



# BODY

**BO**

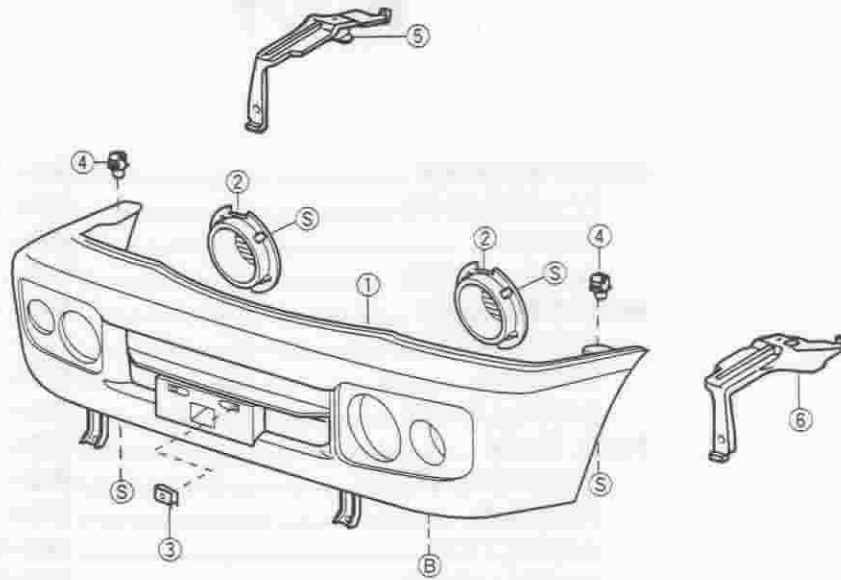
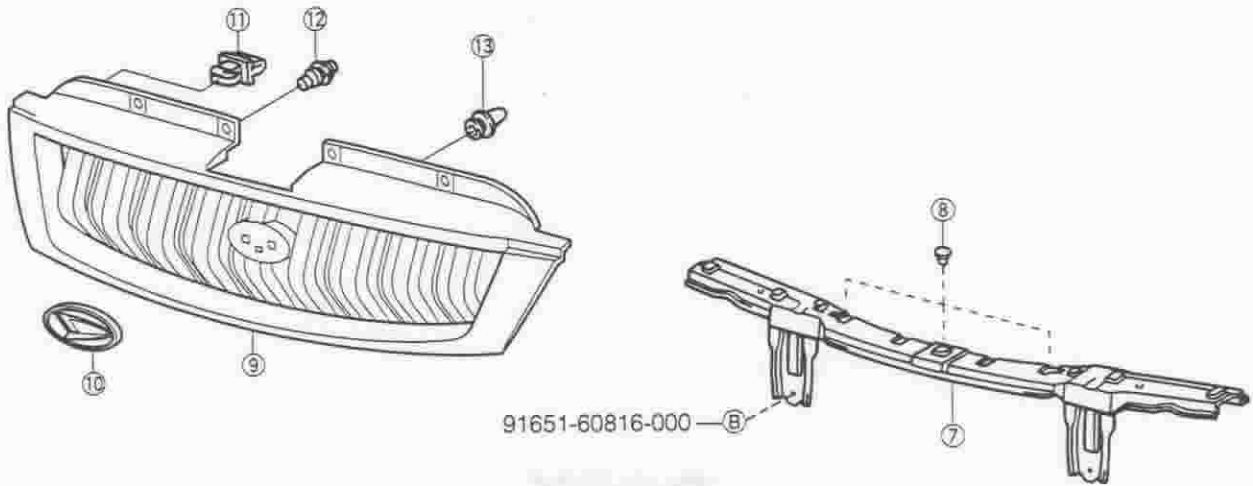
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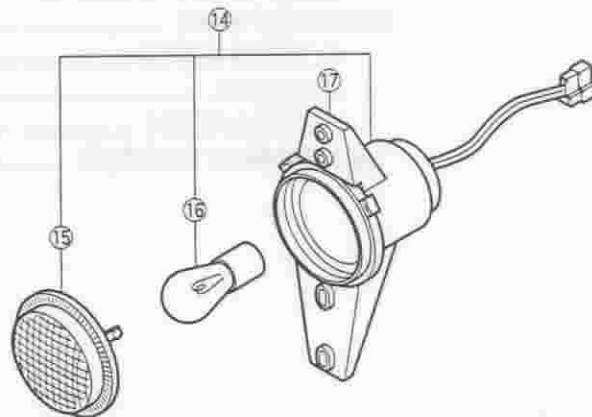
**NOTE:**

- When the tightening torque values are not given, refer to the tightening torque table for general standard bolts to find the required tightening torque values.

FRONT BUMPER  
COMPONENTS

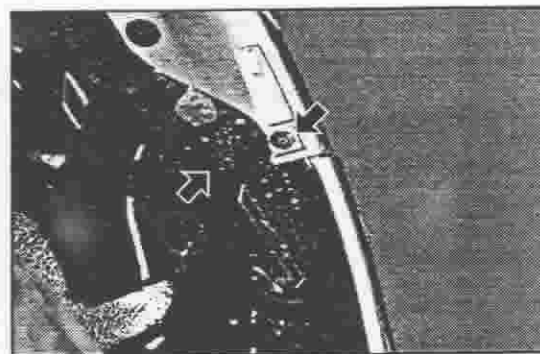


- ① Front bumper cover
- ② Lamp cover
- ③ Nut spring
- ④ Grommet
- ⑤ Front bumper right bracket
- ⑥ Front bumper left bracket
- ⑦ Front bumper bar reinforcement
- ⑧ No. 1 clip
- ⑨ Radiator grill assembly
- ⑩ Emblem
- ⑪ Clip
- ⑫ Clip
- ⑬ Retainer
- ⑭ Front turn signal lamp assembly
- ⑮ Front turn signal lamp lens
- ⑯ Bulb
- ⑰ Bulb body



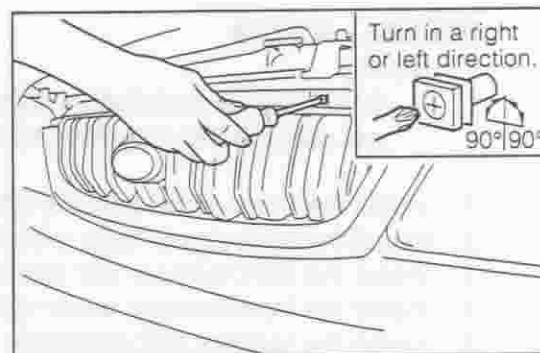
**REMOVAL**

1. Remove the under fender bracket by removing the attaching tapping screw and clip. (Both sides)



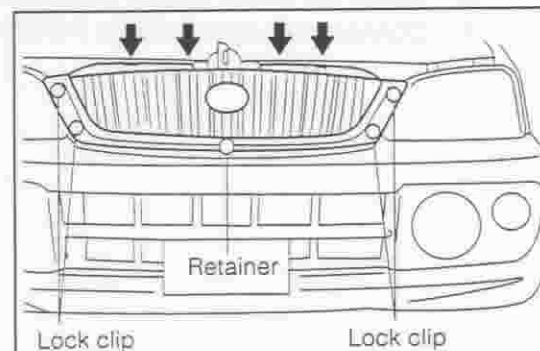
JBO00003-00002

2. Removal of radiator grill
  - (1) Turn the clips 90° degrees, using a phillips screwdriver. (Four clips at the upper side of the radiator grill)



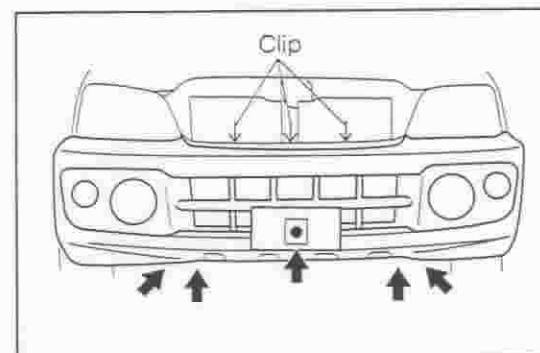
JBO00004-00003

- (2) Remove the radiator grill assembly while unlocking the locking section of the four clips and one retainer.



