BODY ELECTRICAL

BODY ELECTRICAL SYSTEM BE–1
POWER SOURCE BE–12
IGNITION SWITCH AND KEY UNLOCK WARNING SWITCH BE–19
HEADLIGHT AND TAILLIGHT SYSTEM BE–23
HEADLIGHT BEAM LEVEL CONTROL SYSTEM BE–33
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5E01I-04

PRECAUTION

HINT:

Take care to observe the following 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 CARINA/AVENSIS 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 negative (–) terminal cable is reconnected to the battery.

4. MOBILE COMMUNICATION SYSTEM

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

5E01J–05

PROBLEM SYMPTOMS TABLE

1. HEADLIGHT AND TAILLIGHT SYSTEM

Headlight: (w/o Daytime Running Light System)

Symptom	Suspect Area	See page
Headlight does not light. (Taillight is normal)	1. HEAD–(LH, RH) Fuse (E/G Room J/B) 2. Headlight Bulb 3. Wire Harness	– – –
Headlight does not light. (Taillight does not light up)	1. HEAD–(LH, RH) Fuse (E/G Room J/B) 2. Headlight Control Relay (E/G Room J/B) 3. Headlight Bulb 4. Wire Harness	– BE–23 – –
Only one side light does not light.	1. HEAD–(LH, RH) Fuse (E/G Room J/B) 2. Headlight Bulb 3. Wire Harness	– – –
"Lo–Beam" does not light.	1. Headlight Bulb 2. Light Control Switch 3. Wire Harness	– BE–23 –
"Hi–Beam" does not light.	1. Headlight Dimmer Switch 2. Light Control Switch 3. Wire Harness	BE–23 BE–23 –
"Flash" does not light.	1. Headlight Dimmer Switch 2. Wire Harness	BE–23 –
"Light–On Warning System" does not operate.	1. GAUGE Fuse (I/P J/B) 2. DOME Fuse (E/G Room J/B) 3. Integration Relay (I/P J/B) 4. Door Courtesy Switch (Driver's) 5. Ignition Switch 6. Wire Harness	– – BE–23 BE–39 BE–19 –

Taillight: (w/o Daytime Running Light System)

Symptom	Suspect Area	See page
Taillight does not light. (Headlight does not light)	1. Light Control Switch 2. Integration Relay (I/P J/B) 3. Wire Harness	BE–23 BE–19 –
Taillight does not light. (Headlight is normal)	1. TAIL Fuse (I/P J/B) 2. Taillight Control Relay (I/P J/B) 3. Light Control Switch 4. Integration Relay (I/P J/B) 5. Wire Harness	BE–12 BE–23 BE–23 BE–23 –
Only one side light does not light.	1. Bulb 2. Wire Harness	– –
Rear Combination light does not light.	1. Bulb 2. Wire Harness	– –
"Light–On Warning System" does not operate.	1. GAUGE Fuse (I/P J/B) 2. Integration Relay (I/P J/B) 3. Door Courtesy Switch (Driver's) 4. Wire Harness	– BE–23 BE–39 –

Headlight (w/ Daytime Running Light System)

Symptom	Suspect Area	See page
Headlight does not light. (Taillight is normal)	1. Wire Harness	–
Headlight does not light. (Taillight does not light up)	1. Wire Harness	–
Only one side light does not light.	1. Headlight Bulb 2. HEAD LO (LH, RH) Fuse (E/G Room J/B) 3. Wire Harness	– – –
"Lo–Beam" does not light.	1. Headlight Bulb 2. HEAD LO (LH, RH) Fuse (E/G Room J/B) 3. Headlight Control Relay (E/G Room J/B) 4. Integration Relay (I/P J/B) 5. Light Control Switch 6. Wire Harness	– – BE–23 BE–23 BE–23 –
"Hi–Beam" does not light.	1. Headlight Bulb 2. ECU–B Fuse (E/G Room J/B) 3. HEAD LH Fuse (E/G Room J/B) 4. HEAD RH Fuse(E/G Room J/B) 5. HEAD HI (LH, RH) Fuse (Relay Block No.7) 6. Headlight Dimmer Relay (Relay Block No.7) (E/G Room No.5 R/B) 7. Daytime Running Light Main Relay 8. Headlight Dimmer Switch 9. Wire Harness	– – – – – BE–23 – BE–23 BE–23 –
"Flash" does not light.	1. Headlight Bulb 2. ECU–B Fuse (E/G Room J/B) 3. HEAD LH Fuse (E/G Room J/B) 4. HEAD RH Fuse(E/G Room J/B) 5. HEAD HI (LH, RH) Fuse (Relay Block No.7) 6. Headlight Dimmer Relay (E/G Room J/B) 7. Daytime Running Light Main Relay 8. Headlight Dimmer Switch 9. Wire Harness	– – – – – BE–23 BE–23 BE–23 –
"Light–On Warning System" does not operate.	1. GAUGE Fuse (I/P J/B) 2. DOME Fuse (E/G Room J/B) 3. Integration Relay (I/P J/B) 4. Door Courtesy Switch (Driver's) 5. Ignition Switch 6. Wire Harness	– – BE–23 BE–39 BE–19 –
Headlight does not light with engine running and light control SW in OFF.	1. Headlight Bulb 2. ECU–B Fuse (E/G Room J/B) 3. GAUGE Fuse (E/G Room J/B) 4. HEAD LH Fuse (E/G Room J/B) 5. HEAD RH Fuse(E/G Room J/B) 6. HEAD HI (LH, RH) Fuse (Relay Block No.7) 7. Daytime Running Light Main Relay 8. Wire Harness 9. Other Parts*	– – – – – – BE–23 – –

*Terminal L of Alternator and Parking Brake Switch

Taillight: (w/ Daytime Running Light System)

Symptom	Suspect Area	See page
Taillight does not light. (Headlight does not light)	1. Integration Relay (I/P J/B) 2. Light Control Switch 3. Wire Harness	BE–23 BE–23 –
Taillight does not light. (Headlight is normal)	1. TAIL Fuse (I/P J/B) 2. Taillight Control Relay (I/P J/B) 3. Integration Relay (I/P J/B) 4. Light Control Switch 5. Wire Harness	– BE–23 BE–23 BE–23 –
Only one side light does not light.	1. Bulb 2. Wire Harness	– –
Rear Combination light does not light.	1. Bulb 2. Wire Harness	– –
"Light–On Warning System" does not operate.	1. GAUGE Fuse (I/P J/B) 2. Integration Relay (I/P J/B) 3. Door Courtesy Switch (Driver's) 4. Wire Harness	– BE–23 BE–39 –

2. HEADLIGHT BEAM LEVEL CONTROL SYSTEM

Symptom	Suspect Area	See page
Headlight beam level control system does not operate. (All)	1. HEAD (RH) Fuse (E/G J/B) 2. Headlight beam level control Switch 3. Headlight beam level control Actuator 4. Wire Harness	– BE–29 BE–29 –
Headlight beam level control system does not operate. (One side)	1. Headlight beam level control Switch 2. Headlight beam level control Actuator 3. Wire Harness	BE–29 BE–29 –
Abnormal operation. (All)	1. Headlight beam level control Switch 2. Headlight beam level control Actuator 3. Wire Harness	BE–29 BE–29 –
Abnormal operation. (One side)	1. Headlight beam level control Switch 2. Headlight beam level control Actuator 3. Wire Harness	BE–29 BE–29 –

3. FOG LIGHT SYSTEM

Symptom	Suspect Area	See page
Front fog light does not light with light control switch TAIL or HEAD. (Headlight is normal.)	1. Bulb 2. FR FOG Fuse (I/P J/B) 3. Front fog light switch 4. Wire Harness	– – BE–32 –
Front fog light does not light with light control switch TAIL or HEAD. (Headlight does not light.)	1. Inspect Headlight and Taillight System 2. Wire Harness	BE–2 –
Only one front fog light does not light.	1. Bulb 2. Wire Harness	– –
Rear fog light does not light with light control switch TAIL or HEAD. (Headlight is normal.)	1. Bulb 2. DOME Fuse (E/G J/B) 3. Rear fog light switch 4. Wire Harness	– – BE–32 –
Rear fog light does not light with light control switch TAIL or HEAD. (Headlight does not light.)	1. Inspect Headlight and Taillight System 2. Wire Harness	BE–2 –
Only one rear fog light does not light.	1. Bulb 2. Wire Harness	– –

4. TURN SIGNAL AND 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–36 BE–36 –
The flashing frequency is abnormal.	1. Bulb 2. Turn Signal Switch 3. Wire Harness	– BE–36 –
Hazard warning light does not light up. (Turn is normal.)	1. HORN Fuse (E/G Room J/B) 2. Wire Harness	– –
Hazard warning light does not light up in one direction.	1. Hazard Warning Switch 2. Wire Harness	BE–36 –
*1Turn signal does not light up.	1. Ignition Switch 2. TURN Fuse (I/P J/B) 3. Turn Signal Switch 4. Wire Harness	BE–19 – BE–36 –
*2Turn signal does not light up.	1. TURN Fuse (I/P J/B) 2. Turn Signal Switch 3. Wire Harness	– BE–36 –
Turn signal does not light up in one direction.	1. Turn Signal Switch 2. Wire Harness	BE–36 –
Only one bulb does not light up.	1. Bulb 2. Wire Harness	– –

*1: Combination Meter, Wiper and Washer do not operate.
*2: Combination Meter, Wiper and Washer are normal.

5. INTERIOR LIGHT SYSTEM

Symptom	Suspect Area	See page
Only one interior light does not light up.	1. Bulb 2. Wire Harness	– –
Interior light does not light up (All).	1. DOME Fuse (E/G Room J/B) 2. Wire Harness	– –
Room light does not light up.	1. Bulb 2. Room Light 3. Wire Harness	– BE–39 –
Front Personal light does not light up.	1. Bulb 2. Front Personal Light 3. Wire Harness	– BE–39 –
Luggage compartment light does not light up.	1. Bulb 2. Luggage compartment door courtesy switch 3. Wire Harness	– BE–39 –
Rear Room light does not light up.	1. Bulb 2. Rear Room Light 3. Wire Harness	– BE–39 –
Illuminated entry system does not operate	1. Integration Relay (I/P J/B) 2. Room Light 3. Wire Harness	BE–23 – –

6. BACK–UP LIGHT SYSTEM

Symptom	Suspect Area	See page
Back–Up Light does not light up.	1. GAUGE Fuse (I/P J/B) 2. Ignition Switch 3. Wire Harness 4. Bulb	– BE–19 – –
Back–Up Light remains always on.	1. Back–Up Light Switch (M/X) 2. Neutral Start Switch (A/X) (A245E, A246E) 2. Neutral Start Switch (A/X) (A241E) 3. Wire Harness	BE–44 DI–91 DI–35 –
Only one light does not light up.	1. Bulb 2. Wire Harness	– –

7. STOP LIGHT SYSTEM

Symptom	Suspect Area	See page
Stop light does not light up.	1. STOP Fuse (I/P J/B) 2. Stop Light Switch 3. Wire Harness	– BE–47 –
Only one light always lights up.	1. Wire Harness	–
Only one light does not light.	1. Bulb 2. Wire Harness	– –

8. HEADLIGHT CLEANER SYSTEM

Symptom	Suspect Area	See page
Headlight cleaner system does not operate.	1. Ignition Switch 2. Headlight Cleaner Switch 3. Headlight Cleaner Relay 4. Headlight Cleaner Motor 5. Wire Harness	BE–19 BE–49 BE–49 BE–49 –

9. WIPER AND WASHER SYSTEM

Symptom	Suspect Area	See page
Front wiper and washers do not operate.	1. WIPER Fuse (I/P J/B) 2. Front Wiper Switch 3. Front Wiper Motor 4. Wire Harness	– BE–52 BE–52 –
Front wipers do not operate in LO or HI.	1. Front Wiper Switch 2. Front Wiper Motor 3. Wire Harness	BE–52 BE–52 –
Front wipers do not operate in INT.	1. Front Wiper Switch 2. Front Wiper Motor 3. Wire Harness	BE–52 BE–52 –
Front Washer motor does not operate.	1. Front Washer Switch 2. Front Washer Motor 3. Wire Harness	BE–52 BE–52 –
Front Wipers do not operate when washer switch in ON.	1. Front Washer Motor 2. Wire Harness	BE–52 –
Rear wiper and washers do not operate.	1. WIPER Fuse (I/P J/B) 2. Rear Wiper Switch 3. Rear Wiper Relay 4. Rear Wiper Motor 5. Wire Harness	– BE–52 BE–52 BE–52 –

Rear wipers do not operate in INT.	1. Rear Wiper Switch 2. Rear Wiper Relay 3. Rear Wiper Motor 4. Wire Harness	BE–52 BE–52 BE–52 –
Rear washer motor does not operate.	1. Rear Washer Switch 2. Rear Washer Motor 3. Wire Harness	BE–52 BE–52 –
Rear wipers do not operate when washer switch in ON.	1. Rear Washer Motor 2. Wire Harness	BE–52 –
Washer fluid does not operate.	1. Washer Hose and Nozzle	–
• At wiper switch HI position, the wiper blade is in contact with the body. • When the wiper switch is OFF, the wiper blade does not retract or the retract position wrong.	1. *1Wiper Switch 2. Wire Harness	BE–52 –

*1: Inspect wiper arm and blade set position

10. COMBINATION METER

Meter, Gauges and Illumination:

Symptom	Suspect Area	See page
Tachometer, Fuel Gauge and Engine Coolant Temperature Gauge does not operate.	1. GAUGE Fuse (I/P J/B) 2. Meter Circuit Plate 3. Wire Harness	BE–12 BE–57 –
Speedometer does not operate.	1. Vehicle Speed Sensor 2. Meter Circuit Plate 3. Wire Harness	BE–63 BE–60 BE–57
Tachometer does not operate.	1. Igniter 2. Pick–up Sensor (Diesel Engine) 3. Meter Circuit Plate 4. Wire Harness	– BE–63 BE–60 –
Fuel Gauge does not operate or abnormal operation.	1. Fuel Receiver Gauge 2. Fuel Sender Gauge 3. Meter Circuit Plate 4. Wire Harness	BE–63 BE–63 BE–60 –
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 Plate 4. Wire Harness	BE–63 BE–63 BE–60 –
All illumination lights do not light up.	1. TAIL Fuse (I/P J/B) 2. Light Control Rheostat 3. Wire Harness	– – –
Brightness does not change even when rheostat turned.	1. Bulb 2. Wire Harness	– –
Only one illumination light does not light up.	1. Bulb 2. Wire Harness	– –

Warning Lights:

Symptom	Suspect Area	See page
Warning light do not light up. (Except Discharge, Open Door and SRS)	1. GAUGE Fuse (I/P J/B) 2. Meter Circuit Plate 3. Wire Harness	– BE–60 –
Fuel Filter warning light does not light up.	1. Bulb 2. Fuel Filter Warning Switch 3. Meter Circuit Plate 4. Wire Harness	– BE–63 BE–60 –
Low Oil Pressure warning light does not light up.	1. Bulb 2. Low Oil Pressure Warning Switch 3. Meter Circuit Plate 4. Wire Harness	– BE–63 BE–60 –
ABS warning light does not light up.	1. Bulb 2. ABS ECU 3. Wire Harness	– DI–113 –
Discharge warning light does not light up.	1. IGN Fuse (I/P J/B) 2. Bulb 3. Wire Harness 4. Alternator	– – – –
Brake warning light does not light up.	1. Bulb 2. Parking Brake Switch 3. Brake Fluid Level Warning Switch 4. Vacuum Switch (Diesel Engine) 5. Meter Circuit Plate 6. Wire Harness	– BE–63 BE–63 BE–63 BE–60 –
SRS Warning light does not light up.	1. ECU–B Fuse (E/G Room J/B) 2. Bulb 3. Airbag Sensor Assembly (RS section) 4. Meter Circuit Plate 5. Wire Harness	– – DI–150 BE–60 –
Open Door warning light does not light up.	1. DOME Fuse (E/G Room J/B) 2. Bulb 3. Door Courtesy Switch 4. Meter Circuit Plate 5. Wire Harness	– – BE–39 BE–60 –
Check Engine Warning light does not light up.	1. Bulb 2. Engine and ECT ECU 3. Meter Circuit Plate 4. Wire Harness	– – BE–60 –

Indicator Lights:

Symptom	Suspect Area	See page
O/D OFF indicator light does not light up.	1. Bulb 2. O/D OFF Switch (A245E, A246E) 3. O/D OFF Switch (A241E) 3. Meter Circuit Plate 4. Wire Harness	– DI–100 DI–42 BE–60 –
Glow Plug indicator light does not light up.	1. Bulb 2. Glow Plug Timer 3. Meter Circuit Plate 4. Wire Harness	– – BE–60 –
Rear Fog Light indicator light does not light up.	1. Bulb 2. Meter Circuit Plate 3. Wire Harness 4. Fog Light System	– BE–60 – BE–32
High beam indicator light does not light up.	1. Bulb 2. Meter Circuit Plate 3. Wire Harness 4. Headlight System	– BE–60 – BE–23
Turn indicator light does not light up.	1. Bulb 2. Meter Circuit Plate 3. Wire Harness 4. Turn Signal and Hazard Warning System	– BE–60 – BE–36
Shift indicator lights do not light up.	1. Bulb 2. Meter Circuit Plate 3. Neutral Start Switch (A245E, A246E) 3. Neutral Start Switch (A241E) 4. Wire Harness	– BE–60 DI–91 DI–35 –
Only one shift indicator does not light up.	1. Bulb 2. Meter Circuit Plate	– –
Indicator lights do not light up. (Except Turn, Hi–beam and security)	1. GAUGE Fuse (I/P J/B) 2. Wire Harness	– –

11. DEFOGGER SYSTEM

Symptom	Suspect Area	See page
All defogger systems do not operate.	1. RR DEF M–Fuse (I/P J/B) 2. Defogger Relay (I/P J/B) 3. Defogger Switch 4. Wire Harness	– BE–71 BE–71 –
Rear window defogger does not operate.	1. Defogger Wire 2. Choke Coil 3. Wire Harness	BE–71 – –
Mirror defogger does not operate.	1. Mirror Defogger 2. Wire Harness	BE–71 –

12. POWER WINDOW CONTROL SYSTEM

Symptom	Suspect Area	See page
Power window does not operate (ALL). (Power Door Lock does not operate)	1. POWER M–Fuse (I/P J/B) 2. Power Main Relay (I/P J/B) 3. Wire Harness	– BE–81 –
Power window does not operate (ALL). (Power Door Lock is normal)	1. Ignition Switch 2. Power Window Master Switch 3. Wire Harness	BE–19 BE–81 –
Only one window glass does not move.	1. Power Window Master Switch 2. Power Window Switch 3. Power Window Motor 4. Wire Harness	BE–81 BE–81 BE–81 –
"Window Lock System" does not operate.	1. Power Window Master Switch	BE–81
Automatic operation for the driver's door does not operate.	1. TROUBLESHOOTING No.1	BE–74
The down operation starts at the almost–closed position while the up operation.	1. TROUBLESHOOTING No.2	BE–74
The down operation starts at other position than the almost–closed position while the up operation.	1. TROUBLESHOOTING No.3	BE–74
The down operation does not work though some other objects are caught into the window glass.	1. TROUBLESHOOTING No.4	BE–74

13. POWER DOOR LOCK CONTROL SYSTEM

Symptom	Suspect Area	See page
"Door lock system" does not operate at all.	1. POWER M–Fuse (I/P J/B) 2. CIG Fuse (I/P J/B) 3. DOOR Fuse (I/P J/B) 4. Integration Relay (I/P J/B) 5. Wire Harness	– – – BE–94 –
Door lock system does not operate by manual switch.	1. Power Window Master Switch 2. Door Lock Manual Switch 3. Integration Relay (I/P J/B) 4. Wire Harness	BE–81 BE–81 BE–94 –
Door lock system does not operate by door key.	1. Door Key Lock and Unlock Switch 2. Integration Relay (I/P J/B) 3. Wire Harness 4. Door Lock Link Disconnected	BE–81 BE–94 – –
Fault in 2–Operation unlock function of Driver's side door key lock and unlock switch.	1. Door Key Lock and Unlock Switch 2. Integration Relay (I/P J/B) 3. Wire Harness	BE–81 BE–94 –
Fault in key confine prevention operate.	1. Integration Relay (I/P J/B) 2. Key Unlock Warning Switch 3. Door Courtesy Switch 4. Wire Harness	BE–94 BE–19 BE–39 –
Only one door lock does not operate.	1. Door Lock Motor 2. Wire Harness	BE–81 –

14. SLIDING ROOF SYSTEM

Symptom	Suspect Area	See page
Sliding roof system does not operate. (Door Lock does not operate)	1. POWER M–Fuse (I/P J/B) 2. Power Main Relay (I/P J/B) 3. Wire Harness	– BE–81 –
Sliding roof system does not operate. (Door Lock is normal)	1. Ignition Switch 2. Sliding Roof Control Assembly and Switch 3. Wire Harness	BE–19 BE–104 –
Sliding roof system operates abnormally.	1. Sliding Roof Control Assenbly and Switch 2. Wire Harness	BE–104 –
Sliding roof system stops operation half way. (Stones of foreign material trapped in motor assembly)	1. Sliding Roof Control Assenbly and Switch 3. Wire Harness	BE–104 BE–104

15. SEAT HEATER SYSTEM

Symptom	Suspect Area	See page
Seat heaters do not operate. (Driver's and Passenger's)	1. SEAT–HTR Fuse (I/P J/B) 2. Wire Harness	– –
Driver's seat heater do not operate.	1. Seat Heater Switch 2. Seat Heater 3. Wire Harness	BE–112 BE–112 –
Passenger's seat heater do not operate.	1. Seat Heater Switch 2. Seat Heater 3. Wire Harness	BE–112 BE–112 –
Seat heater temperature is too high.	1. Seat Heater	BE–112

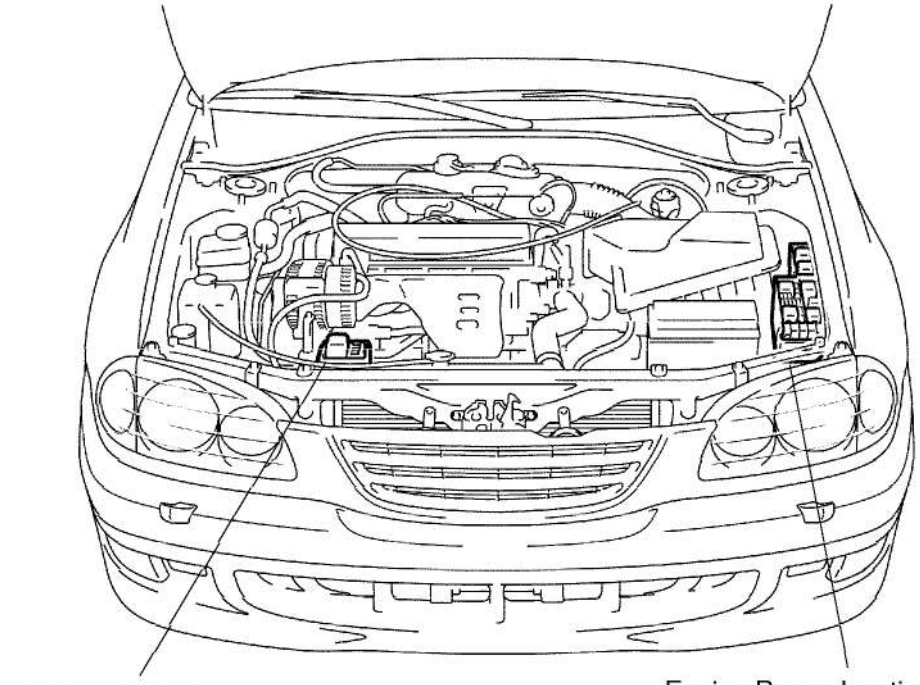
16. POWER MIRROR CONTROL SYSTEM

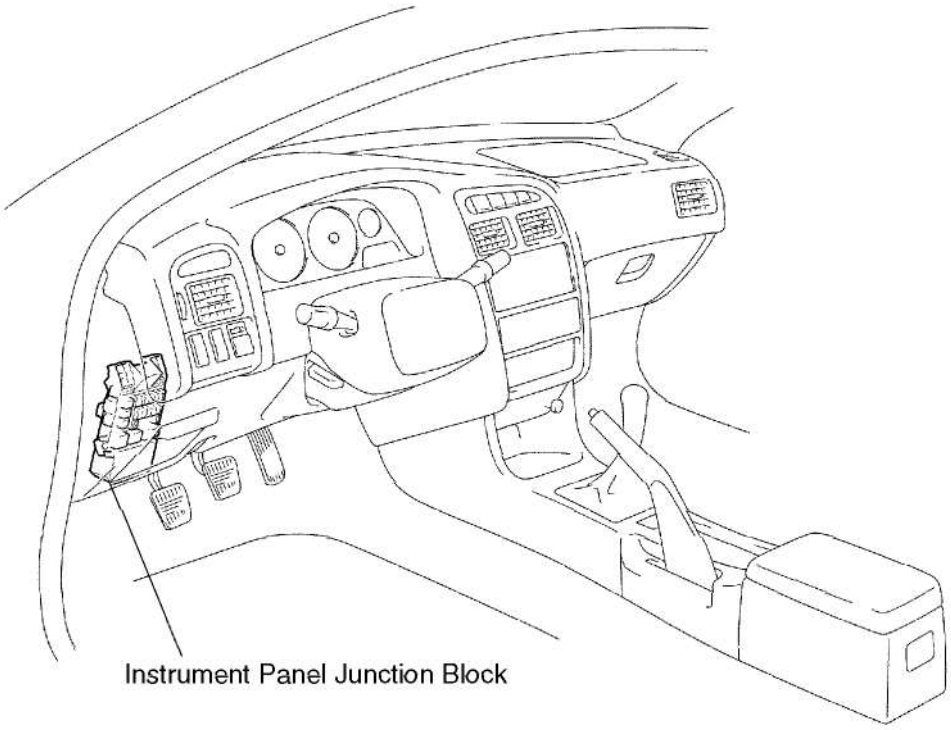
Symptom	Suspect Area	See page
Mirror does not operate.	1. CIG Fuse (I/P J/B) 2. Mirror Switch 3. Mirror Motor 4. Wire Harness	– BE–108 BE–108 –
Mirror operates abnormally.	1. Mirror Switch 2. Mirror Motor 3. Wire Harness	BE–108 BE–108 –

POWER SOURCE

LOCATION

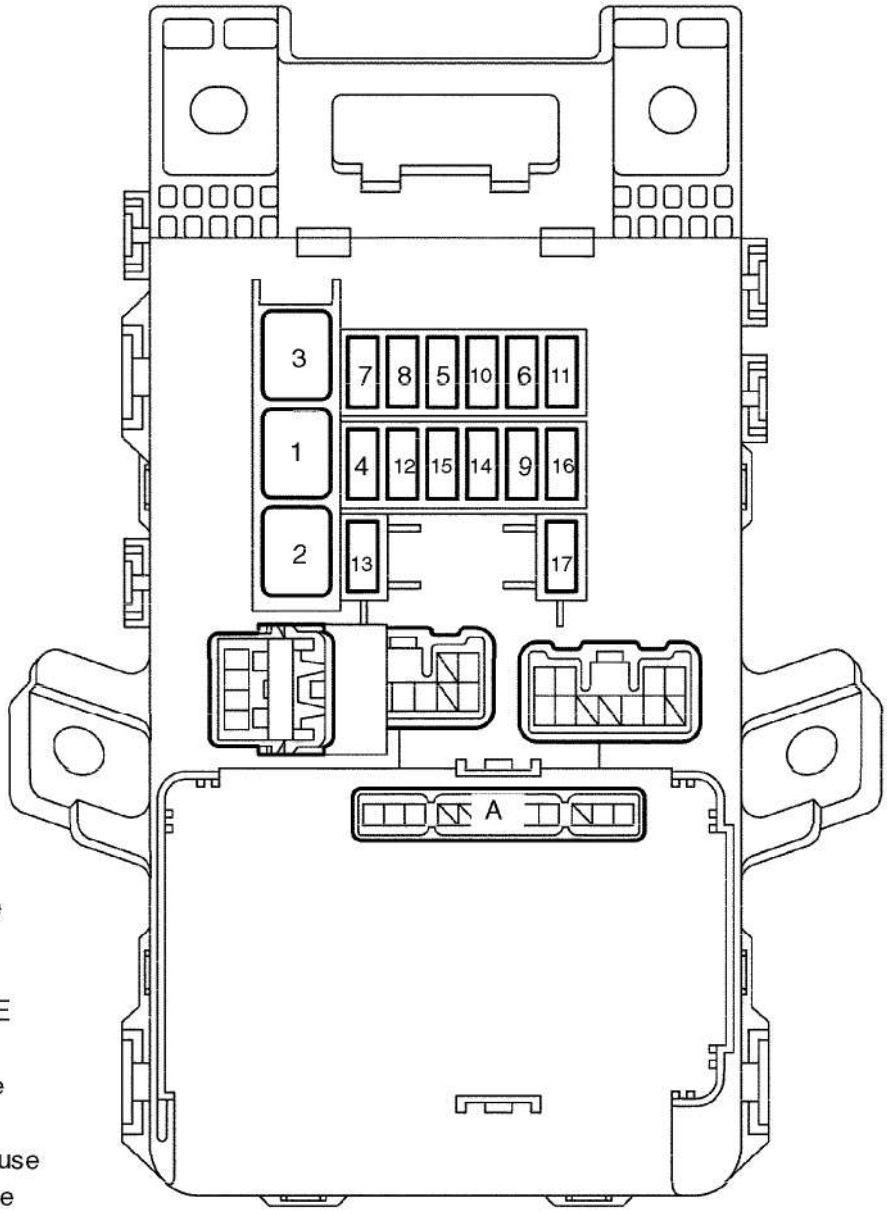
BE0NM–01





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● **Instrument Panel Junction Block (Surface Side)**



Fuses:

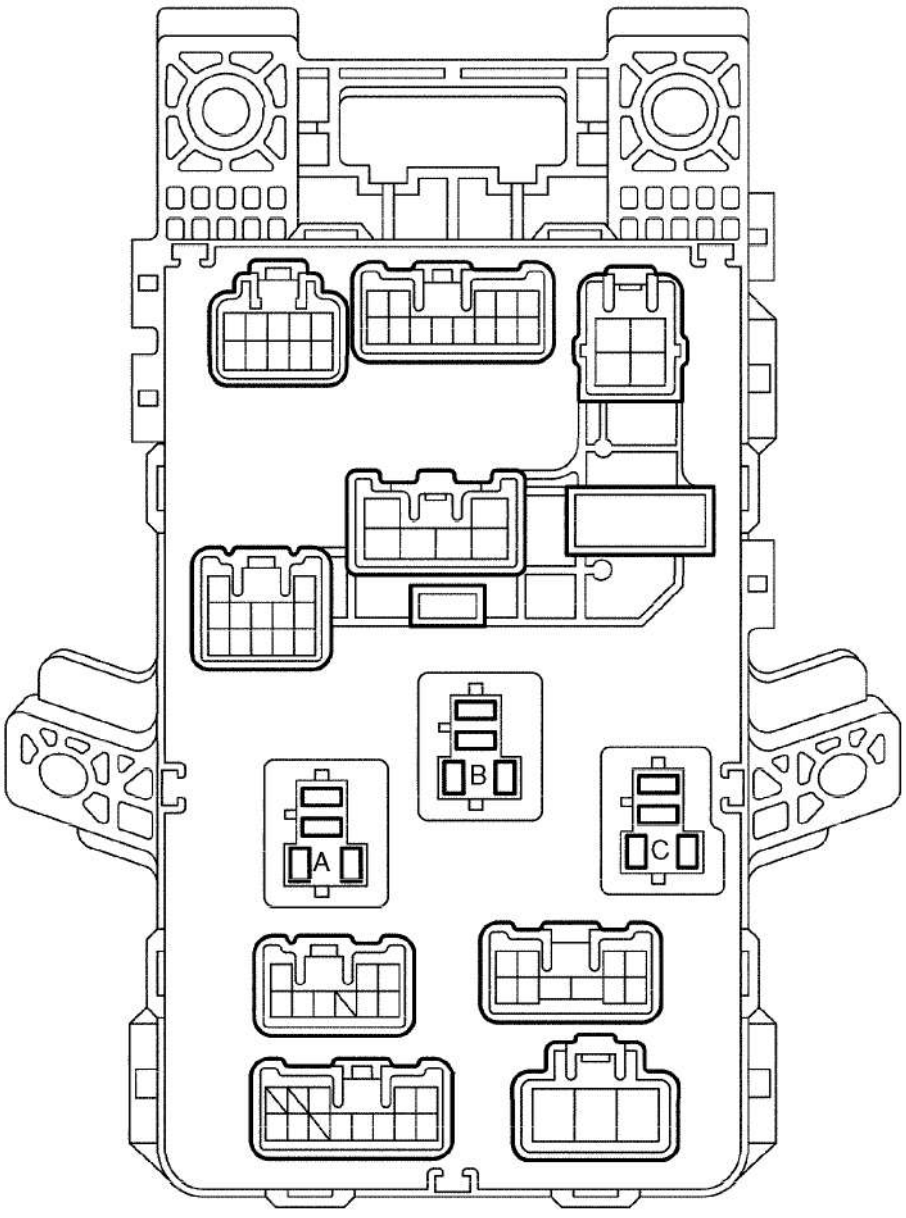
1. AM1 Fuse
2. RR DEF Fuse
3. PWR Fuse
4. DOOR Fuse
5. FR DEF FUSE
6. WIP Fuse
7. FR FOG Fuse
8. S/HTR Fuse
9. RAD & CIG Fuse
10. GAUGE Fuse
11. IGN Fuse
12. TAIL Fuse
13. STOP Fuse
14. TURN Fuse
15. ST Fuse
16. ECU–IG Fuse
17. RR DEF I/UP Fuse

Relay:

A. Integration Relay

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● **Instrument Panel Junction Block (Back Side)**

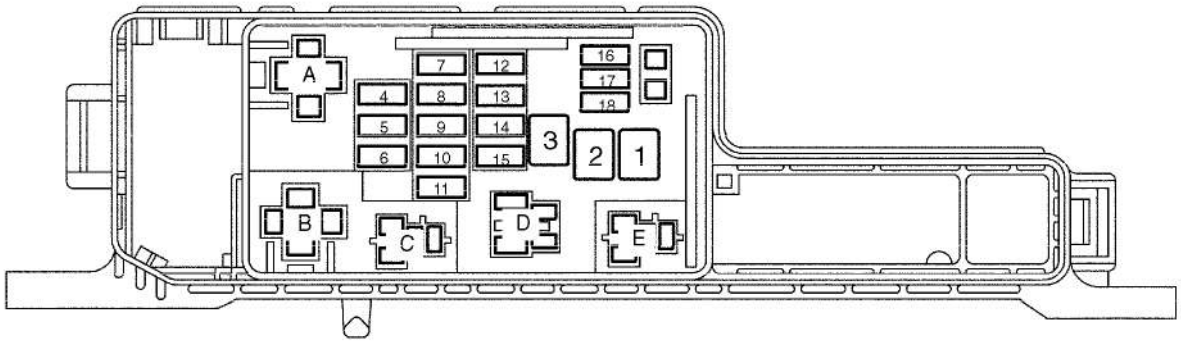


Relays:

A. Rear Defogger Realy
B. Power Relay
C. Tail Relay

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● **Engine Room Junction Block (Surface Side)**



Fuses:

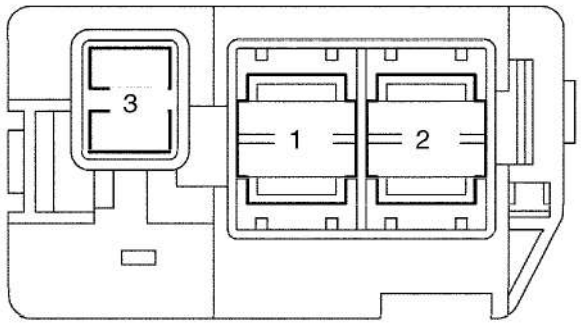
1. MAIN
2. FAN MAIN
3. FAN SUB
4. DOME Fuse
5. HLP–RH Fuse
6. ECU–B Fuse
7. AM2 Fuse
8. RAD Fuse
9. SHORT PIN
10. HLP–LH Fuse
11. HORN Fuse
12. ALT–S Fuse
13. HLP–CLN Fuse
14. HAZ Fuse
15. EFI Fuse
16. SPARE
17. SPARE
18. SPARE

Relays:

A. Fan No.1 Relay
B. Starter Relay
C. Horn Relay
D. Headlight Relay
E. EFI Relay

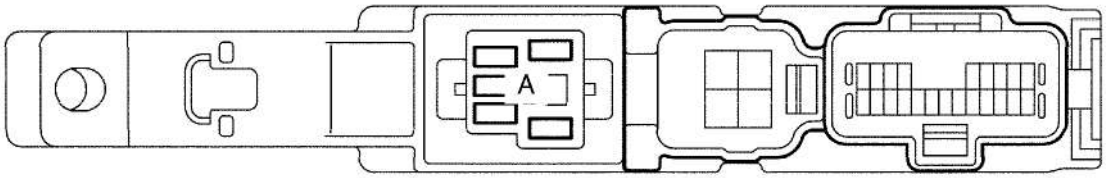
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● **Fusible Link Block**



Fuses:
1. ALT Fuse
2. ABS Fuse
3. HTR Fuse

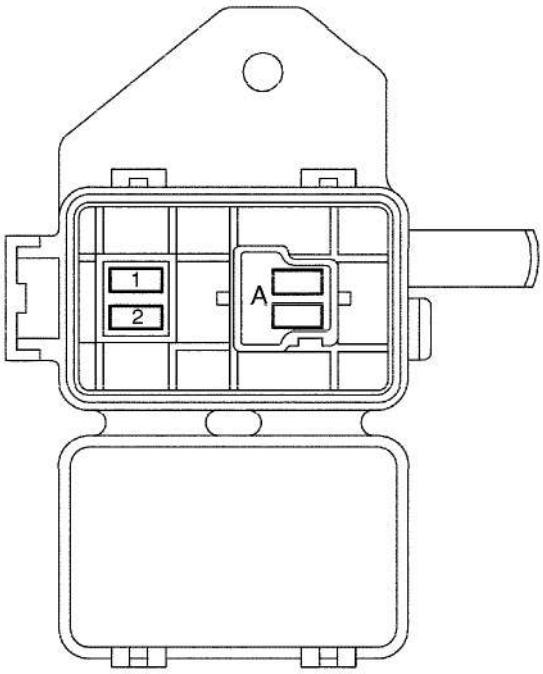
● **Passenger Side Relay Block (No.4 Relay Block)**



Relay:
A. Heater Relay

I04786

● **Relay Block No.7**



Fuses:
1. H–LP RH HI Fuse
2. H–LP LH HI Fuse

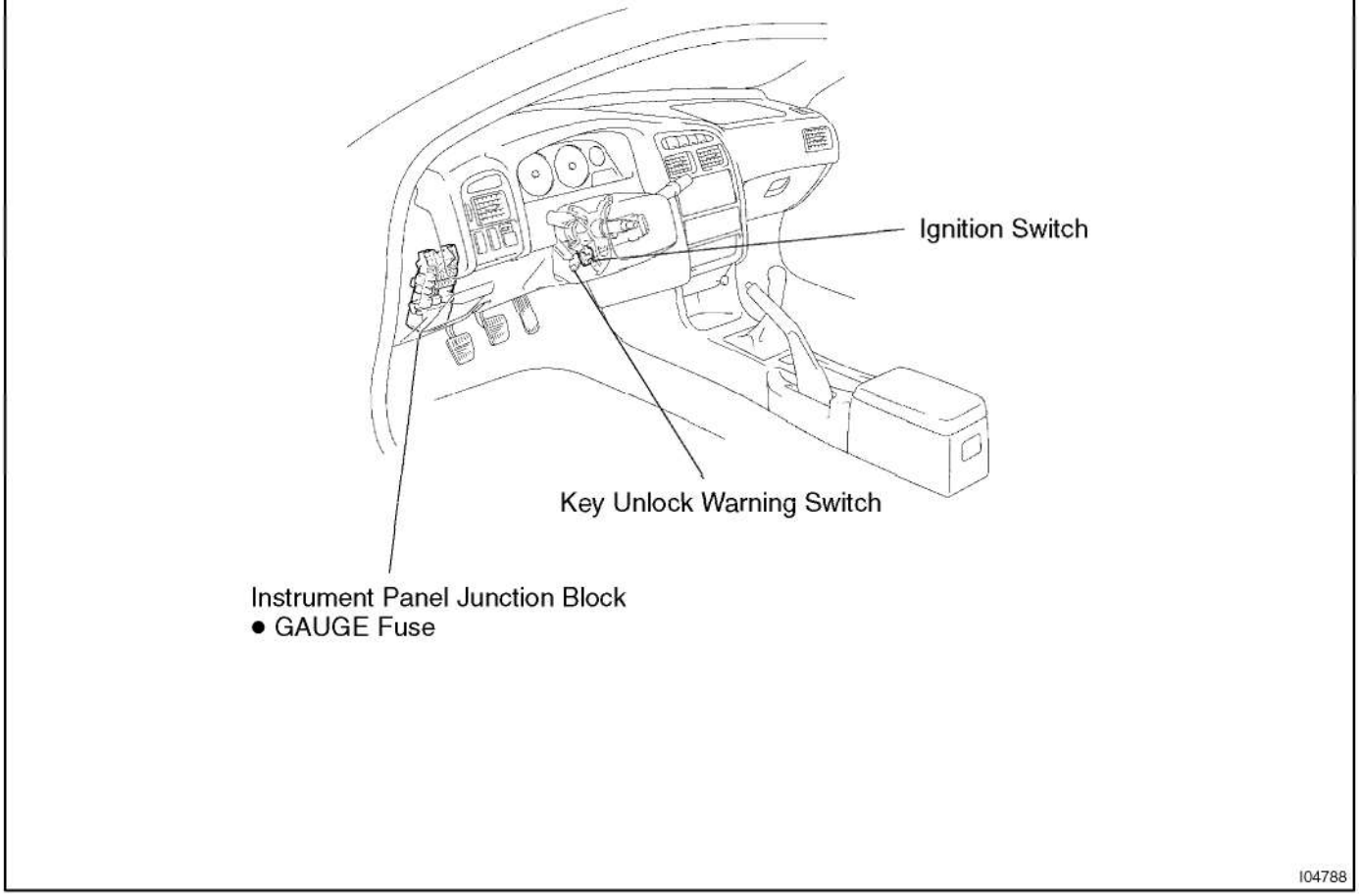
Relay:
A. DIMMER Relay

I04787

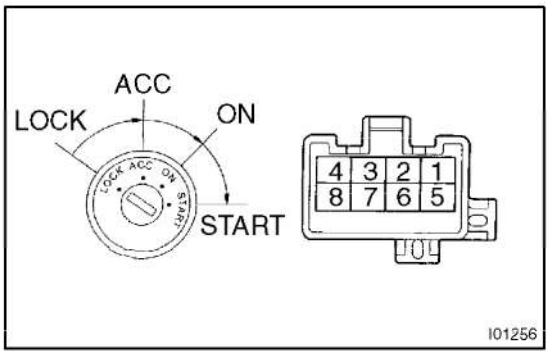
IGNITION SWITCH AND KEY UNLOCK WARNING SWITCH

BE01L–04

LOCATION



BE0NN–01

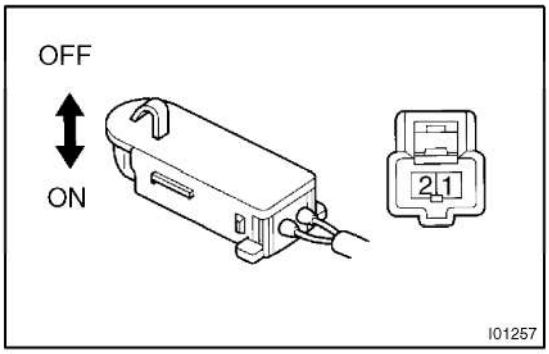


INSPECTION

1. INSPECT IGNITION SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
LOCK	–	No continuity
ACC	2 – 3	Continuity
ON	2 – 3 – 4 6 – 7	Continuity
START	1 – 2 – 4 6 – 7 – 8	Continuity

If continuity is not as specified, replace the switch.



2. INSPECT KEY UNLOCK WARNING SWITCH CONTINUITY

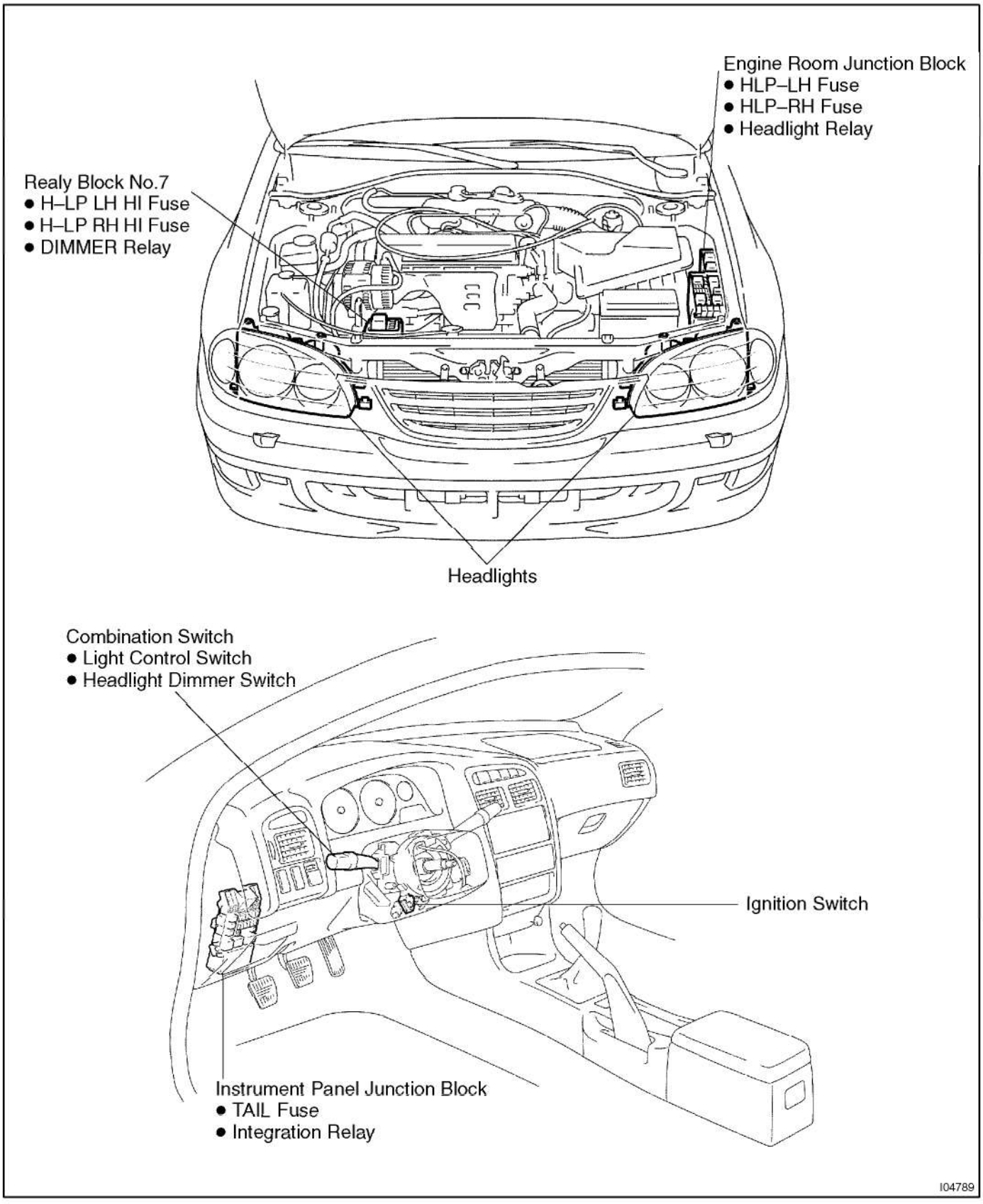
Switch position	Tester connection	Specified condition
OFF (Key removed)	–	No continuity
ON (Key set)	1 – 2	Continuity

If continuity is not as specified, replace the switch.

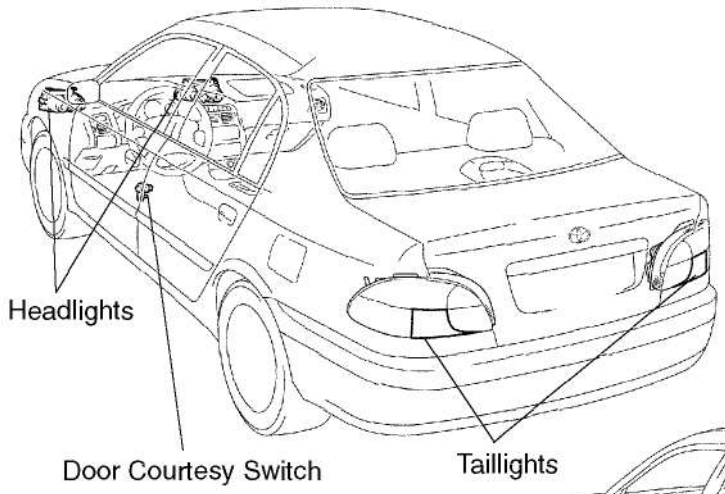
HEADLIGHT AND TAILLIGHT SYSTEM

LOCATION

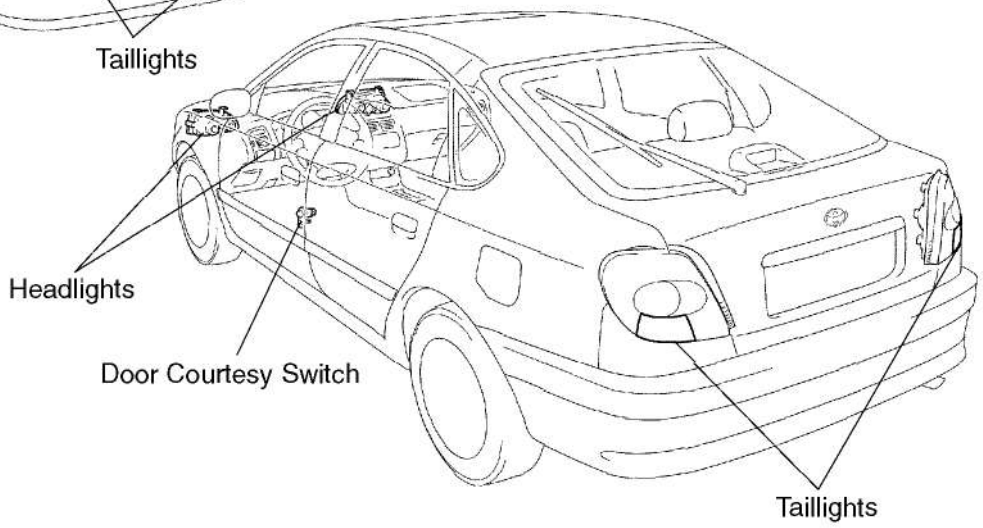
BE0NC–01



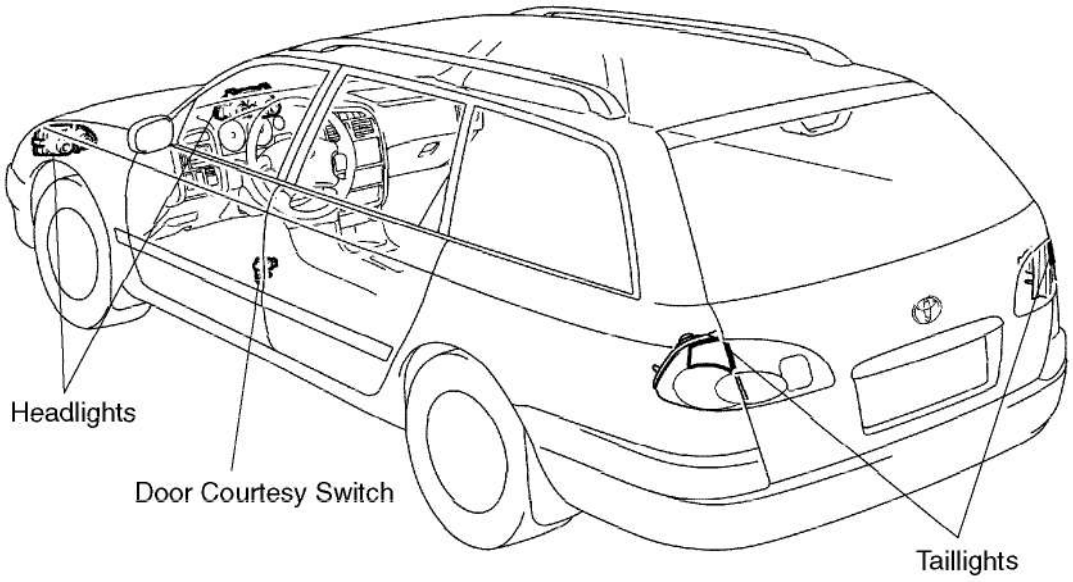
Sedan Model:



Liftback Model:



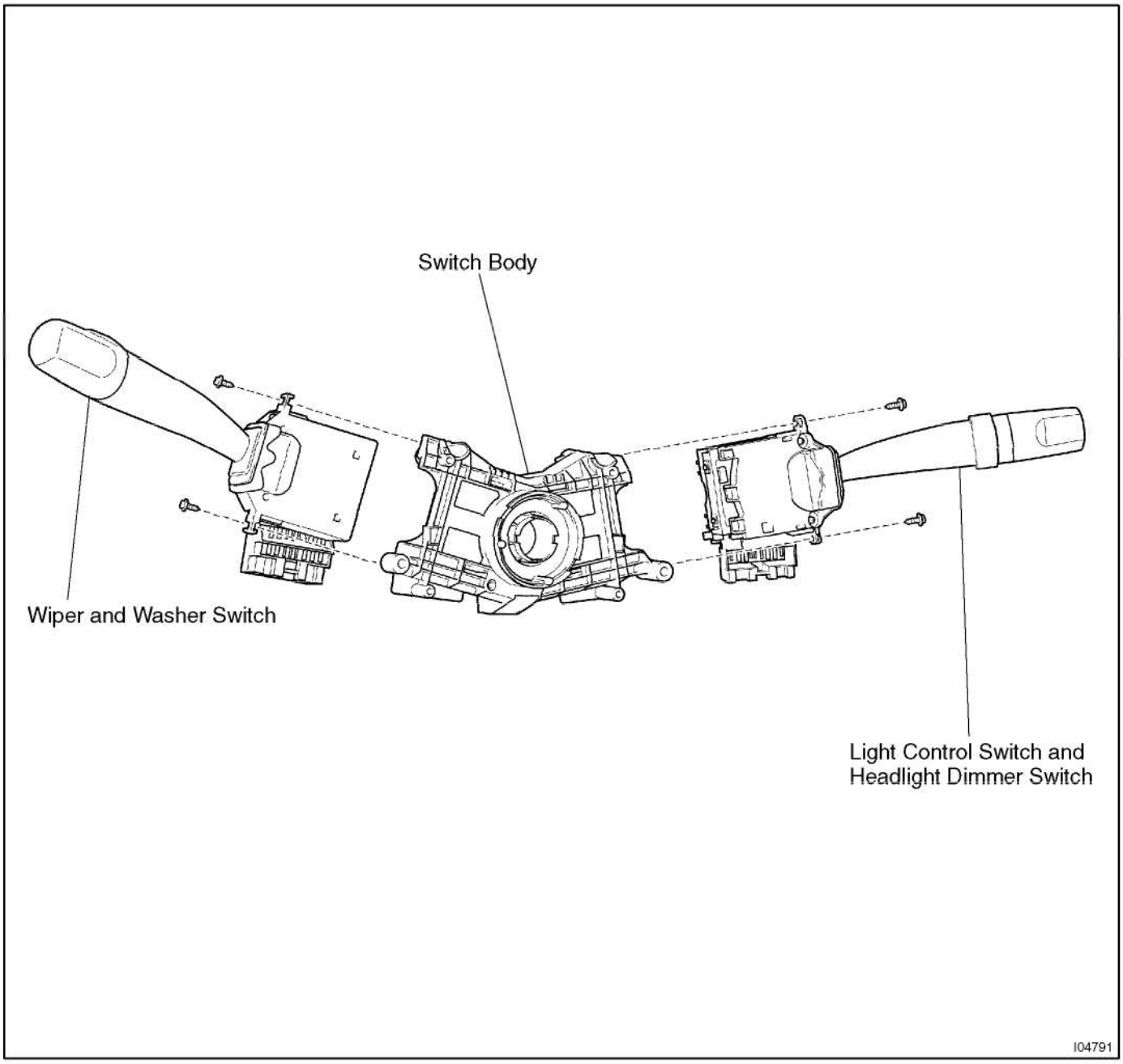
Wagon Model:



I04790

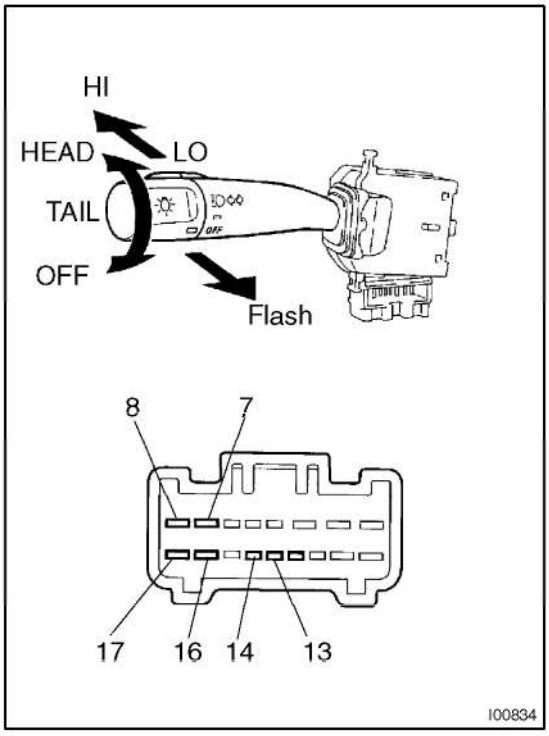
5E01C–02

COMPONENTS



BE01P–02

INSPECTION



1. LHD Models:
INSPECT LIGHT CONTROL SWITCH CONTINUITY

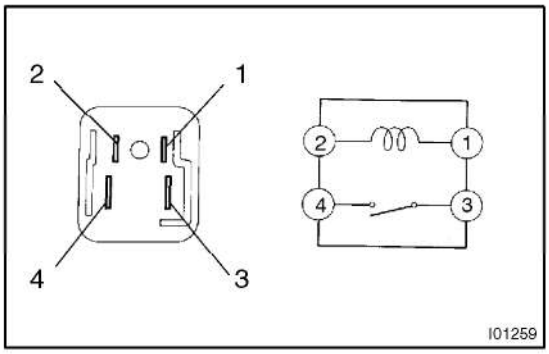
Switch position	Tester connection	Specified condition
OFF	–	No continuity
TAIL	14 – 16	Continuity
HEAD	13 – 14 – 16	Continuity

If continuity is not as specified, replace the switch.

