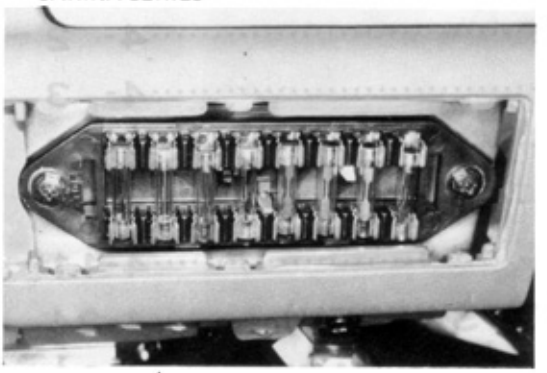
BODY ELECTRICAL

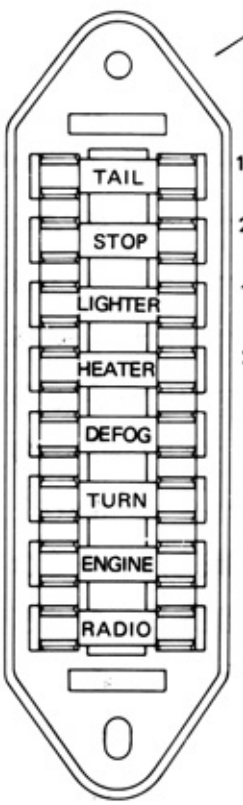
FUSE BLOCK

Fig. 4-1

CARINA SERIES



CELICA SERIES



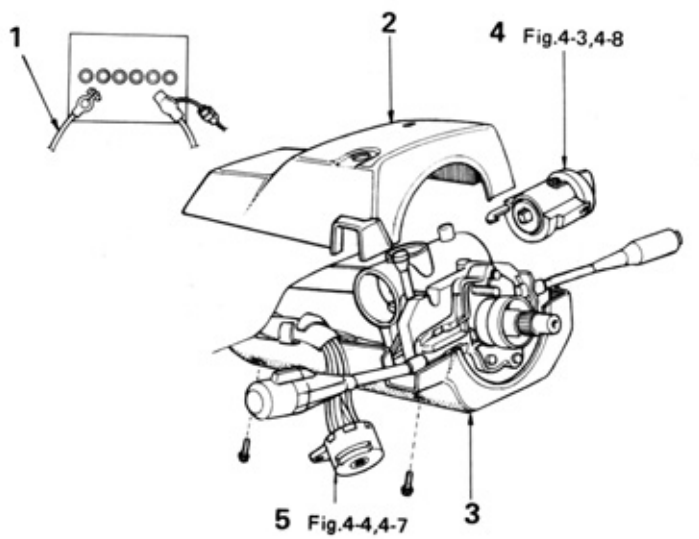
15A	.....	Tail lights, license plate lights, front parking lights, side marker lights, glove box light, illumination lights (cigarette lighter, combination meter, clock, radio & heater control panel).
20A	.....	Horn, stop lights, hazard warning lights & unlock warning buzzer.
15A	.....	Cigarette lighter, room light, door courtesy light, map light luggage room light & clock.
20A	.....	Heater, back up light, meter, gauge, charge warning light, brake warning light & low oil pressure warning light.
15A	.....	Rear window defogger.
15A	.....	Windshield wiper, washer, turn signal light & headlight cleaner.
15A	.....	Main relay, fuel cut solenoid, fuel pump (for 20R engine), voltage regulator (IG terminal) & ignition coil (except 20R engine).
15A	.....	Radio & tape player.

IGNITION SWITCH

REMOVAL

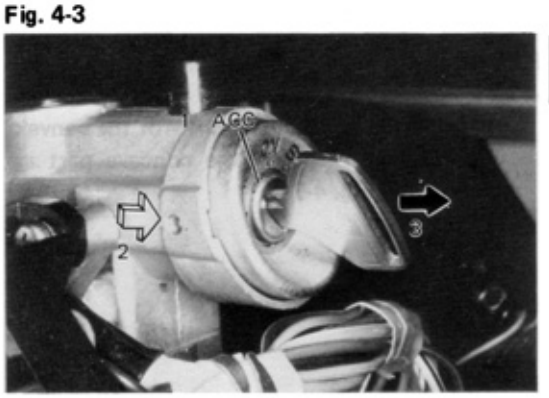
Remove the parts in the order numbered below.

Fig. 4-2



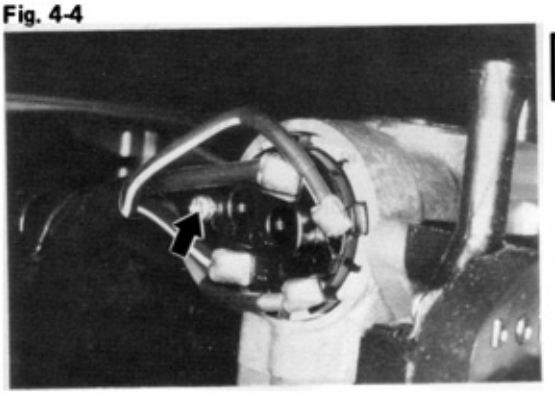
1 Battery Terminal (Ground)
2 Steering Column Cover Upper
3 Steering Column Cover Lower
4 Ignition Switch Key Cylinder
5 Ignition Switch Assembly

Fig. 4-3



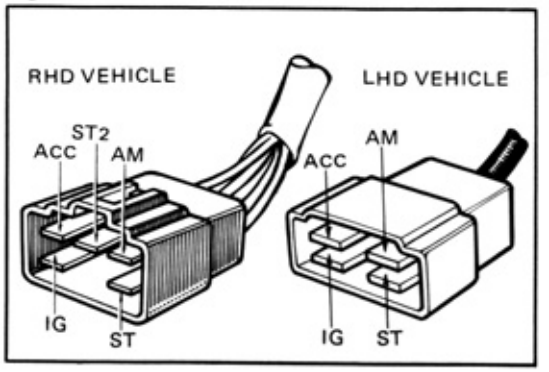
1. Remove ignition switch key cylinder. (Item 4)
   (1) Turn the ignition key to "ACC".
   (2) Hold down the pin with a wire and pull out the ignition switch key cylinder.

Fig. 4-4



2. Remove ignition switch assembly. (Item 5)
   Remove the attaching screw and take off the ignition switch assembly.

Fig. 4-5

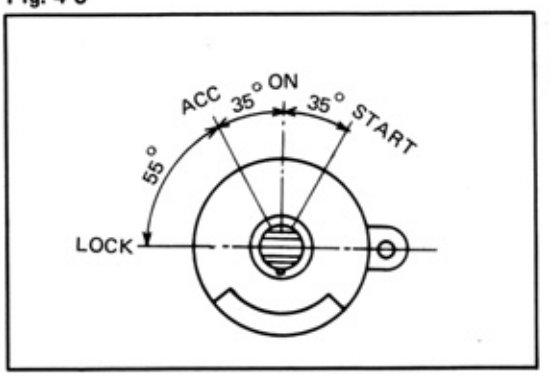


INSPECTION

Terminal connections

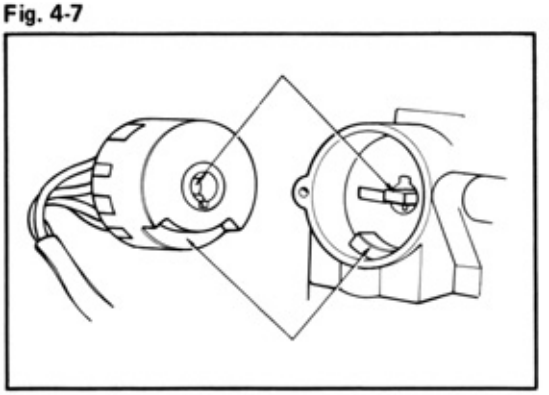
AM ..... To battery fusible link (power source)
IG ..... To ignition coil
fuse (TURN) 15A
fuse (ENGINE) 15A
ACC ..... To fuse (RADIO) 15A
ST ..... To starter "ST" terminal & fuel pump relay
ST2 ..... To ignition coil "+" terminal

Fig. 4-6



TERMINAL / SWITCH POSITION	AM	ACC	IG	ST	ST2 (RHD)
OFF					
ACC	○	○			
ON	○	○	○		
START	○		○	○	○

Fig. 4-7



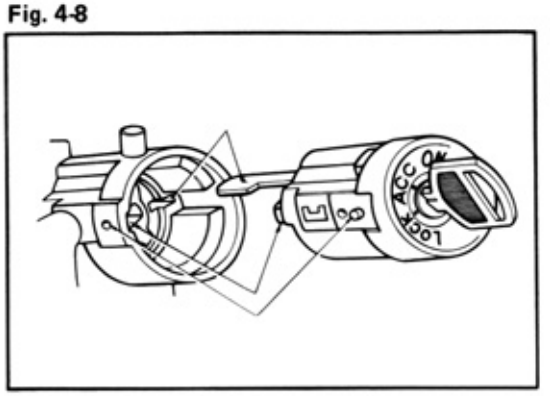
INSTALLATION

Perform the removal in reverse order.

– Note –

1. **Install the ignition switch with the convex part aligned against the concave part as shown in Fig. 4-7.**

Fig. 4-8

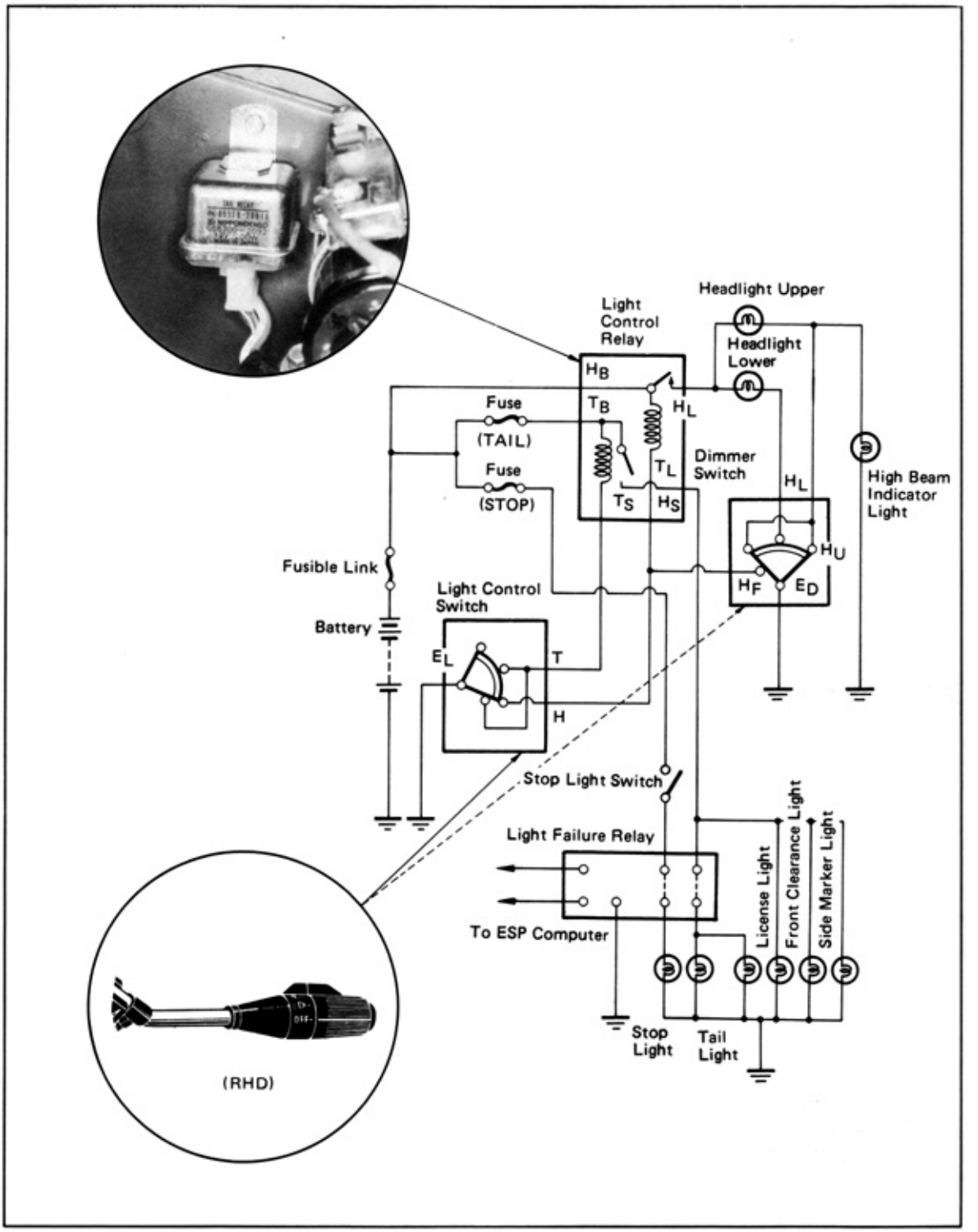


2. **In installing the ignition switch key cylinder, turn the key to "ACC" and align the convex part with the concave part as shown in Fig. 4-8.**

LIGHTING

CIRCUIT DIAGRAM

Fig. 4-9



Light Control Switch

DISASSEMBLY

Disassemble the following parts in numerical order.

Fig. 4-10

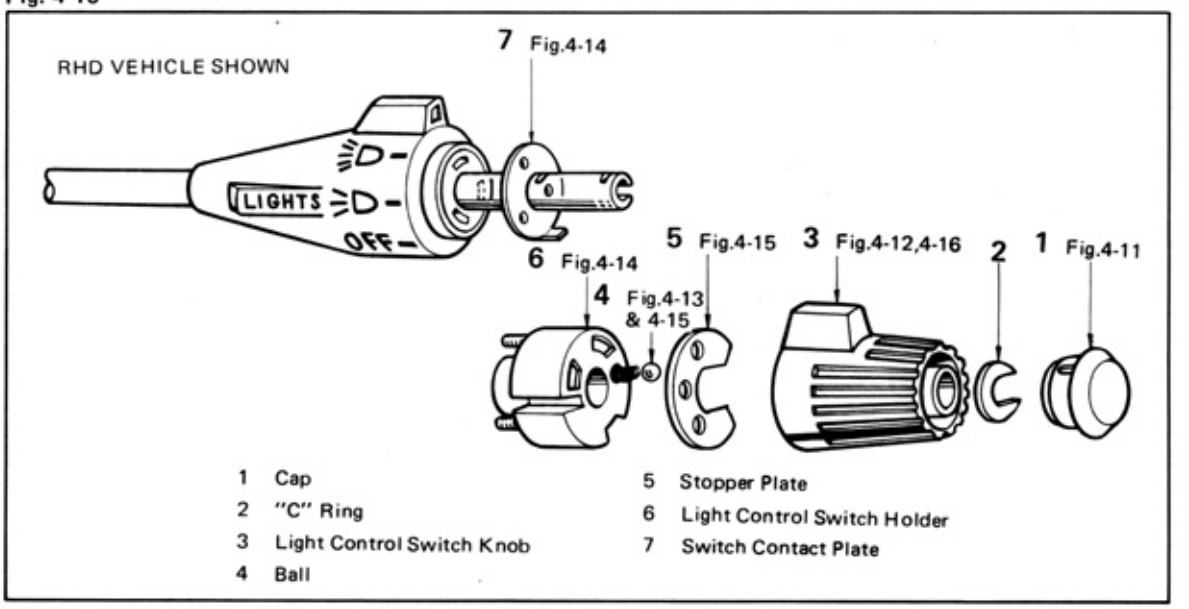
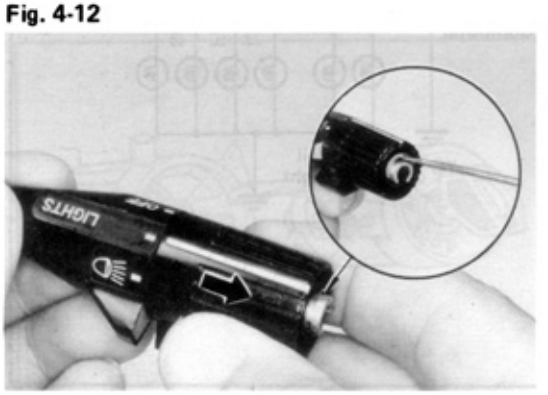


Fig. 4-11

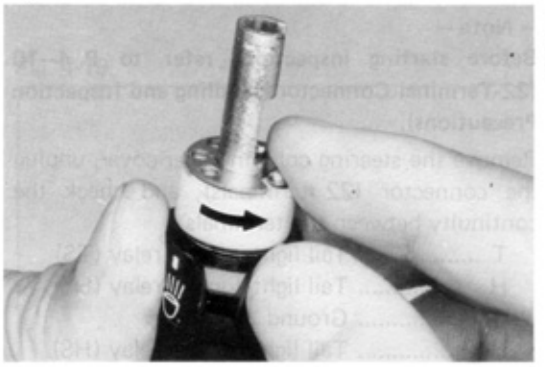
1. Cap removal (Item 1)
   Remove the cap by prying it off screwdriver.

Fig. 4-12



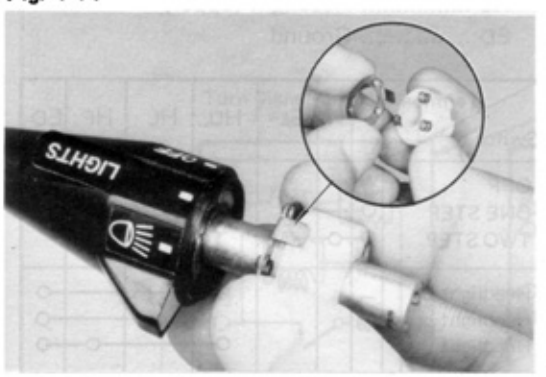
2. Light control switch knob removal. (Item 3)
   Remove the "C" ring. Turn the knob one step and pull the knob from the shaft.

Fig. 4-13



3. Steel ball removal. (Item 4)
   Turn the switch holder and take out the ball and spring. Use care as the ball will jump out.

Fig. 4-14

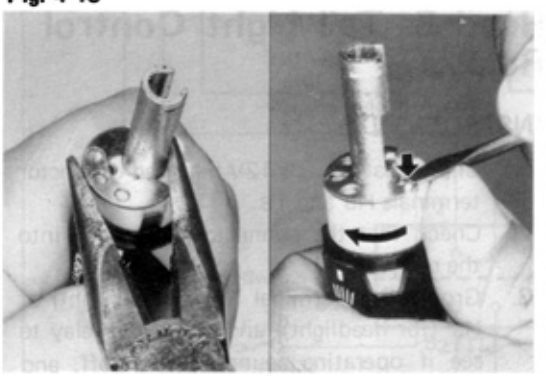


ASSEMBLY

Perform the disassembly in reverse order.

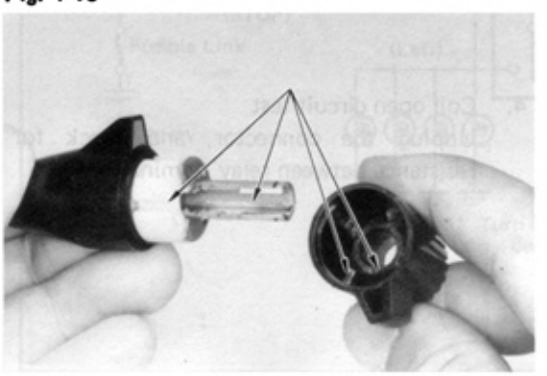
1. Assemble switch holder. (Item 6)
   (1) Set three springs on the switch holder.
   (2) Fit the lip of right contact plate into the larger slot on the switch holder.
   (3) Install the switch holder to the switch body.

Fig. 4-15



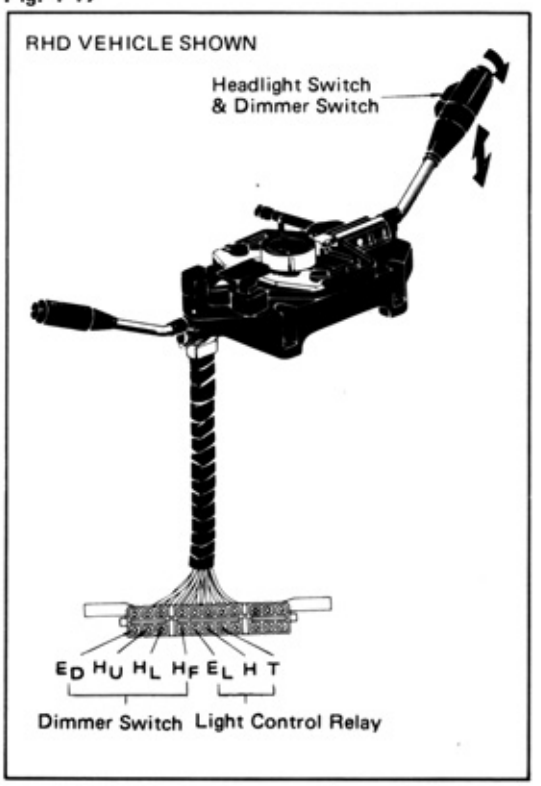
2. Assemble stopper plate. (Item 5)
   Install the stopper plate from the direction as shown.
3. Assemble steel ball. (Item 4)
   Assemble the spring and steel ball into the switch holder, and turn the switch holder while pushing the ball.

Fig. 4-16



4. Assemble light control switch knob. (Item 3)
   Assemble the switch knob by fitting the lips at switch knob inner side into the slots of shaft and switch holder.

Fig. 4-17



INSPECTION

– Note –

Before starting inspection, refer to P. 4–10 (22-Terminal Connector Handling and Inspection Precautions).

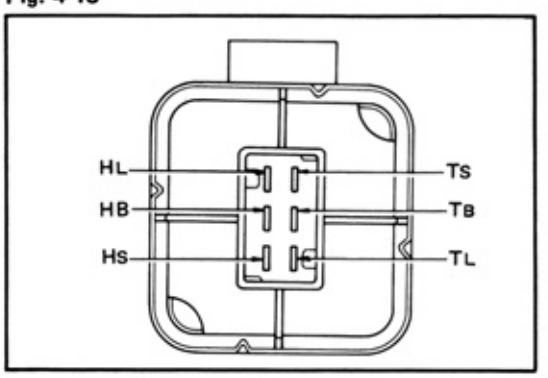
Remove the steering column lower cover, unplug the connector (22 terminals), and check the continuity between the terminals.

T ..... Tail light control relay (TS)
H ..... Tail light control relay (HS)
EL ..... Ground
HF ..... Tail light control relay (HS)
HL ..... Headlight (lower)
HU ..... Headlight (upper)
ED ..... Ground

Terminal / Switch	T	H	EL	HU	HL	HF	ED
OFF							
ONE STEP	○		○				
TWO STEP	○	○	○				
Headlight U.				○			○
Headlight L.					○		○
Headlight F.				○		○	○

Head & Tail Light Control Relay

Fig. 4-18



INSPECTION

1. Check that there is 12V between connector terminals HB and TB.
2. Check that the connector is plugged into the relay.
3. Ground the terminal TS (for tail light) or HS (for headlight), and check the relay to see if operating sound is given off, and check the light to see if turned on.

Terminals	Resistance (Reference)
TB – TS	60 Ω approx.
HB – HS	60 Ω approx.

4. Coil open circuit test
   Unplug the connector, and check for resistance between relay terminals.

TURN SIGNAL & HAZARD

Fig. 4-19

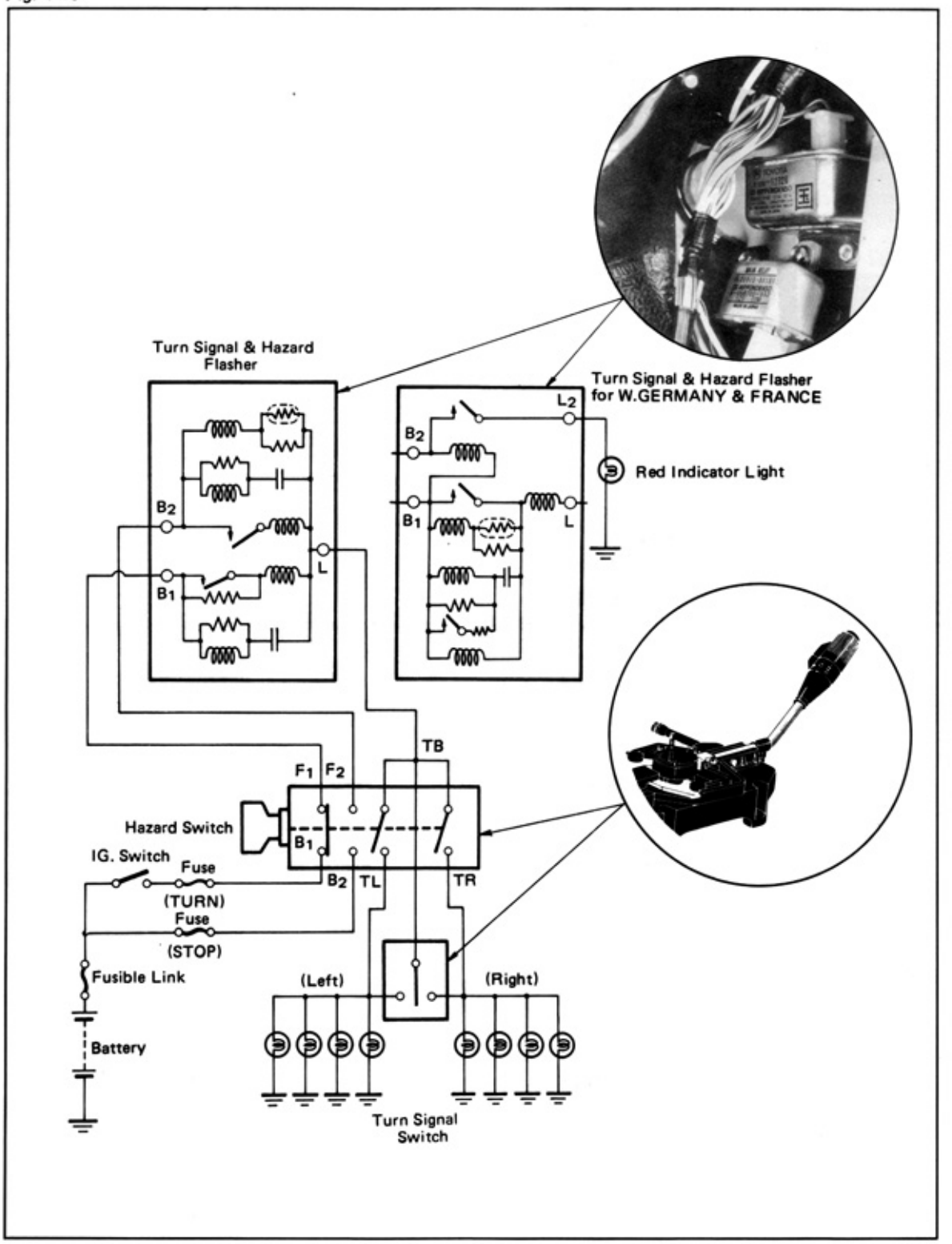
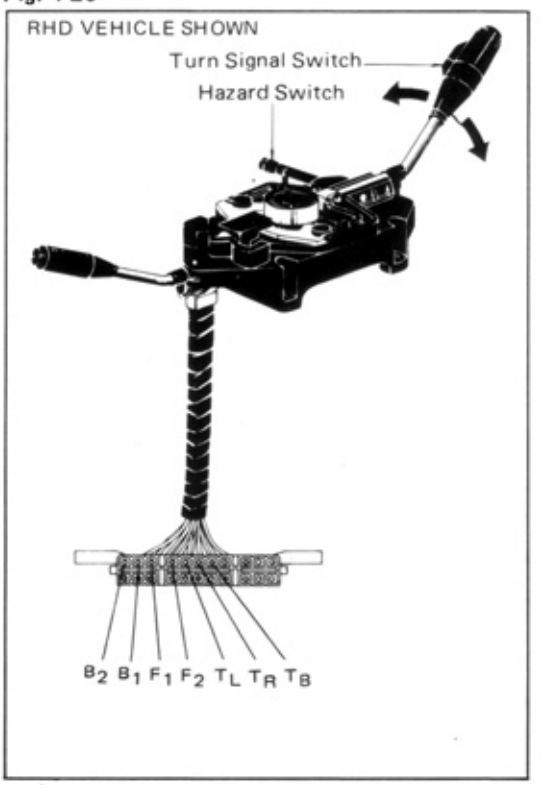


Fig. 4-20



Turn Signal & Hazard Switch

INSPECTION

– Note –

Precautions below before starting inspection.

Remove the steering column lower cover, pull out the connector, and check continuities between terminals.

- TB ..... Turn signal flasher (L)
- TR ..... Turn signal light (R)
- TL ..... Turn signal light (L)
- F1 ..... Turn signal flasher (B1)
- F2 ..... Turn signal flasher (B2)
- B1 ..... Fuse (TURN)
- B2 ..... Fuse (HORN)

Switch \ Terminal		TL	TB	TR	F1	F2	B1	B2
Turn Signal	R		○—○		○——	——○		
	N				○——	——○		
	L	○—○			○——	——○		
Hazard		○—○	○—○	○		○——	——○	

22-Terminal Connector Handling and Inspection Precautions

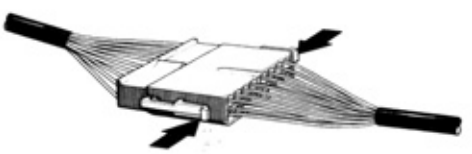


Fig. 1 Unplugging Connector

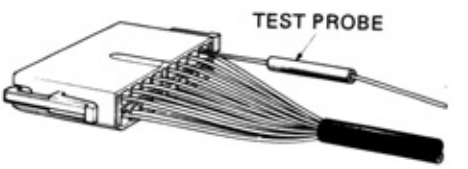


Fig. 2 Inserting tester probe

1. As shown in Fig. 1 unplug the connector by pushing in the lock levers and pulling apart.
2. In checking the continuity or voltage with a circuit tester, always insert the tester probe from the wire harness side as shown in Fig. 2. Never insert from the receptacle side as the connector insertion fit will be enlarged and may cause defective contact.

Fig. 3 Connecting Part

Fig. 4 Connecting Part

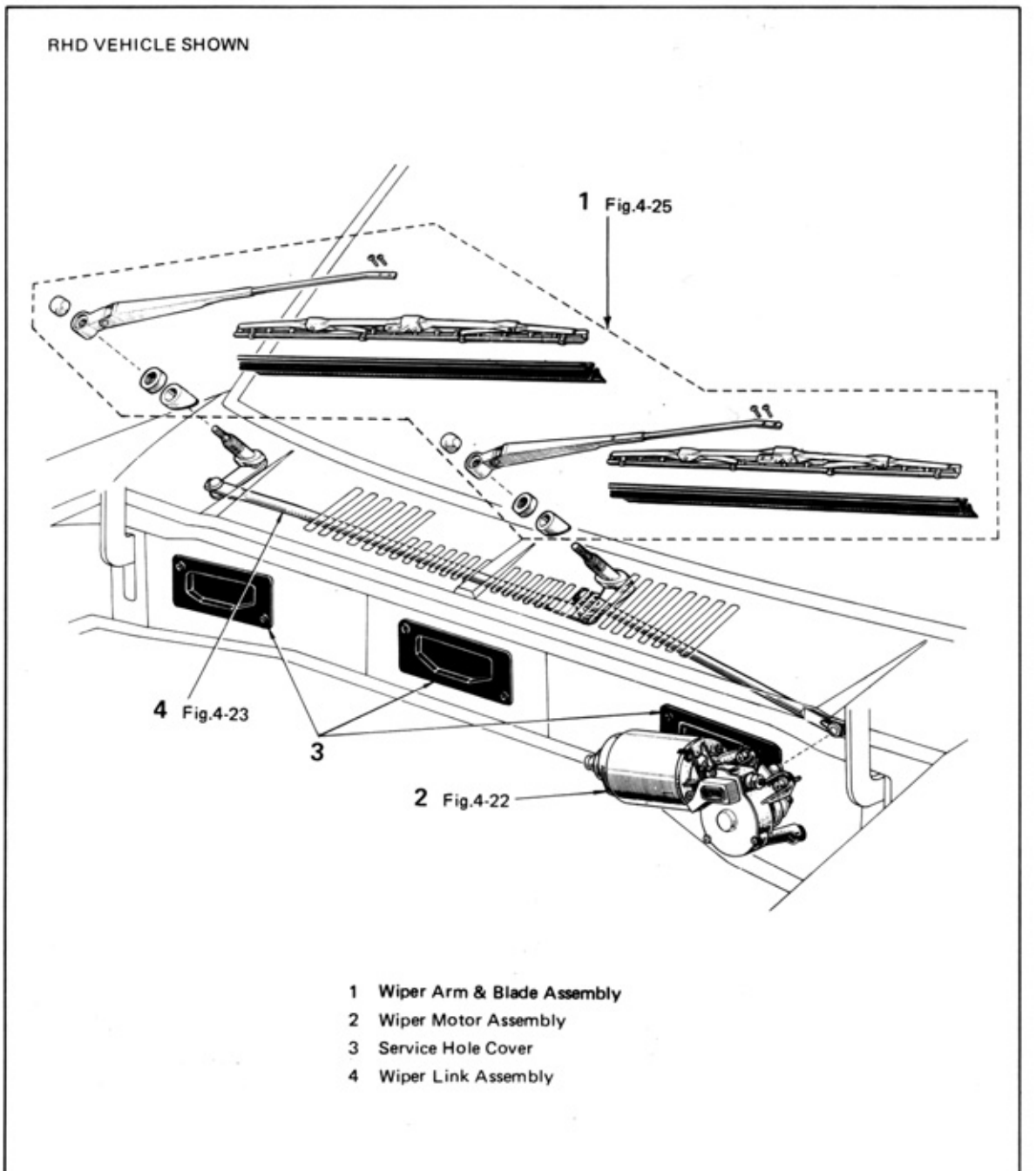
WIPER

Wiper Motor And Link (Carina Series)

REMOVAL

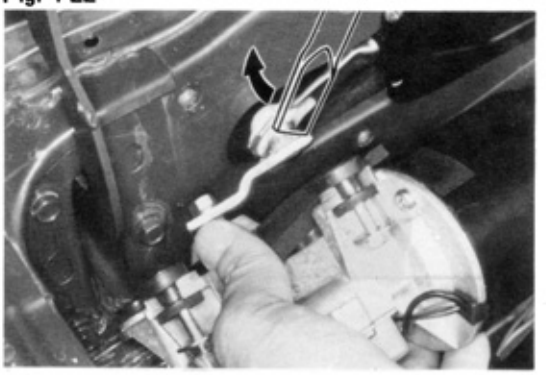
Remove the following parts in numerical order.

Fig. 4-21



1 Wiper Arm & Blade Assembly
2 Wiper Motor Assembly
3 Service Hole Cover
4 Wiper Link Assembly

Fig. 4-22



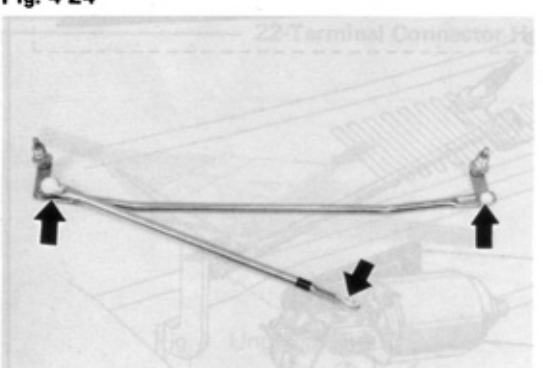
WIPER MOTOR & LINK REMOVAL

1. Wiper motor removal. (Item 2)
   Separate the coupling between the wiper link and crank arm by prying apart with screwdriver.

