

BODY ELECTRICAL SYSTEM

GENERAL DESCRIPTION	BE-2
POWER SUPPLY	BE-6
IGNITION KEY SWITCH	BE-10
COMBINATION METER	BE-12
HEADLAMP	BE-22
HEADLAMP LEVELING	BE-25
DAY-LIGHT SYSTEM	BE-27
FRONT FOG LAMP	BE-29
REAR FOG LAMP	BE-31
STOP LAMP	BE-33
BACK UP LAMP	BE-35
INTERIOR LAMP	BE-37
TAIL LAMP & LICENSE PLATE LAMP	BE-39
HAZARD WARNING & TURN SIGNAL LAMP & HORN	BE-42
POWER WINDOW	BE-45
WIPER & WASHER	BE-48
DEFOGGER	BE-51
CIGARETTE LIGHTER	BE-53
REAR VIEW MIRROR	BE-54
CLOCK	BE-56
REAR ROOF ANTENNA	BE-57
ITC SYSTEM	BE-58
KEYLESS ENTRY SYSTEM	BE-61
SSTs	BE-63
TIGHTENING TORQUE	BE-63

BE

YBE00001-00000

BE-2

GENERAL DESCRIPTION

HANDLING PRECAUTION

GENERAL INSTRUCTIONS

1. Never pull the connectors or step on them during the wire harness transport or assembly.
(Prevention of pulling-out of terminals, connector cracks, deformation and so forth.)
2. Care must be exercised to ensure that no scratch is made to the wire harness by burrs or edges during the wire harness transport or assembly.
(Prevention of scratches to the outer trim, electrical insulators and so forth.)

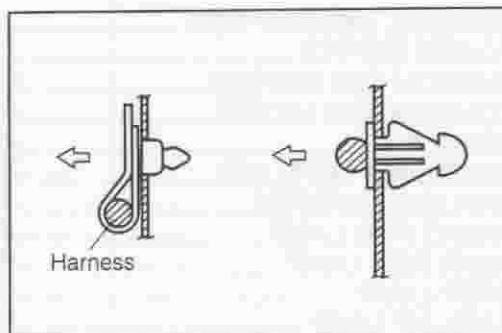
3. Clamping method

In the case of resin clamps, ensure that the clamp section is fitted in the body hole.

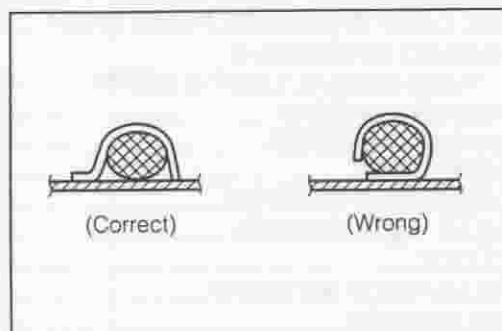
NOTE:

- Ensure that the clamp will not be detached when it is pulled lightly in the arrow-headed direction.
(Prevention of interference due to the detachment of the clamp)
- In the case of metal sheet welded clamps, be sure to assemble the harness in such a way that the harness will not come in contact with the welded surface.
(Prevention of wire harness damage due to welding burrs)
- In case that the locating guide of the clamp position or the clamp mark is clamped, make sure that the clamp is located within the guide. As for the clamp at the clamp mark section, ensure that the clamping is made at a point within ± 10 mm.
(Prevention of slackness or interference)

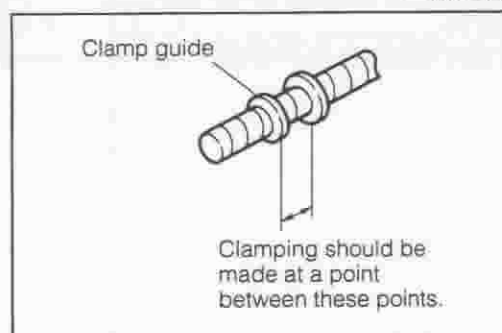
YBE00002-00000



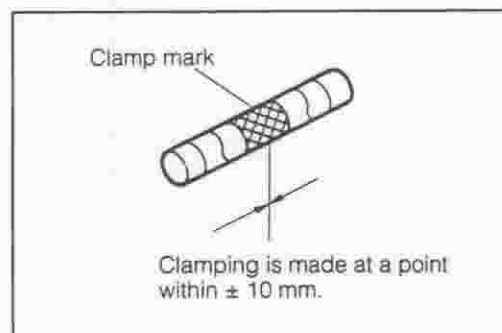
YBE00003-00001



YBE00004-00002



YBE00005-00003



YBE00006-00004

4. Terminals and connectors

Perform the connection of connectors positively.

Connector with lock: Ensure that the connector is locked completely.

Connector without lock: Connect the connector positively until it stops.

Retention by screws

- When the tightening torque is specified, be sure to observe the specification strictly.
(The tightening torque is posted in the table separately.)
- Ensure that the staked section may not come on the assembling surface.
- After completion of the tightening operation, lightly pull out the terminal. Ensure that there is no slackness.
- When performing other operations, care must be exercised to ensure that no connected connector is detached by pulling out the wire harness forcibly.

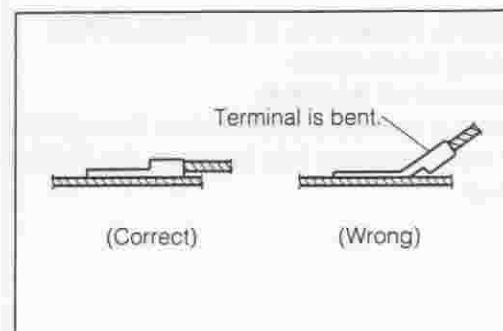
5. Work procedure for tightening-up type resin clamps

When the tightening-up type resin clamps are employed, do not use any pliers, cutting pliers or the like.

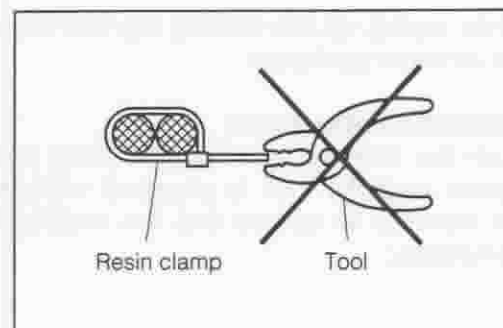
<Reason>

Prevention of clamps being cut or scratched

YBE00006-00000



YBE00007-00005



YBE00008-00006

OPERATION OF LOCK TYPE CONNECTOR

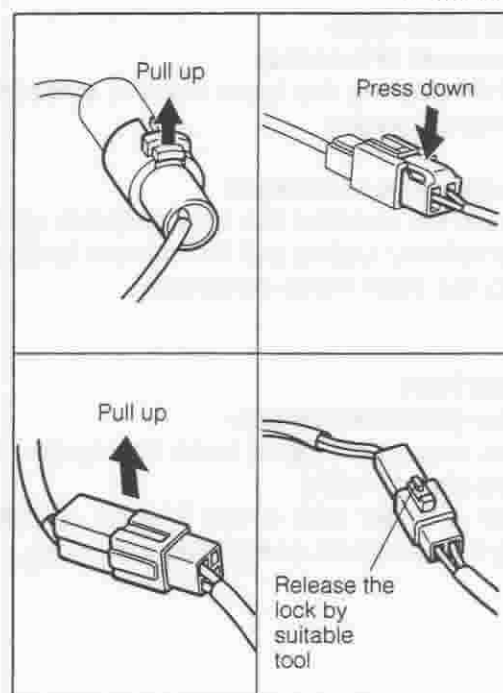
<Conventional type>

The lock type of the connector comes in a push release type, a pull release type, a spring lock type, an one-way lock type and so on.

After confirming the shape of the lock, unlock the lock. Disconnect the connector while holding the connector by hand.

NOTE:

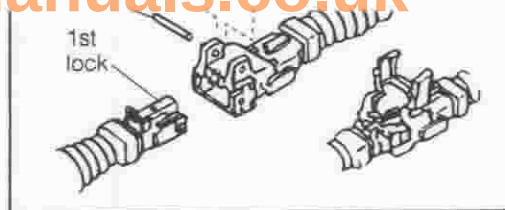
- Never pull the harness during the disconnection.
- Be sure to pull out the connector straight so as not to damage the terminal.



YBE00009-00007

NOTE:

- Disconnection and connection of each connector should be kept at a minimum level. If unnecessary disconnection or connection is repeated, it may cause unexpected troubles such as poor continuity and chattering.



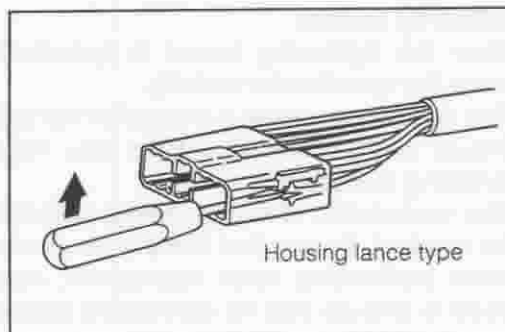
YBE00010-00008

TERMINAL REMOVAL & INSTALLATION

<Housing lance type>

Removal of terminal

Insert a miniature screwdriver through the opening section of the connector into between the locking lug and the terminal.

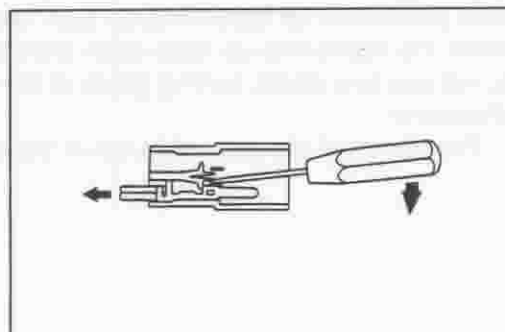


YBE00011-00009

While prying up the locking lug with the screwdriver, pull the terminal backward.

Installation of terminal

Push the terminal into the protruding section of the connector, until the lock is engaged completely. Lightly pull the harness to assure that the locking has been made completely.



YBE00012-00010

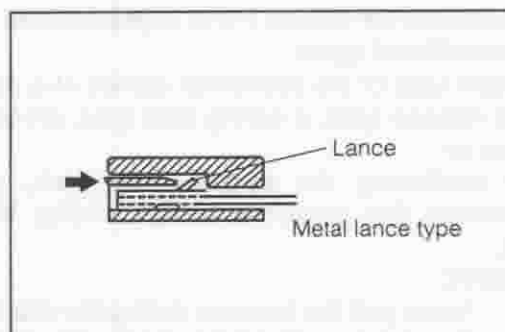
<Metal lance type>

Removal of terminal

While pushing the lance with the screwdriver, pull the terminal backward.

Installation of terminal

Insert the terminal into the connector, until lance is locked completely. Lightly pull the harness to assure that the locking has been made completely.



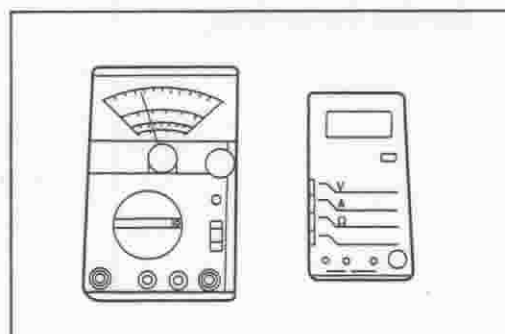
YBE00013-00011

INSPECTION

<Tester (Volt/Ohmmeter)>

For the inspection, use a tester having an internal resistance of more than 10 k Ω /V.

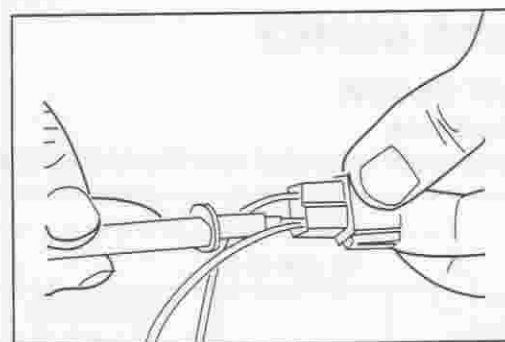
Use of a tester with a low internal resistance may cause wrong measurement or secondary troubles.



YBE00014-00012

<Conventional type connector>

When resistance and/or voltage measurement is conducted at the connector section, insert the measuring probe from the back of the connector, being very careful not to damage the harness-to-terminal connections.



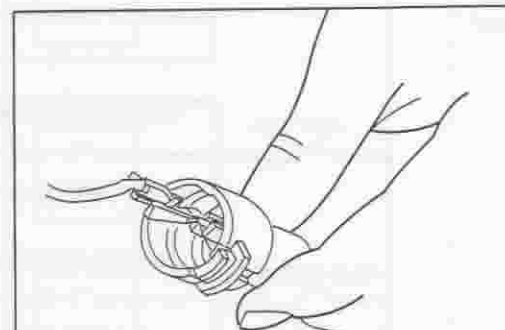
YBE00015-00013

<Water-proof type connector>

When resistance measurement and/or voltage measurement is conducted at the connector section, bring the measuring probe into contact with the terminal at the connection side of the connector.

Be very careful not to apply excessive force to the terminal at the connector side. Failure to observe this caution may deform the terminal, causing poor continuity. As an alternative method, insert a male or female terminal into the connector terminal or connect an adequate attachment.

Then, connect the measuring probe.



YBE00016-00014

WIRE SIZE & COLOR CODE

For identification purpose, each wire has its own color. Each color bears a code as described in the right table. These codes are used in the wiring diagram and will be helpful during trouble shooting.

The wire color comes in two kinds: single color and composite color. In the case of single color, the whole outer coat of the harness is of a single color.

In the case of composite color, a fine line of the second color is drawn on the harness basic color.

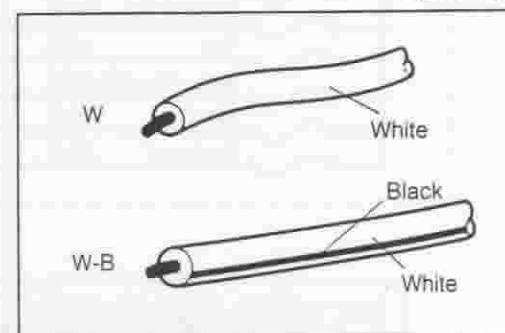
In the case, the code is composed of the basic color code which comes first and the second color code which comes after a hyphen.

WARNING:

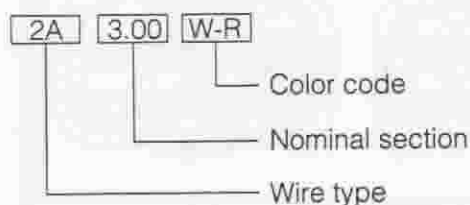
- The wire diameter and capacity of each harness have been determined to assure the normal operation of the electrical system.
- Hence, do not take power for accessories carelessly through the original wiring harness. Failure to observe this caution may cause system malfunction or fire.

Code	Gr	Br	B
Color	Gray	Brown	Black
Code	W	R	G
Color	White	Red	Green
Code	Y	L	O
Color	Yellow	Blue	Orange
Code	P	Lg	V
Color	Pink	Light green	Violet

YBE00017-00015



YBE00018-00016



Nominal section	Section area (mm)	Diameter (mm)	Permissible current (A)
0.5	0.56	1.0	9
0.85	0.88	1.2	12
1.25	1.28	1.5	15
2.00	2.09	1.9	20
3.00	3.29	2.4	27

YBE00000-00017

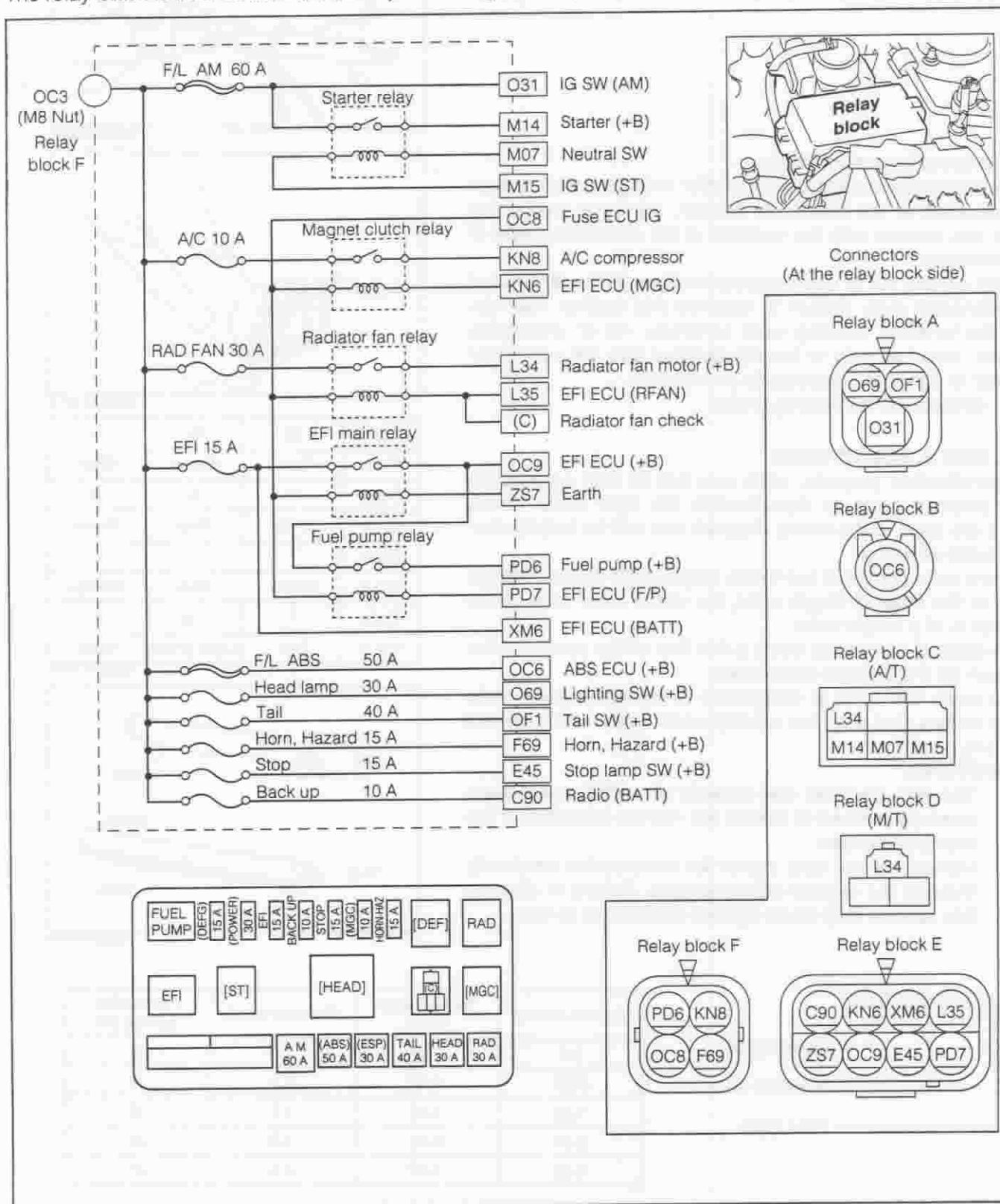
BE-6

POWER SUPPLY

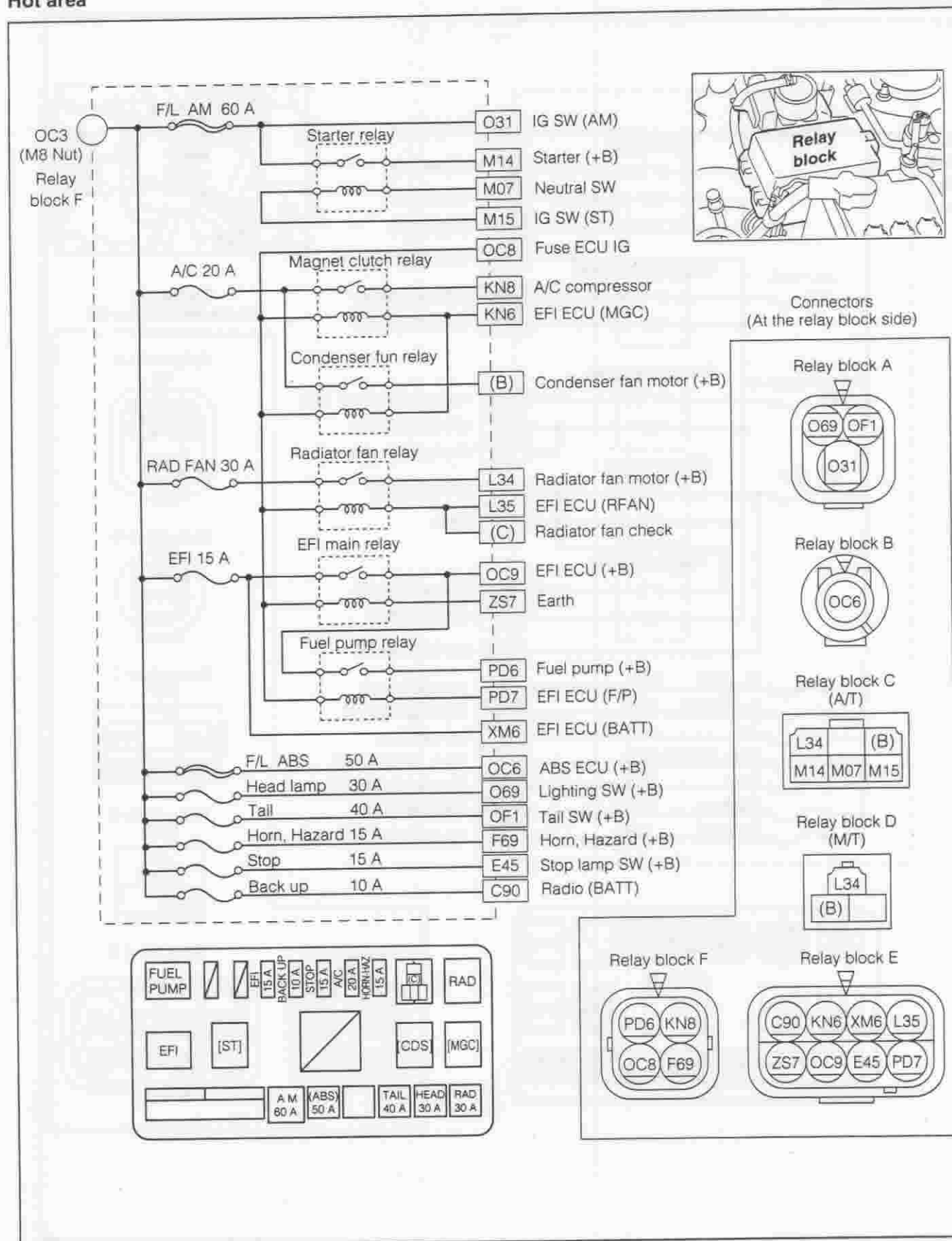
RELAY BLOCK

Standard area

The relay block is located near the battery in the engine compartment.

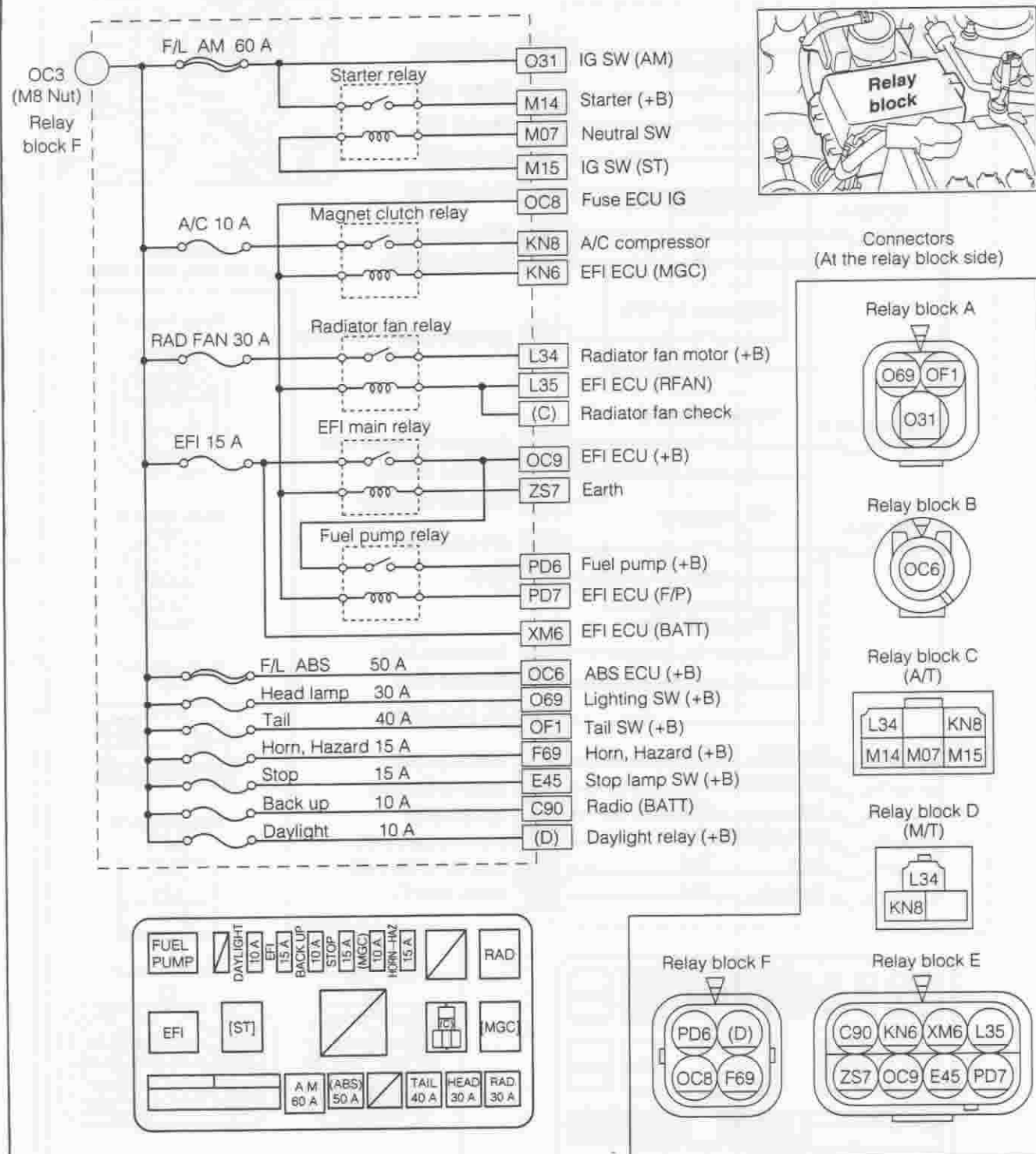


Hot area



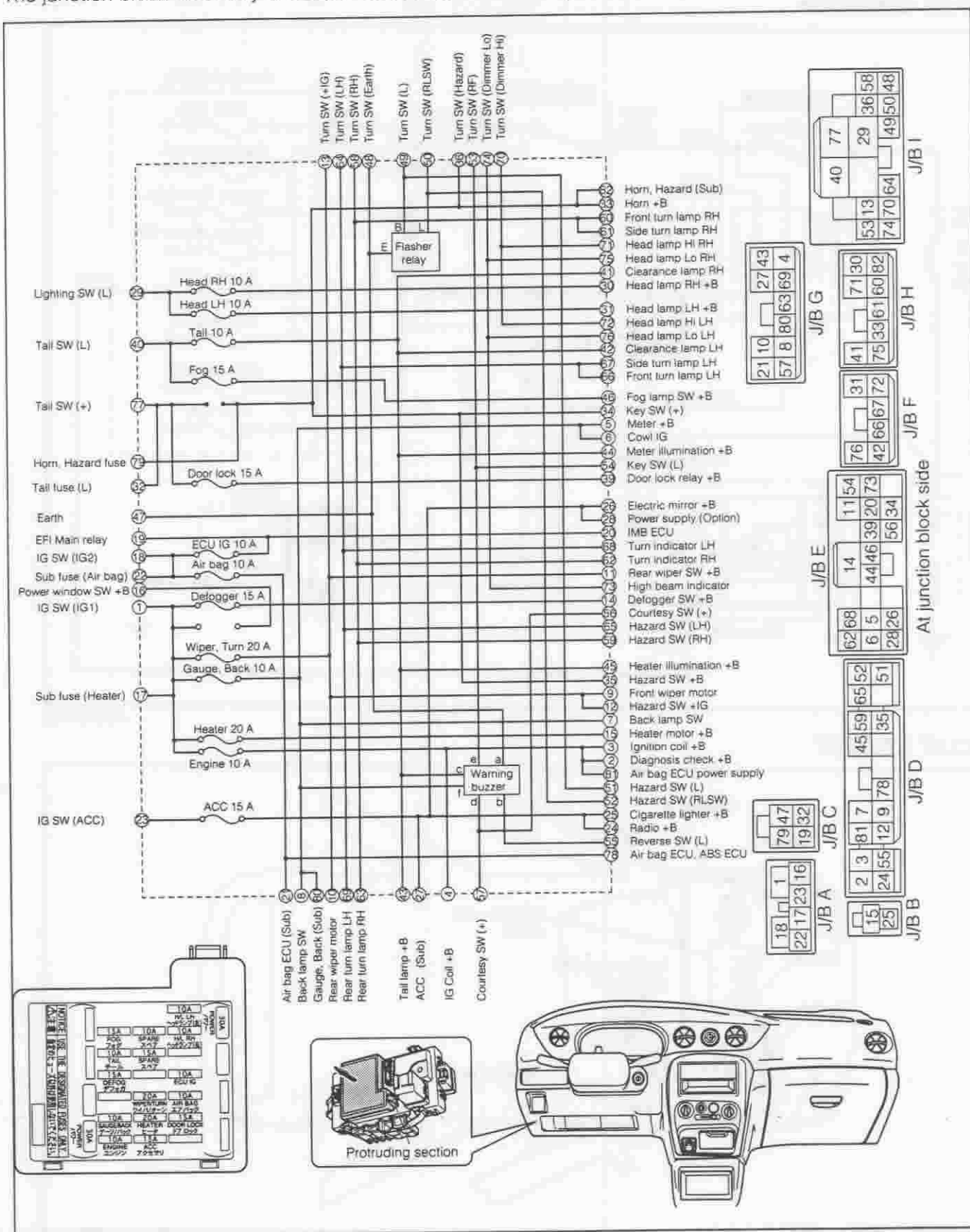
BE-8

North Europe area



JUNCTION BLOCK

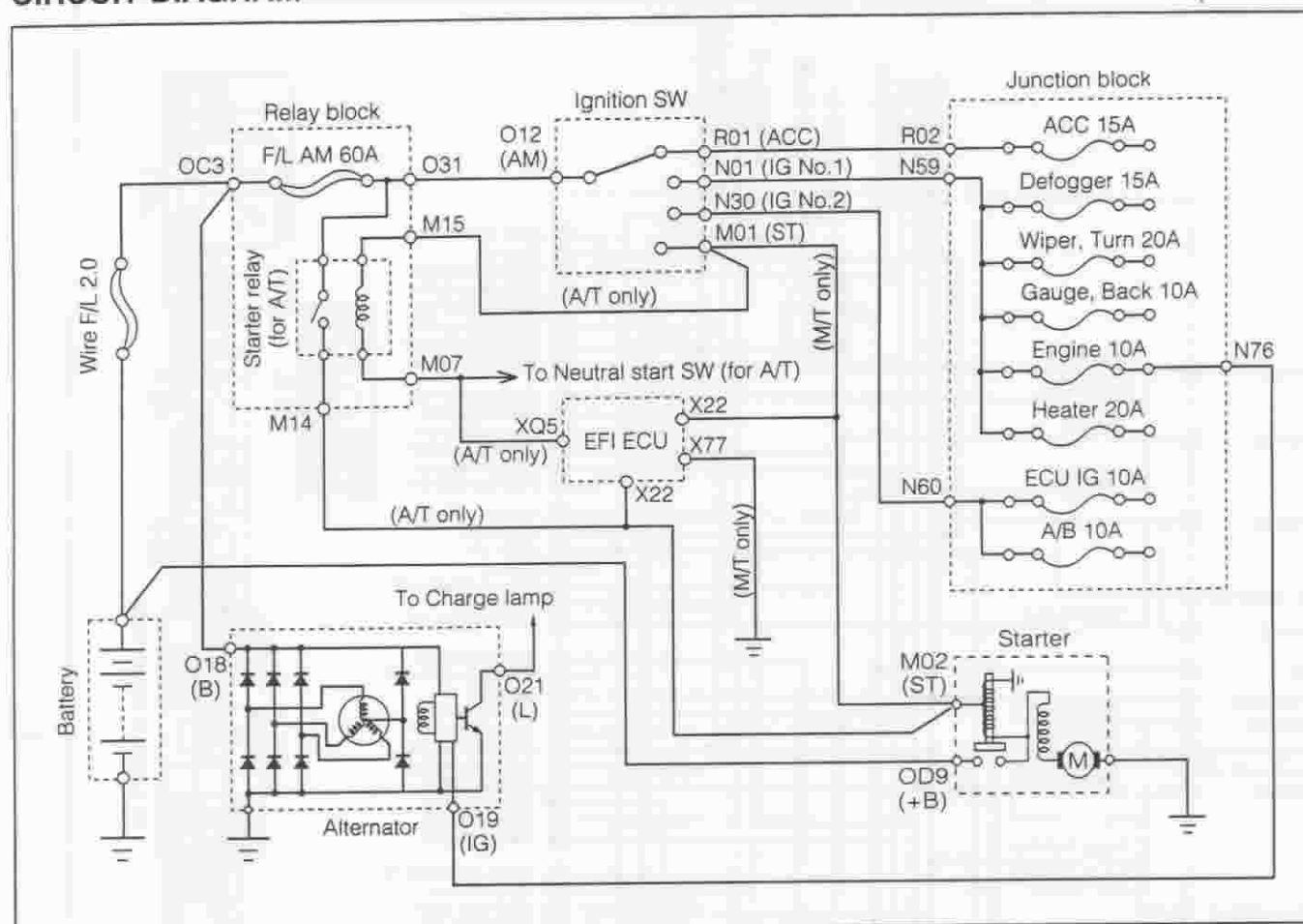
The junction block assembly is located underneath the steering column at the driver's seat side.



