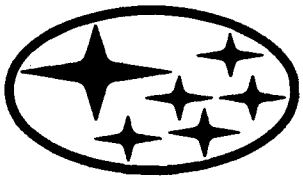
SUBARU

SVX

1992

Precaution for Supplemental Restraint System "Airbag"
The Supplemental Restraint System "Airbag" helps to reduce the risk or severity of injury to the driver in a frontal collision.
The Supplemental Restraint System consists of an airbag module (located in the center of the steering wheel), sensors, a control unit, warning light, wiring harness and spiral cable.
Information necessary to service the safety is included in the "5-5. SUPPLEMENTAL RESTRAINT SYSTEM" of this Service Manual.
WARNING:
- To avoid rendering the Airbag system inoperative, which could lead to personal injury or death in the event of a severe frontal collision, all maintenance must be performed by an authorized SUBARU dealer.
- Improper maintenance, including incorrect removal and installation of the Airbag system, can lead to personal injury caused by unintentional activation of the Airbag system.
- All Airbag system electrical wiring harnesses and connectors are covered with yellow outer insulation. Do not use electrical test equipment on any circuit related to the Supplemental Restraint System "Airbag".



M MECHANISM AND FUNCTION

1. Front Seat

A: OUTLINE

The front seat can be adjusted to different positions to suit the driver's physique, and to improve driving comfort.

B: SEAT SLIDING ADJUSTMENT

When the slide adjuster lever is turned, the slide rail lock is released. The front seat can then be moved 229.5 mm (9.04 in) in the fore-and-aft direction [17 positions at a pitch of 13.5 mm (0.531 in)].

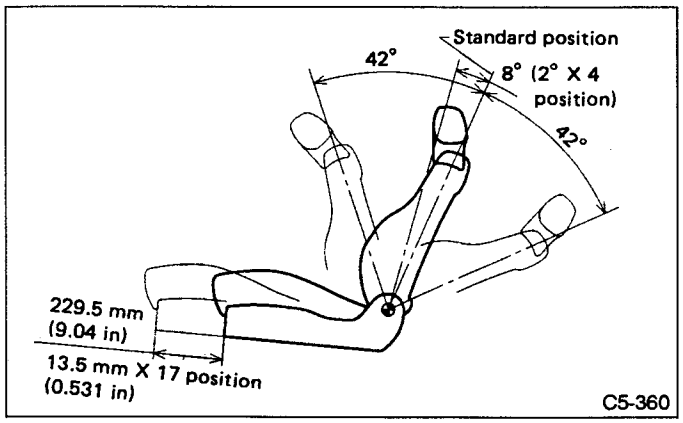


Fig. 1

C: SEAT RECLINING

When the reclining lever is moved up, the reclining hinge lock is released. The seat backrest can be adjusted every 2°, and also folded fully forward.

D: WALK-IN SYSTEM

When getting in or out of rear seat, front passenger seat can be moved to the forward most position as follows: Lift reclining hinge lever or knob to tilt backrest forward. Wire cable connecting reclining hinge will then release slide rail lock so that seat moves forward by helper spring.
When backrest is raised, seat automatically locks in center of seat slide.

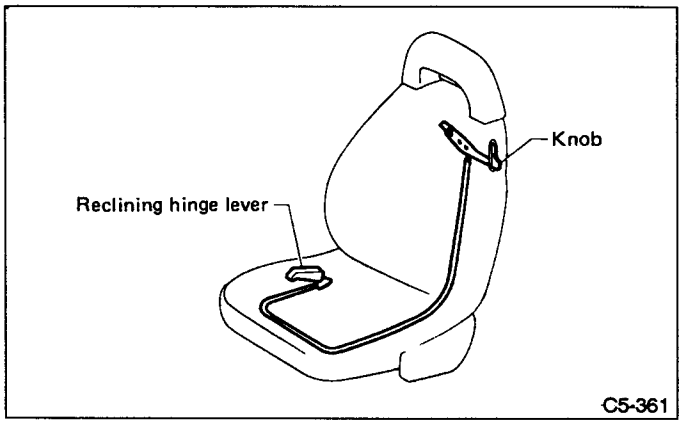


Fig. 2

E: SEAT LIFTER MECHANISM

1. CONSTRUCTION

Two lifter adjustment dials are turned to release lifter brake,allowing seat cushion angle and height to adjust to an optional in position within 35 mm (1.38 in).

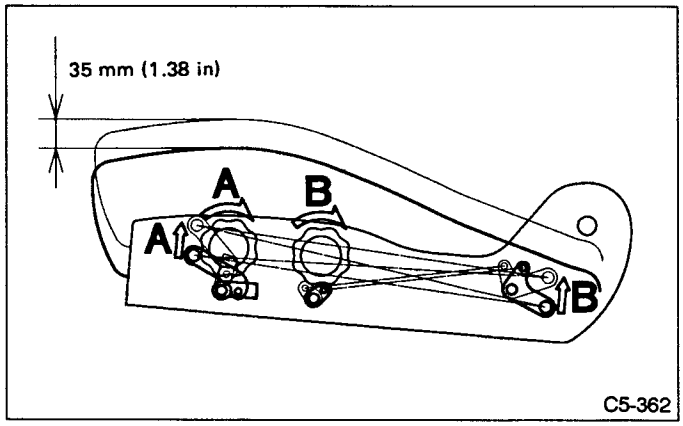


Fig. 3

F: LUMBAR SUPPORT

1. CONSTRUCTION

The lumbar support adjustment lever can set the loin supporting section of the seatback to any of three positions in the fore-and-aft direction.

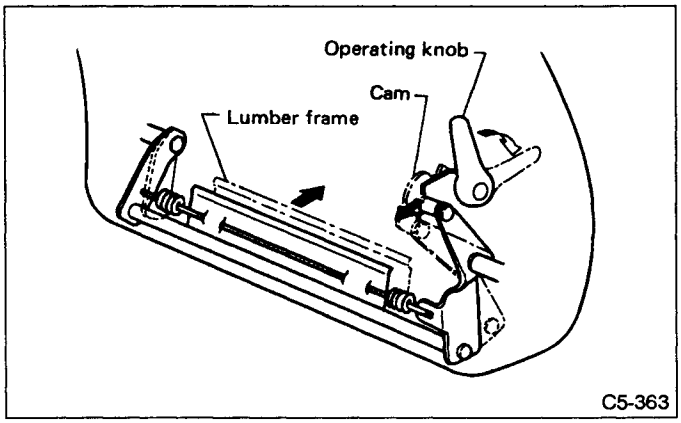


Fig. 4

G: HEADREST FORE-AND-AFT ADJUSTMENT

1. CONSTRUCTION

To adjust the headrest, hold it with both hands. Move it in the fore-and-aft direction and release it at the desired position. The headrest will lock in that position.

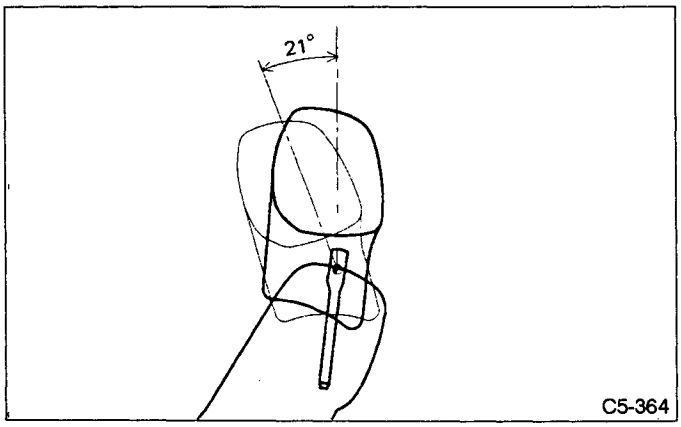


Fig. 5

H: POWER ADJUSTER

1. DESCRIPTION

LS-L grade driver's seat is equipped with power adjustment mechanisms to provide fore-aft, reclining, height or angle adjustment of the seat using corresponding switch as desired.

2. OPERATION

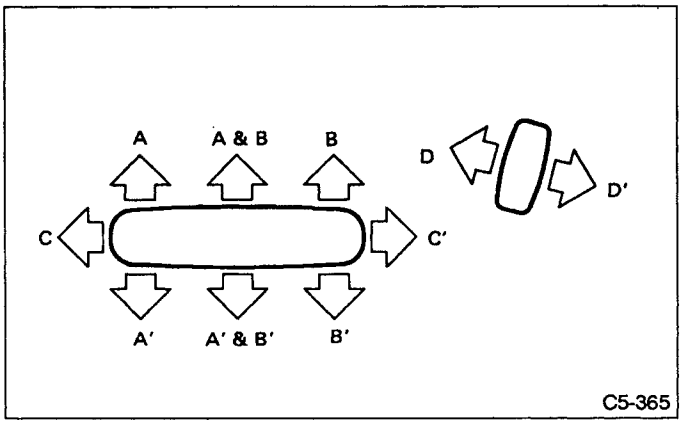


Fig. 6

A: Front lifter adjustment
A & B: Seat height adjustment
B: Rear lifter adjustment
C: Fore-aft adjustment
D: Reclining adjustment

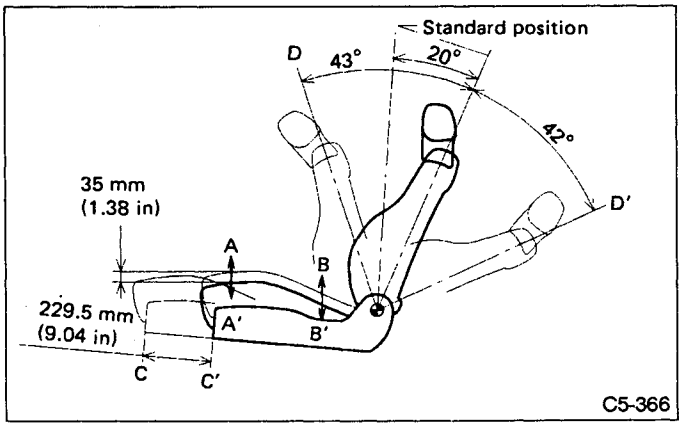


Fig. 7

While adjustment mechanism "D" is operating, all other mechanisms cannot be operated. Adjustment mechanisms "C" and "A" or "B" cannot be operated simultaneously.

3. MECHANISM

Fore-aft adjustment

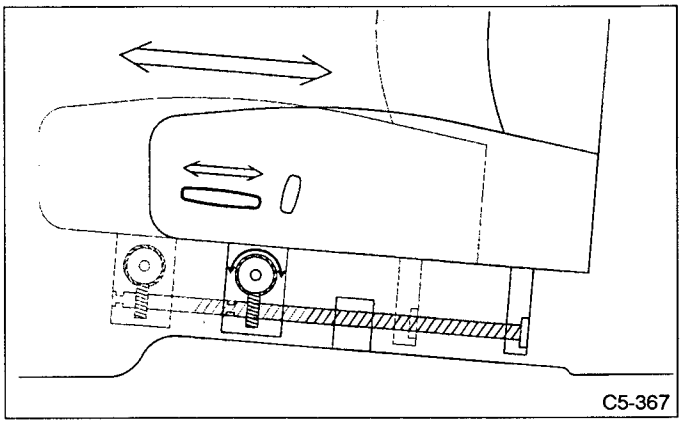


Fig. 8

Front lifter adjustment

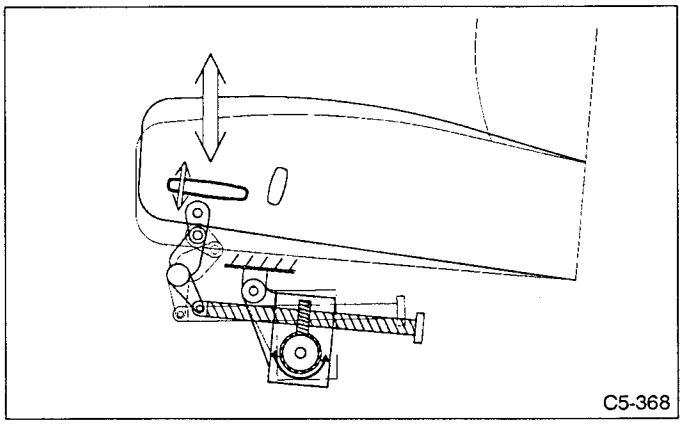


Fig. 9

Rear lifter adjustment

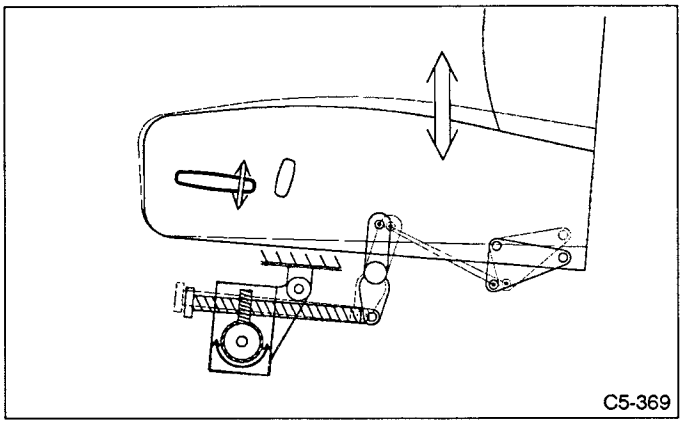


Fig. 10

Reclining adjustment

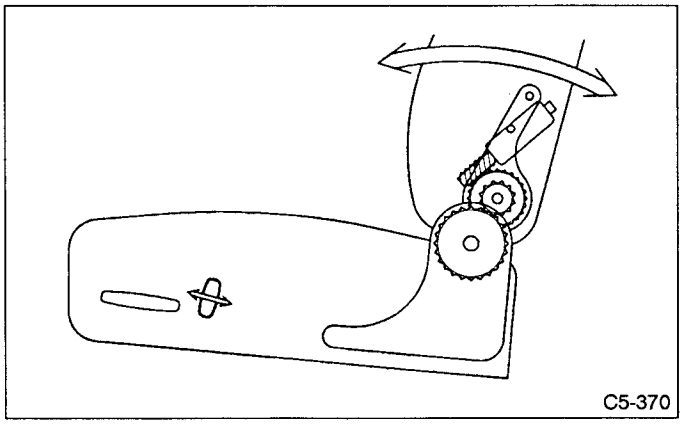


Fig. 11

2. Rear Seat

1. CONSTRUCTION

Rear seat backrest can be folded forward to gain access to trunk compartment, providing good use of space. Backrest is equipped with an interlock. When interlock is activated, backrest "fold-down" is disabled from passenger compartment side.

2. OPERATION

Fold-down

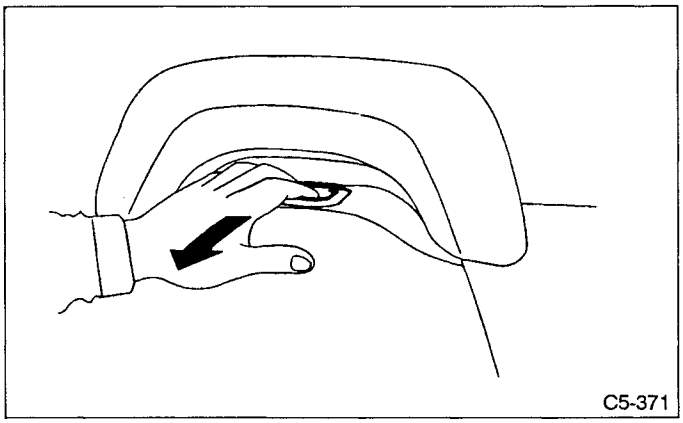


Fig. 12

Interlock

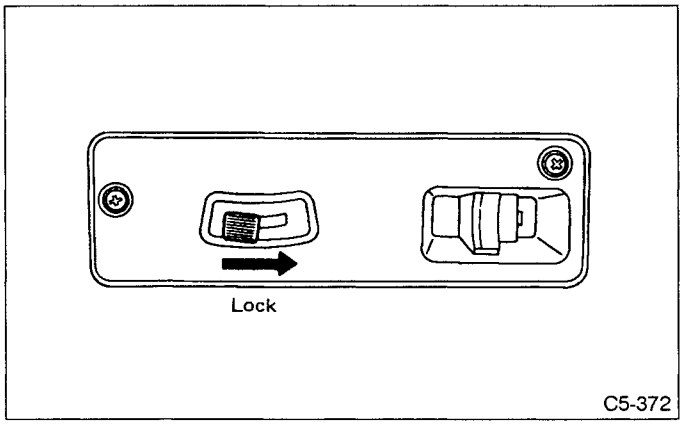
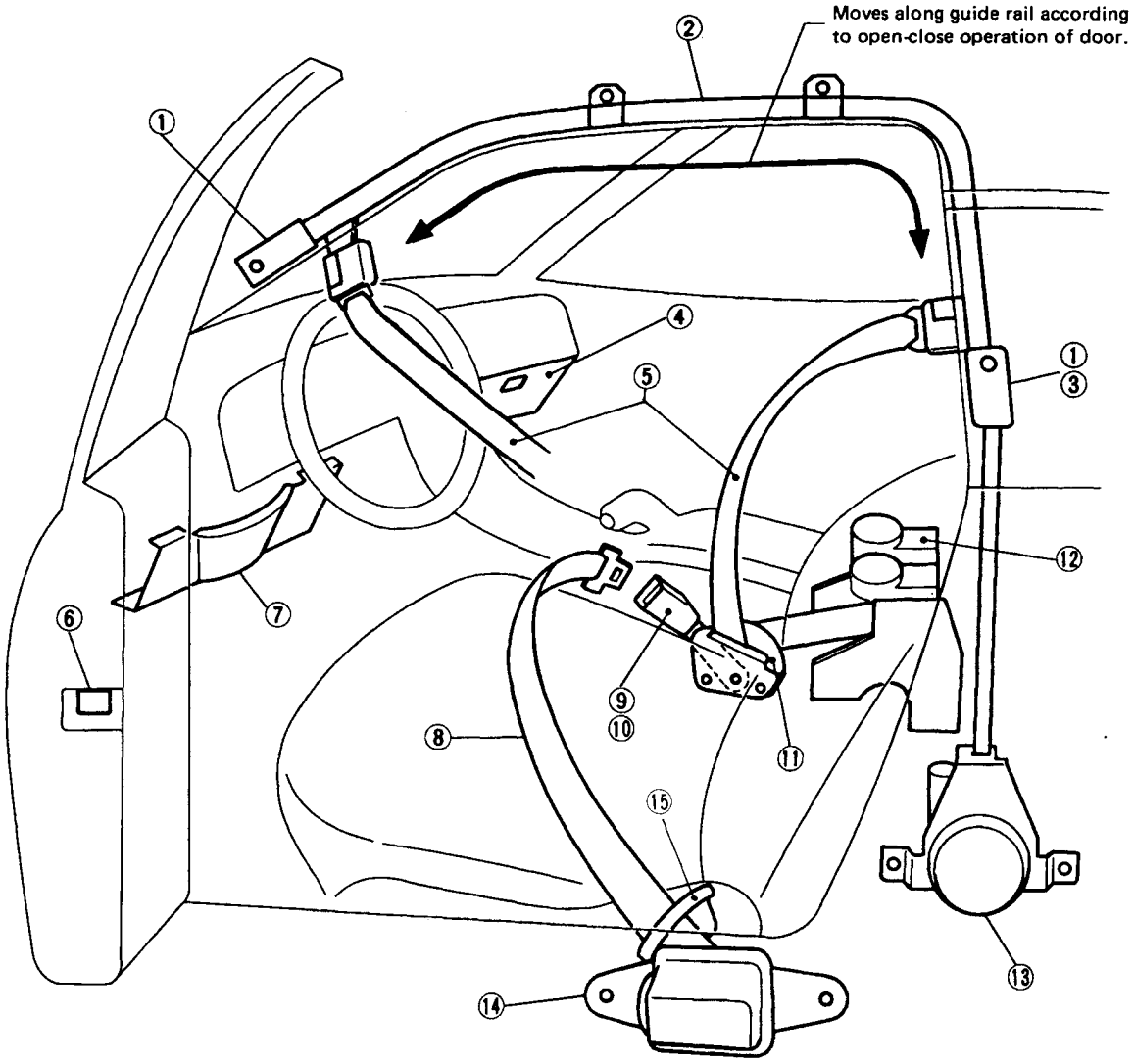


Fig. 13

3. Seat Belts

A: FRONT SEAT BELT



1 Limit switch
2 Guide rail
3 Warning switch
4 Knee panel (passenger)
5 Shoulder belt
6 Door latch switch
7 Knee panel (driver)
8 Lap belt
9 Inner belt ASSY
10 Buckle switch
11 Belt guide
12 ELR ASSY
13 Motor ASSY
14 Outer belt ASSY
13 Motor ASSY
14 Outer belt ASSY
15 Belt holder

C5-373

Fig. 14

1. FEATURES

The front seat is equipped with an automatic shoulder belt system and a manual lap belt.

2. AUTOMATIC SHOULDER BELT SYSTEM

1) Rail & motor ASSY

This system consists of a shoulder anchor, guide rail and motor ASSY.

(1) Shoulder anchor

The shoulder anchor is united with an ERB (Emergency Release Buckle). It is securely latched to the shoulder belt tongue and allows the tongue to move along the guide rail.

(2) Guide rail

The guide rail allows the shoulder anchor to move along the track on the front pillar, side rail and center pillar.

(3) Motor ASSY

The motor ASSY winds or unwinds the wire moving along the guide rail which moves the shoulder anchor.

2) ELR (Emergency Locking Retractor) ASSY

The ELR's used on the driver and passenger seats are combined. They are located on the upper side of the floor tunnel in front of the rear seat cushion. The belts extracted from the ELR's turn at the belt guide and latch on the ERB (Emergency Release Buckle). These belts are used as shoulder belts.

3) Belt guide

Belt guides are secured to slide rails on inner sides of front seats. The belt extracted from the ELR turns at the belt guide and restrains the upper body of the driver or passenger at a fixed position, regardless of physique and seating position.

The shoulder belts fits the occupant when pulled to the center pillar although it appears to be twisted when moved to the front pillar.

3. MANUAL LAP BELT

1) Outer belt ASSY

The belt extracted from the ELR (located in the side sill.) is secured by the belt holder close to the seat hinge cover. It is within easy reach, regardless of the seating position.

The lap belt's ELR is designed to retract into the side sill trim to increase the foot area for the rear seat occupant.

2) Inner belt ASSY

The inner belt ASSY is parallel to the belt guide. Its buckle is secured in a fixed position, regardless of physique and seating position.

4. OTHERS

1) Knee panel

The knee panel is located below the instrument panel. It restrains the lower body of the driver and passenger in a front-end collision.

2) Submarine-preventing material (incorporated in passenger seat cushion)

Unlike the driver's seat, the position of the passenger seat can be optionally selected. (In other words, the passenger is less restrained than the driver.) As a result, the distance between the passenger's knee and knee panel is not constant. For this reason, submarine-preventing material is incorporated in the front edge of the passenger seat cushion to help increase the effect of the knee panel.

5. OPERATION

The automatic shoulder belts (for the driver and passenger) are controlled by a passive belt control unit located under the rear panel.

These belts are operated in response to the open-close operation of the corresponding doors when the ignition switch is ON or OFF.

1) Ignition OFF

With the ignition OFF, the belt anchor can be moved in the forward direction only. In other words, when the ignition switch is turned OFF and door is opened, the belt anchor moves to the front stop and is held in place when the door is closed or opened thereafter. When the door is closed and the ignition switch is turned ON, the belt anchor moves to the rear stop. However, if the ignition switch is turned OFF before the belt anchor reaches rear stop, the anchor belt will stop. The belt anchor moves to the rear stop after the ignition switch is turned ON again.

When ignition switch is turned OFF and door is opened while the belt anchor is moving toward the front stop, the anchor belt will stop. The belt anchor moves to the front stop when the door is opened again.

2) Ignition ON

When the door is closed with the ignition switch ON, the shoulder anchor moves to the final stop of the guide rail at the center pillar and locks.

When the door is opened, the door lock switch is set to "OPEN" so that current flows through relay L1 and motor. This causes the shoulder anchor to move to the front stop. When the shoulder anchor reaches the front stop, the front limit switch is opened so that current stops flowing through the relay and motor.

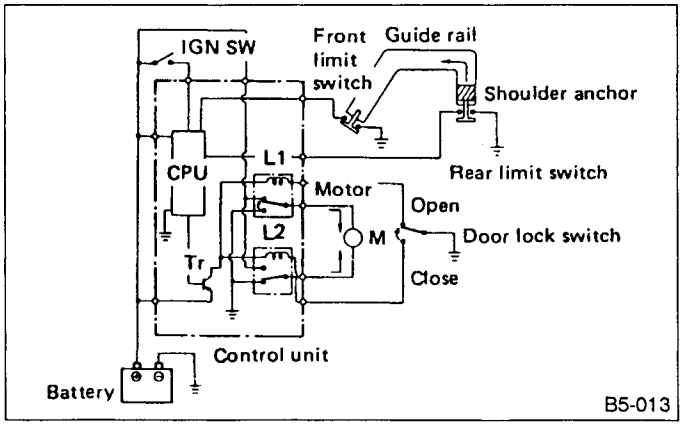


Fig. 15

When the door is closed, the door lock switch is set to "CLOSE" so that current flows through relay L2 and the motor. This causes the shoulder anchor to move to the rear stop. When the shoulder anchor reaches the rear stop, the rear limit switch is opened so that current stops flowing through the relay and motor.

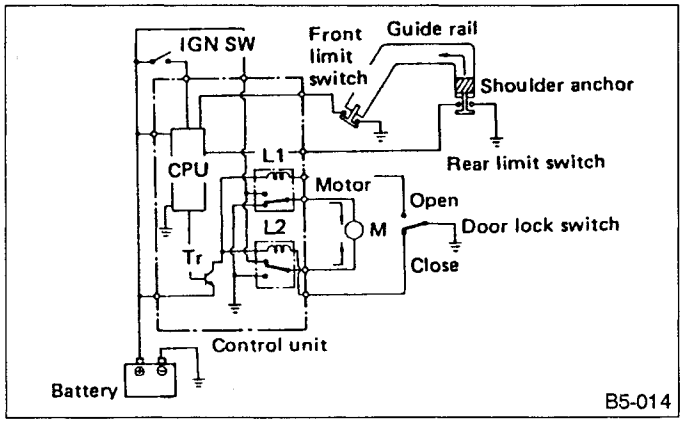


Fig. 16

When the door is closed, while the shoulder anchor is moving toward the front stop after the door is opened, or when the door is opened while it is moving toward the rear stop after the door is closed, the door lock switch changes current flow from relay L1 to relay L2. The shoulder anchor then moves in the direction corresponding with current flow.

It takes approximately two seconds for the shoulder anchor to travel from the front stop to the rear stop, or from the rear stop to the front stop.

6. MOTOR & WIRE PROTECTION CIRCUIT

A circuit breaker and timer protect the automatic shoulder belt system circuit from damage.

If the shoulder anchor is continuously caught during travel for 14±2 seconds, current flow is interrupted. Current flow is resumed by opening or closing the door.

If the motor is overloaded, the circuit breaker activates to immediately interrupt current flow through the motor, protecting it from overheating. When overload is eliminated from the motor, normal operation will automatically resume. However, a timer circuit will usually activate before normal operation resumes.

B: REAR SEAT BELT

OUTLINE

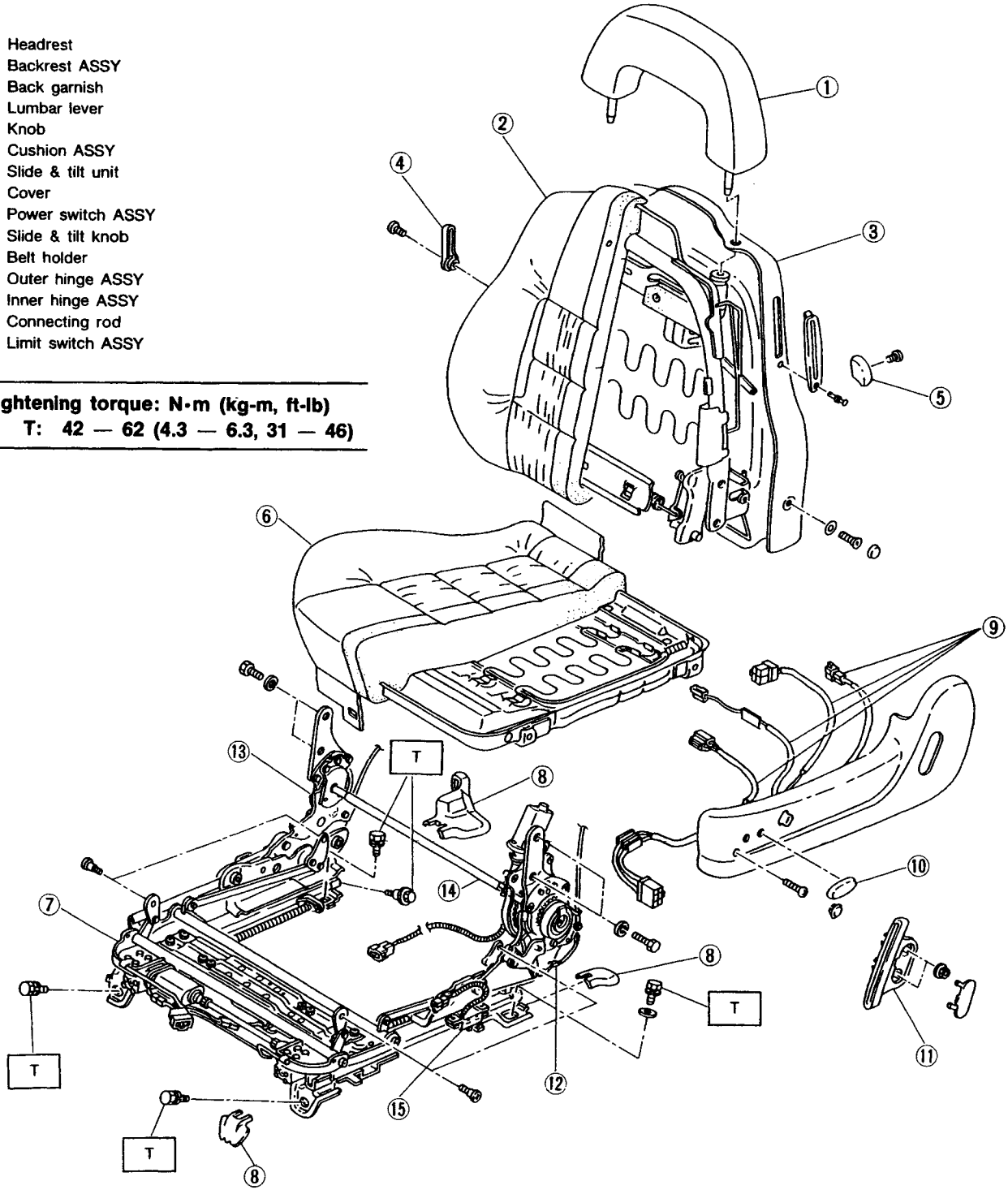
The rear seat is equipped with a three-point type seat belt.

