

# DAIHATSU

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# CHARADE

## Chassis

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WR-10001

**HANDLING INSTRUCTIONS OF WITH LOCK TYPE CONNECTOR**

**HANDLING AND INSPECTION**

**Removal**

To disconnect the connector, simply pull out the connector while the lock lever is being pressed down, as indicated in the right figure.

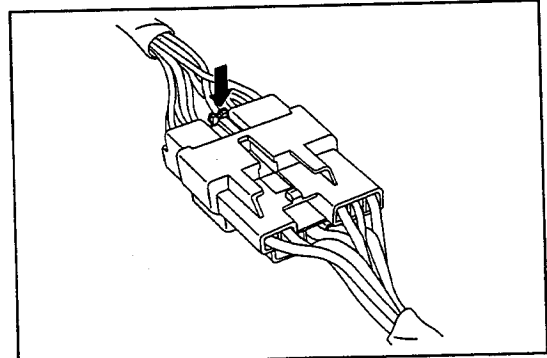


Fig. 10-1

WR-10002

**Inspection**

When you conduct continuity checks or voltage checks using a circuit tester, if you insert a test prod from the connector side, it is impossible to get an adequate fitting. Hence, be sure to positively insert the test prod from the harness side, as indicated in the right figure.

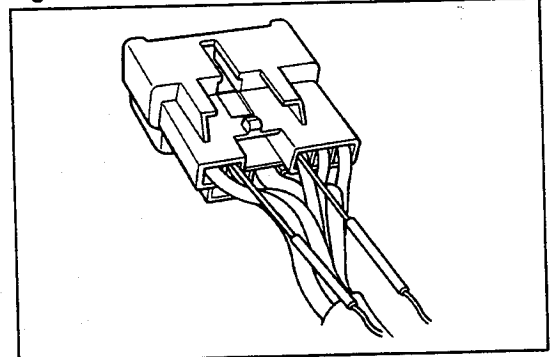


Fig. 10-2

WR-10003

**REPLACEMENT**

**Removal**

- (1) From the aperture, insert a miniature type common screwdriver into between the locking lug and the terminal.
- (2) While the locking lug is being pried upward by means of a screwdriver, pull out the terminal from the backside.

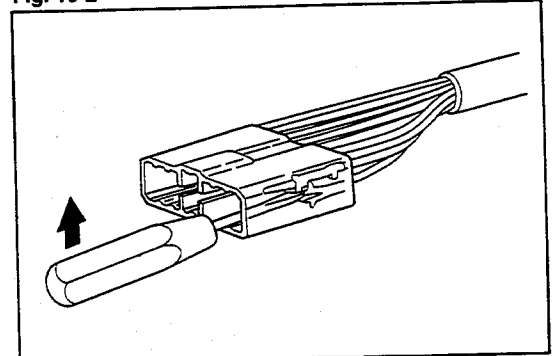


Fig. 10-3

WR-10004

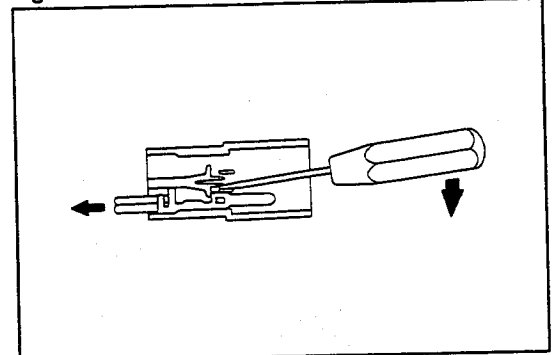


Fig. 10-4

WR-10005

**Installation**

- (1) Insert the terminal, until the locking lug is locked positively.
- (2) Ensure that the locking lug is locked positively by raising the wire.

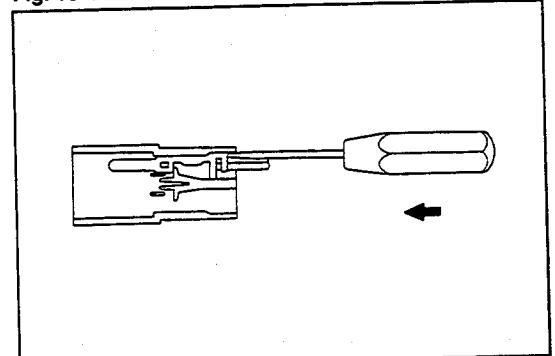


Fig. 10-5

WR-10006

# BODY ELECTRICAL SYSTEM

## WIRING HARNESSES SCHEMATIC DIAGRAM

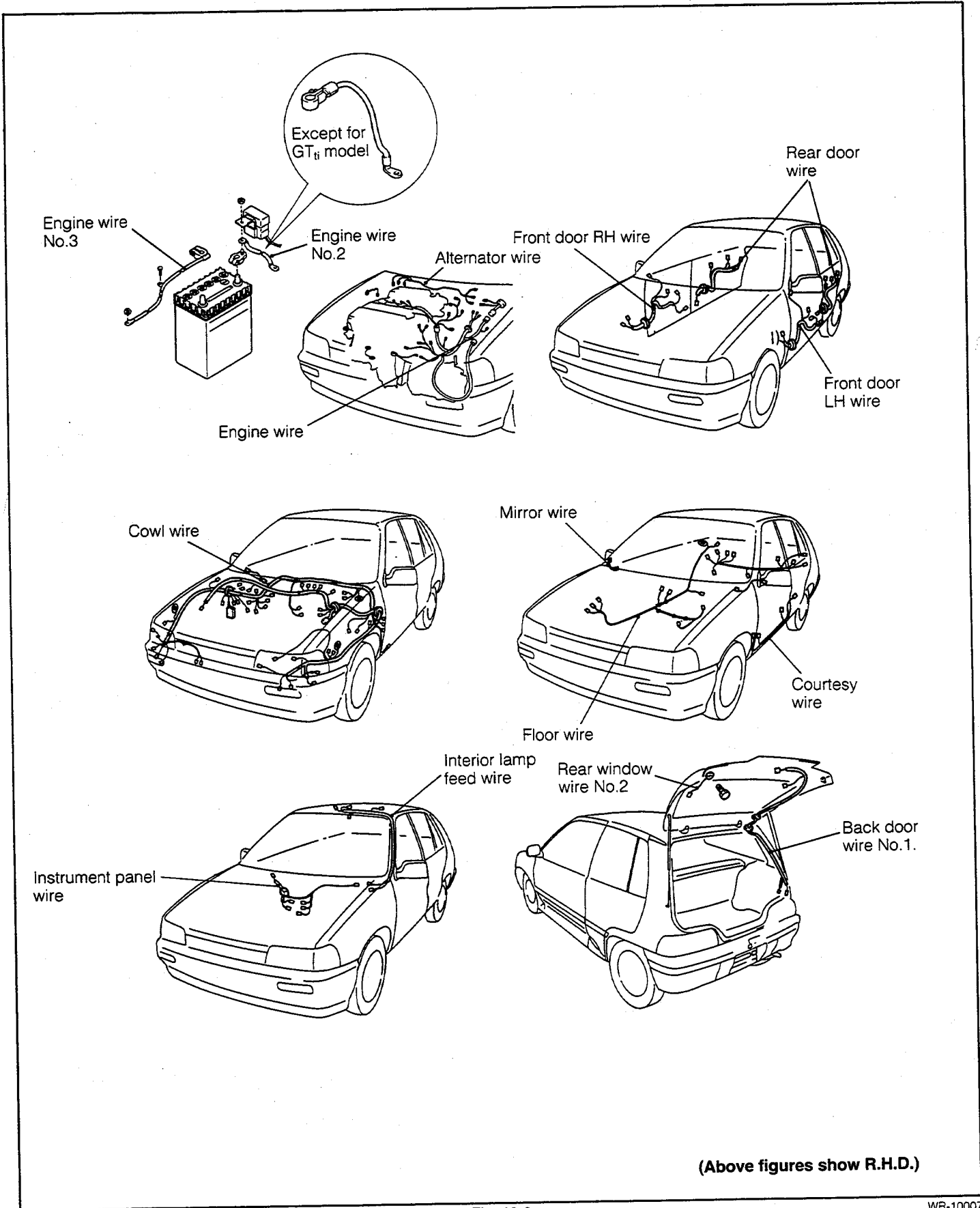


Fig. 10-6

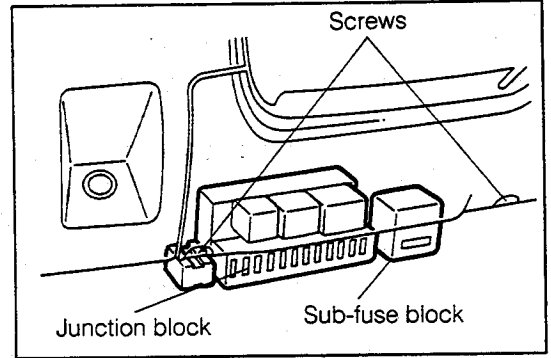
WR-10007

**USES**

**Fuse Block**

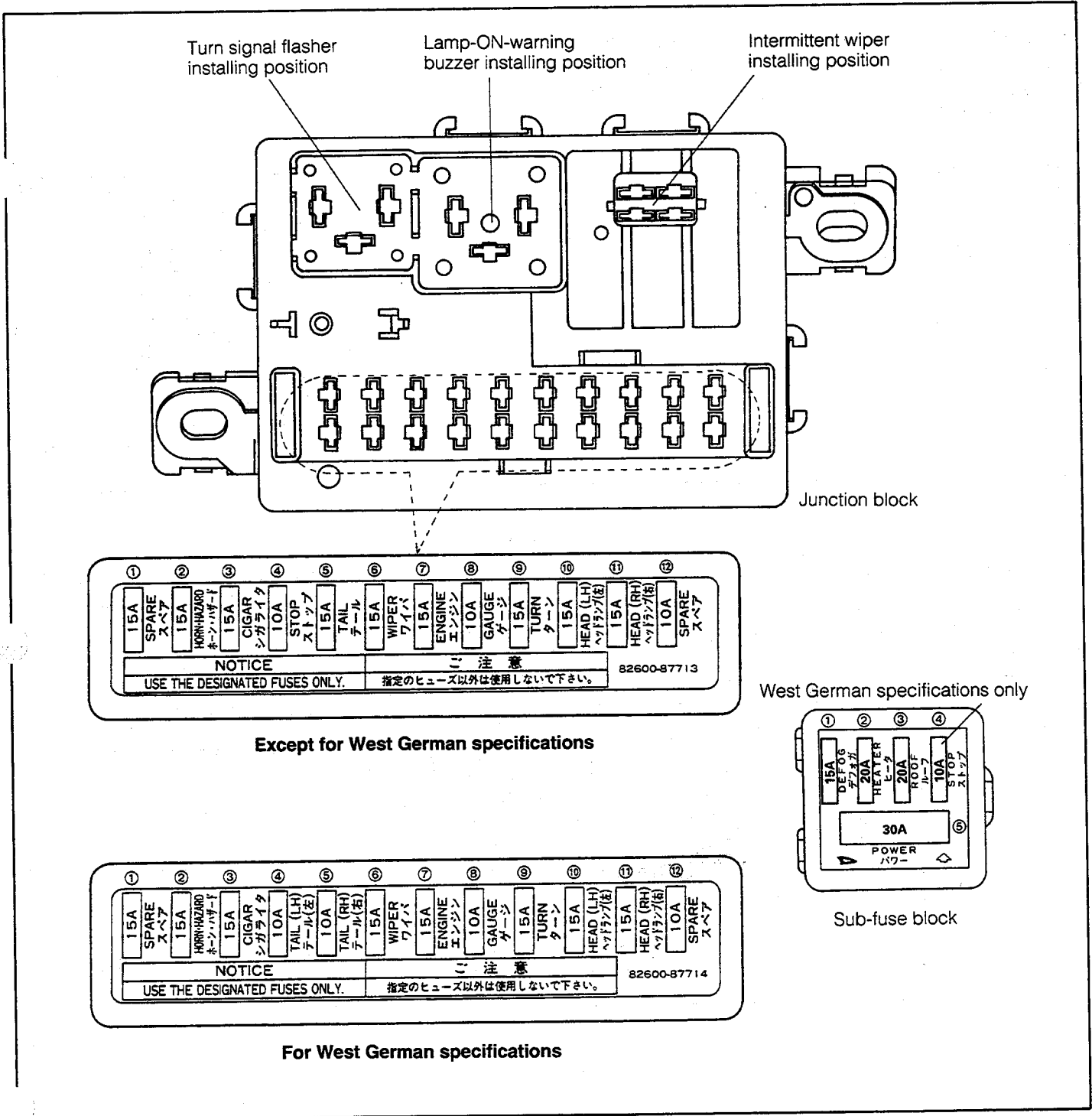
The fuse block is located below the steering post at the driver's seat side.

Detach the cover, as required, by removing the two screws.



**Fig. 10-7**

WR-10008



**Fig. 10-8**

WR-10009

# BODY ELECTRICAL SYSTEM

## Fuse replacement

The fuse replacement must be made at all times by using a new fuse with the correct amperage.

### NOTE:

- (1) Before any fuse is replaced, be certain to turn OFF all electrical equipment and ignition switch. Never use any fuse in excess of the designated rating.
- (2) Be sure to employ a puller for removing/installing fuses. Also, the removal/installation of fuses must be performed straight.

If the fuse is removed or installed in a twisted condition, the terminal will be expanded unduly, resulting in poor contact.

If any fuse is blown out repeatedly, the likelihood is that there exists a short in the relevant system. Hence, perform checks for possible systems, referring to Page 10-9 and Section 11 under "Wiring Diagram."

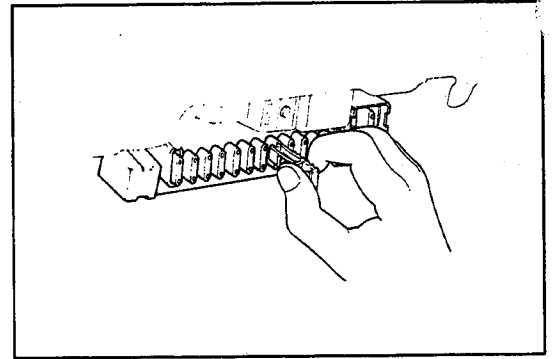


Fig. 10-9

WR-10010

## Relay and fuse block (Vehicles mounted with Type CB-80 engine)

The relay and fuse block are located next to the battery in the engine compartment.

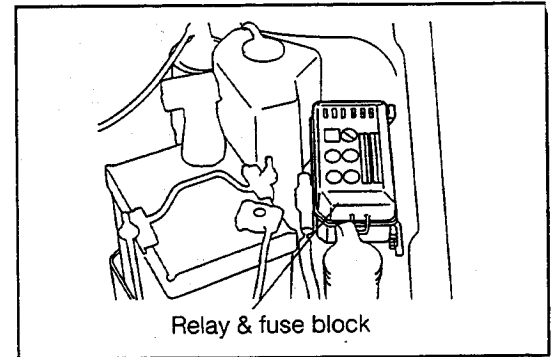


Fig. 10-10

WR-10011

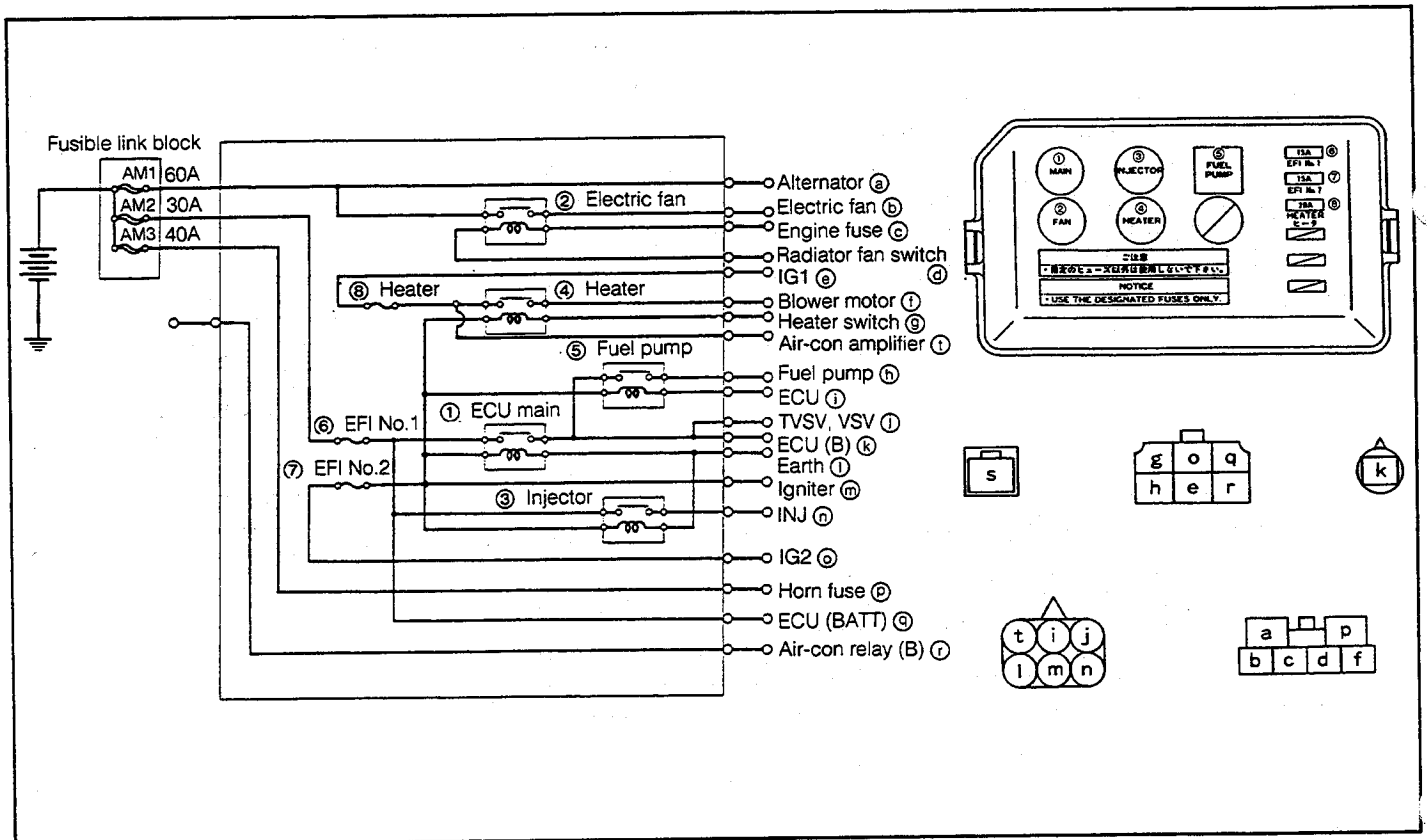


Fig. 10-11

WR-10012

unction block circuit diagram

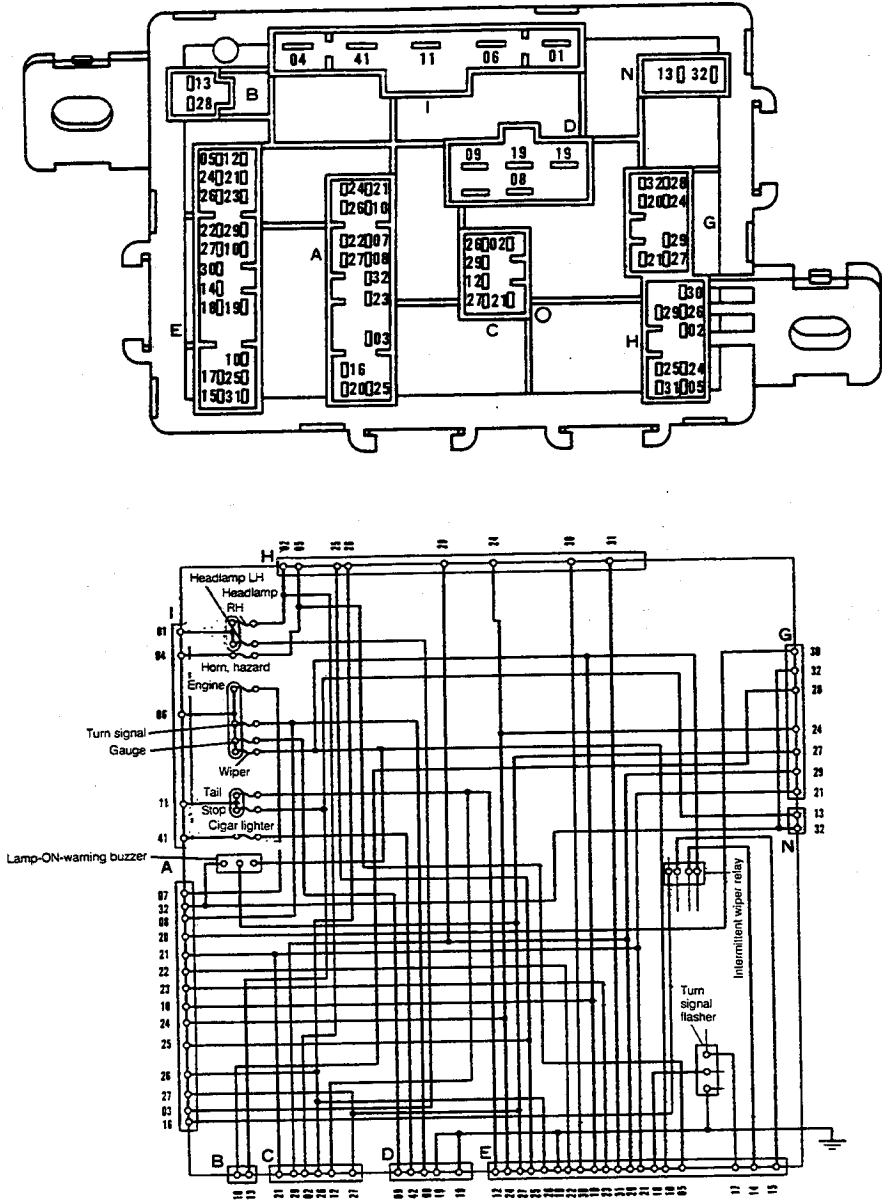


Fig. 10-12

WR-10013

Connectors

Code	Connected system	Code	Connected system
A	Cowl harness	H	Cowl harness
B	Cowl harness	I	Cowl harness
C	Cowl harness	N	—
D	Cowl harness	K	Intermittent wiper relay
E	Multi-use lever switch harness	L	Lamp-ON-warning buzzer relay
G	—	M	Flasher relay

TR86-08004

## BODY ELECTRICAL SYSTEM

### FUSIBLE LINK BLOCK (Vehicles Mounted with Type CB-80 Engine)

On vehicles mounted with Type CB-80 engine, a cartridge type fusible link block is employed.

#### Replacement

1. If visual inspection reveals that the fusible link is blown out, replace it with a new fusible link with the designated rating.

#### NOTE:

1. Before the fusible link is replaced, be sure to turn OFF the ignition key.
  2. Care must be exercised to ensure that the fusible link is not twisted during the removal/installation. If the fusible link is replaced forcibly, it will cause breakage or poor contact.
- 
2. If the fusible link is blown out repeatedly, the likelihood is that there exists a short in the relevant system. Hence, perform checks for possible systems, referring to Page 10-5 and Section 11 under "Wiring Diagram."

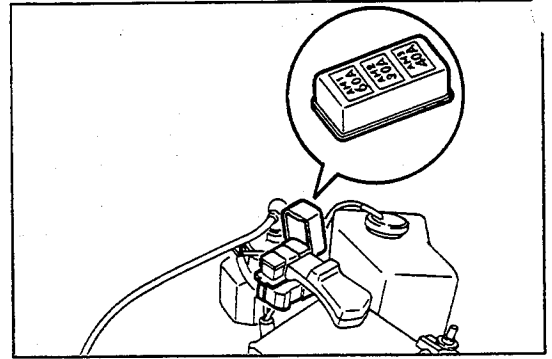


Fig. 10-13

WR-10014

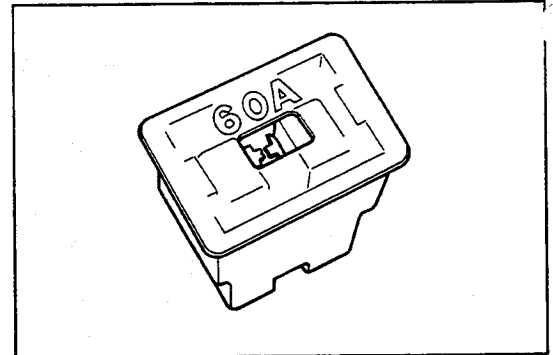


Fig. 10-14

WR-10015



## BODY ELECTRICAL SYSTEM

### use Connecting Circuits

Fuse nomenclature	Capacity (A)	Connecting circuit	Remarks
HORN-HAZARD	15	Horn, Hazard	
CIGAR	15	Cigar lighter, Clock, Electric remote control door mirror	
STOP	10	Stop lamp, Room lamp, Luggage lamp, clock (for West Germany)	
TAIL (LH)	10	Tail lamp (LH), Clearance lamp (LH), License lamp, Rear fog lamp	West German specifications only
TAIL	15	Clock, License lamp, Clearance lamp, Tail lamp, Meter illumination, Heater control illumination, Ashtray illumination, Day-light relay, Dim-dip relay, Rheostat (for AUS), A/T ECU (B)	Except for West German specifications
TAIL (RH)	10	Tail lamp (RH), Clearance lamp (RH), Ashtray illumination, Meter illumination	West German specifications only
WIPER	15	Front wiper, Rear wiper, Headlamp cleaner	
ENGINE	15	Alternator, Radiator fan motor, Fuel pump relay (CB) CSD switch (CL), Fuel cut governor (CL), Outer vent solenoid (CB), Fuel cut solenoid (CB), Vacuum warning relay, Day-light relay, Dim-dip relay	
GAUGE	10	Meter	
TURN	15	Back lamp switch, Lamp-ON-warning buzzer	
HEADLAMP (LH)	15	Headlamp (LH)	
HEADLAMP (RH)	15	Headlamp (RH), High-beam indicator	
DEFOG	15	Rear window defogger	
HEATER	20	Heater, Blower motor	
ROOF	20	Power glass sunroof	
EFI 1	15	EFI main	
EFI 2	15	EFI relay, IG coil	

WR-10016

Circuit breaker nomenclature	Capacity (A)	Connecting circuit	Remarks
POWER	30	Power window	

WR-10017

## BODY ELECTRICAL SYSTEM

### LAMPS

#### TROUBLE SHOOTING

Symptom	Possible causes	Remedies	Page
One headlamp will not glow.	<ul style="list-style-type: none"><li>● Burnt bulb</li><li>● Faulty socket</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Replace bulb.</li><li>● Repair, as required.</li></ul>	10-11
Headlamps will not glow.	<ul style="list-style-type: none"><li>● Fusible link and/or fuse blown out</li><li>● Faulty lighting switch</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Replace fusible link and/or fuse.</li><li>● Check switch.</li><li>● Repair, as required.</li></ul>	10-6 10-35
High beam or low beam will not glow.	<ul style="list-style-type: none"><li>● Faulty lighting switch or dimmer switch</li><li>● Faulty wiring</li></ul>	<ul style="list-style-type: none"><li>● Check switch.</li><li>● Repair, as required.</li></ul>	10-35
Clearance lamp, tail lamp or license lamp will not glow.	<ul style="list-style-type: none"><li>● "Tail" fuse blown out</li><li>● Fusible link blown out</li><li>● Faulty side lamp switch</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Check for short. Replace fuse.</li><li>● Replace fusible link.</li><li>● Check switch.</li><li>● Repair, as required.</li></ul>	10-6 10-8 10-38
Turn signal lamps at one side will not glow.	<ul style="list-style-type: none"><li>● Faulty turn signal lamp switch</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Check switch.</li><li>● Repair, as required.</li></ul>	10-36
Turn signal lamps at both sides will not glow.	<ul style="list-style-type: none"><li>● "Turn" fuse blown out</li><li>● Faulty turn signal/hazard switch</li><li>● Faulty turn signal flasher relay</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Check for short. Replace fuse.</li><li>● Check switch.</li><li>● Check flasher relay</li><li>● Repair, as required.</li></ul>	10-6 10-36 10-37
Stop lamp will not glow.	<ul style="list-style-type: none"><li>● "Stop" fuse blown out</li><li>● Faulty stop lamp switch</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Check for short. Replace fuse.</li><li>● Check switch.</li><li>● Repair, as required.</li></ul>	10-6 10-47
Stop lamp remains in glow state.	<ul style="list-style-type: none"><li>● Faulty stop lamp switch.</li></ul>	<ul style="list-style-type: none"><li>● Adjust or replace switch.</li></ul>	10-47
Hazard warning lamp will not glow.	<ul style="list-style-type: none"><li>● "Horn" fuse blown out</li><li>● Faulty flasher relay</li><li>● Faulty hazard switch</li><li>● Faulty wiring or earth</li></ul>	<ul style="list-style-type: none"><li>● Check for short. Replace fuse.</li><li>● Check flasher.</li><li>● Check switch.</li><li>● Repair, as required.</li></ul>	10-6 10-36

WR-10018

**LEARANCE LAMP**

**Removal**

1. Remove the clearance lamp by removing the two screws.
2. Detach the bulb from the socket.

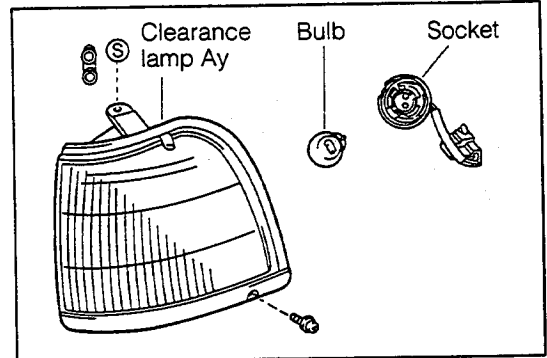


Fig. 10-15

WR-10019

**Installation**

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Install the clearance lamp with the two screws.

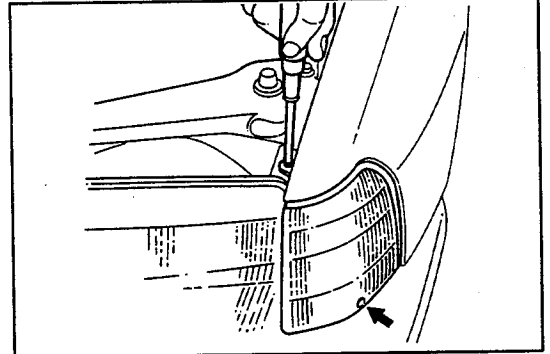


Fig. 10-16

WR-10020

**HEADLAMP**

**NOTE:**

It should be noted that the bulb replacement can be performed only after socket cover has been detached.

**Removal**

1. Remove the radiator grille as follows.  
 Except GT<sub>ti</sub> grade ..... Pull the grille toward you, while the upper part of the claw is being pushed down, using a common screwdriver.  
 GT<sub>ti</sub> grade ..... Detach the grille by turning the central part of the clip 90 degrees, using a cross point screwdriver.
2. Remove the clearance lamp.  
 See the section under "Clearance Lamp" above.
3. Remove the headlamp assembly.
4. Remove the socket cover.
5. Detach the bulb.

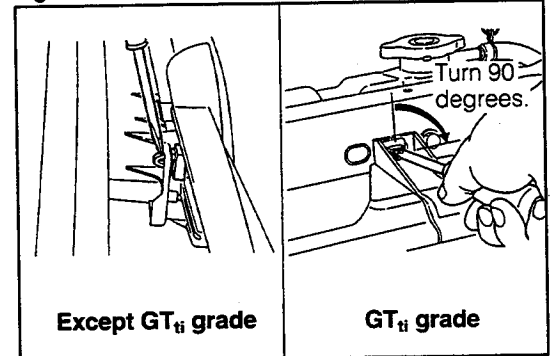


Fig. 10-17

WR-10021

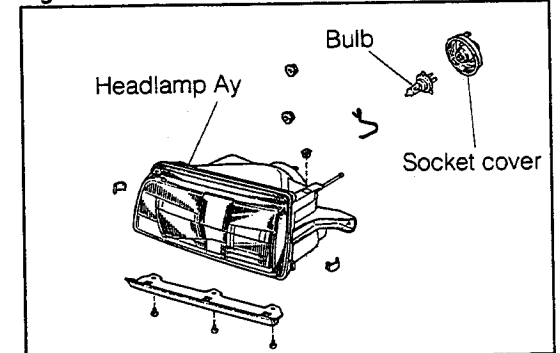


Fig. 10-18

WR-10022

**CAUTION:**

The halogen bulb reaches a very high temperature while it is put into use. If any lubricant gets on the bulb surface, it will result in significantly reduced lamp life. Hence, be very careful not allow your fingers, etc. to touch with the glass portion during the replacement. Be sure to hold the flange section to replace the bulb.

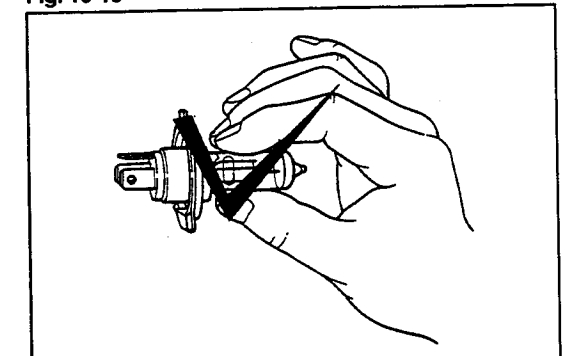


Fig. 10-19

WR-10023

## BODY ELECTRICAL SYSTEM

### Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Install the socket cover in place.

**NOTE:**

Make sure that the socket cover is fitted securely.

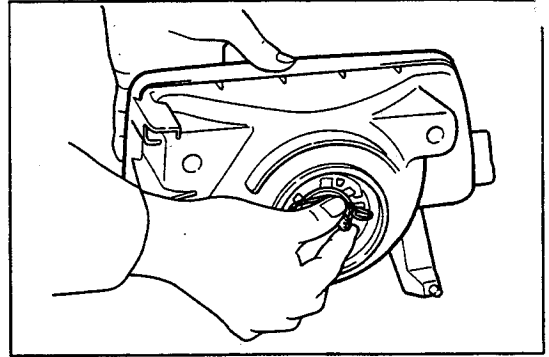


Fig. 10-20

WR-10024

3. Install the headlamp assembly with one bolt and two nuts.
4. Install the clearance lamps and radiator grille.

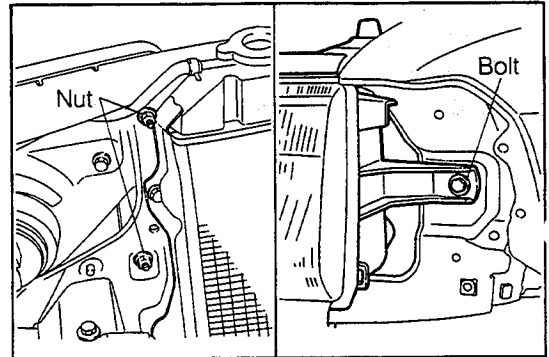


Fig. 10-21

WR-10025

## Headlamp aiming adjustment (Screen type)

Conditions of vehicle during aiming adjustment

1. Perform the aiming adjustment with the tire air inflation pressure set to the specified value and with one person seated at the driver's seat.
2. Rock the vehicle in an up-and-down direction as well as in a right-and-left direction so that the suspensions may be settled in a normal state.
3. Carry out the headlamp aiming adjustment while the engine is running at 1500 rpm or more.  
(If the revolution speed is too low, the lamp terminal voltage drops, thus making it difficult to recognize the hot zone.)

## Halogen headlamps

1. Setting of reference points on screen
  - (1) Measure the center height "H" of the headlamps. Draw an adjustment line on the screen at a height 29 mm (1.14 inches) below the center height "H".
  - (2) Draw a vertical straight line on the screen at each center of the headlamps on both right and left sides. Thus, establish each intersection "F" made by the vertical center line and the adjustment line.
2. Headlamp aiming adjustment
  - (1) Position the vehicle in front of the screen so that the headlamps of the vehicle come at a distance of 3 m (9.84 ft). Also, ensure that the vehicle is positioned normal to the screen.
  - (2) When the headlamps are turned ON with the lower beam selected, you can get a light distribution pattern as indicated in the right figure. Therefore, the aiming adjustment can be carried out at an intersection made by the line "a" and the line "b" of cut-off lines.
  - (3) Turn ON the headlamps with the low beam selected. Perform the adjustment using the adjusting screws in such a way that each intersection of the cut-off lines comes at the respective intersection "F" on the screen.

## Tire size & air pressure

kg/cm<sup>2</sup> (psi)

Tire size		Front		Rear	
(JATMA)	(ISO)	Petrol vehicle	Diesel vehicle	Petrol vehicle	Diesel vehicle
6.00-12-4PR	6.00-12-4PR	1.9 (27)	1.9 (27)	1.9 (27)	1.9 (27)
145SR13	145/80R13 74S	1.8 (26)	2.0 (29)	1.8 (26)	2.0 (29)
155SR13	155/80R13 78S	1.8 (26)	2.0 (29)	1.8 (26)	2.0 (29)
165/70SR13	165/70R13 79S	1.8 (26)	2.0 (29)	1.8 (26)	2.0 (29)
—	175/60R14 78H	1.8 (26)	—	1.8 (26)	—
—	185/60R14 82H (Pirelli Pe)	1.8 (26)	—	1.8 (26)	—

WR-10026

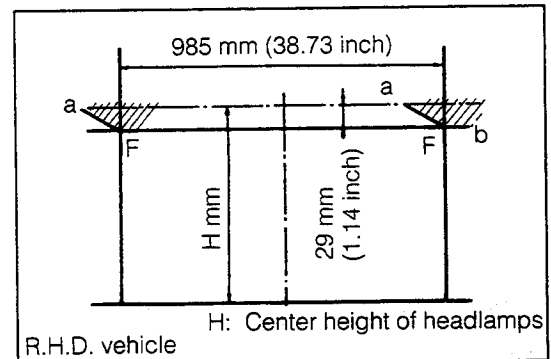


Fig. 10-22

WR-10029

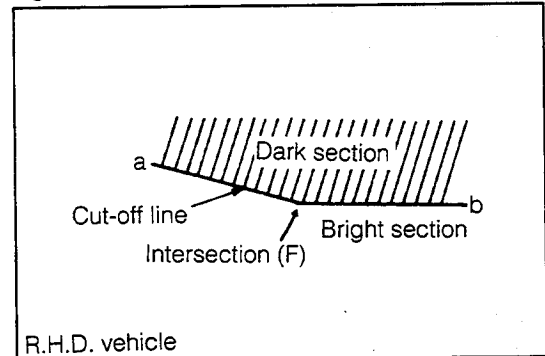


Fig. 10-23

WR-10030

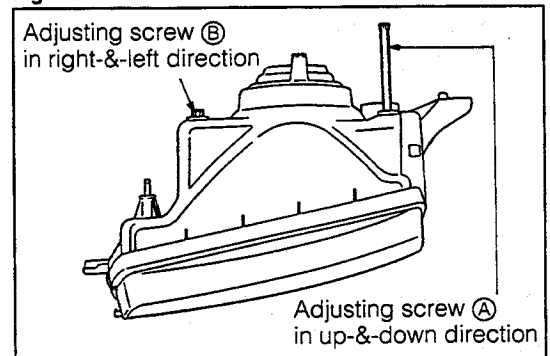


Fig. 10-24

WR-10028

## BODY ELECTRICAL SYSTEM

- (4) Upon completion of the headlamp aiming adjustment, switch the low beam to the high beam. Ensure that each main beam is directed downward and it is aiming straight toward the forward direction of the vehicle.

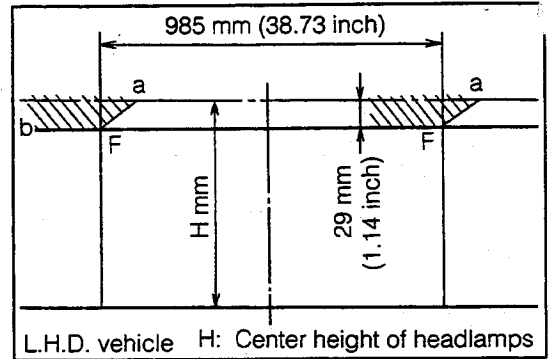


Fig. 10-25

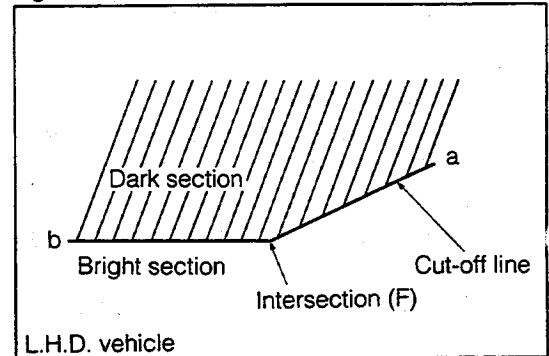


Fig. 10-26

WR-10031

## FRONT TURN SIGNAL LAMP

### Removal

1. Remove the front turn signal lamp by removing one screw.
2. After detaching the lens, remove the bulb.

### Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Install the lens. Secure the front turn signal lamp assembly with the screw.

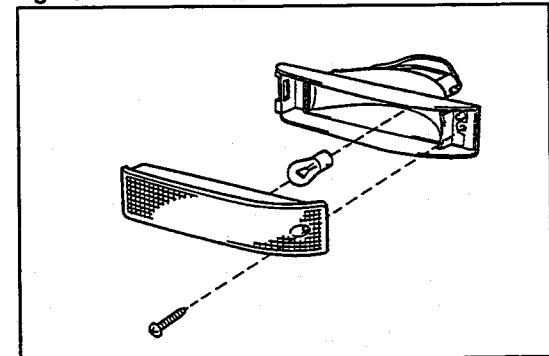


Fig. 10-27

WR-10032

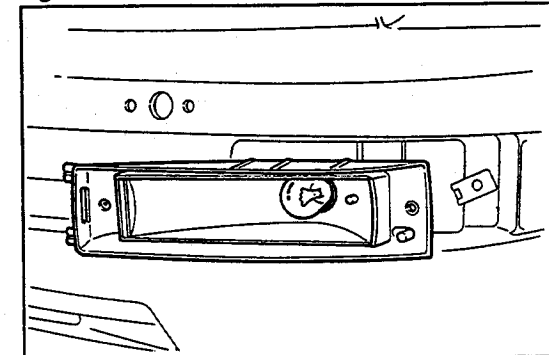


Fig. 10-28

WR-10033

## SIDE TURN SIGNAL LAMP

### Removal

1. Using a common screwdriver, remove the side turn signal lamp assembly by pushing it toward the front part of the vehicle. This removal must be performed carefully with a cloth or the like placed on the body that no scratch may be made to the paint finish surface.
2. After detaching the lens, remove the bulb.

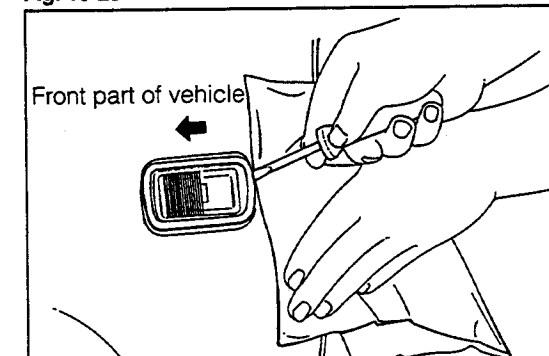


Fig. 10-29

WR-10034

## Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Install the lens on the side turn signal lamp assembly.
3. Attach the side turn signal lamp assembly to the fender section.

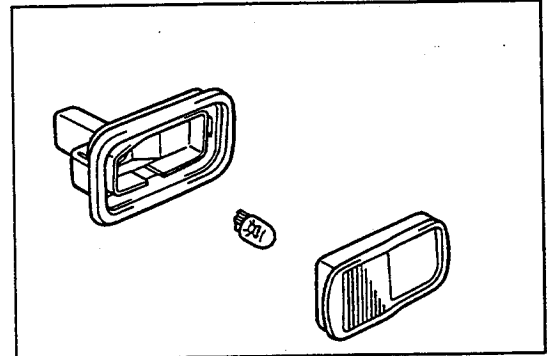


Fig. 10-30

WR-10035

3. Attach the side turn signal lamp assembly to the fender section.

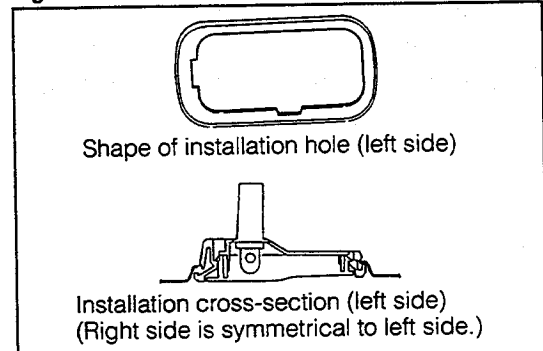


Fig. 10-31

WR-10036

## LICENSE PLATE LAMP

### Removal

1. Detach the clip. Remove the lower back trim.  
**NOTE:**  
 It should be noted that the bulb replacement can be carried out without removing the lower back trim.
2. Disconnect the coupler.
3. Remove the license plate assembly and lens by removing the two tapping screws.  
 Take out the bulb.

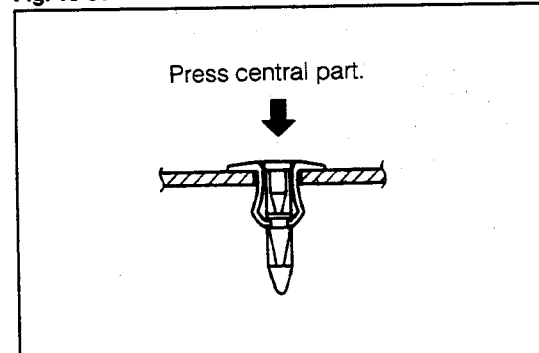


Fig. 10-32

WR-10037

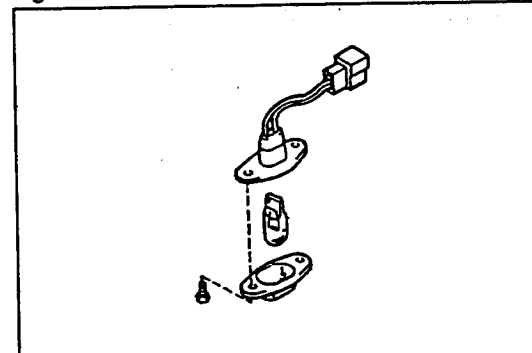


Fig. 10-33

WR-10038

### Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Ensure that the spring nut is mounted properly on the bumper rib.

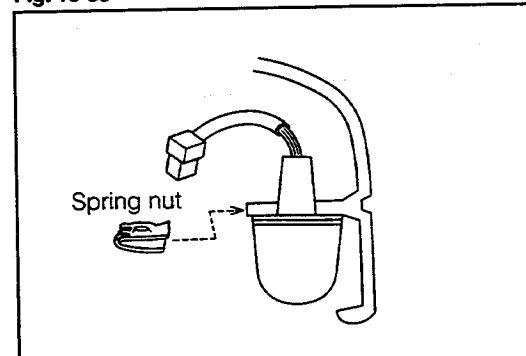


Fig. 10-34

WR-10039

## BODY ELECTRICAL SYSTEM

3. Install the lens. Secure the lens with the tapping screws.
4. Connect the coupler.

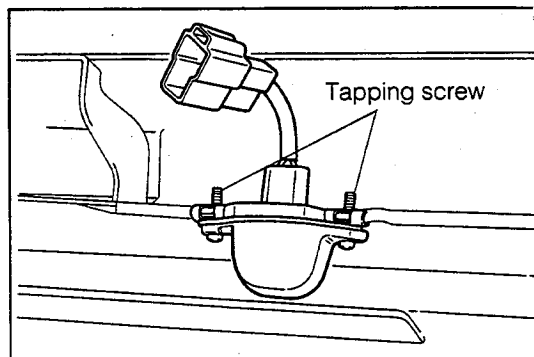


Fig. 10-35

WR-10040

5. Attach the lower back trim.  
As for the clip, install it with the central part in a pulled-out state. Then, push the central part, until the part becomes flush with the other part.

