
FUEL SUPPLY

Click on the applicable bookmark to selected the required model year.

FUEL SUPPLY

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GENERAL INFORMATION

The fuel tank is located under the floor below the rear seats.

The fuel pump module contains a fuel pump (low-pressure), fuel filter and fuel pressure regulator (low-pressure).

The valve assembly contains a cut-off valve, which prevents fuel to flow out, and a two-way valve, which regulates the fuel pressure inside the fuel tank.

The high-pressure fuel hose is of an one-touch joint type.

FUEL TANK <6G7>

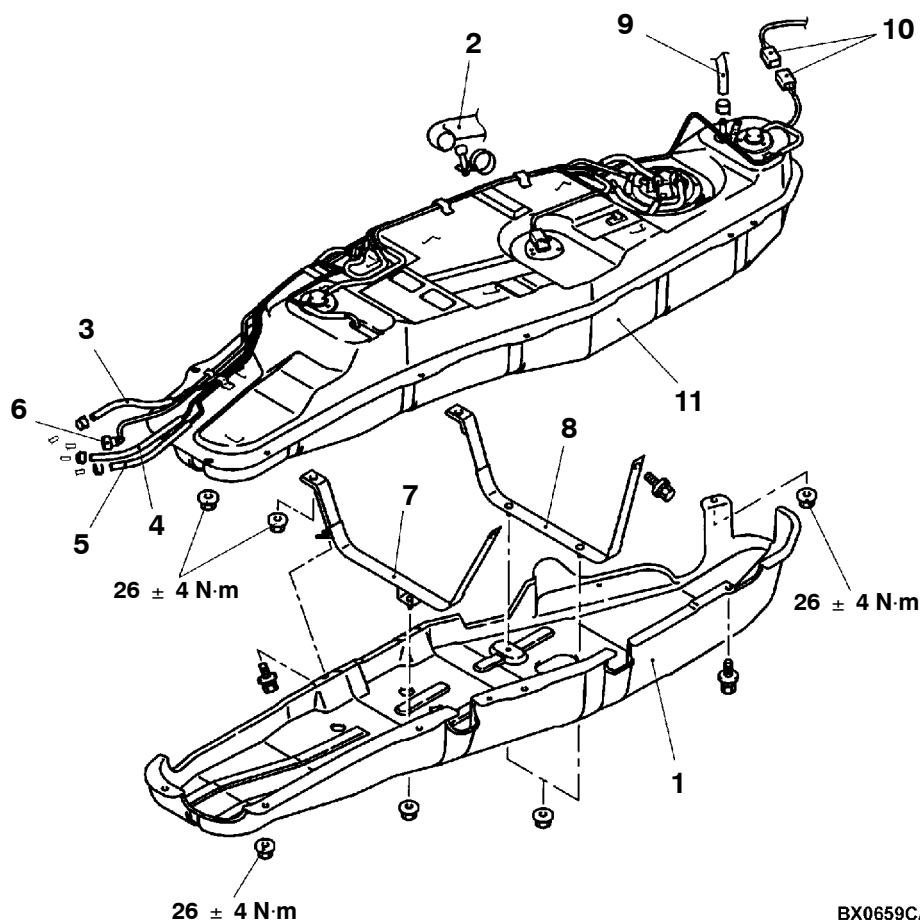
REMOVAL AND INSTALLATION

Pre-removal Operation

- Draining Fuel
- Fuel Line Pressure Reduction (Refer to GROUP 13A - On-vehicle Service.)
- Transmission Mount Center Member Assembly (Refer to GROUP 32.)

Post-installation Operation

- Transmission Mount Center Member Assembly (Refer to GROUP 32.)
- Fuel Leakage Inspection
- Refilling Fuel



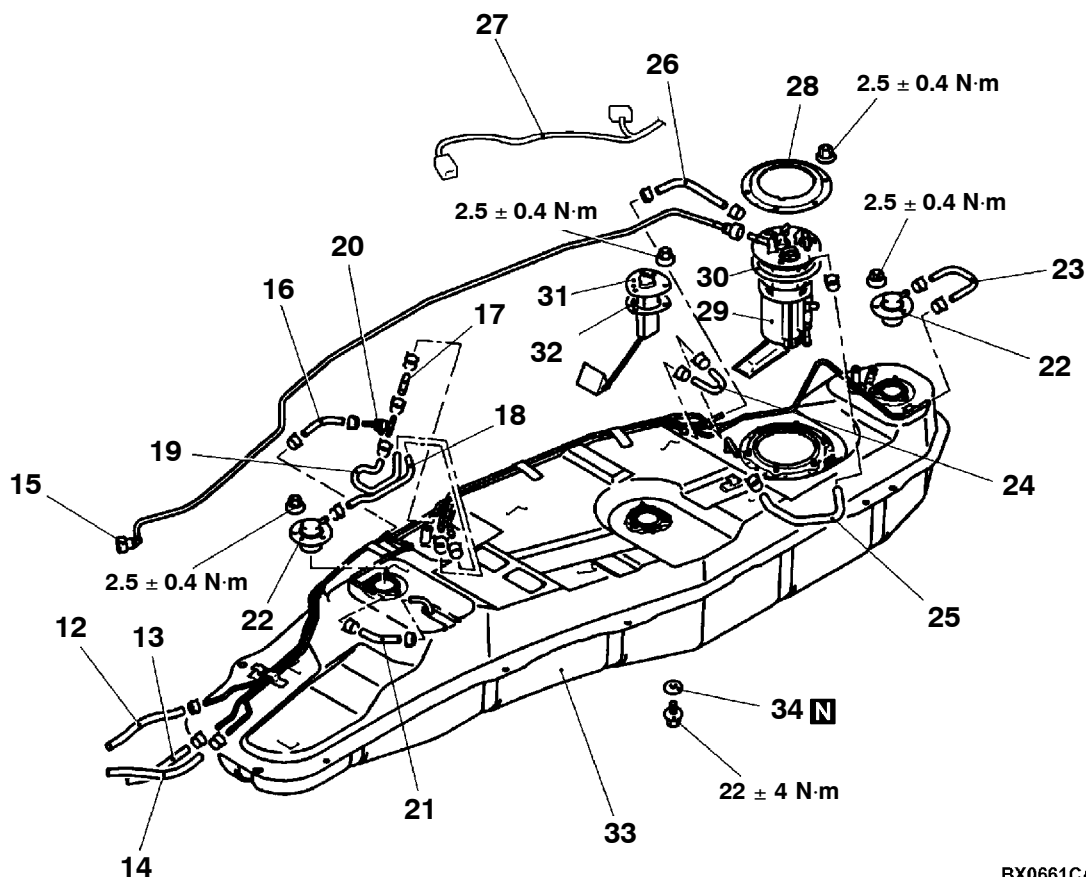
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Removal steps

