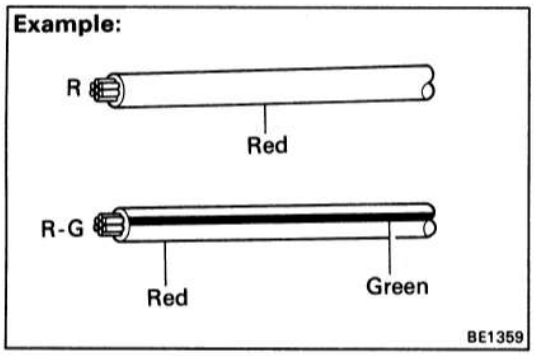
BODY ELECTRICAL SYSTEM

	Page
GENERAL INFORMATION	BE-2
POWER SOURCE	BE-6
IGNITION SWITCH	BE-10
LIGHTING SYSTEM	BE-13
WIPER AND WASHER SYSTEM	BE-43
COMBINATION METER	BE-48
DEFOGGER SYSTEM	BE-63
POWER WINDOW CONTROL SYSTEM	BE-67
POWER DOOR LOCK CONTROL SYSTEM	BE-73
POWER MIRROR CONTROL SYSTEM	BE-80
CRUISE CONTROL SYSTEM	BE-82
THEFT DETERRENT SYSTEM	BE-115
AUDIO	BE-132
CLOCK	BE-160

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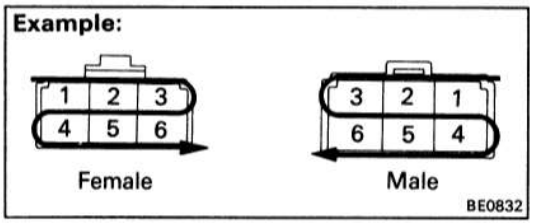
GENERAL INFORMATION

Wiring color code

Wire colors are indicated by an alphabetical code.

B	= Black	L	= Blue	R	= Red
BR	= Brown	LG	= Light Green	V	= Violet
G	= Green	O	= Orange	W	= White
GR	= Gray	P	= Pink	Y	= Yellow

The first letter indicates the basic wire color and the second letter indicates the color of the stripe.



Connector

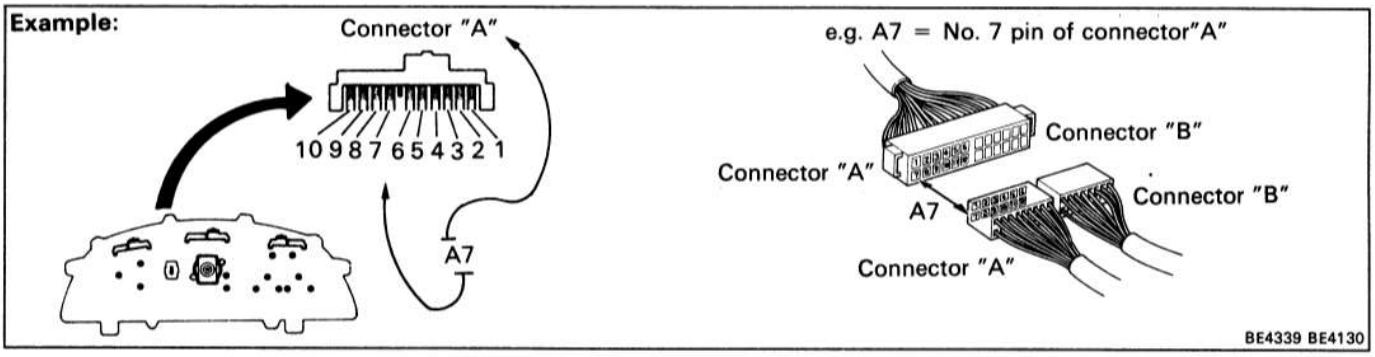
1. PIN NUMBER OF FEMALE CONNECTOR

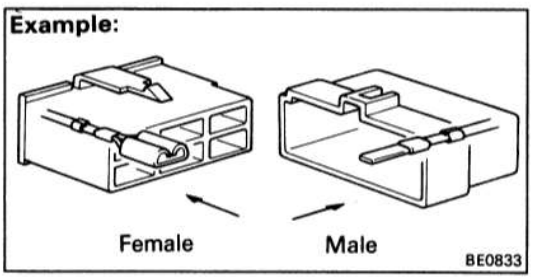
Numbered in order from upper left to lower right.

2. PIN NUMBER OF MALE CONNECTOR

Numbered in order from upper right to lower left.

HINT: When connectors with different or the same number of terminals are used with the same parts, each connector name (letter of the alphabet) and pin number is specified.





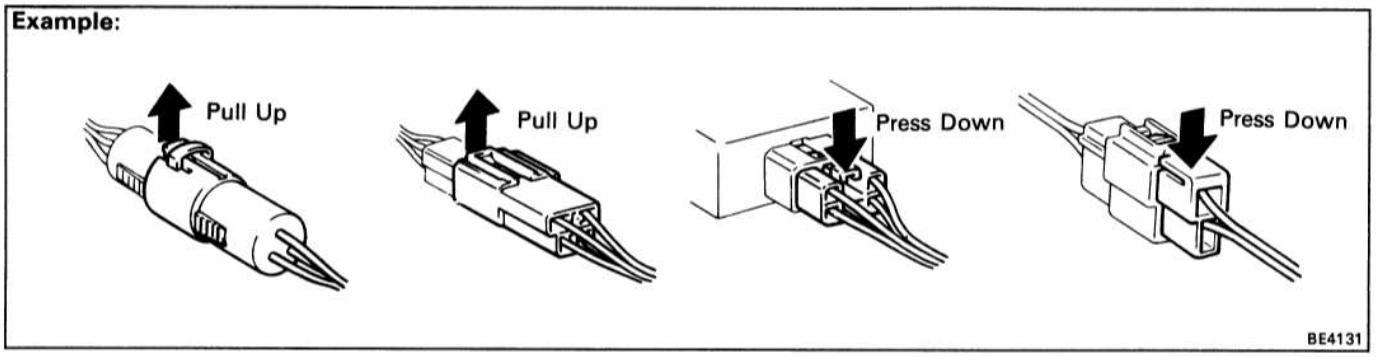
3. DISTINCTION OF MALE AND FEMALE CONNECTORS

Male and female connectors are distinguished by shape of their internal pins.

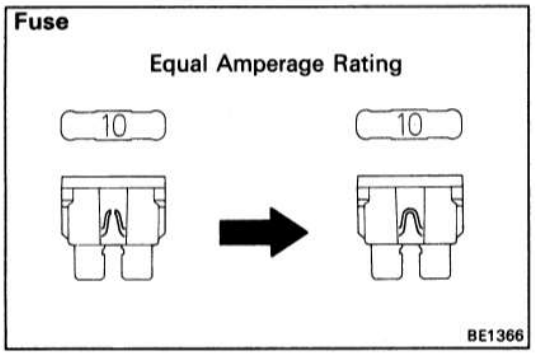
(a) All connectors are shown from the open end, and the lock is on top.

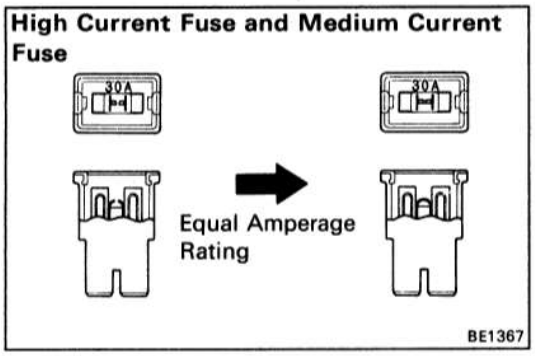
(b) To pull apart the connectors, pull on the connector itself, not the wires.

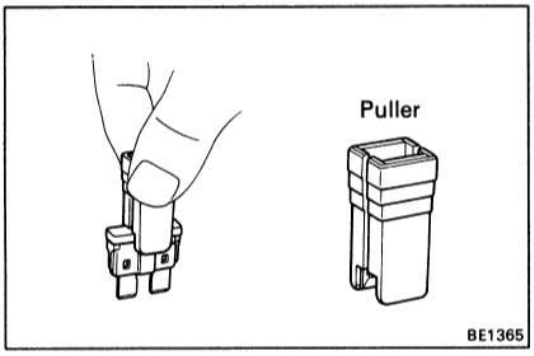
HINT: Check to see what kind of connector you are disconnecting before pulling apart.



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Replacement of Fuse

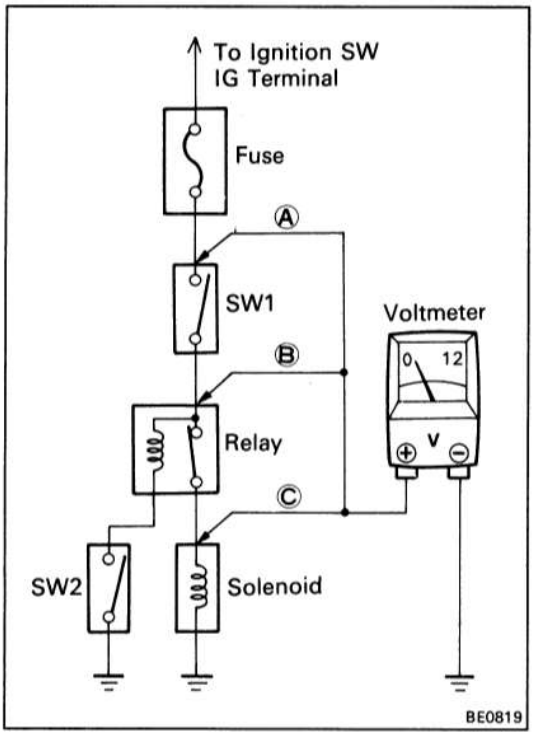
HINT: If replacing the fuse be sure to replace it with a fuse with and equal amperage rating.

NOTICE:

1. **Turn off all electrical components and the ignition switch before replacing a fuse. Do not exceed the fuse amperage rating.**
2. **Always use a fuse puller for removing and inserting a fuse. Remove and insert straight in and out without twisting. Twisting could force open the terminals too much, resulting in a bed connection.**

If a fuse continues to blow, a short circuit is indicated. The system must be checked by a qualified technician.

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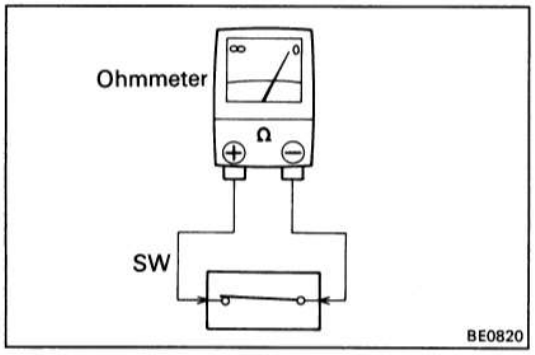


Check for Voltage

(a) Establish conditions in which voltage is present at the check point.

Example:
Ⓐ – Ignition switch on.
Ⓑ – Ignition switch and switch 1 (SW1) on.
Ⓒ – Ignition switch, switch 1 (SW1) and relay on (switch 2 (SW2) off).

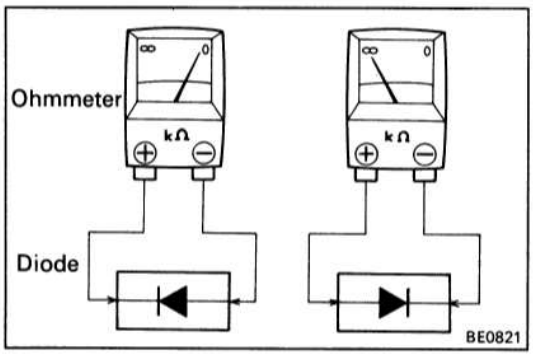
(b) Using a voltmeter, connect the negative (–) lead to a good ground point or negative (–) battery terminal and the positive (+) lead to the connector or component terminal. This check can be done with a test bulb instead of a voltmeter.



Check for Continuity and Resistance

(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

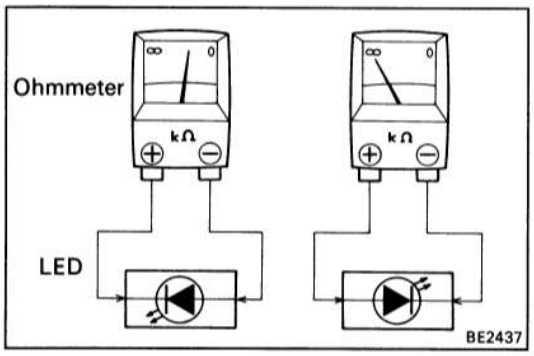
(b) Contact the two leads of an ohmmeter to each of the check points.



If the circuit has diodes, reverse the two leads and check again.

When contacting the negative (–) lead to the diode positive (+) side and the positive (+) lead to the negative (–) side, there should be continuity. When contacting the two leads in reverse, there should be no continuity.

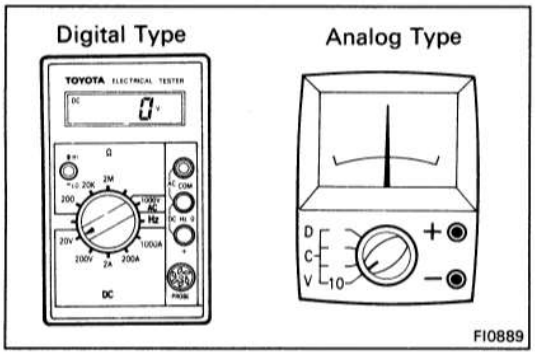
HINT: Specifications may vary depending on the type of tester, so refer to the tester's instruction manual before performing the inspection.



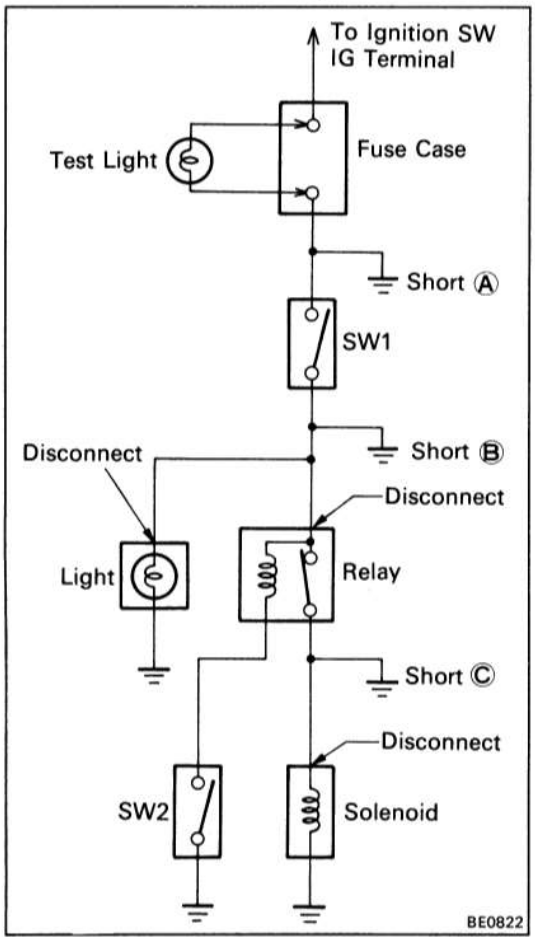
Check LED (Light Emitting Diode) in the same manner as that for diodes.

- Use a tester with a power source of 3V or greater to overcome the circuit resistance.
- If a suitable tester is not available, apply battery voltage and check that the LED that the LED lights up.

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(c) Use a volt/ohmmeter with high impedance (10 k/V minimum) for troubleshooting of the electrical circuit.



Check for Short Circuit

(a) Remove the blown fuse and eliminate all loads from the fuse.

(b) Connect a test bulb in place of the fuse.

(c) Establish conditions in which the test bulb comes on.

Example:
Ⓐ – Ignition switch on.
Ⓑ – Ignition switch and switch 1 (SW1) on.
Ⓒ – Ignition switch, switch 1 (SW1) and relay on (connect the relay) and switch 2 (SW2) off (or disconnect switch 2 (SW2)).

(d) Disconnect and reconnect the connectors while watching the test bulb.

The short lies between the connector where the test bulb stays lit and the connector where the bulb goes out.

(e) Find the exact location of the short by lightly shaking the problem wire along the body.

Electrical Parts

Before removing and inspecting the electrical parts, set the ignition switch to the LOCK position and disconnect the negative (–) terminal cable from the battery.

CAUTION: Work must not be started until after at least 20 seconds or longer from the time the negative (–) terminal cable is disconnected.

SRS Airbag System

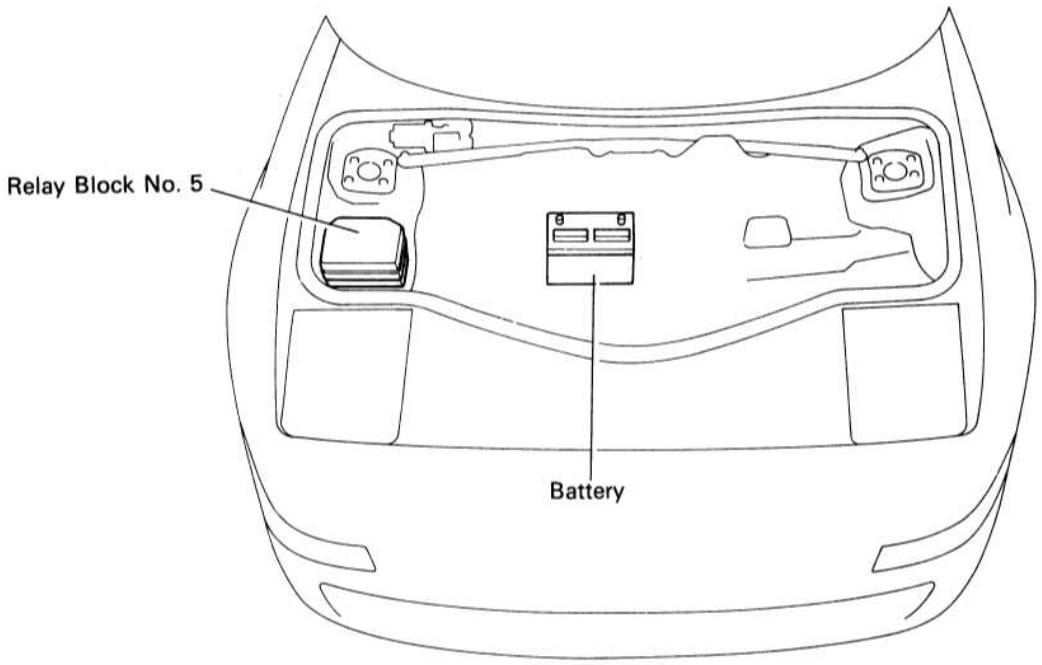
Failure to carry out service operations in the correct sequence could cause the airbag system to deploy, possibly leading to a serious accident.

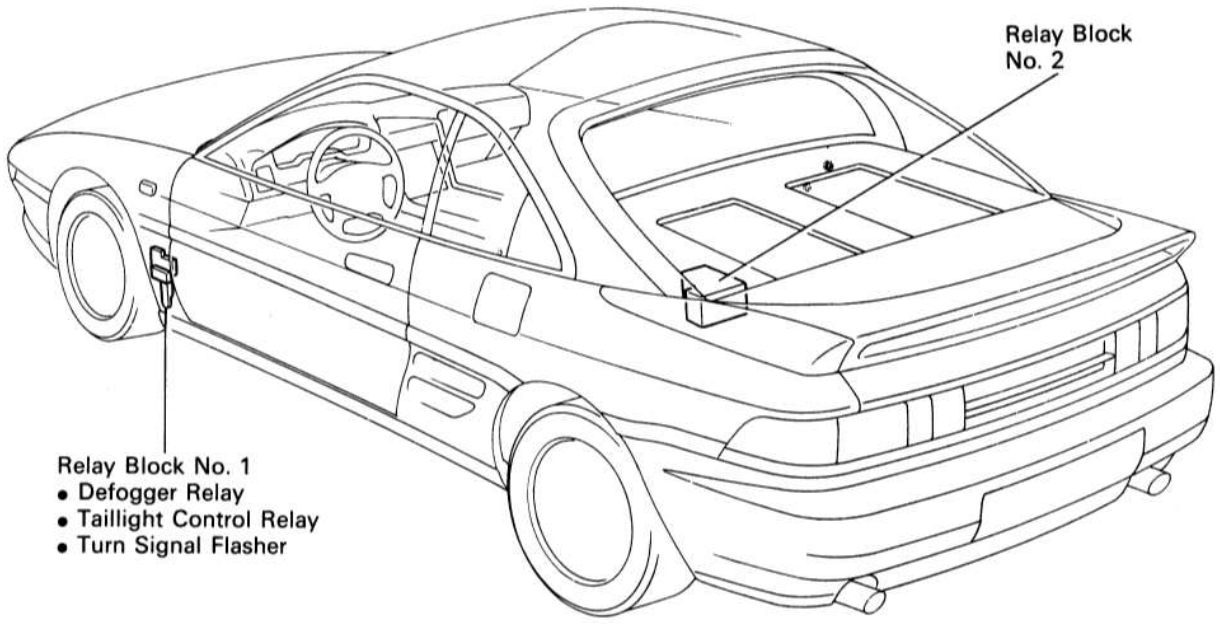
When removal or installation of the parts and the yellow wire harness and connector for the airbag is necessary, refer to the precautionary notices in the AB section before performing the operation.

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POWER SOURCE

Parts Location

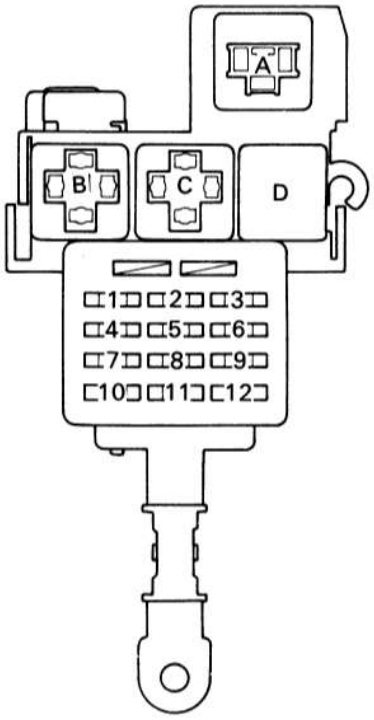




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BE4933

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RELAY BLOCK NO. 1

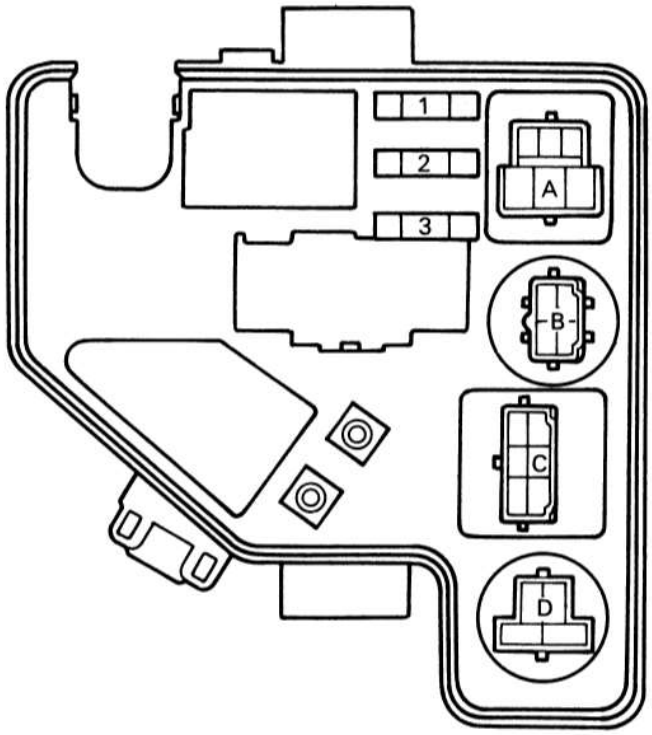


	Fuse	
1.	TAIL	15 A
2.	GAUGE	7.5 A
3.	STOP	15 A
4.	–	
5.	TURN	7.5 A
6.	DOOR	20 A
7.	–	
8.	WIPER	20 A
9.	PWR	30 A
10.	RAD CIG	15 A
11.	DEFOG	20 A
12.	–	

Relays

A. TURN SIGNAL FLASHER
B. DEFOGGER
C. TAIL (Taillight Control)
D. –

RELAY BLOCK NO. 2



	Fuses	
1.	EFI	15 A
2.	VENT	20 A
3.	ECU-IG	7.5 A

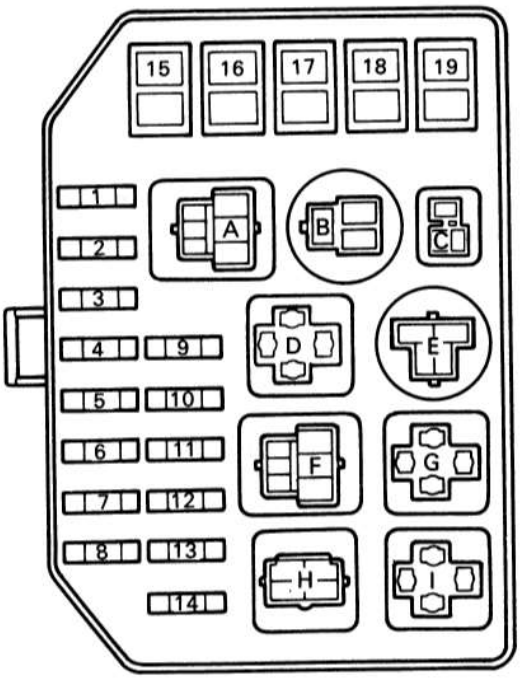
Relays

A. IGN
B. EFI
C. C/OPN
D. VENT

BE5066
BE4934

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RELAY BLOCK NO. 5



Fuses and High Current Fuses

1.	ALT SENCING	7.5 A	
2.	CDS FAN	30 A	
3.	RAD FAN	30 A	
4.	FR FOG	15 A	
5.	–		
6.	–		
7.	HEAD (LH)	15 A	
8.	HEAD (RH)	15 A	
9.	A.C	10 A	
10.	ECU-B	7.5 A	
11.	AM2	7.5 A	
12.	HAZ-HORN	15 A	
13.	RTR	30 A	
14.	DOME	15 A	
15.	AMI	50 A	H-Fuse
16.	HTR	40 A	H-Fuse
17.	A.B.S.	80 A	H-Fuse
18.	ALT	120A	H-Fuse
19.	AM2	40A	H-Fuse

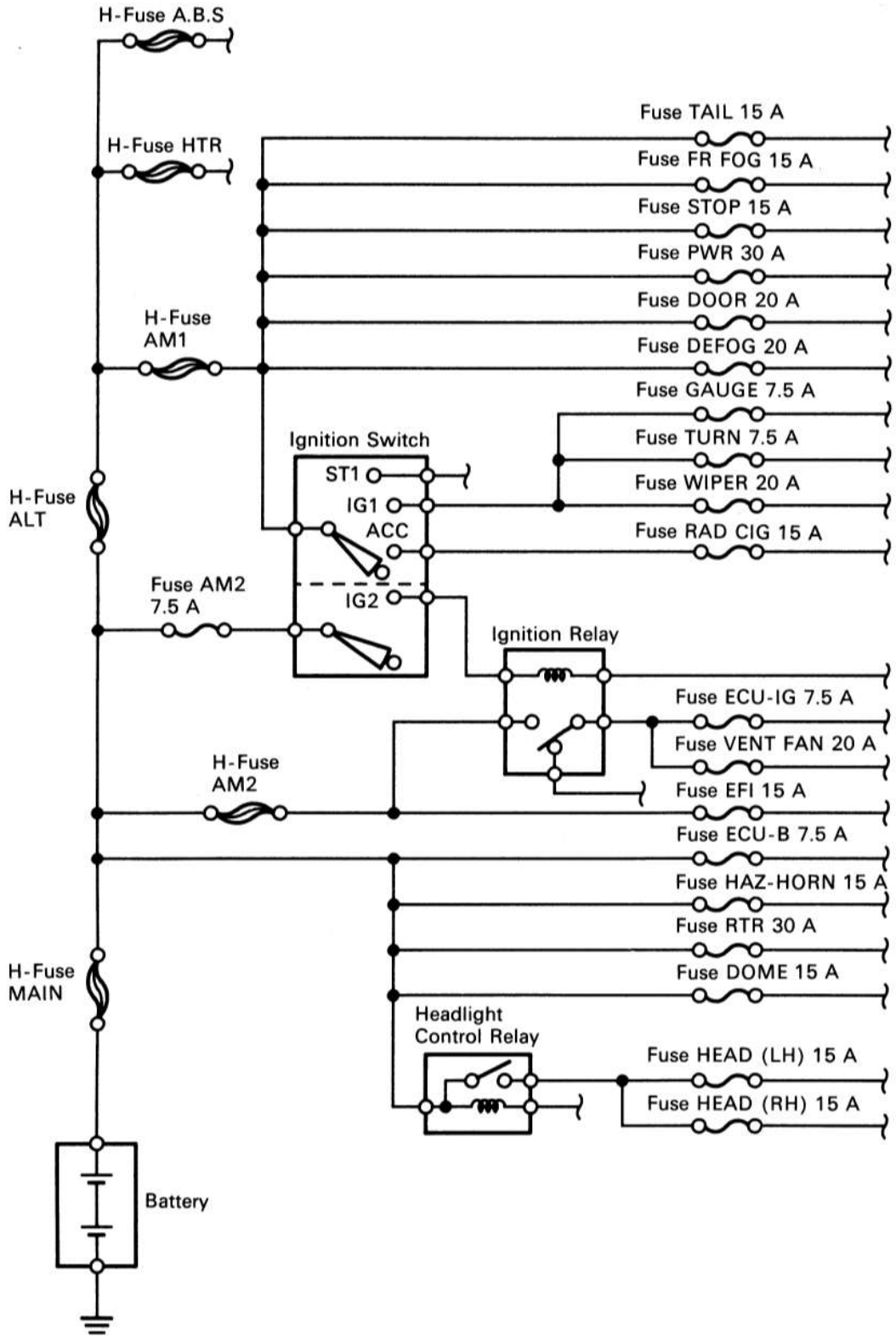
Relays

A.	HTR
B.	H-LP
C.	HORN
D.	FAN NO. 2
E.	FAN NO. 1
F.	FAN MAIN
G.	FAN NO. 3
H.	–
I.	FR FOG

BE4937

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Wiring Diagram

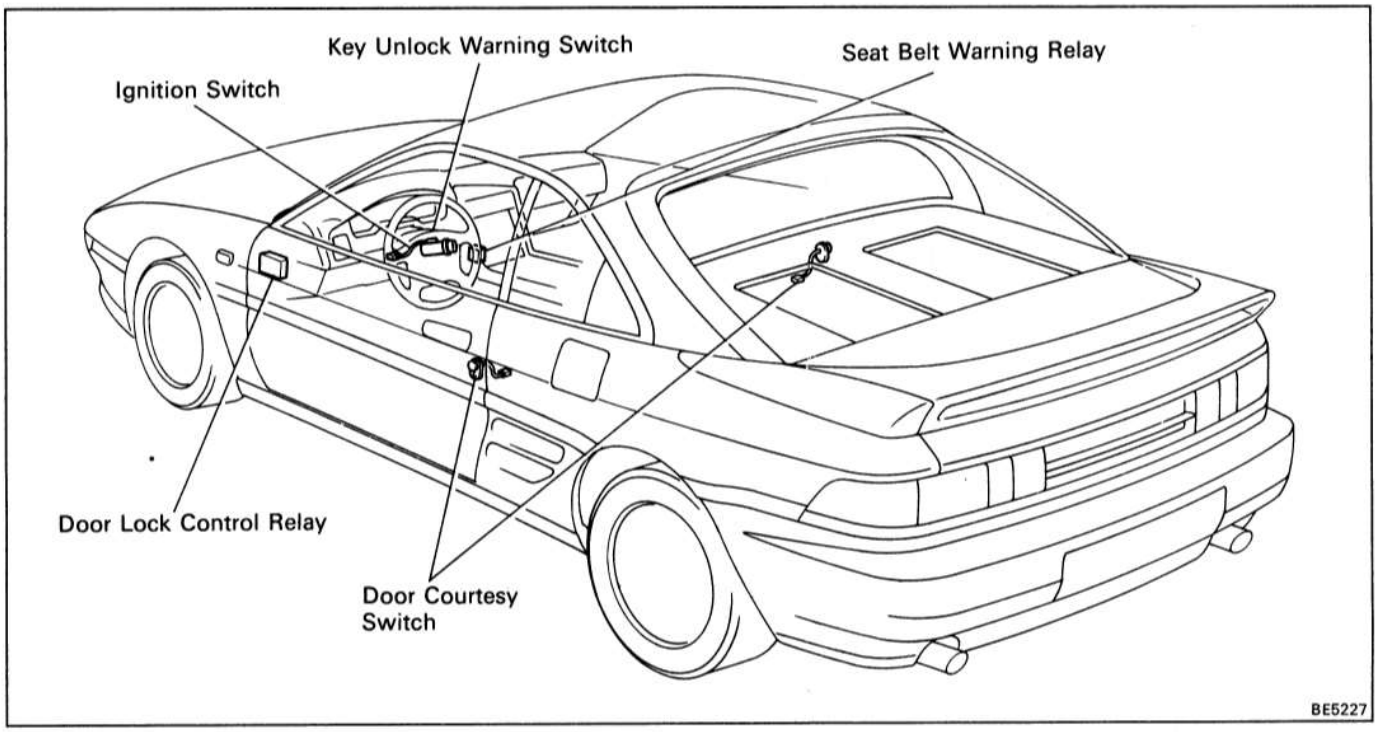


BE5226

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IGNITION SWITCH

Parts Location



Wiring Diagram

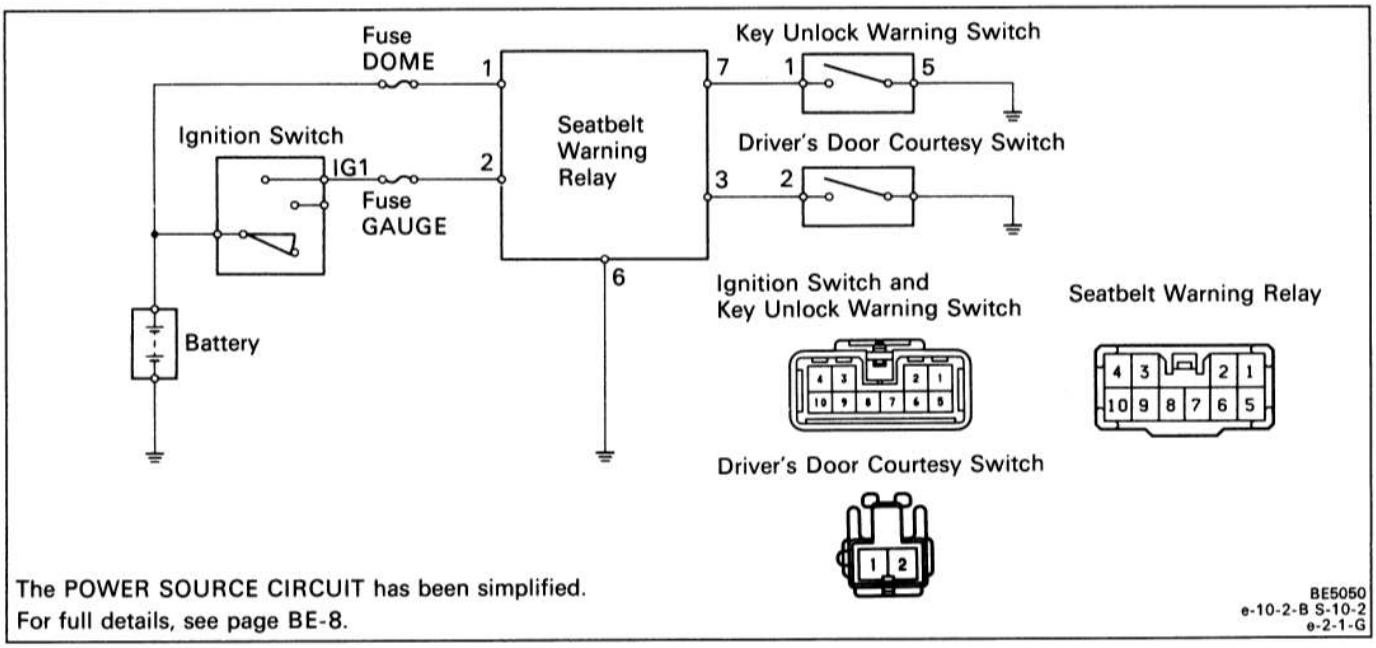
IGNITION SWITCH

See Power Source Section on page BE-9.

KEY CONFINE PREVENTION SYSTEM

See Power Door Lock Control System on page BE-74.

KEY UNLOCK WARNING SYSTEM



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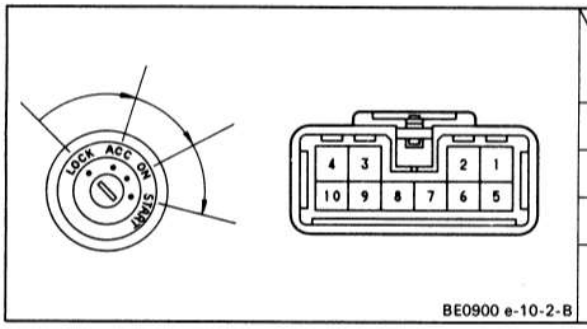
Troubleshooting

Problem	Possible cause	Remedy	Page
Ignition switch is not seat to each position	Ignition switch faulty Power source circuit faulty	Check switch Repair as necessary	BE-11 BE-9
Key confine prevention system does not operate	Key unlock warning switch faulty Door courtesy switch faulty Door lock control relay faulty Wiring faulty	Check switch Check switch Check relay Repair as necessary	BE-11 BE-11 BE-11
Key unlock warning system does not operate	Key unlock warning switch faulty Door courtesy switch faulty Seatbelt Warning Relay faulty Wiring faulty	Check switch Check switch Check relay Repair as necessary	BE-11 BE-11 BE-12

Parts Inspection

Ignition System

INSPECT SWITCH (Ignition Switch /Continuity)

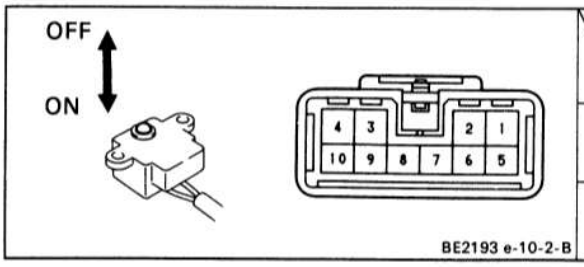


Terminal / Switch position	2 IG1	3 ACC	4 AM1	6 ST2	7 ST1	9 IG2	10 AM2
LOCK							
ACC		○—○					
ON	○	○	○			○	○
START	○		○	○	○	○	○

If continuity is not as specified, replace the switch.

Key Confine Prevention System

1. **INSPECT SWITCHES (Key Unlock Warning Switch/Continuity)**



Terminal / Switch position	1	5
OFF (Ignition Key removed)		
ON (Ignition Key set)	○	○

If continuity is not as specified, replace the switch.

(Door Courtesy Switch)

See Step 1 on page BE-41.

2. **INSPECT DOOR LOCK CONTROL RELAY**

See Step 3 on page BE-78.

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Key Unlock Warning System

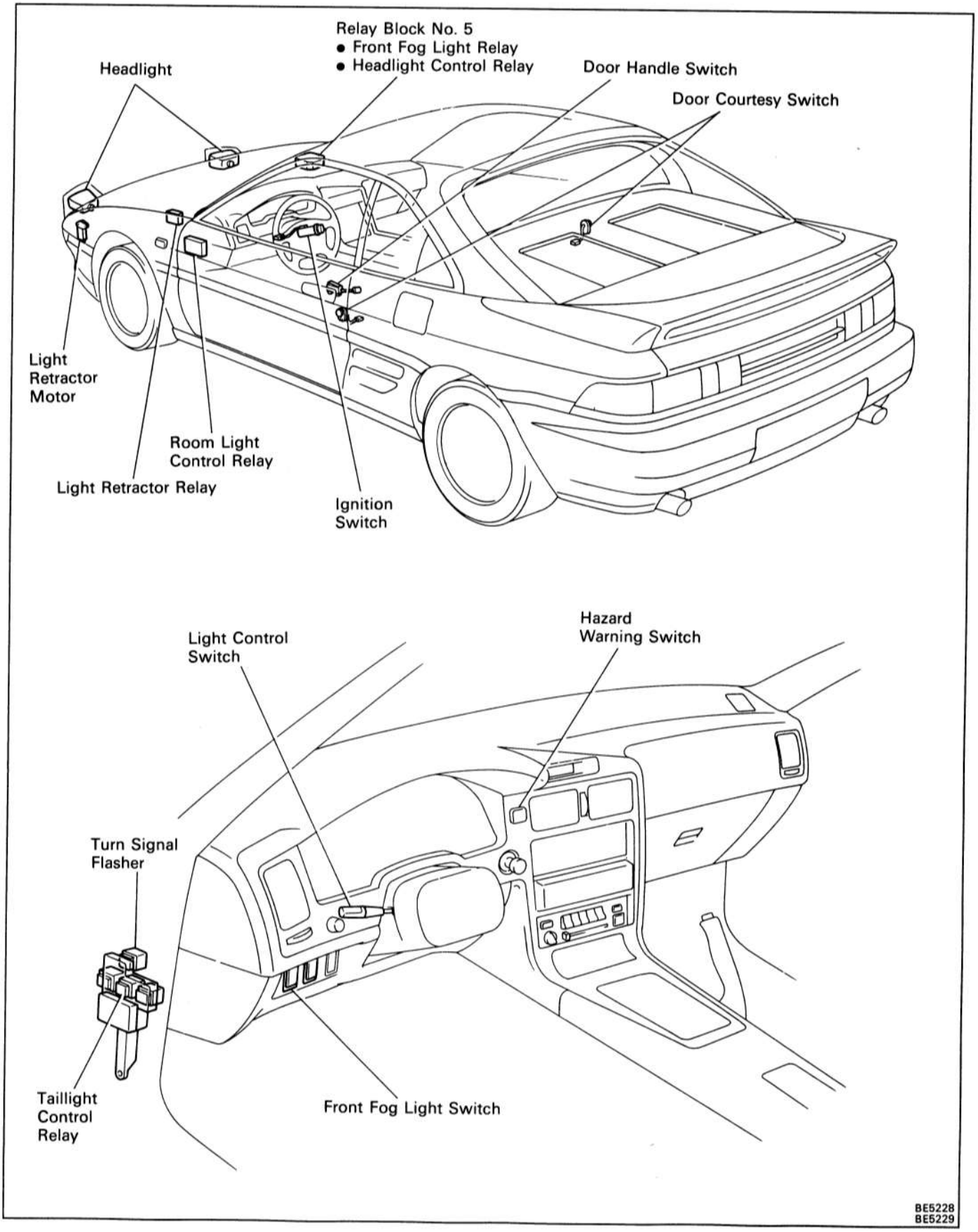
1. **INSPECT SWITCHES**
   (Key Unlock Warning Switch)
   See Step 1 on page BE-11.
   (Door Courtesy Switch)
   See Step 1 on page BE-41.

2. **INSPECT RELAY**
   (Seatbelt Warning Relay 1 Relay Circuit)
   See step 3 on page BE-59.

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LIGHTING SYSTEM

Parts Location



BE5228
BE5229

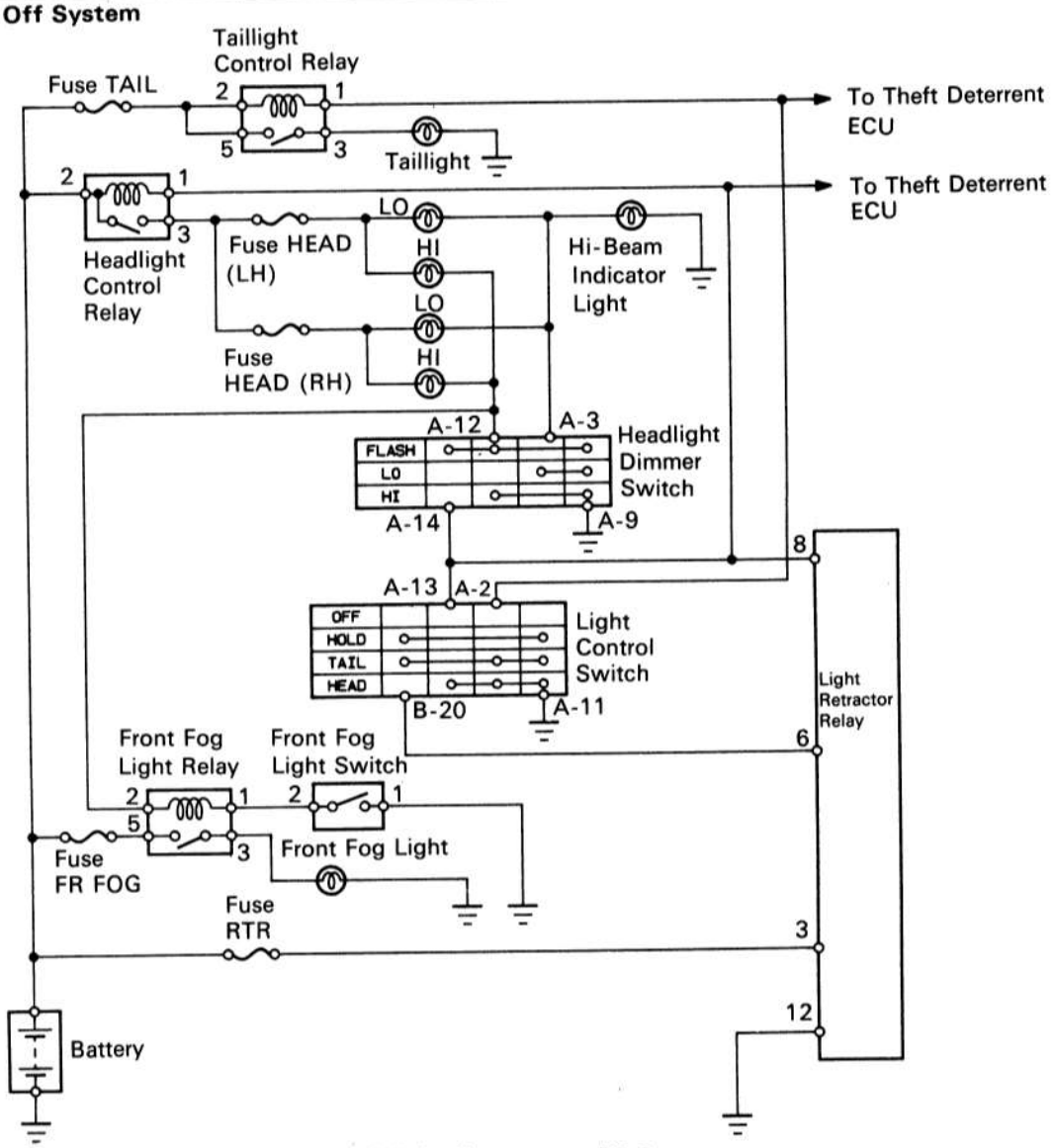
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Wiring and Connector Diagrams

Lighting System (Headlight, Taillight and Front Fog Light System)

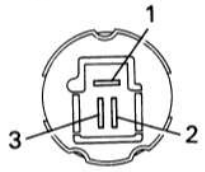
(USA)

w/o Light Auto Turn Off System

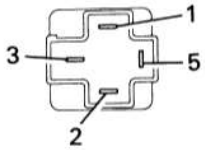


The POWER SOURCE CIRCUIT has been simplified, For full details, see page BE-9.

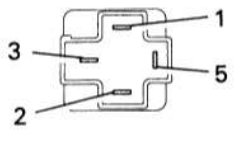
Headlight Control Relay



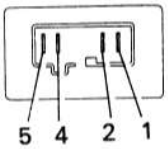
Taillight Control Relay



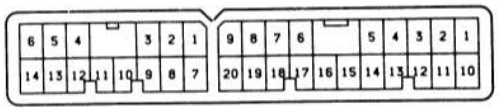
Front Fog Light Relay



Front Fog Light Switch

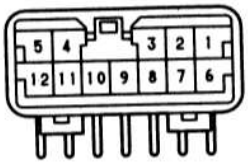


Light Control Switch Headlight Dimmer Switch



Connector "A" Connector "B"

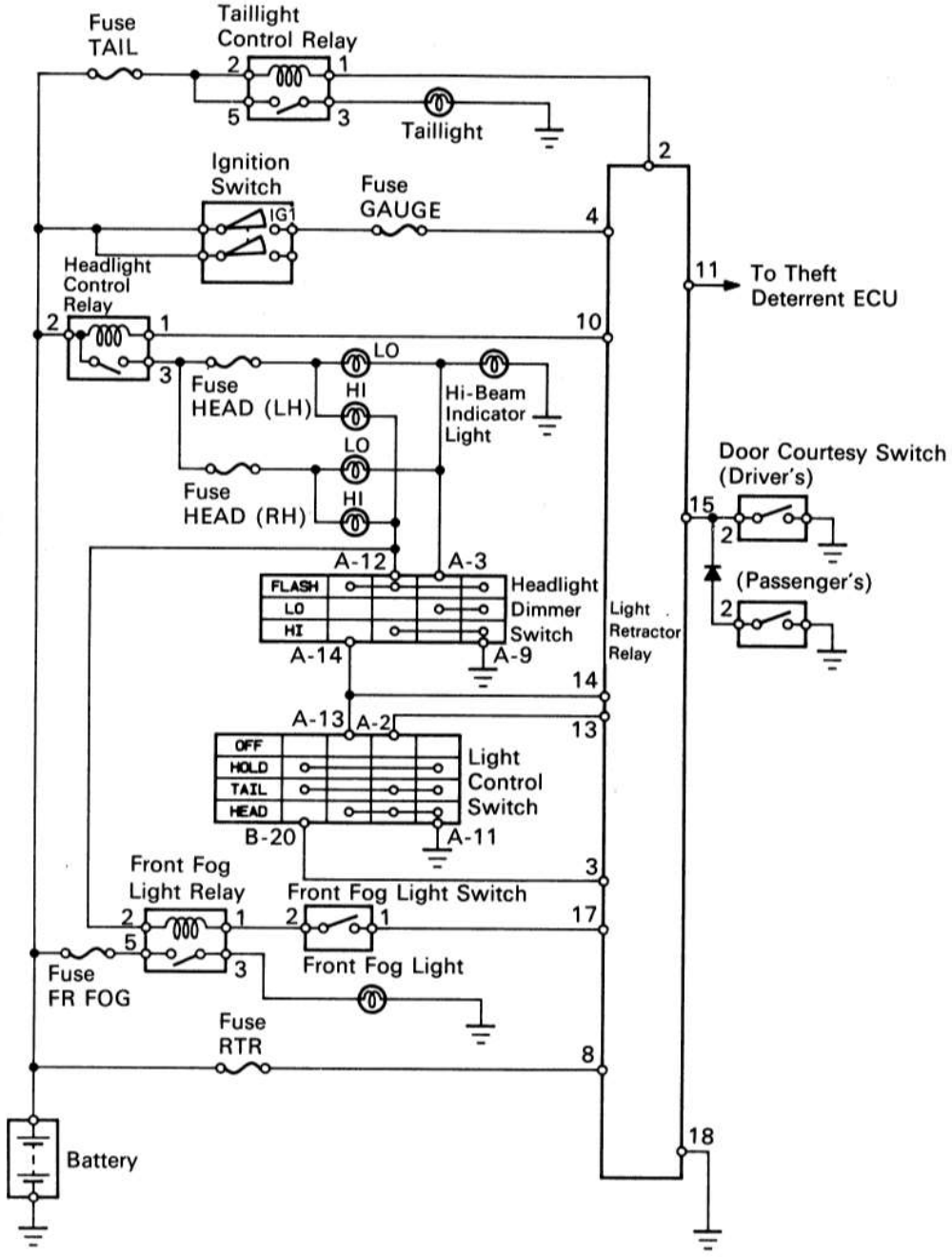
Light Retractor Relay



BE5230
BE2763 BE4049 BE4049 BE4707
V-34-2 e-12-2-A

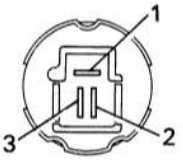
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w/ Light Auto Turn Off System

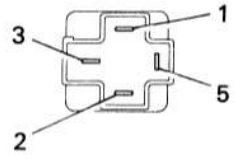


The POWER SOURCE CIRCUIT has been simplified, For full details, see page BE-9.

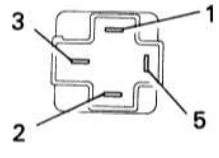
Headlight Control Relay



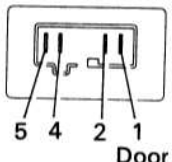
Taillight Control Relay



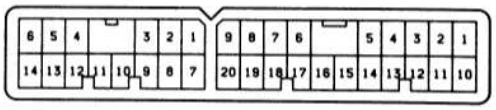
Front Fog Light Relay



Front Fog Light Switch

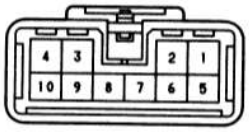


Light Control Switch, Headlight Dimmer Switch

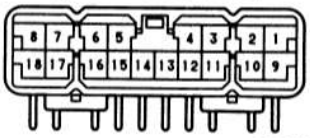


Connector "A" Connector "B"

Ignition Switch



Light Retractor Relay



Door Courtesy Switch



BE5231

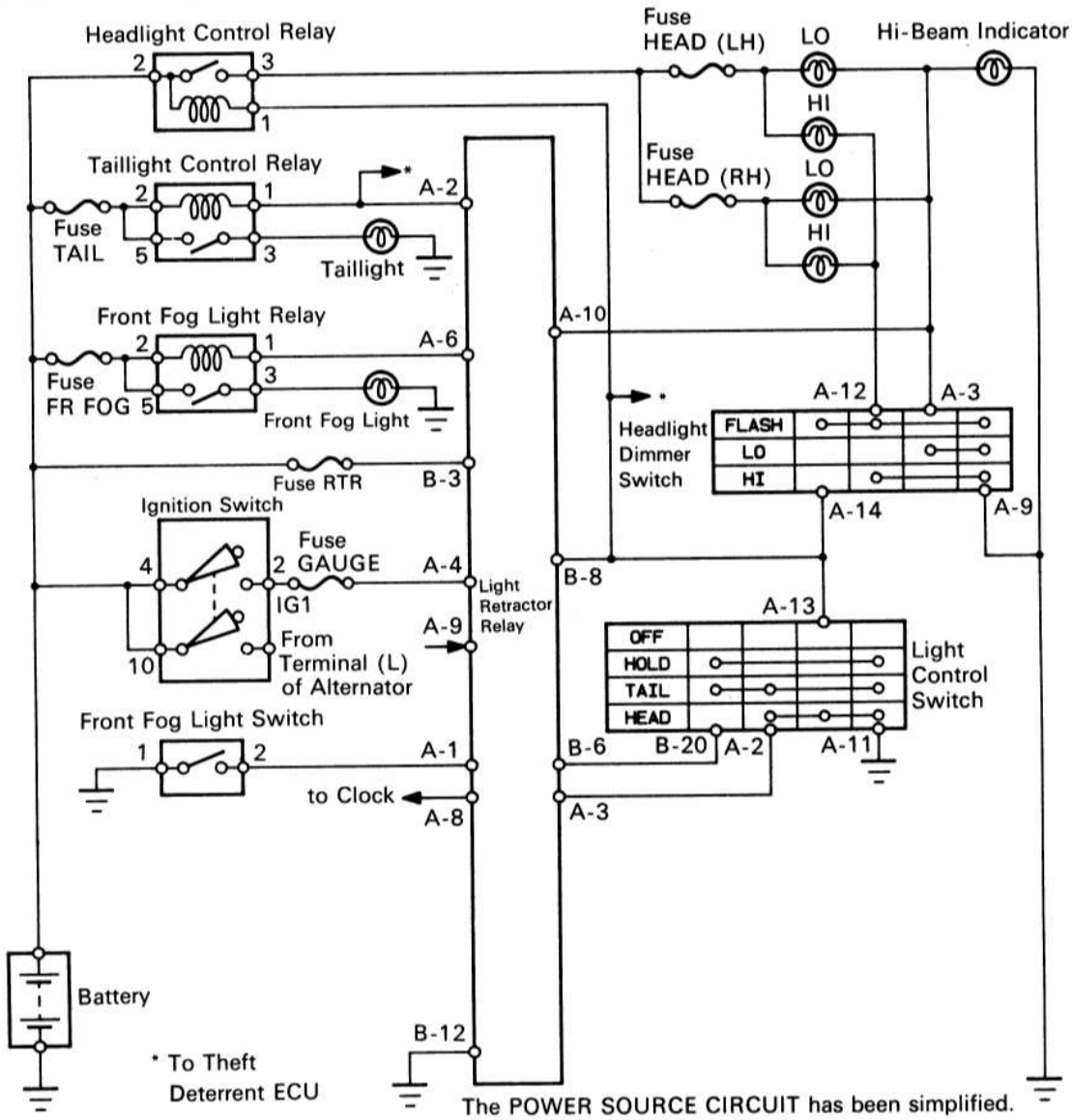
BE2763 BE4049 BE4049 BE4707
V-34-2 e-10-2-B e-18-2-A e-2-1-G

cardiagn.com

Daytime Running Light System (Headlight, Taillight and Front Fog Light System)

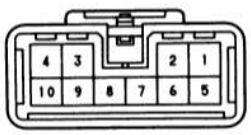
(CANADA)

w/o Light Auto Turn Off System

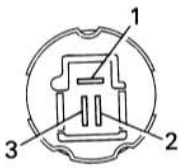


The POWER SOURCE CIRCUIT has been simplified.
For full details, see page BE-9.

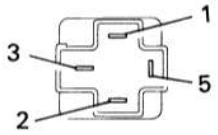
Ignition Switch



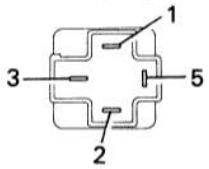
Headlight Control Relay



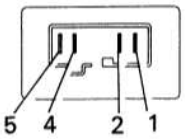
Taillight Control Relay



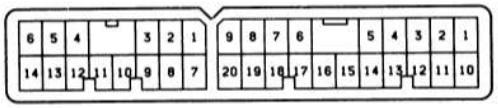
Front Fog Light Relay



Front Fog Light Switch

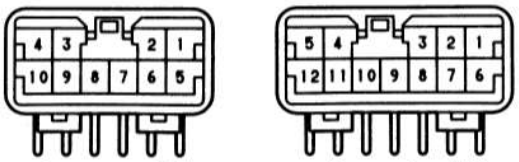


Light Control Switch, Headlight Dimmer Switch



Connector "A" Connector "B"

Light Retractor Relay

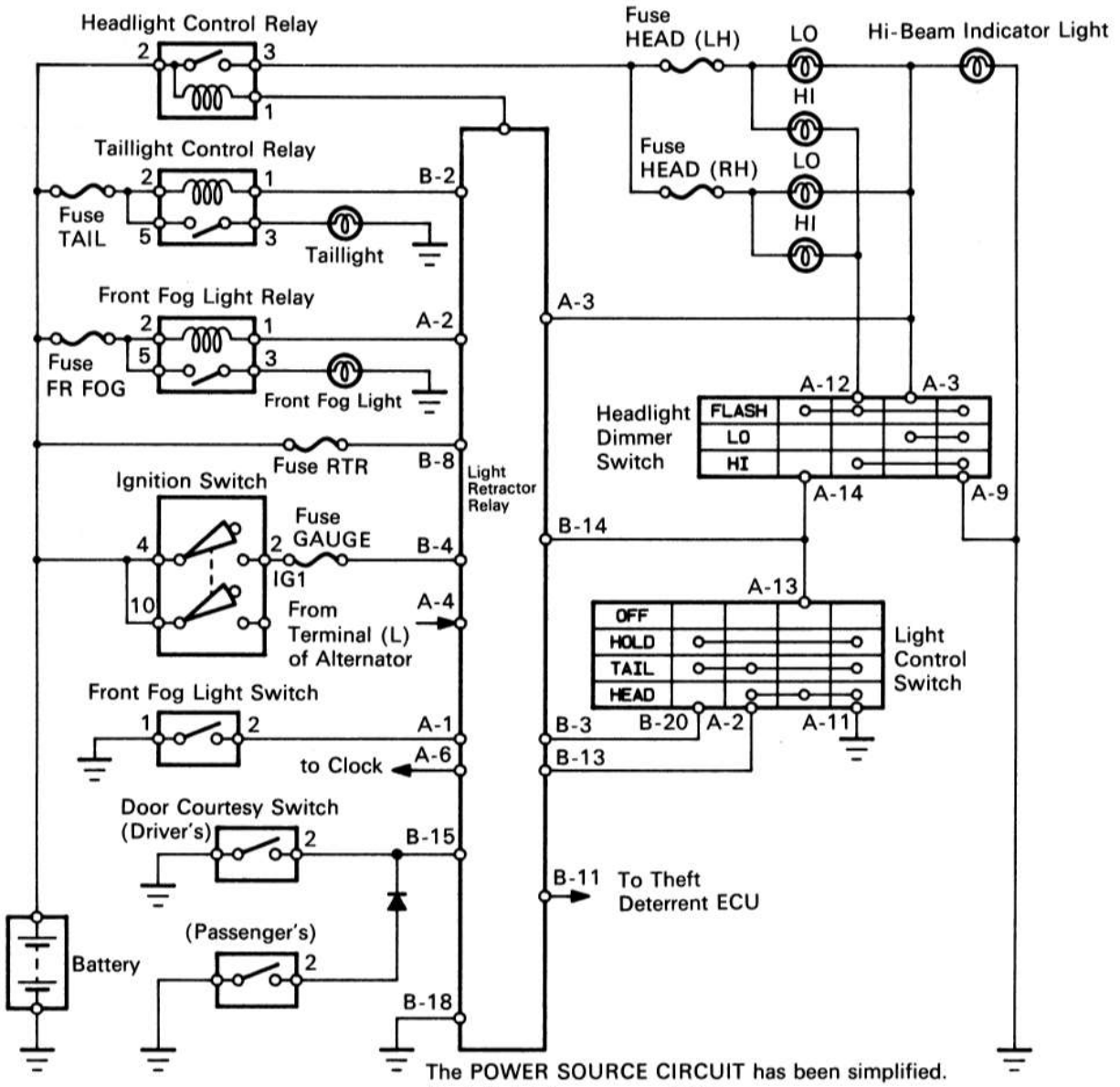


Connector "A" Connector "B"

BE5232
e-10-2-B BE2763 BE4049 BE4049 BE4707
V-34-2 e-10-2-A e-12-2-A

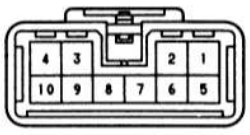
cardiagn.com

w/ Light Auto Turn Off System

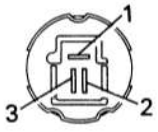


The POWER SOURCE CIRCUIT has been simplified.
For full details, see page BE-9.