Fig. 4-23

2. Wiper link removal. (Item 4)
   (1) Remove the cowl service hole cover and remove the left and right wiper pivot parts from the body.
   (2) Remove the links through the hole where the wiper motor was mounted.

Fig. 4-24



INSTALLATION

Perform the removal in reverse order.

1. Grease the wiper link pivots and ball joints before installing the wiper links.

Fig. 4-25

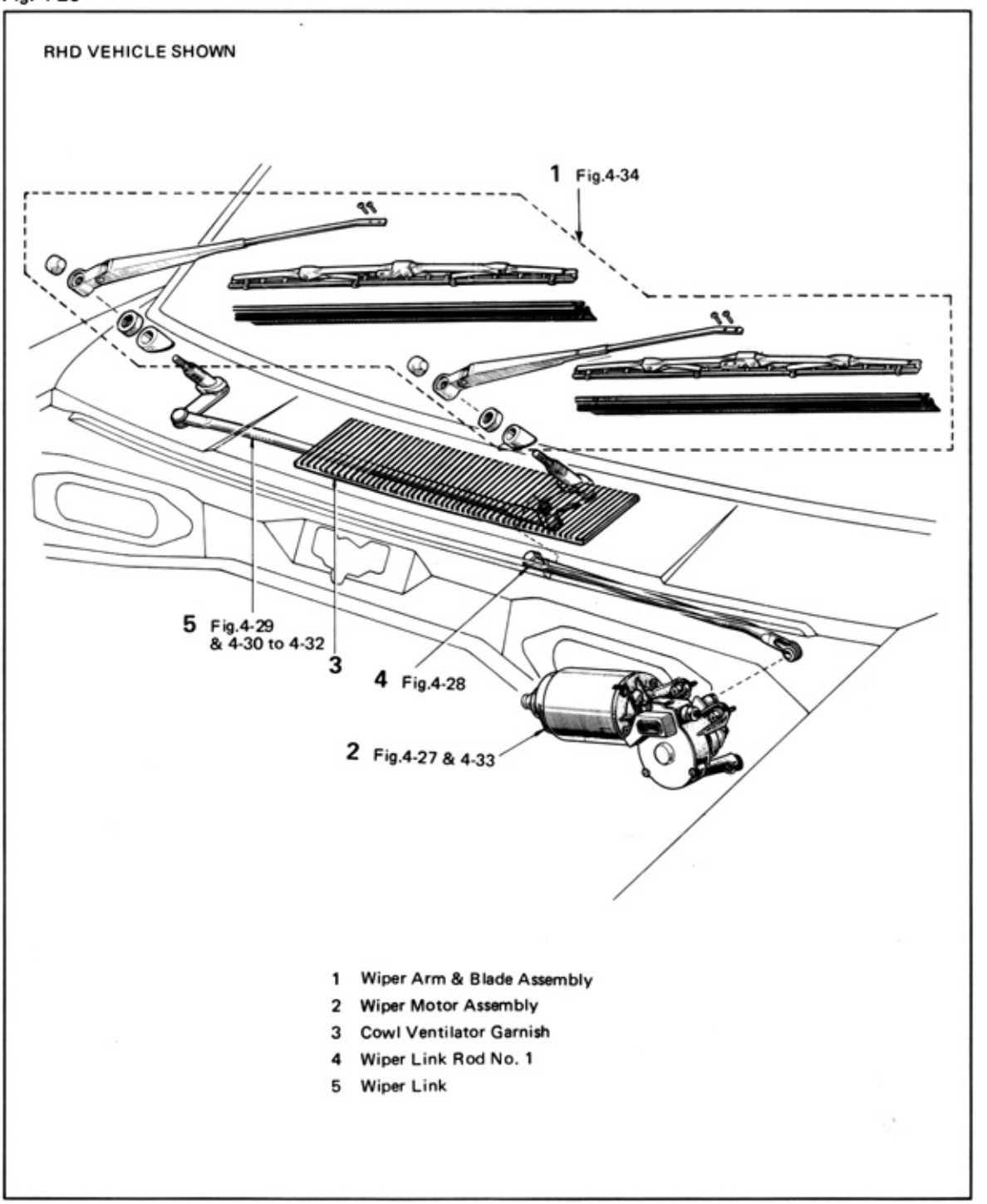
2. Before installing the wiper arms, turn on the wiper motor and then allow it to stop automatically. At this time, install the wiper arms correctly positioned.
   Tightening torque 100 – 160 kg-cm (7.2 – 11.6 ft-lb)
   (The nuts for the arms and those for the pivot shaft are tightened at the same torque)

Wiper Motor And Link (Celica Series)

REMOVAL

Remove the following parts in numerical order.

Fig. 4-26



1 Wiper Arm & Blade Assembly
2 Wiper Motor Assembly
3 Cowl Ventilator Garnish
4 Wiper Link Rod No. 1
5 Wiper Link

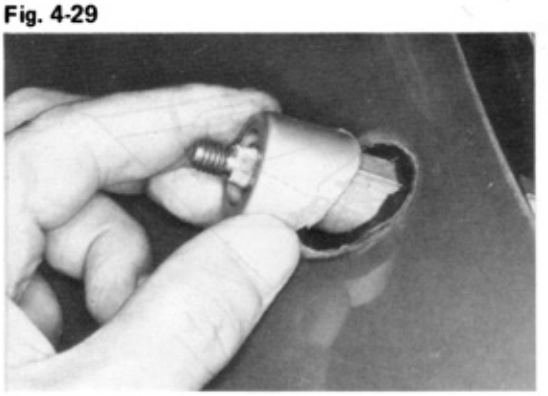
Fig. 4-27

1. Wiper motor removal. (Item 2)
   Separate the coupling between the wiper link and crank arm by prying apart with screwdriver.

Fig. 4-28

2. Wiper link removal. (Item 5)
   (1) Pry apart the link No. 1 at the wiper motor side with screwdriver.

Fig. 4-29

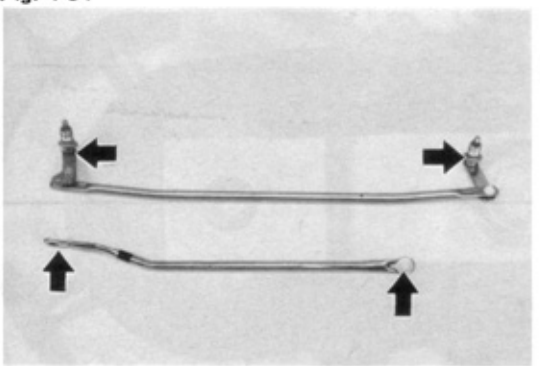


(2) Loosen the pivot nut and take off the outer bushing and packing.

Fig. 4-30

(3) Push the pivot shaft into cowl inner side and pull it out through the cowl center service hole.

Fig. 4-31

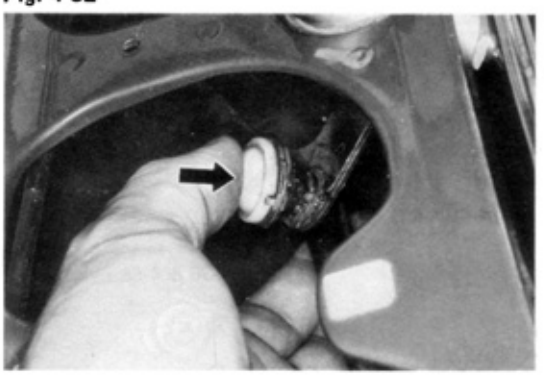


INSTALLATION

Perform the removal in reverse order.

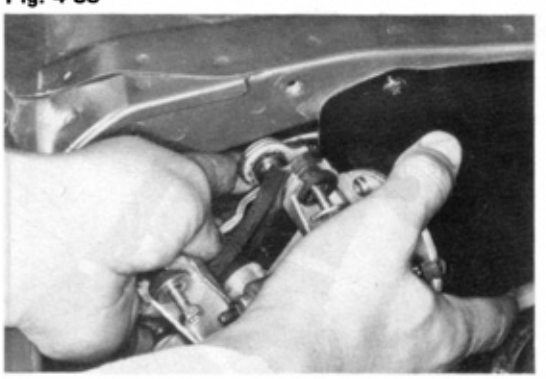
1. Assemble wiper link. (Item 5)
   1) Grease the wiper link pivots and ball joints before installing.

Fig. 4-32



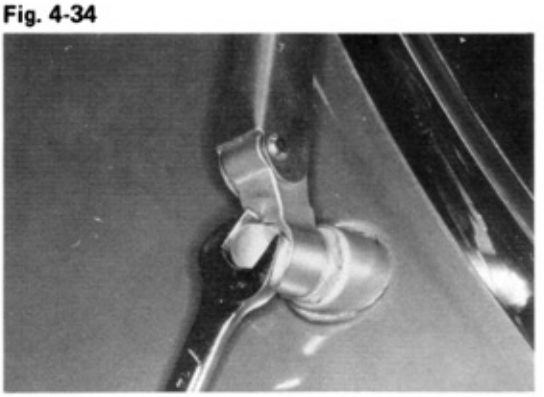
   2) Assemble wiper link ball joint.
      (1) Connect the ball at pivot side to the ball joint at link side.
      (2) Position the taped joint at the wiper motor side.

Fig. 4-33



2. Install wiper motor (Item 2)
   Securely couple the wiper link to the crank arm.

Fig. 4-34



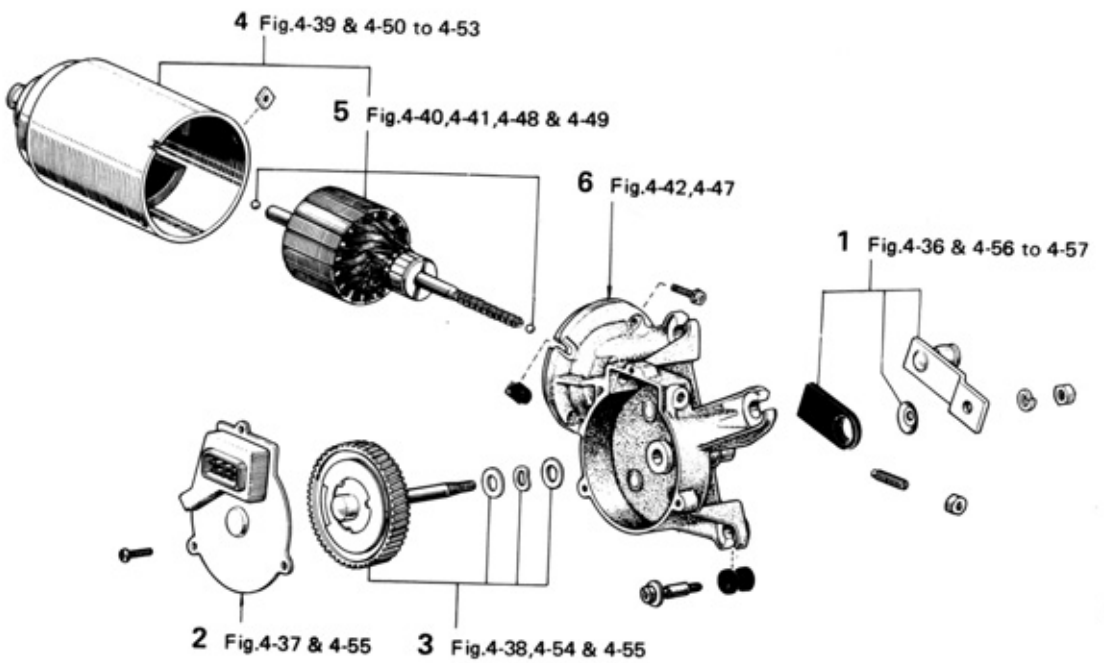
3. Install wiper arms (Item 1)
   Before installing the wiper arms, turn the motor and set it at automatic stop position. Then install the wiper arms in the parked position.
   Tightening torque 100 – 160 kg-cm (7.2 – 11.6 ft-lb)
   (The nuts for the arms and those for the pivot shafts are tightened at the same torque)

Wiper Motor

DISASSEMBLY

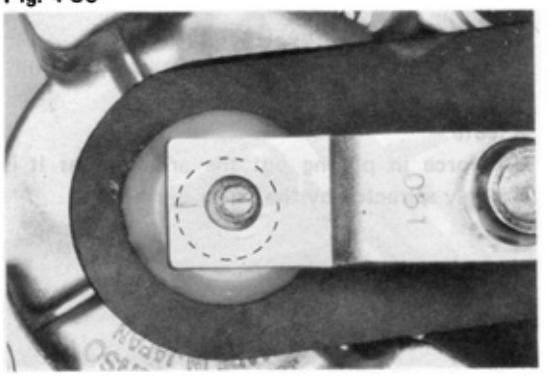
Disassemble the following part in numerical order.

Fig. 4-35



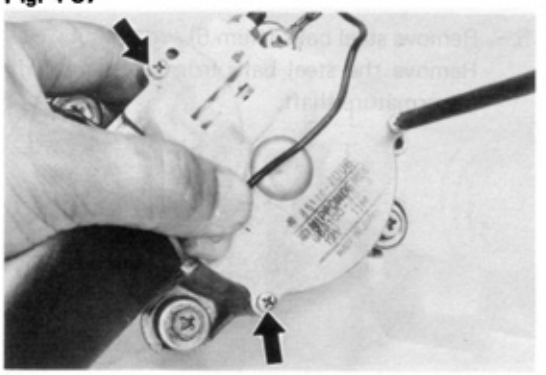
1 Wiper Motor Crank, Seat Ring & Cover Seat
2 Housing Cover Plate
3 Wiper Drive Shaft, Thrust Washer & Wave Washer
4 Stator & Armature
5 Armature & Ball
6 Wiper Motor Housing

Fig. 4-36



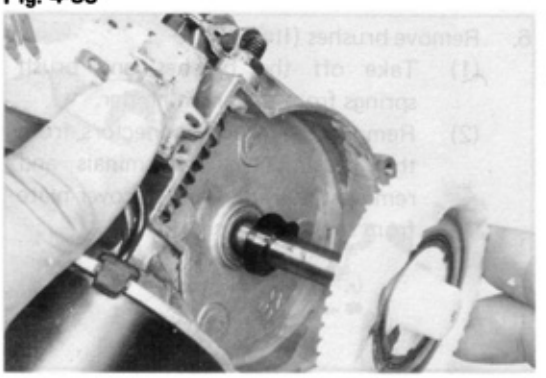
1. Remove wiper motor crank arm. (Item 1) Place aligning marks on the crank arm and shaft.

Fig. 4-37



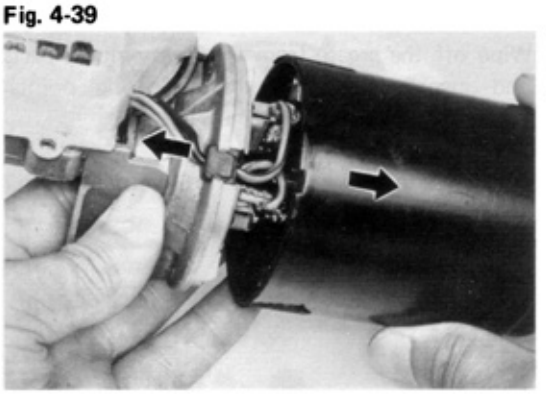
2. Remove drive shaft gear (Item 3)
   (1) Remove the crank housing cover plate from the gear housing.

Fig. 4-38



   (2) Take out the drive shaft gear from gear housing.

Fig. 4-39

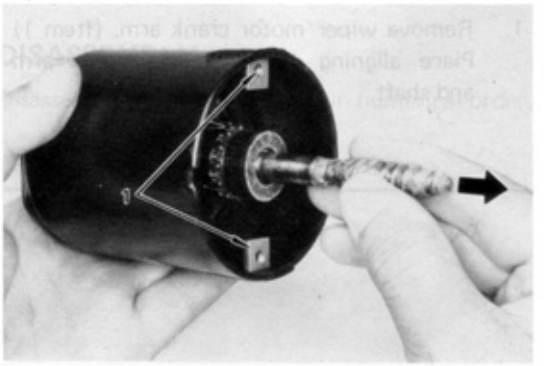


3. Remove stator & armature. (Item 4)
   Remove the two gear housing mounting screws and remove the gear housing from the stator.

– Note –

Since the armature shaft remains with the stator, use care in removal as there will be a danger of the brushes slipping off the commutator and becoming damaged by the worm gear.

Fig. 4-40

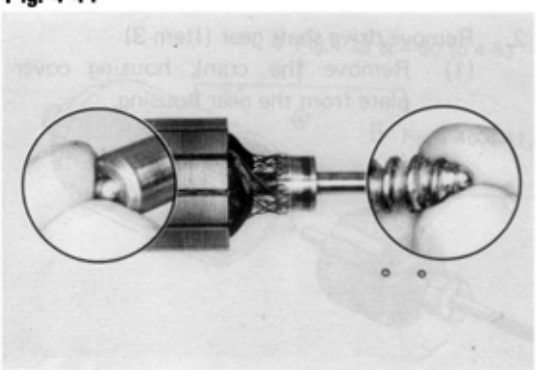


4. Remove armature. (Item 5)
   Remove the two stator nuts (1) and pull the armature from the stator.

– Note –

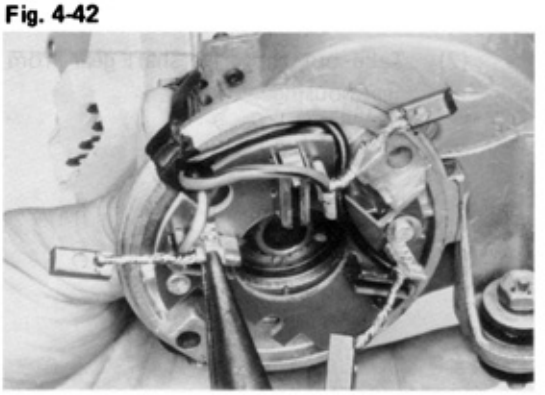
Use force in pulling out the armature as it is strongly attracted by the stator magnet.

Fig. 4-41



5. Remove steel balls (Item 5)
   Remove the steel balls from both ends of the armature shaft.

Fig. 4-42



6. Remove brushes (Item 6)
   (1) Take off the brushes and brush springs from the brush holder.
   (2) Remove the brush connectors from the brush holder terminals and remove the crank housing cover plate from the gear housing.

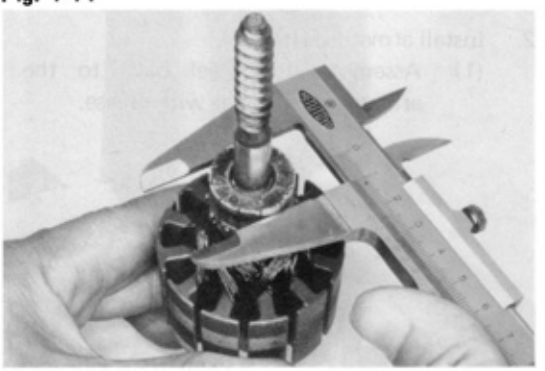
Fig. 4-43

INSPECTION

Wipe off the grease from the disassembled parts and inspect them on the following points, replacing or repairing as necessary.

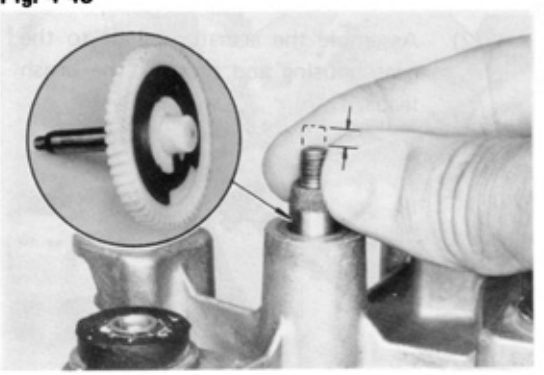
Brush length **Service limit 6.0 mm (0.24 in.)**

Fig. 4-44



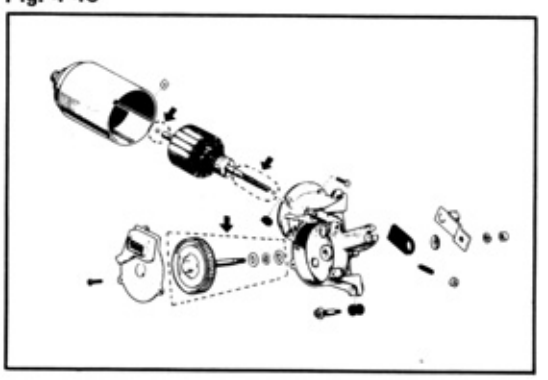
2. Commutator for contamination and burning
   Commutator diameter
   Service limit 22.0 mm (0.87 in.)
3. Armature shaft to bushing clearance
   Clearance is satisfactory if there is no excessive looseness at the gear part (worm part) when the armature is assembled. If too loose, replace the motor assembly.
4. Armature winding for open- or short-circuit.

Fig. 4-45



5. Drive shaft thrust clearance. If excessive, replace the washer.
   Thrust clearance 0.2 mm (0.008 in.) maximum
6. Gears for wear and damage.

Fig. 4-46



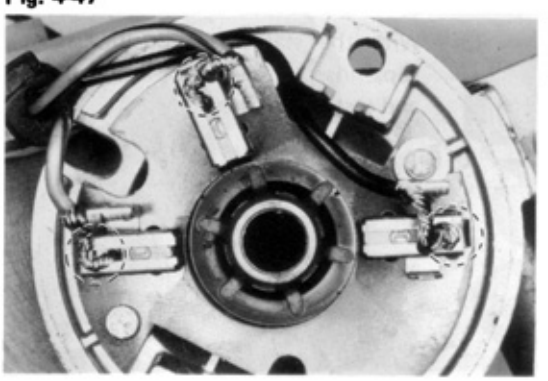
ASSEMBLY

Perform the removal in reverse order.

– Note –

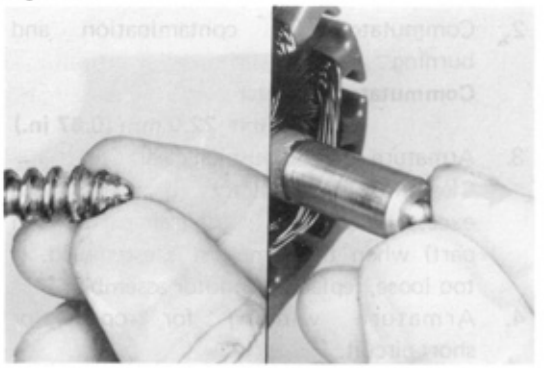
Grease the gear teeth, point sliding surfaces, steel balls, and stator bushings before assembling.

Fig. 4-47



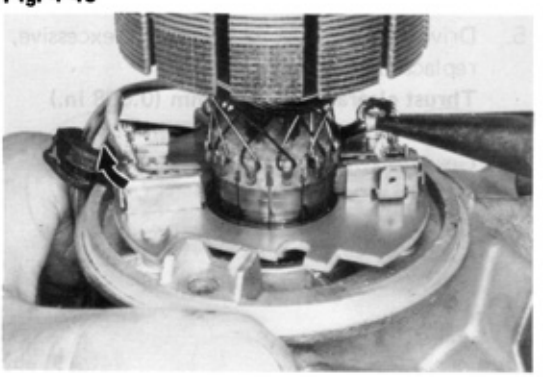
1. Install brushes (Item 6)
   Assemble the brush springs and brushes into the brush holder, and have the brush lead wires hooked on to brush holder lips.

Fig. 4-48



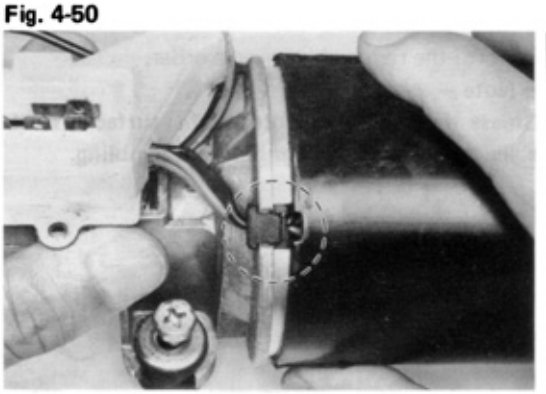
2. Install armature (Item 5)
   (1) Assemble the steel balls to the armature shaft ends with grease.

Fig. 4-49



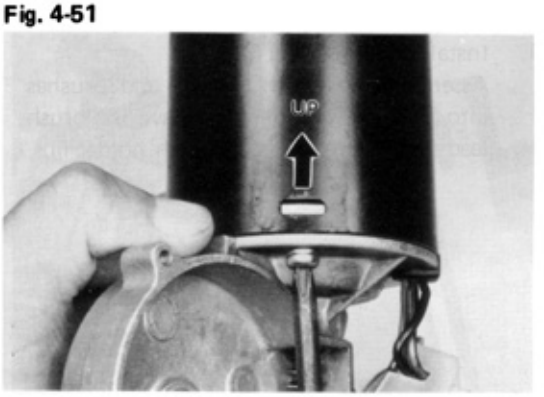
   (2) Assemble the armature shaft to the gear housing and unhook the brush leads.

Fig. 4-50



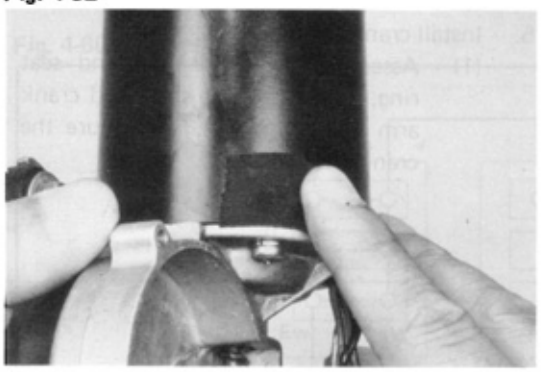
3. Install stator (Item 4)
   (1) Remove the tape adhered to the stator.
   (2) Assemble by fitting the notch at stator side to the tab at key housing side.

Fig. 4-51



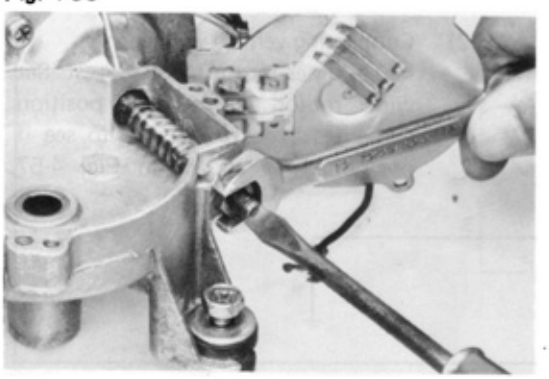
   (3) With the stator end positioned at top, insert the nuts into stator, and install the screws.

Fig. 4-52



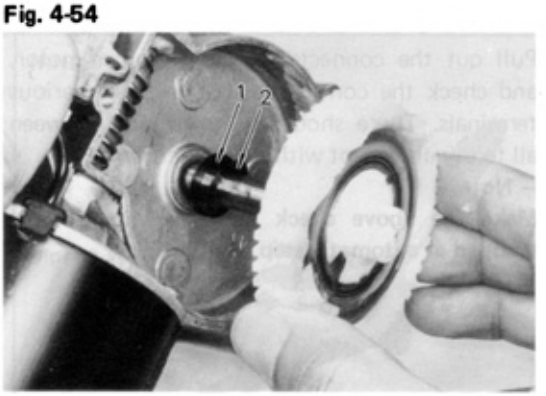
(4) After installing the screws, tape the parts where the nuts were inserted.

Fig. 4-53



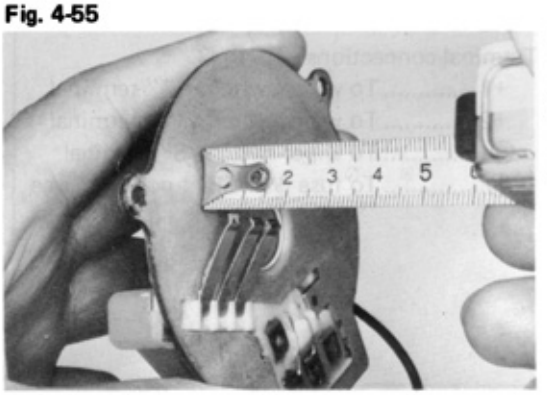
(5) Adjust the armature shaft thrust clearance.
Gradually screw in the adjust screw until it contacts lightly on the nut and then tighten the nut.

Fig. 4-54



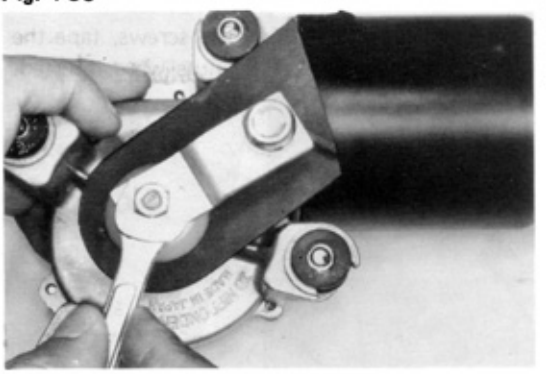
4. Install wiper drive shaft. (Item 3)
(1) Assemble the thrush washer (2) and wave washer (1) to the drive shaft and install the drive shaft to the crank housing.

Fig. 4-55



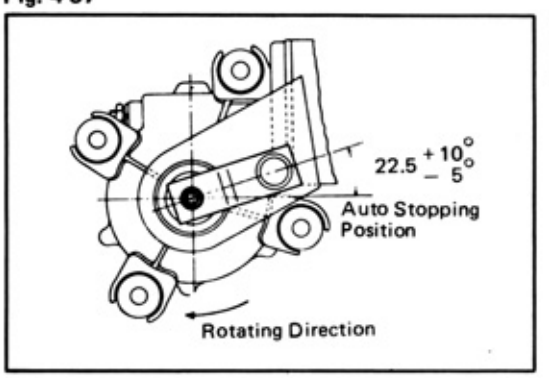
(2) Install crank housing cover plate. Check the height of the auto, stop switch lever at cover plate, and install the cover plate.
Switch lever height 10 mm (0.4 in.)

Fig. 4-56



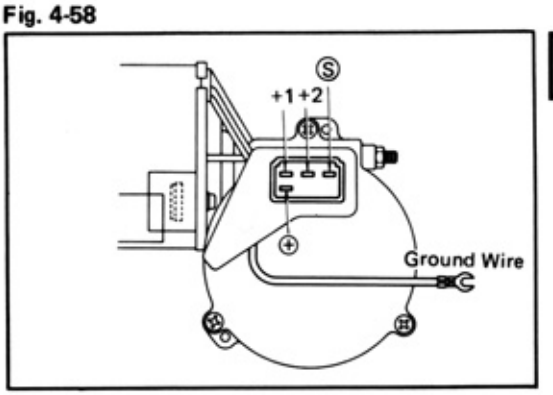
5. Install crank arm (Item 1)
   (1) Assemble the cover seat and seat ring, align the drive shaft and crank arm aligning marks, and secure the crank arm.

Fig. 4-57



(2) Connecting vehicle wire harness
Make wiper motor rotation test. Set wiper motor to auto stop position and check the crank arm to see if positioned as shown in Fig. 4-57

Fig. 4-58



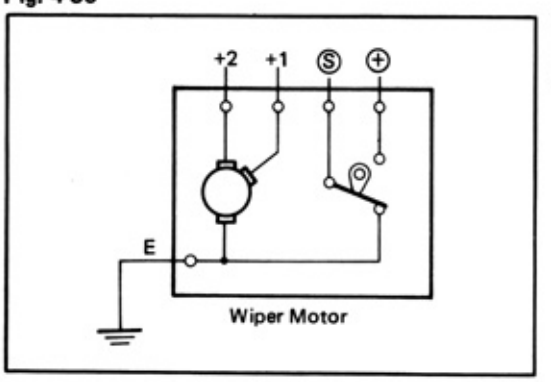
ON-VEHICLE INSPECTION

Pull out the connector from the wiper motor, and check the continuities between the various terminals. There should be continuity between all terminals except with the (+) terminal.

– Note –

Make the above check with the wiper motor stopped at automatic stop position.

Fig. 4-59



Terminal connections
+1 ..... To wiper switch "+1" terminal
+2 ..... To wiper switch "+2" terminal
Ⓢ ..... To wiper switch "S" terminal
⊕ ..... To fuse (WIPER) : power source

INSPECTION

Fig. 4-60

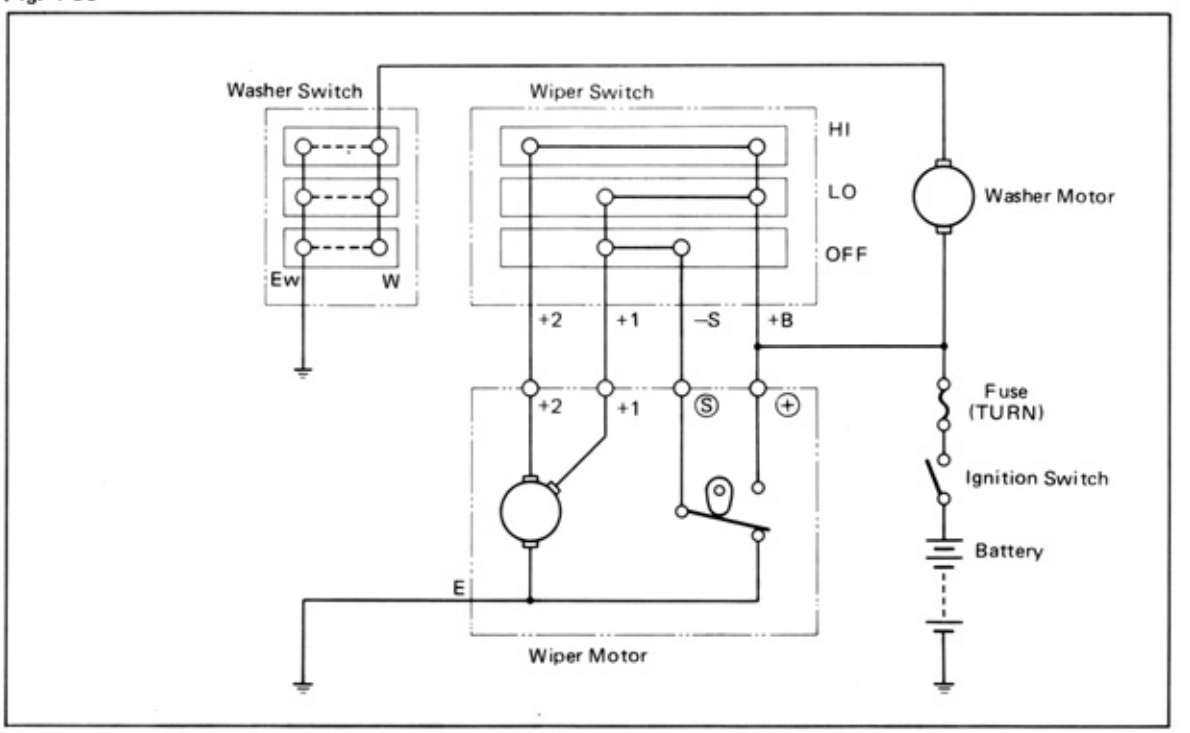
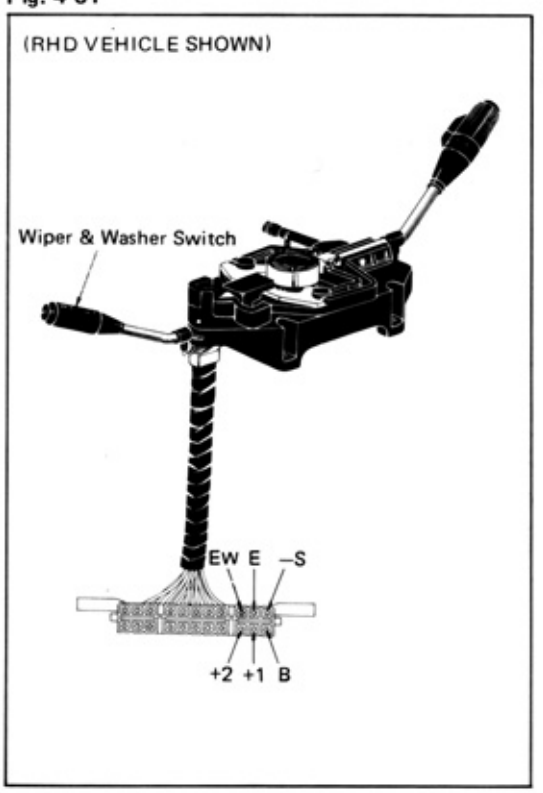


Fig. 4-61



Wiper & Washer Switch

– Note –

Before starting inspection, refer to P. 4-10 (22-Terminal Connector Handling and Inspection Precautions).