BE-10

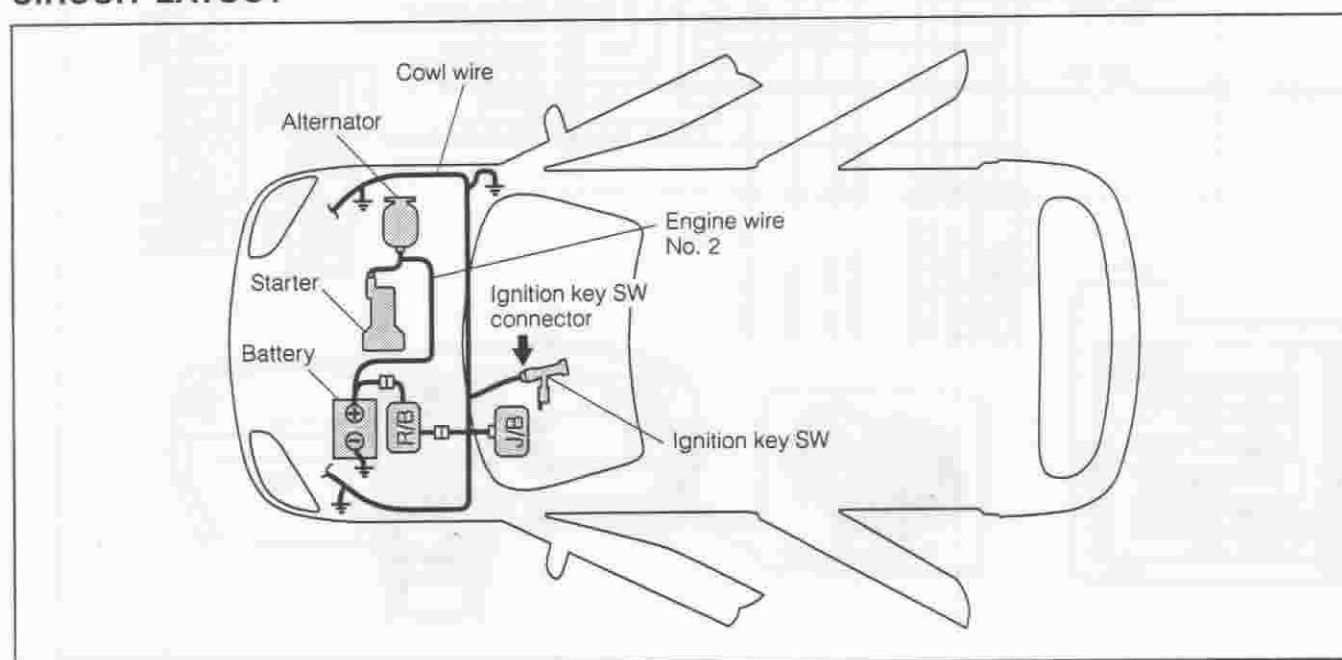
IGNITION KEY SWITCH

CIRCUIT DIAGRAM



YBE00023-00022

CIRCUIT LAYOUT



YBE00024-00023

REMOVAL

1. Turn OFF the ignition key switch.
2. Disconnect the battery ground cable from the negative (-) terminal.

NOTE:

- In case of air bag equipped vehicle, then, wait for at least 60 seconds to prevent the air bag from the deployment.

CAUTION:

- It should be noted that, when the negative (-) terminal of the battery is detached, the memory of the ECU control for each system will be erased at the same time.

3. Detach the instrument finish lower panel and steering column lower cover by loosening the screws.

4. Disconnect the wire harness connector from the ignition key switch.

5. Remove the ignition key switch by loosening the attaching screw.

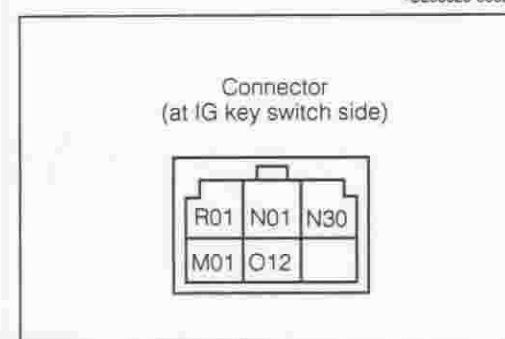
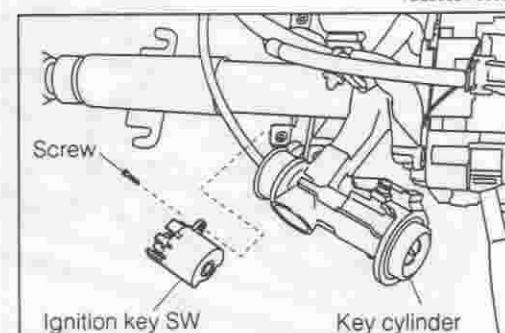
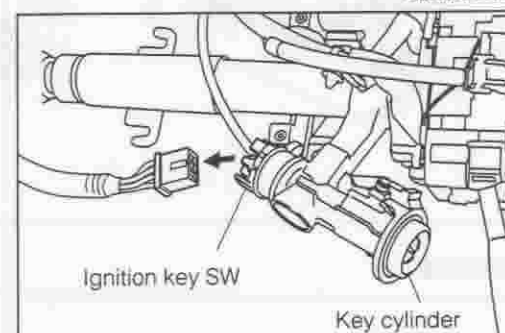
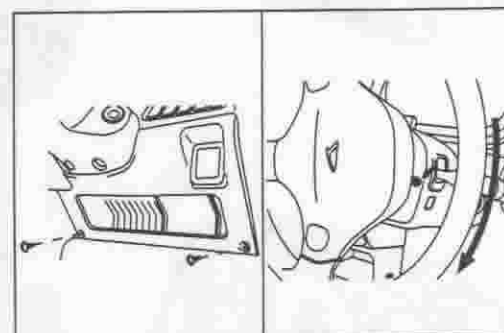
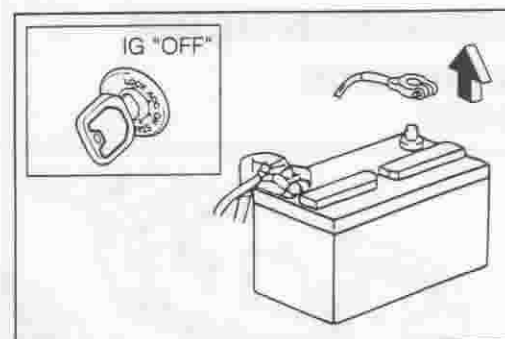
NOTE:

- As regards the removal and installation procedures for the steering column related parts, refer to SR section of the service manual.

INSPECTION OF IGNITION KEY SWITCH

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

Terminal Switch position	O12 (AM)	R01 (ACC)	N01 (IG1)	N30 (IG2)	M01 (ST)
LOCK					
ACC	○	○			
ON	○	○	○	○	
START	○		○	○	○

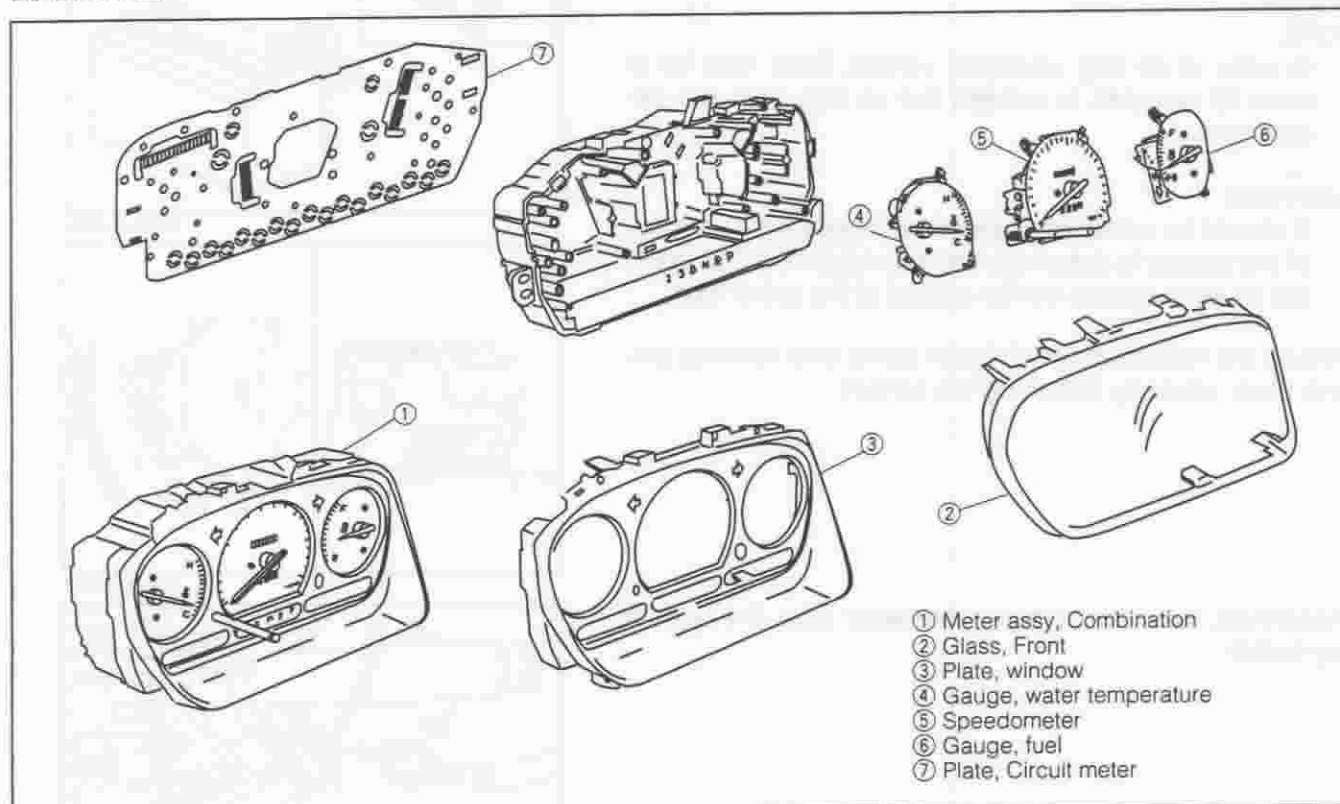


BE-12

COMBINATION METER

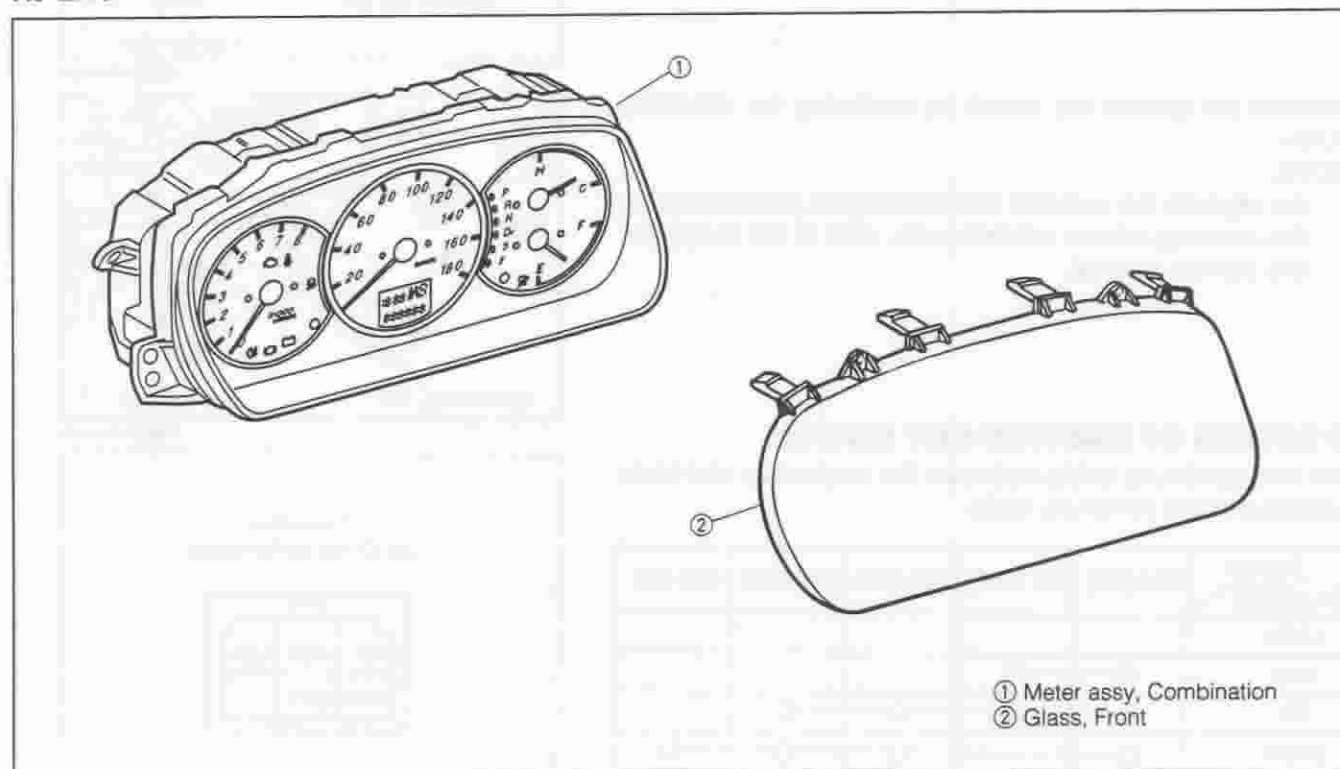
CONSTRUCTION

EJ-ENGINE



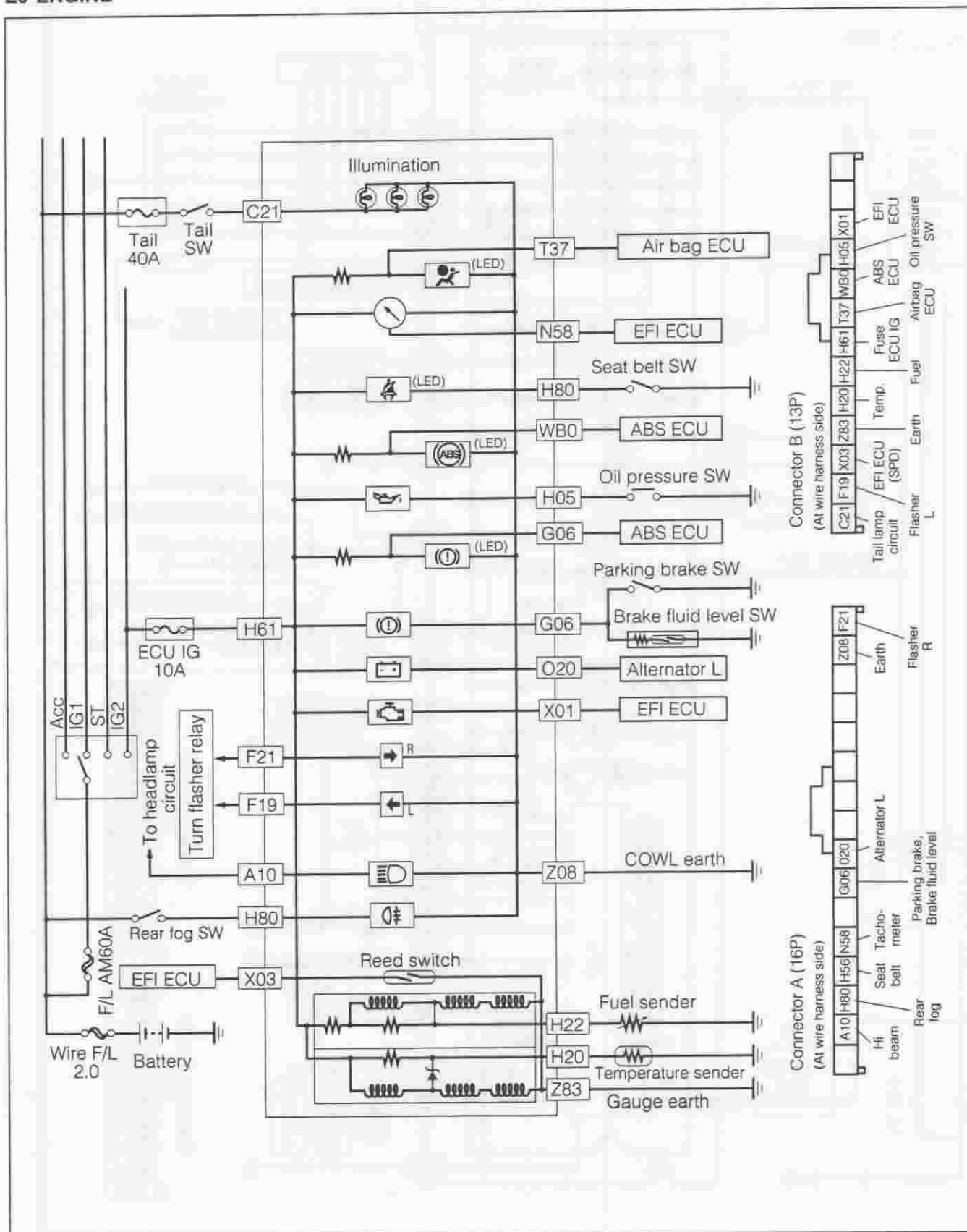
YBE00030-00029

K3-ENGINE



YBE00031-00030

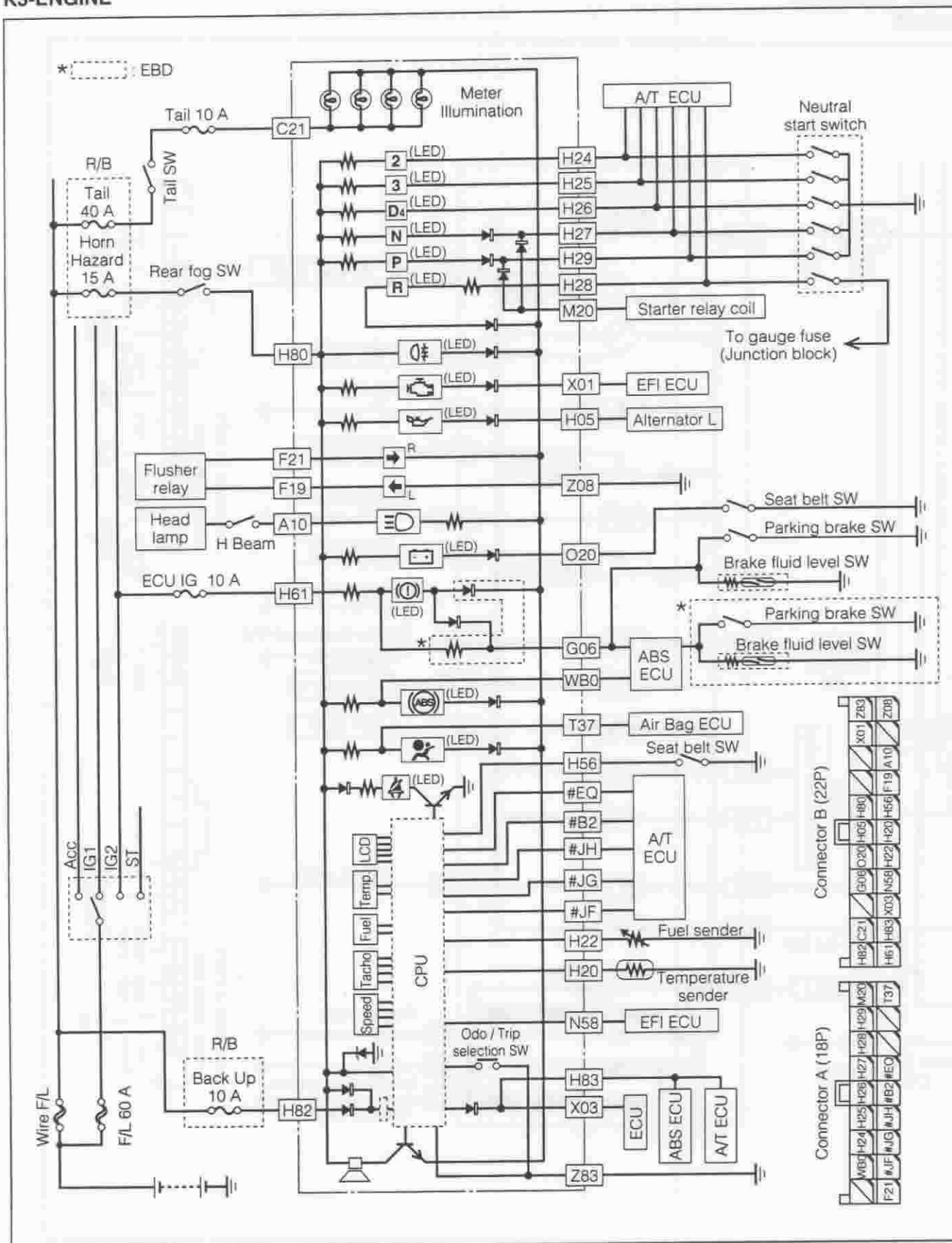
CIRCUIT DIAGRAM EJ-ENGINE



YBE00032-00031

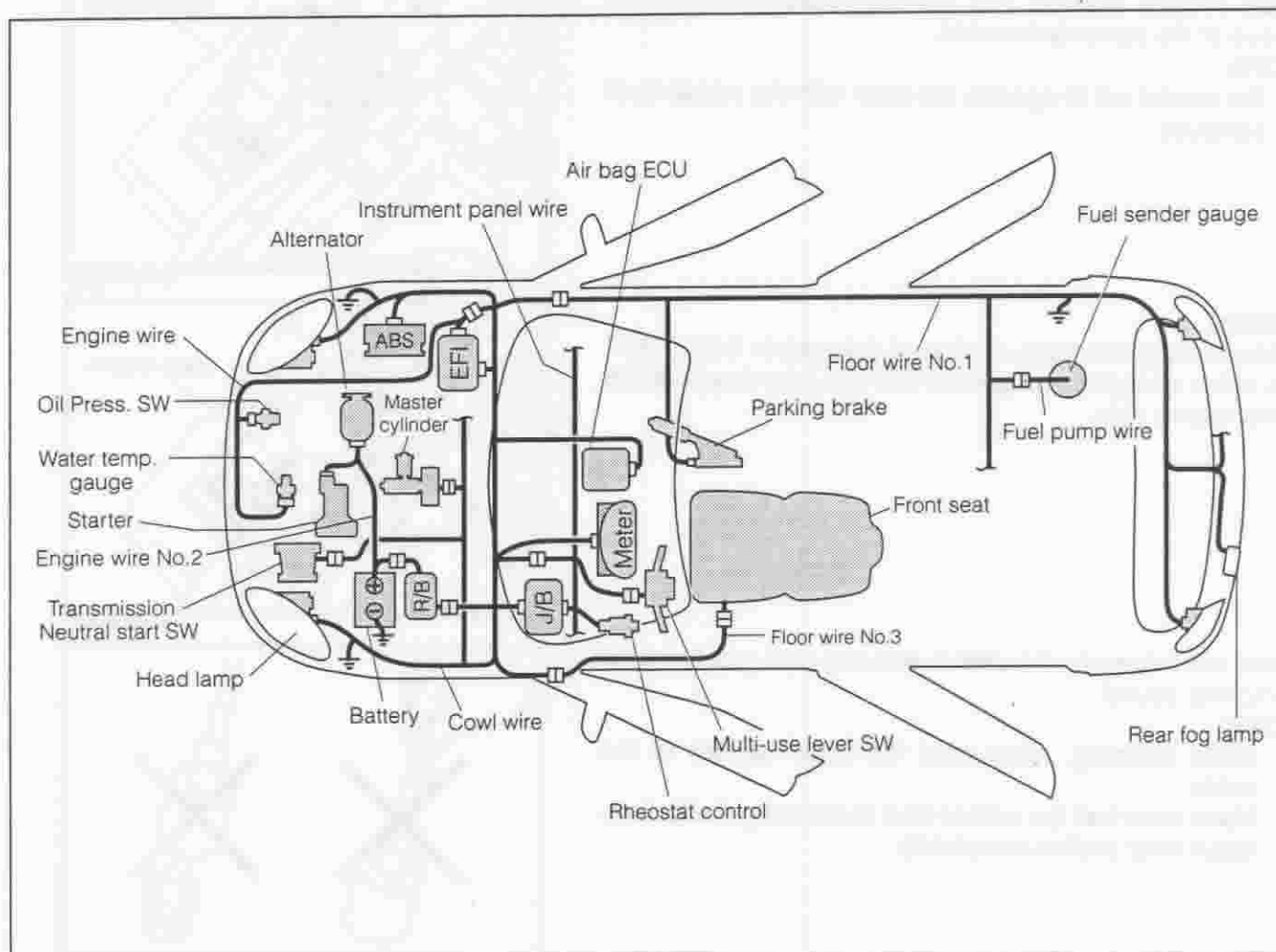
BE-14

K3-ENGINE



YBE00033-00032

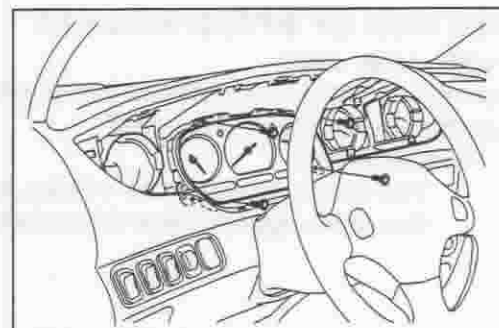
CIRCUIT LAYOUT



YBE00034-00033

REMOVAL OF COMBINATION METER

1. Pull off the hazard warning switch knob on the steering column.
2. Remove the instrument cluster finish panel from the instrument panel by loosening the screws.
3. Remove the attaching screws of the combination meter assembly.
4. Disconnect the speedometer cable and wire harness connectors at the backside of the combination meter assembly.
5. Remove the combination meter assembly.

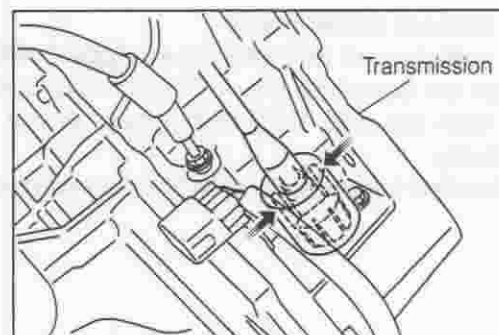


YBE00035-00034

<SPEEDOMETER CABLE (TRANSMISSION SIDE)>

Removal

1. Release the lock by gripping the lock-releasing lever, working from the outside of the rubber boot of the speedometer cable (at the transmission side).



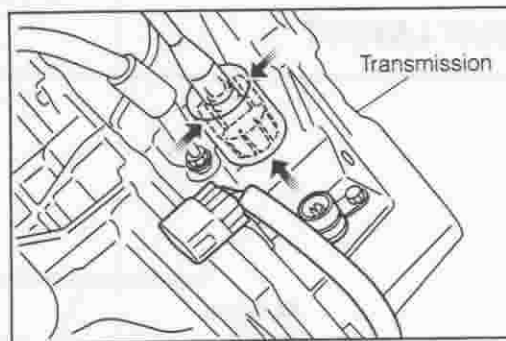
YBE00036-00035

BE-16

- With the lock-releasing lever in a gripped state, pull the cable straight upward. Pull out the cable from the joint sleeve at the transmission side.

NOTE:

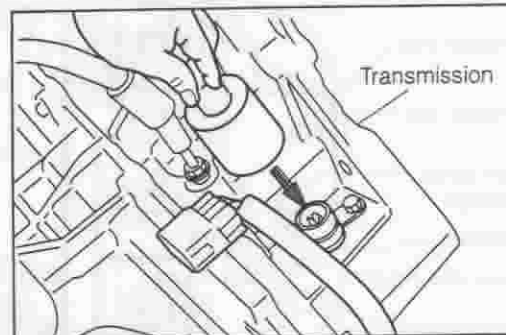
- Be careful not to operate the lever with the rubber boot removed.



YBE00037-00036

Installation

- While holding the base section of the rubber boot, insert the cable straight from upward into the joint sleeve at the transmission side.

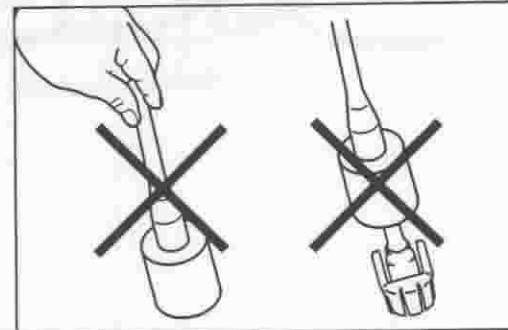


YBE00038-00037

- Insert the cable into the sleeve securely until you can hear a clicking sound.

NOTE:

- While inserting, never hold the upper section of the cable.
- Make sure that the rubber boot is covering the lock-release lever section completely.



YBE00039-00038

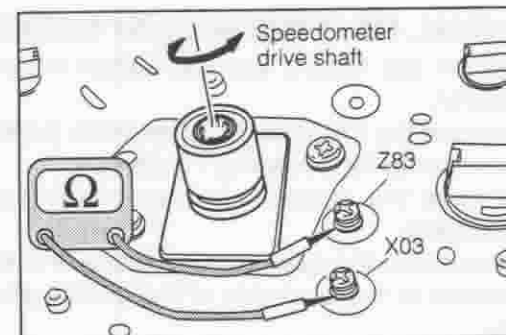
INSPECTION OF SPEED SENSOR

Type with meter cable

- Connect an ohmmeter between the terminal X03 and Z83.
- Turn the speedometer drive shaft.

