

FUEL SYSTEM AND THROTTLE BODY

CONTENTS

FUEL DELIVERY SYSTEM.....	5- 2
FUEL SYSTEM.....	5- 3
FUEL TANK REMOVAL.....	5- 3
FUEL TANK INSTALLATION	5- 4
FUEL PRESSURE INSPECTION.....	5- 5
FUEL PUMP REMOVAL	5- 6
FUEL PUMP INSTALLATION.....	5- 6
FUEL PUMP INSPECTION	5- 6
FUEL DISCHARGE AMOUNT INSPECTION	5- 7
FUEL PUMP RELAY INSPECTION	5- 8
FUEL VALVE/FUEL FILTER.....	5- 9
FUEL PRESSURE REGULATOR.....	5-11
THROTTLE BODY	5-12
CONSTRUCTION	5-12
REMOVAL	5-13
DISASSEMBLY	5-14
CLEANING	5-16
INSPECTION	5-16
REASSEMBLY.....	5-16
INSTALLATION.....	5-18
FUEL INJECTOR REMOVAL.....	5-18
FUEL INJECTOR INSPECTION.....	5-18
FUEL INJECTOR INSTALLATION	5-18
THROTTLE POSITION SENSOR (TPS) SETTING.....	5-18

⚠ WARNING

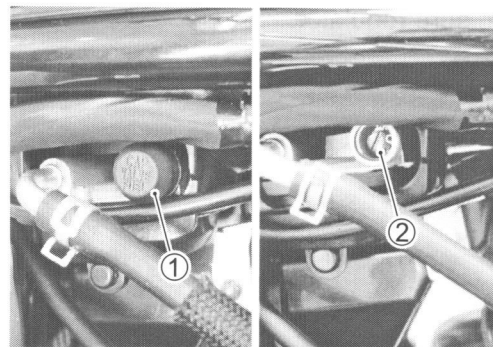
Gasoline must be handled carefully in an area well ventilated and away from fire or sparks.

FUEL DELIVERY SYSTEM

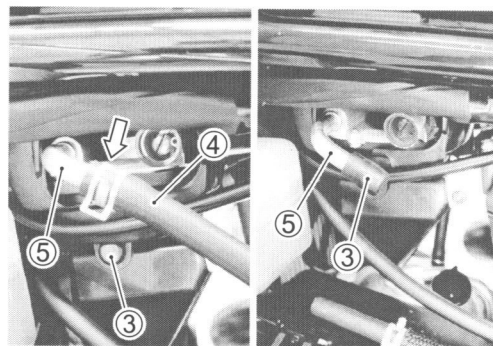
FUEL SYSTEM

FUEL TANK REMOVAL

- Remove the front fender. (☞ 7-6)
- Remove the fuel valve screw cap ①.
- Close the fuel valve screw ② by turning the fuel valve screw ② clockwise.



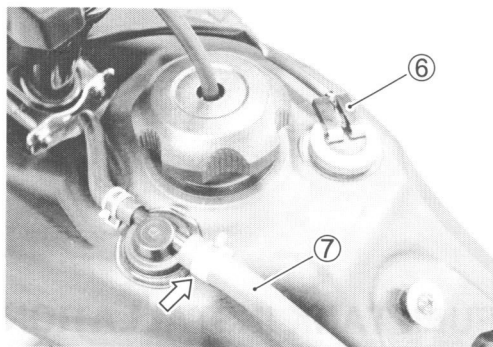
- Remove the fuel pipe cap ③.
- Place a rag under the fuel hose ④ and disconnect the fuel hose ④ from the fuel pipe ⑤.
- Install the fuel pipe cap ③ to the fuel pipe ⑤.



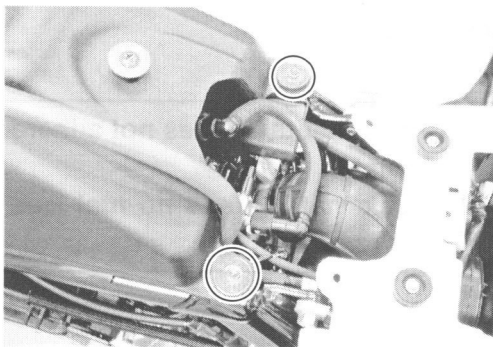
⚠ WARNING

- * Be sure to install the fuel pipe cap ③ to the fuel pipe ⑤ to prevent fuel leakage.
- * Gasoline is highly flammable and explosive. Keep heat, spark and flame away.

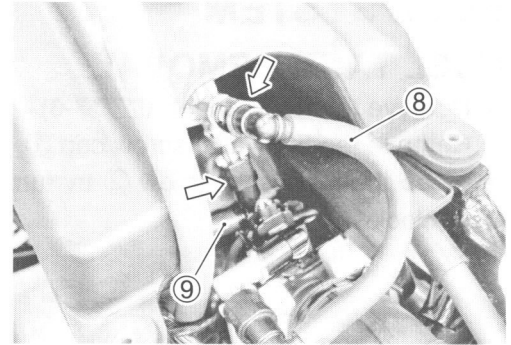
- Disconnect the fuel level gauge coupler ⑥ and fuel vapor return hose ⑦ from the fuel tank.



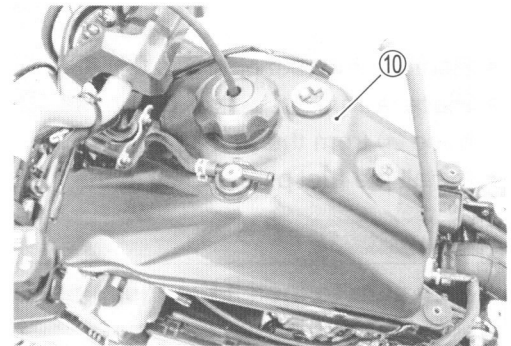
- Remove the fuel tank mounting bolts.