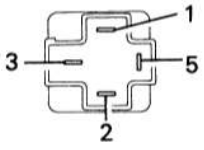
Ignition Switch



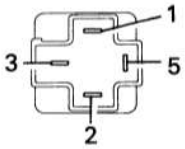
Headlight Control Relay



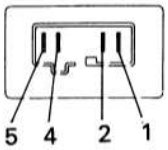
Taillight Control Relay



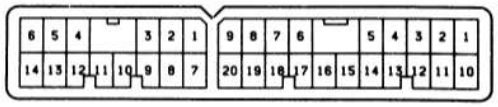
Front Fog Light Relay



Front Fog Light Switch

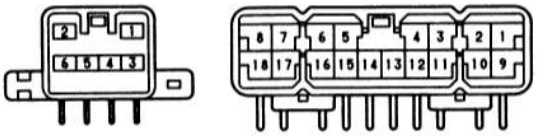


Light Control Switch, Headlight Dimmer Switch



Connector "A" Connector "B"

Light Retractor Relay



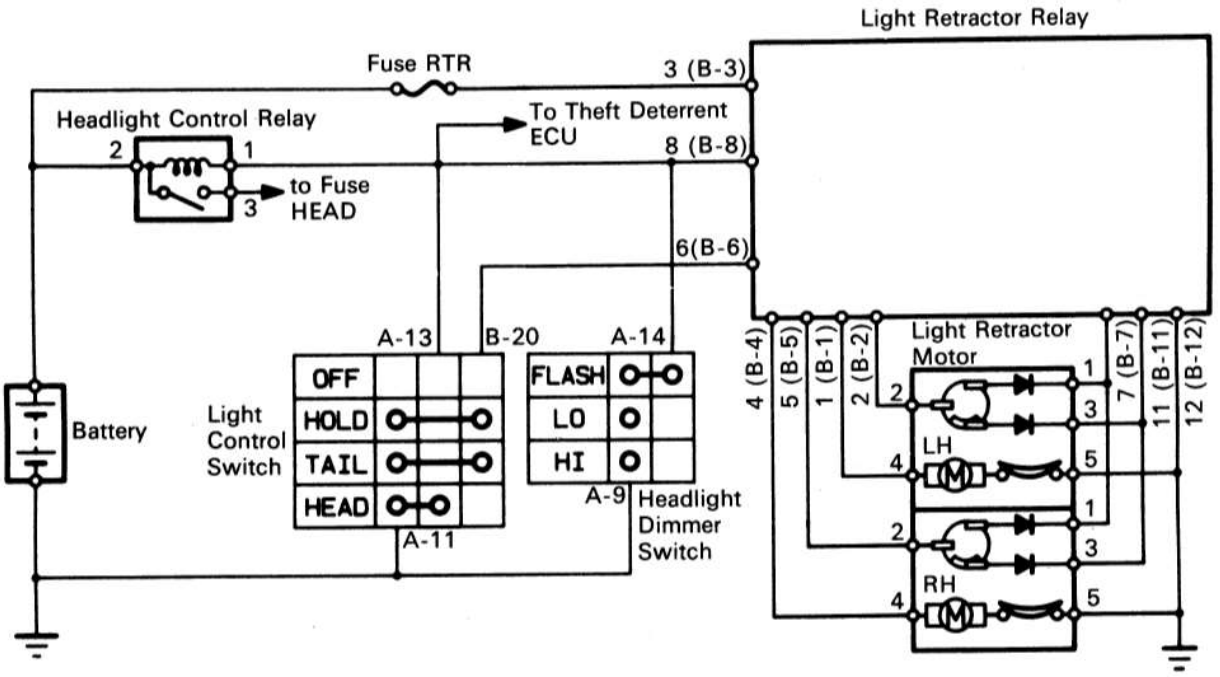
Connector "A" Connector "B"

Door Courtesy Switch



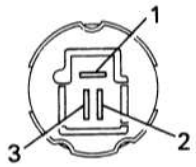
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Light Retractable System (w/o Light Auto Turn Off System)

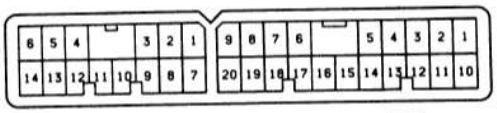


The terminals indicated in brackets ( ) are for CANADA models.
The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

Headlight Control Relay



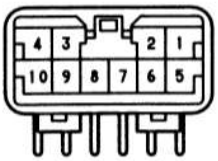
Light Control Switch, Headlight Dimmer Switch



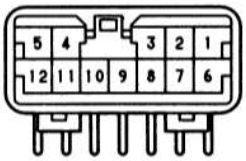
Light Retractor Motor



Light Retractor Relay



(USA)

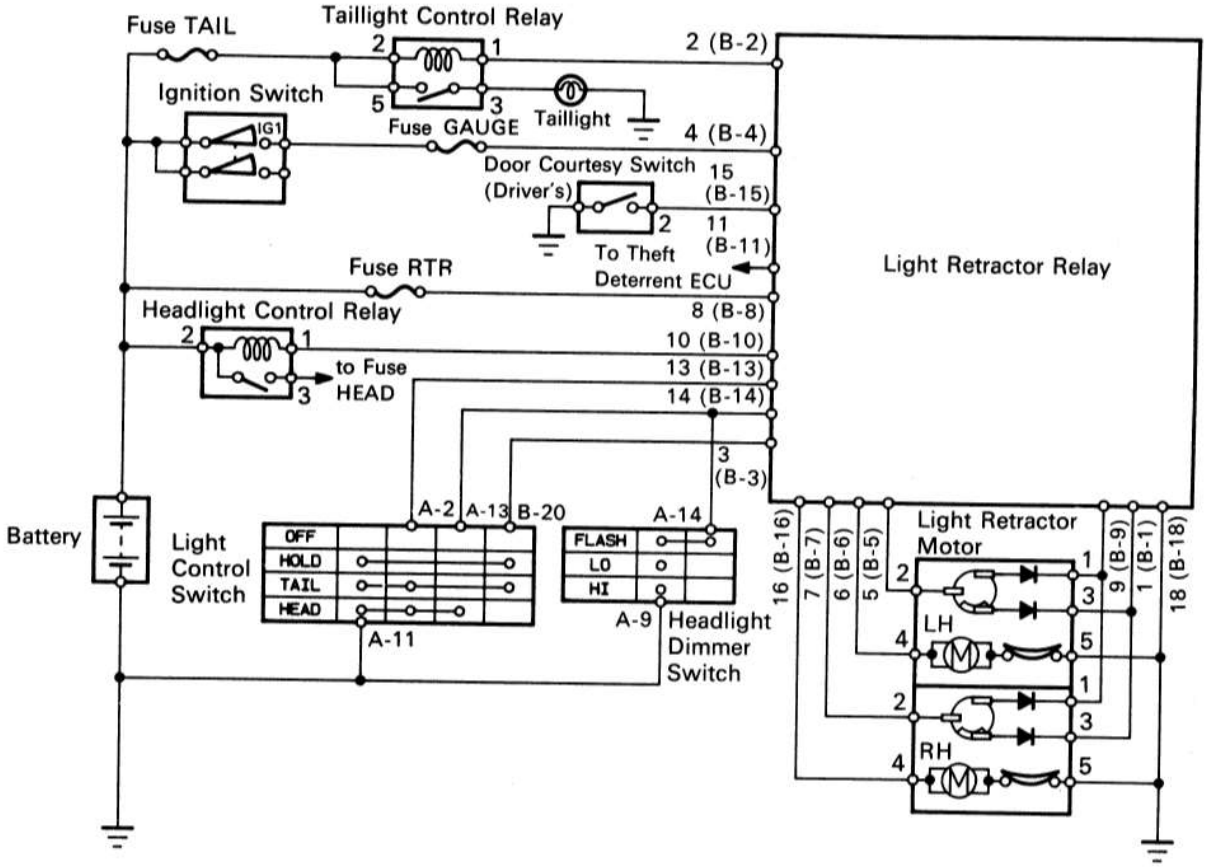


Connector "B" (CANADA)

BE4965
BE2763 V-34-2
IJ-5-2-A e-12-2-A e-12-2-A

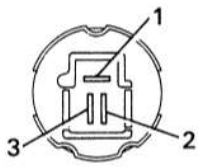
cardiagn.com

(w/ Light Auto Turn Off System)

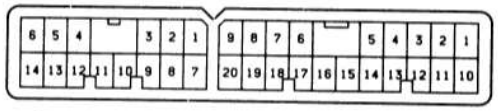


The terminals indicated in brackets ( ) are for CANADA models.
The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

Headlight Control Relay



Light Control Switch, Headlight Dimmer Switch

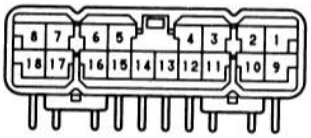


Connector "A" Connector "B"

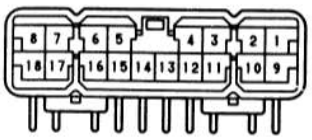
Light Retractor Motor



Light Retractor Relay

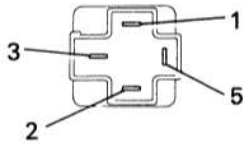


(USA)

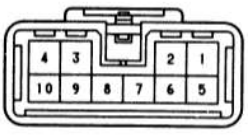


Connector "B" (CANADA)

Taillight Control Relay



Ignition Switch

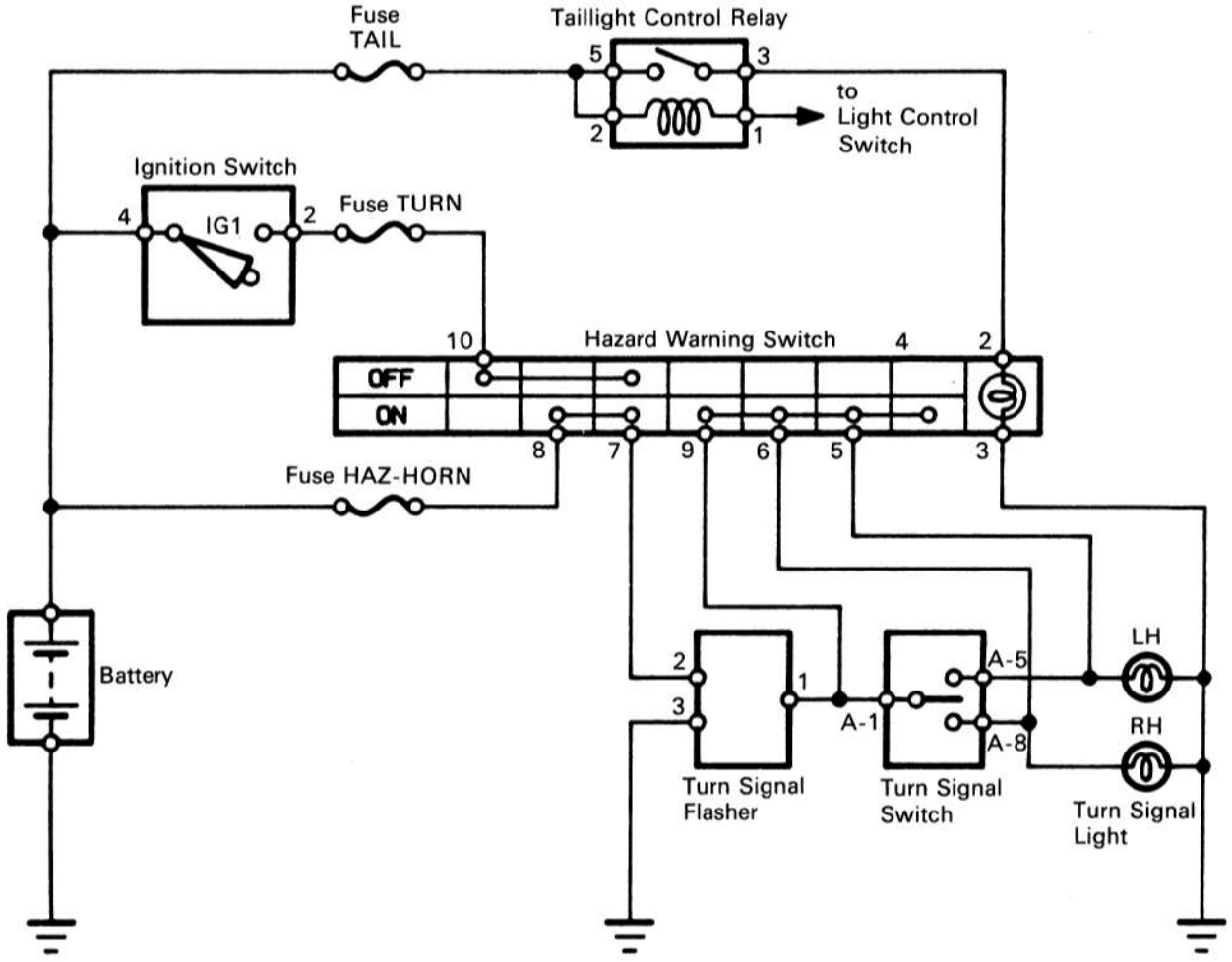


Door Courtesy Switch



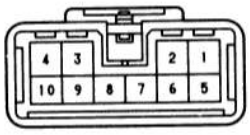
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Turn Signal and Hazard Warning System

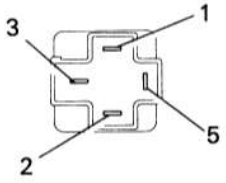


The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

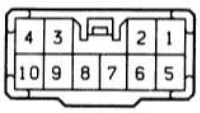
Ignition Switch



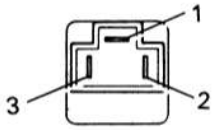
Taillight Control Relay



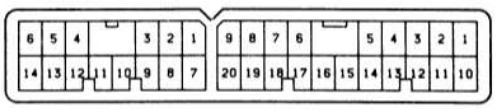
Hazard warning Switch



Turn Signal Flasher



Turn Signal Switch



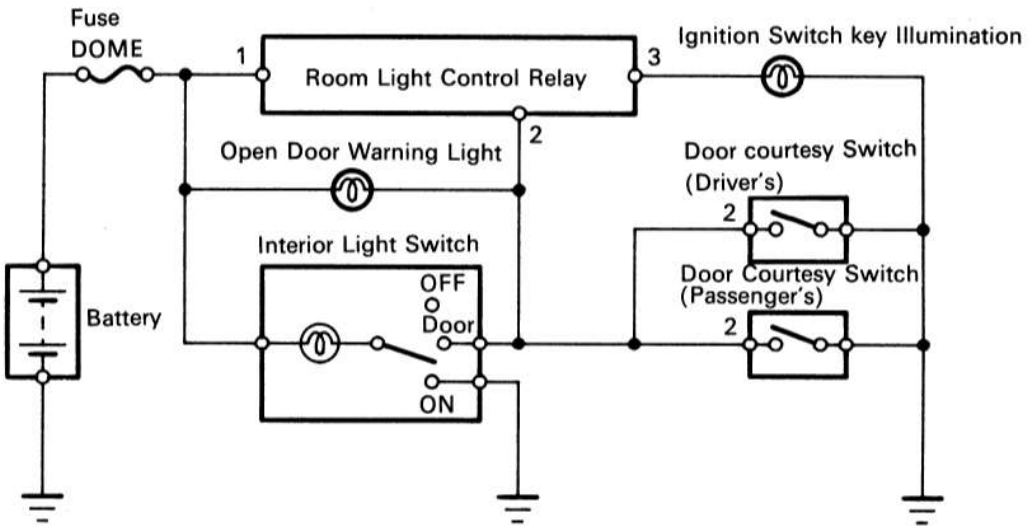
Connector "A" Connector "B"

BE5067
e-10-2-B BE4049 S-10-2
BE2896 V-34-2

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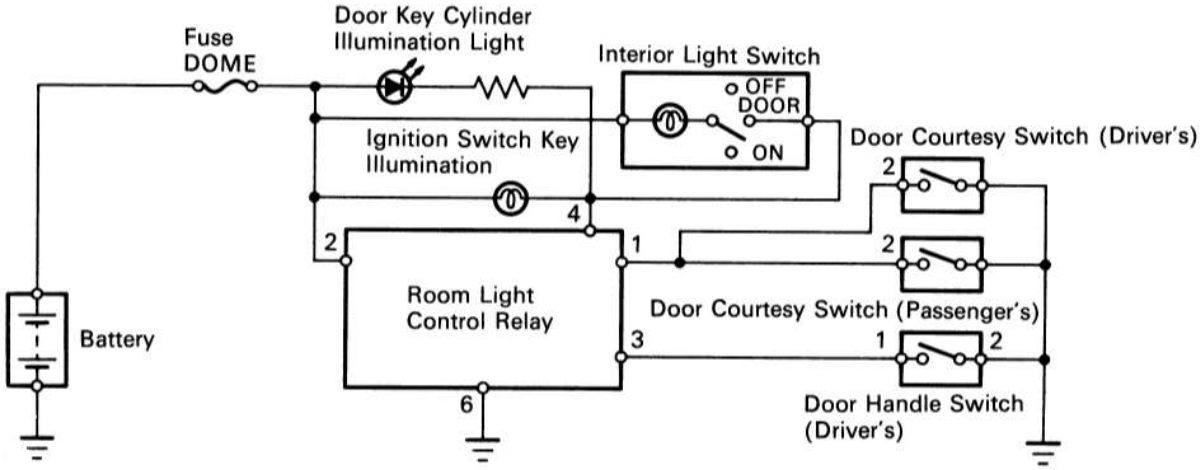
Illuminated Entry System

w/o Door Key Cylinder Illumination Light



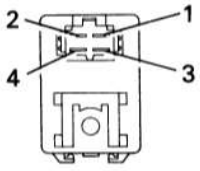
The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

w/ Door Key Cylinder Illumination Light

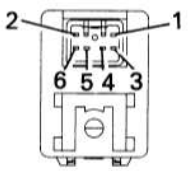


The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

Room Light Control Relay



(w/o Door Key Cylinder Illumination Light)



(w/ Door Key Cylinder Illumination Light)

Door Courtesy Switch



Door Handle Switch

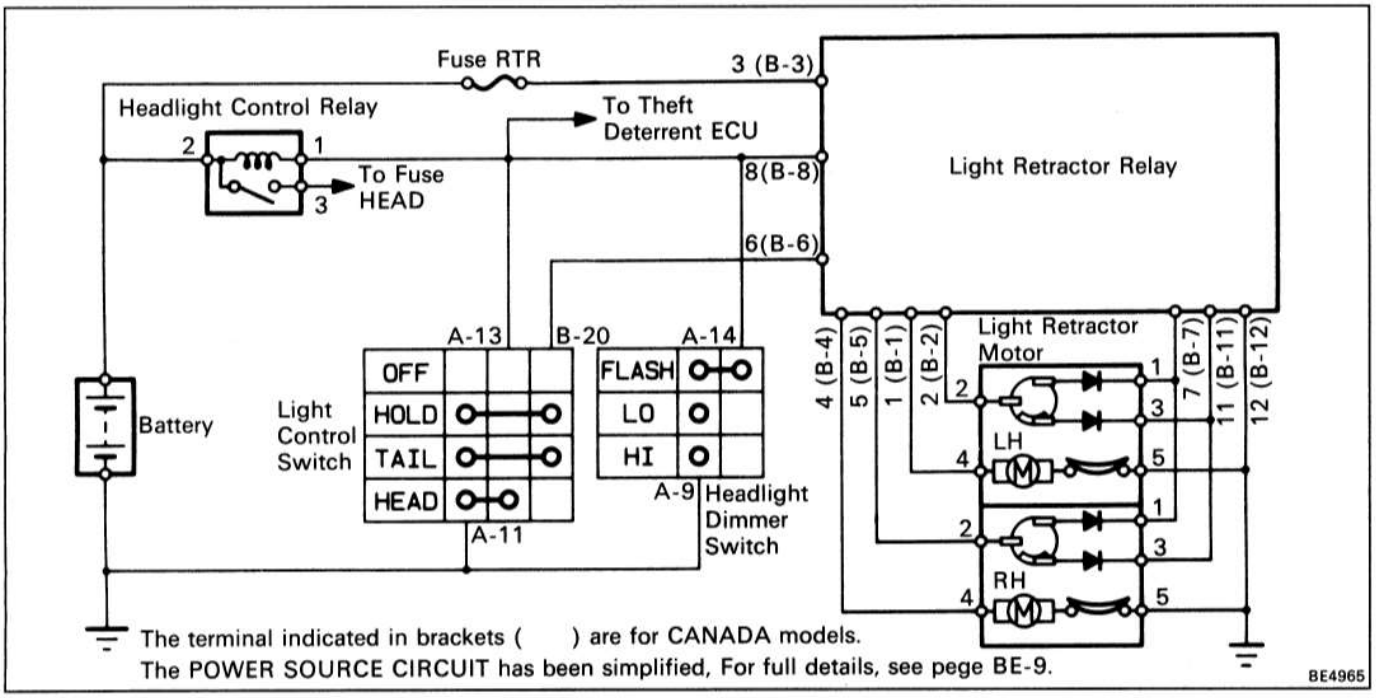


BE4664
BE5055
BE4851 BE5056 e-2-1-G
1Y-2-1-A

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System Discription

Light Retractable System (w/o Light Auto Turn Off System)



Current flows from the battery to terminals 3 (B-3) of the light retractor relay.

Operation examples of the switch are shown below;

HINT: The number in [ ] are for the left side headlight.

1. LIGHT CONTROL SWITCH IN "HEAD"

When the switch is set, continuity is produced between terminal 8 (B-8) of the light retractor relay (hereafter called LRR) and the body ground. Also continuity is made between terminals 7 (B-7) and 12 (B-12) of the LRR. Then the LRR operates so that current flows from terminal 3 (B-3) of the LRR → terminal 4 (B-4) [1 (B-1)] of the LRR → terminal 4 of the light retractor motor → terminal 5 of the motor → the body ground, and the motor starts to run in order to raise the headlights.

When the headlights rise, the limit switch operates, so that continuity is broken between terminals 2 and 1 of the motor, and continuity is produced between terminals 2 and 3.

As a result, because the LRR is interrupted, the headlights stay in position.

2. LIGHT CONTROL SWITCH CHANGED FROM "HEAD" TO "TAIL" OR "HOLD"

When the switch is set, continuity is broken between terminal 8 (B-8) of the LRR and the body ground, and continuity is produced between terminal 6 (B-6) of the LRR and the body ground.

As a result, the headlights are kept in position.

3. LIGHT CONTROL SWITCH CHANGED FROM "TAIL" OR "HOLD" TO "OFF"

When the switch is set, continuity is also broken between terminal 6 (B-6) and the body ground.

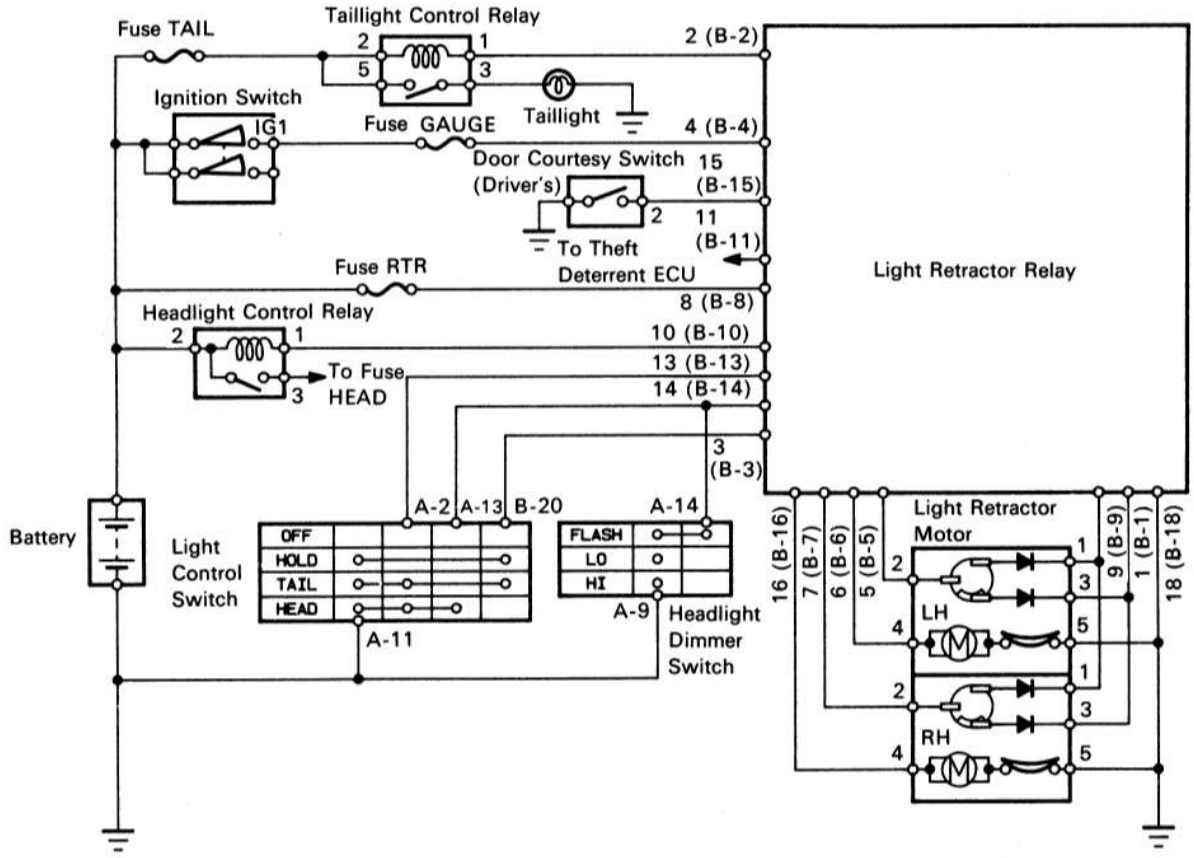
Then continuity is produced between terminals 11 (B-11) and 12 (B-12) of the LRR, so that the LRR operates so that current flows from terminal 3 (B-3) → terminal 4 (B-4) [1 (B-1)] of the LRR → terminal 4 of the light retractor motor → terminal 5 of the motor → the body ground, and the motor starts to run in order to retract the headlights.

When the headlights are retracted, the limit switch operates, so that continuity is broken between terminals 2 and 3 of the motor, and continuity is produced terminals 2 and 1.

As a result, because the LRR interrupted, the headlights stay in position.

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(w/ Light Auto Turn Off System)



The terminals indicated in brackets ( ) are for CANADA models.
The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

BE5234

- Current flows from the battery to terminal 8 (B-8) of the light retractor relay.
- Battery voltage is applied to terminal 5 (B-5) and 7 (B-7) of the light retractor relay.

Operation examples of the switch are shown below;

HINT: The numbers in [ ] are for the left side headlight.

1. LIGHT CONTROL SWITCH IN "TAIL"

When the switch is set continuity is produced between terminal 13 (B-13) of the light retractor relay (hereafter called LRR) and the body ground. Also, because continuity is produced between terminal 2 (B-2) of the LRR and the body ground, the taillight control relay (hereafter called TCR) is turned on. Then the taillights light up.

2. LIGHT CONTROL SWITCH IN "HEAD"

When the switch is set, continuity is produced between terminal 13 (B-13) of the LRR and the body ground, and 14 (B-14) of the LRR and the body ground of the LRR.

- Also continuity is produced between terminals 9 (B-9) and 18 (B-18) of the LRR. Then the LRR operates to lead current from terminal 8 → terminal 16 (B-16) [6 (B-6)] of the LRR → terminal 4 of the light retractor motor → terminal 5 of the motor → the body ground, and the motor starts, to run in order to raise the headlights.

When the headlights rise, the limit switch operates, so that continuity is broken between terminals 2 and 1 of the motor, and continuity is produced between terminals 2 and 3.

As a result, because the LRR is interrupted, the headlights stay in position.

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- Also, because continuity is produced between terminal 2 (B-2) of the LRR and the body ground, and 10 (B-10) of the LRR and the body ground, the TCR and the headlight control relay (hereafter called HCR) are turned on.

  Then the taillights and the headlights light up.

3. LIGHT CONTROL SWITCH CHANGED FROM "HEAD" TO "TAIL"

When the switch is set continuity is broken between terminal 14 (B-14) of the LRR and the body ground, and continuity is produced between terminal 3 (B-3) of the LRR and body ground.

- As a result, the headlights are kept in position.
- By breaking continuity between terminal 14 (B-14) of the LRR and the body ground, continuity is broken between terminal 10 (B-10) and the body ground.

  Then the headlights go out.

4. LIGHT CONTROL SWITCH CHANGED FROM "TAIL" TO "HOLD"

When the switch is set, continuity is broken between terminal 13 (B-13) of the LRR and the body ground. Also, because continuity is broken between terminal 2 (B-2) of the LRR and the body ground, the TCR is turned off.

Then the taillights go out.

The headlights are kept in position, because continuity is kept between terminal 3 (B-3) of the LRR and the body ground.

5. LIGHT CONTROL SWITCH CHANGED FROM "HOLD" TO "OFF"

When the switch is set, continuity is broken between terminal 3 (B-3) of the LRR and the body ground, so that continuity is produced between terminal 1 (B-1) and 18 (B-18) of the LRR.

Then the LRR operates so that the current flows from terminal 8 (B-8) → terminal 16 (B-16) [6 (B-6)] of the LRR → terminal 4 of the light retractor motor → terminal 5 of the motor → the body ground, and the motor starts to run in order to retract the headlights.

When the headlights are retracted, the limit switch operates, so that continuity is broken between terminals 2 and 3 of the motor, and continuity is produced between terminals 2 and 1.

As a result, because the LRR is interrupted, the headlights stay in position.

6. IGNITION SWITCH TURNED FROM "ON" TO "ACC" OR "LOCK" AND DRIVER'S DOOR OPEN WITH LIGHT CONTROL SWITCH IN "HEAD" (Light Auto Turn Off system)

When the switches are set, current does not flow from the battery to terminal 4 (B-4) of the LRR, and continuity is produced between terminal 15 (B-15) of the LRR and the body ground. Also, because continuity is broken between terminals 2 (B-2) of the LRR and the body ground, and 10 (B-10) of the LRR and the body ground, the TCR and the HCR are turned off.

Then the taillights and the headlights go out.

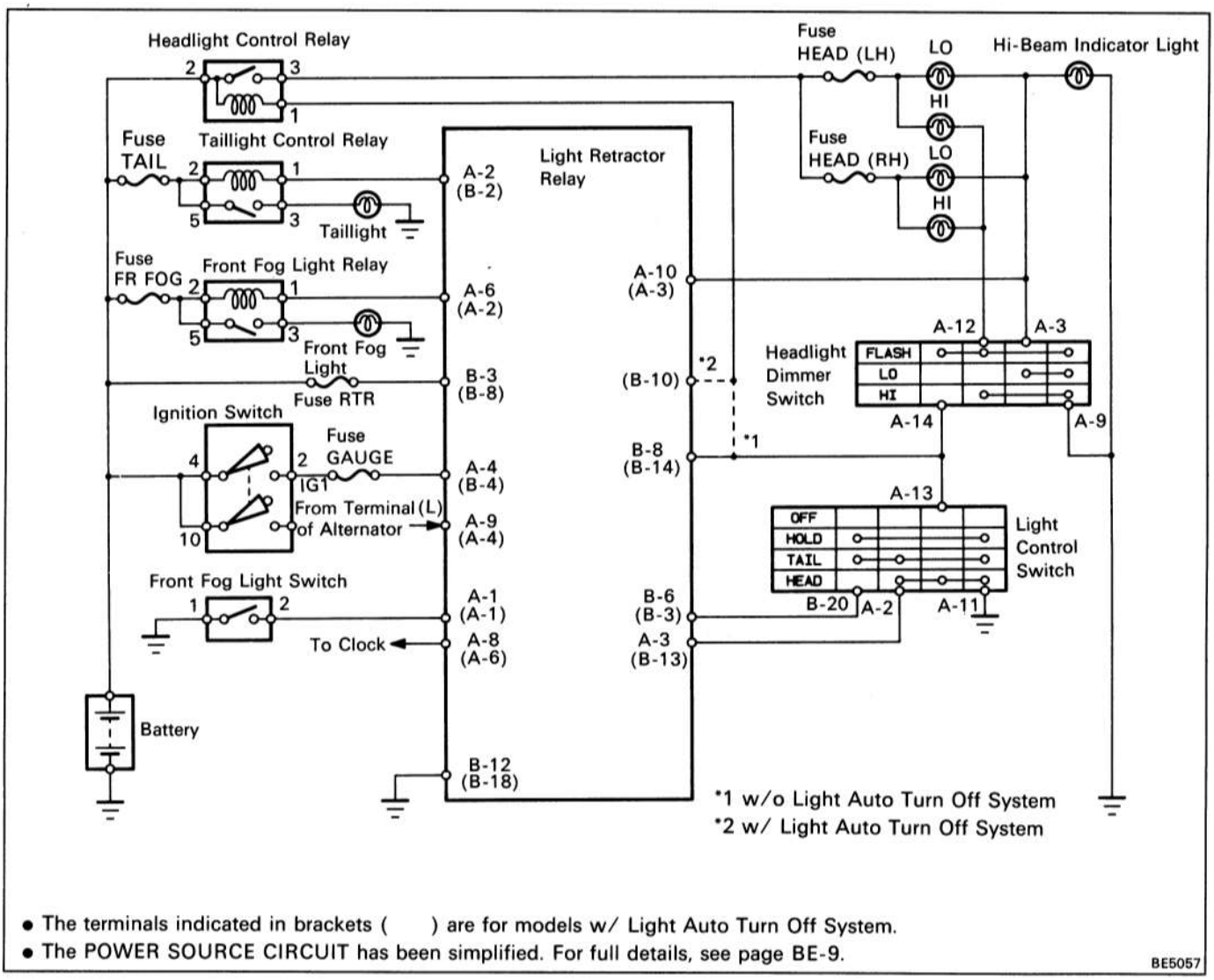
Also with the light control switch in "TAIL", the taillights go out.

When the ignition switch is turned on again, the taillights and headlights light normally.

During light auto turn off operation, if the light switch is turned first to "HOLD" or "OFF", then turned to "TAIL" or "HEAD", both sets of lights will come on again.

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Daytime Running Light System (CANADA)



- The terminals indicated in brackets ( ) are for models w/ Light Auto Turn Off System.
- The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

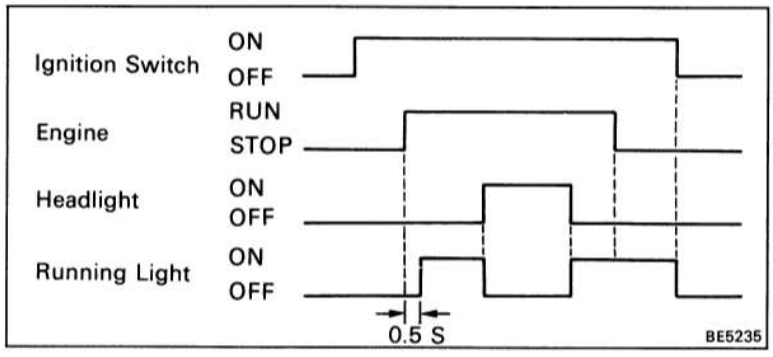
BE5057

DESCRIPTION

The daytime running light system has front fog lights and taillights that go on automatically when the engine is started. This system is standard equipment on all grade models for Canada. The daytime running lights are controlled by the light retractor relay.

Standby Operation

The daytime running light system is activated when the ignition switch is turned on and the engine is started. The lights are turned on and off, as shown below, depending on the condition on applicable switches. (Lights do not go on when the ignition switch is merely turned on. Lights remain on when the running engine stalls.)



BE5235

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OPERATION

Operation examples of the switch are shown below;

1. **IGNITION SWITCH "ON" AND LIGHT CONTROL SWITCH "OFF"**

   When the switches are set, current is led from the battery to terminal A-4 (B-4) and terminal A-9 (A-4) of the light retractor relay. After engine running, because continuity is made between terminal A-2 (B-2) of the light retractor relay and the body ground, and terminal A-6 (A-2) of the light retractor relay and the body ground of the light retractor relay, the taillight control relay and running light control relay are turned on, so the taillights and running lights will come on.

2. **LIGHT CONTROL SWITCH "HEAD"**

   When the switch is set, continuity is made between terminal B-8 (B-14) of the light retractor relay and the body ground. Also, because the continuity between terminal A-6 (A-2) and terminal B-12 (B-18) of the light retractor relay is cut off, so the running lights will go off.

   HINT: If the light control switch is turned to "TAIL" or "HOLD" or "OFF", because continuity is made between terminal A-6 (A-2) and the body ground of the light retractor relay, so the running lights will come on again.

3. **ENGINE STOPS (IGNITION SWITCH "ON")**

   When the engine is stopped, because the continuity between terminal A-6 (A-2) and terminal B-12 (B-18) of the light retractor relay remains, so the running lights also remain.

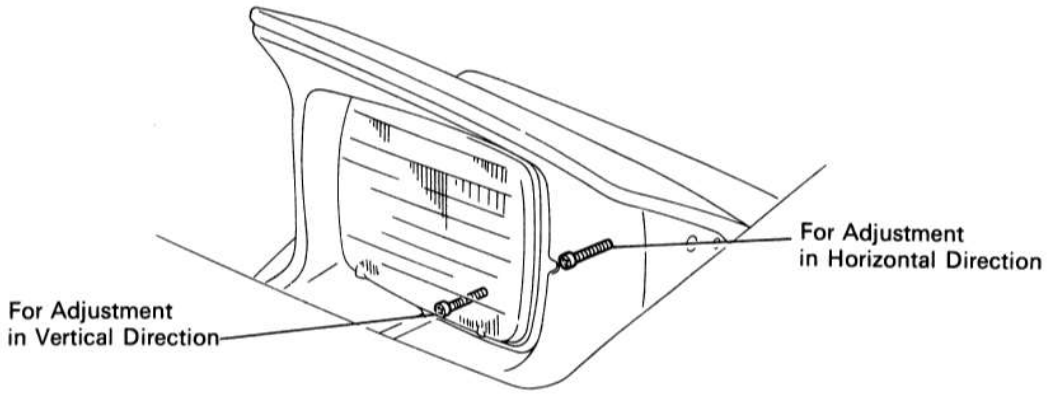
   HINT: If ignition switch is turned to "OFF", because the continuity between terminal A-6 (A-2) and terminal B-12 (B-18) of the light retractor relay is cut off, so running lights will go off.

   If light control switch is in "HOLD" or "OFF", because the continuity between terminal A-2 (B-2) and terminal B-12 (B-18) of the light retractor relay is also cut off, so taillights will also go off.

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Part Adjustment

Adjustment of Light Aiming



BE4708

Troubleshooting

Problem	Possible cause	Remedy	Page
Only one light comes ON	Light bulb burned out	Replace bulb	
	Socket, wire or ground faulty	Repair as necessary	
Headlights do not light	Fusible link blown	Replace fusible link	
	HEAD fuse blown	Replace fuse and check for short	BE-3
	Headlight control relay faulty	Check relay	BE-34
	Light control/dimmer switch faulty	Check switch	BE-34
	Light retractor relay faulty (w/ Light auto turn off system)	Check relay	BE-36, 39
	Wiring or ground faulty	Repair as necessary	
High beam headlights or headlight flashers do not operate	Light control/dimmer switch faulty	Check switch	BE-34
	Wiring faulty	Repair as necessary	
Tail, parking and license light do not Light	Fusible link blown	Replace fusible link	
	TAIL fuse blown	Replace fuse and check for short	BE-3
	Taillight control relay faulty	Check relay	BE-34
	Light control switch faulty	Check switch	BE-34
	Light retractor relay faulty (w/ Light auto turn off system or w/ Daytime running right system)	Check relay	BE-35, 36, 39
	Wiring or ground faulty	Repair as necessary	

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Troubleshooting (Cont'd)

Problem	Possible cause	Remedy	Page
Stop light do not light	STOP fuse blown	Replace fuse and check for short	BE-3
	Stop light switch faulty	Adjust or replace switch	
	Wiring or ground faulty	Replace as necessary	
Stop lights stay on	Stop light switch faulty	Adjust or replace switch	
Turn signal does not flash on one side	Turn signal switch faulty	Check switch	BE-34
	Wiring or ground faulty	Repair as necessary	
Turn signals do not operate	TURN fuse blown	Replace fuse and check for short	BE-3
	Turn signal flasher faulty	Check flasher	BE-40
	Turn signal switch faulty	Check switch	BE-34
	Wiring or ground faulty	Repair as necessary	
Hazard warning lights do not operate	HAZ-HORN fuse blown	Replace fuse and check for short	BE-3
	Turn signal flasher faulty	Check flasher	BE-40
	Hazard warning switch faulty	Check switch	BE-40
	Wiring or ground faulty	Repair as necessary	
Light retractable system does not operate	RTR fuse blown	Replace fuse and check for short	BE-3
	Headlight control relay faulty	Check relay	BE-34
	Light retractor relay faulty	Check relay	BE-38,39
	Light retractor motor faulty	Check motor	BE-39
	Light control/dimmer switch faulty	Check switch	BE-34
	Wiring or ground faulty	Repair as necessary	
Daytime running light system does not operate	GAUGE fuse blown	Replace blown fuse and check for short	BE-3
	RTR fuse blown		
	FR FOG fuse blown		
	ECU-B fuse blown		
	TAIL fuse blown		
	HEAD fuse blown		
	Front fog light relay faulty	Check relay	BE-37
	Taillight control relay faulty	Check relay	BE-34
	Headlight control relay faulty	Check relay	BE-34
	Light retractor relay faulty	Check relay	BE-38,39
	Ignition switch faulty	Check switch	BE-11
	Front fog light switch faulty	Check switch	BE-37
	Light control/dimmer switch faulty	Check switch	BE-34
	Wiring or ground faulty	Repair as necessary	

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Troubleshooting (Cont'd)

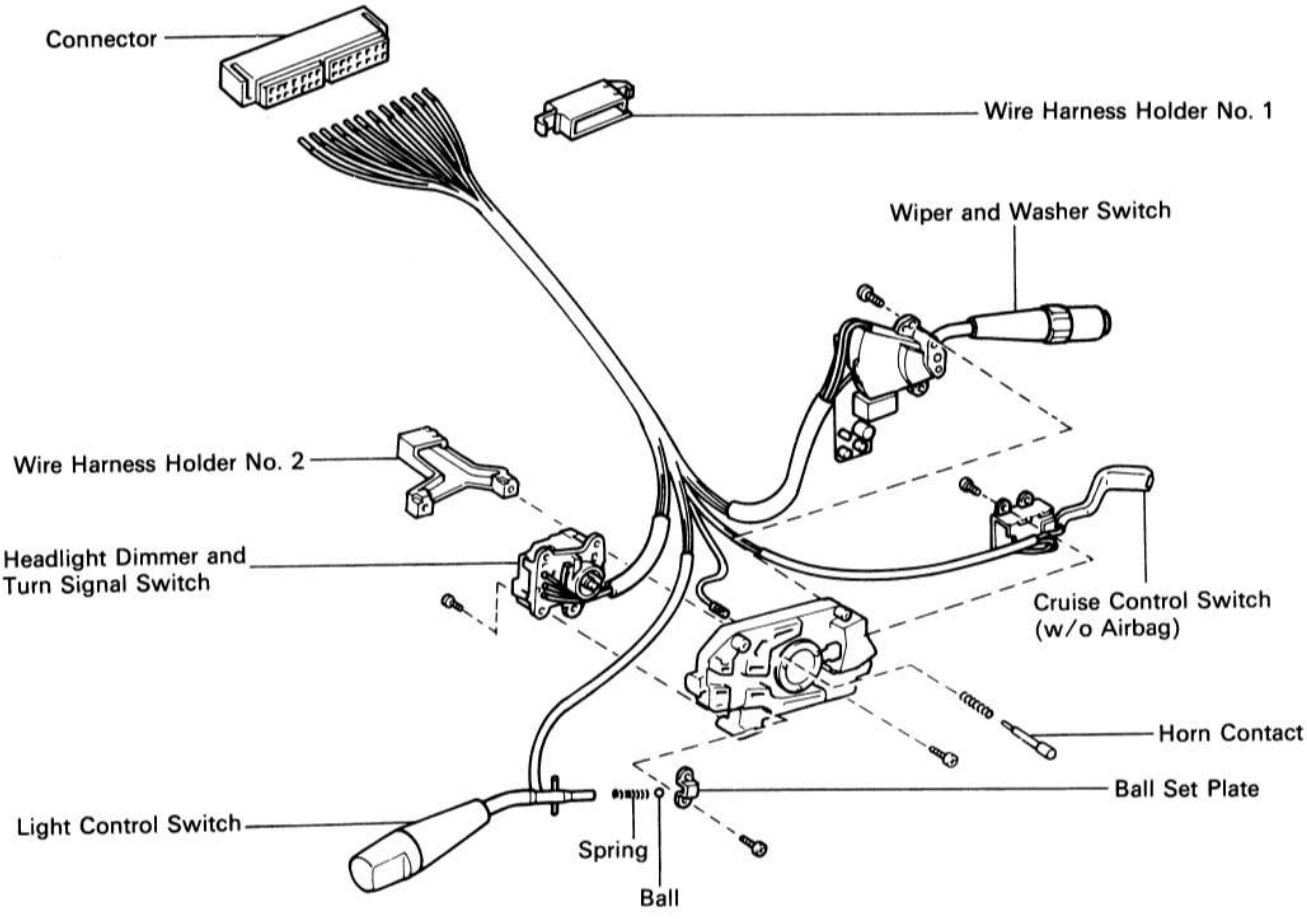
Problem	Possible cause	Remedy	Page
Front fog light system does not operate	FR FOG fuse blown	Replace blown fuse and check for short.	BE-3
	HEAD fuse blown (w/o Daytime running light system)	Replace blown fuse and check for short	BE-3
	Front fog light relay faulty	Check relay	BE-37
	Headlight control relay faulty (w/o Daytime running light system)	Check relay	BE-34
	Light retractor relay faulty (w/ Daytime running light system or w/ Light auto turn off system)	Check relay	BE-35, 36, 39
	Front fog light switch faulty	Check switch	BE-37
	Wiring or ground faulty	Repair as necessary	
Illuminated entry system does not operate	DOME fuse blown	Replace fuse and check for short.	BE-3
	Room light control relay faulty	Check relay	
	Door courtesy switch faulty	Check switch	
	Door handle switch faulty (w/ Door key cylinder illumination light)	Check switch	
	Wiring or ground faulty	Repair as necessary	

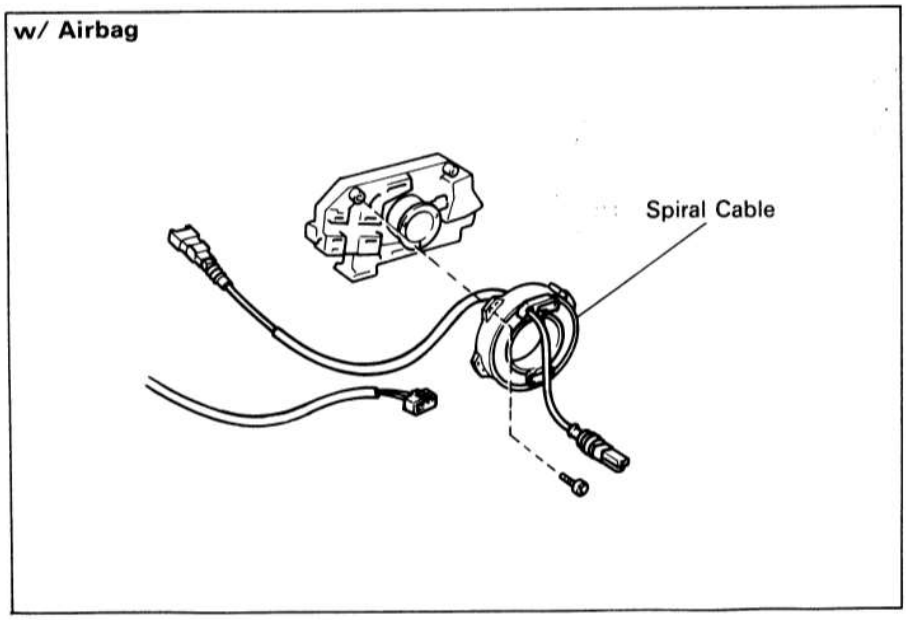
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Parts Replacement

Components

(A Type)

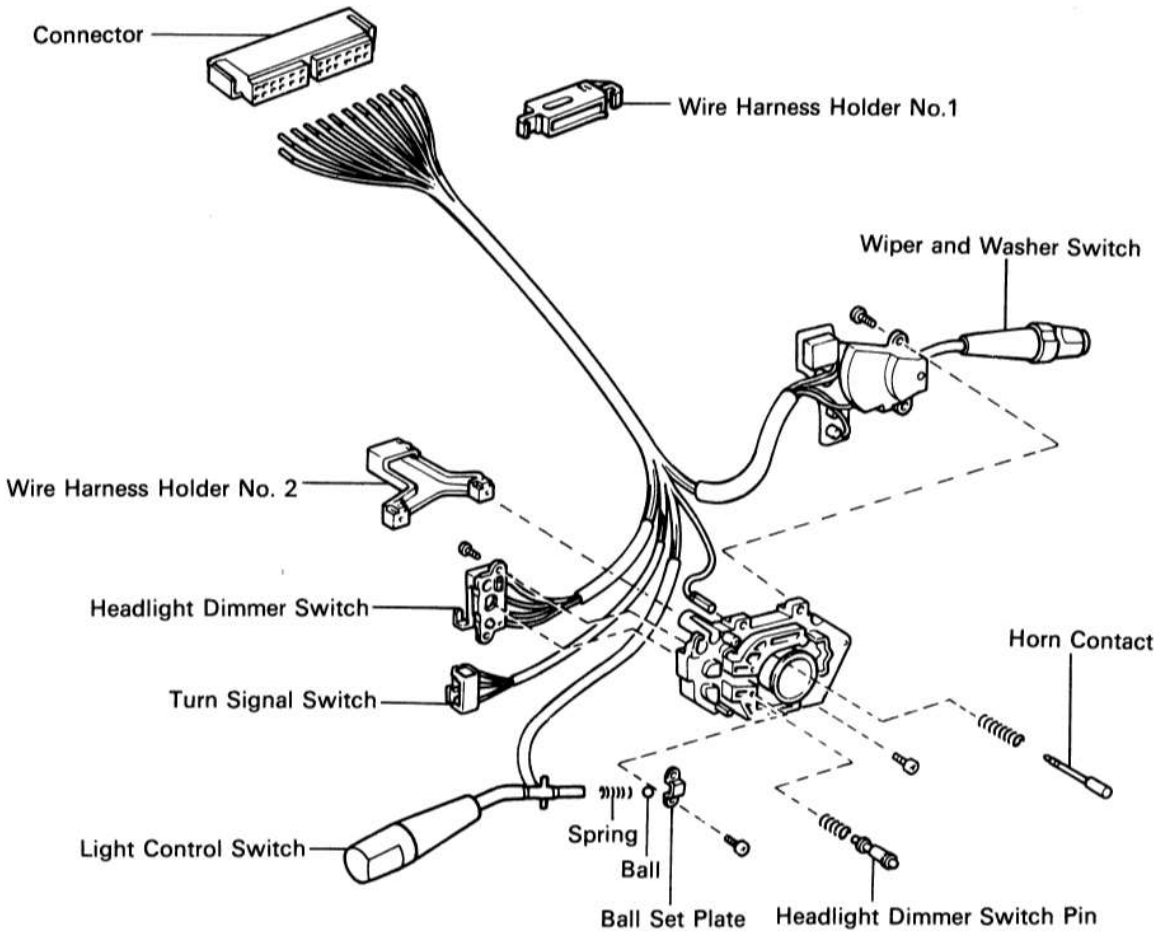


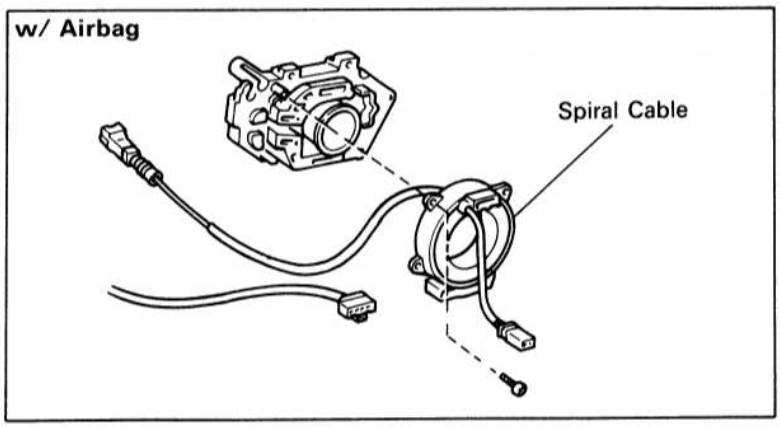


BE4886
BE4966

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(B Type)





BE4372
BE4967

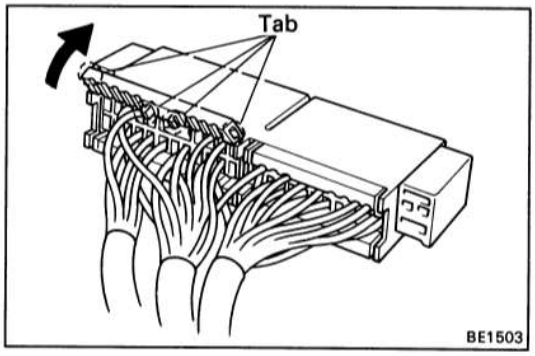
cardiagn.com

Disassembly of Combination Switch

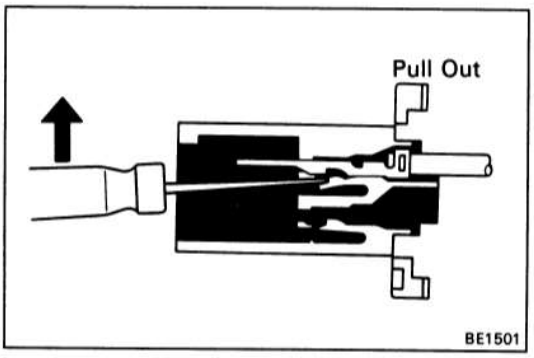
1. **REMOVE WIRE HARNESS HOLDER NO. 1**

2. **REMOVE WIRE HARNESS HOLDER NO. 2**

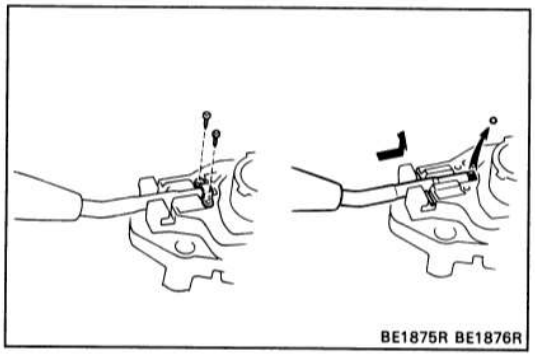
3. **(w/Airbag)**
   REMOVE SPIRAL CABLE SUBASSEMBLY
   (a) Remove the four screws.
   (b) Disconnect the connector and remove the spiral cable subassembly.



4. **REMOVE TERMINALS FROM CONNECTOR**
   (a) Release four tabs and open the terminal cover.



   (b) From the open end, insert a miniature screwdriver between the locking lug and terminal.
   (c) Pry down the locking lug with the screwdriver and pull the terminal out from the rear.



5. **REMOVE LIGHT CONTROL SWITCH**
   (a) Remove two screws and the ball set plate from the switch body.
   (b) Remove the ball and side out the switch from the switch body with the spring.

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6. **REMOVE HEADLIGHT DIMMER AND TURN SIGNAL SWITCH**
(A Type)

Remove four screws and the switch from the switch body.

(B Type)

(a) Pry loose two locking lugs and remove the turn signal switch from the switch body.

(b) Remove two screws and the headlight dimmer switch from the switch body.

(c) Remove the headlight dimmer switch pin from the switch body with the spring.

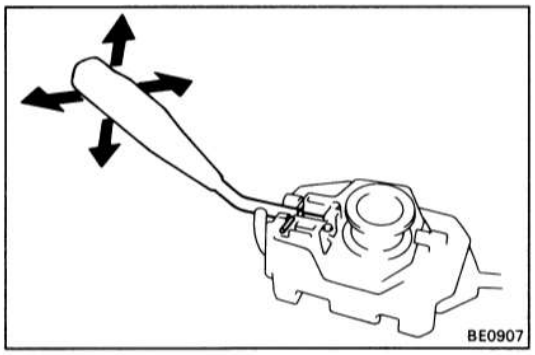
7. **REMOVE WIPER AND WASHER SWITCH**

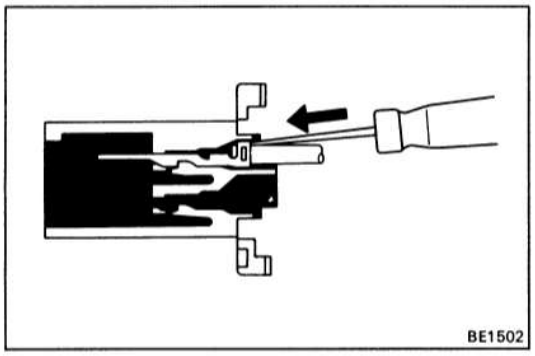
Remove two screws and the switch from the switch body.

8. **(A Type)**
REMOVE CRUISE CONTROL SWITCH

Remove two screws and the switch from the body.

9. **REMOVE HORN CONTACT**


BE0907


BE1502

Assembly of Combination Switch

INSTALL PARTS OF COMBINATION SWITCH IN REVERSE SEQUENCE OF DISASSEMBLY

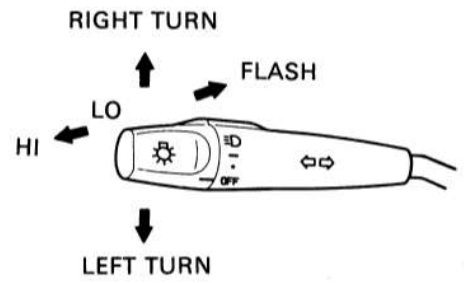
HINT:

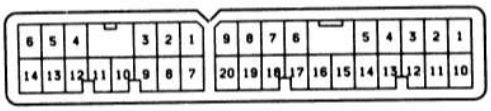
- After installing the light control switch to the switch body, insure that the switch operation is smoothly.

