TOYOTA

REPAIR MANUAL FOR CHASSIS & BODY

CORONA & CARINA E

AT190 series
ST191 series
CT190 series

Feb., 1992

FOREWORD

This repair manual has been prepared to provide information covering general service repairs for the chassis and body of the TOYOTA CORONA and CARINA E.

Applicable models: AT190 series
ST191 series
CT190 series

For the service specifications and repair procedures of the above model other than those listed in this manual, refer to the following manuals.

Manual Name	Pub. No.
• 4A-FE Engine Repair Manual	RM296E
• 5S-FE, 3S-GE, 3S-GTE Engine Repair Manual	RM164E
• 3S-GE, 3S-FE Engine Repair Manual Supplement	RM165E
• 1C, 2C, 2C-T Engine Repair Manual	RM025E
• 2C Engine Repair Manual Supplement	RM297E
• A241L, A241E Automatic Transaxle Repair Manual	RM177E
• Corona & Carina E Electrical Wiring Diagram Manual	EWD146Y
• Carina E New Car Features	NCF085E
• Corona New Car Features	NCF084E

All information in this manual is based on the latest product information at the time of publication. However, specifications and procedures are subject to change without notice.

TOYOTA MOTOR CORPORATION

AIR CONDITIONING SYSTEM

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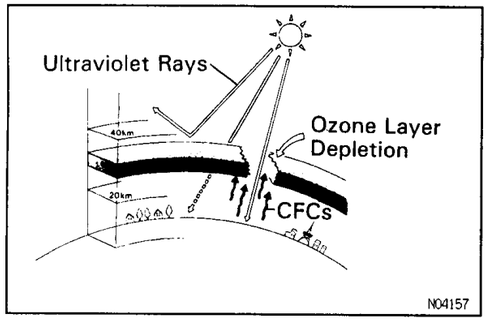
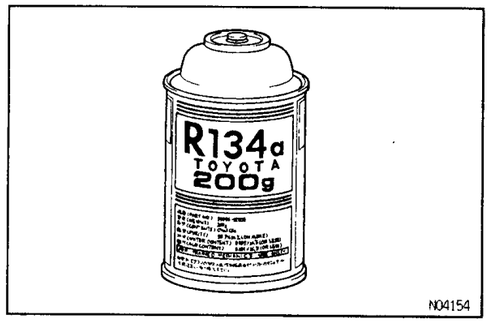


GENERAL INFORMATION

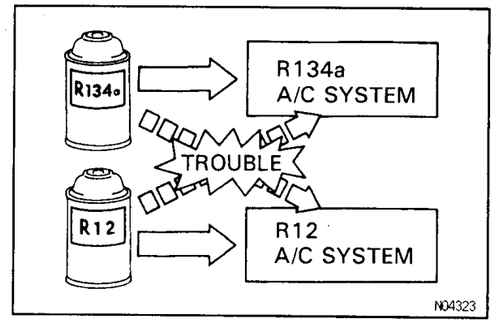
NEW AIR CONDITIONING SYSTEM WITH R134a

ACQEN-01

Refrigerant R 12 (CFC 12), previously used in automobiles' air conditioning systems is believed to contribute towards the depletion the earth's ozone layer. The ozone layer help to protect us against the harmful ultraviolet rays of the sun.



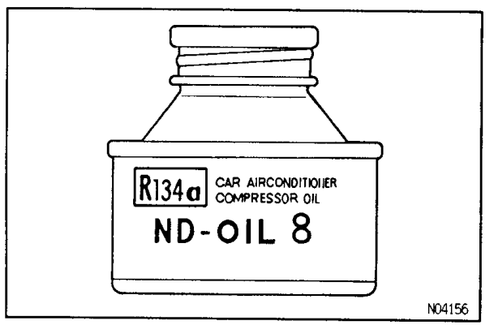
A newly developed refrigerant, R 134 a (HFC 134 a), reduces the destruction of the ozone layer. This refrigerant is used in the specially redesigned air conditioning systems fitted into the AT190, ST191 and CT190 series vehicle.



PRECAUTIONS FOR SERVICING R134a AIR CONDITIONERS

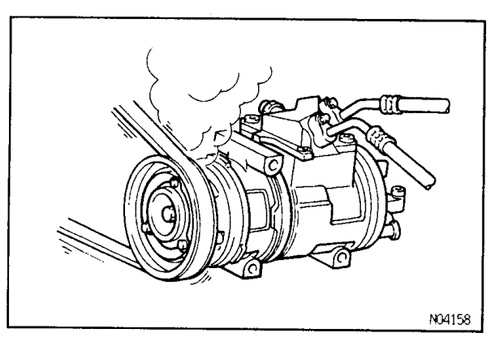
1. USE OF NEW REFRIGERANT R134a

The very different characteristics of refrigerants R134 a and R12 have determined the design of their respective air conditioning systems. Under no circumstances allow R12 to enter an R134a system, or vice versa, because serious damage could occur.

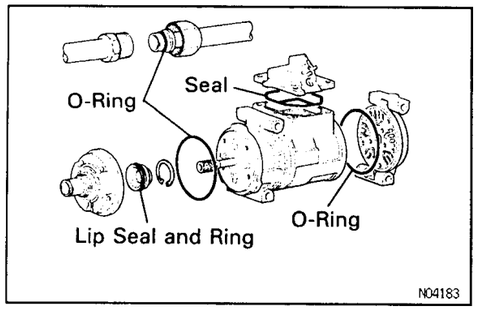


2. USE OF PROPER COMPRESSOR OIL

Compressor oil used in conventional R12 air conditioning systems cannot be used in R134a air conditioning systems.
Always use genuine Toyota R134a air conditioning oil ND–OIL 8, made expressly for use with R134a.

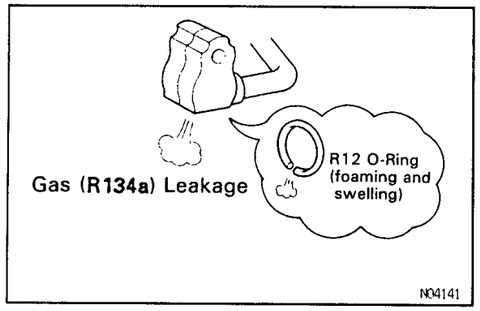


If even a small amount of the wrong oil is changed, it will result in clouding of the refrigerant.
A large amount will cause the compressor to seize up.

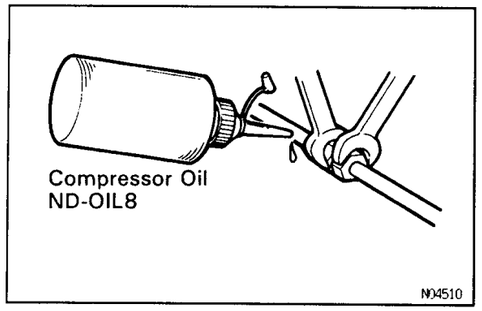


3. USE OF PROPER O–RINGS AND SEALS

O–rings and seals used for conventional R12 air conditioning systems cannot be used for R134a air conditioning systems.
Always use genuine Toyota R134a system O–rings and seals for R134a air conditioning systems.



If O – rings and / or seals for R12 air conditioning systems are used by mistake in the connections of an R134a air conditioning system, the O–ring and seals will foam and swell resulting in leakage of refrigerant.



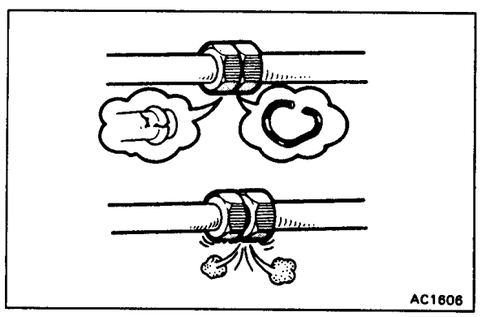
4. TIGHTEN CONNECTING PARTS SECURELY

Securely tighten the connecting parts to prevent leaking of refrigerant gas.

- Apply a few drops of compressor oil to O–ring fittings for easy tightening and to prevent leaking of refrigerant gas.

CAUTION: Apply only ND–OIL 8 compressor oil

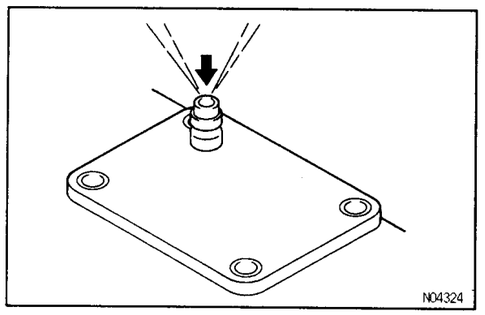
- Tighten the nuts using two wrenches to avoid twisting the tube.
- Tighten the O–ring fittings or the bolted type fittings to the specified torque.



5. INSERT PLUG IMMEDIATELY IN DISCONNECTED PARTS

Insert a plug immediately in the disconnected parts to prevent the ingress of moisture and dust.

6. DO NOT REMOVE PLUG FROM NEW PARTS UNTIL IMMEDIATELY BEFORE INSTALLATION

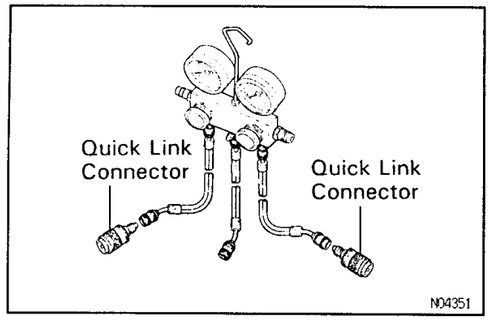


7. DISCHARGE GAS IN NEW COMPRESSOR FROM CHARGING VALVE BEFORE INSTALLING IT

If the gas in the new compressor is not discharged first, compressor oil will spray out with gas when the plug is removed.

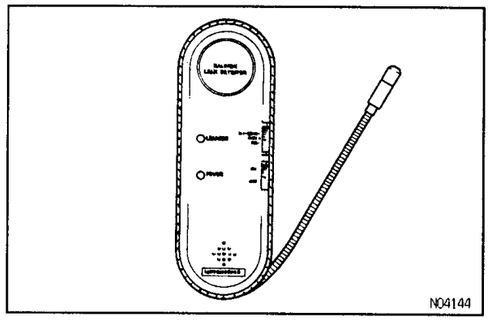
SERVICE TOOLS FOR R134a AIR CONDITIONER

When servicing R 134 a air conditioning systems always use the R134a dedicated manifold gauges, gas leak detector and vacuum pump adaptor.



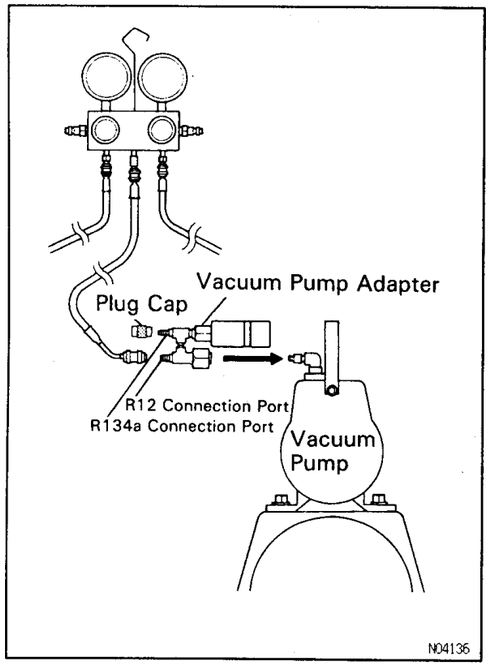
1. USE MANIFOLD GAUGES FOR R134a AIR CONDITIONER

Always use R 134 a dedicated manifold gauges to prevent R12 and R12 compressor oil contaminating the R134a system.



2. USE R134a GAS LEAK DETECTOR

Similarly, always use an R134a dedicated leak detector. The R12 leak detector is not sufficiently sensitive.



3. USE VACUUM PUMP ADAPTER

By correcting a vacuum pump adapter, the vacuum pump can be used for both R134a and R12 air conditioning systems.

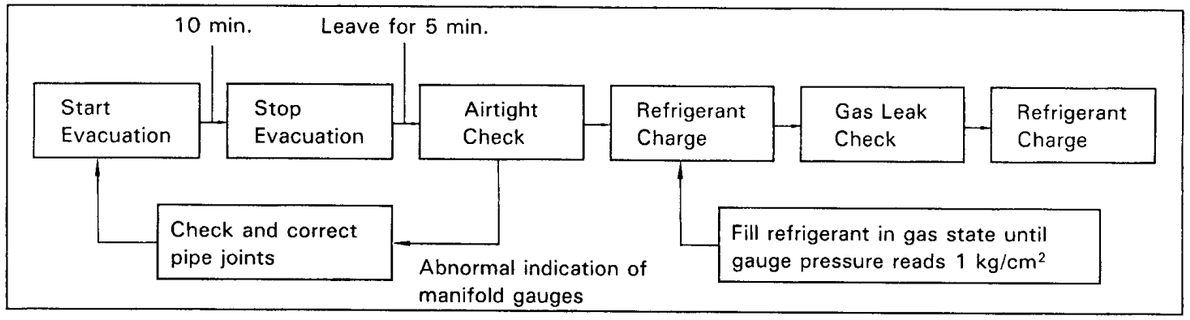
The vacuum pump adaptor has an internal magnetic valve. When evacuation is completed and the vacuum pump switch is turned off, the magnetic valve opens allowing the introduction atmospheric air into the manifold gauges to prevent the back flow of oil from the vacuum pump into the gauge hose.

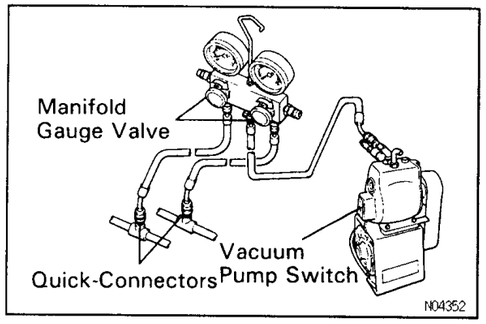
CAUTION:

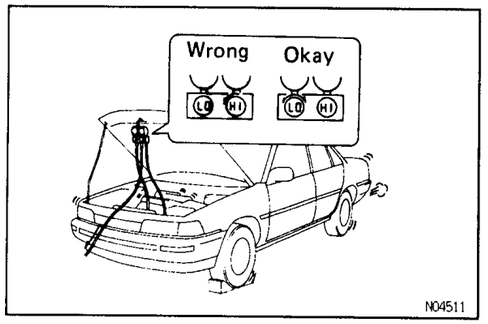
Be sure to turn off the manifold gauge valve immediately after evacuating the system. Then you may switch off the vacuum pump. If this order is reversed, the line will be temporarily open to atmosphere.

CHARGING AND LEAK – CHECK METHODS

Evacuate the refrigeration system according to the following procedures.







CAUTION:

- **Be sure to connect both the high and low pressure quick – connectors onto the A / C system when evacuating. If only one side is connected, the system would be open to atmosphere through the other connector, making it impossible to maintain vacuum.**
- **Be sure to turn off the manifold gauge valve immediately after evacuating the system. Then you may switch off the vacuum pump.**

PRECAUTIONS WHEN CHARGING REFRIGERANT

1. **DO NOT OPERATE COMPRESSOR WITHOUT ENOUGH REFRIGERANT IN REFRIGERANT CYCLE**
   If there is not enough refrigerant in the refrigerant cycle, oil lubrication will be insufficient and compressor burnout may occur, so take care to avoid this.
2. **DO NOT OPEN HIGH PRESSURE MANIFOLD VALVE WHILST COMPRESSOR IS OPERATING**
   If the high pressure valve is opened, refrigerant flows in the reverse direction and could cause the charging cylinder to rupture, so open and close the low pressure valve only.
3. **BE CAREFUL NOT TO OVERCHARGE WITH REFRIGERANT IN SYSTEM**
   If refrigerant is overcharged, it causes problems such as insufficient cooling, poor fuel economy, engine overheating etc.

ELECTRICAL PARTS

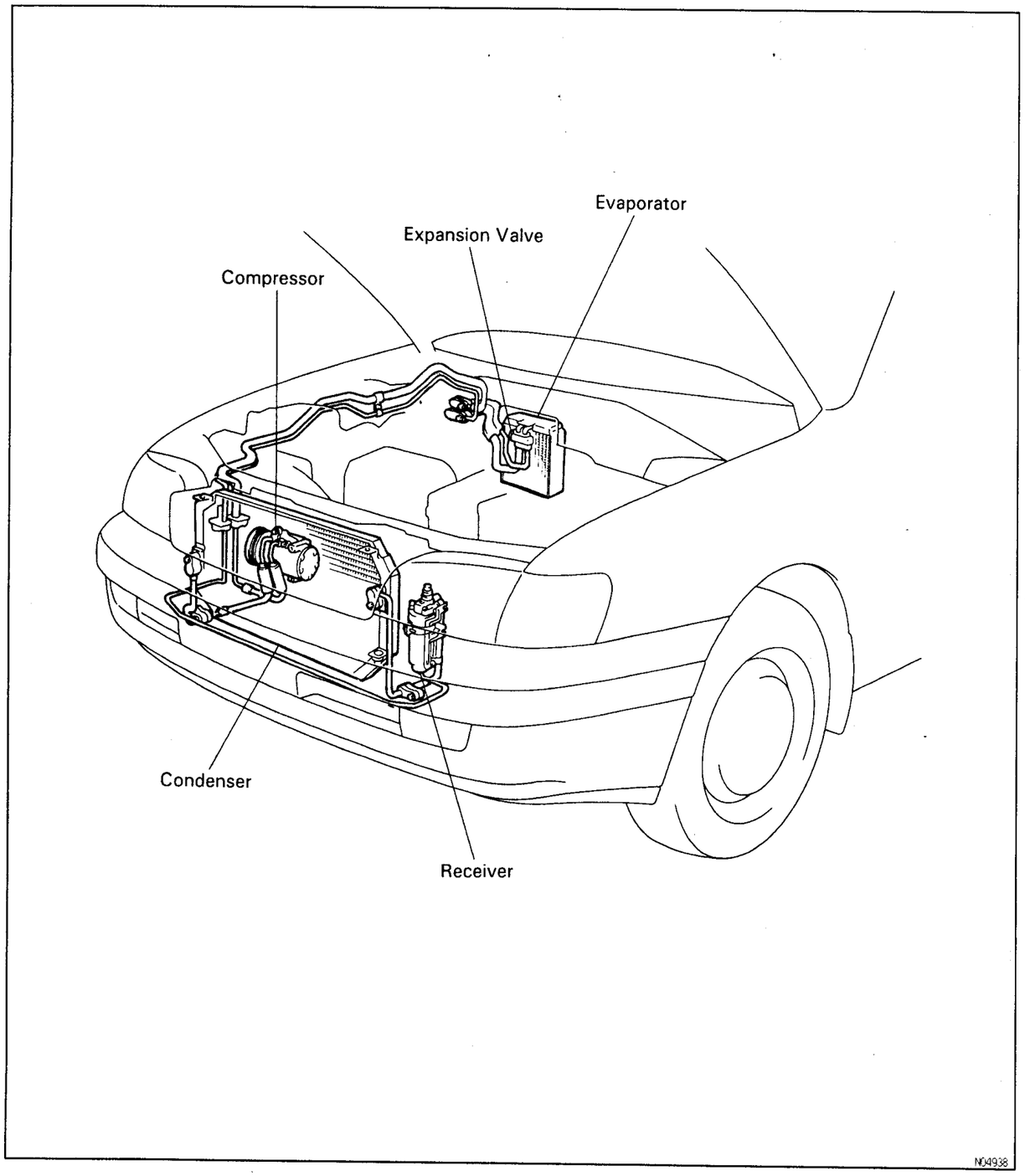
AC0EP-01

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

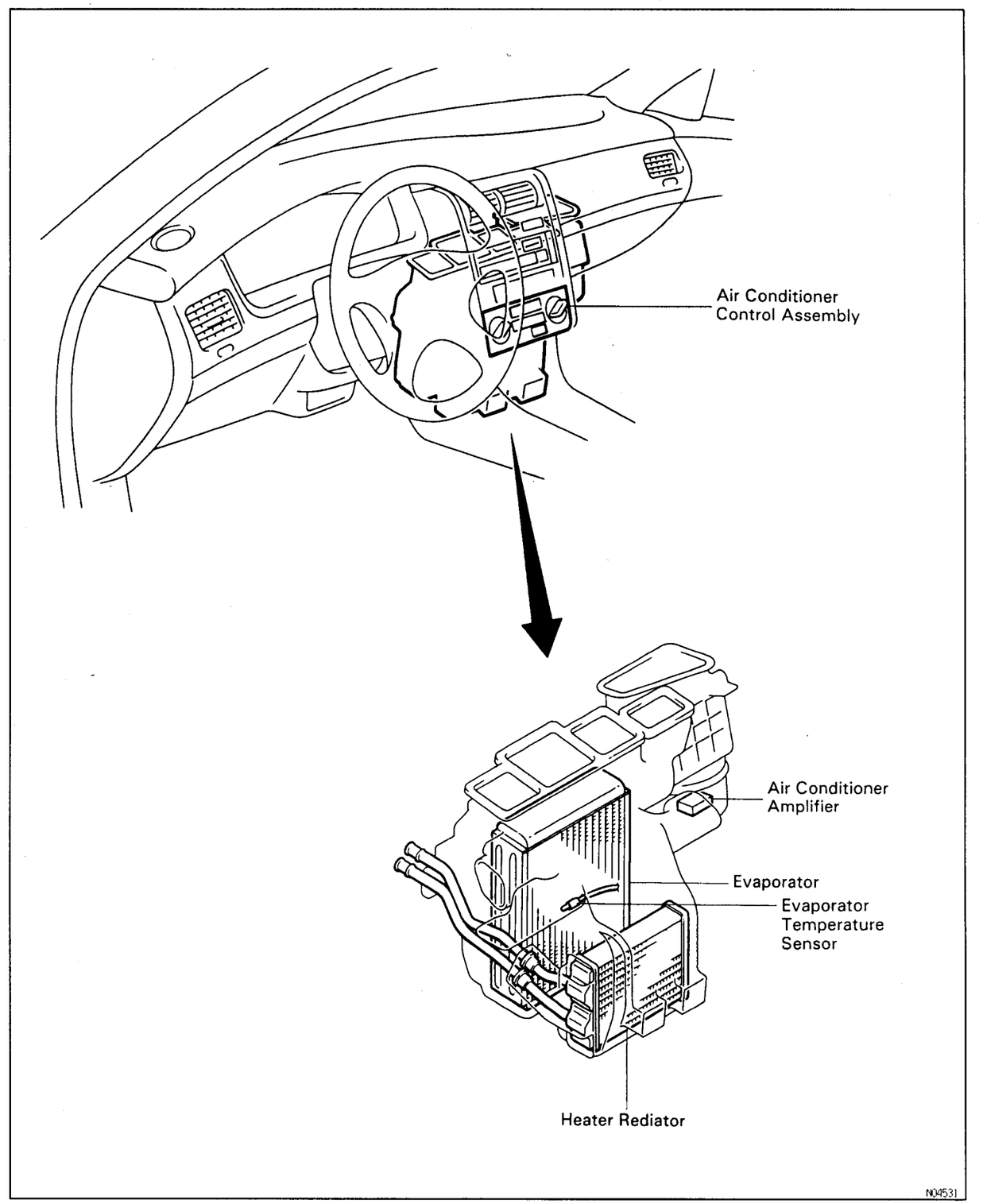
DESCRIPTION

PARTS LOCATION

AC0EQ-01



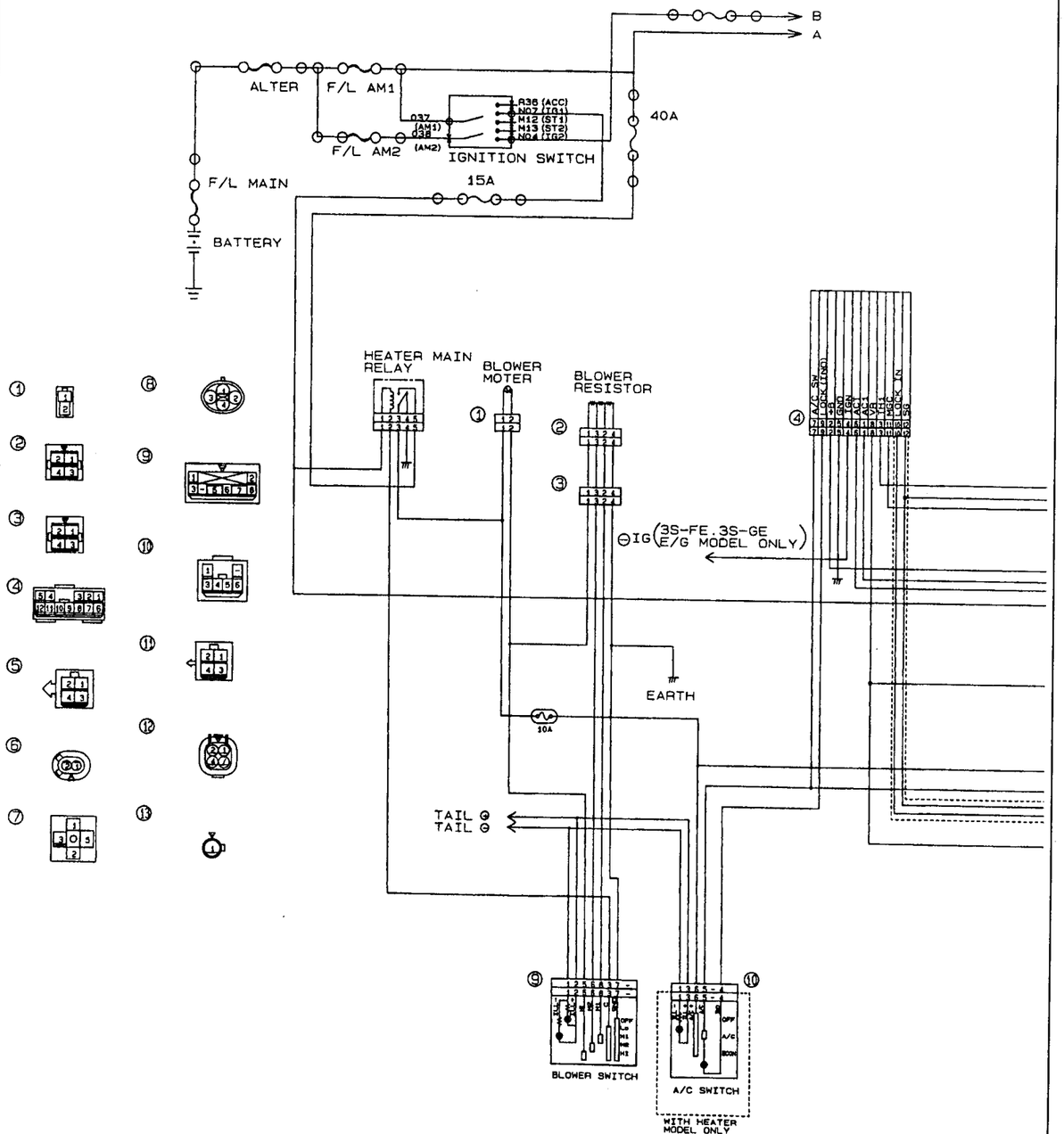
PARTS LOCATION(CONT'D)



ELECTRICAL WIRING DIAGRAM

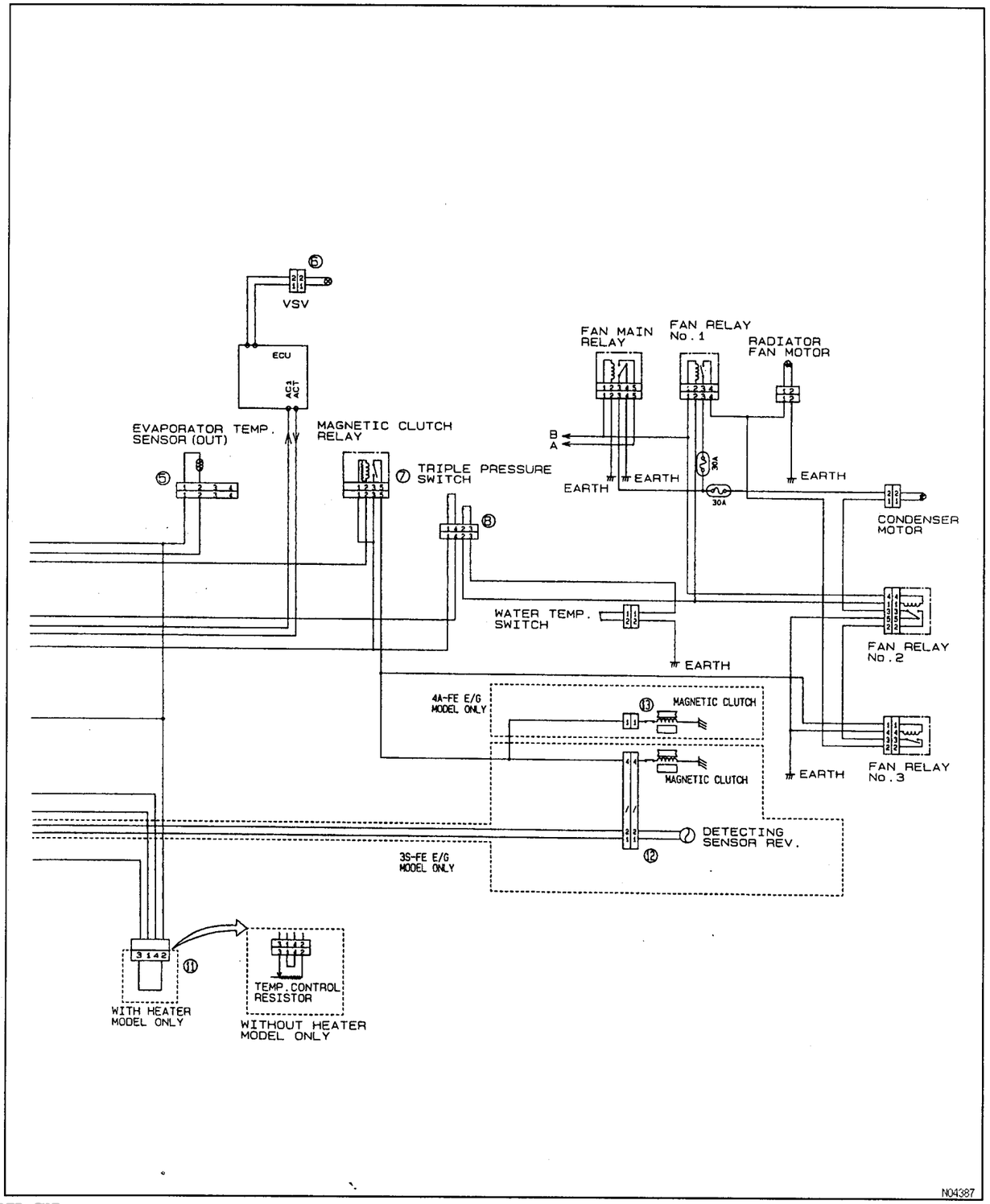
ACOER-01

■ 4A-FE, 3S-FE, 3S-GE ENGINE MODEL (DIAL TYPE HEATER CONTROL)



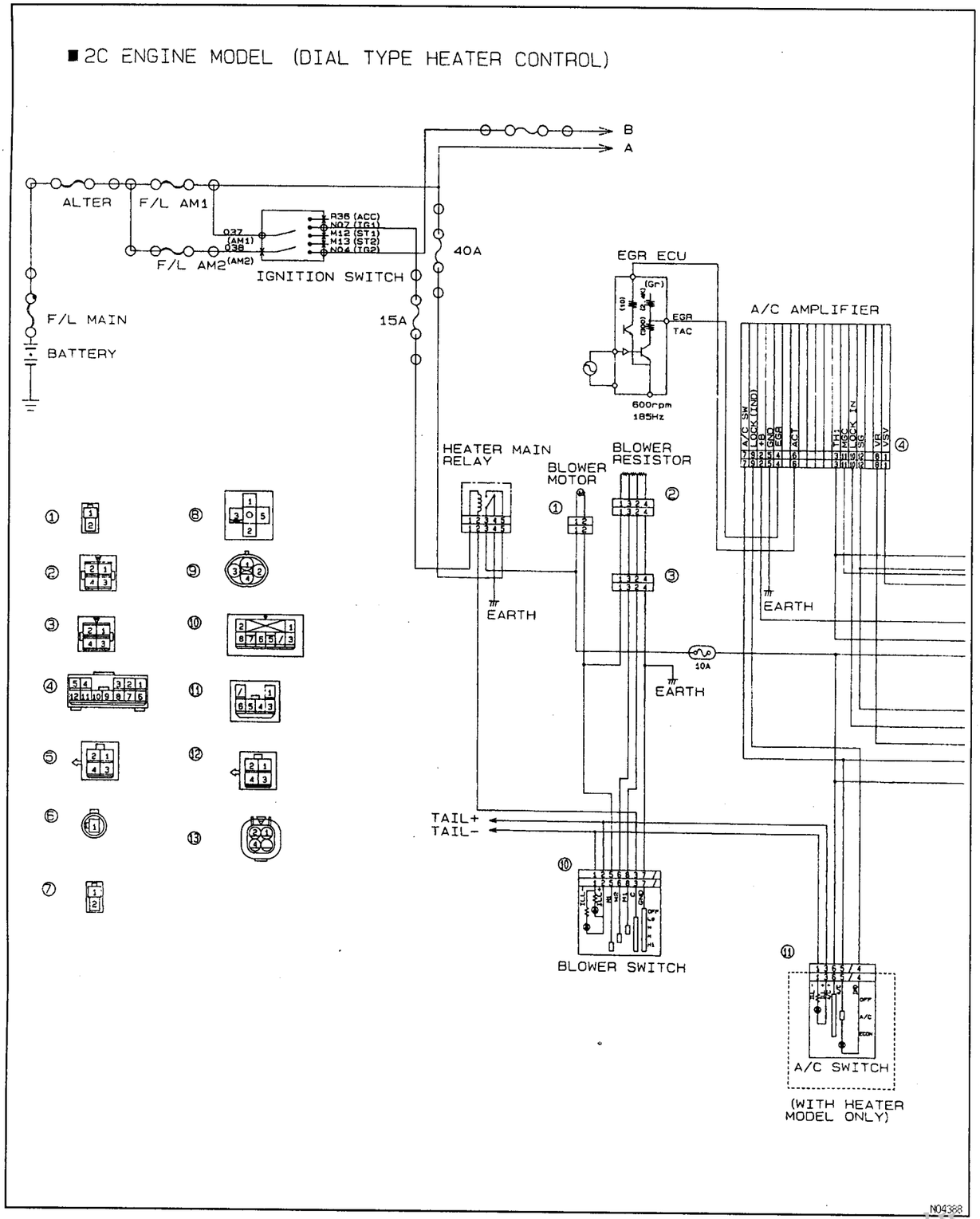
N04386

ELECTRICAL WIRING DIAGRAM (CONT'D)

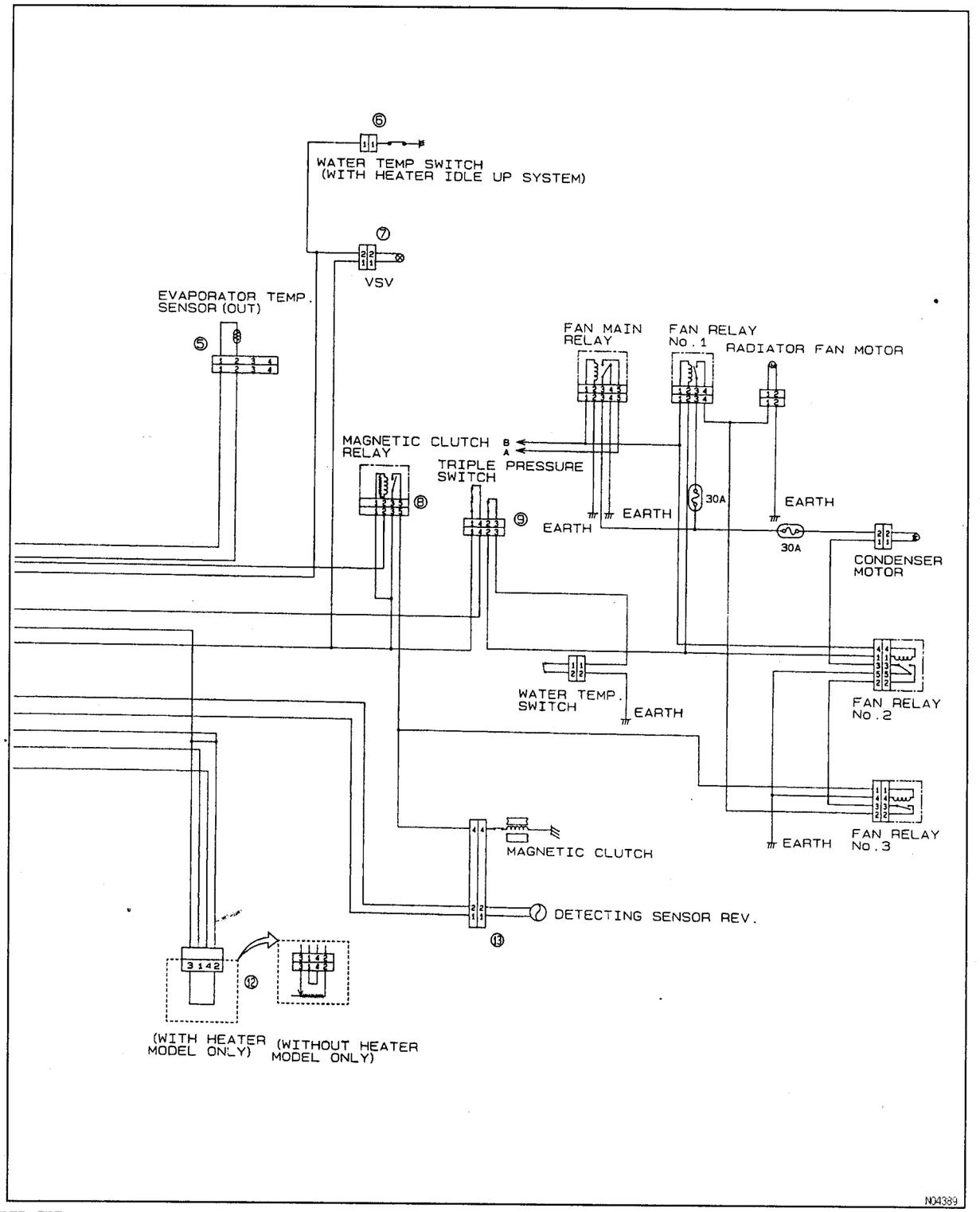


N04387

ELECTRICAL WIRING DIAGRAM (CONT'D)

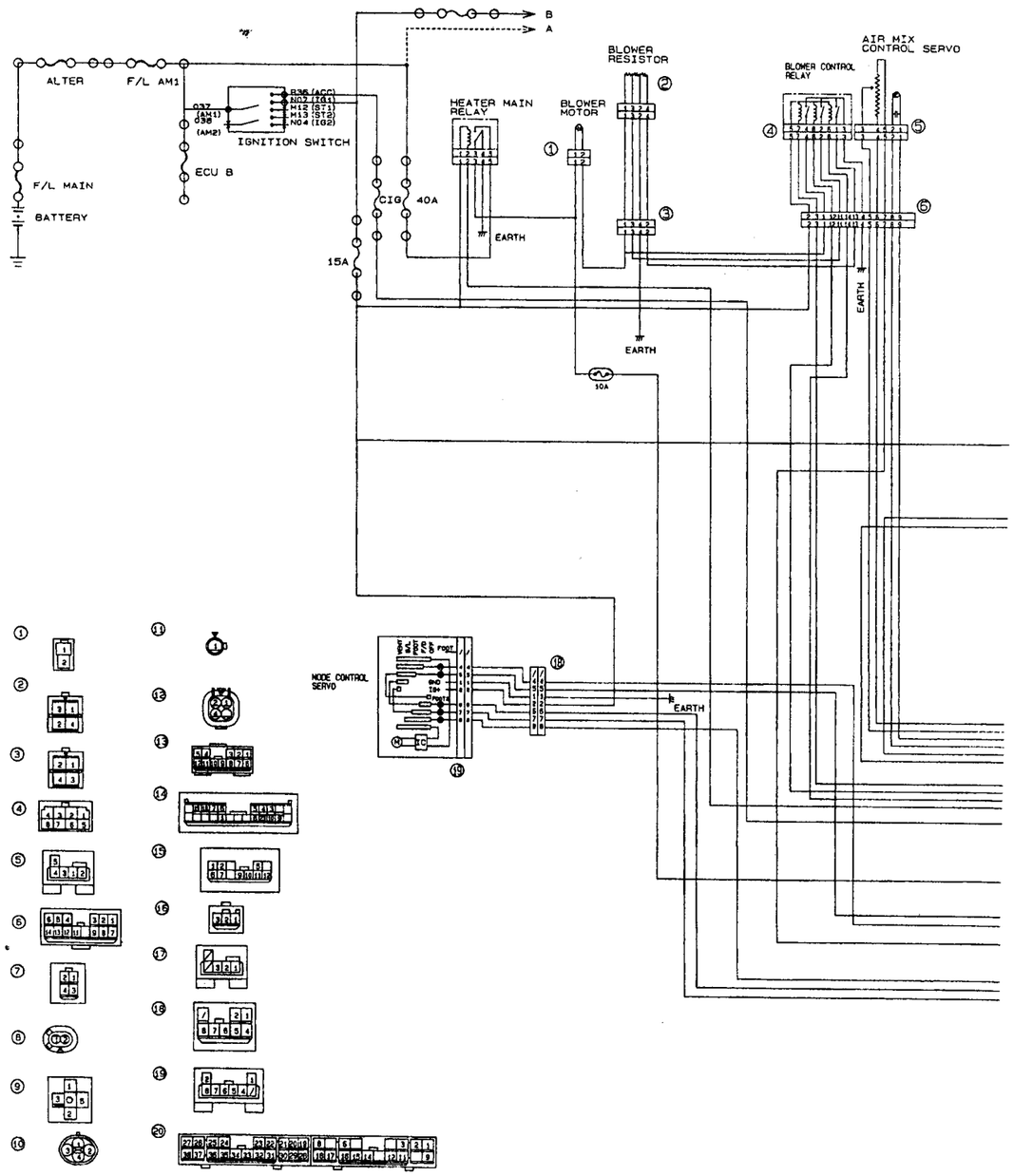


ELECTRICAL WIRING DIAGRAM (CONT'D)



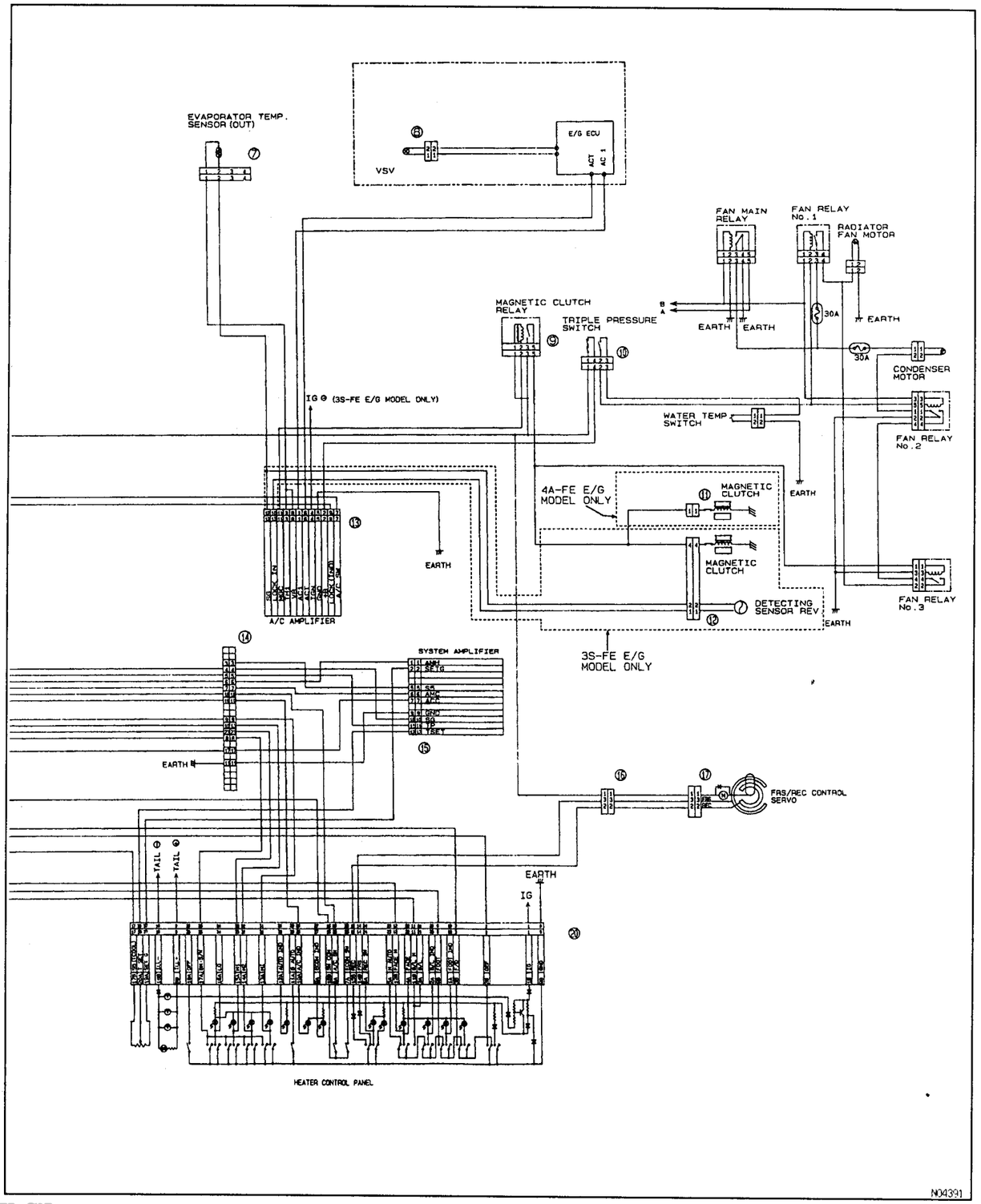
ELECTRICAL WIRING DIAGRAM (CONT'D)

■ 4A-FE, 3S-FE ENGINE MODEL (PUSH TYPE HEATER CONTROL)



N04390

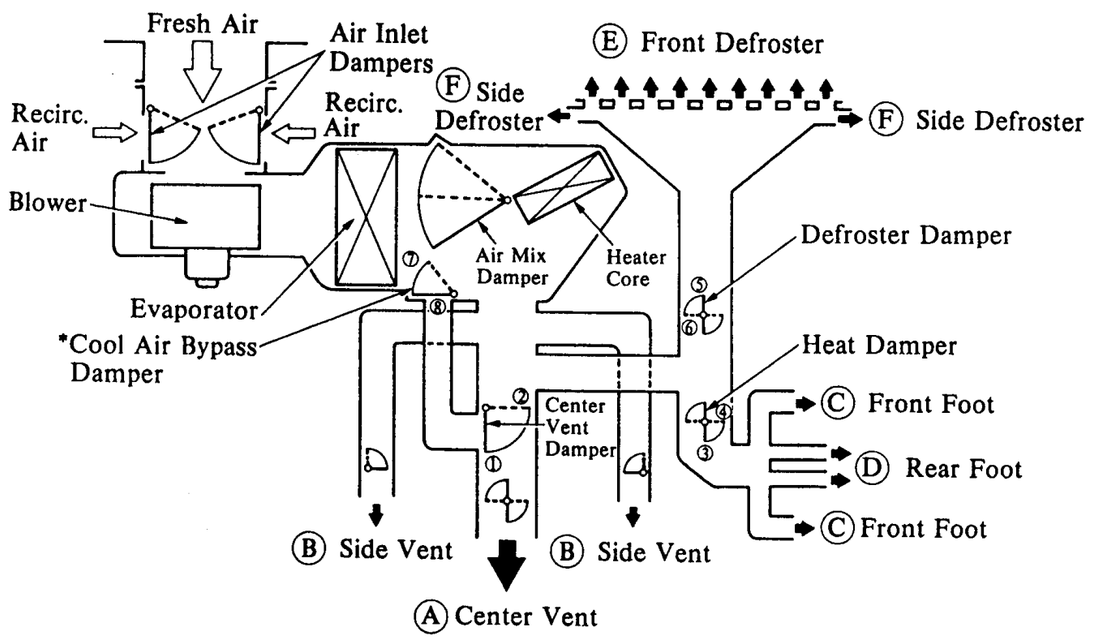
ELECTRICAL WIRING DIAGRAM (CONT'D)



N04391

DAMPERS POSITION

AC0E8-01

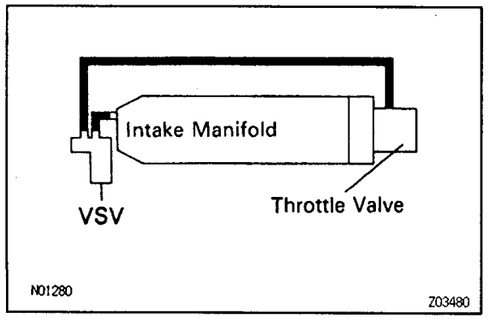


* This damper is provided only on models with the "fresh feeling" heater system.

Air Outlet Mode		Mode Control Damper Position	Vent		Foot		Defroster	
			Ⓐ Center	Ⓑ Side	Ⓒ Front	Ⓓ Rear	Ⓔ Front	Ⓕ Side
Face		① ④ ⑥ ⑧	◯	◯	–	–	–	–
Bi-Level		① ③ ⑥ ⑧	○	○	○	○	–	–
Foot		② ③ ⑥ ⑦	●	○	◯	○	○	○
Foot/ Defroster		② ③ ⑤ ⑦	●	○	○	○	○	○
Defroster		② ④ ⑤ ⑦	●	○	–	–	◯	○

NOTES:
- The size of the circle ○ and ● indicates the proportion of air flow volume.
- ○ indicates temperature-controlled (heated) air flow.
  ● indicates cool air flow (not heated).
- The circle ● indicates blowers exclusively for models with the "fresh feeling" heater system.

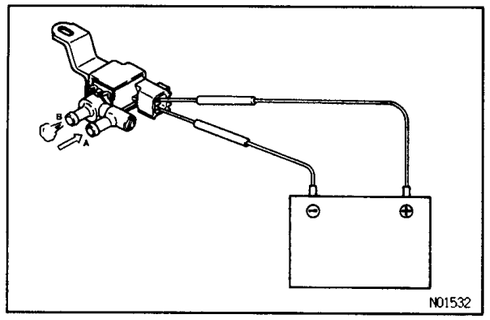
Z03118



VACUUM SWITCHING VALVE (VSV)

AC01A-04

(4A–FE, 3S–FE and 3S–GE)
VACUUM HOSE CIRCUIT



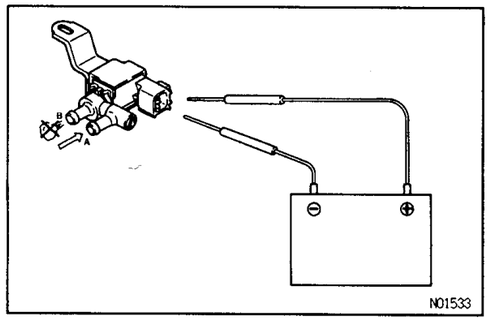
VSV INSPECTION

AC01B-05

1. **REMOVE VSV**
2. **CHECK VACUUM CIRCUIT CONTINUITY IN VSV BY BLOWING AIR INTO PIPES**

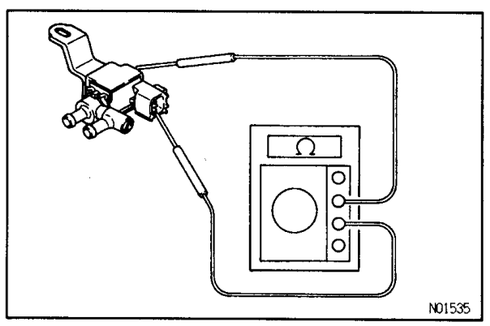
(a) Connect the VSV terminals to the battery terminals as illusstrated.

(b) Blow into pipe "A" and check that air comes out of pipe "B".

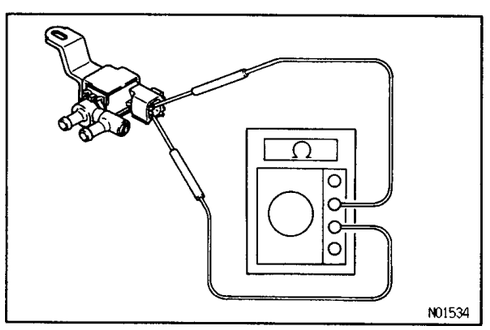


(c) Disconnect the battery.

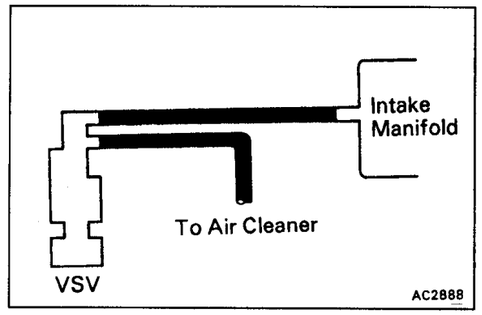
(d) Blow into pipe "A" and check that air does not come out of pipe "B".
If a problem is found, replace the VSV.



3. **CHECK FOR SHORT CIRCUIT**
Using an ohmmeter, check that there is no continuity between each terminal and the VSV.
If there is continuity, replace the VSV.

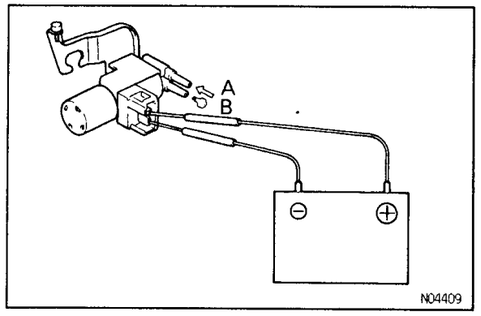


4. **CHECK FOR OPEN CIRCUIT**
Using an ohmmeter, measure the resistance between the two terminals.
Resistance:
30 – 34 Ω at 20°C (68°F)
If resistance value is not as specified, replace the VSV.



AC01A-05

(2C)
VACUUM HOSE CIRCUIT



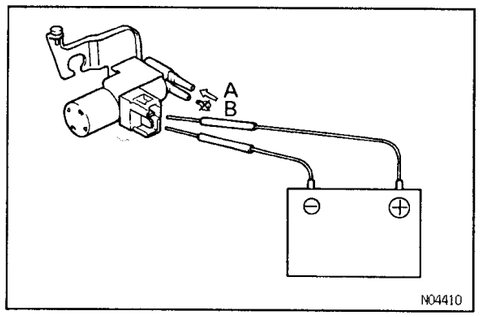
VSV INSPECTION

AC01B-04

1. **REMOVE VSV**
2. **CHECK VACUUM CIRCUIT CONTINUITY IN VSV BY BLOWING AIR INTO PIPES**

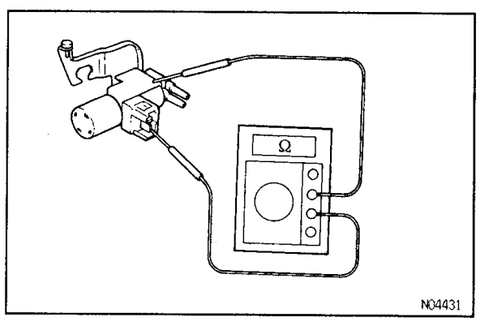
(a) Connect the VSV terminals to the battery terminals as illusstrated.

(b) Blow into pipe "A" and check that air comes out of pipe "B".

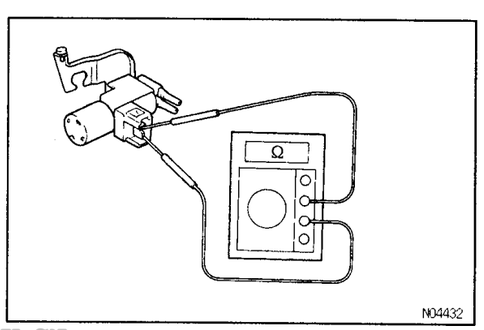


(c) Disconnect the battery.

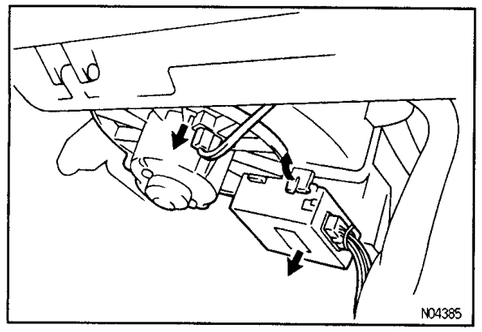
(d) Blow into pipe "A" and check that air does not come out of pipe "B".
If a problem is found, replace the VSV.



3. **CHECK FOR SHORT CIRCUIT**
Using an ohmmeter, check that there is no continuity between each terminal and the VSV body.
If there is continuity, replace the VSV.



4. **CHECK FOR OPEN CIRCUIT**
Using an ohmmeter, the resistance between the two terminals.
Resistance:
30 – 34 Ω at 20°C (68°F)
If the resistance is not within specification, replace the VSV.

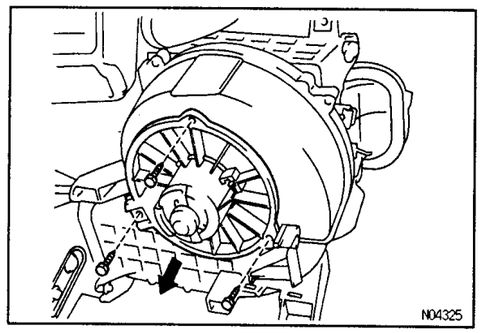


BLOWER MOTOR

BLOWER MOTOR REMOVAL

ACOFM-01

1. **REMOVE INSTRUMENT LOWER PANEL AND UNDER COVER NO.2**
   (See page BO–59)
2. **DISCONNECT CONNECTOR**
3. **REMOVE A/C AMPLIFIER**



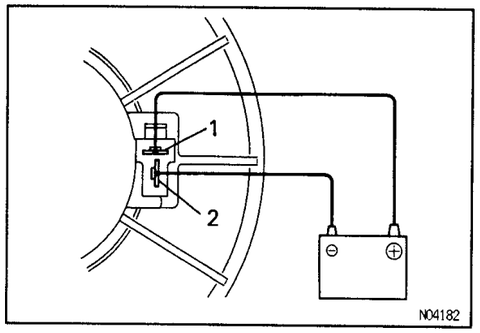
4. **REMOVE MOTOR**
   Remove the three screws and the motor.

BLOWER MOTOR INSPECTION

ACO1D-02

INSPECT BLOWER MOTOR OPERATION

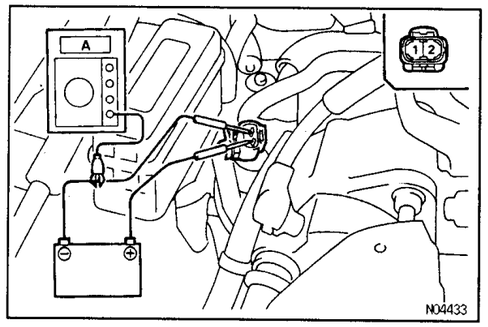
Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, then check that the motor operation is smooth.



BLOWER MOTOR INSTALLATION

ACOFN-01

INSTALL BLOWER MOTOR BY FOLLOWING REMOVAL SEQUENCE IN REVERSE



CONDENSER FAN MOTOR

CONDENSER FAN MOTOR INSPECTION

ACOFP-01

1. **DISCONNECT CONNECTOR**
2. **INSPECT CONDENSER FAN MOTOR**

(a) Using the wire harness, apply battery voltage to the connector. Connect the positive (+) lead from the battery to terminal 1 and negative (–) lead to terminal 2.

(b) Confirm smooth rotation of the motor within the specified current flow.

Standard current:

Vehicles for Europe (3S–GE, 2C)

6.5 ± 1.0 A

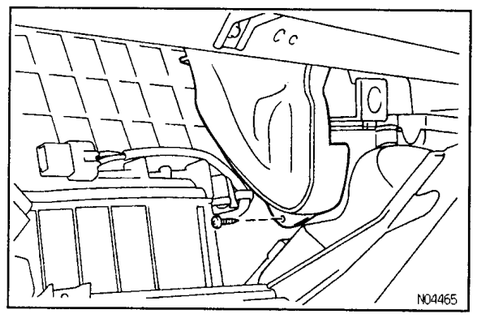
Others

6.0 ± 1.5 A

If current is not as specified, replace the motor.

CONDENSER FAN REMOVAL

1. **DISCONNECT CONNECTOR**
2. **REMOVE CONDENSER FAN**
   Remove three bolts and pull out the condenser fan upward.

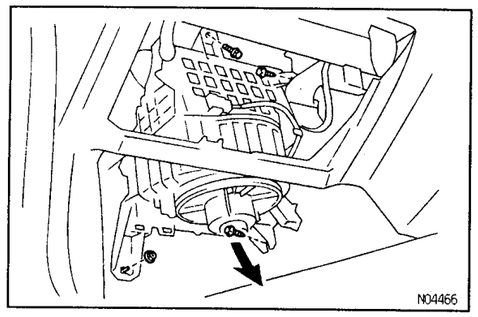


AIR INLET CONTROL SERVOMOTOR

ACOFQ-01

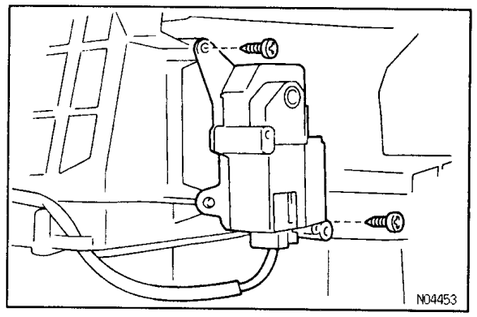
AIR INLET CONTROL SERVOMOTOR REMOVAL

1. **REMOVE INSTRUMENT PANEL UNDER TRAY, GLOVE COMPARTMENT DOOR AND BOX UPPER SHELL**
   (See page BO–59)
2. **REMOVE AIR DUCT NO.2**



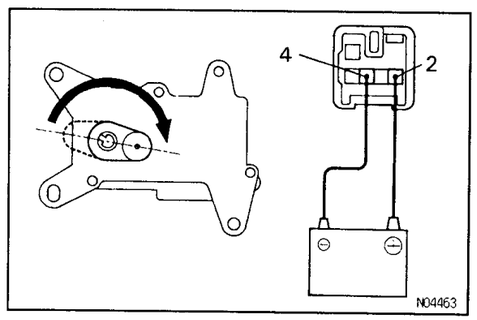
3. **REMOVE BLOWER UNIT**

(a) Disconnect connectors.
(b) Remove the bolt, the nut and two screws.
(c) Remove the blower unit.



4. **REMOVE SERVOMOTOR**

(a) Disconnect the connector.
(b) Remove two screws and the servomotor.

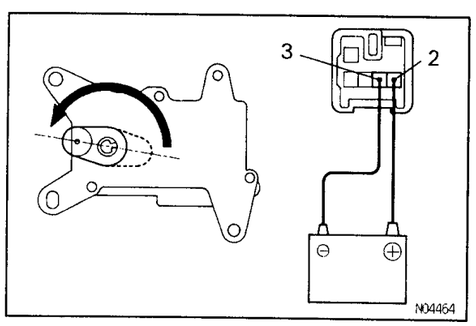


AIR INLET CONTORL SERVOMOTOR INSPECTION

ACOSE-02

INSPECT SERVOMOTOR OPERATION

(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 4, check that the arm rotates to the "FRESH" side smoothly.



(b) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 3, check that the arm rotates to the "RECIRC" side smoothly.
If operation is not as specified, replace the servo motor.

AIR INLET CONTROL SERVOMOTOR INSTALLATION

ACOFR-01

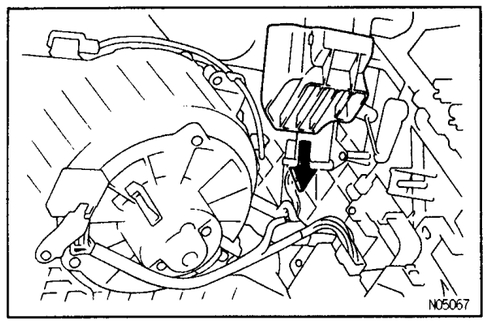
INSTALL SERVOMOTOR BY FOLLOWING REMOVAL SEQUENCE IN REVERSE

AIR MIX CONTROL SERVOMOTOR

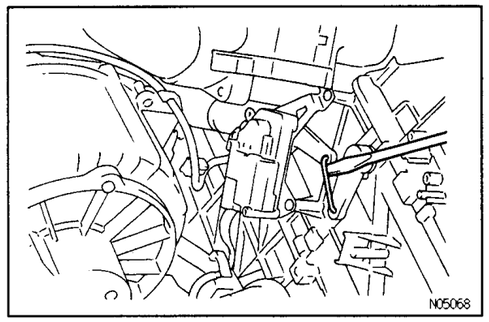
ACOFS-01

AIR MIX CONTROL SERVOMOTOR REMOVAL

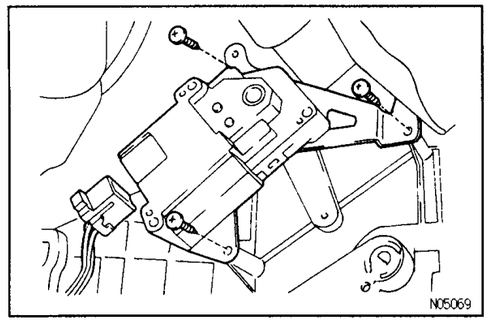
1. REMOVE INSTRUMENT PANEL
(See page BO-59)



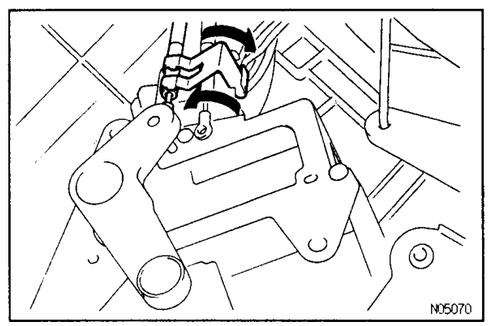
2. REMOVE AIR DUCT



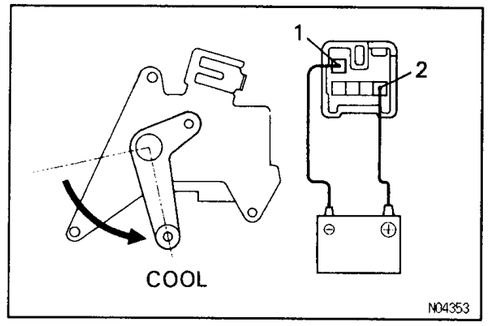
3. REMOVE CONTROL LINK

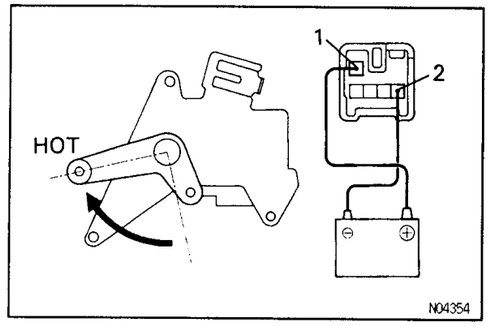


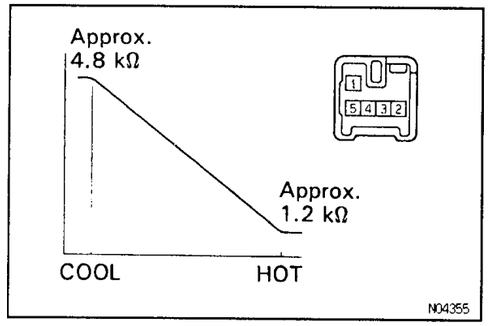
4. REMOVE SERVOMOTOR
(a) Disconnect the connector.
(b) Remove the three screws and the servomotor.



(c) Disconnect the control cable from the servomotor.







ACOFT-01

AIR MIX CONTROL SERVOMOTOR INSPECTION

1. INSPECT SERVOMOTOR OPERATION
(a) Connect the positive (+) lead from the battery to terminal 2 and the negative (–) lead to terminal 1, check that the lever moves smoothly from HOT to COOL.

(b) Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, check that the lever moves smoothly from COOL to HOT.
If operation is not as specified, replace the motor.

2. INSPECT POSITION SENSOR OPERATION
(a) Measure the resistance between terminals 5 and 4.
Resistance: Approx. 6 kΩ
(b) Set the arm to COOL position.
(c) Check that the resistance between terminals 3 and 4 decreases from approx. 4.8 kΩ to 1.2 kΩ, when the arm is rotated from COOL to HOT position.
If resistance value is not as specified, replace the motor.

ACOFU-01

AIR MIX CONTROL SERVOMOTOR INSTALLATION

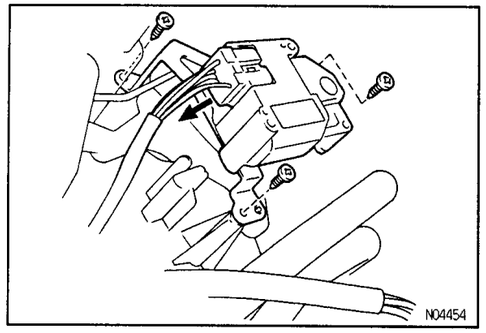
INSTALL SERVOMOTOR BY FOLLOWING REMOVAL SEQUENCE IN REVERSE

AIR VENT MODE CONTROL SERVOMOTOR

MODE CONTROL SERVOMOTOR REMOVAL

AC0FV-01

1. **REMOVE INSTRUMENT FINISH LOWER PANEL AND DUCT (HEATER TO RESISTER NO.2)** **(See page BO–59)**



2. **REMOVE SERVOMOTOR**

(a) Disconnect the connector.

(b) Remove three screws and the servomotor.

MODE CONTROL SERVOMOTOR INSPECTION

AC0FF-02

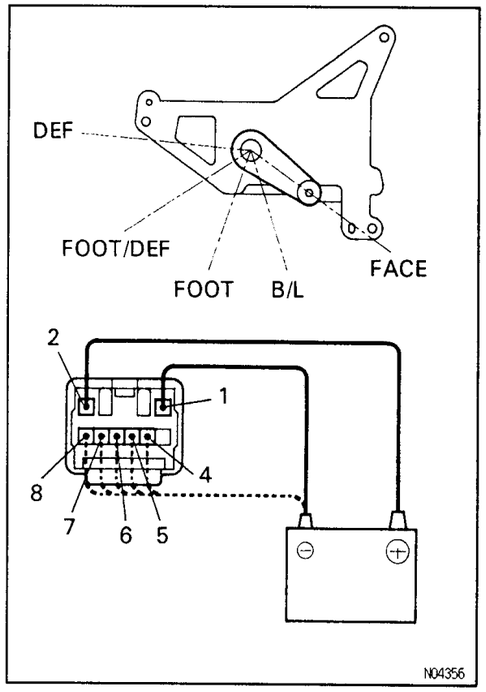
INSPECT SERVOMOTOR OPERATION

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

(b) Connect the negative (–) lead from the battery to each terminal and check that the arm rotates to each position as shown below.

Connected terminal	Position
4	DEF
5	FOOT/DEF
6	FOOT
7	B/L
8	FACE

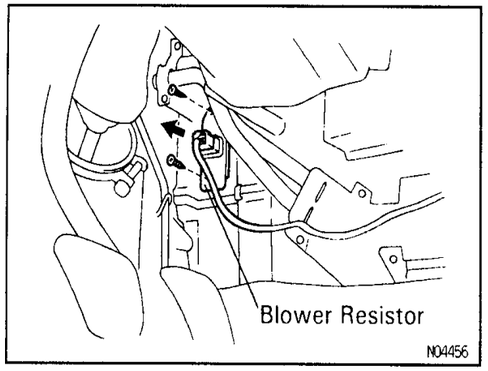
If operation is not as specified, replace the servomotor.



MODE CONTROL SERVOMOTOR INSTALLATION

AC0FW-01

INSTALL SERVOMOTOR BY FOLLOWING REMOVAL SEQUENCE IN REVERSE



BLOWER RESISTOR

BLOWER RESISTOR REMOVAL

AC0FX-01

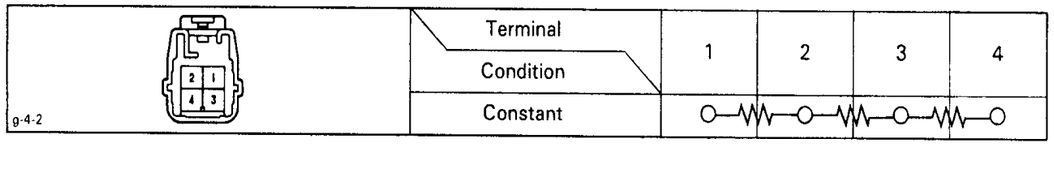
1. **DISCONNECT CONNECTOR**
2. **REMOVE BLOWER RESISTOR**

Remove two screws and the resistor.

BLOWER RESISTOR INSPECTION

AC0FY-01

INSPECT BLOWER RESISTOR CONTINUITY



If continuity is not as specified, replace the blower resistor.

BLOWER RESISTOR INSTALLATION

AC0FZ-01

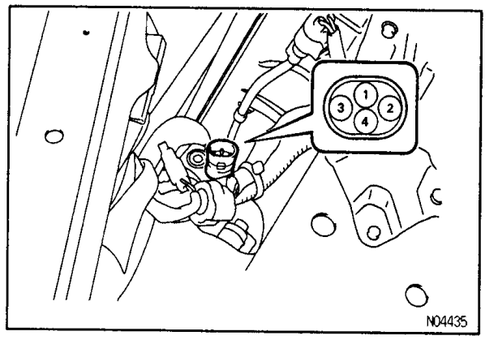
INSTALL BLOWER RESISTOR BY FOLLOWING REMOVAL SEQUENCE IN REVERSE

PRESSURE SWITCH

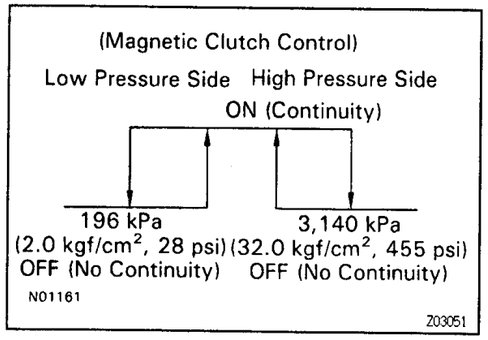
ON–VEHICLE INSPECTION

AC01R-01

1. **INSTALL MANIFOLD GAUGE SET**
   (See page AC–20)
2. **DISCONNECT CONNECTOR FROM PRESSURE SWITCH**
3. **RUN ENGINE AT APPROX. 2000 RPM**

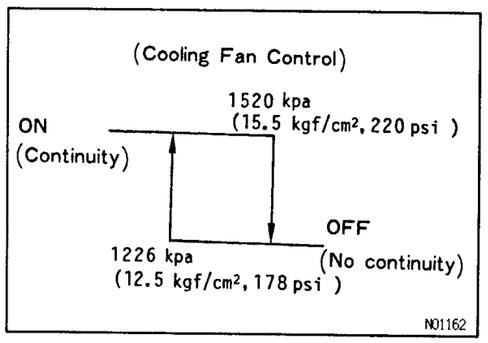


4. **INSPECT PRESSURE SWITCH OPERATION**



(Magnetic Clutch Control)

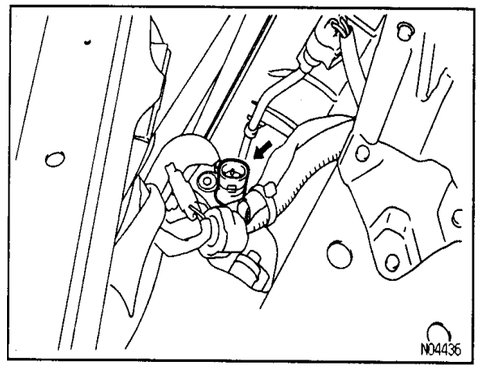
(a) Connect the positive (+) lead from the ohmmeter to terminal 4 and negative (–) lead to terminal 1.
(b) Check continuity between terminals when refrigerant pressure is changed as shown.
If operation is not as specified, replace the pressure switch.



(Cooling Fan Control)

(a) Connect the positive (+) lead from the ohmmeter to terminal 2 and negative (–) lead to terminal 3.
(b) Check continuity between terminals when refrigerant pressure is changed as shown.
If operation is not as specified, replace the pressure switch.

5. **STOP ENGINE AND REMOVE MANIFOLD GAUGE SET**
6. **CONNECT CONNECTOR TO PRESSURE SWITCH**



PRESSURE SWITCH REMOVAL

AC01S-03

1. **DISCHARGE REFRIGERANT IN REFRIGERATION SYSTEM**
2. **REMOVE PRESSURE SWITCH**

(a) Disconnect the connector.
(b) Remove the pressure switch from the liquid tube.
HINT: Lock the switch mount on the tube with an open end wrench, being careful not to deform the tube, and remove the switch.

PRESSURE SWITCH INSTALLATION

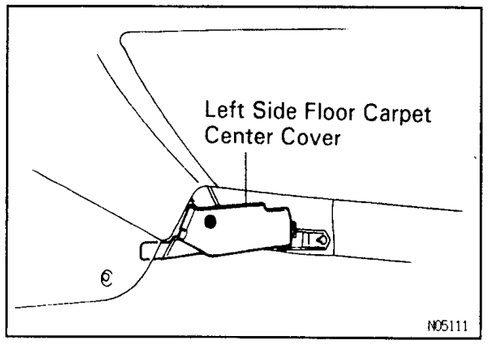
AC0G0-01

1. **INSTALL PRESSURE SWITCH**

(a) Install the pressure switch to the liquid tube.
Torque: 10.8 N·m (110 kgf·cm, 8 ft·lbf)
HINT: Lock the switch mount on the tube with an open end wrench, being careful not to deform the tube, and install the switch.
(b) Connect the connector.

2. **EVACUATE AIR IN REFRIGERATION SYSTEM AND CHARGE WITH REFRIGERANT**
Specified amount:
750 ± 50 g (26.45 ± 1.76 oz)

3. **INSPECT FOR LEAKAGE OF REFRIGERANT**
Using a gas leak tester, check for leakage of refrigerant from the pressure switch mount.
4. **INSPECT A/C OPERATION**



EVAPORATOR TEMPERATURE SENSOR

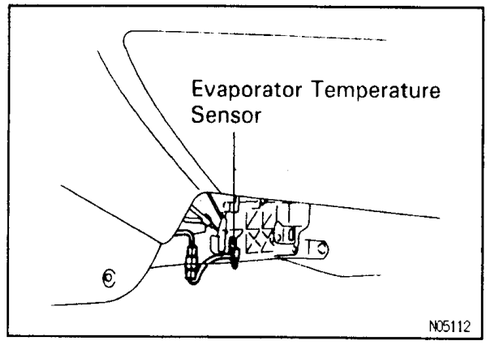
EVAPORATOR TEMPERATURE SENSOR REMOVAL

AC0G1-01

1. **REMOVE LEFT SIDE FLOOR CARPET CENTER COVER.**
   Remove the clip and the left side floor carpet center cover.
2. **REMOVE EVAPORATOR TEMPERATURE SENSOR**

(a) Disconnect the evaporator temperature sensor connector.

(b) Remove the screw and the evaporator temperature sensor.



EVAPORATOR TEMPERATURE SENSOR INSPECTION

AC01V-02

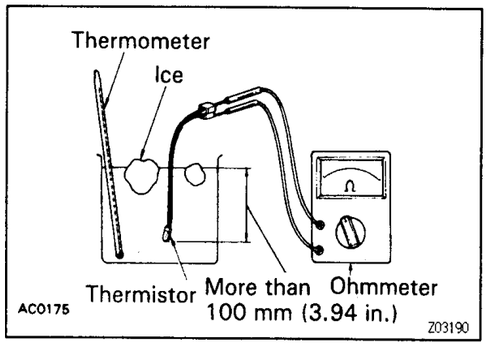
Check resistance between terminals of evaporator temperature sensor (thermistor) connector at each temperature.

Resistance:

at 0°C (32°F): 4.6 – 5.1 kΩ

at 15°C (59°F): 2.1 – 2.6 kΩ

In addition as temperature increases, the resistance decreases gradually.



EVAPORATOR TEMPERATURE SENSOR INSTALLATION

AC01W-01

INSTALL EVAPORATOR TEMPERATURE SENSOR

Install evaporator temperature sensor in reverse order of removal procedure.

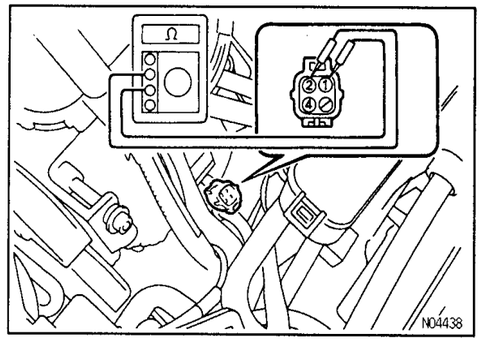
REVOLUTION DETECTING SENSOR

AC01X-02

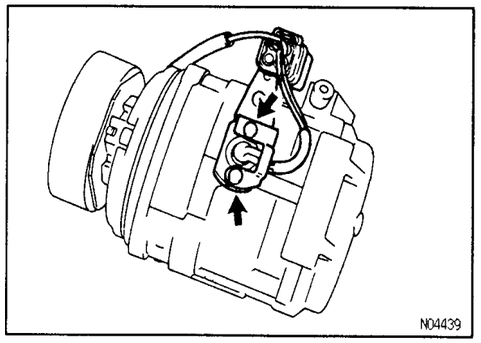
(Ex. 4A–FE Engine)

ON–VEHICLE INSPECTION

1. **DISCONNECT NEGATIVE CABLE FROM BATTERY**
2. **DISCONNECT CONNECTOR OF REVOLUTION DETECTING SENSOR**



3. **INSPECT REVOLUTION DETECTING SENSOR**
   Check the resistance between terminals 1 and 2 of the sensor.
   Specified resistance:
   100 – 130 Ω at 20°C (68°F)
   If the resistance value is not as specified, replace the revolution detecting sensor.