C COMPONENT PARTS

1. Front Seat [Power type]

1 Headrest
2 Backrest ASSY
3 Back garnish
4 Lumbar lever
5 Knob
6 Cushion ASSY
7 Slide & tilt unit
8 Cover
9 Power switch ASSY
10 Slide & tilt knob
11 Belt holder
12 Outer hinge ASSY
13 Inner hinge ASSY
14 Connecting rod
15 Limit switch ASSY

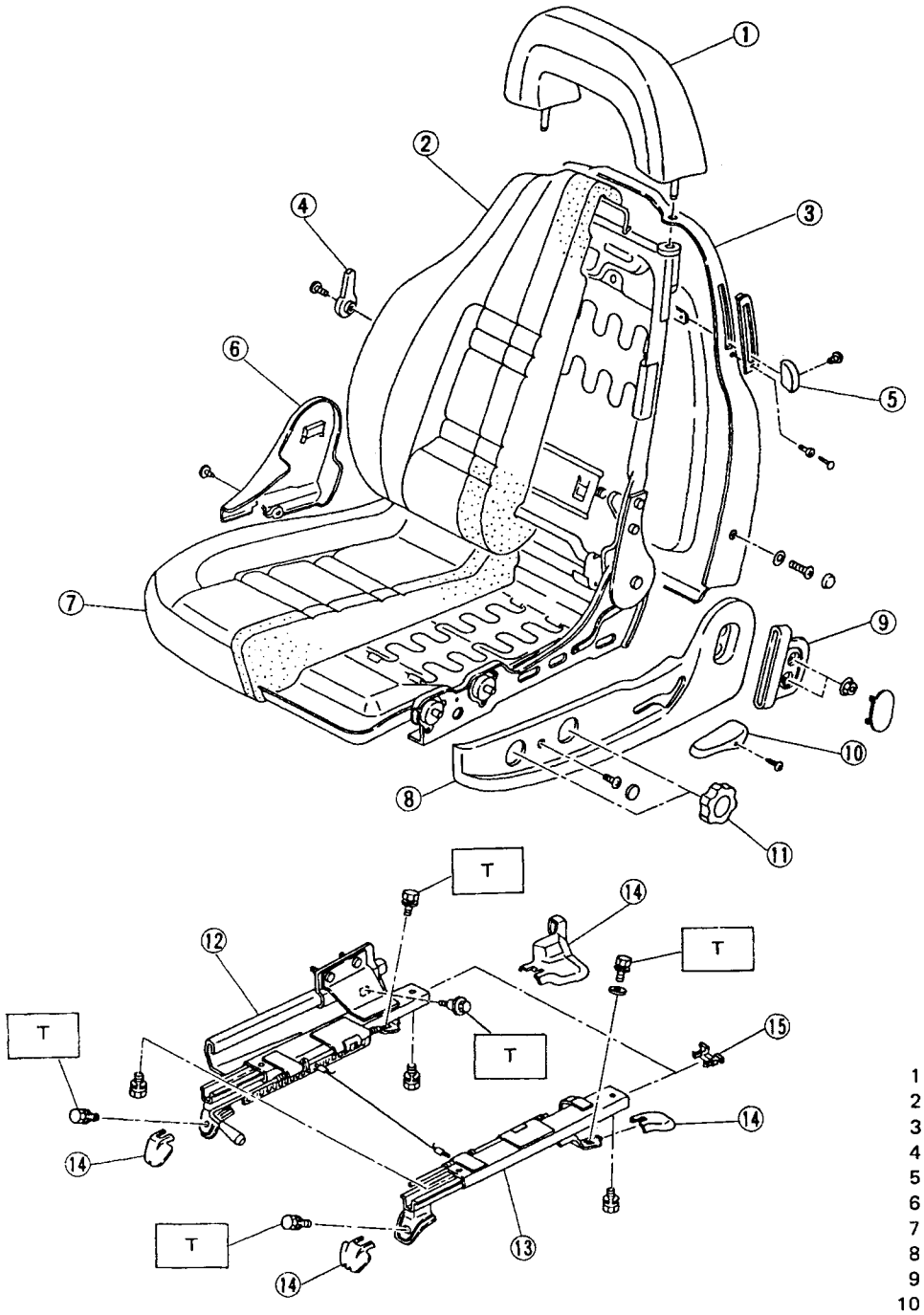
Tightening torque: N·m (kg-m, ft-lb)
T: 42 — 62 (4.3 — 6.3, 31 — 46)



C5-666

Fig. 1

2. Front Seat [Manual type]



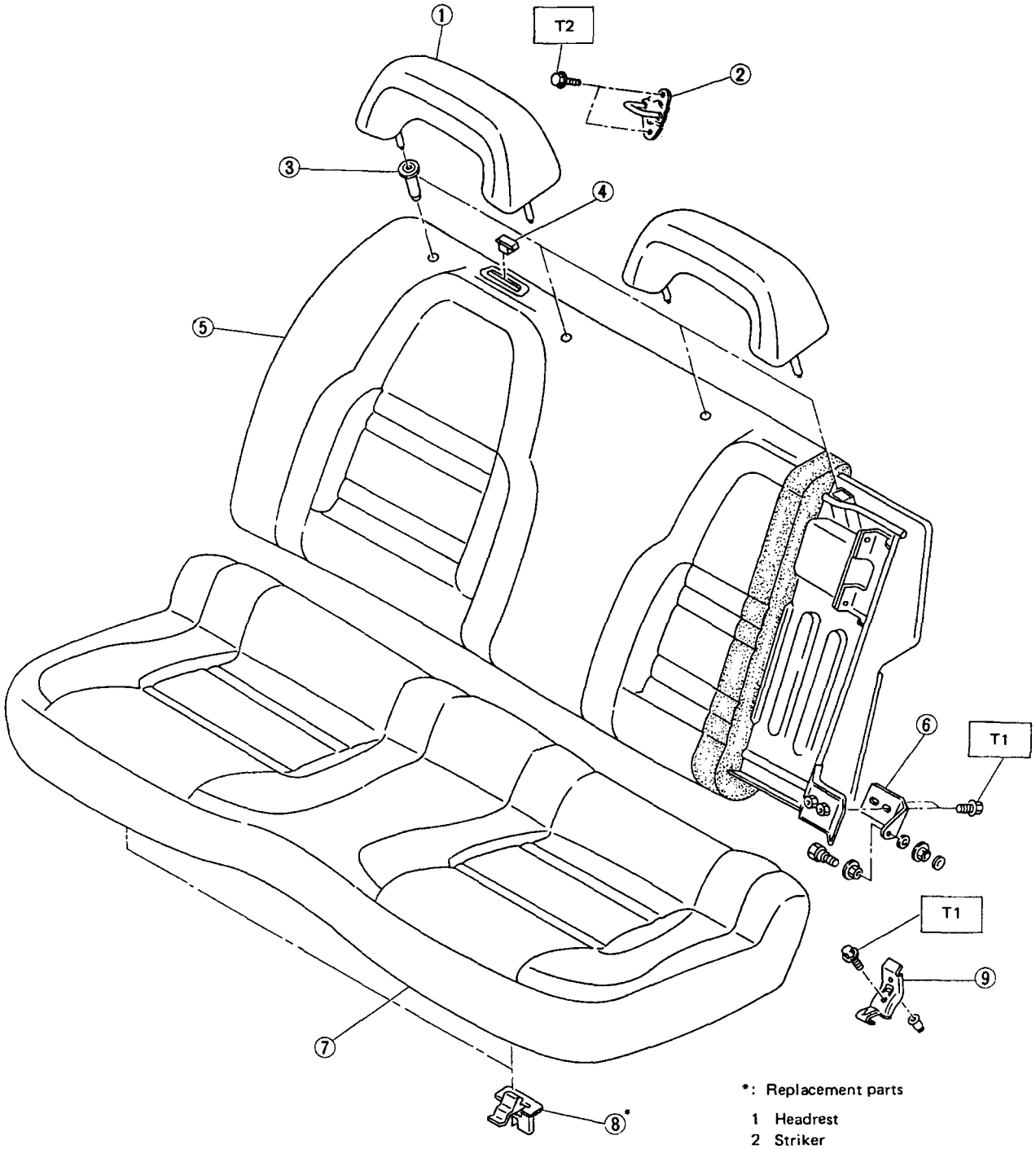
Tightening torque: N·m (kg-m, ft-lb)
T: 42 – 62 (4.3 – 6.3, 31 – 46)

1 Headrest
2 Backrest ASSY
3 Back garnish
4 Lumber lever
5 Knob
6 Hinge cover IN
7 Cushion ASSY
8 Hinge cover OUT
9 Belt holder
10 Hinge knob
11 Tilt dial
12 Slide rail ASSY IN
13 Slide rail ASSY OUT
14 Cover
15 Rail cap

C5-375

Fig. 18

3. Rear Seat



*: Replacement parts

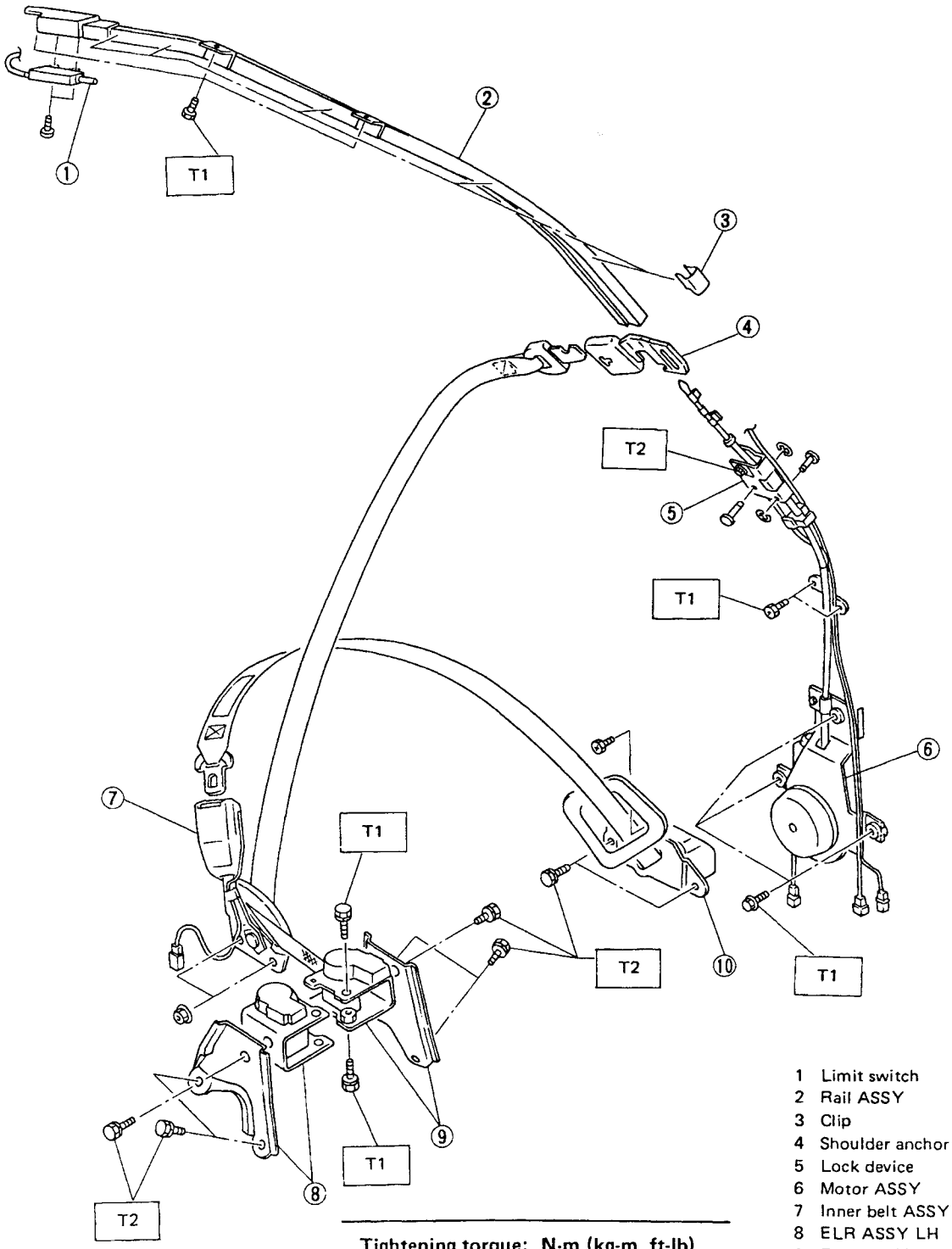
1 Headrest
2 Striker
3 Headrest bush
4 Knob
5 Backrest ASSY
6 Hinge
7 Cushion ASSY
*8 Rear cushion hook
9 BRKT 20G

C5-376

Tightening torque: N·m (kg-m, ft-lb)
T1: 18 – 31 (1.8 – 3.2, 13 – 23)
T2: 7 – 13 (0.7 – 1.3, 5.1 – 9.4)

Fig. 19

4. Front Seat Belt



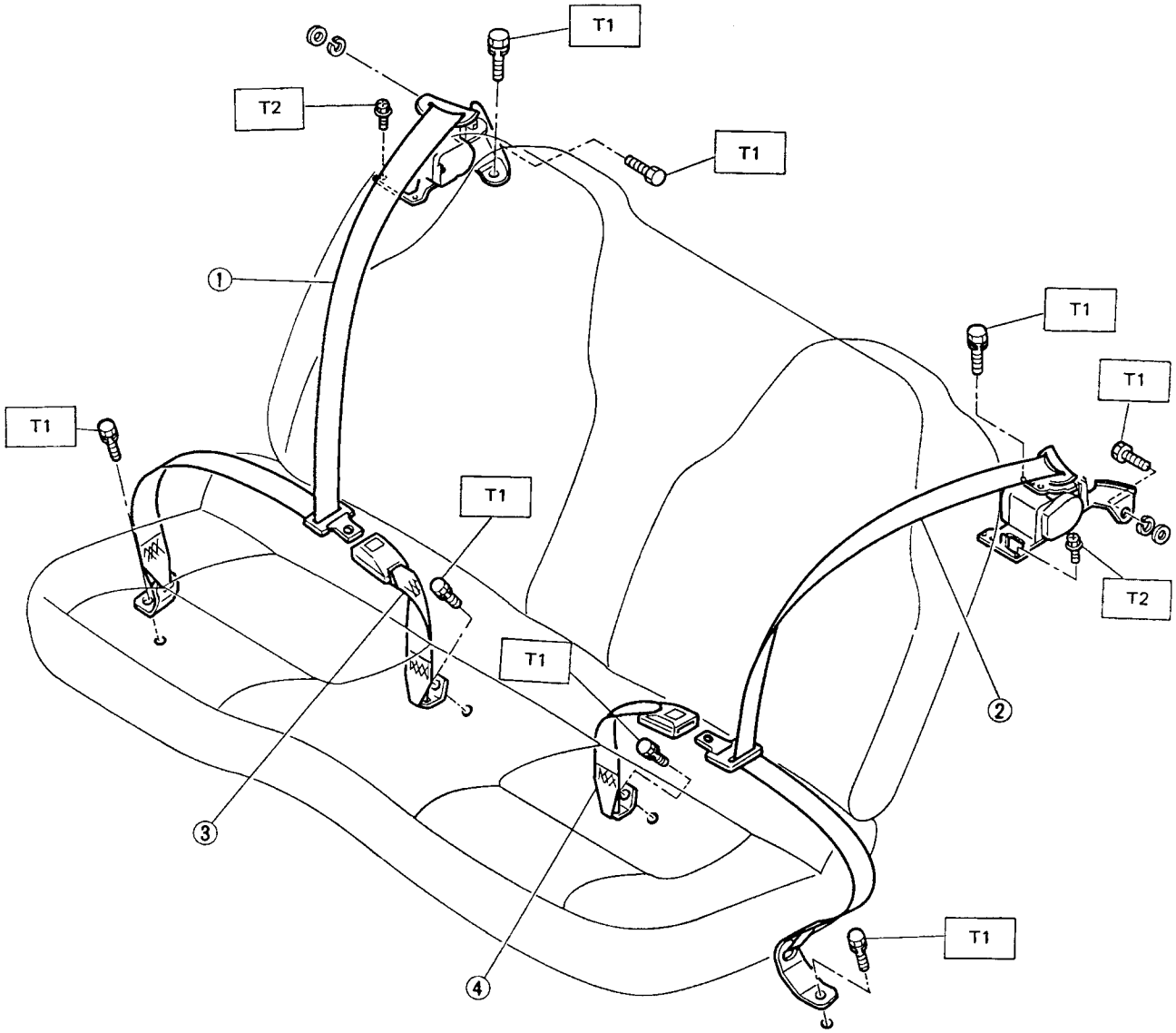
1 Limit switch
2 Rail ASSY
3 Clip
4 Shoulder anchor (ERB)
5 Lock device
6 Motor ASSY
7 Inner belt ASSY
8 ELR ASSY LH
9 ELR ASSY RH
10 Outer belt ASSY

C5-377

Tightening torque: N·m (kg-m, ft-lb)
T1: 10 – 16 (1.0 – 1.6, 7 – 12)
T2: 23 – 49 (2.3 – 5.0, 17 – 36)

Fig. 20

5. Rear Seat Belts

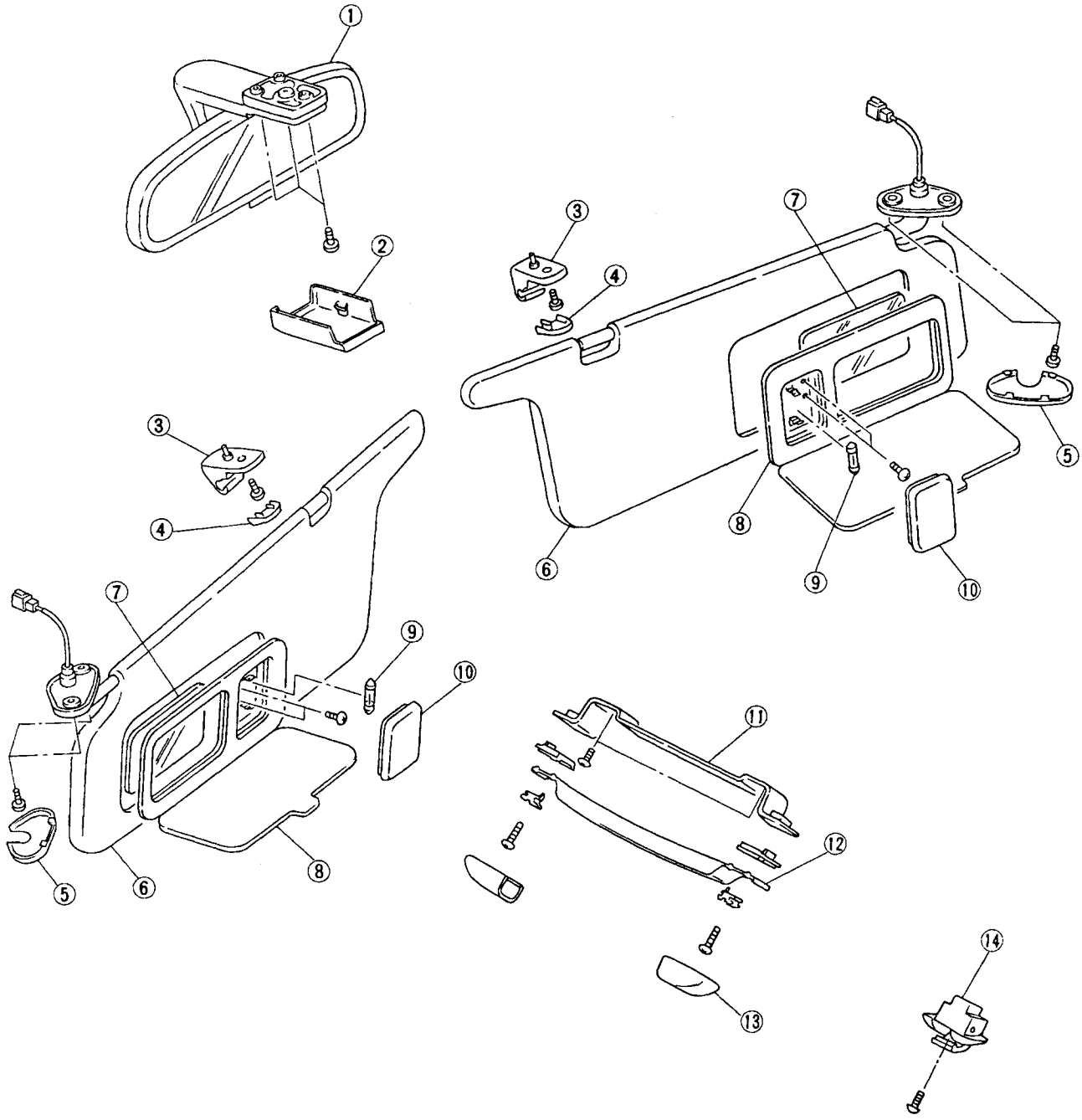


Tightening torque: N·m (kg-m, ft-lb)
T1: 23 – 49 (2.3 – 5.0, 17 – 36)
T2: 5.4 – 9.3 (0.55 – 0.95, 4.0 – 6.9)

1 Outer belt ASSY RH
2 Outer belt ASSY LH
3 Inner belt ASSY RH
4 Inner belt ASSY LH

Fig. 21

6. Inner Accessories

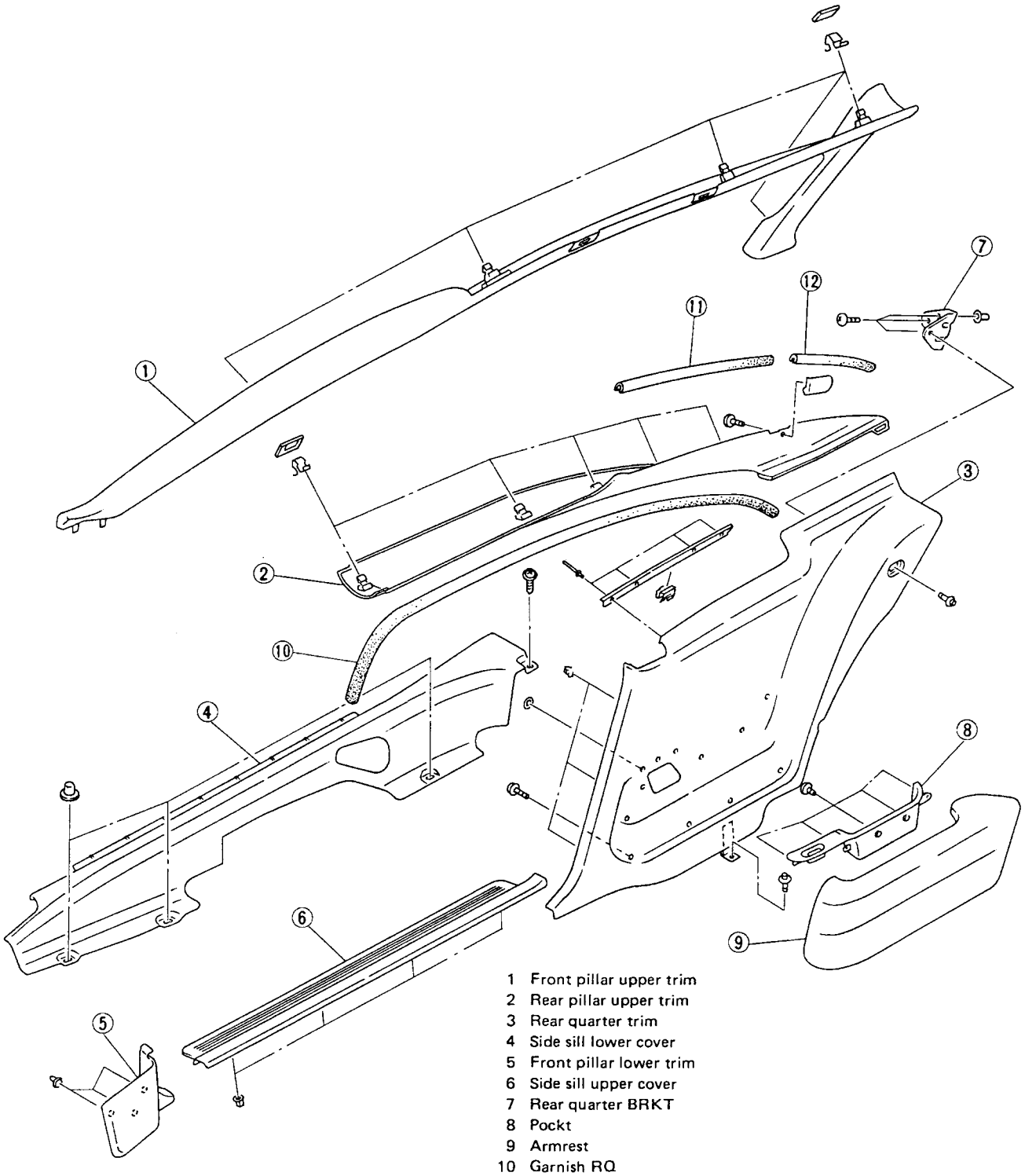


1 Rearview mirror ASSY
2 Rearview mirror cap
3 Hook
4 Hook cap
5 Sunvisor cap
6 Sunvisor ASSY
7 Vanity mirror
8 Vanity mirror flap
9 Bulb
10 Lens
11 Assist rail BRKT
12 Assist rail ASSY
13 Assist rail cap
14 Hanger coat

C5-379

Fig. 22

7. Inner Trim

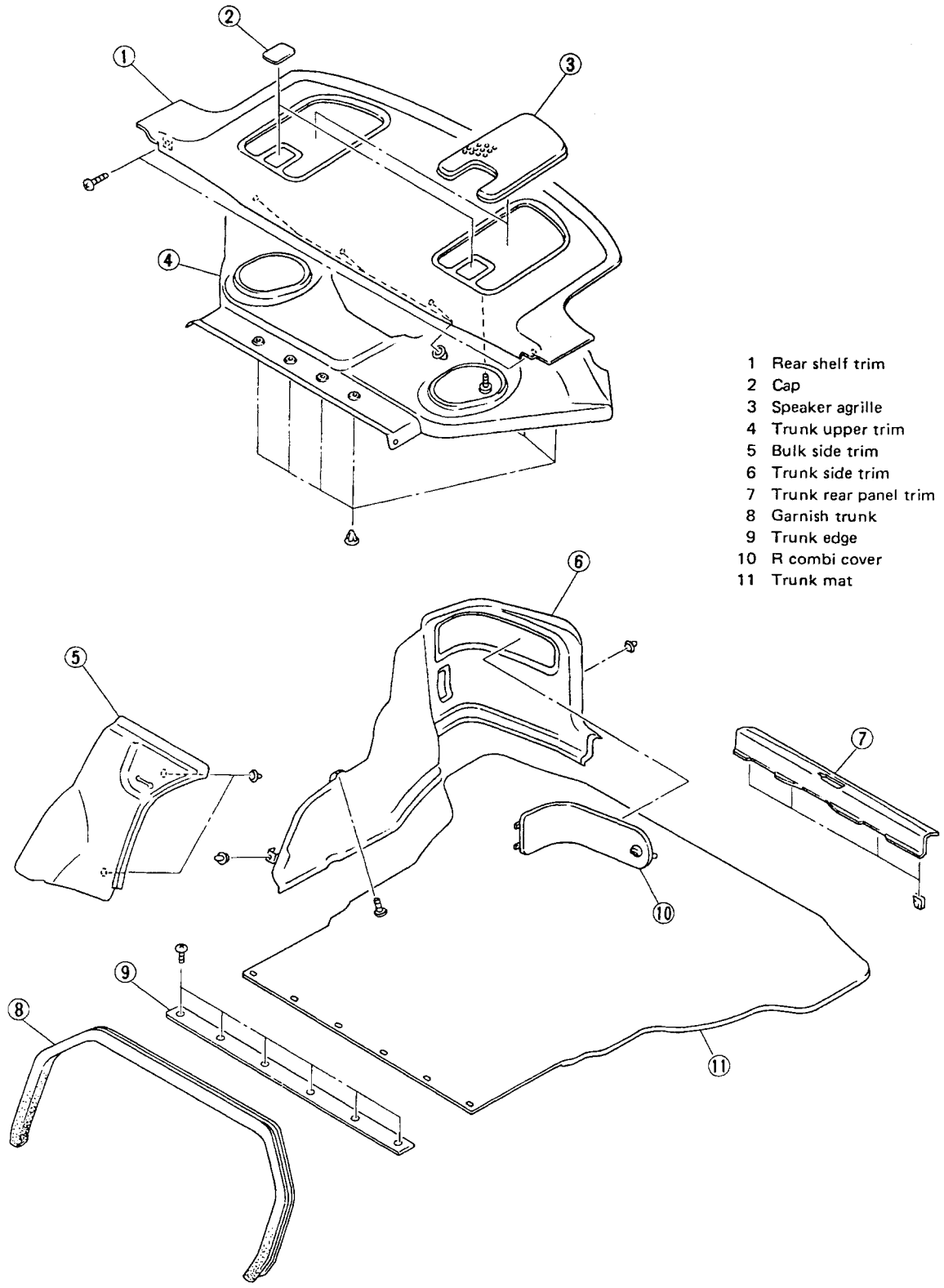


1 Front pillar upper trim
2 Rear pillar upper trim
3 Rear quarter trim
4 Side sill lower cover
5 Front pillar lower trim
6 Side sill upper cover
7 Rear quarter BRKT
8 Pockt
9 Armrest
10 Garnish RQ
11 Garnish R PL UPR
12 Garnish R PL LWR

C5-380

Fig. 23

8. Trunk Trim

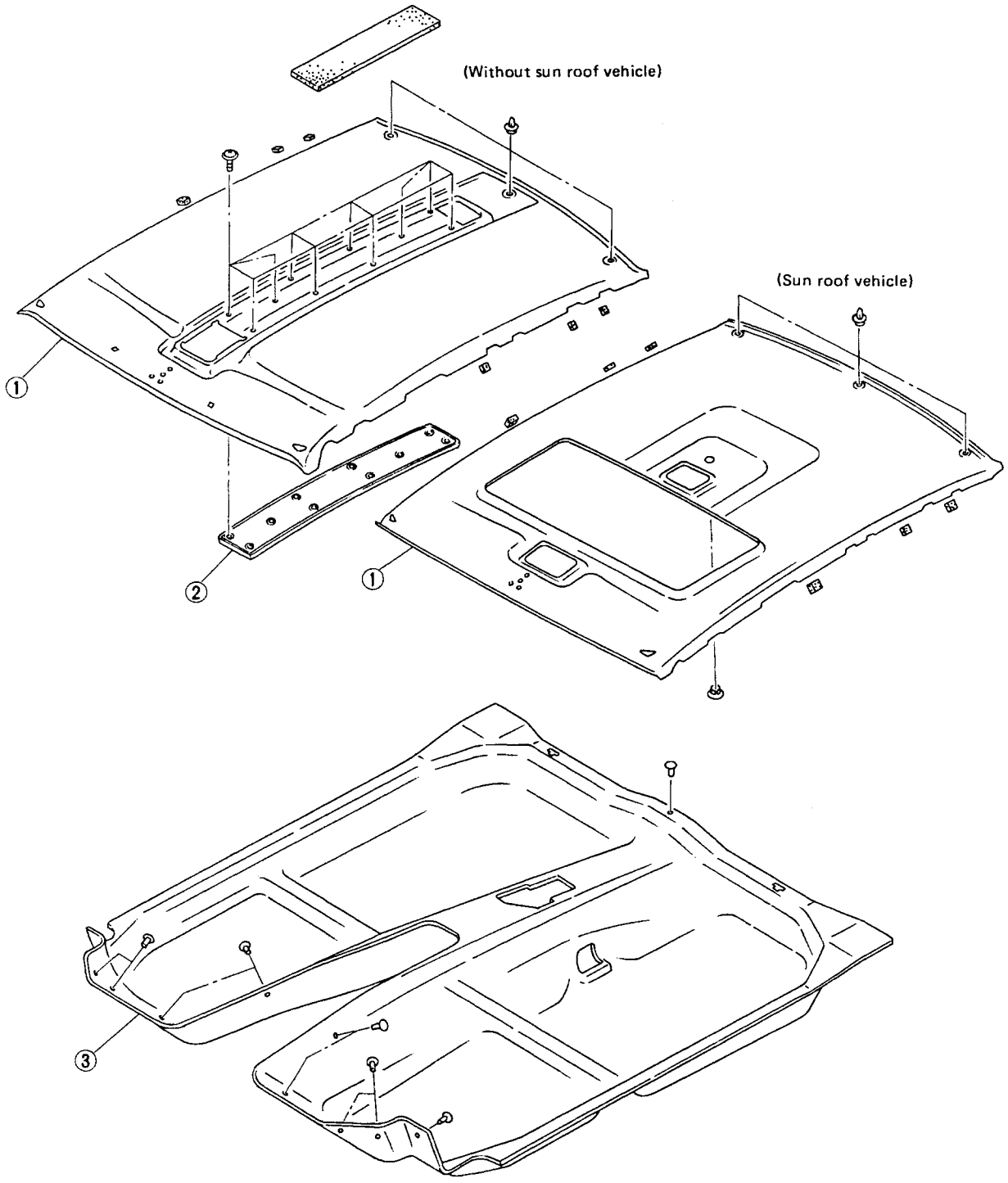


1 Rear shelf trim
2 Cap
3 Speaker agrille
4 Trunk upper trim
5 Bulk side trim
6 Trunk side trim
7 Trunk rear panel trim
8 Garnish trunk
9 Trunk edge
10 R combi cover
11 Trunk mat

C5-381

Fig. 24

9. Roof Trim & Floor Mat



1 Roof trim
2 Center trim
3 Floor mat

C5-382

Fig. 25

W SERVICE PROCEDURE

1. Front Seat

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove headrest from backrest.

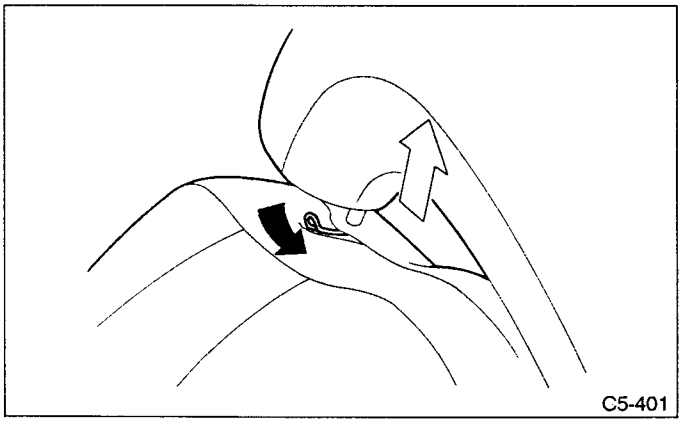


Fig. 26

3) Remove belt holder by expanding it with fingers. Remove ELR belt from belt guide.

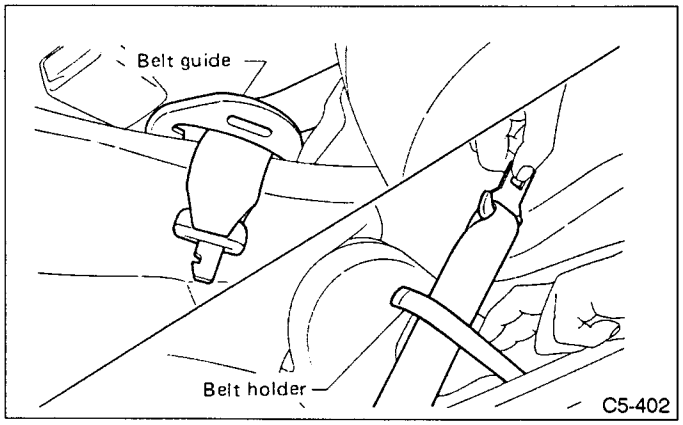


Fig. 27

4) Pull reclining lever back to fold backrest all the way forward. While pulling slide adjuster lever, move seat all the way forward.
5) Disconnect connectors located under driver's seat.
6) Remove bolt cover at rear end of slide rail.
7) Remove bolts securing seat rear.

