BODY ELECTRICAL SYSTEM

BE0DL-01

PRECAUTION

Take care to observe the doing precautions when performing inspections or removal and replacement of body electrical related parts.

1. HEADLIGHT SYSTEM

Halogen bulbs have pressurized gas inside and require special handling. They can burst if scratched or dropped. Hold a bulb only by its plastic or metal case.

Don't touch the glass part of a bulb with bare hands.

2. SRS (SUPPLEMENTAL RESTRAINT SYSTEM)

The SUPRA is equipped with an SRS (Supplemental Restraint System) such as the driver airbag and front passenger airbag. Failure to carry out service operation in the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Before servicing (including removal or installation of parts, inspection or replacement), be sure to read the precautionary notices in the RS section.

3. AUDIO SYSTEM

- If the negative (-) terminal cable is disconnected from the battery, the preset AM, FM 1 and FM 2 stations stored in memory are erased, so be sure to note the stations and reset them after the battery terminal is reconnected.
- If the negative (-) terminal cable is disconnected from the battery, the "ANTI-THEFT SYSTEM" will operate when the cable is reconnected, but the radio, tape player and CD player will not operate. Be sure to input the correct ID number so that the radio, tape player and CD player can be operated again.

4. MOBILE COMMUNICATION SYSTEM

If the vehicle is equipped with a mobile communication system, refer to precautions in the IN section.

BE0DM-02

PROBLEM SYMPTOMS TABLE

IGNITION SWITCH AND KEY UNLOCK WARNING SWITCH

Symptom	Suspect Area	See page
Ignition switch is not set to each position.	1. Ignition Switch	BE-13
”Key unlock warning system” does not operate.	1. GAUGE Fuse (J/B No.1) 2. Key Unlock Warning Switch 3. Door Courtesy Switch 4. Wire Harness	 BE-13 BE-28

USA:
HEADLIGHT AND TAILLIGHT SYSTEM

Symptom	Suspect Area	See page
Headlight does not light. (Taillight is normal)	1. Headlight Bulb 2. HEAD (LH, RH) Fuse (R/B No.2) 3. Headlight Control Relay (R/B No.2) 4. Integration Relay 5. Headlight Dimmer Switch 6. Light Control Switch 7. Wire Harness	 BE-17 BE-13 BE-17 BE-17
Headlight does not light. (Taillight does not light up)	1. Headlight Bulb 2. Integration Relay 3. Light Control Switch 4. Wire Harness	 BE-13 BE-17
Only one side light does not light.	1. Headlight Bulb 2. HEAD (LH, RH) Fuse (R/B No.2) 3. Wire Harness	
”Lo-Beam” does not light.	1. Headlight Dimmer Switch 2. Wire Harness	BE-17
”Hi-Beam” does not light.	1. Headlight Dimmer Switch 2. Wire Harness	BE-17
”Flash” does not light.	1. Headlight Dimmer Switch 2. Wire Harness	BE-17

CANADA:
HEADLIGHT AND TAILLIGHT SYSTEM

Symptom	Suspect Area	See page
Headlight does not light. (Taillight is normal)	1. Headlight Bulb 2. Headlight Control Relay (R/B No.2) 3. D.R.L. Relay 4. D.R.L. No.2 Relay (R/B No.2) 5. D.R.L. No.3 Relay 6. Integration Relay 7. Headlight Dimmer Switch 8. Light Control Switch 9. Wire Harness	 BE-17 BE-17 BE-17 BE-17 BE-13 BE-17 BE-17
Headlight does not light. (Taillight does not light up)	1. D.R.L. Relay 2. D.R.L. No.2 Relay (R/B No.2) 3. D.R.L. No.3 Relay 4. Integration Relay 5. Light Control Switch 6. Wire Harness	BE-17 BE-17 BE-17 BE-13 BE-17
Only one side light does not light.	1. Headlight Bulb 2. Wire Harness	
”Lo-Beam” does not light (ALL).	1. Headlight Control Relay (R/B No.2) 2. Wire Harness	BE-17
”Lo-Beam” does not light (ONE SIDE).	1. Headlight Bulb 2. HEAD LH-LWR Fuse (R/B No.2) 3. HEAD RH-LWR Fuse (R/B No.2) 4. Wire Harness	
”Hi-Beam” does not light (ALL).	1. D.R.L. Relay 2. D.R.L. No.2 Relay (R/B No.2) 3. D.R.L. No.3 Relay 4. Headlight Dimmer Switch 5. Wire Harness	BE-17 BE-17 BE-17 BE-17
”Hi-Beam” does not light (ONE SIDE).	1. Headlight Bulb 2. HEAD LH-UPR Fuse (R/B No.2) 3. HEAD RH-UPR Fuse (R/B No.2) 4. Wire Harness	
”Flash” does not light.	1. D.R.L. Relay 2. D.R.L. No.2 Relay (R/B No.2) 3. D.R.L. No.3 Relay 4. Headlight Dimmer Switch 5. Wire Harness	BE-17 BE-17 BE-17 BE-17
”Auto Turn-off System” dose not operate.	1. GAUGE Fuse (J/B No.1) 2. Integration Relay 3. Door Courtesy Switch (Driver’s) 4. Wire Harness	 BE-13 BE-28
Headlight does not light with light control SW in HEAD.	1. Integration Relay 2. D.R.L. Relay 3. D.R.L. No.2 Relay (R/B No.2) 4. D.R.L. No.3 Relay 5. Light Control Switch 6. Wire Harness	BE-13 BE-17 BE-17 BE-17 BE-17
Headlight does not go out with light control SW in OFF.	1. Headlight Control Relay (R/B No.2) 2. Wire Harness	BE-17

Taillight does not light with light control SW in TAIL.	1. Taillight Relay (J/B No.1) 2. Integration Relay 3. Light Control Switch 4. Wire Harness	BE-17 BE-13 BE-17
Taillight does not go out with light control SW in OFF.	1. Taillight Relay (J/B No.1) 2. Integration Relay 3. Light Control switch 4. Wire Harness	BE-17 BE-13 BE-17
Headlight and Taillight do not light with engine running and light control SW in OFF.	1. GAUGE Fuse (J/B No.1) 2. Generator L Terminal 3. D.R.L. Relay 4. D.R.L. No.2 Relay (R/B No.2) 5. D.R.L. No.3 Relay 6. Parking Brake Switch 7. Wire Harness	 BE-17 BE-17 BE-17 BE-43

FOG LIGHT SYSTEM

Symptom	Suspect Area	See page
Fog light does not light with light control SW HEAD. (Headlight is normal.)	1. FOG Fuse (R/B No.2) 2. HEAD Fuse (R/B No.2) 3. Fog Light Relay (R/B No.2) 4. Fog Light Switch 5. Wire Harness	 BE-23 BE-23
Fog light does not light with light control SW HEAD. (Headlight does not light)	1. Headlight and Taillight system 2. Wire Harness	BE-15
Only one light does not light.	1. Bulb 2. Wire Harness	

TURN SIGNAL HAZARD WARNING SYSTEM

Symptom	Suspect Area	See page
”Hazard” and ”Turn” do not light up.	1. Hazard Warning Switch 2. Turn Signal Flasher 3. Wire Harness	BE-26 BE-26
The flashing frequency is abnormal.	1. Bulb 2. Turn Signal Flasher 3. Wire Harness	BE-26
Hazard warning light does not light up. (Turn is normal.)	1. HAZ-HORN Fuse (R/B No.2) 2. Wire Harness	
Hazard warning light does not light up in one direction.	1. Hazard Warning Switch 2. Wire Harness	BE-26
Turn signal does not light up. (Combination meter, wiper and washer do not operate.)	1. TURN Fuse (J/B No.1) 2. Ignition Switch 3. Turn Signal Switch 4. Wire Harness	 BE-13 BE-26
Turn signal does not light up.	1. TURN Fuse (J/B No.1) 2. Turn Signal Switch 3. Wire Harness	BE-26
Turn signal does not light up in one direction.	1. Turn Signal Switch 2. Wire Harness	BE-26
Only one bulb does not light up.	1. Bulb 2. Wire Harness	

INTERIOR LIGHT SYSTEM

Symptom	Suspect Area	See page
Only one light does not light up.	1. Bulb 2. Wire Harness	
Interior light does not light up (All).	1. DOME Fuse (R/B No.2) 2. Integration Relay 3. Wire Harness	BE-28
”Illuminated Entry System” does not operate.	1. Integration Relay 2. Door Courtesy Switch 3. Door Key Lock and Unlock Switch 4. Door Unlock Detection Switch 5. Wire Harness	BE-28 BE-28 DI-656 DI-638
Front personal light does not light up.	1. Bulb 2. Front Personal Light 3. Wire Harness	BE-28
Luggage room light does not light up.	1. Bulb 2. Luggage Room Light Switch	BE-28

BACK-UP LIGHT SYSTEM

Symptom	Suspect Area	See page
Back Up Light does not light up.	1. Bulb 2. GAUGE Fuse (J/B No.1) 3. Ignition Switch 4. Back-up Light Switch (M/T) 5. Park/Neutral Position Switch (A/T) 6. Wire Harness	BE-13 BE-31 DI-354 DI-423
Back Up Light remains always on.	1. Wire Harness	
Only one light does not light up.	1. Bulb 2. Wire Harness	

STOP LIGHT SYSTEM

Symptom	Suspect Area	See page
Stop light does not light up.	1. Bulb 2. STOP Fuse (J/B No.1) 3. Stop Light Switch 4. Wire Harness	BE-33
Stop light remains always on.	1. Stop Light Switch 2. Wire Harness	BE-33
Only one light does not light up.	1. Bulb 2. Wire Harness	

WIPER AND WASHER SYSTEM

Symptom	Suspect Area	See page
Wipers and washers do not operate.	1. WIPER Fuse (J/B No.1) 2. Ignition Switch 3. Wiper and Washer Switch 4. Wire Harness	 BE-13 BE-35
Front wiper does not operate.	1. Front Wiper and Washer Switch 2. Front Wiper Motor 3. Wire Harness	BE-35 BE-35
Rear wiper does not operate.	1. Rear Wiper and Washer Switch 2. Rear Wiper Motor and Relay 3. Wire Harness	BE-35 BE-35
Front washer does not operate.	1. Front Wiper and Washer Switch 2. Washer Motor 3. Wire Harness	BE-35 BE-35
Rear washer does not operate.	1. Rear Wiper and Washer Switch 2. Washer Motor 3. Wire Harness	BE-35 BE-35

COMBINATION METER
METER, GAUGES AND ILLUMINATION:

Symptom	Suspect Area	See page
Tachometer, Fuel Gauge and Engine Coolant Temperature Gauge do not operate.	1. GAUGE Fuse (J/B No.1) 2. Meter Circuit 3. Wire Harness	 BE-40
Speedometer does not operate.	1. Vehicle Speed Sensor 2. Meter Circuit 3. Wire Harness	BE-43 BE-40
Tachometer does not operate.	1. Igniter 2. ECM 3. Meter Circuit 4. Wire Harness	 DI-1 DI-145 BE-40
Fuel Gauge does not operate or abnormal operation.	1. Fuel Receiver Gauge 2. Fuel Sender Gauge 3. Meter Circuit 4. Wire Harness	BE-43 BE-43 BE-40
Engine Coolant Temperature Gauge does not operate or abnormal operation.	1. Engine Coolant Temperature Receiver Gauge 2. Engine Coolant Temperature Sender Gauge 3. Meter Circuit 4. Wire Harness	BE-43 BE-43 BE-40
All illumination lights do not light up.	1. TAIL Fuse (J/B No.1) 2. Light Control Rheostat 3. Meter Circuit 4. Wire Harness	 BE-43 BE-40
Only one illumination light does not light up.	1. Bulb 2. Meter Circuit	 BE-40

WARNING LIGHTS:

Symptom	Suspect Area	See page
Warning lights do not light up. (Except Discharge and Door Open)	1. Bulb 2. IGN Fuse (J/B No.1) 3. Ignition Switch 4. Meter Circuit 5. Generator 6. Wire Harness	 BE-13 BE-40
Brake Warning Light does not light up.	1. Bulb 2. Brake Fluid Level Warning Switch 3. Parking Brake Switch 4. Bulb Check Relay 5. Meter Circuit 6. Wire Harness	 BE-43 BE-43 BE-40
Seat Belt Warning Light does not light up.	1. Bulb 2. Seat Belt Buckle Switch 3. Integration Relay 4. Meter Circuit 5. Wire Harness	 BE-43 BE-13 BE-40
Engine Oil Level Warning Light does not light up.	1. Bulb 2. Engine Oil Level Warning Switch 3. Meter Circuit 4. Wire Harness	 BE-43 BE-40
Low Oil Pressure Warning Light does not light up.	1. Bulb 2. Low Oil Pressure Warning Switch 3. Meter Circuit	 BE-43 BE-40
Door Open Warning Light does not light up.	1. Bulb 2. DOME Fuse (R/B No.2) 3. Door Courtesy Switch 4. Luggage Room Light Switch 5. Integration Relay 6. Meter Circuit 7. Wire Harness	 BE-28 BE-28 BE-13 BE-40
Master Warning Light does not light up.	1. Bulb 2. Telltale Light Circuit 3. Meter Circuit 4. Wire Harness	 BE-40 BE-40

INDICATOR LIGHTS:

Symptom	Suspect Area	See page
SRS Indicator Light does not light up.	1. Bulb 2. Center Airbag Sensor 3. Wire Harness	 DI-555
ABS Indicator Light does not light up.	1. Bulb 2. Traction ECU 3. Wire Harness	 DI-499
Malfunction Indicator Light does not light up.	1. Bulb 2. ECM 3. Wire Harness	 DI-1 DI-145
TRAC OFF Indicator Light does not light up.	1. Bulb 2. Traction Solenoid Relay 3. Traction ECU 4. Wire Harness	 DI-499 DI-499

Security Indicator Light does not light up.	1. Light Emitting Diode 2. Theft Deterrent and Door Lock ECU 3. Wire Harness	DI-608
A/T Shift Position Indicator Light does not light up.	1. Bulb 2. Park/Neutral Position Switch 3. Light Control Rheostat 4. Meter Circuit 5. Wire Harness	DI-354 DI-423 BE-43 BE-40
MANU Indicator Light does not light up.	1. Bulb 2. ECM 3. Meter Circuit 4. Wire Harness	BE-40
O/D OFF Indicator Light does not light up.	1. Bulb 2. O/D Main Switch 3. ECM 4. Meter Circuit 5. Wire Harness	BE-43 DI-1 DI-145 BE-40
TRAC Indicator Light does not light up.	1. Bulb 2. ABS and Traction ECU 3. Meter Circuit 4. Wire Harness	BE-40
Turn Indicator Light does not light up.	1. Bulb 2. Turn Signal and Hazard Warning System 3. Meter Circuit 4. Wire Harness	BE-25 BE-40
High Beam Indicator Light does not light up.	1. Bulb 2. Headlight and Taillight System 3. Meter Circuit 4. Wire Harness	BE-15 BE-40
CRUISE Indicator Light does not light up.	1. Bulb 2. Cruise Control ECU 3. Meter Circuit 4. Wire Harness	DI-660 BE-40
SNOW Indicator Light does not light up.	1. Bulb 2. Traction ECU 3. Meter Circuit 4. Wire Harness	BE-40

ELECTRIC TENSION REDUCER SYSTEM

Symptom	Suspect Area	See page
Tension Reducer does not operate. (Driver's and Passenger's)	1. ECU-IG fuse (J/B No.1) 2. Wire Harness	
Tension Reducer does not operate. (Only one side)	1. Buckle Switch 2. Tension Reducer Solenoid 3. Wire Harness	BE-54 BE-43

DEFOGGER SYSTEM

Symptom	Suspect Area	See page
All defogger systems do not operate.	1. GAUGE Fuse (J/B No.1) 2. DEFOG Fuse (J/B No.1) 3. Defogger Relay (R/B No.4) 4. Defogger Switch 5. A/C Amplifier 6 Wire Harness	 BE-56 BE-56 DI-711
Rear window defogger does not operate.	1. Defogger Wires 2. Wire Harness	BE-56
Mirror defogger does not operate.	1. MIR-HTR Fuse (J/B No.1) 2. Mirror Defogger 3. Wire Harness	BE-56

POWER WINDOW CONTROL SYSTEM

Symptom	Suspect Area	See page
Power window does not operate. (Power door lock does not operate.)	1. POWER Fuse (R/B No.2) 2. DOOR Fuse (J/B No.1) 3. Ignition Switch 4. Power Window Master Switch 5. Wire Harness	 BE-13 BE-60
Power Window does not operate. (Power door lock is normal.)	1. GAUGE Fuse (J/B No.1) 2. Power Main Relay (J/B No.1) 3. Ignition Switch 4. Power Window Master Switch 5. Wire Harness	 BE-60 BE-13 BE-60
”One Touch Power Window System” does not operate.	1. Power Window Master Switch	BE-60
Only one window glass does not move.	1. Power Window Master Switch 2. Power Window Switch 3. Power Window Motor 4. Wire Harness	BE-60 BE-60 BE-60
”Window Lock System” does not operate.	1. Power Window Master Switch	BE-60
Illumination does not light up.	1. Power Window Master Switch	BE-60

POWER SEAT CONTROL SYSTEM

Symptom	Suspect Area	See page
Power seat does not operate.	1. POWER Fuse (R/B No.2) 2. DOOR Fuse (J/B No.1) 3. Power Seat Switch 4. Wire Harness	 BE-65
”Slide operation” does not operate.	1. Power Seat Switch 2. Sliding Motor 3. Wire Harness	BE-65 BE-65
”Reclining operation” does not operate.	1. Power Seat Switch 2. Reclining Motor 3. Wire Harness	BE-65 BE-65

POWER MIRROR CONTROL SYSTEM

Symptom	Suspect Area	See page
Mirror does not operate.	1. RAD No.2 Fuse (J/B No.1) 2. Mirror Switch 3. Mirror Motor 4. Wire Harness	 BE-68 BE-68
Mirror operates abnormally.	1. Mirror Switch 2. Mirror Motor 3. Wire Harness	BE-68 BE-68

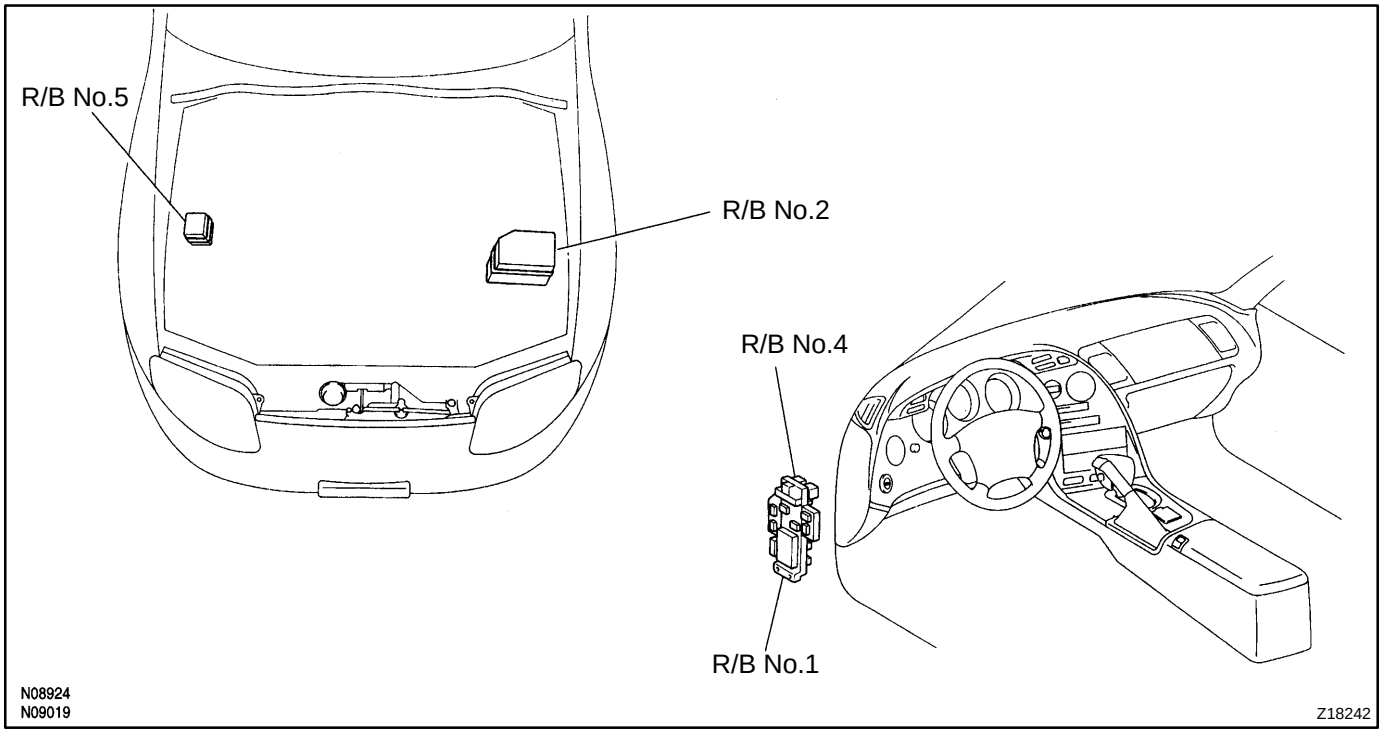
SEAT HEATER SYSTEM

Symptom	Suspect Area	See page
Seat heaters do not operate. (Driver's and Passenger's)	1. SEAT HTR Fuse (J/B No.1) 2. Wire Harness	
Driver's seat heater does not operate.	1. Seat Heater Switch (Driver's) 2. Seat Heater 3. Wire Harness	BE-70 BE-70
Passenger's seat heater does not operate.	1. Seat Heater Switch (Passenger's) 2. Seat Heater 3. Wire Harness	BE-70 BE-70
Seat heater temperature is too hot.	1. Seat Heater	BE-70

POWER SOURCE

BE0DN-02

LOCATION

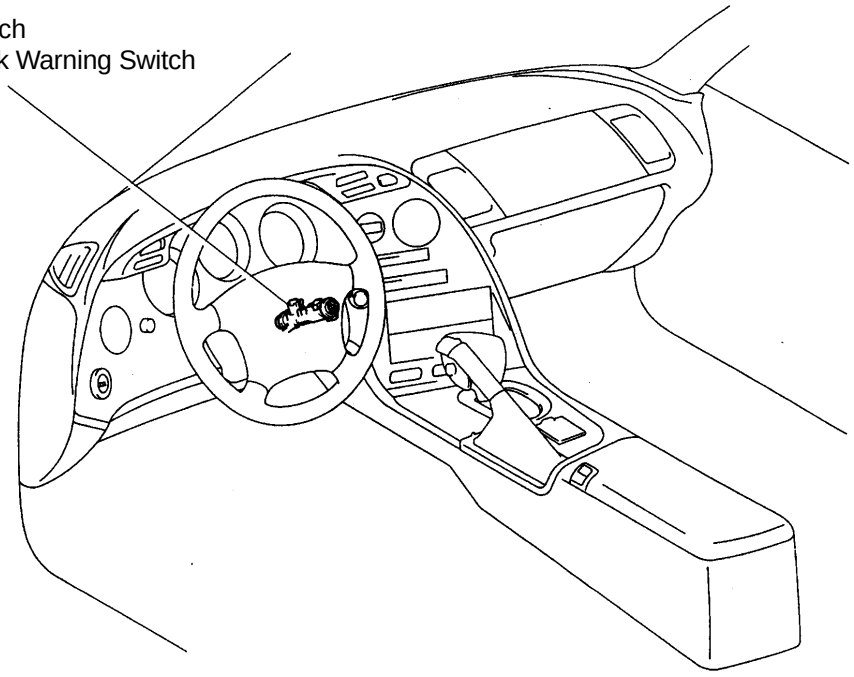


IGNITION SWITCH AND KEY UNLOCK WARNING SWITCH

BE0DO-02

LOCATION

Ignition Switch
- Key Unlock Warning Switch



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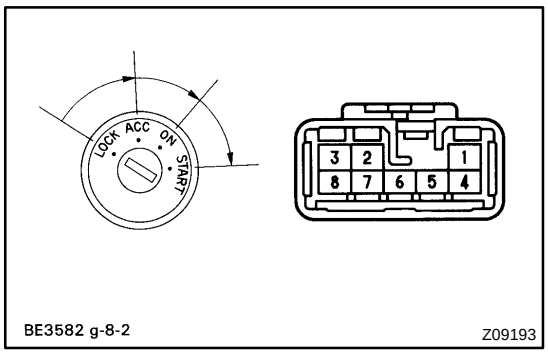
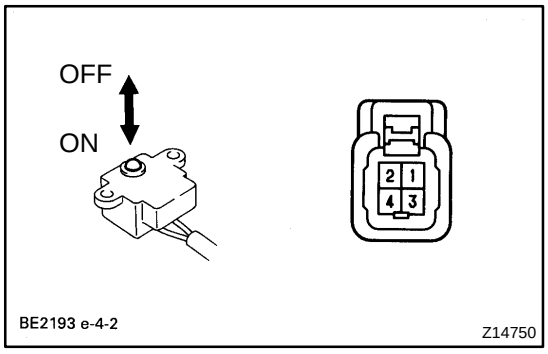
INSPECTION



1. INSPECT IGNITION SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
LOCK	-	No continuity
ACC	5 - 7	Continuity
ON	4 - 5 - 7, 2 - 3	Continuity
START	4 - 7 - 8, 1 - 2 - 3	Continuity

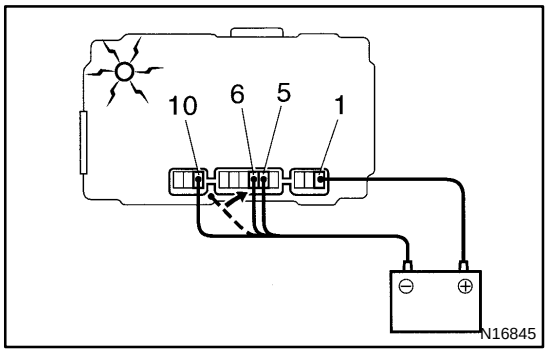
If continuity is not as specified, replace the switch.



2. INSPECT KEY UNLOCK WARNING SWITCH CONTINUITY

Condition	Tester connection	Specified condition
SW OFF (Key removed)	-	No continuity
SW ON (Key set)	1 - 2	Continuity

If continuity is not as specified, replace the switch.

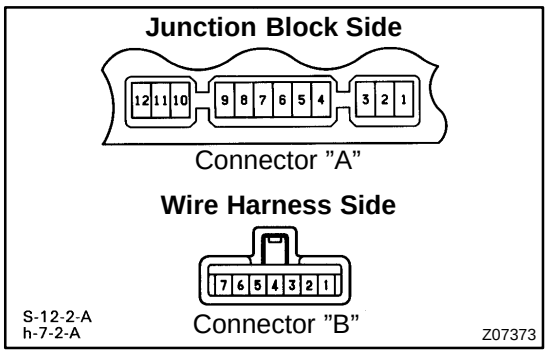


3. Key Unlock Warning System: INSPECT INTEGRATION RELAY OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1, the negative (-) lead to terminals 5 and 10..

(b) Check the buzzer sounds when the negative (-) lead from the battery is connected to terminal 6..

If operation is not as specified, replace the relay.



4. INSPECT RELAY CIRCUIT

Light Auto Turn Off System:

Remove the relay from junction block and inspect the connectors on the wire harness and junction block side, as shown in the chart.

Tester connection	Condition	Specified condition
A6 - Ground	Driver's door courtesy switch OFF	No continuity
A6 - Ground	Driver's door courtesy switch ON	Continuity
A10 - Ground	Constant	Continuity
B1 - Ground	Light control switch position OFF or TAIL	No continuity
B1 - Ground	Light control switch position HEAD	Continuity
B4 - Ground	Light control switch position OFF	No continuity
B4 - Ground	Light control switch position TAIL or HEAD	Continuity
A1 - Ground	Constant	Battery positive voltage
A7 - Ground	Ignition switch position LOCK or ACC	No voltage
A7 - Ground	Ignition switch position ON	Battery positive voltage
B2 - Ground	Constant	Battery positive voltage
B3 - Ground	Constant	Battery positive voltage

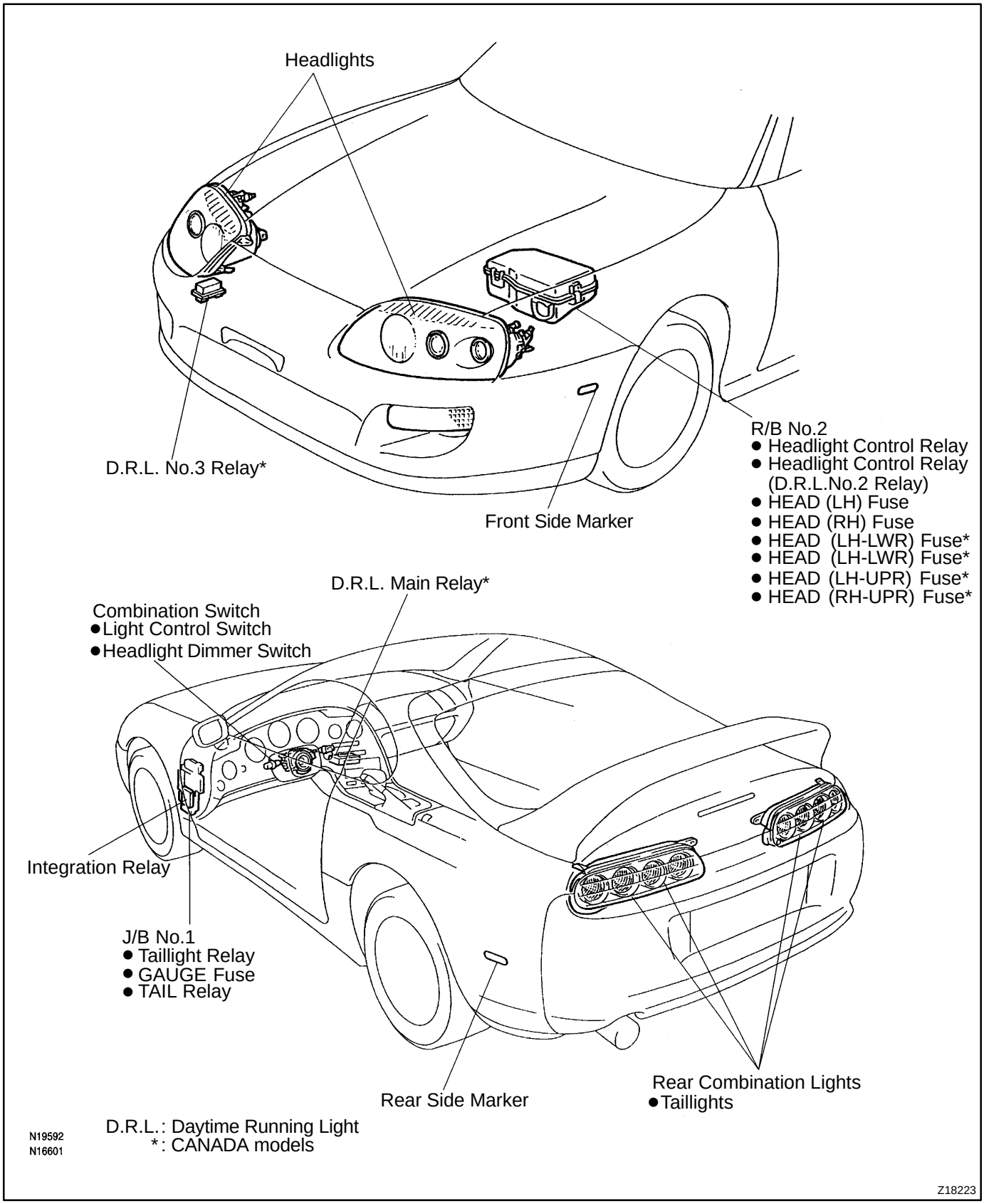
If the circuit is as specified, try replacing the relay with a new one.

If the circuit not as specified, inspect the circuits connected to other parts.

HEADLIGHT AND TAILLIGHT SYSTEM

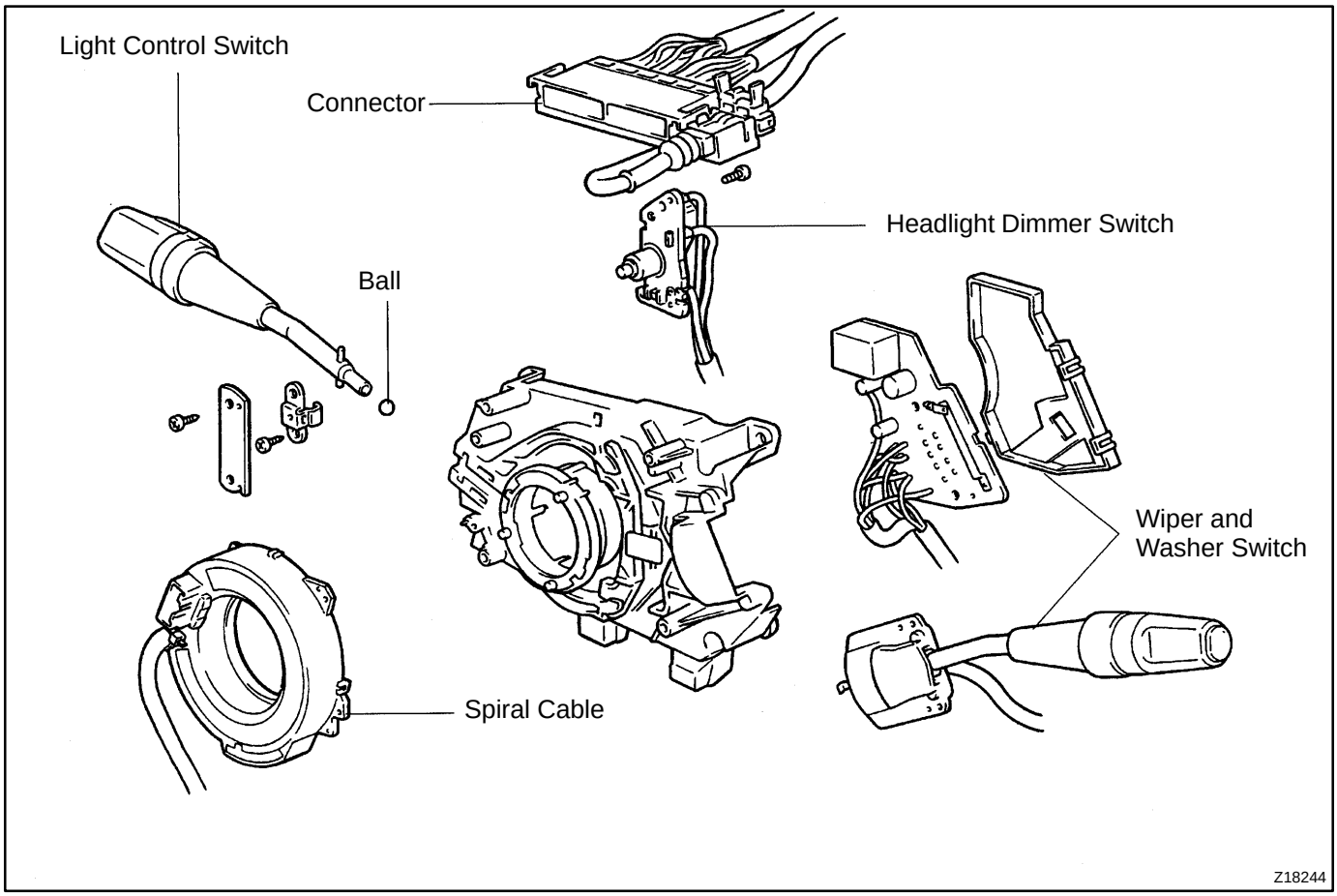
BE0DQ-01

LOCATION



BE0DR-02

COMPONENTS



BE0DS-02

INSPECTION

1. INSPECT LIGHT CONTROL SWITCH CONTINUITY

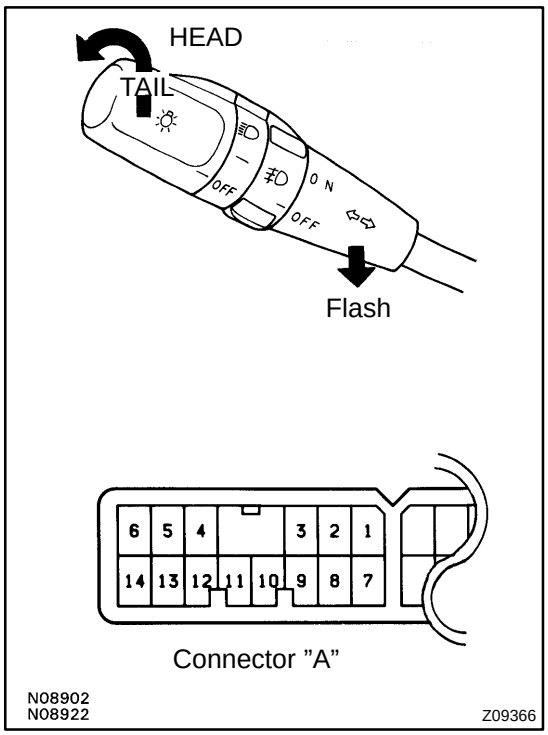
Switch position	Tester connection	Specified condition
OFF	-	No continuity
TAIL	A2 - A11	Continuity
HEAD	A2 - A11 - A13	Continuity

If continuity is not as specified, replace the switch.

2. INSPECT HEADLIGHT DIMMER SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Flash	A9 - A12 - A14	Continuity
Low beam	A3 - A9	Continuity
High beam	A9 - A12	Continuity

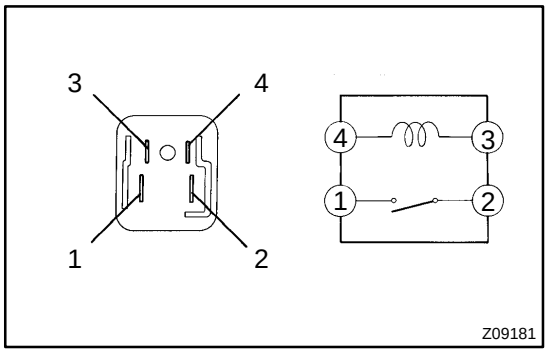
If continuity is not as specified, replace the switch.



3. INSPECT HEADLIGHT CONTROL RELAY CONTINUITY

Condition	Tester connection	Specified condition
Constant	3 - 4	Continuity
Apply B+ between terminal 3 and 4.	1 - 2	Continuity

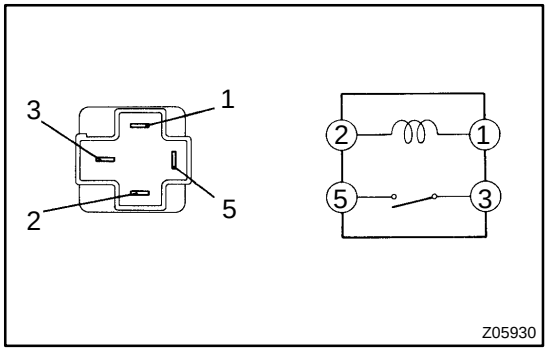
If continuity is not as specified, replace the relay.



4. INSPECT TAILLIGHT RELAY CONTINUITY

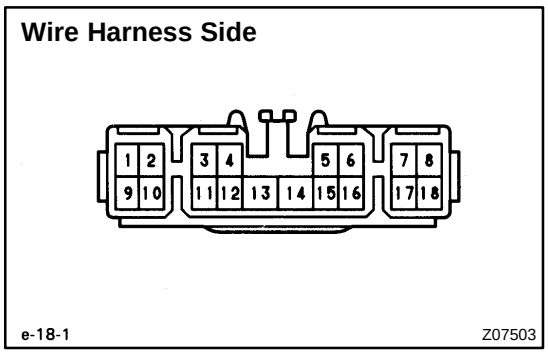
Condition	Tester connection	Specified condition
Constant	1 - 2	Continuity
Apply B+ between terminals 1 and 2.	3 - 5	Continuity

If continuity is not as specified, replace the relay.



5. Light Auto Turn Off System:

INSPECT INTEGRATION RELAY CIRCUIT (See page BE-13)



6. INSPECT DOOR COURTESY SWITCH CONTINUITY
(See page BE-28)

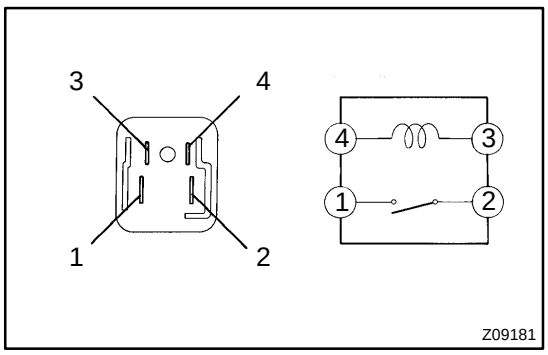
7. CANADA models only:
INSPECT D.R.L. MAIN RELAY CIRCUIT

Disconnect the connector from relay and inspect the connector on wire harness side, as shown.

Tester connection	Condition	Specified condition
5 - Ground	Headlight dimmer switch position Low beam or high beam	No continuity
5 - Ground	Headlight dimmer switch position Flash	Continuity
8 - Ground	Parking brake switch position OFF	No continuity
8 - Ground	Parking brake switch position ON	Continuity
16 - Ground	Headlight dimmer switch position Low beam	No continuity
16 - Ground	Headlight dimmer switch position Flash or High beam	Continuity
13 - Ground	Constant	Continuity
18 - Ground	Constant	Continuity
2 - Ground	Ignition switch position LOCK or ACC	No voltage
2 - Ground	Ignition switch position ON	Battery positive voltage
11 - Ground	Engine Stop	No voltage
11 - Ground	Engine Running	Battery positive voltage
15 - Ground 17 - Ground	Constant	Battery positive voltage

If the circuit is as specified, try replacing the relay with a new one.

If the circuit is not as specified, inspect the circuit connected to other parts.