Specification:

The continuity should be 4 times per each revolution of the speedometer drive shaft.



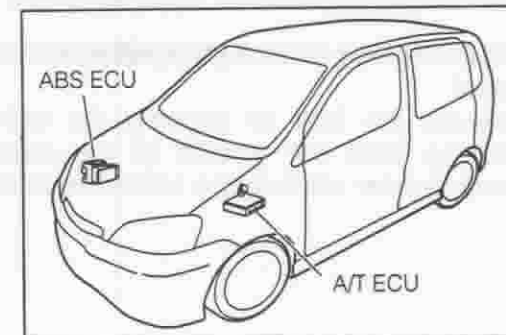
YBE00040-00039

Type without meter cable

<A/T vehicle and M/T vehicle equipped with ABS>

Signals are sent from the A/T ECU in the case of the A/T vehicles; from the ABS ECU in the case of the M/T vehicles, respectively.

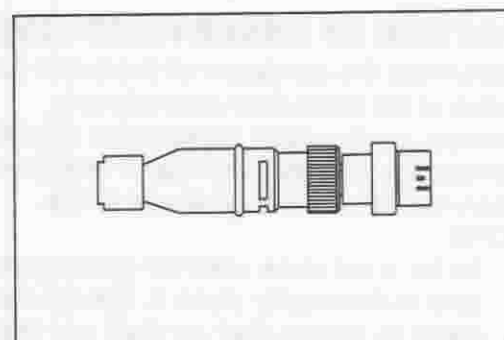
For detailed information, refer to the relative section.



YBE00041-00040

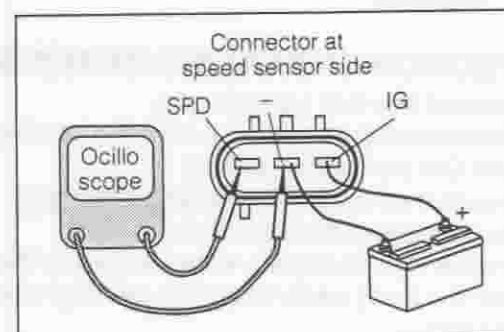
<M/T vehicle without ABS>

1. Disconnect the connector of the speed sensor at the transmission.



YBE00043-00042

2. Connect a battery and an oscilloscope as indicated in the right figure.

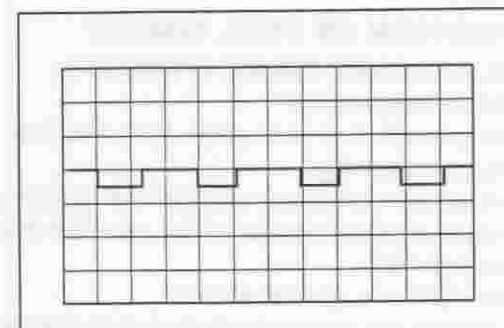


YBE00187-00194

3. Turn the speedometer driven gear. Ensure that the waveforms as indicated in the right figure are outputted.

NOTE:

- The frequency varies depending upon the revolution speed of the gear.



YBE00188-00195

INSPECTION OF LOW OIL PRESSURE WARNING

1. Disconnect the connector from the low oil pressure warning switch.
2. Connect an ohmmeter between the switch terminal and the ground.

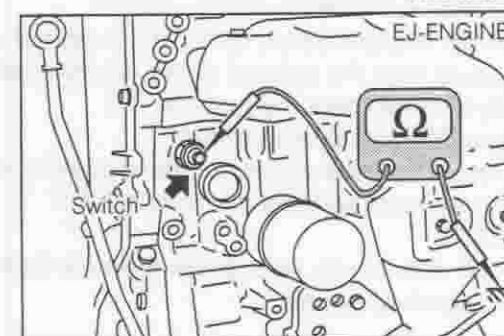
Specification:

Continuity exists while the engine is stopped.

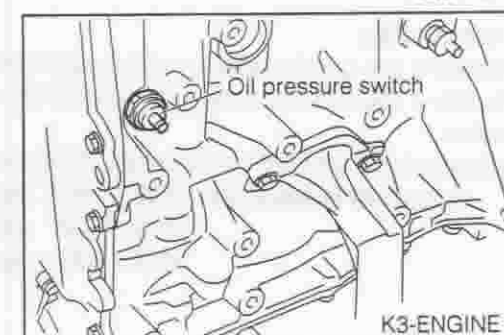
No continuity exists while the engine is running.

NOTE:

- If not, replace the low oil pressure switch.
- As regards the removal and installation procedures for this switch, refer to the LU section.



YBE00044-00043



YBE00000-00044

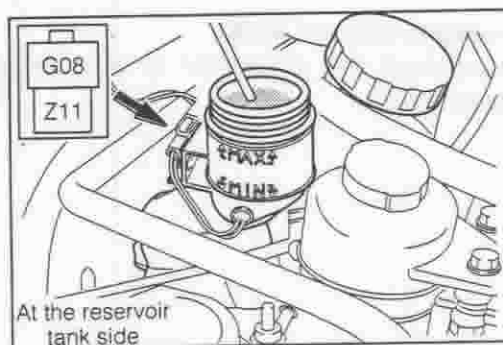
BE-18

INSPECTION OF BRAKE FLUID LEVEL WARNING

1. Disconnect the connector of the brake fluid level warning switch at the brake fluid reservoir tank.
2. Connect an ohmmeter between the terminal G08 and Z11.
3. Remove the reservoir tank cap. Press down the float with a clean rod. Ensure that continuity exists.

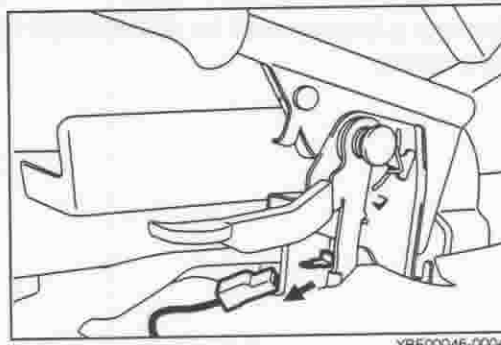
NOTE:

- 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.



INSPECTION OF PARKING BRAKE WARNING

1. Remove the rear console box.
2. Disconnect the connector from the parking brake switch.
3. Turn ON the ignition switch.
4. Ensure that the brake warning lamp goes on when ground the terminal at the wire harness side.
5. Ensure that continuity exists between the switch terminal and the body earth when the parking brake lever is pulled upward.



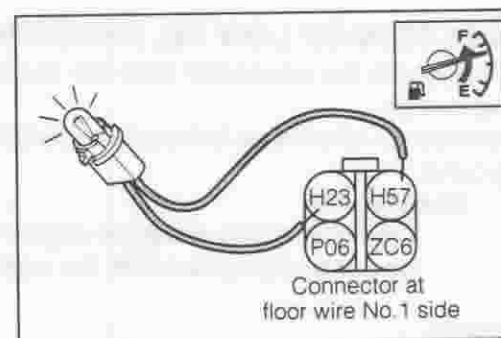
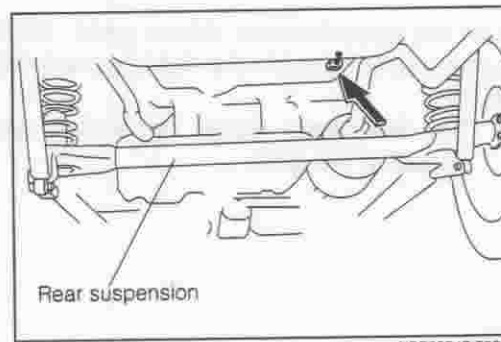
INSPECTION OF FUEL GAUGE <FUEL RECEIVER GAUGE (POINTER)>

In-Vehicle inspection

1. Disconnect the connector from the fuel pump & sender gauge assembly.
2. Under this condition, turn ON the ignition switch.
3. Ensure that the pointer of the receiver gauge returns to the position "E".
4. Turn OFF the ignition switch.
5. Connect the connector between the terminal H23 and H57 through a test lamp. (12 V - 3.4 W)
6. Under this condition, turn ON the ignition switch.
7. Ensure that the pointer of the receiver gauge rises gradually and registers the position "F".
8. Turn OFF the ignition switch.
9. Ensure that the pointer of the receiver gauge remains stationary and registers the position "F".

NOTE:

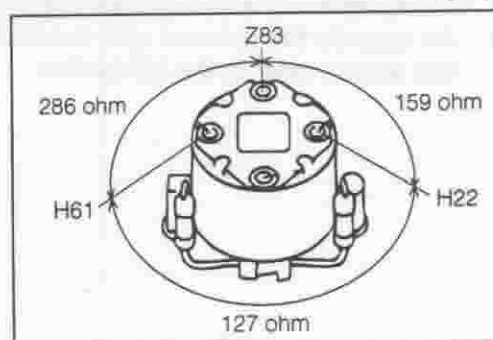
- If not, check or replace the wire harness and the fuel receiver gauge.



Unit inspection

1. Remove the combination meter assembly.
2. Remove the fuel receiver gauge unit from the combination meter.
3. Measure the resistance between the terminals.

Specified Resistance:	Z83 - H61	approx. 286 Ω
	Z83 - H22	approx. 159 Ω
	H61 - H22	approx. 127 Ω



<FUEL SENDER GAUGE>

In-Vehicle inspection

1. Remove the rear seat.
2. Disconnect the connector of the wire harness from the fuel pump & sender gauge assembly.
3. Connect a circuit tester between the terminal H23 and H57.
4. Ensure that the resistance conforms to the standard value for float position specified in the table.

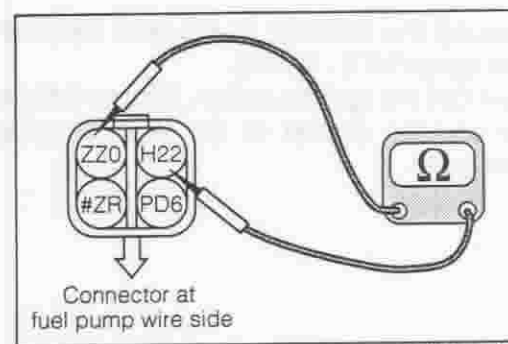
Float position	Resistance (Ω)
F	3 ± 2
E	120 ± 7

Removal of fuel sender gauge/fuel pump assembly

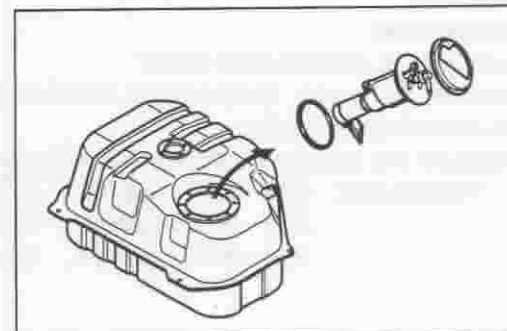
1. Remove the fuel tank.
 2. Remove the fuel pump & sender gauge assembly.
- WARNING:**
- Never allow any fire to be brought near the working site.

Installation of fuel sender gauge/fuel pump assembly

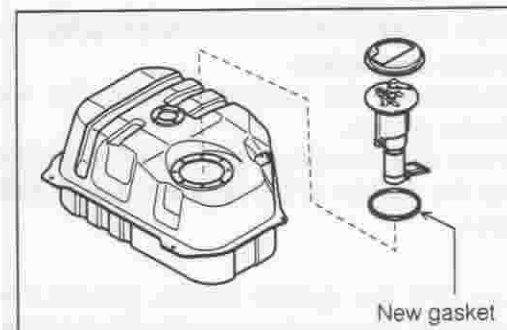
1. Place a new gasket on the fuel tank.
WARNING:
 - Be sure to replace the fuel pump gasket with new one. Failure to observe this caution may cause fire.
2. Install the fuel pump & sender gauge assembly to the fuel tank.
Tightening Torque: 3.8 ± 1.2 N.m
3. Install the fuel tank to the body.



YBE00050-00050



YBE00051-00051



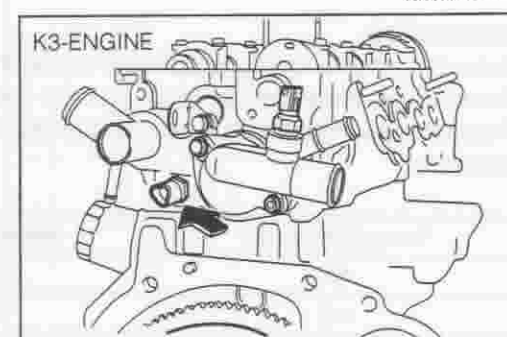
YBE00052-00052

INSPECTION OF WATER TEMPERATURE GAUGE

<WATER TEMPERATURE RECEIVER GAUGE (POINTER)>

In-Vehicle inspection

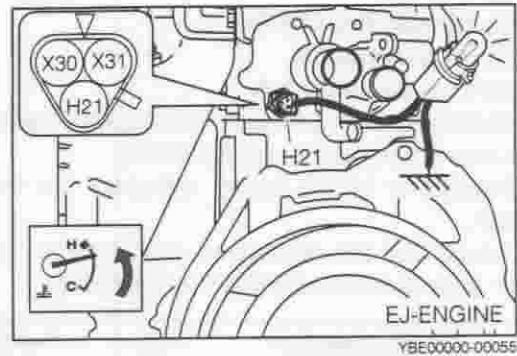
1. Disconnect the connector from the water temperature sender gauge.



YBE00054-00054

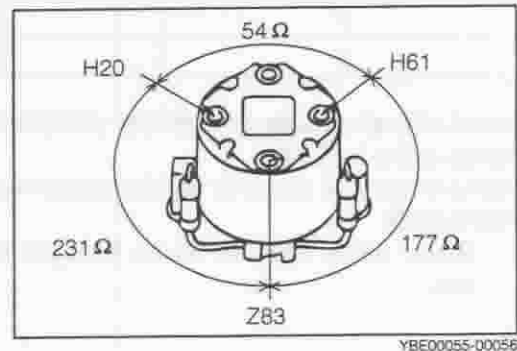
BE-20

2. Ground the terminal at the wire harness side through a test lamp (12 V - 3.4 W).
3. Turn ON the ignition switch. Ensure that the test lamp goes on and the pointer of the receiver gauge starts to rise gradually.



Unit inspection

1. Remove the combination meter.
2. Remove the water temperature receiver gauge unit from the combination meter.
3. Measure the resistance between the terminals.
Resistance: Z83 - H61 : approx. 177 Ω
Z83 - H20 : approx. 231 Ω
H61 - H20 : approx. 54 Ω



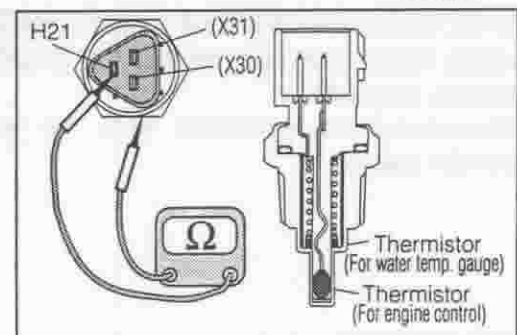
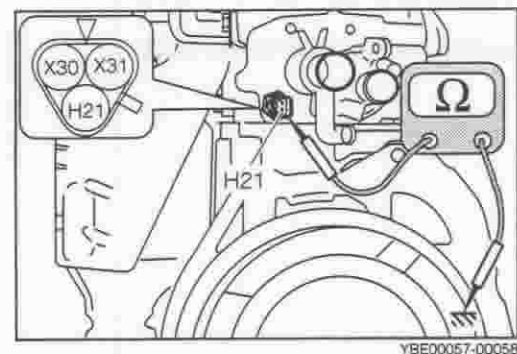
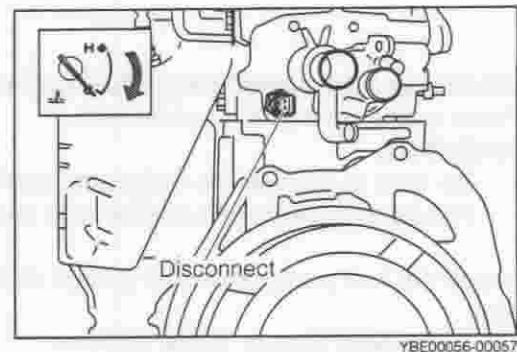
<WATER TEMPERATURE SENDER GAUGE>

In-Vehicle inspection

1. Disconnect the connector from the water temperature sender gauge.
2. Under this condition, turn ON the ignition switch. Ensure that the pointer of the receiver gauge indicates lowest position.
3. Turn OFF the ignition switch, ground the terminal H21 at the water temperature sender gauge side through a circuit tester.
4. Ensure that the resistance conforms to the standard value in the table.

NOTE:

- If not, check the wire harness and the water temperature sender gauge.

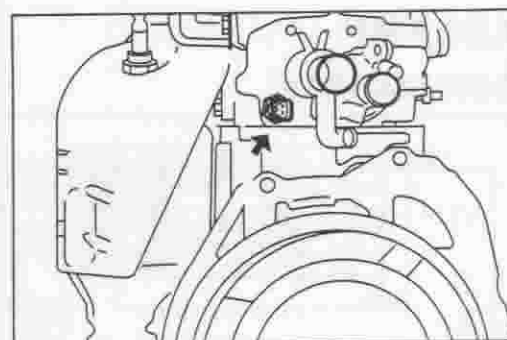


Unit inspection

1. Drain the engine coolant from the radiator.
2. Remove the water temperature sender gauge.
3. Measure the resistance between the terminals as in the illustration.

Temperature (°C)	Resistance ()
50	225 ± 35
115	26 ± 2

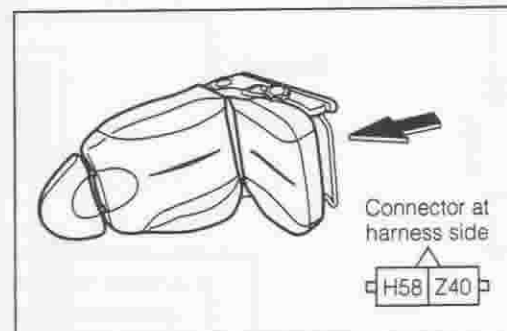
4. Clean the threaded portion of new water temperature sender gauge. Wind seal tape around the threaded portion.
5. Install the sender gauge.
Tightening Torque: $24.0 \pm 4.8 \text{ N}\cdot\text{m}$
6. Fill the engine coolant.



INSPECTION OF SEAT BELT WARNING

Unit inspection

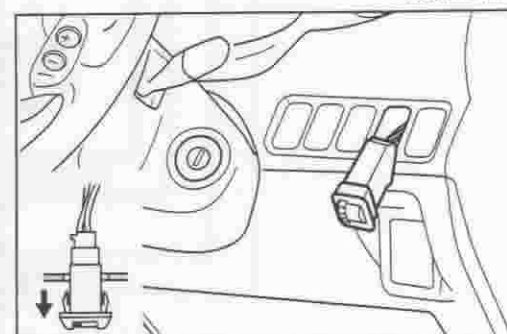
1. Disconnect the connector of the seat belt buckle switch. The connector is clamped underside of the driver's seat cushion.
2. Ensure that the seat belt warning glows when short the terminal H58 at the floor harness side and the body earth.
3. Ensure that continuity exists between the terminals of the front seat belt buckle switch connector.
4. Ensure that no continuity exists when insert the tongue plate into the buckle until it clicks.



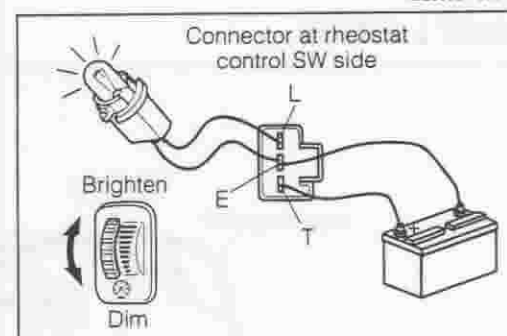
INSPECTION OF RHEOSTAT CONTROL

Unit inspection

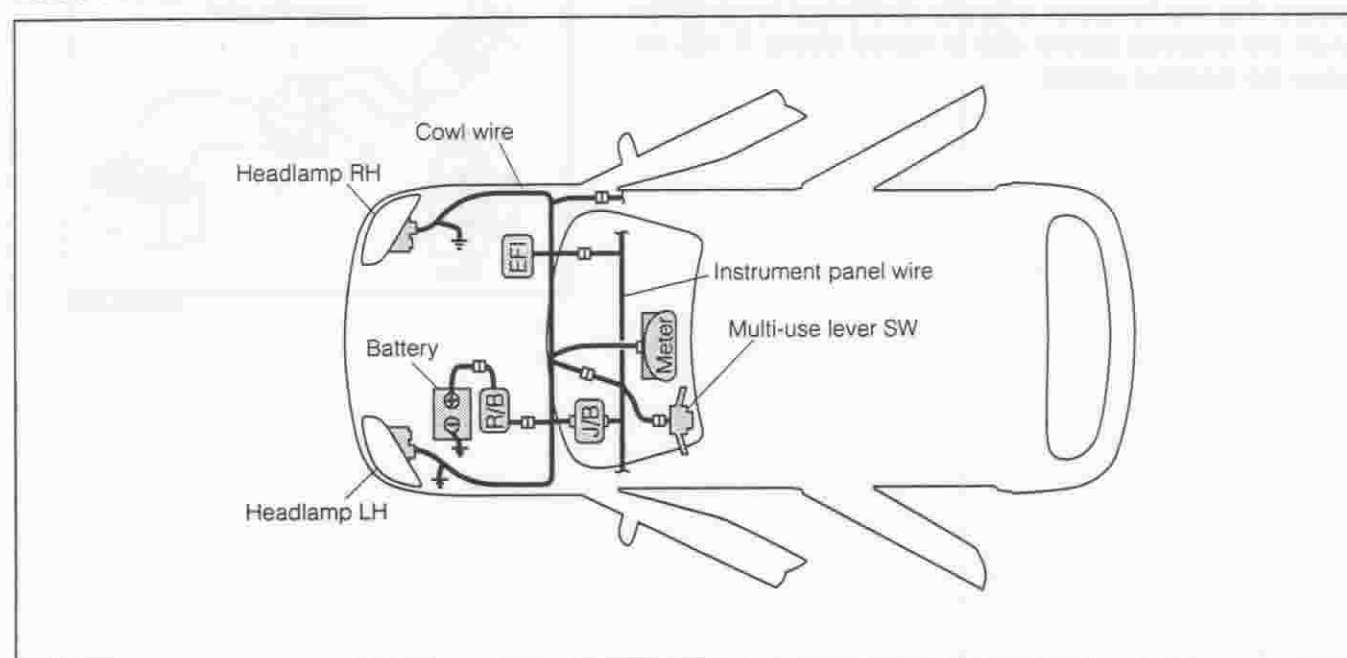
1. Pull out the rheostat control switch from the instrument panel.
2. Disconnect the connector of the wire harness.



3. Connect the respective terminals each other as illustration.
4. Ensure that the luminous intensity of the test lamp varies when the rheostat control dial is turned slowly. If not, replace the rheostat control.



CIRCUIT LAYOUT



Purchased from www.WorkshopManuals.co.uk

TROUBLE SHOOTING HINTS

Malfunction phenomena				Possible malfunctioning parts			
Headlamp does not go on.	Both sides	High beam	Passing signal functions properly.	①	⑧		
			Passing signal also does not function.	①	②	③	⑧
		Low beam		①	⑧		
		High beam and Low beam (Including passing signal)		①	②	③	⑤
	Any one		④	⑥	⑧		
	High beam indicator lamp does not go on.			⑥	⑦	⑧	

①	Multi-use lever (Dimmer/High switch)
②	Multi-use lever (Passing switch)
③	Multi-use lever (Lighting switch)
④	Fuse at the junction block. (Head lamp RH/LH 10A)
⑤	Fuse at the relay block. (Head lamp 30A)
⑥	Headlamp bulb
⑦	Indicator bulb
⑧	Poor contact of connector

REMOVAL OF MULTI-USE LEVER SWITCH

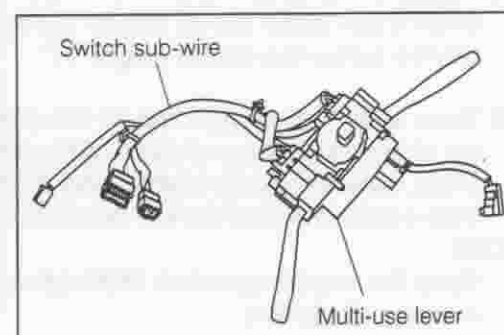
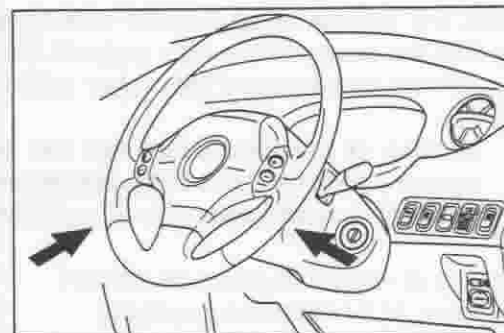
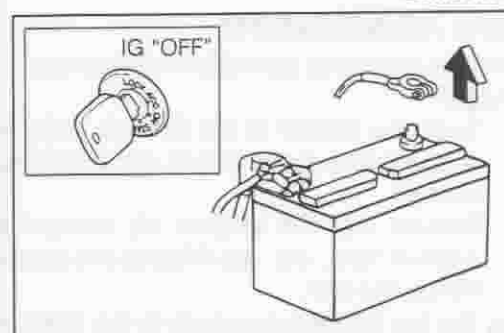
1. Turn OFF the ignition switch.
2. Disconnect the battery ground cable from the negative (-) terminal.

NOTE:

- In case of air bag equipped vehicle, wait for at least 60 seconds to prevent the air bag from the deployment.

3. Remove the attaching bolts (TORX®) at the right and left sides of the steering wheel cover side.
4. Remove the steering horn pad and the steering wheel.
5. Remove the instrument finish lower panel and the steering column cover.

6. Disconnect the connectors between the cowl wire harness and the multi-use lever switch sub-wire.
7. Remove the multi-use lever switch by loosening the attaching screws.



YBE00068-00069

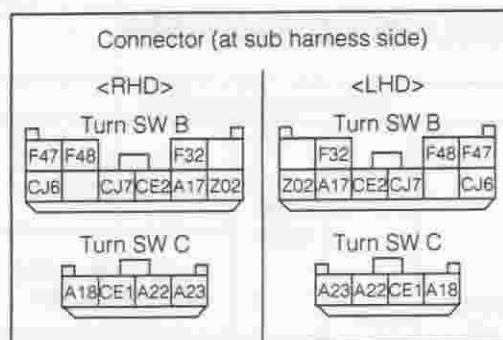
BE-24

HEADLAMP SWITCH (MULTI-USE LEVER)

Ensure that continuity exists between the respective terminals in accordance with the following continuity table.

With rear fog lamp

		A17	A18	Z02	CE1	CE2	CJ6	CJ7	A22	A23
		HM	HS	E	TB	TS	DM	RF	D1	D2
OFF	HF	○		○					○	○
	HL		○	○						
	HU	○		○						
I	HF	○		○	○	○			○	○
	HL		○	○	○	○				
	HU	○		○	○	○				
II	HF	○		○	○	○	○	○	○	○
	HL		○	○	○	○	○	○	○	○
	HU	○		○	○	○	○	○	○	○



YBE00069-00070

Without rear fog lamp

		A17	A18	Z02	CE1	CE2	A22	A23
		HM	HS	E	TB	TS	D1	D2
OFF	HF	○		○			○	○
	HL		○	○				
	HU	○		○				
I	HF	○		○	○	○	○	○
	HL		○	○	○	○		
	HU	○		○	○	○		
II	HF	○		○	○	○	○	○
	HL		○	○	○	○	○	○
	HU	○		○	○	○	○	○

YBE00000-00071

AIMING ADJUSTMENT

Perform the following operation in advance.

1. Weight

- Seat one person at the Driver's seat. (Weighing 75 kg.)
- A spare tire, tools, a jack are mounted at the specified points.
- Ensure that the engine oil, transmission oil, window washer fluid, etc. are filled to the specified levels.
- Fill up the fuel.

2. Set the tire inflation pressure to the specified values.

3. Rock the vehicle in up-&-down and right-&-left directions so that the suspensions may support the load evenly and the vehicle may assume the proper vehicle posture.

NOTE:

- In case of a vehicle which has the headlamp leveling system, perform this aiming adjustment with the leveling control switch set to the "0" position.

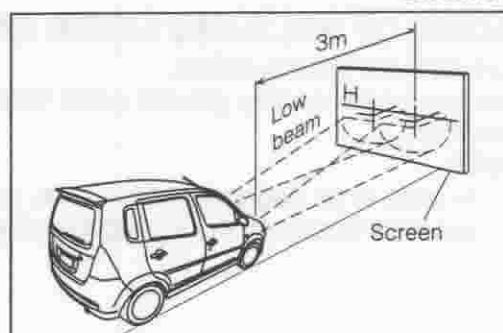
4. Setting of reference points on screen (Screen: At 3 m from lens surface)

- (1) Measure the center height "H" of the headlamps.
Draw a low beam cut-off line on the screen at;
36 mm below the center height "H".

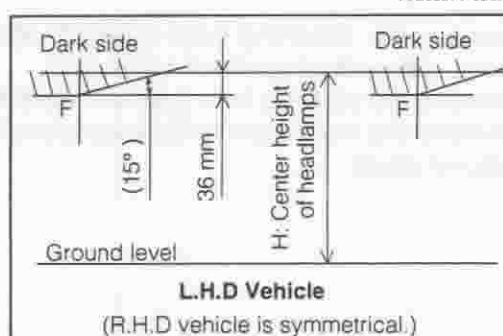
- (2) Draw a vertical straight line on the screen at each center of the headlamps on both right and left sides.
Thus, establish each intersection "F" made by the vertical center line and the low beam cut-off line.

NOTE:

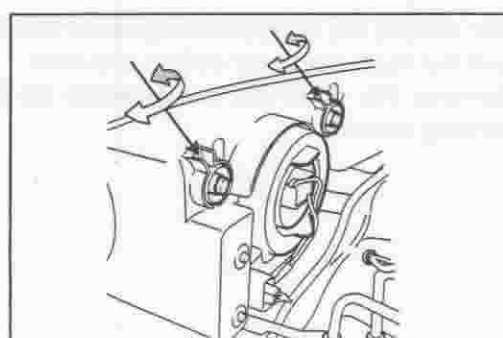
- Keep the engine speed at 1500 rpm or more during the aiming adjustment.



YBE00070-00072



YBE00071-00073



YBE00072-00074

The diagram illustrates the electrical system architecture, starting from the Battery and Wire FIL 2.0 at the top left. It shows the distribution of power through multiple fuse blocks (OC3, OC6) to various loads including F/L ABS, Head lamp, Tail, Back up, Horn Hazard, and F/L AM. The system also includes control circuits for the Ignition Switch (IG SW), Multi-use lever SW, Dimmer/HI/Passing SW, and Head lamp leveling unit LH. Key components like the High beam indicator (Combination meter) and the Head lamp LH/RH are shown with their respective wiring paths. The diagram uses standard automotive symbols for switches, relays, and lamps, and labels all major connection points and components.