- Push in the terminal until it is securely locked in the connector lug.

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Reference:





Connector "A" Connector "B"

BE4888
V-34-2

Parts Inspection

Headlight and Taillight System

1. INSPECT COMBINATION SWITCH
(Light Control Switch/Continuity)

Terminal (Color) / Switch position	A-2 (Clear)	A-11 (W)	A-13 (R)	B-20 (G)
OFF				
HOLD (●)		○		○
TAIL (–)	○	○		○
HEAD (≡D)	○	○	○	

(Headlight Dimmer and Turn Signal Switch/ Continuity)

Headlight Dimmer Switch

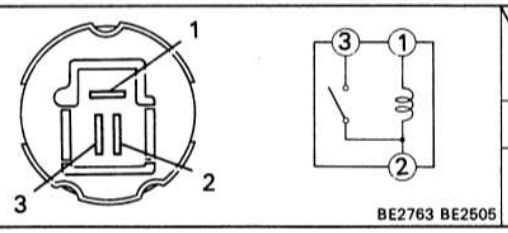
Terminal (Color) / Switch position	A-3 (R-G)	A-9 (W-B)	A-12 (R-Y)	A-14 (R-W)
Flash		○	○	○
Low beam	○	○		
High beam		○	○	

Turn Signal Switch

Terminal (Color) / Switch position	A-1 (G-W)	A-5 (G-B)	A-8 (G-Y)
Left turn	○	○	
Neutral			
Right turn	○		○

If continuity is not as specified, replace the switch.

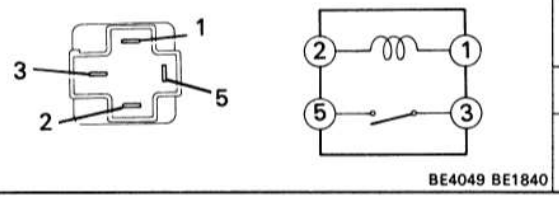
2. INSPECT RELAYS
(Headlight Control Relay/Continuity)



BE2763 BE2505

Terminal / Condition	1	2	3
Constant	○	○	
Apply battery voltage to terminals 1 and 2.		○	○

(Taillight Control Relay/Continuity)

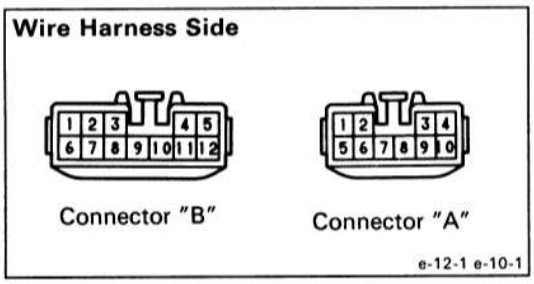


BE4049 BE1840

Terminal / Condition	1	2	3	5
Constant	○	○		
Apply battery voltage to terminals 1 and 2.			○	○

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Daytime Running Light System (w/o Light Auto Turn Off System)

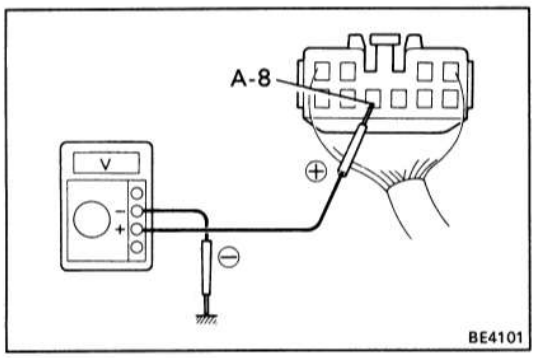


INSPECT LIGHT RETRACTOR RELAY (Relay Circuit)

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

Check for	Tester connection	Condition		Specified value
Continuity	A-1 – Ground	Front fog light switch position	OFF	No continuity
			ON	Continuity
	A-3 – Ground	Light control switch position	OFF or HOLD	No continuity
			TAIL or HEAD	Continuity
	A-10 – Ground	Constant		Continuity
	B-6 – Ground	Light control switch position	OFF or HEAD	No continuity
			HOLD or TAIL	Continuity
	B-12 – Ground	Constant		Continuity
Voltage	A-2 – Ground	Constant		Battery voltage
	A-4 – Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage
	A-6 – Ground	Constant		Battery voltage
	A-9 – Ground	Engine	Stop	No voltage
			Running	Battery voltage
	B-3 – Ground	Constant		Battery voltage
	B-8 – Ground	Light control switch position: OFF, HOLD or TAIL		
		Headlight dimmer switch position	Low beam or High beam	Battery voltage
			Flash	No voltage
		Light control switch position: HEAD		No voltage

If circuit is as specified, inspect relay operation.



(Relay Operation)

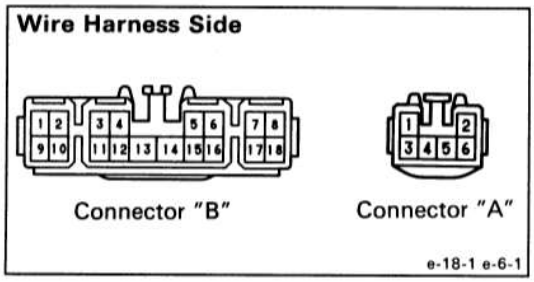
(a) Connect the positive (+) lead from the voltmeter to terminal A-8 and negative (–) lead to the ground.

(b) Check that there is battery voltage with light control switch is turned on.

If operation is not as specified, replace the relay.

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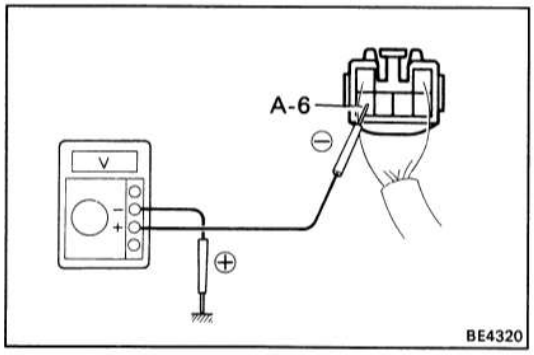
(w/ Light Auto Turn Off System)



INSPECT LIGHT RETRACTOR RELAY (Relay Circuit)

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

Check for	Tester Connection	Condition		Specified value
Continuity	A-1 – Ground	Front fog light Switch position	OFF	No continuity
			ON	Continuity
	B-3 – Ground	Light control switch position	OFF or HEAD	No continuity
			HOLD or TAIL	Continuity
	B-13 – Ground	Light Control switch position	OFF or HOLD	No continuity
			TAIL or HEAD	Continuity
	B-14 – Ground	Light control switch position: OFF, HOLD or TAIL		
		Headlight dimmer switch position	Low beam or High beam	No continuity
			Flash	Continuity
		Light control switch position: HEAD		Continuity
	B-18 – Ground	Constant		Continuity
Voltage	A-2 – Ground	Constant		Battery voltage
	A-3 – Ground	Light control switch HEAD and Dimmer switch LO		No voltage
		Light control switch HEAD and Dimmer switch HI		Battery voltage
	A-4 – Ground	Engine	Stop	No voltage
			Running	Battery voltage
	B-2 – Ground	Constant		Battery voltage
	B-4 – Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage
	B-8 – Ground	Constant		Battery voltage
	B-10 – Ground	Constant		Battery voltage



If circuit is specified, inspect relay operation.

(Relay Operation)

(a) Connect the positive (+) lead from the voltmeter to terminal A-6 and negative (–) lead to the ground.

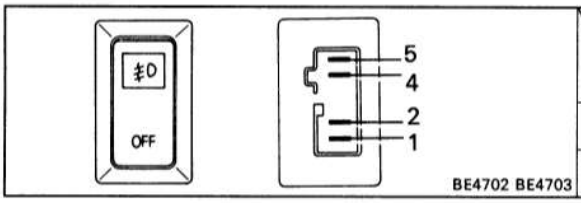
(b) Check that there is battery voltage with light control switch is turned on.

If operation is not as specified, replace the relay.

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Front Fog Light System

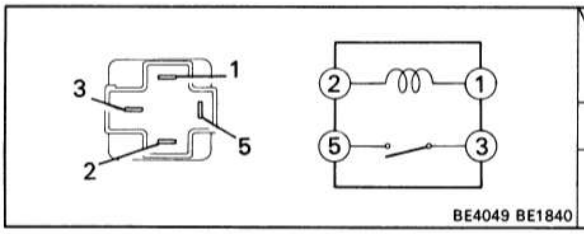
1. INSPECT FRONT FOG LIGHT SWITCH (Continuity)



Terminal / Switch position	1	2	Illumination 4	Illumination 5
OFF				
ON	○——○			

If continuity is not as specified, replace the switch.

2. INSPECT FRONT FOG LIGHT RELAY (Continuity)



Terminal / Condition	1	2	3	5
Constant	○—≈—○			
Apply battery voltage to terminals 1 and 2.			○——○	

If continuity is not as specified, replace the relay.

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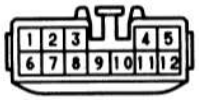
Light Retractable System

1. INSPCT LIGHT RETRACTOR RELAY

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

Wire Harness Side

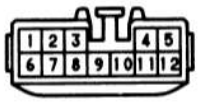
(w/o Light Auto Turn Off System)



(USA)



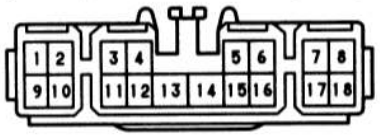
Connector "A"



Connector "B"

(CANADA)

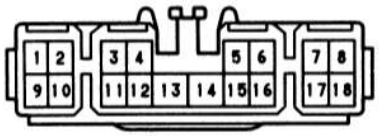
(w/ Light Auto Turn Off System)



(USA)



Connector "A"



Connector "B"

(CANADA)

e-12-1 e-18-1
e-10-1 e-12-1 e-6-1 e-18-1

(w/o Light Turn Off System)

Check for	Tester connection	Condition		Specified value
Continuity	1(B-1) – Ground 4(B-4) – Ground	Constant		*1 Continuity
	*2 2(B-2) – 7(B-7)	Headlight position	Any position ex. uppermost	Continuity
	*2 5(B-5) – 7(B-7)		Uppermost	No continuity
	*2 2(B-2) – 11(B-11)	Headlight position	Any position ex. lowermost	Continuity
	*2 5(B-5) – 11(B-11)		Lowermost	No continuity
	6(B-6) – Ground	Light control switch position	OFF or HEAD	No continuity
			HOLD or TAIL	Continuity
	12(B-12) – Ground	Constant		Continuity
Voltage	3(B-3) – Ground	Constant		Battery voltage
	8(B-8) – Ground	Light control switch position: OFF, HOLD or TAIL		
		Headlight dimmer switch position	Low beam or High beam	Battery voltage
			Flash	No voltage
		Light control switch position: HEAD		No voltage

The number in ( ) mean for CANADA vehicle.
*1: There is resistance because this circuit is grounded through the motor.
*2: Connect the test leads so that the current from the ohmmeter can flow according to the above orders.

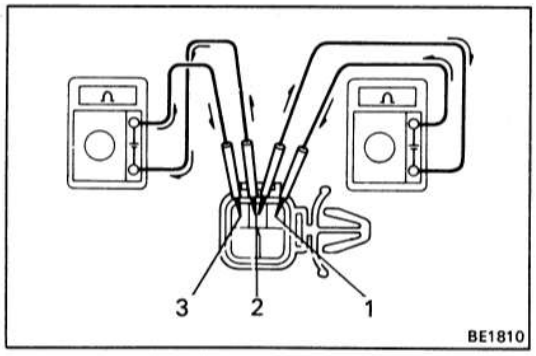
If circuit is as specified, replace the relay.

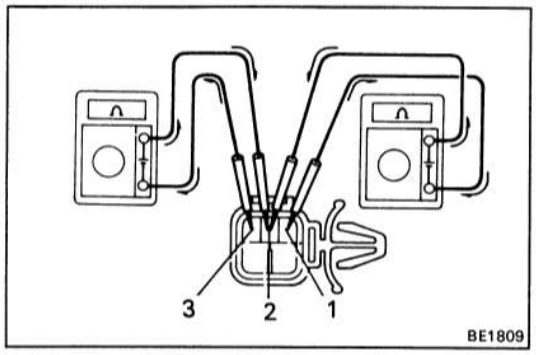
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(w/ Light Auto Turn Off System)

Check for	Tester connection	Condition		Specified value
Continuity	3(B-3) – Ground	Light control switch position	OFF or HEAD	No continuity
			HOLD or TAIL	Continuity
	6(B-6) – Ground 16(B-16) – Ground	Constant		*1 Continuity
	13(B-13) – Ground	Light control switch position	OFF or HOLD	No continuity
			TAIL or HEAD	Continuity
	14(B-14) – Ground	Light control switch position: OFF, HOLD or TAIL		
		Headlight dimmer switch position	Low beam or Hight beam	No continuity
			Flash	Continuity
		Light control switch position: HEAD		Continuity
	18(B-18) – Ground	Constant		Continuity
	*2 5(B-5) – 1(B-1)	Headlight position	Any position ex. lowermost	Continuity
	*2 7(B-7) – 1(B-1)		Lowermost	No continuity
	*2 5(B-5) – 9(B-9)	Headlight position	Any position ex. uppermost	Continuity
	7(B-7) – 9(B-9)		Uppermost	No continuity
Voltage	2(B-2) – Ground	Constant		Battery voltage
	4(B-4) – Ground	Ignition switch position	LOCK or ACC	No Voltage
			ON	Battery voltage
	8(B-8) – Ground	Constant		Battery voltage
	10(B-10) – Ground	Constant		Battery voltage
	15(B-15) – Ground	Door position	Closed (Courtesy switch OFF)	Battery voltage
			Opened (Courtesy switch ON)	No voltage

The number in ( ) mean for CANADA vehicles.
*1: There is resistance because this circuit is grounded through the motor.
*2: Connect the test leads so that the current from the ohmmeter can flow according to the above orders.





If circuit is as specified, replace the relay.

2. INSPECT LIGHT RETRACTOR MOTOR (Diode/Continuity)

(a) Set the motor to any position except the uppermost or lowermost position.

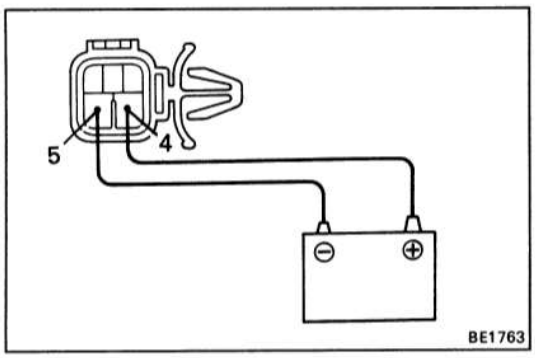
(b) Connect the ohmmeter test lead so that the current from the meter can flow from terminal 1 to 2, check that there is no continuity.

(c) Connect the ohmmeter test lead so that the current from the meter can flow from terminal 3 to 2, check that there is no continuity.

(d) Reverse the test leads of ohmmeter, check that there is continuity.

If continuity is not as specified, replace the motor.

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(Operation)

Connect the positive (+) lead from the battery to terminal 4 and the negative (–) lead to terminal 5, check that the motor operates.

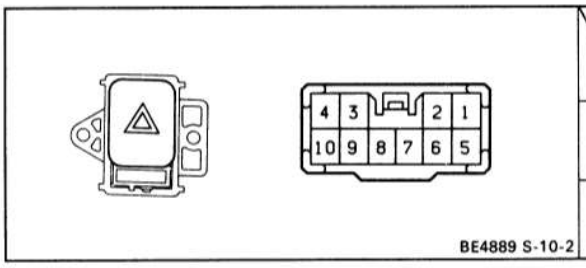
If operation is not as specified, replace the motor.

Turn Signal and Hazard Warning System

1. INSPECT SWITCHES
(Turn Signal Switch/Continuity)

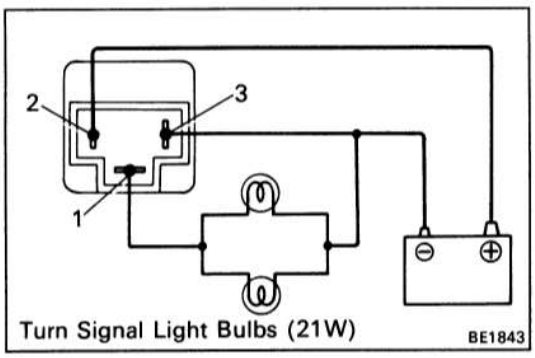
See Headlight Dimmer and Turn Signal Switch on page BE-34.

(Hazard Warning Switch/Continuity)



Terminal / Switch position	4	5	6	7	8	9	10	Illumination 2	Illumination 3
OFF				○			○	○	○
ON	○	○	○	○	○	○			

If continuity is not as specified, replace the switch.



2. 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 two turn signal light bulbs parallel to each other to terminals 1 and 3, check that the bulbs flash.

HINT: The turn signal lights should flash 60 to 120 times per minute.

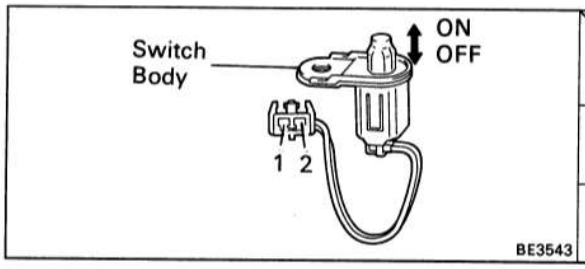
If one of the front or rear turn signal lights has an open circuit, the flash rate will be more than 140 times per minute.

If operation is not as specified, replace the flasher.

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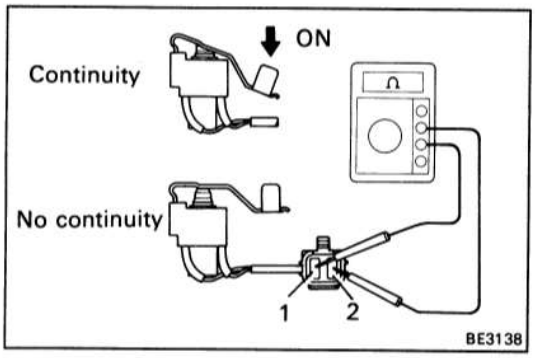
Illuminated Entry System

1. INSPECT DOOR COURTESY SWITCH (Continuity)



Terminal / Switch position	1	2	Switch body
ON (Switch pin released)	○	○	○
OFF (Switch pin pushed in)			

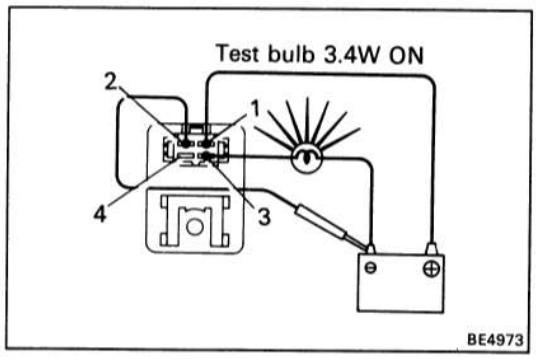
If continuity is not as specified, replace the switch.



2. INSPECT DOOR OUTSIDE HANDLE SWITCH (Continuity)

(a) Check that there is continuity between terminals 1 and 2 when door outside handle is pulled.

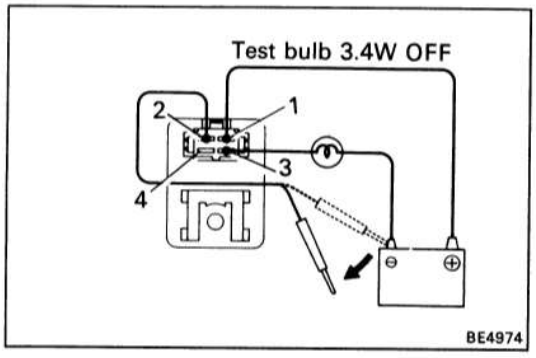
(b) Check that there is no continuity between terminals 1 and 2 when door outside handle is released.



3. (w/o Door Key Cylinder Illumination Light) INSPECT ROOM LIGHT CONTROL RELAY (Operation)

Connect the positive (+) lead from the battery to terminal 1. Connect the negative (–) lead to terminal 2. Connect a 3.4 W test bulb between terminal 3 and the negative (–) lead.

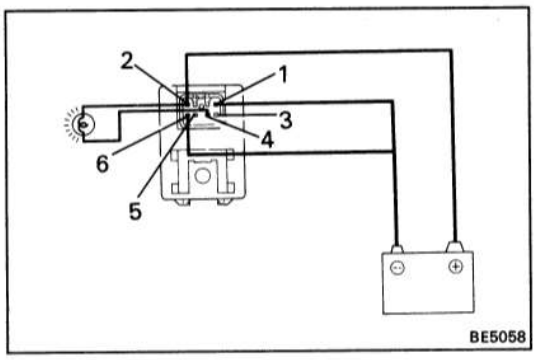
(a) Check that the bulb lights.



(b) Disconnect the negative (–) lead from the battery and check that the bulb goes out 5 seconds later.

If operation is not as specified, replace the relay.

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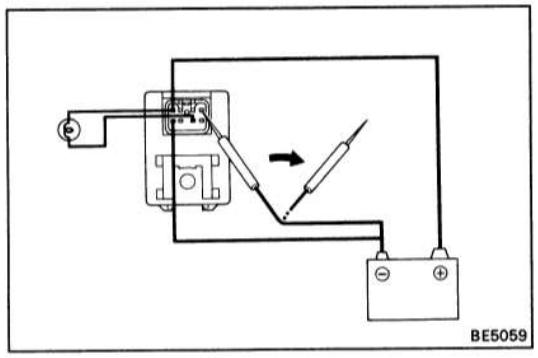


4. **(w/ Door Key Cylinder Illumination Light)**
INSPECT ROOM LIGHT CONTROL RELAY

(Courtesy switch circuit/Operation)

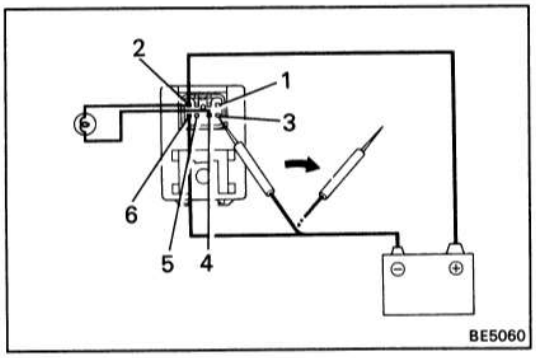
Connect the positive (+) lead from the battery to terminal 2. Connect the negative (–) lead to terminals 1 and 6. Connect a 3.4W test bulb between terminals 2 and 4.

(a) Check that the bulb lights.



(b) Disconnect the negative (–) lead from terminal 1, and check that the bulb fades out about 8.5 seconds later.

If operation is not as specified, replace the relay.



(Outside handle switch circuit/Operation)

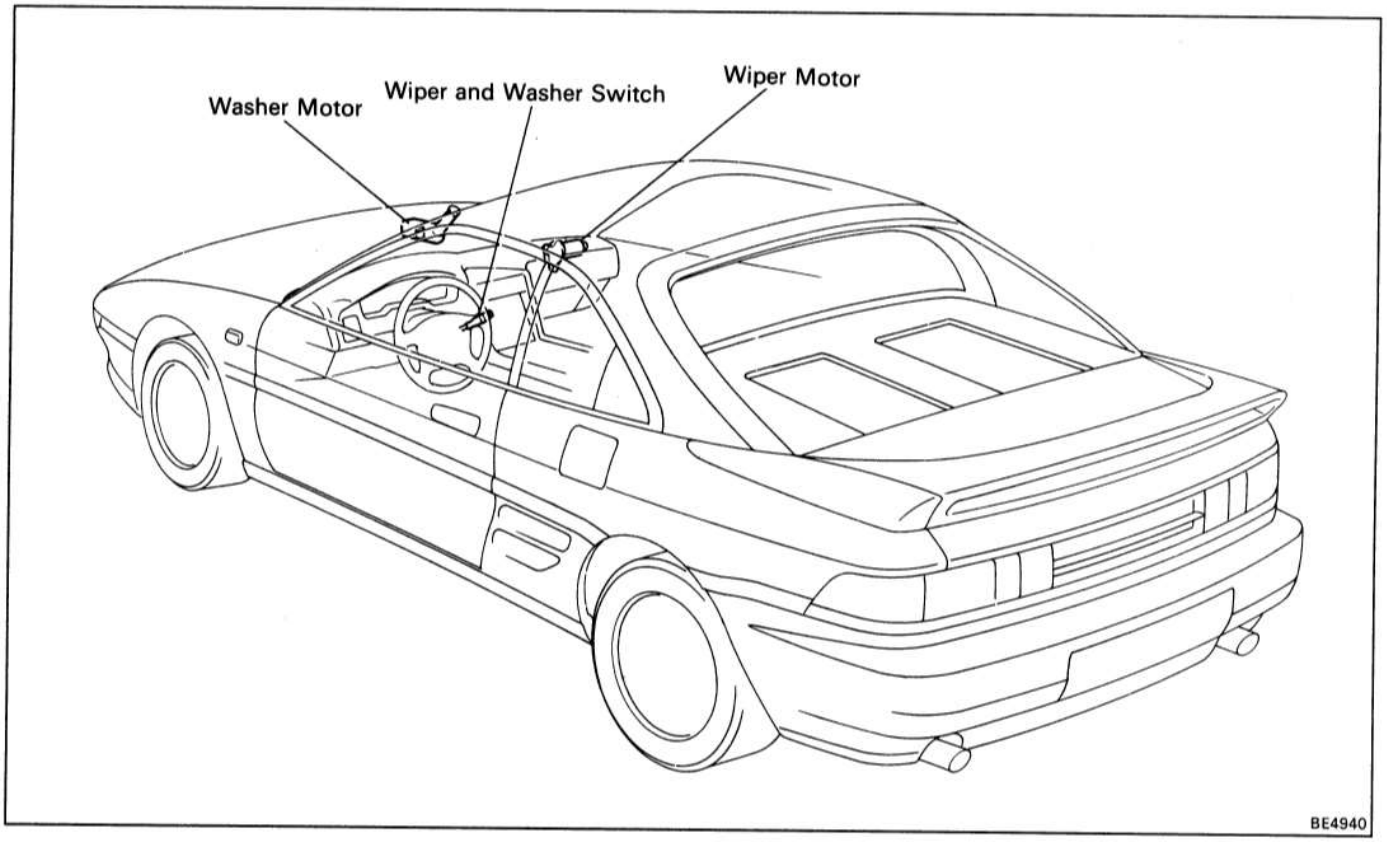
Connect the positive (+) lead from battery to terminal 2. Connect the negative (–) lead to terminals 3 and 6. Connect a 3.4W test bulb between terminals 2 and 4. Disconnect the negative (–) lead from terminal 3, and check that the bulb fades out about 8.5 seconds later.

If operation is not as specified, replace the relay.

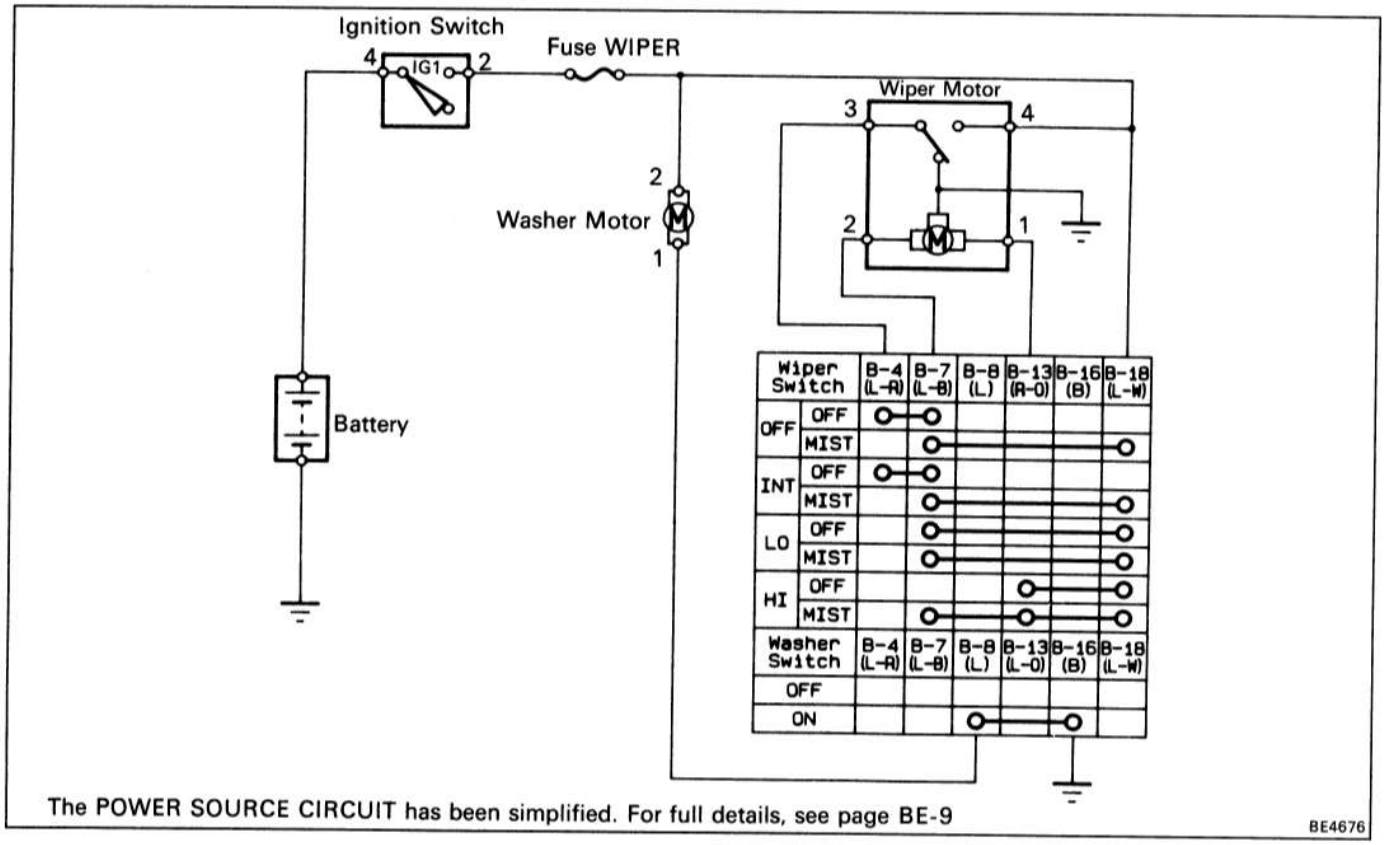
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WIPER AND WASHER SYSTEM

Parts Location



Wiring Diagram

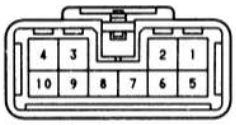


The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9

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Connector Diagrams

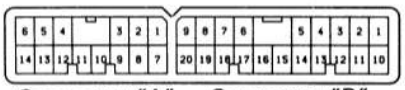
Ignition Switch



Wiper Motor



Wiper and Washer Switch



Connector "A" Connector "B"

Washer Motor
(All vehicles for CANADA, USA vehicles w/ Cold Area Spec.)



(USA vehicles w/o Cold Area Spec.)



e-10-2-B H-4-2 V-34-2
BE4107 IS-2-2-E

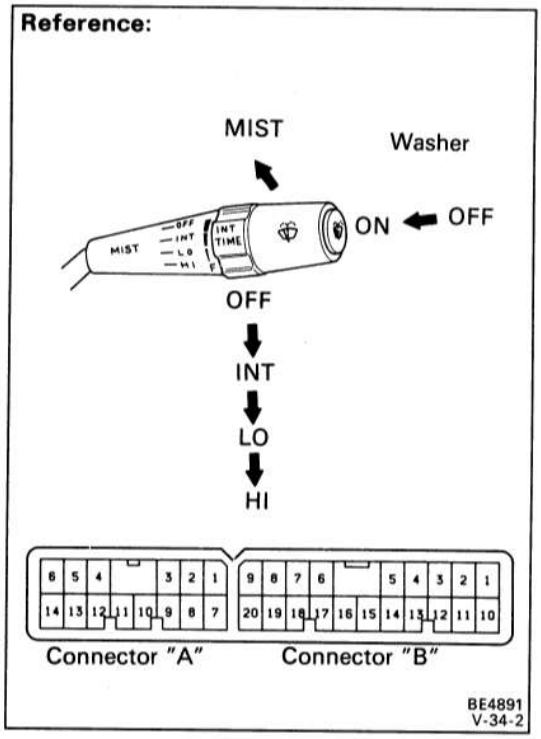
Troubleshooting

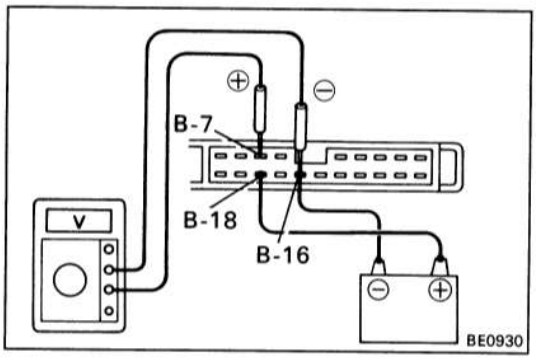
Problem	Possible cause	Remedy	Page
Wipers do not operate or return to off position	WIPER fuse blown Wiper motor faulty Wiper switch faulty Wiper or ground faulty	Replace fuse and check for short Check motor Check switch Repair as necessary	BE-3 BE-46 BE-45
Wiper do not operate in INT position	Wiper switch faulty Wiper motor faulty Wiring or ground faulty	Check switch Check motor Repair as necessary	BE-45 BE-46
Washers do not operate	Washer hose or nozzle clogged Washer motor faulty Wiper switch faulty Wiring faulty	Repair as necessary Replace motor Check switch Repair as necessary	 BE-47 BE-45

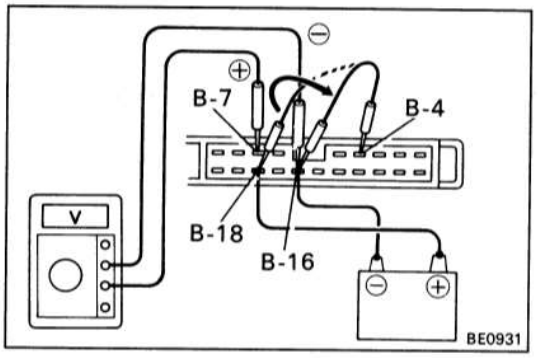
Parts Replacement

See Parts Replacement of Combination Switch on page BE-30.

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Parts Inspection

Wiper System

1. INSPECT SWITCH

(Wiper and Washer Switch/Continuity)

Terminal (Color) / Switch position			B-4 (L-R)	B-7 (L-B)	B-8 (L)	B-13 (R-O)	B-16 (B)	B-18 (L-W)
Wiper	OFF	OFF	O	O				
		MIST		O				O
	INT	OFF	O	O				
		MIST		O				O
	LO	OFF		O				O
		MIST		O				O
	HI	OFF				O		O
		MIST		O		O		O
Washer	OFF							
	ON				O		O	

If continuity is not as specified, replace the switch.

(Wiper and Washer Switch/Intermittent Wiper operation)

(a) Turn the wiper switch to INT position.

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

(c) Connect the positive (+) lead from the battery to terminal B-18 and the negative (–) lead to terminal B-16.

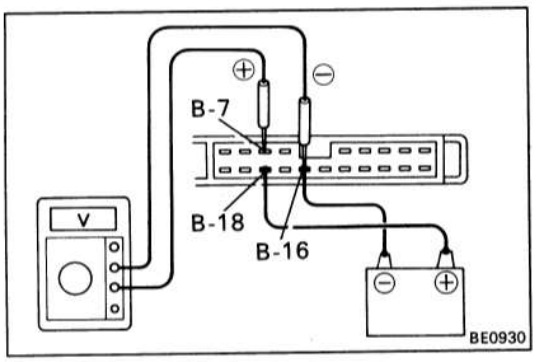
(d) Connect the positive (+) lead from the voltmeter to terminal B-7 and the negative (–) lead to terminal B-16, check that the meter needle indicates battery voltage.

(e) After connecting terminal B-4 to terminal B-18, connect to terminal B-16.
Then, check that the voltage rises from 0 volts to battery voltage within the times as shown in the table.

INT time control switch position	Voltage
FAST	1.6 ± 1 sec. — Battery voltage / 0 volts
SLOW	10.7 ± 5 sec. — Battery voltage / 0 volts
Non variable type	3.3 ± 1 sec. — Battery voltage / 0 volts

If operation is not as specified, replace the switch.

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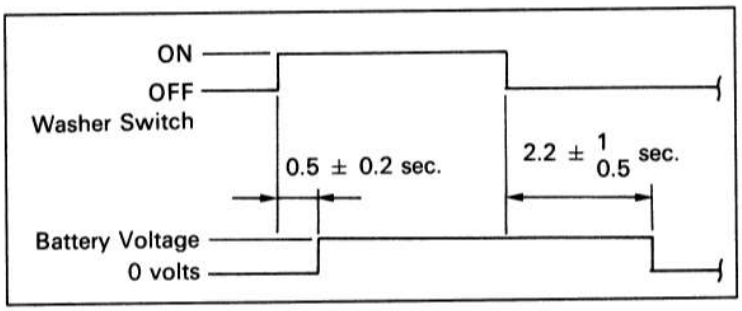


(Wiper and Washer Switch/Washer Linked Wiper Operation)

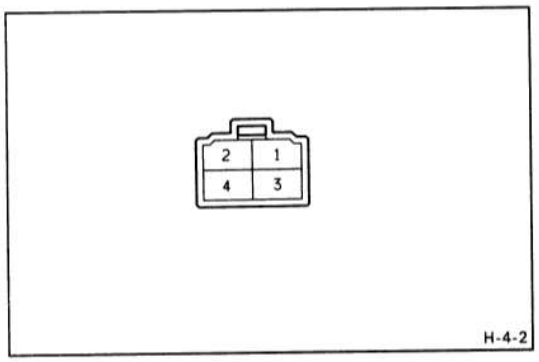
(a) Connect the positive (+) lead from the battery to terminal B-18 and the negative (–) lead to terminal B-16.

(b) Connect the positive (+) lead from the voltmeter to terminal B-7 and the negative (–) lead to terminal B-16.

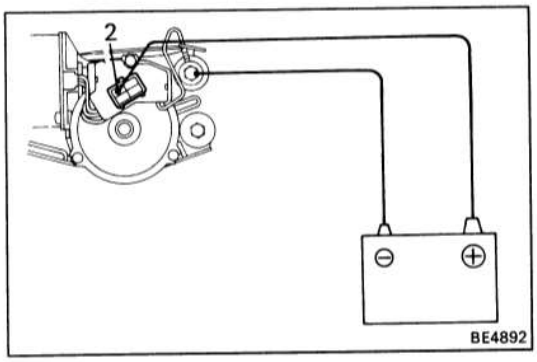
(c) Push in the washer switch. Check that the voltage changes as shown in the table.



If operation is not as specified, replace the switch.



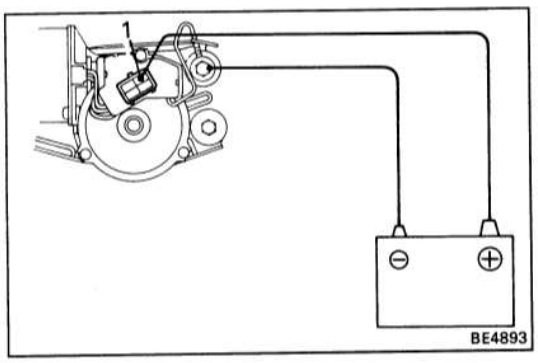
2. INSPECT MOTOR



(Operation at Low Speed)

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

If operation is not as specified, replace the motor.

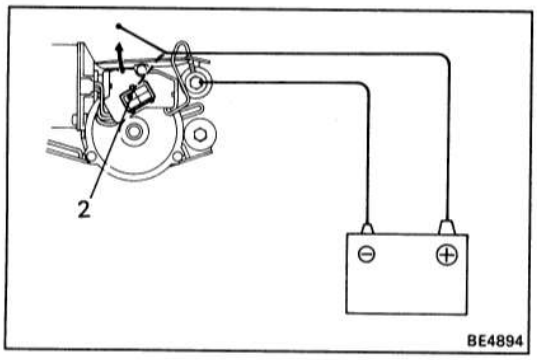


(Operation at High Speed)

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

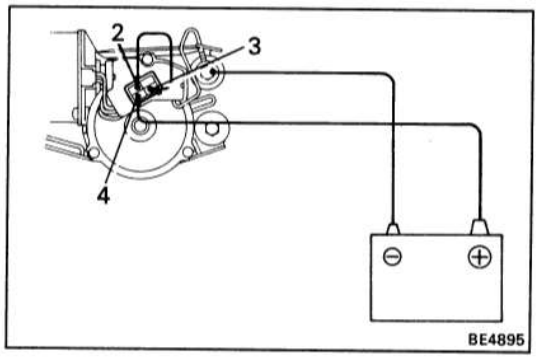
If operation is not as specified, replace the motor.

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(Operation, Stopping 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 2.



(b) Connect terminals 2 and 3.

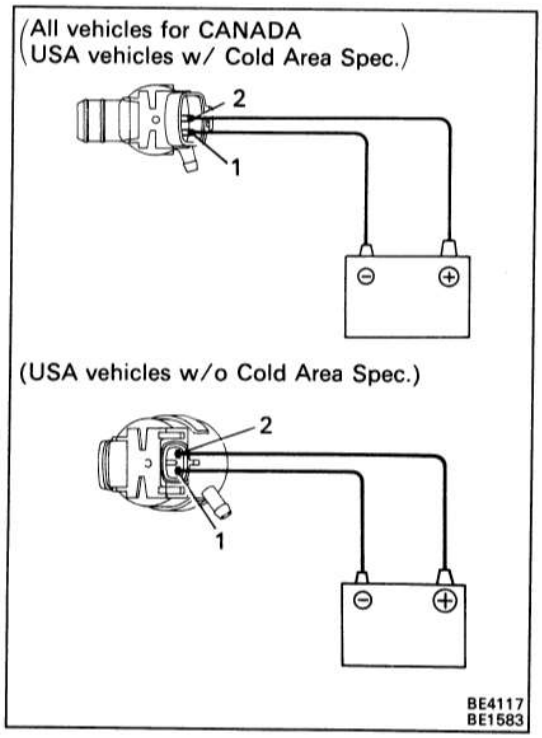
(c) Connect the positive (+) lead from the battery to terminal 4 and the negative (–) lead to the motor body, check that the motor stops running at the stop position after the motor operates again.

If operation is not as specified, replace the motor.

Washer System

1. INSPECT WASHER SWITCH

See (Wiper and Washer Switch/Continuity) on page BE-45.



2. INSPECT WASHER MOTOR

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

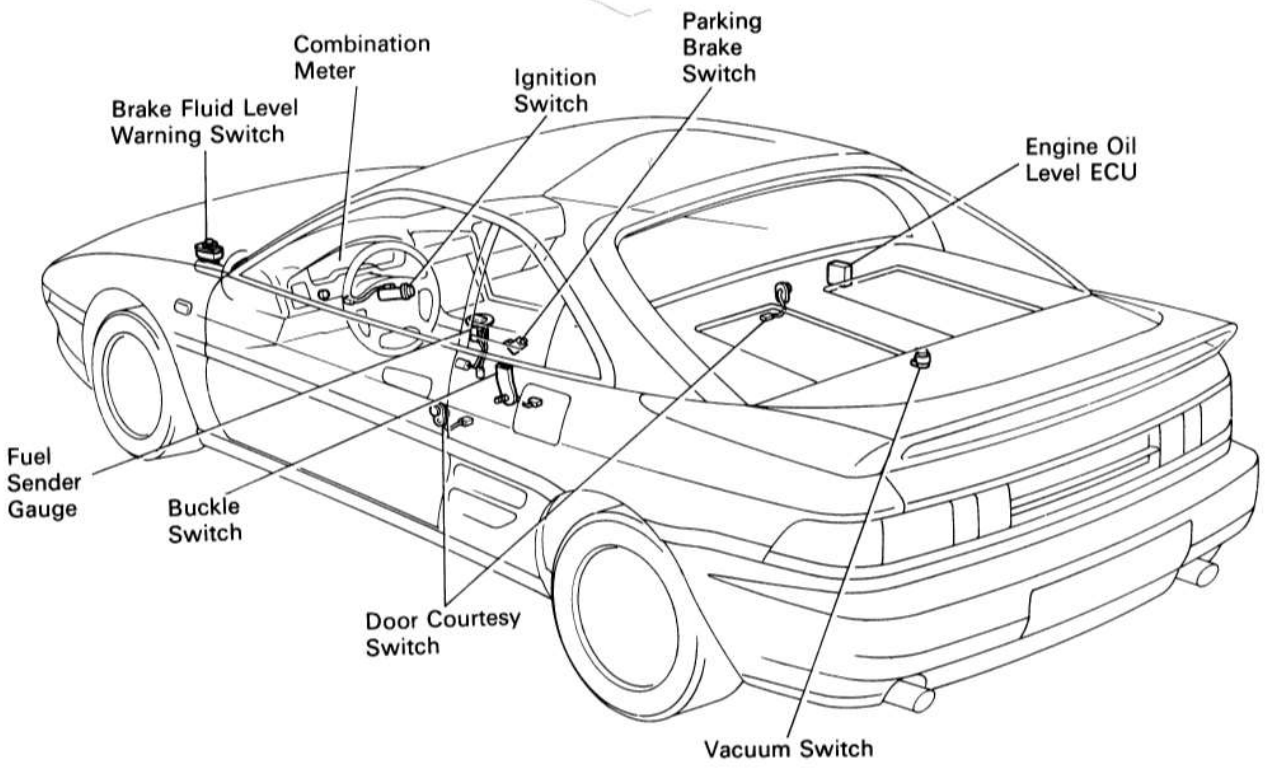
NOTICE: These tests must be performed quickly (within 20 seconds) to prevent the coil from burning out.

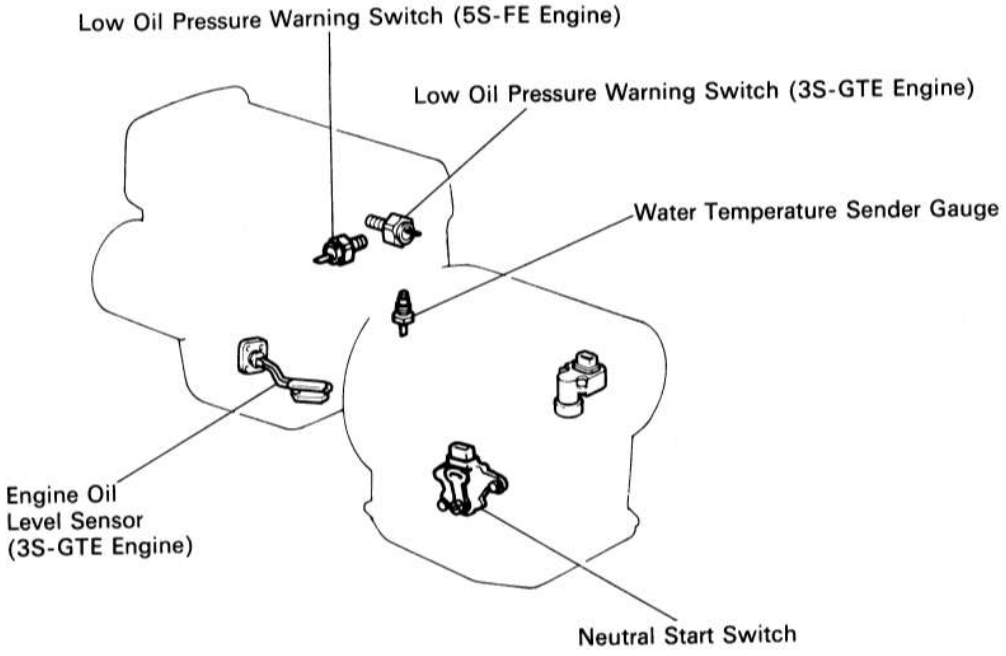
If operation is not as specified, replace the motor.

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COMBINATION METER

Parts Location



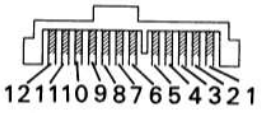


BE5236
BE5237

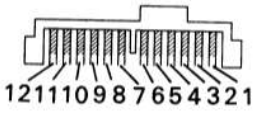
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Meter Circuit

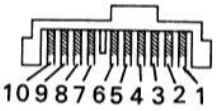
Connector "A"



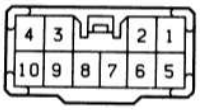
Connector "B"

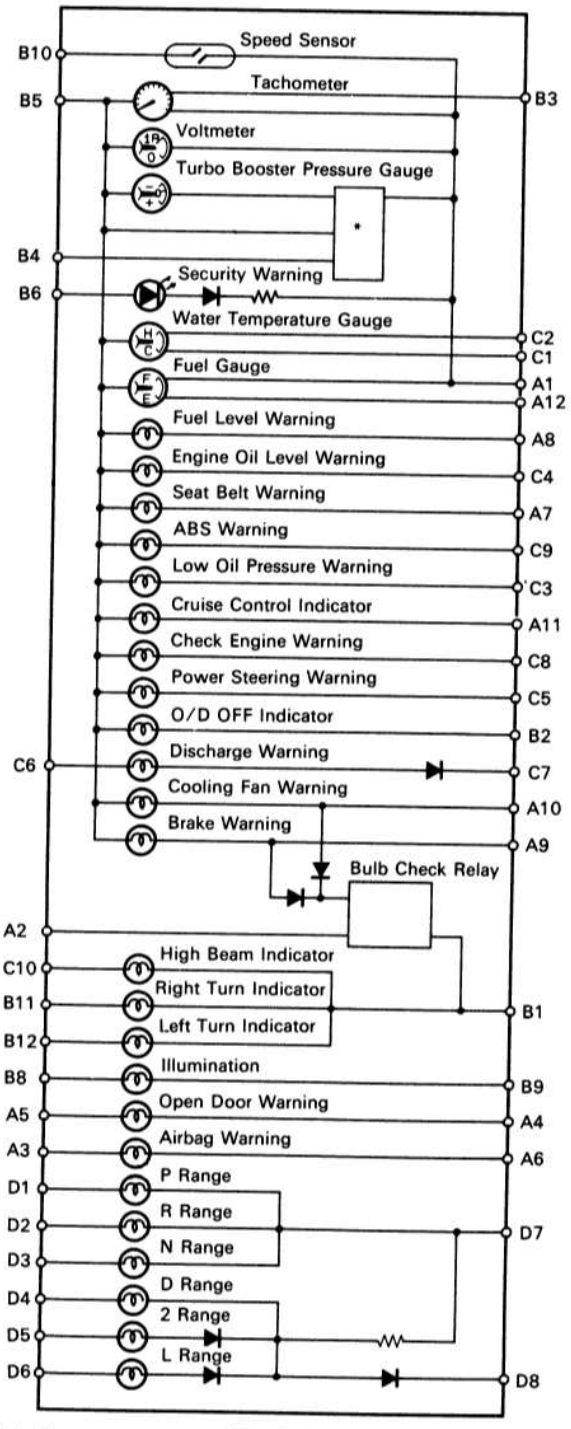


Connector "C"



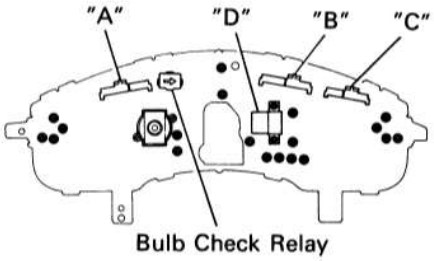
Connector "D"





* Turbo boost pressure gauge drive circuit

BE1266 BE1267 BE1270 S-10-2
BE5062 BE5061



No.		Wiring connector side
A	1	Ground
	2	Starter Relay
	3	Fuse ECU-B
	4	Door Courtesy Switch – terminal 2
	5	Fuse DOME
	6	Airbag ECU
	7	Seatbelt Warning Relay
	8	Fuel Sender Gauge – terminal 2
	9	Brake Fluid Level Warning Switch – terminal 1, and Parking Brake Switch
	10	Cooling FAN ECU
	11	Cruise Control ECU
	12	Fuel Sender Gauge – terminal 1
B	1	Ground
	2	O/D OFF
	3	Igniter
	4	Turbo Pressure Sensor
	5	Fuse GAUGE
	6	Theft Deterrent ECU
	8	Taillight Control Relay
	9	Light Control Rheostat – terminal 3
	10	Speed Control Unit
	11	Turn Signal Switch
	12	Turn Signal Switch
C	1	Water Temperature Sender Gauge
	2	Ground
	3	Low Oil Pressure Warning Switch
	4	Engine Oil Level ECU
	5	Power Steering ECU
	6	Fuse IGN
	7	Alternator – terminal "L"
	8	Engine ECU
	9	ABS ECU
	10	Headlight Dimmer Switch
D	1	Neutral Start Switch
	2	Neutral Start Switch
	3	Neutral Start Switch
	4	Neutral Start Switch
	5	Neutral Start Switch
	6	Neutral Start Switch
	7	Ground
	8	Taillight Control Relay

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Troubleshooting

Problem	Possible cause	Remedy	Page
*Gauges and indicator lights do not operate	GAUGE fuse faulty Wiring or ground faulty	Replace fuse and check for short Repair as necessary	BE-3
Speedometer does not operate	Speedometer cable faulty Speedometer faulty	Check cable Check speedometer	BE-52
Tachometer does not operate	Tachometer faulty Wiring or ground faulty	Check tachometer Repair as necessary	BE-52
Turbo boost pressure gauge does not operate	Turbo boost pressure gauge faulty Turbo pressure sensor faulty Turbo meter drive circuit faulty Wiring or ground faulty	Check turbo boost pressure faulty Check sensor Check drive circuit Repair as necessary	BE-60 BE-60 BE-61
Voltmeter does not operate	Voltmeter faulty Wiring or ground faulty	Check voltmeter Repair as necessary	BE-53
Fuel gauge does not operate	Receiver gauge faulty Sender gauge faulty Wiring or ground faulty	Check gauge Check gauge Repair as necessary	BE-53 BE-53
Fuel level warning light does not light up	Bulb burned out Warning switch faulty Wiring or ground faulty	Replace bulb Check gauge Repair as necessary	BE-54
Water temperature gauge does not operate	Receiver gauge faulty Sender gauge faulty Wiring or ground faulty	Check gauge Check gauge Repair as necessary	BE-55 BE-55
Engine oil level warning light does not light up	Bulb burned out Engine oil level sensor faulty Engine oil level ECU faulty Wiring or ground faulty	Replace bulb Check sensor Check ECU Repair as necessary	BE-56 BE-56
Low oil pressure warning light does not light up	Bulb burned out Low oil pressure warning switch faulty Wiring or ground faulty	Replace bulb Check switch Repair as necessary	BE-57

* Tachometer, Voltmeter, Turbo boost pressure gauge, Fuel gauge, Fuel level warning light, Water temperature gauge, Engine oil level warning light, Low oil pressure warning light, Brake warning light, ABS warning light, Check engine warning light, O/D OFF indicator light, Cooling fan warning light, Power steering warning light, Seat belt warning light and Cruise control indicator light.

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Troubleshooting (Cont'd)

Problem	Possible cause	Remedy	Page
Brake warning light does not light up	Bulb burned out	Replace bulb	
	Brake fluid level warning switch faulty	Check switch	BE-58
	Parking brake switch faulty	Check switch	BE-58
	Wiring or ground faulty	Repair as necessary	
Seat belt warning light does not light up	Bulb burned out	Replace bulb	
	Buckle switch faulty	Check switch	BE-59
	Seat belt warning relay faulty	Check relay	BE-59
Open door warning light does not light up	DOME fuse faulty	Replace fuse and check for short	BE-3
	Bulb burned out	Replace bulb	
	Door courtesy switch faulty	Check switch	BE-58
	Wiring or ground faulty	Repair as necessary	
Meter illumination lights do not light up	Bulbs burned out	Replace bulbs	
	Light control rheostat faulty	Check rheostat	BE-62
	Wiring or ground faulty	Repair as necessary	

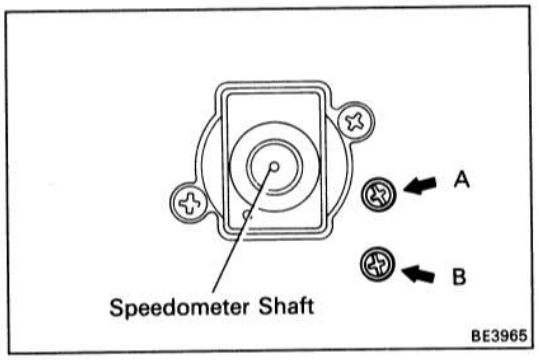
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(mph)

Standard indication	Allowable range
20	20 – 23
40	40 – 43.5
60	60 – 64
80	80 – 84.5
100	100 – 105
120	120 – 125.5
140	140 – 146

(km/h)

Standard indication	Allowable range
20	18 – 23
40	40 – 44
60	60 – 64.5
80	80 – 85
100	100 – 105
120	120 – 125.5
140	140 – 146
160	160 – 167
180	180 – 188
200	200 – 209
220	220 – 230
240	240 – 251



DC 13.5V, 25°C (77°F) rpm	
Standard indication	Allowable range
700	610 – 750
3,000	2,800 – 3,200
5,000	4,800 – 5,200
7,000	6,700 – 7,300

Parts Inspection

Speedometer System

1. INSPECT SPEEDOMETER (ON-VEHICLE)

(a) Using a speedometer tester, inspect the speedometer for allowable indication error and check the operation of the odometer.

HINT: The wear and tire over or under inflation will increase the indication error.

If error is excessive, replace the speedometer.

(b) Check the speedometer for pointer vibration and abnormal noise.

HINT: Pointer vibration can be caused by a loose speedometer cable.

2. INSPECT SPEED SENSOR

Check that there is continuity between terminals A and B four times per each revolution of the speedometer shaft.

If operation is not as specified, replace the speedometer.

Tachometer System

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) Compere the tester and tachometer indications.

If error is excessive, replace the tachometer.

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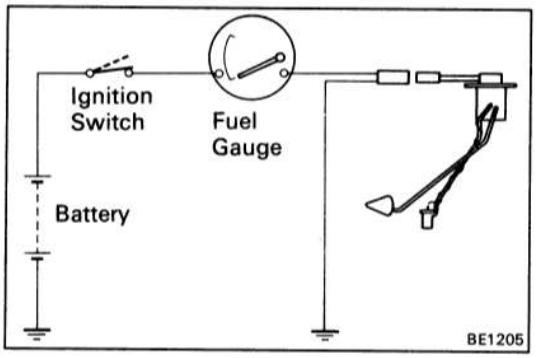
Voltmeter System

INSPECT VOLTMETER (ON-VEHICLE)

Compare the tester and voltmeter indications.

If error is excessive, replace the voltmeter.

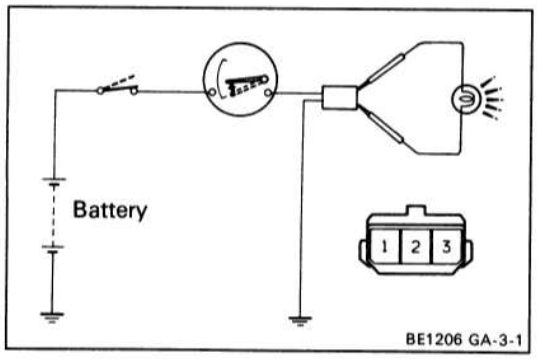
Fuel Gauge System



1. INSPECT 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.

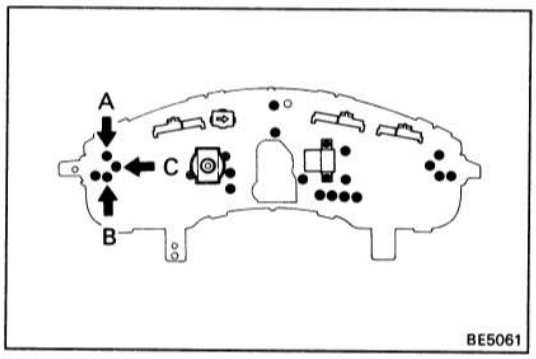


(c) Connect terminals 1 and 3 on the wire harness side connector through a 3.4 W test bulb.

