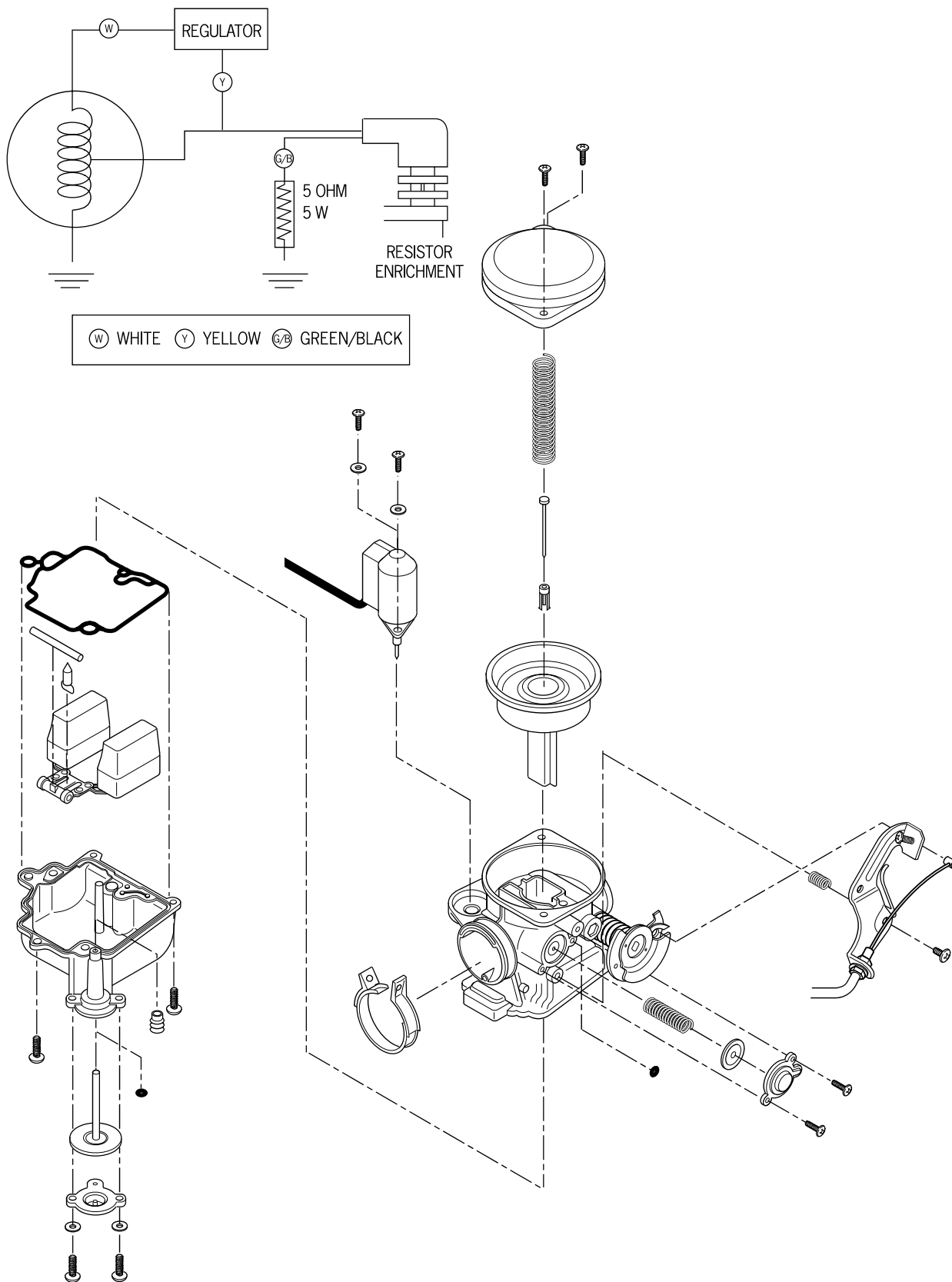


5. Fuel System



5. Fuel System

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General Information



Warning!

Work on the fuel system in a well-ventilated area that is free of sparks or open flames. Do not breathe the vapors from the gasoline. Wear protective gloves to prevent skin irritation.

- Open the bowl drain and allow all gasoline in the carburetor to drain into an appropriate container prior to removing or servicing it.
- Remove control cables and wires carefully to prevent damage.

