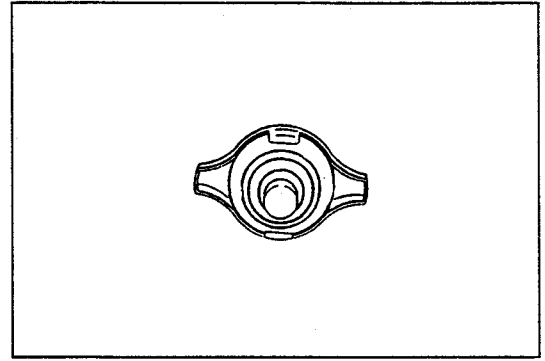


## ABBREVIATION CODES

The abbreviation codes that appear in this service manual stand for the following, respectively.

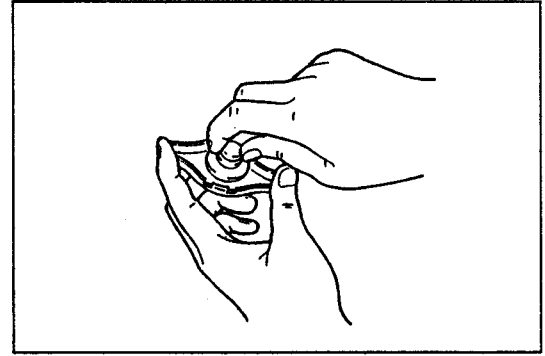
Abbreviation code	Original word	Meaning
A/C, AC	Air Conditioner	Refers to air conditioner.
A/Y, Ay	Assembly	Refers to an assembled component comprising more than two single parts or subassembly parts.
API	American Petroleum Institute	The standards set forth by the American Petroleum Institute (abbreviated as API Classification) have been employed to evaluate and classify properties of various oils. Engine oils for gasoline engines are classified as SD, SE, SF and so on, whereas engine oils for diesel engines are classified as CC, CD and so on.
BDC	Bottom Dead Center	The piston at bottomed position in cylinder.
BTDC	Before Top Dead Center	The piston positioned before most upper position in cylinder.
BVSV	Bimetal Vacuum Switching Valve	Refers to bimetal vacuum switching valve.
C/O	Choke opener	Refers to choke opener.
C/W	Choke warning	Refers to choke warning.
EVAP	Fuel evaporative emission control	Refers to fuel evaporative emission control.
EX	Exhaust (Manifold, Valve)	Refers to exhaust.
F/L	Fusible Link	Refers to fusible link.
GND	Ground	The terminal connected to body ground.
HIC	Hot Idle Compensator	Refers to hot idle compensator.
ISO	International Organization for Standardization	The standards set forth by the international organization for standardization (abbreviation as ISO classification) Standardization have been employed to evaluate and classify properties of various component parts and oils etc.
ITC	Intake air Temperature Compensating valve	Refers to intake air temperature compensating valve.
L.H.D.	Left Hand Drive	Left hand drive vehicles.
L/	Less	Denote that the following part is not attached.
LH	Left Hand	Refers to left side.
LLC	Long Life Coolant	Refers to long life coolant.
M/T, MT	Manual Transmission	Refers to manual transmission
MP	Multipurpose	Means that the following item has multi-purpose
O/S	Oversize	In instance where fitting becomes too loose due to were resulting from use for a long period of time or due to frequent removal/installation operations, if the fitting part having larger dimensions, the other mating part may be put into use again. "Oversized" parts denote those parts having larger dimensions compared with the standard parts.
PCV	Positive Crankcase Ventilation	Refers to positive crankcase ventilation.
PR	Ply Rating	Represents strength of tires. The larger the ply rating number, the stronger the tire st rength.
R.H.D	Right-Hand Drive	Right hand drive vehicle.
RH	Right Hand	Refer to right side.
S/A	Subassembly	Refer to a component comprising more than two single parts which are welded, ataked, or studded to each other or form a single component.
SAE	Society of Automotive Engineers	For example, automotive oils are designated as SAE so and so number. These designation numbers have been set forth by the Society of Automotive Engineers in the United State of America (SAE). The larger the SAE number, the higher the oil viscosity. Conversely, the smaller the SAE number, the lower the oil viscosity.
SST	Special Service Tool	Refer to a tool designed for a specific purpose.

- 9) Check the seal packing of the radiator cap for damage. Replace the radiator cap with a new one, if any damage is exists.



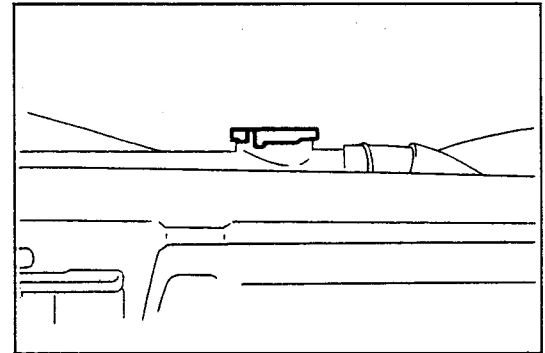
G2MA00007-99999

- (10) Lift the valve at the vacuum side with your fingers. Ensure that the valve is functioning properly. Replace the radiator cap with a new one, if the valve fails to function.



G2MA00008-99999

- (11) Check the radiator filling port
- ① Ensure that the upper part of the radiator filling port has no crack, distortion or dented.
  - ② Ensure that the radiator cap locked section of the radiator filling port has no crack, distortion or dented.
- Replace the radiator, if any crack, distortion or dent are existing.
- (12) Install the radiator cap to the radiator securely.

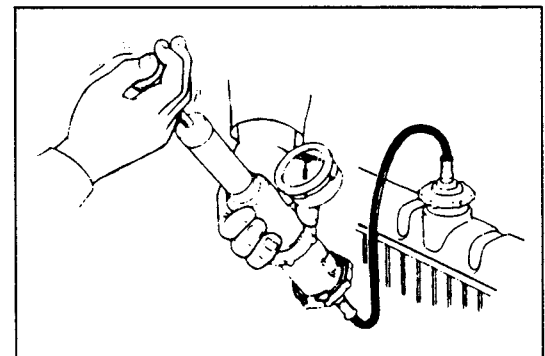


G2MA00009-99999

### 3. Inspection of engine coolant leakage

#### WARNING:

- Never open the radiator cap or drain plug when the coolant is still hot. Failure to observe this caution will cause you to get scalded.
- (1) Ensure that the engine coolant temperature is nearly atmosphere temperature.
  - (2) Turn the radiator cap to opening direction (counterclockwise) for one step (until the first detention will be feels).
  - (3) Lightly depress the radiator cap one to two times to release the inner pressure of the radiator.
  - (4) Open the radiator cap by turn it to counterclockwise while depressing the radiator cap.
  - (5) Remove the radiator cap.
  - (6) Fill the radiator with coolant, if necessary.



