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## GROUP 13D

# FUEL SUPPLY

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**GENERAL INFORMATION**

- The fuel tank is located under the floor of the rear seats to provide increased protection and a more luggage space.
- A fuel tank safety valve assembly has been adopted to prevent fuel from leaking out in case of a collision.

- A fuel pump assembly <2WD>, fuel pump and gauge assembly <4WD> including fuel pump, fuel filter, reservoir and fuel gauge unit, has been adopted to lighten weight and improve serviceability.

M1135000100457

**SEALANT**

M1135005200039

Item	Specified sealant
Service hole cover and floor pan <2WD>	3M 8513 Grommets windshield sealer (Black)

**SPECIAL TOOL**

M1135000600526

Tool	Number	Name	Use
 B992145	MB992145	Fuel leak check cap	Fuel leak check

## ON-VEHICLE SERVICE

## FUEL PUMP OPERATION CHECK

M1135001000260

&lt;4G63-Non-Turbo&gt;: Refer to GROUP 13A -

On-vehicle Service, Fuel Pump Operation Check

[P.13A-319](#).<4G63-Turbo>: Refer to GROUP 13B - On-vehicle Service, Fuel Pump Operation Check [P.13B-393](#).<4G69>: Refer to GROUP 13C - On-vehicle Service, Fuel Pump Operation Check [P.13C-428](#).

## FUEL GAUGE UNIT CHECK

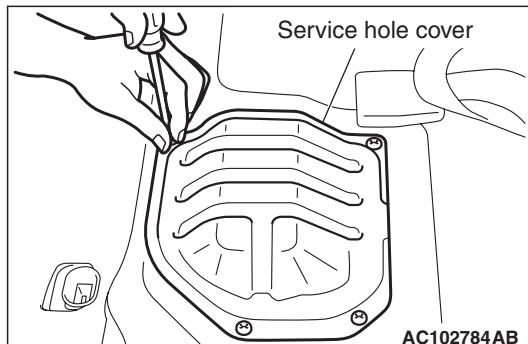
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Refer to GROUP 54A – Combination Meter, On-vehicle Service, Fuel Gauge Unit Check [P.54A-58](#)<2WD>, [P.54A-58](#) <4WD>.

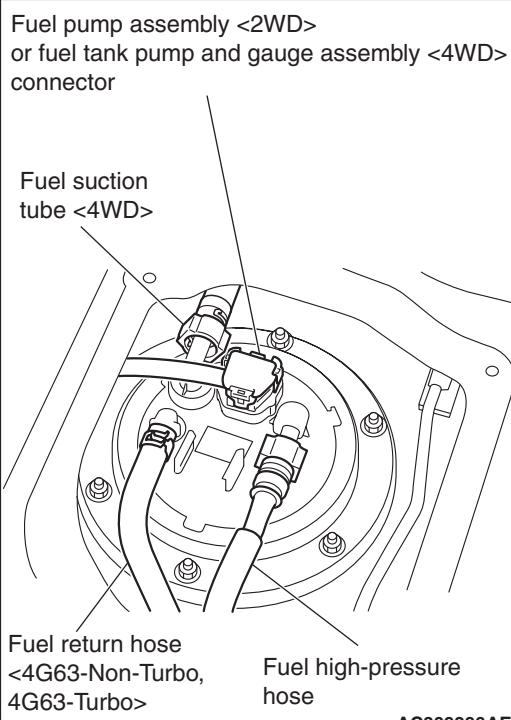
## FUEL PUMP ASSEMBLY &lt;2WD&gt;, FUEL TANK PUMP AND GAUGE ASSEMBLY &lt;4WD&gt; REPLACEMENT

M1135004900433

1. Remove the rear seat cushion assembly (Refer to GROUP 52A – Rear seat assembly [P.52A-26](#)).

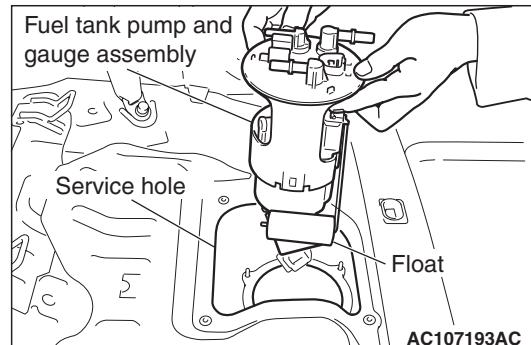


2. Remove the service hole cover mounting screws and remove the service hole cover.



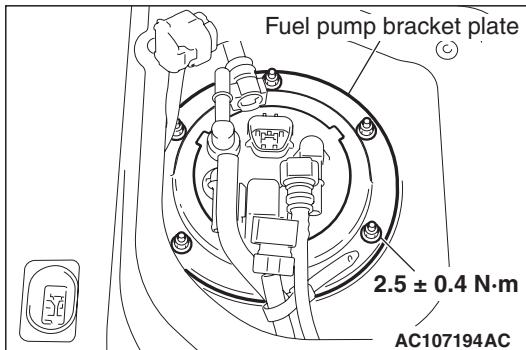
3. Disconnect the fuel pump assembly <2WD> or fuel tank pump and gauge assembly <4WD> connector, fuel return hose, fuel high-pressure hose and fuel suction tube <4WD>.

**CAUTION**



**For 4WD: Pay attention not to damage the float when removing and installing fuel tank pump and gauge assembly through the service hole.**

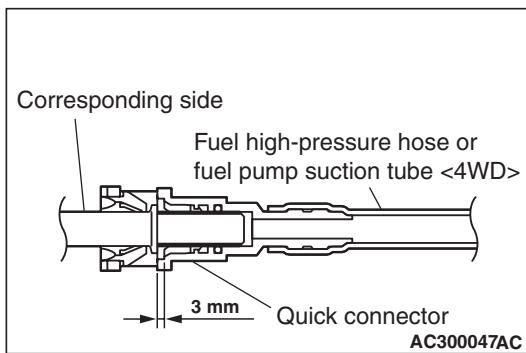
4. Remove the mounting nuts and fuel pump bracket plate, and remove the fuel pump assembly <2WD>, fuel tank pump and gauge assembly <4WD> from the service hole.
5. Install the fuel pump assembly <2WD>, fuel tank pump and gauge assembly <4WD> to the fuel tank through the service hole.



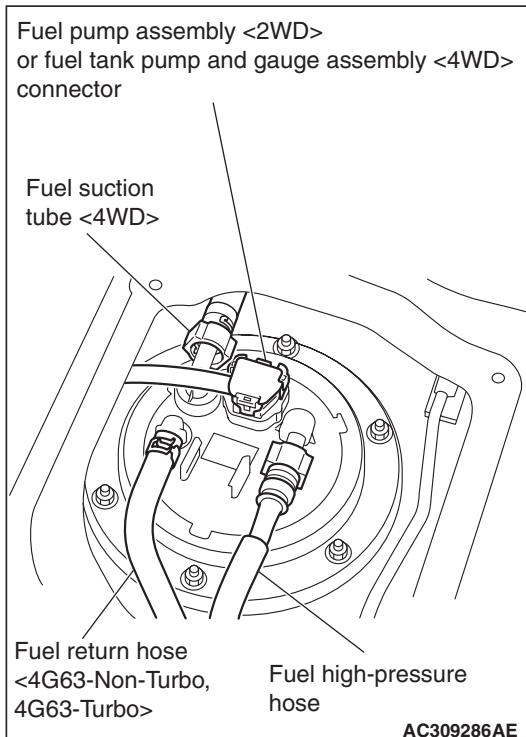
6. Install the fuel pump bracket plate to the fuel tank and tighten the mounting nuts to the specified torque.

**Tightening torque:  $2.5 \pm 0.4 \text{ N}\cdot\text{m}$**

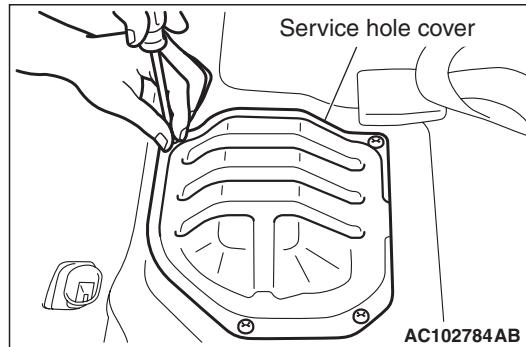
**CAUTION**



**After connecting the fuel high-pressure hose or fuel pump suction tube <4WD>, slightly pull it to ensure that it is installed securely. Also confirm that there is a play approximately 3 mm.**



7. Connect the fuel pump assembly <2WD> or fuel tank pump and gauge assembly <4WD> connector, fuel return hose, fuel high-pressure hose and fuel suction tube <4WD>.