- Check all o-rings for damage. Replace as necessary.

- Remove carburetor from the scooter before attempting to service the fuel bowl or vacuum canister.

- When cleaning the carburetor, remove the vacuum diaphragm before using air or solvents for cleaning. This will prevent damage to the diaphragm.

- When storing the scooter for a period of time exceeding one month, use a quality fuel stabilizer to prevent deterioration of the fuel and damage to the carburetor.

Repairing material

| Specification | Standard valve |
|-----------------------|-----------------------|
| Carburetor type | Constant velocity-CVK |
| Venturi Bore | 17mm (.67 in.) |
| Fuel Level | mm |
| Main jet | |
| Idle jet | .27 mm (.12 in.) |
| Idle speed | 1600 RPM |
| Throttle free play | 5mm (.125 in.) |
| Mixture screw setting | 3 turns out |

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Troubleshooting

Engine is hard to start

- No spark
- Low compression
- No fuel in carburetor
 - Blocked fuel line
 - Blocked fuel filter
 - Blocked vacuum line
 - Leaky vacuum line
 - Dirty float needle
 - Float set too high

Too much fuel to engine

- Blocked air filter
- Manifold air leak
- Bad auto choke
- Blocked air passage in carburetor

Air/fuel mixture too rich or too lean

- Bad auto choke
- Plugged idle jet
- Float needle stuck or dirty
- Float height too high or too low
- Blocked air passage in carburetor
- Dirty air filter
- Air leak at carburetor or manifold

Misfire under acceleration

- Poor spark
- Air mixture screw too lean
- Bad accelerator pump

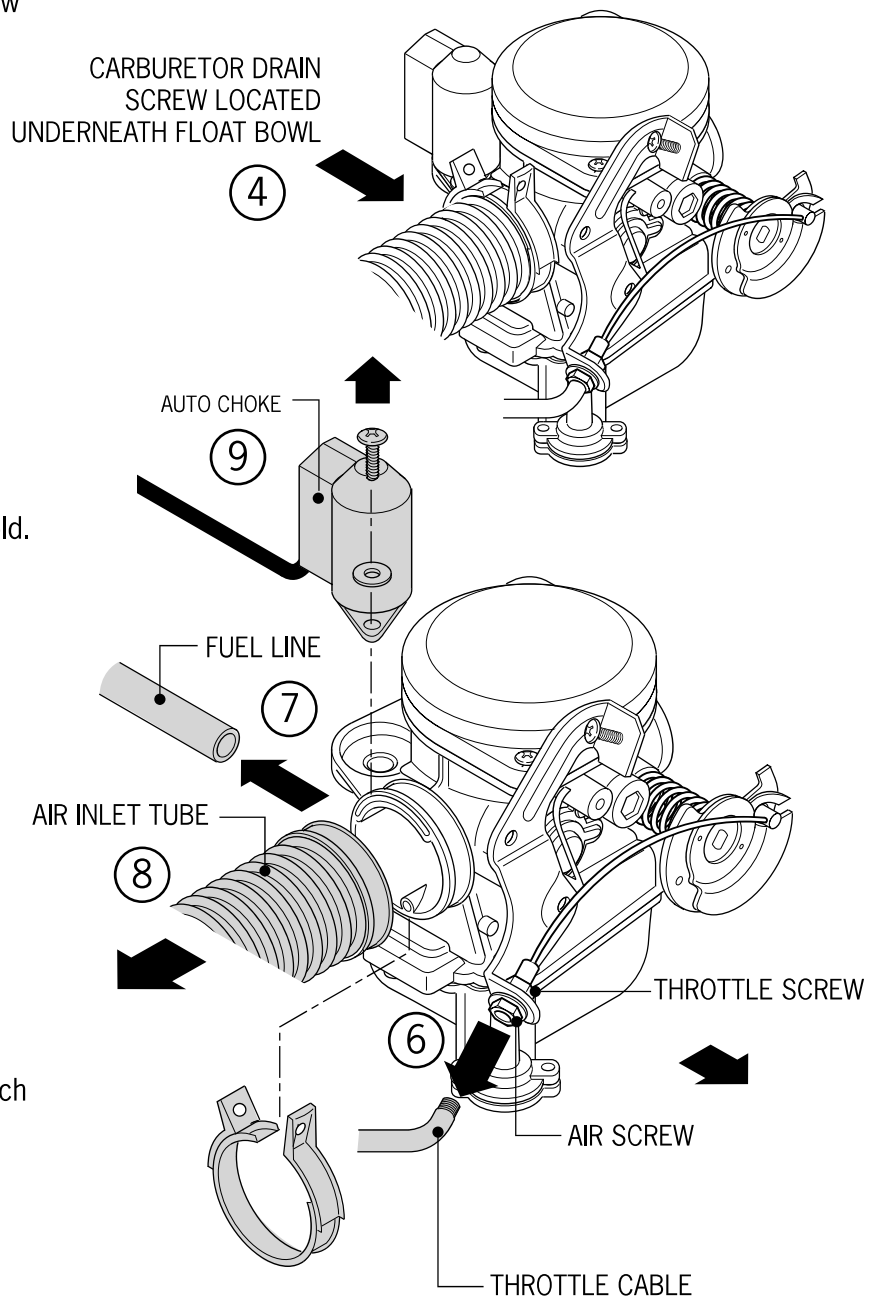
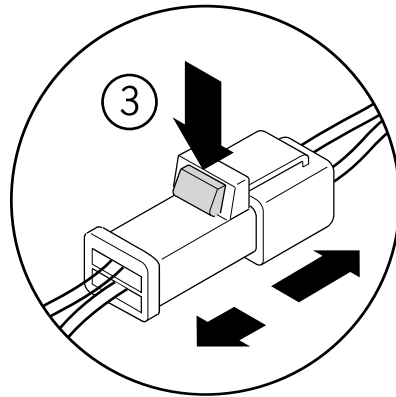
Poor drivability