1. Fuel tank under protector
2. Fuel filler hose connection
3. Fuel return hose connection
4. Fuel vapor hose connection
5. Fuel return hose connection
6. Fuel high-pressure hose connection



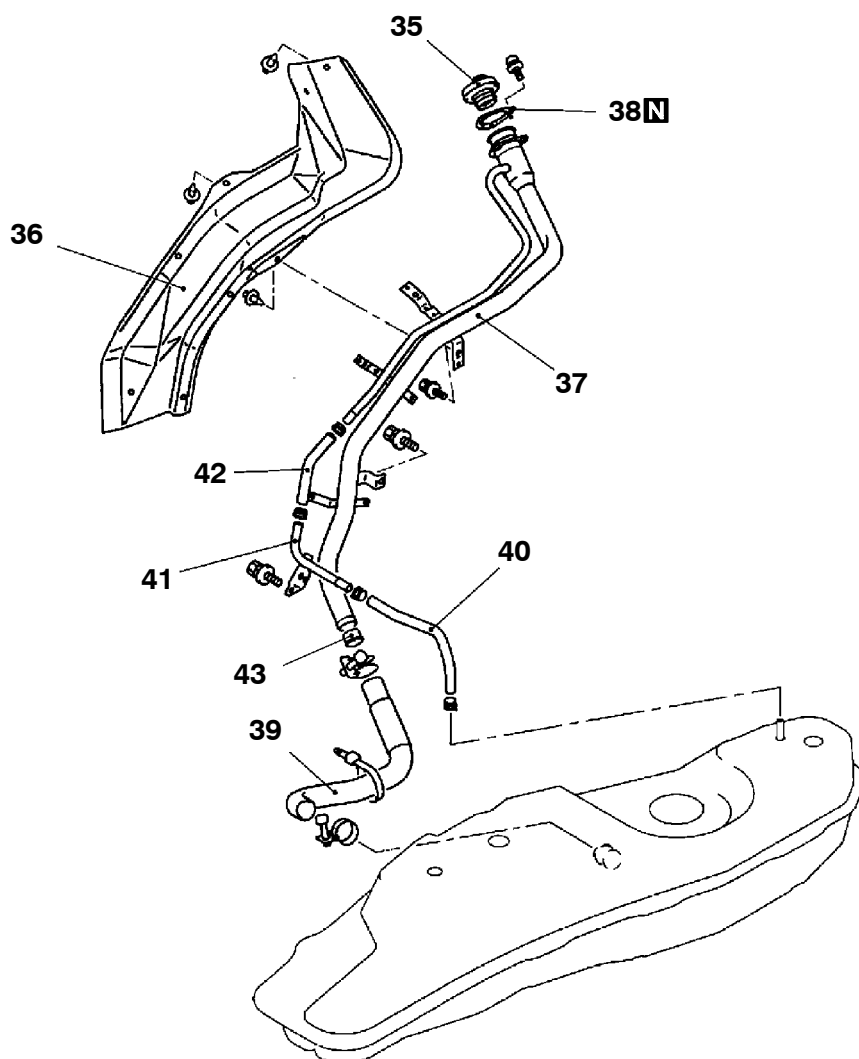
7. Fuel tank band, front
8. Fuel tank band, rear
9. Fuel tank breather hose connection
10. Fuel tank harness connector connection
11. Fuel tank assembly



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- 12. Fuel return hose
- 13. Fuel vapor hose
- 14. Fuel return hose
- 15. Fuel high-pressure hose
- 16. Fuel tank vapor hose
- 17. Fuel tank vapor hose
- 18. Fuel tank vapor hose
- 19. Fuel tank vapor hose
- 20. Fuel check valve
- 21. Fuel tank hose
- 22. Valve assembly
- 23. Fuel tank vapor hose

- 24. Fuel tank vapor hose
- 25. Fuel tank suction hose
- 26. Fuel tank return hose
- 27. Fuel tank harness
- 28. Tapping plate
- 29. Fuel pump module assembly
- 30. Packing
- 31. Fuel gauge unit
- 32. Packing
- 33. Fuel tank
- 34. Gasket



AX0660CA

- 35. Fuel cap
- 36. Fuel filler neck protector
- 37. Fuel filler neck
- 38. Fuel filler neck gasket
- 39. Fuel filler hose

- 40. Fuel filler neck breather hose
- 41. Fuel filler pipe assembly
- 42. Fuel filler neck breather hose
- 43. Shut-off valve

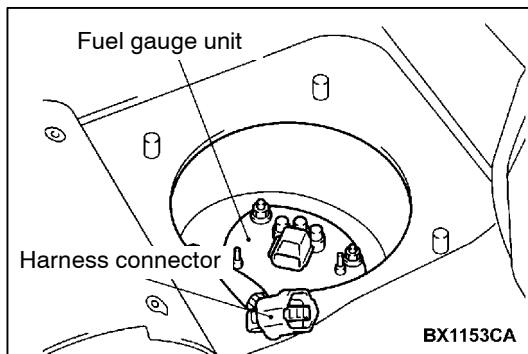
REMOVAL SERVICE POINT

◀A▶ FUEL TANK BREATHER HOSE/FUEL TANK CONNECTOR DISCONNECTION

Lower the fuel tank until the fuel tank breather hose and the fuel tank harness connectors can be disconnected.