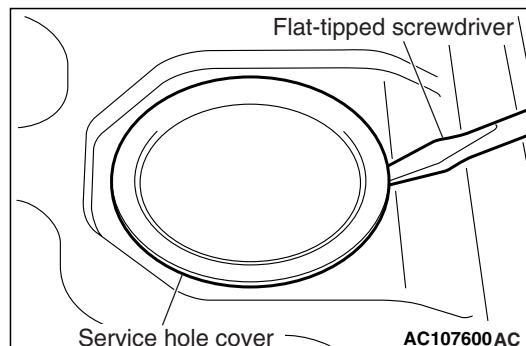
8. Tighten the service hole cover mounting screws and install the service hole cover.

9. Install the rear seat cushion assembly. (Refer to GROUP 52A – Rear seat assembly [P.52A-26](#)).

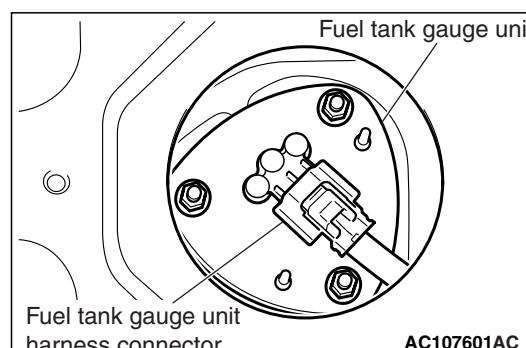
## FUEL TANK GAUGE UNIT REPLACEMENT <2WD>

M1135001400398

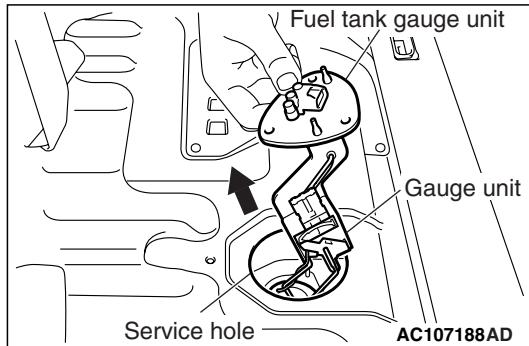
1. Remove the rear seat cushion assembly (Refer to GROUP 52A – Rear Seat Assembly [P.52A-26](#)).



2. Pry off the service hole cover using a flat-tipped screwdriver, etc.

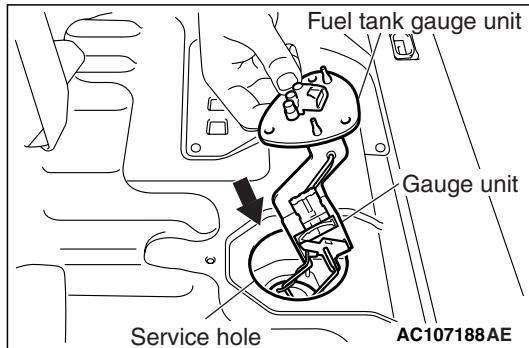


3. Disconnect the fuel tank gauge unit harness connector.

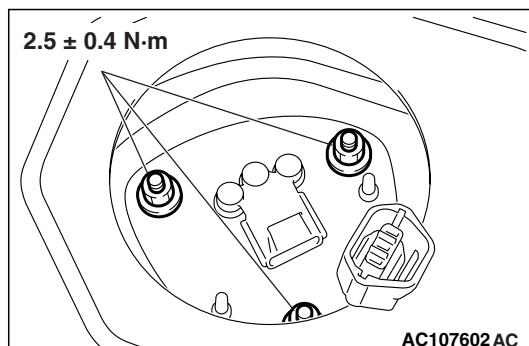
**CAUTION**

**Pay attention not to damage the gauge unit and the float of the fuel tank gauge unit when withdrawing it from the service hole.**

4. Remove the fuel tank gauge unit mounting nuts and remove the fuel tank gauge unit from service hole.

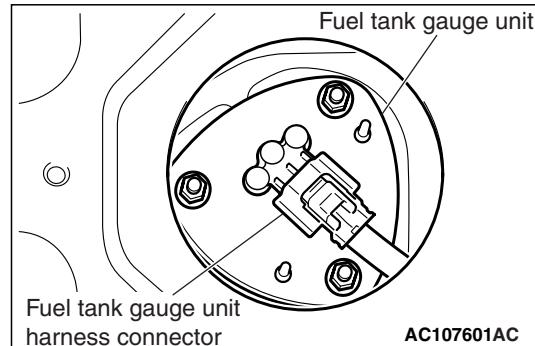
**CAUTION**

**Pay attention not to damage the gauge unit and the float of the fuel tank gauge unit when inserting it from the service hole.**

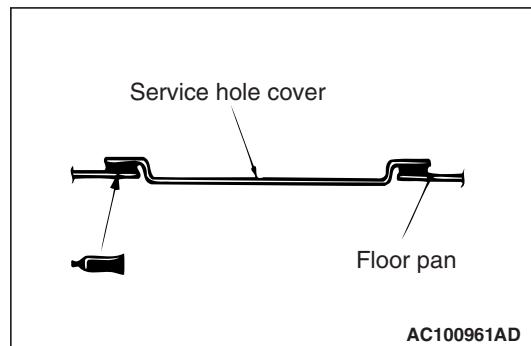


5. Install the fuel tank gauge unit to the fuel tank through the service hole, and tighten the mounting nuts to the specified torque.

**Tightening torque:  $2.5 \pm 0.4 \text{ N}\cdot\text{m}$**



6. Connect the fuel tank gauge unit harness connector.



7. Apply the specified sealant to the contact surfaces of the service hole cover and the floor pan, and install the service hole cover.

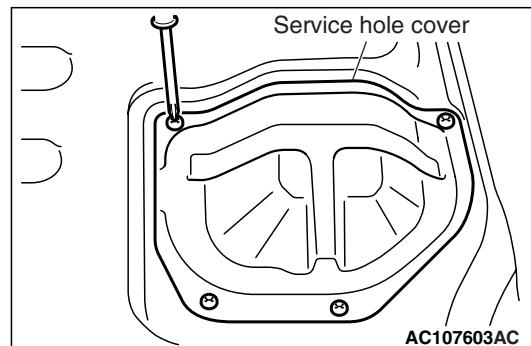
**Specified sealant: 3M 8513 Grommets Windshield Sealer (Black)**

8. Install the rear seat cushion assembly (Refer to GROUP 52A – Rear Seat Assembly P.52A-26).

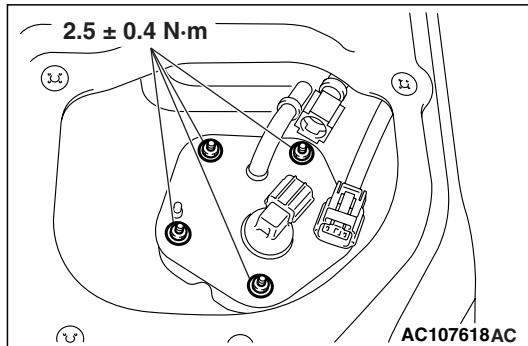
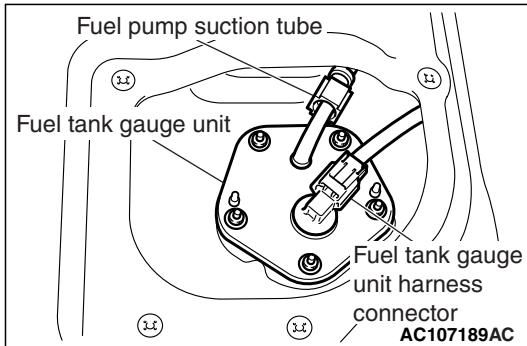
## FUEL TANK GAUGE UNIT REPLACEMENT <4WD>