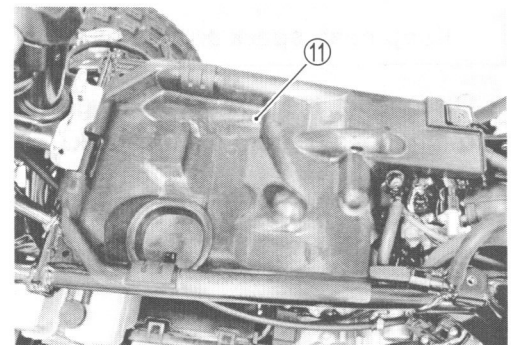
- Disconnect the fuel feed hose ⑧ and ⑨ from the fuel pressure regulator.



- Remove the fuel tank ⑩.



- Remove the fuel tank lower cover ⑪.



FUEL TANK INSTALLATION

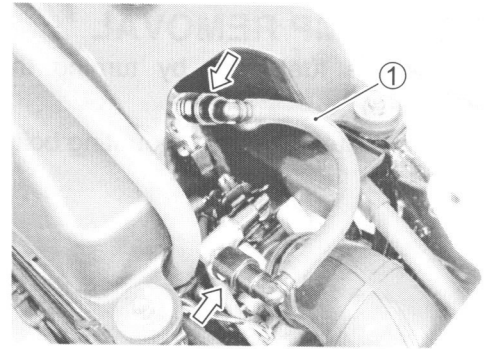
Install the fuel tank in the reverse order of removal. Pay attention to the following points:

CAUTION

- * Check that dust does not adhere to the fuel pressure regulator.
- * Check that there is no fuel leak from the fuel pressure regulator.

FUEL PRESSURE INSPECTION

- Remove the fuel tank cover. (☞ 7-6)
- Place a rag under the fuel feed hose and remove the fuel feed hose ①.

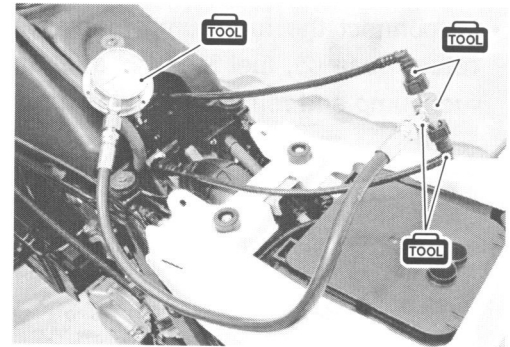


- Install the special tools between the fuel pressure regulator and fuel delivery pipe.

TOOL 09940-40211: Fuel pressure gauge adaptor
 09940-40220: Fuel pressure gauge hose attachment
 09915-77331: Oil pressure gauge
 09915-74521: Oil pressure gauge hose

Turn the ignition switch ON and check the fuel pressure.

DATA Fuel pressure: Approx. 294 kPa (2.94 kgf/cm², 41.81 psi)



If the fuel pressure is lower than the specification, inspect the following items:

- * Fuel hose leakage
- * Clogged fuel filter
- * Pressure regulator
- * Fuel pump

If the fuel pressure is higher than the specification, inspect the following items:

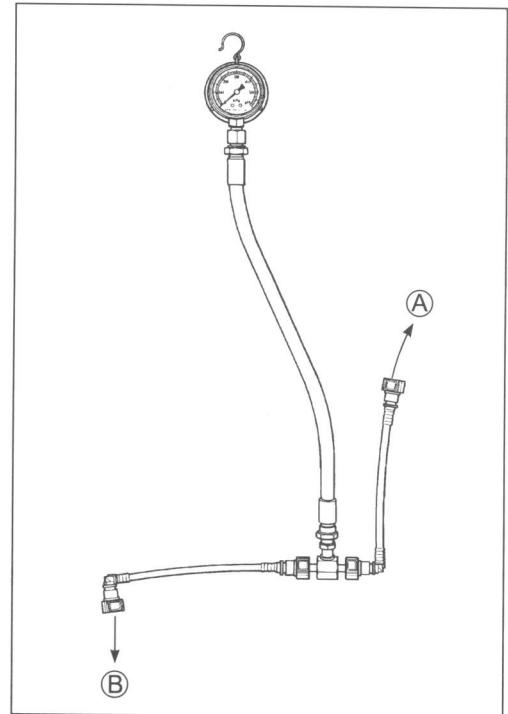
- * Fuel pump
- * Pressure regulator

⚠ WARNING

- * Before removing the special tools, turn the ignition switch to OFF position and release the fuel pressure slowly.
- * Gasoline is highly flammable and explosive. Keep heat, sparks and flame away.

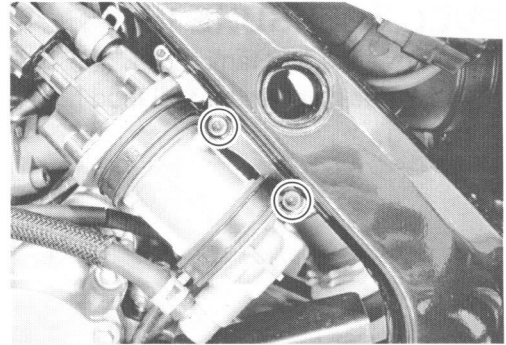
Ⓐ To fuel pressure regulator

Ⓑ To fuel delivery pipe

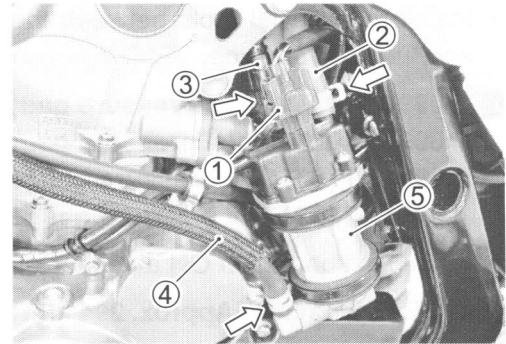


FUEL PUMP REMOVAL

- Close the fuel cock by turning the fuel cock clockwise.
( 5-3)
- Remove the fuel pump mounting bolts.



- Disconnect the fuel pump lead wire coupler ①, fuel vapor return hose ②, fuel feed hose ③ and fuel hose ④ from the fuel pump and remove the fuel pump ⑤.