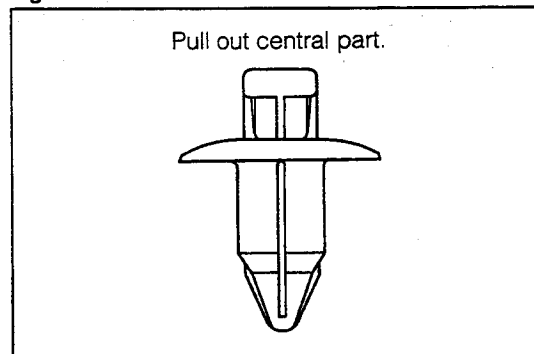


Fig. 10-36

WR-10041

## REAR COMBINATION LAMP

### NOTE:

It should be noted that the bulb replacement can be performed only after the rear combination lamp service cover has been detached.

### Removal

1. Remove the rear bumper. (Refer to page 9-12.)
2. Detach the rear combination lamp service cover.
3. Remove the rear combination lamp assembly from the body.
4. Detach the socket and bulb.

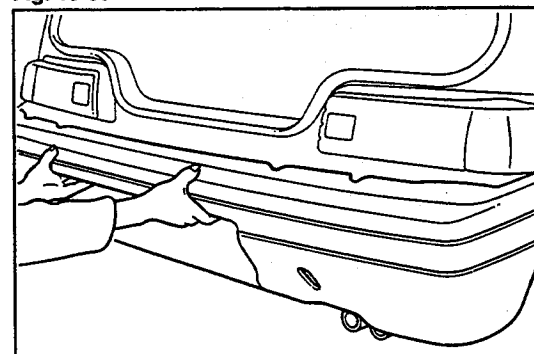


Fig. 10-37

WR-10042

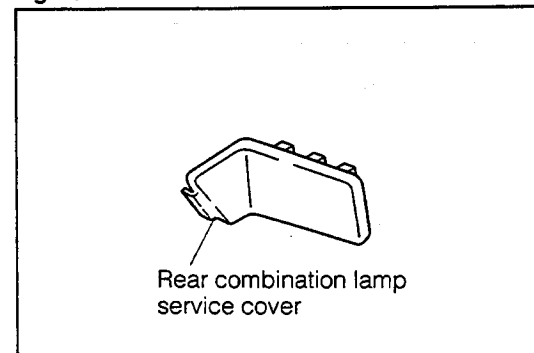


Fig. 10-38

WR-10043

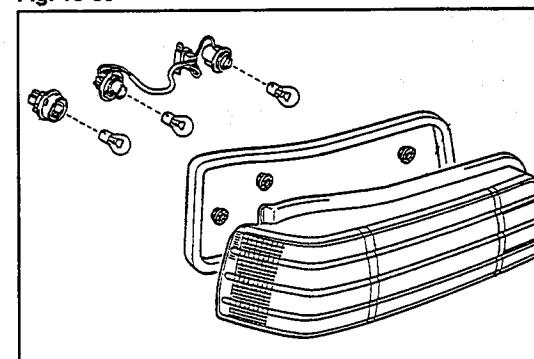


Fig. 10-39

WR-10044



## BODY ELECTRICAL SYSTEM

### Installation

1. Install the bulb and socket in the rear combination lamp assembly.

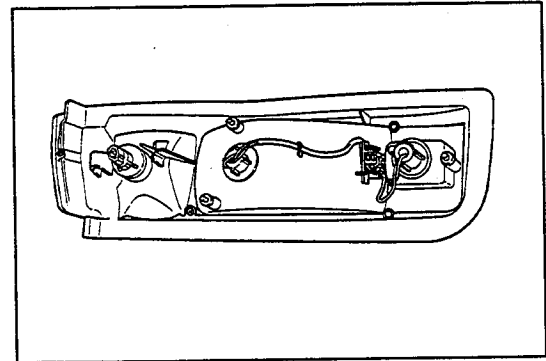


Fig. 10-40

WR-10045

2. Install the rear combination lamp assembly.
  - (1) Remove any remaining butyl tape (body gasket) from the body surface as well as from the gasket surface of the rear combination lamp.

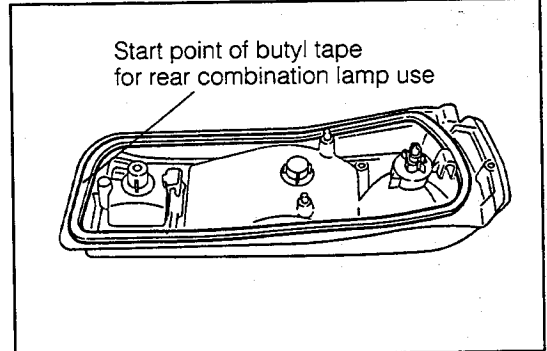


Fig. 10-41

WR-10046

- (2) Affix the butyl tape exclusively for this application onto the rear combination lamp.

#### NOTE:

1. Make sure that the application of butyl is limited only within the marked area.
2. Be sure that the application of butyl is started at around the mid-point of the inner side of the rear combination lamp.
3. Be certain that the ends of the butyl tape are overlapped about 10 mm (0.39 inch).

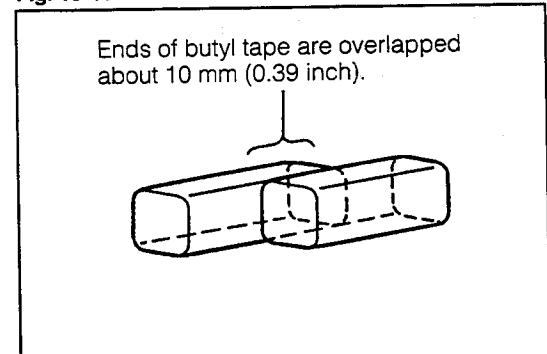


Fig. 10-42

WR-10047

3. Attach the rear combination lamp service cover.
4. Install the rear bumper.

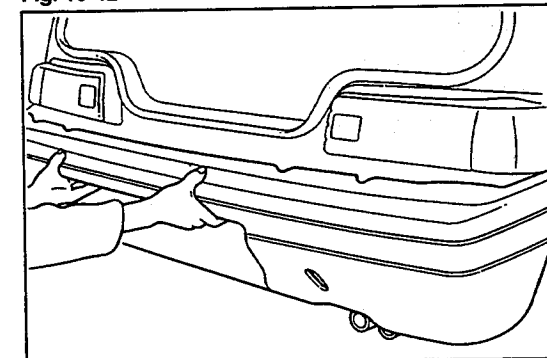


Fig. 10-43

WR-10048

## ROOM LAMP

### Removal

1. Detach the room lamp cover. Remove the bulb.

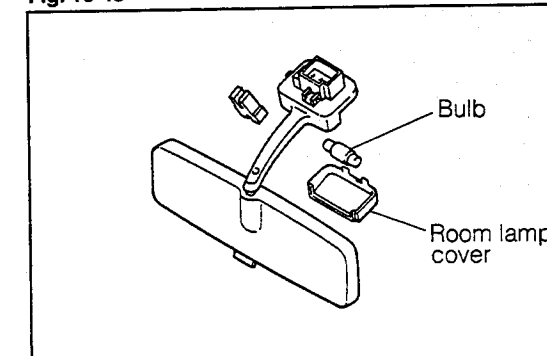


Fig. 10-44

WR-10049

# BODY ELECTRICAL SYSTEM

## Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Install the room lamp cover.

WR-10050

## LUGGAGE ROOM LAMP

### NOTE:

It should be noted that the bulb replacement can be performed only after the lens has been detached.

### Removal

1. Detach the rear combination lamp service cover.
2. Disconnect the connector. Tie a string to the connector section. Working from above, remove the luggage room lamp assembly.
3. Remove the lens and bulb.

### Installation

1. When the bulb is burnt out, install a new bulb with the designated wattage.
2. Attach the lens to the luggage room lamp assembly.

3. Install the luggage room lamp assembly.  
For easier operation, install the lamp assembly by tying the string which was used during the removal to the connector section.
4. Connect the connector. Attach the rear combination lamp service cover.

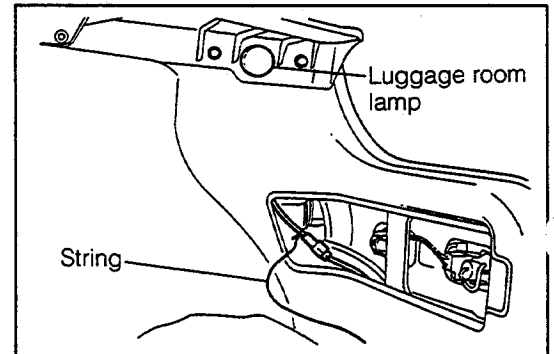


Fig. 10-45

WR-10051

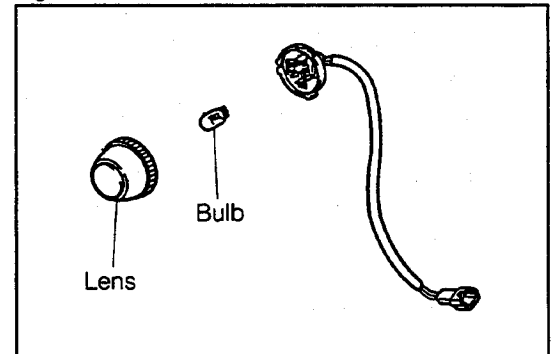


Fig. 10-46

WR-10052

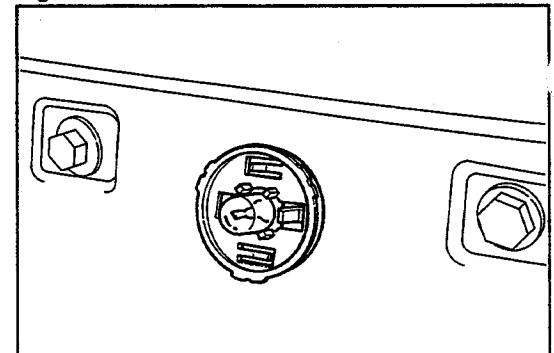


Fig. 10-47

WR-10053

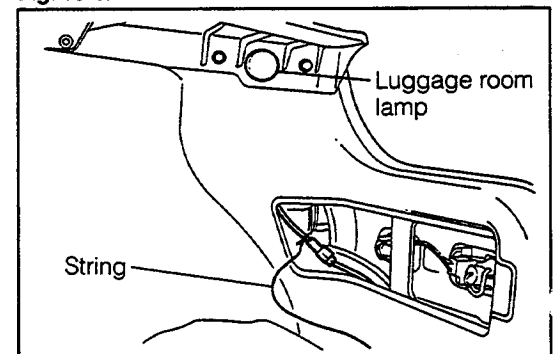


Fig. 10-48

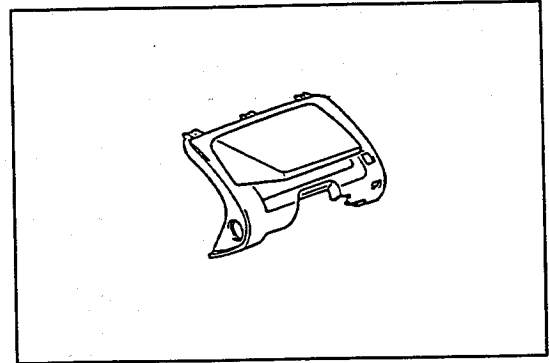
WR-10054

**COMBINATION METER****Removal**

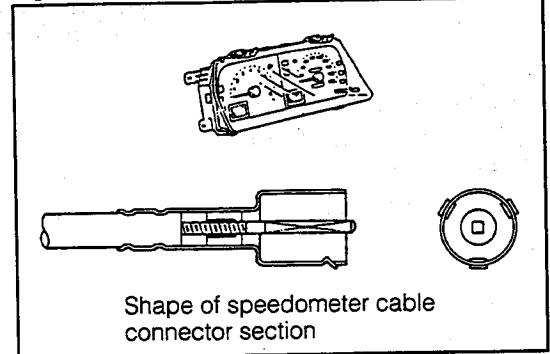
1. Remove the instrument cluster panel finish panel sub-assembly from the instrument panel. (See page 9-78.)
2. Disconnect each connector. Remove the combination meter assembly from the instrument panel.

**Installation**

1. Connect each connector.  
Install the combination meter Ay to the instrument panel.
2. Install the instrument cluster panel finish panel S/A to the instrument panel.  
(See page 9-82.)

**Fig. 10-49**

WR-10055

**Fig. 10-50**

WR-10056

# BODY ELECTRICAL SYSTEM

## COMPONENTS

### Single-meter type standard

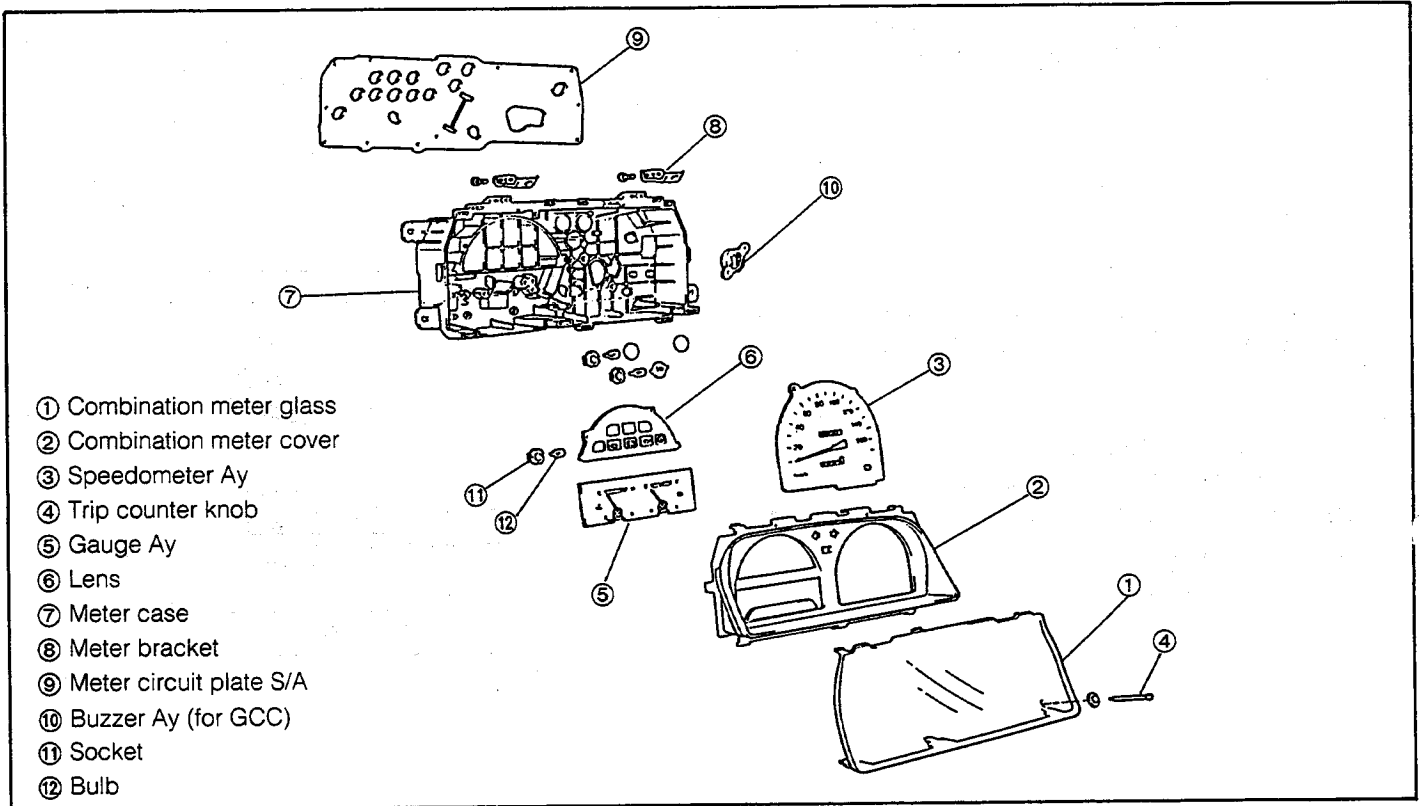


Fig. 10-51

WR-10057

### Two-meter type standard

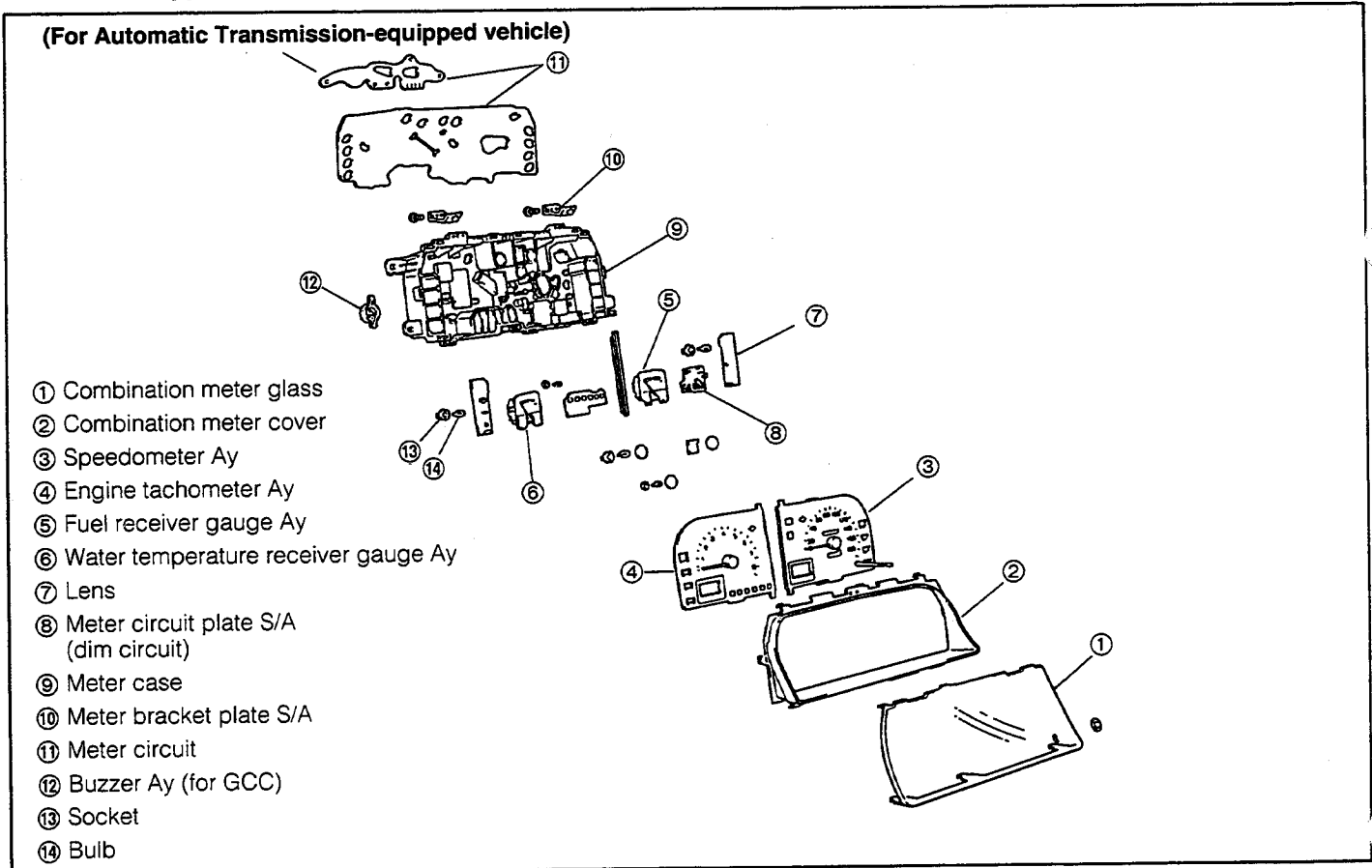


Fig. 10-52

WR-10058

ANGLE-METER TYPE

Circuit panel

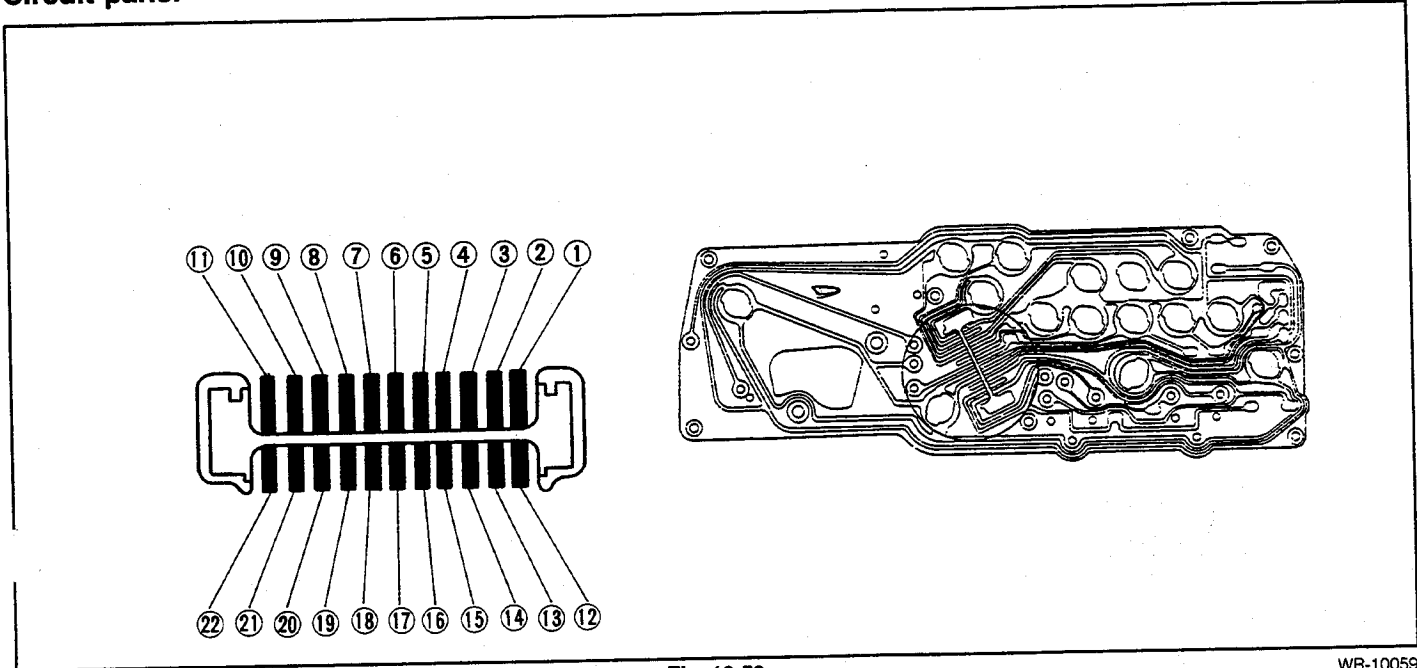


Fig. 10-53

WR-10059

Circuit diagram

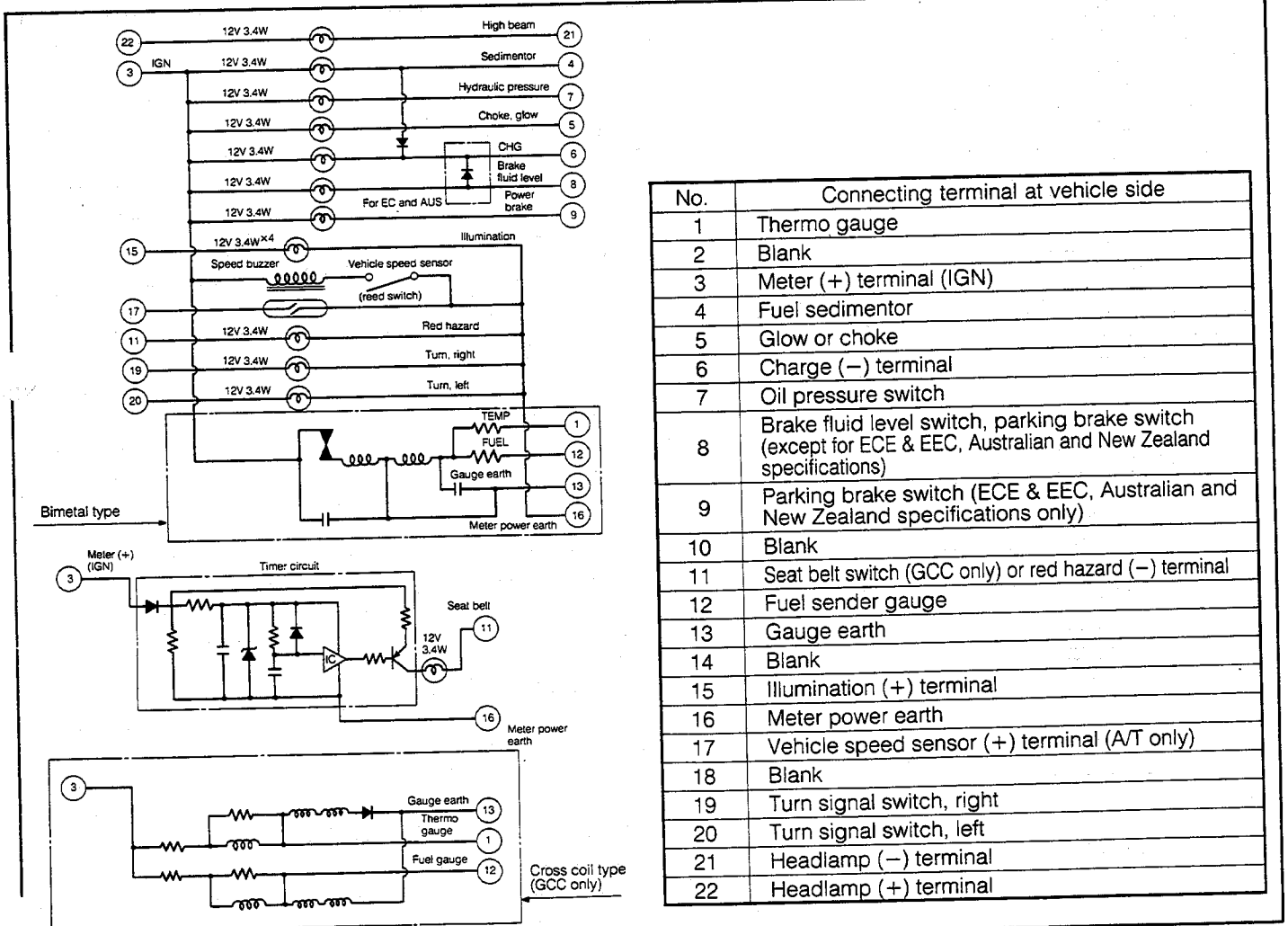


Fig. 10-54

WR-10060

# BODY ELECTRICAL SYSTEM

## TWO-METER TYPE

### Circuit panel

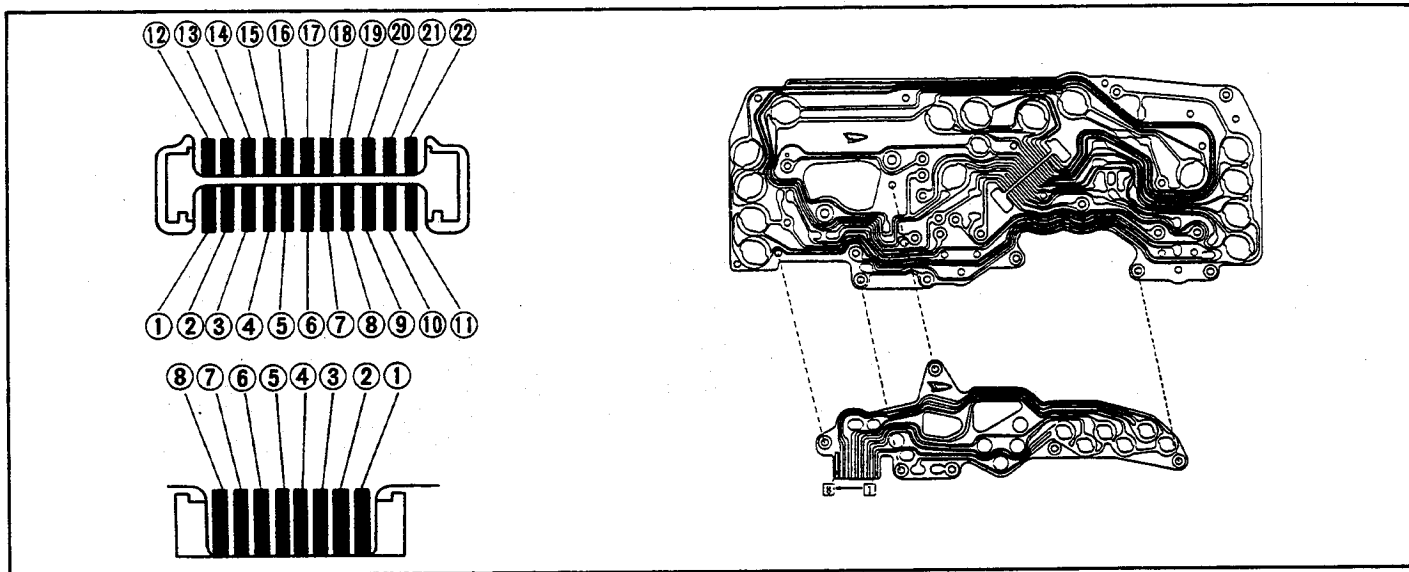


Fig. 10-55

WR-10061

### Circuit diagram

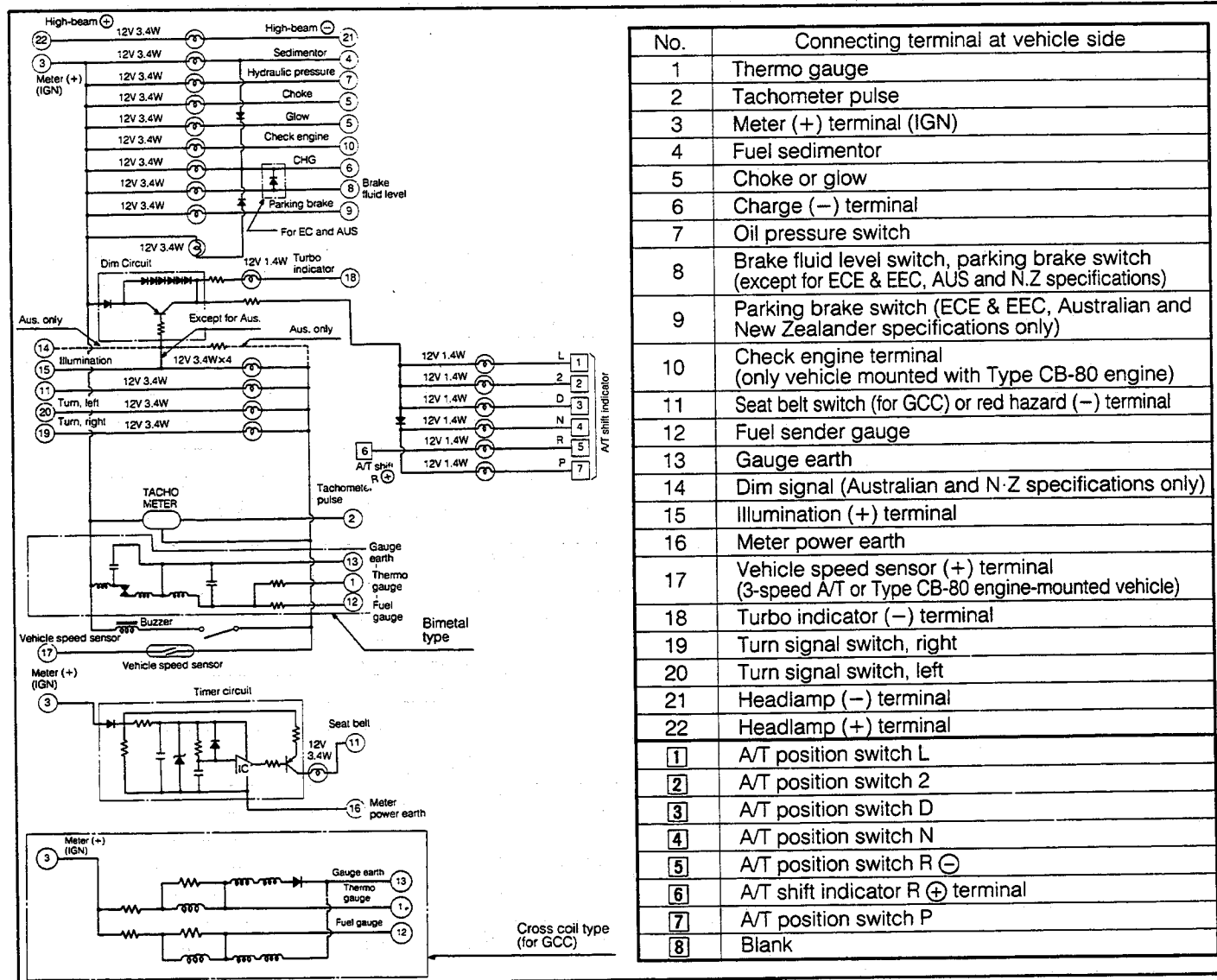


Fig. 10-56

WR-10062

**PEEDOMETER**

**1. In-vehicle check**

Using a speedometer tester, check the speedometer for any indication error, pointer fluctuation and abnormal noise. Furthermore, check to see if the odometer and speed warning device (GCC specifications only) are functioning properly.

**NOTE:**

1. It should be noted that excessive tire wear, over-inflation or under-inflation will cause indication errors of the speedometer.
2. Fluctuations of the meter pointer are often attributable to a faulty meter cable.
3. The meter contains a mechanism using contact points. Hence, there will be instances where the pointer slightly fluctuates in the neighborhood of operating points of contacts points (changeover points between ON and OFF). However, this does not constitute any malfunction.

Item	Meter indication	Remarks
Indication error	For Australia within +10% - -10% For ECE & EEC within +10% - 0%	Relative to tester reading at a time when the actual vehicle speed is 35 km/h (22 mph) or more
Pointer fluctuation	Within $\pm 1$ km/h (0.6 mph)	—
Speed warning device operating speed	$124 \pm 4$ km/h	GCC specifications only

**2. Speed warning buzzer check (GCC specifications only)**

Apply the battery voltage across the terminals of the buzzer unit. Ensure that the buzzer is set off.

**NOTE:**

Be sure to connect the buzzer's side having a (+) mark to the positive (+) terminal of the battery.

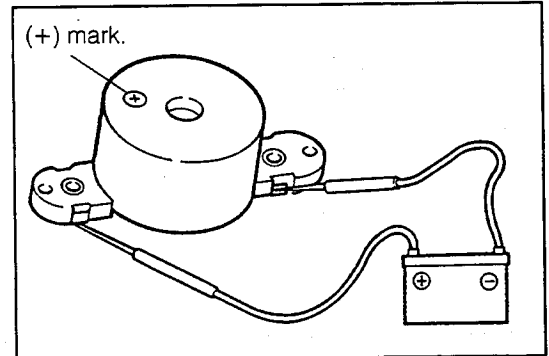


Fig. 10-57

WR-10064

**3. Checking of reed switch for vehicle speed sensor use (Only vehicles mounted with 3-speed A/T or Type CB-80 engine)**

- (1) Remove the combination meter.
- (2) Ensure that continuity occurs four times at the reed switch (between Ⓑ and Ⓒ) while the speedometer drive shaft completes a turn.

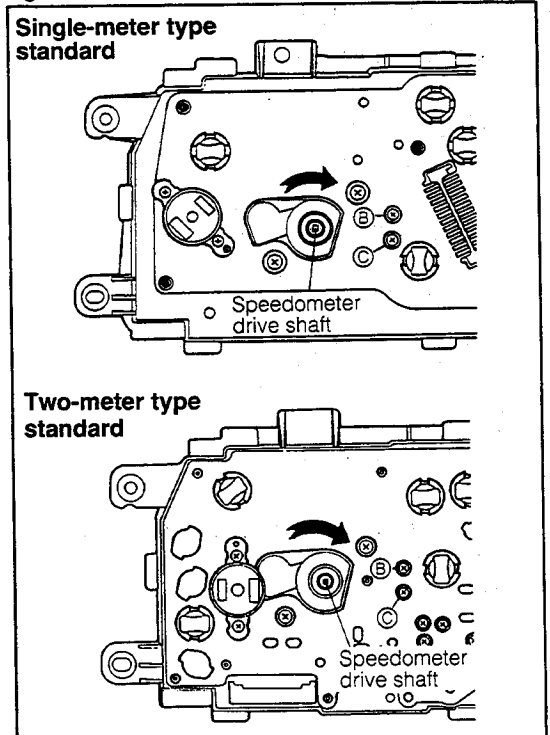


Fig. 10-58

WR-10065

# BODY ELECTRICAL SYSTEM

## FUEL GAUGE AND WATER TEMPERATURE GAUGE

### Circuit Diagram of Pin Type, Bimetal Gauge

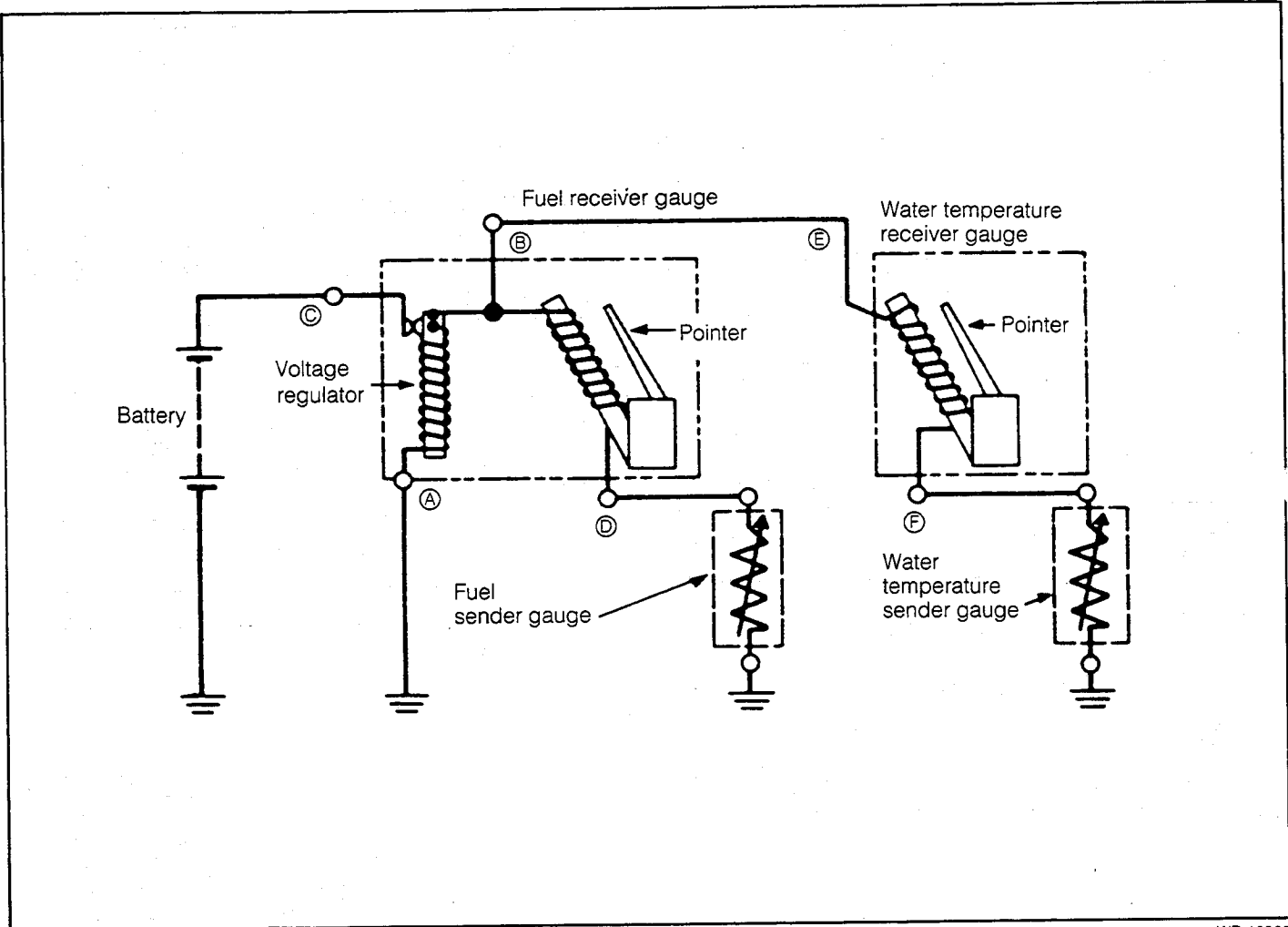


Fig. 10-59

WR-10066

## FUEL RECEIVER GAUGE

### 1. In-Vehicle Inspection

Disconnect the connector located at the upper part of the fuel tank. Carry out the following checks at the terminal at the receiver side.

- (1) Disconnect the connector from the harness of the fuel sender gauge. Ground the gauge through a test lamp (12 V - 3.4 W).
- (2) Turn ON the engine switch. Ensure that the test lamp goes on and, several seconds later, the test lamp starts flashing.

- (3) Ensure that the pointer of the receiver gauge starts to rise gradually.

#### NOTE:

In case that the fuel sender earth terminal is used, in advance, make sure that it has continuity with the body earth.

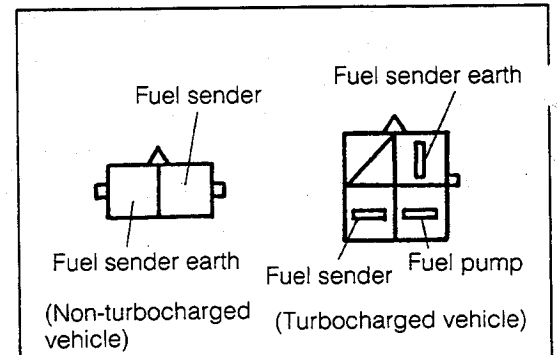


Fig. 10-60

WR-10067

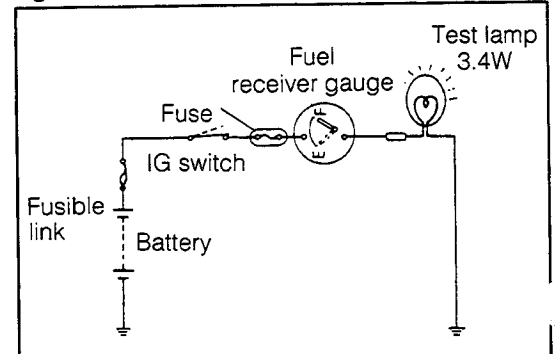


Fig. 10-61

WR-10068



## Unit Check

- (1) Remove the combination meter.
- (2) Measure the resistance between the terminals ② and ③.  
Specified Value: 55 Ω
- (3) Connect the multi-pole connector to the combination meter. Turn ON the engine key. Ensure that the battery voltage is applied between the terminal ④ and the body earth.
- (4) Under the conditions in the step (3), ensure that a voltage varying approximately from 2 to 7 V is applied between the terminal ② and the body earth.

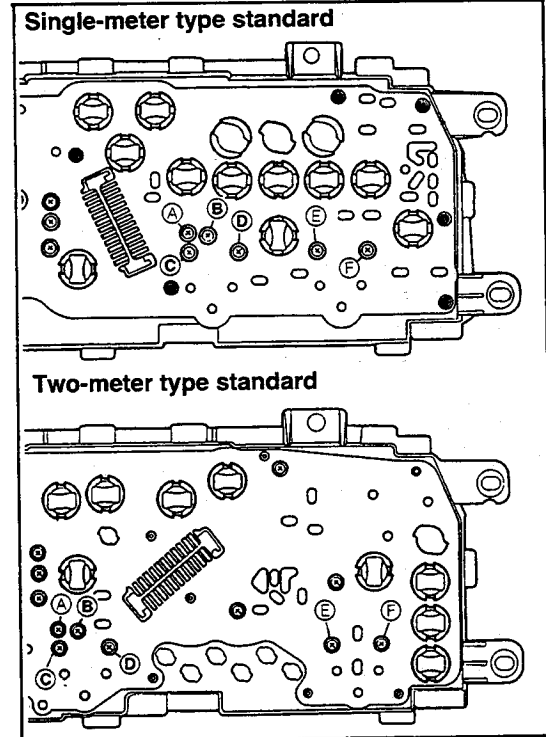


Fig. 10-62

WR-10069

## FUEL SENDER GAUGE

The fuel sender gauge is located at the upper part of the fuel tank.

### 1. Measurement of Resistance of Fuel Sender Gauge

- (1) Ensure that the resistance varies when the float is moved from the upper position to the lower position.
- (2) Measure the resistance between the fuel terminal and the body at each float level.

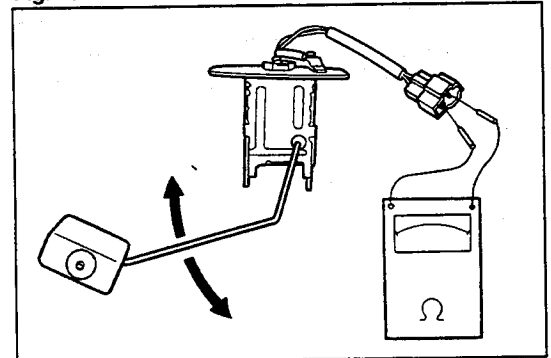


Fig. 10-63

WR-10070

Float position	Resistance (Ω)	Reference dimension mm (inch)	
		Type CB-23, CL-11 and CL-61 engines	Type CB-61 and CB-80 engines
F	1 - 5	40 (1.56)	28 (1.1)
1/2	28.5 - 36.5	91 (3.58)	86 (3.4)
E	103 - 117	129 (5.08)	133 (5.2)

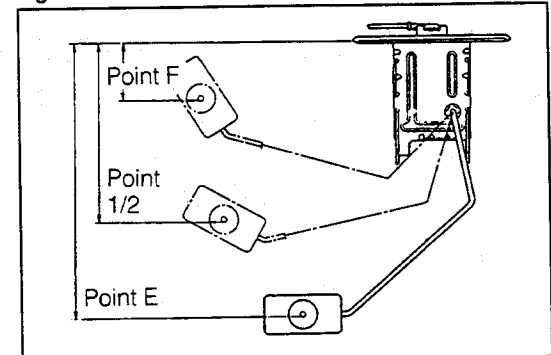


Fig. 10-64

WR-10071

# BODY ELECTRICAL SYSTEM

## WATER TEMPERATURE RECEIVER GAUGE

### 1. In-Vehicle Inspection

- (1) Disconnect the connector from the harness of the water temperature sender gauge. Ground the gauge to the connector at the harness through a test lamp (12 V - 3.4 W).
- (2) Turn ON the engine switch. Ensure that the test lamp goes on and, several seconds later, the test lamp starts flashing.
- (3) Ensure that the pointer of the receiver gauge starts to rise gradually.

### 2. Unit Check

- (1) Remove the combination meter.
- (2) Measure the resistance between the terminals ⑤ and ⑥.  
Specified Value: Approx. 25 Ω
- (3) Connect the multi-pole connector to the combination meter. Turn ON the engine key. Ensure that the battery voltage is applied between the terminal ③ and the body earth.
- (4) Under the conditions in the step (3), ensure that a voltage varying approximately from 2 to 7 V is applied between the terminal ⑤ and the body earth.

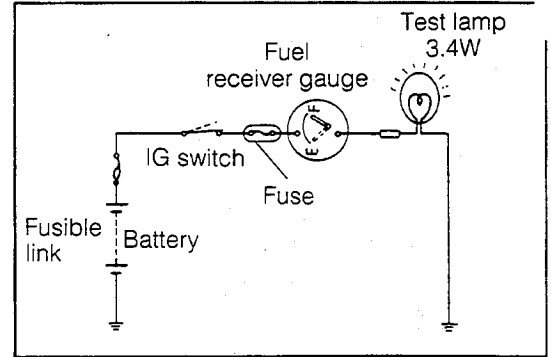


Fig. 10-65

WR-10072

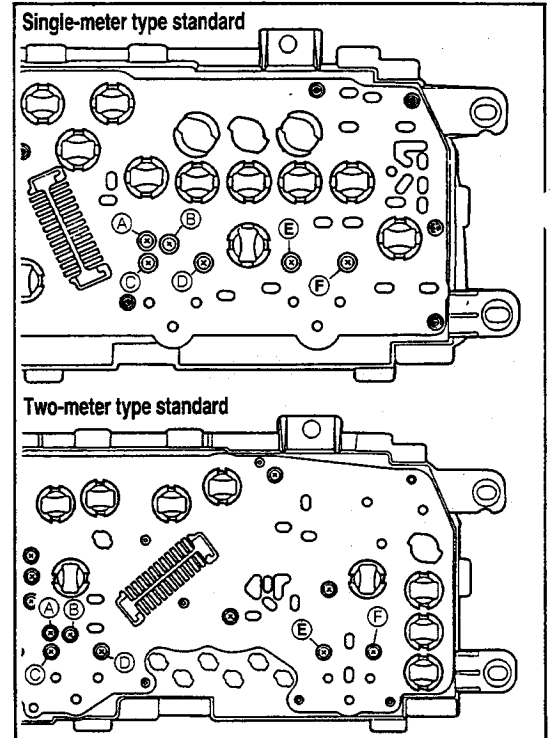


Fig. 10-66

WR-10073

## WATER TEMPERATURE SENDER GAUGE

The water temperature sensor gauge is located at the following points given below:

- Type CB engine ... Rear end of cylinder head
- Type CL engine ... Left/rear section of cylinder head

### Unit Inspection

Measure the resistance between the terminal and the earth, as indicated in the right figure.

