

FUEL AND LUBRICATION SYSTEM

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⚠ WARNING

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

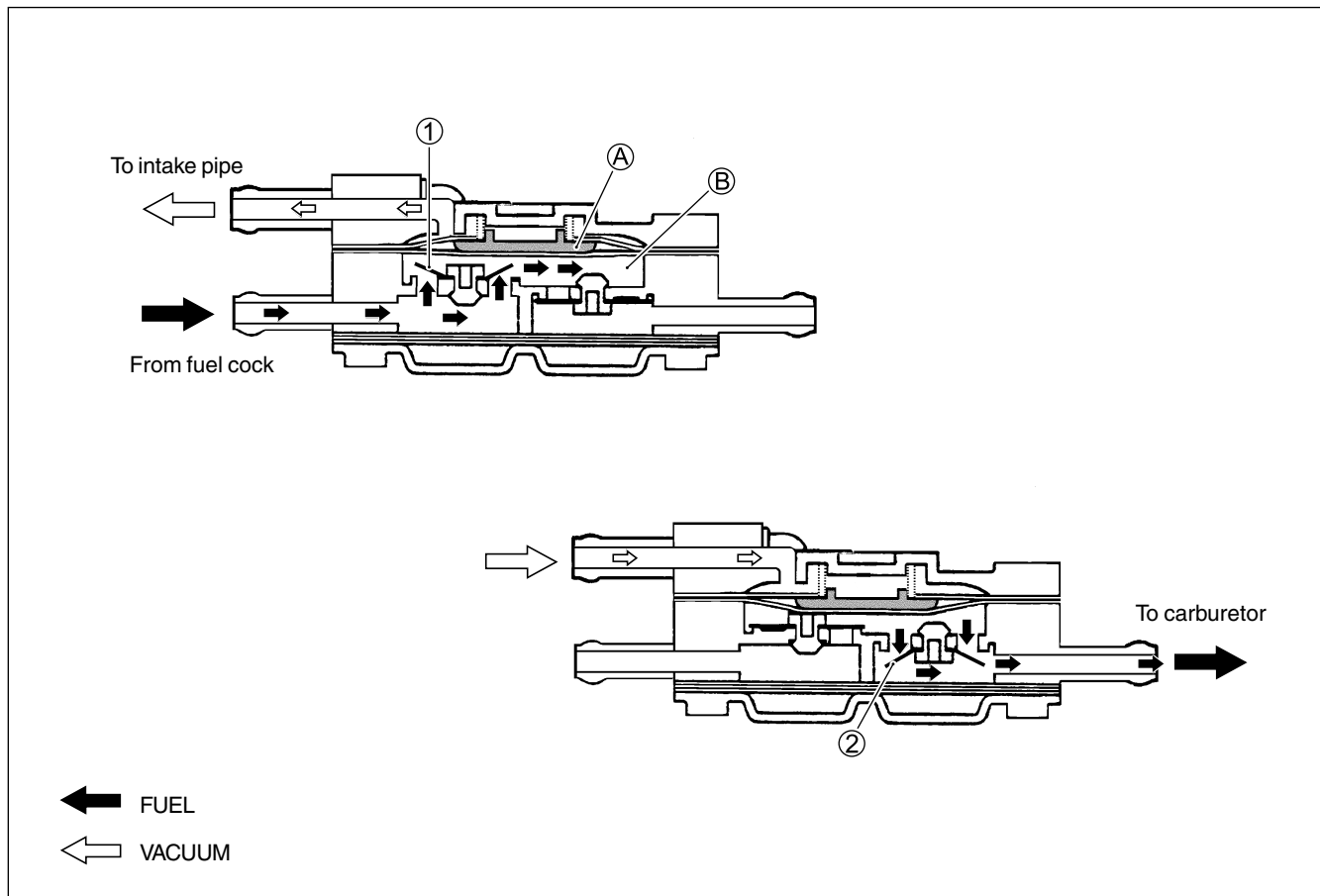
FUEL SYSTEM

The fuel pump is operated by a vacuum force which is supplied from the carburetor intake pipe. The fuel sent under pressure by the fuel pump flows into the float chamber when the float of the carburetor has dropped and the needle valve is open. When the needle valve closes, the pressure of the fuel in the hose connecting the carburetor and the fuel pump increases, and when the set pressure is reached, the operation of the fuel pump is stopped by the fuel pressure to prevent excessive supply.

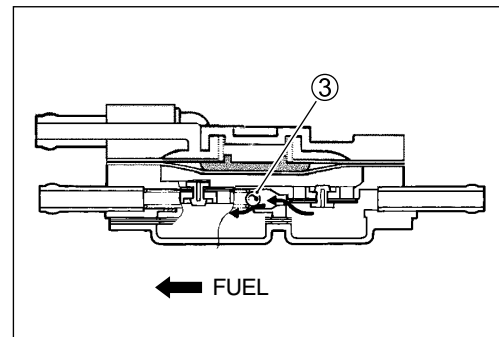
FUEL PUMP

Vacuum pulsations from the carburetor intake pipe are used to operate the pump diaphragm (A). When vacuum is applied to the diaphragm (A), fuel is drawn from the tank into the diaphragm's chamber (B). As positive pressure is applied, the diaphragm backs, pushing the fuel through the outlet to the carburetor.