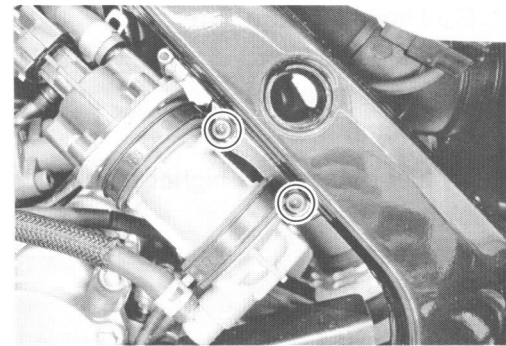


FUEL PUMP INSTALLATION

Install the fuel pump in the reverse order of removal. Pay attention to the following points:

- Tighten the fuel pump mounting bolts to the specified torque.

 **Fuel pump mounting bolt: 9 N·m (0.9 kgf-m, 6.5 lb-ft)**



FUEL PUMP INSPECTION

Turn the ignition switch ON and check that the fuel pump operates for few seconds.

If the fuel pump motor does not make operating sound, inspect the fuel pump circuit connections or inspect the fuel pump relay and tip-over sensor.

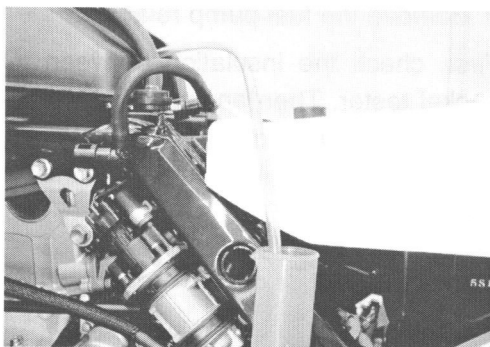
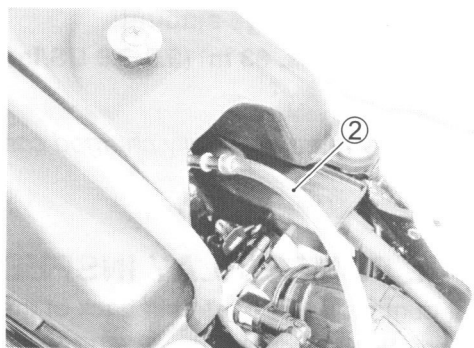
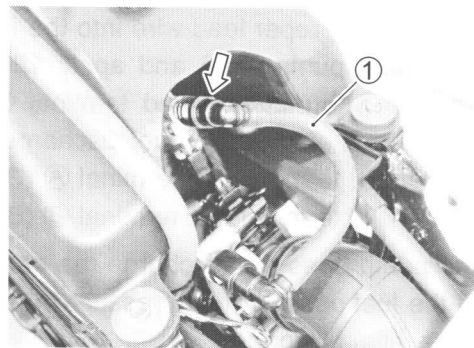
If the fuel pump relay, tip-over sensor and fuel pump circuit connections are OK, the fuel pump may be faulty, replace the fuel pump with a new one.

FUEL DISCHARGE AMOUNT INSPECTION

⚠ WARNING

**Gasoline is highly flammable and explosive.
Keep heat, spark and flame away.**

- Remove the fuel tank cover. (☞ 7-6)
- Place a rag under the fuel feed hose and disconnect the fuel feed hose ① from the fuel pressure regulator.
- Connect a proper fuel hose ② to the fuel pressure regulator.
- Place the measuring cylinder and insert the fuel hose end into the measuring cylinder.
- Disconnect the fuel pump lead wire coupler ③.



- Connect a proper lead wire into the fuel pump lead wire coupler (fuel pump side) and apply 12 volts to the fuel pump (between terminal Ⓐ and terminal Ⓑ) for 10 seconds and measure the amount of fuel discharged.

Battery + terminal — terminal Ⓐ (O/G wire)

Battery - terminal — terminal Ⓑ (B/W wire)

If the pump does not discharge the amount specified, it means that the fuel pump or fuel pressure regulator is defective or that the fuel filter is clogged.

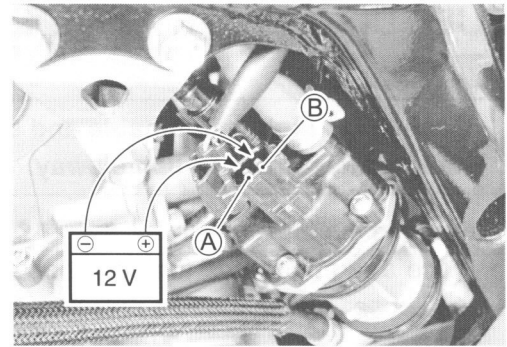


Fuel discharge amount:

Approx. 83 ml (2.8/2.9 US/lmp oz) and more/10 sec.

NOTE:

The battery must be in fully charged condition.



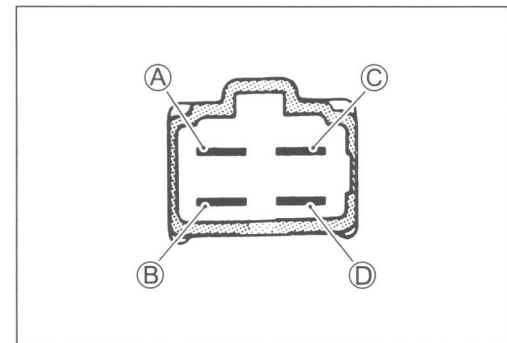
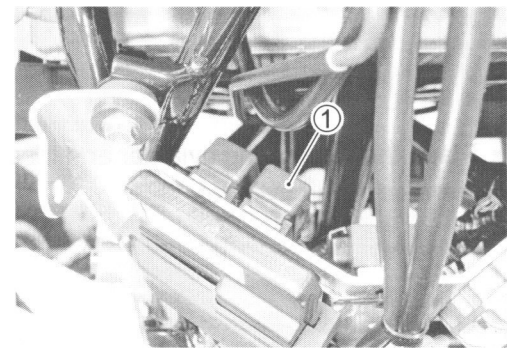
FUEL PUMP RELAY INSPECTION

Fuel pump relay is located in back of the headlight assembly.