G2MA00010-99999

## HOT ENGINE OPERATION

### 1. Inspection of engine oil

#### (1) Oil quality check

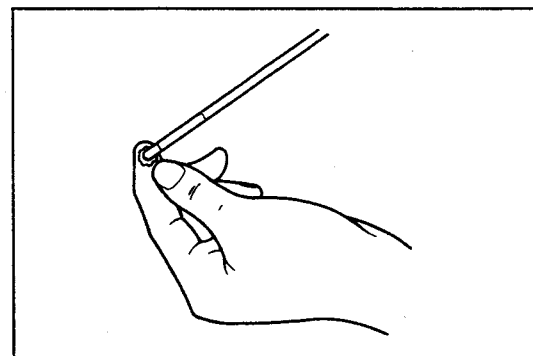
- ① Park the vehicle on a level surface.
- ② Pull out the dipstick out and wipe off the engine oil.
- ③ Reinsert the dipstick as far as it will go.
- ④ Pull out the dipstick again and check the oil level if it is between "F" and "L" marks.
- ⑤ Ensure that the engine oil level should be between the "L" and "F" level on the dipstick.

If engine oil level is less than the "L" level check the oil leakage.

If engine oil level is less than the "L" level, replenish the specified engine oil to the "F" level after the checking of the oil leakage.

#### NOTE:

- The amount of oil between the "L" level and the "F" level equals to one liter.
- ⑥ Check the engine oil for deterioration, ingress of water, discoloring or dilution.  
If oil quality is poor, change the engine oil.  
(See procedure of change of engine oil and oil filter section.)
- ⑦ Reinsert the dipstick as far as it will go.



G2MA00073-99999

#### (2) Oil level check

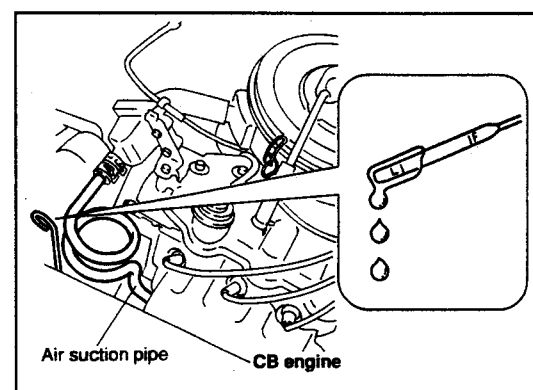
- ① Park the vehicle on a level surface.
- ② Pull out the dipstick out and wipe off the engine oil.
- ③ Reinsert the dipstick as far as it will go.
- ④ Pull out the dipstick again.
- ⑤ Ensure that the engine oil level should be between the "L" and "F" level on the dipstick.

If engine oil level is less than the "L" level check the oil leakage.

If engine oil level is less than the "L" level, replenish the specified engine oil to the "F" level after the checking of the oil leakage.

#### NOTE:

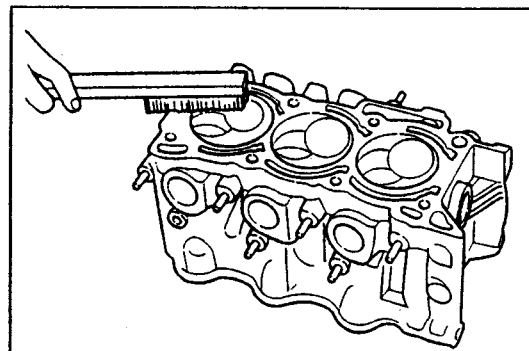
- Use API grade SE or higher multigrade viscosity, fuel-efficient oil. (See the procedure of change of engine oil and oil filter section.)
- The amount of oil between the "L" level and the "F" level equals to one liter.



G2MA00074-99999

## 5. Cleaning of cylinder head

Using a soft brush and solvent, thoroughly clean the cylinder head.



G2EM00093-99999

## 6. Inspection of cylinder head for flatness

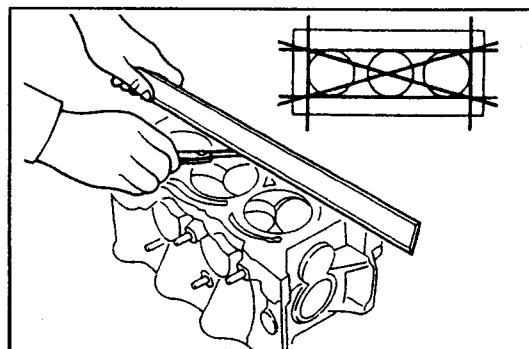
Using a precision straight edge and a feeler gauge, check the gasket surfaces contacting the cylinder block and manifolds for warpage.

### Maximum Surface Warpage

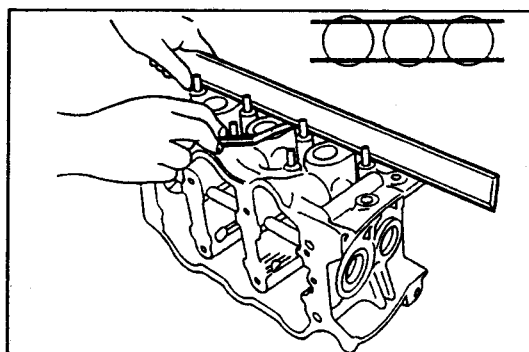
Cylinder Block Side: 0.10 mm (0.0039 inch)

Intake Manifold Side: 0.10 mm (0.0039 inch)

Exhaust Manifold Side: 0.10 mm (0.0039 inch)



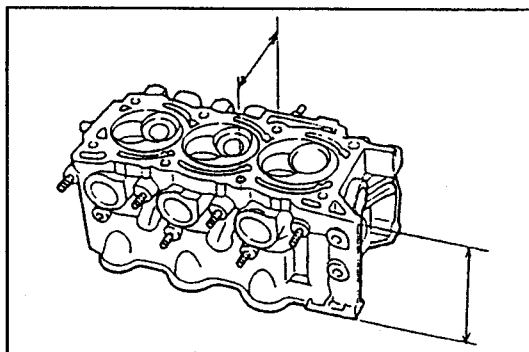
G2EM00094-99999



G2EM00000-99999

If surface warpage of the cylinder block side exceeds the maximum limit, correct surface by a cylinder head refacer, making sure not to exceed the minimum height limit of 4.9488 inches (125.7 mm), or replace the cylinder head, if necessary.