The diagram illustrates the electrical layout of a vehicle. Key components and their connections include:

- Battery:** The power source, connected to the main wiring harness.
- Headlamp RH and LH:** Right and Left Headlamps, connected to the main harness.
- Cowl wire:** A wire running along the top of the vehicle's body.
- Instrument panel wire:** A wire connecting the battery to the instrument panel.
- Multi-use lever SW:** A switch located near the instrument panel.
- Meter:** A gauge or meter connected to the instrument panel wire.
- Relays:** Several relays are shown, including EFL, R/B, and J/B, which manage the flow of electricity to various components.

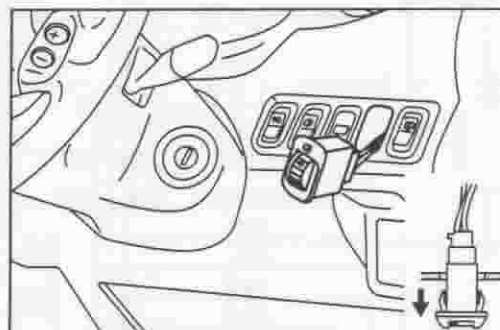
BE-26

TROUBLE SHOOTING HINTS

Malfunction phenomena		Possible malfunctioning parts					
Headlamp leveling does not function properly.	Both side	①	②	}	①	Headlamp leveling switch	
		④	⑥		②	Fuse at relay block (Headlamp 30A)	
	Any one	①	③		③	Fuse at junction block (Headlamp RH / LH 10A)	
		⑤	⑥		④	Multi-use lever (Lighting switch)	
					⑤	Headlamp leveling actuator	
					⑥	Poor contact of connector	

REMOVAL OF HEADLAMP LEVELING SWITCH

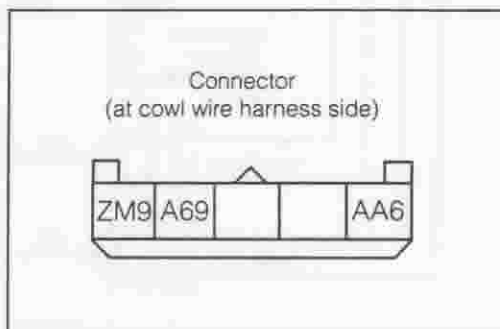
1. Remove the instrument finish lower panel.
2. Pull out the headlamp leveling switch from the instrument panel.
3. Disconnect the connector of the wire harness.



INSPECTION OF HEADLAMP LEVELING SWITCH

1. Ensure that resistance between the respective terminals as conforms to following specifications.

Between A69 and ZM9 (Position 0):	Approx. 2.1 kΩ
Between A69 and ZM9 (Position 1):	Approx. 1.9 kΩ
Between A69 and ZM9 (Position 2):	Approx. 1.4 kΩ
Between A69 and ZM9 (Position 3):	Approx. 1.1 kΩ
Between A69 and ZM9 (Position 4):	Approx. 0.7 kΩ
Between A69 and ZM9 (Each position):	Approx. 2.4 kΩ

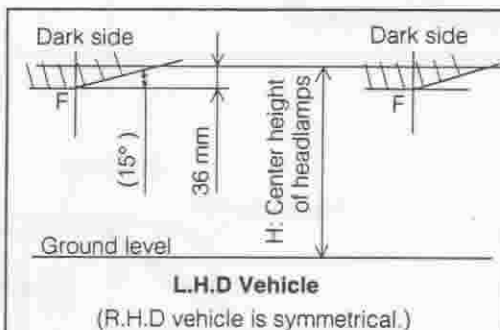


HEADLAMP AIMING ADJUSTMENT

1. As regards the adjustment procedure for the headlamp aiming, refer to "AIMING ADJUSTMENT" of this manual. (Page BE-24)

NOTE:

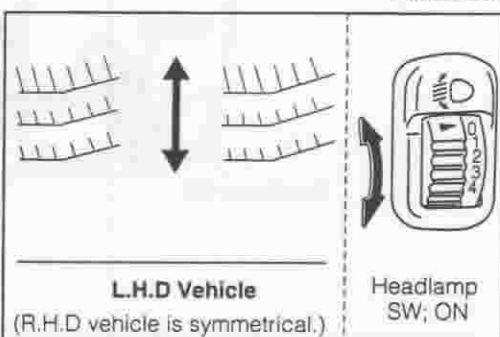
- Perform this aiming adjustment procedure with the leveling control switch set to the "0" position.



2. Ensure that the optical axis moves downward when the headlamp leveling switch is turned 0-1-2-3-4.

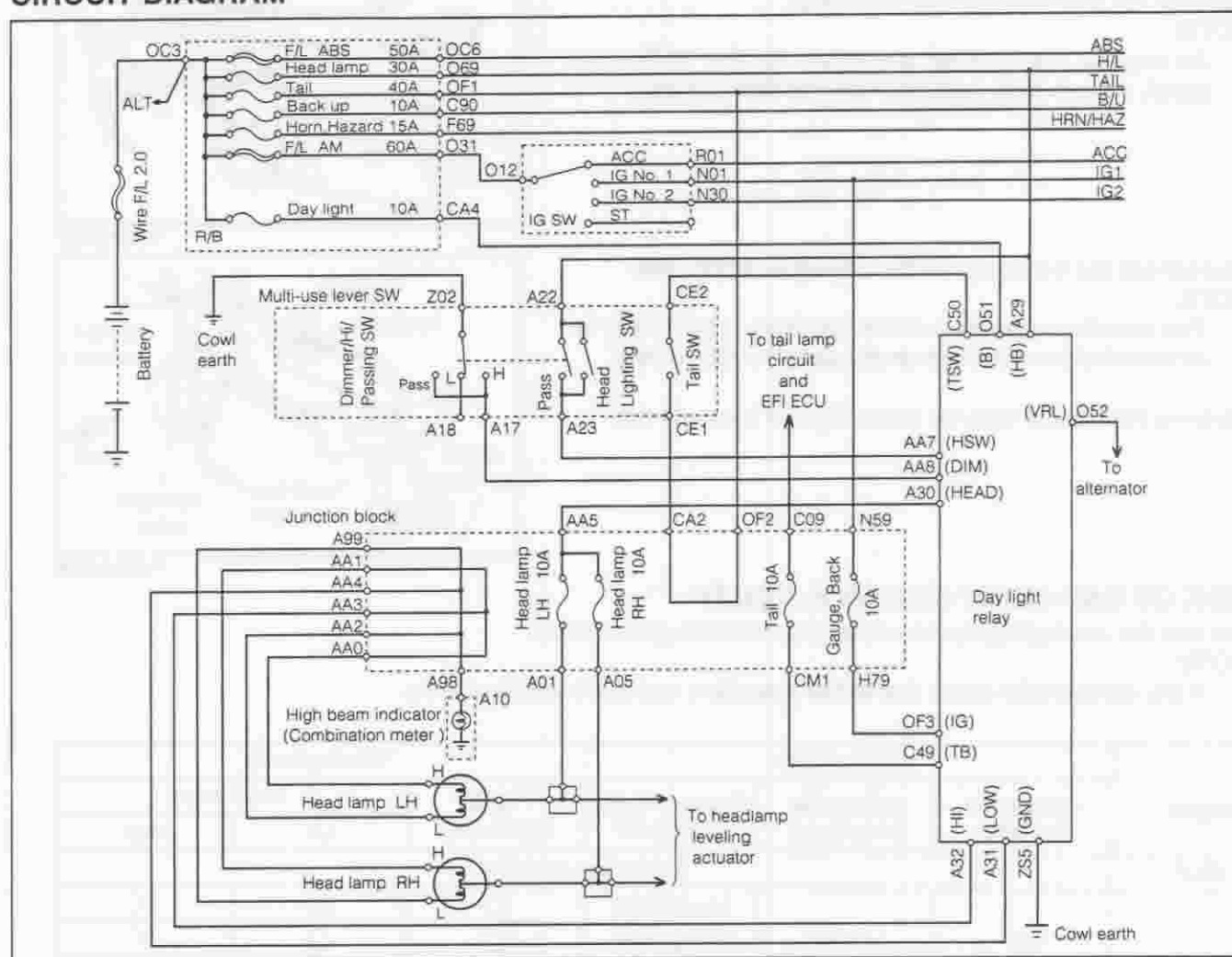
NOTE:

- The headlamp leveling system functions only when the headlamp switch is turned ON.

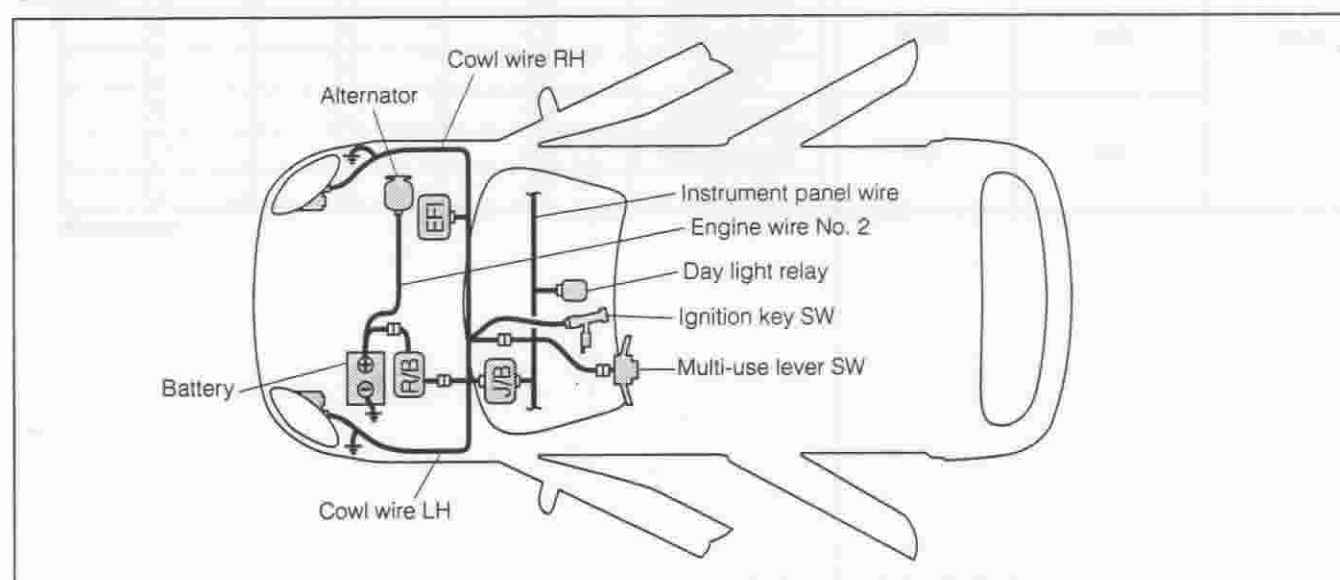


Position	Stroke
0 — 1	36 mm
1 — 2	38 mm
2 — 3	39 mm
3 — 4	39 mm

DAY-LIGHT SYSTEM CIRCUIT DIAGRAM



CIRCUIT LAYOUT



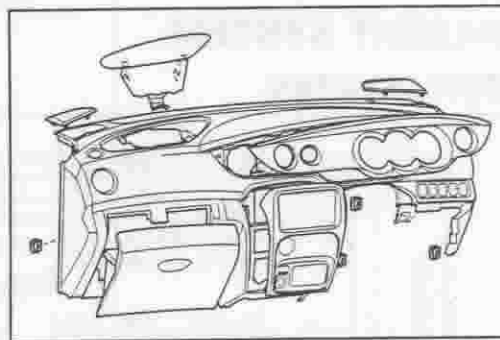
BE-28

REMOVAL OF DAY-LIGHT CONTROL RELAY

1. Turn off the ignition key switch.
2. Remove the instrument panel assembly.

NOTE:

- As regards the removal procedure for the instrument panel, refer to BBE section of the service manual.



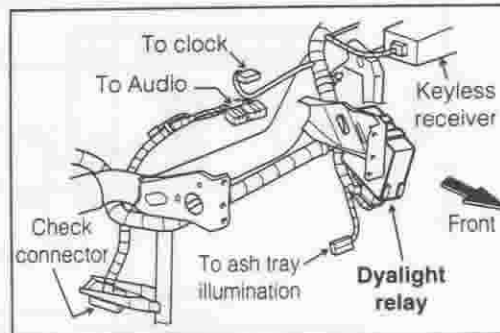
YBE00082-00084

3. Disconnect the connector of the day-light control relay.

NOTE:

- The installation position of the day-light control relay is at the left side of the instrument panel reinforcement.

4. Remove the control relay by loosening the hexagon nut.



YBE00083-00085

CHECK OF DAY-LIGHT CONTROL RELAY

Ensure that the day-light goes on under the condition given below.

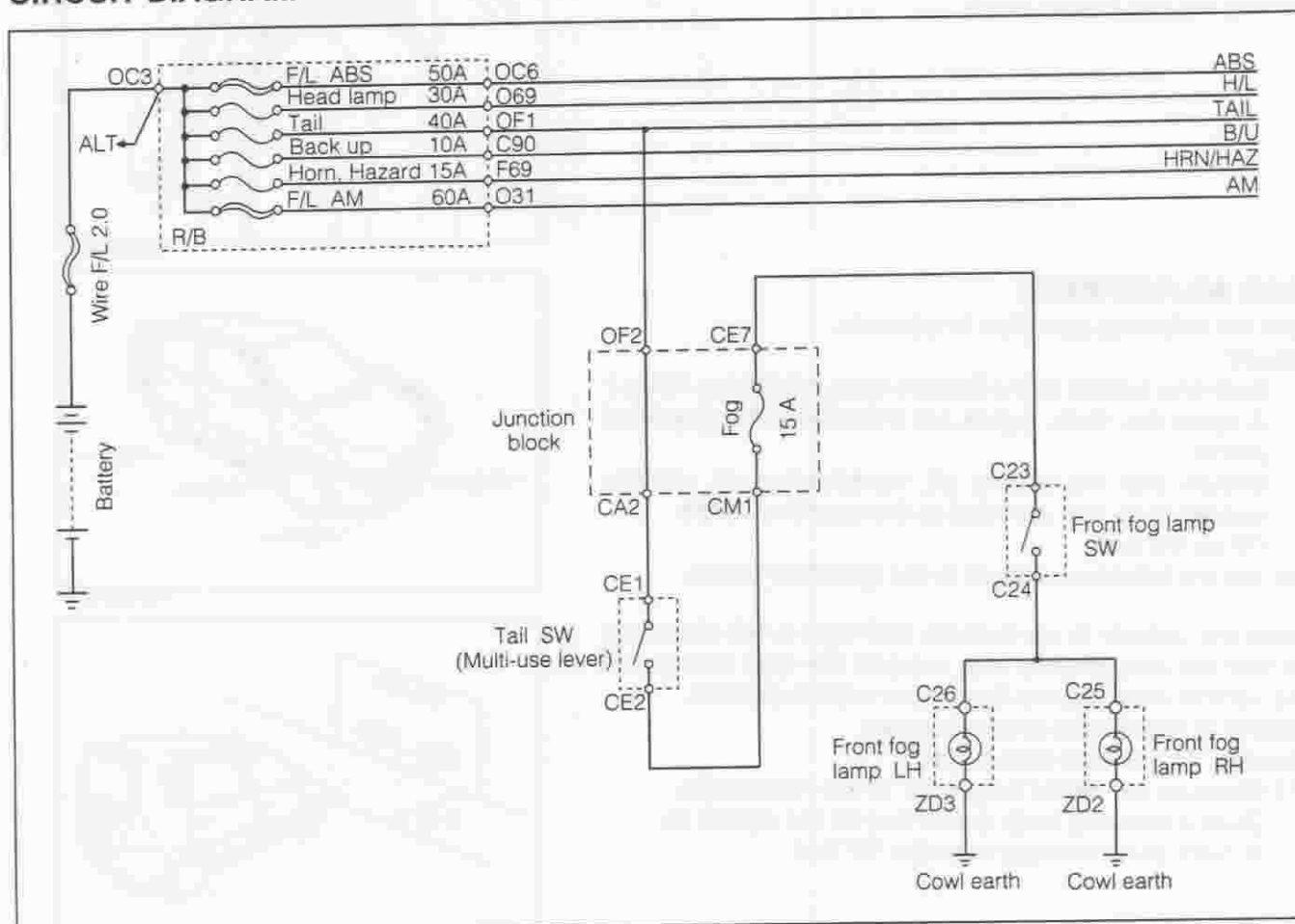
NOTE:

- If any abnormality exists due to the operation, replace the control relay.

Engine	Switch position			Glowing mode		
	Lighting SW (Tail lamp)	Lighting SW (Headlamp)	Dimmer / High / passing SW	Tail & license lamp	Head lamp	
					Lo	High
STOP	Normal glowing mode					
RUN	OFF	OFF	Low position	○	○	×
			High position	○	○	×
			Passing	○	×	○
	ON	OFF	Low position	○	×	×
			High position	○	×	×
			Passing	○	×	○
	ON	ON	Low position	○	○	×
			High position	○	×	○
			Passing	○	×	○

YBE00084-00086

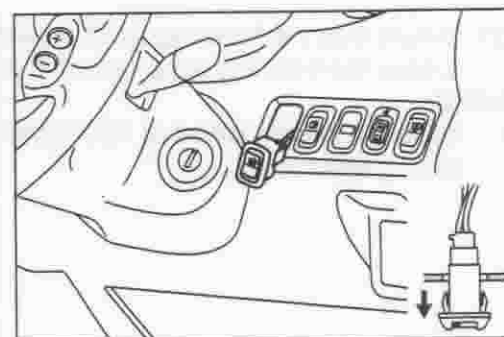
FRONT FOG LAMP CIRCUIT DIAGRAM



YBE00085-00087

REMOVAL OF FRONT FOG LAMP SWITCH

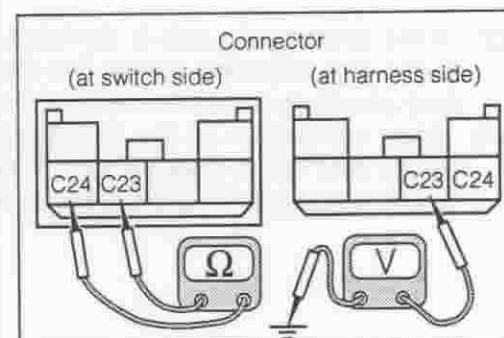
1. Remove the instrument cluster finish lower panel by loosening the attaching screws.
2. Pull out the front fog lamp switch from the instrument panel.
3. Disconnect the connector of the wire harness.



YBE00086-00088

INSPECTION OF FRONT FOG LAMP SWITCH

1. Connect an ohmmeter to the front fog lamp switch side.
Between Terminal C23 and C24:
Continuity exist while the switch is turn ON.
2. Connect a voltmeter to the wire harness side terminal and the body earth.
Between Terminal C23 and body earth:
Battery voltage is applied while the ignition switch (at a multi-use lever) is turned ON.

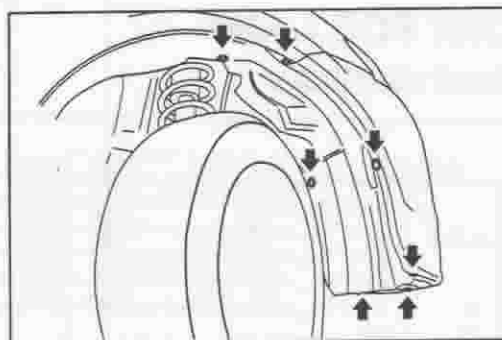


YBE00087-00089

BE-30

REMOVAL OF FRONT FENDER LINER

1. Remove the front fender liner from the front bumper by detaching the clip (seven pcs.)

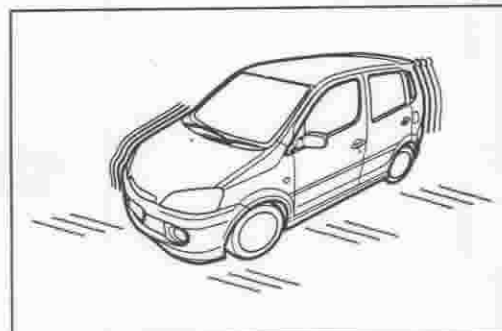


YBE00086-00090

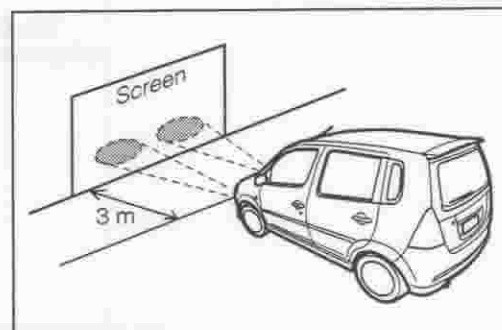
AIMING ADJUSTMENT

Perform the following operation in advance.

1. Weight
 - Seat one person at the Driver's seat. (Weighing 75 kg.)
 - A spare tire, tools, a jack are mounted at the specified points.
 - Ensure that the engine oil, transmission oil, window washer fluid, etc. are filled to the specified levels.
 - Fill up the fuel.
2. Set the tire inflation pressure to the specified values.
3. Rock the vehicle in up-&-down and right-&-left directions so that the suspensions may support the load evenly and the vehicle may assume the proper vehicle posture.
4. Setting of reference points on screen
(Screen: At 3 m from lens surface)
 - (1) Measure the center height "H" of the headlamps.
Draw a front fog lamp cut-off line on the screen at;
A point 244 mm lower from the "H" line.



YBE00089-00091

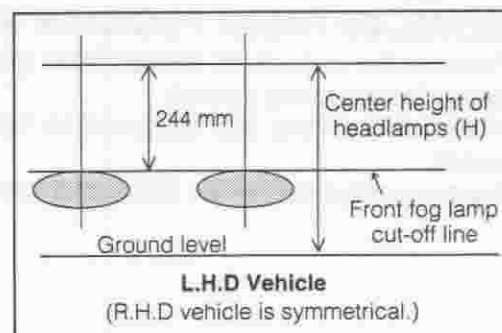


YBE00090-00092

- (2) Ensure that the front fog lamp projected on the screen is below the front fog lamp cut-off line.

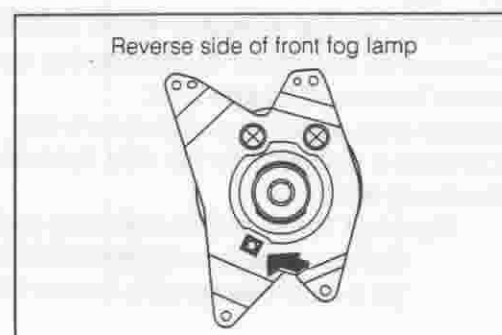
NOTE:

- Keep the engine speed at 1500 rpm or more during the aiming adjustment.



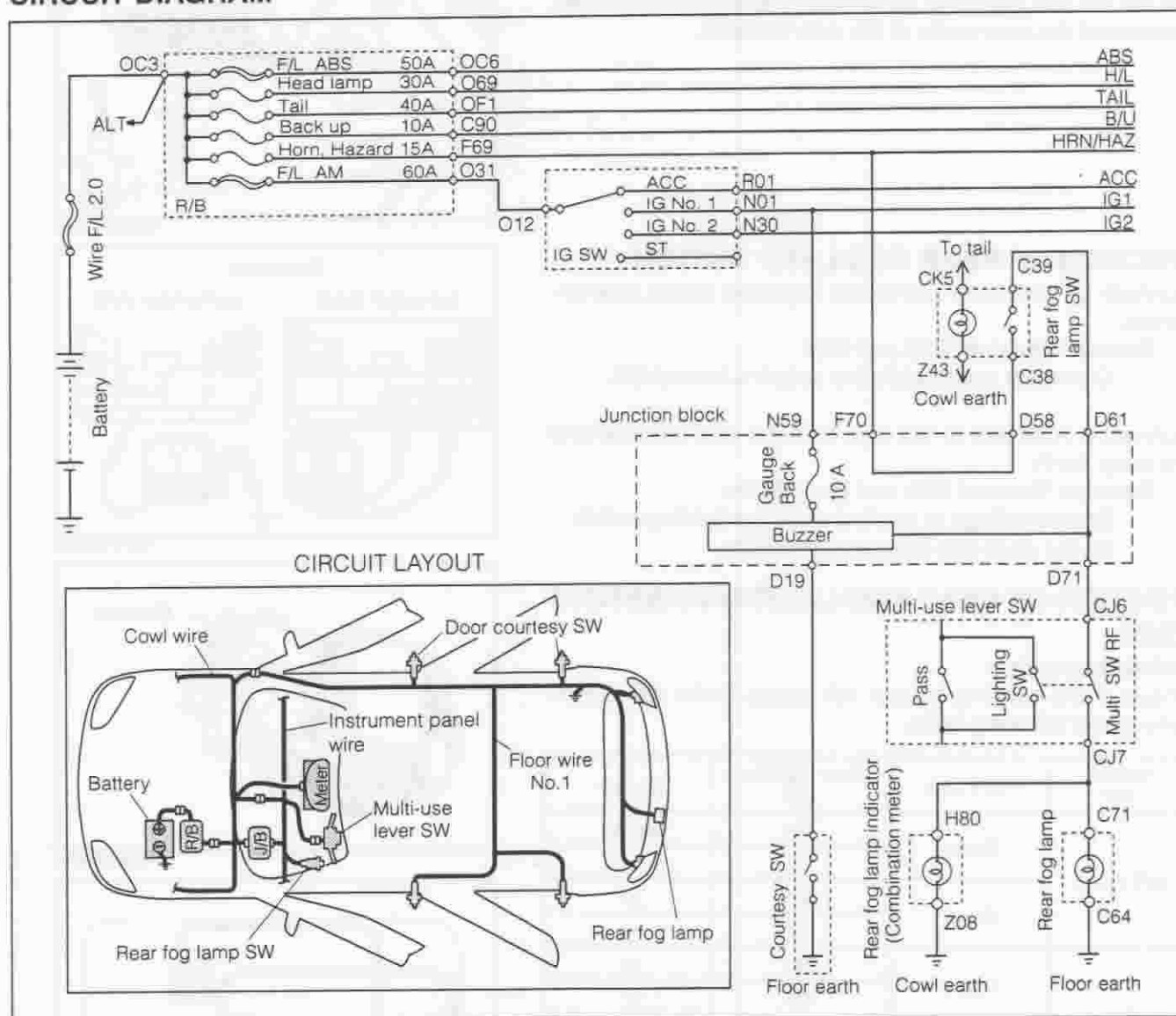
YBE00091-00093

- (3) If the photometric axis is deviated, adjust the photometric axis adjusting screen (for the up-&-down direction) provided at the back side of the front fog lamp.
- (4) After completion of the adjustment, install the front fender liner to the front bumper. Ensure that the specifications at items (1) and (2) above are satisfied.



YBE00092-00094

REAR FOG LAMP CIRCUIT DIAGRAM



YBE00093-00095

TROUBLE SHOOTING HINTS

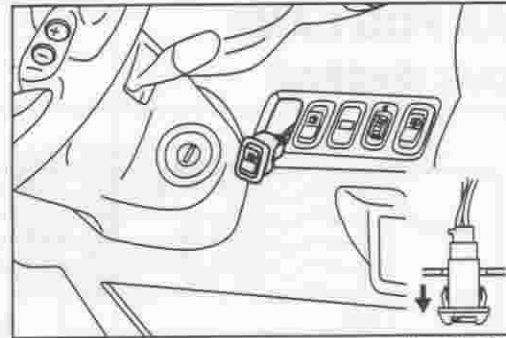
Malfunction phenomena		Possible malfunctioning parts	
Rear fog lamp does not operate.	Headlamp operates properly.	① ③ ④ ⑥	① ② ③ ④ ⑤ ⑥ Rear fog lamp switch Multi-use lever switch Fuse at relay block (Horn, Hazard 15A) Rear fog lamp bulb Buzzer at junction block Poor contact of connector
	Headlamp also does not operate.	② ⑥	
Rear fog light-on-warning buzzer does not operate.		⑤ ⑥	

YBE00094-00096

BE-32

REMOVAL OF REAR FOG LAMP SWITCH

1. Remove the instrument finish lower panel.
2. Pull out the rear fog lamp switch from the instrument panel.
3. Disconnect the connector of the wire harness.



YBE00095-00097

INSPECTION OF REAR FOG LAMP SWITCH

1. Connect an ohmmeter to the rear fog lamp switch side terminals.

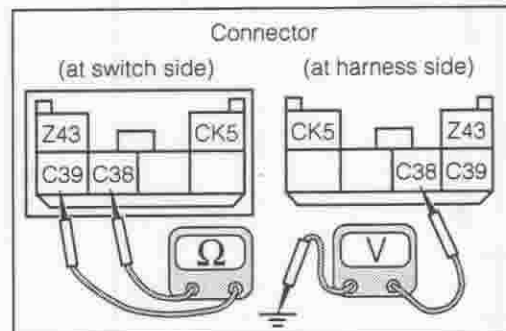
Between Terminal C38 and C39:

Continuity exists while the switch is turned ON.

2. Connect a voltmeter to the wire harness side terminal and the body earth.

Between Terminal C38 and Body Earth:

Battery voltage is applied while the lighting switch (at the multi-use lever) is turned ON.