- Remove the front fender. (7-6)
- Remove the fuel pump relay ①.

First, check the insulation between Ⓐ and Ⓑ terminals with pocket tester. Then apply 12 volts to Ⓒ and Ⓓ terminals, + to Ⓒ and - to Ⓓ, and check the continuity between Ⓐ and Ⓑ.

If there is no continuity, replace it with a new one.



FUEL VALVE/FUEL FILTER

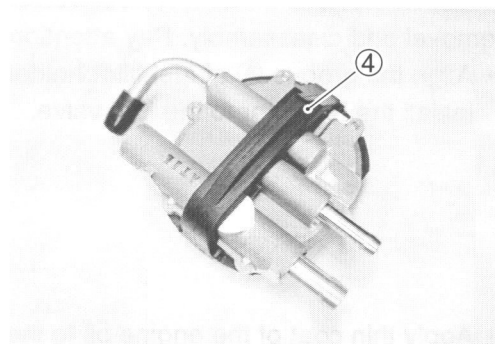
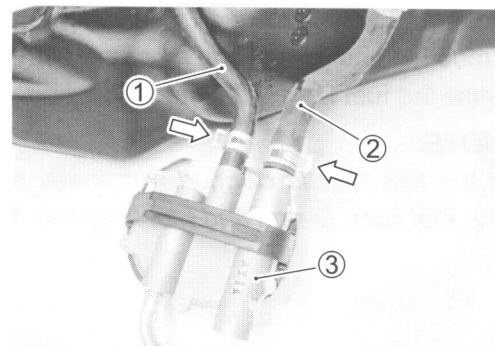
FUEL VALVE REMOVAL AND DISASSEMBLY

- Remove the front fender. (☞ 7-6)
- Drain the fuel completely.
- Remove the fuel tank. (☞ 5-4)
- Disconnect the fuel vapor return hose ① and fuel inlet hose ② and remove the fuel valve ③.

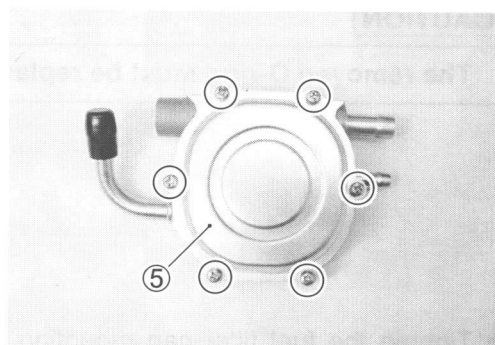
⚠ WARNING

**Gasoline is highly flammable and explosive.
Keep heat, spark and flame away.**

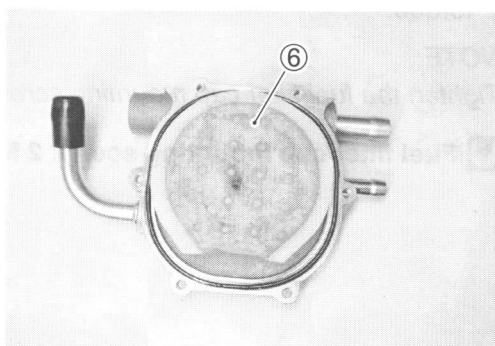
- Remove the rubber cushion ④.



- Remove the fuel filter cap ⑤ by removing its mounting screws diagonally.



- Remove the fuel filter ⑥.



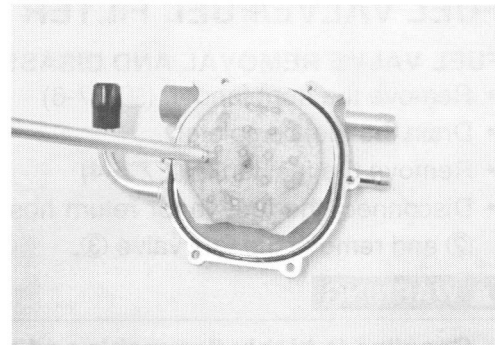
FUEL FILTER INSPECTION AND CLEANING

If the fuel filter is clogged with sediment or rust, fuel will not flow smoothly and loss in engine power may result.

Blow the fuel filter with compressed air.

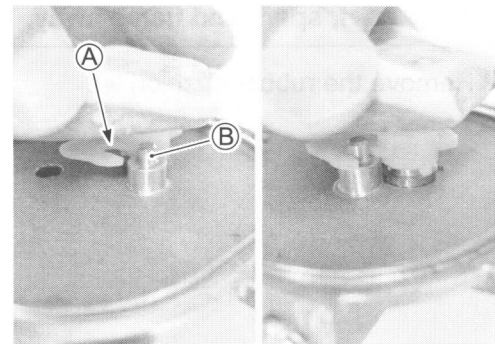
NOTE:

If the fuel filter is clogged with many sediment or rust, replace the fuel filter, O-ring and fuel filter cap with a new one.

**FUEL VALVE REASSEMBLY AND INSTALLATION**

Reassemble and install the fuel valve in the reverse order of removal and disassembly. Pay attention to the following points:

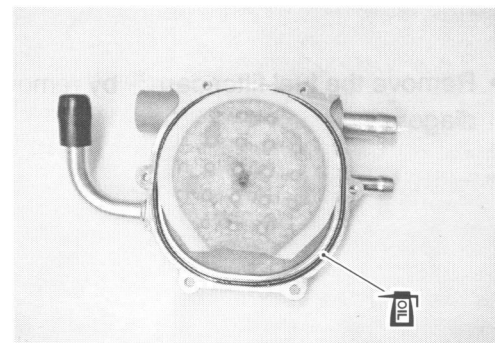
- Align the groove (A) of fuel filter holder with the stopper (B) and install the fuel filter to the fuel valve.



- Apply thin coat of the engine oil to the O-ring.

CAUTION

The removed O-ring must be replaced with a new one.