If the surface warpage of the intake manifold or the exhaust manifold attaching surface exceeds the maximum limit, correct the surface by a cylinder head refacer, making sure that the cylinder head width between the intake manifold and exhaust manifold attaching surfaces will not exceed the minimum width limit of 6.2756 inches (159.4 mm), or replace the cylinder head, if necessary.

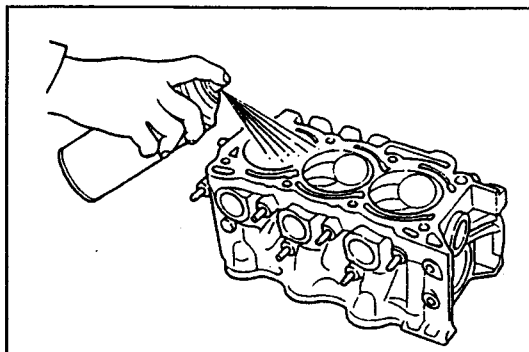


G2EM00095-99999

## 7. Inspection of cylinder head for cracks

Using a dye penetrant, check the combustion chamber, intake and exhaust ports, head surface and top of the head for cracks.

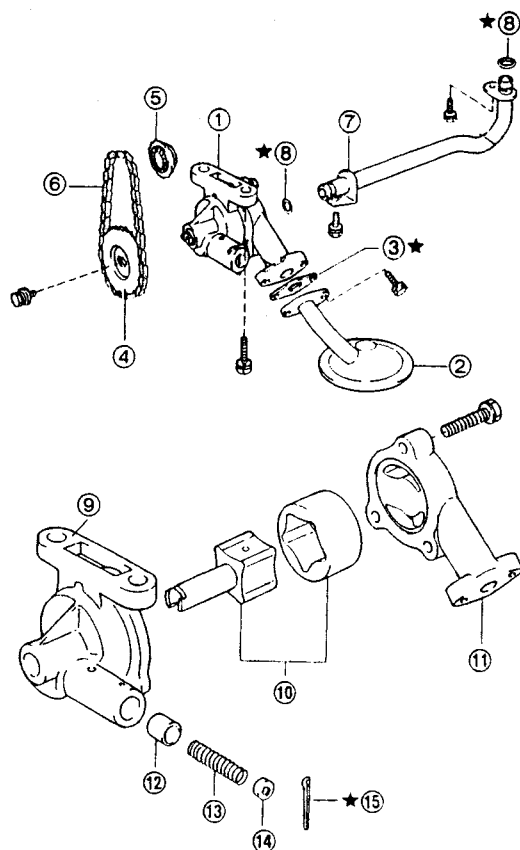
If a crack is found, replace the cylinder head.



G2EM00096-99999

## OIL PUMP COMPONENTS

★ : Non-reusable parts



- ① Oil pump assembly
- ② Oil pump strainer
- ③ Oil strainer flange gasket
- ④ Oil pump drive shaft sprocket
- ⑤ Oil pump drip sprocket
- ⑥ Oil pump drive chain
- ⑦ Oil pump out let pipe
- ⑧ O-ring
- ⑨ Oil pump body
- ⑩ Oil pump rotor set
- ⑪ Oil pump cover
- ⑫ Oil pump relief valve
- ⑬ Compression spring
- ⑭ Oil pump relief valve spring retainer
- ⑮ Cotter pin

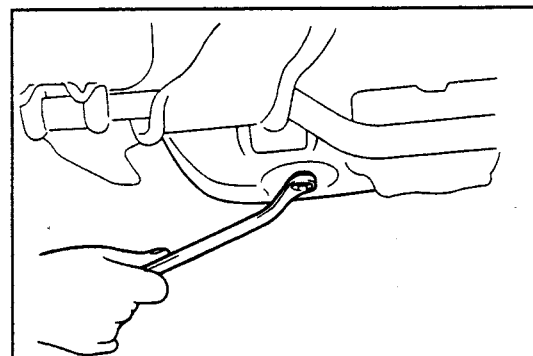
G2LU00012-99999

## REMOVAL OF OIL PUMP

1. Disconnect the battery ground cable from the negative (-) terminal of the battery.
2. Drain the engine oil as follows.  
Remove the oil drain plug, allow the oil to drain into a clean container.

### CAUTION:

- When the oil is still hot, care must be exercised to avoid getting scalded.



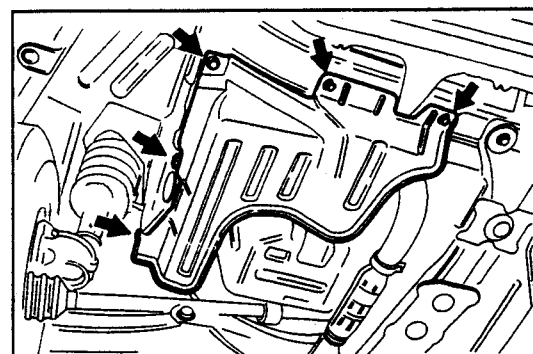
G2LU00013-99999

3. Jack up the vehicle at the front. Place safety stands in position.

### CAUTION:

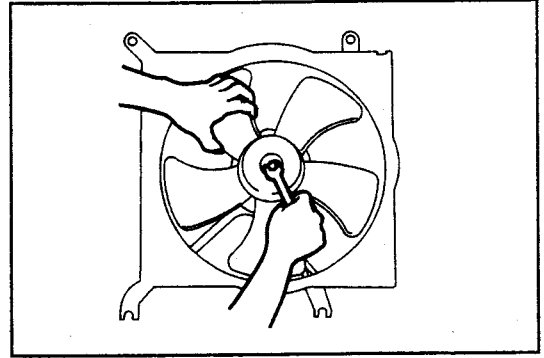
- Place wheel chocks at the rear wheels.