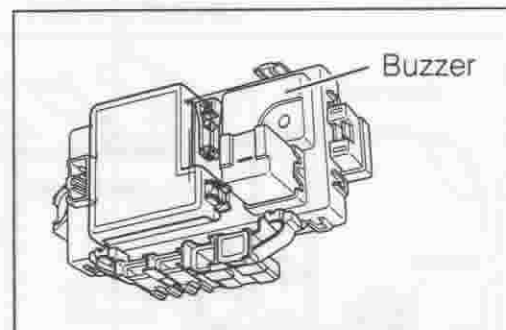
YBE00096-00098

INSPECTION OF REAR FOG LIGHT-ON-WARNING BUZZER

In-Vehicle inspection

1. Ensure if the warning buzzer will sound under the conditions given following table.

Ignition SW	Front door	Rear fog lamp SW	Buzzer
OFF / ACC	Open	On	Sound
		Off	—
	Close	On	—
		Off	—
ON	Open	On	—
		Off	—
	Close	On	—
		Off	—

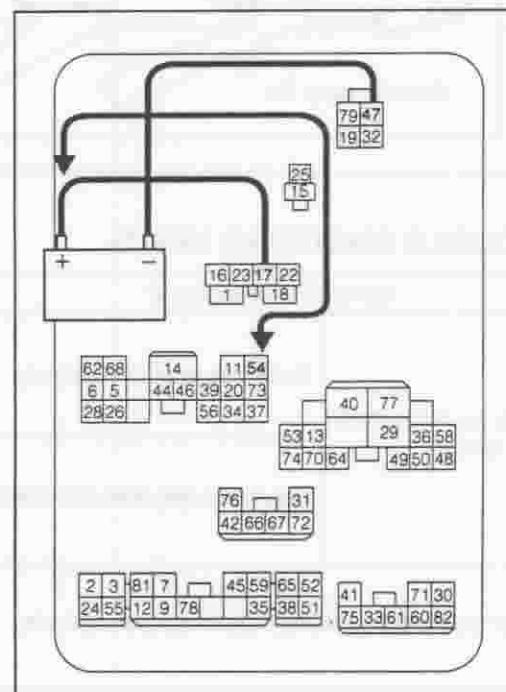


YBE00097-00099

2. If not, check the wiring harness and warning buzzer.

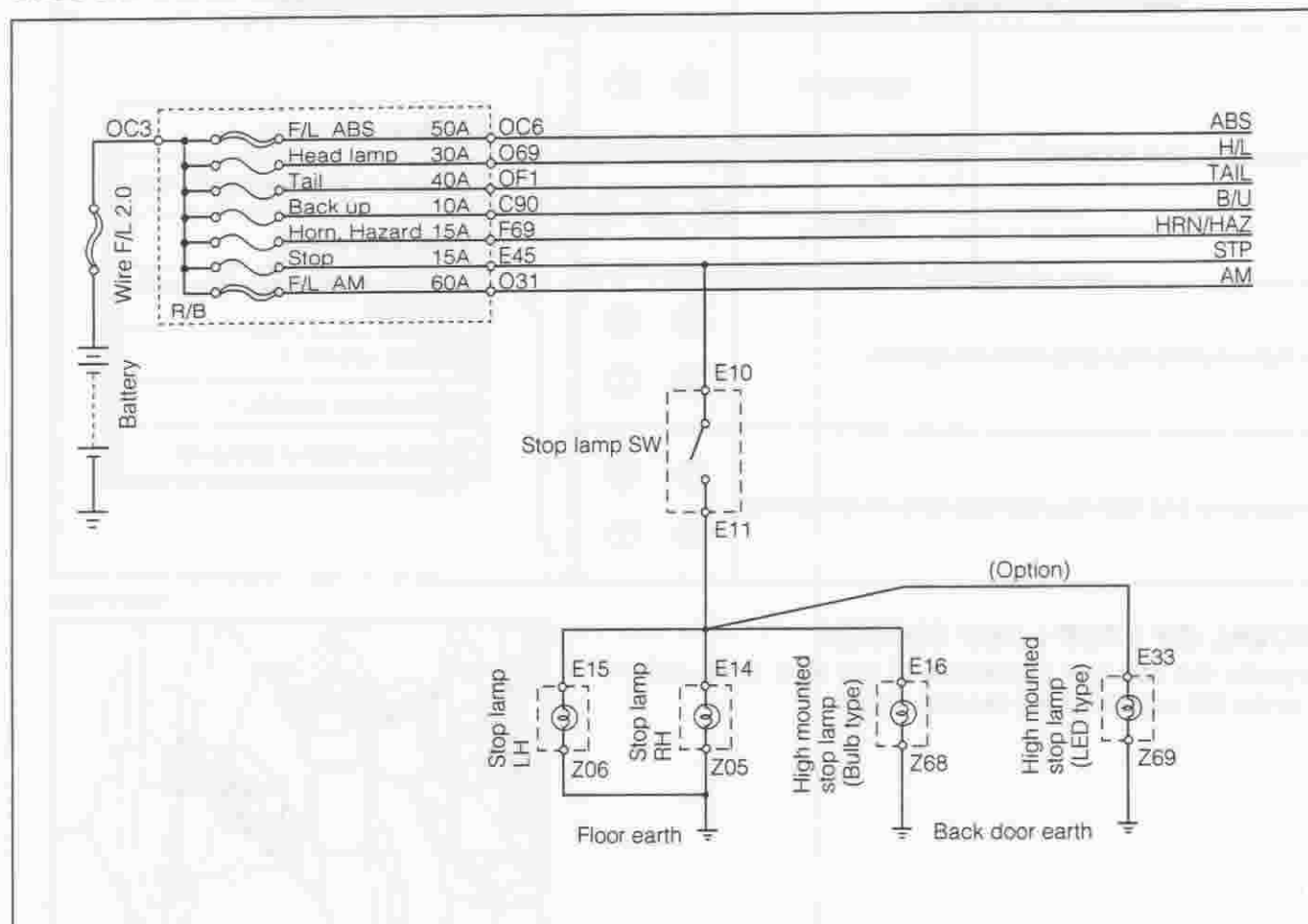
Unit inspection

1. Disconnect the connectors from the junction block.
2. Remove the junction block by removing attaching bolt.
3. Apply a battery voltage to the terminal 17 (+) and the terminal 47 (-).
4. Check that the warning buzzer will sound when the battery (+) (or the terminal 17) is connected to the terminal 54 with a jump wire.



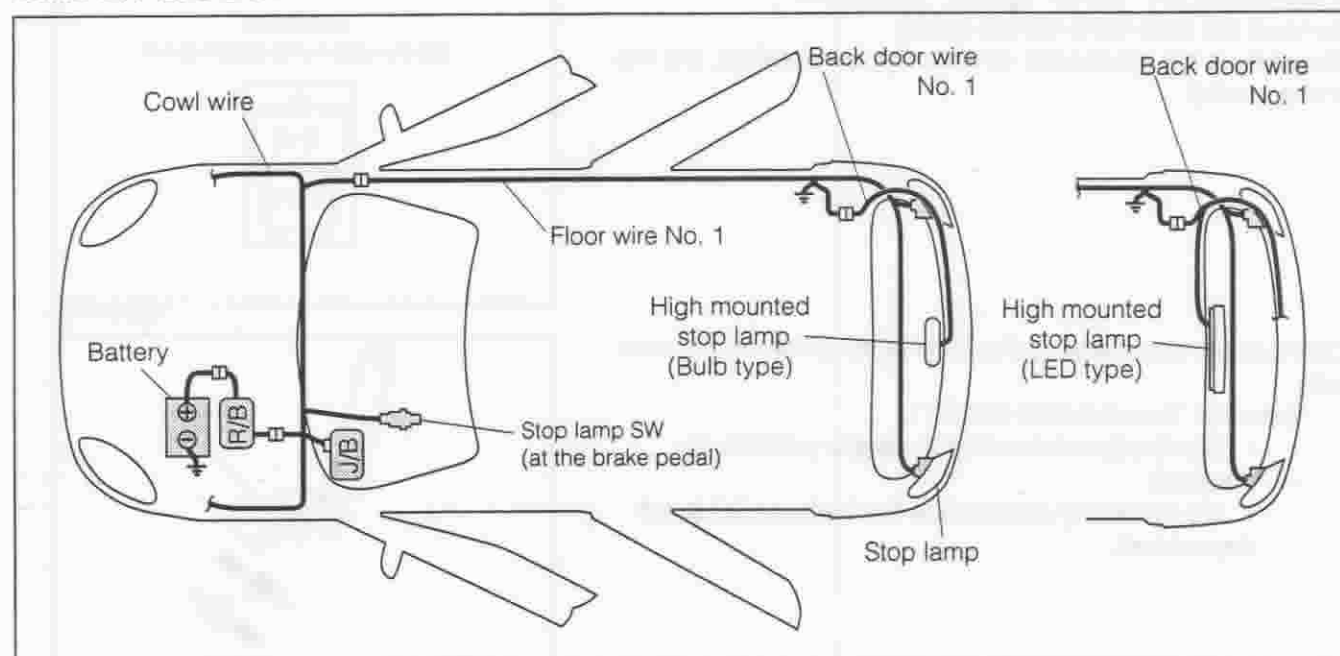
YBE00095-00100

STOP LAMP CIRCUIT DIAGRAM



YBE00099-00101

CIRCUIT LAYOUT



YBE00100-00102

BE-34

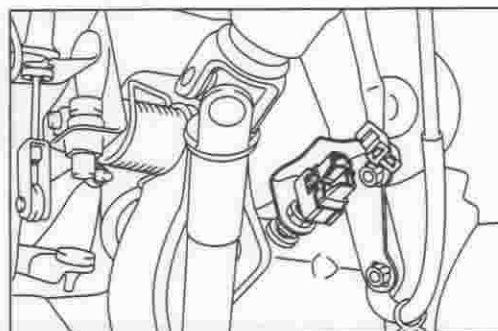
TROUBLE SHOOTING HINTS

Malfunction phenomena		Possible malfunctioning parts																					
Only stop lamp does not operate.	Both sides	⑤ ⑦	} <table><tr><td>①</td><td>Stop lamp switch</td></tr><tr><td>②</td><td>Fuse at relay block (Stop 15A)</td></tr><tr><td>③</td><td>Stop lamp bulb</td></tr><tr><td>④</td><td>High-mounted stop lamp bulb or LED</td></tr><tr><td></td><td></td><td>⑤</td><td>Floor wire No. 1</td></tr><tr><td></td><td></td><td>⑥</td><td>Back door wire No. 1</td></tr><tr><td></td><td></td><td>⑦</td><td>Poor contact of connector</td></tr></table>	①	Stop lamp switch	②	Fuse at relay block (Stop 15A)	③	Stop lamp bulb	④	High-mounted stop lamp bulb or LED			⑤	Floor wire No. 1			⑥	Back door wire No. 1			⑦	Poor contact of connector
	①	Stop lamp switch																					
②	Fuse at relay block (Stop 15A)																						
③	Stop lamp bulb																						
④	High-mounted stop lamp bulb or LED																						
		⑤	Floor wire No. 1																				
		⑥	Back door wire No. 1																				
		⑦	Poor contact of connector																				
	Any one	③ ⑤ ⑦																					
Only high-mounted stop lamp does not operate.		④ ⑤																					
		⑥ ⑦																					
Both stop lamp and high-mounted stop lamp do not operate.		① ②																					
		⑤ ⑦																					

YBE00101-00103

REMOVAL OF STOP LAMP SWITCH

As regards the removal procedure of the stop lamp switch, refer to the BR section of the service manual.

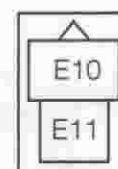


YBE00102-00104

INSPECTION OF STOP LAMP SWITCH

1. Remove the stop lamp switch cover.
2. Disconnect the connector of the stop lamp switch. (At the brake pedal)

Connector
(at the stop lamp switch side)

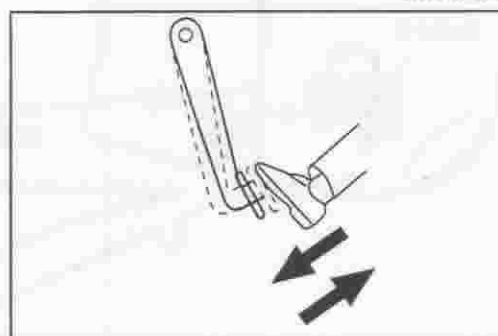


YBE00103-00105

3. Connect an ohmmeter to the stop lamp switch side terminals.

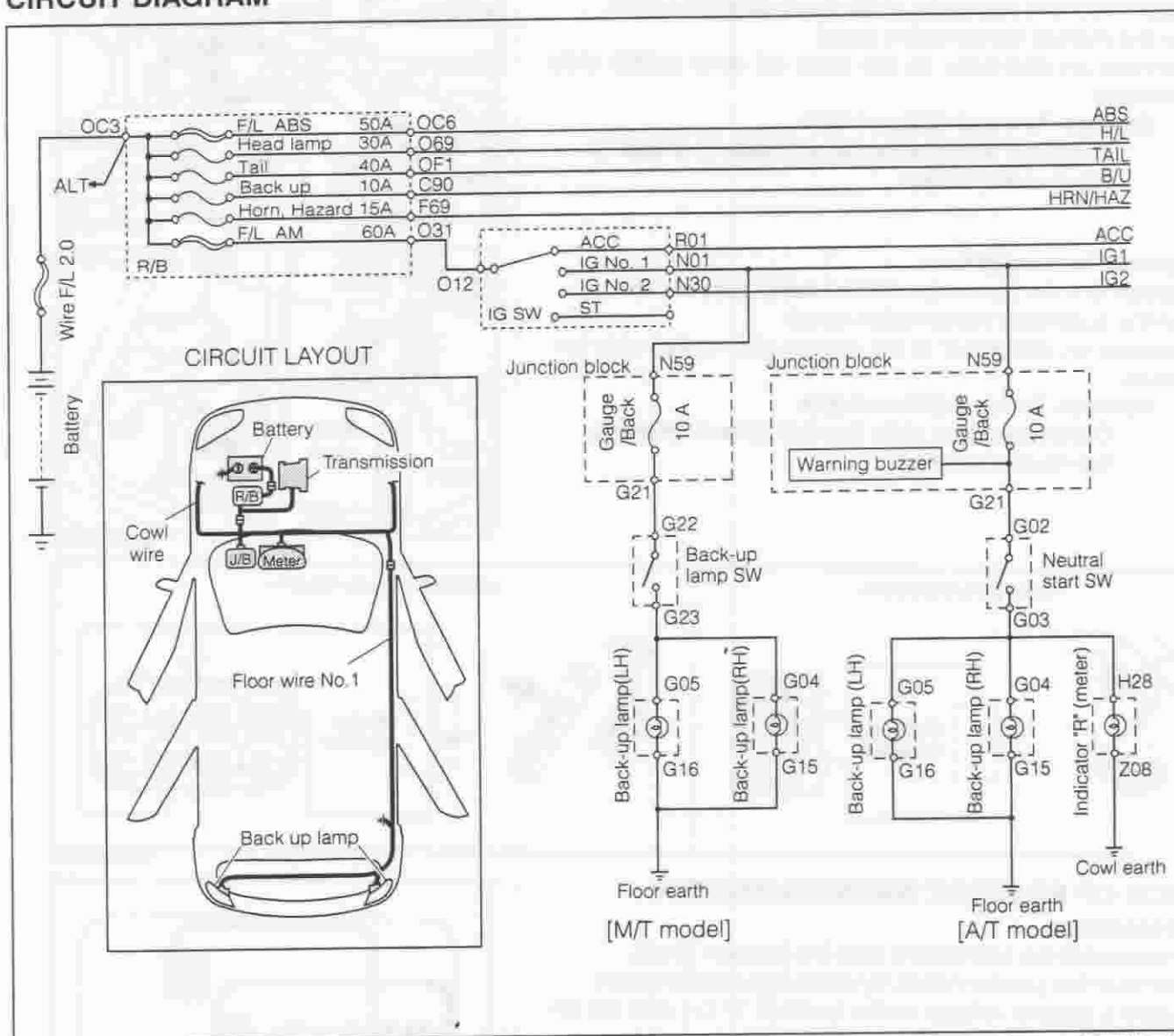
Between Terminal E10 and E11:

- Continuity exists while the brake pedal is depressed.
- No continuity exists while the brake pedal is not depressed.



YBE00104-00106

BACK UP LAMP CIRCUIT DIAGRAM



YBE00105-00107

TROUBLE SHOOTING HINTS

Malfunction phenomena	Possible malfunctioning parts
Back up lamp does not operate.	Back up lamp switch (Manual transmission) Neutral start switch (Automatic transmission) Fusible link at relay block (AM 60 A) Fuse at the junction block (Gauge / Back 10 A) Back up lamp bulb Poor contact of the connector at the back up lamp switch
Warning buzzer does not operate. (Automatic transmission)	Buzzer at the junction block Poor contact of the connector at the back up lamp switch

YBE00106-00108

BE-36

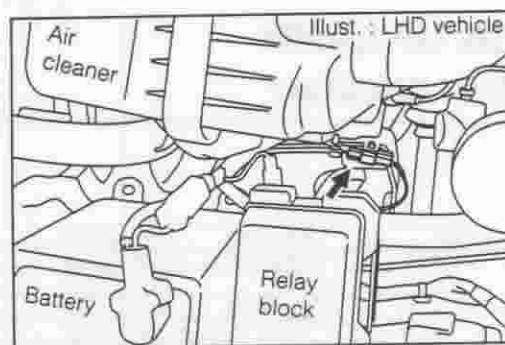
INSPECTION OF BACK UP LAMP SWITCH

<Manual transmission>

1. Disconnect the connector of the back up lamp switch.
(on the manual transmission case)
2. Connect an ohmmeter to the back up lamp switch side terminals.

Between Terminal G22 and G23:

Continuity exists while the shift lever is shifted to the reverse position.



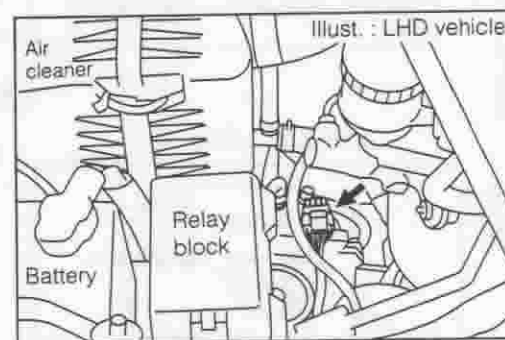
YBE00107-00109

<Automatic transmission>

1. Disconnect the connector of the neutral start switch.
(on the automatic transmission case)
2. Connect an ohmmeter to the neutral start switch side terminals.

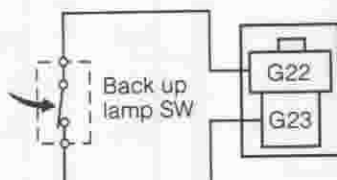
Between Terminal G02 and G03:

Continuity exists while the shift lever is shifted to the reverse position.

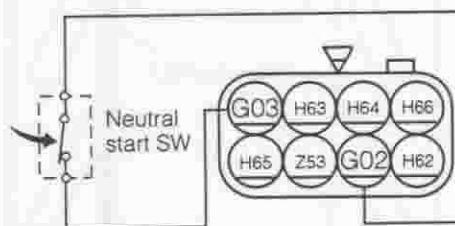
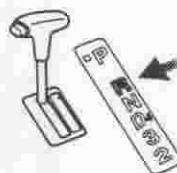


YBE00108-00110

<Manual transmission>



<Automatic transmission>

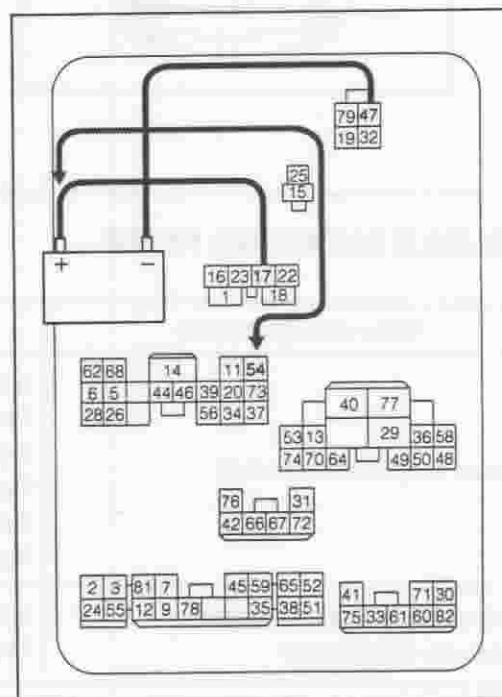


YBE00000-00111

CHECK OF REVERSE WARNING BUZZER

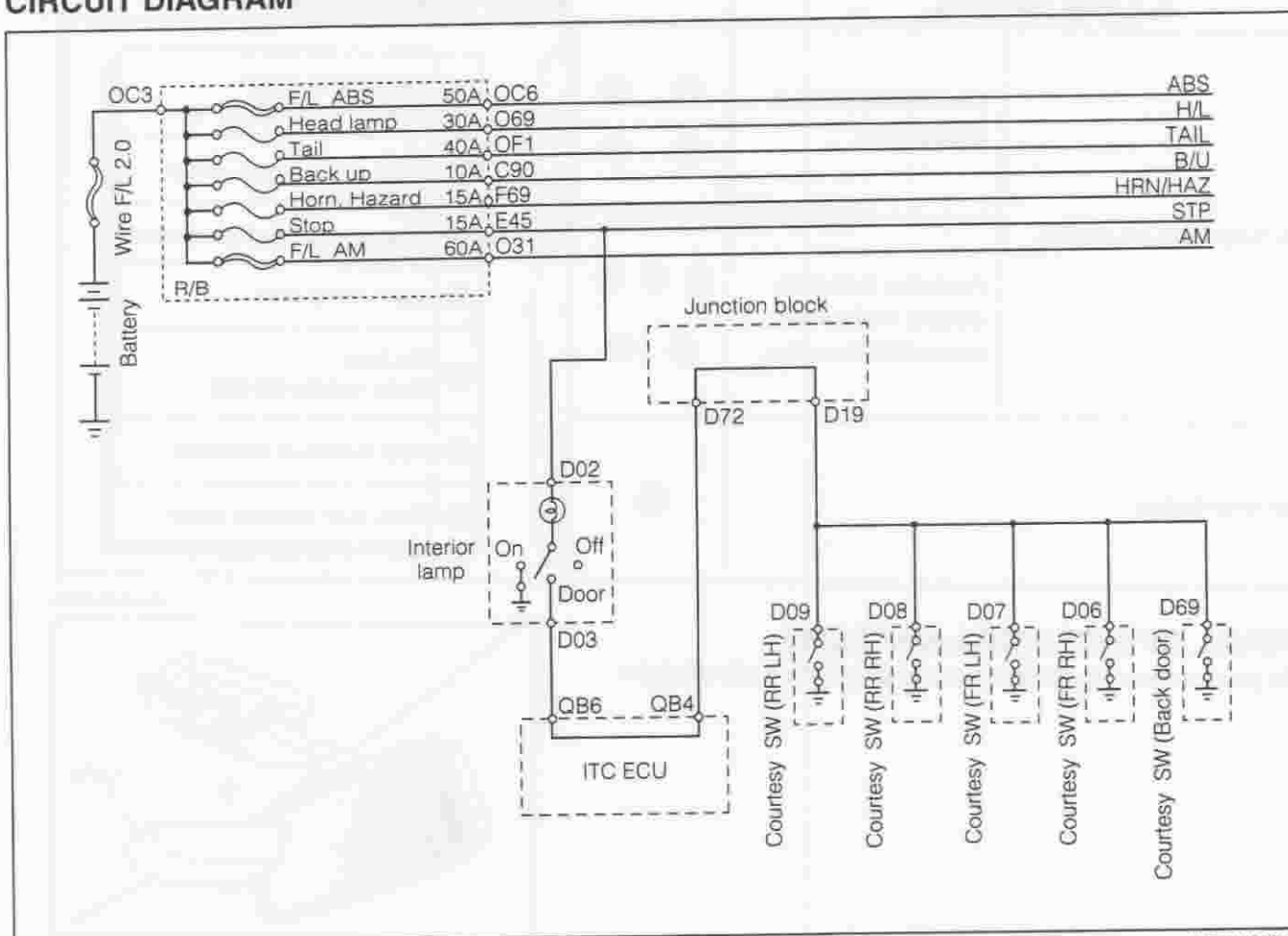
Unit inspection

1. Disconnect the connectors from the junction block.
2. Remove the junction block by removing attaching bolt.
3. Apply a battery voltage to the terminal 17 (+) and the terminal 47 (-).
4. Check that the warning buzzer will sound when the battery (+) (or the terminal 17) is connected to the terminal 54 with a jump wire.



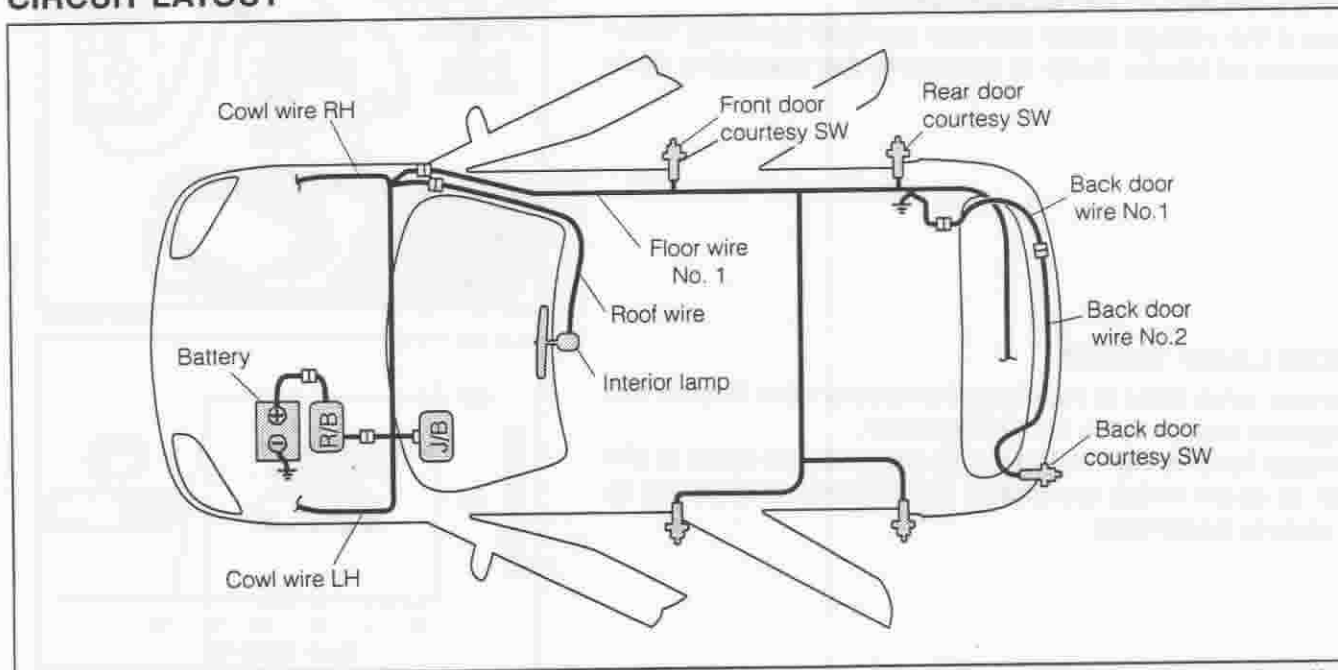
YBE00109-00112

INTERIOR LAMP CIRCUIT DIAGRAM



YBE00110-00113

CIRCUIT LAYOUT



YBE00111-00114

BE-38

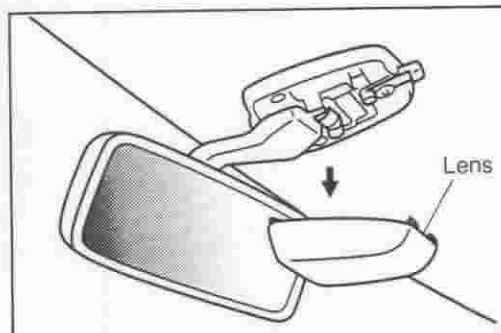
TROUBLE SHOOTING HINTS

Malfunction phenomena		Possible malfunctioning parts	
Interior lamp does not operate.	Interior lamp switch is ON position.	① ③ ④ ⑥	① Interior lamp switch (Built in the interior lamp) ② Front door courtesy switch ③ Fuse at relay block (Stop 15A) ④ Interior lamp bulb ⑤ ITC ECU (Refer to page BE-58) ⑥ Poor contact of connector ⑦ Back door courtesy switch
	Front door is opened with the interior lamp switch DOOR position.	① ② ③ ④ ⑥	
Interior lamp flashes.		⑤	

YBE00112-00115

REMOVAL OF INTERIOR LAMP LENS

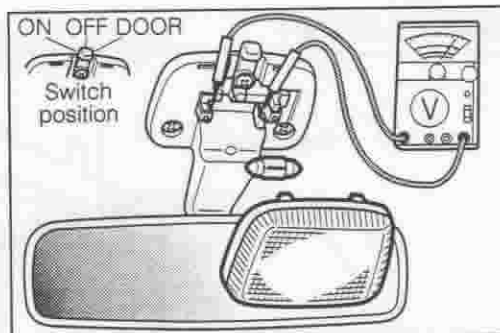
Lightly pry the lens to detach it and pull out the bulb straight.



YBE00113-00116

INSPECTION OF INTERIOR LAMP

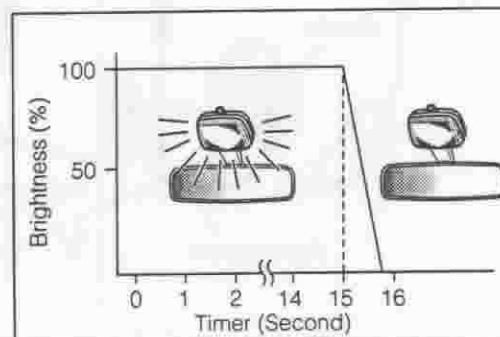
Ensure if the voltage exists between the bulb terminals, when the switch of interior lamp is located to the respective position.



YBE00114-00117

ROOM LAMP TIMER

The room lamp timer is illuminated when any door is open with the ignition switch set to the OFF position. The room lamp is illuminated for 15 seconds and starts to dim when all doors which are closed and locked are unlocked by the keyless transmitter.



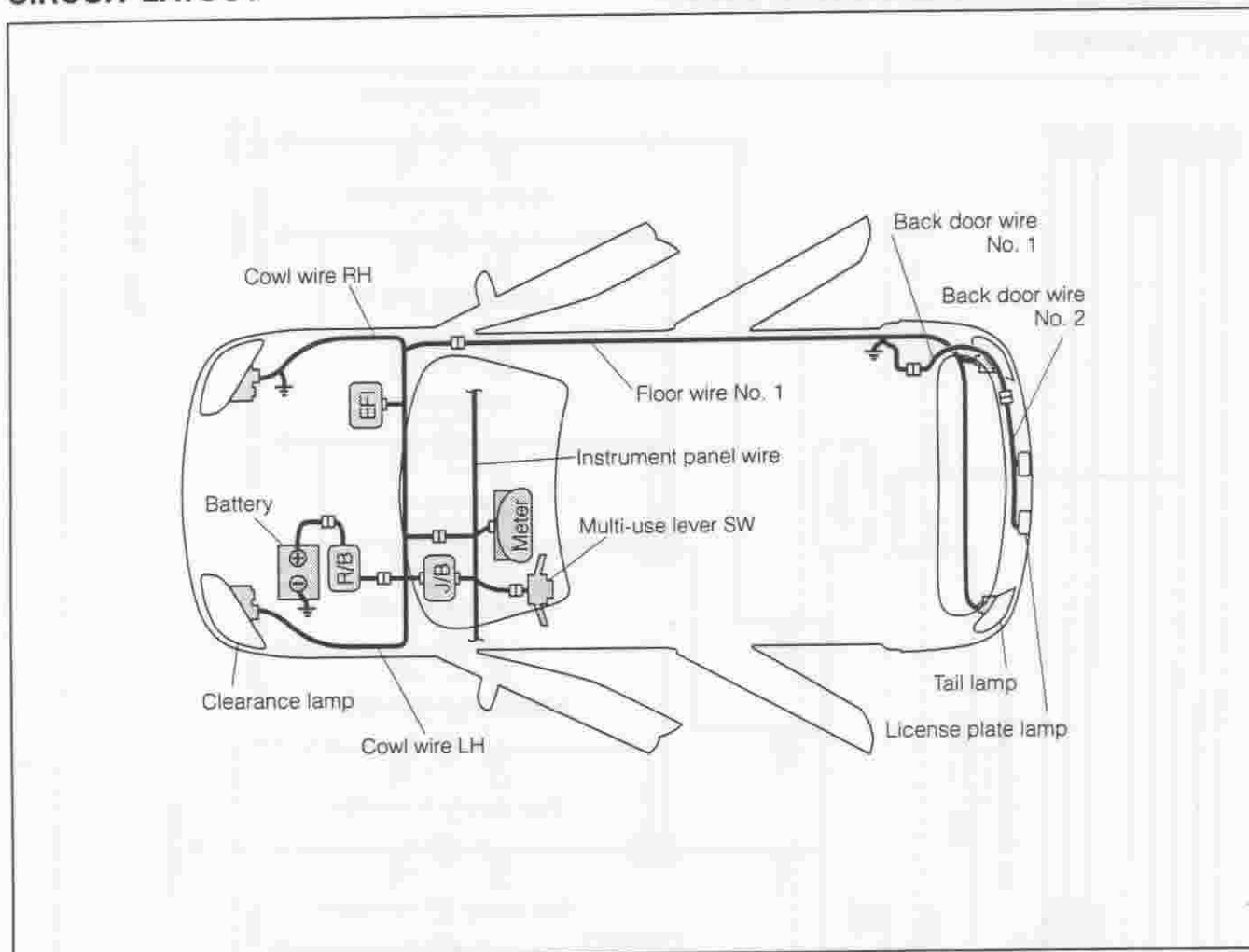
YBE00168-00176

The diagram illustrates the rear lighting and electrical system of a vehicle. It shows the connection of various components to a battery and ground. Key components include:

- Inputs/Outputs:** ABS, H/L, TAIL, B/U, HRN/HAZ, ACC, IG1, IG2.
- Relays and Switches:** F/L ABS (50A), Head lamp (30A), Tail (40A), Back up (10A), Horn/Hazard (15A), F/L AM (60A), R/B, ALT, Wire F/L 2.0, Battery, Tail SW (Multi-use lever), Buzzer, Junction block.
- Wiring Details:** The diagram shows the wiring for the rear wiper SW illumination, Rear fog lamp SW illumination, Rear defogger SW illumination, Steer shift SW illumination, Meter illumination, Tuner illumination, Ash tray illumination, Clearance lamp RH, License plate lamp RH, License plate lamp LH, Tail lamp RH, Tail lamp LH, Heater control illumination, Floor console illumination, and various other lights and switches.
- Labels:** The diagram is labeled "Illustration: RHD vehicle".