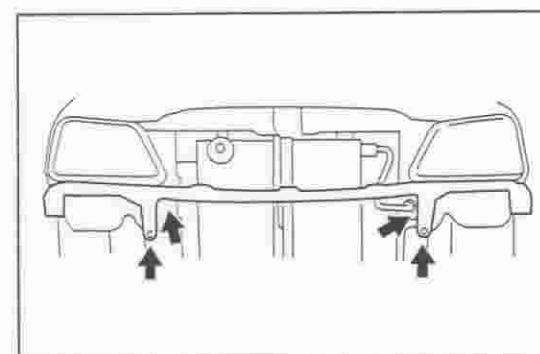
JBO00005-00004

3. Remove the front bumper cover by removing the attaching bolts and clips.



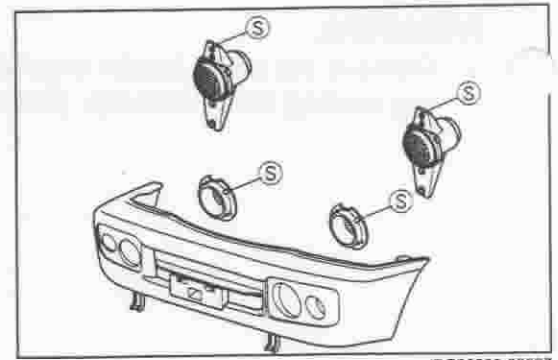
JBO00006-00005

4. Remove the front bumper bar reinforcement by removing the attaching bolts.



JBO00007-00006

5. Remove the front turn signal lamp by removing the screws. (Both sides)
6. Remove the lamp cover by removing the screws. (Both sides)



JBO00008-00007

## INSTALLATION

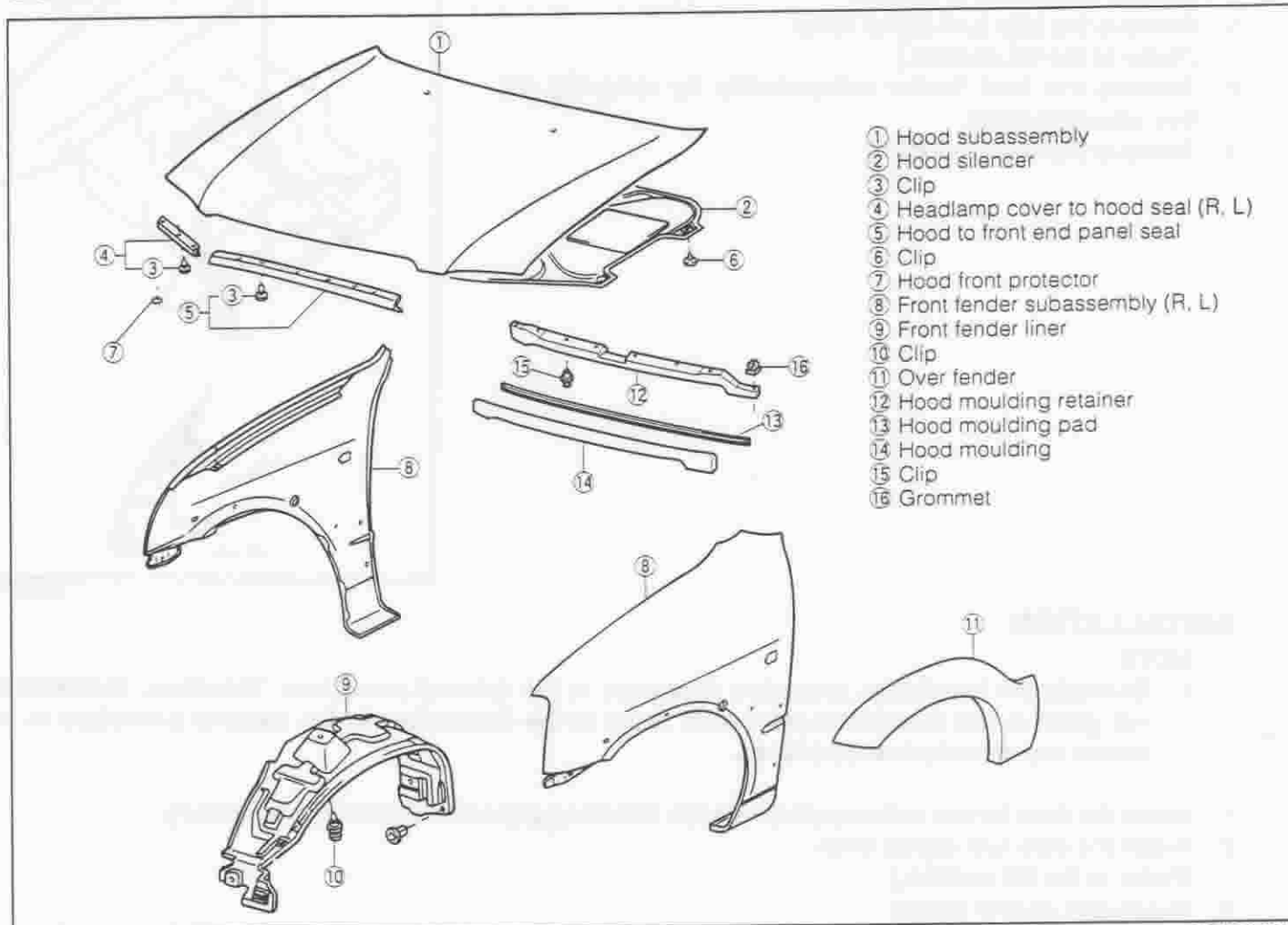
### NOTE:

- Basically the installation procedure is reverse to the removal procedure. Therefore, illustrations are not given in this installation procedure.

1. Install the lamp cover with the attaching screws.
2. Install the front signal lamp with the attaching screws.
3. Install the front bumper bar reinforcement with the attaching bolts.
4. Install the front bumper cover with the attaching bolts and clips.
5. Install the radiator grill assembly.
6. Install the under fender bracket with the attaching screws and clips.
7. Connect the connector to the front turn signal lamp.

JBO00009-00000

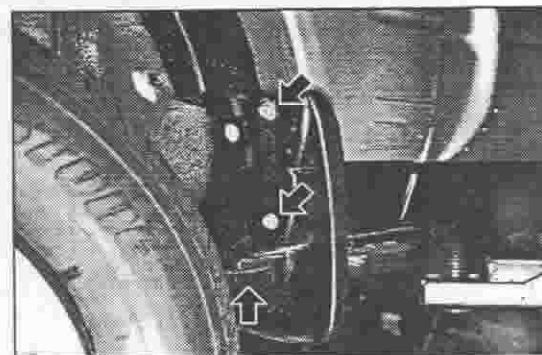
## FRONT FENDER COMPONENTS



JBO00010-00008

### REMOVAL

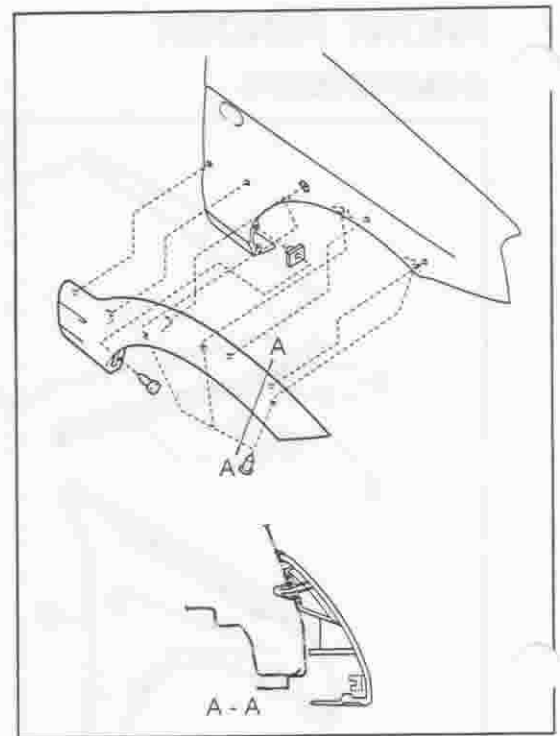
1. Remove the front bumper cover.  
(Refer to the front bumper section.)
2. Remove the front mudguard by removing the three attaching bolts.
3. Remove the front fender liner attaching screw grommets.  
(Refer to the front fender liner section.)



JBO00011-00009



4. Remove the over fender from the fender panel by disconnecting the retainers while retracting the lock section, using a nosepliers or the like.
5. Remove the side turn signal lamp.  
(Refer to the BE section.)
6. Remove the front fender subassembly by removing the five attaching bolts.
7. Remove the hood moulding.