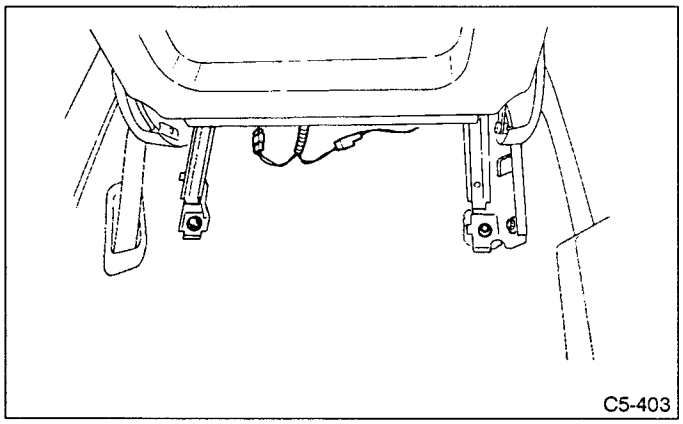


Fig. 28

8) While pulling slide adjuster lever, slide seat all the way back.
9) Remove bolts securing front of seat.

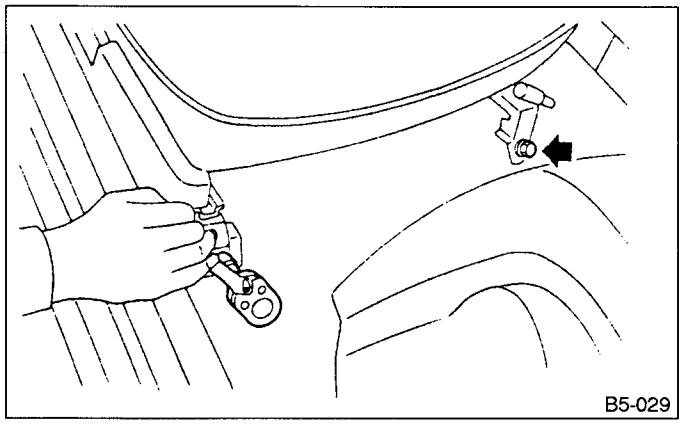


Fig. 29

10) Remove front seat from vehicle.
Be careful not to scratch seat when removing it from vehicle.

B: INSTALLATION

1) Remove headrest.
2) Pull reclining lever back to fold backrest all the way forward. Pull slide adjuster lever and move lower slide rail all the way forward.
Ensure that lock plate pawls are securely inserted into corresponding holes in both slide rail brackets.
3) Carefully set seats in position.
4) Install bolts securing front side of seat to body.
5) While pulling slide adjuster lever, move seat all the way forward.
Ensure that lock plate pawls are securely inserted into corresponding holes in both slide rail brackets.
6) Install bolts which secure rear of seat to body.

7) Install anchor bolt (compartment side) securing seat rear to body. Tighten anchor bolt to secure with seat belt bracket.
8) Install bolt cover on rear end of slide rail.
9) Connect connectors located under driver's seat.
10) While expanding belt holder with fingers, route lap belt tongues into place. Pass ELR belt tongue through hole in belt guide.
11) Install headrest on backrest.

Bolt tightening torque:
42 — 62 N•m (4.3 — 6.3 kg-m, 31 — 46 ft-lb)

a. Tighten bolts in the order designated.
b. After installation, ensure that all functional mechanisms operate properly and lock.

2. Rear Seat

A: REMOVAL

1) Push left and right hooks (A) down.

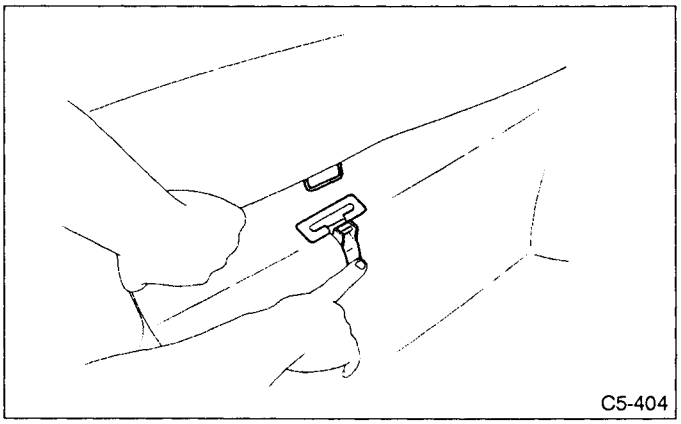


Fig. 30

2) While raising front of seat cushion, push left and right rear ends of cushion down to disconnect hook (B), and remove seat cushion.

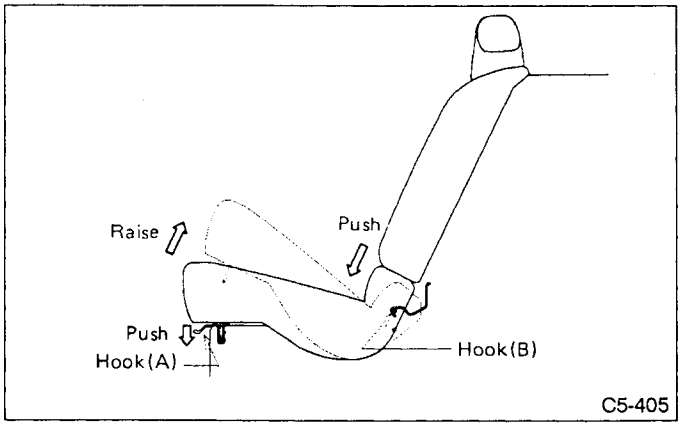


Fig. 31

3) Fold backrest forward to unfasten edge trunk.

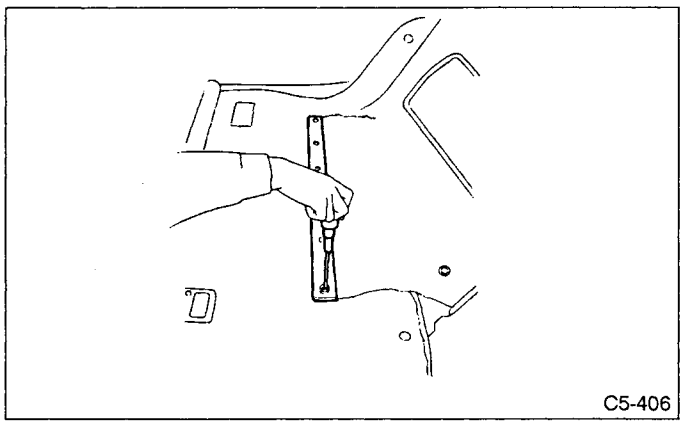


Fig. 32

5) Roll up left and right edges of floor mat at backrest, remove four bolts (two on each side) and remove backrest.

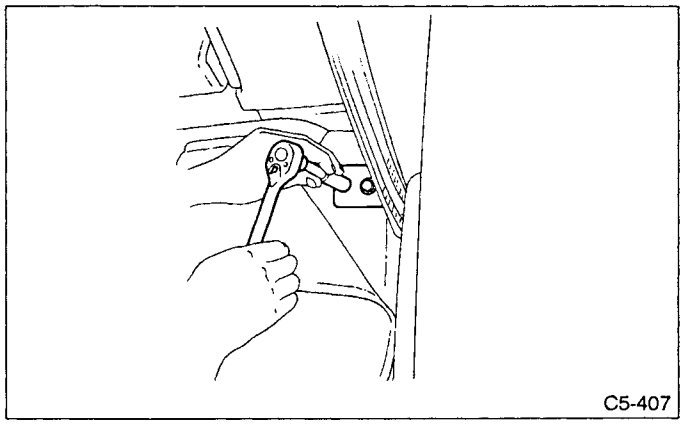


Fig. 33

B: INSTALLATION

1) Install backrest and edge trunk in reverse order of above removal procedures. Backrest should be set perpendicular and outer belt should not be caught during installation.
2) Pass inner belt buckle through slit in seat cushion. While pushing left and right rear ends of seat cushion down, connect to hook (B).
3) Push front end of seat cushion down and lock cushion to hooks (A).
4) Ensure that rear seat belt webbing is not twisted or rolled on seat.

Bolt tightening torque:
18 — 31 N•m (1.8 — 3.2 kg-m, 13 — 23 ft-lb)

3. Front Seat Belt

In case the connector to the automatic shoulder belt has been disconnected for repairs of the automatic shoulder belt or related parts or for repairs of other parts, be sure to disconnect the battery and reset the control unit. If the connector of the automatic shoulder belt control unit or the connector of the front or rear limit switch has been disconnected once during repairs, the control unit can enter the failure mode when the connector is reconnected, making the automatic shoulder belt inoperative.

A: REMOVAL

1) Disconnect battery ground cable.
2) Push emergency release button on the shoulder anchor and remove belt.

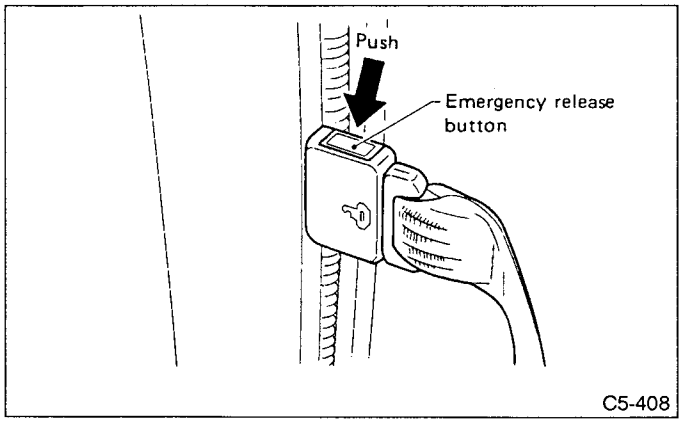


Fig. 34

3) Remove Rear quarter trim ⟨Refer to [W8A0].⟩ and Front pillar upper trim ⟨Refer to [W11A0].⟩
4) Disconnect three connectors at motor.

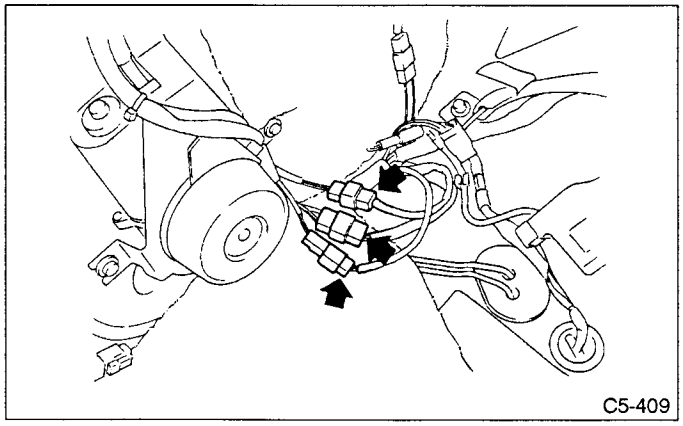


Fig. 35

5) Remove nine bolts (one on left side and eight on right side), loosen anchor bolts, and then remove front seat belt assembly.

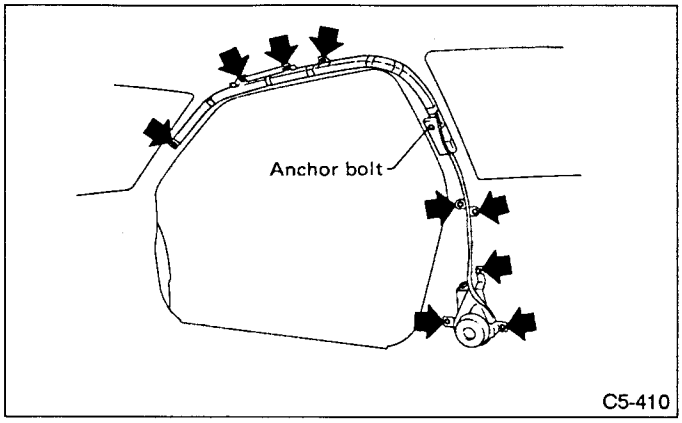


Fig. 36

B: DISASSEMBLY

1. FRONT LIMIT SWITCH

1) Unfasten five clips and tape to free limit switch harness from rail assembly.

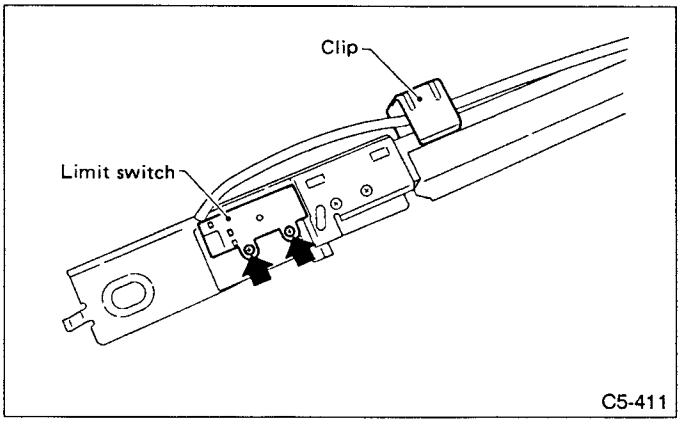


Fig. 37

2) Remove two screws, then limit switch.

2. LOCKING DEVICE (REAR LIMIT SWITCH, WARNING SWITCH)

1) Remove limit switch.
2) Remove E-clip which fixes two pins of rail and tube and pull out pin.
3) Remove tube in the rail.
4) Pull out locking device by sliding.

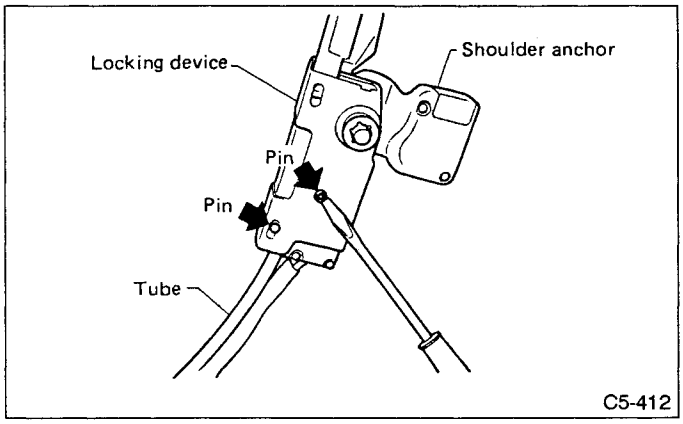


Fig. 38

3. SHOULDER ANCHOR (EMERGENCY RELEASE BUCKLE) & MOTOR ASSY

1) Remove locking device.
2) Remove motor ASSY wire and shoulder anchor as a unit from guide rail.

C: ASSEMBLY

Assembly is in the reverse order of disassembly.

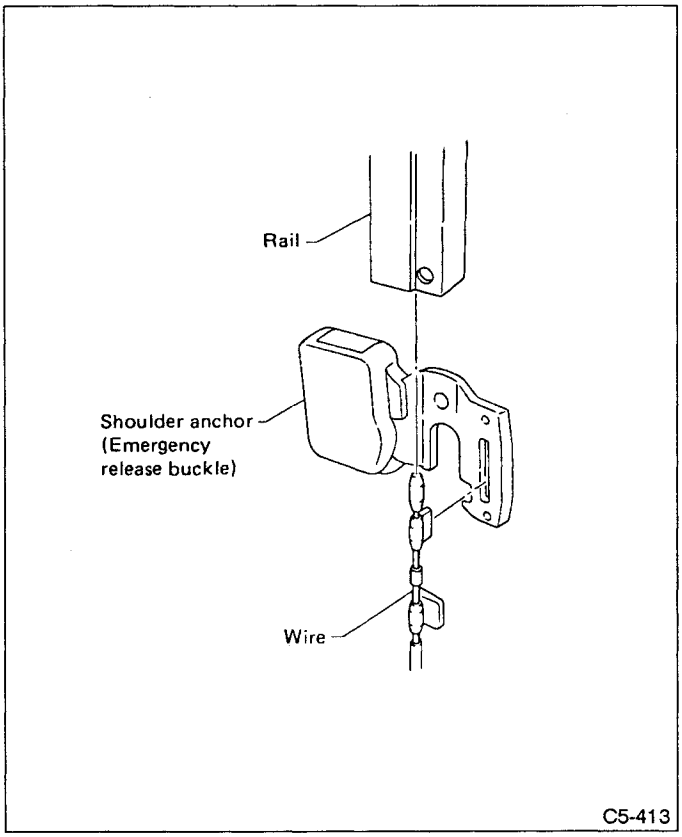


Fig. 39

a. Do not remove grease from wire.
b. Do not bend or twist wire too sharply.

D: INSTALLATION

Installation is in the reverse order of removal.
Use M6 bolts, length 12 mm (0.47 in) (047406120).

E: OPERATION CHECK

Perform operation checks after replacing parts.

1. RAIL & MOTOR ASSY

While latching shoulder belt on shoulder anchor (emergency release buckle), open and close the door to check that shoulder anchor moves smoothly without binding, free play, etc.

2. EMERGENCY RELEASE BUCKLE

Check that tongue properly releases when emergency release button is pressed. Also check that click is heard to indicate proper latching when tongue is inserted into emergency release buckle.

4. Front Seat Belt [Manual Lap Belt] Outer Belt Assembly

Supplemental Restraint System "Airbag"

Airbag system wiring harness is routed near side sill and floor panel.

a. All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuit.

b. Be careful not to damage Airbag system wiring harness when servicing the Manual lap belt.

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove lap ELR cover.

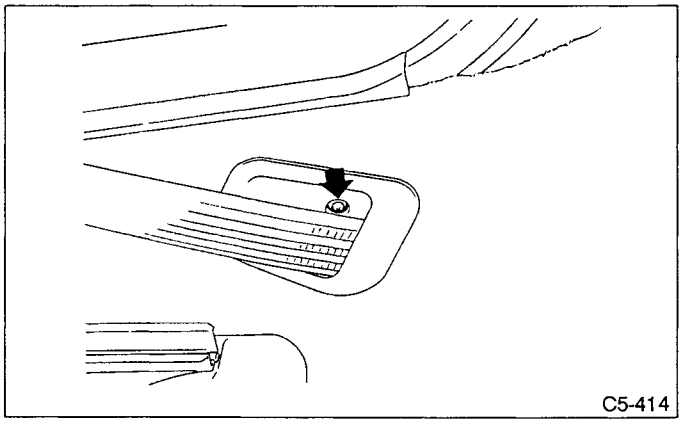


Fig. 40

3) Remove relevant front seat when removing manual lap belt. ⟨Refer to [W1A0].⟩
4) Remove rear quarter trim. ⟨Refer to [W8A0].⟩
5) Remove cover opener from driver's seat side.

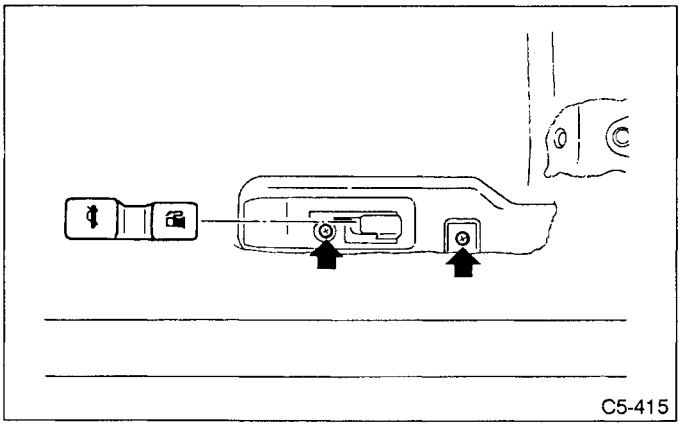


Fig. 41

7) Remove side sill lower cover. ⟨Refer to [W9A0].⟩
8) Roll up floor mat and remove the two bolts.

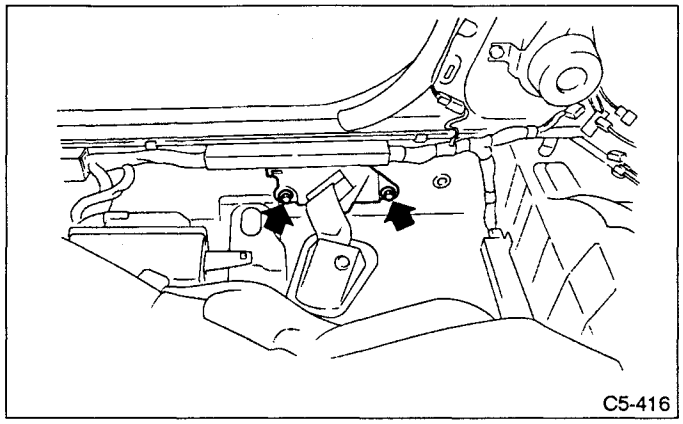


Fig. 42

B: INSTALLATION

Installation is in the reverse order of removal.

5. Front Seat Belt ELR Assembly

Supplemental Restraint System "Airbag"

Airbag system wiring harness is routed near floor panel.

a. All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuit.

b. Be careful not to damage Airbag system wiring harness when servicing the ELR assembly.

A: REMOVAL

1) Remove front passenger seat. ⟨Refer to [W1A0].⟩
2) Remove console box. ⟨Refer to [5-4].⟩
3) Remove rear seat cushion. ⟨Refer to [W2A0].⟩
4) Remove side sill upper cover from passenger seat side. ⟨Refer to [W7A0].⟩
5) Remove lap ELR cover from passenger seat side. ⟨Refer to [W4A0].⟩
6) Unfasten hooks from rear of floor mat and right side of rear cushion. Discard hooks (on right side of rear cushion) after removal, and replace with new ones.

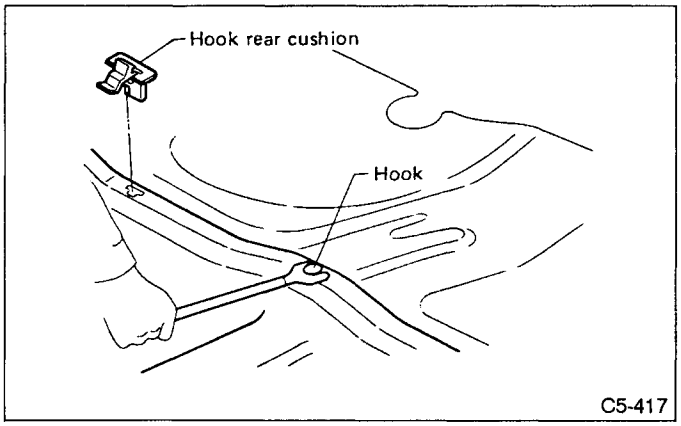


Fig. 43

7) Roll up floor mat, and remove four anchor bolts securing ELR assembly to body.

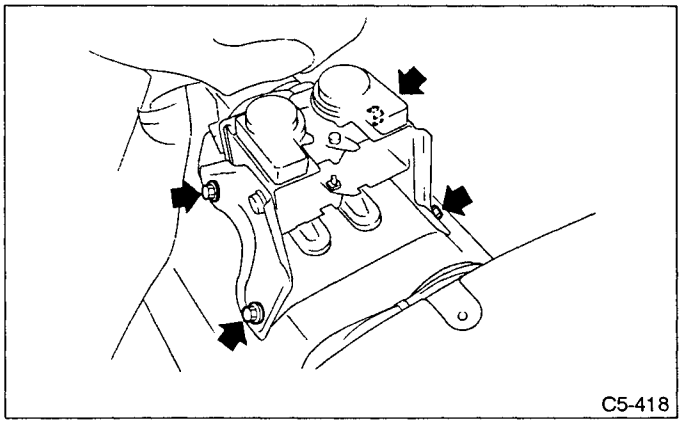


Fig. 44

B: DISASSEMBLY

Remove M6-bolts which mount base of ELR.

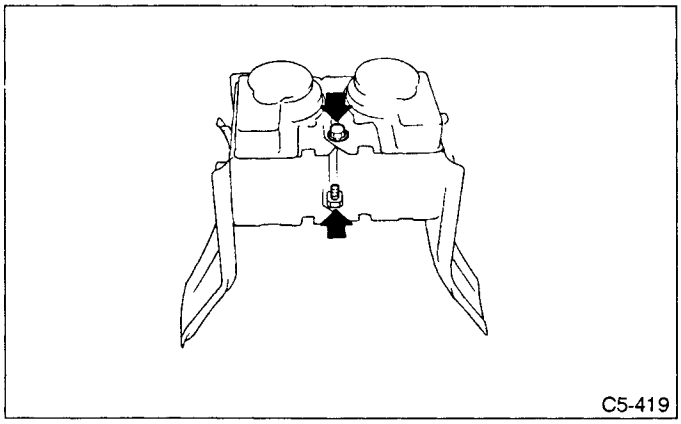


Fig. 45

C: ASSEMBLY

Reverse the removal and disassembly procedures.

D: OPERATION CHECK

Perform operation checks before installing new parts.
1) Align point of ELR ASSY with floor tunnel and temporarily install ELR ASSY. Check that shoulder belt winds and unwinds properly.
2) Gradually tilt ELR ASSY. Check that ELR locks so that belt cannot be withdrawn when ELR is tilted 45° or more in relation to standard installation angle, and that ELR unlocks when it is tilted within 15°.

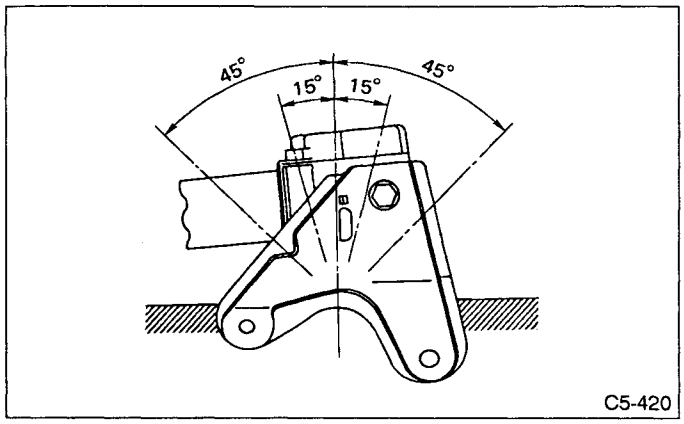


Fig. 46

E: INSTALLATION

Reverse the removal and disassembly procedures.

6. Rear Seat Belt

A: REMOVAL

1. INNER BELT ASSY

1) Remove rear seat cushion. <Refer to [W2A0].>
2) Remove bolts.

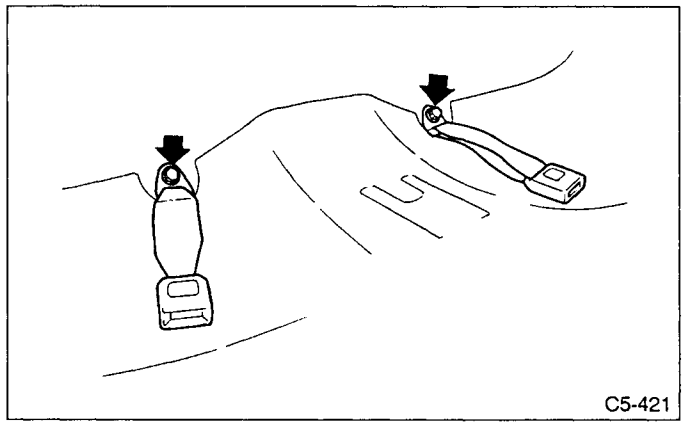


Fig. 47

2. OUTER BELT ASSY

1) Disconnect battery ground cable.
2) Remove rear seat backrest. ⟨Refer to [W2A0].⟩
3) Remove rear shelf trim. ⟨Refer to [W10A0].⟩
4) Remove two bolts from compartment side.

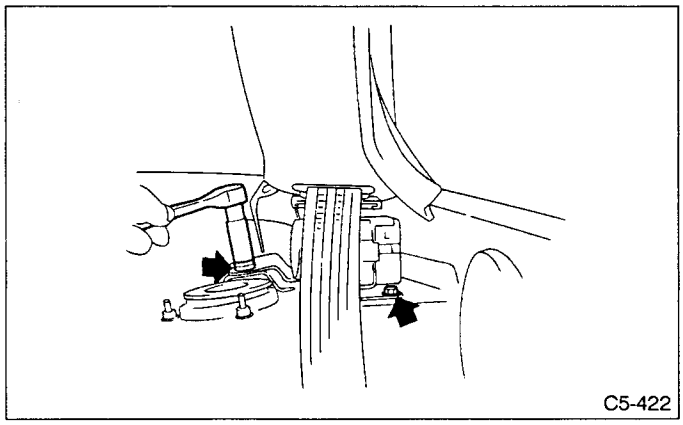


Fig. 48

5) Remove one bolt from lower side of compartment.

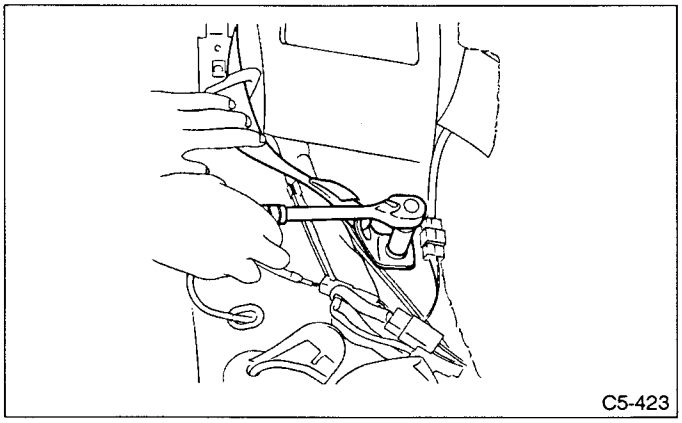


Fig. 49

6) Remove trunk side trim. ⟨Refer to [W16A0].⟩
7) Remove one bolt from trunk compartment side.

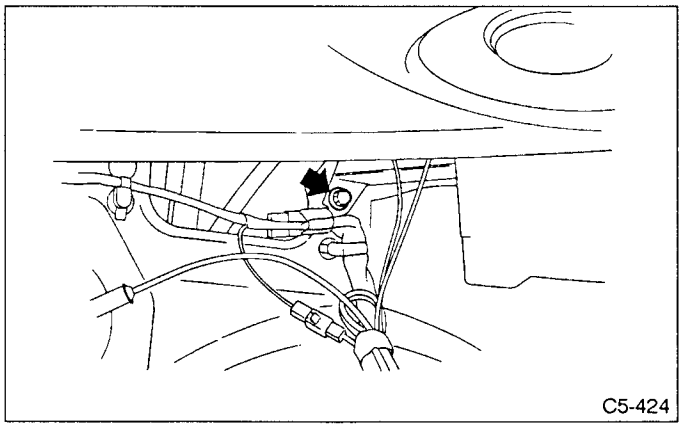


Fig. 50

B: INSTALLATION

Installation is in the reverse order of removal. Ensure that seat belt is properly reeled on and off after installation of ELR.

a. Be extremely careful not to confuse center seat anchor plate with outer seat anchor plate during installation.

b. Ensure that seat belts are free from twisting after installation.

c. Ensure that tongues, buckles and belts are properly placed on seat.

7. Side Sill Upper Cover

A: REMOVAL

Carefully remove four clips, one at a time.

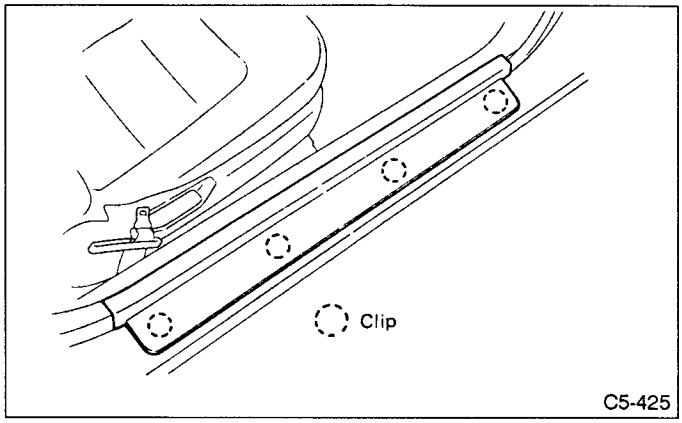


Fig. 51

8. Rear Quarter Trim

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove rear seat cushion. ⟨Refer to [W2A0].⟩
3) Remove side sill upper cover. ⟨Refer to [W7A0].⟩
4) Remove two screws.

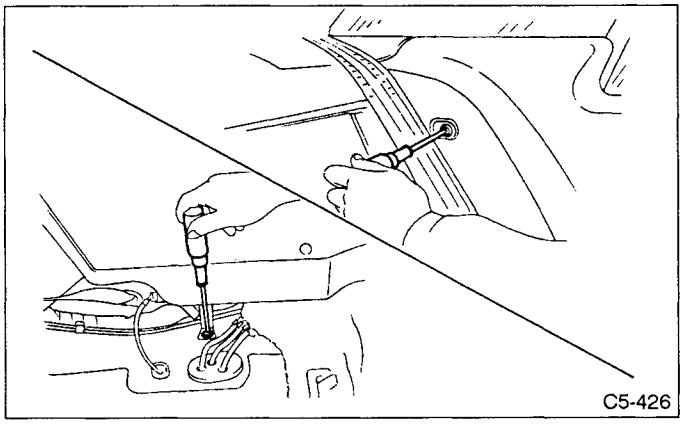


Fig. 52

5) Carefully remove four clips, one at a time. Disconnect power window harness connectors.