Remove the steering column lower cover, pull out the connector, and check continuities between terminals.

B ..... Fuse (WIPER)
+1 ..... Wiper motor (+1)
+2 ..... Wiper motor (+2)
–S ..... Wiper motor (S)
W ..... Washer motor
Ew ..... Ground

Terminal / Switch	+B	+1	+2	–S	W	Ew
OFF		○	○	○	○	○
LO	○	○			○	○
HI	○		○		○	○

HEADLIGHT CLEANER(FOR SWEDEN)

Fig. 4-62

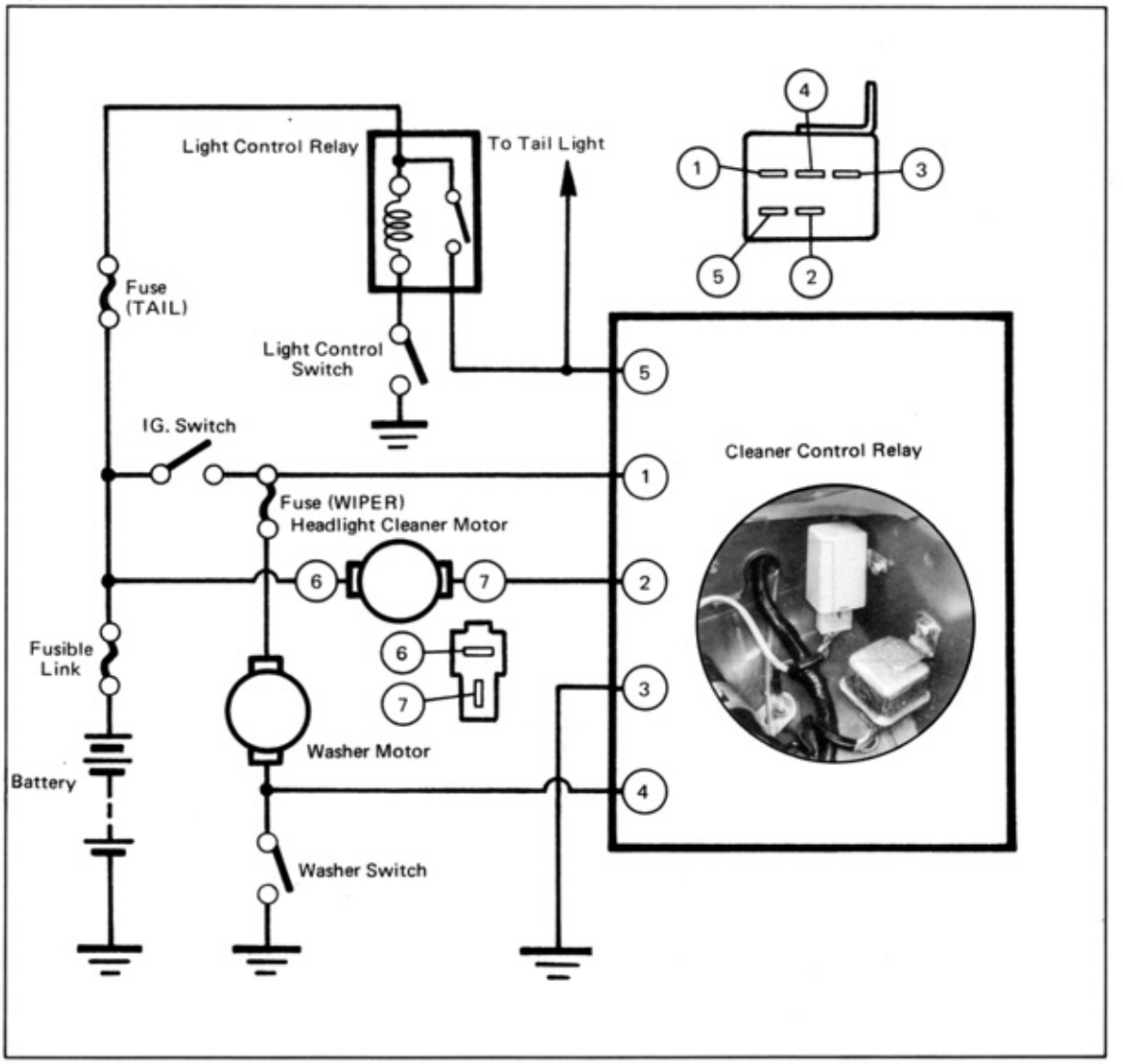
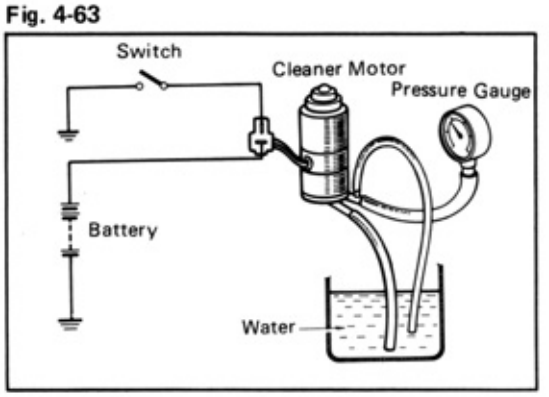


Fig. 4-63



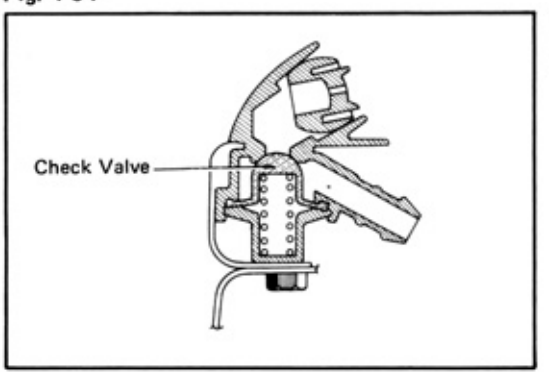
INSPECTION

Cleaner Motor

Mount a pressure gauge to the outlet union, and check the motor discharge pressure.

Discharge pressure	**2.4 to 3.0 kg/cm² (34.1 to 42.7 psi)**

Fig. 4-64



Cleaner Nozzle

1. Check the opening pressure of nozzle check valve.

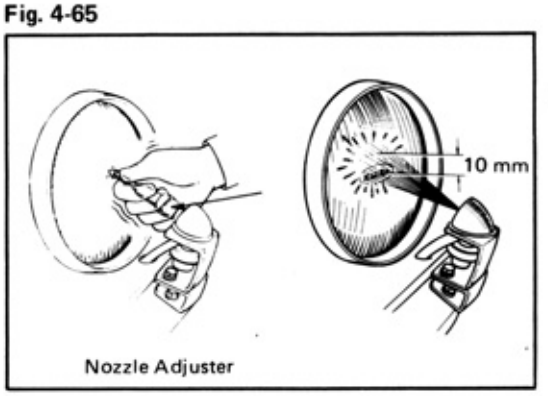
Opening pressure 1.7 to 2.1 kg/cm² (24.2 to 29.9 psi)

Difference between left and right sides 0.2 kg/cm² (2.8 psi) maximum

– Note –

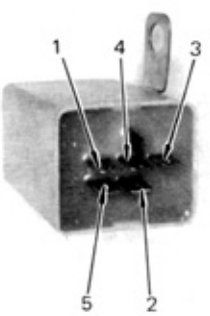
If one nozzle starts spraying extremely faster than the other, replace the nozzle assembly.

Fig. 4-65



2. Nozzle spray angle. Adjust by using the nozzle adjuster so that the fluid will be sprayed 5 to 10 mm above the headlight center mark.

Fig. 4-66

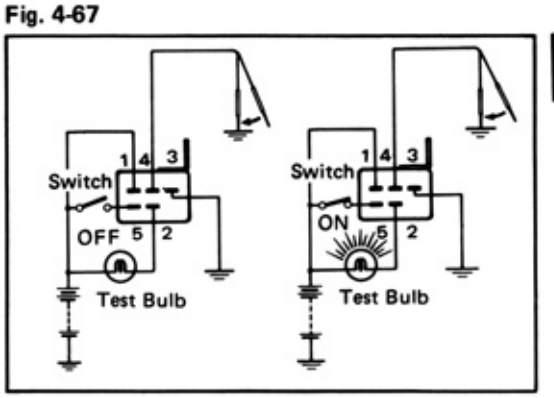


Cleaner Relay

Terminal connections

1 ..... To fuse (WIPER) power source
2 ..... To cleaner motor
3 ..... Ground
4 ..... To window washer switch
5 ..... To light control relay

Fig. 4-67



1. Connect the battery and test bulb (12V/3.4W) as illustrated.
2. Check the light control relay for correct operation.

With the terminal (5) disconnected from the battery and the terminal (4) grounded, the test bulb should not come on.

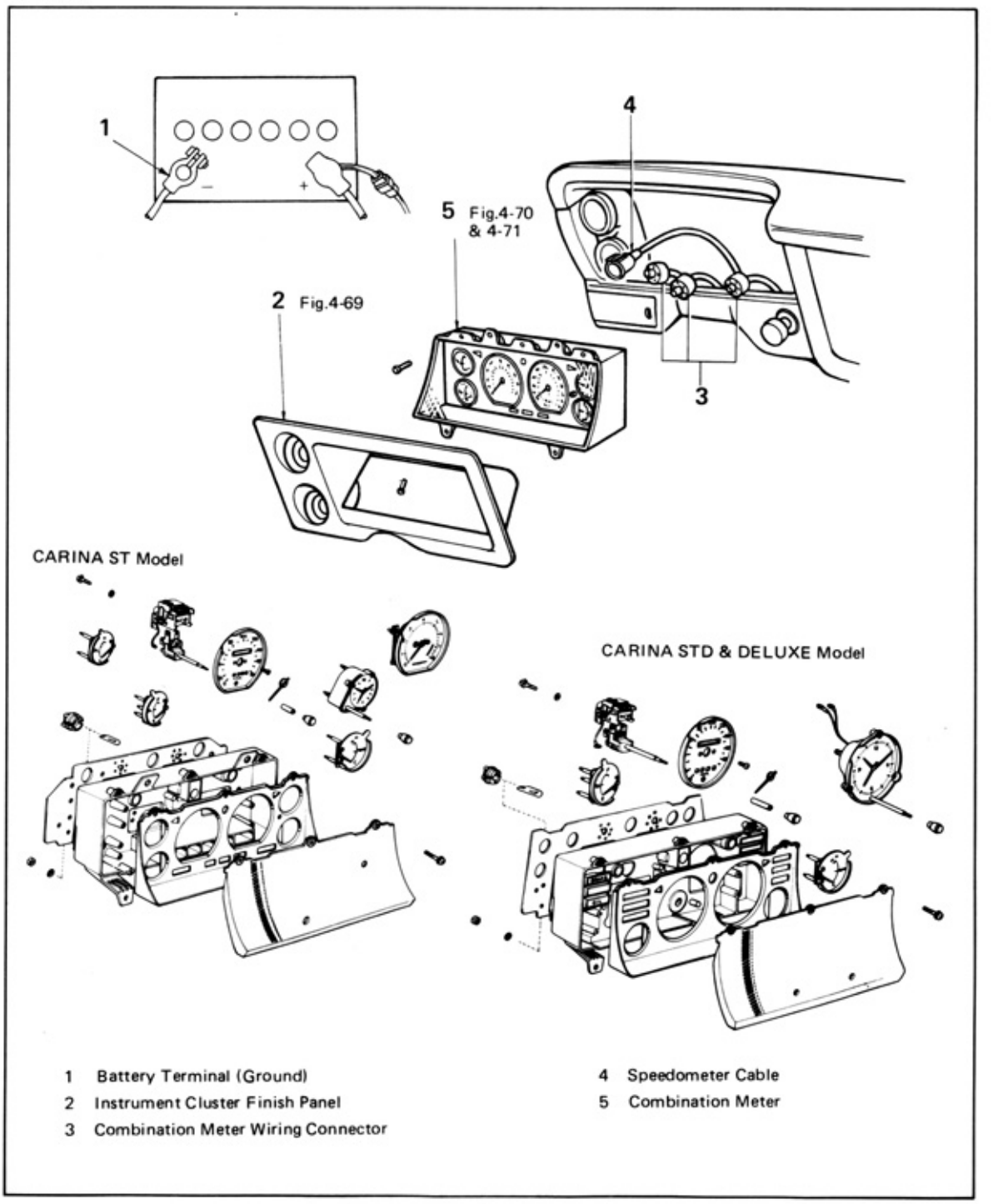
With the terminal (5) connected to the battery and the terminal (4) grounded, the test bulb should come on during 0.3 to 0.5 second.

COMBINATION METER & GAUGES (CARINA SERIES)

REMOVAL

Remove the following parts in numerical order.

Fig. 4-68



1 Battery Terminal (Ground)
2 Instrument Cluster Finish Panel
3 Combination Meter Wiring Connector
4 Speedometer Cable
5 Combination Meter

Fig. 4-69

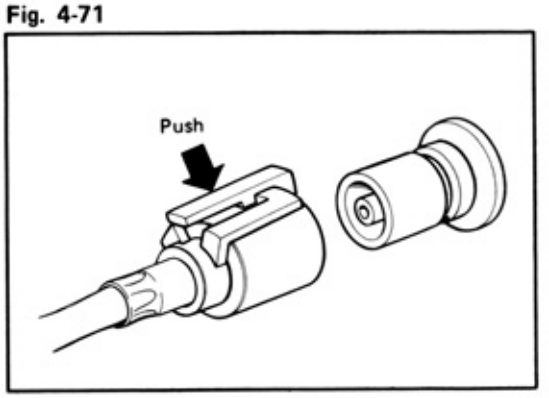
Instrument cluster finish panel removal. (Item 2)
Remove the four mounting screws and take off the instrument cluster finish panel by pulling out from the lower part.

Fig. 4-70

Combination meter removal (Item 5)

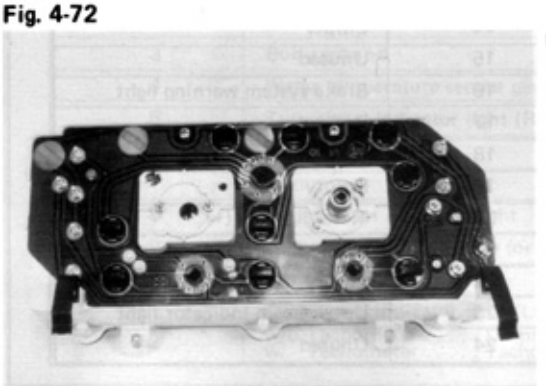
(1) Remove the four mounting screws, and disconnect the wire connector from the back side of the meter.

Fig. 4-71



(2) To disconnect speedometer cable, push the lock release lever and pull the cable from the socket.

Fig. 4-72



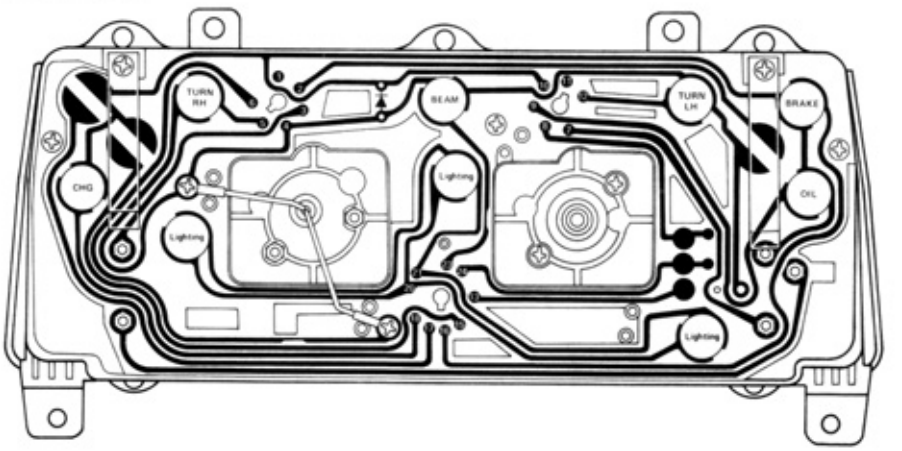
(3) Disassemble the combination meter as necessary.

INSPECTION

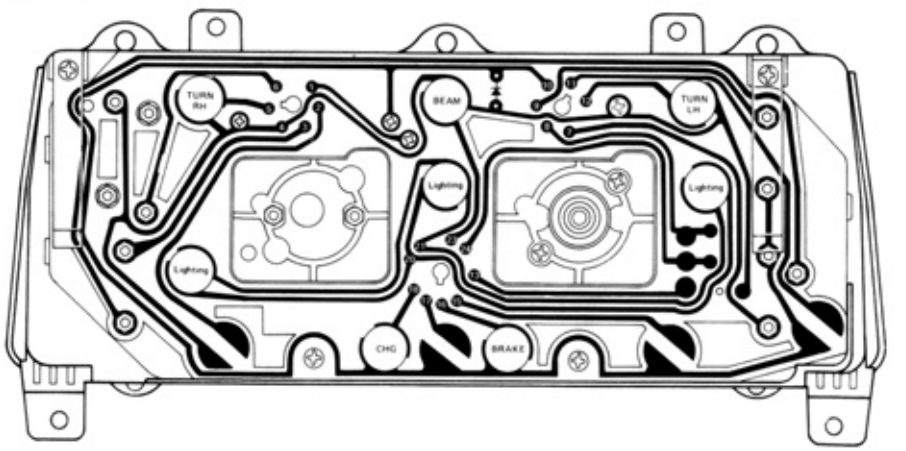
Fig. 4-73

RHD VEHICLE

w/o TACHOMETER



w/ TACHOMETER

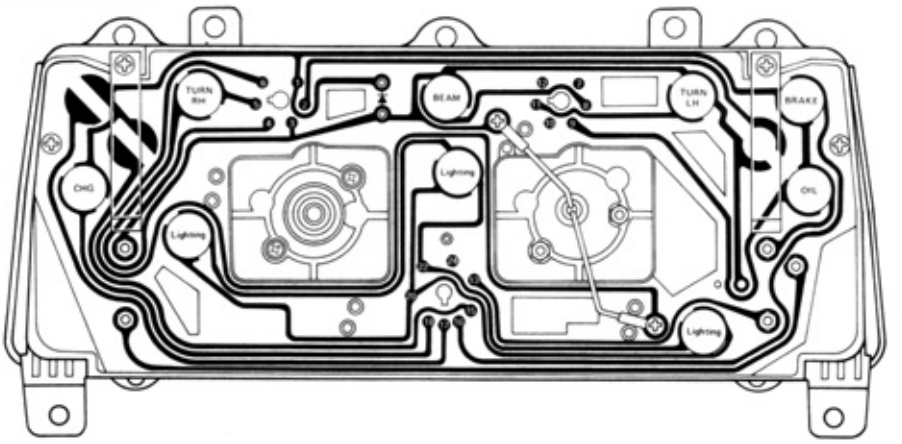


Terminal No.	Connects to	Terminal No.	Connects to
1	w/o Tachometer . . . . . Dummy w/ Tachometer . . . . . Tachometer (S)	13	Unused
2	Unused	14	Empty
3	Water temperature sender gauge	15	Unused
4	Body groud	16	Brake system warning light
5	Turn signal indicator light (RH)	17	Unused
6	Auto clock (+)	18	Discharge warning light
7	Fuel sender gauge	19	Empty
8	Unused	20	Meter lighting (+)
9	Oil pressure sender gauge (or switch)	21	Meter lighting (–)
10	Combination meter (+)	22	Empty
11	Unused	23	Upper beam indicator light
12	Turn signal indicator light (LH)	24	Unused

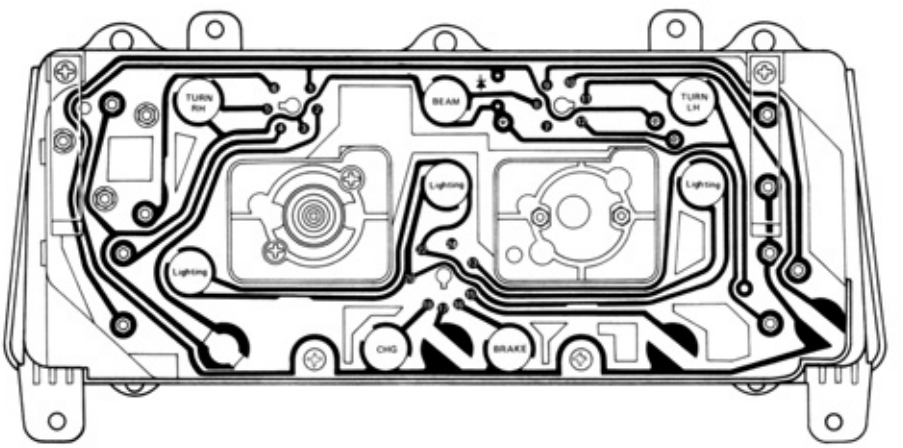
Fig. 4-74

LHD VEHICLE

w/o TACHOMETER



w/ TACHOMETER



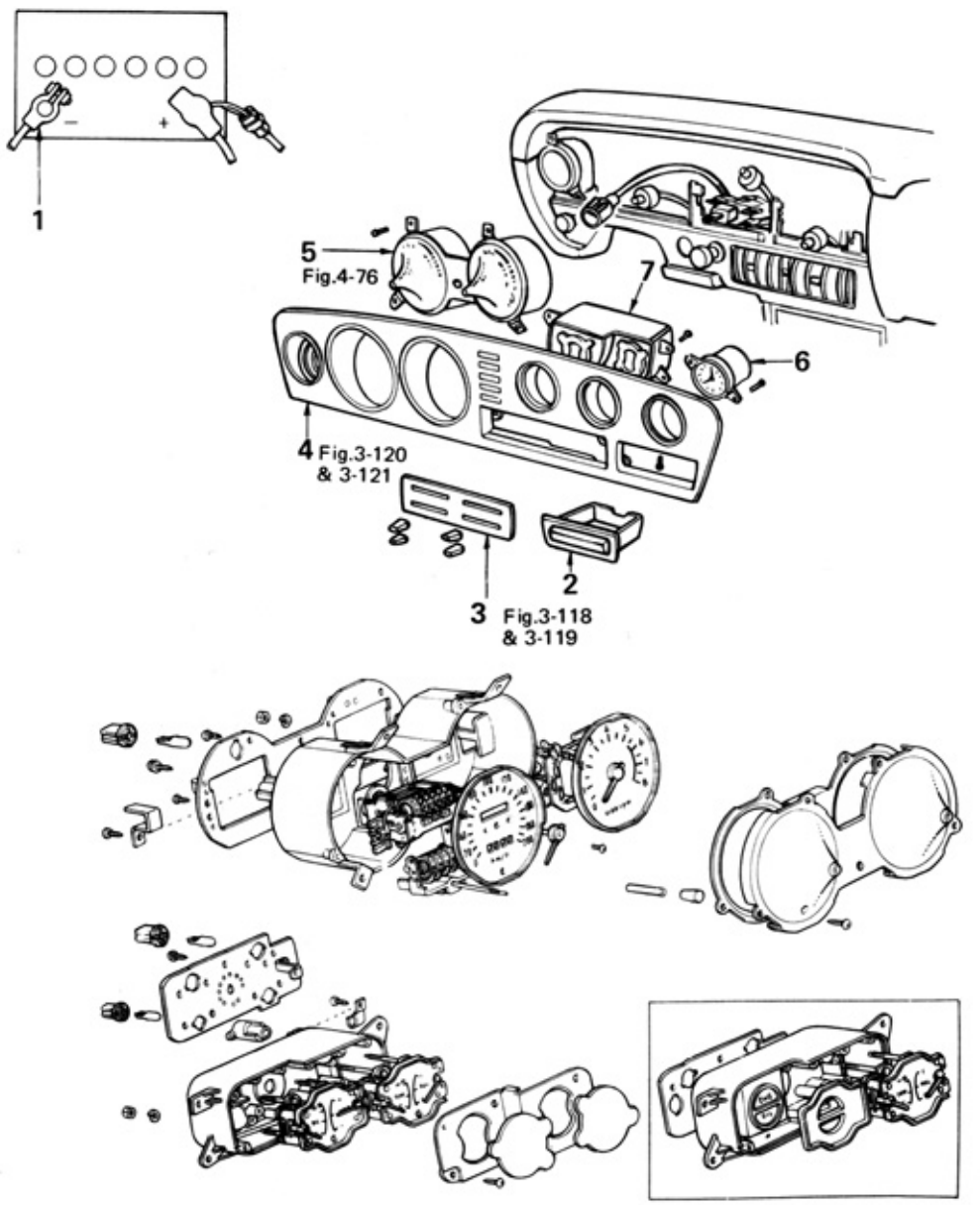
Terminal No.	Connects to	Terminal No.	Connects to
1	Combination meter (+)	13	Fuel sender gauge
2	Unused	14	Empty
3	Body ground	15	Unused
4	Water temperature sender gauge	16	Brake system warning light
5	Turn signal indicator light (RH)	17	Unused
6	Auto clock (+)	18	Discharge warning light
7	Dummy	19	Empty
8	Upper beam indicator light	20	Meter lighting (+)
9	Oil pressure sender gauge (or switch)	21	Empty
10	Unused	22	Meter lighting (–)
11	Turn signal indicator light (LH)	23	Empty
12	w/o Tachometer . . . . . Dummy w/ Tachometer . . . . . Tachometer (S)	24	Dummy

COMBINATION METER & GAUGES (CELICA SERIES)

REMOVAL

Remove the following parts in numerical order.

Fig. 4-75

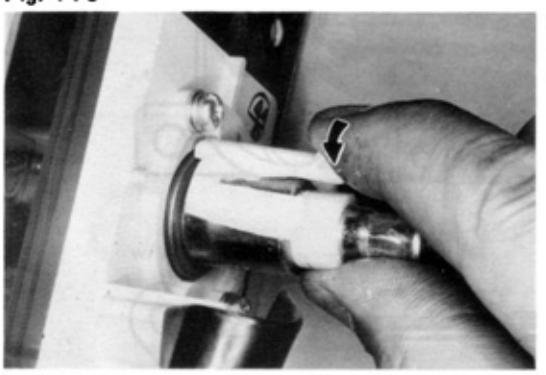


1 Battery Terminal (Ground)
2 Ash Receptacle
3 Heater Control Indicator Panel
4 Instrument Cluster Finish Panel
5 Combination Meter
6 Clock
7 Combination Gauge

SEE
SAFETY PAD REMOVAL
PAGE 3-42

Instrument cluster finish panel removal. Perform the operations 5 and 6 under Instrument Panel Safety Pad Removal section on Page 3-44.

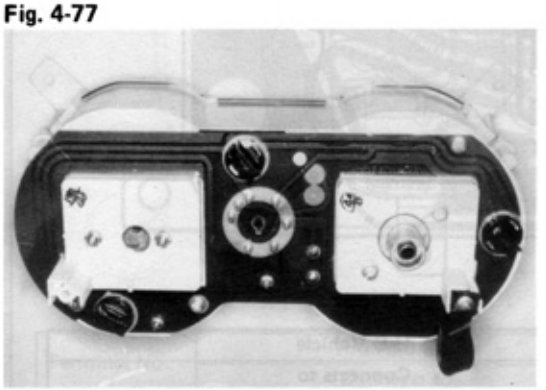
Fig. 4-76



Combination meter. (Item 5)

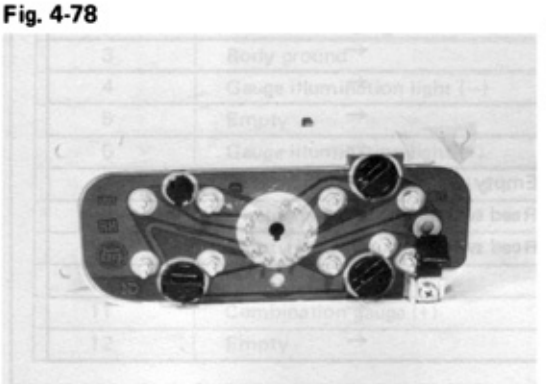
(1) Loosen the mounting screws, and disconnect the socket and speedometer cable from the back side of meter.

Fig. 4-77



(2) Disassemble and inspect the combination meter as found necessary.

Fig. 4-78



Combination gauge (Item 7)

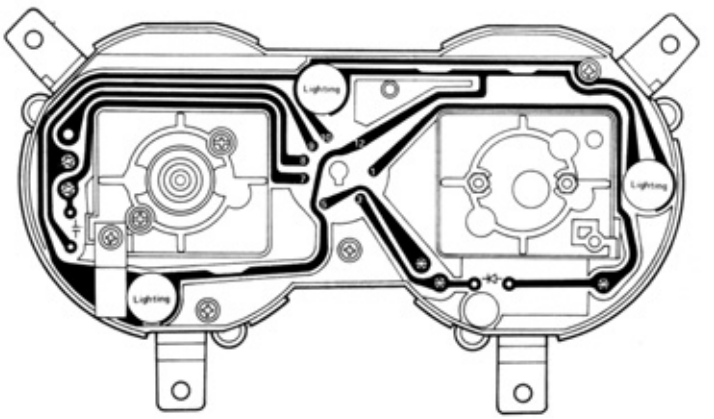
Remove combination gauge from cluster finish panel, and disassemble and inspect as found necessary.