INSTALLATION SERVICE POINT**►A◀ FUEL HIGH-PRESSURE HOSE INSTALLATION****Caution**

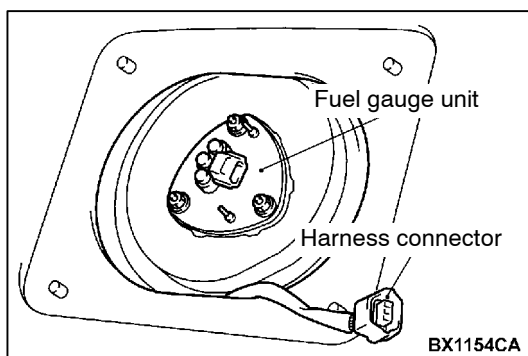
Snap the high-pressure fuel hose one-touch joint into place, then pull back slightly on the hose to assure it is securely fitted. However, the connection should have a play of approx. 3 mm.

**INSPECTION****FUEL GAUGE UNIT REPLACEMENT
<SHORT WHEELBASE>**

1. Slide the front seat (driver's side) forward and turn up the service hole notch on the carpet.
2. Remove the service hole cover and packing.
3. Disconnect the harness connector.
4. Unscrew the mounting nut to remove the fuel gauge unit.
5. Assemble the fuel gauge unit and tighten the mounting nut to the specified torque.

Tightening torque : 2.5 ± 0.4 N·m

6. Connect the harness connector.
7. Install the service hole cover and packing.
8. Return the floor carpet and slide the front seat (driver's side).

**<LONG WHEELBASE>**

1. Tumble the second seat.
2. Remove the service hole cover (upper side) and the packing located under the second seat.
3. Remove the second seat, the rear scuff plate, the anchor bolts for the outer seat belt (second) and mounting screws of the lower quarter trim. Tear off the carpet. (Refer to GROUP 52A.)
4. Remove the service hole cover and the packing located between the front seat and the second seat.
5. Disconnect the harness connector.
6. Unscrew the mounting nut to remove the fuel gauge unit.
7. Assemble the fuel gauge unit and tighten the mounting nut to the specified torque.

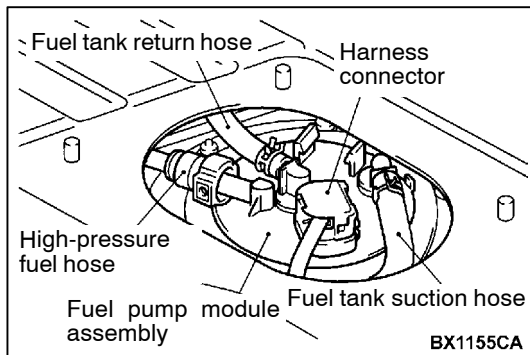
Tightening torque : 2.5 ± 0.4 N·m

8. Connect the harness connector.
9. Attach the service hole cover and the packing located between the front seat and the second seat.

10. Restore the carpet; attach the second seat, the rear scuff plate, anchor bolts for the outer seat belt (second) and mounting screws of the lower quarter trim. (Refer to GROUP 52A.)
11. Attach the service hole cover located under the second seat and the packing.
12. Restore the second seat.

FUEL GAUGE UNIT CHECK

Refer to GROUP 54 - Combination meter.



FUEL PUMP MODULE REPLACEMENT <SHORT WHEELBASE>

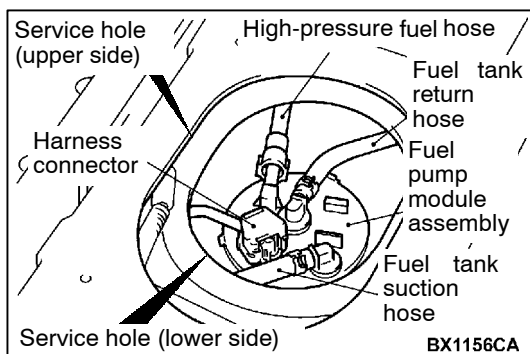
1. Remove the front scuff plate and outer seat belt (rear) anchor bolt, and then turn the carpet up. (Refer to GROUP 52A.)
2. Remove the service hole cover and packing.
3. Disconnect the harness connector.
4. Disconnect the high-pressure fuel hose and the fuel tank hose.
5. Remove the mounting nuts, and remove the fuel pump module.
6. Install the fuel pump module, and tighten the mounting nuts to the specified torque.

Tightening torque: 2.5 ± 0.4 N·m

7. Connect the high-pressure fuel hose and the fuel tank hose.
8. Connect the harness connector.
9. Install the service hole cover and packing.
10. Spread the carpet and then install the front scuff plate and outer seat belt (rear) anchor bolt. (Refer to GROUP 52A.)

<LONG WHEELBASE>

1. Tumble the second seat.
2. Remove the service hole cover (upper side) and the packing.
3. Remove the service hole cover (lower side) and the packing.
4. Disconnect the harness connector.
5. Disconnect the fuel high-pressure hose and the fuel tank hose.