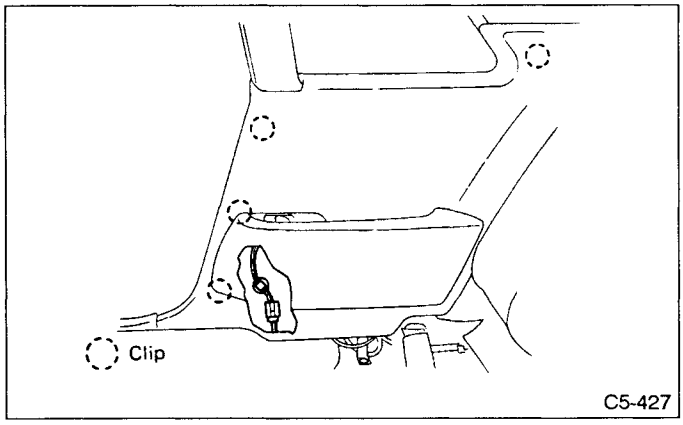


Fig. 53

B: INSTALLATION

Installation is in the reverse order of removal.

9. Side Sill Lower Cover

Supplemental Restraint System "Airbag"

Airbag system wring harness is routed near side sill and floor panel.

a. All airbag system wiring harness and connectors are colored yellow. Do not use electical test equipment on these circuit.

b. Be careful not to damage Airbag system wiring harness when servicing the side sill lower cover.

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove front seat. ⟨Refer to [W1A0].⟩
3) Remove front pillar lower trim. ⟨Refer to [W14A0].⟩
4) Remove rear quarter trim. ⟨Refer to [W8A0].⟩
5) Remove lap ELR cover. ⟨Refer to [W4A0].⟩
6) Remove cover opener from driver's seat side.

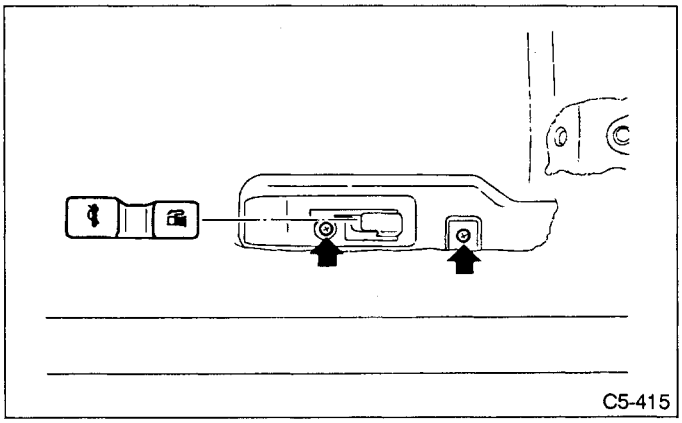


Fig. 54

7) Remove hooks from rear cushion. Discard old hooks and replace with new ones.
8) Remove one screw and three caps.

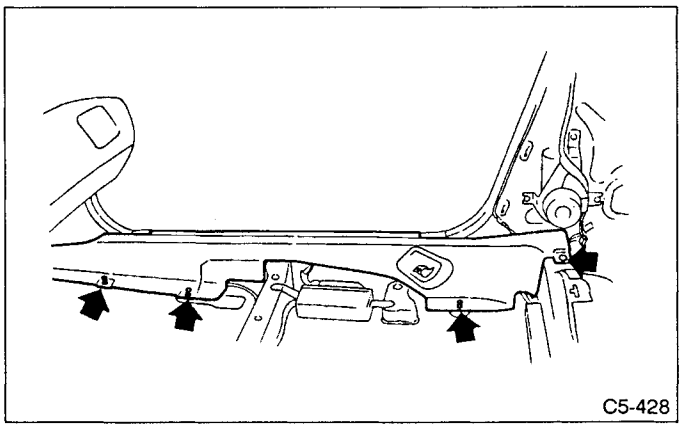


Fig. 55

B: INSTALLATION

Installation is in the reverse order of removal.

10. Rear Shelf Trim

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove rear quarter trim. ⟨Refer to [W8A0].⟩
3) Extract rear wiper base cover.

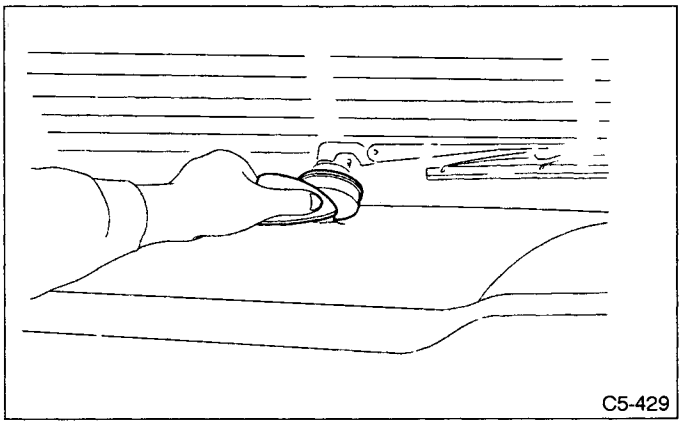


Fig. 56

4) Remove screw from each side of rear shelf trim.

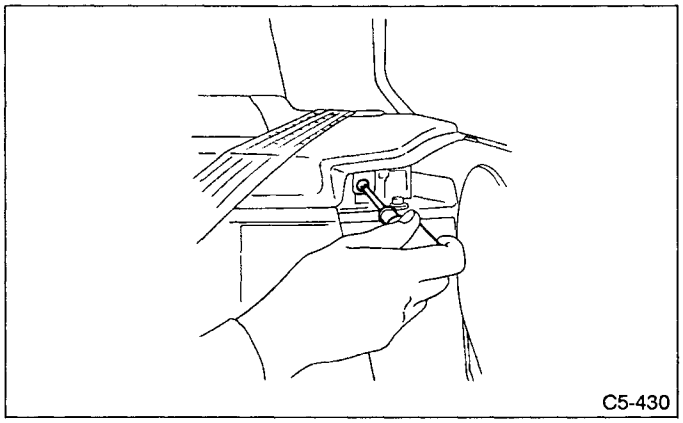


Fig. 57

5) Carefully remove the three clips (one at a time) from front edge of rear shelf trim, move it forward.

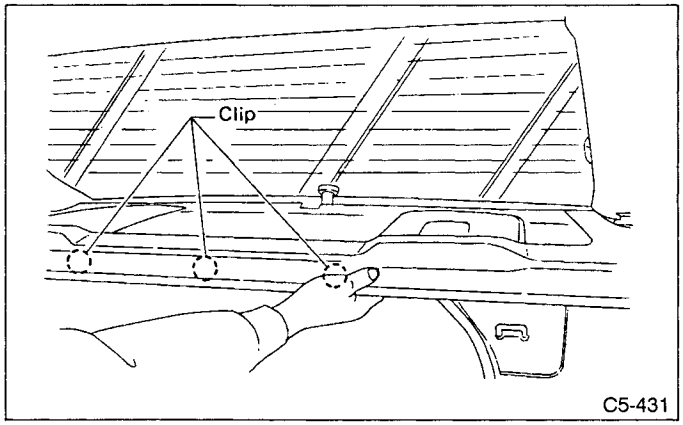


Fig. 58

B: INSTALLATION

Installation is in the reverse order of removal.

11. Front Pillar Upper Trim

A: REMOVAL

1) Remove assist rail grip from front passenger seat side.

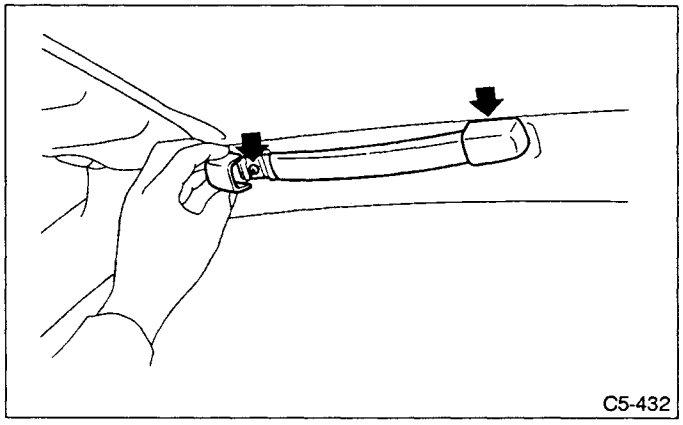


Fig. 59

2) Carefully remove five clips, one at a time.

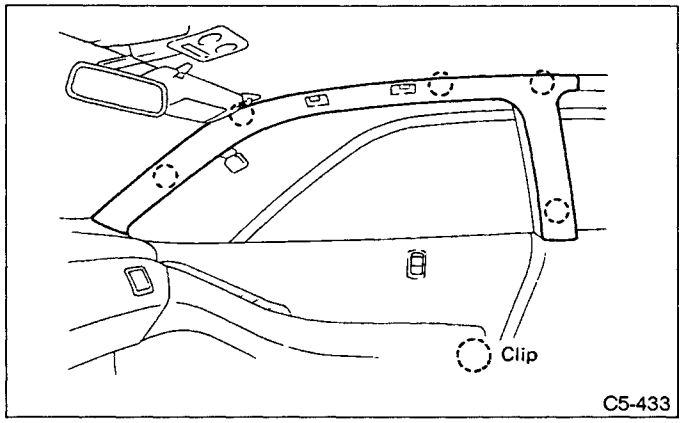


Fig. 60

3) Remove front pillar upper trim by raising its front edge. Be careful not to break pawls.

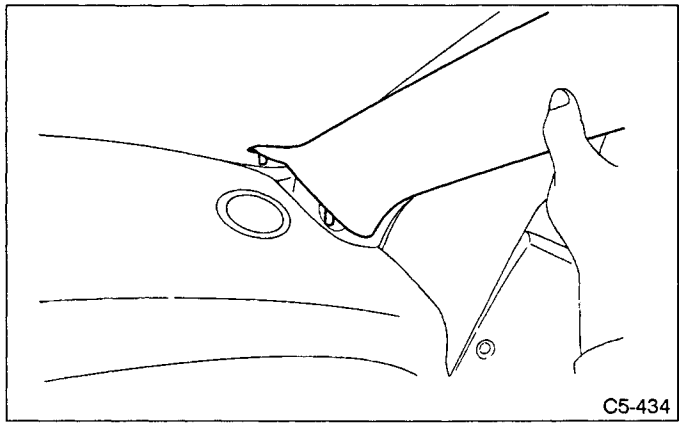


Fig. 61

B: INSTALLATION

Installation is in the reverse order of removal.

12. Rear Pillar Upper Trim

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove front pillar upper trim. ⟨Refer to [W11A0].⟩
3) Remove rear shelf trim. ⟨Refer to [W10A0].⟩
4) Remove coat hanger hook.

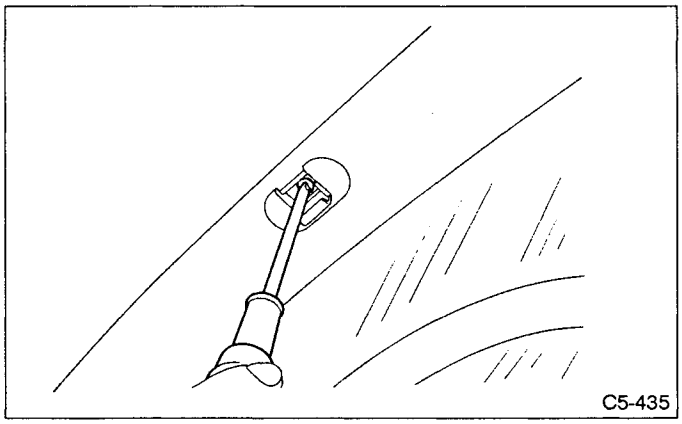


Fig. 62

5) Carefully remove five clips, one at a time.

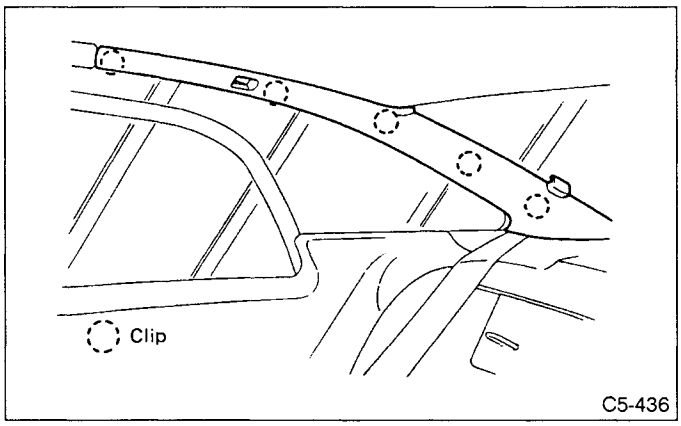


Fig. 63

B: INSTALLATION

Installation is in the reverse order of removal.

13. Roof Trim & Inner Parts

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove front pillar upper trim. ⟨Refer to [W11A0].⟩
3) Remove rear pillar upper trim. ⟨Refer to [W12A0].⟩
4) Remove assist rail bracket.

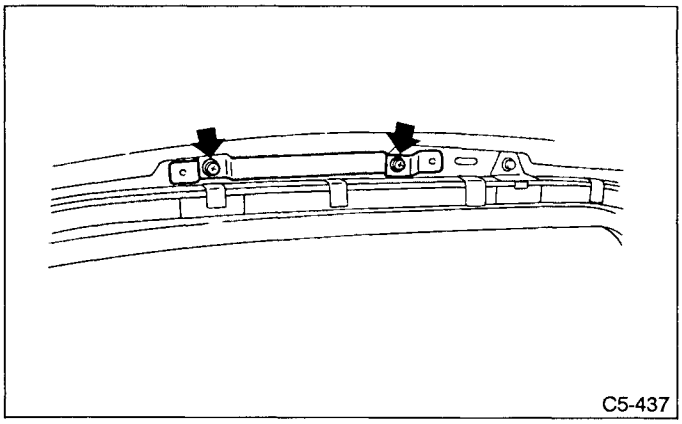


Fig. 64

5) Remove sun visor assembly and sunvisor hook.

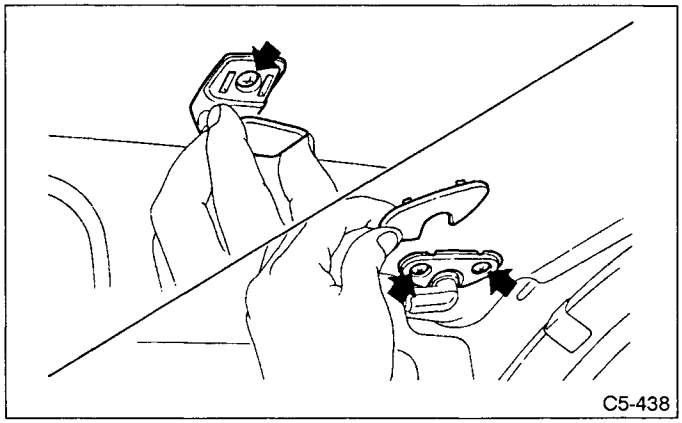


Fig. 65

6) Remove rearview mirror assembly.

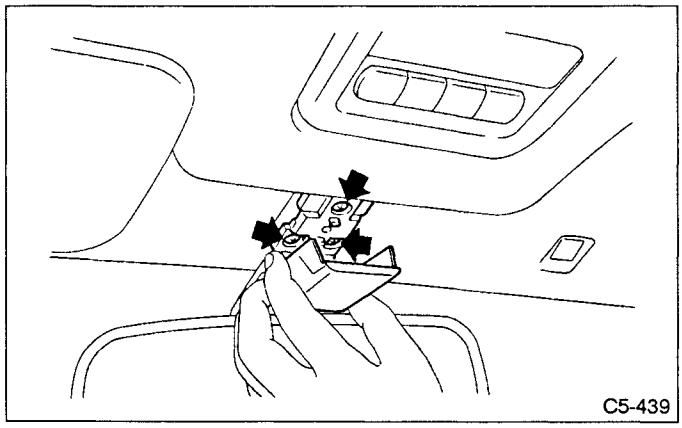


Fig. 66

7) Remove two spotlight lenses to gain access to two screws and connectors. Remove two screws and connectors; remove spotlight assembly.

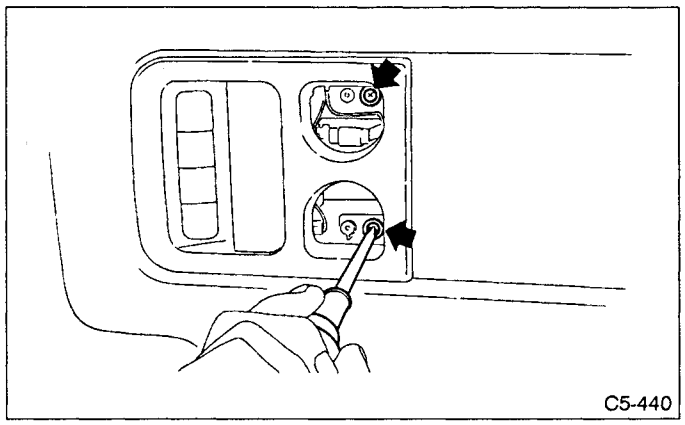


Fig. 67

8) Remove spotlight base.
(without sunroof vehicle)

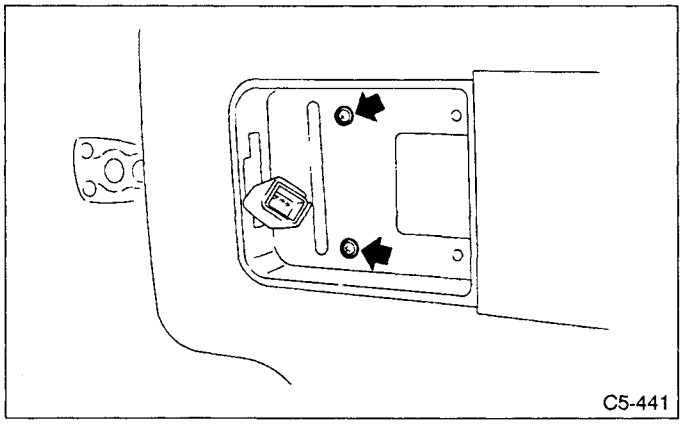


Fig. 68

9) Remove sunroof garnish.
(with sunroof vehicle)

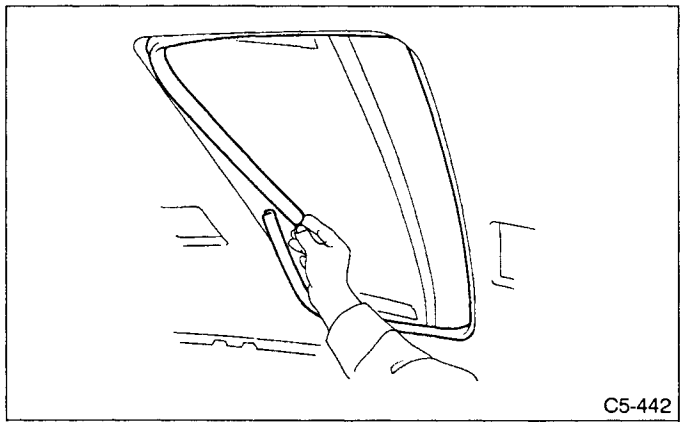


Fig. 69

10) Remove interior light.

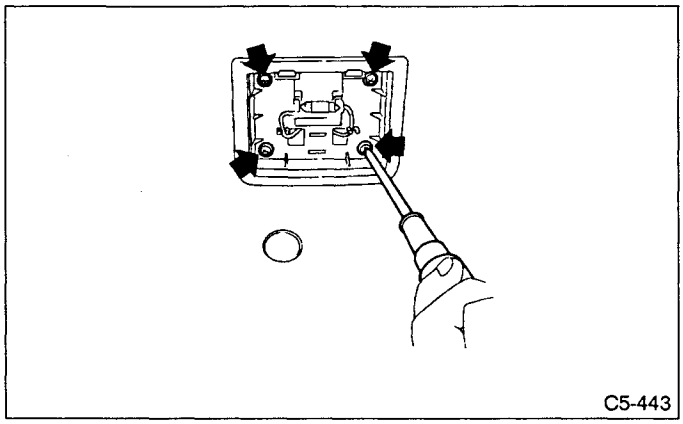


Fig. 70

11) Remove four clips and roof trim.

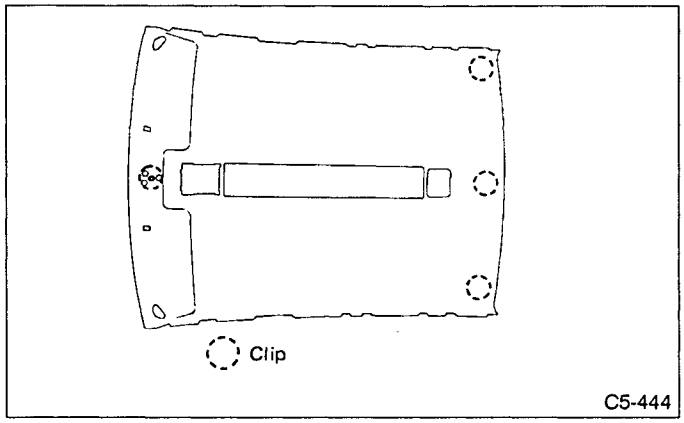


Fig. 71

B: INSTALLATION

Installation is in the reverse order of removal.

14. Floor Mat

Supplemental Restraint System "Airbag"
Airbag system wiring harness is routed near side sill and floor panel.
a. All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuit.
b. Be careful not to damage Airbag system wiring harness when servicing the floor mat.

A: REMOVAL

1) Disconnect battery ground cable.
2) Remove front seat. ⟨Refer to [W1A0].⟩
3) Remove rear seat cushion. ⟨Refer to [W2A0].⟩
4) Remove console box. ⟨Refer to [5-4].⟩
5) Remove lap ELR cover.

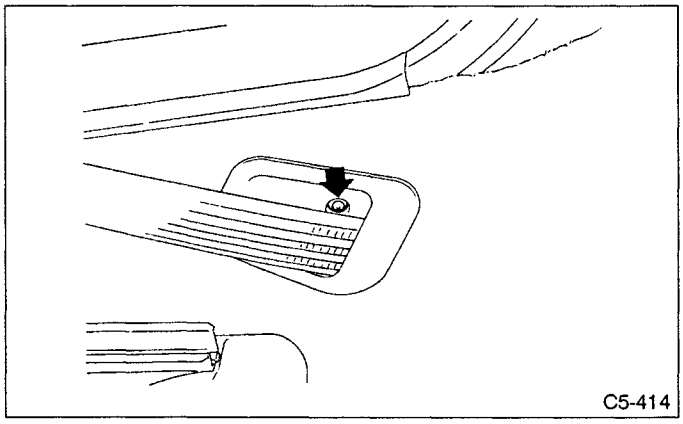


Fig. 72

6) Remove side sill upper cover.

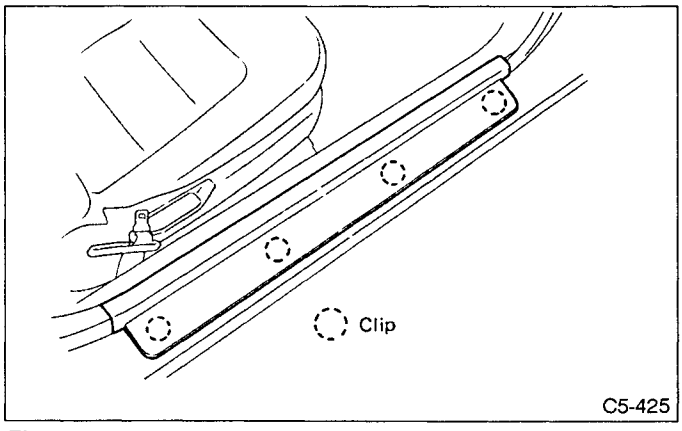


Fig. 73

7) Remove front pillar lower trim.

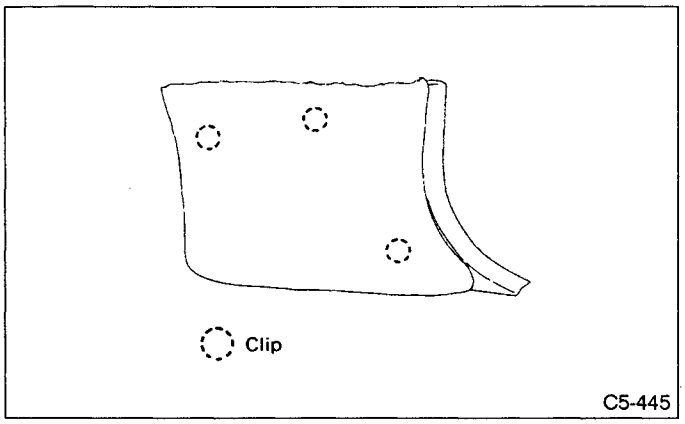


Fig. 74

8) Remove cover opener from driver's seat side.

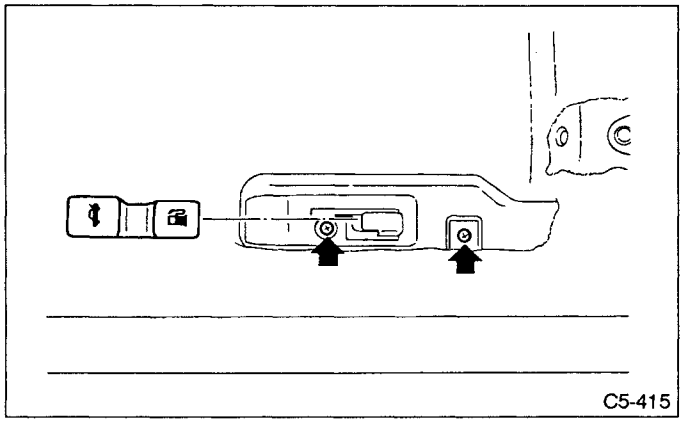


Fig. 75

9) Remove accelerator pedal stopper.

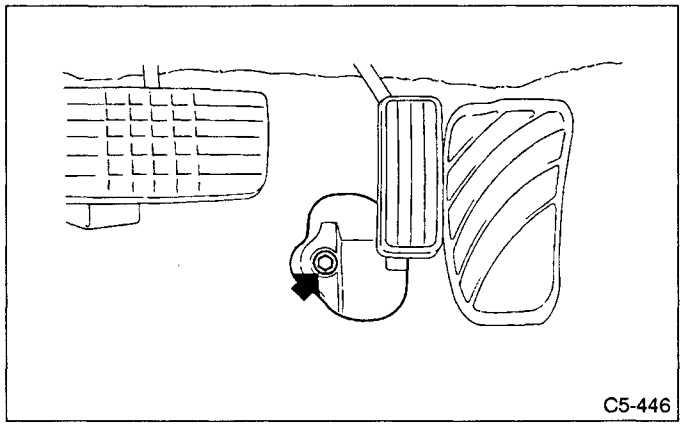


Fig. 76

10) Remove ten clips using puller, and remove floor mat.

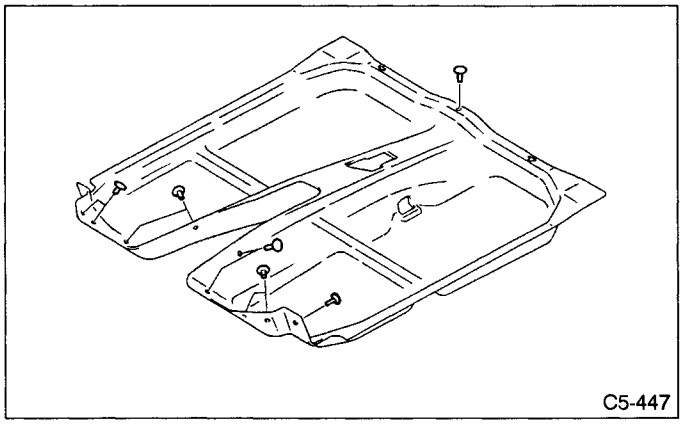


Fig. 77

B: INSTALLATION

1) Before setting floor mat in position, pass power seat harness and connector through hole.

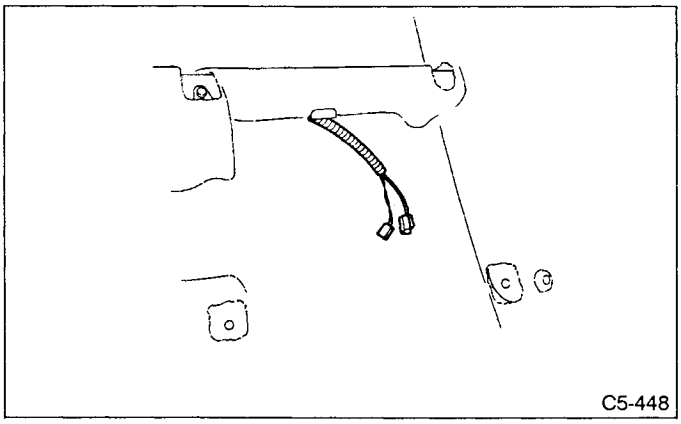


Fig. 78

2) Align edge of floor mat with side sill lower cover.

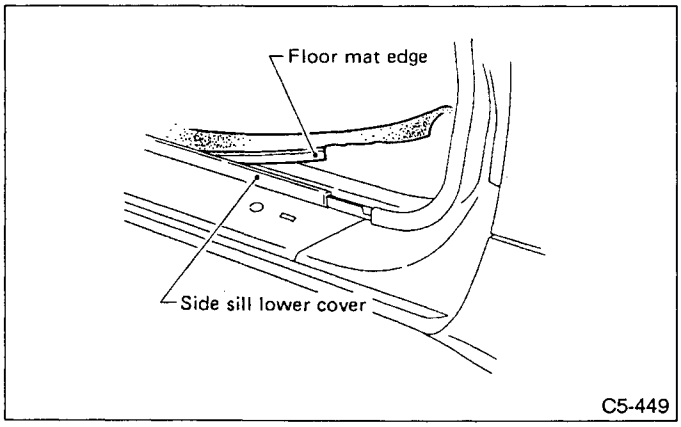


Fig. 79

3) Install remaining parts in reverse order of removal.

15. Bulk Side Trim

A: REMOVAL

Remove trunk garnish and undo two clips.

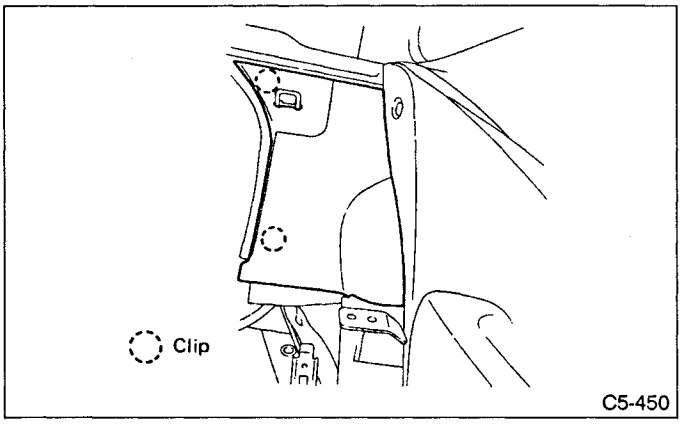


Fig. 80

16. Trunk Trim

A: REMOVAL

1) Remove trunk edge ⟨Refer to [W2A0].⟩ and front two hooks; remove trunk mat.

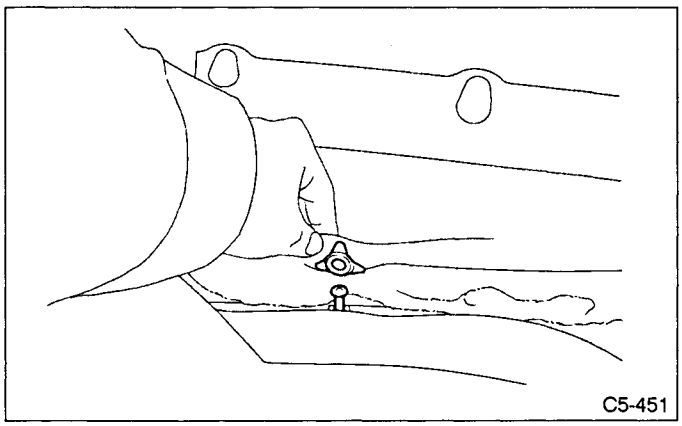


Fig. 81

2) Remove trunk rear panel trim.

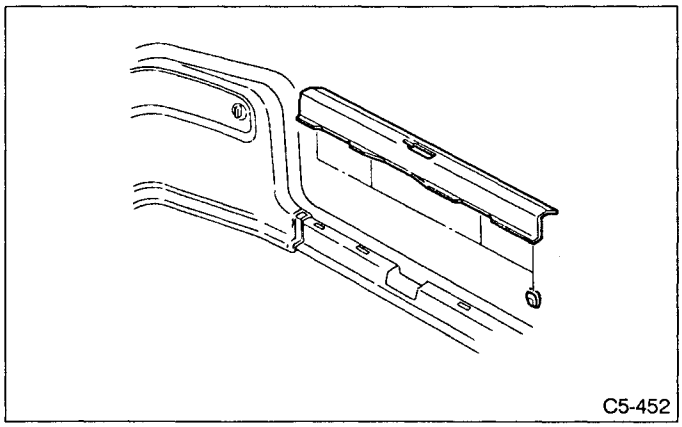


Fig. 82

3) Roll up weatherstrip, remove three clips and trunk side trim.