4. Remove the engine right side undercover.



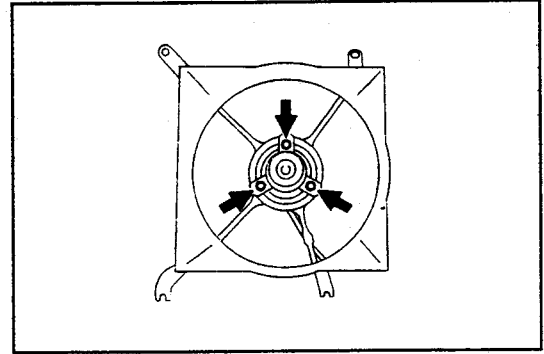
G2LU00014-99999

5. Remove the fan from the fan motor.



G2CO00062-99999

6. Remove the fan motor from the fan shroud.



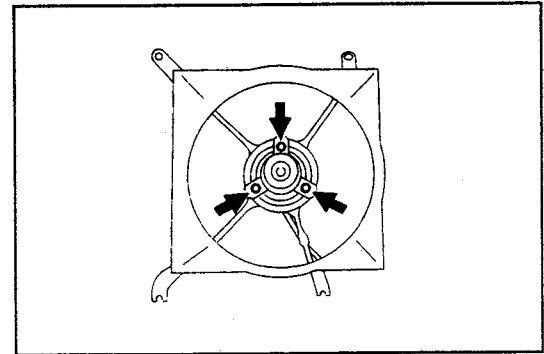
G2CO00063-99999

## J) INSTALLATION OF RADIATOR FAN MOTOR

1. Install the radiator fan motor to the fan shroud.

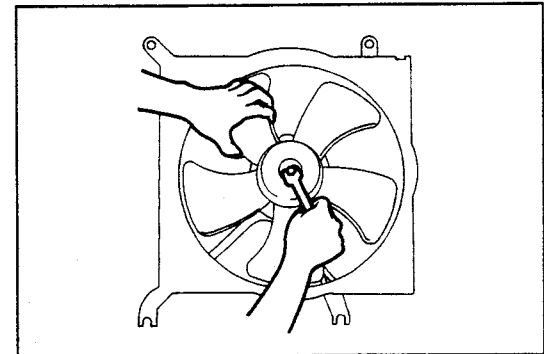
### NOTE:

- Install the radiator fan motor in such a way that the drain hose comes at the lower side of the vehicle.



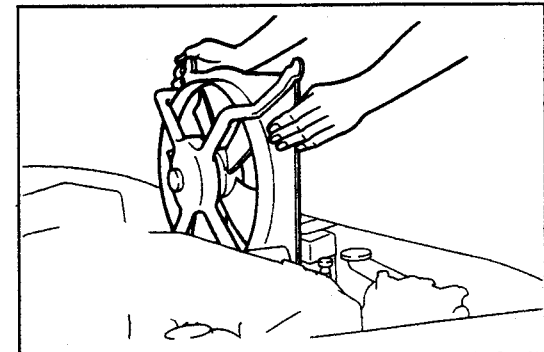
G2CO00064-99999

2. Install the fan to the fan motor.



G2CO00065-99999

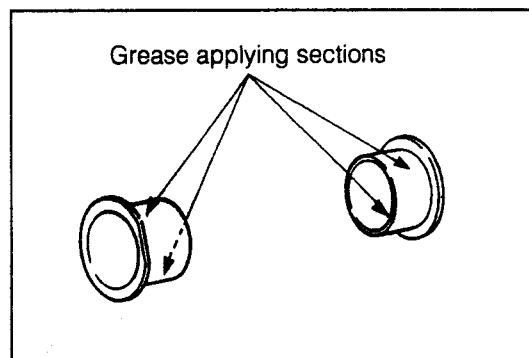
3. Install the radiator fan shroud to the radiator.



G2CO00066-99999

**NOTE:**

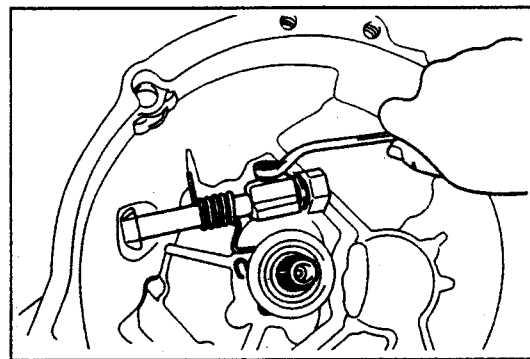
- Apply long-life chassis grease to the inside and outside of the bush No. 1.



G2CL00026-99999

3. Assemble the bolt with washer, with a new lock plate interposed.

Tightening Torque: 29.4 - 39.2 N·m  
(3.0 - 4.0 kgf-m, 21.7 - 28.9 ft-lb)

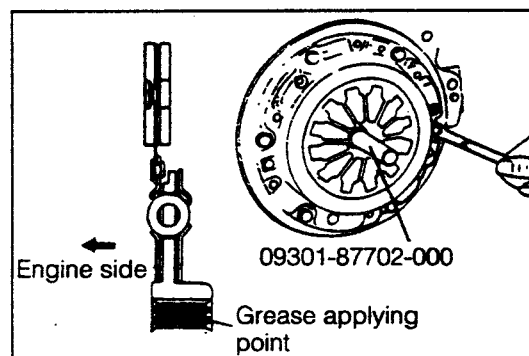


G2CL00027-99999

4. Install the clutch disc and clutch cover, using the following SST.

SST: 09301-87702-000

Bolt Tightening Torque: 14.7 - 21.6 N·m  
(1.5 - 2.2 kgf-m, 10.8 - 15.9 ft-lb)

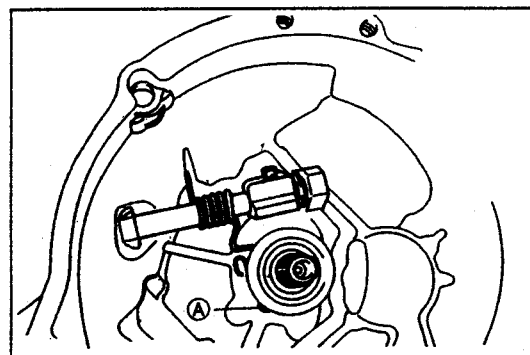


G2CL00028-99999

**NOTE:**

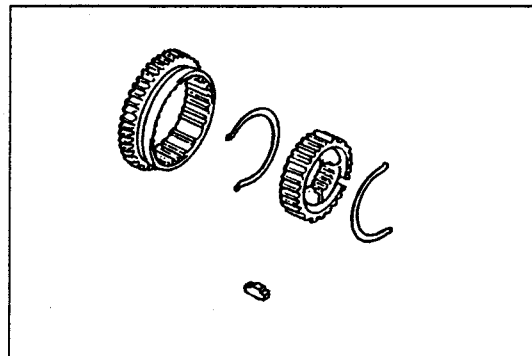
1. Assemble the clutch disc in the direction as shown in the figure.
2. Tighten the bolts evenly, starting with those bolts provided near the locating pin.
3. Apply long-life chassis grease to the clutch disc splined section.