BE-40

CIRCUIT LAYOUT



YBE00116-00119

TROUBLE SHOOTING HINTS

Malfunction phenomena		Possible malfunctioning parts
Tail lamp does not go on.	Any one	Tail lamp bulb (burnt out) Poor contact at the connector of the tail lamp
	Both side	Open wire at the harness wire (Floor wire No.1)
License plate lamp does not go on.	Any one	License plate lamp bulb (burnt out) Poor contact at the connector of the rear fog lamp
	Both side	Open wire at the harness wire (Back door wire No.1 / No.2)
No lamp goes on.		Open wire at the harness wire (Floor wire No.1) Tail fuse at the junction block (blown) Multi-use lever switch (Lighting switch)

YBE00117-00120

REMOVAL OF MULTI USE LEVER SWITCH

1. Turn OFF the ignition switch.
2. Disconnect the battery ground cable from the negative (-) terminal.

NOTE:

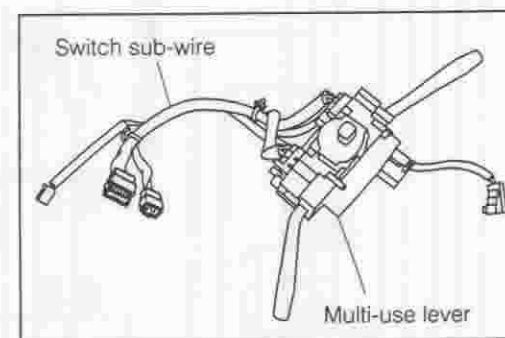
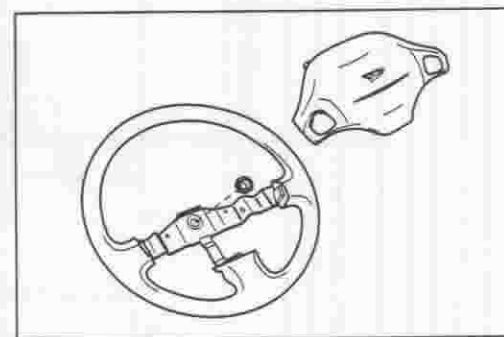
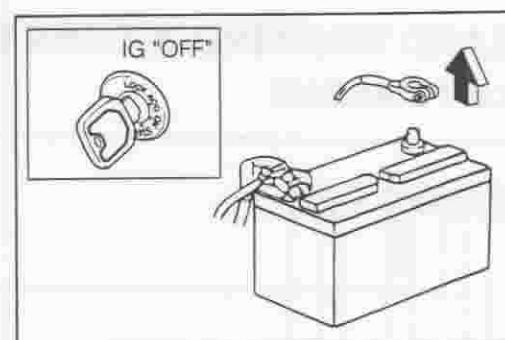
- In case of air bag equipped vehicle, wait for at least 60 seconds to prevent the air bag from the deployment.

CAUTION:

- When the negative (-) terminal of the battery is detached, the memory of the ECU control for each system will be erased at the same time.

3. Remove the steering horn pad and the steering wheel.
4. Remove the instrument finish lower panel and the steering column cover.

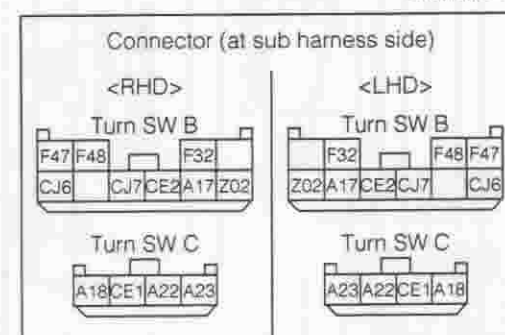
5. Disconnect the connectors between the cowl wire harness and the multi-use lever switch sub-wire.
6. Remove the multi-use lever switch by loosening the attaching screws.



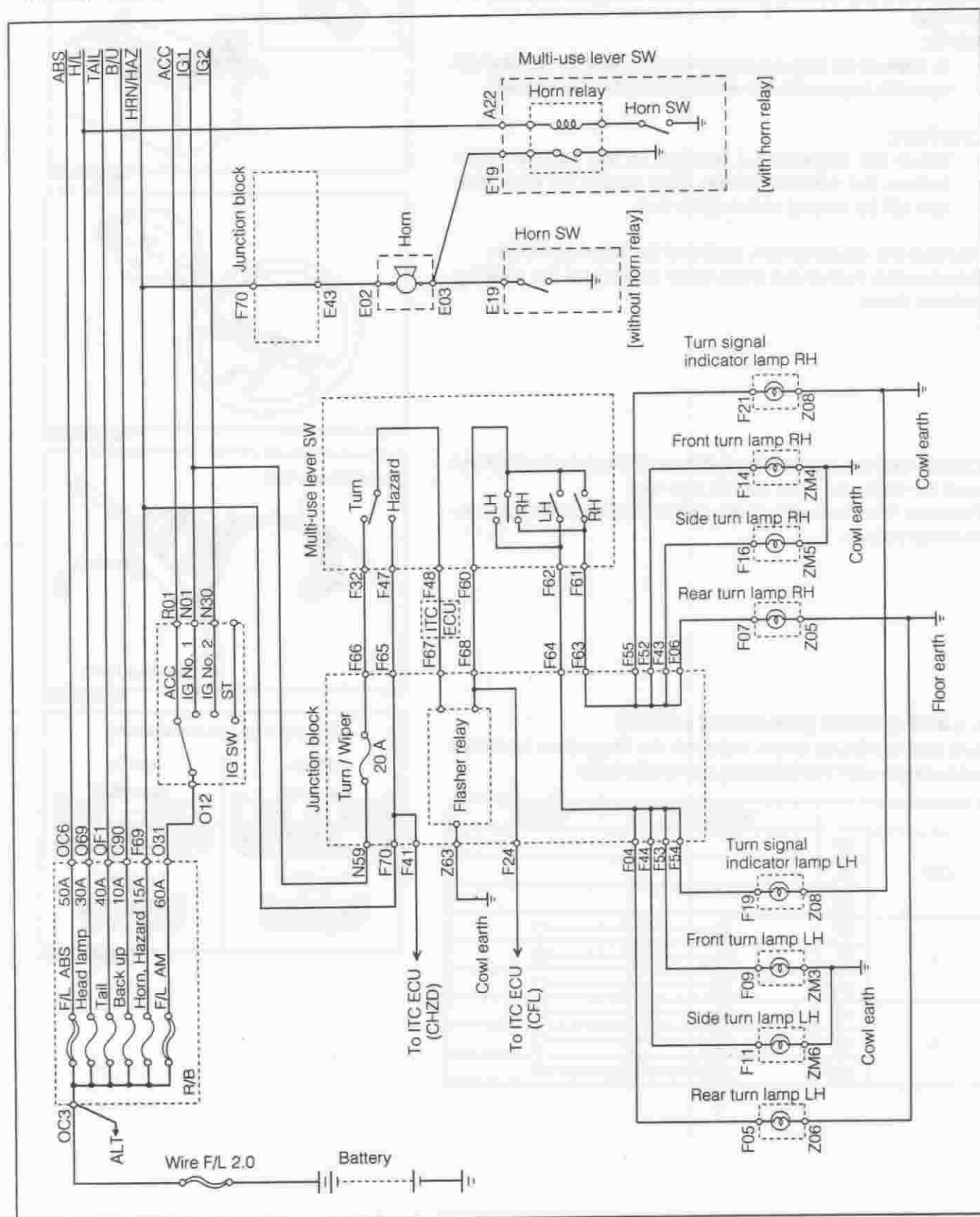
TAIL LAMP SWITCH (MULTI-USE LEVER)

Ensure that continuity exists between the respective terminals in accordance with the following continuity table.

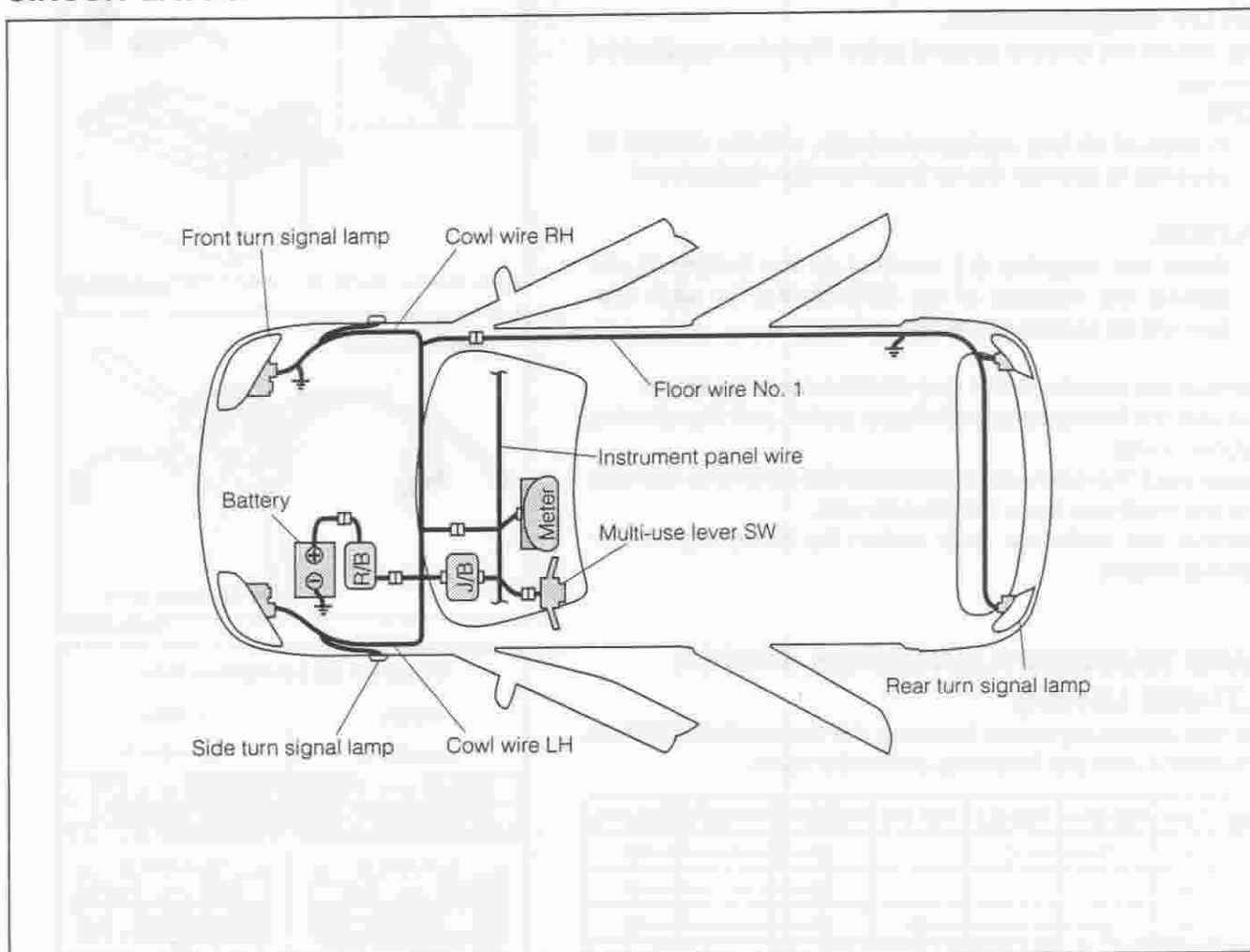
		TB (CE1)	S (CE2)
OFF	HF		
	HL		
	HU		
I	HF	○	○
	HL	○	○
	HU	○	○
II	HF	○	○
	HL	○	○
	HU	○	○



CIRCUIT DIAGRAM



CIRCUIT LAYOUT



YBE00123-00126

TROUBLE SHOOTING HINTS

Malfunction phenomena	Possible malfunctioning parts	
Neither turn signal lamp nor hazard warning lamp operates.	③	⑨
Turn signal lamp does not operate. (Hazard warning lamp operates properly.)	①	④
	⑥	⑨
Hazard warning lamp does not operate. (Turn signal lamp operates properly.)	②	⑤ ⑨
Flashing cycle is shorter than normal state.	③	⑤ ⑨
The lamp does not flash.	④	⑨
Turn signal indicator does not operate.	⑧	⑨

- ① Multi-use lever (Turn signal switch)
- ② Multi-use lever (Hazard switch)
- ③ Flasher relay
- ④ Fusible link at relay block (AM 60A)
- ⑤ Fuse at relay block. (Horn, Hazard 15A)
- ⑥ Fuse at junction block. (Turn, Wiper 20A)
- ⑦ Turn signal lamp bulb
- ⑧ Turn signal indicator bulb
- ⑨ Poor contact of connector

YBE00124-00127

BE-44

REMOVAL OF MULTI-USE LEVER SWITCH

1. Turn OFF the ignition switch.
2. Disconnect the battery ground cable from the negative (-) terminal.

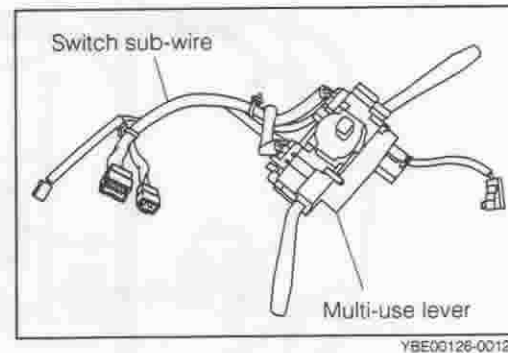
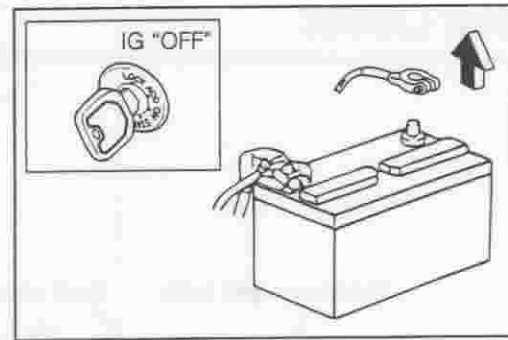
NOTE:

- In case of air bag equipped vehicle, wait for at least 60 seconds to prevent the air bag from the deployment.

CAUTION:

- When the negative (-) terminal of the battery is detached, the memory of the ECU control for each system will be erased at the same time.

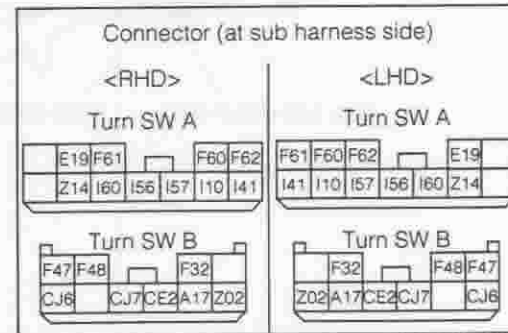
3. Remove the steering horn pad and the steering wheel.
4. Remove the instrument finish lower panel and the steering column cover.
5. Disconnect the connectors between the cowl wire harness and the multi-use lever switch sub-wire.
6. Remove the multi-use lever switch by loosening the attaching screws.



HAZARD WARNING/TURN SIGNAL SWITCH (MULTI-USE LEVER)

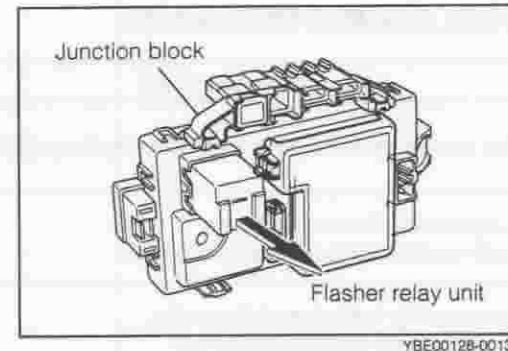
Ensure that continuity exists between the respective terminals in accordance with the following continuity table.

Hazard	Turn	F60 (F-)	F62 (L)	F61 (R)	F32 (BT)	F47 (BH)	F48 (F+)
OFF	L	○	○		○		○
	N				○		○
	R	○		○	○		○
ON		○	○	○		○	○

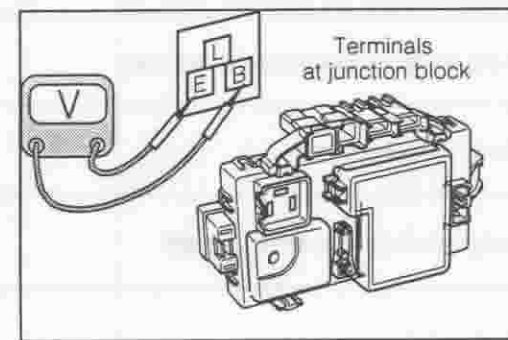


TURN SIGNAL FLASHER RELAY

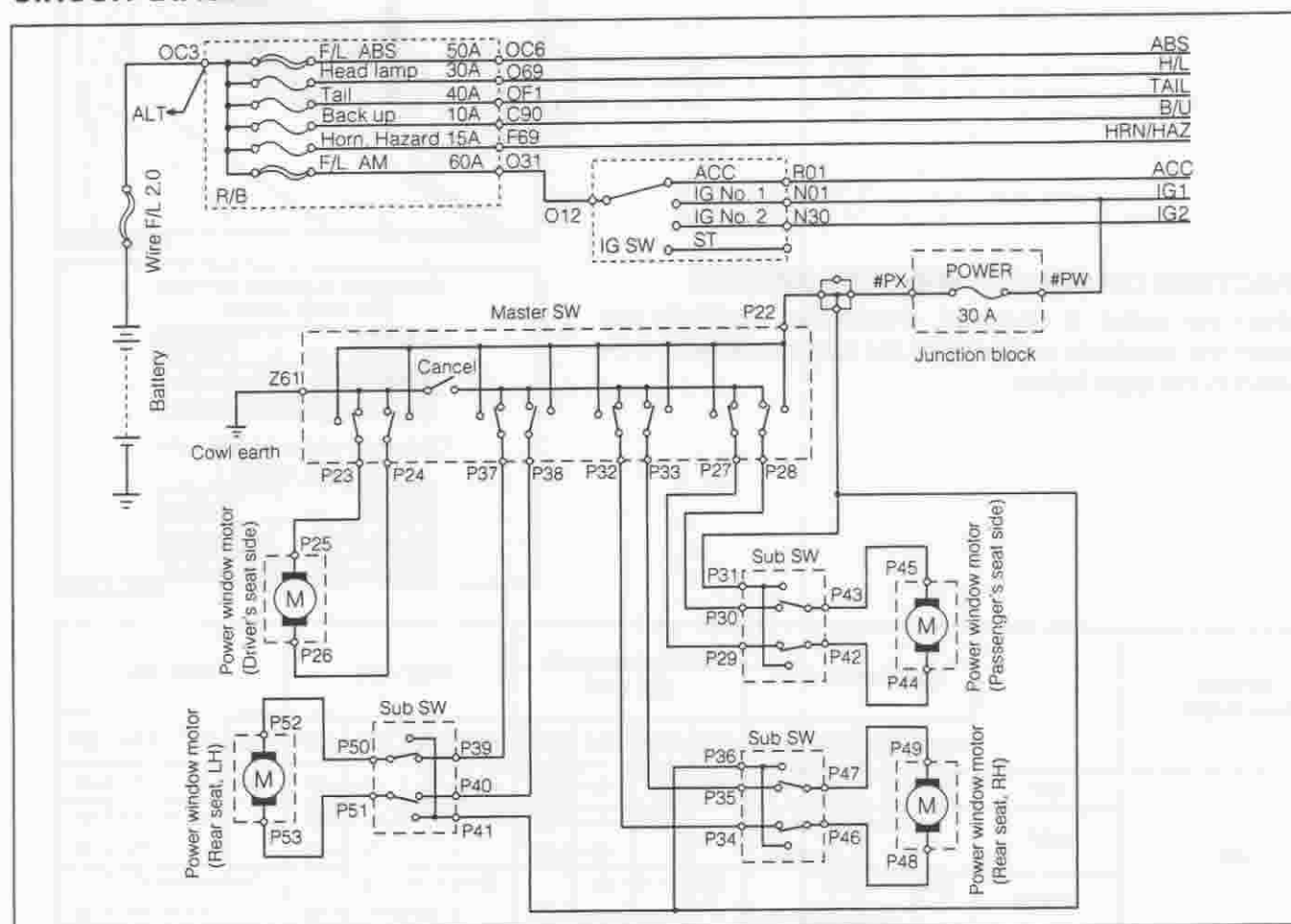
1. Pull out the flasher unit from the junction block.
2. Ensure if the battery voltage is applied to the respective terminals at junction block connector when the ignition switch and turn signal switch are turned on.



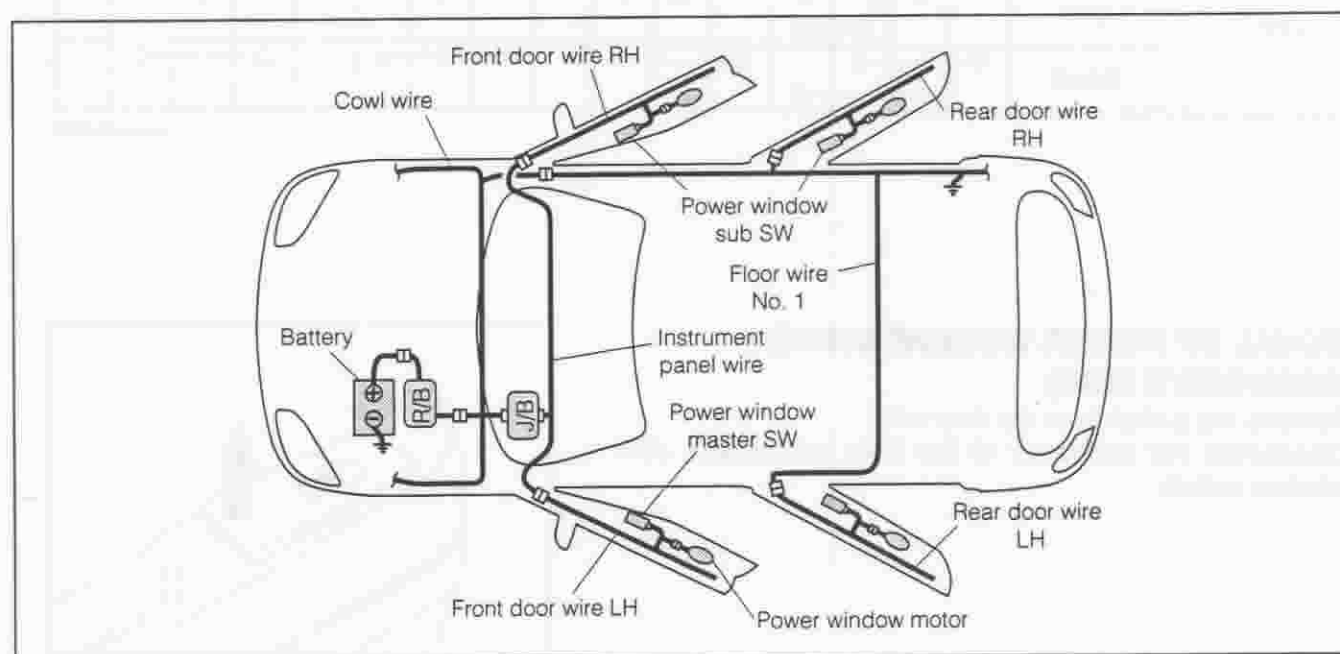
3. Ensure if the battery voltage is applied to the terminals when hazard switch is turned ON.
4. Connect the flasher unit to the junction block connector. Under the condition, if the flasher unit will not work, then the unit is failure.



POWER WINDOW CIRCUIT DIAGRAM



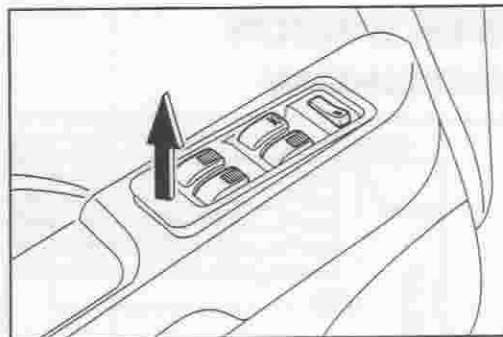
CIRCUIT LAYOUT



BE-46

REMOVAL OF MASTER SWITCH (DRIVER'S SIDE)

1. Remove the switch from the door trim.



YBE00132-00135

INSPECTION OF POWER WINDOW SWITCH

1. When the switch is operated, ensure that continuity between the terminals conforms to the requirements as indicated in the table below.

Connector at master SW side
(For RHD vehicle)

P37	P38			P33	P32
P28	P27	P22	Z61	P23	P24

Connector at master SW side
(For LHD vehicle)

P37	P38			P33	P32
P24	P23	P22	Z61	P27	P28

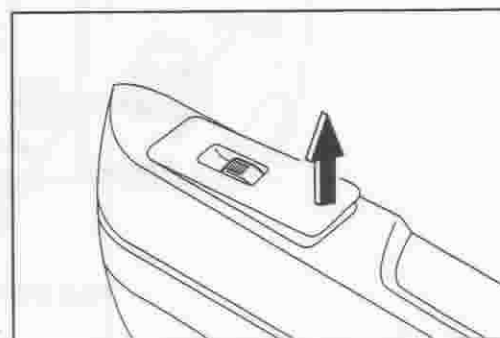
YBE00133-00136

Window lock switch		Driver's seat side				Front passenger's seat side				Rear right				Rear left			
		P22	P23	P24	Z61	P22	P27	P28	Z61	P22	P32	P33	Z61	P22	P37	P38	Z61
ON	UP	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
	OFF		○—○	○—○	○—○		○—○	○—○	○—○		○—○	○—○	○—○		○—○	○—○	○—○
	DOWN	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
OFF	UP	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○
	OFF		○—○	○—○	○—○		○—○	○—○	○—○		○—○	○—○	○—○		○—○	○—○	○—○
	DOWN	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○	○—○

YBE00000-00137

REMOVAL OF POWER WINDOW SWITCH (PASSENGER'S SIDE)

1. Remove the switch from the door trim.
2. Disconnect the connector of the front passenger's door window switch.



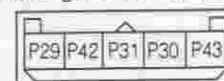
YBE00134-00138

INSPECTION OF POWER WINDOW SWITCH

- When the switch is operated, ensure that continuity between the terminals conforms to the requirements as indicated in the table below.

	P42	P29	P31	P43	P30
UP	○		○	○	○
OFF	○	○		○	○
DOWN	○	○	○	○	

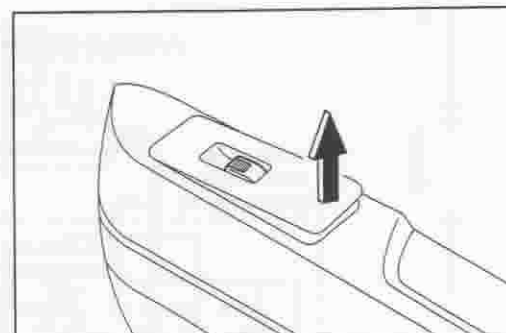
Connector at front passenger's sub SW side



YBE00135-00139

REMOVAL OF POWER WINDOW SWITCH (REAR DOOR SIDE)

- Remove the rear door trim assembly.
- Disconnect the connector of the rear door window switch.



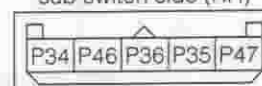
YBE00136-00140

INSPECTION OF POWER WINDOW SWITCH

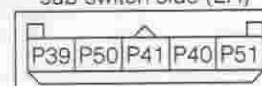
- When the switch is operated, ensure that continuity between the terminals conforms to the requirements as indicated in the table below.

Rear RH	P46	P34	P36	P47	P35
Rear LH	P50	P39	P41	P51	P40
UP	○		○	○	○
OFF	○	○		○	○
DOWN	○	○	○	○	

Connector at rear sub switch side (RH)



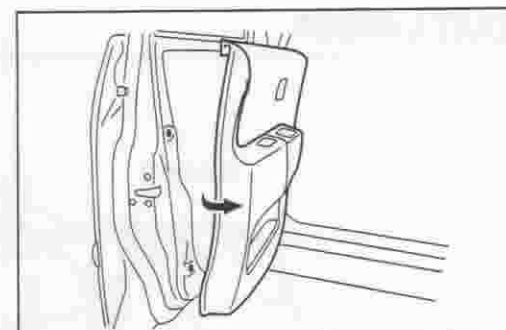
Connector at rear sub switch side (LH)



YBE00137-00141

REMOVAL OF POWER WINDOW MOTOR

- Remove the door trim, service hole cover and the door window regulator. (Refer to the BBE section.)



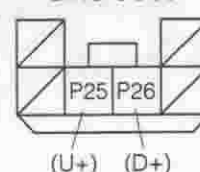
YBE00138-00142

INSPECTION OF POWER WINDOW MOTOR

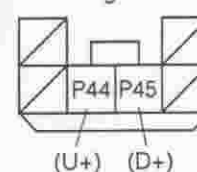
- Apply a battery voltage (12 V) between the following two terminals.
- Ensure that the power window motor operates in accordance with the table below.