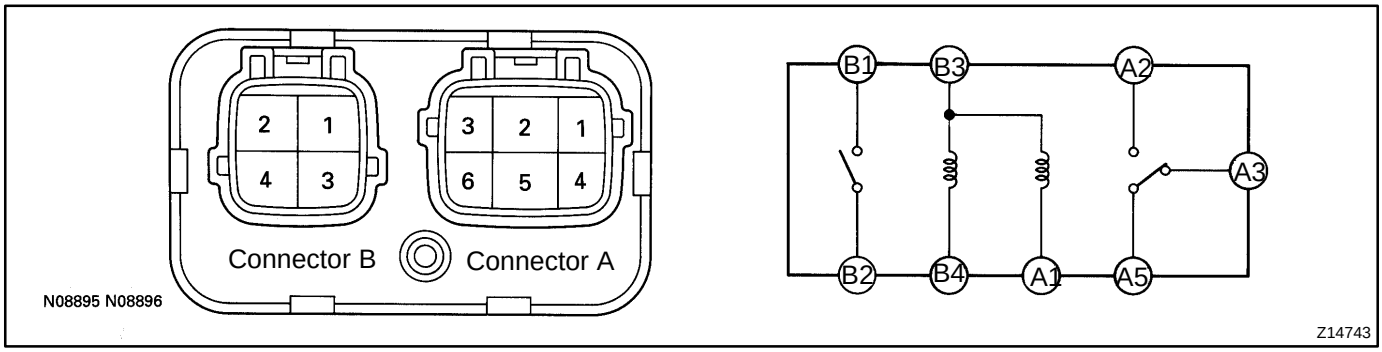


8. INSPECT D.R.L. NO.2 RELAY CONTINUITY

Condition	Tester connection	Specified condition
Constant	3 - 4	Continuity
Apply B+ between terminals 3 and 4.	1 - 2	Continuity

If continuity is not as specified, replace the relay.

9. INSPECT D.R.L. NO.3 RELAY CONTINUITY



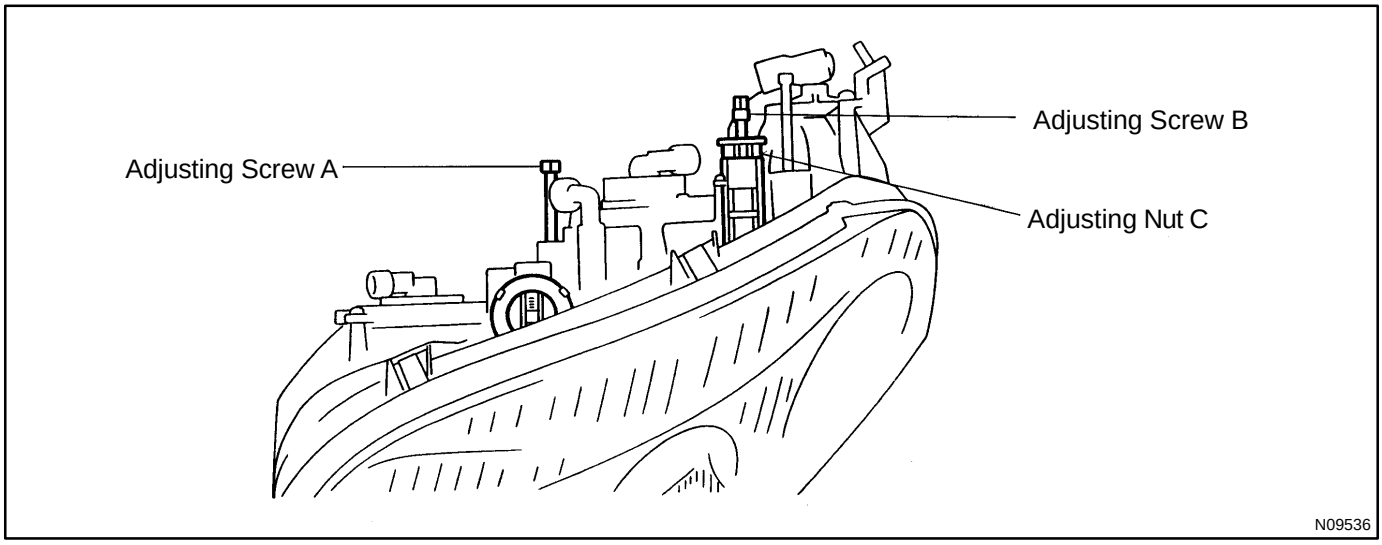
Tester connection	Condition	Specified condition
A1 - B3	Constant	Continuity
A3 - A5	Constant	Continuity
B3 - B4	Constant	Continuity
A2 - A5	Apply battery positive voltage between terminal A1 and B3.	Continuity
B1 - B2	Apply battery positive voltage between terminal B3 and B4.	Continuity

If continuity is not as specified, replace the relay.

10. INSPECT PARKING BRAKE SWITCH CONTINUITY (See page BE-43)

BE0DT-01

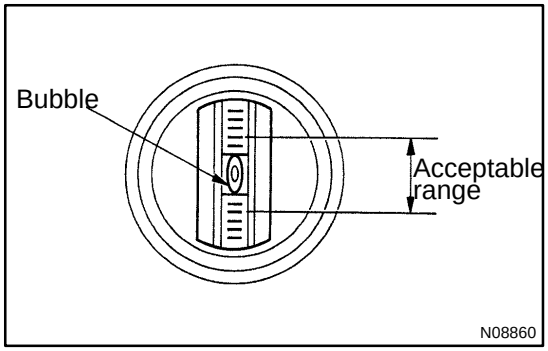
ADJUSTMENT



1. Adjusting headlight aim only:
INSPECT HEADLIGHT AIM

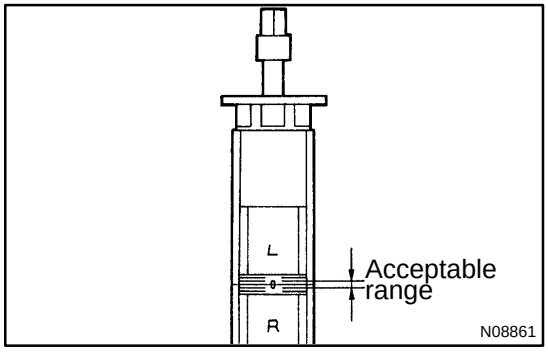
Do the following before inspection.

- Make sure the body around the headlight is not deformed.
- Park the vehicle on a level spot.
- The driver gets into the driver's seat and puts the vehicle in a state ready for driving (with a full tank).
- Bounce the vehicle several times.



2. Adjusting headlight aim only:
ADJUST HEADLIGHT VERTICAL ALIGNMENT

If the bubble is outside the acceptable range of the beam angle gauge, adjust it using adjusting screw A.



3. Adjusting headlight aim only:
ADJUST HEADLIGHT HORIZONTAL ALIGNMENT

If the "0" moves away from the mark beyond the acceptable range, adjust the "0" back to the mark using adjusting screw B.

4. Replacing headlight:
REPLACE HEADLIGHT

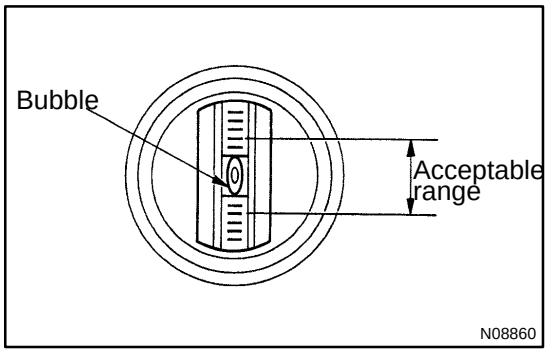
5. Replacing headlight:
INSPECT HEADLIGHT AIM

Do the following before inspection.

- Make sure the body around the headlight is not deformed.
- Park the vehicle on a level spot.
- The driver gets into the driver's seat and puts the vehicle in a state ready for driving (with a full tank).
- Bounce the vehicle several times.

6. Replacing headlight:
ADJUST HEADLIGHT IN VERTICAL ALIGNMENT

(a) Using adjusting screw A, adjust the headlight aim to within the specifications.

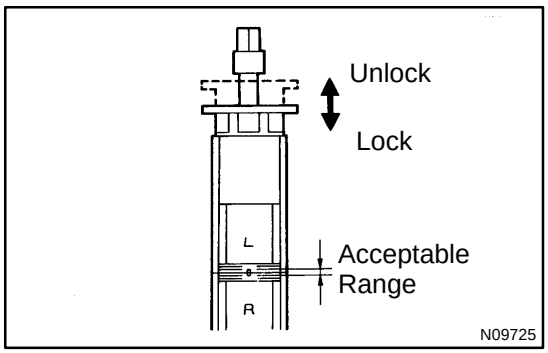


(b) Make sure the gauge bubble is within the acceptable range.

HINT:

If the gauge bubble is outside the acceptable range, check that the vehicle is parked on a level spot.

Readjust the headlight aim after parking the vehicle on a level spot.



7. Replacing headlight:
ADJUST HEADLIGHT IN HORIZONTAL ALIGNMENT

(a) Using adjusting screw B, adjust the headlight aim to within the specifications.

(b) Using adjusting nut C, adjust the "0" back to the mark.

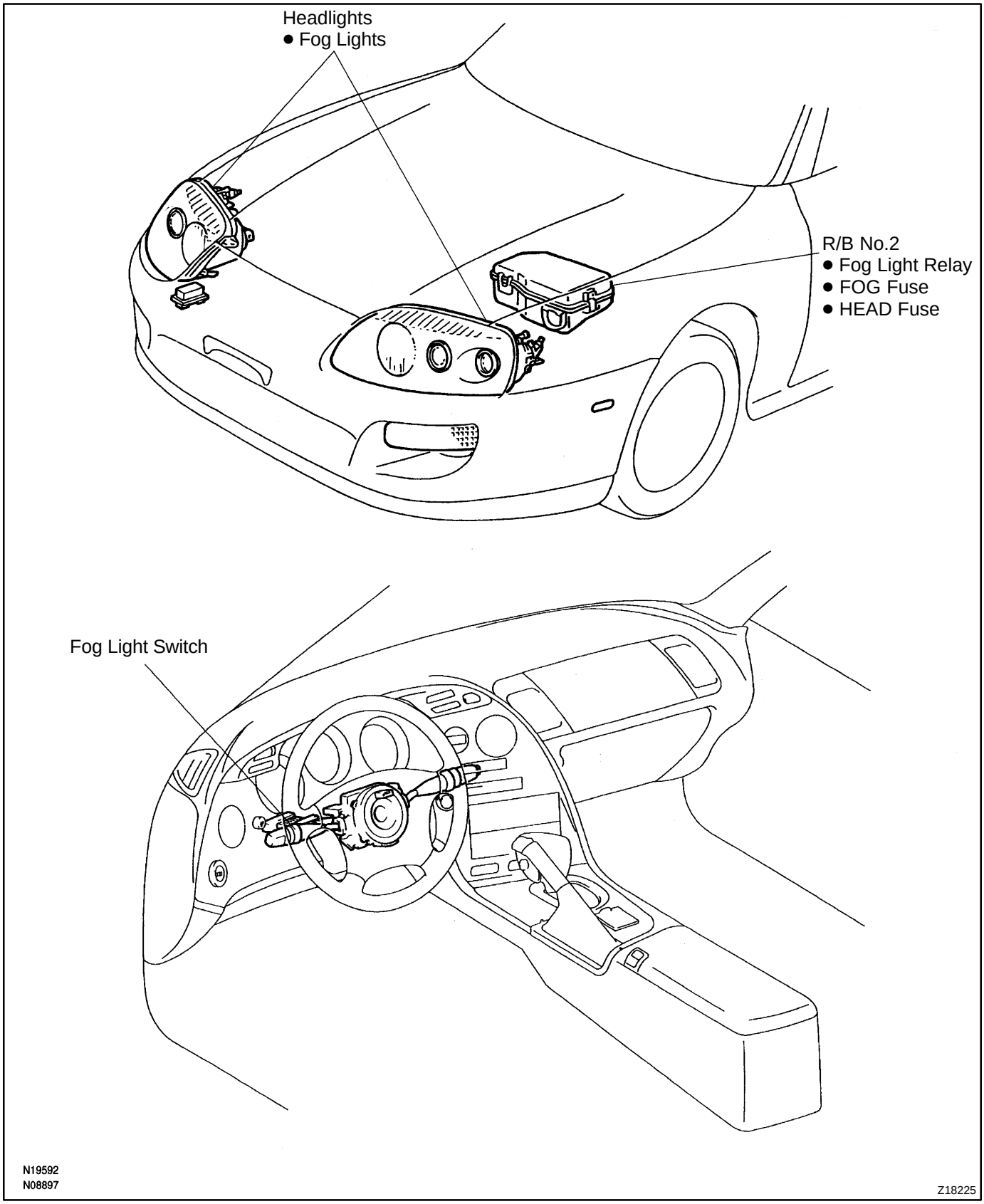
HINT:

For adjustment, pull nut C to the rear vehicle to free it. After adjustment, check that the nut C is locked in.

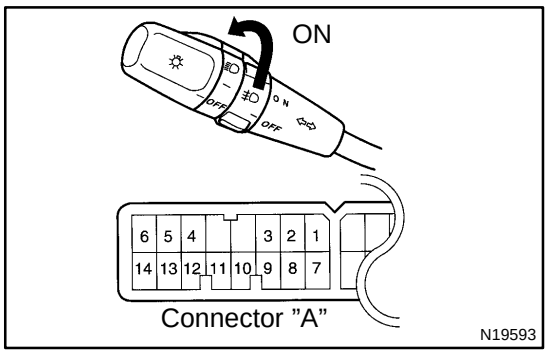
FOG LIGHT SYSTEM

LOCATION

BE0DU-03



BE0DV-03

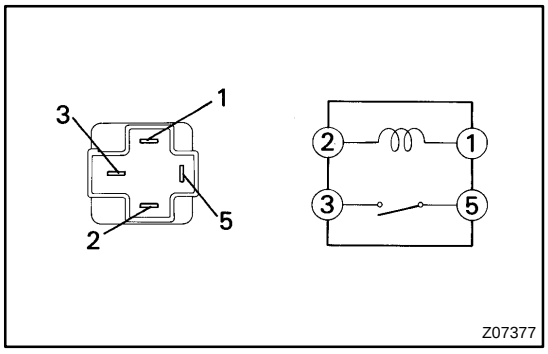


INSPECTION

1. INSPECT FOG LIGHT SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
OFF	-	No continuity
ON	A6 - A7	Continuity

If continuity is not as specified, replace the switch.

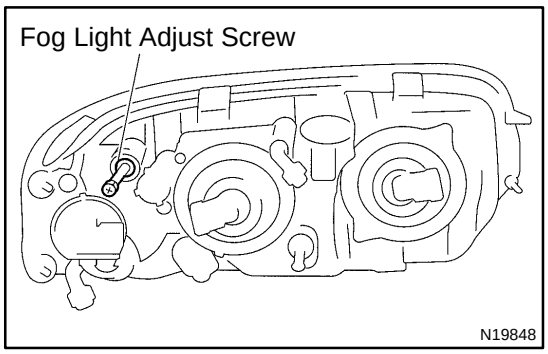


2. INSPECT FOG LIGHT RELAY CONTINUITY

Condition	Tester connection	Specified condition
Constant	1 - 2	Continuity
Apply B+ between terminals 1 and 2.	3 - 5	Continuity

If continuity is not as specified, replace the relay.

BE0DW-01



ADJUSTMENT

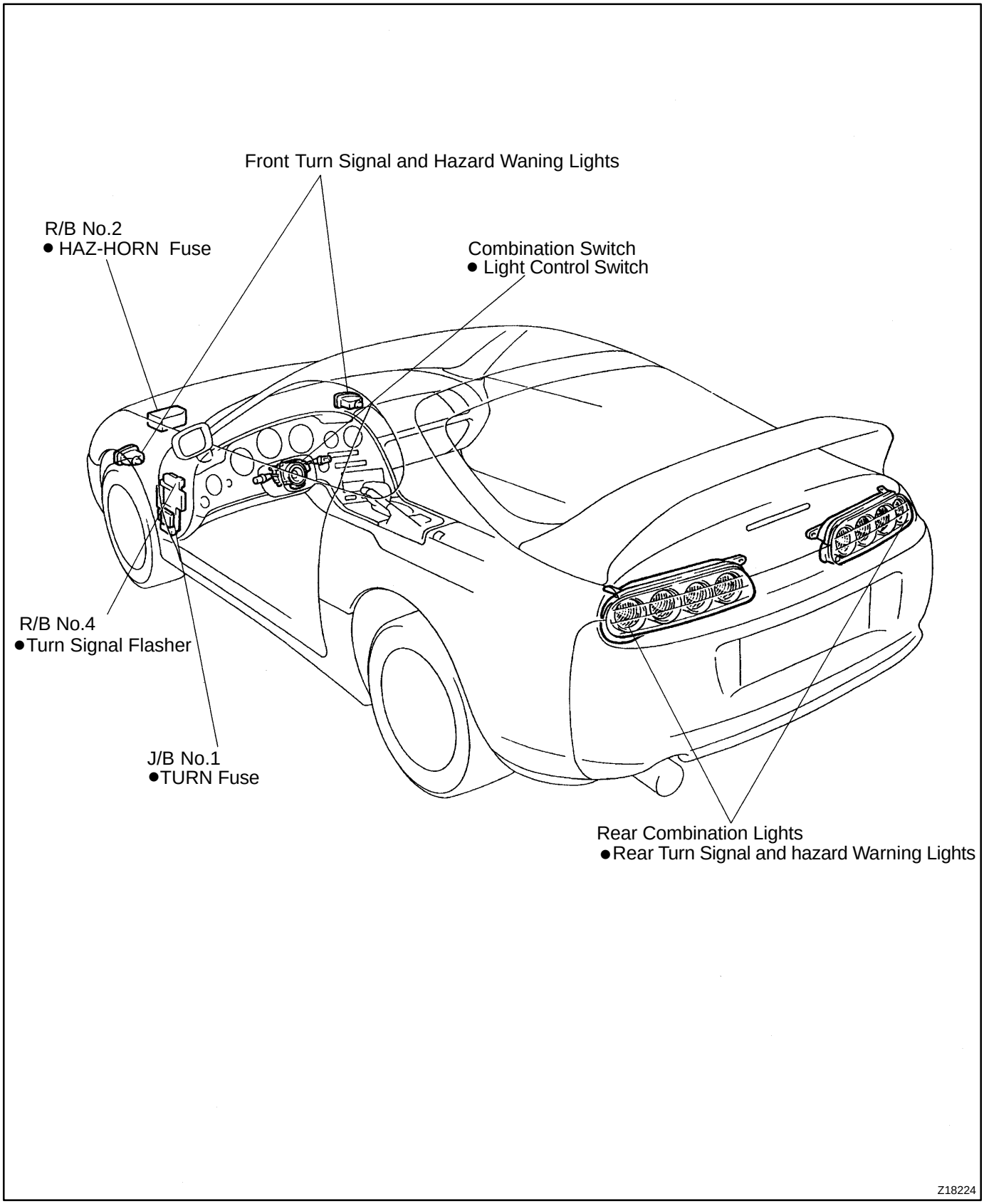
ADJUST FOG LIGHT AIM

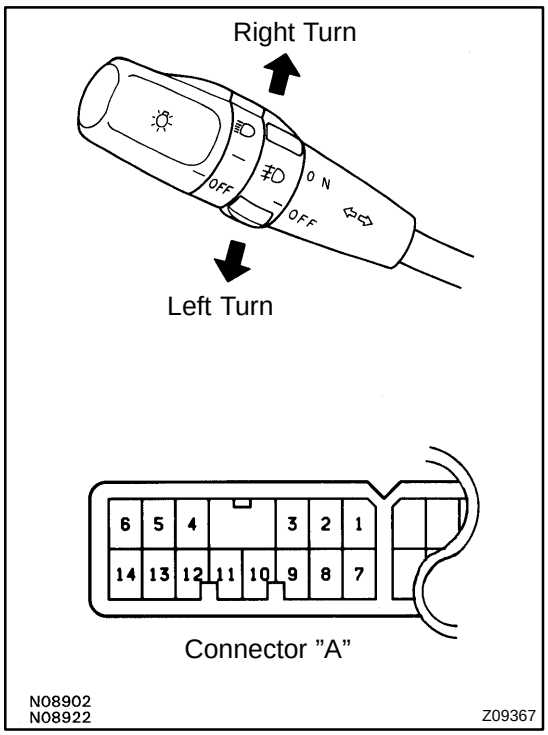
Adjust Screw: Vertical Direction

TURN SIGNAL AND HAZARD WARNING SYSTEM

LOCATION

BE0DX-01





BE0DY-02

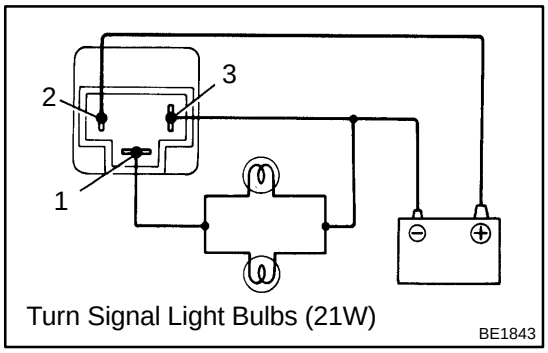
INSPECTION

BE3QR-01

1. INSPECT TURN SIGNAL SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Left turn	A1 - A5	Continuity
Neutral	-	No continuity
Right turn	A1 - A8	Continuity

If continuity is not as specified, replace the switch.



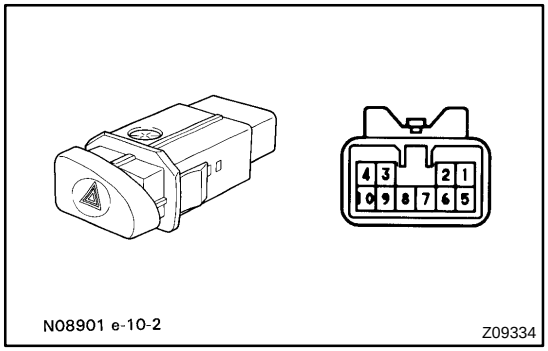
2. INSPECT TURN SIGNAL FLASHER OPERATION

(a) Connect the terminal 2 to battery positive (+) terminal and the terminal 3 to battery negative (-) terminal.

(b) Connect the 2 turn signal light bulbs parallel to each other to terminals 1 and 3, check that the bulbs flash.

HINT:

The turn signal lights should flash between 60 and 120 times per minute.



3. INSPECT HAZARD WARNING SWITCH CONTINUITY

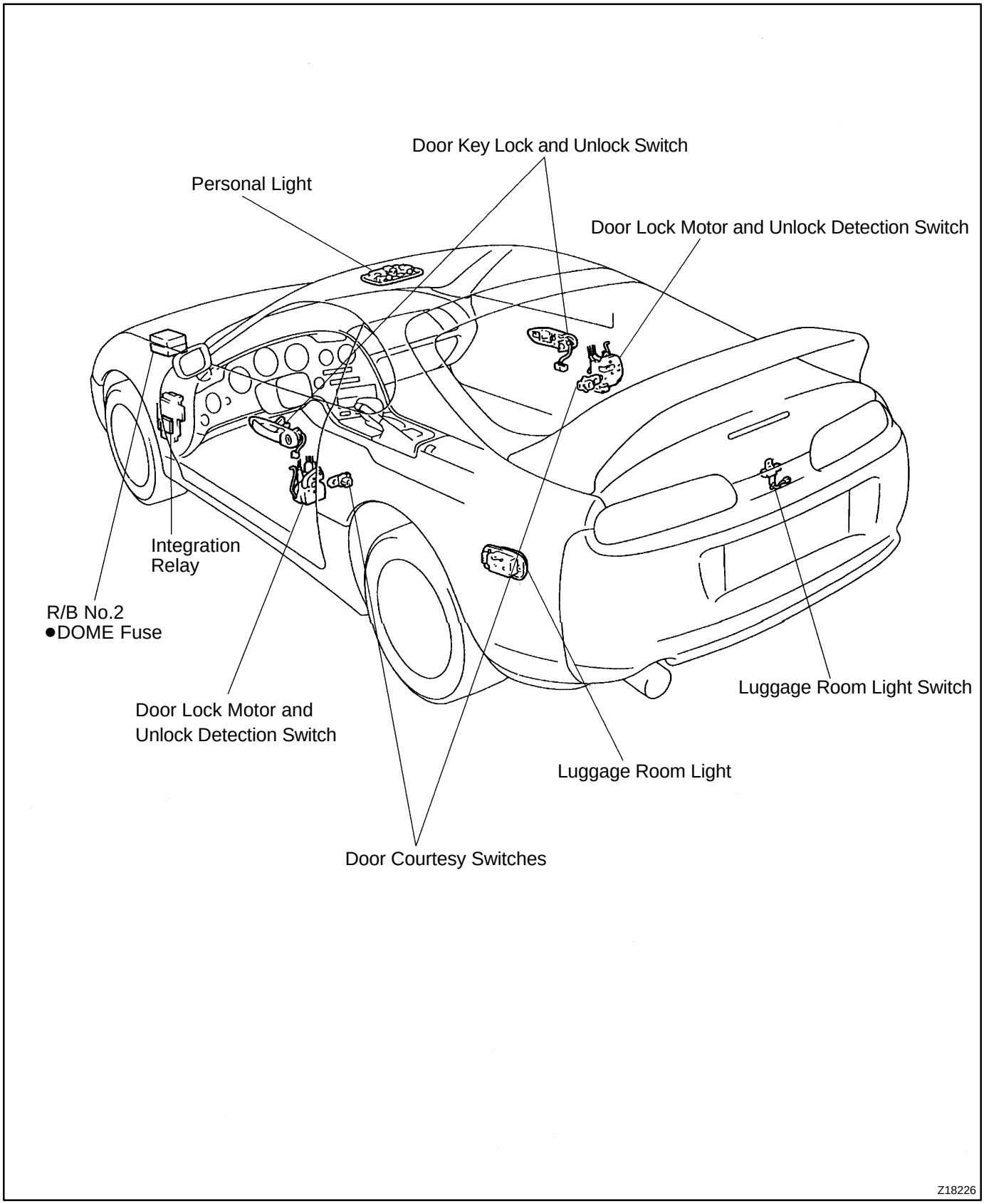
Condition	Tester connection	Specified condition
Switch OFF	7 - 10	Continuity
Switch ON	7 - 8 4 - 5 - 6 - 9	Continuity
Illumination circuit	2 - 3	Continuity

If continuity is not as specified, replace the switch.

INTERIOR LIGHT SYSTEM

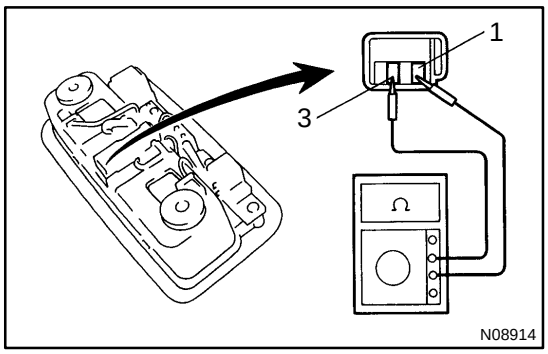
LOCATION

BE0DZ-01



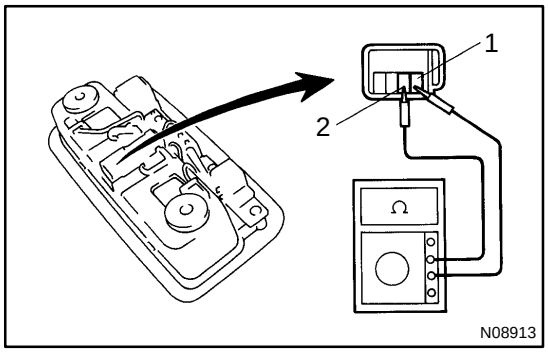
BE0E0-02

INSPECTION



1. INSPECT INTERIOR LIGHT CONTINUITY

Switch position	Tester connection	Specified condition
DOOR	1 - 3	Continuity
OFF	-	No continuity

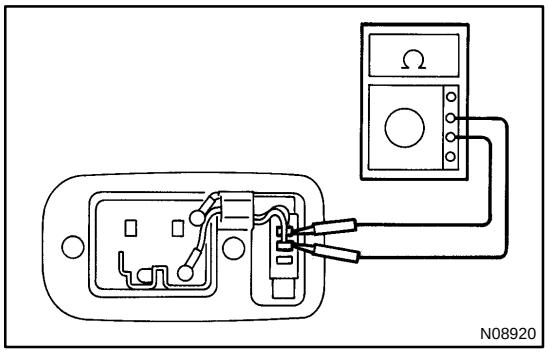


2. INSPECT PERSONAL LIGHT CONTINUITY

Switch position	Tester connection	Specified condition
OFF	-	No continuity
*ON	1 - 2	Continuity

* Set the interior light switch to OFF or DOOR.

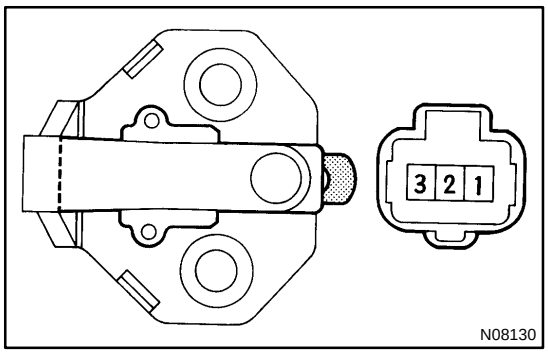
If continuity is not as specified, replace the light assembly or bulb.



3. INSPECT LUGGAGE ROOM LIGHT CONTINUITY

Switch position	Tester connection	Specified condition
OFF	1 - 2	No continuity
ON	1 - 2	Continuity

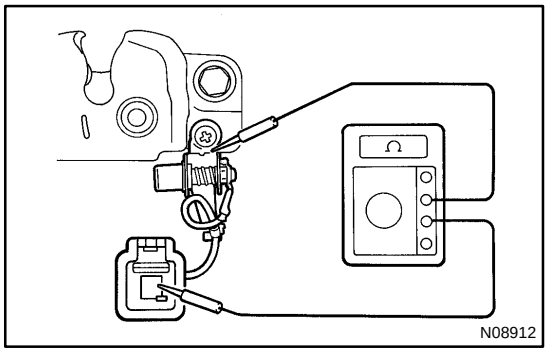
If continuity is not as specified, replace the light.



4. INSPECT DOOR COURTESY SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
ON (SW pin released)	1 - 2 - 3	Continuity
OFF (SW pin pushed in)	-	No continuity

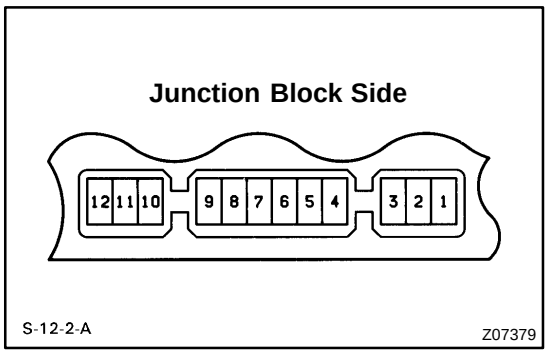
If continuity is not as specified, replace the switch.



5. INSPECT LUGGAGE ROOM LIGHT SWITCH CONTINUITY

Condition	Tester connection	Specified condition
ON (SW pin released)	1 - Switch body	Continuity
OFF (SW pin pushed in)	1 - Switch body	No continuity

If continuity is not as specified, replace the switch.



6. INSPECT INTEGRATION RELAY CIRCUIT

Remove the relay from junction block and inspect the connector on the junction block side, as shown in the chart.

Tester connection	Condition	Specified condition
4 - Ground	Courtesy Switch Position OFF (Door closed)	No continuity
4 - Ground	Courtesy Switch Position ON (Door opened)	Continuity
10 - Ground	Constant	Continuity
1 - Ground	Constant	Battery positive voltage
7 - Ground	Ignition switch position / LOCK or ACC	No voltage
7 - Ground	Ignition switch position / ON	Battery positive voltage

If circuit is as specified, try replacing the relay with a new one. If the circuit is not as specified, inspect the circuits connected to other parts.

7. INSPECT DOOR KEY LOCK AND UNLOCK SWITCH CIRCUIT

See page DI-656

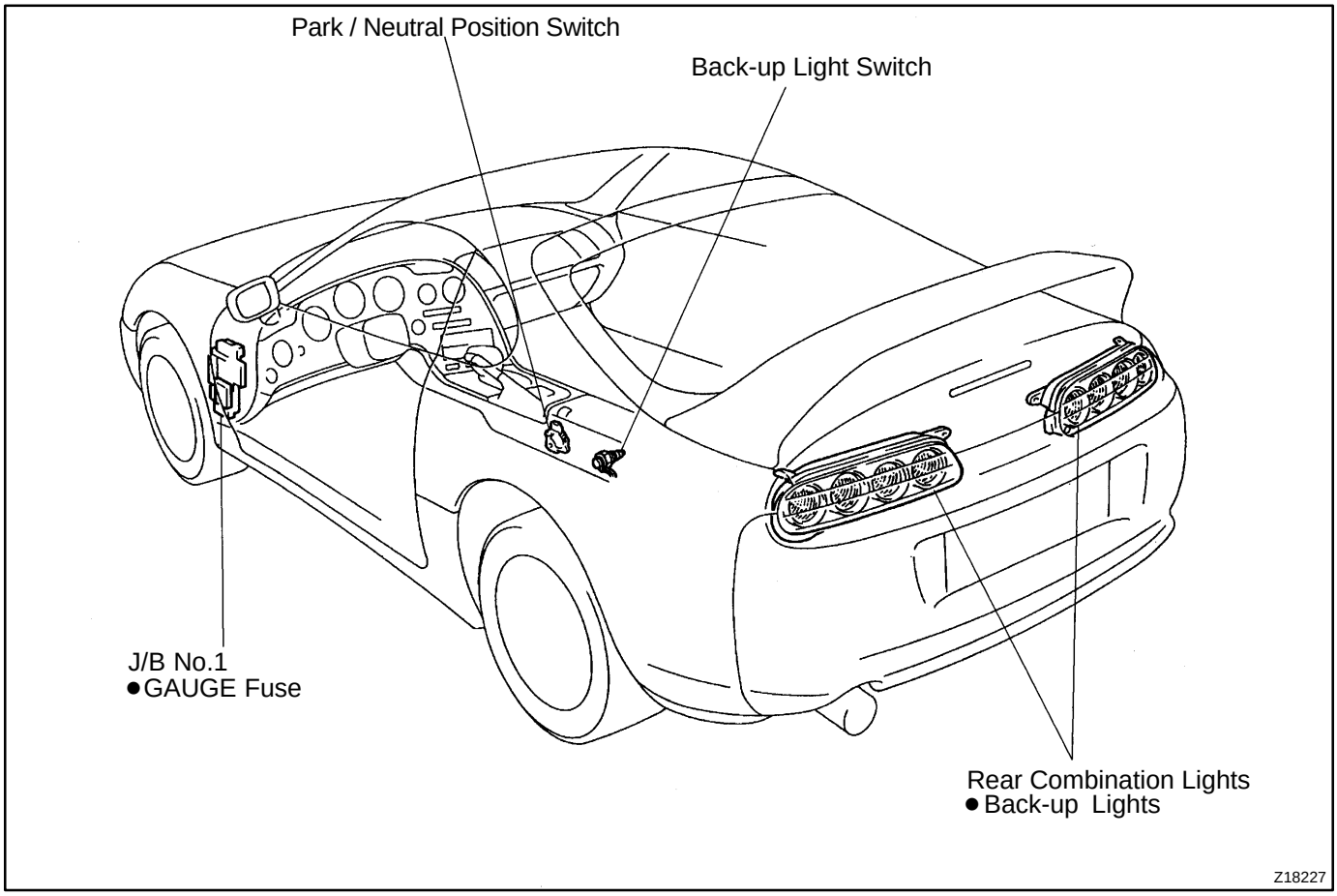
8. INSPECT DOOR UNLOCK DETECTION SWITCH CIRCUIT

See page DI-638

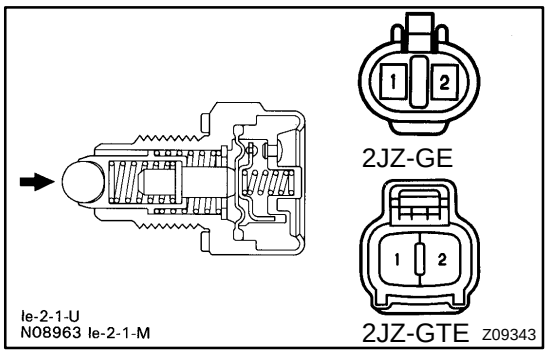
BACK-UP LIGHT SYSTEM

LOCATION

BE0E1-01



BE0E2-02



INSPECTION

1. INSPECT BACK-UP LIGHT SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Free	1 - 2	No continuity
Push	1 - 2	Continuity

If continuity is not as specified, replace the switch.

2. INSPECT PARK/NEUTRAL POSITION SWITCH MALFUNCTION

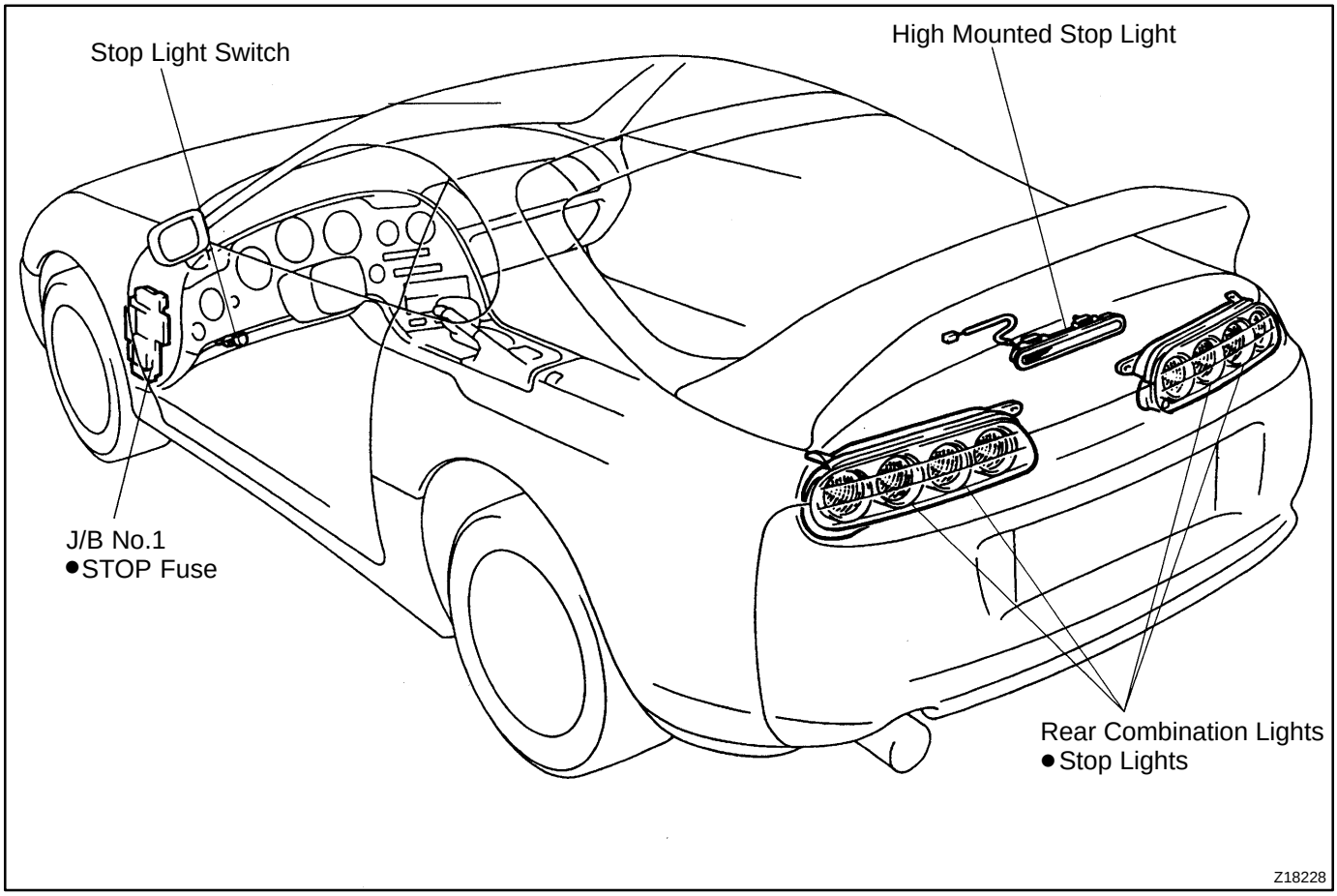
2JZ-GE: See page DI-354

2JZ-GTE: See page DI-423

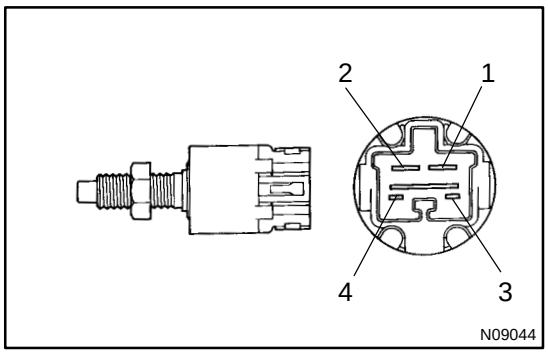
STOP LIGHT SYSTEM

LOCATION

BE0E3-01



BE0E4-01



INSPECTION

INSPECT STOP LIGHT SWITCH CONTINUITY

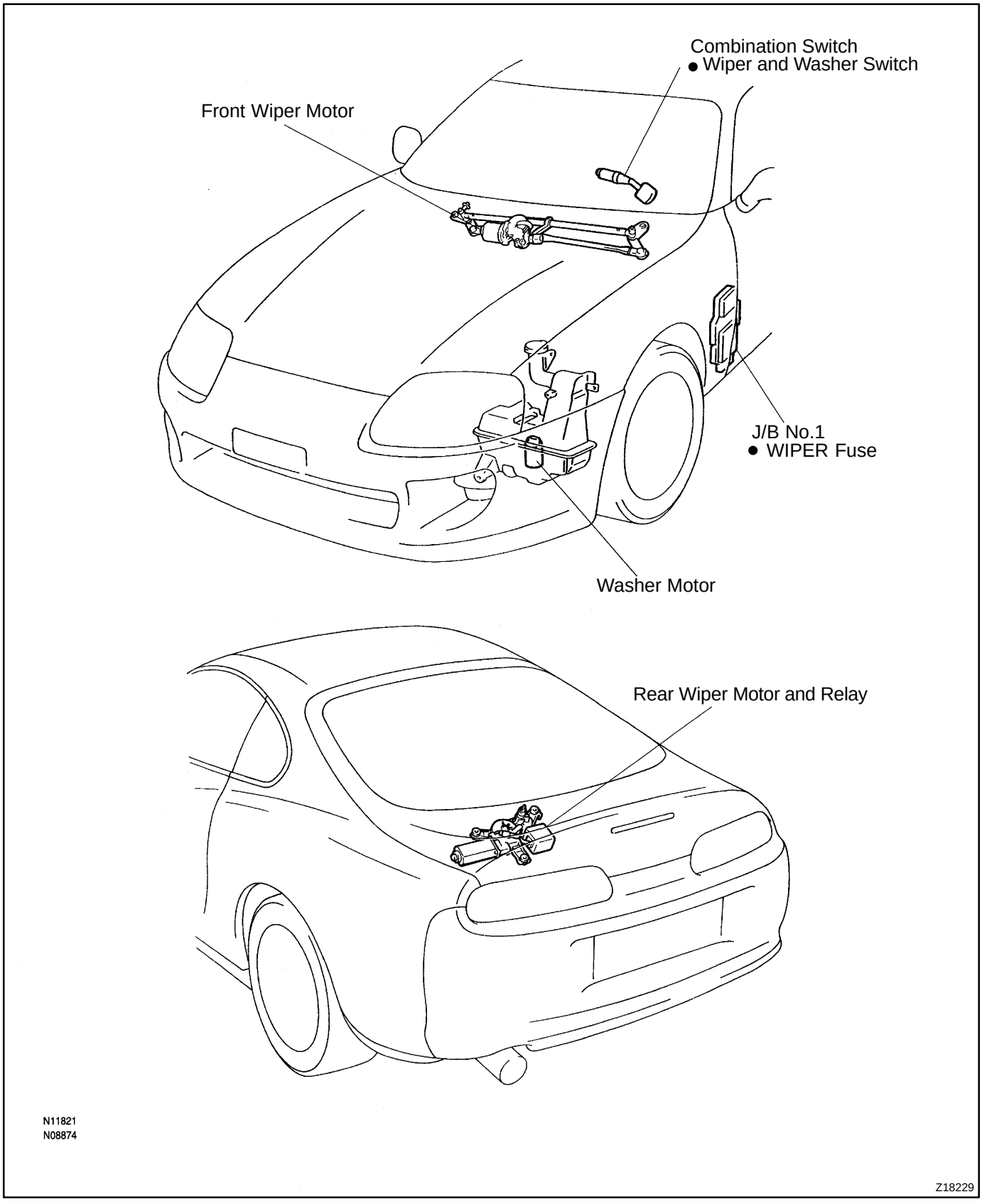
Switch position	Tester connection	Specified condition
Switch pin free (Pedal depressed)	1 - 2	Continuity
Switch pin pushed in (Pedal released)	3 - 4	Continuity

If continuity is not as specified, replace the switch.