5. Check the release hub and yoke for proper operation. Operate the clutch release lever about 50 times. Check the section A of the clip. If the clip exhibits excessive spread and there is a likelihood that the clip may be detached, replace it with a new clip.
6. Install the transmission assembly to the vehicle.



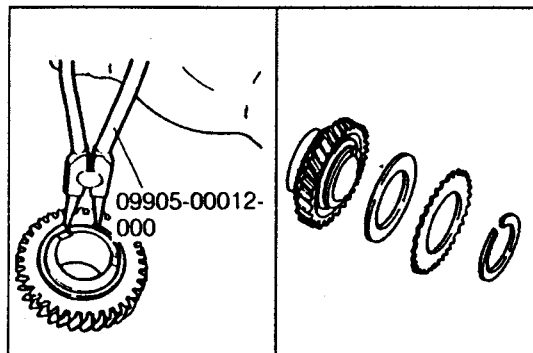
G2CL00029-99999

5. Removal of synchronizer hub assembly.
  - (1) Remove the two synchromesh shifting key springs and three synchromesh shifting keys.
6. Remove the synchronizer ring No. 2.



G2MT00167-99999

7. Removal of 1st gear assembly
  - (1) Detach the shaft snap ring, using the following SST.  
SST: 09905-00012-000
  - (2) Remove the 1st subgear.
  - (3) Remove the conical spring washer.
8. Remove the spacer and needle roller bearing.

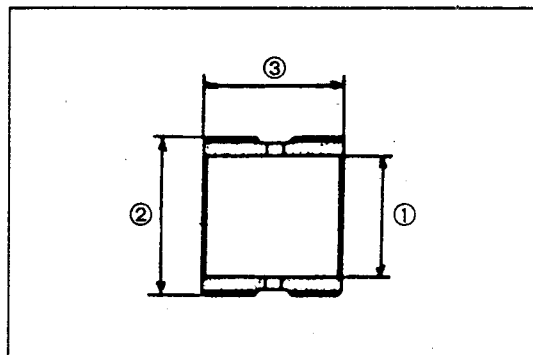


G2MT00168-99999

## INSPECTION

1. Check the 2nd gear bushing for wear or damage.

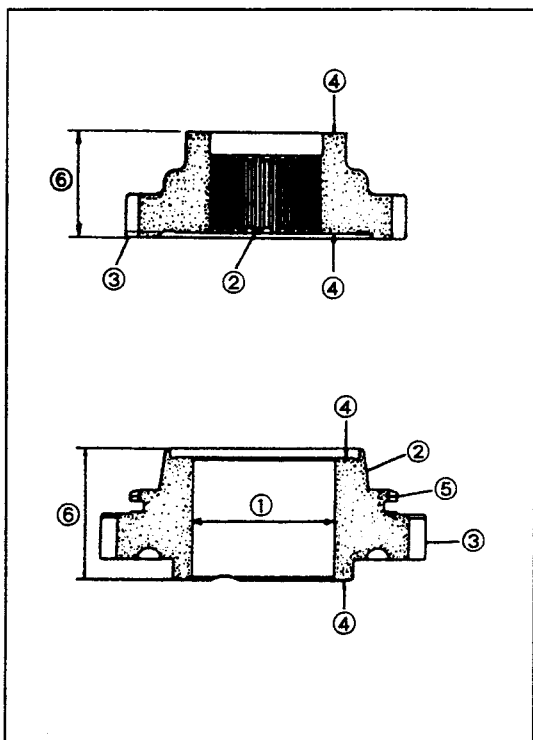
Part	Specified value mm	Limit mm
Bore ①	29 $\begin{smallmatrix} -0.115 \\ -0.130 \end{smallmatrix}$	28.91
Outer diameter ②	37 $\begin{smallmatrix} -0.040 \\ -0.060 \end{smallmatrix}$	36.89
Overall length ③	32.5 $\pm$ 0.03	32.47



G2MT00169-99999

2. Check each gear for wear or damage.

Part	Specified value mm		Limit mm	
	Bore ①	Width ⑥	Bore ①	Width ⑥
1st gear (output)	37 $\begin{smallmatrix} +0.025 \\ +0 \end{smallmatrix}$	32.5 $\begin{smallmatrix} -0.20 \\ -0.27 \end{smallmatrix}$	37.05	32.2
2nd gear (output)	37 $\begin{smallmatrix} +0.025 \\ +0 \end{smallmatrix}$	32.5 $\begin{smallmatrix} -0.13 \\ -0.20 \end{smallmatrix}$	37.05	32.2
3rd gear (output)	—	26 $\pm$ 0.03	—	—
4th gear (output)	—	29.5 $\pm$ 0.03	—	—
5th gear (output)	—	13.5 $\pm$ 0.15	—	—
Splined section Tapered section ②	Visually inspect the section for excessive damage or wear.			
Gear section ③				
Both edge surfaces of gear ④				
Fitting section with hub sleeve ⑤	Inspect the section for excessive play, nick or rounded edge.			

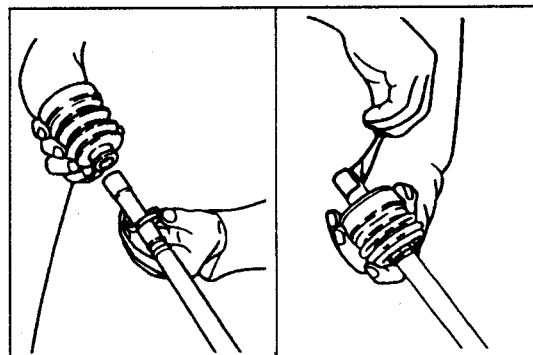


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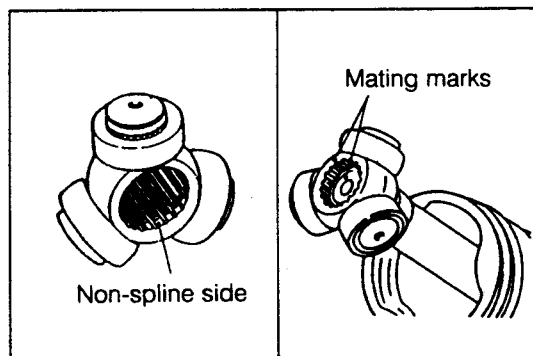
## 5. Replacement (Inboard joint section)

- (1) Temporarily install the boot and a new boot band onto the drive shaft.
- (2) Remove the vinyl tape that was wound around the splined portion.



G2FS00104-99999

- (3) Face the non-splined side of the inboard joint tripod toward the outboard joint.
- (4) Align the mating marks which were put during the dis-assembly.