INSPECTION

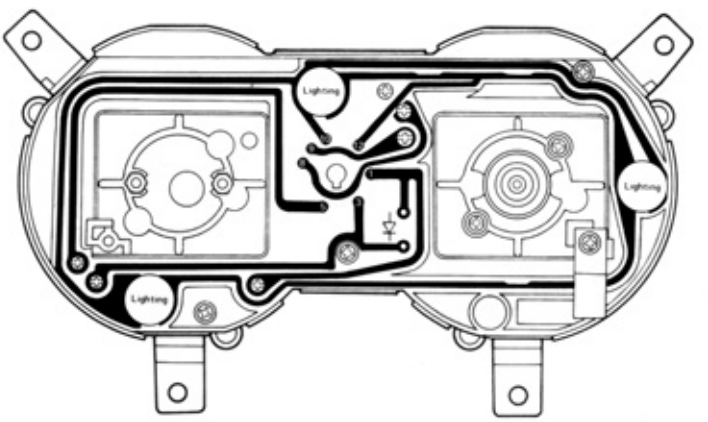
Fig. 4-79

COMBINATION METER

R.H.D VEHICLE



L.H.D. VEHICLE



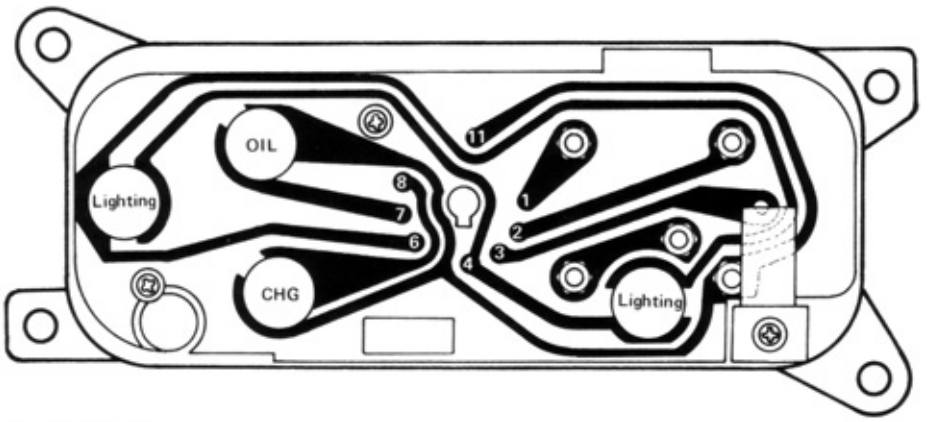
Terminal No.	R.H.D. Vehicle	L.H.D Vehicle
	Connects to	Connects to
1	Tachometer ground	←
2	Empty	←
3	Tachometer (+) ↔Ignition (+)	←
4	Empty	←
5	Tachometer (s) ↔Ignition (–)	←
6	Empty	←
7	Unused	Empty
8	Empty	Reed switch (USA)
9	Unused	Reed switch ground (USA)
10	Meter illumination light (+)	←
11	Empty	←
12	Meter illumination light (–)	←

Fig. 4-80

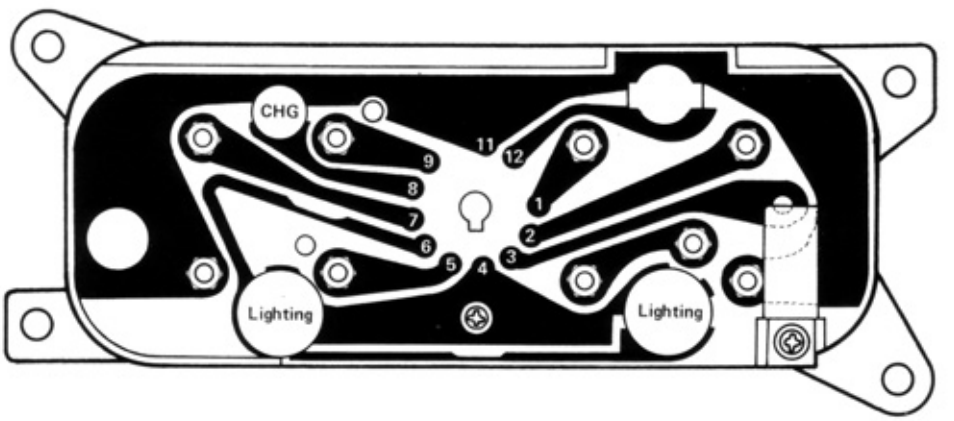
COMBINATION GAUGE

R.H.D VEHICLE

w/o AMMETER



w/ AMMETER

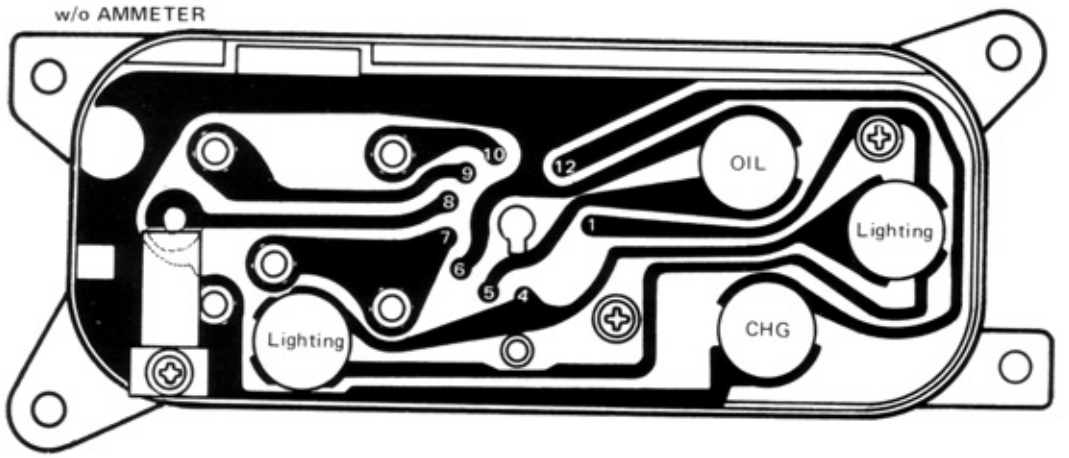


Terminal No.	w/o Ammeter	w/ Ammeter
	Connects to	Connects to
1	Water temperature receiver gauge	←
2	Fuel receiver gauge	←
3	Body ground	←
4	Gauge illumination light (–)	←
5	Empty	Ammeter (+)
6	Gauge illumination light (+)	←
7	Low oil pressure warning light	Oil pressure receiver gauge
8	Discharge warning light	Discharge warning light
9	Empty	Ammeter (–)
10	Empty	←
11	Combination gauge (+)	←
12	Empty	Unused

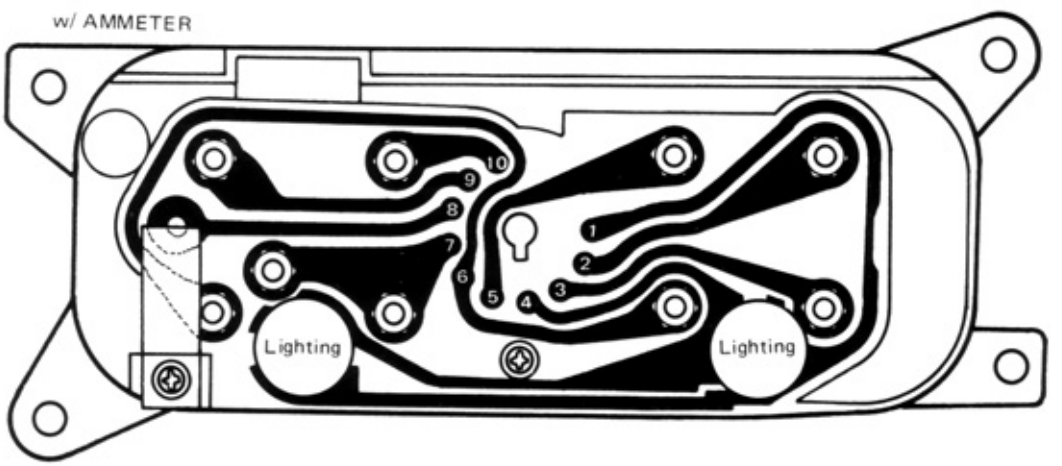
Fig. 4-81

L.H.D VEHICLE

w/o AMMETER



w/ AMMETER



Terminal No.	w/o Ammeter	w/ Ammeter
	Connects to	Connects to
1	Gauge illumination light (–)	←
2	Empty	Ammeter (–)
3	Empty	Ammeter (+)
4	Gauge illumination light (+)	←
5	Low oil pressure warning light	Oil pressure receiver gauge
6	Combination gauge (+)	←
7	7V terminal	←
8	Body ground	←
9	Fuel receiver gauge	←
10	Water temperature receiver gauge	←
11	Empty	←
12	Discharge warning light	Empty

FUEL GAUGE & WATER TEMPERATURE GAUGE

Fig. 4-82

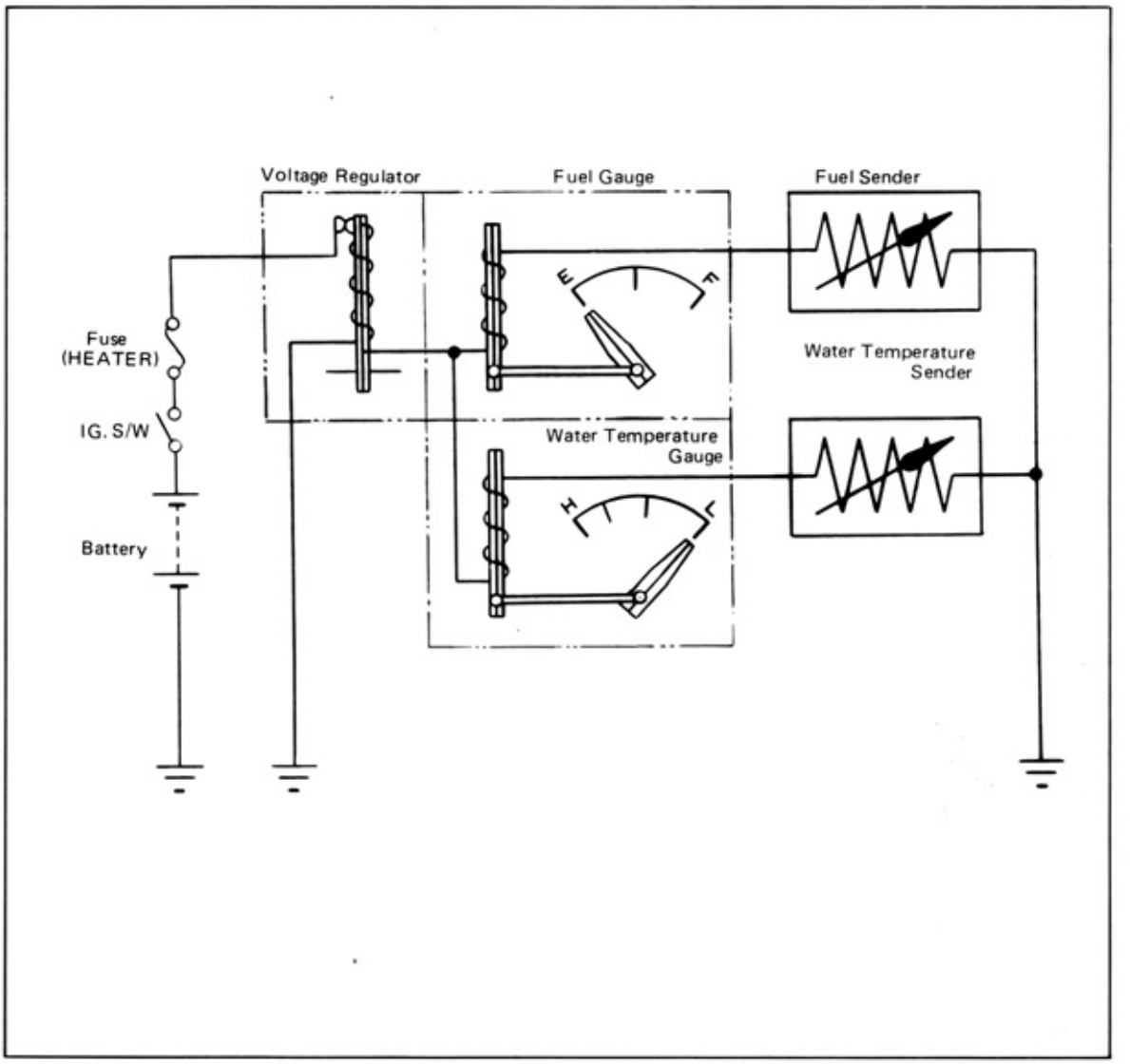
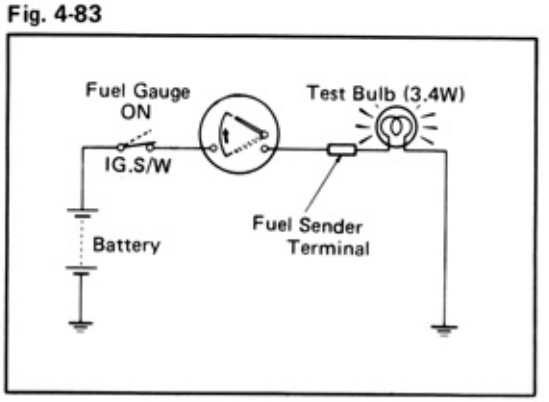


Fig. 4-83

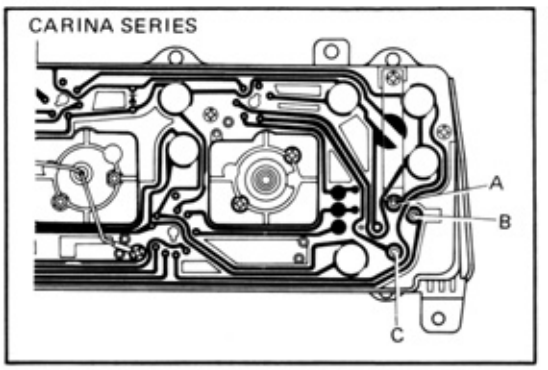


Fuel Gauge

INSPECTION

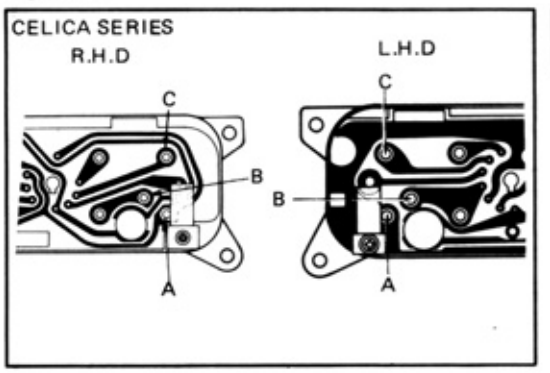
1. Pull out the connector from the fuel gauge and ground the terminal through a 3.4W bulb. When the ignition switch is turn on, the bulb should light (but start to flash after few seconds) and the gauge pointer should deflect, if the gauge is in proper condition.

Fig. 4-84



2. If the gauge fails the above test, remove the combination meter assembly and check on the following points.
   (1) With the multi-terminal connector plugged in to the combination meter, turn on the ignition switch and verify that battery voltage is present at terminal (A).
   (2) There should then be a constantly varying voltage at terminal (B) that is fluctuating between 2V and 7V.

Fig. 4-85



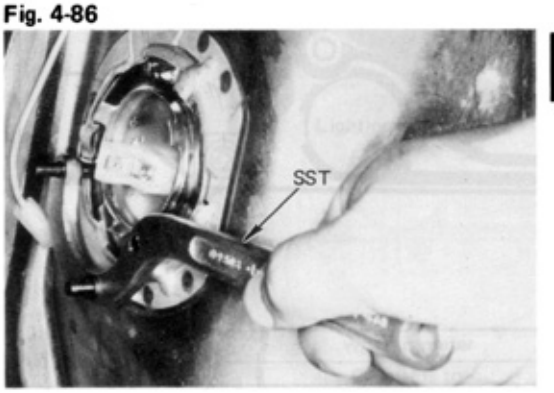
– Note –

When the ignition switch is turned on, the 12V battery voltage will be indicated but after a few seconds, the voltage will drop down to between 2V and 7V.

   (3) Measure the resistance between terminals (A) and (C).

Standard resistance **55Ω**

Fig. 4-86



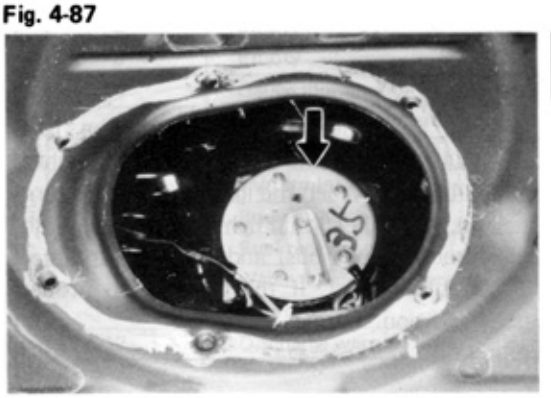
Fuel Sender

REMOVAL

A. Carina & Celica Hardtop Series

1. Drain the gasoline from the fuel tank.
2. Remove the fuel tank protecter, and pull out the sender gauge wire harness connector.
3. Remove the set bracket with SST [09808-12010], and remove the sender.

Fig. 4-87



B. Celica Liftback Series

1. Drain the gasoline from the fuel tank.
2. Remove the spare tire, and remove the rear floor service hole cover.
3. Remove the sender.

Fig. 4-88

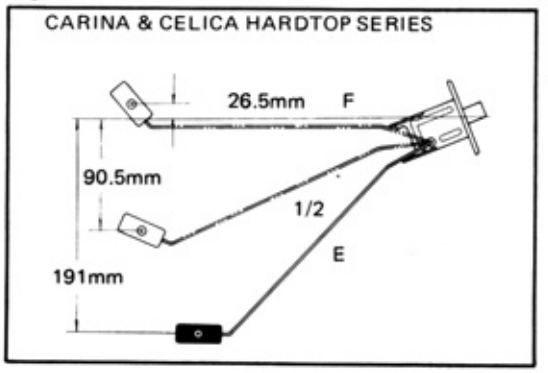


Fig. 4-89

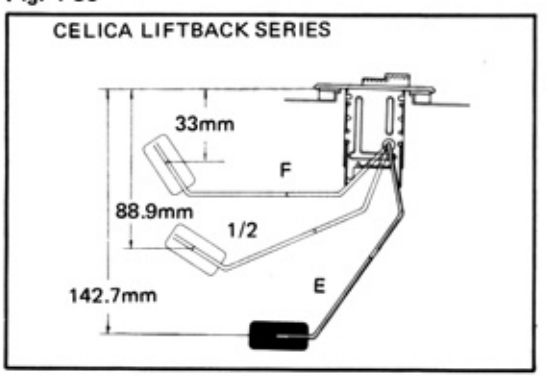


Fig. 4-90

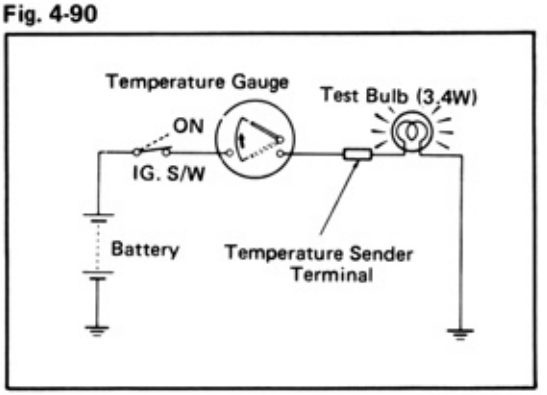
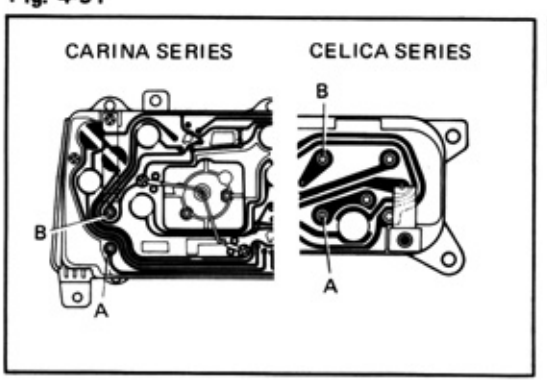


Fig. 4-91



INSPECTION

Remove the sender and measure the resistance between the terminal and ground with a circuit tester. The resistance should change smoothly when the float arm is moved, and be of the values shown in following table.

Float Position	Resistance (Ω)
F	3 ± 2.1
1/2	32.5 ± 4.8
E	110 ± 7.7

Water Temperature Gauge

INSPECTION

1. Pull out the connector from the water temperature sender gauge and ground its terminal through a 3.4W bulb. When the ignition switch is turned ON, the bulb should light (but start to flash after few seconds) and the gauge pointer should deflect.
2. If the above test shows condition to be abnormal, remove the combination meter assembly and check on the following points.
   (1) With the multi-terminal connector plugged in to the combination meter and the ignition switch turned on, there should be a constantly varying voltage at terminal (A) that fluctuates between 2V and 7V. (A regulator is built into the fuel level gauge).

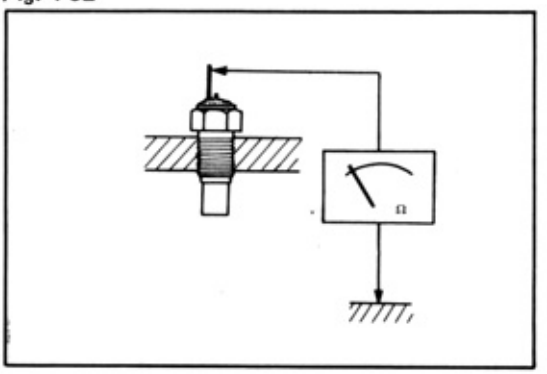
– Note –

When the ignition switch is turned on, the 12V battery voltage will be present but after a few seconds, the voltage will drop to between 2V and 7V.

   (2) Measure the resistance between terminals (A) and (B).

Standard resistance 55Ω

Fig. 4-92



Water Temperature Sender Gauge

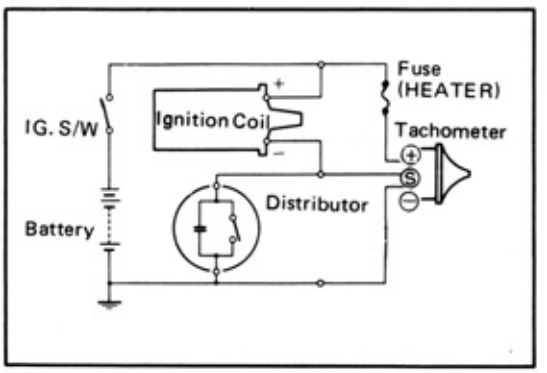
INSPECTION

Measure the resistance between the terminal and ground with a circuit tester. The resistance should vary with the water temperature as shown in the table below.

Temperature	Resistance
(50°C)	(154 Ω app.)
80°C	25 Ω app.
100°C	27.5 Ω app.
(120°C)	(16 Ω app.)

Values in ( ) are for reference

Fig. 4-93



ENGINE TACHOMETER

INSPECTION

1. Connect a tune-up test tachometer, and start the engine.
2. Compare the tester and tachometer indications, and if the error is too great, replace the tachometer.

– Caution –

1. **Do not reverse battery connections as this tachometer is intended only for use in (–) ground vehicles. Reversed connection could damage the transistors and diodes contained inside.**
2. **In removing or installing the tachometer, be careful not to drop it or subject it to heavy shocks.**

Fig. 4-94

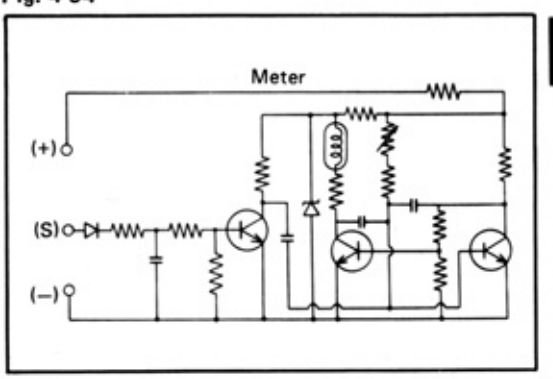
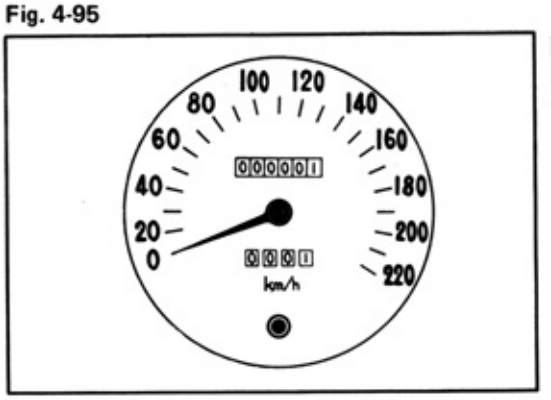


Fig. 4-95



SPEEDOMETER

ON-VEHICLE INSPECTION

Using a speedometer tester, inspect the meter indicating error, pointer vibration, abnormal noise, operation of odometer, and operation of speed warning device, supplied on some models.

– Note –

It must be noted that tire wear and tire over- and under-inflation will contribute toward indication error, and that pointer vibration is often caused by a loose cable.

OIL PRESSURE WARNING LIGHT & GAUGE

Fig. 4-96

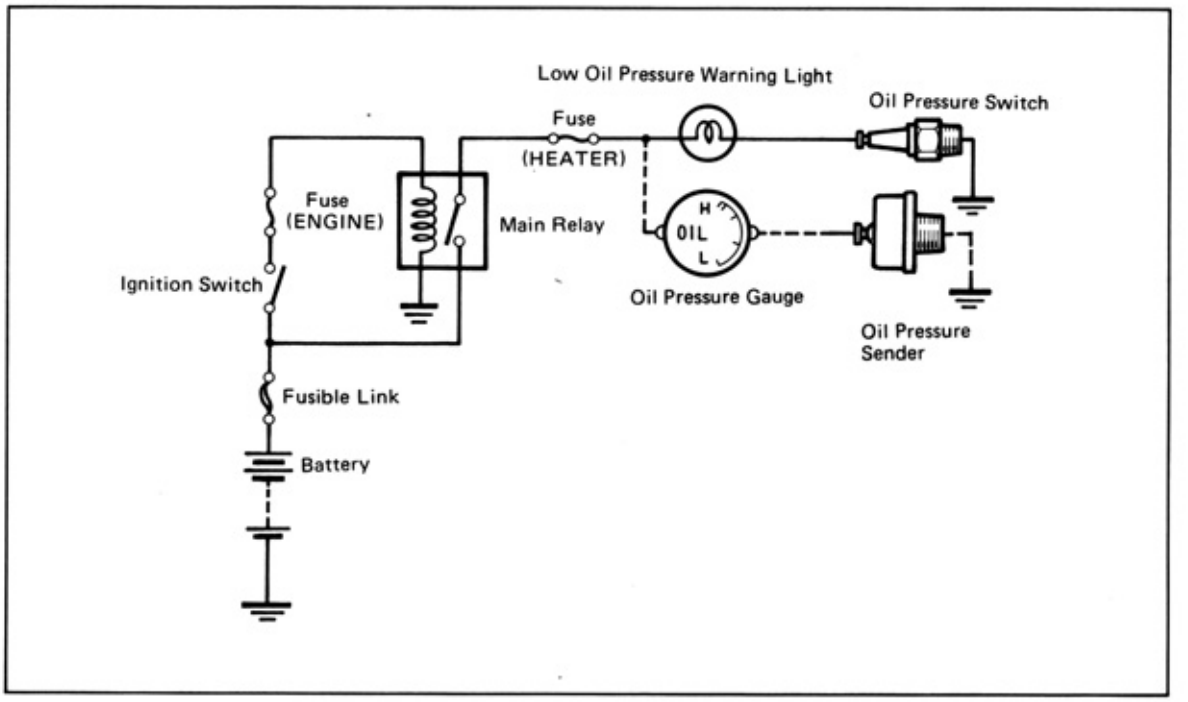
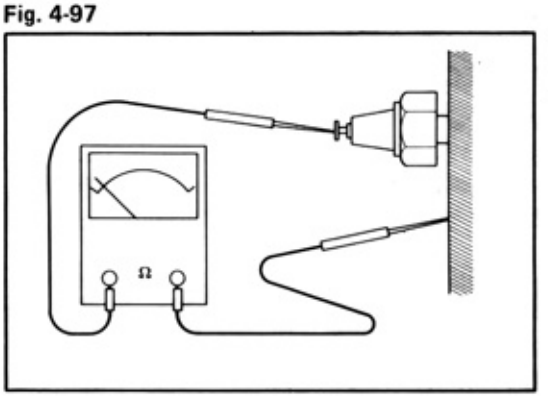


Fig. 4-97



Oil Pressure Switch

INSPECTION

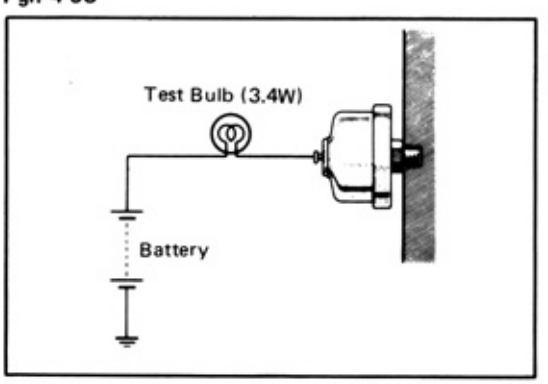
Check the continuity between the terminal and ground with a circuit tester.

Engine stopped	ON	Normal
Engine running	OFF	

– Note –

Oil pressure must be up to 0.3 kg/cm² or higher after the engine starts.

Fgi. 4-98



Oil Pressure Sender

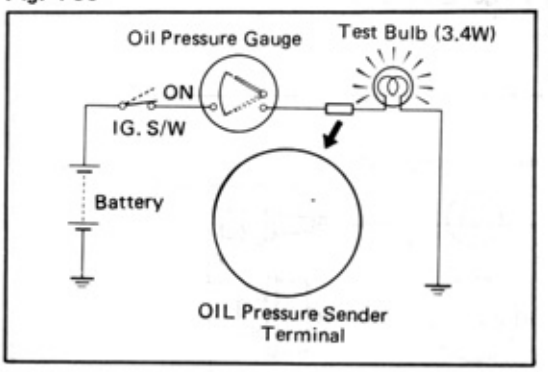
INSPECTION

Pull out the connector from the sender, and apply battery voltage to the sender terminal through a 3.4W bulb. The bulb should not light when the engine is stopped, and should flash when the engine is running. The number of flashes should also vary with the engine speed.

– Note –

Even when the engine is stopped, the bulb may light for an instant when the battery voltage is applied, but this is normal.

Fig. 4-99

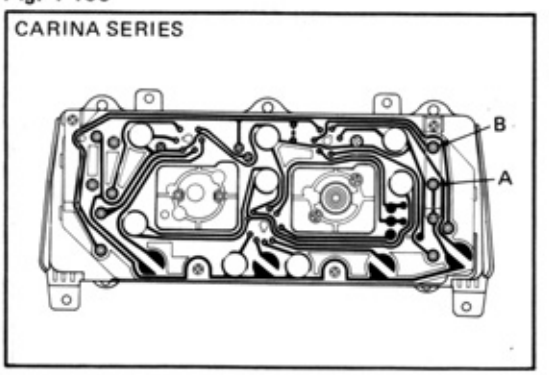


Oil Pressure Gauge

INSPECTION

1. Pull out the connector from oil pressure gauge and ground the terminal through a 3.4W bulb. When the ignition switch is turned on, the bulb should light and gauge pointer should deflect.

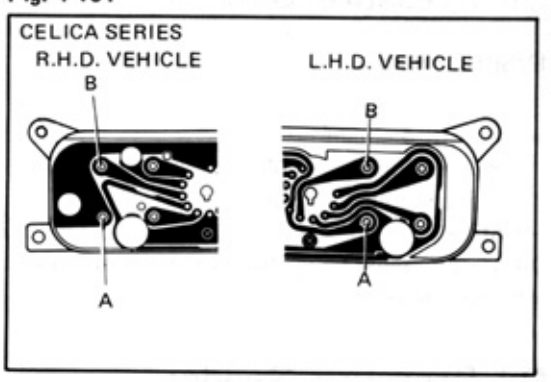
Fig. 4-100



2. If the above test shows abnormal condition, remove the combination gauge assembly and check on the following points.
   (1) With the connector plugged into the combination meter (gauge) and the ignition switch turned on, battery voltage should be present at terminal (A).
   (2) Measure the resistance between terminals (A) and (B).

Standard resistance 42Ω

Fig. 4-101



AMMETER

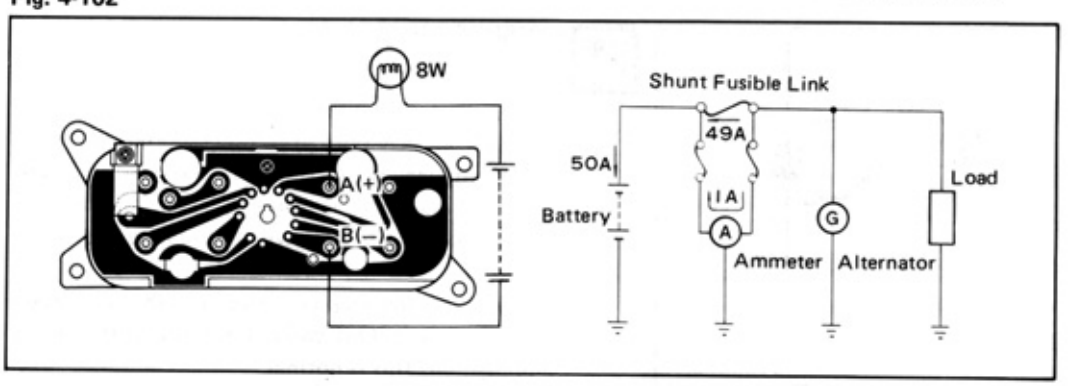
INSPECTION

Remove the combination gauge assembly, and apply 12V battery voltage between the terminals (A) and (B) through an 8W bulb. The ammeter should indicate around 30A at this time.
time.

– Caution –

In making this test, always connect a bulb not greater than 10W in series with the ammeter. If the battery voltage is applied directly impressed, the ammeter will be burned out.

Fig. 4-102



BRAKE WARNING

Fig. 4-103

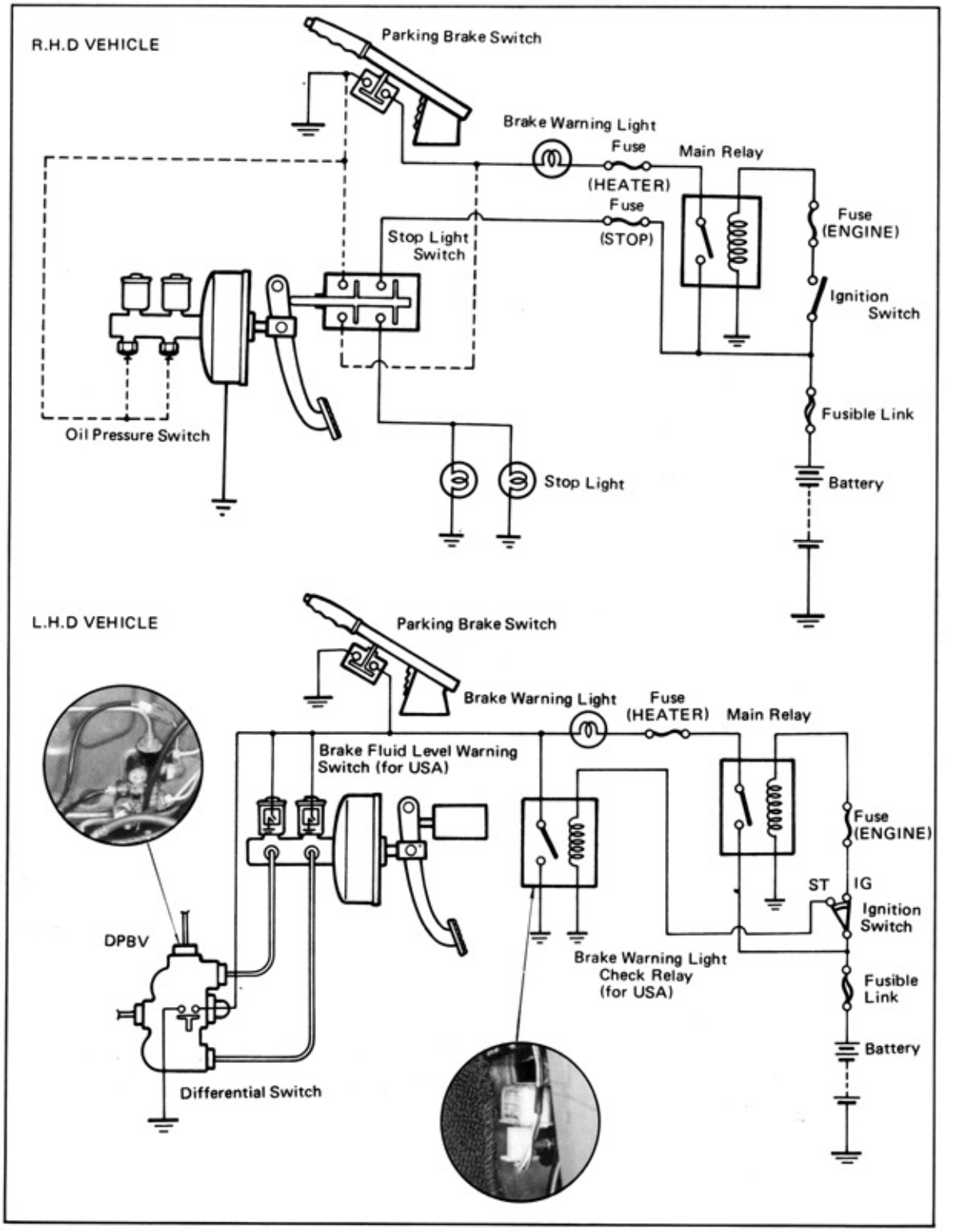
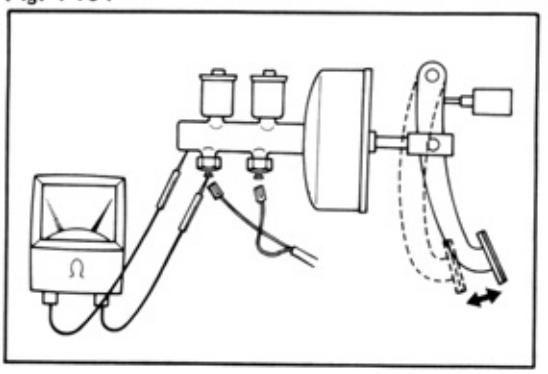


Fig. 4-104

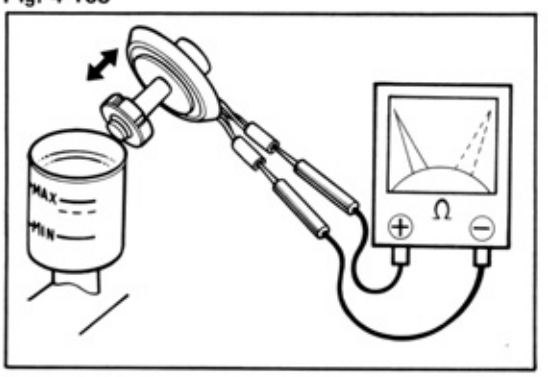


INSPECTION

Oil Pressure Switch

1. When brake pedal is not depressed:
   Continuity between switch terminal and body.
2. When brake pedal is depressed.
   No continuity between switch terminal and body.