REVOLUTION DETECTING SENSOR REMOVAL

AC01Y-02

1. **REMOVE COMPRESSOR**
   (See page AC–39)
2. **REMOVE REVOLUTION DETECTING SENSOR**

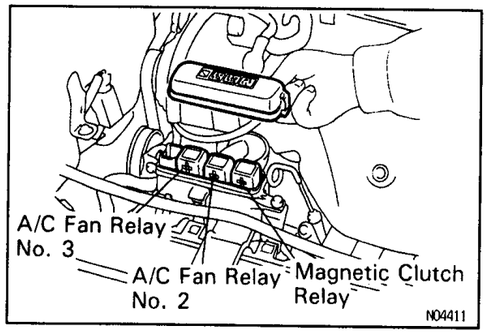
(a) Using a hexagon wrench, remove two bolts.

(b) Pull out the revolution detecting sensor.

REVOLUTION DETECTING SENSOR INSTALLATION

AC01Z-02

1. **INSTALL REVOLUTION DETECTING SENSOR**
   Install the revolution detecting sensor with two bolts.
   Torque: 5.9 N·m (60 kgf·cm, 52 in.·lbf)
2. **INSTALL COMPRESSOR**
   (See page AC–53)

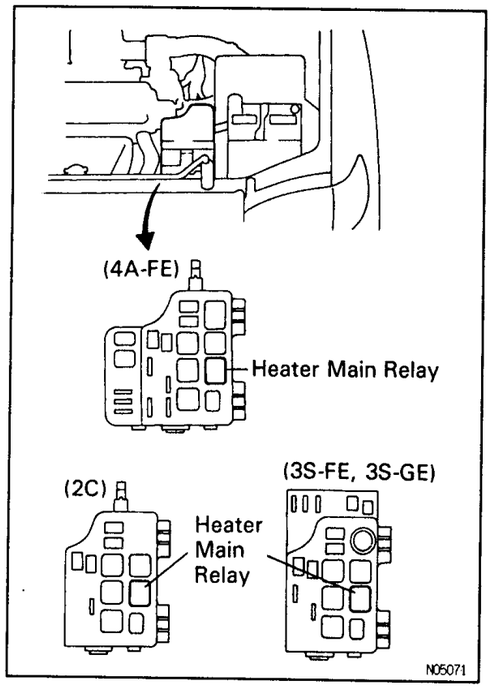


RELAYS

AC02F–03

RELAYS REMOVAL

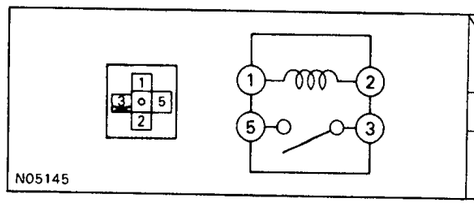
1. DISCONNECT NEGATIVE (–) CABLE FROM BATTERY
2. REMOVE RELAYS



RELAYS INSPECTION

AC02E–03

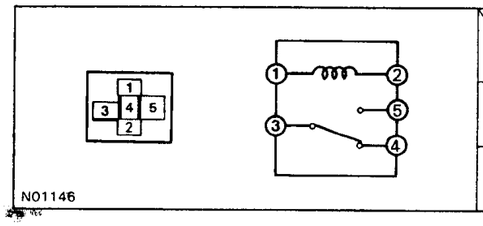
1. INSPECT MAGNETIC CLUTCH RELAY CONTINUITY
If continuity is not as specified, replace the relay.



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

V01269

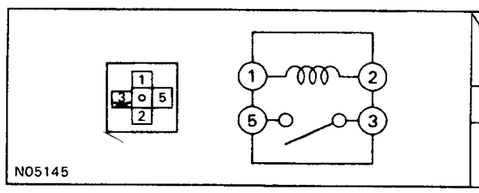
2. INSPECT A/C FAN RELAY NO. 2 CONTINUITY
If continuity is not as specified, replace the relay.



Terminal / Condition	1	2	3	4	5
Constant	○—∿∿∿—○		○——○		
Apply battery voltage to terminal 1 and 2.			○——○		○

V01270

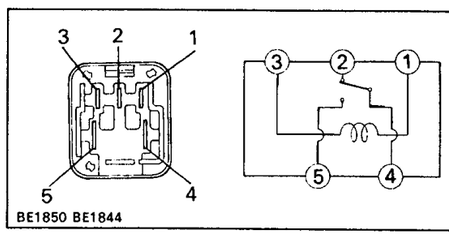
3. INSPECT A/C FAN RELAY NO. 3 CONTINUITY
If continuity is not as specified, replace the relay.



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

V01269

4. INSPECT HEATER MAIN RELAY CONTINUITY
If continuity is not as specified, replace the relay.



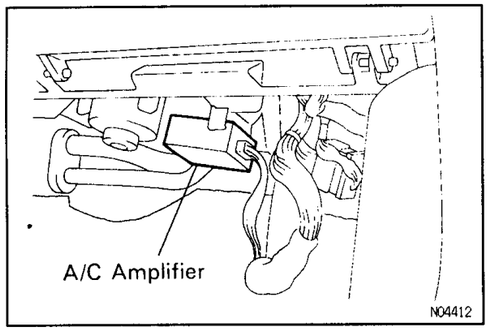
Terminal / Condition	1	2	3	4	5
Constant	○—∿∿∿—○	○			
Apply battery voltage to terminal 1 and 3.				○——○	

V00100

RELAYS INSTALLATION

AC022–01

1. INSTALL RELAYS
2. CONNECT NEGATIVE (–) CABLE TO BATTERY



AIR CONDITIONER AMPLIFIER

AC0G2-01

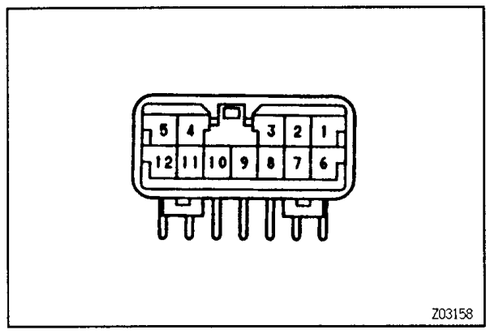
A/C AMPLIFIER INSPECTION

INSPECT AMPLIFIER CIRCUIT

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

Test conditions

(1) Ignition switch : ON
(2) Temperature control dial : MAX COOL
(3) Blower switch : HI



Check for	Tester connection	Condition	Specified value
Continuity	5 — ground	Constant	Continuity
Resistance	*1 3 — 8	A/C switch on (MAX. COOL to MAX. WARM)	Approx. 0 to 3 kΩ
		A/C switch off	No continuity
	3 — 12	Constant	1.5 kΩ at 25°C (77°F)
	*2 10 — 12	Constant	Approx. 115 Ω at 20°C (68°F)
Voltage	*3 1 — ground	Constant	Battery voltage
		Blower switch off	No voltage
	2 — ground	Constant	Battery voltage
		Blower switch off	No voltage
	*4 4 — ground	Start the engine	Approx. 10 — 14 V
		Stop the engine	No voltage
	7 — ground	A/C switch on	Battery voltage
		A/C switch off	No voltage
	11 — ground	A/C switch on	Battery voltage
		A/C switch off	No voltage

*1: Without heater
*2: With revolution detecting sensor
*3: 2C Engine only
*4: Except 4A-FE Engine

W01042

If circuit is not as specified, replace the amplifier.

AIR CONDITIONING CONTROL ASSEMBLY

A/C CONTROL ASSEMBLY REMOVAL

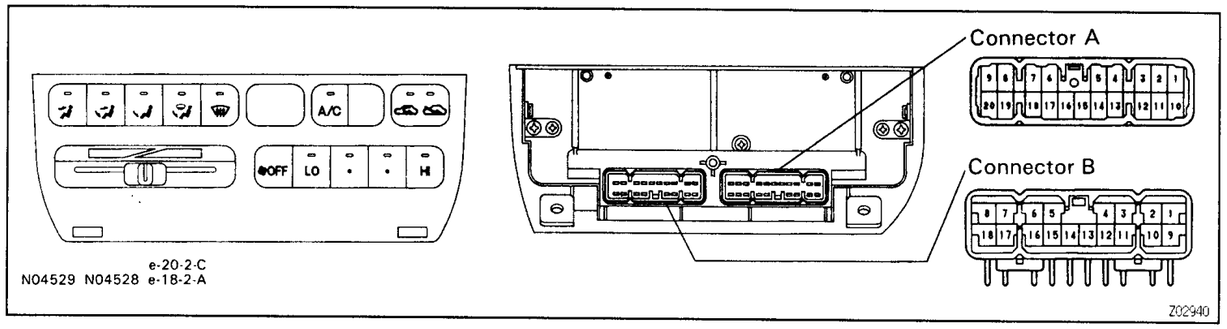
AC024-02

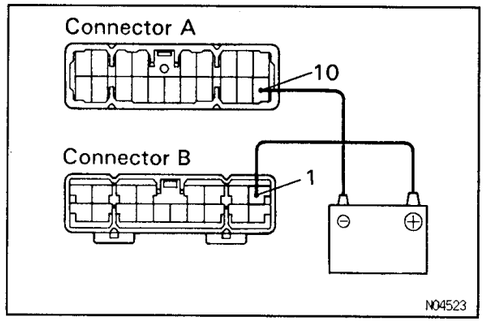
(See page BO—59)

A/C CONTROL ASSEMBLY INSPECTION

AC0G3-01

(Push Type Heater Control)

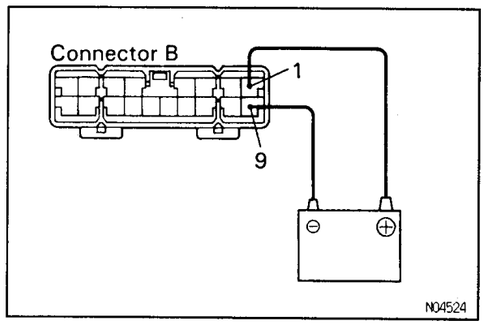




1. INSPECT A/C INDICATOR

(a) Connect the positive (+) lead from the battery to terminal B—1 and the negative (—) lead to terminal A—10.
(b) Push the A/C button in and check that the indicator light up.

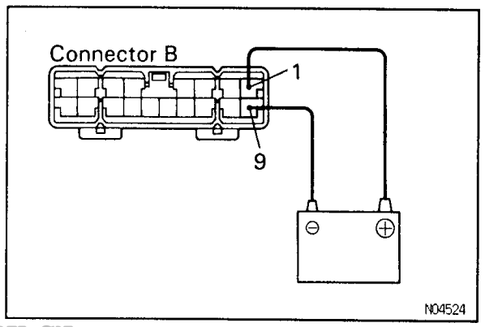
If operation is not as specified replace the A/C control assembly.



2. INSPECT MODE INDICATOR

(a) Connect the positive (+) lead from the battery to terminal B—1 and the negative (—) lead to terminal B—9.
(b) Push each of the mode buttons in and check that their indicators light up.

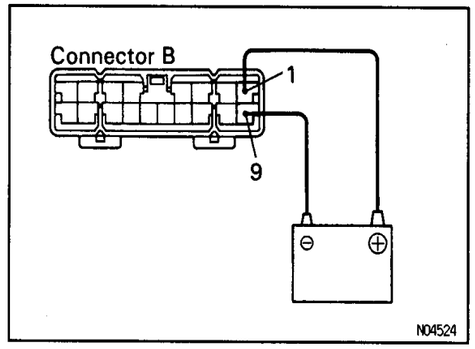
If operation is not as specified replace the A/C control assembly.



3. INSPECT AIR INLET INDICATOR

(a) Connect the positive (+) lead from the battery to terminal B—1 and the negative (—) lead to terminal B—9.
(b) Check that the FRESH and RECIRC indicators light up alternately each time the air inlet control switch button is pressed.

If operation is not as specified, replace the A/C control assembly.



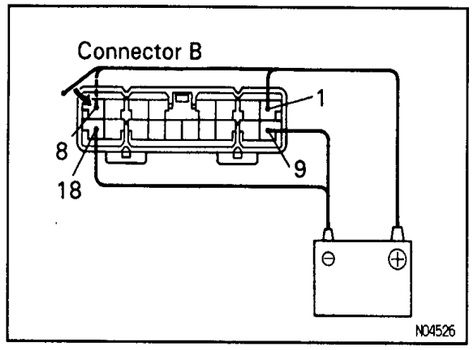
4. INSPECT BLOWER SPEED INDICATOR

(a) Connect the positive (+) lead from the battery to terminal B–1 and the negative (–) lead to terminal B –9.

(b) Push each of the blower buttons in and check that their indicators light up.

HINT: The indicator will not light up when the blower button is in the OFF position.

If operation is not as specified, replace the A/C control assembly.

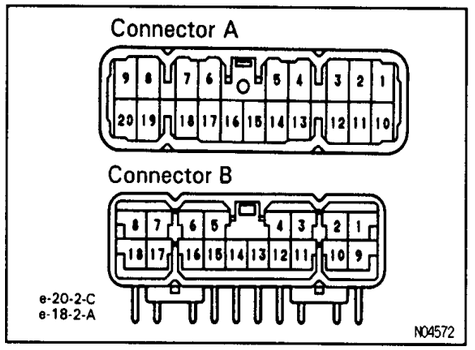


5. INSPECT INDICATOR DIMMING OPERATION

(a) Connect the positive (+) lead from the battery to terminal B–1 and the negative (–) lead to terminals B –9 and B–18.

(b) Connect the positive (+) lead from the battery to terminal B–8 and check that the mode indicator dims.

If operation is not as specified, replace the A/C control assembly.



6. INSPECT A/C SWITCH CONTINUITY

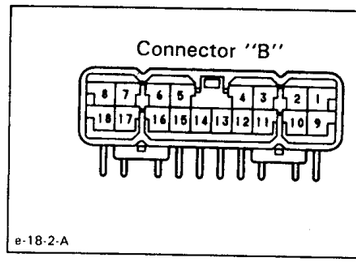
Terminal / Switch position	A-8	B-16
OFF		
ON	○	○

V01024

If continuity is not as specified, replace the A / C control assembly.

7. INSPECT MODE CONTROL SWITCH CONTINUITY

If continuity is not as specified, replace the A / C control assembly.

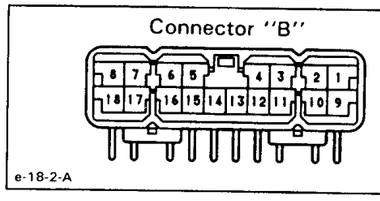


Terminal / Switch position	B-12	B-11	B-6	B-3	B-2	B-9
FACE	○					○
B/L		○				○
FOOT			○			○
FOOT/DEF				○		○
DEF					○	○

V01026

8. INSPECT AIR INLET CONTROL SWITCH CONTINUITY

If continuity is not as specified, replace the A / C control assembly.

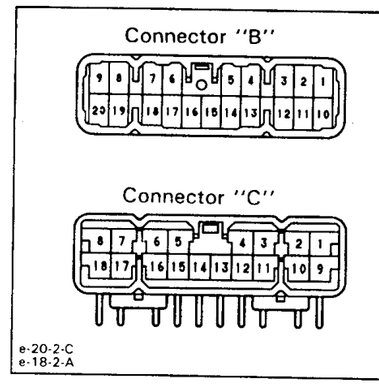


Terminal / Switch position	B-15	B-14	B-9
RECIRC	○		○
FRESH		○	○

V01027

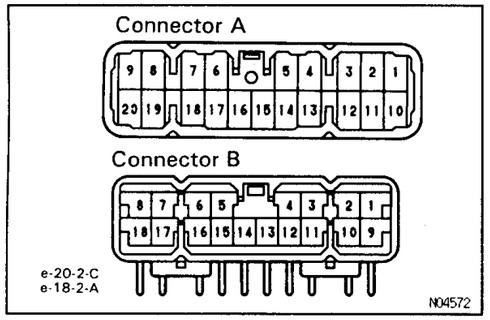
9. INSPECT BLOWER SPEED CONTROL SWITCH CONTINUITY

If continuity is not as specified, replace the A / C control assembly.



Terminal / Switch position	A-13	A-14	A-15	A-17	B-9
OFF					
LO				○	○
●			○	○	○
●		○		○	○
HI	○			○	○

V01028

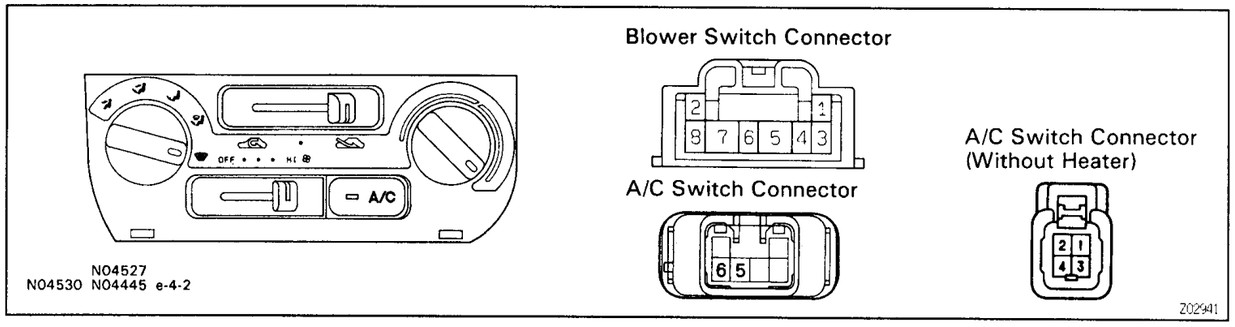


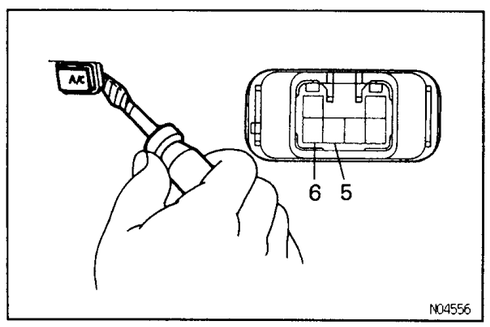
10. INSPECT TEMPERATURE CONTROL SWITCH

(a) Measure the resistance between terminals A – 19 and B – 17.
Resistance: Approx. 3 kΩ

(b) Check that the resistance between terminals B – 17 and A – 20 increases from 0 to approx. 3 kΩ when the switch knob is turned from COOL to HOT.
If operation is not as specified, replace the A/C control assembly.

A/C CONTROL ASSEMBLY INSPECTION (Dial Type Heater Control) AC0G4-01





1. INSPECT A/C SWITCH CONTINUITY

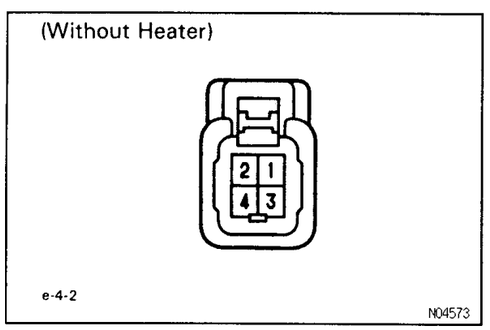
Terminal / Switch position	5	6
OFF		
ON	○	○

V01025

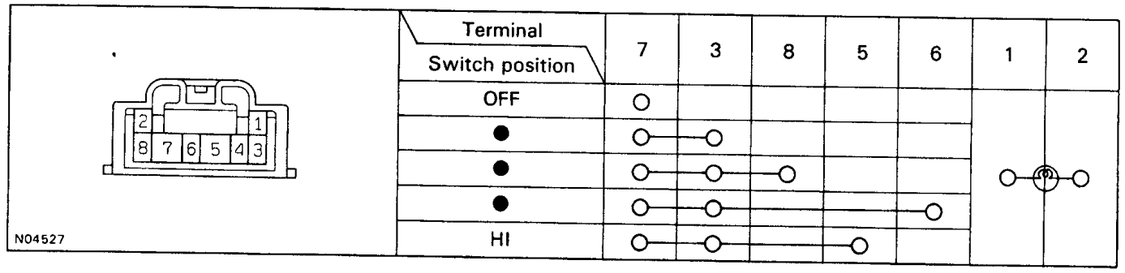
If continuity is not as specified, replace the switch.
(Without Heater)

(a) Check that there is no continuity between terminals 2 and 3 with the switch is OFF position.

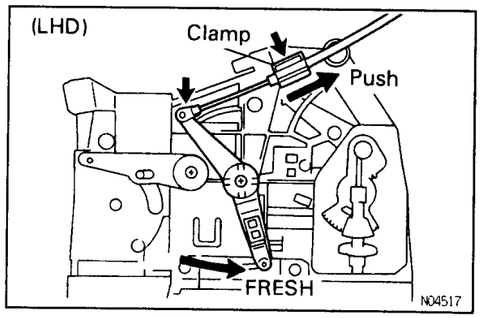
(b) Check that the resistance between terminals 2 and 3 decreases from 3k to 0 Ω when the switch knob turned to clockwise.
If operation is not as specified, replace the A/C control assembly.

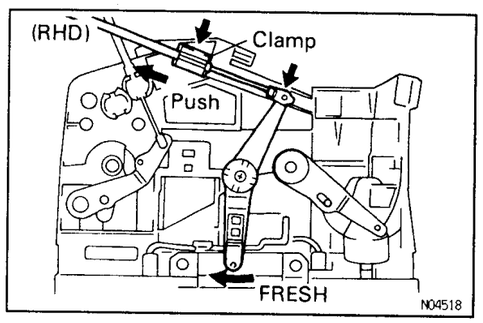


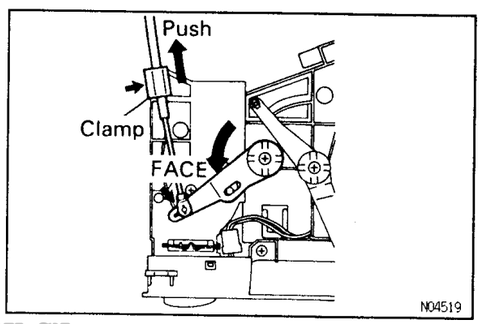
2. INSPECT BLOWER SPEED CONTROL SWITCH CONTINUITY



If continuity is not as specified, replace the A/C control assembly.







A/C CONTROL CABLES ADJUSTMENT AC0G5-01

1. ADJUST AIR INLET DAMPER CONTROL CABLE

Set the air inlet damper and the control lever to " FRESH" position, install the control cable and lock the clamp while lightly pushing the outer cable in the direction shown by the arrow.

2. ADJUST AIR VENT MODE CONTROL CABLE

AC028-01

A/C CONTROL ASSEMBLY INSTALLATION

(See page BO-59)

SERVICE SPECIFICATIONS

SERVICE DATA

AC05J-02

Refrigerant charge volume	750±50 g 26.45±17.6 oz
Drive belt tension	
(4A-FE) New belt	6.0-7.0 mm (0.24-0.28 in.)
(4A-FE) Used belt	8.5-9.5 mm (0.33-0.37 in.)
(3S-FE) New belt	6.0-9.0 mm (0.24-0.35 in.)
(3S-FE) Used belt	9.0-11.0 mm (0.35-0.43 in.)
(3S-GE) New belt	9.0-11.0 mm (0.35-0.43 in.)
(3S-GE) Used belt	13.0-16.0 mm (0.51-0.61 in.)
(2C) New belt	11.0-13.0 mm (0.43-0.51 in.)
(2C) Used belt	15.0-18.0 mm (0.59-0.71 in.)
Idle speed	
(4A-FE and 3S-FE) Magnetic clutch engaged	Approx. 750 rpm
(3S-GE) Magnetic clutch engaged	Approx. 950 rpm
(2C) Magnetic clutch engaed	Approx. 800 rpm
Starting torque of compressor shaft	2.9 N·m (30 kgf·cm, 26 in.·lbf) or less
Compressor magnet clutch clearance	0.5±0.15 mm (0.020±0.006 in.)

TORQUE SPECIFICATIONS

AC02A-02

Part tightened	N·m	kgf·cm	ft·lbf
Suction hose x Compressor	9.8	100	7
Discharge hose x Compressor	9.8	100	7
Compressor x Engine	25	250	18
Compressor shft bolt	13	135	10
Compressor cylinder x Service valve	25	250	18
Compressor x Front housing	25	250	18
Liquid tube x Receiver	5.4	55	48 in.·lbf
Lequid tube x Condensor	9.8	100	7
Expansion valve x Evaporator	5.4	55	48 in.·lbf
Suction tube x A/C unit	9.8	100	7
Liquid tube x A/C unit	9.8	100	7
Pressure switch x Liquid tube	10.8	110	8

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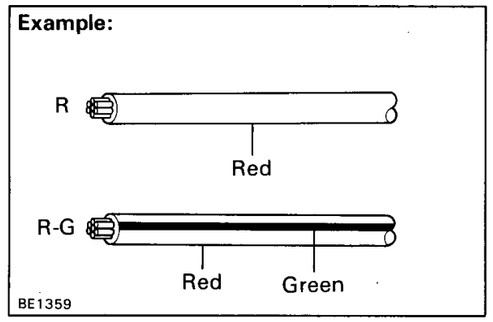
GENERAL INFORMATION

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

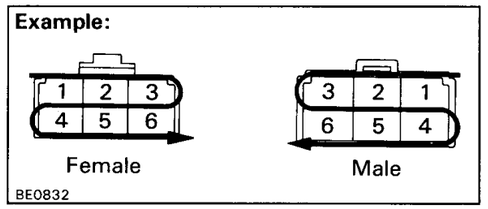
FEMALE CONNECTOR PIN NUMBER

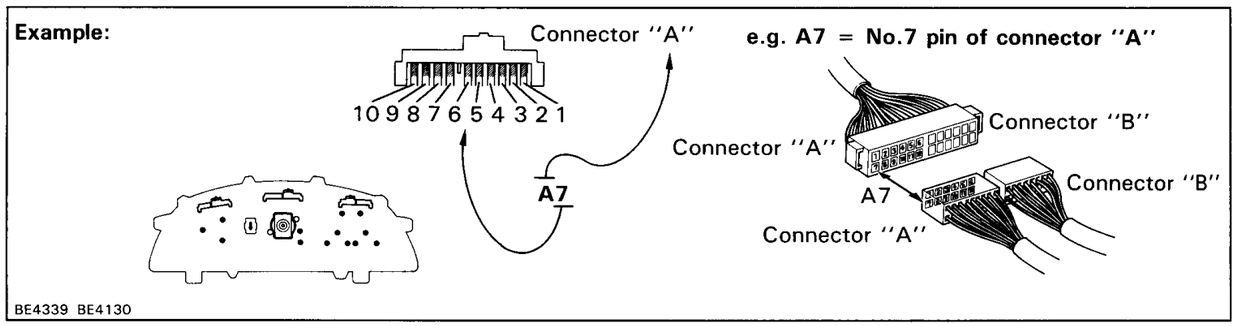
Numbered in order from upper left to lower right.

MALE CONNECTOR PIN NUMBER

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.





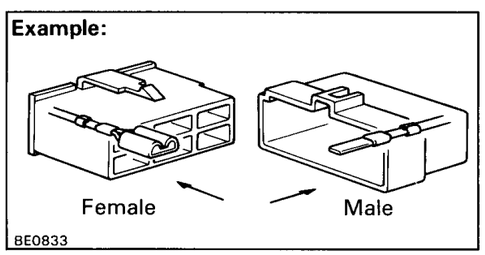
MALE AND FEMALE CONNECTORS DISTINCTION

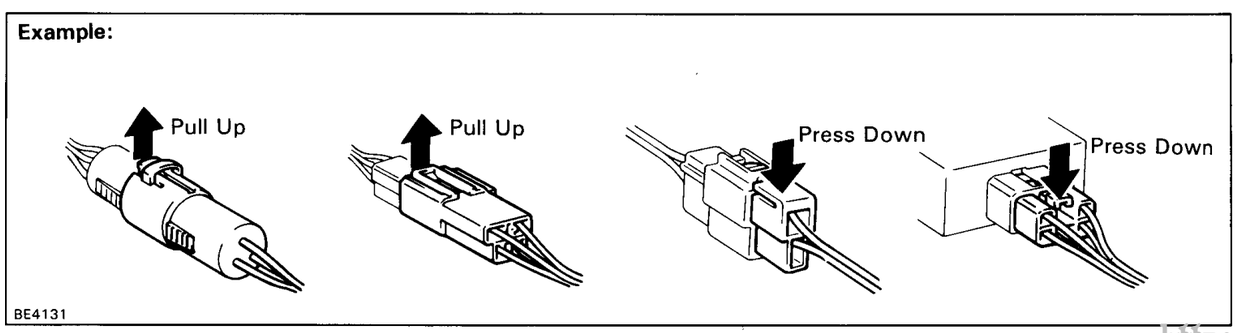
Male and female connectors are distinguished by shape of their internal pins.

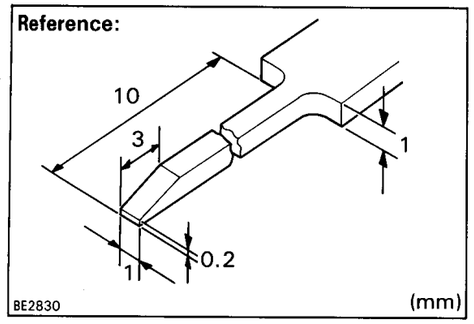
(a) All connectors are shown from the open end, and the lock is on top.

(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.



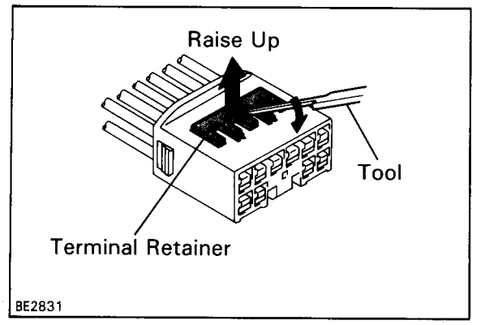




HOW TO REPLACE TERMINAL

WITH TERMINAL RETAINER TYPE

HINT: To remove the terminal for this type of connector, please construct and use the special tool or like object shown on the left.



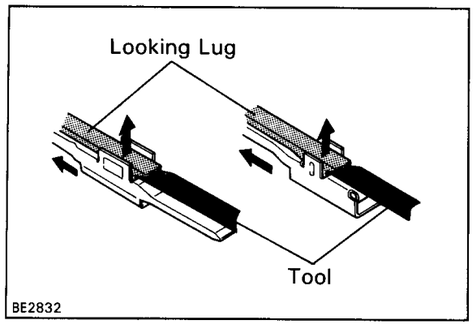
CONNECTOR DISCONNECTION

Disconnect the connector according to the instructions on BE-2.

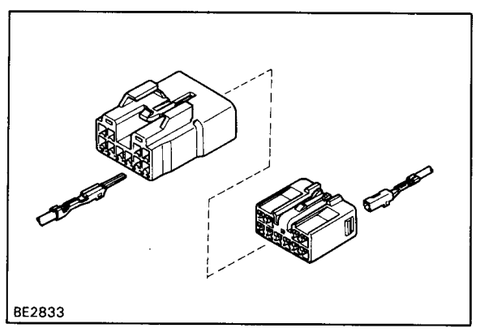
TERMINAL FROM CONNECTOR DISCONNECTION

(a) Using the special tool, raise the retainer up to the temporary lock position.

HINT: The needle insertion position varies according to the connector's shape (number of terminals, etc.), so check the position before inserting it.



(b) Using the special tool, release the locking lug and pull the terminal out from rear.

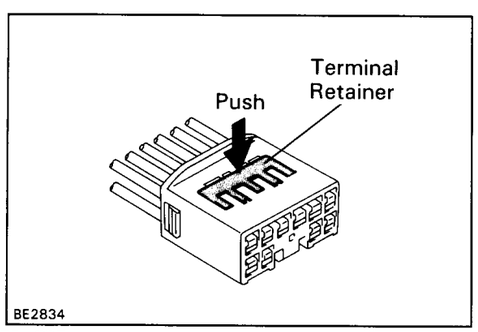


TERMINAL TO CONNECTOR INSTALLATION

(a) Insert the terminal.

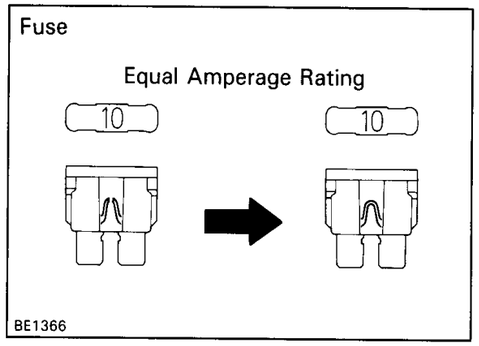
HINT:

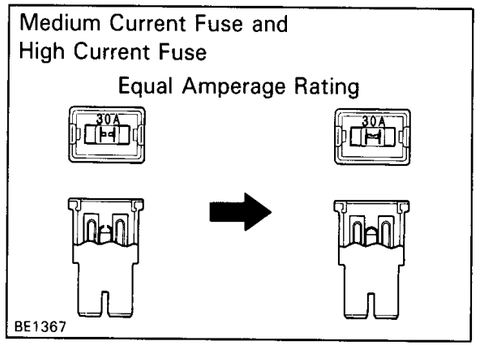
1. Make sure the terminal is positioned correctly.
2. Insert the terminal until the locking lug locks firmly.
3. Insert the terminal with retainer in the temporary lock position.

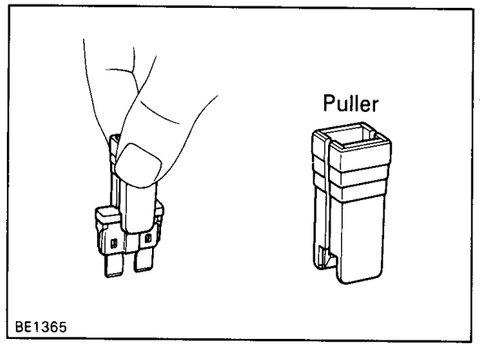


(b) Push the retainer in as far as the full lock position.

CONNECTOR CONNECTION







FUSE REPLACEMENT

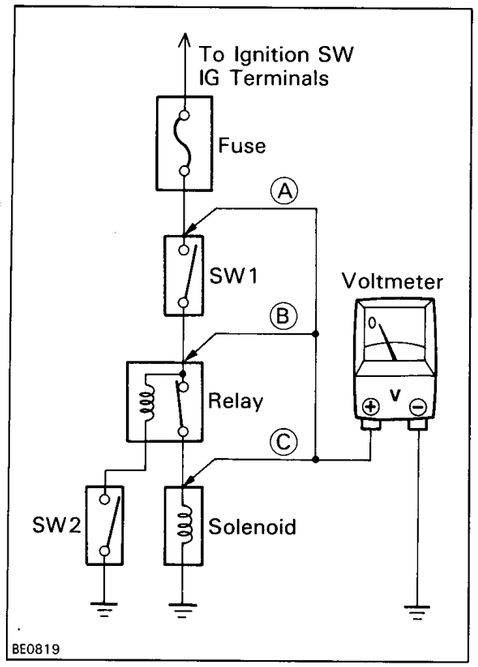
HINT: If replacing the fuse be sure to replace it with a fuse with an equal amperage rating.

NOTICE:

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

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

HINT: The puller is located at Relay Block No.2.

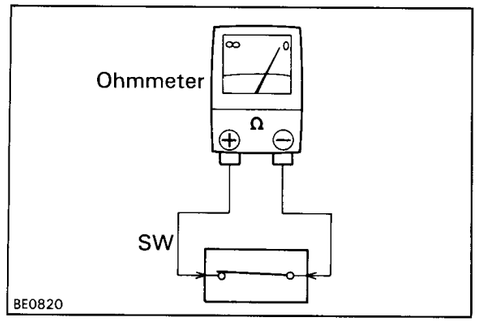


VOLTAGE CHECK

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

Example:
Ⓐ - Ignition SW on
Ⓑ - Ignition SW and SW 1 on
Ⓒ - Ignition SW, SW 1 and Relay on (SW 2 off)

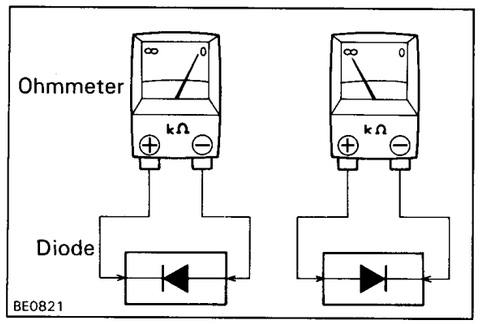
(b) Using a voltmeter, connect the negative (−) lead to a good ground point or negative(−) battery terminal and the positive (+) lead to the connector or component terminal. This check can be done with a test bulb instead of a voltmeter.



CONTINUITY AND RESISTANCE CHECK

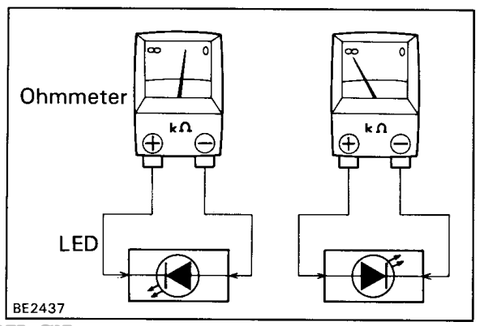
(a) Disconnect the battery terminal or wire so there is no voltage between the check points.

(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.

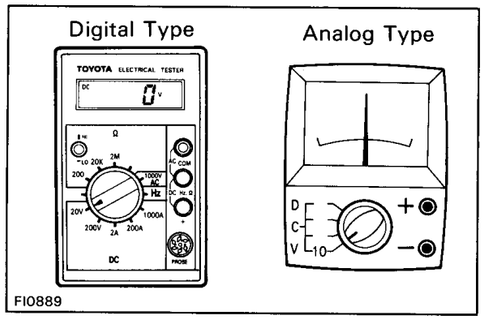
HINT: Specifications may very depending on the type of tester, so refer to the tester's instruction manual before performing the inspection.



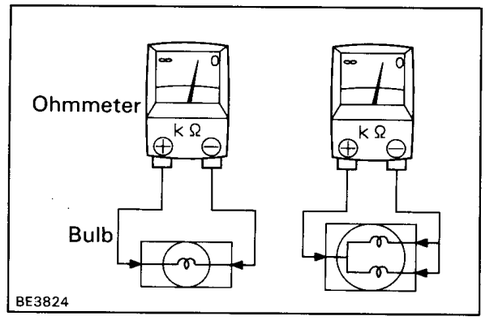
Check LED (Light Emitting Diode) in the same manner as that for diodes.

HINT:

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



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



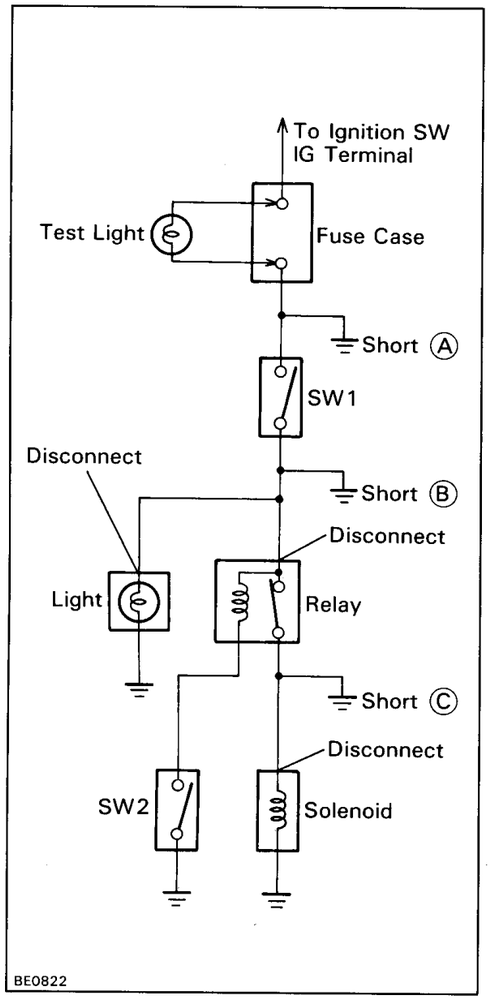
THE BULB CHECK

(a) Remove the bulb.

(b) There should be continuity between the respectire terminals of the bulb together with a certain amount of resistance.

(c) Apply the two leads of the ohmmeter to each of the terminals.

(d) Apply battery voltage and check that the bulb lights up.



SHORT CIRCUIT CHECK

(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.

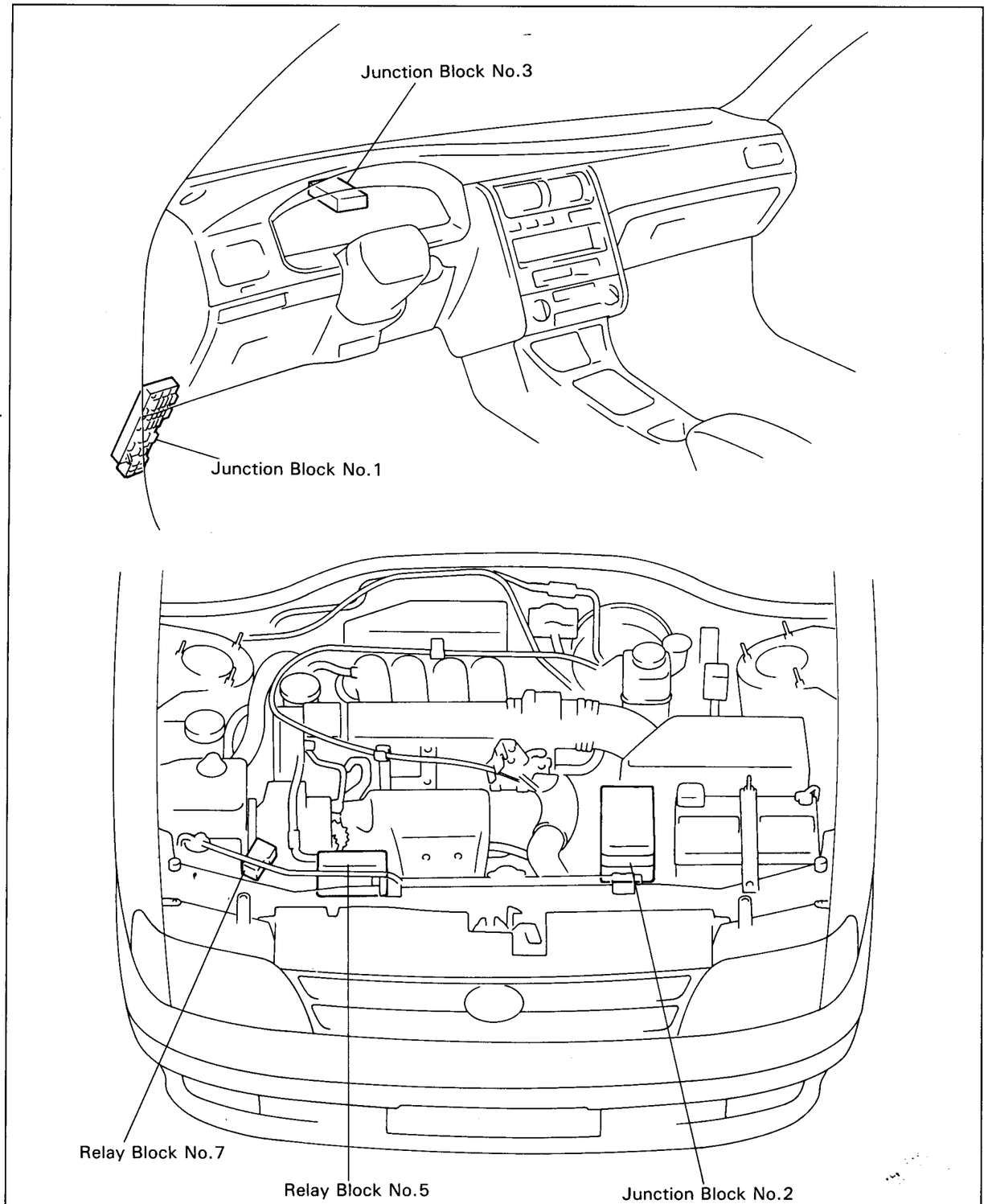
Example:
Ⓐ - Ignition SW on
Ⓑ - Ignition SW and SW 1 on
Ⓒ - Ignition SW, SW1 and Relay on (Connect the Relay) and SW 2 off (or Disconnect SW 2)

(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.

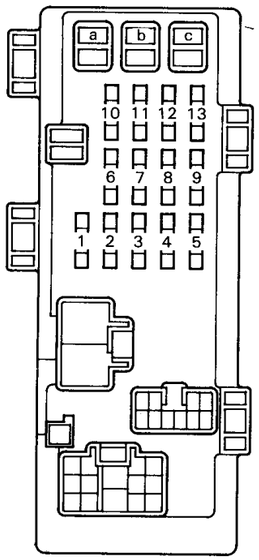
POWER SOURCE

PARTS LOCATION



PARTS LOCATION (CONT'D)

Junction Block No.1



FUSES
Medium Current Fuses

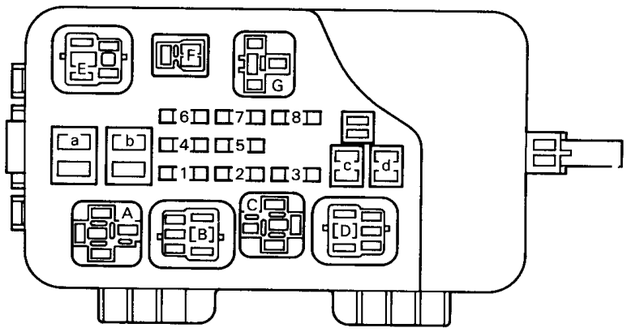
a.	AM1	40A
b.	POWER	30A
c.	DEF	40A

Fuses

1.	STOP	15A
2.	TAIL	10A
3.	TAIL MAIN	20A (RHD)
4.	ECU-IG	15A
5.	WIPER	20A
6.	ST	7.5A
7.	IGN	7.5A
8.	CIG & RAD	15A
9.	TURN	10A
10.	ECU-B	15A
11.	PANEL	7.5A
12.	Fr DEF	30A
13.	GAUGE	10A

Junction Block No.2

S type engine



FUSES
Medium Current Fuses

a.	HTR	50A
b.	MAIN	40A
c.	CDS	30A
d.	RRI	

Fuses

1.	HEAD RH	15A
2.	HEAD LH	15A
3.	EFI	15A
4.	—	
5.	—	
6.	HAZARD	15A
7.	HORN	10A
8.	—	

RELAY

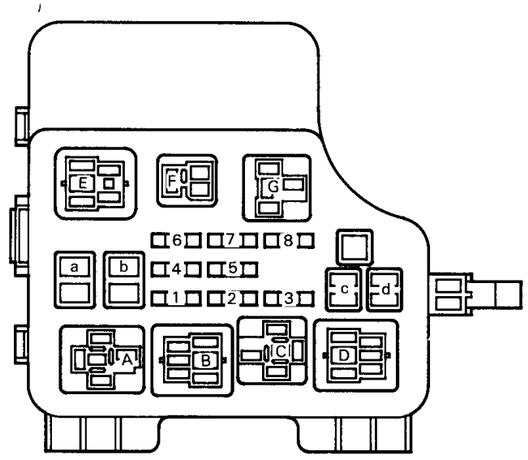
A.	STARTER
B.	HEATER
C.	EFI MAIN
D.	ENGINE MAIN
E.	HEAD
F.	HORN
G.	FM No.1

N04357
N04358

PARTS LOCATION (CONT'D)

Junction Block No.2

A type engine



FUSES
Medium Current Fuses

a.	HTR	50A
b.	MAIN	40A
c.	CDS	30A
d.	RDI	30A

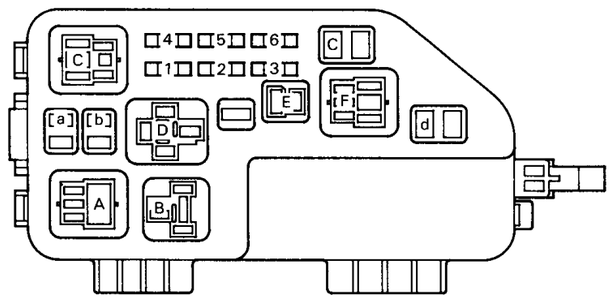
Fuses

1.	HEAD RH	15A
2.	HEAD LH	15A
3.	EFI	15A
4.	—	
5.	—	
6.	HAZARD	15A
7.	HORN	10A
8.	—	

RELAY

A.	STARTER
B.	HEATER
C.	EFI MAIN
D.	ENGINE MAIN
E.	HEAD
F.	HORN
G.	FM No.1

C type engine



FUSES
Medium Current Fuses

a.	CDS	30A
b.	RDI	30A
c.	MAIN	40A
d.	HTR	50A

Fuses

1.	—	
2.	HEAD LH	15A
3.	HORN	10A
4.	—	
5.	HEAD RH	15A
6.	HAZARD	15A

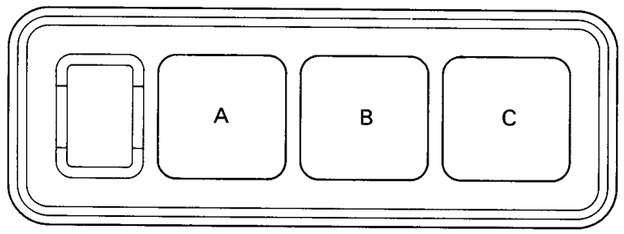
RELAY

A.	ENGINE MAIN
B.	FAN No.1
C.	HEAD
D.	STARTER
E.	HORN
F.	HEATER

N04359
N04360

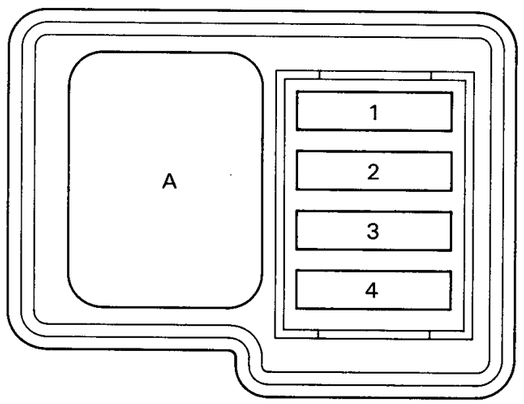
PARTS LOCATION (CONT'D)

Relay Block No.5



Relays
A. A/C FAN No.2 Relay
B. A/C FAN No.3 Relay
C. A/C MG CLT Relay

Relay Block No.7



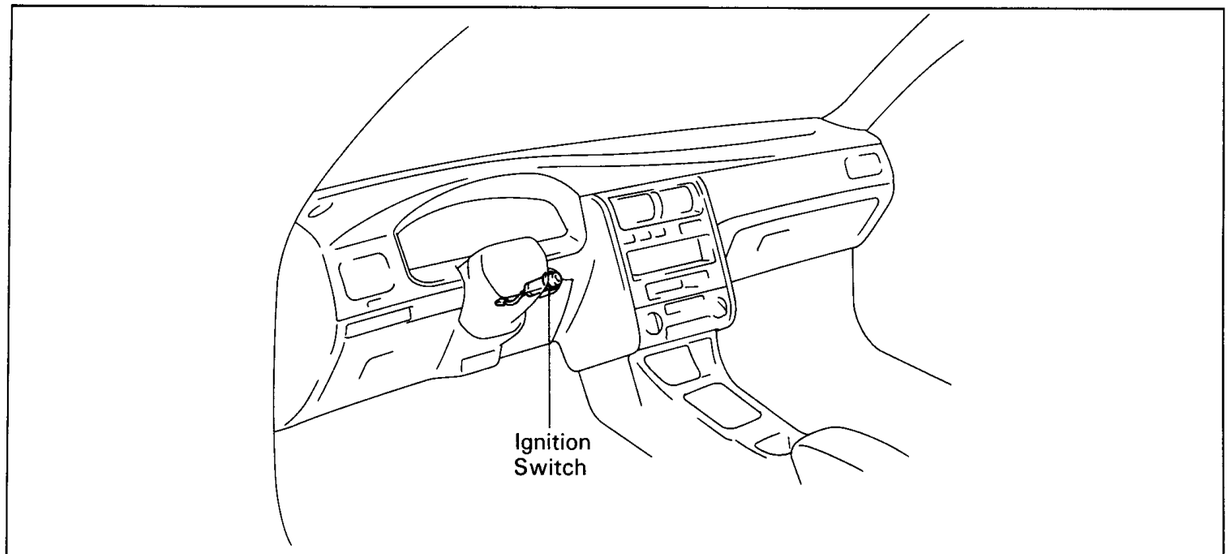
Relay
A. DIMMER (Head Light Dimmer Relay) [Europe LHD]

Fuses
1. HEAD HI(LH) 15A [Europe LHD]
2. HEAD HI(RH) 15A [Europe LHD]
3. HEAD LO(LH) 15A [Europe LHD]
4. HEAD LO(RH) 15A [Europe LHD]

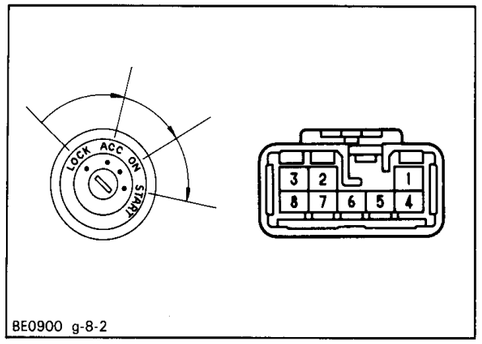
N04362
N04361

IGNITION SWITCH

PARTS LOCATION



N04135



BE0900 g-8-2

IGNITION SWITCH

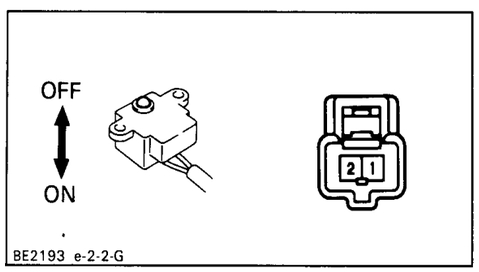
IGNITION SWITCH INSPECTION

○—○ CONTINUITY INSPECTION

Terminal / Switch position	1	2	3	4	5	7	8
LOCK							
ACC					○	○	
ON		○	○	○	○	○	
START	○	○	○	○		○	○

If continuity is not as specified, replace the switch.

KEY UNLOCK WARNING SWITCH



BE2193 e-2-2-G

KEY UNLOCK WARNING SWITCH INSPECTION

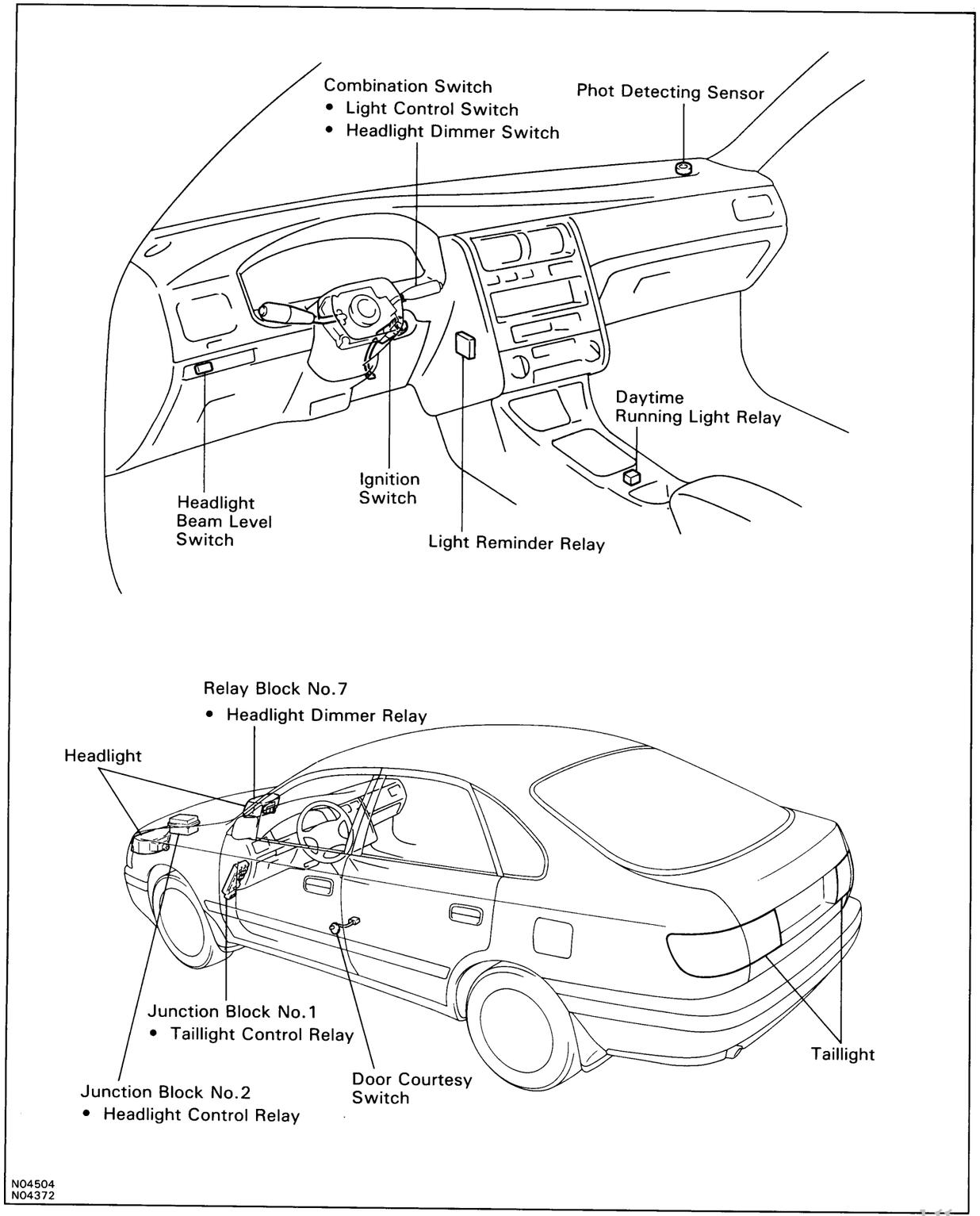
○—○ CONTINUITY INSPECTION

Terminal / Switch position	1	2
OFF (Key removed)		
ON (Key set)	○	○

If continuity is not as specified, replace the switch.

HEADLIGHT AND TAILLIGHT SYSTEM

PARTS LOCATION



N04504
N04372

TROUBLESHOOTING

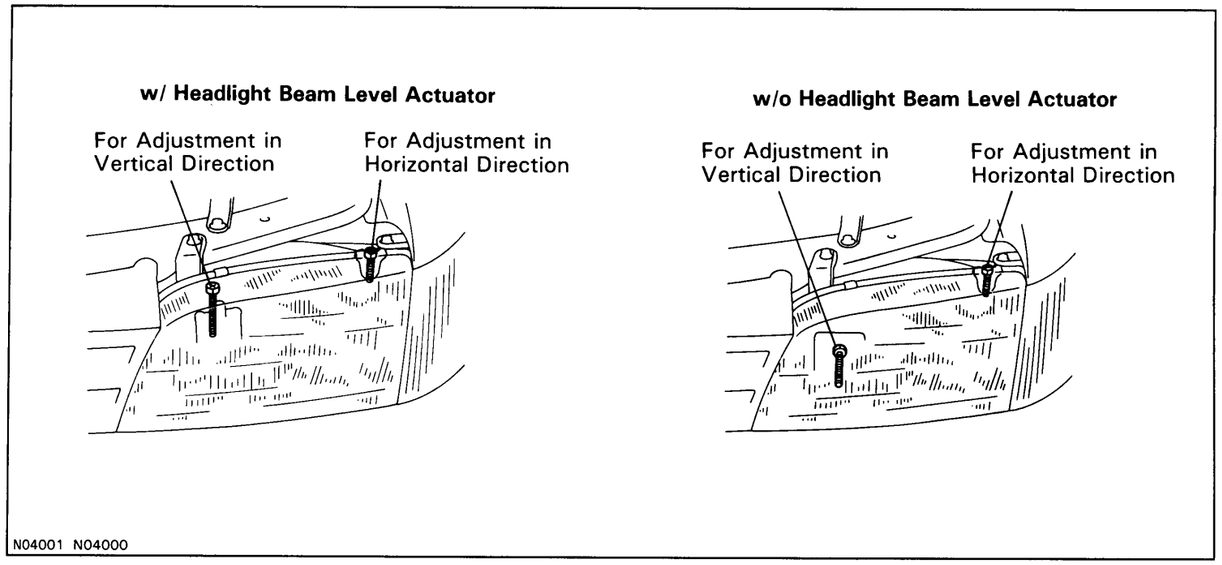
You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Part name	See page
Headlight does not light up. (Taillight is normal.)	1. Headlight Bulb	—
	2. MAIN FL	—
	3. HEAD Fuse	BE-8
	4. Light Control Switch	BE-16
	5. Headlight Dimmer Switch	BE-16
	6. Light Control Sensor (with)	BE-21
	7. Wire Harness	—
Headlight does not light up. (Taillight does not light up.)	1. Headlight Bulb	—
	2. Light Control Switch	BE-16
	3. Headlight Dimmer Switch	BE-16
	4. Light Control Sensor (with)	BE-21
	5. Wire Harness	—
Only one light comes ON.	1. Headlight Bulb	—
	2. HEAD Fuse	BE-8
	3. Wire Harness	—
"Lo-Beam" does not light up.	1. Headlight Bulb	—
	2. Headlight Control Relay	BE-16
	3. Daytime Running Light Relay (with)	BE-21
	4. Headlight Dimmer Relay	BE-17
	5. Headlight Dimmer Switch	BE-16
	6. Wire Harness	—
"Hi-Beam" does not light up.	1. Headlight Bulb	—
	2. Headlight Control Relay	BE-16
	3. Daytime Running Light Relay (with)	BE-21
	4. Headlight Dimmer Relay	BE-17
	5. Headlight Dimmer Switch	BE-16
	6. Wire Harness	—
"Flash" does not light up.	1. Headlight Bulb	—
	2. Headlight Control Relay	BE-16
	3. Daytime Running Light Relay (with)	BE-21
	4. Headlight Dimmer Relay	BE-17
	5. Headlight Dimmer Switch	BE-16
	6. Wire Harness	—
Taillight does not light up. (Headlight is normal.)	1. Taillight Bulb	—
	2. TAIL Fuse	—
	3. Light Control Switch	BE-16
	4. Taillight Control Relay	BE-17
	5. Wire Harness	—
Taillight does not light up. (Headlight does not light up.)	1. Taillight Bulb	—
	2. MAIN FL	—
	3. TAIL Fuse	BE-8
	4. Light Control Switch	BE-16
	5. Light Control Sensor	BE-21
	6. Wire Harness	—

Trouble	Part name	See page
Only one light goes out of does not light up.	1. Taillight Bulb	—
	2. Wire Harness	—
Rear Combination light does not light up.	1. Taillight Bulb	—
	2. TAIL Fuse	BE-8
	3. Wire Harness	—
Lights-on warning system does not operate.	1. CIG fuse	BE-8
	2. GAUG fuse	BE-8
	3. TAIL fuse	BE-8
	4. Light reminder relay	BE-19
	5. Door courtesy switch	BE-18
	6. Wire Harness	—

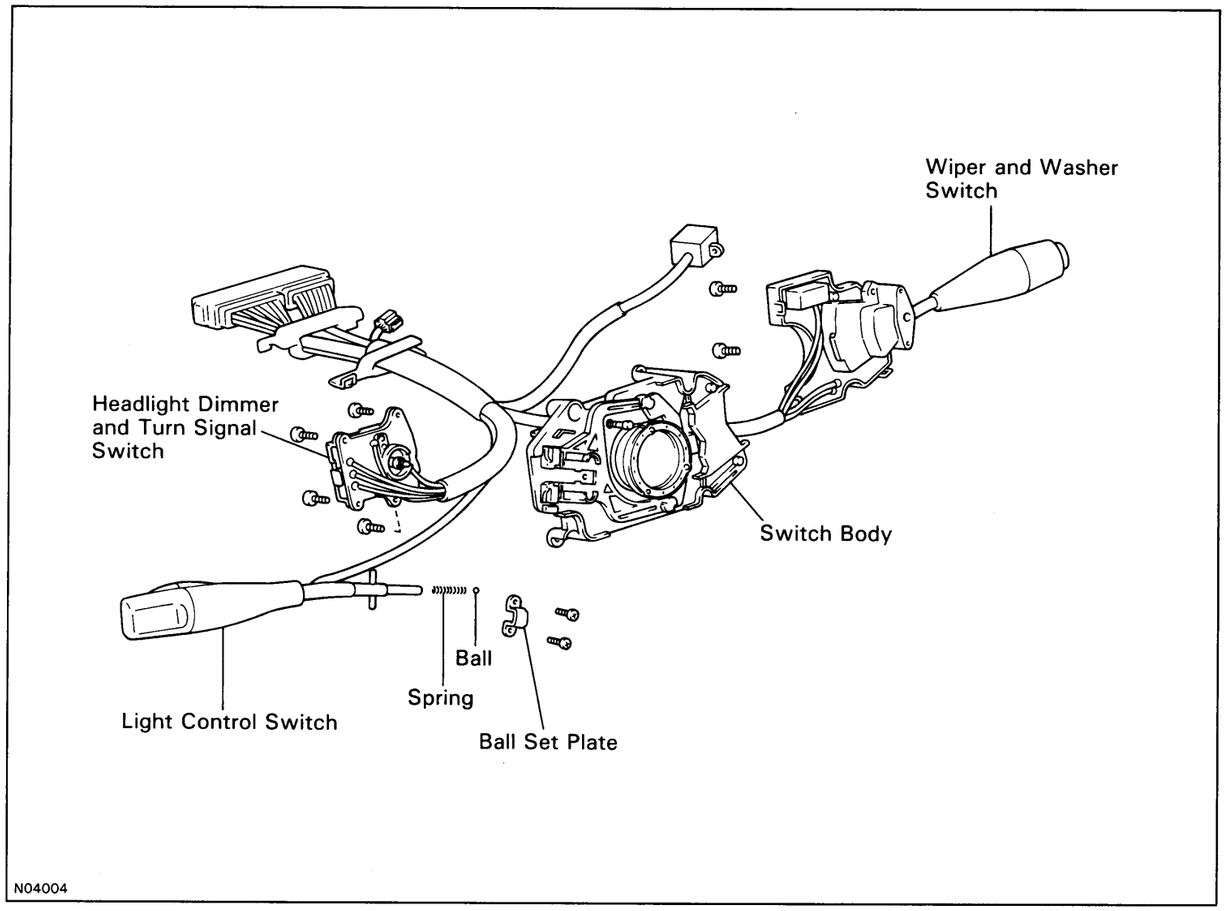
HEADLIGHT

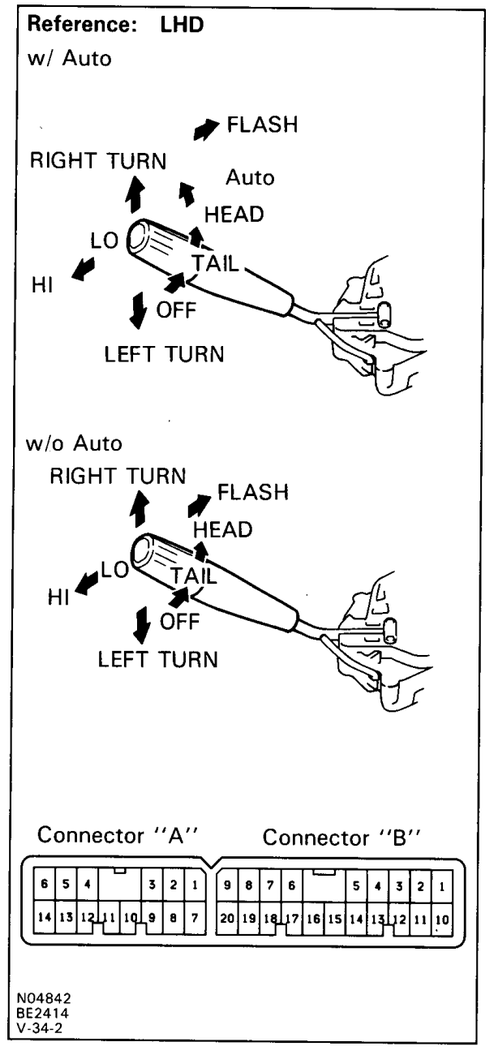
HEADLIGHT AIMING ADJUSTMENT



COMBINATION SWITCH

COMPONENTS





COMBINATION SWITCH INSPECTION

LIGHT CONTROL SWITCH CONTINUITY

○——○ CONTINUITY INSPECTION

Terminal / Switch position	A2	A11	A13	B19
OFF				
TAIL	○	○		
HEAD	○	○	○	
AUTO		○		○

HEADLIGHT DIMMER SWITCH CONTINUITY

○——○ CONTINUITY INSPECTION

Terminal / Switch position	A3	A9	A12	A14
Flash		○	○	○
Low beam	○	○		
High beam		○	○	

TURN SIGNAL SWITCH CONTINUITY

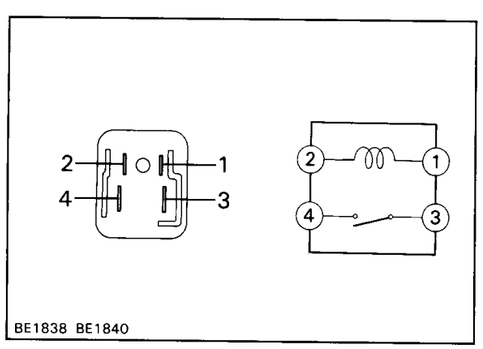
○——○ CONTINUITY INSPECTION

Terminal / Switch position	A1	A5	A8
Left turn	○	○	
Neutral			
Right turn	○		○

If continuity is not as specified, replace the switch.

HEADLIGHT CONTROL RELAY

HEADLIGHT CONTROL RELAY INSPECTION



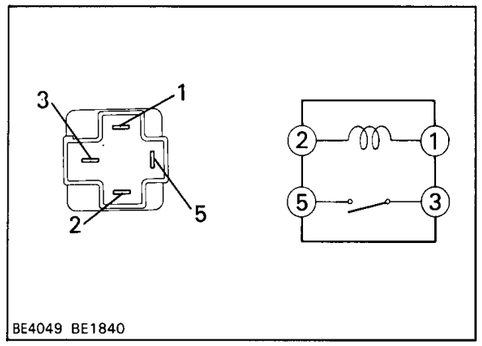
○——○ CONTINUITY INSPECTION

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

If continuity is not as specified, replace the relay.

TAILLIGHT CONTROL RELAY

TAILLIGHT CONTROL RELAY INSPECTION



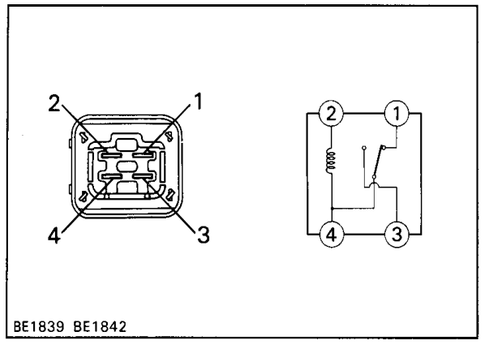
○——○ CONTINUITY INSPECTION

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

If continuity is not as specified, replace the relay.

HEADLIGHT DIMMER RELAY

HEADLIGHT DIMMER RELAY INSPECTION



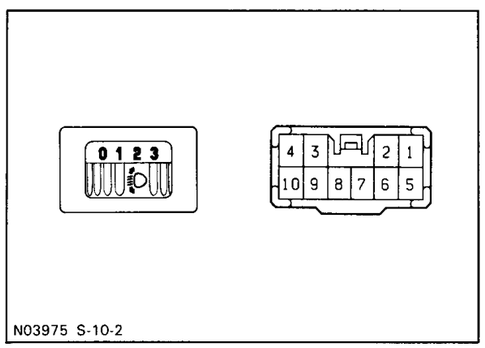
○——○ CONTINUITY INSPECTION

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

If continuity is not as specified, replace the relay.

HEADLIGHT BEAM LEVEL CONTROL SYSTEM

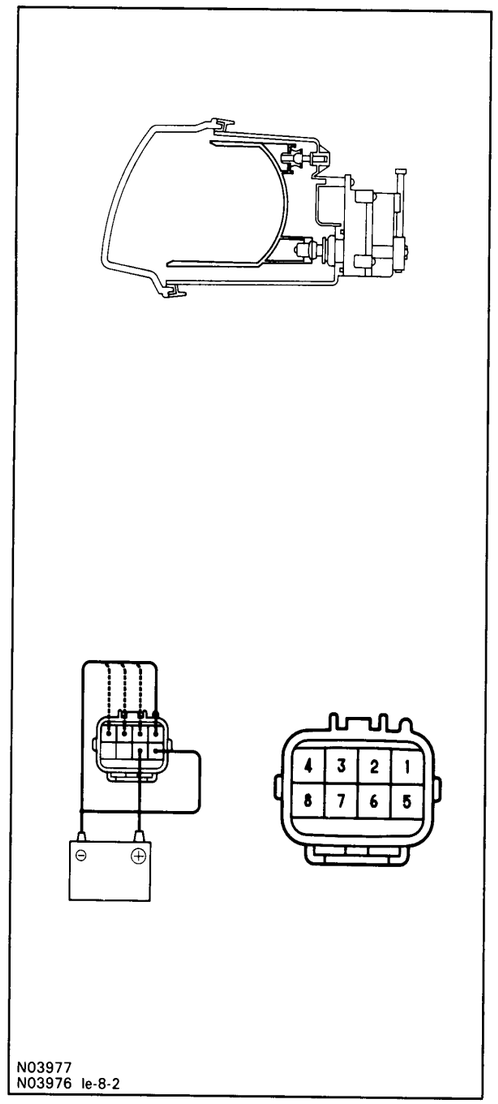
HEADLIGHT BEAM LEVEL SWITCH INSPECTION



○——○ CONTINUITY INSPECTION

Terminal / Switch position	1	2	3	4	6	Illumination 7	Illumination 9
0	○				○		
1		○			○		
2			○		○		
3				○	○		

If continuity is not as specified, replace the switch.



N03977
N03976 Ie-8-2

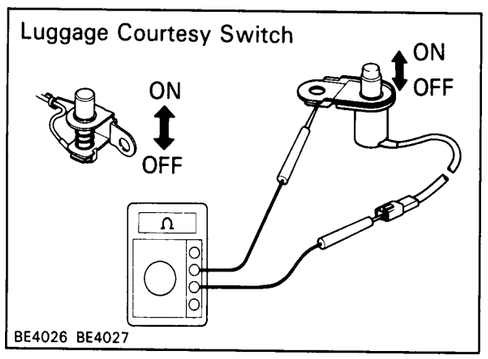
HEADLIGHT BEAM LEVEL ACTUATOR INSPECTION

(a) Connect the positive (+) lead from the battery to terminal 6 and the negative (—) lead to terminal 5.

(b) Ground each terminal and check that each mode operates as shown in the chart and illustration.

Terminal	Headlight Beam Level
1 — Ground	"0"
2 — Ground	"1"
3 — Ground	"2"
4 — Ground	"3"

If operation is not as specified, replace the actuator.



BE4026 BE4027

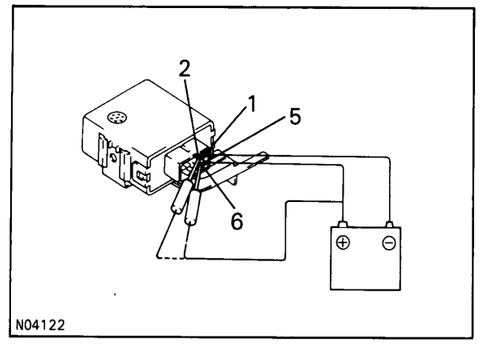
DOOR COURTESY SWITCH

DOOR COURTESY SWITCH INSPECTION

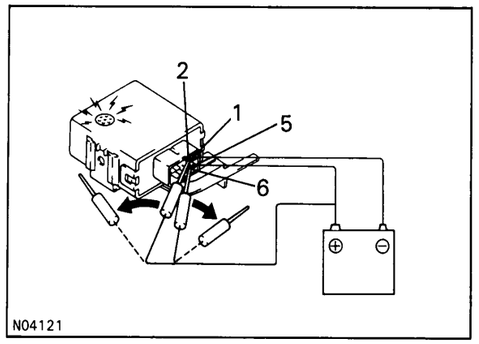
(a) Check that there is continuity between terminal and the switch body with the switch ON (switch pin released).

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

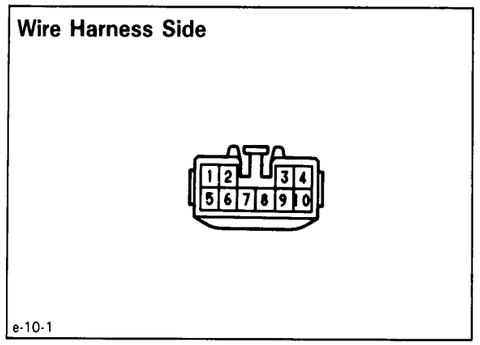
If operation is not as specified, replace the switch.



N04122



N04121



e-10-1

LIGHT-ON WARNING SYSTEM

DOOR COURTESY SWITCH INSPECTION
(See page BE-18)

LIGHT REMINDER RELAY INSPECTION

OPERATION

(a) Connect the positive (+) lead from the battery to terminal 5 and 7 and the negative (—) lead to terminal 1 and 4.

(b) Check that the buzzer does not sound when connected terminal 2 and 6 from the positive (+) lead.

(c) Check that the buzzer sounds when disconnecting terminal 2 and 6 from the positive (+) lead.

If operation is not as specified, replace the relay.

RELAY CIRCUIT

(a) Disconnect the light reminder relay from wire harness.

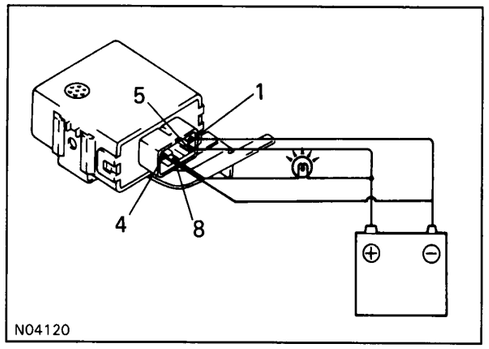
(b) Inspect wire harness and wire harness side as shown.

Tester connection	Condition	Specified value
1 — Ground	Constant	Continuity
2 — Ground	Ignition switch position LOCK or ACC	Below 1V
2 — Ground	Ignition switch position ON	10 ~ 14 V
3 — Ground	Courtesy switch position (Passenger) OFF	10 ~ 14 V
3 — Ground	Courtesy switch position (Passenger) ON	Continuity
4 — Ground	Courtesy switch position (Driver) OFF	10 ~ 14 V
4 — Ground	Courtesy switch position (Driver) ON	Continuity
5 — Ground	Constant	10 ~ 14 V
6 — Ground	Ignition switch position LOCK	Below 1 V
6 — Ground	Ignition ACC or ON	10 ~ 14 V
7 — Ground	Light control switch position OFF	Continuity
7 — Ground	Light control switch position TAIL or HEAD	10 ~ 14 V
8 — Ground	Constant	10 ~ 14 V

ILLUMINATED ENTRY SYSTEM

DOOR COURTESY SWITCH INSPECTION

(See page BE-18)



LIGHT REMINDER RELAY INSPECTION

OPERATION

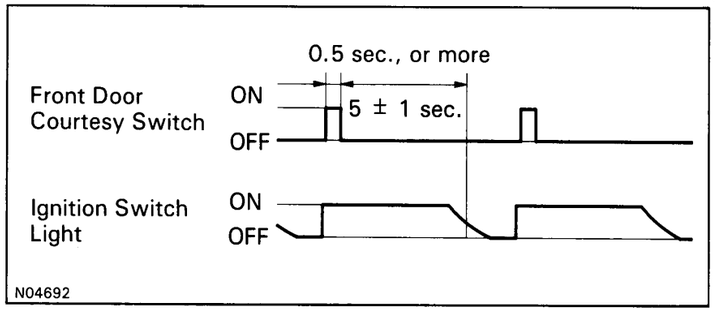
(a) Connect the positive (+) lead from the battery to terminal 5.

Connect the negative (−) lead to terminal 1.

(b) Connect a 3.4 W bulb between terminal 8 and the battery positive (+).

(c) Connect the negative (−) lead from the battery to terminal 3 or 4, and then check that the bulb lights.

Disconnect the negative (−) lead from the battery to terminal 3 or 4, and check that the bulb goes out approx.5 seconds later as shown in the chart.



If operation is not as specified, replace the relay.