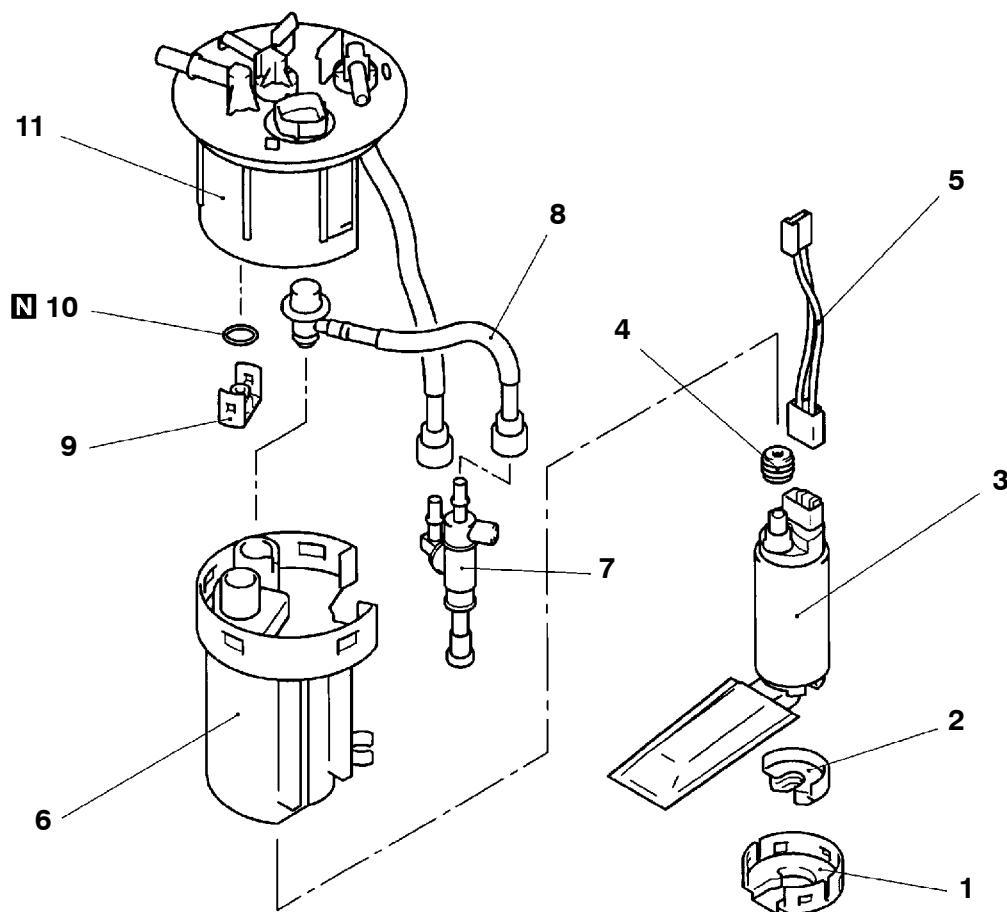
6. Unscrew the mounting nut to remove the fuel pump module.
7. Assemble the fuel pump module and tighten the mounting nut to the specified torque.

Tightening torque: 2.5 ± 0.4 N·m

8. Connect the fuel high-pressure hose and the fuel tank hose.
9. Connect the harness connector.
10. Attach the service hole cover (lower side) and the packing.
11. Attach the service hole cover (upper side) and the packing.
12. Restore the second seat.

DISASSEMBLY AND REASSEMBLY

FUEL PUMP MODULE



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Disassembly steps

- A◄
1. Fuel pump bracket
 2. Fuel pump cushion
 3. Fuel pump (low-pressure)

- A◄
7. Assist pump
 8. Fuel pressure regulator (low-pressure)
 9. Cap
 10. O-ring
 11. Fuel high-pressure filter assembly

REASSEMBLY SERVICE POINTS**►A◄ O-RING/GROMMET INSTALLATION**

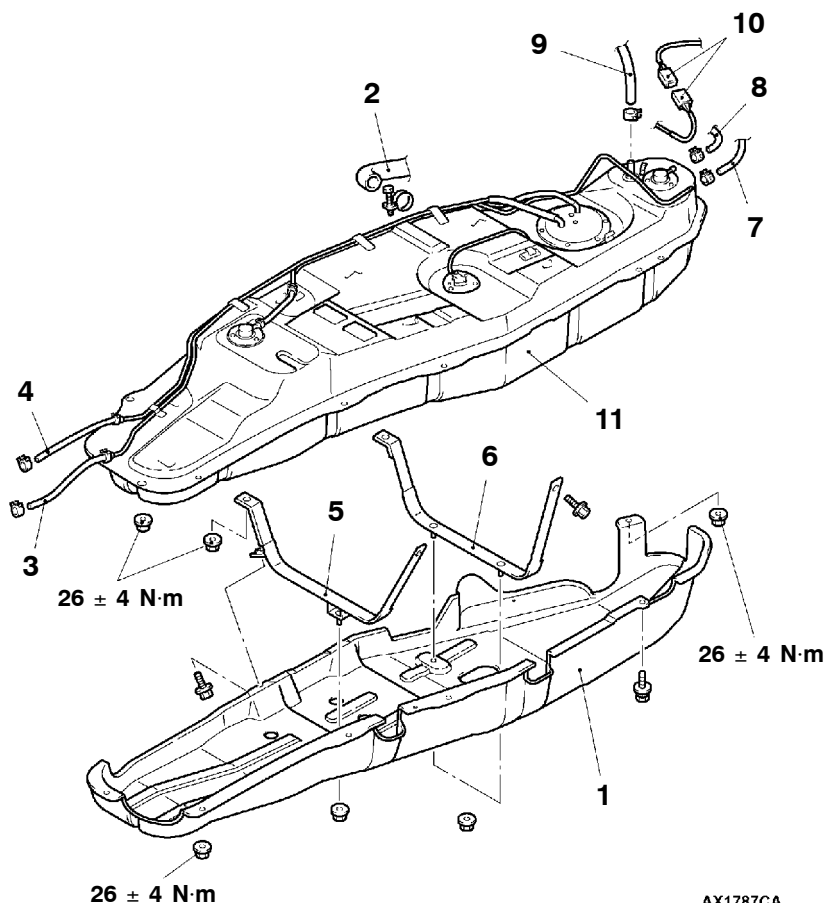
Apply a fuel to O-ring and grommet before installing them, to prevent them from being damaged or twisted.