M1135001400406

1. Remove the rear seat cushion assembly (Refer to GROUP 52A – Rear Seat Assembly P.52A-26).

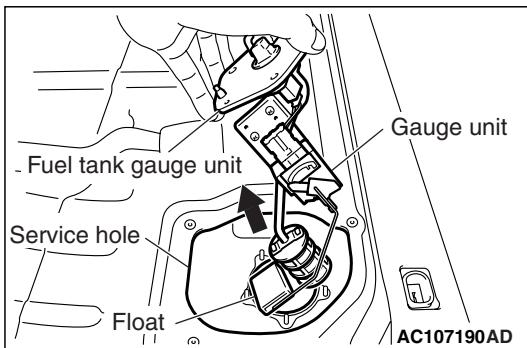


2. Remove the service hole cover mounting screws and remove the service hole cover.



3. Disconnect the fuel tank gauge unit harness connector and fuel pump suction tube.

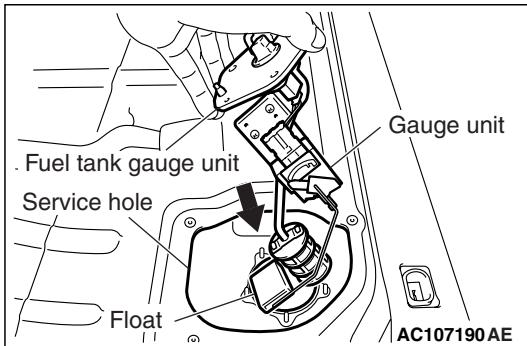
**CAUTION**



**Pay attention not to damage the gauge unit and the float of the fuel tank gauge unit when withdrawing it from the service hole.**

4. Remove the fuel tank gauge unit mounting nuts and remove the fuel tank gauge unit from service hole.

**CAUTION**

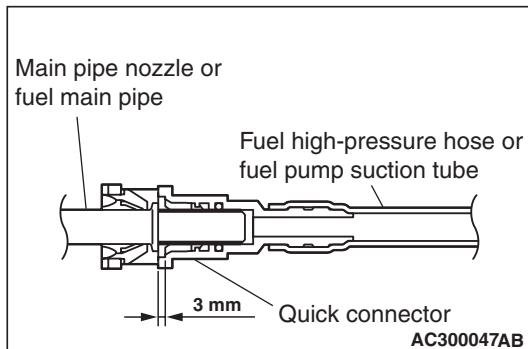


**Pay attention not to damage the gauge unit and the float of the fuel tank gauge unit when inserting it from the service hole.**

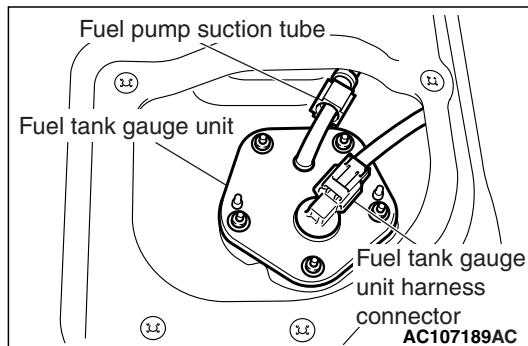
5. Install the fuel tank gauge unit to the fuel tank through the service hole, and tighten the mounting nuts to the specified torque.

**Tightening torque:  $2.5 \pm 0.4 \text{ N}\cdot\text{m}$**

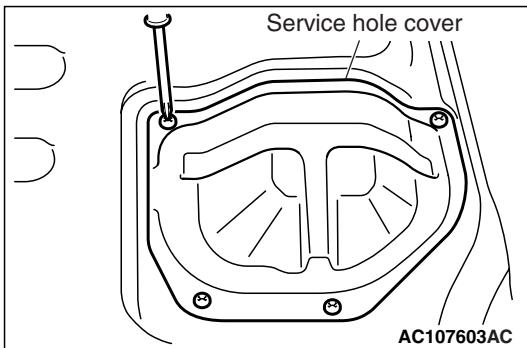
**CAUTION**



**After connecting the fuel high-pressure hose or fuel pump suction tube, slightly pull it to ensure that it is installed securely. Also confirm that there is a play approximately 3 mm.**



6. Connect the fuel tank pump gauge unit harness connector and fuel suction tube.



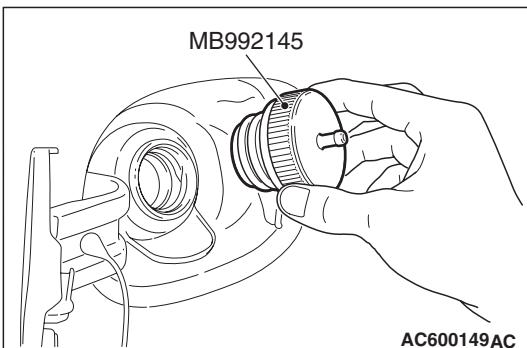
7. Tighten the service hole cover mounting screws and install the service hole cover.
8. Install the rear seat cushion assembly (Refer to GROUP 52A – Rear Seat Assembly [P.52A-26](#)).

## FUEL LEAK CHECK OF FUEL TANK

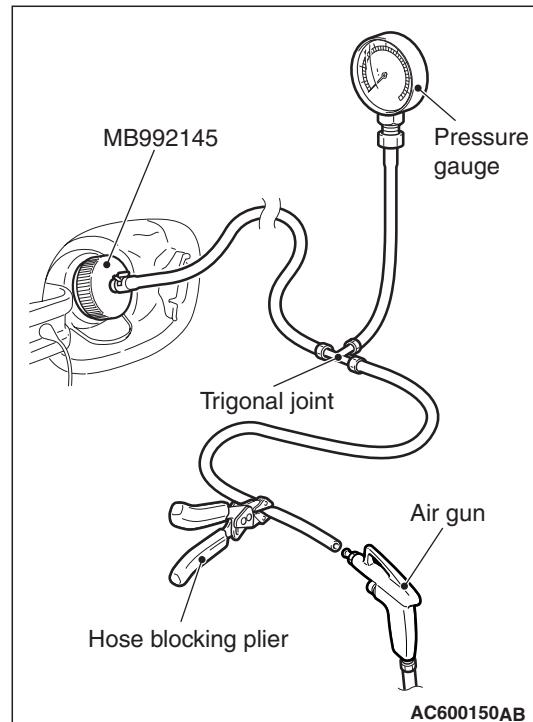
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### ⚠ CAUTION

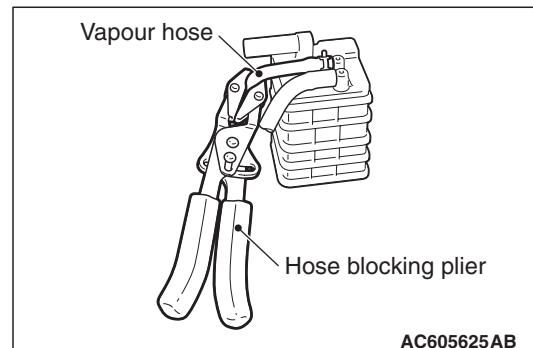
Always check the fuel leak of fuel tank with the vehicle loaded. If it is checked with the fuel tank removed, the fuel tank may be damaged.



1. Remove the fuel tank cap, install special tool fuel leak check cap (MB992145).



2. Install the hose and pressure gauge to the special tool as shown.



3. Block the canister vapour hose (fuel tank side).

### ⚠ CAUTION

- Do not pressurise suddenly.
- Do not pressurise 11.76 kPa or more to prevent the damage of components.

4. Pressurize while checking the pressure gauge and hold if it reaches from 9.80 to 11.76 kPa.
5. Leave it for approximately 3 minutes and check that the pressure is not weakened.
6. If the pressure is weakened, apply soapy water to each part with pressurised state and check the leak while confirming if air bubbles are seen.