JBO00012-00010

## INSTALLATION

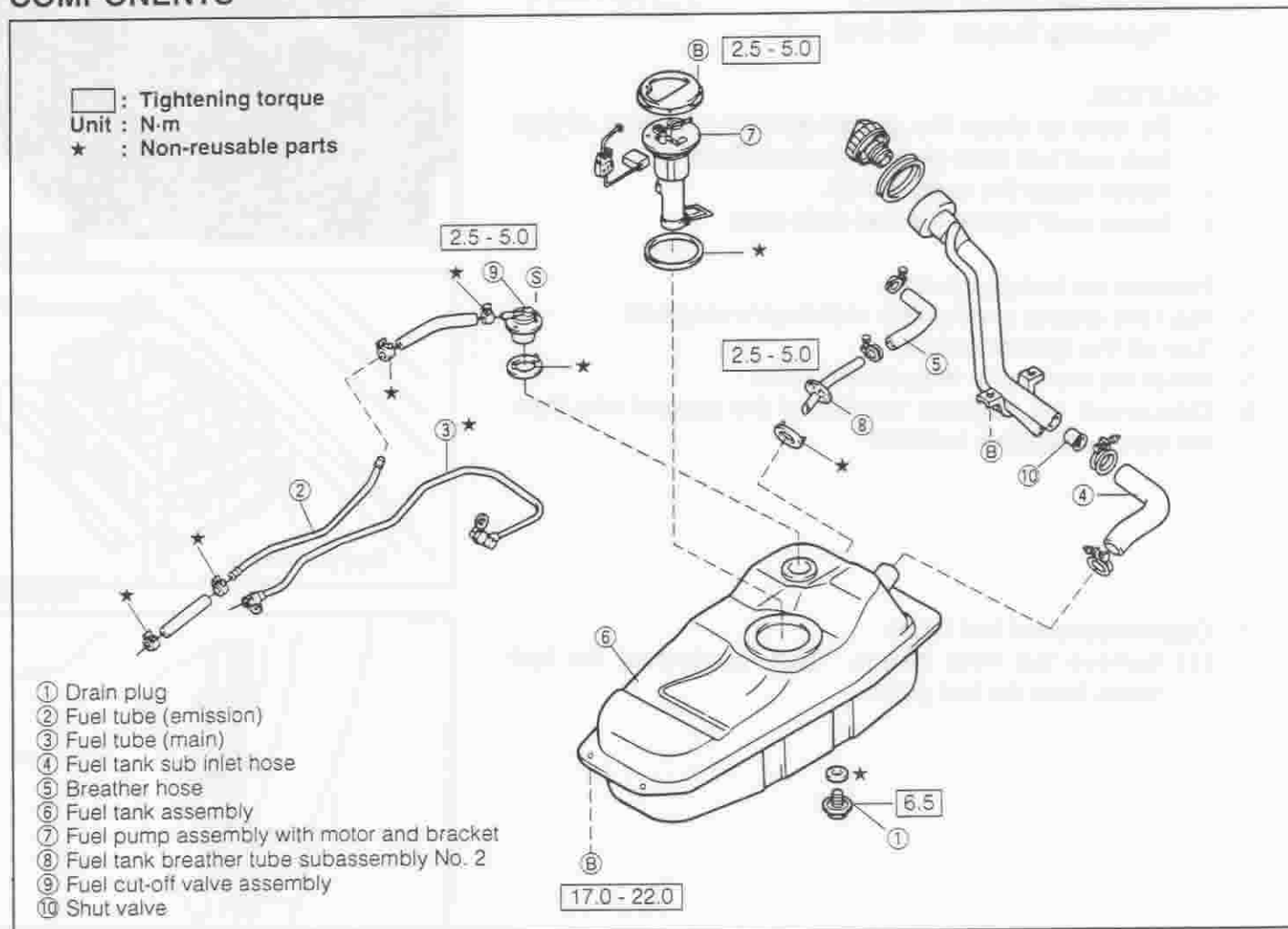
### NOTE:

- Basically the installation procedure is reverse to the removal procedure. Therefore, illustrations are not given in this installation procedure. Refer to the illustrations in the removal procedure in cases where any difficulty is encountered.

1. Install the front fender subassembly with the attaching bolts and tighten them properly.
2. Install the side turn signal lamp.  
(Refer to the BE section.)
3. Installation of over fender
  - (1) Ensure that the retainers are installed properly and there is no damage.  
If any damage exists, replace the retainer with a new one.
  - (2) Install the over fender to the front fender by connecting the retainers on the over fender to the front fender.
  - (3) Ensure that the retainers are locked properly.
4. Install the front fender liner. (Refer to the fender liner section.)
5. Install the front mudguard with the three attaching bolts.
6. Install the front bumper. (Refer to the front bumper section.)
7. Install the hood moulding.

JBO00013-00000

## FUEL TANK COMPONENTS



JBC00014-00011

## REMOVAL

### WARNING:

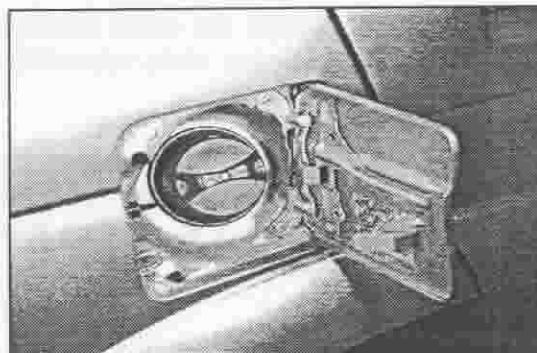
- Never work near open flame or never smoke near the working site of fuel-related components.

1. Draining of fuel from fuel tank  
 (1) Remove the fuel filler cap.

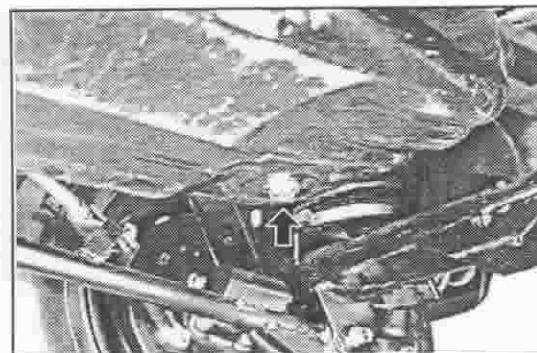
- (2) Place a suitable container under the fuel drain plug.
- (3) Drain the fuel to the container by removing the fuel drain plug.

### CAUTION:

- Never reuse the used gasket.



JBC00015-00012

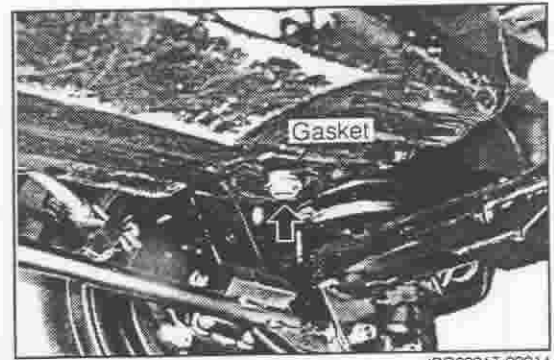


JBC00016-00013

- (4) Install the fuel drain plug with new gasket interposed and tighten it to specified tightening torque.  
(When fuel tank is reused.)  
Tightening Torque: 65 N·m

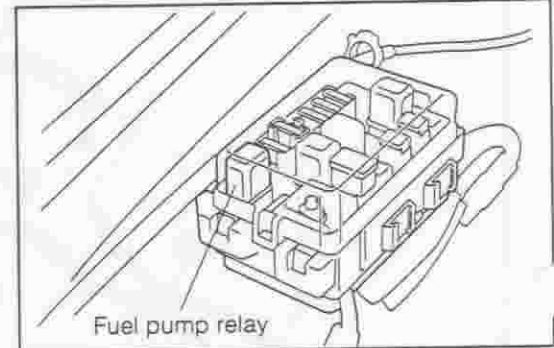
**CAUTION:**

- Be sure to clean the gasket attaching surface of fuel tank and fuel drain plug before installation.
- Never reuse the used gasket.
- Never over tighten the fuel drain plug.