FUEL TANK <4D5, 4M4>**REMOVAL AND INSTALLATION****Pre-removal Operation**

- Draining Fuel
- Fuel Line Pressure Reduction
(Refer to GROUP 13A – On-vehicle Service.)
- Transmission Mount Center Member Assembly
(Refer to GROUP 32.)

Post-installation Operation

- Transmission Mount Center Member Assembly
(Refer to GROUP 32.)
- Fuel Leakage Inspection
- Refilling Fuel



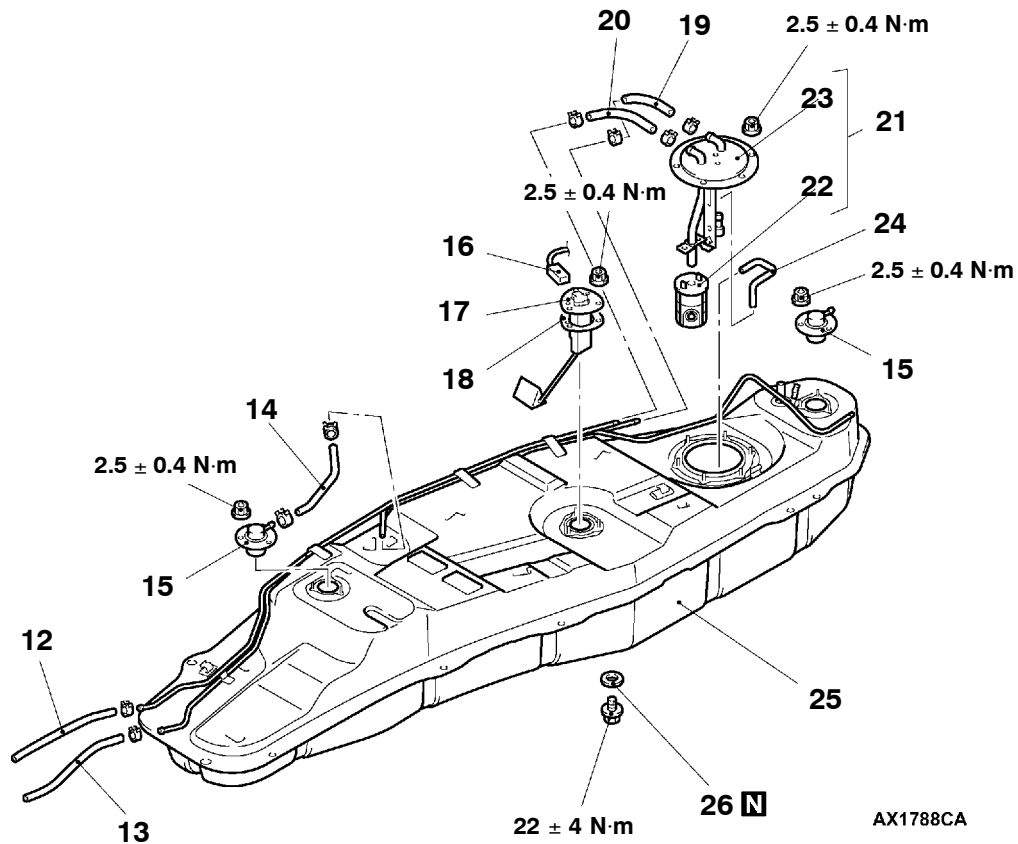
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Removal steps

1. Fuel tank under protector
2. Fuel filler hose connection
3. Fuel return hose connection
4. Fuel main hose connection
5. Fuel tank band front
6. Fuel tank band rear