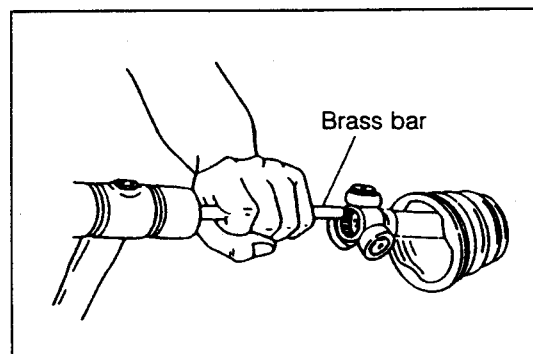


G2FS00105-99999

- (5) Install the tripod assembly onto the shaft.

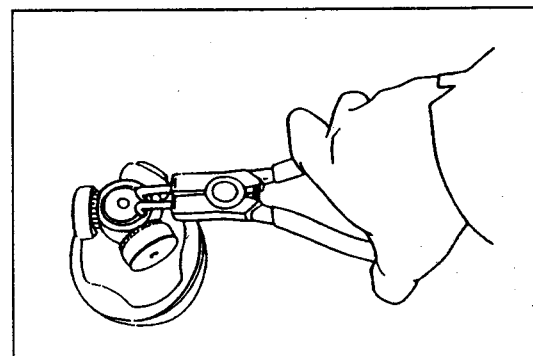
### NOTE:

- If any difficulty in installing the inboard joint tripod assembly is encountered, drive it onto the shaft lightly, using a brass bar.
- Be sure to apply the brass bar to the boss section of the inboard joint tripod, not to the roller section.



G2FS00106-99999

- (6) Attach the shaft snap ring in position, using snap ring pliers.

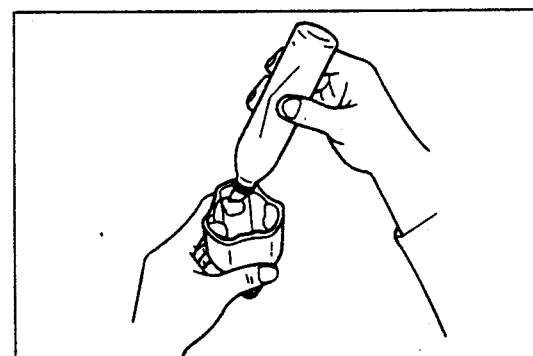


G2FS00107-99999

- (7) Pack the inboard joint section with grease.

### NOTE:

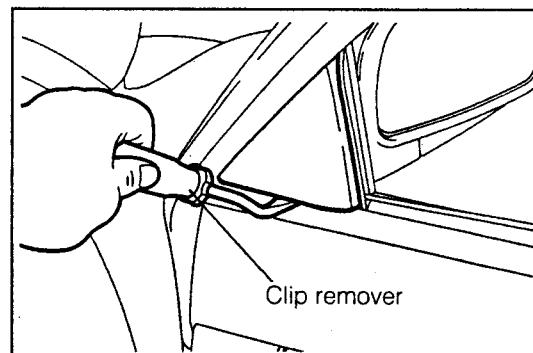
- Use the grease that has been furnished along with the boot as a kit.
- Pack the grease as closely to the joint as possible.



G2FS00108-99999

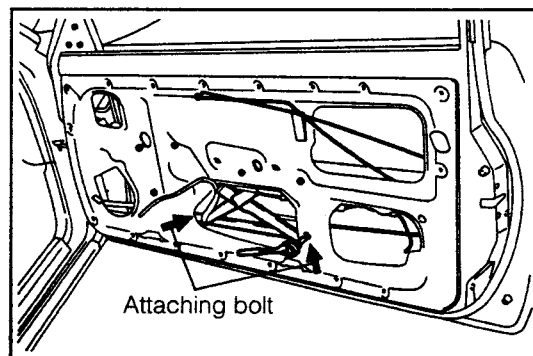
## REMOVAL

1. Remove the front door trim. (See page BO-25)
2. Remove the front door service hole cover.
3. Remove the front door lower flame garnish by means of a clip remover or a screw driver with protective tape.



GB000079-99999

4. Remove the front door glass outer weatherstrip assembly.
5. Let down the front door glass to the position indicated in the right figure.  
Remove two attaching bolts.  
Remove the front door glass.



GB000080-99999

6. Remove the door window glass holder cushion & door window glass holder.
7. Remove the front door glass inner weatherstrip. (Except the vehicle equipped with semitrim)
8. Remove the front door glass run.
9. Remove the front door window regulator assembly by removing six attaching bolts.