RELAY CIRCUIT

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

(See page BE-19)

Wire Harness Side

e-10-1

Wire Harness Side

e-6-1

AUTOMATIC LIGHT CONTROL SENSOR

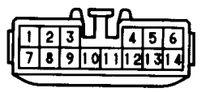
AUTOMATIC LIGHT CONTROL SENSOR INSPECTION

RELAY CIRCUIT

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

Tester connection	Condition	Specified value
1 — Ground	Ignition switch position LOCK or ACC	Below 1 V
1 — Ground	Ignition switch position ON or START	10 ~ 14 V
2 — Ground	Constant	10 ~ 14 V
3 — Ground	Courtesy switch position OFF Door closed	10 ~ 14 V
3 — Ground	Courtesy switch position ON Door opened	Continuity
4 — Ground	Light control switch Auto	Continuity
4 — Ground	Light control switch OFF, TAIL or HEAD	Below 1 V
5 — Ground	Light control switch HEAD	Continuity
5 — Ground	Light control switch OFF or TAIL	10 ~ 14 V
6 — Ground	Light control switch TAIL or HEAD	Continuity
6 — Ground	Light control switch OFF	10 ~ 14 V

Wire Harness Side



e-14-1-A

DAYTIME RUNNING LIGHT RELAY

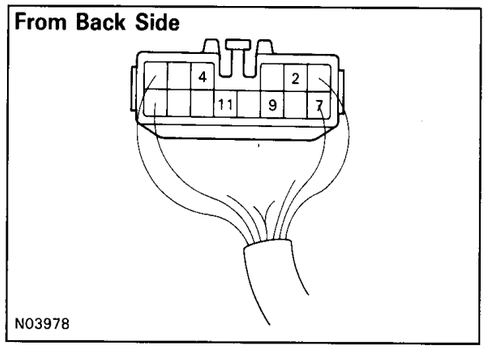
DAYTIME RUNNING LIGHT RELAY INSPECTION

RELAY CIRCUIT

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

Tester connection	Condition	Specified value
1 — Ground	Ignition switch position LOCK or ACC	Below 1 V
1 — Ground	Ignition switch position ON or START	10 ~ 14 V
3 — Ground	Constant	10 ~ 14 V
5 — Ground	Constant	10 ~ 14 V
6 — Ground	Headlight dimmer switch position Low Beam or High Beam	No continuity
6 — Ground	Headlight dimmer switch position Flash	Continuity

Tester connection	Condition	Specified value
8 — Ground	Engine stop	Below 1 V
8 — Ground	Engine running	10 ~ 14 V
10 — Ground	Constant	Continuity
13 — Ground	Headlight dimmer switch position Low beam	No continuity
13 — Ground	Headlight dimmer switch position High beam	Continuity
14 — Ground	Light control switch position OFF or TAIL	Below 1 V
14 — Ground	Light control switch position HEAD	10 ~ 14 V



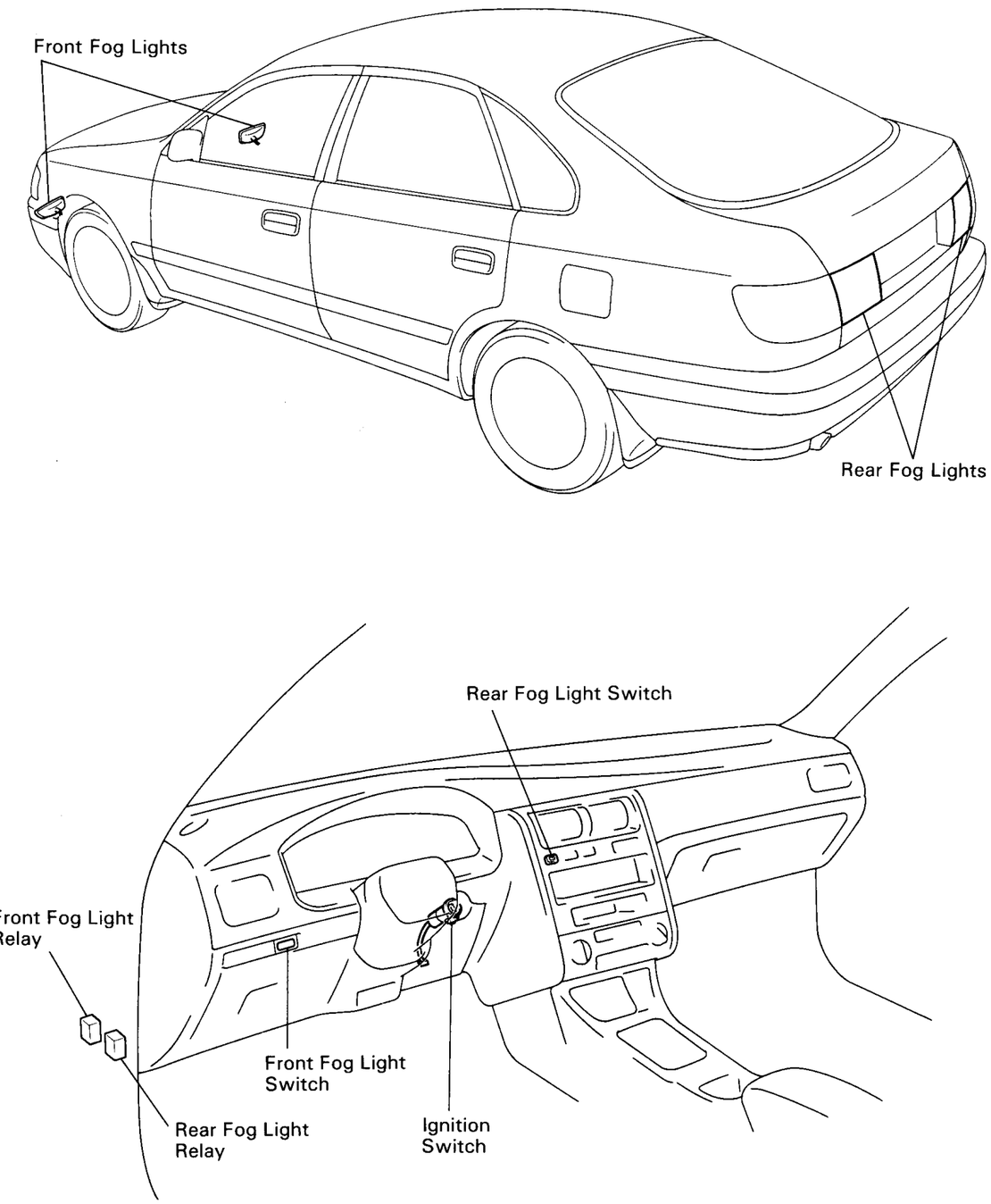
RELAY CIRCUIT (CONNECTOR CONNECTED)

Connect the wire harness side connector to the relay and inspect wire harness side connector from the back side as shown.

Tester connection	Condition	Specified value
2 — Ground	Light control switch position OFF	Below 1 V
2 — Ground	Light control switch position TAIL or HEAD	10 ~ 14 V
4 — Ground	Light control switch position OFF or TAIL	Below 1 V
4 — Ground	Light control switch position HEAD	10 ~ 14 V
7 — Ground	Light control switch TAIL or HEAD	10 ~ 14 V
7 — Ground	Light control switch OFF	Below 1 V
9 — Ground	Light control switch position front fog switch ON	10 ~ 14 V
9 — Ground	Light control switch position front fog switch OFF	Below 1 V
11 — Ground	Light control switch position rear fog switch ON	10 ~ 14 V
11 — Ground	Light control switch position rear fog switch OFF	Below 1 V

FOG LIGHT SYSTEM

PARTS LOCATION



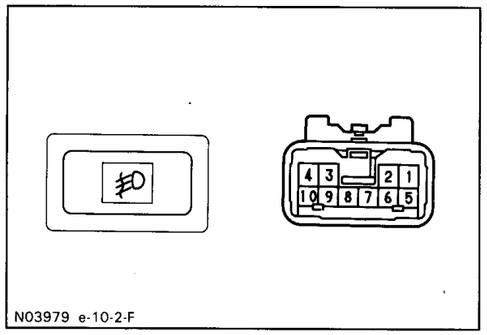
TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Part name	See page
Fog light does not light with light control SW HEAD (Headlight is normal.)	1. FOG Fuse	BE-8
	2. Fog Light Relay	BE-17
	3. Fog Light Switch	BE-24
	4. Wire Harness	—
	5. Daytime Running Light Relay	BE-21
Fog light does not light with light control SW HEAD (Headlight does not light.)*1	1. Daytime Running Light Relay	BE-21
	2. Wire Harness	—
Only one light does not light.	1. Bulb	—
	2. Wire Harness	—

*1: Inspect Headlight System

FOG LIGHT SWITCH



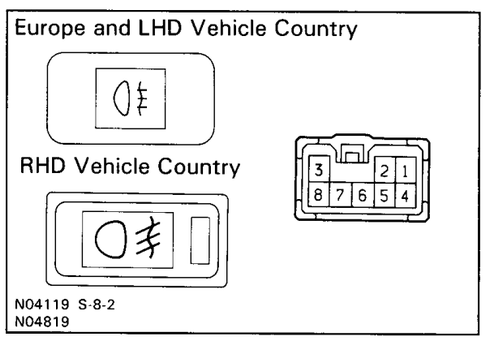
N03979 e-10-2-F

FRONT FOG LIGHT SWITCH INSPECTION

O—O CONTINUITY INSPECTION

Terminal / Switch position	2	3	7	8
OFF				
ON	O—O		O—O	

If continuity is not as sepcified, replace the switch.



N04119 S-8-2
N04819

REAR FOG LIGHT SWITCH INSPECTION

(Europe and LHD Vehicle Country)

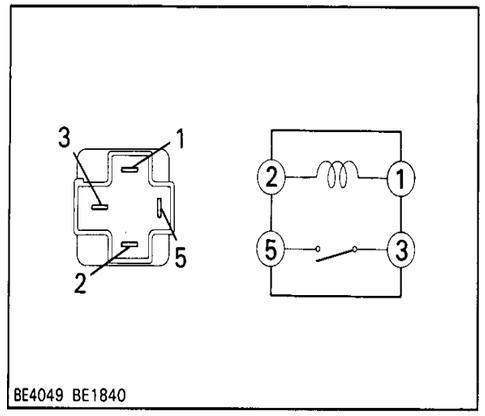
O—O CONTINUITY INSPECTION

Terminal / Switch position	2	6	5	8
OFF				
ON	O—O		O—O	

(RHD Vehicle Country)

Terminal / Switch position	8	5	3	2	6
OFF					
ON	O—O	O—O		O—O	

If continuity is not as sepcified, replace the switch.



BE4049 BE1840

FOG LIGHT RELAY

FOG LIGHT RELAY INSPECTION

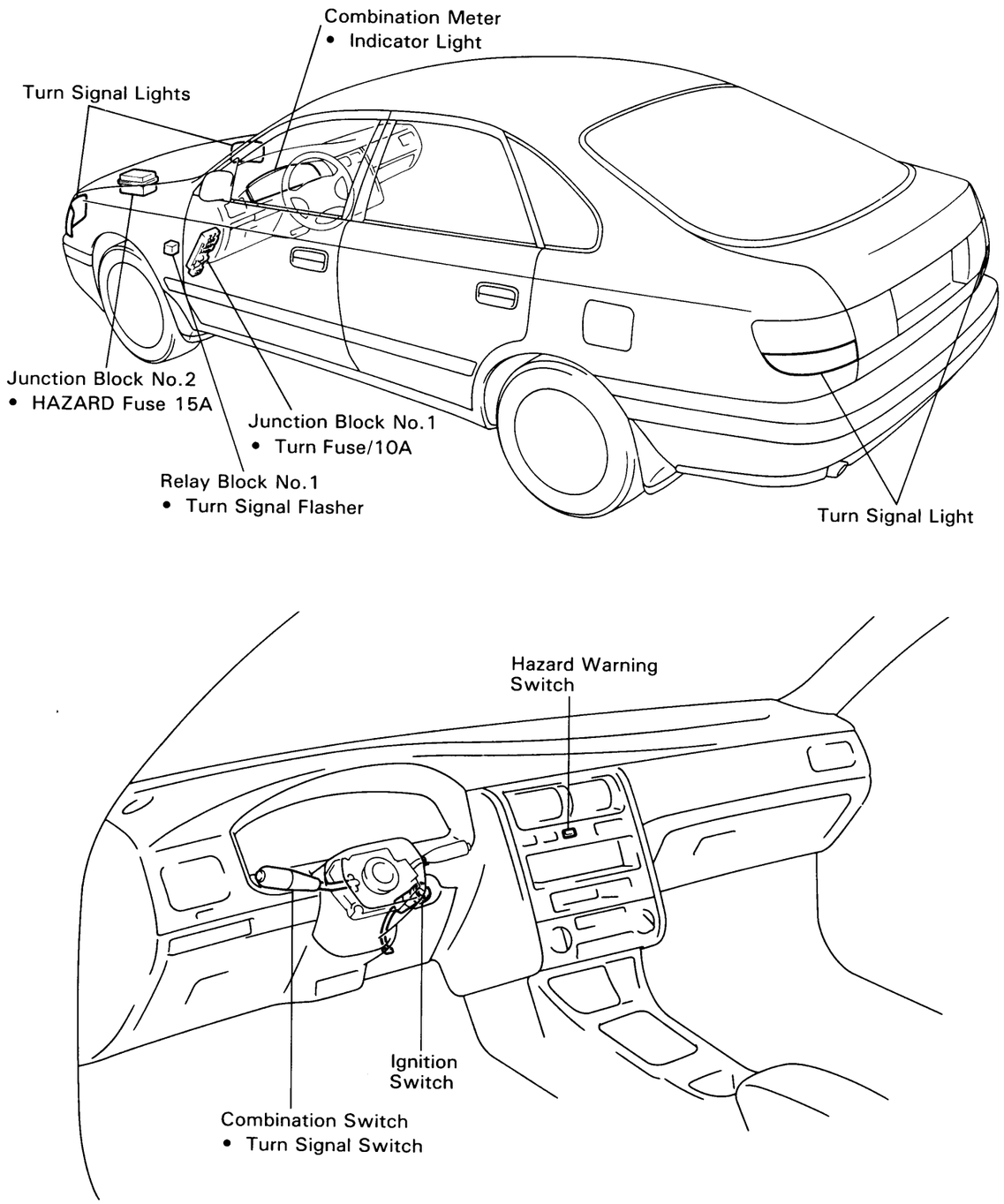
O—O CONTINUITY INSPECTION

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

If continuity is not as specified, replace the relay.

TURN SIGNAL AND HAZARD WARNING SYSTEM

PARTS LOCATION



N04377
N04376

TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

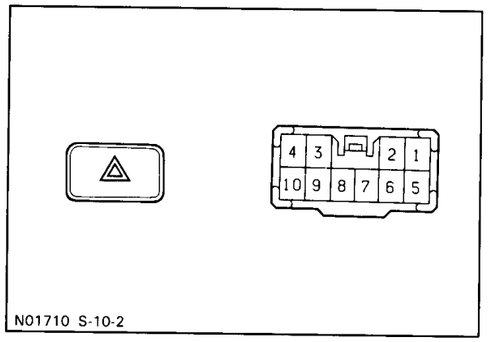
Trouble	Part name	See page
Hazard and Turn do not light up.	1. Hazard Warning Switch	BE-28
	2. Turn Signal Flasher	BE-28
	3. Wire Harness	—
No of blinks for Hazard, Turn is abnormal.	1. Bulb	—
	2. Turn Signal Flasher	BE-28
	3. Wire Harness	—
Hazard does not light up. (Turn is normal.)	1. HAZ - HORN Fuse	BE-8
	2. Wire Harness	—
Hazard light on one side only does not light up.	1. Hazard Warning Switch	BE-28
	2. Wire Harness	—
Turn signal on one side only does not light up.	1. Turn Signal Switch	BE-16
	2. Wire Harness	—
Only one bulb does not light up for hazard Turn.	1. Bulb	—
	2. Wire Harness	—
*1 Turn signal does not light up.	1. Ignition Switch	BE-11
	2. TURN Fuse	BE-8
	3. Turn Signal Switch	BE-16
	4. Wire Harness	—
*2 Turn signal does not light up.	1. TURN Fuse	BE-8
	2. Turn Signal Switch	BE-16
	3. Wire Harness	—

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

TURN SIGNAL SWITCH

TURN SIGNAL SWITCH INSPECTION

See Combination Switch on page BE-16



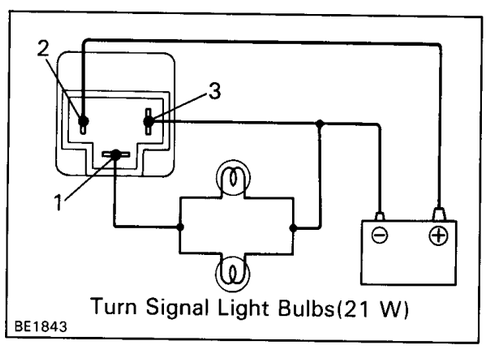
HAZARD WARNING SWITCH

HAZARD WARNING SWITCH INSPECTION

O—O CONTINUITY INSPECTION

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

If continuity is not as specified, replace the switch.



TURN SIGNAL FLASHER

TURN SIGNAL FLASHER INSPECTION

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 terminal 1 and 3, check that the bulbs flash.

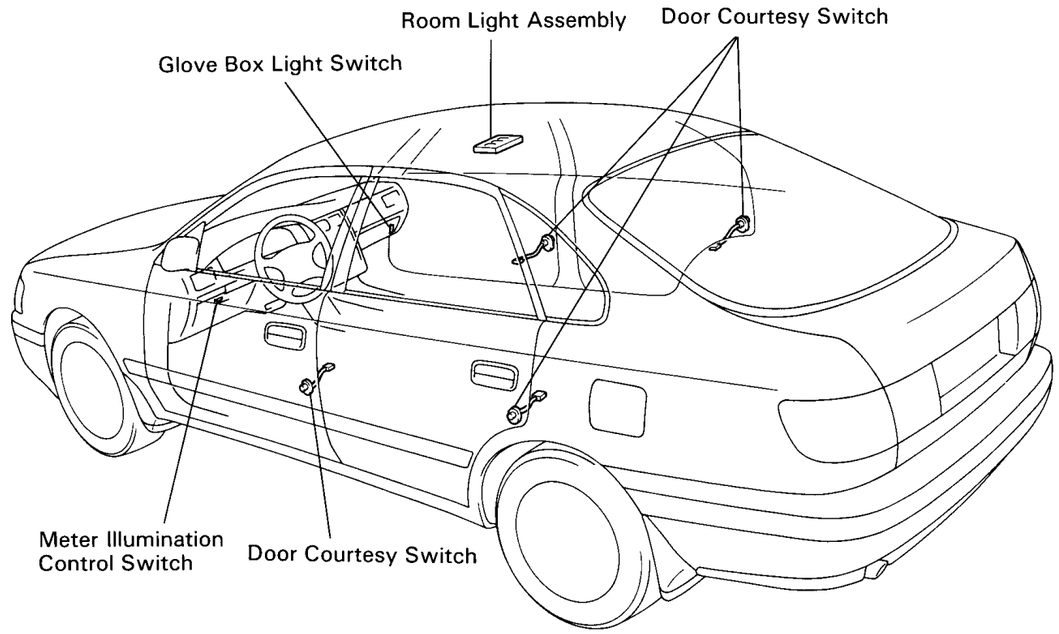
HINT: The turn signal lights should flash 60 to 120 times par minute.

If one of the front or rear turn signal light bulbs has an open circuit, the numbers of flashed will be more than 140 par minute.

If operation is not as specified, replace the flasher or check the wattage specification of the bulbs.

INTERIOR LIGHT SYSTEM

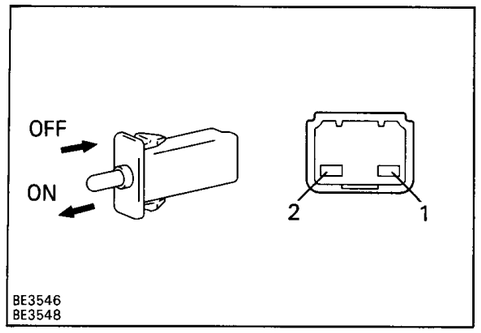
PARTS LOCATION

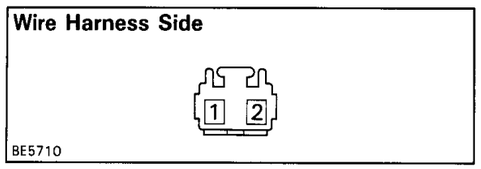


TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Part name	See page
Room light does not light up	1. DOME Fuse	BE-8
	2. Door Courtesy Switch	BE-18
	3. Wire Harness	—
	4. Bulb	—
Room light remains always on.	1. Door Courtesy Switch	BE-18
	2. Wire Harness	—





GLOVE BOX LIGHT SWITCH

GLOVE BOX LIGHT SWITCH INSPECTION

O—O Continuity Inspection

Terminal / Switch position	1	2
OFF (Closed)		
ON (Opened)	O	O

If continuity is not as specified, replace the switch.

SWITCH CIRCUIT

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

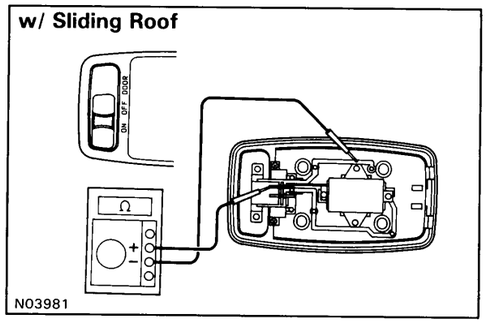
Tester connection	Condition	Specified Valve
1 — Ground	Light control switch position OFF	Below 1 V
1 — Ground	Light control switch position TAIL or HEAD	10 ~ 14 V
2 — Ground	Constant	Continuity

If the circuit is not as specified, refer to BE-76 wiring diagram and inspect the circuits connected to other parts.

DOOR COURTESY SWITCH

DOOR COURTESY SWITCH INSPECTION

(See page BE-18)



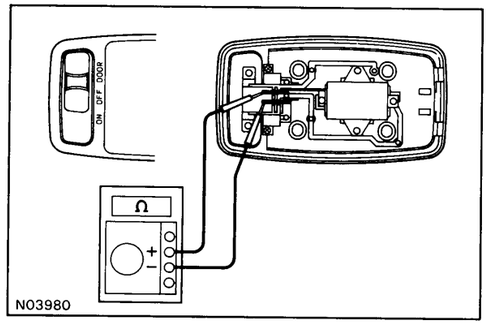
ROOM LIGHT ASSEMBLY

ROOM LIGHT ASSEMBLY INSPECTION

w/ SLIDING ROOF

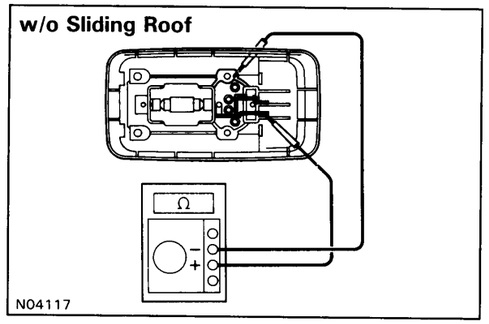
(a) Disconnect the connector from room light assembly.

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



(c) Turn the room light switch DOOR, check that there is continuity between terminal 1 and 2.

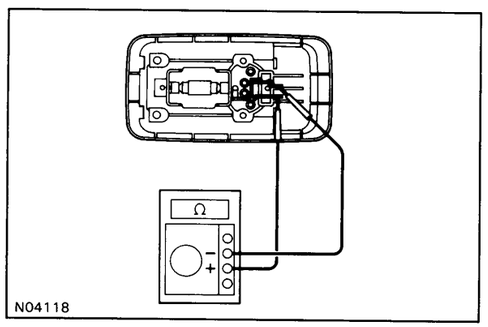
If operation is not as specified, replace the switch.



w/o SLIDING ROOF

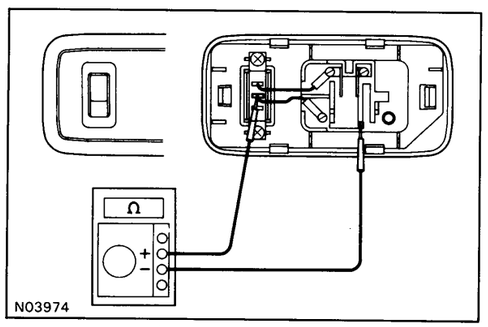
(a) Disconnect the connector from room light assembly.

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



(c) Turn the room light switch DOOR, check that there is continuity between terminal 1 and 2.

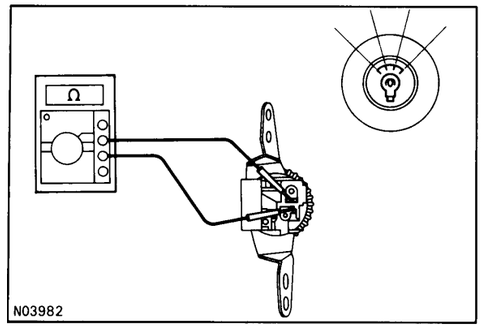
If operation is not as specified, replace the switch.



REAR ROOM LIGHT ASSEMBLY INSPECTION

(a) Disconnect the connector from room light assembly.

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



METER ILLUMINATION CONTROL SYSTEM

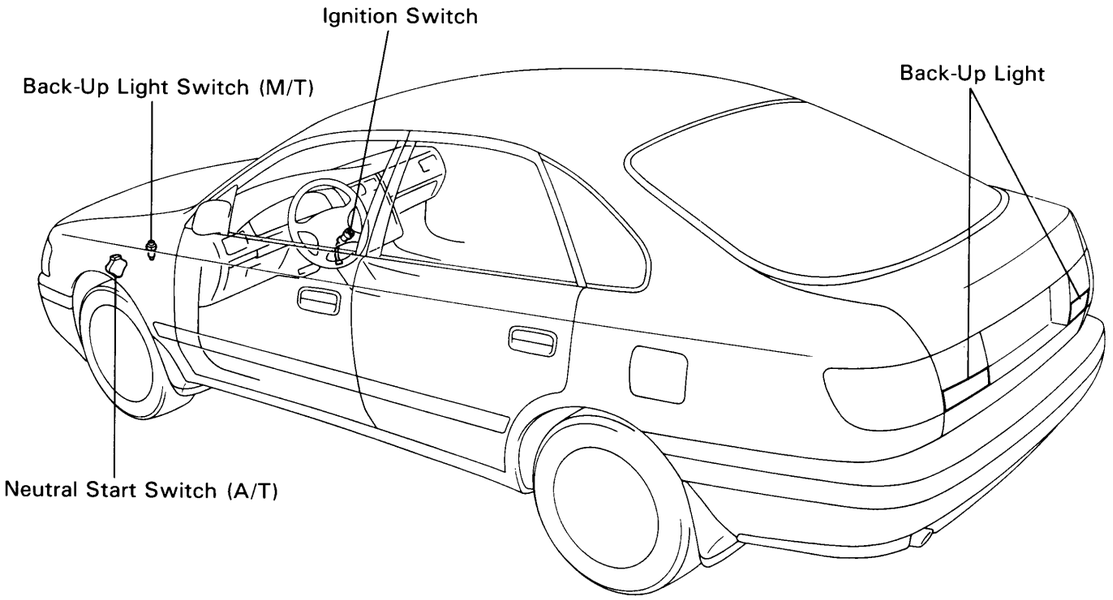
LIGHT CONTROL RHEOSTAT INSPECTION

Gradually turn the rheostat knob from the bright side to dark side, check that the resistance between terminals increases from approximately 0 to 4.5 Ω.

If operation is not as specified, replace the rheostat.

BACK-UP LIGHT SYSTEM

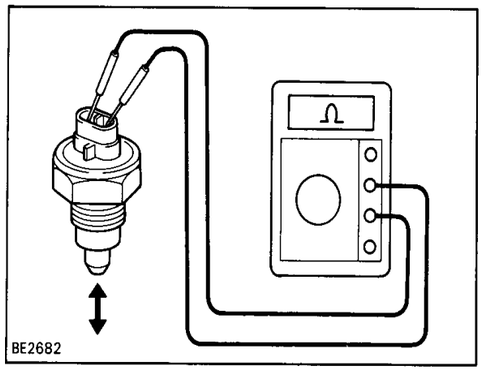
PARTS LOCATION



TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Part name	See page
Back-up light does not light up.	1. GAUGE Fuse	BE-8
	2. Ignition Switch	BE-11
	3. Wire Harness	—
	4. Bulb	—
Back-up light remains always on.	1. Wire Harness	—
Only one light does not light up.	1. Wire Harness	—
	2. Bulb	—



BACK UP LIGHT SWITCH

BACK UP LIGHT SWITCH INSPECTION

Check that there is continuity between terminals as shown.

Switch Position	Specified
Push	Continuity
Free	No continuity

If operation is not as specified, replace the switch.

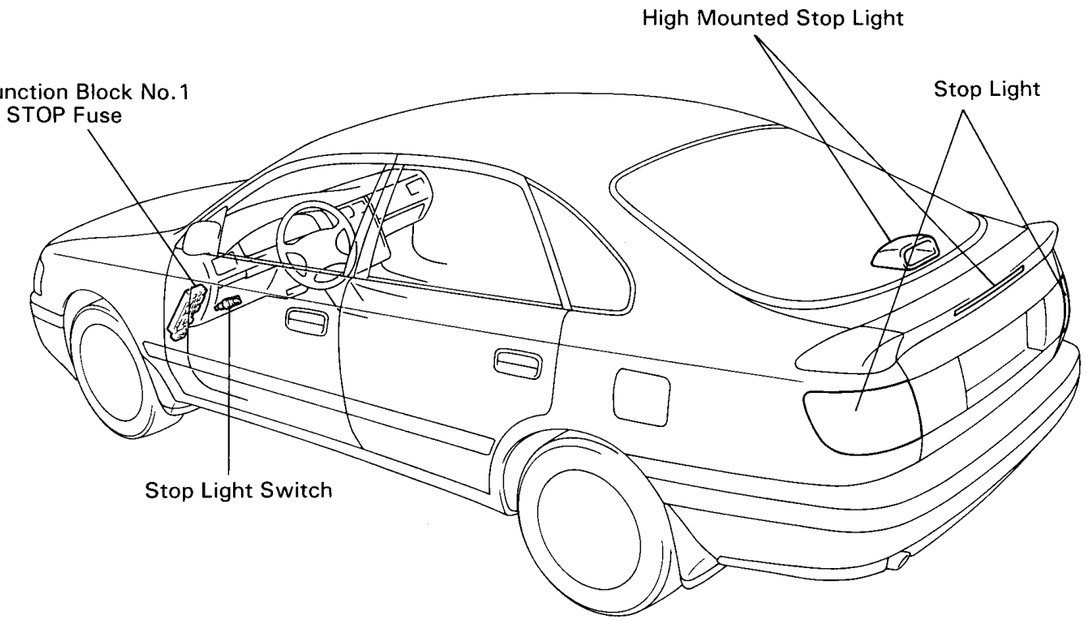
NEUTRAL START SWITCH

NEUTRAL START SWITCH INSPECTION

See AT section

STOP LIGHT SYSTEM

PARTS LOCATION



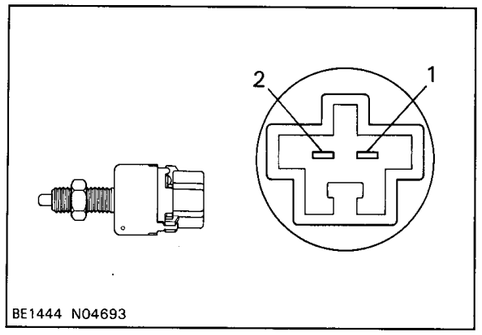
N04365

TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Part name	See page
Stop light does not light up.	1. STOP Fuse	BE-8
	2. Stop Light Switch	BE-37
	3. Wire Harness	—
	4. Bulb	—
Stop light remains always on.	1. Stop Light Switch	BE-37
	2. Wire Harness	—
Only one light does not light up.	1. Wire Harness	—
	2. Bulb	—

STOP LIGHT SWITCH



BE1444 N04693

STOP LIGHT SWITCH INSPECTION

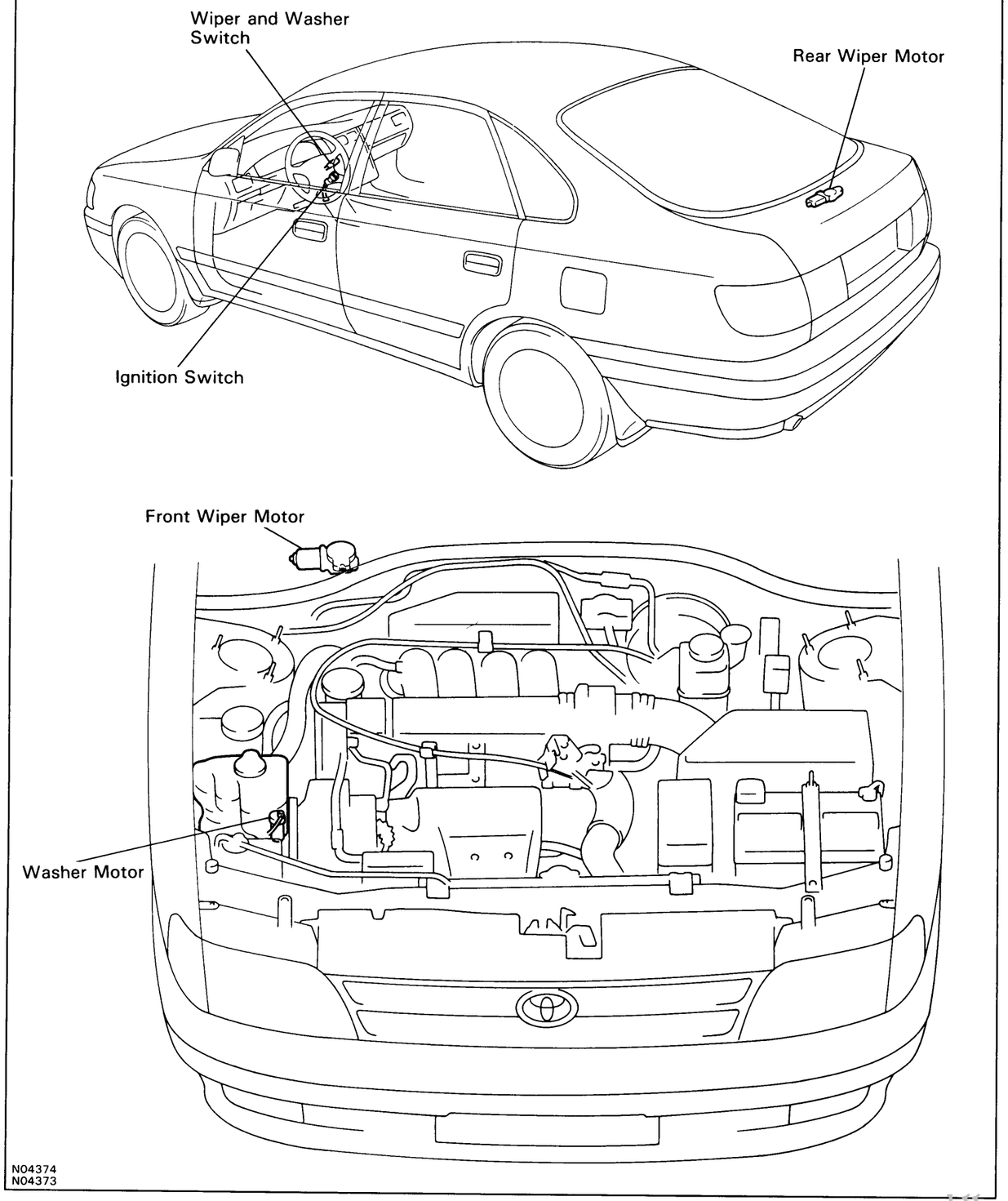
O—O CONTINUITY INSPECTION

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

If continuity is not as specified, replace the switch.

WIPER AND WASHER SYSTEM

PARTS LOCATION



TROUBLESHOOTING

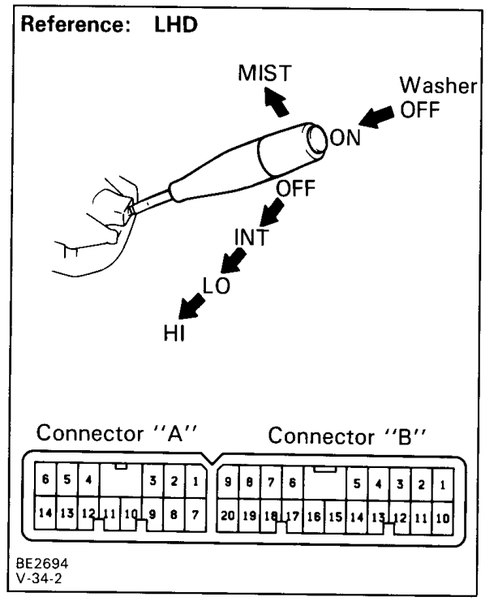
You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

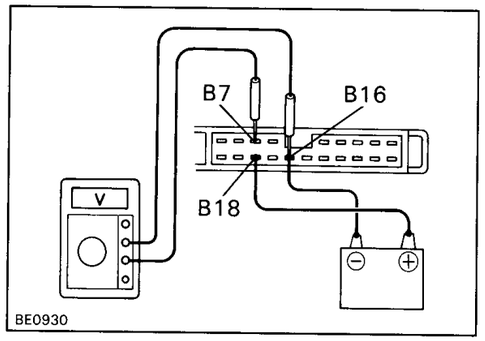
Trouble	Parts name	See page
Wipers do not operate or return to OFF position.	1. AM1 H-Fuse	BE-8
	2. WIPER Fuse	BE-8
	3. Ignition Switch	BE-11
	4. Wiper and Washer Switch	BE-40
	5. Wiper Motor	BE-41
	6. Wire Harness	—
Wipers do not operate in INT position.	1. Wiper and Washer Switch	BE-40
	2. Wiper Motor	BE-41
	3. Wire Harness	—
Washer do not operate.	1. Wiper and Washer Switch	BE-40
	2. Washer Hose and Nozzle	—
	3. Washer Motor	BE-42
	4. Wire Harness	—

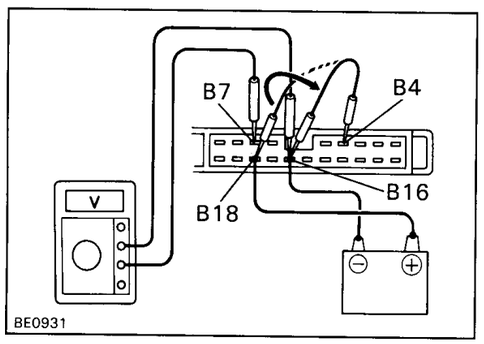
COMBINATION SWITCH

COMBINATION SWITCH DISASSEMBLY
(See page BE-15)

COMBINATION SWITCH ASSEMBLY
(See page BE-15)







COMBINATION SWITCH INSPECTION

INSPECT WIPER AND WASHER SWITCH CONTINUITY

Switch position		B4	B7	B8	B13	B16	B18
OFF	OFF	○	○				
	MIST		○				○
INT	OFF	○	○				
	MIST		○				○
LO	OFF		○				○
	MIST		○				○
HI	OFF				○		○
	MIST		○		○		○
WASH	OFF						
	ON			○		○	

If continuity is not as specified, replace the switch.

OPERATION (INTERMITTENT WIPER)

(a) Turn the wiper switch to INT position.

(b) Turn the INT switch to FAST position. (Variable type)

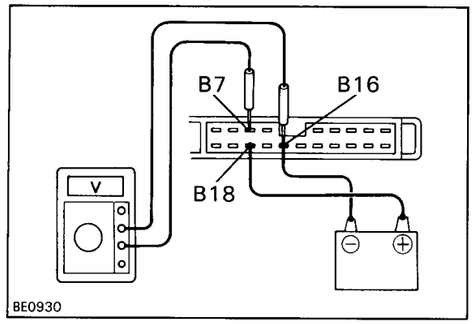
(c) Connect the positive (+) lead from the battery to terminal B18 and the negative (−) lead to terminal B16.

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

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

INT time control switch position	Voltage
FAST	Approx. 2 sec. — Battery voltage / 0 V
SLOW	10.7 ± 5 sec. — Battery voltage / 0 V
Non variable type	3.3 ± 1 sec. — Battery voltage / 0 V

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

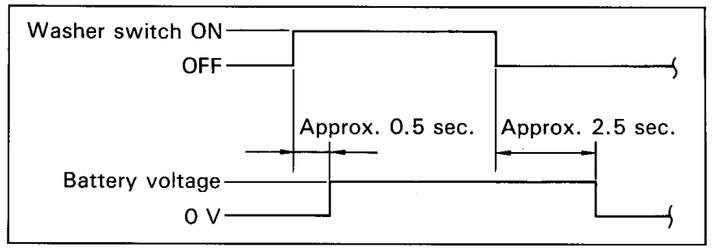


OPERATION (WASHER LINKED)

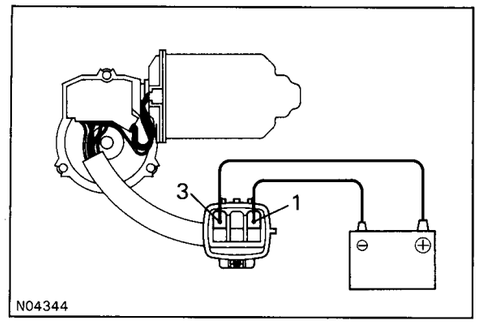
(a) Connect the positive (+) lead from the battery to terminal B18 and the negative (−) lead to terminal B16.

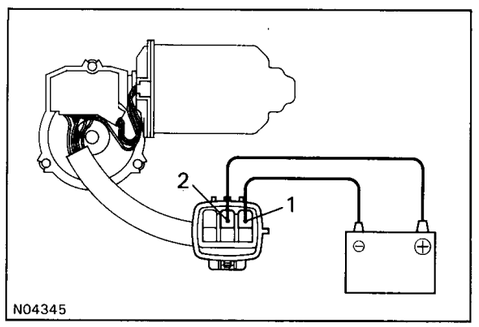
(b) Connect the positive (+) lead from the voltmeter to terminal B7 and the negative (−) lead to terminal B16.

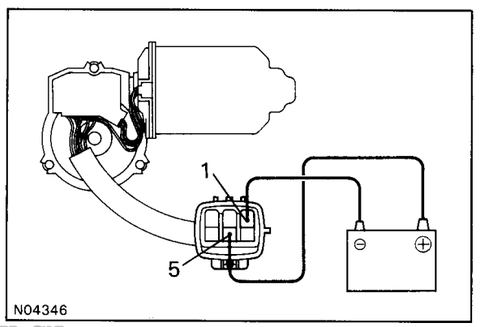
(c) Push in the washer switch, check that the voltage changes as shown in the table.



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







WIPER MOTOR

FRONT WIPER MOTOR INSPECTION

OPERATION (LOW SPEED)

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

If operation is not as specified, replace the motor.

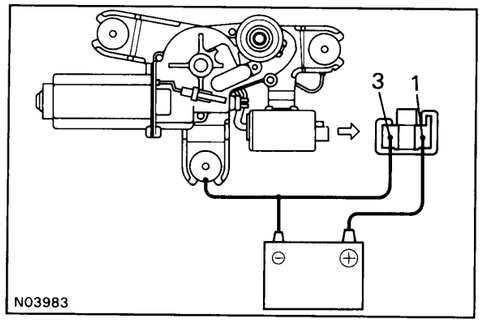
OPERATION (HIGH SPEED)

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

If operation is not as specified, replace the motor.

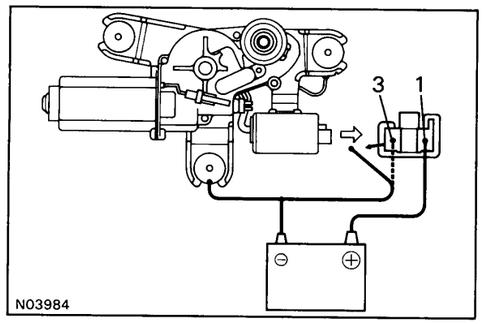
OPERATION (STOPPING AT STOP POSITION)

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



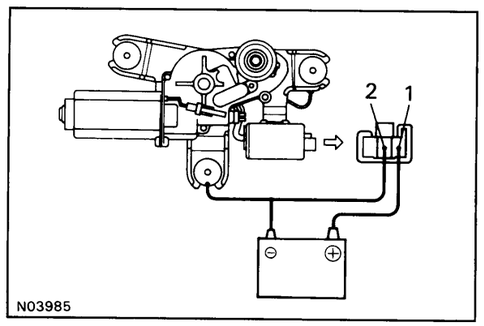
REAR WIPER MOTOR INSPECTION OPERATION

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



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

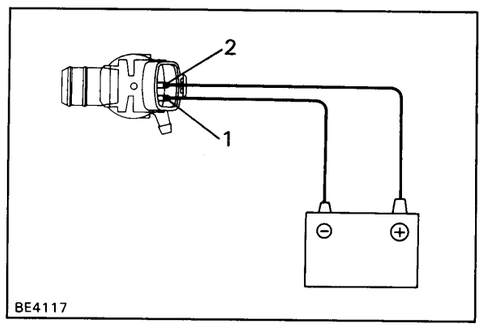
If operation is not as specified, replace the motor with the relay.



INTERMITTENT OPERATION

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

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



WASHER MOTOR

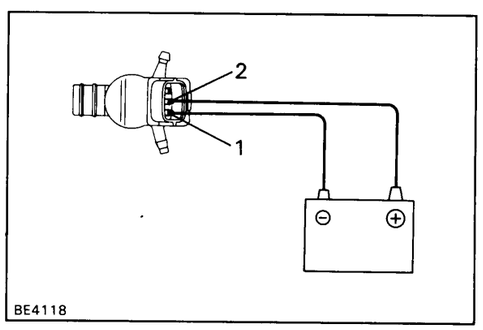
WASHER MOTOR INSPECTION

W/O REAR WIPER

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.

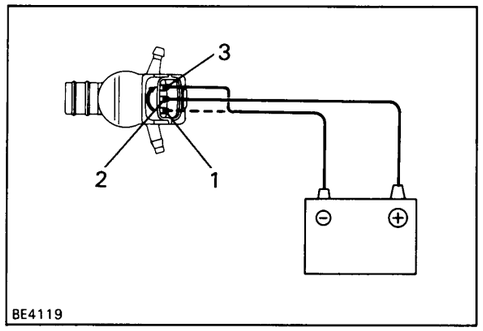
If operation is not as specified, replace the motor.



W/ REAR WIPER

(a) 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.



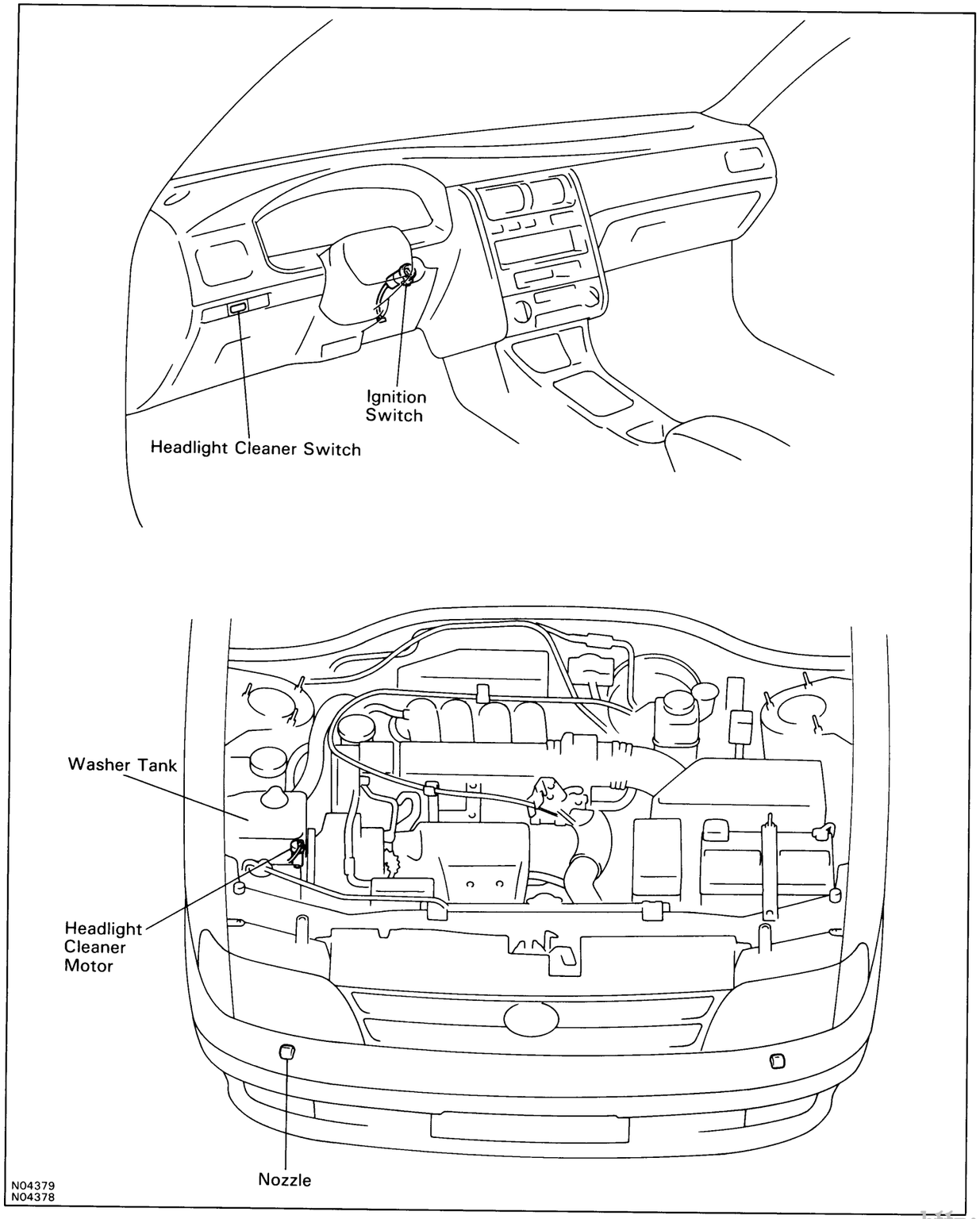
(b) Disconnect the negative (—) lead from terminal 1, and connect the negative (—) lead from the battery to terminal 3, check that the motor operates.

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

If operation is not as specified, replace the motor.

HEADLIGHT CLEANER SYSTEM

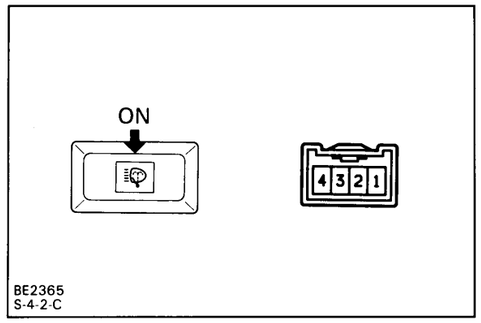
PARTS LOCATION



TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Part name	See page
Headlight cleaner do not operate	1. WIPER fuse	BE-8
	2. Cleaner hose or nozzle	—
	3. Cleaner motor	BE-45
	4. Cleaner switch	BE-45
	5. Wiring or ground	—



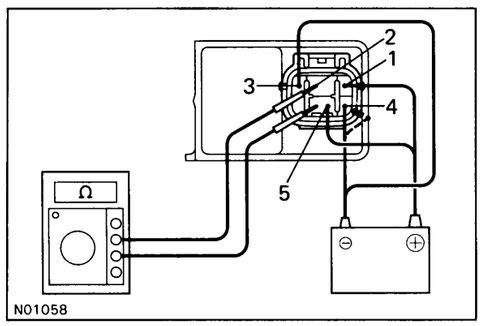
HEADLIGHT CLEANER SWITCH

1. HEADLIGHT CLEANER SWITCH INSPECTION

O—O Continuity Inspection

Terminal / Switch position	1	4	Illumination 2	Illumination 3
OFF			O—(•)—O	
ON	O—O			

If continuity is not as specified, replace the switch.

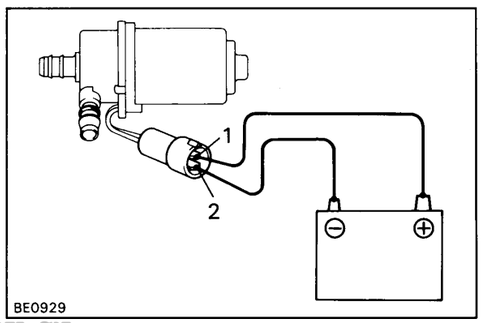


2. HEADLIGHT CLEANER RELAY INSPECTION

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

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

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



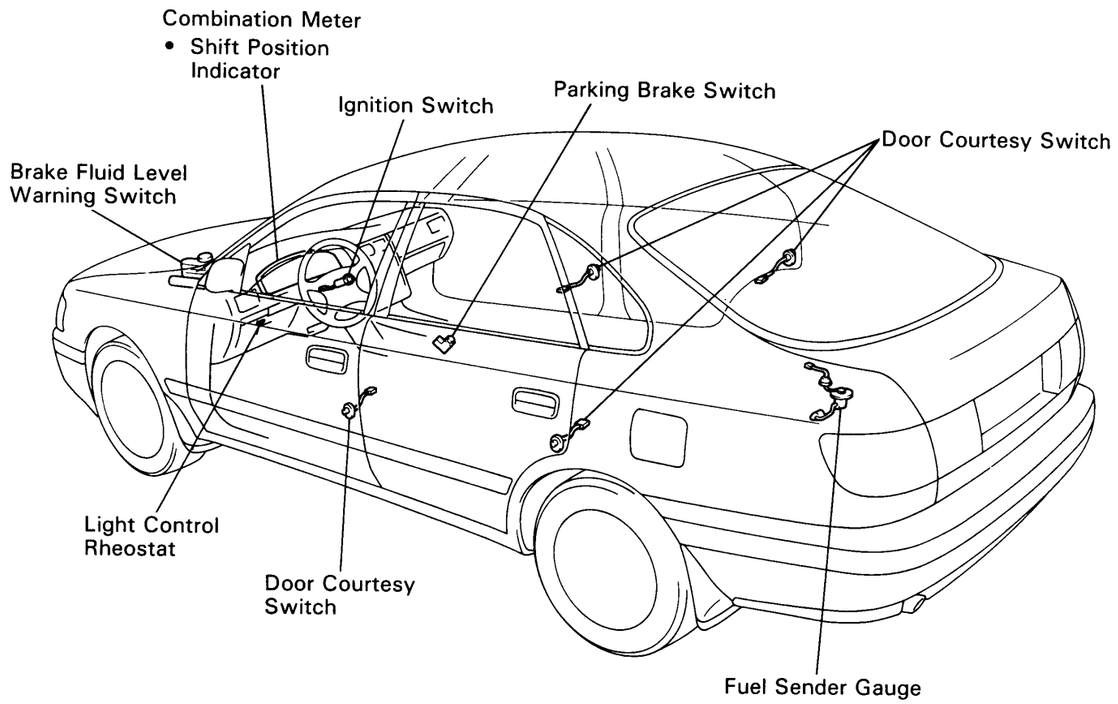
3. HEADLIGHT CLEANER MOTOR INSPECTION

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

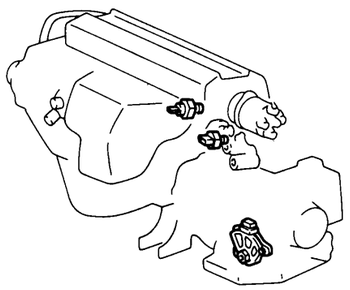
CAUTION: These test must be performed quickly (within 3 — 5 seconds) to prevent the coil from burning out.

If operation is not as specified, replace the motor.

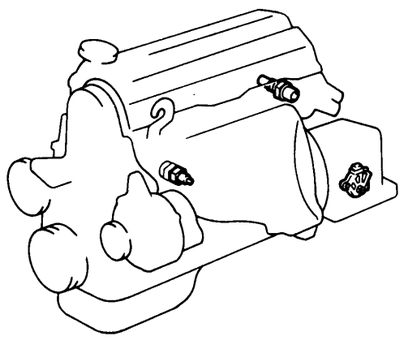
COMBINATION METER
PARTS LOCATION



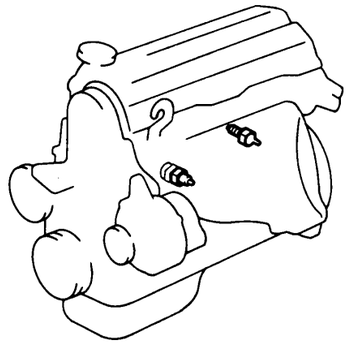
3S-FE Engine



4A-FE Engine

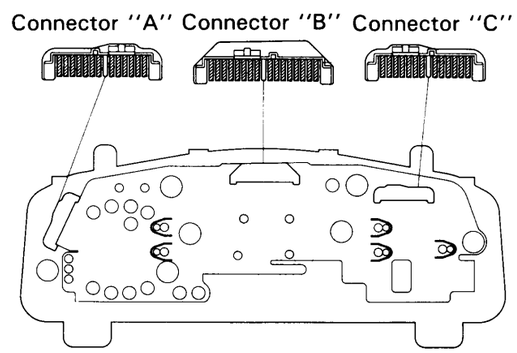


2C Engine

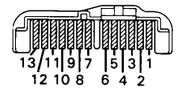


N04375
N02683 N04363 N04364

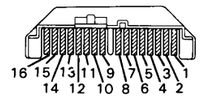
METER CIRCUIT
(W/ TACHOMETER)



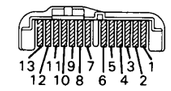
Connector "A"

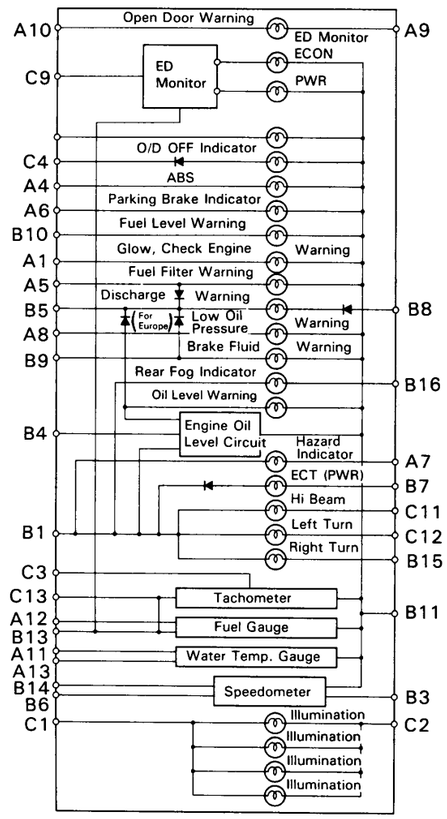


Connector "B"



Connector "C"

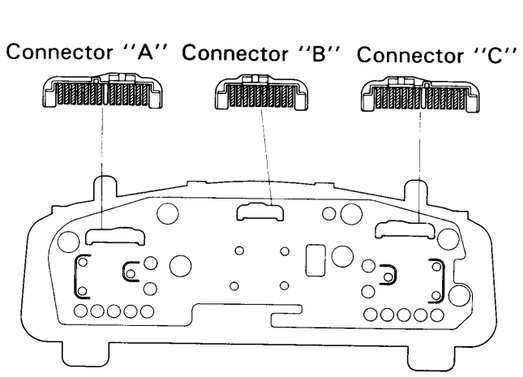


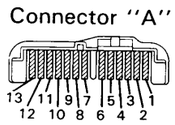


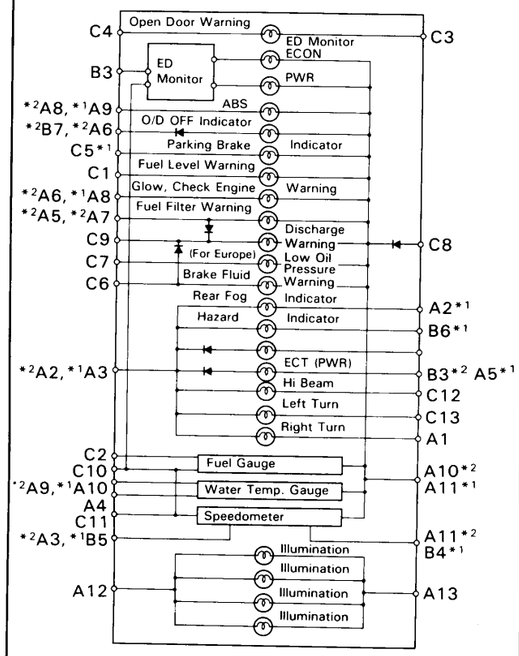
N03970
N04003 N03973
N04006 N03972

	No.	Wiring Connector Side
A	1	Engine & ECT ECU Glow timer relay
	4	ABS
	5	Fuel filter warning, switch
	6	Parking brake switch
	7	Hazard warning switch
	8	Oil pressure switch
	9	Dome Fuse
	10	Door courtesy switch
	11	Ground
	12	Fuel sender gauge
	13	Water temperature sender gauge
B	1	Ground
	3	4 pulse output
	4	Oil level gauge
	5	Alternator
	6	Speed sensor
	7	ECT (PWR)
	8	Alternator
	9	Brake fluid level warning switch
	10	Fuel sender gauge
	11	IG
	13	Ground
	14	Ground
	15	Headlight dimmer and turn signal switch
	16	Rear fog light switch
C	1	Light control rheostat
	2	TAIL fuse
	3	Tacho pluse or Pickup ⊕
	4	O/D OFF
	9	ED Moniter
	11	Headlight dimmer and turn signal switch
	12	Headlight dimmer and turn signal switch
	13	Pickup ⊖

METER CIRCUIT (CONT'D) (W/ TACHOMETER)







No.		Wiring Connector Side
A	1	Headlight dimmer and turn signal switch
	2	Ground (General), Rear fog light switch (Europe)
	3	Speed sensor (General), Ground (Europe)
	4	Water temperature sender gauge
	5	Fuel filter warning switch (Diesel only)
	6	O/D Main switch (Europe), Glow timer relay (General, Diesel), Engine & ECT ECU (General, Gasoline)
	8	ABS ECU (General), Glow timer relay (Europe, Diesel) Engine & ECT ECU (Europe)
	9	Ground (General), ABS ECU (Europe)
	10	Ignition switch (General), Ground (Europe)
	11	4 pulse output (General), Ignition switch (Europe)
	12	Light control rheostat
	13	TAIL Fuse
B	3	ECT (PWR) (General), E/G ECU (Europe, Gasoline)
	4	4 pulse output (Europe)
	5	Speed sensor (Europe)
	6	Hazard light switch (Europe)
	7	O/D Main switch (General)
C	1	Fuel sender gauge
	2	Fuel sender gauge
	3	DOME Fuse
	4	Door courtesy switch
	5	Parking brake switch (Europe)
	6	Brake fluid level warning switch
	7	Low oil pressure warning switch
	8	Alternator
	9	Ground
	10	Ground
	11	Ground
	12	Headlight dimmer and turn signal switch
	13	Headlight dimmer and turn signal switch

*1: Europe
*2: General

N03970
N04002 N03971
N04005 N03972

TROUBLESHOOTING

METERS, GAUGES AND ILLUMINATIONS

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Parts name	See page
Tachometer, Fuel Gauge and Water Temperature Gauge do not operate.	1. GAUGE Fuse	BE-8
	2. Combination Meter Wiring Circuit	BE-47
	3. Wire Harness	—
	4. Meter Circuit Plate	—
Speedometer does not operate.	1. Speed Sensor	BE-52
	2. Speedometer Driven Gear and Drive Gear	—
Tachometer does not operate.	1. Combination Meter Wiring Circuit	BE-47
	2. Wire Harness	—
	3. Igniter	—
	4. Meter Circuit Plate	—
Fuel Gauge does not operate or abnormal operation.	1. Fuel Receiver Gauge	BE-53
	2. Fuel Sender Gauge	BE-54
	3. Combination Meter Wiring Circuit	BE-47
	4. Wire Harness	—
Water Temperature Gauge does not operate or abnormal operation.	1. Water Temperature Receiver Gauge	BE-56
	2. Water Temperature Sender Gauge	BE-56
	3. Combination Meter Wiring Circuit	BE-47
	4. Wire Harness	—
All illumination lights do not light up.	1. TAIL Fuse	BE-8
	2. Light Control Rheostat	BE-33
	3. Wire Harness	—
Brightness does not change even when rheostat turned.	1. Bulb	—
	2. Wire Harness	—
Only one illumination light does not light up.	1. Bulb	—
	2. Wire Harness	—

INDICATOR LIGHTS

Trouble	Parts name	See page
O/D OFF indicator light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. O/D OFF Switch	—
	4. Wire Harness	—
High beam indicator light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Wire Harness	—
	4. Headlight System	BE-12
Turn indicator light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Wire Harness	—
	4. Turn Signal and Hazard Warning System	BE-26
ECT PWR indicator light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. ECT Pattern Select Switch	—
	4. Wire Harness	—
Shift indicator lights do not light up. (All)	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Neutral Start Switch	—
	4. Wire Harness	—
Shift indicator lights do not light up. (L.2.D)	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Neutral Start Switch	—
	4. Light Control Rheostat	BE-33
	5. Wire Harness	—
Only one shift indicator does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
Indicator lights do not light up. (Except. Turn, Hi-beam)	1. GAUGE Fuse	BE-8
	2. Wire Harness	—

WARNING LIGHTS AND WARNING CHIME

Trouble	Parts name	See page
Warning lights do not light up. (Except. Discharge)	1. GAUGE Fuse	BE-8
	2. Combination Meter Wiring Circuit	BE-47
	3. Wire Harness	—
Low oil pressure warning light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Low Oil Pressure Warning Switch	BE-58
	4. Wire Harness	—
Fuel level warning light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Fuel Level Warning Switch	BE-55
Check engine warning light does not light up.	1. Bulb	—
	2. Engine & ECT ECU	—
	3. Wire Harness	—
Seat belt warning light does not light up.	1. Bulb	—
	2. Integration Relay	
	3. Wire Harness	—
Discharge warning light does not light up.	1. IG2 Fuse	BE-8
	2. Bulb	—
	3. Wire Harness	—
	4. Alternater	—
Light Failure warning light does not light up.	1. Bulb	—
	2. Light Failure Sensor	
	3. Wire Harness	—
	4. Taillight and Stop Light System	
Brake warning light does not light up.	1. Bulb	—
	2. Combination Meter Wiring Circuit	BE-47
	3. Parking Brake Switch	BE-57
	4. Brake Fluid Level Warning Switch	BE-57
Open door warning light does not light up.	1. DOME Fuse	BE-8
	2. Bulb	—
	3. Combination Meter Wiring Circuit	BE-47
	4. Door Courtesy Switch	BE-18
	5. Wire Harness	—

(mph)

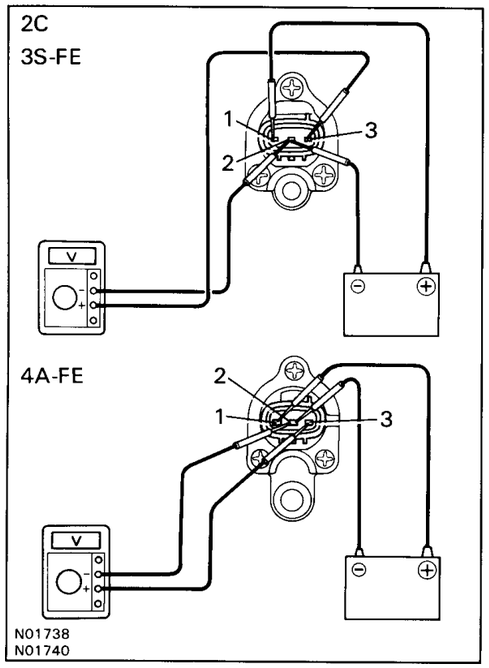
Standard Indication	Allowable range
20	21 ~ 23.5
40	41.5 ~ 44
60	62.5 ~ 66
80	83 ~ 87
100	104 ~ 108.5

(km/h)
Except Indonesia, Singapore

Standard Indication	Allowable range
20	21 ~ 25
40	41.5 ~ 46
60	62.5 ~ 67
80	83 ~ 88
100	104 ~ 109
120	125 ~ 130.5
140	145.5 ~ 151.5
160	166 ~ 173

Indonesia, Singapore

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



SPEEDOMETER SYSTEM

SPEEDOMETER INSPECTION

ON-VEHICLE

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

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

If error is excessive, replace the speedometer.

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

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

SPEED SENSOR INSPECTION

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

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

(c) Revolve shaft.

(d) Check that there is voltage changer from approx. 0 V to 11 V or more between terminal 3 and 2.

HINT: The voltage change should be 20 times per each revolution of the speed sensor shaft.

If operation is not as specified, replace the sensor.

DC 13.5 V, 25°C (77°F) rpm	
Standard indication	Allowable range
700	610 ~ 750
1000	900 ~ 1100
2000	1875 ~ 2125
3000	2850 ~ 3150
4000	3850 ~ 4150
5000	4850 ~ 5150
6000	5820 ~ 6180
7000	6790 ~ 7210

TACHOMETER SYSTEM

TACHOMETER INSPECTION

(ON-VEHICLE)

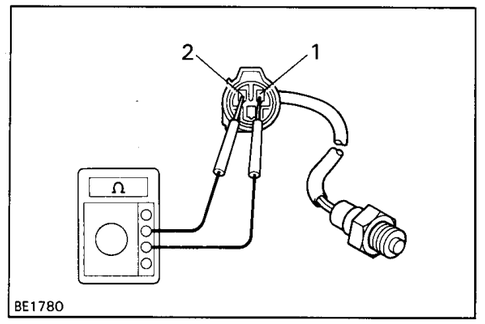
(a) Connect a tune-up test tachometer, and start the engine.

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.

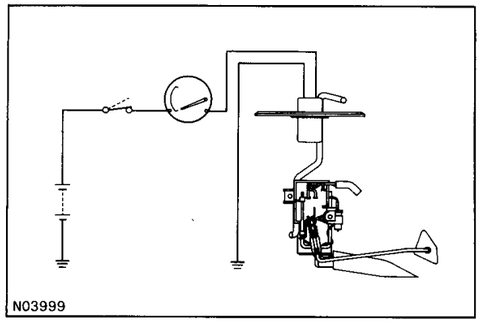


PICKUP SENSOR INSPECTION

Measure the resistance between terminals 1 and 2.

Resistance: Approx. 730 Ω

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



FUEL GAUGE SYSTEM

FUEL RECEIVER GAUGE INSPECTION

OPERATION

(a) Disconnect the connector from the sub-wire harness of sender gauge.

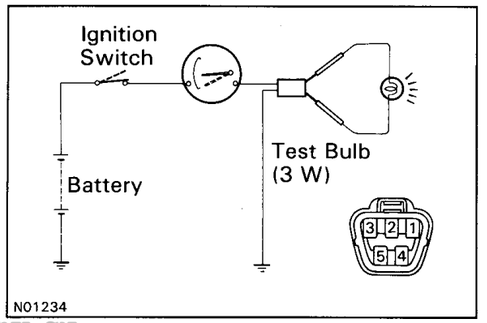
(b) Turn the ignition switch ON, check that the receiver gauge needle indicates EMPTY.

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

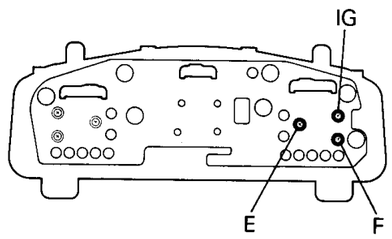
(d) Turn the ignition switch ON, check that the bulb lights up and receiver gauge needle moves toward the full side.

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.

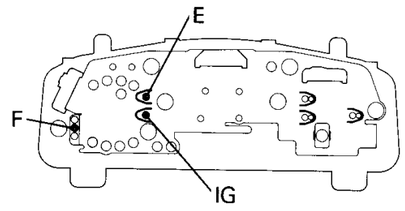


w/o TACHOMETER

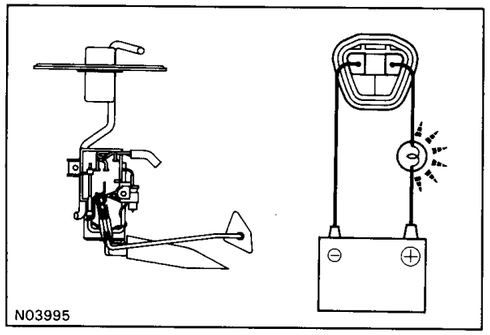


N03998

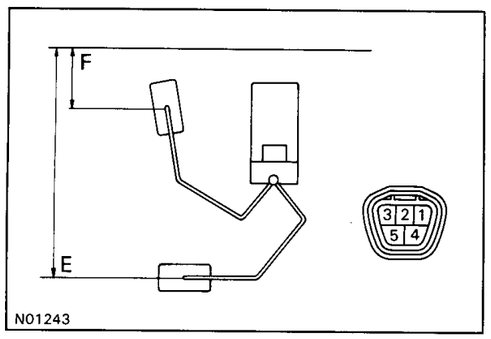
w/ TACHOMETER



N04101



N03995



N01243

RESISTANCE

Measure the resistance between terminals.

w/o TACHOMETER

Between terminals	Resistance (Ω)
F — E	Approx.191
F — IG	Approx.109
IG — E	Approx.300

w/ TACHOMETER

Between terminals	Resistance (Ω)
F — E	Approx.181
F — IG	Approx.123
IG — E	Approx.304

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

FUEL SENDER GAUGE INSPECTION

OPERATION

(a) Disconnect the connector from the sender gauge.

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

(c) Connect the positive (+) lead from the dry cellbatteries to terminal 2 through a 3.4 W test bulb and the negative (−) lead to terminal 3.

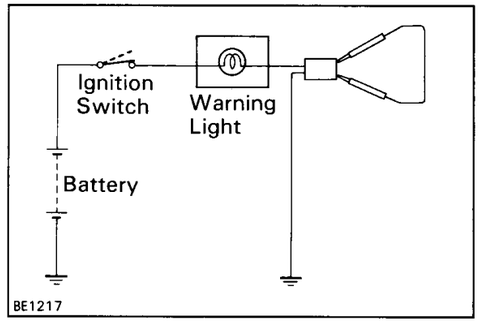
(d) Check that the voltage rises between terminals 2 and 3 as the float is moved from the top to bottom position.

RESISTANCE

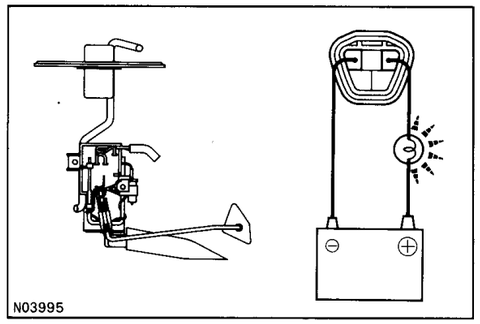
Measure the resistance between terminals 2 and 3 for each float position.

	Float position mm (in.)	Resistance (Ω)
F	Approx.13 (0.51)	Approx.4
E	Approx.127 (5.00)	Approx.111

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



BE1217



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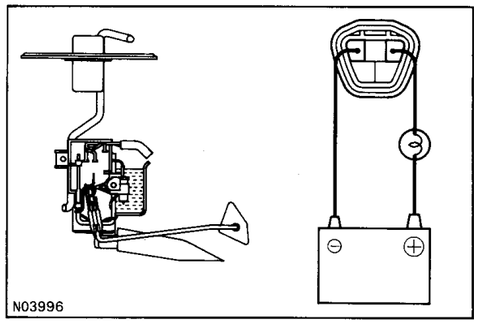

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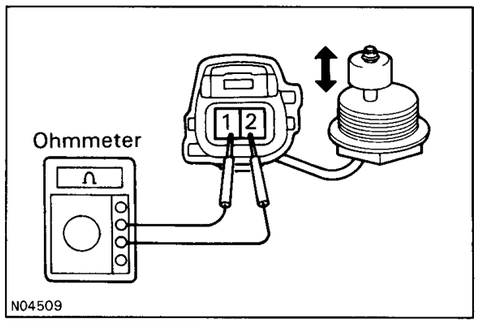
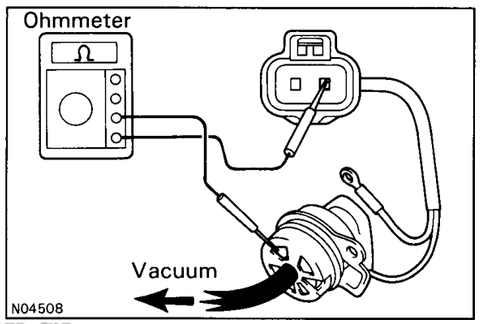


N04509



N04508

FUEL LEVEL WARNING SYSTEM

FUEL LEVEL WARNING LIGHT INSPECTION

(a) Disconnect the connector from the sender gauge.

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

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

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

FUEL LEVEL WARNING SWITCH INSPECTION

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

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

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

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

FUEL FILTER WARNING SWITCH

FUEL FILTER WARNING SWITCH INSPECTION

(a) Check that there is continuity between terminals when the warning switch is ON (float up).

(b) Check that there is no continuity between terminals when the warning switch is OFF (float down).

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

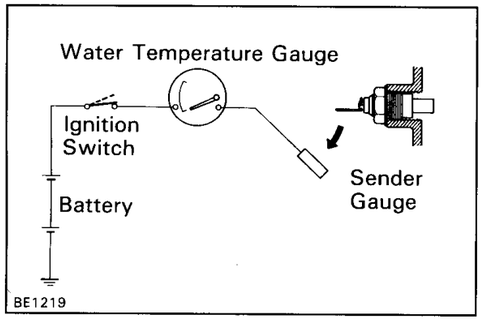
FUEL HEATER

FUEL HEATER INSPECTION

(a) Apply a vacuum of 46.7 ± 86.7 kPa (350 ± 50 mmHg, 13.78 ± 1.97 in.Hg) or more to the vacuum switch port.

(b) Using an ohmmeter, check that there is continuity between terminal 1 and the switch body.

If operation is not as specified, replace the fuel heater and vacuum switch assembly.



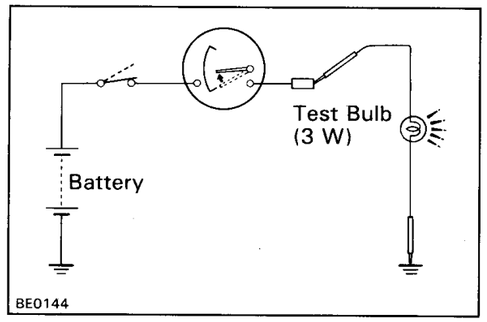
WATER TEMPERATURE GAUGE SYSTEM

WATER TEMPERATURE RECEIVER GAUGE INSPECTION

OPERATION

(a) Disconnect the connector from the sender gauge.

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



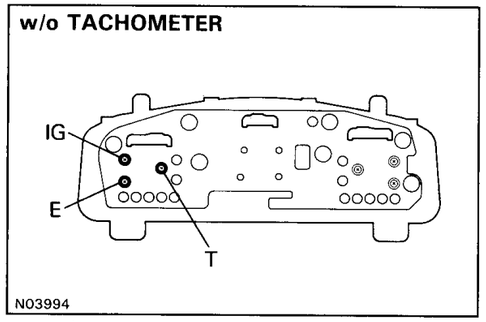
(c) Ground terminal on the wire harness side connector through a 3 W test bulb.

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

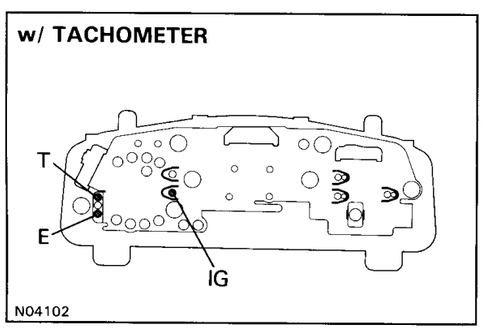
If operation is as specified, replace the sender gauge. Then, recheck the system.

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

w/o TACHOMETER



w/ TACHOMETER



OPERATION

Measure the resistance between terminals.

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

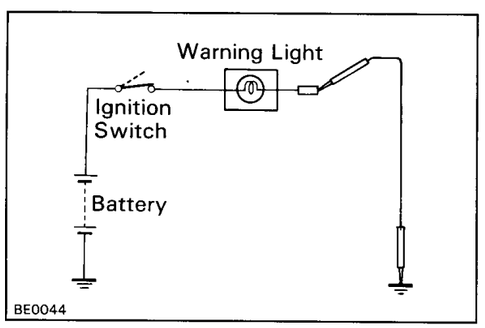
w/o TACHOMETER

Between terminals	Resistance (Ω)
T — E	Approx.214
T — IG	Approx.75
E — IG	Approx.139

w/ TACHOMETER

Between terminals	Resistance (Ω)
T — E	Approx.214
T — IG	Approx.75
IG — E	Approx.139

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



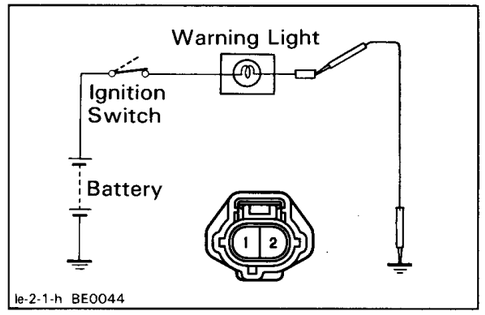
LOW OIL PRESSURE WARNING SYSTEM

LOW OIL PRESSURE WARNING LIGHT INSPECTION

(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.

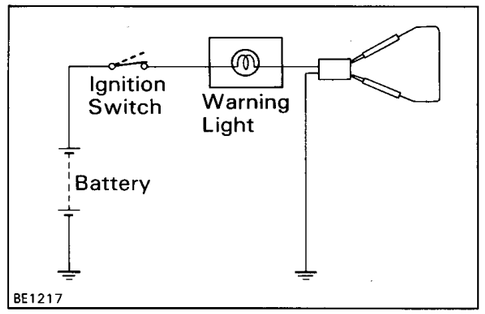


(c) Disconnect the connector from the switch.