2. LHD Models:
INSPECT HEADLIGHT DIMMER SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Low beam	16 – 17	Continuity
High beam	7 – 16	Continuity
Flash	7 – 8 – 16	Continuity

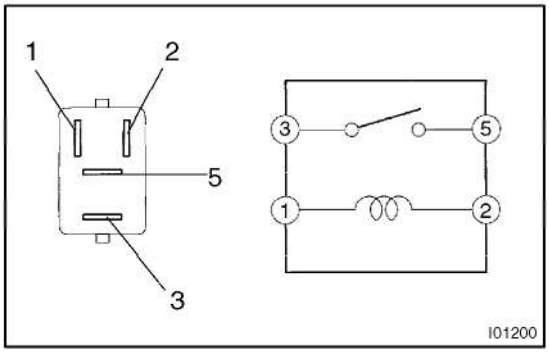
If continuity is not as specified, replace the switch.



3. INSPECT HEADLIGHT CONTROL RELAY CONTINUITY

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

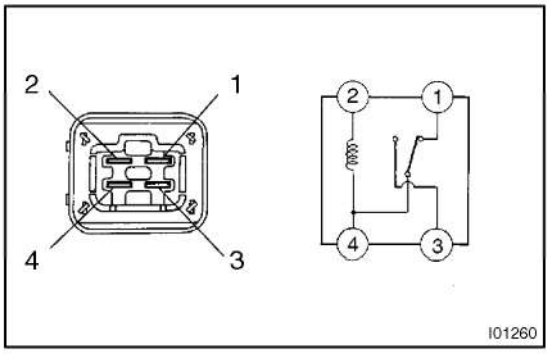
If continuity is not as specified, replace the relay.



4. INSPECT TAILLIGHT CONTROL RELAY CONTINUITY

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

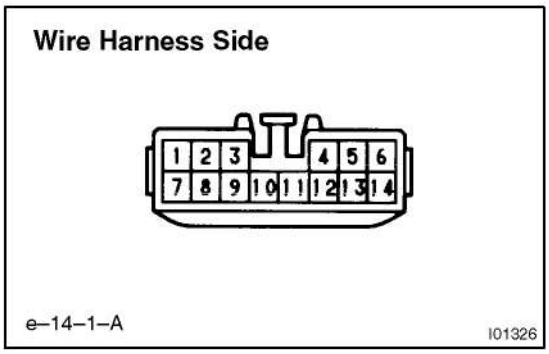
If continuity is not as specified, replace the relay.



5. INSPECT HEADLIGHT DIMMER RELAY CONTINUITY

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

If continuity is not as specified, replace the relay.

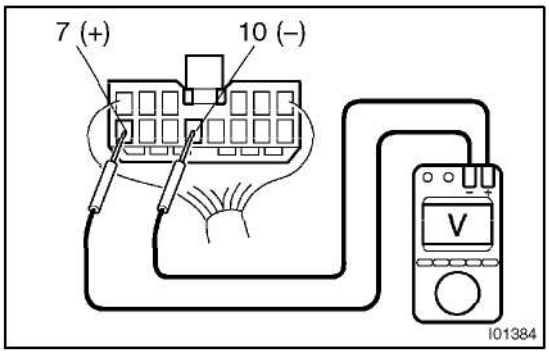


6. INSPECT DAYTIME RUNNING LIGHT MAIN RELAY CIRCUIT

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

Tester connection	Condition	Specified condition
2 – Ground	Light control switch OFF	No continuity
2 – Ground	Light control switch TAIL or HEAD	Continuity
4 – Ground	Light control switch OFF or TAIL	No continuity
4 – Ground	Light control switch HEAD	Continuity
6 – Ground	Headlight dimmer switch LOW beam or HIGH beam	No continuity
6 – Ground	Headlight dimmer switch FLASH	Continuity
7 – Ground	Constant	Continuity
10 – Ground	Constant	Continuity
13 – Ground	Headlight dimmer switch LOW beam	No continuity
13 – Ground	Headlight dimmer switch HIGH beam or FLASH	Continuity
1 – Ground	Ignition switch LOCK or ACC	No voltage
1 – Ground	Ignition switch ON or START	Battery voltage
3 – Ground	Constant	Battery voltage
5 – Ground	Constant	Battery voltage
8 – Ground	Engine Stop	No voltage
8 – Ground	Engine Running	Battery voltage
9 – Ground	Constant	No voltage
9 – Ground	Ground terminal 3	Battery voltage
11 – Ground	Constant	No voltage
11 – Ground	Ground terminal 3	Battery voltage
12 – Ground	Constant	Battery voltage
14 – Ground	Constant	No voltage
14 – Ground	Ground terminal 5	Battery voltage

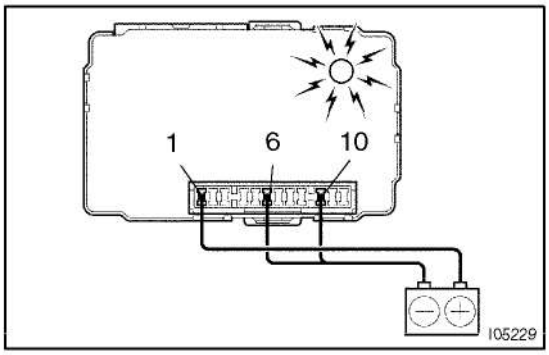
If circuit is specified, try replacing the relay with a new one.
If circuit is not as specified, inspect the circuits connected to other parts.



7. INSPECT DAYTIME RUNNING LIGHT MAIN RELAY OPERATION

(a) Connect the positive (+) lead from the voltmeter to terminal 7 and the negative (–) lead to terminal 10.

(b) Check that there is battery voltage with the light control switch turned to ON.



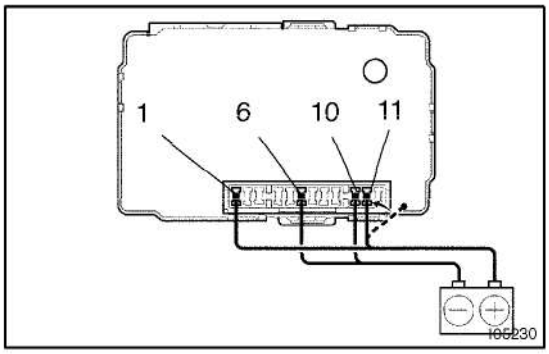
8. INSPECT LIGHT–ON WARNING SYSTEM (INSPECT INTEGRATION RELAY OPERATION)

(a) Connect the positive (+) lead from the battery to terminal 1.

(b) Connect the negative (–) lead from the battery to terminals 6 and 10.

(c) Check that the bulb lights and the buzzer sounds for 4 – 8 seconds.

(d) Return to step (a), and operate sounding the buzzer again.

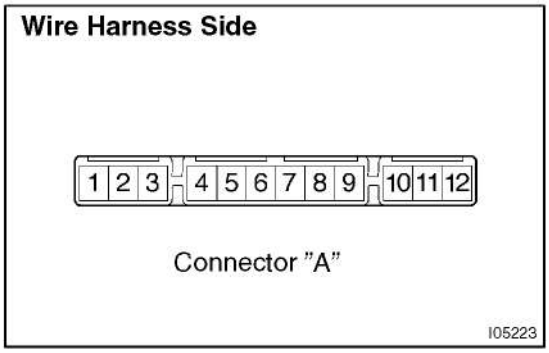


(e) Connect the positive (+) lead from the battery to terminal 11.

(f) Check that the buzzer stops sounding.

HINT:

Check the buzzer sounds within a period of 4 to 8 seconds.
If operation is as specified, replace the relay.



9. INSPECT INTEGRATION RELAY CIRCUIT

Wire harness side :

Disconnect the connector from the integration relay and inspect the connectors on the wire harness side.

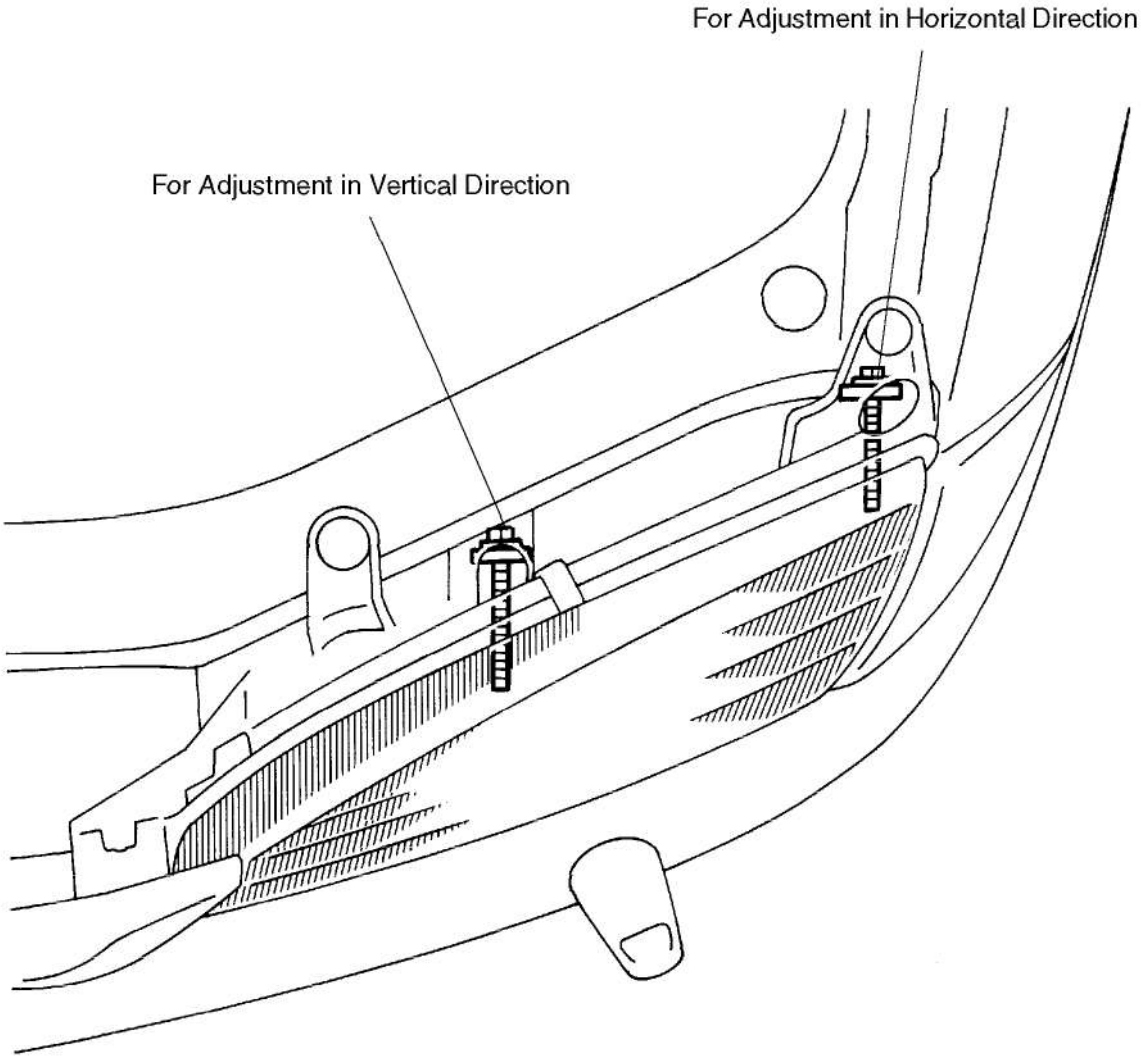
Tester connection	Condition	Specified condition
A4 – Ground	Front passenger's door and rear door courtesy switch OFF	No continuity
A4 – Ground	Front passenger's door and rear door courtesy switch ON	Cntinuity
A6 – Ground	Driver's door courtesy switch OFF	No continuity
A6 – Ground	Driver's door courtesy switch ON	Continuity
A10 – Ground	Constant	Continuity
A1 – Ground	Constant	Battry Voltage

A7 – Ground	Ignition switch LOCK or ACC	No voltage
A7 – Ground	Ignition switch ON	Battery voltage
A11 – Ground	Ignition switch LOCK	No voltage
A11 – Ground	Ignition switch ACC or ON	Battery voltage
A12 – Ground	Light control switch OFF	No voltage
A12 – Ground	Light control switch TAIL or HEAD	Battery voltage
A2 – Ground	Interior light OFF	No voltage
A2 – Ground	Interior light ON	Battery voltage

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

5E01Q–02

ADJUSTMENT

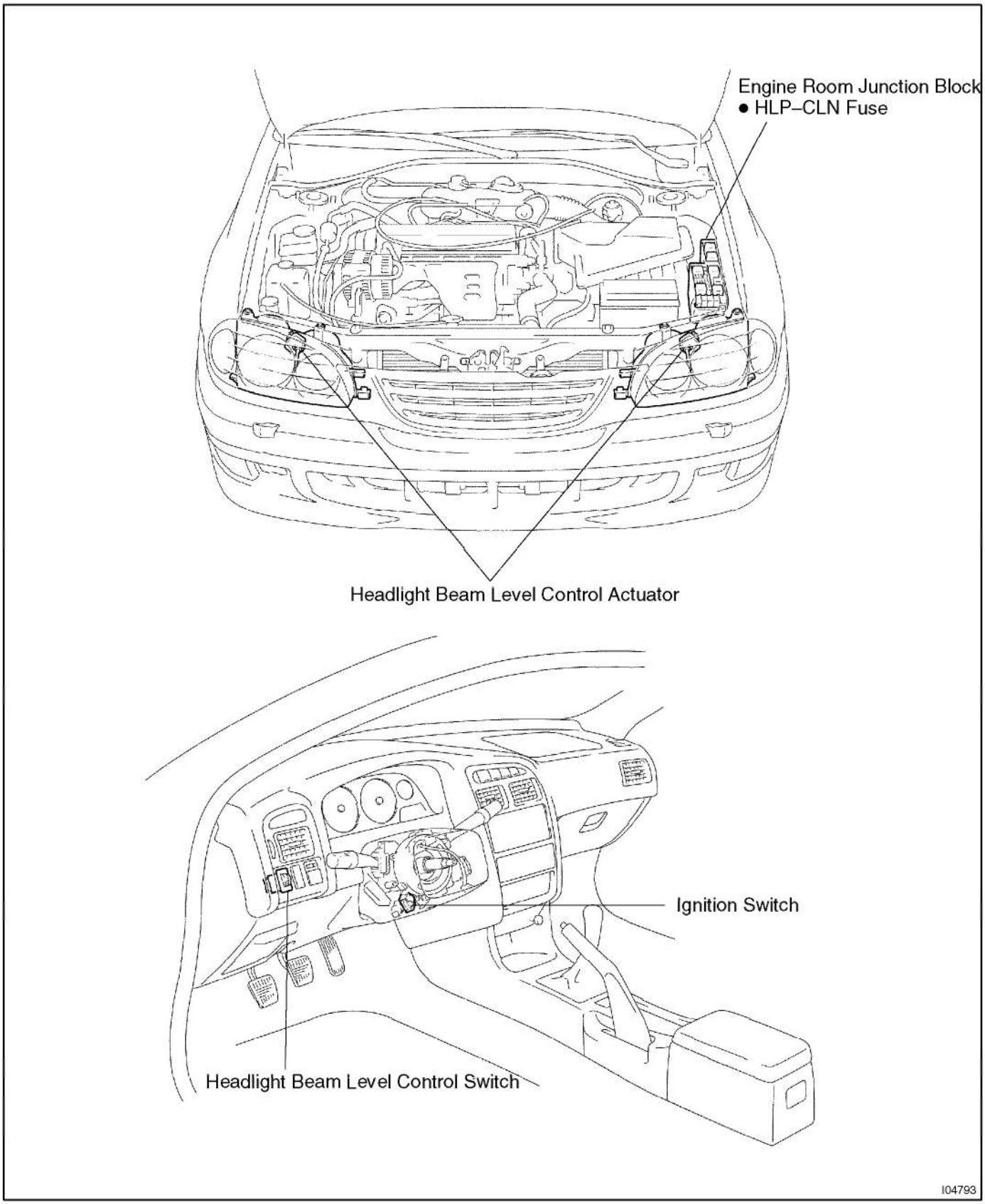


I04792

HEADLIGHT BEAM LEVEL CONTROL SYSTEM

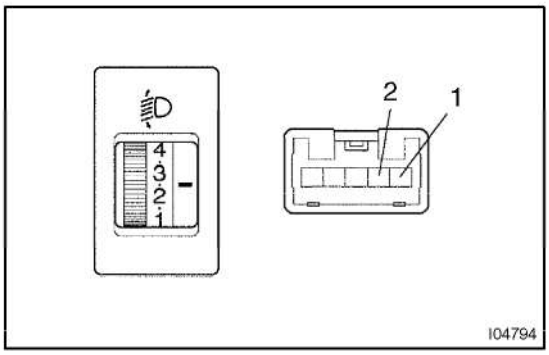
LOCATION

BE01R–04



5E01S–02

INSPECTION

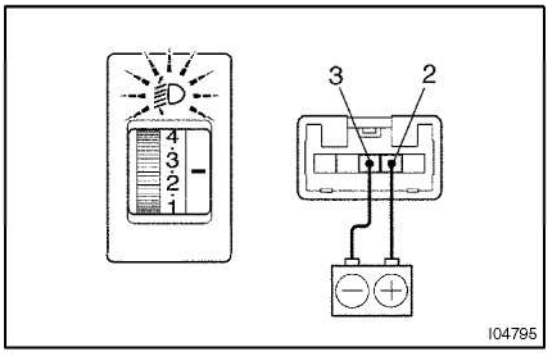


1. INSPECT HEADLIGHT BEAM LEVEL CONTROL SWITCH RESISTANCE

Measure the resistance between terminals 1 and 2.

Switch position	Resistance (kΩ)
0	1.4 – 1.6
1	1.6 – 1.8
2	1.8 – 2.0
3	2.0 – 2.3
4	2.4 – 2.7
5	2.8 – 3.2

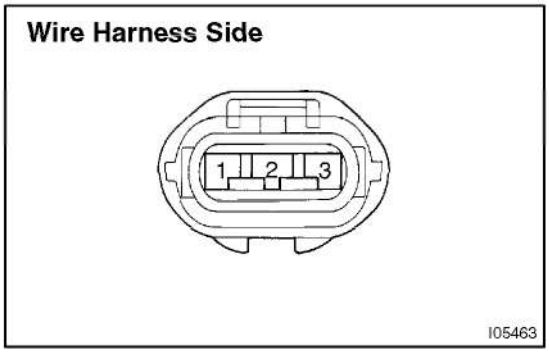
If resistance value is not as specified, replace the switch.



2. INSPECT HEADLIGHT BEAM LEVEL CONTROL SWITCH ILLUMINATION

Connect the positive (+) lead from the battery to terminal 3 and negative (–) lead to terminal 6 and check that the illumination light lights up.

If operation is not as specified, replace the switch.



3. INSPECT HEADLIGHT BEAM LEVEL CONTROL ACTUATOR CIRCUIT

Disconnect the connector from the switch and inspect the connector on wire harness side, as shown in the trable below.

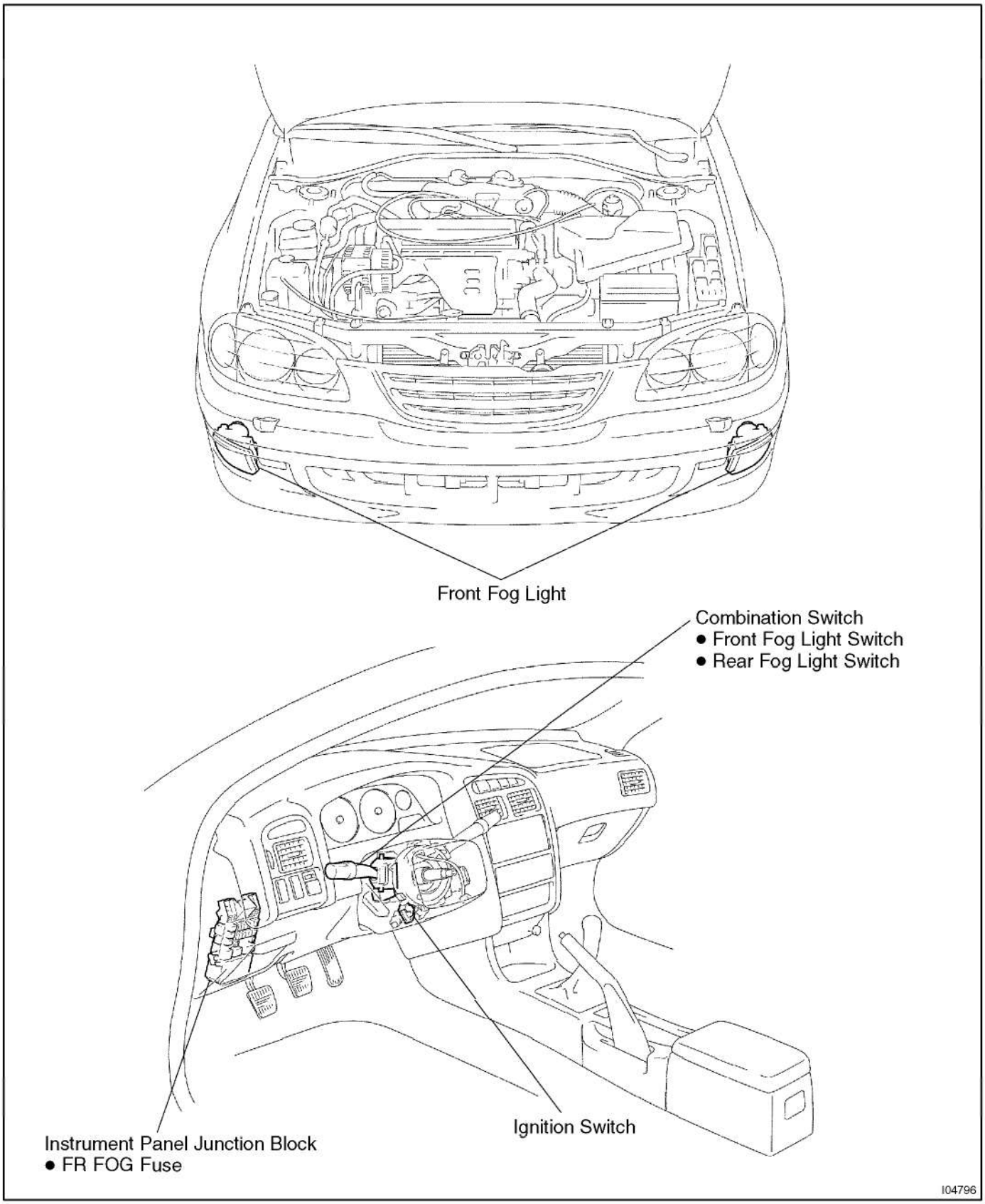
Tester connection	Condition	Specified condition
1 – Ground	Constant	Continuity
3 – Ground	Constant	Battery voltage

If the circuit is not as specified, replace the actuator.

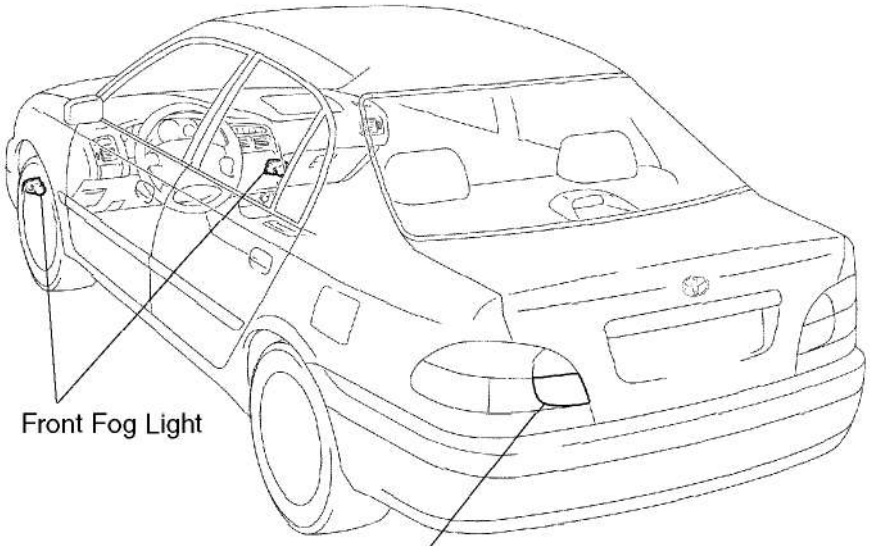
FOG LIGHT SYSTEM

LOCATION

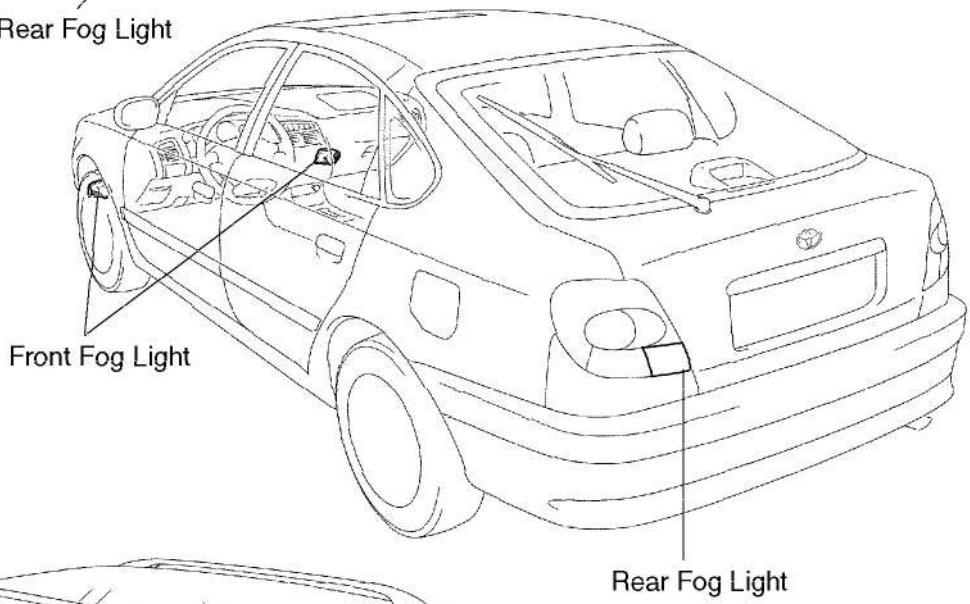
BE0NP–01



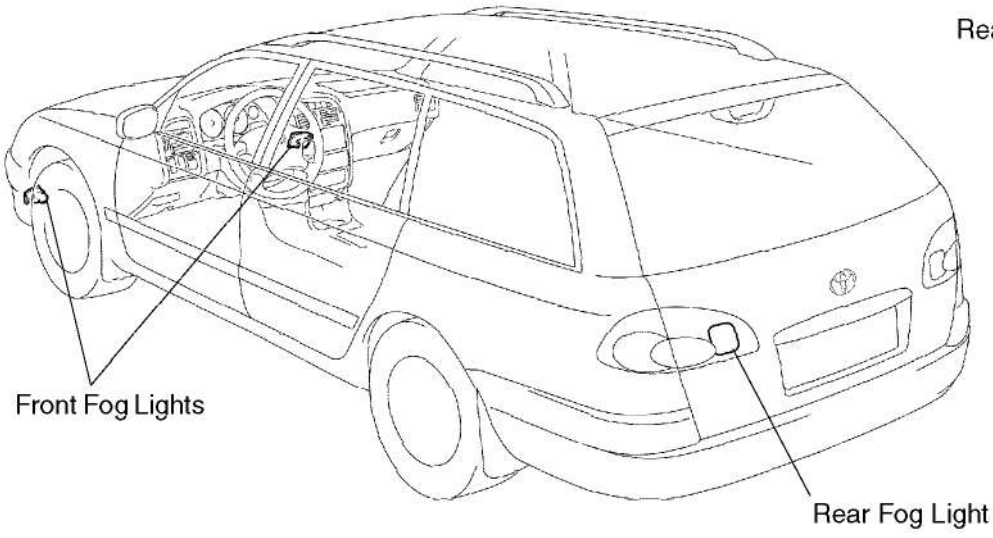
Sedan Model:



Liftback Model:



Wagon Model:

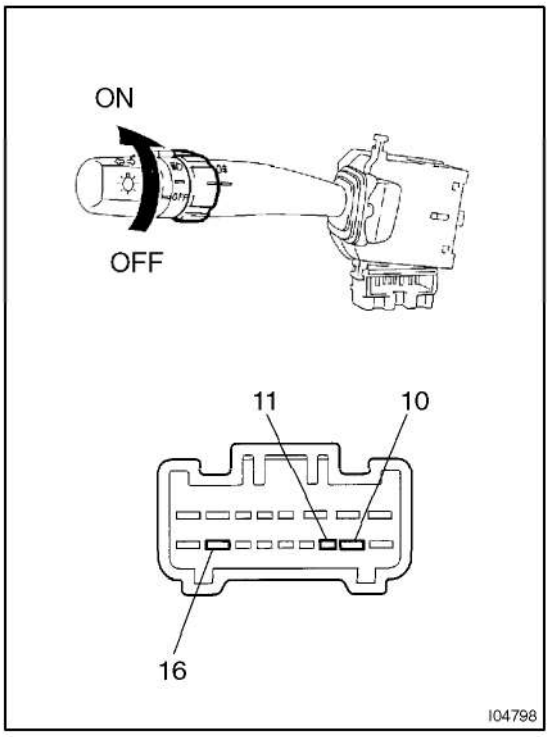


I04797

BE0NQ-01

INSPECTION

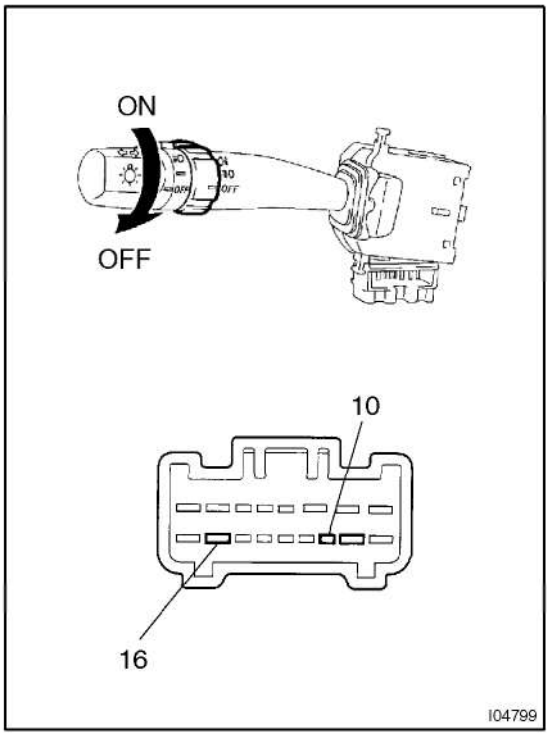
1. INSPECT FRONT/REAR FOG LIGHT SWITCH CONTINUITY



Switch position	Tester connection	Specified condition
OFF	–	No continuity
ON (FRONT)	11 – 16	Continuity
ON (FRONT/REAR)	10 – 11 – 16	Continuity

If continuity is not as specified, replace the switch.

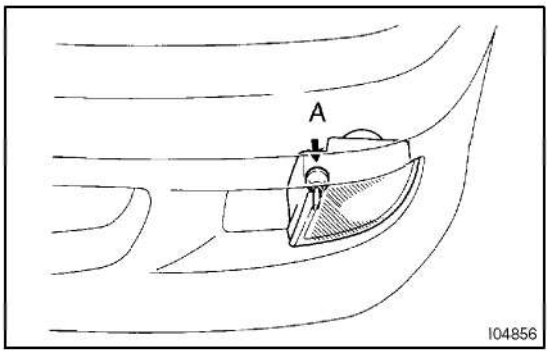
2. INSPECT REAR FOG LIGHT SWITCH CONTINUITY



Switch position	Tester connection	Specified condition
OFF	–	No continuity
ON	10 – 16	Continuity

If continuity is not as specified, replace the switch.

BE0NR–01



ADJUSTMENT

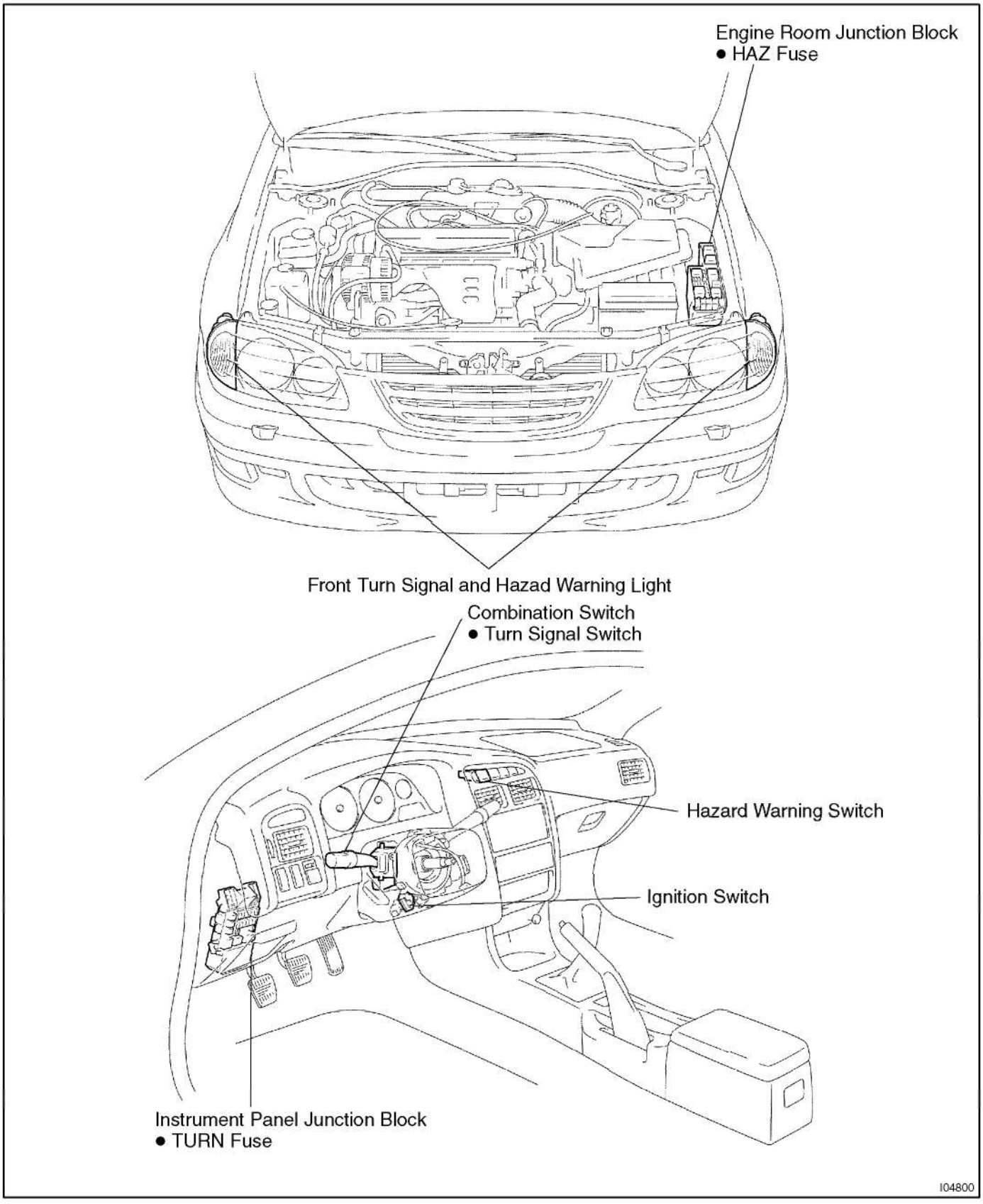
ADJUST FOG LIGHT AIM

The fog light aim can be adjusted by moving the A–bolt in the vertical direction.

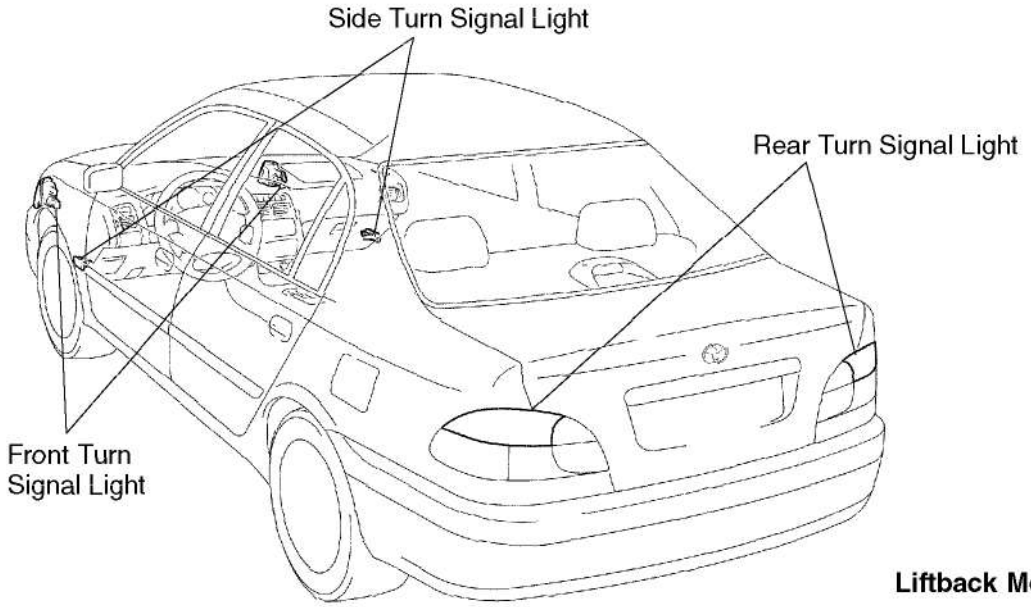
TURN SIGNAL AND HAZARD WARNING SYSTEM

BE0NS–01

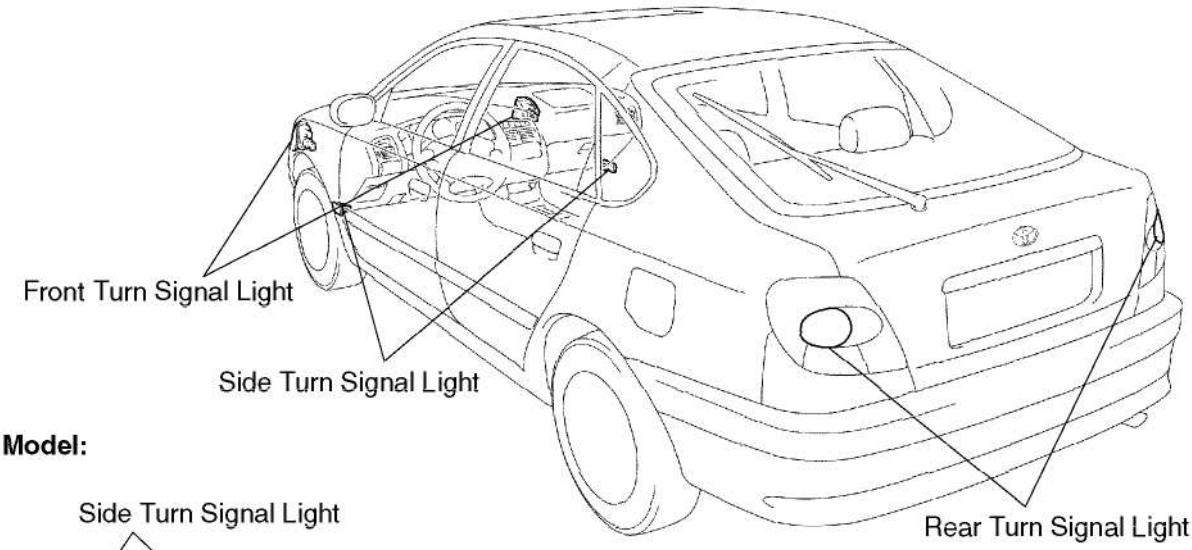
LOCATION



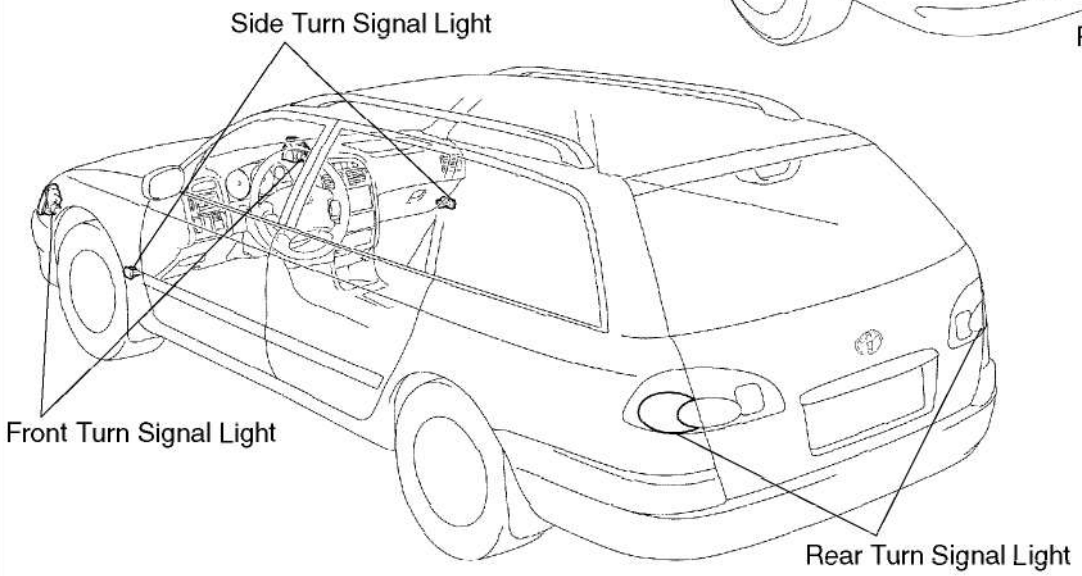
Sedan Model:



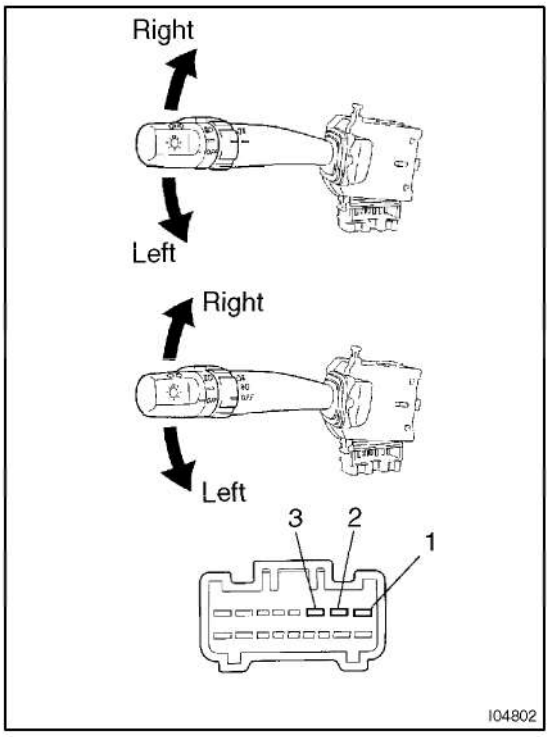
Liftback Model:



Wagon Model:



I04801



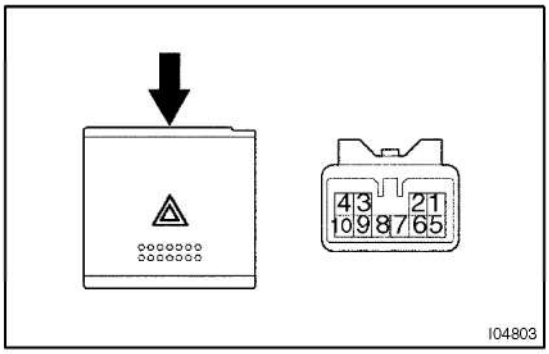
INSPECTION

BE0NT-01

1. INSPECT TURN SIGNAL SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Left turn	1 – 2	Continuity
Neutral	–	No continuity
Right turn	2 – 3	Continuity

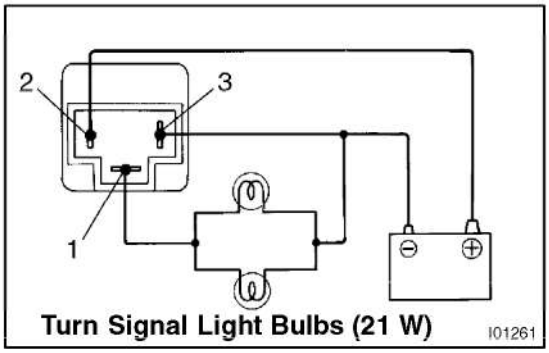
If continuity is not as specified, replace the switch.



2. INSPECT HAZARD WARNING SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Switch OFF	7 – 10	Continuity
Switch ON	5 – 6 – 9 7 – 8	Continuity
Illumination circuit	2 – 3	Continuity

If continuity is not as specified, replace the switch.



Turn Signal Light Bulbs (21 W)

3. INSPECT TURN SIGNAL FLASHER OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 3.

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

HINT:

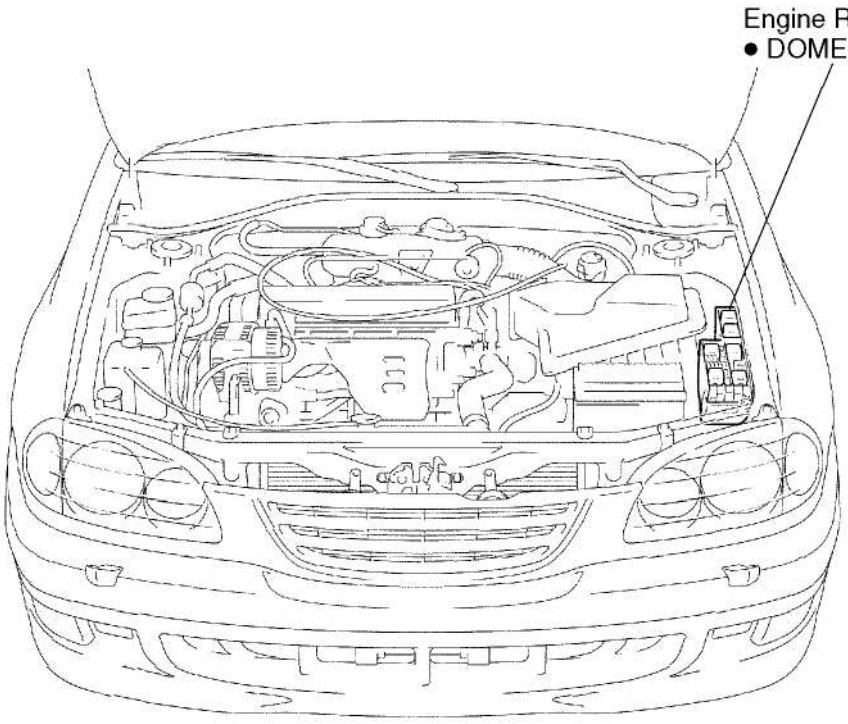
The turn signal lights should flash 60 to 120 times per minute. If one of the front or rear turn signal lights has an open circuit, the number of flashes will be more than 140 per minute.

If operation is not as specified, replace the flasher.

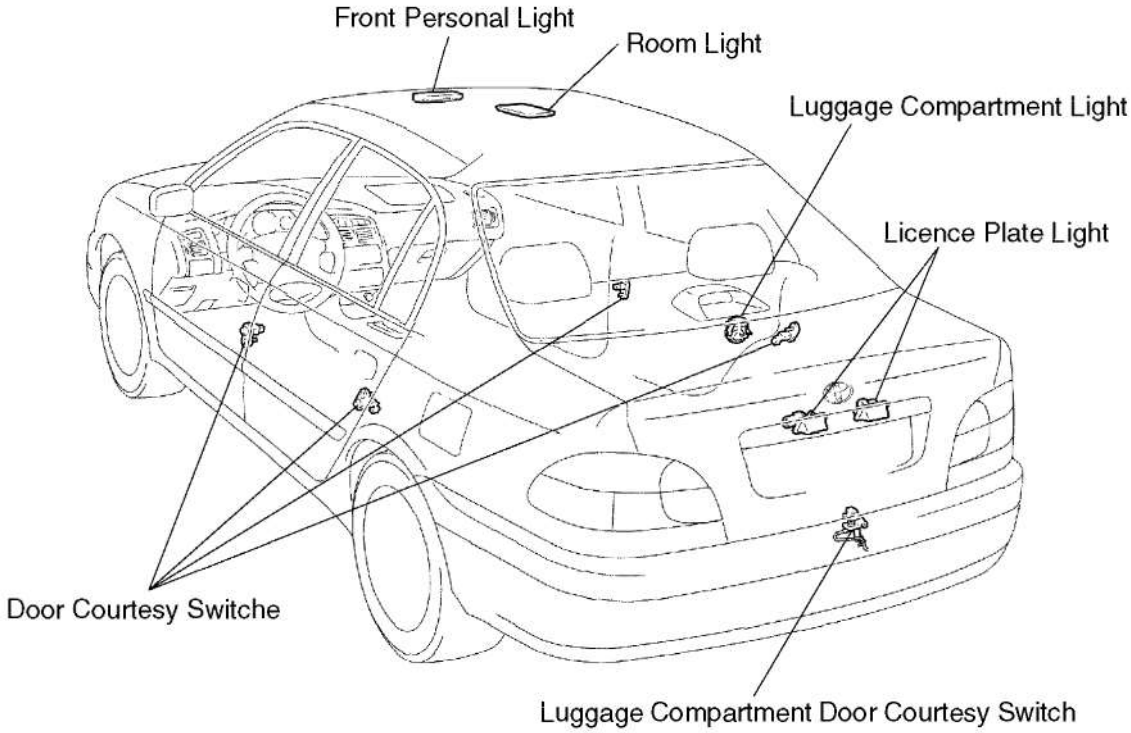
INTERIOR LIGHT SYSTEM

LOCATION

BE0NU–01

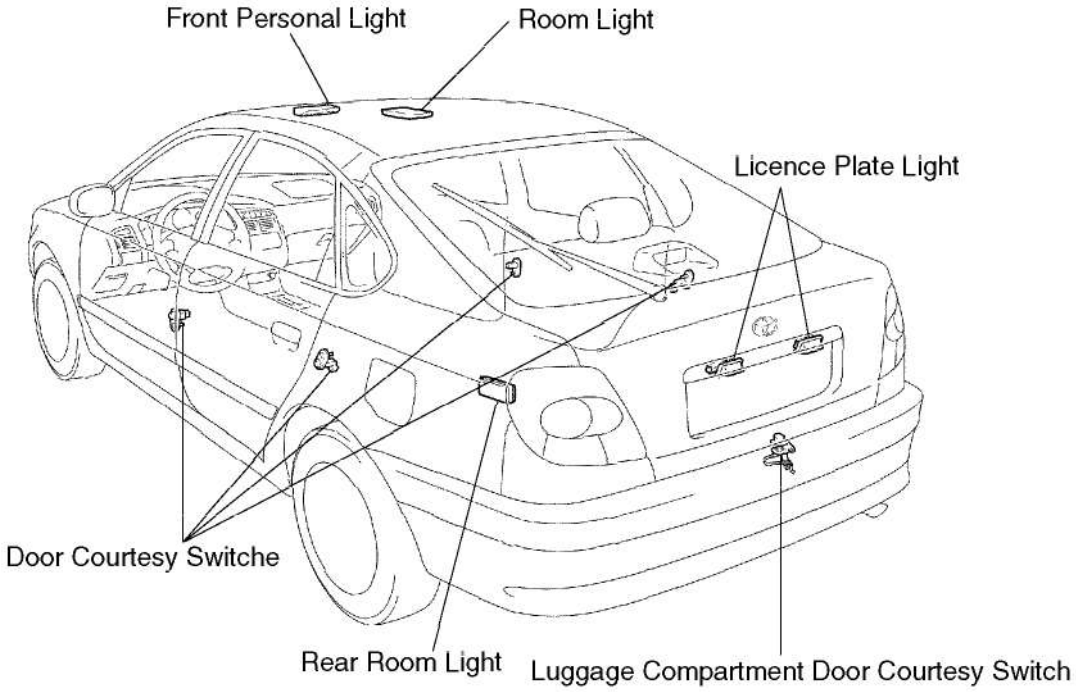


Sedan Model:

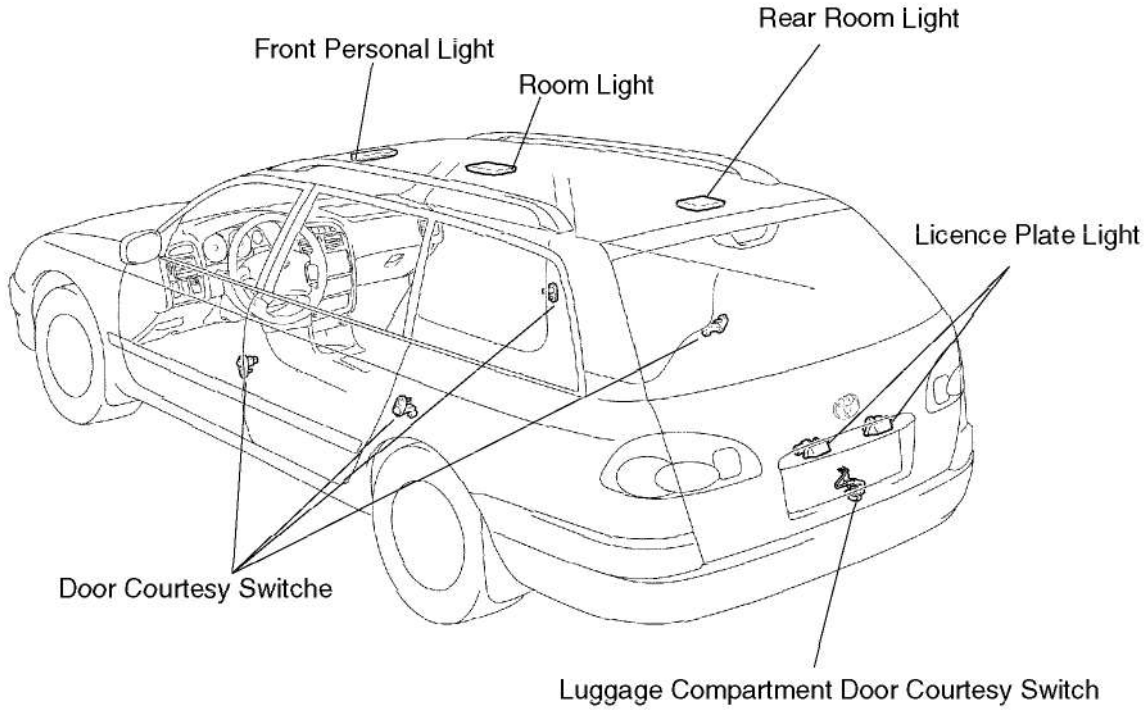


I04804

Liftback Model:



Wagon Model:

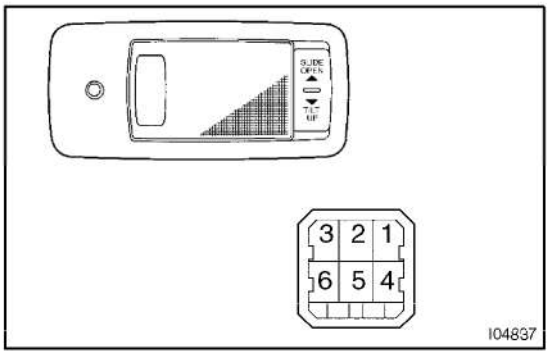


I04805

BE0NV-01

INSPECTION

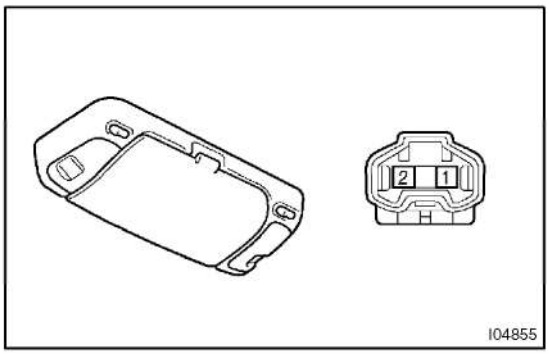
1. w/ Sliding Roof:
INSPECT FRONT PERSONAL LIGHT SWITCH CONTINUITY



Switch position	Tester connection	Specified condition
OFF	–	No continuity
ON	2 – 6	Continuity

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

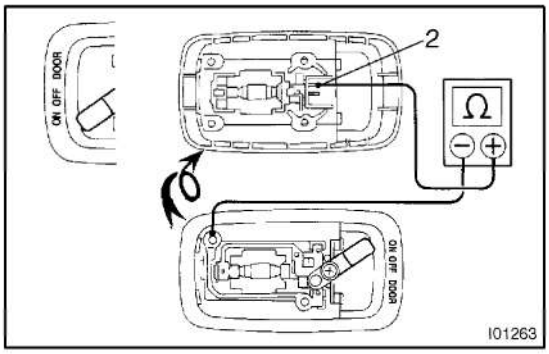
2. w/o Sliding Roof:
INSPECT FRONT PERSONAL LIGHT SWITCH CONTINUITY



Using the ohmmeter, check that continuity exists between terminals.