Driver's side	P25	P26
Passenger's side	P44	P45
Clockwise	:	:
Counterclockwise	:	:

Driver's side



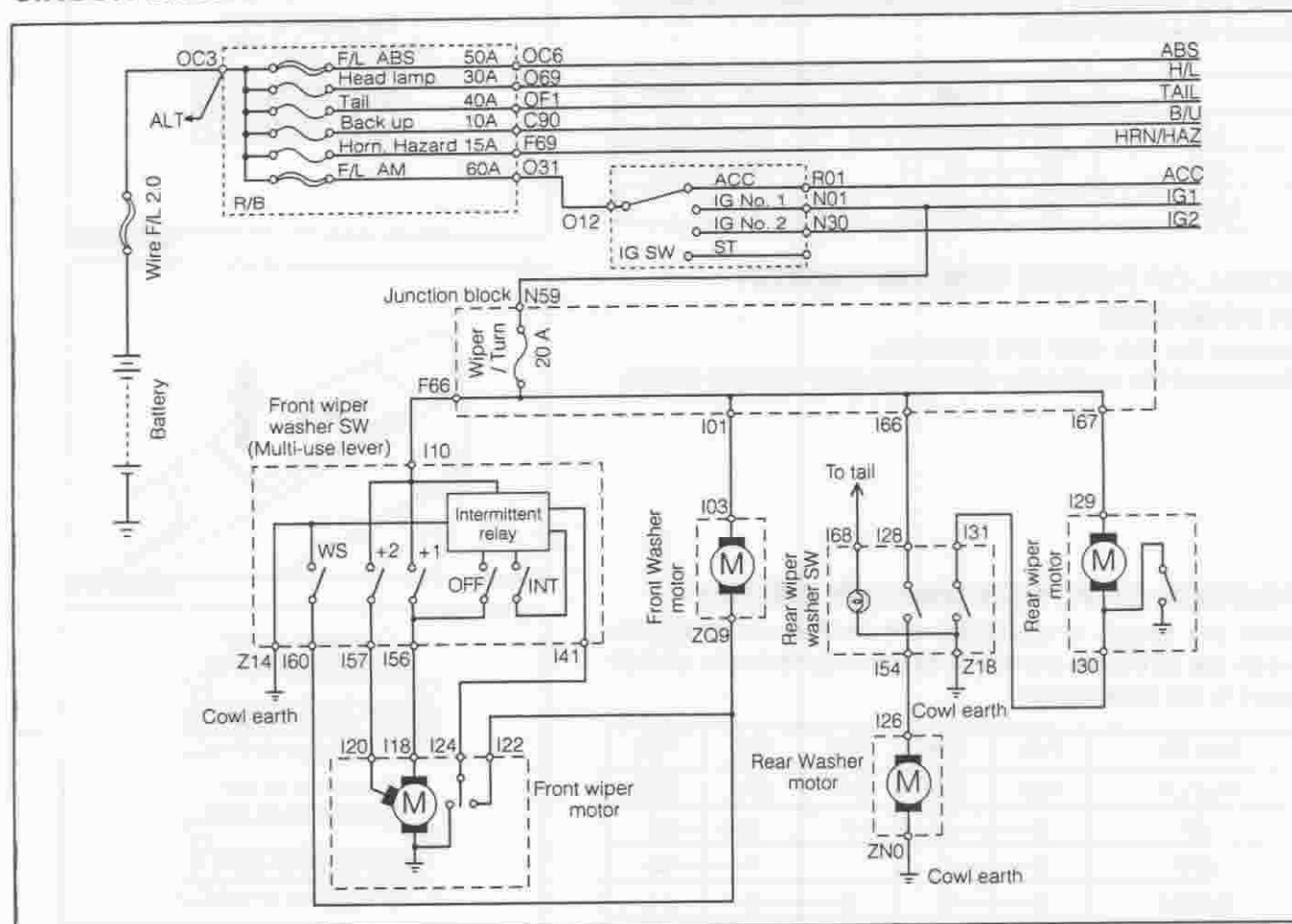
Passenger's side



YBE00139-00143

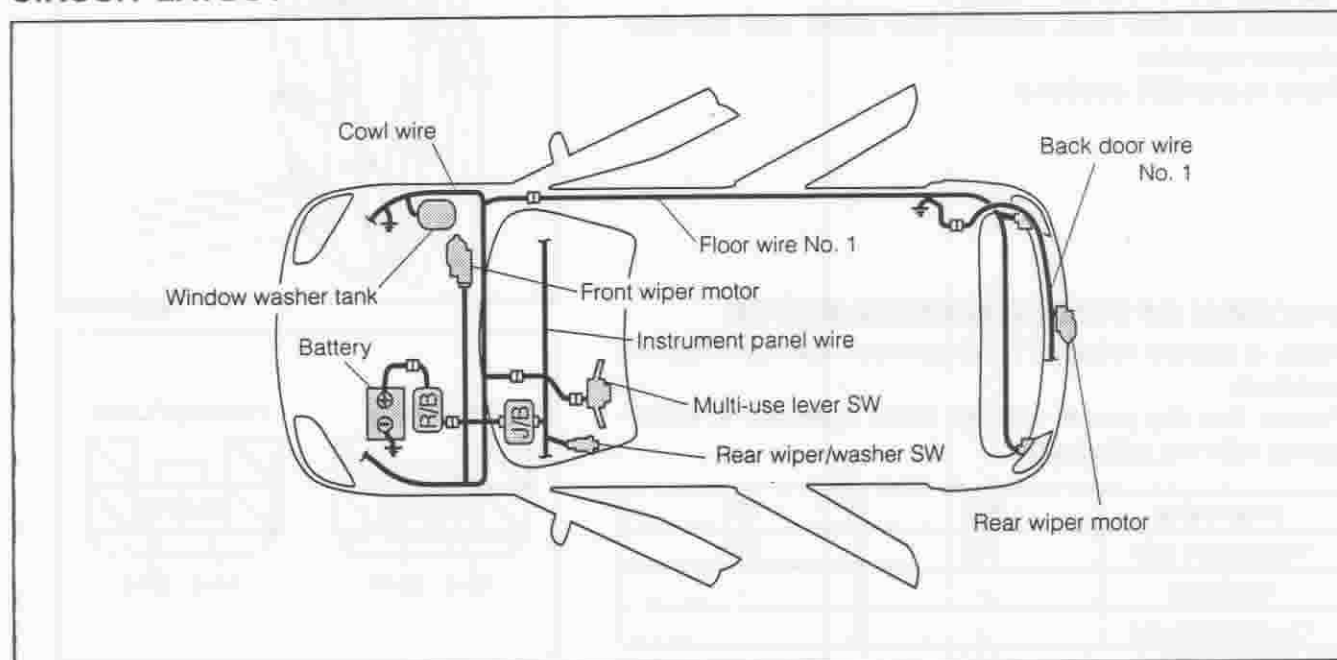
BE-48

WIPER & WASHER CIRCUIT DIAGRAM



YBE00140-00144

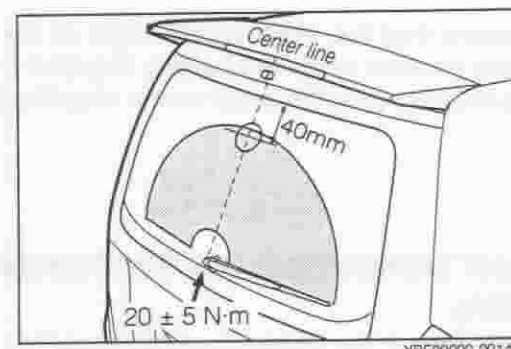
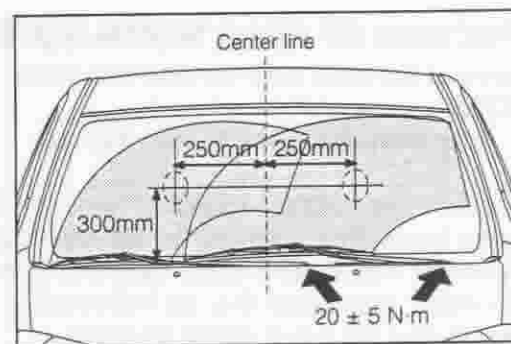
CIRCUIT LAYOUT



YBE00141-00145

ADJUSTMENT OF WIPER ARM AND WASHER NOZZLE

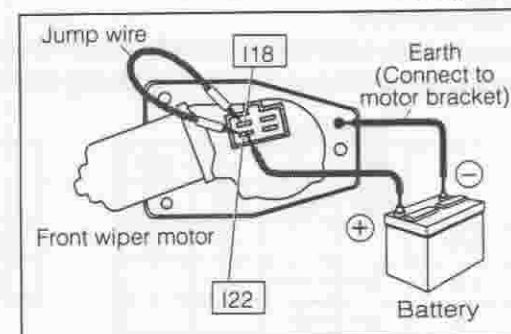
Inspect the wiping area and stationary position of the wiper blade.



INSPECTION OF FRONT WIPER MOTOR

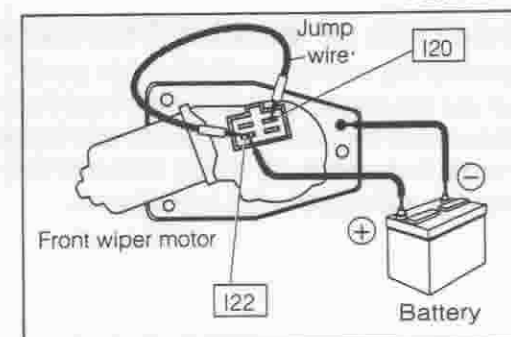
Low speed operation check

1. Apply a battery voltage (12 V) to the terminal I22 (WB) and the wiper motor bracket.
2. Ensure that the wiper operates at the low speed when the terminal I22 (WB) and I18 (+1) are connected with a jump wire.



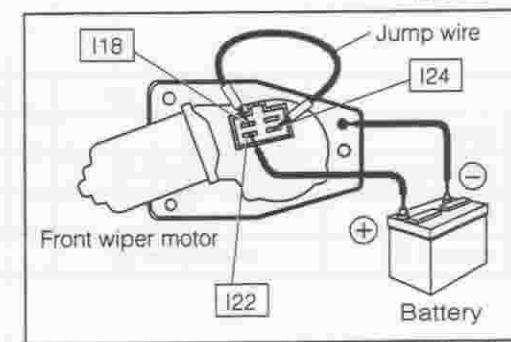
High speed operation check

1. Apply a battery voltage (12 V) to the terminal I22 (WB) and the wiper motor bracket.
2. Ensure that the wiper operates at the high speed when the terminal I22 (WB) and I20 (+2) are connected with a jump wire.



OFF (Auto-stop) operation check

1. Apply a battery voltage (12 V) to the terminal I22 (WB) and the wiper motor bracket.
2. Perform the low speed or high speed check procedure, and after that, disconnect the jump wire.
3. Ensure that the wiper operates to some extent and then stops at the proper position, when the terminal I18 (+1) and I24 (WS) are connected with a jump wire.



BE-50

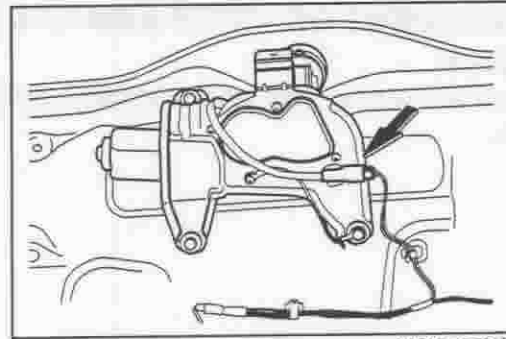
INSPECTION OF REAR WIPER MOTOR

1. Remove the back door service hole cover.

NOTE:

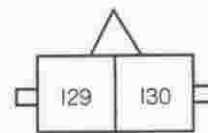
- See BEE section of service manual.

2. Connect the battery negative terminal (-) to the wiper motor body. Also connect the battery negative terminal to the motor connector (-) and battery positive terminal (+) to the motor connector (+), as indicated in the right figure. Ensure that the wiper motor functions.
3. Ensure that the wiper motor stops at the automatic stopping position when the battery negative (-) terminal is disconnected from the wiper motor negative (-) connector.



YBE00146-00151

Connector
(at rear wiper motor side)



YBE00147-00152

FRONT WIPER/WASHER SWITCH (MULTI-USE LEVER)

1. Disconnect the connectors of the switch sub-wire for the multi-use lever.
2. Ensure that continuity exists between the respective terminals in accordance with the following continuity table.

	Wiper switch			
	WB	+2	+1	WS
	F32	I57	I56	I41
OFF			○—○	
LO	○—○			
HI	○—○			

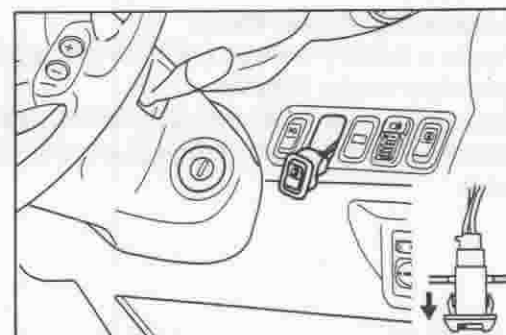
	Washer switch	
	W	E
	I60	Z02
OFF		
ON	○—○	

Connector (at sub harness side)	
<RHD>	<LHD>
Turn SW A	Turn SW A
E19 F61 F60 F62	F61 F60 F62 E19
Z14 I60 I56 I57 I10 I41	I41 I10 I57 I56 I60 Z14
Turn SW B	Turn SW B
F47 F48 F32	F32 F48 F47
CJ6 CJ7 CE2 A17 Z02	Z02 A17 CE2 CJ7 CJ6

YBE00148-00153

INSPECTION OF REAR WIPER/WASHER SWITCH

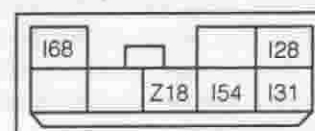
1. Remove the instrument finish lower panel.
2. Pull out the wiper/washer switch from the instrument panel.
3. Disconnect the connector of the wire harness.
4. Ensure that continuity exists between the respective terminals, as indicated in the table below.



YBE00149-00154

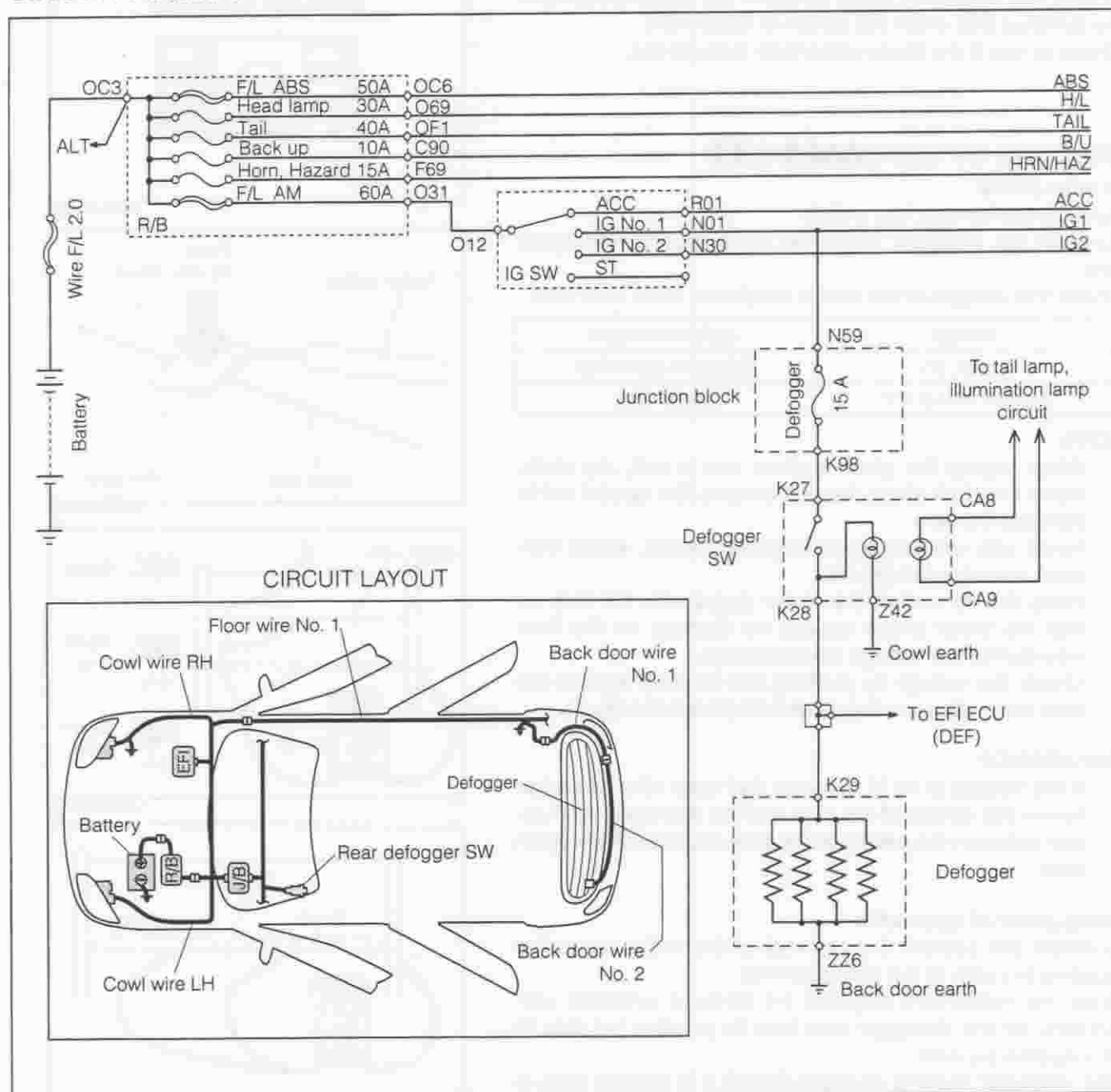
	Z18	I31	I28	I54
OFF				
Wiper ON	○—○			
Washer 1			○—○	
Washer 2	○—○		○—○	

Connector
(at rear wiper/washer SW side)



YBE00000-00155

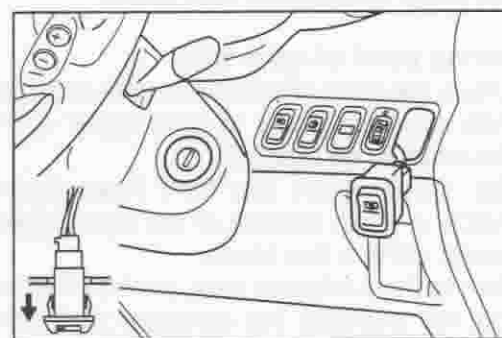
DEFOGGER CIRCUIT DIAGRAM



YBE00150-00156

REMOVAL OF DEFOGGER SWITCH

1. Remove the instrument finish lower panel.
2. Pull out the rear fog lamp switch from the instrument panel.
3. Disconnect the connector of the wire harness.



YBE00151-00157

BE-52

INSPECTION OF DEFOGGER SWITCH

1. Remove the defogger switch from the instrument panel.
2. Ensure that continuity exists between the terminal K27 and the terminal Z42 when the switch is turned ON.
3. Check to see if the illumination bulb is burnt out.

INSPECTION OF DEFOGGER WIRE

Open wire check

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

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

NOTE:

- When wiping the glass surface, use a soft, dry cloth. Move the cloth along the printed wire. Be careful not to damage the wire.
- Never use washing agent or glass cleaner, which contains abrasive compound.
- 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 with your finger, as indicated in the figure.

REFERENCE:

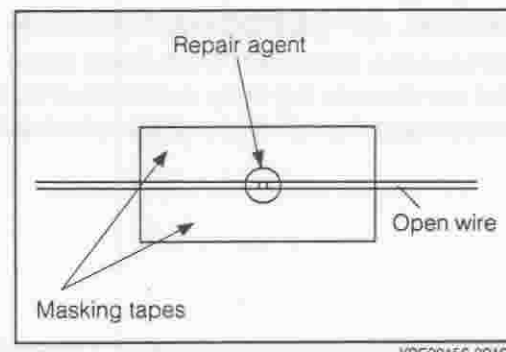
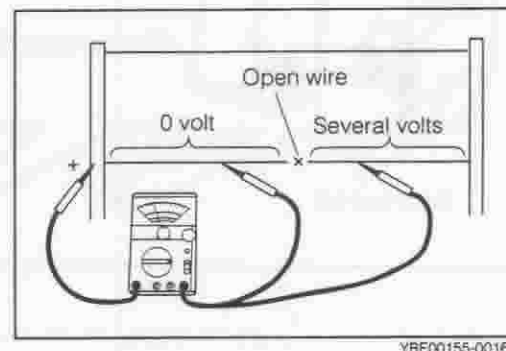
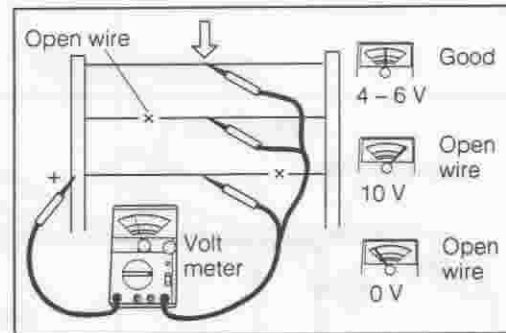
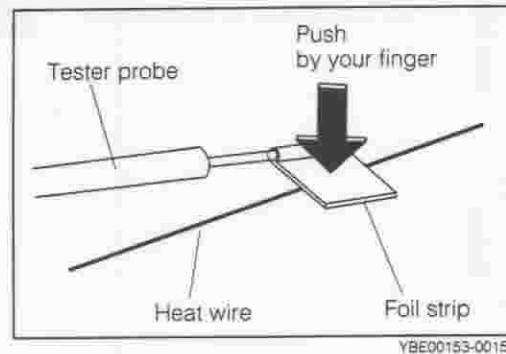
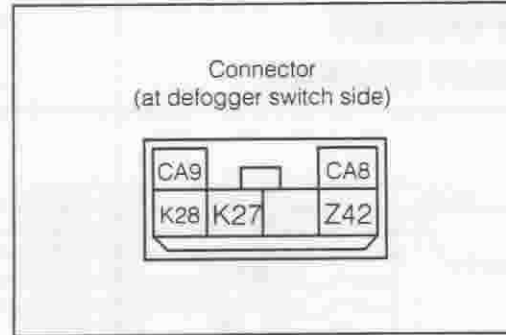
- If the voltage is 10 V, it means that open wire exists between the center of the wire and the end open wire exists between the center of the wire and end of the earth side.

Locating point of open wire

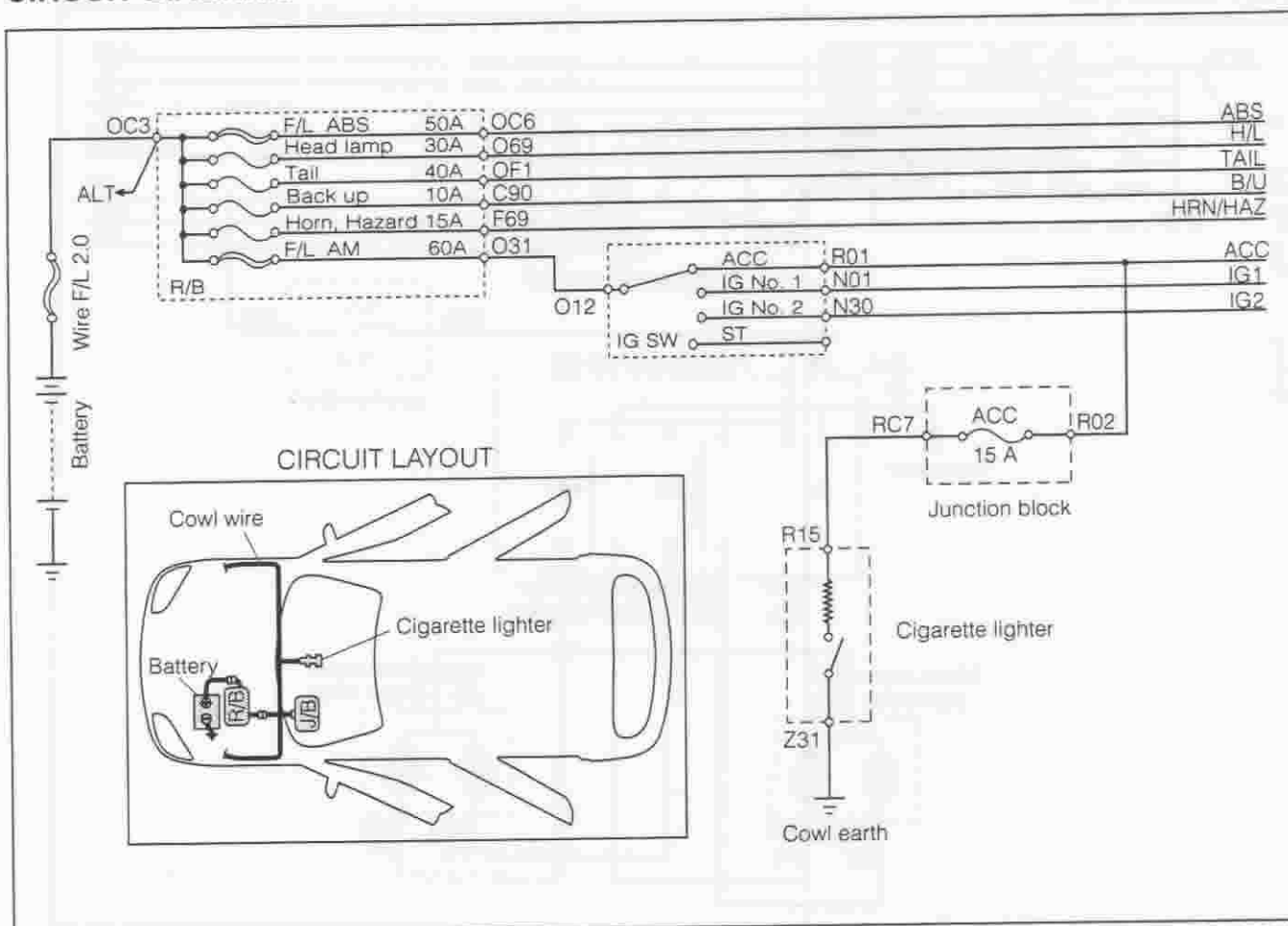
1. Connect the positive (+) terminal of the voltmeter to the positive (+) side of the defogger wire.
2. Slide the voltmeter's negative (-) terminal wrapped with foil strip on the defogger wire from its positive (+) side to its negative (-) side.
3. The voltmeter reading changes from 0 V to several volts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

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.



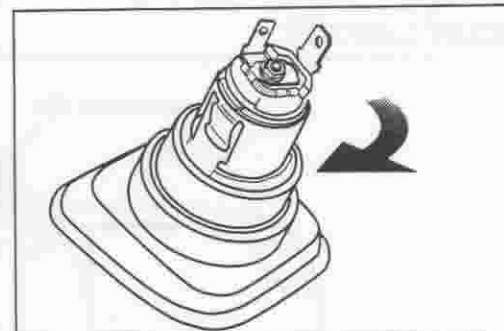
CIGARETTE LIGHTER CIRCUIT DIAGRAM



YBE00157-00163

REMOVAL OF CIGARETTE LIGHTER

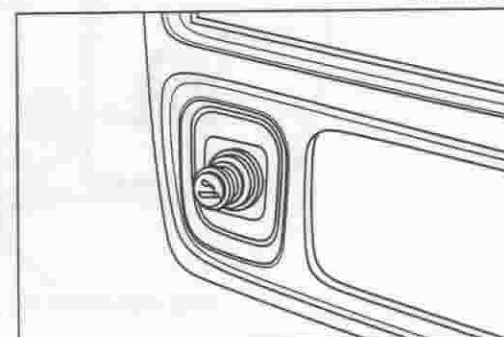
1. Remove the instrument cluster finish panel.
2. Disconnect the connector from the cigarette lighter assembly.
3. Turn about 2° and pull out 10 mm the cigarette lighter assembly. Then turn back about 2° (align the embossed at the connector side) and pull out the cigarette lighter assembly from the cigarette lighter bezel.
4. Remove the cigarette lighter.



YBE00158-00164

INSPECTION OF CIGARETTE LIGHTER

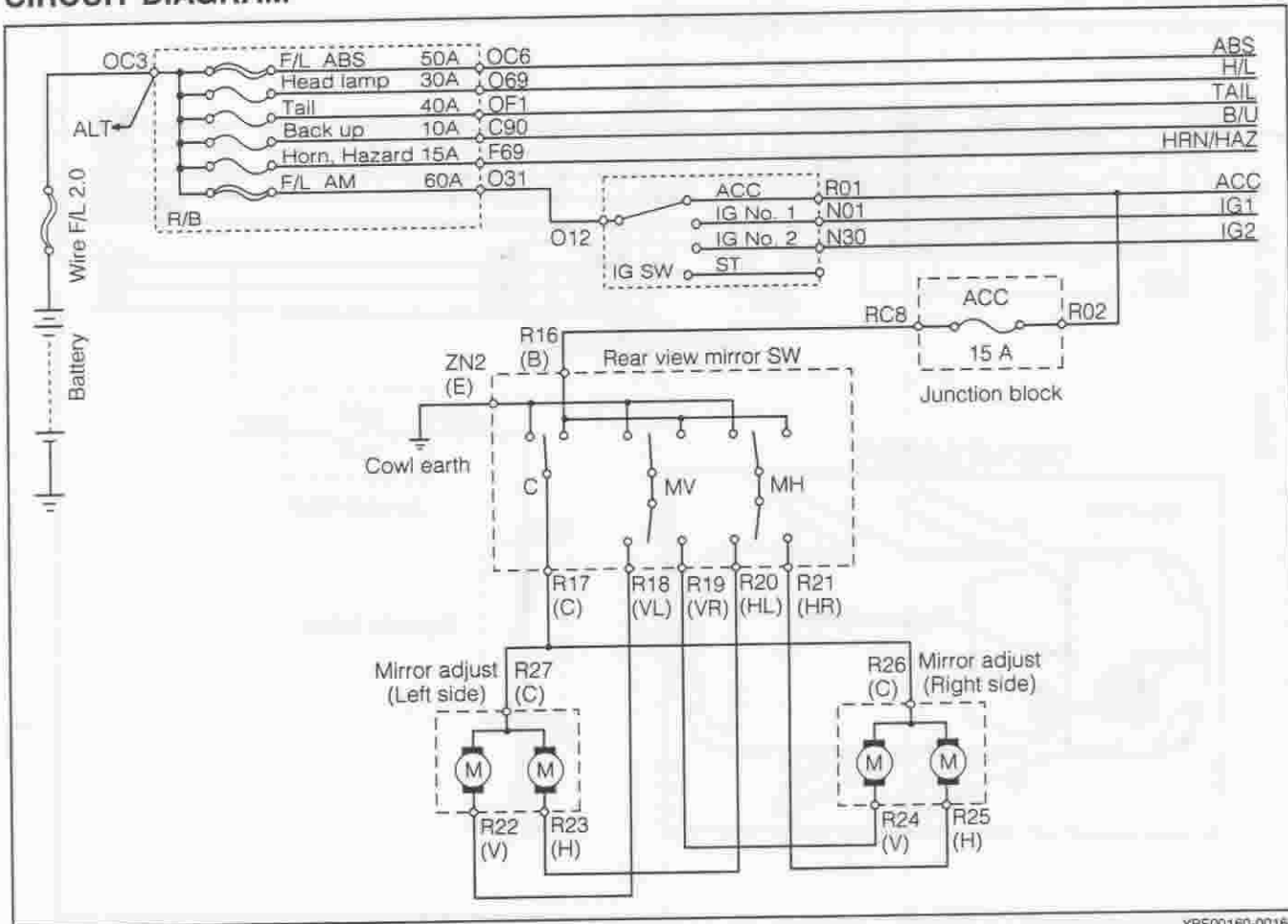
1. Push the cigarette lighter. Ensure that the heater section is heated and glows red.
2. Ensure that the heater section returns to the original position about 18 seconds.
3. If not, replace the cigarette lighter.