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

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

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



BRAKE WARNING SYSTEM

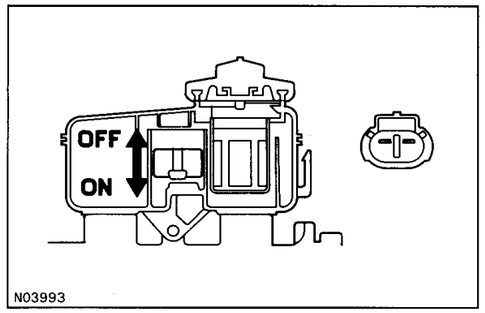
BRAKE WARNING LIGHT INSPECTION

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

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

(c) Start the engine, check that the warning light goes out.

If operation is not as specified, inspect the bulb and the bulb check relay.



BRAKE FLUID LEVEL WARNING SWITCH INSPECTION

(a) Remove the reservoir tank cap and strainer.

(b) Disconnect the connector.

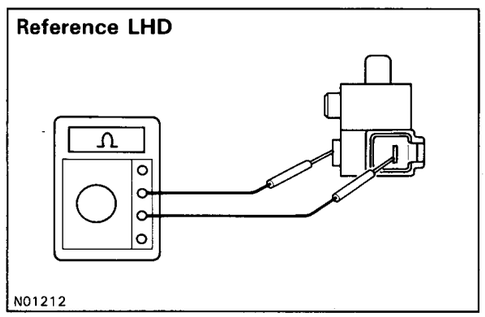
(c) Check that there is no continuity between terminals with the switch OFF (float up).

(d) Use syphon, etc. to take fluid out of the reservoir tank.

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

(f) Pour the fluid back in the reservoir tank.

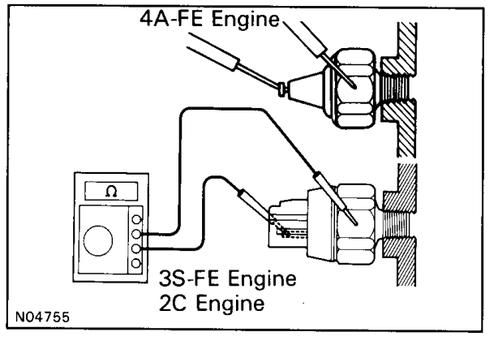
If operation is not as specified, replace the switch.



PARKING BRAKE SWITCH INSPECTION

(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).



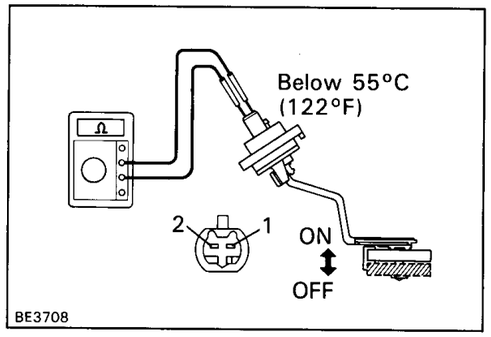
LOW OIL PRESSURE WARNING SWITCH INSPECTION

(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 49 kPa (0.5 kgf/cm, 7.1 psi).

If operation is not as specified, replace the switch.

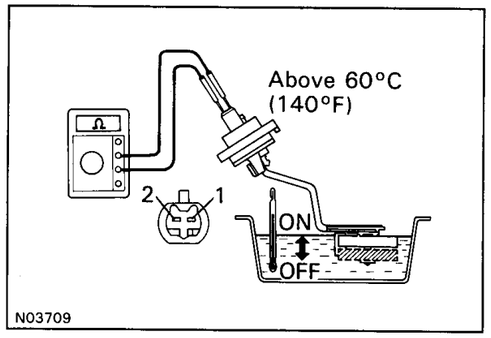


ENGINE OIL LEVEL WARNING SWITCH

ENGINE OIL LEVEL WARNING SWITCH INSPECTION

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

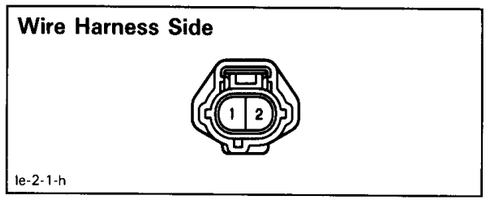
(b) Heat the switch to above 60°C (140°F) in an oil bath.



(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.

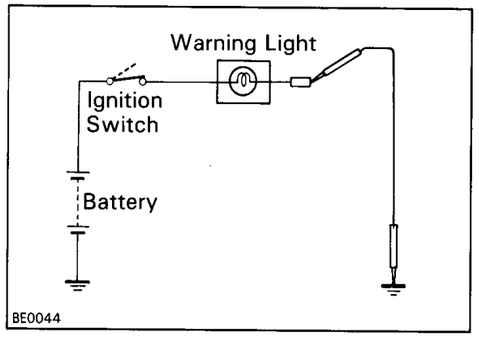


CIRCUIT

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

Check for	Tester connection	Condition	Specified value
Continuity	2 — Ground	Constant	Continuity

If continuity is not as specified, inspect the wire harness or ground point.



OPEN DOOR WARNING SYSTEM

OPEN DOOR WARNING LIGHT INSPECTION

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

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

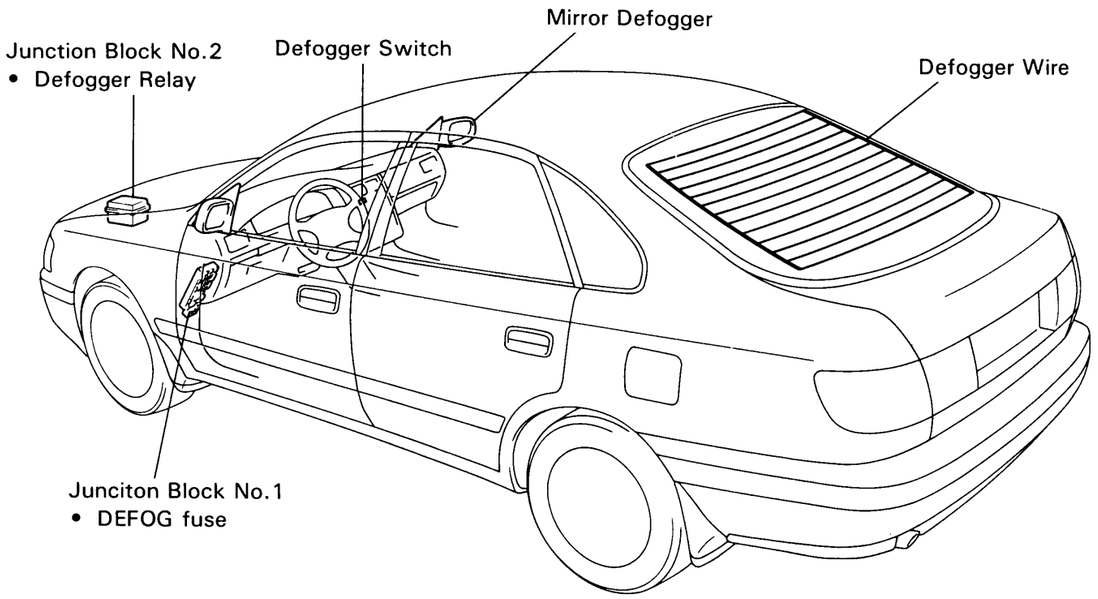
If the warning light does not light up, test the bulb.

DOOR COURTESY SWITCH INSPECTION

(See page BE-18)

DEFOGGER SYSTEM

PARTS LOCATION



N04369

TROUBLESHOOTING

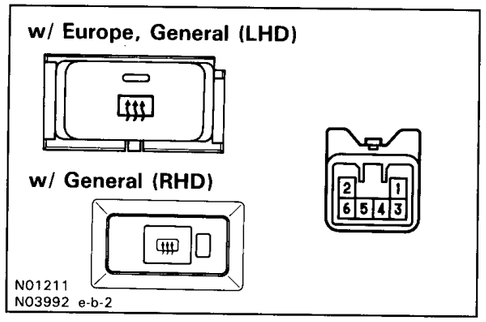
You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

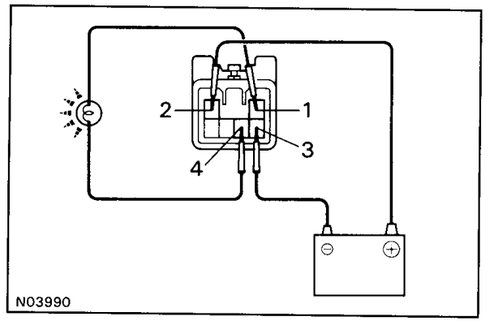
Trouble	Part name	See page
All defogger systems do not operate	1. GAUGE Fuse	BE-8
	2. CB DEFOG	—
	3. Defogger Switch	BE-62
	4. Wire Harness	BE-62
Rear Window defogger does not operate	1. Defogger Wire	BE-62
	2. Wire Harness	—

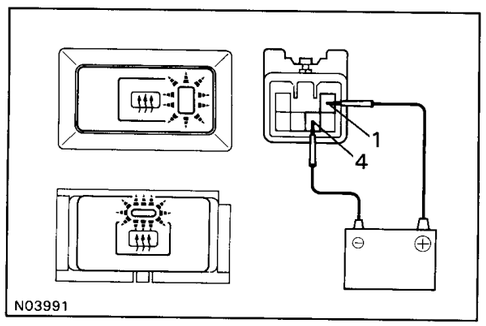
PREPARATION

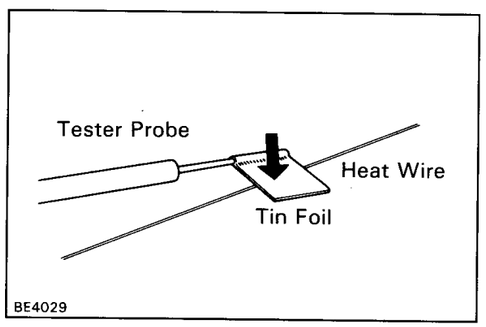
SSM (SPECIAL SERVICE MATERIALS)

Part Name	Part No.	Use etc.
Duppont Paste No.4817	—	Rear window defogger wire.









DEFOGGER SWITCH

DEFOGGER SWITCH INSPECTION

O——O: CONTINUITY INSPECTION

Terminal / Switch position	2	3	Illumination 1	Illumination 4
OFF			O——(●)——O	
ON	O——O			

If continuity is not as specified, replace the switch.

TIMER OPERATION

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

(b) Connect between terminals 1 and 4 through a 3.4 W test bulb.

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

If operation is not as specified, replace the switch.

INDICATOR LIGHT OPERATION

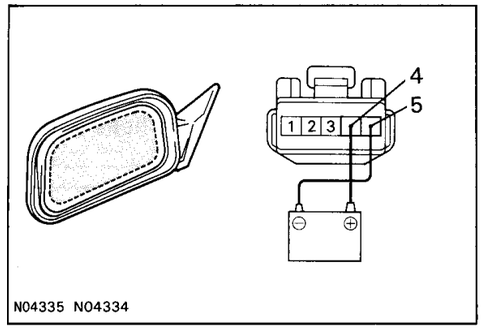
Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 4, check that the indicator light lights up. If indicator light does not light up, replace switch.

DEFOGGER WIRE

DEFOGGER WIRE INSPECTION

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.**



MIRROR DEFOGGER INSPECTION

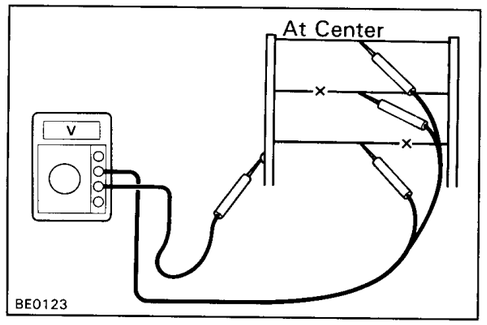
INSPECT MIRROR DEFOGGER

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

(b) Check that the mirror becomes warm.

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

If the mirror does not become warm, replace the mirror assembly.



WIRE BREAKAGE

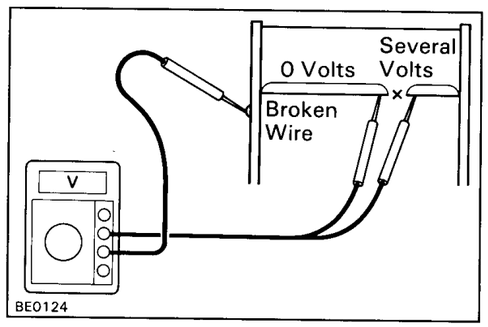
(a) Turn the ignition switch ON.

(b) Push in the defogger switch.

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

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

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



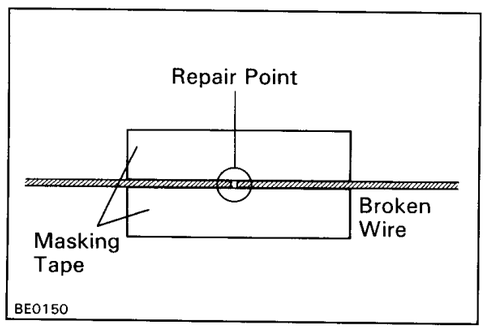
WIRE BREAKAGE POINT

(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.

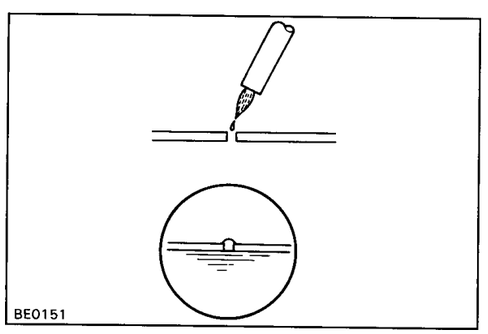
HINT: If the heat wire is not broken, the voltmeter indicates 0 V at the positive (+) end of the heat wire but gradually increases to about 12 V as the meter probe is moved to the other end.



DEFOGGER WIRES REPAIR

(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) Throughly mix the repair agent (Dupont paste No.4817).

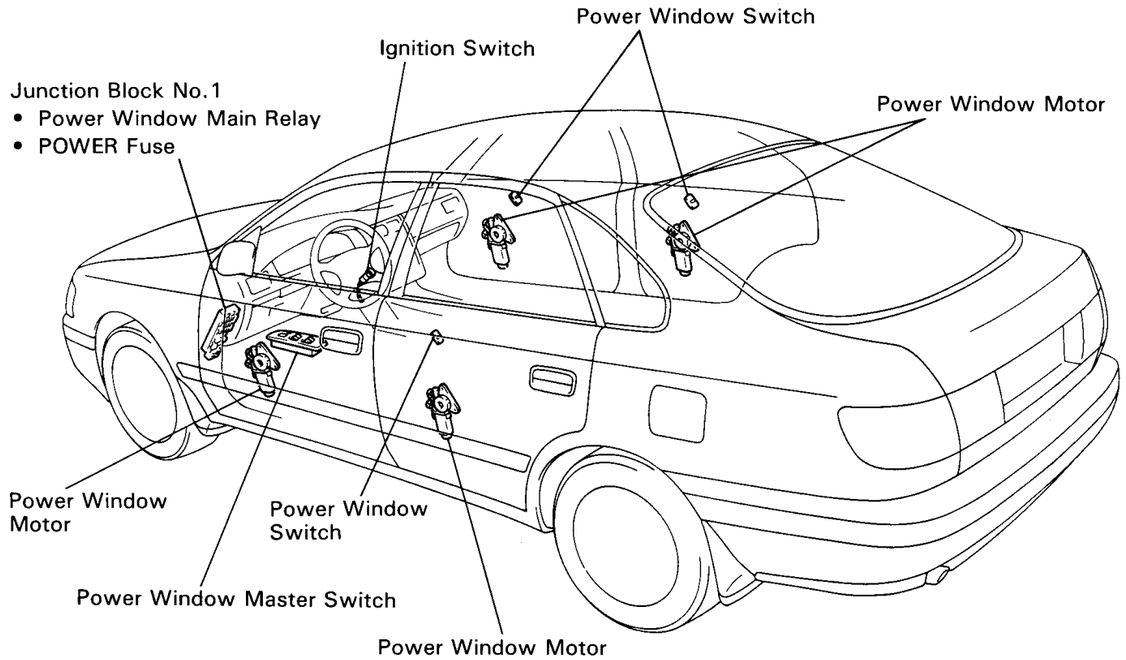
(d) Using a fine tip brush, apply a small amount to the wire.

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

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

POWER WINDOW CONTROL SYSTEM

PARTS LOCATION



TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

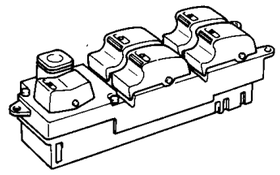
Trouble	Parts name	See page
Power Window does not operate.*1	1. AM1 FL	BE-8
	2. POWER Fuse	BE-8
	3. GAUGE Fuse	BE-8
	4. Power Main Relay	BE-17
	5. Ignition Switch	BE-11
	6. Power Window Master Switch	BE-67
	7. Wire Harness	—
Power Window does not operate.*2	1. POWER Fuse	BE-8
	2. GAUGE Fuse	BE-8
	3. Ignition Switch	BE-11
	4. Power Main Relay	BE-17
	5. Power Window Master Switch	BE-67
"One Touch Power Window System" does not operate.	1. Power Window Master Switch	BE-67
Only one window glass does not move.	1. Power Window Master Switch	BE-67
	2. Power Window Switch	BE-70
	3. Power Window Motor	BE-70
	4. Wire Harness	—
"Window Lock System" does not operate.	1. Power Window Master Switch	BE-67
"Window Lock illumination" does not light up.	1. Power Window Master Switch	BE-67

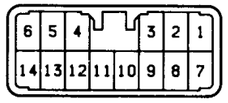
*1: Power door lock control system does not operate.
*2: Power door lock control is normal.

MASTER SWITCH

MASTER SWITCH INSPECTION

O——O CONTINUITY INSPECTION

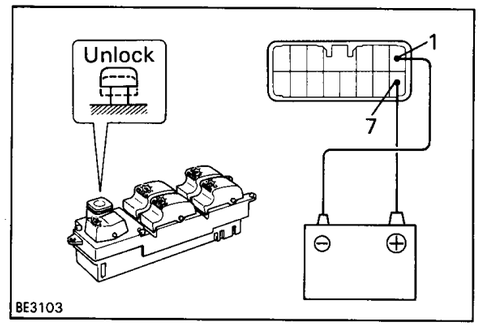




BE2594 S-14-2-B

Window operation			Front								Rear							
			Driver's				Passenger's				Left				Right			
Terminal		LHD	1 or 2	6	7 or 8	13	1 or 2	5	7 or 8	12	1 or 2	7 or 8	9	10	1 or 2	7 or 8	11	14
Switch position		RHD	5 or 6	1	13 or 14	8	5 or 6	2	13 or 14	9	5 or 6	13 or 14	7	10	5 or 6	13 or 14	11	12
Window unlock	UP		O—O	O——O			O—O	O—O			O	O——O		O	O		O——O	
	OFF		O—O	O—O		O	O—O	O—O		O	O		O—O	O	O		O—O	O
	DOWN		O—O	O—O	O—O		O		O—O	O	O	O—O		O	O	O—O		O
Window lock	UP		O—O	O——O					O—O	O		O—O		O		O—O	O	
	OFF		O—O	O—O		O		O—O		O			O—O	O				O
	DOWN		O—O	O—O	O—O			O—O				O—O				O		O

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



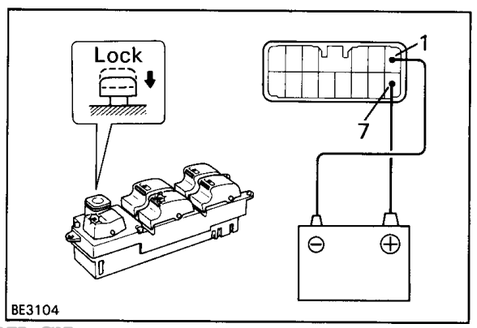
BE3103

LHD:

ILLUMINATION OPERATION

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

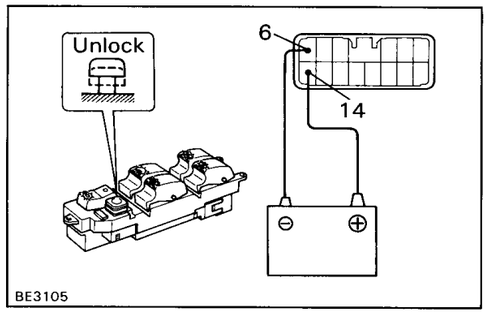
(b) Connect the positive (+) lead from the battery to terminal 7 and the negative (—) lead to terminal 1, check that all the illuminations light up.



BE3104

(c) Set the window lock switch to the lock position, check that all the passenger's illuminations go out.

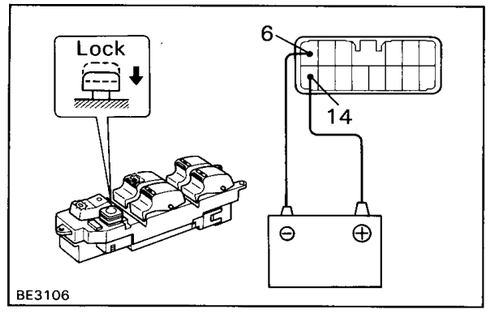
If operation is not as specified, replace the master switch.



RHD:

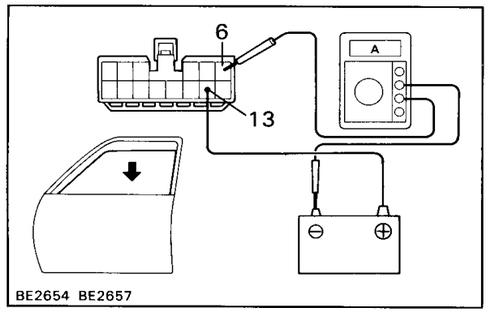
(a) Set the window lock switch to the unlock position.

(b) Connect the positive (+) lead from the battery to terminal 14 and the negative (—) lead to terminal 6, check that all the illuminations light up.



(c) Set the window lock switch to the lock position, check that all the passenger's illuminations go out.

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



LHD:

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 6 on the wire harness side connector and the negative (—) lead to negative (—) terminal of the battery.

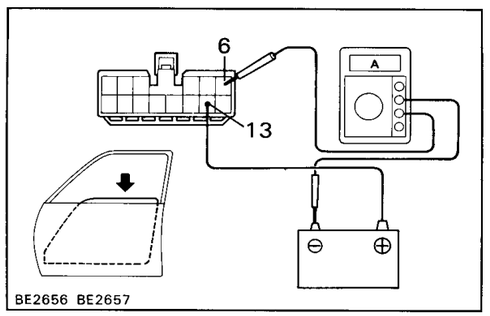
(c) Connect the positive (+) lead from the battery to terminal 13 on the wire harness side.

(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 the operation is as specified, replace the master switch.



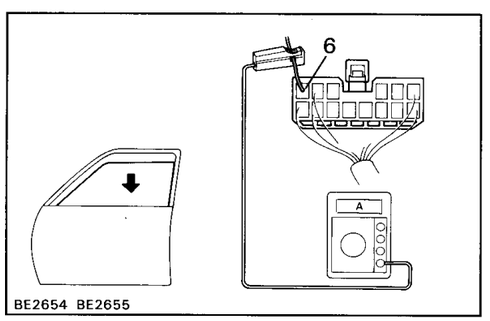
(Inspection using an ammeter with a current-measuring probe.)

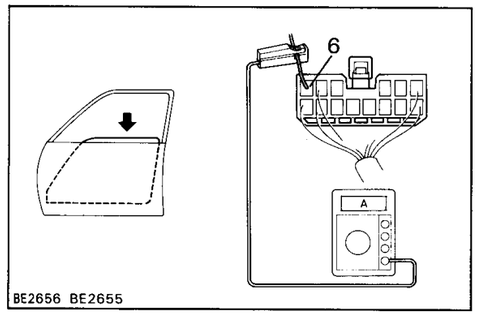
(a) Remove the master switch with connector connected.

(b) Attach a current-measuring probe to terminal 6 of the wire harness.

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

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

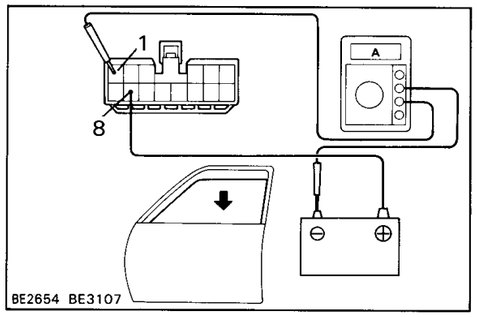




(e) Check that the current increases approximately 14.5 amperes or more when the window stops going down.

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.



RHD:

ONE TOUCH POWER WINDOW SYSTEM

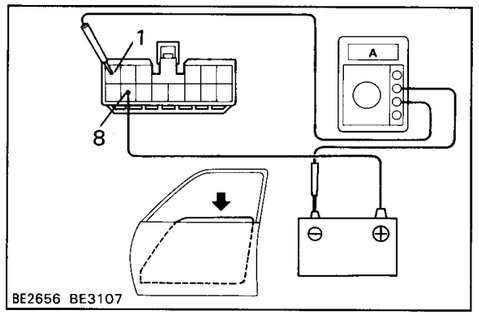
(Inspection using an ammeter)

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the ammeter to terminal 1 on the wire harness side connector and the negative (—) lead to negative (—) terminal of the battery.

(c) Connect the positive (+) lead from the battery to terminal 8 on the wire harness side.

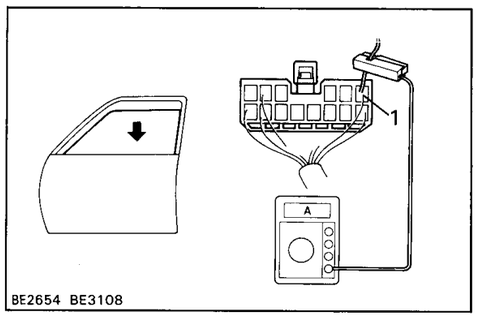
(d) As the window goes down, check that the current flows approximately 7 amperes.



(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.



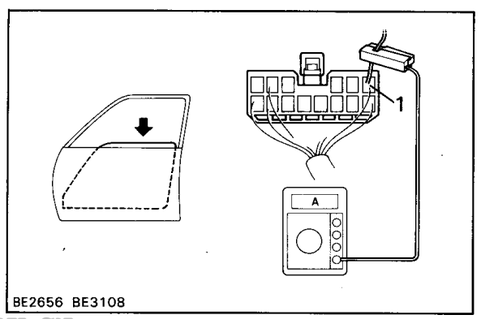
(Inspection using an ammeter with a current-measuring probe.)

(a) Remove the master switch with connector connected.

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

(c) Turn the ignition switch ON and set the power wind 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.

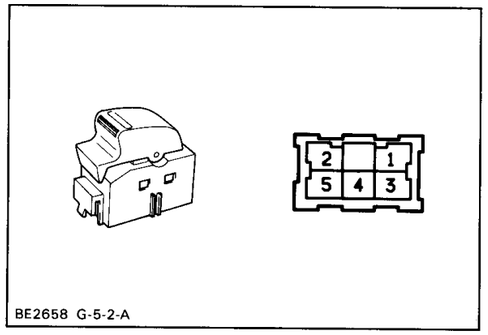
HINT: The circuit breaker opens some 4 — 40 seconds after the window stops going down, so that check must be made before the circuit breaker operates.

If operation is as specified, replace the master switch.

POWER WINDOW SWITCH

POWER WINDOW SWITCH INSPECTION

O—O CONTINUITY INSPECTION



BE2658 G-5-2-A

Terminal / Switch position	1	2	3	4	5
UP	O	O		O	O
OFF	O	O	O	O	
DOWN	O		O	O	

If continuity is not as specified, replace these switch.

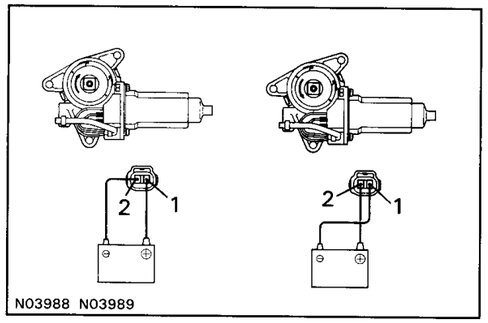
POWER WINDOW MOTOR

POWER WINDOW MOTOR INSPECTION LEFT SIDE DOOR 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 counter clockwise.

If operation is not as specified, replace the motor.



N03988 N03989

LEFT SIDE DOOR MOTOR CIRCUIT BREAKER OPERATION DRIVER'S DOOR

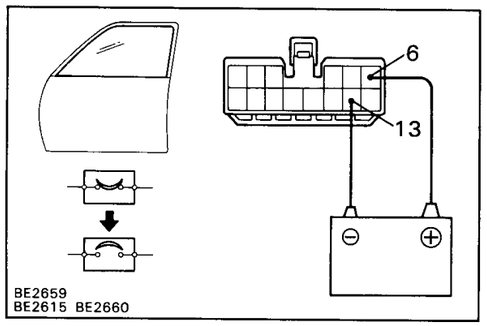
(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the battery to terminal 6 and the negative (—) lead to terminal 13 on the wire harness side connector, and raise the window to full closed position.

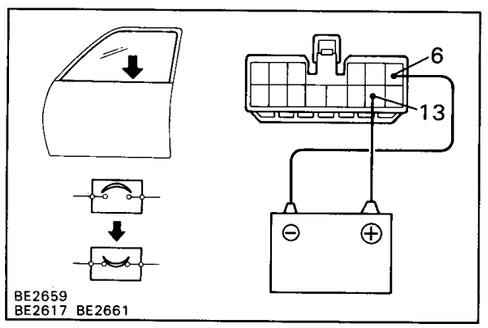
(c) Continue to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.

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

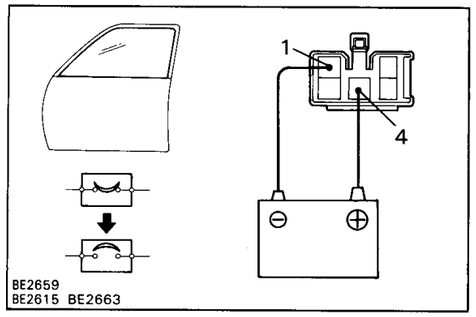
If operation is not as specified, replace the motor.



BE2659
BE2615 BE2660



BE2659
BE2617 BE2661



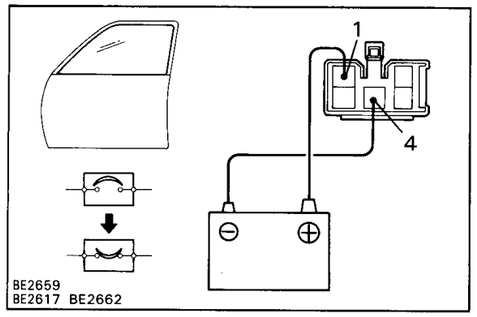
BE2659
BE2615 BE2663

PASSENGER'S DOOR

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

(b) Connect the positive (+) lead from the battery to terminal 4 and the negative (—) lead to terminal 1 on the wire harness side connector, and raise the window to full closed position.

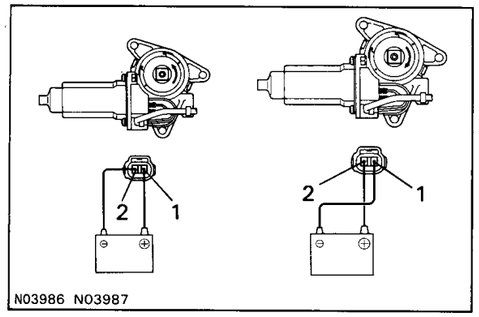
(c) Continue to apply voltage, check that there is a circuit breaker operation noise within approximately 4 to 40 seconds.



BE2659
BE2617 BE2662

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

If operation is not as specified, replace the motor.



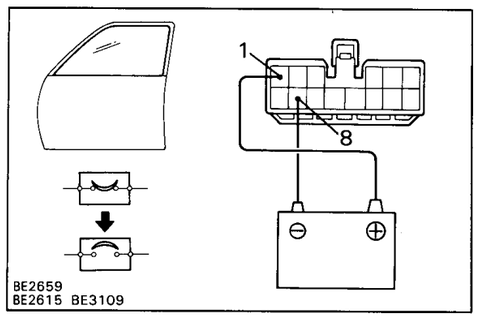
N03986 N03987

RIGHT SIDE DOOR 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.



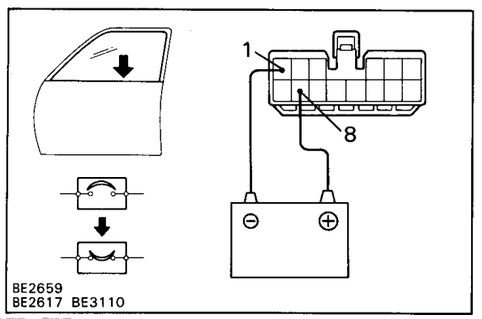
BE2659
BE2615 BE3109

RIGHT SIDE DOOR MOTOR CIRCUIT BREAKER OPERATION DRIVER'S DOOR

(a) Disconnect the connector from the master switch.

(b) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 8 on the wire harness side connector, and raise the window to full closed position.

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



BE2659
BE2617 BE3110

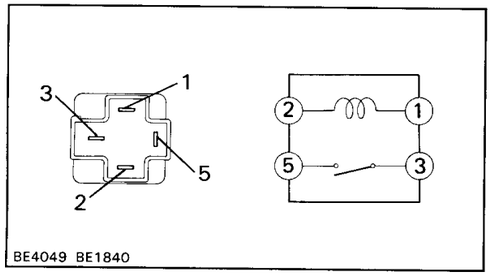
(d) Reverse the polarity, check that the window begins to descend within approximately 60 seconds.

If operation is not as specified, replace the motor.

PASSENGER'S DOOR

See LEFT SIDE DOOR MOTOR OPERATION on page BE-70

POWER MAIN RELAY



POWER MAIN RELAY INSPECTION

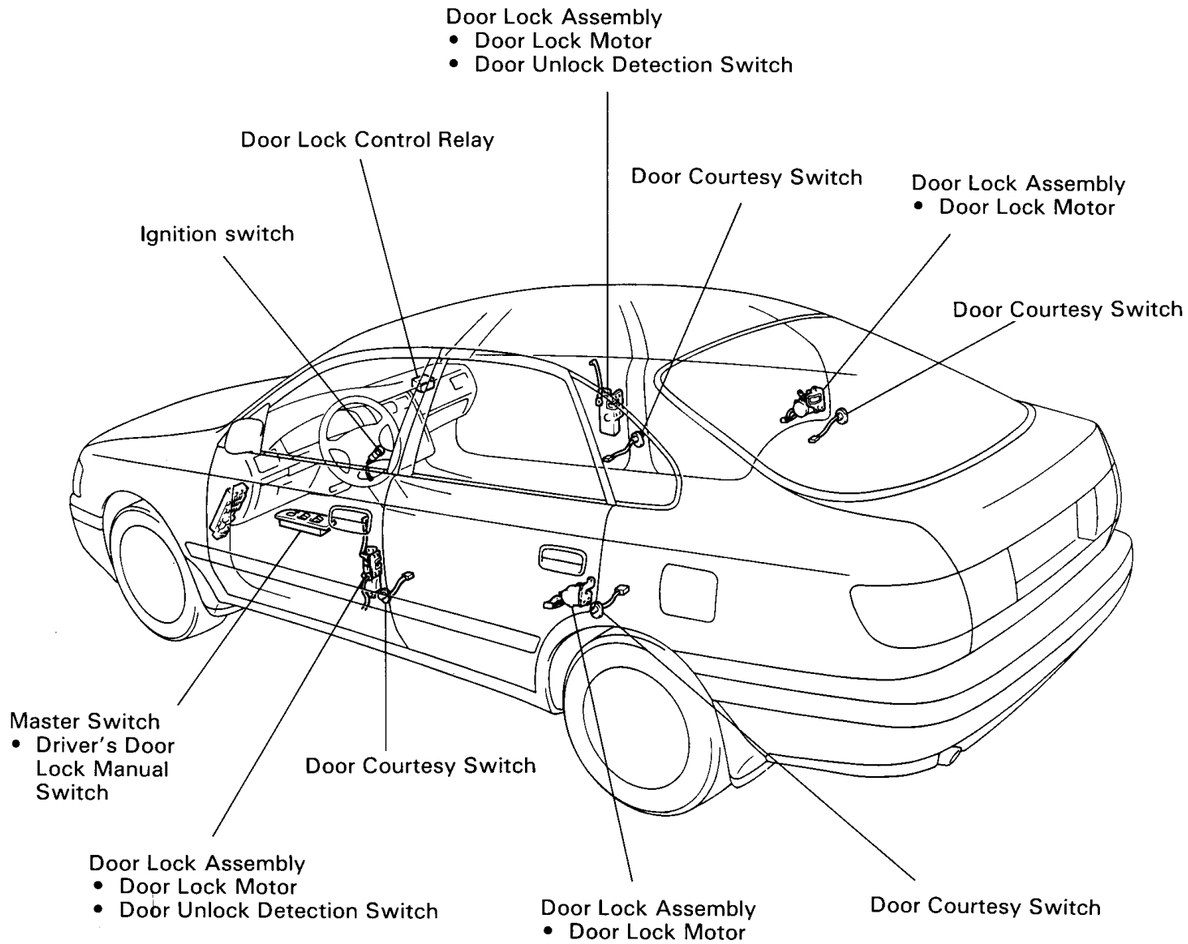
O——O CONTINUITY INSPECTION

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

If continuity is not as specified, replace the relay.

POWER DOOR LOCK CONTROL SYSTEM

PARTS LOCATION

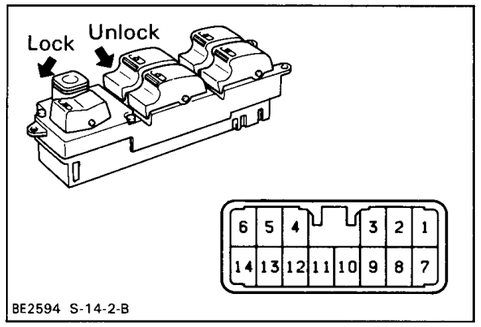


TROUBLESHOOTING

You will find the troubles easier using the table well shown below. In this table, each number showns the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble		Parts name	See page
"Door lock control system" does not operate. (All)		1. Door Lock Control Relay (Door Lock Signal)	BE-78
		2. Door Lock Control Relay (Relay Circuit)	BE-78
		3. RADIO & CIG Fuse	BE-8
		4. P/W Fuse	BE-8
		5. Wire Harness	—
		6. Other Parts	—
Mulfunction in Door Lock/Unlock	Using door manual switch	1. Door Lock Manual Switch	BE-75
		2. Wire Harness	—
		3. Door Lock Control Relay (Relay Circuit)	BE-78
		4. Other Parts	—
	Using door manual switch and key	1. Wire Harness	—
		2. Door Lock Control Relay (Door Lock Signal)	BE-78
		3. Other Parts	—
	Using Key	1. Door Key Lock and Unlock Switch	BE-75
		2. Wire Harness	—
		3. Door Lock Control Relay (Relay Circuit)	BE-78
		4. Other Parts	—
Fault in 2-Operation unlock function of Driver's side door key lock and Unlock switch.		1. Door Key Lock and Unlock Switch	BE-75
		2. Wire Harness	—
		3. Door Lock Control Relay (Relay Circuit)	BE-78
		4. Other Parts	—
Fault in key confine prevention operation.		1. Key Unlock Warning Switch	BE-75
		2. Door Courtesy Switch	BE-11
		3. Door Lock Switch	BE-75
		4. Wire Harness	—
		5. Door Lock Control Relay (Relay Circuit)	BE-78
		6. Other Parts	—
Only one door lock does not operate.		1. Door Lock Motor	BE-76
		2. Wire Harness	—

MASTER SWITCH



MASTER SWITCH INSPECTION

○—○ CONTINUITY INSPECT

Terminal / Switch position	LHD / RHD	1 / 6	2 / 5	3 / 4	4 / 3
LOCK		○	○		○
OFF		○	○		
UNLOCK		○	○	○	

If continuity is not as specified, replace the switch.

DOOR KEY LOCK AND UNLOCK SWITCH

DOOR KEY LOCK AND UNLOCK SWITCH INSPECTION

○—○ CONTINUITY INSPECT

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

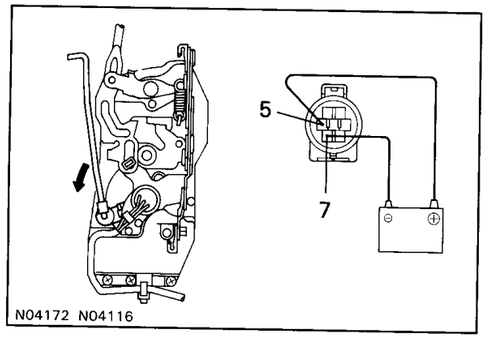
If continuity is not as specified, replace the switch.

KEY UNLOCK WARNING SWITCH

KEY UNLOCK WARNING SWITCH INSPECTION
(See page BE-11)

DOOR COURTESY SWITCH

DOOR COURTESY SWITCH INSPECTION
(See page BE-18)

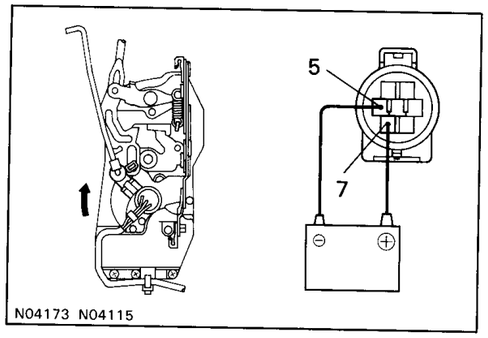


DOOR LOCK MOTOR

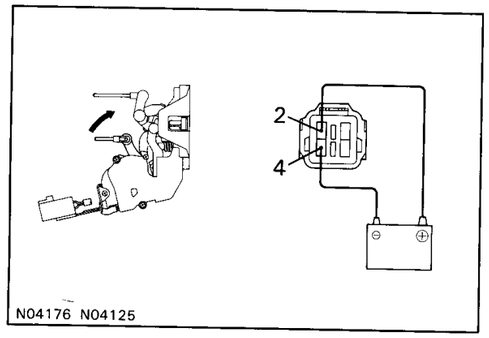
DOOR LOCK MOTOR INSPECTION

OPERATION (Front door lock)

(a) Connect the positive (+) lead from the battery to terminal 5 and the negative (−) lead to terminal 7, check that the door lock link moves to UNLOCK position.

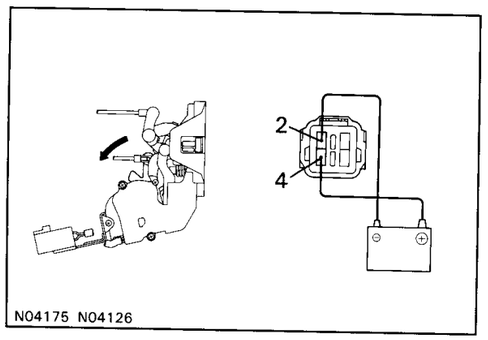


(b) Connect the positive (+) lead from the battery to terminal 7 and the negative (−) lead to terminal 5, check that the door lock link moves to LOCK position.



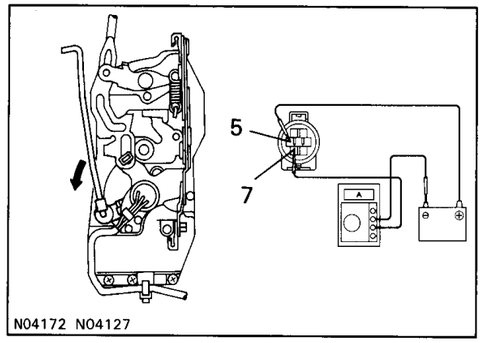
OPERATION (Rear door lock)

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



(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.

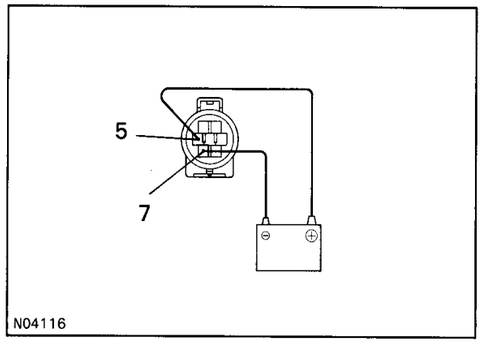


PTC THERMISTER OPERATION

(Inspection using an ammeter)

(a) Connect the positive (+) lead from the battery to terminal 5.

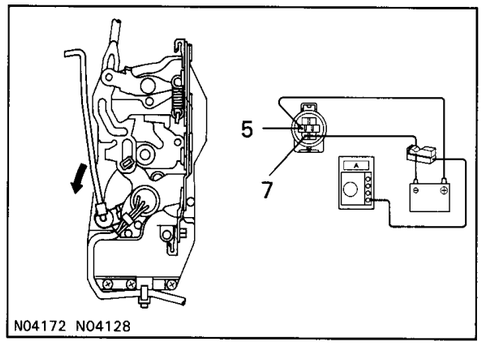
(b) Connect the positive (+) lead from the ammeter to terminal 7 and the negative (−) lead to battery negative (−) terminal, check that the current changes from approximately 3.2 A to less than 0.5 A within 20 to 70 seconds.



(c) Disconnect the leads from terminals.

(d) Approximately 60 seconds later, connect the positive (+) lead from the battery to terminal 5 and the negative (−) lead to terminal 7, check that the door lock moves to LOCK position.

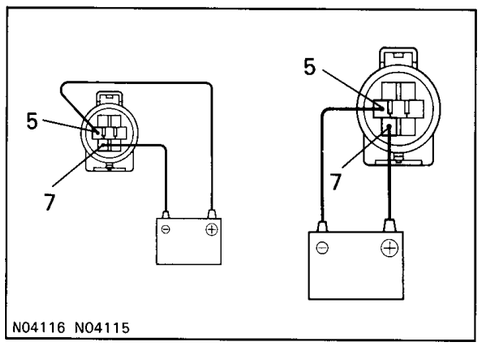
If operation is not as specified, replace the door lock assembly.



(Inspection using an ammeter with a current-measuring probe.)

(a) Connect the positive (+) lead from the battery to terminal 5 and the negative (−) lead to terminal 7.

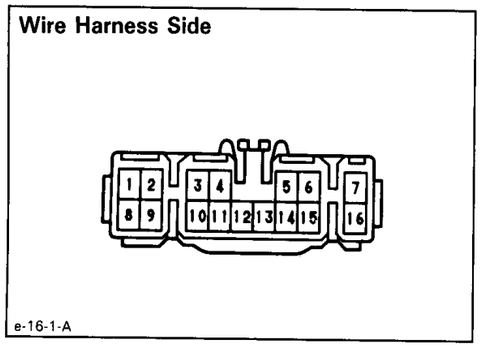
(b) Attach a current-measuring probe to either the positive (+) lead or the negative (−) lead, check that the current changes from approximately 3.2 A to less than 0.5 A within 20 to 70 seconds.



(c) Disconnect the leads from terminals.

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

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



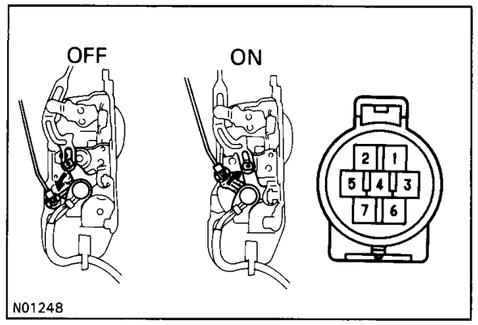
POWER DOOR LOCK CONTROL RELAY

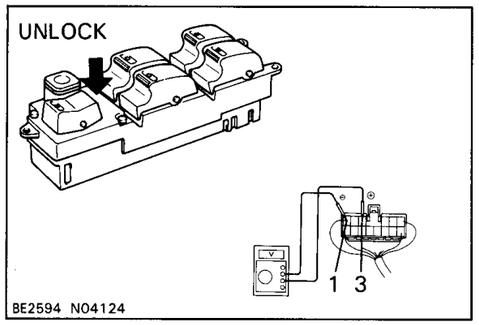
POWER DOOR LOCK CONTROL RELAY INSPECTION

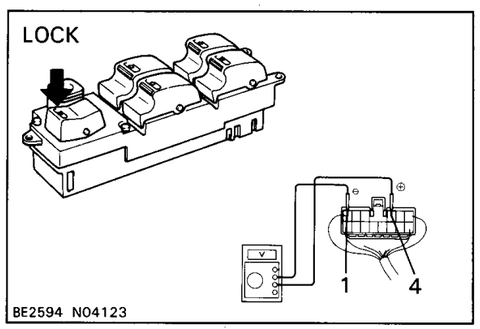
RELAY CIRCUIT

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	5 — Ground	Passenger's door unlock detection switch position	OFF (Door locked)	No continuity
			ON (Door unlocked)	Continuity
	6 — Ground	Driver's door unlock detection 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	Parking brake lever position	OFF (Release the PKB lever)	No continuity
			ON (Pull the PKB lever)	Continuity
	10 — Ground	Driver's door key lock and door lock manual switch position	ON (Driver's door key locked)	Continuity
			ON (Door lock manual switch locked)	Continuity
	11 — Ground	Driver's door key lock and door lock manual switch position	OFF (Driver's door key unlocked)	Continuity
			OFF (Door lock manual switch unlocked)	Continuity
	13 — Ground	Constant	—	Continuity
Voltage	2 — Ground	Driver's door courtesy switch position	ON (Door opened)	Battery voltage
	1 — Ground	Ignition switch position	LOCK	No voltage
			ACC or ON	Battery voltage
	8 — Ground	Constant	—	Battery voltage







DOOR UNLOCK DETECTION SWITCH

DOOR UNLOCK DETECTION SWITCH INSPECTION

O—O CONTINUITY INSPECTION

Terminal / Switch position	4	6
OFF (Door lock set to LOCK)		
ON (Door lock set to UNLOCK)	O	O

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

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 1.

(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.

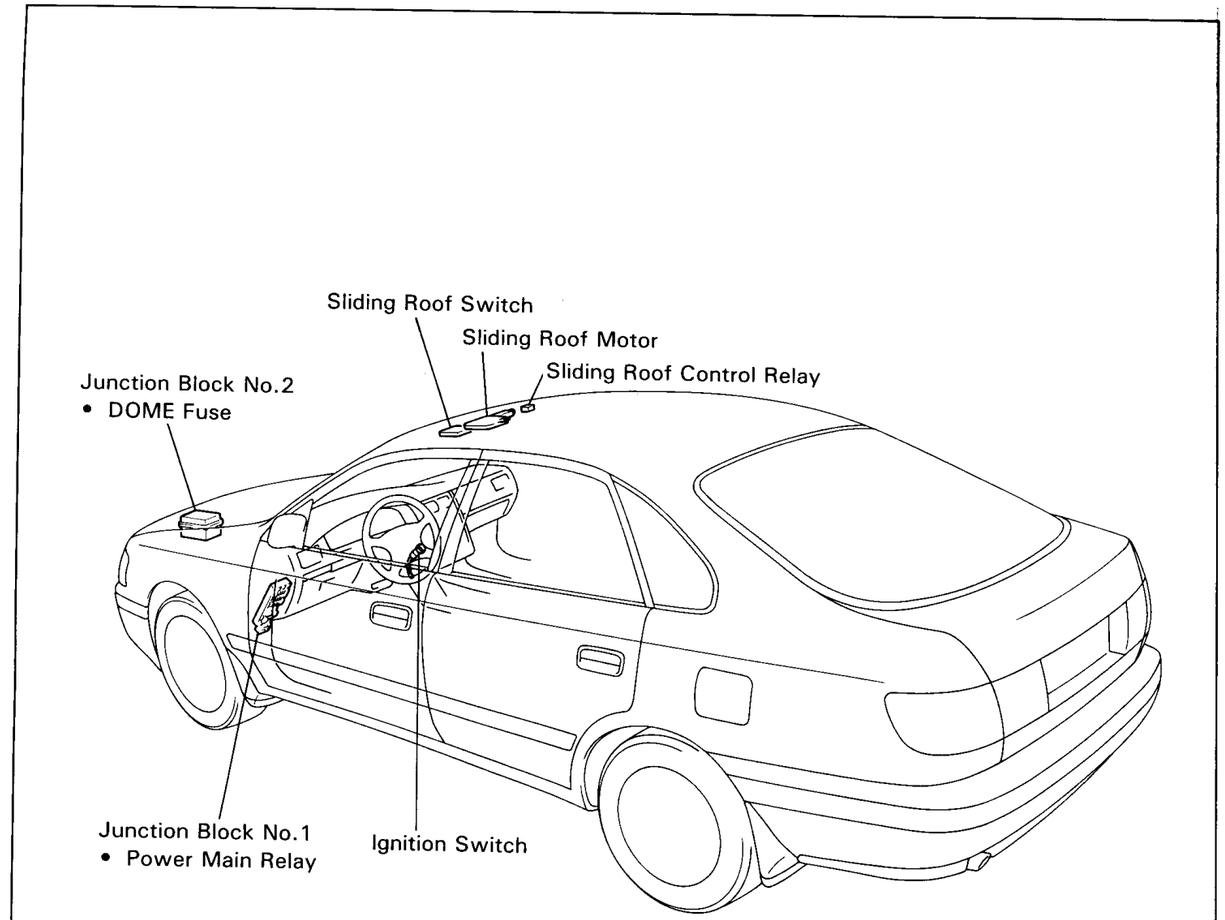
(d) Connect the positive (+) lead from the voltmeter to terminal 4 and the negative (—) lead to terminal 1.

(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.

SLIDING ROOF SYSTEM

PARTS LOCATION



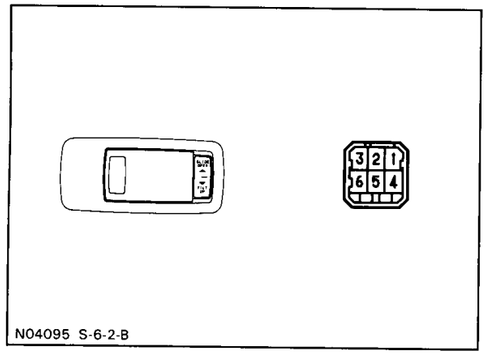
N04368

TROUBLESHOOTING

You will find the cause of 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. If necessary, replace the part.

Trouble			Parts name	See page
OPEN	Does not move.	*1	1. DOME Fuse	BE-8
			2. GAUGE Fuse	BE-8
			3. POWER Fuse	BE-8
			4. Ignition Switch	BE-11
			5. Power Main Relay	BE-17
			6. Sliding Roof Switch	BE-82
			7. Sliding Roof Control Relay	BE-83
			8. Sliding Roof Limit Switch	BE-82
			9. Sliding Roof Motor	BE-82
			10. Wire Harness	—
		*2	1. Sliding Roof Switch	BE-82
			2. Sliding Roof Control Relay	BE-83
			3. Sliding Roof Limit Switch	BE-82
			4. Sliding Roof Motor	BE-82
			5. Wire Harness	—
	Stops halfway.	—	1. Sliding Roof Limit Switch	BE-82
			2. Sliding Roof Control Relay	BE-83
			3. Sliding Roof Motor	BE-82
			4. Wire Harness	—
CLOSE	Does not move.	*1	1. DOME Fuse	BE-8
			2. GAUGE Fuse	BE-8
			3. POWER Fuse	BE-8
			4. Ignition Switch	BE-11
			5. Power Main Relay	BE-17
			6. Sliding Roof Switch	BE-82
			7. Sliding Roof Control Relay	BE-83
			8. Sliding Roof Limit Switch	BE-82
			9. Sliding Roof Motor	BE-82
			10. Wire Harness	—
		*2	1. Sliding Roof Switch	BE-82
			2. Sliding Roof Control Relay	BE-83
			3. Sliding Roof Limit Switch	BE-82
			4. Sliding Roof Motor	BE-82
			5. Wire Harness	—
	Stops halfway.	—	1. Sliding Roof Limit Switch	BE-82
			2. Sliding Roof Control Relay	BE-83
			3. Sliding Roof Motor	BE-82
			4. Wire Harness	—
	Does not stop at the stopping position.	—	1. Sliding Roof Limit Switch	BE-82
			2. Sliding Roof Control Relay	BE-83
	Returns and stop.	—	1. Sliding Roof Limit Switch	BE-82
			2. Sliding Roof Control Relay	BE-83

*1: Power window and power seat does not operate.
*2: Power window and power seat are normal operate.



SLIDING ROOF SWITCH

SLIDING ROOF SWITCH INSPECTION

O—O CONTINUITY INSPECTION

Terminal / Switch position		1	3	4	5
SLIDE	OPEN			O	O
	OFF	O		O	O
	CLOSE	O			O
TILT	DOWN	O	O		
	OFF	O		O	O
	UP		O	O	

If continuity is not as specified, replace the switch.

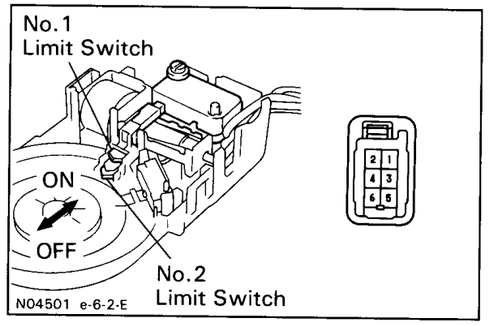
LIMIT SWITCH

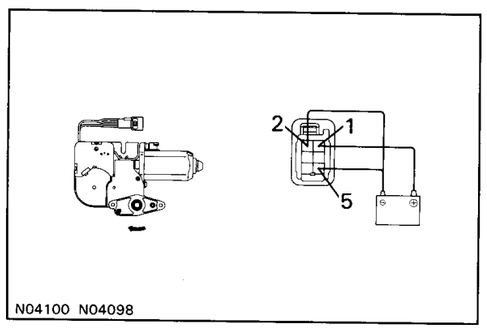
LIMIT SWITCH INSPECTION

O—O CONTINUITY INSPECTION

Terminal / Switch position		1	2	5
No.1 Limit switch	OFF (SW pin released)			
	ON (SW pin pushed in)		O	O
No.2 Limit switch	OFF (SW pin released)			
	ON (SW pin pushed in)	O		O

If continuity is not as specified, replace the motor.





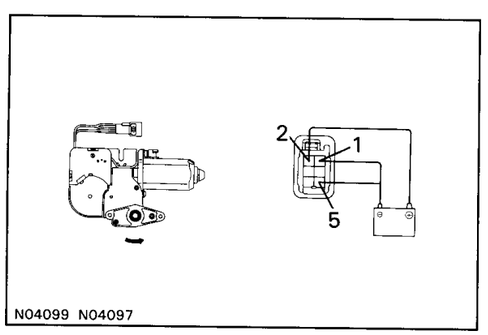
SLIDING ROOF MOTOR

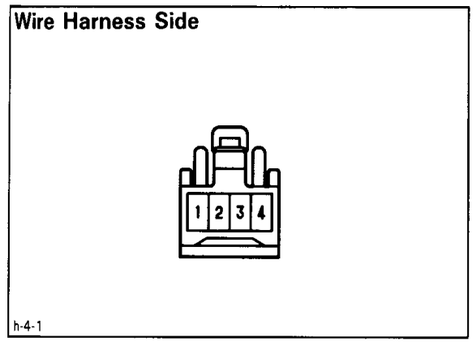
SLIDING ROOF MOTOR INSPECTION

OPERATION

(a) Connect the positive (+) lead from the battery to terminal 1 and the negative (—) lead to terminal 2 and 5, check that the motor turns to counterclockwise (moves to the close side.)

(b) Connect the positive (+) lead from the battery to terminal 2 and the negative (—) lead to terminal 1 and 5, check that the motor turns to clockwise (moves to the open side)





SLIDING ROOF CONTROL RELAY

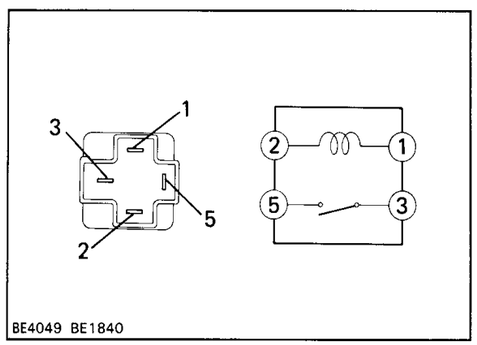
SLIDING ROOF CONTROL RELAY INSPECTION

RELAY CIRCUIT

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

Check for	Tester connection	Condition		Specified value
Voltage	1 — Ground	Constant		Battery voltage
	2 — 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
	4 — Ground	Constant		No voltage

If circuit is as specified, replace the relay.



POWER MAIN RELAY

POWER MAIN RELAY INSPECTION

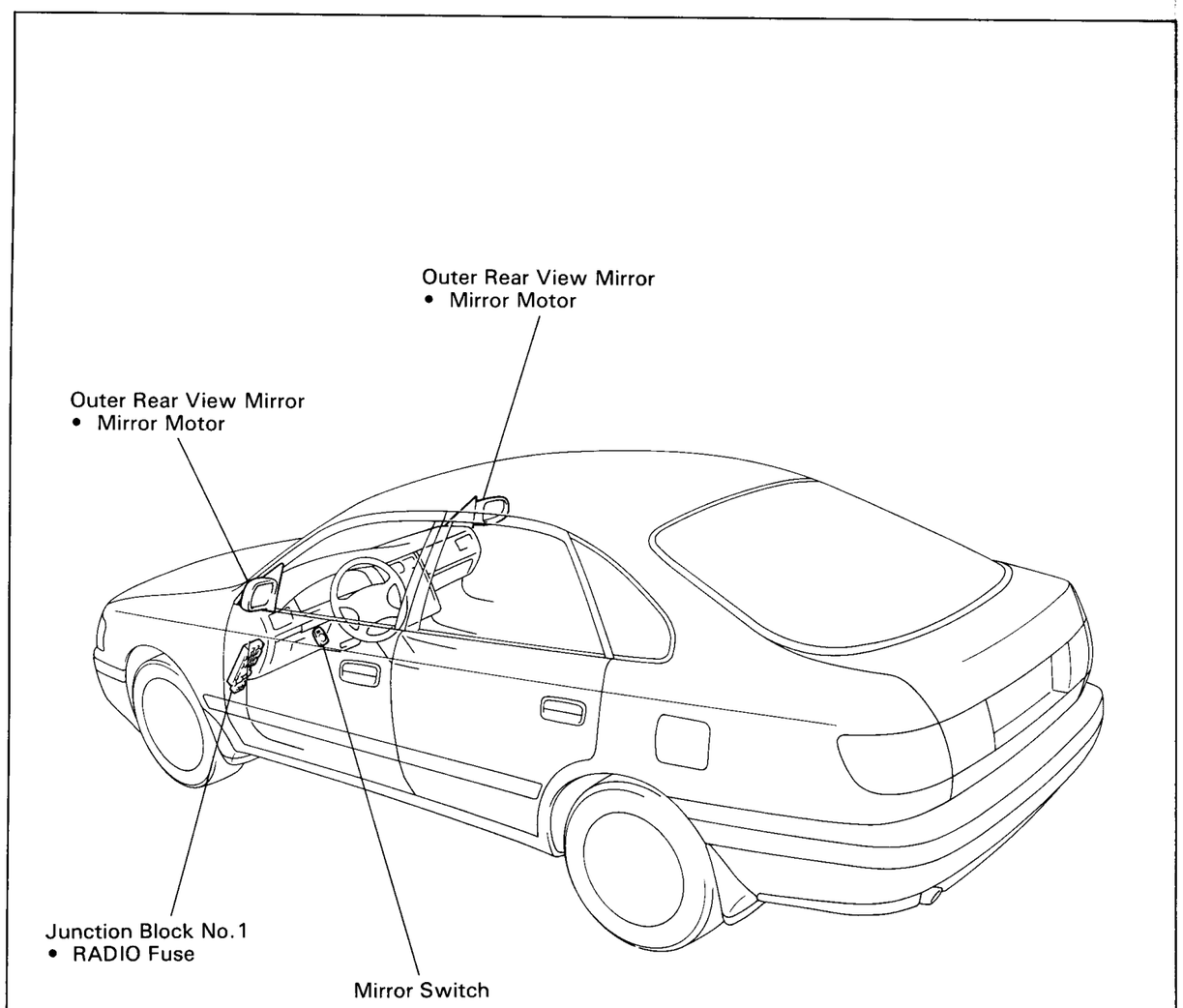
O—O CONTINUITY INSPECTION

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

If continuity is not as specified, replace the relay.

POWER MIRROR CONTROL SYSTEM

PARTS LOCATION



N04503

TROUBLESHOOTING

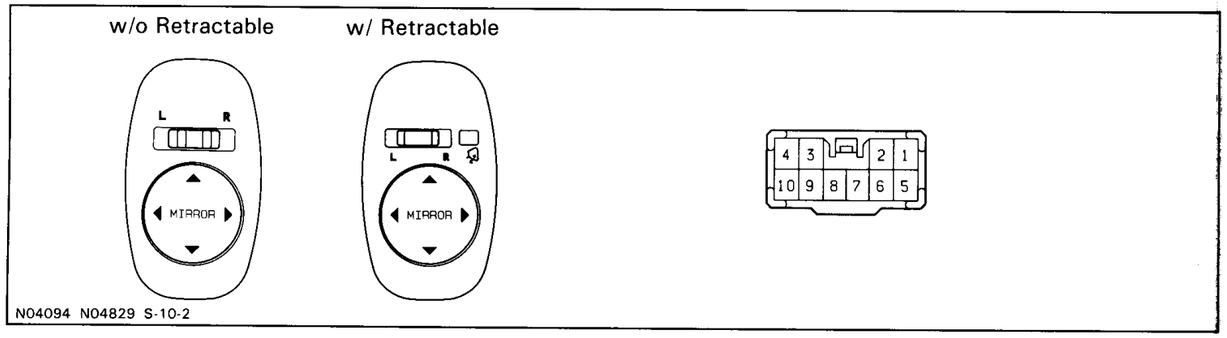
You will find the troubles easier using the table well shown below. In this table, each number shows the priority of causes in troubles. Check each part in order. If necessary, replace these parts.

Trouble	Parts name	See page
Power mirror on each side does not operate at all.	• Fuse RADIO	BE-8
	• Mirror Switch	BE-86
	• Mirror Motor (Up/Down Control)	BE-87
	• Mirror Motor (Left/Right Control)	BE-87
	• Wiring and Ground	–
Left or right power mirror does not operate at all.	• Mirror Switch	BE-86
	• Mirror Motor (Up/Down Control)	BE-87
	• Mirror Motor (Left/Right Control)	BE-87
	• Wiring and Ground	–
Up/Down control of left or right power mirror does not operate.	• Mirror Motor (Up/Down Control)	BE-87
	• Wiring and Ground	–
Left/Right control of left or right power mirror does not operate.	• Mirror Motor (Left/Right Control)	BE-87
	• Wiring and Ground	–

POWER MIRROR SWITCH

POWER MIRROR SWITCH INSPECTION

O—O CONTINUITY INSPECTION



w/o Retractable

Left Right adjustment switch position	Left					Right				
Terminal / Control switch position	1	3	4	9	10	1	2	3	4	6
UP	O				O	O				O
		O	O					O	O	
DOWN		O	O		O				O	O
	O	O				O		O		
LEFT	O				O	O				
		O						O	O	
RIGHT		O	O				O			O
	O					O	O			

w/ Retractable

Left Right adjustment switch position	Left					Right				
Terminal / Control switch position	1	2	5	6	10	3	5	6	9	10
UP	O				O	O				O
			O	O			O		O	
DOWN	O					O				
		O		O	O			O		O
LEFT		O			O				O	O
			O	O			O	O		
RIGHT				O	O		O			O
		O	O					O		

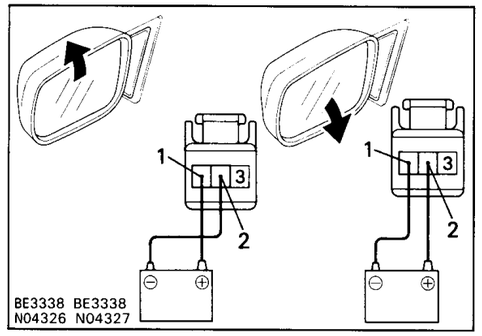
Terminal / Control switch position	4	10
Retractable	O	O

If continuity is not as specified, replace the switch.

POWER MIRROR MOTOR

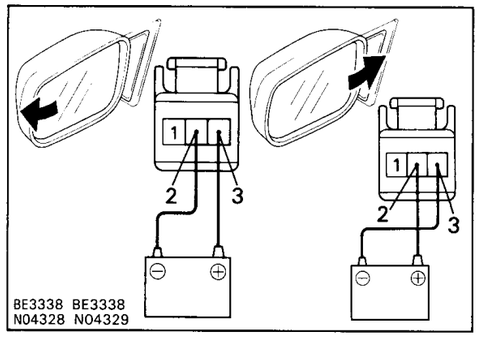
POWER MIRROR MOTOR INSPECTION

OPERATION



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

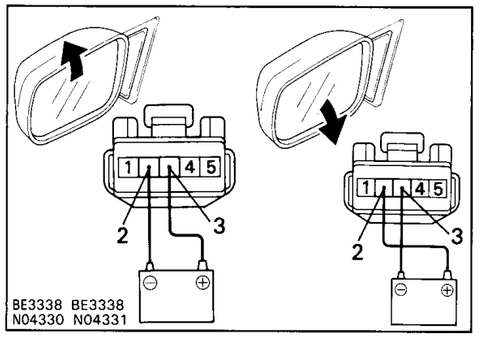
(b) Reverse the polarity, check that the mirror turns downward.



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

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

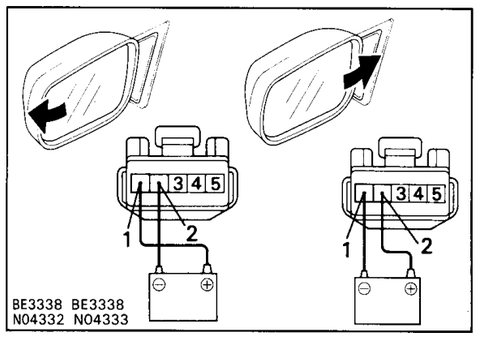
If operation is not as specified, replace the mirror assembly.



w/ Defogger type

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

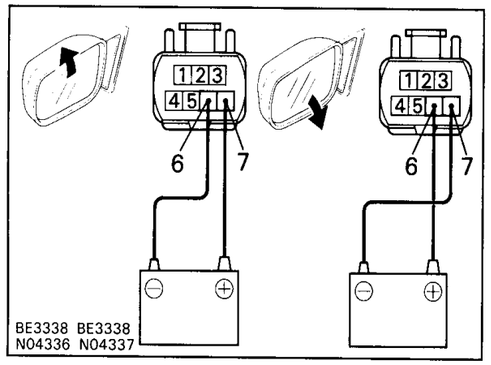
(b) Reverse the polarity, check that the mirror turns downward.



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

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

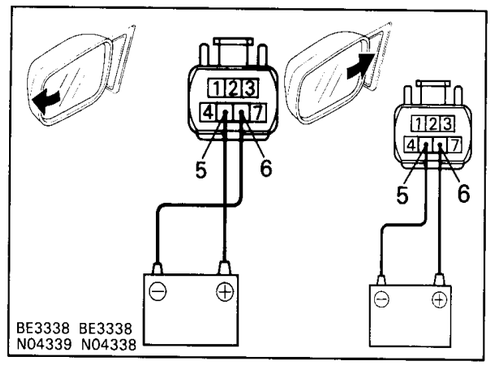
If operation is not as specified, replace the mirror assembly.



w/ Retractable type

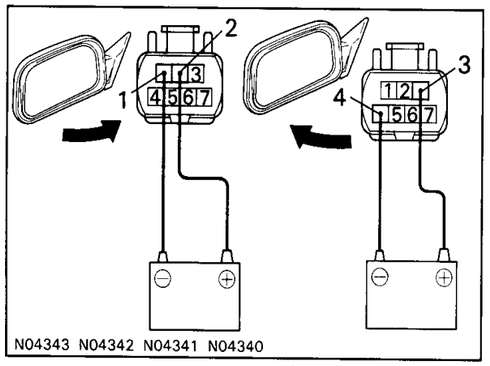
(a) Connect the positive (+) lead from the battery to terminal 7 and the negative (−) lead to terminal 6, check that the mirror turns to upward.

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



(c) Connect the positive (+) lead from the battery to terminal 5 and the negative (−) lead to terminal 6, check that the mirror turns to left side.

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

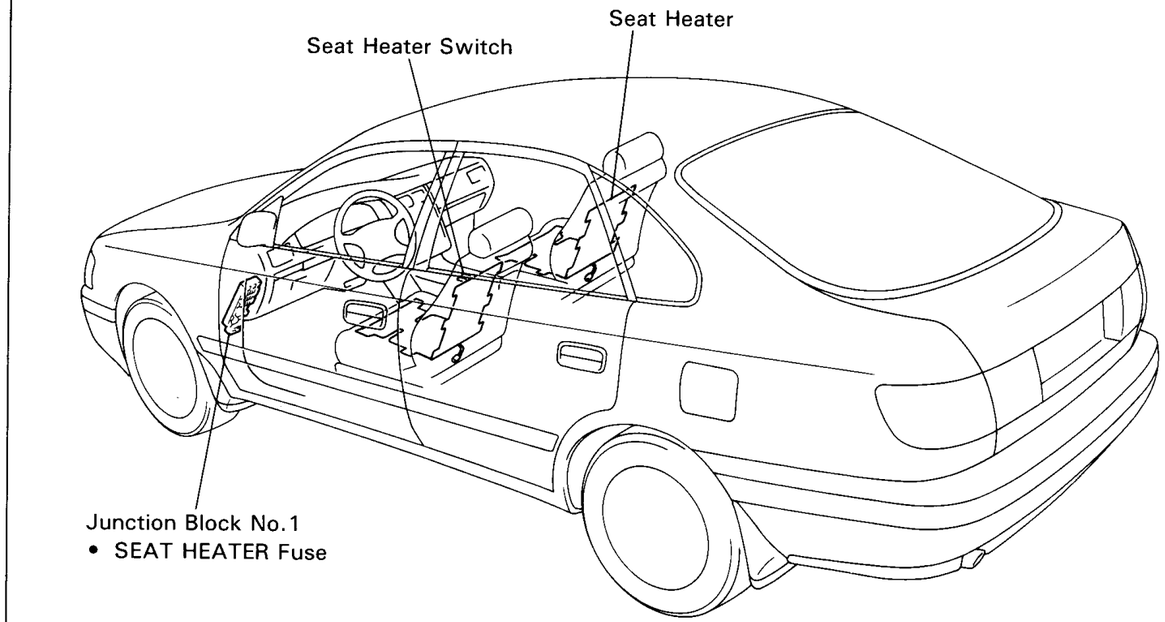


(e) Connect the positive (+) lead from the battery to terminal 2 and the negative (−) lead to terminal 1, check that the mirror turns to retractable.

(f) Connect the positive (+) lead from the battery to terminal 3 and the negative (−) lead to terminal 4, check that the mirror returns to its original position.

SEAT HEATER SYSTEM

PARTS LOCATION

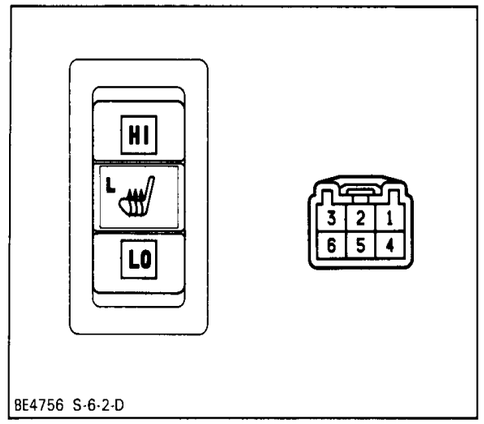


TROUBLESHOOTING

You will find the cause of trouble more easily by properly using the table shown below. In this table, the numbers indicate the order priority of the causes of trouble. Check each part in the order shown. If necessary, replace the part.

Trouble	Parts name	See page
Seat heaters do not operate. (Driver's and Passenger's)	1. Fuse S/HTR	BE-8
	2. Engine Main Relay	—
	3. Seat Heater Switch	BE-91
	4. Wire Harness	—
	5. Seat Heater	BE-92
Driver's seat heater does not operate.	1. Seat Heater Switch	BE-91
	2. Seat Heater Relay (Left)	
	3. Wire Harness	—
Passenger's seat heater does not operate.	1. Seat Heater Switch	BE-91
	2. Seat Heater Relay (Right)	
	3. Wire Harness	—
Seat heater temperature is too hot.	1. Seat Heater	BE-92

SEAT HEATER SWITCH

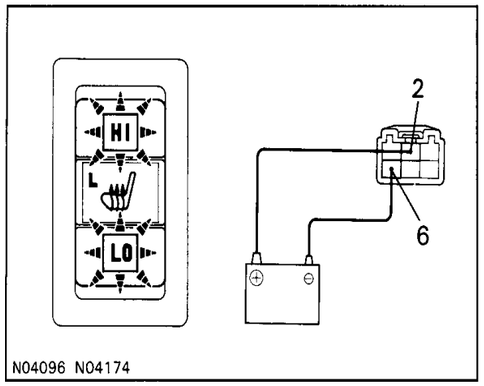


SEAT HEATER SWITCH INSPECTION

O—O CONTINUITY INSPECTION

Terminal / Switch position	2	3	5	6	Illumination 1	Illumination 4
HI	O—O		O—O			
OFF					O—O	
LO	O——	——O				

If continuity is not as specified, replace the switch.

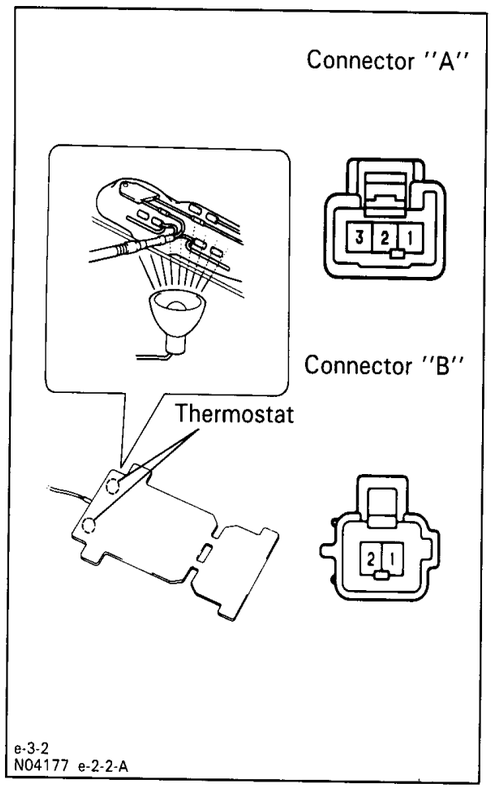


INDICATOR LIGHT OPERATION

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

(b) Push the switch to HI or LO, check that the indicator light of the pushed side lights up.

If operation is not as specified, replace the switch.



e-3-2
N04177 e-2-2-A

SEAT HEATER INSPECTION

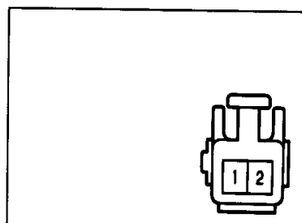
INSPECT SEAT HEATER (Continuity/Seat Cushion)

(a) Heat the thermostat with a light.

(b) Inspect the seat heater continuity between term.

Check for	Tester connection	Condition	Specified value
Continuity	A1-B2	Seat heater temperature below 25°C (77°F)	Continuity
	A2-B2	Seat heater temperature below 35°C (95°F)	Continuity
	A3-B1	Constant	Continuity

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



e-2-1

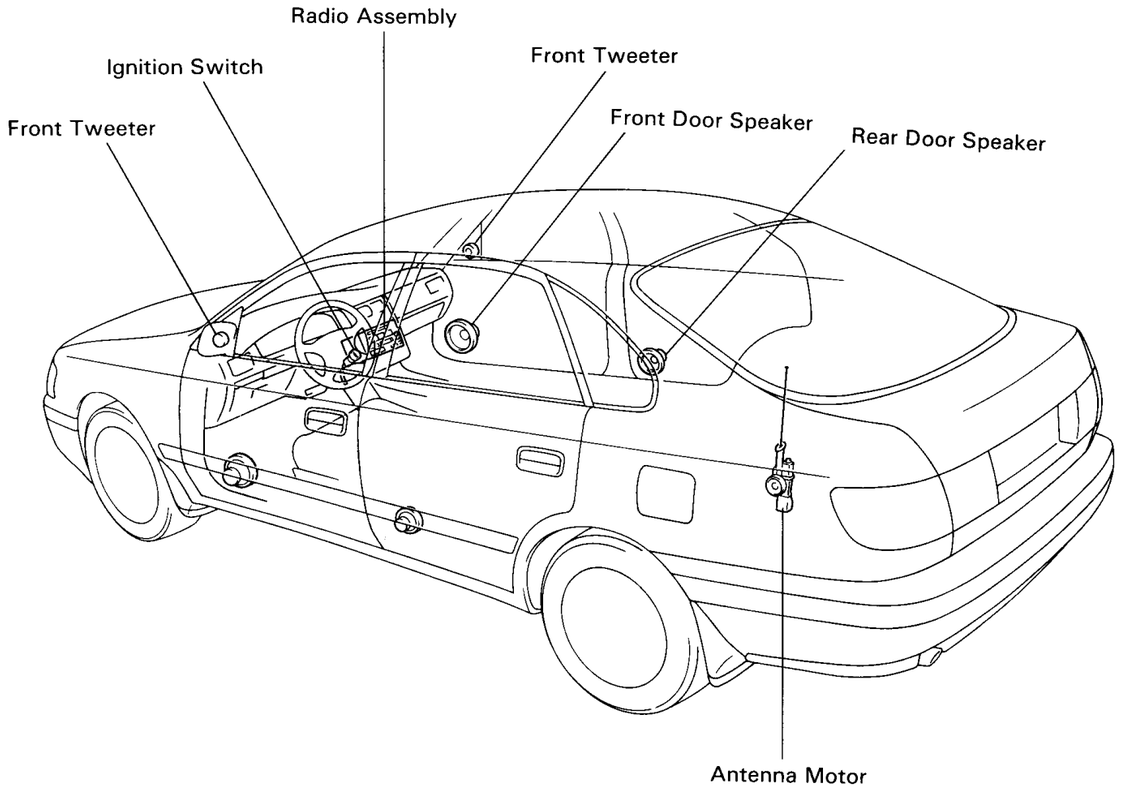
(Continuity/Seat Back)

Check that there is continuity between terminals.