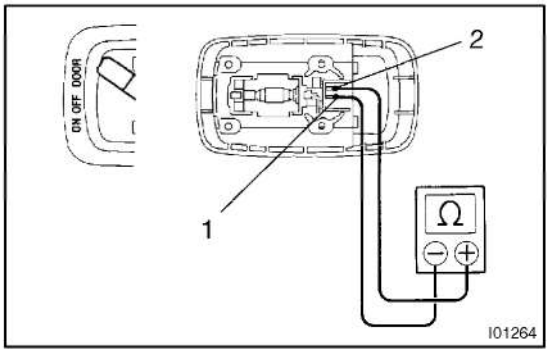
If continuity is not as specified, replace the light assembly or bulb.

3. INSPECT ROOM LIGHT CONTINUITY



(a) Disconnect the connector from the room light.

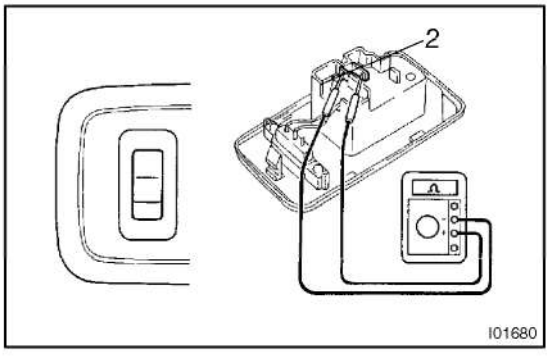
(b) Turn the room light switch ON, check that continuity exists between terminal 2 and body ground.



(c) Turn the room light switch DOOR, check that continuity exists between terminals 1 and 2.

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

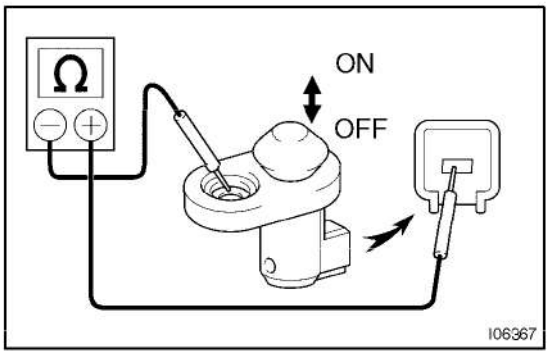
4. Liftback Type:
INSPECT REAR ROOM LIGHT CONTINUITY



(a) Disconnect the connector from the room light.

(b) Turn the room light switch ON, check that continuity exists between terminals 1 and 2.

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

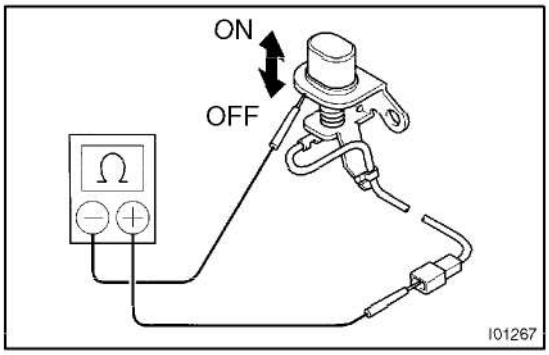


5. INSPECT FRONT DOOR AND REAR SOOR COURTESY SWITCH CONTINUITY

(a) Check that continuity exists between terminal and the switch body with the switch ON (switch pin released: open doors).

(b) Check that no continuity exists between terminal and the switch body with the switch OFF (switch pin pushed in: closed doors).

If operation is not as specified, replace the switch.

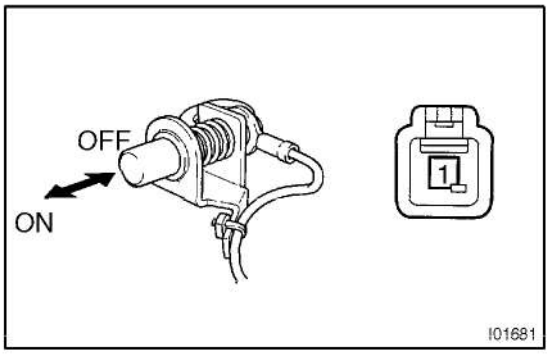


6. Sedan Type:
INSPECT LUGGAGE COMPARTMENT DOOR COURTESY SWITCH CONTINUITY

(a) Check that continuity exists between terminal and the switch body with the switch ON (switch pin released: open doors).

(b) Check that no continuity exists between terminal and the switch body with the switch OFF (switch pin pushed in: closed doors).

If operation is not as specified, replace the switch.

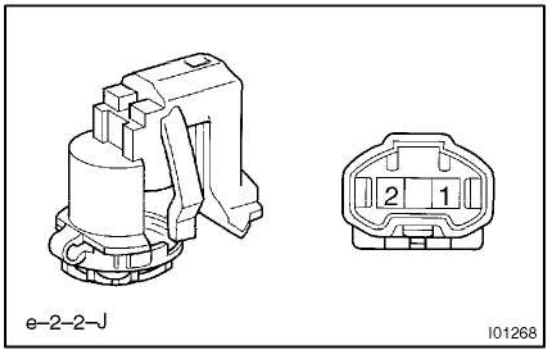


7. Liftback Type and Hatchback Type:
INSPECT LUGGAGE COMPARTMENT DOOR COURTESY SWITCH CONTINUITY

(a) Check that continuity exists between terminals and the switch body with the switch ON (switch pin released: open doors).

(b) Check that there is no continuity between terminals and the switch body with the switch OFF (switch pin pushed in: closed doors).

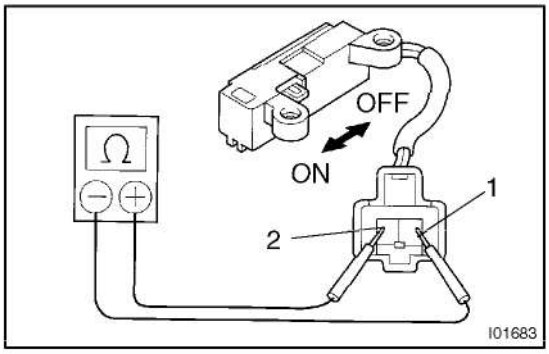
If operation is not as specified, replace the switch.



8. INSPECT LUGGAGE COMPARTMENT LIGHT CONTINUITY

Using an ohmmeter, check that continuity exists between terminals.

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

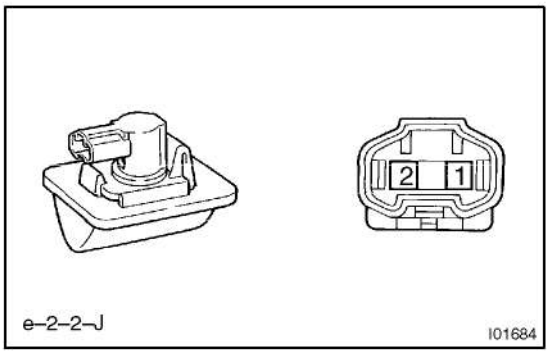


9. Wagon:
INSPECT BACK DOOR COURTESY SWITCH CONTINUITY

(a) Check that continuity exists between terminals and the switch body with the switch ON (switch pin released: open door).

(b) Check that no continuity exists between terminals and the switch body with the switch OFF (switch pin pushed in: closed doors).

If operation is not as specified, replace the switch.



10. INSPECT LICENCE PLATE LIGHT CONTINUITY

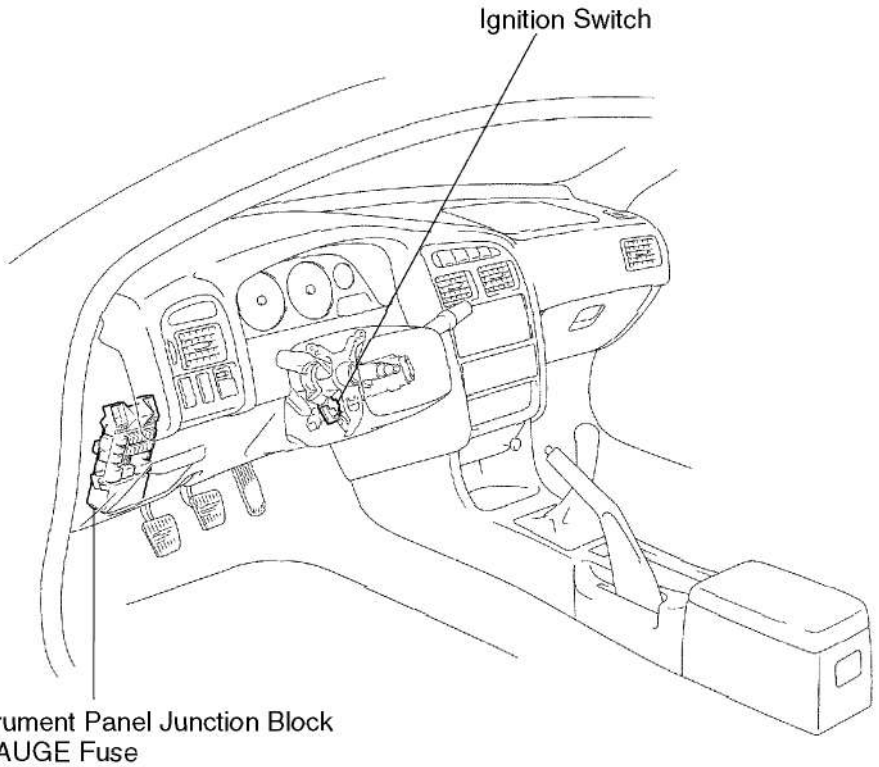
Using an ohmmeter, check that continuity exists between terminals.

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

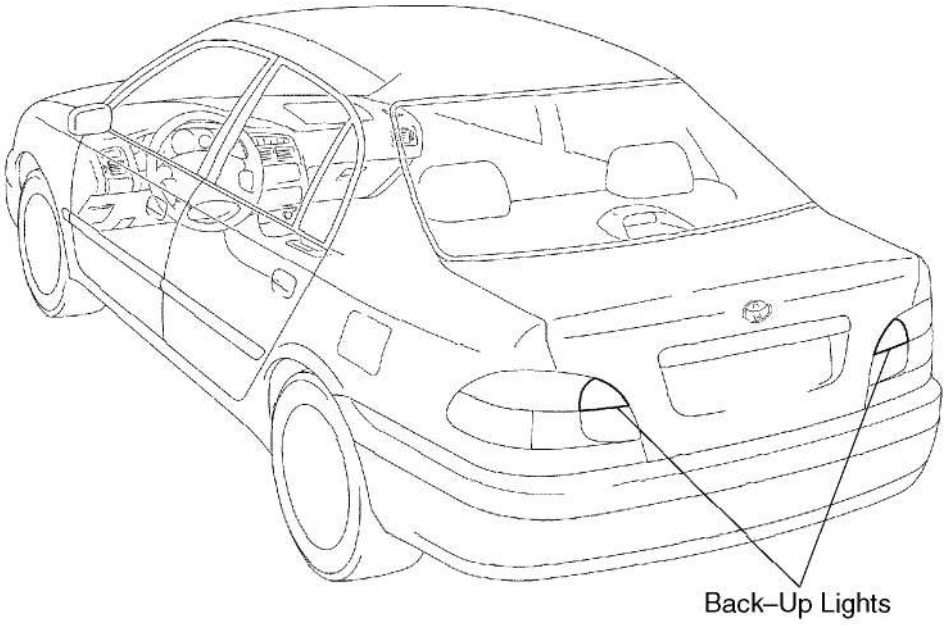
BACK–UP LIGHT SYSTEM

LOCATION

BE0NW–01

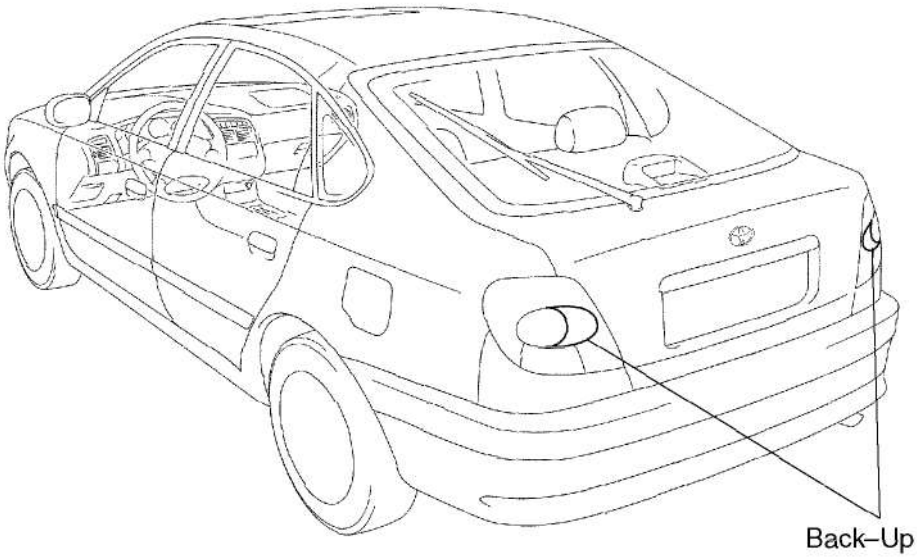


Sedan Model:

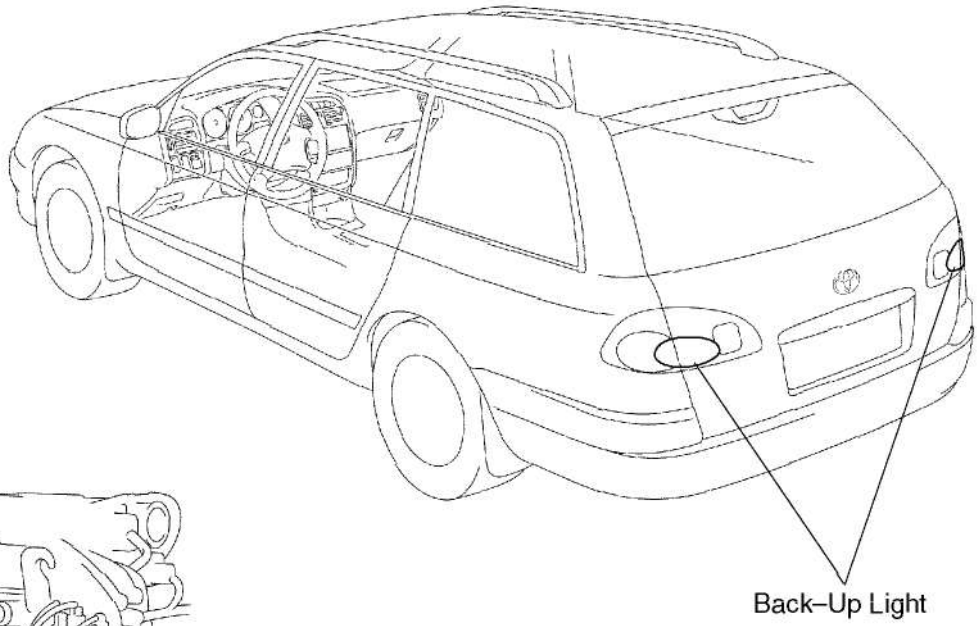


I04806

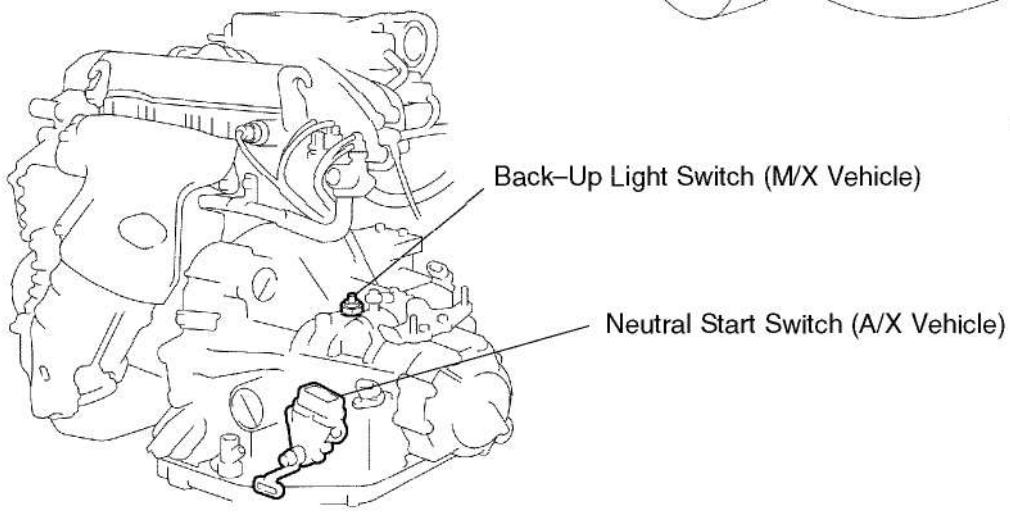
Liftback Model:



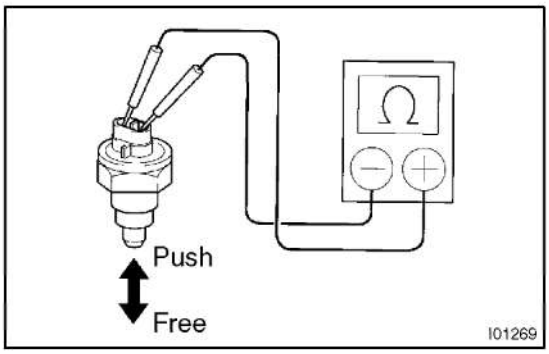
Wagon Model:



ex. 3S–FE Engine:



I04807



5E020–02

INSPECTION

1. INSPECT BACK–UP LIGHT SWITCH CONTINUITY

Switch position	Specified condition
Push	Continuity
Free	No continuity

If continuity is not as specified, replace the switch.

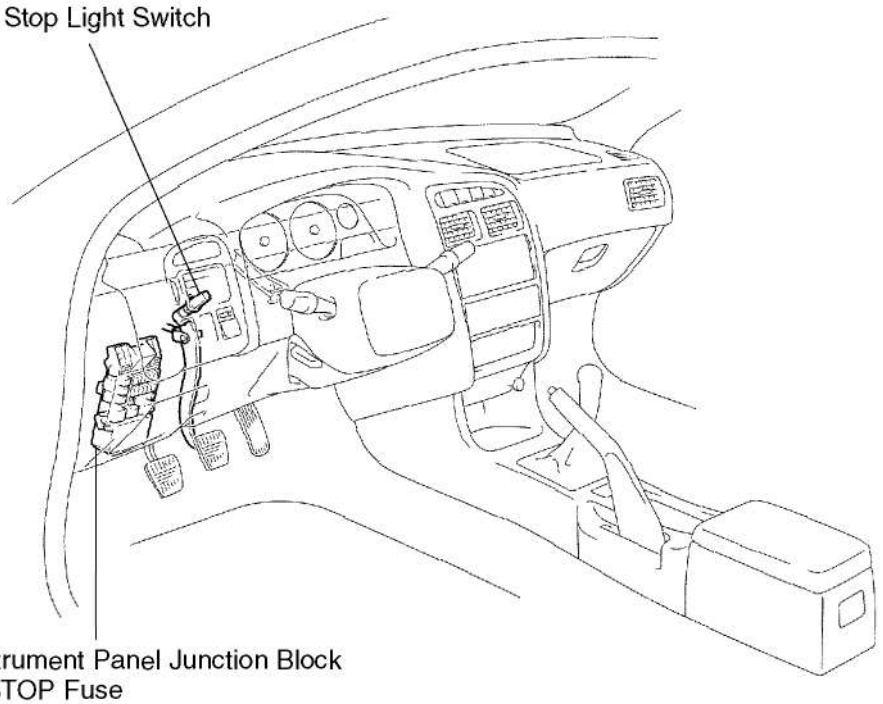
2. INSPECT NEUTRAL START SWITCH CONTINUITY

See page DI–35, DI–91

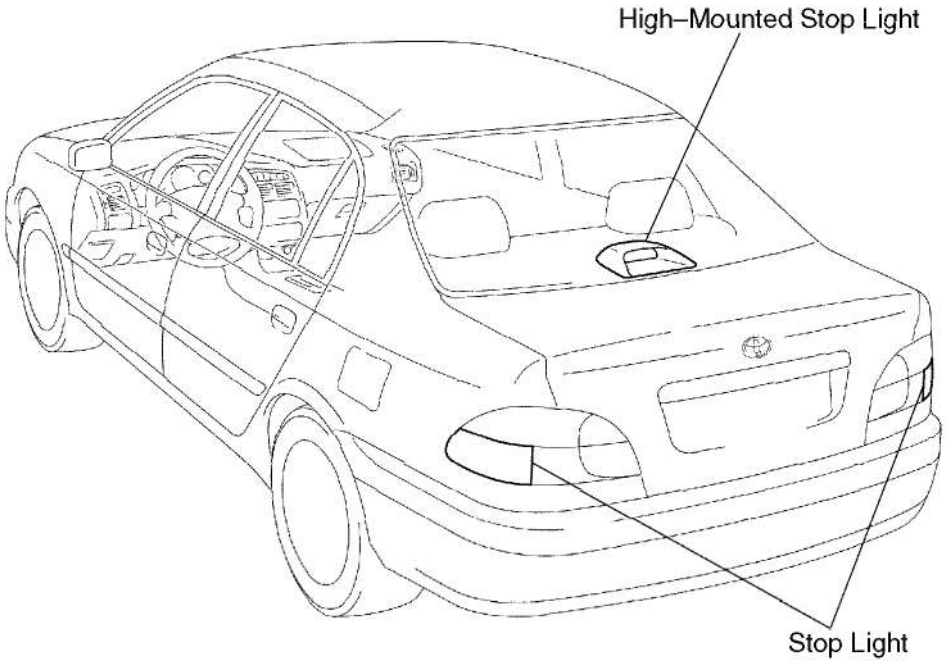
STOP LIGHT SYSTEM

LOCATION

BE0NX–01

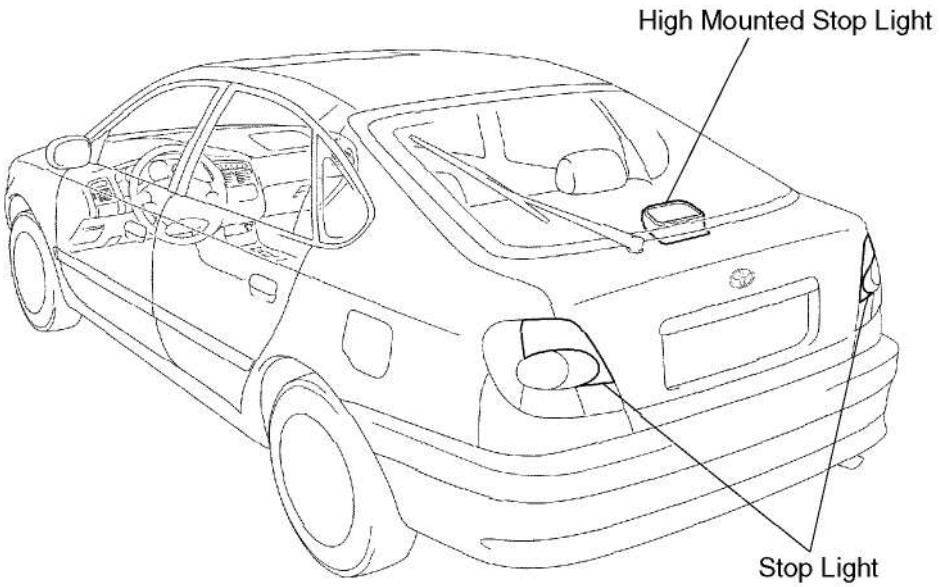


Sedan Model:

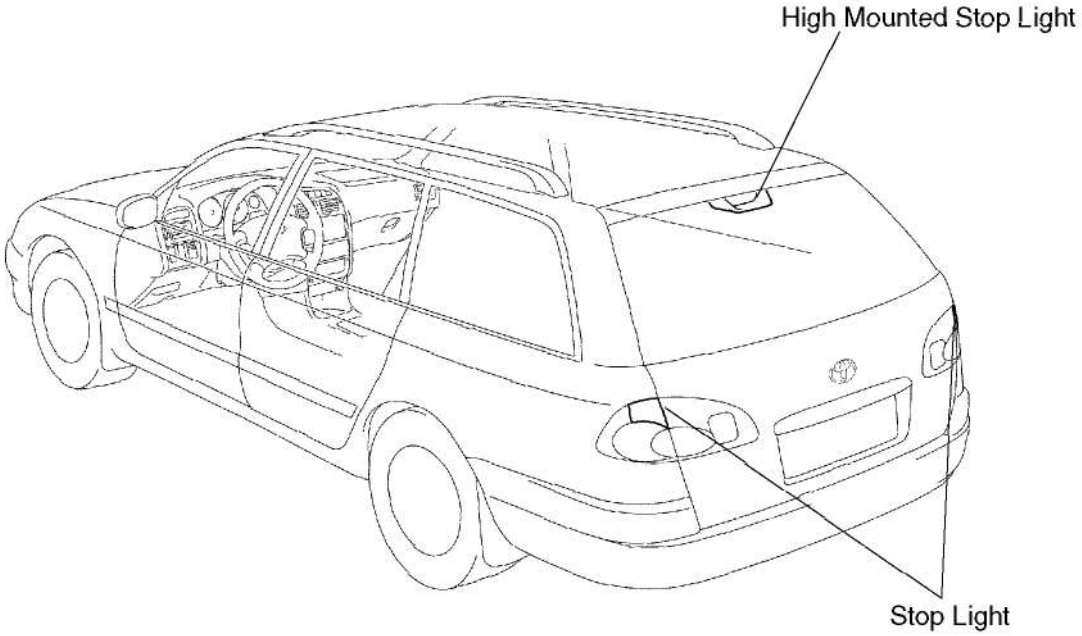


I04808

Liftback Model:



Wagon Model:

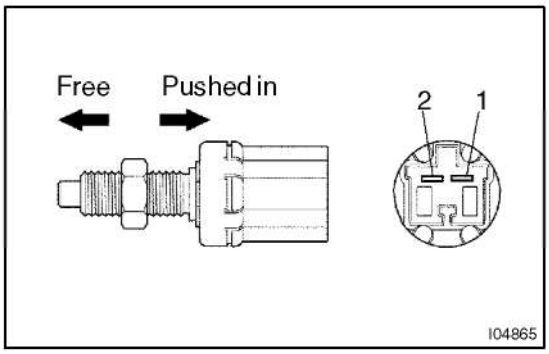


I04809

BE0NY-01

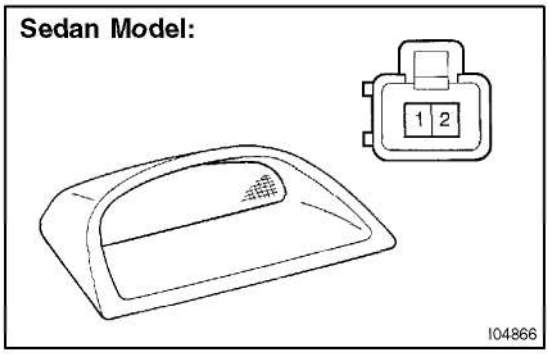
INSPECTION

1. INSPECT STOP LIGHT SWITCH CONTINUITY



Switch position	Tester connection	Specified condition
Switch pin pushed in (Pedal released)	–	No continuity
Switch pin free (Pedal depressed)	1 – 2	Continuity

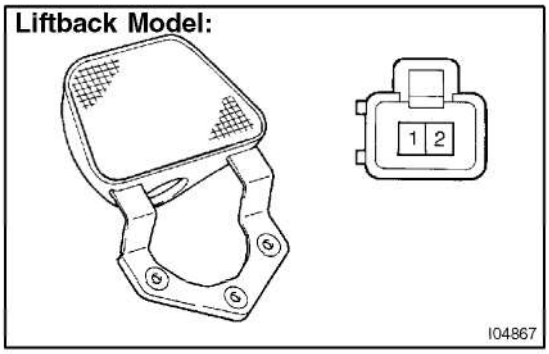
If continuity is not as specified, replace the switch.



2. Sedan Model: INSPECT HI–MOUNTED STOP LIGHT CONTINUITY

Using an ohmmeter, check that continuity exists between terminals.

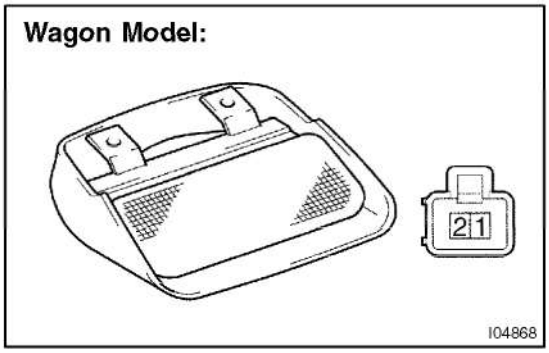
If continuity is not as specified, replace the light assembly or bulb.



3. Liftback Model: INSPECT HI–MOUNTED STOP LIGHT CONTINUITY

Using an ohmmeter, check that continuity exists between terminals.

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



4. Wagon Model: INSPECT HI–MOUNTED STOP LIGHT CONTINUITY

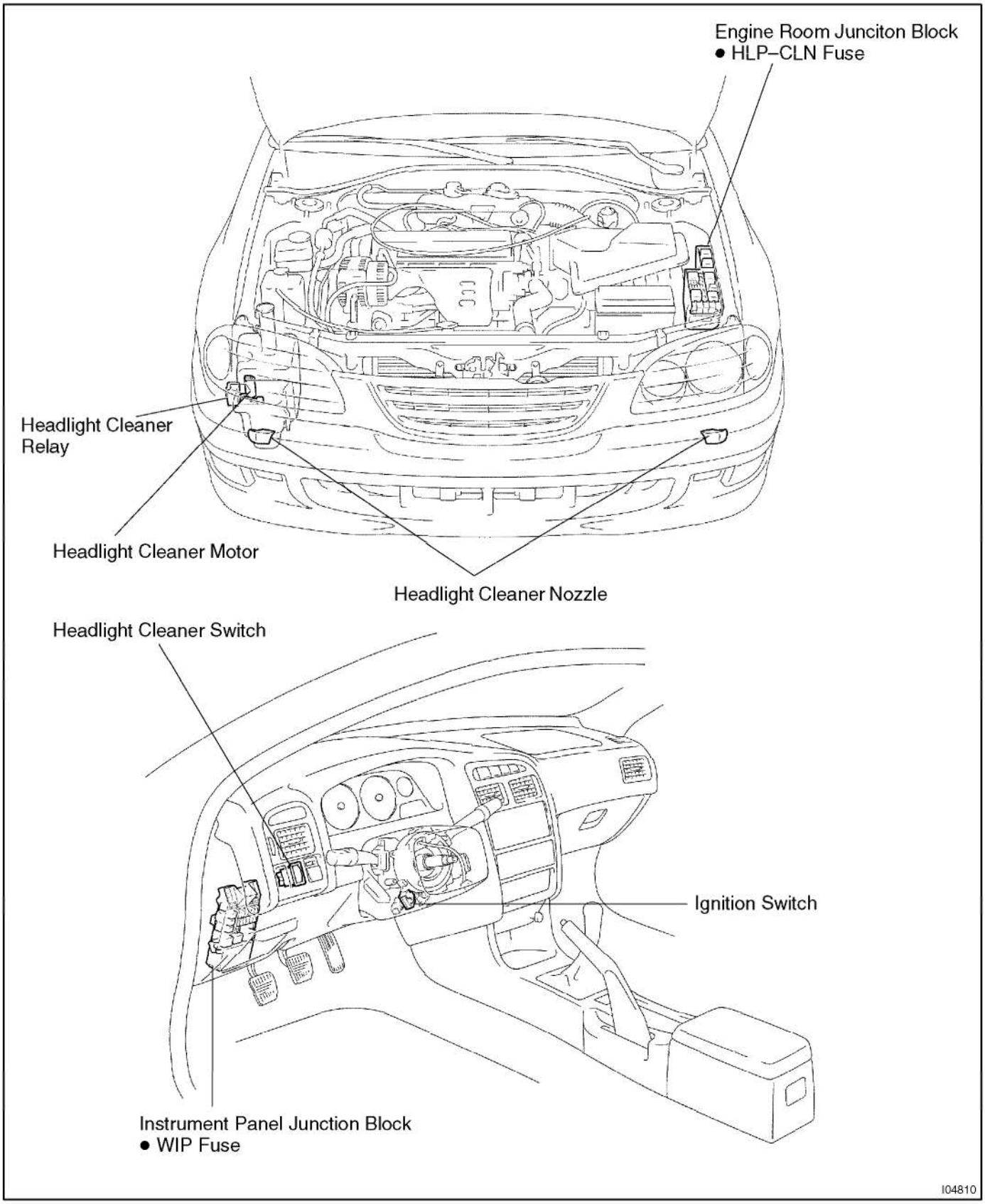
Using an ohmmeter, check that continuity exists between terminals.

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

HEADLIGHT CLEANER SYSTEM

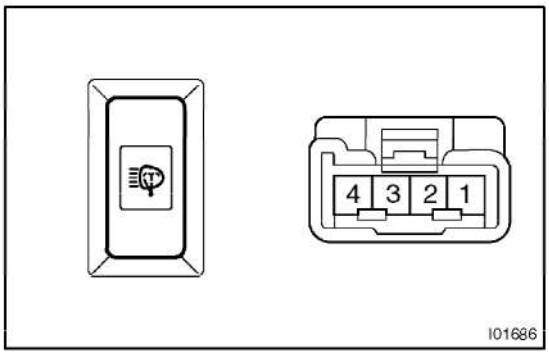
LOCATION

BE023–04



5E024-02

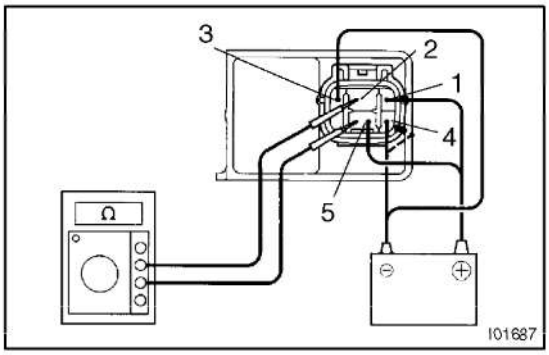
INSPECTION



1. INSPECT HEADLIGHT CLEANER SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
OFF	–	No continuity
ON	1 – 4	Continuity
Illumination circuit	2 – 3	Continuity

If continuity is not as specified, replace the switch.



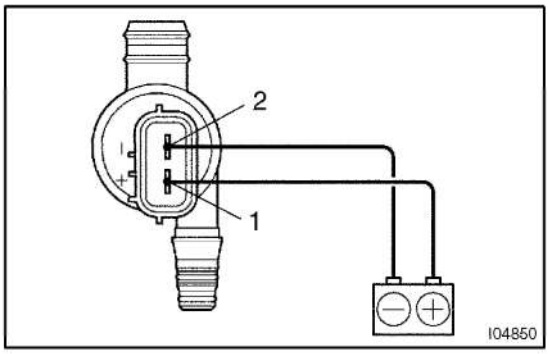
2. INSPECT HEADLIGHT CLEANER RELAY OPERATION

(a) Check that there is no continuity between terminals 2 and 5.

(b) Connect the positive (+) lead from the battery to terminals 1 and 5, and the negative (–) lead to terminal 3.

(c) Connect the negative (–) lead from the battery to terminal 4, and check that continuity exists between terminals 2 and 5 for 0.4 – 0.6 seconds, then there is no continuity.

If operation is not as specified, replace the motor.



3. INSPECT HEADLIGHT CLEANER MOTOR OPERATION

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

NOTICE:

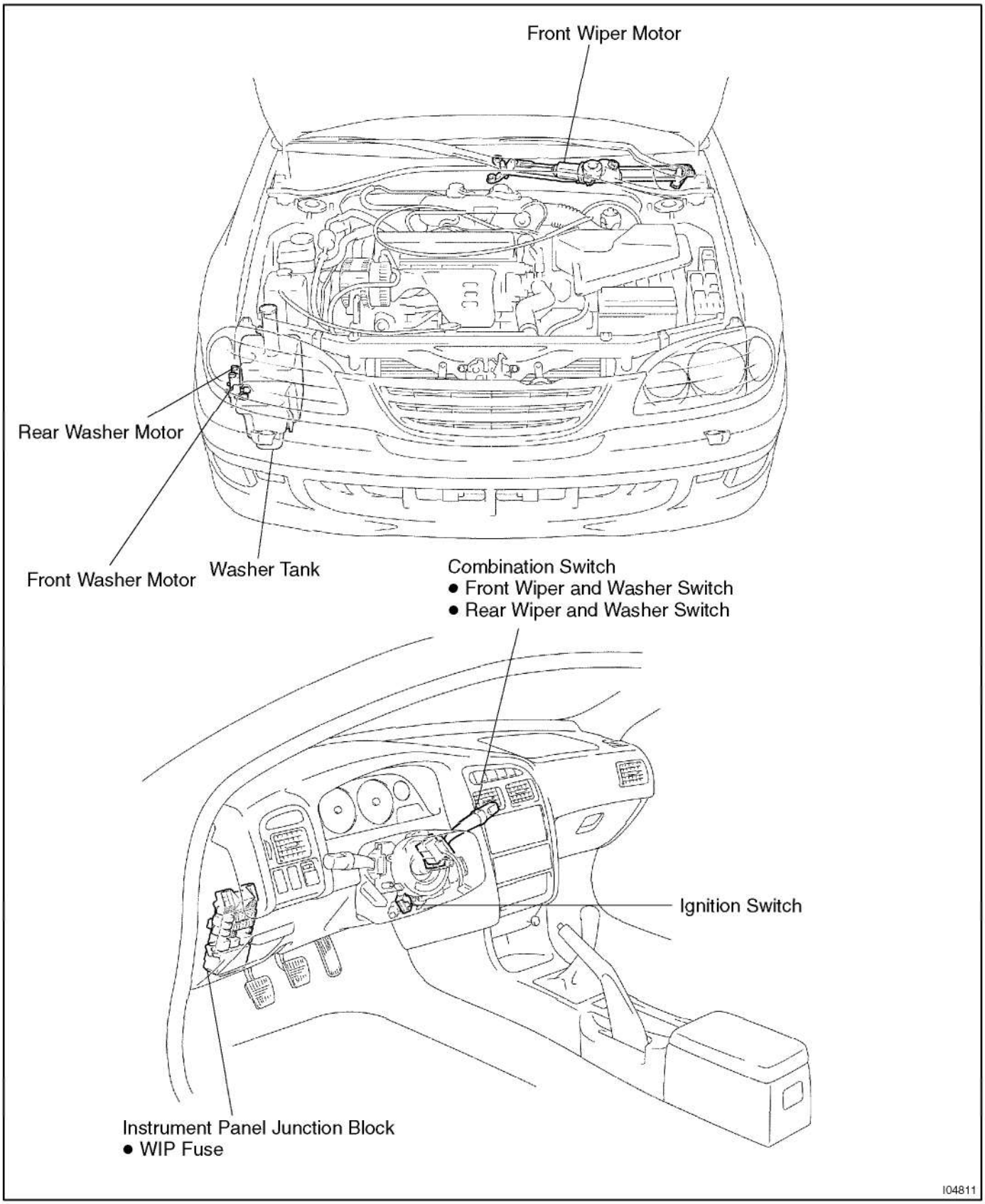
These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.

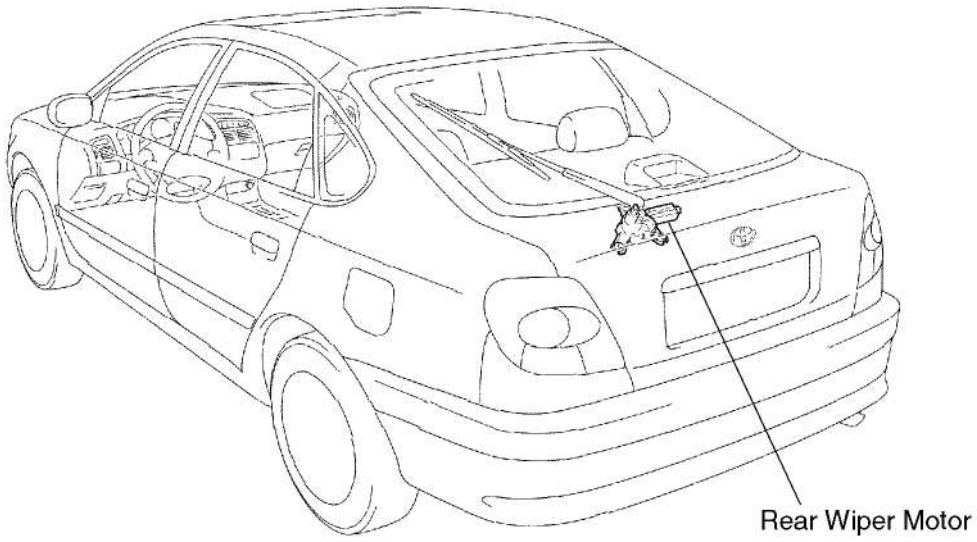
WIPER AND WASHER SYSTEM

LOCATION

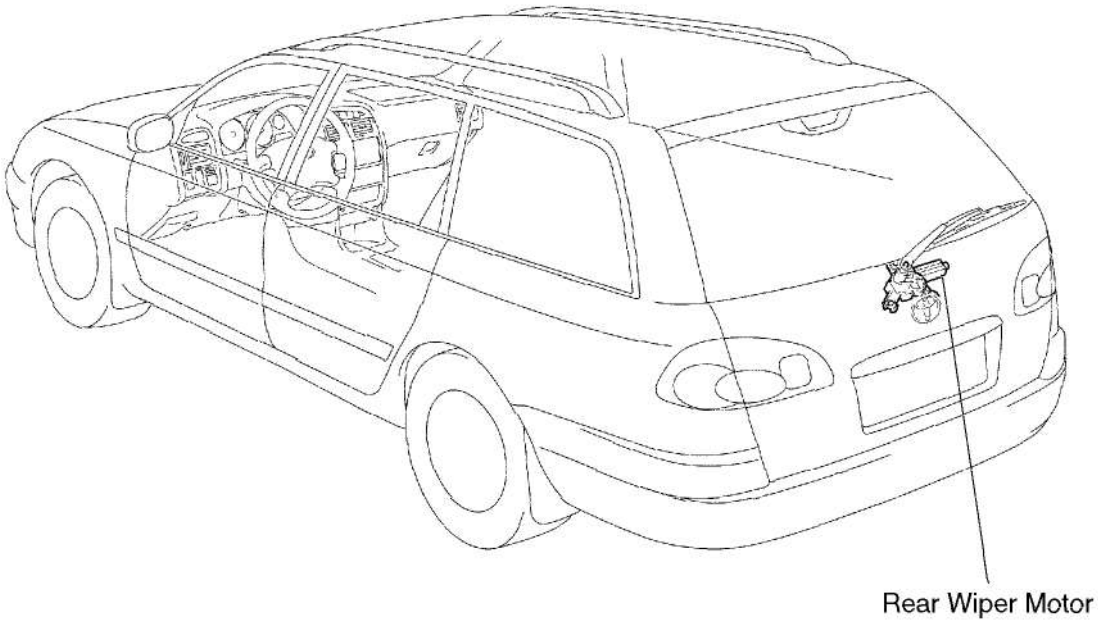
BE0NZ–01



Liftback Model:



Wagon Model:

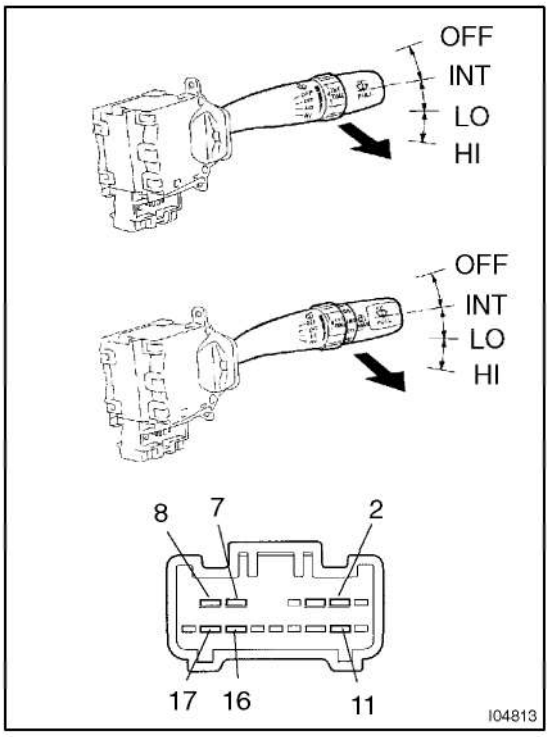


I04812

5E0C0-01

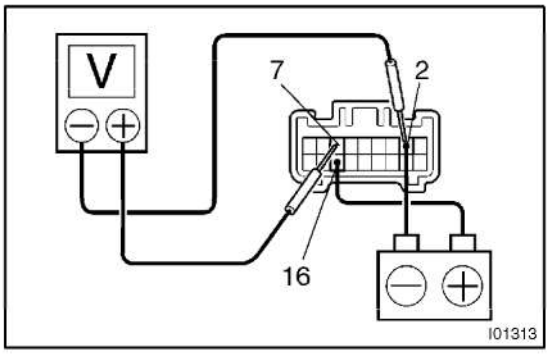
INSPECTION

1. INSPECT FRONT WIPER AND WASHER SWITCH CONTINUITY



Switch position	Tester connection	Specified condition
OFF	7 – 16	Continuity
INT (w/ Intermittent wiper)	7 – 16	Continuity
LO	7 – 17	Continuity
HI	8 – 17	Continuity
Washer ON	2 – 11	Continuity

If continuity is not as specified, replace the switch.



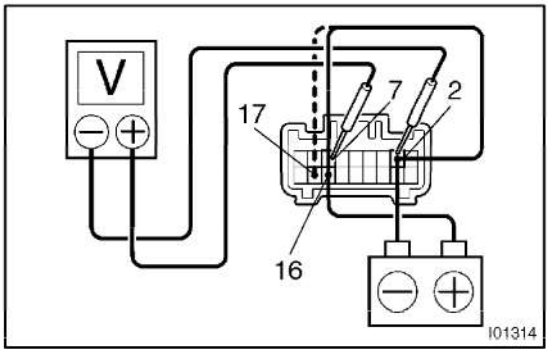
2. INSPECT FRONT WIPER INTERMITTENT OPERATION

(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 16 and the negative (–) lead to terminal 2.

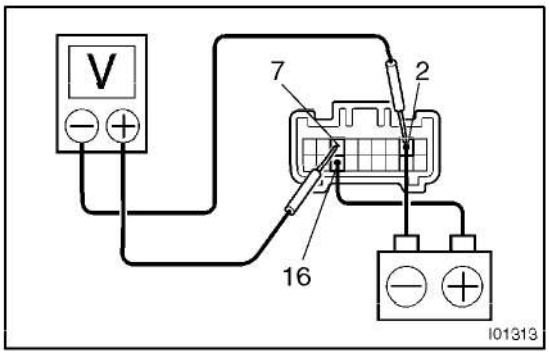
(d) Connect the positive (+) lead from the voltmeter to terminal 7 and the negative (–) lead to terminal 2, check that the meter needle indicates battery voltage.



(e) After connecting terminal 16 to terminal 17, connect terminal 2 to terminal 17, check the voltage rises from 0 volts to battery voltage within the time, as shown in the table.

INT time control switch position	Voltage
FAST	Approx. 1 ~ 3 sec. Battery voltage 0 Volt
SLOW	Approx. 10 ~ 15 secs. Battery voltage 0 Volt

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

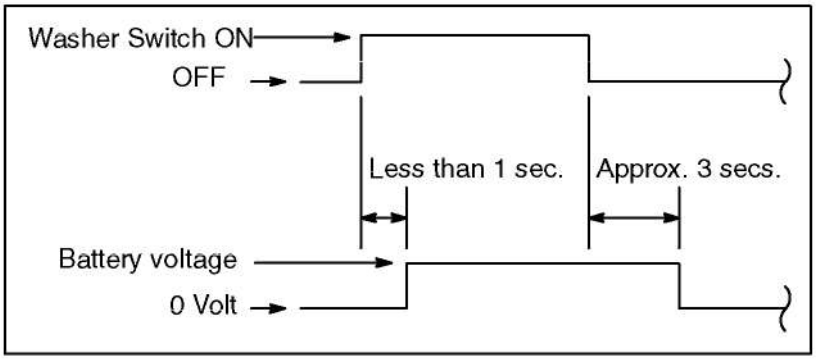


3. INSPECT FRONT WASHER LINKED OPERATION

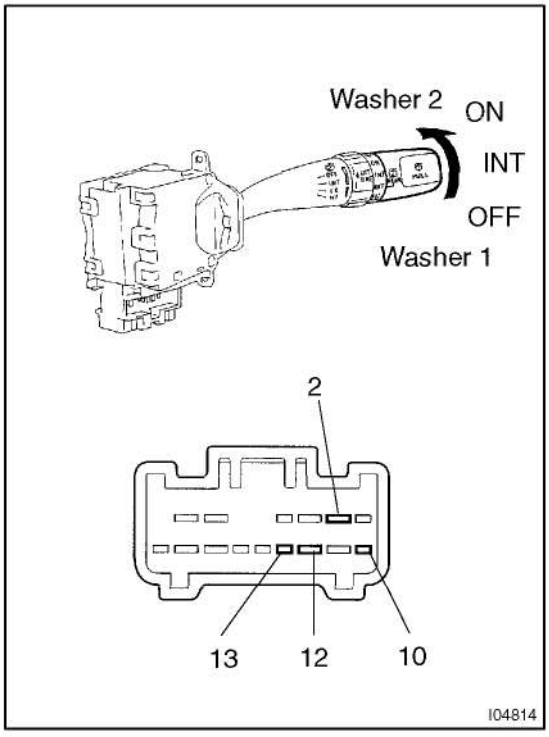
(a) Connect the positive (+) lead from the battery to terminal 16 and the negative (–) lead to terminal 2.

(b) Connect the positive (+) lead from the voltmeter to terminal 7 and the negative (–) lead to terminal 2.

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



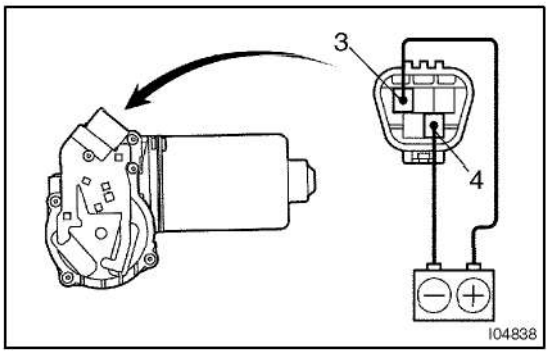
If operation is not as specified, replace the wiper and washer switch.



4. INSPECT REAR WIPER AND WASHER SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
Washer 1	2 – 12	Continuity
OFF	–	No continuity
INT	2 – 13	Continuity
ON	2 – 10	Continuity
Washer 2	2 – 10 – 12	Continuity

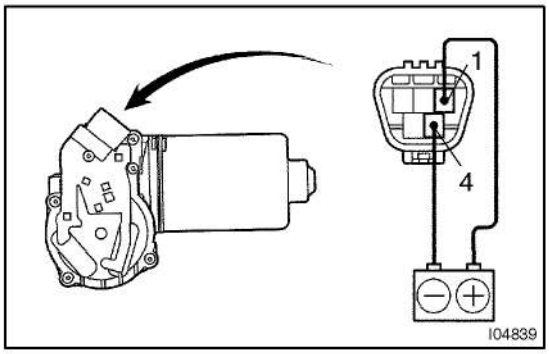
If continuity is not as specified, replace the switch.



5. LHD Models:
INSPECT FRONT WIPER MOTOR OPERATION
Low Speed:

Connect the positive (+) lead from the battery to terminal 3 and the negative (–) lead to terminal 4, check that the motor operates at low speed.

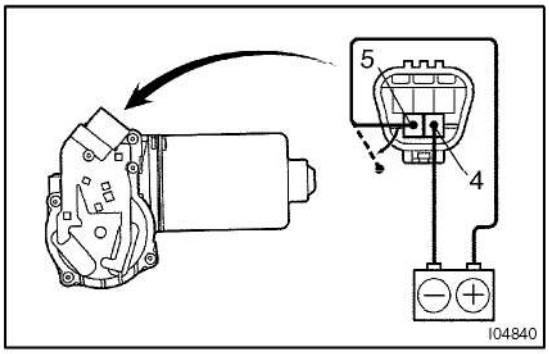
If operation is not as specified, replace the motor.



6. LHD Models:
INSPECT FRONT WIPER MOTOR OPERATION
High Speed:

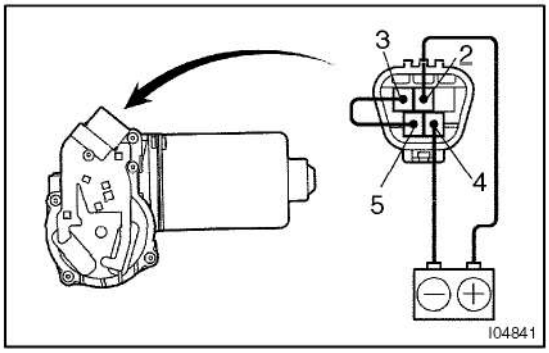
Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 4, check that the motor operates at high speed.