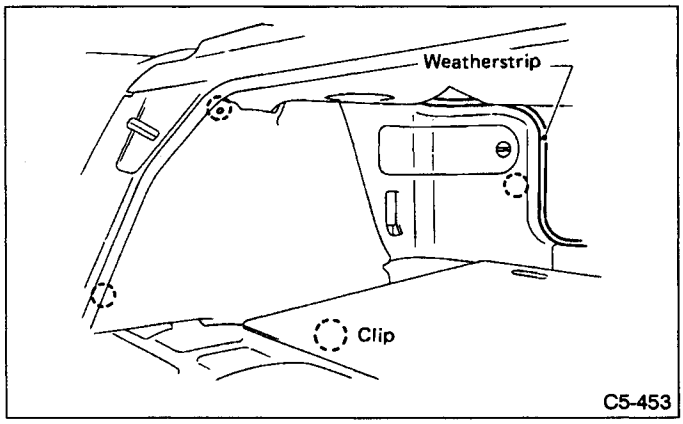


Fig. 83

4) Remove eight clips, then upper trunk trim.

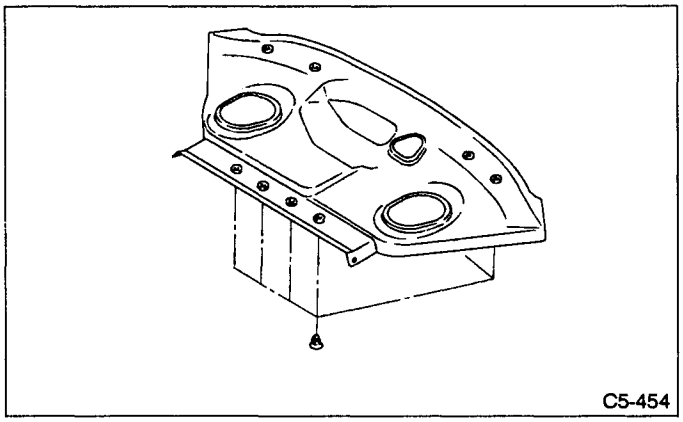


Fig. 84

B: INSTALLATION

Install in reverse order of above removal procedures. Make sure edge of side trunk trim and upper thank trim are fitted in weatherstrip.

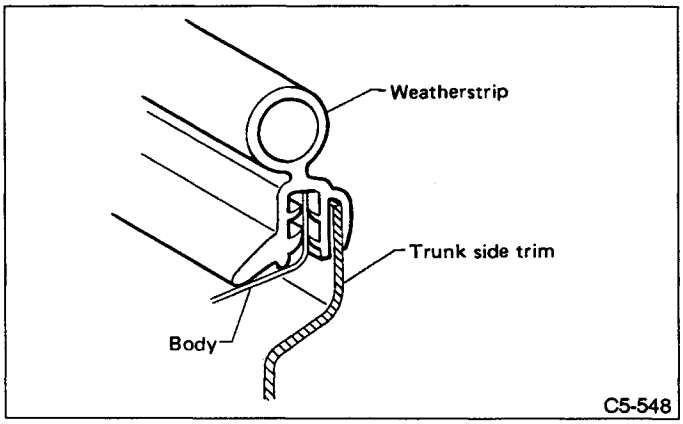
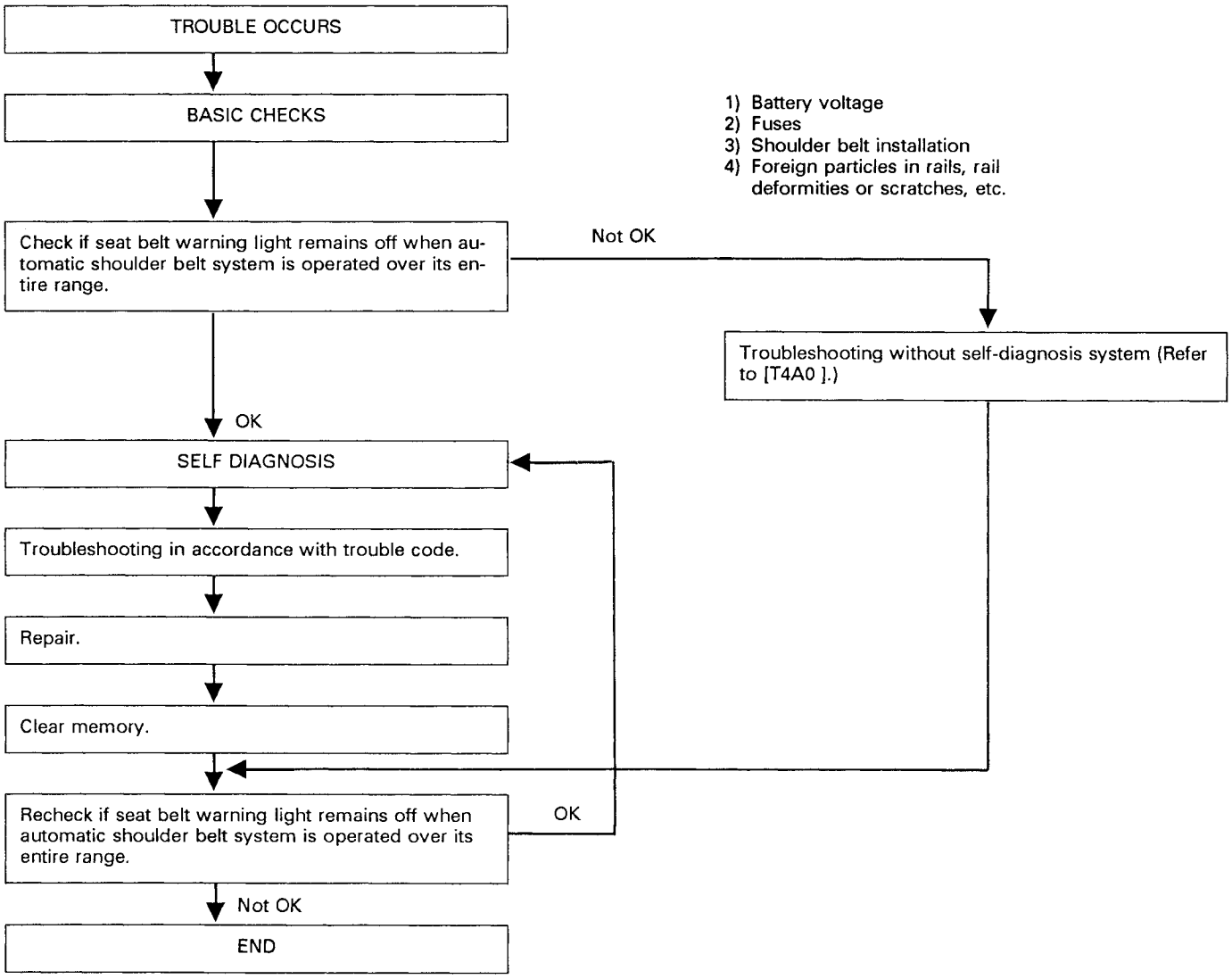


Fig. 85

T TROUBLESHOOTING [Automatic Shoulder Belt]

1. Self-diagnosis System

A: BASIC TROUBLESHOOTING PROCEDURE



B: SEAT BELT WARNING LIGHT INDICATIONS

If any self-diagnosis item is malfunctioning, the seat belt warning light activates (as shown in Figure 101) immediately after the ignition switch is turned ON.

- Warning light signal is as follows.

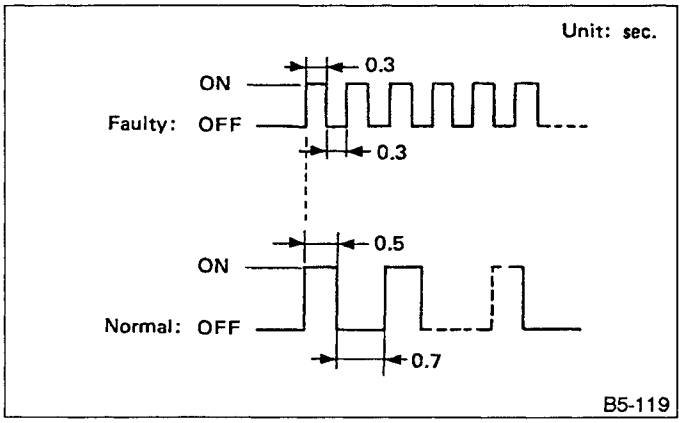


Fig. 86

When the warning light blinks at an interval of 0.3 seconds, conduct a self-diagnosis operation to determine the problem indicated by the trouble code.

*: If either the driver's seat belt or the passenger's seat belt is not fastened after the ignition switch is turned ON, the warning light will remain on after it blinks for 6± 2 seconds.

If any shoulder belt or lap belt (for the driver or front passenger) is unfastened after the ignition switch is turned ON, the buzzer will sound for 6± 2 seconds.

C: SELF-DIAGNOSIS

When the seat belt warning light blinks at abnormal intervals, conduct the self-diagnosis operation as follows:

1) Turn ignition switch ON (with engine OFF).
2) Connect DIAG. terminal to No. 8 terminal of diagnosis connector located below the pillar lower cover LH side.
3) Check in accordance with the trouble code outputted by the seat belt warning light.

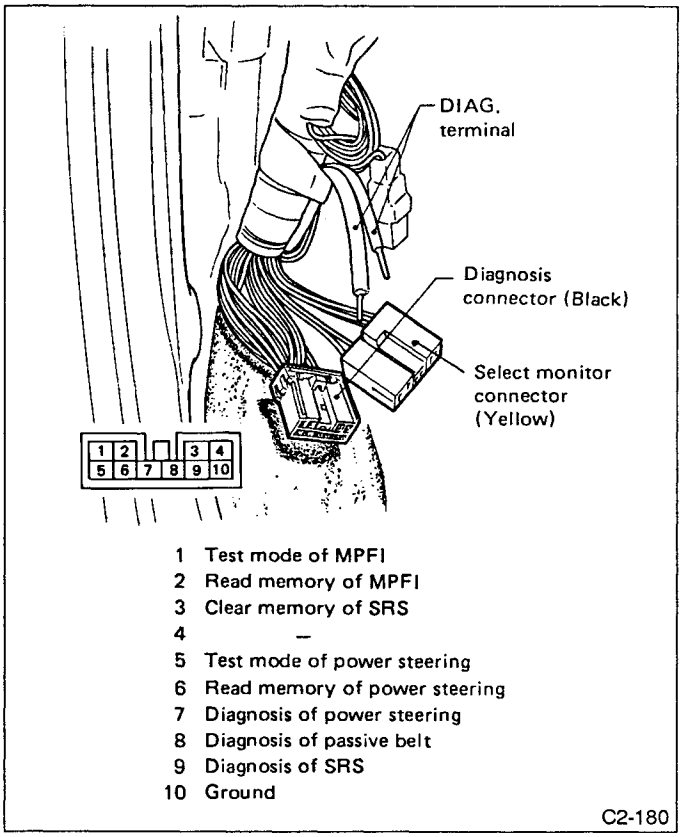


Fig. 87

D: LIST OF TROUBLE CODES

1. TROUBLE CODES

Trouble code	Content of diagnosis
11	Open and closed ends of driver's door latch switch are ON.
12	Open and closed ends of driver's door latch switch are OFF.
13	Front limit switch (on driver's side) remains ON.
14	Rear limit switch (on driver's side) remains ON.
15	Front and rear limit switches (on driver's side) are OFF.
16	Shoulder belt buckle switch and front limit switch (on driver's side) are OFF.
21	Open and closed ends of passenger's door latch switch are ON.
22	Open and closed ends of passenger's door latch switch are OFF.
23	Front limit switch (on passenger's side) remains ON.
24	Rear limit switch (on passenger's side) remains ON.
25	Front and rear limit switches (on passenger's side) are OFF.
26	Shoulder belt buckle switch and front limit switch (on passenger's side) are OFF.
32	Ignition switch is ON with battery power left OFF.

2. HOW TO READ TROUBLE CODES

The seat belt warning light flashes a code corresponding to the faulty parts.
The long segment (1.25 sec on) indicates a "ten", and the short segment (0.30 sec on) indicates a "one".

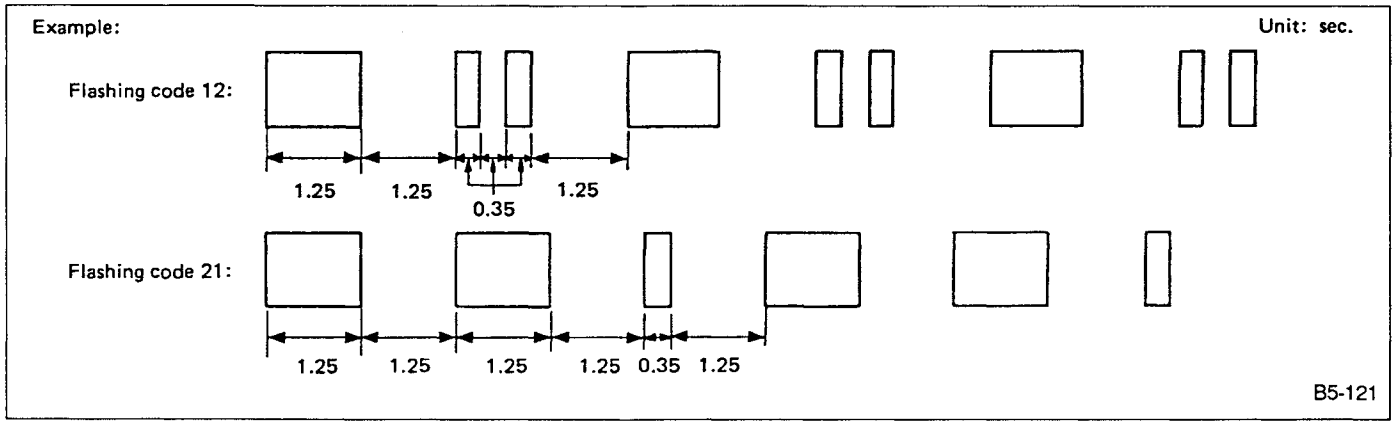


Fig. 88

E: CLEAR MEMORY

Only one trouble code is stored in the memory of this system. If several trouble codes are outputted, only the initial trouble code which is detected by the system is memorized.
After any repairs, the automatic shoulder belt system must be operated over its entire range (with the following fuse removed and with the memory cleared) to check that the seat belt warning light blinks abnormally.

CLEAR MEMORY:
Removal of No. 22 Fuse (Ignition switch OFF)

2. Control Unit I/O Signal

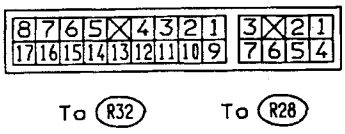
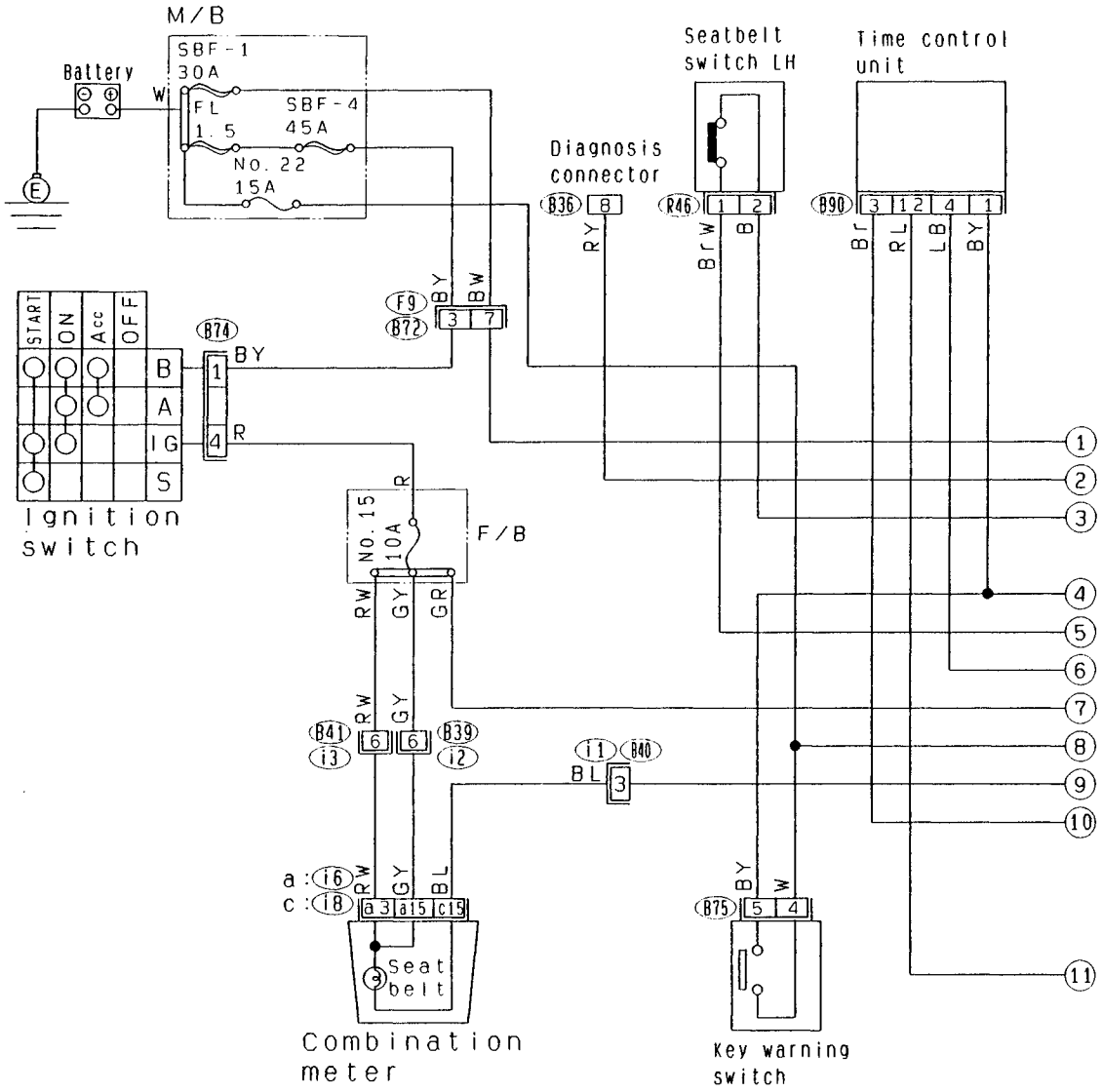
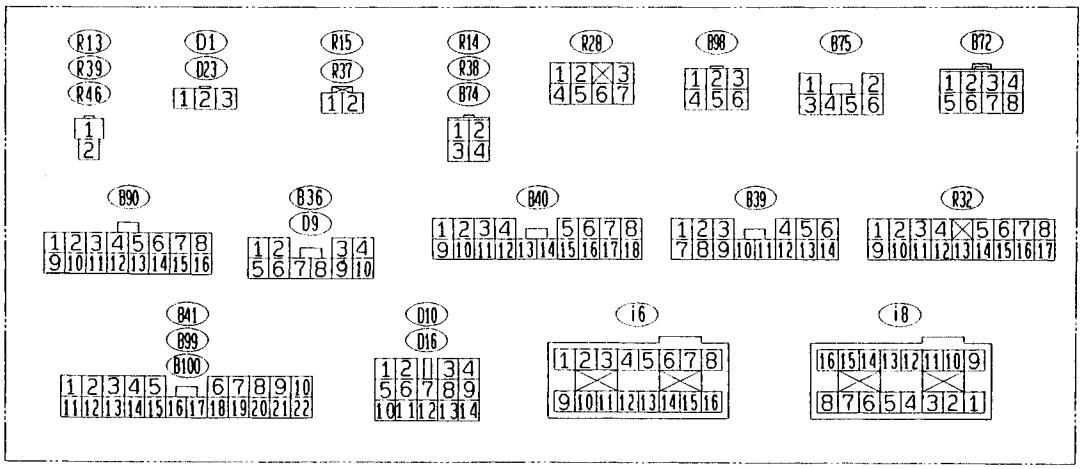


Fig. 89

Contents	Connector No.	Terminal	Signal (V)		
			Ig. SW OFF	Ig. SW ON	
				Engine OFF	Engine ON
Front limit switch (on driver's side)	R32	1	—	10 — 13	—
Shoulder belt buckle switch (on passenger's side)		2	—	10 — 13	—
Shoulder belt buckle switch (on driver's side)		3	—	10 — 13	—
Buzzer (time control unit)		4	—	10 — 13	—
Warning light		5	—	10 — 13	—
Ignition switch		6	0	0	13 — 14
Battery		8	—	—	13 — 14
GND(Ground)		9	—	—	—
Door latch switch (on passenger's side)		10	—	10 — 13	0
Door latch switch (on passenger's side)		11	—	10 — 13	0
Door latch switch (on driver's side)		12	—	10 — 13	0
Rear limit switch (on passenger's side)		13	—	10 — 13	0
Front limit switch (on passenger's side)		14	—	10 — 13	0
Door latch switch (on driver's side)		15	—	10 — 13	0
Seat belt switch (on driver's side)		16	—	10 — 13	0
Rear limit switch (on driver's side)		17	—	10 — 13	0
Motor (LH)	R28	1	—	0	13 — 14
Motor (LH)		2	—	0	13 — 14
SBF-1		3	—	—	13 — 14 (Motor OFF)
Diagnosis connector		4	—	4 — 5	—
GND(Ground)		5	—	—	—
Motor (RH)		6	—	0	13 — 14
Motor (RH)		7	—	0	13 — 14

3. Diagram of Automatic Shoulder Belt System





C5-558

Fig. 90

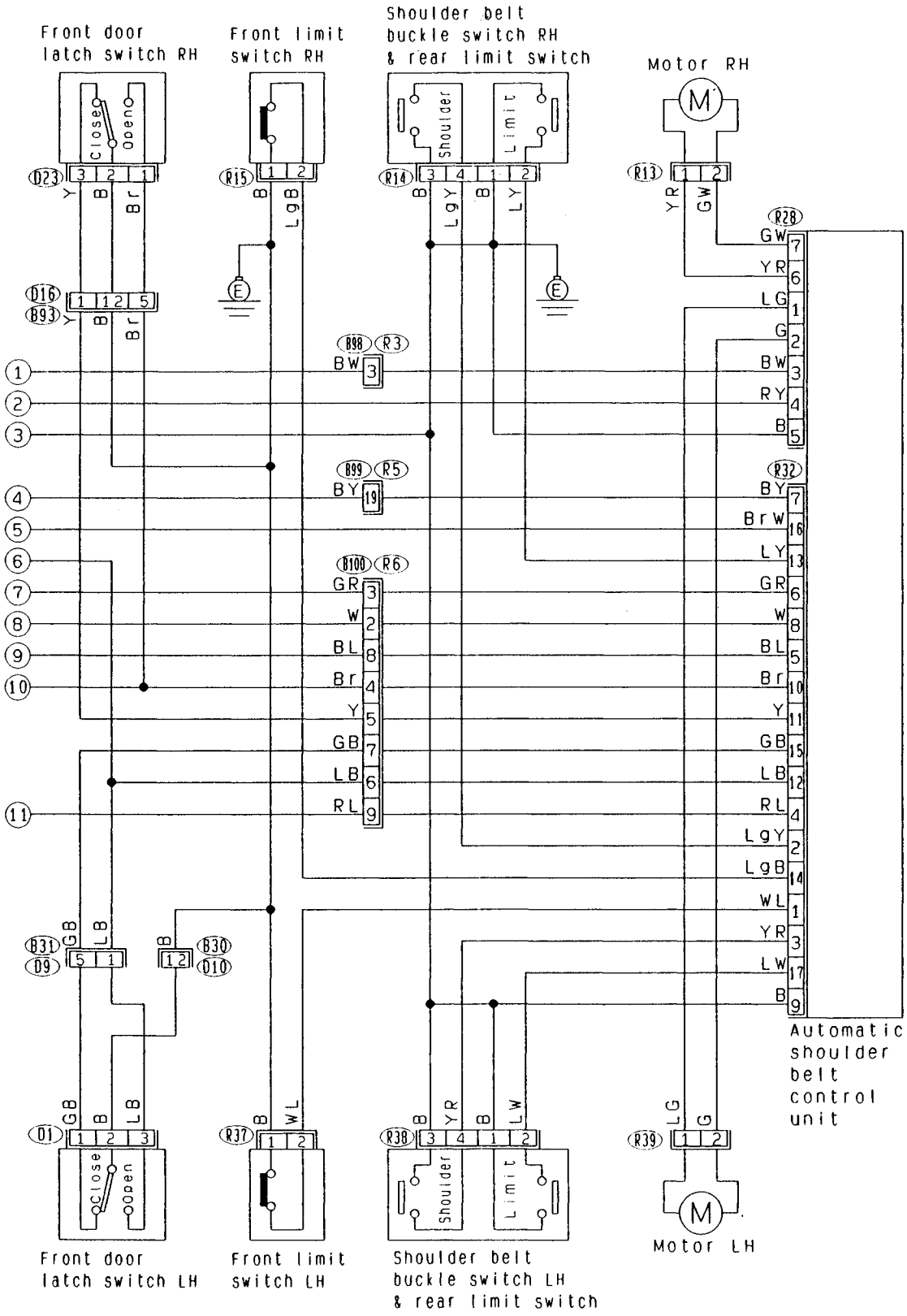

Front door latch switch RH
Front limit switch RH
Shoulder belt buckle switch RH & rear limit switch
Motor RH
Close
Open
Shoulder
Limit
D23
R15
R14
R13
R28
D16
B93
B88
R3
B99
R5
B100
R6
R32
B31
D9
B30
D10
D1
R37
R38
R39
Automatic shoulder belt control unit
Front door latch switch LH
Front limit switch LH
Shoulder belt buckle switch LH & rear limit switch
Motor LH
C5-559

Fig. 91

4. Troubleshooting Chart with Trouble Code

A: TROUBLE CODE 11 — DRIVER'S DOOR LATCH SWITCH REMAINS ON

CONTENTS OF DIAGNOSIS:
- Faulty door latch switch
- Shorted wire harness

TROUBLE SYMPTOM:
- Driver's shoulder anchor is inoperative.

1	Measure signal voltage at control unit.	OK	Repair control unit terminal poor contact. (Replace control unit.)
	▼ Not OK		
2	Check door latch switch.	Not OK	Replace door latch switch.
	▼ OK		
3	Check harness/ connector between control unit and door latch switch.	Not OK	Repair harness/ connector.
	▼ OK		
	Repair control unit terminal poor contact. (Replace control unit.)		

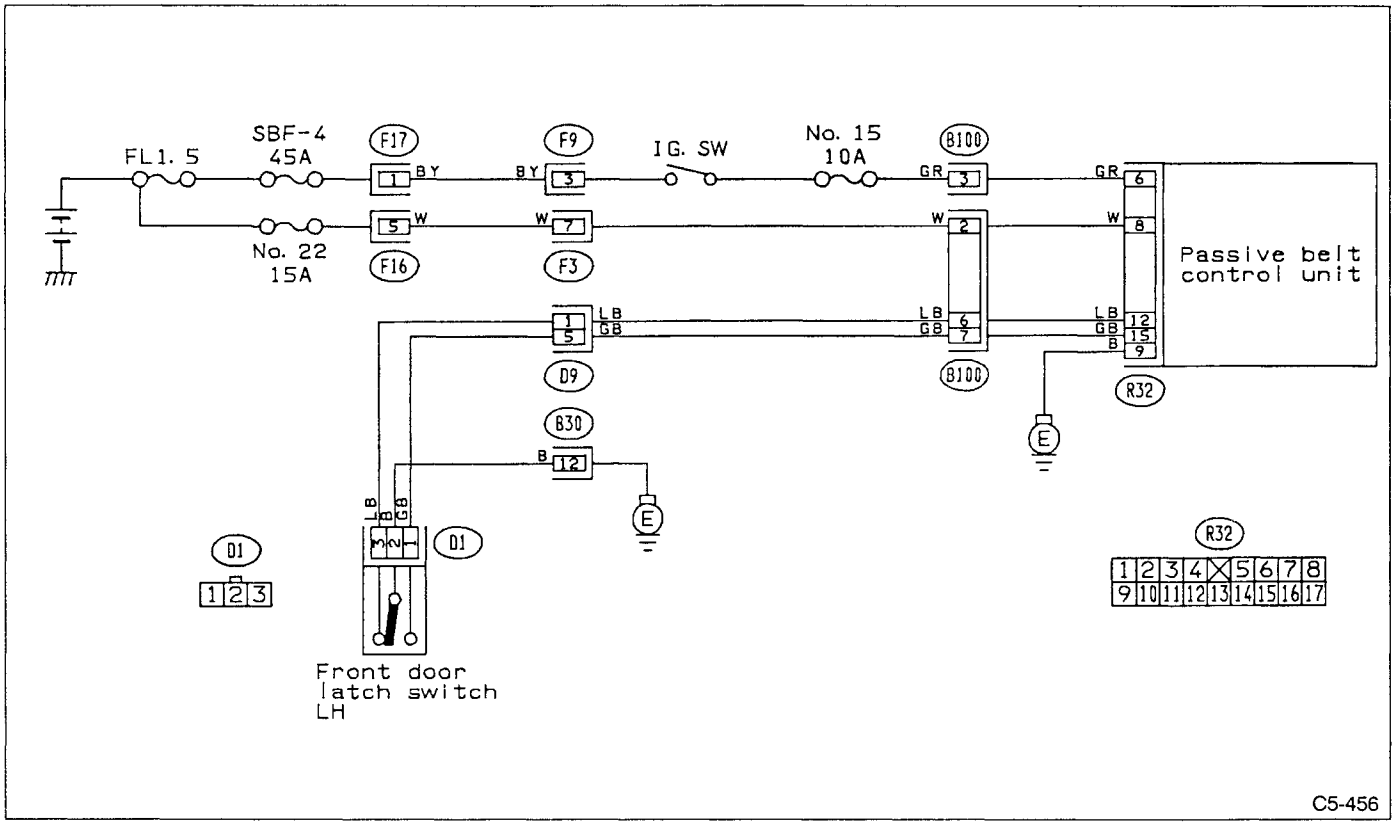


Fig. 92

1. MEASURE SIGNAL VOLTAGE AT CONTROL UNIT

1) Turn ignition switch ON (with engine OFF).
2) Measure signal voltage at control unit connector.

Connector & terminal/Specified voltage:
(R32) No.12 — Body/10 — 13 V (Door closed)
(R32) No.15 — Body/10 — 13 V (Door open)

2. CHECK DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Measure resistance between terminals of connector receptacle (on switch side).

Connector & terminal/Specified resistance:
(D1) No. 2 — No. 1/1 MΩ min. (Door open)
(D1) No. 2 — No. 3/1 MΩ min. (Door closed)

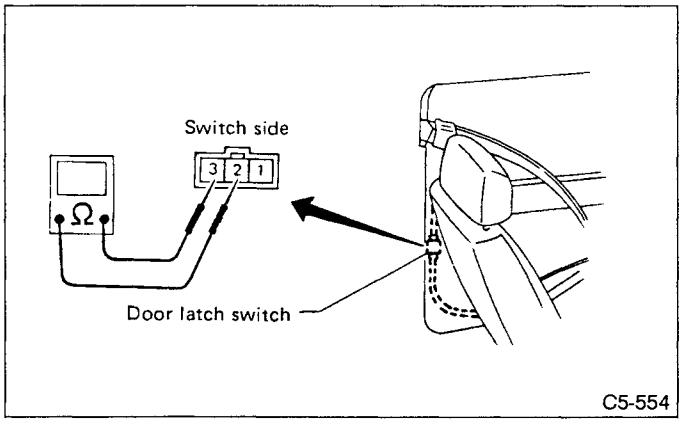


Fig. 93

3. CHECK HARNESS/CONNECTOR BETWEEN CONTROL UNIT AND DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Disconnect connector from control unit.
3) Measure resistance between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 12 — Body/1 MΩ min.
(R32) No. 15 — Body/1 MΩ min.

B: TROUBLE CODE 12 — DRIVER'S DOOR LATCH SWITCH REMAINS OFF.

CONTENTS OF DIAGNOSIS:
- Faulty door latch switch
- Faulty harness/ connector

TROUBLE SYMPTOM:
- Driver's shoulder anchor is inoperative.
- Key warning chime operates with driver's door closed and with ignition switch OFF.

1 Measure signal voltage at control unit.
- OK → Repair control unit terminal poor contact. (Replace control unit.)
- Not OK ↓

2 Check door latch switch.
- Not OK → Replace door latch switch.
- OK ↓

3 Check harness/ connector between control unit and door latch switch.
- Not OK → Repair harness/ connector.
- OK ↓

Repair control unit terminal poor contact. (Replace control unit.)