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

AUDIO SYSTEM

PARTS LOCATION



N04370

SYSTEM DESCRIPTION

RADIO WAVE BAND

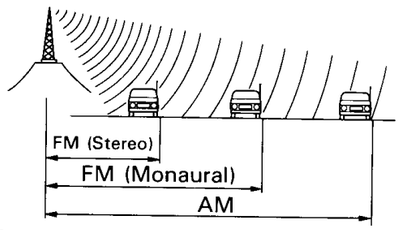
The radio wave bands used in radio broadcasting are as follows:

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 through 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

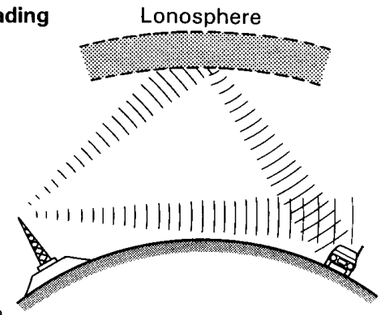
RECEPTION PROBLEMS

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

Fading

Besides electrical interference, AM broadcasts are also susceptible to other types 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

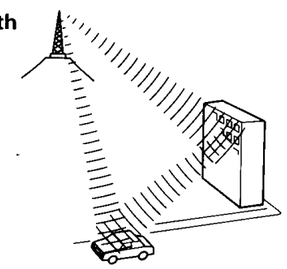


BE2819

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.

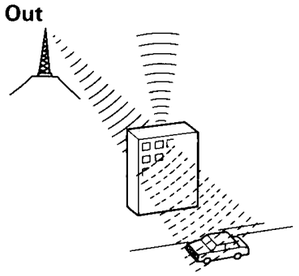
Multipath


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

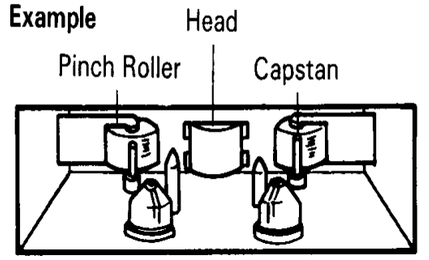
MAINTENANCE OF TAPE PLAYER

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

TROUBLESHOOTING

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

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

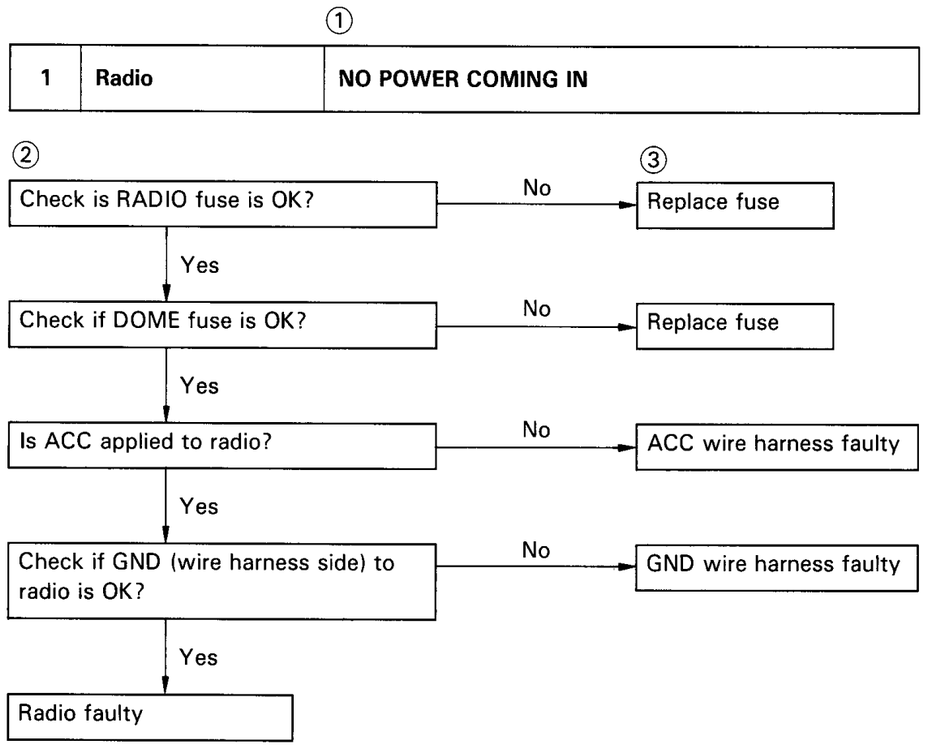
- Open or short circuit of the wire harness
- Connector or terminal connection fault

Problem		No.
Radio	Radio not operating when power switch turned to 'ON'.	1
	Display indicates when power switch turned to 'ON', but no sound (including 'noise') is produced.	2
	Noise present, but AM-FM not operating.	3
	Any speaker does not work.	4
	Reception poor.	5
	Sound quality poor.	6
	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
	Any speaker does not work.	11
	Sound quality poor.	12
	Tape jammed, malfunction with tape speed or auto-reverse	13
	Cassette tape will not eject.	14
Antenna	Antenna-related.	15
Noise	Noise produced by vibration or shock white driving.	16
	Noise produced when engine starts.	17

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

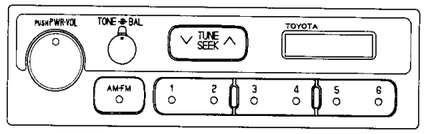
HOW TO USE DIAGNOSTIC CHART

Reference:

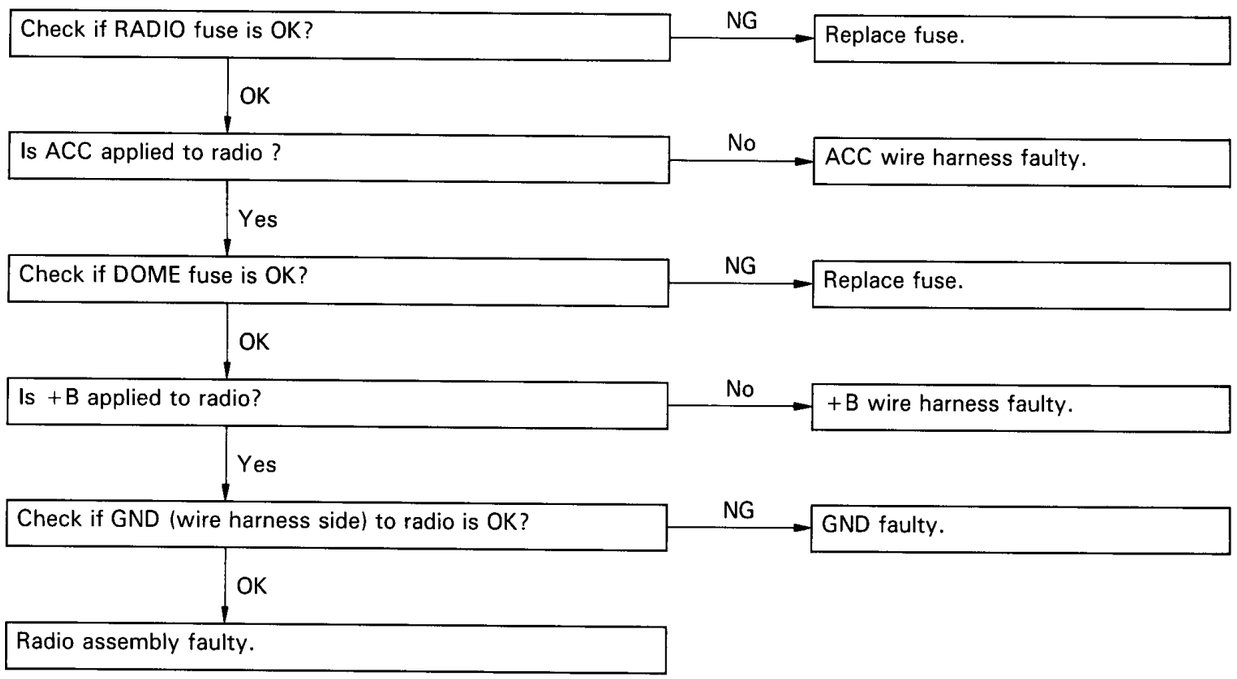


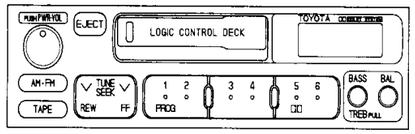
① : Phenomenon
: Problem
② : Check item
③ : Trouble part or disposal

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

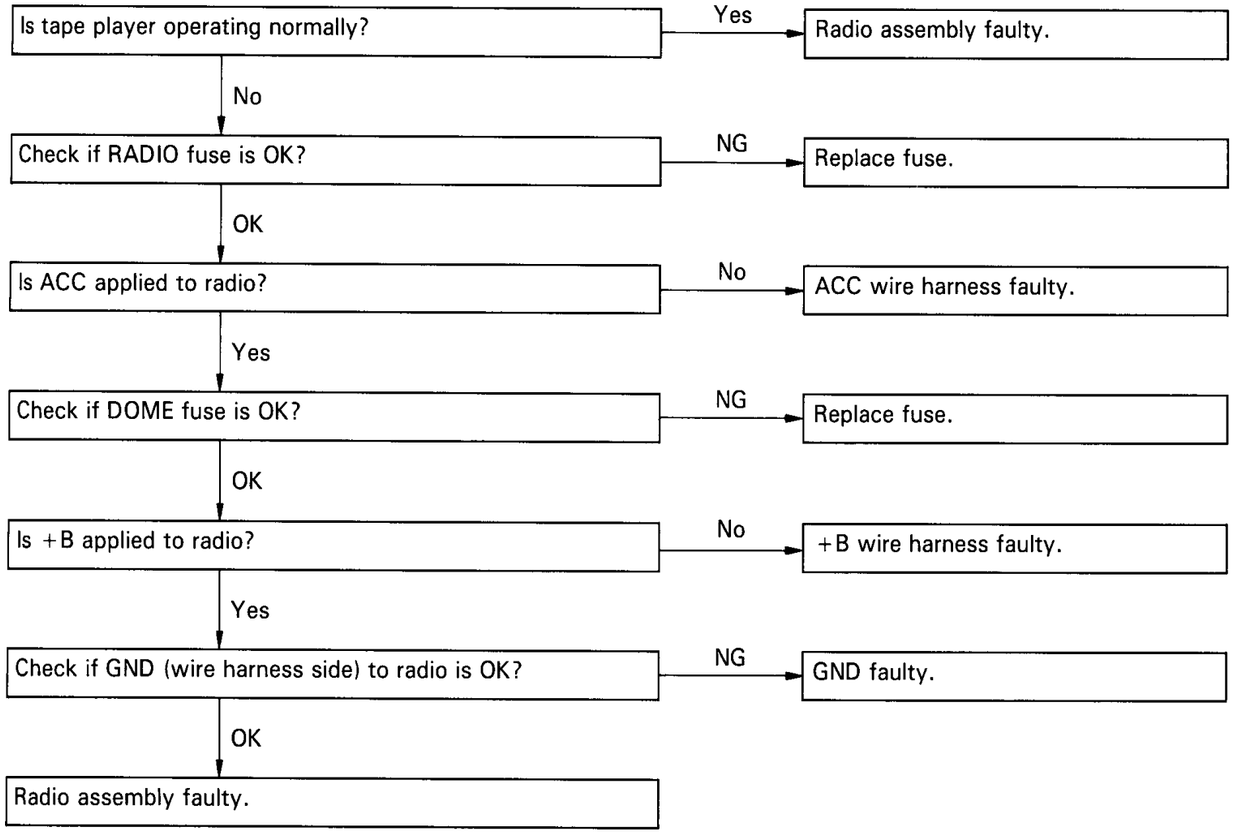


N04758

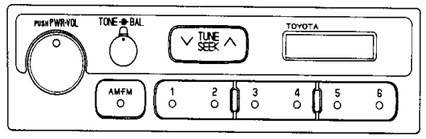




N04757



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



N04758

Check if RADIO fuse is OK?
NG → Replace fuse.
OK

Is ACC applied to radio?
No → ACC wire harness faulty.
Yes

Check if DOME fuse is OK?
NG → Replace fuse.
OK

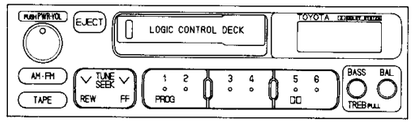
Is +B applied to radio?
No → +B wire harness faulty.
Yes

Check if GND (wire harness side) to radio is OK?
NG → GND faulty.
OK

Is there continuity in speaker wire harness?
No → Speaker wire harness faulty.
Yes

Temporarily install another speaker.
Yes → Speaker faulty.
No

Radio faulty.



N04757

Is tape player operating normally?
Yes → Radio faulty.
No

Check if RADIO fuse is OK?
NG → Replace fuse.
OK

Is ACC applied to radio?
No → ACC wire harness faulty.
Yes

Check if DOME fuse is OK?
NG → Replace fuse.
OK

Is +B applied to radio?
No → +B wire harness faulty.
Yes

Check if GND (wire harness side) to radio is OK?
NG → GND faulty.
OK

Is there continuity in speaker wire harness?
No → Speaker wire harness faulty.
Yes

Temporarily install another speaker.
Yes → Speaker faulty.
Yes

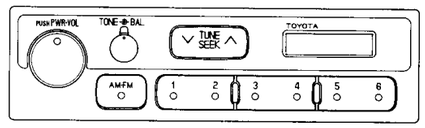
Radio faulty.

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

Go to No. 15

If radio side faulty → Radio faulty.

4 Radio — ANY SPEAKER DOES NOT WORK



N04758

Is hiss produced by non-functionimg speaker? — Yes → Radio faulty.

No

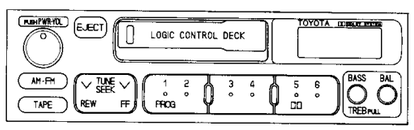
Is there continuity in speaker wire harness? — No → Speaker wire harness faulty.

Yes

Temporarily install another speaker. Functions OK? — Yes → Speaker faulty.

No

Radio faulty.



N04757

Is tape player operating normally? — Yes → Radio assembly faulty.

No

Is hiss produced by non-functioning speaker? — Yes → Radio assembly faulty.

No

Is there continuity in speaker wire harness? — No → Speaker wire harness faulty.

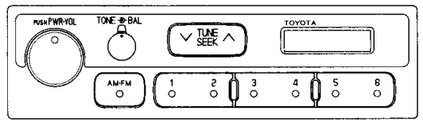
Yes

Temporarily install another speaker. Functions OK? — Yes → Speaker faulty.

No

Radio assembly faulty.

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



N04758

Problem with radio wave signals or location? — Yes → Poor signals, poor location.

No

Are both AM or FM defective? — No → Radio faulty.

Yes

Is power for the antenna being output from the radio? — No → Radio faulty.

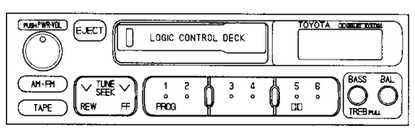
Yes

Go to No. 15

Temporarily install another speaker. Functions OK? — Yes → Speaker faulty.

No

Radio faulty.



N04757

Problem with radio wave signals or location? — Yes → Poor signals, poor location.

No

Are both AM or FM defective? — No → Radio assembly faulty.

Yes

Is power for the antenna being output from the radio assembly? — No → Radio assembly faulty.

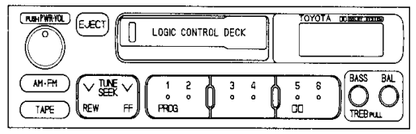
Yes

Go to No. 15

CONTINUED ON NEXT PAGE

CONTINUED FROM PREVIOUS PAGE

Is tape player operating normally?
- Yes → Radio assembly faulty.
- No → Temporarily install another speaker. Functions OK?
  - Yes → Speaker faulty.
  - No → Radio assembly faulty.

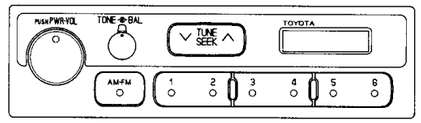


N04757

Problem with radio wave signals or location?
- Yes → Poor signals, poor location.
- No → Are both AM and FM defective?
  - No → Radio assembly faulty.
  - Yes → Is power for the antenna being output from the radio assembly?
    - No → Radio assembly faulty.
    - Yes → Go to No. 15

Is tape player operating normally?
- Yes → Radio assembly faulty.
- No → Temporarily install another speaker. Functions OK?
  - Yes → Speaker faulty.
  - No → Radio assembly faulty. Recheck system after repair.

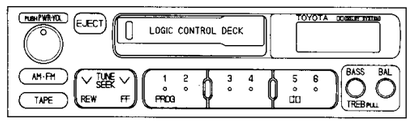
6 Radio — SOUND QUALITY POOR



N04758

Is sound quality always bad?
- No → Is sound quality bad in certain area only?
  - Yes → Poor signals, poor location.
  - No → Radio faulty.
- Yes → Is speaker properly installed?
  - No → Install properly.
  - Yes → Temporarily install another speaker. Functions OK?
    - Yes → Speaker faulty.
    - No → Is power for the antenna being output from the radio?
      - No → Radio faulty.
      - Yes → Go to No. 15

If radio side faulty → Radio faulty.

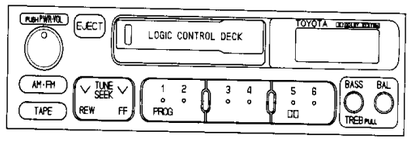


N04757

Is sound quality always bad?
- No → Is sound quality bad in certain area only?
  - Yes → Poor signals, poor location.
  - No → Radio assembly faulty.
- Yes → Is tape player operating normally?
  - Yes → Is power for the antenna being output from the radio assembly?
    - No → Radio assembly faulty.
    - Yes → Go to No. 15
      - If radio side faulty → Radio assembly faulty.
  - No → Is speaker properly installed?
    - No → Install properly.
    - Yes → CONTINUED ON NEXT PAGE

CONTINUED FROM PREVIOUS PAGE

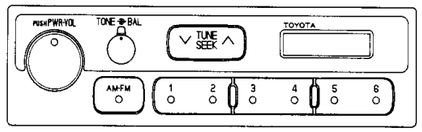
Temporarily install another speaker. Functions OK?
- Yes → Speaker faulty.
- No → Radio assembly faulty.



N04757

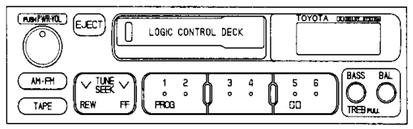
Is sound quality always bad?
- No → Is sound quality bad in certain areas only?
  - Yes → Poor signals, poor location.
  - No → Is tape player operating normally?
    - Yes → Radio assembly faulty.
    - No → Radio assembly faulty.
- Yes → Is tape player operating normally?
  - Yes → Is power for the antenna being output from the radio assembly?
    - No → Radio assembly faulty.
    - Yes → Is speaker properly installed?
      - No → Install properly.
      - Yes → Temporarily install another speaker. Functions OK?
        - Yes → Speaker faulty.
        - No → Radio assembly faulty. Recheck system after repair.
  - No → Is speaker properly installed?
    - No → Install properly.
    - Yes → Temporarily install another speaker. Functions OK?
      - Yes → Speaker faulty.
      - No → Radio assembly faulty. Recheck system after repair.

7 Radio — PRESET MEMORY DISAPPEARS



N04758

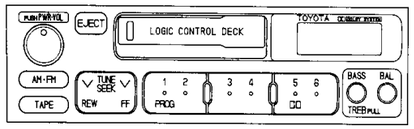
Check if DOME fuse is OK?
- NG → Replace fuse.
- OK → Is +B applied to radio?
  - No → +B wire harness faulty.
  - Yes → Check if GND (wire harness side) to radio?
    - NG → GND faulty.
    - OK → Radio faulty.



N04757

Can cassette tape be inserted in tape player?
- Yes → Radio assembly faulty.
- No → Check if DOME fuse is OK?
  - NG → Replace fuse.
  - OK → Is +B applied to radio assembly?
    - No → +B wire harness faulty.
    - Yes → Check if GND (wire harness side) to radio?
      - NG → GND faulty.
      - OK → Radio assembly faulty.

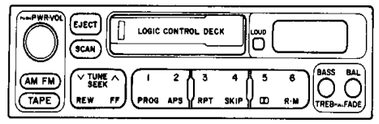
8 Tape Player — CASSETTE TAPE CANNOT BE INSERTED



N04757

Is there a foreign object inside tape player?
- Yes → Remove foreign object.
- No → Is auto search button of radio operating normally?
  - Yes → Radio assembly faulty.
  - No → Check if DOME fuse is OK?
    - NG → Replace fuse.
    - OK → Is +B applied to radio assembly?
      - No → +B wire harness faulty.
      - Yes → Check if GND (wire harness side) to radio assembly?
        - NG → GND faulty.
        - OK → Radio assembly faulty.

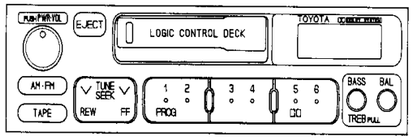
9 Tape Player — CASSETTE TAPE INSERTS, BUT NO POWER



N01721

Is radio operating normally?
- Yes → Radio assembly faulty.
- No → Check if RADIO fuse is OK?
  - NG → Replace fuse.
  - OK → Is ACC applied to radio assembly?
    - No → ACC wire harness faulty.
    - Yes → Check if DOME fuse is OK?
      - NG → Replace fuse.
      - OK → Is +B applied to radio assembly?
        - No → +B wire harness faulty.
        - Yes → Radio assembly faulty.

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



N04757

Functions OK if different cassette tape inserted?
- Yes → Cassette tape faulty.
- No ↓

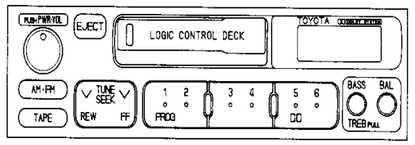
Is radio operating normally?
- Yes → Radio assembly faulty.
- No ↓

If there continuity in speaker wire harness?
- No → Speaker wire harness faulty.
- Yes ↓

Temporarily install another speaker.
Functions OK?
- Yes → Speaker faulty.
- No ↓

Radio assembly faulty.

11	Tape Player	EITHER SPEAKER DOES NOT WORK



N04757

Is radio operating normally?
- Yes → Radio assembly faulty.
- No ↓

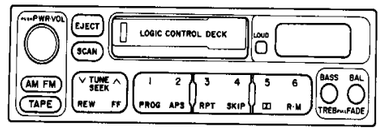
Is hiss produces by non-functioning speaker?
- Yes → Radio assembly faulty.
- No ↓

Is there continuity in speaker wire harness?
- No → Speaker wire harness faulty.
- No ↓

Temporarily install another speaker.
Functions OK?
- Yes → Speaker faulty.
- No ↓

Radio assembly faulty.

12 Tape Player — SOUND QUALITY POOR (VOLUME FAINT)



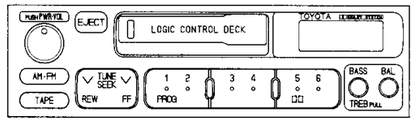
N01721

- Functions OK if different cassette tape inserted?
  - Yes → Cassette tape faulty.
  - No ↓
- Operates normally after cleaning the heads?
  - Yes → Head dirty.
  - No ↓
- Is radio operating normally?
  - Yes → Radio assembly faulty.
  - No ↓
- Is speaker properly installed?
  - No → Install properly.
  - Yes ↓
- Temporarily install another speaker. Function OK?
  - Yes → Speaker faulty.
  - No ↓
- Radio assembly faulty.

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

- Function OK if different tape (less than 120 mins.) is inserted?
  - Yes → Cassette tape faulty.
  - No ↓
- Is there a foreign object inside tape player?
  - Yes → Remove foreign object.
  - No ↓
- Operates normally after cleaning the heads?
  - Yes → Head dirty.
  - No ↓
- Radio assembly faulty.

14 Tape Player — CASSETTE TAPE WILL NOT EJECT

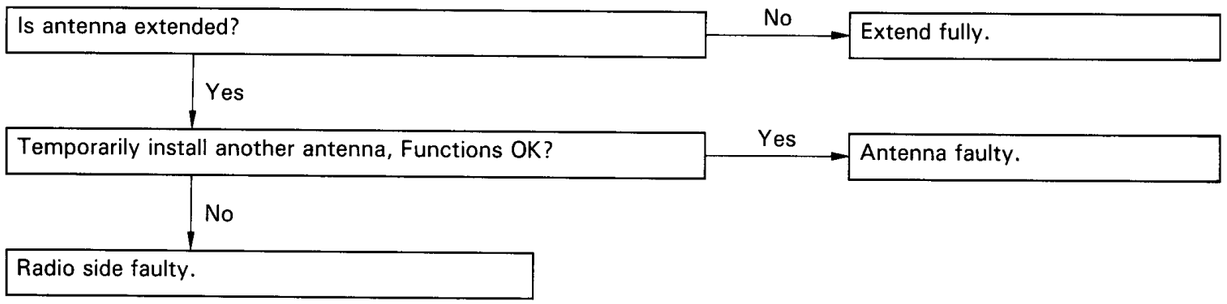


N04757

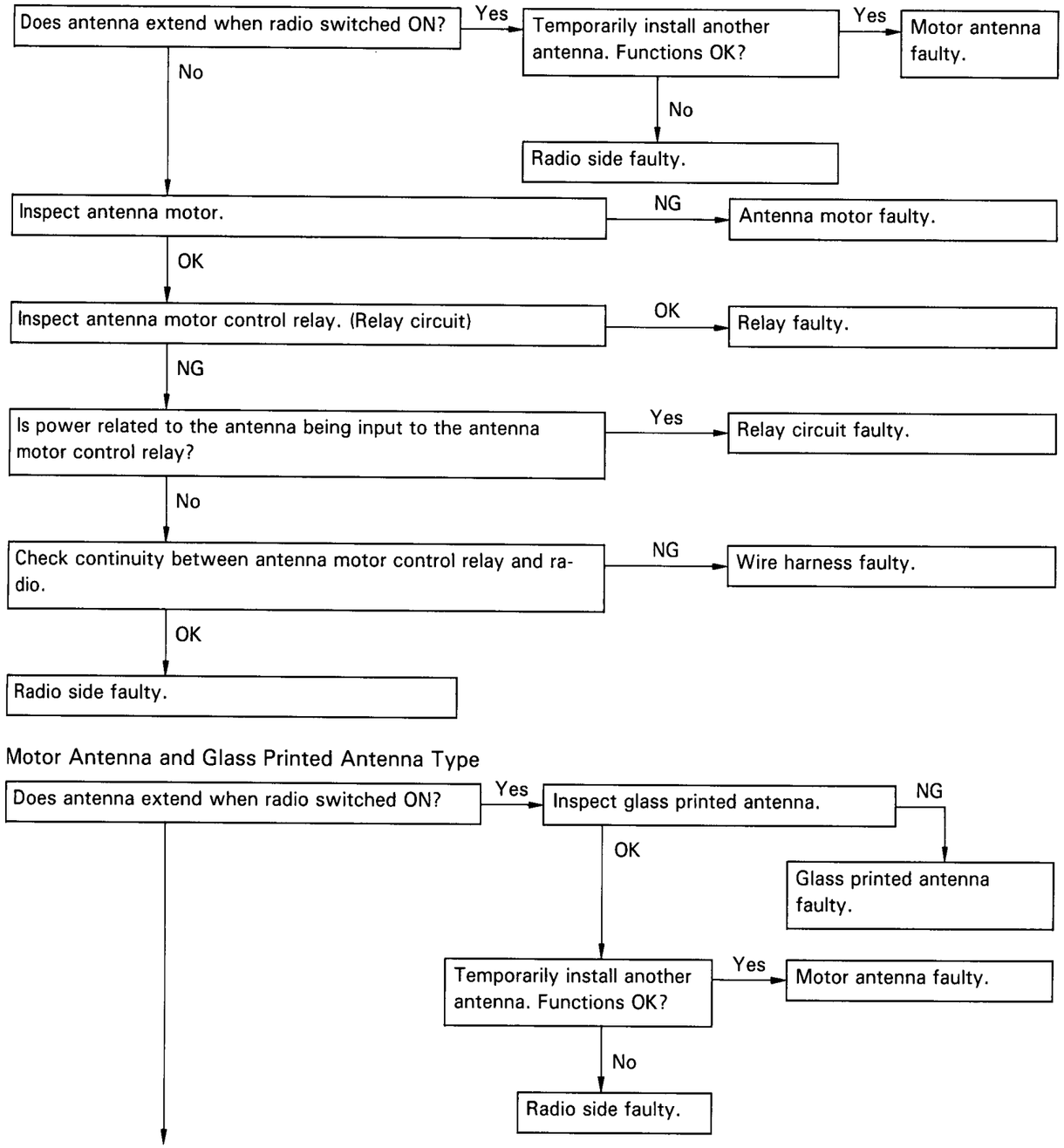
- Is tape player operating normally?
  - No → Cassette tape jammed.
  - Yes ↓
- Is auto search button of radio operating normally?
  - Yes → Radio assembly faulty.
  - No ↓
- Check if DOME fuse is OK?
  - NG → Replace fuse.
  - OK ↓
- Is +B applied to radio assembly?
  - No → +B wire harness faulty.
  - Yes ↓
- Radio assembly faulty.

15	Antenna	ANTENNA-RELATED

Antenna w/o Motor Type



Motor Antenna Type



Motor Antenna and Glass Printed Antenna Type

CONTINUED ON NEXT PAGE

CONTINUED FROM PREVIOUS PAGE

Inspect antenna motor. —NG→ Antenna motor faulty.

OK ↓

Inspect antenna motor control relay. (Relay circuit) —OK→ Relay faulty.

NG ↓

Is power related to the antenna being input to the antenna motor control relay? —Yes→ Relay circuit faulty.

No ↓

Check continuity between antenna motor control relay and radio. —NG→ Wire harness faulty.

OK ↓

Radio side faulty.

16 Noise — NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING

Is speaker properly installed? —No→ Install properly.

Yes ↓

Is each system correctly installed? —No→ Install properly.

Yes ↓

With vehicle stopped lightly tap each system. Is noise produced? —Yes→ Each system faulty.

No ↓

Noise produced by static electricity accumulating in the vehicle body.

17 Noise — NOISE PRODUCED WHEN ENGINE STARTS

Whisting noise which becomes high-pitched when accelerator strongly depressed, disappears shortly after engine stops. —Yes→ Alternator noise.

No ↓

Whining noise occurs when A/C is operating. —Yes→ A/C noise.

No ↓

Scratching noise occurs during sudden acceleration, driving on rough roads or when ignition switch is turned on. —Yes→ Fuel gauge noise.

No ↓

Clicking sound heard when horn button is pressed, then released. Whirring/grating sound when pushed continuously. —Yes→ Horn noise.

No ↓

Murmuring sound, stops when engine stops. —Yes→ Ignition noise.

No ↓

Tick-tock noise occurs in co-ordination with blinking of flasher. —Yes→ Turn signal noise.

No ↓

Noise occurs during window washer operation. —Yes→ Washer noise.

No ↓

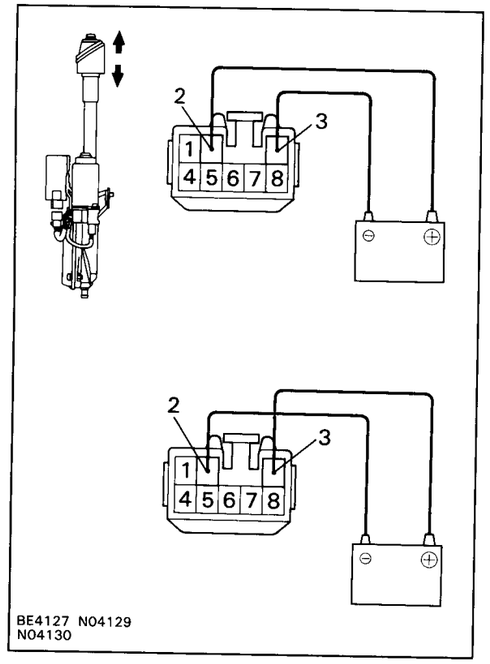
Scratching noise occurs while engine is running, continues a while even after engine stops. —Yes→ Water temp. gauge noise.

No ↓

Scraping noise in time with wiper beat. —Yes→ Wiper noise.

No ↓

Other type of noise.



BE4127 N04129
N04130

ANTENNA MOTOR

ANTENNA MOTOR INSPECTION

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

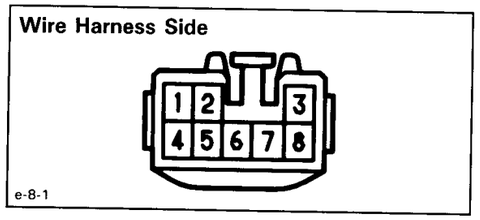
(b) Check that the motor turns (moves upward).

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.



e-8-1

ANTENNA MOTOR CONTROL RELAY

ANTENNA MOTOR CONTROL RELAY INSPECTION

RELAY CIRCUIT

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

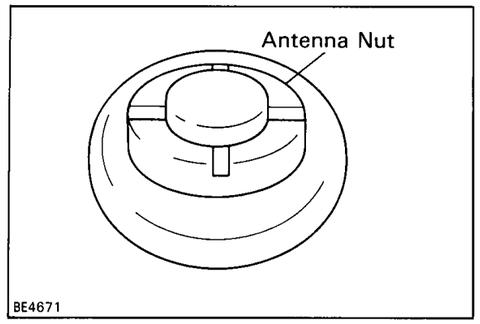
Check for	Tester connection	Condition			Specified value
Continuity	2 — 3	Constant			Continuity
	6 — Ground	Constant			Continuity
Voltage	1 — Ground	Constant			Battery voltage
	4 — Ground	Ignition switch position	LOCK or ACC		No voltage
			ON		Battery voltage
	5 — Ground	Ignition switch position	LOCK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

If circuit is as specified, replace the relay.

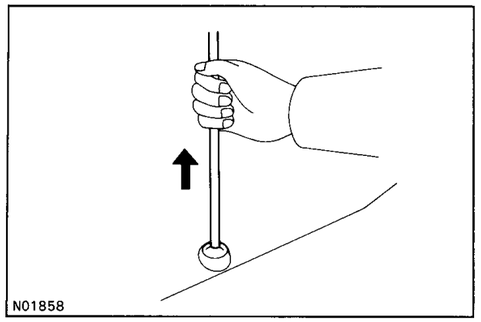
GLASS PRINTED ANTENNA

GLASS PRINTED ANTENNA INSPECTION

(Use same procedure as for "INSPECT DEFOGGER WIRES")



BE4671


N01858

ANTENNA ROD REMOVAL AND INSTALLATION

ANTENNA ROD REMOVAL AND INSTALLATION

1. REMOVE ANTENNA ROD

HINT: Perform this operation with the battery negative (−) cable connected to the battery terminal.

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

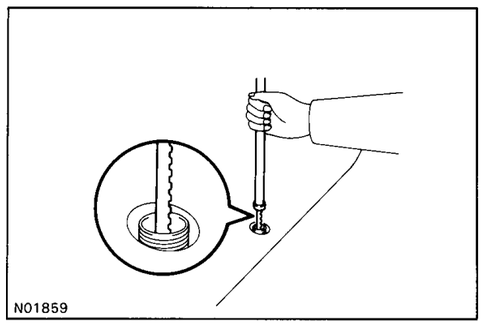
(b) Remove the antenna nut.

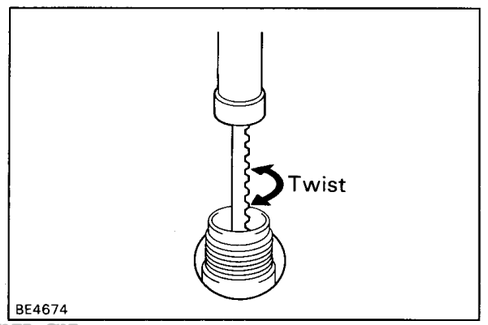
(c) Press the "AM" button on the radio receiver, and simultaneously turn the ignition switch to "ACC" positioin.

HINT:

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

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


N01859



BE4674

2. INSTALL ANTENNA ROD

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

HINT:

- When inserting the cable, the teeth on the cable must face toward the rear of the vehicle.
- Insert the antenna approx. 290 mm (11.4 in.)

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

HINT:

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

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

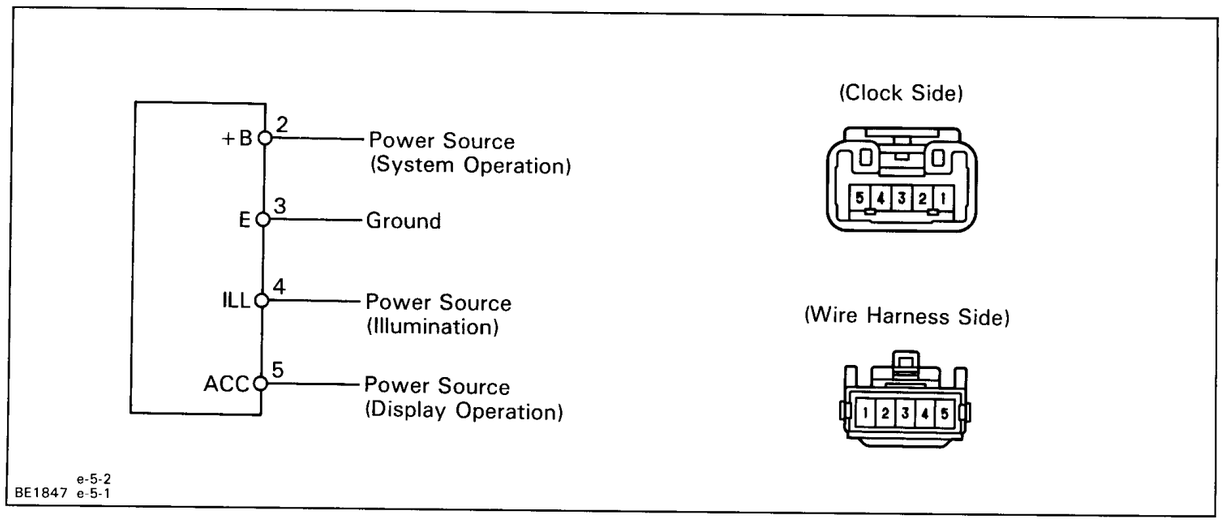
CLOCK

TROUBLESHOOTING

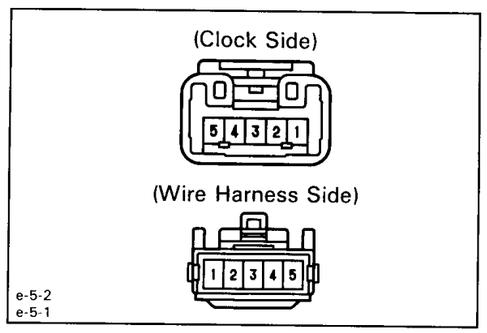
HINT: Troubleshoot the clock according to the table below.

Clock will not operate	1
Clock loses or gains time	2

± 1.5 seconds/day



1 CLOCK WILL NOT OPERATE



(a) Check that the battery voltage is 10 — 16 V.
If voltage is not as specified, replace the battery.

(b) Check that the DOME fuse is not blown.
If the fuse is blown, replace the fuse and check for short.

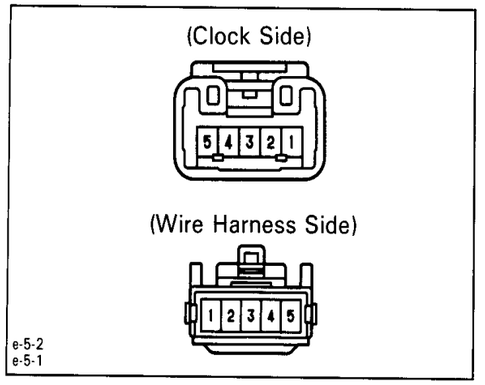
(c) Troubleshoot the clock as follows.
HINT: Inspect the connector on the wire harness side.

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

Is there continuity between terminal GND and body ground?
- No → Open circuit in wire harness between terminal GND and body ground.
- Yes ↓

Replay clock.

2 CLOCK LOSES OR GAINS TIME



(a) Check that the battery voltage is 10 — 16 V.
If voltage is not as specified, replace the battery.

(b) Inspect the error of the clock.

Allowable error (per day): ± 1.5 seconds

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

(c) Check that the clock adjusting button is sticking in position and has failed to return.
If the button is not returned, repair or replace the clock.

(d) Troubleshoot the clock as follws.
HINT: Inspect the connector on the wire harness side.

Is there 10 — 16 V between terminal +B and body ground?
- Below 10 V → Locate cause and repair, or recharge battery.
- Yes ↓

Adjust or replace clock.

BRAKE SYSTEM

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ANTI–LOCK BRAKE SYSTEM (ABS)

DESCRIPTION

BR09A–01

- The ABS is a brake system which controls the brake cylinder hydraulic pressure of all four wheels during sudden braking and braking on slippery road surface, preventing the wheels from locking. This ABS provides the following benefits:
  (1) Enables steering round an obstacle with a greater degree of certainty even when panic braking.
  (2) Enables stopping in a panic brake while keeping the effect upon stability and steerability to a minimum, even on curves.
- The function of the ABS is to help maintain directional stability and vehicle steerability on most road conditions. However, the system cannot prevent the vehicle from skidding if the cornering speed limit is exceeded.
- In case a malfunction occurs, a diagnosis function and fail–safe system have been adopted for the ABS to increase serviceability.

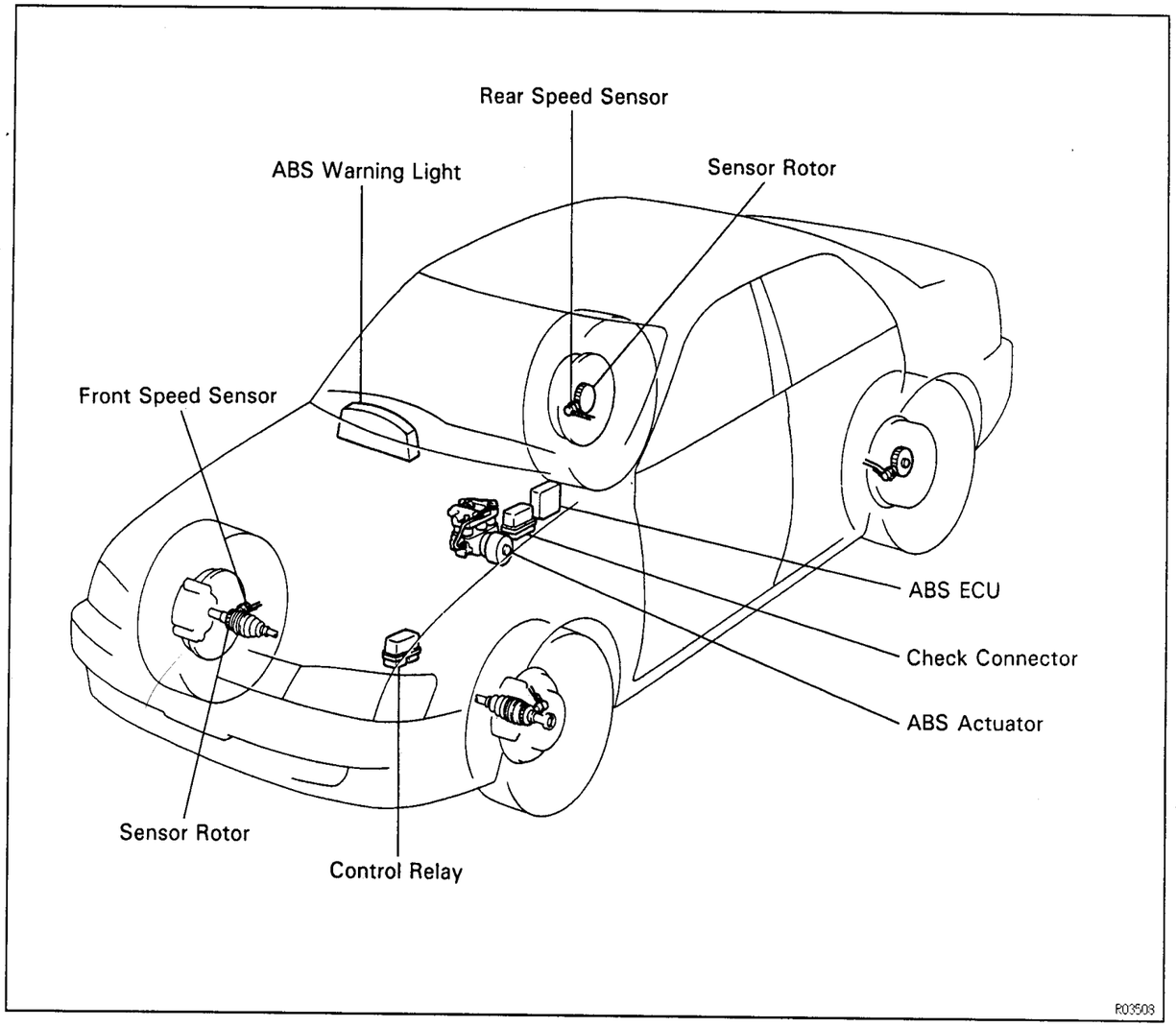
COMPONENTS FUNCTION

BR02K–03

Component	Function
Front Speed Sensor	Detect the wheel speed of each of the left and right front wheels.
Rear Speed Sensor	Detect the wheel speed of each of the left and right rear wheels.
ABS Warning Light	Lights up to alert the driver when trouble has occured in the Anti–Lock Brake System.
Actuator	Controls the brake fluid pressure to each brake cylinder through signals from the ECU.
ABS ECU	From the wheel speed signals from each sensor, it calculates acceleration, deceleration and slip values and sends signals to the actuator to control brake fluid pressure.

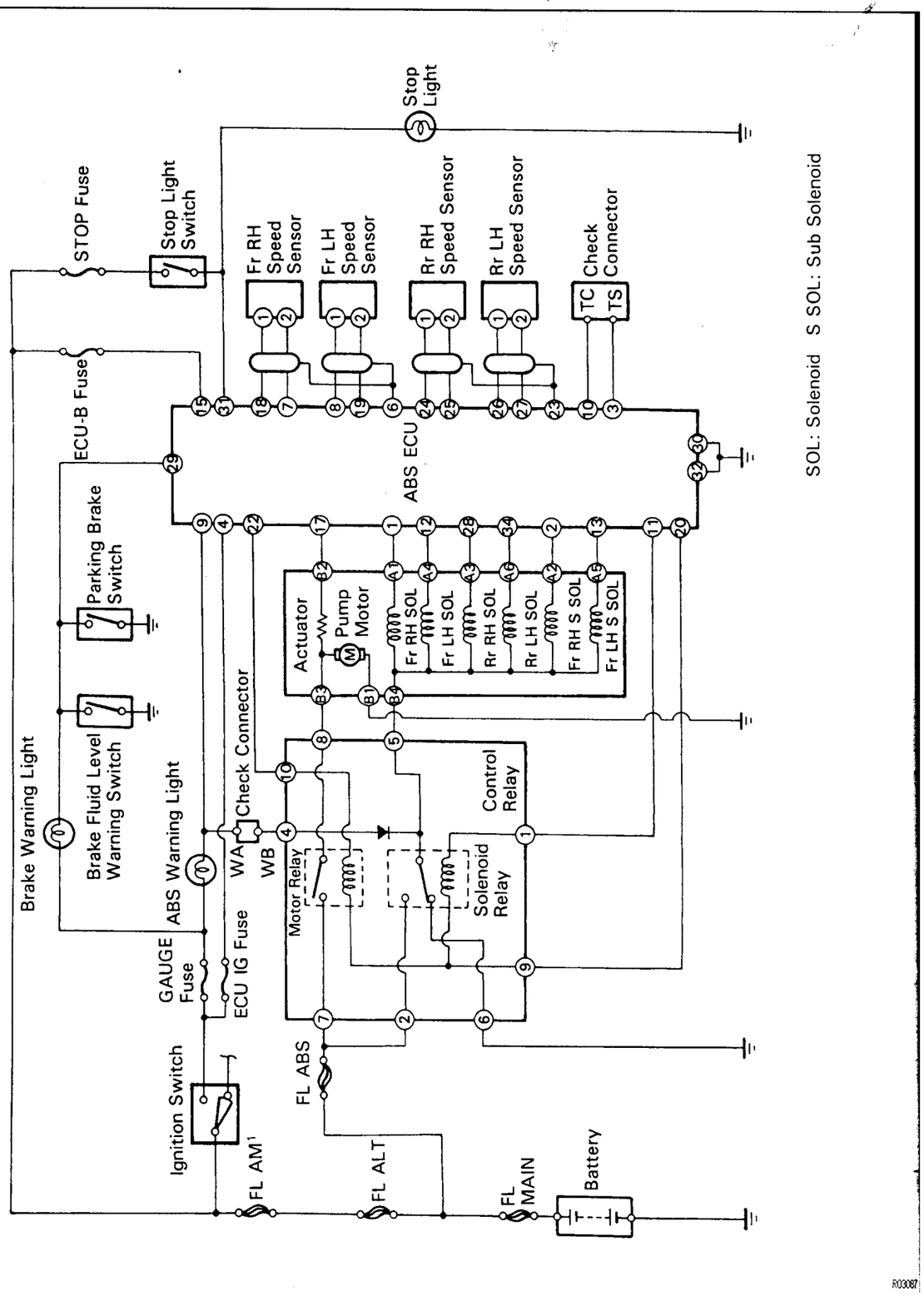
SYSTEM PARTS LOCATION

BR02L–01



WIRING DIAGRAM

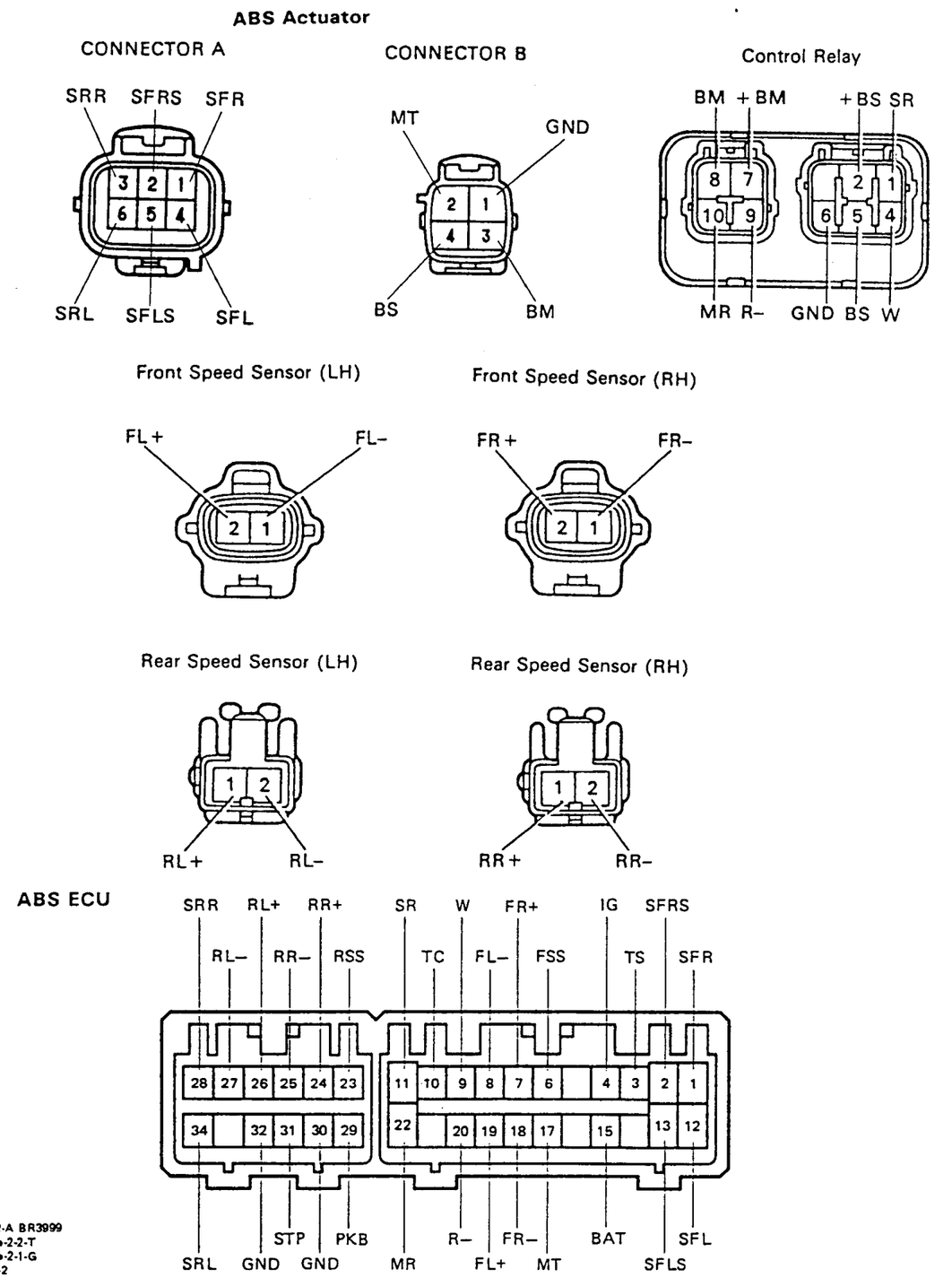
BR02



R03087

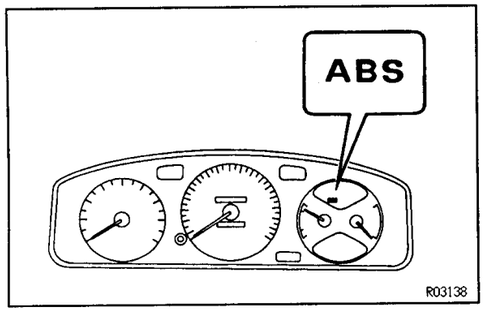
CONNECTORS

BR02N–03



Ie-6-2-C Ig-4-2-A BR3999
Ie-2-2-T Ie-2-2-T
e-2-1-G e-2-1-G
Vd-34-2

Z02932

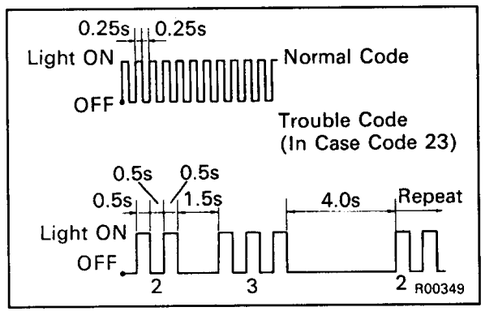


DIAGNOSIS SYSTEM

DESCRIPTION

BR02P–03

If a malfunction occurs, the system will identify the problem and the ECU will store the codes for the trouble items.
At the same time, the system informs the driver of a malfunction via the "ABS" warning light in the combination meter.
By turning on the ignition switch, disconnecting the short pin of the check connector and use SST to connect Tc and E1 of the check connector, the trouble can be identified by the number of blinks (diagnostic code) of the warning light.
In the event of two codes, that having the smallest numbered code will be identified first.
HINT: The warning light does not show the diagnostic codes while the vehicle is running.

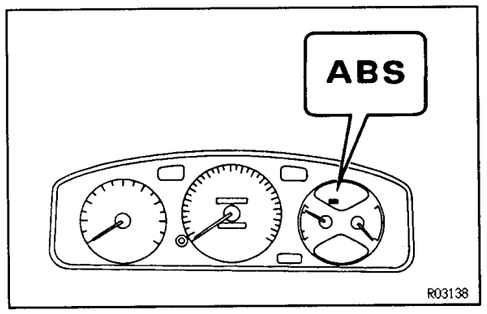


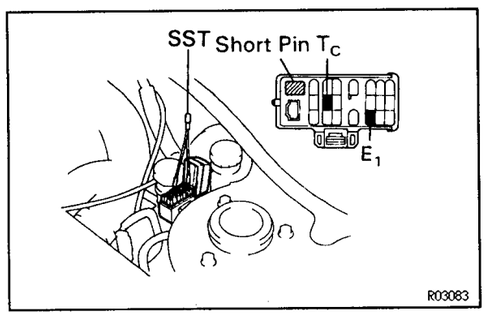
BR09B–01

DIAGNOSIS SYSTEM INSPECTION

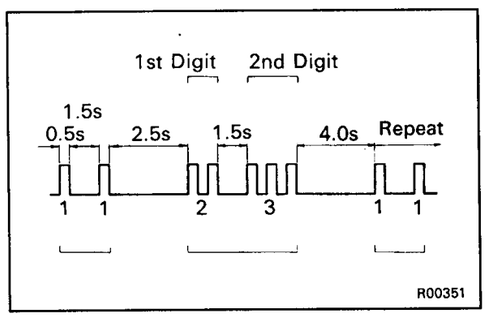
1. INSPECT BATTERY VOLTAGE
Inspect that the battery voltage is about 12 V.

2. CHECK THAT WARNING LIGHT TURNS ON
(a) Turn the ignition switch on.
(b) Check that the "ABS" warning light turns on for 3 seconds.
If not, inspect and repair or replace the fuse, bulb and wire harness.



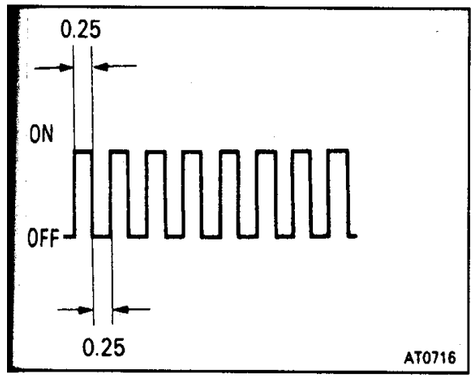


3. READ DIAGNOSTIC CODE
(a) Turn the ignition switch on.
(b) Using SST, connect terminals Tc and E1 of the check connector.
SST 09843–18020
(c) Pull out the short pin from the terminals WA and WB of the check connector in engine room.

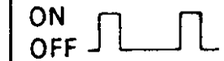
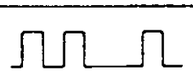
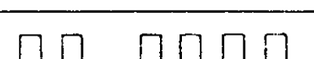
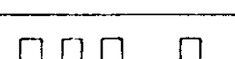
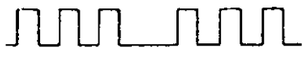
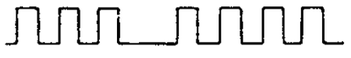


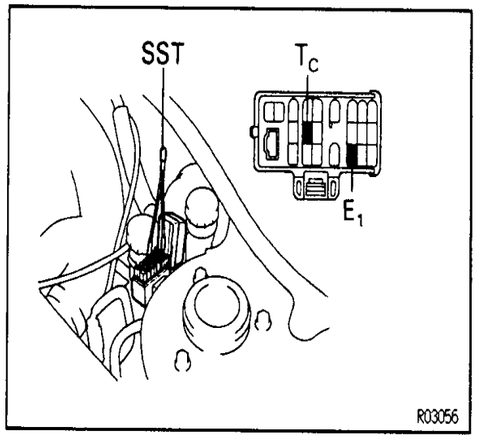
(d) In event of a malfunction, 4 seconds later the warning light will begin to blink. Read the number of blinks. (See DIAGNOSTIC CODE)

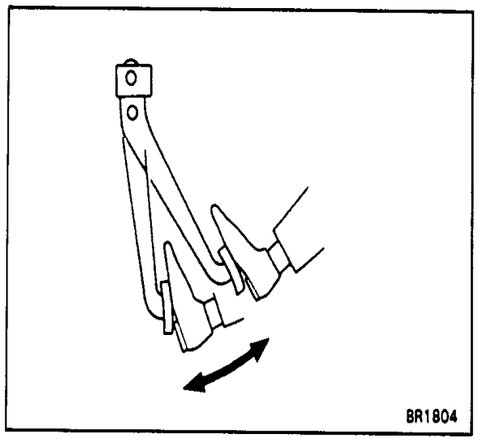
HINT: The first number of blinks will equal the first digit of a two digit diagnostic code. After a 1.5 second pause, the 2nd number of blinks will equal the 2nd number of a two digit code. If there are two or more codes, there will be a 2.5 second pause between each, and indication will begin after 4.0 second pause from the smaller value and continue in order to larger.

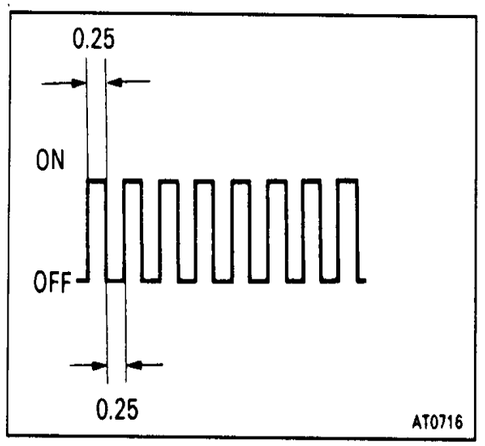


(e) If the system is operating normally (no malfunction), the warning light will blink once every 0.5 seconds.
(f) Repair the system.
(g) After the malfunctioning components has been repaired, clear the diagnostic codes stored in the ECU.
HINT: If you disconnect the battery cable while repairing, all diagnostic codes in the ECU will erased.
(h) Remove the SST from terminals Tc and E1 of the check connector.
(i) Install the short pin to the terminals WA and WB.
(j) Turn the ignition switch on, and check that the "ABS" warning light goes off after the warning light goes on for 3 seconds.

Code No.	Light Pattern	Diagnosis	Trouble Part
11		Open circuit in solenoid relay circuit	● Actuator inside wire harness ● Control relay ● Wire harness and connector of solenoid relay circuit
12		Short circuit in solenoid relay circuit	
13		Open circuit in pump motor relay circuit	● Actuator inside wire harness ● Control relay ● Wire harness and connector of pump motor relay circuit
14		Short circuit in pump motor relay circuit	
21		Open or short circuit in solenoid of front right wheel	● Actuator solenoid ● Wire harness and connector of actuator solenoid circuit
22		Open or short circuit in solenoid of front left wheel	
23		Open or short circuit in solenoid of rear right wheel	
24		Open or short circuit in solenoid of rear left wheel	
31		Front right wheel speed sensor signal malfunction	● Speed sensor ● Sensor rotor ● Wire harness and connector of speed sensor
32		Front left wheel speed sensor signal malfunction	
33		Rear right wheel speed sensor signal malfunction	
34		Rear left wheel speed sensor signal malfunction	
35		Open circuit in front left or rear right wheel speed sensor	
36		Open circuit in front right or rear left wheel speed sensor	
37		Wrong both rear axle hubs	● Rear sensor rotors
41		Abnormal battery voltage (less than 9.5 V/more than 16.2 V)	● Battery ● Voltage regulator
51		Pump motor of actuator locked or open circuit in pump motor circuit in actuator	● Pump motor, relay and battery ● Wire harness, connector and ground bolt or actuator pump motor circuit
Always on		Malfunction in ECU	● ECU







DIAGNOSTIC CODES CLEARING

BR09C–01

CLEAR DIAGNOSTIC CODES

(a) Pull the parking brake lever up.

(b) Turn the ignition switch on.

(c) Using SST, connect terminals Tc and E1 of the check connector.
SST 09843–18020
HINT: Keep the vehicle stopped vehicle speed 0 km/h (0 mph).

(d) Clear the diagnostic codes stored in the ECU by depressing the brake pedal 8 or more times within 3 seconds.

(e) Check that the warning light shows the normal code.

(f) Remove the SST from terminals Tc and E1 of the check connector.

(g) Check that the warning light goes off.

TROUBLESHOOTING

BR09D-01

Problem		No.
"ABS" warning light	Always comes on after ignition switch is turned on.	1
	Does not come on for 3 seconds after ignition switch on.	2
	Goes on and off.	3
	Comes on while running.	1
Brake condition	Brakes pull. ※	4
	Braking inefficient. ※	4
	ABS operates at ordinary braking.	4
	ABS operates just before stopping at ordinary braking.	4
	Brake pedal pulsates abnormally while ABS is operating.	4
	Skidding noise occurs while ABS operating. (ABS operates inefficiently)	5

※ Also check the parts of the brake system (brake cylinders, pads, hydraulic lines, etc.) not specifically part of the ABS.

V01130

1 "ABS" warning light comes on.

Pull out the short pin and connect terminals T_C and E_1 of check connector.

Does warning light show the diagnostic code? (Ignition switch on)
- YES → See diagnostic code.
- NO ↓

Does warning light show the diagnostic normal code? (Ignition switch on)
- YES →
  - Inspect control relay, and replace if necessary.
  - Short circuit in wire harness between short pin and control relay terminal W.
- NO ↓

Are connectors of ECU properly connected? And are all terminals in the connector?
- NO → Faulty ECU connector.
- YES ↓

Is there 10 – 14 V between terminal IG on ECU wire harness side connector and body ground? (Ignition switch on)
- NO → Faulty power circuit.
- YES ↓

Does warning light go off when both the ECU connectors and short pin are disconnected? (Ignition switch on)
- NO (Come on) → Short circuit in wire harness between ECU terminal W and short pin or warning light.
- YES (Goes off) ↓

Faulty ECU

V01131

2	"ABS" warning light does not come on for 3 seconds after ignition switch on.

Pull out the short pin and ground the terminal WA of check connector. (Ignition switch on)

↓

Does warning light come on? — NO → Bulb burned out or open circuit in wire harness between warning light and GAUGE fuse.

↓ YES

Disconnect connectors from ECU and ground terminal W of ECU wire harness side connector. (Ignition switch on)

↓

Does warning light come on? — NO → Open circuit in wire harness between ECU terminal W and warning light.

↓ YES

With ignition switch off, disconnect control relay connectors, and check continuity between terminals W and GND on control relay.

↓

Reverse tester leads and check again. Is there one way continuity between terminals? — NO → Short circuit in control relay inside diode.

↓ YES

Faulty ECU

HINT: If the diode is short-circuited, a malfunction at ECU terminal W will occur. When inspecting the terminal, connect the ECU connector, and pull out the short pin. Then turn the ignition switch on, and check that the warning light goes on. If it does, the ECU terminal is OK.

V011

3	"ABS" warning light goes on and off.

• Check for short circuit in wire harness between terminal T_C or T_S and E_1 of check connector.

4	• Brakes pull. • Braking inefficient. • ABS operates at ordinary braking. • ABS operates just before stopping at ordinary braking. • Brake pedal pulsates abnormally while ABS is operating.

Pull out the short pin and connect terminals T_C and E_1 of check connector.

↓

Does warning light show the diagnostic normal code? (Ignition switch on) — NO → See diagnostic code.

↓ YES

Is each speed sensor installed in place? And is each installation bolt tightened securely? — NO → Speed sensor installation faulty.

↓ YES

Try speed sensor diagnosis system. Is sensor signal level OK? — NO → Inspect speed sensor, and replace if necessary.

↓ YES

Try speed sensor diagnosis system. Is sensor signal change OK? — NO → Inspect sensor rotor, and replace if necessary.

↓ YES

Disconnect connectors from ECU, inspect continuity between each speed sensor terminals on wire harness side.

↓

Does any abnormal change occur in continuity when the connectors or wire harness of the speed sensor and intermediate connectors are twisted or bent? — Yes (Abnormal change) → Faulty wire harness.

↓ NO (No change)

Continued on next page

Continued from previous page

Is there foreign material or ferric chips on the sensor tip?
- YES → Clean chips from the speed sensor.
- NO → Inspect the actuator operation.

Is actuator operation OK?
- NO → Faulty actuator.
- YES → Replace ECU.

5	Anti-lock brake system operations inefficiently.

Pull out the short pin and connect terminals T_C and E_1 of check connector.

Does warning light show the diagnostic normal code? (Ignition switch on)
- NO → See diagnostic code.
- YES → Is there battery voltage between ECU terminal STP and body ground when depressing brake pedal?

Is there battery voltage between ECU terminal STP and body ground when depressing brake pedal?
- NO → Open circuit in stop light switch and/or wire harness.
- YES → Inspect actuator.

V011

SPEED SENSOR DIAGNOSIS SYSTEM

BR02V-02

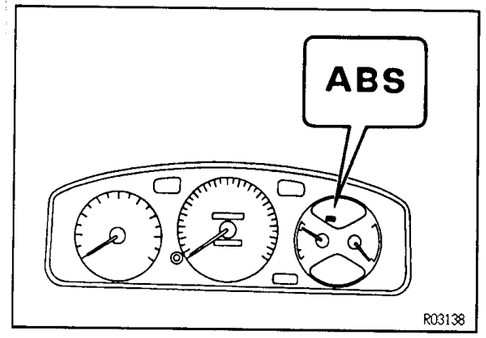
DIAGNOSIS SYSTEM INSPECTION

PRECAUTION

While checking the speed sensor diagnosis system, ABS dose not operate and brake system operates as normal brake system.

1. INSPECT BATTERY VOLTAGE

Inspect that the battery voltage is about 12 V.



2. CHECK THAT WARNING LIGHT TURNS ON

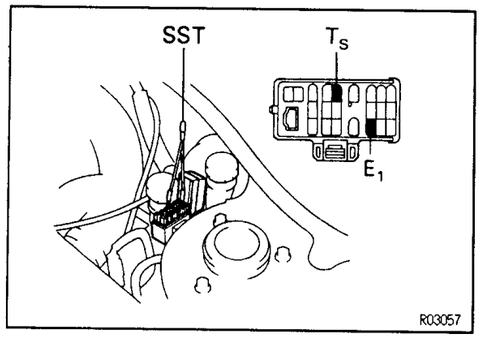
(a) Turn the ignition switch on.

(b) Check that the "ABS" warning light turns on for 3 seconds.

If not inspect and repair or replace the fuse, bulb and wire harness.

(c) Check that the "ABS" warning light turns off.

(d) Turn the ignition switch off.

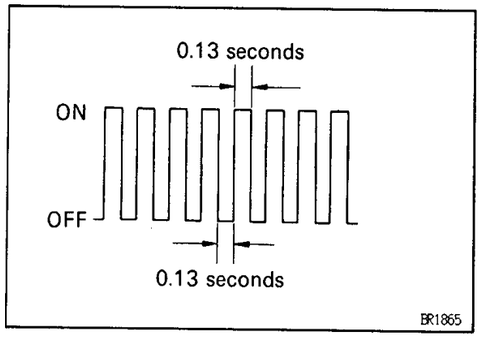


3. PERFORM FOLLOWING STEPS

(a) Using SST, connect terminals Ts and E1 of the check connector in the engine room.

SST 09843–18020

(b) Pull the parking brake lever up, and start the engine.

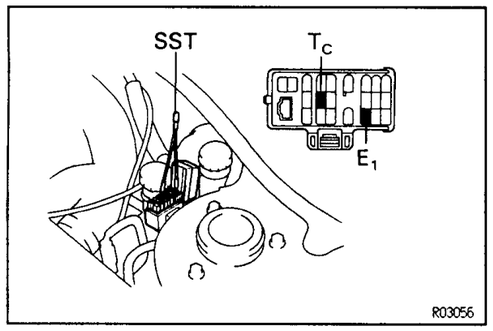


(c) Check that the warning light blinks about 4 times every 1 second as shown.

4. DRIVE VEHICLE

(a) Release the parking brake.

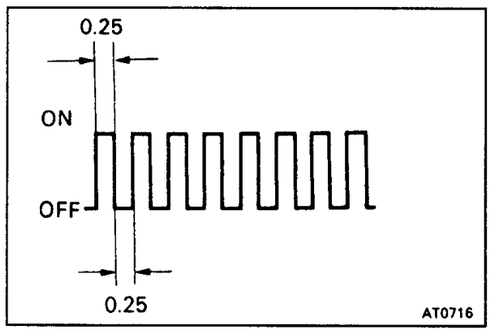
(b) Drive the vehicle faster than 80 km/h (50 mph) for several seconds.



5. READ DIAGNOSTIC CODE

(a) Stop the vehicle, and warning light will begin to blink.

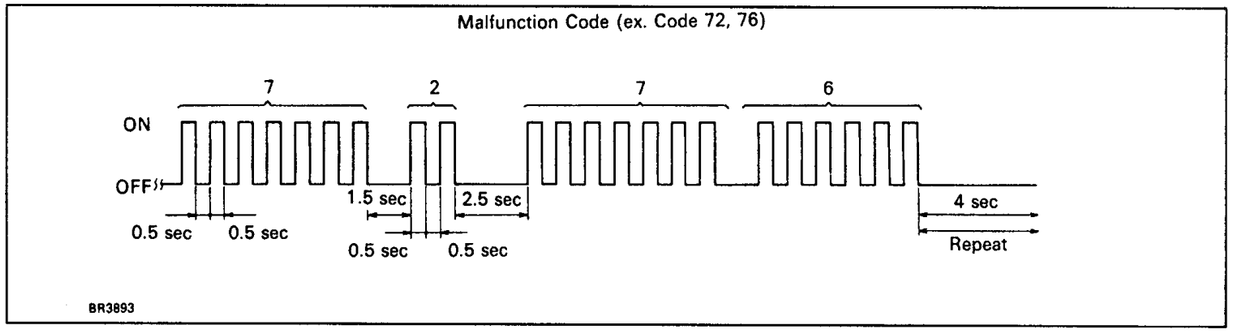
(b) Using SST, connect the terminals Tc and E1 of the check connector.



(c) Read the number of blinks of the "ABS" warning light. (See DIAGNOSTIC CODE)

HINT: If normal, the warning light blinks 2 times every 1 second.

If two or more malfunctions are indicated at the same time, the smallest numbered code will be displayed first.



6. REPAIR MALFUNCTIONING PARTS

Repair or replace the malfunctioning parts.

HINT: When repairing or replacing parts, turn the ignition switch to OFF.

7. REMOVE SST

Remove the SST from terminals Tc and E1 of the check connector.

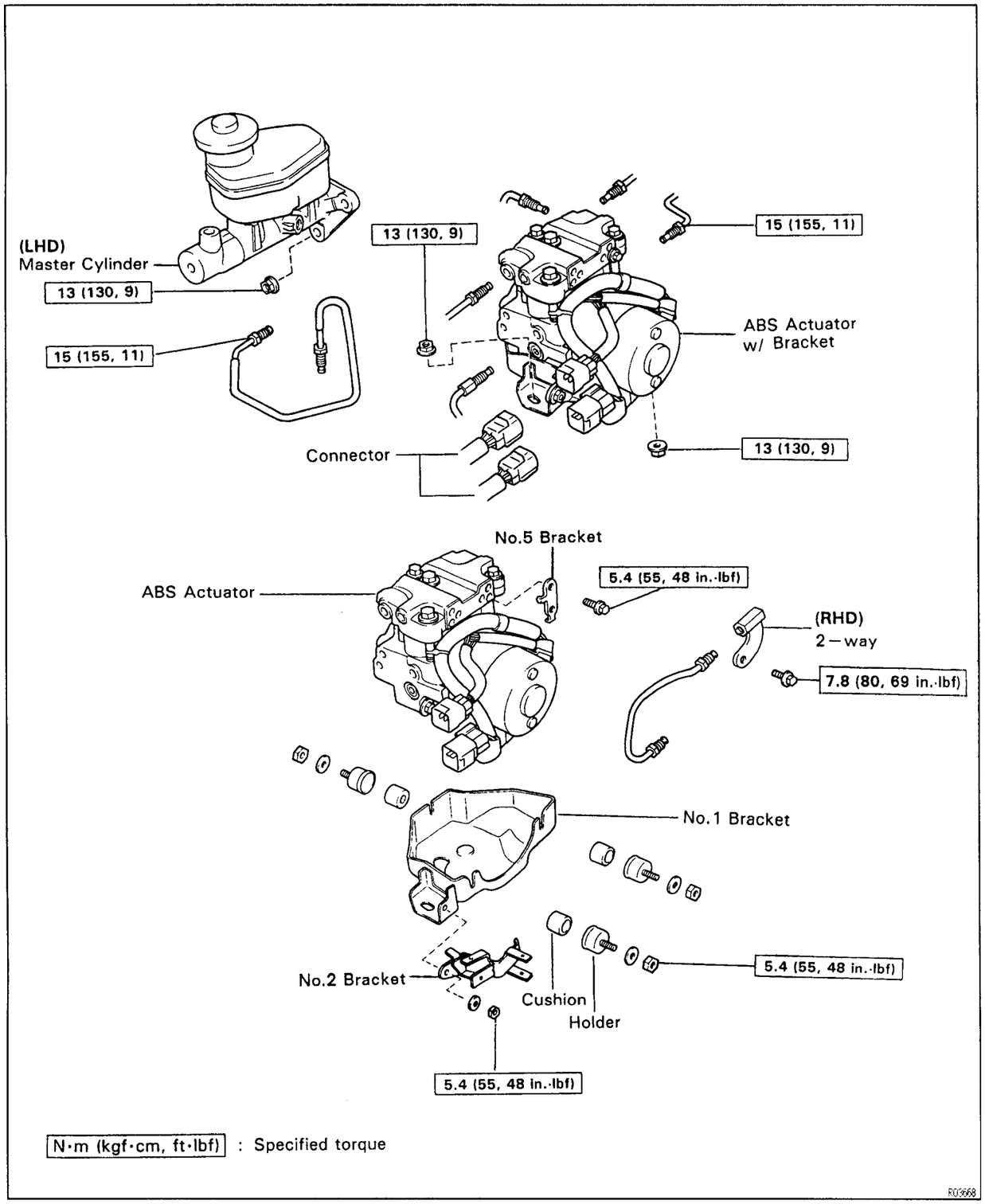
Code No.	Light Pattern	Diagnosis	Malfunctioning Part
	ON / OFF 	All speed sensors and sensor rotors are normal	
71		Low voltage of front right speed sensor signal	● Front right speed sensor ● Sensor installation
72		Low voltage of front left speed sensor signal	● Front left speed sensor ● Sensor installation
73		Low voltage of rear right speed sensor signal	● Rear right speed sensor ● Sensor installation
74		Low voltage of rear left speed sensor signal	● Rear left speed sensor ● Sensor installation
75		Abnormal change of front right speed sensor signal	● Front right sensor rotor
76		Abnormal change of front left speed sensor signal	● Front left sensor rotor
77		Abnormal change of rear right speed sensor signal	● Rear right sensor rotor
78		Abnormal change of rear left speed sensor signal	● Rear left sensor rotor

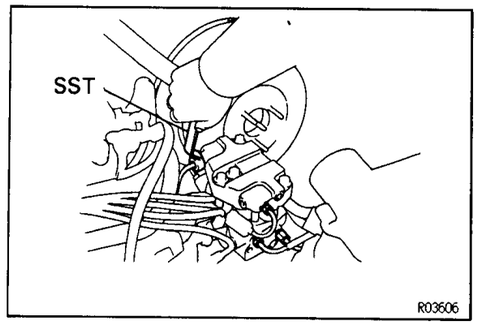
ABS ACTUATOR

ABS ACTUATOR REMOVAL AND INSTALLATION

BR03C–02

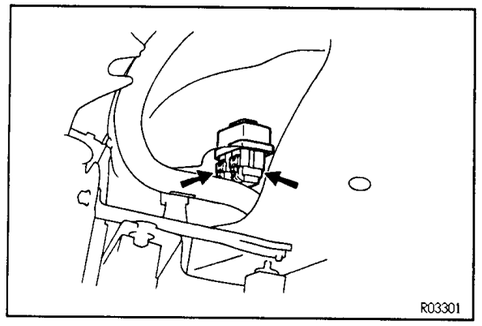
Remove and install the parts as shown.





(MAIN POINT OF REMOVAL AND INSTALLATION)

1. **(LHD)**
   REMOVE MASTER CYLINDER
   (See MASTER CYLINDER REMOVAL)
2. **DISCONNECT AND CONNECT BRAKE TUBES**
   Using SST, disconnect and connect the brake tubes from/to the ABS actuator.
   SST 09023–00100 or 09751–36011
   Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)
3. **BLEED BRAKE SYSTEM**
   (See BRAKE SYSTEM BLEEDING)

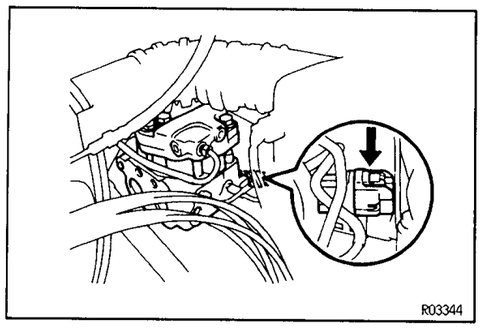


BR09E–01

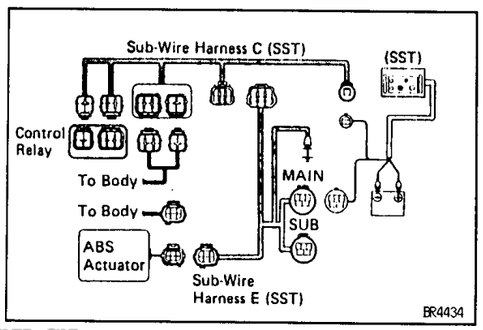
ABS ACTUATOR INSPECTION

1. **INSPECT BATTERY VOLTAGE**
   Battery voltage:
   10–14.5 V
2. **DISCONNECT CONNECTORS**

(a) Remove the fender liner and disconnect the two connectors from the control relay.