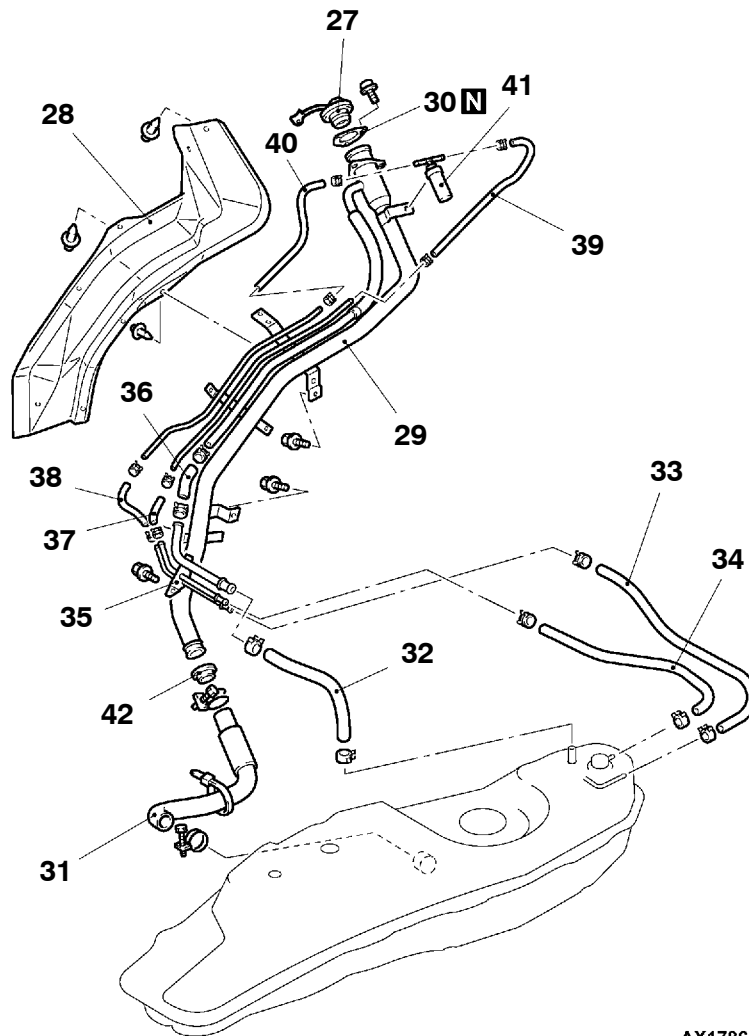


7. Fuel filler neck vapor hose (B) connection
8. Fuel filler neck vapor hose (A) connection
9. Fuel tank breather hose connection
10. Fuel tank harness connector connection
11. Fuel tank assembly



- 12. Fuel return hose
- 13. Fuel main hose
- 14. Fuel tank vapor hose
- 15. Valve assembly
- 16. Fuel tank harness
- 17. Fuel gauge unit
- 18. Packing
- 19. Fuel tank return hose

- 20. Fuel tank main hose
- 21. Fuel filter pipe assembly
- 22. Fuel filter
- 23. Pipe assembly
- 24. Fuel tank suction hose
- 25. Fuel tank
- 26. Gasket



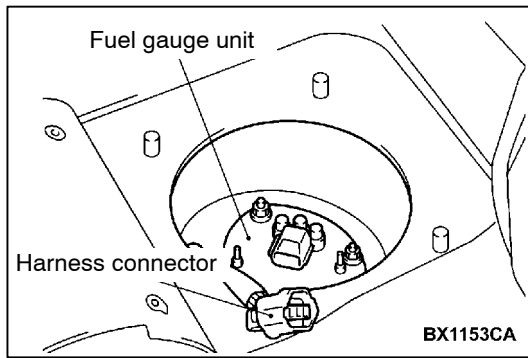
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- | | |
|-------------------------------------|-------------------------------------------|
| 27. Fuel cap | 36. Fuel filler neck breather hose |
| 28. Fuel filler neck protector | 37. Fuel filler neck vapor hose |
| 29. Fuel filler neck | 38. Fuel filler neck vapor hose |
| 30. Fuel filler neck gasket | 39. Fuel filler neck vapor hose (B) |
| 31. Fuel filler hose | 40. Fuel filler neck vapor hose (A) |
| 32. Fuel filler neck breather hose | 41. Fuel filler neck check valve assembly |
| 33. Fuel filler neck vapor hose (B) | 42. Shut-off valve |
| 34. Fuel filler neck vapor hose (A) | |
| 35. Fuel filler pipe assembly | |

REMOVAL SERVICE POINT

◀A▶ FUEL TANK BREATHER HOSE/FUEL TANK CONNECTOR DISCONNECTION

Lower the fuel tank until the fuel tank breather hose and the fuel tank harness connectors can be disconnected.



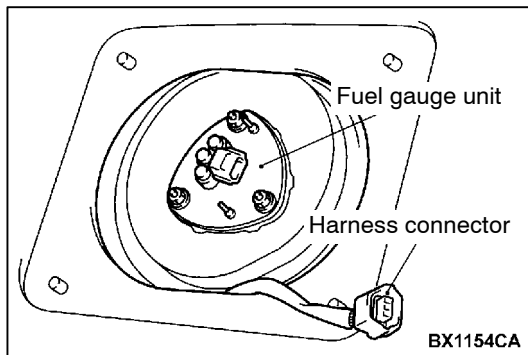
INSPECTION

FUEL GAUGE UNIT REPLACEMENT <SHORT WHEELBASE>

1. Slide the front seat (driver's side) forward and turn up the service hole notch on the carpet.
2. Remove the service hole cover and packing.
3. Disconnect the harness connector.
4. Unscrew the mounting nut to remove the fuel gauge unit.
5. Assemble the fuel gauge unit and tighten the mounting nut to the specified torque.

Tightening torque: 2.5 ± 0.4 N·m

6. Connect the harness connector.
7. Install the service hole cover and packing.
8. Return the floor carpet and slide the front seat (driver's side).



<LONG WHEELBASE>

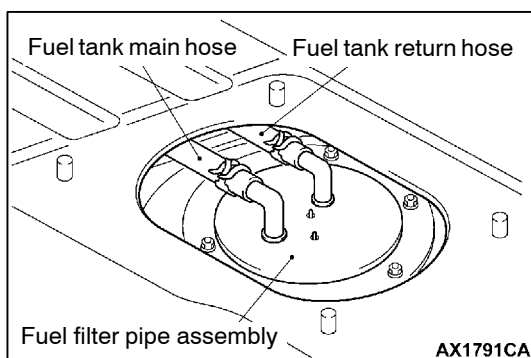
1. Tumble the second seat.
2. Remove the service hole cover (upper side) and the packing located under the second seat.
3. Remove the second seat, the rear scuff plate, the anchor bolts for the outer seat belt (second) and mounting screws of the lower quarter trim. Tear off the carpet. (Refer to GROUP 52A.)
4. Remove the service hole cover and the packing located between the front seat and the second seat.
5. Disconnect the harness connector.
6. Unscrew the mounting nut to remove the fuel gauge unit.
7. Assemble the fuel gauge unit and tighten the mounting nut to the specified torque.