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

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

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

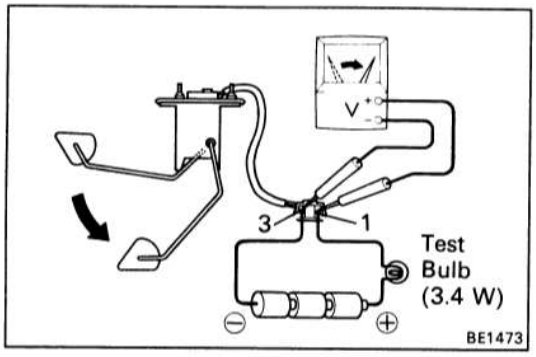


(Resistance)

Measure the resistance between terminals.

Between terminals	Resistance (Ω)
A – B	Approx. 101.9
A – C	Approx. 203.2
B – C	Approx. 101.3

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



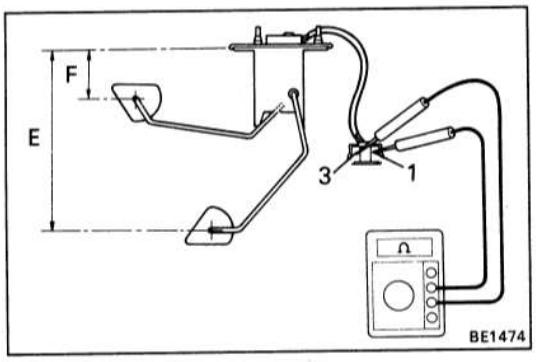
2. INSPECT SENDER GAUGE (Operation)

(a) Connect a series of three 1.5V dry cell batteries.

(b) Connect the positive (+) lead from the dry cell batteries to terminal 1 through a 3.4 W test bulb and the negative (–) lead to terminal 3.

(c) Check that the voltage rises between terminals 1 and 3 as the float is moved from the top to bottom position.

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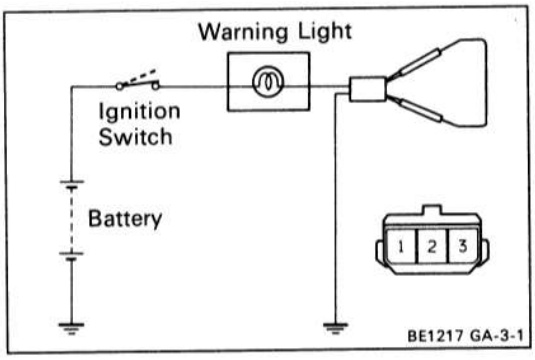
(Resistance)

Measure the resistance between terminals 1 and 3 for each float position.

Float position mm (in.)		Resistance (Ω)
F	Approx. 59.9 (2.358)	3 ± 1.0
E	Approx. 228.1 (8.980)	110 ± 7.7

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

Fuel Level Warning System



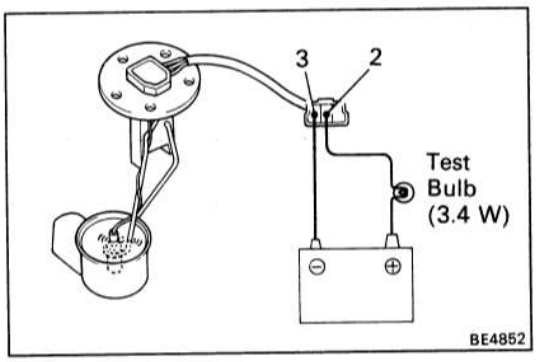
1. INSPECT WARNING LIGHT

(a) Disconnect the connector from the sender gauge.

(b) Connect terminals 2 and 3 on the wire harness side connector.

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

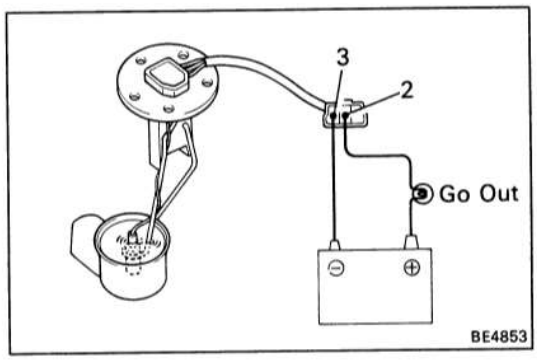
If the warning light does not light up, test the bulb.



2. INSPECT WARNING SWITCH

(a) Apply battery voltage between terminals 2 and 3 through a 3.4W test bulb, check that the bulb lights up.

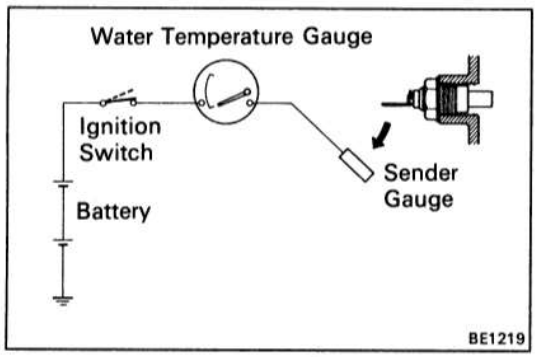
HINT: It will take a short time for the bulb to light up.



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

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

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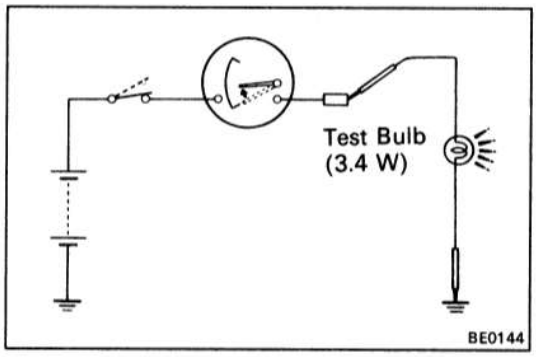
Water Temperature Gauge System

INSPECT RECEIVER GAUGE

(Operation)

(a) Disconnect the connector from the sender gauge.

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

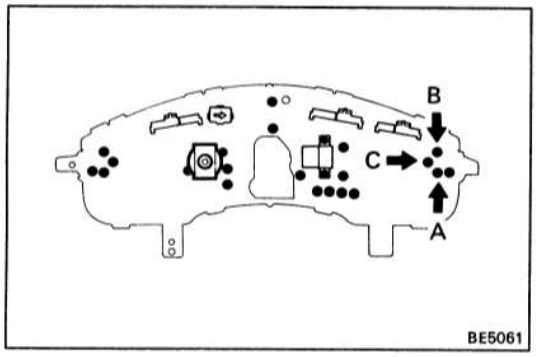


(c) Ground terminal on the wire harness side connector through a 3.4 W test bulb.

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

If operation is as specified, replace the sender gange. Then, recheck the system.

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



(Resistance)

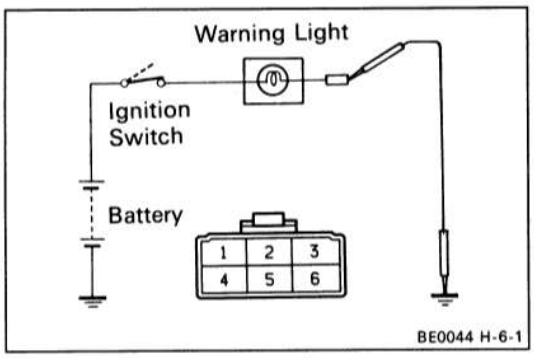
Measure the resistance between terminals.

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

Between terminals	Resistance (Ω)
A – B	Approx. 54
A – C	Approx. 146.2
B – C	Approx. 200.2

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

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Engine Oil Level Warning System

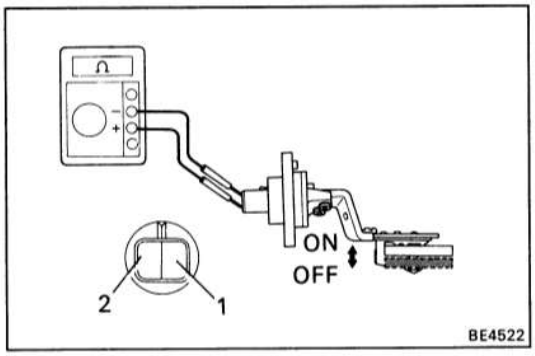
1. INSPECT WARNING LIGHT

(a) Disconnect the connector from the engine oil level ECU.

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

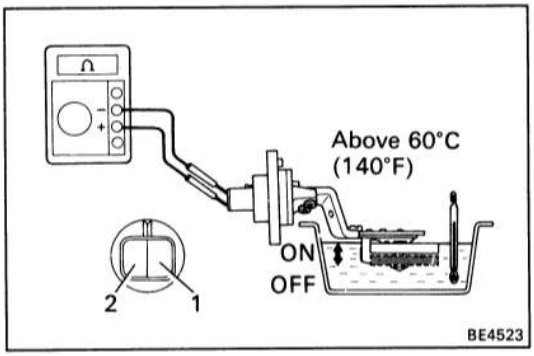
(c) Turn the ignition switch ON, check that the warning light lights up.

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



2. INSPECT ENGINE OIL LEVEL SENSOR

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

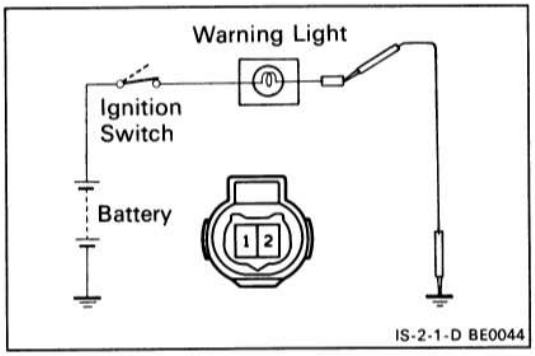


(b) Heat the switch to above 60°C (140°F) in an oil bath.

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

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

If operation is not as specified, replace the switch.



3. INSPECT ENGINE OIL LEVEL ECU (Operation)

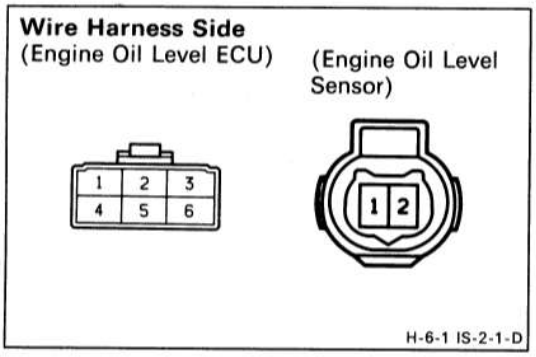
(a) Disconnect the connector from the engine oil level sensor.

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

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

If operation is not as specified, inspect the relay circuit.

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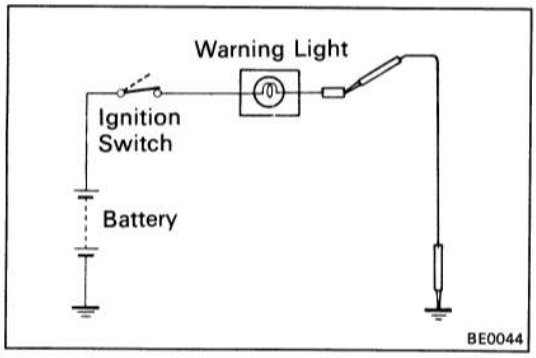
(Relay Circuit)

(a) Disconnect the connectors from the engine oil level ECU and engine oil level sensor.

(b) Inspect the connectors on the wire harness side as shown in the chart.

Check for	Tester connection	Condition		Specified value
Continuity	2/6 – 1/2	Constant		Continuity
	5/6 – 2/2	Constant		Continuity
Voltage	3/6 – Ground	Engine condition	Stopped	No voltage
			Running	Battery voltage
	6/6 – Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage

If circuit is as specified, replace the engine oil level ECU.



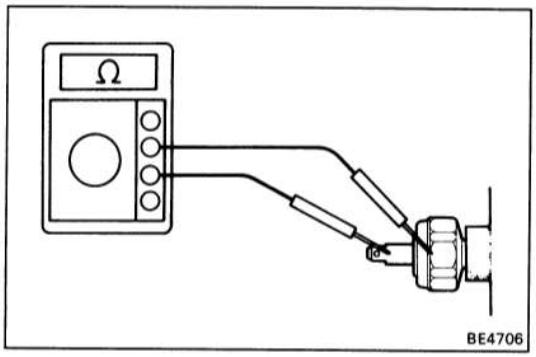
Low Oil Pressure Warning System

1. INSPECT WARNING LIGHT

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

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

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



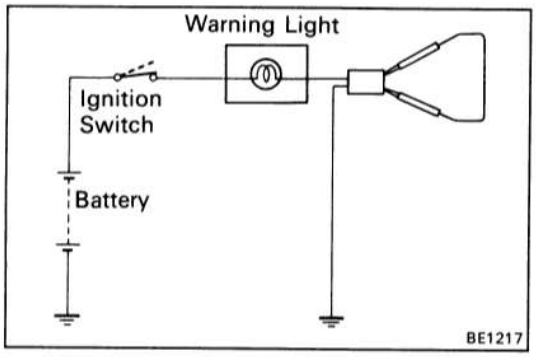
2. INSPECT LOW OIL PRESSURE WARNING SWITCH

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

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

HINT: Oil pressure should be over 0.5 kg/cm^2 (7.1 psi, 49 kPa).

If operation is not as specified, replace the switch.



Brake Warning System

1. INSPECT WARNING LIGHT

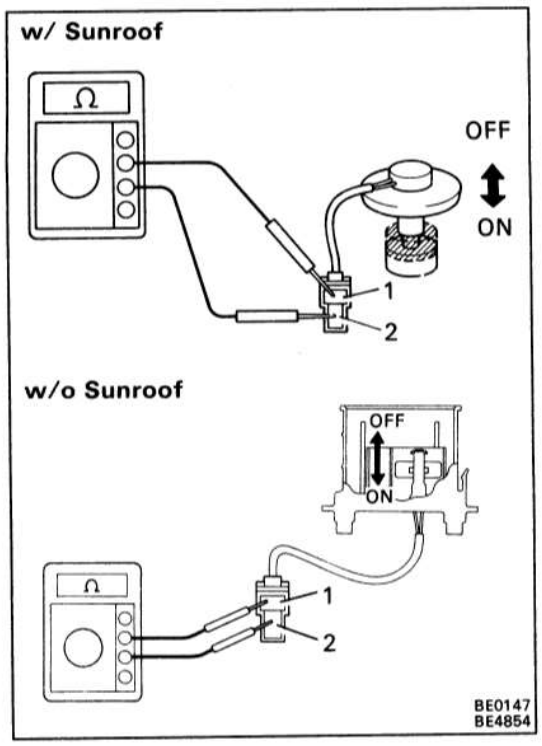
(a) Disconnect the connectors from the brake fluid level warning switch and parking brake switch.

(b) Connect terminals on the wire harness side of the level warning switch connector.

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

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

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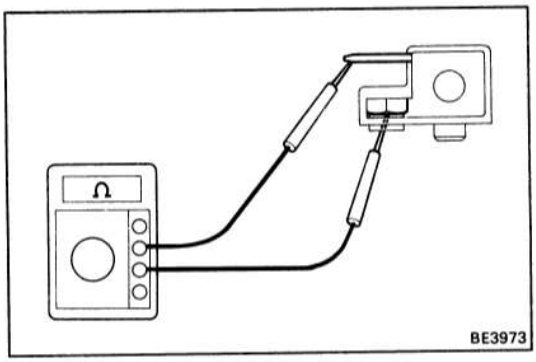


2. **INSPECT SWITCHES**
(Brake Fluid Level Warning Switch)

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

(b) Check that there is continuity between terminals with the switch ON (float down).

If operation is not as specified, replace the switch.



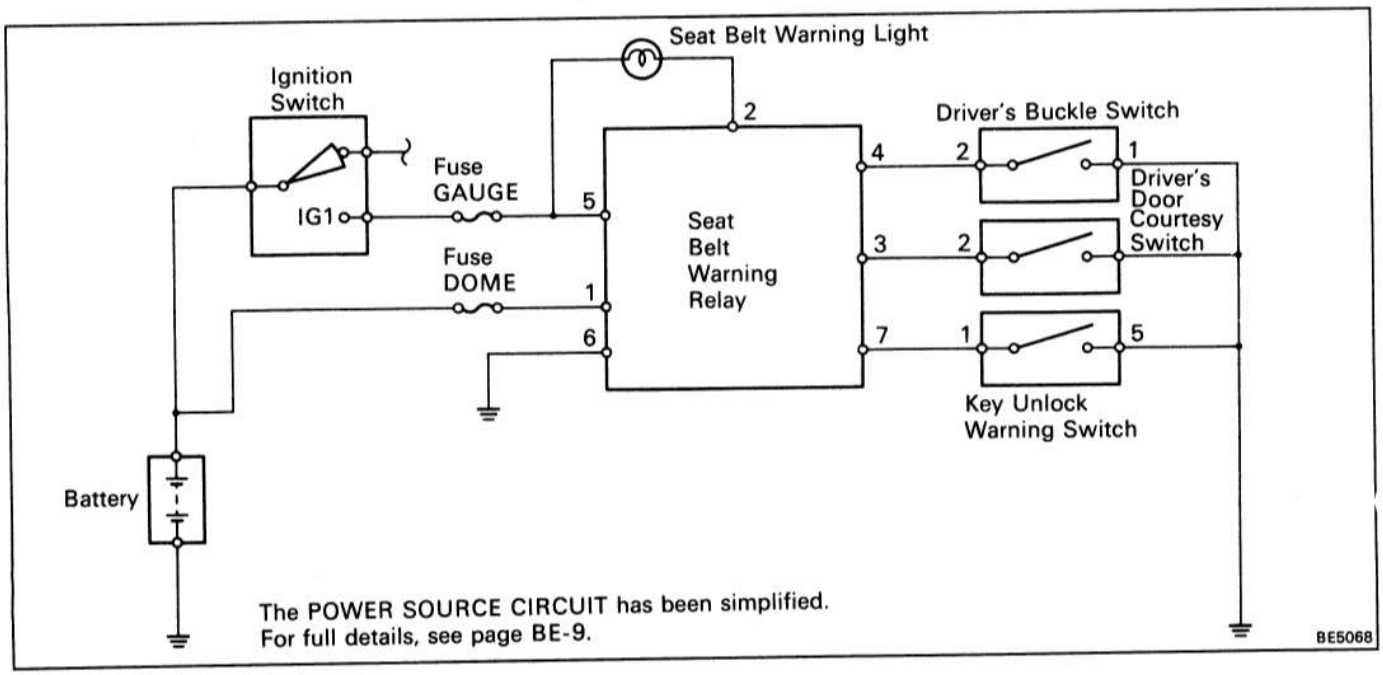
(Parking Brake Switch)

(a) Check that there is continuity between terminals with the switch ON (switch pin released).

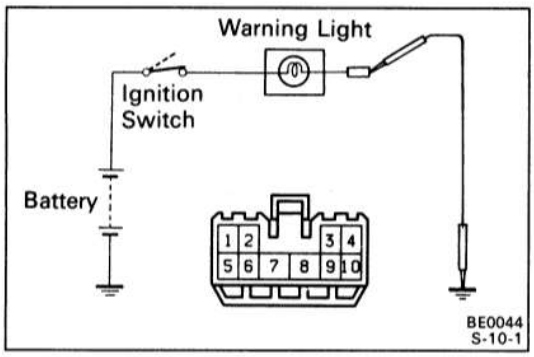
(b) Check that there is no continuity between terminals with the switch OFF (switch pin pushed in).

Seat Belt Warning System

(Wiring Diagram)



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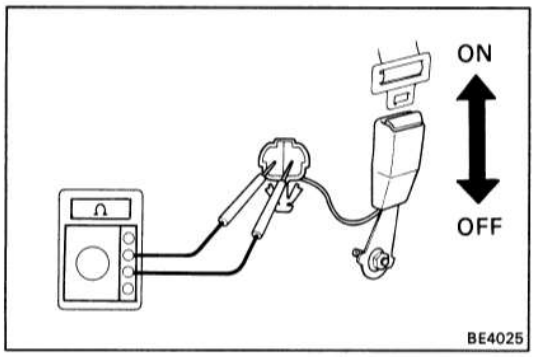
1. INSPECT WARNING LIGHT

(a) Disconnect the connector from the seat belt warning relay.

(b) Ground terminal 5 on the wire harness side.

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

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

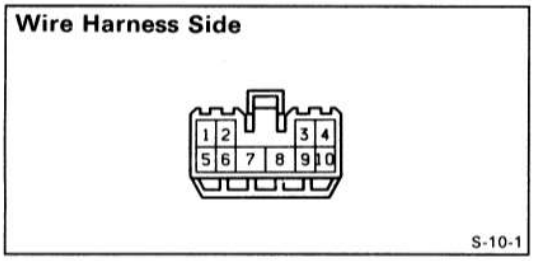


2. INSPECT BUCKLE SWITCH

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

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

If operation is not as specified, replace the seat belt inner.



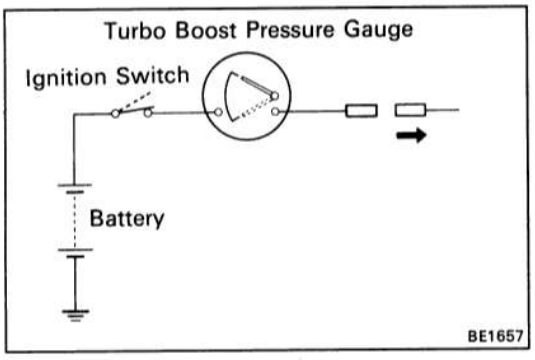
3. INSPECT SEAT BELT WARNING RELAY (Relay Circuit)

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

Check for	Tester connector	Condition		Specified value
Continuity	3 – Ground	Driver's door courtesy switch position	OFF (door closed)	No continuity
			ON (door opened)	Continuity
	4 – Ground	Driver's buckle switch position	OFF (seat belt unfastened)	No continuity
			ON (seat belt fastened)	Continuity
	6 – Ground	Constant		Continuity
	7 – Ground	Key unlock warning switch position	OFF (ignition key removed)	No continuity
			ON (ignition key set)	Continuity
Voltage	1 – Ground	Constant		Battery voltage
	2 – Ground 5 – Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage

If circuit is as specified, replace the relay.

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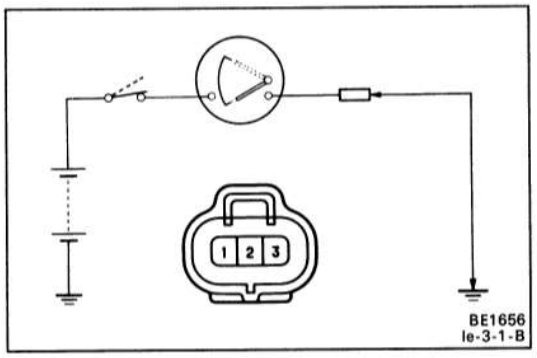


Turbo Boost Pressure Gauge System

1. INSPECT TURBO BOOST PRESSURE GAUGE (Operation)

(a) Disconnect the connector from the pressure sensor.

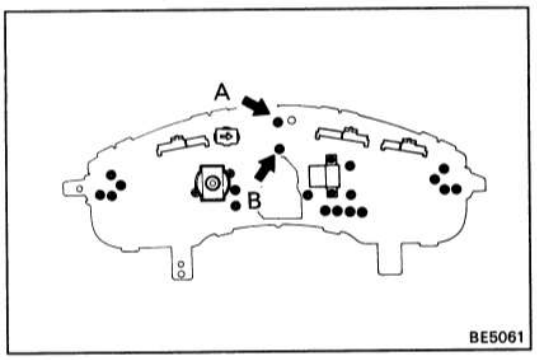
(b) Turn the ignition switch ON, check that the gauge needle moves to upper position.



(c) Ground terminal 2 on the wire harness side.

Check that the gauge needle moves to lower position.

If operation is not as specified, inspect the turbo boost pressure gauge drive circuit and resistance.



(Resistance)

Measure the resistance between terminals A and B.

Resistance: Approx. 72 Ω

If resistance value is not as specified, replace the turbo boost pressure gauge.

2. INSPECT TURBO PRESSURE SENSOR

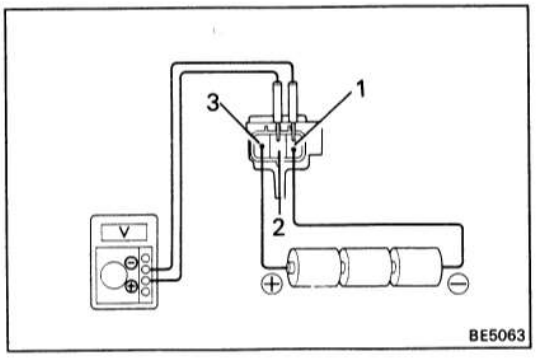
(a) Connect a series of three 1.5 V dry cell batteries.

(b) Connect the positive (+) lead from the dry cell batteries to terminal 3 and the negative (–) lead to terminal 1.

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

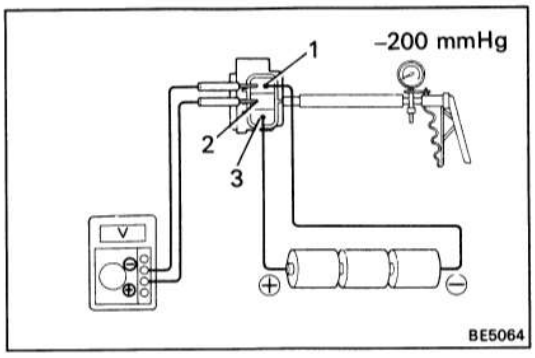
(d) Check that the voltage between terminals 2 and 1.

Voltage: Approx. 2.4 V

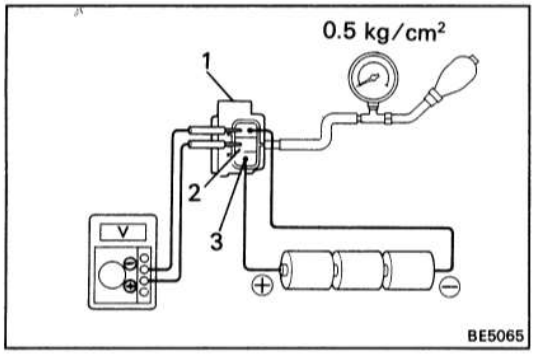


(e) Apply 200 mmHg (7.87 in.Hg. 26.7 kPa) of vacuum.

Check that the voltage drops below approximately 2.4 V.



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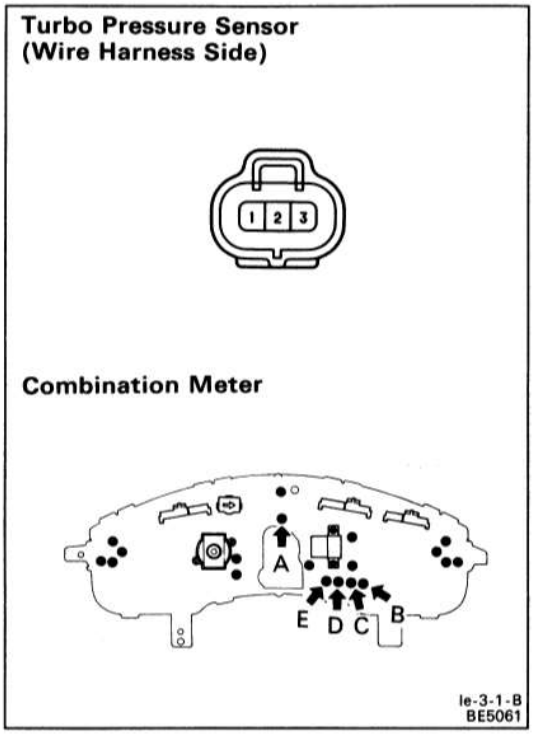


(f) Using SST, apply 0.5 kg/cm² (7.1 psi, 49 kPa) of pressure.

Check that the voltage rises approximately 2.4 V.

SST 09992-00241

If operations are not as specified. replace the sensor.



3. INSPECT TURBO BOOST PRESSURE GAUGE DRIVE CIRCUIT

(a) Disconnect the connector from the turbo pressure sensor.

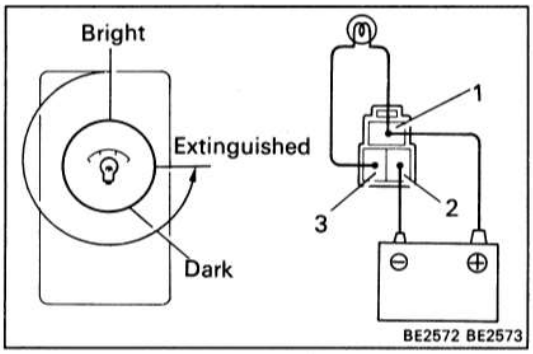
(b) Remove the combination meter with connected three connectors.

(c) Inspect the connector on the wire harness side and terminals of the turbo boost pressure gauge drive circuit as shown in the chart.

Check for	Tester connection	Condition		Specified value
Continuity	A – B	Constant		Continuity
	C – 2	Constant		Continuity
	D – Ground	Constant		Continuity
	1 – Ground	Constant		Continuity
Voltage	E – Ground	Ignition Switch position	LOCK or ACC	No voltage
			ON	Battery voltage
	3 – Ground	Ignition Switch position	LOCK or ACC	No voltage
			ON	Battery voltage

If circuit is as specified, replace the drive circuit.

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Meter Illumination Control System

INSPECT LIGHT CONTROL RHEOSTAT

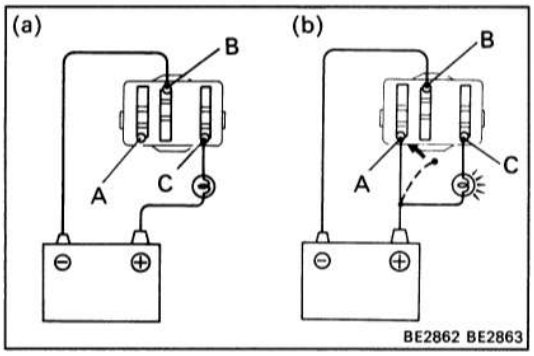
(a) Connect terminals 1 and 3 through a 3.4 W test bulb.

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

(c) Turn the rheostat knob to fully counterclockwise, check that the test bulb goes out.

(d) Gradually turn the rheostat knob to clockwise, check that the test bulb brightness changes from dark to bright.

If operation is not as specified, replace the rheostat.



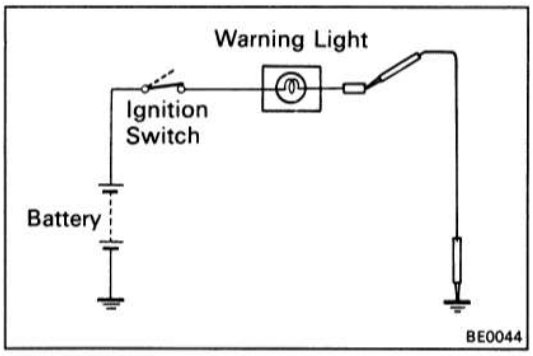
Bulb Check System

INSPECT BULB CHECK RELAY

(a) Connect the positive (+) lead from the battery to terminal C through a 1.4 W test bulb and the negative (–) lead to terminal B, check that the test bulb does not light up.

(b) Connect the positive (+) lead from the battery to terminal A, check that the test bulb lights up.

If operation is not as specified, replace the relay.



Open Door Warning System

1. INSPECT WARNING LIGHT

(a) Disconnect the connector from the door courtesy switch and groung terminal on the wire harness side connector.

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

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

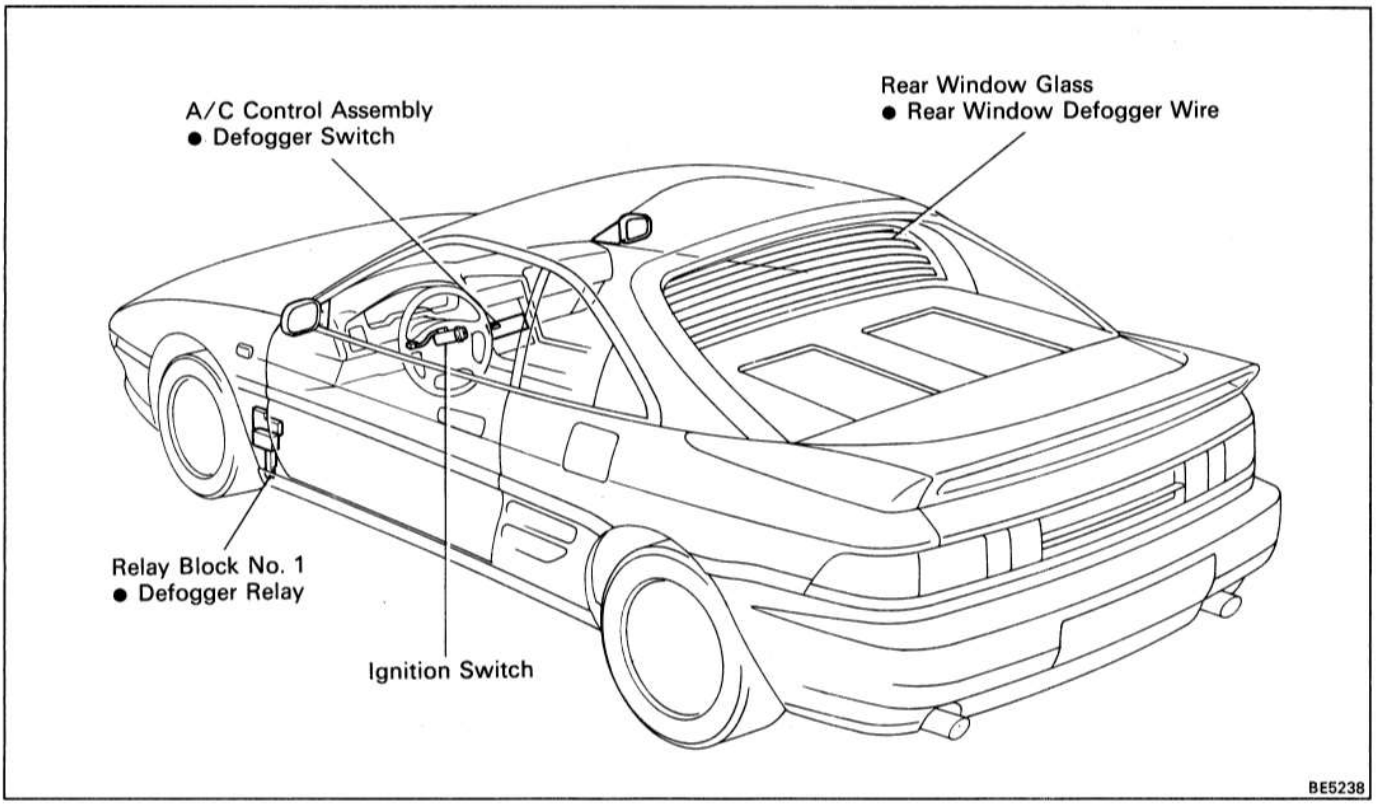
2. INSPECT DOOR COURTESY SWITCH

See step 1 of Illuminated Entry Sysatem on page BE-41.

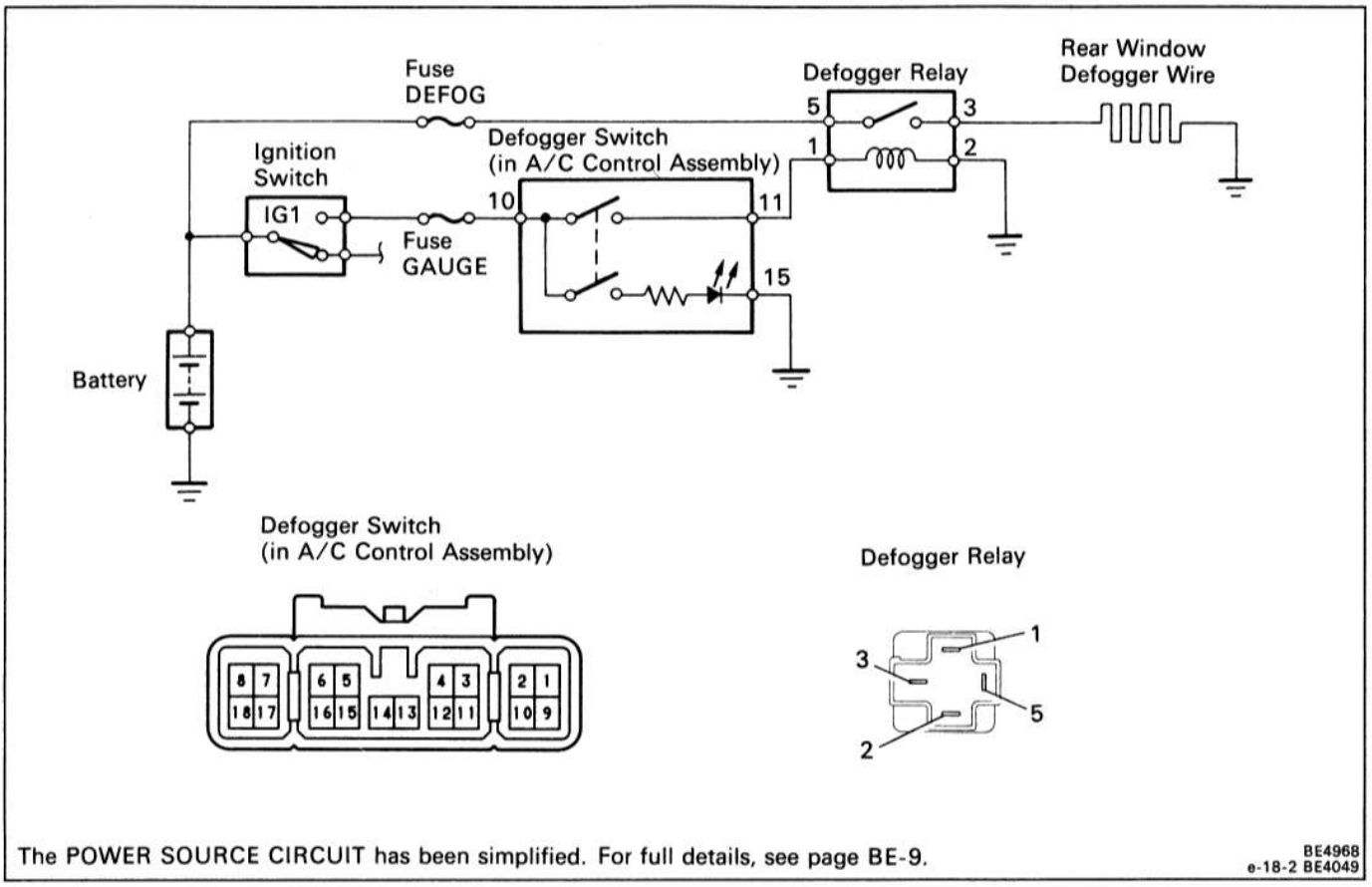
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DEFOGGER SYSTEM

Parts Location



Wiring and Connector Diagrams



The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

BE4968
e-18-2 BE4049

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Troubleshooting

Problem	Possible cause	Remedy	Page
All defogger systems do not operate	DEFOG fuse faulty	Replace fuse and check for short	BE-3
	GAUGE fuse faulty	Replace fuse and check for short	BE-3
	Defogger switch faulty	Check switch	BE-64
	Defogger relay faulty	Check relay	BE-65
	Wiring or ground faulty	Repair as necessary	
Rear window defogger system does not operate	Defogger wires broken	Check wires	BE-65
	Wiring or ground faulty	Repair as necessary	
Indicator light does not light up	Bulb burned out	Replace bulb	
	Wiring or ground faulty	Repair as necessary	

On-Vehicle Inspection

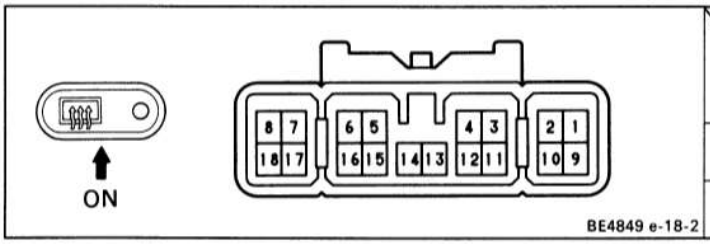
Defogger Idle-Up System

Set the defogger switch ON, check that the engine revolutions increase.

Parts Inspection

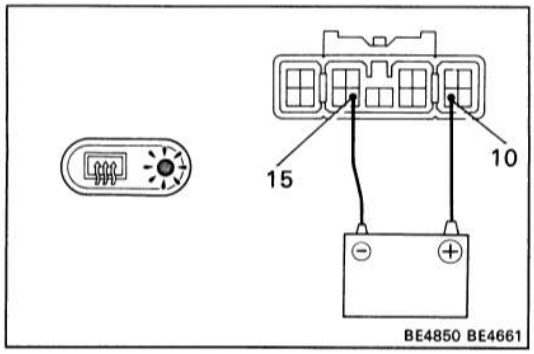
Rear Window Defogger System

1. **INSPECT DEFOGGER SWITCH (Continuity)**



Terminal / Switch Position	10	11
OFF		
ON	○———	———○

If continuity is not as specified, replace the switch.



(Indicator Light Operation)

(a) Connect the positive (+) lead from the battery to terminal 10 and the negative (–) lead to terminal 15.

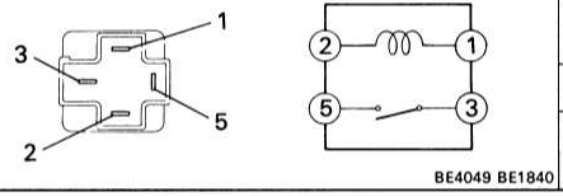
(b) Push the defogger switch ON.

(c) Check that the indicator light lights up.

If the indicator light does not light up, replace the switch.

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2. INSPECT DEFOGGER RELAY (Continuity)



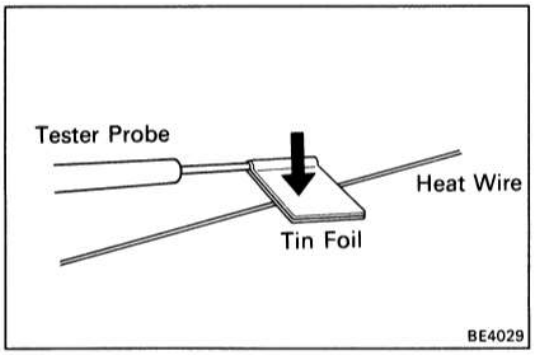
Terminal / Condition	1	2	3	5
Constant	○—∿∿∿—○			
Apply battery voltage to terminals 1 and 2.			○——	——○

If continuity is not as specified, replace the relay.

3. INSPECT DEFOGGER WIRES

NOTICE:

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

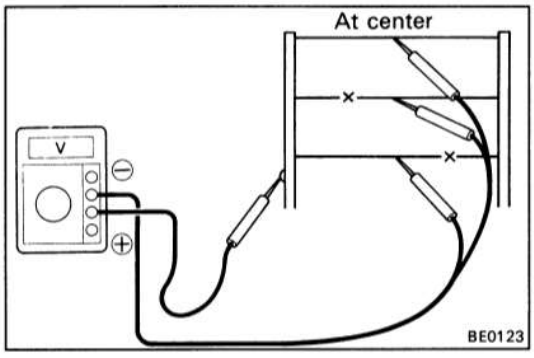


(Wire Breakage)

(a) Turn the ignition switch ON.

(b) Push in the defogger switch.

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



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

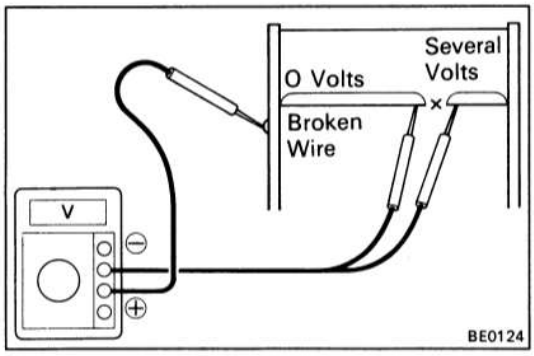
HINT: If there is approximately 10 volts, the wire is broken between the center of the wire and the positive (+)end. If there is no voltage, the wire is broken between the center of the wire and ground.

(Wire Breakage Point)

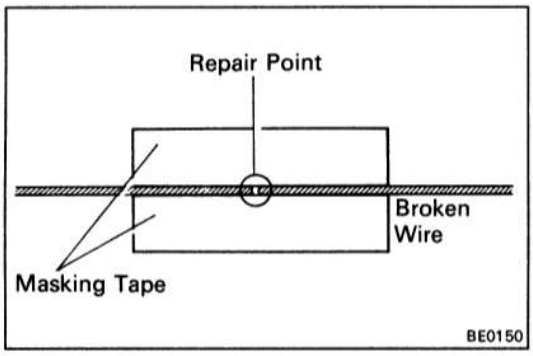
(a) Place the voltmeter positive (+) lead against the defogger positive (+) terminal.

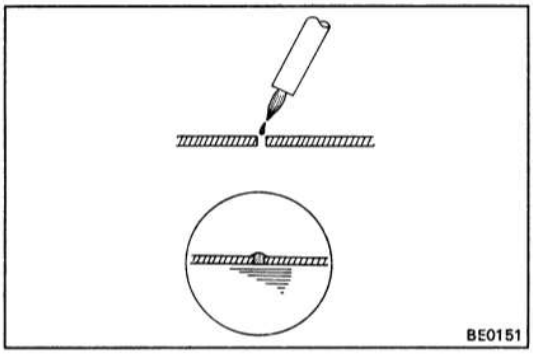
(b) Place the voltmeter negative (–) lead with the foil strip against the heat wire at the positive (+) terminal end and slide it toward the negative (–) terminal end.

(c) The point where the voltmeter deflects from zero to several volts is the place where the heat wire is broken.



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

4. REPAIR DEFOGGER WIRES

(a) Clean the broken wire tips with a grease, wax and silicone remover.

(b) Place the masking tape along both sides of the wire to be repaired.

(c) Thoroughly mix the repair agent (Dupont paste No. 4817).

(d) Using a fine tip brush, apply a small amount to the wire.

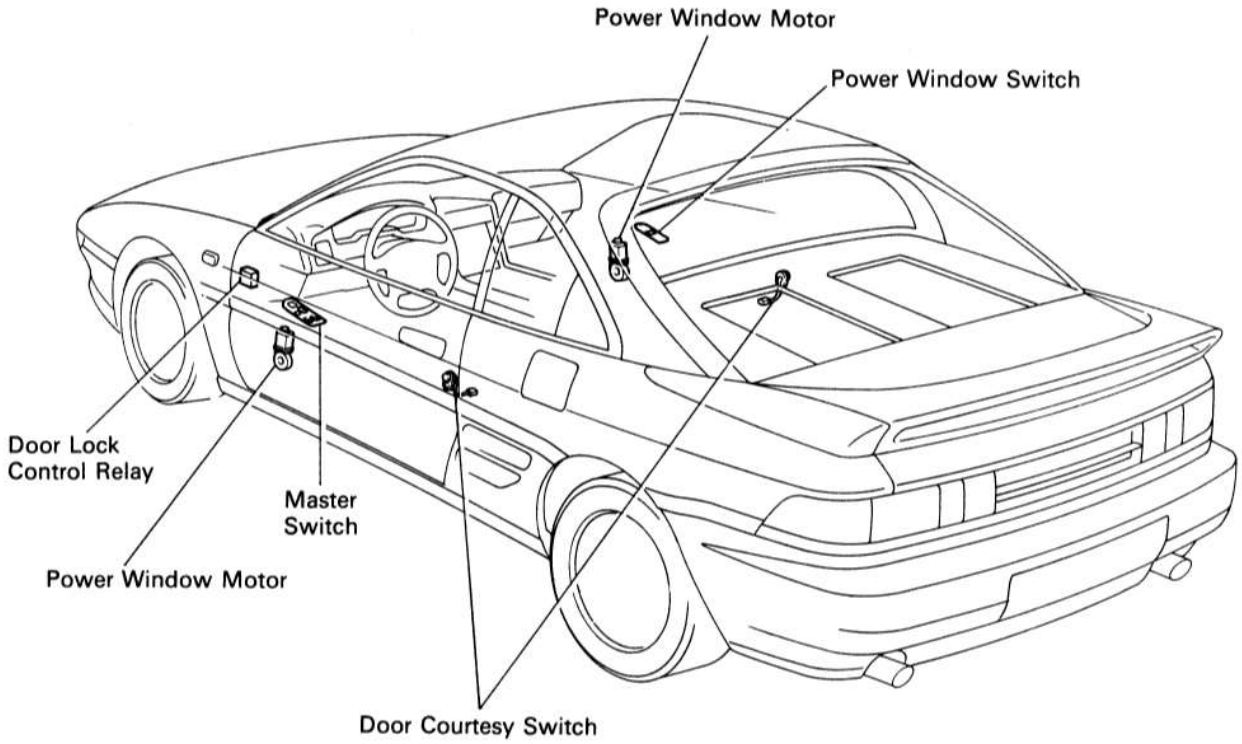
(e) After a few minutes, remove the masking tape.

(f) Allow the repair to stand at least 24 hours.

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POWER WINDOW CONTROL SYSTEM

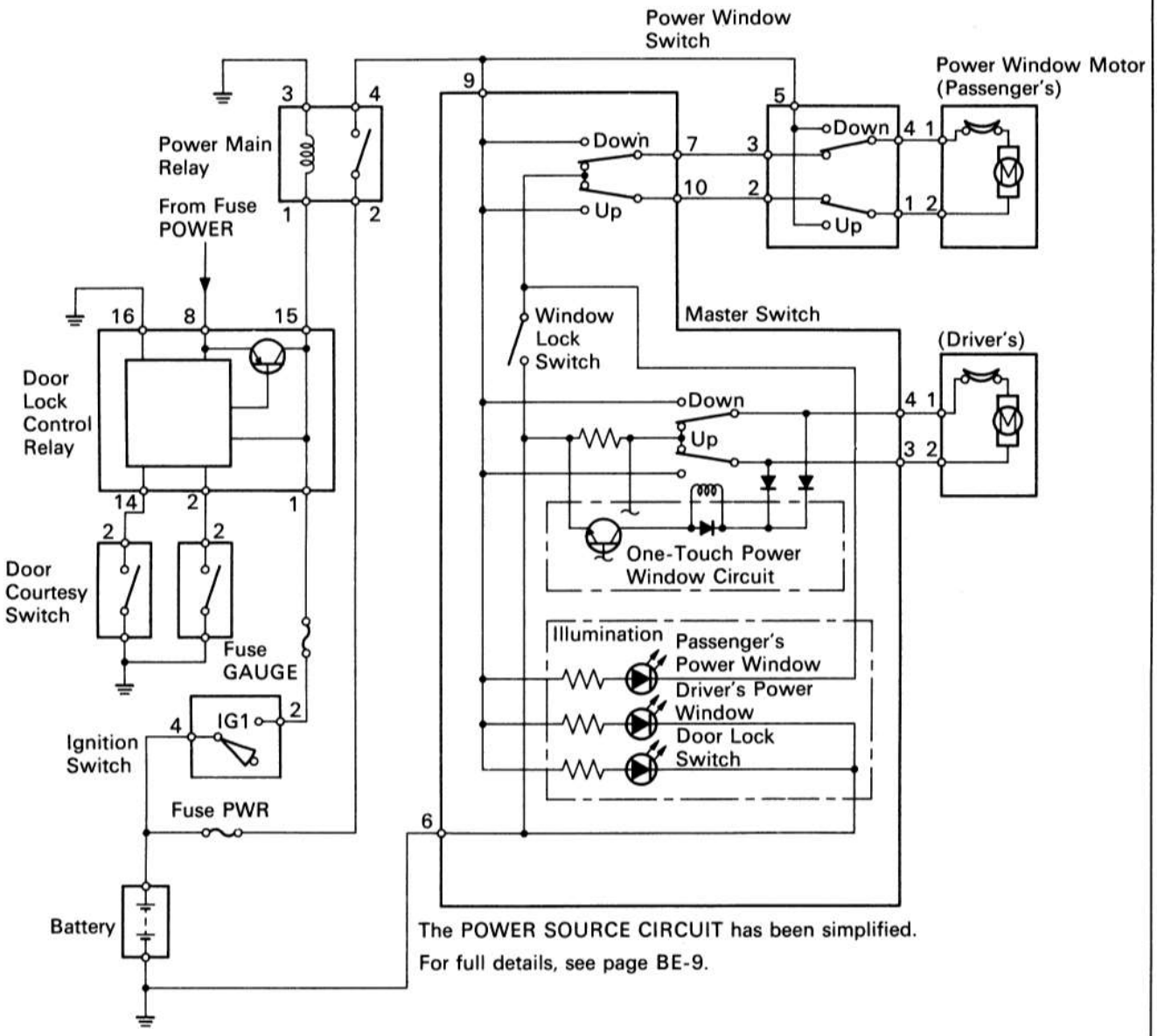
Parts Location



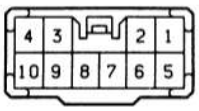
BE5239

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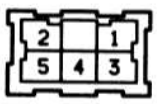
Wiring and Connector Diagrams



Master Switch



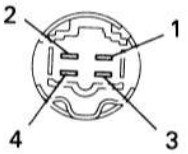
Power Window Switch



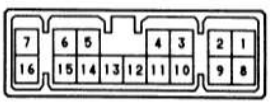
Power Window Motor



Power Main Relay



Door Lock Control Relay



Door Courtesy Switch



Ignition Switch



BE5240
S-10-2 G-5-2-A H-2-2 BE1647
S-16-2-A e-2-1-G e-10-2-B

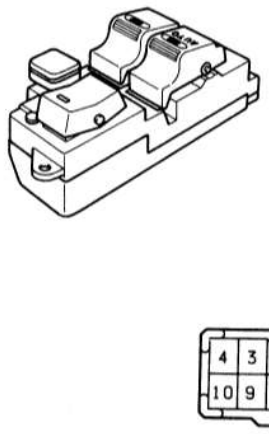
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Troubleshooting

Problem	Possible cause	Remedy	Page
Power window does not operate at all	GAUGE fuse blown PWR fuse blown Power main relay faulty Wiring or ground faulty	Replace fuse and check for short Replace fuse and check for short Check relay Repair as necessary	BE-3 BE-3 BE-72
One-touch power window does not operate	Power window master switch faulty	Check Switch	BE-69
Key-off power window does not operate	Door lock control relay faulty Wiring faulty	Check relay Repair as necessary	BE-72

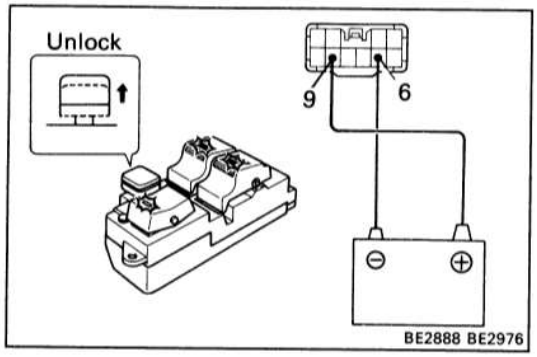
Parts Inspection

1. **INSPECT SWITCHES**
   (Master Switch/Continuity)



Window operation		Driver's				Passenger's			
Terminal / Switch position		3	4	6	9	6	7	9	10
Window unlock	UP	○	○		○	○		○	○
	OFF	○	○	○		○	○		○
	DOWN	○		○	○		○	○	
Window lock	UP	○	○		○			○	○
	OFF	○	○	○			○		○
	DOWN	○		○	○		○	○	

If continuity is not as specified, replace the switch.

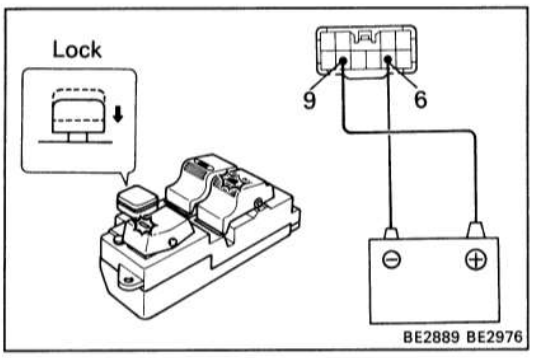


(Master Switch: Illumination)

(a) Set the window lock switch to the unlock position.

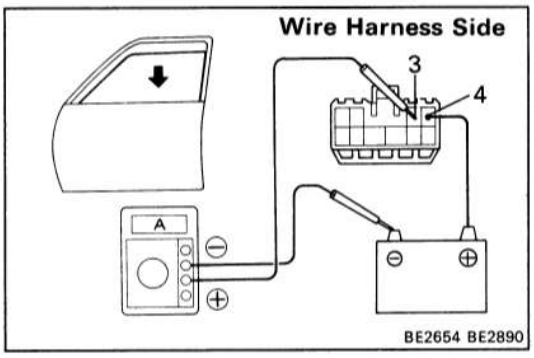
(b) Connect the positive (+) lead from the battery to terminal 9 and the negative (–) lead to terminal 6, check that all the illuminations light up.

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(c) Set the window lock switch to the lock position, check that the passenger's power window switch illumination goes out.

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



(Master Switch: One Touch Power Window System)

Inspection using an ammeter:

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the ammeter to terminal 3 on the wire harness side connector and the negative (–) lead to negative terminal of the battery.

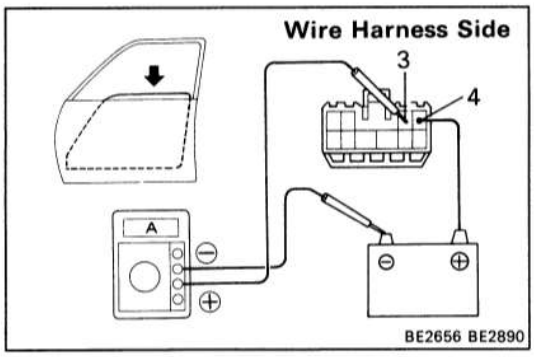
(c) Connect the positive (+) lead from the battery to terminal 4 on the wire harness side connector.

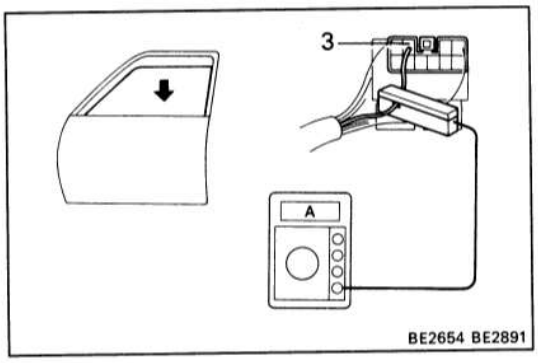
(d) As the window goes down, check that the current flows approximately 7 amperes.

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

HINT: The circuit breaker opens some 4 – 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.





Inspection using an ammeter with a current-measuring probe:

(a) Remove the master switch with connector connected.

(b) Attach a current-measuring probe to terminal 3 of the wire harness.

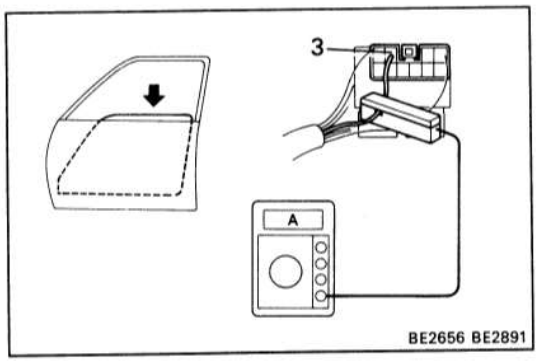
(c) Turn the ignition switch ON and set the power window switch in the down position.

(d) As the window goes down, check that the current flows approximately 7 amperes.

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

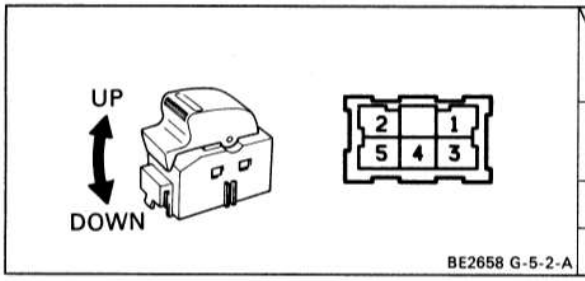
HINT: The circuit breaker opens some 4 – 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.