## FUEL TANK

## REMOVAL AND INSTALLATION

&lt;4G63-Non-Turbo, 4G63-Turbo&gt;

M1135001900702

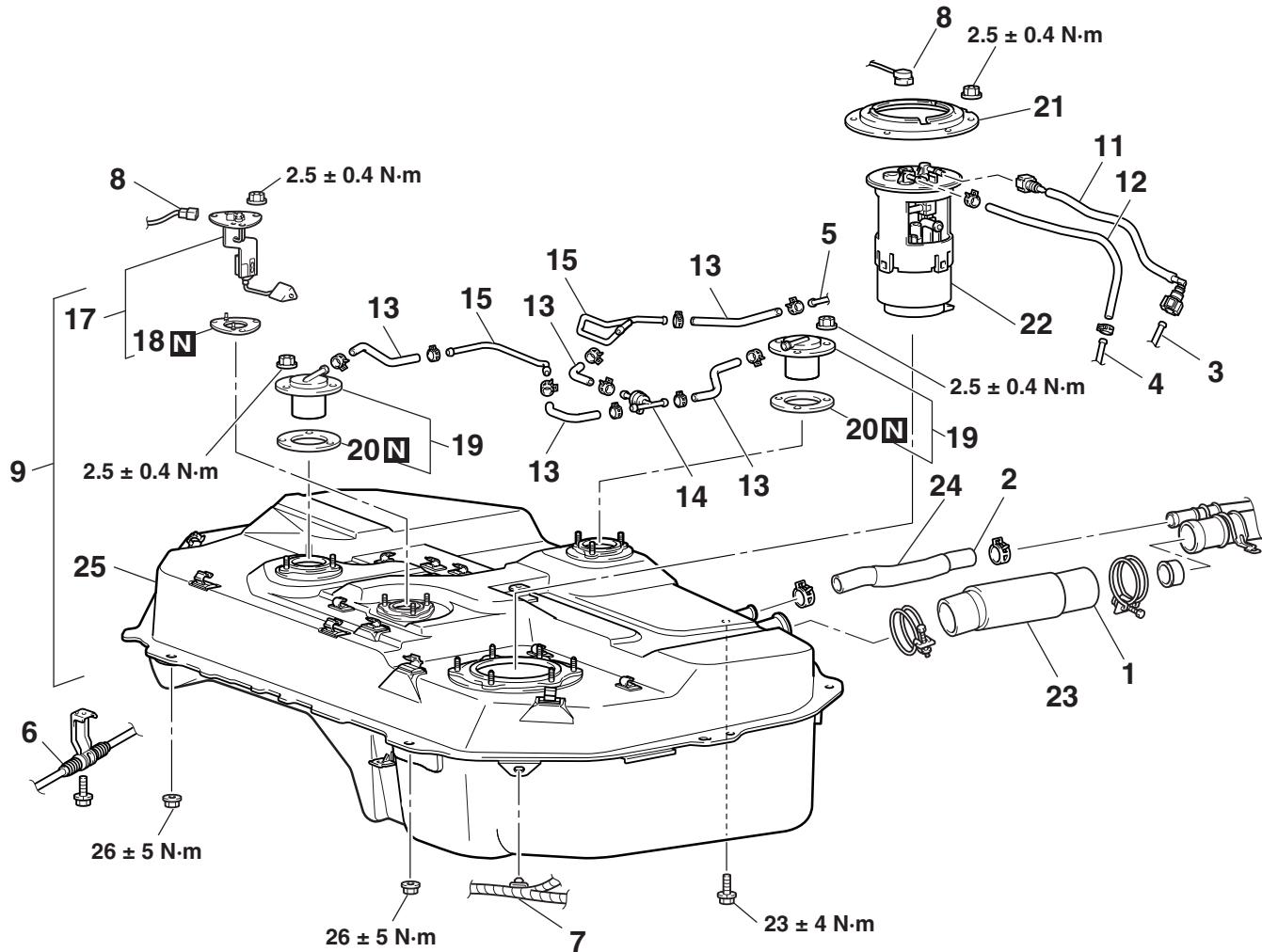
## Pre-removal Operation

- Draining Fuel
- Fuel Pump Connector Disconnection (How to Reduce Fuel Pressure) (Refer to GROUP 13A – On-vehicle Service [P.13A-318](#) <4G63-Non-Turbo>) (Refer to GROUP 13B – On-vehicle Service [P.13B-393](#) <4G63-Turbo>).
- Centre Exhaust Pipe Removal (Refer to GROUP 15, Exhaust Pipe and Main Muffler [P.15-25](#) <4G63-Non-Turbo>) (Refer to GROUP 15, Exhaust Pipe and Main Muffler [P.15-27](#) <4G63-Turbo>).
- Propeller Shaft Removal <4WD> (Refer to GROUP 25, Propeller Shaft [P.25-3](#)).

## Post-installation Operation

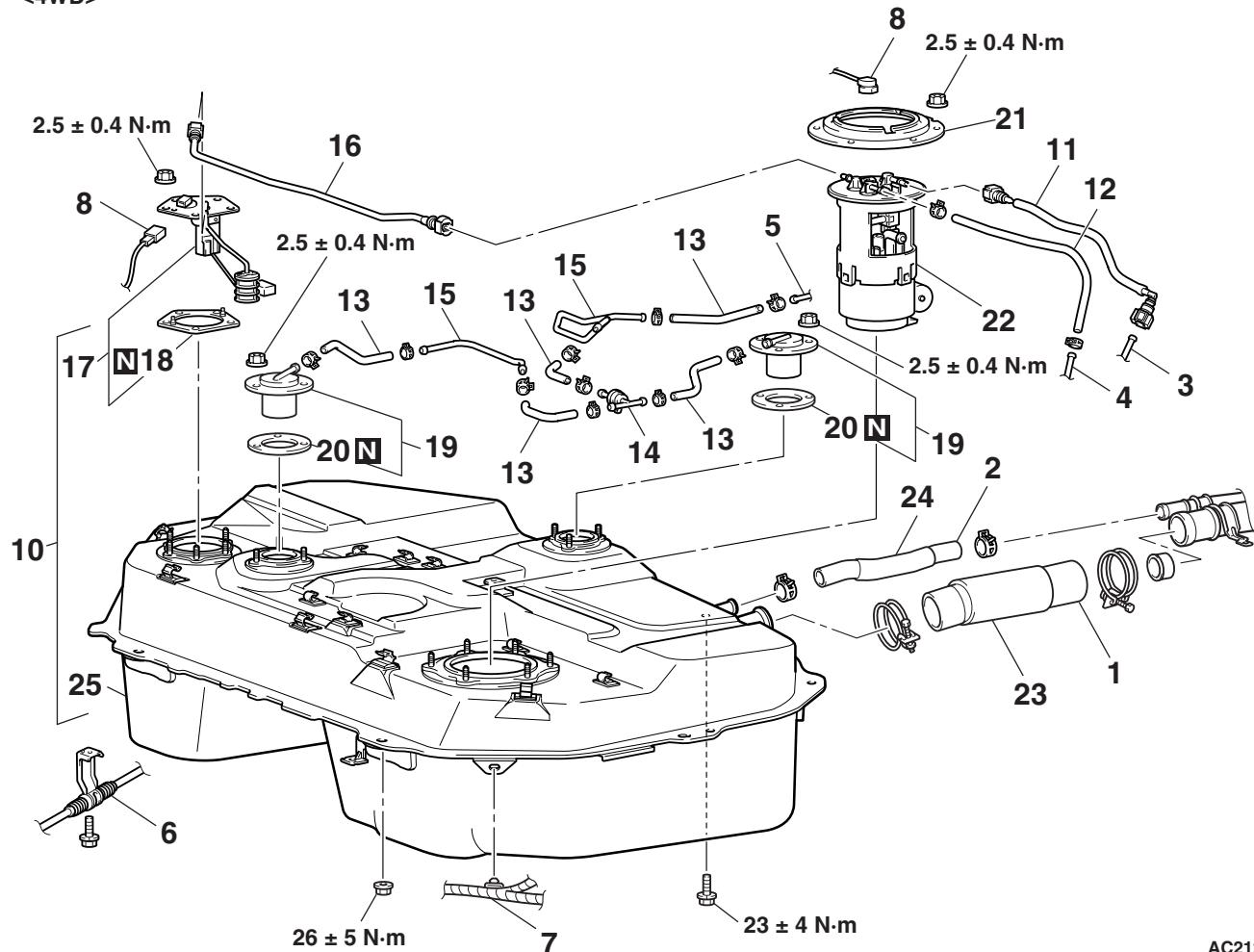
- Propeller Shaft Installation <4WD> (Refer to GROUP 25, Propeller Shaft [P.25-3](#)).
- Centre Exhaust Pipe Installation (Refer to GROUP 15, Exhaust Pipe and Main Muffler [P.15-25](#) <4G63-Non-Turbo>) (Refer to GROUP 15, Exhaust Pipe and Main Muffler [P.15-27](#) <4G63-Turbo>).
- Refilling Fuel
- Checking for Fuel Leaks

&lt;2WD&gt;