A series of check valves (① and ②) is used in the fuel flow route to allow the fuel to move in only one direction, through the pump body.



If the fuel pressure in the chamber of carburetor side is too high, the return valve (③) is opened so that the fuel pressure is released to the chamber of fuel cock side.

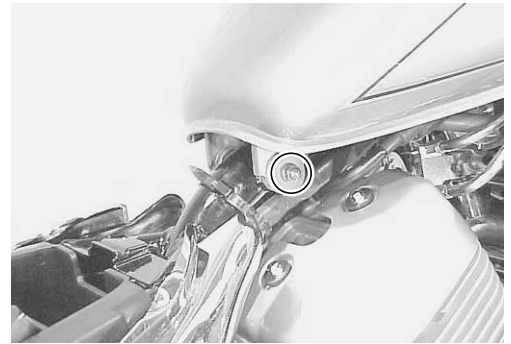


FUEL TANK/FUEL COCK REMOVAL

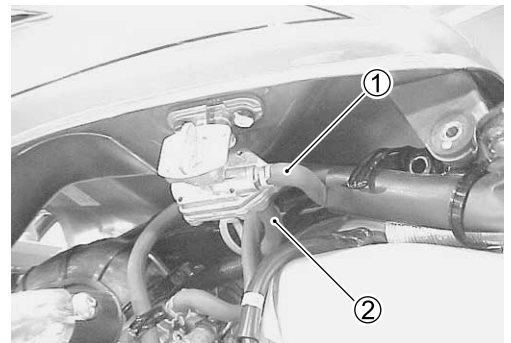
⚠ WARNING

Gasoline is very explosive. Extreme care must be taken.

- Remove the front seat. (☞ 5-2)
- Remove the frame head cover. (☞ 5-3)
- Disconnect the speedometer couplers.
- Remove the fuel tank mounting nut and bolt.



- Turn the fuel cock to “ON” and disconnect the fuel hose ① and vacuum hose ②.
- Remove the fuel tank.



- Remove the fuel tank cap.
- Remove the speedometer.



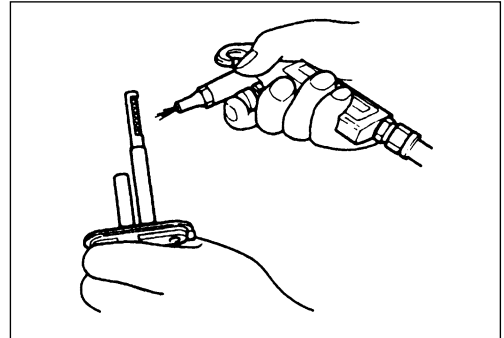
- Remove the fuel cock.



INSPECTION

FUEL COCK

If the fuel filter is dirty with sediment or rust, fuel will not flow smoothly and loss in engine power may result. Clean the fuel filter with compressed air. Also check the fuel cock for cracks.