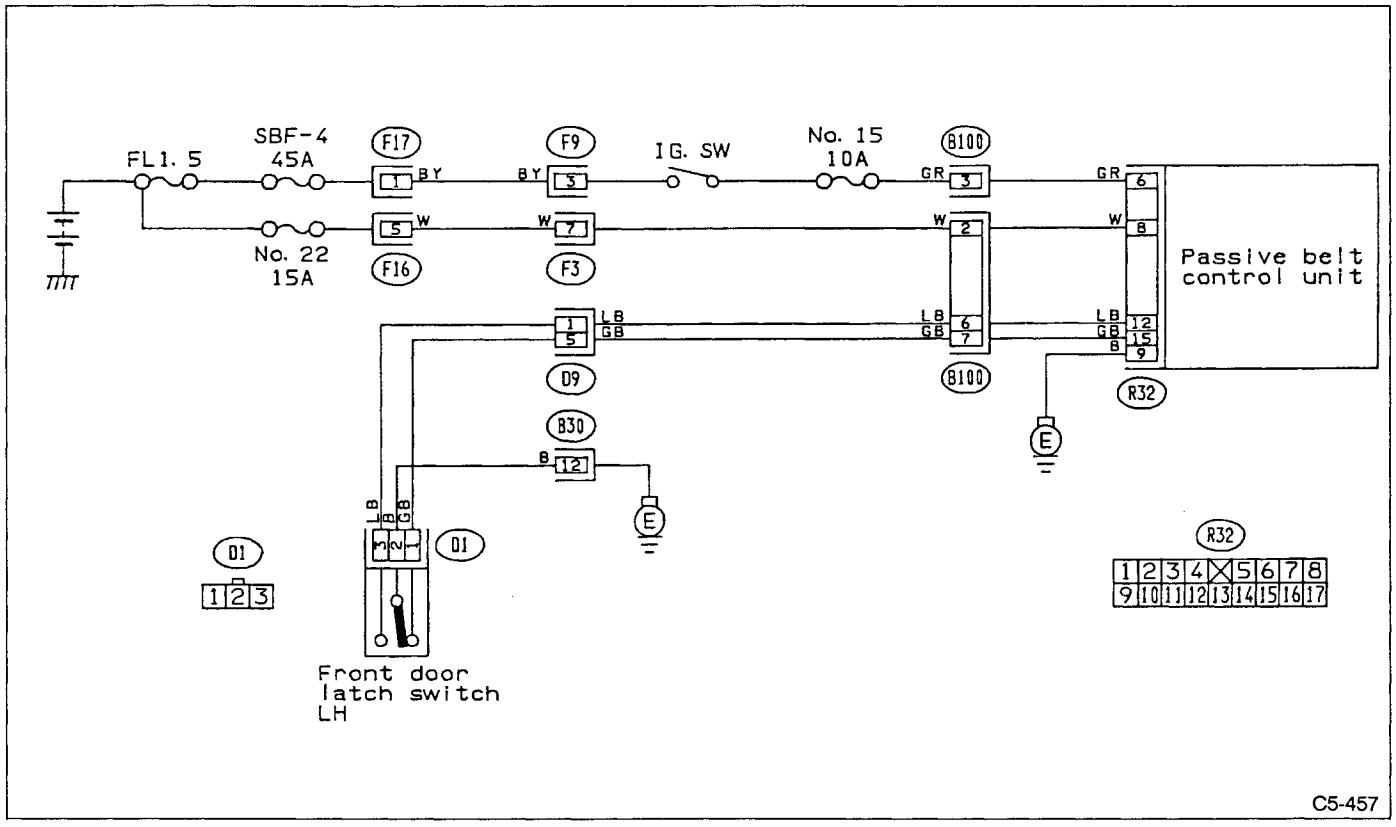


Fig. 94

1. MEASURE SIGNAL VOLTAGE AT CONTROL UNIT

1) Turn ignition switch ON (with engine OFF).
2) Measure signal voltage at control unit connector.

Connector & terminal/Specified voltage:
(R32) No. 12 — Body/0 V (Door open)
(R32) No. 15 — Body/0 V (Door closed)

2. CHECK DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Measure resistance between terminals of connector receptacle (on switch side).

Connector & terminal/Specified resistance:
(D1) No. 2 — No. 1/1 Ω max. (Door closed)
(D1) No. 2 — No. 3/1 Ω max. (Door open)

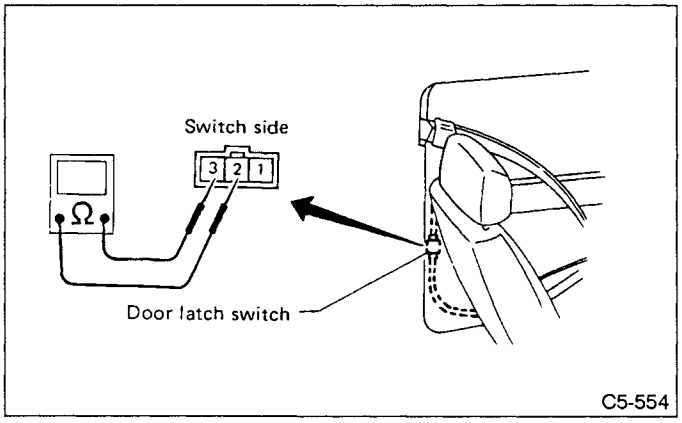


Fig. 95

3. CHECK HARNESS/CONNECTOR BETWEEN CONTROL UNIT AND DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Disconnect connector from control unit.
3) Measure resistance between control unit connector and door latch switch connector.

Connector & terminal/Specified resistance:
(R32) No. 12 — (D1) No. 3/1 Ω max.
(R32) No. 15 — (D1) No. 1/1 Ω max.
(D1) No. 1 — Body/1 Ω max.

C: TROUBLE CODE 13 — FRONT LIMIT SWITCH (ON DRIVER'S SIDE) REMAINS ON.

CONTENTS OF DIAGNOSIS:
- Faulty front limit switch
- Faulty harness
- Inoperative motor

TROUBLE SYMPTOM:
- Timer activates when anchor reaches front end.
- Anchor stops midway on rail.

If anchor stops midway on rail, check rail for foreign particles. If no foreign particles are noted, proceed to "3. Motor Inspection."

1	Check front limit switch.	Not OK	Replace front limit switch.
	OK ↓		
2	Check front limit switch wire harness.	Not OK	Repair wire harness.
	OK ↓		
3	Check motor.	Not OK	Replace motor.
	OK ↓		
4	Check motor harness.	Not OK	Repair motor harness.
	OK ↓		
	Repair control unit terminal poor contact. (Replace control unit.)		

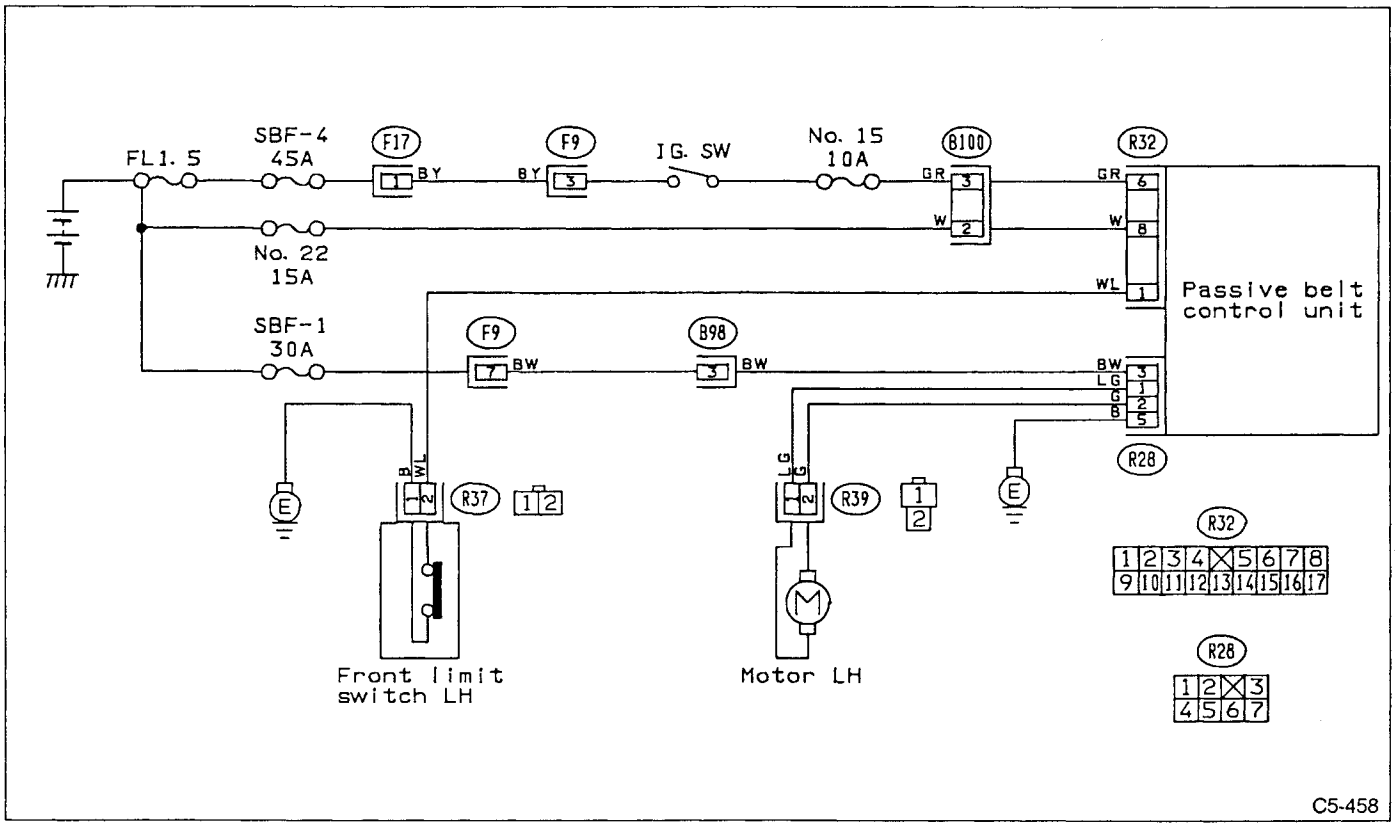


Fig. 96

1. CHECK FRONT LIMIT SWITCH

1) Move shoulder anchor to front end.
2) Disconnect front limit switch connector.
3) Measure resistance between front limit switch's terminals.

Specified resistance:
(R37)1 MΩ min.

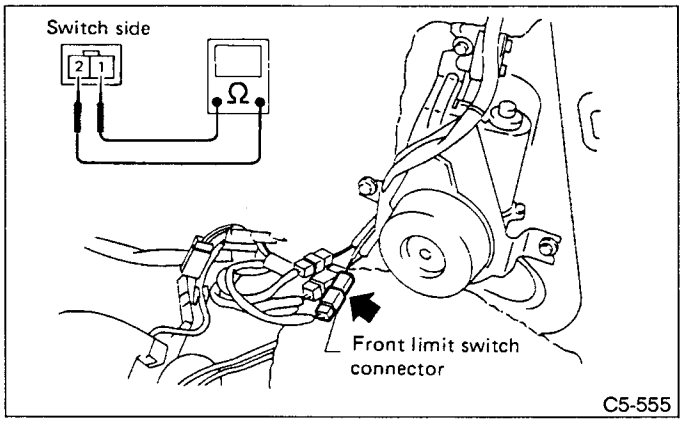


Fig. 97

2. CHECK FRONT LIMIT SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from front limit switch.
3) Measure resistance between front limit switch connector and body.

Connector & terminal/Specified resistance:
(R37) No. 2 — Body/1 MΩ min.

3. CHECK MOTOR

1) Disconnect motor connector and apply 12 volts (DC) to motor terminals.

Terminal & polarity/diagnosis
(R39) No. 1 → +, No. 2 → −/Shoulder anchor moves to rear end.
(R39) No. 1 → −, No. 2 → +/Shoulder anchor moves to front end.

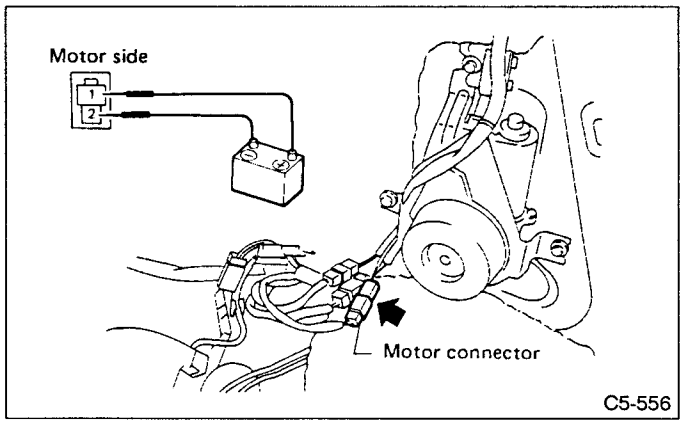


Fig. 98

4. CHECK MOTOR HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from motor.
3) Measure resistance between control unit connector and motor connector, and between control unit connector and body.

Connector & terminal/Specified resistance:
(R28) No. 1 — (R39) No. 1/1 Ω max.— Body/1 MΩ min.
(R28) No. 2 — (R39) No. 2/1 Ω max.— Body/1 MΩ min.
(R28) No. 3 — Body/1 MΩ min.
(R28) No. 5 — Body/1 Ω max.

4) Measure voltage between control unit connector and body.

Connector & terminal/Specified voltage:
(R28) No. 5 — Body/10 — 13 V

D: TROUBLE CODE 14 — REAR LIMIT SWITCH (ON DRIVER'S SIDE) REMAINS ON.

CONTENTS OF DIAGNOSIS:
- Faulty rear limit switch
- Faulty harness
- Inoperative motor

TROUBLE SYMPTOMS:
- Timer activates when anchor reaches rear end.
- Anchor stops midway on rail.

When anchor stops midway on rail, check rail for foreign particles. If no foreign particles are noted, proceed to "3. Motor Inspection."

1 Check rear limit switch.
- Not OK → Replace rear limit switch.
- OK ↓

2 Check rear limit switch wire harness.
- Not OK → Repair wire harness.
- OK ↓

3 Check motor.
- Not OK → Replace motor.
- OK ↓

4 Check motor harness.
- Not OK → Repair motor harness.
- OK ↓

Repair control unit terminal poor contact. (Replace control unit.)

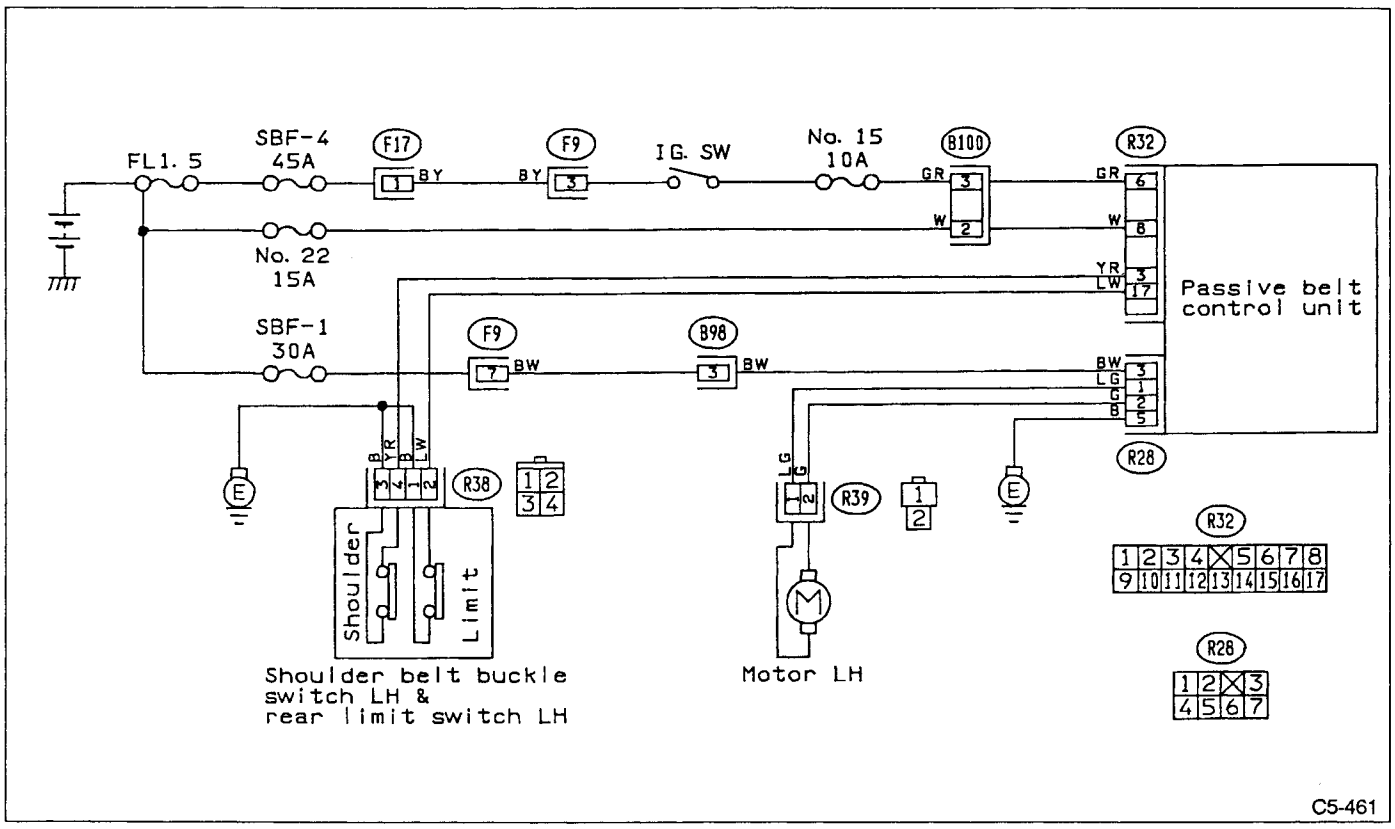


Fig. 99

1. CHECK REAR LIMIT SWITCH

1) Move shoulder anchor to rear end.
2) Disconnect rear limit switch connector.
3) Measure resistance between rear limit switch connector's terminals.

Connector & terminal/Specified resistance:
(R38) No. 1 — No. 2/1 MΩ min.

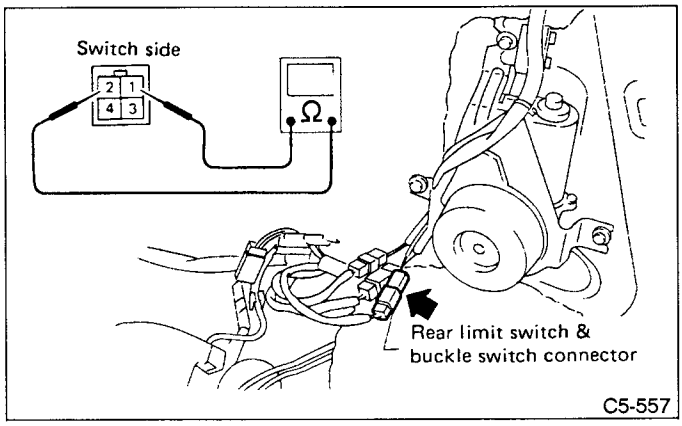


Fig. 100

2. CHECK REAR LIMIT SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from rear limit switch.
3) Measure resistance between rear limit switch connector and body.

Connector & terminal/Specified resistance:
(R38) No. 2 — Body/1 MΩ min.

3. CHECK MOTOR

1) Disconnect motor connector, and apply 12 volts (DC) to motor terminals.

Terminal & polarity/diagnosis
(R39) No. 1 → +, No. 2 → −/Shoulder anchor moves to rear end.
(R39) No. 1 → −, No. 2 → +/Shoulder anchor moves to front end.

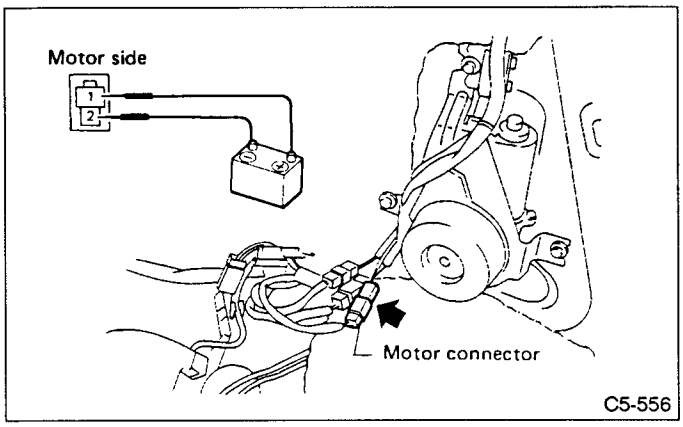


Fig. 101

4. CHECK MOTOR HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from motor.
3) Measure resistance between control unit and motor connector, and between control unit connector and body.

Connector & terminal/Specified resistance:
(R28) No. 1 — (R39) No. 1/1 Ω max.
(R28) No. 1 — Body/1 MΩ min.
(R28) No. 2 — (R39) No. 2/1 Ω max.
(R28) No. 2 — Body/1 MΩ min.
(R28) No. 3 — Body/1 MΩ min.
(R28) No. 5 — Body/1 Ω max.

4) Measure voltage between control unit connector and body.

Connector & terminal/Specified voltage:
(R28) No. 5 — Body/10 — 13 V

E: TROUBLE CODE 15 — FRONT AND REAR LIMIT SWITCHES (ON DRIVER'S SIDE) OFF.

CONTENTS OF DIAGNOSIS:
- Open front and rear switch signal circuits.

TROUBLE SYMPTOM:
- Shoulder anchor does not move in direction of faulty limit switch.

1	Check front and rear limit connectors for proper contact.	Not OK	Connect connectors firmly and recheck.
	OK ▼		
2	Check front and rear limit switches.	Not OK	Replace faulty limit switches.
	OK ▼		
3	Check front and rear limit switch wire harnesses.	Not OK	Repair wire harness.
	OK ▼		
	Repair control unit terminal poor contact. (Replace control unit.)		

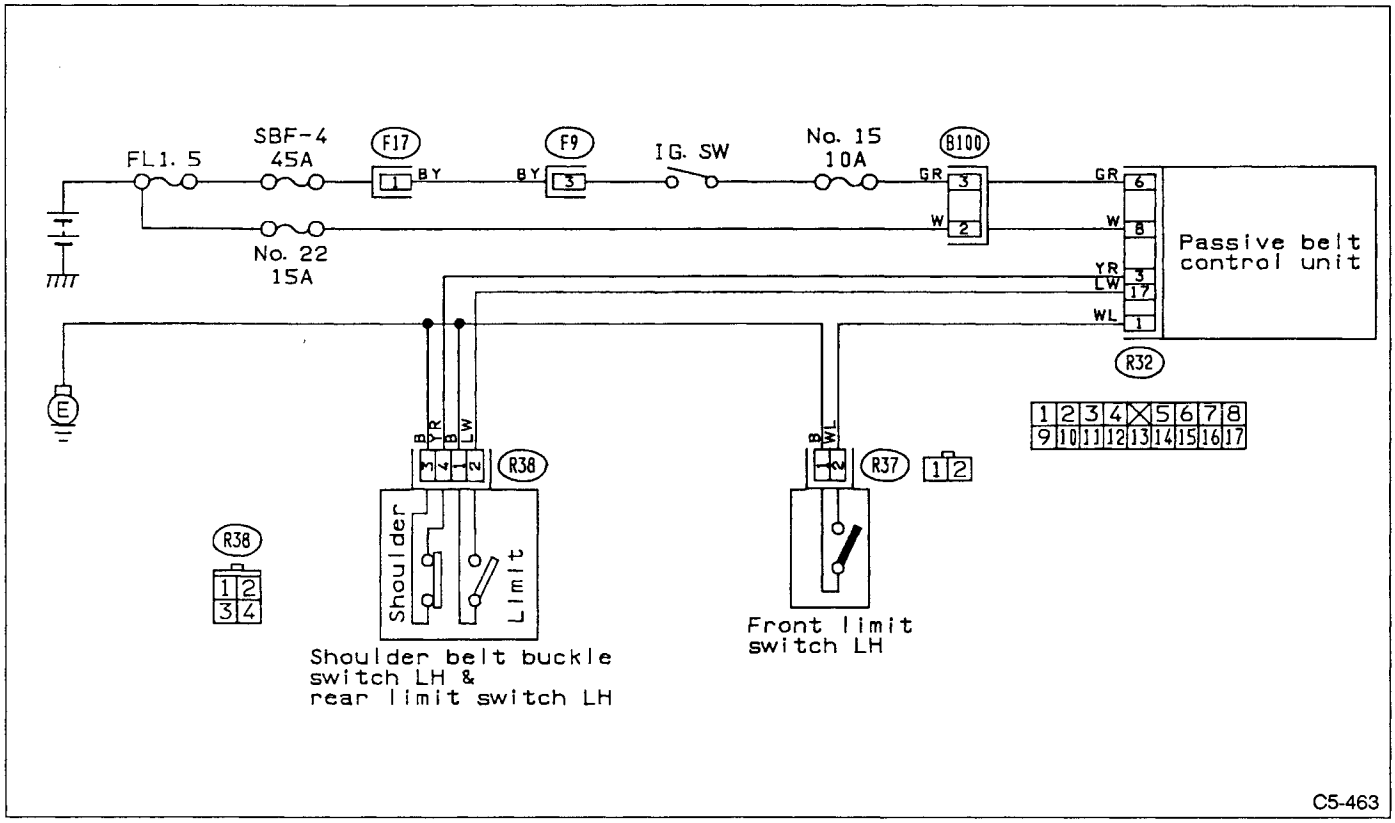


Fig. 102

1. CHECK FRONT AND REAR LIMIT SWITCH CONNECTORS FOR PROPER CONTACT

Visually check connectors or disconnect and reconnect until a click is heard.

2. CHECK FRONT AND REAR LIMIT SWITCHES

1) Front limit switch
   (1) Move shoulder anchor to front end.
   (2) Disconnect front limit switch connector.
   (3) Measure resistance between front limit switch's connector terminals.

Specified resistance:
(R37) 1 MΩ min

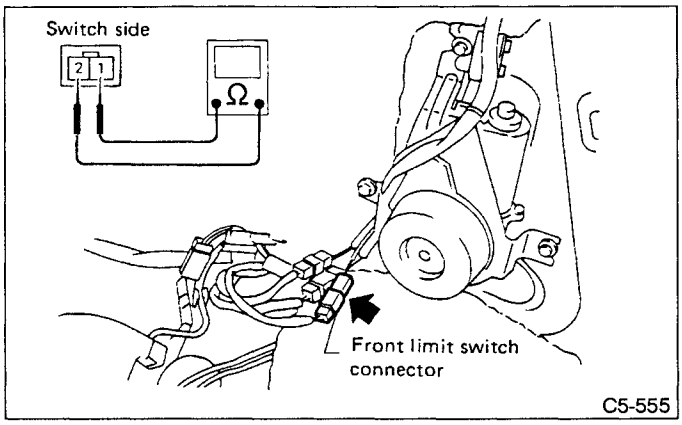


Fig. 103

2) Rear limit switch
   (1) Move shoulder anchor to rear end.
   (2) Disconnect rear limit switch connector.
   (3) Measure resistance between rear limit switch connector's terminals.

Connector & terminal/Specified resistance:
(R38) No. 1 — No. 2/1 MΩ min

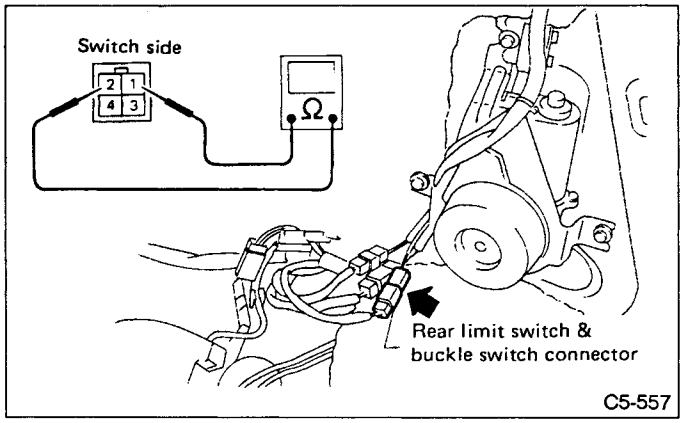


Fig. 104

3. CHECK FRONT AND REAR LIMIT SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect front limit switch connector.
3) Measure resistance between front limit switch connector and control unit connector, and between front limit switch connector and body.

Connector & terminal/Specified resistance:
(R37) No. 2 — (R32) No. 1/1 Ω max.
(R37) No. 1 — Body/1 Ω max.

4) Disconnect rear limit switch connector.
5) Measure resistance between rear limit switch connector and control unit connector, and between rear limit switch connector and body.

Connector & terminal/Specified resistance:
(R38) No. 2 — (R32) No. 17/1 Ω max.
(R38) No. 1 — Body/1 Ω max.

F: TROUBLE CODE 16 — BOTH SHOULDER BELT BUCKLE SWITCH AND FRONT LIMIT SWITCH (ON DRIVER'S SIDE) ARE OFF.

CONTENTS OF DIAGNOSIS:
- Loose or disconnected connector
- Faulty shoulder belt buckle switch
- Faulty wire harness

TROUBLE SYMPTOM:
- Warning light remains off when shoulder belt is fastened. (Shoulder anchor operates properly.)

1	Check shoulder belt buckle switch connection.	Not OK	Connect firmly and recheck.
	▼ OK		
2	Check buckle switch.	Not OK	Replace buckle switch (complete with rear limit switch).
	▼ OK		
3	Check buckle switch wire harness.	Not OK	Repair wire harness.
	▼ OK		
	Repair control unit terminal poor contact. (Replace control unit.)		

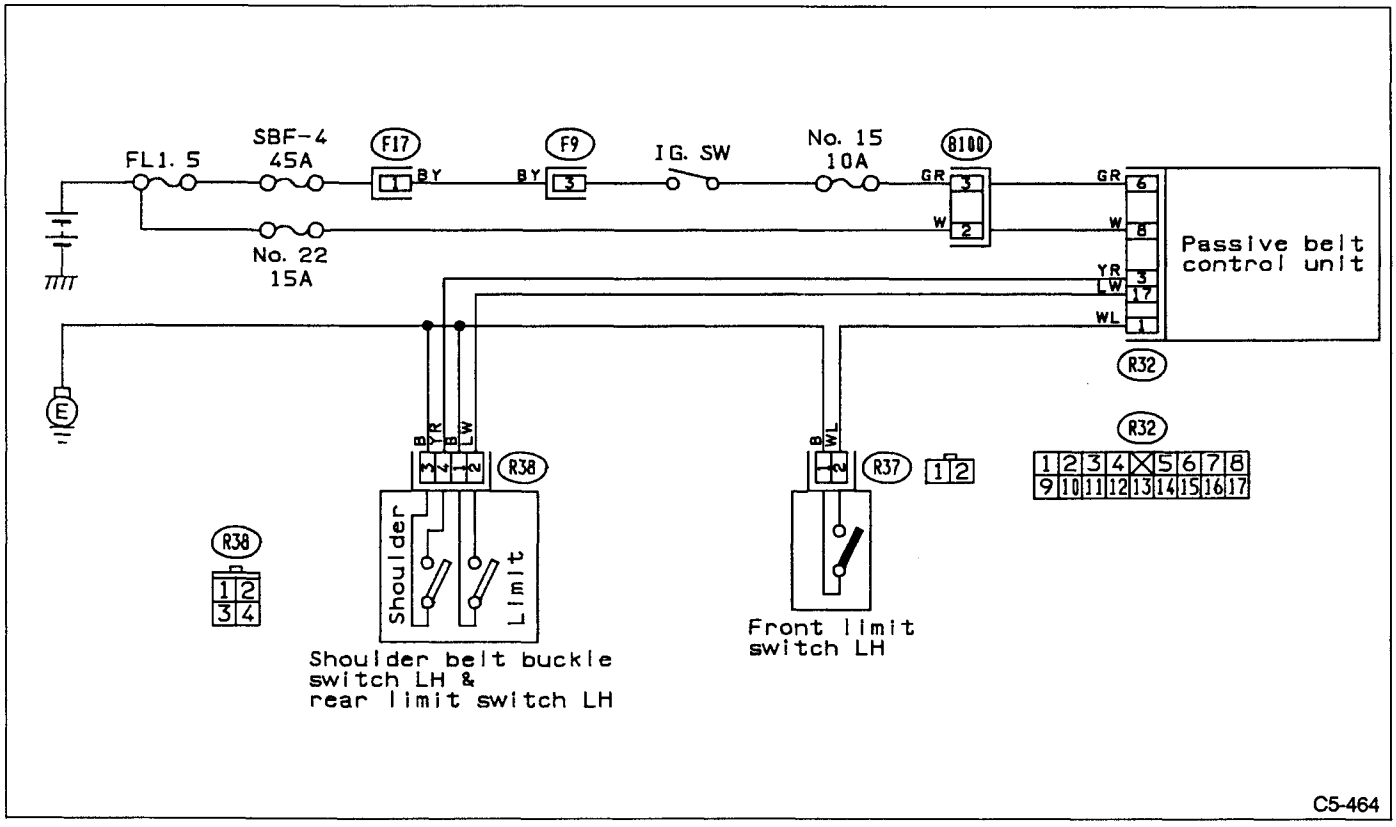


Fig. 105

1. CHECK SHOULDER BELT BUCKLE SWITCH CONNETION

Visually check connectors or disconnect and reconnect until a click is heard.

2. CHECK BUCKLE SWITCH

1) Move shoulder anchor from rear end to midway along rail.
2) Disconnect buckle switch connector.
3) Measure resistance between buckle switch connector's terminals.

Connector & terminal/Specified resistance:
(R38) No. 3 — No. 4/1 Ω max.