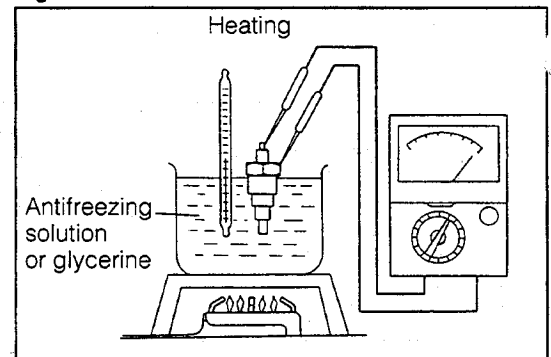


Fig. 10-67

WR-10074

Temperature (°C)	Resistance (Ω)
50	226 $\pm$ $\frac{34}{37}$
115	26.4 $\pm$ $\frac{1.71}{2.20}$

**CROSS COIL TYPE GAUGE CIRCUIT (GCC SPECIFICATIONS ONLY)**

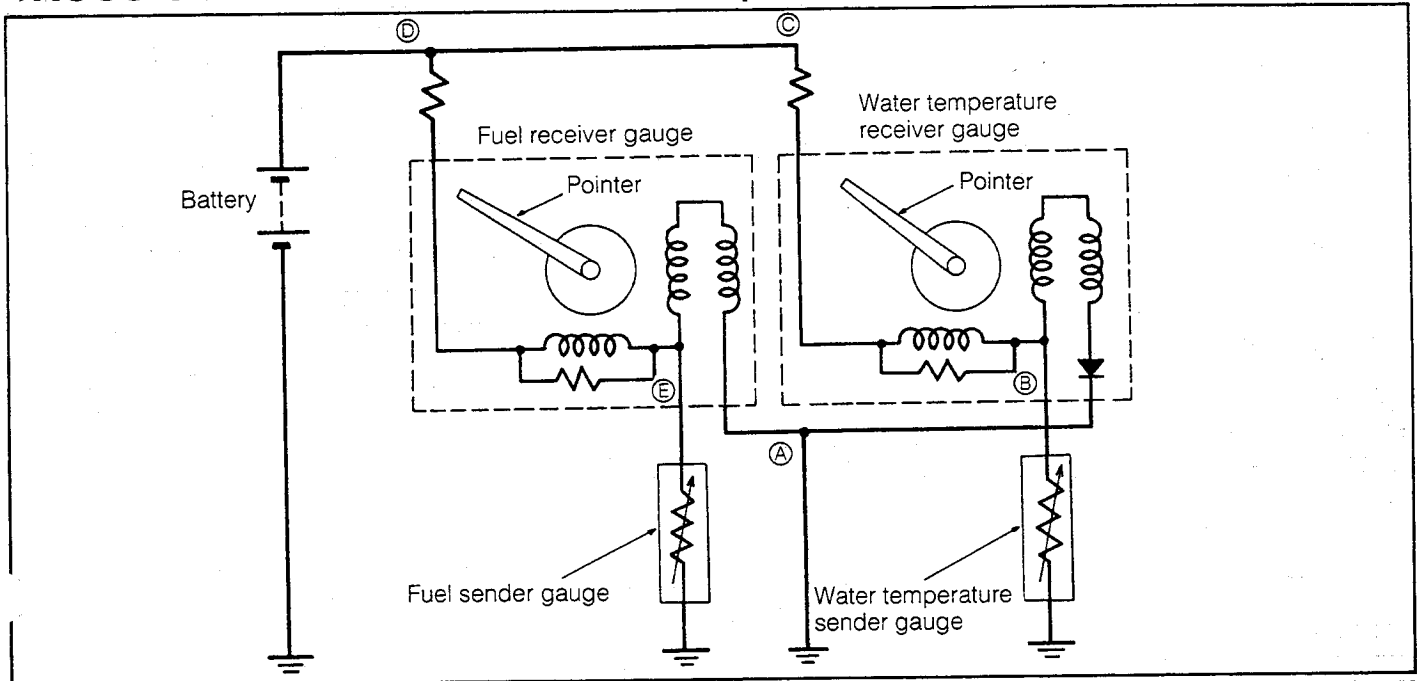


Fig. 10-68

WR-10075

**FUEL RECEIVER GAUGE  
(POINTER REMAINING TYPE)**

**1. In-Vehicle Inspection**

- (1) Disconnect the connector of the fuel sender gauge located at the upper part of the fuel tank. Under this condition, turn ON the engine switch. Ensure that the pointer of the receiver gauge returns to the position "E".
- (2) Turn OFF the engine switch. Ground the harness connector of the fuel sender gauge. Under this condition, turn ON the engine switch. Ensure that the pointer of the receiver gauge rises gradually and registers the position "F".
- (3) Turn OFF the engine switch. Ensure that the pointer of the receiver gauge remains stationary and registers the position "F"

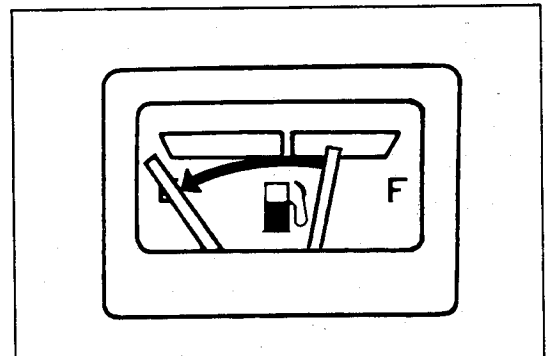


Fig. 10-69

WR-10076

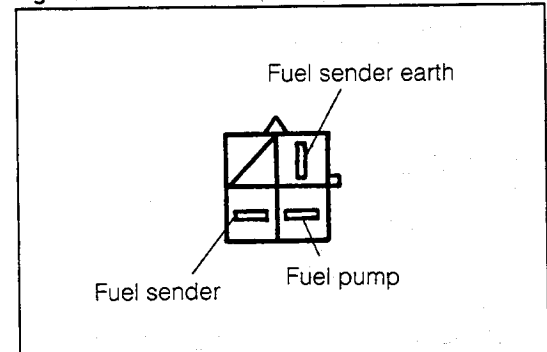


Fig. 10-70

WR-10077

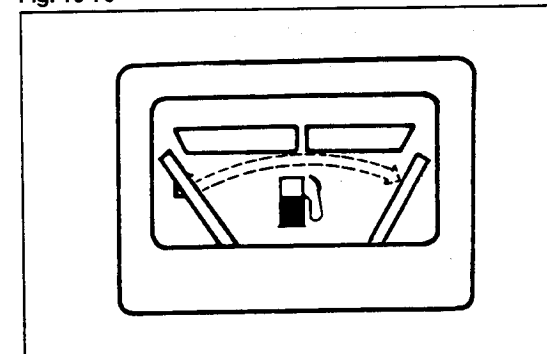


Fig. 10-71

WR-10078

# BODY ELECTRICAL SYSTEM

## 2. Unit Check

- (1) Remove the combination meter. Measure the resistance between the terminals ④ and ⑤.  
Specified Value: Approx. 82  $\Omega$
- (2) Connect the multi-pole connector to the combination meter. Turn ON the engine switch. Ensure that the battery voltage is applied between the terminal ④ and the body earth.

## FUEL SENDER GAUGE

### Inspection

Remove the sender gauge located at the upper part of the fuel tank. Measure the resistance between the terminal and the body at each float level.

Float position	Resistance ( $\Omega$ )	Reference dimension mm (inch)
F	1 - 5	28 $\pm$ 3 (1.1 $\pm$ 0.12)
1/2	28.5 - 36.5	86.4 (3.40)
E	103 - 117	133 $\pm$ 3 (5.24 $\pm$ 0.12)

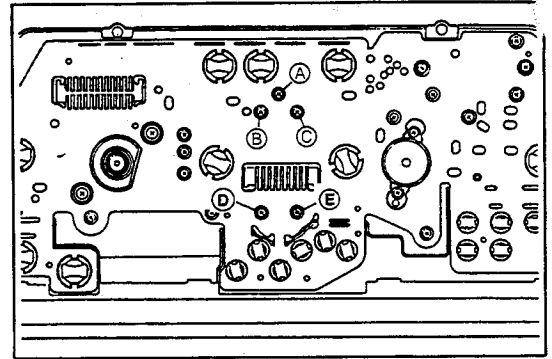


Fig. 10-72

WR-10079

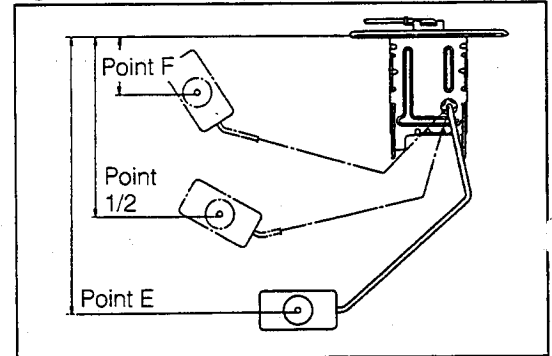


Fig. 10-73

WR-10080

## WATER TEMPERATURE RECEIVER GAUGE

### 1. In-Vehicle Inspection

- (1) Disconnect the connector from the harness of the water temperature sender gauge. Ground the gauge through a test lamp (12 V - 3.4 W).
- (2) Turn ON the engine switch. Ensure that the test lamp goes on and the pointer of the receiver gauge starts to rise gradually.

### 2. Unit Check

- (1) Remove the combination meter. Measure the resistance between the terminals ⑥ and ⑦.  
Specified Value: Approx. 134  $\Omega$
- (2) Connect the multi-pole connector to the combination meter. Turn ON the engine switch. Ensure that the battery voltage is applied between the terminal ⑦ and the body earth.

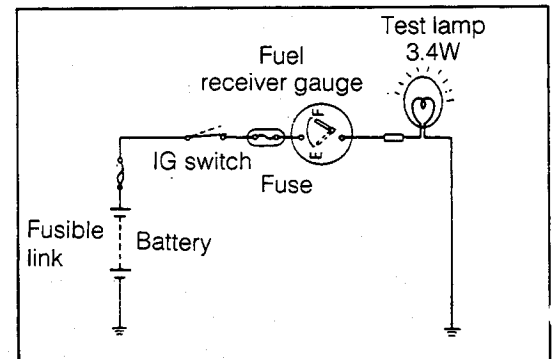


Fig. 10-74

WR-10081

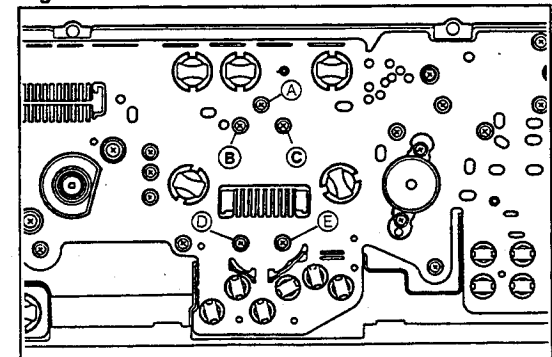


Fig. 10-75

WR-10082

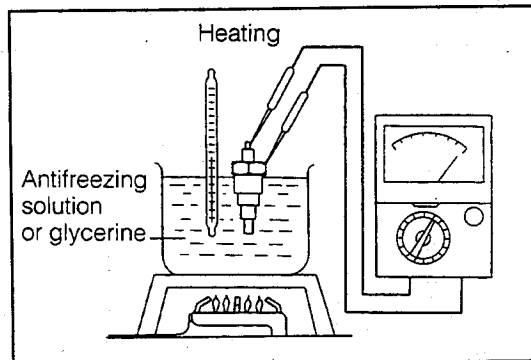
**WATER TEMPERATURE SENDER GAUGE**

The water temperature sensor gauge is located at the rear end of the cylinder head.

**Unit Inspection**

Measure the resistance between the terminal and the earth, as indicated in the right figure.

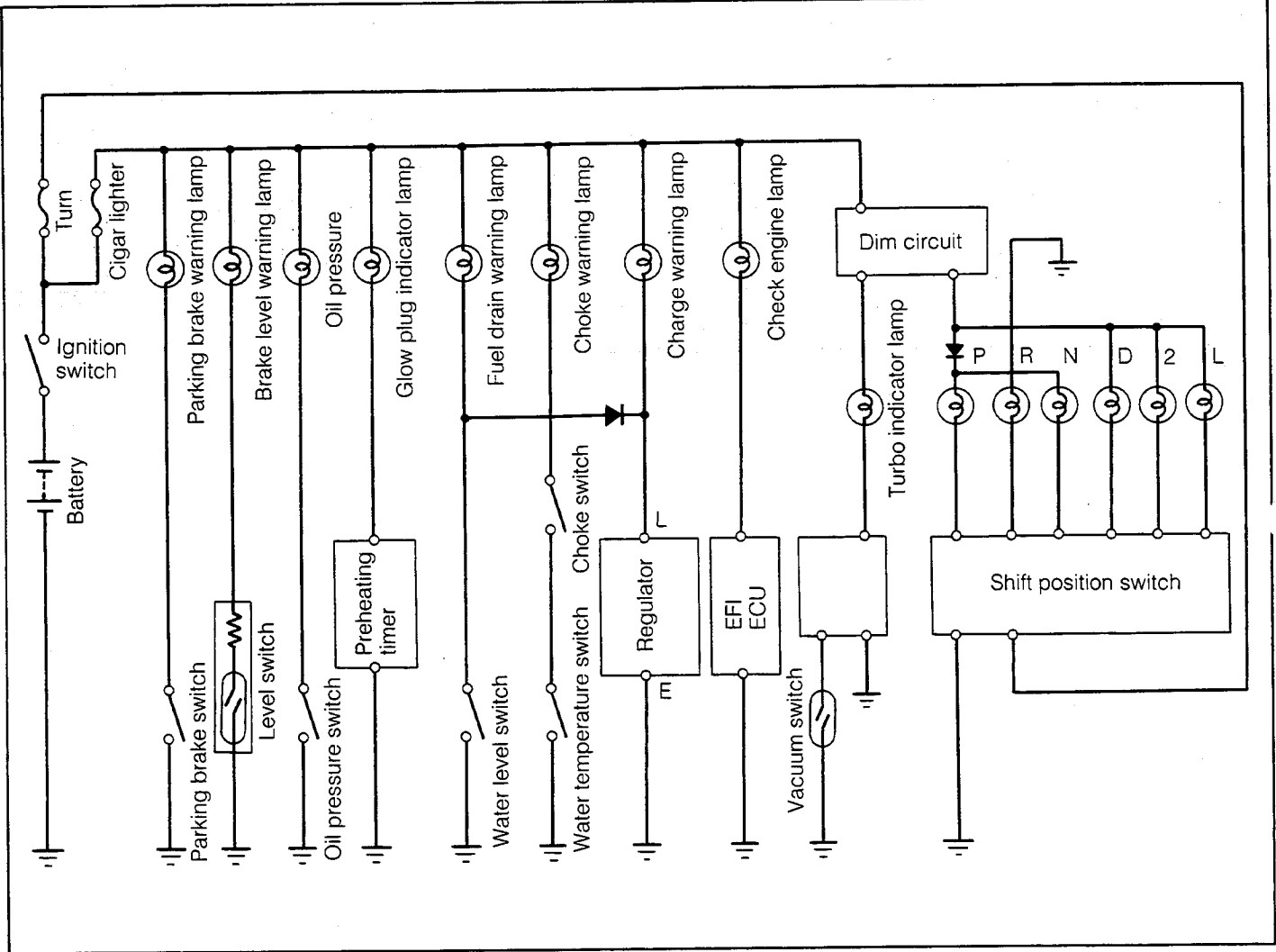
Temperature (°C)	Resistance (Ω)
50	$226^{+34}_{-37}$
115	$26.4^{+1.7}_{-2.2}$



**Fig. 10-76**

WR-10083

**WARNING AND INDICATOR SYSTEM**



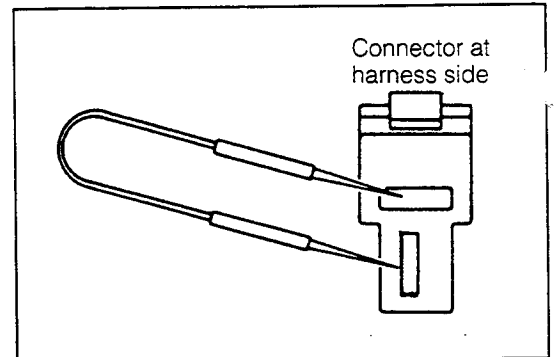
**Fig. 10-77**

WR-10084

**BRAKE LEVEL WARNING LAMP**

**Inspection**

1. Start the engine.
2. Return the parking brake lever to the original position. (General specifications only)
3. Pull out the connector of the brake fluid level warning switch and short the connector at the harness side. Ensure that the level warning lamp glows.



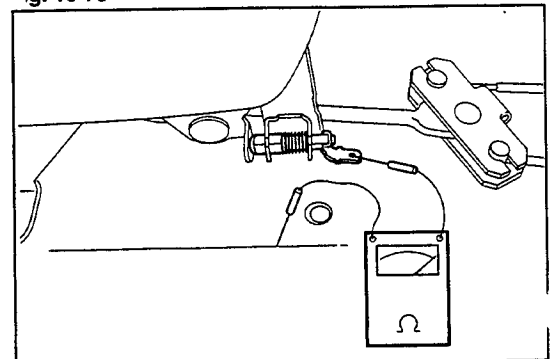
**g. 10-78**

WR-10085

**PARKING BRAKE SWITCH**

**Inspection**

1. Pull out the connector of the parking brake switch and conduct continuity checks between the terminal and the body earth.
  - (1) Ensure that continuity exists between the terminals when the parking brake lever is pulled upward.
  - (2) Ensure that no continuity exists between the terminals when the parking brake lever is returned.



**Fig. 10-79**

WR-10086

## RAKE LEVEL WARNING SWITCH

### Inspection

1. Pull out the connector of the brake fluid level warning switch and connect a tester.

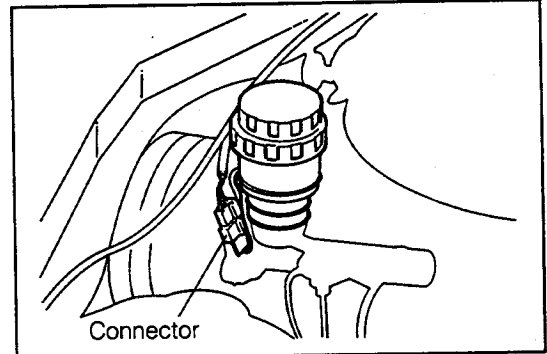


Fig. 10-80

WR-10087

2. Press down the brake fluid level warning switch (float) with a rod. Ensure that continuity exists between the connector terminals.

### NOTE:

As for a rod to be used for pressing down the float, be sure to thoroughly clean it. Special care must be exercised to ensure that no dust nor water gets into the reservoir.

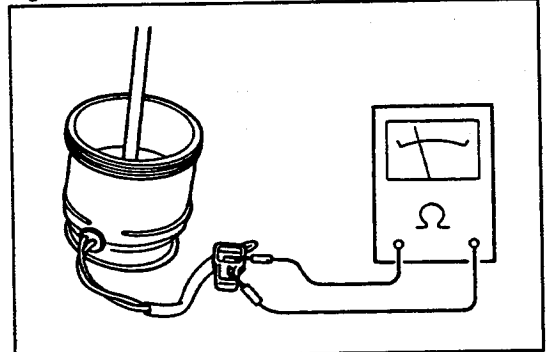


Fig. 10-81

WR-10088

## OIL PRESSURE WARNING LAMP

### Inspection

1. Pull out the connector located at the right/rear part of the cylinder block. Ground the connector at the harness side.
2. Ensure that the oil pressure warning lamp glows when the engine switch is turned ON.

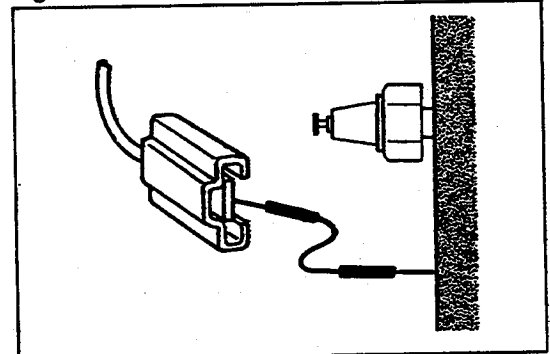


Fig. 10-82

WR-10089

## OIL PRESSURE SWITCH

### Inspection

1. Pull out the connector located at the right/rear part of the cylinder block.
2. Ensure that continuity exists between the oil pressure switch terminal and the earth.

### NOTE:

It should be noted that continuity exists while the engine is stopped, whereas no continuity exists while the engine is running.

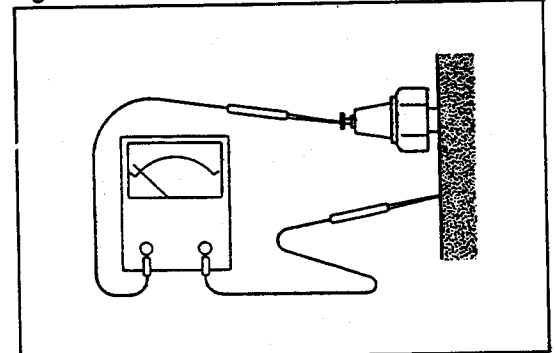


Fig. 10-83

WR-10090

## FUEL DRAIN WARNING LAMP (DIESEL-POWERED VEHICLES ONLY)

### Inspection

1. Start the engine. Disconnect the connector of the sedimentor.
2. Ensure that the warning lamp glows when short is made between the terminals of the connector at the harness side.

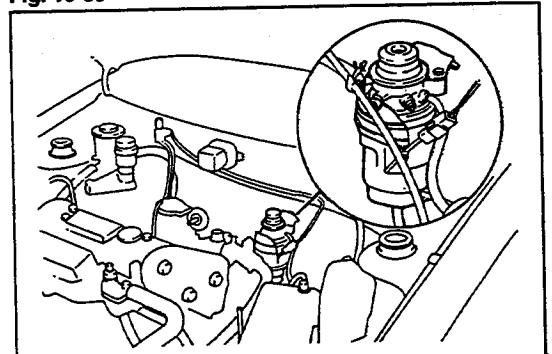


Fig. 10-84

WR-10091

## BODY ELECTRICAL SYSTEM

### Water level sensor

1. Remove the water level sensor from the sedimentor. Pull out the connector.
2. Connect a circuit tester to the connector. Ensure that continuity exists between the connector terminals when the float is lifted (when the switch is turned ON).

#### NOTE:

After the water level sensor has been installed, be certain to fill the fuel filter with fuel, using the priming pump.

## SHIFT INDICATOR LAMP (3-SPEED A/T VEHICLE)

### Inspection

1. Remove the combination meter. Disconnect the connector (8-pole) for shift indicator use.
  - (1) Ensure that continuity exists between ⑤ and the body earth.
  - (2) Ensure that continuity exists between ① and ⑤ when the range [L] is selected.
  - (3) Ensure that continuity exists between ② and ⑤ when the range [2] is selected.
  - (4) Ensure that continuity exists between ③ and ⑤ when the range [D] is selected.
  - (5) Ensure that continuity exists between ④ and ⑤ when the range [N] is selected.
  - (6) Ensure that continuity exists between ⑦ and ⑤ when the range [P] is selected.
  - (7) Turn ON the ignition switch. Ensure that the battery voltage is applied between ⑥ and the body earth when the range [R] is selected.
3. Under conditions where the connector for shift indicator use and other connectors are installed, turn ON the ignition switch. Ensure that the indicator lamp goes on in accordance with each relevant shift position.

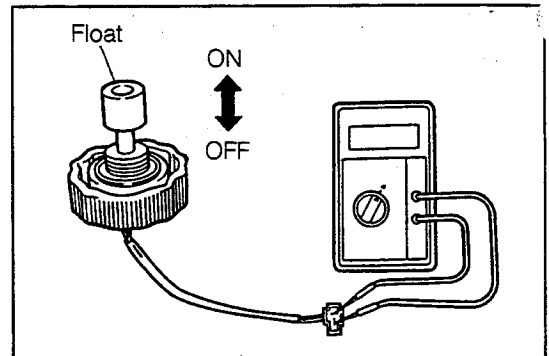


Fig. 10-85

WR-10092

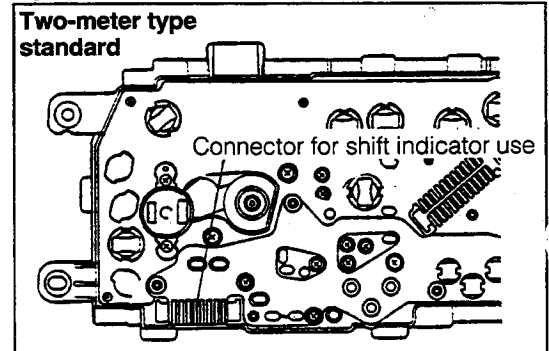


Fig. 10-86

WR-10093

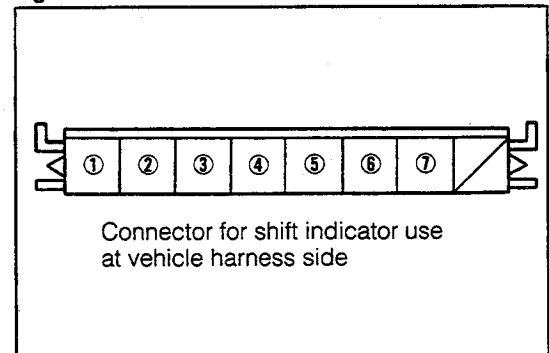


Fig. 10-87

WR-10094

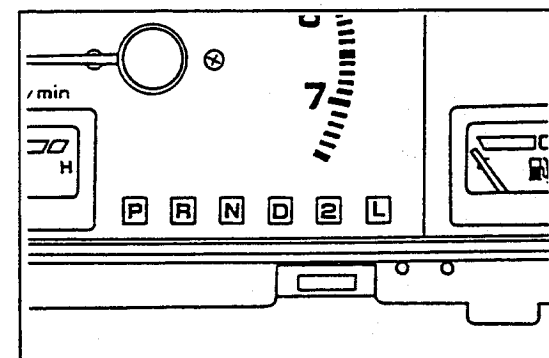


Fig. 10-88

WR-10095



**IMMER DEVICE FOR TURBO AND A/T INDICATORS**

(Vehicles Mounted with Type CB-61, CB-80 Engines and 3-speed A/T)

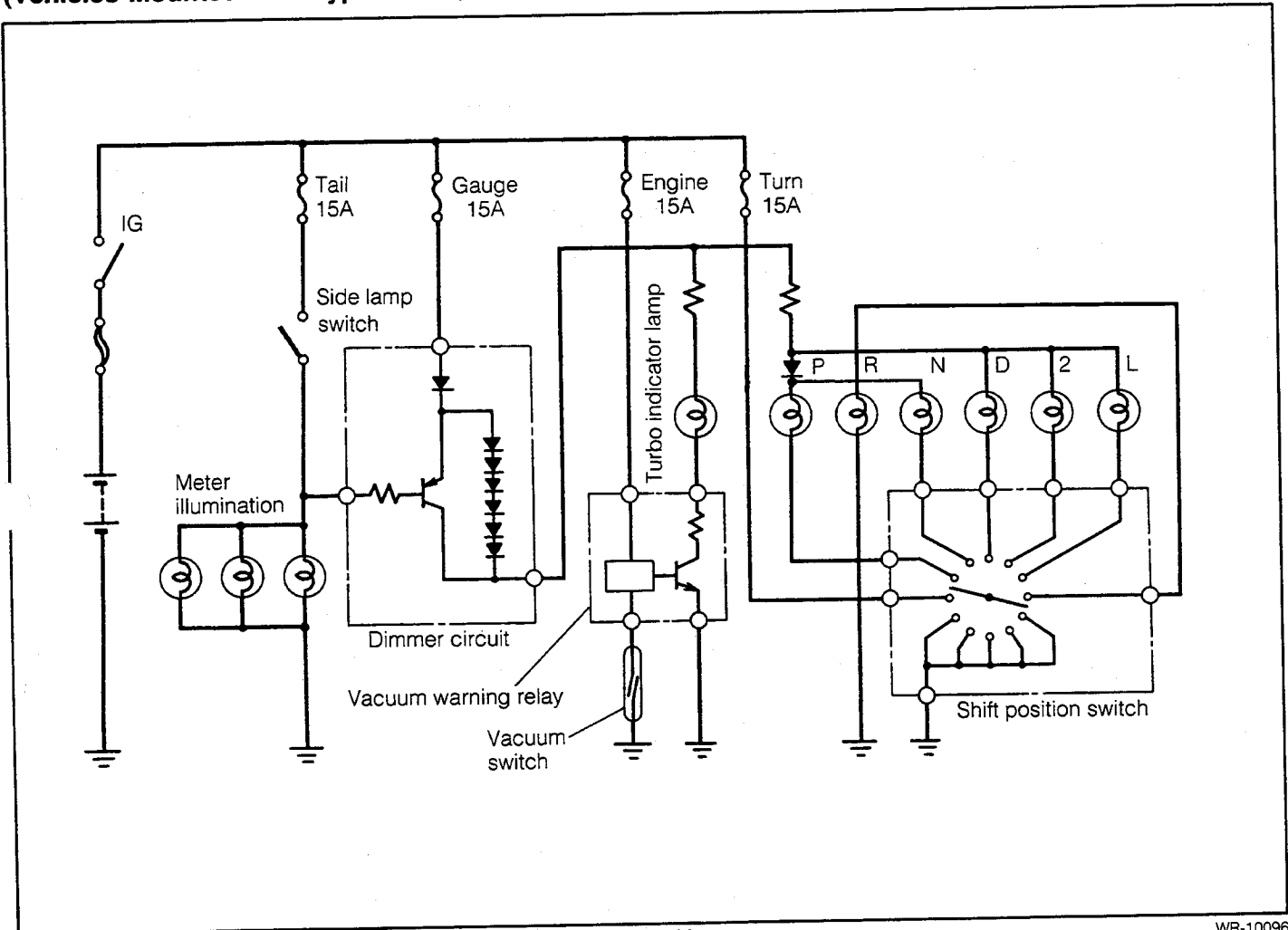


Fig. 10-89

WR-10096

**In-Vehicle Check**

1. Remove the combination meter (with the connector in a connected state) and turn ON the ignition switch. Ensure that the battery voltage is applied between the terminal Ⓐ and the body earth.
2. Ensure that a voltage of 10.5 to 11.5 V is applied between the terminal Ⓑ and the body earth when the turbo indicator terminal (multi-pole connector section) is grounded in the case of the turbocharged vehicle. Also, ensure that the same voltage is applied between the terminal Ⓑ and the body earth when the shift switch is turned ON (L, 2, D, N and P) in the case of the automatic transmission-equipped vehicle.  
At this point, the indicator should be illuminated normally.
3. Under the conditions described above, turn ON the side lamp switch. Ensure that a voltage of 6.0 to 6.5 V is applied between the terminal Ⓒ and the body earth.  
At this point, the indicator should be illuminated dimly.

**NOTE:**

For the turbo indicator terminal at the connector section, see page 10-22.

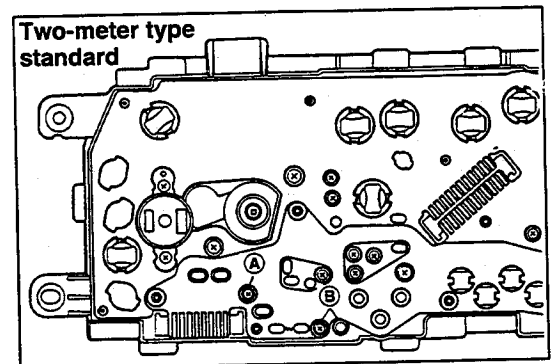


Fig. 10-90

WR-10097

# BODY ELECTRICAL SYSTEM

## MULTI-USE LEVER SWITCH

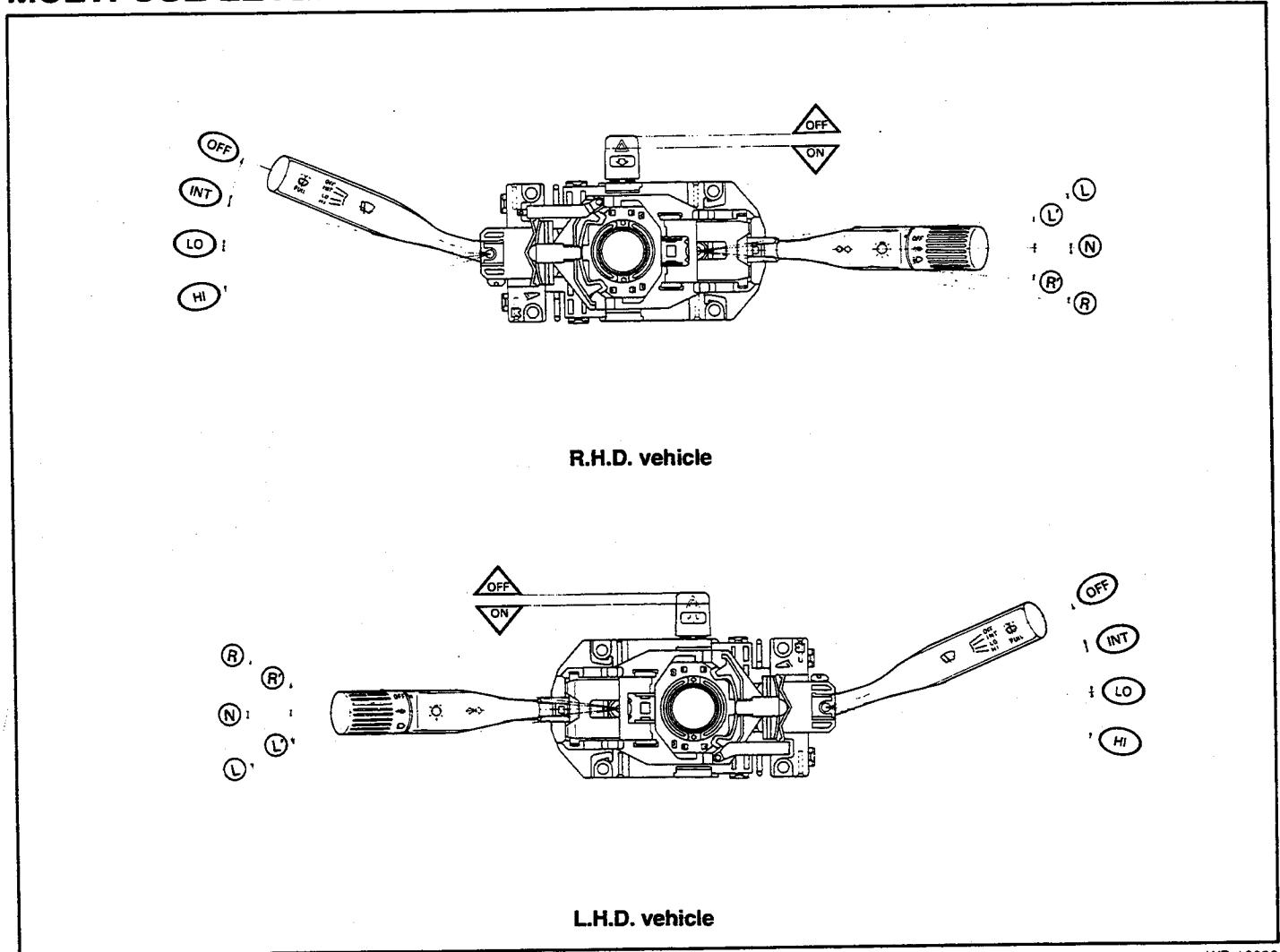


Fig. 10-91

WR-10098

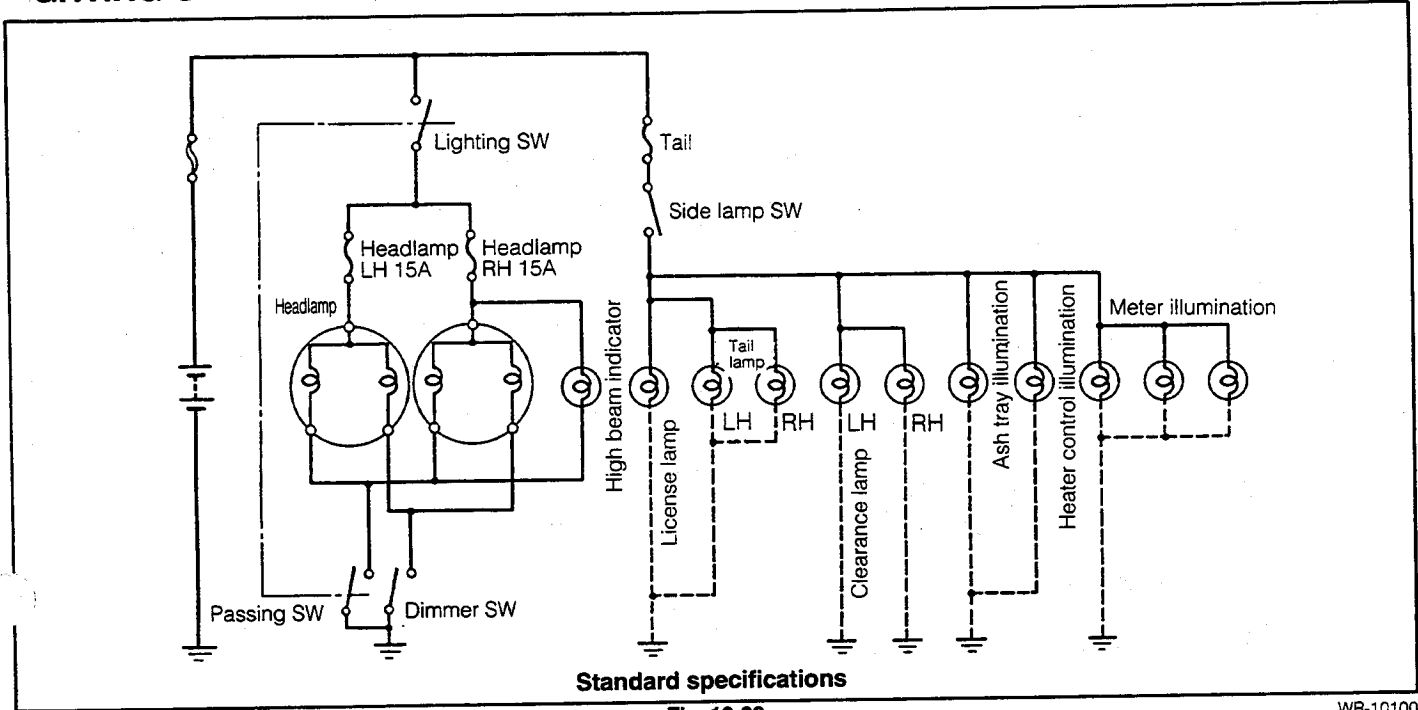
### INSPECTION

1. Ensure that each of the turn signal, dimmer, lighting, hazard warning and front wiper switches is functioning smoothly with a positive dent feeling.
2. Disconnect the connector for multi-use lever switch. Ensure that continuity exists between the respective terminals in accordance with the continuity table in pages 10-38 through 10-46.

Code	Kind of wires
TB	0.5 R (2W in case of West German specifications)
L	0.5GY
+2	0.5L
R	0.5GW
WB	0.5LW
E	1.25WB
HS	0.85RY
HO	0.3G
B <sub>1</sub>	0.5GR
HM	0.85RW
+1	0.5LY
S	0.5 RG (2WG in case of West German specifications)
W	0.3LG
WS	0.5LR
F	0.5GO
F <sub>1</sub>	0.5GB
INT	0.5LB
DM	0.5GL
M	0.5G
RF	0.5Lg
B <sub>2</sub>	0.5GL
D1	2RW
D2	2R

WR-10099

LIGHTING SWITCH



Standard specifications

Fig. 10-92

WR-10100

○—○ Continuity exists.

R.H.D. vehicles with general specifications and Australian specifications (without intermittent wiper)  
L.H.D. vehicles with general specifications

R.H.D. vehicles with ECE & EEC and Australian specifications (with intermittent wiper)  
L.H.D. vehicles with ECE & EEC Specifications (except for West Germany)

Light & Dimmer Passing Switch

Terminal	Light	Dimmer passing	HM	HS	E	TB	S	D1	D2
OFF	HF		○	○				○	○
	HL								
	HU								
I	HF		○	○			○	○	○
	HL						○	○	
	HU						○	○	
II	HF		○	○			○	○	○
	HL						○	○	
	HU						○	○	

(L.H.D.) (R.H.D.)

TB B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

B2
D1
M
D2
B2

Light & Dimmer Passing Switch

Terminal	Light	Dimmer passing	HM	HS	E	TB	S	RF	D1	D2
OFF	HF		○	○					○	○
	HL									
	HU									
I	HF		○	○			○	○	○	○
	HL						○	○	○	
	HU						○	○	○	
II	HF		○	○			○	○	○	○
	HL						○	○	○	
	HU						○	○	○	

TB B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

RF
D1
M
D2
B2

West German specifications

Light & Dimmer Passing Switch

Terminal	Light	Dimmer passing	HM	HS	E	TB	S	D1	D2	DM	RF
OFF	HF		○	○				○	○		
	HL										
	HU										
I	HF		○	○			○	○	○		
	HL						○	○	○		
	HU						○	○	○		
II	HF		○	○			○	○	○	○	○
	HL						○	○	○	○	
	HU						○	○	○	○	

B1
L
+2 HM
R +1
WB S
W
WS
E F
HS F1
HO INT

DM D1
M
TB
RF S
B2 D2

L.H.D. vehicles with day-light feature

Light & Dimmer Passing Switch

Terminal	Light	Dimmer passing	HM	HS	E	TB	S	RF	D1	D2
OFF	HF		○	○					○	○
	HL									
	HU									
I	HF		○	○			○	○	○	○
	HL						○	○	○	
	HU						○	○	○	
II	HF		○	○			○	○	○	○
	HL						○	○	○	
	HU						○	○	○	

TB B1
L
+2 HM
R -1
WB S
W
WS
E F
HS F1
HO INT

B2
D1
M
D2
RF
M

Fig. 10-93

WR-10101

# BODY ELECTRICAL SYSTEM

## TURN SIGNAL AND HAZARD SWITCH

### Circuit diagram

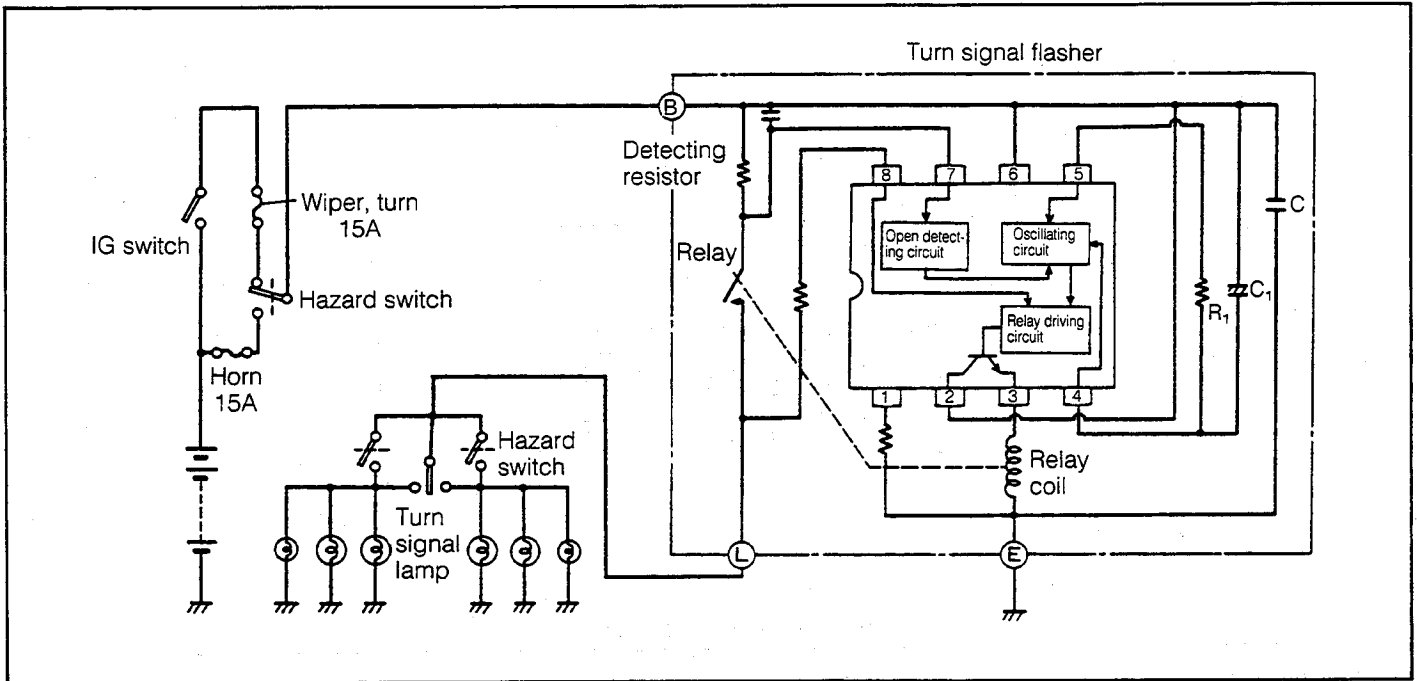


Fig. 10-94

WR-10102

### INSPECTION

Disconnect the multi-pole connector. Ensure that continuity exists between the respective terminals as indicated in the continuity table below.

#### NOTE:

Upon completion of the inspection, make sure that each connector is connected positively.

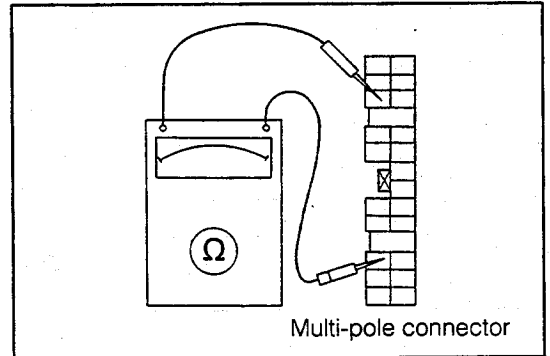


Fig. 10-95

WR-10103

### L.H.D. Vehicles with General Specifications

○—○ Continuity exists.

Hazard	Turn signal	Terminal						
		F	L	R	B <sub>2</sub>	B <sub>1</sub>	F <sub>1</sub>	
OFF	ⓁⓁ	○—○			○—○	○—○		
	Ⓝ				○—○	○—○		
	ⓇⓇ	○—○		○—○	○—○	○—○		
ON	ⓁⓃⓇ	○—○	○—○	○—○		○—○		

Code	Kind of wires
F	0.5GO
L	0.5GY
R	0.5GW
M	0.5G
B <sub>2</sub>	0.5GL
B <sub>1</sub>	0.5GR
F <sub>1</sub>	0.5GB

WR-10104

### Vehicles Other Than L.H.D. with General Specifications

Hazard	Turn signal	Terminal						
		F	L	R	M	B <sub>2</sub>	B <sub>1</sub>	F <sub>1</sub>
OFF	ⓁⓁ	○—○				○—○	○—○	
	Ⓝ					○—○	○—○	
	ⓇⓇ	○—○		○—○		○—○	○—○	
ON	ⓁⓃⓇ	○—○	○—○	○—○	○—○		○—○	

**FRONT SIGNAL FLASHER**

The turn signal flasher is located at the upper part of the fuse block.

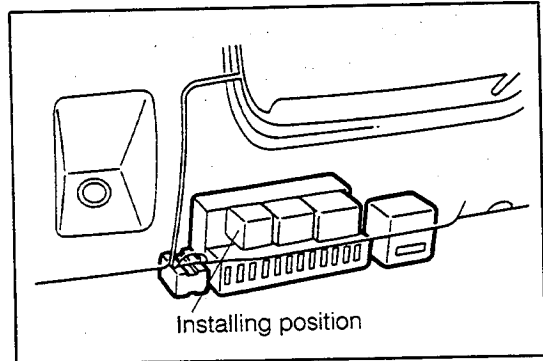


Fig. 10-96

WR-10105

**INSPECTION**

Check the flashing speed of the turn signal lamp.