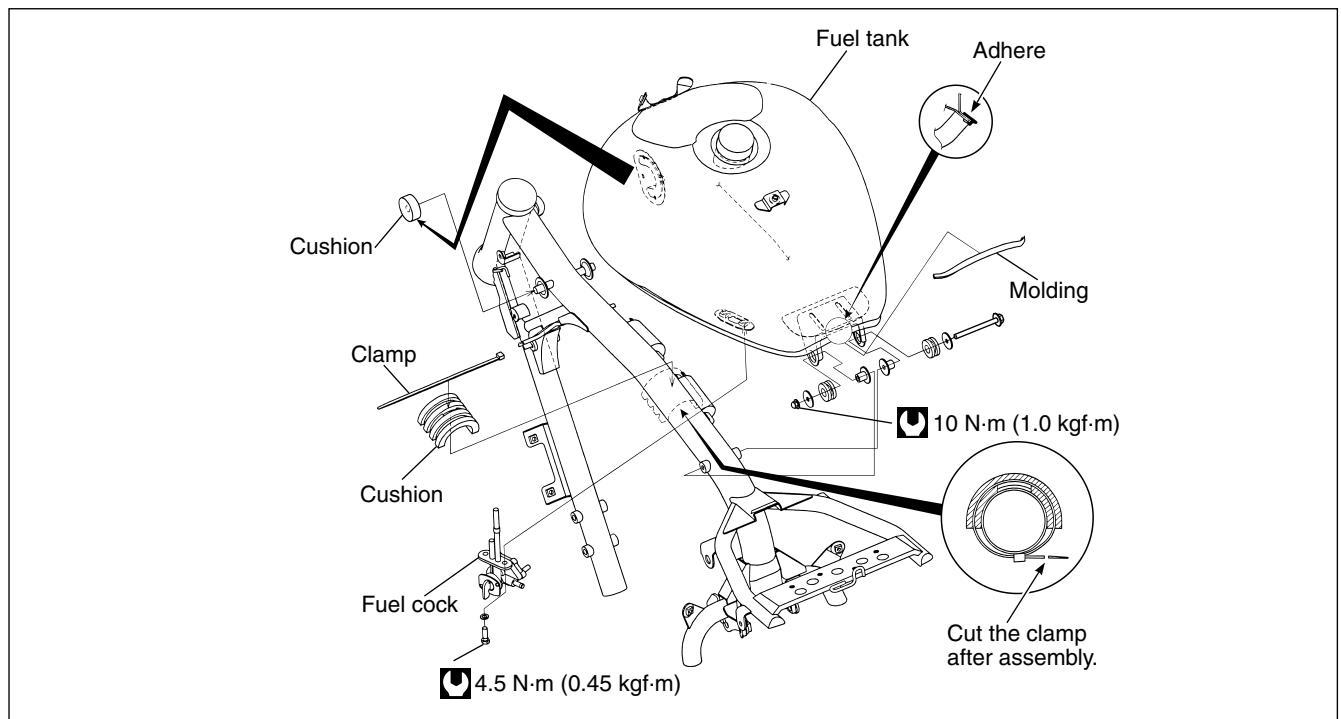
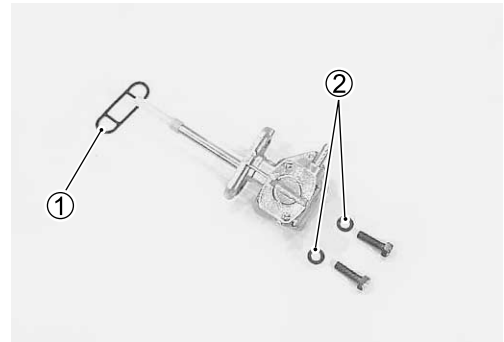


REMOUNTING

- Remount the fuel tank and fuel cock in the reverse order of removal.

⚠ WARNING

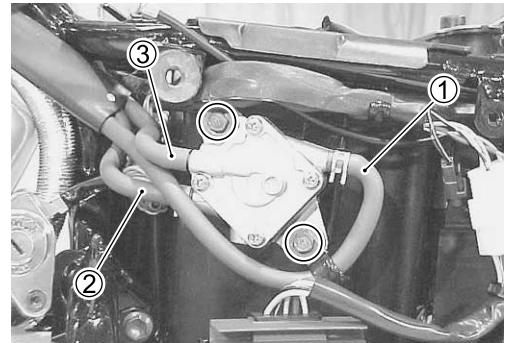
- * Gaskets ① and ② must be replaced with new ones to prevent fuel leakage.
- * Tighten the fuel cock bolts evenly.



FUEL PUMP

REMOVAL

- Remove the left frame cover. (☞ 5-3)
- Turn the fuel cock to "ON"
- Disconnect the fuel hoses ①, ② and vacuum hose ③.
- Remove the fuel pump mounting bolts.



INSPECTION

⚠ WARNING

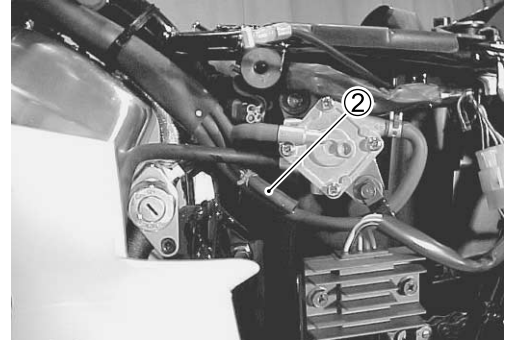
Gasoline is very explosive. Extreme care must be taken.

- Disconnect the fuel hose ②, connect the suitable hose and insert the free end of the hose into a receptacle.

Check the fuel flow when cranking the engine for few seconds by pressing the starter button.

If the fuel flow is not found, check the fuel cock. (☞ 4-4)

If the fuel cock and hoses are not fault, replace the fuel pump.



REASSEMBLY

Carry out the assembly procedure in the reverse order of disassembly.

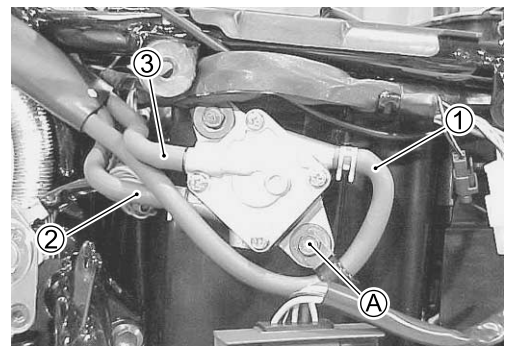
- Install the clamp to the bolt (A) and tighten the bolts.
- Connect the fuel hoses ①, ② and vacuum hose ③ securely.