If operation is not as specified, replace the motor.



7. LHD Models:
INSPECT FRONT WIPER MOTOR OPERATION
Stop at Stop Position:

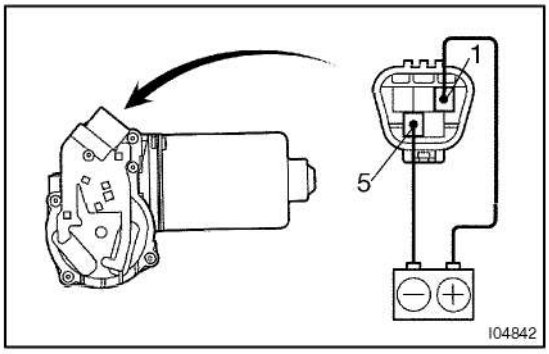
(a) Operate the motor at low speed and stop the motor operation anywhere except at the stop position by disconnecting positive (+) lead from terminal 5.



(b) Connect terminals 3 and 5.

(c) Connect the positive (+) lead from the battery to terminal 2 and negative (–) lead to terminal 4, check that the motor stops running at the stop position after the motor operates again.

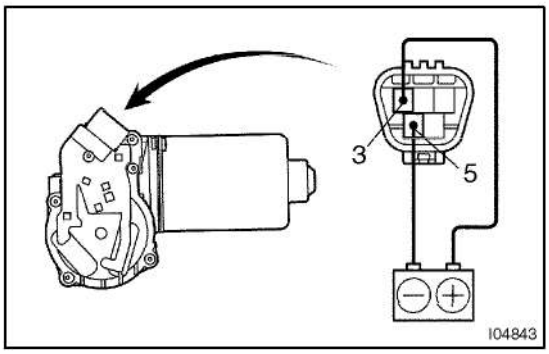
If operation is not as specified, replace the motor.



8. RHD Models:
INSPECT FRONT WIPER MOTOR OPERATION
Low Speed:

Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 5, check that the motor operates at low speed.

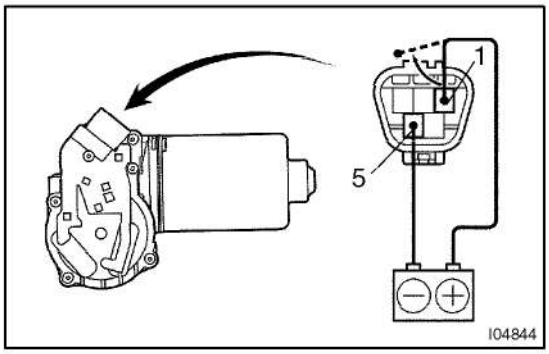
If operation is not as specified, replace the motor.



9. RHD Models:
INSPECT FRONT WIPER MOTOR OPERATION
High Speed:

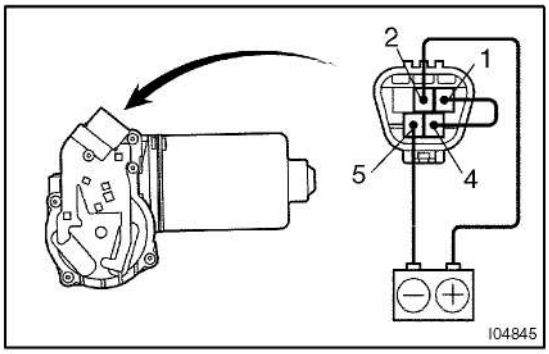
Connect the positive (+) lead from the battery to terminal 3 and the negative (–) lead to terminal 5, check that the motor operates at high speed.

If operation is not as specified, replace the motor.



10. RHD Models:
INSPECT FRONT WIPER MOTOR OPERATION
Stop at Stop Position:

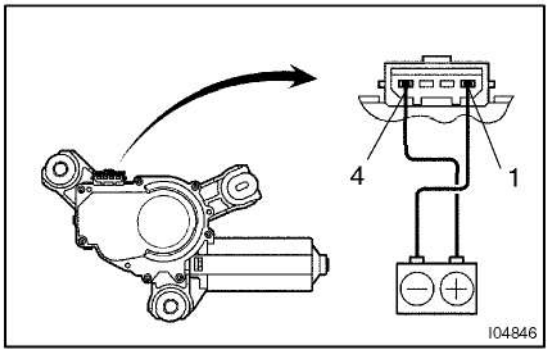
(a) Operate the motor at low speed and stop the motor operation anywhere except at the stop position by disconnecting positive (+) lead from terminal 1.



(b) Connect terminals 1 and 4.

(c) Connect the positive (+) lead from the battery to terminal 2 and negative (–) lead to terminal 5, check that the motor stops running at the stop position after the motor has operated again.

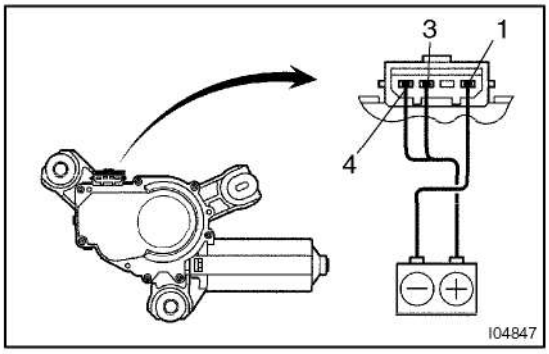
If operation is not as specified, replace the motor.



11. INSPECT REAR WIPER MOTOR OPERATION

Connect the positive (+) lead from the battery to terminal 4 and the negative (–) lead to terminal 1, check that the motor operates.

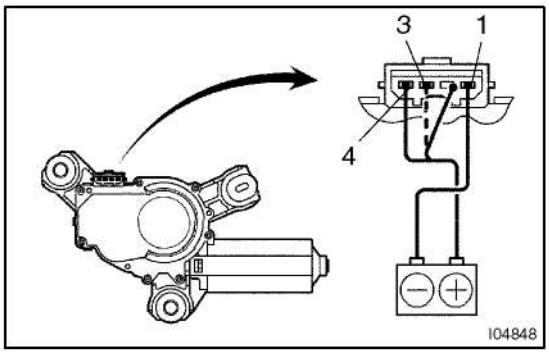
If operation is not as specified, replace the motor.



12. INSPECT REAR WIPER MOTOR AND RELAY INTERMITTENT OPERATION

Connect the positive (+) lead from the battery to terminal 3 and 4, and the negative (–) lead to terminal 1, and check that the motor operates intermittently for 9 – 15 seconds.

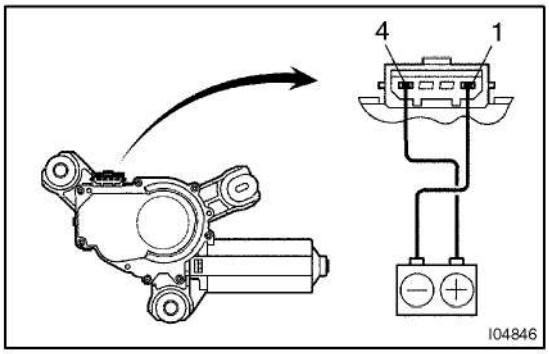
If operation is not as specified, replace the motor and relay.



13. INSPECT REAR WIPER MOTOR OPERATION

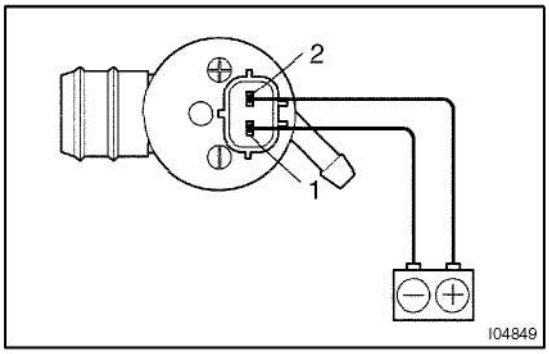
Stop at Stop Position:

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



(b) Connect the positive (+) lead from the battery to terminal 4 and negative (–) lead to terminal 1, check that the motor stops running at the stop position after the motor has operated again.

If operation is not as specified, replace the motor.



14. 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:

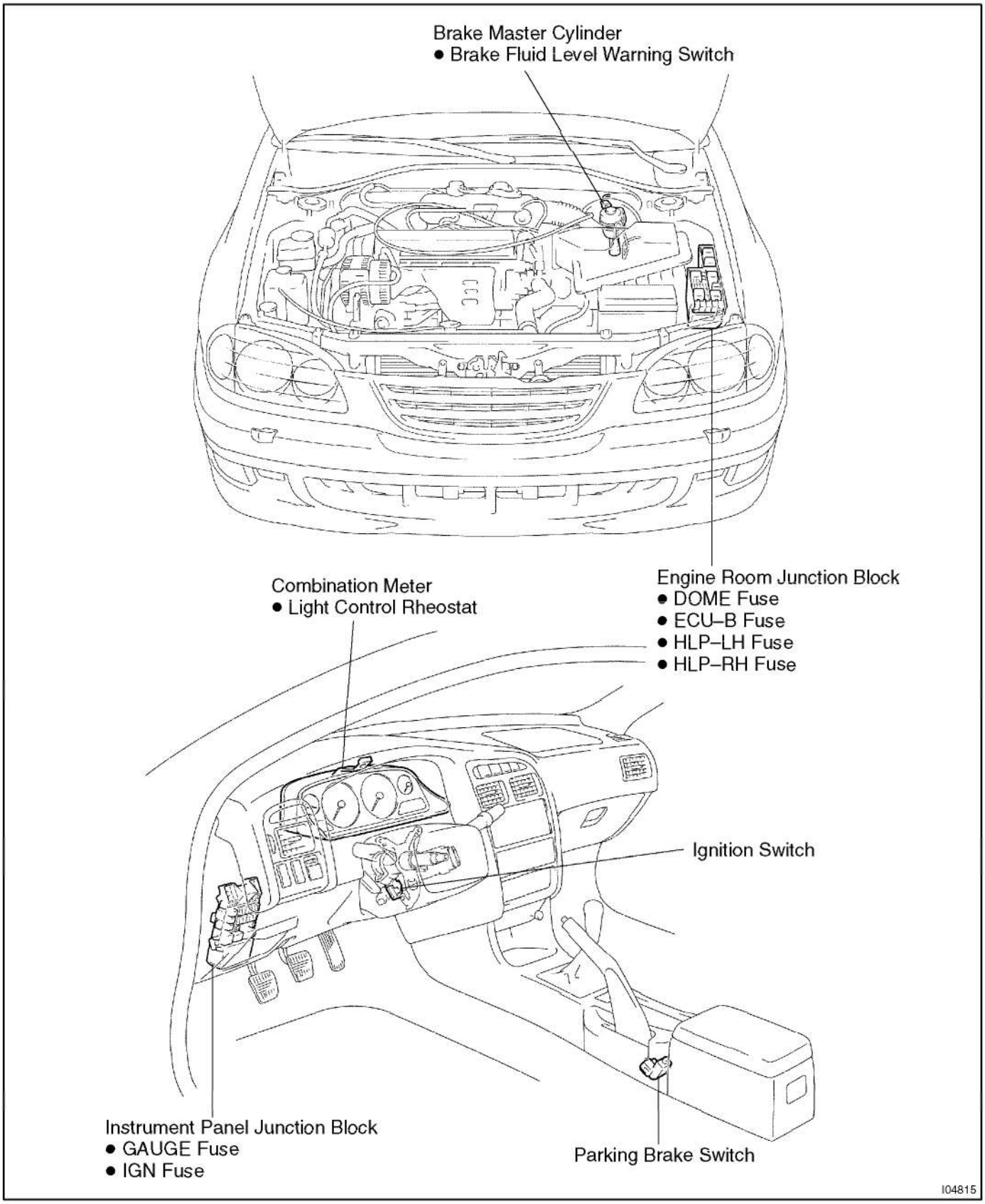
These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.

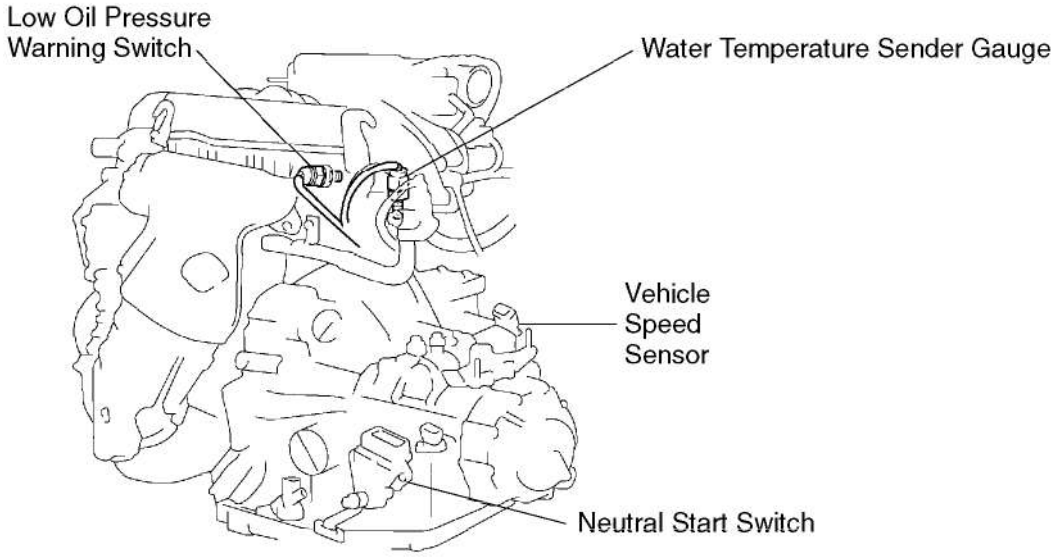
COMBINATION METER

LOCATION

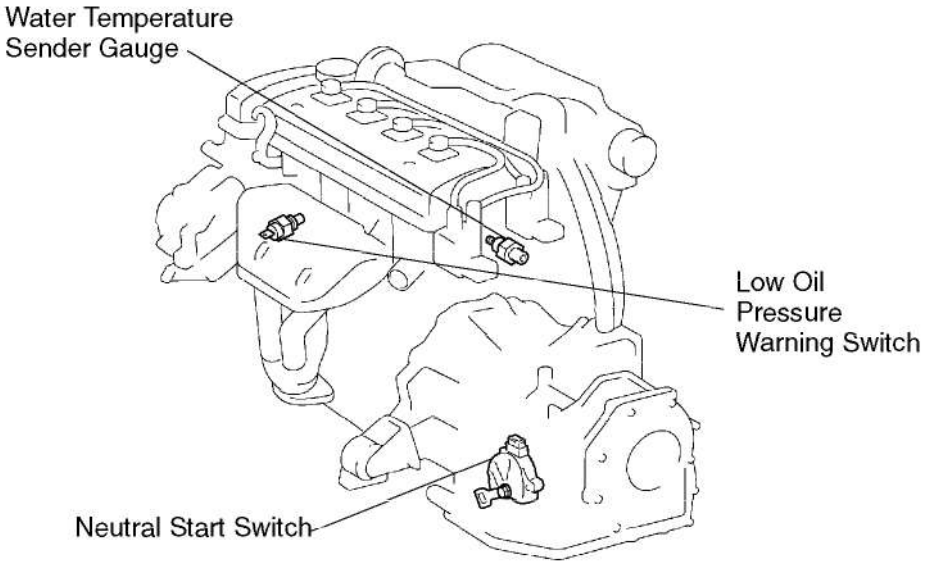
BE0O1–01



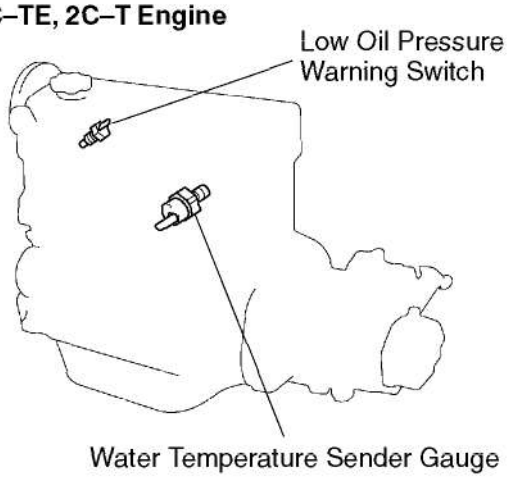
3S–FE Engine



7A–FE, 4A–FE Engine

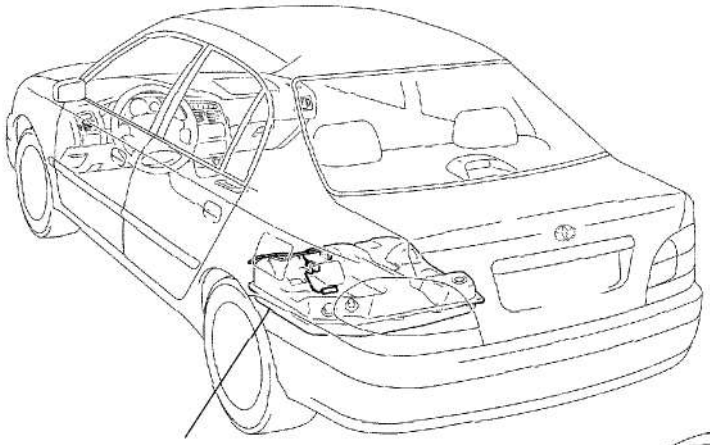


2C–TE, 2C–T Engine



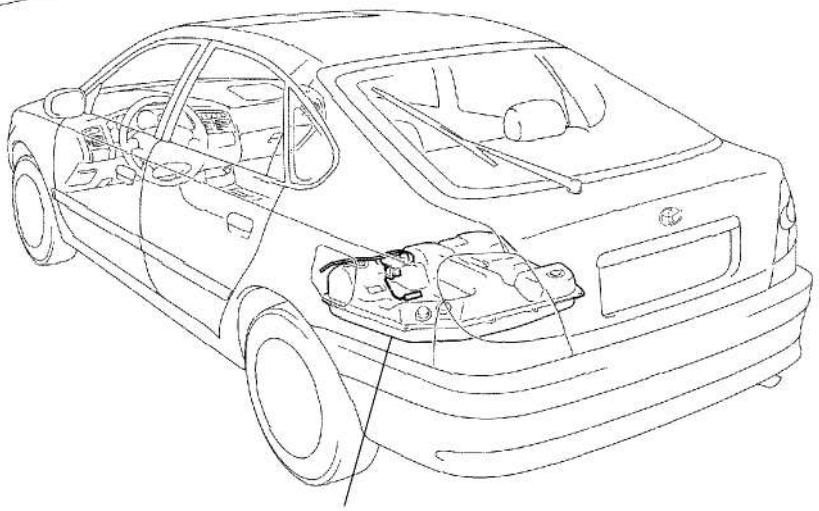
I04816

Sedan Model:



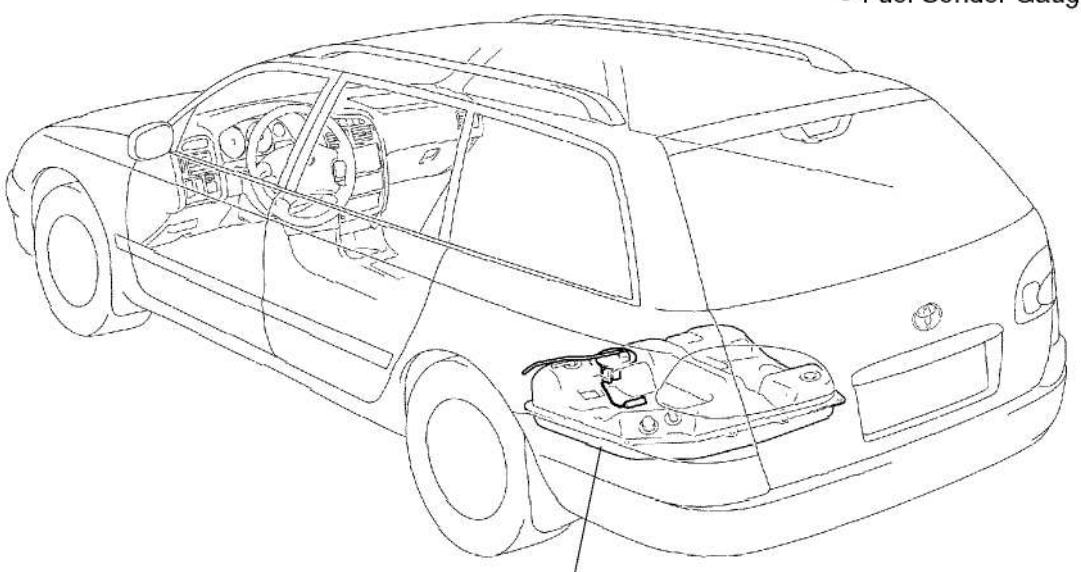
Fuel Tank
● Fuel Sender Gauge

Liftback Model:



Fuel Tank
● Fuel Sender Gauge

Wagon Model:

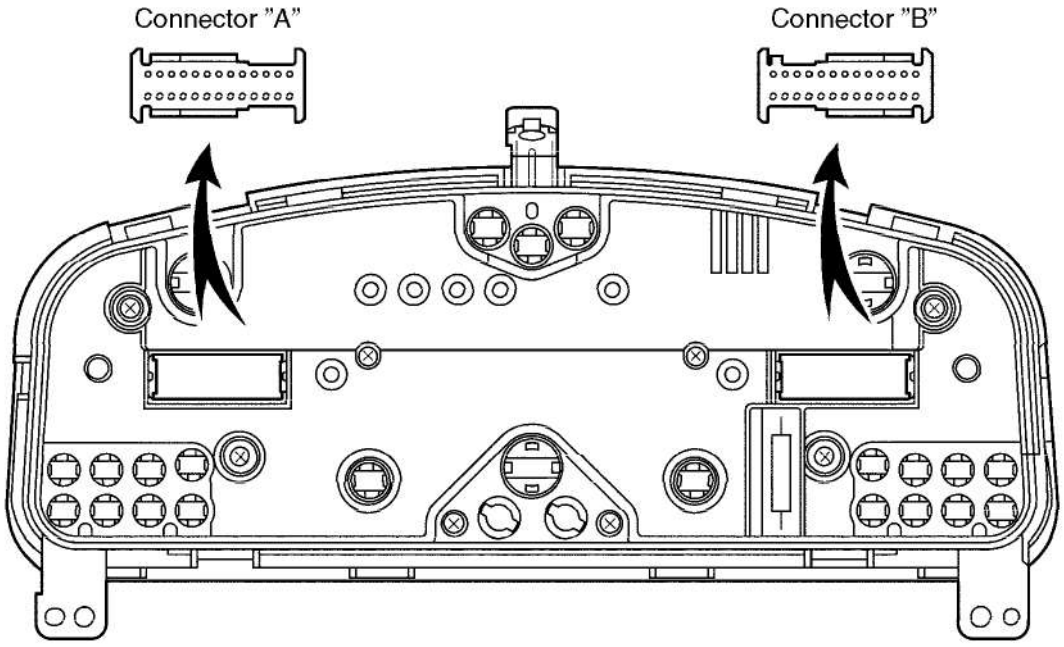


Fuel Tank
● Fuel Sender Gauge

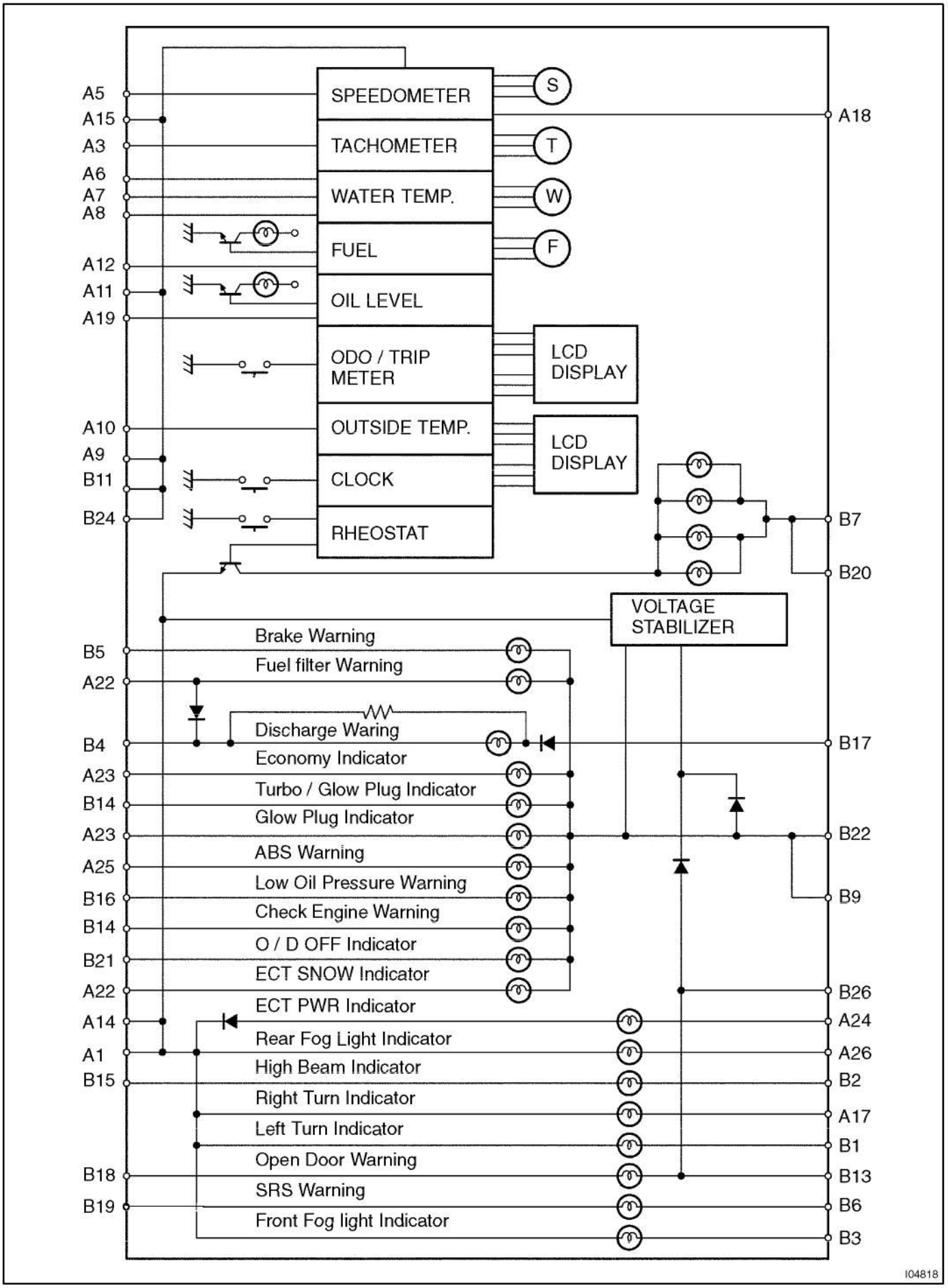
I04857

5E028-02

CIRCUIT



I04817


A5
A15
A3
A6
A7
A8
A12
A11
A19
A10
A9
B11
B24
B5
A22
B4
A23
B14
A23
A25
B16
B14
B21
A22
A14
A1
B15
B18
B19
SPEEDOMETER
TACHOMETER
WATER TEMP.
FUEL
OIL LEVEL
ODO / TRIP METER
OUTSIDE TEMP.
CLOCK
RHEOSTAT
S
T
W
F
LCD DISPLAY
LCD DISPLAY
A18
B7
B20
VOLTAGE STABILIZER
Brake Warning
Fuel filter Warning
Discharge Waring
Economy Indicator
Turbo / Glow Plug Indicator
Glow Plug Indicator
ABS Warning
Low Oil Pressure Warning
Check Engine Warning
O / D OFF Indicator
ECT SNOW Indicator
ECT PWR Indicator
Rear Fog Light Indicator
High Beam Indicator
Right Turn Indicator
Left Turn Indicator
Open Door Warning
SRS Warning
Front Fog light Indicator
B17
B22
B9
B26
A24
A26
B2
A17
B1
B13
B6
B3
I04818

No.		Wire Harness Side
A	1	Ground (Power)
	3	Tacho Pick–UP Sensor EFI ECU (3S–FE, 2C–TE Engine) EGR (2C–T Engine)
	5	Vehicle Speed Sensor
	6	EFI ECU
	7	Water Temperature Sender Gauge (2C–T Engine)
	8	Ground (Engine)
	9	Ground
	10	Outside Temperature Sender Gauge
	11	Ground (Fuel)
	12	Fuel Sender Gauge
	14	Ground (Power)
	15	Ground (Speed)
	17	Turn Signal Switch (Right)
	18	Other Parts
	19	Oil Level Warning Switch
	21	O/D OFF Switch
	22	ECT ECU (Gasoline Engine) Fuel Filter Warning Switch (Diesel Engine)
	23	Glow Plug Timer (Diesel Engine) EFI ECU (Gasoline Engine)
	24	ECT Pattern Select Switch
	25	ABS ECU
	26	Rear Fog Light Switch
B	1	Turn Signal Switch (Left)
	2	H–LP Fuse
	3	Front Fog Light Switch
	4	Alternator L Terminal
	5	Brake Fluid Level Warning Switch Parking Brake Switch
	6	ECU+B Fuse
	7	Taillight Relay
	9	GAUGE Fuse
	11	Ground (Signal)
	13	DOOR Fuse
	14	EFI ECU (Gasoline Engine) EGR ECU (Diesel Engine)
	15	Headlight Dimmer Switch
	16	Low Oil Pressure Warning Switch
	17	IGN Fuse
	18	Door Courtesy Switch
	19	Airbag ECU
	20	Taillight Relay
	22	GAUGE Fuse
	24	Ground (Signal)
	26	DOOR Fuse

5E0C2-01

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.

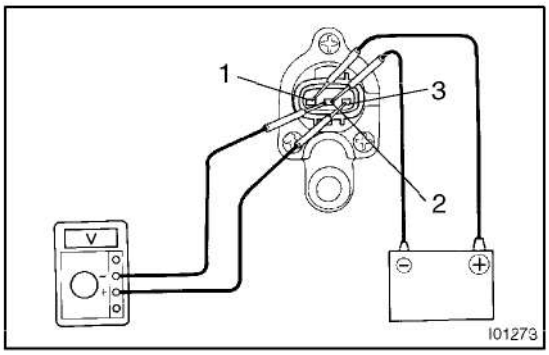
Europe Models

(mph)		(km/h)	
Standard indication	Allowable range	Standard indication	Allowable range
20	20 – 24.5	20	20 – 26
40	40 – 46.5	40	40 – 48
60	60 – 68.5	60	60 – 70
80	80 – 90.5	80	80 – 92
100	100 – 112.5	100	100 – 114
		120	120 – 136
		140	140 – 158
		160	160 – 180

General Countries

(mph)		(km/h)	
Standard indication	Allowable range	Standard indication	Allowable range
20	21 – 23.5	20	21 – 25
40	41.5 – 44	40	41.5 – 46
60	62.5 – 66	60	62.5 – 67
80	83 – 87	80	83 – 88
100	104 – 108.5	100	104 – 109
		120	125 – 130.5
		140	145.5 – 151..5
		160	166 – 173

If error is excessive, replace the speedometer.



2. w/o Speedometer cable:
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 the negative (–) lead to terminal 2.
(c) Rotate the shaft.
(d) Check that the voltage changes from approx. 0 V to 11 V or more between terminals 2 and 3.

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

3. INSPECT TACHOMETER/
ON–VEHICLE

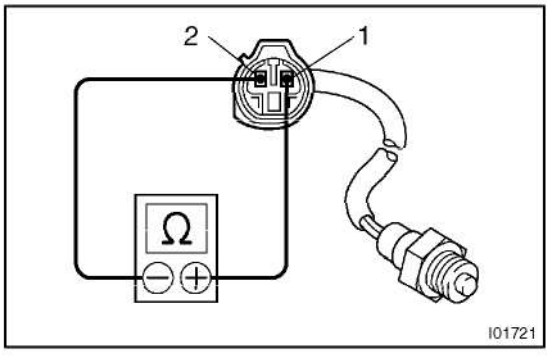
(a) Connect a tune–up test tachometer, and start the engine.

NOTICE:

- **Reversing the connection of the tachometer will damage the transistors and diodes inside.**
- **When removing or installing the tachometer, be careful not to drop or subject it to heavy shocks.**

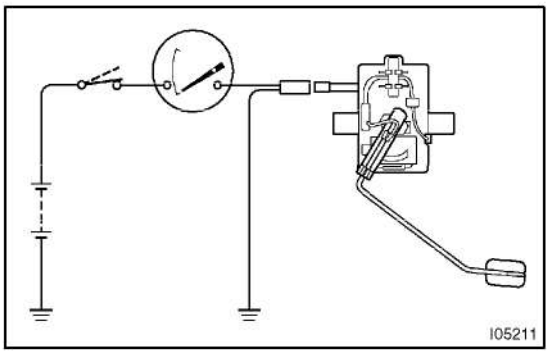
(b) Compare the tester and tachometer indications.
DC 13.5 V 25 °C at (77°F)

Standard indication	Allowable range
700	630 – 770
1,000	900 – 1,100
2,000	1,850 – 2,150
3,000	2,800 – 3,200
4,000	3,800 – 4,200
5,000	4,800 – 5,200
6,000	5,750 – 6,250
7,000	6,700 – 7,300



4. Diesel Engine Models:
INSPECT PICK–UP SENSOR

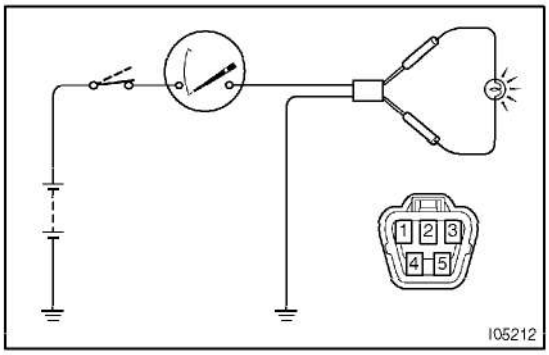
Measure the resistance between terminals 1 and 2.
Resistance: Approx. 810 Ω at 20 °C
If resistance value is not as specified, replace the sensor.



5. INSPECT FUEL RECEIVER GAUGE OPERATION

(a) Disconnect the connector from the sender gauge.

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



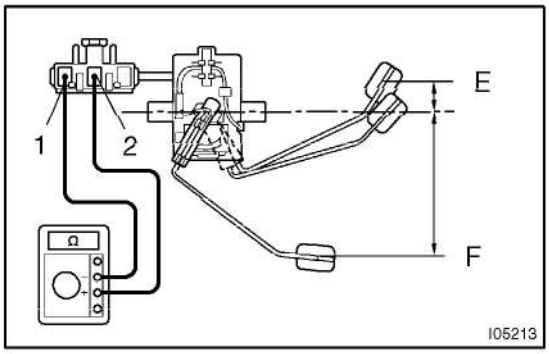
(c) Connect terminals 2 and 3 on the wire harness side connector through a 3.4 W test bulb.

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

HINT:

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

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

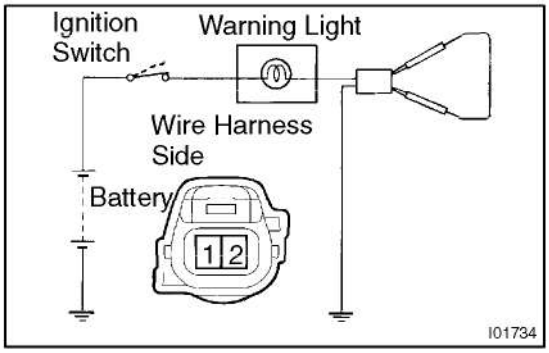


6. INSPECT FUEL SENDER GAUGE RESISTANCE

Measure the resistance between terminals 1 and 2 for each float position.

Float position mm (in.)	Resistance (Ω)
F: Approx. 19.76 (0.78) ± 3 (0.12)	Approx. 4.0 ± 1.0
E: Approx. 92.7 (3.65) ± 3 (0.12)	Approx. 107.0 ± 1.0

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



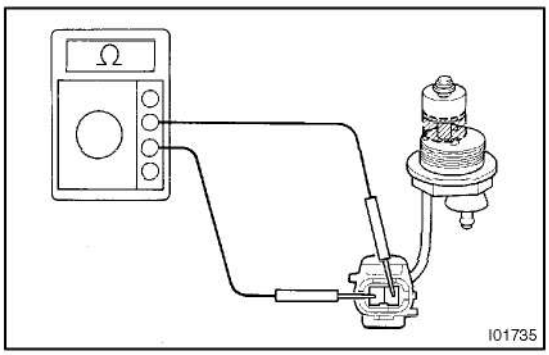
7. INSPECT FUEL FILTER WARNING LIGHT

(a) Disconnect the connector from the warning switch and connect terminals on the wire harness side connector.

(b) Remove the CHARGE fuse and turn the ignition switch ON.

(c) Check that the warning light lights up and the warning buzzer sounds.

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

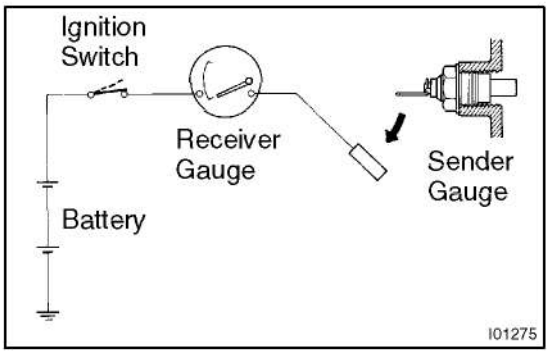


8. INSPECT FUEL FILTER WARNING SWITCH CONTINUITY

(a) Check that no continuity exists between the terminals with the switch OFF (float down).

(b) Check that continuity exists between the terminals with the switch ON (float up)

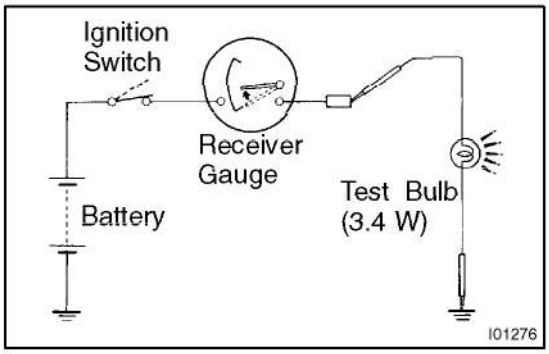
If operation is not as specified, replace the switch.



9. INSPECT ENGINE COOLANT TEMPERATURE RECEIVER GAUGE OPERATION

(a) Disconnect the connector from the sender gauge.

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



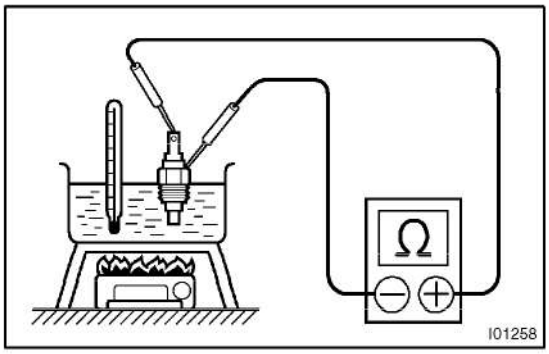
(c) Ground terminal on the wire harness side connector through a 3.4 W test bulb.

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

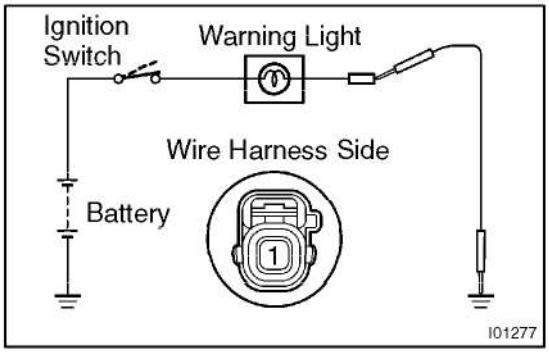


10. INSPECT ENGINE COOLANT TEMPERATURE SENDER GAUGE RESISTANCE

Measure the resistance between the 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.

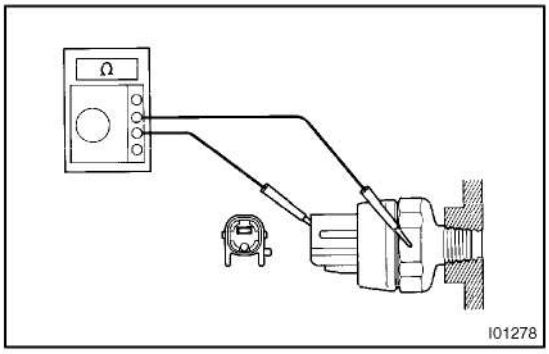


11. INSPECT LOW OIL PRESSURE WARNING LIGHT

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

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

If the warning light does not light up, test the bulb.



12. INSPECT LOW OIL PRESSURE SWITCH CONTINUITY

(a) Disconnect the connector from the switch.

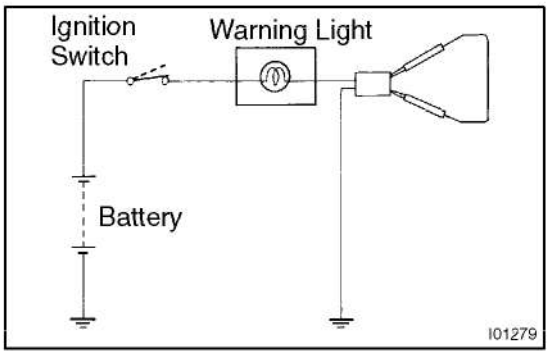
(b) Check that continuity exists between terminal and ground with the engine stopped.

(c) Check that no continuity exists between terminal and ground with the engine running.

HINT:

Oil pressure should be over 24.5 kPa (0.25 kgf/cm^2, 3.55 psi).

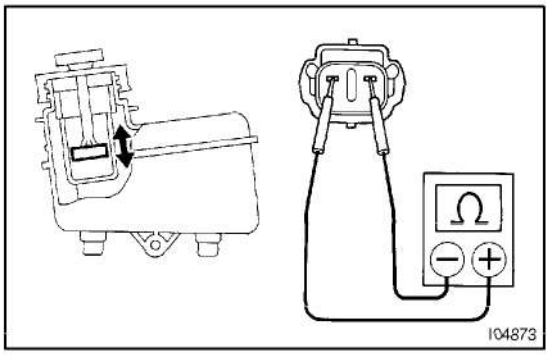
If operation is not as specified, replace the switch.



13. Gasoline Engine:
INSPECT BRAKE WARNING LIGHT

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

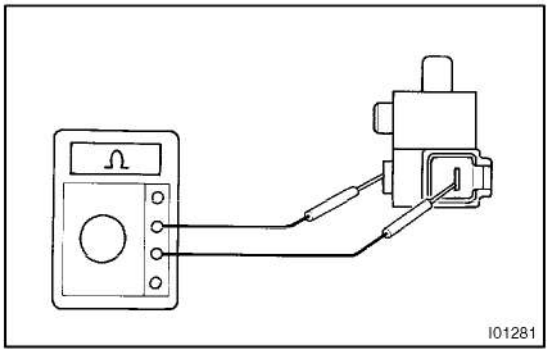
If the warning light does not light up, test the bulb or wire harness.



14. Gasoline Engine:
INSPECT BRAKE FLUID LEVEL WARNING SWITCH CONTINUITY

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

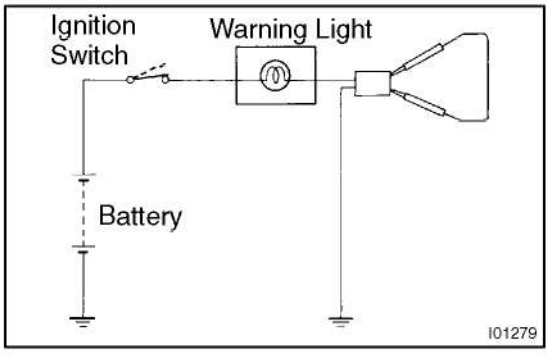
If operation is not as specified, replace the switch.



15. Gasoline Engine:
INSPECT PARKING BRAKE SWITCH CONTINUITY

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

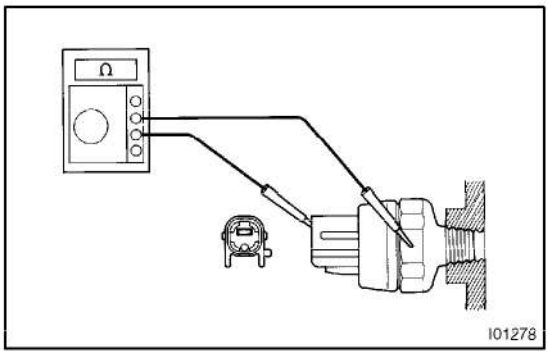
If operation is not as specified, replace the switch or inspect ground point.

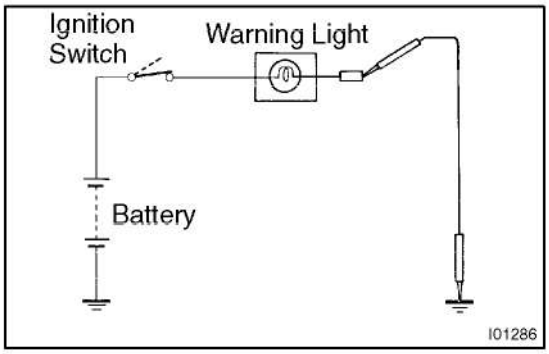


16. Diesel Engine:
INSPECT BRAKE WARNING LIGHT

(a) Disconnect the connector from the vacuum switch and ground terminal on the wire harness side connector.
(b) Turn the ignition switch ON, and check that the warning light lights up.

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





17. Diesel Engine:
INSPECT VACUUM SWITCH CONTINUITY

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

(b) Check that continuity exists between the terminal and ground with the engine running.

HINT:

Oil pressure should be over 13.3 kPa (100 mmHg, 3.94 in.Hg)

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

18. INSPECT OPEN DOOR WARNING LIGHT

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

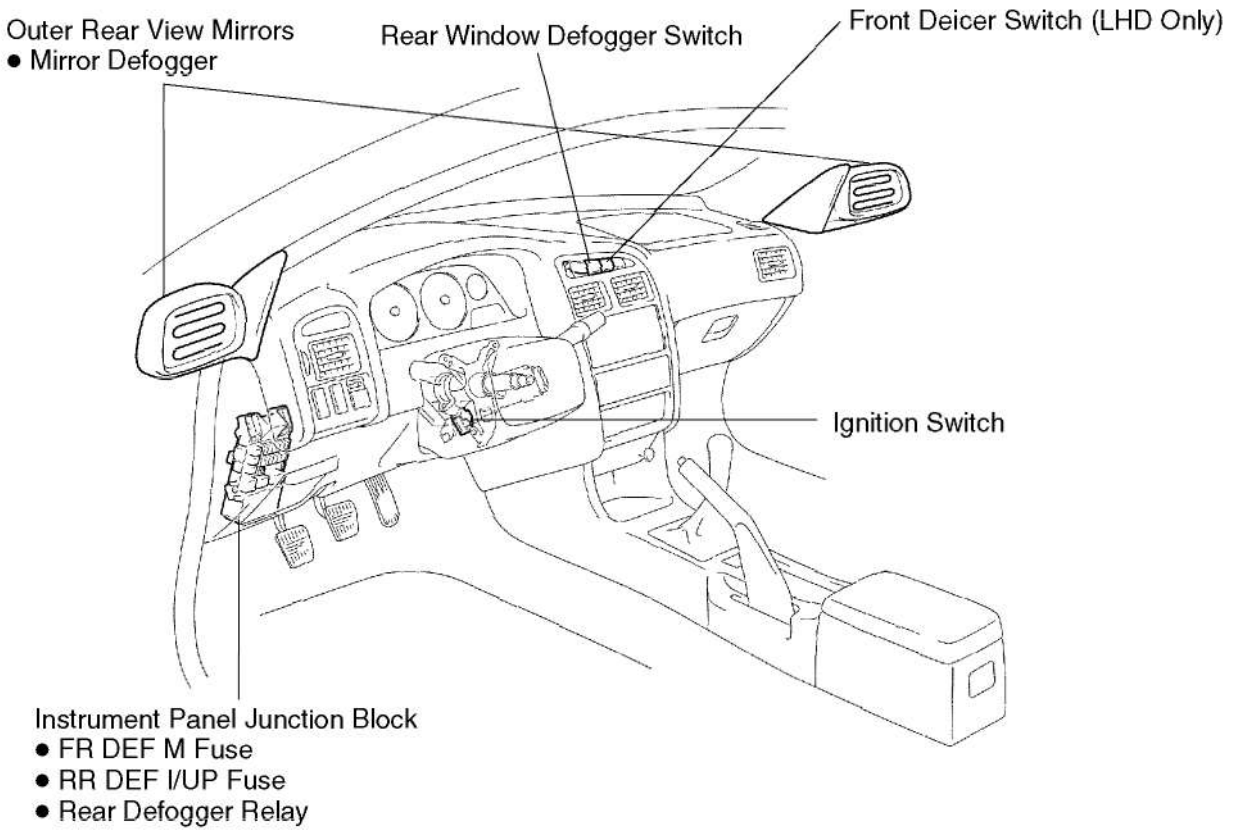
If the warning light does not light up, inspect the bulb or wire harness.

19. INSPECT DOOR COURTESY SWITCH CONTINUITY
(See page BE–39)

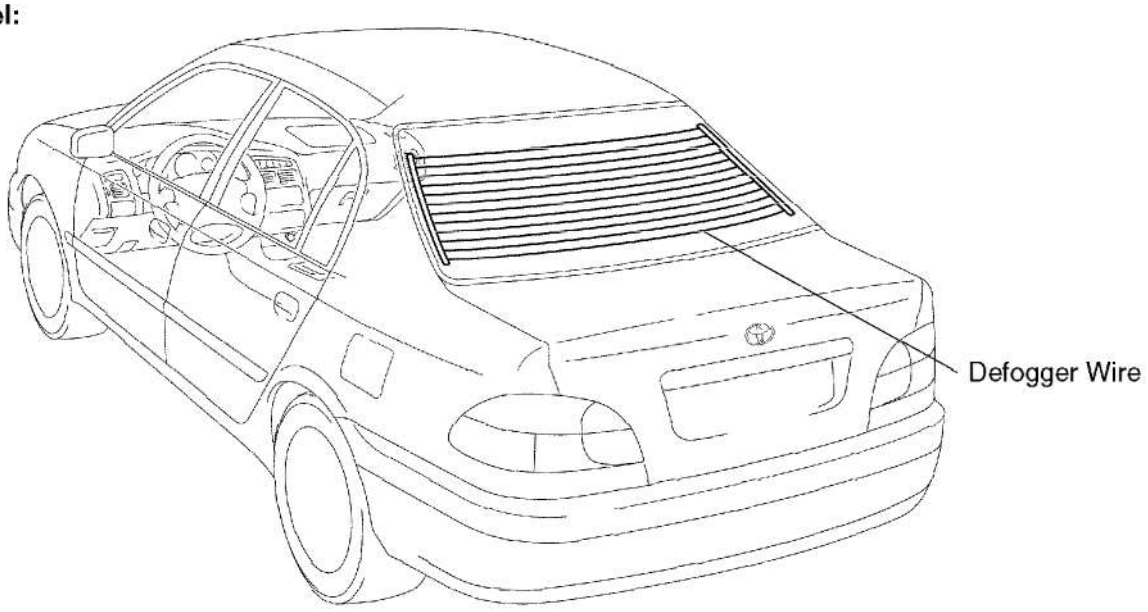
DEFOGGER SYSTEM

LOCATION

BE0CG-01

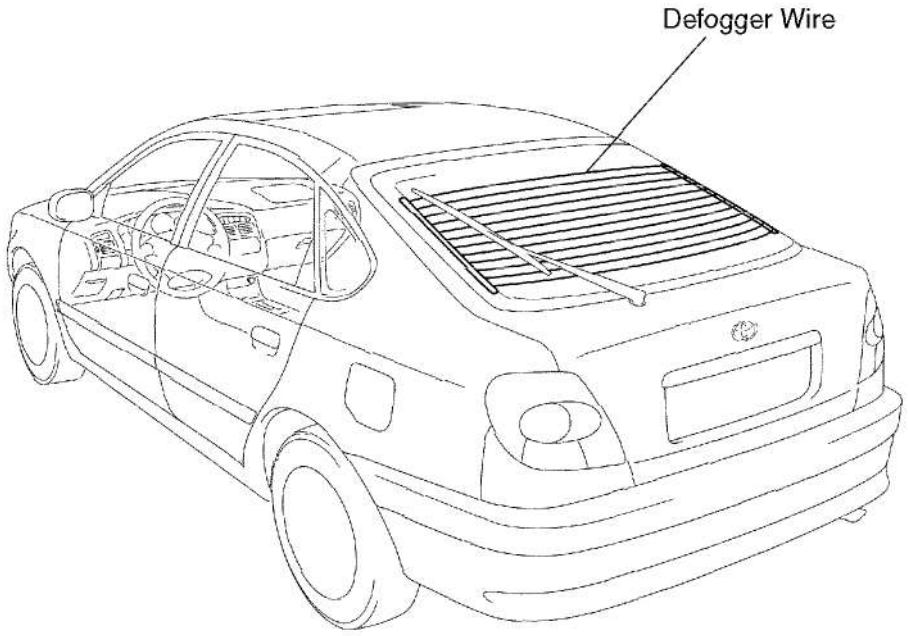


Sedan Model:

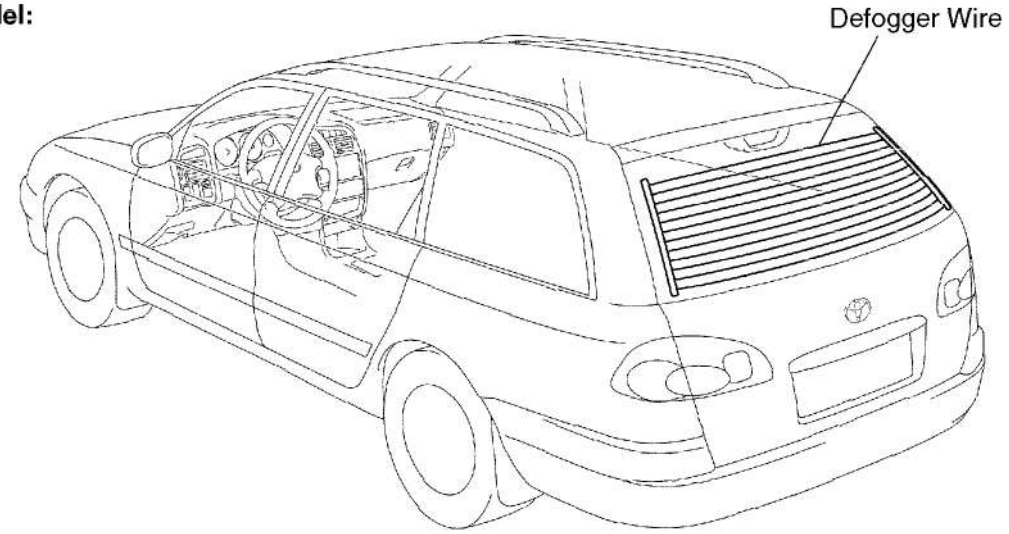


I04819

Liftback Model:



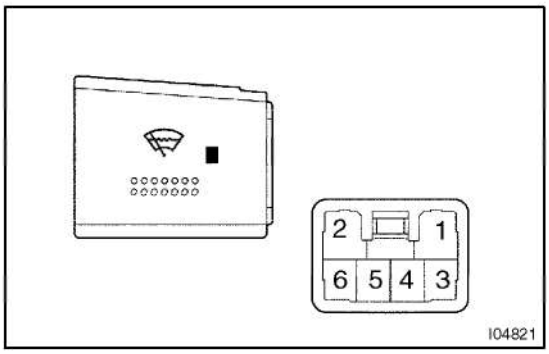
Wagon Model:



I04820

5E0O4–01

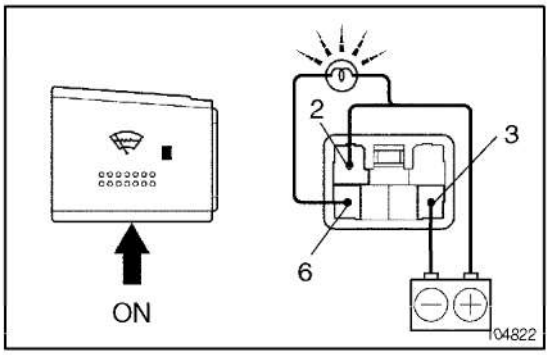
INSPECTION



1. INSPECT FRONT DEICER SWITCH CONTINUITY

Check that continuity exists between terminals 1 and 4.