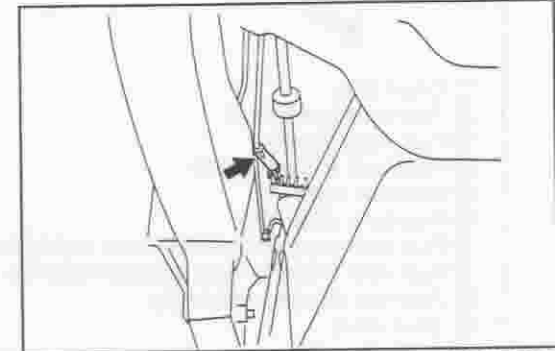
JBC00017-00014

2. Remove the fuel pump relay.
3. Start the engine and leave it until engine stopped.
4. Turn off the ignition switch.
5. Install the fuel pump relay to relay box.
6. Disconnect the negative terminal of the ground wire from the battery negative terminal.



JBC00018-00015

7. Disconnection of fuel tubes.
  - (1) Remove the hose bands. Then, disconnect the fuel hoses from the fuel pipes.

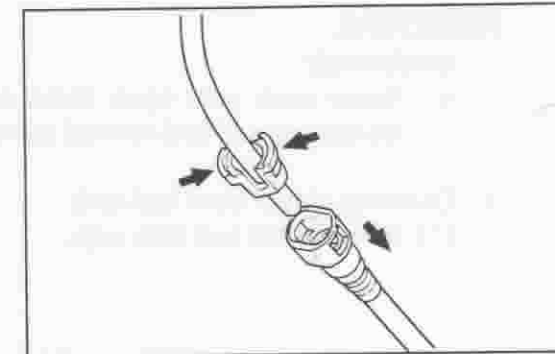


JBC00019-00016

- (2) Disconnect the quick connector of the fuel hose from the fuel pipe while retracting the retainer as shown in the figure.

**CAUTION:**

- Never use any tools during disconnection.
- Never reuse the removed fuel hose (quick connector) again. Failure to observe this caution may lead to fuel leakage.

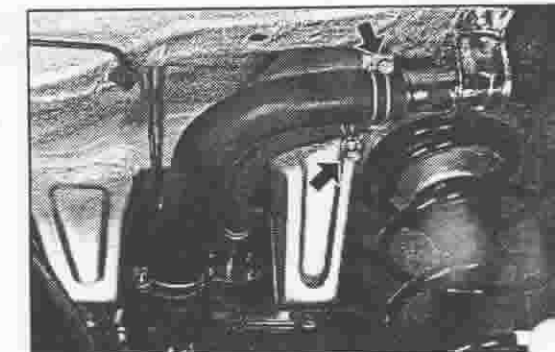


JBC00020-00017

8. Remove the breather hose and fuel tank inlet hose from the fuel inlet pipe assembly by loosening the hose bands.

**CAUTION:**

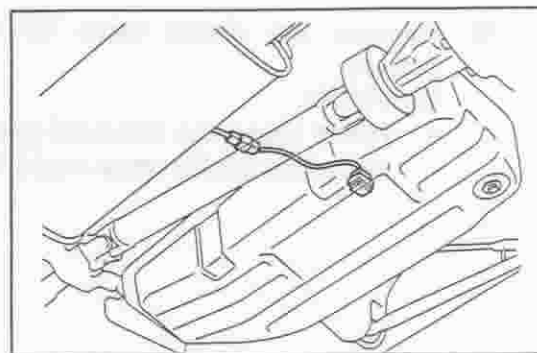
- Never reuse the removed hose bands.



JBC00021-00018

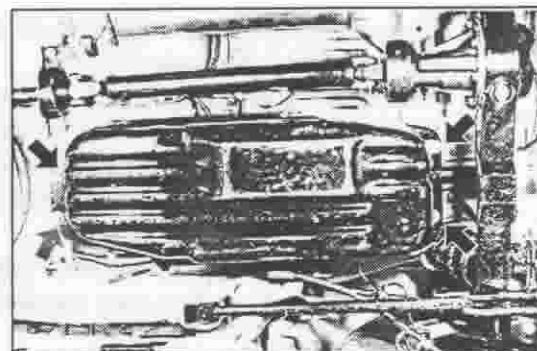


9. Disconnect the connector of the wire harness from the fuel pump with motor and bracket located upper side of fuel tank while unlocking the lock on the connector.



JBO00022-00019

10. Support the fuel tank with suitable jack or bench.  
11. Remove the fuel tank by removing the four attaching bolts.



JBO00023-00020

12. Removal of the fuel hoses from the fuel pump with motor and bracket (fuel pump assembly) by following manner.

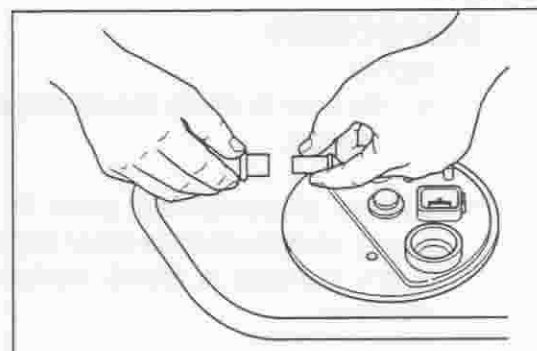
(1) Disconnect the main fuel hose from fuel pump assembly by pull it out while retracting the retainer as shown.

**CAUTION:**

- Never reuse the removed fuel hose again. Failure to observe this caution may lead to fuel leakage.

(2) Remove the fuel main hose from fuel tank by unlocking the main hose from the hose clips.

(3) Remove the retainer for quick connector from the fuel pump assembly.

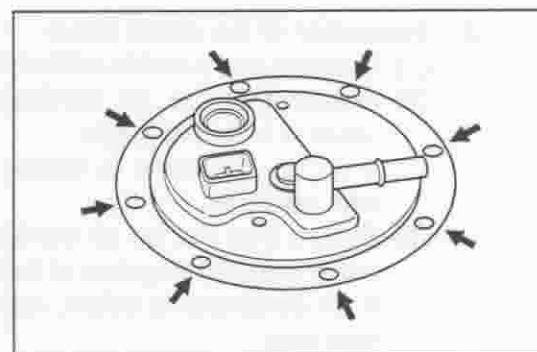


JBO00024-00021

13. Remove the fuel pump assembly and gasket by removing the attaching screws evenly

**CAUTION:**

- Never reuse the removed gasket again. Failure to observe this caution may cause to fire.



JBO00025-00022

14. Remove the fuel hose from the check valve by removing the hose clamp.  
15. Remove the fuel pipe from the fuel tank by unlocking the fuel pipe from the hose clamps.

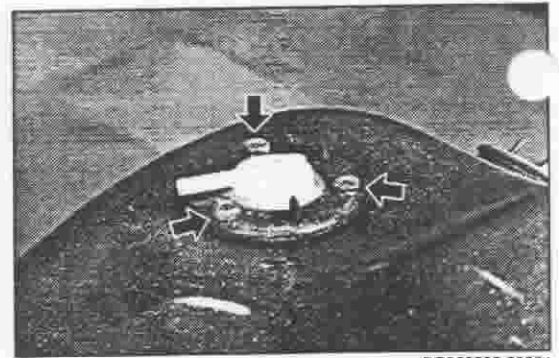


JBO00026-00023

16. Remove the check valve by removing the attaching screws.

**CAUTION:**

- Never reuse the removed gasket again. Failure to observe this caution may cause to fire.

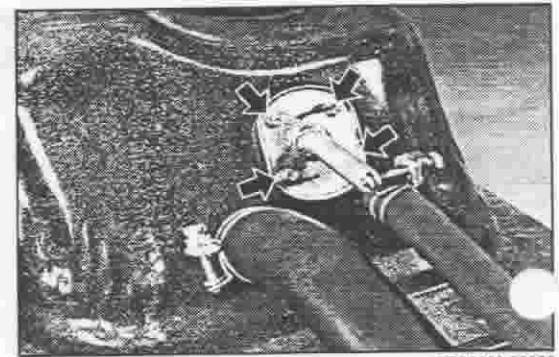


JB0002027-00024

17. Disconnect the fuel tank sub inlet hose from the fuel tank by loosening the hose clamp.  
18. Remove the shut valve from the fuel inlet pipe.  
19. Disconnect the breather hose from the fuel tank breather No. 2 tube by loosening the hose clamp.  
20. Remove the fuel tank breather No. 2 tube with gasket.

**CAUTION:**

- Never reuse the removed gasket again. Failure to observe this caution may cause to fire.



JB0000028-00025

## INSPECTION

**NOTE:**

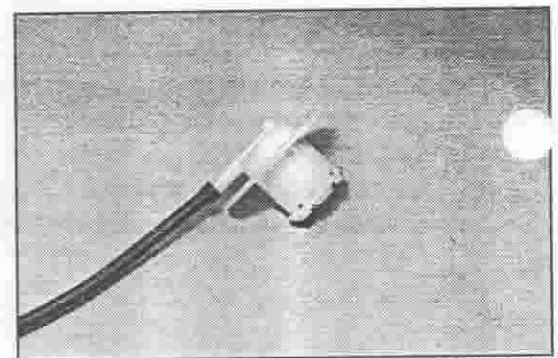
- Be sure to check the electrical parts by referring the BE section.