Specified Flashing Speed:  $85 \pm 10$  times/min.

**NOTE:**

If any of the front or rear turn signal lamps has open wire, the flashing speed will exceed 120 times /min.

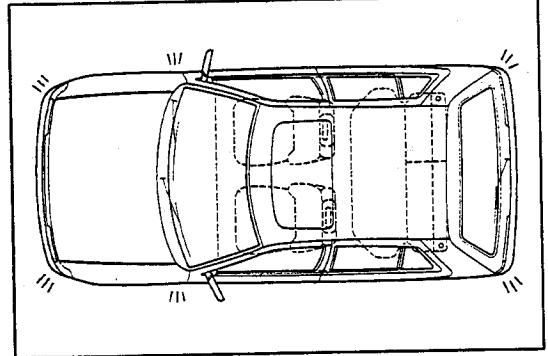


Fig. 10-97

WR-10106

**FRONT WIPER AND WASHER SWITCH**

**INSPECTION**

Disconnect the multi-pole connector. Ensure that continuity exists between the respective terminals as indicated in the continuity table below.

**Switch with Intermittent Wiper**

○—○ Continuity exists.

Lever position		Terminal	WS	+1	+2	INT	E	WB	W
Wiper switch	OFF		○—○						
	INT		○—○			○—○			
	LO			○—○				○—○	
	HI				○—○			○—○	
Washer switch	OFF								
	ON						○—○		○—○

Code	Kind of wires
WS	0.5LR
+1	0.5LY
+2	0.5L
INT	0.5LB
E	1.25WB
WB	0.5LW
W	0.3LG

WR-10107

**Switch without Intermittent Wiper**

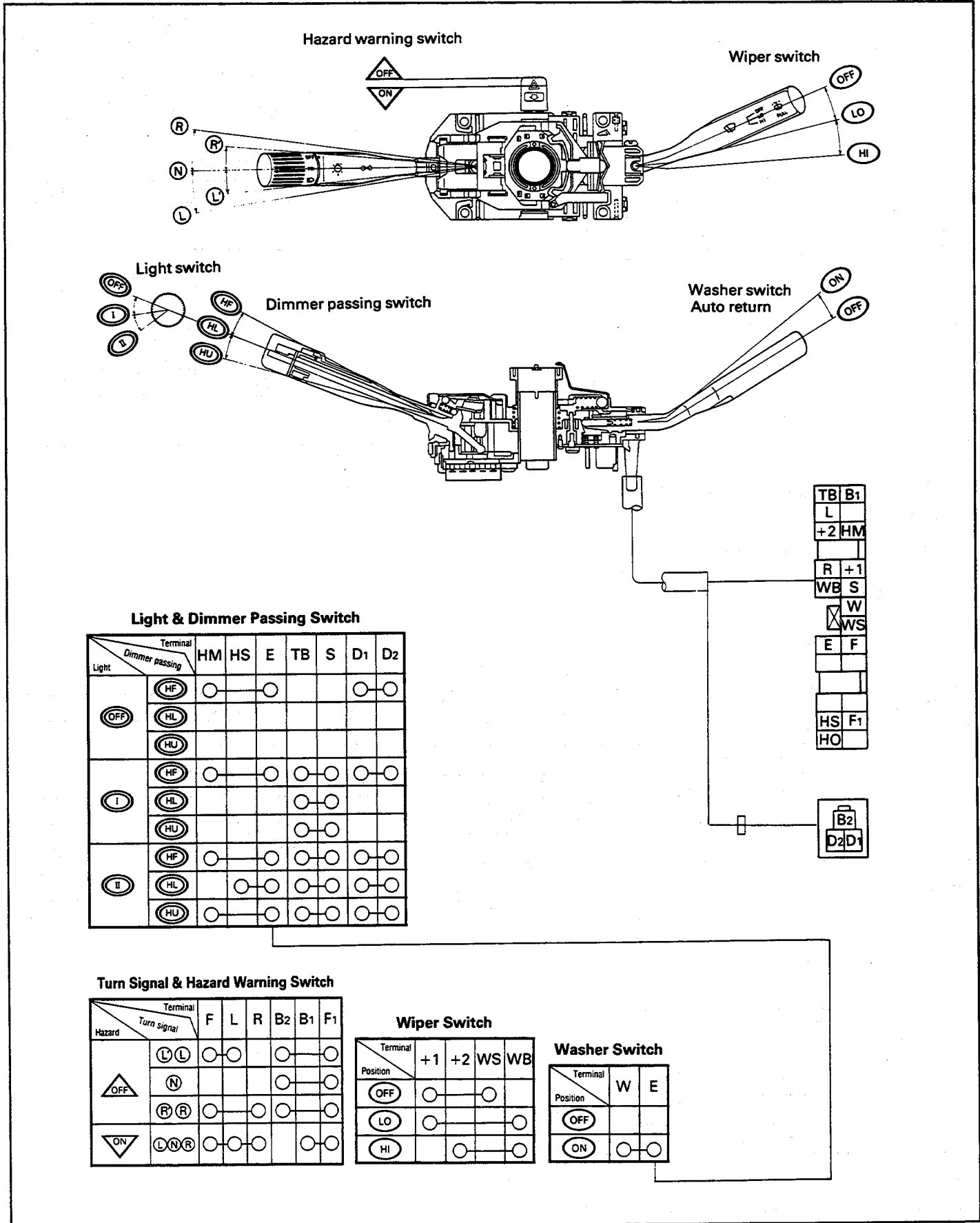
○—○ Continuity exists.

Lever position		Terminal	WS	+1	+2	E	WB	W
Wiper switch	OFF		○—○					
	LO			○—○			○—○	
	HI				○—○		○—○	
Washer switch	OFF							
	ON					○—○		○—○

# BODY ELECTRICAL SYSTEM

## CONTINUITY TABLE OF MULTI-USE LEVER SWITCH BY DESTINATION

L.H.D. Vehicles with General Specifications (Two-speed Wiper)



**Light & Dimmer Passing Switch**

		Terminal	HM	HS	E	TB	S	D1	D2
Light	Dimmer passing	OFF	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
		I	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>		
II	HF	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	HL				<input type="checkbox"/>	<input type="checkbox"/>			
	HU	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>			

**Turn Signal & Hazard Warning Switch**

		Terminal	F	L	R	B2	B1	F1
Hazard	Turn signal	OFF	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		ON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	

**Wiper Switch**

Terminal	+1	+2	WS	WB
OFF	<input type="checkbox"/>	<input type="checkbox"/>		
LO	<input type="checkbox"/>			
HI	<input type="checkbox"/>			

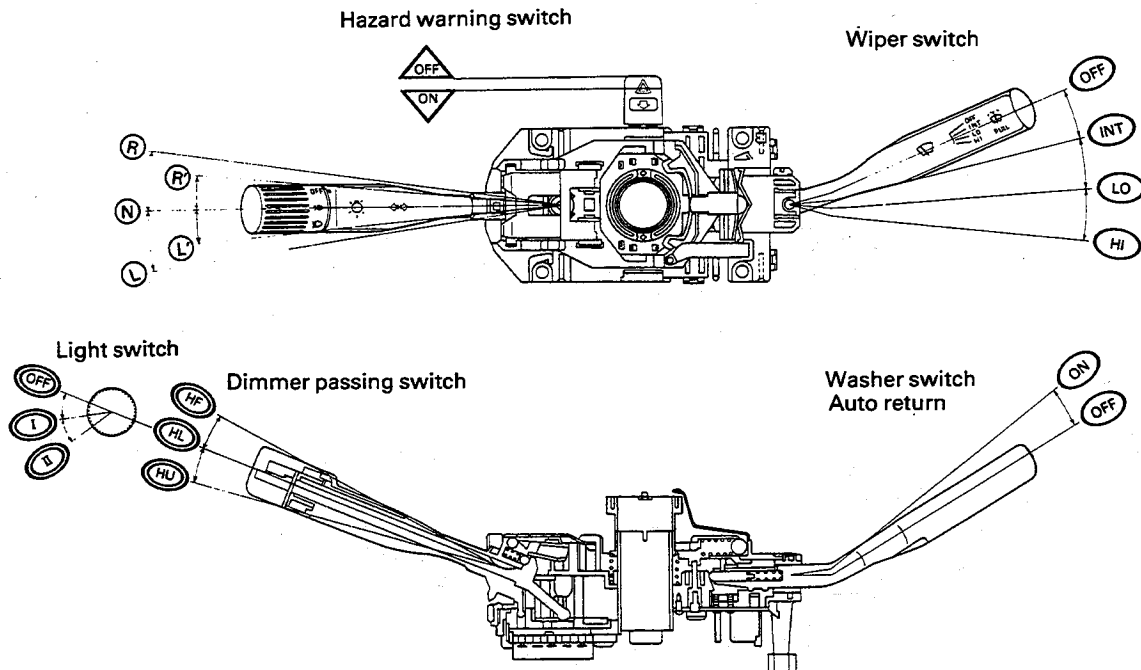
**Washer Switch**

Terminal	W	E
OFF	<input type="checkbox"/>	<input type="checkbox"/>
ON	<input type="checkbox"/>	<input type="checkbox"/>

Fig. 10-98

TR86-08019

H.D. Vehicles with General Specifications (Two-speed, Intermittent Wiper)



**Light & Dimmer Passing Switch**

Light	Terminal		HM	HS	E	TB	S	D1	D2
	Dimmer passing								
OFF	HF								
	HL								
	HU								
I	HF								
	HL								
	HU								
II	HF								
	HL								
	HU								

TB	B1
L	
+2	HM
R	+1
WB	S
W	
WS	
E	F
HS	F1
HO	INT

B2	
D2	D1

**Turn Signal & Hazard Warning Switch**

Hazard	Terminal		F	L	R	B2	B1	F1
	Turn signal							
OFF	L	L						
	N							
ON	R	R						
	L	N	R					

**Wiper Switch**

Terminal	WS	+1	+2	INT	E	WB
Position						
OFF						
INT						
LO						
HI						

**Washer Switch**

Terminal	W	E
Position		
OFF		
ON		

Fig. 10-99

# BODY ELECTRICAL SYSTEM

R.H.D. Vehicles with ECE & EEC, General and Australian Specifications  
(Two-speed, Intermittent Wiper)

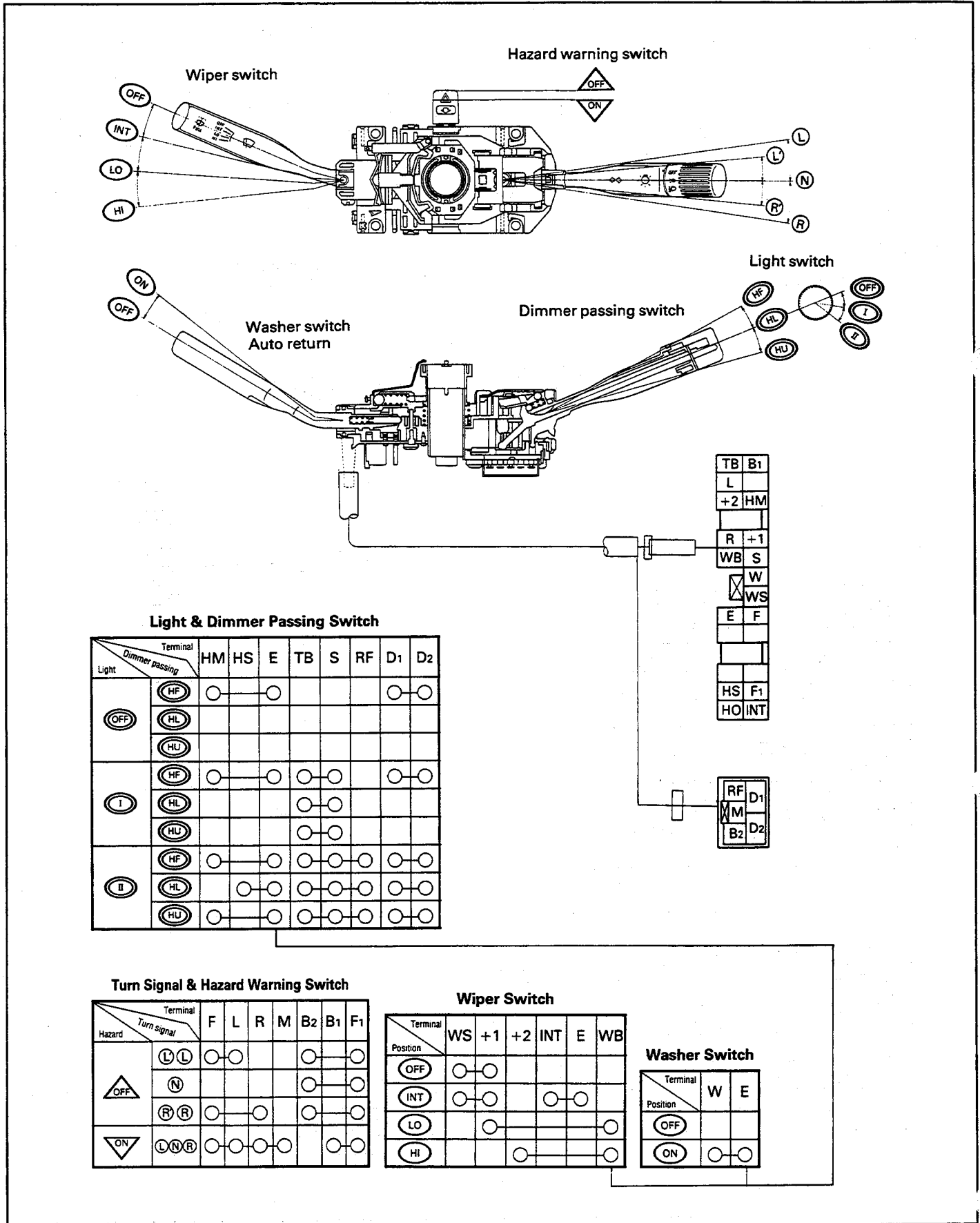


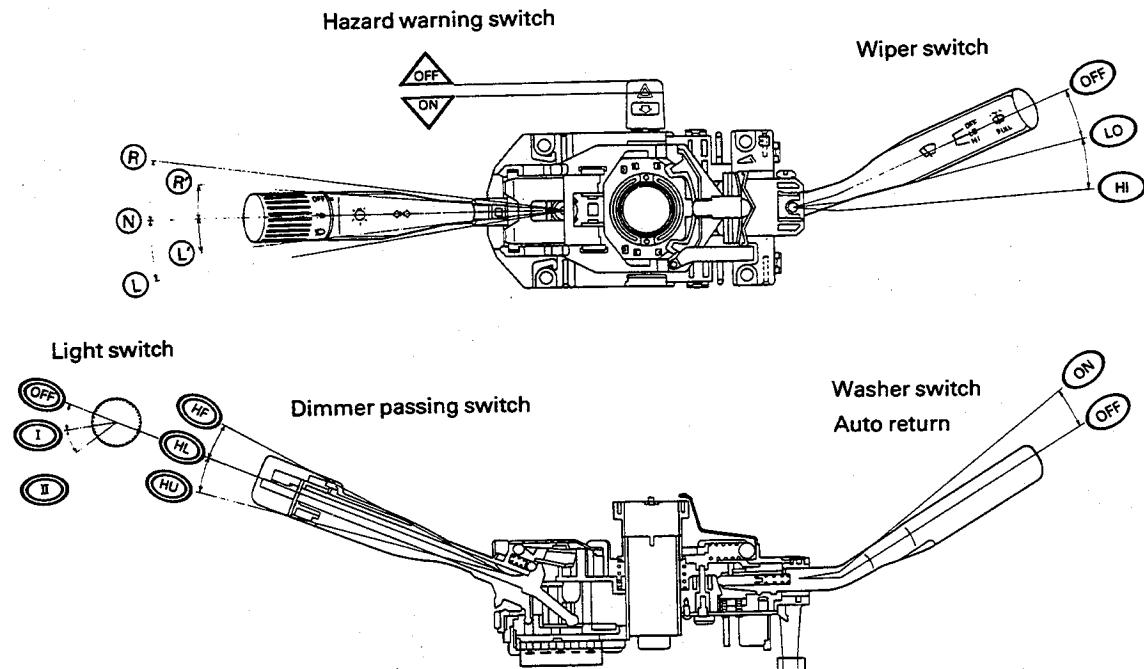
Fig. 10-100

TR86-08021



# BODY ELECTRICAL SYSTEM

## H.D. Vehicles with ECE & EEC Specifications, Except for West Germany (Two-speed Wiper)



**Light & Dimmer Passing Switch**

Light	Dimmer passing		Terminal							
	HF	HL	HM	HS	E	TB	S	RF	D1	D2
OFF	○	○	○	○					○	○
I	○	○	○	○	○	○	○	○	○	○
II	○	○	○	○	○	○	○	○	○	○

TB	B1
L	
+2	HM
R	+1
WB	S
	W
	WS
E	F
HS	F1
HO	

RF	D1
M	D2
B2	

**Turn Signal & Hazard Warning Switch**

Hazard	Turn signal		Terminal						
	L	R	F	L	R	M	B2	B1	F1
OFF	○	○	○	○			○	○	○
	○	○					○	○	○
ON	○	○	○	○	○	○	○	○	○

**Wiper Switch**

Position	Terminal			
	+1	+2	WS	WB
OFF	○	○		
LO	○			○
HI				○

**Washer Switch**

Position	Terminal	
	W	E
OFF		
ON	○	○

Fig. 10-101

TR86-08022

# BODY ELECTRICAL SYSTEM

L.H.D. Vehicles with ECE & EEC Specifications, Except for West Germany  
(Two-speed, Intermittent Wiper)

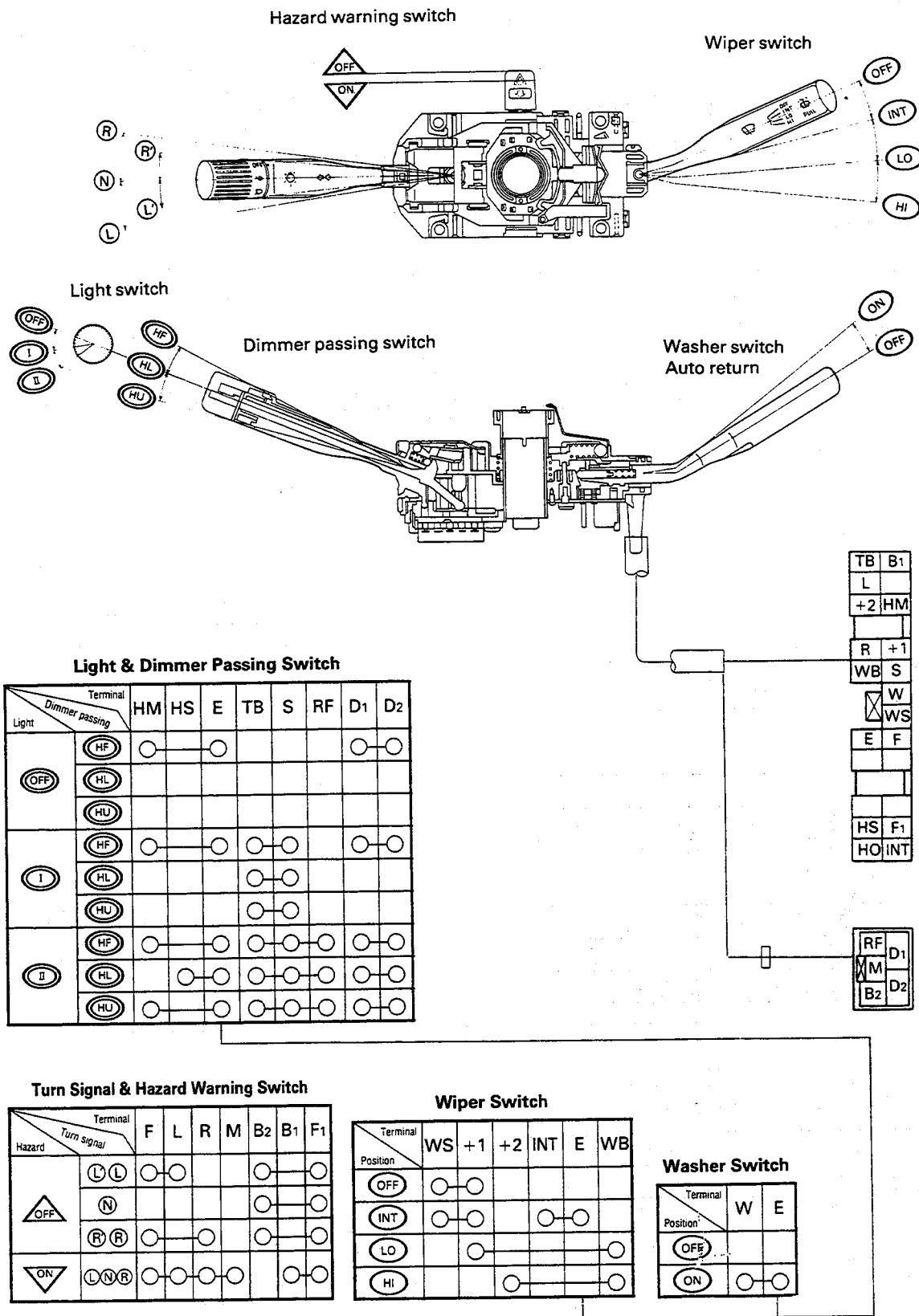
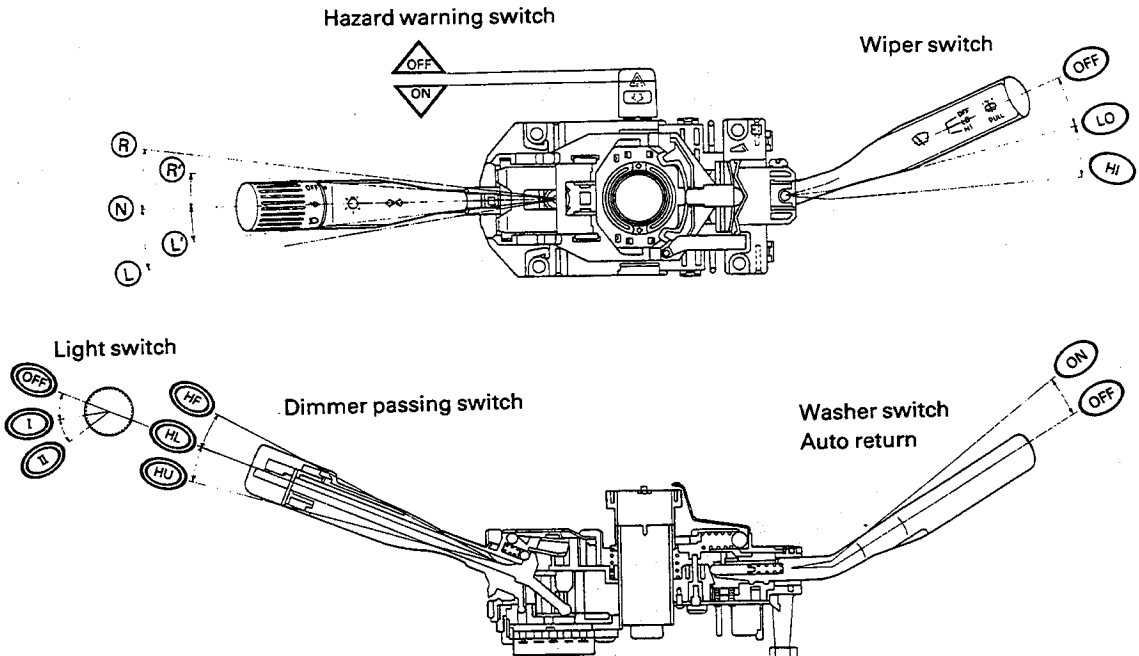


Fig. 10-102

TR86-08023

ehicles with West German Specifications (Two-speed Wiper)



**Light & Dimmer Passing Switch**

Light	Terminal		HM	HS	E	TB	S	D1	D2	DM	RF
	Dimmer passing										
OFF	HF		○	○				○	○		
	HL										
	HU										
I	HF		○	○	○	○	○	○	○		
	HL					○					
	HU					○					
II	HF		○	○	○	○	○	○	○	○	○
	HL			○	○	○	○	○	○	○	○
	HU		○	○	○	○	○	○	○	○	○

	B1
L	
+2	HM
R	+1
WB	
W	
WS	
E	F
HS	F1
HO	

DM	D1
M	TB
RF	S
B2	D2

**Turn Signal & Hazard Warning Switch**

Hazard	Terminal		F	L	R	M	B2	B1	F1
	Turn signal								
OFF	L	L	○	○			○	○	
	N						○	○	
	R	R	○	○			○	○	
ON	L	N	○	○	○	○		○	
	N	R	○	○	○	○		○	

**Wiper Switch**

Terminal	+1	+2	WS	WB
OFF	○	○		
LO	○			○
HI		○		○

**Washer Switch**

Terminal	W	E
OFF		
ON	○	○

Fig. 10-103

# BODY ELECTRICAL SYSTEM

## Vehicles with West German Specifications (Two-speed, Intermittent Wiper)

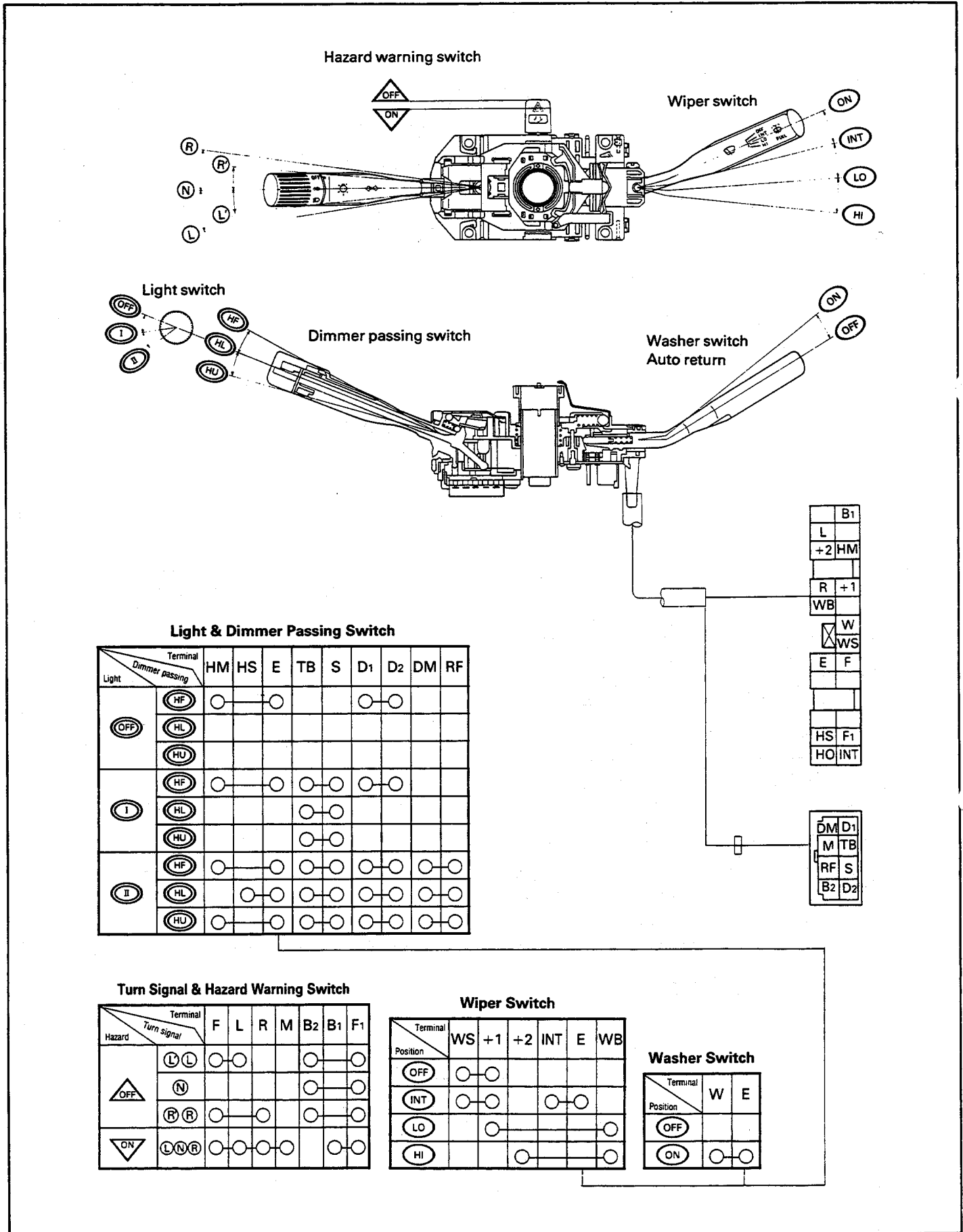
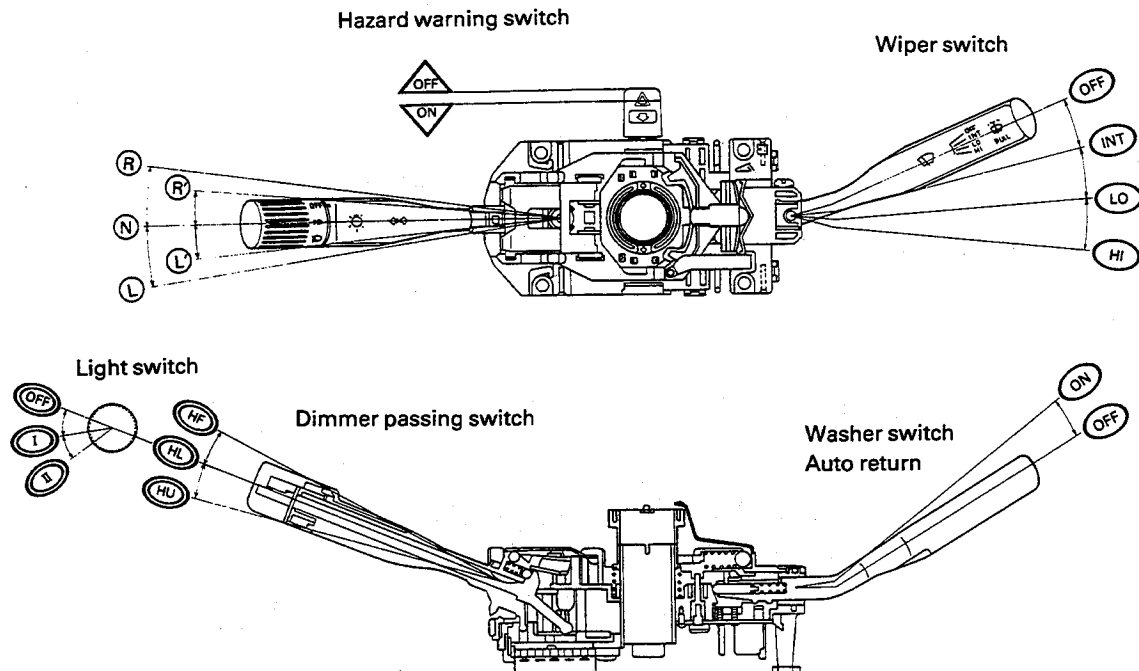


Fig. 10-104

TR86-0825

H.D. Vehicles with Day-light Specifications (Two-speed, Intermittent Wiper)



**Light & Dimmer Passing Switch**

Light	Terminal		HM, ⑩	HS, ⑥	E	⑧	TB, ④	RF	D1	D2
	Dimmer passing	Light								
OFF	HF									
	HL									
	HU									
I	HF									
	HL									
	HU									
II	HF									
	HL									
	HU									

TB	B1
L	
+2	HM
R	+1
WB	S
W	WS
E	F
HS	F1
HO	INT

⑩	B2
⑧	D1
	D2
⑤	RF
④	M

**Turn Signal & Hazard Warning Switch**

Hazard	Terminal		F	L	R	M	B2	B1	F1
	Turn signal	Hazard							
OFF	L	L							
	N								
ON	R	R							
	L/N	R							

**Wiper Switch**

Position	Terminal					
	WS	+1	+2	INT	E	WB
OFF						
INT						
LO						
HI						

**Washer Switch**

Position	Terminal	
	W	E
OFF		
ON		

Fig. 10-105

# BODY ELECTRICAL SYSTEM

## R.H.D. Vehicles with General Specifications and Australian Specifications (Two-speed, Wiper)

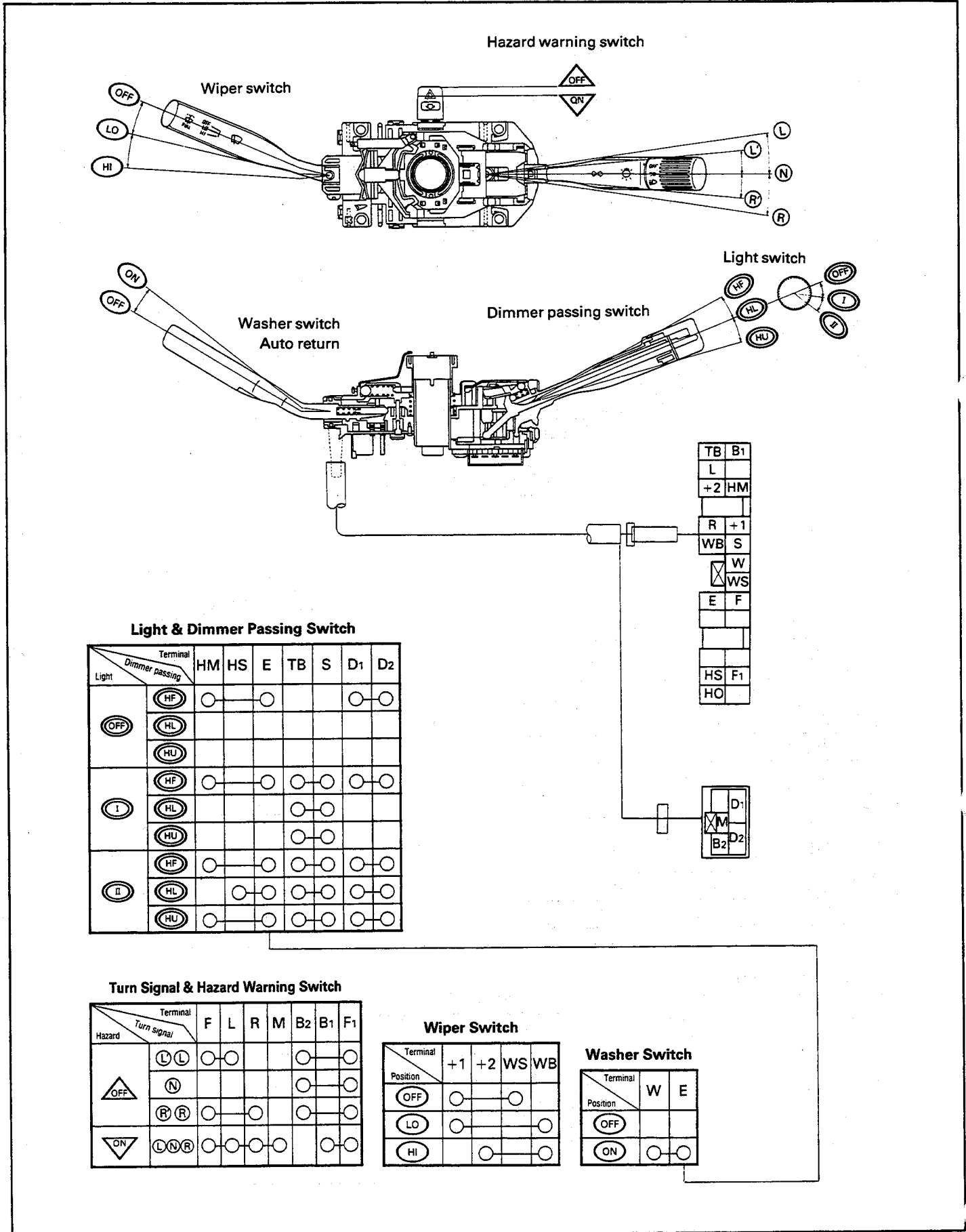


Fig. 10-106

TR86-08027

## SWITCHES

### IGNITION KEY SWITCH

For the removal/installation procedure for the ignition key switch lock cylinder assembly, see page 7-5.

#### INSPECTION

Disconnect the connector of the ignition key switch. Ensure that continuity exists between the respective terminals as indicated in the continuity table.

#### Continuity Table (Except for GT<sub>ii</sub>)

	AM	ACC	IG	ST
LOCK				
ACC	○—○			
ON	○—○—○			
START	○—○—○—○			

#### Continuity Table (For GT<sub>ii</sub>)

	AM	ACC	IG <sub>1</sub>	IG <sub>2</sub>	ST
LOCK					
↕					
ACC	○—○				
↕	○—○				
ON	○—○—○—○				
↕	○—○—○—○				
START	○—○—○—○—○				

### STOP LAMP SWITCH

The stop lamp switch is located at the pedal bracket section.

#### INSPECTION

1. Disconnect the connector of the stop lamp switch.
2. Ensure that continuity exists between the terminals when the brake pedal is depressed.

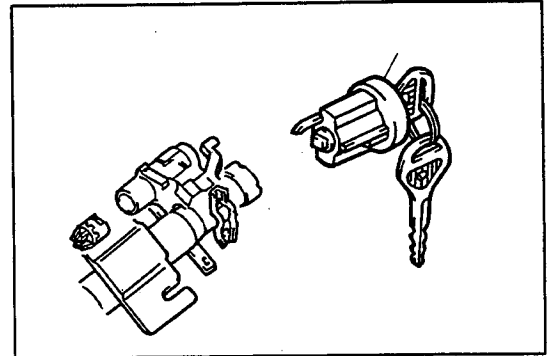


Fig. 10-107

WR-10108

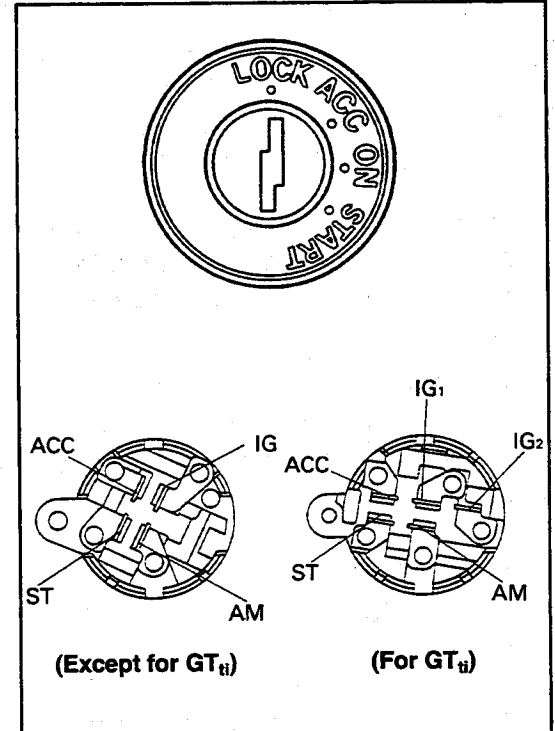


Fig. 10-108

WR-10109

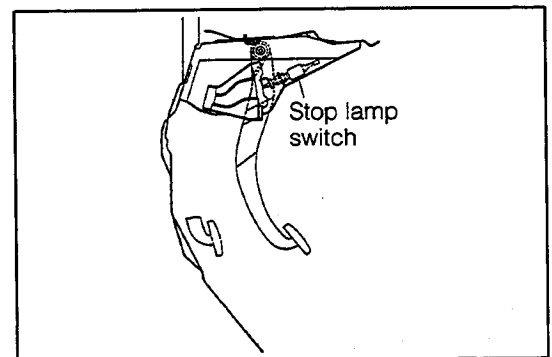


Fig. 10-109

WR-10110

## BODY ELECTRICAL SYSTEM

3. Ensure that no continuity exists between the terminals when the brake pedal is not depressed.

### REAR WINDOW DEFOGGER SWITCH

On the R.H.D. vehicles, the rear window defogger switch is located at the right side of the instrument cluster finish panel. On the L.H.D. vehicles, this switch is located at the left side of the instrument cluster finish panel.

#### Removal

1. Remove the four screws. Pull the instrument cluster finish panel assembly toward your side.
2. Remove the switch by removing the connector and two screws.

#### INSPECTION

Disconnect the connector. Ensure that continuity exists between the respective terminals as indicated in the continuity table below.

#### Continuity Table

○—⊕—○: Bulb in installed state

Knob position \ Terminal	B	D	E
OFF		○—⊕—○	
ON	○—	○—⊕—○	

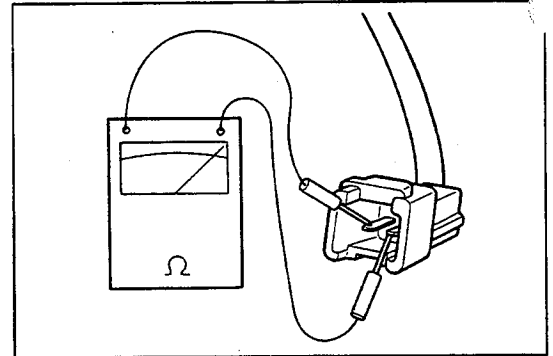


Fig. 10-110

WR-10111

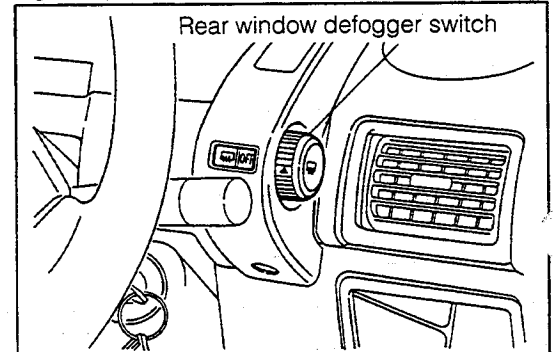


Fig. 10-111

WR-10112

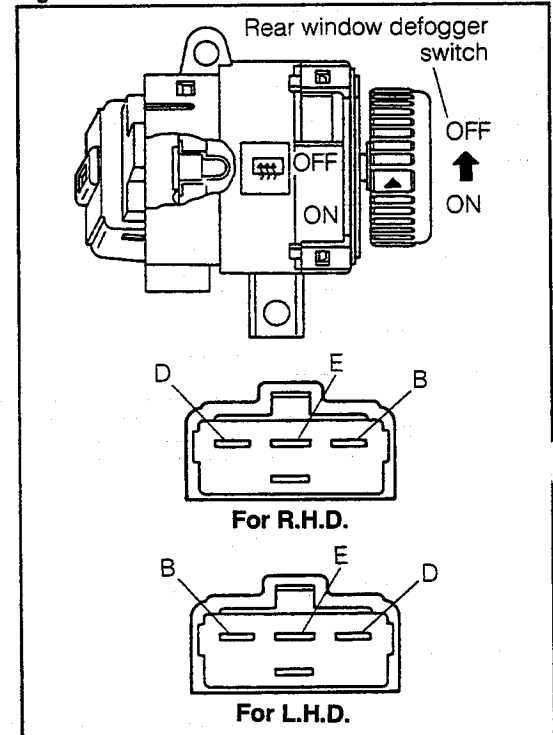


Fig. 10-112

WR-10113

#### INSTALLATION

1. Install the defogger switch to the cluster finish panel with the two screws.
2. Connect the connector securely.
3. Attach the cluster finish panel to the instrument panel by tightening the two screws.

WR-10114



## EAR WINDOW DEFOGGER WIRE

### NOTE:

- (1) When wiping the glass surface, use a soft, dry cloth. Move the cloth along the wire. Be careful not to damage the wire.
- (2) Never use washing agent or glass cleaner which contains abrasive compound.
- (3) Wrap the tip end of the tester probe with foil strip so that the tester probe causes no damage on the heat wire during the voltage measurement. Check the voltage by pushing the foil strip against the heat wire by your finger, as shown in the figure.

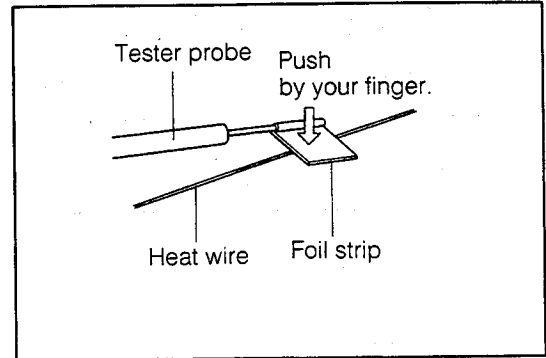


Fig. 10-113

WR-10115

### 1. Open wire check

- (1) Turn ON the ignition key switch.
- (2) Turn ON the defogger switch so as to energize the defogger wire.
- (3) Check the voltage at the center section of each heat wire.

Voltage	Judgement criteria
Approx. 5 V	Good (No open wire)
Approx. 10 V or 0 V	Open wire

#### Reference:

If the voltage is 10 V, it means that open wire exists between the center of the wire and the end of the positive  $\oplus$  side. If the voltage is 0 V, it means that open wire exists between the center of the wire and the end of the earth side.

### 2. Locating Point of Open Wire

- (1) Connect the positive  $\oplus$  terminal of the voltmeter to the positive  $\oplus$  side of the defogger wire.
- (2) Slide the voltmeter's negative  $\ominus$  terminal wrapped with foil strip on the defogger wire from its positive  $\oplus$  side to its negative  $\ominus$  side.
- (3) The voltmeter reading changes from 0 V to several volts at the point where open wire exists.

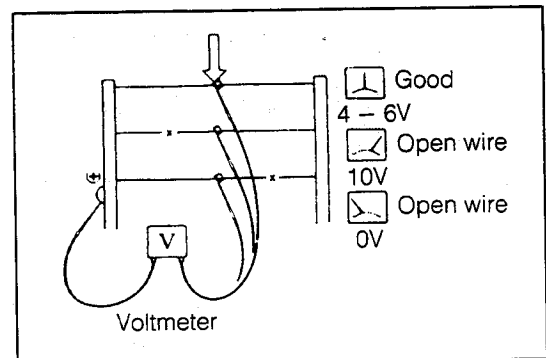


Fig. 10-114

WR-10116

### 3. Repairing Point of Open Wire

- (1) Clean the point of open wire with white gasoline.
- (2) Affix masking tapes to both upper and lower portions of the point to be repaired.
- (3) Stir repair agent (Du Pont Paste No. 4817) thoroughly. Apply a small amount of the repair agent to the repairing point, using a fine brush.
- (4) Two to three minutes later, peel off the masking tapes.
- (5) Do not energize the defogger wire within 24 hours after the repair.