FUEL HOSE ROUTING: ☞ 7-18

Fuel hose ① (To fuel cock)

Fuel hose ② (To carburetor)

Vacuum hose ③ (To intake pipe)

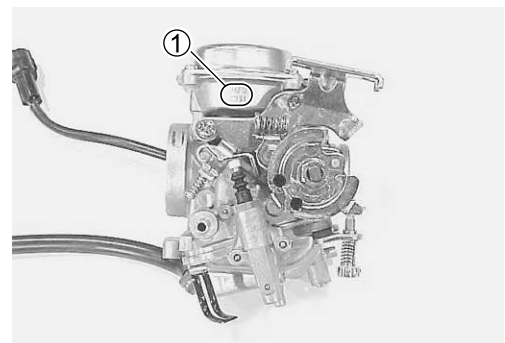


CARBURETOR SPECIFICATIONS

ITEM	SPECIFICATIONS			
	E-02, 04, 34	E-17, 22	E-22 (U-type)	E-18
Carburetor type	MIKUNI BDS26	←	←	←
Bore size	26 mm	←	←	←
I.D. No.	26F0	26F1	←	26F2
Idle r/min.	1 400 ± 100 r/min.	←	←	1 400 ± 50 r/min.
Fuel level	11 ± 1.0 mm	←	←	←
Float height	9.9 ± 1.0 mm	←	←	←
Main jet (M.J.)	#102.5	←	←	←
Main air jet (M.A.J.)	#35	←	←	←
Jet needle (J.N.)	4DM9-4	←	←	←
Needle jet (N.J.)	O-1	←	←	←
Throttle valve (Th.V.)	#140	←	←	#145
Pilot jet (P.J.)	# 20	←	←	#17.5
Pilot screw (P.S.)	PRE-SET (3- ¹ / ₄ turns out)	←	←	PRE-SET (3 turns out)
Throttle cable play	2 – 4 mm	←	←	←

LOCATION OF CARBURETOR I.D. NO.

The carburetor I.D. is stamped on the location ① on the carburetor as shown in the right photo.