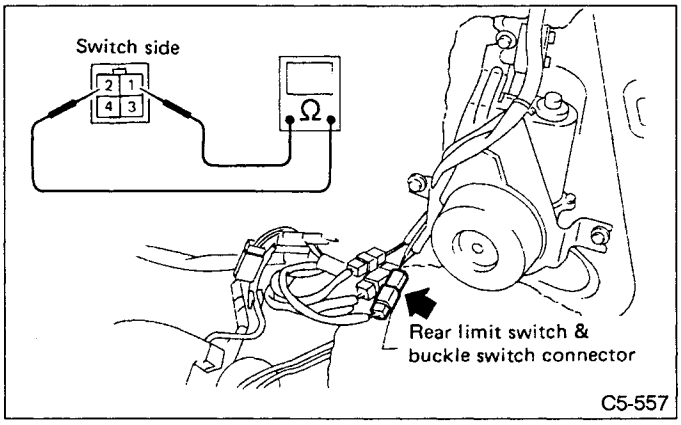


Fig. 106

3. CHECK BUCKLE SWITCH WIRE HARNESS

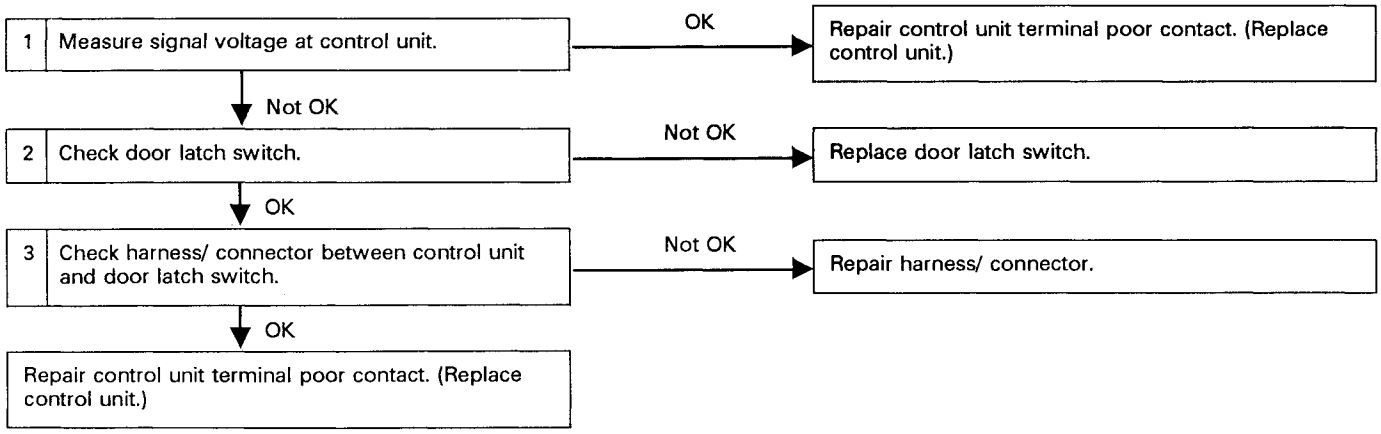
1) Disconnect two connectors from control unit.
2) Disconnect buckle switch connector.
3) Measure resistance between buckle switch connector and control unit connector, and between buckle switch connector and body.

Connector & terminal/Specified resistance:
(R38) No. 4 — (R32) No. 3/1 Ω max.
(R38) No. 3 — Body/1 Ω max.

G: TROUBLE CODE 21 — DOOR LATCH SWITCH (ON PASSENGER'S SIDE) REMAINS ON.

CONTENTS OF DIAGNOSIS:
- Faulty door latch switch
- Shorted wire harness

TROUBLE SYMPTOM:
- Passenger's shoulder anchor does not operate.



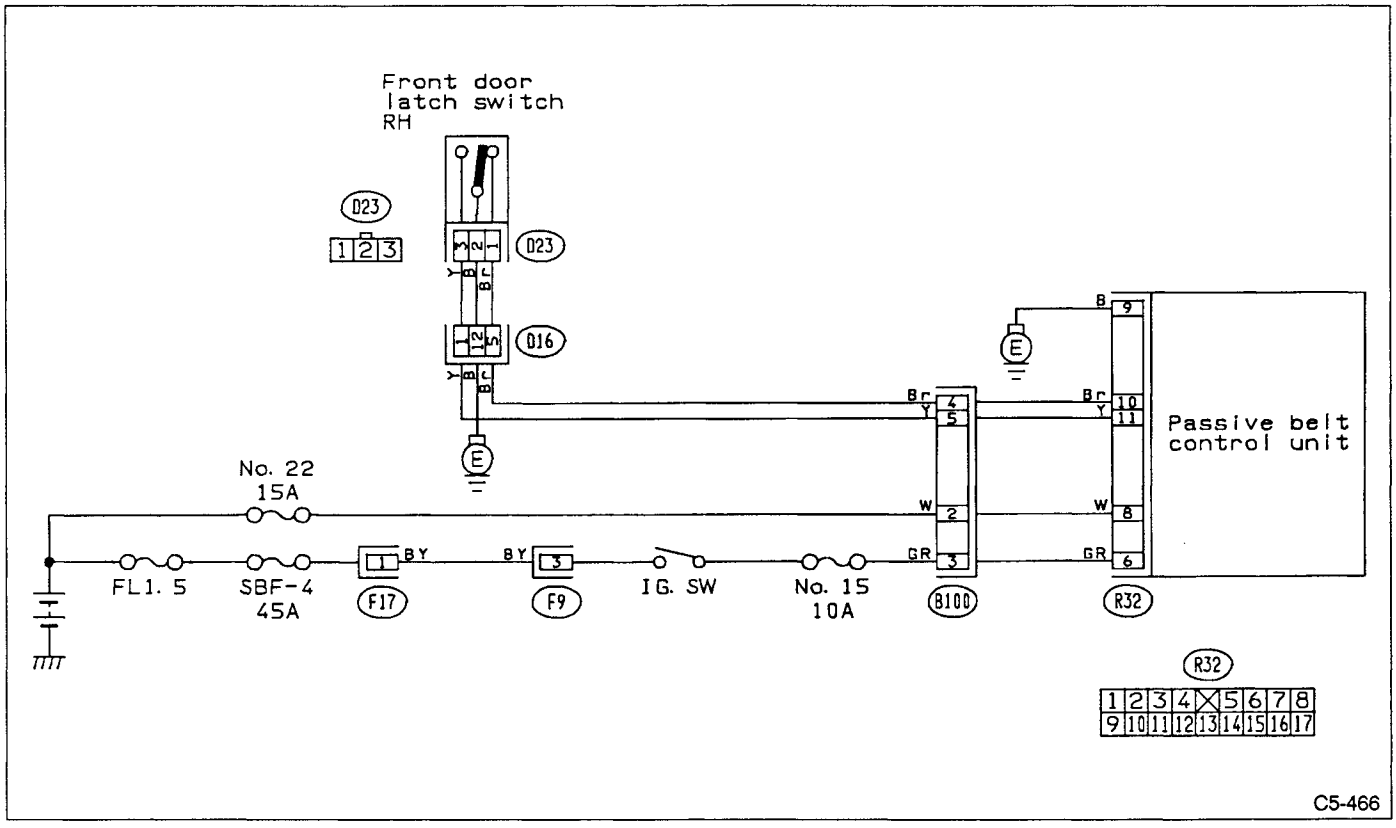


Fig. 107

1. MEASURE SIGNAL VOLTAGE AT CONTROL UNIT

1) Turn ignition switch ON (with engine OFF).
2) Measure signal voltage at control unit connector.

Connector & terminal/Specified voltage:
(R32) No. 10 — Body/10 — 13 V (Door closed)
(R32) No. 11 — Body/10 — 13 V (Door open)

2. CHECK DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Measure resistance between door latch switch terminals.

Connector & terminal/Specified resistance:
(D23) No. 2 — No. 3/1 MΩ min. (Door open)
(D23) No. 2 — No. 1/1 MΩ min. (Door closed)

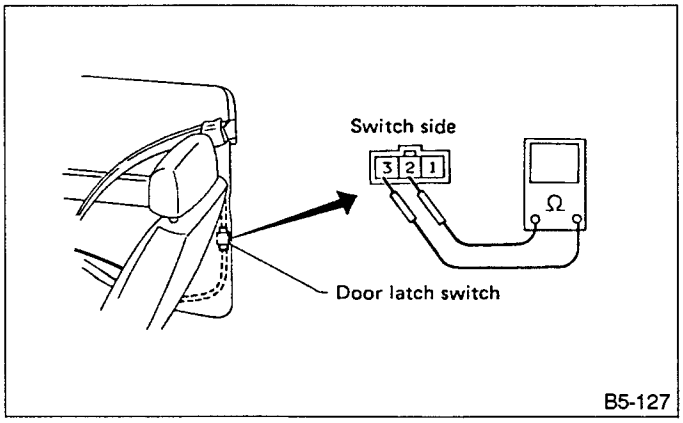


Fig. 108

3. CHECK HARNESS/CONNECTOR BETWEEN CONTROL UNIT AND DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Disconnect connector from control unit.
3) Measure resistance between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 10 — Body/1 MΩ min.
(R32) No. 11 — Body/1 MΩ min.

H: TROUBLE CODE 22 — DOOR LATCH SWITCH (ON PASSENGER'S SIDE) REMAINS OFF.

CONTENTS OF DIAGNOSIS:
- Faulty door latch switch
- Faulty harness/ connector

TROUBLE SYMPTOM:
- Passenger's shoulder anchor does not operate.

1	Measure signal voltage at control unit.	OK	Repair control unit terminal poor contact. (Replace control unit.)
	▼ Not OK		
2	Check door latch switch.	Not OK	Replace door latch switch.
	▼ OK		
3	Check harness/ connector between control unit and door latch switch.	Not OK	Repair harness/ connector.
	▼ OK		
	Repair control unit terminal poor contact. (Replace control unit.)		

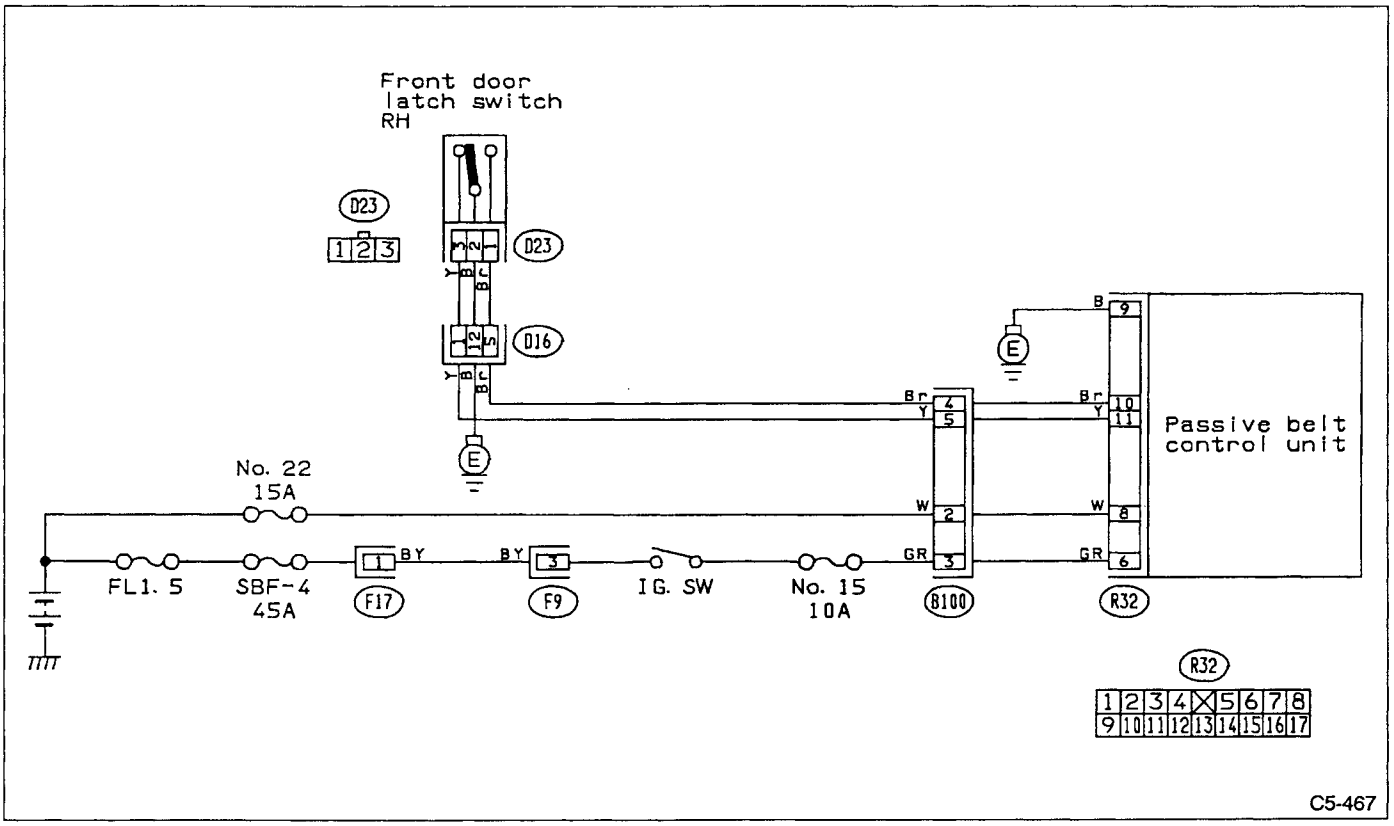


Fig. 109

1. MEASURE SIGNAL VOLTAGE AT CONTROL UNIT

1) Turn ignition switch ON (with engine OFF).
2) Measure signal voltage at control unit connector.

Connector & terminal/Specified voltage:
(R32) No. 10 — Body/0 V (Door open)
(R32) No. 11 — Body/0 V (Door closed)

2. CHECK DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Measure resistance between door latch switch terminals.

Connector & terminal/Specified resistance:
(D23) No. 2 — No. 3/1 Ω max. (Door closed)
(D23) No. 2 — No. 1/1 Ω max. (Door open)

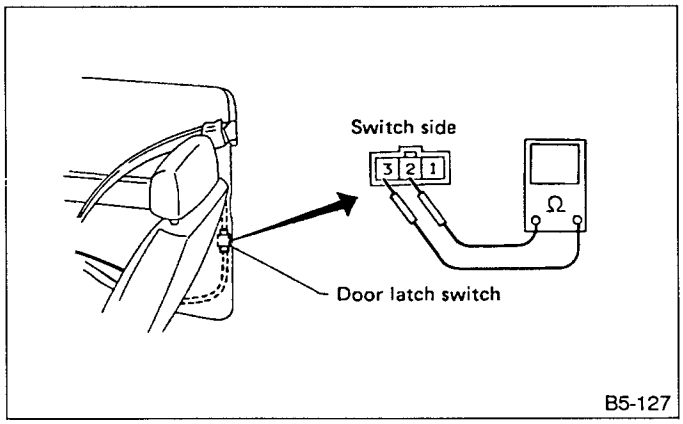


Fig. 110

3. CHECK HARNESS/CONNECTOR BETWEEN CONTROL UNIT AND DOOR LATCH SWITCH

1) Disconnect connector from door latch switch.
2) Disconnect connector from control unit.
3) Measure resistance between control unit connector and door latch switch connector, and between door latch switch connector and body.

Connector & terminal/Specified resistance:
(R32) No. 10 — (D23) No. 1/1 Ω max.
(R32) No. 11 — (D23) No. 3/1 Ω max.
(D23) No. 1 — Body/1 Ω max.

I: TROUBLE CODE 23 — FRONT LIMIT SWITCH (ON PASSENGER'S SIDE) REMAINS ON.

CONTENTS OF DIAGNOSIS:
- Faulty front limit switch
- Faulty harness
- Inoperative motor

TROUBLE SYMPTOMS:
- Timer activates when shoulder anchor reaches front end.
- Shoulder anchor stops midway on rail.

When shoulder anchor stops midway on rail, check rail for foreign particles. If no foreign particles are noted, proceed to "3. Motor Inspection."

1	Check front limit switch.	Not OK →	Replace front limit switch.
↓ OK			
2	Check front limit switch wire harness.	Not OK →	Replace wire harness.
↓ OK			
3	Check motor.	Not OK →	Replace motor.
↓ OK			
4	Check motor harness.	Not OK →	Repair motor harness.
↓ OK			
Repair control unit terminal poor contact. (Replace control unit.)			

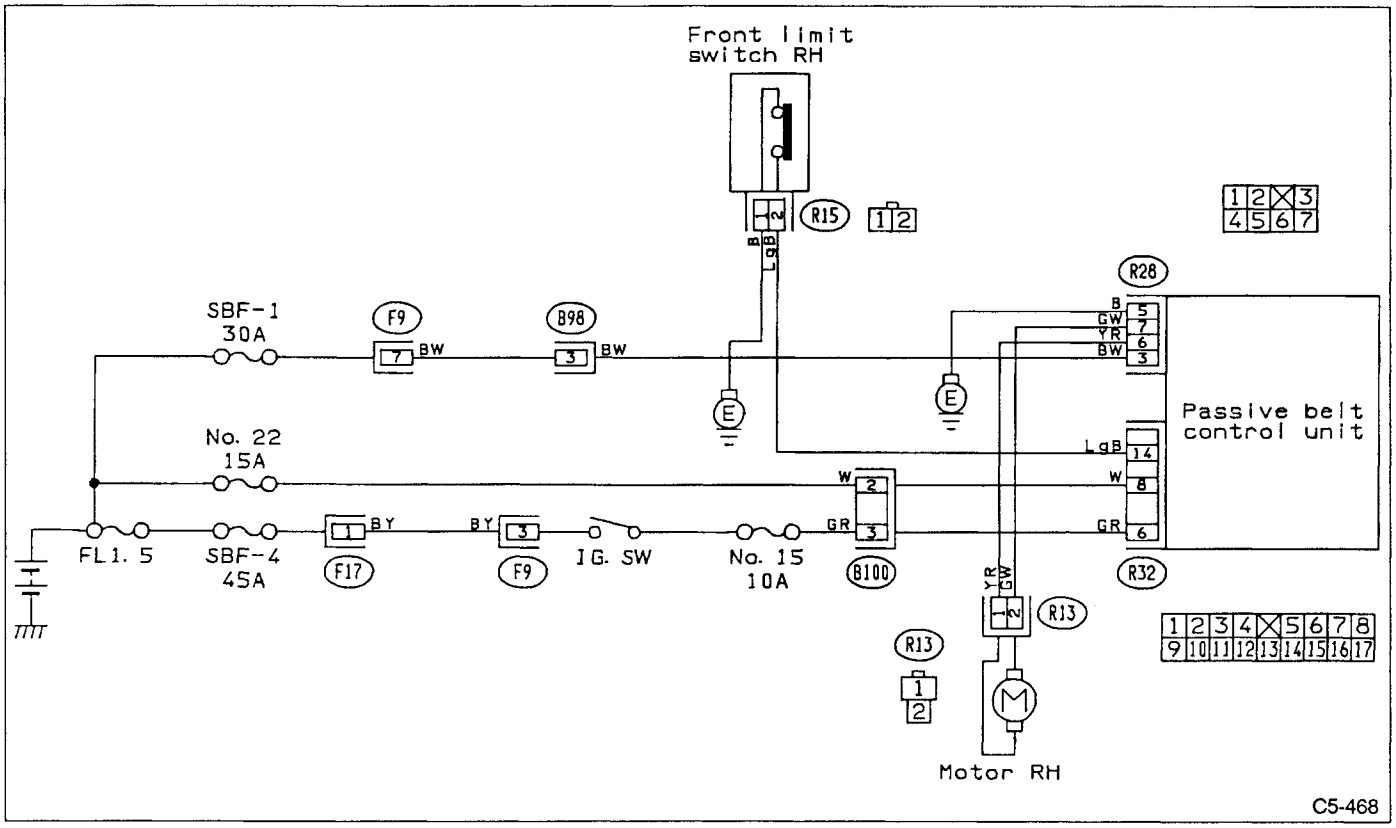


Fig. 111

1. CHECK FRONT LIMIT SWITCH

1) Move shoulder anchor to front end.
2) Disconnect connector from front limit switch.
3) Measure resistance between front limit switch terminals.

Specified resistance:
(R15) 1 MΩ min.

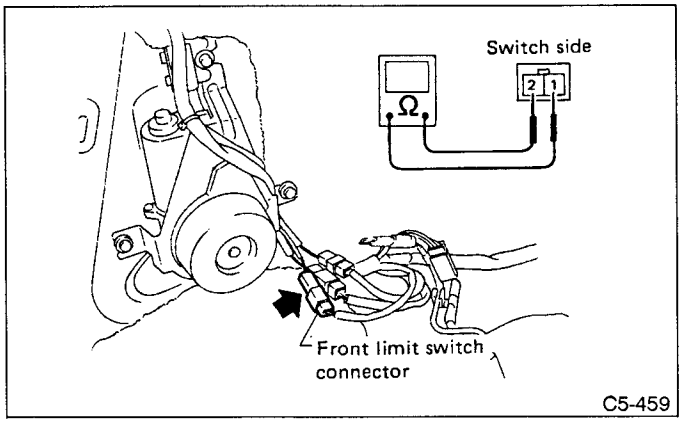


Fig. 112

2. CHECK FRONT LIMIT SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from front limit switch.
3) Measure resistance between front limit switch connector and body.

Connector & terminal/Specified resistance:
(R15) No. 2 — Body/1 MΩ min.

3. CHECK MOTOR

1) Disconnect motor connector and apply 12 volts (DC) to motor terminals.

Terminal & polarity/diagnosis
(R13) No. 1 → +, No. 2 → −/Shoulder anchor moves to rear end.
(R13) No. 1 → −, No. 2 → +/Shoulder anchor moves to front end.

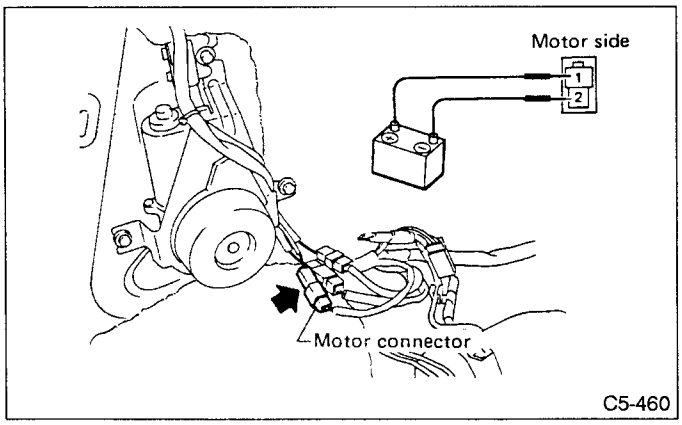


Fig. 113

4. CHECK MOTOR HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from motor.
3) Measure resistance between control unit connector and motor connector, and between control unit connector and body.

Connector & terminal/Specified resistance:
(R28) No. 6 — (R13) No. 1/1 Ω max.
— Body/1 MΩ min.
(R28) No. 7 — (R13) No. 2/1 Ω max.
— Body/1 MΩ min.
(R28) No. 3 — Body/1 MΩ min.
(R28) No. 5 — Body/1 Ω max.

4) Measure voltage between control unit connector and body.

Connector & terminal/Specified voltage:
(R28) No. 5 — Body/10 — 13 V

J: TROUBLE CODE 24 — REAR LIMIT SWITCH (ON PASSENGER'S SIDE) REMAINS ON.

CONTENTS OF DIAGNOSIS:
- Faulty rear limit switch
- Faulty harness
- Inoperative motor

TROUBLE SYMPTOMS:
- Timer activates when shoulder anchor reaches rear end.
- Shoulder anchor stops midway on rail.

When shoulder anchor stops midway on rail, check rail for foreign particles. If no foreign particles are noted, proceed to "3. Motor Inspection."

1 Check rear limit switch. — Not OK → Replace rear limit switch.
↓ OK
2 Check rear limit switch wire harness. — Not OK → Repair wire harness.
↓ OK
3 Check motor. — Not OK → Replace motor.
↓ OK
4 Check motor harness. — Not OK → Repair motor harness.
↓ OK
Repair control unit terminal poor contact. (Replace control unit.)

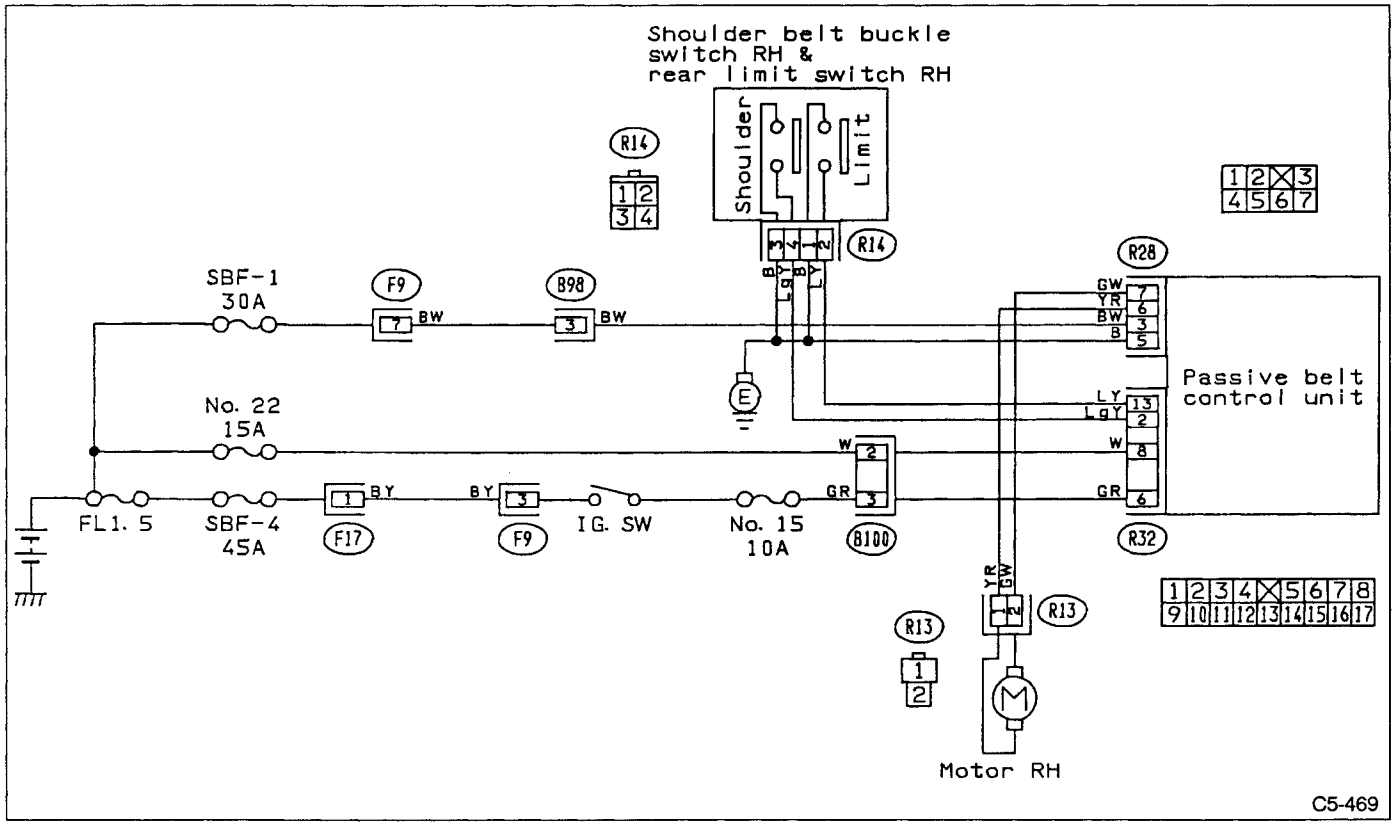


Fig. 114

1. CHECK REAR LIMIT SWITCH

1) Move shoulder anchor to rear end.
2) Disconnect connector from rear limit switch.
3) Measure resistance between rear limit switch connector terminals.

Connector & terminal/Specified resistance:
(R14) No. 1 — No. 2/1 MΩ min.

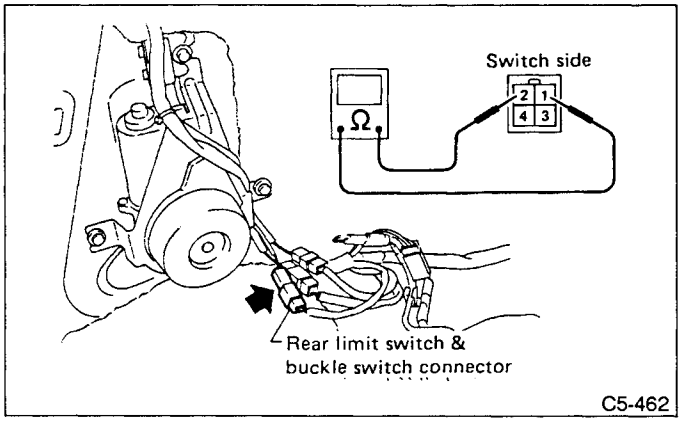


Fig. 115

2. CHECK REAR LIMIT SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from rear limit switch.
3) Measure resistance between rear limit switch connector and body.

Connector & terminal/Specified resistance:
(R14) No. 2 — Body/1 MΩ min.

3. CHECK MOTOR

1) Disconnect motor connector, and apply 12 volts (DC) to motor terminals.

Terminal & polarity/diagnosis
(R13) No. 1 → +, No. 2 → −/Shoulder anchor moves to rear end.
(R13) No. 1 → −, No. 2 → +/Shoulder anchor moves to front end.

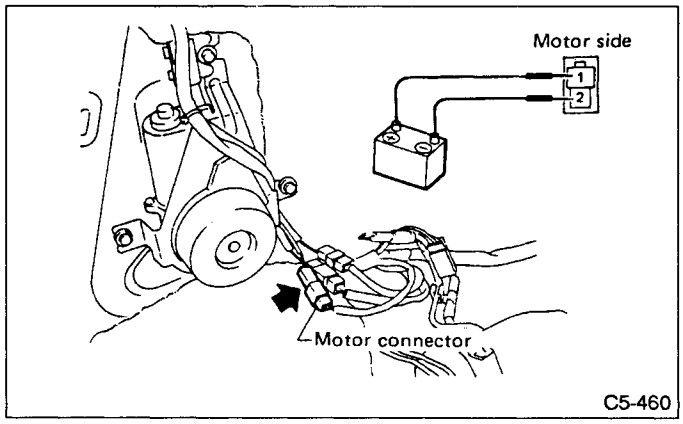


Fig. 116

4. CHECK MOTOR HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect connector from motor.
3) Measure resistance between control unit connector and motor connector, and between control unit connector and body.

Connector & terminal/Specified resistance:
(R28) No. 6 — (R13) No. 1/1 Ω max.
(R28) No. 6 — Body/1 MΩ min.
(R28) No. 7 — (R13) No. 2/1 Ω max.
(R28) No. 7 — Body/1 MΩ min.
(R28) No. 3 — Body/1 MΩ min.
(R28) No. 5 — Body/1 Ω max.

4) Measure voltage between control unit connector and body.

Connector & terminal/Specified voltage:
(R28) No. 5 — Body/10 — 13V

K: TROUBLE CODE 25 — BOTH FRONT AND REAR LIMIT SWITCHES (ON PASSENGER'S SIDE) ARE OFF.

CONTENTS OF DIAGNOSIS:
- Open signal circuits of front and rear limit switches

TROUBLE SYMPTOM:
- Shoulder anchor does not move in direction of faulty limit switch.

1	Check front and rear limit switch connections.	Not OK	Reconnect firmly and recheck.
	OK ▼		
2	Check front and rear limit switches.	Not OK	Replace limit switches.
	OK ▼		
3	Check front and rear limit switch wire harnesses.	Not OK	Repair faulty parts.
	OK ▼		
	Repair control unit terminal poor contact. (Replace control unit.)		

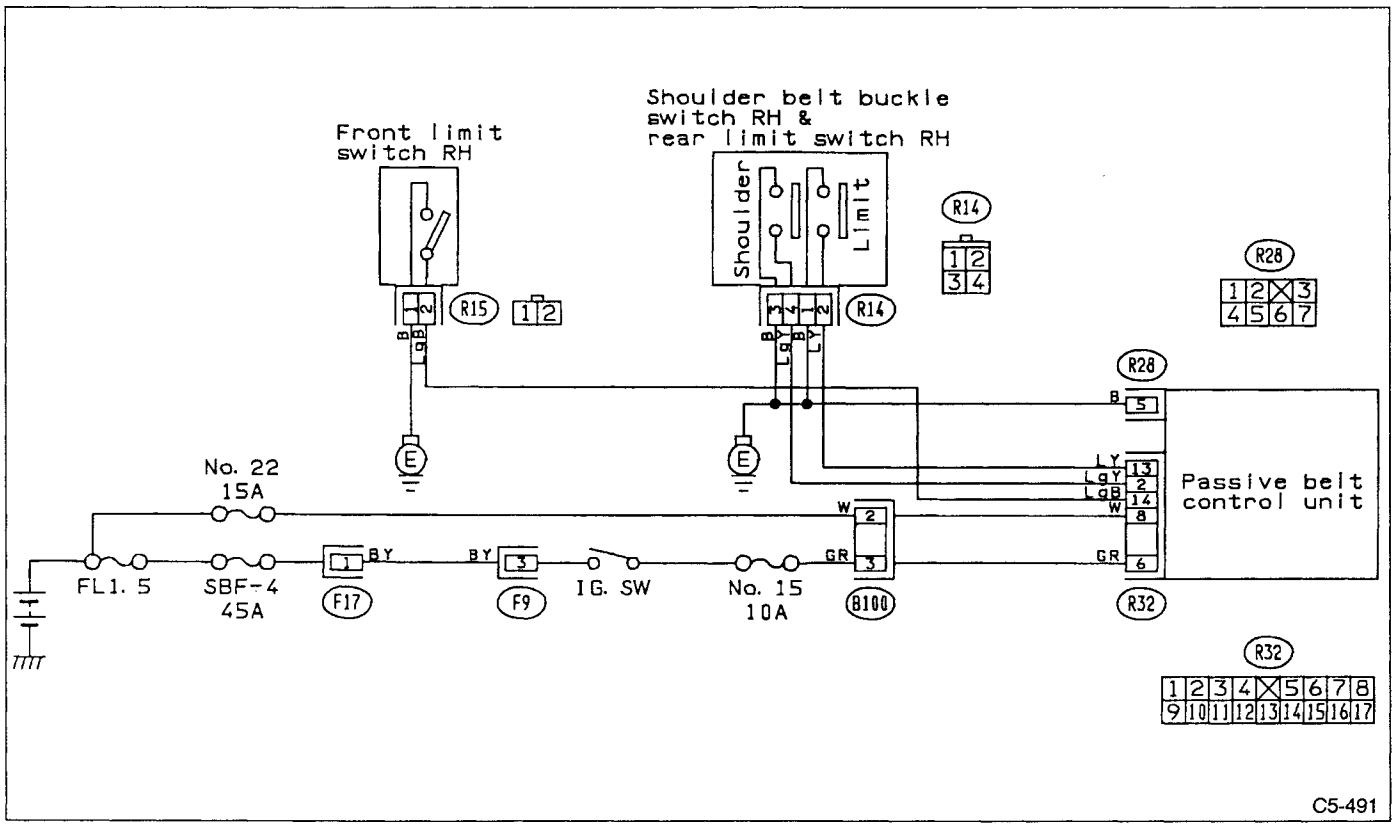


Fig. 117

1. CHECK FRONT AND REAR LIMIT SWITCH CONNECTIONS

Visually check connectors or disconnect and reconnect until a click is heard.