1. Inspect all component parts for any crack, deformation, aging, deterioration or other damage. If any damage is found, replace the damaged part with new one.

JB0000029-00000

2. Inspection of the check valve

- (1) Connect the suitable rubber hose to check valve.
- (2) Ensure that the air continuity is exists when check valve in installed angle.  
If no air continuity is exists, replace the check valve with new one.
- (3) Ensure that the no air continuity is exists when check valve tilted 90 degrees or before 90 degrees.  
If air continuity is exists, replace the check valve with new one.



JB0000030-00026



## INSTALLATION

### NOTE:

- Installation procedure are basically reverse procedure of the removal procedure. Therefore, no illustration shown in this installation procedure. Refer to the illustration shown in the removal procedure when any difficulty is encountered.

JBO00031-00003

### 1. Installation of the check valve

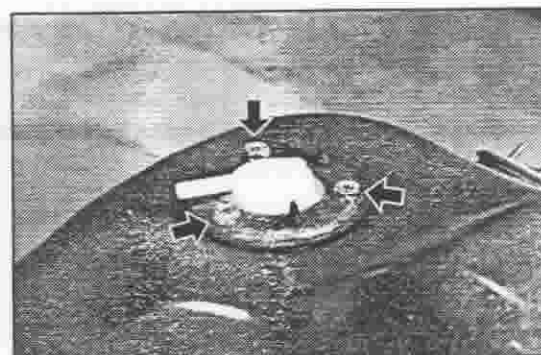
- (1) Clean the attaching surface of the fuel tank, check valve and new gasket.
- (2) Install the check valve to the fuel tank by installing the attaching screws with new gasket interposed. Then, tighten the attaching screws to specified tightening torque evenly.

Tightening Torque: 2.5 - 5.0 N·m

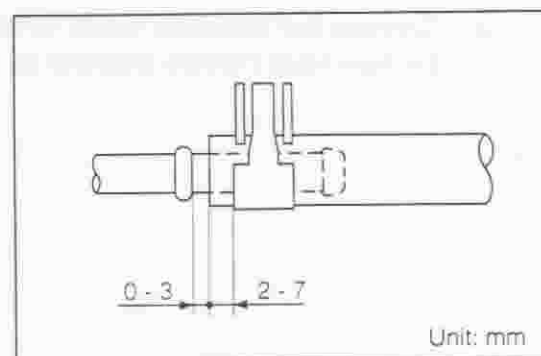
### CAUTION:

- Never reuse the used gasket again.

2. Connect the fuel hoses to the fuel tube (for emission). Then, attach the new hose bands as shown.
3. Connect the fuel tube (for emission) with fuel hoses to the fuel pipe clamp on the fuel tank.
4. Connect the fuel hose (for emission) to the check valve and secure the fuel hose with new hose band.
5. Connect the fuel pipe to fuel pipe clamp securely.



JBO00032-00049



Unit: mm

JBO00032-00027

### 6. Installation of the fuel pump assembly

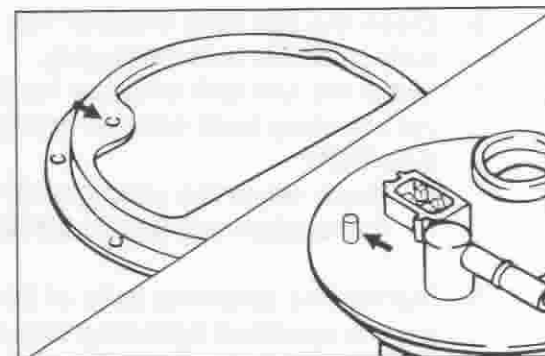
- (1) Clean the attaching surface of the fuel tank, fuel pump assembly and new gasket.
  - (2) Install the fuel pump assembly to the fuel tank while aligning the protruding section of the fuel pump with the hole on the bracket by installing the attaching screws with new gasket interposed. Then, tighten the attaching screws to specified tightening torque evenly.
- Tightening Torque: 2.5 - 5.0 N·m

### CAUTION:

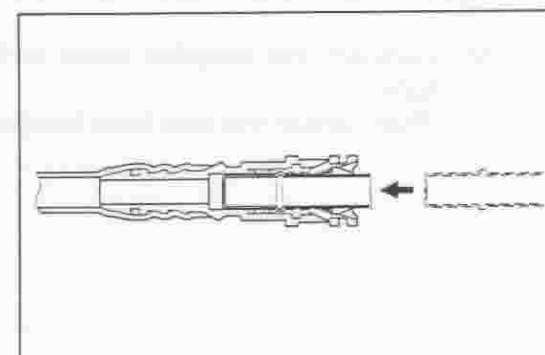
- Never reuse the used gasket again.

### 7. Connection of the fuel hoses to fuel pump assembly

- (1) Connection of the fuel main tube
  - ① Clean the fuel main pipe on the fuel pump assembly.
  - ② Apply the few drops of engine oil to the fuel pipe.
  - ③ Connect the new fuel hose to the fuel pipe until clicking sounds emits from the retainer.

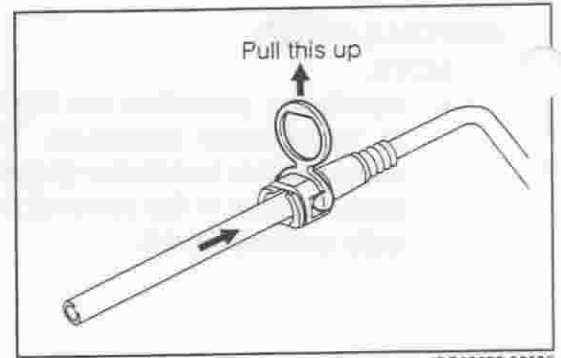


JBO00033-00028

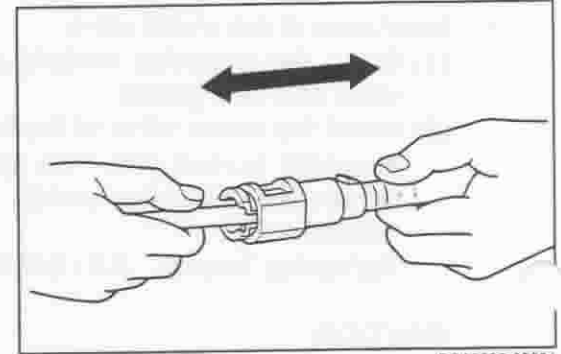


JBO00034-00029

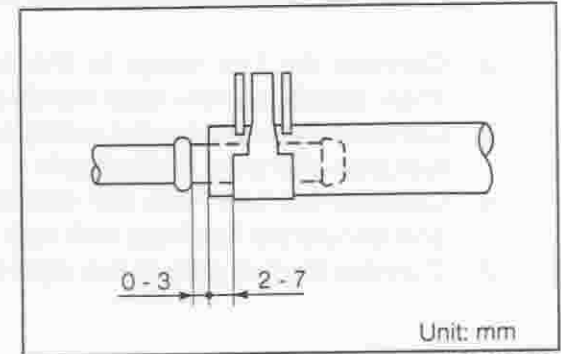
- ④ Remove the checker from the quick connector.



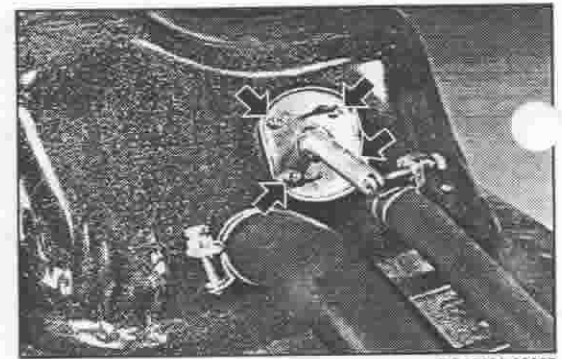
- ⑤ Ensure that the connector is connected properly by pull the connector from the fuel pipe lightly.  
 (2) Connect the fuel main tube to the fuel pipe clamps installed on the fuel tank securely.