AC212356AB

<4WD>



AC212516AB

**Fuel tank assembly removal steps**

1. Fuel filler hose connection <Fuel filler neck side>
2. Fuel filler neck breather hose connection <Fuel filler neck side>
3. Main pipe connection
4. Return pipe
5. Fuel vapour pipe
6. Parking brake cable clamp connection <RH side>
7. Wiring harness clamp connection
8. Fuel tank gauge unit assembly, fuel pump assembly <2WD>, fuel tank pump and gauge assembly <4WD> connector connection

<<A>>

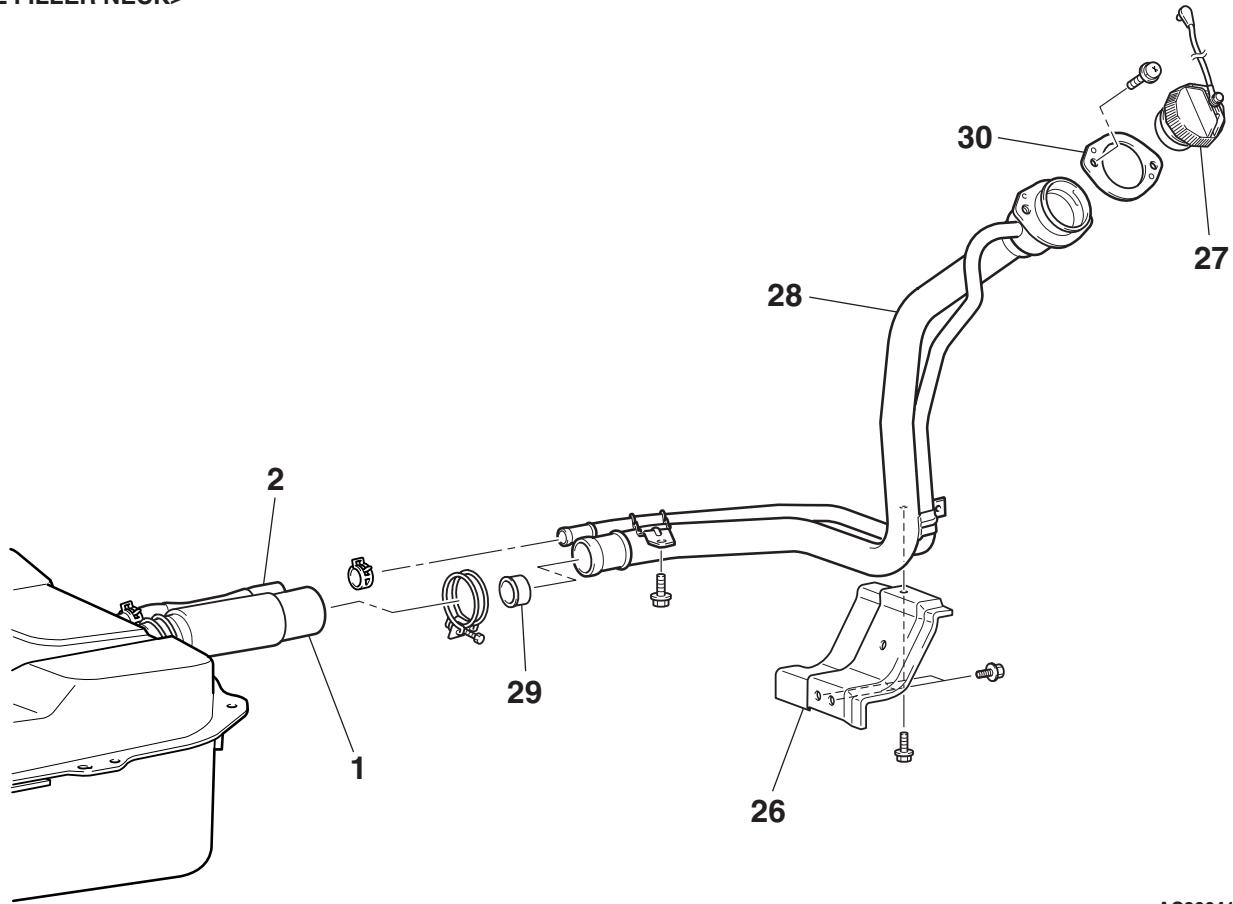
- Rear differential support member installation nuts and bolts <4WD> (Refer to GROUP 27B – Rear Differential Carrier Assembly P.27B-16).

9. Fuel tank assembly <2WD>
10. Fuel tank assembly <4WD>

**Fuel tank assembly removal steps (Continued)**

<p>&gt;&gt;A&lt;&lt;</p> <p>&gt;&gt;B&lt;&lt;</p> <p>&lt;&lt;B&gt;&gt;</p>	<p>11. Fuel high-pressure hose</p> <p>12. Fuel return hose</p> <p>13. Fuel tank hose</p> <p>14. Fuel tank vapour hose 2way valve</p> <p>15. Fuel vapour pipe</p> <p>16. Fuel pump suction tube &lt;4WD&gt;</p> <p>17. Fuel tank gauge unit</p> <p>18. Gasket</p> <p>19. Fuel tank safety valve</p> <p>20. Gasket</p> <p>21. Fuel pump bracket plate</p> <p>22. Fuel pump assembly &lt;2WD&gt;, fuel tank pump and gauge assembly &lt;4WD&gt;</p> <p>23. Fuel filler hose</p> <p>24. Fuel filler neck breather hose</p> <p>25. Fuel tank</p>
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## &lt;FUEL FILLER NECK&gt;



AC300410AB

**Fuel filler neck removal steps**

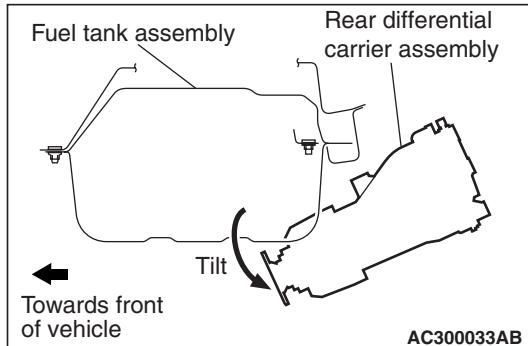
1. Fuel filler hose connection <Fuel filler neck side>
2. Fuel filler neck breather hose connection <Fuel filler neck side>
26. Fuel filler neck protector

**Fuel filler neck removal steps**

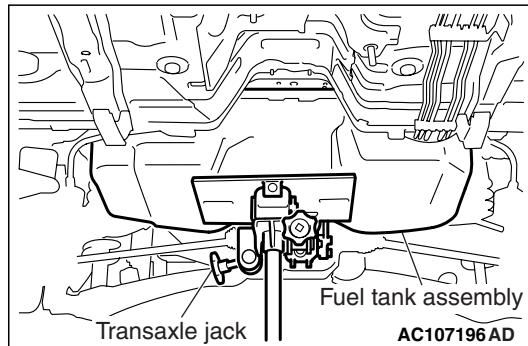
27. Fuel tank cap
28. Fuel filler neck
29. Fuel filler neck valve
30. Gasket

## REMOVAL SERVICE POINTS

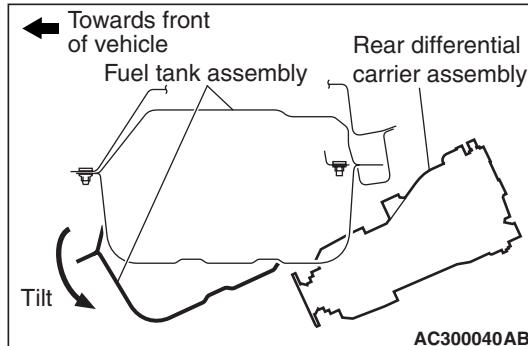
## &lt;&lt;A&gt;&gt; REAR DIFFERENTIAL SUPPORT MEMBER INSTALLATION NUTS AND BOLTS &lt;4WD&gt;/FUEL TANK ASSEMBLY &lt;4WD&gt; REMOVAL



1. Remove the rear differential support member installation nuts and bolts, and then tilt the rear differential carrier assembly (Refer to GROUP 27B – Rear Differential Carrier Assembly P.27B-16).