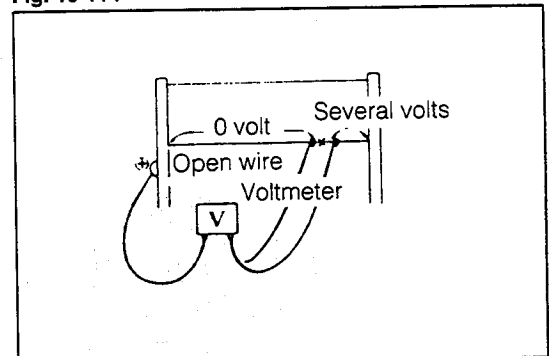


Fig. 10-115

WR-10117

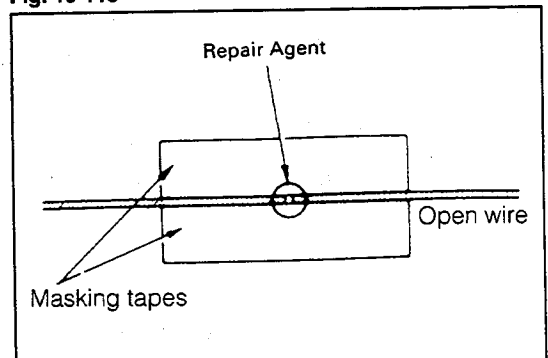


Fig. 10-116

WR-10118

**BODY ELECTRICAL SYSTEM**

**FRONT WIPER AND WASHER**

**FRONT WIPER CIRCUIT DIAGRAM**

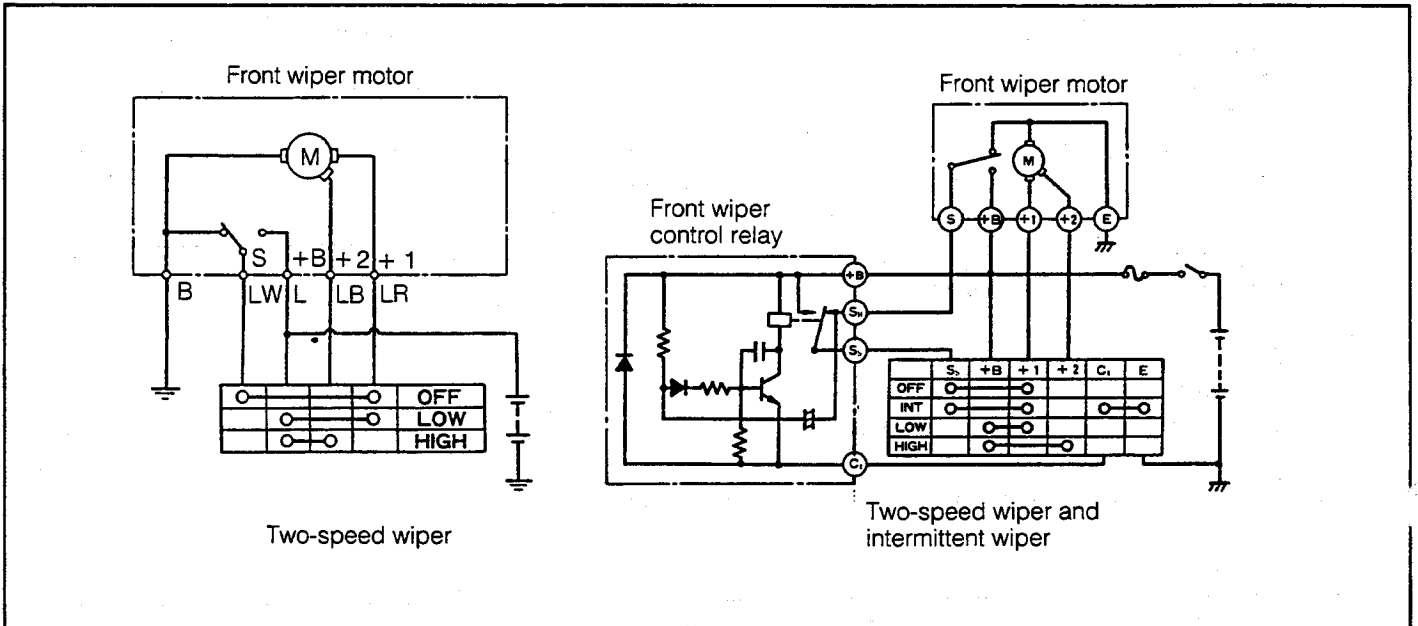


Fig. 10-117

WR-10119

**FRONT WIPER AND BLADES COMPONENTS**

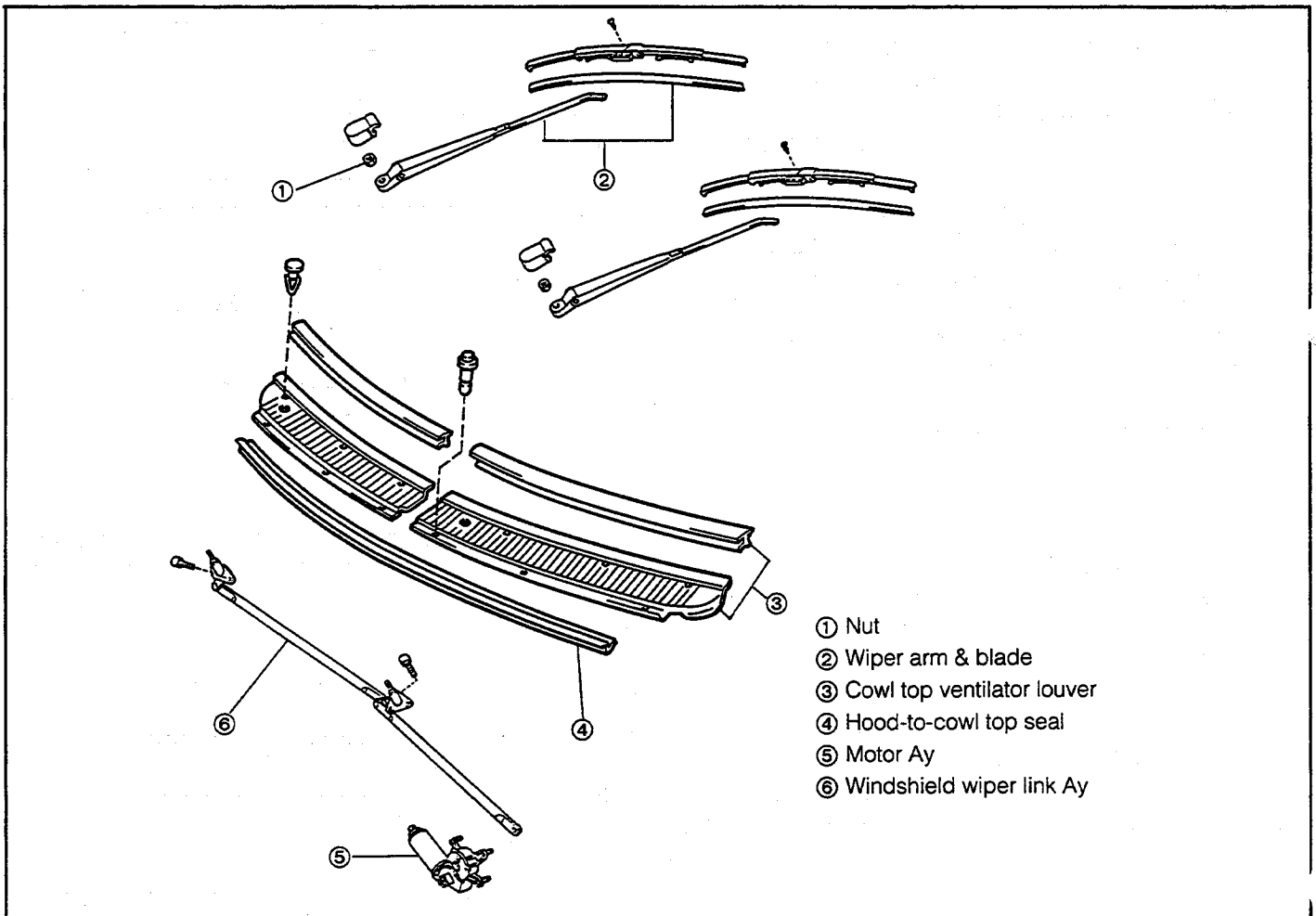


Fig. 10-118

WR-10120

## BODY ELECTRICAL SYSTEM

### REMOVAL

1. Remove the front wiper arm cover. Remove the nut.  
**NOTE:**  
Care must be exercised to ensure that no scratch is made to the engine hood.

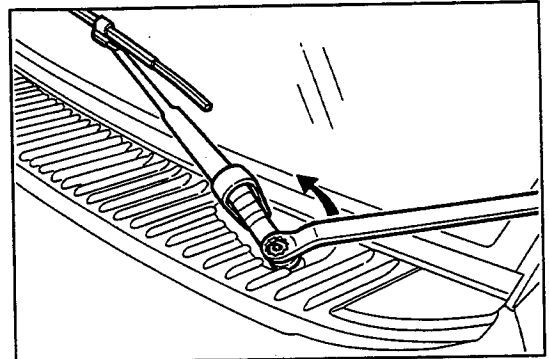


Fig. 10-119

WR-10121

2. Remove the wiper arm and blades.

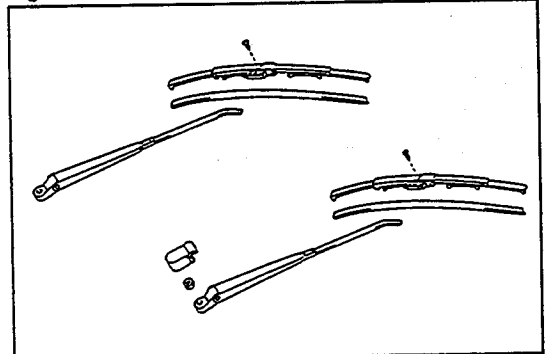


Fig. 10-120

WR-10122

3. Remove the cowl top ventilator louver.
4. Remove the hood-to-cowl top seal.

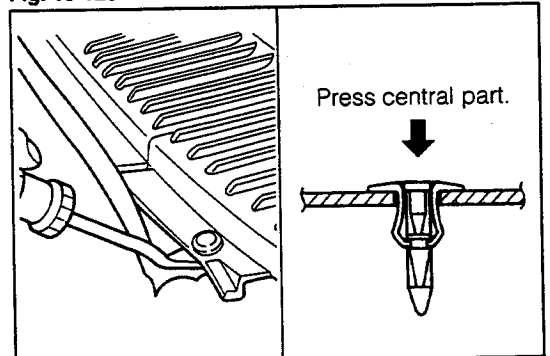


Fig. 10-121

WR-10123

5. Remove the wiper motor assembly.
  - (1) Disconnect the connector.
  - (2) Remove the set bolt.
  - (3) Disconnect the motor from the link. Remove the motor.

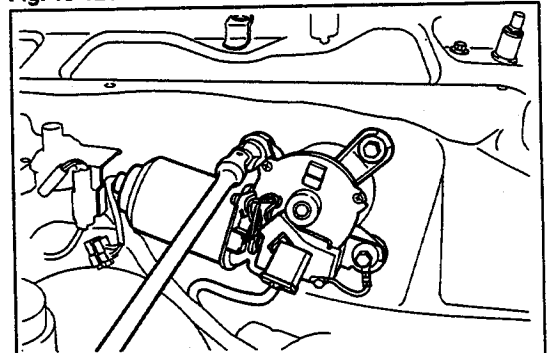


Fig. 10-122

WR-10124

6. Remove the wiper link assembly.
  - (1) Remove the set bolt.

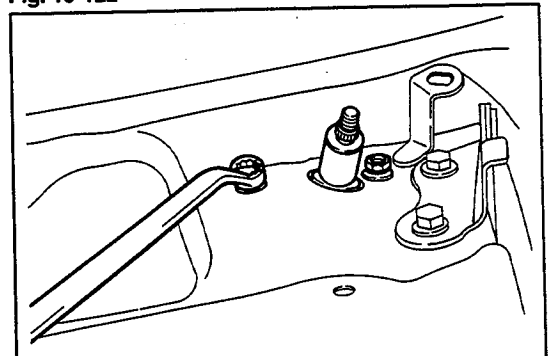


Fig. 10-123

WR-10125

## BODY ELECTRICAL SYSTEM

- (2) Take out the wiper link assembly from the cowl louver hole.

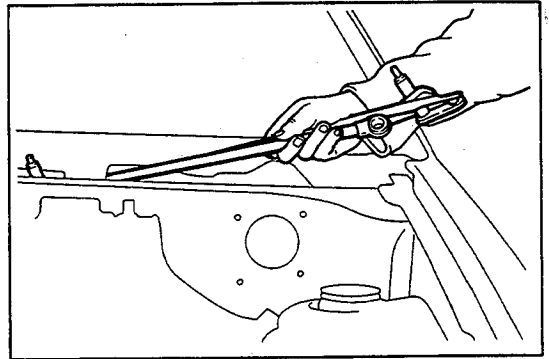


Fig. 10-124

WR-10126

### Checking of Front Wiper Motor Unit

#### 1. Low Speed Operation Check

- (1) Connect the terminal +1 to the positive  $\oplus$  terminal of the battery; the body to the negative  $\ominus$  terminal of the battery. Ensure that the wiper operates at the low speed.

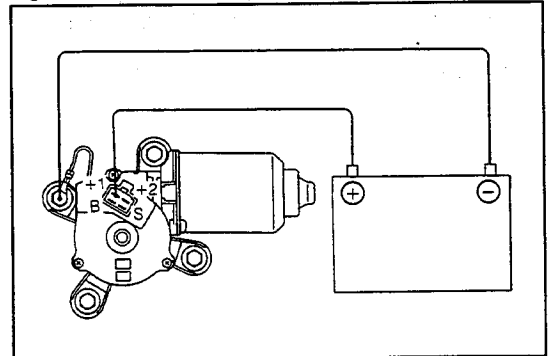


Fig. 10-125

WR-10127

#### 2. High Speed Operation Check

- (1) Connect the terminal +2 to the positive  $\oplus$  terminal of the battery; the body to the negative  $\ominus$  terminal of the battery. Ensure that the wiper operates at the high speed.

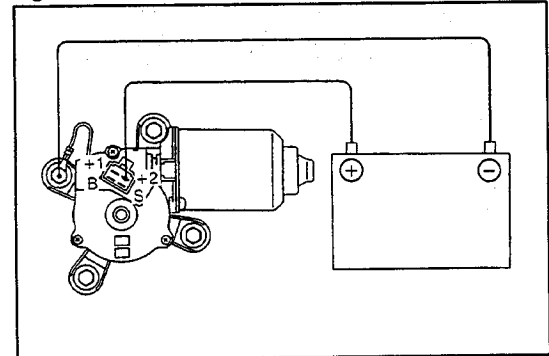


Fig. 10-126

WR-10128

#### 3. OFF Operation Check

With the wiper motor body connected to the negative  $\ominus$  terminal of the battery, perform the following checks.

- (1) Connect the terminal B to the positive  $\oplus$  terminal of the battery.
- (2) Operate the wiper at the low speed by connecting the terminal +1 to the positive  $\oplus$  terminal of the battery.

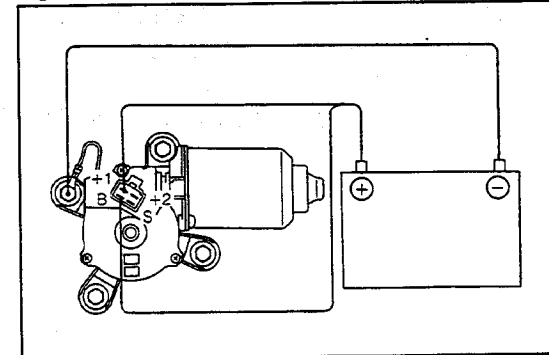


Fig. 10-127

WR-10129

- (3) Under the operating conditions in the step (2), disconnect the terminal +1 so as to interrupt the wiper motor operation.

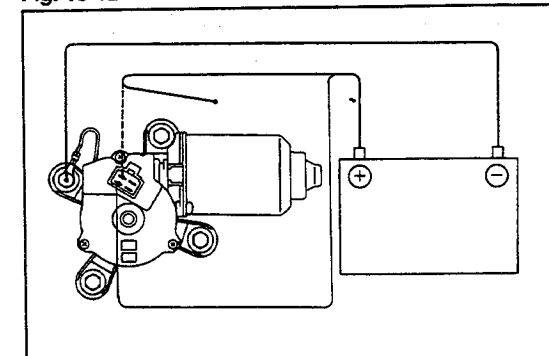


Fig. 10-128

WR-10130

- (4) Connect the terminal +1 to the terminal S. Ensure that the wiper operates and stops at the automatic stopping position.

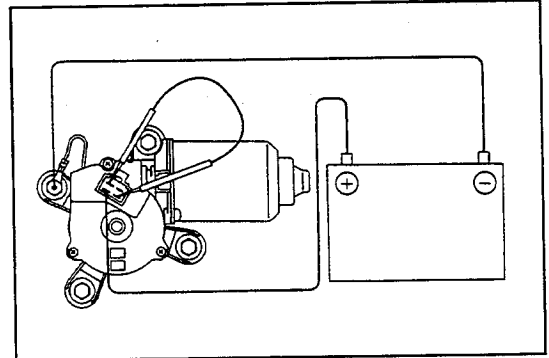


Fig. 10-129

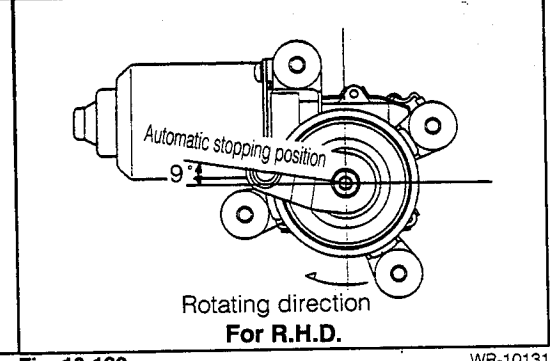
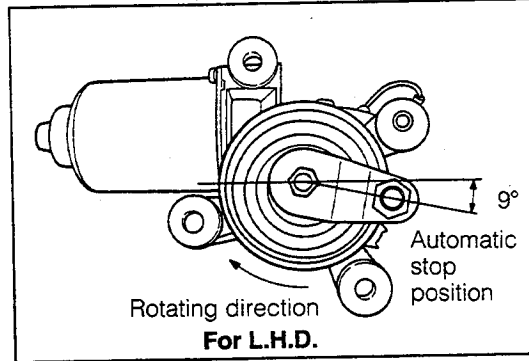


Fig. 10-130

WR-10131

## INSTALLATION

1. Install the windshield wiper link assembly.
2. Install the motor assembly.

### NOTE:

Connect the motor assembly with the link securely.

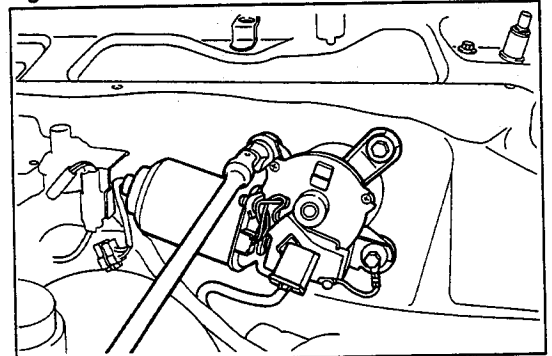


Fig. 10-131

WR-10132

3. Install the hood-to-cowl top seal. Install the cowl top ventilator louver.

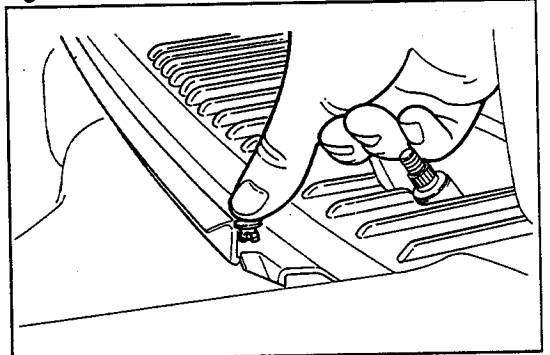


Fig. 10-132

WR-10133

4. Install the wiper arm and blade.
  - (1) Operate the wiper arm and set it to the automatic stopping position.
  - (2) Set the wiper arm to the position as indicated in the right figure.
5. Install the front wiper arm cover.

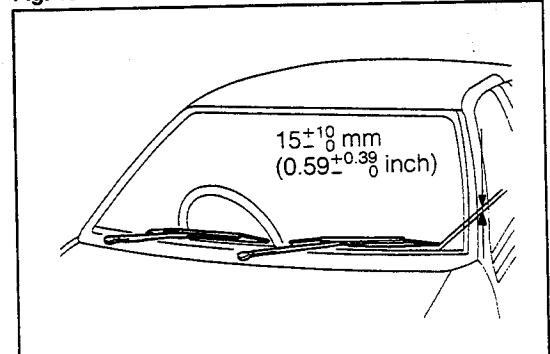


Fig. 10-133

WR-10134

# BODY ELECTRICAL SYSTEM

## FRONT WASHER TANK

### INSTALLATION POSITION

1. Standard vehicle (1.2ℓ) ... Right side of engine compartment
2. Vehicles mounted with turbocharged engine or ECE & EEC specifications (2.5ℓ)  
... Inside of left front fender

### REMOVAL (VEHICLES MOUNTED WITH TURBOCHARGED ENGINE OR ECE & EEC SPECIFICATIONS)

1. Remove the front part of the left front fender liner.
2. Remove the left headlamp assembly.
3. Remove the left clearance lamp.
4. Remove the washer tank assembly.  
(1) Remove the connector, hose, two bolts (one is to be removed during the fender liner removal) and nut.

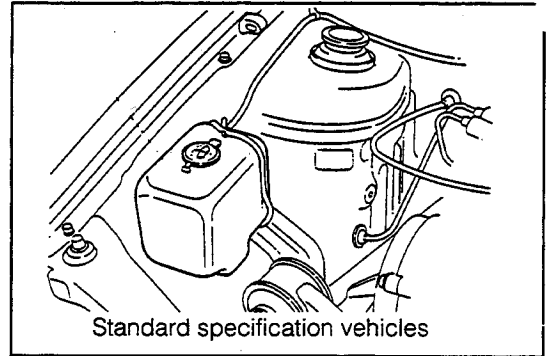


Fig. 10-134

WR-10135

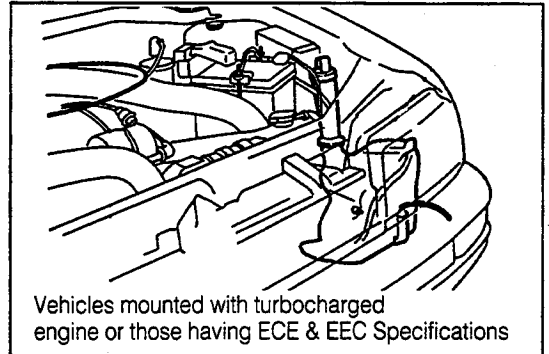


Fig. 10-135

WR-10136

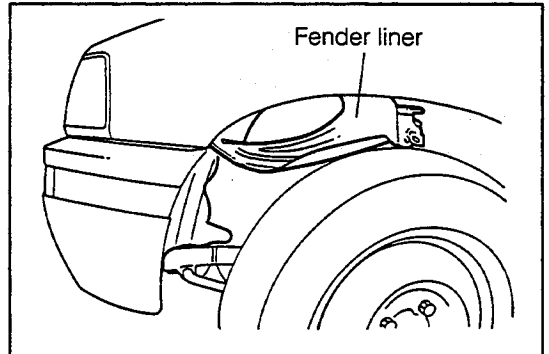


Fig. 10-136

WR-10137

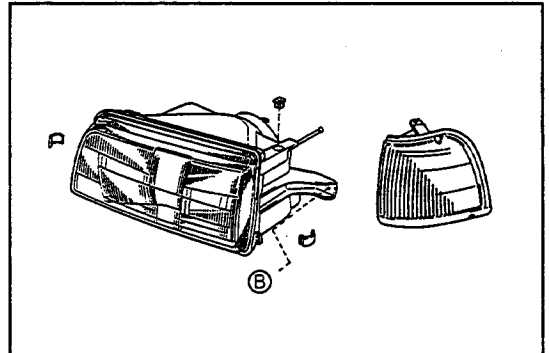


Fig. 10-137

WR-10138

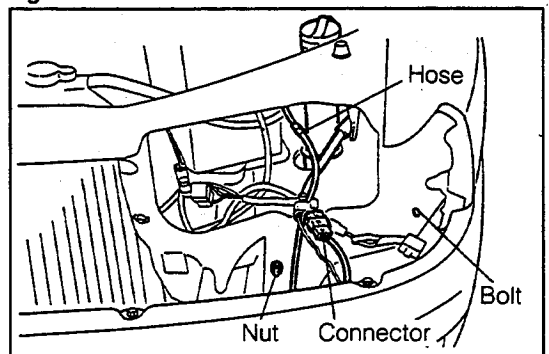


Fig. 10-138

WR-10139

- (2) Remove the washer tank assembly from the back side of the fender.

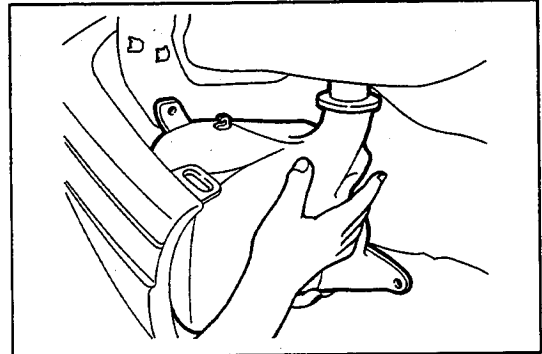


Fig. 10-139

WR-10140

## INSTALLATION

1. Install the washer tank assembly.
2. Install the left headlamp assembly.
3. Install the left clearance lamp.
4. Install the left front fender liner.

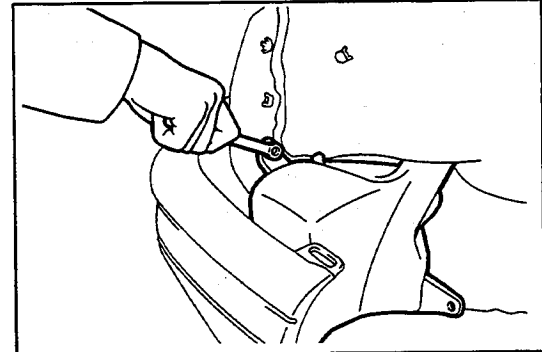


Fig. 10-140

WR-10141

## FRONT WIPER CONTROL RELAY

The front wiper control relay is located at the upper side of the fuse block.

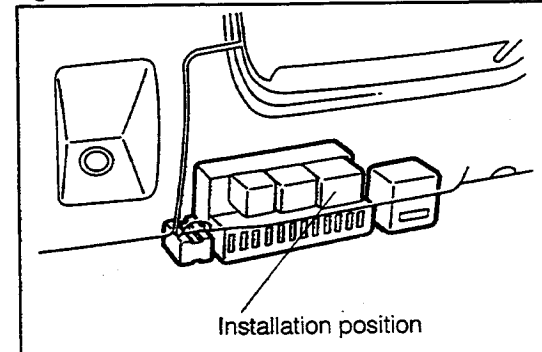


Fig. 10-141

WR-10142

## INSPECTION

1. Perform continuity checks between terminals given below.

- (1) Between terminals ② and ③ ... Continuity exists.
- (2) Between terminals ② and ④ ... No continuity exists.

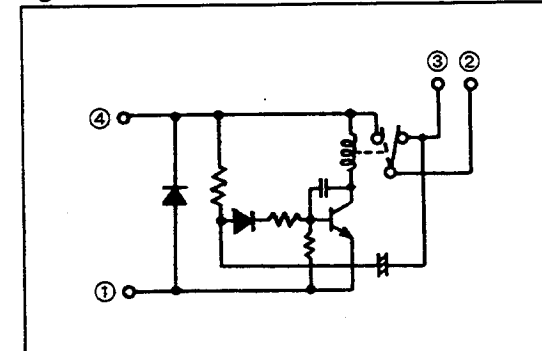


Fig. 10-142

WR-10143

2. Relay operation check

Connect the terminal ④ to the positive  $\oplus$  terminal of the battery; terminal ① to the negative  $\ominus$  terminal of the battery. Ensure that the relay emits an operating sound (clicking sound).

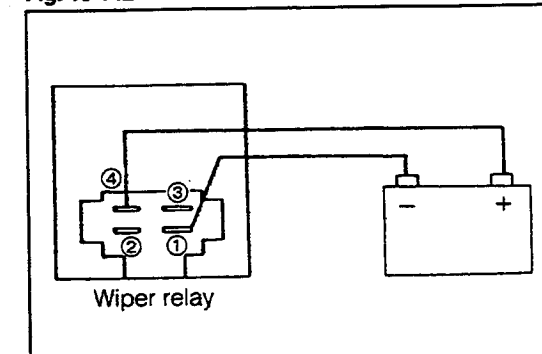


Fig. 10-143

WR-10144

## BODY ELECTRICAL SYSTEM

### 3. Intermittent operation check

(1) Connect the terminal ④ to the positive ⊕ terminal of the battery; terminal ① to the negative ⊖ terminal of the battery.

(At this time, the relay emits an operating sound.): The relay is turned ON.

(2) Connect the terminal ③ to the positive ⊕ terminal of the battery for about one second. Then, ground the terminal ③.

(The relay emits an operating sound.): The relay is turned OFF.

(3) Ensure that, about four seconds later, the relay emits an operating sound (intermittent operation).

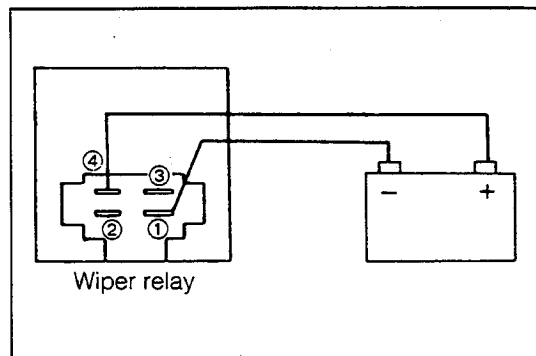


Fig. 10-144

WR-10145

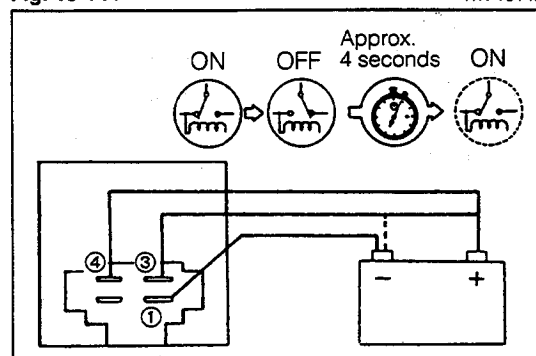


Fig. 10-145

WR-10146



REAR WIPER AND WASHER

REAR WIPER CIRCUIT DIAGRAM

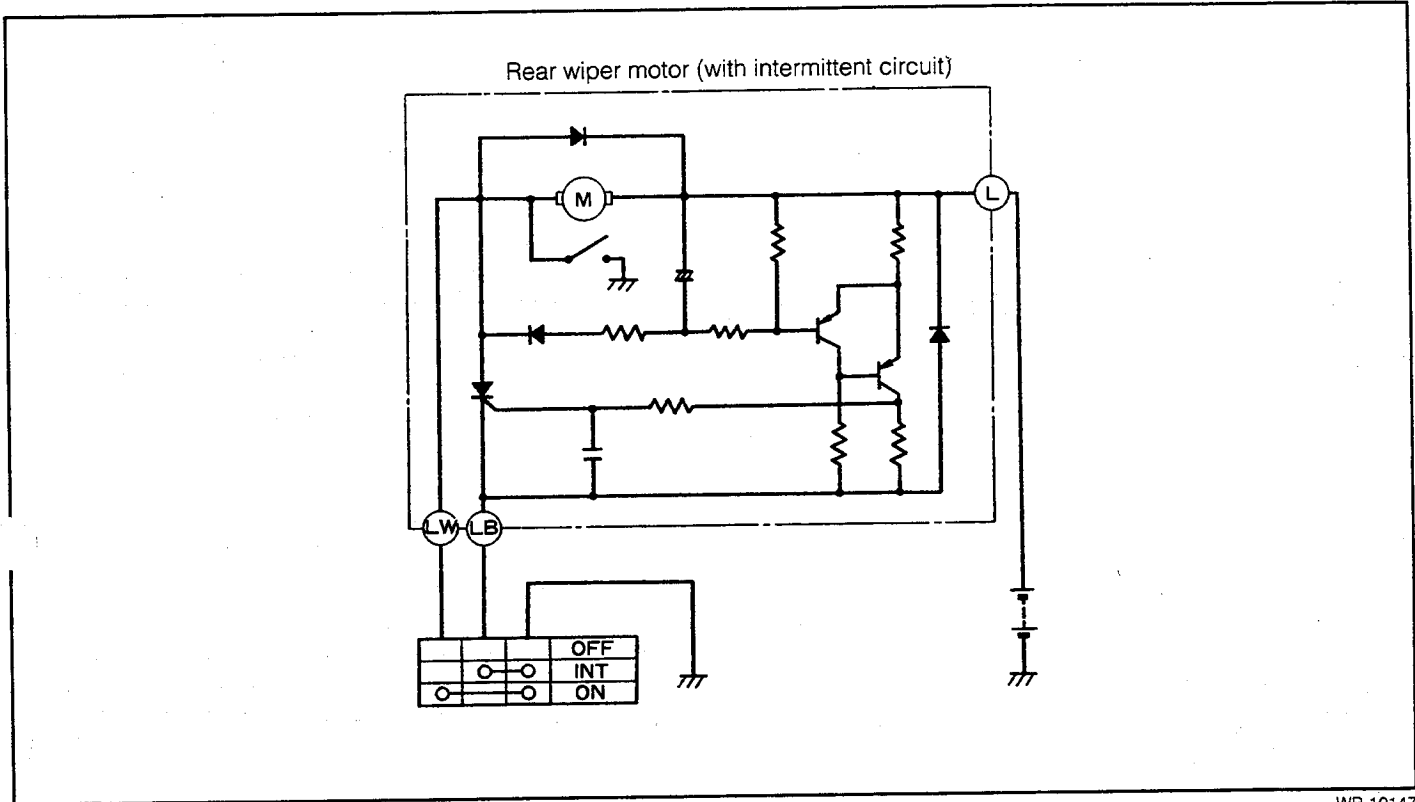


Fig. 10-146

WR-10147

REAR WIPER MOTOR AND BLADE COMPONENTS

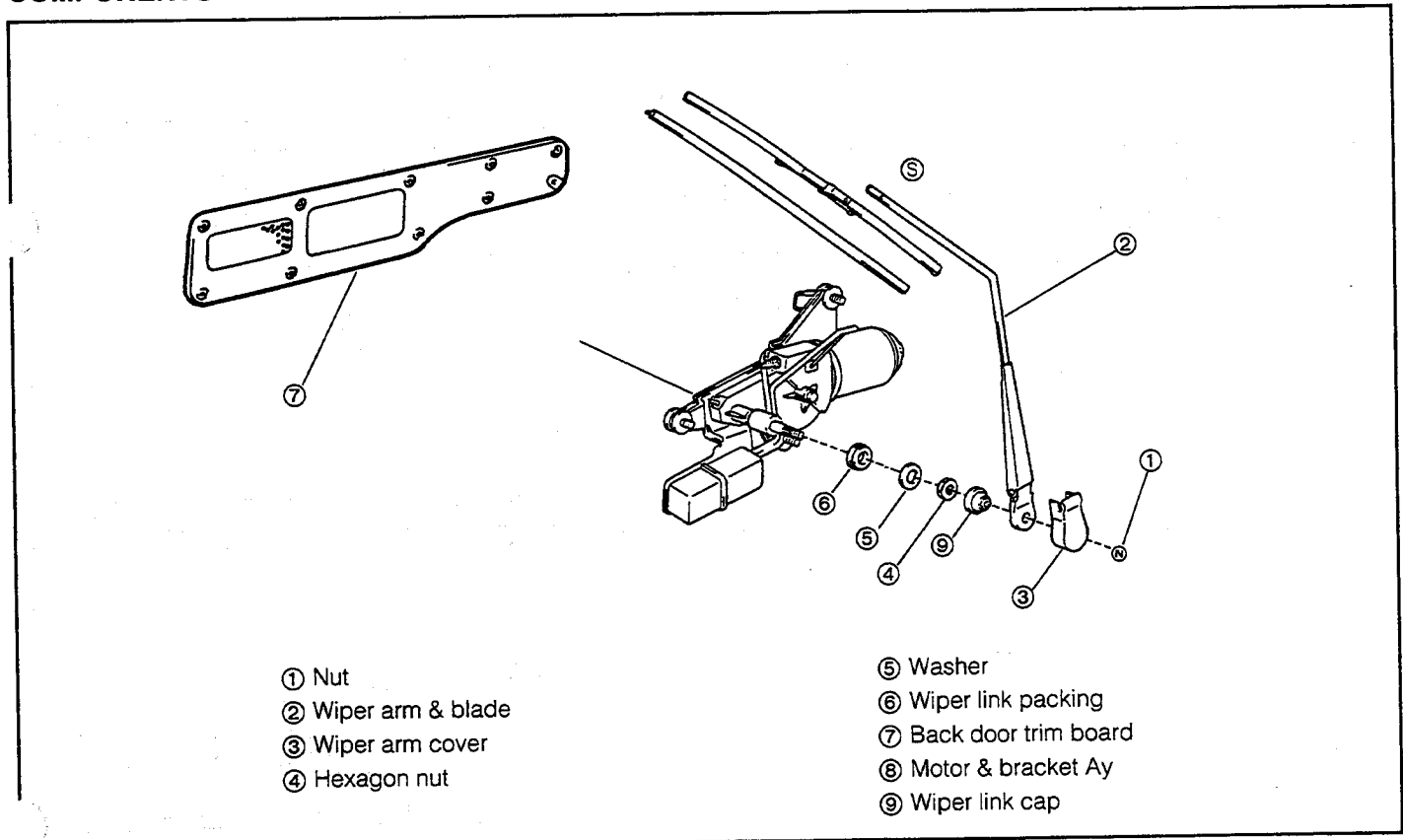


Fig. 10-147

WR-10148

## BODY ELECTRICAL SYSTEM

### REMOVAL

1. Remove the wiper arm cover.
2. Remove the wiper arm and blade by removing the nut.
3. Remove the wiper link cap.  
Remove the washer and wiper link packing by removing the hexagon nut.
4. Remove the back door trim board, as follows:
  - (1) Release the lock by pushing the center section of the clip. Then, detach the clip.
  - (2) Remove the back door trim board (10 pieces of clips).
5. Disconnect the connector. Remove the rear wiper motor assembly.

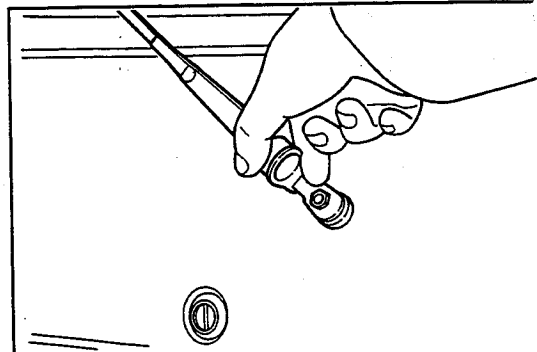


Fig. 10-148

WR-10149

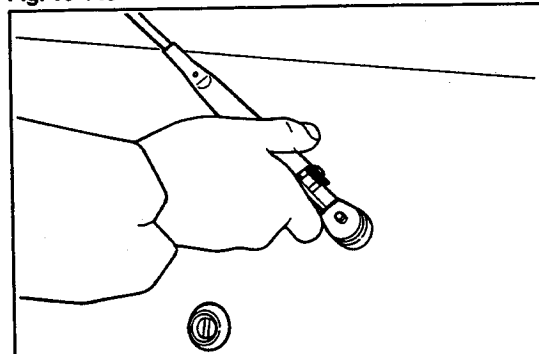


Fig. 10-149

WR-10150

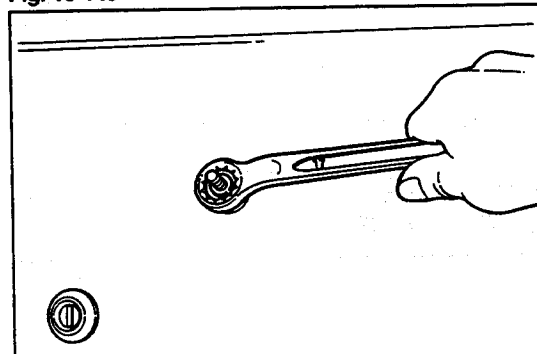


Fig. 10-150

WR-10151

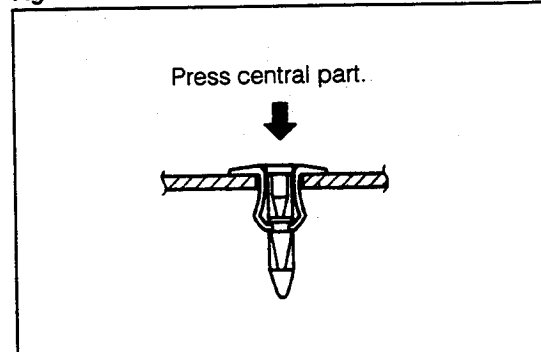


Fig. 10-151

WR-10152

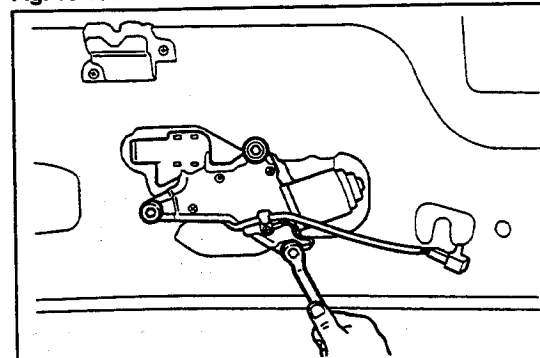


Fig. 10-152

WR-10153

## REAR WIPER MOTOR CHECK

Ensure that the wiper motor is grounded to the body properly. Proceed to the following checks.

1. Connect the terminal L of the connector to the positive  $\oplus$  terminal of the battery; terminal LW to the negative  $\ominus$  terminal of the battery. Ensure that the wiper operates.
  
2. Disconnect the terminal LW from the negative  $\ominus$  terminal of the battery. Ensure that the wiper stops at the automatic stopping position.
  
3. Connect the terminal L to the positive  $\oplus$  terminal of the battery; terminal LB to the negative  $\ominus$  terminal of the battery. Ensure that the wiper operates intermittently.
  
4. Disconnect the terminal LB from the negative  $\ominus$  terminal of the battery. Ensure that the wiper stops at the automatic stopping position.

## INSTALLATION

1. Install the rear wiper motor assembly, as follows:
  - (1) Install the rear wiper motor assembly by tightening the set bolt.

### NOTE:

Make sure that the body earth is provided properly.

- (2) Connect the connector.

2. Install the back door trim, as follows:
  - (1) Pull out the center section of the clip. Attach the clip to the trim. Push the center section so as to lock the clip.
  - (2) Install the back door trim boards (10 pieces).

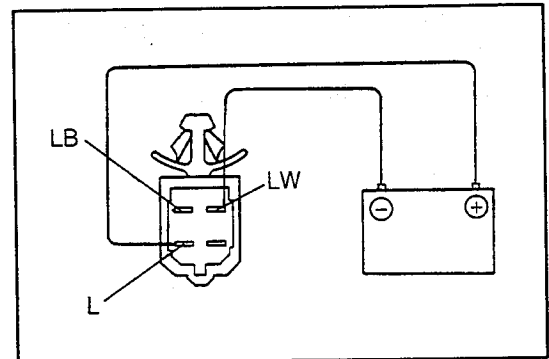


Fig. 10-153

WR-10154

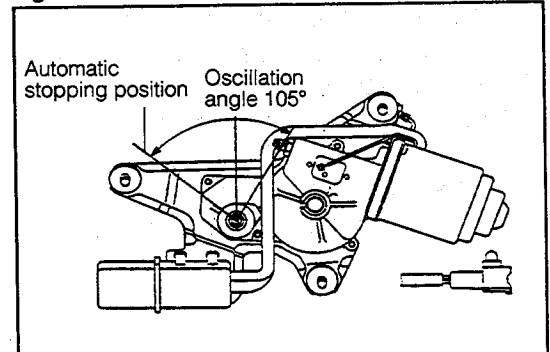


Fig. 10-154

WR-10155

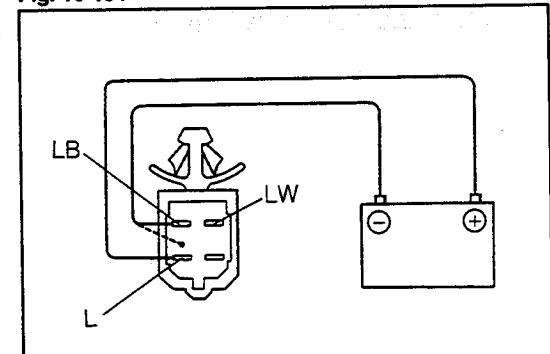


Fig. 10-155

WR-10156

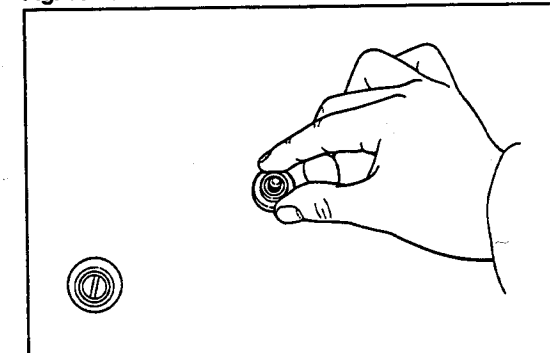


Fig. 10-156

WR-10157

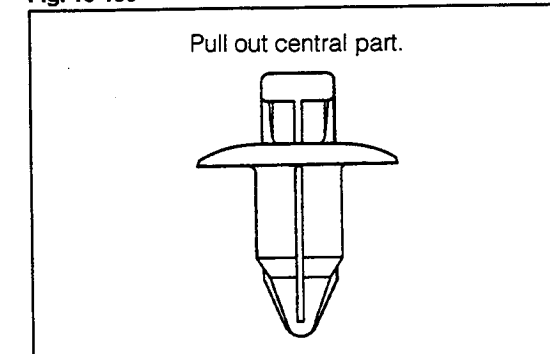


Fig. 10-157

WR-10158

## BODY ELECTRICAL SYSTEM

3. Install the wiper link packing and washer by tightening the hexagon nut.  
Install the wiper link cap.

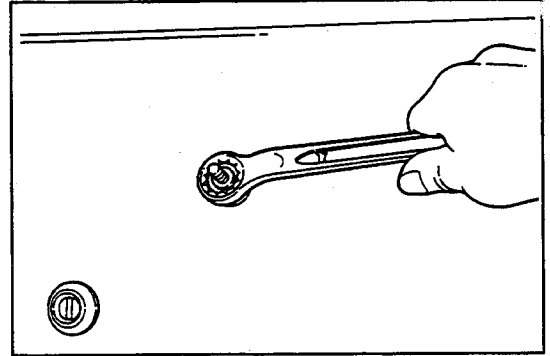


Fig. 10-158

WR-10159

4. Install the wiper arm and blade, as follows:
  - (1) Operate the wiper motor and set the wiper arm to the automatic stopping position.
  - (2) Align the blade with the bottom line of the defogger pattern.