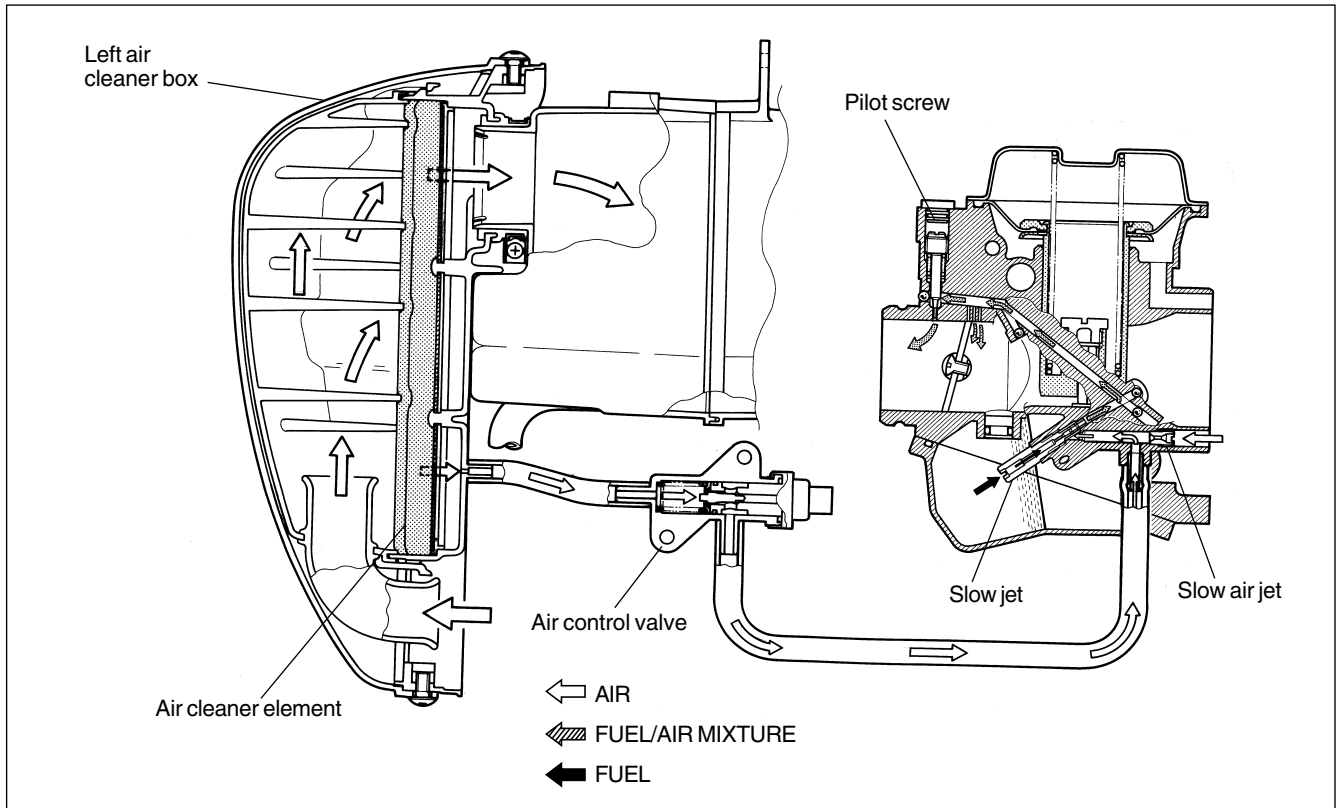


AIR CONTROL VALVE

- The air control valve changes the valve opening area to adjust the air volume for slow system in accordance with temperature variation, thereby supplying the optimum air/fuel mixture for idling operation.

In this system, air is taken in from the clean side of air cleaner and guided into the slow system through the air control valve.

Air supplied both from the slow air jet and the air control valve is metered by the pilot screw to produce air/fuel mixture most appropriate for the current atmospheric temperature, and then jetted into the main bore.

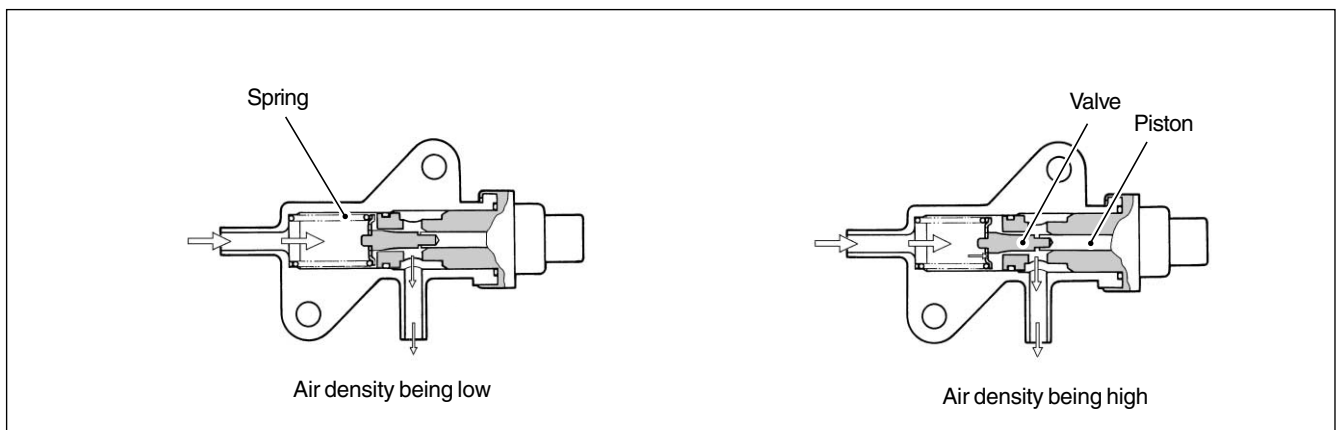


When temperature is low (air density being high):

- The thermo-wax inside the air control valve shrinks and the valve opening area is narrowed due to spring force.