If continuity is not as specified, replace the bulb.



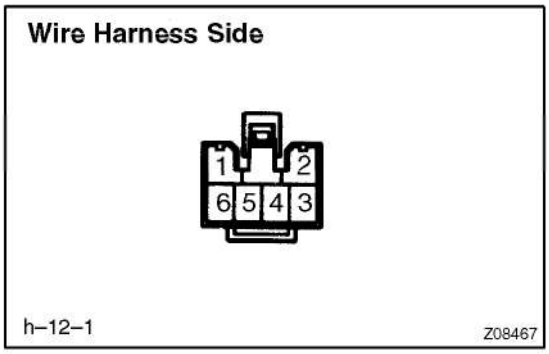
2. INSPECT DEICER TIMER OPERATION

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

(b) Connect the positive (+) lead from the battery to terminal 4 through a 3.4 W test bulb.

(c) Push the defogger switch ON, check that the indicator light and test bulb light up for 12 for 18 minutes, then the indicator light and test bulb lights go out.

If operation is not as specified, replace the switch.



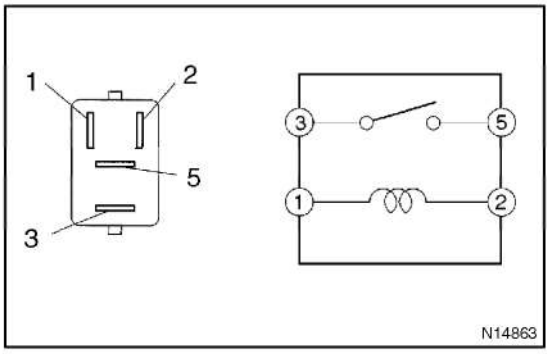
3. INSPECT DEICER TIMER CIRCUIT

Connector disconnected:

Disconnect the connector from the switch and inspect the connector on wire harness side, as shown in the table below.

Tester connection	Condition	Specified condition
3 – Ground	Constant	Continuity
1 – Ground	Ignition switch LOCK or ACC	No voltage
1 – Ground	Ignition switch LOCK	Battery voltage
6 – Ground	Ignition switch LOCK or ACC	No voltage
6 – Ground	Ignition switch ON	Battery voltage
–	Connect terminals 1 and 3	Defogger system operation is normal

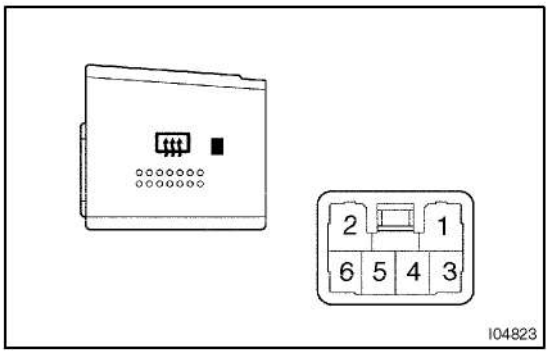
If the circuit is not as specified, replace the switch.



4. INSPECT DEICER RELAY CONTINUITY

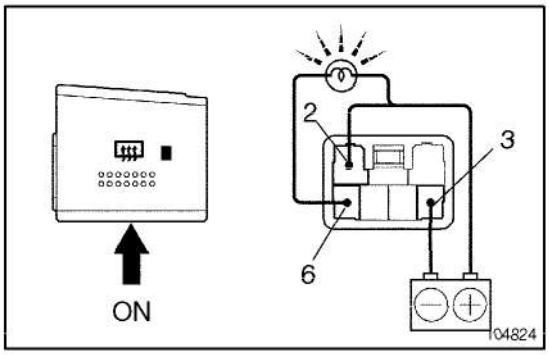
Condition	Tester connection	Specified condition
Constant	1 – 2	Continuity
Apply B+ between terminals 1 and 2.	3 – 5	Continuity

If continuity is not as specified, replace the relay.



5. INSPECT REAR DEFOGGER SWITCH CONTINUITY

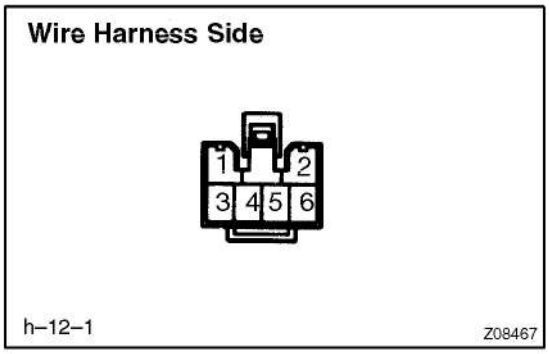
Check that continuity exists between terminals 1 and 4.
If continuity is not as specified, replace the bulb.



6. INSPECT DEFOGGER TIMER OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1 and negative (–) lead to terminal 3.
(b) Connect the positive (+) lead from the battery to terminal 4 through a 3.4 W test bulb.
(c) Push the defogger switch ON, check that the indicator light and test bulb light up for 12 for 18 minutes, then the indicator light and test bulb lights go out.

If operation is not as specified, replace the switch.



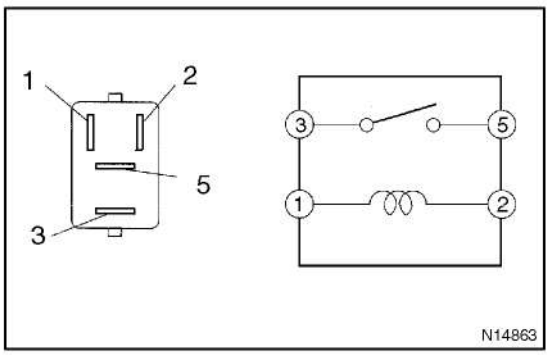
7. INSPECT DEFOGGER TIMER CIRCUIT

Connector disconnected:

Disconnect the connector from the switch and inspect the connector on wire harness side, as shown in the chart.

Tester connection	Condition	Specified condition
3 – Ground	Constant	Continuity
4 – Ground	Ignition switch LOCK or ACC	No voltage
4 – Ground	Ignition switch ON	Battery voltage
5 – Ground	Ignition switch LOCK or ACC	No voltage
5 – Ground	Ignition switch ON	Battery voltage
–	Connect terminals 3 and 5	Defogger system operation is normal

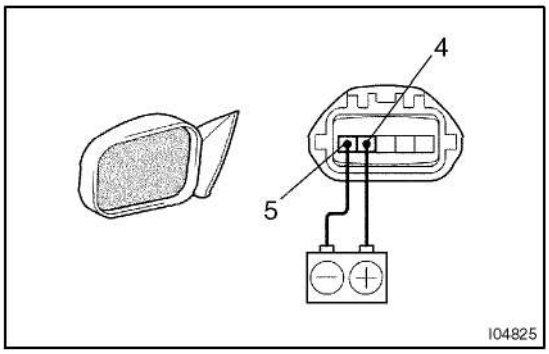
If the circuit is not as specified, replace the switch.



8. 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.



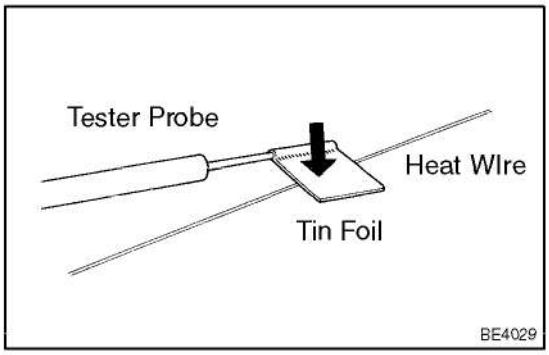
9. w/ Heater:
INSPECT MIRROR DEFOGGER

(a) Connect the positive (+) lead from the battery to terminal 4 and the negative (–) lead to terminal 5.

(b) Check that the mirror becomes warm.

HINT:

It will take a short time for the mirror to become warm.



10. INSPECT DEFOGGER WIRE

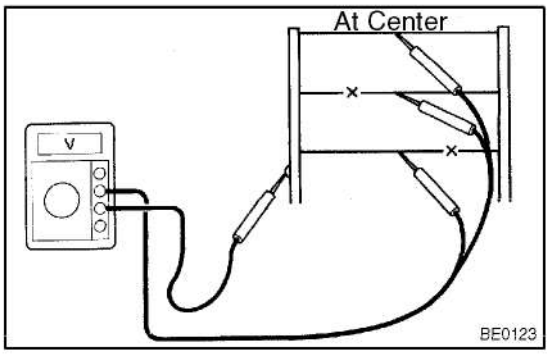
NOTICE:

- **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, wrap 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.

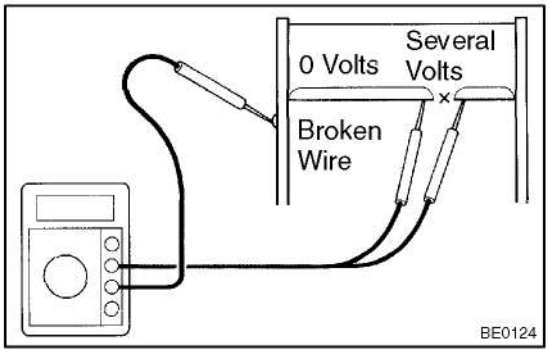
(c) Inspect the voltage at the center of each heat wire, as shown.



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

HINT:

If the voltage is approx. 10V 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:

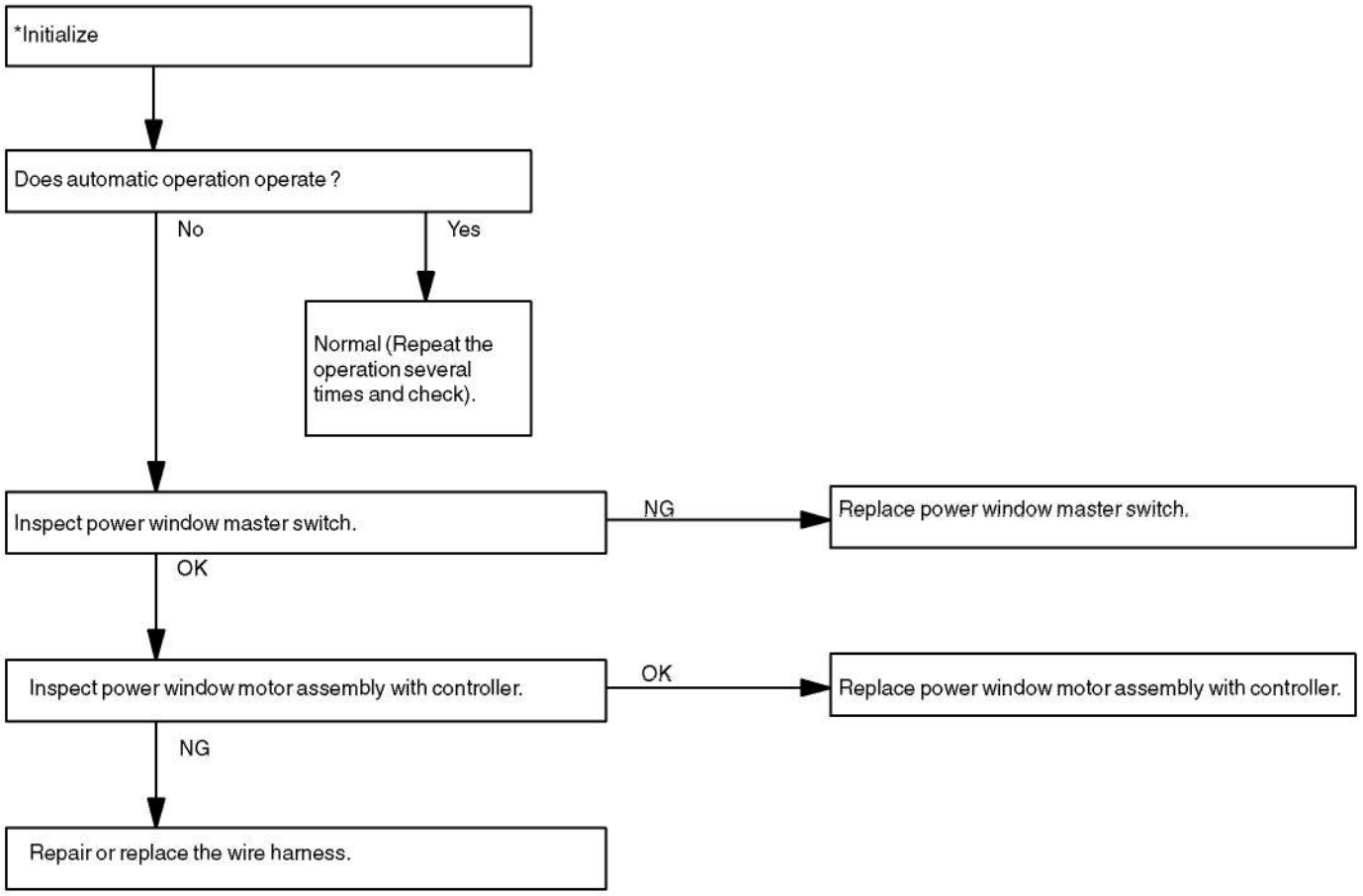
If the heat wire is not broken, the voltmeter indicates 0 V at the positive (+) end of the heat wire but gradually the voltage increases to about 12 V as the meter probe is moved to the other end.

POWER WINDOW CONTROL SYSTEM

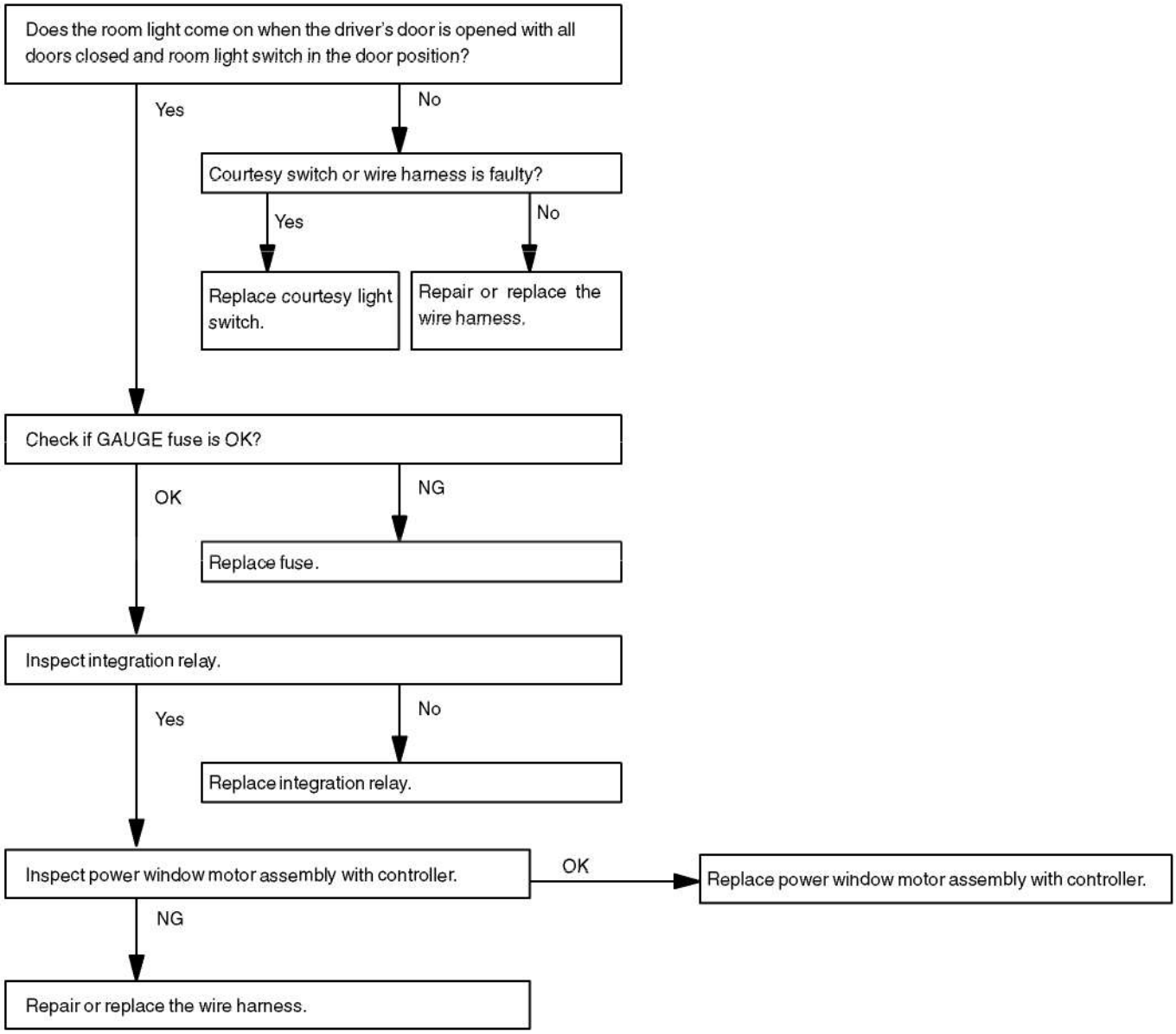
TROUBLESHOOTING

BE02C–05

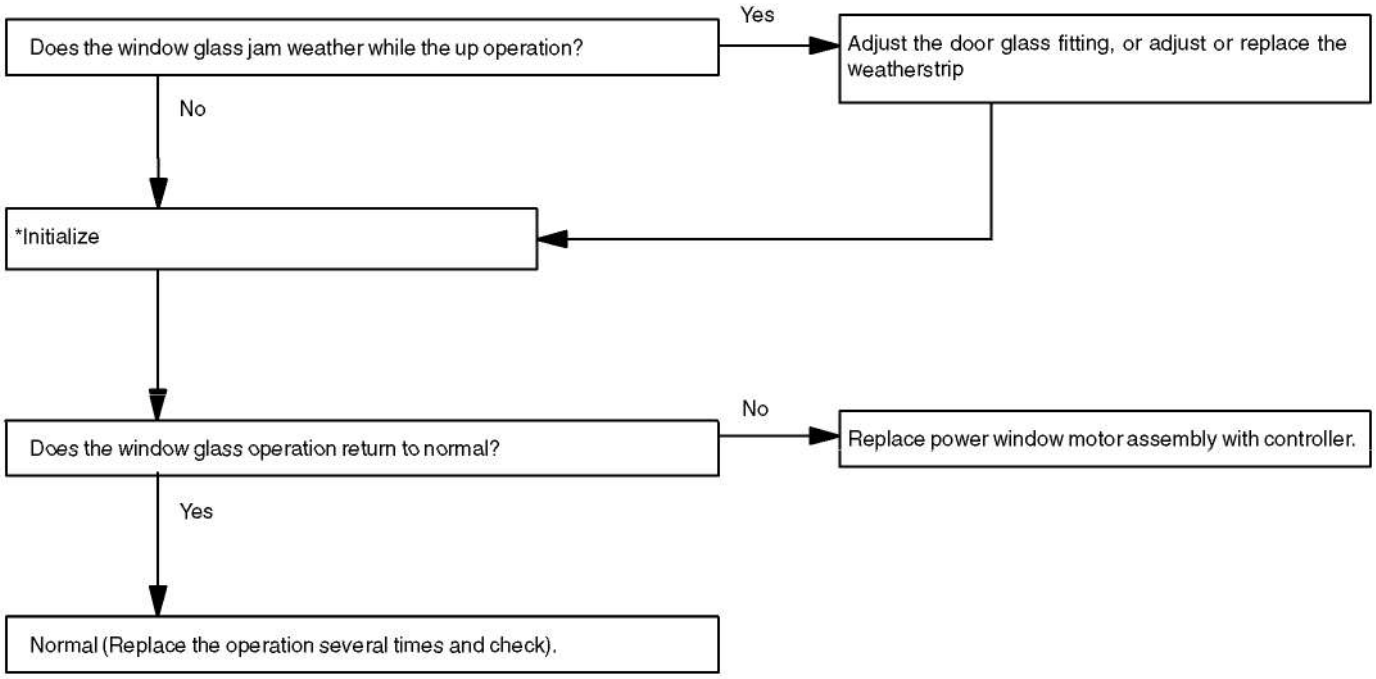
1	Automatic operation for the driver's door does not operate.



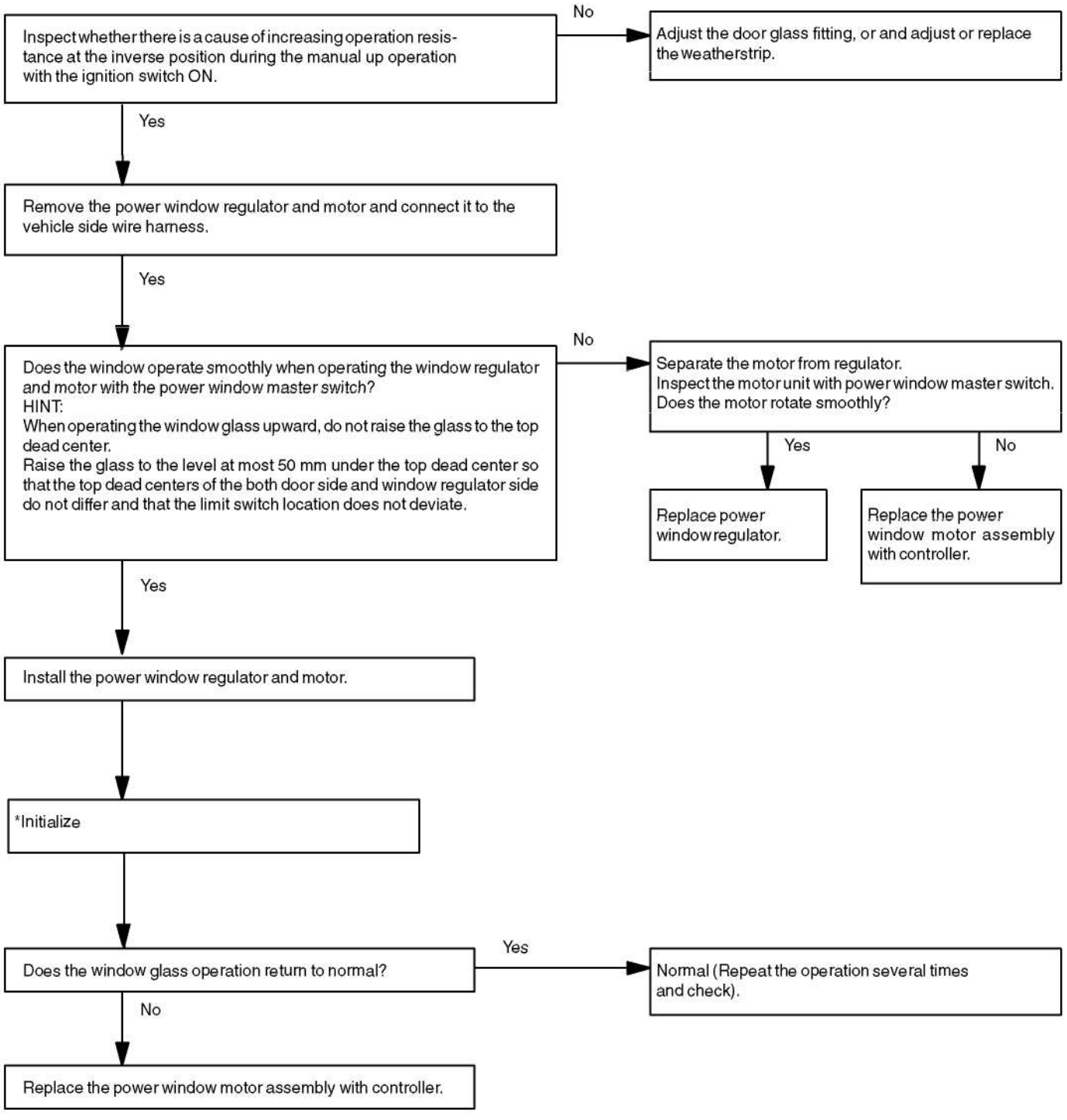
2	**The key–off operation does not operate.**



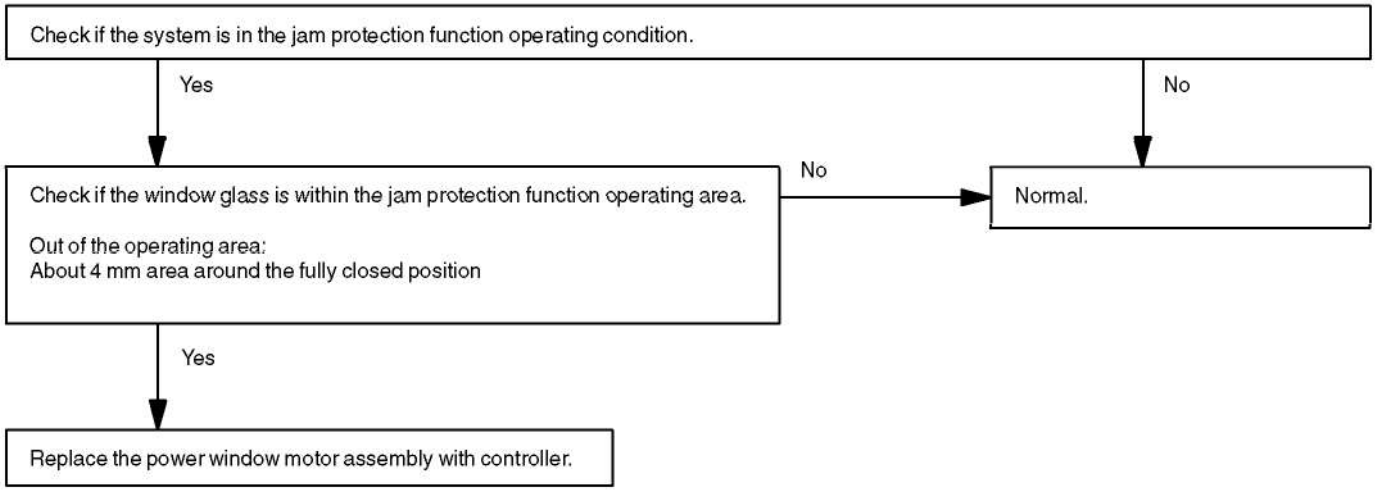
3	The down operation starts at the almost–closed position while the up operation.



4 The down operation starts at other positions than the almost–closed position during the up operation.



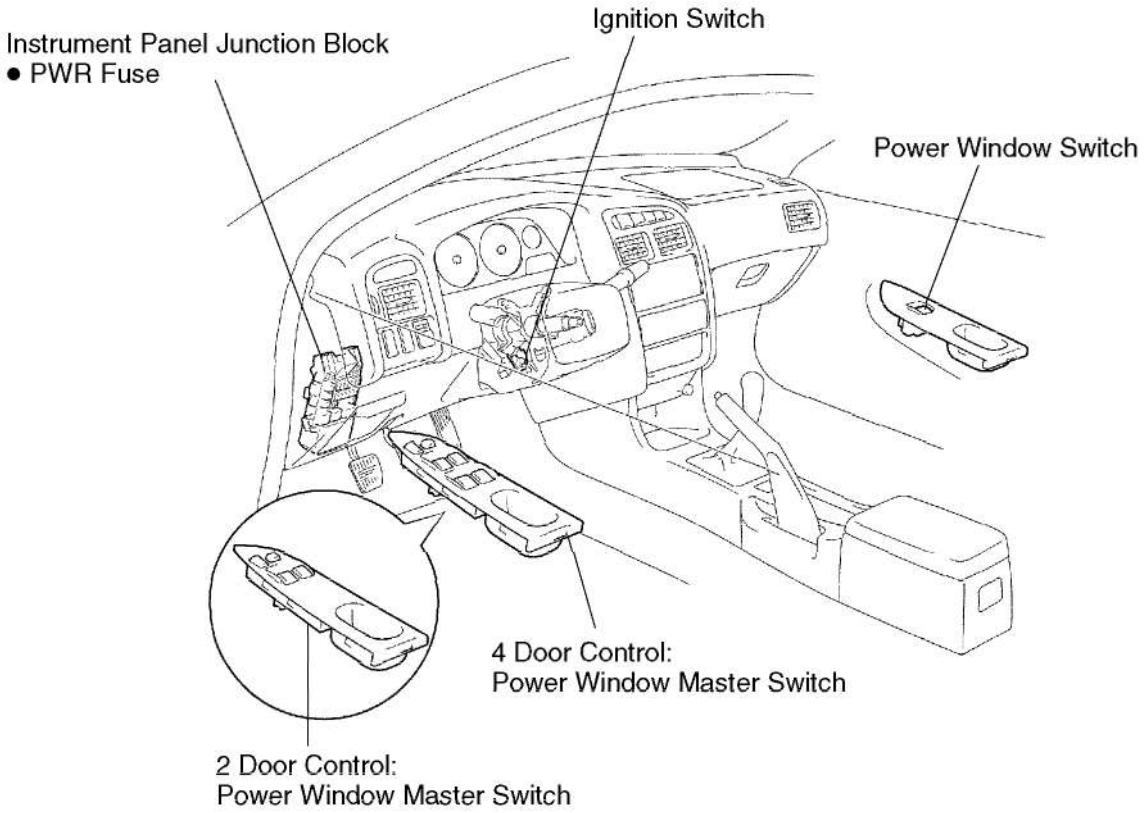
5	**The down operation does not work though some other objects are caught into the window glass.**



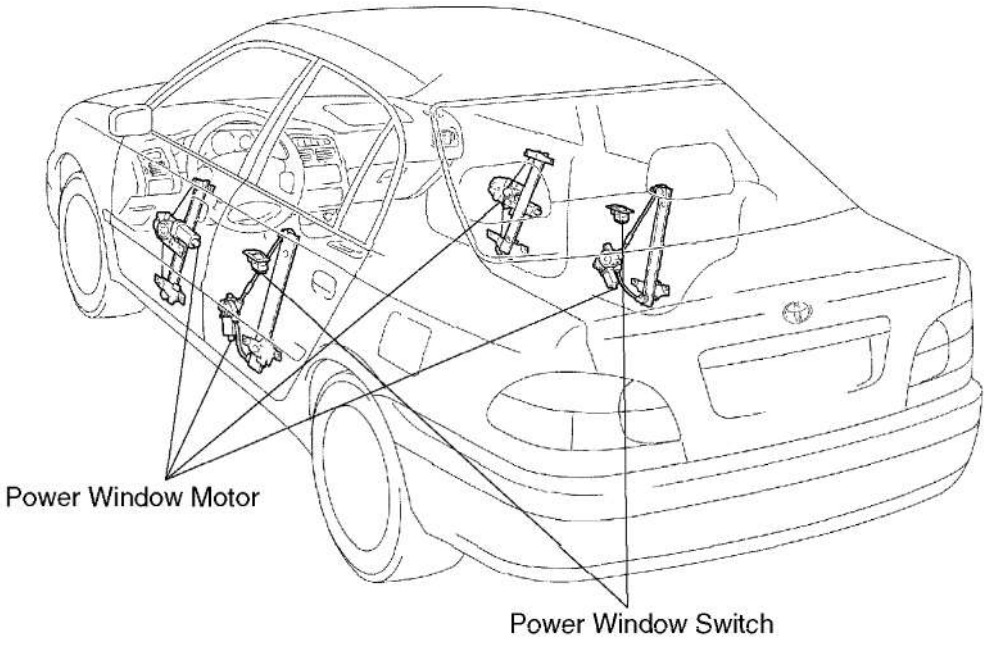
*Initializing method
Move up the door glass to the fully closed position and hold the switch for 5 secs.

5E0C5–01

LOCATION

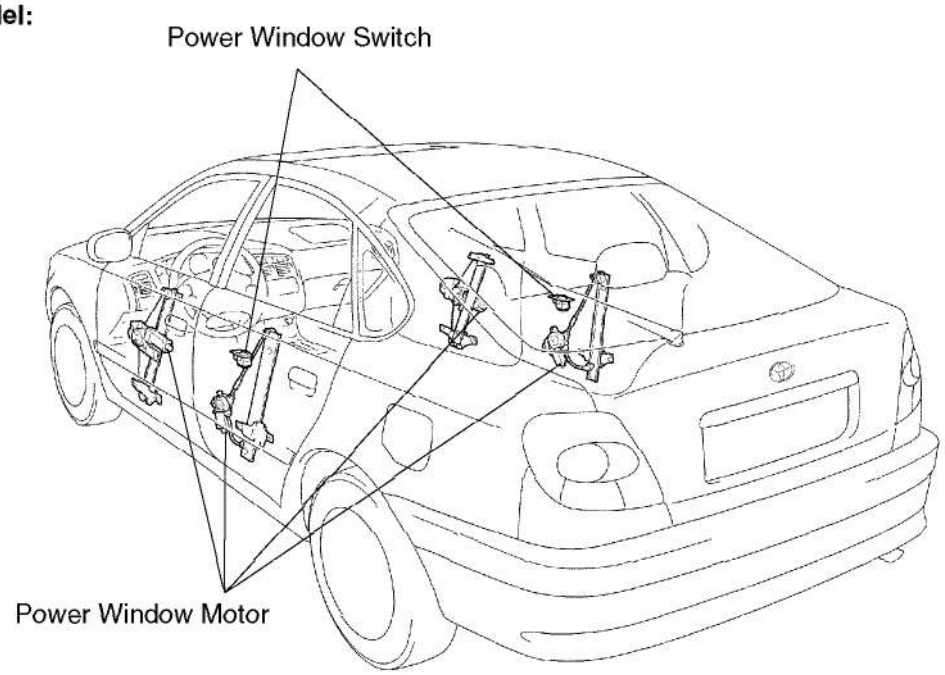


Sedan Model:

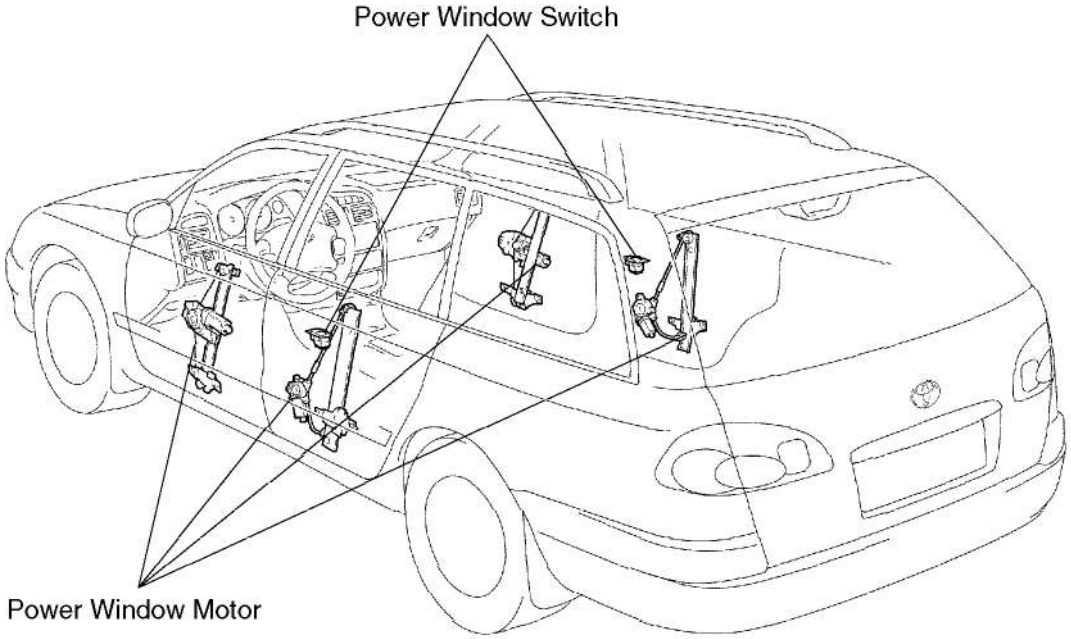


I04862

Liftback Model:



Wagon Model:



I04863

5E0C6-01

INSPECTION

NOTICE:

If battery voltage to the window regulator motor is cut off by disconnecting the connector of jam protection window regulator or the battery, AUTO UP operation does not function.

In this case, initialize the system again.

HINT:

Initializing method

Move up the door glass to the fully closed position and hold the switch for 5 secs.

1. 4–Door Control Power Window:
INSPECT POWER WINDOW MASTER SWITCH CONTINUITY AND VOLTAGE

Connect the battery positive (+) lead to terminals 3 and 10, and battery negative (–) lead to terminals 4 and 5.

Front Driver's Switch (Window unlock and lock):

Switch position	Tester connection	Specified condition
UP	1 – 2	Battery voltage
UP	1 – 3 2 – 4 – 5	Continuity
OFF	1 – 2 – 4 – 5	Continuity
DOWN	1 – 2	Battery voltage
DOWN	1 – 4 – 5 2 – 3	Continuity

Front Passenger's Switch (Window unlock):

Switch position	Tester connection	Specified condition
UP	7 – 8	Battery voltage
UP	4 – 5 – 8 7 – 10	Continuity
OFF	4 – 5 – 7 – 8	Continuity
DOWN	7 – 8	Battery voltage
DOWN	4 – 5 – 7 8 – 10	Continuity

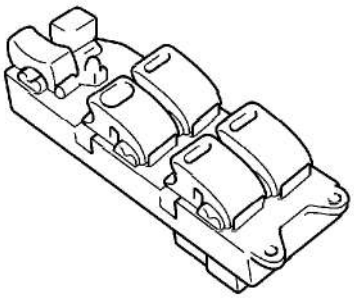
Front Passenger's Switch (Window lock):

Switch position	Tester connection	Specified condition
UP	7 – 8	Battery voltage
UP	7 – 10	Continuity
OFF	7 – 8	Continuity
DOWN	7 – 8	Battery voltage
DOWN	8 – 10	Continuity

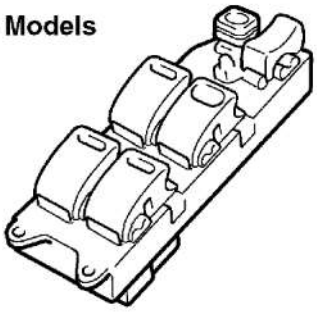
Rear Left Switch (Window unlock):

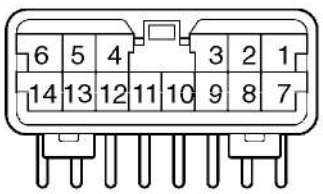
Switch position	Tester connection	Specified condition
UP	9 – 11	Battery voltage
UP	4 – 5 – 11 9 – 10	Continuity
OFF	4 – 5 – 9 – 11	Continuity

LHD Models



RHD Models





e–14–2–F

I01754

DOWN	9 – 11	Battery voltage
DOWN	4 – 5 – 9 10 – 11	Continuity

Rear Left Switch (Window lock):

Switch position	Tester connection	Specified condition
UP	9 – 11	Battery voltage
UP	9 – 10	Continuity
OFF	9 – 11	Continuity
DOWN	9 – 11	Battery voltage
DOWN	10 – 11	Continuity

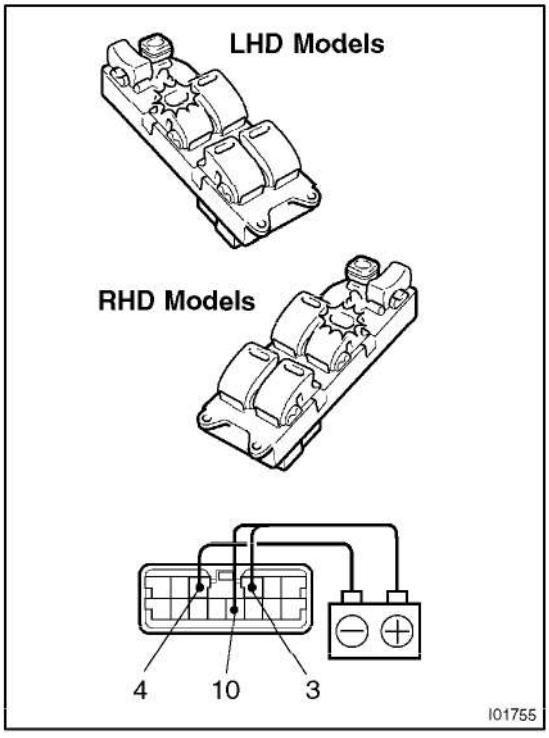
Rear Right Switch (Window unlock):

Switch position	Tester connection	Specified condition
UP	13 – 14	Battery voltage
UP	4 – 5 – 14 10 – 13	Continuity
OFF	4 – 5 – 13 – 14	Continuity
DOWN	13 – 14	Battery voltage
DOWN	4 – 5 – 13 10 – 14	Continuity

Rear Right Switch (Window lock):

Switch position	Tester connection	Specified condition
UP	13 – 14	Battery voltage
UP	10 – 13	Continuity
OFF	13 – 14	Continuity
DOWN	13 – 14	Battery voltage
DOWN	10 – 14	Continuity

If continuity and voltage are not as specified, replace the master switch.

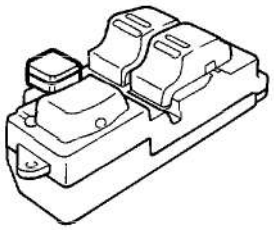


2. 4–Door Lock Control Power Window:
INSPECT POWER WINDOW MASTER SWITCH ILLUMINATION

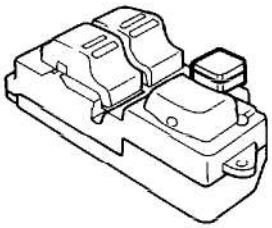
Connect the positive (+) lead from the battery to terminal 3 and 10, and the negative (–) lead to terminal 4, and check that all the illuminations light up.

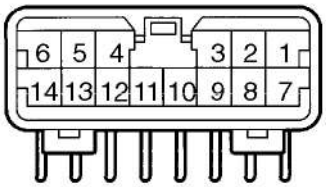
If operation is not as specified, replace the master switch.

LHD Models



RHD Models





e–14–2–F

I01828

3. 2–Door Lock Control Power Window: INSPECT POWER WINDOW MASTER SWITCH CONTINUITY AND VOLTAGE

Connect the battery positive (+) lead to terminals 3 and 9, and battery negative (–) lead to terminal 10.

Switch position	Tester connection	Specified condition
UP	1 – 2	Battery voltage
UP	1 – 3 2 – 10	Continuity
OFF	1 – 2 – 10	Continuity
DOWN	1 – 2	Battery voltage
DOWN	1 – 10 2 – 3	Continuity

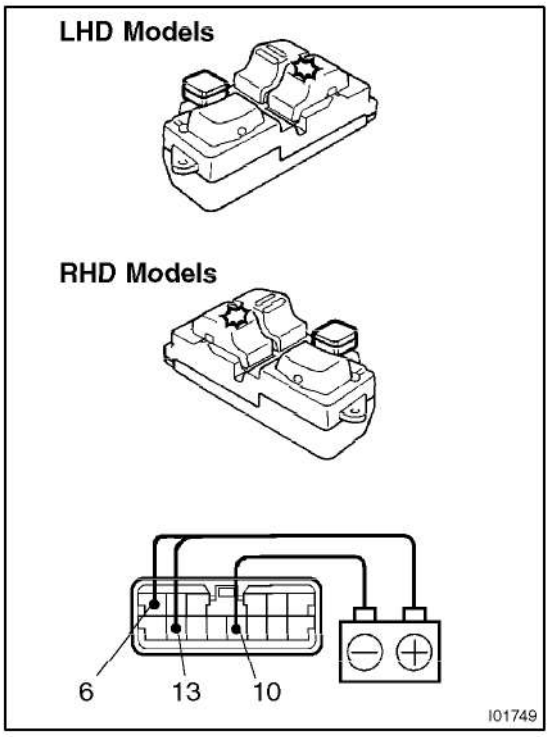
Front Passenger's Switch (Window unlock):

Switch position	Tester connection	Specified condition
UP	7 – 8	Battery voltage
UP	8 – 10 7 – 9	Continuity
OFF	7 – 8 – 10	Continuity
DOWN	7 – 8	Battery voltage
DOWN	7 – 10 8 – 9	Continuity

Front Passenger's Switch (Window lock):

Switch position	Tester connection	Specified condition
UP	7 – 8	Battery voltage
UP	7 – 9	Continuity
OFF	7 – 8	Continuity
DOWN	7 – 8	Battery voltage
DOWN	8 – 9	Continuity

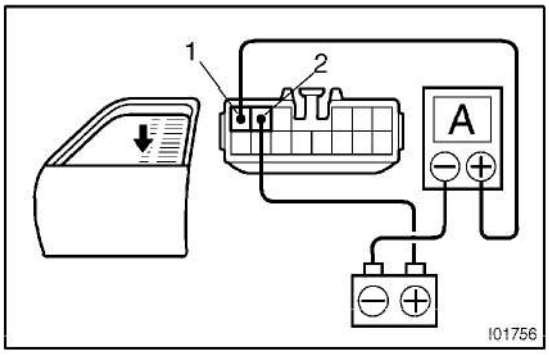
If continuity and voltage are not as specified, replace the master switch.



4. 2–Door Lock Control Power Window: INSPECT POWER WINDOW MASTER SWITCH ILLUMINATION

Connect the positive (+) lead from the battery to terminals 6 and 13, and the negative (–) lead to terminal 10, and check that all the illuminations light up.

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



5. INSPECT ONE TOUCH POWER WINDOW SYSTEM/ CURRENT OF CIRCUIT

Using an ammeter:

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the ammeter to terminal 1 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 2 on the wire harness side connector.

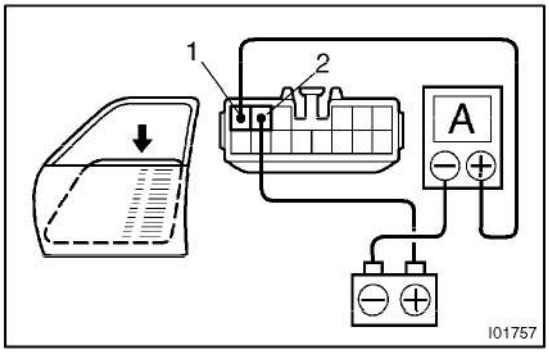
(d) As the window goes down, check that the current flow is approximately 7 A.

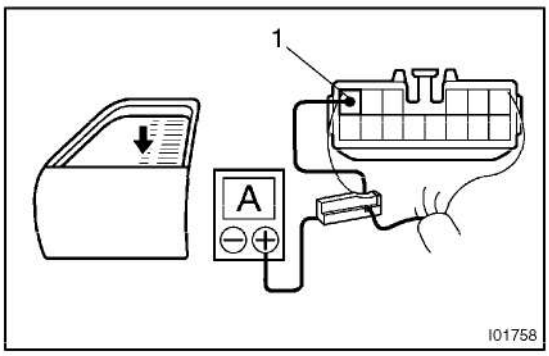
(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:

The circuit breaker opens for some 4 to 40 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.





6. INSPECT ONE TOUCH POWER WINDOW SYSTEM/ CURRENT OF CIRCUIT

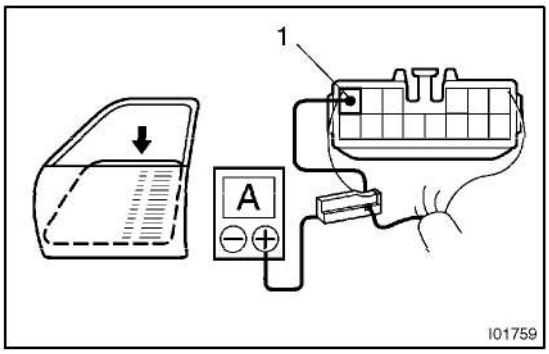
Using an ammeter with a current–measuring probe:

(a) Remove the master switch with connector connected.

(b) Attach a current–measuring probe to terminal 1 of the wire harness.

(c) Turn the ignition switch ON and set the power window switch to the down position.

(d) As the window goes down, check that the current flow is approximately 7 A.

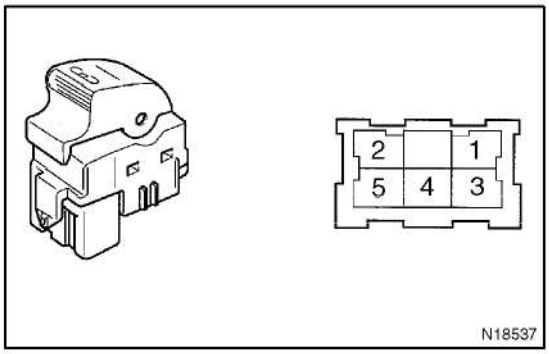


(e) Check that the current increases up to approximately 14.5 A or more when the window stops going down.

HINT:

The circuit breaker opens for some 4 to 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

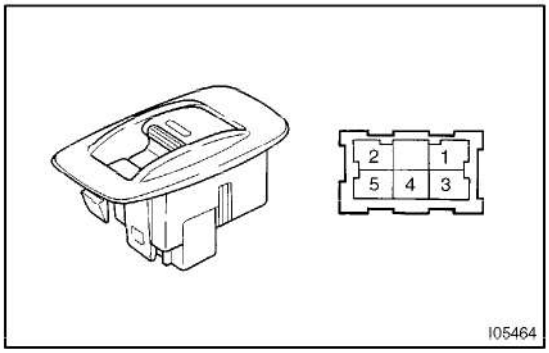
If operation is as specified, replace the master switch.



7. INSPECT PASSENGER'S POWER WINDOW SWITCH CONTINUITY

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

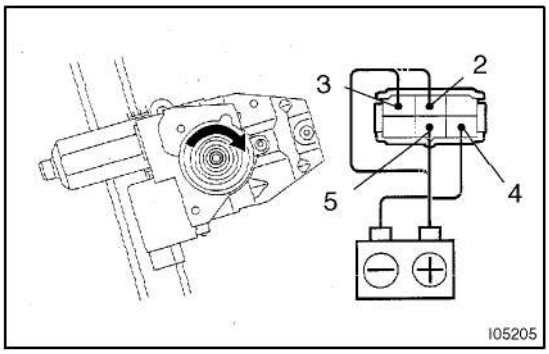
If continuity is not as specified, replace the switch.



8. INSPECT REAR DOOR POWER WINDOW SWITCH CONTINUITY

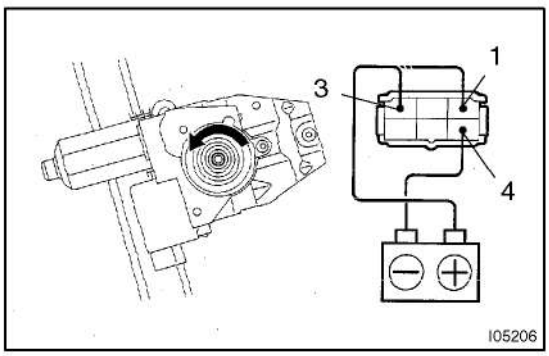
Switch position	Tester connection	Specified condition
UP	1 – 5 3 – 4	Continuity
OFF	1 – 2 3 – 4	Continuity
DOWN	1 – 2 4 – 5	Continuity

If continuity is not as specified, replace the switch.



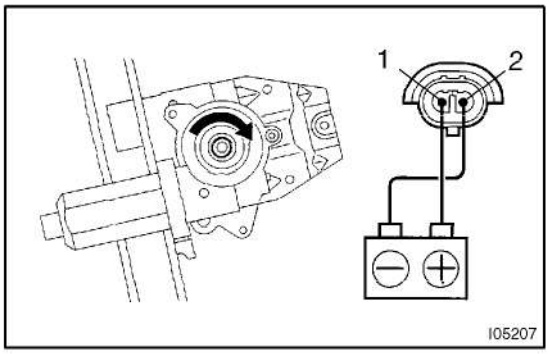
9. LHD Models Driver's Door:
INSPECT POWER WINDOW MOTOR OPERATION

(a) Connect the positive (+) lead from the battery to each of terminals 2, 3 and 5 and the negative (–) lead to terminal 4, and check that the motor turns clockwise.



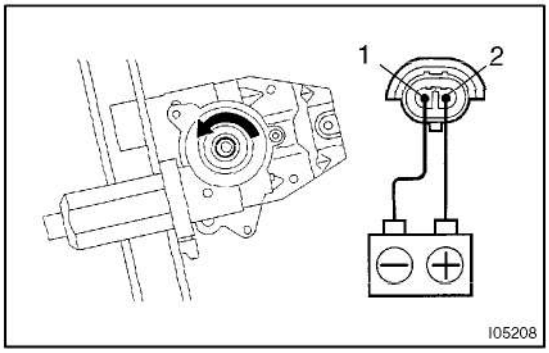
(b) Connect the positive (+) lead from the battery to each of terminals 1 and 3 and the negative (–) lead to terminal 4, and check that the motor turns counterclockwise.

If operation is not as specified, replace the motor.



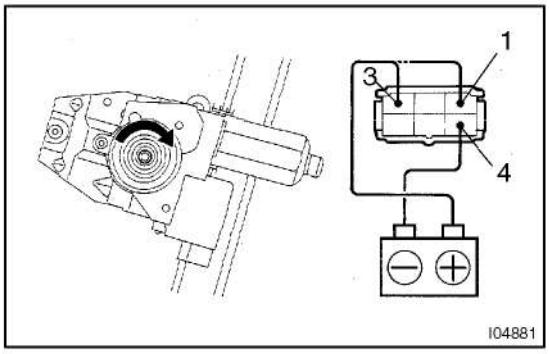
10. LHD Models Front passenger's Door:
INSPECT POWER WINDOW MOTOR OPERATION

(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.



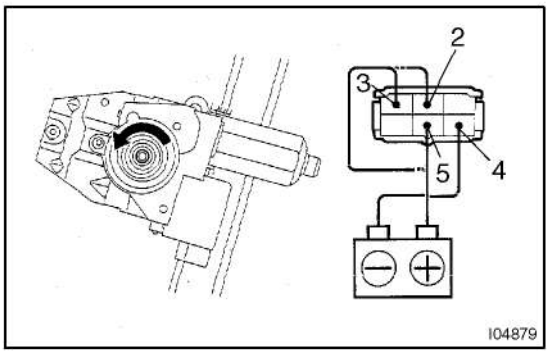
(b) Reverse the polarity, check that the motor turns counterclockwise.

If operation is not as specified, replace the motor.



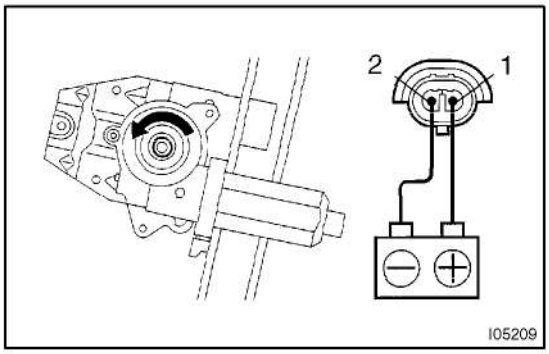
11. RHD Models Driver's Door:
INSPECT POWER WINDOW MOTOR OPERATION

(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.



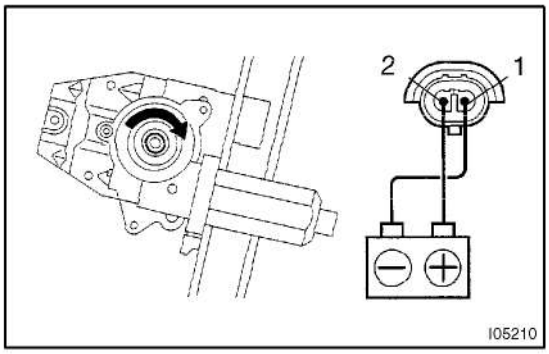
(b) Reverse the polarity, check that the motor turns counter-clockwise.

If operation is not as specified, replace the motor.



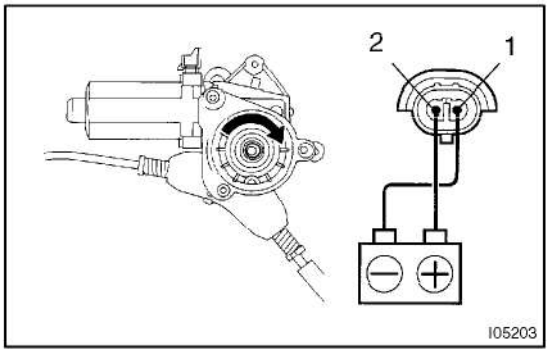
12. RHD Models Front Passenger's Door: INSPECT POWER WINDOW MOTOR OPERATION

(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.