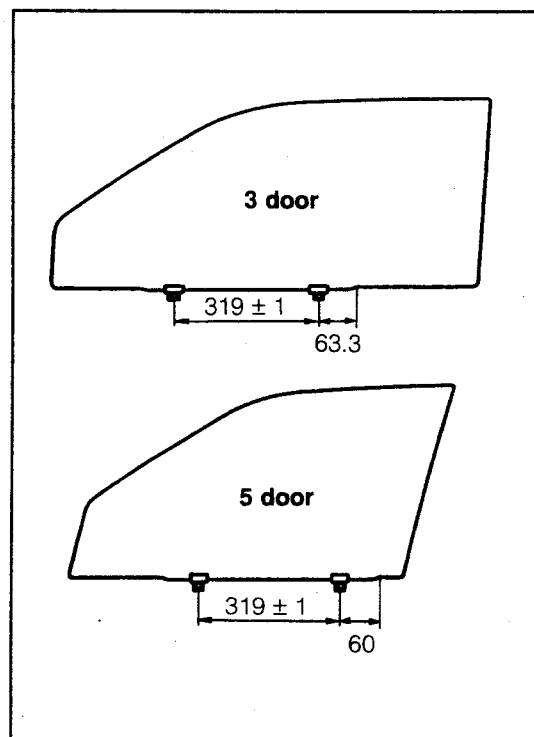
GB000081-00000

## INSTALLATION

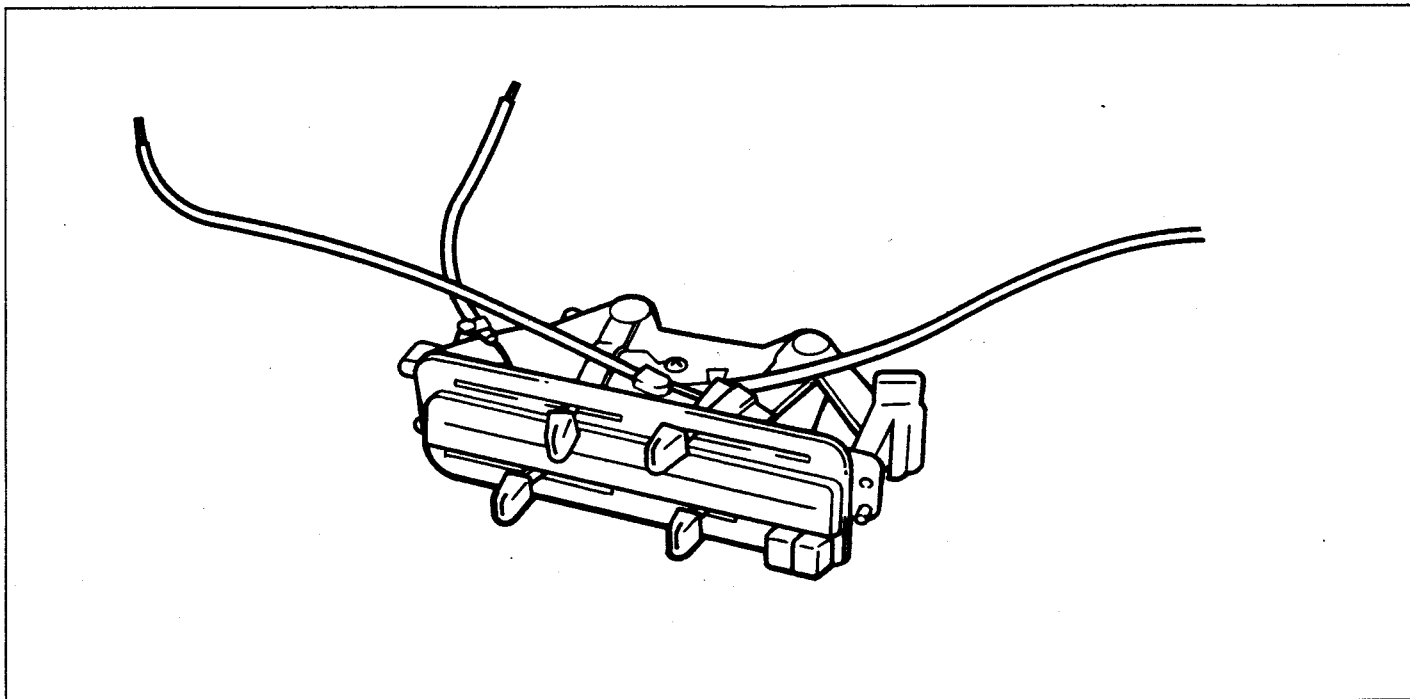
Install each component in the opposite order of the removal order.

### NOTE:

- ① Installation of the door window glass holder cushion & door window glass holder.
  - Mark the attaching position of the cushion & holder on the front door glass.
  - Apply soap and water or the like on the inside surface of the cushion.
  - Install the cushion & holder to the front door glass by patting them with a plastic hammer or the like.
- ② Installation of the front door window regulator assembly
  - Apply MP grease to the sliding and gear sections of the front door window regulator assembly.



GB000082-99999

**HEATER CONTROL ASSEMBLY**

GBE00133-99999

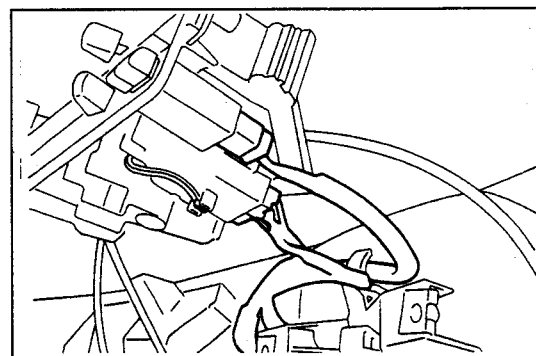
**REMOVAL****Removal of instrument panel****NOTE:**

- See page BE-11, clock removal.

GBE00134-00000

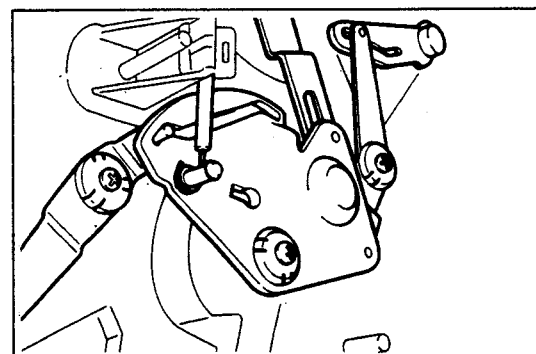
**Removal of heater control assembly**

1. Disconnect the connector of the blower switch.
2. Disconnect the connector of the air conditioner switch, if equipped.



GBE00135-99999

3. Disconnect the control cables from the heater unit.

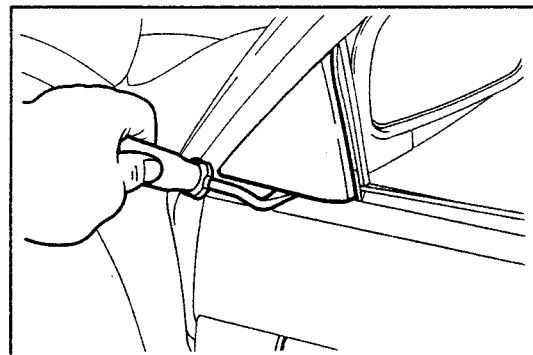


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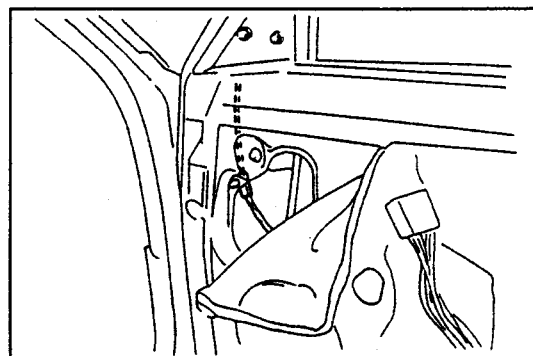
## DOOR MIRROR MOTOR

### REMOVAL

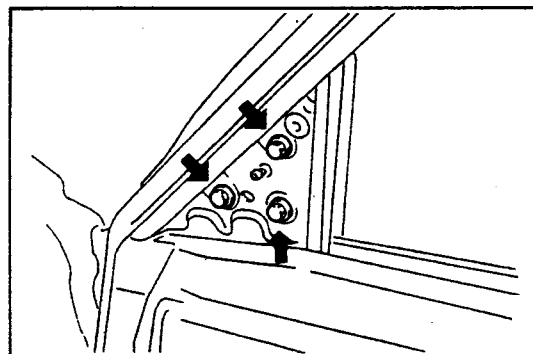
1. Remove the front door trim assembly.
2. Remove the front door service hole cover.
3. Disconnect the door mirror connector from the clamp.
4. Disconnect the door mirror connector.
5. Remove the outer rear view mirror assembly by removing the attaching bolts.