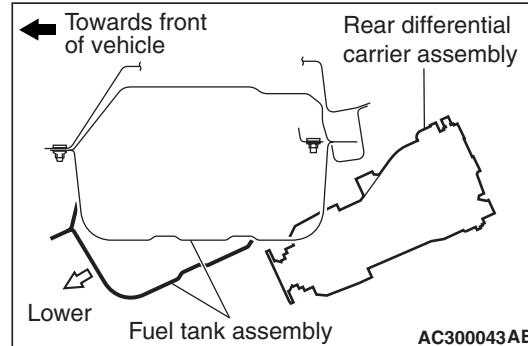
2. Raise and support the fuel tank assembly with a transmission jack, and remove the mounting nuts and bolts.



## ⚠ CAUTION

Support the fuel tank assembly securely so that it does not fall off from the transmission jack.

3. Tilt the fuel tank assembly to disconnect the connectors.



4. Remove the fuel tank assembly to the direction shown, being careful not to strike it against the rear differential carrier assembly.

## &lt;&lt;B&gt;&gt; FUEL TANK GAUGE UNIT/FUEL PUMP ASSEMBLY &lt;2WD&gt;, FUEL TANK PUMP AND GAUGE ASSEMBLY &lt;4WD&gt; REMOVAL

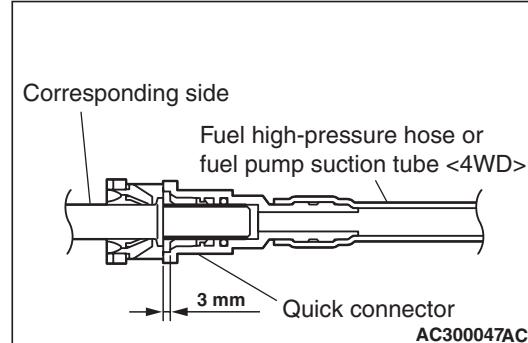
## ⚠ CAUTION

When withdrawing the fuel tank gauge unit, fuel tank pump and gauge assembly from the fuel tank, be careful not damage the module unit and the float.

## INSTALLATION SERVICE POINTS

## &gt;&gt;A&lt;&lt; FUEL PUMP SUCTION TUBE &lt;4WD&gt;/FUEL HIGH-PRESSURE HOSE INSTALLATION

## ⚠ CAUTION



After connecting the fuel high-pressure hose or fuel pump suction tube <4WD>, slightly pull it to ensure that it is installed securely. Also confirm that there is a play approximately 3 mm.

## REMOVAL AND INSTALLATION &lt;4G69&gt;

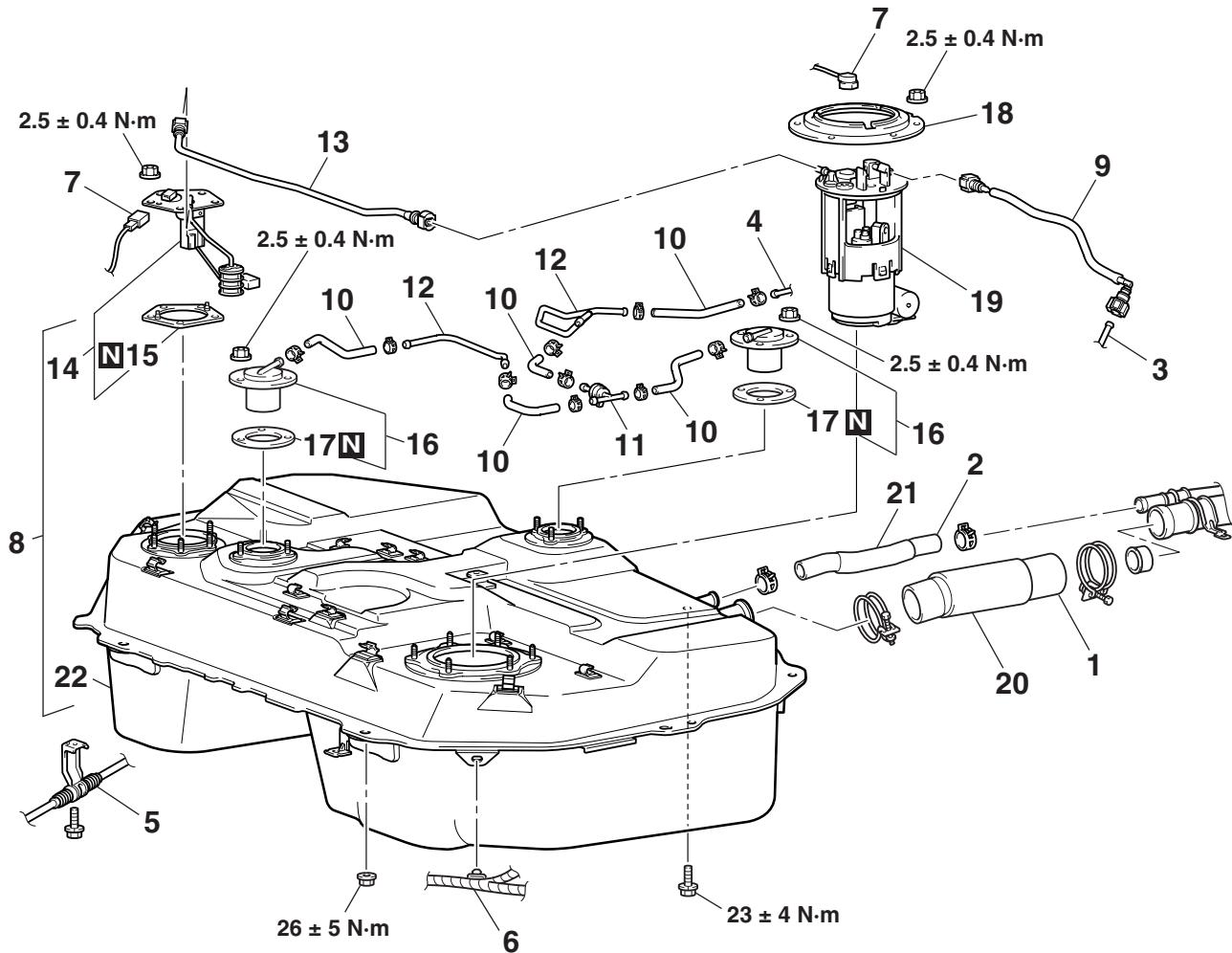
M1135001900542

## Pre-removal Operation

- Draining Fuel
- Fuel Pump Connector Disconnection (How to Reduce Fuel Pressure) (Refer to GROUP 13C – On-vehicle Service P.13C-428).
- Centre Exhaust Pipe Removal (Refer to GROUP 15, Exhaust Pipe and Main Muffler P.15-25).
- Propeller Shaft Removal (Refer to GROUP 25, Propeller Shaft P.25-3).

## Post-installation Operation

- Propeller Shaft Installation (Refer to GROUP 25, Propeller Shaft P.25-3).
- Centre Exhaust Pipe Installation (Refer to GROUP 15, Exhaust Pipe and Main Muffler P.15-25).
- Refilling Fuel
- Checking for Fuel Leaks



AC309122AB

## Fuel tank assembly removal steps

1. Fuel filler hose connection <Fuel filler neck side>
2. Fuel filler neck breather hose connection <Fuel filler neck side>
3. Main pipe connection
4. Fuel vapour pipe
5. Parking brake cable clamp connection <RH side>
6. Wiring harness clamp connection
7. Fuel tank gauge unit assembly, fuel tank pump and gauge assembly connector connection

&lt;&lt;A&gt;&gt;

&lt;&lt;A&gt;&gt;

&gt;&gt;A&lt;&lt;

&gt;&gt;A&lt;&lt;