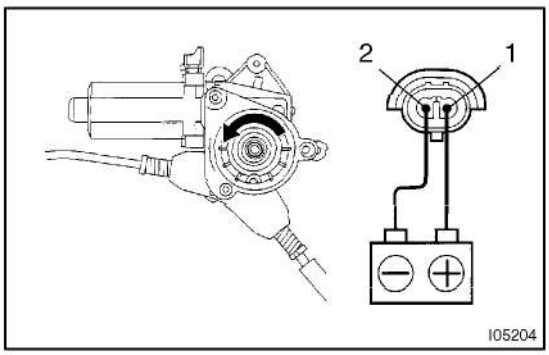
(b) Reverse the polarity, check that the motor turns counter-clockwise.

If operation is not as specified, replace the motor.



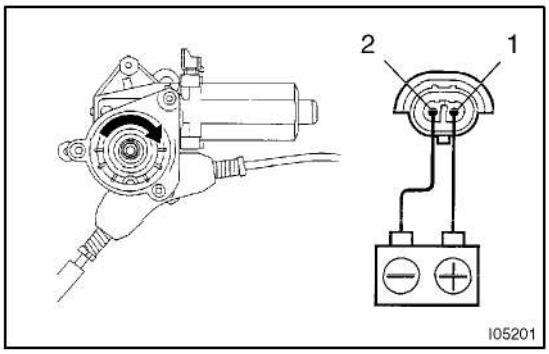
13. Rear Left Side Door: INSPECT POWER WINDOW MOTOR OPERATION

(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.



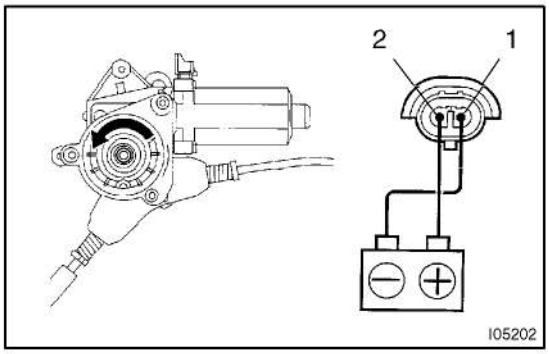
(b) Reverse the polarity, check that the motor turns counter-clockwise.

If operation is not as specified, replace the motor.



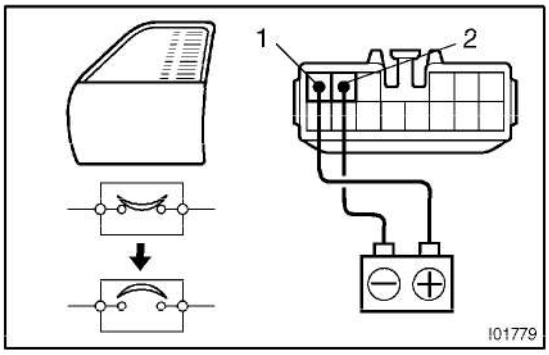
14. Rear Right Side Door:
INSPECT POWER WINDOW MOTOR OPERATION

(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, check that the motor turns counter-clockwise.

If operation is not as specified, replace the motor.

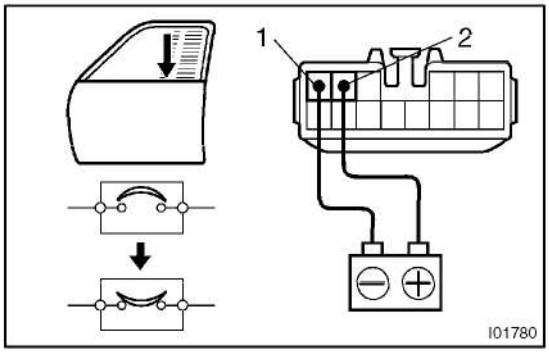


15. INSPECT POWER WINDOW MOTOR CIRCUIT BREAKER OPERATION

(a) Disconnect the connector from the master switch.

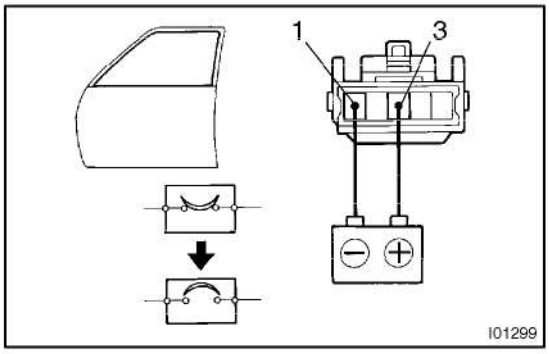
(b) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2 on the wire harness side connector and raise the window to fully closed position.

(c) Continue to supply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.



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

If operation is not as specified, replace the motor.

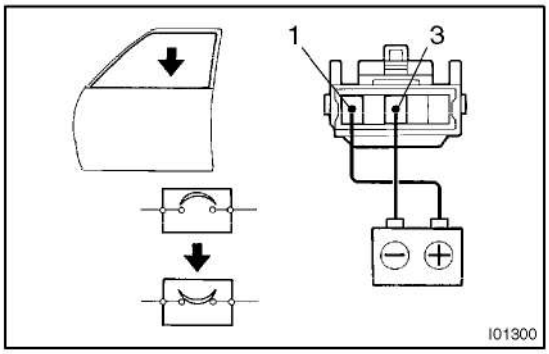


16. Front Passenger's Door:
INSPECT POWER WINDOW MOTOR CIRCUIT BREAKER OPERATION

(a) Disconnect the connector from the power window switch.

(b) Connect the positive (+) lead from the battery to terminal 3 and the negative (–) lead to terminal 1 on the wire harness side connector, and raise the window to full closed position.

(c) Continue to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.



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

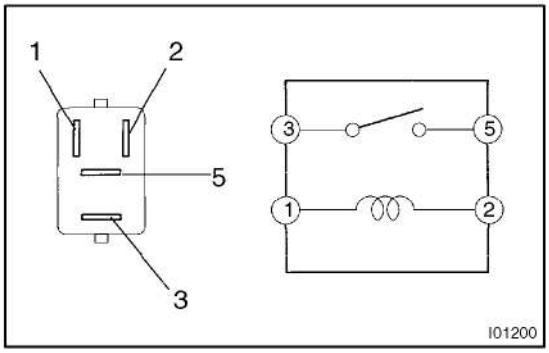
If operation is not as specified, replace the motor.

17. Rear Left Side Door:
INSPECT POWER WINDOW MOTOR CIRCUIT BREAKER OPERATION

See step of Front Passenger Door Motor on previous page.

18. Rear Right Side Door:
INSPECT POWER WINDOW MOTOR CIRCUIT BREAKER OPERATION

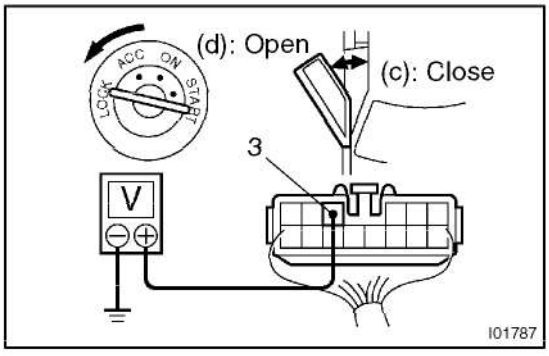
See step of Front Passenger Door Motor on previous page.



19. INSPECT POWER MAIN RELAY CONTINUITY

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

If continuity is not as specified, replace the relay.



20. INSPECT INTEGRATION RELAY OPERATION
Key–Off Power Window Signal:

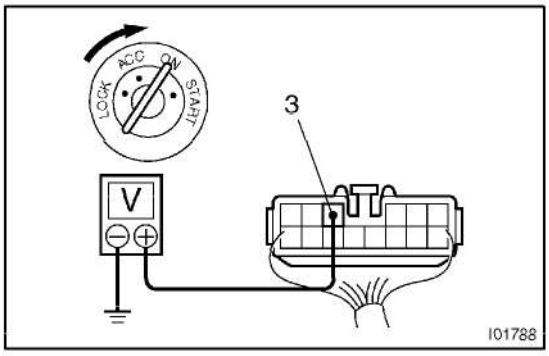
HINT:

When the relay circuit is as specified, inspect the key–off power window signal.

(a) Connect the positive (+) lead from the voltmeter to terminal 3 and the negative (–) lead to body ground.

(b) Close the door with ignition switch turned to LOCK or ACC, and check that the meter needle indicates battery voltage.

(c) Open the door and check that the meter needle indicates 0 V.



(d) Turn the ignition switch ON and check that the meter needle indicates battery voltage again.

If operation is not as specified, replace the relay.

21. INSPECT INTEGRATION RELAY CIRCUIT(See page BE–23)

22. JAM PROTECTION FUNCTION CHECK

NOTICE:

- **Pay due attention not to be caught any part of your body while checking.**
- **When adjusting the detection switches, perform it after moving the door glass up and down several times by AUTO operation.**

(a) Check the following items with jam protection function operating.
  (1) AUTO UP operation with ignition switch ON
  (2) UP operation using the key
  (3) UP operation using the wireless function
  (4) AUTO UP and UP operation using the key OFF function

(b) Move the door glass to the fully closed position.

(c) Place the handle of a hammer at around the fully closed position.

(d) Check the door glass starts going DOWN without jamming the handle of the hammer and stops after moving down approx. 200mm when closing the door glass with the jam protection function operating.

(e) While the door glass is moving down, check that the door glass does not move up by any inputs from master switch,key, and multi–function remote control.During inputting operation, DOWN operation stops.

HINT:

A detection switch is installed in the power window motor, which detects the fully closed position.When the position in the switch does not match the fully closed position, error will occur.Therefore adjustment of the switch is necessary.

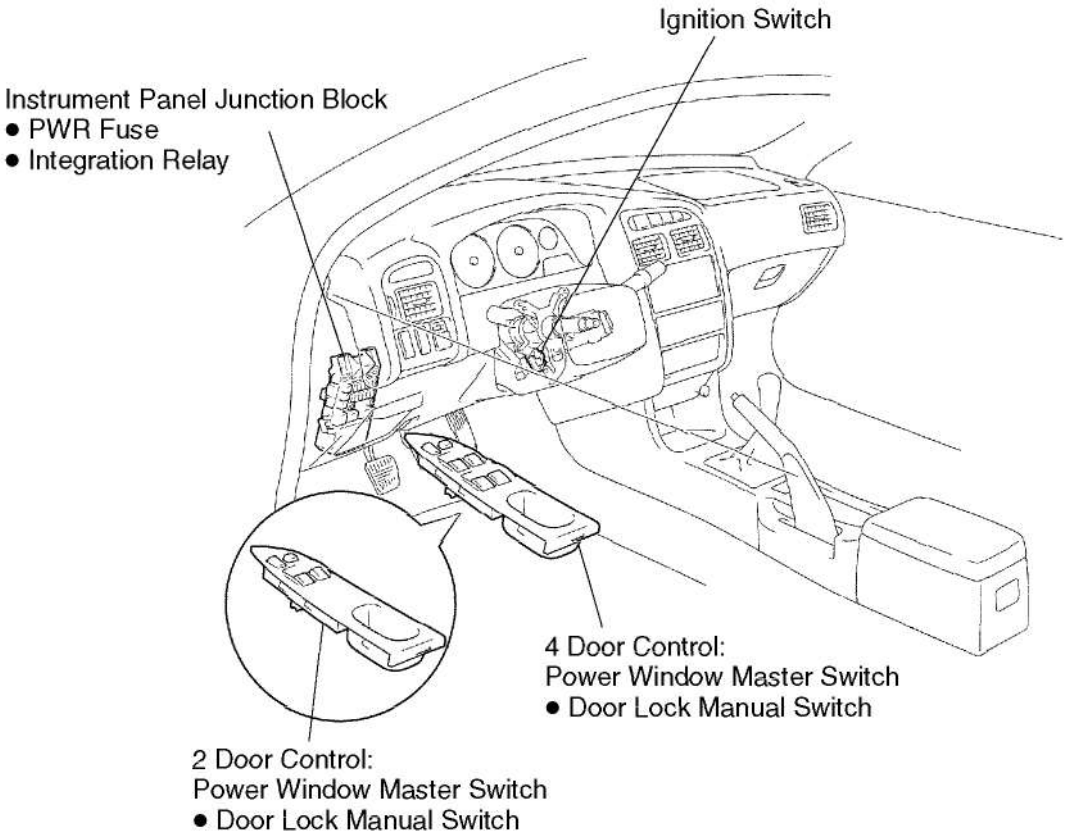
The operation necessary to adjust the detection switch are as follows.

- Door glass removal, installation and adjustment
- Door installation adjustment
- Roof side weather strip removal and installation
- Roof drip moulding removal and installation

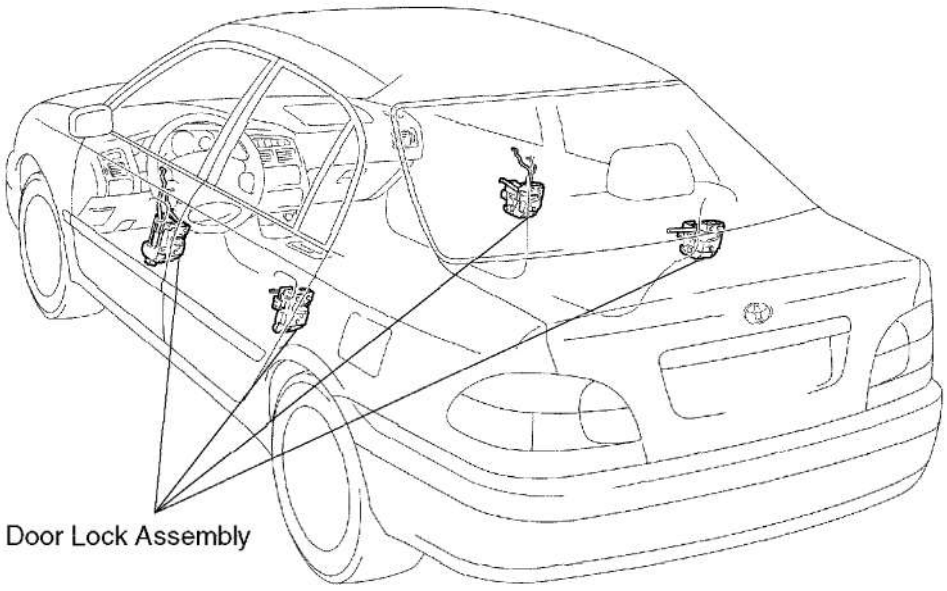
POWER DOOR LOCK CONTROL SYSTEM

LOCATION

BE007-01

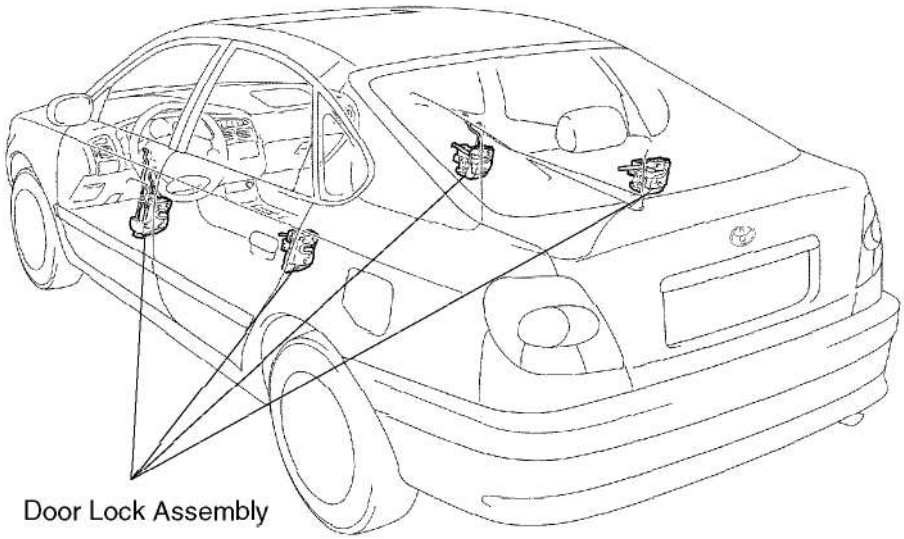


Sedan Model:

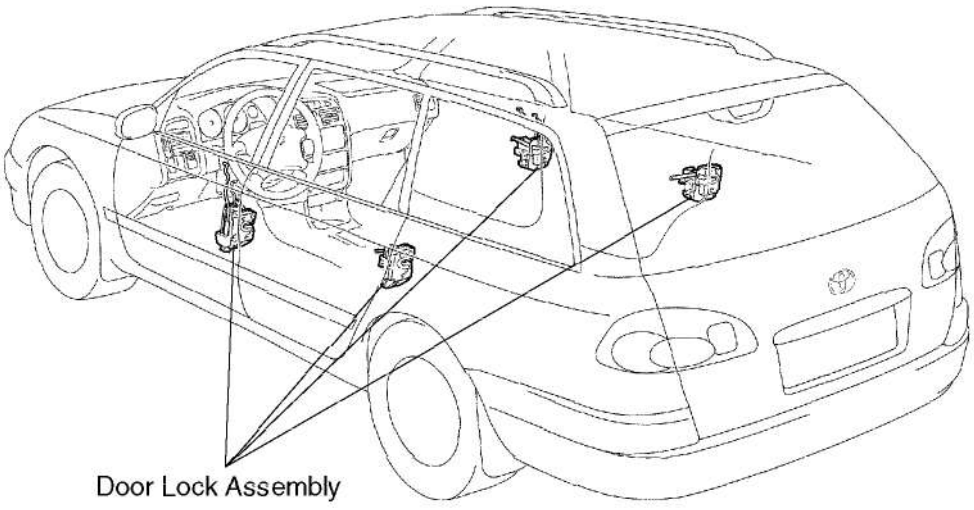


I04860

Liftback Model:



Wagon Model:



I04861

5E0C8–01

INSPECTION

1. 4–Door Control Power Window:

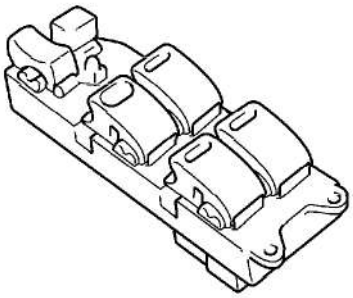
INSPECT DOOR LOCK CONTROL SWITCH CONTINUITY

Master Switch:

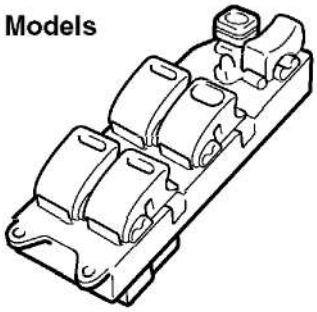
Switch position	Tester connection	Specified condition
LOCK	4 – 6	Continuity
OFF	–	No continuity
UNLOCK	4 – 12	Continuity

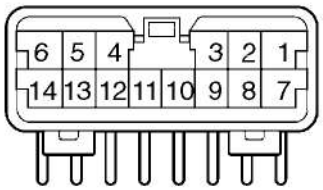
If continuity is not as specified, replace the switch.

LHD Models



RHD Models

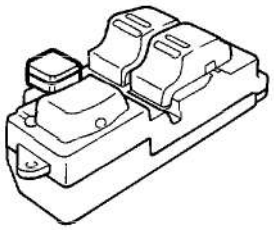




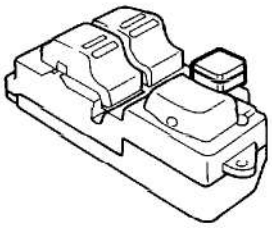
e–14–2–F

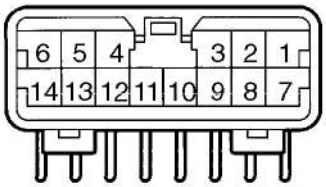
I01754

LHD Models



RHD Models





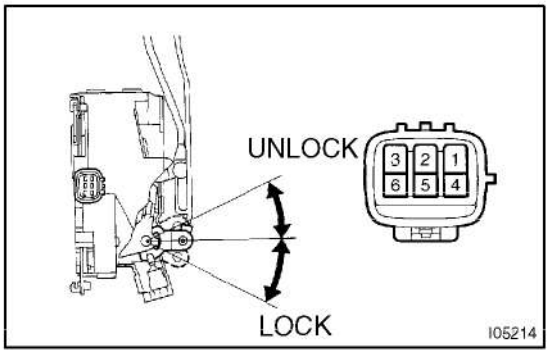
e–14–2–F

I01828

2. Front 2–Door Control Power Window:
INSPECT DOOR LOCK CONTROL SWITCH CONTINUITY
Master Switch:

Switch position	Tester connection	Specified condition
LOCK	6 – 10	Continuity
OFF	–	No continuity
UNLOCK	5 – 10	Continuity

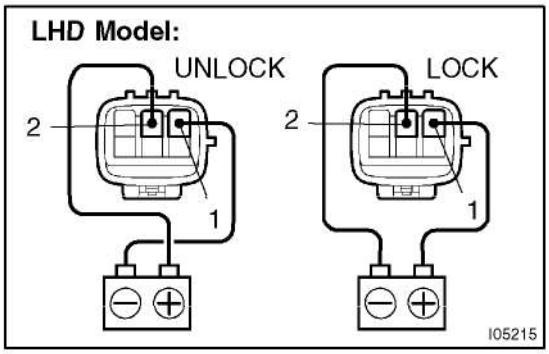
If continuity is not as specified, replace the switch.



3. INSPECT DOOR KEY LOCK AND UNLOCK SWITCH CONTINUITY

Switch position	Tester connection	Specified condition
LOCK	2 – 3	Continuity
OFF	–	No continuity
UNLOCK	1 – 3	Continuity

If continuity is not as specified, replace the switch.



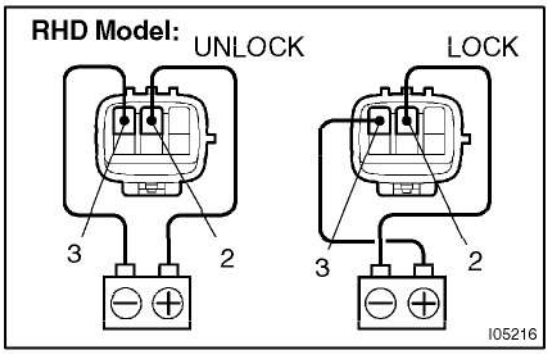
4. INSPECT DOOR LOCK MOTOR OPERATION

LHD Model:

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1, and check that the door lock link moves to UNLOCK position.

(b) Reverse the polarity and check that the door lock link moves to LOCK position.

If operation is not as specified, replace the door lock assembly.



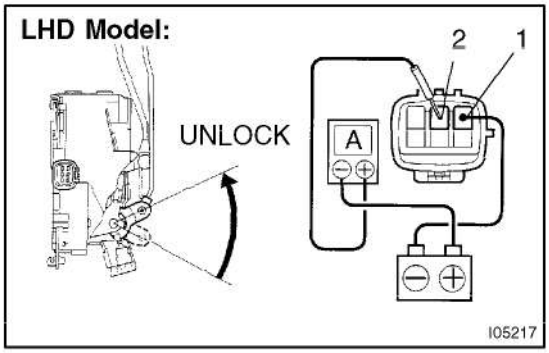
5. INSPECT DOOR LOCK MOTOR OPERATION

RHD Model:

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 3, and check that the door lock link moves to UNLOCK position.

(b) Reverse the polarity and check that the door lock link moves to LOCK position.

If operation is not as specified, replace the door lock assembly.



6. INSPECT DOOR LOCK MOTOR PTC THERMISTOR OPERATION

LHD Model:

Using an ammeter:

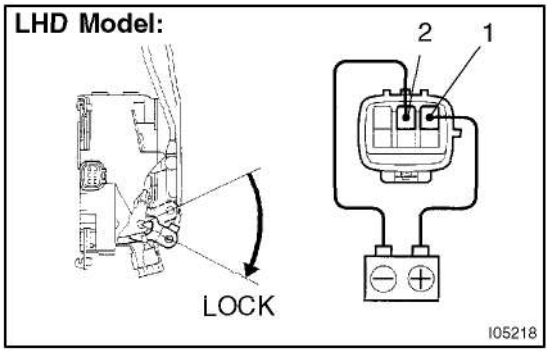
(a) Connect the negative (–) lead from the battery to terminal 1.

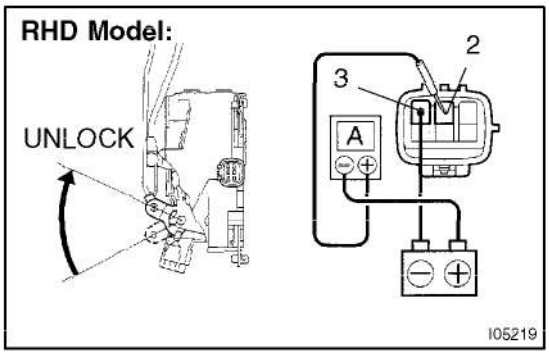
(b) Connect the positive (+) lead from the ammeter to terminal 2 and the negative (–) lead to battery positive (+) terminal, and check that the current changes from approximately 3.2 A to less than 0.5 A within 20 to 70 seconds.

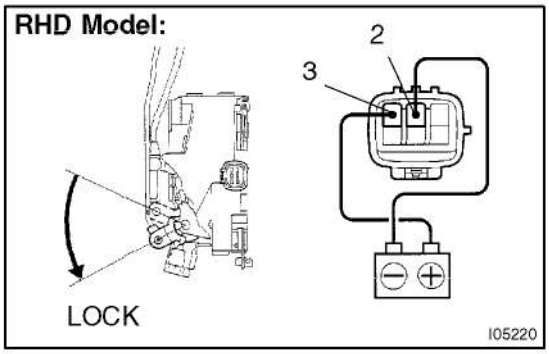
(c) Disconnect the leads from terminals.

(d) 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 door lock moves to the LOCK position.

If operation is not as specified, replace the door lock assembly.







7. INSPECT DOOR LOCK MOTOR PTC THERMISTOR OPERATION

RHD Model:

Using an ammeter:

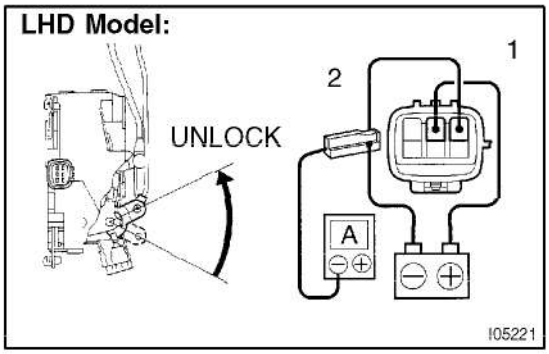
(a) Connect the negative (–) lead from the battery to terminal 3.

(b) Connect the positive (+) lead from the ammeter to terminal 3 and the negative (–) lead to battery positive (+) terminal, and check that the current changes from approximately 3.2 A to less than 0.5 A within 20 to 70 seconds.

(c) Disconnect the leads from terminals.

(d) Approximately 60 seconds later, connect the positive (+) lead from the battery to terminal 3 and the negative (–) lead to terminal 2, and check that the door lock moves to the LOCK position.

If operation is not as specified, replace the door lock assembly.



8. INSPECT DOOR LOCK MOTOR PTC THERMISTOR OPERATION

LHD Model:

Using an ammeter with a current–measuring probe:

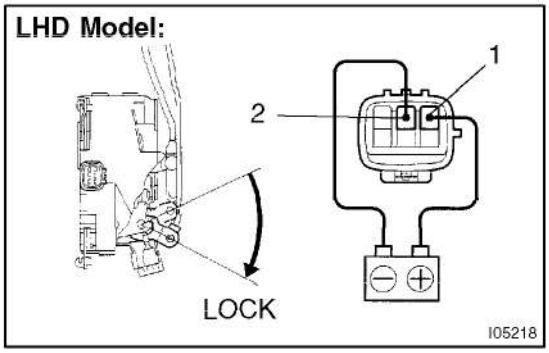
(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2.

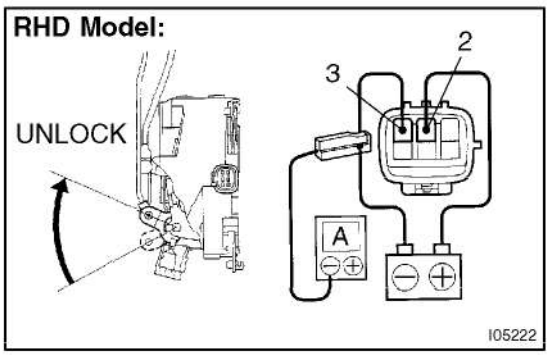
(b) Attach a current–measuring probe to either the positive (+) lead or the negative (–) lead, and check that the current changes from approximately 3.2 A to less than 0.5 A within 20 to 70 seconds.

(c) Disconnect the leads from terminals.

(d) Approximately 60 seconds later, reverse the polarity, and check that the door lock moves to the LOCK position.

If operation is not as specified, replace the door lock assembly.





9. INSPECT DOOR LOCK MOTOR PTC THERMISTOR OPERATION

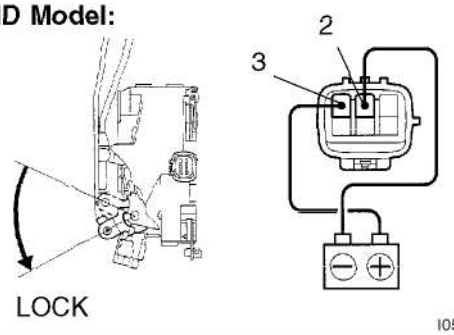
RHD Model:

Using an ammeter with a current–measuring probe:

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 3.

(b) Attach a current–measuring probe to either the positive (+) lead or the negative (–) lead, and check that the current changes from approximately 3.2 A to less than 0.5 A within 20 to 70 seconds.

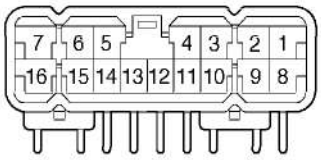
RHD Model:



(c) Disconnect the leads from terminals.
(d) Approximately 60 seconds later, reverse the polarity, and check that the door lock moves to the LOCK position.

If operation is not as specified, replace the door lock assembly.

Junction block side



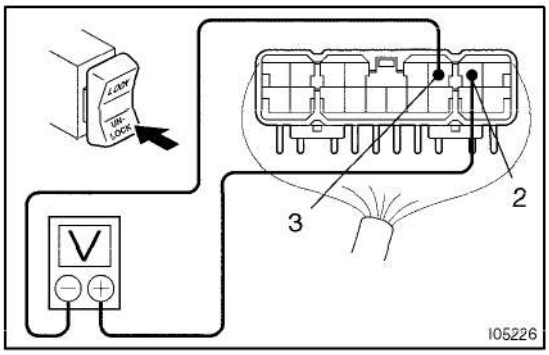
10. INSPECT INTEGRATION RELAY CIRCUIT

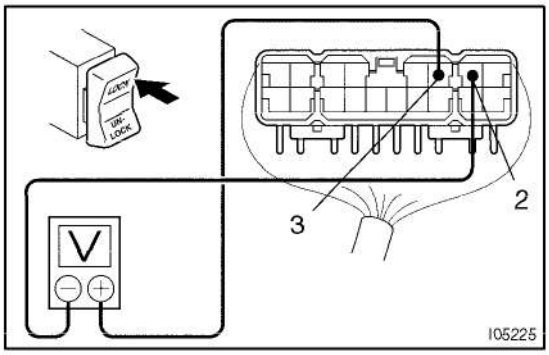
Junction block side :

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

Tester connection	Condition	Specified condition
B4 – Ground	Door key lock and unlock switch UNLOCK or OFF	No continuity
B4 – Ground	Door key lock and unlock switch LOCK	Continuity
B5 – Ground	Door lock assembly is locked	No continuity
B5 – Ground	Door lock assembly is unlocked	Continuity
B7 – Ground	Door key lock and unlock switch LOCK or OFF	No continuity
B7 – Ground	Door key lock and unlock switch UNLOCK	Continuity
B9 – Ground	Driver's door lock manual switch UNLOCK or OFF	No continuity
B9 – Ground	Driver's door lock manual switch LOCK	Continuity
B10 – Ground	Driver's door lock manual switch LOCK or OFF	No continuity
B10 – Ground	Driver's door lock manual switch UNLOCK	Continuity
B14 – Ground	Back door key lock and unlock switch LOCK or OFF	No continuity
B14 – Ground	Back door key lock and unlock switch UNLOCK	Continuity
B15 – Ground	Constant	Continuity
B13 – Ground	Constant	Battery positive voltage

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





11. INSPECT DOOR LOCK CONTROL RELAY (INTEGRATION RELAY) OPERATION

LHD Model:

Door Lock Signal:

HINT:

When the relay circuit is as specified, inspect the door lock signal.

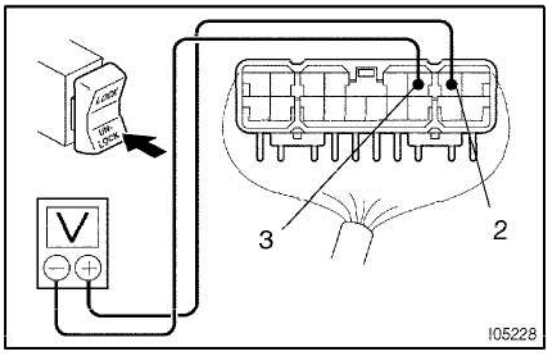
(a) Connect the positive (+) lead from the voltmeter to terminal 2 and the negative (–) lead to terminal 3.

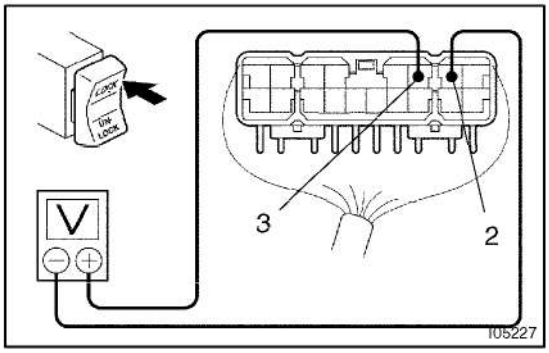
(b) Set the door lock control switch to UNLOCK and check that the voltage rises from 0 V to battery voltage for approximately 0.5 seconds.

(c) Reverse the polarity of the voltmeter leads.

(d) Set the door lock control switch to LOCK and check that the voltage rises from 0 V to battery voltage for approximately 0.5 seconds.

If operation is not as specified, replace the relay.





12. INSPECT DOOR LOCK CONTROL RELAY (INTEGRATION RELAY) OPERATION

RHD Model:

Door Lock Signal:

HINT:

When the relay circuit is as specified, inspect the door lock signal.

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

(b) Set the door lock control switch to UNLOCK and check that the voltage rises from 0 V to battery voltage for approximately 0.5 seconds.

(c) Reverse the polarity of the voltmeter leads.

(d) Set the door lock control switch to LOCK and check that the voltage rises from 0 V to battery voltage for approximately 0.5 seconds.

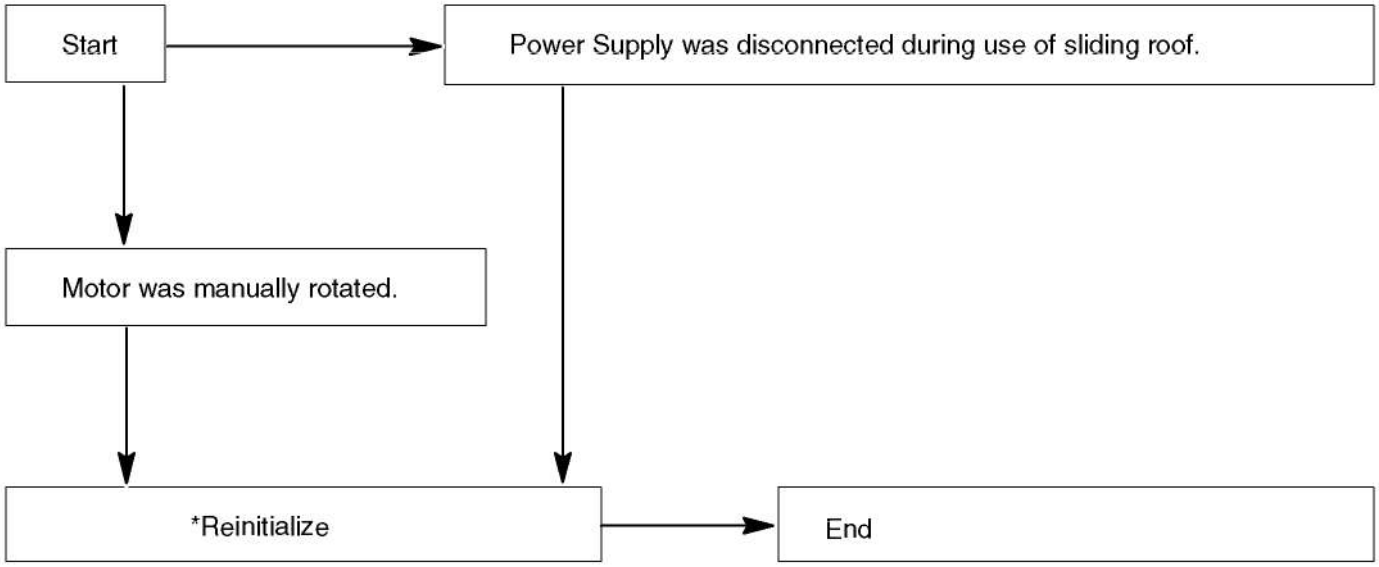
If operation is not as specified, replace the relay.

SLIDING ROOF SYSTEM

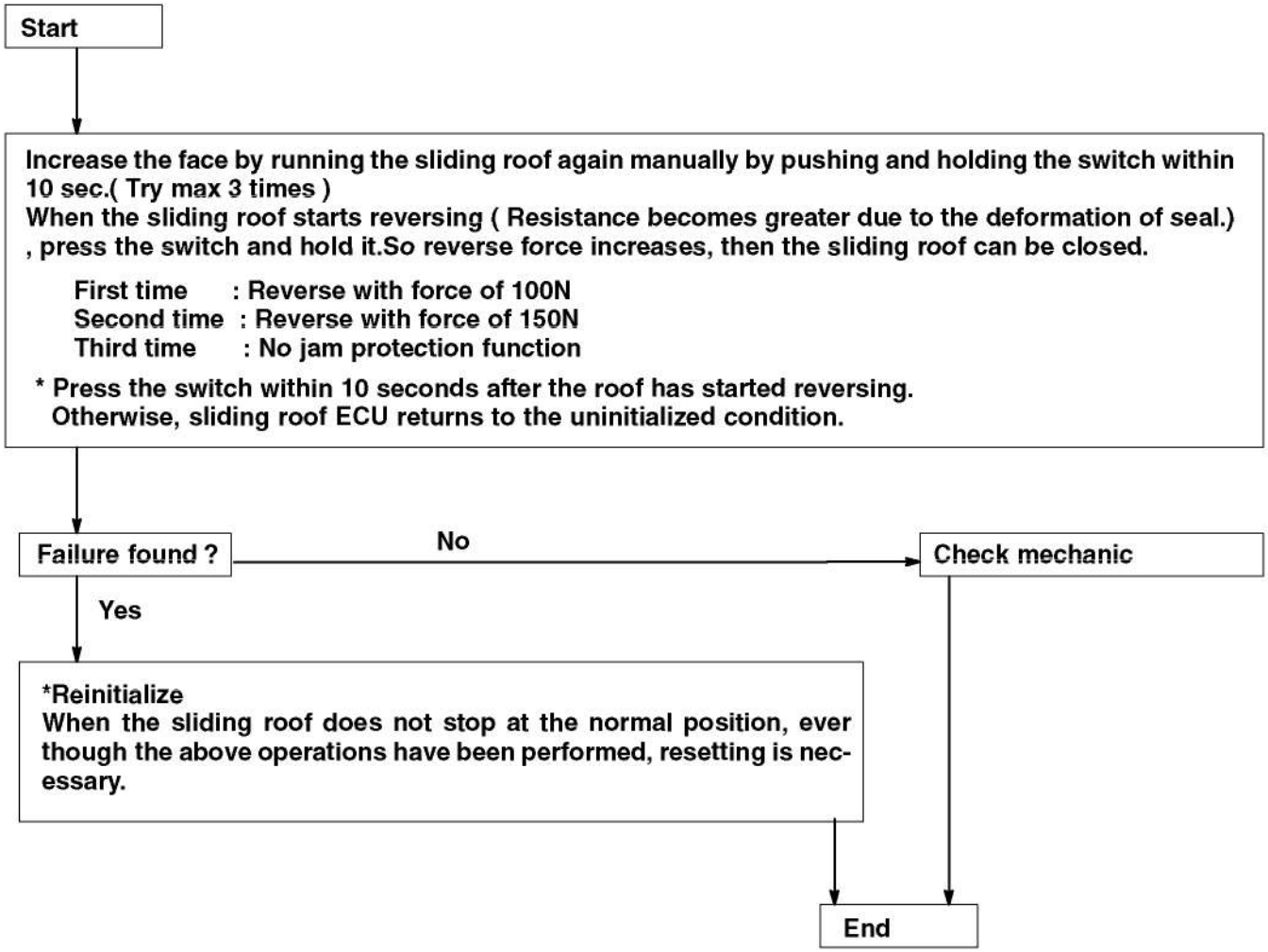
TROUBLESHOOTING

BE0C9–01

1	Sliding Roof does not stop at correct position.



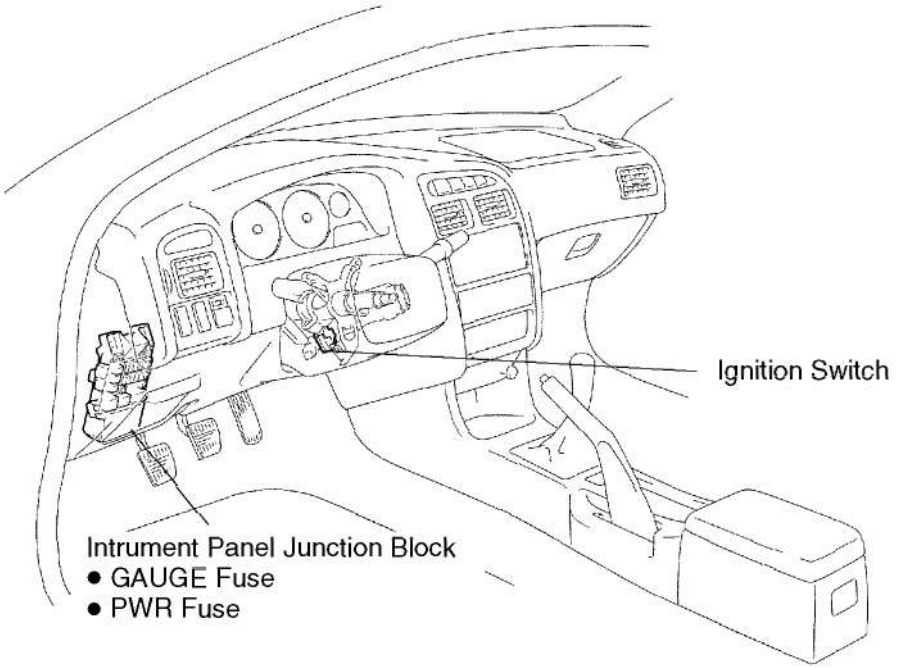
2	Sliding Roof always reopens (anti trap function).



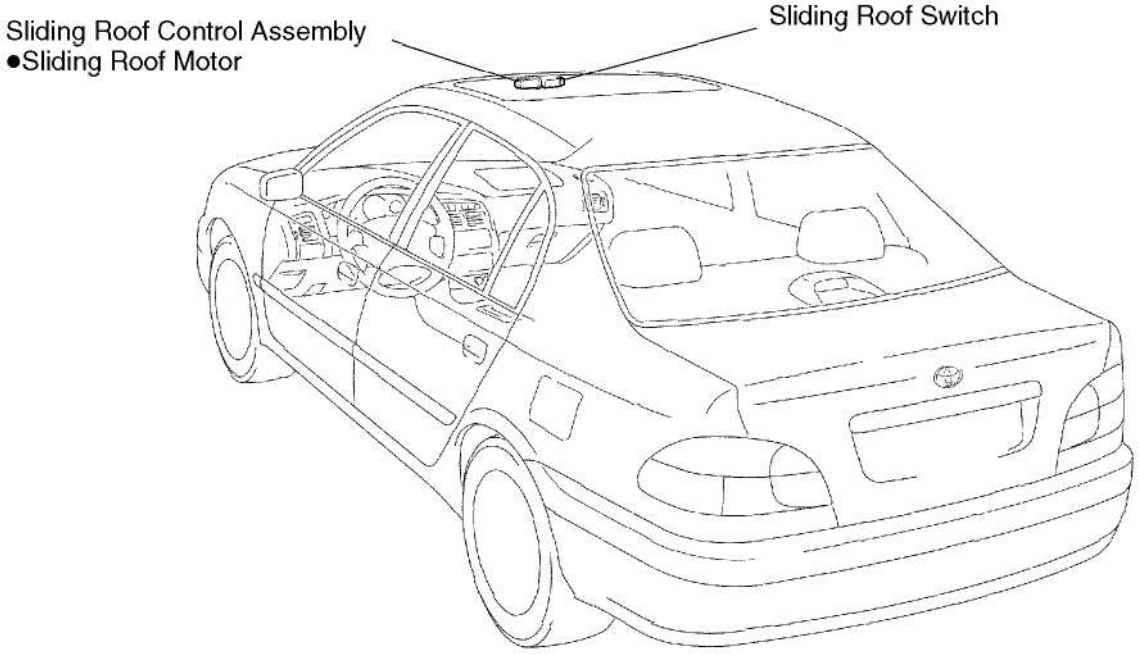
*Reinitializing method
(a) Move the sliding roof to the maximum tilted position.
(b) Release the switch, press the switch again and hold it for 10 secs.
(c) The sliding roof operates in a cycle of TILT DOWN → SLIDE OPEN → SLIDE CLOSE → TILT UP.
THis completes reinitializing.

5E0CA–01

LOCATION

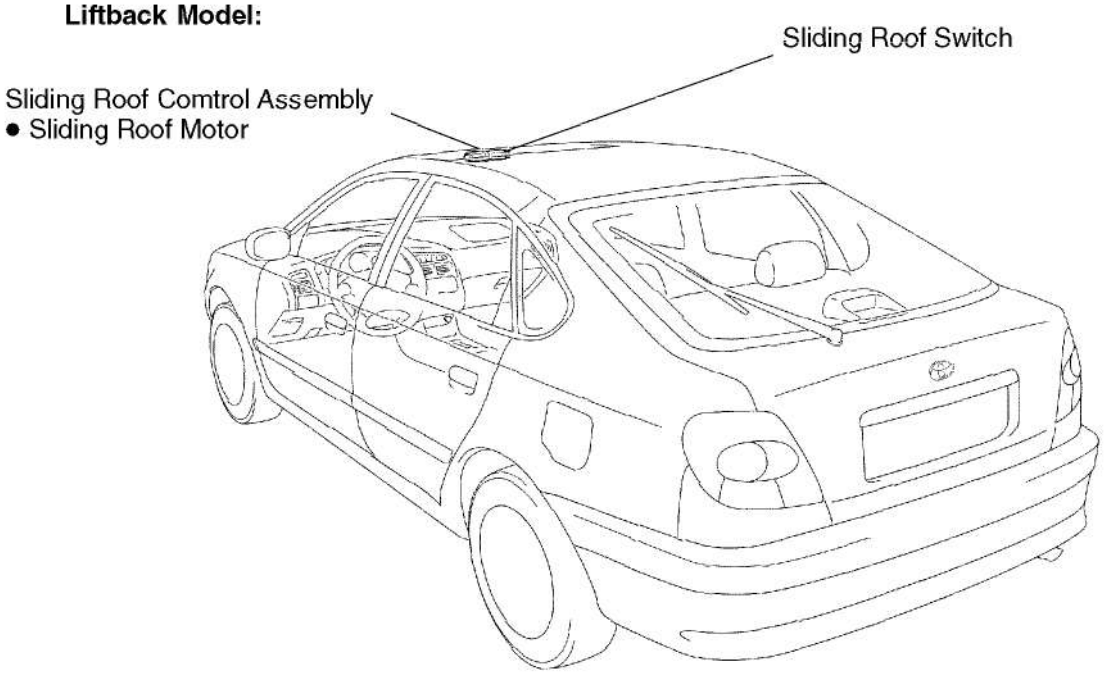


Sedan Model:

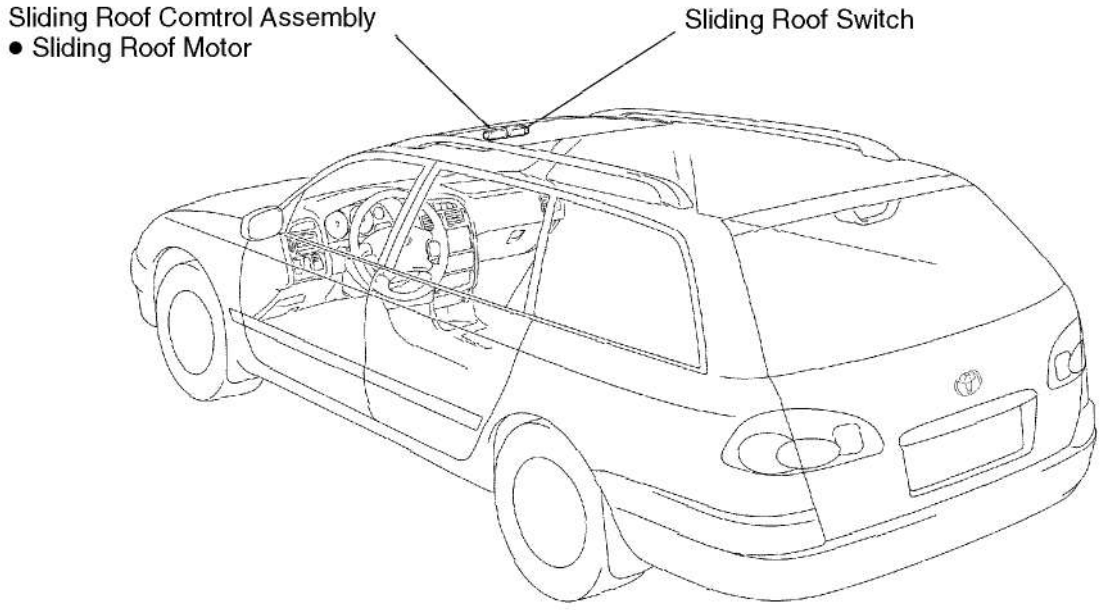


I04836

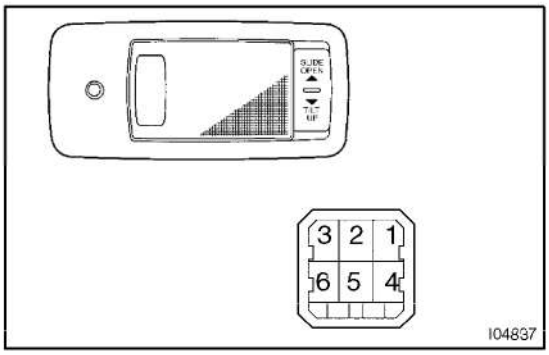
Liftback Model:



Wagon Model:



I04876



INSPECTION

NOTICE:

While the sliding roof is in operation when an abnormality is found in power source system, the roof does not stop at correct position.In this case, it is necessary to reinitialize the system.

1. REINITIALIZING METHOD

(a) Move the sliding roof to the maximum tilted position.

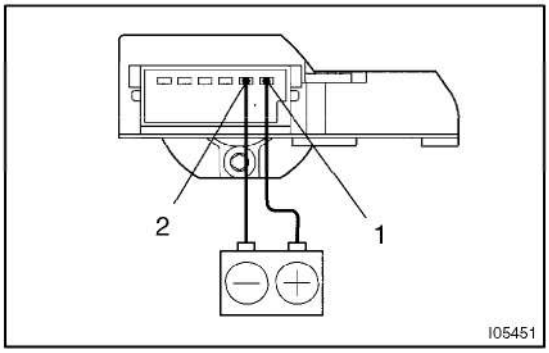
(b) Release the switch, press the switch again and hold it for 10 secs.

(c) The sliding roof operates in a cycle of TILT DOWN → SLIDE OPEN → SLIDE CLOSE → TILT UP.THis completes reinitializing.

2. INSPECT SLIDING ROOF SWITCH CONTINUITY

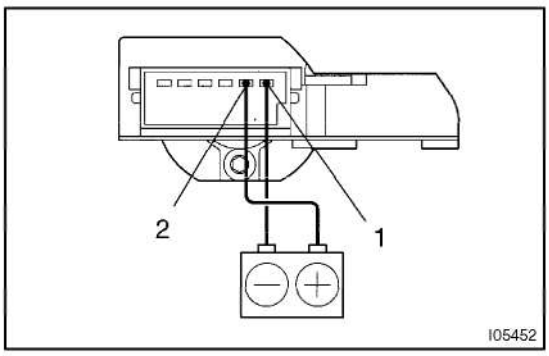
Switch position	Tester connection	Specified condition
SLIDE OPEN	1 – 3, 4 – 5	Continuity
SLIDE OFF	1 – 4 – 5	Continuity
SLIDE CLOSE	1 – 5, 3 – 4	Continuity
TILT DOWN	1 – 3, 4 – 5	Continuity
TILT OFF	1 – 4 – 5	Continuity
TILT UP	1 – 5, 3 – 4	Continuity

If continuity is not as specified, replace the switch.



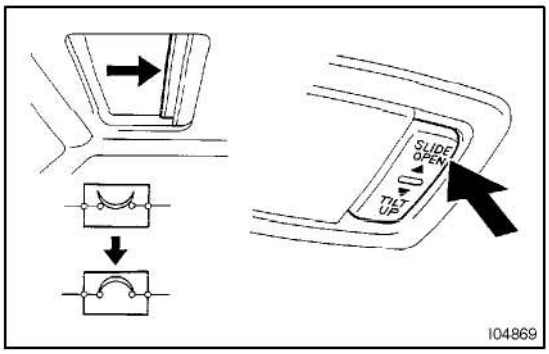
3. INSPECT SLIDING ROOF CONTROL ASSEMBLY OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, check that the motor turns counterclockwise (moves to the close and up side).



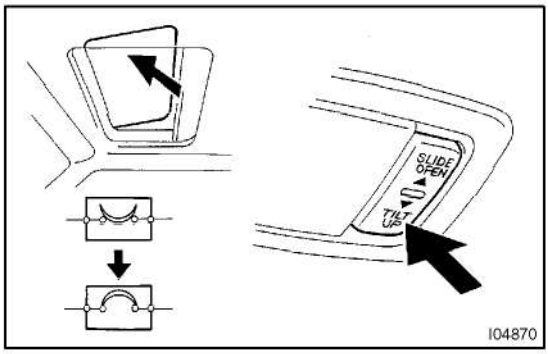
(b) Reverse the polarity, check that the motor turns clockwise. (moves to the open and down side).

If operation is not as specified, replace the sliding roof control assembly.



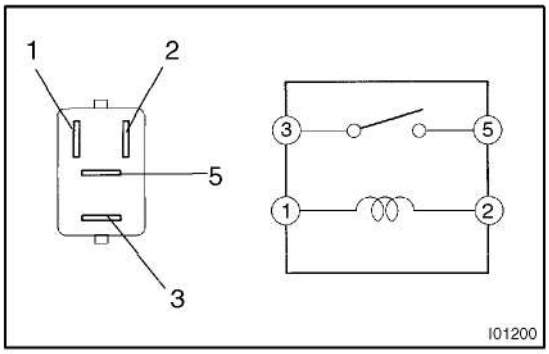
4. INSPECT SLIDING ROOF CONTROL ASSEMBLY CIRCUIT BREAKER OPERATION

(a) With the sliding roof in the fully opened position, hold the sliding roof switch in "OPEN" position and check that a circuit breaker operation noise can be heard within 10 to 60 seconds.



(b) With the sliding roof in the fully opened position, hold the sliding roof switch in "TILT UP" position and check that the sliding roof begins to close within 60 seconds.

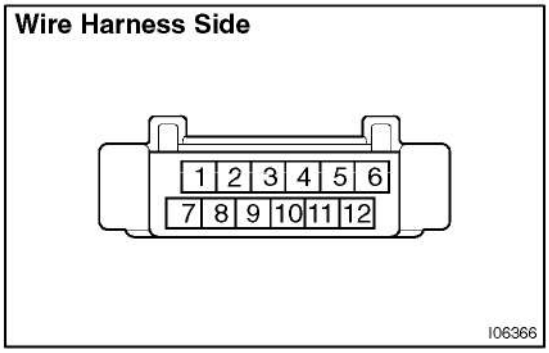
If operation is not as specified, replace the sliding roof control assembly.