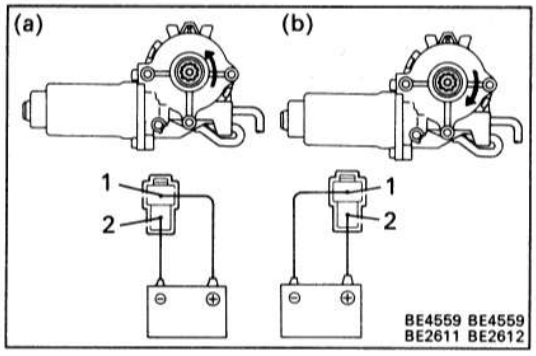
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(Power Window Switch/Continuity)



Switch position \ Terminal	1	2	3	4	5
UP	○		○	○	○
OFF	○	○	○	○	
DOWN	○	○		○	○

If continuity is not as specified, replace the switch.



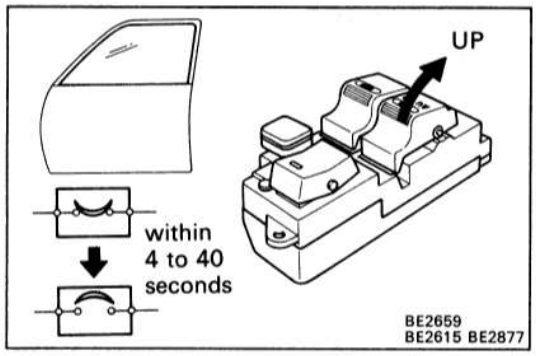
2. INSPECT POWER WINDOW MOTOR

(Left Side Door Motor/Motor 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.

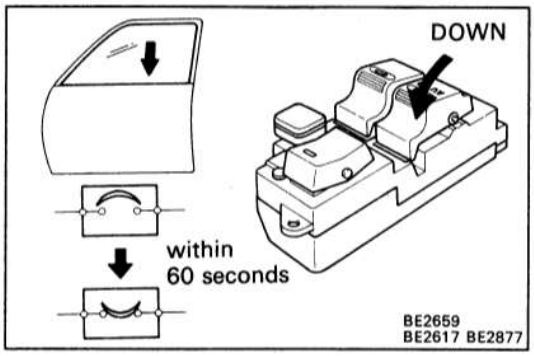
(b) Reverse the polarity, check that the motor turns clockwise.

If operation is not as specified, replace the motor.



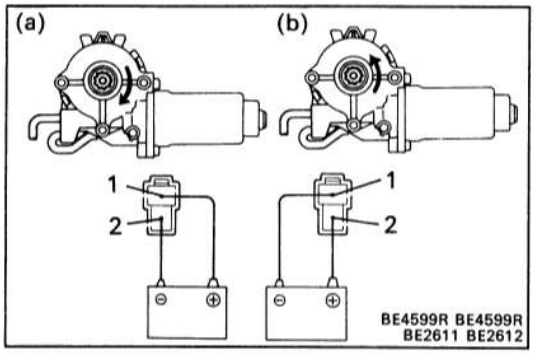
(Left Side Door Motor/Circuit Breaker Operation)

(a) With the window in the full closed position, hold the power window switch in "UP" position and check that there is a circuit breaker operation noise within 4 to 40 seconds.



(b) With the window in the full closed position, hold the switch in "DOWN" and check that the window begins to descend within 60 seconds.

If operation is not as specified, replace the motor.



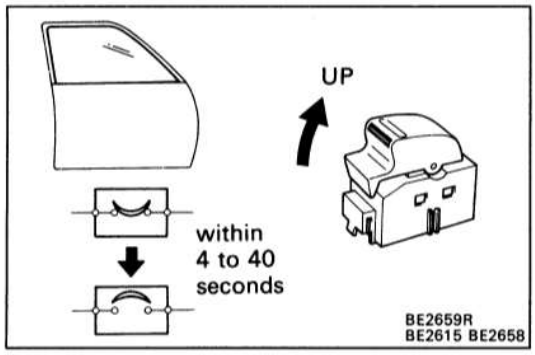
(Right Side Door Motor/Motor Operation)

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

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

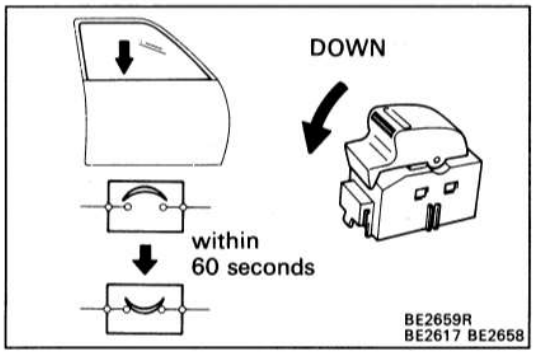
If operation is not as specified, replace the motor.

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(Right Side Door Motor/Circuit Breaker Operation)

(a) With the window in the full closed position, hold the power window switch in "UP" position and check that there is a circuit breaker operation noise within 4 to 40 seconds.



(b) With the window in the full closed position, hold the switch in "DOWN" and check that the window begins to descend within 60 seconds.

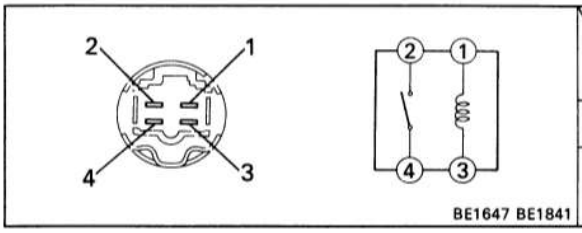
If operation is not as specified, replace the motor.

3. INSPECT DOOR LOCK CONTROL RELAY

See Step 3 of Power Door Lock Control System on page BE-78

4. INSPECT POWER MAIN RELAY

(Continuity)



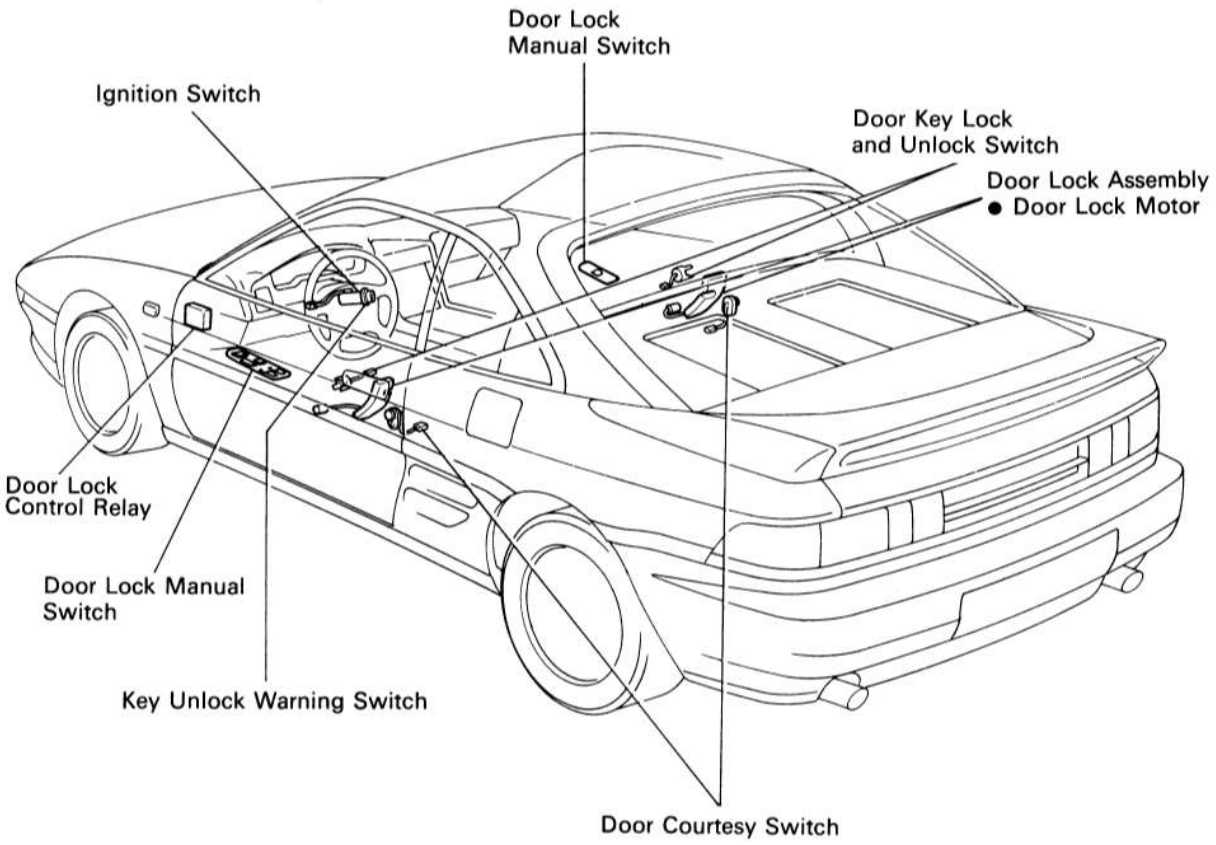
Terminal / Condition	1	2	3	4
Constant	○	∿∿	○	
Apply battery voltage to terminals 1 and 3.		○		○

If continuity is not as specified, replace the relay.

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POWER DOOR LOCK CONTROL SYSTEM

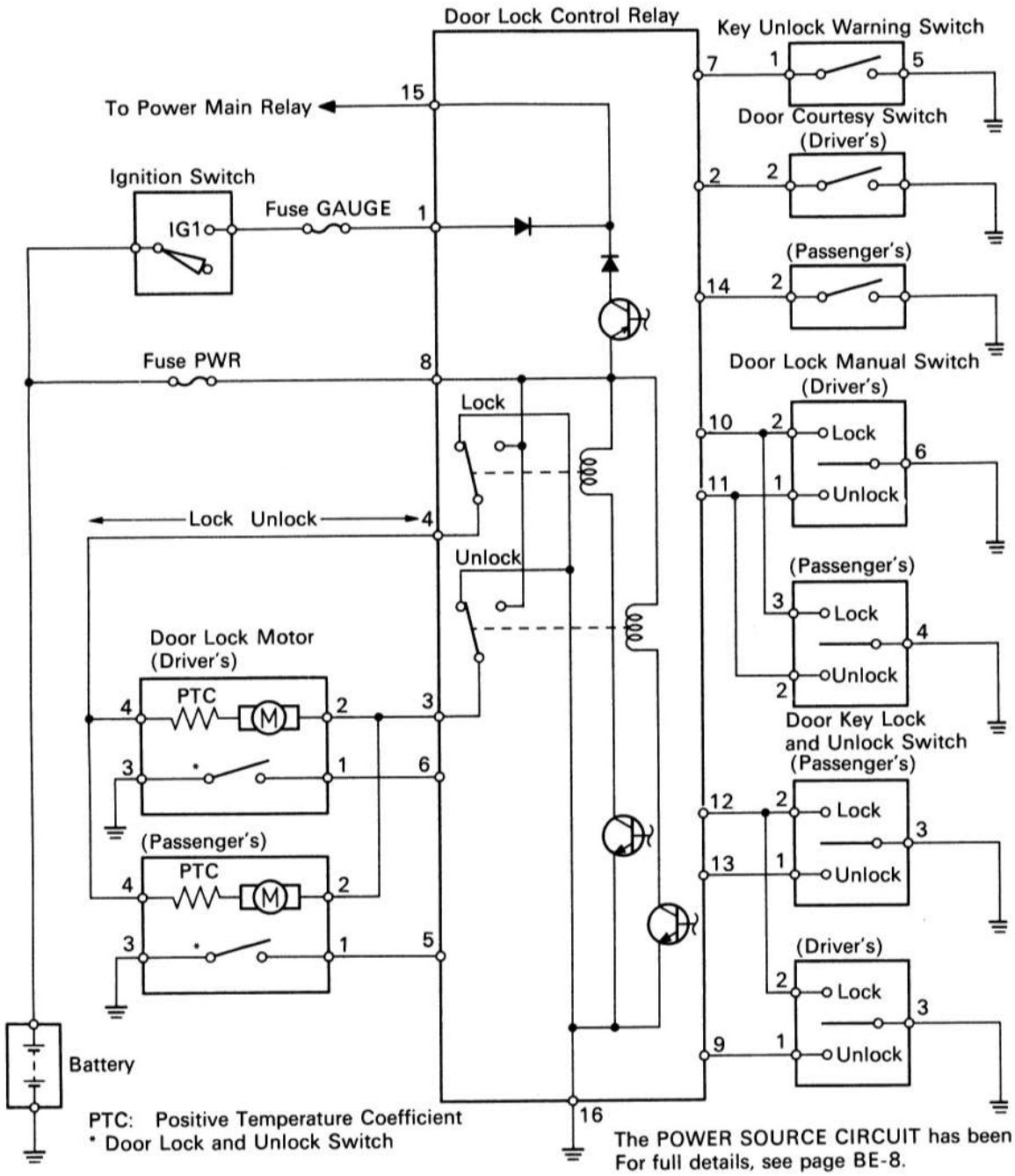
Parts Location



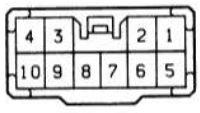
BE5241

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Wiring and Connector Diagrams



Door Lock Manual Switch (Driver's)



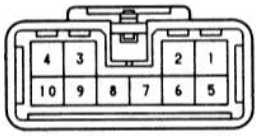
(Passenger's)



Door Key Lock and Unlock Switch



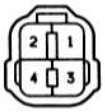
Key Unlock Warning Switch



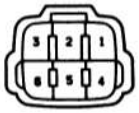
Door Courtesy Switch



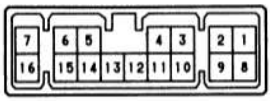
Door Lock Motor (w/o Theft Deterrent System)



(w/ Theft Deterrent System)



Door Lock Control Relay



BE5242
S-10-2 S-4-2-C Ie-3-1 e-10-2-B e-2-1-G
IS-4-2-B IS-6-2-B S-16-2-A

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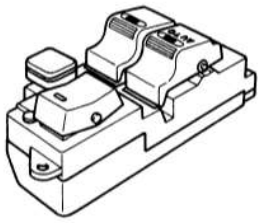
Troubleshooting

Problem	Possible cause	Remedy	Page
Door lock system does not operate at all	POWER fuse blown Door lock motor faulty Door lock control relay faulty Wiring or ground faulty	Replace fuse and check for short Check motor Check relay Repair as necessary	BE-3 BE-76 BE-78
Door lock system does not operate by manual switch	Door lock manual switch faulty Door lock control relay faulty Wiring faulty	Check switch Check relay Repair as necessary	BE-75 BE-78
Door lock system does not operate by door key	Door key lock and unlock switch faulty Door lock control relay faulty Wiring faulty	Check switch Check relay Repair as necessary	BE-78 BE-78

Parts Inspection

1. INSPECT SWITCHES

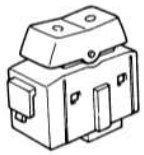
(Driver's Door Lock Manual Switch: in Master Switch/Continuity)



BE2877 S-10-2

Terminal / Switch position	1	2	5	6
LOCK	○		○	
		○		○
OFF				
UNLOCK	○			○
		○	○	

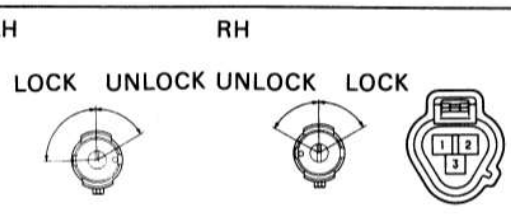
(Passenger's Door Lock Manual Switch/Continuity)



BE2595 S-4-2-C

Terminal / Switch position	2	3	4
LOCK		○	○
OFF			
UNLOCK	○		○

(Door Key Lock and Unlock Switch/Continuity)



BE4663 BE4662 le-3-1

Terminal / Switch Position	1	2	3
LOCK		○	○
OFF			
UNLOCK	○		○

If continuity is not as specified, replace the switch.

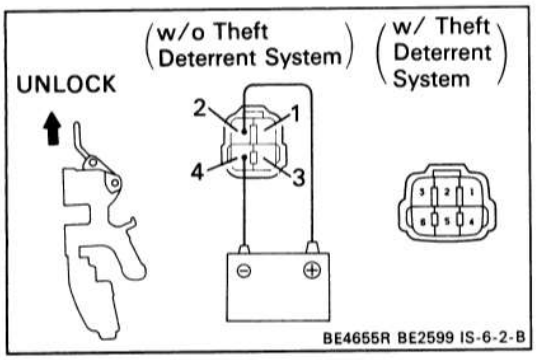
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(Key Unlock Warning Switch/Continuity)

See Step 1 of Key Confine Prevension System on page BE-11.

(Door Courtesy Switch/Continuity)

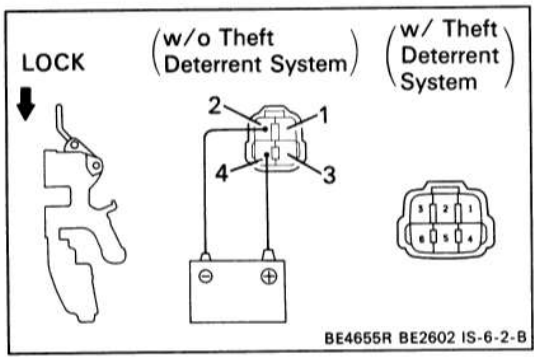
See Step 1 of Illuminated Entry System on page BE-41.



2. INSPECT DOOR LOCK MOTOR
(Motor Operation)

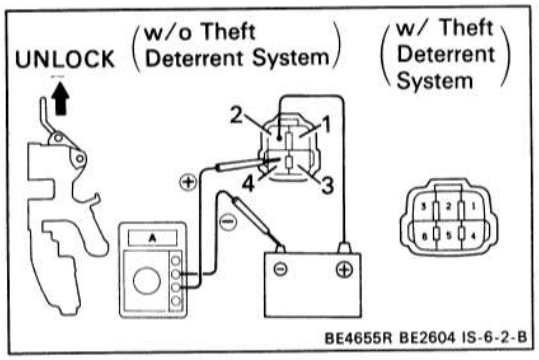
(a) Connect the positive (+) lead from the battery to terminal 2 (2) and the negative (–) lead to terminal 4 (5), check that the door lock link moves to UNLOCK position.

HINT: The number in brackets ( ) applies to vehicles w/ Theft Deterrent System.



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

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

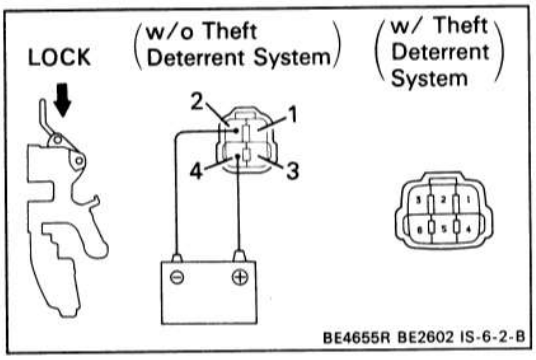


(PTC Thermistor Operation)

Inspection using an ammeter.

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

(b) Connect the positive (+) lead from the ammeter to terminal 4 (5) and the negative (–) lead to battery negative (–) terminal, check that the current changes from approximately 3.2 ampere to less than 0.5 ampere within 10 to 60 seconds.



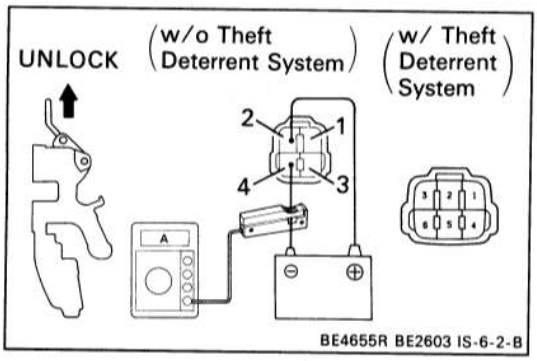
(c) Disconnect the leads from terminals.

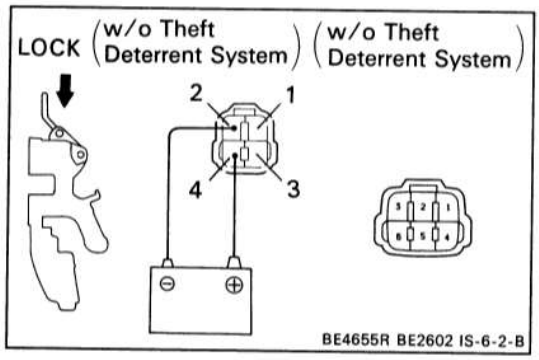
(d) Approximately 60 seconds later, connect the positive (+) lead from the battery to terminal 4 (5) and the negative (–) lead to terminal 2 (2), check that the door lock moves to LOCK position.

HINT: The number in brackets ( ) applies to vehicles w/ Theft Deterrent System.

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

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Inspection using an ammeter with a current-measuring probe.

(a) Connect the positive (+) lead from the battery to terminal 2 (2) and the negative (–) lead to terminal 4 (5).

(b) Attach a current-measuring probe to either the positive (+) lead or the negative (–) lead, check that the current changes from approximately 3.2 ampere to less than 0.5 ampere within 10 to 60 seconds.

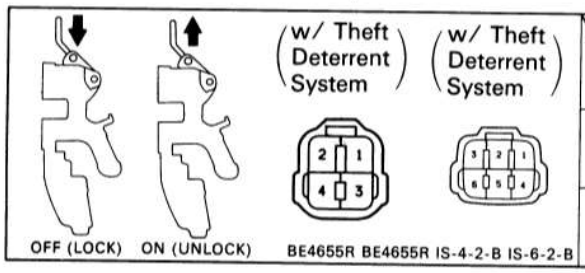
HINT: The number in brackets ( ) applies to vehicles w/ Theft Deterrent System.

(c) Disconnect the leads from terminals.

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

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

(Door Lock and Unlock Switch/Continuity)



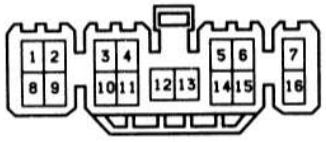
Terminal / Switch position	1 (1)	3 (4)
OFF (Door lock set to LOCK)		
ON (Door lock set to UNLOCK)	O	O

HINT: The number in brackets ( ) applies to vehicles w/ Theft Deterrent System.

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

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Wire Harness Side



S-16-1-A

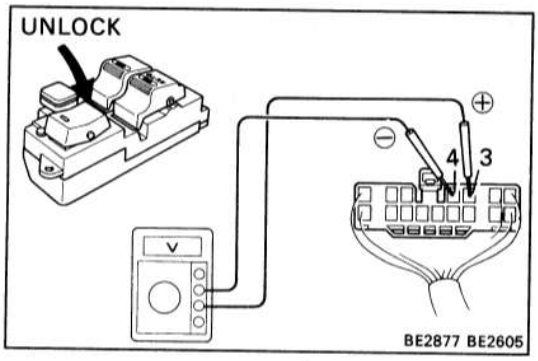
3. INSPECT DOOR LOCK CONTROL RELAY (Relay Circuit)

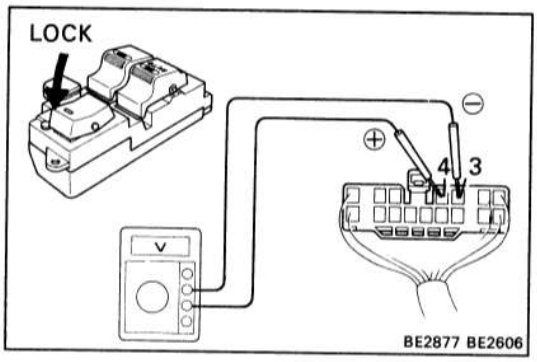
Disconnect the connector from the relay and inspect the connector on the wire harness side as shown in the chart.

Check for	Tester connection	Condition		Specified value
Continuity	2 – Ground	Driver's door courtesy switch position	OFF (Door closed)	No continuity
			ON (Door opened)	Continuity
	5 – Ground	Passenger's door lock and unlock switch position	OFF (Door locked)	No continuity
			ON (Door unlocked)	Continuity
	6 – Ground	Driver's door lock and unlock switch position	OFF (Door locked)	No continuity
			ON (Door unlocked)	Continuity
	7 – Ground	Key unlock warning switch position	OFF (Ignition key removed)	No continuity
			ON (Ignition key set)	Continuity
	9 – Ground	Driver's door key lock and unlock switch position	OFF or LOCK (Door key free or turned to lock)	No continuity
			UNLOCK (Door key turned to unlock)	Continuity
	10 – Ground	Door lock manual switch position	OFF or UNLOCK	No continuity
			LOCK	Continuity
	11 – Ground	Door lock manual switch position	OFF or LOCK	No continuity
			UNLOCK	Continuity
	12 – Ground	Door key lock and Unlock switch position	OFF or UNLOCK (Door key free or turned to unlock	No continuity
			LOCK (Door key turned to lock)	Continuity
	13 – Ground	Passenger's door key lock and unlock switch position	OFF or LOCK (Door key free or turned to lock)	No continuity
			UNLOCK (Door key turned to unlock)	Continuity
	14 – Ground	Passenger's door courtesy switch position	OFF (Door closed)	No continuity
			ON (Door opened)	Continuity
	16 – Ground	Constant		Continuity
Voltage	1 – Ground	Ignition switch position	LOCK or ACC	No voltage
			ON	Battery voltage
	8 – Ground	Constant		Battery voltage
Resistance	15 – Ground	Constant		Approx. 60Ω

If circuit is as specified, inspect the door lock signal.

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(Door Lock Signal)

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

(a) Connect the connector to the relay.

(b) Connect the positive (+) lead from the voltmeter to terminal 3 and the negative (–) lead to terminal 4.

(c) Set the door lock manual switch to UNLOCK, check that the voltage rises from 0 volts to battery voltage for approximately 0.2 seconds.

(d) Reverse the polarity of the voltmeter leads.

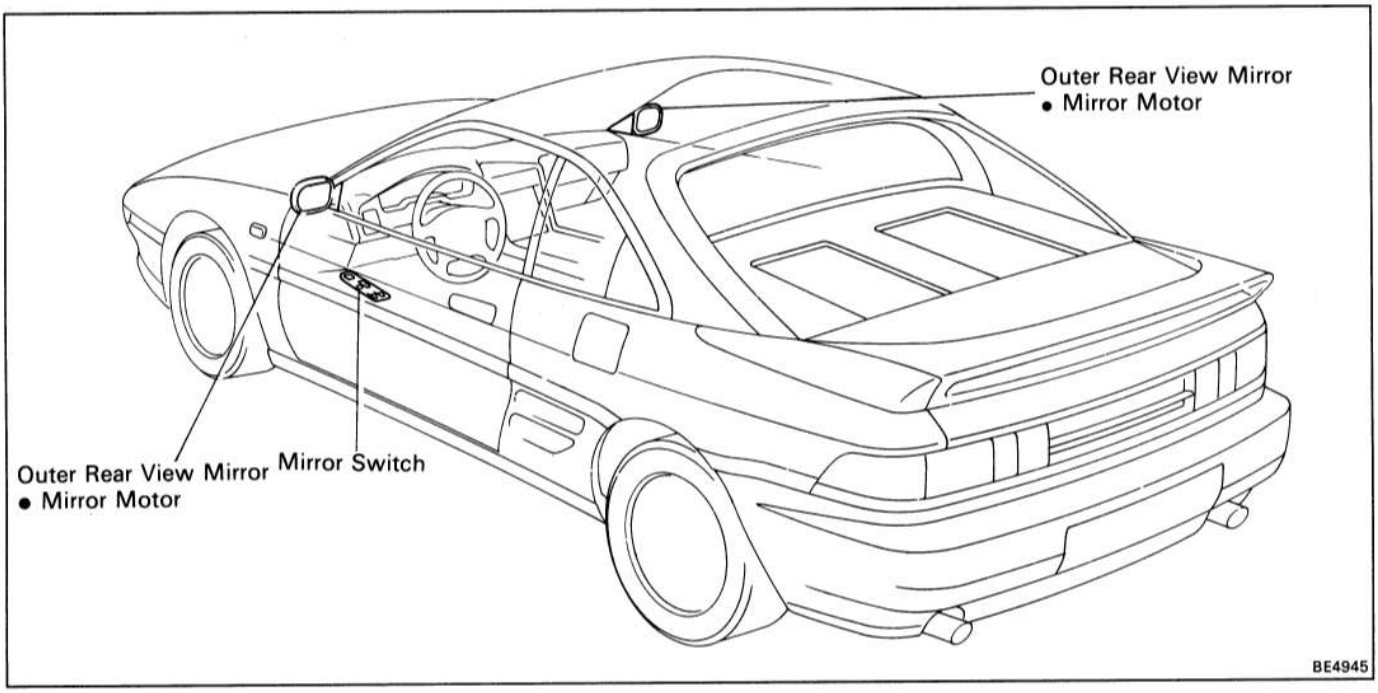
(e) Set the door lock manual switch to LOCK, check that the voltage rises from 0 volts to battery voltage for approximately 0.2 seconds.

If operation is not as specified, replace the relay.

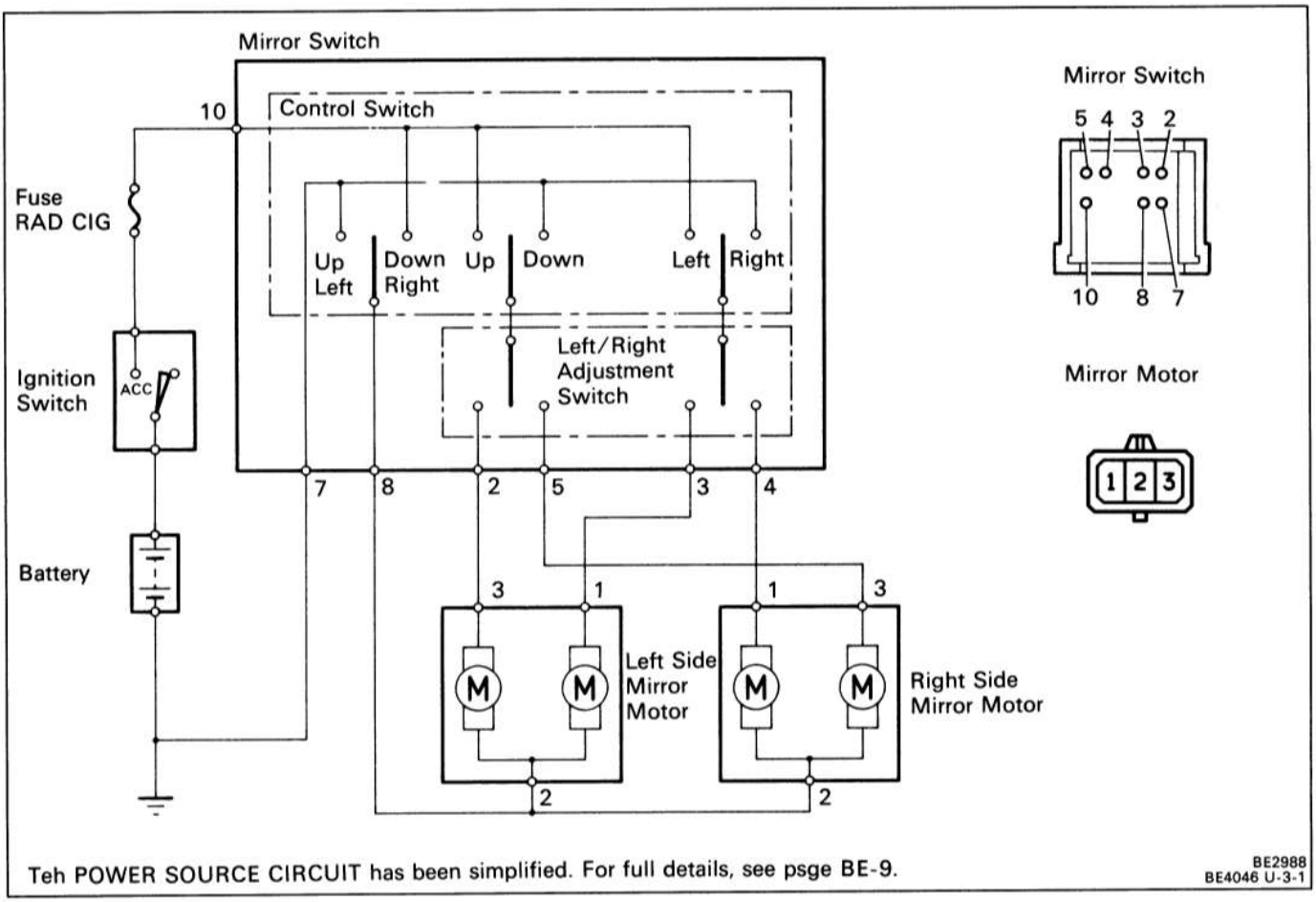
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POWER MIRROR CONTROL SYSTEM

Parts Location



Wiring and Connector Diagrams



Teh POWER SOURCE CIRCUIT has been simplified. For full details, see psge BE-9.

BE2988
BE4046 U-3-1

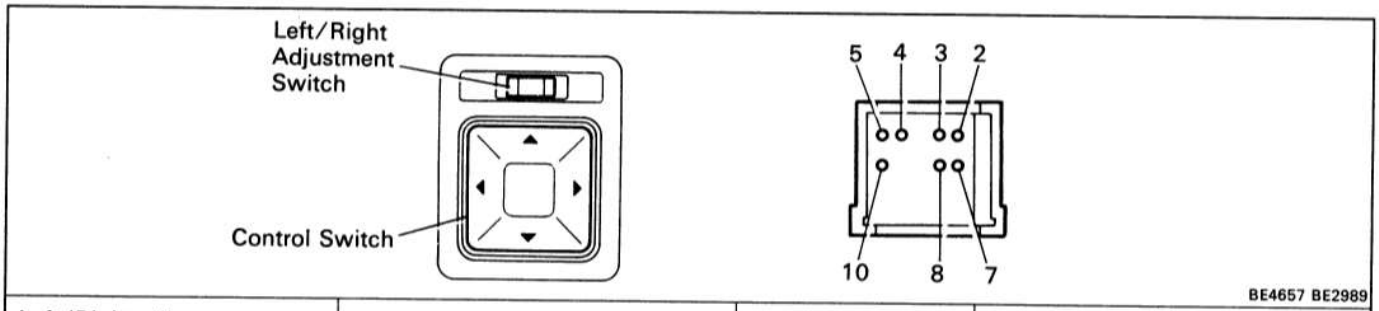
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Troubleshooting

Problem	Possible cause	Remedy	Page
Remote control mirror system does not operate	RAD CIG fuse faulty Mirror switch faulty Mirror motor faulty Wiring or ground faulty	Replace fuse and check for short Check switch Check motor Repair as necessary	BE-3 BE-81 BE-81

Parts Inspection

1. INSPECT MIRROR SWITCH (Continuity)

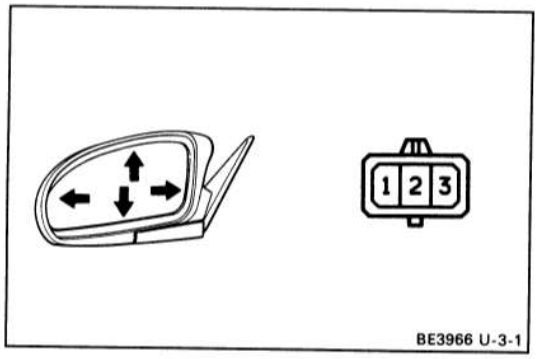


Left/Right adjustment switch position	LEFT SIDE					OFF			RIGHT SIDE				
Terminal / Control switch position	2	3	7	8	10	7	8	10	4	5	7	8	10
OFF													
UP	○				○	○	○			○			○
			○	○							○	○	
DOWN	○		○	○	○		○	○		○	○	○	○
LEFT		○			○	○	○		○				○
			○	○							○	○	
RIGHT		○	○	○	○		○	○	○		○	○	○

If continuity is not as specified, replace the switch.

2. INSPECT MIRROR MOTOR

Connect the positive (+) lead from the battery to terminal is column "A" and the negative (–) lead to terminal in column "B", check that the mirror operates in column "C".



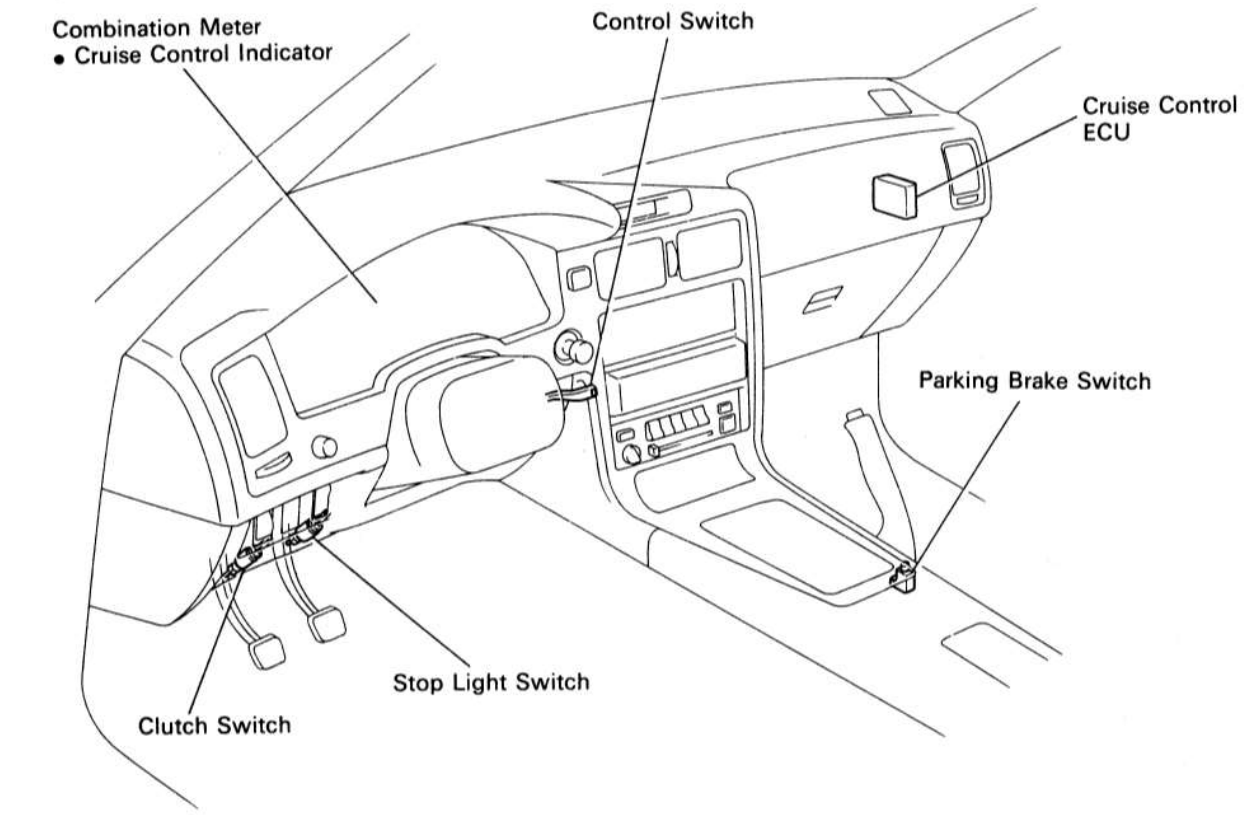
A (+)	B (–)	C (Operation)
3	2	Mirror turns upward
2	3	Mirror turns downward
1	2	Mirror turns to left side
2	1	Mirror turns to right side

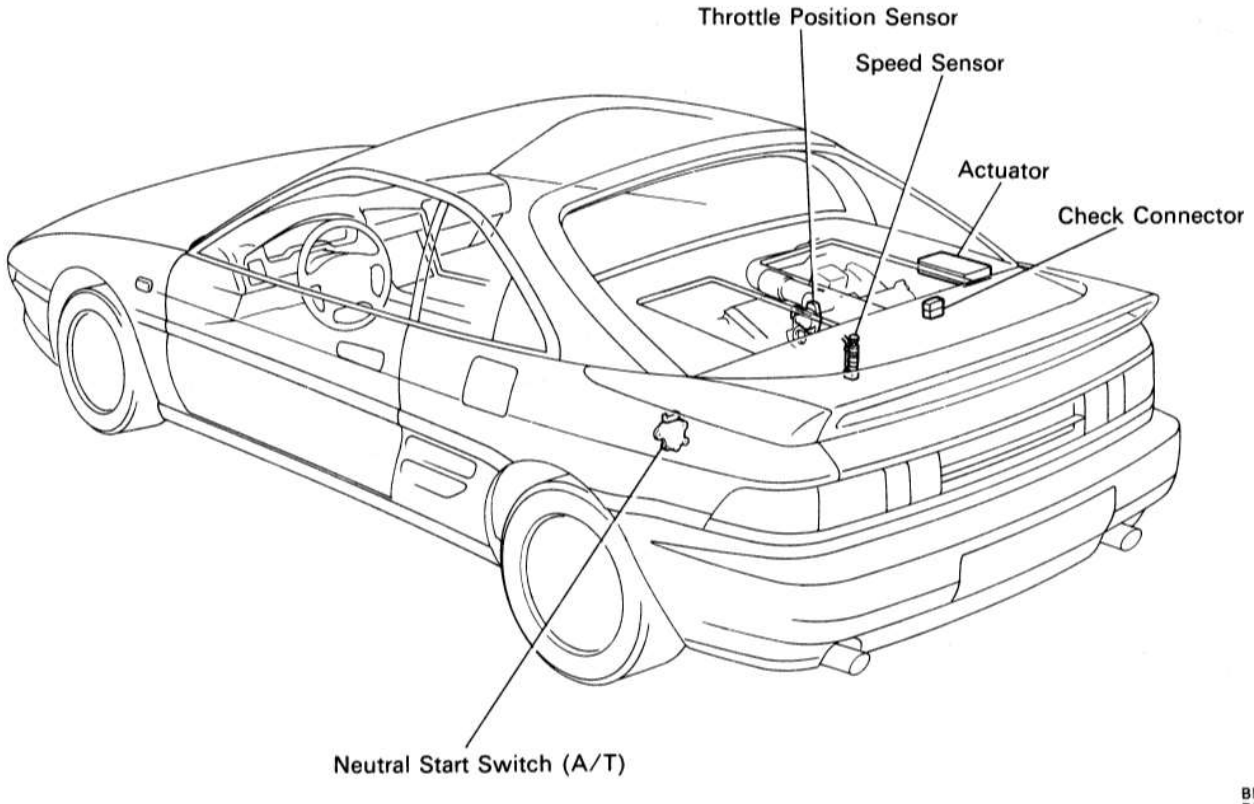
If operation is not as specified, replace the mirror assembly.

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CRUISE CONTROL SYSTEM

Parts Location



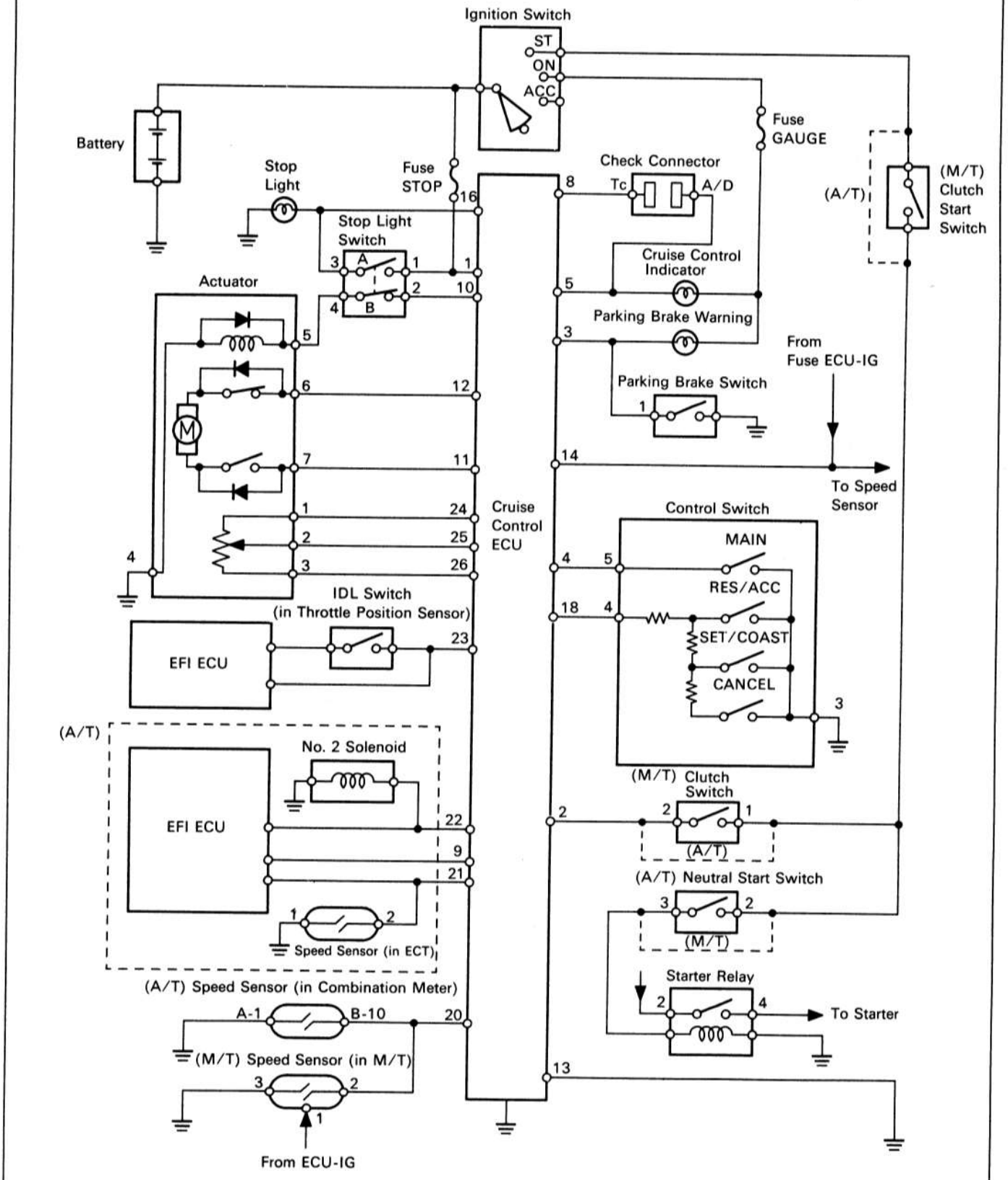


BE5243
BE4947

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Wiring Diagram

(USA)

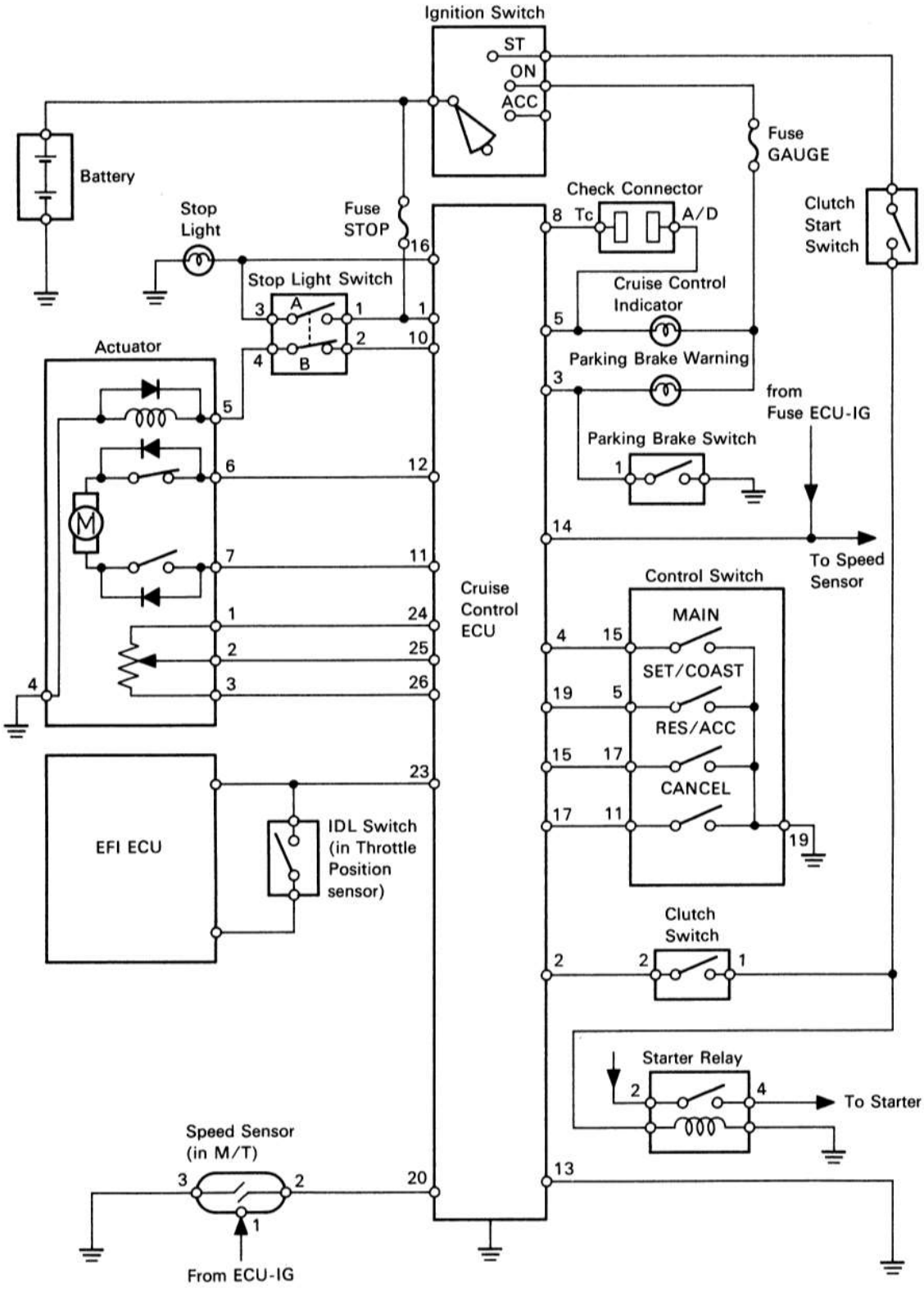


The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

BE5244

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(CANADA)



The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

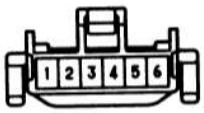
BE5245

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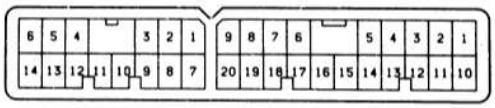
Connector Diagrams

Cruise Control Switch

(USA)

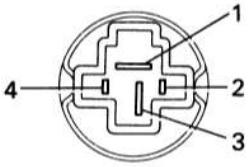


(CANADA)



Connector "A" Connector "B"

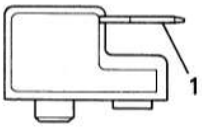
Stop Light Switch



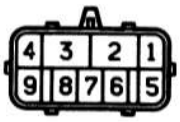
Clutch Switch (M/T)



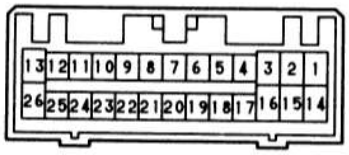
Parking Brake Switch



Neutral Start Switch (A/T)



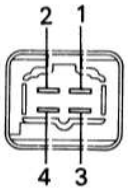
Cruise Control ECU



Actuator

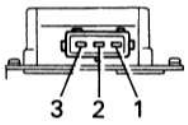


Starter Relay

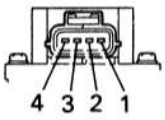


Throttle Position Sensor

(3-pin Type)



(4-Pin Type)

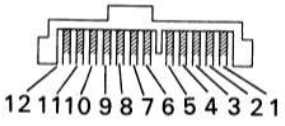


Speed Sensor
(M/T)

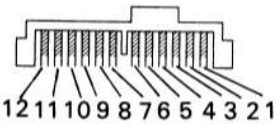


(A/T: Combination Meter)

Connector "A"



Connector "B"



Speed Sensor
(A/T: ECT)



e-6-1-C V-34-2
BE0336 G-2-2 BE1412 SH-9-2-A
Vd-26-2-B Ie-7-2 ST0280
AC2241 IS-3-2-A BE1266 BE1267
IS-2-2-B

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System Description

- When the ignition switch is turned ON, current flows from the battery to terminal 14 of the cruise control (CC) ECU.
- Terminal 13 of the CC ECU is always grounded.

Basic Operation

HINT: For all explanations below, the ignition switch is in the ON position.

1. CONTROL SWITCH OPERATION

- The CC switch controls MAIN switch, SET/COAST, RESUME/ACCEL and CANCEL functions.

(USA)

(a) MAIN switch
When the main switch is pushed ON, current flows from terminal 4 of the CC ECU → terminal 5 of the control switch → terminal 3 of the switch → ground.

As a result, the CC ECU is on standby and terminal 5 of the CC ECU is grounded. Therefore the CC indicator lights up.

(b) SET/COAST, RESUME/ACCEL and CANCEL switch
The control switch controls the SET, COAST, RESUME, ACCEL and CANCEL functions. When the control switch is turned to each position, current flows from terminal 18 of the CC ECU → terminal 4 of the control switch → (each resistance) → terminal 3 of the switch → ground.

In the way, the CC ECU detects each position the control switch is turned to, and starts operation.

HINT: The SET function is detected by the CC ECU when the control switch released from SET/COAST.

(CANADA)

(a) MAIN switch
When the main switch is pushed ON, current flows from terminal 4 of the CC ECU → terminal 15 of the control switch → terminal 19 of the switch → ground.

As a result, the CC ECU is on standby and terminal 5 of the CC ECU is grounded. Therefore the CC indicator lights up.

(b) SET/COAST switch
When the control switch is turned to SET/COAST position, the current flows from terminal 19 of the CC ECU → terminal 5 of the CC switch → terminal 19 of the CC switch → ground.

(c) RESUME/ACCEL switch
When the control switch is turned to RES/ACC position, the current flows from terminal 18 of the CC ECU → terminal 17 of the CC switch → terminal 19 of the CC switch → ground.

(d) CANCEL switch
When the control switch is turned to CANCEL position, the current flows from terminal 17 of the CC ECU → terminal 11 of the CC switch → terminal 19 of the CC switch → ground.

2. SPEED CONTROL OPERATION

When the vehicle speed is set by the control switch, the ECU sends signal from terminal 10 → terminal 2 of the stop light switch → terminal 4 of the switch → terminal 5 of the actuator → (safety magnetic clutch) → terminal 4 of the actuator → ground.

When the actual vehicle speed drops below the set speed, the CC ECU sends a signal (voltage) from terminal 12 → terminal 6 of actuator → (motor) → terminal 7 of actuator → terminal 11 of CC ECU. This causes the motor to rotate the actuator arm in the throttle opening direction, increasing the vehicle speed. Then, when the arm reaches the prescribed angle, the CC ECU detects this at terminal 25 and stops the signal from 12.

When the actual vehicle speed rises above the set speed, the CC ECU sends a signal from terminal 11, turning the motor in the opposite direction so that the vehicle speed is reduced.

The CC ECU sends approx. 5 V from terminal 24 → terminal 1 of the actuator → (position sensor) → terminal 3 of the actuator → terminal 26 of the CC ECU. When the occurs, the position sensor sends the position of the actuator arm as a signal (voltage) from terminal 2 of the actuator to terminal 25 of the CC ECU.

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3. MANUAL CANCEL OPERATION

The CC system has the following methods of cancellation:

- **Speed Control Switch (CANCEL)**

  When the control switch is turned to CANCEL position.

- **Parking Brake Switch**

  When the parking brake lever is pulled, the parking brake switch is turned ON and sends a cancellation signal (ground voltage) to terminal 3 of the CC ECU.

- **Neutral Start Switch (A/T)**

  When the shift lever is set to "N" or "P" range, the neutral start switch is turned ON and sends a cancellation signal (ground voltage) to terminal 2 of the CC ECU.

- **Clutch Switch (M/T)**

  When the clutch pedal is depressed, the clutch switch is turned ON and sends a cancellation signal (ground voltage) to terminal 2 of the CC ECU.

- **Stop Light Switch**

  When the brake pedal is depressed, SW B of the stop light switch is turned OFF, the safety magnetic clutch (in actuator) is released, and SW A of the stop light switch is turned ON and sends a cancellation signal (battery voltage) to terminal 16 of the CC ECU.

When the CC ECU detects any of the above signals, it stops output of signals to the actuator, and cancels cruise control.

cc: Cruise Control

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Diagnosis System

Output of Diagnostic Code

READ DIAGNOSTIC CODE

(Type A)

(a) Turn the ignition switch on.

(b) Turn the control switch to SET/COAST position, and keep it there.

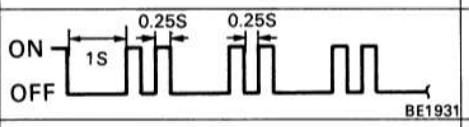
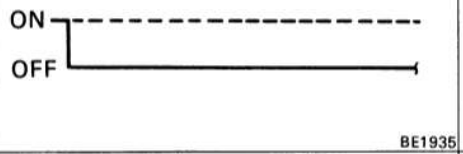
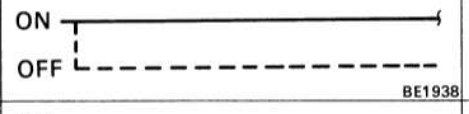
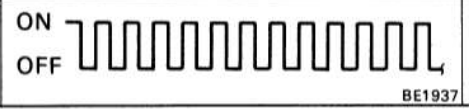
(c) Push the MAIN switch ON.

(d) Check that the indicator light "CRUISE" lights-up in the combination meter.

(e) Turn the SET/COAST switch off.

(f) Meet the conditions listed in the table below.

(g) Read the diagnosis code on the cruise control indicator light.

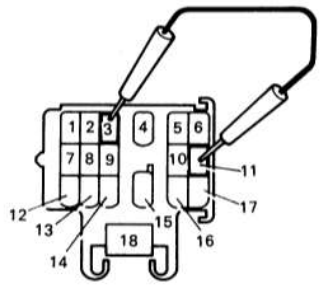
No.	Conditions	Indication code	Diagnosis
1	Turn the control switch to SET/COAST position.		SET/COAST circuit is normal.
2	Turn the control switch to RES/ACC position.		RES/ACC circuit is normal.
3	Each cancel switch is turned ON. ● Control switch (to CANCEL) ● Stop light switch ● Parking brake switch ● Clutch Switch (M/T) ● Neutral Start Switch (A/T)		Each cancel switch is normal.
4	Drive at approx. 40 km/h (25 mph) or below.		Speed sensor circuit is normal.
	Drive at approx. 40 km/h (25 mph) or over		Speed sensor circuit is normal.

HINT:

- Indication codes appear in order from No. 1.
- If there is no indication code, perform troubleshooting and inspection. (See page BE-90)
- Indication is stopped when the MAIN switch is re-pushed.

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Diagnosis Check Connector



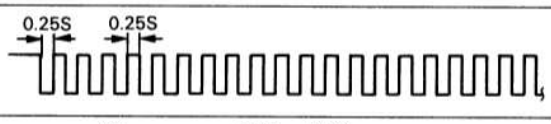
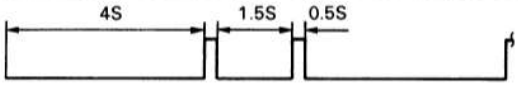
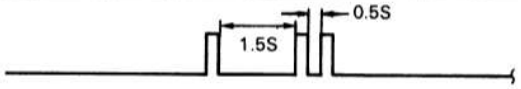
(Type B)

(a) If while driving with the cruise control on, the system is canceled by a malfunction in either the actuator, speed sensor or speed control switch circuit, the cruise control indicator light "CRUISE" will blink 5 times.

(b) While stopped, connect terminals 3 and 11 of the check connector.

HINT: If the ignition switch is turned off, the diagnostic code will be erased from the computer memory.

(c) Read the diagnostic code on the indicator light "CRUISE".