Installation position:

Bottom line of pattern  $\pm 5$  mm ( $\pm 0.2$  inch)

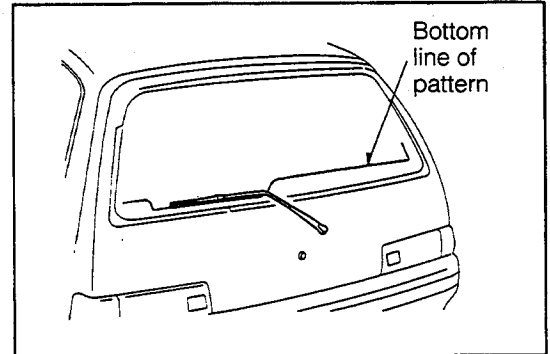


Fig. 10-159

WR-10160

5. Tighten the nut. Install the wiper arm cover.

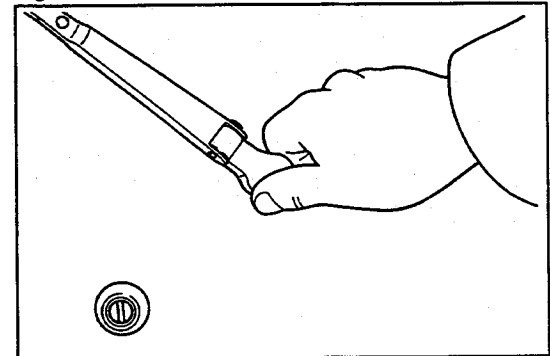


Fig. 10-160

WR-10161

**EAR WASHER TANK  
COMPONENTS**

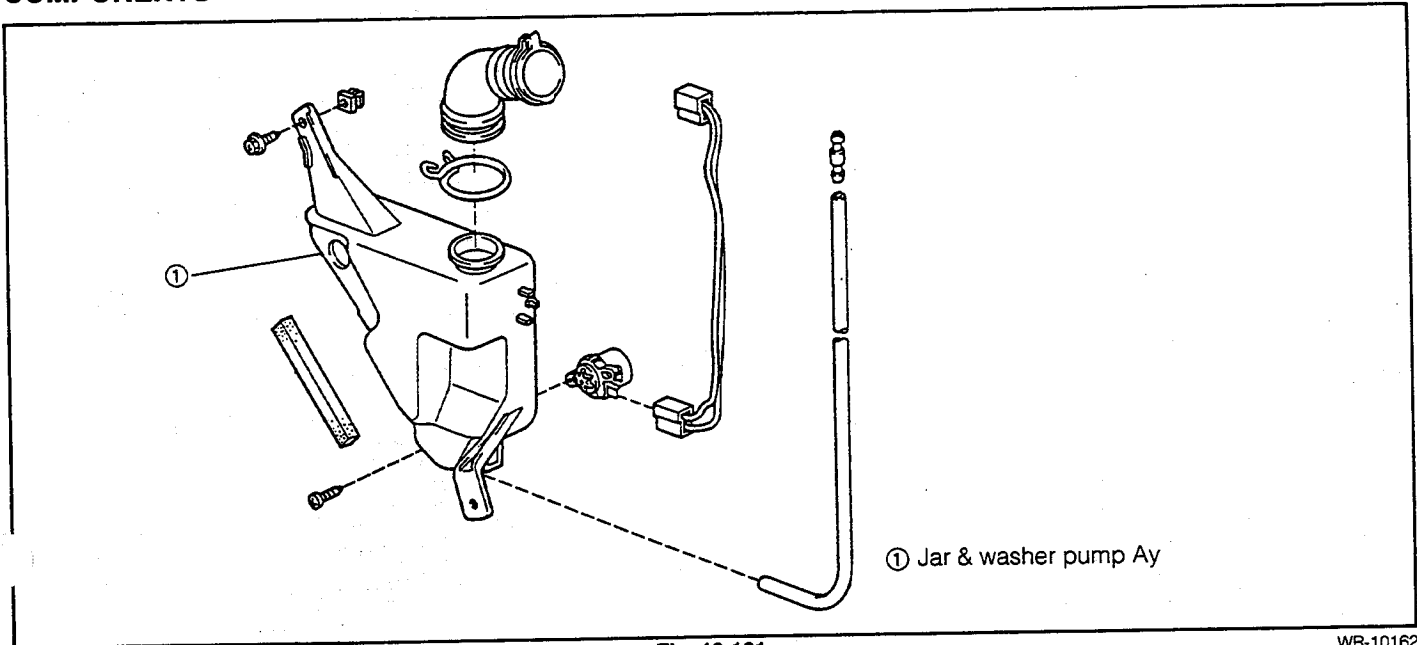


Fig. 10-161

WR-10162

**REMOVAL**

1. Remove the deck side trim RH.
2. Disconnect the connector and water hose. Remove the washer tank assembly.

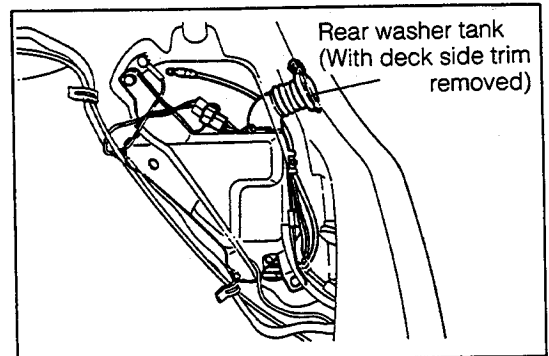


Fig. 10-162

WR-10163

**INSTALLATION**

1. Install the washer tank assembly by tightening the screws (2 pcs.).
2. Connect the connector and water hose.

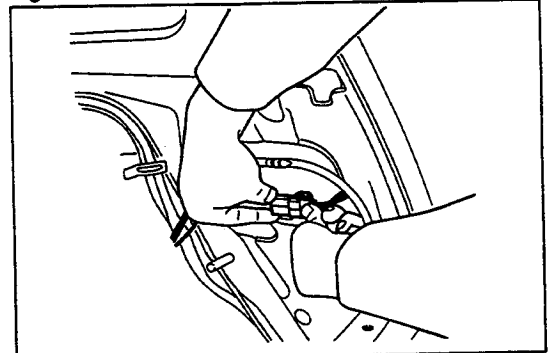


Fig. 10-163

WR-10164

3. Install the deck side trim RH.

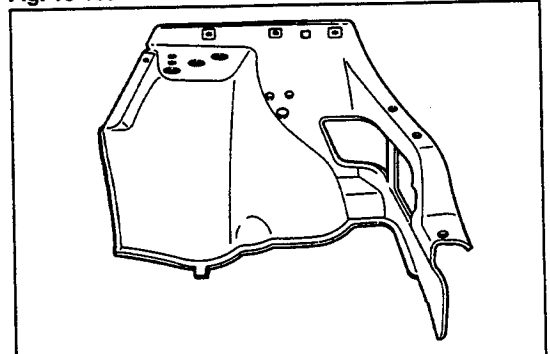


Fig. 10-164

WR-10165

# BODY ELECTRICAL SYSTEM

## REAR WIPER AND WASHER SWITCH

### INSTALLATION POSITION

R.H.D. vehicles ... Left side of instrument cluster finish panel  
 L.H.D. vehicles ... Right side of instrument cluster finish panel

### INSPECTION

Ensure that continuity exists between the respective terminals as indicated in the continuity table.

○—○ Continuity exists.

Knob position		Terminal	R+1	RINT	E <sub>3</sub>	RW
Wiper switch	OFF					
	INT			○—○		
	ON		○—○			
Washer switch	OFF					
	ON				○—○	

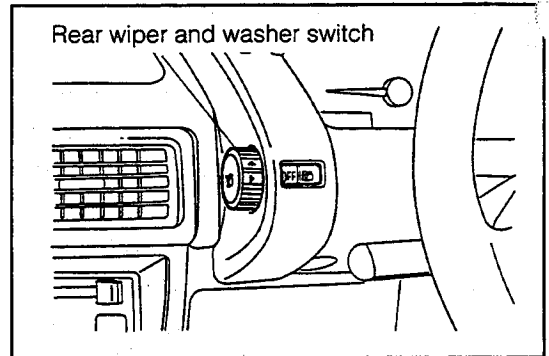


Fig. 10-165

WR-10166

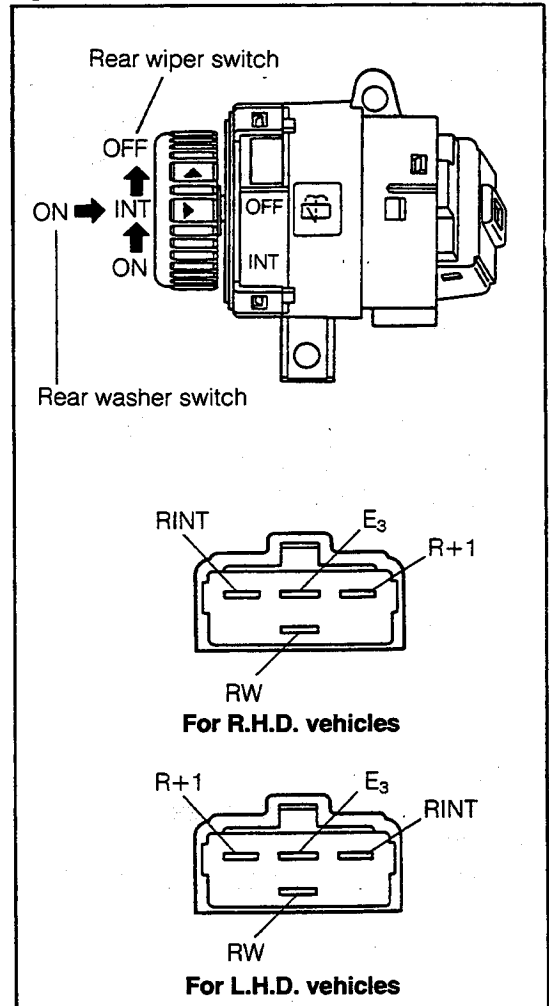


Fig. 10-166

WR-10167

# ELECTRICAL REMOTE CONTROL DOOR MIRROR

## CIRCUIT DIAGRAM

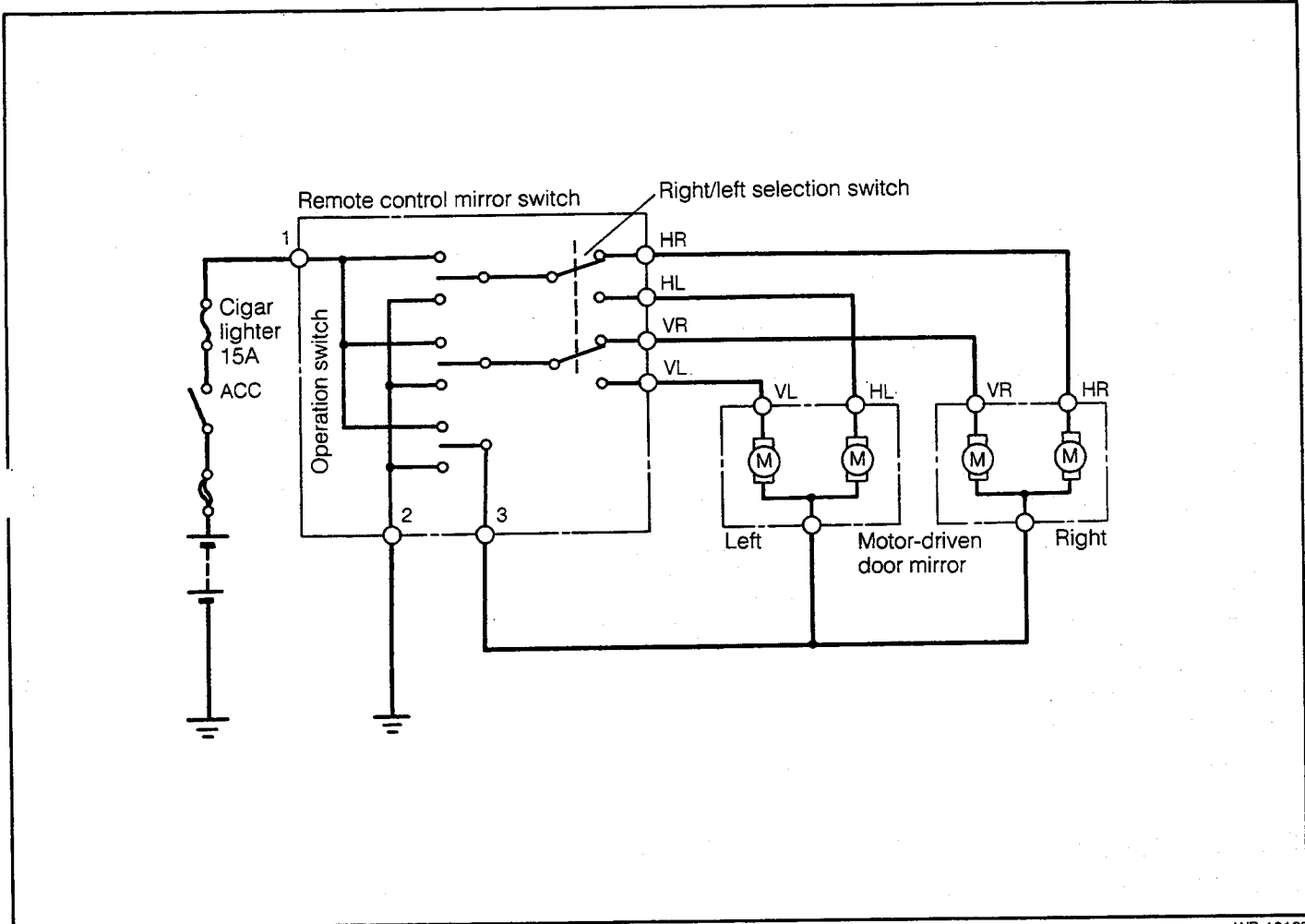


Fig. 10-167

WR-10168

### DOOR MIRROR SWITCH

#### INSTALLATION POSITION

H.D. vehicles ... Right side of steering post  
 L.H.D. vehicles ... Left side of steering post

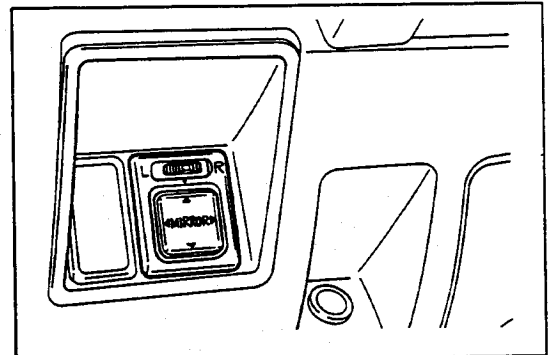


Fig. 10-168

WR-10169

#### REMOVAL

Working from the back side of the instrument panel, push the switch toward your side.

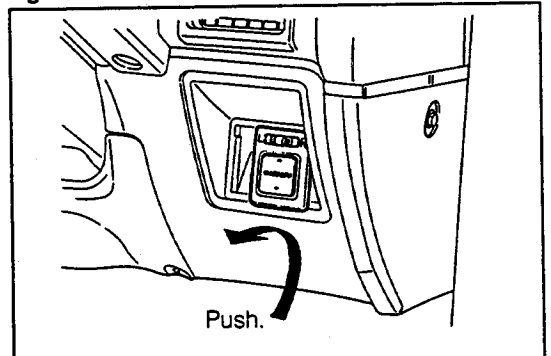


Fig. 10-169

WR-10170

# BODY ELECTRICAL SYSTEM

## INSPECTION

Ensure that continuity exists between the respective terminals as indicated in the continuity table.

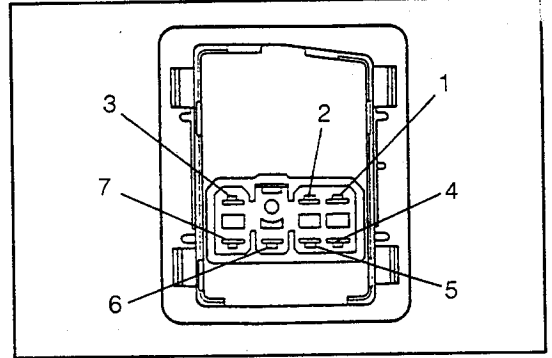


Fig. 10-170

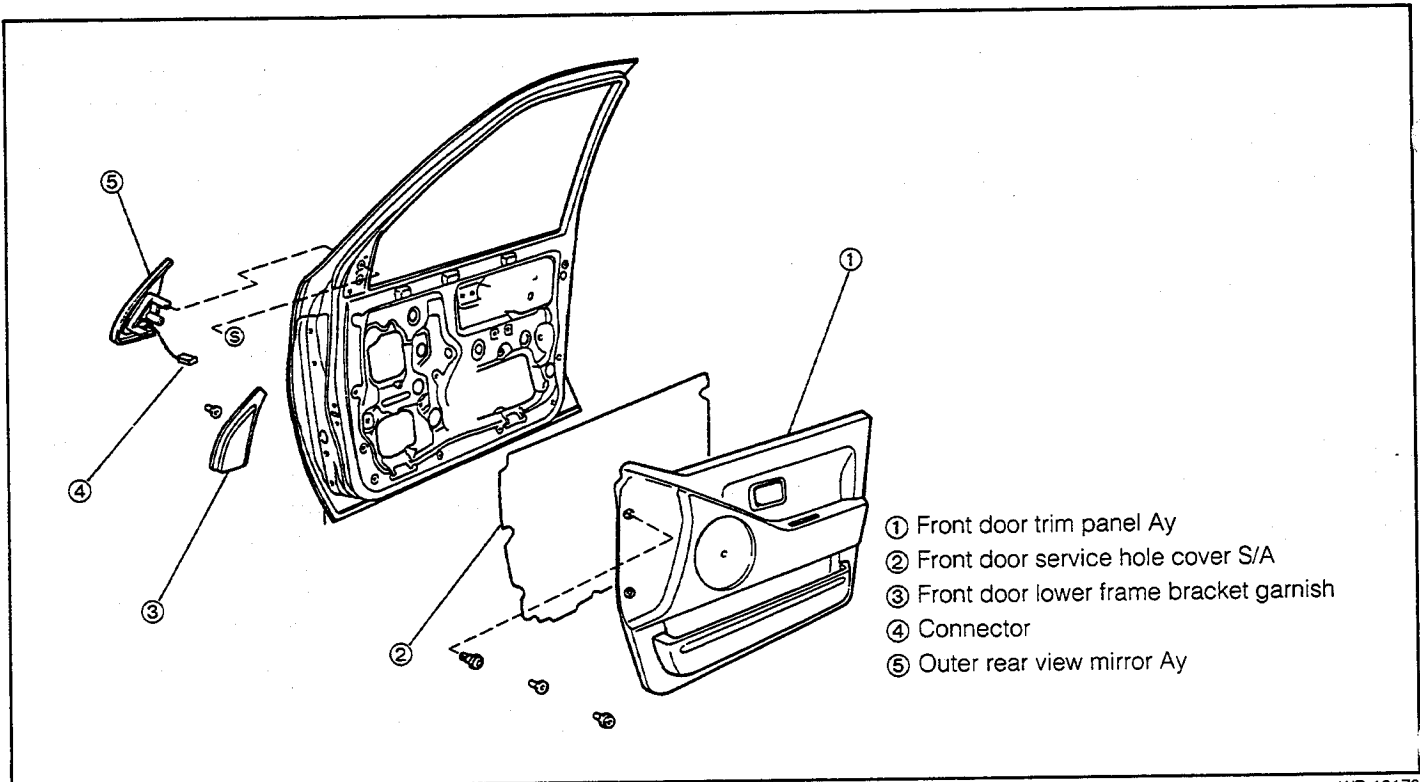
WR-10171

## Continuity Table

Mirror	Terminal	Left					Right			
Switch position		7	6	1	2	3	2	1	5	4
UP		○		○		○	○	○		○
DOWN		○			○		○		○	○
LEFT			○	○		○	○		○	○
RIGHT			○		○		○		○	○

WR-10172

## ELECTRICAL REMOTE CONTROL DOOR MIRROR RELATED PARTS



- ① Front door trim panel Ay
- ② Front door service hole cover S/A
- ③ Front door lower frame bracket garnish
- ④ Connector
- ⑤ Outer rear view mirror Ay

Fig. 10-171

WR-10173



## REMOVAL

1. Remove the front door trim assembly.
  - (1) Release the lock by pushing the center section of the clip. Detach the clip.
  - (2) Remove the front door trim assembly.
2. Remove the front door service hole cover.
3. Remove the lower frame bracket garnish by pulling it toward you.
4. Disconnect the door mirror connector. Remove the outer rear view mirror assembly by removing the attaching bolt.

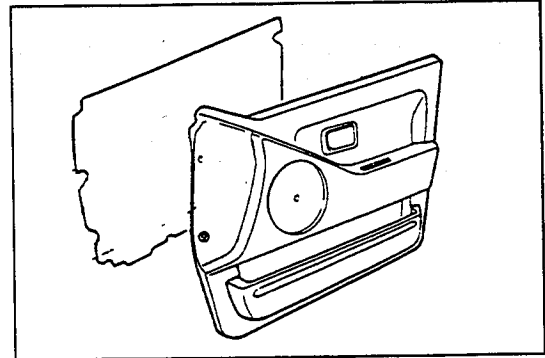


Fig. 10-172

WR-10174

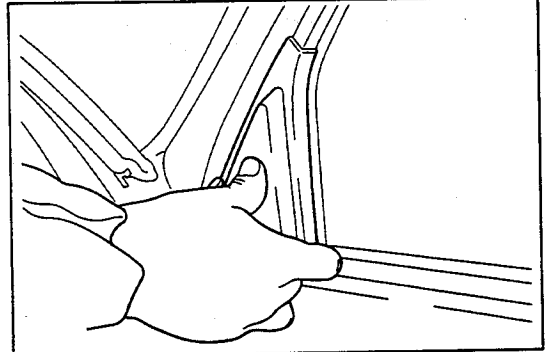


Fig. 10-173

WR-10175

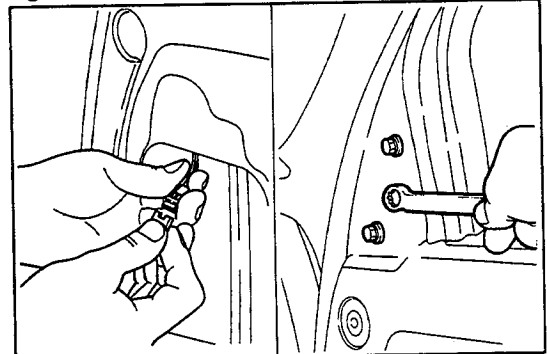


Fig. 10-174

WR-10176

## INSPECTION

1. Apply the battery voltage to each terminal, as indicated in the table below. Ensure that the mirror operates properly.

Terminal	Right door mirror	COM	MVR	MHR	Operation direction
	Left door mirror	COM	MVL	MHL	
Connection		⊖	⊕		UP
		⊕	⊖		Down
		⊖		⊕	Left
		⊕		⊖	Right

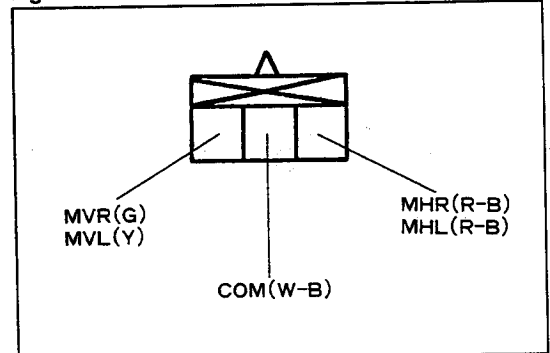


Fig. 10-175

WR-10177

## BODY ELECTRICAL SYSTEM

### INSTALLATION

1. Connect the connector. Install the outer rear view mirror.
2. Install the lower frame bracket garnish.

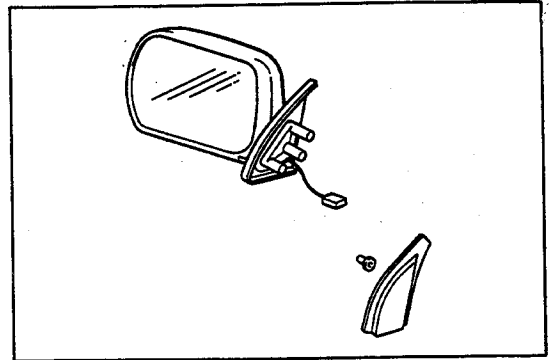


Fig. 10-176

WR-10178

3. Install the front service hole cover subassembly.
4. Install the front door trim assembly.

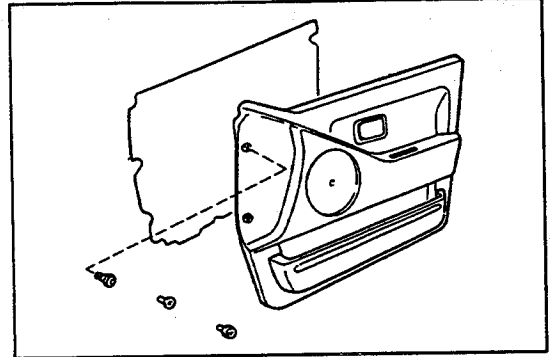


Fig. 10-177

WR-10179

**CENTRAL DOOR LOCK**

**CIRCUIT DIAGRAM**

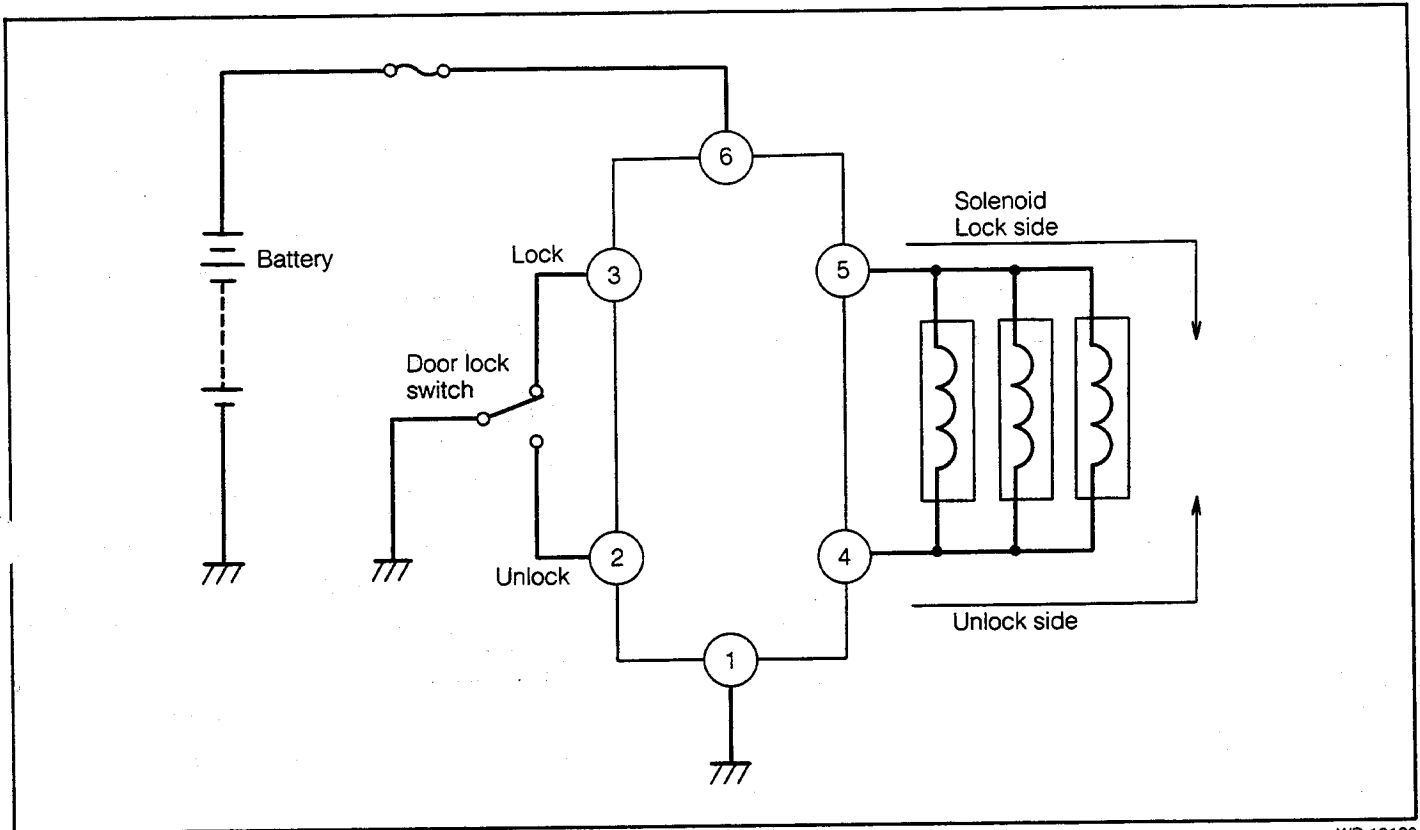


Fig. 10-178

WR-10180

**DOOR LOCK SWITCH AND SOLENOID RELATED PARTS**

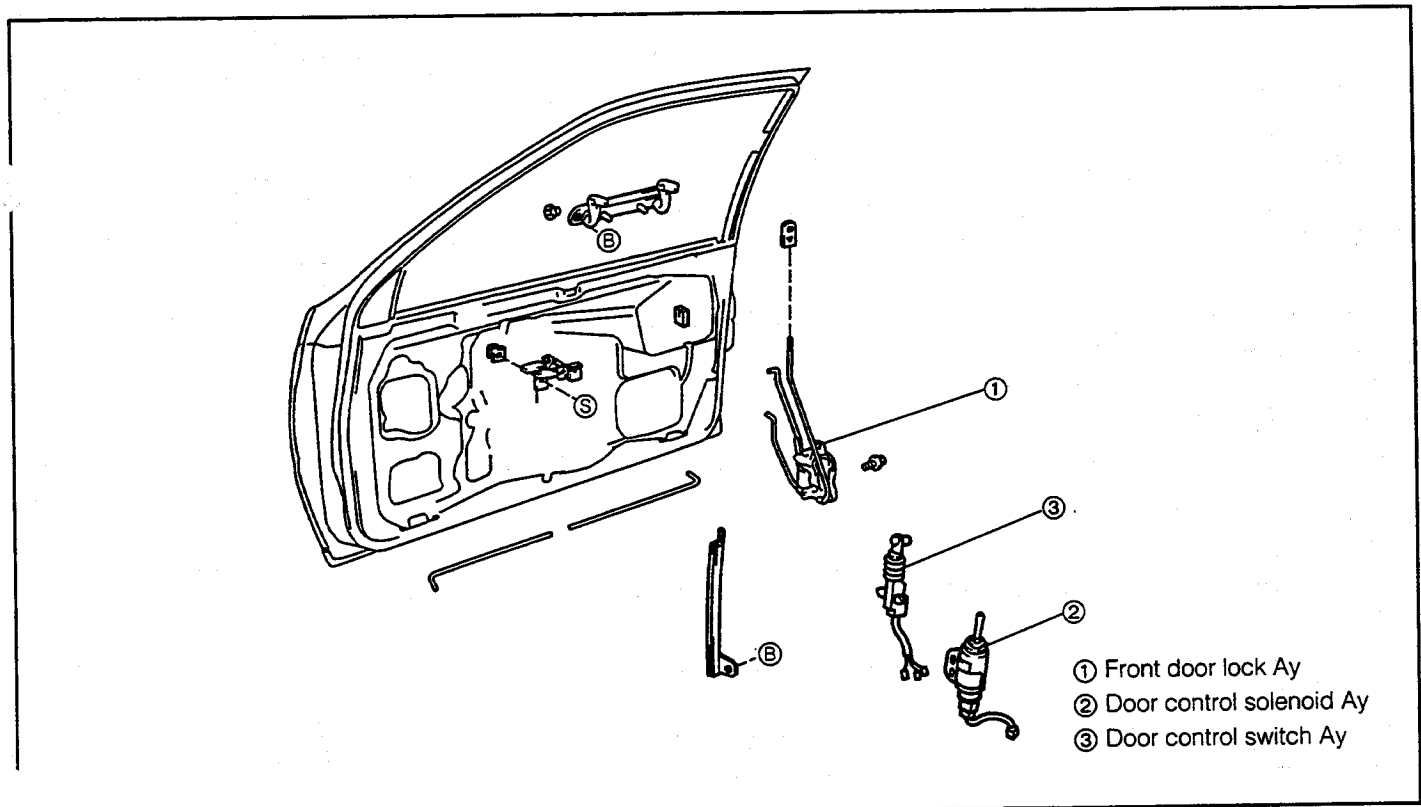


Fig. 10-179

WR-10181

# BODY ELECTRICAL SYSTEM

## REMOVAL

1. Remove the front door trim panel assembly and service hole cover subassembly.
2. Disconnect the lock knob from the link section. Remove the front door lock assembly by removing the attaching bolt.
3. Disconnect the connector. Remove the door control solenoid assembly or switch assembly by removing the attaching bolt.

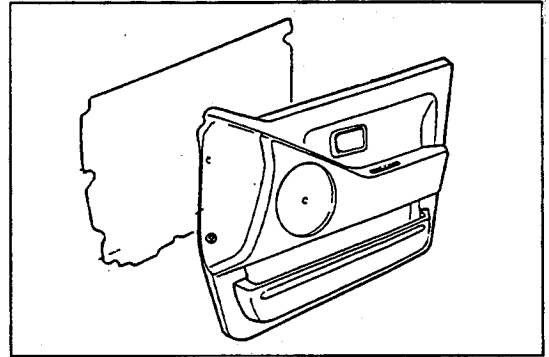


Fig. 10-180

WR-10182

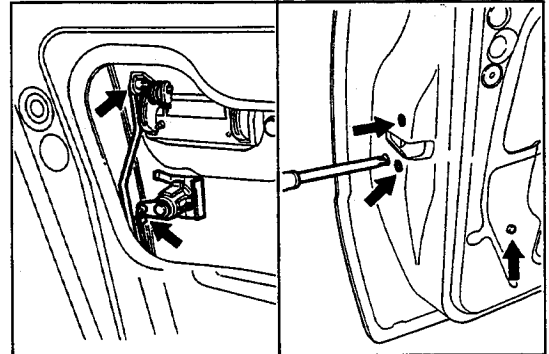


Fig. 10-181

WR-10183

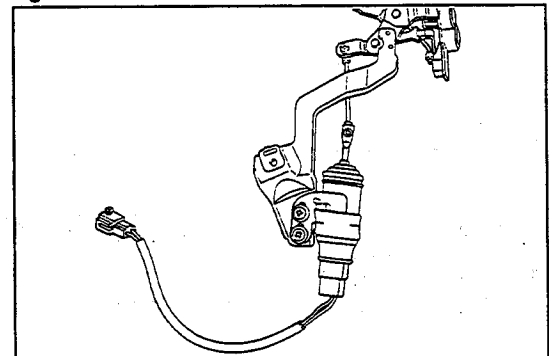


Fig. 10-182

WR-10184

## INSPECTION

### Solenoid Assembly

#### (Front Doors on 3-Door Vehicles and 5-Door Vehicles)

Apply a voltage of 12 V between the following two terminals. Ensure that the plunger operates in accordance with the table below.

Operation direction \ Terminal	①	②
UNLOCK	+	-
LOCK	-	+

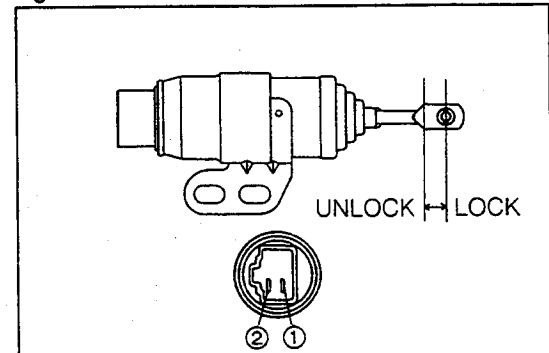


Fig. 10-183

WR-10185

#### (Rear Doors on 5-Door Vehicles)

Apply a voltage of 12 V between the following two terminals. Ensure that the plunger operates in accordance with the table below.

Operation direction \ Terminal	①	②
LOCK	+	-
UNLOCK	-	+

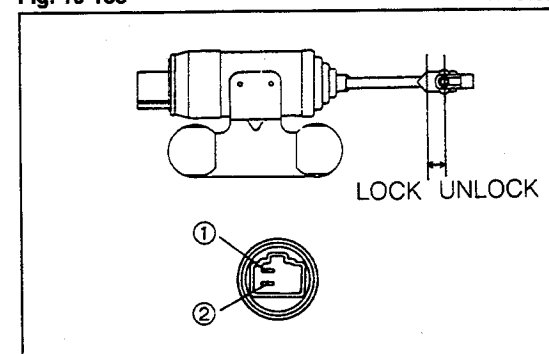


Fig. 10-184

WR-10186

## DOOR LOCK SWITCH

	Lg	WB	LgR
LOCK	○	○	
UNLOCK		○	○

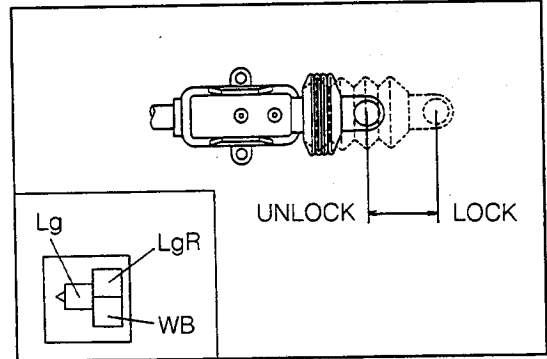


Fig. 10-185

WR-10187

## INSTALLATION

1. Install the door control switch assembly.
2. Install the door control solenoid assembly.

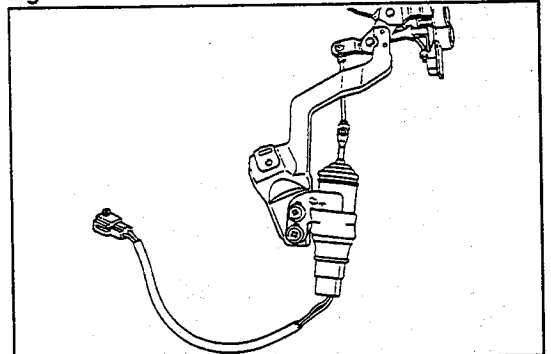


Fig. 10-186

WR-10188

3. Install the front door lock assembly. Install the link and lock knob.
4. Install the service hole cover subassembly and front door trim panel assembly. (See page 9-39.)

### NOTE:

Before connecting the battery, make sure that the lock knob is in an unlocked state.

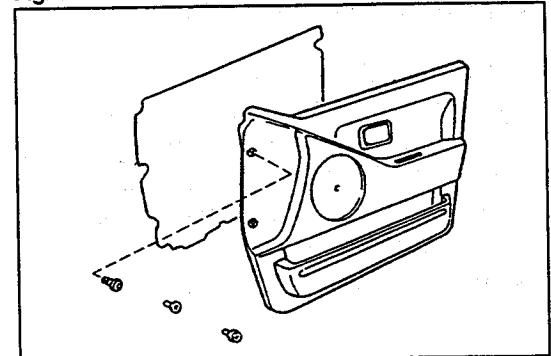


Fig. 10-187

WR-10189

## DOOR CONTROL RELAY

### CIRCUIT DIAGRAM

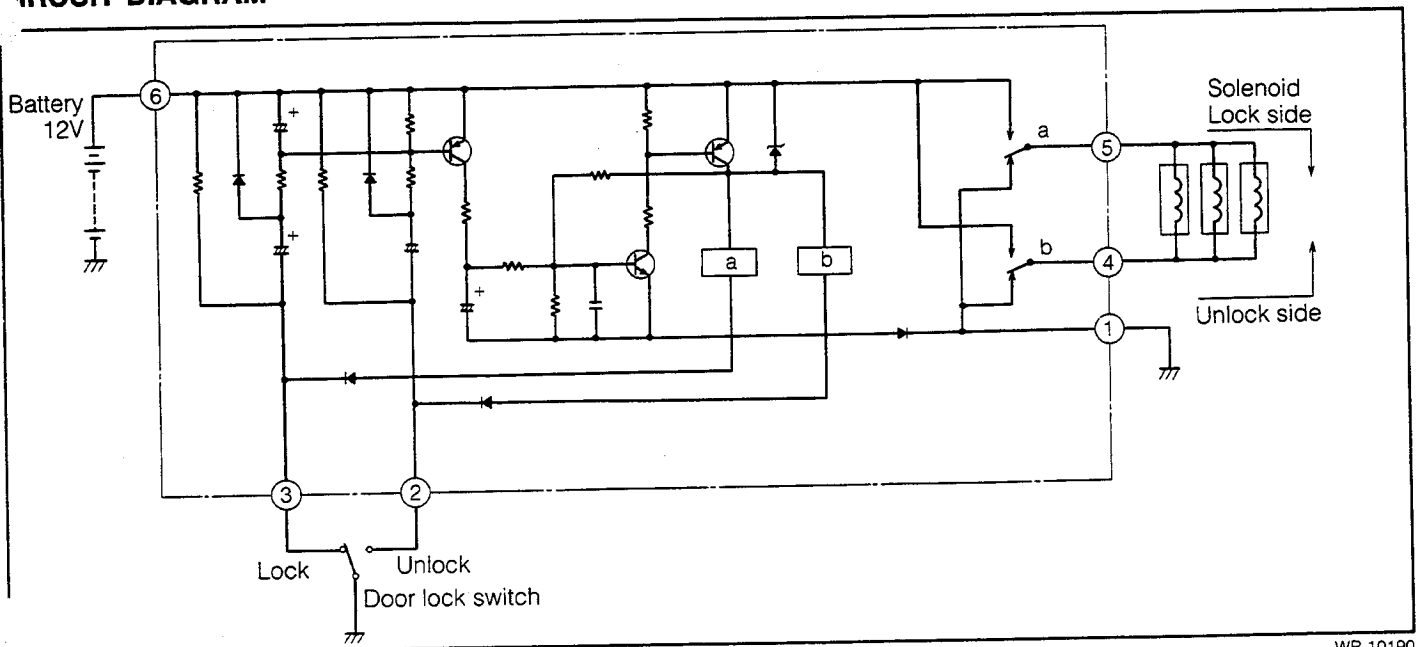


Fig. 10-188

WR-10190

# BODY ELECTRICAL SYSTEM

## INSTALLATION POSITION

R.H.D. vehicles ... Right cowl side

L.H.D. vehicles ... Left cowl side

## INSPECTION

Connect the terminal ⑥ to the positive  $\oplus$  terminal of the battery; terminal ① to the negative  $\ominus$  terminal. Perform the following checks.

1. When the negative  $\ominus$  terminal is connected to the terminal ③, ensure that the relay operates as follows: The relay "a" is turned ON, accompanying an operating sound. A voltage of 12 V is applied to the terminal ⑤. Immediately after this (about 0.2 seconds later), the relay is turned OFF, accompanying an operating sound. Then, the voltage at the terminal ⑤ drops to 0 V.
2. When the negative  $\ominus$  terminal is connected to the terminal ②, ensure that the relay operates as follows: The relay "b" is turned ON, accompanying an operating sound. A voltage of 12 V is applied to the terminal ④. Immediately after this (about 0.2 seconds later), the relay is turned OFF, accompanying an operating sound. Then, the voltage at the terminal ④ drops to 0 V.

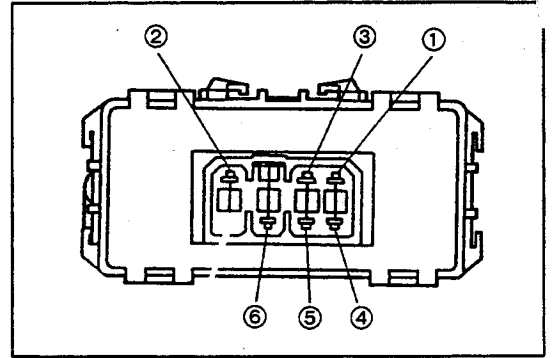


Fig. 10-189

WR-10191

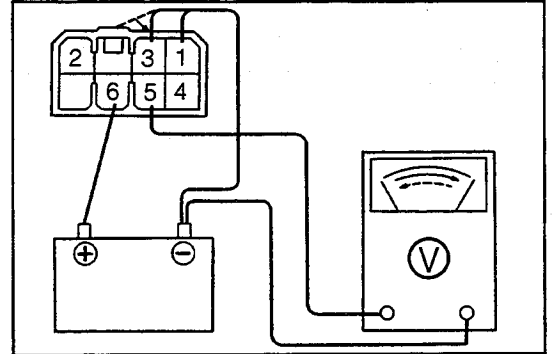


Fig. 10-190

WR-10192

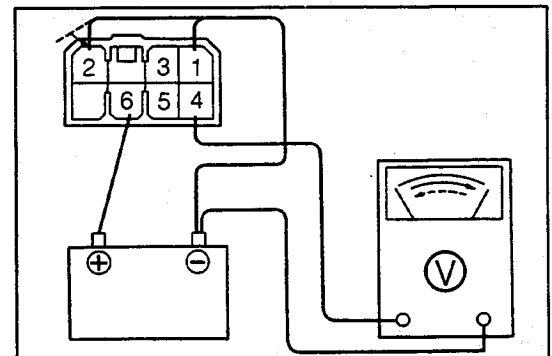


Fig. 10-191

WR-10193

**POWER WINDOW  
CIRCUIT DIAGRAM**

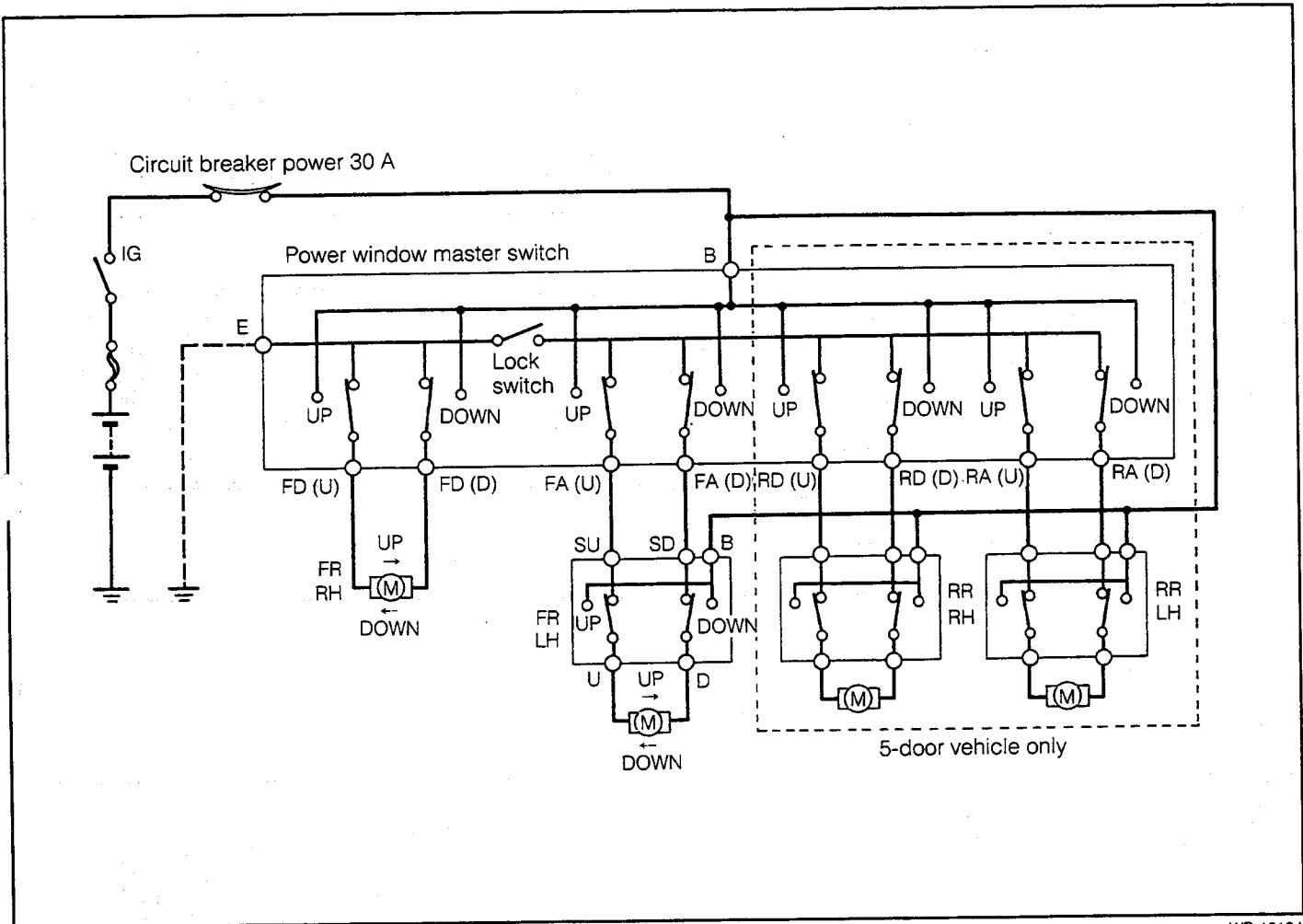


Fig. 10-192

WR-10194

**POWER WINDOW MASTER SWITCH**

The power window master switch is located at the door trim at the driver's seat side.