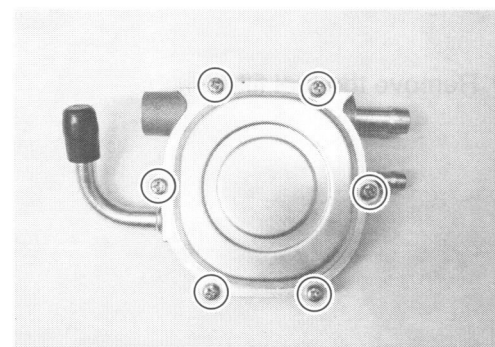


- Tighten the fuel filter cap mounting screws to the specified torque.

NOTE:

Tighten the fuel filter cap mounting screws diagonally.

 **Fuel filter cap mounting screw: 2 N·m (0.2 kgf-m, 1.5 lb-ft)**



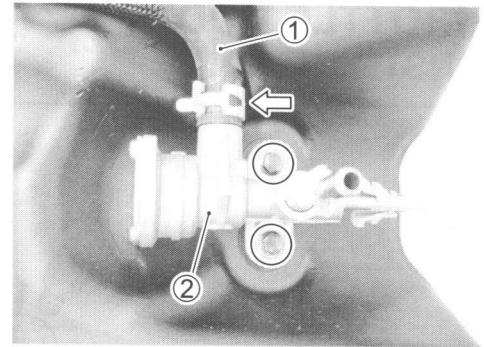
FUEL PRESSURE REGULATOR

REMOVAL

- Remove the front fender. (➡ 7-6)
- Drain the fuel completely.
- Remove the fuel tank. (➡ 5-4)
- Disconnect the fuel return hose ①.
- Remove the fuel pressure regulator ②.

⚠ WARNING

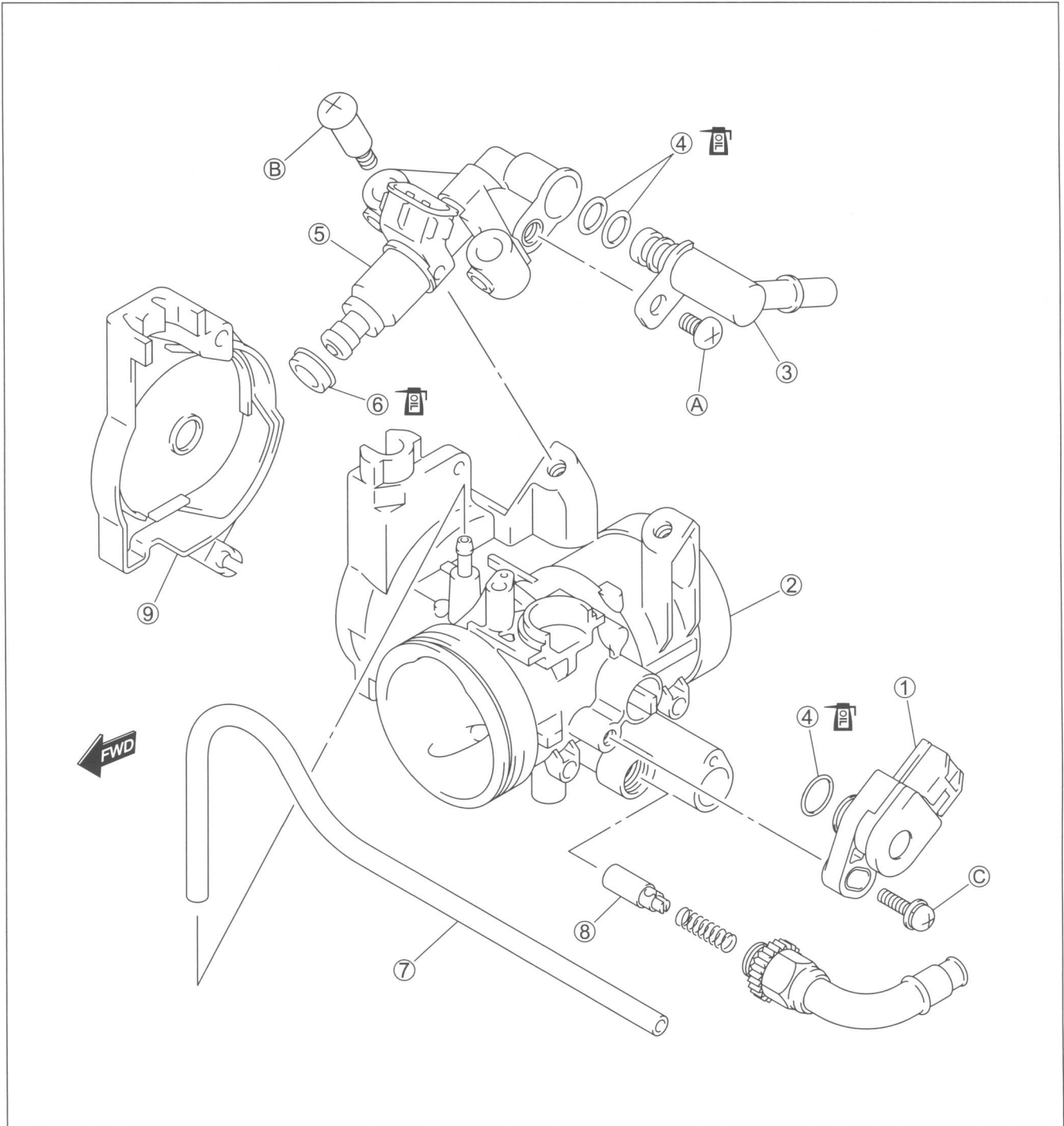
**Gasoline is highly flammable and explosive.
Keep heat, spark and flame away.**



INSTALLATION

Install the fuel pressure regulator in the reverse order of removal.