	Indication code	Diagnosis
	 BE1939	Normal
11	 BE1940	Excessive current flowed to motor or safety magnetic clutch drive circuit.
12	 BE2711	Open circuit in safety magnetic clutch circuit.
13	 BE4344	• Position sensor circuit abnormal. • Open circuit in motor.
21	 BE1941	Vehicle speed signal not sent for 140 msec. or longer
22	 BE1942	(A/T) Speed sensor (in ECT) circuit is abnormal.
23	 BE1943	* Vehicle speed has decreased by 16 km/h (10 mph) or more from the set speed during cruising.
31	 BE1944	(CANADA) RESUME/ACCEL switch is ON always when MAIN switch is pushed ON.
32	 BE1945	(USA) Short circuit in control switch circuit.
33	 BE2712	(CANADA) SET/COAST switch signal and RES/ACC switch signal turned on simultaneously.
34	 BE4342	(USA) Control switch does not turn off before switching.
41	 BE4345	ECU malfunction.

* If the set speed can be maintained when the speed control switch is again set at SET/COAST, there is no malfunction.

HINT:

- Indication codes appear in order from No. 11.
- If there is no indication code, perform troubleshooting and inspection. (See page BE-90).

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Troubleshooting

You will find the source of the trouble more easily be properly using the table shown below. In this table, the numbers indicate the order of priority of the causes of trouble. Check each part in the order shown.

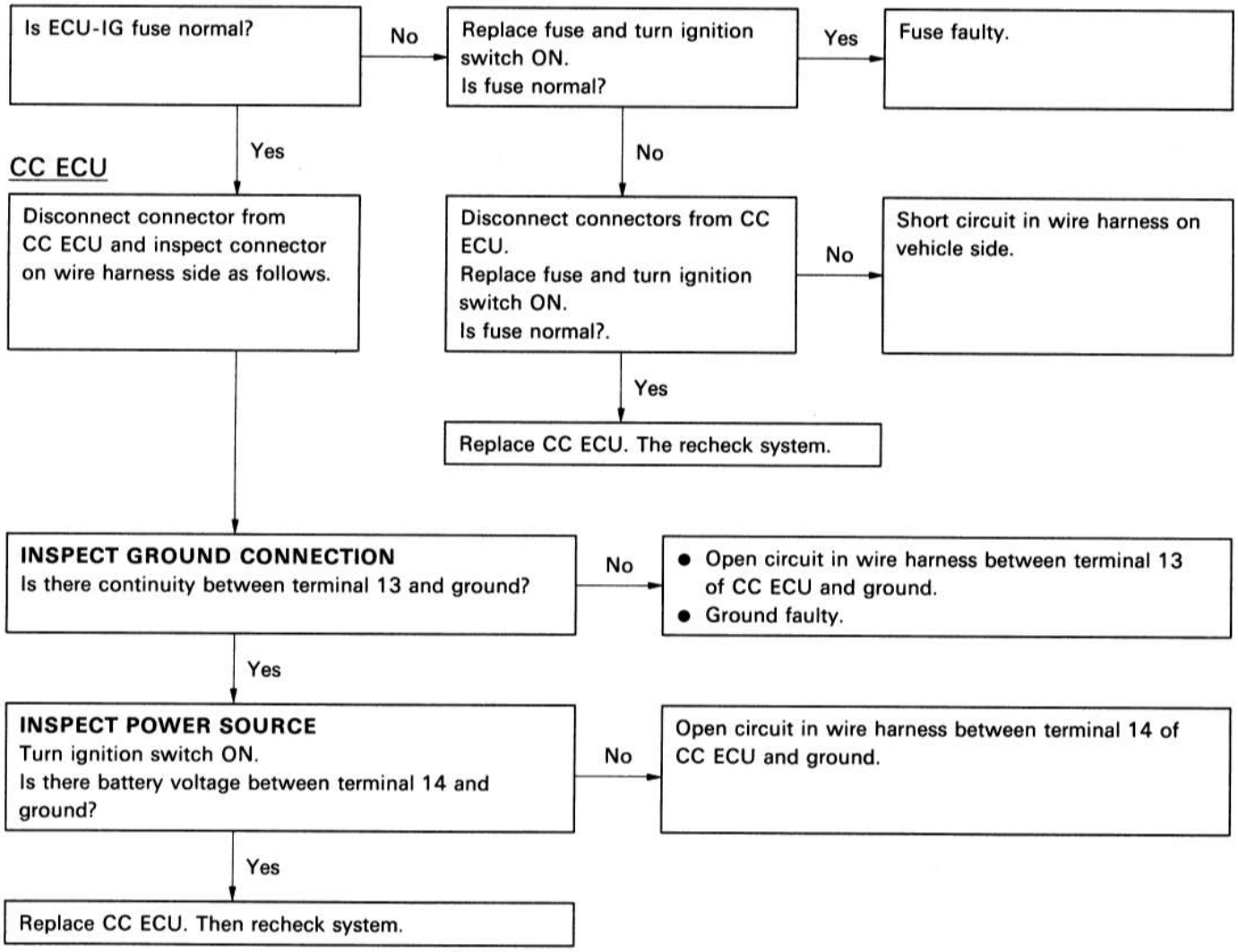
Chart No.					H	*1	*2	L	N,O	M	*3	P	Q		
Inspection Item / Diagnosis Code / Problem	Type B	Type A		CC ECU	Actuator	Main Switch (in Control Switch)	Control Switch	Stop light Switch	Clutch Switch or Neutral Start Switch	Parking Brake Switch	Speed Sensor, or Speedometer Cable	ECT Solenoid No. 2 Circuit	Throttle Position Sensor (IDL)	Speed Control Cable Function	Wire Harness
• "CRUISE" Indicator light blinks 5 times. • Cruise control system does not set. • Cruise control system does not operate.	11			3	2										1
	12			4	2			3							1
	13			3	2										1
	21			3							2				1
	22			2							1				
	23			4	3						2			1	
	31			3			2								1
	32			2			1								
	33			3			2								1
	34			2			1								
	41			1											
	Normal	4	OK	9	8	2	3	4	5	6				7	1
			NG	2							7				
Set speed deviates on high or low side.				4	3						1			2	
Large speed drop when the speed control switch turned to SET.				4	3								2	1	
Vehicle speed fluctuates when speed control switch turned to SET.				4	3						1			2	
Acceleration response is sluggish when speed control switch turned to "ACCEL" or "RESUME"				4	3						2			1	
During autodrive operation, shift operation ocuurs frequently without control				2								1			
Set speed does not cancel when brake pedal depressed.	3	OK		1											
		NG		2				1							
Set speed does not cancel when parking brake lever pulled	3	OK		1											
		NG		2						1					
Set speed does not cancel when clutch pedal depressed.	3	OK		1											
		NG		2					1						
Set speed does not cancel when speed control switch turned to CANCEL.	3	OK		1											
		NG		2			1								
Vehicle speed does not decrease when speed control switch turned to COAST.	1	OK		4	1						3			2	
		NG		2			1								
Vehicle speed does not accelerate when speed control switch turned to ACCEL.	2	OK		4	1						3			2	
		NG		2			1								
Vehicle speed does not return to memorized speed when control switch turned on RESUME	2	OK		4	1						3			2	
		NG		2			1								
Speed can be set below about 40 km/h (25 mph.)	4	OK		1											
		NG		2							1				
Cruise control will not disengage even at about 40 km/h (25 mph).	4	OK		1											
		NG		3							1			2	

*1 USA : C
CANADA : D
*2 USA : C
CANADA : E,F,G
*3 M/T : I
A/T : J, K

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A POWER SOURCE CIRCUIT

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

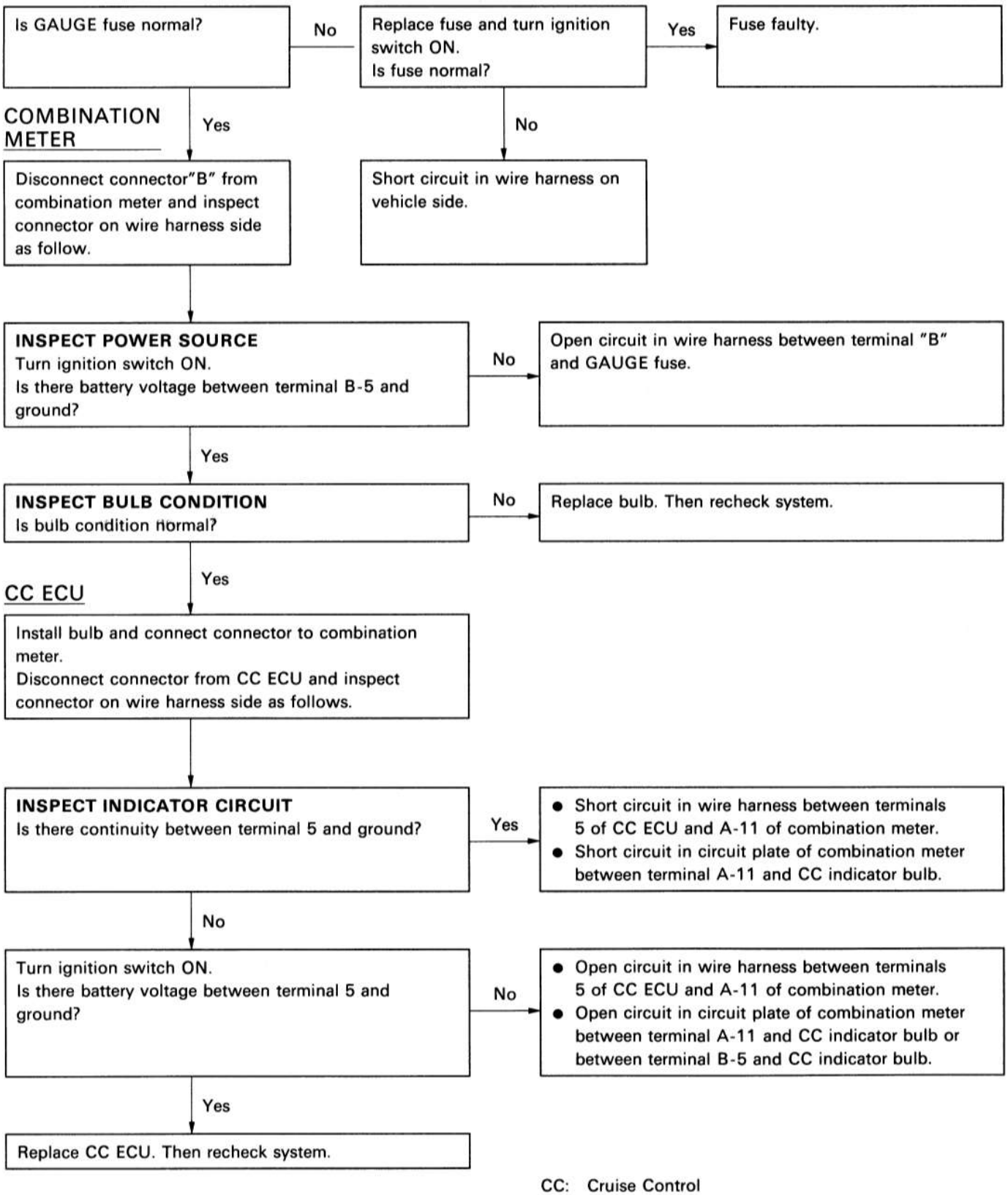


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B CRUISE CONTROL INDICATOR CIRCUIT

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.



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C CONTROL SWITCH CIRCUIT (USA)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

CONTROL SWITCH

Disconnect connector from control switch and inspect connector on wire harness side as follows.

INSPECT GROUND CONNECTION
Is there continuity between terminal 3 and ground?

No → ● Open circuit in wire harness between terminal 3 of control switch and ground.
● Ground faulty.

Yes

INSPECT CONTROL SWITCH (See page BE-111)
Is control switch operation normal?

No → Replace control switch. Then recheck system.

Yes

CC ECU

Connect connector to control switch.
Disconnect connectors from CC ECU and inspect connectors on wire harness side as follows.

INSPECT MAIN SWITCH CIRCUIT
Is there continuity between terminal 4 and ground with main switch OFF?

Yes → Short circuit in wire harness between terminals 4 of CC ECU and 5 of control switch.

No

Is there continuity between terminal 4 and ground with main switch ON?

No → Open circuit in wire harness between terminals 4 of CC ECU and 5 of control switch.

Yes

INSPECT CONTROL SWITCH CIRCUIT
Is there continuity between terminal 18 and ground with control switch OFF?

Yes → Short circuit in wire harness between terminals 18 of CC ECU and 4 of control switch.

No

Is there resistance as shown in table below between terminal 18 and ground when control switch is turned to each position?

Position	Resistance (Ω)
RES/ACC	Approx. 68
SET/COAST	Approx. 198
CANCEL	Approx. 418

No → Open circuit in wire harness between terminals 18 of CC ECU and 4 of control switch.

Yes

Replace CC ECU. Then recheck system.

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D MAIN SWITCH CIRCUIT (CANADA)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

CONTROL SWITCH

Disconnect connector from control switch and inspect connector on wire harness side as follows.

↓

INSPECT GROUND CONNECTION
Is there continuity between terminal 19 and ground?

No → ● Open circuit in wire harness between terminal 19 of control switch and ground.
● Ground faulty.

Yes ↓

INSPECT CONTROL SWITCH (See page BE-111)
Is control switch operation normal?

No → Replace control switch. Then recheck system.

Yes ↓

CC ECU

Connect connector to control switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

↓

INSPECT MAIN SWITCH CIRCUIT
Is there continuity between terminal 4 and ground with MAIN switch ON.

No → Open circuit in wire harness between terminal 4 of CC ECU and terminal 15 of control switch.

Yes ↓

Is there continuity between terminal 4 and ground when MAIN switch OFF.

Yes → Short circuit in wire harness between terminal 4 of CC ECU and terminal 15 of control switch.

No ↓

Replace CC ECU.
Then recheck system.

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E SET/COAST SWITCH CIRCUIT (CANADA)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

CONTROL SWITCH

Disconnect connector from control switch and inspect connector on wire harness side as follows.

↓

INSPECT GROUND CONNECTION
Is there continuity between terminal 19 and ground?

No → ● Open circuit in wire harness between terminal 19 of control switch and ground.
● Ground faulty.

↓ Yes

INSPECT CONTROL SWITCH
(See page BE-111)
Is control switch operation normal?

No → Replace control switch. Then recheck system.

↓ Yes

CC ECU

Connect connector to control switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

↓

INSPECT SET/COAST CIRCUIT
Is there continuity between terminal 19 and ground with control switch turned to SET/COAST position?

No → Open circuit in wire harness between terminal 19 of CC ECU and terminal 5 of control switch.

↓ Yes

Is there continuity between terminal 19 and ground when control switch released?

Yes → Short circuit in wire harness between terminal 19 of CC ECU and terminal 5 of control switch.

↓ No

Replace CC ECU.
Then recheck system.

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F RES/ACC SWITCH CIRCUIT (CANADA)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

CONTROL SWITCH

Disconnect connector from control switch and inspect connector on wire harness side as follows.

↓

INSPECT GROUND CONNECTION
Is there continuity between terminal 19 and ground?

No → ● Open circuit in wire harness between terminal 19 of control switch and ground.
● Ground faulty.

↓ Yes

INSPECT CONTROL SWITCH
(See page BE-111)
Is control switch operation normal?

No → Replace control switch. Then recheck system.

↓ Yes

CC ECU

Connect connector to control switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

↓

INSPECT RESUME/ACCEL CIRCUIT
Is there continuity between terminal 18 and ground with control switch turned to RES/ACC position?

No → Open circuit in wire harness between terminal 18 of CC ECU and terminal 17 of control switch.

↓ Yes

Is there continuity between terminal 18 and ground when control switch released?

Yes → Short circuit in wire harness between terminal 18 of CC ECU and terminal 17 of control switch.

↓ No

Replace CC ECU.
Then recheck system.

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G CANCEL SWITCH CIRCUIT (CANADA)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

CONTROL SWITCH

Disconnect connector from control switch and inspect connector on wire harness side as follows.

INSPECT GROUND CONNECTION
Is there continuity between terminal 19 and ground?

No → ● Open circuit in wire harness between terminal 19 of control switch and ground.
● Ground faulty.

Yes

INSPECT CONTROL SWITCH
(See page BE-111)
Is control switch operation normal?

No → Replace control switch. Then recheck system.

Yes

CC ECU

Connect connector to control switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT CANCEL CIRCUIT
Is there continuity between terminal 17 and ground with control switch turned to CANCEL position?

No → Open circuit in wire harness between terminal 17 of CC ECU and terminal 11 of control switch.

Yes

Is there continuity between terminal 17 and ground when control switch released?

Yes → Short circuit in wire harness between terminal 17 of CC ECU and terminal 11 of control switch.

No

Replace CC ECU.
Then recheck system.

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H ACTUATOR CIRCUIT

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

ACTUATOR

Disconnect connector from actuator and inspect connector on wire harness side as follows.

↓

INSPECT GROUND CONNECTION
Is there continuity between terminal 4 and ground?

No → ● Open circuit in wire harness between terminal 4 of actuator and ground.
● Ground faulty.

Yes ↓

INSPECT ACTUATOR (See page BE-113)
Is actuator operation normal?

No → Replace actuator. Then recheck system.

Yes ↓

STOP LIGHT SWITCH

INSPECT STOP LIGHT SWITCH INSTALLATION
Is stop light switch installed properly?

No → Reinstall stop light switch properly. Then recheck system.

Yes ↓

Connect connector to actuator.
Disconnect connector from stop light switch and inspect connector on wire harness side as follows.

↓

INSPECT SAFETY MAGNETIC CLUTCH CIRCUIT
Is there approx. 38.5 Ω between terminal 4 and ground?

No → Open or short circuit in wire harness between terminals 4 of stop light and 5 of actuator.

Yes ↓

INSPECT STOP LIGHT SWITCH (See page BE-111)
Is stop light switch operation normal?

No → Replace stop light switch. Then recheck system.

Yes ↓

CONTINUED ON NEXT PAGE

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CC ECU

Connect connector to stop light switch.
Disconnect connectors from CC ECU and inspect connector on wire harness side as follows.

INSPECT SAFETY MAGNETIC CLUTCH CIRCUIT
Is there approx. 38.5 Ω between terminal 10 and ground?

No → Open or short circuit in wire harness between terminals 10 of CC ECU and 4 of actuator.

Yes

INSPECT MOTOR CIRCUIT
Is there continuity between terminal 12 and ground?

Yes → Short circuit in wire harness between terminals 12 of CC ECU and 6 of actuator.

No

Is there continuity between terminal 11 and ground?

Yes → Short circuit in wire harness between terminals 11 of CC ECU and 7 of actuator.

No

Is there continuity between terminals 11 and 12 with actuator arm in a position except max. open or max. close?

No → Open circuit in wire harness between terminals 12 of CC ECU and 6 of actuator or between terminals 11 of CC ECU and 7 of actuator.

Yes

INSPECT POSITION SENSOR CIRCUIT
Is there continuity between terminal 24 and ground?

Yes → Short circuit in wire harness between terminals 24 of CC ECU and 1 of actuator.

No

Is there approx. 2 kΩ between terminals 24 and 26?

No →
- Open circuit in wire harness between terminals 26 of CC ECU and 3 of actuator.
- Open circuit in wire harness between terminals 24 of CC ECU and 1 of actuator.

Yes

Does resistance change even between terminals 25 and 26?

No → Open or short circuit in wire harness between terminals 25 of CC ECU and 2 of actuator.

Yes

Replace CC ECU. Then recheck system.

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I SPEED SENSOR CIRCUIT (with M/T)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

SPEED SENSOR

Disconnect connector from speed sensor and inspect connector on wire harness side as follows.

↓

INSPECT GROUND CONNECTION
Is there continuity between terminal 3 and ground?

No → ● Open circuit in wire harness between terminal 3 of speed sensor and ground.
● Ground faulty.

↓ Yes

INSPECT SPEED SENSOR (See page BE-112)
Is speed sensor operation normal?

No → Replace speed sensor. Then recheck system.

↓ Yes

CC ECU

Connect connector to speed sensor.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

↓

INSPECT SPEED SENSOR CIRCUIT
Is there continuity repeatedly between terminal 20 and ground?

No → ● Open or short circuit in wire harness between terminals 20 of CC ECU and 2 of speed sensor.

↓ Yes

Replace CC ECU. Then recheck system.

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J SPEED SENSOR CIRCUIT (with A/T: COMBINATION METER)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

SPEED METER CABLE

Does meter fluctuate when driving at steady speed?
- Yes → Replace meter cable. Then recheck system.
- No ↓

COMBINATION METER

Disconnect connector "A" from combination meter and inspect connector on wire harness side as follows.

INSPECT GROUND CONNECTION
Is there continuity between terminal A-1 and ground?
- No →
  - Open circuit in wire harness between terminal A-1 of combination meter and ground.
  - Ground faulty.
- Yes ↓

INSPECT SPEED SENSOR (See page BE-112)
Is speed sensor operation normal?
- No → Replace speedometer. Then recheck system.
- Yes ↓

CC ECU

Connect connector "A to combination meter.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT SPEED SENSOR CIRCUIT
Is there continuity repeatedly between terminal 20 and ground?
- No →
  - Open or short circuit in wire harness between terminals 20 of CC ECU and B-10 of combination meter.
  - Open or short circuit in circuit plate of combination meter between terminal B-10 and speed sensor.
  - Open circuit in circuit plate of combination meter between terminal A-1 and speed sensor.
- Yes ↓

Replace CC ECU. Then recheck system.

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K SPEED SENSOR CIRCUIT (with A/T: ECT)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

SPEED SENSOR

Disconnect connector from speed sensor and inspect connector on wire harness side as follows.

↓

INSPECT GROUND CONNECTION
Is there continuity between terminal 1 and ground?

No → ● Open circuit in wire harness between terminal 1 of speed sensor and ground.
● Ground faulty.

Yes ↓

INSPECT SPEED SENSOR (See page BE-112)
Is speed sensor operation normal?

No → Replace speed sensor. Then recheck system.

Yes ↓

CC ECU

Connect connector to speed sensor.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

↓

INSPECT SPEED SENSOR CIRCUIT
Is there continuity repeatedly between terminal 21 and ground?

No → ● Open or short circuit in wire harness between terminals 21 of CC ECU and of speed sensor.

Yes ↓

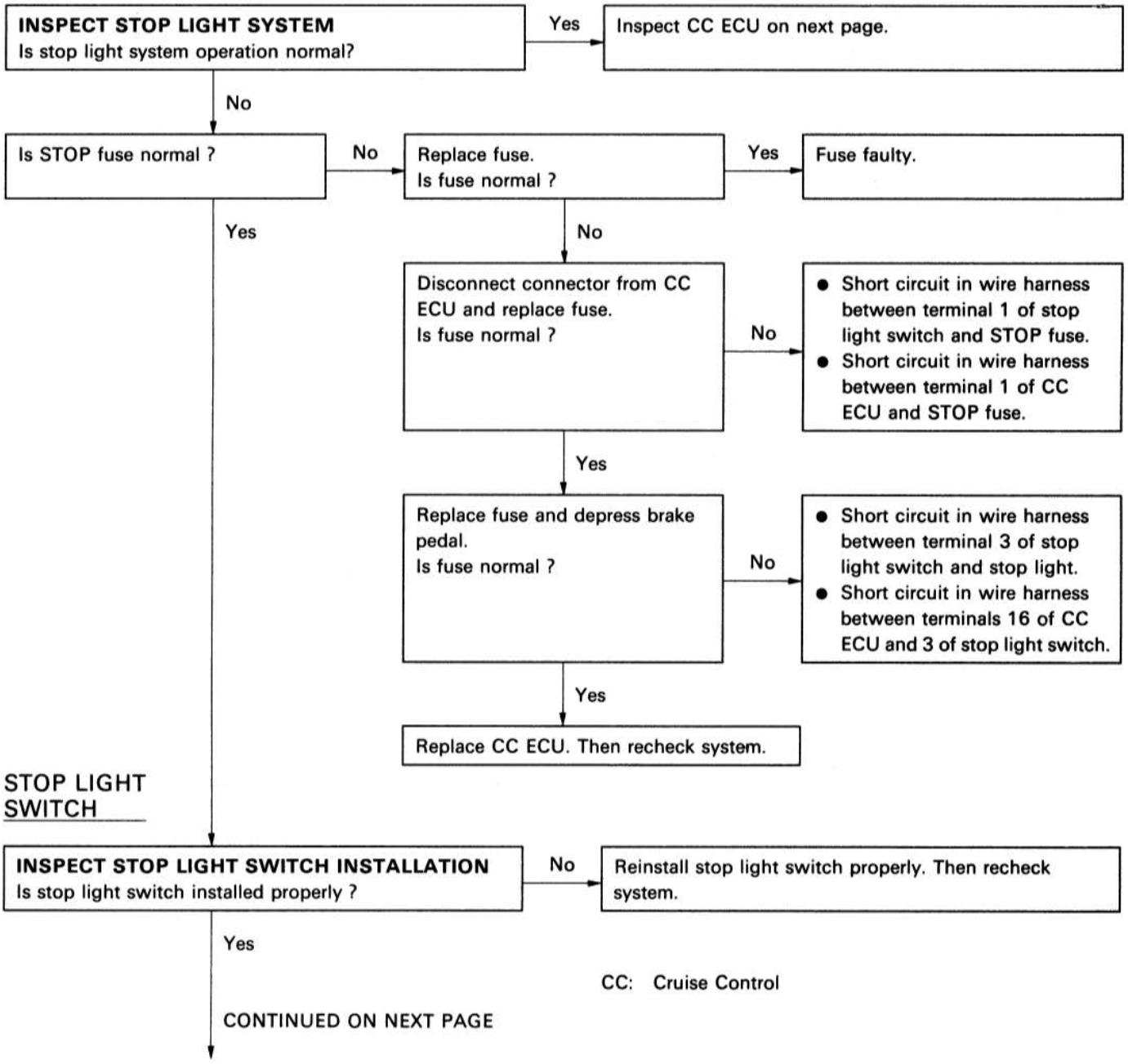
Replace CC ECU. Then recheck system.

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L STOP LIGHT SWITCH CIRCUIT

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.



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STOP LIGHT SWITCH

Disconnect connector from stop light switch and inspect connector on wire harness side as follows.

INSPECT POWER SOURCE
Is there battery voltage between terminal 1 and ground?
No → Open circuit in wire harness between terminal 1 of stop light switch and STOP fuse.

Yes

INSPECT STOP LIGHT CIRCUIT
Connect terminals 1 and 3.
Do stop light lights up?
No →
- Open circuit in wire harness between terminal 3 of stop light switch and ground.
- Ground faulty.

Yes

INSPECT STOP LIGHT SWITCH
(See page BE-111)
Is stop light switch operation normal?
No → Replace stop light switch. Then recheck system.

Yes

CC ECU

Connect connector to stop light switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.
← If stop light system operation is normal, start inspection from this step.

INSPECT STOP LIGHT SWITCH CIRCUIT
Is there battery voltage between terminal 1 and ground?
No → Open circuit in wire harness between terminal 1 of CC ECU and STOP fuse.

Yes

Is there battery voltage between terminal 16 and ground when brake pedal depressed?
No → Open circuit in wire harness between terminals 16 of CC ECU and 3 of stop light switch.

Yes

Replace CC ECU. Then recheck system.

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M PARKING BRAKE SWITCH CIRCUIT

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

INSPECT PARKING BRAKE SWITCH
(See page BE-111)
Is parking brake switch operation normal?

No → Replace parking brake switch. Then recheck system.

Yes

CC ECU

Connect connector to parking brake switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT PARKING BRAKE SWITCH CIRCUIT
Is there continuity between terminal 3 and ground when parking brake lever is released?

Yes → Short circuit in wire harness between terminal 3 of CC ECU and parking brake switch.

No

Is there continuity between terminal 3 and ground when parking brake lever is pulled?

No → Open circuit in wire harness between terminal 3 of CC ECU and parking brake switch.

Yes

Replace CC ECU. Then recheck system.

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N CLUTCH SWITCH CIRCUIT (with M/T)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

CLUTCH SWITCH

INSPECT CLUTCH SWITCH INSTALLATION
Is clutch switch installed properly?
- No → Reinstall clutch switch properly. Then recheck system.
- Yes ↓

Disconnect connector from clutch switch and inspect connector on wire harness side as follows.

INSPECT GROUND CONNECTION
Is there continuity between terminal 1 and ground?
- No → ● Open circuit in wire harness between terminal 1 of clutch switch and ground.
  ● Ground faulty.
- Yes ↓

INSPECT CLUTCH SWITCH (See page BE-112)
Is clutch switch operation normal?
- No → Replace clutch switch. Then recheck system.
- Yes ↓

CC ECU

Connect connector to clutch switch.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT CLUTCH SWITCH CIRCUIT
Is there continuity between terminal 2 and ground when clutch pedal released?
- Yes → Short circuit in wire harness between terminals 2 of CC ECU and 2 of clutch switch.
- No ↓

Is there continuity between terminal 2 and ground when clutch pedal depressed?
- No → Open circuit in wire harness between terminal 2 of CC ECU and 2 of clutch switch.
- Yes ↓

Replace CC ECU. Then recheck system.

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O NEUTRAL START SWITCH CIRCUIT (with A/T)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

INSPECT STARTING SYSTEM
Is starting system normal?
- No → Repair staring system. Then recheck system.
- Yes ↓

CC ECU

Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT NEUTRAL START SWITCH CIRCUIT
Is there continuity between terminal 2 and ground when shift lever is shifted to P or N range?
- No → Open circuit in wire harness between terminals 2 of CC ECU and 2 of neutral start switch.
- Yes ↓

Is there continuity between terminal 2 and ground when shift lever is shifted to L, 2, 3, or R range?
- Yes → Short circuit in wire harness between terminals 2 of CC ECU and 2 of neutral start switch.
- No ↓

Replace CC ECU. Then recheck system.

CC: Cruise Control

P ECT SOLENOID No. 2 CIRCUIT (with A/T)

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

INSPECT ECT SYSTEM
Is ECT system normal?
- No → Repair ECT system. Then recheck system.
- Yes ↓

CC ECU

Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT No. 2 SOLENOID CIRCUIT
Is there approx. 13 Ω between terminal 22 and ground?
- No → Open or short circuit in wire harness between terminal 22 of CC ECU and No. 2 solenoid.
- Yes ↓

Replace CC ECU. Then recheck system.

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Q IDL SIGNAL CIRCUIT

HINT: While carrying out the following inspection, make certain that the connectors and terminals are properly connected.

THROTTLE POSITION SENSOR

INSPECT THROTTLE POSITION SENSOR ADJUSTMENT
Is throttle position sensor adjustment normal?

No → Adjust position sensor position. Then recheck system.

Yes

INSPECT THROTTLE POSITION SENSOR
Is throttle position sensor operation normal?

No → Replace throttle position sensor. Then recheck system.

Yes

CC ECU

Connect connector to throttle position sensor.
Disconnect connector from CC ECU and inspect connector on wire harness side as follows.

INSPECT IDL SIGNAL CIRCUIT
Is there continuity between terminal 23 and ground when acceleration pedal is released?

No → Open circuit in wire harness between terminals 23 of CC ECU and 2 of throttle position sensor.

Yes

Is there continuity between terminal 23 and ground when acceleration pedal is depressed?

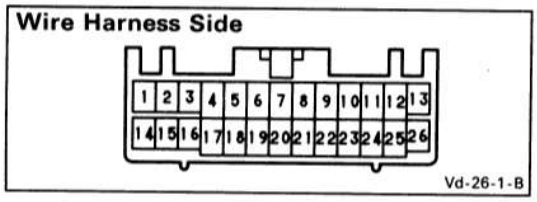
Yes → Short circuit in wire harness between terminals 23 of CC ECU and 2 of throttle position sensor.

No

Replace CC ECU. Then recheck system.

CC: Cruise Control

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Cruise Control ECU Circuit

INSPECT ECU CIRCUIT

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

(USA)

Check for	Measured item	Tester connection	Condition		Specified Value
Continuity	Clutch Switch (M/T)	2 – ground	Clutch pedal Position	released	No continuity
				depressed	Continuity
	Neutral start switch (A/T)	2 – ground	Shift lever position	N or P	Continuity
				L,2,D or R	No continuity
	Parking brake switch	3 – ground	Parking brake lever position	released	No continuity
				pulled	Continuity
	Control switch	4 – ground	Main switch position	pushed	Continuity
				released	No continuity
	Actuator (motor)	11 – 12	Actuator arm position: max. OPEN		(12→11) Continuity
					(11→12) No continuity
			Actuator arm position: max. CLOSE		(11→12) Continuity
					(12→11) No continuity
			Actuator arm position: any position except above position		(11→12) Continuity
	Ground connection	13 – ground	Constant		Continuity
Resistance	Actuator (Safety magnetic clutch)	10 – ground	Brake pedal position	released	Approx. 38.5 Ω
				depressed	No continuity
	Control switch	18 – ground	Control switch position	OFF	No continuity
				RES/ACC	Approx. 68 Ω
				SET/COAST	Approx. 198 Ω
				CANCEL	Approx. 418 Ω
	ECT No. 2 solenoid valve (A/T)	22 – ground	Constant		Approx. 13 Ω
	Actuator (position sensor)	24 – 26	Constant		Approx. 2 kΩ
		25 – 26	Actuator arm turned		Resistance change even
Voltage	STOP fuse	1 – ground	Constant		Battery voltage
	Power source	14 – ground	Ignition switch position	LOCK or ACC	No voltage
				ON	Battery voltage
	Stop light	16 – ground	Brake pedal position	released	No voltage
				depressed	Battery voltage
	Speed sensor	20 – ground	With ignition switch ON, speedometer shaft or speed sensor shaft turned.		Voltage changes repeatedly

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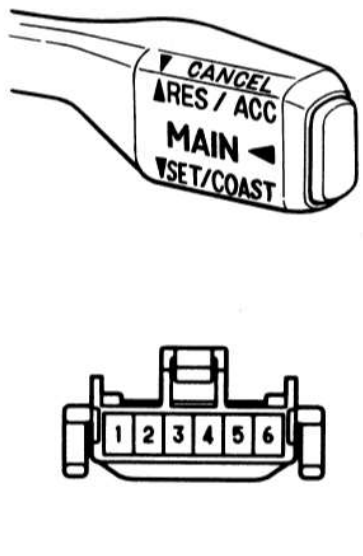
(CANADA)

Check for	Measured item	Tester connection	Condition		Specified value
Continuity	Clutch switch	2 – ground	Clutch pedal position	released	No continuity
				depressed	Continuity
	Parking brake switch	3 – ground	Parking brake lever position	released	No continuity
				pulled	Continuity
	MAIN switch*1	4 – ground	Main switch position	pushed	Continuity
				released	No continuity
	Actuator (motor)	11 – 12	Actuator arm position: max. OPEN		(12→11) Continuity
					(11→12) No continuity
			Actuator arm position: max. CLOSE		(11→12) Continuity
					(12→11) No continuity
			Actuator arm position: any position except above position		(11↔12) Continuity
	Ground connection	13 – ground	Constant		Continuity
	CANCEL switch*1	17 – ground	Cruise control switch position	turned to "CANCEL"	Continuity
				released	No continuity
	RES/ACC switch*1	18 – ground		turned to "RES/ACC"	Continuity
				released	No continuity
	SET/COAST switch*1	19 – ground		turned to "SET/COAST"	Continuity
				released	No continuity
Resistance	Actuator (Safety magnetic clutch)	10 – ground	Brake pedal position	released	Approx. 38.5 Ω
				depressed	No continuity
	Actuator (position sensor)	24 – 26	Constant		Approx. 2 kΩ
		25 – 26	Actuator arm turned		Resistance change even
Voltage	STOP fuse	1 – ground	Constant		Battery voltage
	Power source	14 – ground	Ignition switch position	LOCK or ACC	No voltage
				ON	Battery voltage
	Stop light	16 – ground	Brake pedal position	released	No voltage
				depressed	Battery voltage
	Speed Sensor	20 – ground	With ignition switch ON, speedometer shaft or speed sensor shaft turned.		Voltage changes repeatedly

*1 There is on cruise control switch.

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USA



Parts Inspection

1. **INSPECT SWITCHES**
(Control Switch: USA)

(a) Check continuity between terminals 3 and 5.

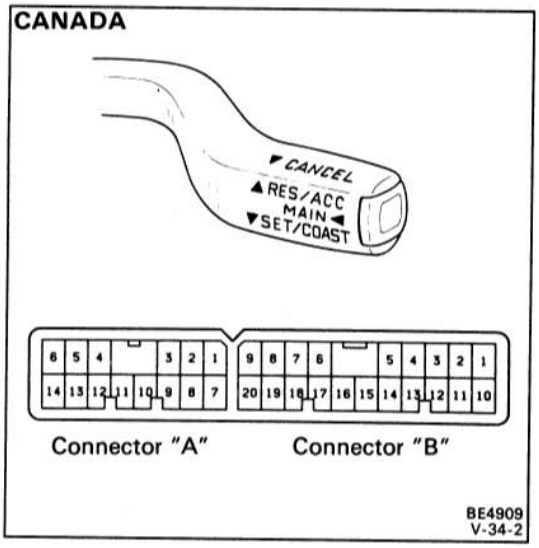
Main switch position	Condition
OFF	No continuity
ON	Continuity

(b) Measure resistance between terminals 3 and 4.

Control switch position	Resistance (Ω)
OFF	∞ (No continuity)
RES/ACC	Approx. 68
SET/COAST	Approx. 198
CANCEL	Approx. 418

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

CANADA



(Control Switch: CANADA/Continuity)

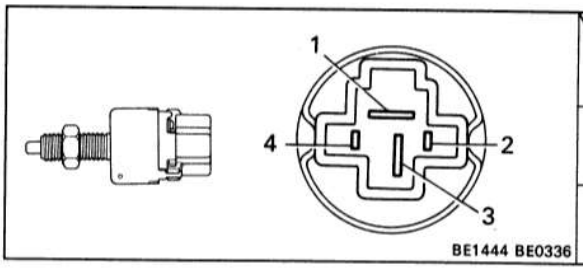
Terminal / Switch Position	B-5 (V)	B-11 (Y)	B-15 (R)	B-17 (Or)	B-19 (B)
OFF					
RES/ACC				○	○
MAIN			○		○
SET/COAST	○				○
CANCEL		○			○

If continuity is not as specified, replace the switch.

(Parking Brake Switch)

See Step 2 of Brake Warning System on page BE-58

(Stop Light Switch/Continuity)

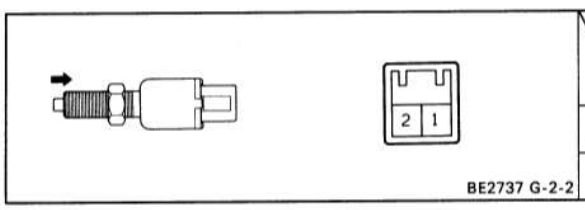


Terminal / Switch position	1	2	3	4
Switch pin free (Brake pedal depressed)	○		○	
Switch pin pushed in (Brake pedal released)		○		○

If continuity is not as specified, replace the stop light switch.

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(Clutch Switch: M/T/Continuity)

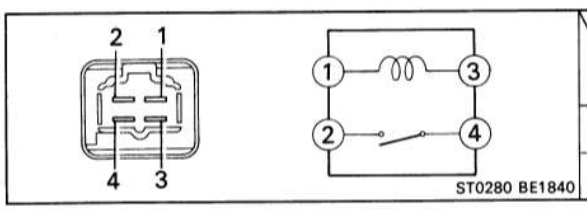


Terminal / Condition	1	2
Switch pin free (Clutch pedal depressed)	○——○	
Switch pin pushed in (Clutch pedal released)		

If continuity is not as specified, replace the switch.

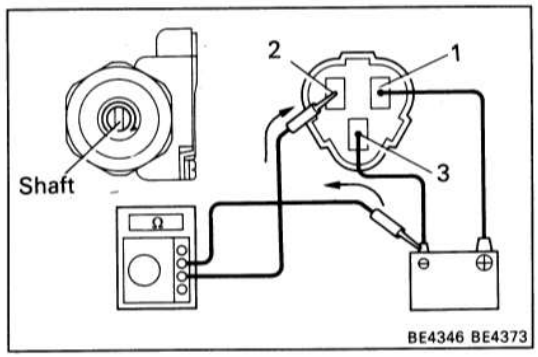
(Neutral Start Switch : A/T)
See page AT-29.

2. INSPECT RELAY
(Starter Relay/Continuity)



Terminal / Condition	1	2	3	4
Constant	○	∿	○	
Apply battery voltage to terminals 1 and 3.		○		○

If continuity is not as specified, replace the relay.



3. INSPECT SPEED SENSOR
(M/T)

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

(b) Check that there is continuity between terminal 2 and the battery negative (–) terminal four times per each revolution of the shaft.

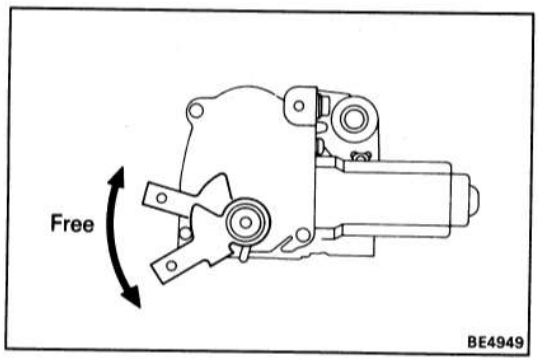
HINT: Connect the test leads so that the current from the ohmmeter can flow from terminal 2 to the battery negative (–) terminal.

If operation is not as specified, replace the speed sensor.

(A/T : Combination Meter)
See page BE-52

(A/T : ECT)
See page AT-29

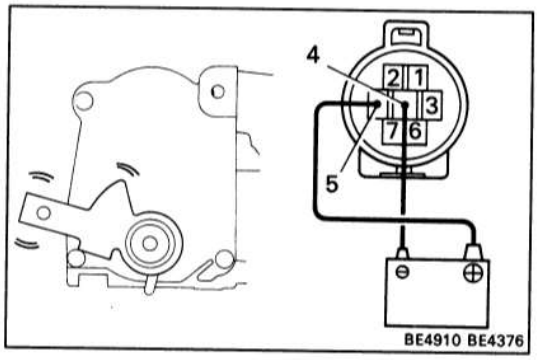
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4. INSPECT ACTUATOR

Safety Magnetic Clutch

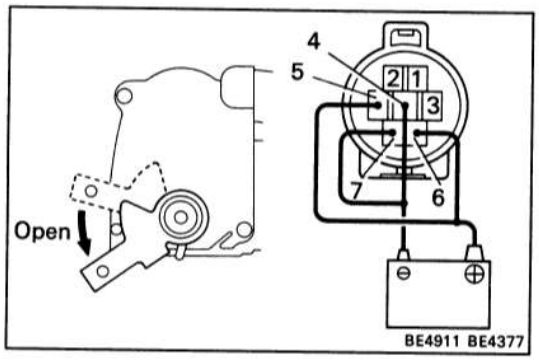
(a) Check that the arm moves smoothly by hand.



(b) Connect the positive (+) lead from the battery to terminal 5 and the negative (–) lead to terminal 4. (Safety Magnetic Clutch turned ON)

(c) Check that the arm does not move by hand.

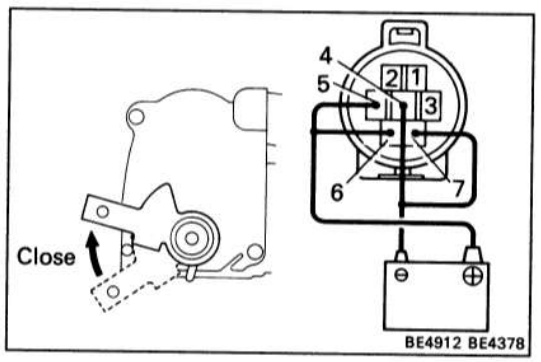
If operation is not as specified, replace the motor.



Motor

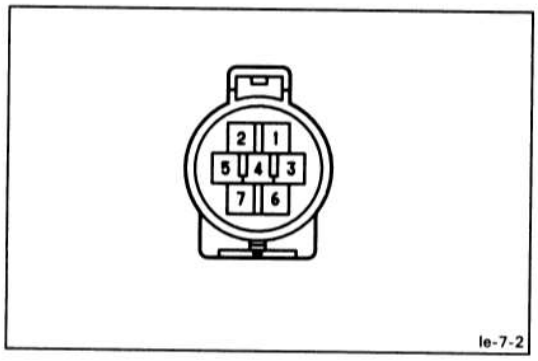
(a) With the safety magnetic clutch ON, connect the positive (+) lead from the battery to terminal 6 and the negative (–) lead to terminal 7, check that the arm moves to the open side.

(b) When the arm reached to the open position, check that the motor operation stops.



(c) With the safety magnetic clutch ON, connect the positive (+) lead from the battery to terminal 7 and the negative (–) lead to terminal 6, check that the arm moves to the close side.

(d) When the arm reaches to the closed position, check that the motor operation stops.

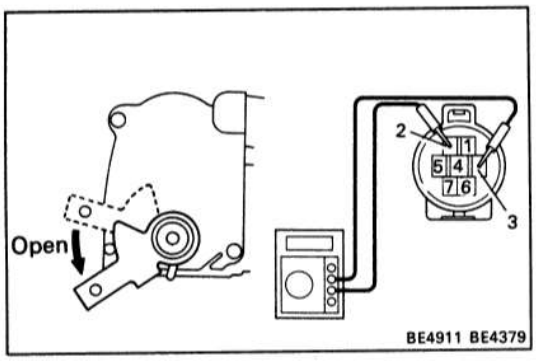


Position Sensor

(a) Measure the resistance between terminals 1 and 3.

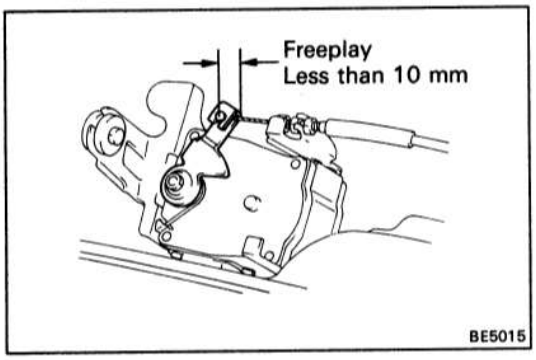
Resistance: Approx. 2 kΩ

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(b) When the arm is moving from the closed to open position, check that resistance between terminals 2 and 3 increases from approx. 0.5 to 1.7 kΩ.

If operation is not as specified, replace the motor.



Cruise Control Cable

(a) Check that the cruise control cable freeplay is less than 10 mm (0.39 in.).

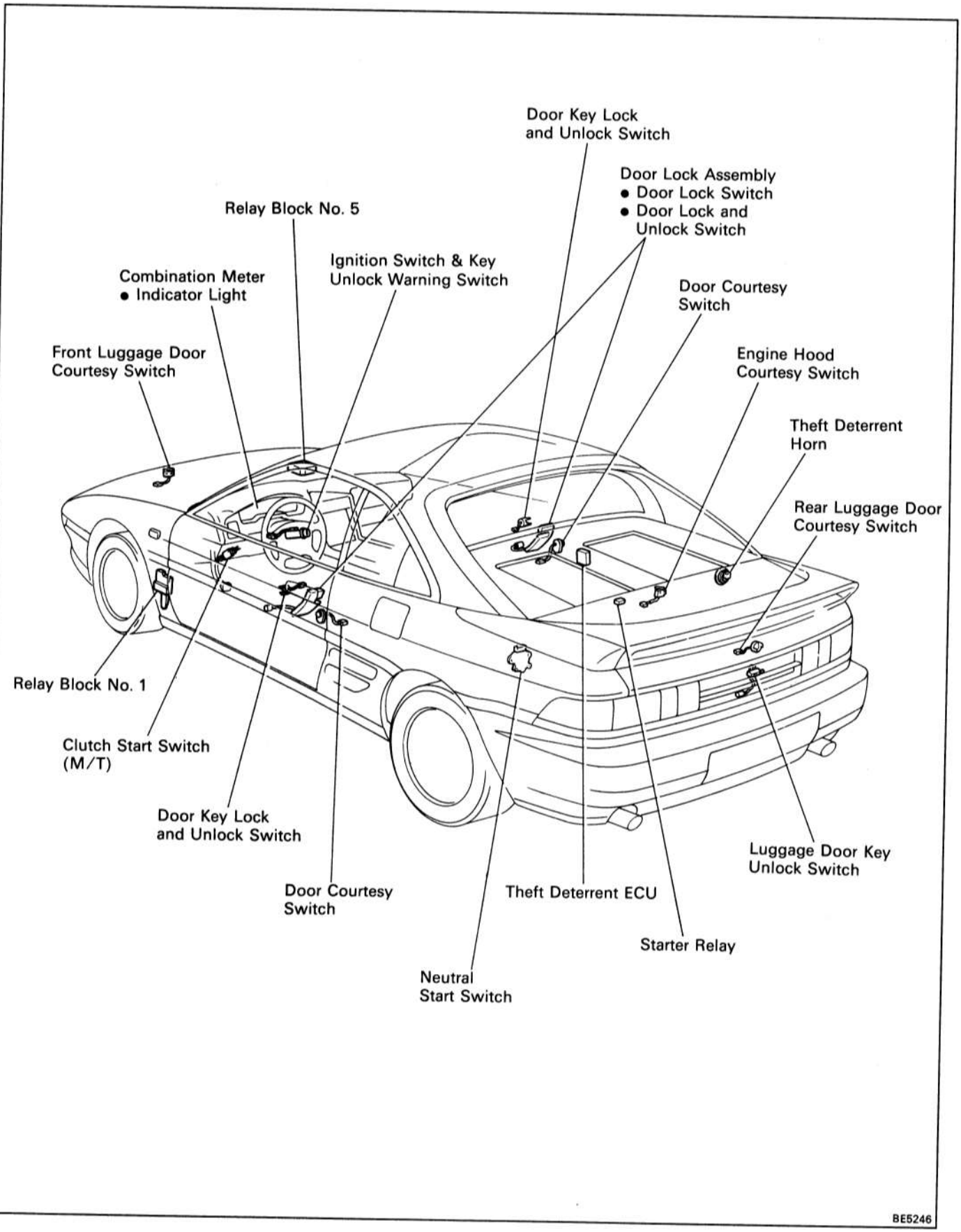
(b) If necessary adjust the cruise control cable freeplay.

5. INSPECT THROTTLE POSITION SENSOR
See pages FI-134 and FI-141.

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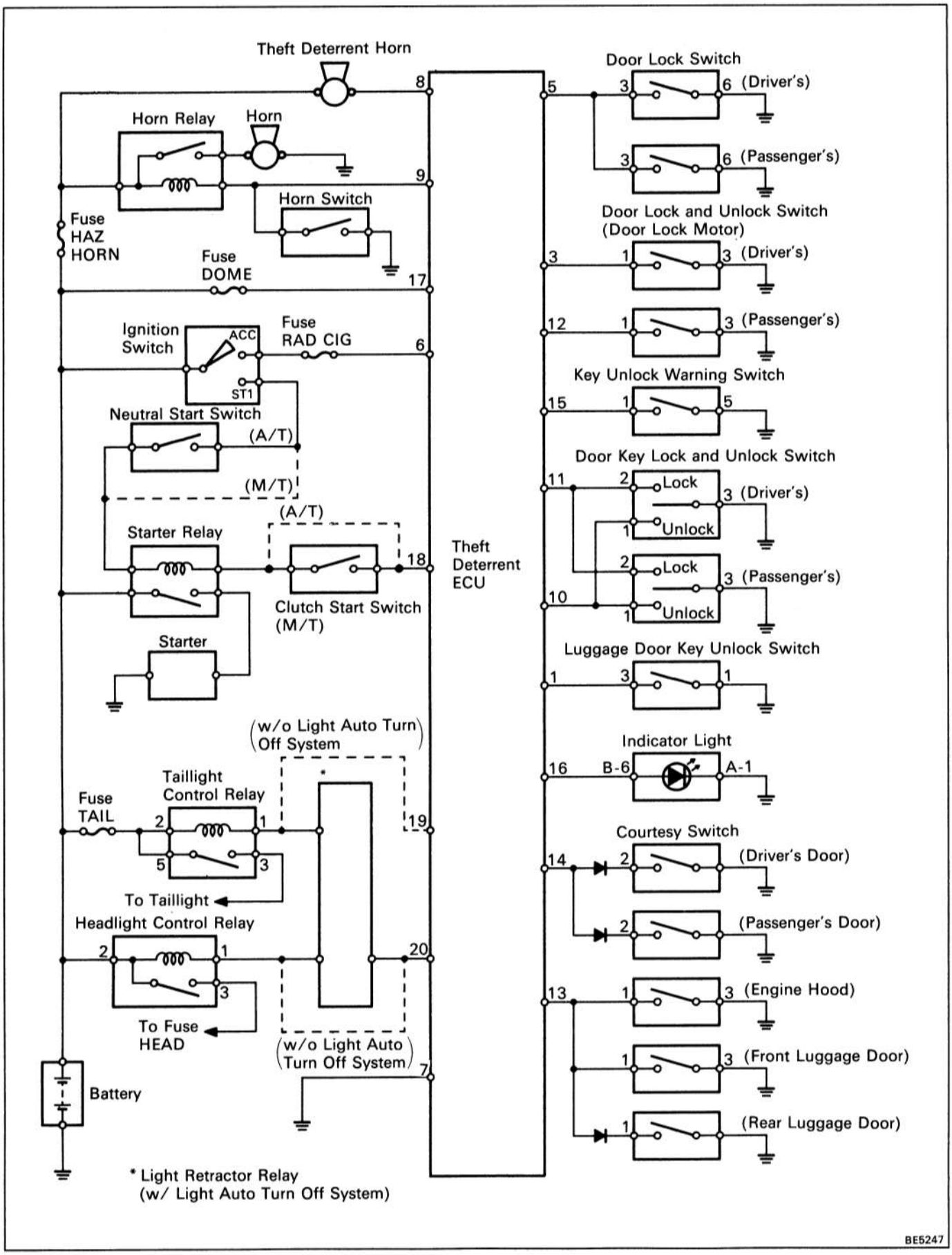
THEFT DETERRENT SYSTEM

Parts Location



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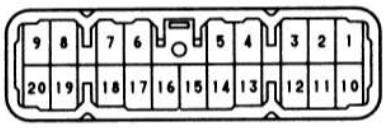
Wiring Diagrams



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Connector Diagrams

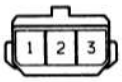
Theft Deterrent ECU



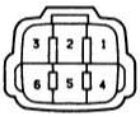
Door Key Lock and Unlock Switch



Luggage Door Key Unlock Switch



Door Lock Assembly



Theft Deterrent Horn



Courtesy Switch (Engine Hood)



(Front Luggage Door)



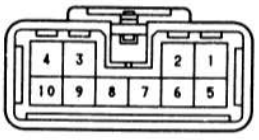
(Rear Luggage Door)



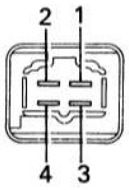
(Door)



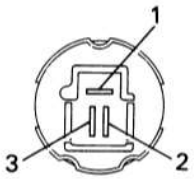
Ignition Switch Key Unlock Warning Switch



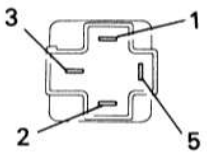
Starter Relay



Headlight Control Relay



Taillight Control Relay



e-20-2-C Ie-3-1 GA-3-1
IS-6-2-B IA-2-2
IU-3-2 IU-3-2 e-1-1 e-2-1-G
e-10-2-B ST0280 BE2763 BE4049

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Troubleshooting

- Check that the operation of Power Door Lock Control System is normal.
- When the system is not operating, lower the door glass and confirm under what conditions it does not operate, or malfunctions.

Problem	Inspection Item	Section
Theft deterrent system can not be set.	Power source circuit	A
Indicator light does not light even if theft deterrent system operated.	Indicator light circuit	B
Theft deterrent system does not operate when driver's and passenger's doors opened.	Door Lock and unlock switch circuit Door lock switch circuit Door courtesy switch circuit	C D E
Theft deterrent system does not operate when front and rear luggage doors opened.	Luggage door courtesy switch circuit	E
Theft deterrent system does not operate when engine hood opened.	Engine hood courtesy switch circuit	E
Theft deterrent system does not cancel when driver's and passenger's doors unlocked with key.	Door key lock and unlock switch circuit	F
Theft deterrent system does not cancel when rear luggage door unlocked with key.	Luggage door key unlock switch circuit	G
Theft deterrent system does not cancel when ignition switch turned to ON or ACC position.	Ignition switch circuit Key unlock warning switch circuit	H I
Starter cut system does not operate even if theft deterrent system operated.	Starter cut system circuit	J
Starter cut system does not cancel even if theft deterrent system canceled.	Starter cut system circuit	J
Horn does not blow even if theft deterrent system operated	Theft deterrent horn circuit Standard equipment horns circuit	K
Theft deterrent horn blows even if system is not set.	Theft deterrent horn circuit	K
Headlights do not flash even if theft deterrent system operated.	*1 Light retractor relay circuit *2 Headlight control relay circuit	L M
Taillights do not flash even if theft deterrent system operated.	*1 Light retractor relay circuit *2 Taillight control relay circuit	L N
Headlights flash even if system is not set.	*1 Light retractor relay circuit *2 Headlight control relay circuit	L M
Taillights flash even if system is not set.	*1 Light retractor relay circuit *2 Taillight control relay circuit	L N

*1 w/ Light Auto Turn Off System
*2 w/o Light Auto Turn Off System

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A POWER SOURCE CIRCUIT

Turn ignition switch off.

Is DOME fuse normal?
- No → Replace fuse. Is operation normal?
  - No → Short circuit in wire harness between fuse and terminal 17 of TD ECU.
  - Yes → Fuse faulty.
- Yes

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT POWER SOURCE
Is there battery voltage between terminal 17 and ground.
- No → Open circuit in wire harness between fuse and terminal 17 of TD ECU.
- Yes

INSPECT GROUND CONNECTION
Is there continuity between terminal 7 and ground.
- No →
  - Open circuit in wire harness between terminal 7 of TD ECU and ground.
  - Ground faulty.
- Yes

INSPECT FOLLOWING SECTIONS:

Door Lock and Unlock Switch Circuit	Section C
Door Lock Switch Circuit	Section D
Courtesy Switch Circuit	Section E
Door Key Lock and Unlock Switch Circuit	Section F
Luggage Door Key Unlock Switch Circuit	Section G
Ignition Switch Circuit	Section H
Key Unlock Warning Switch Circuit	Section I

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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B INDICATOR LIGHT CIRCUIT

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT INDICATOR LIGHT CIRCUIT
Connect the negative lead from the ohmmeter to terminal 16 and positive lead to ground.
* Is there continuity between terminal 16 and ground?

No → Open circuit in indicator light circuit.

Yes

Replace TD ECU. Then recheck system.

*: This circuit includes the LED. If the circuit shows no continuity, change the positive and negative probes and recheck the circuit.

TD: Theft Deterrent

C DOOR LOCK AND UNLOCK SWITCH CIRCUIT

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT DRIVER'S DOOR LOCK AND UNLOCK SWITCH CIRCUIT
Is there continuity between terminal 3 and ground with driver's door unlocked?

No → Open circuit in driver's door lock and unlock switch circuit.

Yes

INSPECT PASSENGER'S DOOR LOCK AND UNLOCK SWITCH CIRCUIT
Is there continuity between terminal 12 and ground with passenger's door unlocked?

No → Open circuit in passenger's door lock and unlock switch circuit.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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D DOOR LOCK SWITCH CIRCUIT

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT DRIVER'S DOOR LOCK SWITCH CIRCUIT
Is there continuity between terminal 5 and ground with driver's door opened?

No → Open circuit in driver's door lock switch circuit.

Yes

INSPECT PASSENGER'S DOOR LOCK SWITCH CIRCUIT
Is there continuity between terminal 5 and ground with passenger's door opened?

No → Open circuit in passenger's door lock switch circuit.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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E COURTESY SWITCH CIRCUIT

Turn ignition switch off.

*: This circuit includes the diode. If the circuit shows no continuity, change the positive and negative probes and recheck the circuit.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

Driver's and Passenger's Door

INSPECT DRIVER'S DOOR COURTESY SWITCH CIRCUIT
Close passenger's door.
* Is there continuity between terminal 14 and ground with driver's door opened?

No → Open circuit in driver's door courtesy switch circuit.

Yes

INSPECT PASSENGER'S DOOR COURTESY SWITCH CIRCUIT
Close driver's door.
* Is there continuity between terminal 14 and ground with passenger's door opened?

No → Open circuit in passenger's door courtesy switch circuit.

Yes

Engine Hood

INSPECT ENGINE HOOD COURTESY SWITCH CIRCUIT
Close front and rear luggage doors.
Is there continuity between terminal 13 and ground with engine hood opened?