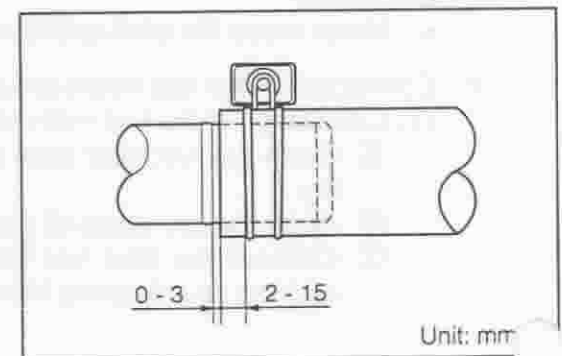
8. Connect the emission tubes to the fuel hoses and attach the new hose clamps properly as shown.



9. Clean the fuel tank breather No. 2 tube and its attaching surface of fuel tank thoroughly.  
 10. Install the fuel tank breather No. 2 tube to the fuel tank by the attaching bolts with the new gasket interposed.  
**CAUTION:**
- Never reuse the used gasket again. Failure to observe this caution may lead to fuel leakage.
11. Tighten the attaching bolts of the fuel tank breather No. 2 tube to specified tightening torque.  
 Tightening Torque: 2.5 - 5.0 N·m



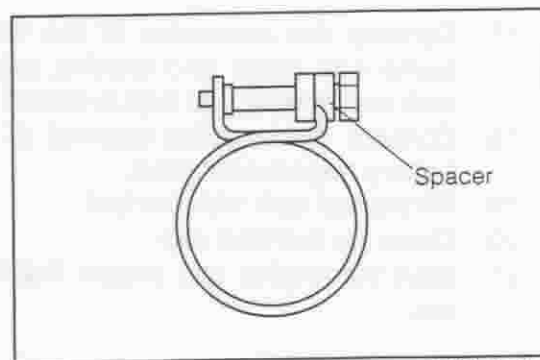
12. Connect the breather hose to fuel tank breather No. 2 tube.  
 Then, attach the new hose band as shown.





**CAUTION:**

- Hose clamp should be tighten until attaching bolt base contact with the spacer.



JBO00040-00035

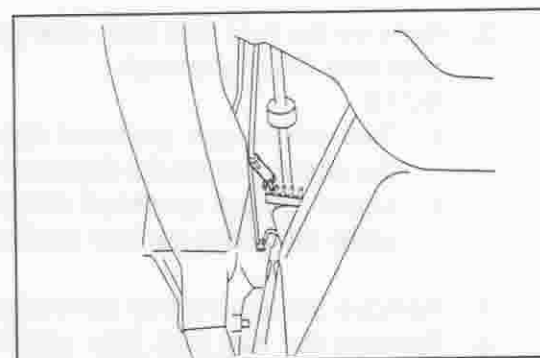
13. Install the shut valve to the fuel inlet securely.
14. Connect the fuel tank sub inlet hose with new hose band to the fuel tank temporary.
15. Install the fuel tank to the floor panel with the four attaching bolts and tighten the attaching bolts to specified tightening torque evenly while supporting the fuel tank with suitable stand or the like.

Tightening Torque: 17.0 - 22.0 N·m

JBO00041-00000

16. Connection of fuel tubes.

- (1) Connect the fuel hoses to the fuel pipes and attach the new hose bands. (Refer to the illustration in step 8.)
- (2) Connection of fuel main tube (Refer to the step 7.)
  - ① Clean the fuel main pipe on the fuel pump assembly.
  - ② Apply the few drops of engine oil to the fuel pipe.
  - ③ Connect the new fuel hose to the fuel pipe until clicking sounds emits from the retainer.
  - ④ Remove the checker from the quick connector.
  - ⑤ Ensure that the connector is connected properly by pull the connector from the fuel pipe lightly.
- (3) Connect the breather hose with new hose band to the fuel inlet and tighten the hose band securely. (Refer to the step 12.)



JBO00042-00036

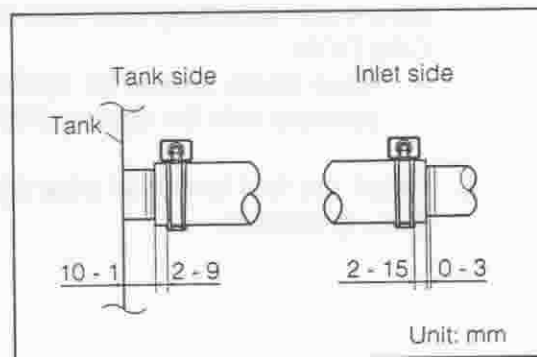
**CAUTION:**

- Hose clamp should be tighten until attaching bolt base contact with the spacer. (Refer to illustration in step 12.)

- (4) Connect the fuel tank sub inlet hose to fuel inlet with new hose band as shown and tighten the hose bands securely.

**CAUTION:**

- Hose clamp should be tighten until attaching bolt base contact with the spacer.



Unit: mm

JBO00043-00037

17. Connect the connector of the wire harness to the fuel pump with motor and bracket located upper side of fuel tank and ensure that lock is locked properly.
18. Connect the negative terminal of the ground wire to the battery negative terminal.
19. Fill the fuel tank with the fuel.
20. Close the fuel filler cap.
21. Start the engine and ensure that the no fuel leakage exists.

JBO002044-00000

## REMOVAL OF FUEL INLET

### CAUTION:

- Be sure to drain the fuel from the fuel tank before removing the fuel inlet when fuel filled-up more than half in the fuel tank.

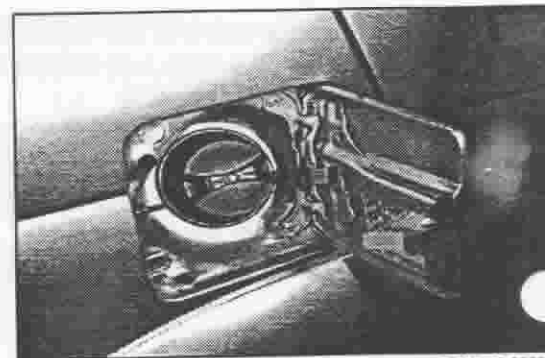
1. Remove the fuel tank cap assembly.
2. Disconnect the fuel hose and fuel breather hose by removing the hose bands.

3. Remove the fuel tank filler pipe protector by removing the attaching three grommet.

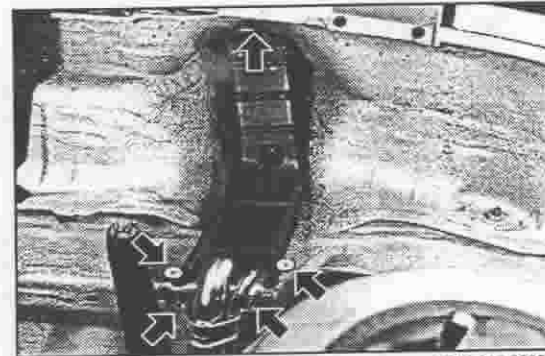
### NOTE:

- Two screw type grommet can be loosened by turning the screw section 90 degree to counter clockwise.
- Upper section grommet can be removed by pull it out while retracting the lock sections on the grommet.

4. Remove the fuel inlet by removing the two attaching bolts.
5. Remove the fuel tank filler pipe shield from the fuel inlet box.



JBO00045-00038



JBO00046-00039

## INSTALLATION OF FUEL INLET

Install the components in the reversed order of the removal procedure.

1. Install the fuel tank filler pipe shield to the fuel inlet box.
2. Install the fuel inlet with the two attaching bolts and tighten the attaching bolts to specified tightening torque.

Tightening Torque: 6.24 - 9.36 N-m

3. Install the fuel tank cap assembly.
4. Connect the fuel hose and fuel breather hose. Then, secure it with attaching new hose bands.