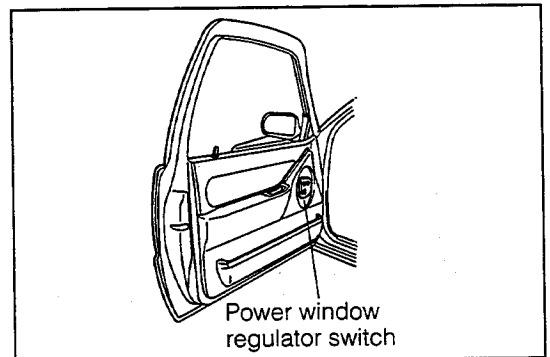


Fig. 10-193

WR-10195

# BODY ELECTRICAL SYSTEM

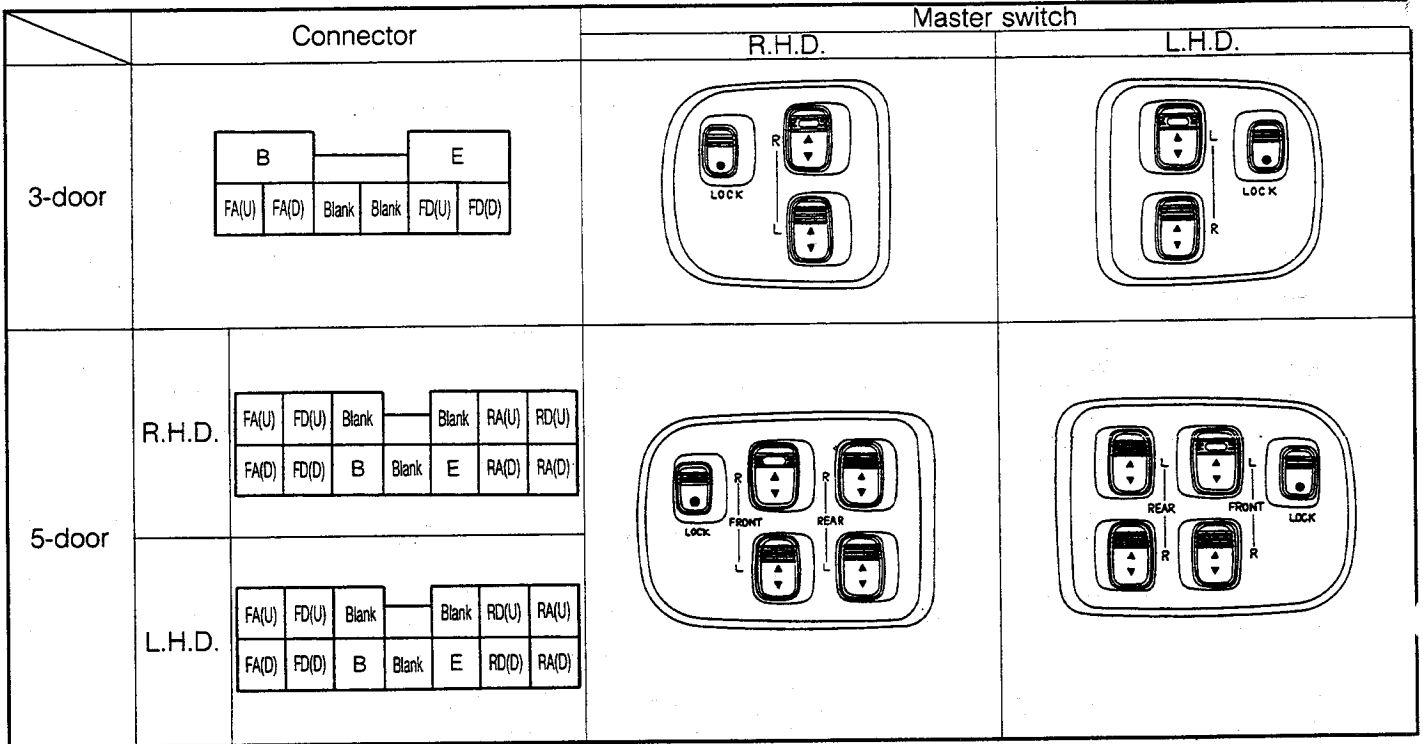


Fig. 10-194

WR-10196

## REMOVAL

1. Remove the front door trim panel Ay.  
See page 9-39.

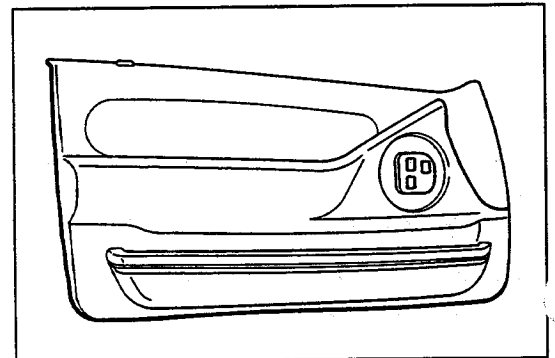


Fig. 10-195

WR-10197

2. Remove the power window master switch from the door trim, as follows:
  - (1) Disconnect the connector.
  - (2) Remove the master switch from the door trim.

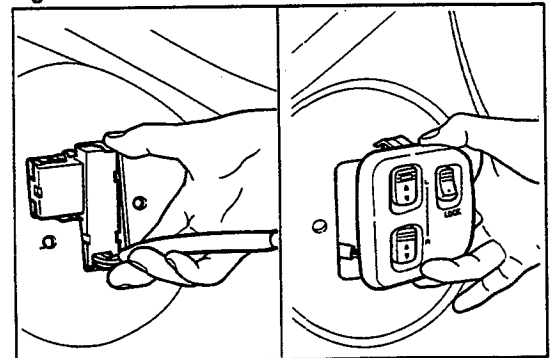


Fig. 10-196

WR-10198

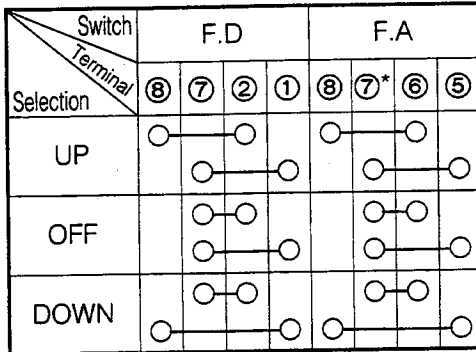


## INSPECTION

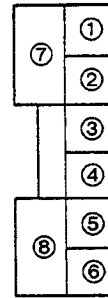
Ensure that continuity exists between the respective terminals of the power window master switch connector.

### 1. 3-Door Vehicle

○—○ Continuity exists.



\*: Make sure that the lock switch is in the lock state.



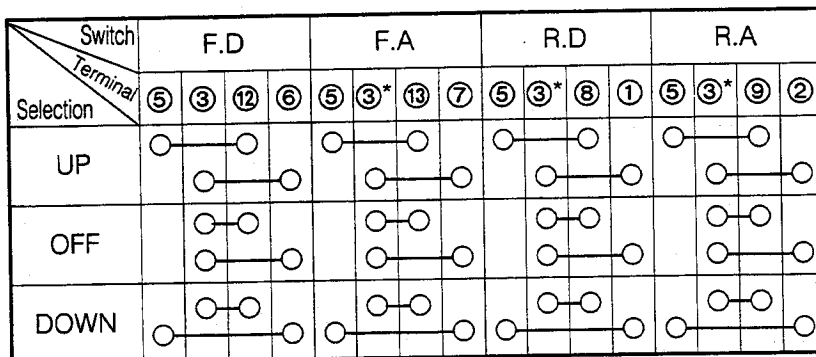
Connector

No.	Terminal	Kind of wire
①	F.D (D)	2 R
②	F.D (U)	2 G
③		Blank
④		Blank
⑤	F.A (D)	2 RL
⑥	F.A (U)	2 GL
⑦	E	2 WB
⑧	B	2 L

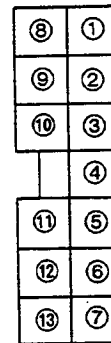
WR-10199

### 2. 5-Door Vehicle (R.H.D. vehicles)

○—○ Continuity exists.



\*: Make sure that the lock switch is in the lock state.



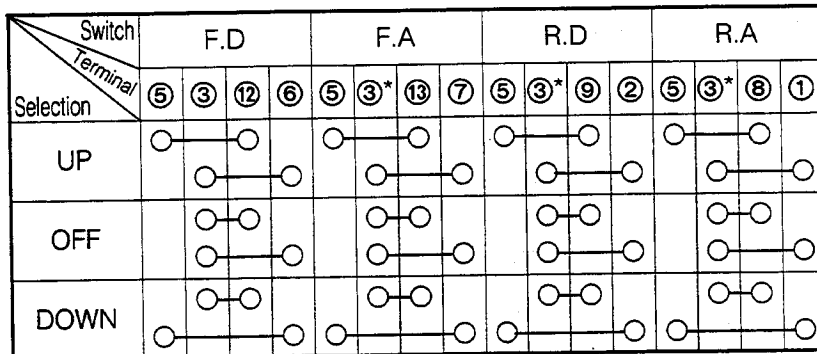
Connector

No.	Terminal	Kind of wire
①	R.D (D)	2 RB
②	R.A (D)	2 RY
③	E	2 WB
④		Blank
⑤	B	2 L
⑥	F.D (D)	2 R
⑦	F.A (D)	2 RL
⑧	R.D (U)	2 LB
⑨	R.A (U)	2 GY
⑩		Blank
⑪		Blank
⑫	F.D (U)	2 G
⑬	F.A (U)	2 LW

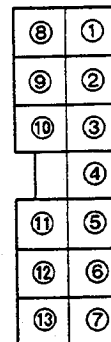
WR-10200

### 3. 5-Door Vehicle (L.H.D. vehicles)

○—○ Continuity exists.



\*: Make sure that the lock switch is in the lock state.



Connector

No.	Terminal	Kind of wire
①	R.A (D)	2 RY
②	R.D (D)	2 RB
③	E	2 WB
④		Blank
⑤	B	2 L
⑥	F.D (D)	2 R
⑦	F.A (D)	2 RL
⑧	R.A (U)	2 GY
⑨	R.D (U)	2 LB
⑩		Blank
⑪		Blank
⑫	F.D (U)	2 G
⑬	F.A (U)	2 LW

WR-10201

# BODY ELECTRICAL SYSTEM

## 4. Checking of Operation of Window Lock Switch

○—○ Continuity exists.

Selection	Terminal	Window lock switch			
		3-door	5-door	3-door	5-door
		⑦	③	⑥	⑬
NORMAL			○—○		○—○
LOCK					

\*: Perform the checks with the power window master switch in an inoperative state.

## POWER WINDOW SWITCHES

The power window switch is located at each door trim except for that at the driver's seat side.

### NOTE:

For the removal/installation procedure for the door trim, see page 9-39.

## INSPECTION

Ensure that continuity exists between the respective terminals as indicated in the continuity table.

Selection	Terminal	B	SU	SD	U	D
UP		○—○			○—○	
OFF			○—○		○—○	
DOWN		○—○	○—○		○—○	○—○

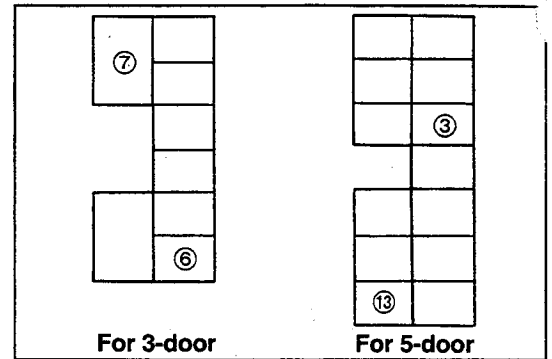


Fig. 10-197

WR-10202

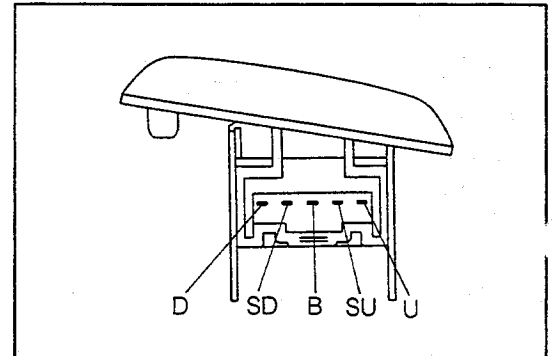


Fig. 10-198

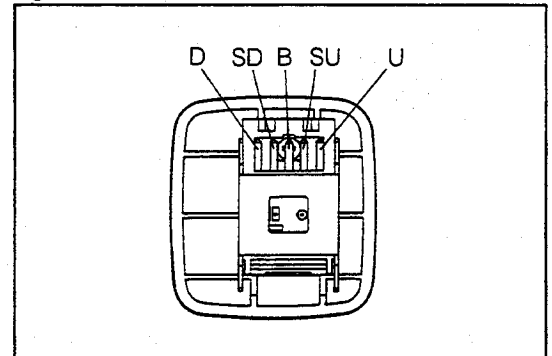


Fig. 10-199

WR-10203

## POWER WINDOW REGULATOR MOTOR RELATED PARTS

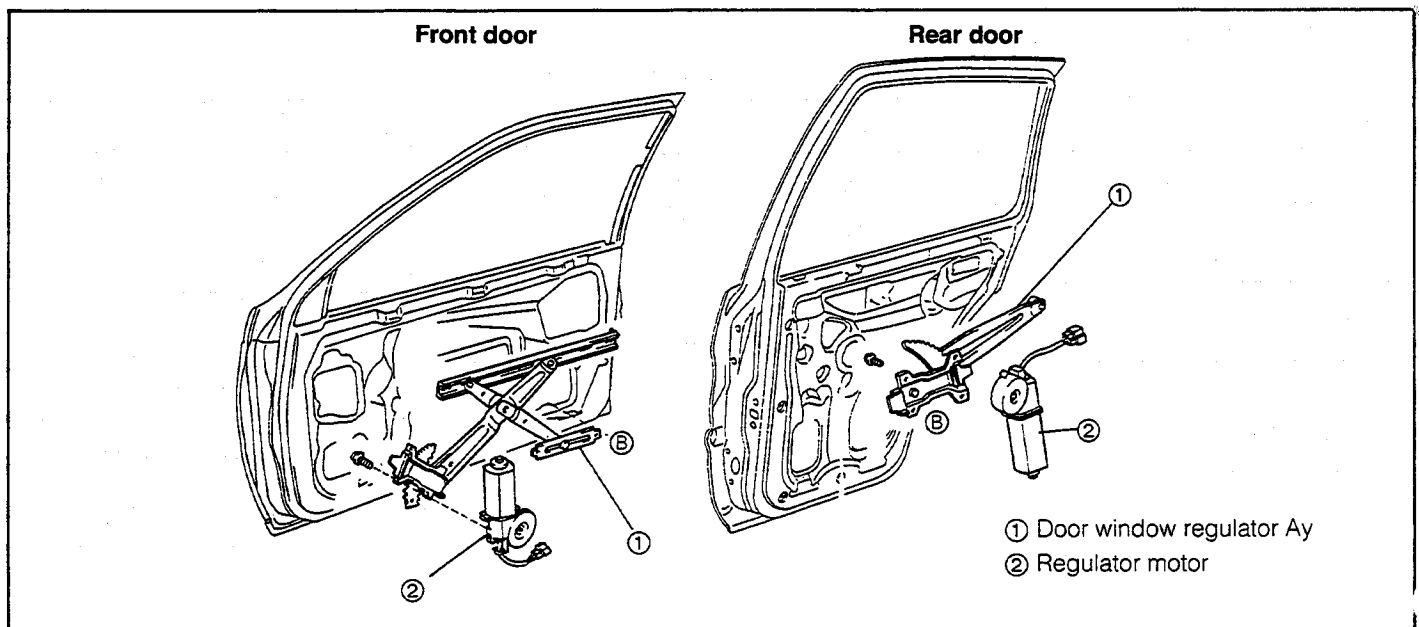


Fig. 10-200

WR-10204

**NOTE:**

For the removal/installation procedure of the regulator motor, see page 9-52.

**INSPECTION**

**(For Left side door)**

1. Connect the terminal R to the positive  $\oplus$  terminal of the battery; the terminal G to the negative  $\ominus$  terminal of the battery. Ensure that the motor makes right rotation, as viewed from the driving shaft.
2. Connect the terminal R to the negative  $\ominus$  terminal of the battery; the terminal G to the positive  $\oplus$  terminal of the battery. Ensure that the motor makes left rotation, as viewed from the driving shaft.

**(For Right side door)**

The motor rotates opposite direction of the left side door motor.

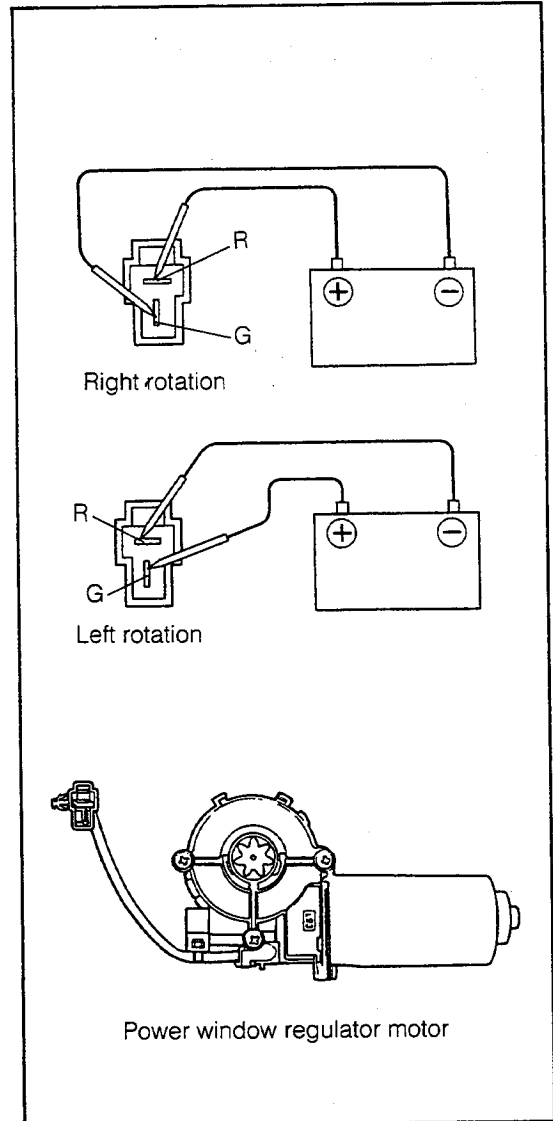


Fig. 10-201

WR-10205

**CIRCUIT BREAKER**

The circuit breaker is located inside of the sub-fuse block.

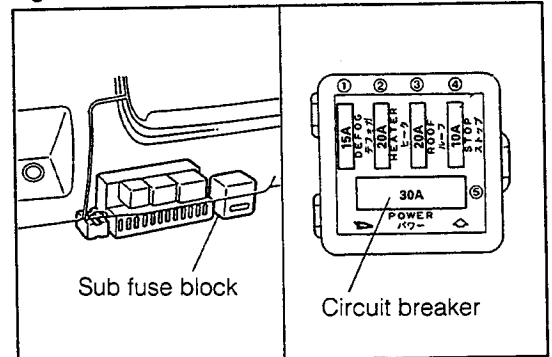


Fig. 10-202

WR-10206

## BODY ELECTRICAL SYSTEM

### INSPECTION

With the circuit breaker turned ON, ensure that continuity exists between the terminals.

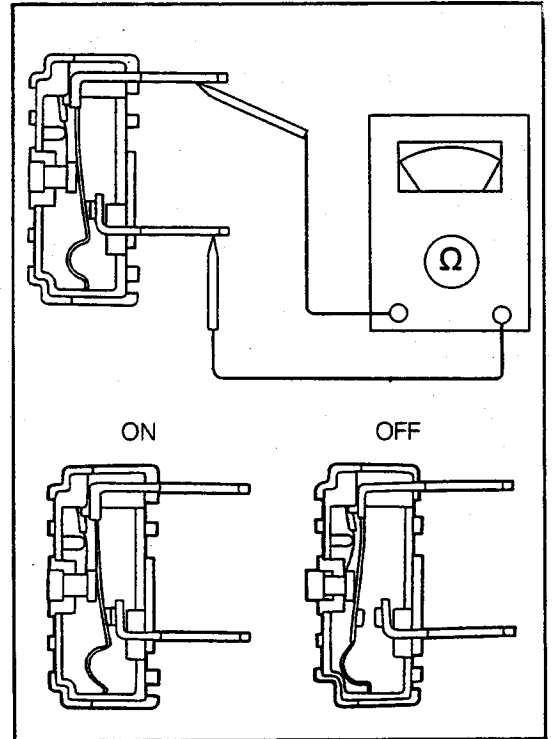


Fig. 10-203

WR-10207

# LOWER GLASS SUN ROOF (TILT-UP AND SLIDING)

## CIRCUIT DIAGRAM

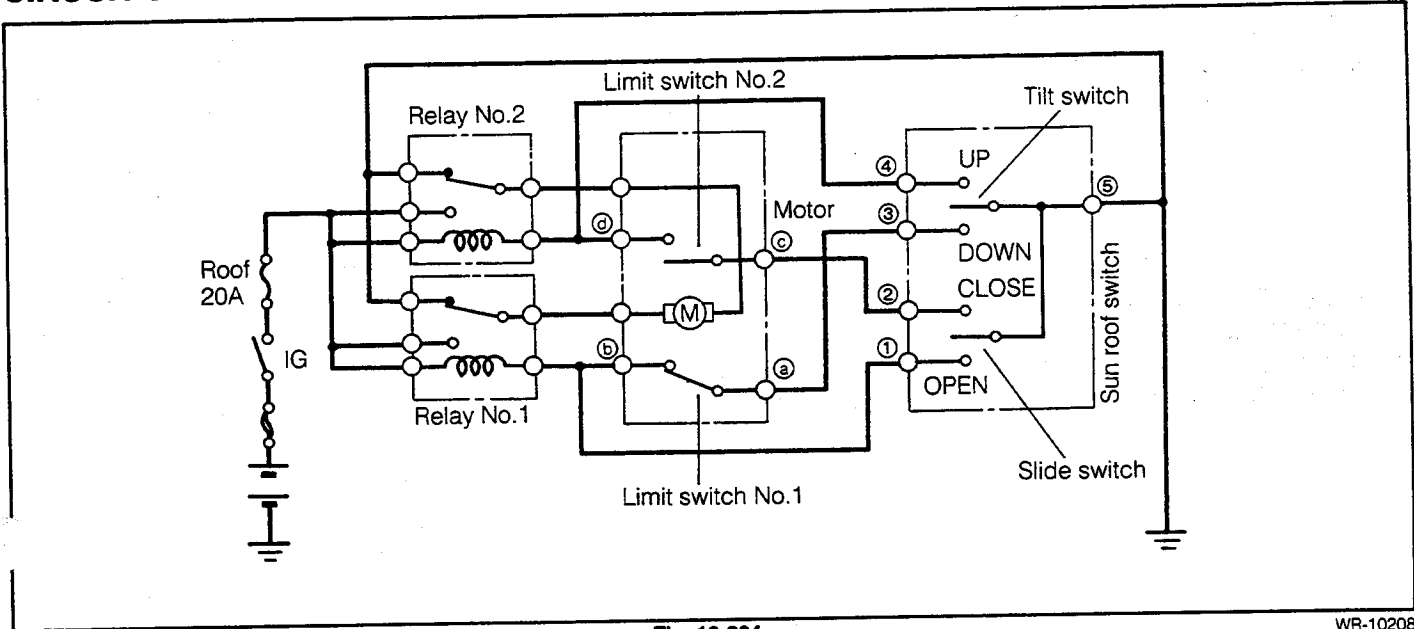


Fig. 10-204

WR-10208

## SUN ROOF SWITCH

The sun roof switch is located at the front end of the roof.

**NOTE:**

For the removal/installation procedure for the sun roof switch, see page 9-61.

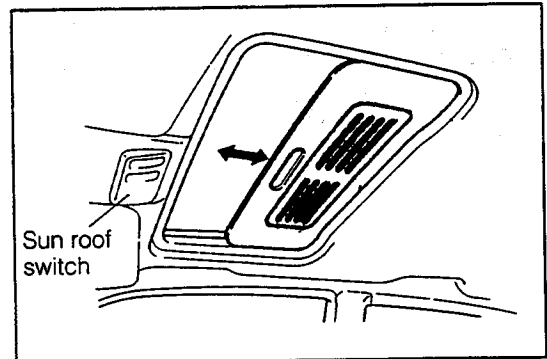


Fig. 10-205

WR-10209

## INSPECTION

When the tilt switch and slide switch are operated, ensure that continuity exists between the respective terminals as indicated in the continuity table.

Switch \ Operation		Terminal				
		①	②	③	④	⑤
Slide switch	OPEN	○				○
	OFF					
	CLOSE		○			○
Tilt switch	UP				○	○
	OFF					
	DOWN			○		○

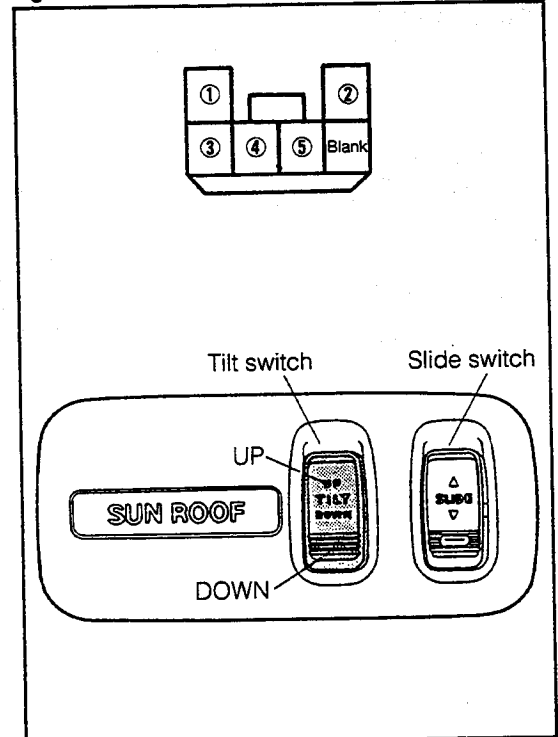


Fig. 10-206

WR-10210

# BODY ELECTRICAL SYSTEM

## SUN ROOF MOTOR

The sun roof motor is located at the back side of the sun roof switch.

**NOTE:**

For the removal/installation procedure for the sun roof motor, see page 9-62.

### Motor Operation Check

1. Connect the terminal ① to the positive (+) terminal of the battery; the terminal ② to the negative (-) terminal of the battery. Ensure that the drive gear rotates to the right.
2. Connect the terminal ① to the negative (-) terminal of the battery; the terminal ② to the positive (+) terminal of the battery. Ensure that the drive gear rotates to the left.

### Limit Switch Check

Remove the limit switch from the motor.

1. Limit switch No.1  
Ensure that no continuity exists between (a) and (b) when the switch is turned ON. Ensure that continuity exists between (a) and (b) when the switch is turned OFF.
2. Limit switch No.2  
Ensure that continuity exists between (c) and (d) when the switch is turned ON. Ensure that no continuity exists between (c) and (d) when the switch is turned OFF.

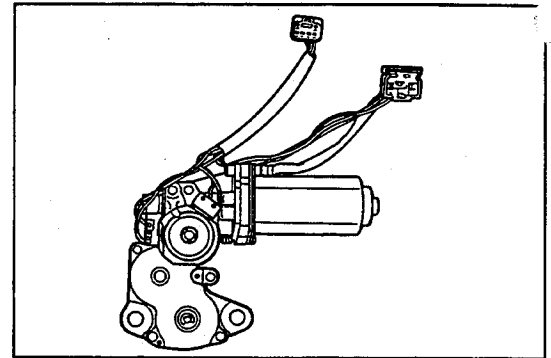


Fig. 10-207

WR-10211

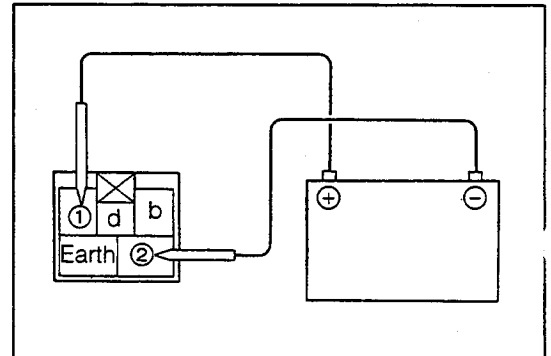


Fig. 10-208

WR-10212

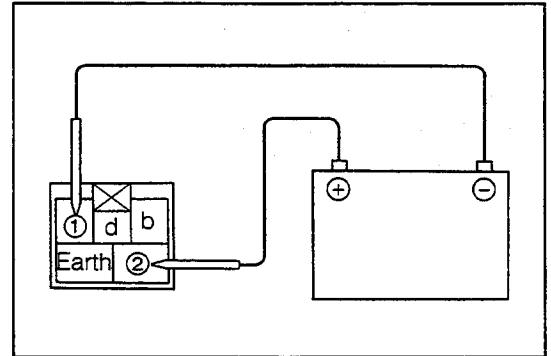


Fig. 10-209

WR-10213

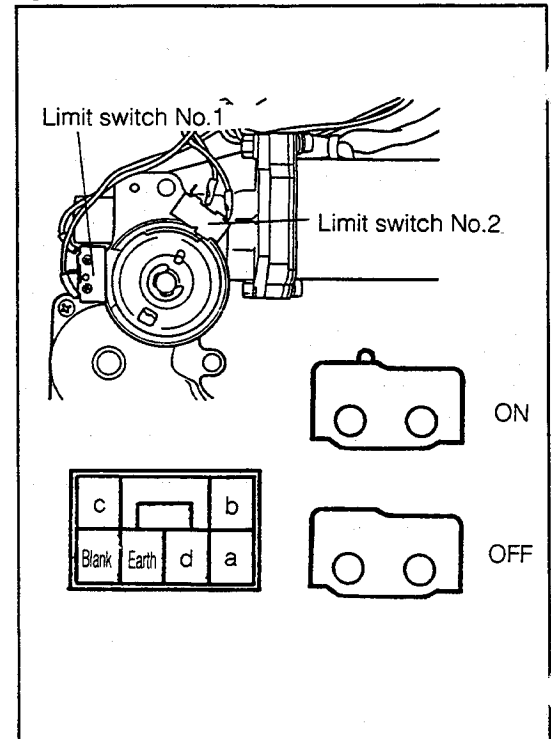


Fig. 10-210

WR-10214

**HEATER**  
**HEATER UNIT**  
**RELATED PARTS**

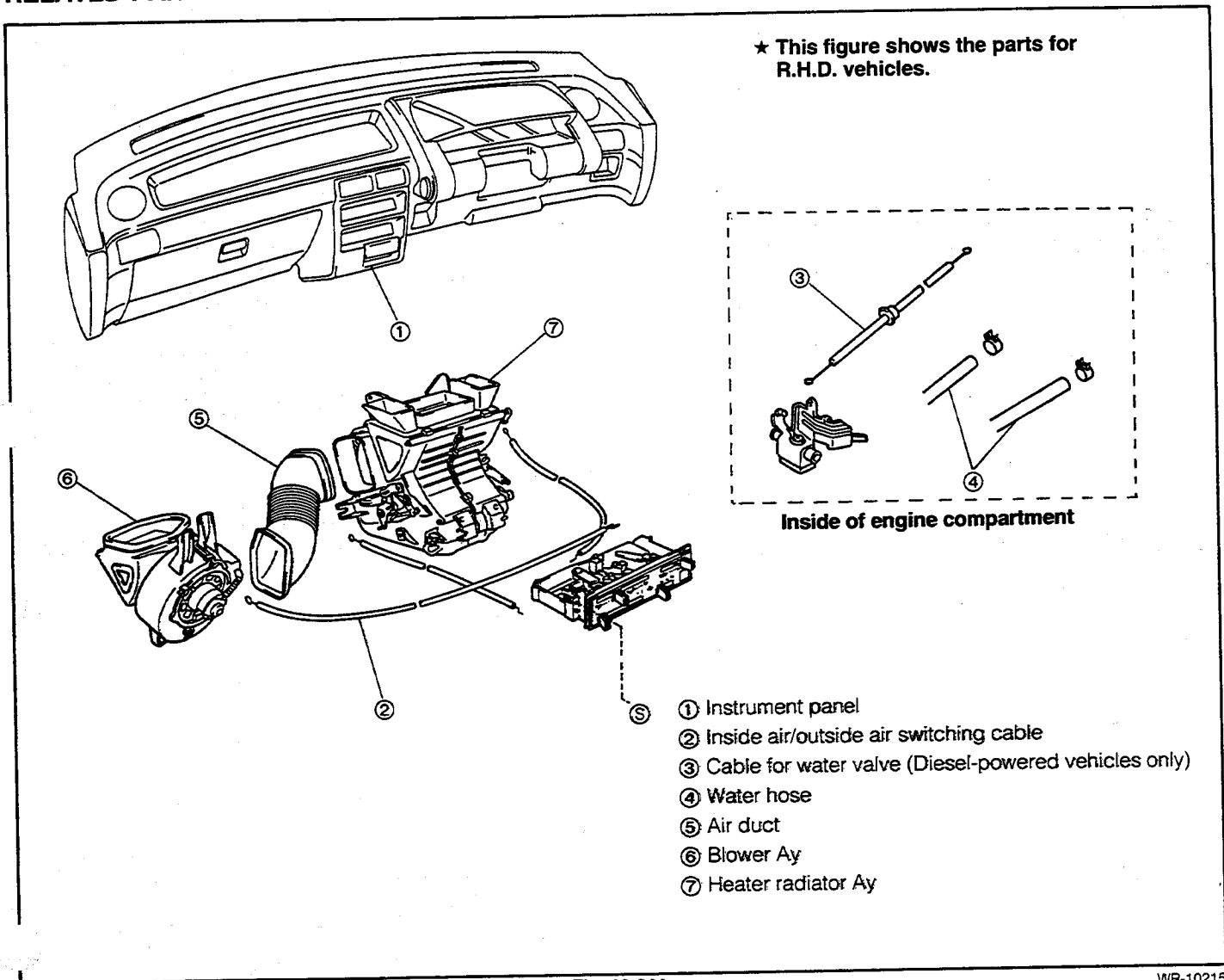


Fig. 10-211

WR-10215

**OPERATION PRIOR TO REMOVAL**

1. Disconnect the negative  $\ominus$  terminal of the battery.
2. Drain the cooling water from the radiator. (As for the diesel-powered vehicles, perform this operation with the temperature regulating lever of the heater control set to the **WARM** side.)

WR-10216

**REMOVAL**

1. Remove the instrument panel.  
See page 9-78.

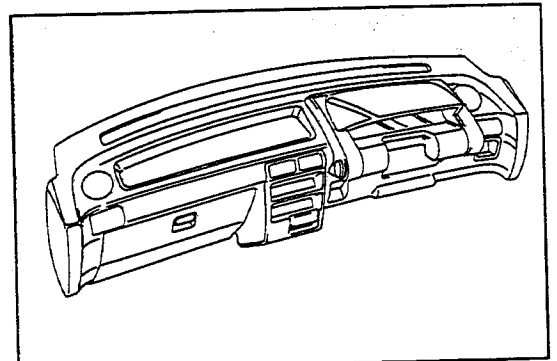


Fig. 10-212

WR-10217

## BODY ELECTRICAL SYSTEM

2. Disconnect the inside air/outside air switching cable from the blower assembly.
3. Disconnect the cable for the water valve in the engine compartment. (Diesel-powered vehicles only)
4. Disconnect the two water hoses from the heater assembly.
5. Remove the air duct.
6. Remove the blower assembly by removing the two nuts, bolt and connector.

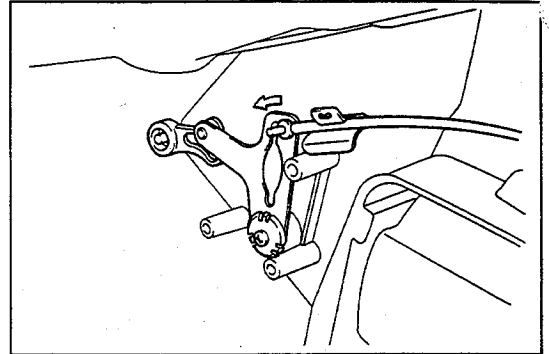


Fig. 10-213

WR-10218

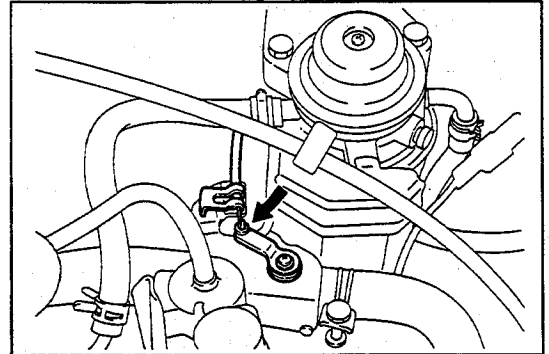


Fig. 10-214

WR-10219

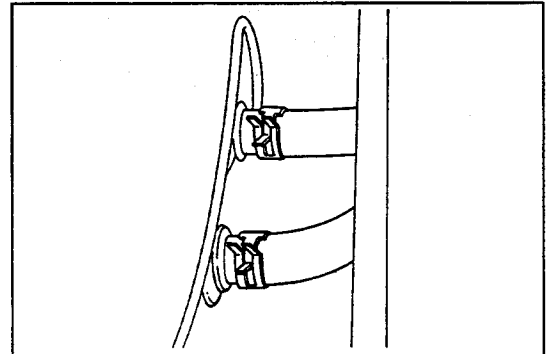


Fig. 10-215

WR-10220

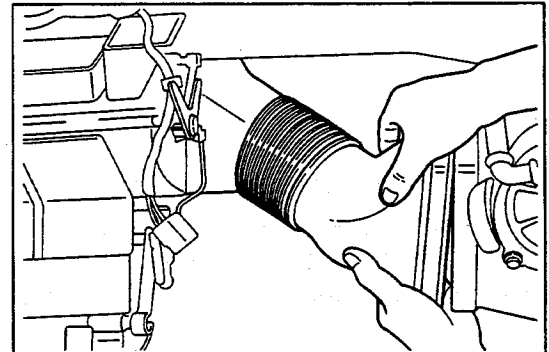


Fig. 10-216

WR-10221

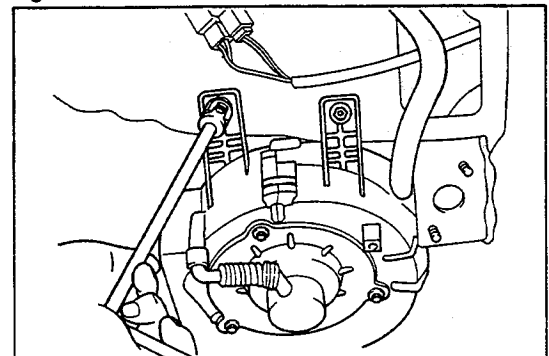


Fig. 10-217

WR-10222



Remove the heater radiator assembly by removing the two nuts and two bolts.

## INSPECTION

### 1. Blower Register

Ensure that the resistance between the respective terminals conforms to the specifications below.

Specified Values:

- Between Terminals (L) and (M<sub>1</sub>): 1.37Ω
- Between Terminals (L) and (M<sub>2</sub>): 2.10Ω
- Between Terminals (H) and (M<sub>2</sub>): 0Ω

### 2. Blower Motor

Connect the connector positive ⊕ terminal of the blower motor to the positive ⊕ terminal of the battery; the negative ⊖ terminal of the blower motor to the negative ⊖ terminal of the battery. Ensure that the motor rotates.

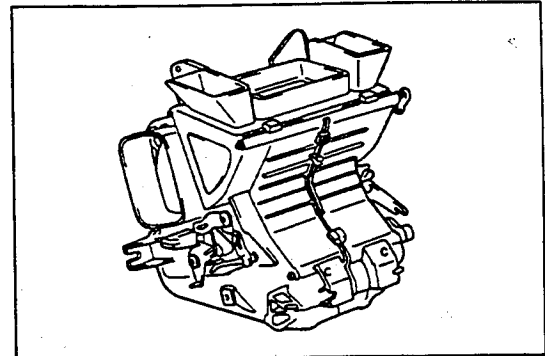


Fig. 10-218

WR-10223

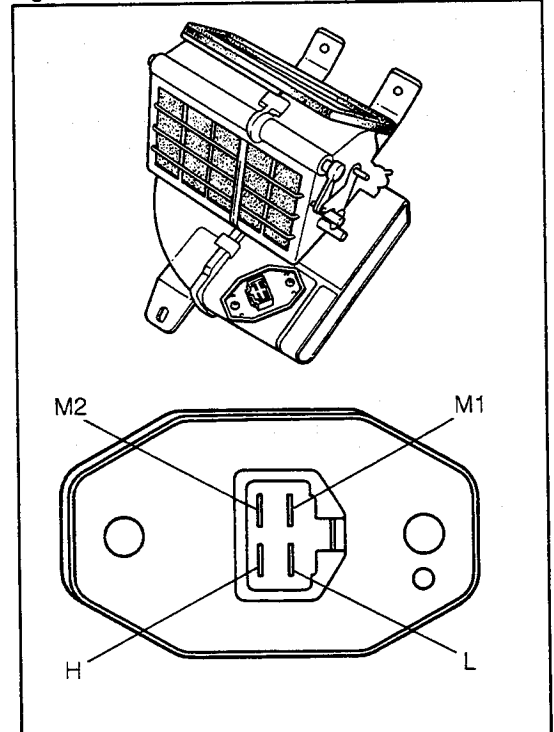


Fig. 10-219

WR-10224

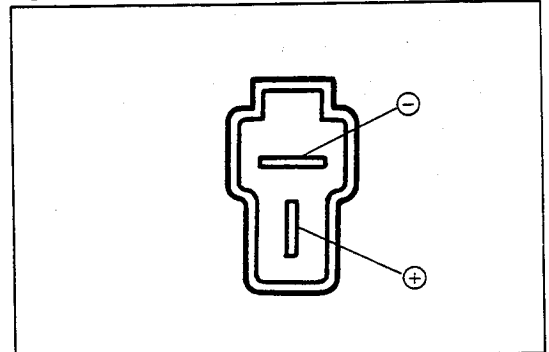


Fig. 10-220

WR-10225

# BODY ELECTRICAL SYSTEM

## 3. Blower Switch

When the blower switch is set to each stage, ensure that continuity exists between the respective terminals as indicated in the continuity table.

○—○ Continuity exists.

Switch \ Terminal	①	②	③	④	⑤	⑥	⑦	⑧
OFF								
I		○—○	○—○	○—○				
II		○—○	○—○	○—○	○—○			
III	○—○	○—○	○—○	○—○				
Always		○—○		○—○		○—○		○—○

○—(M)—○ Bulb in installed state

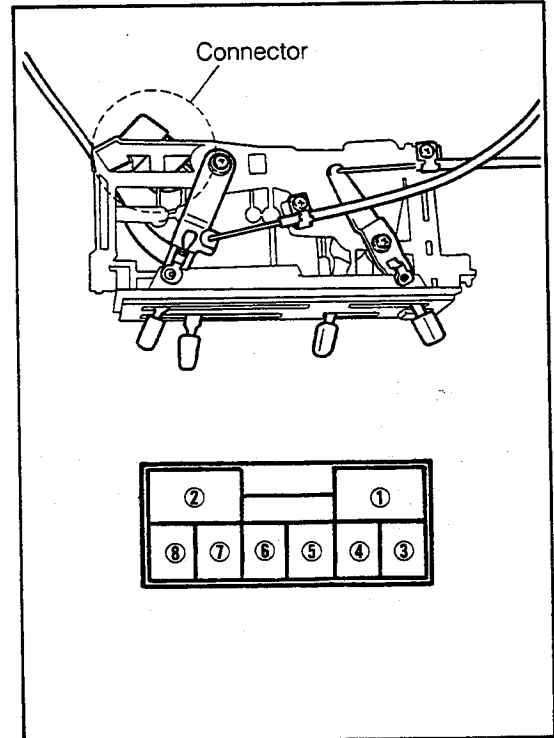


Fig. 10-221

WR-10226

## INSTALLATION

1. Install the radiator heater assembly to the dash panel.
2. Install the blower register and blower motor connector to the blower assembly.
3. Install the blower assembly by tightening the two nuts and one bolt.
4. Install the air duct. Connect the water hose at the engine compartment side to the heater assembly.  
**NOTE:**  
Connect the hose securely and clamp it.
5. Install the cable for the water valve, as follows:  
(Diesel-powered vehicle only)  
Set the water valve in the engine compartment to the close mode; the mode switching lever of the heater unit to the COOL side. Then, insert and clamp the cable.

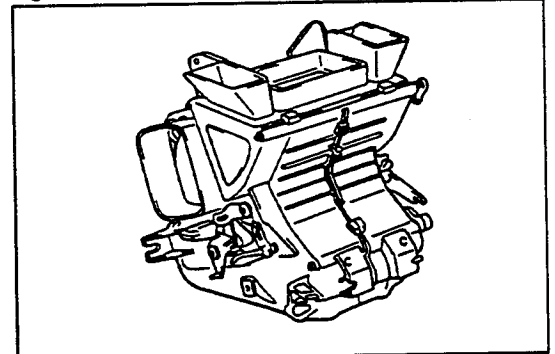


Fig. 10-222

WR-10227

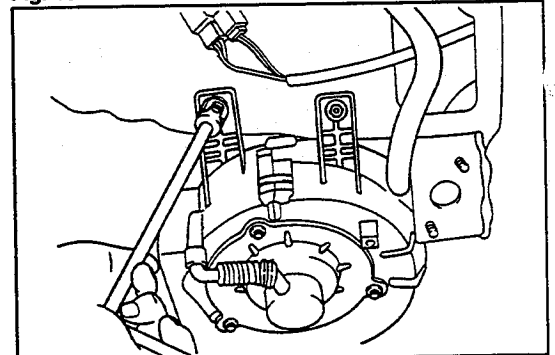


Fig. 10-223

WR-10228

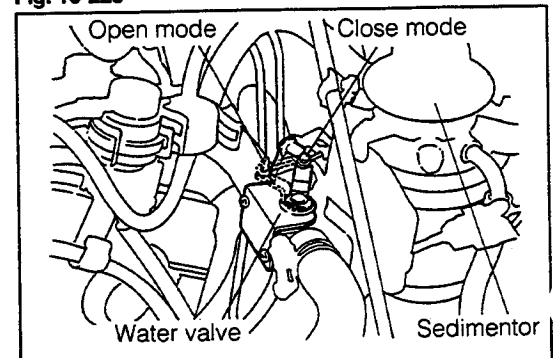



Fig. 10-224

WR-10229

## BODY ELECTRICAL SYSTEM

Install the inside air/outside air switching cable to the blower assembly, as follows:

- (1) Set the inside air/outside air switching lever of the heater control to the  (RECIRC) side; the inside air/outside air switching lever of the blower assembly to the RECIRC side.
- (2) Insert and clamp the cable securely.

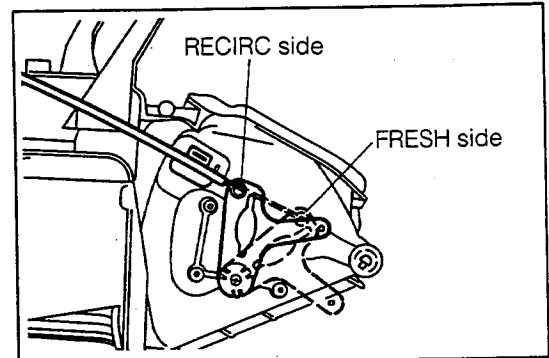


Fig. 10-225

WR-10230

### Operation After Installation

1. Fill the cooling water. (For the diesel-powered vehicles, perform this operation with the temperature regulating lever of the heater control set to the WARM side.)
2. Install the negative terminal  $\ominus$  of the battery.
3. As for the vehicle equipped with a clock, set the time.

### Inspection After Installation

Ensure that the air amount and air flowing direction vary correctly in accordance with the position of the heater control lever.

WR-10231

## HEATER CONTROL ASSEMBLY RELATED PARTS

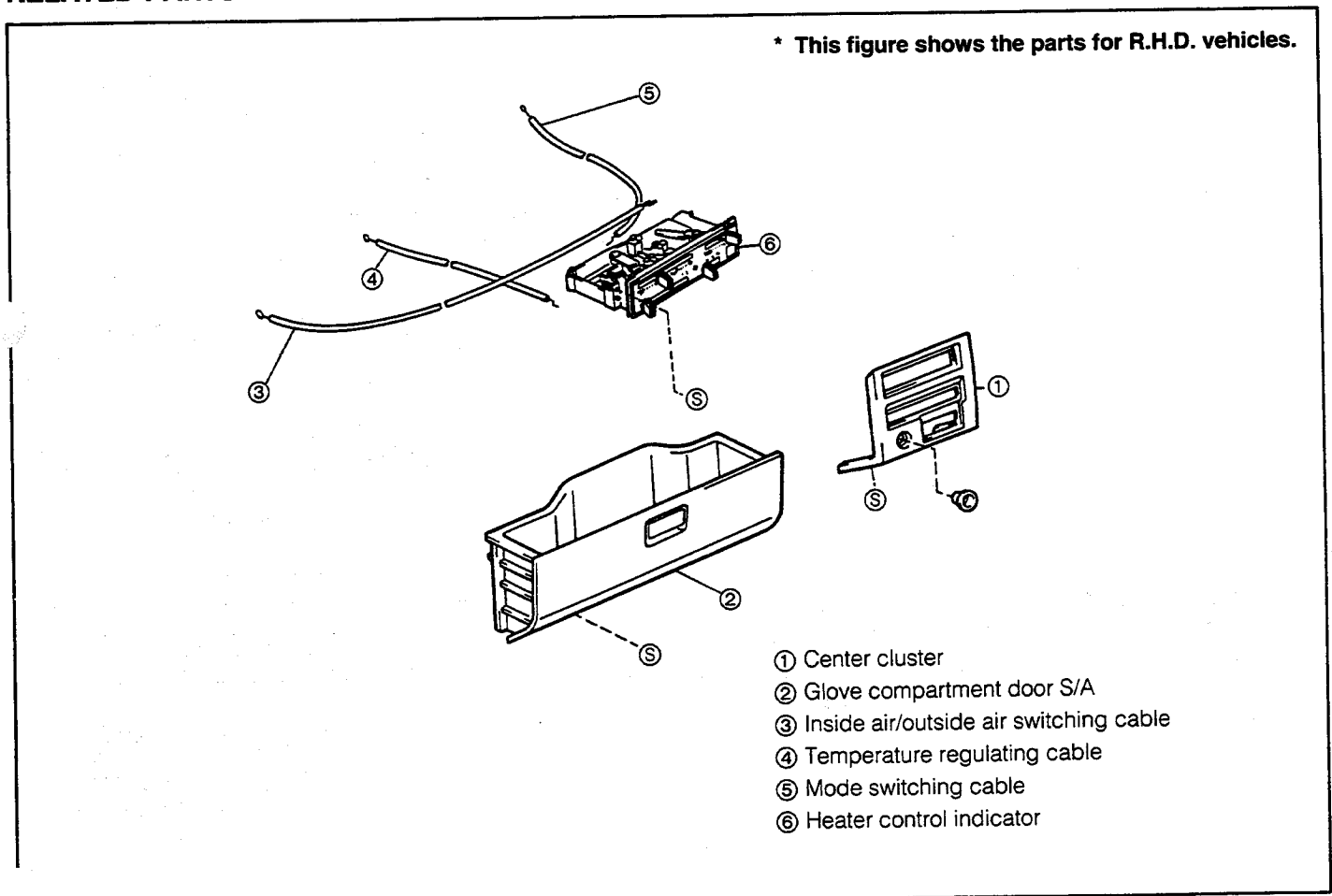


Fig. 10-226

WR-10232

## BODY ELECTRICAL SYSTEM

### REMOVAL

1. Remove the four tapping screws and take out the center cluster.
2. Remove the glove compartment door subassembly by removing the two screws at the lower side.
3. Disconnect the inside air/outside air switching cable from the blower assembly.
4. Disconnect the temperature regulating cable and mode switching cable from the heater assembly.
5. Remove the heater control indicator, as follows:
  - (1) Remove the three screws. Remove the heater control indicator toward the back side of the instrument panel.
  - (2) Take out the heater control indicator from the glove compartment door section.