5. 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.



6. INSPECT SLIDING ROOF CONTROL ASSEMBLY CIRCUIT

Disconnect the connector from the sliding roof control assembly and inspect the connector on the wire harness side, as shown in the table below.

Tester connection	Condition	Specified condition
2 – Ground	Ignition switch ON, slide roof control switch (SLIDE) OFF or CLOSE	No voltage
2 – Ground	Ignition switch ON, slide roof control switch (SLIDE) OPEN	Battery voltage
1 – Ground	Ignition switch ON, slide roof control switch (SLIDE) OFF or OPEN	No voltage

1 – Ground	Ignition switch ON, slide roof control switch (SLIDE) CLOSE	Battery voltage
1 – Ground	Ignition switch ON, slide roof control switch (TILT) OFF or DOWN	No voltage
1 – Ground	Ignition switch ON, slide roof control switch (TILT) UP	Battery voltage
2 – Ground	Ignition switch ON, slide roof control switch (TILT) OFF or UP	No voltage
2 – Ground	Ignition switch ON, slide roof control switch (TILT) DOWN	Battery voltage
6 – Ground	Constant	Continuity
5 – Ground	Ignition switch LOCK or ACC	*No voltage
5 – Ground	Ignition switch ON	Battery voltage
4 – Ground	Constant	Battery voltage

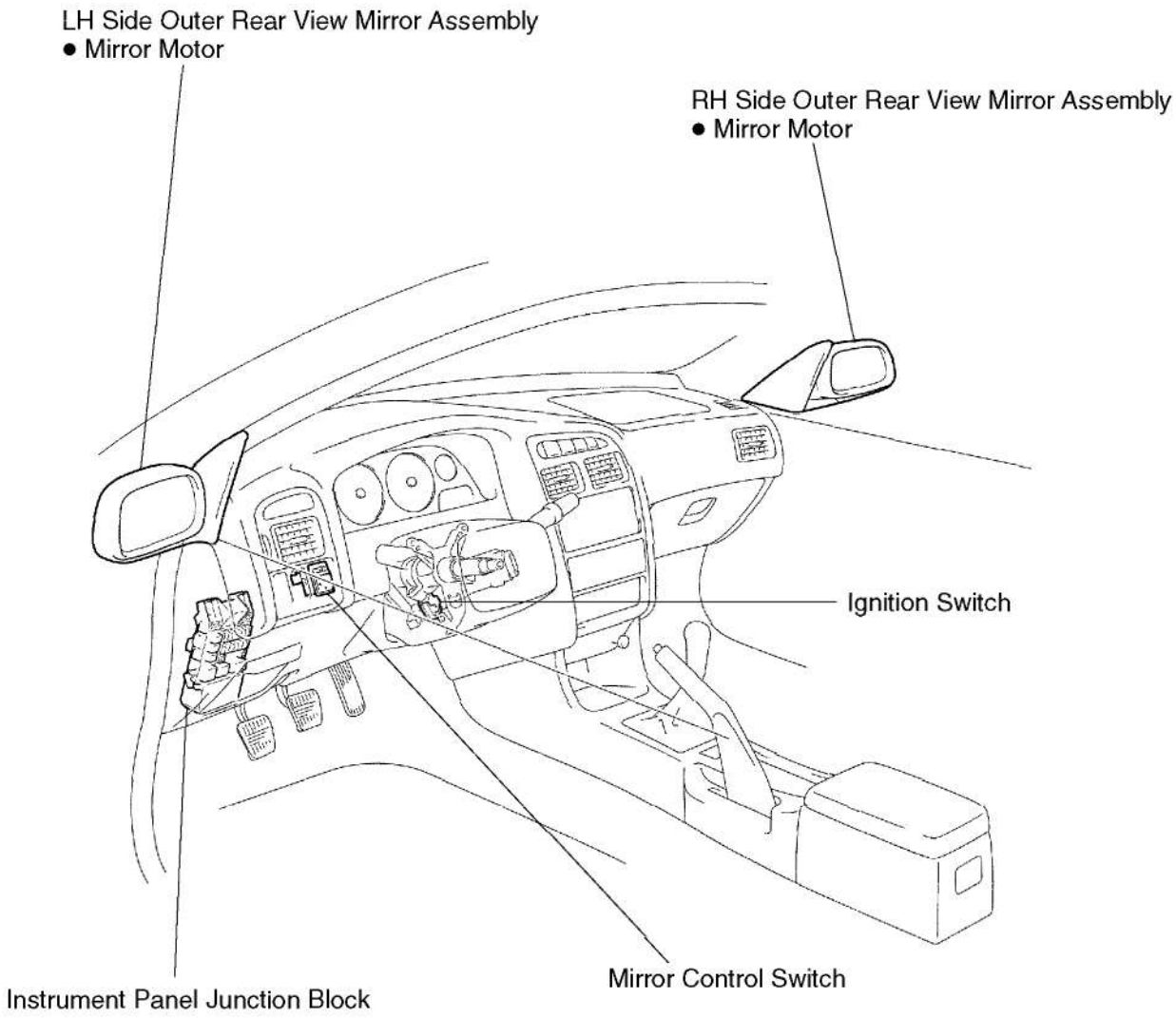
*Exceptions: For 60 seconds after the ignition switch is turned from ON to OFF (ACC) or until driver or passenger door is opened after the ignition switch is turned from ON to OFF (ACC).

If the circuit is as specified, replace the relay.

POWER MIRROR CONTROL SYSTEM

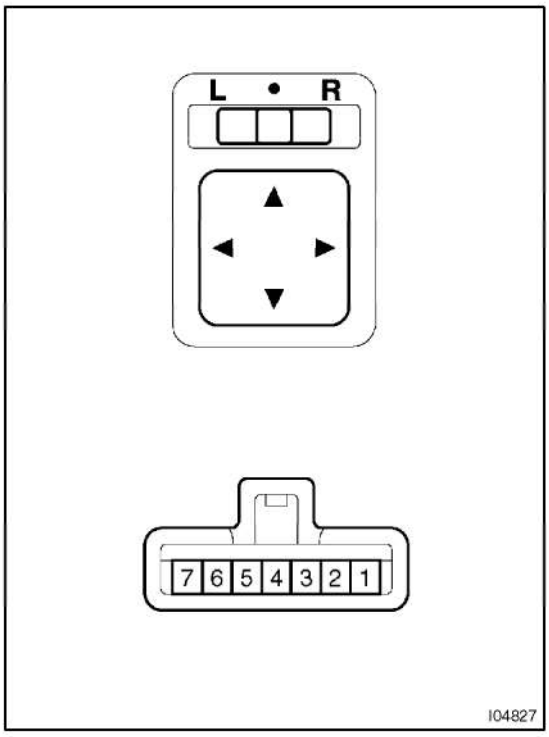
LOCATION

BE02J–04



I04826

5E00C–01



INSPECTION

1. INSPECT MIRROR SWITCH CONTINUITY

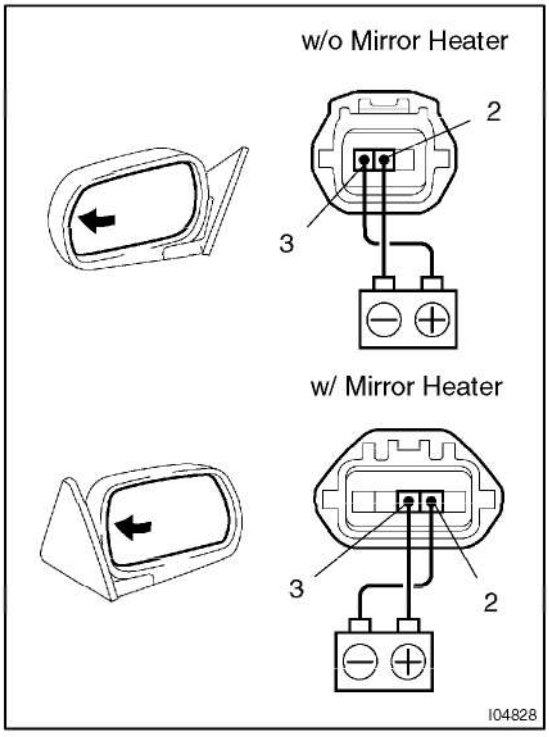
Left Side for Left/Right Adjustment Switch

Switch position	Tester connection	Specified condition
OFF	–	No continuity
UP	1 – 9 6 – 10	Continuity
DOWN	1 – 10 6 – 9	Continuity
LEFT	5 – 9 6 – 10	Continuity
RIGHT	5 – 10 6 – 9	Continuity

Right Side for Left/Right Adjustment Switch

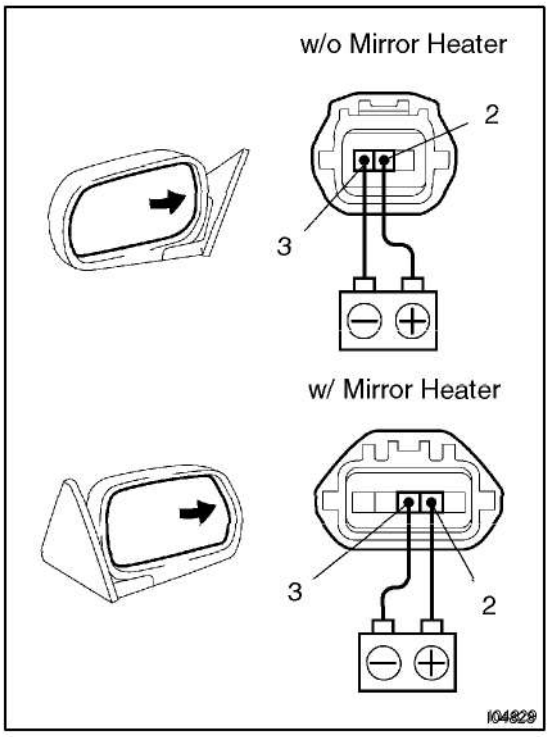
Switch position	Tester connection	Specified condition
OFF	–	No continuity
UP	6 – 10 7 – 9	Continuity
DOWN	6 – 9 7 – 10	Continuity
LEFT	6 – 10 8 – 9	Continuity
RIGHT	6 – 9 8 – 10	Continuity

If continuity is not as specified, replace the switch.

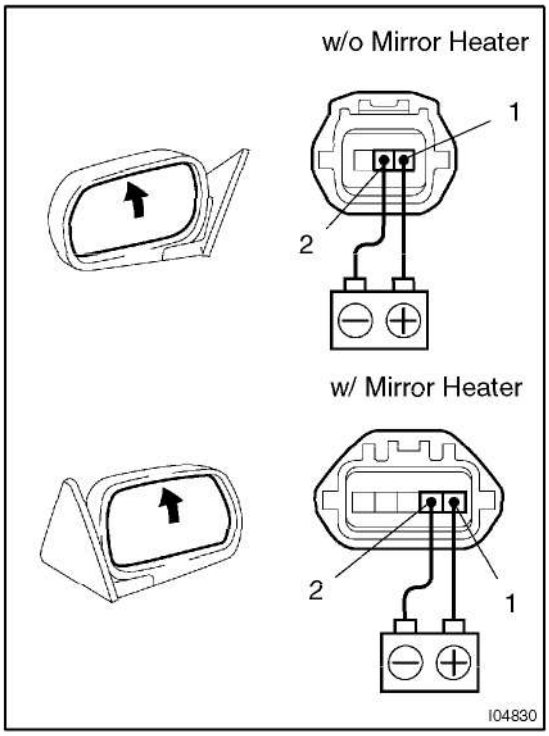


2. INSPECT MIRROR MOTOR

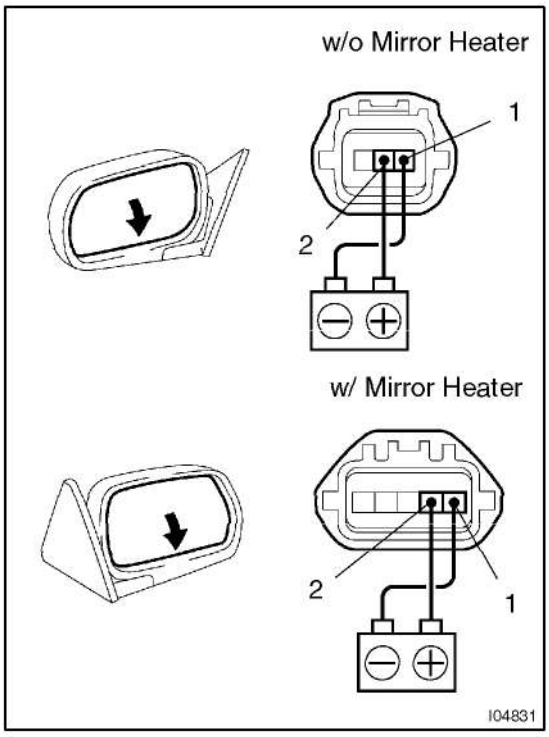
(a) Connect the positive (+) lead from the battery to terminal 3 and the negative (–) lead to terminal 2, check that the mirror turns left side.



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



(c) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, and check that the mirror turns upward.



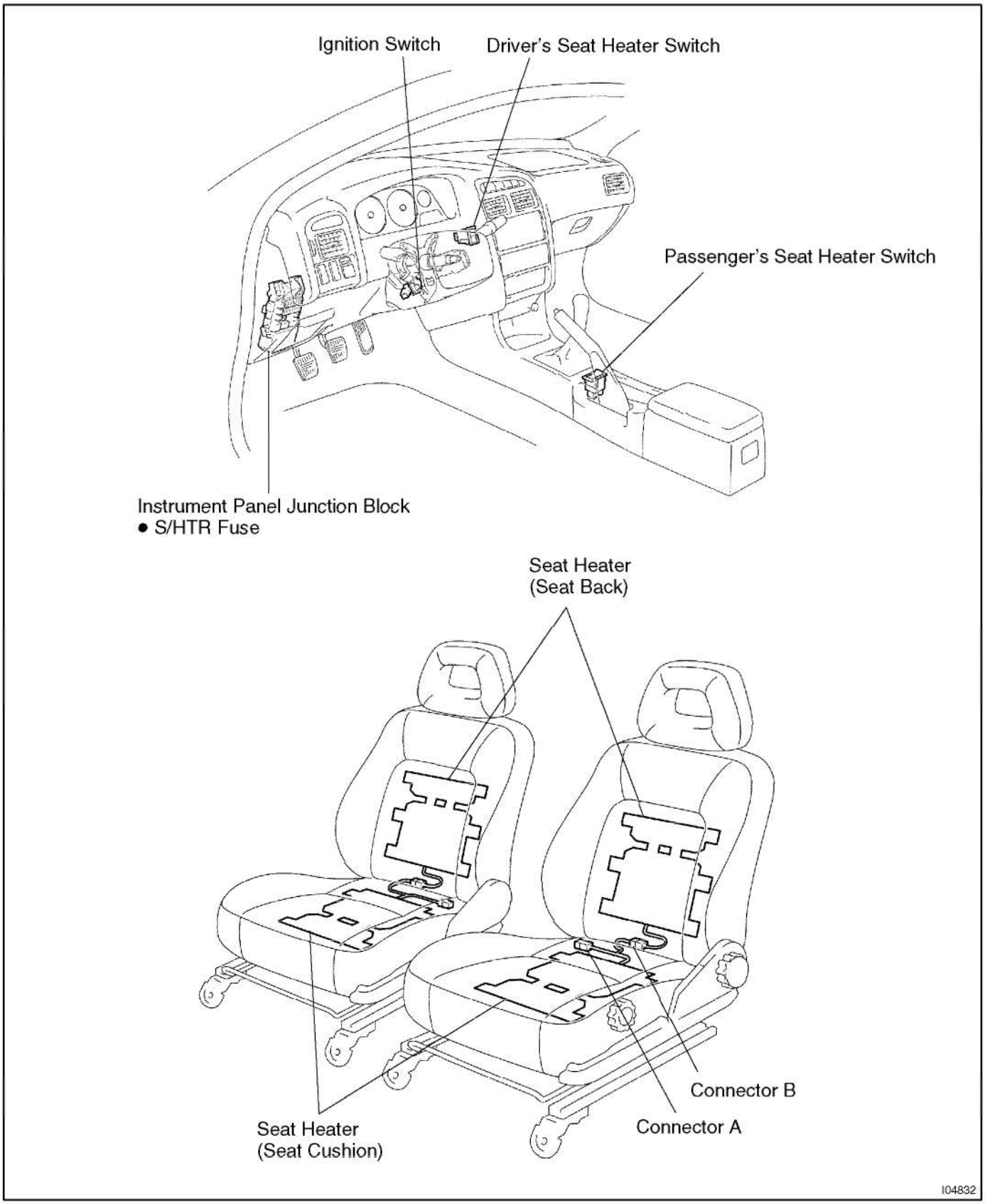
(d) Reverse the polarity, and check that the mirror turns downward.

If the operation is not as specified, replace the mirror assembly.

SEAT HEATER SYSTEM

LOCATION

BE0OD–01



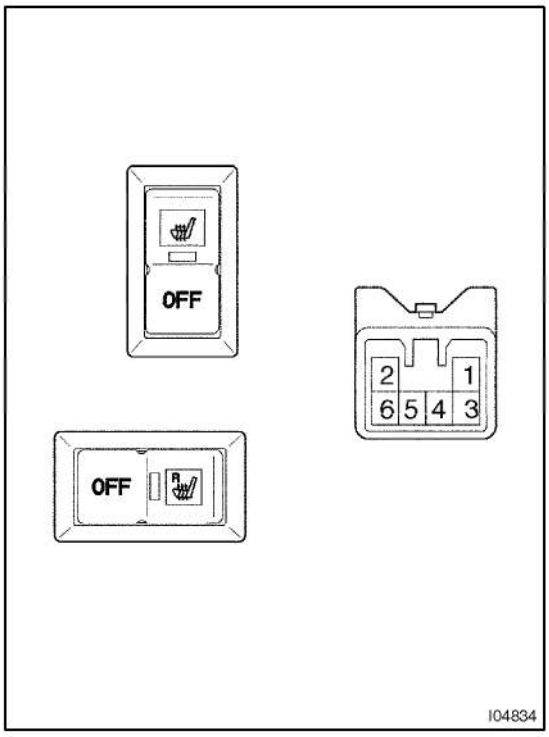
5E02U-03

INSPECTION

1. INSPECT SEAT HEATER SWITCH CONTINUITY

Condition	Tester connection	Specified condition
OFF	1 – 3	Continuity
ON	1 – 3 – 5	Continuity
Illumination circuit	2 – 6	Continuity

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

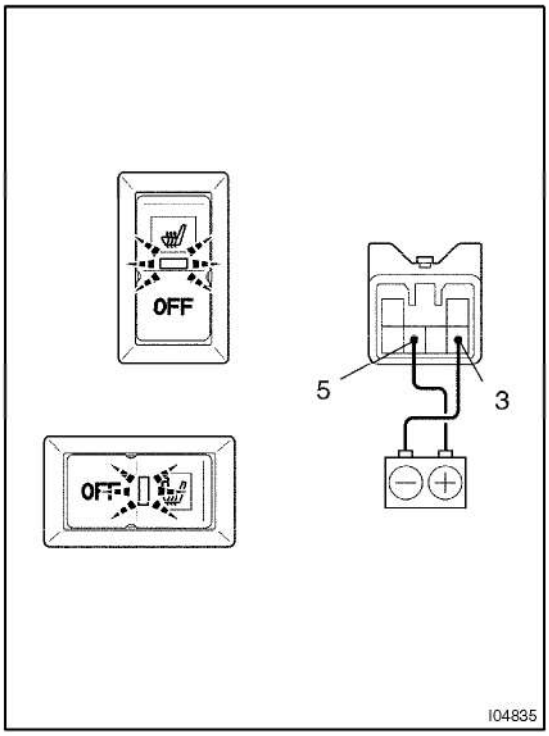


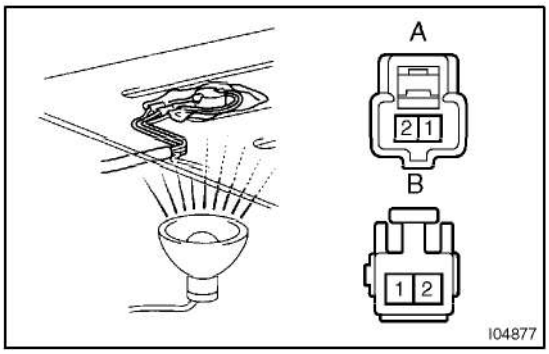
2. INSPECT SEAT HEATER SWITCH INDICATOR

(a) Connect the positive (+) lead from the battery to terminal 5 and the negative (–) lead to terminal 3.

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

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





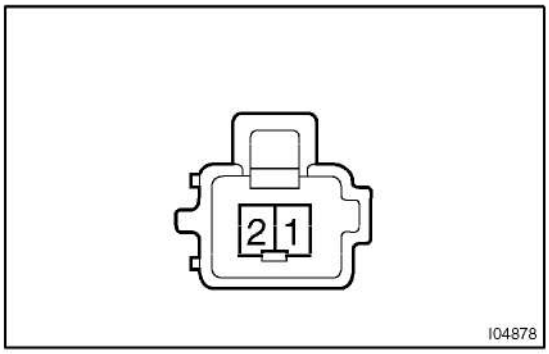
3. INSPECT SEAT HEATER CUSHION CONTINUITY

(a) Heat the thermostat with a light.

(b) Inspect the seat heater continuity between terminals, as shown.

Tester connection	Condition	Specified condition
A2 – B2	Constant	Continuity
A1 – B1	Seat heater temperature below 29 °C (84.2 °F)	Continuity

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



4. INSPECT SEAT BACK CONTINUITY

Inspect the seat back continuity between terminals, as shown.

Tester connection	Condition	Specified condition
1 – 2	Constant	Continuity

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

AUDIO SYSTEM

DESCRIPTION

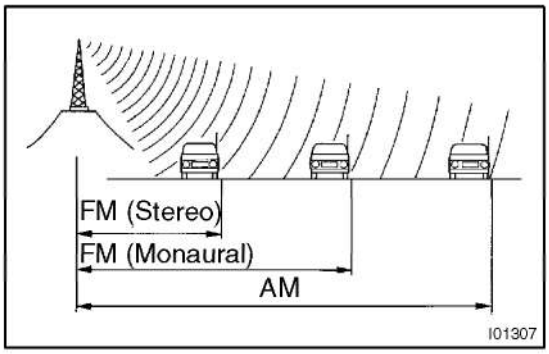
BE02L-02

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	LW ⟷	AM (MW) ⟷	SW ⟷	FM (UKW) ⟷	
Modulation	Amplitube modulation			Frequency modulation	

LF: Low Frequency
MF: Medium Frequency
HF: High Frequency
VHF: Very High Frequency
HINT:
In this section, the term "AM" includes LW, MW and SW, and the term "FM" includes "UKW".

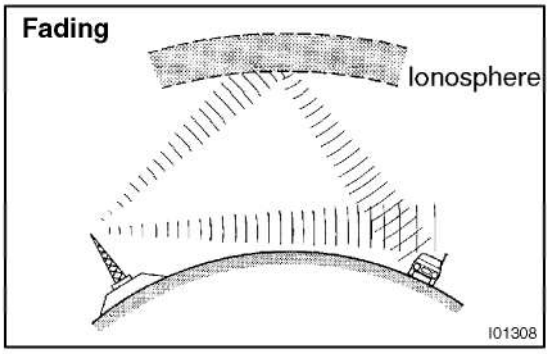


2. SERVICE AREA

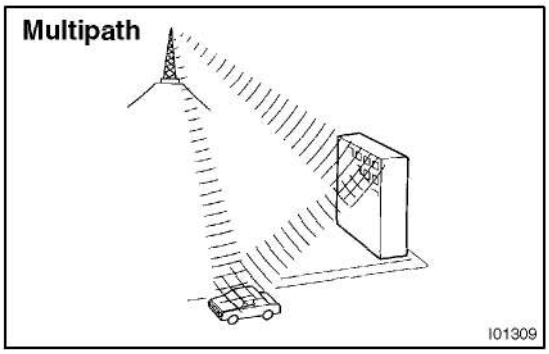
There are great differences in the size of the service area for AM and FM monaural. Sometimes FM stereo broadcasts cannot be received even though AM comes in very clearly.
Not only does FM stereo have the smallest service area, but it also picks up static and other types of interference ("noise") easily.

3. RECEPTION PROBLEMS

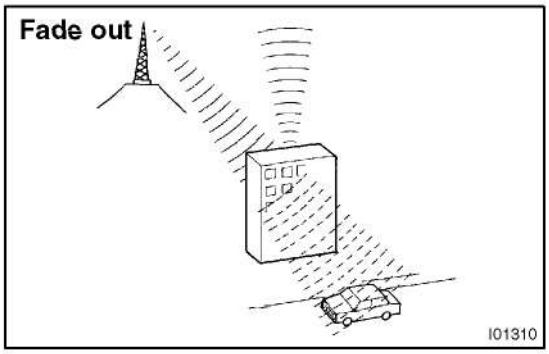
HINT:
Besides the problem of static, there are also the problems called "fading", "multipath" and "fade out". These problems are caused not by electrical noise but by the nature of the radio waves themselves.



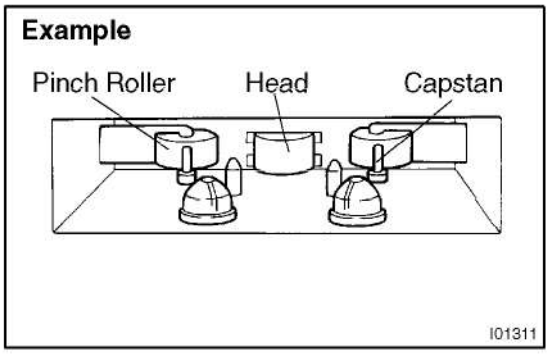
(a) Fading
Besides electrical interference, AM broadcasts are also susceptible to other types of interference, especially at night. This is because AM radio waves bounce off the ionosphere at night. These radio waves then interfere with the signals from the same transmitter that reach the vehicle's antenna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



(b) Multipath
One type of interference caused by the bouncing 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. MAINTENANCE

Tape Player/ Head Cleaning

(a) Raise the cassette door with your finger.
Next, using a pencil or like object, push in the guide.

(b) Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.

5E02M–02

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.

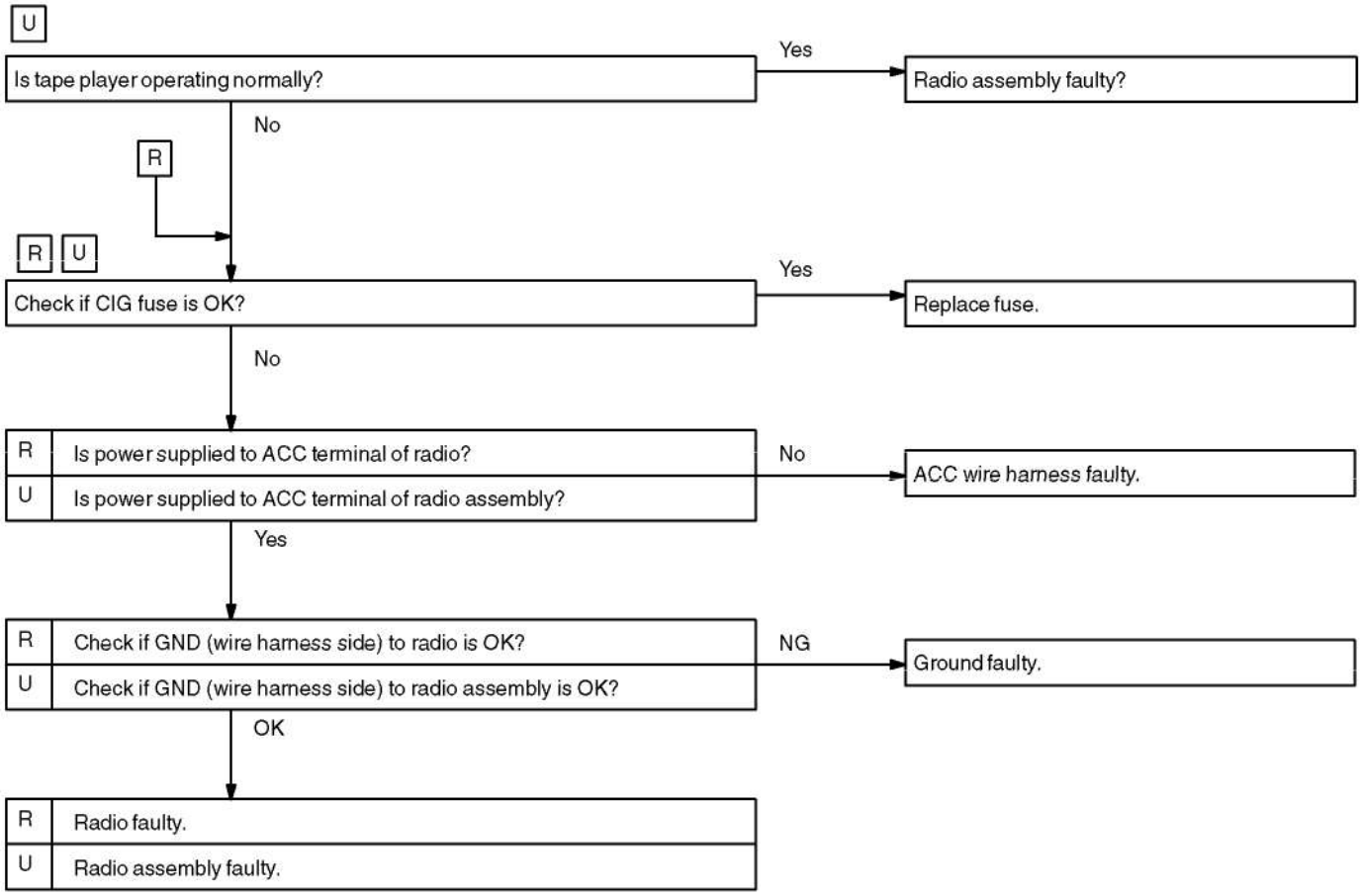
- Open or short circuit of the wire harness
- Connector or terminal connection fault

	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
	Either speaker does not work.	4
	Either AM or FM does not work.	5
	Reception poor.	5
	Few preset turning bands.	5
	Sound quality poor.	6
	Preset memory disappears.	7
	Cannot set station select button, preset memory disappears.	7
Tape Player	Cassette tape cannot be inserted.	8
	Cassette tape inserted, but no power.	9
	Power coming in, but tape player not operating.	10
	Either speaker does not work.	11
	Sound quality poor.	12
	Tape jammed, malfunction with tape speed or auto–reverse.	13
	APS, SKIP, RPT buttons not operating	14
	Cassette tape will not be ejected.	15
Antenna	Antenna related.	16
Noise	Noise produced by vibration or shock while driving.	17
	Noise produced when engine starts.	18

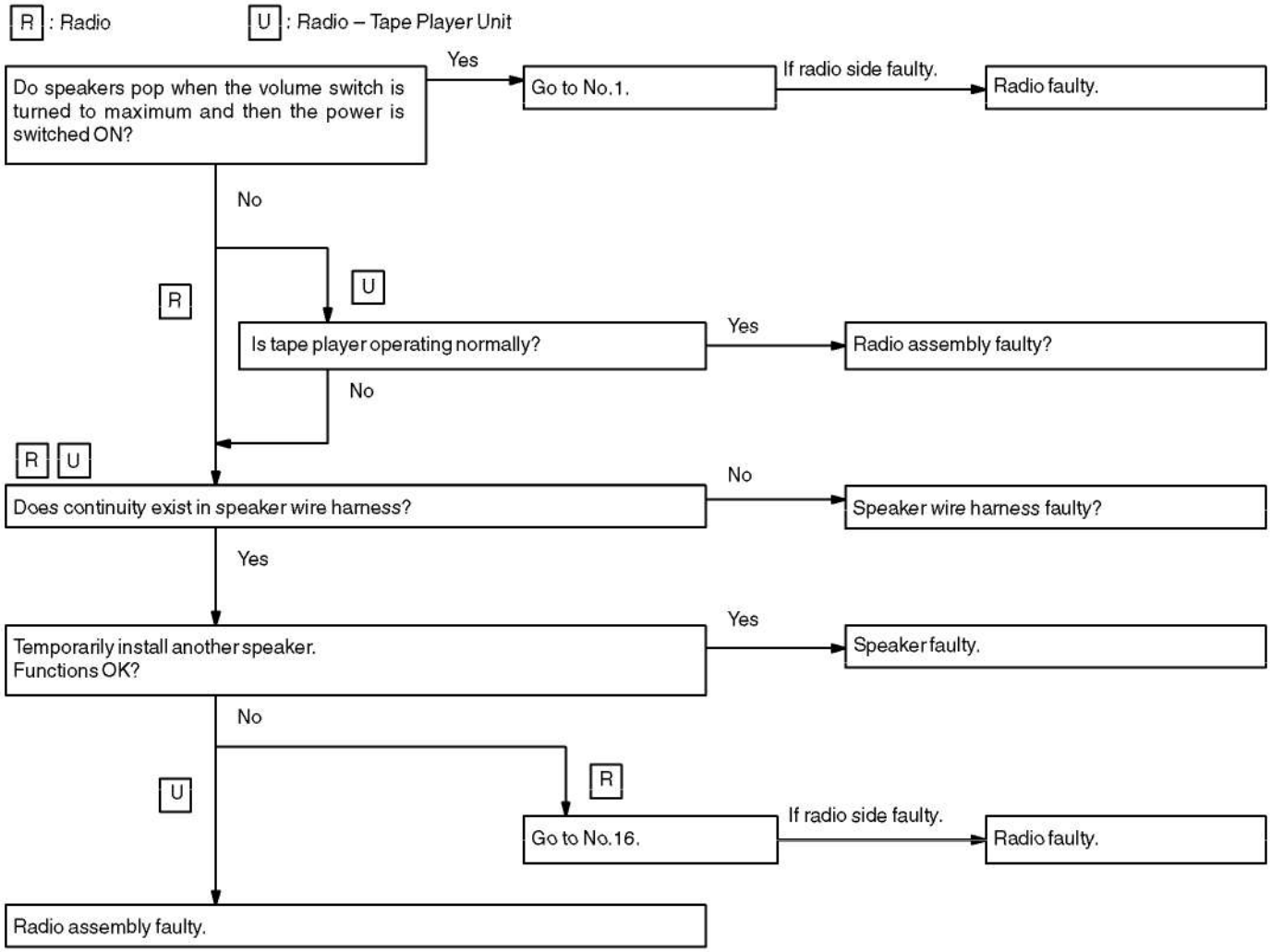
The term "AM" includes LW,MW and SW, and the term "FW" includes UKW.

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

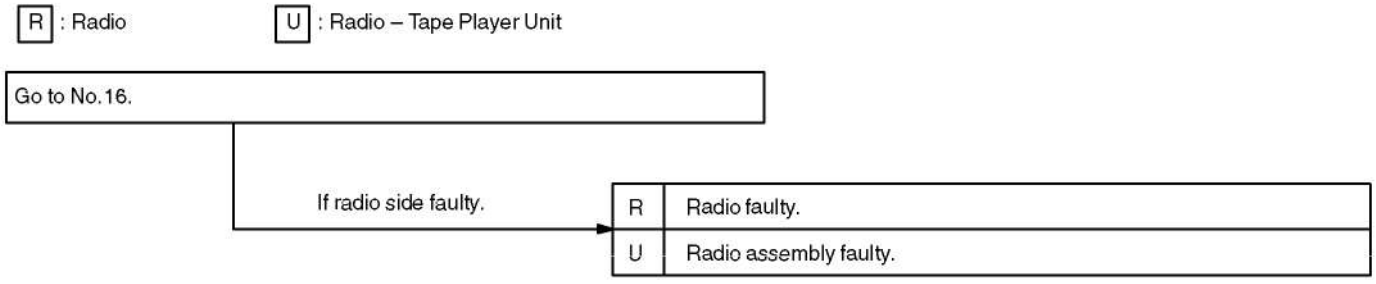
[R] : Radio [U] : Radio – Tape Player Unit



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

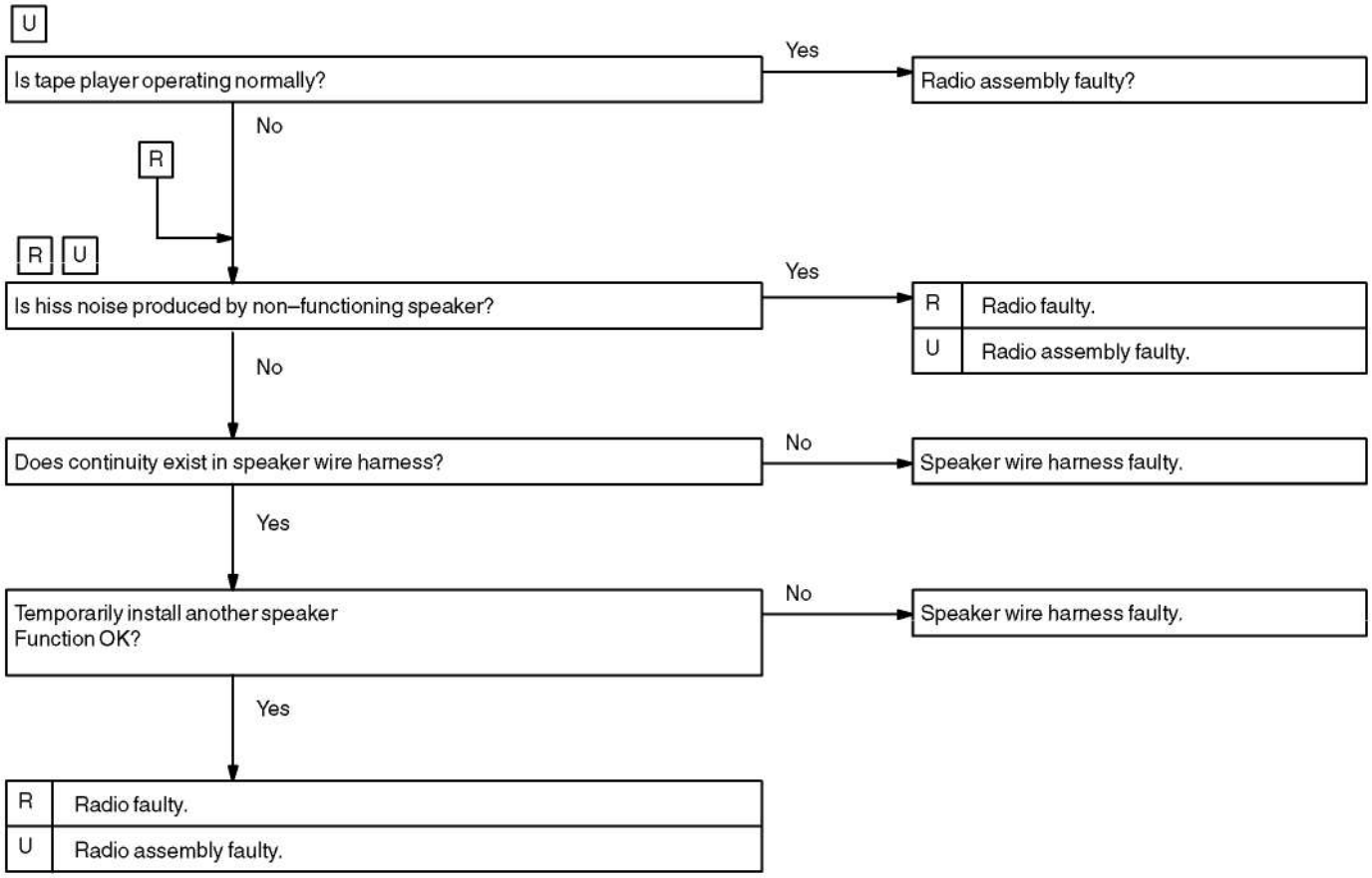


3	Radio	NOISE PRESENT, BUT AM–FM NOT OPERATING

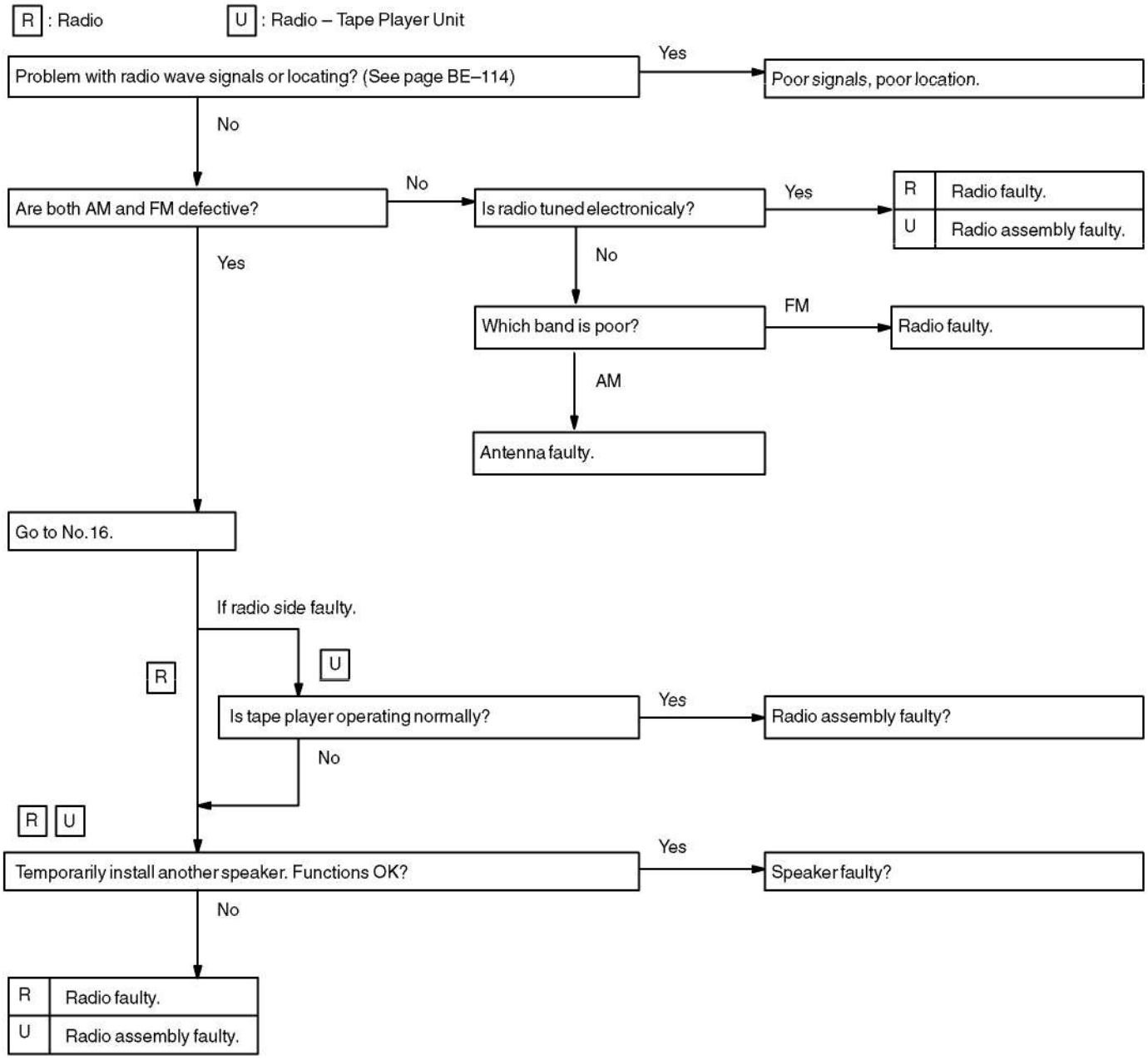


4	Radio	EITHER SPEAKER DOES NOT WORK

[R] : Radio [U] : Radio – Tape Player Unit

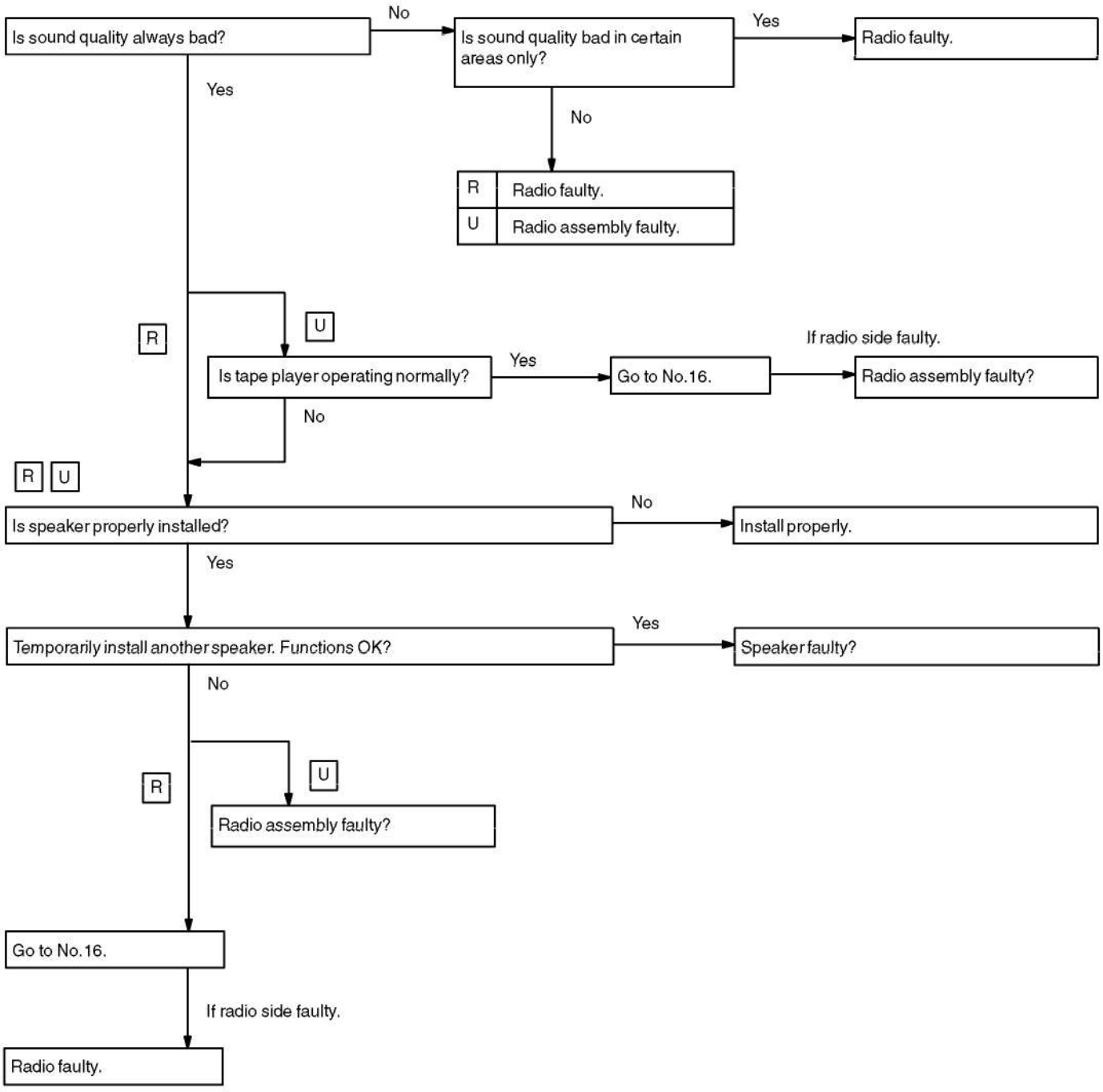


5	Radio	EITHER AM OR FM DOES NOT WORK, RECEPTION POOR (VOLUME FAINT), FEW PRESET TUNING BANDS

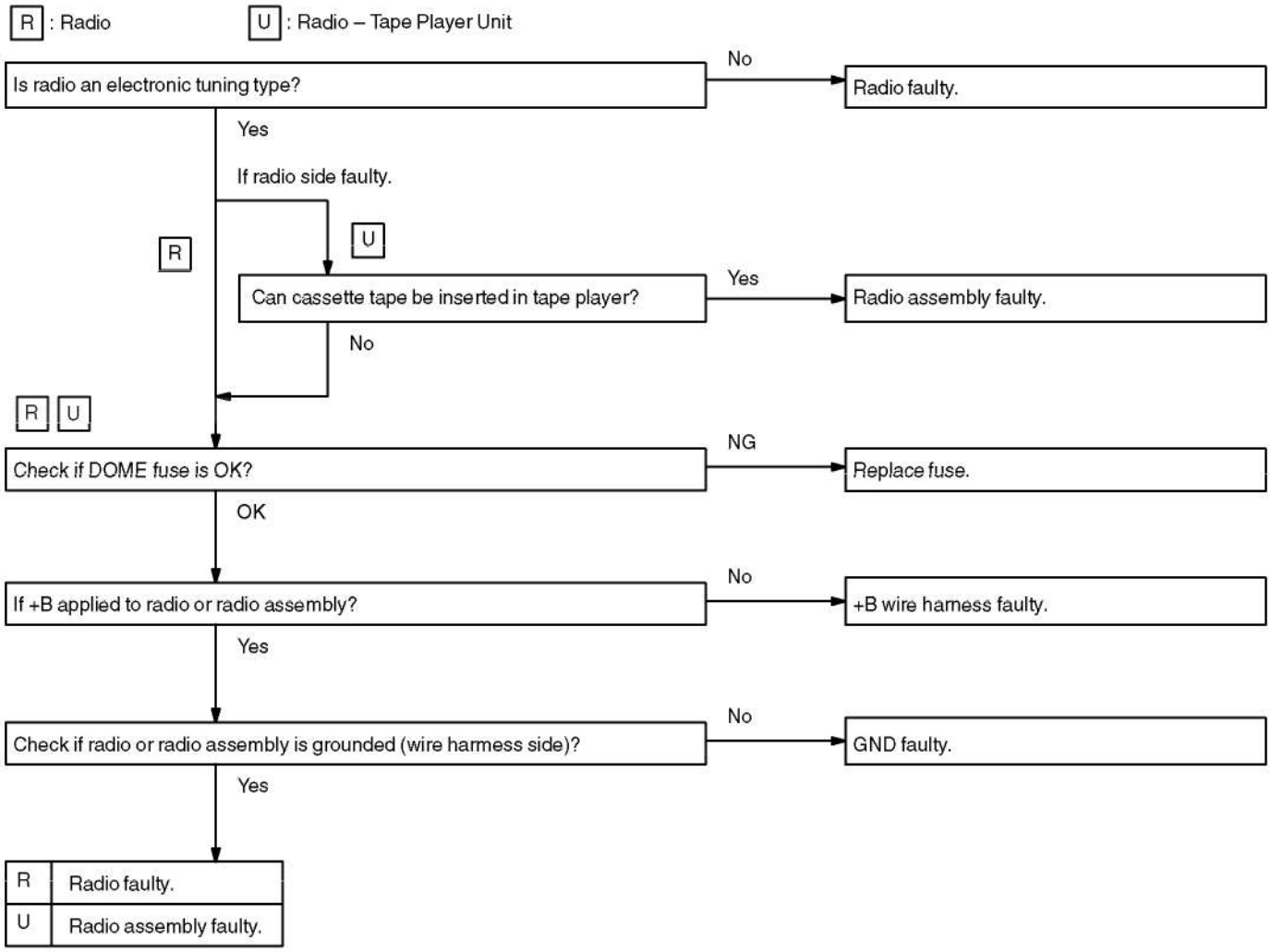


6	Radio	SOUND QUALITY POOR

[R] : Radio [U] : Radio – Tape Player Unit

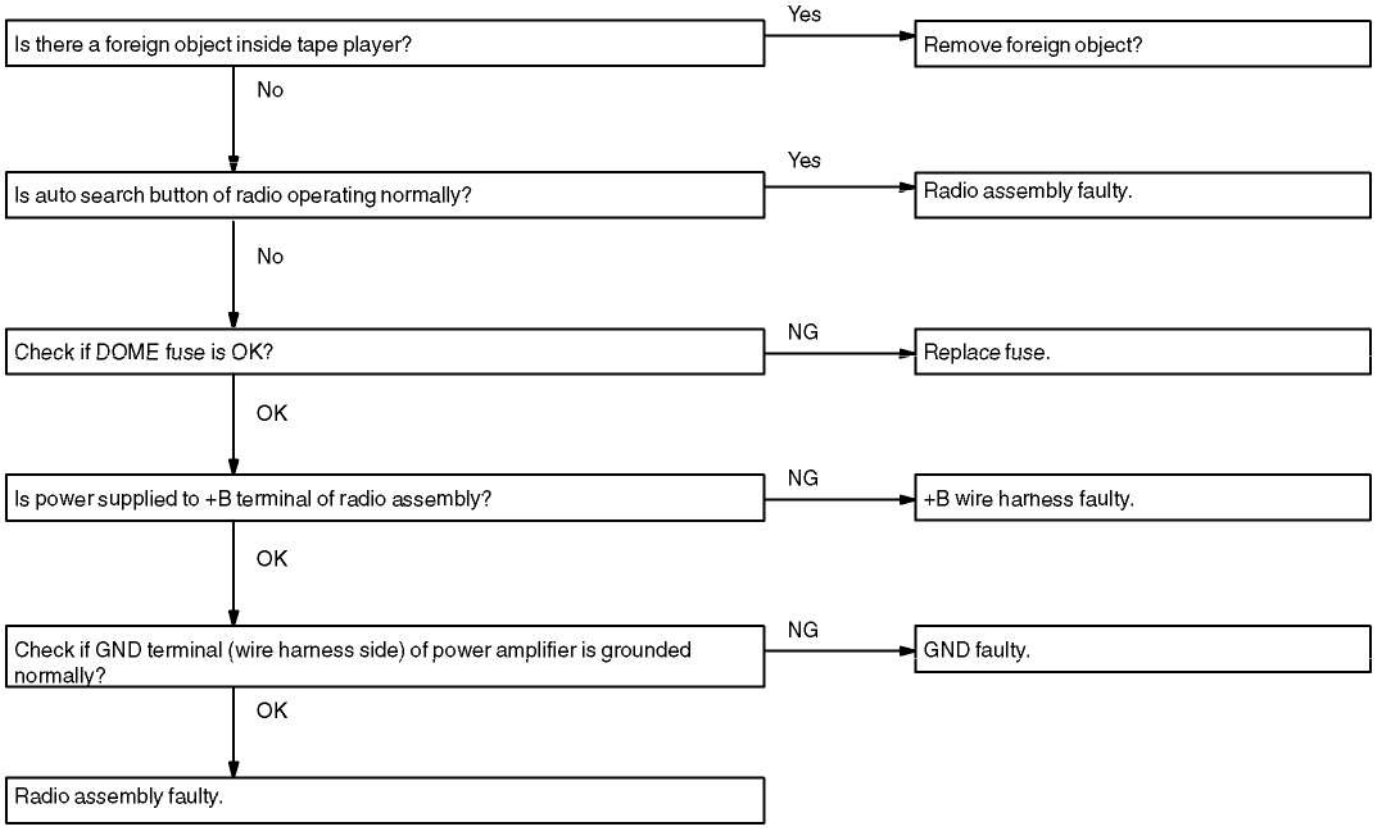


7	Radio	CANNOT SET STATION SELECT BUTTON, PRESET MEMORY DISAPPEARS



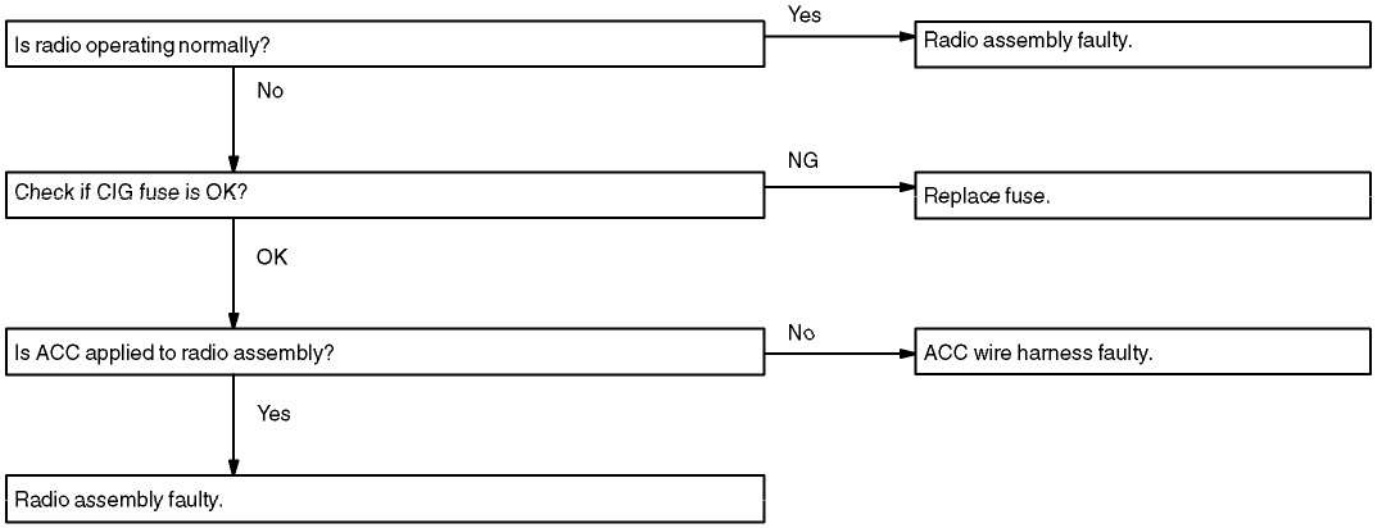
8	Tape Player	CASSETTE TAPE CANNOT BE INSERTED