THROTTLE BODY CONSTRUCTION



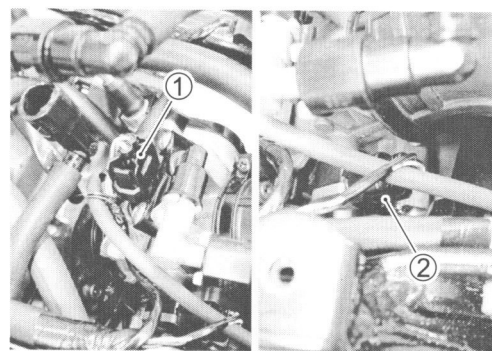
①	TP sensor	⑦	Vacuum hose
②	Throttle body	⑧	Starter valve
③	Fuel delivery pipe	⑨	Throttle cable cover
④	O-ring	A	Fuel delivery pipe mounting screw
⑤	Fuel injector	B	Fuel injector mounting screw
⑥	Injector seal	C	TP sensor mounting screw



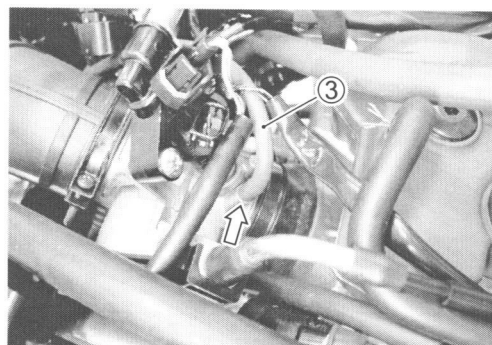
ITEM	N·m	kgf-m	lb-ft
A	3.5	0.35	2.5
B	3.5	0.35	2.5
C	3.5	0.35	2.5

REMOVAL

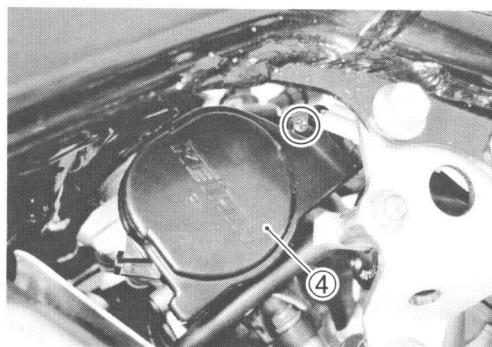
- Remove the front fender. (☞ 7-6)
- Remove the fuel tank and fuel tank lower cover. (☞ 5-4)
- Disconnect the fuel injector coupler ① and TP sensor coupler ②.



- Disconnect the IAP hose ③.



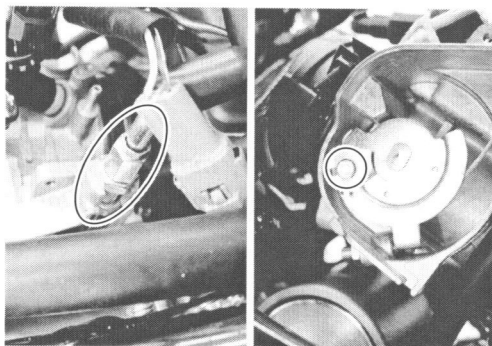
- Remove the throttle cable cover ④.



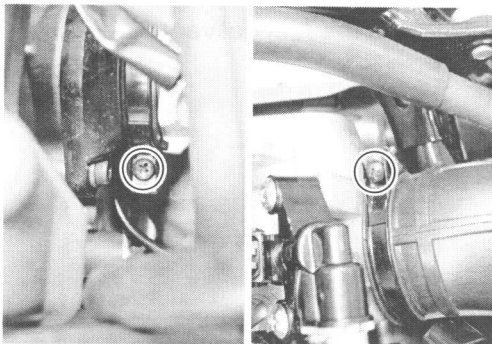
- Disconnect the throttle cable from drum.

CAUTION

After disconnecting the throttle cables, do not snap the throttle valve from full open to full close. It may cause damage to the throttle valve and throttle body.



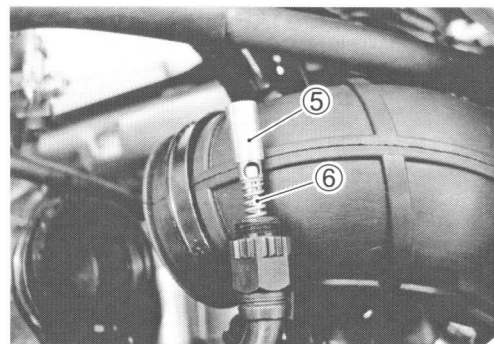
- Loosen the throttle body clamp screws and remove the throttle body assembly.



- Disconnect the starter cable from the throttle body assembly.

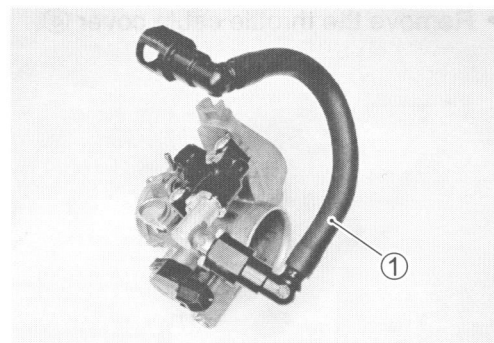


- Remove the starter valve ⑤ and spring ⑥ from the starter cable.



DISASSEMBLY

- Remove the fuel feed hose ①.

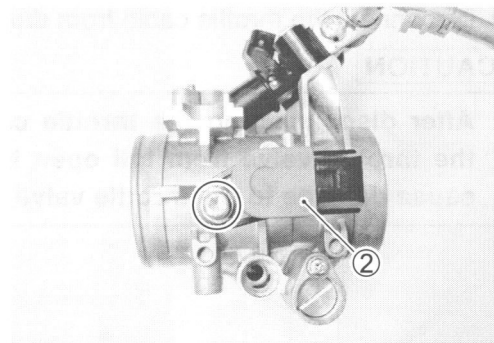


- Remove the TP sensor ② with the special tool.