2. CHECK FRONT AND REAR LIMIT SWITCH CONNECTIONS

1) Front limit switch
   (1) Move shoulder anchor to front end.
   (2) Disconnect front limit switch connector.
   (3) Measure resistance between front limit switch connector terminals.

Specified resistance:
(R15) 1 MΩ min

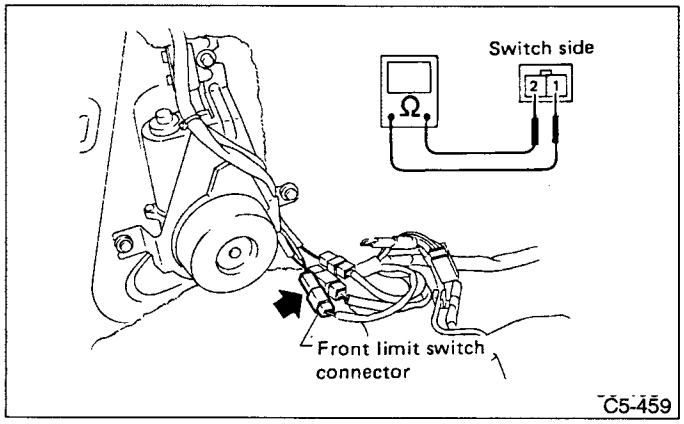


Fig. 118

2) Rear limit switch
   (1) Move shoulder anchor to rear end.
   (2) Disconnect rear limit switch connector.
   (3) Measure resistance between rear limit switch connector terminals.

Connector & terminal/Specified resistance:
(R14) No. 1 — No. 2/1 MΩ min

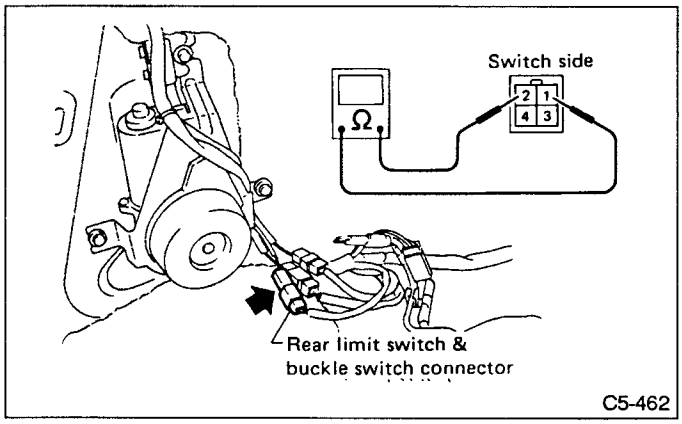


Fig. 119

3. CHECK FRONT AND REAR LIMIT SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect front limit switch connector.
3) Measure resistance between front limit switch connector and control unit connector, and between front limit switch and body.

Connector & terminal/Specified resistance:
(R15) No. 2 — (R32) No. 14/1 Ω max.
(R15) No. 1 — Body/1 Ω max.

4) Disconnect rear limit switch connector.
5) Measure resistance between rear limit switch connector and control unit connector, and between rear limit switch connector and body.

Connector & terminal/Specified resistance:
(R14) No. 2 — (R32) No. 13/1 Ω max.
(R14) No. 1 — Body/1 Ω max.

L: TROUBLE CODE 26 — BOTH SHOULDER BELT BUCKLE SWITCH AND FRONT LIMIT SWITCH (ON PASSENGER'S SIDE) ARE OFF.

CONTENTS OF DIAGNOSIS:
- Loose or disconnected connector
- Faulty shoulder belt buckle switch
- Faulty wire harness

TROUBLE SYMPTOM:
- Warning light remains off when shoulder belt is unfastened.
  (Shoulder anchor operates properly.)

1 Check shoulder belt buckle switch connection. — Not OK → Reconnect firmly and recheck.

OK ↓

2 Check buckle switch. — Not OK → Replace buckle switch (complete with rear limit switch).

OK ↓

3 Check buckle switch wire harness. — Not OK → Repair wire harness.

OK ↓

Repair control unit terminal poor contact. (Replace control unit.)

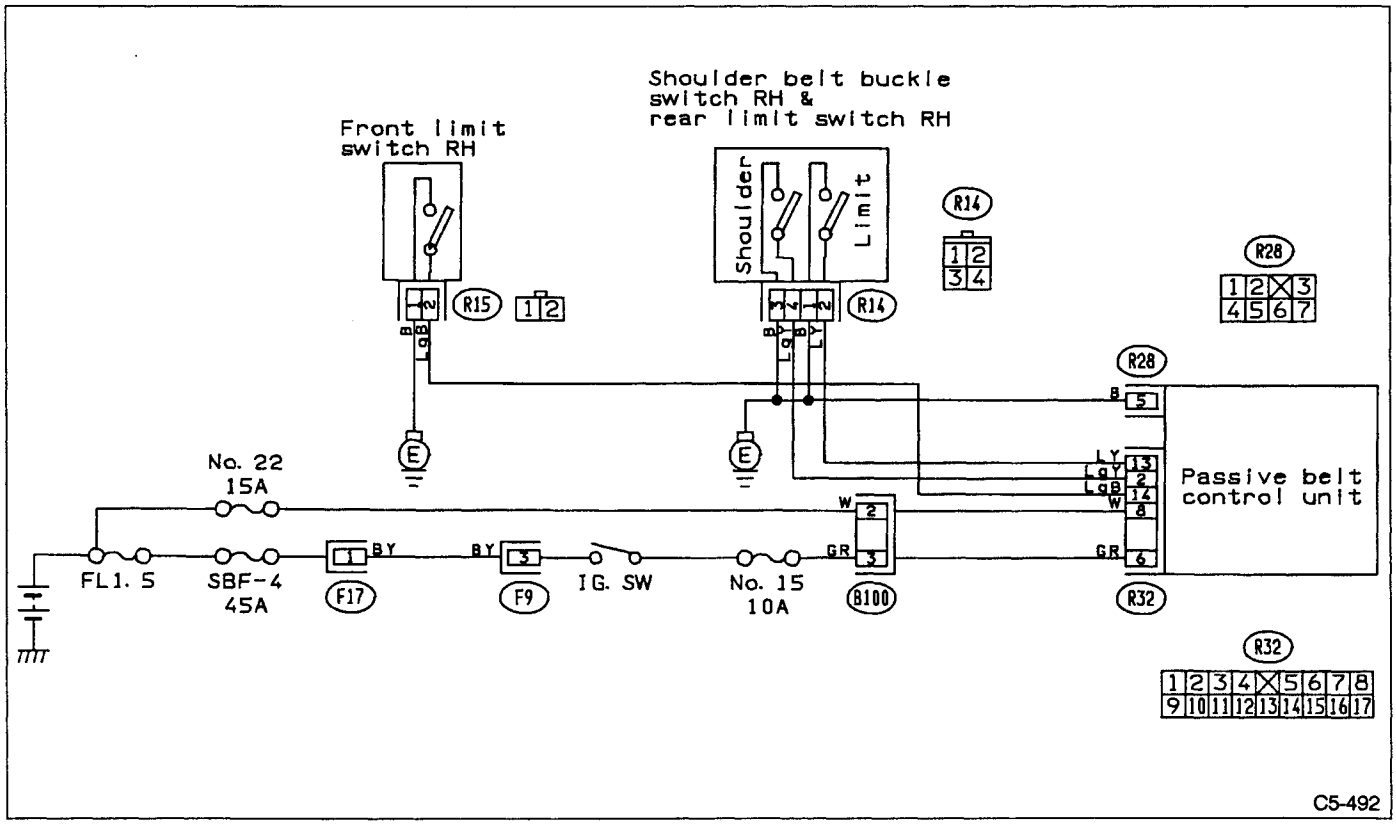


Fig. 120

1. CHECK SHOULDER BELT BUCKLE SWITCH CONNECTION

Visually check connectors, or disconnect and reconnect until a clicks is heard.

2. CHECK BUCKLE SWITCH

1) Move shoulder anchor from rear end to midway along rail.
2) Disconnect buckle switch connector.
3) Measure resistance between buckle switch connector terminals.

Connector & terminal/Specified resistance:
(R14) No. 3 — No. 4/1 Ω max.

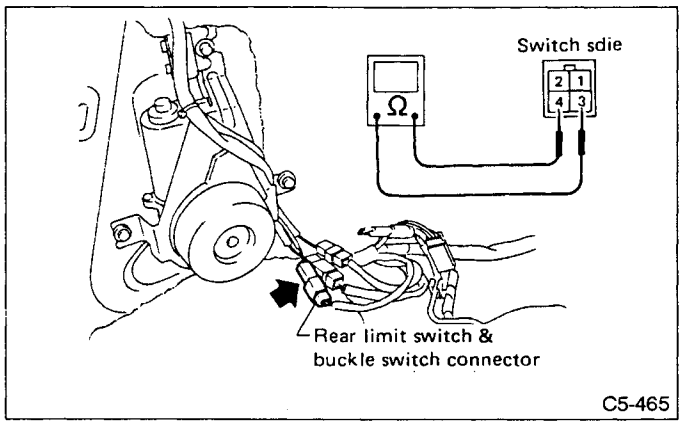


Fig. 121

3. CHECK BUCKLE SWITCH WIRE HARNESS

1) Disconnect two connectors from control unit.
2) Disconnect buckle switch connector.
3) Measure resistance between buckle switch connector and control unit connector, and between buckle switch connector and body.

Connector & terminal/Specified resistance:
(R14) No. 4 — (R32) No. 2/1 Ω max.
(R14) No. 3 — Body/1 Ω max.

M: TROUBLE CODE 32 — IGNITION SWITCH IS ON WITH BATTERY POWER OFF.

CONTENTS OF DIAGNOSIS:
- Shorted or open battery power circuit.
- Burned-out fuse (due to shorted key warning switch circuit)

TROUBLE SYMPTOM:
- Automatic shoulder belt system does not operate.

1	Check battery harness.	Not OK →	Repair battery harness.
	↓ OK		
	Repair control unit terminal poor contact. (Replace control unit.)		

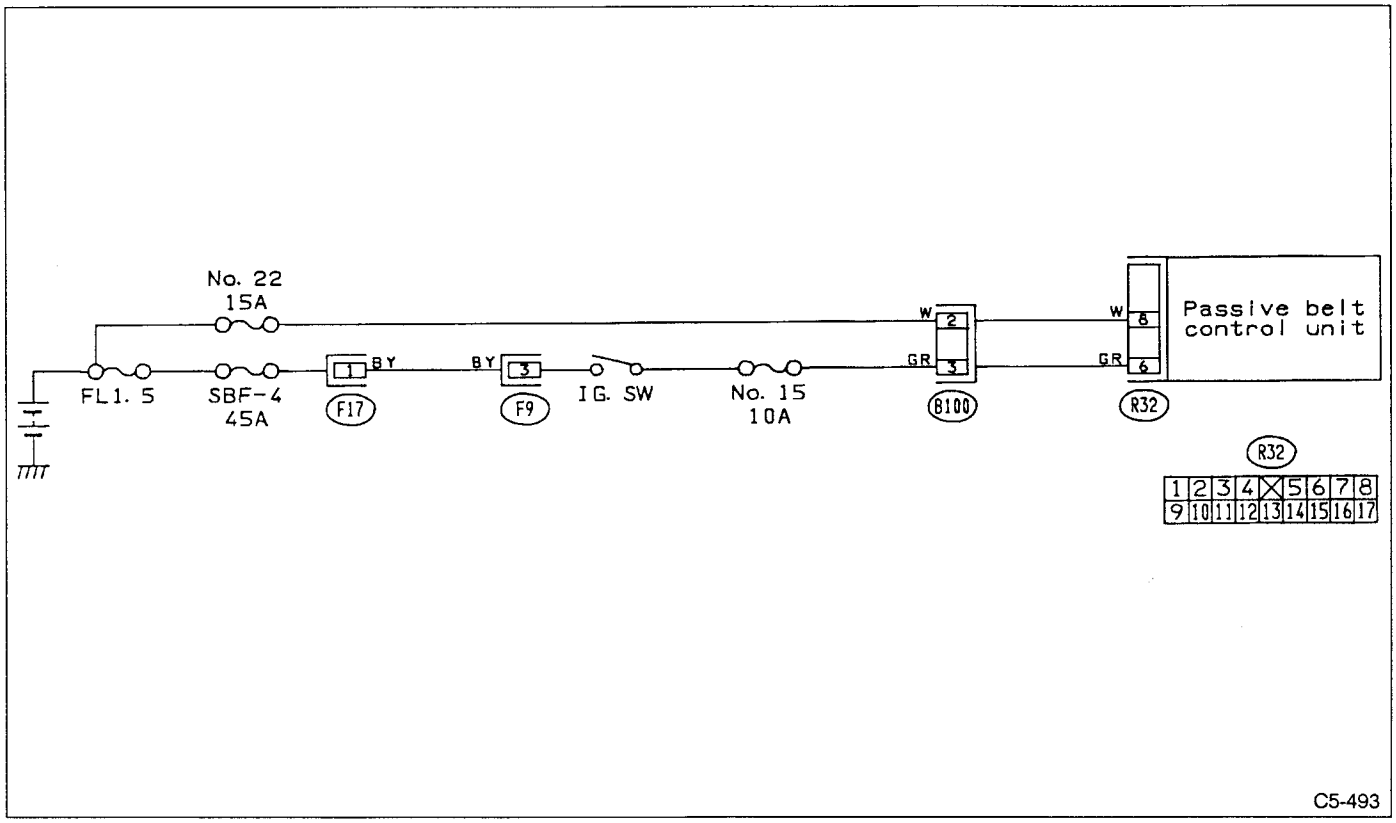


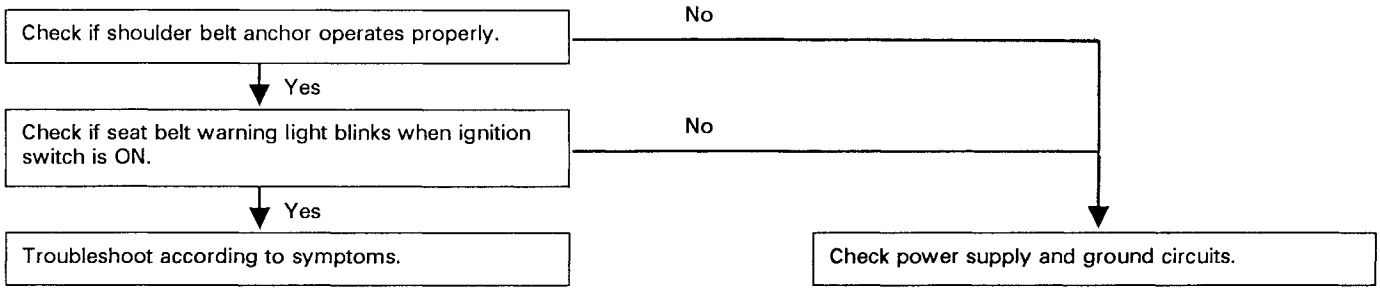
Fig. 122

1. CHECK BATTERY HARNESS

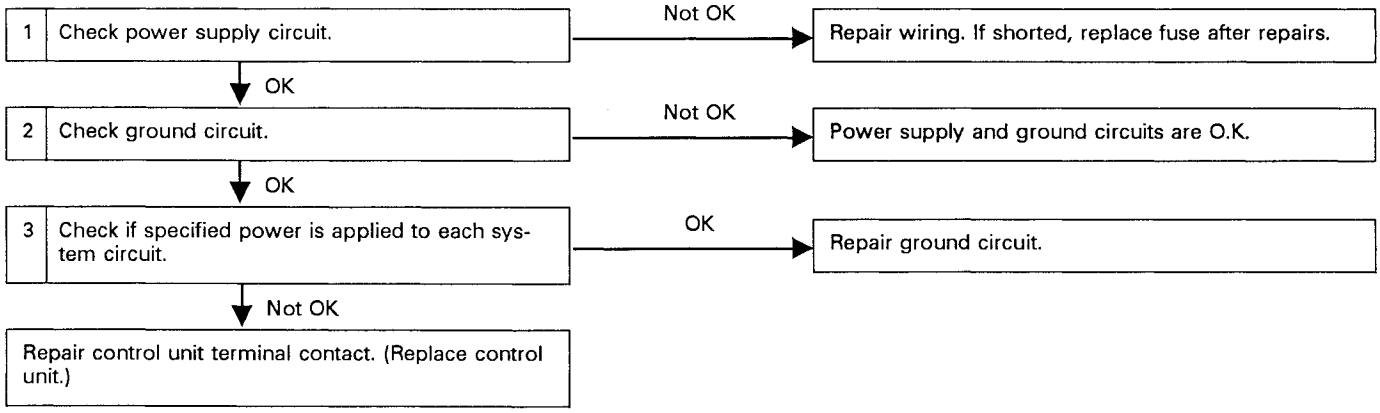
Check battery harness for shortcircuits or discontinuity.
(Refer to [T5B1].)

5. Troubleshooting without Self diagnosis System

A: BASIC TROUBLESHOOTING PROCEDURE



B: POWER SUPPLY AND GROUND CIRCUITS



1. CHECK POWER SUPPLY CIRCUIT

1) Disconnect battery ground (−) cable.
2) Disconnect connector from control unit.
3) Measure resistance between control unit connector and fuse, and between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 8 — No. 22 Fuse/1 Ω max.
(R32) No. 8 — Body/1 MΩ min.
(R32) No. 6 — No. 15 Fuse/1 Ω max.
(R32) No. 6 — Body/1 MΩ min.

2. CHECK GROUND CIRCUIT

1) Disconnect connector from control unit.
2) Measure resistance between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 9 — Body/1 Ω max.

3. CHECK IF SPECIFIED VOLTAGE IS APPLIED TO EACH SYSTEM CIRCUIT

1) Check that control unit connector is properly connected.
2) Measure voltage between control unit connector and body.

Connector & terminal/Specified voltage:
(R32) No. 8 — Body/10 — 13 V
(R32) No. 6 — Body/10 — 13 V

C: TROUBLESHOOTING ACCORDING TO SYMPTOM

D	Warning light shows an "unlatch" signal although shoulder belt is properly latched to anchor.
E	Seat belt warning light remains on after ignition switch is turned ON.
F	Seat belt warning light neither blinks nor illuminates after ignition switch is turned ON.
G	Buzzer does not sound under warning conditions.
H	Buzzer continues to sound.
I	"Unlatch" warning is emitted although lap belt is properly latched to buckle.
J	Warning is not emitted when lap belt is unlatched to buckle.

D: WARNING LIGHT SHOWS AN "UNLATCH" SIGNAL ALTHOUGH SHOULDER BELT IS PROPERLY LATCHED TO ANCHOR.

1 Check shoulder belt buckle switch.
- Not OK → Replace shoulder belt buckle switch (complete with rear limit switch).
- OK ↓

2 Check shoulder belt buckle switch harness.
- Not OK → Repair harness.
- OK ↓

Repair control unit terminal poor contact. (Replace control unit)

1. CHECK SHOULDER BELT BUCKLE SWITCH

1) Disconnect shoulder belt buckle switch connector.
2) Latch shoulder belt to anchor and move anchor to rear end.
3) Measure resistance between buckle switch's terminals.

Terminal/Specified resistance:
(R14) No. 3 — No. 4/1 MΩ min.
(R38) No. 3 — No. 4/1 MΩ min.

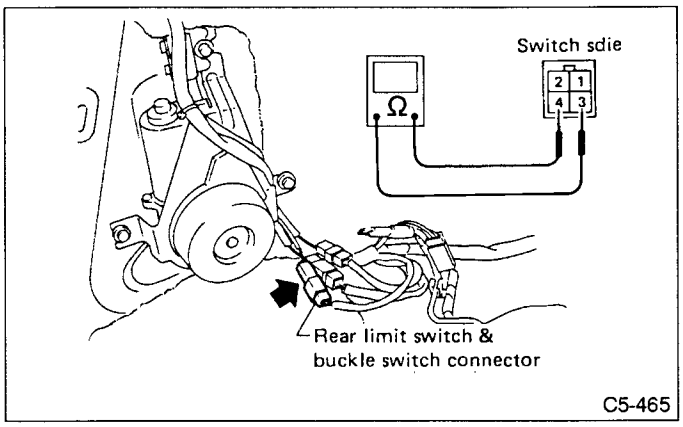


Fig. 123

2. CHECK SHOULDER BELT BUCKLE SWITCH HARNESS

1) Disconnect connector from control unit.
2) Disconnect buckle switch connector.
3) Measure resistance between buckle switch connector and body.

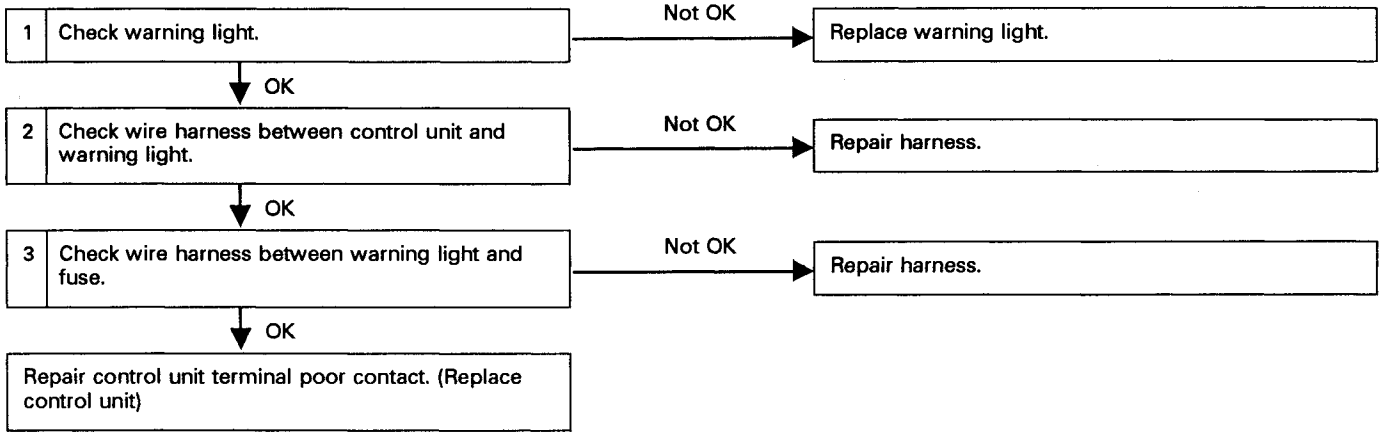
Connector & terminal/Specified resistance:
(R14) No. 4 — Body/1 MΩ min.
(R38) No. 4 — Body/1 MΩ min.

E: SEAT BELT WARNING LIGHT REMAINS ON AFTER IGNITION SWITCH IS TURNED ON.

1) Disconnect connector from control unit.
2) Measure resistance between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 5 — Body/1 MΩ min.

F: SEAT BELT WARNING LIGHT NEITHER BLINKS NOR ILLUMINATES AFTER IGNITION SWITCH IS TURNED ON.



1. CHECK WARNING LIGHT

Remove bulb from rear of meter and check for burned-out bulb.

2. CHECK WIRE HARNESS BETWEEN CONTROL UNIT AND WARNING LIGHT

1) Disconnect combination meter connector.
2) Disconnect control unit connector.
3) Measure resistance between combination meter connector and control unit connector.

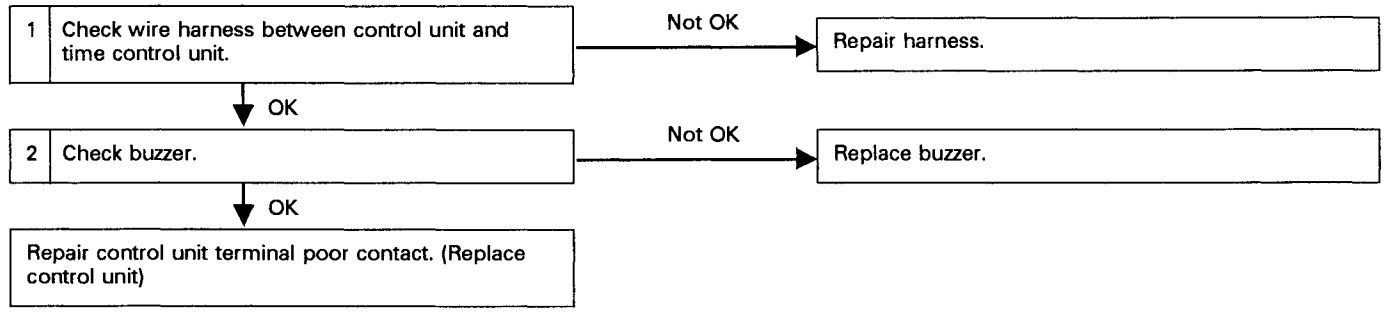
Connector & terminal/Specified resistance:
(i8) No. 15 — (R32) No. 5/1 Ω max.

3. CHECK WIRE HARNESS BETWEEN IGNITION SWITCH AND WARNING LIGHT

1) Disconnect combination meter connector.
2) Turn ignition switch ON.
3) Measure resistance between combination meter connector and body, and between combination meter connector and fuse.

Connector & terminal/Specified resistance:
(i6) No. 3 — Body/1 MΩ min.
(i6) No. 15 — Body/1 MΩ min.
(i6) No. 3 — No. 15 Fuse/1 Ω max.
(i6) No. 15 — No. 15 Fuse/1 Ω max.

G: BUZZER DOES NOT SOUND UNDER WARNING CONDITIONS.



1. CHECKING WIRE HARNESS BETWEEN CONTROL UNIT CONNECTOR AND TIME CONTROL UNIT CONNECTOR

1) Turn ignition switch OFF.
2) Disconnect connector from time control unit.
3) Disconnect connector from control unit.
4) Check continuity between time control unit connector and control unit connector.

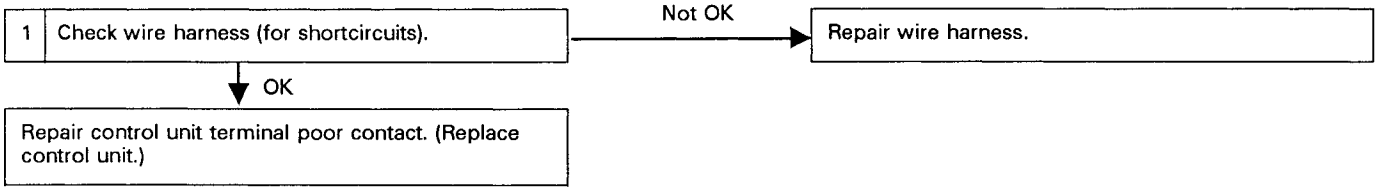
Connector & terminal/Specified resistance:
(R32) No. 4 — (B90) No. 12/1 Ω max.
(R32) No. 10 — (B90) No. 3/1 Ω max.
(R32) No. 12 — (B90) No. 4/1 Ω max.

2. CHECKING BUZZER

1) Disconnect connector from control unit.
2) Apply 12 volts (DC) to terminals to check that buzzer sounds.

Terminal/polarity:
(B90) No. 1/+ 12 V
(B90) No. 12/− 12 V

H: BUZZER CONTINUES TO SOUND.

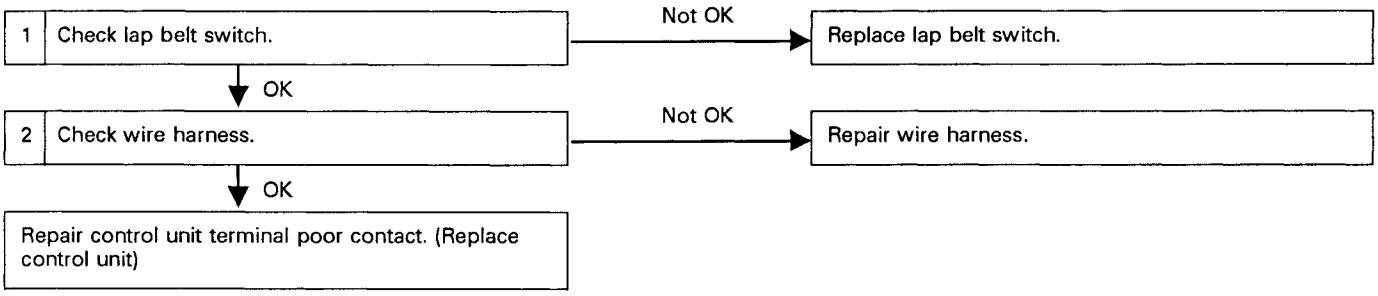


1. CHECK WIRE HARNESS (FOR SHORTCIRCUITS)

1) Disconnect connector from control unit.
2) Measure resistance between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 4 — Body/1 MΩ min.

I: "UNLATCH" WARNING SIGNAL IS EMITTED ALTHOUGH LAP BELT IS PROPERLY LATCHED TO BUCKLE.



1. CHECKING LAP BELT SWITCH

1) Remove seat and disconnect lap belt switch connector.
2) Disconnect connector from control unit.
3) Latch belt tongue in place.
4) Measure resistance between lap belt switch's terminals.

Specified resistance:
(R46) No. 1 — No. 2/1 MΩ min.

2. CHECKING WIRE HARNESS

1) Remove seat and disconnect lap belt switch connector.
2) Disconnect connector from control unit.
3) Measure resistance between control unit connector and body.

Connector & terminal/Specified resistance:
(R32) No. 16 — body /1MΩ min.

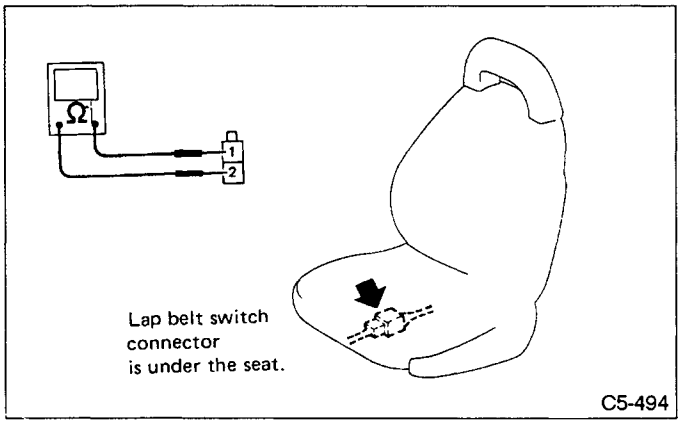
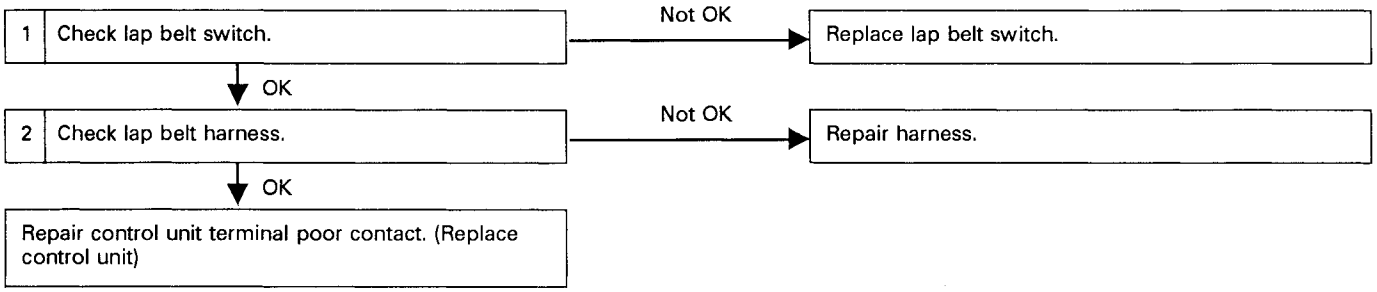


Fig. 124

J: WARNING IS NOT EMITTED WHEN LAP BELT IS UNLATCHED FROM BUCKLE.



1. CHECK LAP BELT SWITCH

1) Remove seat and disconnect lap belt switch connector.
2) Disconnect connector from control unit.
3) Unlatch belt tongue.
4) Measure resistance between lap belt switch terminals.

Specified resistance:
(R46) 1 Ω max.

2. CHECK LAP BELT HARNESS

1) Remove seat and disconnect lap belt switch connector.
2) Disconnect connector from control unit.
3) Measure resistance between lap belt switch connector and control unit connector.

Connector & terminal/Specified resistance:
(R32) No. 16 — (R46) No. 1 /1 Ω max.