U : Radio – Tape Player Unit



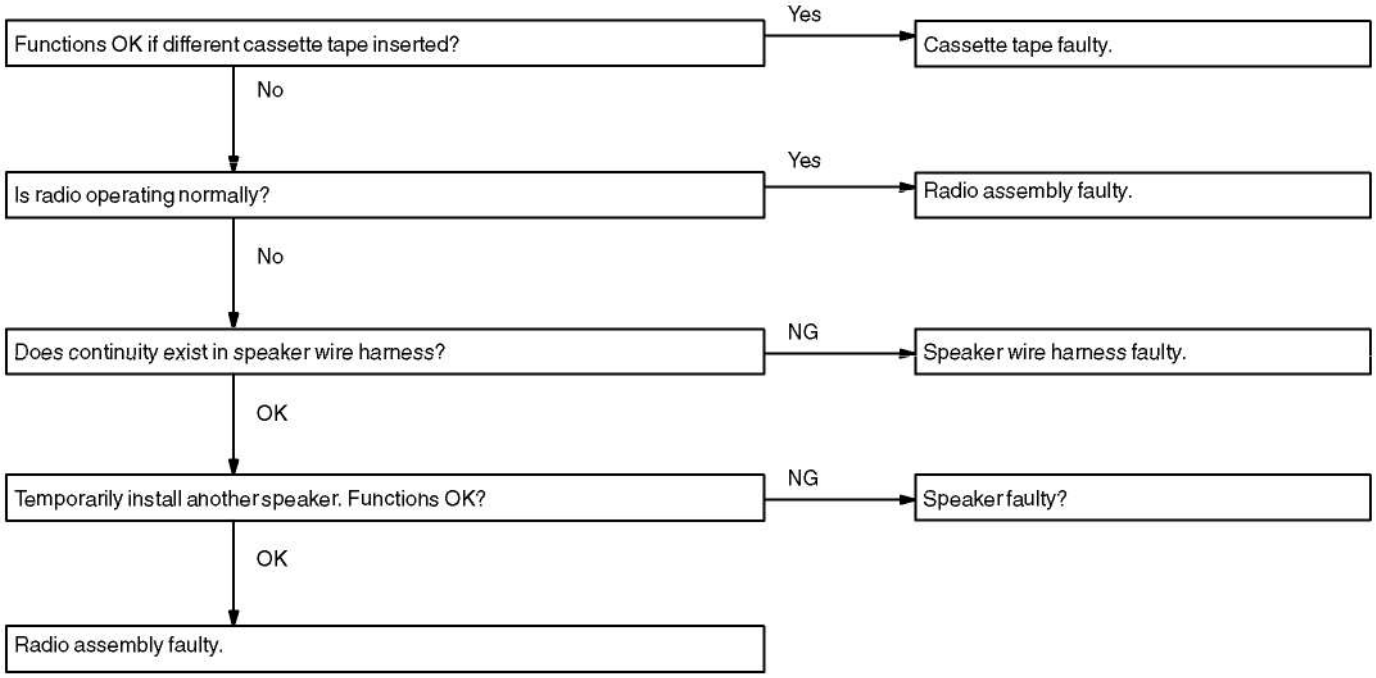
9	Tape Player	CASSETTE TAPE INSERTED, BUT NO POWER

U : Radio – Tape Player Unit



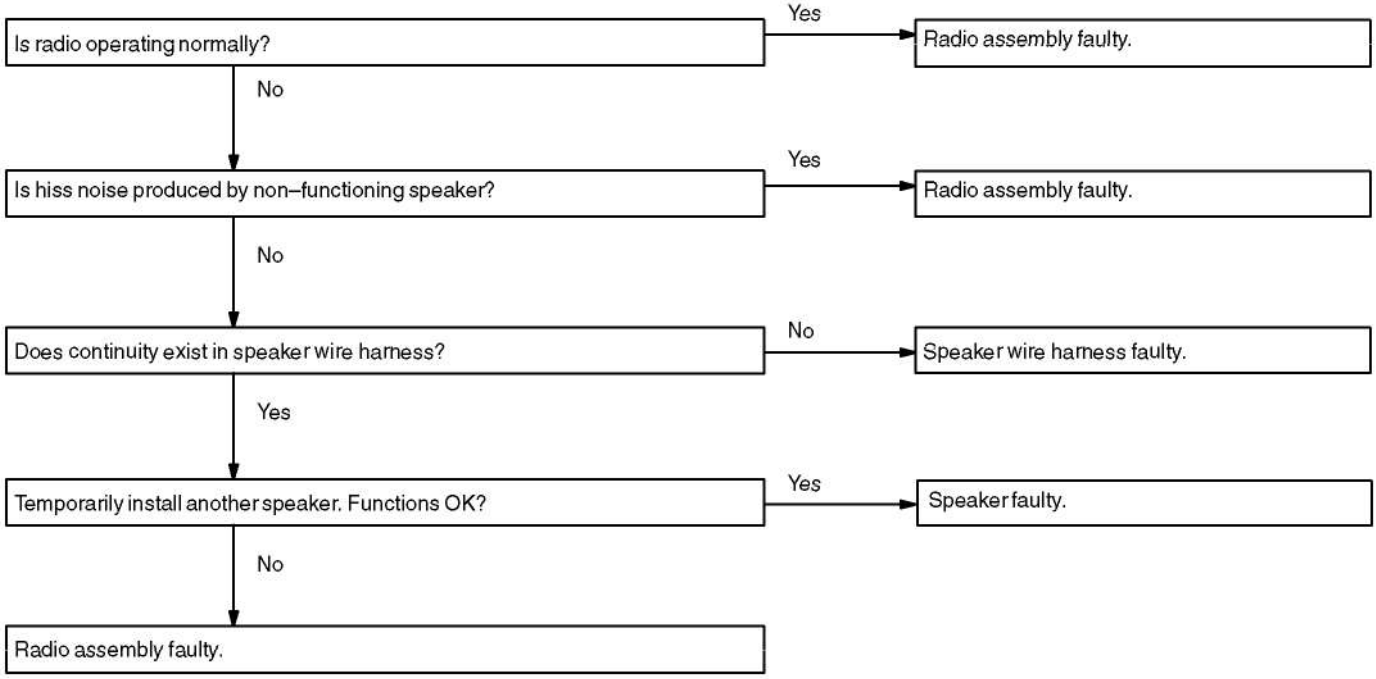
10	Tape Player	POWER COMING IN, BUT TAPE PLAYER NOT OPERATING

U : Radio – Tape Player Unit



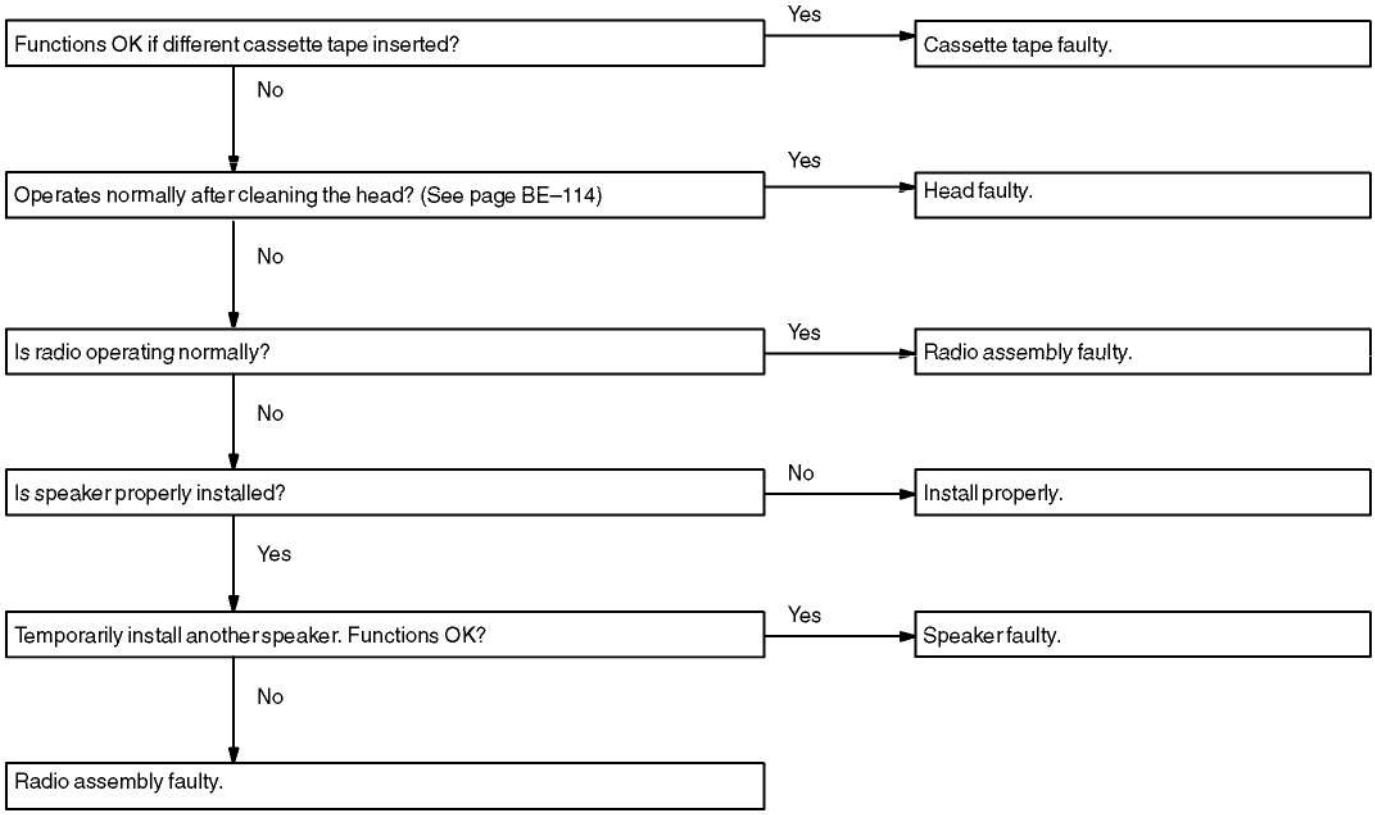
11	Tape Player	EITHER SPEAKER DOES NOT WORK

U : Radio – Tape Player Unit



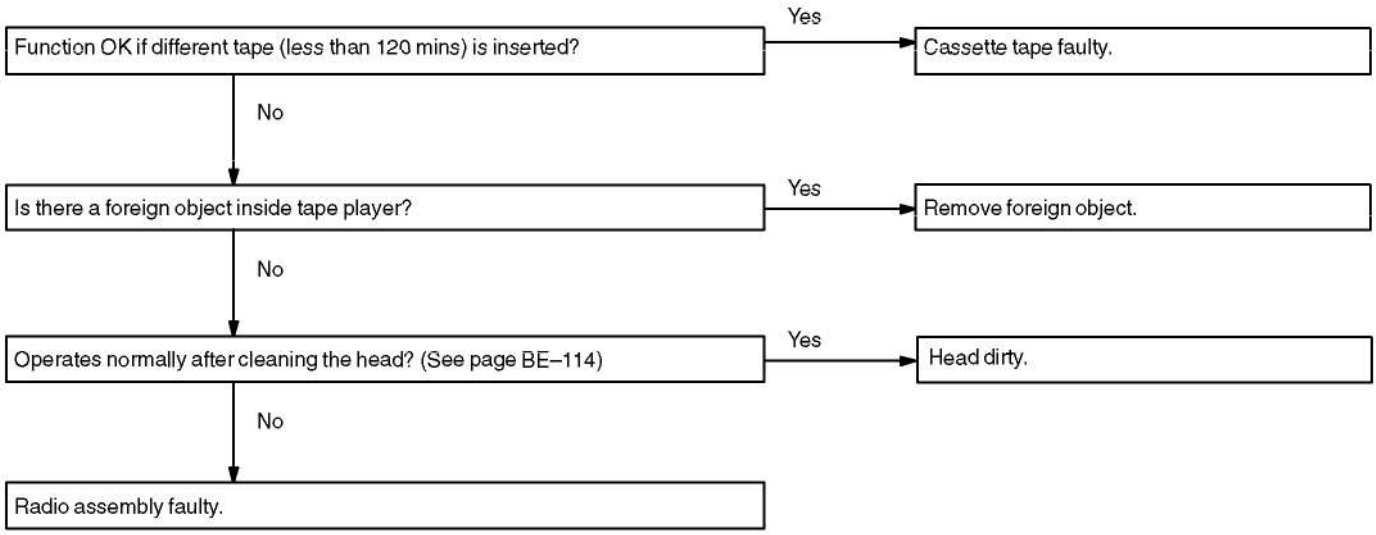
12	Tape Player	SOUND QUALITY POOR (VOLUME FAINT)

U : Radio – Tape Player Unit

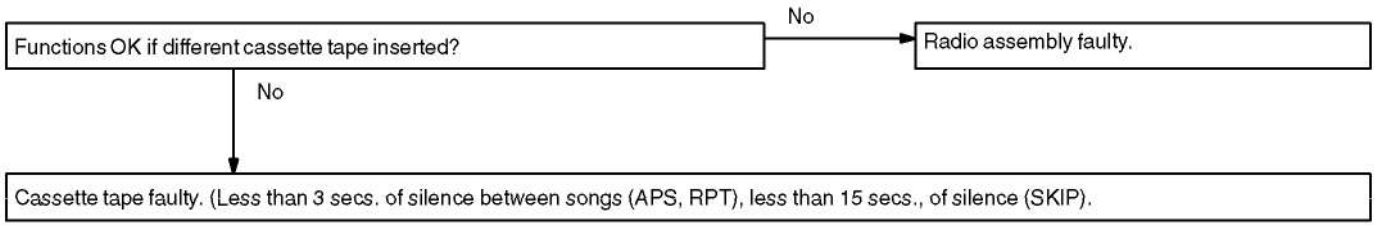


13	Tape Player	TAPE JAMMED, MALFUNCTION WITH TAPE SPEED OR AUTO–REVERSE

U : Radio – Tape Player Unit

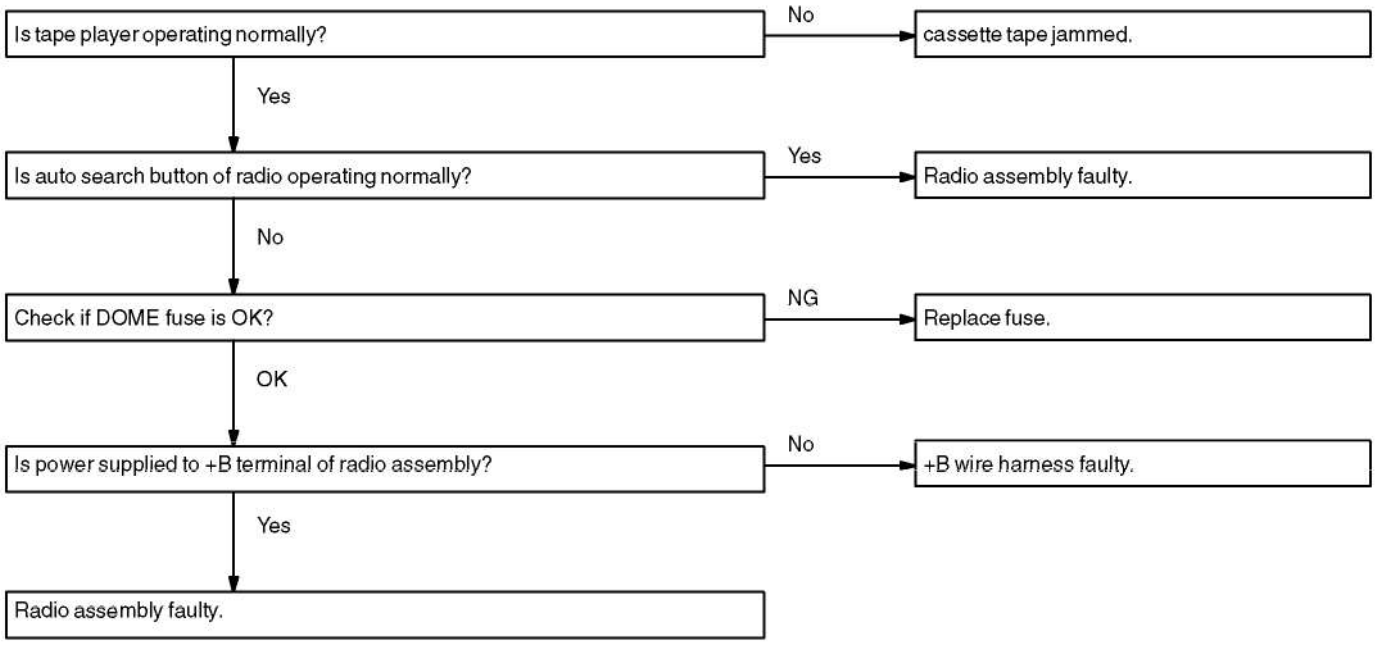


14	Tape Player	APS, SKIP, RPT BUTTONS NOT OPERATING

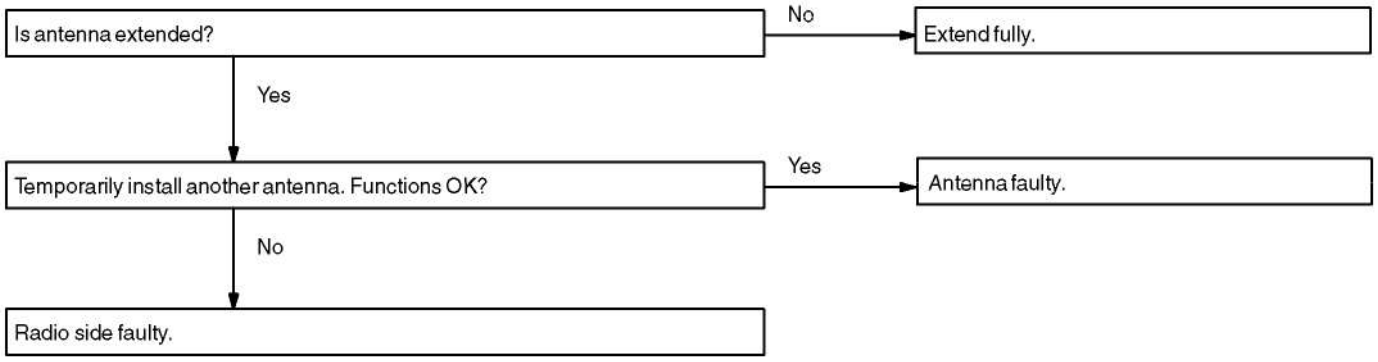


15	Tape Player	CASSETTE TAPE WILL NOT BE EJECTED

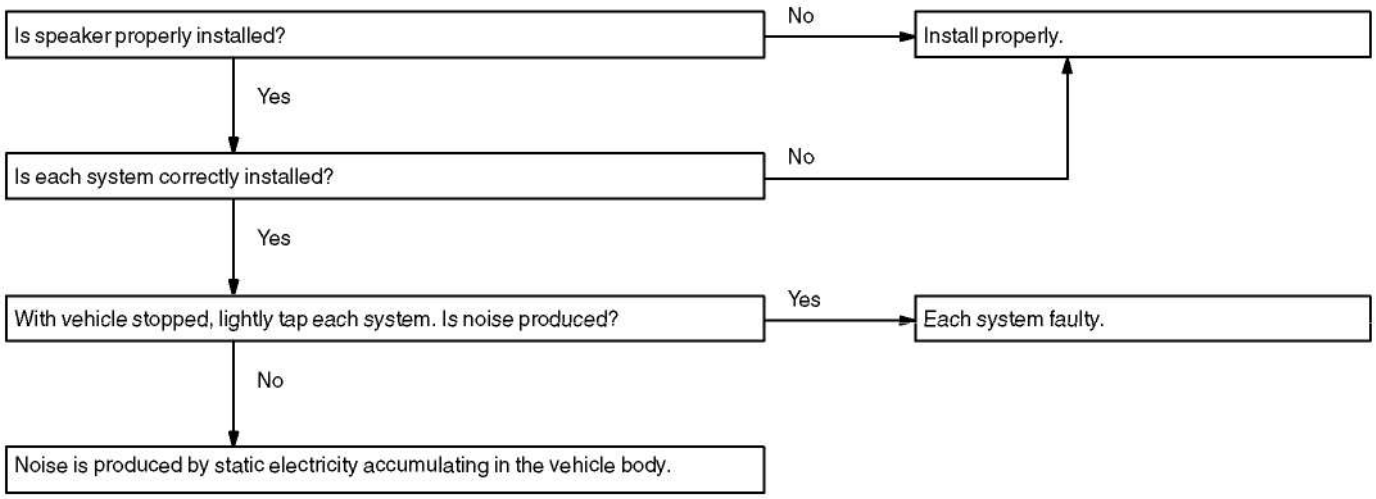
U : Radio – Tape Player Unit



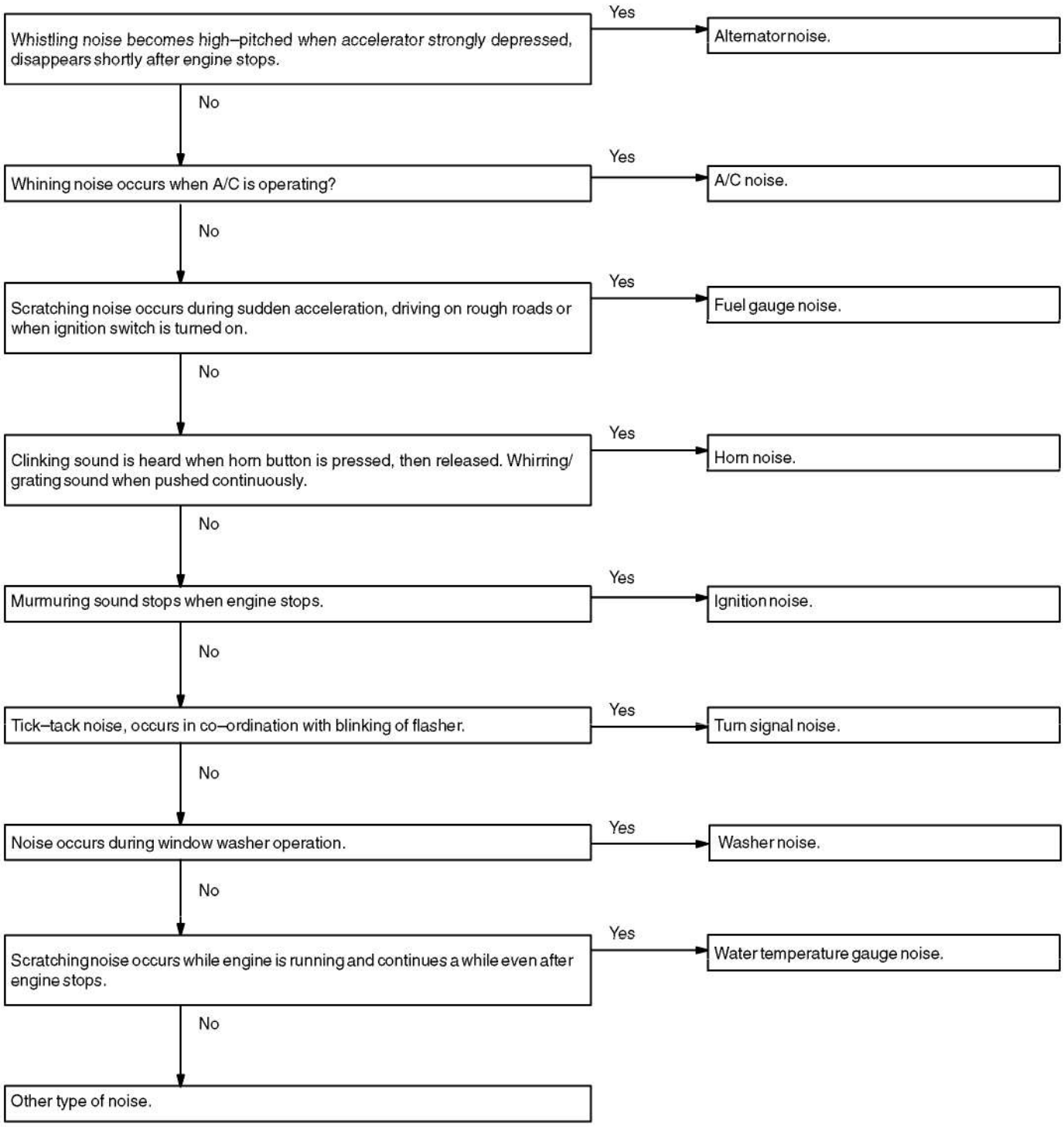
16	Antenna	ANTENNA–RELATED



17	Noise	NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING

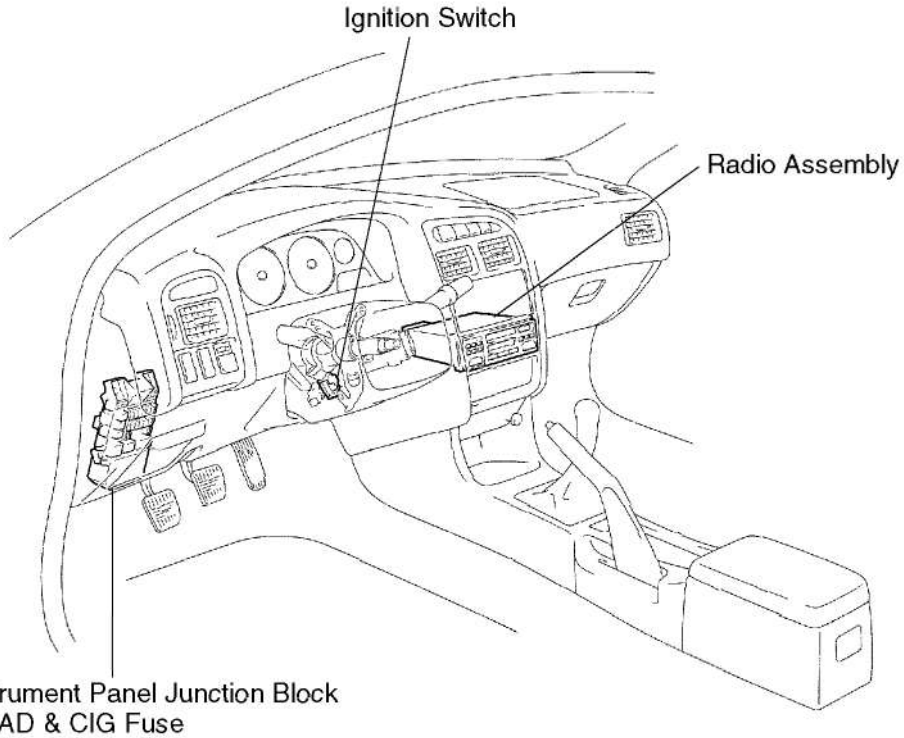


18	Noise	NOISE PRODUCED WHEN ENGINE STARTS

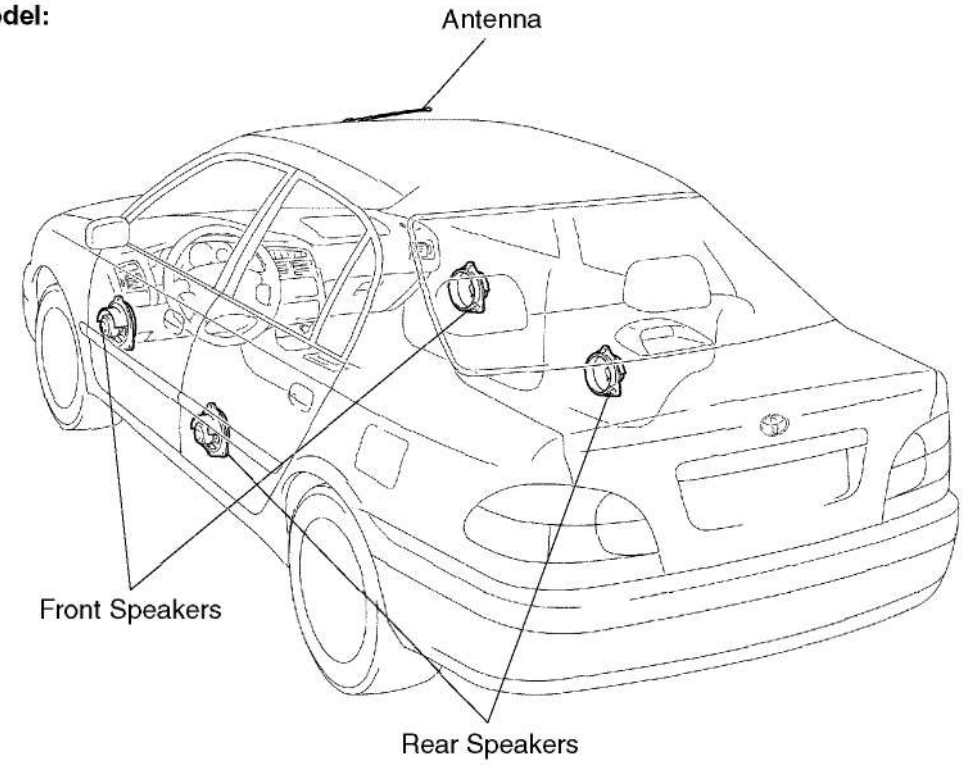


5E0CE–01

LOCATION

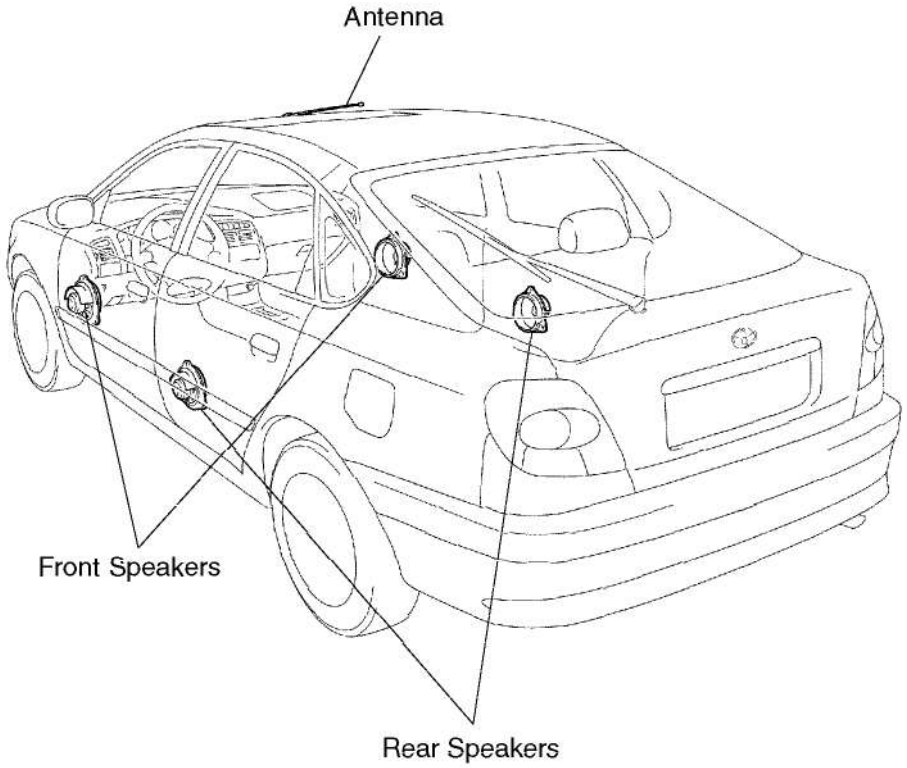


Sedan Model:

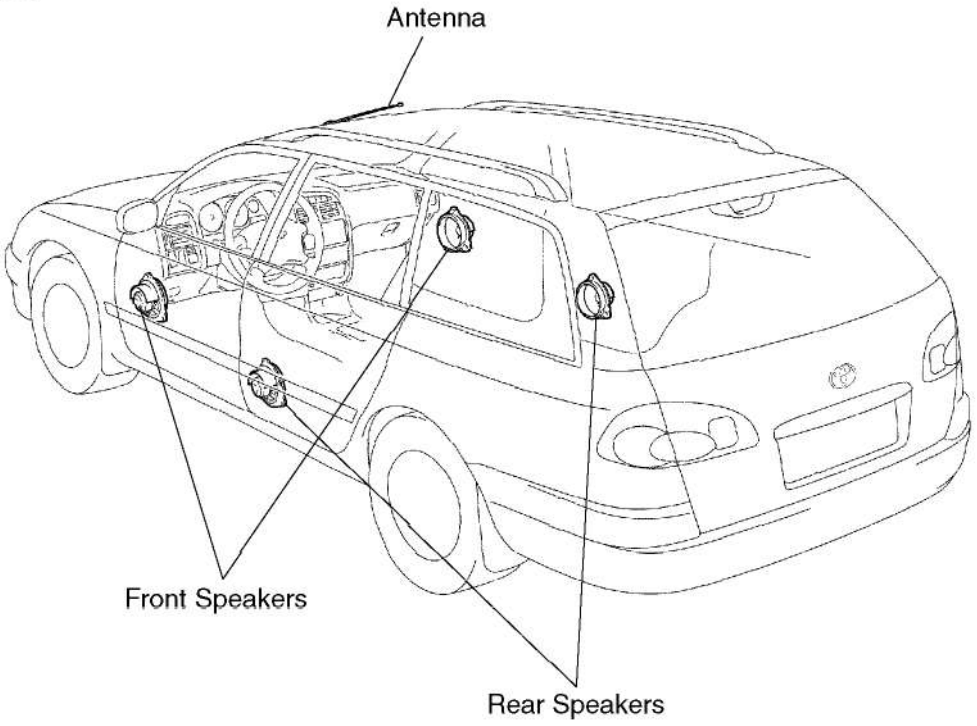


I04858

Liftback Model:



Wagon Model:



I04859

CLOCK

TROUBLESHOOTING

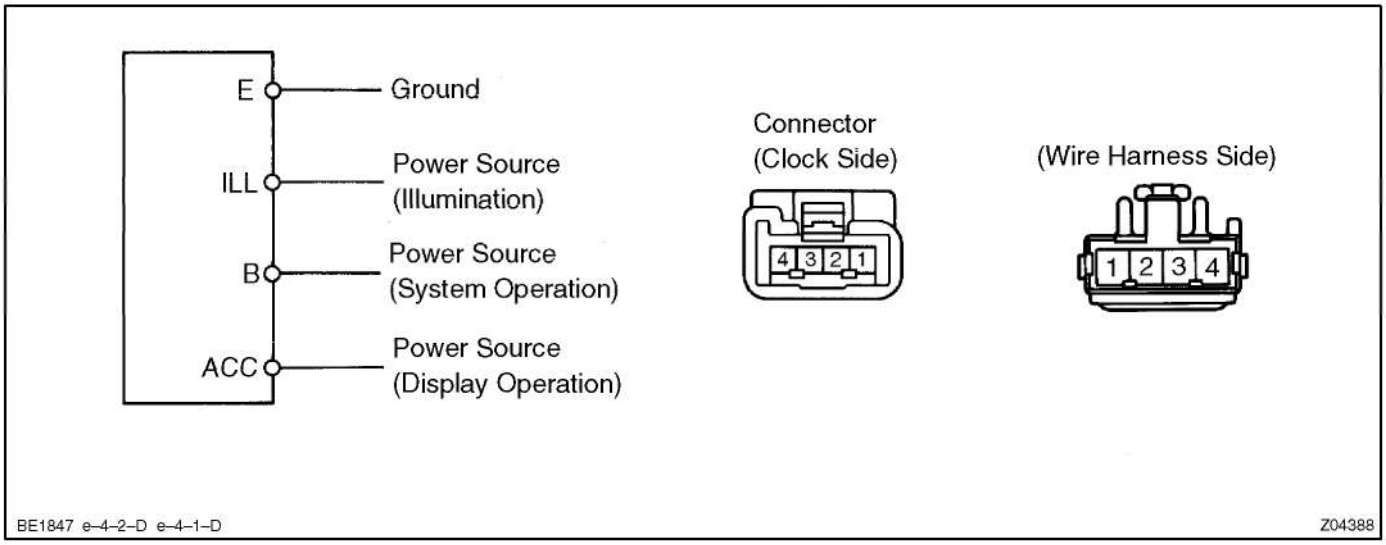
BE0QG-01

HINT:

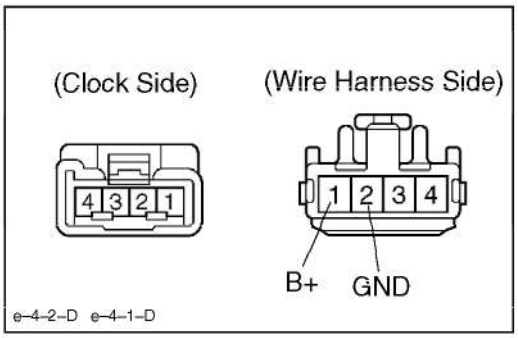
Troubleshoot the clock according to the table below.

Clock will not operate	1
Clock loses or gains time	2

± 1.5 seconds / day



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 circuit.

(c) Troubleshoot the clock as follows.
HINT: Inspect the connector on the wire harness side.

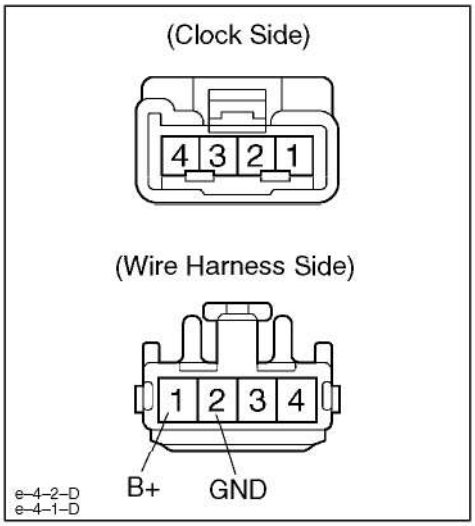
Is there battery positive voltage between terminal B+ and body ground?
- No → Open or short circuit in wire harness between terminal GND and body ground.
- Yes ↓

Does continuity exist between terminal GND and body ground.
- No → Open circuit in wire harness between terminal GND and body ground.
- Yes ↓

Replace clock.

V04421

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): ± 1.5 seconds

If the error exceeds the allowable error, replace the clock.

(c) Check that the clock adjusting button is caught in position, and does not return.

If the button is not returned, repair or replace the clock.

(d) Troubleshoot the clock as follows.

HINT: Inspect the connector on the wire harness side.

Is there 10 – 16 V between terminal B+ and body ground?

Below 10 V → Locate cause and repair, or recharge battery.

Yes → Adjust or replace clock.

V04422

ENGINE IMMOBILISER SYSTEM

BE02P–02

TROUBLESHOOTING

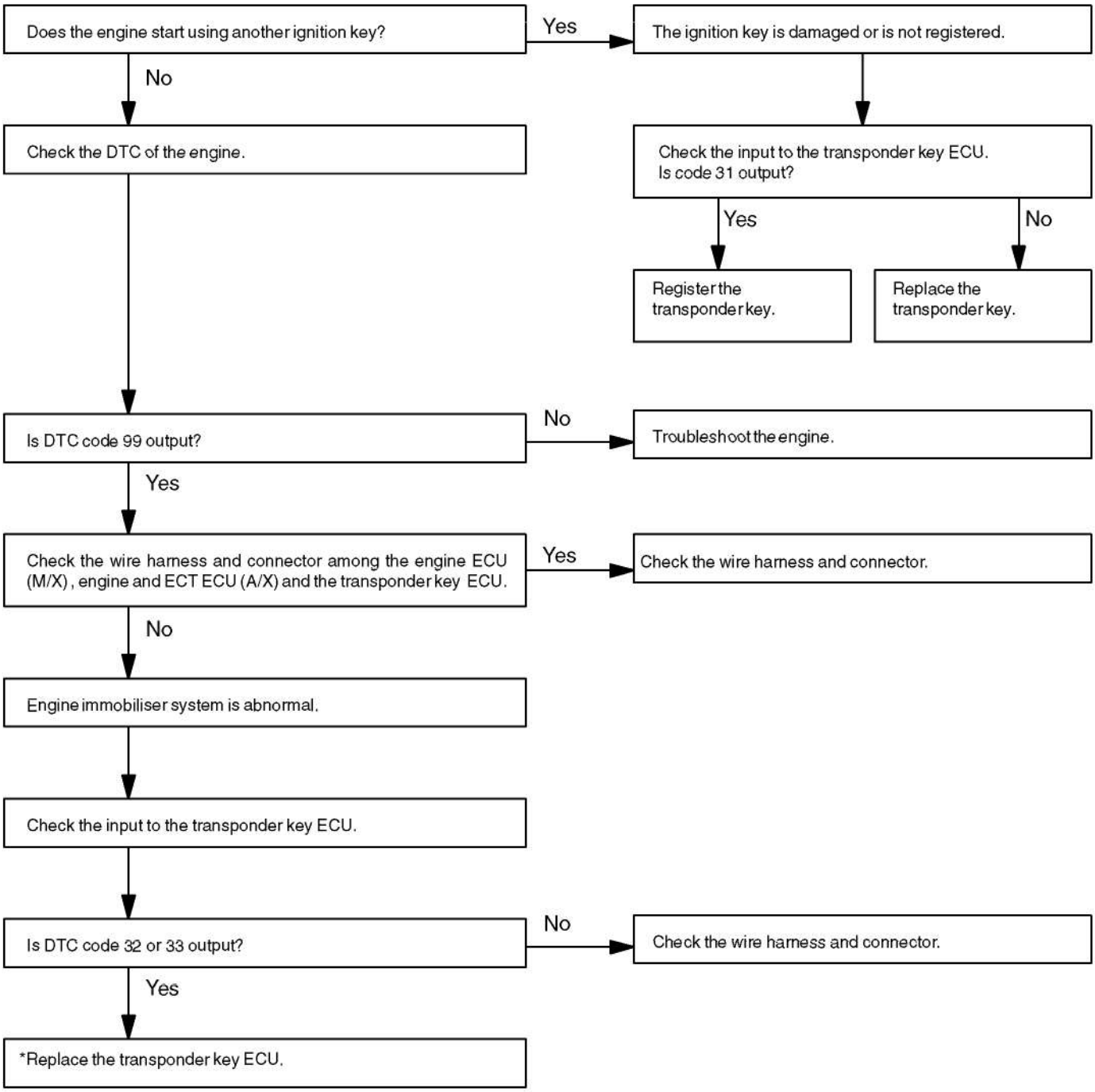
HINT:

If a malfunction occurs in the engine immobiliser system, either of the following symptoms occurs:

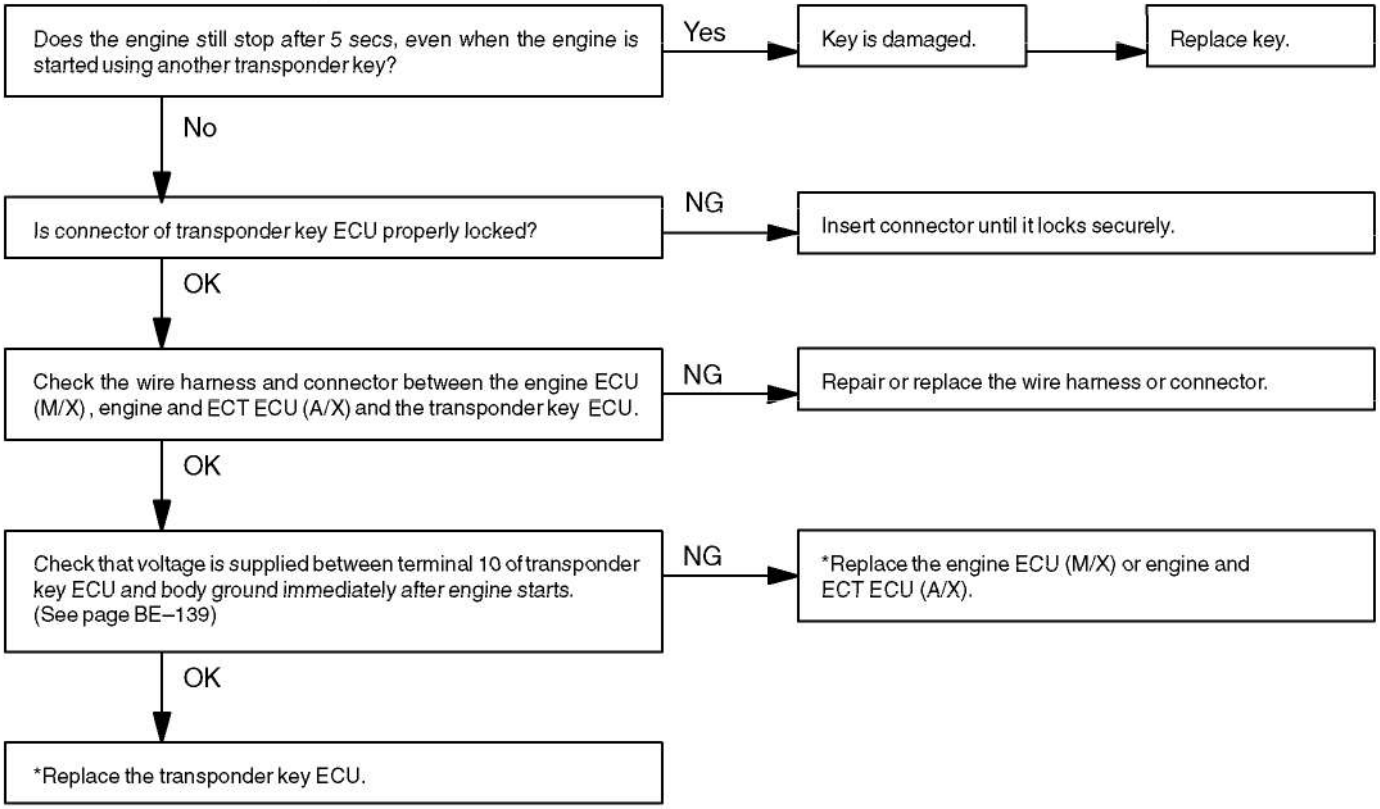
- Cranking occurs, but the engine does not start.
- The engine starts, but stops after 5 seconds.

If either or these symptoms occurs, troubleshoot in accordance with the following flow chart.

1. CRANKING OCCURS, BUT THE ENGINE DOES NOT START



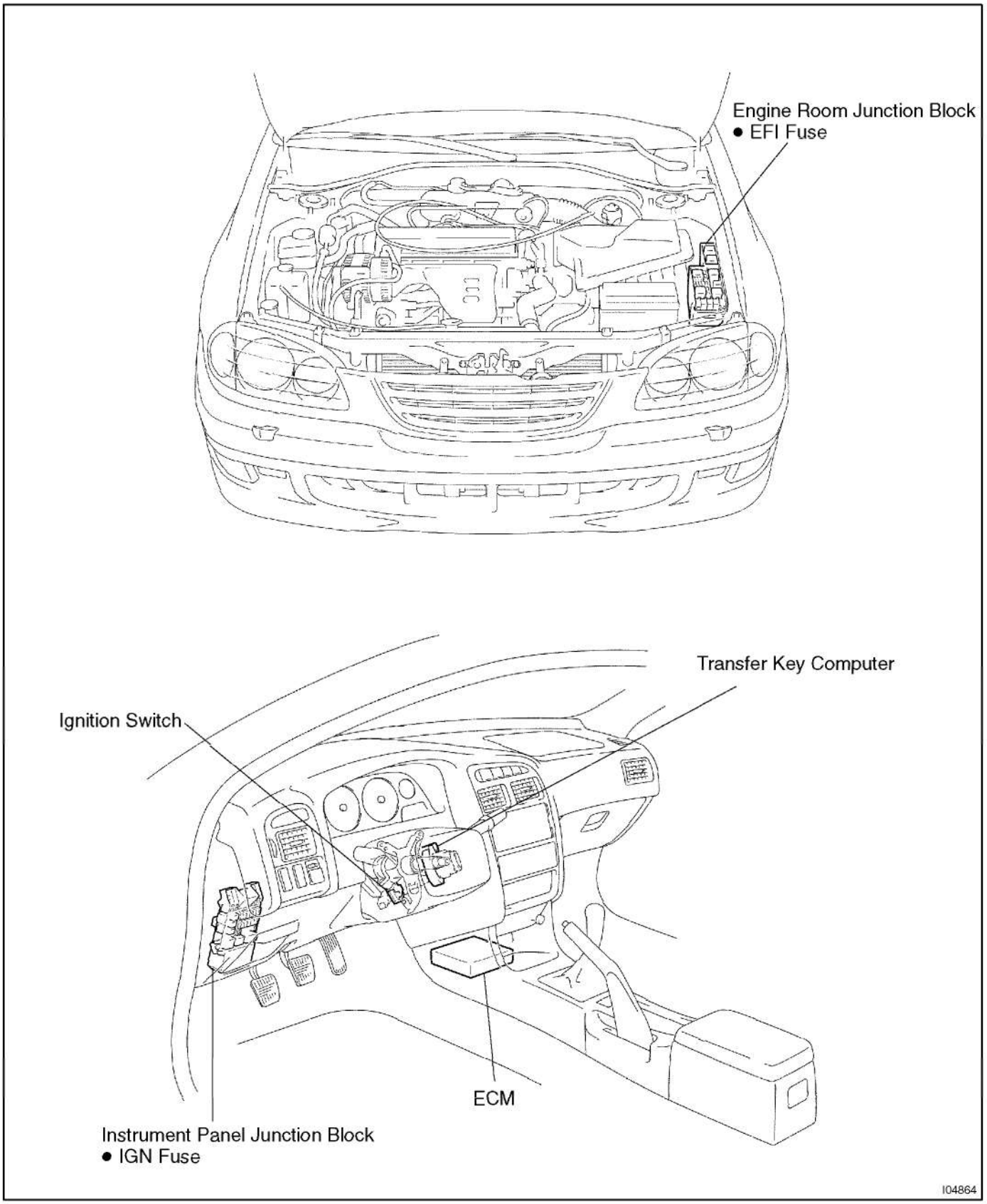
2. ENGINE STARTS, BUT STOPS AFTER 5 SECONDS



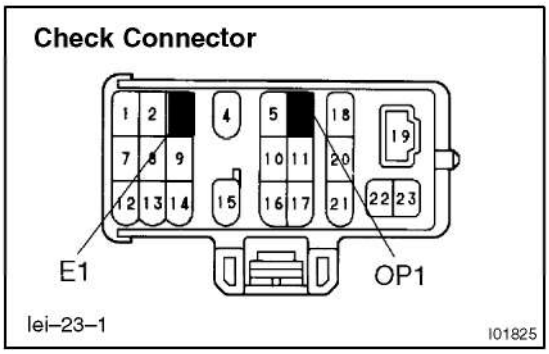
* When starting the engine after replacement of tansponder key ECU or engine ECU, do it 30 minutes after the replacenent.

5E02Q–04

LOCATION



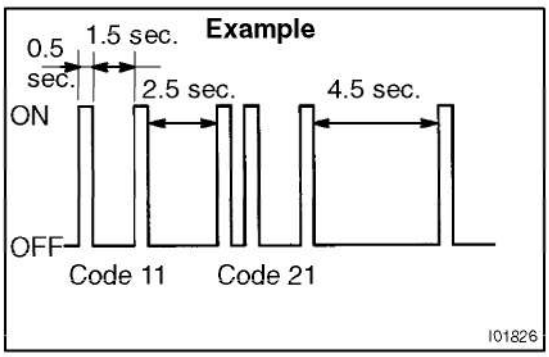
5E02R-02



PRE–CHECK

1. TRANSPONDER KEY ECU INPUT CONDITION DISPLAY READ CODE

(a) Connect the positive (+) lead from the volt meter (Analog Type) to OP3 of the check connector and the negative (–) lead to E1 of the check connector.



(b) Insert the ignition key in the key cylinder.

(c) Read the code from the movement of the tester probe.

If no code is output, turn the ignition switch ON.

If a code is not output, check if the DOME fuse is blown.

HINT:

- The code can be read using a luminous diode (Recommend activation current is 0 to 20 mA) instead of a tester.
- A digital tester can also be used.

Display condition:

- When there are multiple codes, they are output in order stating from the lowest code.
- After all the codes are output, Lo is displayed for 4.5 secs., then all the code are output again starting from the lowest code.
- If the situation changes during code output, Lo is output for 4.5 secs. after output of the current code ceases, then the codes are output again starting from the lowest code. E.g. while 11 (out of 11 and 21) is being output, conditions change and 12 is added. So after 11 is output, Lo is output for 4.5 secs., then 11, 12 and 21 are output.

2. TRANSPONDER KEY ECU INPUT CONDITION DISPLAY CODE LIST

Code	Output condition
11	Key unlock warning switch ON (Ignition key inserted)
12	Any door is open. (Door courtesy switch ON)
13	Ignition switch at ON position
21	Master key is inserted in key cylinder and the immobiliser system is OFF.
22	Sub key is inserted in key cylinder and immobiliser system is OFF.
31	Key code recorded in transponder key ECU differs from code of key inserted in key cylinder.
32	Transponder key code cannot be read.
33	Key code cannot be read because format of chip inside key is wrong.
34	Transponder key ECU has no memory space to register key code.

3. TRANSPONDER KEY ECU INPUT CONDITION DISPLAY MALFUNCTION LIST

Symptom	Cause
No code is output.	1. DOME Fuse 2. Wire harness or connector 3. Transponder key ECU
Even when key is inserted in key cylinder, Code 11 is not output.	1. Key unlock warning switch 2. Wire harness or connector 3. Transponder key ECU
Code 12 is not output when the door is open.	1. Door courtesy switch 2. Wire harness or connector 3. Transponder key ECU
Code 13 is not output when ignition switch is ON.	1. IGN Fuse 2. Wire harness or connector 3. Transponder key ECU
Code 31 is output when key is inserted in key cylinder.	Key code is not registered.
Code 32 is output.	1. Transponder key ECU 2. Wire harness or connector
Code 33 is output.	1. Transponder key ECU
Code 34 is output.	Transponder key ECU has no memory space to register key code.

5E0CF-01

INSPECTION

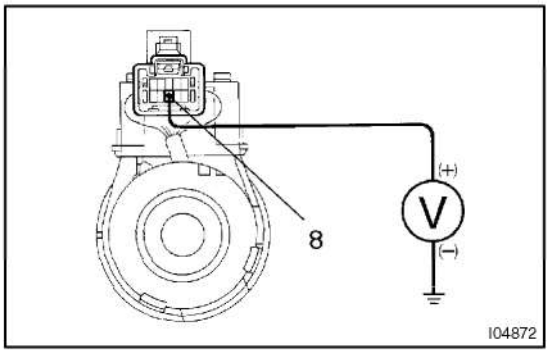
1. INSPECT TRANSPONDER KEY ECU CIRCUIT

Disconnect the connector from the ECU and inspect the connector on the wire harness side, as shown in the table below.

Tester connection	Condition	Specified condition
1 – Ground	Constant	Battery voltage
2 – Ground	Ignition switch ON	Battery voltage
7 – Ground	All doors closed	No continuity
7 – Ground	All doors open	Continuity
6 – Ground	Key unlock warning switch OFF (key removed)	No continuity
6 – Ground	Key unlock warning switch ON (key inserted)	Continuity
10 – Ground	Constant	Continuity

If the circuit is not as specified, try replacing the ECU with a new one.

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



2. INSPECT TRANSPONDER KEY ECU

(a) With the connector connected, connect the positive (+) lead from the analog type tester to terminal 8 and the negative (–) lead to the body ground.

(b) Check that there is battery voltage when the ignition switch turned ON.

(c) Check that the tester needle swings strongly for approx. 1 sec. when the engine is started using the ignition key.