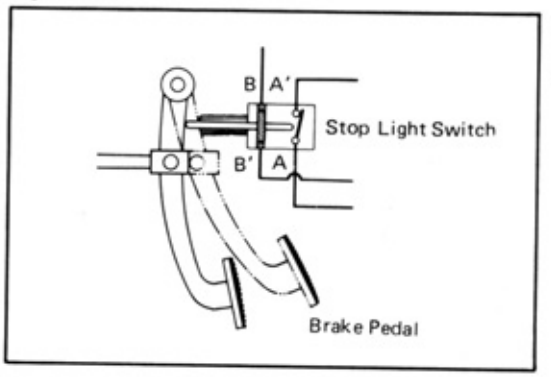
Fig. 4-105



Brake Fluid Level Warning Switch

Remove the cap and check to see that it will switch "ON" and "OFF" when raised and lowered.

Fig. 4-106



Stop Light Switch

Terminal Connections

A ..... To stop light
A' ..... To fuse (stop) (power source)
B ..... To brake warning light switch
B' ..... To brake warning light (power source)

Fig. 4-107

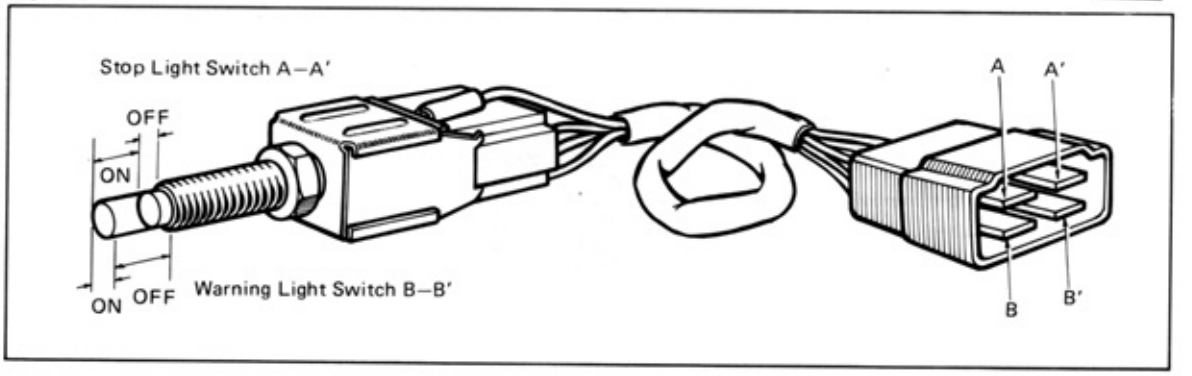
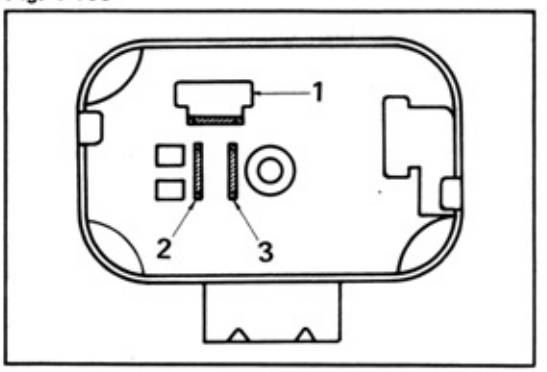


Fig. 4-108

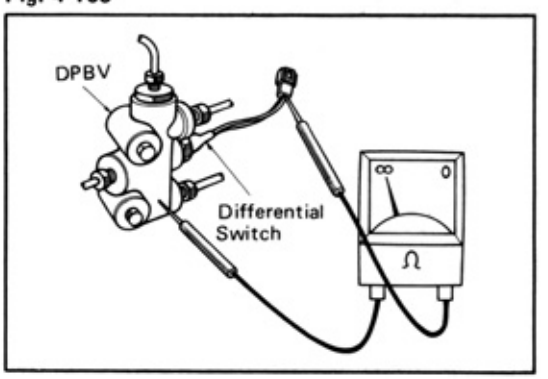


Brake Warning Light Check Relay

Terminal connections:

1 ..... To ignition switch "ST" terminal
2 ..... To brake warning light
3 ..... Ground

Fig. 4-109



Differential Valve Switch

Standard resistance

Switch OFF ..... ∞
Switch ON ..... 0 Ω

REAR WINDOW DEFOGGER

Fig. 4-110

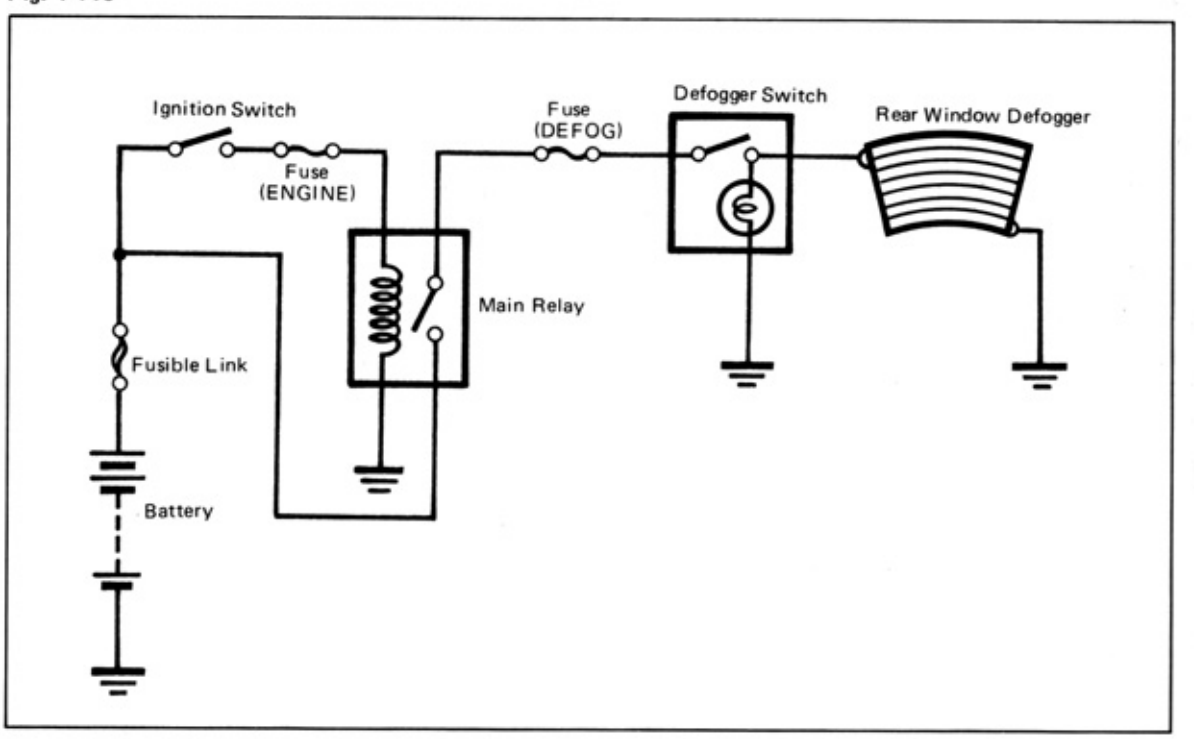
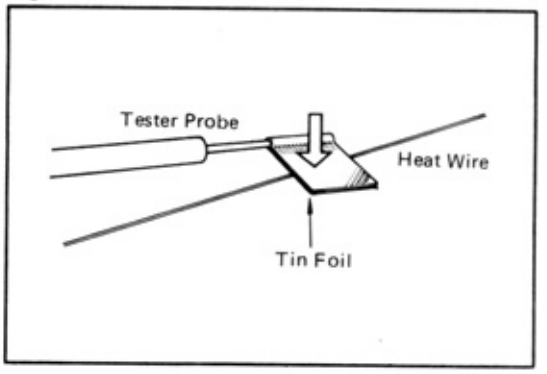


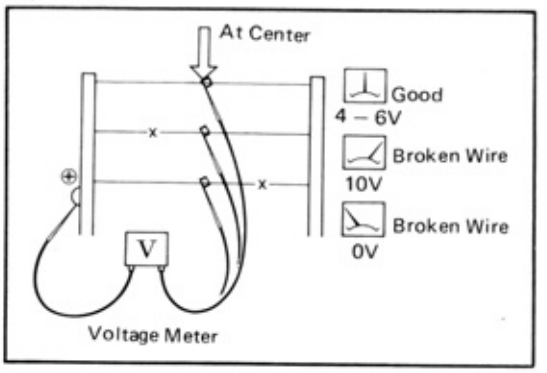
Fig. 4-111



PRECAUTIONS ON HANDLING HEAT WIRE TYPE DEFOGGER

1. When cleaning the glass with a cloth, use a cloth that is soft and as dry as possible and wipe the glass in the heat wire direction, using care not to damage the heat wires.
2. No not use detergents or glass cleaners containing abrasive ingredients.
3. To prevent the tip of tester probe from damaging the heat wire when measuring the voltage, wind one end as strip of tin foil around the tip and check by pressing the other end of foil against the heat wire with your finger.

Fig. 4-112



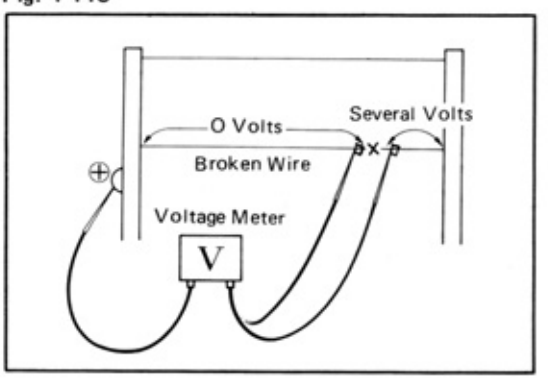
Printed Heat Wire

INSPECTION

1. Turn ON the defogger.
2. Check the voltage at the center of each heat wire.

Voltage	Criteria
4 – 6V	Good (No break in wire)
Approx. 10V or 0V	Broken wire

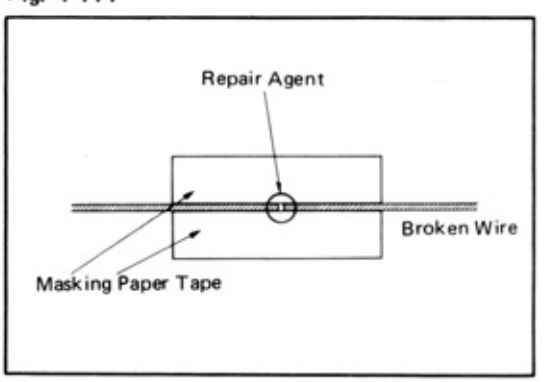
Fig. 4-113



CHECK FOR WIRE BREAKAGE POINT

1. Place the voltmeter (+) lead against the defogger (+) terminal.
2. Place the voltmeter (–) lead with the foil strip against the heat wire at (+) terminal end, and shift it toward the (–) terminal end.
3. The point at where the voltmeter deflects from zero volts to several volts is the place where the heat wire is broken.

Fig. 4-114

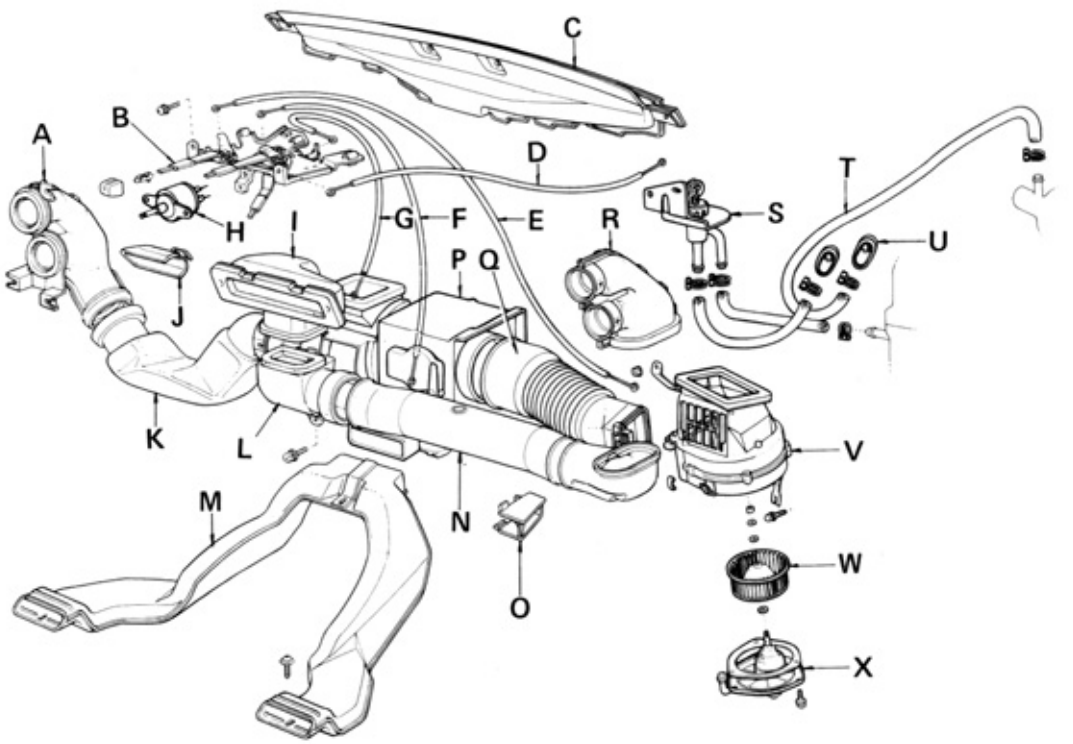


REPAIR

1. Preparatory materials
   (1) Fine pointed brush, size "O" or similar
   (2) White gasoline
   (3) Masking paper tape
   (4) Repair agent: Dupont Paste No. 4817
2. Repair method
   (1) Clean where the wire is broken.
   (2) Stick masking tape beside the place that is to be repaired as illustrated.
   (3) Thoroughly mix the repair agent, dip a small amount on a fine brush, and paint it on the part to be repaired.
   (4) After one or two minutes, peel off the masking tape.
   (5) Allow to stand at least 24 hours after repairing before turning the defogger on.

HEATER(CARINA SERIES)

Fig. 4-115



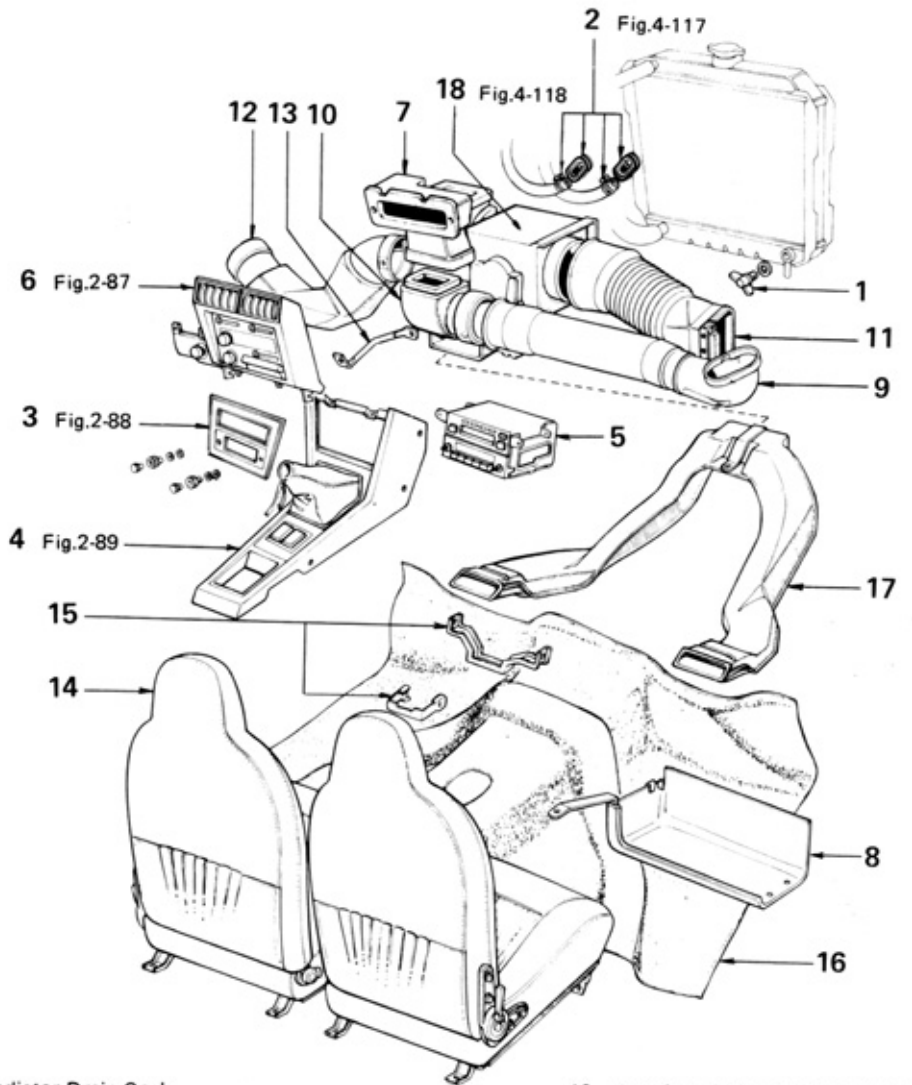
A	Air Duct, No. 1	M	Heater Air Rear Duct
B	Heater Control	N	Air Duct No. 3
C	Defroster Nozzle	O	Air Guide
D	Heater Control Cable (for Water Valve)	P	Heater Unit Assembly
E	Heater Air Inlet Butterfly Cable	Q	Heater Air Supply Duct
F	Heater Control Cable (for Air Mix)	R	Air Duct No. 4
G	Defrost Control Cable	S	Water Valve
H	Heater Blower Switch	T	Hose
I	Heater Interior Air Center Duct, No. 1	U	Grommet
J	Air Guide	V	Heater Blower Case
K	Air Duct No. 2	W	Heater Blower Fan
L	Heater Interior Air Center Duct, No. 1	X	Heater Blower Motor

Heater Unit

REMOVAL

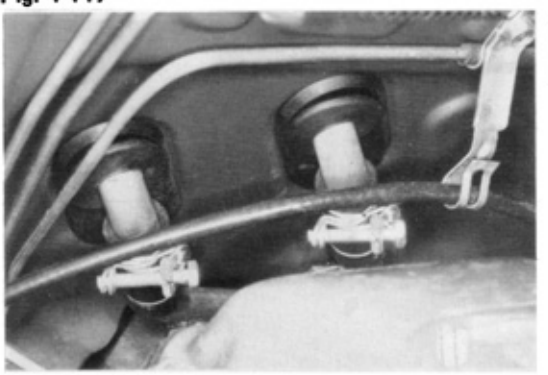
Remove the following parts in numerical order.

Fig. 4-116



1 Radiator Drain Cock
2 Water Hoses & Grommets
3 Console Upper Front Panel
4 Console Box
5 Radio & Tape Player
6 Instrument Cluster Finish Panel
7 Interior Air Center Duct No. 2
8 Under Tray
9 Air Duct No.3
10 Interior Air Center Duct No. 1
11 Heater Air Supply Duct
12 Air Duct No.2
13 Instrument Panel To Cowl Brace
14 Front Seat RH & LH
15 Console Box Support Braket
16 Front Floor Carpet
17 Heater Air Rear Duct
18 Heater Unit

Fig. 4-117



HEATER UNIT REMOVAL

Disconnect water hose. (Item 2)

(1) Loosen the hose clamp and pull out the water hose from the hose union.

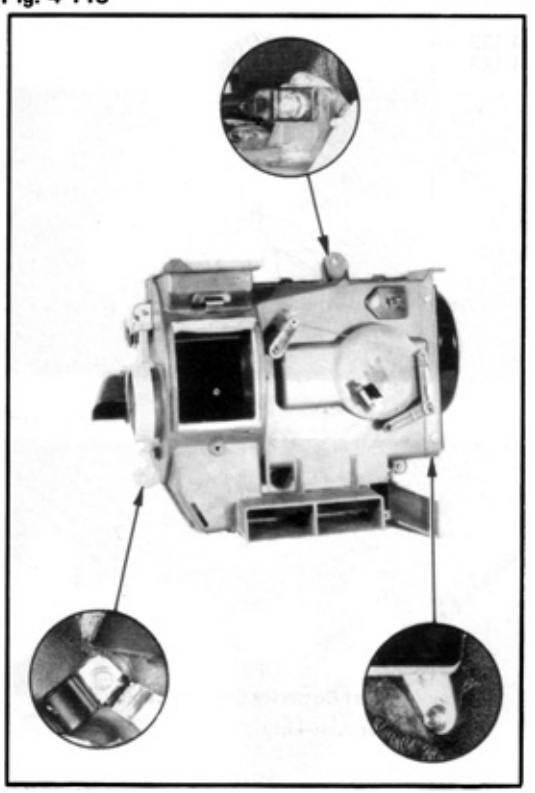
(2) Take off the grommet and plug the hose union.

SEE
SAFETY PAD REMOVAL
PAGE 2-33

Instrument panel cluster finish center panel removal. (Item 6)

Perform the first 4 steps and the steps 8 through 13 in Safety Pad Removal Fig. 2-87.

Fig. 4-118



Heater unit assembly removal (Item 18)

(1) Unplug register wiring connector.

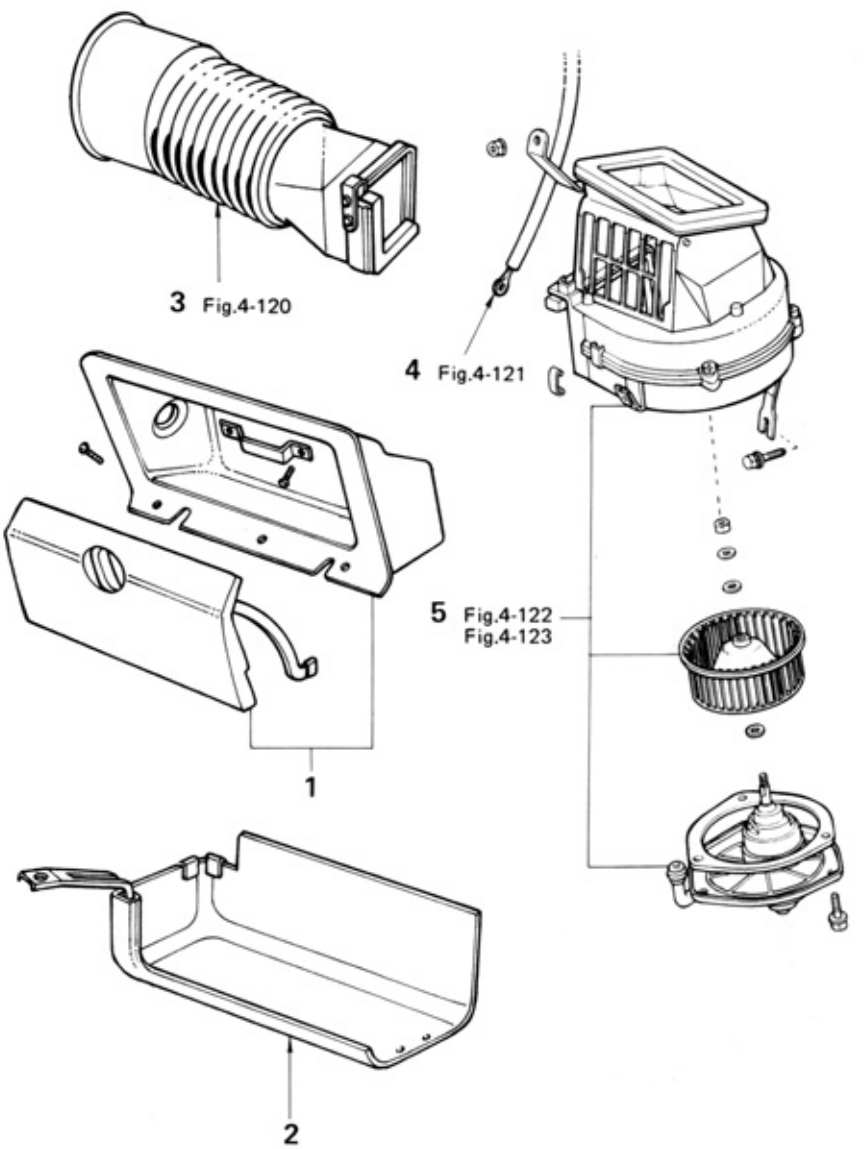
(2) Loosen the three heater unit mounting bolts, and take off the heater unit.

Heater Blower

REMOVAL

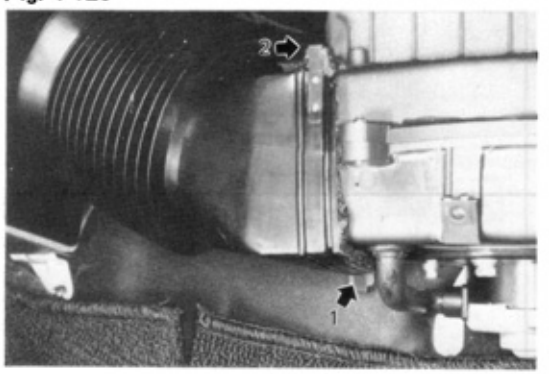
Remove the following parts in numerical order.

Fig. 4-119



1 Glove Compartment & Door
2 Under Tray
3 Heater Air Supply Duct
4 Heater Air Inlet Butterfly Control Cable
5 Heater Blower Assembly

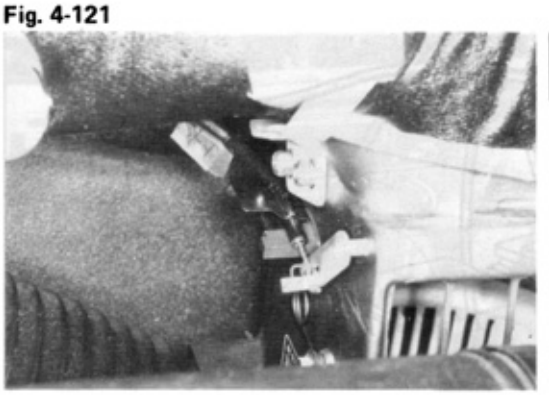
Fig. 4-120



HEATER BLOWER REMOVAL

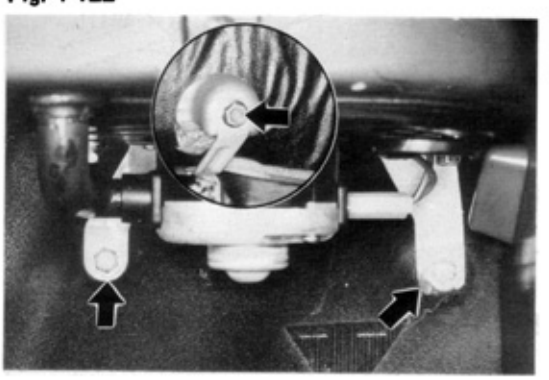
1. Heater air supply duct removal (Item 3)
   (1) Remove the lower side clip (1) from the blower and peel off the heater air duct adhesive.
   (2) After peeling off, remove the upper side clip (2) take off the heater air duct.

Fig. 4-121



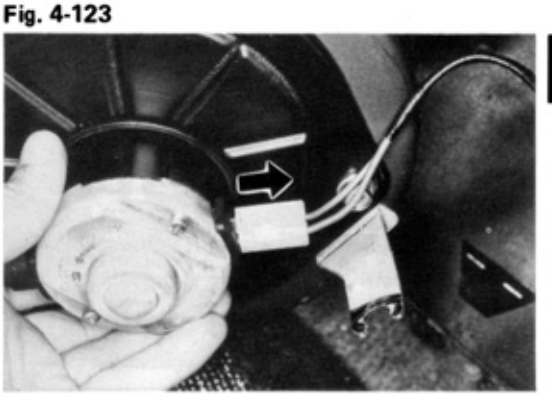
2. Heater air inlet butterfly cable removal (Item 4)
   Press open the clip and disconnect the control cable.

Fig. 4-122



3. Blower assembly removal (Item 5)
   (1) Loosen the nut holding the upper side and the two bolts holding the lower side, and take off blower assembly.

Fig. 4-123



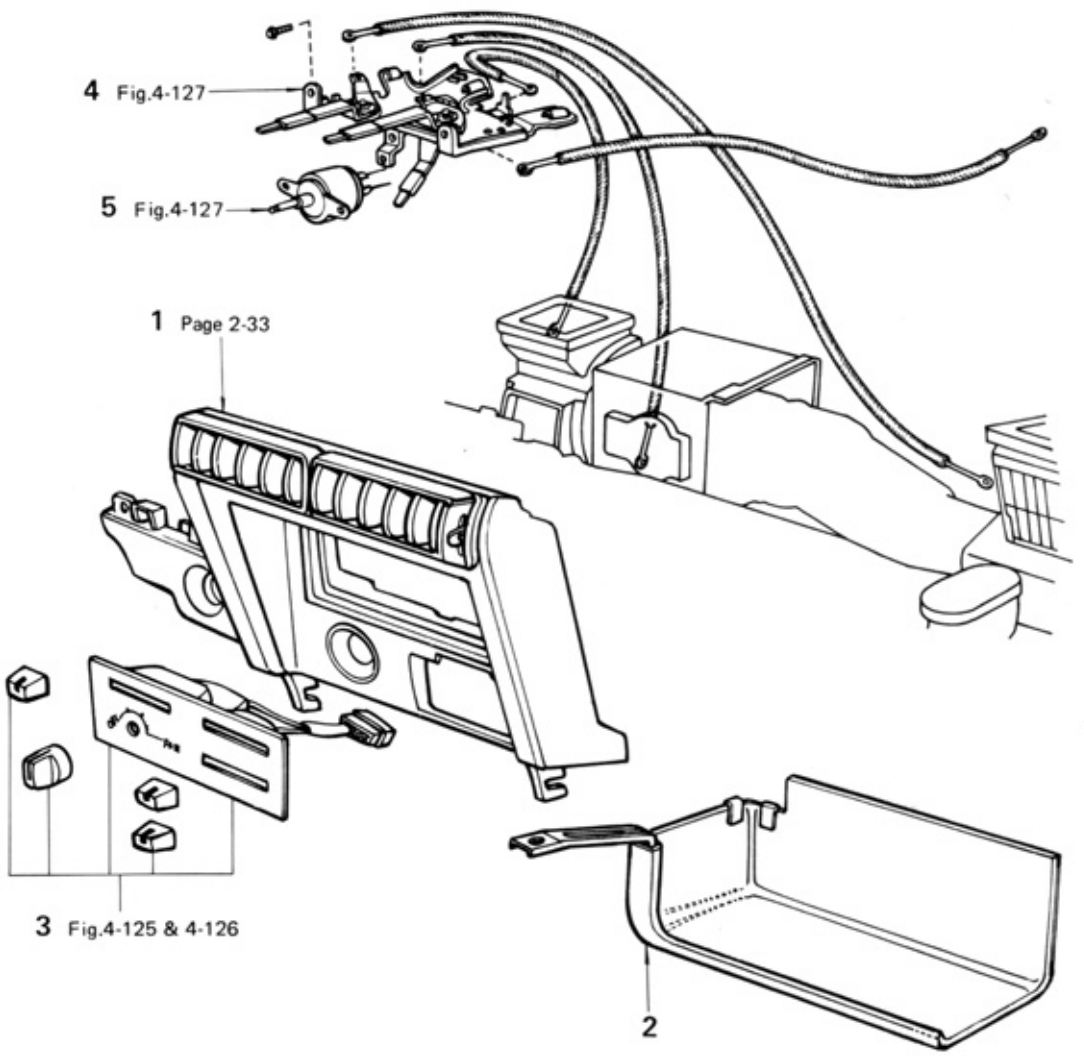
   (2) While taking off the blower assembly, unplug the blower motor wire connector.

Heater Control & Switch

REMOVAL

Remove the following parts in numerical order.

Fig. 4-124

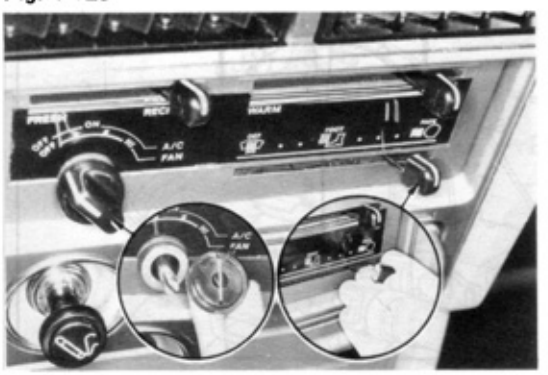


1 Instrument Panel Cluster Finish Center Panel
2 Under Tray
3 Knob & Heater Indicator Panel
4 Heater Control Assembly
5 Heater Blower Switch

SEE
SAFETY PAD REMOVAL
PAGE 2-33

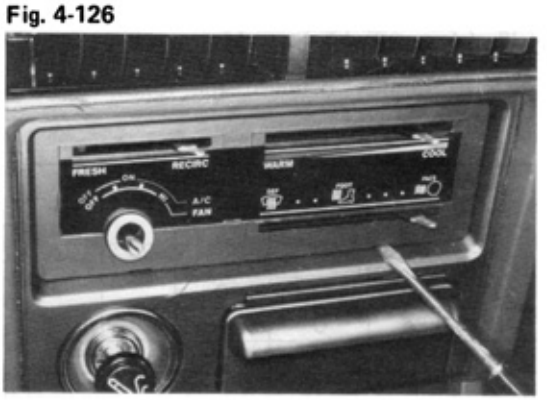
1. Instrument panel cluster finish center panel removal. (Item 1)
Perform the first 4 steps and the steps 8 through 13 in Safety Pad Removal Fig. 2-87.

Fig. 4-125



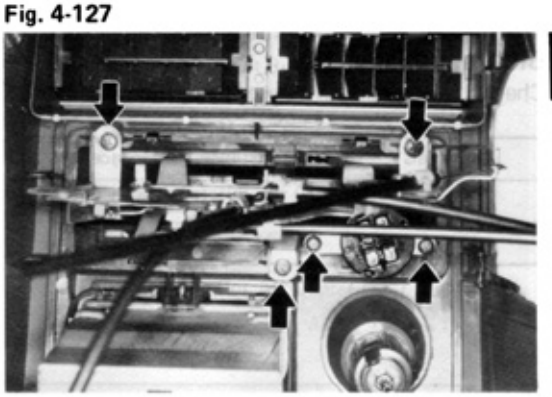
2. Heater indicator panel removal. (Item 3)
(1) Pull out the heater control switch knob and heater control lever knob.

Fig. 4-126



(2) Remove the heater indicator panel by prying off with screwdriver.

Fig. 4-127



3. Heater control assembly and heater blower switch removal. (Items 4 & 5)
Remove by loosening the mounting screws from the back side of instrument panel cluster finish center panel.