## Fuel tank assembly removal steps (Continued)

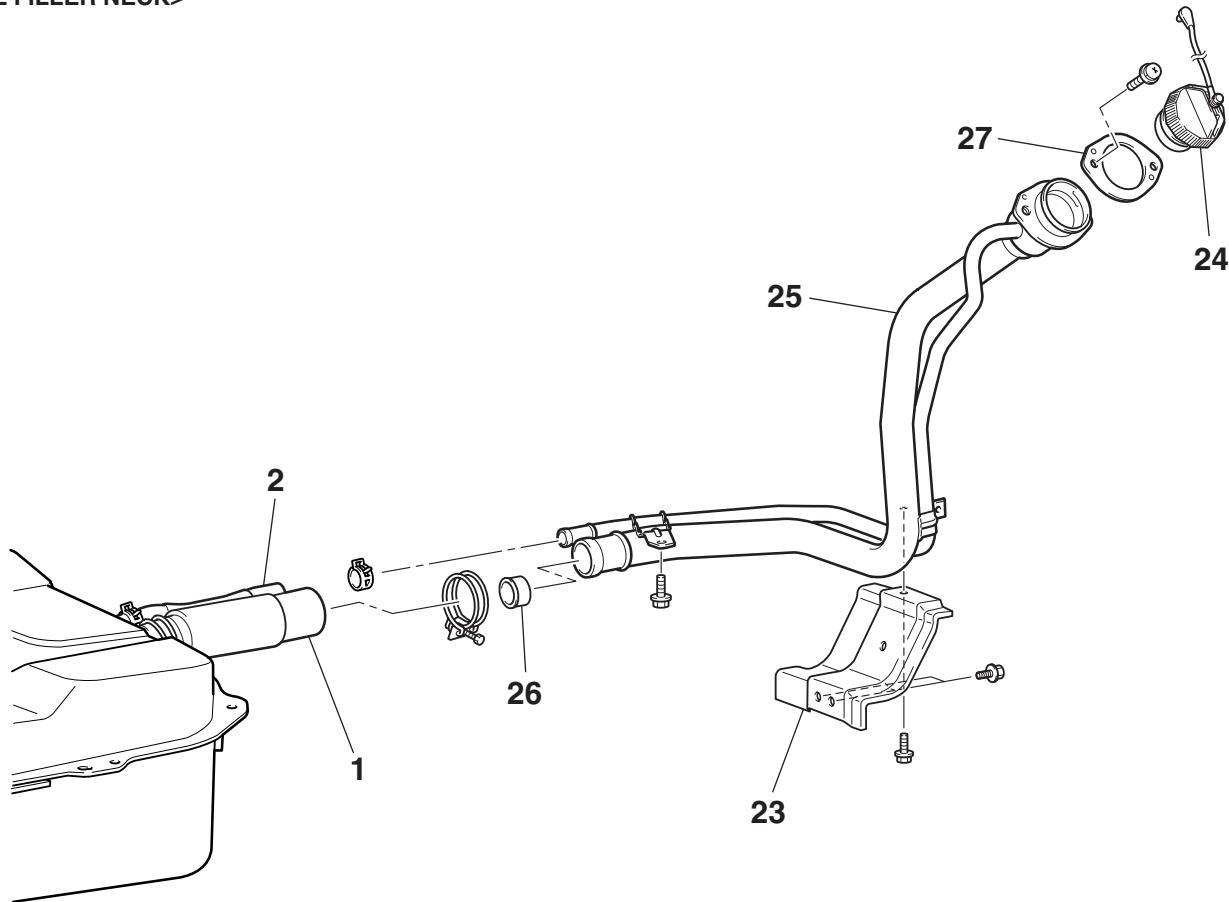
- Rear differential support member installation nuts and bolts (Refer to GROUP 27B – Rear Differential Carrier Assembly P.27B-16).
- 8. Fuel tank assembly
- 9. Fuel high-pressure hose
- 10. Fuel tank hose
- 11. Fuel tank vapour hose 2way valve
- 12. Fuel vapour pipe
- 13. Fuel pump suction tube
- 14. Fuel tank gauge unit
- 15. Gasket
- 16. Fuel tank safety valve

**Fuel tank assembly removal  
steps (Continued)**

<<B>>

17. Gasket
18. Fuel pump bracket plate
19. Fuel tank pump and gauge assembly
20. Fuel filler hose
21. Fuel filler neck breather hose
22. Fuel tank

<FUEL FILLER NECK>



AC300410AC

**Fuel filler neck removal steps**

1. Fuel filler hose connection <Fuel filler neck side>
2. Fuel filler neck breather hose connection <Fuel filler neck side>
23. Fuel filler neck protector

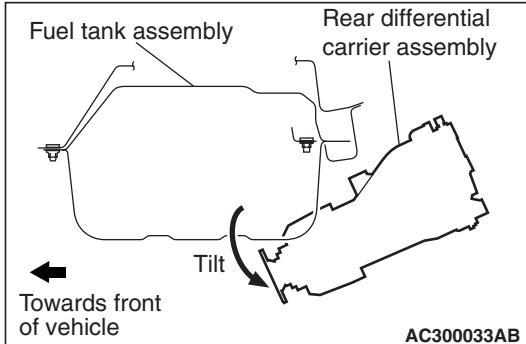
**Fuel filler neck removal steps**

24. Fuel tank cap
25. Fuel filler neck
26. Fuel filler neck valve
27. Gasket

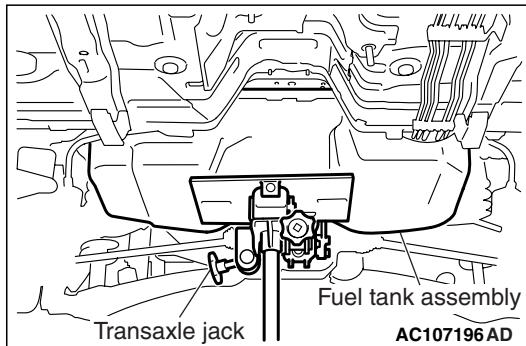
## REMOVAL SERVICE POINTS

## &lt;&lt;A&gt;&gt; REAR DIFFERENTIAL SUPPORT MEMBER INSTALLATION NUTS AND BOLTS/FUEL TANK ASSEMBLY

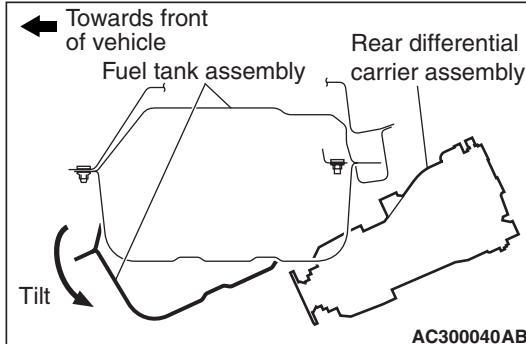
## REMOVAL



1. Remove the rear differential support member installation nuts and bolts, and then tilt the rear differential carrier assembly (Refer to GROUP 27B – Rear Differential Carrier Assembly P.27B-16).



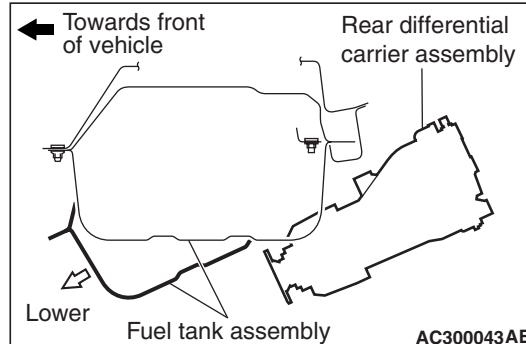
2. Raise and support the fuel tank assembly with a transmission jack, and remove the mounting nuts and bolts.



## ⚠ CAUTION

Support the fuel tank assembly securely so that it does not fall off from the transmission jack.

3. Tilt the fuel tank assembly to disconnect the connectors.



4. Remove the fuel tank assembly to the direction shown, being careful not to strike it against the rear differential carrier assembly.

## &lt;&lt;B&gt;&gt; FUEL TANK GAUGE UNIT/FUEL TANK PUMP AND GAUGE ASSEMBLY REMOVAL

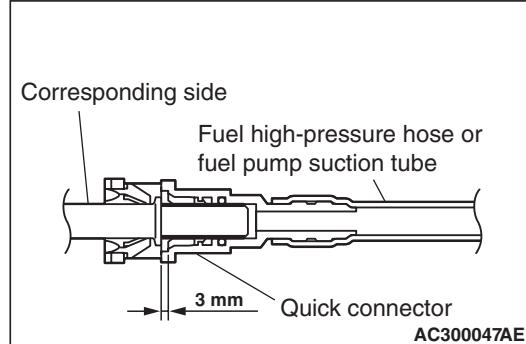
## ⚠ CAUTION

When withdrawing the fuel tank gauge unit, fuel tank pump and gauge assembly from the fuel tank, be careful not damage the module unit and the float.