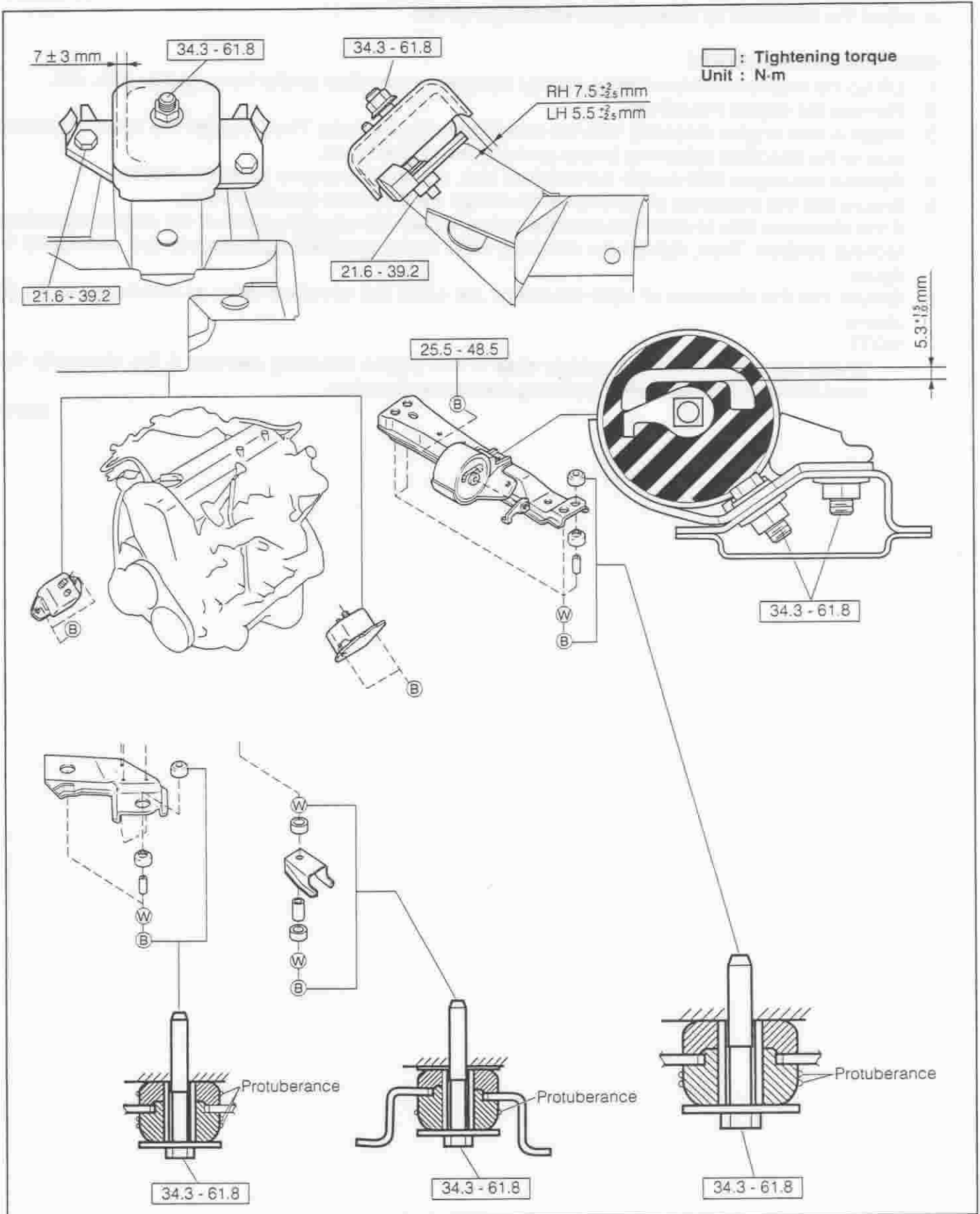
### CAUTION:

- Hose clamp should be tighten until attaching bolt base contacts with the spacer. (Refer to page BO-00.)

5. Install the fuel tank filler pipe protector with the attaching three grommets.

JBO00047-00000

# MOUNTING INSULATOR COMPONENTS



JBO0048-0040

**INSPECTION**

Ensure that the clearance of each mounting is within the specified value, as shown in the figure. If the clearance fails to meet the specified value mentioned in the figure, replace the part with a new one or adjust the clearance by changing the attaching position.

**REMOVAL/INSTALLATION**

1. Lift up the engine and transmission slightly, using an engine lifter and/or transmission jack, etc.
2. Remove the engine mountings.
3. Install a new engine mounting with the attaching bolts and nuts. Then, tighten the attaching bolts and nuts to the specified tightening torque as mentioned in the figure.
4. Remove the engine lifter and/or transmission jack, etc from the engine and transmission.
5. Ensure that the clearance of the engine mountings are within the specified value.  
If the clearance fails to meet the specified value, loosen the attaching bolts of the engine mountings at attaching position. Then, tighten the attaching bolts to the specified tightening torque mentioned in the figure.
6. Ensure that the clearance of each mountings are within the specified value as mentioned in the figure above.

**NOTE:**

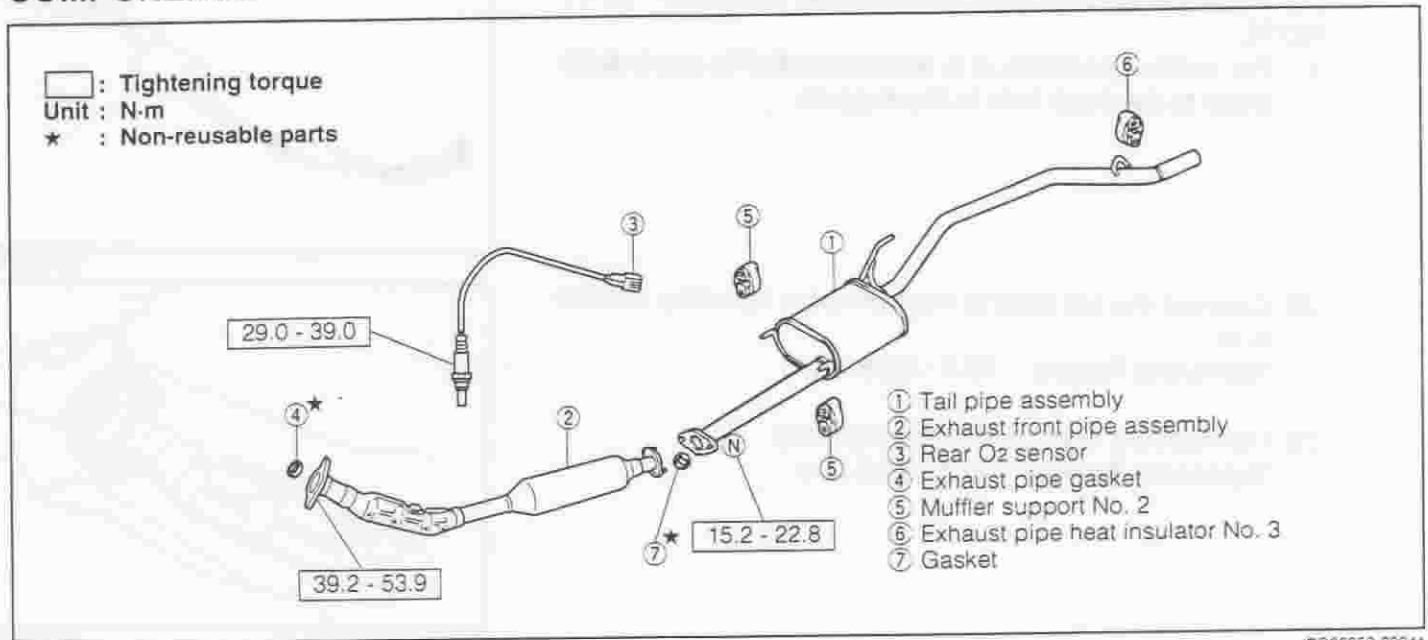
- Check the alignment of the vehicle shell or the engine mounting member if the clearance fails to meet the specified value after replacing the engine mounting.

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## EXHAUST PIPE COMPONENTS



### REMOVAL

#### CAUTION:

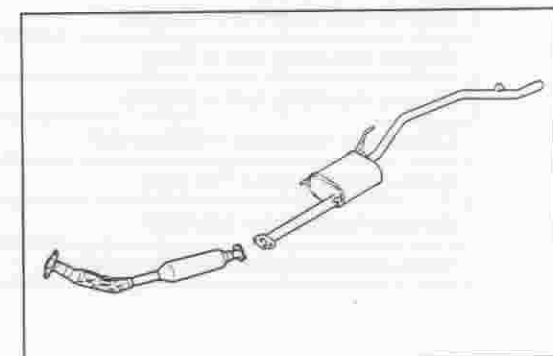
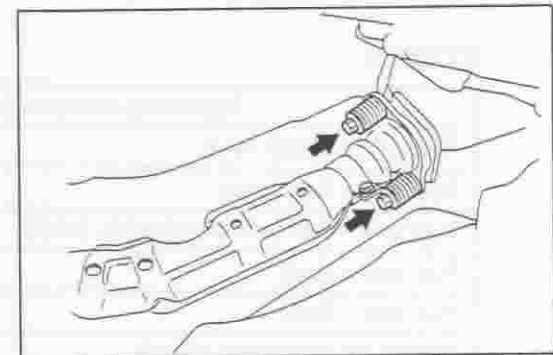
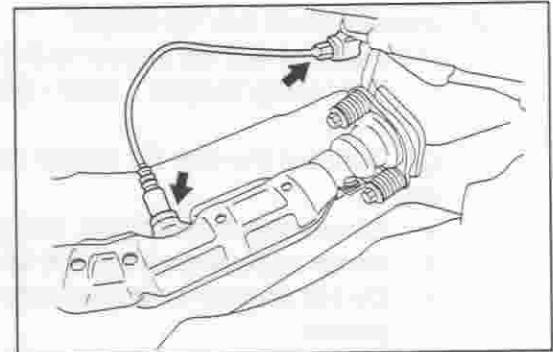
- The operation should be started after the exhaust pipe has completely cooled down.