WIPER AND WASHER SYSTEM

LOCATION

BE0E5-01



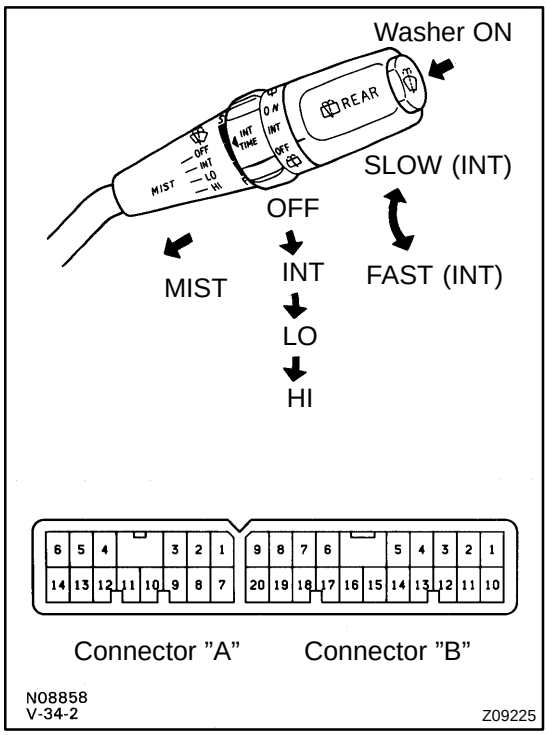
BE0E6-02

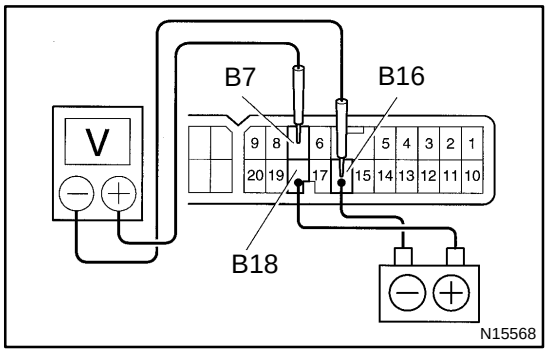
INSPECTION

1. INSPECT FRONT WIPER AND WASHER SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Wiper OFF	B4 - B7	Continuity
Wiper OFF and MIST	B7 - B18	Continuity
Wiper INT	B4 - B7	Continuity
Wiper INT and MIST	B7 - B18	Continuity
Wiper LO	B7 - B18	Continuity
Wiper LO and MIST	B7 - B18	Continuity
Wiper HI	B13 - B18	Continuity
Wiper HI and MIST	B7 - B13 B13 - B18	Continuity
Wiper ON	B8 - B16	Continuity

If continuity is not as specified, replace the switch.





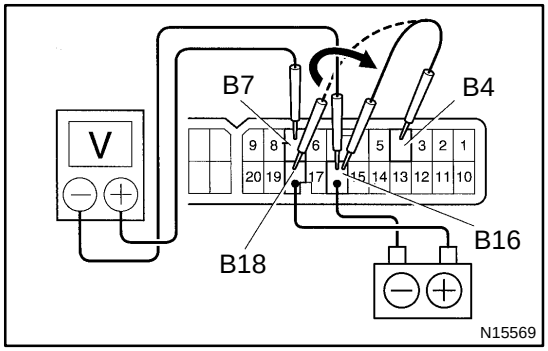
2. INSPECT FRONT WIPER INTERMITTENT OPERATION

(a) Turn the wiper switch to INT position.

(b) Turn the intermittent time control switch to FAST position.

(c) Connect the positive (+) lead from the battery to terminal B18 and the negative (-) lead to terminal B16.

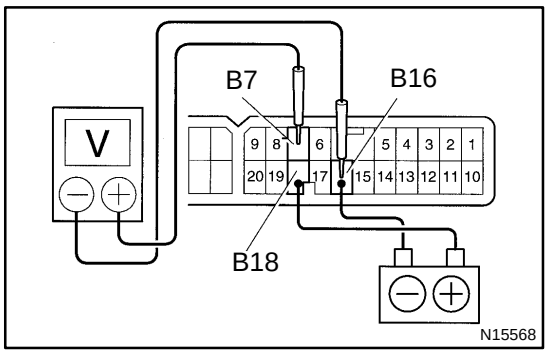
(d) Connect the positive (+) lead from the voltmeter to terminal B7 and the negative (-) lead to terminal B16, check that the meter needle indicates battery positive voltage.



(e) After connecting terminal B4 to terminal B18, connect to terminal it to terminal B16, check the voltage rises from 0 V to battery voltage with in the times, as shown in the table.

INT time control switch position	Voltage
FAST	Approx. 1 - 3 sec. Battery positive voltage 0 V
SLOW	Approx. 10 - 15 sec. Battery positive voltage 0 V

If operation is not as specified, replace the wiper and washer switch.

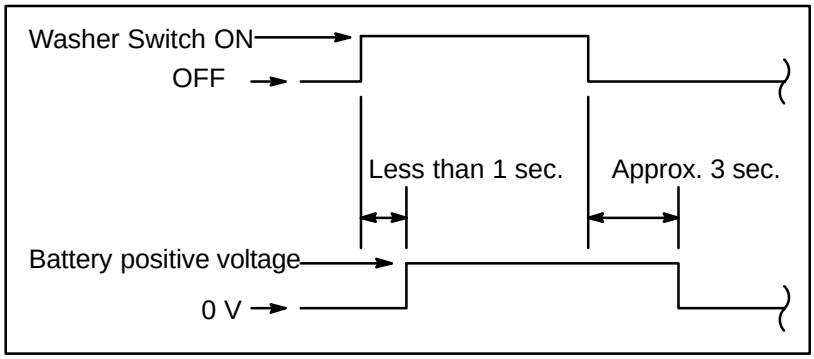


3. INSPECT FRONT WASHER LINKED OPERATION

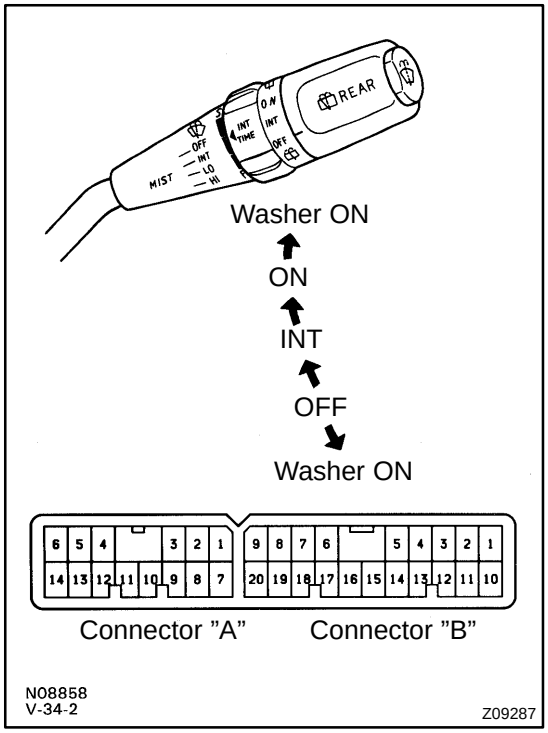
(a) Connect the positive (+) lead from the battery to terminal B18 and the negative (-) lead to terminal B16.

(b) Connect the positive (+) lead from the voltmeter to terminal B7 and the negative (-) lead to terminal B16.

(c) Push in the washer switch, check that the voltage changes, as shown in the table.



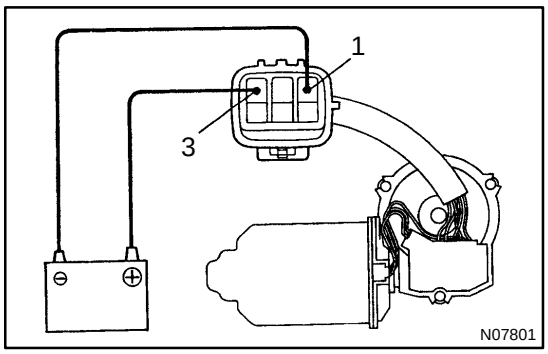
If operation is not as specified, replace the wiper and washer switch.



4. INSPECT REAR WIPER AND WASHER SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Washer 1	B2 - B16	Continuity
OFF	-	No continuity
INT	B10 - B16	Continuity
ON	B1 - B16	Continuity
Washer 2	B1 - B2 - B16	Continuity

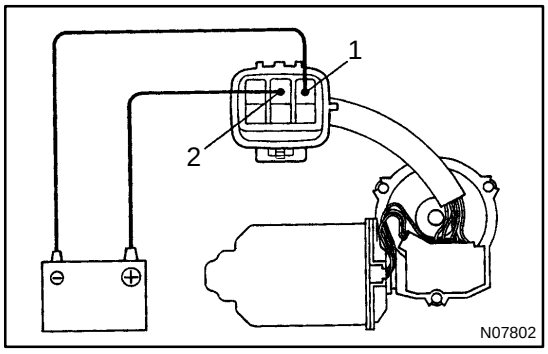
If continuity is not as specified, replace the switch.



5. Low Speed:
INSPECT FRONT WIPER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 3 and the negative (-) lead to terminal 1, check that the motor operates at low speed.

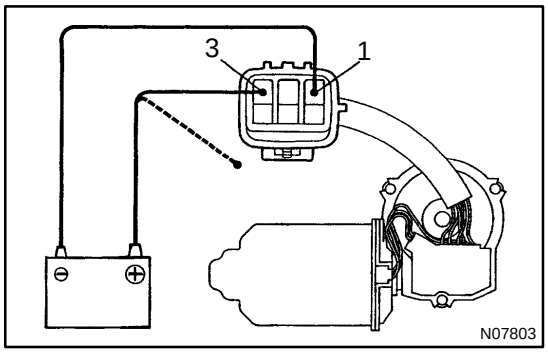
If operation is not as specified, replace the motor.



6. High Speed:
INSPECT FRONT WIPER MOTOR OPERATION

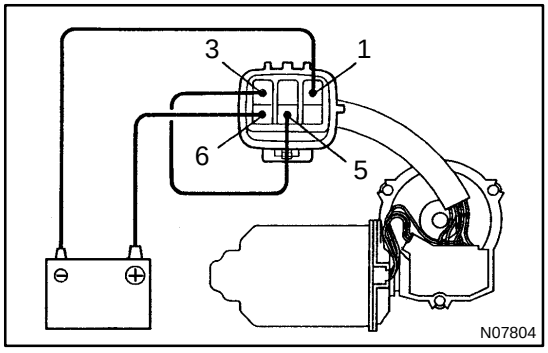
Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1, check that the motor operates at high speed.

If operation is not as specified, replace the motor.



7. Stopping at Stop Position:
INSPECT FRONT WIPER MOTOR OPERATION

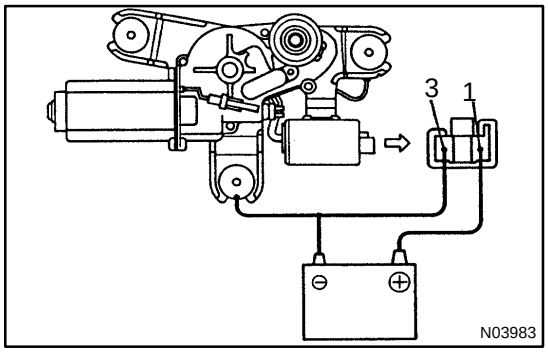
(a) Operate the motor at low speed and stop the motor operation anywhere by disconnecting positive (+) lead from terminal 3.



(b) Connect terminals 3 and 5.

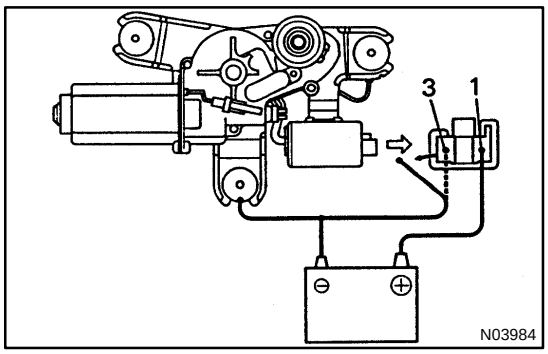
(c) Connect the positive (+) lead from the battery to terminal 6 and negative (-) lead to terminal 1, check that the motor stops running at the stop position after the motor operates again.

If operation is not as specified, replace the motor.



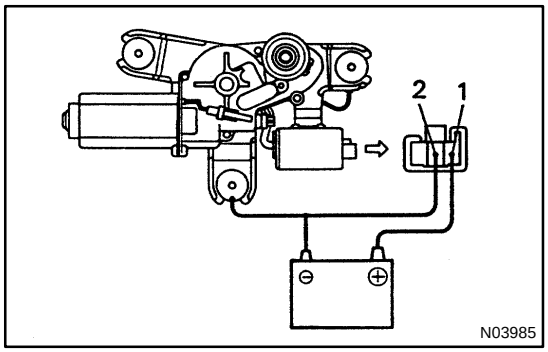
8. INSPECT REAR WIPER MOTOR AND RELAY OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1, and the negative (-) lead to terminal 3 and the motor body, check that the motor operates.



(b) Disconnect the negative (-) lead from terminal 3, check that the motor stops running at the stop position.

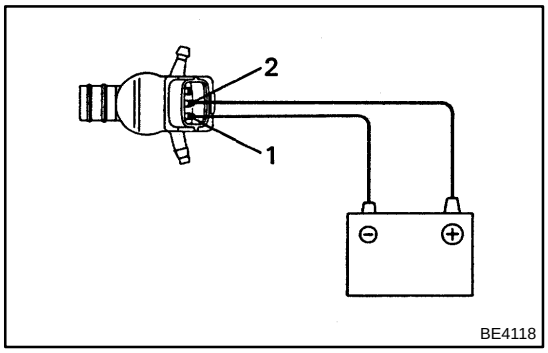
If operation is not as specified, replace the motor and relay.



9. INSPECT INTERMITTENT OPERATION

Connect the positive (+) lead from the battery to terminal 1, and the negative (-) lead to terminal 2 and the motor body, check that the motor operates intermittently for 9 - 15 seconds.

If operation is not as specified, replace the motor and relay.



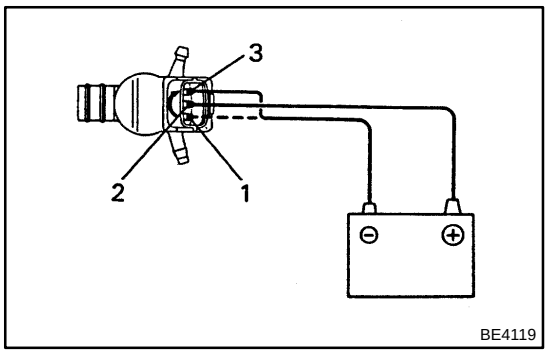
10. Front Washer:
INSPECT WASHER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1, check that the motor operates.

NOTICE:

These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.



11. Rear Washer:
INSPECT WASHER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 3, check that the motor operates.

NOTICE:

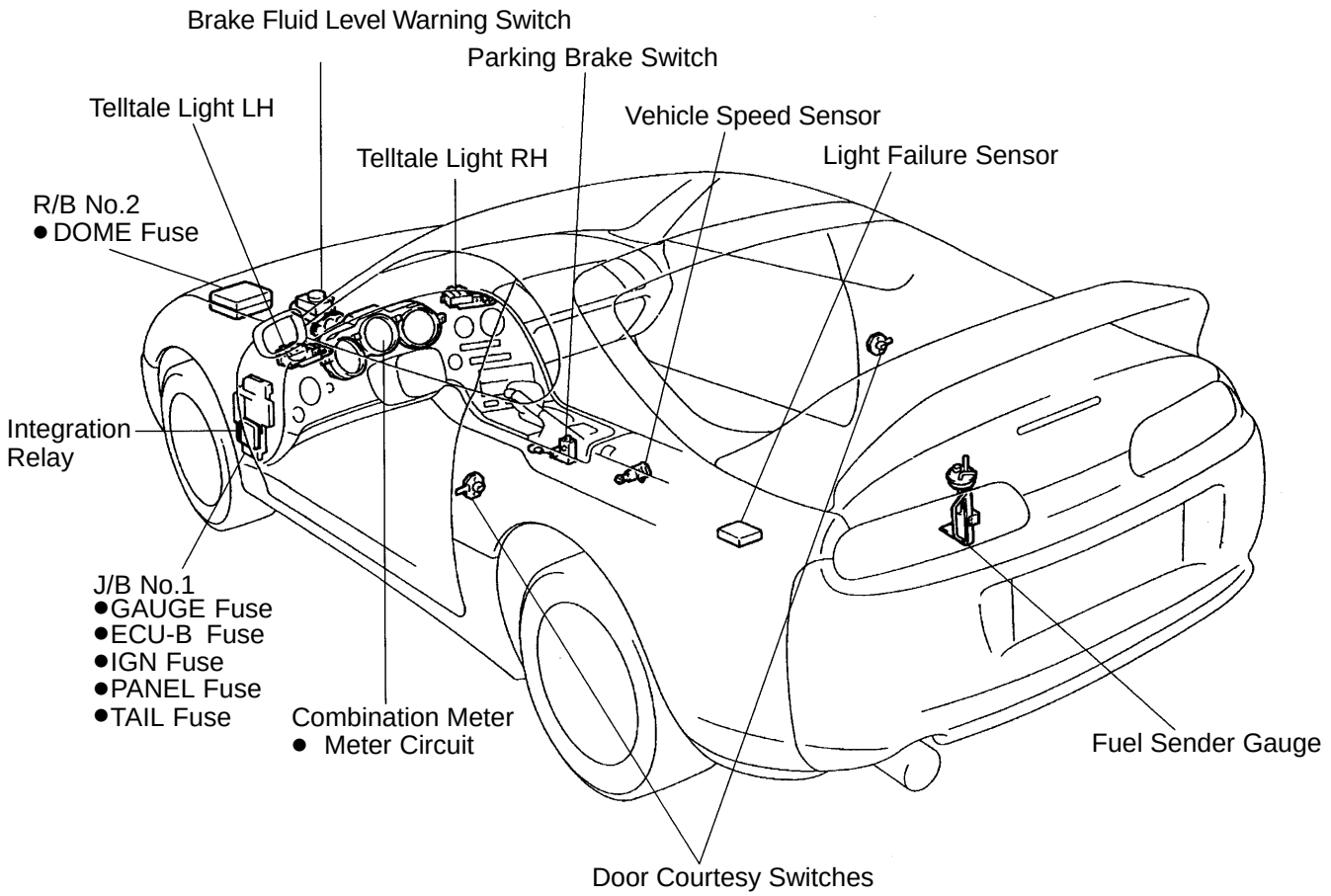
These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.

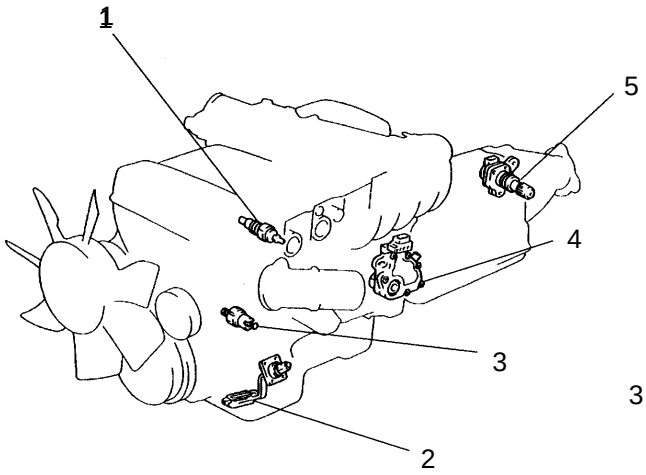
COMBINATION METER

LOCATION

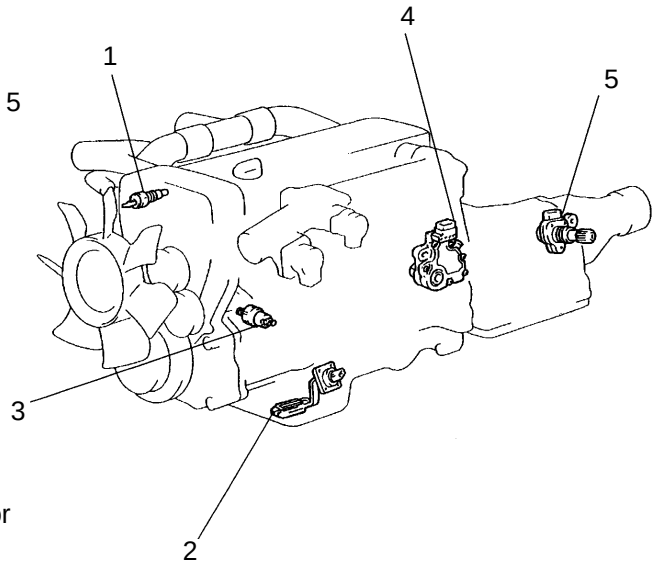
BE0E7-01



2JZ-GE



2JZ-GTE



1 : Engine Coolant Temperature Sensor
2 : Engine Oil Level Sensor
3 : Low Oil Pressure Warning Switch
4 : Park/Neutral Position Switch
5 : Vehicle Speed Sensor

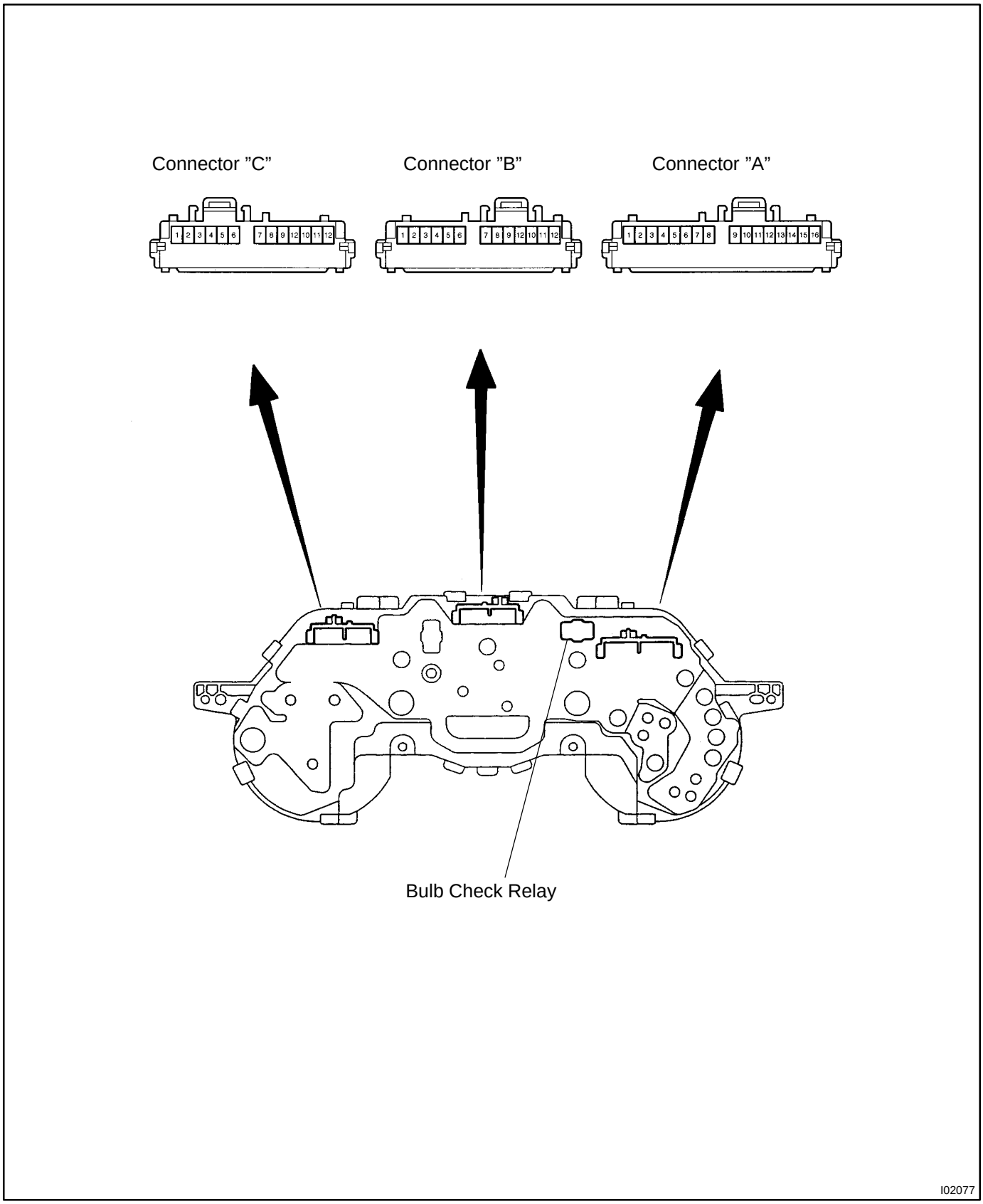
N16602
N09801 N09802

Z18230

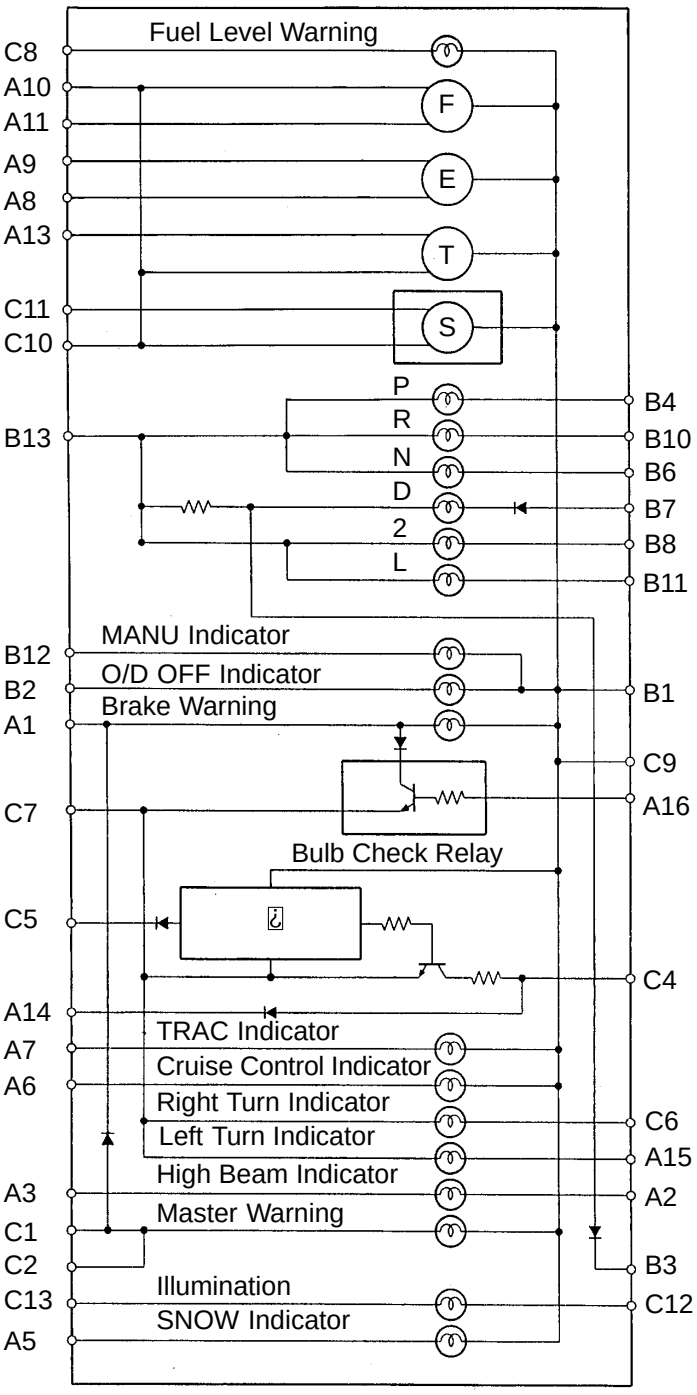
BE0E8-01

CIRCUIT

1. METER:



(F) :Fuel Gauge
(E) :Engine Coolant Temperature Gauge
(T) :Tachometer
(S) :Speedometer
D.R.L. :Daytime Running Light
* :Engine Oil Level Delay Circuit

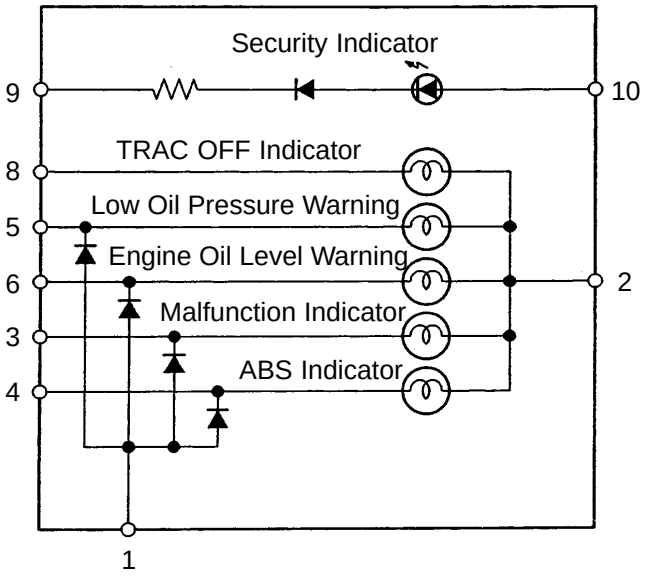


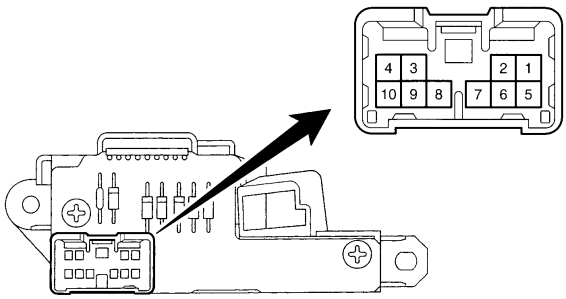
No.		Wire Harness Side
A	1	Brake Fluid Level Warning Switch Parking Brake Switch
	2	USA:TAIL (RH) Fuse, PANEL Fuse CANADA:D.R.L. No.3 Relay
	3	Headlight Dimmer Switch
	5	ECT ECU
	6	Cruise Control ECU
	7	TRAC ECU
	8	Ground (Engine)
	9	Engine Coolant Temperature Sender Gauge
	10	Fuel Sender Gauge
	11	Ground (Signal)
	13	Igniter
	14	Generator L Terminal
	15	Turn Signal Switch
	16	Starter Relay
		Park/Neutral Position Switch (A/T Vehicle) Clutch Start Switch (M/T Vehicle)
B	1	GAUGE Fuse
	2	O/D OFF Switch
	3	USA:TAIL (RH) Fuse, PANEL Fuse CANADA:D.R.L. No.3 Relay
	4	Park/Neutral Position Switch (P)
	6	Park/Neutral Position Switch (N)
	7	Park/Neutral Position Switch (D)
	8	Park/Neutral Position Switch (2)
	10	Park/Neutral Position Switch (R)
	11	Park/Neutral Position Switch (L)
	12	ECT ECU
	13	Ground (Power)
C	1	Telltail Light RH (Terminal 11)
	2	Telltail Light LH (Terminal 1)
	4	Telltail Light LH (Terminal 6)
	5	Engine Oil Level Sensor
	6	Turn Signal Switch
	7	Ground (Power)
	8	Fuel Sender Gauge
	9	GAUGE Fuse
	10	Vehicle Speed Sensor (Terminal 2)
	11	Vehicle Speed Sensor (Terminal 3)
	12	USA:TAIL (RH) Fuse, PANEL Fuse CANADA:D.R.L. No.3 Relay
	13	Light Control Rheostat

I02078

2. TELLTALE LIGHT:

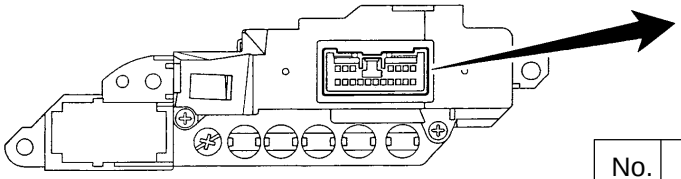
Telltale Light LH:

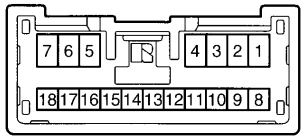


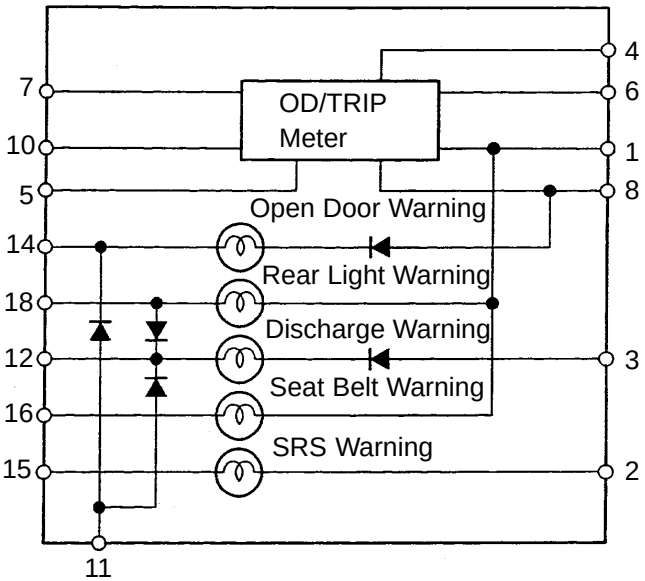


No.	Wire Harness Side
1	Combination Meter (Terminal B2)
2	GAUGE Fuse
3	ECM
4	ECM
5	Low Oil Pressure Warning Switch
6	Combination Meter (Terminal B4)
8	TRAC ECU, Traction Solenoid Relay
9	Ground
10	Theft Deterrent and Door Lock ECU

Telltale Light RH:







No.	Wire Harness Side
1	GAUGE Fuse
2	ECU-B Fuse
3	IGN Fuse
4	PANEL Fuse
5	Vehicle Speed Sensor (Terminal 3)
6	PPS ECU, Cruise Control ECU, ECM Air Conditioning Amplifier
7	Ground
8	DOME Fuse
10	Light Control Rheostat
11	Combination Meter (Terminal B1)
12	Generator Terminal
14	Door Courtesy Switch
15	Center Airbag Sensor
16	Integration Relay (Terminal 9)
18	Light Failure Sensor

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I02082
I02080

I05022

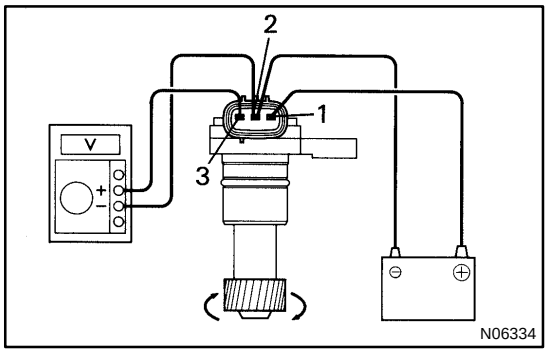
BE1L4-01

INSPECTION

1. INSPECT SPEEDOMETER ON-VEHICLE

Using a speedometer tester, inspect the speedometer for allowable indication error and check the operation of the odometer.
HINT:
Tire wear and tire over or under inflation will increase the indication error.
If error is excessive, replace the speedometer.

USA (mph)		CANADA (km/h)	
Standard indication	Allowable range	Standard indication	Allowable range
20	18 - 24	20	17 - 24
40	38 - 44	40	38 - 46
60	56 - 66	60	57.5 - 67
80	78 - 88	80	77 - 88
100	98 - 110	100	96 - 109
120	118 - 132	120	115 - 130
		140	134 - 151.5
		160	153 - 173



2. INSPECT VEHICLE SPEED SENSOR OPERATION

(a) Connect the positive (+) lead from battery to terminal 1 and negative (-) lead to terminal 2.
(b) Connect the positive (+) lead from tester to terminal 3 and negative (-) lead to terminal 2.
(c) Rotate shaft.
(d) Check that there is voltage change from approx. 0 V to 11 V or more between terminals 2 and 3.

HINT:
The voltage change should be 4 times for every revolution of the speed sensor shaft.
If operation is not as specified, replace the sensor.

3. INSPECT TACHOMETER ON-VEHICLE

(a) Connect a tune-up test tachometer, and start the engine.

NOTICE:

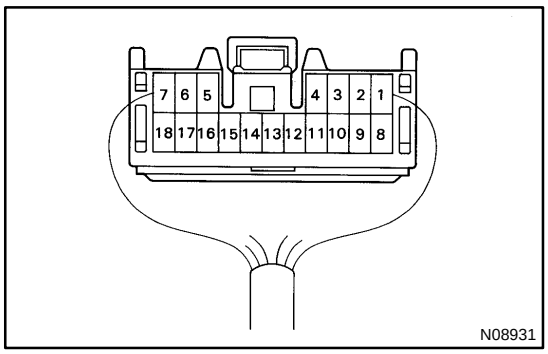
Reversing the connection of the tachometer will damage the transistors and diodes inside.

(b) Compare the tester and tachometer indications.

If error is excessive, replace the tachometer.

RPM (DC 13.5 V, 25 ˚C (77˚F))

Standard indication (rpm)	Allowable range (rpm)
700	630 - 770
1,000	915 - 1,115
2,000	1,920 - 2,220
3,000	2,890 - 3,350
4,000	3,940 - 4,400
5,000	5,025 - 5,425
6,500	6,650 - 6,950
7,000	7,025 - 7,625



4. INSPECT OD/TRIP METER (in Telltale Light RH)

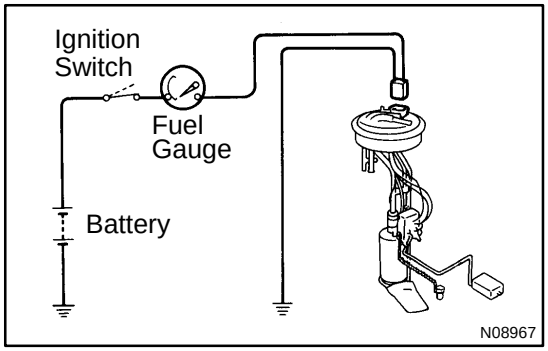
(a) Remove the telltale light with connector still connected.