## INSTALLATION SERVICE POINTS

## &gt;&gt;A&lt;&lt; FUEL PUMP SUCTION TUBE &lt;4WD&gt;/FUEL HIGH-PRESSURE HOSE INSTALLATION

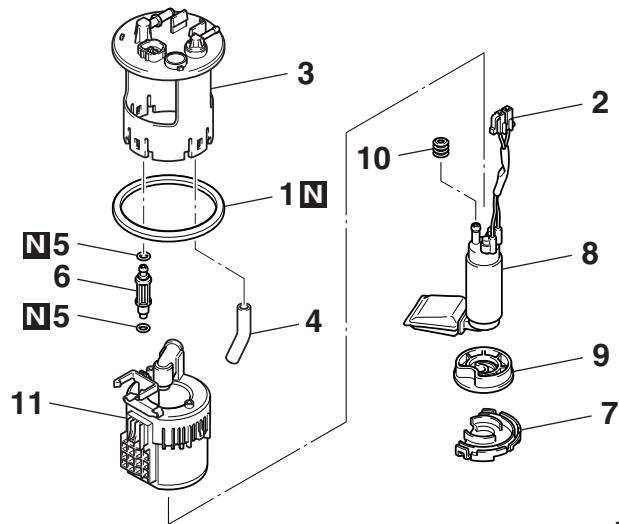
## ⚠ CAUTION



After connecting the fuel high-pressure hose or fuel pump suction tube, slightly pull it to ensure that it is installed securely. Also confirm that there is a play approximately 3 mm.

FUEL PUMP ASSEMBLY DISASSEMBLY  
AND REASSEMBLY <2WD>

M1135004600380



AC309295AB

**Disassembly steps**

>>A<<

- 1. Gasket
- 2. Fuel tank pump connector connection
- 3. Fuel pump bracket
- 4. Fuel pump hose
- 5. O-ring
- 6. Fuel pump tube
- 7. Fuel pump bracket
- 8. Fuel tank pump
- 9. Fuel tank pump cushion

**Disassembly steps (Continued)**

- >>A<< 10. Fuel tank grommet
- 11. Fuel tank filter assembly

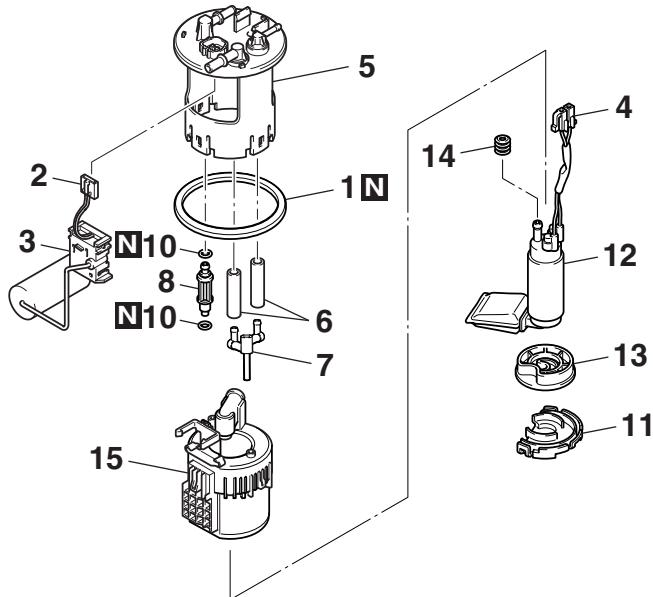
**REASSEMBLY SERVICE POINT****>>A<< FUEL TANK GROMMET/O-RING  
INSTALLATION**

Apply gasoline on the grommet and the O-ring before mounting them to prevent damage or twisting.

FUEL TANK PUMP AND GAUGE  
ASSEMBLY DISASSEMBLY AND  
REASSEMBLY <4WD>

M1135004600476

&lt;4G63-Non-Turbo, 4G63-Turbo&gt;

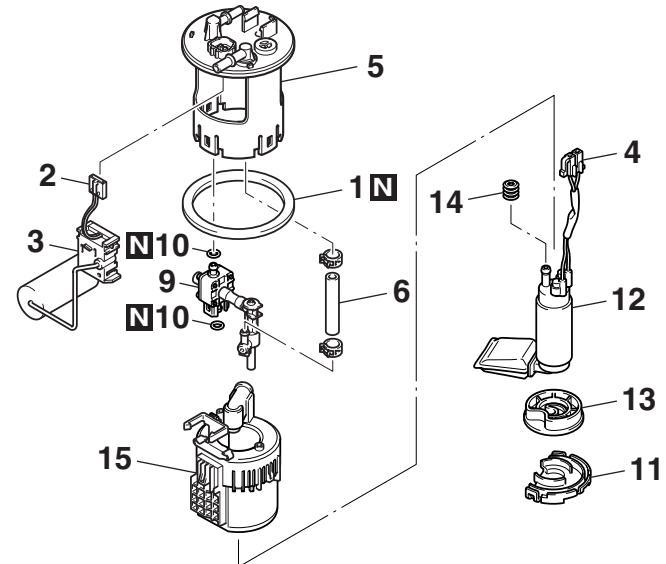


AC309123

**Disassembly steps**

1. Gasket
2. Fuel tank gauge unit connector connection
3. Fuel tank gauge unit
4. Fuel tank pump connector connection
5. Fuel pump bracket
6. Fuel pump hose
7. Fuel tank assist pump  
<4G63-Non-Turbo, 4G63-Turbo>
8. Fuel pump tube  
<4G63-Non-Turbo, 4G63-Turbo>
9. Fuel pump pressure regulator  
<4G69>
- >>A<< 10. O-ring

&lt;4G69&gt;

AC309123  
AC309296AC**Disassembly steps (Continued)**

11. Fuel pump bracket
12. Fuel tank pump
13. Fuel tank pump cushion
- >>A<< 14. Fuel tank grommet
15. Fuel tank filter assembly

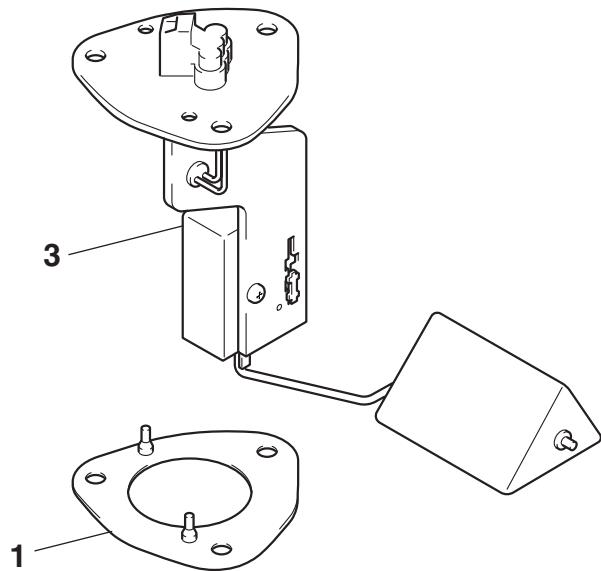
**REASSEMBLY SERVICE POINT****>>A<< FUEL TANK GROMMET/O-RING  
INSTALLATION**

Apply gasoline on the grommet and the O-ring before mounting them to prevent damage or twisting.

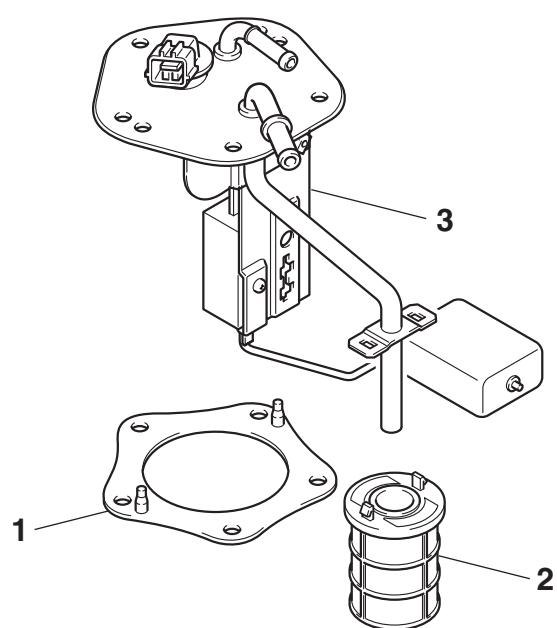
## FUEL TANK GAUGE UNIT DISASSEMBLY AND REASSEMBLY

M1135051100068

<2WD>



<4WD>



### Disassembly steps

1. Gasket

### Disassembly steps (Continued)

2. Fuel in tank filter <4WD>
3. Fuel tank gauge unit

AC102461AD

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**NOTES**