- Removal of rear O<sub>2</sub> sensor (European specification only)
  - Disconnect the connector.
  - Remove the O<sub>2</sub> sensor.

#### NOTE:

- Ensure that no lubricant, etc. gets to the O<sub>2</sub> sensor.
- Never apply impacts to the O<sub>2</sub> sensor.
- Do not employ an impact wrench when removing the O<sub>2</sub> sensor.
- Do not apply a forcible force to the O<sub>2</sub> sensor.

- Removal of exhaust pipe
  - Remove the set bolts (two pcs.) together with tension springs.
  - Separate the tail pipe from the front pipe by removing the two nuts.
  - Remove the exhaust pipe from the muffler support.



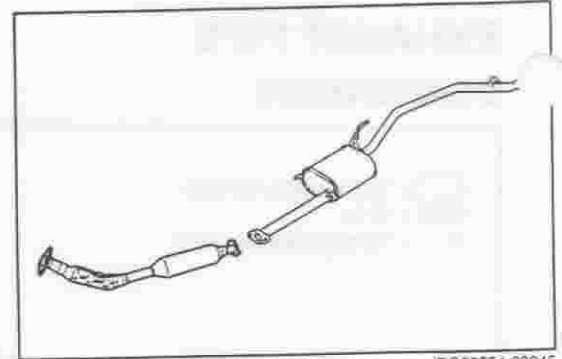
## INSTALLATION

### 1. Installation of exhaust pipe

(1) Install the exhaust pipe to the muffler supports.

#### NOTE:

- For easier operation, it is recommended to apply soap water to the hook hole to the support.



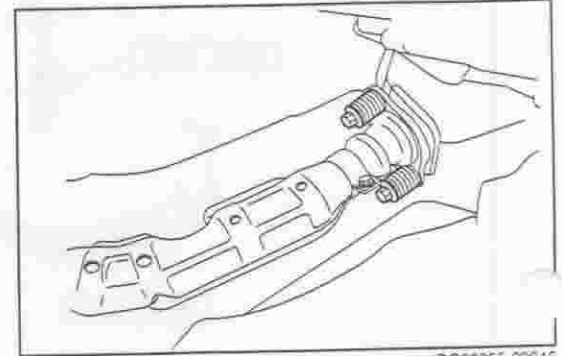
JBO00054-00045

(2) Connect the tail pipe to the front pipe by using the two nuts.

Tightening Torque: 15.2 - 22.8 N·m

(3) Connect the front pipe to the manifold.

Tightening Torque: 39.2 - 53.9 N·m



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### 2. Installation of rear O<sub>2</sub> sensor

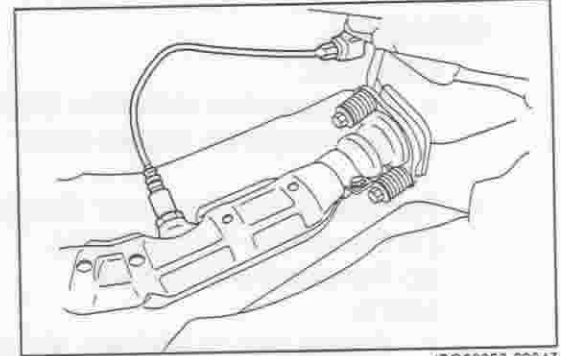
(1) Install of rear O<sub>2</sub> sensor to the front pipe.

Tightening Torque: 29.0 - 39.0 N·m

(2) Connect the rear O<sub>2</sub> sensor connector

#### NOTE:

- Ensure that no lubricant, etc. gets to the O<sub>2</sub> sensor.
- Never apply impacts to the O<sub>2</sub> sensor.
- Do not employ an impact wrench when installing the O<sub>2</sub> sensor.
- Do not apply a forcible force to the O<sub>2</sub> sensor.



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## XXXXXX

Tightening components	N·m	kgf·m
Fuel tank × Check valve	2.5 - 5.0	0.25 - 0.5
Fuel tank × Fuel pump	2.5 - 5.0	0.25 - 0.5
Fuel tank × Fuel tank breather No. 2 tube	2.5 - 5.0	0.25 - 0.5
Fuel tank × Body	17.0 - 22.0	1.7 - 2.2
Fuel inlet × Body	6.24 - 9.36	0.64 - 0.96
Engine mounting front × Body	21.6 - 39.2	2.2 - 4.0
Engine mounting front × Engine	34.3 - 61.8	3.5 - 6.3
Engine mounting rear × Body	34.3 - 61.8	3.5 - 6.3
Engine mounting rear × Engine	25.5 - 48.5	2.6 - 4.9
Differential mounting × Differential	34.3 - 61.8	3.5 - 6.3
Exhaust front pipe × Tail pipe	15.2 - 22.8	1.55 - 2.33
Exhaust front pipe × Manifold	39.2 - 53.9	4.0 - 5.5
Exhaust front pipe × Rear O <sub>2</sub> sensor	29.0 - 39.0	3.0 - 4.0











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## TIGHTENING TORQUE

### Tightening torque determination procedure for general standard bolts and nuts

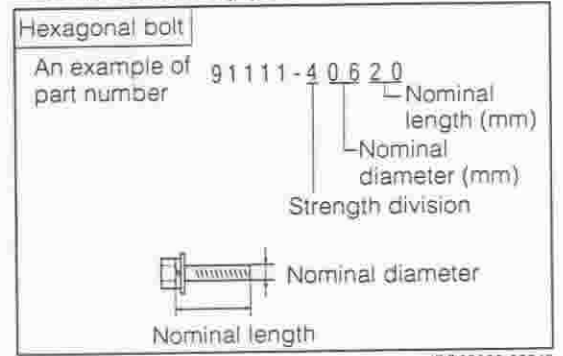
1. Tightening torque determination procedure for bolts  
Determine the strength division of the bolt concerned from the table below. Then, locate the tightening torque in the tightening torque table.
2. Tightening torque determination procedure for nuts  
Determine the tightening torque in the same way as described above, based on the mating bolt.
3. Identification

Identification of strength division by checking bolts them selves

Kind (Strength division)	Shape of head (How to determine strength division)	
	Bolt without flange	Bolt with flange
4 T	 	 
5 T	 	—
6 T	— —	 
7 T	 	—

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Identification by part number



### 4. Tightening torque table for general standard bolts

Strength division	Nominal diameter (mm)	Pitch (mm)	Standard tightening torque [N·m (kgf·m)]	
			Bolt without flange	Bolt with flange
4 T	6	1.0	5.4 (0.55)	5.9 (0.6)
	8	1.25	13 (1.3)	14 (1.45)
	10	1.25	25 (2.6)	28 (2.9)
	12	1.25	47 (4.8)	53 (5.4)
	14	1.5	74 (7.6)	83 (8.5)
	16	1.5	113 (11.5)	—
5 T	6	1.0	6.4 (0.65)	—
	8	1.25	16 (1.6)	—
	10	1.25	32 (3.3)	—
	12	1.25	59 (6.0)	—
	14	1.5	91 (9.3)	—
	16	1.5	137 (14.0)	—
6 T	6	1.0	7.8 (0.8)	8.8 (0.9)
	8	1.25	19 (1.95)	20.5 (2.1)
	10	1.25	39 (4.0)	43 (4.4)
	12	1.25	72 (7.3)	79 (8.1)
	14	1.5	109 (11.0)	123 (12.5)
7 T	6	1.0	11 (1.1)	12 (1.2)
	8	1.25	25 (2.6)	28 (2.9)
	10	1.25	52 (5.3)	58 (5.9)
	12	1.25	9.5 (9.7)	103 (10.5)
	14	1.5	147 (15.0)	167 (17.0)
	16	1.5	225 (23.0)	—

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