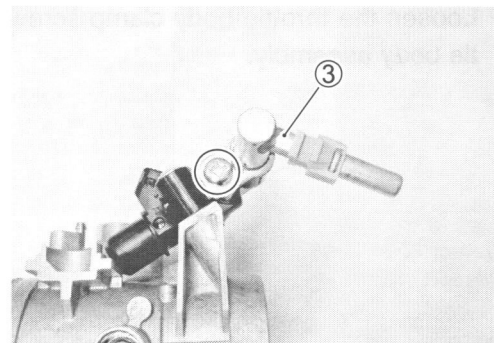
TOOL 09930-11950: Torx wrench

NOTE:

Prior to disassembly, mark the sensor original position with a paint or scribe for accurate reinstallation.



- Remove the fuel delivery pipe ③.



- Remove the fuel injector ④.

CAUTION

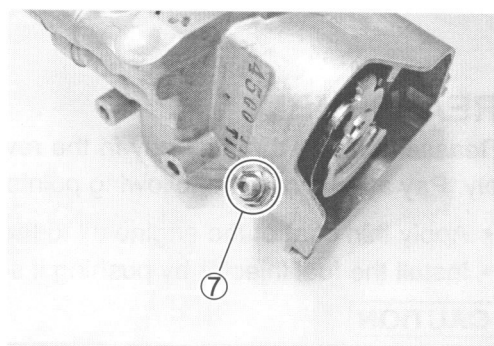
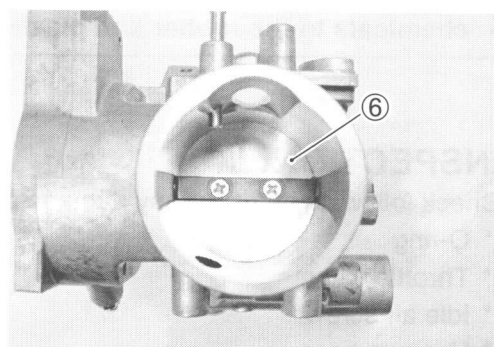
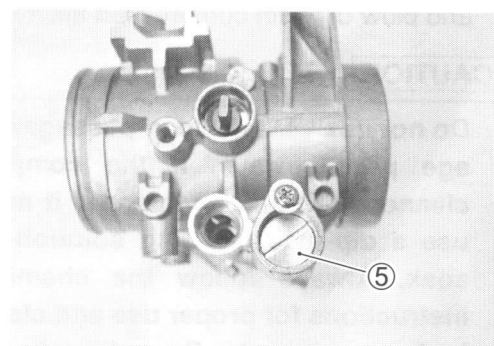
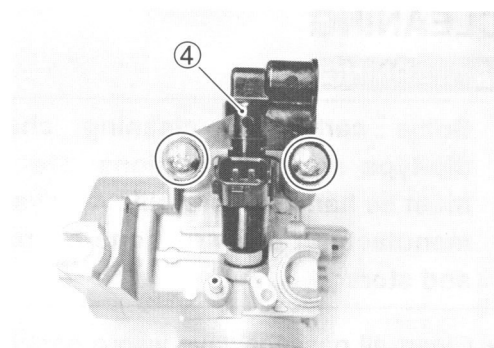
Avoid removing the idle air screw ⑤.

CAUTION

Never remove the throttle valve ⑥.

CAUTION

Avoid removing the throttle lever stopper screw ⑦.



CLEANING

⚠ WARNING

Some carburetor cleaning chemicals, especially dip-type soaking solutions, are very corrosive and must be handled carefully. Always follow the chemical manufacturer's instructions on proper use, handling and storage.

- Clean all passageways with a spray-type carburetor cleaner and blow dry with compressed air.

CAUTION

Do not use wire to clean passageways. Wire can damage passageways. If the components cannot be cleaned with a spray cleaner it may be necessary to use a dip-type cleaning solution and allow them to soak. Always follow the chemical manufacturer's instructions for proper use and cleaning of the throttle body components. Do not apply carburetor cleaning chemicals to the rubber and plastic materials.

INSPECTION

Check following items for any damage or clogging.

- * O-ring
- * Throttle valve
- * Idle air screw
- * Vacuum hose

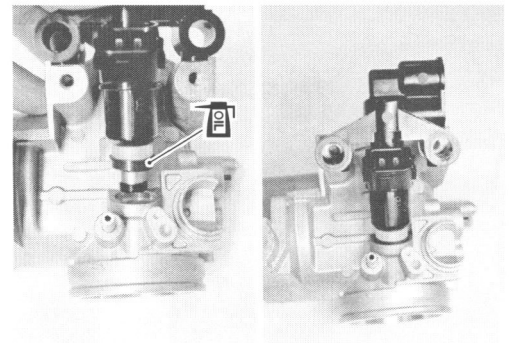
REASSEMBLY

Reassemble the throttle body in the reverse order of disassembly. Pay attention to the following points:

- Apply thin coat of the engine oil to the injector seal.
- Install the fuel injector by pushing it straight to throttle body.

CAUTION

- * The removed injector seal must be replaced with a new one.
- * Never turn the injector while pushing it.



- Tighten the fuel injector mounting screws to the specified torque.

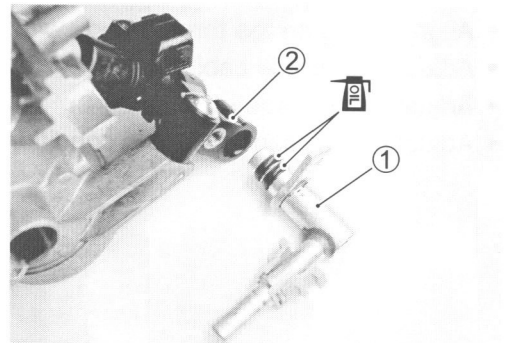
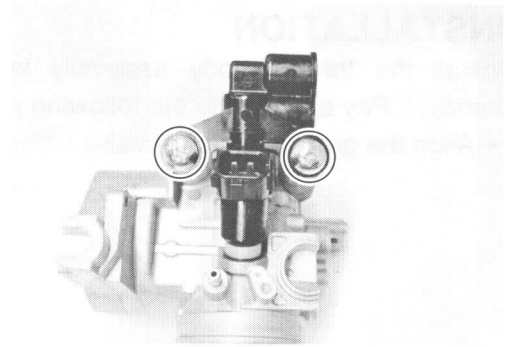
 Fuel injector mounting screw:

3.5 N·m (0.35 kgf-m, 2.5 lb-ft)

- Apply thin coat of the engine oil to the O-rings.
- Install the fuel delivery pipe ① to the injector ②.