No → Open circuit in engine hood courtesy switch circuit.

Yes

Luggage Door

INSPECT FRONT LUGGAGE DOOR COURTESY SWITCH CIRCUIT
Close engine hood and rear luggage door.
Is there continuity between terminal 13 and ground with front luggage door opened?

No → Open circuit in front luggage door courtesy switch circuit.

Yes

INSPECT REAR LUGGAGE DOOR COURTESY SWITCH CIRCUIT
Close engine hood and front luggage door.
* Is there continuity between terminal 13 and ground with rear luggage door opened?

No → Open circuit in rear luggage door courtesy switch circuit.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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F DOOR KEY LOCK AND UNLOCK SWITCH CIRCUIT

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

DRIVER'S DOOR

INSPECT KEY LOCK SWITCH CIRCUIT
Is there continuity between terminal 11 and ground with driver's door locked with key?
- No → Open circuit in driver's door key lock switch circuit.
- Yes

Is there continuity between terminal 11 and ground with driver's door unlocked with key?
- Yes → Short circuit in driver's door key lock switch circuit.
- No

INSPECT KEY UNLOCK SWITCH CIRCUIT
Is there continuity between terminal 10 and ground with driver's door unlocked with key?
- No → Open circuit in driver's door key unlock switch circuit.
- Yes

Is there continuity between terminal 10 and ground with driver's door locked with key?
- Yes → Short circuit in driver's door key unlock switch circuit.
- No

PASSENGER'S DOOR

INSPECT KEY LOCK SWITCH CIRCUIT
Is there continuity between terminal 11 and ground with passenger's door locked with key?
- No → Open circuit in passenger's door key lock switch circuit.
- Yes

Is there continuity between terminal 11 and ground with passenger's door unlocked with key?
- Yes → Short circuit in passenger's door key lock switch circuit.
- No

INSPECT KEY UNLOCK SWITCH CIRCUIT
Is there continuity between terminal 10 and ground with passenger's door unlocked with key?
- No → Open circuit in passenger's door key unlock switch circuit.
- Yes

Is there continuity between terminal 10 and ground with passenger's door locked with key?
- Yes → Short circuit in passenger's door key unlock switch circuit.
- No

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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G LUGGAGE DOOR KEY UNLOCK SWITCH CIRCUIT

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT LUGGAGE DOOR KEY UNLOCK SWITCH CIRCUIT
Is there continuity between terminal 1 and ground with luggage door key free?

Yes → Short circuit in luggage door key unlock switch circuit.

No

Is there continuity between terminal 1 and ground with luggage door unlocked with key?

No → Open circuit in luggage door key unlock switch circuit.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

H IGNITION SWITCH CIRCUIT

Turn ignition switch OFF.

Is RAD CIG fuse normal?

No → Replace fuse. Is operation normal?

No → Short circuit in wire harness between fuse and terminal 6 of TD ECU.

Yes → Fuse faulty.

Yes

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT IGNITION SWITCH CIRCUIT
Is there battery voltage between terminal 6 and ground with ignition switch turned to ACC or ON.

No → Open circuit in wire harness between fuse and terminal 6 of TD ECU.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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I KEY UNLOCK WARNING SWITCH CIRCUIT

Turn ignition switch OFF.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT KEY UNLOCK WARNING SWITCH CIRCUIT
Ignition key set to ignition switch.
Is there continuity between terminal 15 and ground?

No → Open circuit in key unlock warning switch circuit.

Yes

Ignition key removed from ignition switch.
Is there continuity between terminal 15 and ground?

Yes → Short circuit in key unlock warning switch circuit.

No

Replace TD ECU, Then recheck system.

TD: Theft Deterrent

J STARTER CUT SYSTEM CIRCUIT

Turn ignition switch to ST.

HINT: If starter does not operate, even when system is cancelled, before checking the circuit, use the key to turn the door lock to the unlock position and recheck starter operation.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT STARTER CUT SYSTEM CIRCUIT
Turn ignition switch to ST position (*1 with shift lever at N or P position or *2 with clutch pedal depressed). Is there battery voltage between terminal 18 and ground?

No → Short or open circuit in starter relay circuit.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent
*1 A/T
*2 M/T

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K THEFT DETERRENT HORN CIRCUIT

Turn ignition switch off.

THEFT DETERRENT HORN

INSPECT THEFT DETERRENT HORN OPERATION
Disconnect connector from horn.
Is horn operation normal? (See page BE-130)

No → Replace theft deterrent horn.

Yes

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT THEFT DETERRENT HORN CIRCUIT
Is there battery voltage between terminal 8 and ground.

No → Open or short circuit in theft deterrent horn circuit.

Yes

INSPECT STANDARD EQUIPMENT HORN CIRCUIT
Is there battery voltage between terminal 9 and ground.

No → Open or short circuit in standard horn circuit.

Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

L LIGHT RETRACTOR RELAY CIRCUIT

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT LIGHT RETRACTOR RELAY CIRCUIT
Ground the terminal 20 and check that the headlights and taillights light up.

No →
- Open circuit in light retractor relay circuit.
- Check the light retractor relay.

Yes

Replace TD ECU.

TD: Theft Deterrent

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M HEADLIGHT CONTROL RELAY CIRCUIT (w/o LIGHT AUTO TURN OFF SYSTEM)

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT HEADLIGHT CONTROL RELAY CIRCUIT
If there battery voltage between terminal 20 and ground.

No → Open or short circuit in headlight control relay circuit.

Yes

INSPECT HEADLIGHT CIRCUIT
(See pages BE-14 and 16)

No → Replace parts as necessary.

Yes

Replace TD ECU. Then recheck system

TD: Theft Deterrent

N TAILLIGHT CONTROL RELAY CIRCUIT (w/o LIGHT AUTO TURN OFF SYSTEM)

Turn ignition switch off.

TD ECU

Disconnect TD ECU connector and inspect connector on wire harness side as follows.

INSPECT TAILLIGHT CONTROL RELAY CIRCUIT
Is there battery voltage between terminal 19 and ground.

No → Open or short circuit in taillight control relay circuit.

Yes

INSPECT TAILLIGHT CIRCUIT
(See pages BE-14 and 16)

No → Replace as necessary part.

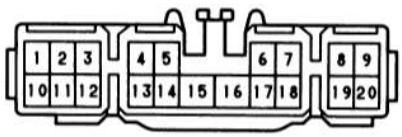
Yes

Replace TD ECU. Then recheck system.

TD: Theft Deterrent

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Wire Harness Side



e-20-1

Parts Inspection

1. INSPECT THEFT DETERRENT ECU CIRCUIT

Disconnect the ECU and inspect the connector on the wire harness side as shown in the chart below.

Check for	Tester connection	Condition	Specified value
Continuity	1 – ground	Luggage door unlocked with key	Continuity
		Other position	No continuity
	3 – ground	Driver's door lock lever unlocked	Continuity
		Driver's door lock lever locked	No continuity
	5 – ground	Driver's and passenger's door closed	No continuity
		Others	Continuity
	7 – ground	Constant	Continuity
	10 – ground	Driver's or passenger's door unlocked with key	Continuity
		Others	No continuity
	11 – ground	Driver's or passenger's door locked with key	Continuity
		Others	No continuity
	12 – ground	Passenger's door lock lever unlocked	Continuity
		Passenger's door lock lever locked	No continuity
	*1 13 – ground	Engine hood, front luggage door and rear luggage door closed	No continuity
		Others	Continuity
	*1 14 – ground	Driver's and passenger's door closed	No continuity
		Others	Continuity
	15 – ground	Ignition key set to ignition switch	Continuity
		Ignition key removed from ignition switch	No continuity
	*1 16 – ground	Constant	Continuity
Voltage	6 – ground	Turn ignition switch to ACC or ON	Battery voltage
	8 – ground	Constant	Battery voltage
	9 – ground	Constant	Battery voltage
	17 – ground	Constant	Battery voltage
	18 – ground	(M/T) Turn ignition switch to START with clutch pedal depressed. (A/T) Turn ignition switch to START with shift lever at P or N position	Battery voltage
	*2 19 – ground	Constant	Battery voltage
	20 – ground	Constant	Battery voltage

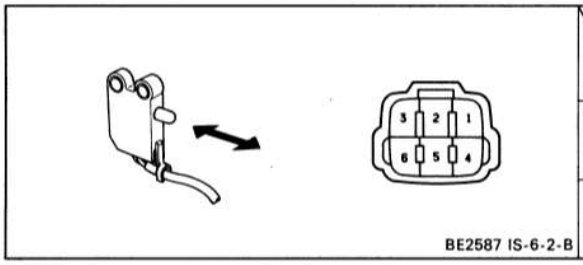
*1 This circuit includes the LED or diode. If the circuit shows no continuity, change the positive and negative probes and recheck the circuit.

*2 w/o Light Auto Turn Off System

If circuit is correct, replace the theft deterrent ECU.

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2. INSPECT SWITCHES
(Door Lock Switch: in Door Lock Assembly/ Continuity)



Terminal / Condition	3	6
Door closed (Switch pin pushed in)		
Door opened (Switch pin released)	○———	———○

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

(Door Lock and Unlock Switch/Continuity)

See Step 2 of Power Door Lock Control System on page BE-76.

(Key Unlock Warning Switch/Continuity)

See Step 1 of Key Confine Prevention System on page BE-11.

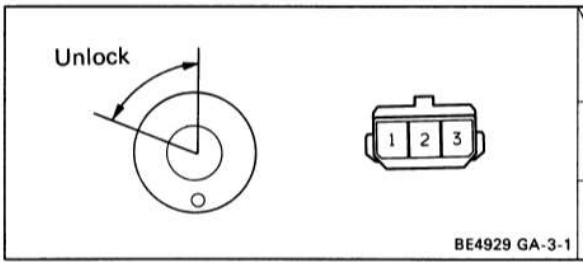
(Ignition Switch/Continuity)

See Ignition Switch on page BE-11.

(Door Key Lock and Unlock Switch/Continuity)

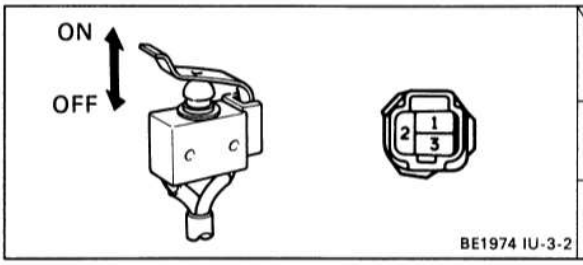
See Step 1 of Power Door Lock Control System on page BE-75.

(Luggage Door Key Unlock Switch/Continuity)



Terminal / Condition	1	3
OFF		
UNLOCK	○———	———○

(Engine Hood Courtesy Switch/Continuity)



Terminal / Condition	1	2	3
OFF (Closed)			
ON (Opened)	○———	———	———○

(Front Luggage Door Courtesy Switch/Continuity)

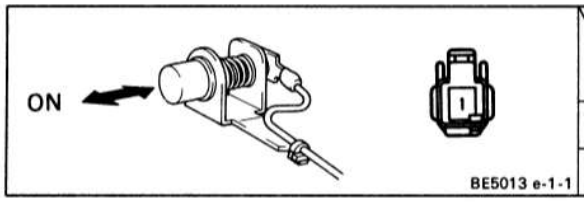
See Engine Hood Courtesy Switch on page BE-129.

(Door Courtesy Switch/Continuity)

See Step 1 of Illuminated Entry System on page BE-41.

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(Rear Luggage Door Courtesy Switch/Continuity)



Terminal / Condition	1	Switch Body
OFF (closed)		
ON (Opened)	O———	———O

If operation is not as specified, replace the switch.

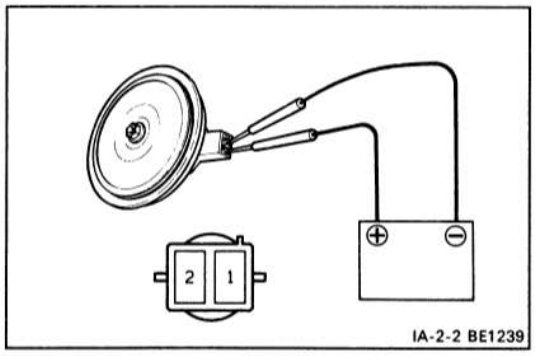
(Neutral Start Switch/Continuity)
See page AT-16.

(Clutch start switch/Continuity)
See page CL-5.

3. **INSPECT RELAY**
(Starter Relay/Continuity)
See page ST-18.

(Headlight Control Relay/Continuity)
See page BE-34.

(Taillight Control Relay/Continuity)
See page BE-34.



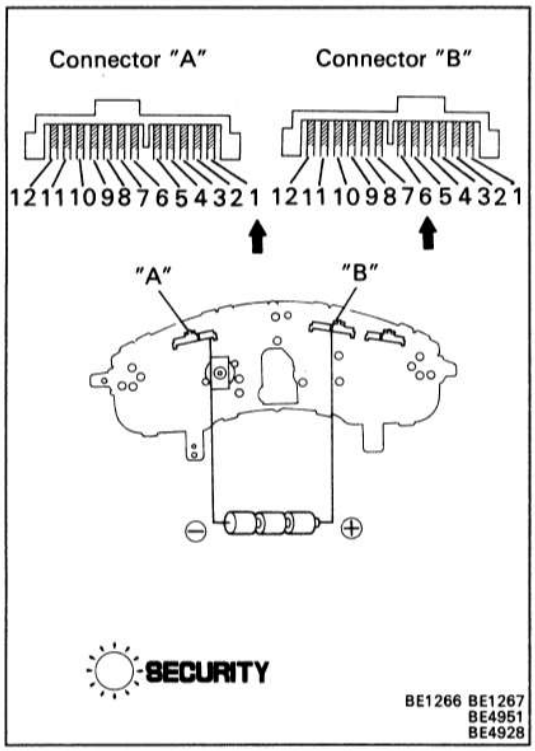
4. **INSPECT THEFT DETERRENT HORN**
(Operation)

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

(b) Check that the horn blows.

If operation is not as specified, replace the horn.

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5. INSPECT THEFT DETERRENT INDICATOR LIGHT

(a) Connect a series of three 1.5 V dry cell batteries.

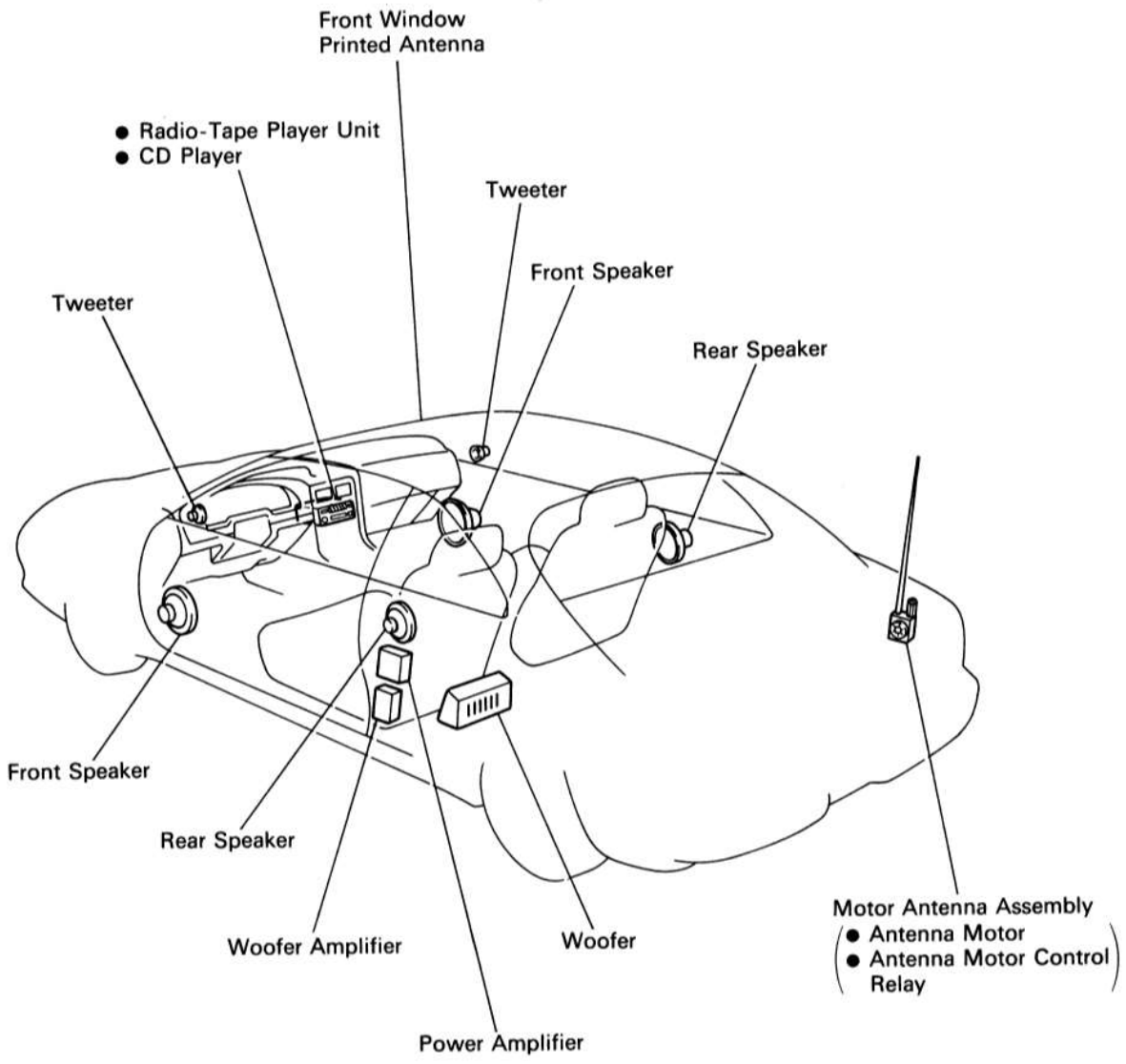
(b) Connect the positive (+) lead from the dry cell batteries to terminal 6 of connector "B" and the negative (–) lead to terminal 1 of connector "A".

(c) Check that the indicator light lights up.

If the indicator light does not light up, replace the indicator light.

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AUDIO SYSTEM
Parts Location

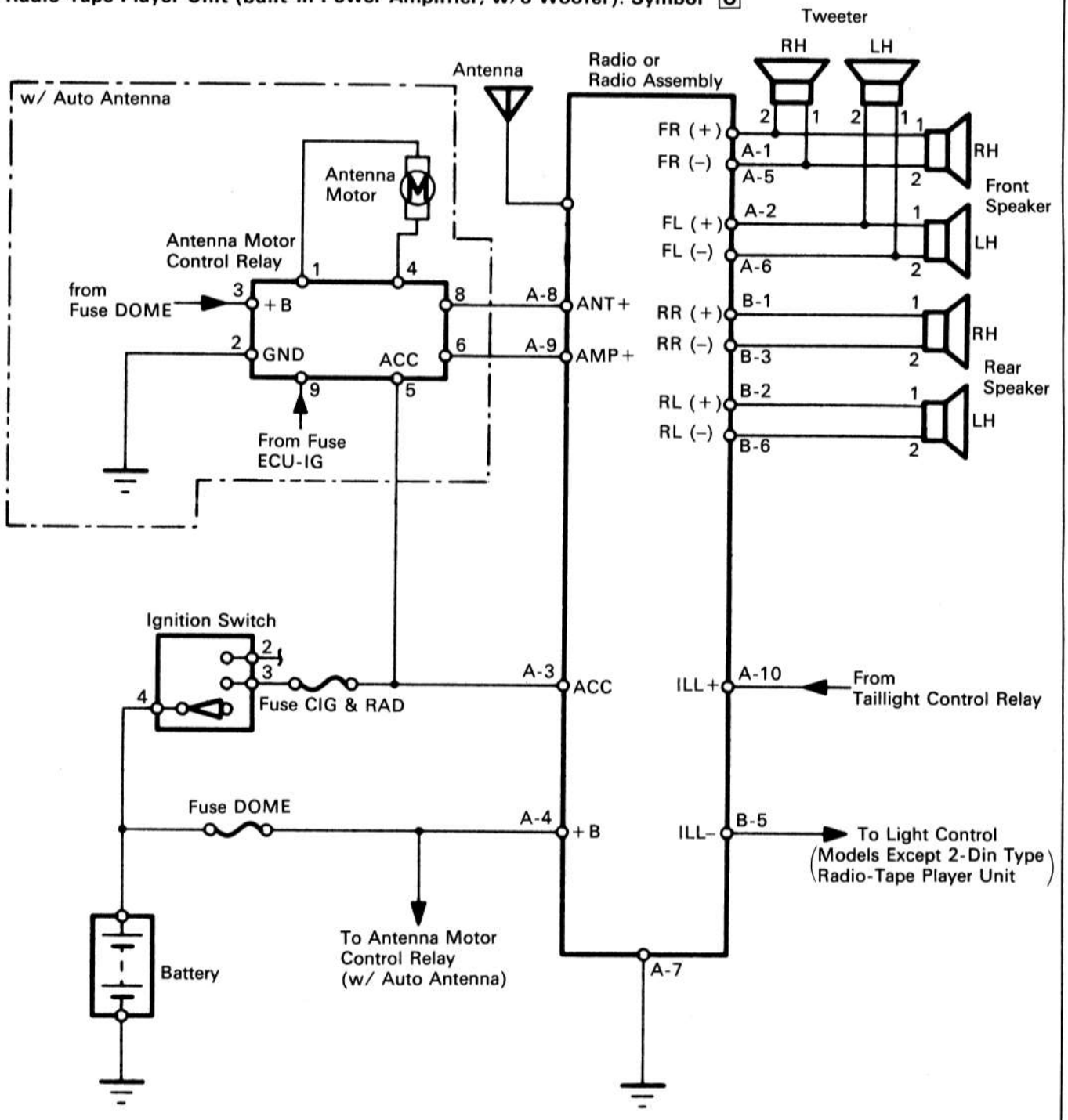


BE4700

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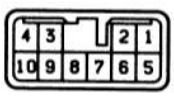
Wiring and Connector Diagrams

Radio: Symbol [R]
Radio-Tape Player Unit (built-in Power Amplifier, w/o Woofer): Symbol [U]

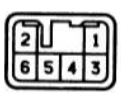


The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

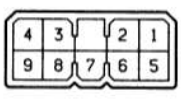
Radio Assembly
Connector "A"



Connector "B"



Antenna Motor
Control Relay



Front Speaker



Rear Speaker



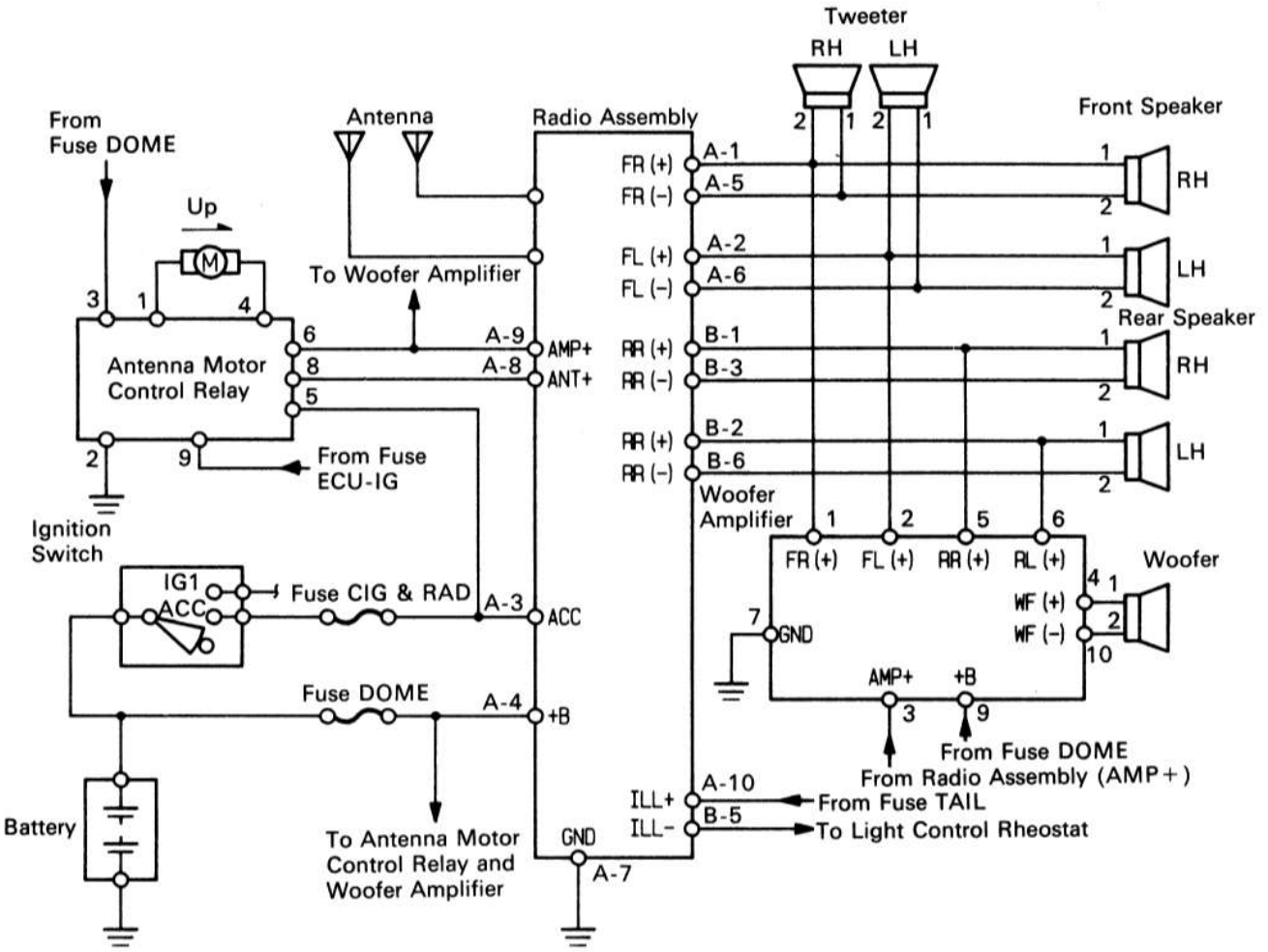
Tweeter



BE4686
S-10-2-A S-6-2-E G-9-2 Ie-2-2-J BE4123 GA-2-2-C

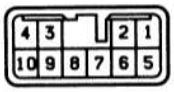
cardiagn.com

Radio-Tape Player Unit (built-in Power Amplifier, w/ Woofer): Symbol U

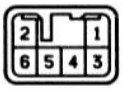


The POWER SOURCE CIRCUIT has been simplified. For full details, see page BE-9.

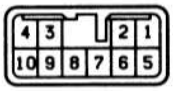
Radio Assembly Connector "A"



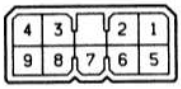
Connector "B"



Woofer Amplifier



Antenna Motor Control Relay



Front Speaker



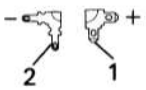
Rear Speaker



Tweeter



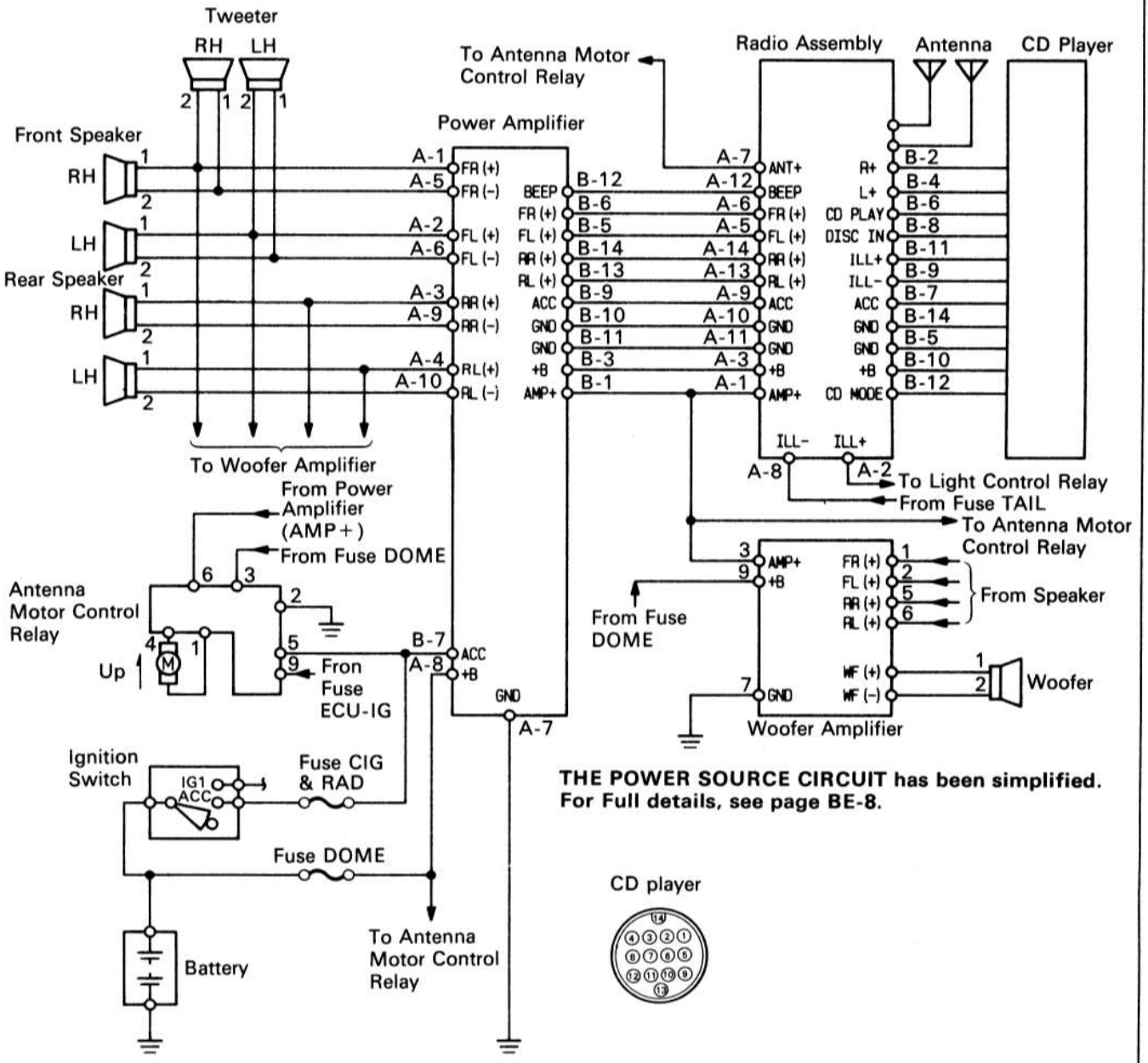
Woofer



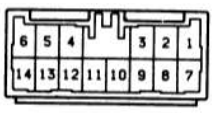
BE4771
S-10-2-A S-6-2-E S-10-2-A G-9-2
Ie-2-2-J BE4123 GA-2-2-C BE4773

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Radio-Tape Player Unit (Separate Power Amplifier, w/Woofer): Symbol [P]
Radio-Tape Player Unit + CD Player: Symbol [C]



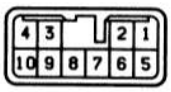
Radio Assembly Connector "A"



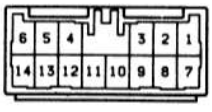
Connector "B"



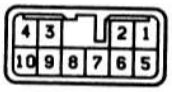
Power Amplifier Connector "A"



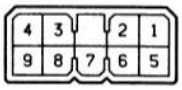
Connector "B"



Woofer Amplifier



Antenna Motor Control Relay



Front Speaker



Rear Speaker



Tweeter



Woofer



BE4772
BE3308
Y-14-2 BE3309 S-10-2-A Y-14-2 S-10-2-A
G-9-2 le-2-2-J BE4123 GA-2-2-C BE4773

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System Description

RADIO WAVE BAND

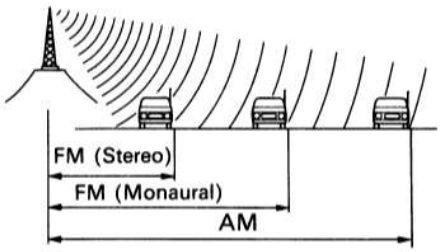
The radio wave bands used in radio broadcasting are as follows:

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

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

SERVICE AREA

There is great difference in the size of the service area for AM, FM monaural, and FM stereo broadcasting. Thus it may happen that FM broadcast 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") the most easily.



BE2818

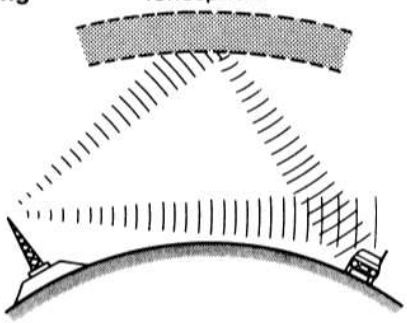
RECEPTION PROBLEMS

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

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".

Fading

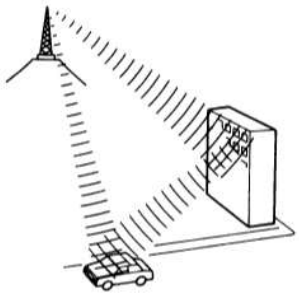


BE2819

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 of buildings and mountains and interferes with the signal that is received directly.

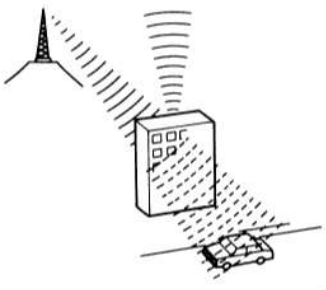
Multipath


BE2820

Fade Out

Because FM radio waves are of higher frequencies than AM radio waves, they bounce off of 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".

Fade Out


BE2821

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COMPACT DISC PLAYER

Compact Disc (hereafter called "CD") players use a laser beam pick-up to read the digital signals recorded on the CD and reproduce analog signals of the music, etc. There are 4.7 in. (12 cm) and 3.2 in. (8 cm) CD available.

HINT: Never attempt to disassemble or oil any part of the player unit. Do not insert any object other than a disc into the slot.

NOTICE: CD players use invisible laser beam which could cause hazardous radiation explosure if directed. Be sure to operate the player correctly as instructed.

MAINTENANCE

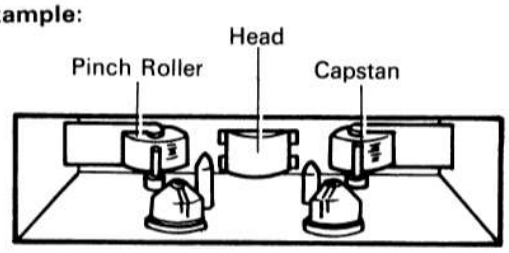
(Tape Player)

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.

Example:



C0192

(CD Player)

Disc Cleaning

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

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

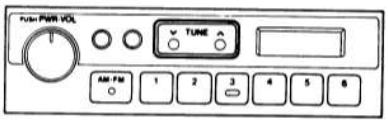


BE4331

AUDIO TYPES

Example:

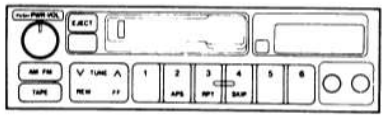
Radio



(Symbol: R)

BE4332

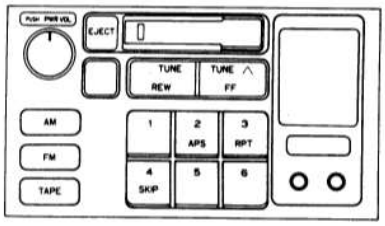
Radio-Tape Player Unit Radio
1-Din Type



(Symbol: Built-in Power Amplifier U
: Separate Power Amplifier P)

BE4336

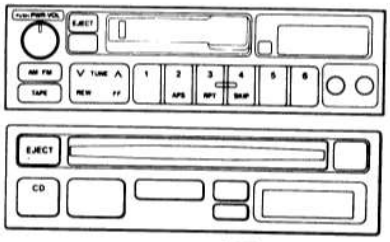
2-Din Type



(Symbol: U)

BE4333

Radio-Tape Player Unit + CD Player

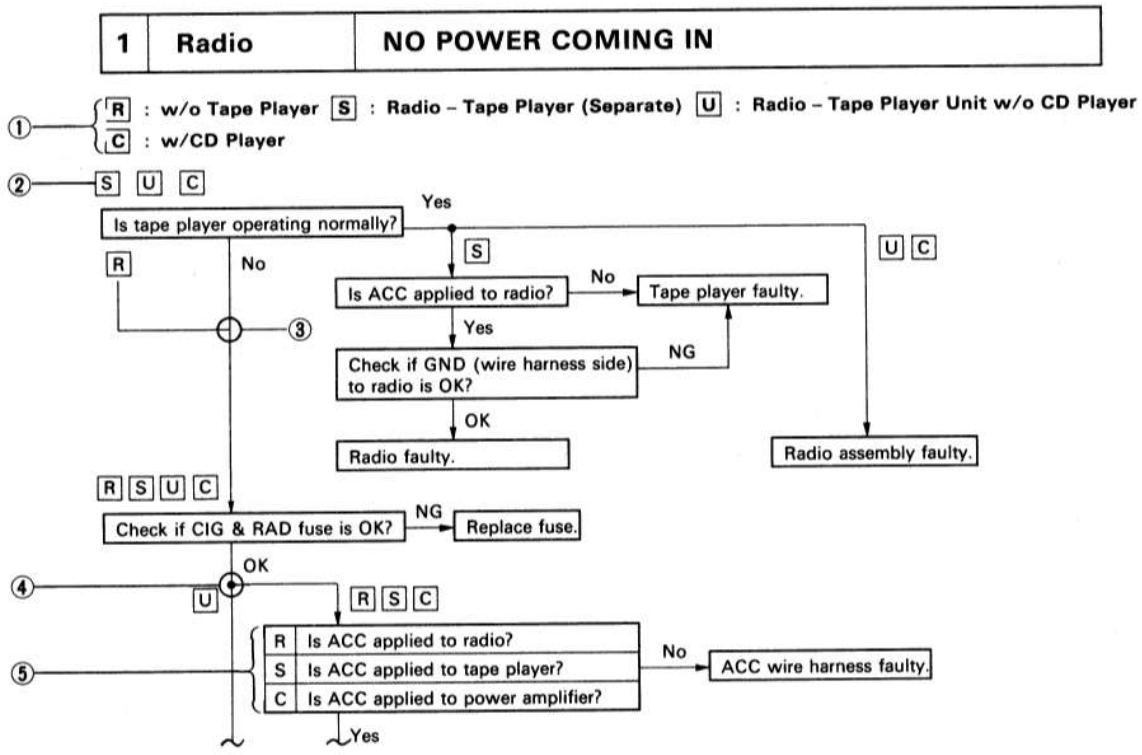


(Symbol: C)

BE4336
BE4335

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HOW TO USE DIAGNOSTIC CHART



① Audio system type and symbol used.
HINT: Confirm the applicable type of audio system. (See page BE-137).

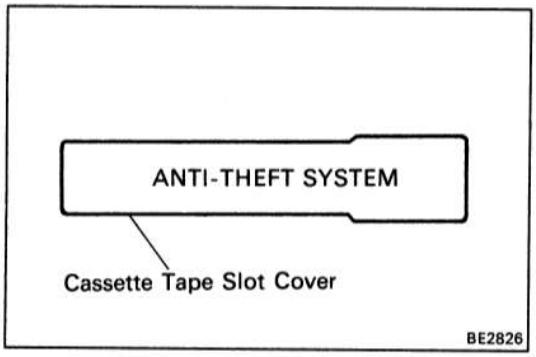
② Symbol for type of audio system the question applies to.
HINT: If the audio system type is not applicable, proceed to next question below.

③ Junction without black circle.
HINT: Proceed to next question below.

④ Junction with black circle.
HINT: Proceed to question for applicable audio system type.

⑤ HINT: Select question for applicable audio system type.

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Anti-Theft System

The anti-theft system is only provided for audio systems equipped with an Acoustic Flavor function.

HINT: The words "ANTI-THEFT SYSTEM" are displayed on the cassette tape slot cover.
For operation instructions for the anti-theft system, please consult the audio system section in the Owner's Manual.

1. SETTING SYSTEM

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

(Refer to the Owner's Manual "SETTING THE ANTI-THEFT SYSTEM")

HINT:

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

2. ANTI-THEFT SYSTEM OPERATION

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

3. CANCELLING SYSTEM

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

(Refer to the Owner's Manual "IF THE SYSTEM IS ACTIVATED")

HINT: To change or cancel the ID number, please refer to the owner's Manual "CANCELLING THE SYSTEM".

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Troubleshooting

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

HINT: This inspection procedure is a simple troubleshooting which should be carried out on the vehicle during system operation and was prepared on the assumption of system component troubles (except for the wires and connectors, etc.).
Always inspect the trouble taking the following items into consideration.

- Open or short circuit of the wire harness
- Connector or terminal connection fault
- For audio systems with anti-theft system, troubleshooting items marked (*) indicate that "Troubleshooting for ANTI-THEFT SYSTEM" should be carried out first.

Problem		No.
Radio	No power coming in.	*1
	Power coming in, but radio not operating.	*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 (Volume faint).	5
	Few preset tuning bands.	5
	Sound quality poor.	6
	Cannot set station select button.	7
	Preset memory disappears.	7
Tape Player	Cassette tape cannot be inserted.	8
	Cassette tape inserts, but no power.	*9
	Power coming in, but tape player not operating.	10
	Either speaker does not work.	11
	Sound quality poor (Volume faint).	12
	Tape jammed, malfunction with tape speed or auto-reverse.	13
	APS, SKIP, RPT buttons not operating.	14
	Cassette tape will not eject.	*15
CD Player	CD cannot be inserted.	16
	CD inserts, but no power.	17
	Power coming in, but CD player not operating.	18
	Sound jumps.	19
	Sound quality poor (Volume faint).	20
	Either speaker does not work.	21
	CD will not eject.	22
Antenna	Antenna – related.	23
Noise	Noise produced by vibration or shock while driving.	24
	Noise produced when engine starts.	25

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TROUBLESHOOTING FOR ANTI-THEFT SYSTEM

Turn ignition key from LOCK position to ACC position.

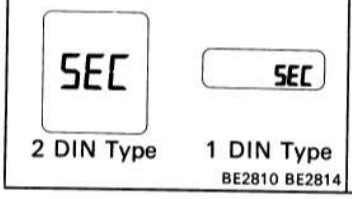
Display "A" showing?
- No → Radio switch turned ON.
  - Display "B" showing?
    - No → ID number not input. (Display "D")
      - Refer to each malfunction item.
    - Yes → While holding the 1, 4 and 6 buttons in. Push and hold the "PWR VOL" knob. Check display.
      - Display "B" → Go to No.1.
      - Display "E" → ANTI-THEFT SYSTEM operating condition. (ID number input error 5 times) Take to designated radio service station.
- Yes → ID number is set.

"SEC" display disappears after 1 second.
- Yes → Normal operation when radio switch turned ON.
  - Yes → Forgot to press switch.
  - No → Cancel ID number, refer to each malfunction item.
- No → ANTI-THEFT SYSTEM operating condition. (ID number input error 4 times or less)

Input ID number, check display.
- Display "D" → Take to designated radio service station.
- Display "A" or "B" → ANTI-THEFT SYSTEM cancelled. Check audio system again.
  - OK → ID number not input, or else input error.
  - NG → Cancel ID number, refer to each malfunction item.
- Display "C" → "A" (After 2 seconds) → ANTI-THEFT SYSTEM not cancelled. ID number input 5 times or more?
  - No → Input ID number, check display.
  - Yes → Take to designated radio service station.

(Liquid Crystal Display (LCD) for Audio System)

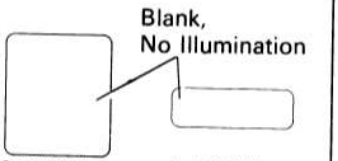
Display "A"



2 DIN Type 1 DIN Type

BE2810 BE2814

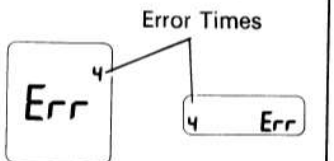
Display "B"



2 DIN Type 1 DIN Type

BE2811 BE2815

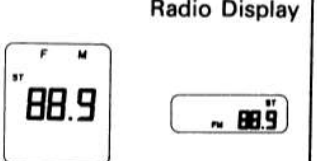
Display "C"



2 DIN Type 1 DIN Type

BE2812 BE2816

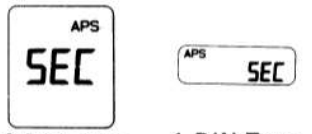
Display "D" Example:



2 DIN Type 1 DIN Type

BE2813 BE2817

Display "E"



2 DIN Type 1 DIN Type

BE3922 BE3923

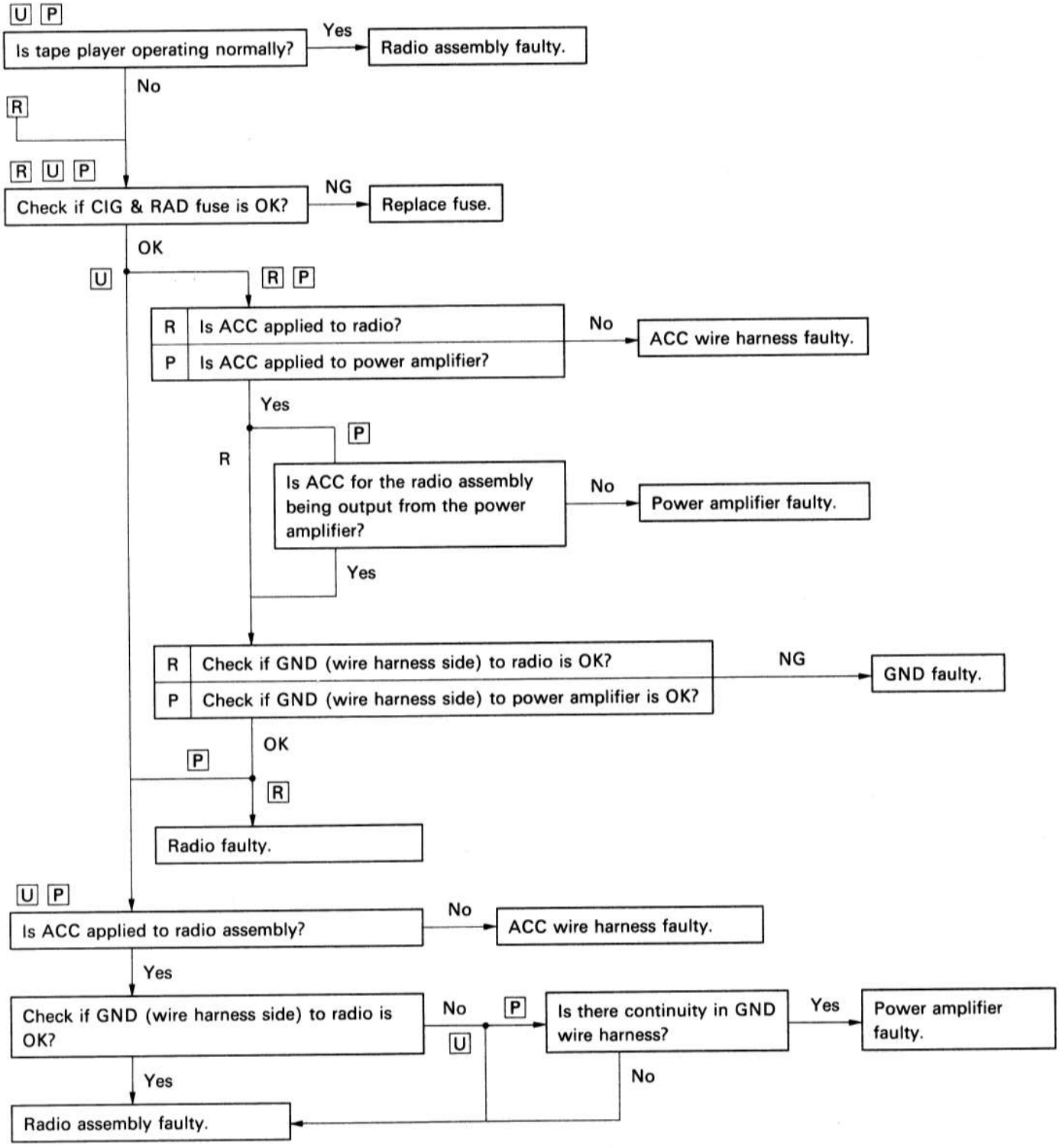
HINT:

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

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1 Radio — NO POWER COMING IN

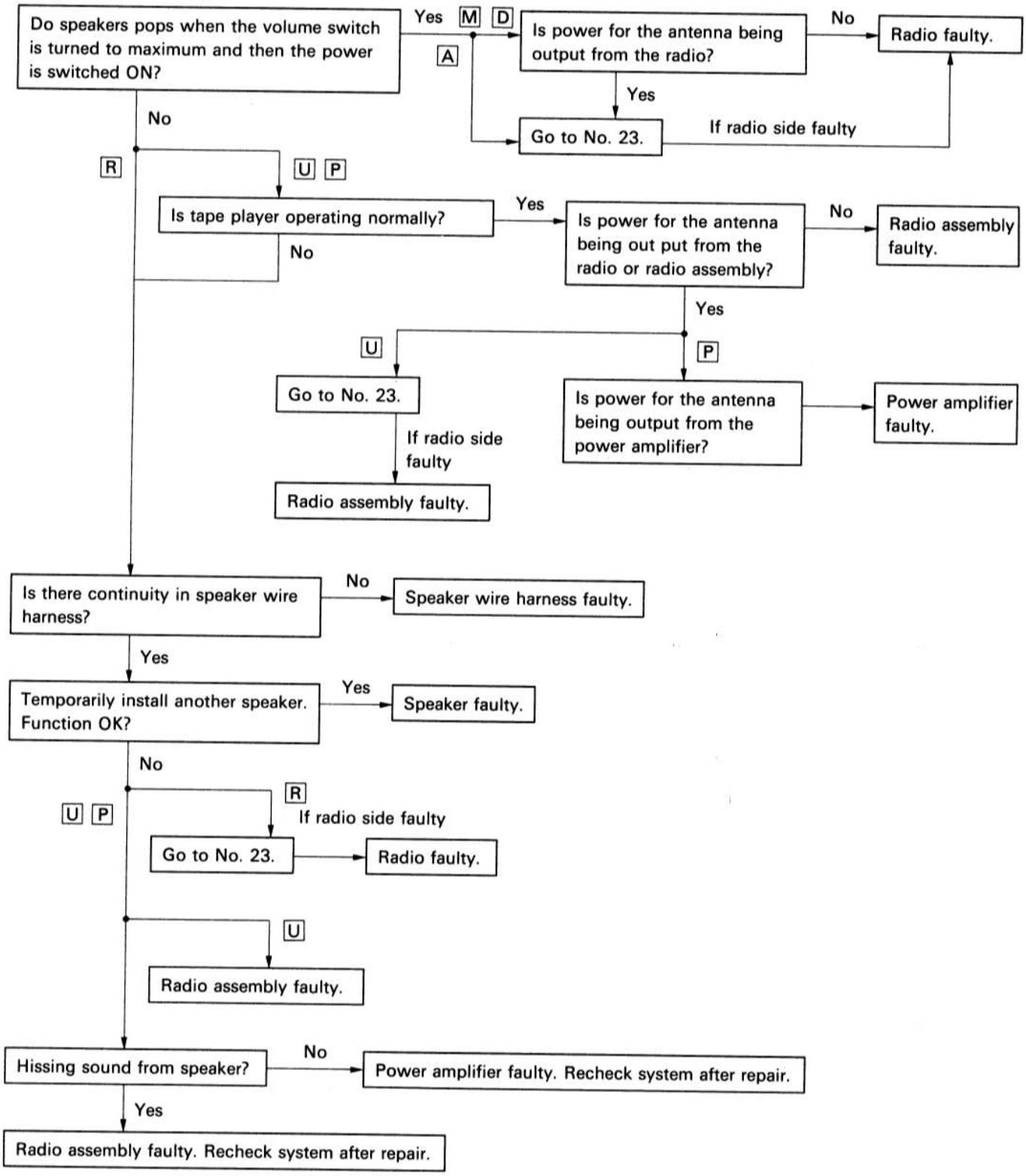
[R] : Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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2 Radio — POWER COMING IN, BUT RADIO NOT OPERATING

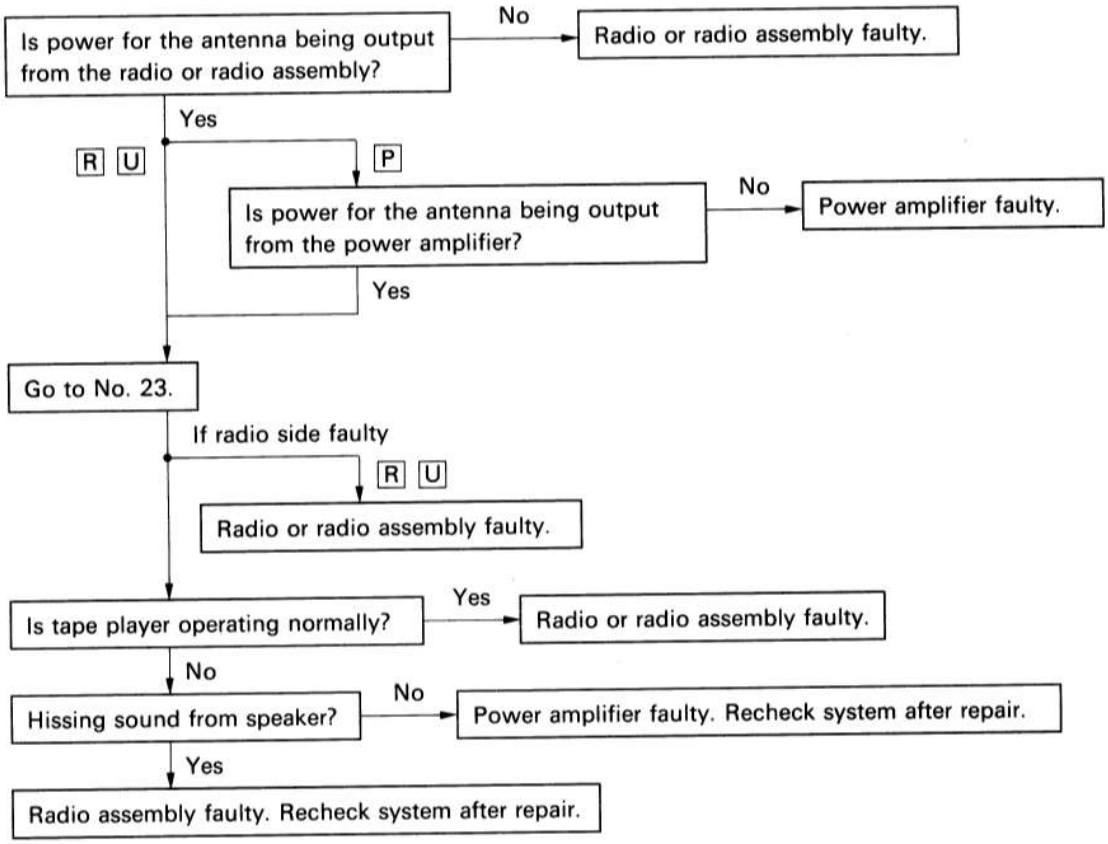
[R] : Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)
[A] : Antena w/o Motor [M] : Motor Antenna [D] : Motor Antenna and Glass Printed Antenna



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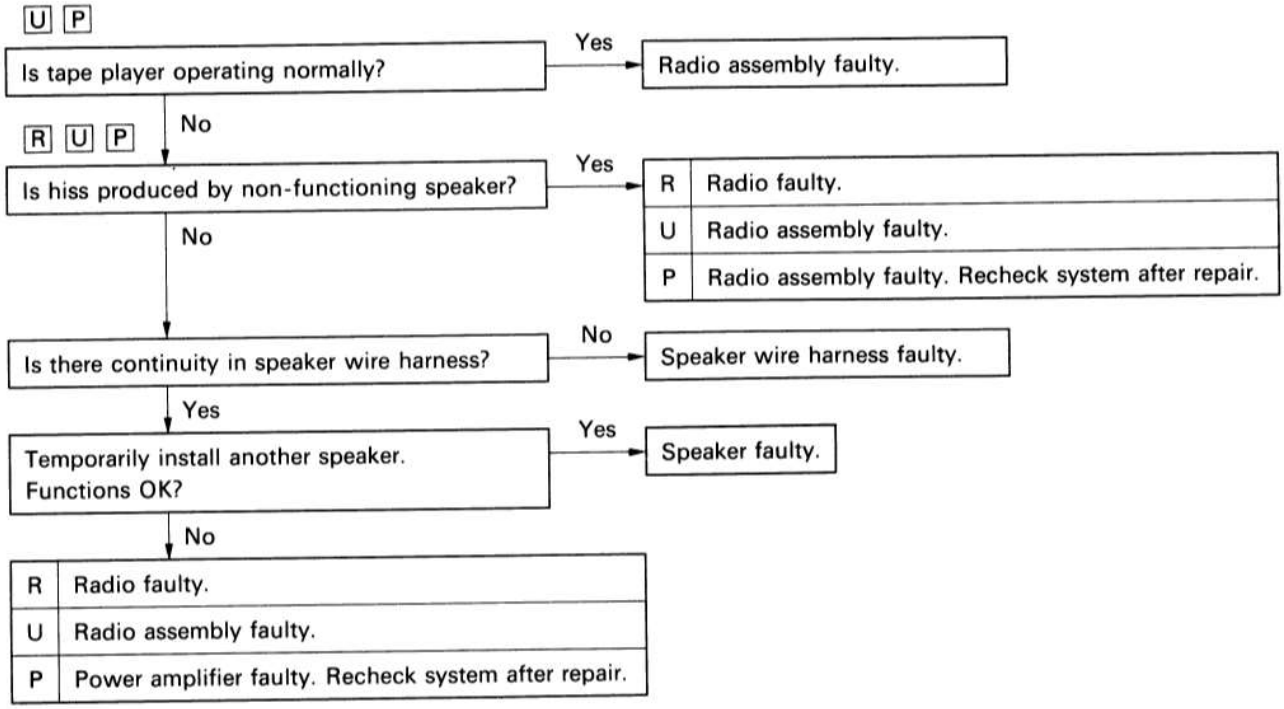
3 Radio — NOISE PRESENT, BUT AM-FM NOT OPERATING

[R] : Radio **[U] : Radio – Tape Player Unit (Built-in Power Amplifier)**
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



4 Radio — EITHER SPEAKER DOES NOT WORK

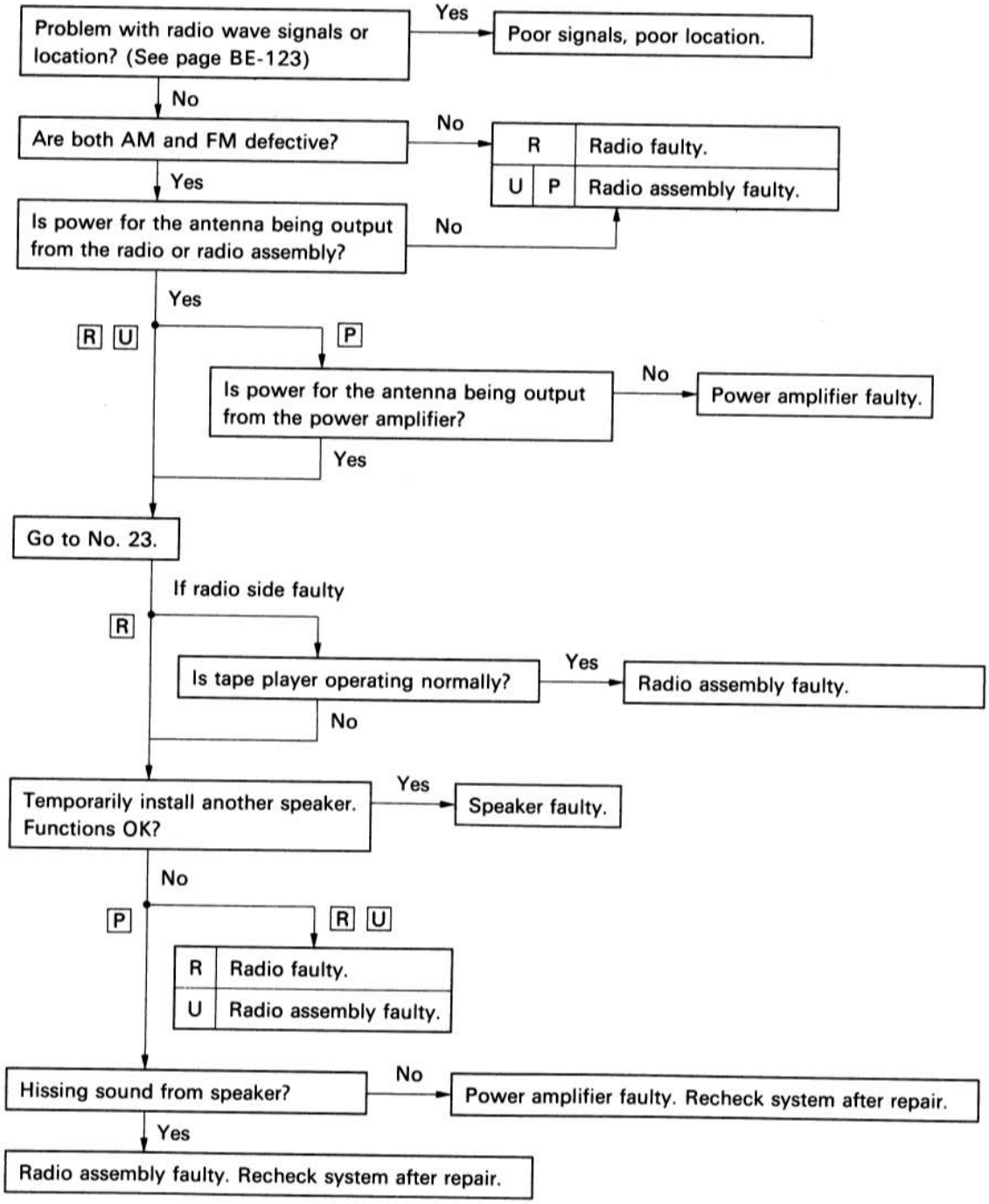
[R] : Radio **[U] : Radio – Tape Player Unit (Built-in Power Amplifier)**
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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