INSPECTION

Fig. 4-128

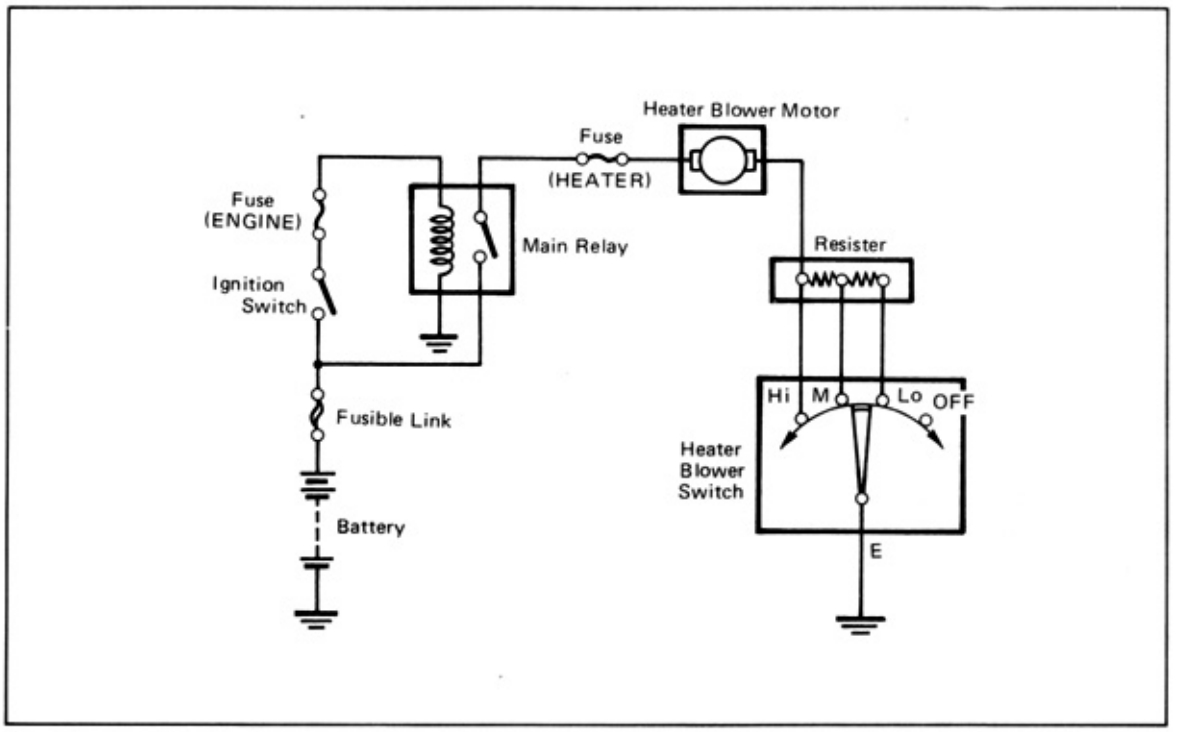
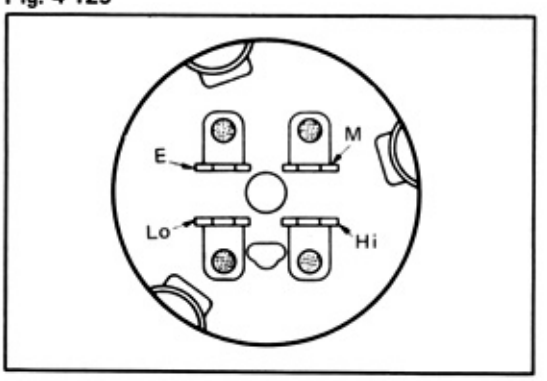


Fig. 4-129

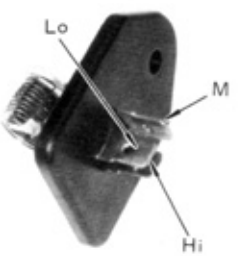


Heater Switch

Check continuity between the following terminals.

TERMINAL / SWITCH POSITION	E	Lo	M	Hi
OFF				
1ST STEP	○	○		
2ND STEP	○		○	
3RD STEP	○			○

Fig. 4-130



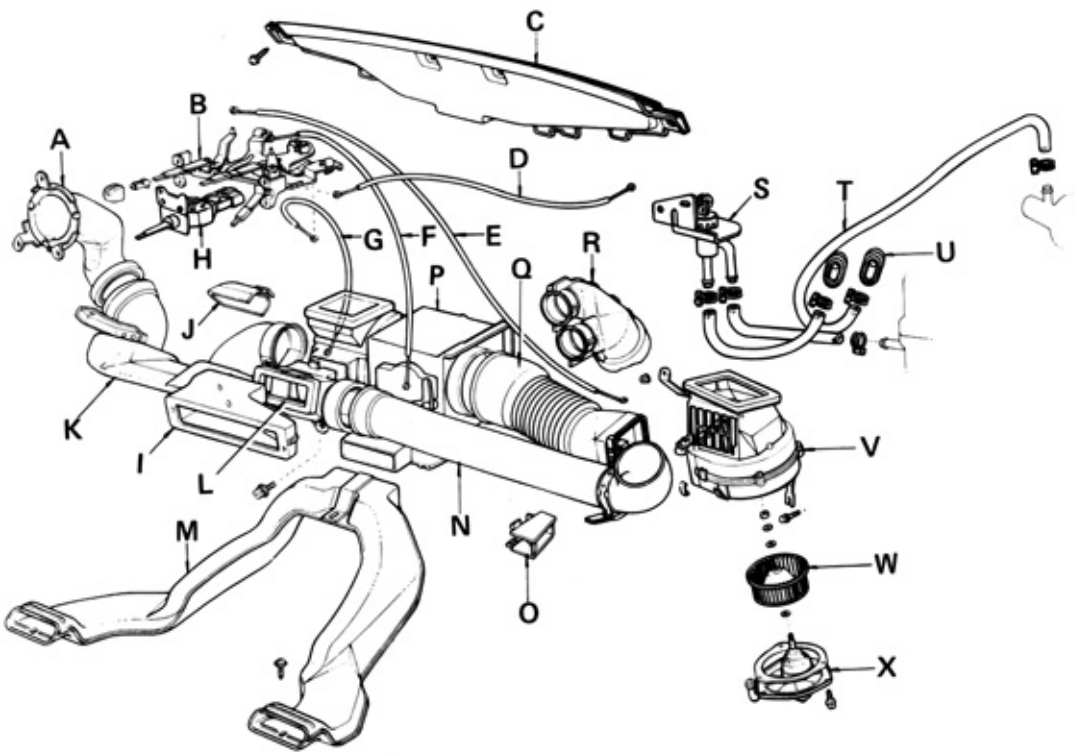
Blower Resistor

Check the resistances between terminals.

Terminals	Resistance (Reference)
Hi to M	0.8 Ω
M to Lo	1.0 Ω

HEATER(CELICA SERIES)

Fig. 4-131



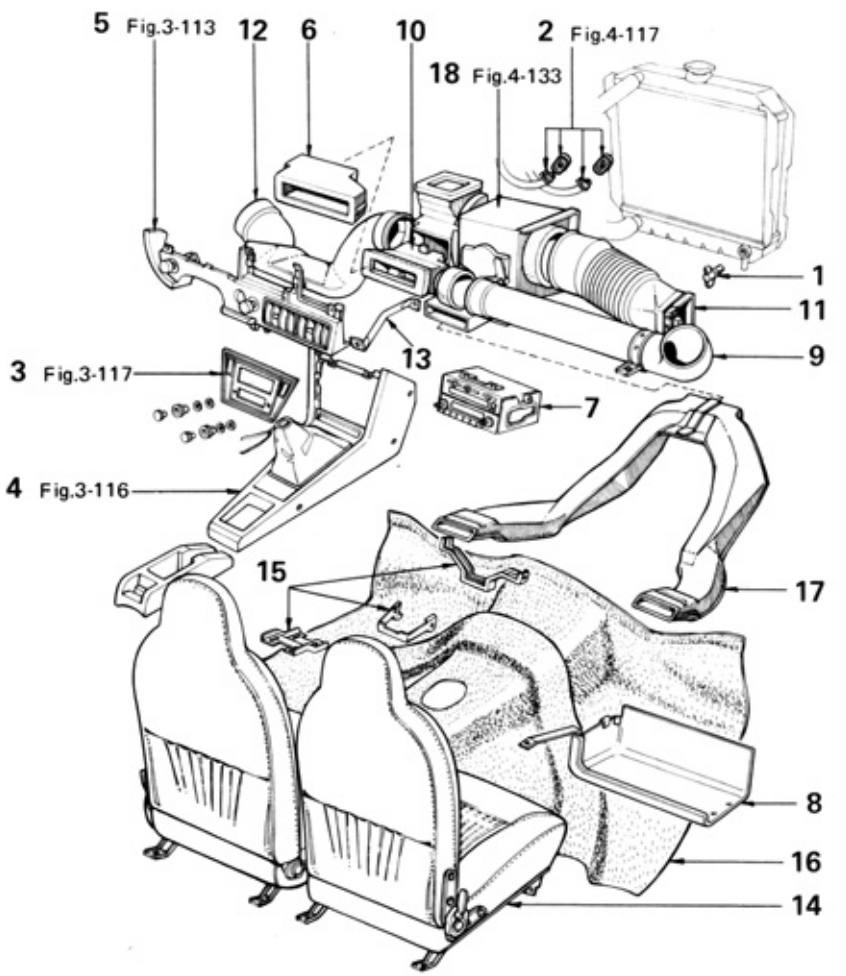
A	Air Duct No. 1	M	Heater Air Rear Duct (Optional)
B	Heater Control	N	Air Duct No. 3
C	Defroster Nozzle	O	Air Guide
D	Heater Control Cable (for Water Valve)	P	Heater Unit Assembly
E	Heater Air Inlet Butterfly Cable	Q	Heater Air Supply Duct
F	Heater Control Cable (for Air Mix)	R	Air Duct No. 4
G	Defrost Control Cable	S	Water Valve
H	Heater Blower Switch	T	Hose
I	Heater Interior Air Center Duct, No. 1	U	Grommet
J	Air Guide	V	Heater Blower Case
K	Air Duct No. 2	W	Heater Blower Fan
L	Heater Interior Air Center Duct No. 1	X	Heater Blower Motor

Heater Unit

REMOVAL

Remove the following parts in numerical order.

Fig. 4-132



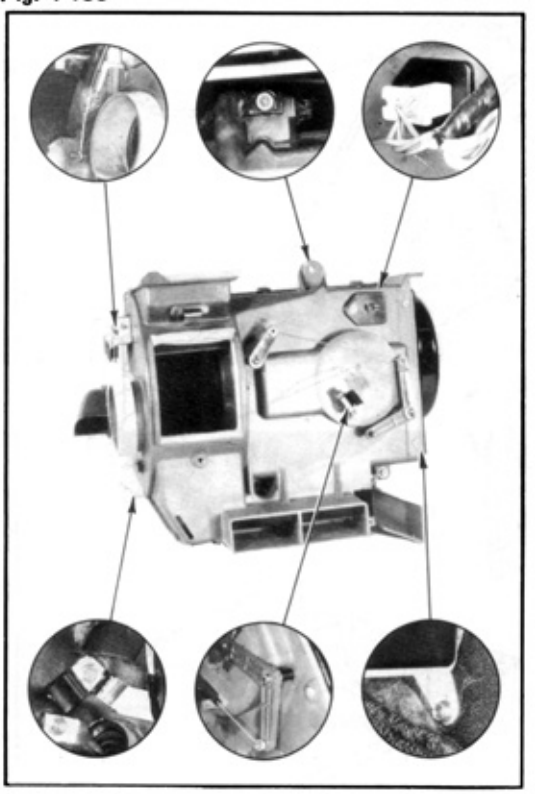
1 Radiator Drain Cock
2 Water Hoses & Grommets
3 Console Upper Front Panel
4 Console Box
5 Instrument Panel Finish Lower Panel LH
6 Interior Air Center Duct No. 2
7 Radio & Tape Player
8 Under Tray
9 Air Duct No. 3
10 Interior Air Center Duct No. 1
11 Heater Air Supply Duct
12 Air Duct No. 2
13 Instrument Panel To Cowl Brace
14 Front Seat RH & LH
15 Console Box Support Braket
16 Front Floor Carpet
17 Heater Air Rear Duct
18 Heater Unit

HEATER UNIT REMOVAL

1. Remove instrument panel finish lower panel LH. (Item 5)
   Perform first 10 steps and steps 15 to 17 in Safety Pad Removal Fig. 3-113.

SEE
SAFETY PAD REMOVAL
PAGE 3-42

Fig. 4-133



2. Heater unit assembly removal (Item 18)
   (1) Disconnect the two heater control cables.
   (2) Disconnect register wiring connector.
   (3) Remove the heater unit after loosening its three mounting bolts.

Heater Blower

REMOVAL

Remove by following the same procedures for Carina series heater blower (page 4-49).

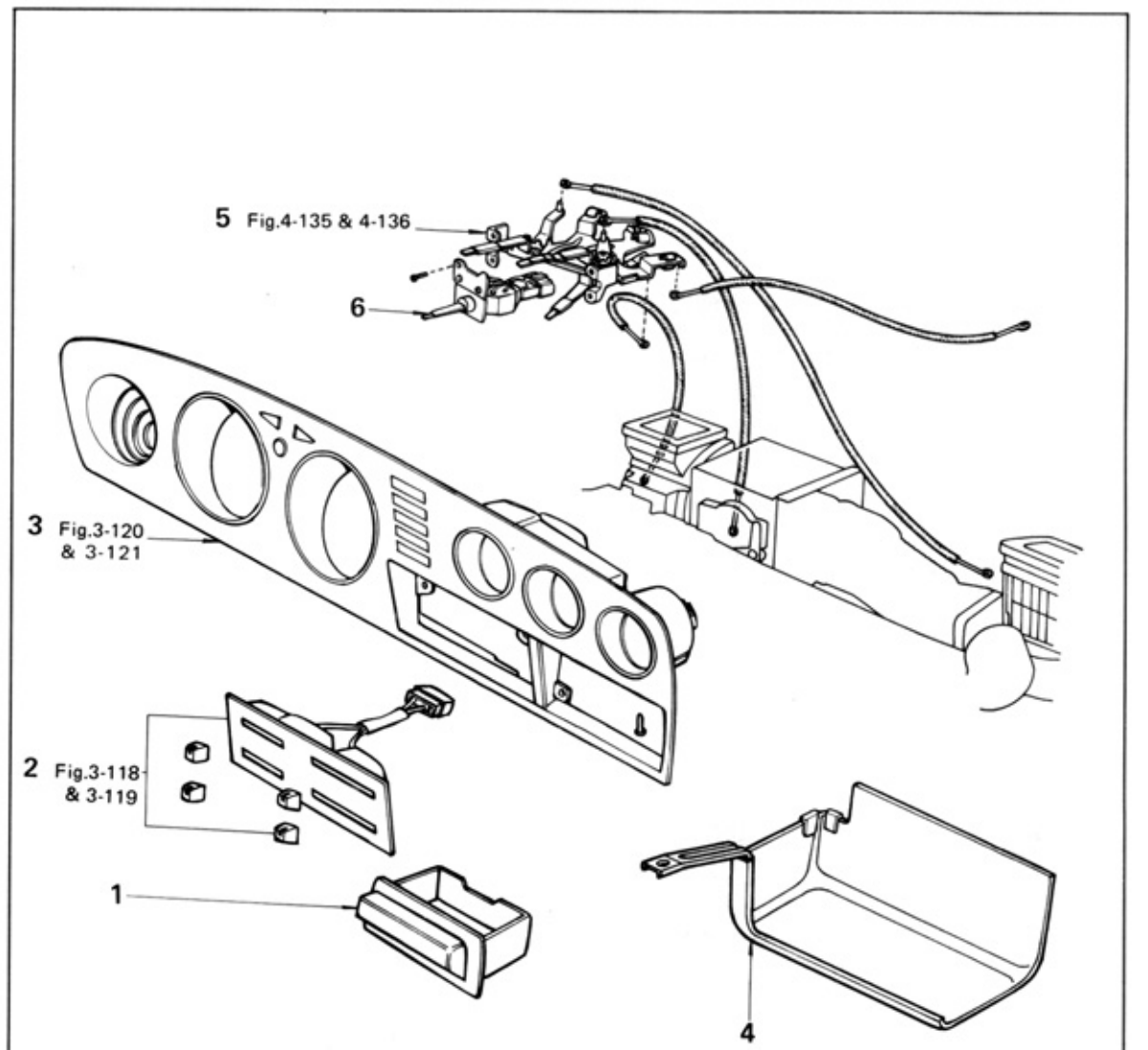
SEE
CARINA SERIES HEATER
BLOWER PAGE 4-49

Heater Control & Switch

REMOVAL

Remove the following parts in numerical order.

Fig. 4-134



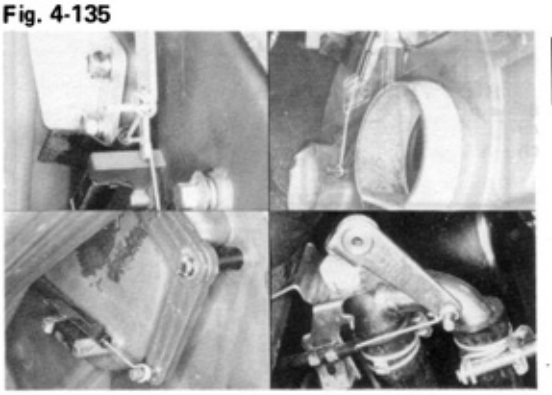
1 Ash Receptacle
2 Heater Indicator Panel
3 Instrument Panel Cluster Finish Panel
4 Under Tray
5 Heater Control Assembly
6 Heater Blower Switch

SEE
SAFETY PAD REMOVAL
PAGE 3-42

HEATER CONTROL & SWITCH REMOVAL

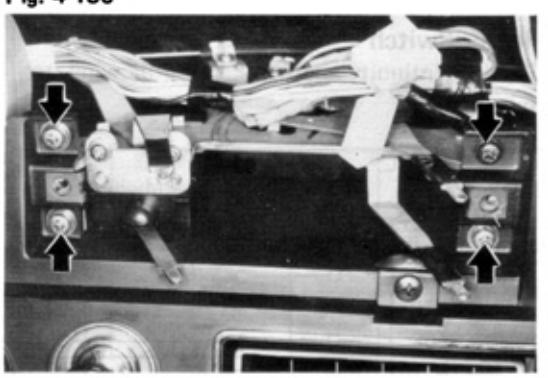
1. Instrument panel cluster finish panel removal. (Item 3)
   Perform steps 5 and 6 in Safety Pad Removal page 3-44.

Fig. 4-135



2. Heater control assembly removal. (Item 5)
   (1) Disconnect the heater control cables from the blower motor, heater unit, and water valve.

Fig. 4-136



(2) Loosen the heater control mounting screws, and take off the heater control assembly.

INSPECTION

Fig. 4-137

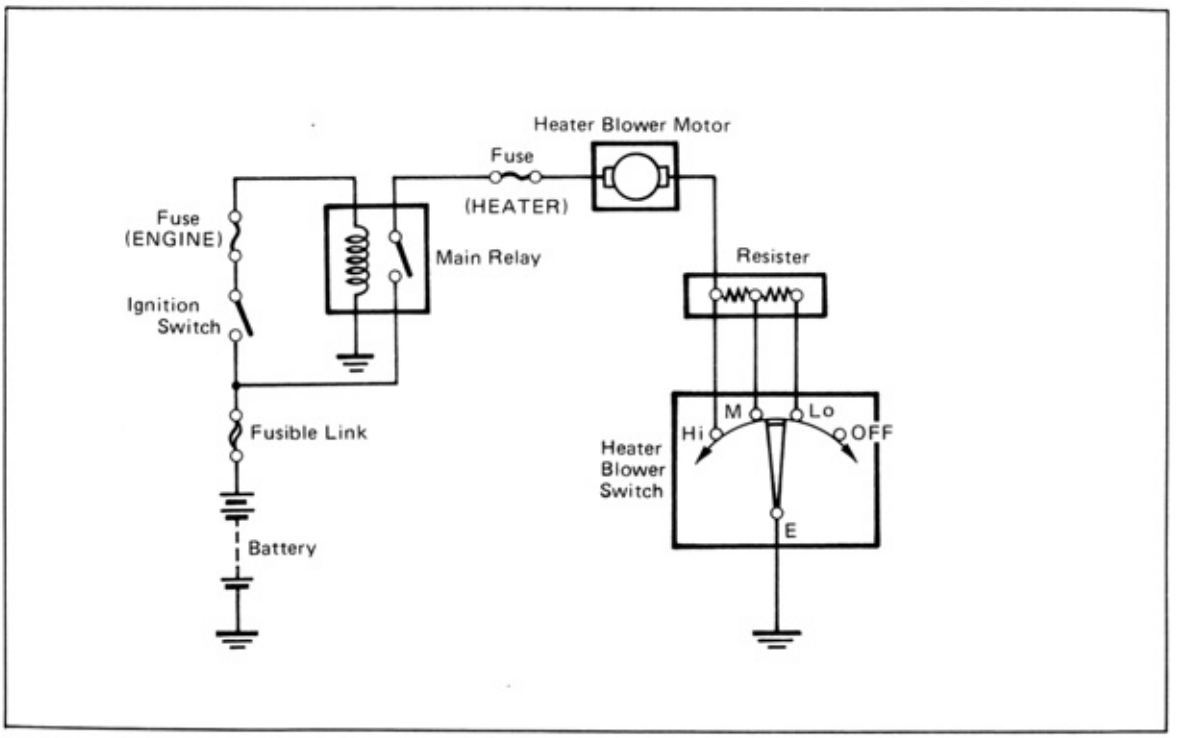
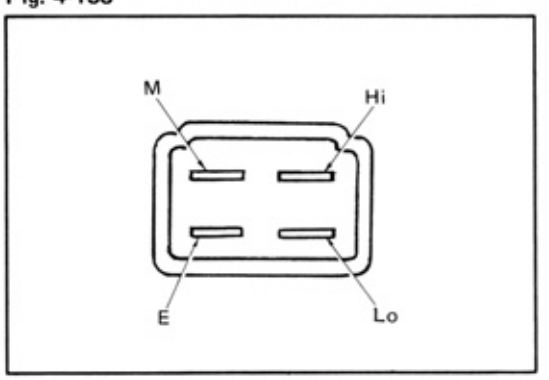


Fig. 4-138

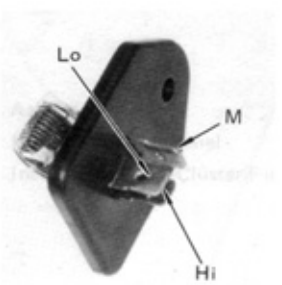


Heater Switch

Check continuity between the following terminals.

TERMINAL / SWITCH POSITION	E	Lo	M	Hi
OFF				
1ST STEP	○——	——○		
2ND STEP	○——	——	——○	
3RD STEP	○——	——	——	——○

Fig. 4-139



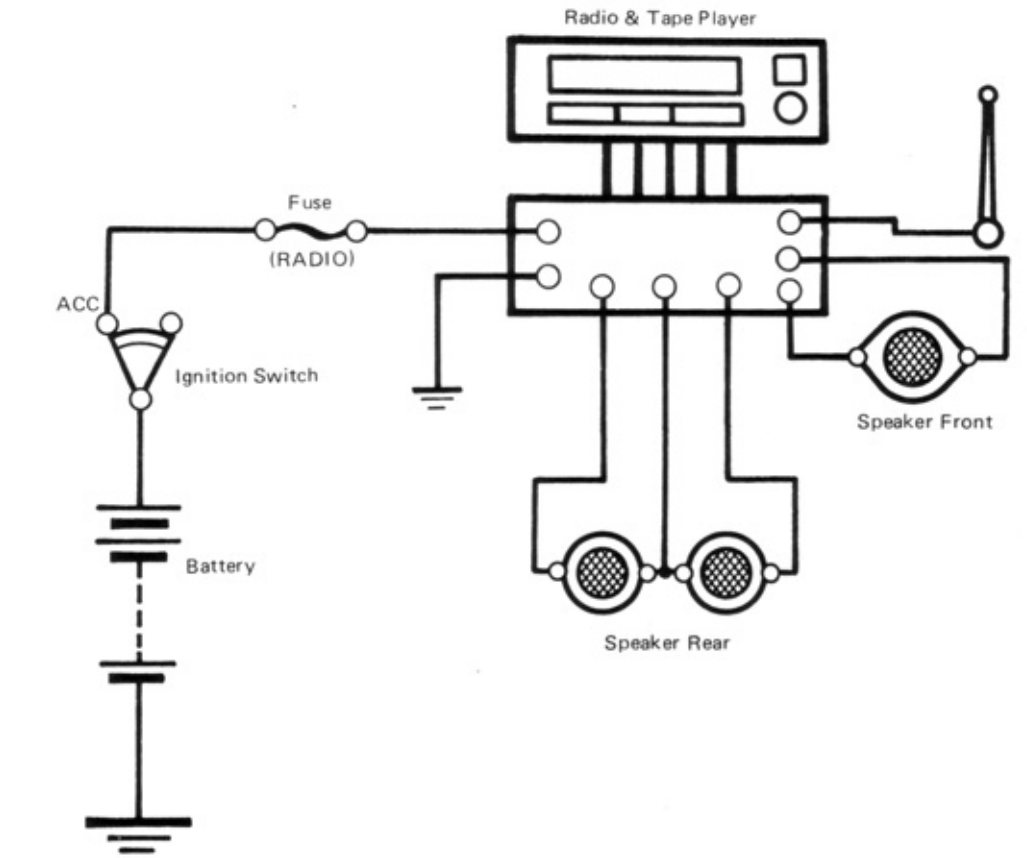
Blower Resistor

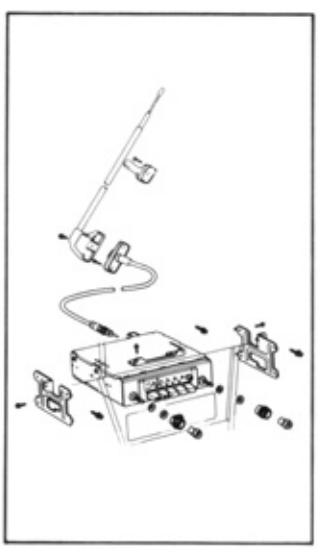
Check the resistances between terminals.

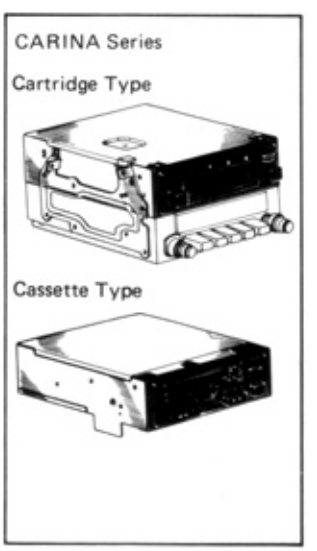
Terminals	Resistance (Reference)
Hi to M	0.8 Ω
M to Lo	1.0 Ω

RADIO, TAPE PLAYER & SPEAKER

Fig. 4-140







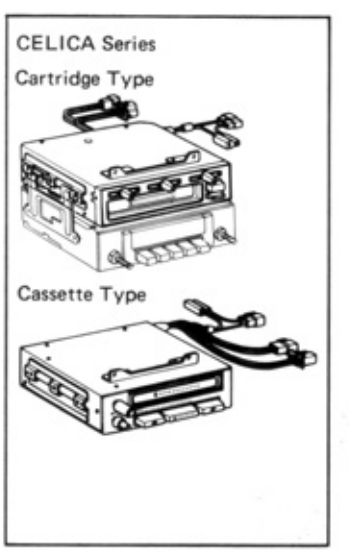


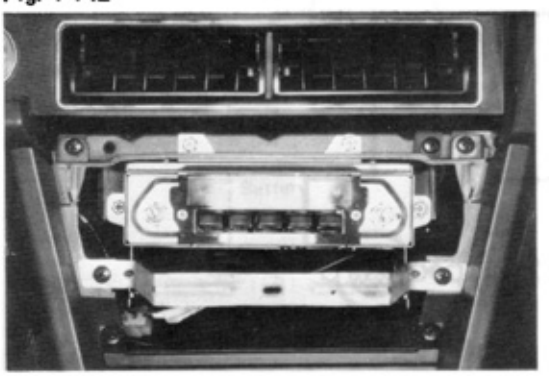
Fig. 4-141

RADIO REMOVAL

Carina Series

1. Remove the console upper front panel.
2. Unplug the wiring connector at radio back side, and remove the radio.

Fig. 4-142



Celica Series

1. Remove the console upper front panel.
2. Remove the console upper front retainer from the console box.
3. Unplug the wiring connector at radio back side, and remove the radio.

Fig. 4-143

TAPE PLAYER REMOVAL

Remove the following parts:

1. Console upper front panel.
2. Console box
3. Radio & tape player

Fig. 4-144

SPEAKER REMOVAL

Carina Series

Remove the following parts:

1. Glove compartment & door.
2. Speaker

Celica Series

Remove the following parts:

1. Instrument cluster finish panel.
2. Speaker.

CLOCK

Fig. 4-145

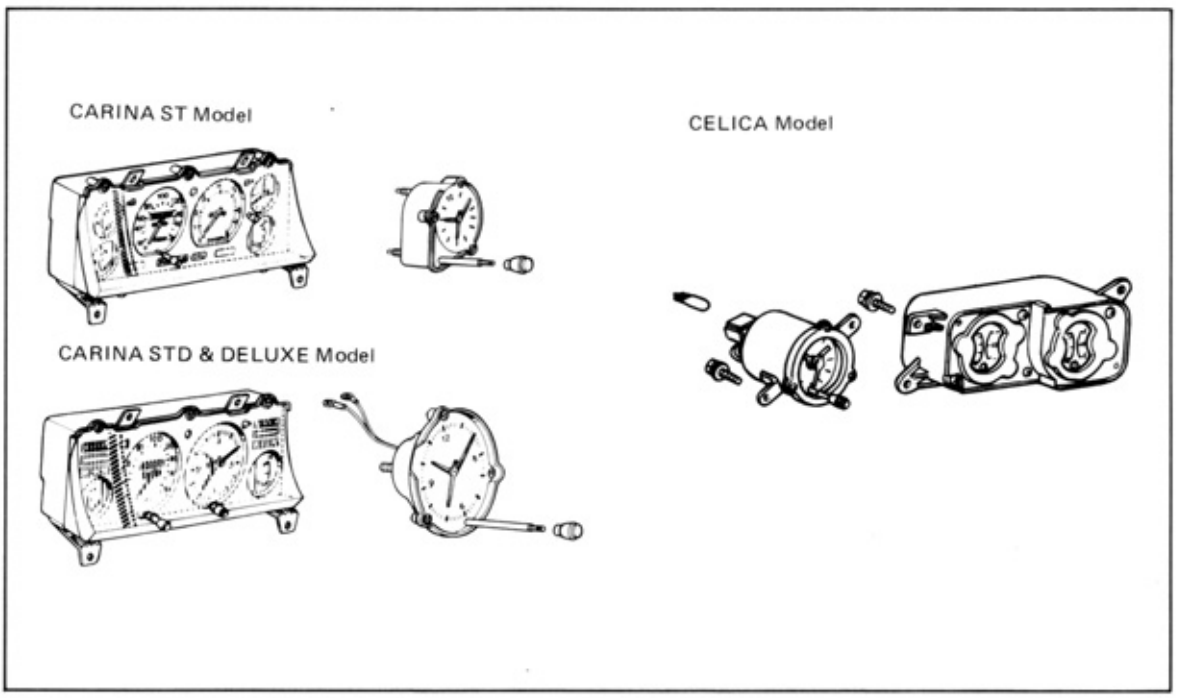
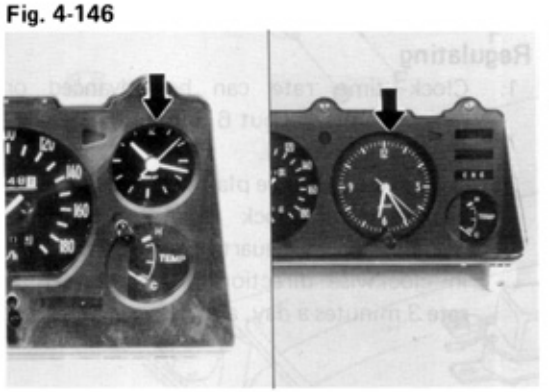


Fig. 4-146



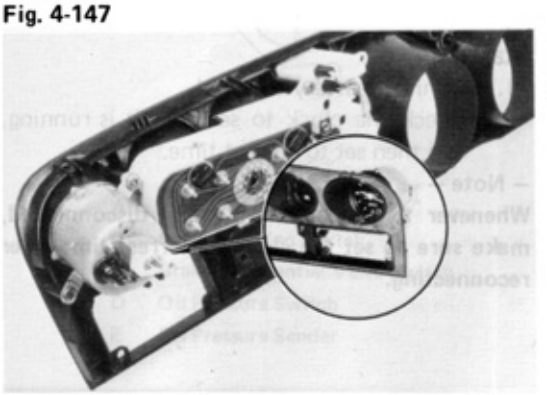
REMOVAL

Carina Series

Remove the following parts:

1. Instrument cluster finish panel.
2. Combination meter.
3. Clock.

Fig. 4-147



Celica Series

Remove the following parts:

1. Instrument cluster finish panel.
2. Clock.

INSPECTION

Fig. 4-148

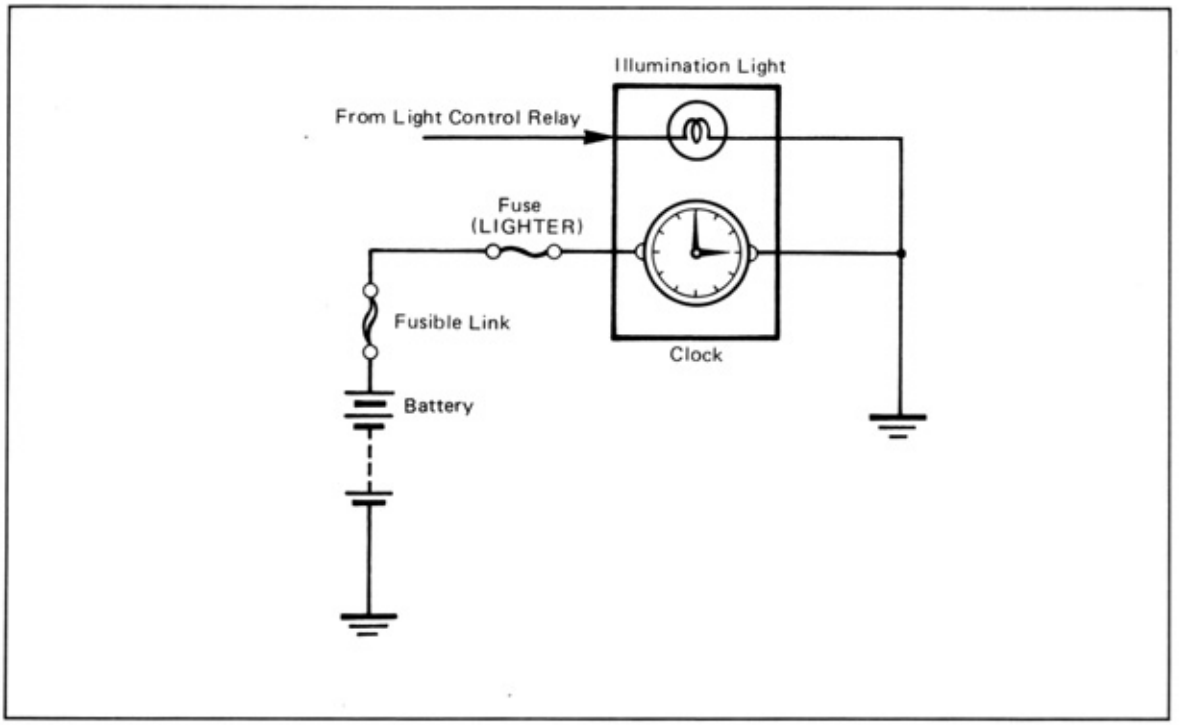
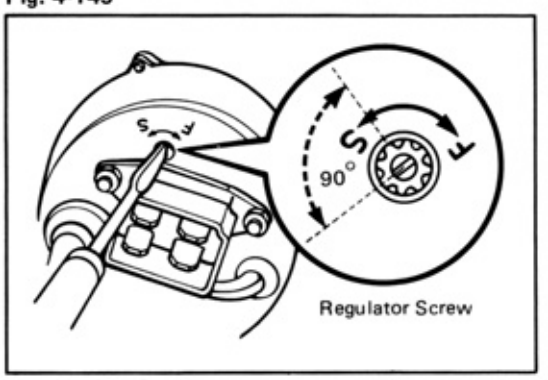


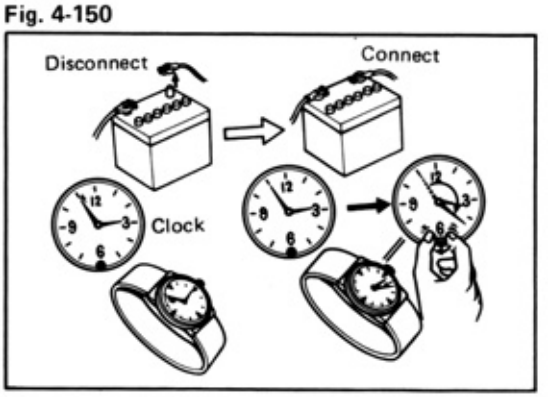
Fig. 4-149



Regulating

1. Clock time rate can be advanced or retarded up to about 6 minutes a day with the regulator screw.
2. To regulate, remove plastic dust cover from back side of clock case and turn the regulator screw. Quarter turn (90 degrees) in clockwise direction will advance time rate 3 minutes a day, and vice-versa.