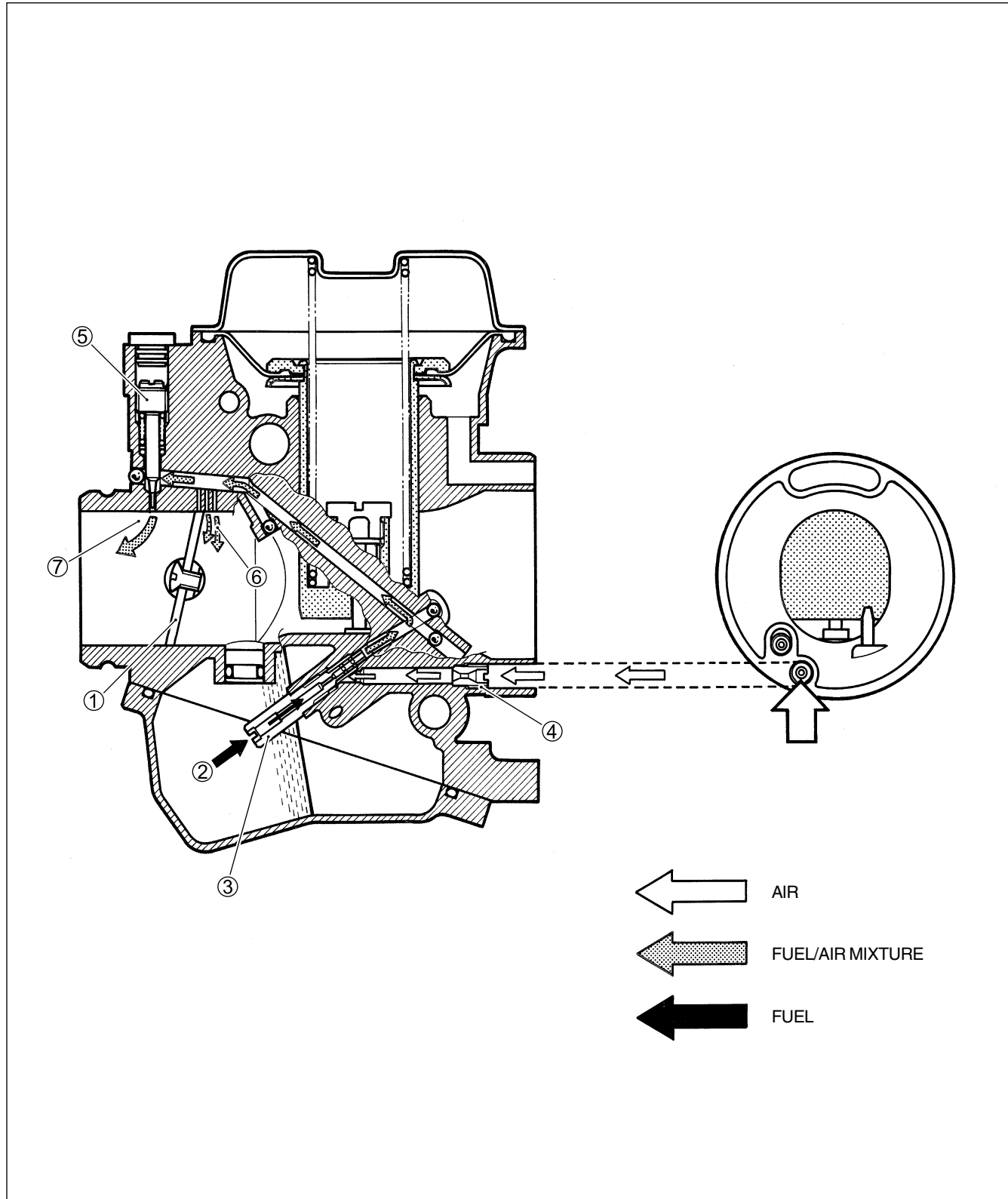
When temperature is high (air density being low):

- The thermo-wax inside the air control valve expands causing the piston to push the valve resulting in widened opening area.



SLOW SYSTEM

This system supplies fuel during engine operation when the throttle valve ① is closed or slightly opened. The fuel from the float chamber ② is metered by the pilot jet ③ where it mixes with air coming in through the pilot air jet ④. This mixture, rich with fuel, then goes up through the pilot passage to the pilot screw ⑤. Part of the mixture is discharged into the main bore through bypass ports ⑥. The mixture is metered by the pilot screw ⑤ and sprayed into the main bore through the pilot outlet port ⑦.