GBE00201-99999



GBE00202-99999

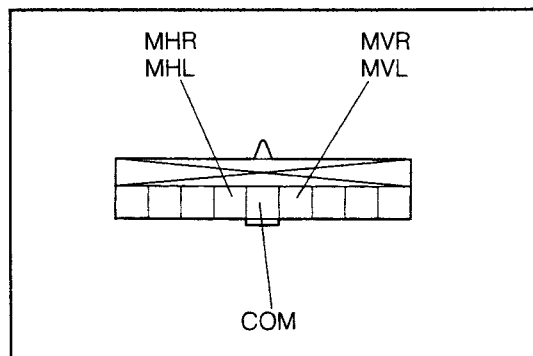


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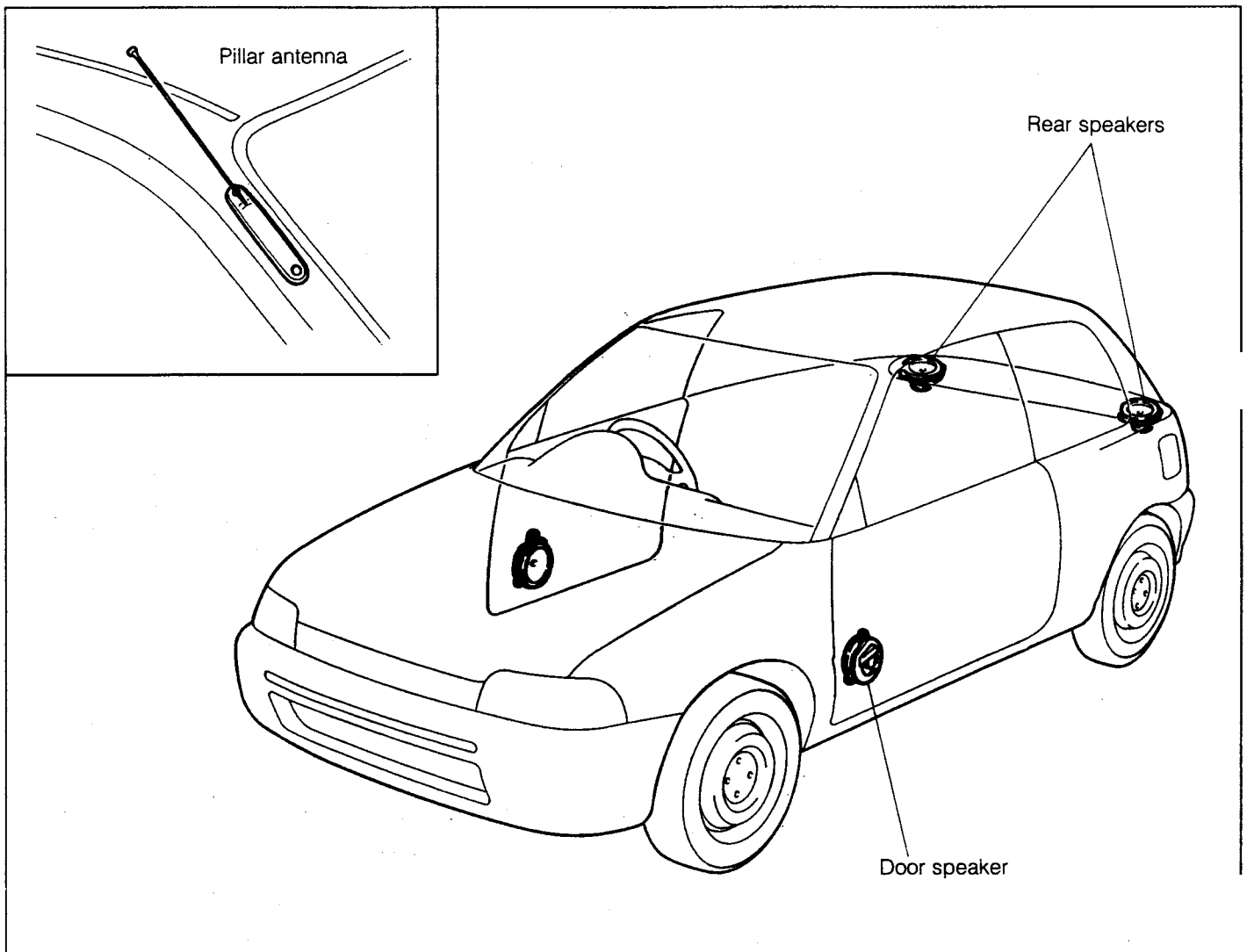
### INSPECTION

1. Apply the battery voltage to each terminal, as indicated in the table below. Ensure that the mirror operates properly.

Terminal	Right door mirror	COM	MVR	MHR	Operation direction
	Left door mirror	COM	MVL	MHL	
Connection		⊖	⊕		UP
		⊕	⊖		Down
		⊖		⊕	Left
		⊕		⊖	Right



GBE00204-99999

**SPEAKER & ANTENNA ASSEMBLY**

GBE00208-99999

**REMOVAL OF SPEAKER****[Instrument panel speaker]**

1. Remove the instrument panel.

**NOTE:**

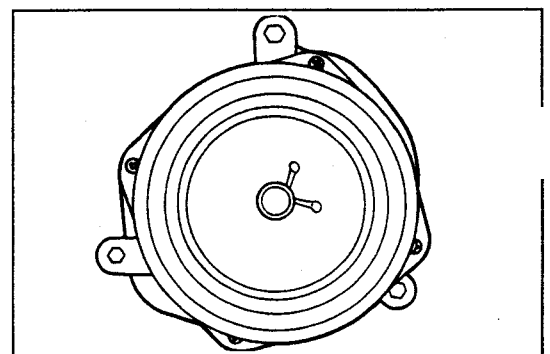
- For the removal and installation of the instrument panel, see the clock removal at page BE-11.

2. Disconnect the connector from the speaker. Remove the speaker assembly.

GBE00209-00000

**[Door speaker]**

1. Remove the front door trim.
2. Disconnect the connector.
3. Remove the speaker.



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REAR DOOR LH