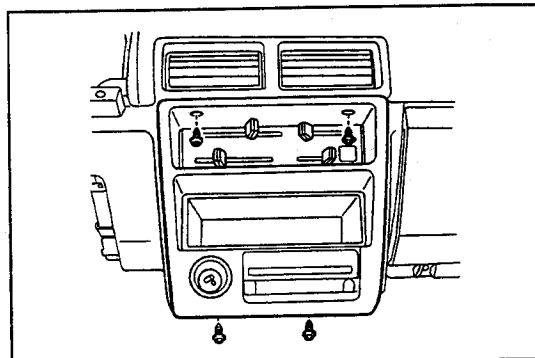


Fig. 10-227

WR-10233

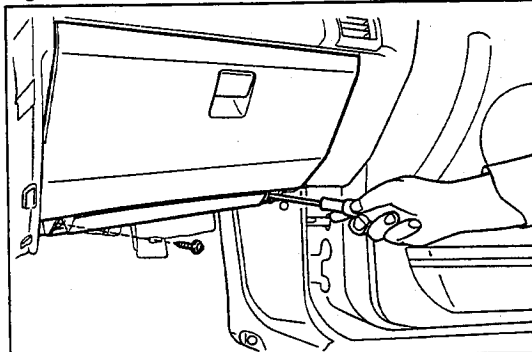


Fig. 10-228

WR-10234

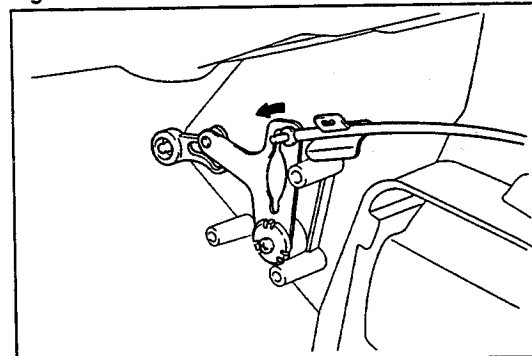


Fig. 10-229

WR-10235

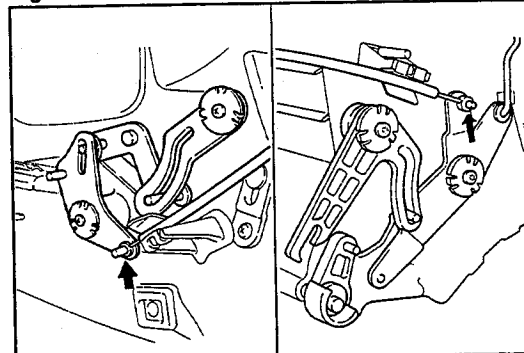


Fig. 10-230

WR-10236

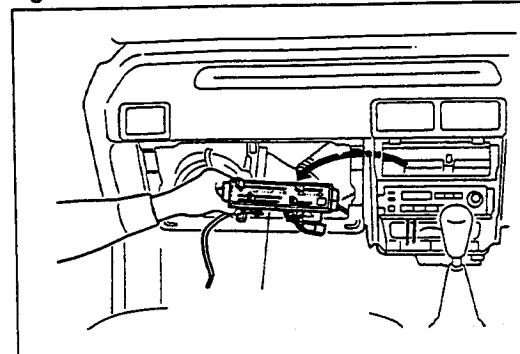


Fig. 10-231

WR-10237


## INSPECTION

### Blower switch

With the blower switch set to each stage, ensure that continuity exists between the respective terminals as indicated in the continuity table.

○—○ Continuity exists.

Switch \ Terminal	①	②	③	④	⑤	⑥	⑦	⑧
OFF								
I		○—○						
II		○—○	○—○	○—○	○—○			
III	○—○	○—○	○—○	○—○				
Always		○—○		○—○	○—○	○—○	○—○	○—○

○——○: Bulb in installed state

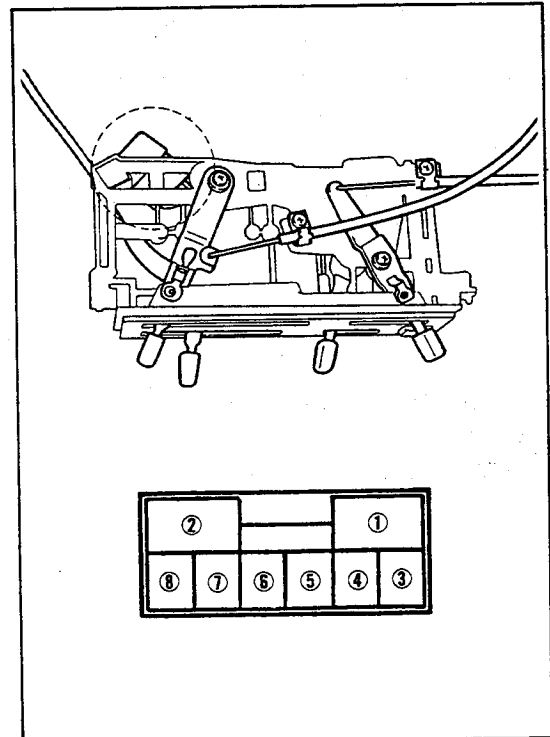


Fig. 10-232

WR-10238

## INSTALLATION

1. Install the heater control indicator by tightening the three screws.

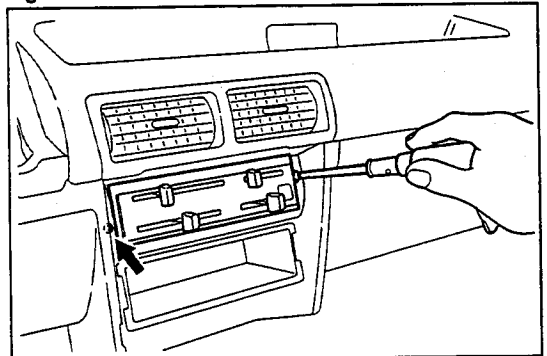



Fig. 10-233

WR-10239

2. Install the mode switching cable, as follows:
  - (1) Set the mode switching lever of the heater control to the  (DEF) side; the mode switching lever of the heater unit to the DEF side.
  - (2) Connect the mode switching cable. Insert it into the clamp securely.

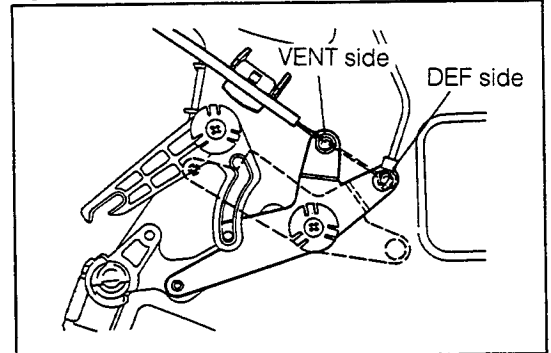



Fig. 10-234

WR-10240

3. Install the temperature regulating cable, as follows:
  - (1) Set the temperature regulating lever of the heater control to the  (COOL) side; the temperature regulating lever of the heater unit to the COOL side.
  - (2) Connect the temperature regulating cable. Insert it into the clamp securely.

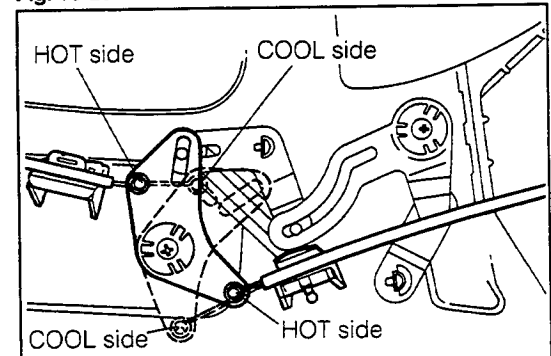



Fig. 10-235

WR-10241

## BODY ELECTRICAL SYSTEM

4. Install the inside air/outside air switching cable, as follows:
  - (1) Set the inside air/outside air switching lever of the heater control to the  (RECIRC) side; the inside air/outside air switching lever of the blower assembly to the RECIRC side.
  - (2) Connect the inside air/outside air switching cable. Insert it to the clamp securely.
5. Install the glove compartment door subassembly by tightening the two screws.
6. Install the center cluster by tightening the four screws.

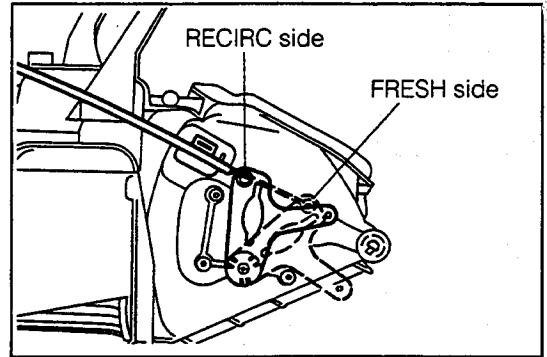


Fig. 10-236

WR-10242

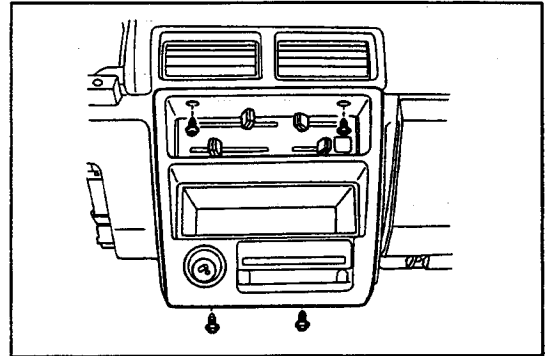


Fig. 10-237

WR-10243

### Inspection After Installation

Ensure that the air amount and air flowing direction vary correctly in accordance with the position of the heater control lever.

WR-10244

**RADIO**

**RELATED PARTS**

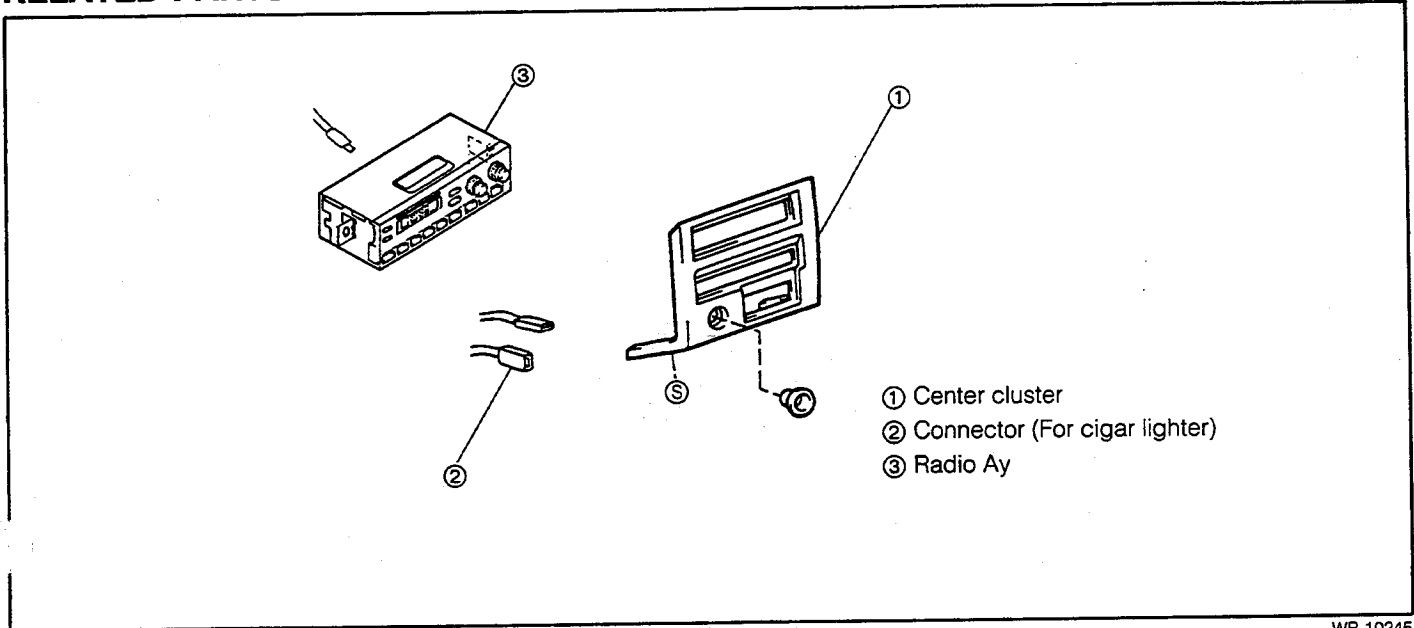


Fig. 10-238

WR-10245

**REMOVAL**

1. Remove the center cluster by removing the four screws.
2. Disconnect the connector for the cigar lighter.
3. Remove the radio assembly.

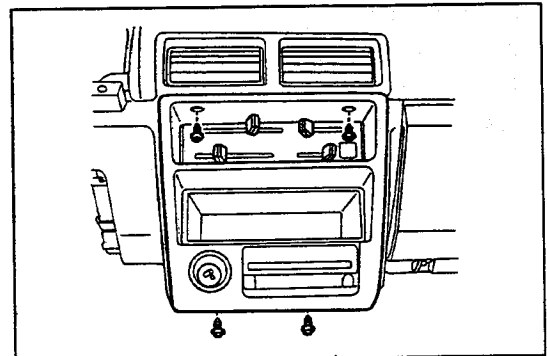


Fig. 10-239

WR-10246

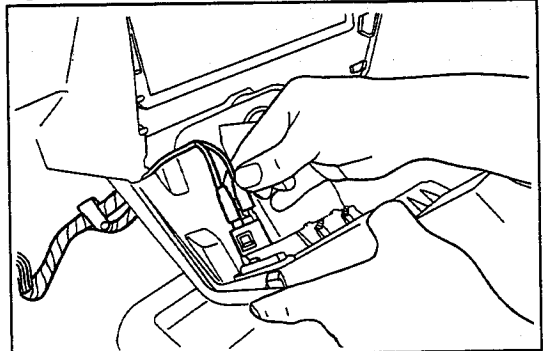


Fig. 10-240

WR-10247

**INSTALLATION**

1. Install the radio assembly.
2. Connect the connector for the cigar lighter.
3. Install the center cluster by tightening the four screws.

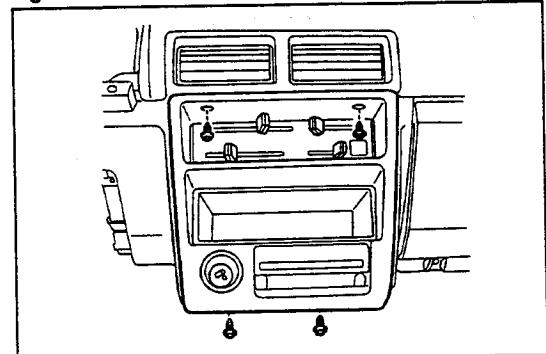


Fig. 10-241

WR-10248

# BODY ELECTRICAL SYSTEM

## SPEAKER ASSEMBLY AND ANTENNA ASSEMBLY

### RELATED PARTS

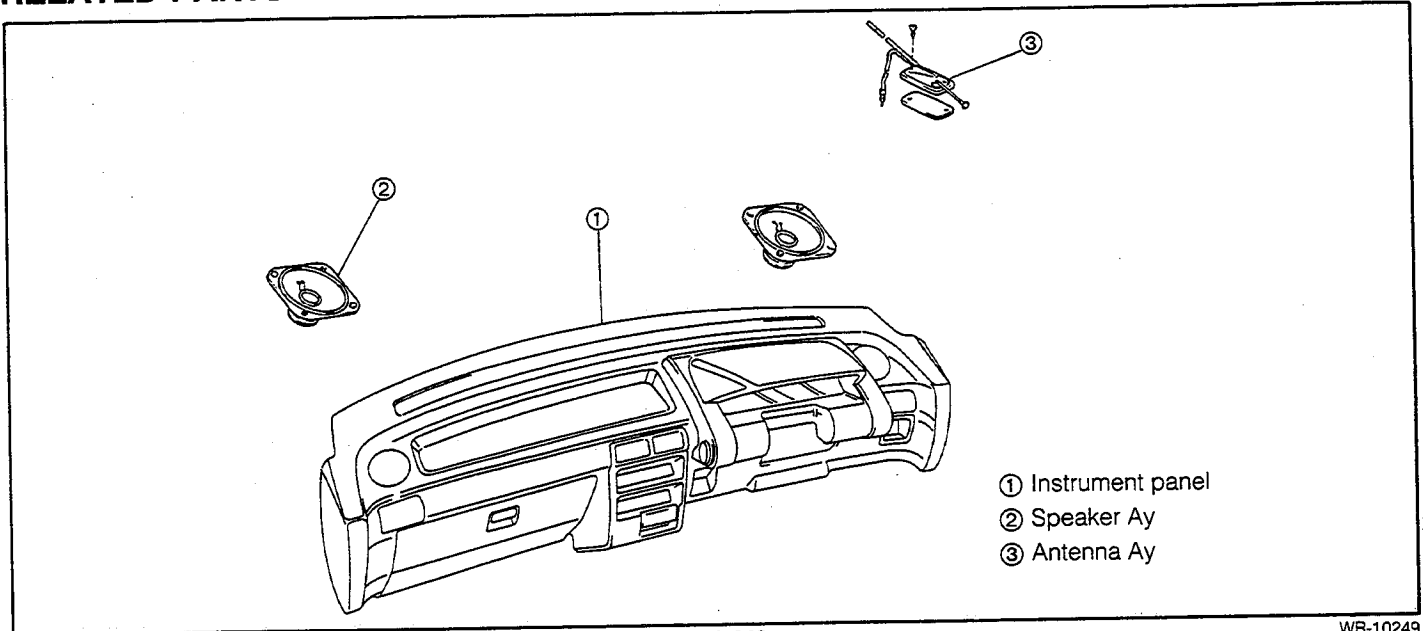


Fig. 10-242

WR-10249

### SPEAKER REMOVAL

1. Remove the instrument panel.  
See page 9-78.
2. Disconnect the connector of the speaker. Remove the speaker assembly.

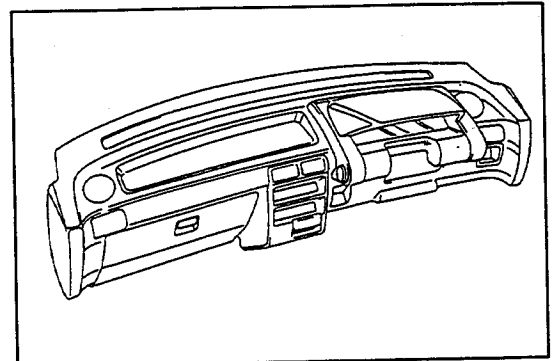


Fig. 10-243

WR-10250

### ANTENNA REMOVAL

1. Disconnect the feeder cord connector.

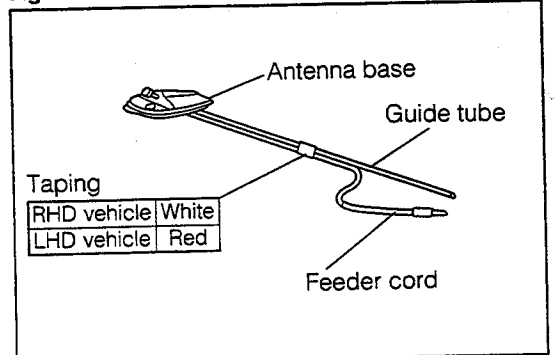


Fig. 10-244

WR-10251

2. Remove the antenna base, using a Torx bit.

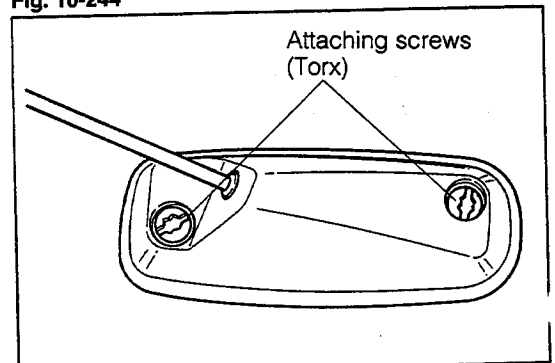


Fig. 10-245

WR-10252



## ANTENNA INSTALLATION

1. Insert the guide tube and feeder cord into the roof opening section.

**NOTE:**

Insert the guide tube in such a way that it comes to the vehicle front section.

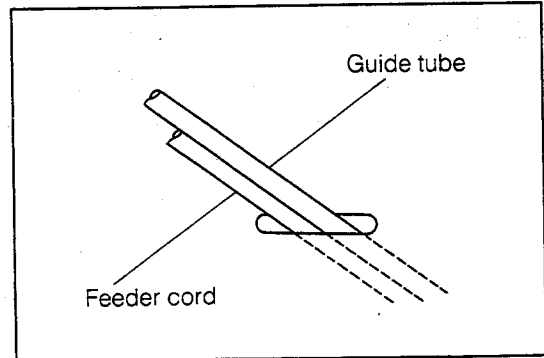


Fig. 10-246

WR-10253

2. Connect the antenna cord to the radio proper.

**NOTE:**

1. As for the intersection of the feeder wire and the vehicle harness section, route wiring in such a way that the feeder wire comes under the harness section. ... (A)
2. As for the heater unit section, make sure that the link does not interfere with other parts when it is moved. .... (B)

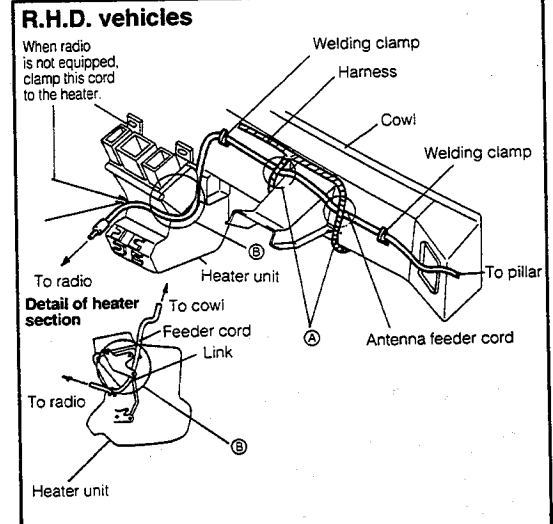


Fig. 10-247

### R.H.D. vehicles

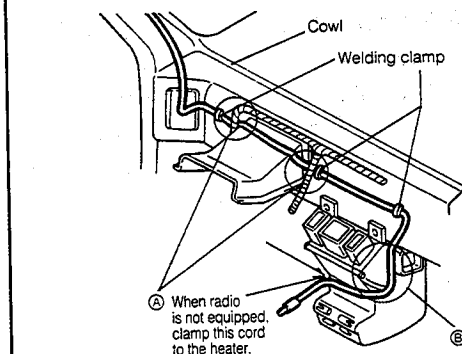


Fig. 10-248

WR-10254

## SPEAKER INSTALLATION

1. Connect the connector for the speaker. Install the speaker to the instrument panel.
2. Install the instrument panel. See page 9-82.

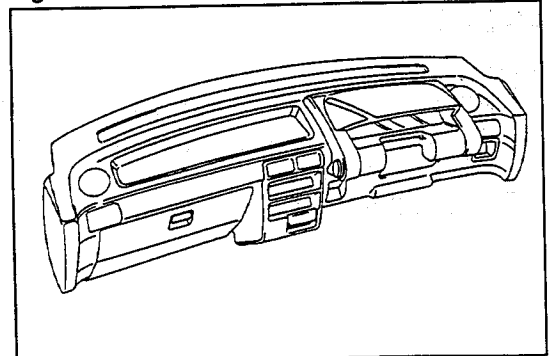


Fig. 10-249

WR-10255

## HEADLAMP CLEANER (Option for Finland and Swedish Specifications)

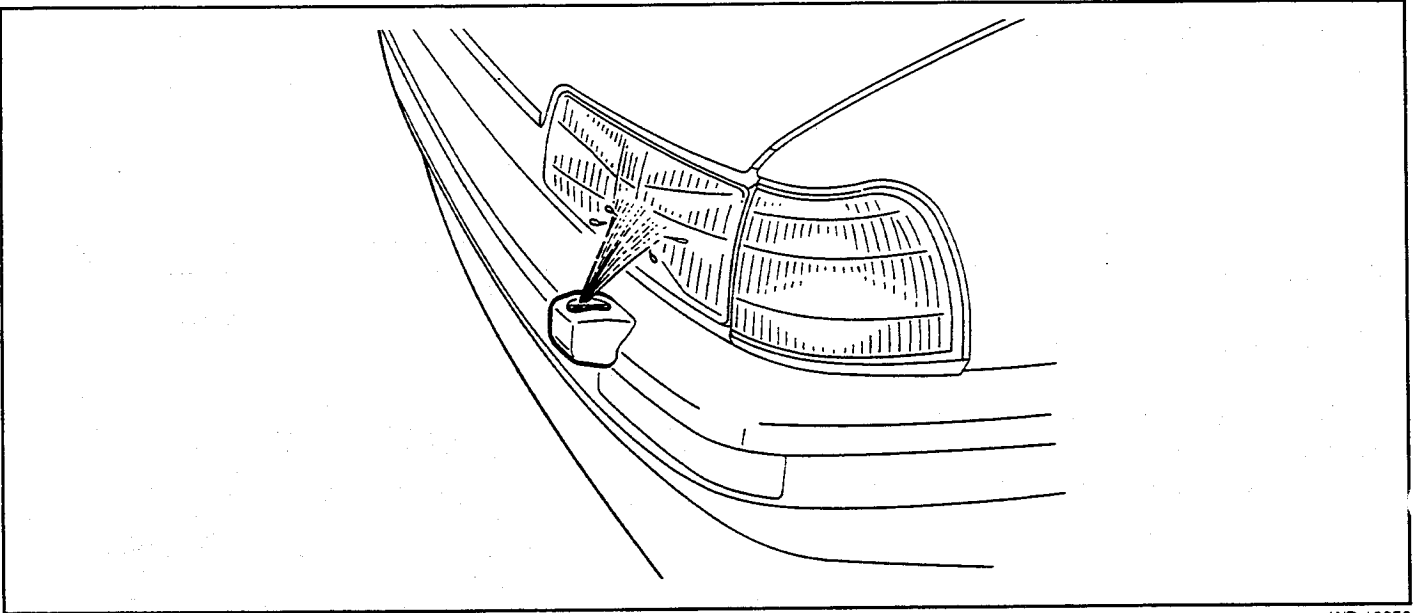


Fig. 10-250

WR-10256

### OPERATION CHECK

#### 1. Vehicles with Day-Light Feature

While the engine is running, carry out the following check. Operate the washer switch one time. Within about 0.8 second, operate the washer switch again. Ensure that the cleaner motor operates for about 0.5 second, regardless of the position of the lighting switch.

#### 2. Vehicles without Day-Light Feature

While the ignition switch is turned ON, carry out the following check: Operate the washer switch one time. Within about 0.8 second, operate the washer switch again. Ensure that the cleaner motor operates for about 0.5 second.

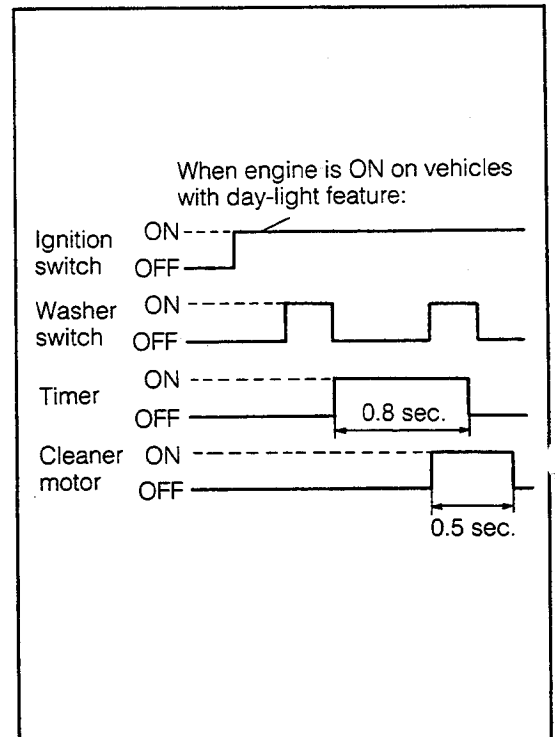


Fig. 10-251

WR-10257

### NOZZLE

#### Removal

1. Remove the front bumper. (See page 9-9.)
2. Disconnect the water hose joint section located at the back side of the bumper.
3. Remove the nozzle assembly by slackening the two nuts.

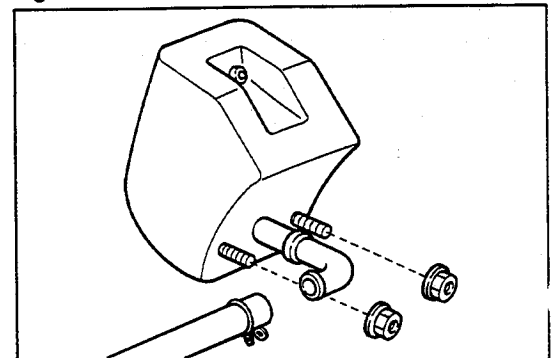


Fig. 10-252

WR-10258

## Installation

1. Insert the nozzle into the bumper cover from the joint side, while rotating the nozzle 90 degrees.
2. Install the nozzle proper with the two nuts. Connect the water hose.

### NOTE:

Clamp the water hose securely.

3. Install the front bumper. (See page 9–10.)

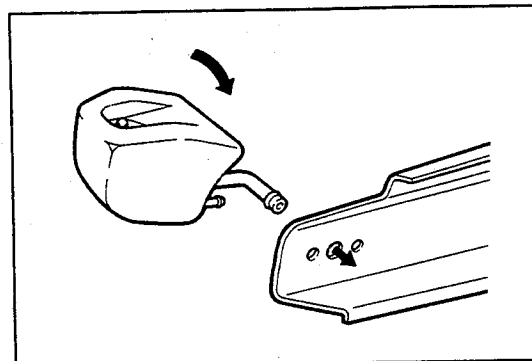


Fig. 10-253

WR-10259

## ADJUSTING PROCEDURE FOR NOZZLE INJECTION ANGLE

### Operation Prior to Adjustment

1. Perform the headlamp aiming operation. (See page 10–13.)

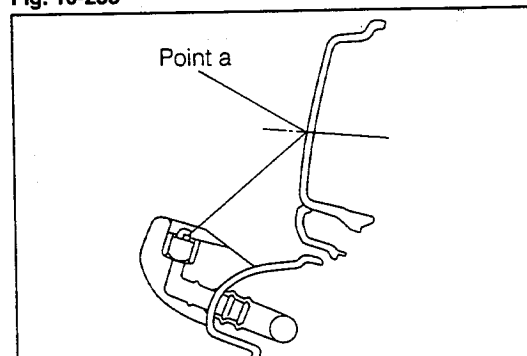


Fig. 10-254

WR-10260

### Adjustment

1. Set the nozzle so that the center of squirt comes to the bulb installation position of the headlamp. (Bulb center: point a)
2. Ensure that the variation in the squirting angle is within the allowable range.

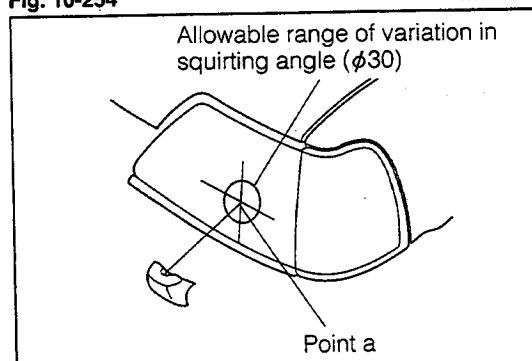


Fig. 10-255

WR-10261

# BODY ELECTRICAL SYSTEM

## HEADLAMP WASHER TANK

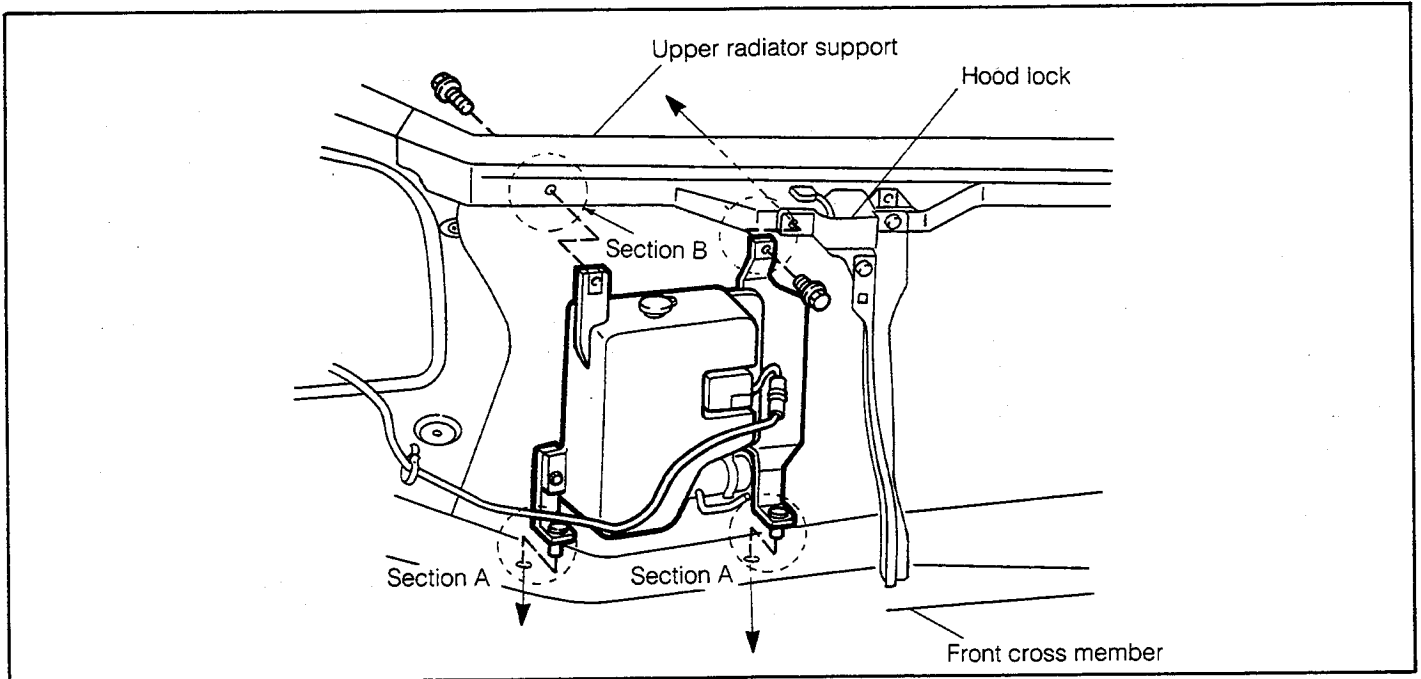


Fig. 10-256

WR-10262

### Removal

1. Remove the front grille and front bumper. See page 9-78.
2. Disconnect the water hose from the washer motor. Disconnect the harness clamp.
3. Remove the washer tank assembly by removing the two bolts.

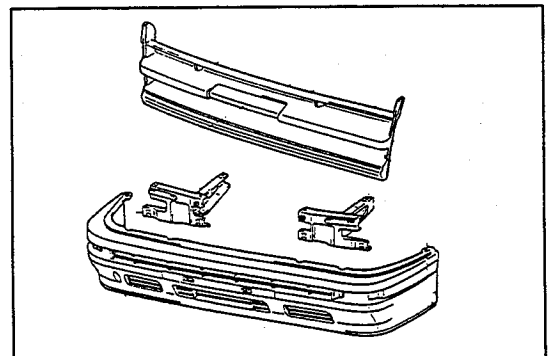


Fig. 10-257

WR-10263

### Installation

1. Insert the washer tank into the front cross member (at two points).
2. Working from the engine compartment, tighten the bolt at the vehicle outside. Working from the front of the vehicle, tighten the bolt at the vehicle inside together with the hood lock.

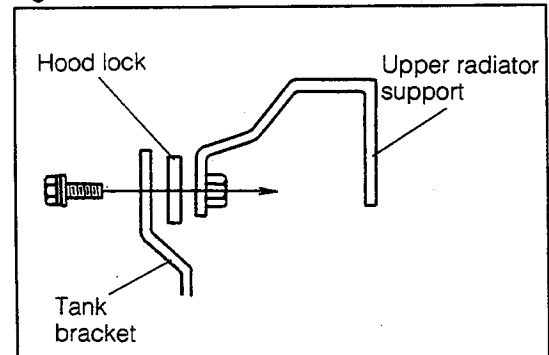


Fig. 10-258

WR-10264

3. Connect the water hose to the washer motor. Connect the harness connector.

#### NOTE:

Tighten the clamp securely.

4. Install the front bumper and front grille. See page 9-10.

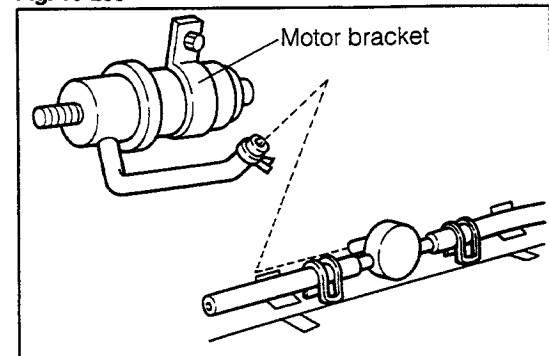


Fig. 10-259

WR-10265

**IM-DIP LAMP  
CIRCUIT DIAGRAM**

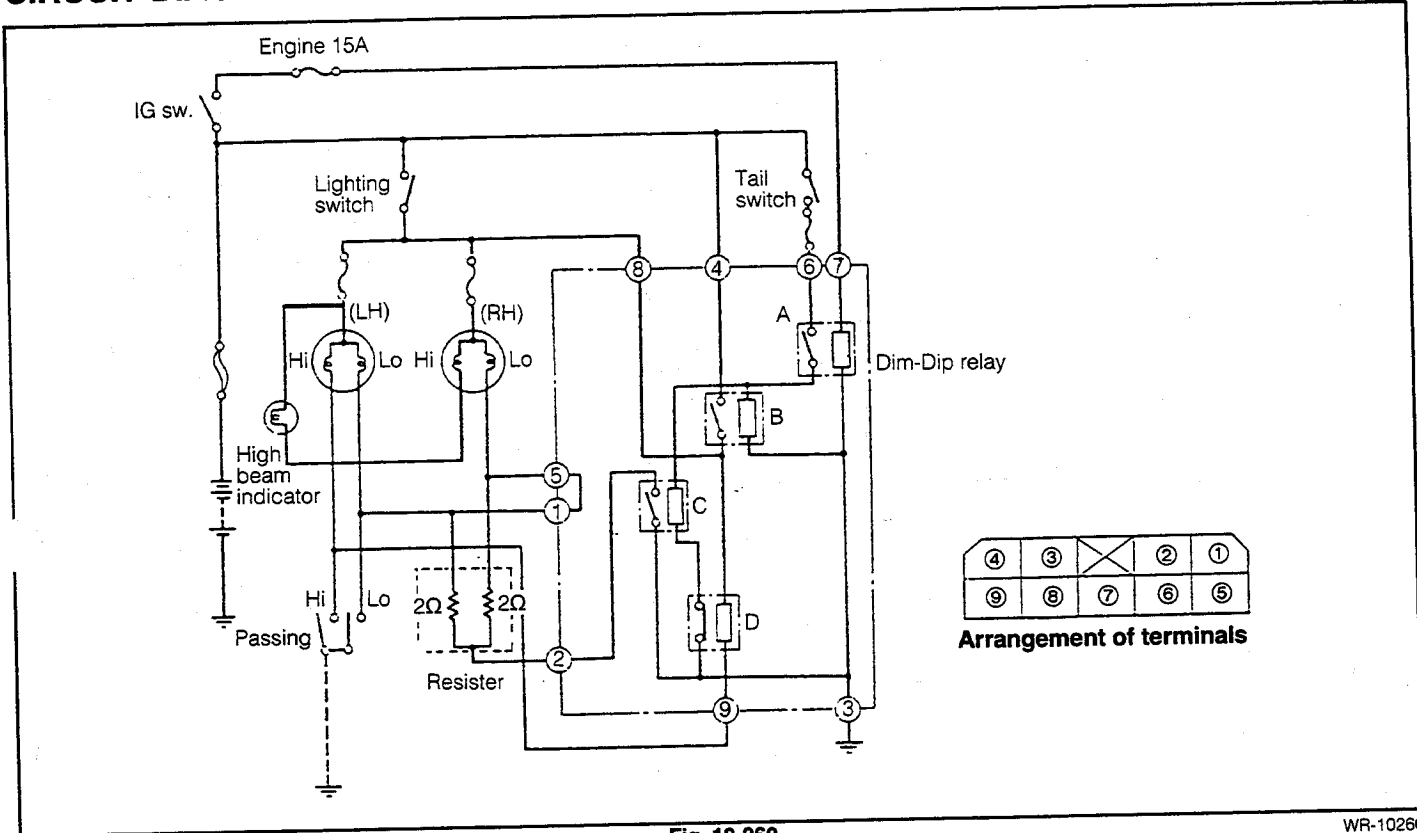


Fig. 10-260

WR-10266

**OPERATION CHECK**

Under the conditions given below, ensure that the luminous intensity of the dim-dip lamp is reduced 10% compared with the normal operation.

Ignition switch	Switch condition			Headlamp condition	Remarks
	Tail switch	Lighting switch L	Lighting switch H		
OFF	OFF	OFF	OFF	OFF	
	ON	OFF	OFF	OFF	Tail lamp only goes on.
	ON	ON	OFF	Lo	
	ON	OFF	ON	Hi	
	OFF	OFF	ON	Hi	Passing
ON	OFF	OFF	OFF	OFF	
	ON	OFF	OFF	Dim-dip	
	ON	ON	OFF	Lo	
	ON	OFF	ON	Hi	
	OFF	OFF	ON	Hi	Passing

WR-10267

# BODY ELECTRICAL SYSTEM

## DAY-LIGHT RELAY CIRCUIT DIAGRAM

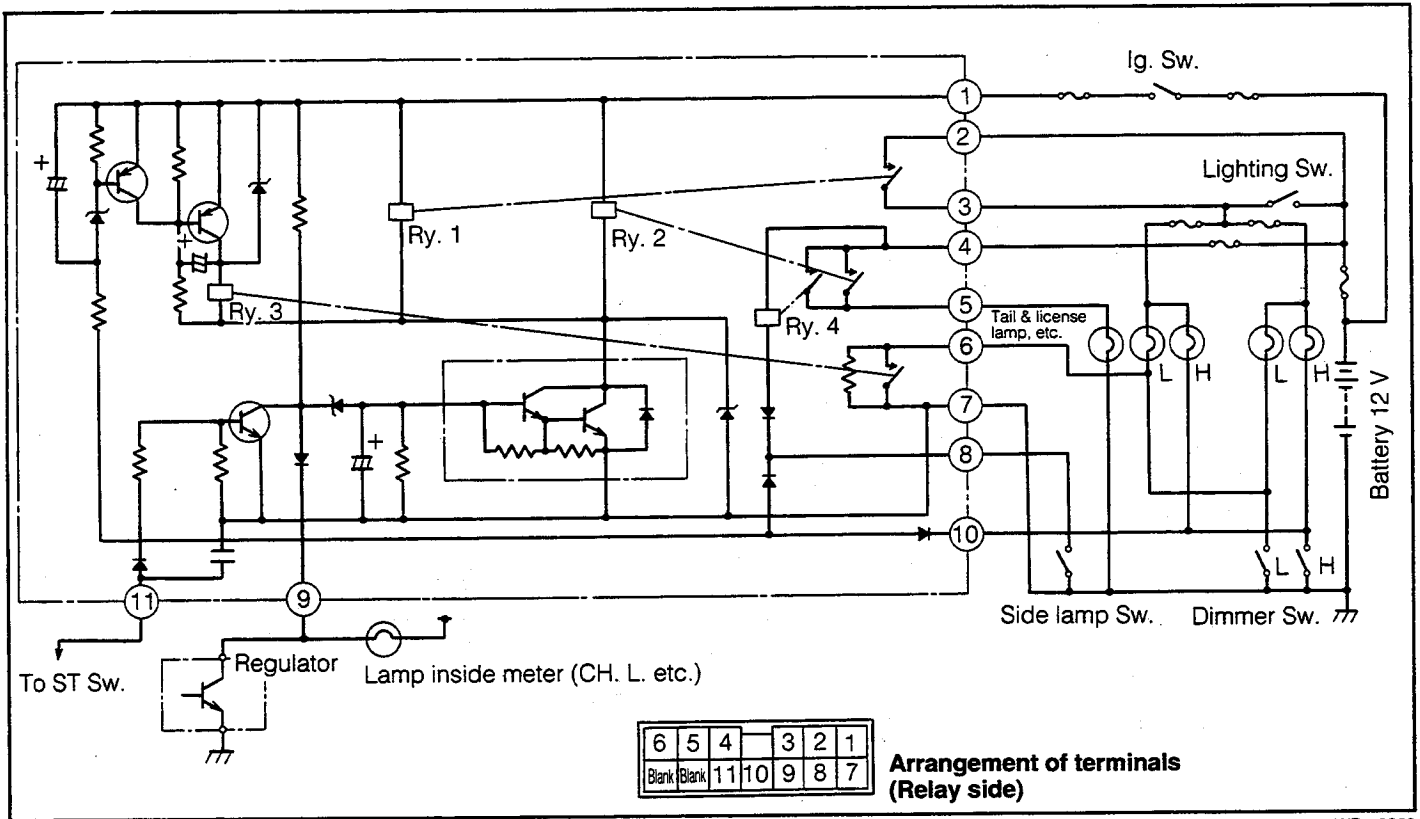


Fig. 10-261

WR-10268

### OPERATION CHECK

While the engine is rotating, ensure that the day-light goes on under the conditions given below.

○ ... Goes on  
× ... Goes off.

Engine	Ignition switch	Side lamp switch	Lighting switch	Dimmer switch	Tail & license lamp	Headlamp	
						Lo	Hi
STOP	ON	Normal glowing mode					
	OFF						
RUN	ON	OFF	OFF	OFF	○	○	×
	ON	ON	OFF	OFF	○	×	×
	ON	ON	ON	Lo	○	○	×
	ON	ON	ON	Hi	○	×	○
	ON	ON	ON	Passing	Passing	○	×

WR-10269