(b) Check the continuity and voltage.

Tester connection	Condition	Specified condition
7 - Ground*1	Constant	Continuity
1 - Ground*1	Ignition Switch "ON" position	Battery positive voltage
4 - Ground*1	Light Control Switch "TAIL" or "HEAD" position	Battery positive voltage
5 - 7*1	Ignition Switch ON Drive the vehicle slowly	0V ↔ Battery positive voltage
6 - 7*2	Ignition Switch ON Drive the vehicle slowly	0V ↔ more than 5V
8 - Ground*1	Constant	Battery positive voltage
10 - Ground*1	Ignition Switch ON, Light Control Switch TAIL or HEAD, Turn the light control rheostat knob to clockwise	6V → 0V

*1: If continuity or voltage are not as specified, check vehicle side.

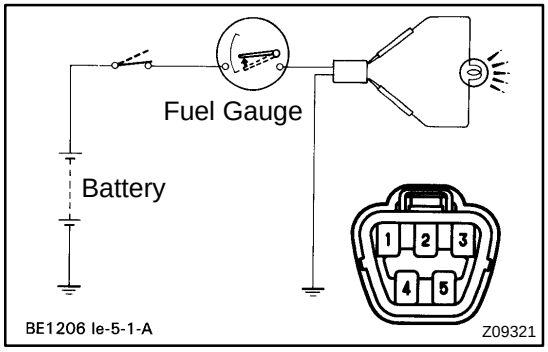
*2: If voltage is not as specified, replace the telltale light.



5. INSPECT FUEL RECEIVER GAUGE OPERATION

(a) Disconnect the connector from the sender gauge assembly.

(b) Turn the ignition switch ON, check that the receiver gauge needle indicates EMPTY.



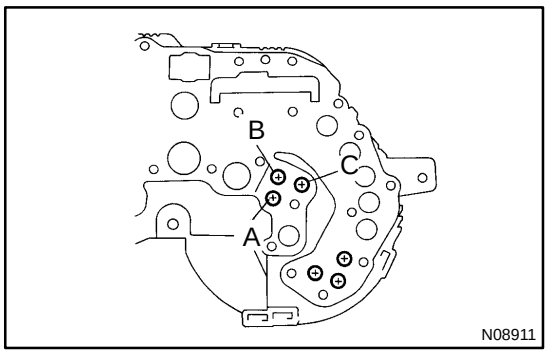
(c) Connect terminals 2 and 3 on the wire harness side connector through a 3.4 W test bulb.

(d) Turn the ignition switch ON, and check that the bulb lights up and that receiver gauge needle moves toward the full side.

HINT:

Because of the silicon oil in the gauge, it will take a short time for the needle to stabilize.

If operation is not as specified, inspect the receiver gauge resistance.

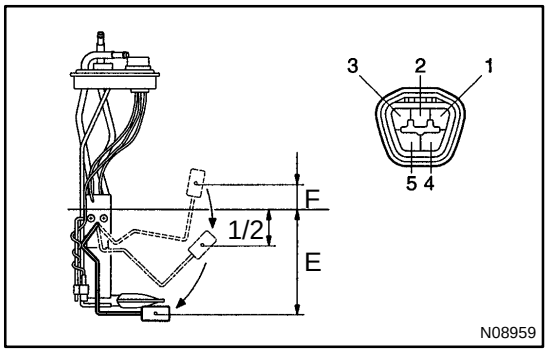


6. INSPECT FUEL RECEIVER GAUGE RESISTANCE

Measure the resistance between terminals.

Between terminals	Resistance (Ω)
A - B	Approx. 269.7
A - C	Approx. 123.5
B - C	Approx. 146.2

If resistance value is not as specified, replace the fuel receiver gauge.

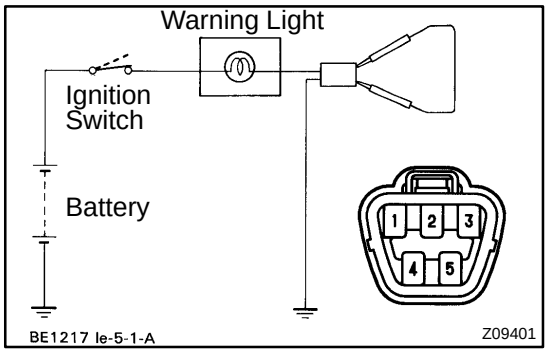


7. INSPECT FUEL SENDER GAUGE RESISTANCE

Measure the resistance between terminals 2 and 3 for each float position.

Float position: mm (in.)	Resistance (Ω)
F: Approx. 33.8 (1.331)	Approx. 4.0
1/2: Approx. 44.8 (1.764)	Approx. 55.0
E: Approx. 141.1 (5.555)	Approx. 107.0

If resistance value is not as specified, replace the sender gauge.



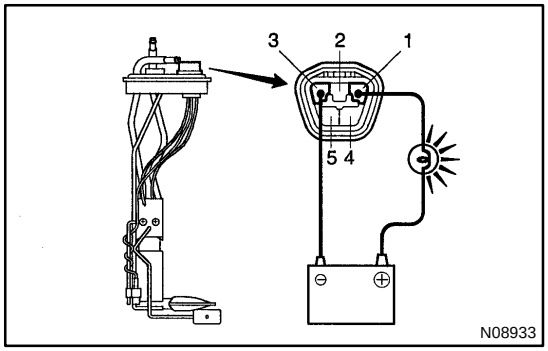
8. INSPECT FUEL LEVEL WARNING LIGHT

(a) Disconnect the connector from the sender gauge.

(b) Connect terminals 1 and 3 on the wire harness side connector.

(c) Turn the ignition switch ON, check that the warning light lights up.

If the warning light does not light up, test the bulb or inspect wire harness.

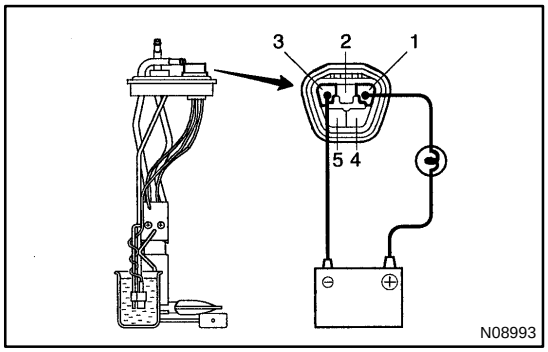


9. INSPECT FUEL LEVEL WARNING SWITCH OPERATION

(a) Apply battery positive voltage between terminals 1 and 3 through a 3.4 W test bulb, check that the bulb lights up.

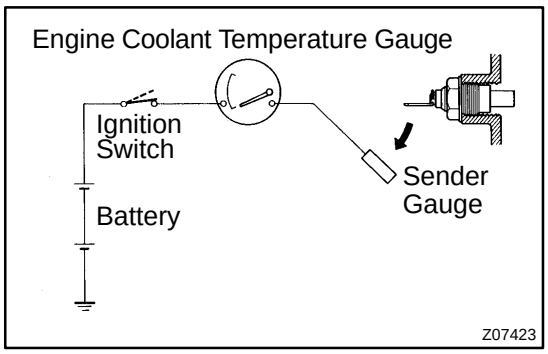
HINT:

It will take a short time for the bulb to light up.



(b) Submerge the switch in fuel, check that the bulb goes out.

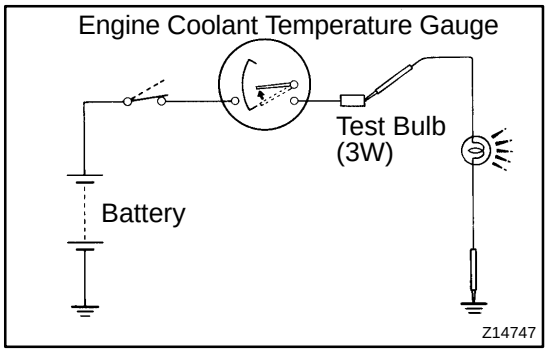
If operation is not as specified, replace the sender gauge.



10. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE OPERATION

(a) Disconnect the connector from the sender gauge.

(b) Turn the ignition switch ON, check that the receiver gauge needle indicates COOL.



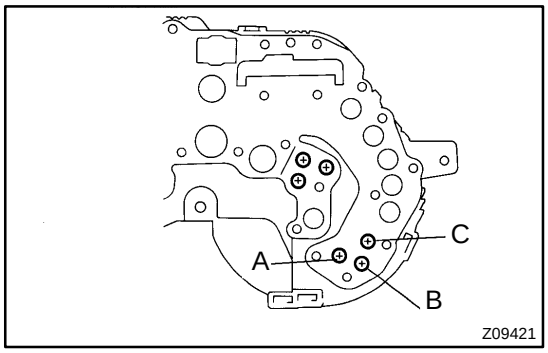
(c) Ground terminal on the wire harness side connector through a 3 W test bulb.

(d) Turn the ignition switch ON, check that the bulb lights up and that the receiver gauge needle moves toward the hot side.

If operation is as specified, replace the sender gauge.

Then recheck the system.

If operation is not as specified, measure the receiver gauge resistance.



11. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE RESISTANCE

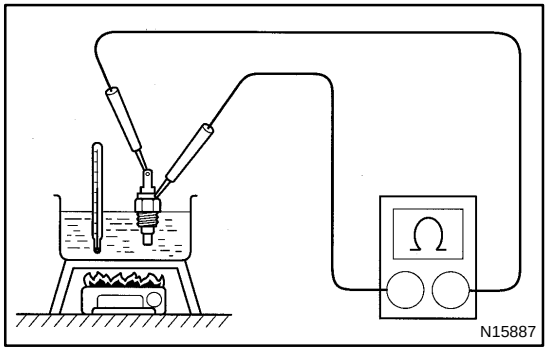
Measure the resistance between terminals.

HINT:

Connect the test leads so that the current from the ohmmeter can flow according to the chart order.

Between terminals	Resistance (Ω)
A - B	Approx. 229.7
A - C	Approx. 54.0
B - C	Approx. 175.7

If resistance value is not as specified, replace the engine coolant temperature receiver gauge.

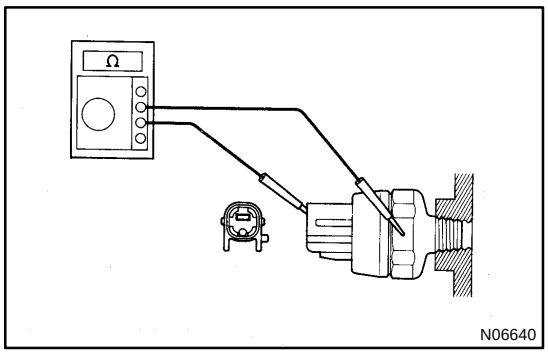


12. INSPECT ENGINE COOLANT TEMPERATURE SENDER GAUGE RESISTANCE

Measure the resistance between terminal and gauge body.

Temperature °C (°F)	Resistance (Ω)
50 (122.0)	160 ~ 240
120 (248.0)	17.1 ~ 21.2

If resistance value is not as specified, replace the engine coolant temperature sender gauge.



13. INSPECT LOW OIL PRESSURE SWITCH CONTINUITY

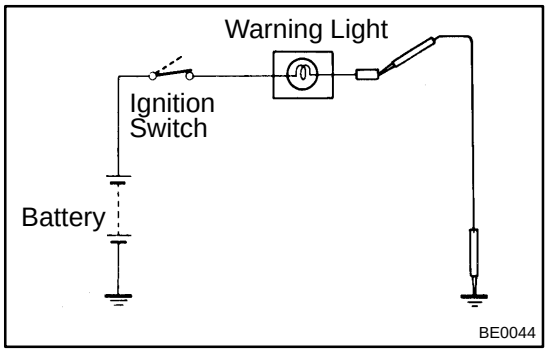
(a) Check that there is continuity between terminal and ground with the engine stopped.

(b) Check that there is no continuity between terminal and ground with the engine running.

HINT:

Oil pressure should be over 29 kPa (0.3 kgf/cm^2, 4.3 psi)

If operation is not as specified, replace the switch.

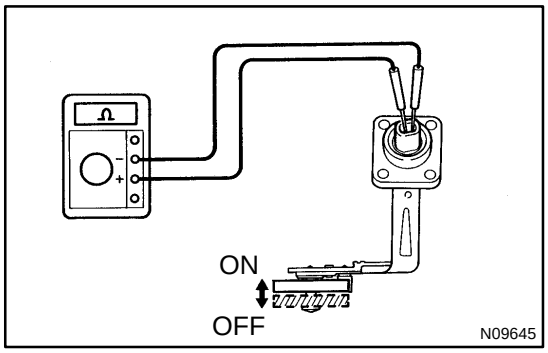


14. INSPECT LOW OIL PRESSURE WARNING LIGHT

(a) Disconnect the connector from the warning switch and ground terminal on the wire harness side connector.

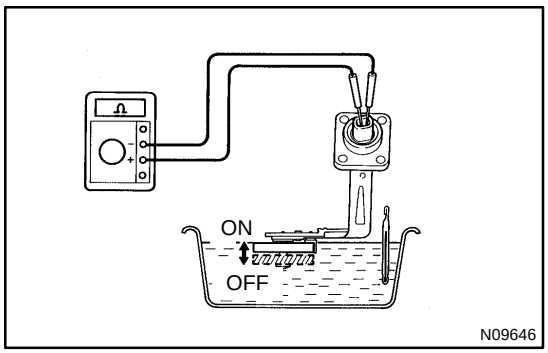
(b) Turn the ignition switch ON, check that the warning light lights up.

If the warning light does not light up, test the bulb or inspect wire harness.



15. INSPECT ENGINE OIL LEVEL WARNING SWITCH CONTINUITY

(a) Check that there is continuity between terminal with the switch in each position.

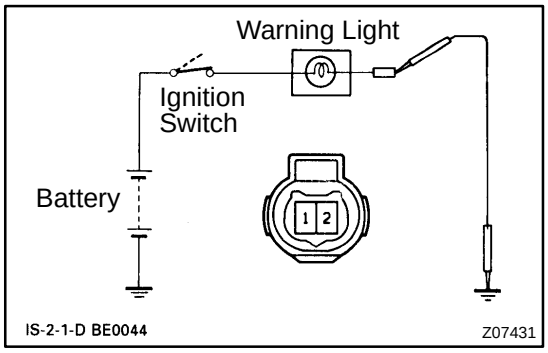


(b) Heat the switch to above 60˚C (140˚F) in an oil bath.

(c) Check that there is continuity between terminals with the switch ON (float up).

(d) Check that there is no continuity between terminals with the switch OFF (float down).

If operation is not as specified, replace the switch.



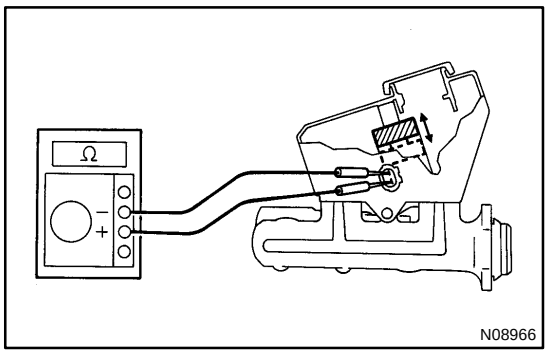
16. INSPECT ENGINE OIL LEVEL WARNING LIGHT

(a) Disconnect the connector from the switch.

(b) Ground terminal 1 on the wire harness connector.

(c) Turn the ignition switch ON. Check that the warning light lights up approximately 40 seconds later.

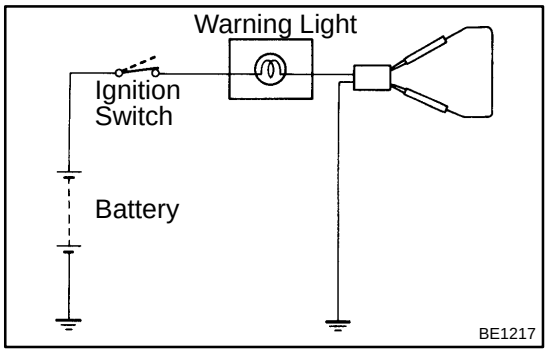
If the warning light does not light up, inspect bulb or wire harness.



17. INSPECT BRAKE FLUID LEVEL WARNING SWITCH CONTINUITY

(a) Remove the reservoir tank cap and strainer.
(b) Disconnect the connector.
(c) Check that there is no continuity between terminals with the switch OFF (float up).
(d) Use syphon, etc. to take fluid out of the reservoir tank.
(e) Check that there is continuity between terminals with the switch ON (float down).
(f) Pour the fluid back in the reservoir tank.

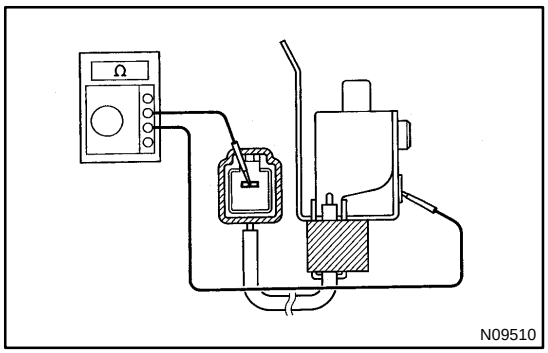
If operation is not as specified, replace the switch.



18. INSPECT BRAKE FLUID LEVEL WARNING LIGHT

(a) Disconnect the connector from the brake fluid warning switch.
(b) Release the parking brake pedal.
(c) Connect terminals on the wire harness side of the level warning switch connector.
(d) Start the engine, check that the warning light lights up.

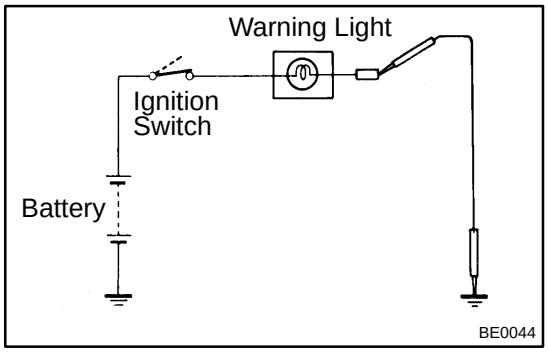
If the warning light does not light up, test the bulb or wire harness.



19. INSPECT PARKING BRAKE SWITCH CONTINUITY

(a) Check that there is continuity between terminal and switch body with the switch ON (switch pin released).
(b) Check that there is no continuity between terminal and switch body with the switch OFF (switch pin pushed in).

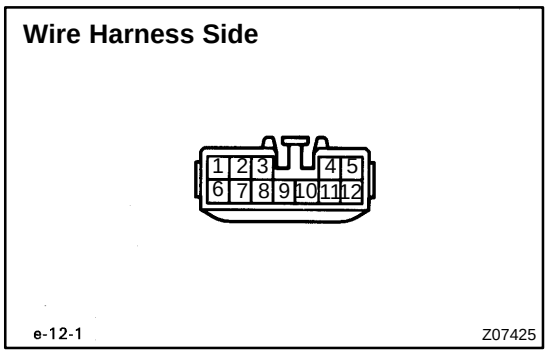
If operation is not as specified, replace the switch or inspect ground point.



20. INSPECT PARKING BRAKE WARNING LIGHT

(a) Disconnect the connector from the parking brake switch and the brake fluid warning switch.
(b) Ground terminal on the wire harness side connector.
(c) Start the engine, check that the warning light lights up.

If the warning light does not light up, test the bulb or inspect wire harness.



21. INSPECT LIGHT FAILURE SENSOR CIRCUIT

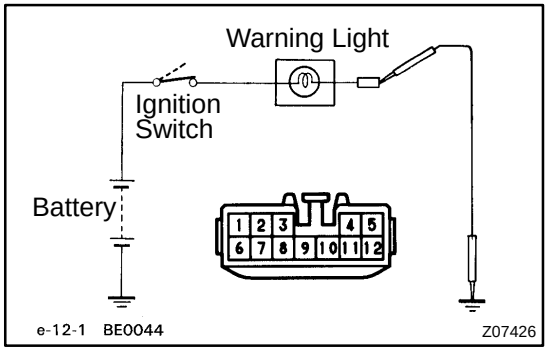
Disconnect the connector from the sensor and inspect the connector on the wire harness side, as shown.

Tester connection	Condition	Specified condition
1 - Ground	Constant	Continuity*
2 - Ground	Constant	Continuity*
9 - Ground	Constant	Continuity*
10 - Ground	Constant	Continuity*
11 - Ground	Constant	Continuity
12 - Ground	Constant	Continuity*
3 - Ground	Light control switch position OFF	No Voltage
3 - Ground	Light control switch position TAIL or HEAD	Battery positive voltage
4 - Ground	Ignition switch position LOCK or ACC	No voltage
4 - Ground	Ignition switch position ON	Battery positive voltage
7 - Ground	Stop light switch position OFF	No voltage
7 - Ground	Stop light switch position ON	Battery positive voltage
8 - Ground	Engine condition Stop	No voltage
8 - Ground	Engine condition Running	Battery positive voltage

*: There is the resistance because this circuit is grounded through the bulb.

If circuit is as specified, replace the sensor.

If the circuit is not as specified, inspect the circuits connected to other parts.

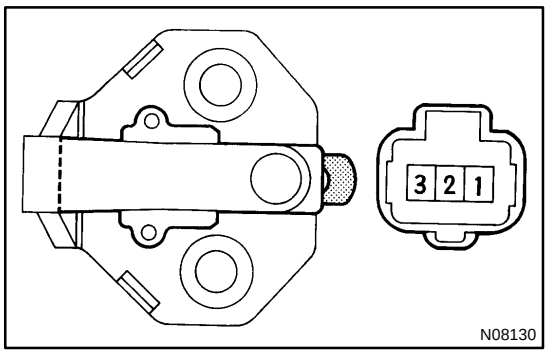


22. INSPECT LIGHT FAILURE WARNING LIGHT

(a) Disconnect the connector from the light failure sensor and ground terminal 4 on the wire harness side connector.

(b) Start the engine, check that the warning light lights up.

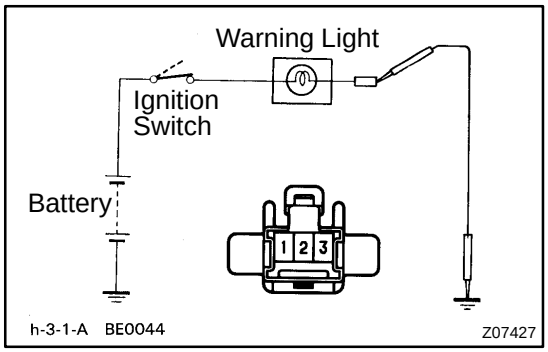
If the warning light does not light up, test the bulb or inspect wire harness.



23. INSPECT DOOR COURTESY SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
ON (SW pin released)	1 - 2, 2 - 3	Continuity
OFF (SW pin pushed in)	-	No continuity

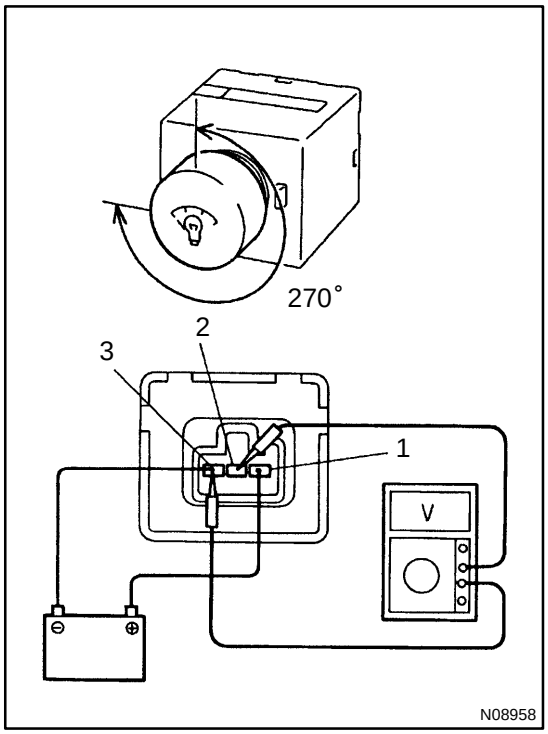
If continuity is not as specified, replace the switch.



24. INSPECT OPEN DOOR WARNING LIGHT

Disconnect the connector from the door courtesy switch, ground terminal 1 on the wire harness side connector and check that the warning light lights up.

If the warning light does not light up, inspect the bulb or wire harness.

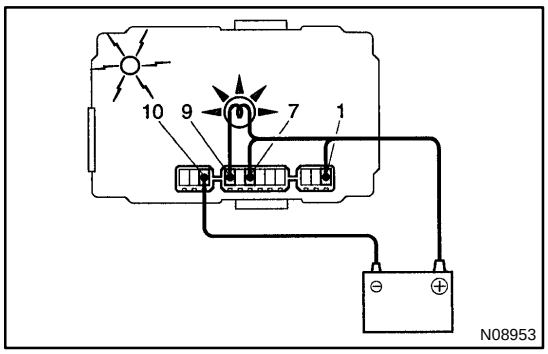


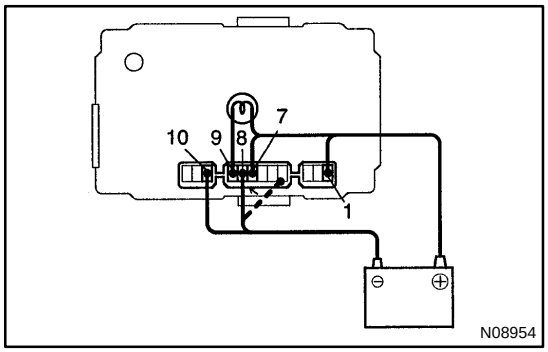
25. INSPECT LIGHT CONTROL RHEOSTAT

(a) Connect the positive (+) lead from the battery to terminal 1 and negative lead (-) to terminal 3.

(b) Connect the positive (+) lead from the voltmeter to terminal 2 and negative lead to terminal 3.

(c) Turn the rheostat knob and check that the voltage changes.





26. INSPECT INTEGRATION RELAY OPERATION

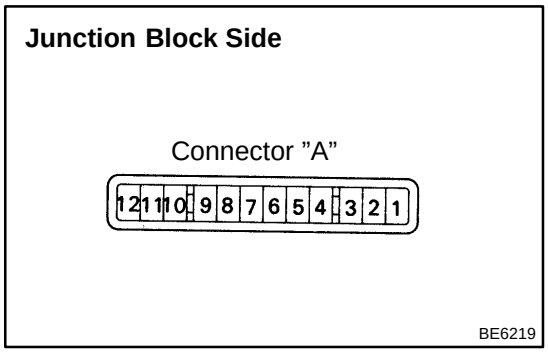
(a) Connect the positive (+) lead from the battery to terminals 1 and 7.

(b) Connect the positive (+) lead from the battery to terminal 9 through a 3.4 W test bulb.

(c) Check that the test bulb lights up and buzzer sounds for 4 - 8 seconds when the negative (-) lead from the battery is connected to terminal 10.

(d) Check that the buzzer sounding in (c) stops when the negative (-) lead from the battery is connected to terminl 8.

If operation is not as specified, replace the integration relay.

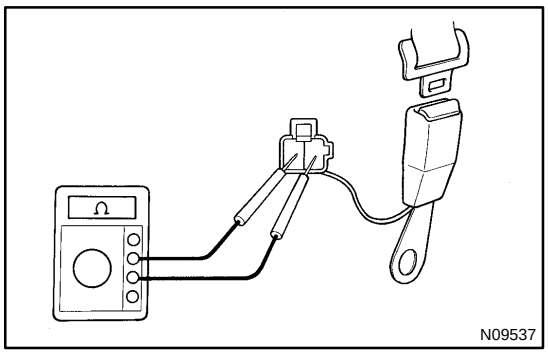


27. INSPECT RELAY CIRCUIT

Remove the relay from the junction block No. 1 and inspect the connectors on the junction block side.

Tester connection	Condition	Specified condition
4 - Ground	Driver's door open	Continuity
4 - Ground	Driver's door close	No continuity
5 - Ground	Ignition key Set	Continuity
5 - Ground	Ignition key remove	No continuity
8 - Ground	Driver's seat belt fasten	Continuity
8 - Ground	Driver's seat belt unfasten	No continuity
10 - Ground	Constant	Continuity
1 - Ground	Constant	Battery positive voltage
9 - Ground	Ignition switch position ON	Battery positive voltage
9 - Ground	Ignition switch position LOCK or ACC	No Voltage

If circuit is not as specified, tray replacing the relay with a new one.



28. INSPECT BUCKLE SWITCH CONTINUITY

(a) Check that there is continuity between terminals 1 and 2 on the switch side connector with the switch ON (belt fastened).

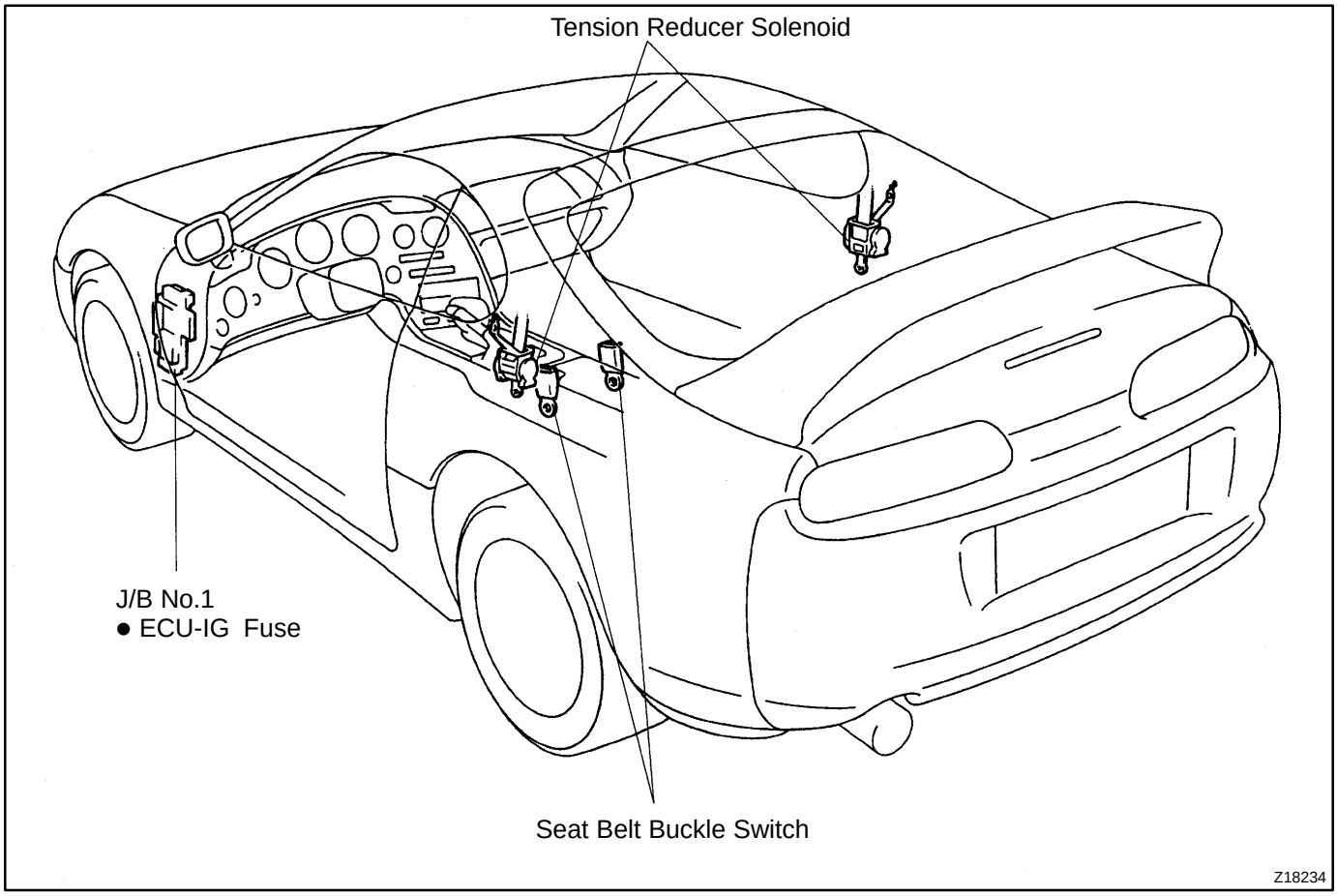
(b) Check that there is no continuity between terminals 1 and 2 on the switch side connector with the switch OFF (belt unfastened).

If operation is not as specified, replace the seat belt inner belt.
If the circuit is not as specified, inspect the circuits connected to other parts.

ELECTRIC TENSION REDUCER SYSTEM

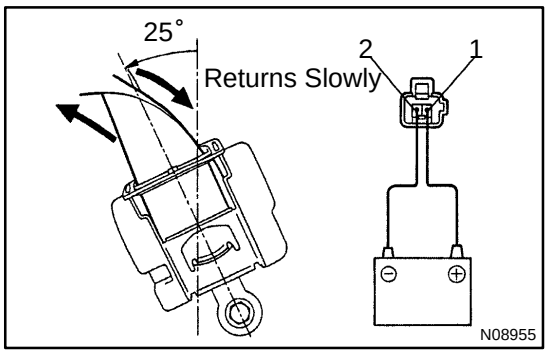
LOCATION

BE0EA-01



BE0EB-01

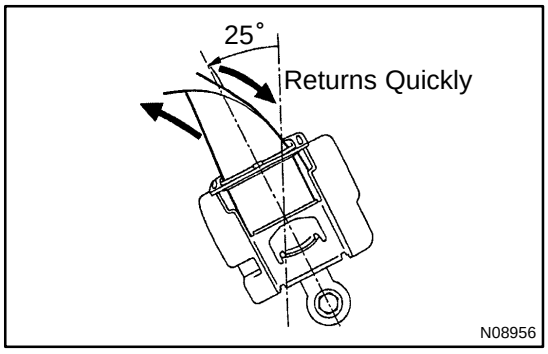
INSPECTION



1. INSPECT TENSION REDUCER SOLENOID OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1, and negative (-) lead to terminal 2.

(b) Pull the belt upward and check that the belt is slowly retracted when released.



(c) Disconnect the lead from the battery.

(d) Pull the belt upward and check that the belt is retracted more quickly when released than in (b).

HINT:

Do not tilt the retractor.

If the operation is not as specified, replace the front seat outer belt assembly.

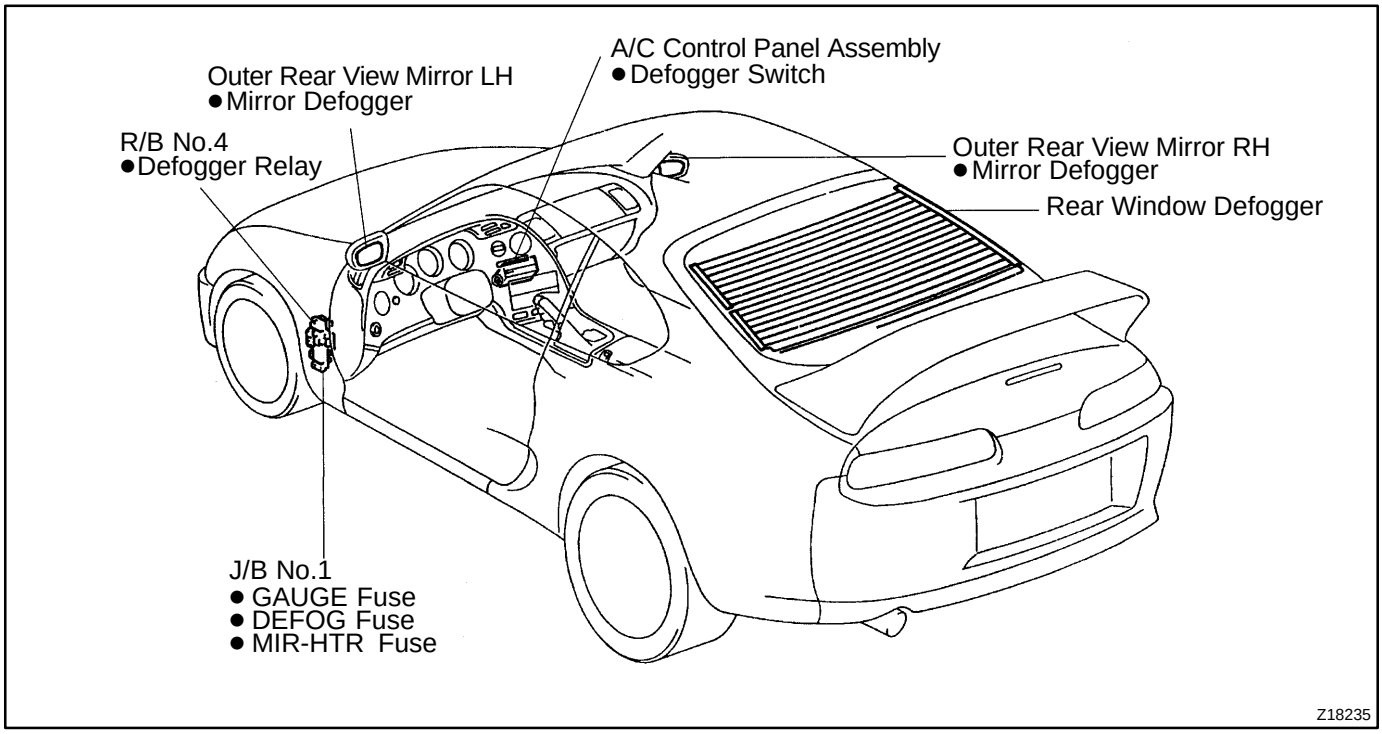
2. INSPECT BUCKLE SWITCH CONTINUITY

See page BE-43

DEFOGGER SYSTEM

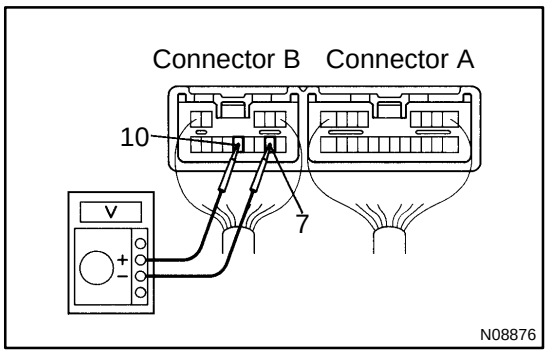
LOCATION

BE0EC-01



BE0ED-01

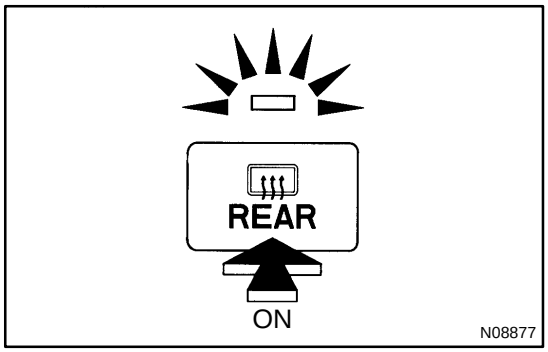
INSPECTION



1. INSPECT DEFOGGER SWITCH OPERATION

(a) Connect the positive (+) lead from the voltmeter to terminal 7 of connector B and the negative (-) lead from voltmeter to terminal 10 of connector B.

(b) When the switch is off, the voltage should be approx. 12 V.

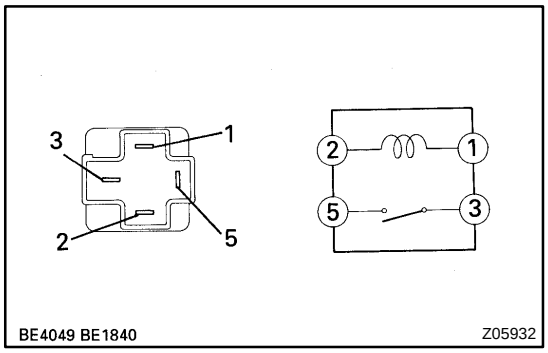


(c) When the switch is on, check that the indicator light lights up and that the voltage is less than 1 V.

(d) After 15 minutes, check that the switch is off and the voltage is approx. 12 V.

2. INSPECT A/C AMPLIFIER

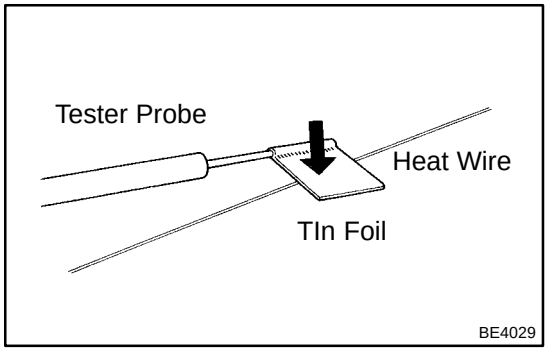
See page DI-71 1



3. INSPECT DEFOGGER RELAY CONTINUITY

Condition	Tester connection	Specified condition
Constant	1 - 2	Continuity
Apply B+ between terminals 1 and 2.	3 - 5	Continuity

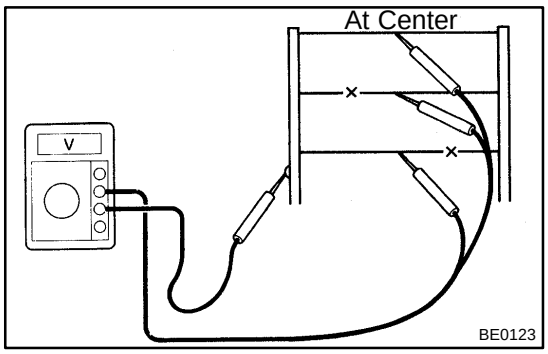
If continuity is not as specified, replace the relay.