Tightening torque : 2.5 ± 0.4 N·m

8. Connect the harness connector.
9. Attach the service hole cover and the packing located between the front seat and the second seat.
10. Restore the carpet; attach the second seat, the rear scuff plate, anchor bolts for the outer seat belt (second) and mounting screws of the lower quarter trim. (Refer to GROUP 52A.)
11. Attach the service hole cover located under the second seat and the packing.
12. Restore the second seat.

FUEL GAUGE UNIT CHECK

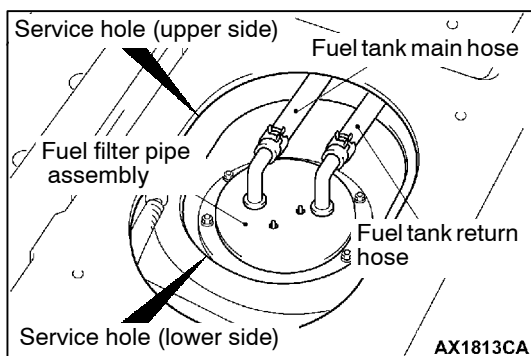
Refer to GROUP 54 - Combination Meter.

**FUEL FILTER PIPE ASSEMBLY REPLACEMENT
<SHORT WHEELBASE>**

1. Remove the front scuff plate and outer seat belt (rear) anchor bolt, and then turn the carpet up. (Refer to GROUP 52A.)
2. Remove the service hole cover and packing.
3. Disconnect the fuel tank return hose and the fuel tank main hose.
4. Remove the mounting nuts, and remove the fuel filter pipe assembly.
5. Install the fuel filter pipe assembly, and tighten the mounting nuts to the specified torque.

Tightening torque: 2.5 ± 0.4 N·m

6. Connect the fuel tank return hose and the fuel tank main hose.
7. Install the service hole cover and packing.
8. Spread the carpet and then install the front scuff plate and outer seat belt (rear) anchor bolt. (Refer to GROUP 52A.)

**<LONG WHEELBASE>**

1. Tumble the second seat.
2. Remove the service hole cover (upper side) and the packing.
3. Remove the service hole cover (lower side) and the packing.
4. Disconnect the fuel tank return hose and the fuel tank main hose.
5. Unscrew the mounting nut to remove the fuel filter pipe assembly.
6. Assemble the fuel filter pipe assembly and tighten the mounting nut to the specified torque.

Tightening torque: 2.5 ± 0.4 N·m

7. Connect the fuel tank return hose and the fuel tank main hose.
8. Attach the service hole cover (lower side) and the packing.
9. Attach the service hole cover (upper side) and the packing.
10. Restore the second seat.

FUEL FILTER

REMOVAL AND INSTALLATION

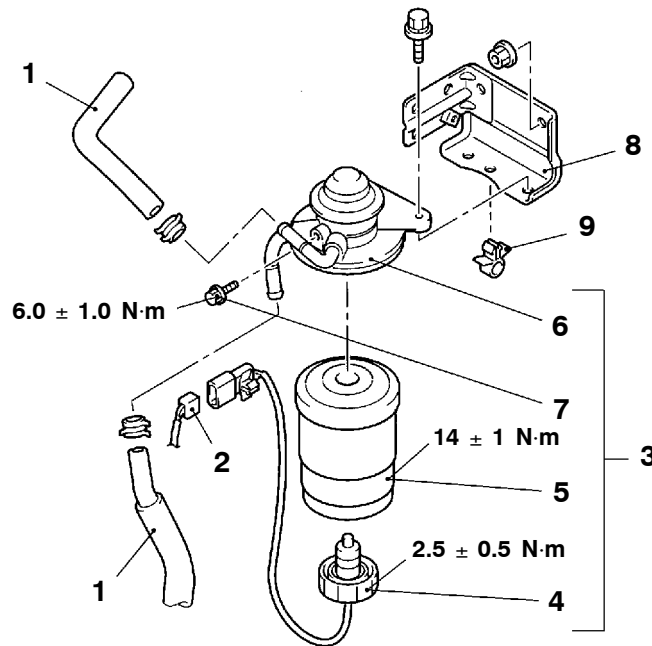
Pre-removal Operation

- Engine Cover Removal
(Refer to GROUP 11B - Camshaft)
- Battery, Battery Tray Removal

Post-installation Operation

- Fuel Line Air-bleeding
(Refer to GROUP 13B - On-vehicle Service.)
- Battery, Battery Tray Installation
- Engine Cover Installation
(Refer to GROUP 11B - Camshaft.)

<4D5>



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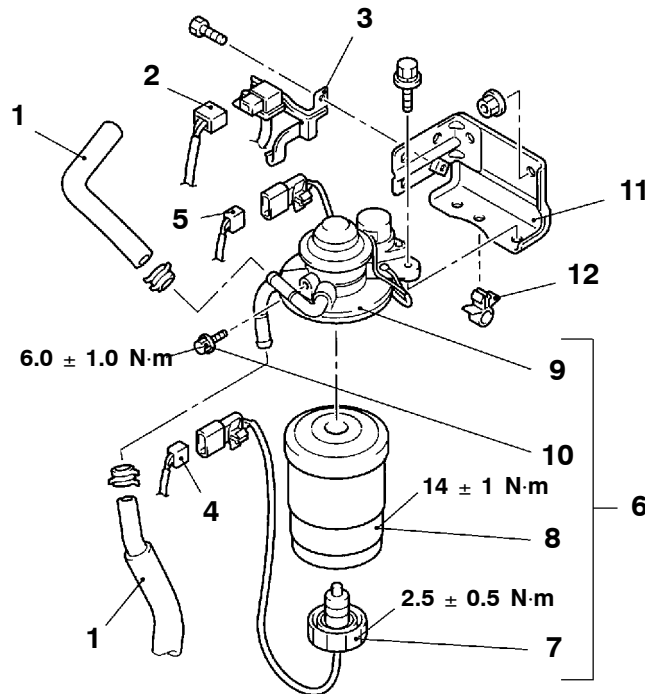
Removal steps