(b) Disconnect the connector from the actuator.

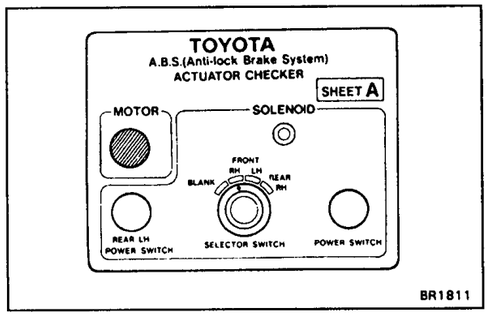


3. **CONNECT ACTUATOR CHECKER (SST) TO ACTUATOR**

(a) Connect the actuator checker (SST) to the actuator, control relay and body side wire harness through the sub–wire harness C and E (SST) as shown.
SST 09990–00150, 09990–00200 and 09990–00210

(b) Connect the red cable of the checker to the battery positive (+) terminal and black cable to the negative (–) terminal. Connect the black cable of the sub–wire harness to the battery negative (–) terminal or body ground.

(c) Place the "SHEET A" (SST) on the actuator checker.
SST 09990–00163



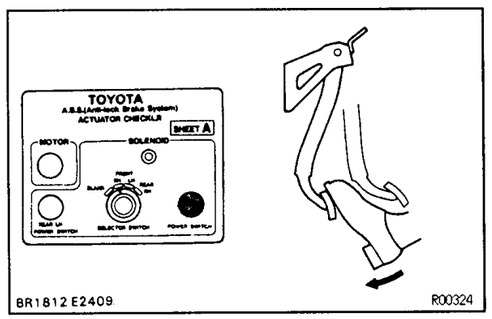
4. INSPECT MAIN SOLENOID AND PUMP MOTOR OPERATION

(a) Start the engine, and run it at idle.

(b) Turn the selector switch of the actuator checker to "FRONT RH" position.

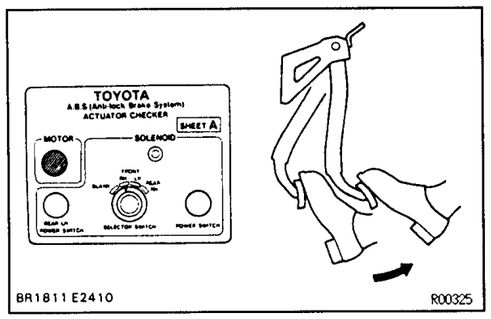
(c) Push and hold in the MOTOR switch for a few seconds.

(d) Depress the brake pedal and hold it until the step (g) is completed.



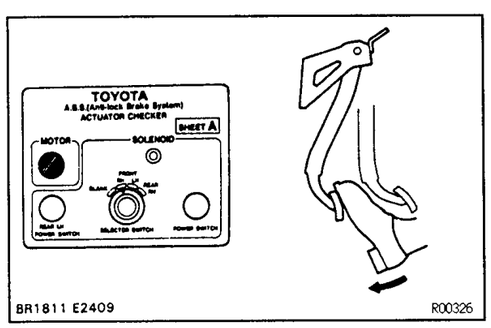
(e) Push the POWER SWITCH, and check that the brake pedal does not go down.
NOTICE: Do not keep the POWER SWITCH pushing more than 10 seconds.

(f) Release the switch, and check that the pedal goes down.



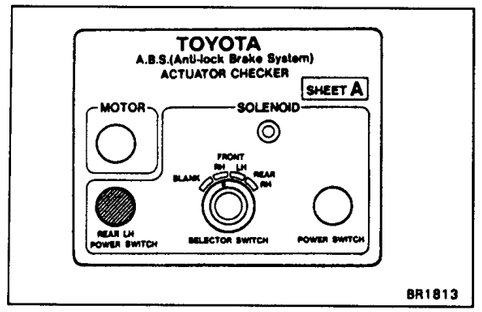
(g) Push and hold in the MOTOR switch for a few seconds, and check that the pedal returns.

(h) Release the brake pedal.



(i) Push and hold in the MOTOR switch for a few seconds.

(j) Depress the brake pedal and hold it for about 15 seconds. As you hold the pedal down, push the MOTOR switch for a few seconds. Check that the brake pedal does not pulsate.

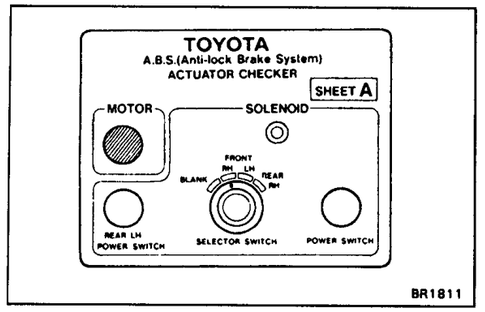


5. (FOR OTHER WHEELS)

(a) Turn the selector switch to "FRONT LH" position.

(b) Repeating (c) to (j) of the step 4, check the actuator operation similarly.

(c) Similarly, inspect "REAR RH" and "REAR LH" position.
HINT: When inspecting "REAR LH" position, push the REAR LH switch instead of the POWER SWITCH, and you can inspect in any selector switch position.



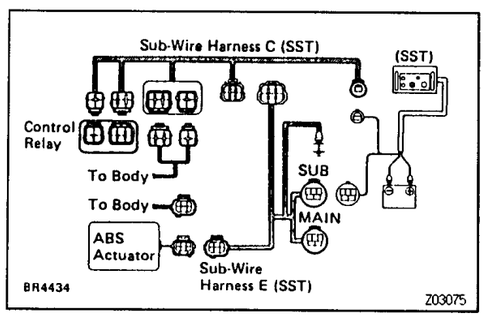
6. PUSH MOTOR SWITCH

Push and hold in the MOTOR switch for a few seconds.

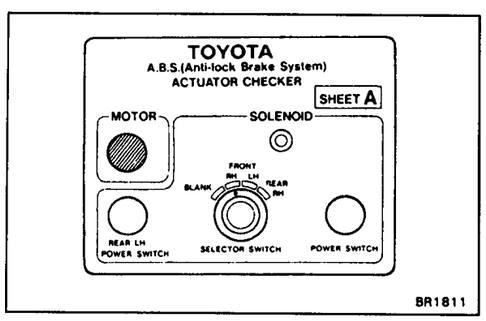
7. INSPECT FRONT SUB SOLENOID OPERATION

(a) Jack up and support vehicle.

(b) Check the fluid level in the reservoir. If necessary, add brake fluid.

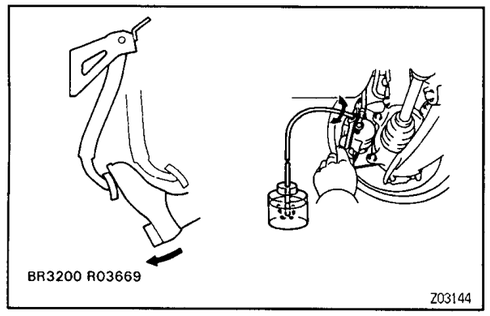


(c) Disconnect the MAIN connector of the sub–wire harness E from the actuator checker and connect the SUB connector as shown.

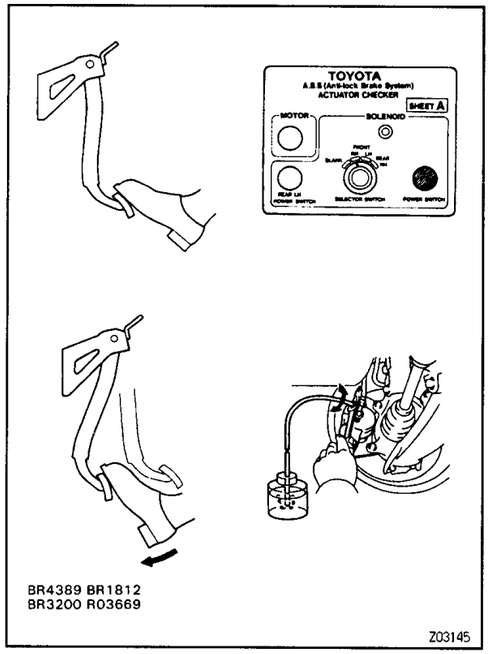


(d) Turn the selector switch of the actuator checker to "FRONT RH" position.

(e) Push and hold in the MOTOR switch for a few seconds.



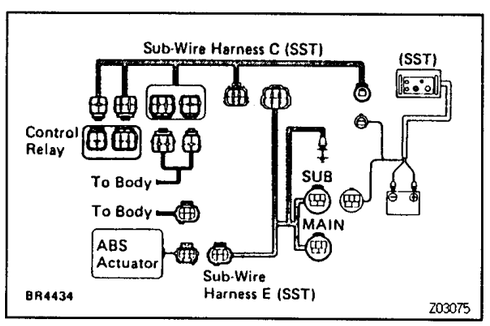
(f) With the brake pedal depressed, loosen the bleeder plug of the front RH wheel and check the speed of the brake pedal descent.
(g) Tighten the bleeder plug and release the brake pedal.



(h) Depress the brake pedal while performing steps (i) to (j).
(i) With the POWER SWITCH pushed in, loosen the bleeder plug and check that the speed of the brake pedal descent is slower than in (f).
(j) Release the POWER SWITCH.
(k) Tighten the bleeder plug, then release the brake pedal.
HINT: Tighten the bleeder plug before releasing the brake pedal.
(l) Push and hold in the MOTOR switch for a few seconds.

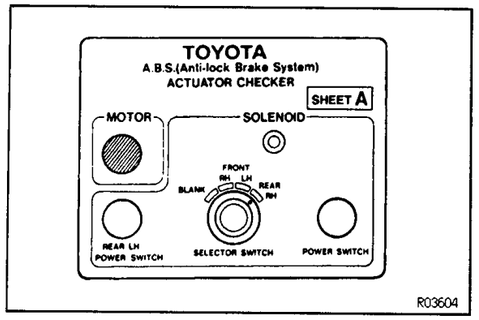
(FOR FRONT LH WHEEL)

(a) Turn the selector switch to "FRONT LH" position.
(b) Repeating (e) to (l) of step 7, check the front sub solenoid operation the same way.

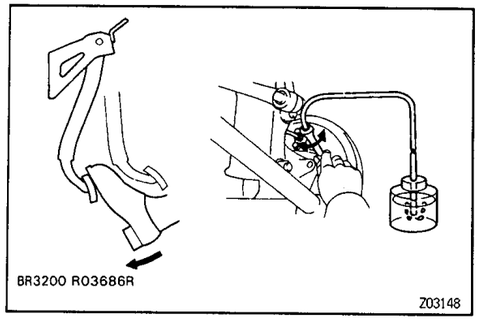


8. INSPECT REAR PRESSURE INCREASE CONTROL VALVE OPERATION

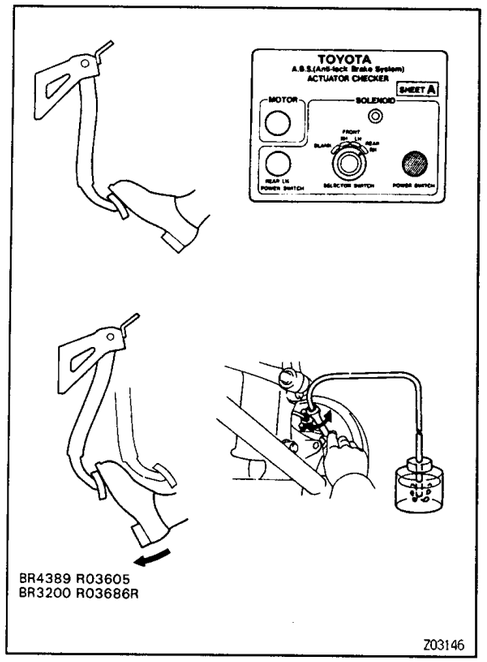
(a) Check that the SUB connector of sub–wire harness E is connected to the actuator checker.
HINT: The wire harness connection is the same as for inspection of the front sub solenoid.



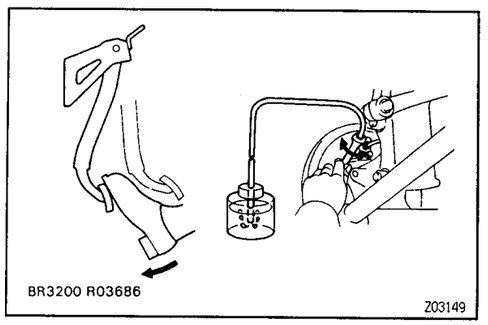
(b) Turn the selector switch of the actuator checker to " REAR RH" position.
(c) Push and hold in the MOTOR switch for a few seconds.



(d) With the brake pedal depressed, loosen the bleeder plug of the rear RH wheel and check the speed of brake pedal descent.
(e) Tighten the bleeder plug and release the brake pedal.
HINT: Tighten the bleeder plug before releasing the brake pedal.

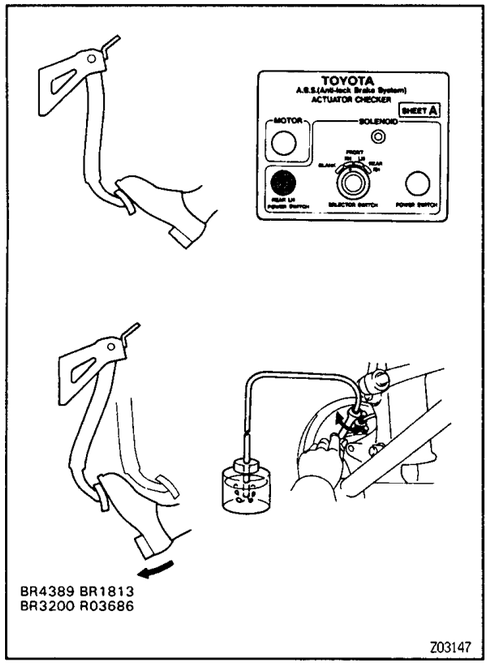


(f) Depress the brake pedal while performing steps (g) and (h).
(g) With the POWER SWITCH pushed in, loosen the bleeder plug.
(h) Release the POWER SWITCH, then check that the speed of the brake pedal descent is slower than in (d).
(i) Tighten the bleeder plug and release the brake pedal.
HINT: Tighten the bleeder plug before releasing the brake pedal.
(j) Push and hold in the MOTOR switch for a few seconds.



(FOR REAR LH WHEEL)

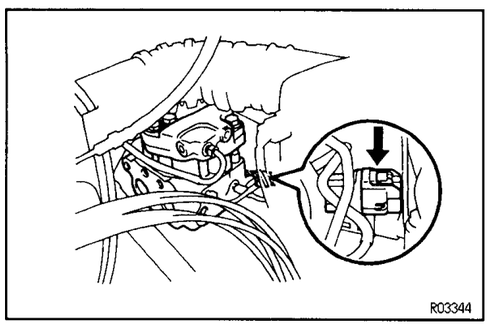
(a) With the brake pedal depressed, loosen the bleeder plug of the rear LH wheel and check the speed of the brake pedal descent.
(b) Tighten the bleeder plug and release the brake pedal.



(c) Depress the brake pedal while performing steps (d) and (e).
(d) With the POWER SWITCH REAR LH pushed in, loosen the bleeder plug.
HINT: Any position of the selector switch will do.
(e) Release the REAR LH switch and check that the pedal descent speed is slower than in (a).
(f) Tighten the bleeder plug and release the brake pedal.
HINT: Tighten the bleeder plug before releasing the brake pedal.
(g) Push and hold in the MOTOR switch for a few seconds.

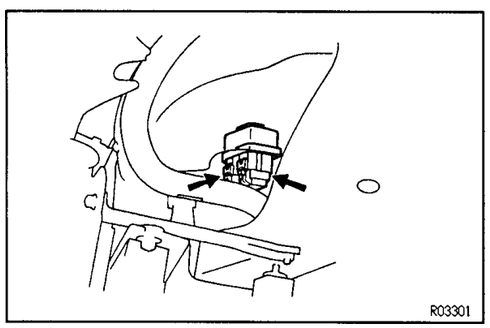
9. DISCONNECT ACTUATOR CHECKER (SST) FROM ACTUATOR

Remove the "SHEET A" (SST) and disconnect the actuator checker (SST) and sub–wire harness C and E (SST) from the actuator, control relay and body side wire harness.



10. CONNECT CONNECTORS

(a) Connect the connector to the actuator.

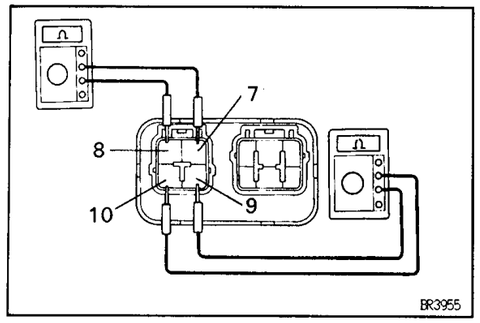


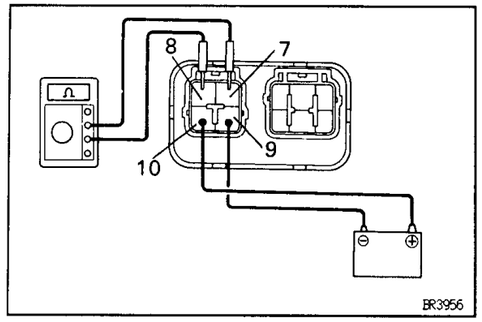
(b) Connect the two connectors to the control relay and install the fender liner.

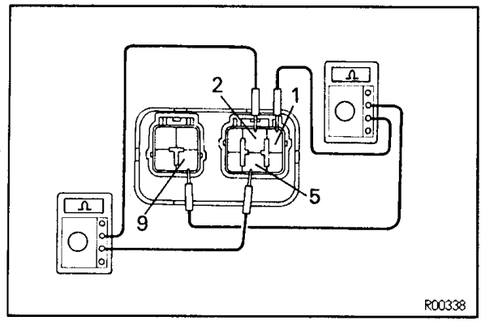
11. CLEAR DIAGNOSTIC CODES
(See DIAGNOSTIC CODES CLEARING)

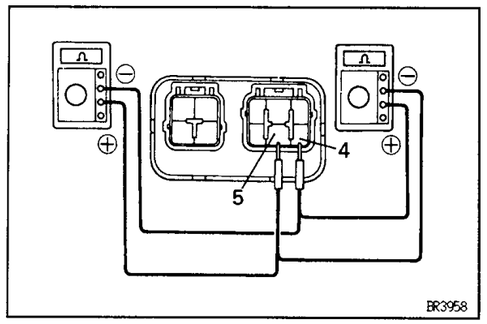
12. CHECK FLUID LEVEL IN RESERVOIR TANK

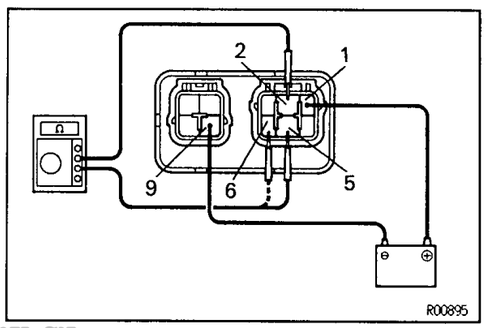
Check the fluid level and add fluid if necessary.
Fluid: SAE J1703 or FMVSS No.116 DOT 3











CONTROL RELAY

CONTROL RELAY INSPECTION

BR02Y–02

1. INSPECT CONTINUITY OF MOTOR RELAY CIRCUIT

(a) Check that there is continuity between terminals 9 and 10.
(b) Check that there is no continuity between terminals 7 and 8.
If continuity is not as specified, replace the relay.

2. INSPECT OPERATION OF MOTOR RELAY CIRCUIT

(a) Connect the positive (+) lead from the battery to terminal 10 and negative (–) lead to terminal 9.
(b) Check that there is continuity between terminals 7 and 8.
If operation is not as specified, replace the relay.

3. INSPECT CONTINUITY OF SOLENOID RELAY CIRCUIT

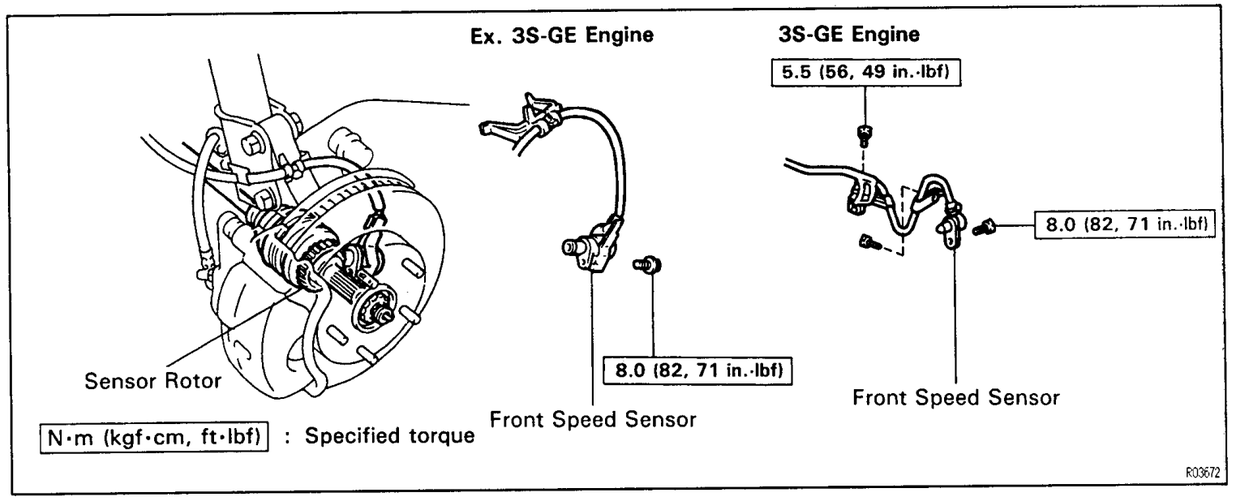
(a) Check that there is continuity between terminals 1 and 9.
(b) Check that there is no continuity between terminals 2 and 5.
(c) Connect the positive lead from the ohmmeter to terminal 4 and connect negative lead to terminal 5.
(d) Check that there is continuity between terminals.
(e) Connect the two leads in reverse, and check that there is no continuity between terminals.
If continuity is not as specified, replace the relay.
HINT: For the different type ohmmeter, there is no continuity for step (d), and there is continuity for step (e).

4. INSPECT OPERATION OF SOLENOID RELAY CIRCUIT

(a) Connect the positive (+) lead from the battery to terminal 1 and negative (–) lead to terminal 9.
(b) Check that there is continuity between terminals 2 and 5.
(c) Check that there is no continuity between terminals 2 and 6.
If operation is not as specified, replace the relay.

FRONT SPEED SENSOR
COMPONENTS

BR02Z–01



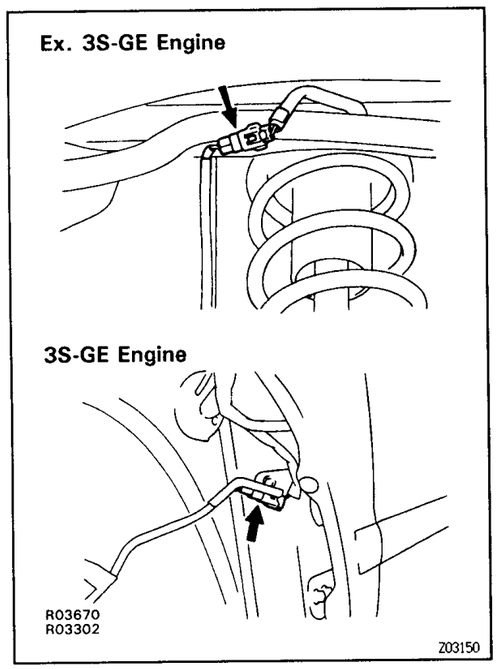
BR030–02

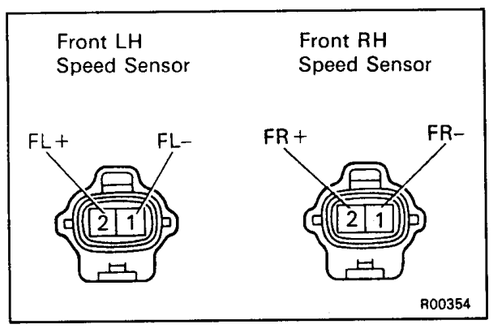
FRONT SPEED SENSOR INSPECTION

1. INSPECT SPEED SENSOR

(a) Remove the fender liner.

(b) Disconnect the speed sensor connector.



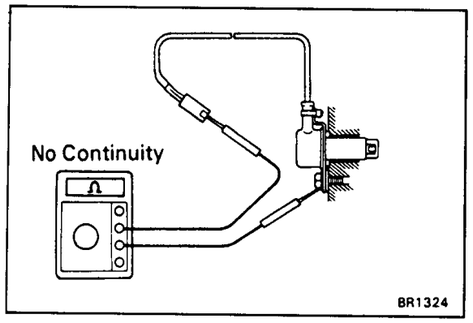


(c) Measure the resistance between terminals.

Resistance:

0.92–1.22 kΩ

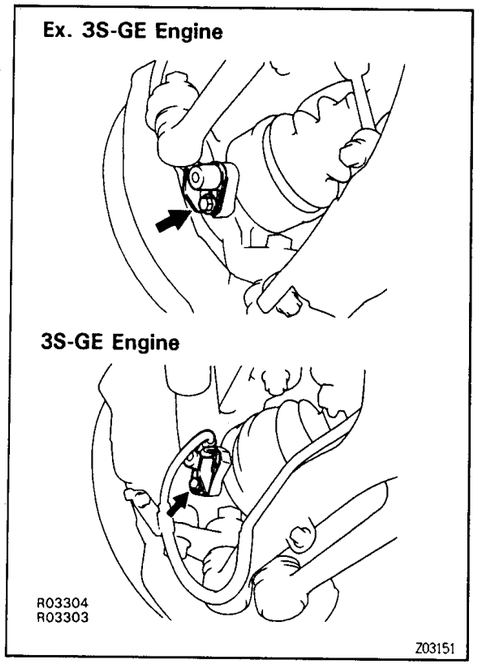
If resistance value is not as specified, replace th sensor.



(d) Check that there is no continuity between each terminal and sensor body.
If there is continuity, replace the sensor.

(e) Connect the speed sensor connector.

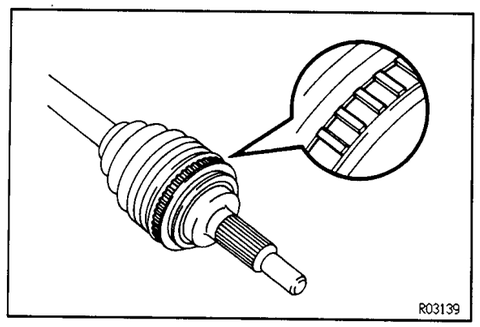
(f) Install the fender liner.



2. INSPECT SENSOR INSTALLATION

Check that the sensor installation bolt is tightened properly. If not, tighten the bolt.

Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)



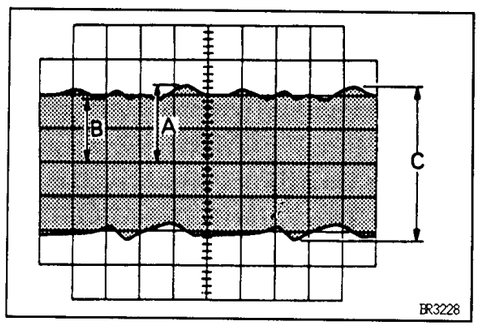
3. VISUALLY INSPECT SENSOR ROTOR SERRATIONS

(a) Remove the drive shaft.
(See SA section)

(b) Inspect the sensor rotor serrations for scratches, cracks, warping or missing teeth.

(c) Install the drive shaft.
(See SA section)

NOTICE: To prevent damage to the serrations, do not strike the drive shaft.



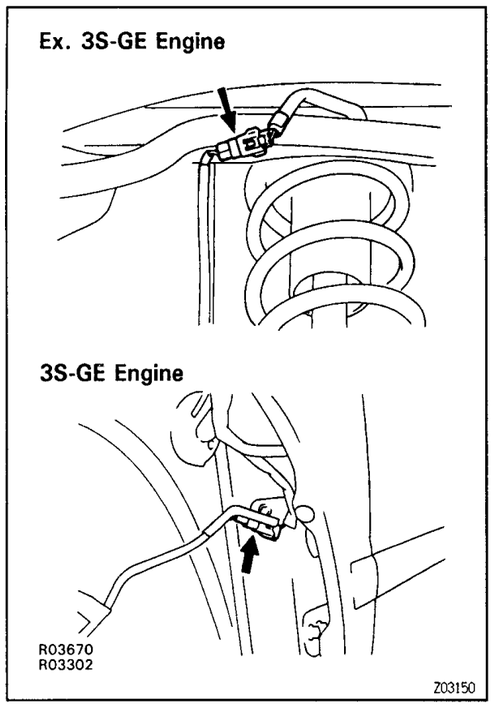
BR031–03

FRONT SPEED SENSOR AND SENSOR ROTOR SERRATIONS INSPECTION (REFERENCE)

INSPECT FRONT SPEED SENSOR AND SENSOR ROTOR SERRATIONS BY USING AN OSCILLOSCOPE

(a) Connect an oscilloscope to the speed sensor connector.

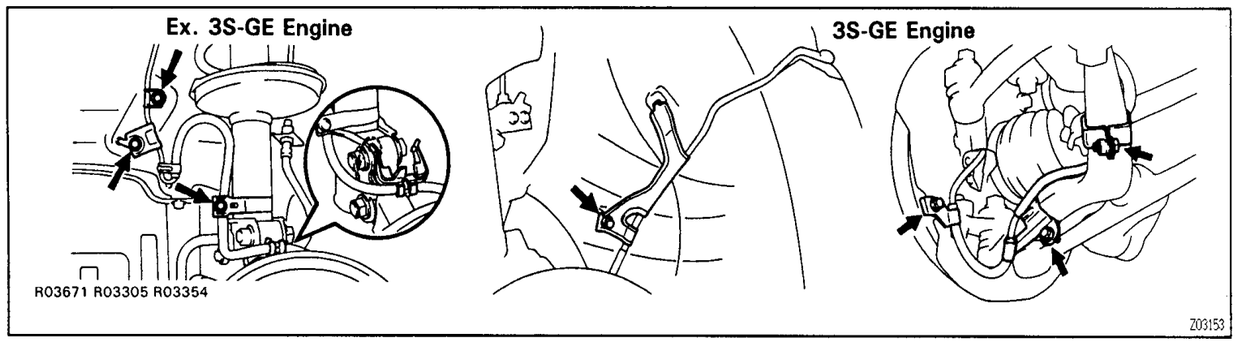
(b) Run the vehicle at 20 km/h (12.4 mph), and inspect speed sensor output wave.
(c) Check that C is 0.5 V or more.
If not as specified, replace the speed sensor.
(d) Check that B is 30 % or more of A.
If not as specified, replace the drive shaft.

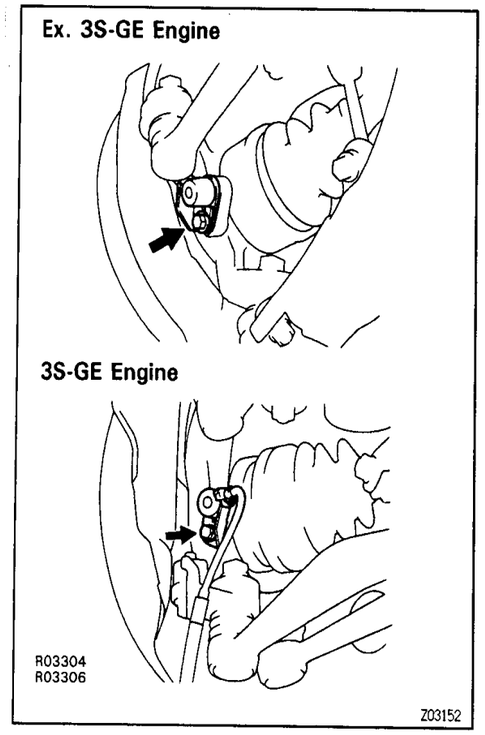


BR032-02

FRONT SPEED SENSOR REMOVAL

1. DISCONNECT SPEED SENSOR CONNECTOR
(a) Remove the fender liner.
(b) Disconnect the speed sensor connector.
2. REMOVE SPEED SENSOR
(a) Remove the clamp bolts holding the sensor harness to the body, shock absorber and lower arm.





(b) Remove the speed sensor from the steering knuckle.

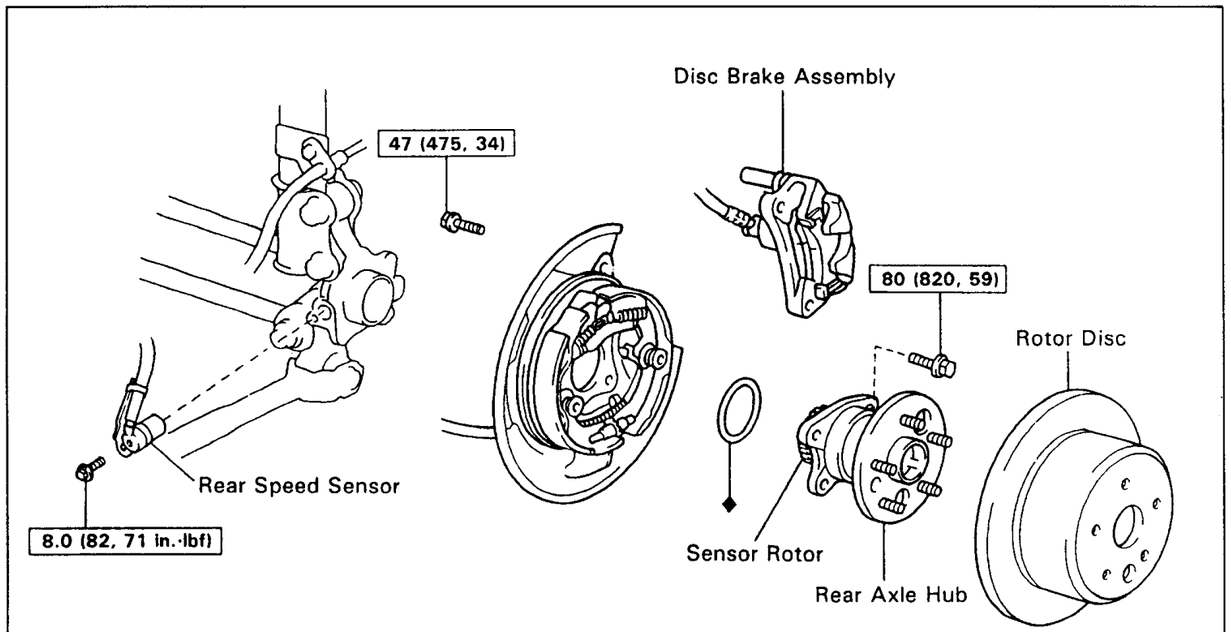
BR09F-01

FRONT SPEED SENSOR INSTALLATION

1. INSTALL SPEED SENSOR
Install the speed sensor to the steering knuckle.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)
2. CONNECT SPEED SENSOR CONNECTOR
(a) Install the sensor harness with the clamps and bolts in place.
Torque: 5.5 N·m (56 kgf·cm, 49 in.·lbf)
(b) Connect the speed sensor connector.
(c) Install the fender liner.

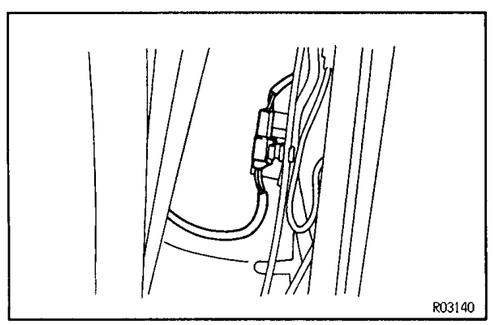
REAR SPEED SENSOR
COMPONENTS

BR034-01



N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non-reusable part

R03146



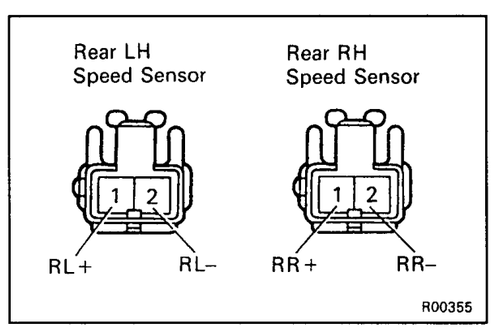
R03140

BR035-02

REAR SPEED SENSOR INSPECTION

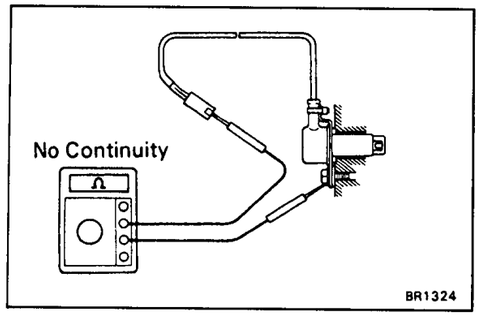
1. INSPECT SPEED SENSOR

(a) Remove the seat cushion and side seatback.
(b) Disconnect the speed sensor connector.



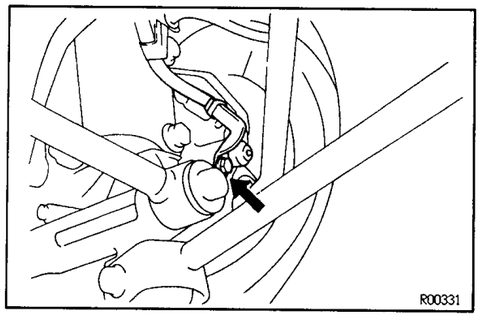
R00355

(c) Measure the resistance between terminals.
Resistance:
1.05–1.45 kΩ
If resistance value is not as specified, replace the sensor.



BR1324

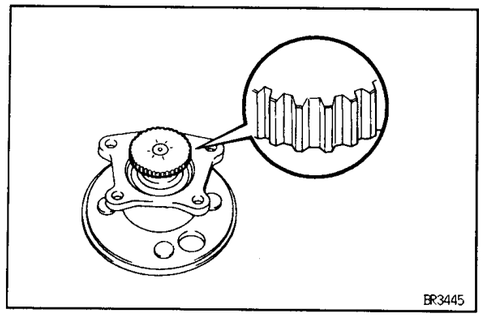
(d) Check that there is no continuity between each terminal and sensor body.
If there is continuity, replace the sensor.
(e) Connect the speed sensor connector.
(f) Install the side seatback and the seat cushion.



R00331

2. INSPECT SENSOR INSTALLATION

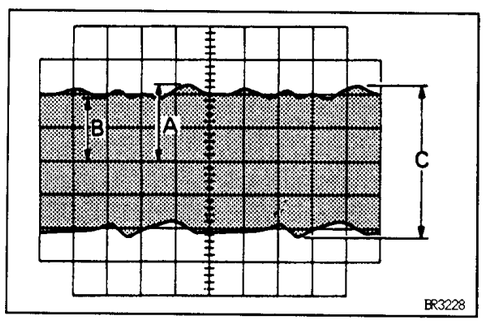
Check that the sensor installation bolt is tightened properly. If not, tighten the bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)



BR3445

3. VISUALLY INSPECT SENSOR ROTOR SERRATIONS

(a) Remove the axle hub assembly.
(See SA section)
(b) Inspect the sensor rotor serrations for scratches, cracks, warping or missing teeth.
(c) Install the axle hub assembly.
(See SA section)



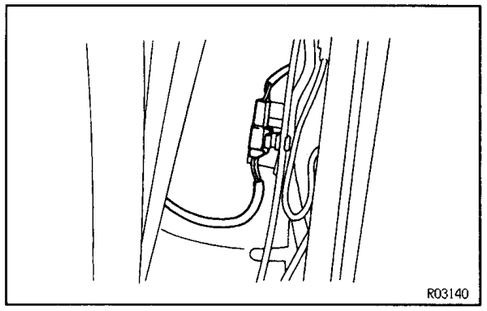
BR3228

BR036-03

REAR SPEED SENSOR AND SENSOR ROTOR SERRATIONS INSPECTION (REFERENCE)

INSPECT REAR SPEED SENSOR AND SENSOR ROTOR SERRATIONS BY USING AN OSCILLOSCOPE

(a) Connect an oscilloscope to the speed sensor connector.
(b) Run the vehicle at 20 km/h (12.4 mph), and inspect speed sensor output wave.
(c) Check that C is 0.8 V or more.
If not as specified, replace the speed sensor.
(d) Check that B is 40 % or more of A.
If not as specified, replace the rear axle hub.

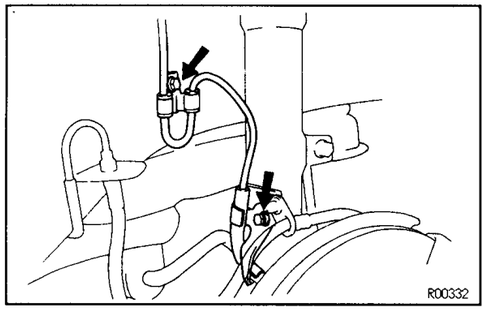


REAR SPEED SENSOR REMOVAL

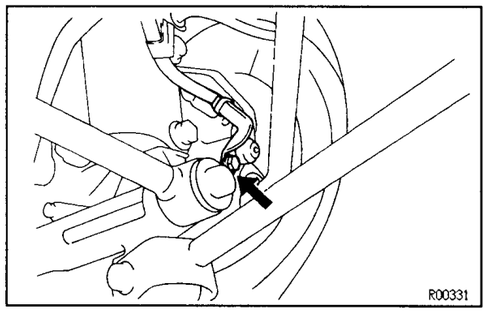
BRG37–02

1. DISCONNECT SPEED SENSOR CONNECTOR

(a) Remove the seat cushion and side seatback.
(b) Disconnect the speed sensor connector, and pull out the sensor wire harness with the grommet.

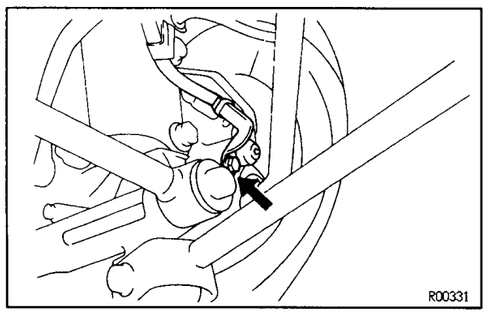


(c) Remove the two clamp bolts holding the sensor wire harness to the body and shock absorber.



2. REMOVE SPEED SENSOR

Remove the speed sensor from the axle carrier.

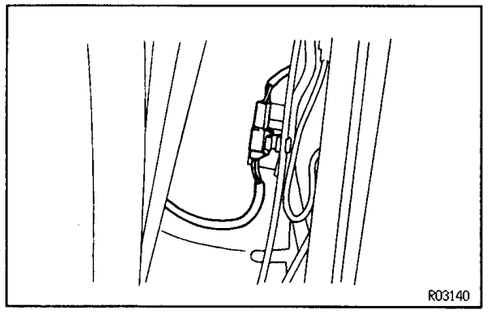


REAR SPEED SENSOR INSTALLATION

BR038–02

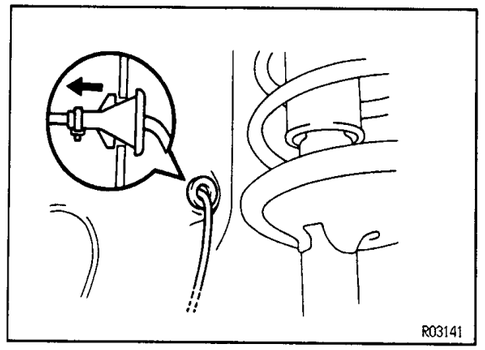
1. INSTALL SPEED SENSOR

Install the speed sensor to the axle carrier.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)

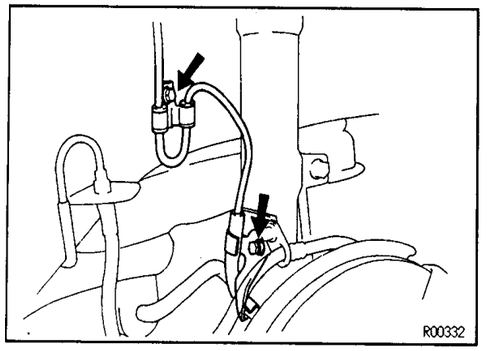


2. CONNECT SPEED SENSOR CONNECTOR

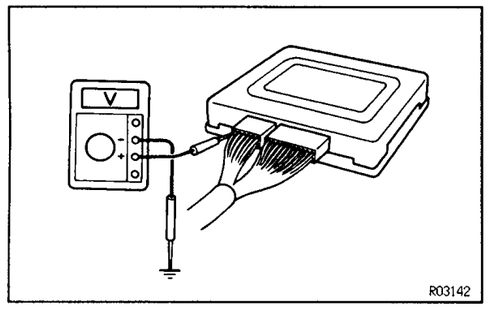
(a) Pass the sensor harness through the body panel hole, and connect the connector.



(b) Install the grommet securely.



(c) Install the sensor harness with the clamps and bolts in place.
Torque: 5.5 N·m (56 kgf·cm, 49 in.·lbf)
(d) Install the side seatback and seat cushion.



ANTI—LOCK BRAKE SYSTEM CIRCUIT

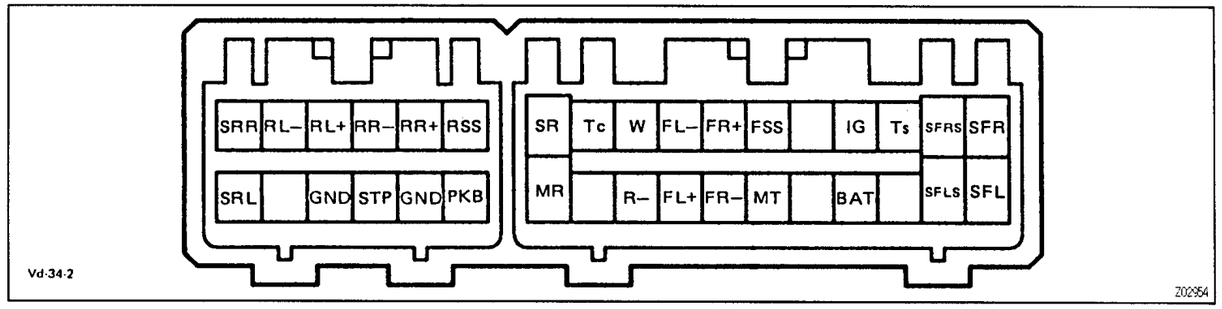
SYSTEM CIRCUIT INSPECTION

BR039-03

1. INSPECT SYSTEM CIRCUIT WITH CONNECTORS CONNECTED

(a) Remove the ABS ECU.

(b) Using a voltmeter with high impedance (10 kΩ/V minimum), measure the voltage at each terminal and body ground.



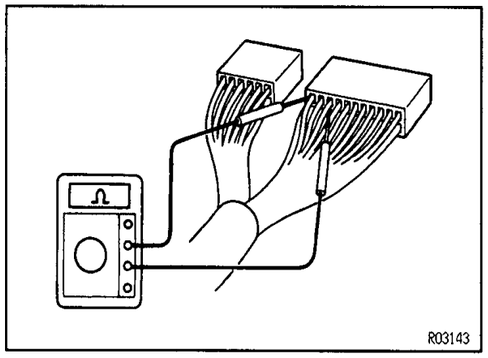
Tester Connection	Check Item	Condition	Specified Value	Trouble Part
SFR	Voltage	IG switch on and "ABS" warning light goes off	Battery voltage	Actuator
SFRS	Voltage	IG switch on and "ABS" warning light goes off	Battery voltage	
TS	Voltage	IG switch on and check connector T_S-E_1 not connected	Battery voltage	ABS ECU
		IG switch on and check connector T_S-E_1 connected	About 0 V	
IG	Voltage	IG switch on	Battery voltage	ECU-IG Fuse
FSS	Continuity	IG switch off	Continuity	ABS ECU
FL—	Continuity	IG switch off	Continuity	
W	Voltage	IG switch on and "ABS" warning light goes on	About 0 V	ABS ECU "ABS" warning light
		IG switch on and "ABS" warning light goes off	Battery voltage	
TC	Voltage	IG switch on and check connector T_C-E_1 not connected	Battery voltage	ABS ECU
		IG switch on and check connector T_C-E_1 connected	About 0 V	
SR	Voltage	IG switch on and "ABS" warning light goes on	About 0 V	
		IG switch on and "ABS" warning light goes off	Battery voltage	
SFL	Voltage	IG switch on and "ABS" warning light goes off	Battery voltage	Actuator
SFLS	Voltage	IG switch on and "ABS" warning light goes off	Battery voltage	
BAT	Voltage	IG switch off	Battery voltage	ECU-B Fuse
FR—	Continuity	IG switch off	Continuity	ABS ECU
R—	Continuity	IG switch off	Continuity	
RR—	Continuity	IG switch off	Continuity	

V01113

Tester Connection	Check Item	Condition	Specified Value	Trouble Part
RL—	Continuity	IG switch off	Continuity	ABS ECU
SRR	Voltage	IG switch on and "ABS" warning light goes off	Battery voltage	Actuator
PKB	Voltage	IG switch on and PKB lever pulled	About 0 V	Parking brake switch Level warning switch
		IG switch on and PKB lever returned	Battery voltage	
GND	Continuity	IG switch off	Continuity	Wiring harness
STP	Voltage	IG switch off and brake pedal depressed	Battery voltage	Stop light switch Stop light
	Continuity	IG switch off and brake pedal returned	Continuity	
GND	Continuity	IG switch off	Continuity	Wiring harness
SRL	Voltage	IG switch on and "ABS" warning light goes off	Battery voltage	Actuator

V01114

If the circuit is not as specified, check and repair or replace the trouble part shown in the table above.



2. INSPECT SYSTEM CIRCUIT WITH CONNECTORS DISCONNECTED

(a) Disconnect the connectors from the ECU, inspect at the wire harness side connector.

Tester Connection	Check Item	Specified Value	Trouble Part	Tester Connection	Check Item	Specified Value	Trouble Part
SFR↔Body ground	Resistance	About 2.2 Ω	Actuator	FL+↔FL–	Resistance	0.92 – 1.22 kΩ	Front LH speed sensor
SFRS↔Body ground	Resistance	About 2.2 Ω	Actuator	MR+↔R–	Resistance	50 – 80 Ω	Control relay
FR+↔FR–	Resistance	0.92 – 1.22 kΩ	Front RH speed sensor	RR+↔RR–	Resistance	1.05 – 1.45 kΩ	Rear RH speed sensor
SR ↔ R–	Resistance	60 – 100 Ω	Control relay	RL+↔RL–	Resistance	1.05 – 1.45 kΩ	Rear LH speed sensor
SFL↔Body ground	Resistance	About 2.2 Ω	Actuator	SRR↔Body ground	Resistance	About 2.2 Ω	Actuator
SFLS↔Body ground	Resistance	About 2.2 Ω	Actuator	SRL↔Body ground	Resistance	About 2.2 Ω	Actuator
MT↔Body ground	Continuity	Continuity	Actuator				

V01115

If the circuit is not as specified, check and repair or replace the trouble part shown in the table above.

(b) Connect the connectors, and install the ECU in place.

SERVICE SPECIFICATIONS

SERVICE DATA

BR03A–06

Brake pedal height (from asphalt sheet)		
LHD vehicles		138–148 mm (5.43–5.83 in.)
RHD vehicles		159–169 mm (6.26–6.65 in.)
Brake pedal freeplay		1–6 mm (0.04–0.24 in.)
Brake pedal reserve distance at 490 N (50 kgf, 110.2 lbf)		More than
For General	4A–FE, 3S–FE engine (RHD)	85 mm (3.35 in.)
	4A–FE, 3S–FE engine (LHD)	65 mm (2.56 in.)
	2C engine	60 mm (2.36 in.)
For Europe	4A–FE, 3S–FE engine (RHD) w/o ABS	90 mm (3.54 in.)
	4A–FE, 3S–FE engine (RHD) w/ ABS	85 mm (3.35 in.)
	3S–GE engine (RHD)	90 mm (3.54 in.)
	4A–FE, 3S–FE engine (LHD) w/o ABS	70 mm (2.76 in.)
	4A–FE, 3S–FE engine (LHD) w/ ABS	65 mm (2.56 in.)
	3S–GE engine (LHD)	70 mm (2.76 in.)
	2C engine (RHD) w/o ABS	85 mm (3.35 in.)
	2C engine (RHD) w/ABS	80 mm (3.15 in.)
	2C engine (LHD) w/o ABS	65 mm (2.56 in.)
	2C engine (LHD) w/ABS	60 mm (2.36 in.)
Brake booster push rod to piston clearance (w/SST)		0 mm (0 in.)
Vacuum pump blade height	Limit	13.3 mm (0.524 in.)
Vacuum pump blade thickness	Limit	5.95 mm (0.2343 in.)
Vacuum pump blade length	Limit	22.98 mm (0.9047 in.)
Front brake pad thickness (Ex. 3S–GE engine)	STD	12.0 mm (0.472 in.)
Front brake pad thickness (Ex. 3S–GE engine)	Limit	1.0 mm (0.039 in.)
Front brake pad thickness (3S–GE engine)	STD	10.0 mm (0.394 in.)
Front brake pad thickness (3S–GE engine)	Limit	1.0 mm (0.039 in.)
Front brake disc thickness (3S–FE engine)	STD	28.0 mm (1.102 in.)
Front brake disc thickness (3S–FE engine)	Limit	26.0 mm (1.024 in.)
Front brake disc thickness (Ex. 3S–FE engine)	STD	25.0 mm (0.984 in.)
Front brake disc thickness (Ex. 3S–FE engine)	Limit	23.0 mm (0.906 in.)
Front brake disc runout	Limit	0.05 mm (0.0020 in.)
Rear brake drum inside diameter	STD	200.0 mm (7.874 in.)
Rear brake drum inside diameter	Limit	201.0 mm (7.913 in.)
Rear brake drum lining thickness	STD	4.0 mm (0.157 in.)
Rear brake drum lining thickness	Limit	1.0 mm (0.039 in.)
Rear brake drum to shoe clearance		0.6 mm (0.024 in.)
Rear drum brake clearance between rear shoe and lever		Less than 0.35 mm (0.0138 in.)
Rear drum brake adjusting shim thickness		0.2 mm (0.008 in.) 0.3 mm (0.012 in.) 0.4 mm (0.016 in.) 0.5 mm (0.020 in.) 0.6 mm (0.024 in.) 0.9 mm (0.035 in.)
Rear brake disc pad thickness	STD	10.0 mm (0.394 in.)
Rear brake disc pad thickness	Limit	1.0 mm (0.039 in.)
Rear brake disc thickness	STD	10.0 mm (0.394 in.)

Rear brake disc thickness	Limit	9.0 mm (0.354 in.)
Rear brake disc runout	Limit	0.15 mm (0.0059 in.)
Rear brake disc inside diameter	STD	170 mm (6.69 in.)
Rear brake disc inside diameter	Limit	171 mm (6.73 in.)
Parking brake lining thickness	STD	2.0 mm (0.079 in.)
Parking brake lining thickness	Limit	1.0 mm (0.039 in.)
Parking brake lever travel at 196 N (20 kgf, 44 lbf)		4 – 7 clicks
Parking brake clearance between rear shoe and lever		Less than 0.35 mm (0.0138 in.)
Parking brake adjusting shim thickness for rear disc brake		0.3 mm (0.012 in.) 0.6 mm (0.024 in.) 0.9 mm (0.035 in.)

BR03B-07

TORQUE SPECIFICATIONS

Part tightened	N·m	kgf·cm	ft·lbf
Master cylinder x Piston stopper bolt	10	100	7
Master cylinder x Reservoir	1.7	17.5	15.2 in.·lbf
Master cylinder x Brake booster	13	130	9
Brake tube union nut	15	155	11
Brake booster clevis lock nut	25	260	19
Brake booster x Pedal bracket	13	130	9
Vacuum pump x Alternator	7.8	80	69 in.·lbf
Vacuum pump x Check valve	74	750	54
Vacuum pump x Vacuum union	14	140	10
Vacuum pump x Oil outlet union	32	325	24
Front disc brake cylinder installation bolt	34	350	25
Bleeder plug	8.3	85	74 in.·lbf
Front disc brake torque plate x Steering knuckle	94	960	69
Front disc brake cylinder x Flexible hose	30	310	22
Rear drum brake wheel cylinder x Backing plate	10	100	7
Parking brake cable bracket x Backing plate	7.8	80	69 in.·lbf
Flexible hose x Shock absorber	29	300	22
Rear disc brake cylinder instllation bolt	20	200	14
Rear disc brake torque plate x Dust cover	47	475	34
Rear disc brake cylinder x Flexible hose	30	310	22
Proportioning valve installation nut	7.8	80	69 in.·lbf
Load sensing proportioning valve x Suspension arm	25	260	19
Load sensing proportioning valve x Body	39	400	29
ABS actuator x ABS actuator No.1 bracket	5.4	55	48 in.·lbf
ABS actuator x ABS actuator No.3 bracket	13	130	9
ABS actuator No.3 bracket x Body	19	195	14
Front speed sensor installation bolt	8.0	82	71 in.·lbf
Rear speed sensor installation bolt	8.0	82	71 in.·lbf
ABS ECU bracket x Body	5.5	56	49 in.·lbf

ELECTRICAL WIRING DIAGRAMS

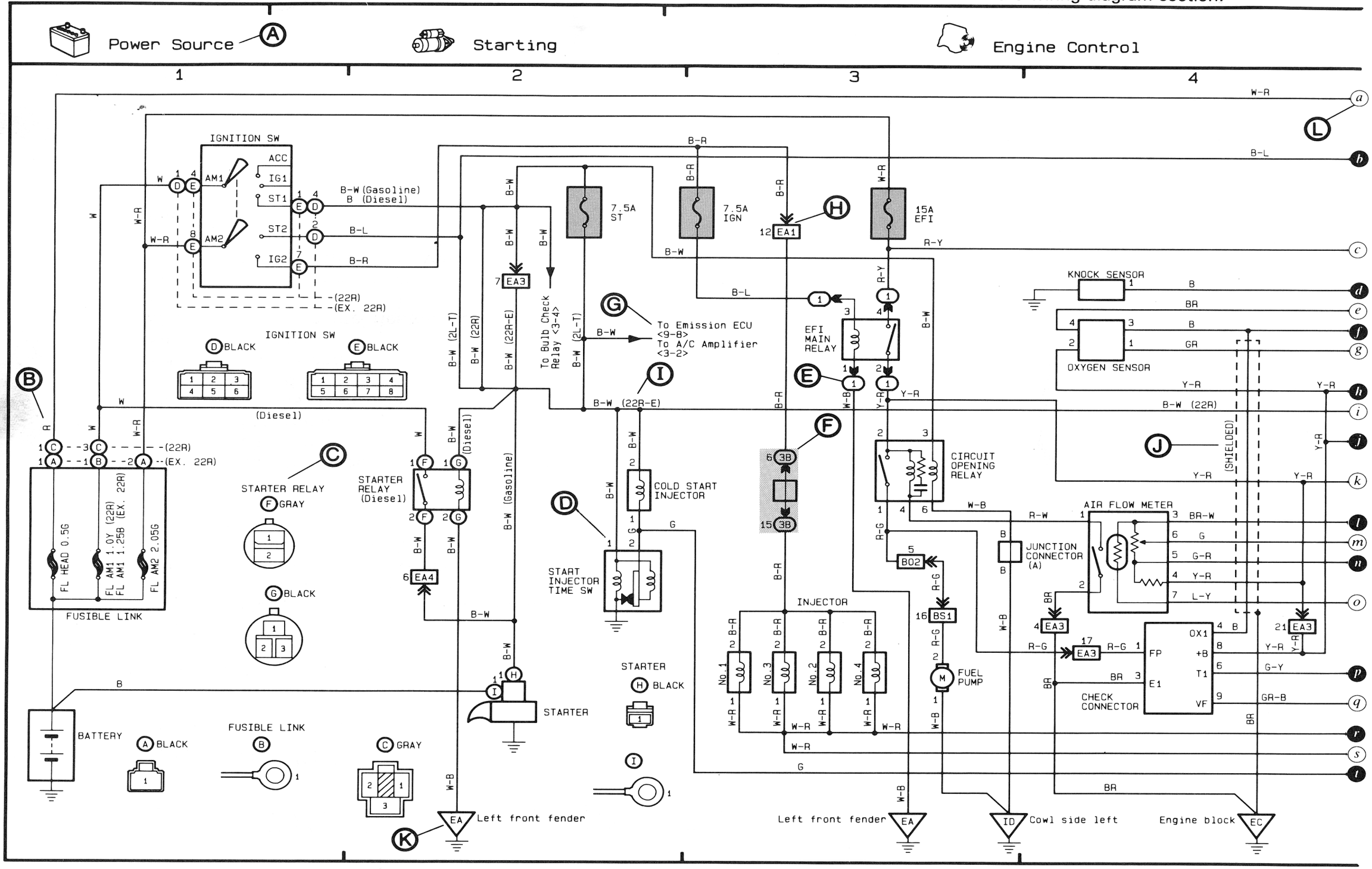
ABBREVIATION

The following abbreviations are used in this wiring diagram.

ABS = Anti-Lock Brake System
A/C = Air Conditioner
A/T = Automatic Transaxle
COMB. = Combination
ECT = Electronic Controlled Transmission
ECU = Electronic Control Unit
EFI = Electronic Fuel Injection
EGR = Exhaust Gas Recirculation
Ex. = Except
FL = Fusible Link
ISC = Idle Speed Control
J/B = Junction Block
L/B = Liftback
LH = Left-Hand
M/T = Manual Transaxle
O/D = Overdrive
RH = Right-Hand
S/D = Sedan
SRS = Supplemental Restraint System
SW = Switch
TEMP. = Temperature
VSV = Vacuum Switching Valve
w/ = With
w/o = Without

HOW TO READ THIS SECTION

* The system shown here is an EXAMPLE ONLY. It is different to the actual circuit shown in the wiring diagram section.



Ⓐ: System Title

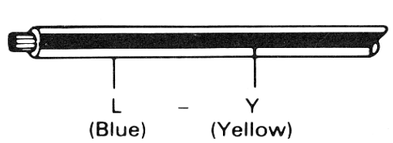
Ⓑ: Indicates the wiring color.

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.

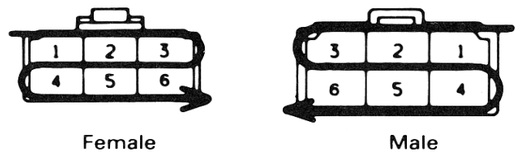
Example: L – Y



Ⓒ: Indicates the connector to be connected to a part (the numeral indicates the pin No.)

Ⓓ: Indicates the pin number of the connector. The numbering system is different for female and male connectors.

Example: Numbered in order from upper left to lower right / Numbered in order from upper right to lower left



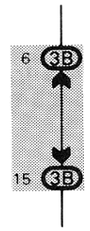
The numbering system for the overall wiring diagram is the same as above.

Ⓔ: Indicates a Relay Block. No shading is used and only the Relay Block No. is shown to distinguish it from the J/B.

Example: ① Indicates Relay Block No. 1.

Ⓕ: Junction Block (The number in the circle is the J/B No. and the connector code is shown beside it). Junction Blocks are shaded to clearly separate them from other parts (different junction blocks are shaded differently for further clarification).

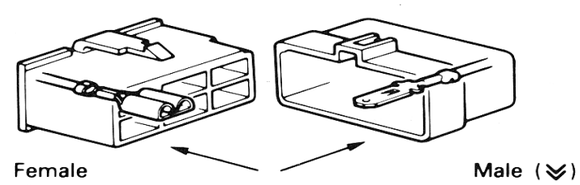
Example:



3B indicates that it is inside Junction Block No.3.

Ⓖ: Indicates related system.

Ⓗ: Indicates the wiring harness and wiring harness connector. The wiring harness with male terminal is shown with arrows (≫). Outside numerals are pin numbers.



Ⓘ: ( ) is used to indicate different wiring and connector, etc. when the vehicle model, engine type, or specification is different.

Ⓙ: Indicates a shielded cable.

Ⓚ: Indicates a ground point.

Ⓛ: The same code occuring on the next page indicates that the wire harness is continuous.

SYSTEM INDEX

1991 Model (Location No. 1 to 44)

SYSTEMS	LOCATION
ABS (Anti-Lock Brake System)	25-2
Air Conditioner	38-2 (RHD Push SW type) 39-2 (LHD Lever SW type) 40-2 (RHD Lever SW type)
Auto Antenna	34-3
Back-Up Light	33-2
Charging	1-4
Cigarette Lighter and Clock	31-2
Combination Meter	35-2 (w/ Tachometer) 36-2 (w/o Tachometer)
Door Lock	28-2
ECT (Electronic Control Transmission)	10-2
Engine Control	3-2 (3S-GE) 4-2 (3S-FE, A/T) 5-2 (3S-FE, M/T) 6-2 (4A-FE Lean Burn type) 7-2 (4A-FE Ex. Lean Burn type, A/T) 8-2 (4A-FE Ex. Lean Burn type, M/T)
Front and Rear Window Defogger	29-3
Front Fog Light	13-2
Front Wiper and Washer	32-2
Fuel Heater (2C)	2-2

SYSTEMS	LOCATION
Glow and Emission Control	9-2
Glow Plug	2-3
Headlight	11-2 (LHD w/Daytime Running Light) 12-3 (LHD in Europe w/o Daytime Running Light) 13-3 (Ex. LHD in Europe)
Headlight Beam Level Control	14-2
Headlight Cleaner	22-2
Horn	29-2
Illumination	19-2 (LHD) 20-2 (RHD)
Interior Light	21-2
Light Auto Turn Off	31-3
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Power Source	1 ~ 40-1
Power Window	27-2
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SYSTEMS	LOCATION
Radio and Player	30-2
Rear Fog Light	15-2
Rear Wiper and Washer	32-3
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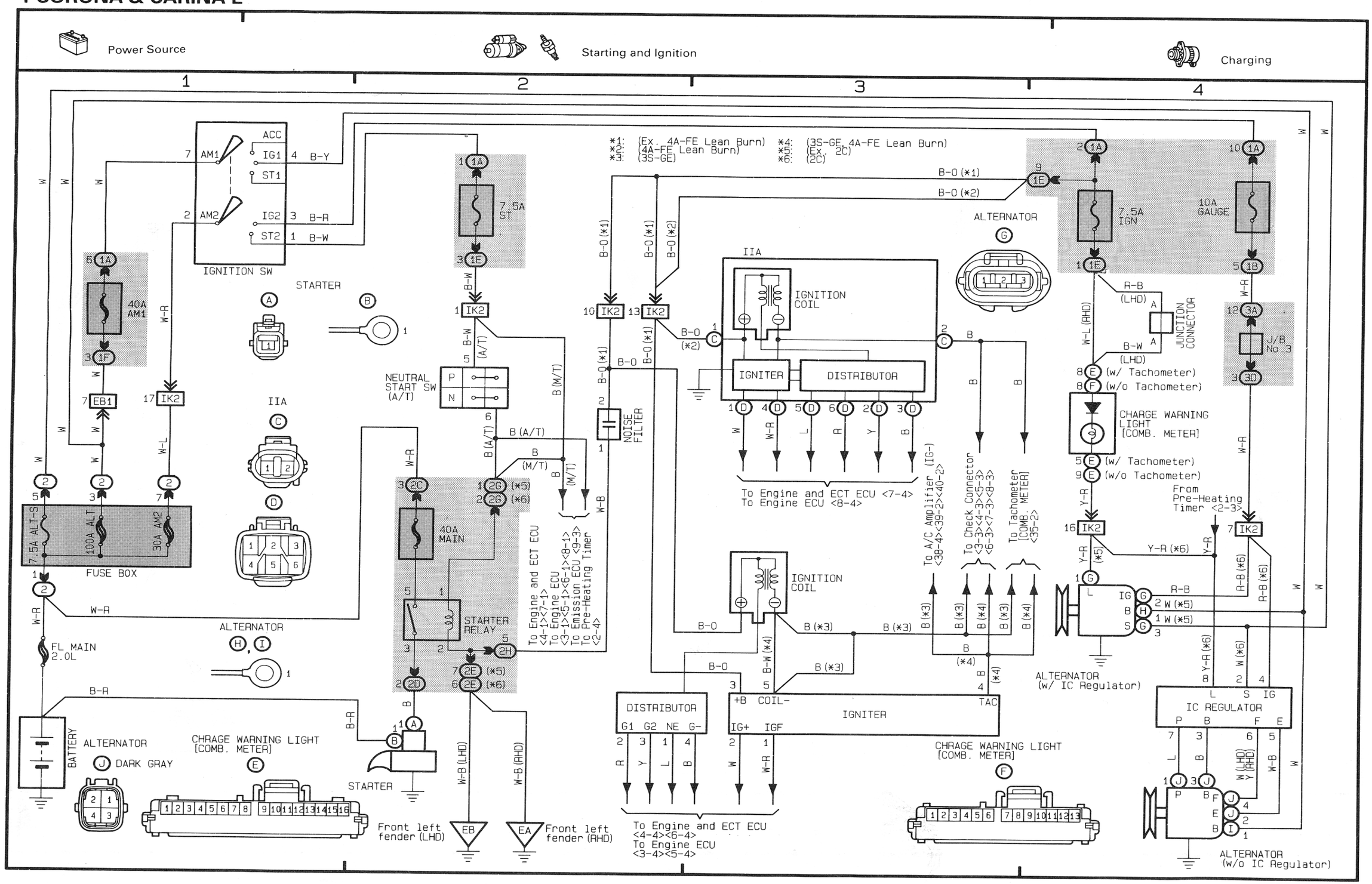
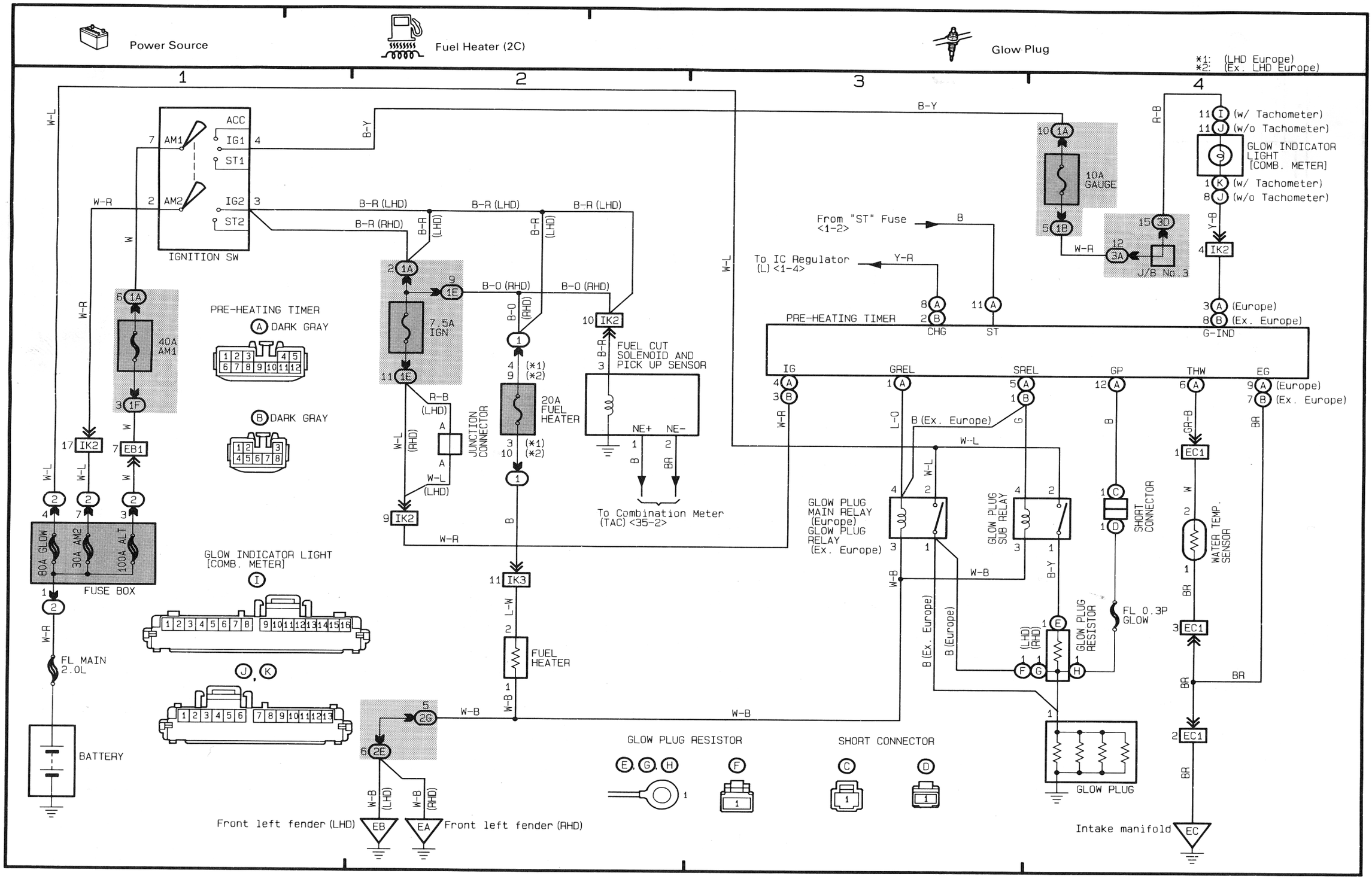
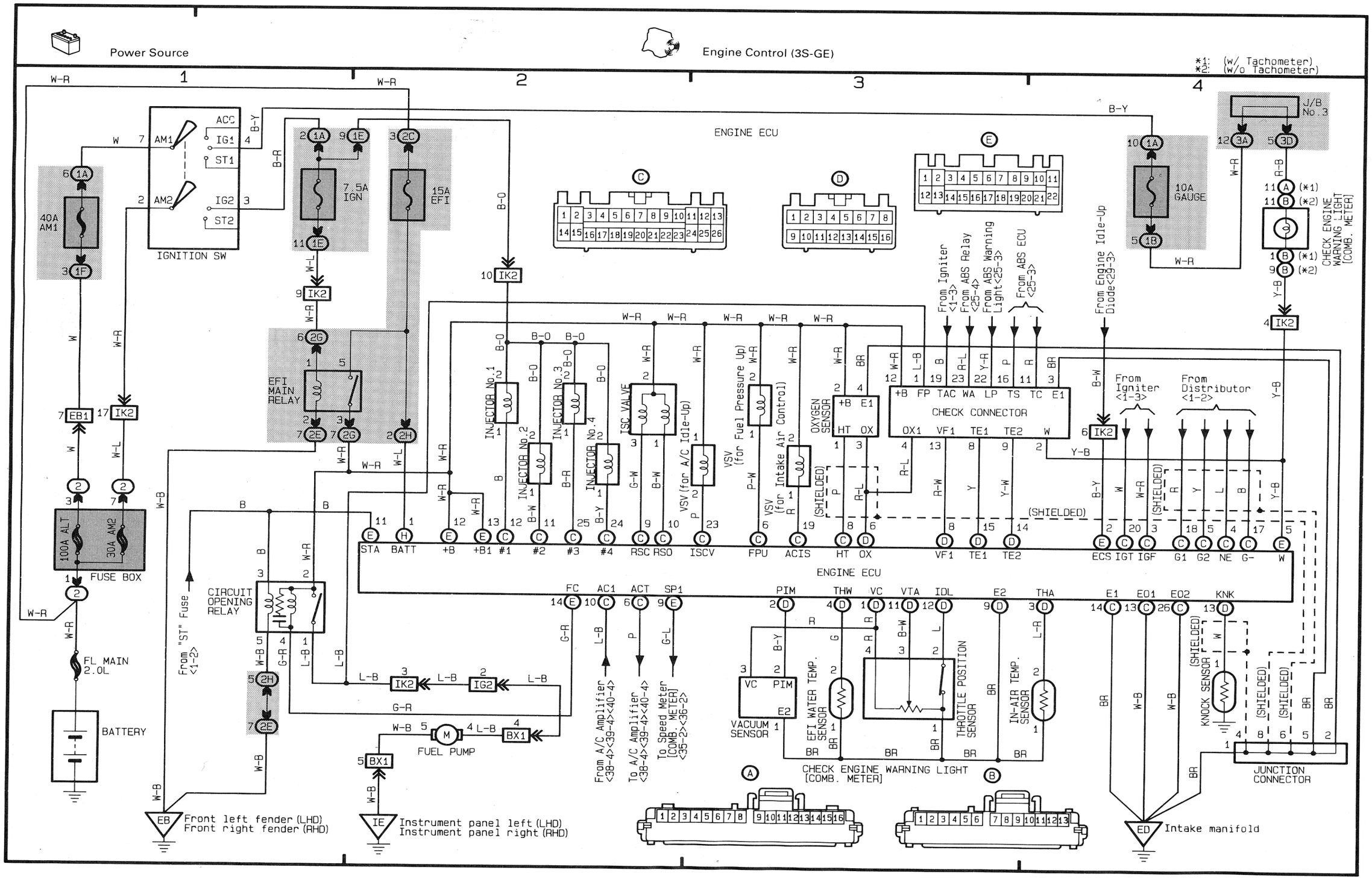
Starting and Ignition	1-2
Stop Light	12-2 (S/D) 17-4 (L/B)
Taillight	16-2 (LHD in Europe) 17-2 (L/B.Ex. LHD in Europe) 18-2 (S/D Ex. LHD in Europe)
Turn Signal and Hazard Warning Light	23-2 (LHD) 24-2 (RHD)
Junction Block and Wire Harness Connector	41-1
Connector Joining Wire Harness and Wire Harness	41-1 42-1 43-1 44-1


Power Source
Starting and Ignition
Charging
1
2
3
4
*1: (Ex. 4A-FE Lean Burn) <4-1><7-1>
*2: (4A-FE Lean Burn)
*3: (3S-GE)
*4: (3S-GE, 4A-FE Lean Burn)
*5: (Ex. 2C)
*6: (2C)
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
B-Y
B-R
B-W
STARTER
40A AM1
7.5A ST
7.5A IGN
10A GAUGE
ALTERNATOR
IIA
IGNITION COIL
IGNITER
DISTRIBUTOR
NEUTRAL START SW (A/T)
NOISE FILTER
JUNCTION CONNECTOR
R-B (LHD)
B-W (LHD)
W-L (RHD)
CHARGE WARNING LIGHT [COMB. METER]
(w/ Tachometer)
(w/o Tachometer)
To Engine and ECT ECU <7-4>
To Engine ECU <8-4>
To A/C Amplifier (IG-) <38-4><39-2><40-2>
To Check Connector <3-3><4-3><5-3> <6-3><7-3><8-3>
To Tachometer [COMB. METER] <35-2>
From Pre-Heating Timer <2-3>
7.5A ALT-S
100A ALT
30A AM2
FUSE BOX
FL MAIN 2.0L
BATTERY
DARK GRAY
CHRAGE WARNING LIGHT [COMB. METER]
STARTER
40A MAIN
STARTER RELAY
To Engine and ECT ECU <4-1><7-1>
To Engine ECU <3-1><5-1><6-1><8-1>
To Emission ECU <9-3>
To Pre-Heating Timer <2-4>
W-B (LHD)
W-B (RHD)
Front left fender (LHD)
Front left fender (RHD)
To Engine and ECT ECU <4-4><6-4>
To Engine ECU <3-4><5-4>
ALTERNATOR (w/ IC Regulator)
ALTERNATOR (w/o IC Regulator)
IC REGULATOR

2 CORONA & CARINA E




Power Source
Engine Control (3S-GE)
*1: (w/ Tachometer)
*2: (w/o Tachometer)
ENGINE ECU
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
40A AM1
7.5A IGN
15A EFI
10A GAUGE
J/B No.3
EFI MAIN RELAY
CHECK ENGINE WARNING LIGHT [COMB. METER]
From Igniter <1-3>
From ABS Relay <25-4>
From ABS Warning Light <25-3>
From ABS ECU <25-3>
From Engine Idle-Up Diode <29-3>
From Distributor <1-2>
CHECK CONNECTOR
+B FP TAC WA LP TS TC E1
OX1 VF1 TE1 TE2 W
INJECTOR No.1
INJECTOR No.2
INJECTOR No.3
INJECTOR No.4
TSC VALVE
VSV (for A/C Idle-Up)
VSV (for Fuel Pressure Up)
VSV (for Intake Air Control)
OXYGEN SENSOR
+B E1
HT OX
(SHIELDED)
STA BATT +B +B1 #1 #2 #3 #4 RSC RSO ISCV FPU ACIS HT OX VF1 TE1 TE2
ECS IGT IGF G1 G2 NE G- W
100A ALT
30A AM2
FUSE BOX
FL MAIN 2.0L
BATTERY
CIRCUIT OPENING RELAY
From "ST" Fuse <1-2>
FUEL PUMP
From A/C Amplifier <38-4><39-4><40-4>
To A/C Amplifier <38-4><39-4><40-4>
To Speed Meter [COMB. METER] <35-2><36-2>
FC AC1 ACT SP1
PIM THW VC VTA IDL E2 THA
E1 E01 E02 KNK
VACUUM SENSOR
EFI WATER TEMP. SENSOR
THROTTLE POSITION SENSOR
IN-AIR TEMP. SENSOR
KNOCK SENSOR
JUNCTION CONNECTOR
CHECK ENGINE WARNING LIGHT [COMB. METER]
EB Front left fender (LHD) Front right fender (RHD)
IE Instrument panel left (LHD) Instrument panel right (RHD)
ED Intake manifold