4. INSPECT DEFOGGER WIRE

NOTICE:

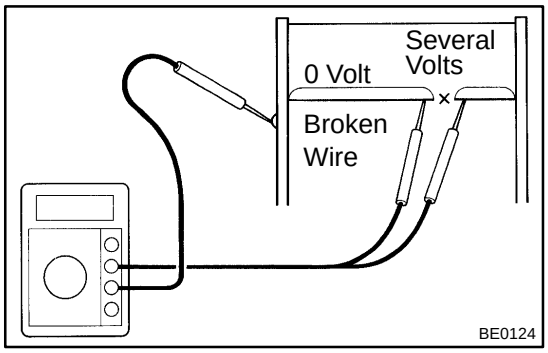
- **When cleaning the glass, use a soft, dry cloth, and wipe the glass in the direction of the wire. Take care not to damage the wires.**
- **Do not use detergents or glass cleaners with abrasive ingredients.**
- **When measuring voltage, wind a piece of tin foil around the top of the negative probe and press the foil against the wire with your finger, as shown.**



(a) Turn the ignition switch ON.
(b) Turn the defogger switch ON.
(c) Inspect the voltage at the center of each heat wire, as shown.

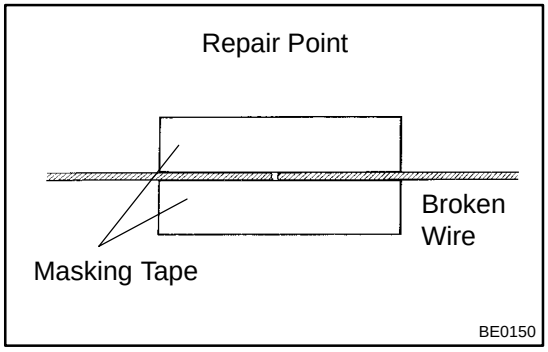
Voltage	Criteria
Approx. 5V	Okay (No break in wire)
Approx. 10V or 0V	Broken wire

HINT:
If there is approximately 10 V, the wire is broken between the center of the wire and the positive (+) end. If there is no voltage, the wire is broken between the center of the wire and ground.



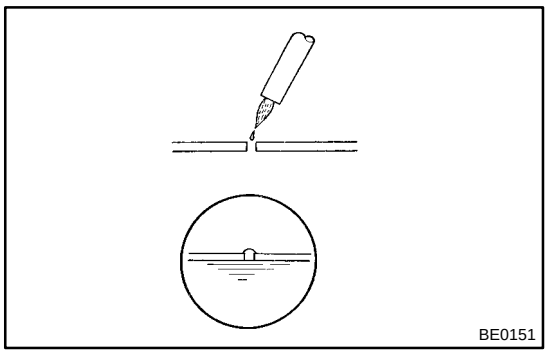
(d) Place the voltmeter positive (+) lead against the defogger positive (+) terminal.
(e) Place the voltmeter negative (-) lead with the foil strip against the heat wire at the positive (+) terminal end and slide it toward the negative (-) terminal end.
(f) The point where the voltmeter deflects from zero to several V is the place where the heat wire is broken.

HINT:
If the heat wire is not broken, the voltmeter indicates 0 V at the positive (+) end of the heat wire but gradually increases to about 12 V as the meter probe is moved to the other end.

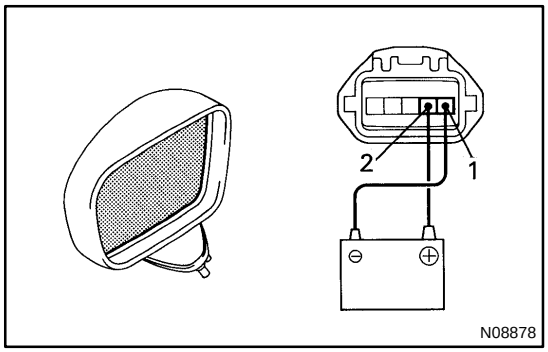


5. IF NECESSARY, REPAIR DEFOGGER WIRE

(a) Clean the broken wire tips with a grease, wax and silicone remover.
(b) Place the masking tape along both sides of the wire to be repaired.
(c) Thoroughly mix the repair agent (DuPont paste No. 4817).



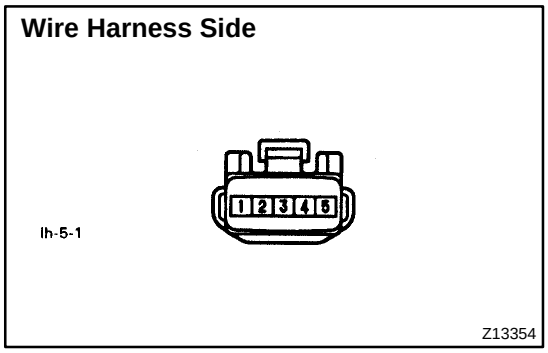
(d) Using a fine tip brush, apply a small amount to the wire.
(e) After a few minutes, remove the masking tape.
(f) Do not repair the defogger wire for at least 24 hours.



6. INSPECT MIRROR DEFOGGER OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1.
(b) Check that the mirror becomes warm.

HINT:
It will take a short time for the mirror to become warm.
If the mirror does not become warm, replace the mirror assembly.



7. INSPECT MIRROR DEFOGGER CIRCUIT

Disconnect the connector from the outside mirror and inspect the connector on the wire harness side, as shown.

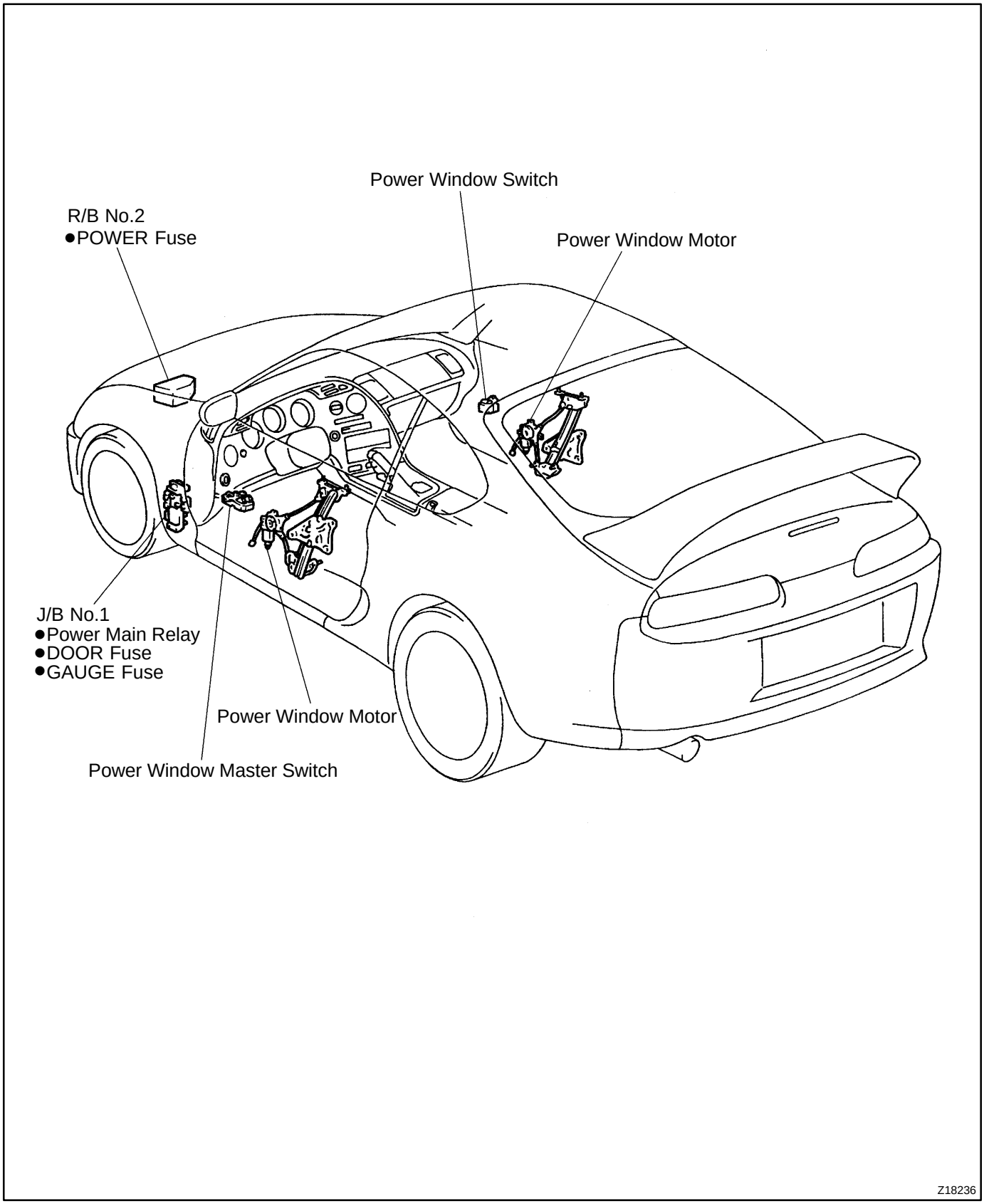
Tester connection	Condition	Specified condition
1 - Ground	Constant	Continuity
2 - Ground	Ignition switch ON (Defogger switch OFF)	No voltage
2 - Ground	Ignition switch ON (Defogger switch ON)	Battery positive voltage

If the circuit is not as specified, inspect the circuits connected to other parts.

POWER WINDOW CONTROL SYSTEM

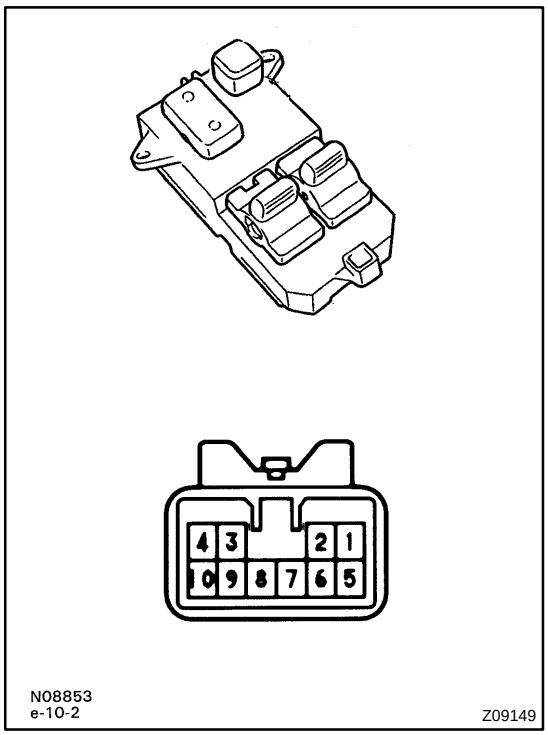
LOCATION

BE0EE-01



BE0EF-01

INSPECTION



1. INSPECT POWER WINDOW MASTER SWITCH CONTINUITY

Driver's Switch:

Switch position	Tester connection	Specified condition
UP	4 - 10, 8 - 9	Continuity
OFF	8 - 10, 8 - 9	Continuity
DOWN	4 - 9, 8 - 10	Continuity

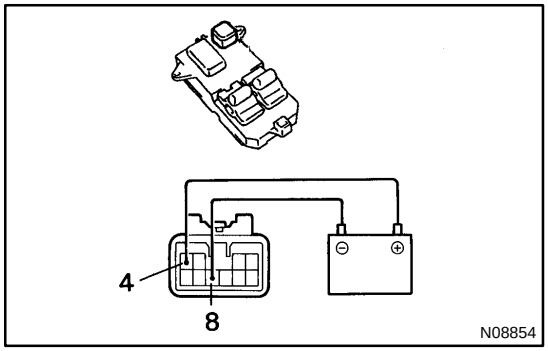
Passenger's Switch (Window unlock):

Switch position	Tester connection	Specified condition
UP	4 - 5, 7 - 8	Continuity
OFF	5 - 8, 7 - 8	Continuity
DOWN	4 - 7, 5 - 8	Continuity

Passenger's Switch (Window lock):

Switch position	Tester connection	Specified condition
UP	4 - 5	Continuity
OFF	5 - 7	Continuity
DOWN	4 - 7	Continuity

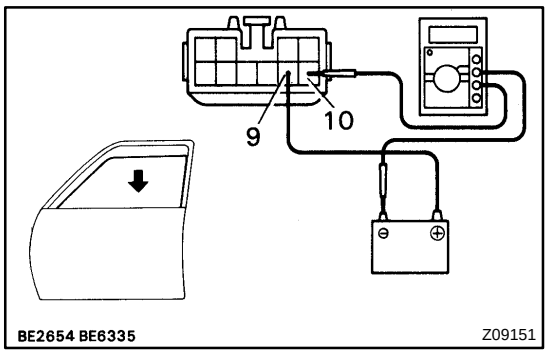
If continuity is not as specified, replace the switch.



2. INSPECT POWER WINDOW MASTER SWITCH ILLUMINATION

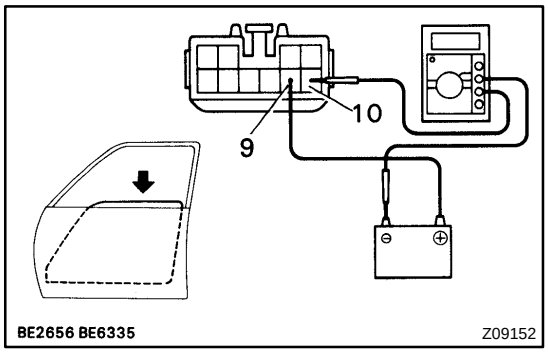
Connect the positive (+) lead from the battery to terminal 4 and the negative (-) lead to terminal 8, check that the illumination lights up.

If operation is not as specified, replace the master switch.



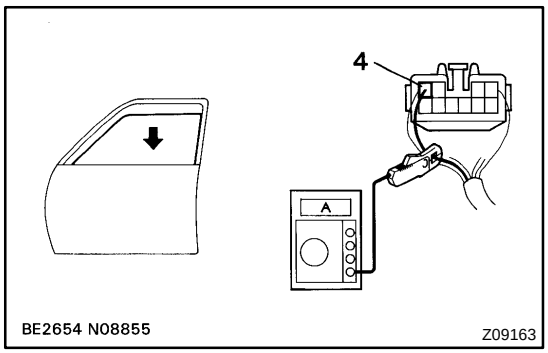
3. Using an ammeter:
INSPECT ONE TOUCH POWER WINDOW SYSTEM/ CURRENT OF CIRCUIT

(a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the ammeter to terminal 9 on the wire harness side connector and the negative (-) lead to negative terminal of the battery.
(c) Connect the positive (+) lead from the battery to terminal 10 on the wire harness side connector.
(d) As the window goes down, check that the current flow is approximately 7 A.



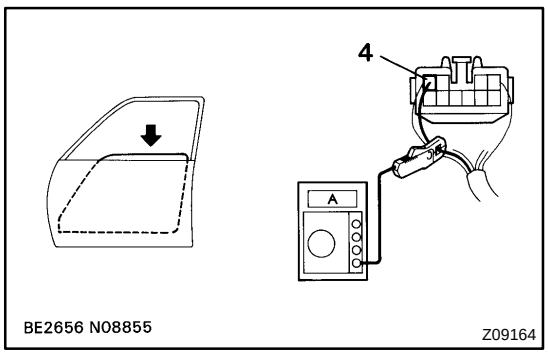
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:
The circuit breaker opens some 4 - 90 seconds after the window stops going down, so that check must be made before the circuit breaker operates.
If the operation is as specified, replace the master switch.



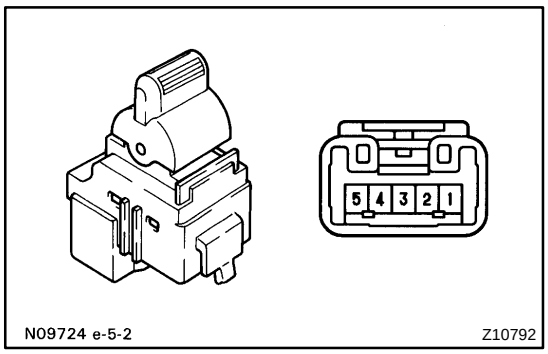
4. Using an ammeter with a current-measuring probe:
INSPECT ONE TOUCH POWER WINDOW SYSTEM CURRENT OF CIRCUIT

(a) Remove the master switch with connector connected.
(b) Attach a current-measuring probe to terminal 4 of the wire harness.
(c) Turn the ignition switch ON and set the power window switch in the down position.
(d) As the window goes down, check that the current flow is approximately 7 A.



(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

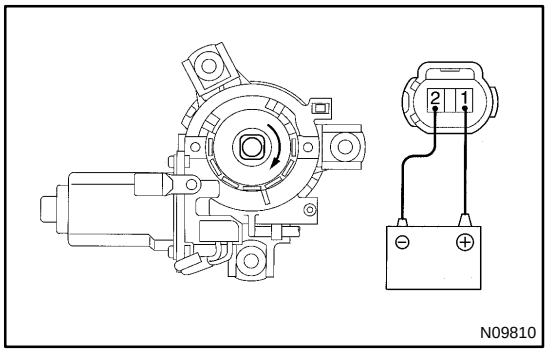
HINT:
The circuit breaker opens some 9 - 90 seconds after the window stops going down, so that check must be made before the circuit breaker operates.
If operation is as specified, replace the master switch.



5. INSPECT POWER WINDOW SWITCH CONTINUITY

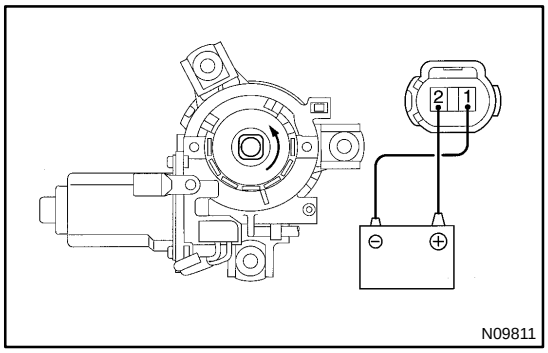
Switch position	Tester connection	Specified condition
UP	1 - 4, 3 - 5	Continuity
OFF	1 - 2, 3 - 5	Continuity
DOWN	1 - 2, 3 - 4	Continuity

If continuity is not as specified, replace the switch.



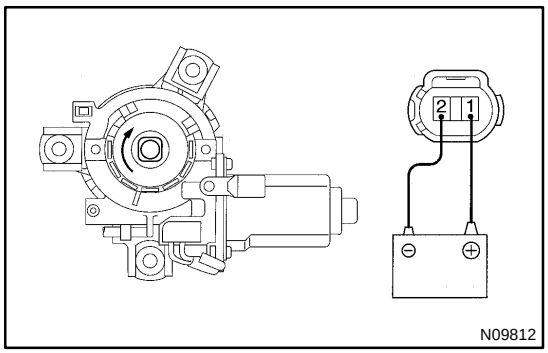
6. Driver's Door: INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, and check that the motor turns clockwise.



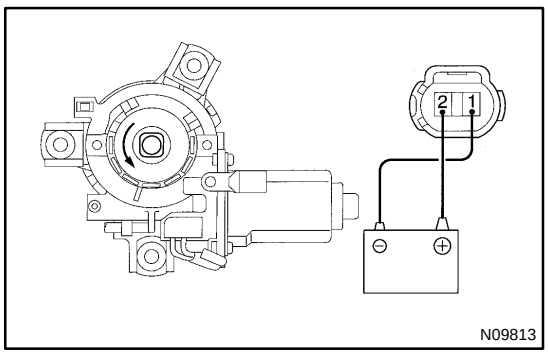
(b) Reverse the polarity, and check that the motor turns counterclockwise.

If operation is not as specified, replace the motor.



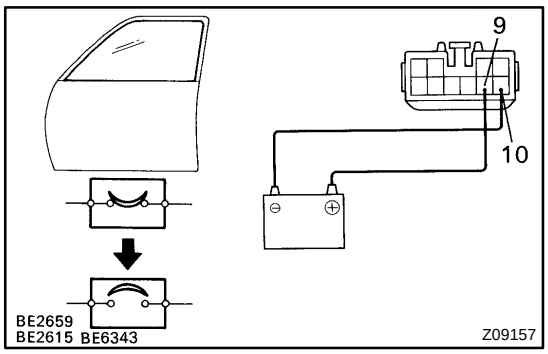
7. Passenger's Door: INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, and check that the motor turns clockwise.



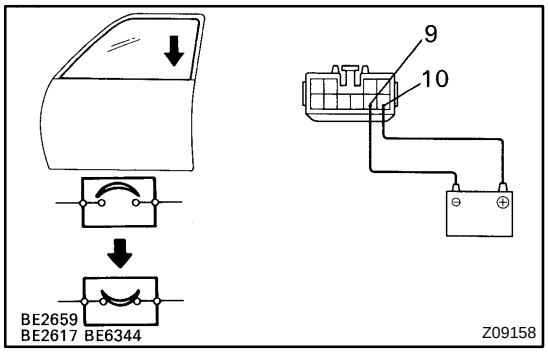
(b) Reverse the polarity, and check that the motor turns counterclockwise.

If operation is not as specified, replace the motor.



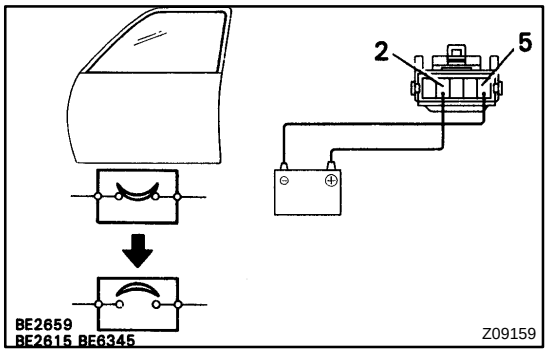
8. Driver's Door:
INSPECT PTC OPERATION

(a) Disconnect the connector from the master switch.
(b) Connect the positive (+) lead from the battery to terminal 9 and the negative (-) lead to terminal 10 on the wire harness side connector and raise the window to the fully closed position.
(c) Continue to apply voltage, and check that there is a PTC operation noise within approximately 4 to 90 seconds.



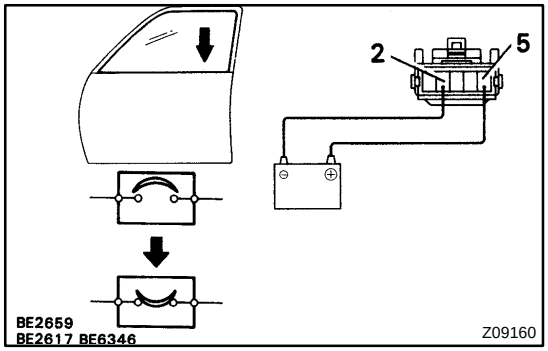
(d) Reverse the polarity, and check that the window begins to descend within approximately 60 seconds.

If operation is not as specified, replace the motor.



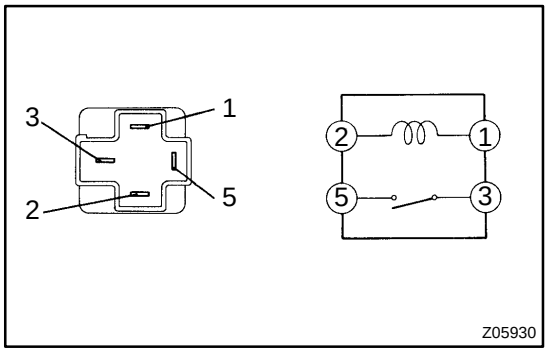
9. Passenger's Door:
INSPECT PTC OPERATION

(a) Disconnect the connector from the power window switch.
(b) Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 5 on the wire harness side connector, and raise the window to the fully closed position.
(c) Continue to apply voltage, and check that there is a PTC operation noise within approximately 4 to 90 seconds.



(d) Reverse the polarity, and check that the window begins to descend within approximately 60 seconds.

If operation is not as specified, replace the motor.



10. INSPECT POWER MAIN RELAY CONTINUITY

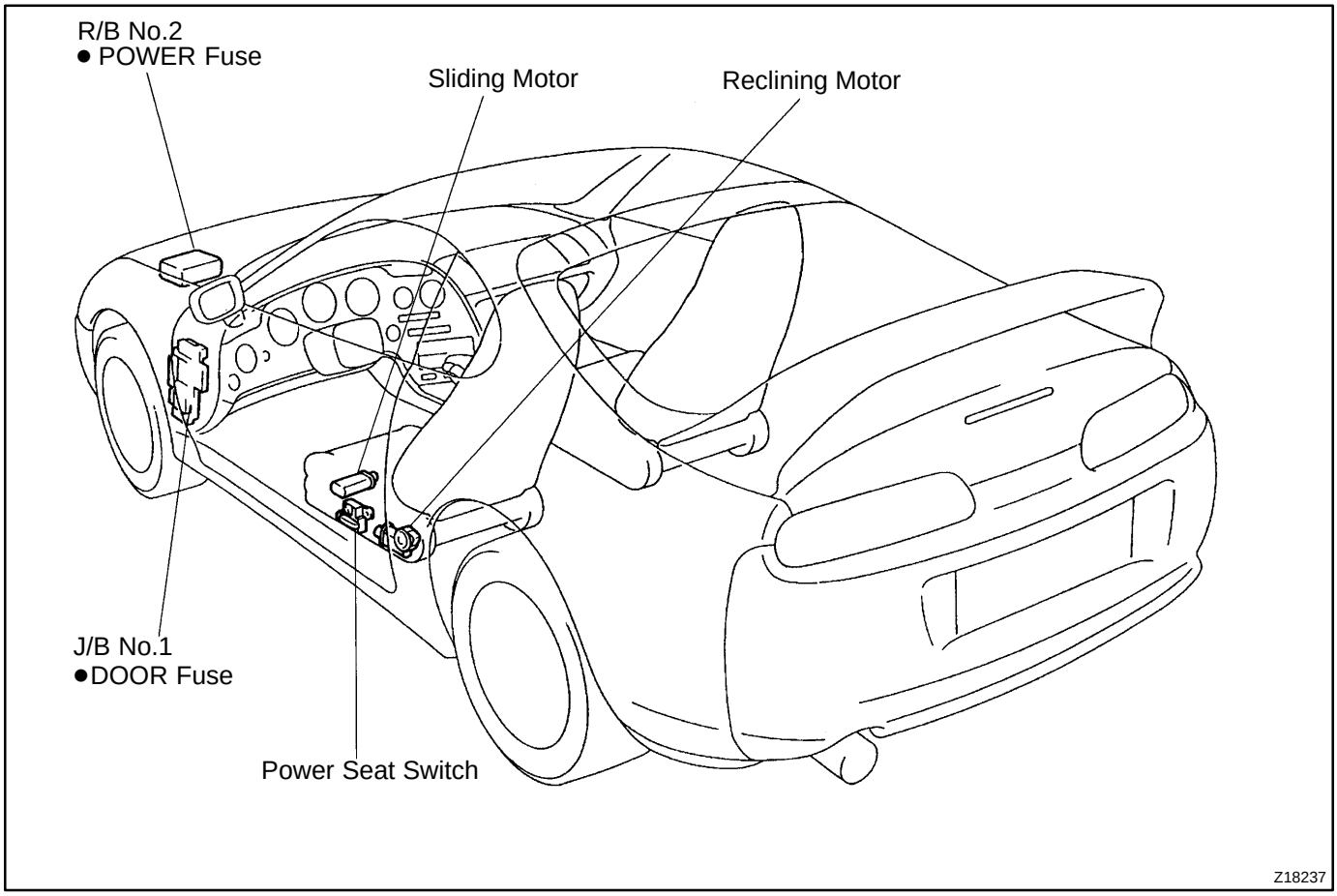
Condition	Tester connection	Specified condition
Constant	1 - 2	Continuity
Apply B+ between terminals 1 and 2.	3 - 5	Continuity

If continuity is not as specified, replace the relay.

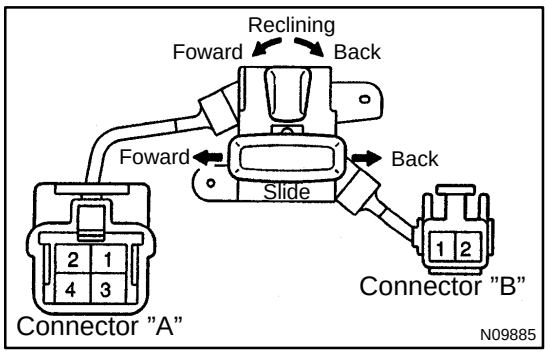
POWER SEAT CONTROL SYSTEM

LOCATION

BE0EG-01



BE0EH-01



INSPECTION

1. INSPECT POWER SEAT SWITCH CONTINUITY

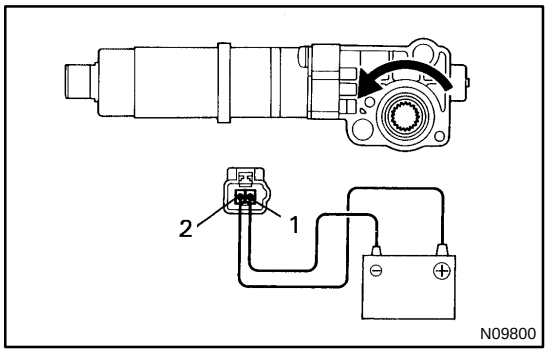
Slide:

Switch position	Tester connection	Specified condition
Forward	A1-A3, A2-A4	Continuity
Off	A1-A3, A1-A4	Continuity
Back	A1-A4, A2-A3	Continuity

Reclining:

Switch position	Tester connection	Specified condition
Forward	A1-B1, A2-B2	Continuity
Off	A1-B1, A1-B2	Continuity
Back	A1-B2, A2-B1	Continuity

If continuity is not as specified, replace the switch.

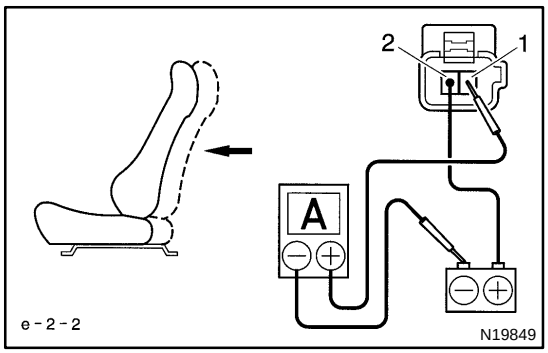


2. INSPECT SLIDE MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (-) lead to terminal 1, and check that the motor turns counterclockwise.

(b) Reverse the polarity, and check that the motor turns clockwise.

If operation is not as specified, replace the motor.

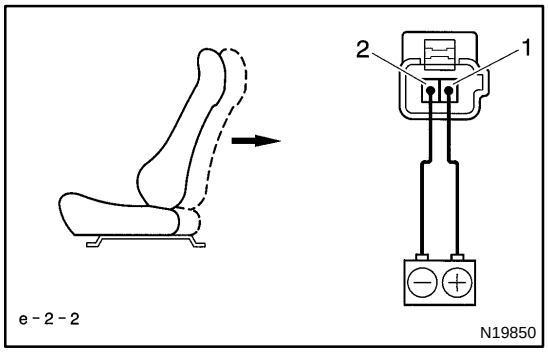


3. INSPECT PTC THERMISTOR OPERATION

(a) Separate power seat adjuster from front seat.

(b) Connect the positive (+) lead from the battery to terminal 2, the positive (+) lead from the ammeter to terminal 1, and the negative (-) lead to battery negative (-) terminal, and move the seat front end position.

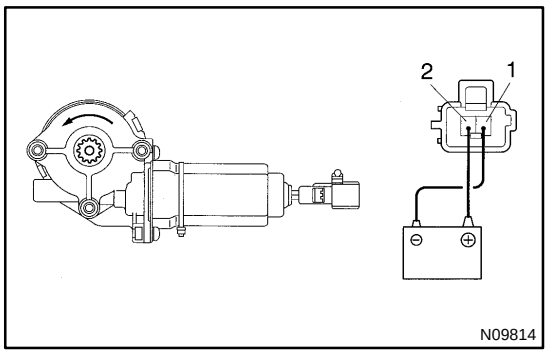
(c) Continue to apply voltage, and check the current changes to less than 1 A within 4 to 90 seconds.



(d) Disconnect the lead from terminals.

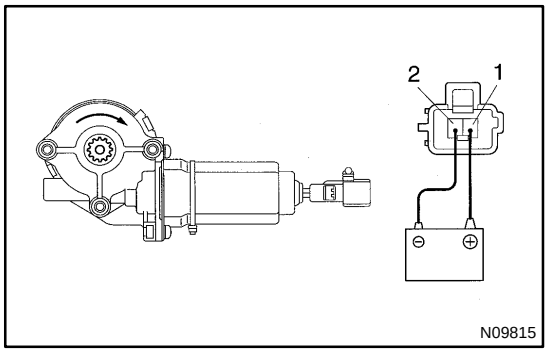
(e) Approximately 60 seconds later , connect the positive (+) lead from battery to terminal 1 and the negative (-) lead to terminal 2, and check that the seat begins to move backwards.

If operation is not as specified, replace the motor.



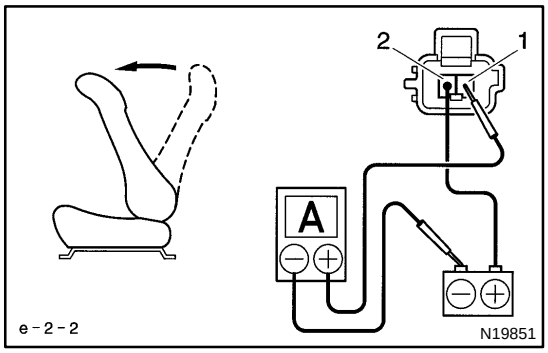
4. INSPECT RECLINING MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and negative (-) lead to terminal 1, and check that the motor turns counterclockwise.



(b) Reverse the polarity, and check that the motor turns clockwise.

If operation is not as specified, replace the motor.



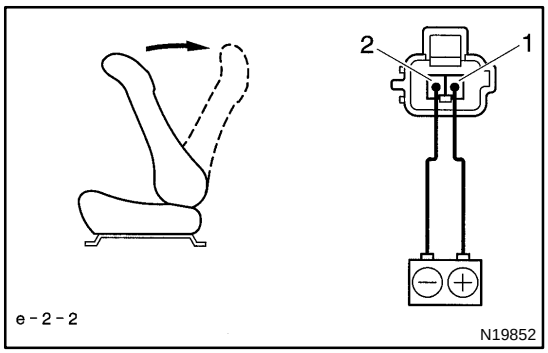
5. INSPECT PTC THERMISTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2.

(b) Connect the positive (+) lead from the ammeter to terminal 1 and the negative (-) lead to battery negative (-) terminal.

(c) Check that the seat back is reclined to the most forward position.

(d) Continue to apply voltage, and check the current change to less than 1 A within 4 to 90 seconds.



(e) Disconnect the lead from terminals.

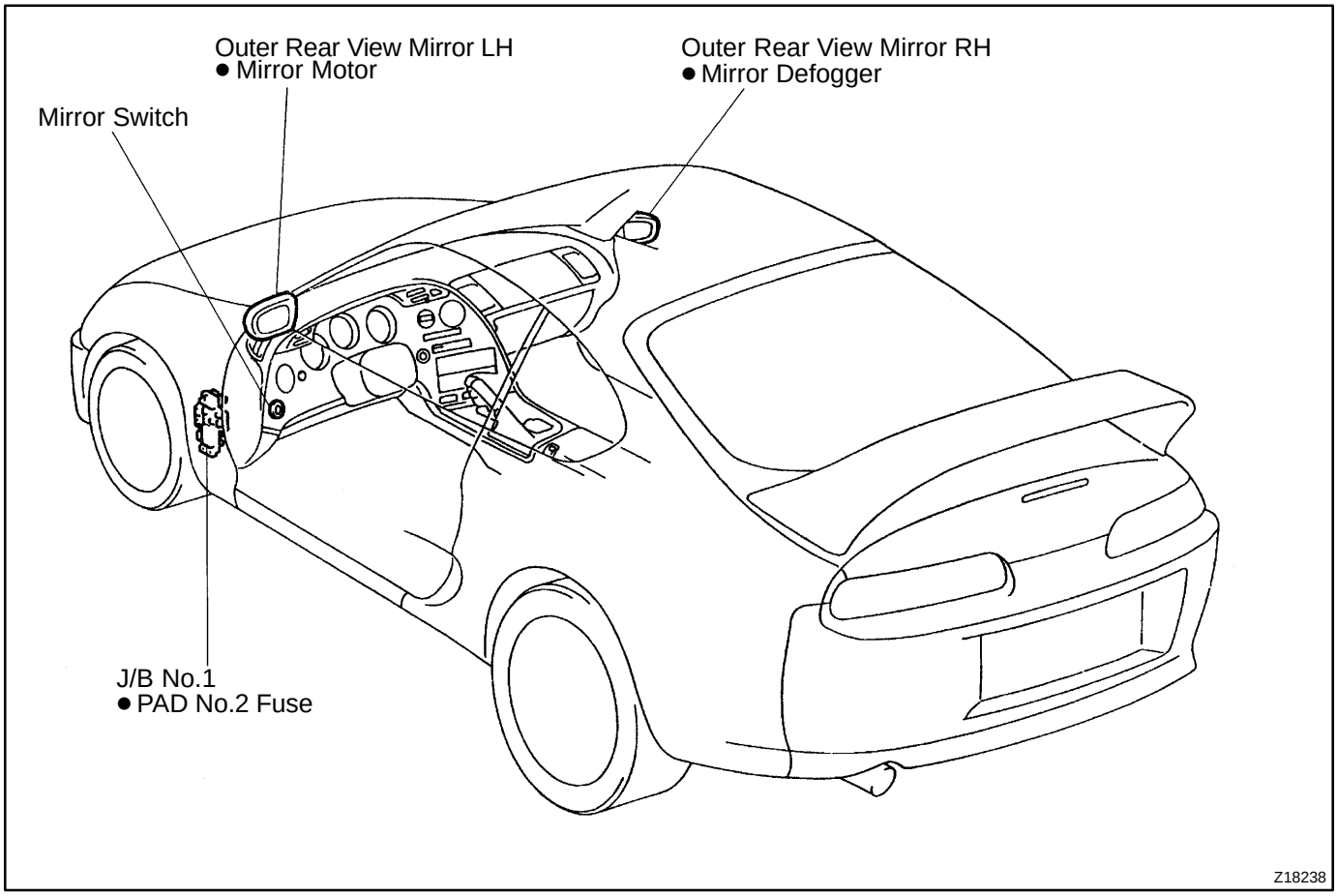
(f) Approximately 60 seconds later, connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2, and check that the seat back starts to fall backwards.

If operation is not as specified, replace the motor.

POWER MIRROR CONTROL SYSTEM

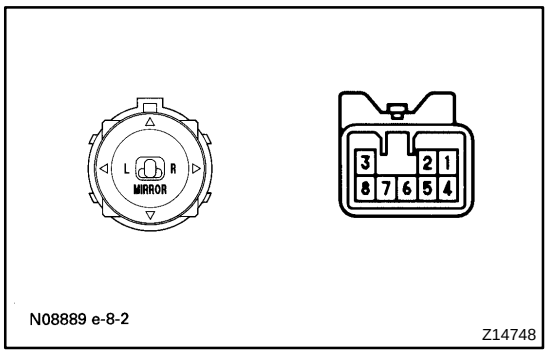
LOCATION

BE0EI-01



BE0EJ-01

INSPECTION



1. INSPECT MIRROR SWITCH CONTINUITY

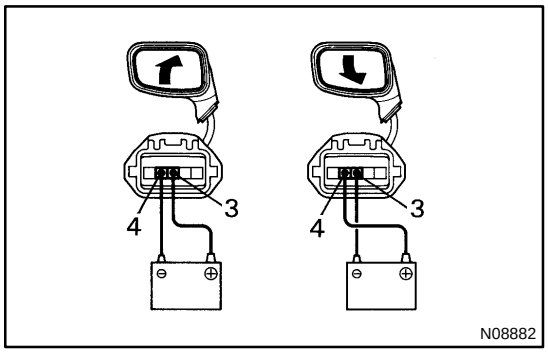
Left Side

Switch position	Tester connection	Specified condition
OFF	-	No continuity
UP	2 - 5, 6 - 8	Continuity
DOWN	2 - 6, 5 - 8	Continuity
LEFT	1 - 8, 2 - 5	Continuity
RIGHT	1 - 2, 5 - 8	Continuity

Right Side

Switch position	Tester connection	Specified condition
OFF	-	No continuity
UP	2 - 5, 3 - 8	Continuity
DOWN	2 - 3, 5 - 8	Continuity
LEFT	2 - 5, 7 - 8	Continuity
RIGHT	2 - 7, 5 - 8	Continuity

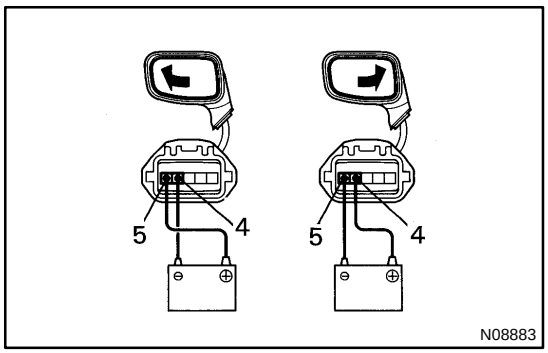
If continuity is not as specified, replace the switch.



2. INSPECT MIRROR MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 3 and negative (-) lead to terminal 4, and check that the mirror turns upward.

(b) Reverse the polarity, and check that the mirror turns to downward.



(c) Connect the positive (+) lead from the battery to terminal 5 and negative (-) lead to terminal 4, and check that the mirror turns to left side.