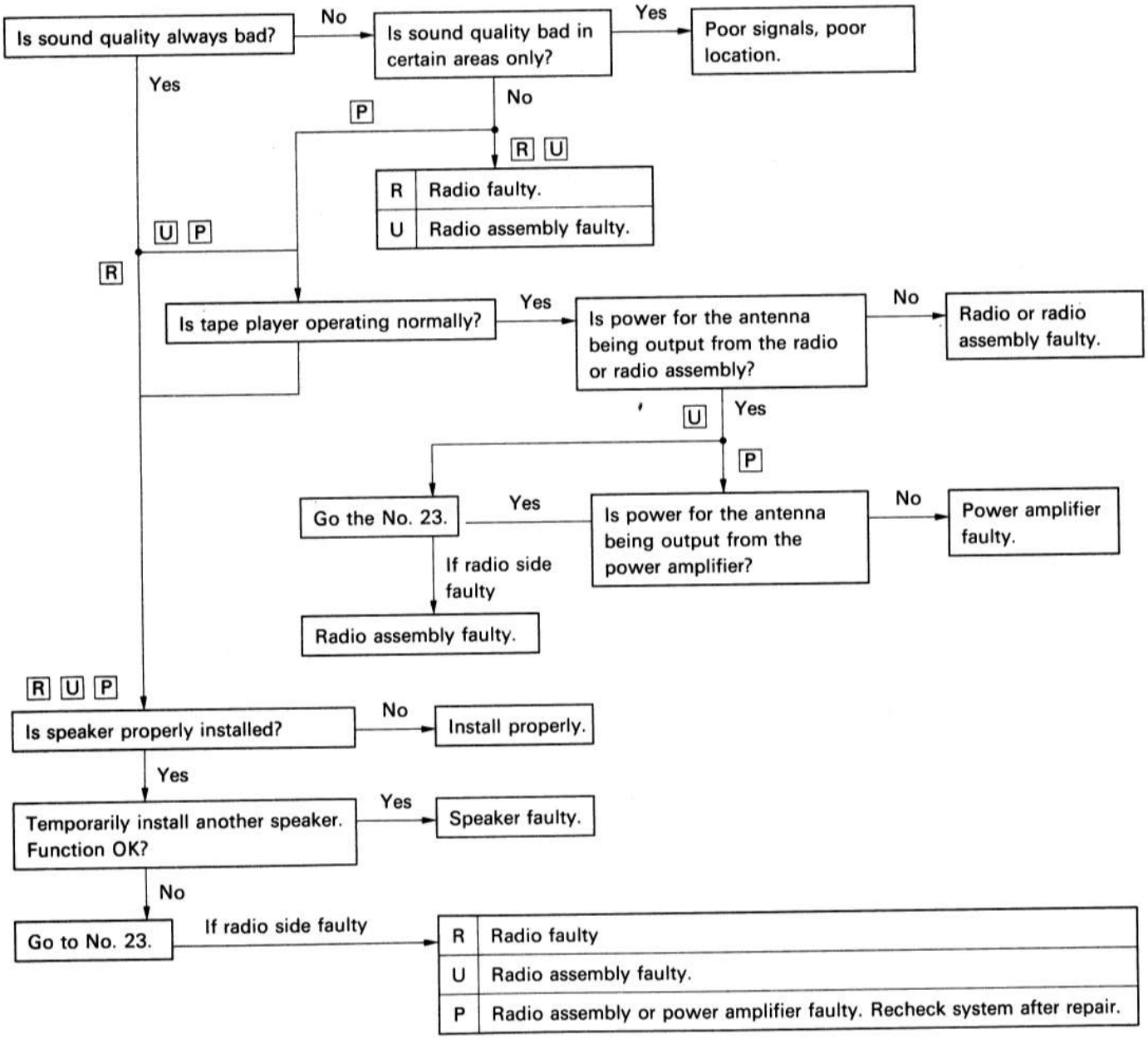
[R] : Radio **[U] : Radio – Tape Player Unit (Built-in Power Amplifier)**
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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6 Radio — SOUND QUALITY POOR

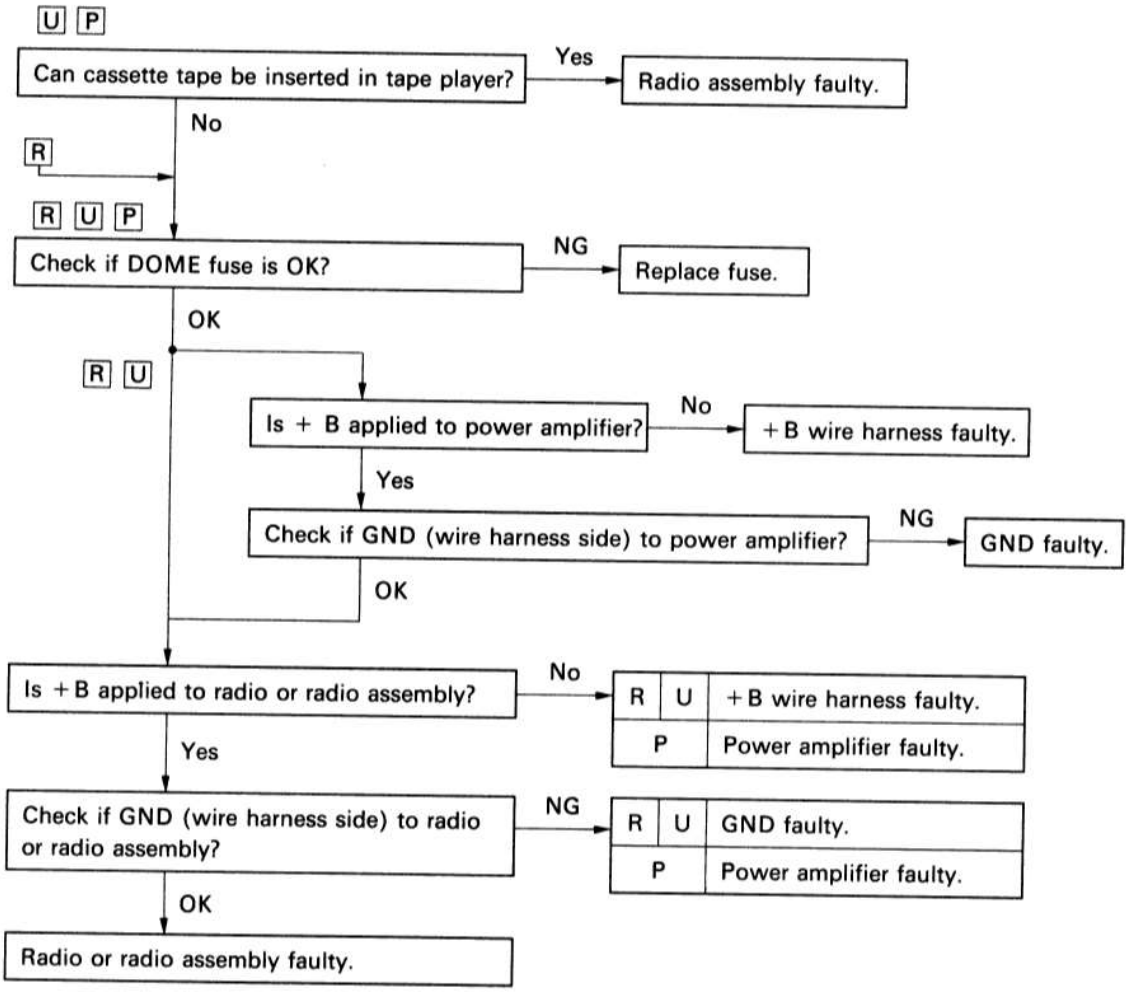
[R] : Radio **[U] : Radio – Tape Player Unit (Built-in Power Amplifier)**
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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7	Radio	CANNOT SET STATION SELECT BUTTON, PRESET MEMORY DISAPPEARS

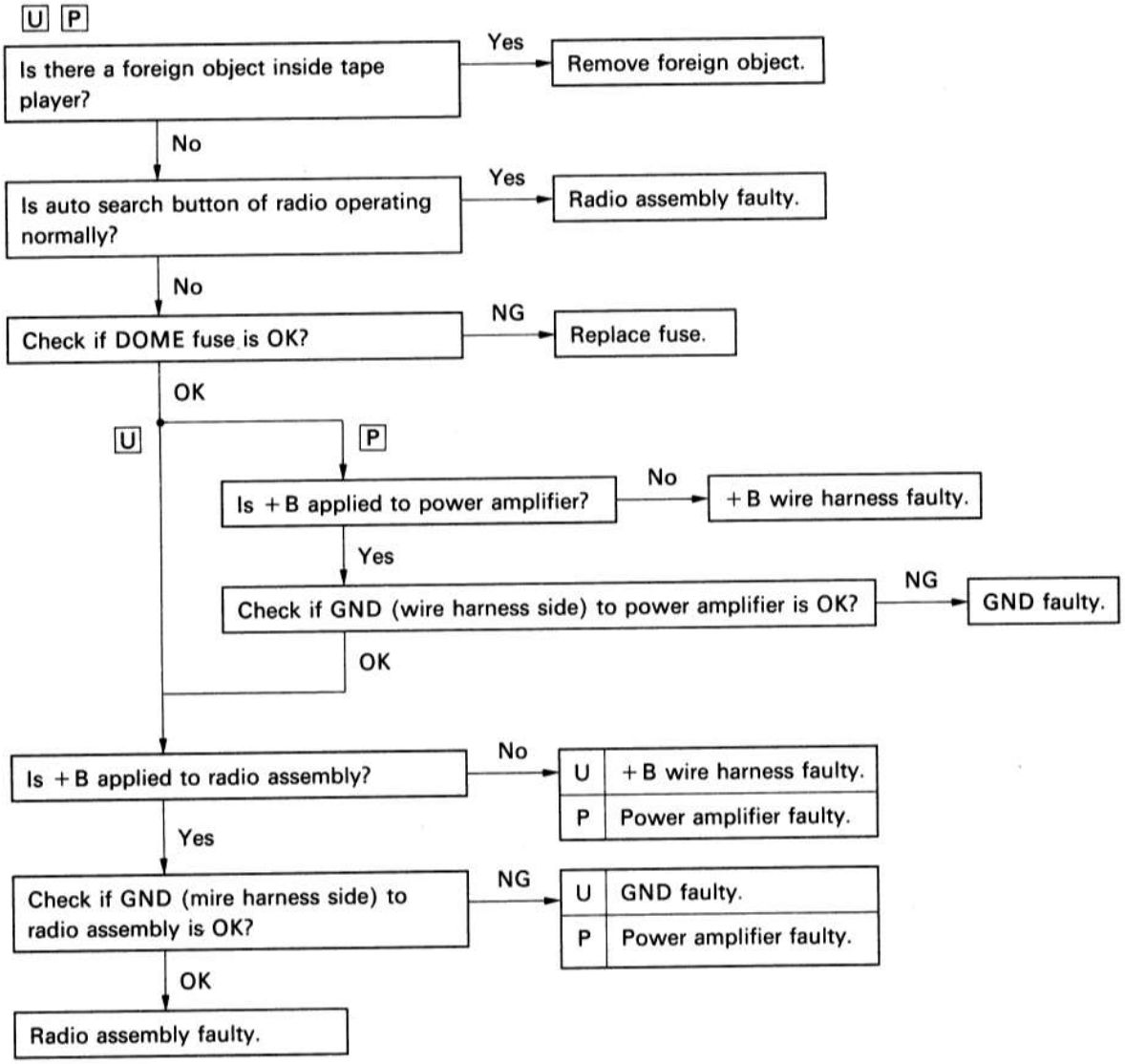
[R] : Radio [U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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8 Tape Player — CASSETTE TAPE CANNOT BE INSERTED

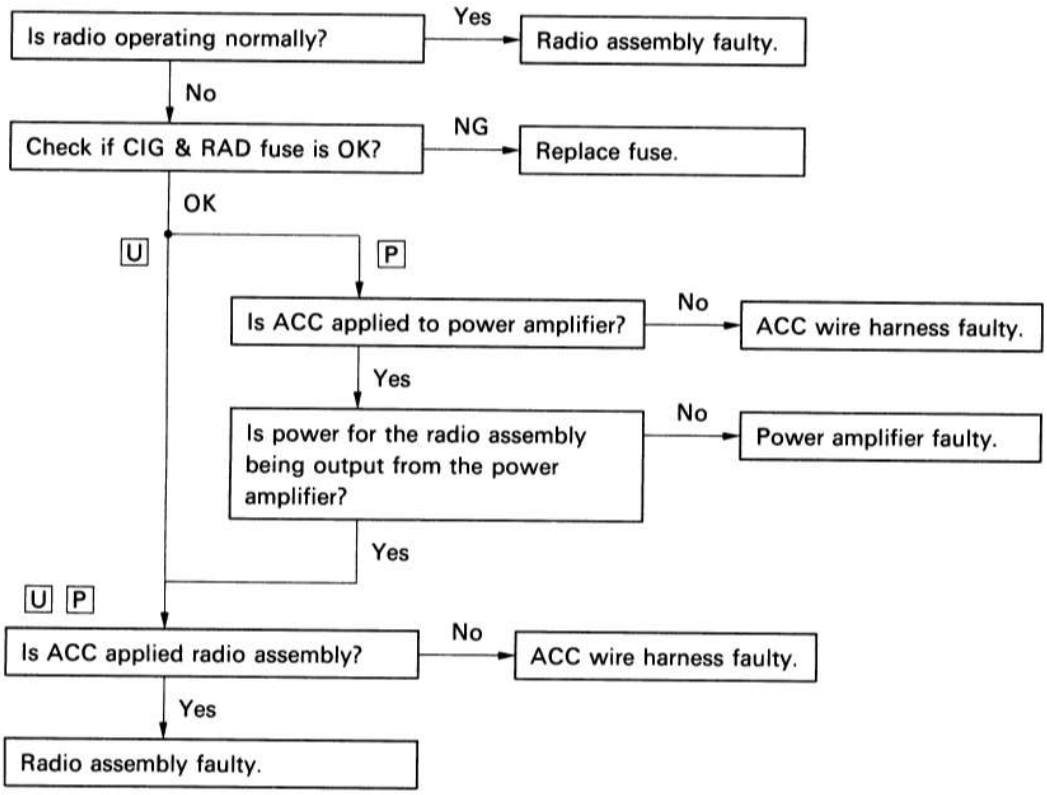
[U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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9 Tape Player CASSETTE TAPE INSERTS, BUT NO POWER

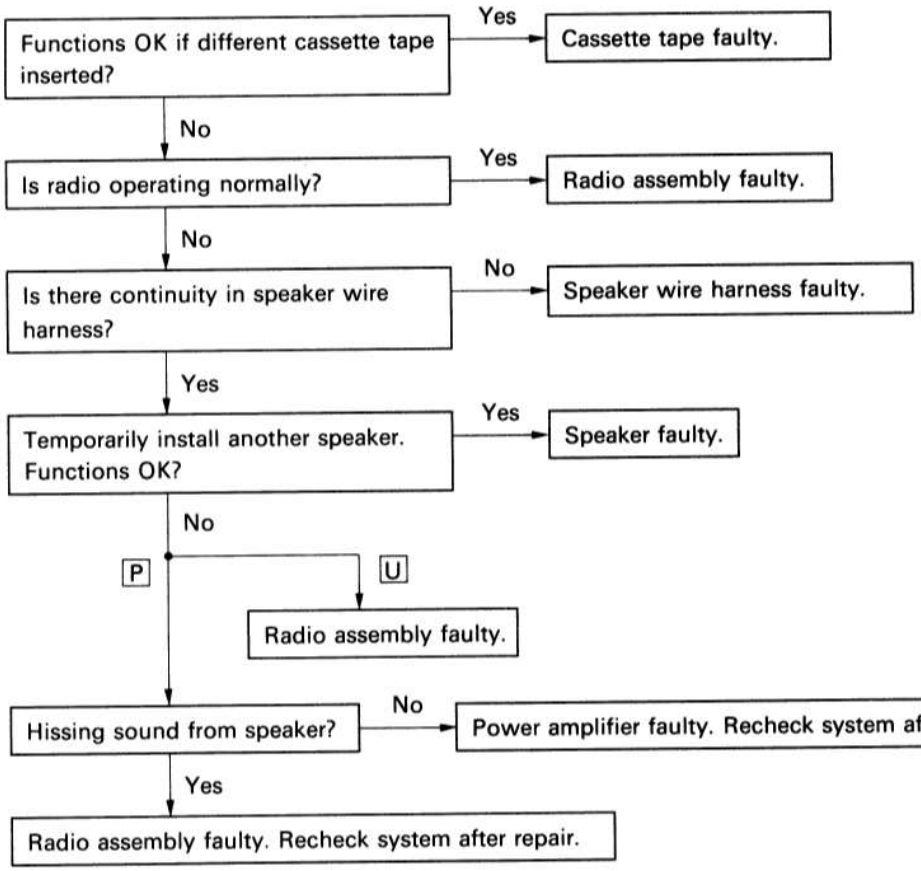
[U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



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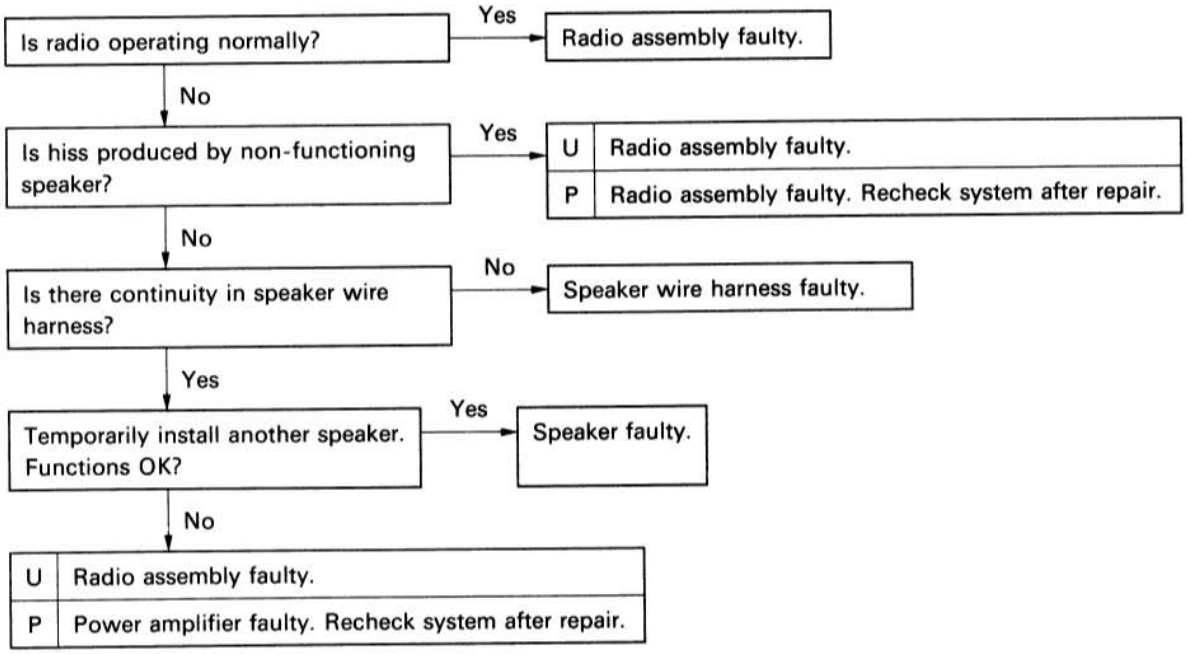
10 Tape Player — POWER COMING IN, BUT TAPE PLAYER NOT OPERATING

[U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



11 Tape Player — EITHER SPEAKER DOES NOT WORK

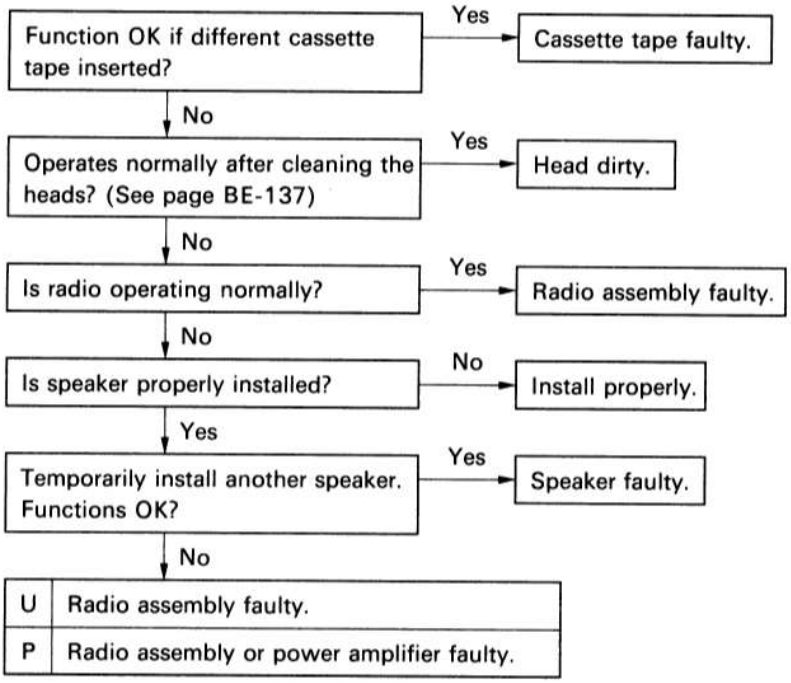
[U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)



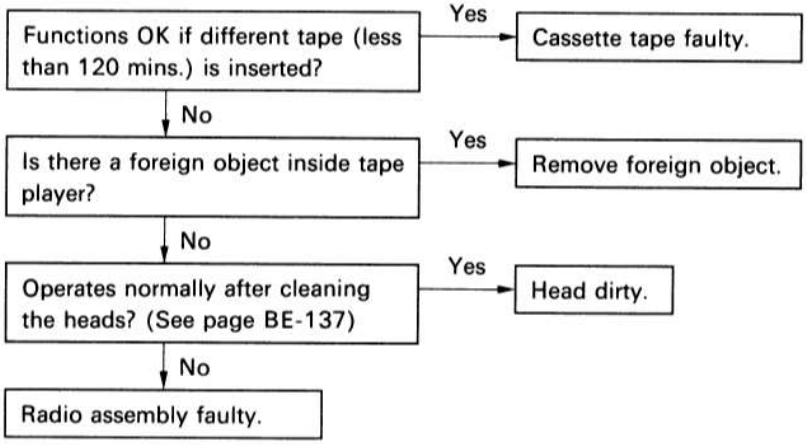
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12 Tape Player SOUND QUALITY POOR (VOLUME PAINT)

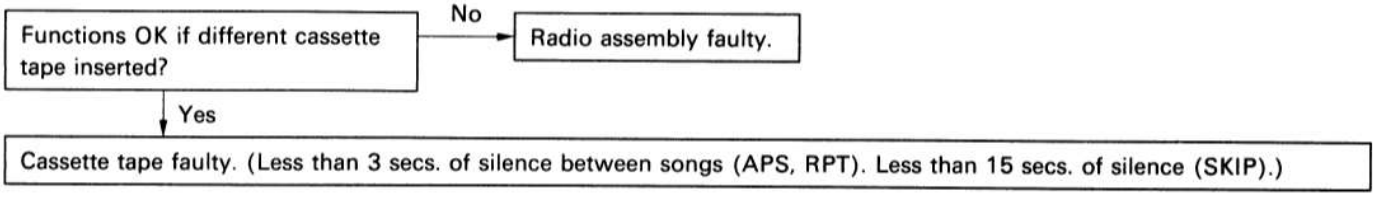
U : Radio – Tape Player Unit (Built-in Power Amplifier)
P : Radio – Tape Player Unit (Separate Power Amplifier)



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



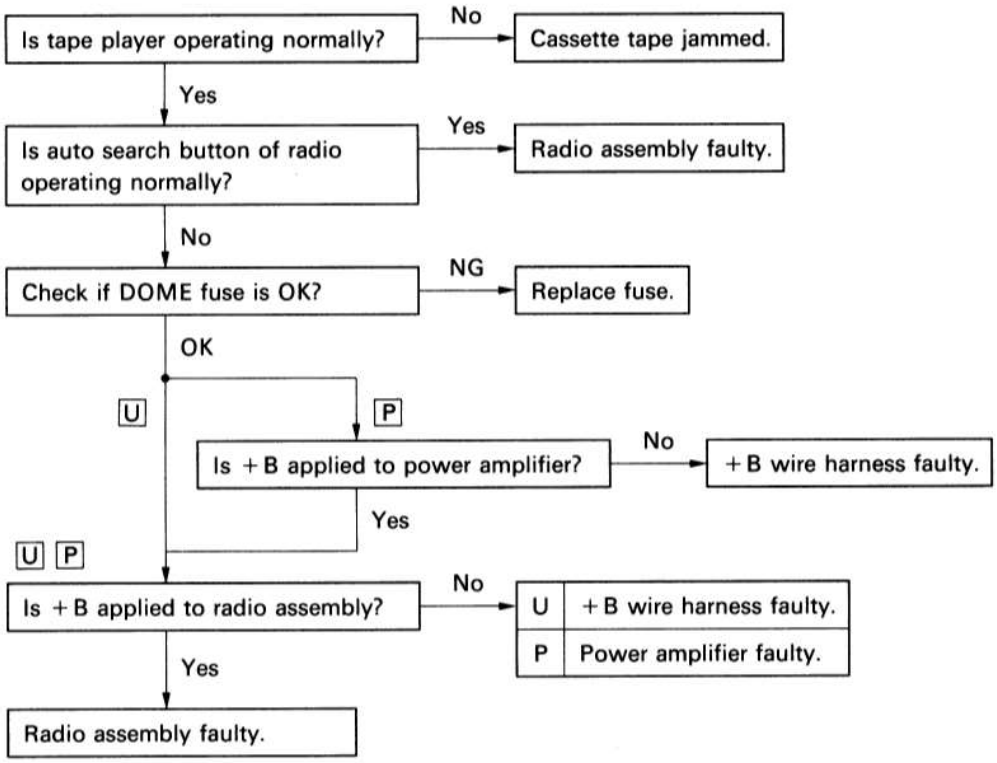
14 Tape Player APS, SKIP, RPT BUTTONS NOT OPERATING



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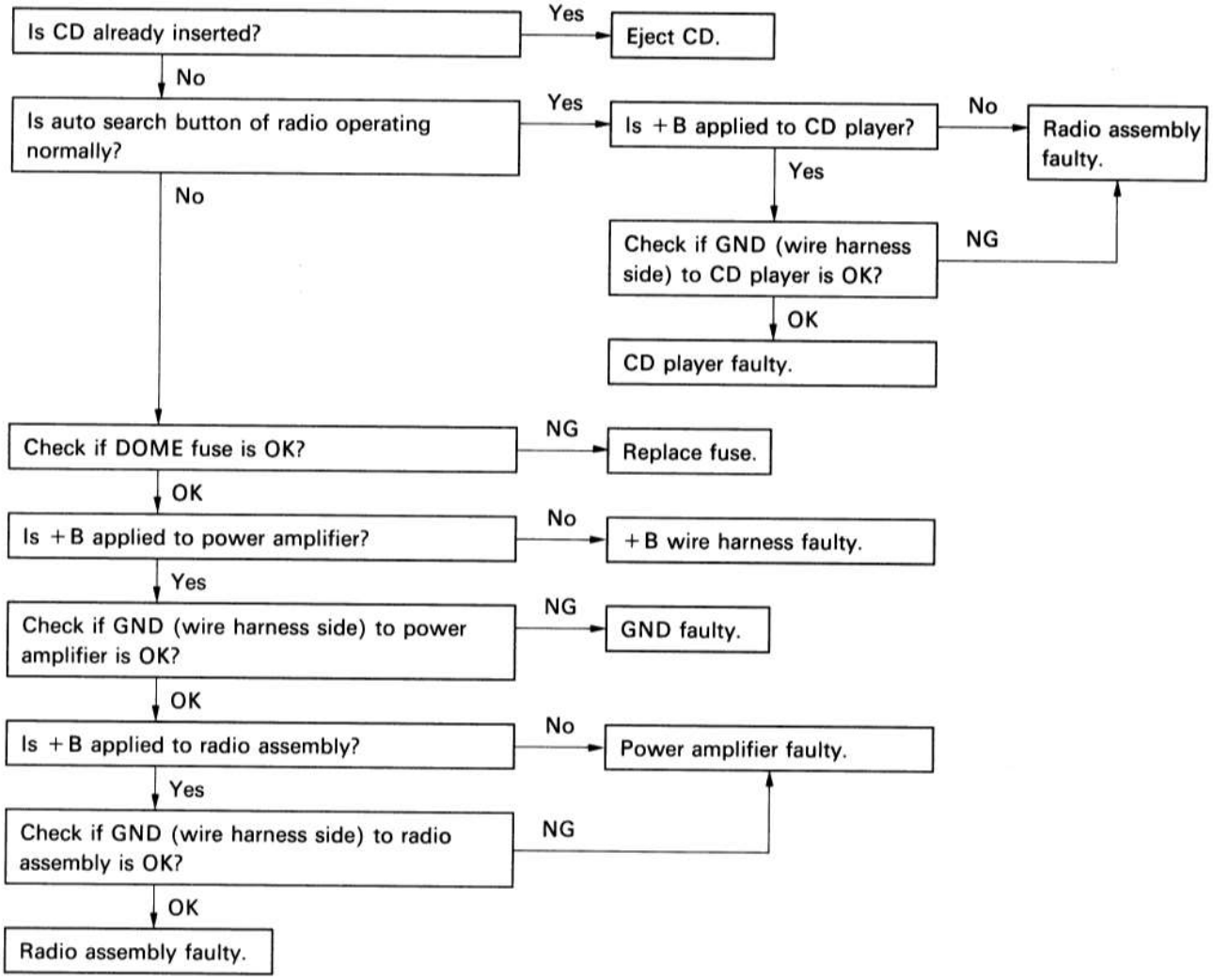
15 Tape Player | CASSETTE TAPE WILL NOT EJECT

[U] : Radio – Tape Player Unit (Built-in Power Amplifier)
[P] : Radio – Tape Player Unit (Separate Power Amplifier)

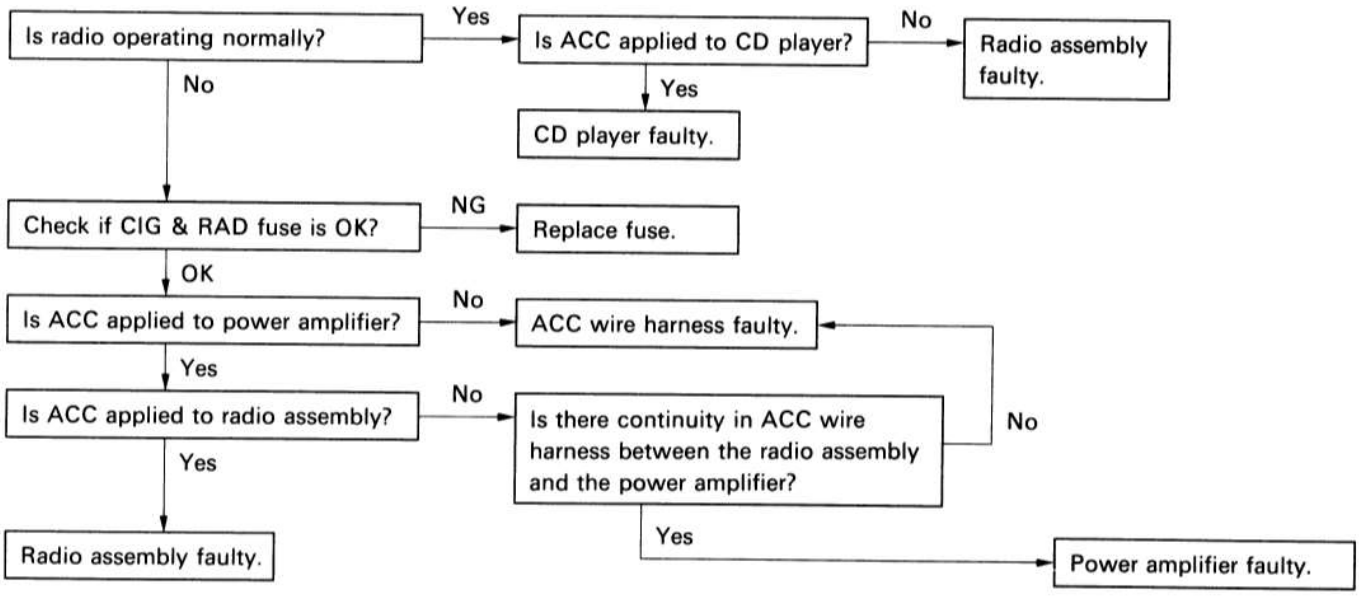


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16 CD Player — CD CANNOT BE INSERTED

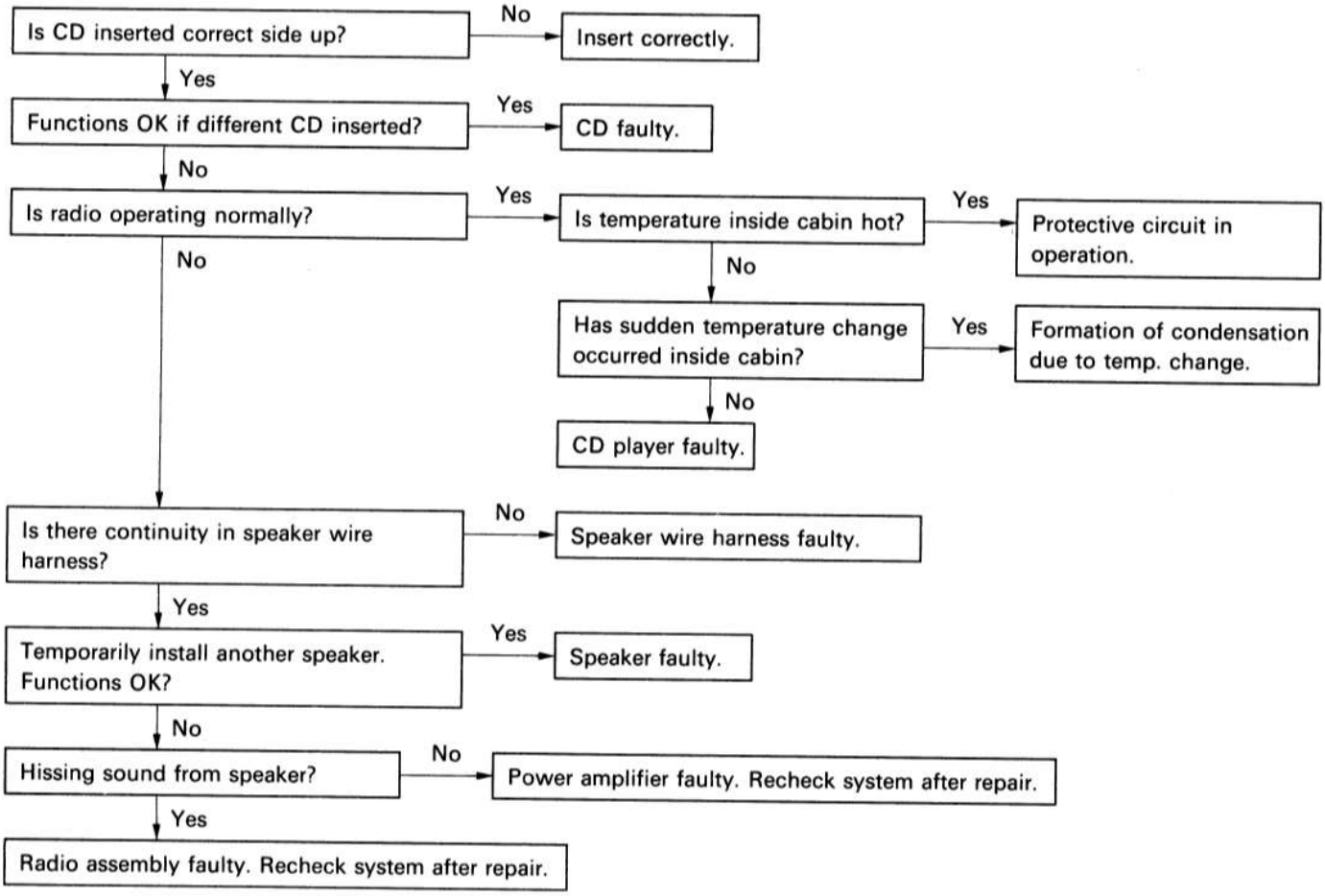


17 CD Player — CD INSERTS, BUT NO POWER

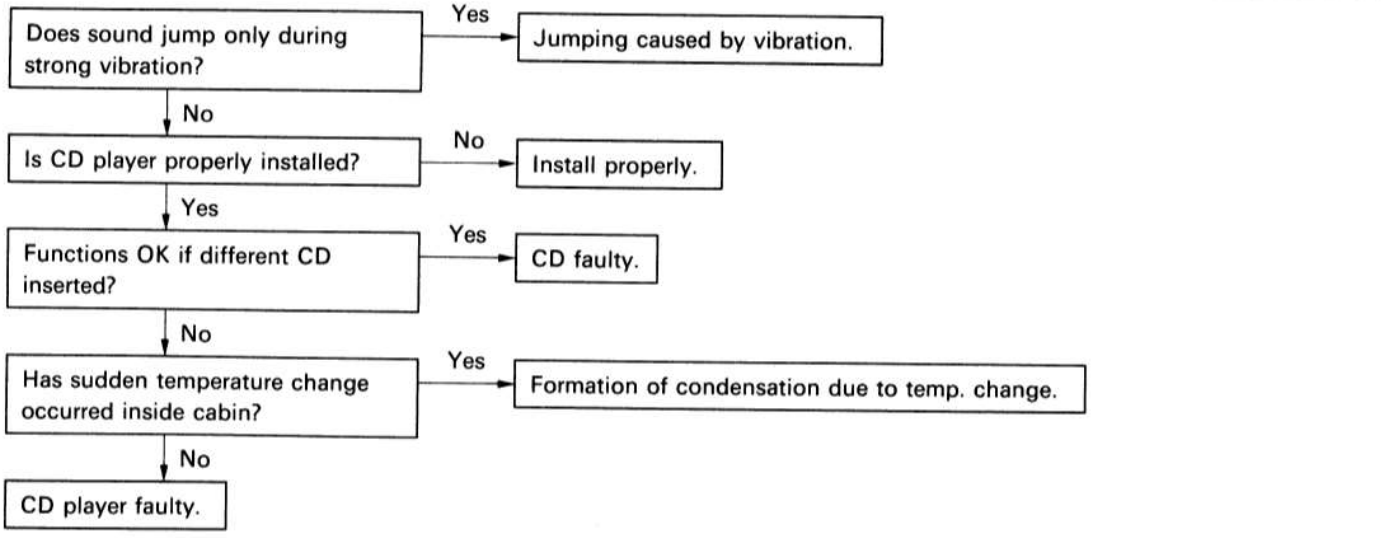


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18 CD Player — POWER COMING IN, BUT CD PLAYER NOT OPERATING

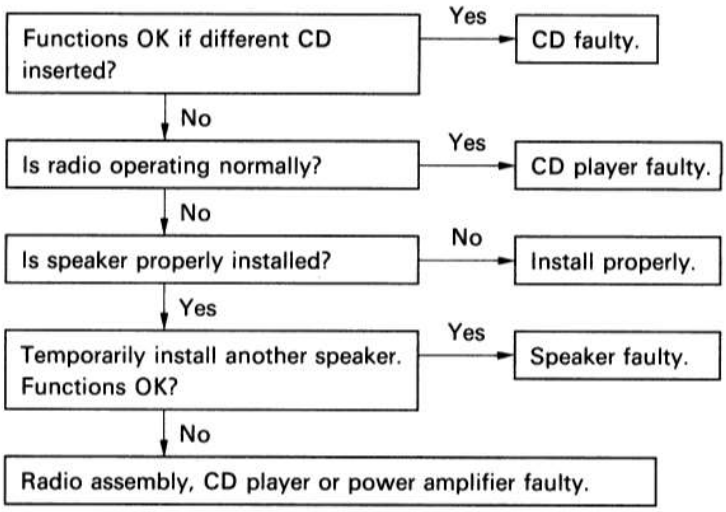


19 CD Player — SOUND JUMPS

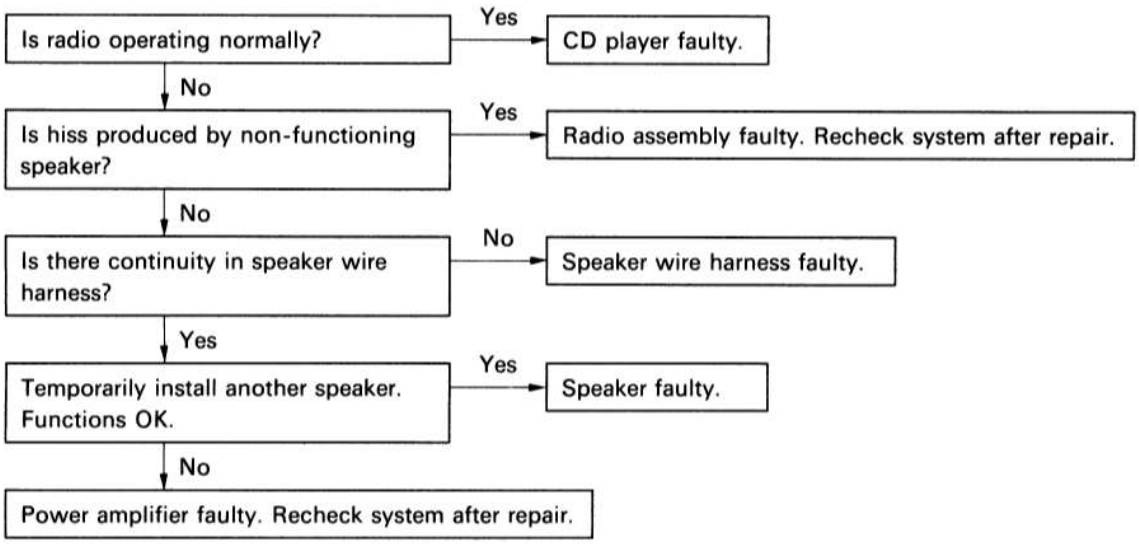


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20 CD Player — SOUND QUALITY POOR (VOLUME FAINT)

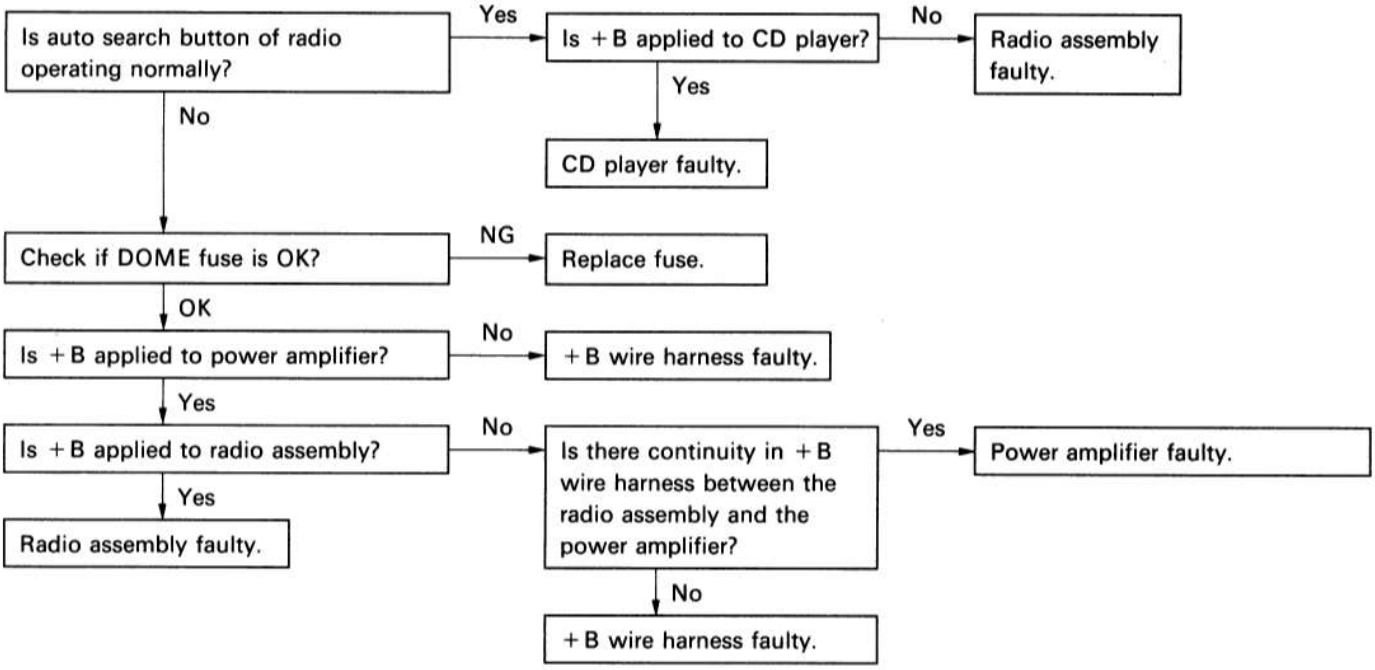


21 CD Player — EITHER SPEAKER DOES NOT WORK



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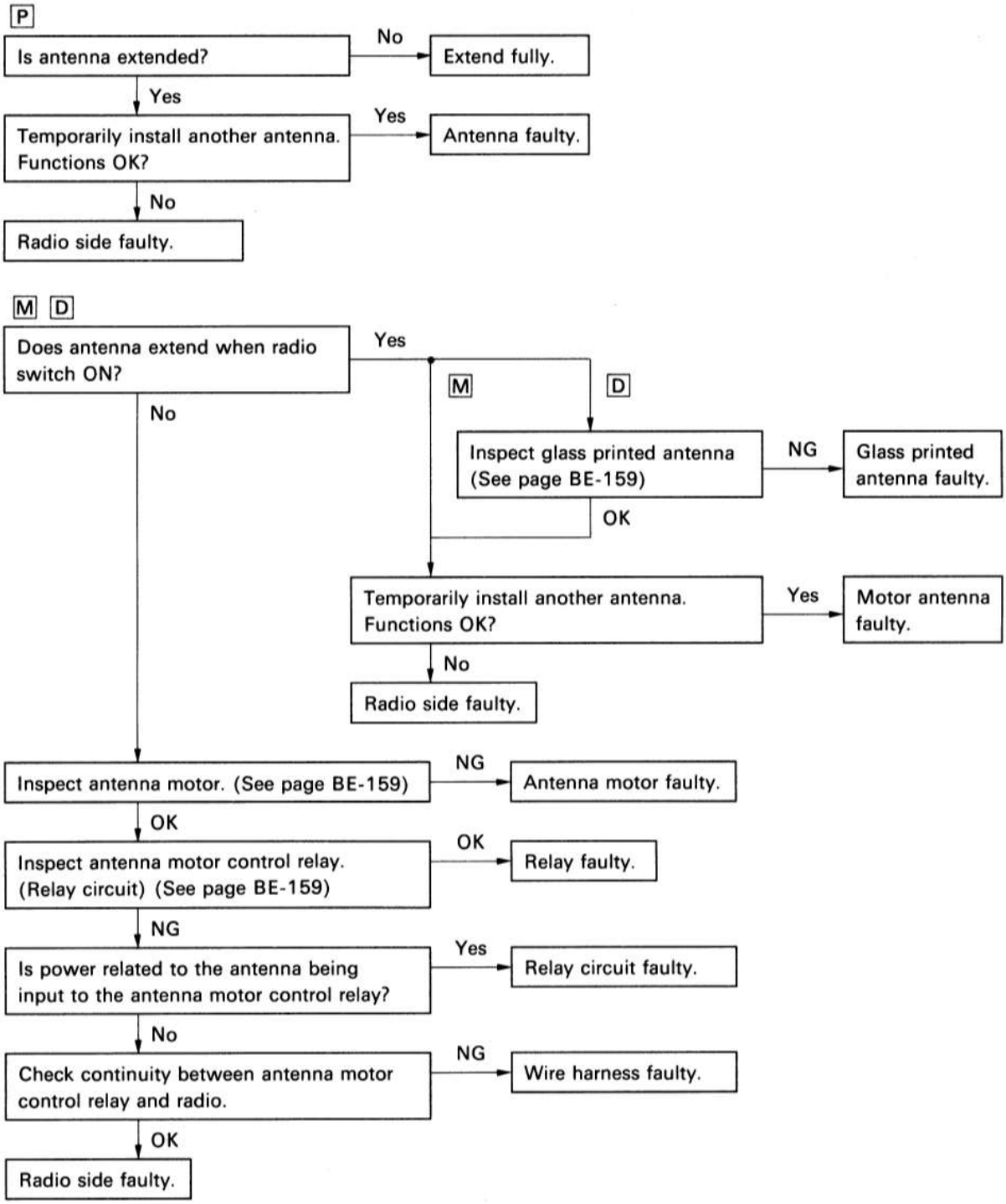
22 CD Player — CD WILL NOT EJECT



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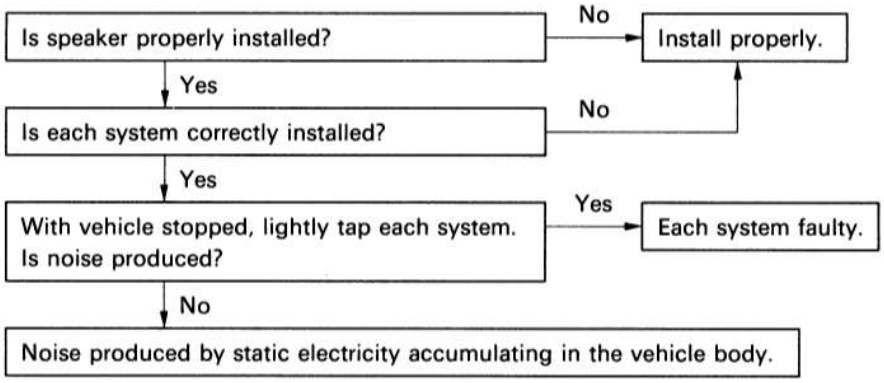
23	Antenna	ANTENNA-RELATED

[P] : Antenna w/o Motor [M] : Motor Antenna [D] : Motor Antenna and Glass Printed Antenna

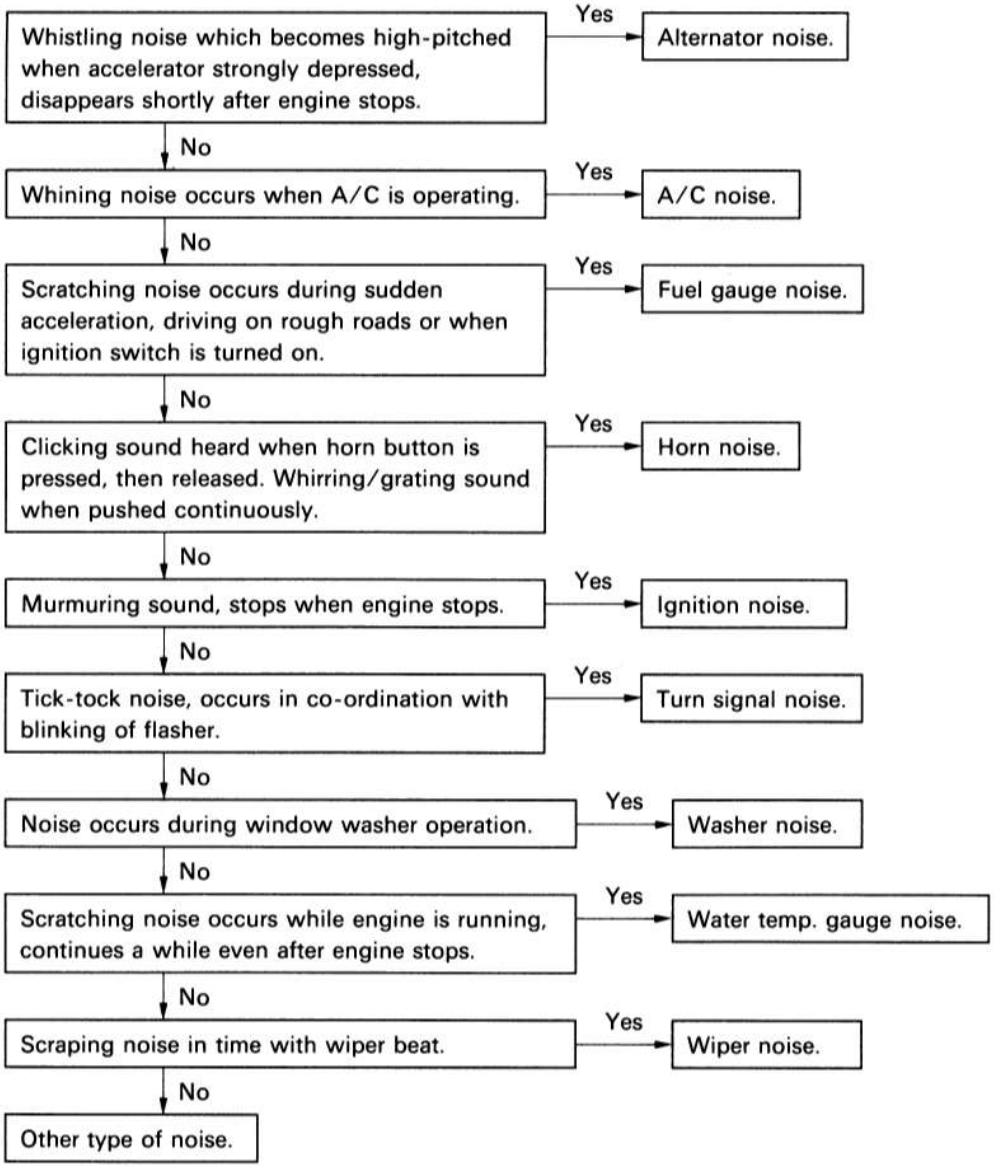


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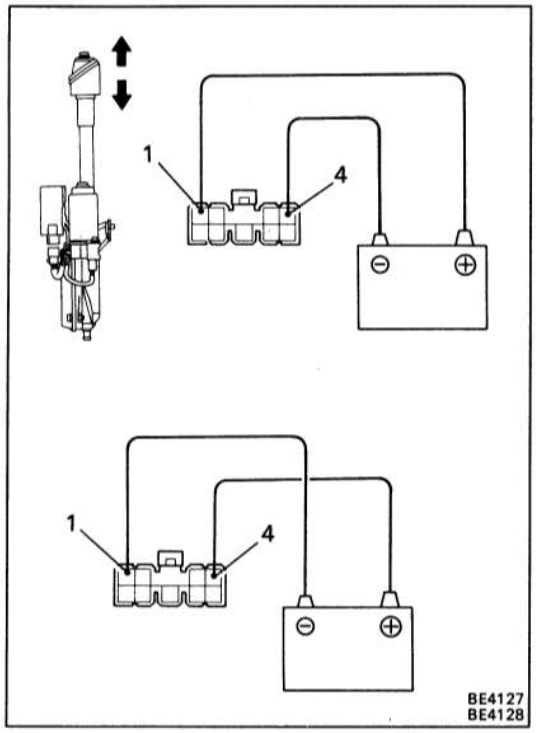
24 Noise — NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING



25 Noise — NOISE PRODUCED WHEN ENGINE STARTS



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Parts Inspection

1. INSPECT ANTENNA MOTOR

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 4.

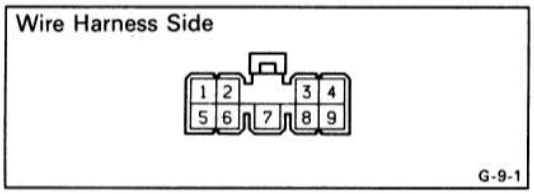
(b) Check that the motor turns (moves upward).

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

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

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

If operation is not as specified, replace the motor.



2. INSPECT ANTENNA MOTOR CONTROL RELAY

(Relay Circuit)

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

Check for	Tester connection	Condition			Specified value
Continuity	1 – 4	Constant			Continuity
	2 – Ground	Constant			Continuity
Voltage	3 – Ground	Constant			Battery voltage
	5 – Ground	Ignition switch position	LOCK		No voltage
			ACC or ON		Battery voltage
	6 – Ground	Ignition switch position	LOCK		No voltage
			ACC or ON	Radio switch and cassette OFF	No voltage
				Radio switch or cassette ON	Battery voltage
	8 – Ground	Ignition switch position	LOCK		No voltage
			ACC or ON	Radio switch OFF or cassette ON	No voaltage
				Radio switch ON and cassette OFF	Battery voltage
	9 – Ground	Ignition switch position	LOCK or ACC		No voltage
			ON		Battery voltage

If circuit is as specified, replace the relay.

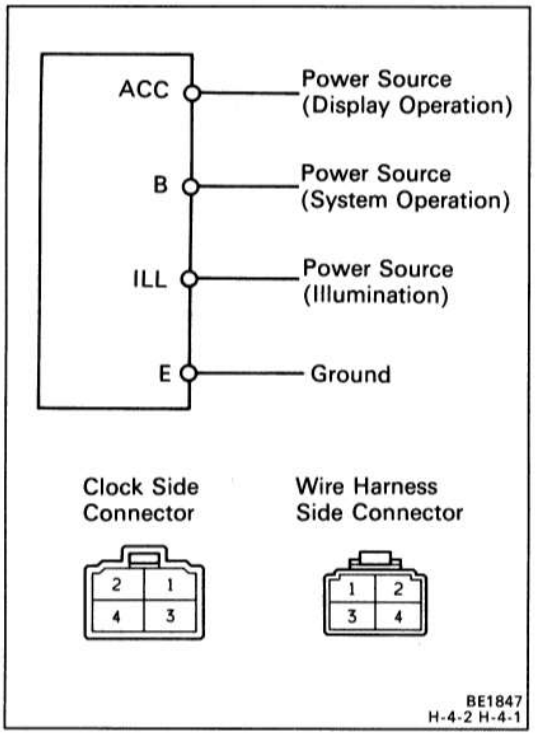
3. INSPECT GLASS PRINTED ANTENNA

(Use same procedure as for "INSPECT DEFOGGER WIRES" on page BE-65.)

4. REPAIR GLASS PRINTED ANTENNA

(Use same procedure as for "REPAIR DEFOGGER WIRES" on page BE-66.)

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CLOCK

Troubleshooting

As shown in the illustration, those are clock circuit and connector diagrams. Inspect each terminal for applicable trouble.

Terminal		Condition	Specified value
1	E	Constant	Continuity
2	ILL	Turn light control switch ON	Battery Voltage
3	B	Constant	
4	ACC	Turn ignition switch ON	

Allowable error: ± 1.5 seconds/day

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