Fig. 4-150



Starting

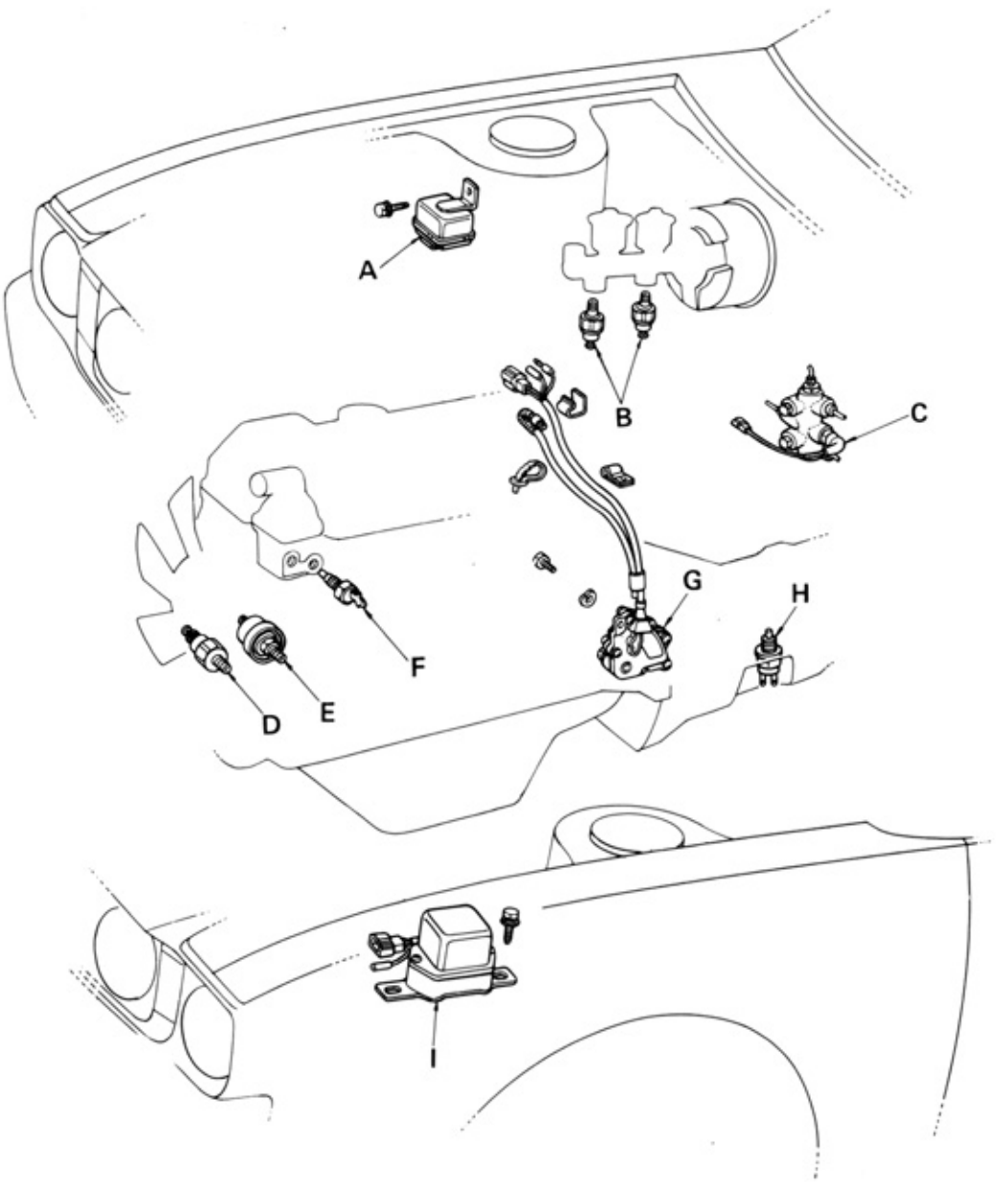
1. Connect battery terminal.
2. Check the clock to see that it is running, and then set to correct time.

– Note –

Whenever the battery terminal is disconnected, make sure to set the clock to correct time after reconnecting.

SWITCHES & RELAYS LOCATION (CARINA SERIES)

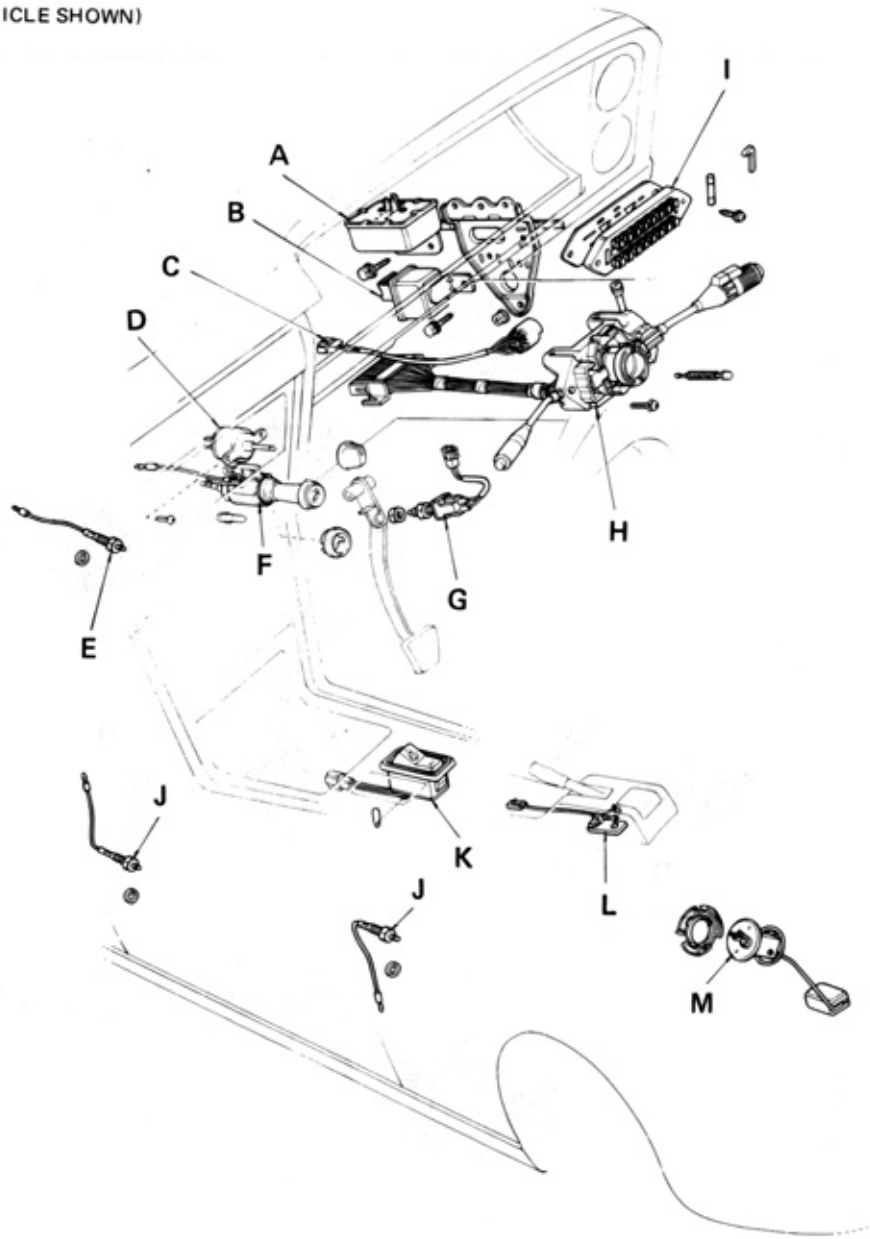
Fig. 4-151



A	Light Control Relay	F	Warter Temperature Sender
B	Brake Warning Switch	G	Neutral Safety Switch
C	Brake Differential Valve Switch	H	Back-up Light Switch
D	Oil Pressure Switch	I	Charging Regulator
E	Oil Pressure Sender		

Fig. 4-152

(RHD VEHICLE SHOWN)

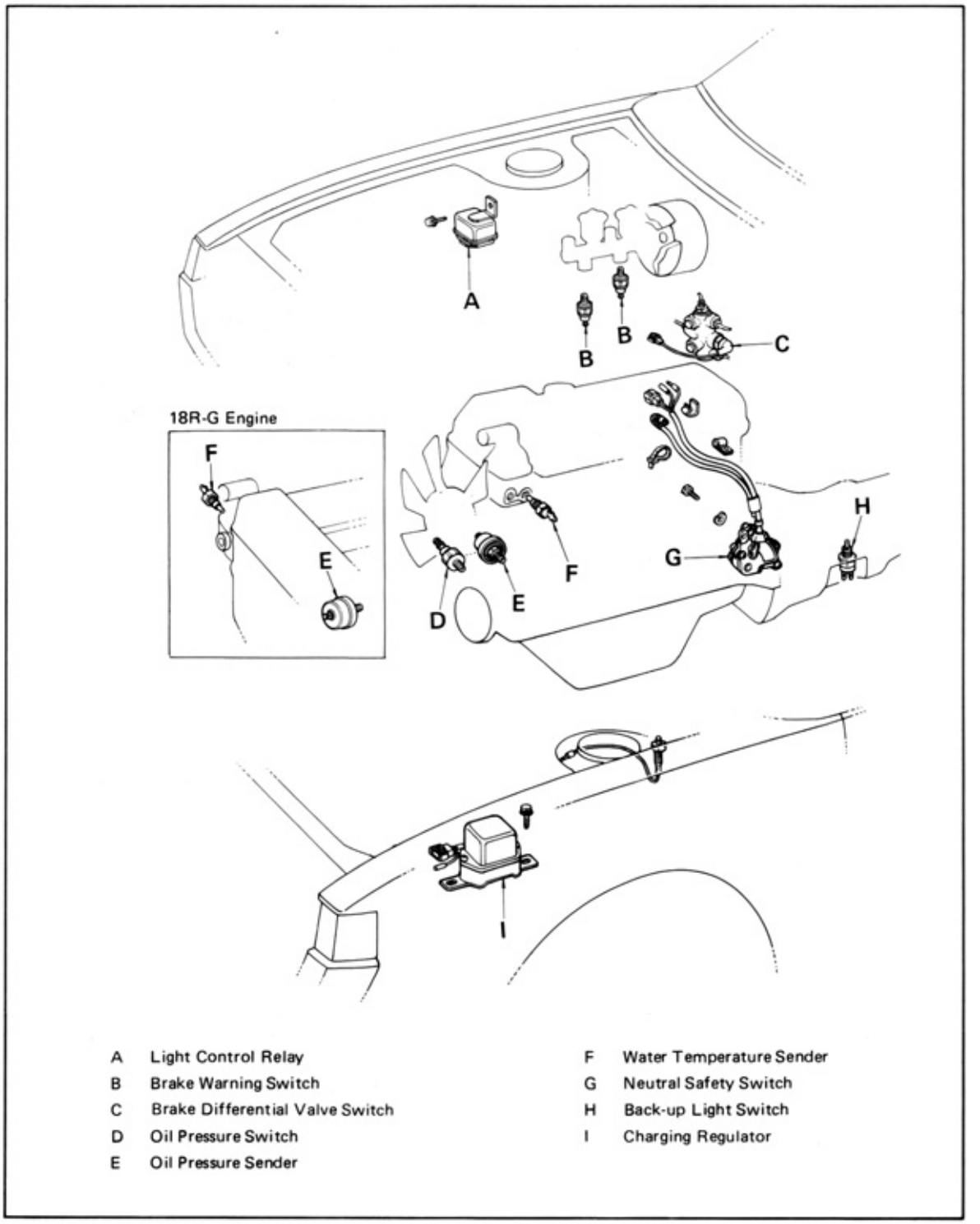


A	Turn Signal & Hazard Flasher	H	Combination Light Control, Dimmer, Turn Signal, Hazard & Wiper Switch
B	Main Relay	I	Fuse Block
C	Ignition Switch	J	Door Switch
D	Heater Blower Motor Switch	K	Rear Window Defogger Switch
E	Glove Box Light Switch	L	Parking Brake Switch
F	Cigarette Lighter	M	Fuel Sender
G	Stop Light Switch		

SWITCHES & RELAYS LOCATION (CELICA SERIES)

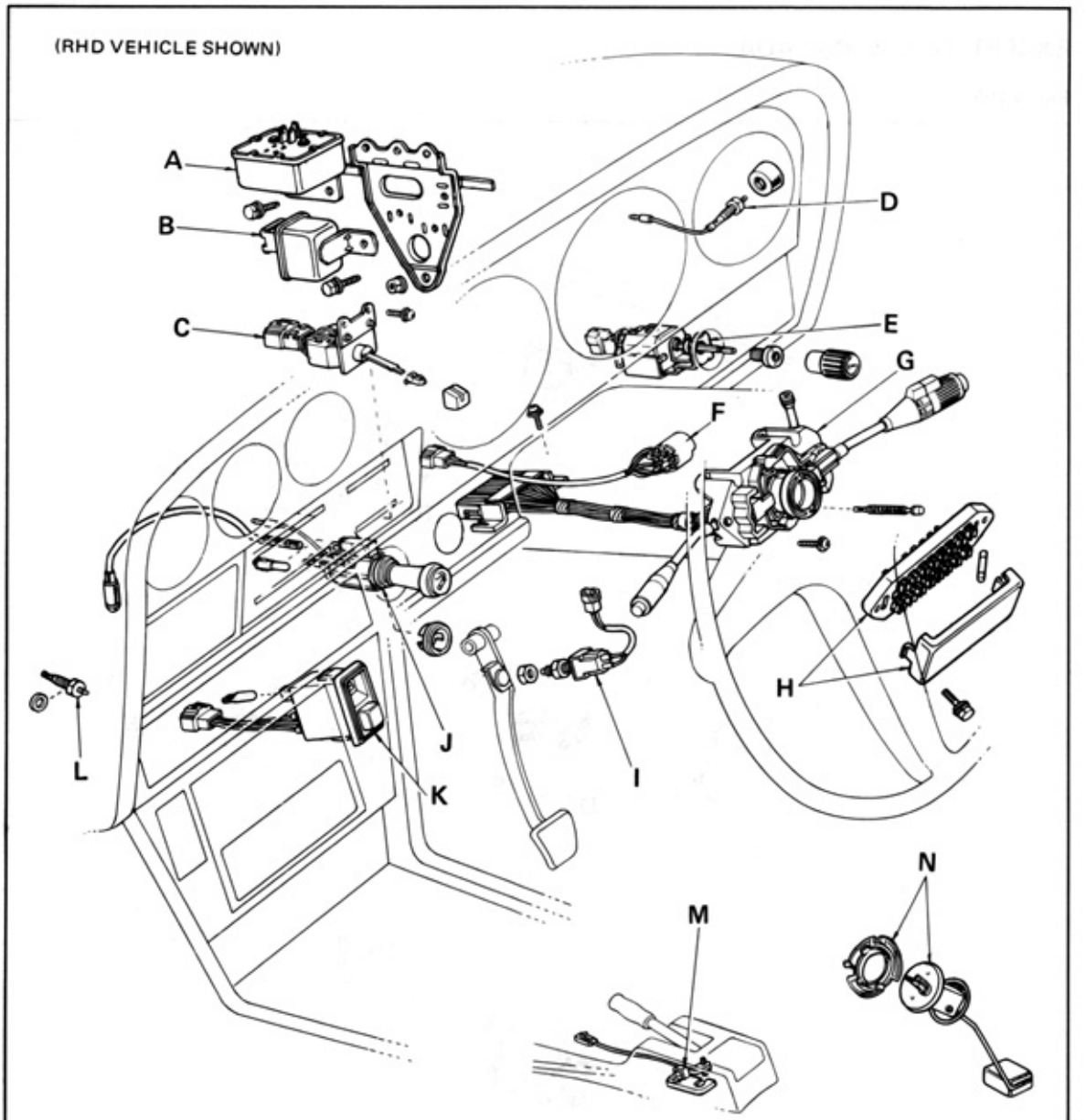
EXCEPT USA & CANADA

Fig. 4-153



A	Light Control Relay	F	Water Temperature Sender
B	Brake Warning Switch	G	Neutral Safety Switch
C	Brake Differential Valve Switch	H	Back-up Light Switch
D	Oil Pressure Switch	I	Charging Regulator
E	Oil Pressure Sender		

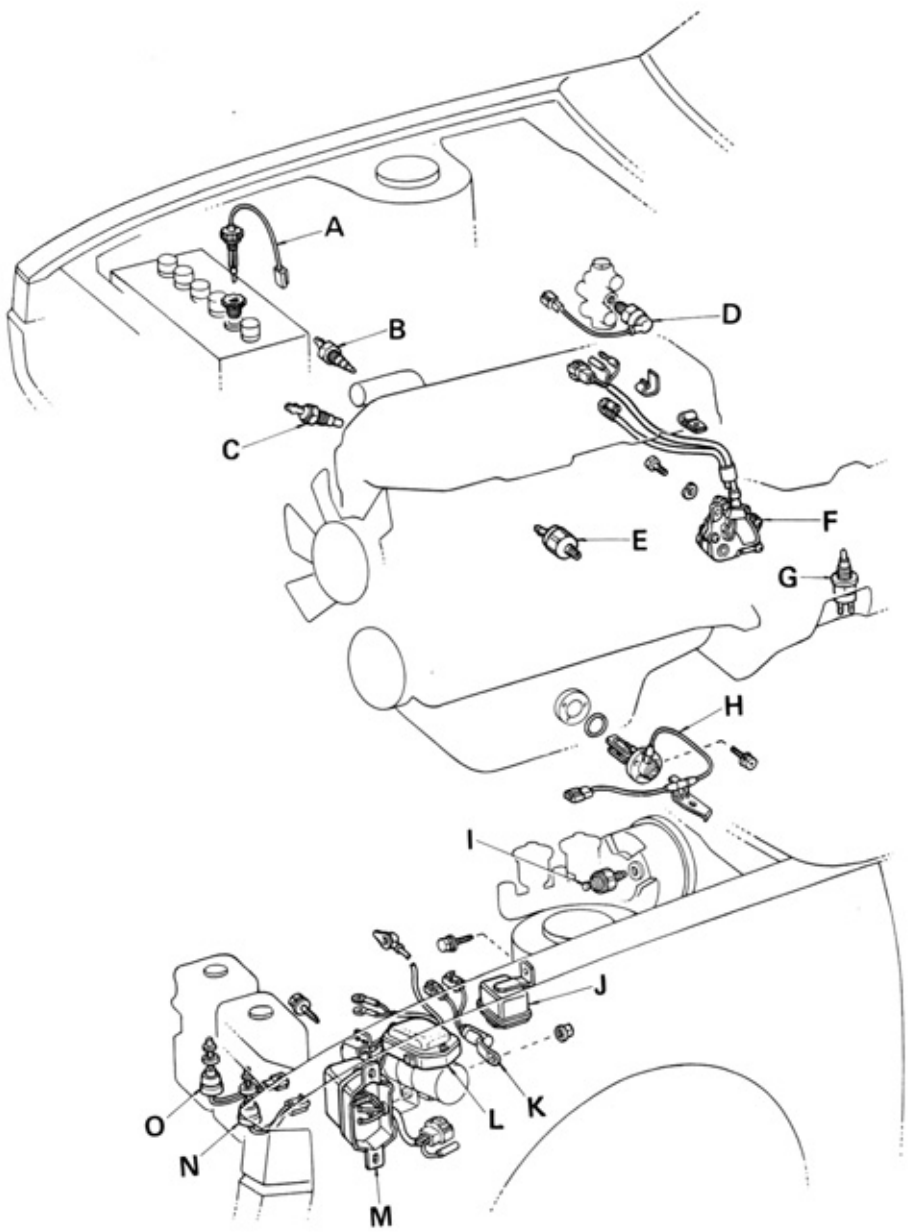
Fig. 4-154



A	Turn Signal & Hazard Flasher	H	Fuse Block
B	Main Relay	I	Stop Light Switch
C	Heater Blower Motor Switch	J	Cigarette Lighter
D	Door Switch	K	Rear Window Defogger Switch
E	Light Control Rheostat	L	Glove Box Light Switch
F	Ignition Switch	M	Parking Brake Switch
G	Combination Light Control, Dimmer, Turn Signal, Hazard & Wiper Switch	N	Fuel Sender

FOR USA & CANADA

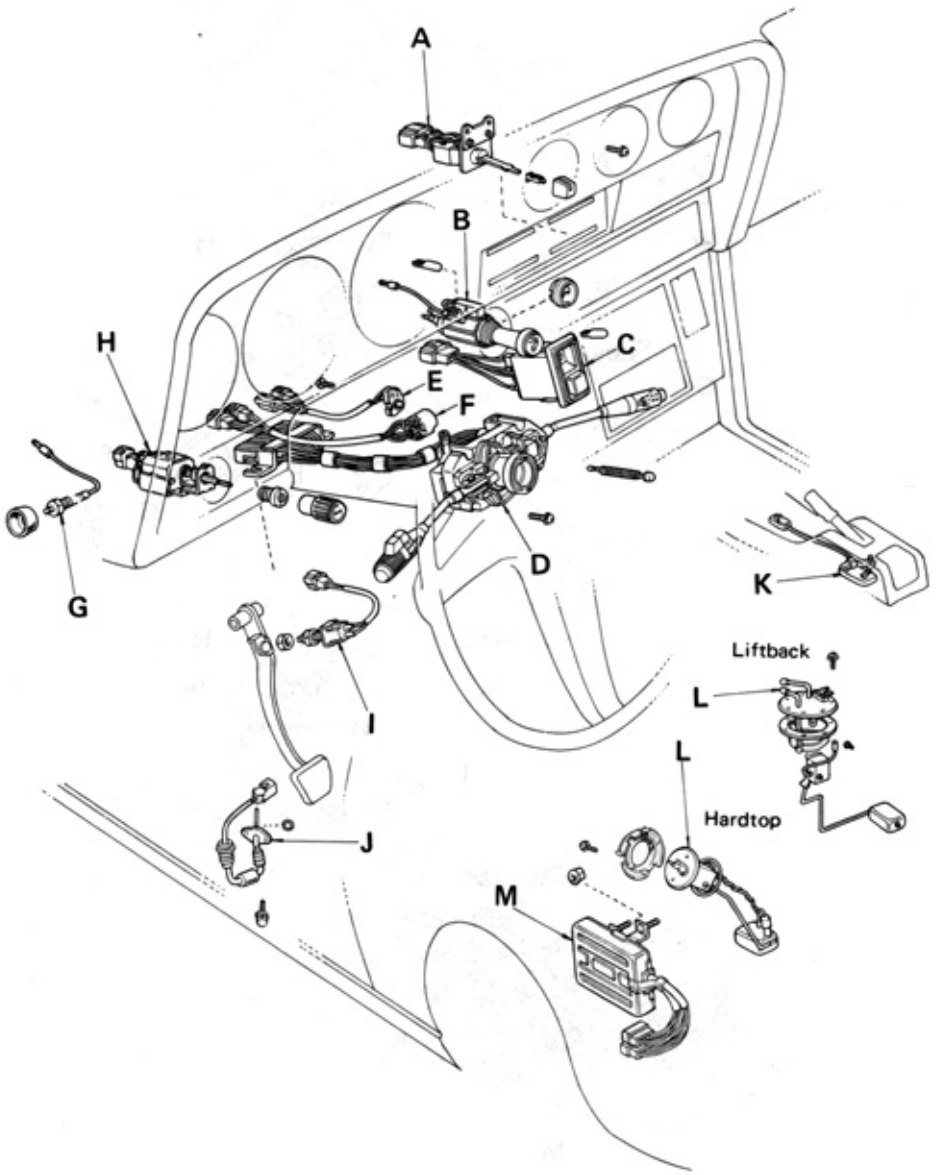
Fig. 4-155



A	Electrolyte Level Sensor
B	Water Thermo Sensor (for T.C.S)
C	Water Temperature Sender
D	Brake Differential Valve Switch
E	Oil Pressure Switch (for Engine)
F	Neutral Safety & Reverse Switch
G	Back-up Light Switch
H	Engine Oil Level Sensor
I	Brake Booster Vacuum Warning Switch
J	Light Control Relay
K	Ignition Coil Diode
L	Igniter
M	Charging Regulator
N	Windshield Washer Level Warning Switch
O	Coolant Reserve Tank Level Warning Switch

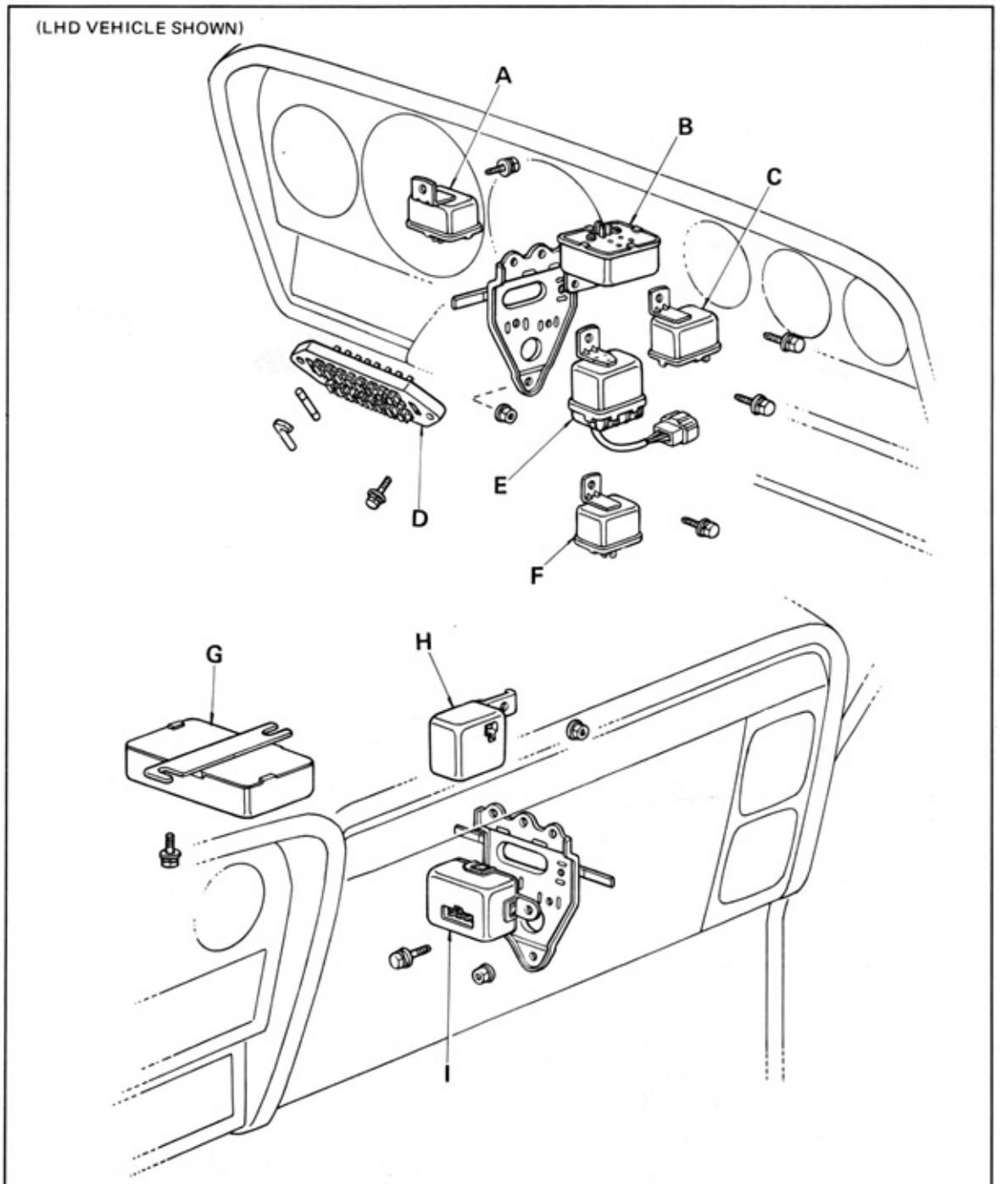
Fig. 4-156

(LHD VEHICLE SHOWN)



A	Heater Blower Switch	G	Courtesy Light Switch
B	Cigarette Lighter	H	Light Control Rheostat
C	Rear Window Defogger Switch	I	Stop Light Switch
D	Combination Light Control, Dimmer, Turn Signal, Hazard & Wiper Switch	J	Exhaust Gas Temperature Sensor
		K	Parking Brake Switch
E	Un-Lock Warning Switch	L	Fuel Sender Gauge
F	Ignition Switch	M	Condition Indicator Computer

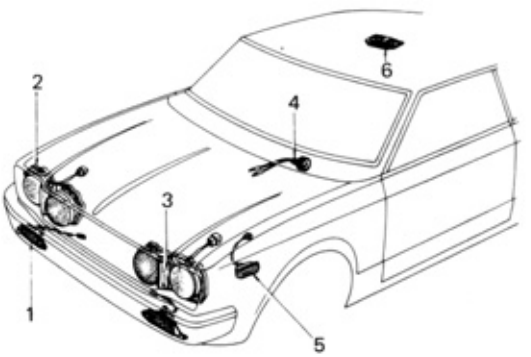
Fig. 4-157

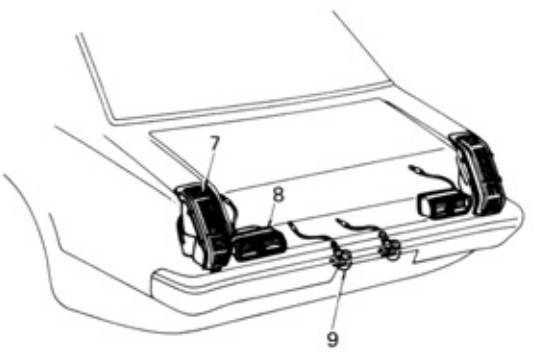


A	Un-Lock or Seat Belt Warning Buzzer	F	Ignition Relay (for Brake Warning Light)
B	Turn Signal Flasher	G	Spark Control Computer
C	Main Relay	H	Seat Belt Warning Relay
D	Fuse Block	I	Light Failure Indicator Relay
E	Fuel Pump Relay		

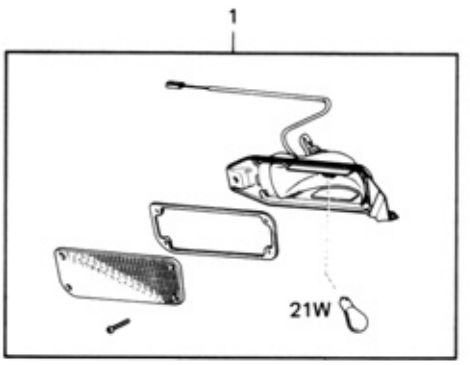
LIGHT COMPONENTS(CARINA SERIES)

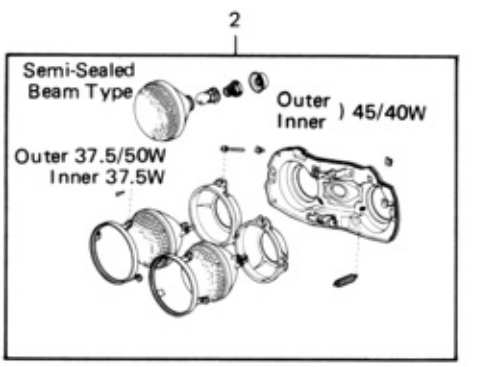
Fig. 4-158

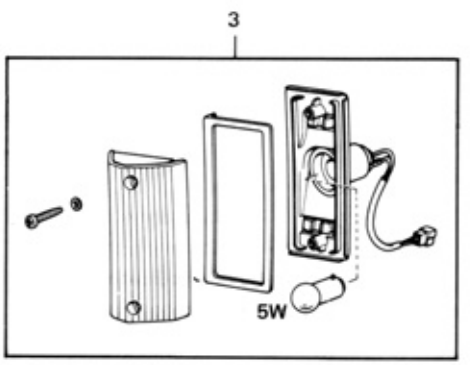




1 Front Turn Signal Light
2 Headlight
3 Front Parking Light
4 Glove Compartment Light
5 Side Turn Signal Light
6 Interior Light
7 Rear Combination Light
8 Back-up Light
9 License Plate Light