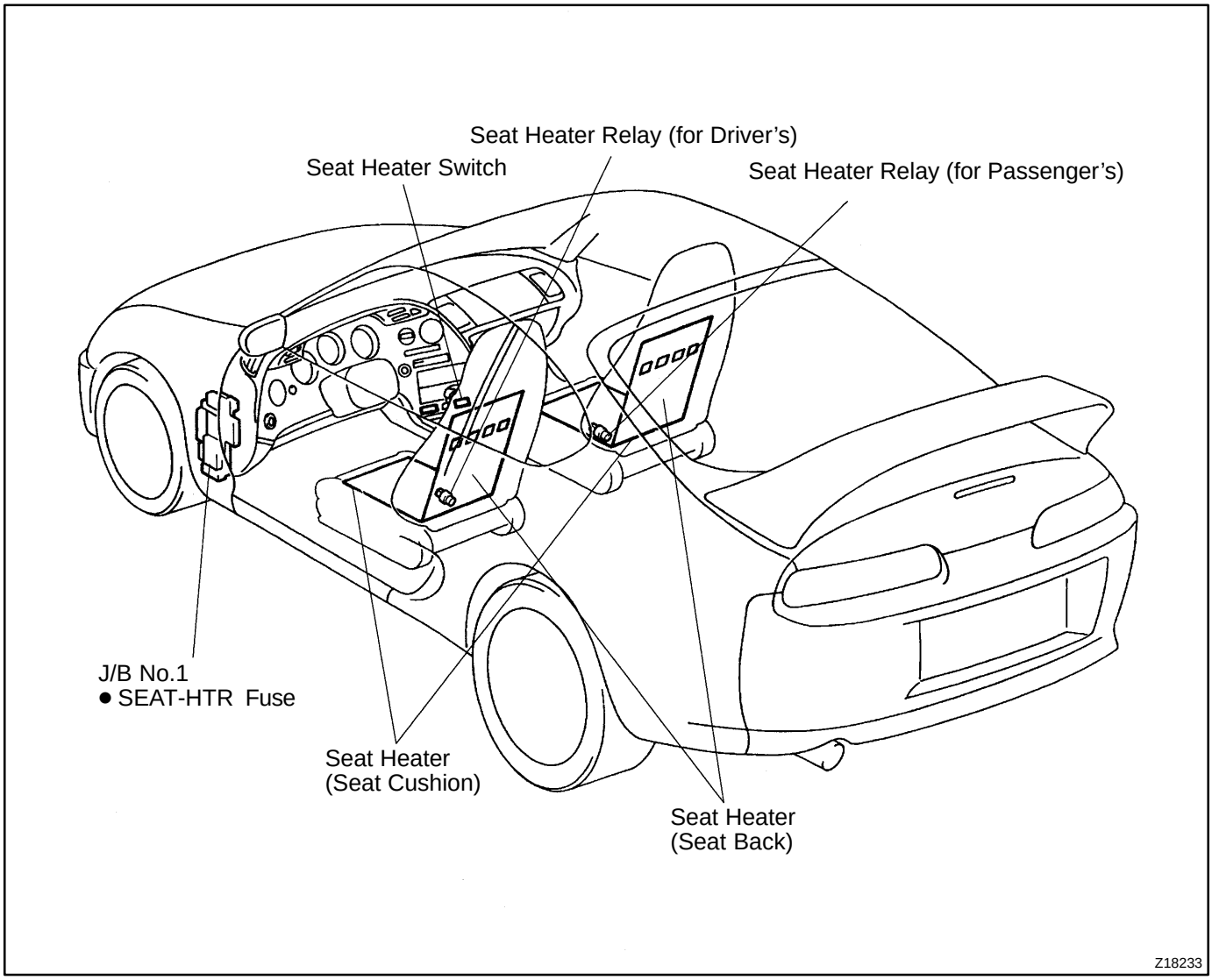
(d) Reverse the polarity, and check that the mirror turns to right side.

If operation is not as specified, replace the mirror.

SEAT HEATER SYSTEM

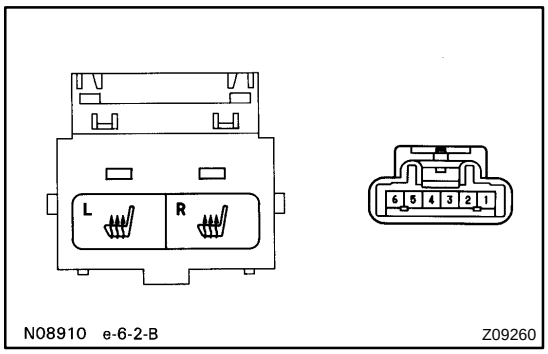
LOCATION

BE0EK-01



BE0EL-01

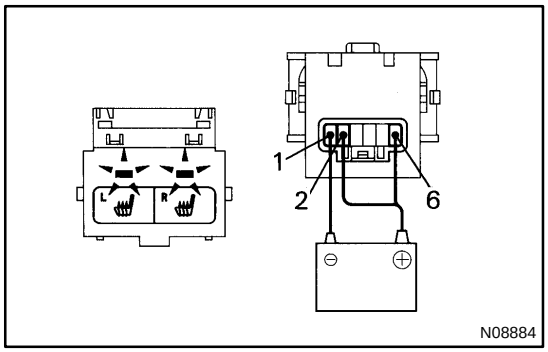
INSPECTION



1. INSPECT SEAT HEATER SWITCH CONTINUITY

Condition	Tester connection	Specified condition
SW ON (LEFT)	2 - 4	Continuity
SW ON (RIGHT)	4 - 6	Continuity
SW OFF	-	No continuity
Illumination circuit	3 - 5	Continuity

If continuity is not as specified, replace the switch or bulb.

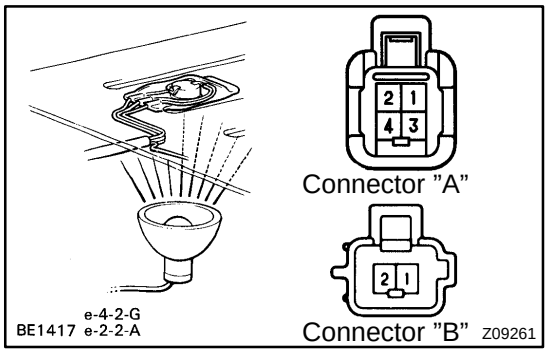


2. INSPECT SEAT HEATER SWITCH INDICATOR

(a) Connect the positive (+) lead from the battery to terminal 2 and 6 and the negative (-) lead to terminal 1.

(b) Push the switches, check that the indicator lights up.

If operation is not as specified, replace the switch and inspect the circuits connected to other parts.



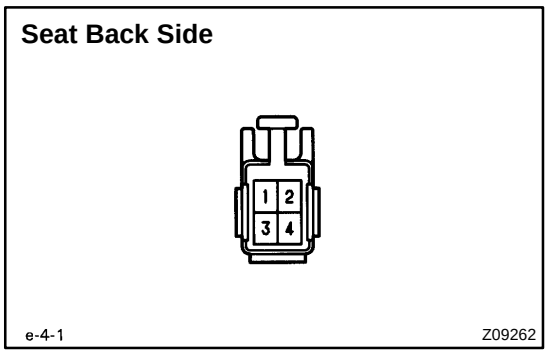
3. INSPECT SEAT CUSHION CONTINUITY

(a) Heat the thermostat with a light.

(b) Inspect the seat heater continuity between terminals.

Tester connection	Condition	Specified condition
A1 - A2	Constant	Continuity
A1 - B2	Constant	Continuity
A2 - B2	Constant	Continuity
A3 - A4	Seat heater temperature below 25˚C (77˚F)	Continuity
A4 - B1	Seat heater temperature below 25˚C (77˚F)	Continuity
A3 - A4	Seat heater temperature above 45˚C (113˚F)	No Continuity
A4 - B1	Seat heater temperature above 45˚C (113˚F)	No Continuity

If continuity is not as specified, replace the seat cushion pad.

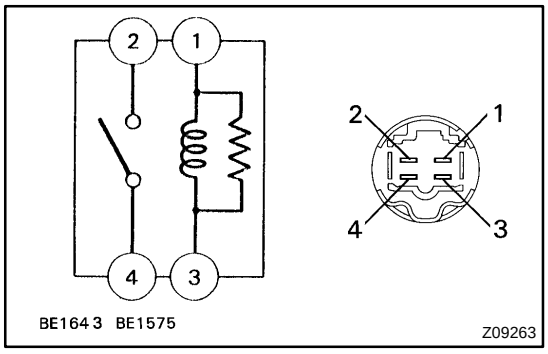


4. INSPECT SEAT BACK CONTINUITY

Inspect the seat heater continuity between terminals, as shown.

Tester connection	Condition	Specified condition
1 - 3	Constant	Continuity
2 - 4	Constant	Continuity

If continuity is not as specified, replace the seat back pad.



5. INSPECT SEAT HEATER RELAY CONTINUITY

Condition	Tester connection	Specified condition
Constant	1 - 3	Continuity
Apply B+ between terminals 1 and 3.	2 - 4	Continuity

If continuity is not as specified, replace the relay.

AUDIO SYSTEM

BE0EM-01

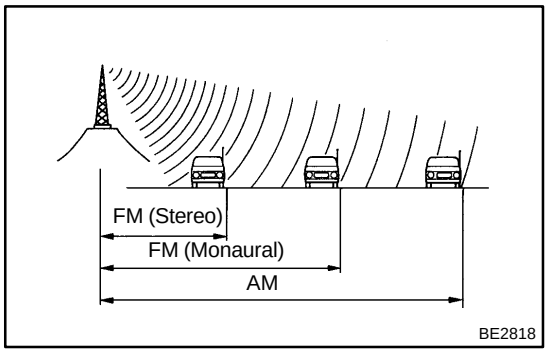
DESCRIPTION

1. RADIO WAVE BAND

The radio wave bands used in radio broadcasting are as follows:

Frequency	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz
Designation	LF	MF	HF	VHF	
Radio wave		AM		FM	
Modulation method	Amplitude modulation			Frequency modulation	

LF: Low frequency MF: Medium Frequency HF: High Frequency VHF: Very High Frequency

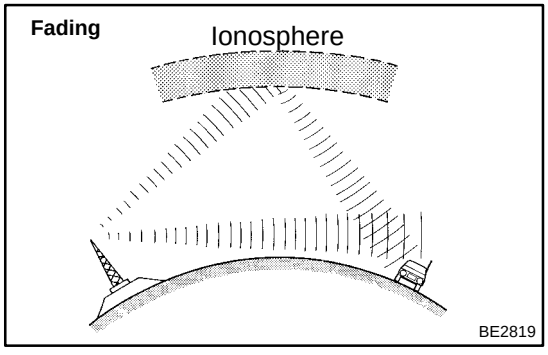


2. SERVICE AREA

There are great differences in the size of the service area for AM and FM monaural. Sometimes FM stereo broadcasts cannot be received even through AM can be received in very clearly.
Not only does FM stereo have the smallest service area, but it also picks up static and other types of interference (”noise”) easily.

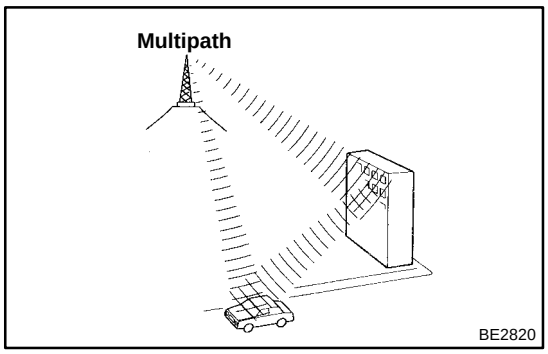
3. RECEPTION PROBLEMS

Besides the problem of static, there are also the problems called ”fading”, ”multipath” and ”fade out”. These problems are caused not by electrical noise but by the nature of the radio waves themselves.

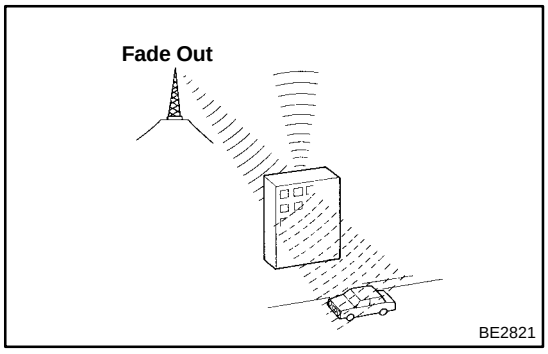


(a) Fading

Besides electrical interference, AM broadcasts are also susceptible to other types of interference, especially at night. This is because AM radio waves bounce off the ionosphere at night. These radio waves then interfere with the signals from the same transmitter that reach the vehicle’s antenna directly. This type of interference is called ”fading”.



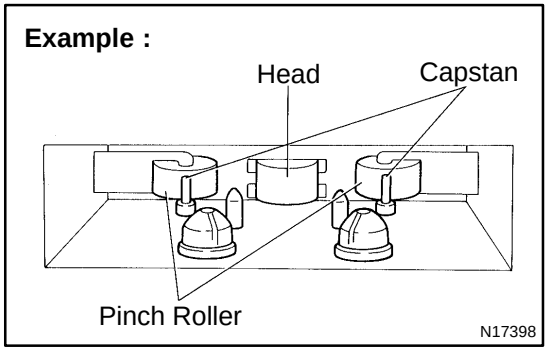
(b) Multipath
One type of interference caused by the bounce of radio waves off of obstructions is called ”multipath”. Multipath occurs when a signal from the broadcast transmitter antenna bounces off buildings and mountains and interferes with the signal that is received directly.



(c) Fade Out
Because FM radio waves are of higher frequencies than AM radio waves, they bounce off buildings, mountains, and other obstructions. For this reason, FM signals often seem to gradually disappear or fade away as the vehicle goes behind a building or other obstruction. This is called ”fade out”.

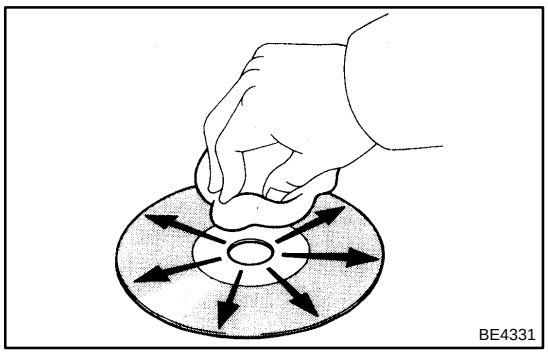
4. COMPACT DISC PLAYER

Compact Disc (hereafter called ”CD”) Players use a laser beam pick-up to read the digital signals recorded on the CD and reproduce analog signals of the music, etc. There are 4.7 in. (12 cm) and 3.2 in. (8 cm) discs in the CD player.
HINT:
Never attempt to disassemble or oil any part of the player unit.
Do not insert any object other than a disc into the magazine.
NOTICE:
CD players use an invisible laser beam which could cause hazardous radiation exposure. Be sure to operate the player correctly as instructed.



5. Tape Player/Head Cleaning: MAINTENANCE

(a) Raise the cassette door with your finger.
Next, using a pencil or similar object, push in the guide.
(b) Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.

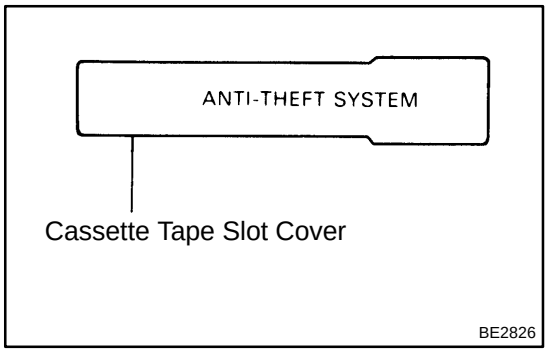

BE4331

6. CD Player/Disc Cleaning: MAINTENANCE

If the disc gets dirty, clean the disc by wiping the surface from the center to outside in the radial directions with a soft cloth.

NOTICE:

Do not use a conventional record cleaner or anti-static preservative.



BE2826

7. ANTI-THEFT SYSTEM

HINT:

The words ”ANTI-THEFT SYSTEM” are displayed on the cassette tape slot cover.

For operation instructions for the anti-theft system, please consult the audio system section in the Owner’s Manual (hereafter called O/M).

(a) Setting system

The system is in operation once the customer has pushed the required buttons and entered the customer-selected 3-digit ID number.

(Refer to the O/M section, ”Setting the anti-theft system”)

HINT:

- When the audio system is shipped, the ID number has not been input, so the anti-theft system is not in operation.
- If the ID number has not been input, the audio system remains the same as a normal audio system.

(b) Anti-theft system operation

If the normal electrical power source (Connector or battery terminal) is cut off, the audio system becomes inoperable, even if the power supply resumes.

(c) Canceling system

The ID number chosen by the customer is input to cancel the anti-theft system

(Refer to the O/M section, ”If the system is activated”)

HINT:

To change or cancel the ID number, please refer to the O/M ”Cancelling the system”.

BE0EN-01

TROUBLESHOOTING

NOTICE:

When replacing the internal mechanism (computer part) of the audio system, be careful that no part of your body or clothing comes in contact with the terminals of the leads from the IC, etc. of the replacement part (spare part).

HINT:

This inspection procedure is a simple troubleshooting which should be carried out on the vehicle during system operation and was prepared on the assumption of system component troubles (except for the wires and connectors, etc.).

Always inspect the trouble taking the following items into consideration.

Open or short circuit of the wire harness

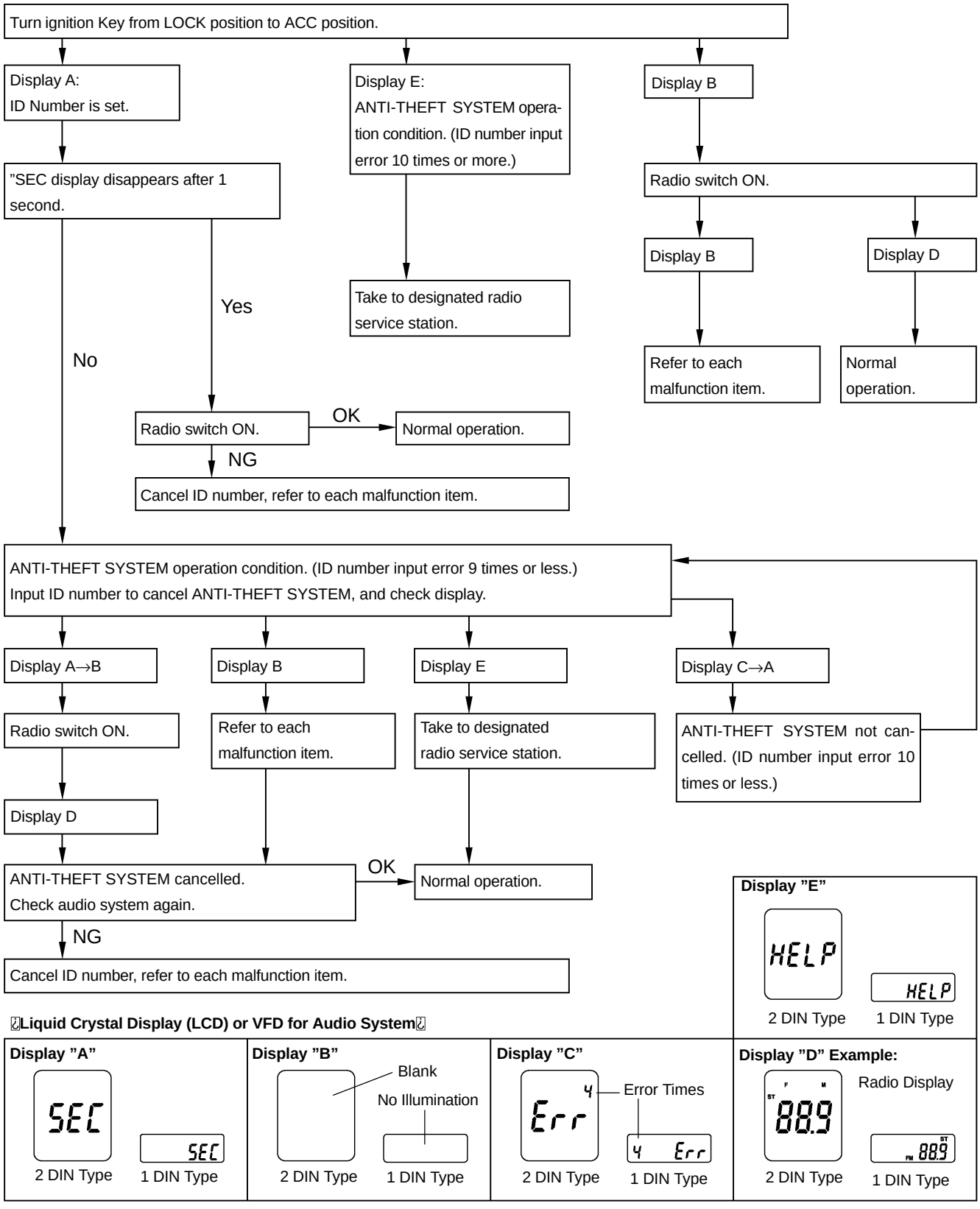
Connector or terminal connection fault

For audio systems with anti-theft system, troubleshooting items marked (*) indicate that "Troubleshooting for ANTI-THEFT SYSTEM" should be carried out first.

	Problem	No.
Radio	Radio not operating when power switch turned to 'ON'.	1
	Display indicates when power switch turned to 'ON', but no sound (including 'noise') is produced.	2
	Noise present, but AM - FM not operating.	3
	Any speaker does not work.	4
	Any AM or FM does not work.	5
	Few preset turning bands.	5
	Reception poor.	6
	Sound quality poor.	7
	Preset memory disappears.	8
Tape Player	Cassette tape cannot be inserted.	9
	Cassette tape inserts, but no power.	10
	Power coming in, but tape player not operating.	11
	Any speaker does not work.	12
	Sound quality poor.	13
	Tape jammed, malfunction with tape speed or auto-reverse.	14
	Cassette tape will not eject.	15
CD Player	CD cannot be inserted.	16
	CD inserted, but no power.	17
	Power coming in, but CD player not operating.	18
	Sound jumps.	19
	Sound quality poor (Volume faint).	20
	Any speaker does not work.	21
	CD will not be ejected.	22
Power Amplifier	No power coming in.	23
	Power coming in, but power amplifier not operating.	24
	Any speaker does not work.	25
Antenna	Antenna does not fully extend or fully retract.	26
	Antenna - related.	27
Noise	Noise produced by vibration or shock while driving.	28
	Noise produced when engine starts.	29

The term "AM" includes LW,MW and SW, and the term "FW" includes UKW.

Troubleshooting for ANTI-THEFT SYSTEM

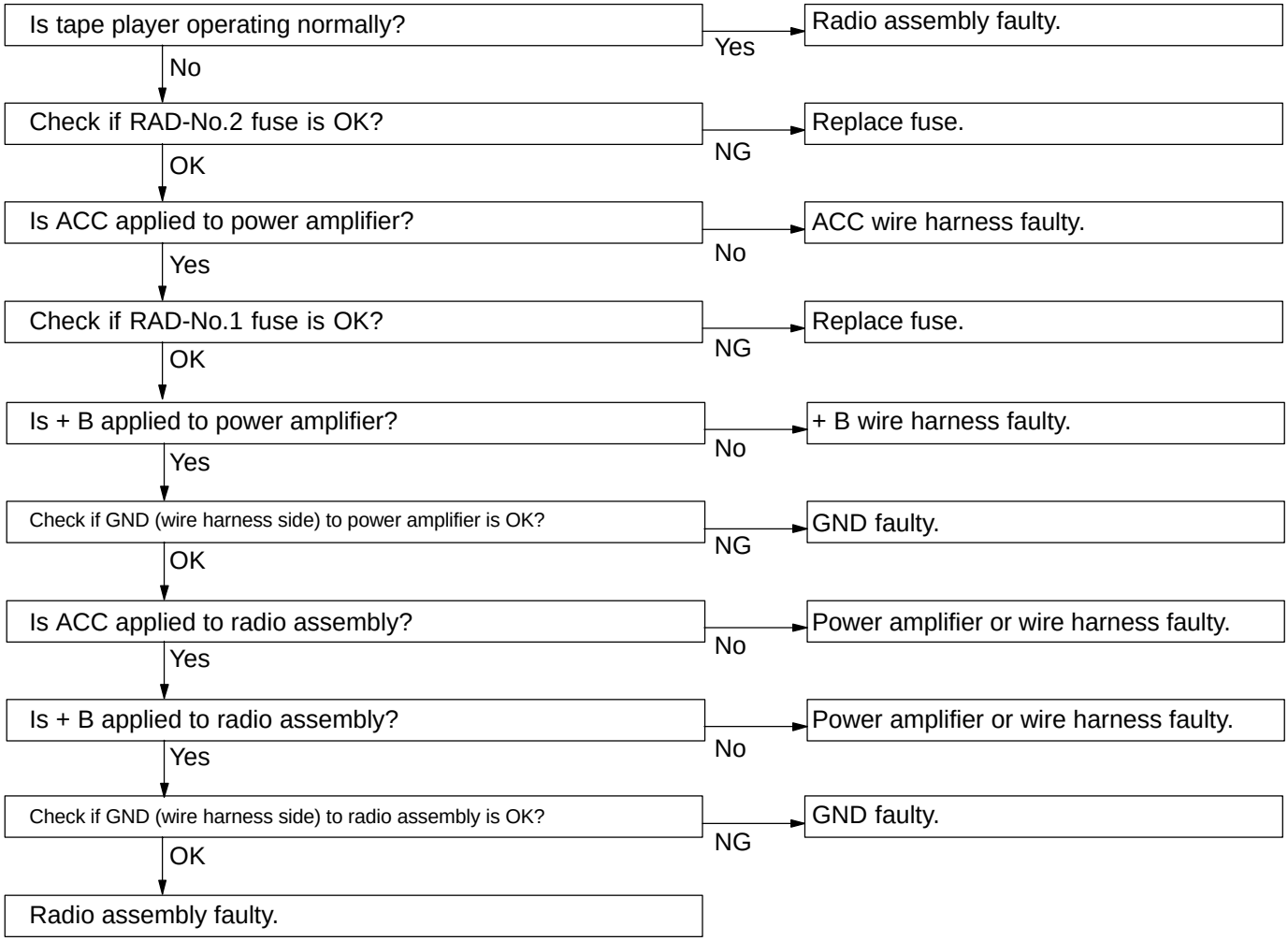


HINT:

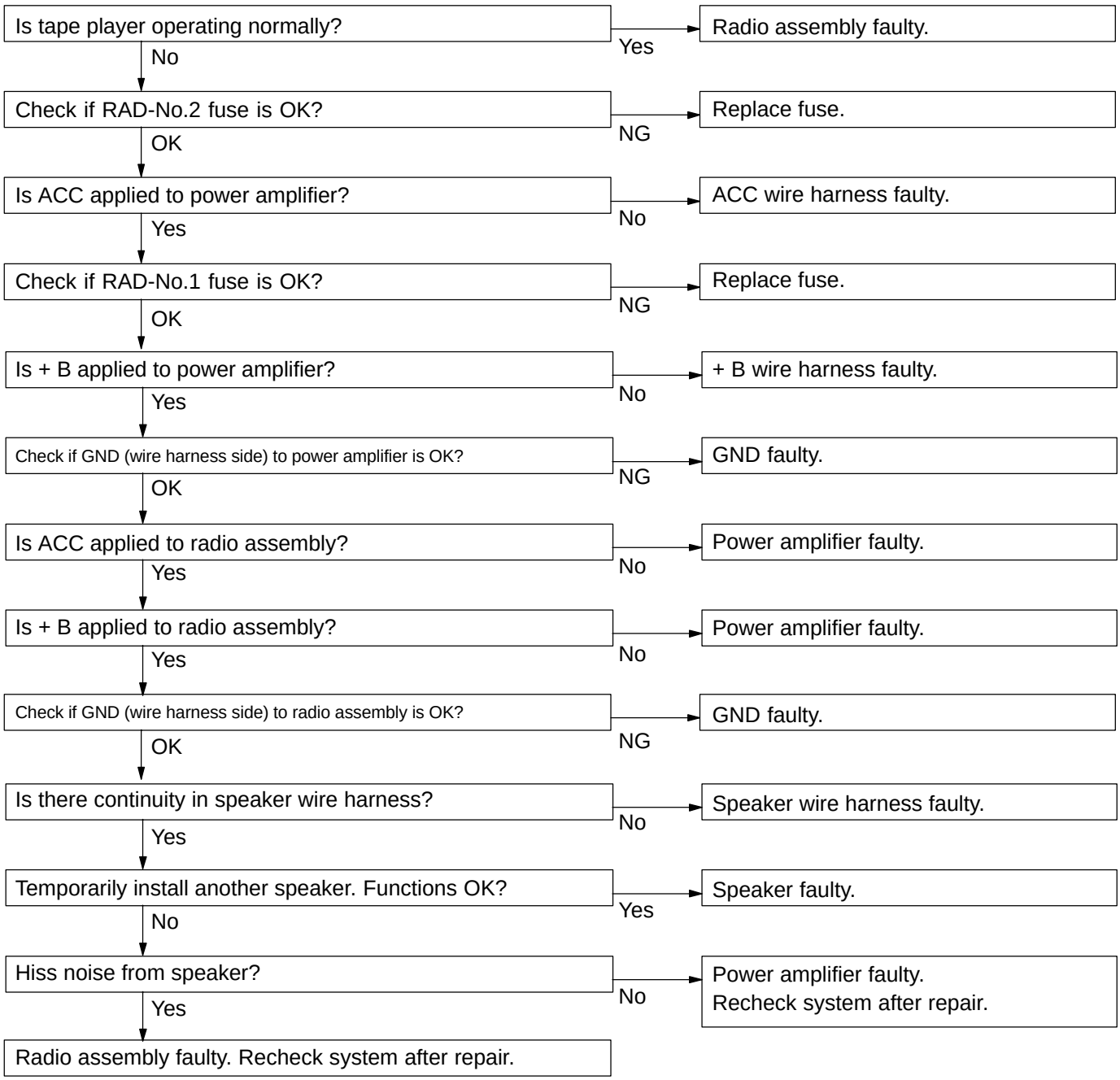
- Refer to Owner's Manual for operation details of ANTI-THEFT SYSTEM.
- When the ID number has been cancelled, reset the same number after completing the operation, or inform the customer that it has been cancelled.

V08418

1	Radio	RADIO NOT OPERATING WHEN POWER SWITCH TURNED TO "ON"



2	Radio	DISPLAY INDICATES WHEN POWER SWITCH TURNED TO "ON", BUT NO SOUND (INCLUDING "NOISE") IS PRODUCED

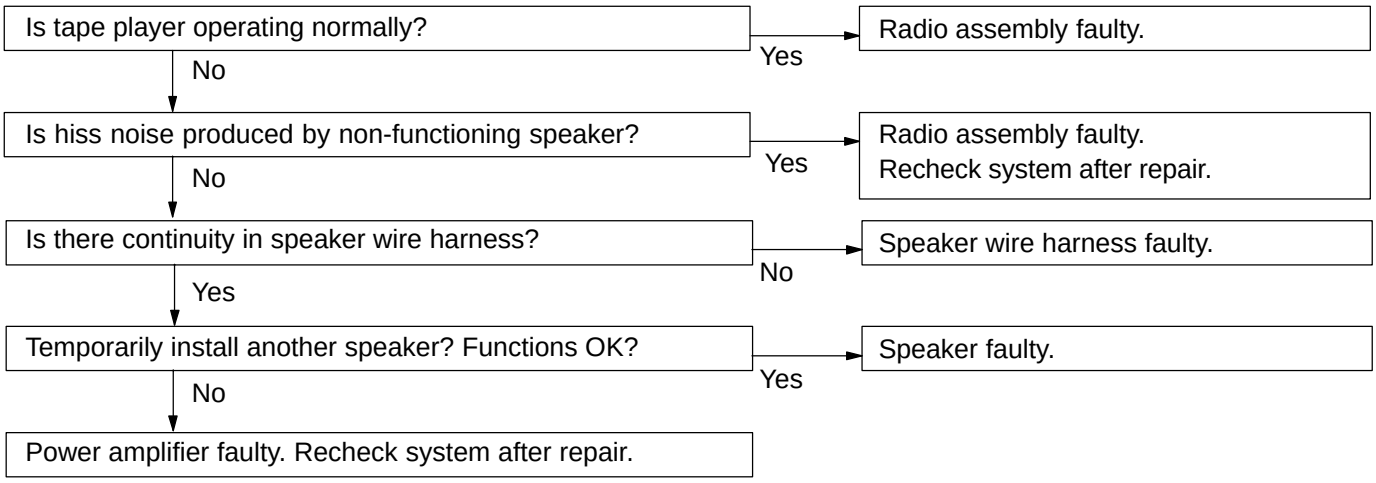


3	Radio	NOISE PRESENT, BUT AM-FM NOT OPERATING

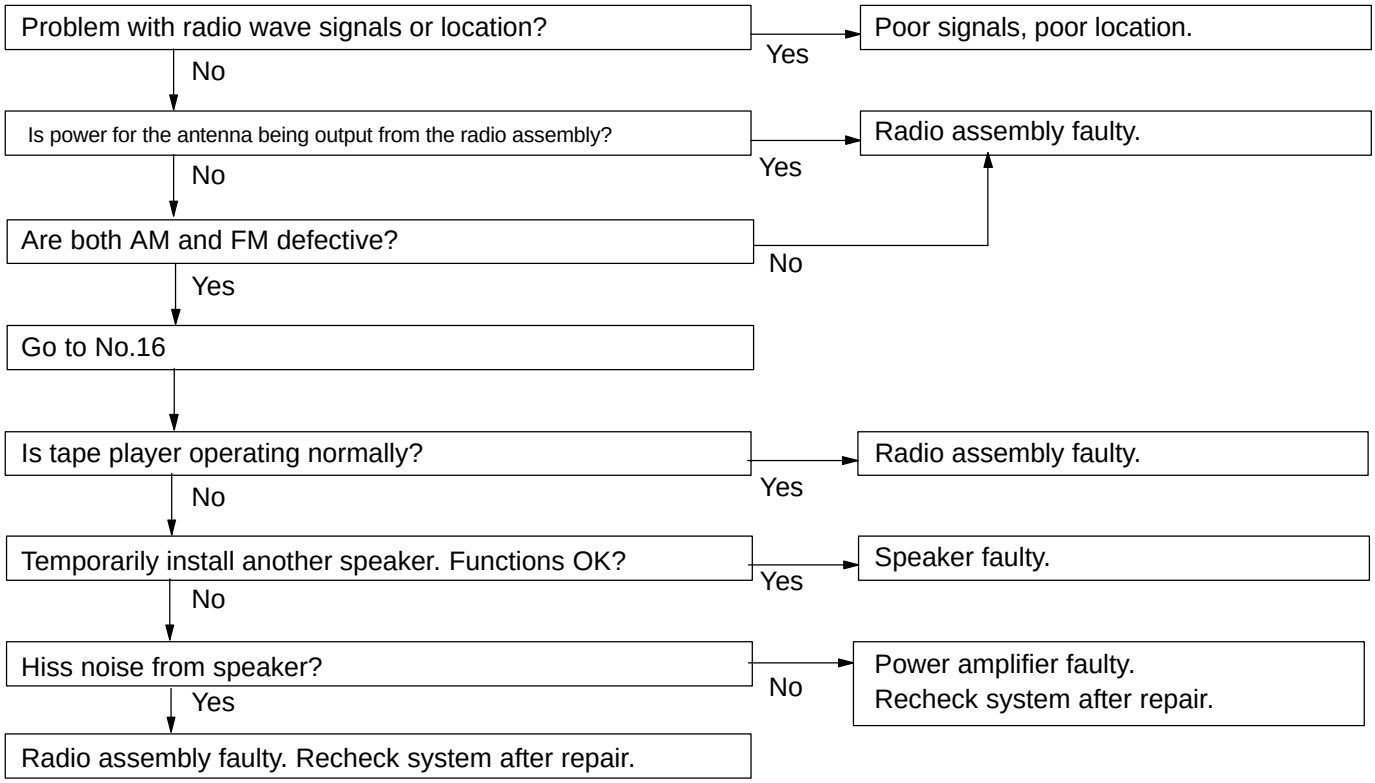
Go to No.25

If radio side faulty. → Radio faulty.