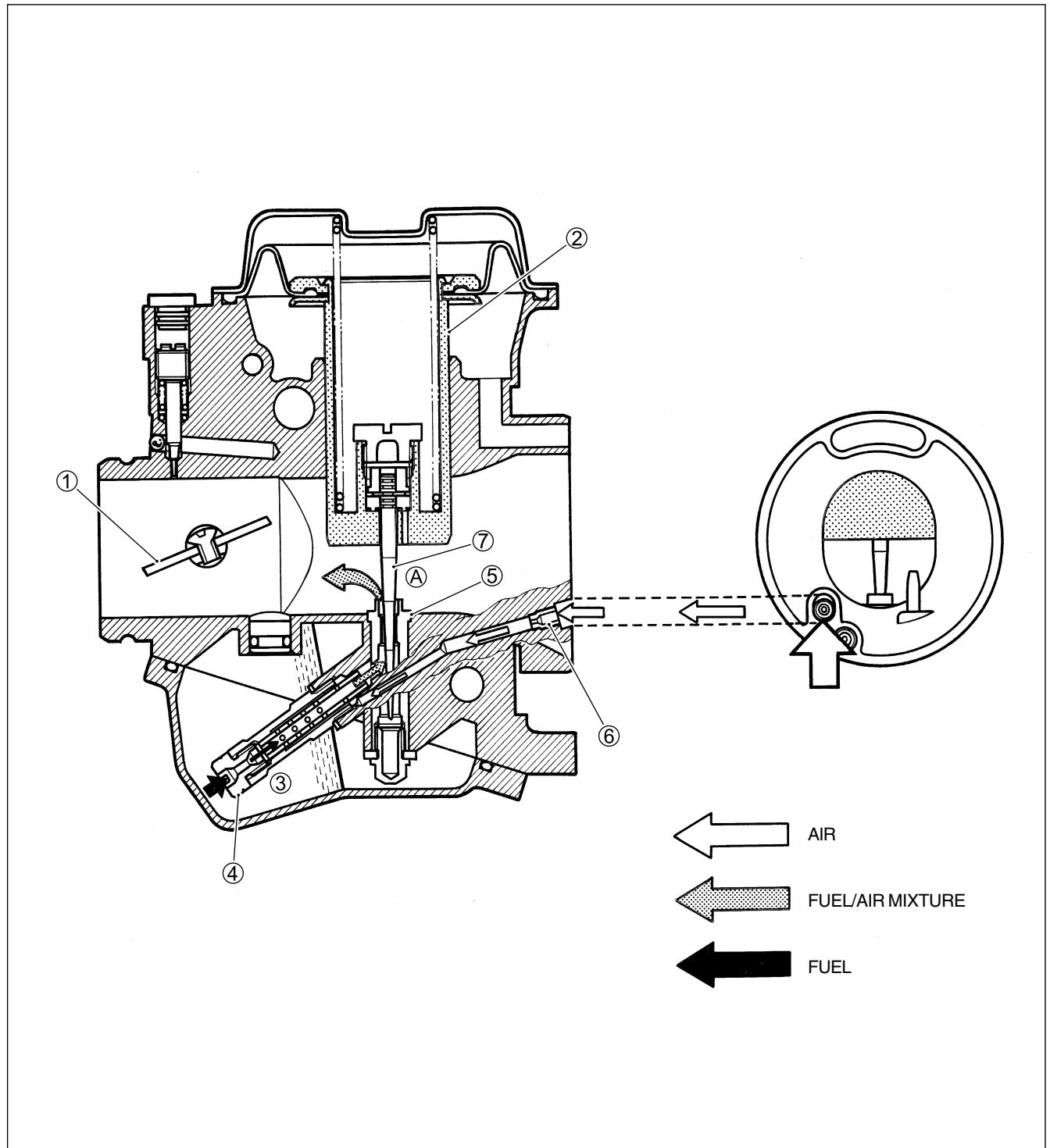
MAIN SYSTEM

As the throttle valve ① is opened, engine speed rises and negative pressure in the venturi (A) increases. This causes the piston valve ② to move upward.

The fuel in the float chamber ③ is metered by the main jet ④. The metered fuel enters the needle jet ⑤, mixes with the air admitted through the main air jet ⑥ and forms an emulsion.

The emulsified fuel then passes through the clearance between the needle jet ⑤ and jet needle ⑦ and is discharged into the venturi (A), where it meets the main air stream being drawn by the engine.

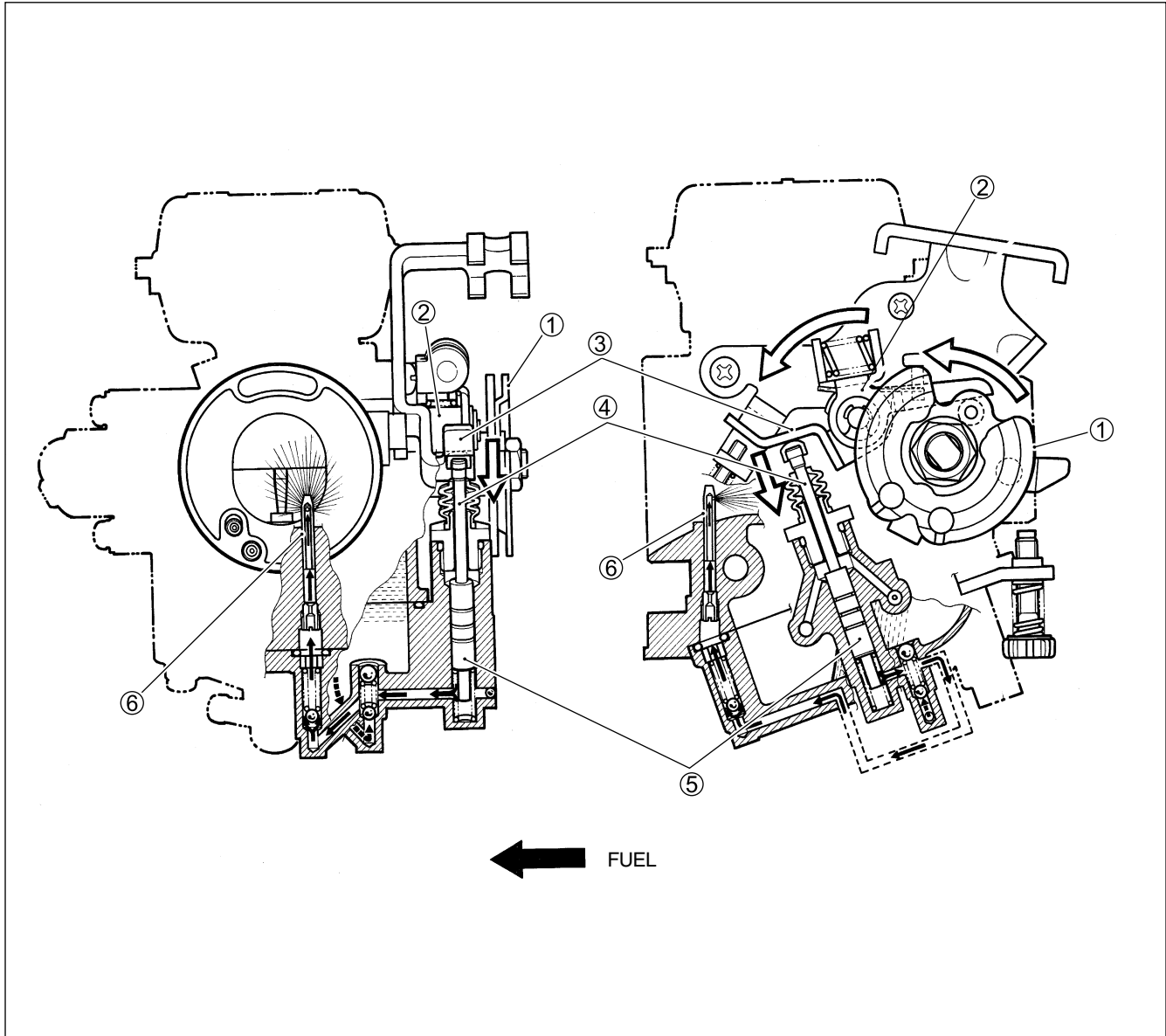
Mixture proportioning is accomplished in the needle jet ⑤. The clearance through which the emulsified fuel must flow ultimately depends on throttle position.