CAUTION

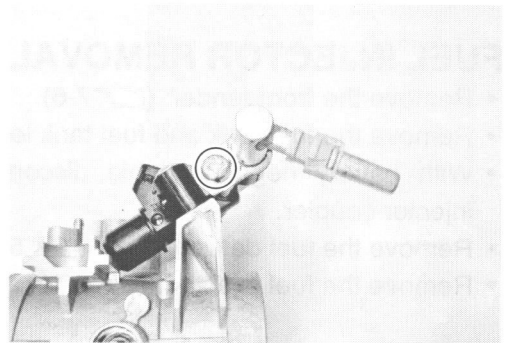
- * The removed O-rings must be replaced with new ones.
- * Never turn the fuel delivery pipe while pushing it.



- Tighten the fuel delivery pipe mounting screws to the specified torque.

 Fuel delivery pipe mounting screw:

3.5 N·m (0.35 kgf-m, 2.5 lb-ft)



- With the throttle valve fully closed, install the TP sensor ③ and tighten the TP sensor mounting screw to the specified torque.

CAUTION

The removed O-ring must be replaced with a new one.

NOTE:

- * Apply thin coat of the engine oil to the O-ring.
- * Align the throttle shaft end ① with the groove ② of TP sensor.
- * Apply grease to the throttle shaft end ① if necessary.

 **TP sensor mounting screw: 3.5 N·m (0.35 kgf-m, 2.5 lb-ft)**

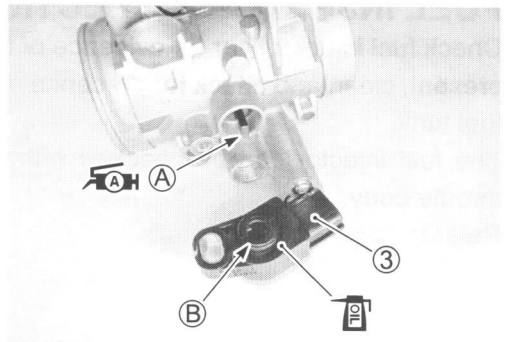
 **99000-25010: SUZUKI SUPER GREASE "A"**

(or equivalent grease)

 **09930-11950: Torx wrench**

NOTE:

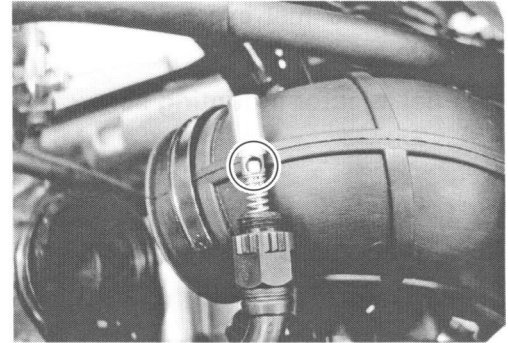
- * Make sure the throttle valve open or close smoothly.
- * TP sensor setting procedure. (4-19)



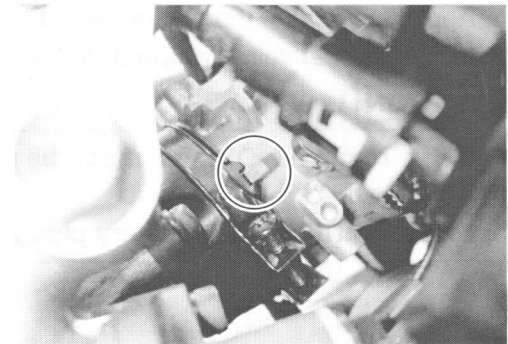
INSTALLATION

Install the throttle body assembly in the reverse order of removal. Pay attention to the following points:

- Align the groove of starter valve with the starter cable end.



- Align the lug on the throttle body with the intake pipe's cutout.
- Adjust the throttle cable play. (☞ 2-11)
- Adjust the idle speed. (☞ 2-12)
- Adjust the TP sensor setting condition. (☞ 4-19)



FUEL INJECTOR REMOVAL

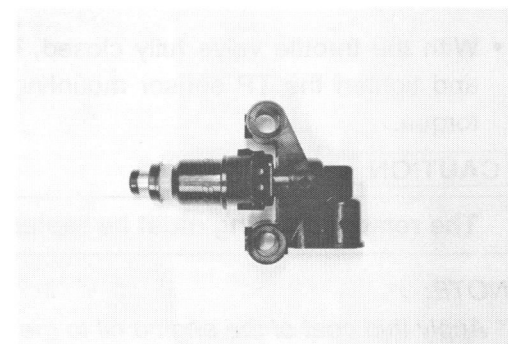
- Remove the front fender. (☞ 7-6)
- Remove the fuel tank and fuel tank lower cover. (☞ 5-4)
- With battery negative cable disconnected, disconnect the injector coupler.
- Remove the fuel delivery pipe. (☞ 5-14)
- Remove the fuel injector. (☞ 5-15)

FUEL INJECTOR INSPECTION

Check fuel injector filter for evidence of dirt and contamination. If present, clean and check for presence of dirt in the fuel lines and fuel tank.

The fuel injector can be checked without removing it from the throttle body.

Refer to page 4-56 for details.



FUEL INJECTOR INSTALLATION

- Apply thin coat of the engine oil to injector seal.
- Install the injector by pushing it straight to the throttle body.
Never turn the injector while pushing it. (☞ 5-16)
- Install the fuel delivery pipe. (☞ 5-17)

THROTTLE POSITION SENSOR (TPS) SETTING

After all adjustments are completed, check or adjust the TPS setting condition.
(Refer to page 4-19 for TPS setting procedure.)