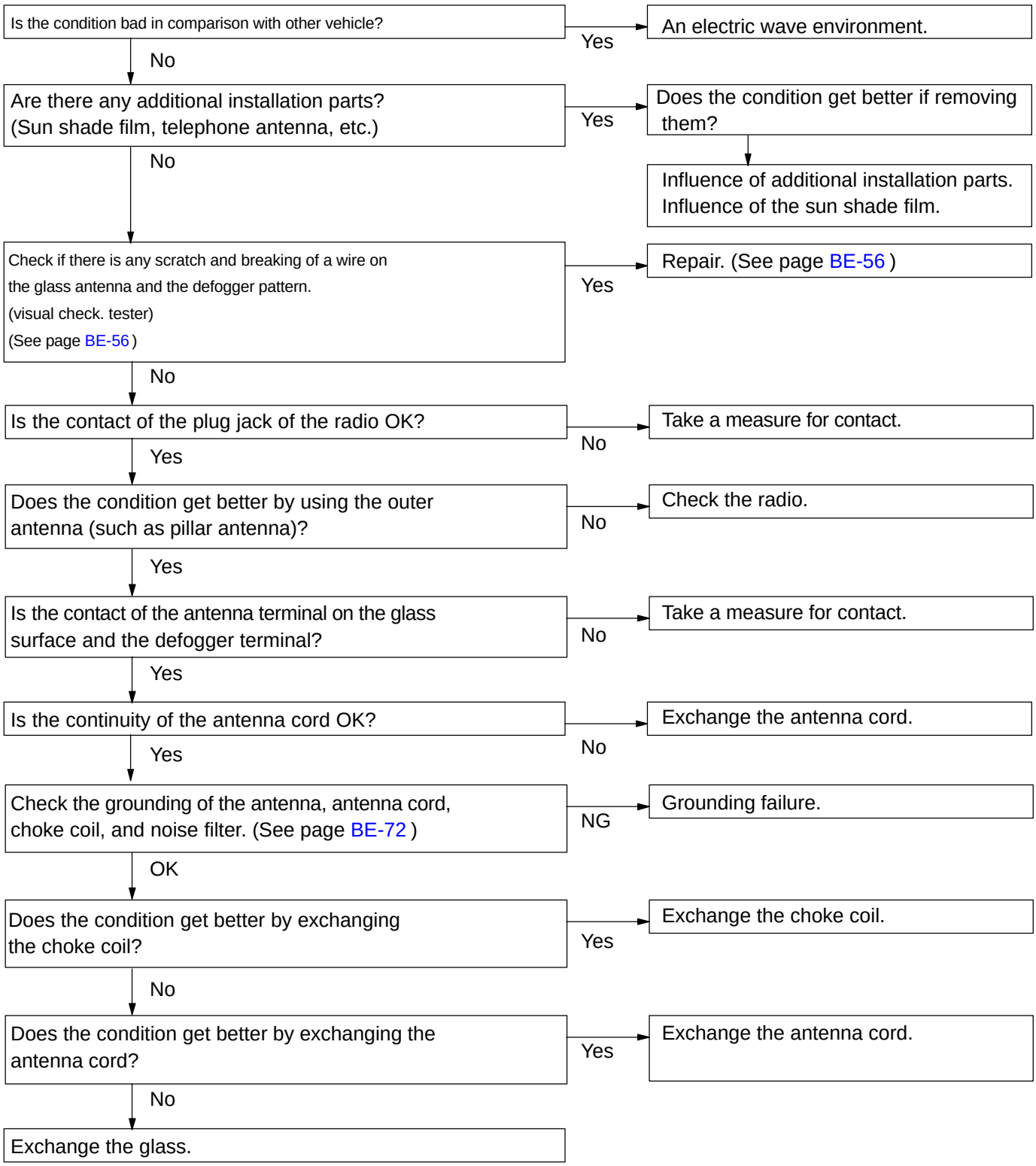
4	Radio	ANY SPEAKER DOSE NOT WORK



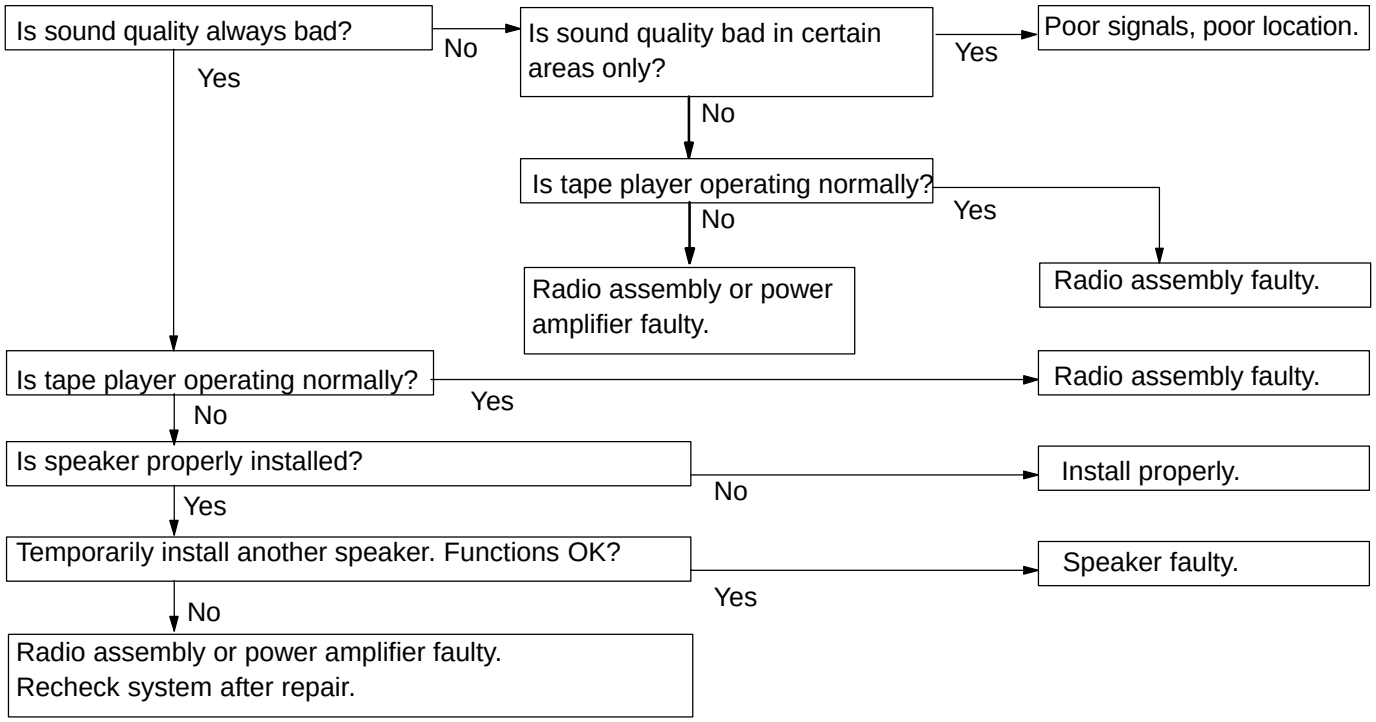
5	Radio	ANY AM OR FM DOES NOR WORK FEW PRESET TUNING BANDS



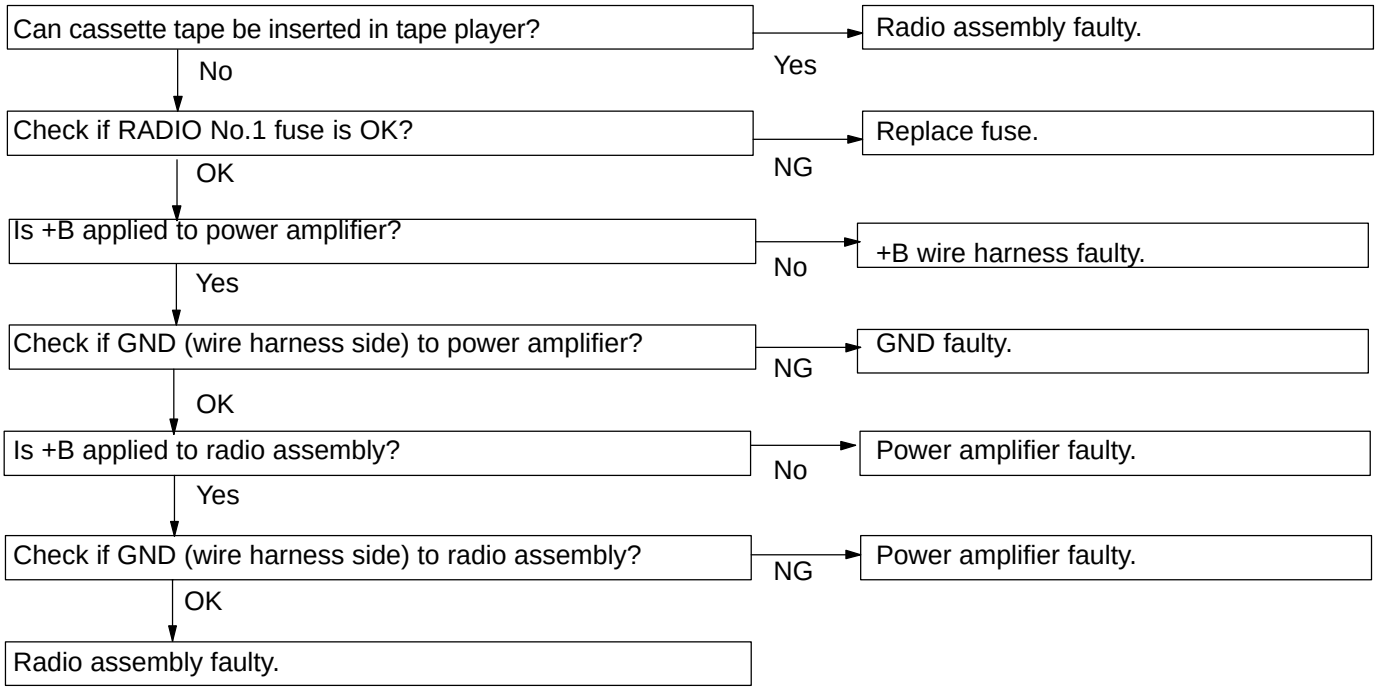
6	Radio	POOR RECEPTION



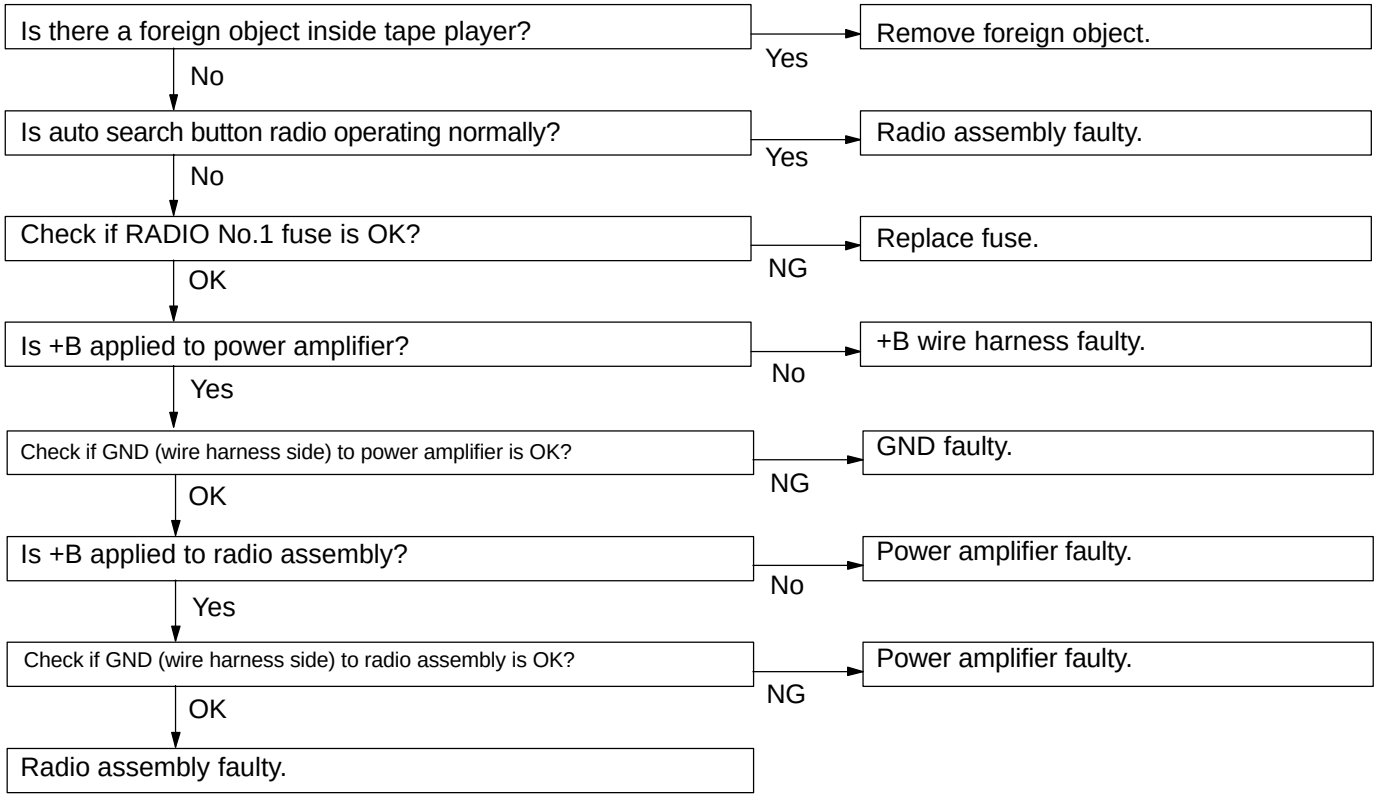
7	Radio	SOUND QUALITY POOR



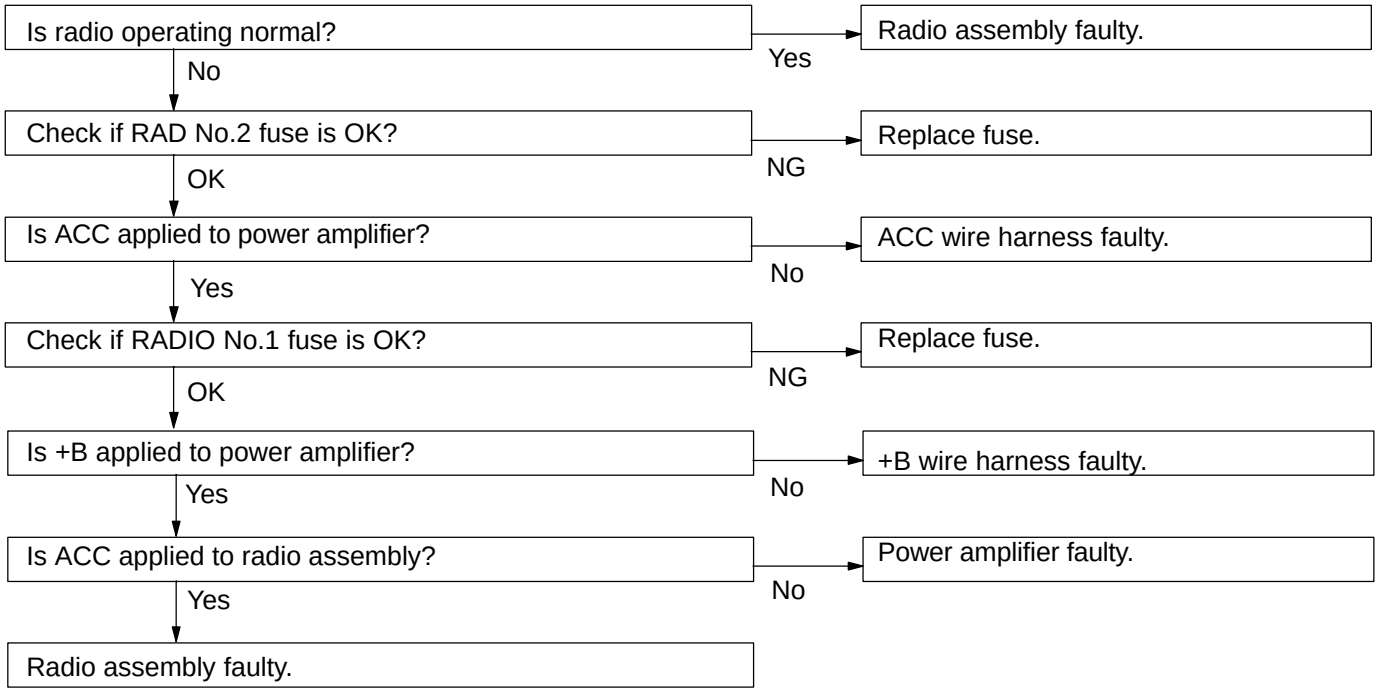
8	Radio	PRESET MEMORY DISAPPEARS



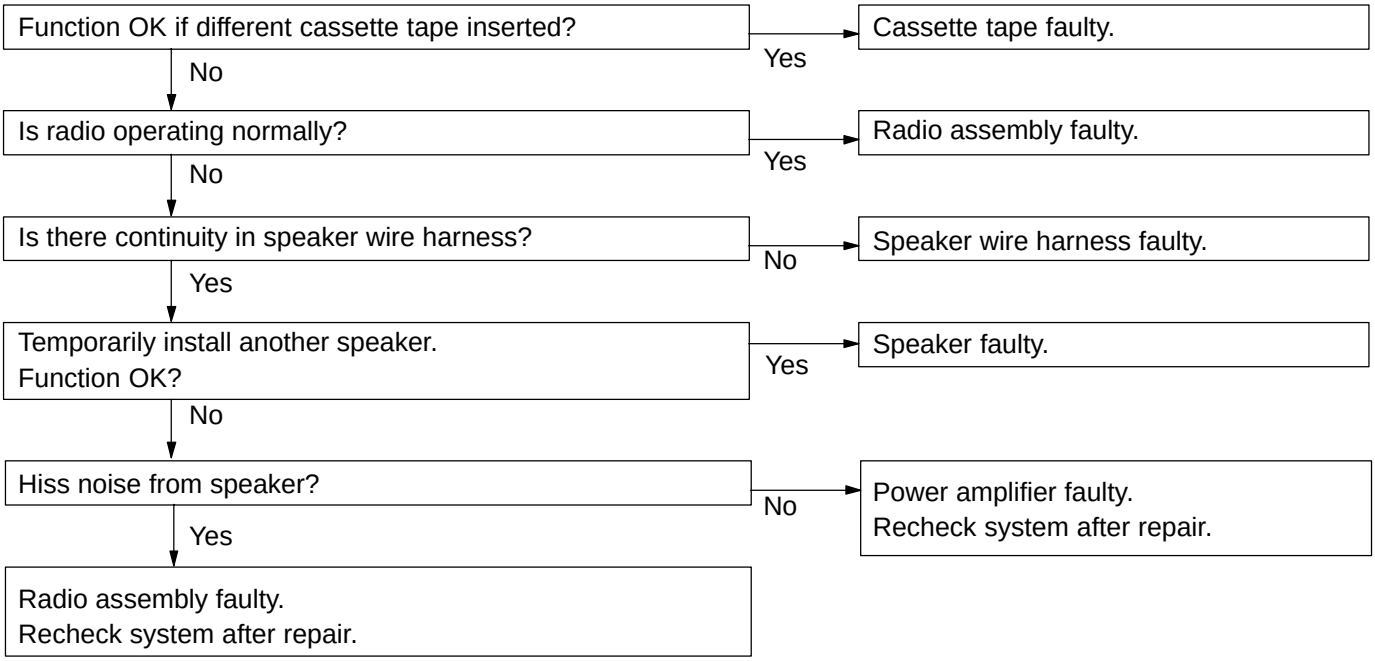
9	Tape Player	CASSETTE TAPE CANNOT BE INSERTED



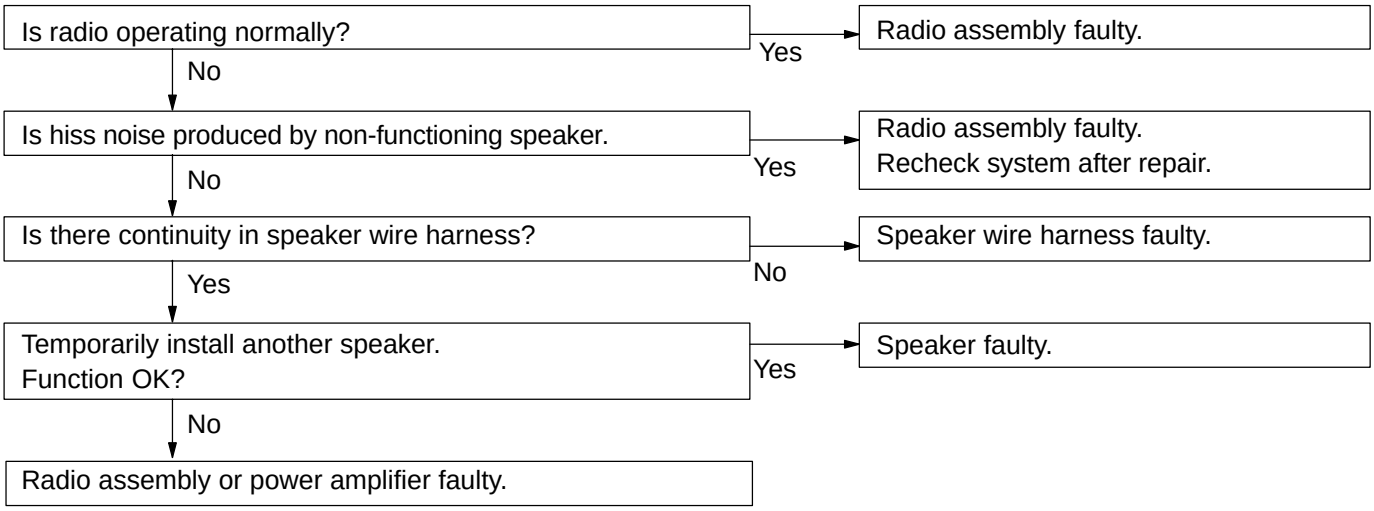
10	Tape Player	CASSETTE TAPE INSERTED, BUT NO POWER



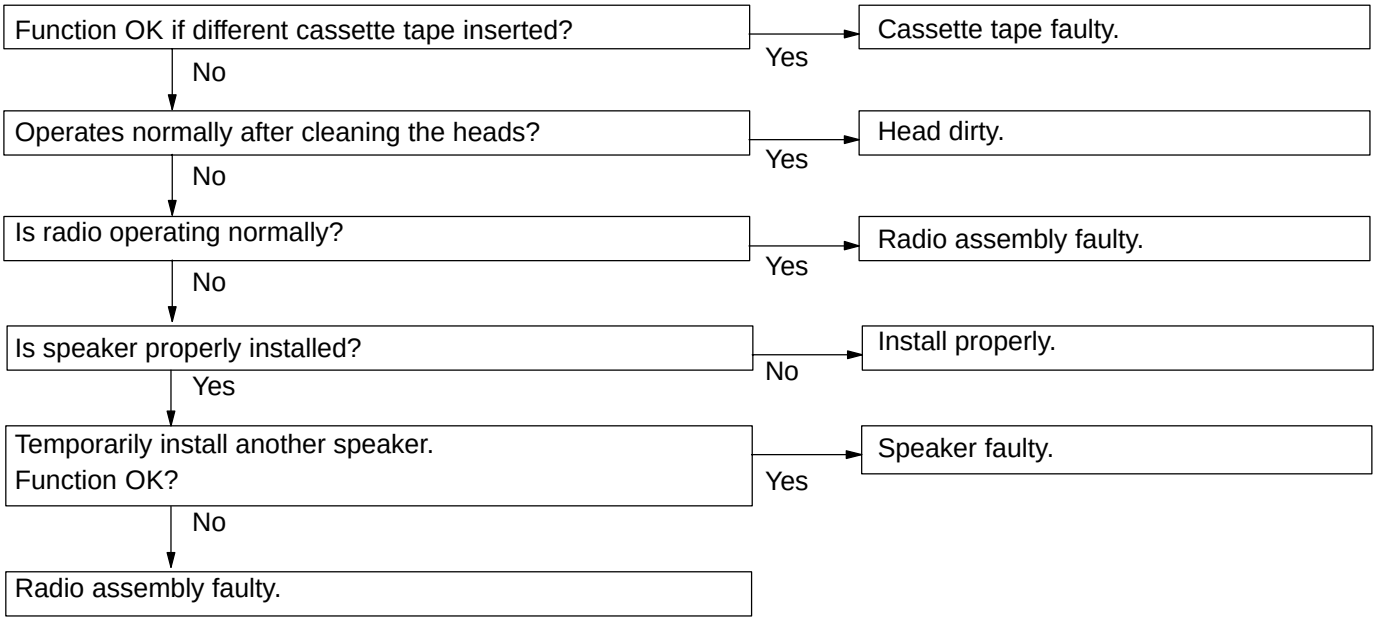
11	Tape Player	POWER COMING IN, BUT TAPE PLAYER NOT OPERATING



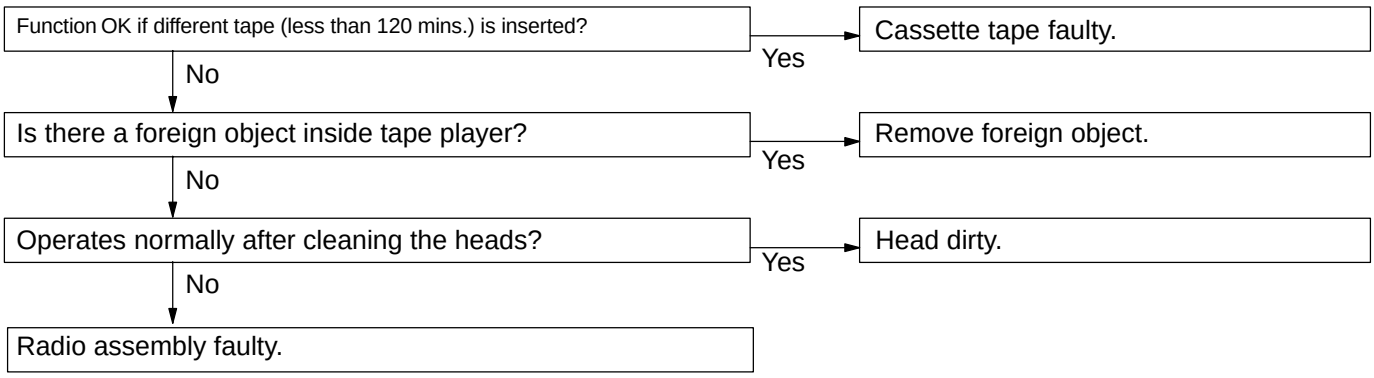
12	Tape Player	ANY SPEAKER DOES NOT WORK



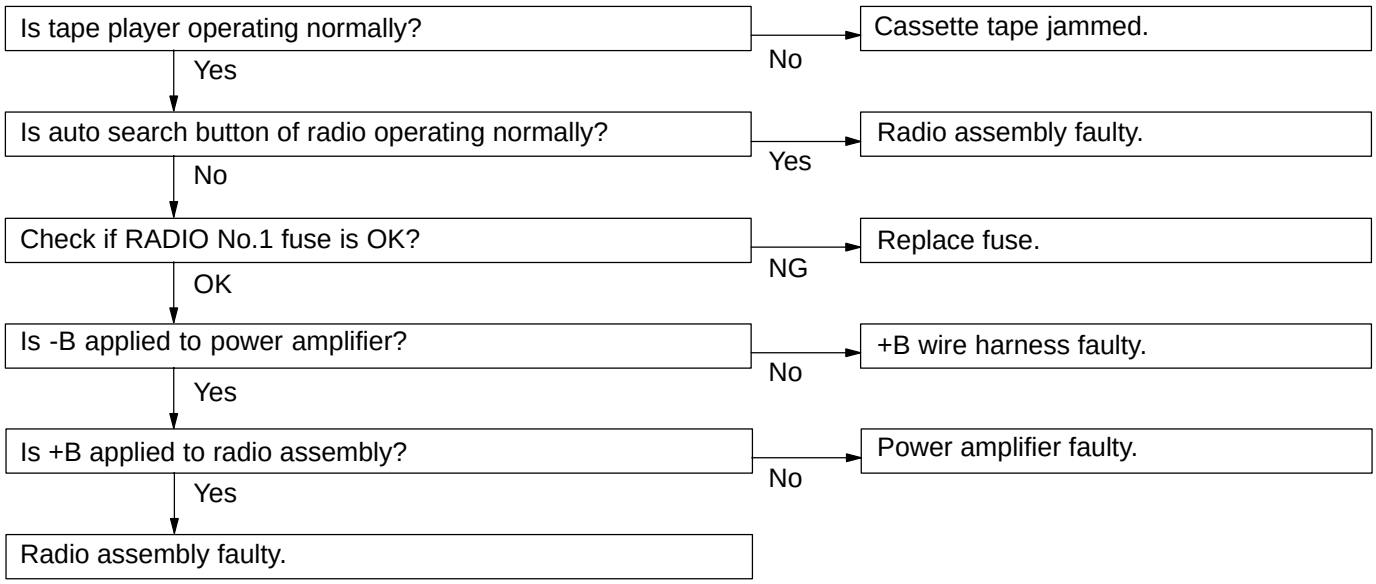
13	Tape Player	SOUND QUALITY POOR (VOLUME FAINT)



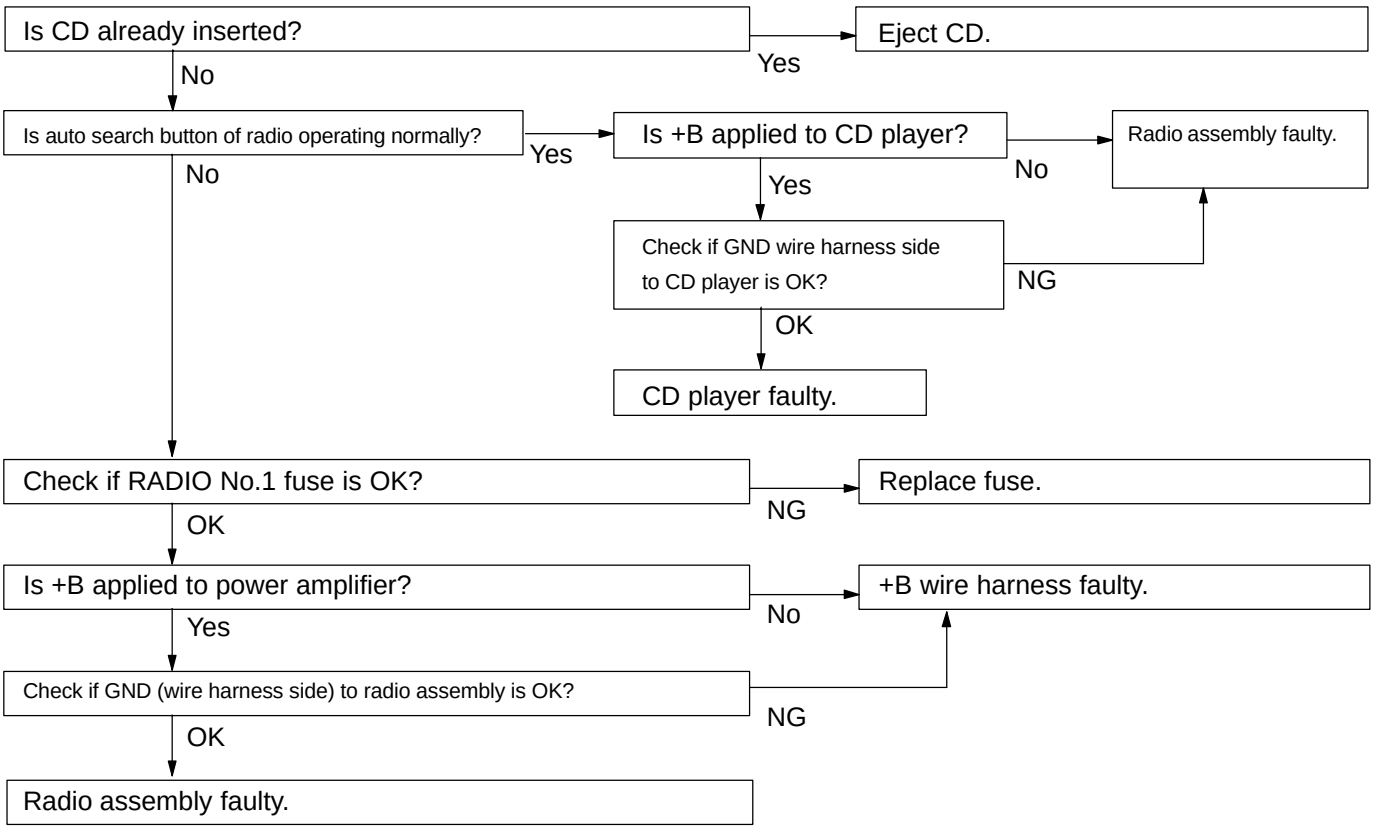
14	Tape Player	TAPE JAMMED MALFUNCTION WITH TAPE SPEED OR AUTO-REVERSE



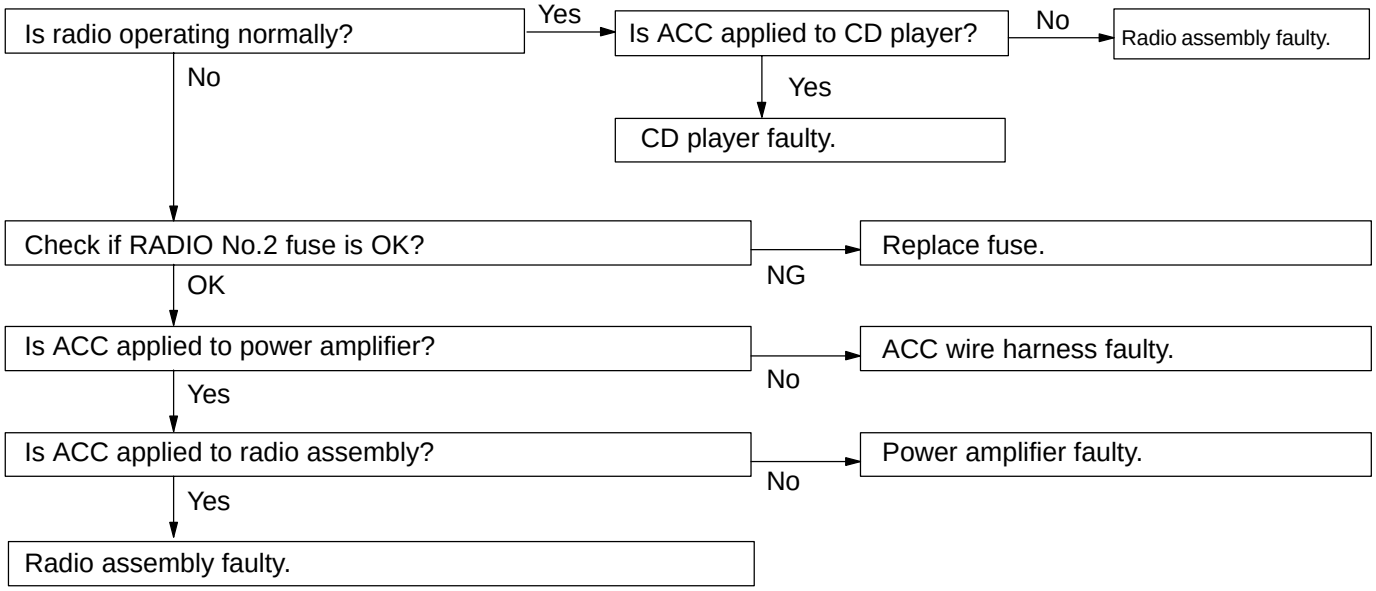
15	Tape Player	CASSETTE TAPE WILL NOT EJECTED



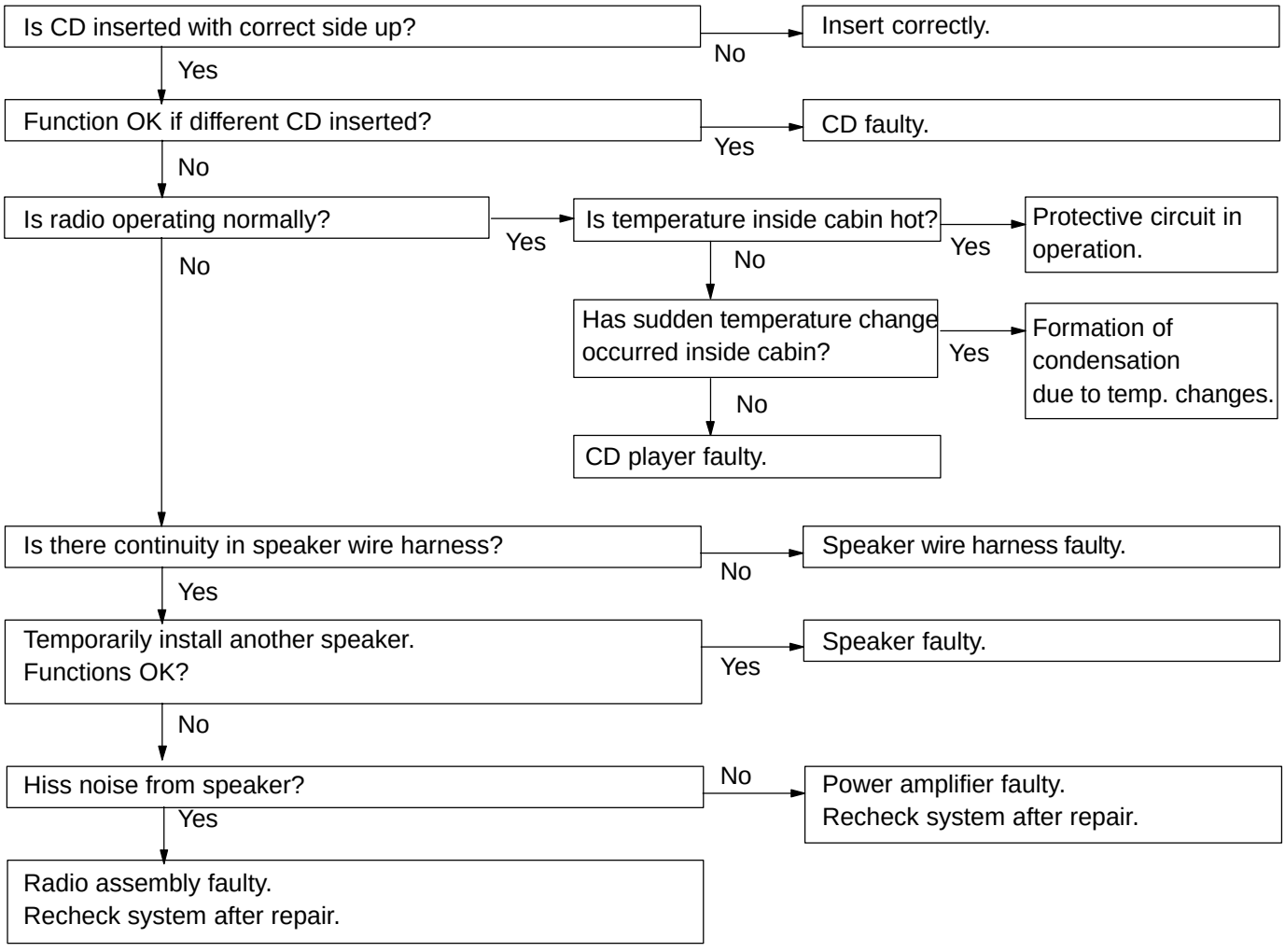
16	CD Player	CD CANNOT BE INSERTED



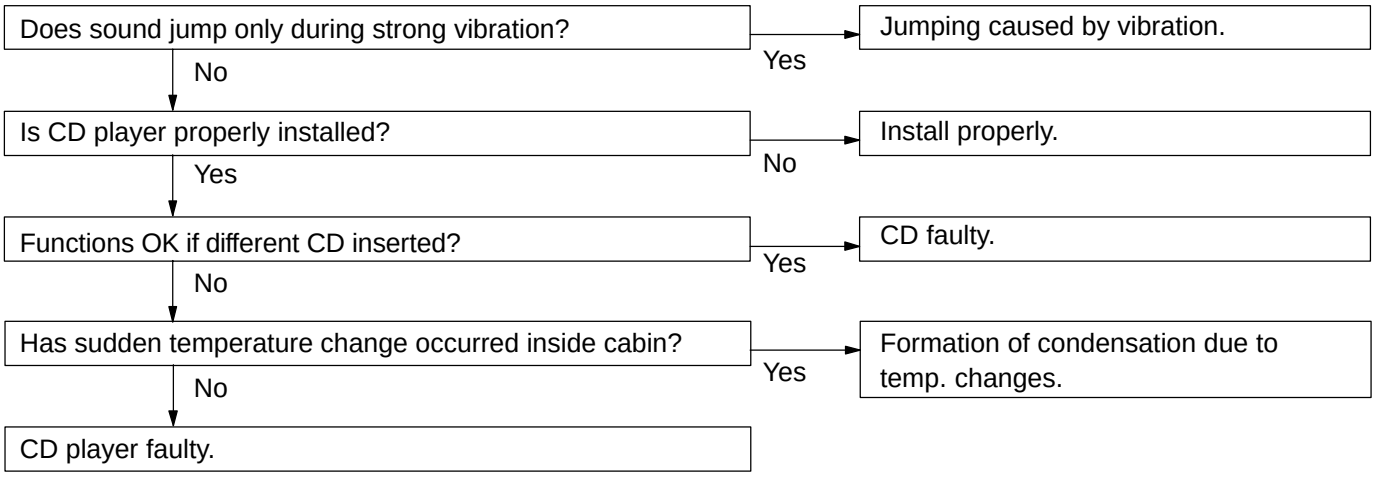
17	CD Player	CD INSERTED, BUT NO POWER



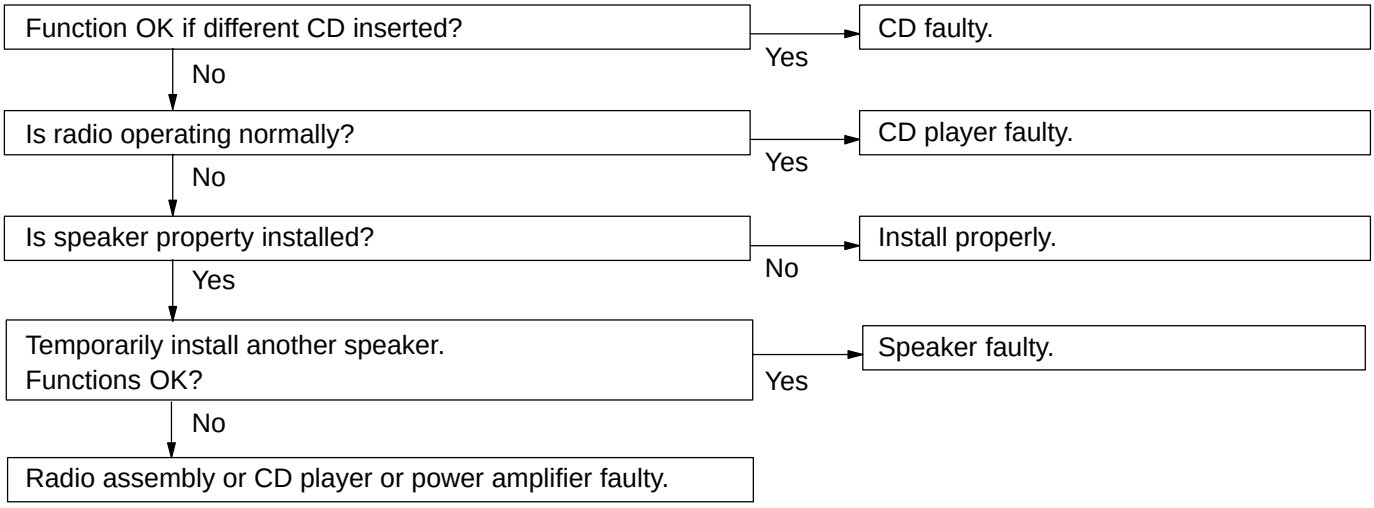
18	CD Player	POWER COMING IN, BUT CD PLAYER NOT OPERATING



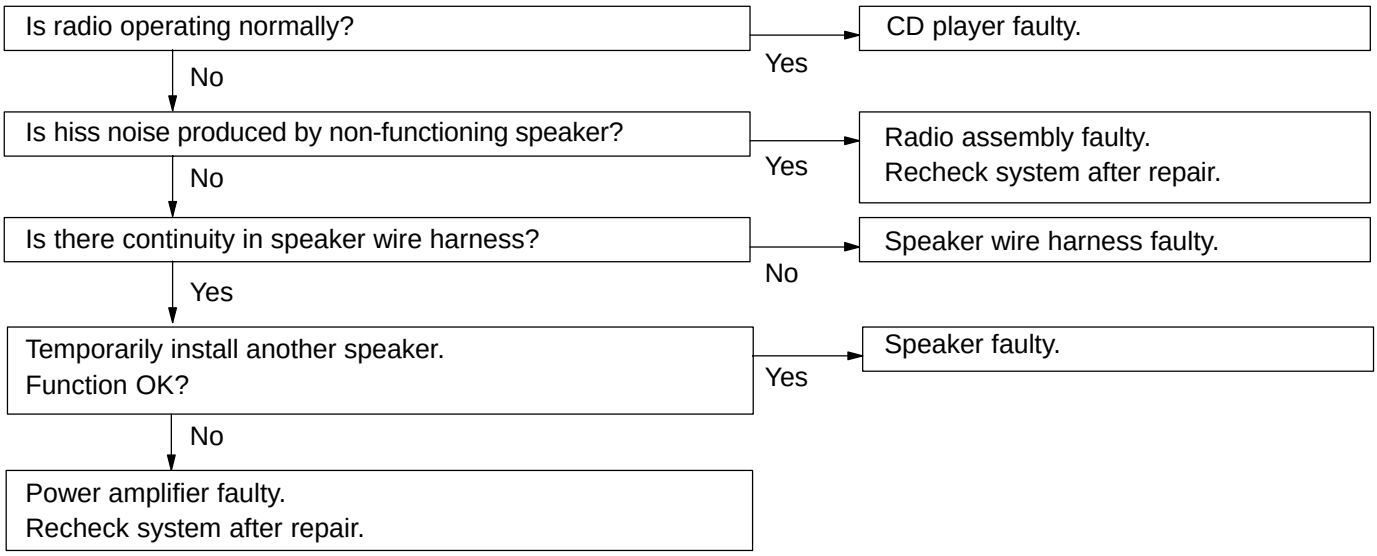
19	CD Player	SOUND JUMPS



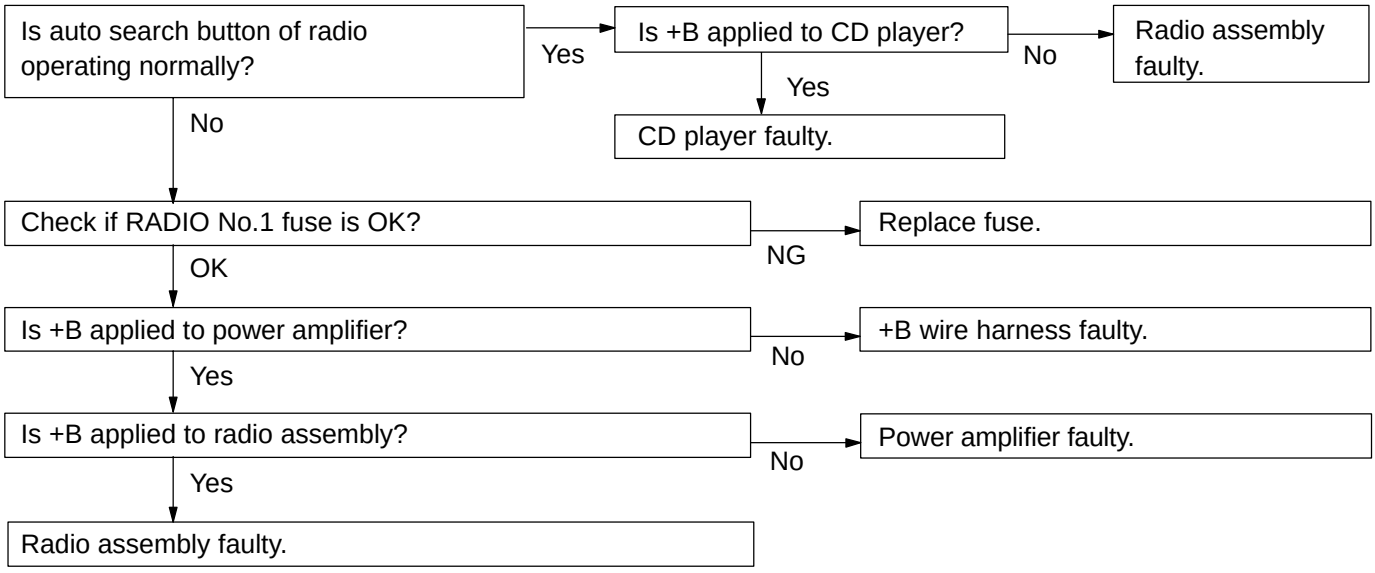
20	CD Player	SOUND QUALITY POOR (VOLUME FAINT)