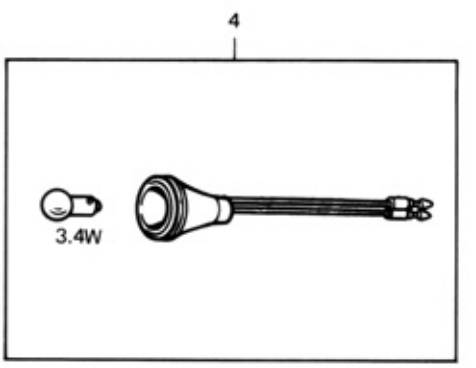
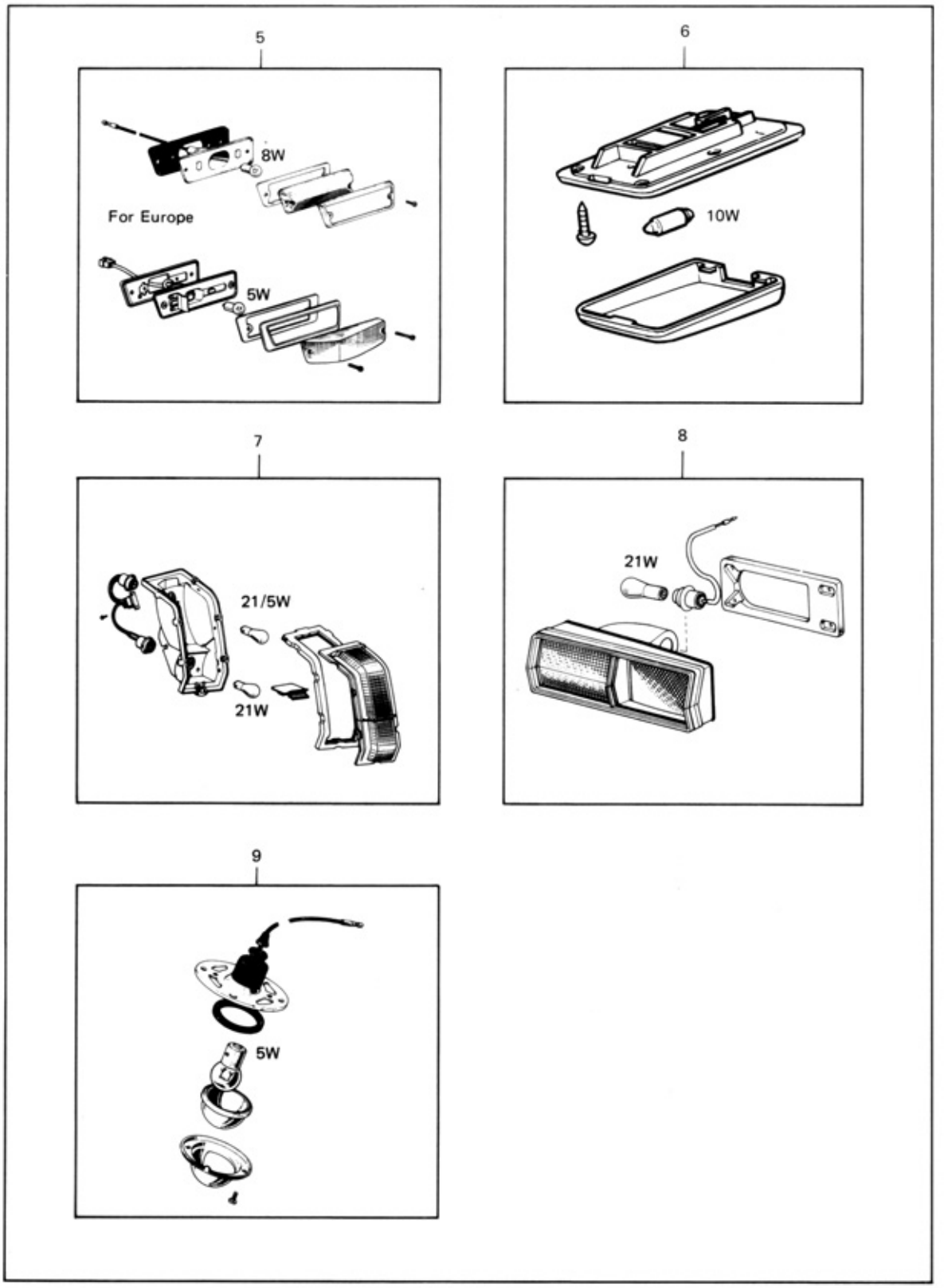
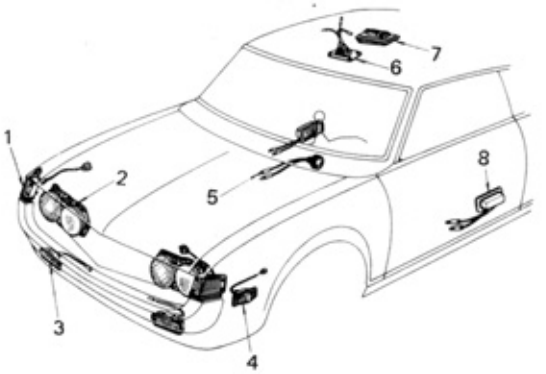


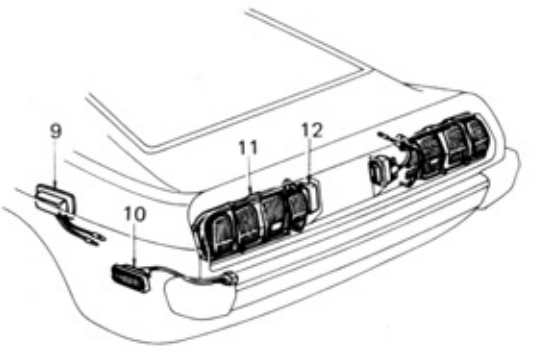
Fig. 4-159



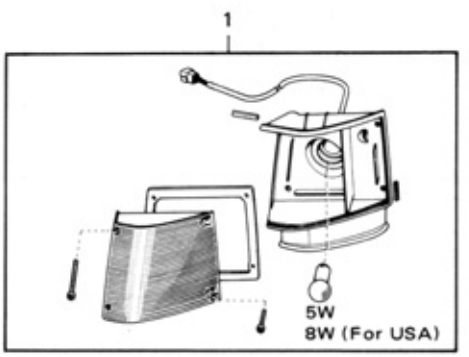
LIGHT COMPONENTS(CELICA SERIES)

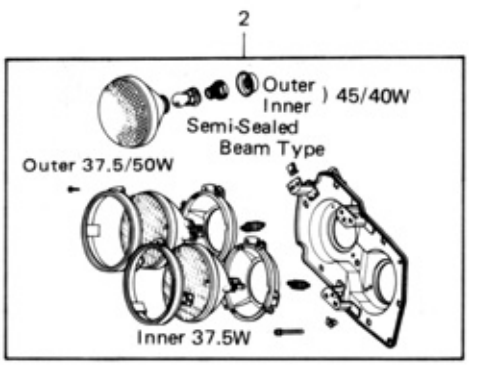
Fig. 4-160

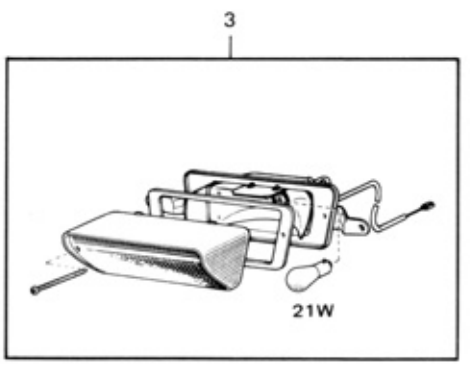




1 Front Parking Light
2 Headlight
3 Front Turn Signal Light
4 Side Turn Signal Light
Front Side Marker Light (for USA)
5 Glove Compartment Light
6 Spot Light (Liftback)
7 Interior Light
8 Door Courtesy Light
9 Luggage Room Light
10 Rear Side Marker Light (for USA)
11 Rear Combination Light
12 License Plate Light







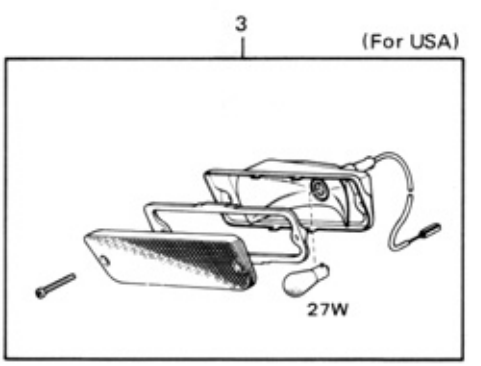
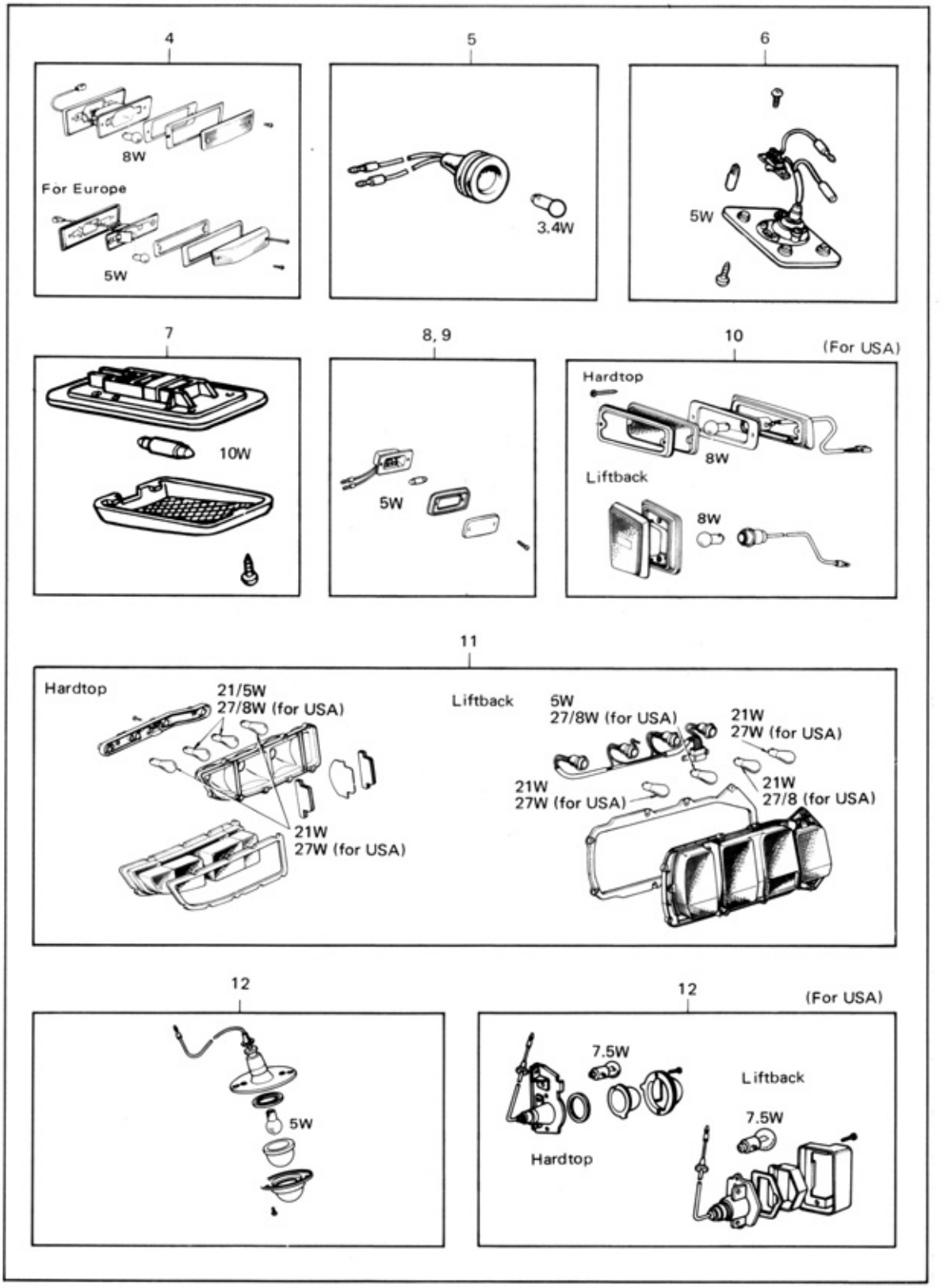
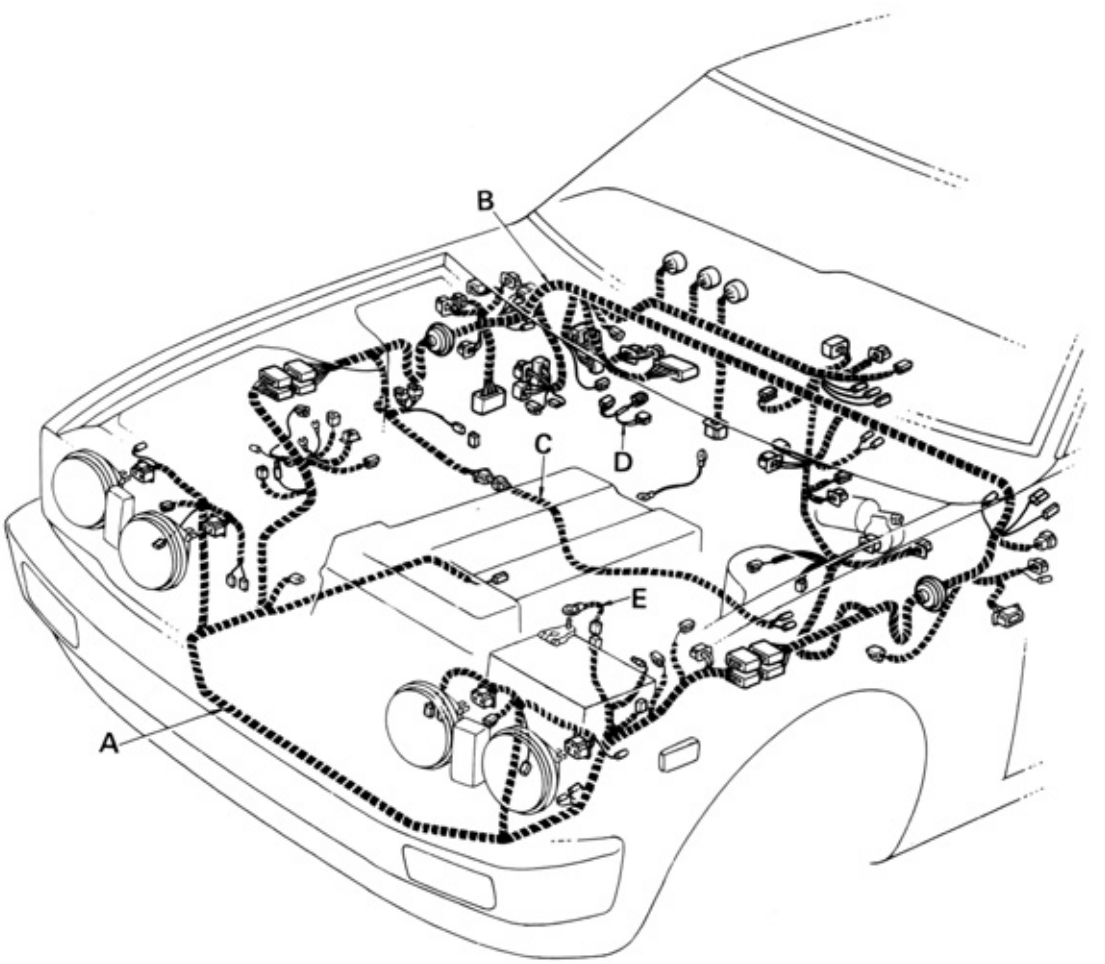


Fig. 4-161


4
8W
For Europe
5W
5
3.4W
6
5W
7
10W
8, 9
5W
10
(For USA)
Hardtop
8W
Liftback
8W
11
Hardtop
21/5W
27/8W (for USA)
21W
27W (for USA)
Liftback
5W
27/8W (for USA)
21W
27W (for USA)
21W
27W (for USA)
21W
27/8 (for USA)
12
5W
12
(For USA)
7.5W
Hardtop
Liftback
7.5W

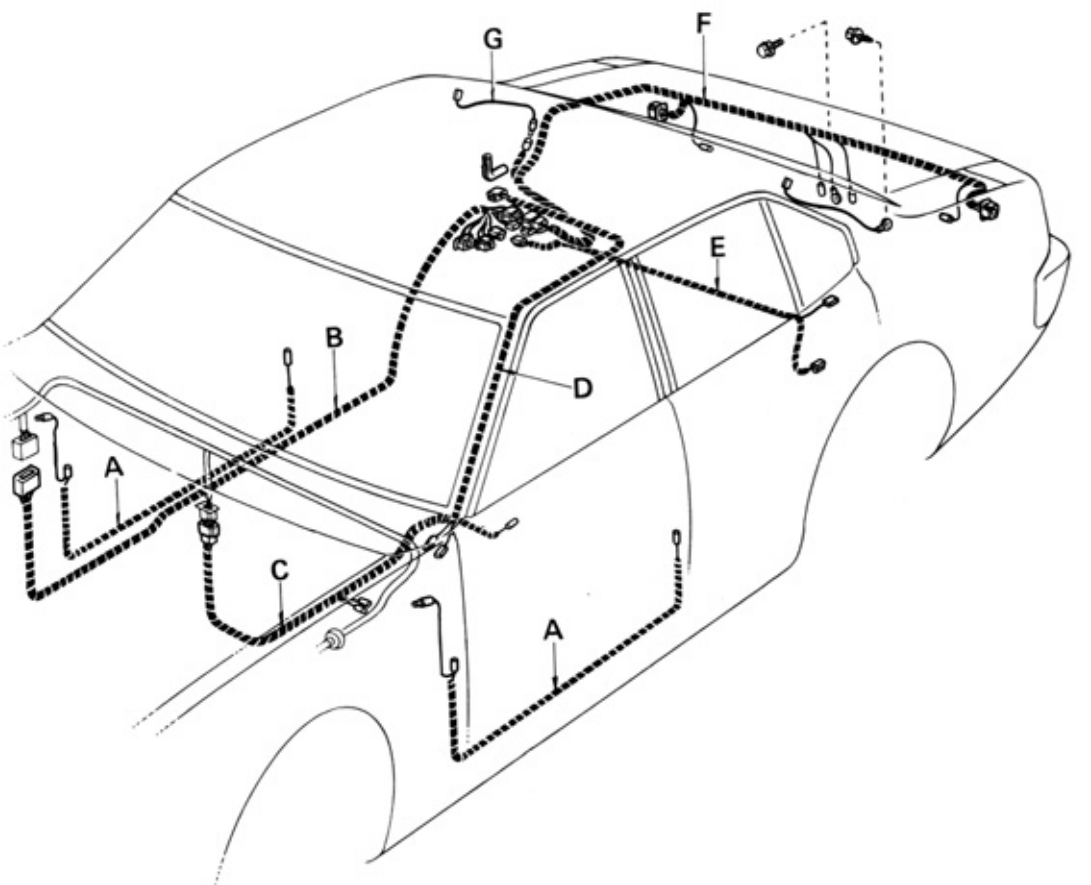
WIRING HARNESS ROUTING (CARINA SERIES)

Fig. 4-162



A Cowl To Headlight Wiring Harness
B Cowl Wiring Harness
C Back-up Light Switch Wiring Harness
D Brake Warning System Wiring Harness
E Fusible Link

Fig. 4-163

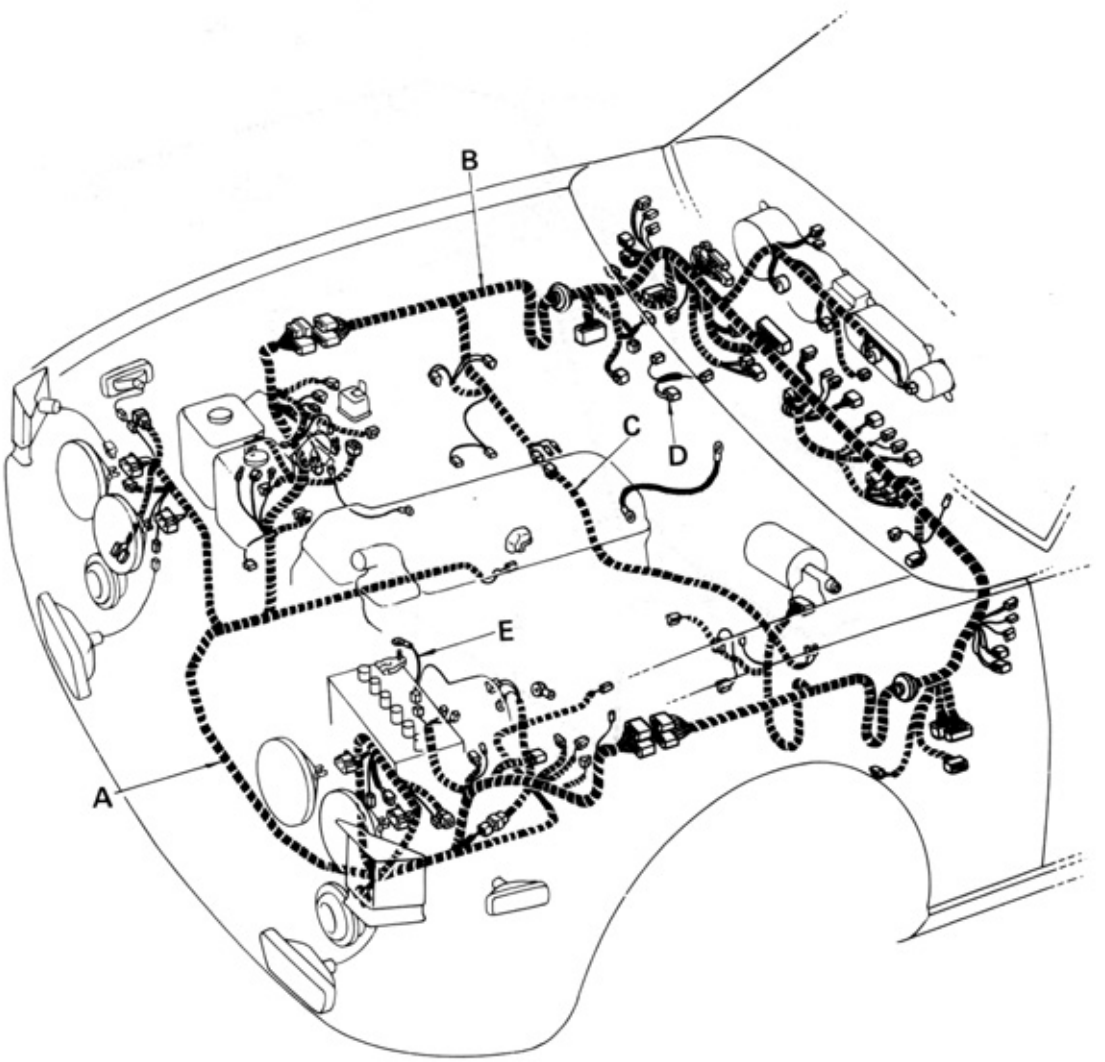


A Front Door Wiring Harness
B Chassis Wiring Harness
C Parking Brake Light Switch Wiring Harness
D Roof Wiring Harness
E Fuel Gauge Wiring Harness
F Rear Light Wiring Harness
G Rear Window Defogger Wiring Harness

WIRING HARNESS ROUTING (CELICA SERIES)

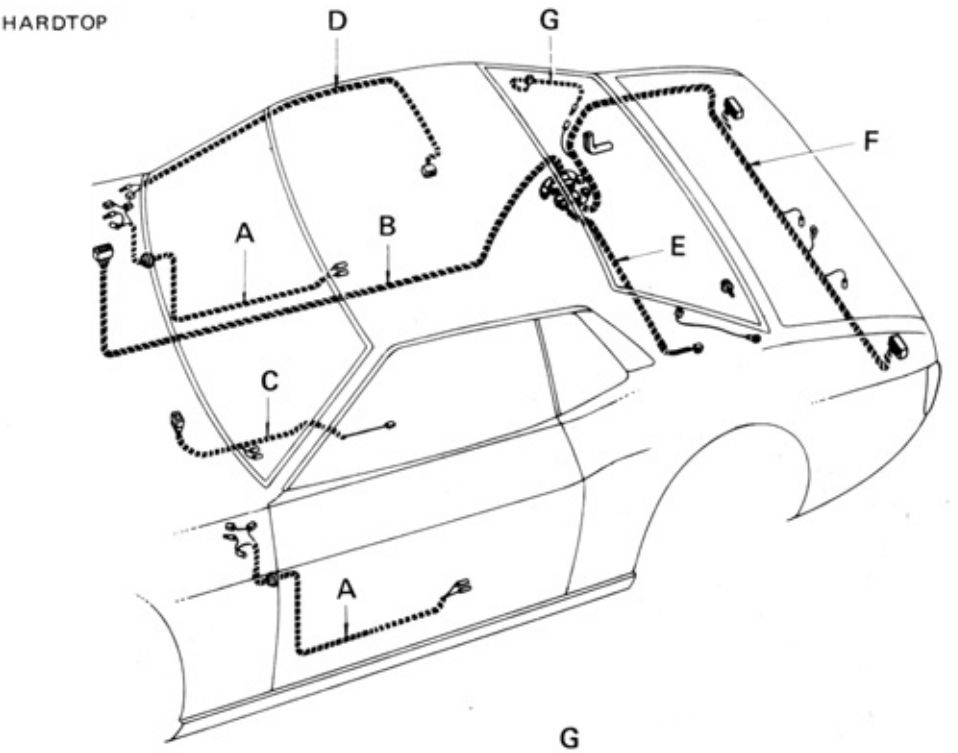
EXCEPT USA & CANADA

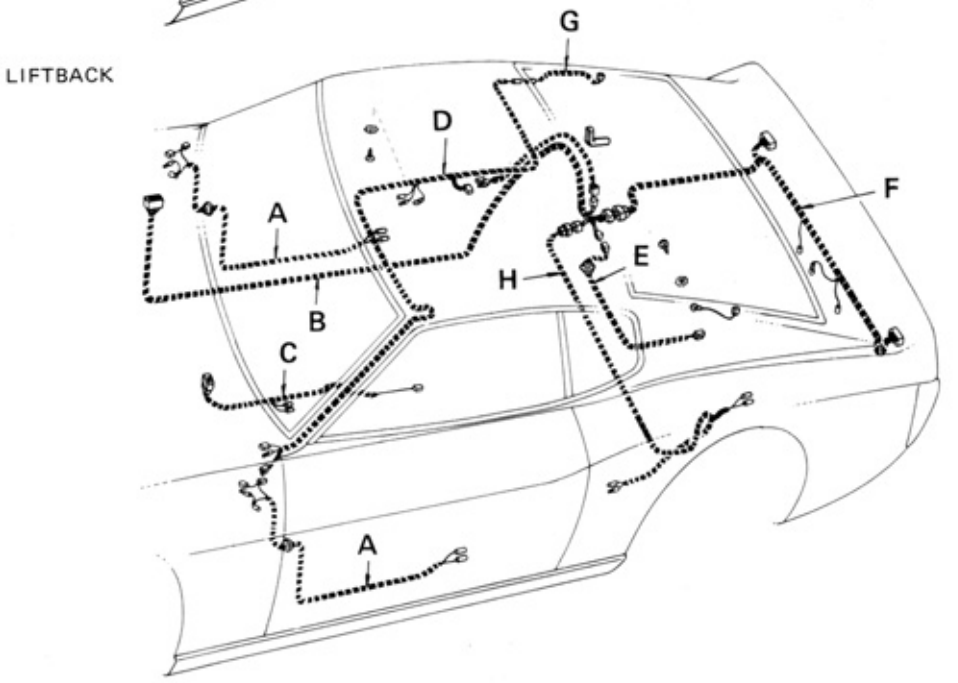
Fig. 4-164



A Cowl To Headlight Wiring Harness
B Cowl Wiring Harness
C To Back-up Light Switch Wiring Harness
D Brake Warning System Wiring Harness
E Fusible Link

Fig. 4-165

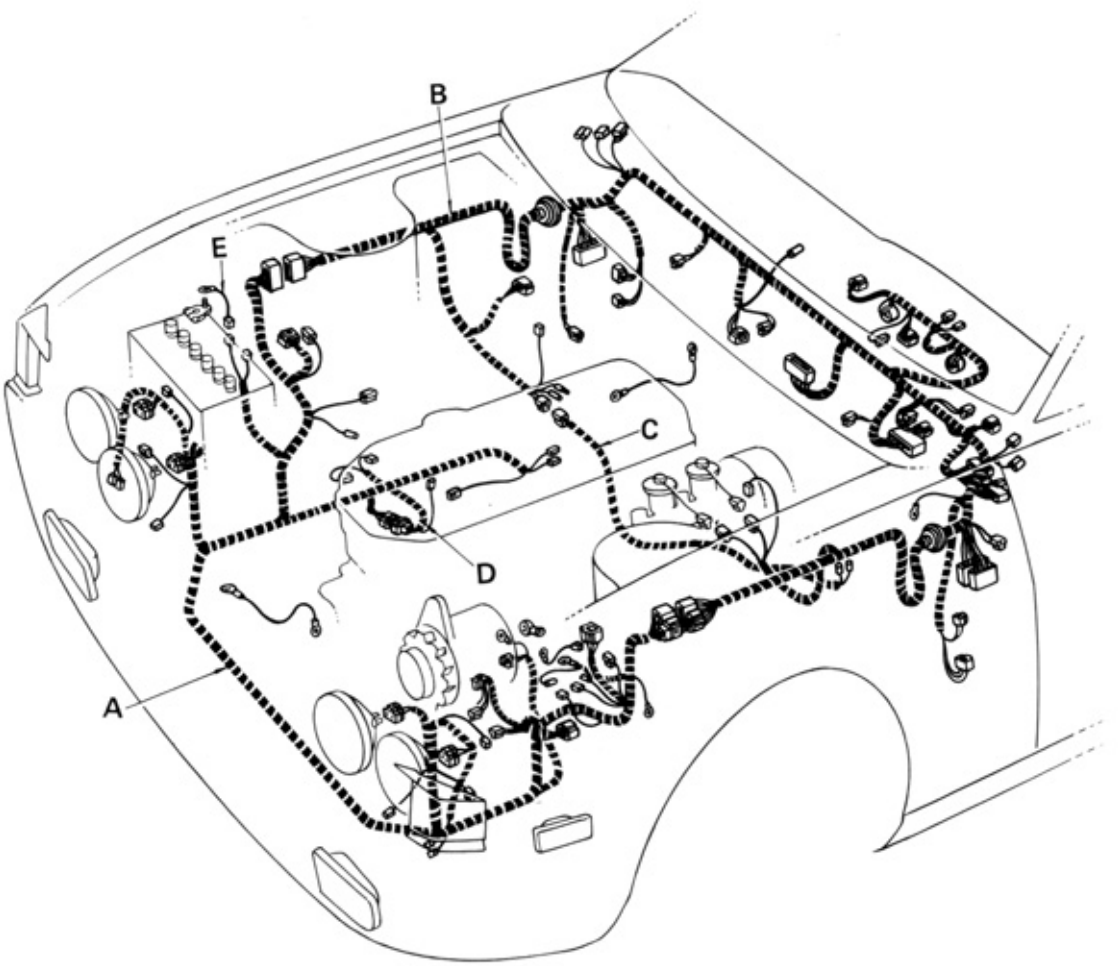




A	Front Door Wiring Harness	E	Fuel Gauge Wiring Harness
B	Chassis Wiring Harness	F	Rear Light Wiring Harness
C	Parking Brake Light Switch Wiring Harness	G	Rear Window Defogger Wiring Harness
D	Roof Wiring Harness	H	License Light Feed No. 2 Wiring Harness

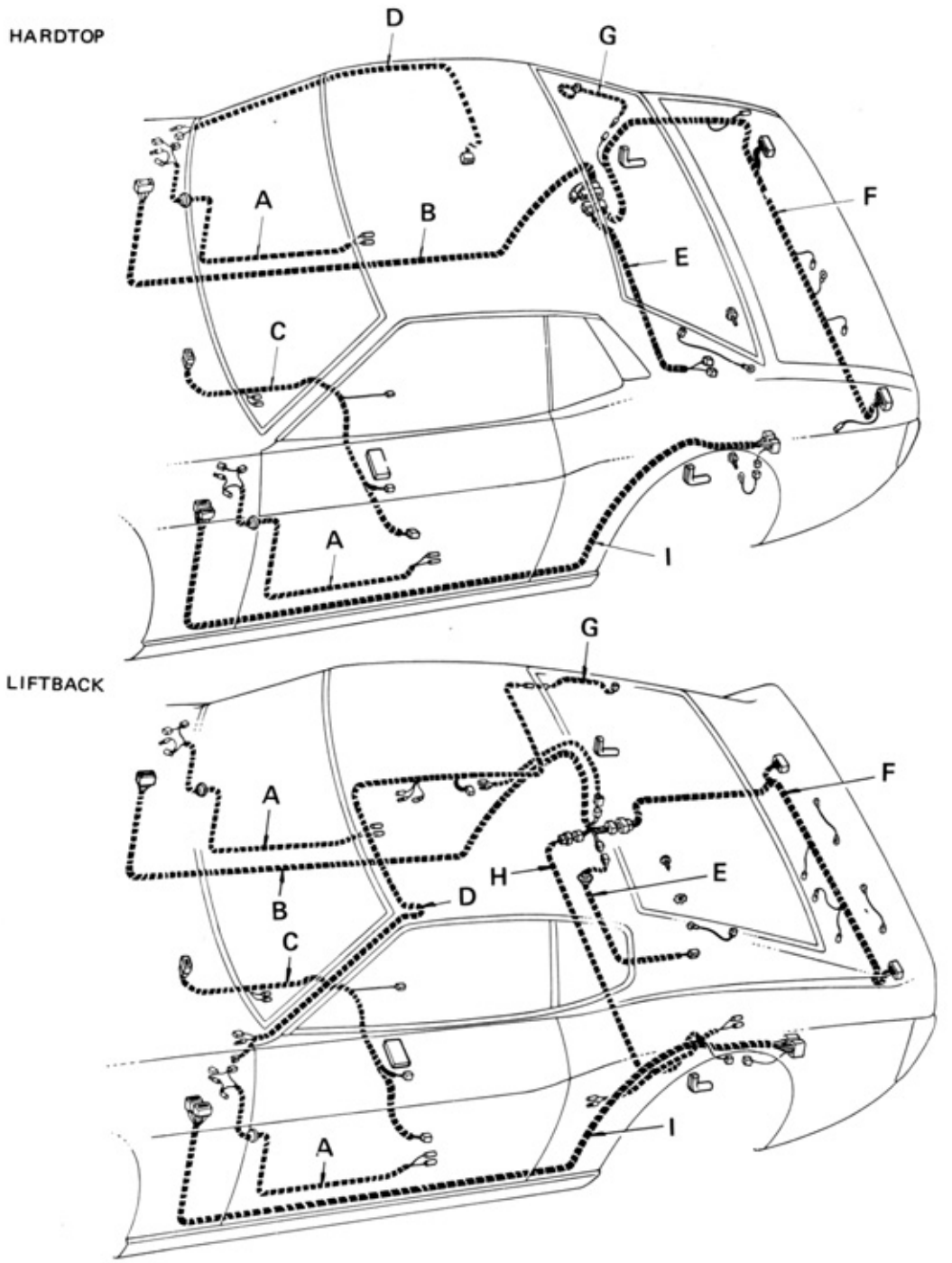
FOR USA & CANADA

Fig. 4-166



A Cowl To Headlight Wiring Harness
B Cowl Wiring Harness
C Back-up Light Switch Wiring Harness
D Oil Pressure Switch Wiring Harness
E Fusible Link

Fig. 4-167



A Front Door Wiring Harness
B Chassis Wiring Harness
C Parking Brake Light Switch Wiring Harness
D Roof Wiring Harness
E Fuel Gauge Wiring Harness
F Rear Light Wiring Harness
G Rear Window Defogger Wiring Harness
H License Light Feed No.2 Wiring Harness
I Computer Wiring Harness