1. Fuel hose
2. Water level sensor connector connection
3. Fuel filter assembly
4. Water level sensor

5. Fuel filter cartridge
6. Fuel filter pump
7. Air plug
8. Fuel filter bracket
9. Clip

<4M4>

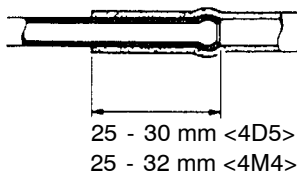


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Removal steps

1. Fuel hose
2. Boost sensor connector
3. Boost sensor bracket
4. Water level sensor connector connection
5. Fuel line heater connector
<Vehicles for cold zone>

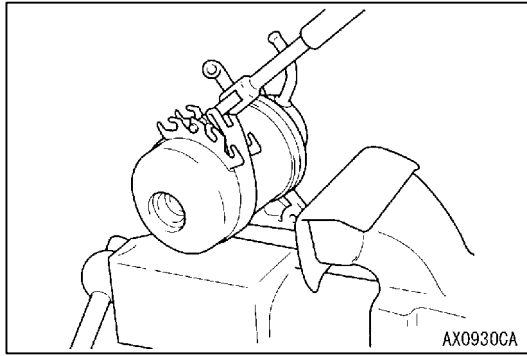
6. Fuel filter assembly
7. Water level sensor
8. Fuel filter cartridge
9. Fuel filter pump
10. Air plug
11. Fuel filter bracket
12. Clip



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INSTALLATION SERVICE POINT**►A◄ FUEL MAIN HOSE INSTALLATION**

If the pipe has a stepped part, connect securely up to the stepped part. If the pipe has no stepped part, insert so that the inserted portion is 25 - 30 mm <4D5>, 25 - 32 mm <4M4> long.



INSPECTION

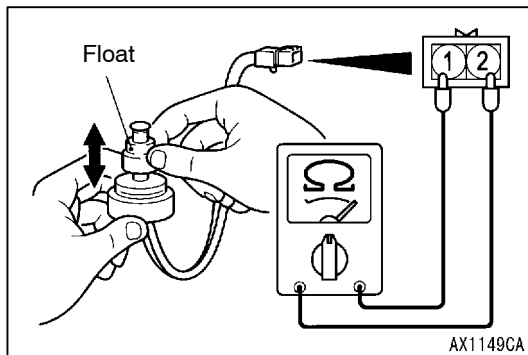
FUEL FILTER CARTRIDGE REPLACEMENT

1. Remove the fuel filler cap, and depressurise the fuel tank.
2. Disconnect the connector and the fuel hose.
3. Remove the boost sensor bracket from the fuel filter bracket. <4M4>
4. Remove the fuel filter assembly from the fuel filter bracket.
5. Remove the water level sensor from the fuel filter cartridge.
6. Use a filter wrench to remove the fuel filter cartridge from the fuel filter pump.

Caution

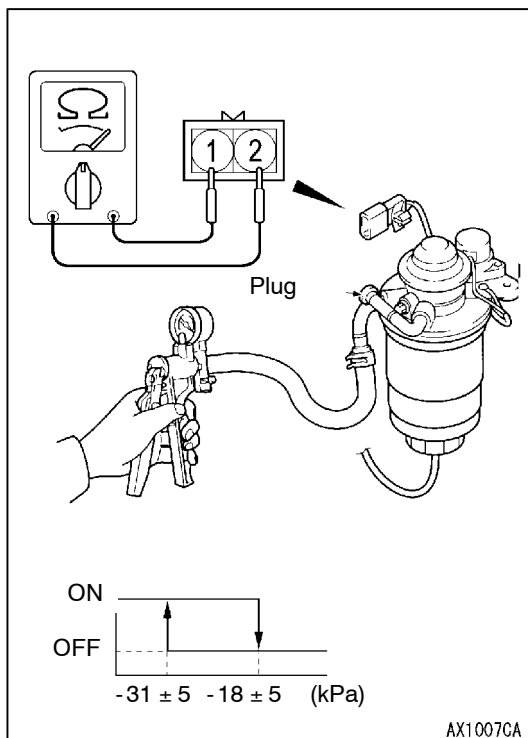
Cover the cartridge port with rag to prevent fuel from flowing out.

7. Install a new filter, and bleed the air from fuel line.
(Refer to GROUP 13B - On-vehicle Service.) <4D5>
(Refer to GROUP 13C - On-vehicle Service.) <4M4>
8. Start the engine, and check that there is no fuel leakage.



WATER LEVEL SENSOR CHECK

1. Connect the circuit tester to the water level sensor.
2. There should be continuity when the float is raised, while there is no continuity when it is lowered.
3. Replace the water level sensor if it is faulty.



FUEL LINE HEATER CONTINUITY CHECK <4M4>

1. Connect a hand vacuum pump to the outlet port of the fuel filter pump, and plug the inlet port as shown.
2. Connect a circuit tester to the fuel line heater connector.
3. Using hand vacuum pump apply a vacuum to the fuel filter pump body, check that there is a continuity between terminals when the pressure becomes -31 ± 5 kPa or less.
4. Lower the load gradually and became -18 ± 5 kPa, check that there is no continuity.
5. The fuel line heater is normal if the conditions 3 and 4 above are satisfied.
6. Replace the fuel filter pump if defective.

NOTES