Power Source

Engine Control (3S-FE A/T)

*1: (w/ Tachometer)
*2: (w/o Tachometer Europe)
*3: (w/o Tachometer Ex. Europe)

1 2 3 4

W-R

W-R

B-Y

ENGINE AND ECT ECU

CHECK ENGINE WARNING LIGHT [COMB. METER]

J/B No.3

10A GAUGE

CHECK ENGINE WARNING LIGHT [COMB. METER]

40A AM1

IGNITION SW

ACC IG1 ST1 IG2 ST2 AM1 AM2

7.5A IGN

15A EFI

SHORT CONNECTOR

EFI MAIN RELAY

From Igniter<1-3>

From ABS Relay <25-3>

From ABS Warning Light<25-3>

From ABS ECU <25-3>

From Engine Idle-Up Diode<29-3>

From Igniter <1-3>

From Distributor <1-2>

INJECTOR No.1

INJECTOR No.3

INJECTOR No.2

INJECTOR No.4

ISC VALVE

VSV (for A/C Idle-Up)

VSV (for EGR)

OXYGEN SENSOR

CHECK CONNECTOR

+B E1 HT OX

+B FP TAC WA LP TS TC E1

TT OX1 VF1 TE1 TE2 W

STA BATT +B +B1 #10 #20 RSC RSO ISCV SEL HT OX TT VF1 TE1 TE2 ECS IGT IGF G1 NE- NE+ G- W

ENGINE AND ECT ECU

FC AC1 ACT SPD B/K VAF PIM THW VC VTA IDL E2 THA E02 E01 E KNK KNK R/P

From Neutral Start SW <1-2>

CIRCUIT OPENING RELAY

FUEL PUMP

From A/C Amplifier <38-4><39-4><40-4>

To A/C Amplifier <38-4><39-4><40-4>

To Speed Meter [COMB. METER] <35-2><36-2>

From Stop Light SW <12-2><17-4>

VALIABLE RESISTOR

VACUUM SENSOR

EFI WATER TEMP. SENSOR

THROTTLE POSITION SENSOR

IN-AIR TEMP. SENSOR

KICK DOWN SW

KNOCK SENSOR

SHORT CONNECTOR

JUNCTION CONNECTOR

FUSE BOX

100A ALT

30A AM2

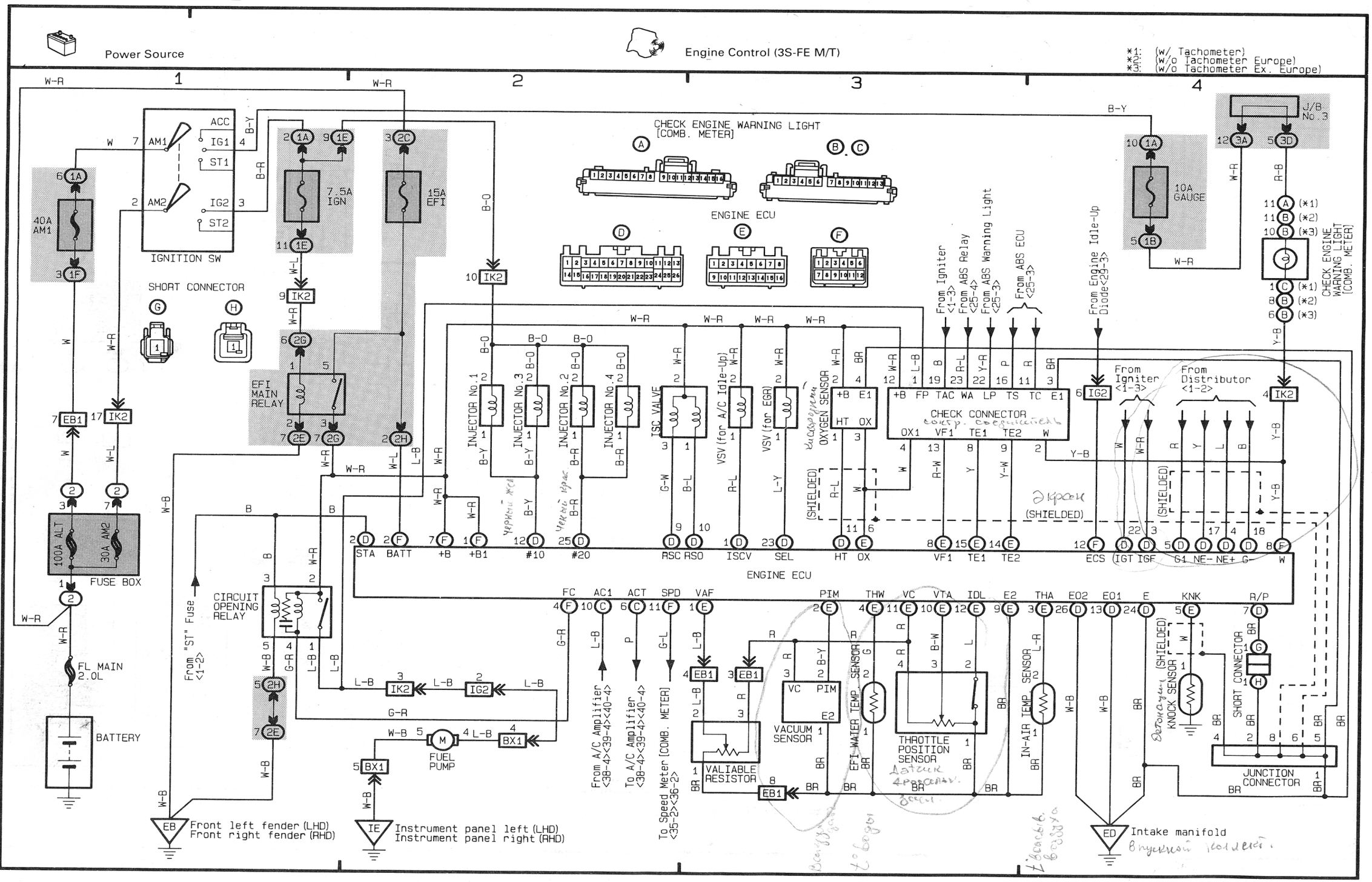
FL MAIN 2.0L

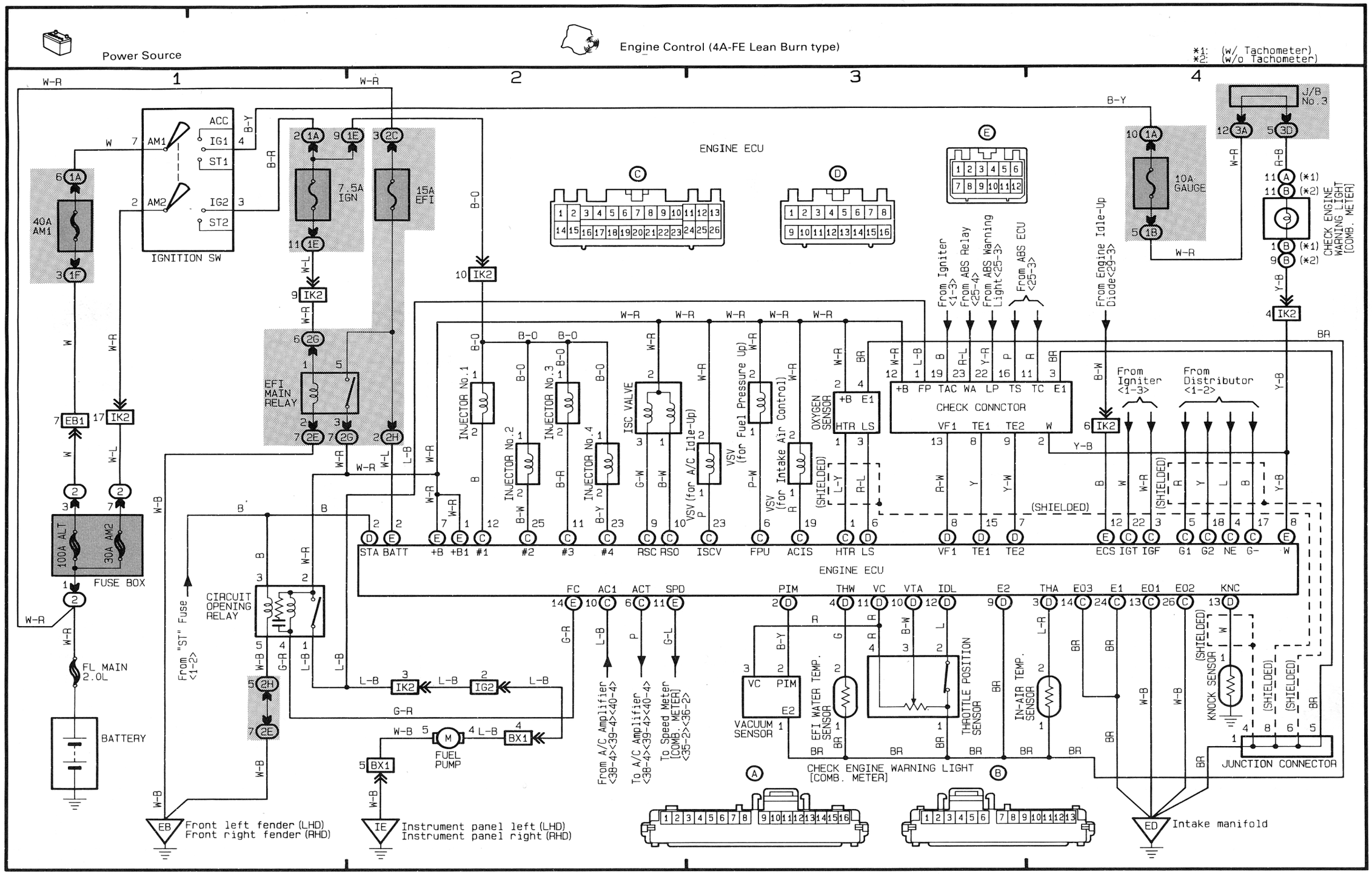
BATTERY

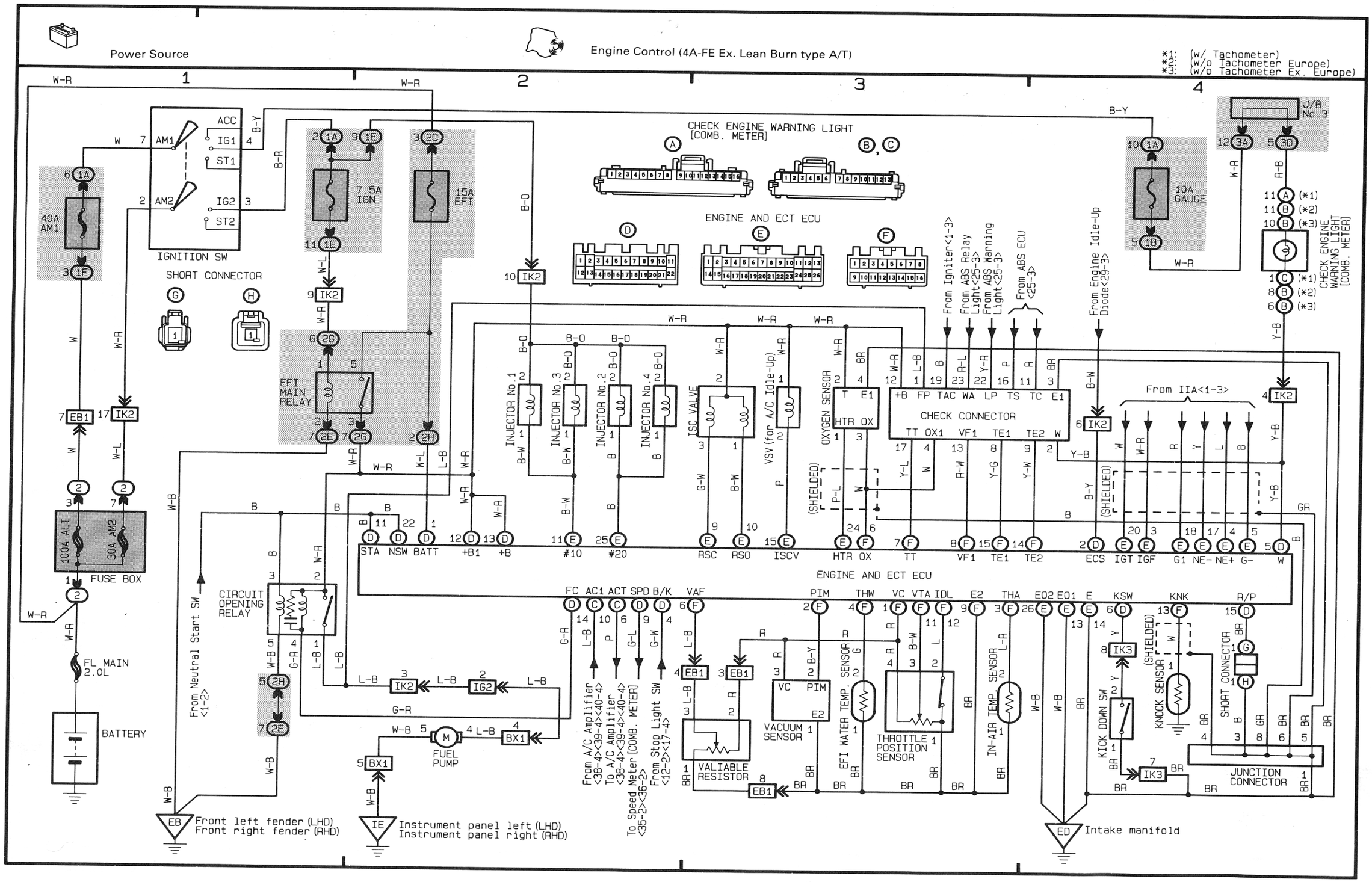
EB Front left fender (LHD)
Front right fender (RHD)

IE Instrument panel left (LHD)
Instrument panel right (RHD)

ED Intake manifold


Power Source
Engine Control (3S-FE M/T)
*1: (w/ Tachometer)
*2: (w/o Tachometer Europe)
*3: (w/o Tachometer Ex. Europe)
1
2
3
4
CHECK ENGINE WARNING LIGHT [COMB. METER]
ENGINE ECU
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
40A AM1
7.5A IGN
15A EFI
10A GAUGE
J/B No.3
SHORT CONNECTOR
EFI MAIN RELAY
INJECTOR No.1
INJECTOR No.3
INJECTOR No.2
INJECTOR No.4
ISC VALVE
VSV (for A/C Idle-Up)
VSV (for EGR)
OXYGEN SENSOR
CHECK CONNECTOR
From Igniter <1-3>
From ABS Relay <25-4>
From ABS Warning Light <25-3>
From ABS ECU <25-3>
From Engine Idle-Up Diode<29-3>
From Distributor <1-2>
STA BATT +B +B1 #10 #20 RSC RSO ISCV SEL HT OX VF1 TE1 TE2 ECS IGT IGF G1 NE- NE+ G- W
FC AC1 ACT SPD VAF PIM THW VC VTA IDL E2 THA E02 E01 E KNK R/P
CIRCUIT OPENING RELAY
From "ST" Fuse <1-2>
FUEL PUMP
VACUUM SENSOR
EFI-WATER TEMP. SENSOR
THROTTLE POSITION SENSOR
IN-AIR TEMP. SENSOR
KNOCK SENSOR
VALIABLE RESISTOR
JUNCTION CONNECTOR
FUSE BOX
100A ALT
30A AM2
FL MAIN 2.0L
BATTERY
From A/C Amplifier <38-4><39-4><40-4>
To A/C Amplifier <38-4><39-4><40-4>
To Speed Meter [COMB. METER] <35-2><36-2>
EB Front left fender (LHD) Front right fender (RHD)
IE Instrument panel left (LHD) Instrument panel right (RHD)
ED Intake manifold

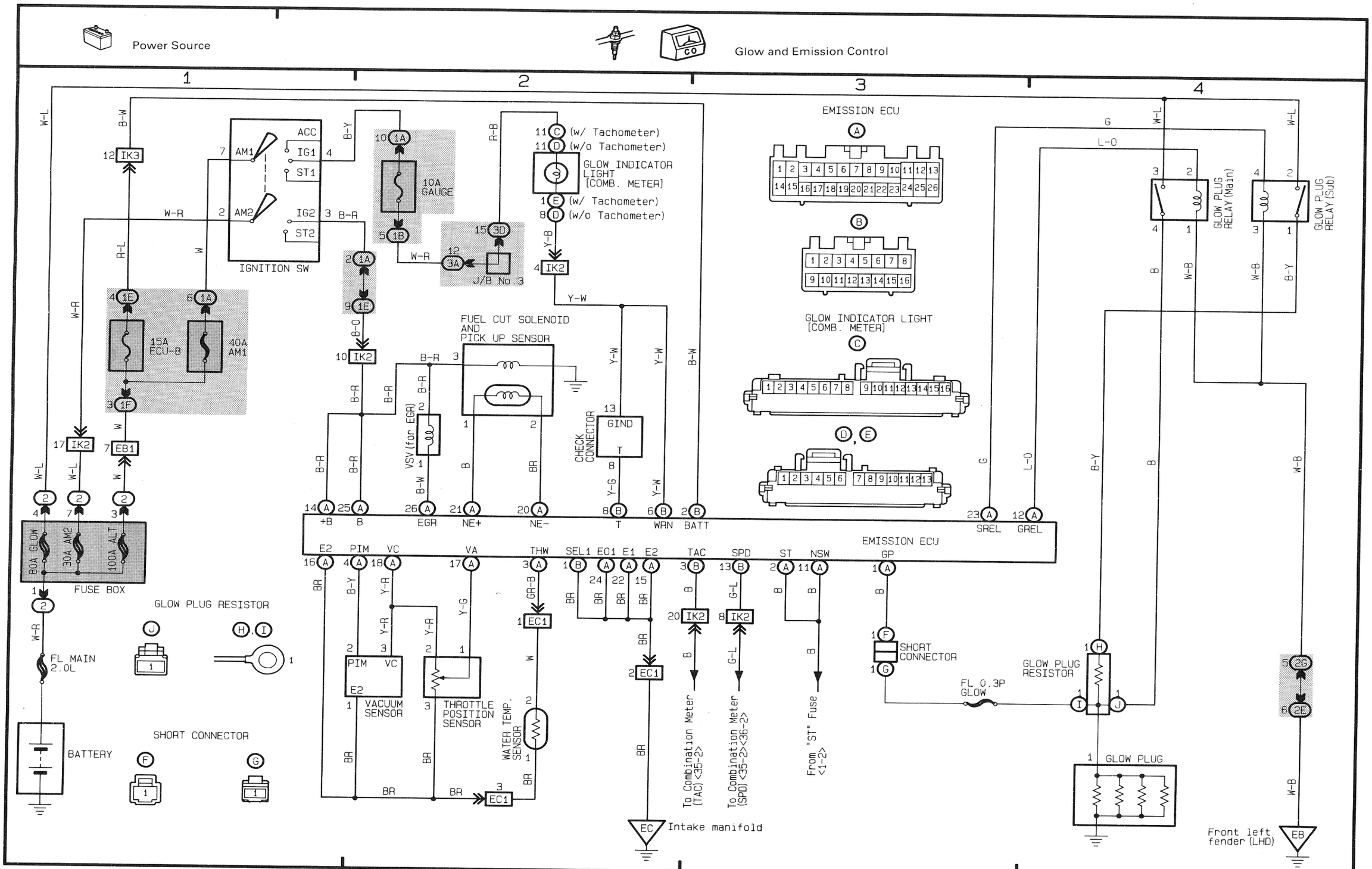

Power Source
Engine Control (4A-FE Lean Burn type)
*1: (w/ Tachometer)
*2: (w/o Tachometer)
ENGINE ECU
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
40A AM1
7.5A IGN
15A EFI
EFI MAIN RELAY
FUSE BOX
100A ALT
30A AM2
FL MAIN 2.0L
BATTERY
CIRCUIT OPENING RELAY
From "ST" Fuse <1-2>
FUEL PUMP
INJECTOR No.1
INJECTOR No.2
INJECTOR No.3
INJECTOR No.4
ISC VALVE
VSV (for A/C Idle-Up)
VSV (for Fuel Pressure Up)
VSV (for Intake Air Control)
OXYGEN SENSOR
HTR LS
CHECK CONNCTOR
+B FP TAC WA LP TS TC E1
VF1 TE1 TE2 W
From Igniter <1-3>
From ABS Relay <25-4>
From ABS Warning Light<25-3>
From ABS ECU <25-3>
From Engine Idle-Up Diode<29-3>
10A GAUGE
J/B No.3
CHECK ENGINE WARNING LIGHT [COMB. METER]
From Distributor <1-2>
STA BATT +B +B1 #1 #2 #3 #4 RSC RSO ISCV FPU ACIS HTR LS VF1 TE1 TE2 ECS IGT IGF G1 G2 NE G- W
FC AC1 ACT SPD PIM THW VC VTA IDL E2 THA E03 E1 E01 E02 KNC
From A/C Amplifier <38-4><39-4><40-4>
To A/C Amplifier <38-4><39-4><40-4>
To Speed Meter [COMB. METER] <35-2><36-2>
VACUUM SENSOR
EFI WATER TEMP. SENSOR
THROTTLE POSITION SENSOR
IN-AIR TEMP. SENSOR
KNOCK SENSOR
JUNCTION CONNECTOR
CHECK ENGINE WARNING LIGHT [COMB. METER]
EB Front left fender (LHD) Front right fender (RHD)
IE Instrument panel left (LHD) Instrument panel right (RHD)
ED Intake manifold


Power Source
Engine Control (4A-FE Ex. Lean Burn type A/T)
*1: (w/ Tachometer)
*2: (w/o Tachometer Europe)
*3: (w/o Tachometer Ex. Europe)
CHECK ENGINE WARNING LIGHT [COMB. METER]
ENGINE AND ECT ECU
IGNITION SW
SHORT CONNECTOR
40A AM1
7.5A IGN
15A EFI
EFI MAIN RELAY
10A GAUGE
J/B No. 3
CHECK ENGINE WARNING LIGHT [COMB. METER]
From Igniter<1-3>
From ABS Relay Light<25-3>
From ABS Warning Light<25-3>
From ABS ECU <25-3>
From Engine Idle-Up Diode<29-3>
From IIA<1-3>
INJECTOR No.1
INJECTOR No.3
INJECTOR No.2
INJECTOR No.4
ISC VALVE
VSV (for A/C Idle-Up)
OXYGEN SENSOR
CHECK CONNECTOR
100A ALT
30A AM2
FUSE BOX
FL MAIN 2.0L
BATTERY
From Neutral Start SW <1-2>
CIRCUIT OPENING RELAY
FUEL PUMP
From A/C Amplifier <38-4><39-4><40-4>
To A/C Amplifier <38-4><39-4><40-4>
To Speed Meter [COMB. METER] <35-2><36-2>
From Stop Light SW <12-2><17-4>
VALIABLE RESISTOR
VACUUM SENSOR
EFI WATER TEMP. SENSOR
THROTTLE POSITION SENSOR
IN-AIR TEMP. SENSOR
KICK DOWN SW
KNOCK SENSOR
SHORT CONNECTOR
JUNCTION CONNECTOR
EB Front left fender (LHD) Front right fender (RHD)
IE Instrument panel left (LHD) Instrument panel right (RHD)
ED Intake manifold

Power Source

Engine Control (4A-FE Ex. Lean Burn type M/T)

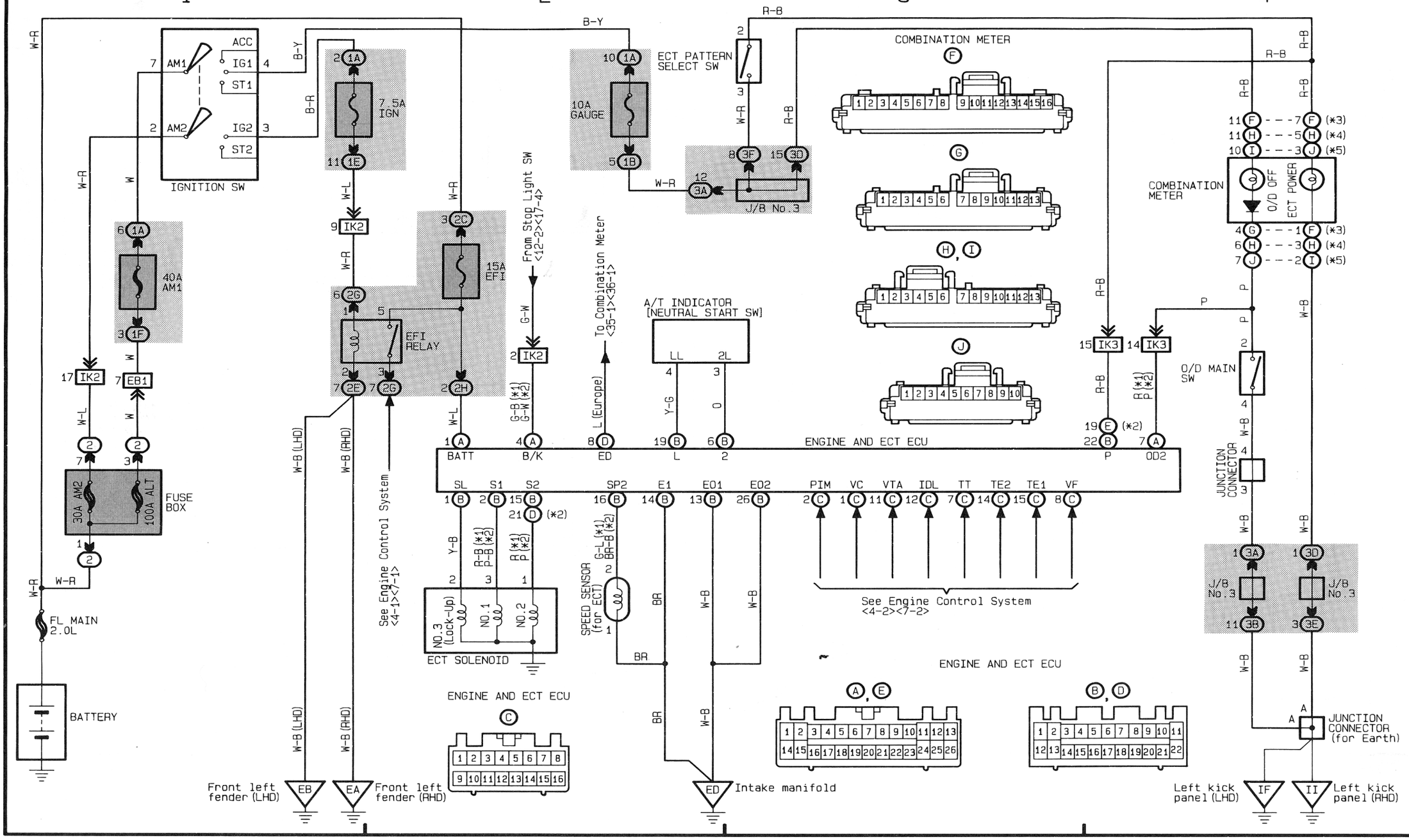
*1: (w/ Tachometer)
*2: (w/o Tachometer Europe)
*3: (w/o Tachometer Ex. Europe)

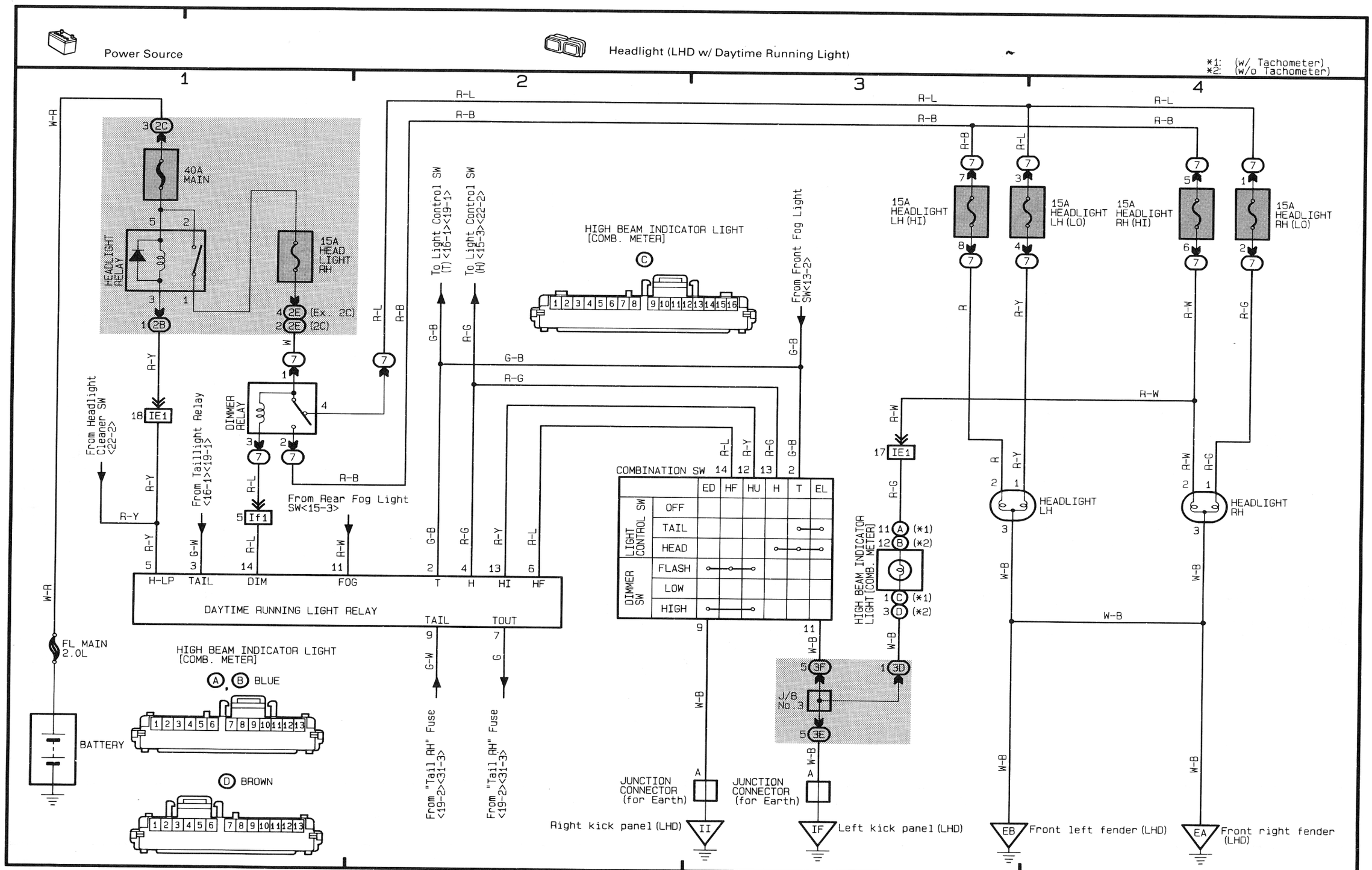

Power Source
Glow and Emission Control
1
2
3
4
W-L
B-W
12 IK3
7 AM1
ACC
IG1
ST1
4
B-Y
10 1A
10A GAUGE
5 1B
R-B
11 C (w/ Tachometer)
11 D (w/o Tachometer)
GLOW INDICATOR LIGHT [COMB. METER]
1 E (w/ Tachometer)
8 D (w/o Tachometer)
W-R
2 AM2
IG2
3 B-R
ST2
IGNITION SW
15 30
12 3A
J/B No.3
Y-B
4 IK2
2 1A
9 1E
B-O
10 IK2
Y-W
FUEL CUT SOLENOID AND PICK UP SENSOR
B-R
3
13 GIND
CHECK CONNECTOR
T
8
Y-G
Y-W
B-W
VSV (for EGR)
2
1
B
BR
4 1E
6 1A
15A ECU-B
40A AM1
3 1F
W
17 IK2
7 EB1
W-L
2
4
7
3
80A GLOW
30A AM2
100A ALT
FUSE BOX
1
W-R
FL MAIN 2.0L
BATTERY
GLOW PLUG RESISTOR
J
H, I
SHORT CONNECTOR
F
G
14 A +B
25 A B
26 A EGR
21 A NE+
20 A NE-
8 B T
6 B WRN
2 B BATT
EMISSION ECU
A
B
C
D, E
GLOW INDICATOR LIGHT [COMB. METER]
23 A SREL
12 A GREL
G
L-O
GLOW PLUG RELAY (Main)
GLOW PLUG RELAY (Sub)
E2 PIM VC VA THW SEL1 EO1 E1 E2 TAC SPD ST NSW GP
16 A
4 A
18 A
17 A
3 A
1 B
24 A
22 A
15 A
3 B
13 B
2 A
11 A
1 A
VACUUM SENSOR
THROTTLE POSITION SENSOR
WATER TEMP. SENSOR
1 EC1
2 EC1
3 EC1
20 IK2
8 IK2
To Combination Meter (TAC) <35-2>
To Combination Meter (SPD) <35-2><36-2>
From "ST" Fuse <1-2>
SHORT CONNECTOR
FL 0.3P GLOW
GLOW PLUG RESISTOR
GLOW PLUG
5 2G
6 2E
EC
Intake manifold
Front left fender (LHD)
EB

Power Source

ECT ECT (Electronic Controlled Transmission)

*1: (3S-GE)
*2: (4A-FE)
*3: (w/ Tachometer)
*4: (w/o Tachometer Europe)
*5: (w/o Tachometer Ex. Europe)




Power Source
Headlight (LHD w/ Daytime Running Light)
*1: (w/ Tachometer)
*2: (w/o Tachometer)
1
2
3
4
40A MAIN
HEADLIGHT RELAY
15A HEAD LIGHT RH
(Ex. 2C)
(2C)
DIMMER RELAY
From Headlight Cleaner SW <22-2>
From Taillight Relay <16-1><19-1>
From Rear Fog Light SW<15-3>
H-LP
TAIL
DIM
FOG
T
H
HI
HF
DAYTIME RUNNING LIGHT RELAY
TAIL
TOUT
To Light Control SW (T) <16-1><19-1>
To Light Control SW (H) <15-3><22-2>
From Front Fog Light SW<13-2>
HIGH BEAM INDICATOR LIGHT [COMB. METER]
BLUE
BROWN
BATTERY
FL MAIN 2.0L
From "Tail RH" Fuse <19-2><31-3>
From "Tail RH" Fuse <19-2><31-3>
COMBINATION SW
LIGHT CONTROL SW
DIMMER SW
OFF
TAIL
HEAD
FLASH
LOW
HIGH
ED
HF
HU
H
T
EL
J/B No.3
JUNCTION CONNECTOR (for Earth)
Right kick panel (LHD)
Left kick panel (LHD)
15A HEADLIGHT LH (HI)
15A HEADLIGHT LH (LO)
15A HEADLIGHT RH (HI)
15A HEADLIGHT RH (LO)
HEADLIGHT LH
HEADLIGHT RH
HIGH BEAM INDICATOR LIGHT [COMB. METER]
Front left fender (LHD)
Front right fender (LHD)

Power Source

Stop Light (S/D)

Headlight (LHD in Europe w/o Daytime Running Light)

*1: (w/ Rear Spoiler)
*2: (w/o Rear Spoiler)
*3: (w/o Seat Heater)
*4: (w/ Seat Heater)

HIGH MOUNT STOP LIGHT

HIGH BEAM INDICATOR LIGHT [COMB. METER]

A GRAY

C, D BLUE

B

E

F BROWN

15A STOP

40A MAIN

HEADLIGHT RELAY

15A HEADLIGHT RH

To Engine and ECT ECU (B/K) <4-3><7-3>

STOP LIGHT SW

DIMMER RELAY

15A HEADLIGHT LH (HI)

15A HEADLIGHT LH (LO)

15A HEADLIGHT RH (HI)

15A HEADLIGHT RH (LO)

JUNCTION CONNECTOR

DIODE

DIODE

HIGH MOUNT STOP LIGHT

STOP LIGHT [REAR COMB. LIGHT]

LH

RH

		H	EL	HF	T	ED	HU
LIGHT CONTROL SW	OFF						
	TAIL		●	●			
	HEAD		●	●			
DIMMER SW	FLASH				●	●	●
	LOW						
	HIGH						●

COMBINATION SW

(w/ Tachometer)
(w/o Tachometer)

HIGH BEAM INDICATOR LIGHT [COMB. METER]

(w/ Tachometer)
(w/o Tachometer)

J/B No.3

JUNCTION CONNECTOR (for Earth)

JUNCTION CONNECTOR (for Earth)

HEADLIGHT

FUSE BOX

100A ALT

FL MAIN 2.0L

BATTERY

BO Body lower back panel center

BJ Upper back panel left (LHD) Upper back panel right (RHD)

II Right kick panel (LHD)

IF Left kick panel (LHD)

EB Front left fender (LHD)

EA Front right fender (LHD)

Power Source

Front Fog Light

Headlight (Ex. LHD in Europe)

1 2 3 4

HIGH BEAM INDICATOR LIGHT [COMB. METER]

A, B BLUE

C

D, E BROWN

W-R

W W W

3 1F 1 1F

40A AM1

20A TAIL MAIN

2 4C 4 1C

W-R W-R

7 EB1

12 (*1) 1 (*2)

15A FR FOG

2 (*1) 11 (*2)

9 IG1

G-R

2 3 FUSE BOX

100A ALT

1 2

W-R W-R

FL MAIN 2.0L

BATTERY

TAILLIGHT RELAY

L-R (*1) L-R (*2)

3 1C 3 1C

15A TAIL RH (Europe)

10A TAIL

3 1H 6 1H

See Taillight System <16-1><17-1><18-1>

G-O (*1) G (*2)

(Ex. LHD L/B) 3 - - 1
(LHD L/B) 5 - - 2

FRONT FOG LIGHT RELAY

(Ex. LHD L/B) 5 - - 2
(LHD L/B) 3 - - 1

W-B

R-W

From Front and Rear Fog Light Diode<15-2>

R-W R-W

From Rear Fog Light SW<15-3>

R-W 3 DIODE 1 R-W (*3)

2 R (*3) R-W (*4)

8 FRONT FOG LIGHT SW

To Light Control SW [COMB. SW]<11-3>

G-B (*3)

7

19 IG1

W-B

G-W

20 IG1

3 IE1

L (LHD) R-W (RHD)

L (LHD) R-W (RHD)

1 LH FRONT FOG LIGHT RH 1

2 2

W-B W-B W-B W-B

W-B (LHD, *4) W-B (RHD, *4)

1 3A J/B No.3 10 3A

A JUNCTION CONNECTOR (for Earth)

Front right fender (LHD) Front left fender (RHD) — EA

Front left fender (LHD) Front right fender (RHD) — EB

Left kick panel (LHD) Right kick panel RHD) — IF

3 2C 40A MAIN

5 2 HEADLIGHT RELAY

3 1 1 2B

R-L

18 IE1 (LHD) 12 IE1 (RHD)

R-L (*5)

1 3 DIODE 2 1 R

R-L (*6) R-L (*6) R-L (*5)

13 14 12 3

15A HEADLIGHT LH

15A HEADLIGHT RH

5 2E (Ex. 2C)- - 4 2E

8 2E (2C)- - - - 2 2E

R R-W

3 3 LH HEADLIGHT RH

2 1 2 1

R-Y R-Y

R-G R-G

4 IE1 17 IE1 (LHD)

5 IE1 (RHD)

R-G R-Y

R-Y R-G

R-G

11 A (w/ Tachometer)

12 B (w/o Tachometer)

HIGH BEAM INDICATOR LIGHT [COMB. METER]

1 C (w/ Tachometer)

3 D (*7)

2 E (*8)

W-B

1 3D J/B No.3

5 3E (LHD)

11 3C (RHD)

W-B A JUNCTION CONNECTOR (for Earth)

W-B (RHD)

		H	T	AU	HF	EL	HU	ED	HL
LIGHT CONTROL SW	OFF								
	TAIL	●	●			●			
	HEAD	●	●			●			
	AUTO								
DIMMER SW	FLASH								
	LOW								
	HIGH								

COMBINATION SW

11 9

W-B W-B W-B

A (LHD) JUNCTION CONNECTOR (for Earth)

Right kick panel (LHD) — II

*1: (LHD Europe)
*2: (Ex. LHD Europe)
*3: (w/ Daytime Running Light)
*4: (w/o Daytime Running Light)
*5: (w/ Fog Light)
*6: (w/o Fog Light)
*7: (w/o Tachometer Europe)
*8: (w/o Tachometer Ex. Europe)

Power Source

Headlight Beam Level Control

1 2 3 4

W-R

W-R

W-R

G

10 1G

10A TAIL

3 1C

TAILLIGHT RELAY

1 3 2 5

1 1 1 1

L-R

G

See Taillight System <16-1><17-1><18-1>

4 1C

20A TAIL MAIN

1 1F

W

7 EB1

W

2

3

100A ALT

FUSE BOX

1

2

W-R

FL MAIN 2.0L

BATTERY

HEADLIGHT BEAM LEVEL CONTROL ACTUATOR LH

HEADLIGHT BEAM LEVEL CONTROL ACTUATOR RH

UP

DOWN

M

UP RELAY

DOWN RELAY

3 2 1 0

6

4 3 2 1 5

Y L G-B LG

G

W-B

LG

G-B

L

Y

W-B

15 14 IE1 IM1 (LHD) (RHD)

14 15 IE1 IM1 (LHD) (RHD)

19 19 IE1 IM1 (LHD) (RHD)

12 12 IE1 IM1 (LHD) (RHD)

HEADLIGHT BEAM LEVEL CONTROL SW

E 6

1 2 3 4

LG G-B L Y

W-B (LHD)

W-B (RHD)

11 3D

J/B No. 3

10 3A

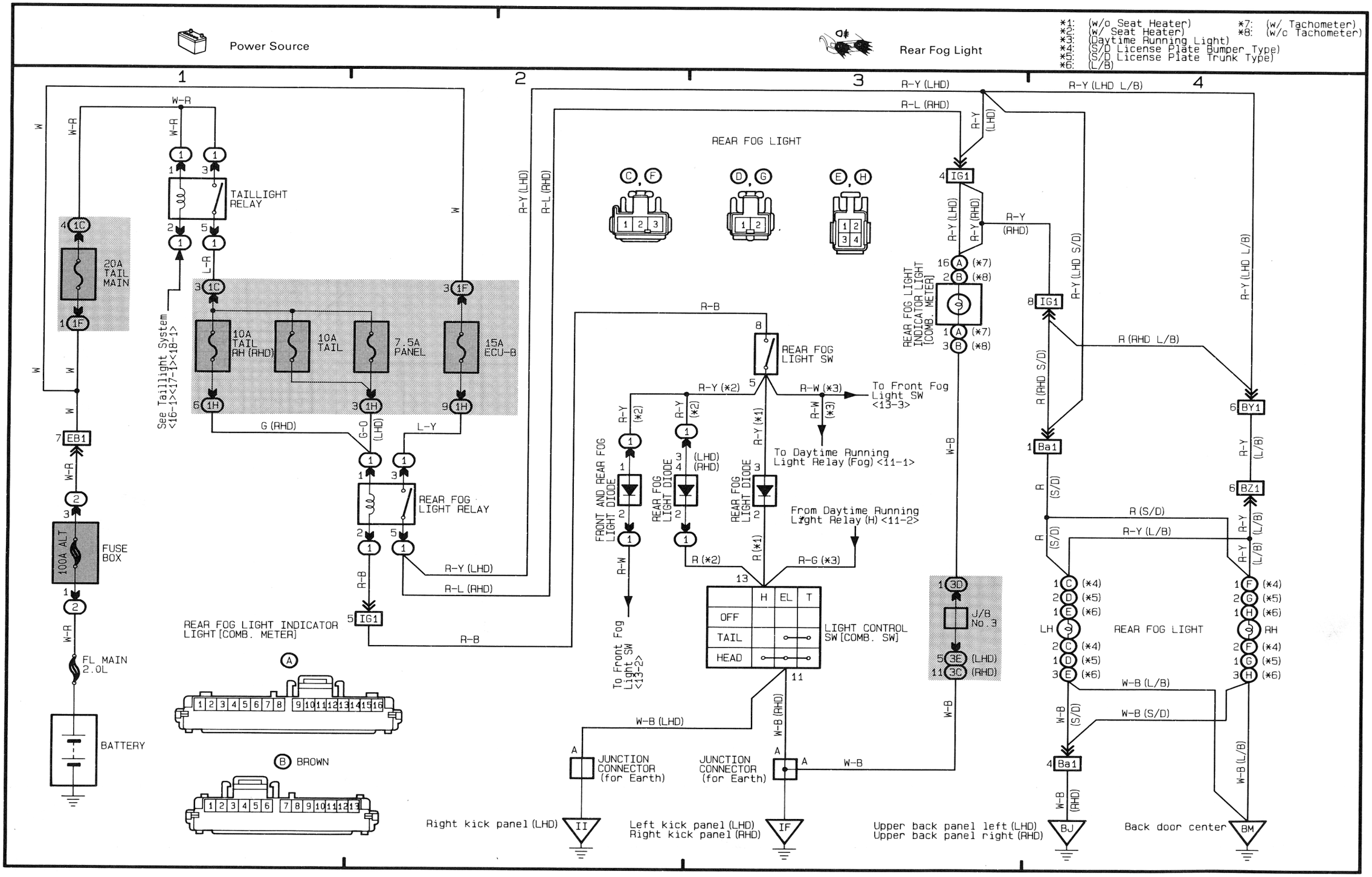
A

JUNCTION CONNECTOR (for Earth)

Front left fender (LHD)
Front right fender (RHD)
EB

Front right fender (LHD)
Front left fender (RHD)
EA

Right kick panel (LHD)
Left kick panel (RHD)
II


Power Source
Rear Fog Light
*1: (w/o Seat Heater)
*2: (w/ Seat Heater)
*3: (Daytime Running Light)
*4: (S/D License Plate Bumper Type)
*5: (S/D License Plate Trunk Type)
*6: (L/B)
*7: (w/ Tachometer)
*8: (w/o Tachometer)
1
2
3
4
W-R
W
20A TAIL MAIN
1C
1F
TAILLIGHT RELAY
See Taillight System <16-1><17-1><18-1>
10A TAIL RH (RHD)
10A TAIL
7.5A PANEL
15A ECU-B
G (RHD)
G-O (LHD)
L-Y
EB1
100A ALT
FUSE BOX
FL MAIN 2.0L
BATTERY
REAR FOG LIGHT RELAY
R-Y (LHD)
R-L (RHD)
R-B
IG1
REAR FOG LIGHT INDICATOR LIGHT [COMB. METER]
A
B BROWN
REAR FOG LIGHT
C, F
D, G
E, H
R-Y (LHD)
R-L (RHD)
R-Y
R-Y (RHD)
REAR FOG LIGHT INDICATOR LIGHT [COMB. METER]
(*7)
(*8)
R-B
REAR FOG LIGHT SW
R-Y (*2)
R-W (*3)
To Front Fog Light SW <13-3>
R-Y (*1)
To Daytime Running Light Relay (Fog) <11-1>
FRONT AND REAR FOG LIGHT DIODE
REAR FOG LIGHT DIODE
(LHD)
(RHD)
From Daytime Running Light Relay (H) <11-2>
R (*2)
R-G (*3)
R-W
To Front Fog Light SW <13-2>
LIGHT CONTROL SW [COMB. SW]
H
EL
T
OFF
TAIL
HEAD
W-B
W-B (LHD)
W-B (RHD)
J/B No. 3
3E (LHD)
3C (RHD)
JUNCTION CONNECTOR (for Earth)
Right kick panel (LHD)
Left kick panel (LHD)
Right kick panel (RHD)
Upper back panel left (LHD)
Upper back panel right (RHD)
R-Y (LHD L/B)
R (RHD L/B)
R-Y (LHD S/D)
R (RHD S/D)
BY1
BZ1
Ba1
BJ
BM
R (S/D)
R-Y (L/B)
W-B (L/B)
W-B (S/D)
REAR FOG LIGHT
LH
RH
Back door center

Power Source

Taillight (LHD in Europe)

*1: (w/ Daytime Running Light)
*2: (w/o Daytime Running Light)
*3: (4A-FE w/ ABS, 2C)
*4: (Ex. 4A-FE w/ ABS, 2C)

1 2 3 4

W-R W-R W-R W-R W-R

TAILLIGHT RELAY

4 1C 20A TAIL MAIN

1 1F

W

7 EB1

W

2

3

100A ALT FUSE BOX

1 2

W-R

FL MAIN 2.0L

BATTERY

G-W (*1)

To Daytime Running Light Relay (TAIL) <11-1>

G-W (*2)

From Daytime Running Light Relay (T) <11-2>

G-B (*1)

2

	T	H	EL
OFF			
TAIL			
HEAD			

LIGHT CONTROL SW [COMB. SW] 11

W-B (*1)

5 3F J/B No.3 5 3E

W-B

W-B (*2)

A JUNCTION CONNECTOR (for Earth)

Left kick panel (LHD) IF

A JUNCTION CONNECTOR (for Earth)

II Right kick panel (LHD)

L-R

3 1C

10A TAIL LH (LHD)

15A TAIL RH (Europe)

10 1G 9 1G 6 1H 3 1H

G

1 LH 2 CLEARANCE LIGHT 1 RH 2

W-B (*3) W-B (*4) W-B (*4) W-B (*3)

W-B (*3) W-B (*4)

EB Front left fender (LHD)

EA Front right fender (LHD)

G (S/D)

G-O (L/B)

3 Bb1

1 LH 3 TAILLIGHT [REAR COMB. LIGHT] 1 RH 3

W-B (S/D) W-B (L/B) W-B (L/B) W-B (S/D)

BO Body lower back panel center

BN Body lower back panel center

G-O (L/B)

G-O (S/D)

4 Bb1

G-O (S/D)

G-O (L/B)

2 BY1

G (L/B)

5 Ba1

2 BZ1

G (L/B)

G (S/D)

G (S/D)

G (L/B)

2 LH 1 LICENCE PLATE LIGHT 2 RH 1

W-B (S/D)

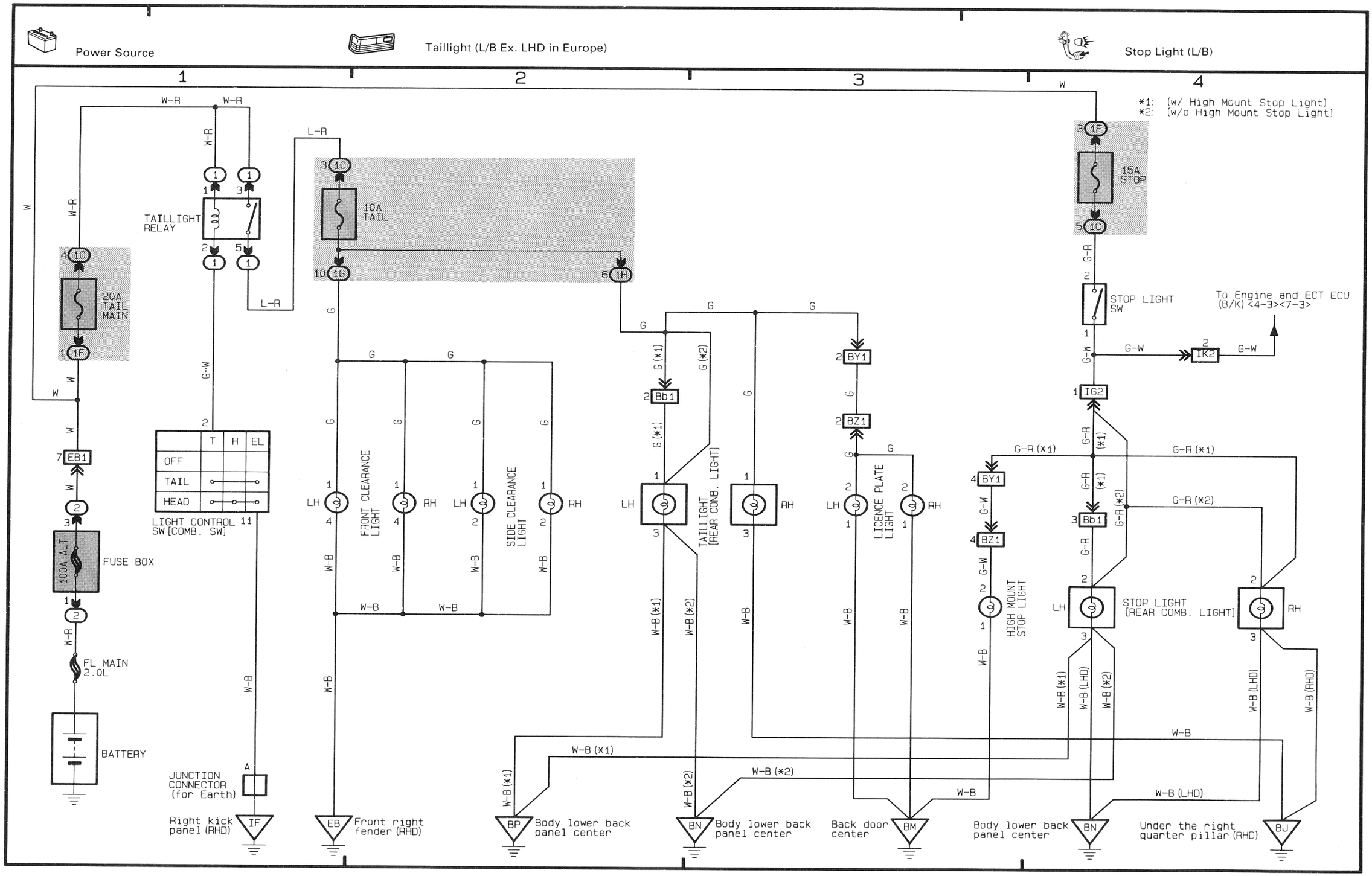
W-B (S/D)

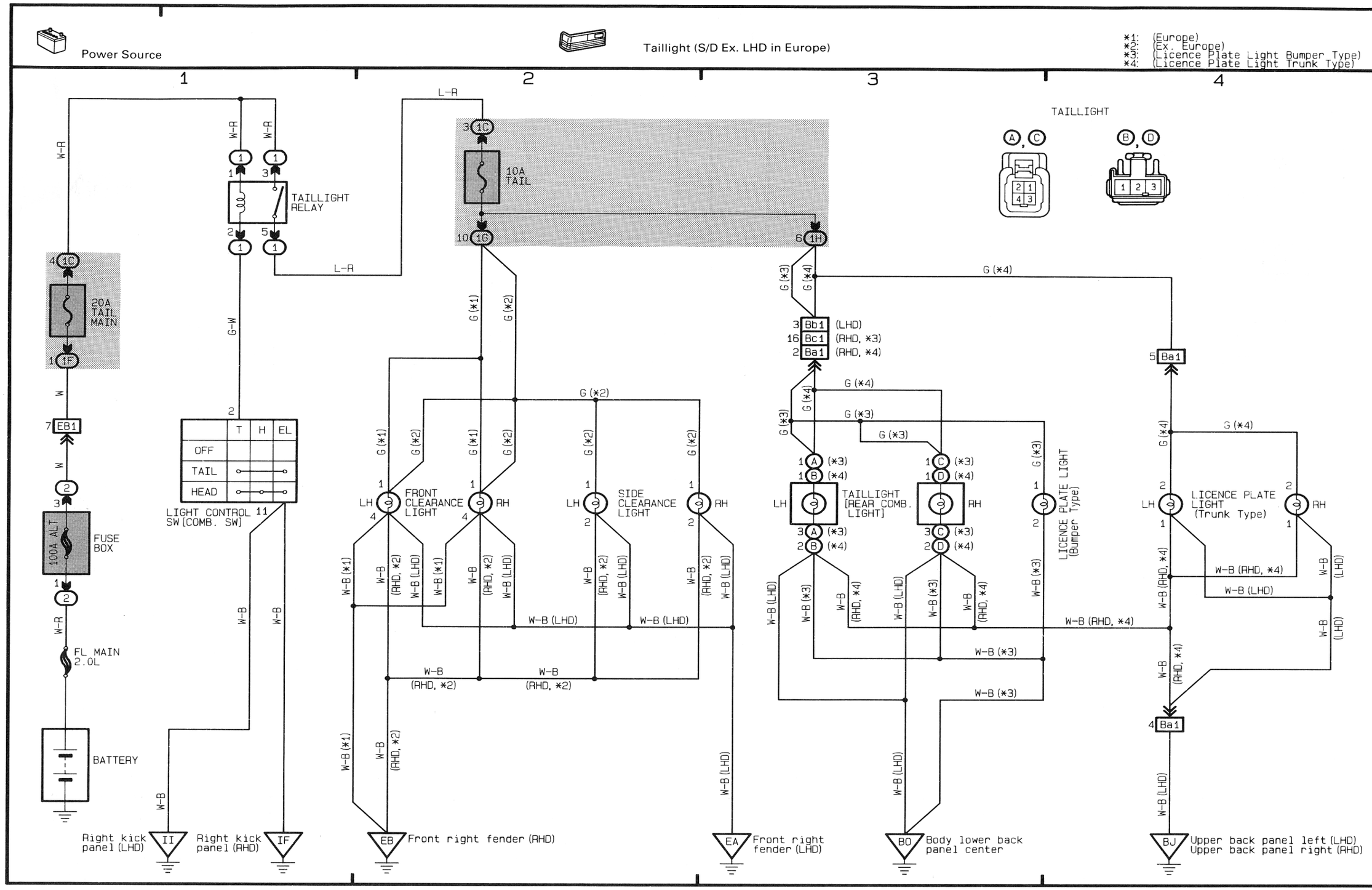
4 Ba1

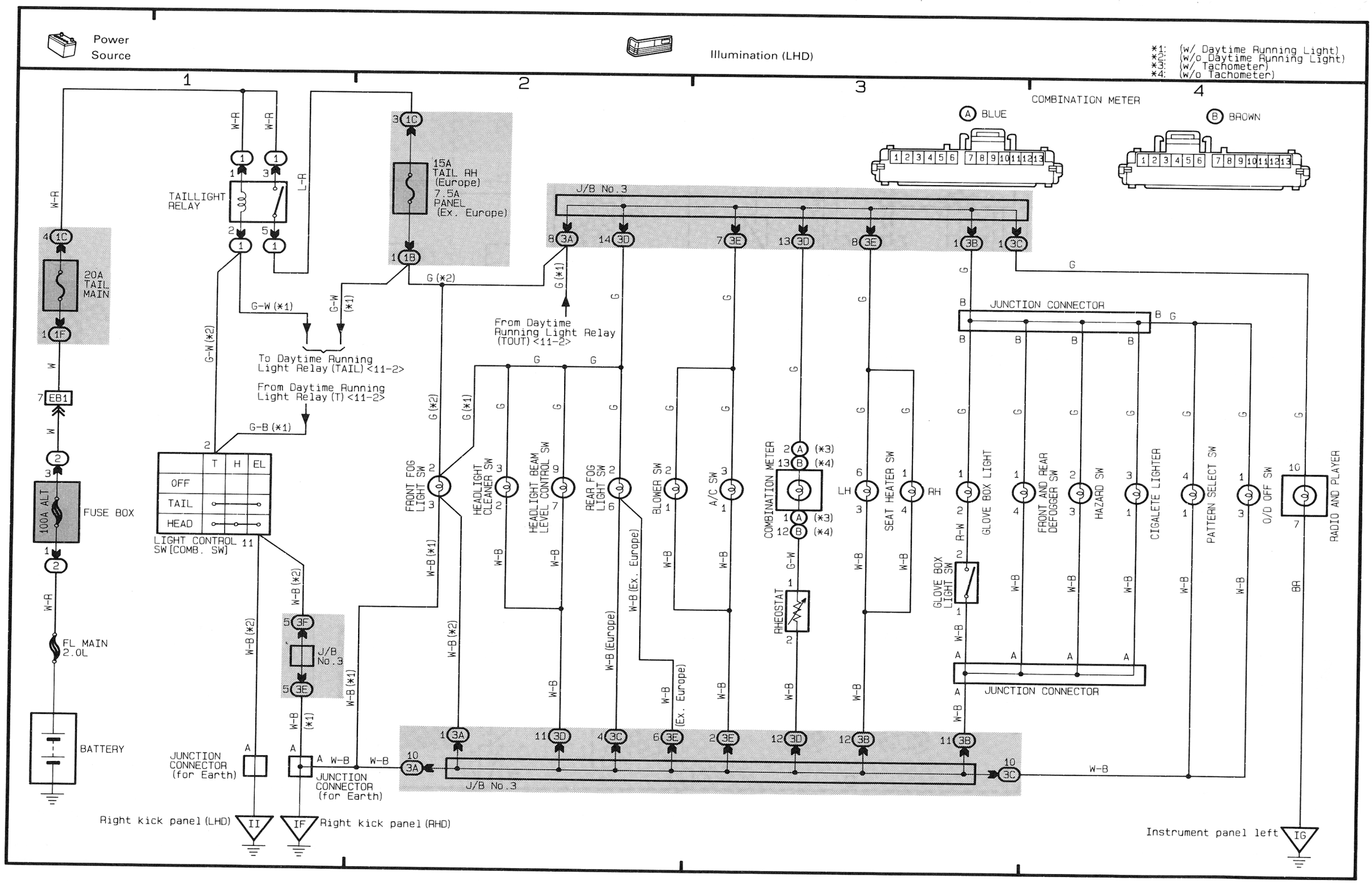
W-B (L/B) W-B (L/B)

BJ Upper back panel left (LHD)

BM Back door center


Power Source
Taillight (L/B Ex. LHD in Europe)
Stop Light (L/B)
1
2
3
4
*1: (w/ High Mount Stop Light)
*2: (w/o High Mount Stop Light)
W-R
W
L-R
G-W
G
G-R
W-B
TAILLIGHT RELAY
20A TAIL MAIN
10A TAIL
15A STOP
100A ALT
FUSE BOX
FL MAIN 2.0L
BATTERY
LIGHT CONTROL SW [COMB. SW]
OFF
TAIL
HEAD
T
H
EL
JUNCTION CONNECTOR (for Earth)
Right kick panel (RHD)
IF
EB
Front right fender (RHD)
FRONT CLEARANCE LIGHT
SIDE CLEARANCE LIGHT
LH
RH
TAILLIGHT [REAR COMB. LIGHT]
LICENCE PLATE LIGHT
STOP LIGHT SW
To Engine and ECT ECU (B/K) <4-3><7-3>
HIGH MOUNT STOP LIGHT
STOP LIGHT [REAR COMB. LIGHT]
BP
Body lower back panel center
BN
Body lower back panel center
Back door center
BM
Body lower back panel center
BN
Under the right quarter pillar (RHD)
BJ


Power Source
Taillight (S/D Ex. LHD in Europe)
*1: (Europe)
*2: (Ex. Europe)
*3: (Licence Plate Light Bumper Type)
*4: (Licence Plate Light Trunk Type)
1
2
3
4
W-R
L-R
TAILLIGHT RELAY
10A TAIL
20A TAIL MAIN
G-W
W
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
LIGHT CONTROL SW [COMB. SW]
OFF
TAIL
HEAD
T
H
EL
G (*1)
G (*2)
FRONT CLEARANCE LIGHT
SIDE CLEARANCE LIGHT
LH
RH
W-B
W-B (*1)
W-B (RHD, *2)
W-B (LHD)
W-B (RHD, *2)
TAILLIGHT
TAILLIGHT [REAR COMB. LIGHT]
G (*3)
G (*4)
3 Bb1 (LHD)
16 Bc1 (RHD, *3)
2 Ba1 (RHD, *4)
5 Ba1
LICENCE PLATE LIGHT (Bumper Type)
LICENCE PLATE LIGHT (Trunk Type)
W-B (RHD, *4)
W-B (LHD)
W-B (*3)
4 Ba1
Right kick panel (LHD)
Right kick panel (RHD)
Front right fender (RHD)
Front right fender (LHD)
Body lower back panel center
Upper back panel left (LHD)
Upper back panel right (RHD)


Power Source
Illumination (LHD)
*1: (w/ Daytime Running Light)
*2: (w/o Daytime Running Light)
*3: (w/ Tachometer)
*4: (w/o Tachometer)
1
2
3
4
COMBINATION METER
A BLUE
B BROWN
TAILLIGHT RELAY
15A TAIL RH (Europe) 7.5A PANEL (Ex. Europe)
20A TAIL MAIN
J/B No.3
JUNCTION CONNECTOR
From Daytime Running Light Relay (TOUT) <11-2>
To Daytime Running Light Relay (TAIL) <11-2>
From Daytime Running Light Relay (T) <11-2>
G-W (*1)
G-W (*2)
G-B (*1)
G (*2)
G (*1)
W-R
W-B (*1)
W-B (*2)
W-B (Europe)
W-B (Ex. Europe)
L-R
W
G
B
BR
R-W
OFF
TAIL
HEAD
T
H
EL
LIGHT CONTROL SW (COMB. SW)
FRONT FOG LIGHT SW
HEADLIGHT CLEANER SW
HEADLIGHT BEAM LEVEL CONTROL SW
REAR FOG LIGHT SW
BLOWER SW
A/C SW
COMBINATION METER
RHEOSTAT
SEAT HEATER SW
LH
RH
GLOVE BOX LIGHT
GLOVE BOX LIGHT SW
FRONT AND REAR DEFOGGER SW
HAZARD SW
CIGALETE LIGHTER
PATTERN SELECT SW
O/D OFF SW
RADIO AND PLAYER
100A ALT
FUSE BOX
FL MAIN 2.0L
BATTERY
JUNCTION CONNECTOR (for Earth)
Right kick panel (LHD)
Right kick panel (RHD)
Instrument panel left

Power Source

Illumination (RHD)

*1: (w/ Tachometer)
*2: (w/o Tachometer)

1 2 3 4

COMBINATION METER

A BLUE

B BLOWN

20A TAIL MAIN

7.5A PANEL (Ex. Europe)

15A TAIL RH (Europe)

TAIL LIGHT RELAY

J/B No.3

JUNCTION CONNECTOR

JUNCTION CONNECTOR

JUNCTION CONNECTOR

JUNCTION CONNECTOR (for Earth)

JUNCTION CONNECTOR (for Earth)

FUSE BOX

100A ALT

FL MAIN 2.0L

BATTERY

LIGHT CONTROL SW [COMB. SW]

	T	H	EL
OFF			
TAIL	○		
HEAD	○	○	

REAR FOG LIGHT SW

FRONT FOG LIGHT SW

O/D OFF SW

PATTERN SELECT SW

RADIO AND PLAYER

HAZARD SW

COMBINATION METER

RHEOSTAT

HEATER CONTROL SW

GLOVE BOX LIGHT

GLOVE BOX SW

FRONT AND REAR DEFFOGER SW

CIGALETTE LIGHTER

HEADLIGHT CLEANER SW

HEADLIGHT BEAM LEVEL CONTROL SW

BLOWER SW

A/C SW

G (A/C Lever Type)

G (A/C Push Type)

Right kick panel (RHD)

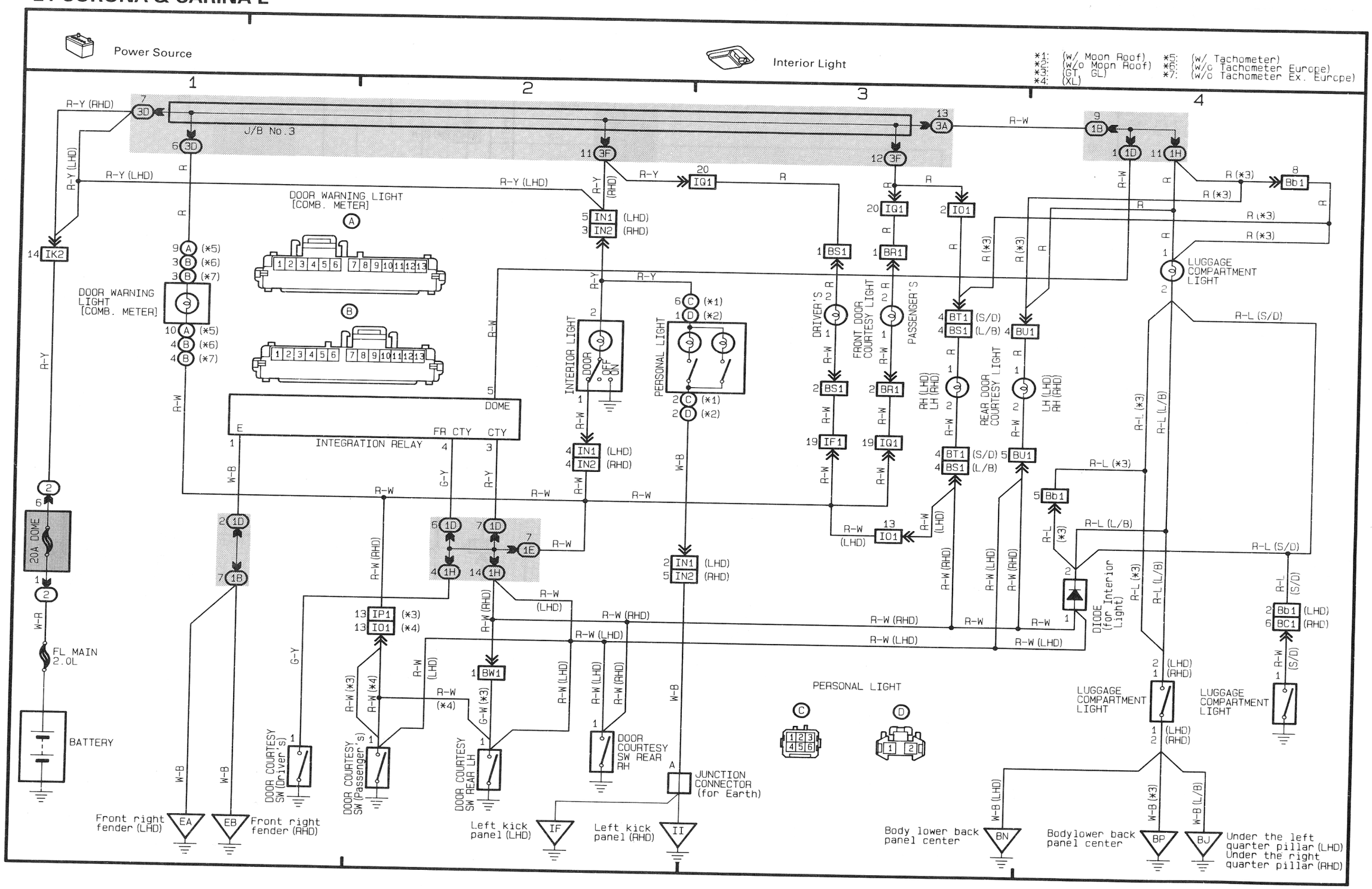
IF

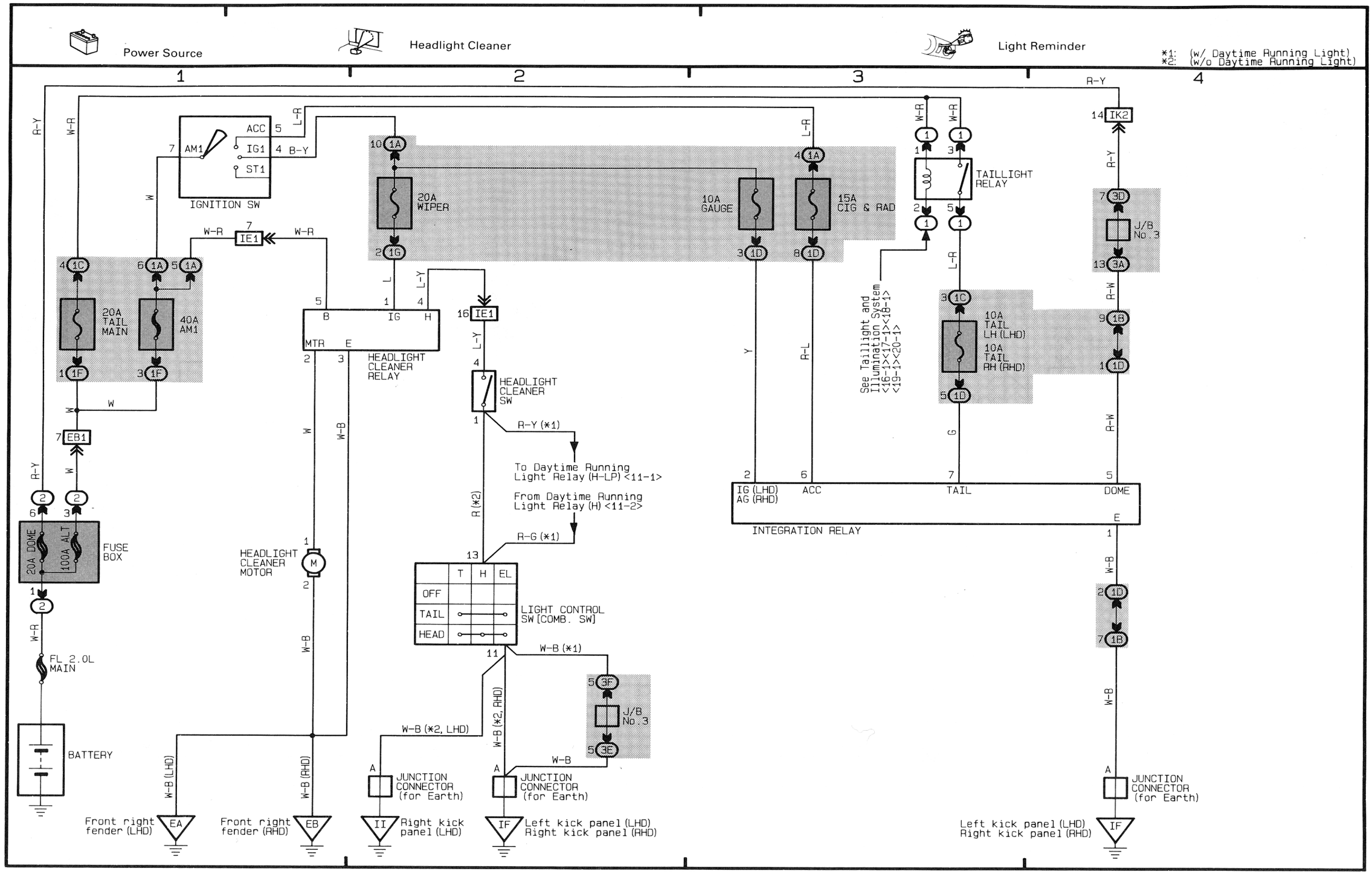
IH

Instrument panel right

Left kick panel (RHD)

II

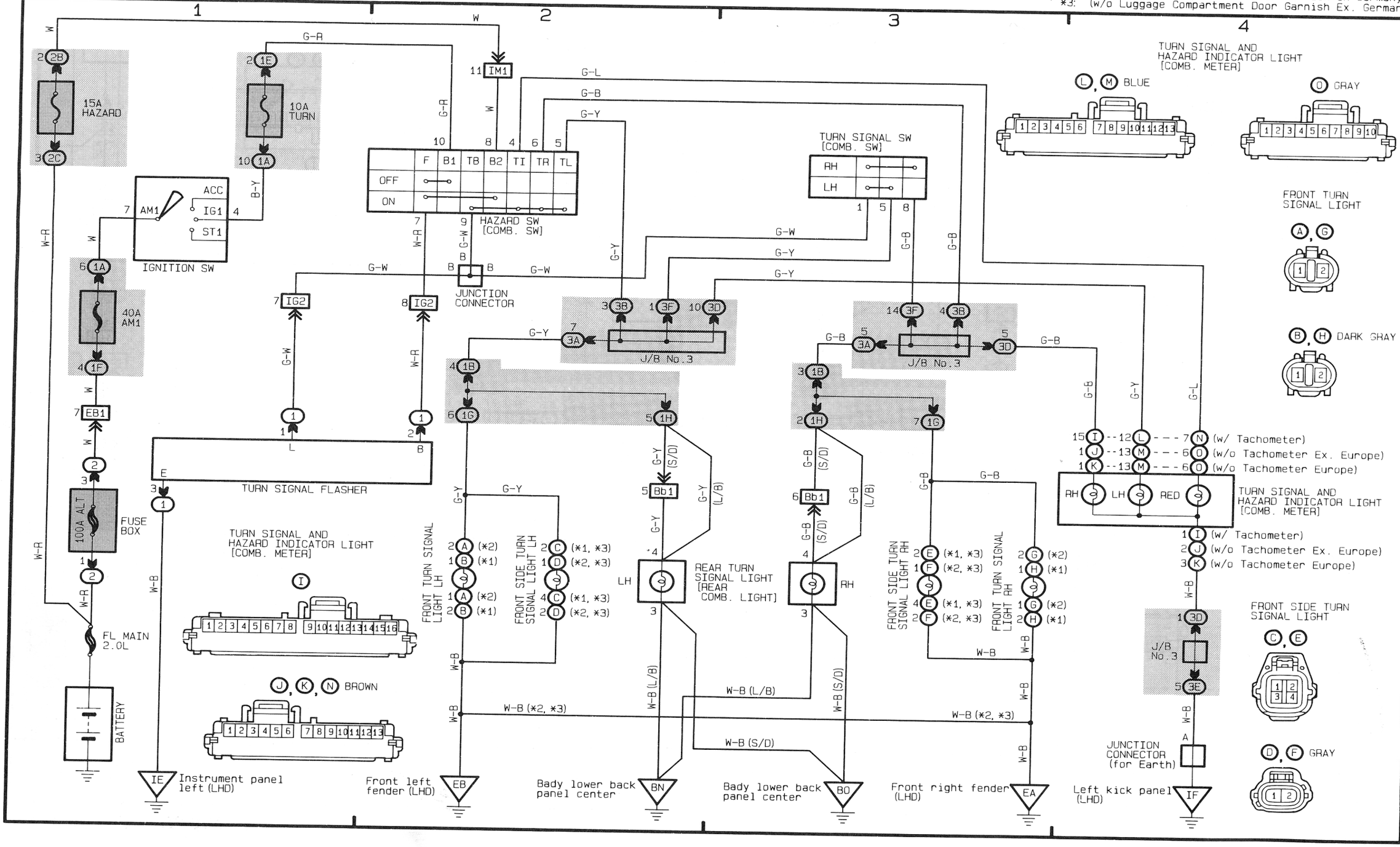

Power Source
Interior Light
*1: (w/ Moon Roof)
*2: (w/o Moon Roof)
*3: (GT, GL)
*4: (XL)
*5: (w/ Tachometer)
*6: (w/o Tachometer Europe)
*7: (w/o Tachometer Ex. Europe)
J/B No. 3
DOOR WARNING LIGHT [COMB. METER]
DOOR WARNING LIGHT [COMB. METER]
INTEGRATION RELAY
DOME
INTERIOR LIGHT DOOR SW
PERSONAL LIGHT
DRIVER'S
FRONT DOOR COURTESY LIGHT
PASSENGER'S
REAR DOOR COURTESY LIGHT
LUGGAGE COMPARTMENT LIGHT
DIODE (for Interior Light)
20A DOME
FL MAIN 2.0L
BATTERY
DOOR COURTESY SW (Driver's)
DOOR COURTESY SW (Passenger's)
DOOR COURTESY SW REAR LH
DOOR COURTESY SW REAR RH
JUNCTION CONNECTOR (for Earth)
PERSONAL LIGHT
LUGGAGE COMPARTMENT LIGHT
Front right fender (LHD)
Front right fender (RHD)
Left kick panel (LHD)
Left kick panel (RHD)
Body lower back panel center
Bodylower back panel center
Under the left quarter pillar (LHD)
Under the right quarter pillar (RHD)


Power Source
Headlight Cleaner
Light Reminder
*1: (w/ Daytime Running Light)
*2: (w/o Daytime Running Light)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
20A WIPER
10A GAUGE
15A CIG & RAD
TAILLIGHT RELAY
See Taillight and Illumination System <16-1><17-1><18-1> <19-1><20-1>
J/B No.3
20A TAIL MAIN
40A AM1
HEADLIGHT CLEANER RELAY
HEADLIGHT CLEANER SW
R-Y (*1)
To Daytime Running Light Relay (H-LP) <11-1>
From Daytime Running Light Relay (H) <11-2>
R-G (*1)
R (*2)
10A TAIL LH (LHD)
10A TAIL RH (RHD)
FUSE BOX
20A DOME
100A ALT
FL 2.0L MAIN
BATTERY
HEADLIGHT CLEANER MOTOR
LIGHT CONTROL SW [COMB. SW]
OFF
TAIL
HEAD
T
H
EL
W-B (*1)
W-B (*2, LHD)
W-B (*2, RHD)
JUNCTION CONNECTOR (for Earth)
INTEGRATION RELAY
IG (LHD) AG (RHD)
ACC
TAIL
DOME
Front right fender (LHD)
Front right fender (RHD)
Right kick panel (LHD)
Left kick panel (LHD) Right kick panel (RHD)
Left kick panel (LHD) Right kick panel (RHD)

Power Source

Turn Signal and Hazard Warning Light (LHD)