ACCELERATOR PUMP SYSTEM

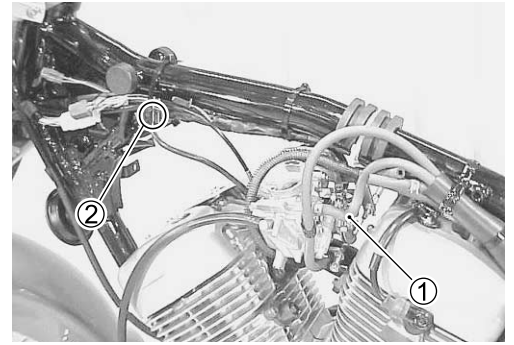
This system works only when the rider opens throttle grip quickly as pump send the necessary amount of fuel to the carburetor bore for correcting fuel/air mixture ratio. When the rider open the throttle grip quickly, the intaken air volume becomes large and air velocity at the bottom of the throttle valve (piston valve) is slow and sucking volume of fuel is less.

The throttle valve lever ① turns lever ②, and lever ③ turns and pushes rod ④. The rod ④ pushes plunger ⑤. This plunger pushes out the fuel through outlet pipe ⑥, spraying fuel into the main bore.

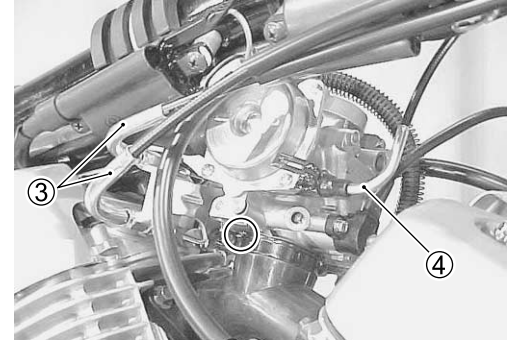


REMOVAL

- Remove the fuel tank. (☞ 4-3)
- Remove the air cleaner box. (☞ 3-3)
- Remove the fuel hose ①.
- Disconnect the throttle position sensor coupler ②.

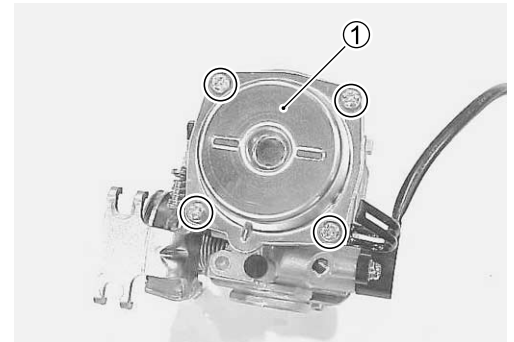


- Remove the throttle cables ③ and starter plunger ④.
- Loosen the clamp screw and remove the carburetor.

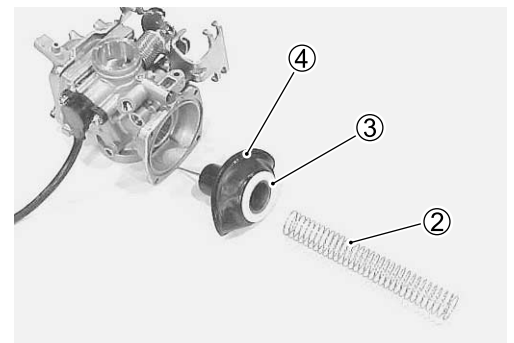


DISASSEMBLY

- Remove the carburetor top cap ①.



- Remove the spring ② and piston valve ③ along with diaphragm ④.



- Remove the jet needle cap ⑤, spring ⑥, retainer ⑦ and jet needle ⑧.