YBE00159-00165

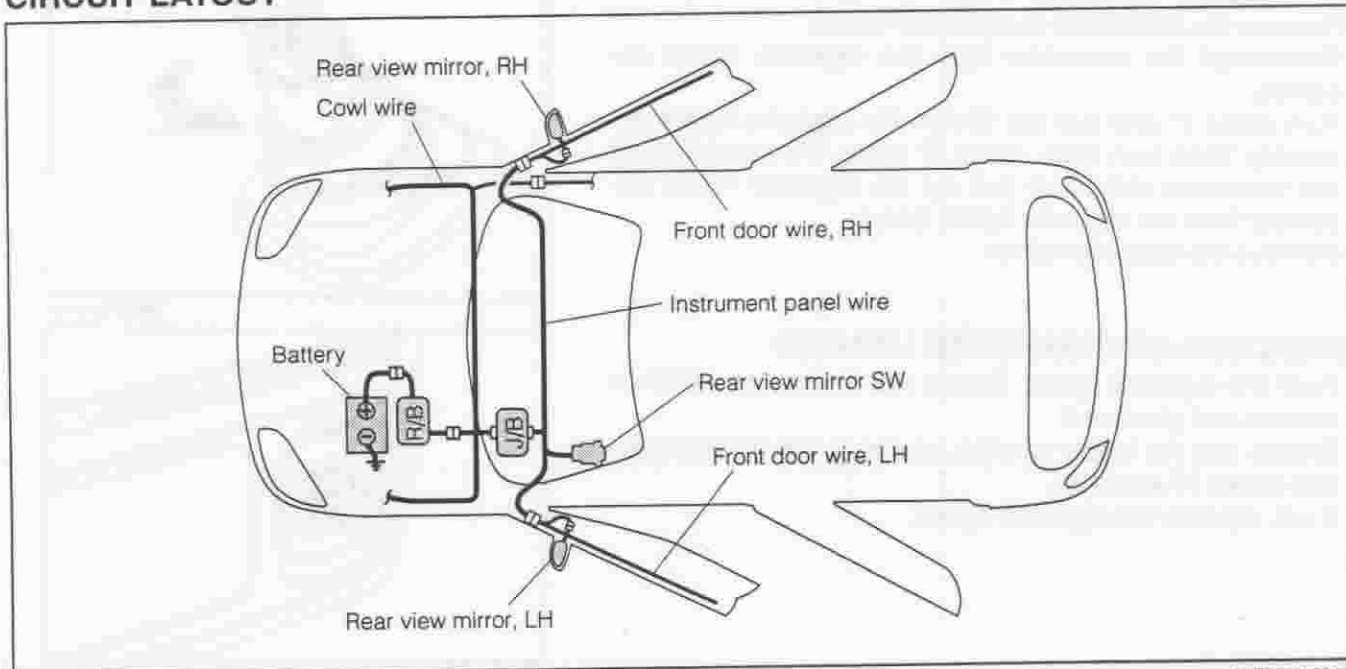
BE-54

REAR VIEW MIRROR CIRCUIT DIAGRAM



YBE00160-00166

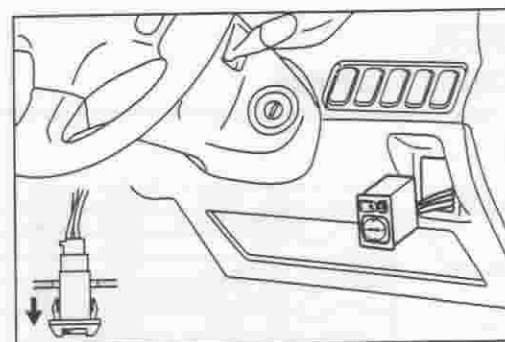
CIRCUIT LAYOUT



YBE00161-00167

REMOVAL OF REAR VIEW MIRROR SWITCH

1. Pull out the rearview mirror switch from the instrument panel.
2. Disconnect the connector of the wire harness.



YBE00162-00166

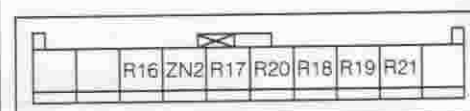
INSPECTION OF REAR VIEW MIRROR SWITCH

Ensure that the continuity exists between the respective terminals in accordance with the following continuity table.

MIRROR ADJUST

Mirror Terminal Switch position	Left					Right				
	R16	ZN2	R18	R17	R20	R16	ZN2	R19	R17	R21
UP	○		○			○		○		
DOWN	○		○			○		○		
LEFT	○		○		○	○		○		○
RIGHT	○		○		○	○		○		○

Connector
(at rear view mirror SW side)



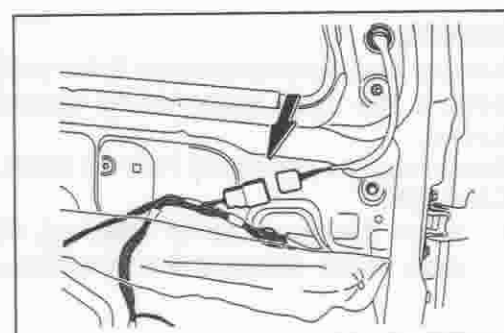
YBE00163-00169

INSPECTION OF REAR VIEW MIRROR UNIT

1. Remove the front door trim assembly.
2. Disconnect the connector of the door mirror.
3. Apply a voltage of 12 V between the following two terminals.
4. Ensure that the mirror operates in accordance with the table below.

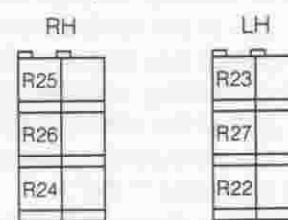
MIRROR ADJUST

Terminal	Right door mirror	R26	R24	R25	Operation direction
	Left door mirror	R27	R22	R23	
Connection		⊖	⊕		Up
		⊕	⊖		Down
		⊖		⊕	Left
		⊕		⊖	Right



YBE00164-00170

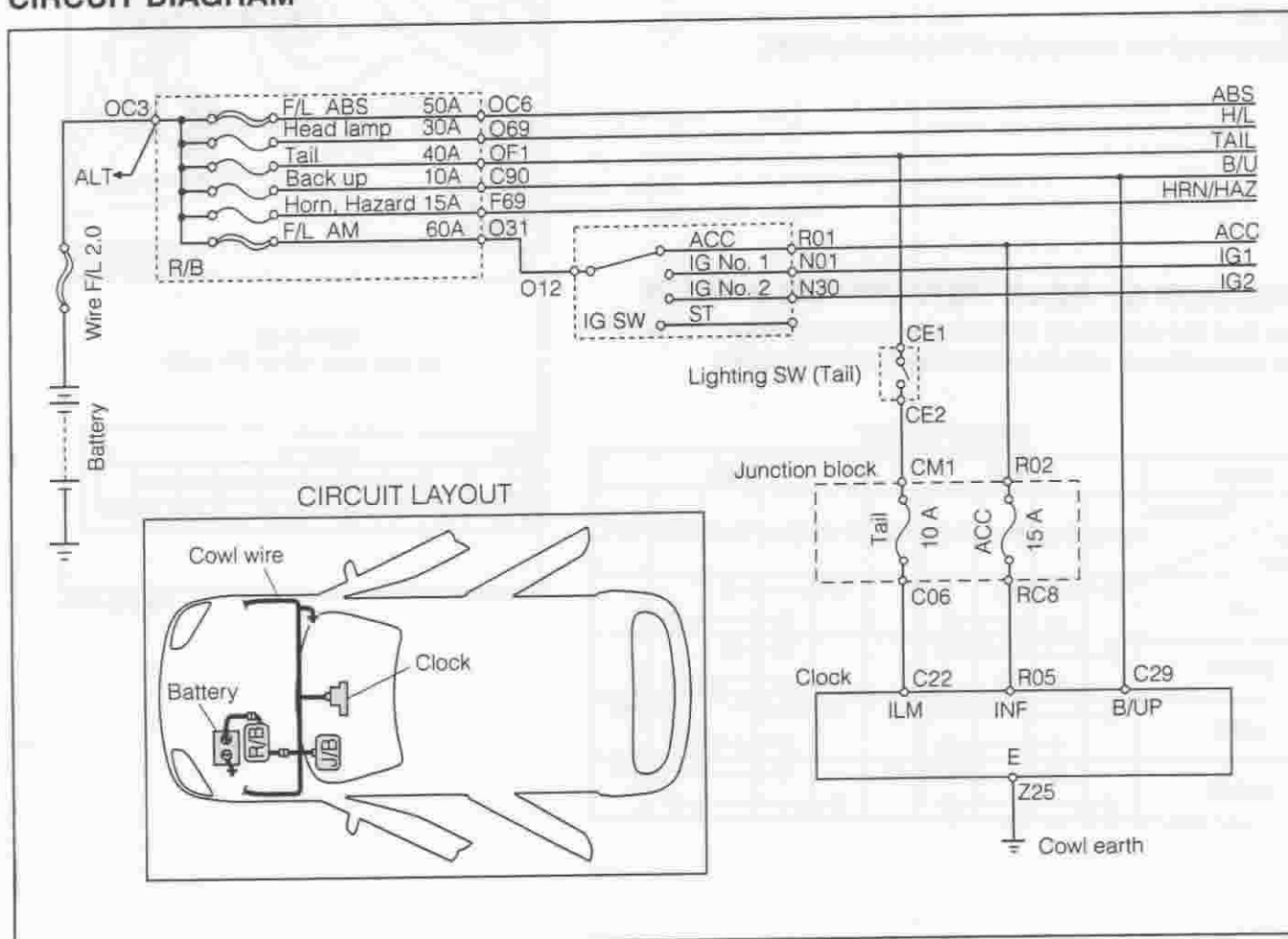
Connector (at rear view mirror side)



YBE00000-00171

BE-56

CLOCK CIRCUIT DIAGRAM



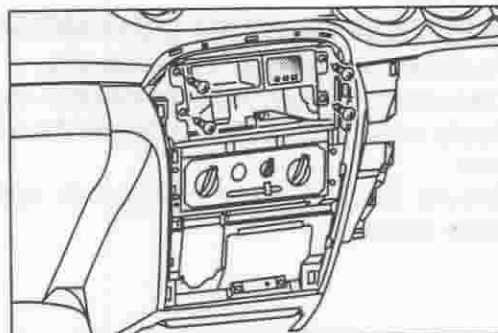
YBE00165-00172

REMOVAL

1. Remove the instrument cluster finish panel.
2. Remove the clock assembly by loosening the attaching screws.
3. Disconnect the connector from the clock.

CAUTION:

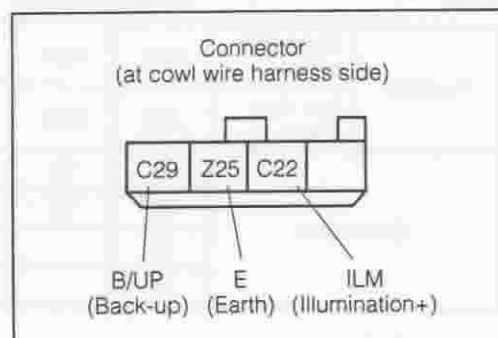
- When the connector is detached, the memory of the clock will be erased at the same time.



YBE00166-00173

INSPECTION

1. Turn OFF the ignition key switch.
2. Ensure that battery voltage exists between the terminal C29 and Z25 at the vehicle harness (cowl wire) side.
3. Turn the ignition key switch to ACC position.
4. Ensure that battery voltage exists between the terminal R06 and Z25 at the vehicle harness (cowl wire) side.
5. Connect the connector to the clock assembly. Check that the clock indicates "1:00".
6. Ensure that the display will dim when the lighting switch is turned on.
7. Perform the time adjusting procedure.



YBE00167-00174

CIRCUIT DIAGRAM



1. Remove the roof headlining. (Refer to the BBE section.)
2. Disconnect the connector of the wire harness.



1. Connect a voltmeter between the terminal #NB and the body earth.

Battery voltage is applied while the ignition switch is turned ON.



DIAGRAM

The diagram illustrates the electrical system for a vehicle, showing the connection between various components and the battery. The battery is connected to a junction block (Junction block OF2) which distributes power to various components. The components include:

- Wiper/Turn 20 A**: Connected to the junction block via F70.
- Gauge 10 A**: Connected to the junction block via H67.
- Door lock 15 A**: Connected to the junction block via Q17.
- Room lamp**: Connected to the junction block via D02 and D03.
- Courtesy SW**: Connected to the junction block via D19.
- Turn signal indicator**: Connected to the junction block via Z63 and F23.
- Turn signal lamp**: Connected to the junction block via F23.
- Multi-use lever SW**: Connected to the junction block via F68.
- Key SW**: Connected to the junction block via D13 and D14.
- Receiver**: Connected to the junction block via Q70 and Q69.
- Diagnosis connector**: Connected to the junction block via QC1.
- Door lock motor**: Connected to the junction block via Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57, Q58, Q59, Q60, Q61, Q62, Q63, Q64, Q65, Q66, Q67, Q68, Q69, Q70, Q71, Q72, Q73, Q74, Q75, Q76, Q77, Q78, Q79, Q80, Q81, Q82, Q83, Q84, Q85, Q86, Q87, Q88, Q89, Q90, Q91, Q92, Q93, Q94, Q95, Q96, Q97, Q98, Q99, Q100.
- Door lock SW**: Connected to the junction block via Q17.
- Airbag ECU**: Connected to the junction block via CS1 and QC3.
- ITC ECU A connector**: Connected to the junction block via QC4, QC5, QC6, QC7, QC8, QC9, QC10, QC11, QC12, QC13, QC14, QC15, QC16, QC17, QC18, QC19, QC20, QC21, QC22, QC23, QC24, QC25, QC26, QC27, QC28, QC29, QC30, QC31, QC32, QC33, QC34, QC35, QC36, QC37, QC38, QC39, QC40, QC41, QC42, QC43, QC44, QC45, QC46, QC47, QC48, QC49, QC50, QC51, QC52, QC53, QC54, QC55, QC56, QC57, QC58, QC59, QC60, QC61, QC62, QC63, QC64, QC65, QC66, QC67, QC68, QC69, QC70, QC71, QC72, QC73, QC74, QC75, QC76, QC77, QC78, QC79, QC80, QC81, QC82, QC83, QC84, QC85, QC86, QC87, QC88, QC89, QC90, QC91, QC92, QC93, QC94, QC95, QC96, QC97, QC98, QC99, QC100.
- ITC ECU B connector**: Connected to the junction block via QC1, QC2, QC3, QC4, QC5, QC6, QC7, QC8, QC9, QC10, QC11, QC12, QC13, QC14, QC15, QC16, QC17, QC18, QC19, QC20, QC21, QC22, QC23, QC24, QC25, QC26, QC27, QC28, QC29, QC30, QC31, QC32, QC33, QC34, QC35, QC36, QC37, QC38, QC39, QC40, QC41, QC42, QC43, QC44, QC45, QC46, QC47, QC48, QC49, QC50, QC51, QC52, QC53, QC54, QC55, QC56, QC57, QC58, QC59, QC60, QC61, QC62, QC63, QC64, QC65, QC66, QC67, QC68, QC69, QC70, QC71, QC72, QC73, QC74, QC75, QC76, QC77, QC78, QC79, QC80, QC81, QC82, QC83, QC84, QC85, QC86, QC87, QC88, QC89, QC90, QC91, QC92, QC93, QC94, QC95, QC96, QC97, QC98, QC99, QC100.

The diagram also shows the connection between the battery and the junction block, and the connection between the junction block and the various components. The battery is connected to the junction block via a 2.0 A fuse (Wire F/L 2.0). The junction block is connected to the various components via various wires and connectors. The diagram is a detailed representation of the vehicle's electrical system, showing the connection between various components and the battery.

YRF00169-00172

TROUBLE-SHOOTING

Operation checking method by shorting ITC-test terminal

The operations of the following systems can be checked by connecting the test terminal (ITC-T) to the earth terminal (E) with a jump wire.

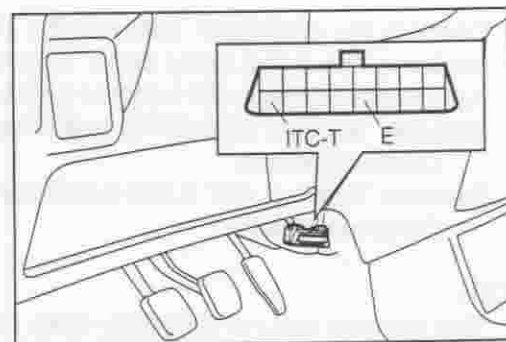
1. Pull off the diagnosis connector from the bracket.
The SST (extension-sub-wire) enables much easier to do the following procedure.

SST: 09991-87404-000
09991-87403-000

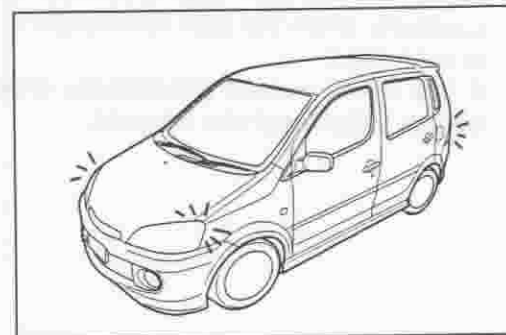
2. Turn ON the ignition switch.
3. Connect the test terminal (ITC-T) to the earth terminal (E) with the jump wire, as shown in the figure.
4. The hazard lamp flashes three times.

NOTE:

- If the lamps will not go on, check the wire harness and unit itself. If it is satisfactory, disconnect the jump wire and SST. This completes the check.



YBE00170-00178



YBE00171-00179

Malfunctions observed during operation check through shorting ITC-test terminal

1. When hazard lamp will not flash:
 - (1) Turn off the ignition switch and turn on the hazard switch. Check that the hazard lamp flashes properly.
 - (2) If the hazard lamp will not flash, check the hazard lamp circuit and switch.
 - (3) Check to see if there is open wire in the horn/hazard lamp fuse at the relay block.
 - (4) Check to see if the multi-use lever switch connectors are fit properly.
 - (5) Check to see if the flasher relay is functioning properly.



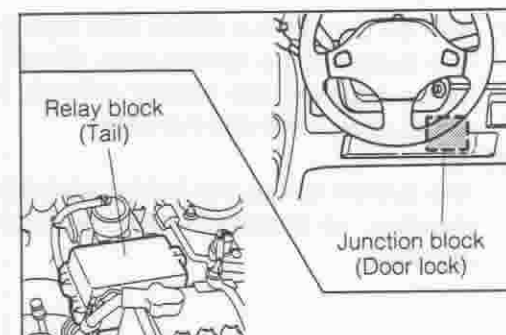
YBE00172-00180

Malfunction of power door lock

NOTE:

- When each door can not be locked in interlocking with the door lock button at driver's seat side, proceed to the following checks.

- (1) Check that tail lamp fuse at the relay block or door lock fuse at the junction block has not melted.



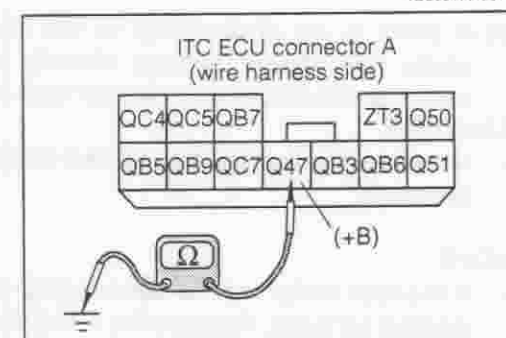
YBE00173-00181

- (2) Turn off the ignition switch. Disconnect the ITC ECU connectors from the connector at the vehicle wire harness side.

- (3) Connect the voltmeter between the terminal Q47 (+B) of the connector at the vehicle wire harness side and the body earth, as shown in the figure. Check to see if the battery voltage is applied.

NOTE:

- The battery voltage is applied to this terminal at all times regardless of the ON/OFF state of the ignition switch.



YBE00174-00182

BE-60

- (4) Connect the ohmmeter between the ITC ECU B connector terminal and body earth. Ensure that the continuity exists between the terminal and body earth.

Between Terminal QB8 (UKS) and Body Earth:

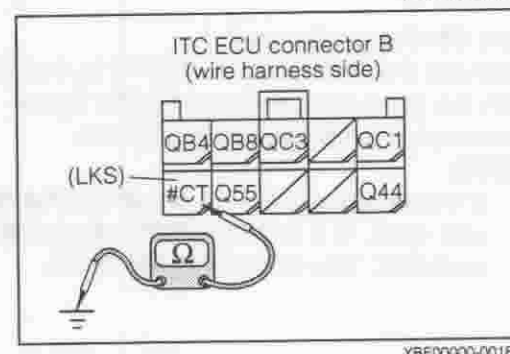
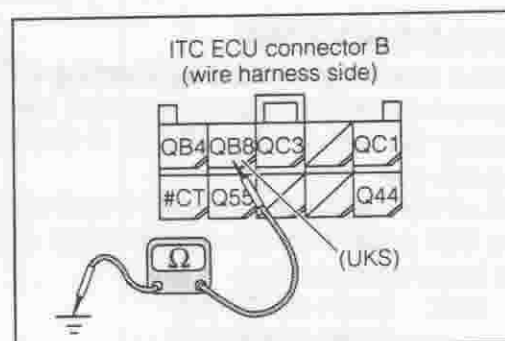
Continuity exists.

Between Terminal #CT (LKS) and Body Earth:

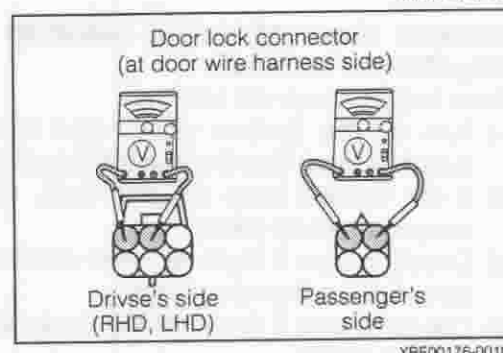
Continuity exists.

NOTE:

- This terminal has no continuity when the door lock button at driver's seat side is locked. Conversely, it has continuity when the door lock button at the driver's seat is not locked.
- If this check reveals abnormality, check the door lock control switch and wire harness.



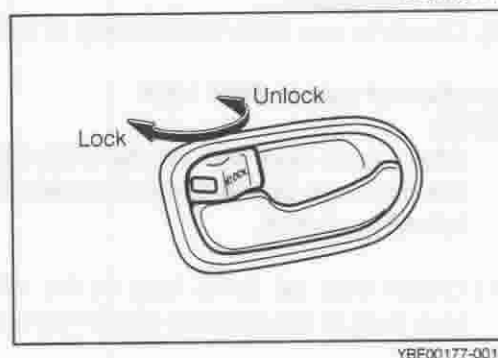
- (5) Connect the ITC ECU connector with the connector at the vehicle wire harness side. (Connect the connectors that were disconnected at Step (2) into the original positions.)
- (6) Disconnect the door lock motor connector at the door side whose locking is inoperative from the connector at the vehicle wire harness side. Connect a circuit tester in its voltmeter mode, as shown in the figure.



- (7) Turn on the ignition switch and lock or unlock the door lock button at the driver's seat. Check to see if the voltmeter registers the battery voltage. If there is abnormality, check the wire harness.

NOTE:

- The current during the locking state flows in the reverse direction, as opposed to the current during the unlocking state.



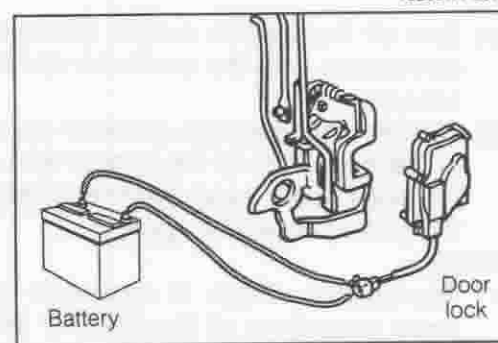
- (8) If there is no abnormality in the check at Step (7), apply the battery voltage directly to the door lock motor terminal to see if the door lock functions.

CAUTION:

- Never let the current flow for ten seconds or more continuously.

NOTE:

- If the lock motor has no abnormality, the ITC ECU is regarded as faulty. Replace the ITC ECU.



KEYLESS ENTRY SYSTEM

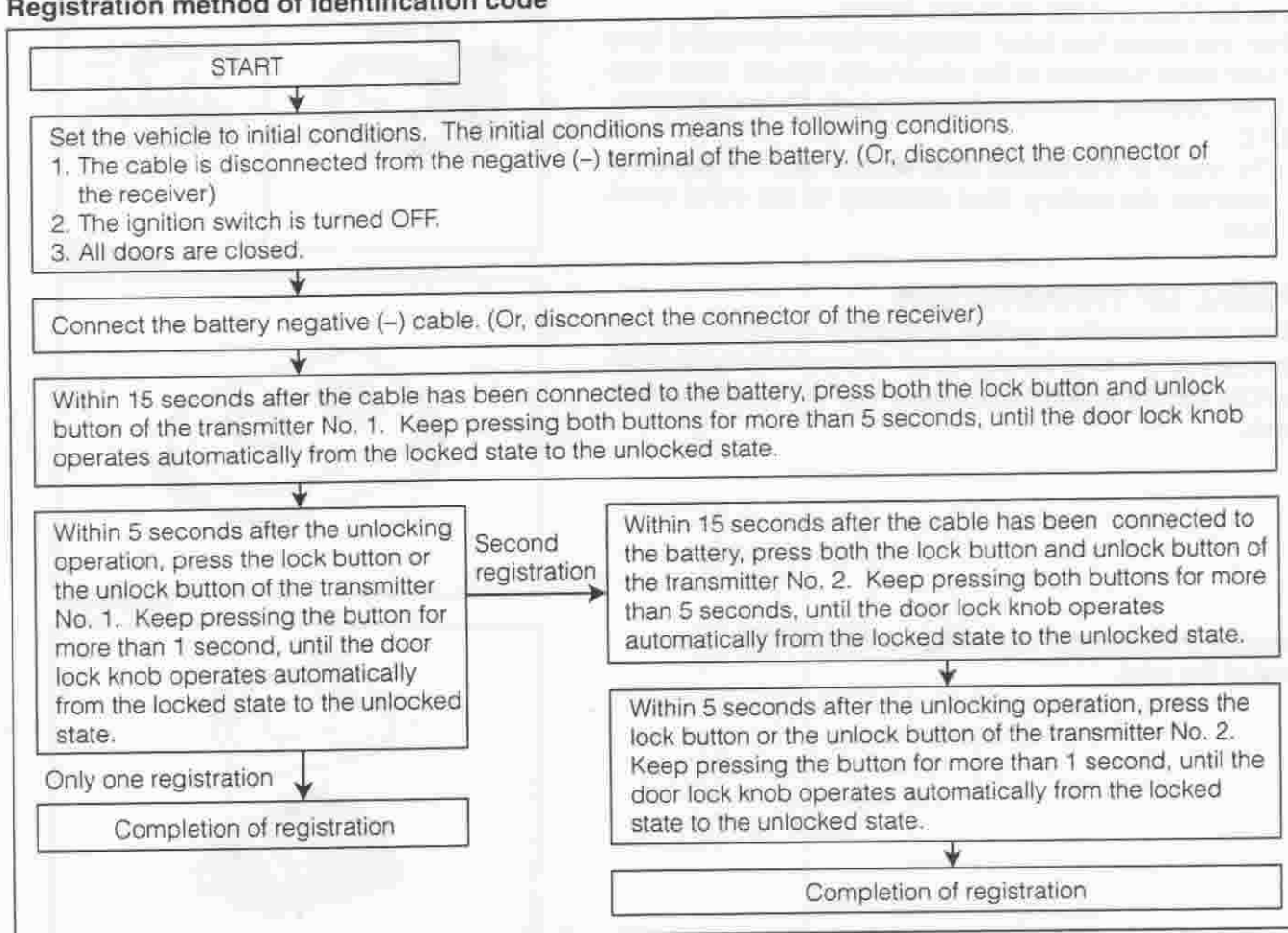
REGISTRATION OF IDENTIFICATION CODE

Description

1. When the transmitter is lost, the battery is dead, or another transmitter is added, it is necessary to register the identification code.
2. Two identification codes at maximum can be registered at each receiver. Therefore, two transmitters can be used. Each time registration is made for the third time or more, one code will be erased in order of registration, starting from the oldest one.
3. When the transmitter is lost, register the identification code twice successively. This will erase the old identification code that has been memorized in the receiver.
4. Even if the battery is removed, no identification code will be lost.

YBE00179-00000

Registration method of identification code



YBE00180-00188

Customizing function

If the user does not opt to have the hazard lamp answer back function, it is possible to change the hazard lamp answer back function to the room lamp answer back function by executing the customizing function. The following indicates the switching procedure.

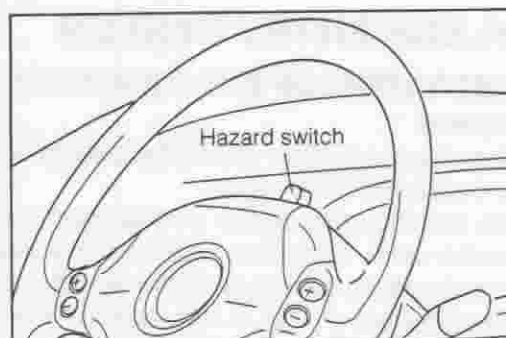
NOTE:

- The initial condition when the battery is installed is the hazard lamp answer back mode.

YBE00181-00000

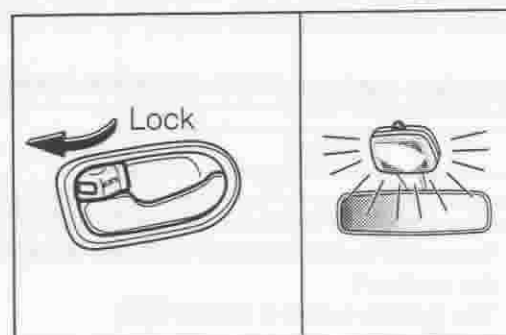
BE-62

1. Turn OFF the ignition switch.
2. Close all the doors. Then open any door.
3. Within 10 seconds after the completion of the operation in Step 2, turn ON and OFF the hazard lamp switch repeatedly at least five times. Then set the ignition switch from the OFF position to ON position. Then open any door and close all the doors.



YBE00182-00189

4. Within 10 seconds after the completion of the operation in Step 3, repeat unlocking/locking the door at least three times by means of the door lock button.
5. When the mode has been changed from the hazard lamp answer back function to the room lamp answer back function successfully, the room lamp goes on for two seconds.



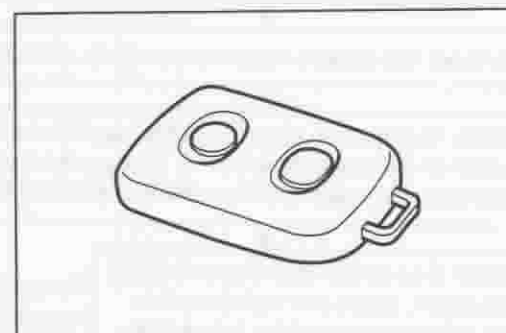
YBE00183-00190

NOTE:

- To return to the hazard lamp answer back function, disconnect the battery, thus returning to the initial condition.

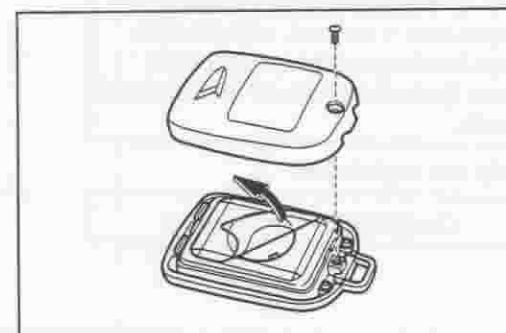
DISPOSAL OF TRANSMITTER

1. When the transmitter battery is dead or a vehicle with the keyless system is to be disposed, it is necessary to disassemble the transmitter and dispose its components separately.



YBE00184-00191

2. Remove the cover by loosening the attaching screw.
3. Peel off the seal.



YBE00185-00192

4. Remove the lithium battery. Dispose the battery, circuit board and case separately.

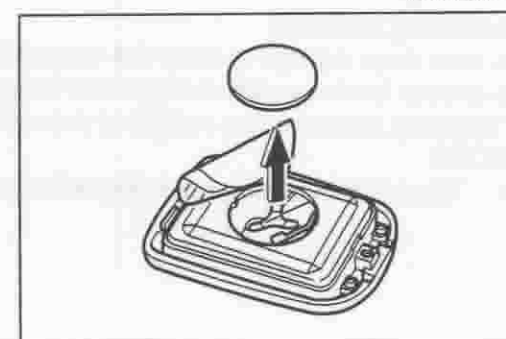
Part for replacement

BATTERY SET, TRANSMITTER

Part No.: 89706-87701

NOTE:

- The battery set consists of a battery, a seal and a screw.



YBE00186-00193

	09991-87403-000	Diagnosis check wire	To short the terminal T	BE-59
	09991-87404-000	Engine control system inspection wire	Additional use for reading the diagnosis code	BE-59

YBE0192-00199

TIGHTENING TORQUE

Tightening component	Tightening torque		Remarks
	N·m	kgf·cm	
Fuel tank × Fuel sender gauge	3.8 ± 1.2	39 ± 12	
Water temp. sender gauge × Cylinder block	24.0 ± 4.8	245 ± 49	
Front wiper arm × Body	20 ± 5	204 ± 51	
Rear wiper arm × Body	20 ± 5	204 ± 51	

YBE00193-00200