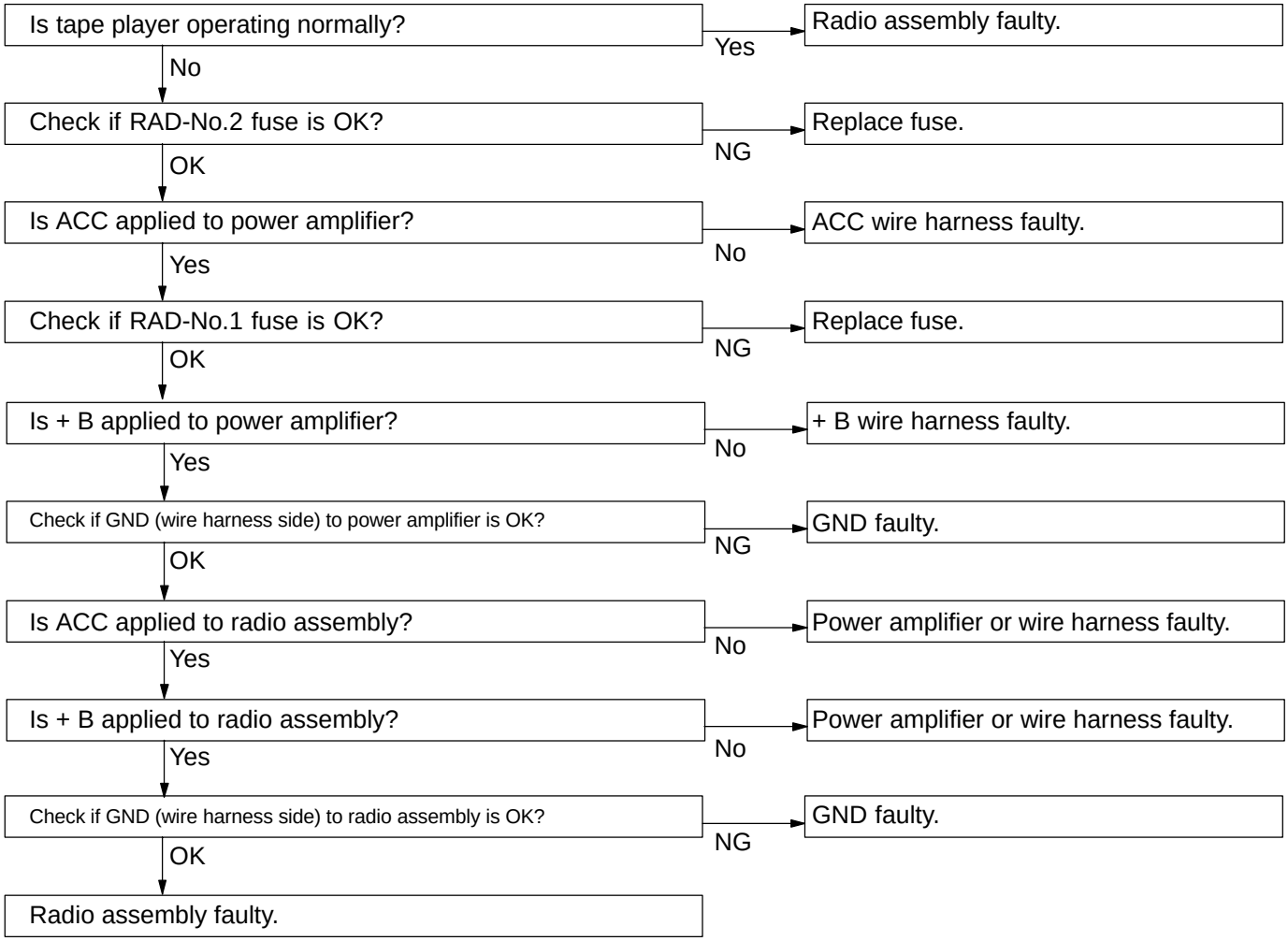
21	CD Player	ANY SPEAKER DOES NOT WORK



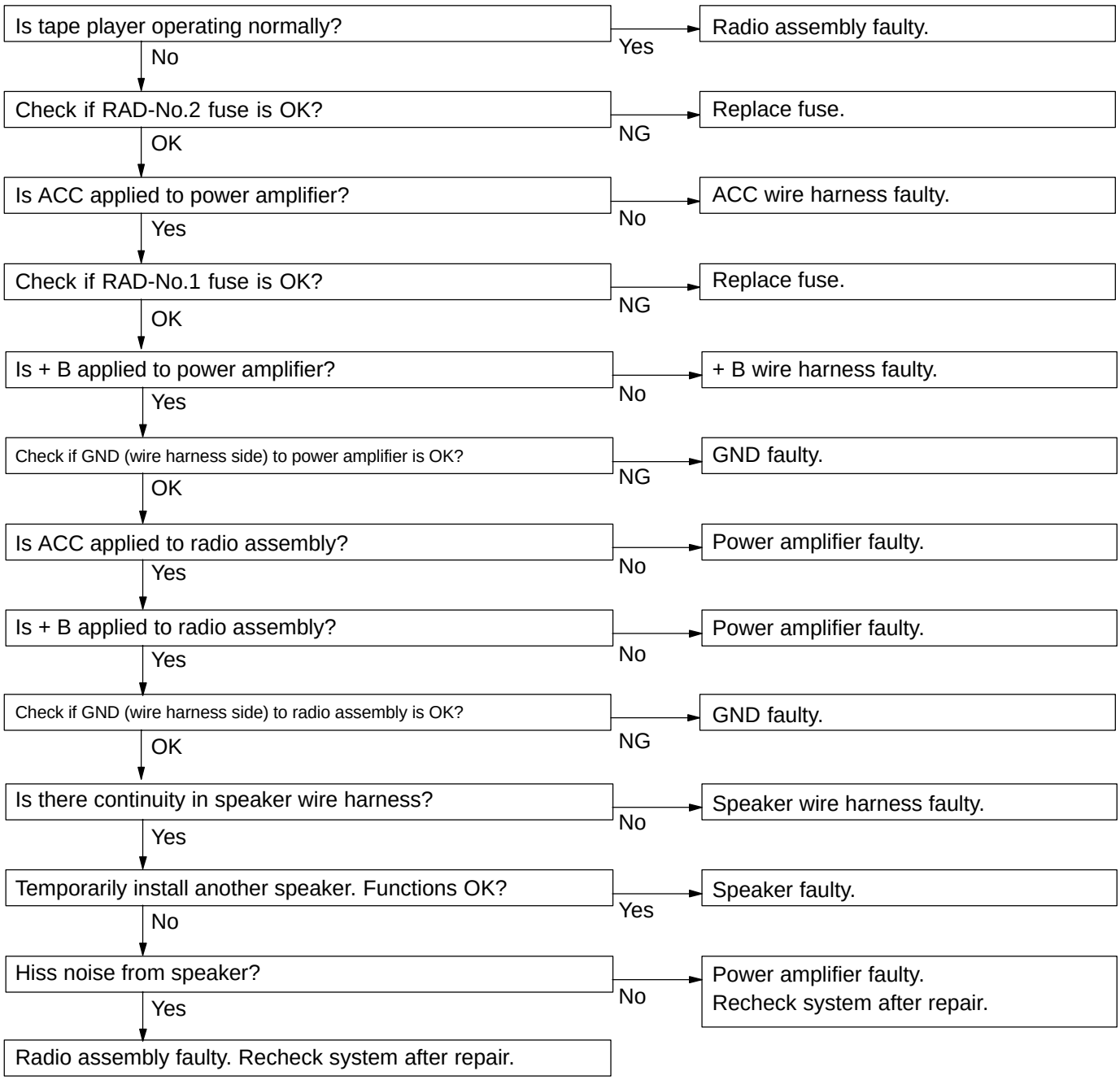
22	CD Player	CD WILL NOT BE EJECTED



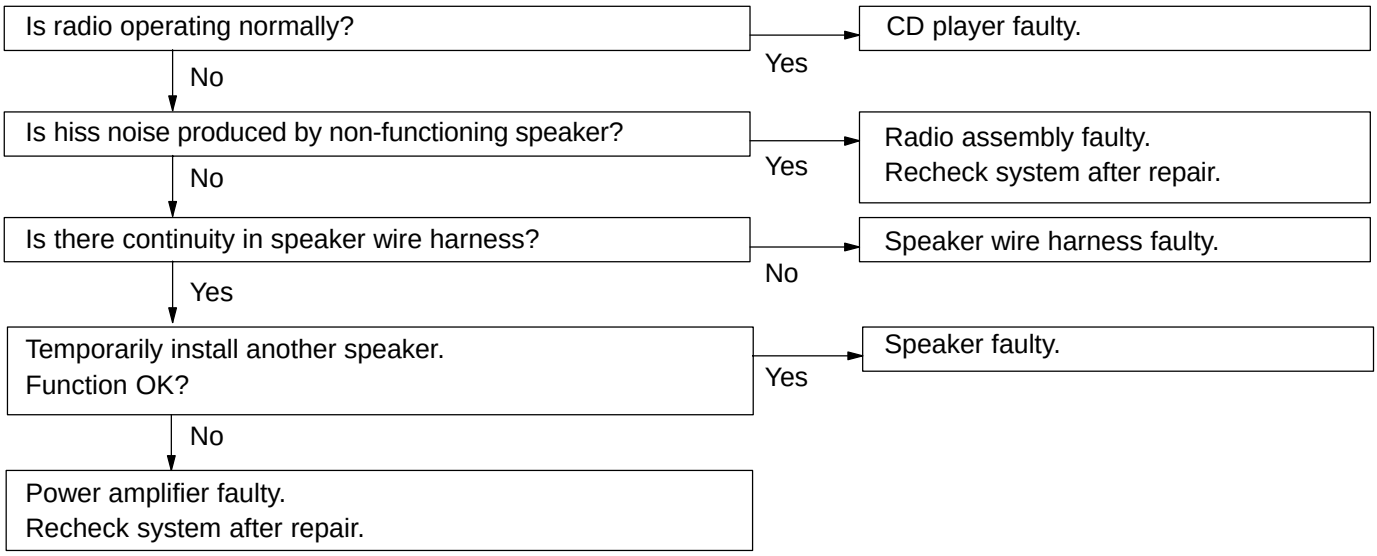
23	Power Amplifier	NO POWER COMING IN



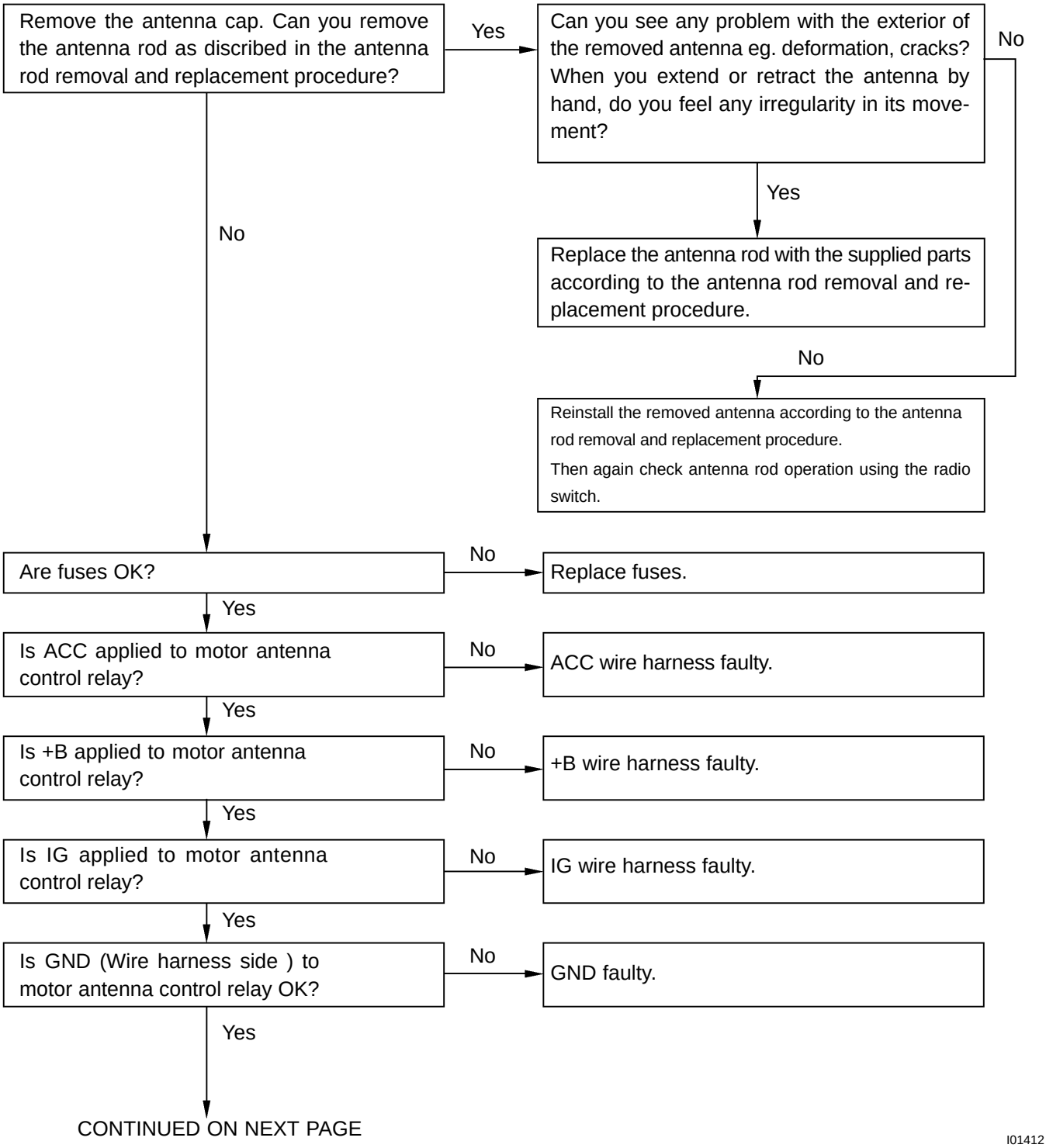
24	Power Amplifier	POWER COMING IN, BUT WOOFER (POWER) AMPLIFIER NOT OPERATING



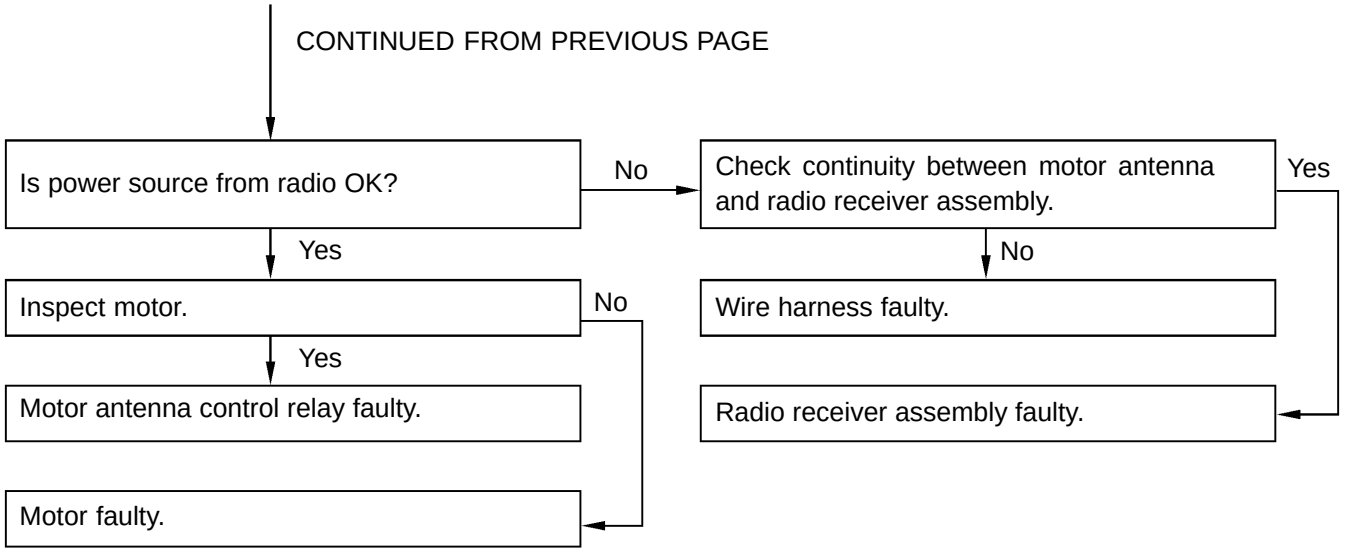
25	Power Amplifier	ANY SPEAKER DOES NOT WORK



26	Antenna	ANTENNA DOES NOT FULLY EXTEND OR FULLY RETRACT

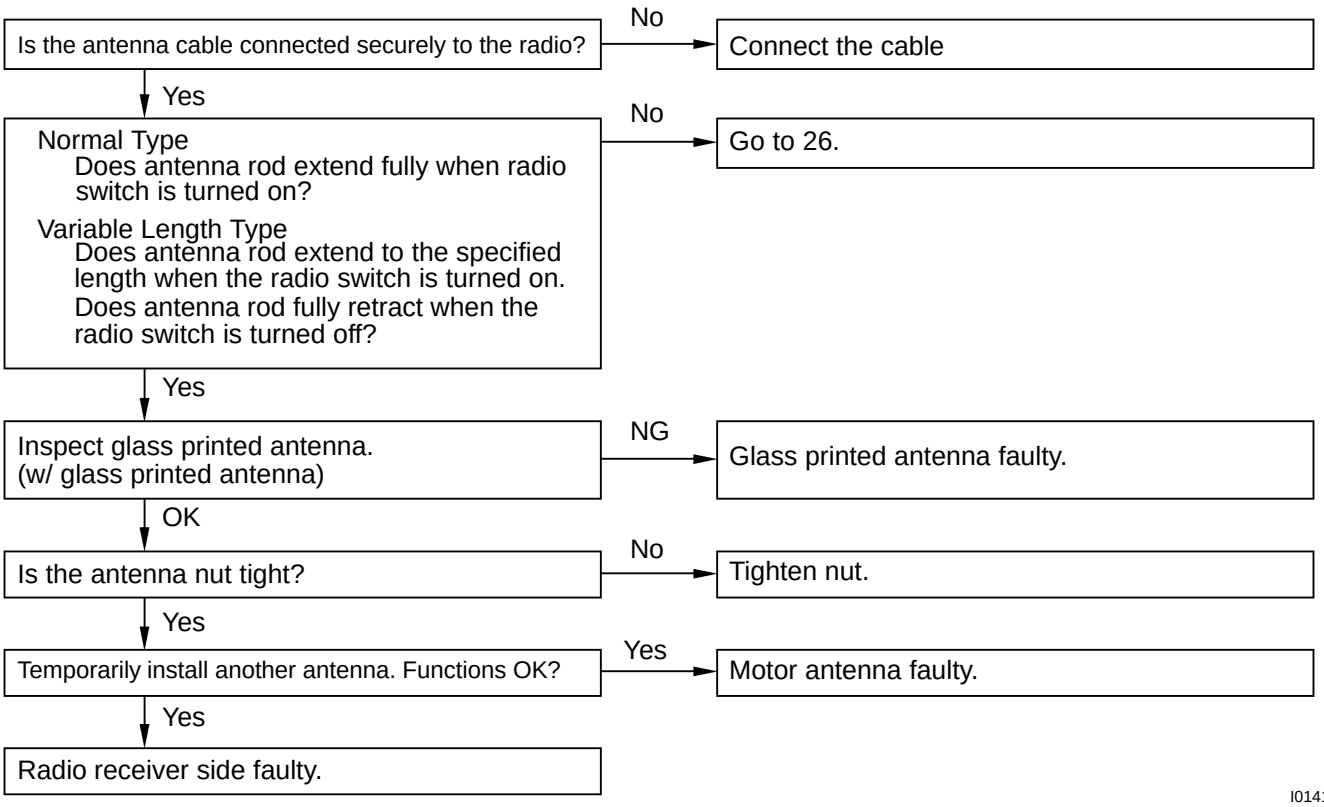


I01412



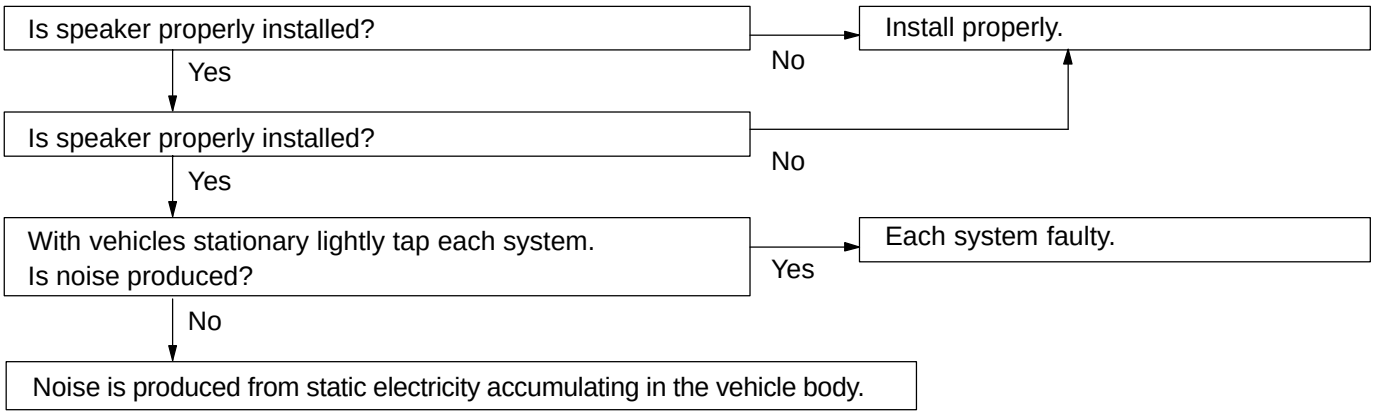
I01413

27	Antenna	ANTENNA-RELA TED

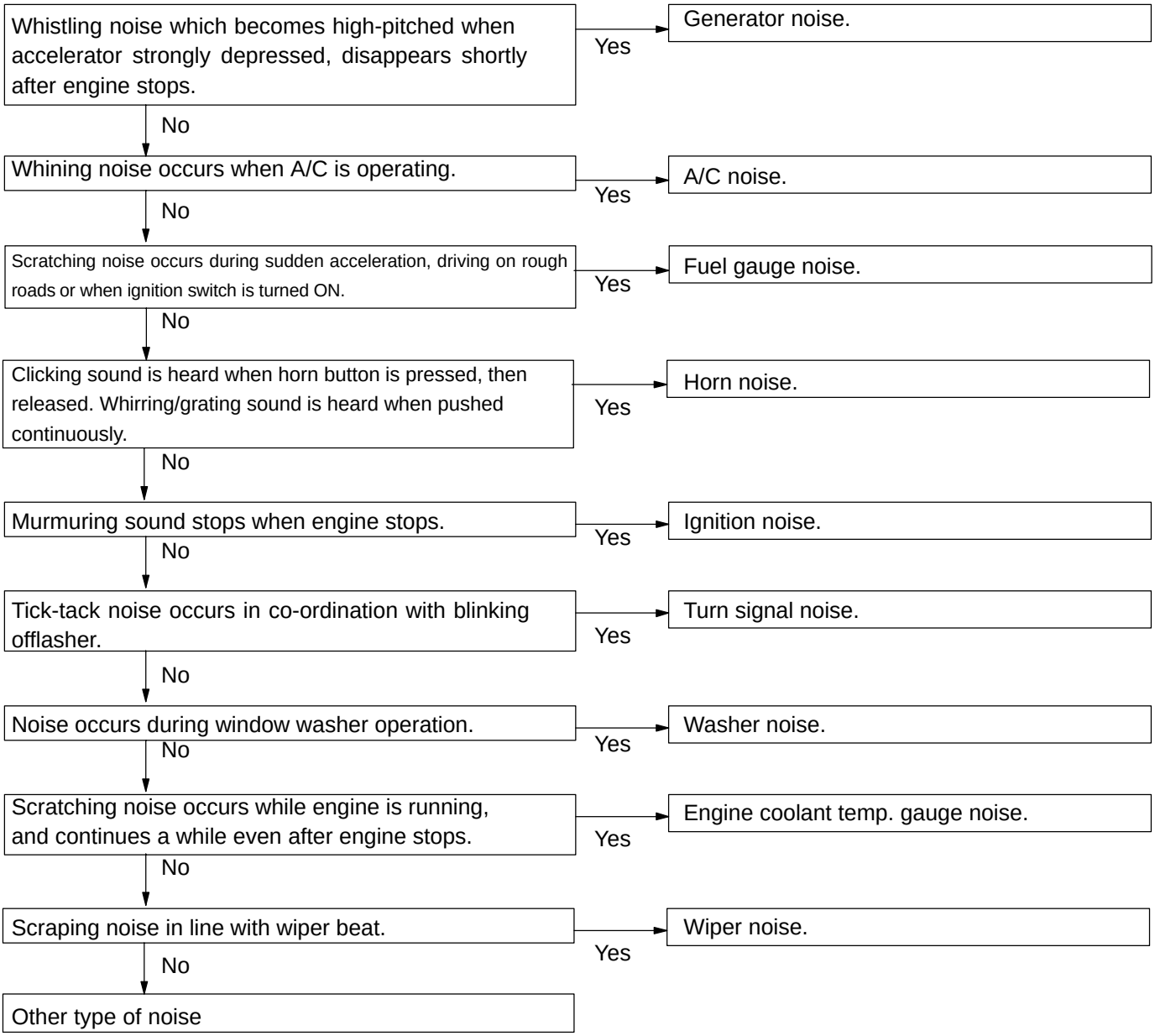


I01414

28	Noise	NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING

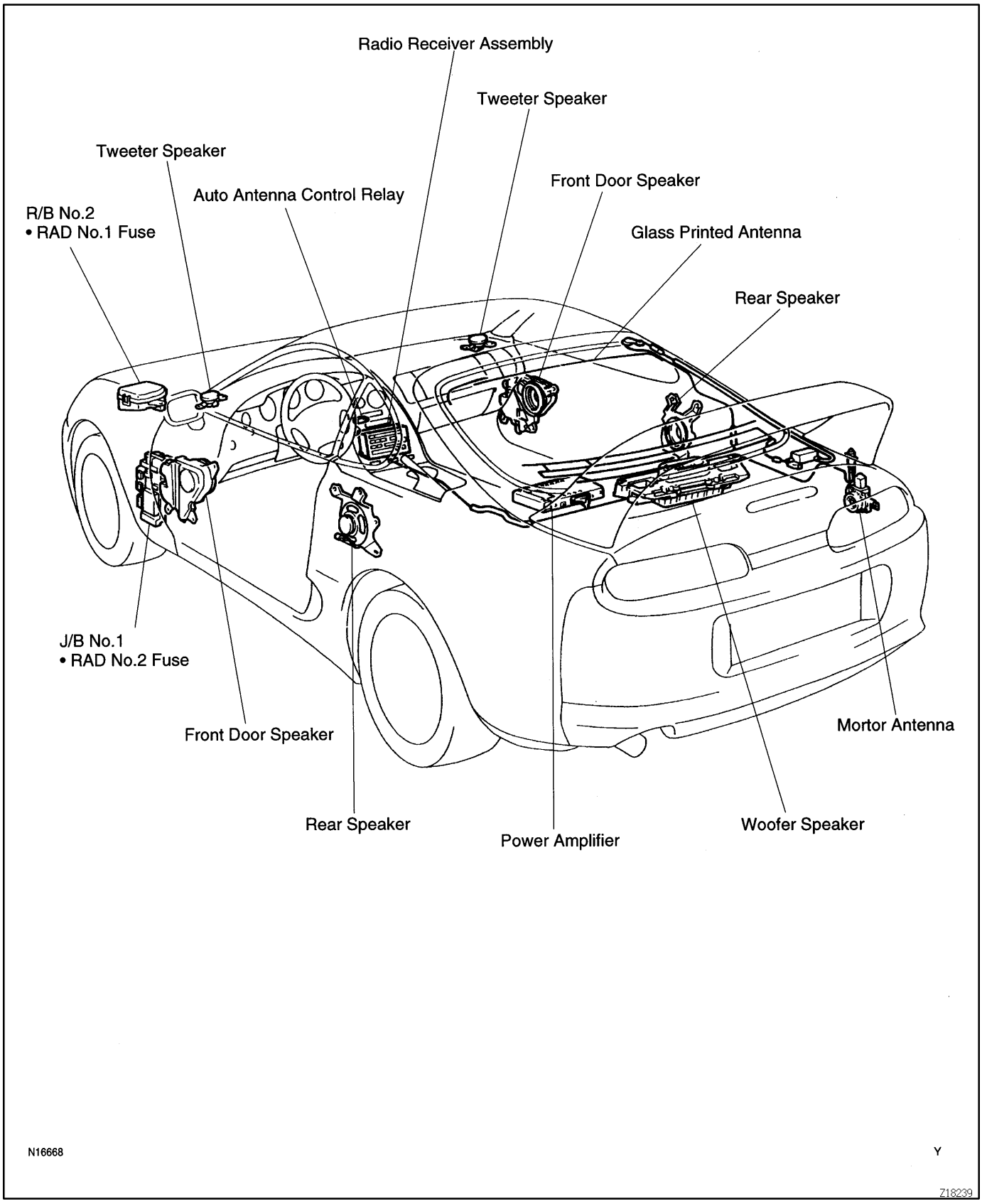


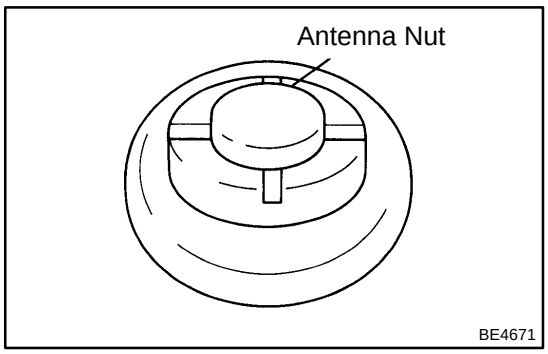
29	Noise	NOISE PRODUCED WHEN ENGINE STARTS



BE0EO-02

LOCATION





ANTENNA

BE0EP-01

REMOVAL

REMOVE ANTENNA ROD

HINT:

Do this operation with the negative (-) terminal cable connected to the battery.

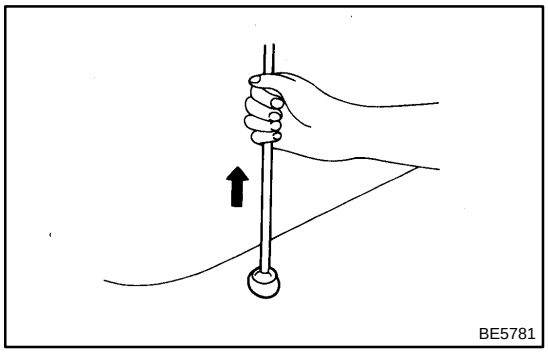
(a) Turn the ignition switch to ”LOCK” position.

(b) Remove the antenna nut.

(c) Press the ”AM” button on the radio receiver, and simultaneously turn the ignition switch to ”ACC” position.

HINT:

- The rod will extend fully and be released from the motor antenna.
- After removing the antenna rod, leave the ignition switch at ”ACC”.



NOTICE:

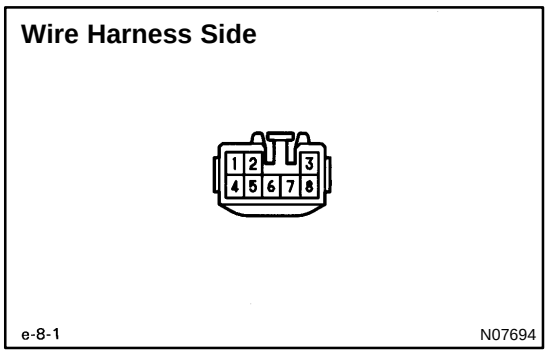
To prevent body damage when the antenna rod is released, hold the rod while it comes out.

BE0EQ-01

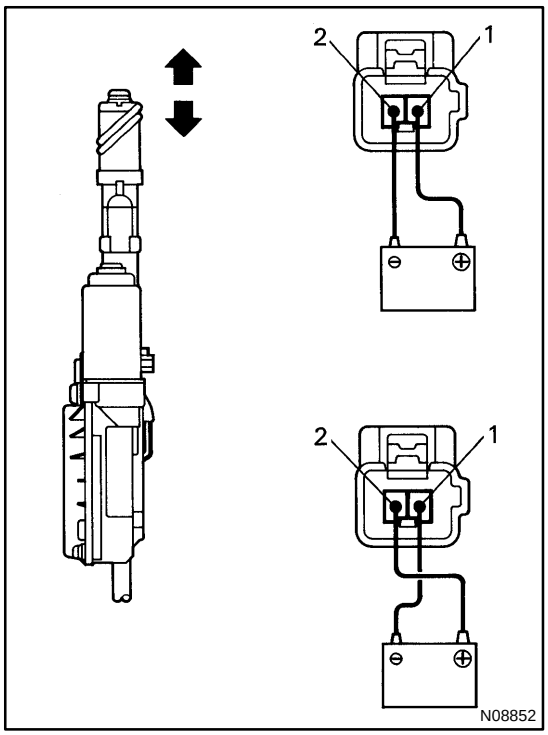
INSPECTION

1. INSPECT RELAY CIRCUIT

Disconnect the connector from the relay and inspect connector on wire harness side, as shown in the chart.
If circuit is not as specified, replace the relay.



Tester connection	Condition	Specified condition
6 - Ground	Constant	Continuity
2 - 3	Constant	Continuity
1 - Ground	Constant	Battery positive voltage
4 - Ground	Ignition switch position ON	Battery positive voltage
5 - Ground	Ignition switch position ACC or ON	Battery positive voltage
7 - Ground	Ignition switch position ACC or ON and radio switch ON	Battery positive voltage
8 - Ground	Ignition switch position ACC or ON	Battery positive voltage



2. INSPECT MOTOR ANTENNA

(a) Install antenna nut.
(b) Connect the positive (+) lead from the battery to terminal 1 and the negative (-) lead to terminal 2.
(c) Check that the motor turns (moves upward).

NOTICE:

These tests must be done quickly (within 3 - 5 seconds) to prevent the coil from burning out.

(d) Then, reverse the polarity, and check that the motor turns the opposite way (moves downward).

NOTICE:

These tests must be done quickly (within 3 - 5 seconds) to prevent the coil from burning out.

HINT:

When the motor is normal, lower the antenna to its lowest position.
If operation is not as specified, replace the antenna motor assembly.

3. INSPECT GLASS PRINTED ANTENNA

(Use same procedure as for ”INSPECT DEFOGGER WIRES”.)

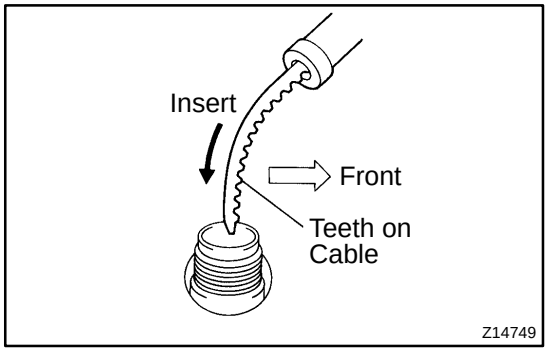
4. REPAIR GLASS PRINTED ANTENNA

(Use same procedure as for ”REPAIR DEFOGGER WIRES”.)

BE0ER-01

INSTALLATION

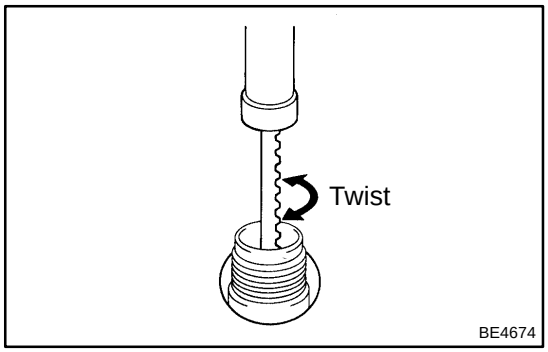
INSTALL ANTENNA ROD



(a) Insert the cable of the rod until it reaches the bottom.

HINT:

- When inserting the cable, the teeth on the cable must face toward the rear of the vehicle.
- Insert the cable approx. 400 mm.



(b) Wind the cable to retract the rod by turning the ignition switch to ”LOCK” position.

HINT:

- If the ignition switch is already in ”LOCK” position, do step 1 (c) first, then turn the ignition switch to ”ACC” position.
- In case the cable is not wound, twist it as shown in the illustration.
- Even if the rod has not retracted fully, install the antenna nut and inspect the antenna rod operation. It will finally retract fully.

(c) Inspect the antenna rod operation by pushing the radio wave band select buttons.

CLOCK

BE1L5-01

TROUBLESHOOTING

HINT:

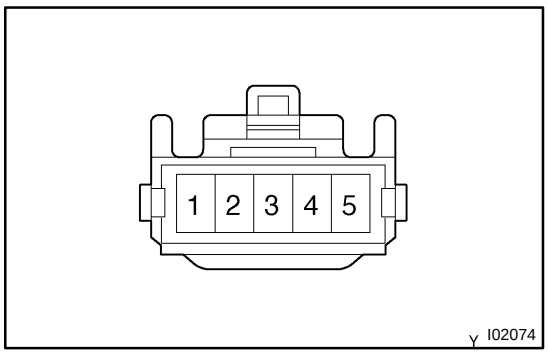
Troubleshoot the clock according to the table below.

Problem	No.
Clock will not operate	1
Clock loses or gains time	2

± 1.5 seconds / day

1. PROBLEM No.1

1	**CLOCK WILL NOT OPERATE**



(a) Check that the battery positive voltage is 10 - 16 V.

If voltage is not as specified, replace the battery.

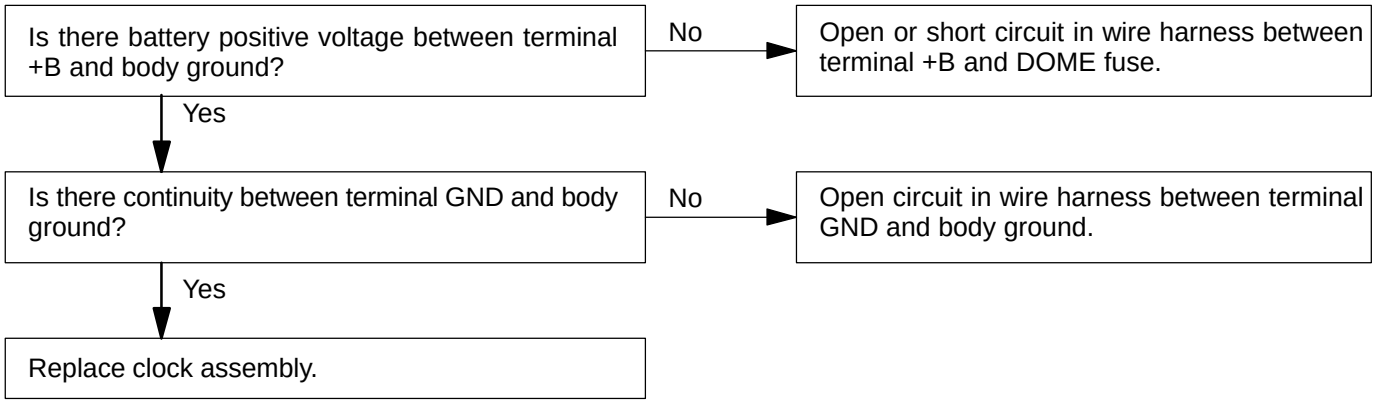
(b) Check that the DOME fuse is not blown.

If the fuse is blown, replace the fuse and check for short.

(c) Troubleshoot the clock as follows.

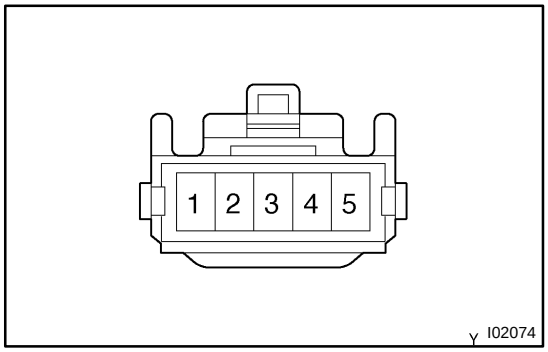
HINT:

Inspect the connector on the wire harness side.



2. PROBLEM No.2

2	CLOCK LOSES OR GAINS TIME



(a) Check that the battery positive voltage is 10 - 16 V.
If voltage is not as specified, replace the battery.
(b) Inspect the error of the clock.
Allowable error (per day): ± 2.0 seconds
If the error exceeds the allowable error, replace the clock assembly.
(c) Check if the clock adjusting button is sticking in position and has failed to return.
If the button has not returned, repair or replace the clock assembly.
(d) Troubleshoot the clock as follows.
HINT:
Inspect the connector on the wire harness side.