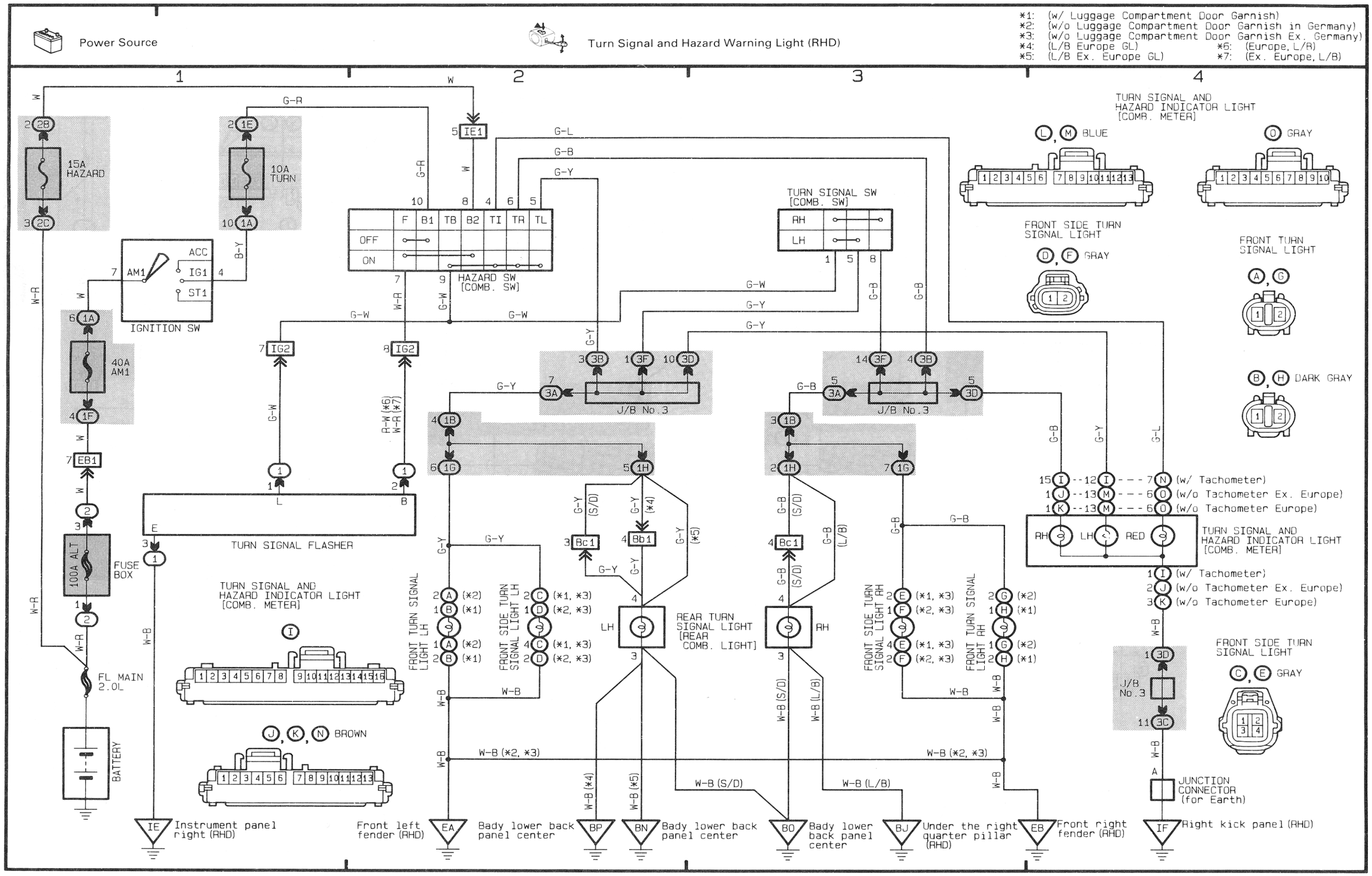
*1: (w/ Luggage Compartment Door Garnish)
*2: (w/o Luggage Compartment Door Garnish in Germany)
*3: (w/o Luggage Compartment Door Garnish Ex. Germany)

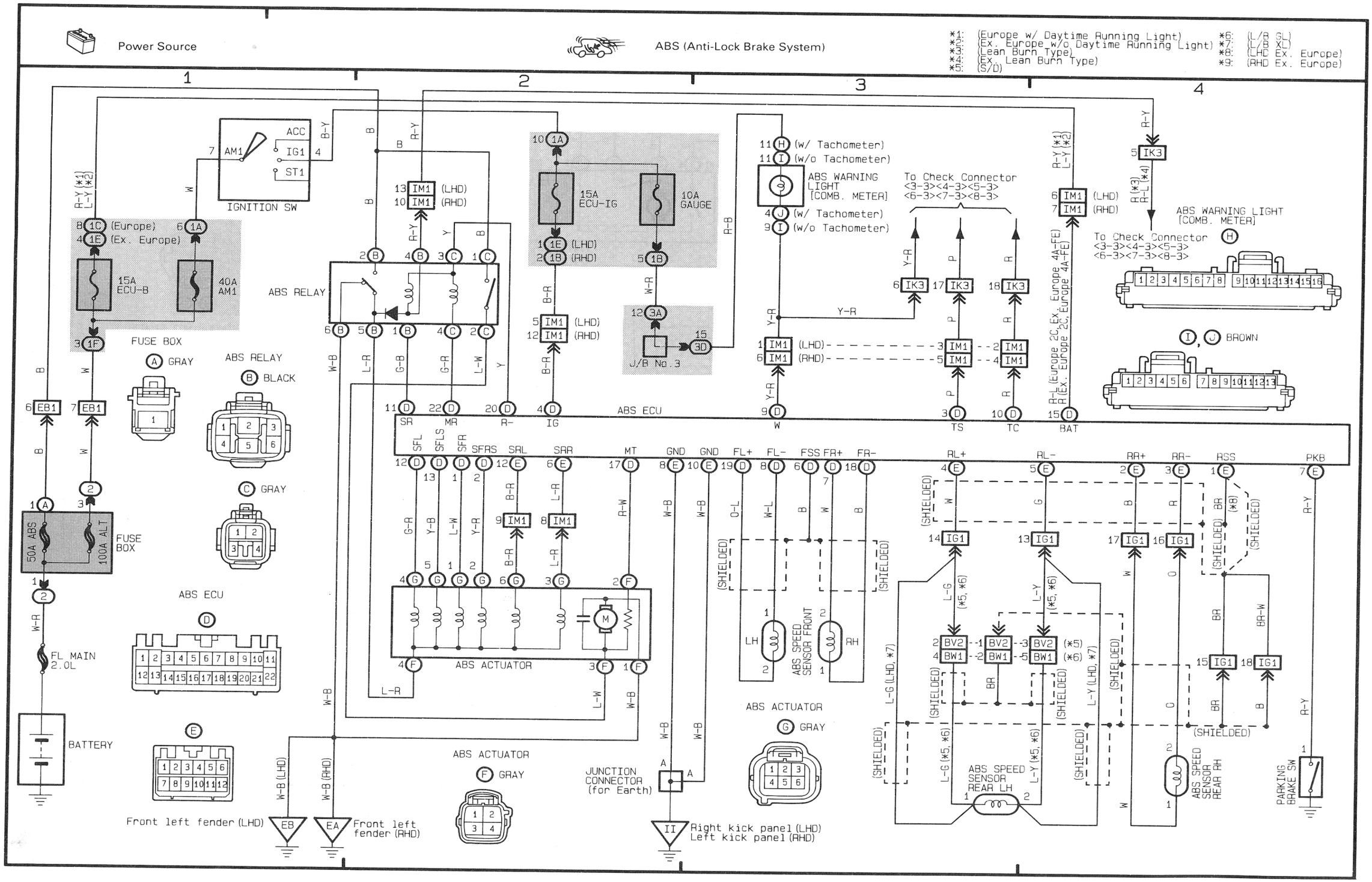


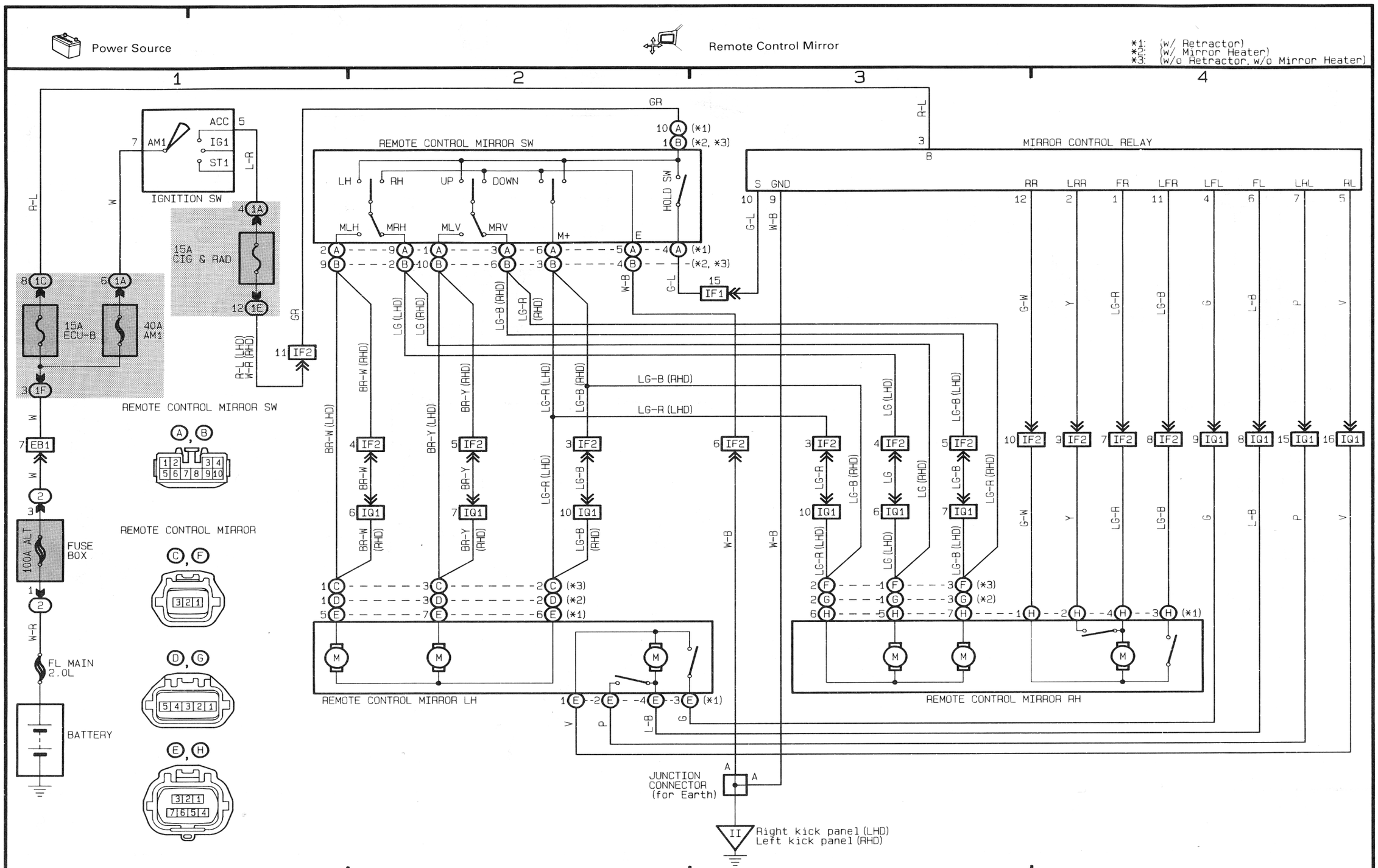
Power Source

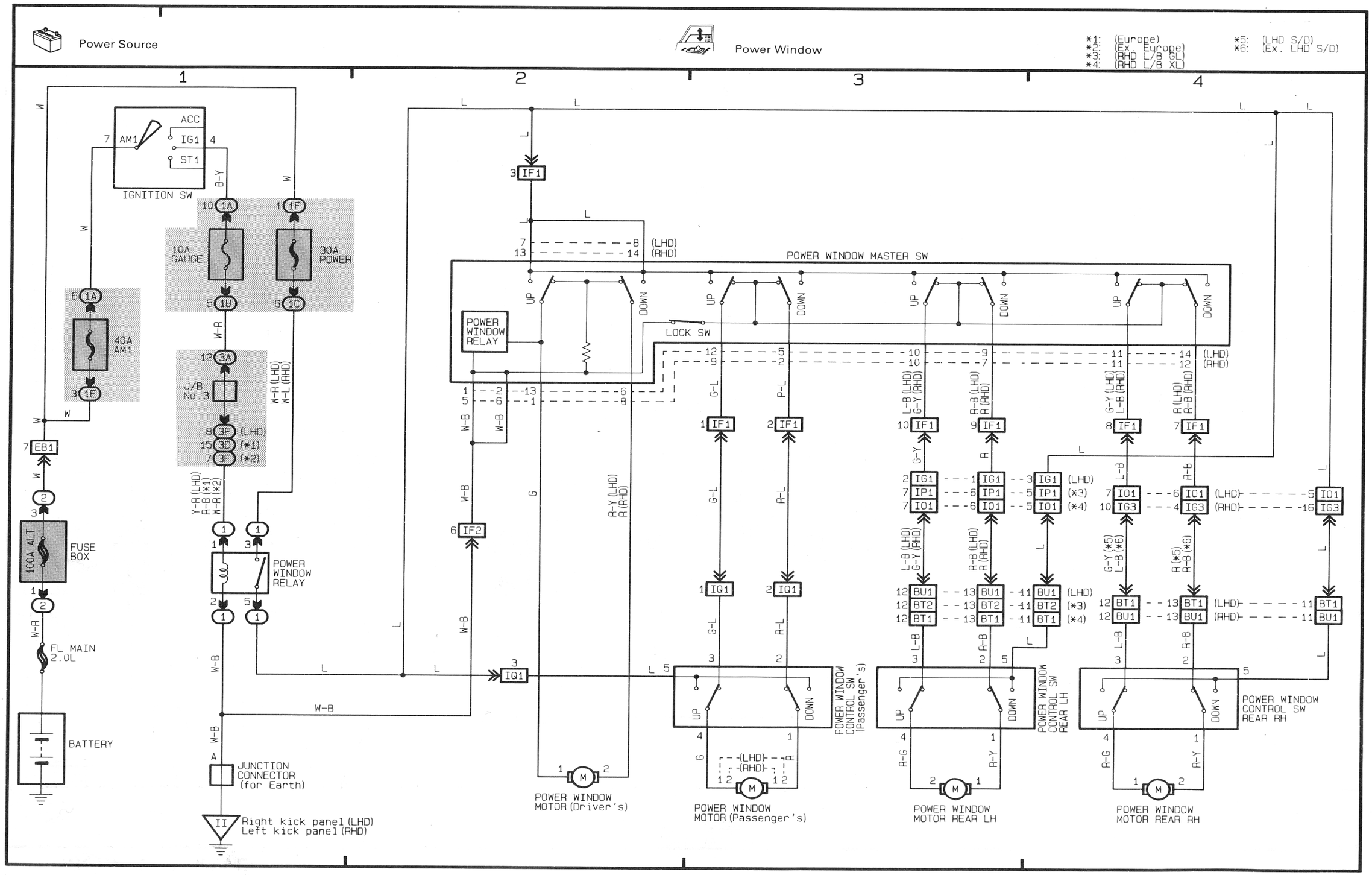
Turn Signal and Hazard Warning Light (RHD)

*1: (w/ Luggage Compartment Door Garnish)
*2: (w/o Luggage Compartment Door Garnish in Germany)
*3: (w/o Luggage Compartment Door Garnish Ex. Germany)
*4: (L/B Europe GL)
*5: (L/B Ex. Europe GL)
*6: (Europe, L/R)
*7: (Ex. Europe, L/B)




Power Source
ABS (Anti-Lock Brake System)
*1: (Europe w/ Daytime Running Light)
*2: (Ex. Europe w/o Daytime Running Light)
*3: (Lean Burn Type)
*4: (Ex. Lean Burn Type)
*5: (S/D)
*6: (L/B SL)
*7: (L/B XL)
*8: (LHD Ex. Europe)
*9: (RHD Ex. Europe)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
FUSE BOX
15A ECU-B
40A AM1
15A ECU-IG
10A GAUGE
ABS RELAY
J/B No.3
(w/ Tachometer)
(w/o Tachometer)
ABS WARNING LIGHT [COMB. METER]
To Check Connector <3-3><4-3><5-3> <6-3><7-3><8-3>
(LHD)
(RHD)
(Europe)
(Ex. Europe)
GRAY
BLACK
BROWN
ABS ECU
ABS ACTUATOR
50A ABS
100A ALT
FL MAIN 2.0L
BATTERY
Front left fender (LHD)
Front left fender (RHD)
JUNCTION CONNECTOR (for Earth)
Right kick panel (LHD)
Left kick panel (RHD)
ABS SPEED SENSOR FRONT
ABS SPEED SENSOR REAR LH
ABS SPEED SENSOR REAR RH
PARKING BRAKE SW
(SHIELDED)


Power Source
Remote Control Mirror
*1: (w/ Retractor)
*2: (w/ Mirror Heater)
*3: (w/o Retractor, w/o Mirror Heater)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
15A CIG & RAD
15A ECU-B
40A AM1
REMOTE CONTROL MIRROR SW
REMOTE CONTROL MIRROR
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
REMOTE CONTROL MIRROR SW
LH
RH
UP
DOWN
HOLD SW
MLH
MRH
MLV
MRV
M+
E
MIRROR CONTROL RELAY
S
GND
RR
LRR
FR
LFR
LFL
FL
LHL
RL
REMOTE CONTROL MIRROR LH
REMOTE CONTROL MIRROR RH
JUNCTION CONNECTOR (for Earth)
Right kick panel (LHD)
Left kick panel (RHD)


Power Source
Power Window
*1: (Europe)
*2: (Ex. Europe)
*3: (RHD L/B GL)
*4: (RHD L/B XL)
*5: (LHD S/D)
*6: (Ex. LHD S/D)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
10A GAUGE
30A POWER
40A AM1
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
EB1
J/B No.3
POWER WINDOW RELAY
JUNCTION CONNECTOR (for Earth)
Right kick panel (LHD)
Left kick panel (RHD)
POWER WINDOW MASTER SW
UP
DOWN
LOCK SW
(LHD)
(RHD)
POWER WINDOW MOTOR (Driver's)
POWER WINDOW MOTOR (Passenger's)
POWER WINDOW CONTROL SW (Passenger's)
POWER WINDOW MOTOR REAR LH
POWER WINDOW CONTROL SW REAR LH
POWER WINDOW MOTOR REAR RH
POWER WINDOW CONTROL SW REAR RH

Power Source

Door Lock

*1: (w/ Power Window)
*2: (w/o Power Window)
*3: (L/B GT, GL)
*4: (L/B XL)

1 2 3 4

ACC
IG1
ST1
AM1
IGNITION SW

DOOR LOCK CONTROL RELAY
IG KSW E DSWD L UL ACT- ACT LSWD

30A POWER
40A AM1
10A GAUGE

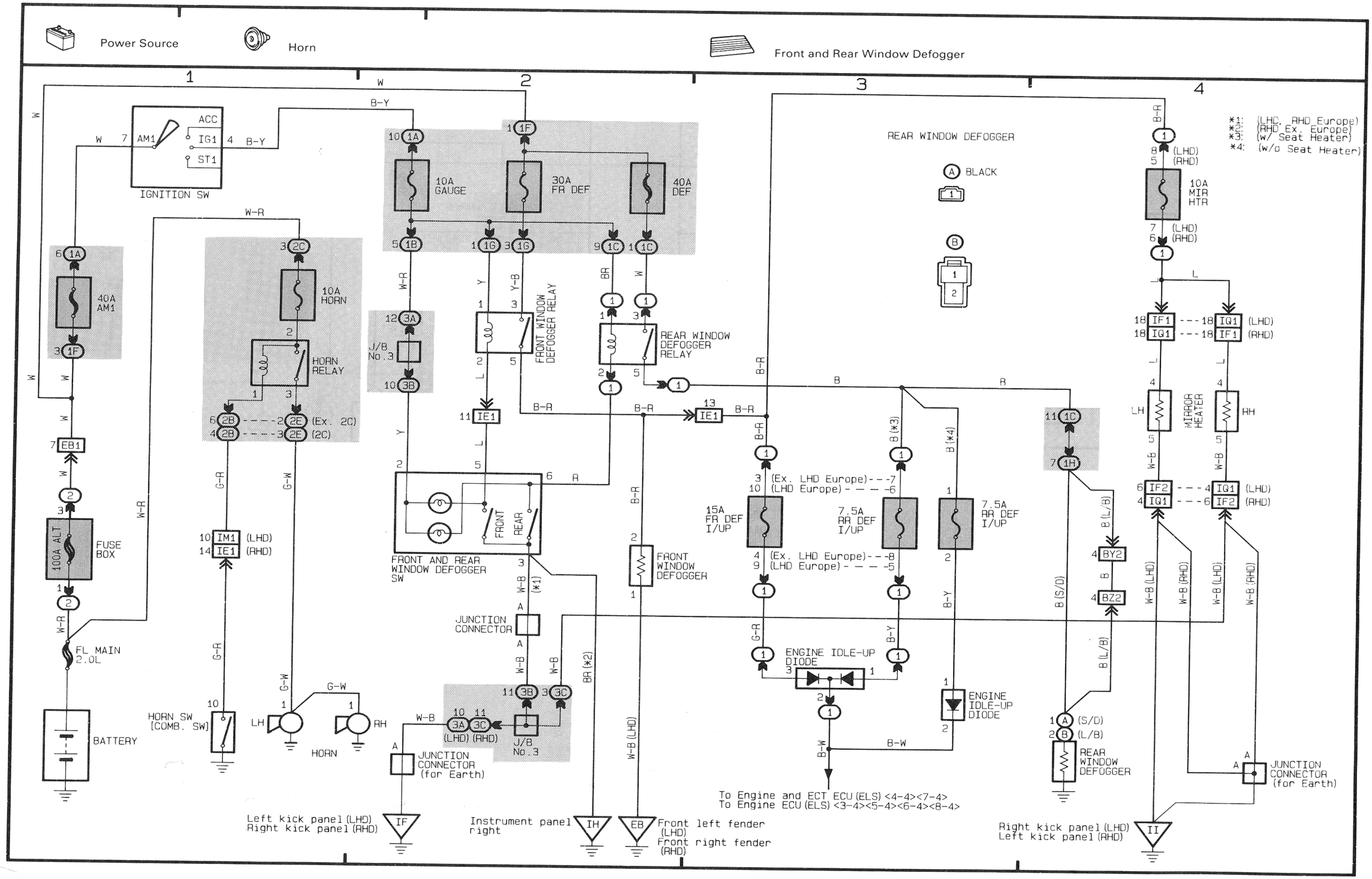
7 EB1
100A ALT
FUSE BOX
FL MAIN 2.0L
BATTERY

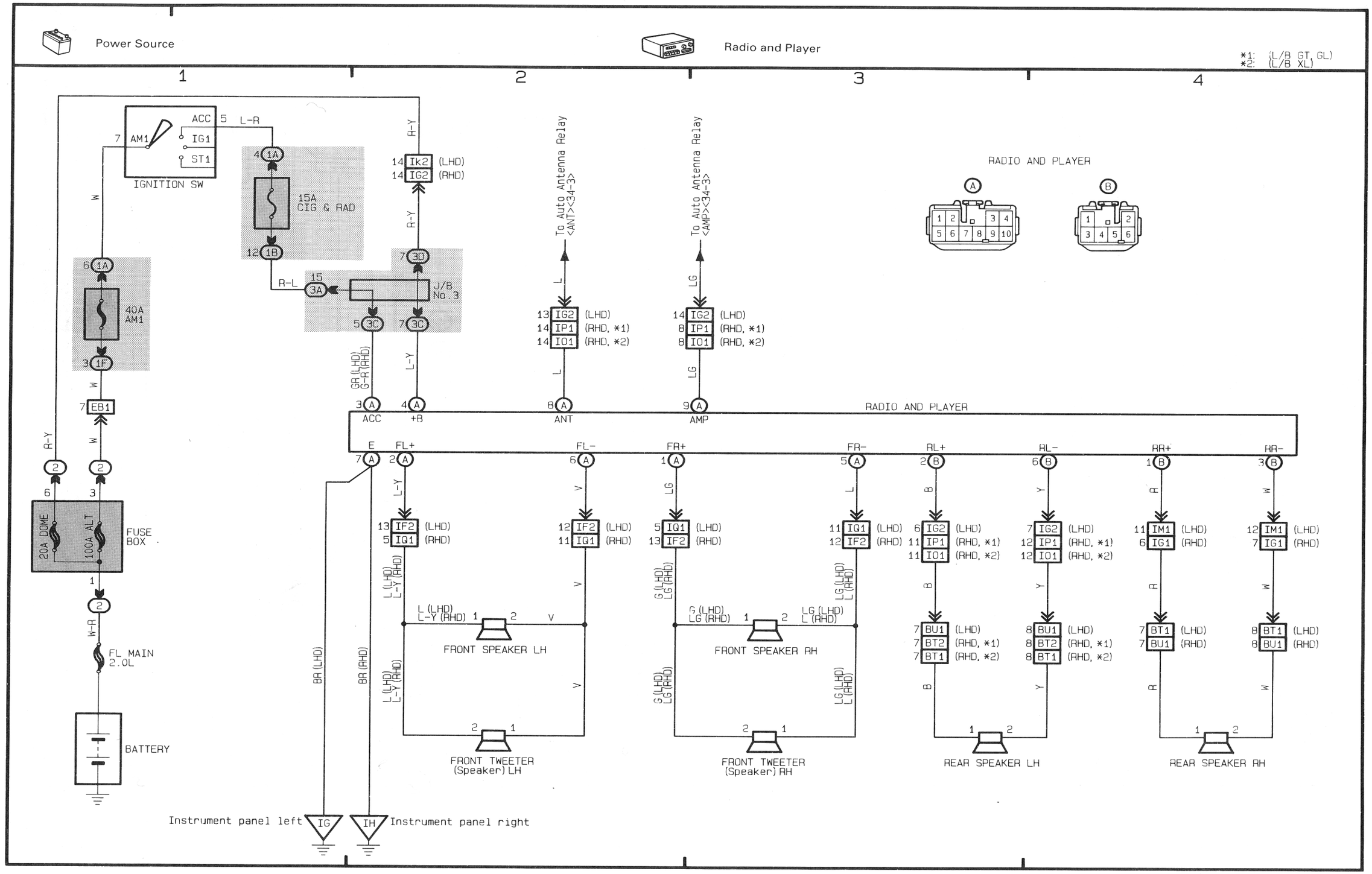
J/B No.3
UNLOCK WARNING SW
DOOR COURTESY SW (Driver's)
DOOR LOCK CONTROL SW (Driver's)
DOOR LOCK MOTOR, KEY LOCK AND UNLOCK SW (Driver's)

JUNCTION CONNECTOR (for Earth)
JUNCTION CONNECTOR (for Earth)

IF Right kick panel (RHD)
II Right kick panel (LHD) Left kick panel (RHD)

FRONT DOOR LOCK MOTOR (Passenger's)
FRONT DOOR LOCK MOTOR REAR LH
FRONT DOOR LOCK MOTOR REAR RH


Power Source
Horn
Front and Rear Window Defogger
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
40A AM1
10A GAUGE
30A FR DEF
40A DEF
10A HORN
HORN RELAY
FRONT WINDOW DEFOGGER RELAY
REAR WINDOW DEFOGGER RELAY
J/B No.3
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
HORN SW [COMB. SW]
HORN
LH
RH
FRONT AND REAR WINDOW DEFOGGER SW
FRONT
REAR
FRONT WINDOW DEFOGGER
JUNCTION CONNECTOR
JUNCTION CONNECTOR (for Earth)
REAR WINDOW DEFOGGER
BLACK
15A FR DEF I/UP
7.5A RR DEF I/UP
7.5A RR DEF I/UP
ENGINE IDLE-UP DIODE
ENGINE IDLE-UP DIODE
10A MIR HTR
MIRROR HEATER
REAR WINDOW DEFOGGER
(LHD)
(RHD)
(Ex. 2C)
(2C)
(Ex. LHD Europe)
(LHD Europe)
(Ex. LHD Europe)
(LHD Europe)
(S/D)
(L/B)
*1: (LHD, RHD Europe)
*2: (RHD Ex. Europe)
*3: (w/ Seat Heater)
*4: (w/o Seat Heater)
To Engine and ECT ECU (ELS) <4-4><7-4>
To Engine ECU (ELS) <3-4><5-4><6-4><8-4>
Left kick panel (LHD)
Right kick panel (RHD)
Instrument panel right
Front left fender (LHD)
Front right fender (RHD)
Right kick panel (LHD)
Left kick panel (RHD)


Power Source
Radio and Player
*1: (L/B GT, GL)
*2: (L/B XL)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
15A CIG & RAD
40A AM1
J/B No. 3
To Auto Antenna Relay <ANT><34-3>
To Auto Antenna Relay <AMP><34-3>
RADIO AND PLAYER
FUSE BOX
20A DOME
10A ALT
FL MAIN 2.0L
BATTERY
ACC
+B
ANT
AMP
FRONT SPEAKER LH
FRONT SPEAKER RH
FRONT TWEETER (Speaker) LH
FRONT TWEETER (Speaker) RH
REAR SPEAKER LH
REAR SPEAKER RH
Instrument panel left
Instrument panel right

Power Source

Cigarette Lighter and Clock

Light Auto Turn Off

*1: (w/ Daytime Running Light)
*2: (w/o Daytime Running Light)

IGNITION SW
ACC
IG1
ST1
AM1
20A TAIL MAIN
15A ECU-B
40A AM1
15A CIG & RAD
J/B No.3
10A TAIL RH (LHD Europe) 7.5A PANEL (Ex. LHD Europe)
TAILLIGHT RELAY
15A ECU-IG
INTEGRATION RELAY
40A MAIN
HEADLIGHT RELAY
DIODE
LIGHT CONTROL SW [COMB. SW]
DOOR COURTESY SW (Driver's)
CLOCK 10:00
CIGARETTE LIGHTER
JUNCTION CONNECTOR
100A ALT
20A DOME
FUSE BOX
FL MAIN 2.0L
BATTERY
JUNCTION CONNECTOR (for Earth)
Left kick panel (LHD)
Right kick panel (RHD)
To Daytime Running Light Relay (TAIL) <11-2>
From Daytime Running Light Relay (TOUT) <11-2>
<See Headlight System <13-4>>

Power Source

Front Wiper and Washer

Rear Wiper and Washer

1 2 3 4

B-Y

ACC
AM1
IG1
ST1
IGNITION SW

20A WIPER

40A AM1

FRONT WIPER MOTOR

WASHER MOTOR

REAR WIPER MOTOR AND RELAY

REAR WIPER RELAY

100A ALT

FUSE BOX

FL MAIN 2.0L

BATTERY

W-B (LHD)

W-B (RHD)

Front right fender (LHD)

Front right fender (RHD)

FRONT WIPER AND WASHER SW [COMB. SW]

WIPER RELAY

JUNCTION CONNECTOR (for Earth)

Right kick panel (LHD)

Right kick panel (RHD)

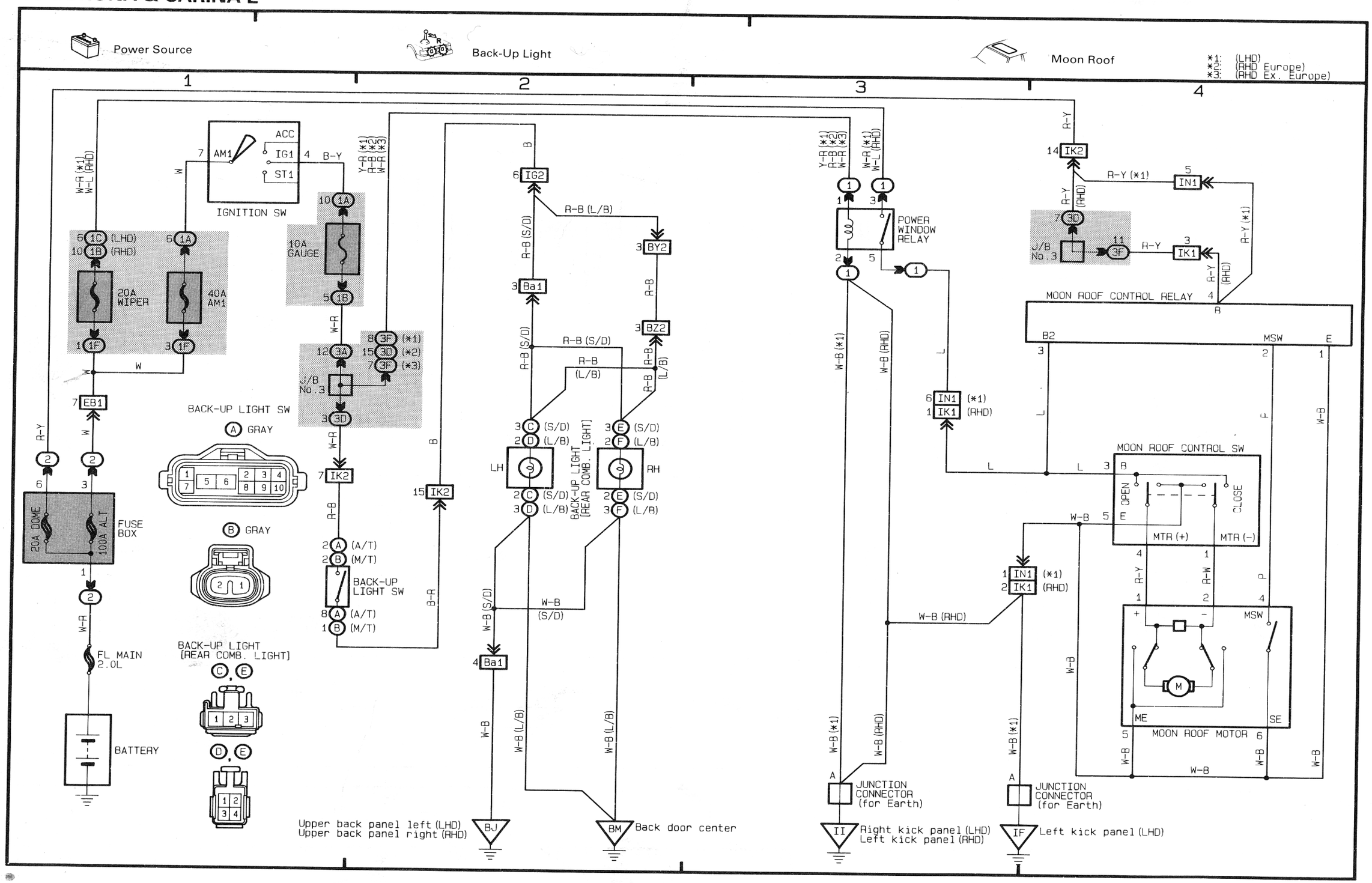
REAR WIPER AND WASHER SW [COMB. SW]

	INT	+2	+1	+S	+B
OFF					
INT					
LOW					
HIGH					

	W	EW
OFF		
ON		

	E	WR	L	C
WASH1				
OFF				
INT				
LOW				
WASH2				

(LHD)
(RHD)


Power Source
Back-Up Light
Moon Roof
*1: (LHD)
*2: (RHD Europe)
*3: (RHD Ex. Europe)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
AM1
10A GAUGE
20A WIPER
40A AM1
FUSE BOX
20A DOME
100A ALT
FL MAIN 2.0L
BATTERY
BACK-UP LIGHT SW
A GRAY
B GRAY
BACK-UP LIGHT [REAR COMB. LIGHT]
C, E
D, E
J/B No. 3
BACK-UP LIGHT SW
(A/T)
(M/T)
LH
RH
BACK-UP LIGHT [REAR COMB. LIGHT]
(S/D)
(L/B)
POWER WINDOW RELAY
MOON ROOF CONTROL RELAY
MOON ROOF CONTROL SW
OPEN
CLOSE
MTR (+)
MTR (–)
MSW
MOON ROOF MOTOR
ME
SE
JUNCTION CONNECTOR (for Earth)
Upper back panel left (LHD)
Upper back panel right (RHD)
Back door center
Right kick panel (LHD)
Left kick panel (RHD)
Left kick panel (LHD)

Power Source

Seat Heater

Auto Antenna

*1: (RHD GL)
*2: (RHD XL)
*3: (RHD S/D)
*4: (RHD L/B)

1 2 3 4

IGNITION SW
ACC 5
IG1 4
ST1
7 AM1
L-R
B-Y
W

6 1A 40A AM1 3 1F

14 IK2 7 EB1
R-Y W

2 2
6 3
20A DOME 100A ALT
1 FUSE BOX
2
W-R
FL MAIN 2.0L
BATTERY

B-Y
1 2 20A SEAT HTR 1 1
B-W
B-W
2

SEAT HEATER SW LH
L H L H L H L H
1 5 4
R-L R-Y
3 IO1 2 IO1
R-L R-Y
1 2
SEAT HEATER LH
3

SEAT HEATER SW RH
H L H L H L H L
6 5 3
R-B R-W
3 II1 2 II1
R-B R-W
1 2
SEAT HEATER RH

W-B
W-B W-B
W-B
1 IO1 12 3B J/B No.3 1 II1
W-B 10 3A W-B
A
JUNCTION CONNECTOR (for Earth)
IF
Left kick panel (LHD)

Under the left quarter pillar (LHD)
Upper back panel left (LHD)

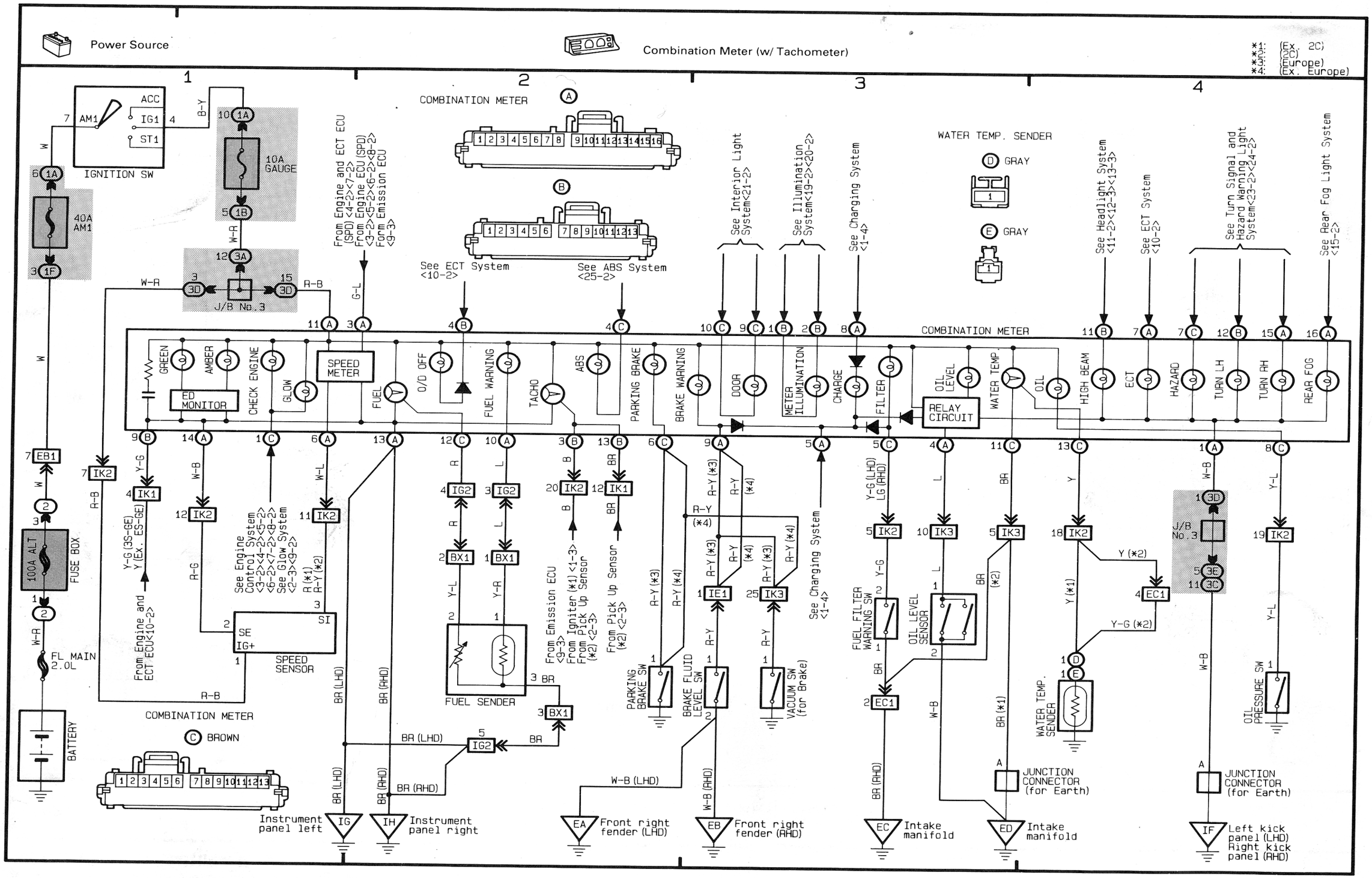
B-Y
9 1A 10 1A
10A GAUGE
13 1H (LHD)
5 1B (RHD)
W-R (RHD)
R-L (LHD, L/B)
Y (LHD, S/D)
W-B (LHD)
BJ

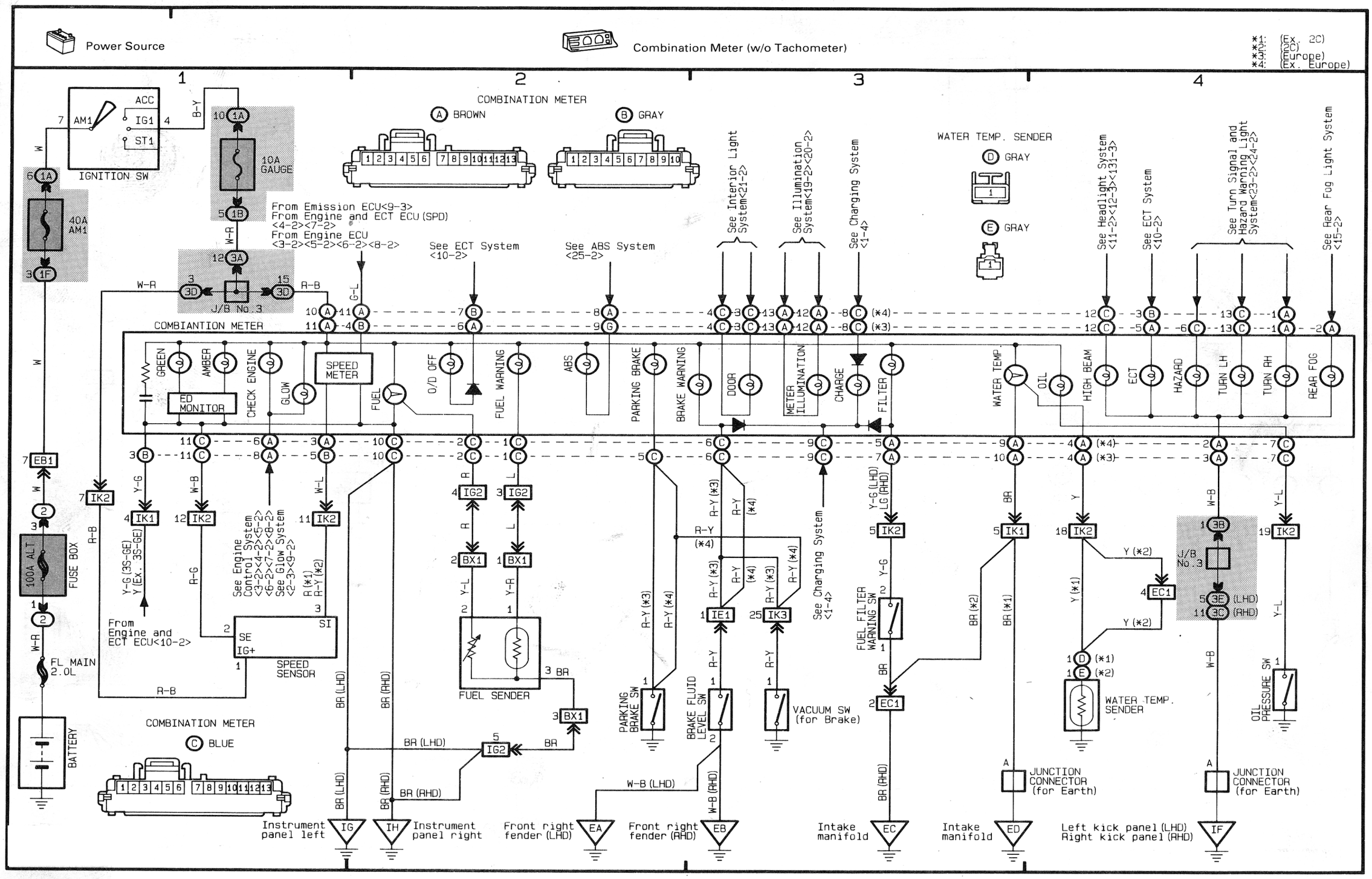
L-R
4 1A 15A CIG & RAD
12 1B
R-L
12 3A J/B No.3 9 3C
W-R
15 IO1 (*1)
15 IP1 (*2)
R-Y (*3)
R-L (*4)

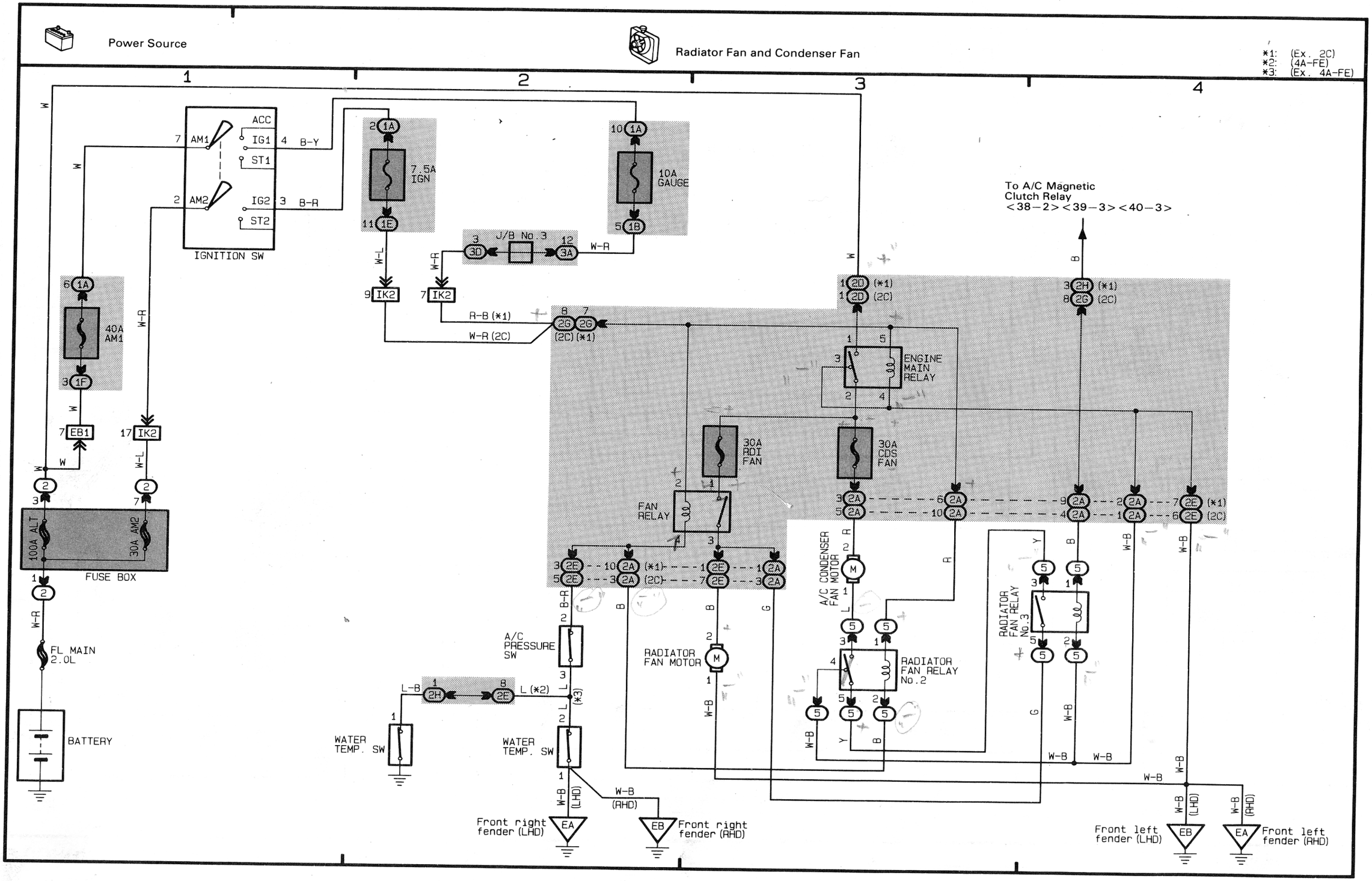
15 3A J/B No.3 5 3C
G-R
12 IG2 (LHD)
10 IO1 (*1)
10 IP1 (*2)
GR (S/D)
G-R (L/B)
6

R-Y
7 3D J/B No.3
13 3A (LHD)
7 3C (RHD Europe)
12 3F (RHD Ex. Europe)
B-W (LHD)
9 1B 11 1H
R (LHD)
9 IO1 (*1)
9 IP1 (*2)
L-Y (RHD Europe)
R (RHD Ex. Europe)
R
2

IG ACC FB
E AMP ANT
1 3 4
AUTO ANTENNA CONTROL RELAY AND MOTOR
W-B (RHD)
16 IO1 16 IP1 (*1) (*2)
W-B
4 3C J/B No.3
11 3C
W-B
A
JUNCTION CONNECTOR (for Earth)
IF
Right kick panel (RHD)
LG L
From Radio and Player <30-2>


Power Source
Combination Meter (w/ Tachometer)
*1: (Ex. 2C)
*2: (2C)
*3: (Europe)
*4: (Ex. Europe)
1
2
3
4
COMBINATION METER
WATER TEMP. SENDER
GRAY
GRAY
ACC
IG1
ST1
AM1
IGNITION SW
10A GAUGE
40A AM1
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
J/B No.3
From Engine and ECT ECU (SPD) <4-2><7-2>
From Engine ECU (SPD) <3-2><5-2><6-2><8-2>
Form Emission ECU <9-3>
See ECT System <10-2>
See ABS System <25-2>
See Interior Light System<21-2>
See Illumination System<19-2><20-2>
See Charging System <1-4>
See Headlight System <11-2><12-3><13-3>
See ECT System <10-2>
See Turn Signal and Hazard Warning Light System<23-2><24-2>
See Rear Fog Light System <15-2>
GREEN
AMBER
CHECK ENGINE
GLOW
ED MONITOR
SPEED METER
FUEL
O/D OFF
FUEL WARNING
TACHO
ABS
PARKING BRAKE
BRAKE WARNING
DOOR
METER ILLUMINATION
CHARGE
FILTER
OIL LEVEL
RELAY CIRCUIT
WATER TEMP.
OIL
HIGH BEAM
ECT
HAZARD
TURN LH
TURN RH
REAR FOG
See Engine Control System <3-2><4-2><5-2> <6-2><7-2><8-2>
See Glow System <2-3><9-2>
From Engine and ECT ECU<10-2>
SPEED SENSOR
COMBINATION METER
BROWN
FUEL SENDER
From Emission ECU <9-3>
From Igniter (*1) <1-3>
From Pick Up Sensor (*2) <2-3>
From Pick Up Sensor (*2) <2-3>
See Charging System <1-4>
PARKING BRAKE SW
BRAKE FLUID LEVEL SW
VACUUM SW (for Brake)
FUEL FILTER WARNING SW
OIL LEVEL SENSOR
WATER TEMP. SENDER
OIL PRESSURE SW
JUNCTION CONNECTOR (for Earth)
JUNCTION CONNECTOR (for Earth)
Instrument panel left
Instrument panel right
Front right fender (LHD)
Front right fender (RHD)
Intake manifold
Intake manifold
Left kick panel (LHD) Right kick panel (RHD)


Power Source
Combination Meter (w/o Tachometer)
*1: (Ex. 2C)
*2: (2C)
*3: (Europe)
*4: (Ex. Europe)
1
2
3
4
COMBINATION METER
A BROWN
B GRAY
ACC
IG1
ST1
AM1
IGNITION SW
10A GAUGE
40A AM1
From Emission ECU<9-3>
From Engine and ECT ECU (SPD) <4-2><7-2>
From Engine ECU <3-2><5-2><6-2><8-2>
See ECT System <10-2>
See ABS System <25-2>
See Interior Light System<21-2>
See Illumination System<19-2><20-2>
See Charging System <1-4>
WATER TEMP. SENDER
D GRAY
E GRAY
See Headlight System <11-2><12-3><131-3>
See ECT System <10-2>
See Turn Signal and Hazard Warning Light System<23-2><24-2>
See Rear Fog Light System <15-2>
J/B No.3
COMBIANTION METER
GREEN
AMBER
ED MONITOR
CHECK ENGINE
GLOW
SPEED METER
FUEL
O/D OFF
FUEL WARNING
ABS
PARKING BRAKE
BRAKE WARNING
DOOR
METER ILLUMINATION
CHARGE
FILTER
WATER TEMP.
OIL
HIGH BEAM
ECT
HAZARD
TURN LH
TURN RH
REAR FOG
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
From Engine and ECT ECU<10-2>
SPEED SENSOR
See Engine Control System <3-2><4-2><5-2><6-2><7-2><8-2>
See Glow System <2-3><9-2>
FUEL SENDER
PARKING BRAKE SW
BRAKE FLUID LEVEL SW
VACUUM SW (for Brake)
See Charging System <1-4>
FUEL FILTER WARNING SW
WATER TEMP. SENDER
OIL PRESSURE SW
COMBINATION METER
C BLUE
JUNCTION CONNECTOR (for Earth)
JUNCTION CONNECTOR (for Earth)
Instrument panel left
Instrument panel right
Front right fender (LHD)
Front right fender (RHD)
Intake manifold
Intake manifold
Left kick panel (LHD)
Right kick panel (RHD)


Power Source
Radiator Fan and Condenser Fan
*1: (Ex. 2C)
*2: (4A-FE)
*3: (Ex. 4A-FE)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
B-Y
B-R
7.5A IGN
10A GAUGE
J/B No. 3
W-L
W-R
IK2
R-B (*1)
W-R (2C)
ENGINE MAIN RELAY
30A RDI FAN
30A CDS FAN
FAN RELAY
40A AM1
EB1
100A ALT
30A AM2
FUSE BOX
FL MAIN 2.0L
BATTERY
A/C PRESSURE SW
L-B
L (*2)
(*3)
WATER TEMP. SW
W-B (LHD)
W-B (RHD)
Front right fender (LHD)
Front right fender (RHD)
RADIATOR FAN MOTOR
A/C CONDENSER FAN MOTOR
RADIATOR FAN RELAY No.2
RADIATOR FAN RELAY No.3
To A/C Magnetic Clutch Relay
<38-2><39-3><40-3>
Front left fender (LHD)
Front left fender (RHD)

(Cont. next page)

Power Source

Air Conditioner (RHD Push SW type)

1 2 3 4

W
ACC 5 L-R
7 AM1
IG1 4 B-Y
ST1
IGNITION SW
L-R
4 1A
15A CIG & RAD
12 1B
R-L
3 3A
15 3A
J/B No.3
10 1A
10A GAUGE
1 1G
Y
5 1B
W-R
12 3A
4 3E
J/B No.3
3 3D 3 3E 9 3E
W-R
7 IK2
R-B
R-B
1 EA1
Y
8 2G
2 2C
50A HEATER
HEATER RELAY
5 2B 1 2F 7 2E
2H
W-B
L-W
2 IM1
L-W
B
W-B
L-Y
EA1
L-Y
Y
5 5
A/C MAGNETIC CLUTCH RELAY
2 5 5 5
6 1A
40A AM1
3 1F
W
7 EB1
W
2
3
100A ALT
FUSE BOX
1
2
W-R
FL MAIN 2.0L
BATTERY
1
A/C HIGH PRESSURE SW
4
B-L
2 EB1
B-L
W-R
EA
Front left fender (RHD)

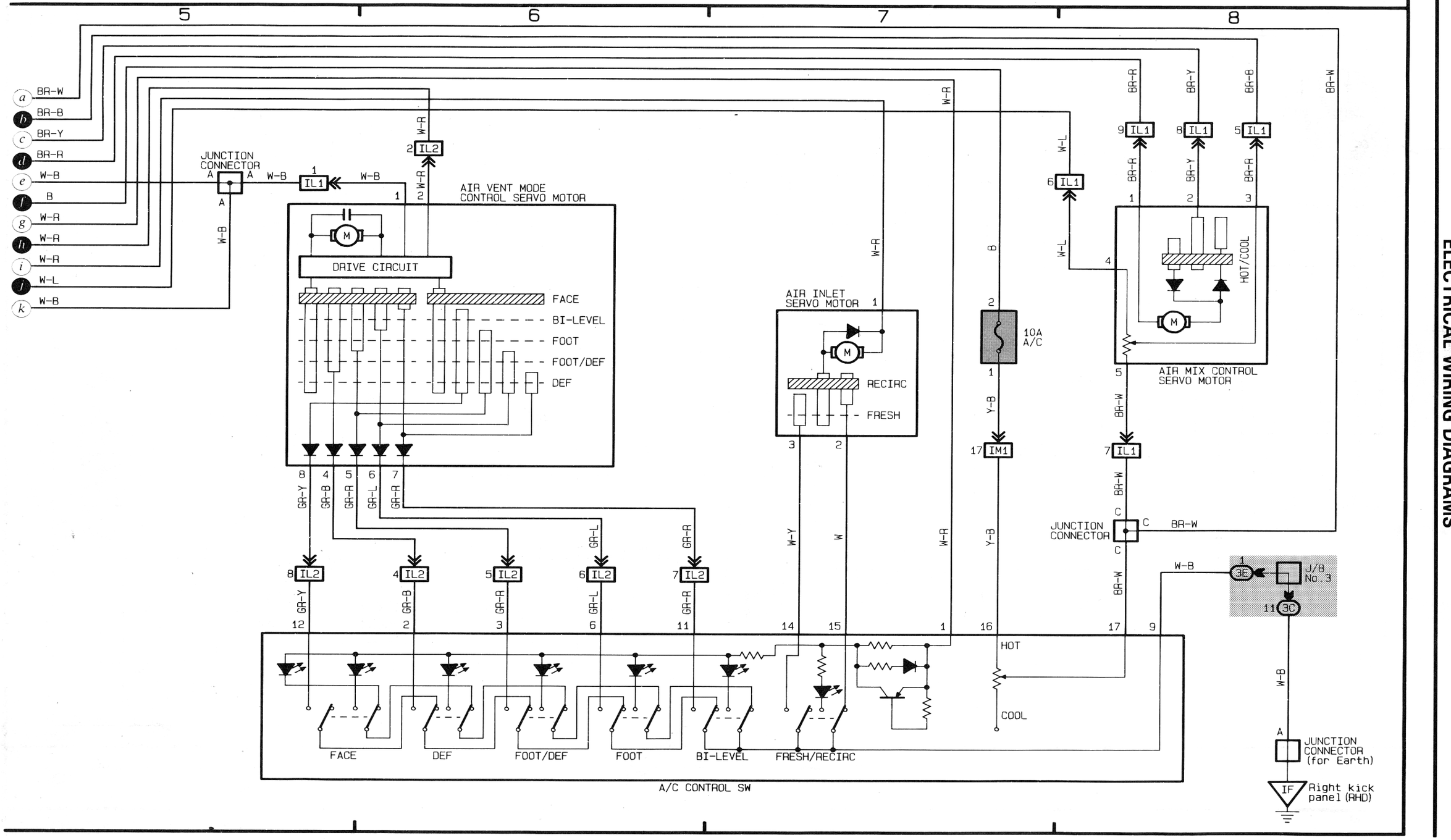
A/C SYSTEM AMPLIFIER

ACC 17 — R-L
HR 8 — L-W
BLW 10 — L-R
FR 9 — G-Y
TM 23 — L-B
ACIND 19 — Y-W
ACSW 18 — Y-R
S6 4 — W-L
GND 11
MH 6
MC 7
TP 5
S5 3

BR-W a
BR-B b
BR-Y c
BR-R d
W-B e
B f
W-R g
W-R h
W-R i
W-L j
W-B k

2 IK3
3 IK3
12 IL1
3 IL1
14 IL1
2 IL1
B
W-R
W-R
W-R
W-R
W-B
B
L-Y
W-B
B
B-L
To A/C Condenser Fan Relay No.3 <37-4>
B
JUNCTION CONNECTOR
B
B
W-L
W-L
2
A/C EVAPORATOR TEMP. SENSOR
W-B
7 IK1
W-R
10 IK1
W-L
W-L
(Europe)
A/C MAGNETIC CLUTCH AND LOCK SENSOR
4
1
2 W-R
W-R
7 IM1
B
BLOWER MOTOR
M
2
B-W
B-W
1 IJ2
BLOWER RESISTOR (for Low Speed)
B-W 1
2
B-W
1
BLOWER CONTROL RELAY
5 6 7 8
1 4 3 2
B-W W L W-B
1 IL1 13 IL1 11 IL1 4 IL1
L-R G-Y L-B W-R
2 IJ2 3 IJ2 4 IJ2
L-R L-B W-B
L-R L-B W-B
4 2 3
POWER TRANSISTOR
L-Y W-B Y-W B-L Y-R R-L
11 5 9 2 7 10
MGC GND LOCK IND B ACSW LOCK IN
A/C AMPLIFIER
SG
12
THI VR
3 8
ACT 6
AC1 1
IG- 4
W-B
W-B
G-W
L-B
B
JUNCTION CONNECTOR (for Earth)
A
W-B
II
Left kick panel (RHD)
From Engine and ECT ECU (ACT) <4-2><7-2>
From Engine ECU (ACT) <3-2><5-2><6-2><8-2>
To Engine and ECT ECU (AC1) <4-2><7-2>
To Engine ECU (AC1) <3-2><5-2><6-2><8-2>
From Igniter <1-3>

Air Conditioner (RHD Push SW type)



Power Source

Air Conditioner (LHD Lever SW type)

1 2 3 4

W

B-Y

ACC
IG1
ST1
IG2
ST2
AM1
AM2
IGNITION SW

10A GAUGE

50A HEATER

HEATER RELAY

10A A/C

40A AM1

J/B No.3

W-R

R-B

L-W

B

Y

Y-B

17 IM1

EA1

IK2

IM1

EB1

A/C MAGNETIC CLUTCH RELAY

A/C HIGH PRESSURE SW

BLOWER MOTOR

B-W

IJ1

L-B

L-R

BLOWER RESISTOR

OFF LO M1 M2 HI

BLOWER SW

J/B No.3

3E

3F

JUNCTION CONNECTOR (for Earth)

Right kick panel (LHD)

II

IF

Left kick panel (LHD)

100A ALT

FUSE BOX

FL MAIN 2.0L

BATTERY

TO A/C Condenser Fan Relay No.3 <37-4>

A/C VOLUME SW

See Illumination System<19-2>

ON
OFF
A/C SW

A/C MAGNETIC CLUTCH AND LOCK SENSOR

A/C THERMISTOR

IK1

B-L

L-Y

R-L

W-L

Y-R

Y-W

G-W

L-B

From Igniter <1-3>

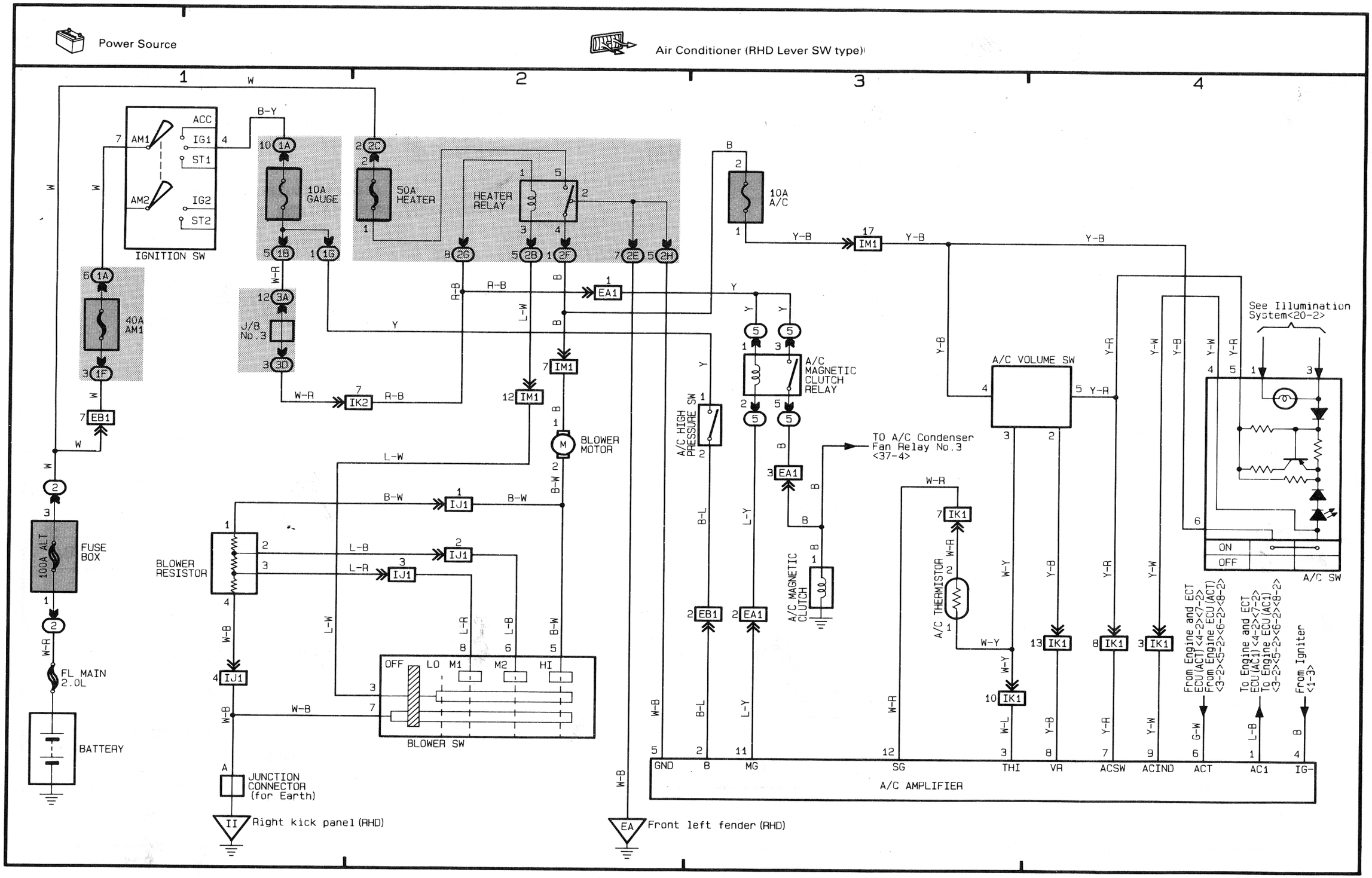
From Engine and ECT ECU(ACT) <4-2><7-2>
From Engine ECU(ACT) <3-2><5-2><6-2><8-2>

To Engine and ECT ECU(AC1) <4-2><7-2>
To Engine ECU(AC1) <3-2><5-2><6-2><8-2>

GND B MG LOCK IN SG THI VR ACSW LOCK GND IG1 ACT AC1

A/C AMPLIFIER

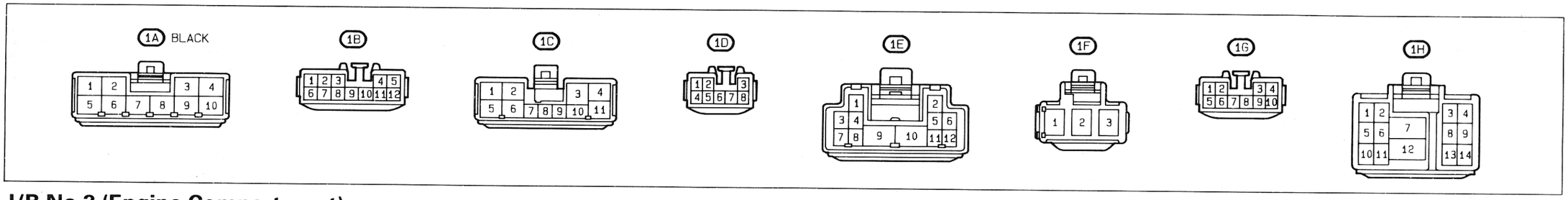
EB
Front left fender (LHD)


Power Source
Air Conditioner (RHD Lever SW type)
1
2
3
4
IGNITION SW
ACC
IG1
ST1
IG2
ST2
AM1
AM2
10A GAUGE
50A HEATER
HEATER RELAY
10A A/C
40A AM1
J/B No.3
FUSE BOX
100A ALT
FL MAIN 2.0L
BATTERY
BLOWER RESISTOR
BLOWER MOTOR
BLOWER SW
OFF
LO
M1
M2
HI
JUNCTION CONNECTOR (for Earth)
Right kick panel (RHD)
A/C HIGH PRESSURE SW
A/C MAGNETIC CLUTCH RELAY
A/C MAGNETIC CLUTCH
TO A/C Condenser Fan Relay No.3 <37-4>
A/C VOLUME SW
A/C THERMISTOR
See Illumination System<20-2>
ON
OFF
A/C SW
From Engine and ECT ECU (ACT) <4-2><7-2> From Engine ECU (ACT) <3-2><5-2><6-2><8-2>
To Engine and ECT ECU (AC1) <4-2><7-2> To Engine ECU (AC1) <3-2><5-2><6-2><8-2>
From Igniter <1-3>
GND
B
MG
SG
THI
VR
ACSW
ACIND
ACT
AC1
IG-
A/C AMPLIFIER
Front left fender (RHD)

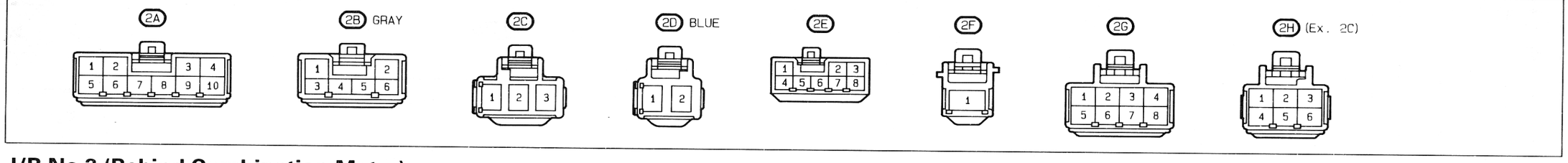
1 2 3 4

Junction Block and Wire Harness Connector

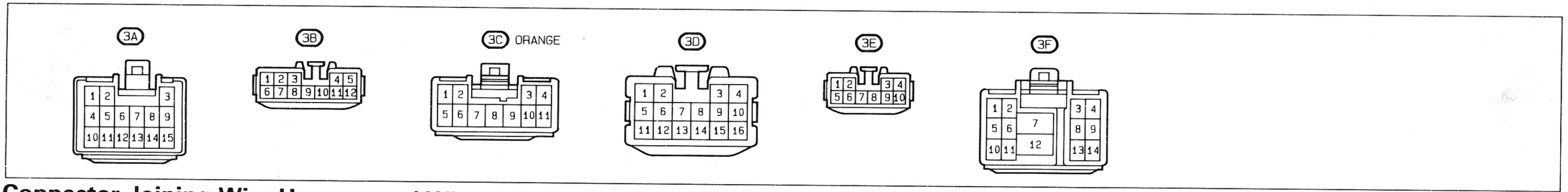
J/B No.1 (LHD : Left Kick Panel, RHD : Right Kick Panel)



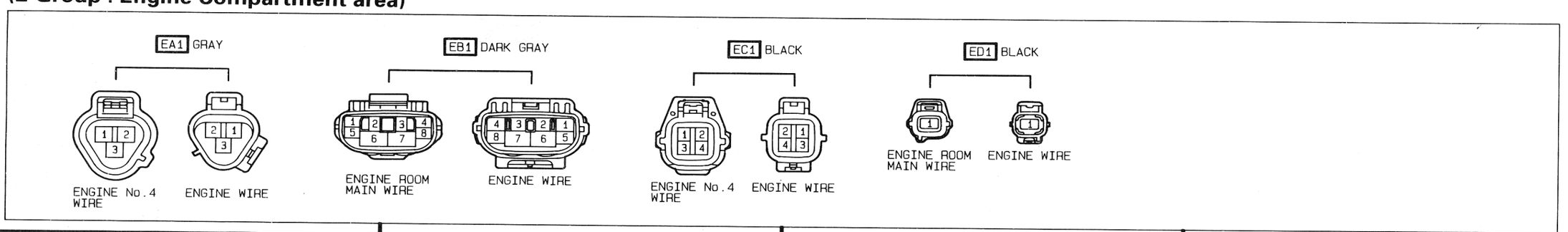
J/B No.2 (Engine Compartment)



J/B No.3 (Behind Combination Meter)

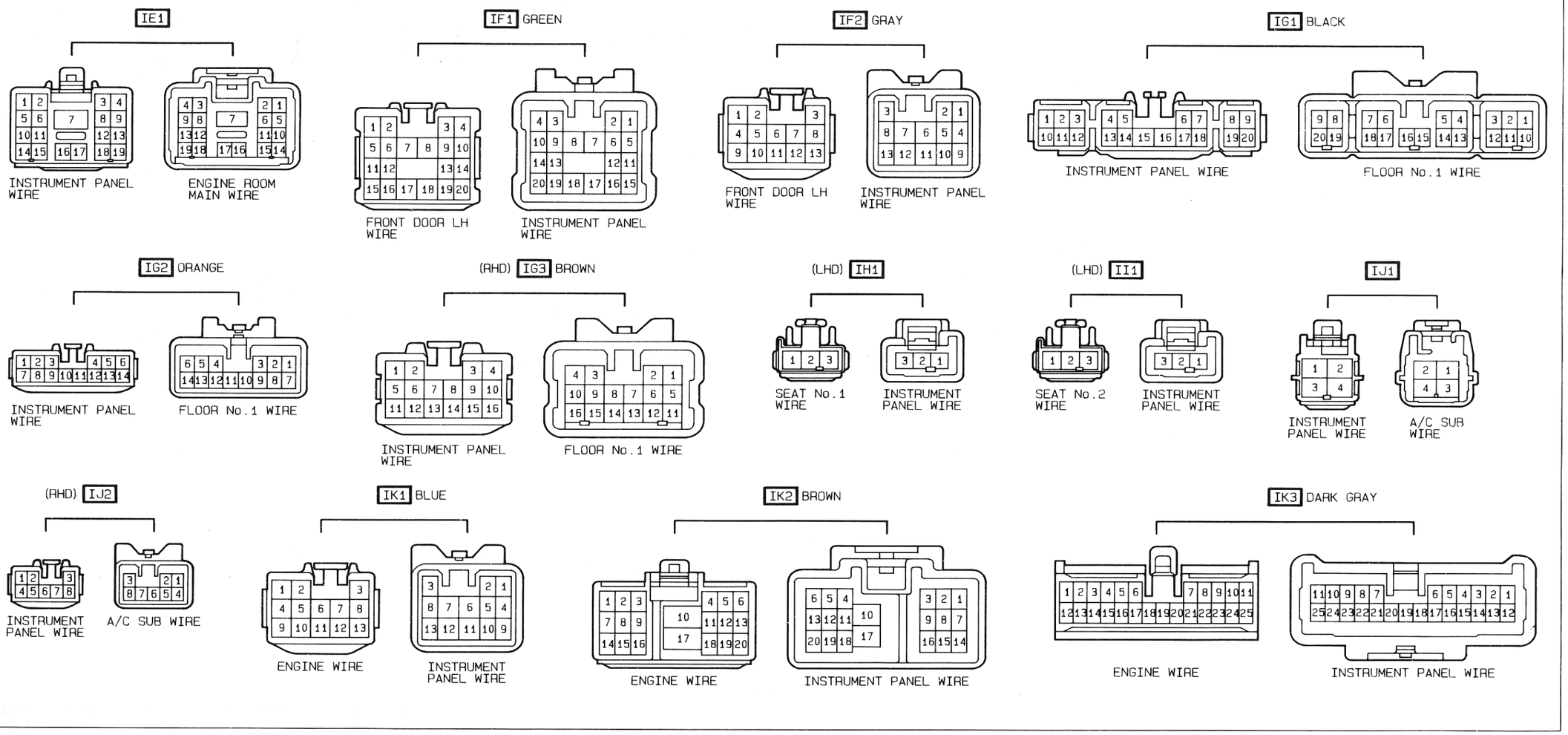


Connector Joining Wire Harness and Wire Harness
(E Group : Engine Compartment area)



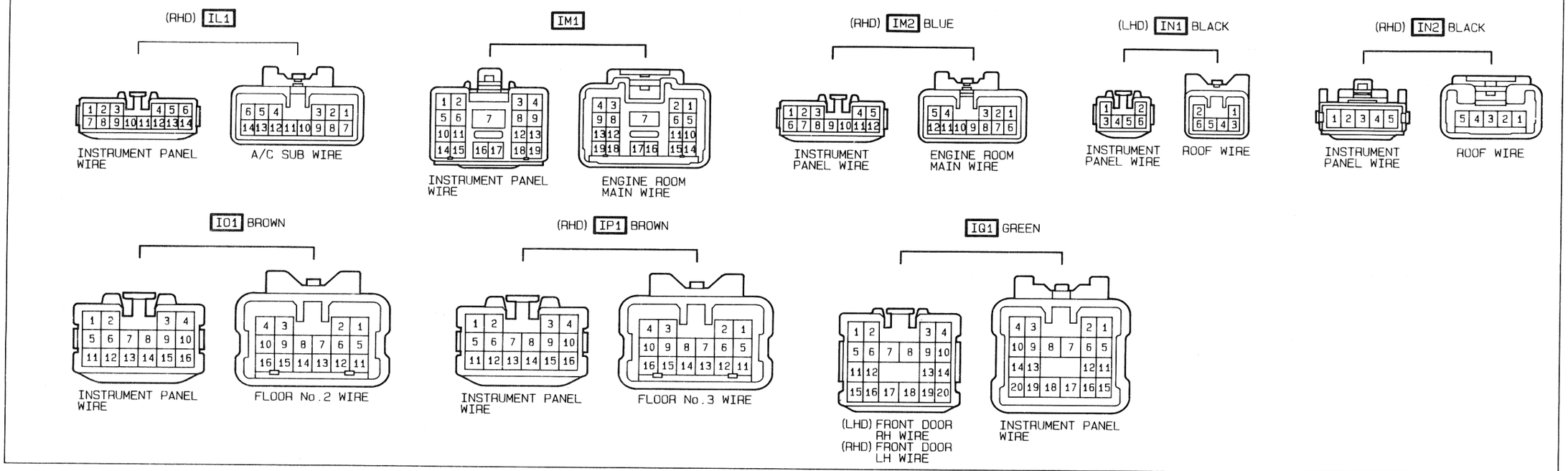
1 2 3 4

(I Group : Instrument Panel and Surrounding area)

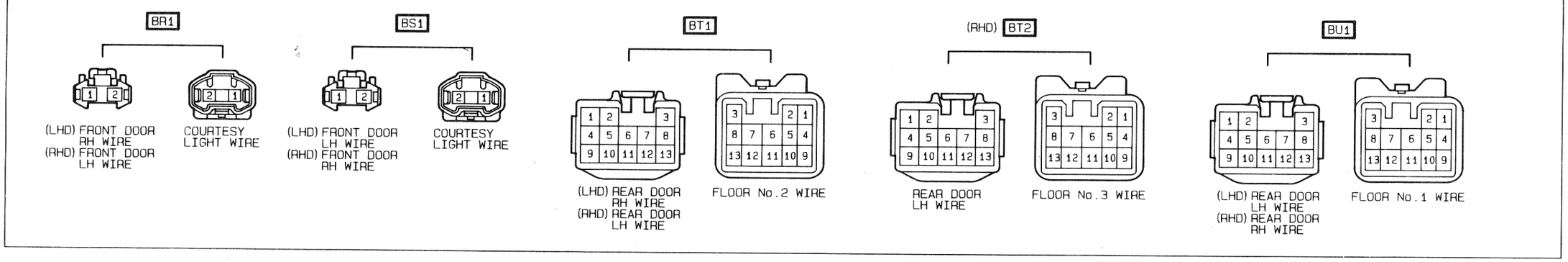


1 2 3 4

(I Group : Instrument Panel and Surrounding area)

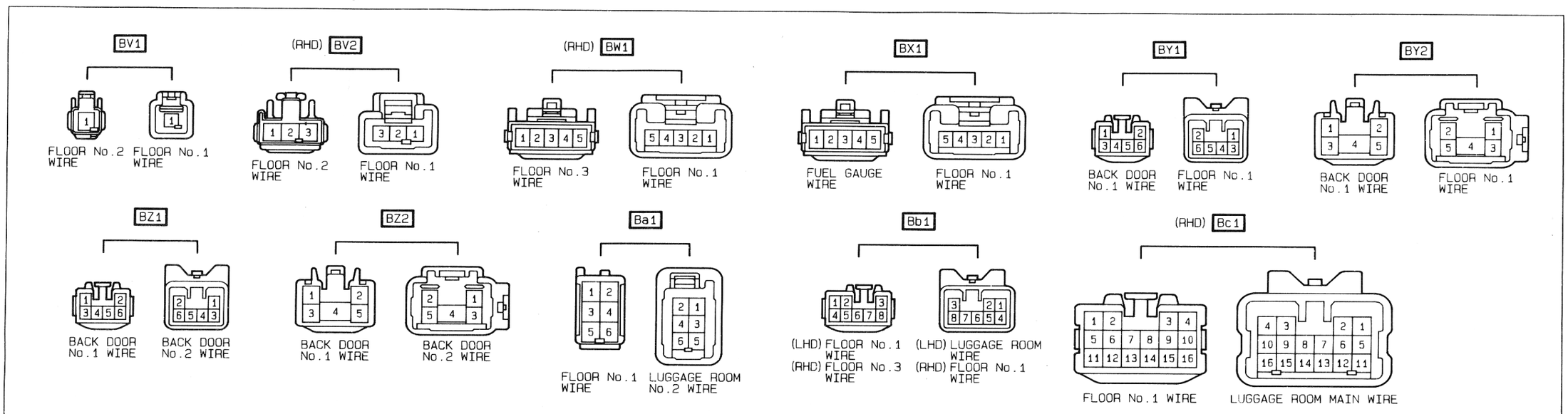


(B Group : Body and Surrounding area)



1 2 3 4

(B Group : Body and Surrounding area)



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