- Weak spark/bad ignition system
 - Blocked fuel line
 - Blocked fuel filter
 - Bad fuel
 - Water in fuel
 - Air leak at carburetor or manifold
 - Improper float level
 - Bad auto choke
 - Obstructed jet in carburetor
 - Vacuum slide stuck
 - Damaged vacuum diaphragm
 - Dirt in carburetor
-

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Disassembly of carburetor

1. Remove seat and helmet storage tub.
2. Remove right side body panel.
3. Disconnect cable connector for auto choke.
4. Loosen carburetor drain screw and drain fuel from float bowl.
5. Loosen clumps in intake tube and main fold.
6. Loosen throttle cable and remove from support and from throttle control plate.
7. Remove fuel line from carburetor.
8. Remove air inlet tube from carburetor and pull carburetor straight back out of intake manifold.
9. Remove auto choke from carburetor.



Checking Auto Choke

1. Check resistance volume.
2. Standard value below 5 when cold.
3. Connect auto choke to 12V battery.
4. Plunger should extend 3/8 inch in 5 minutes.

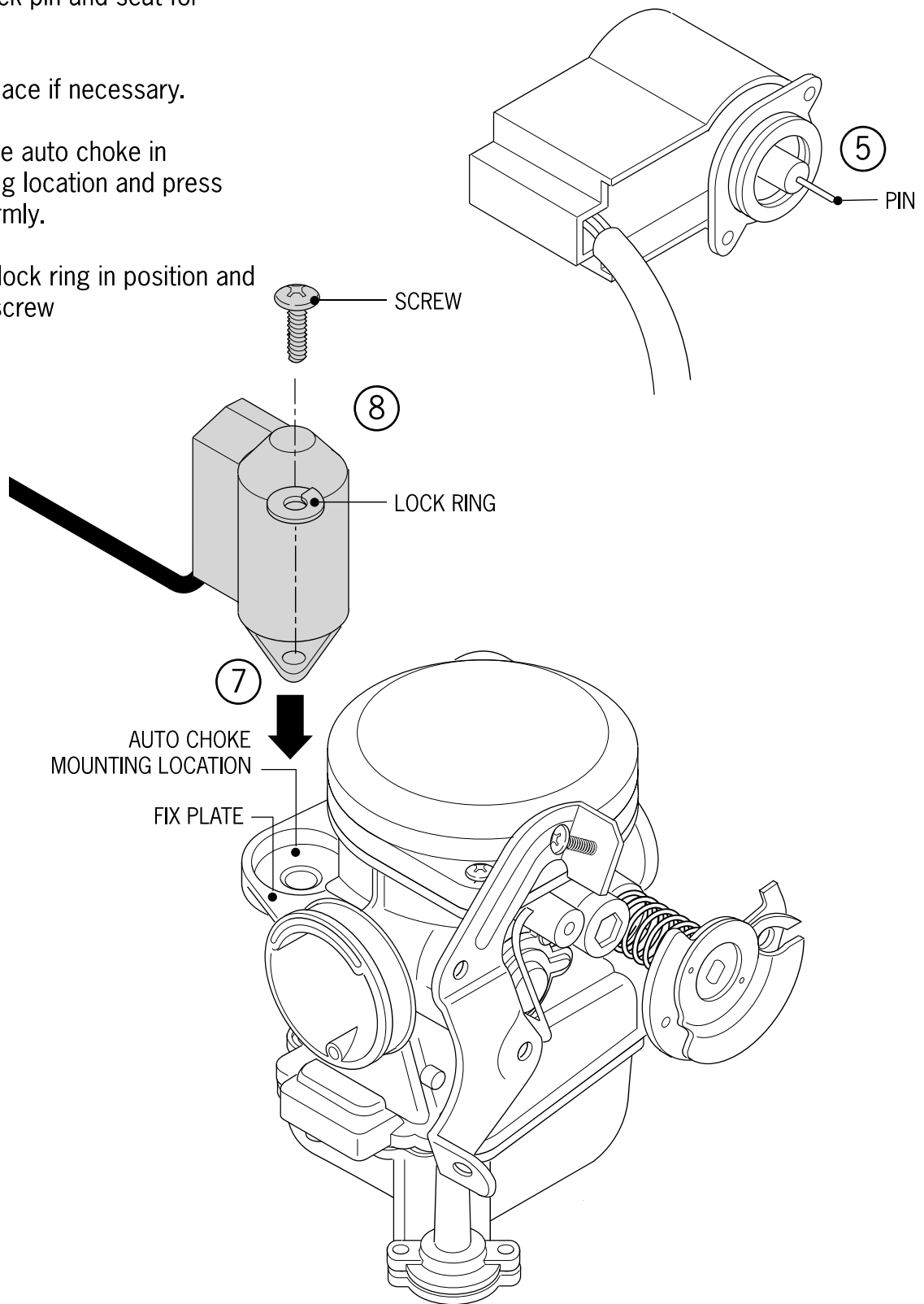
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5. Check pin and seat for wear.

6. Replace if necessary.

7. Place auto choke in mounting location and press down firmly.

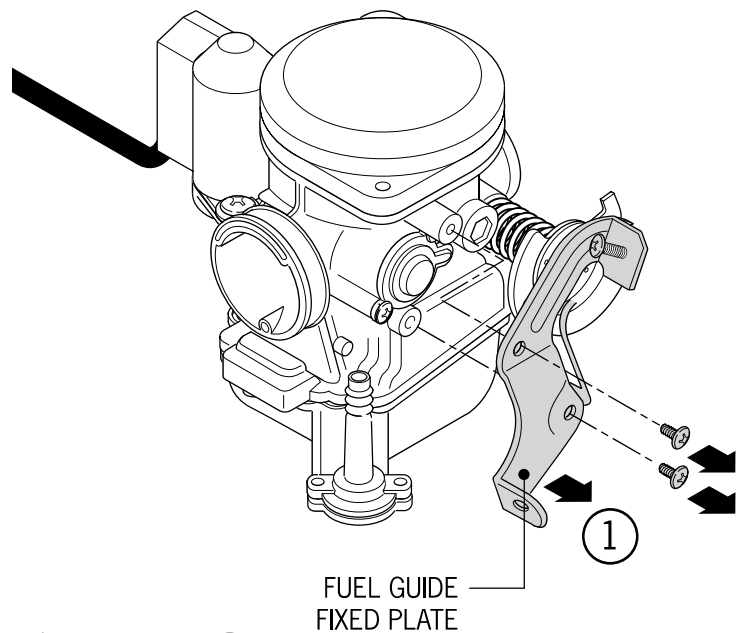
8. Put lock ring in position and fasten screw



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Air Cut Off Valve

1. Disassemble two screws in fuel guide fixed plate and remove fixed plate.
2. Disassemble two screws in air cut off valve.
3. Take off spring and vacuum plate.
4. Check for wear on plate, replace if necessary.
5. Clean the passage way to remove dirt or varnish.

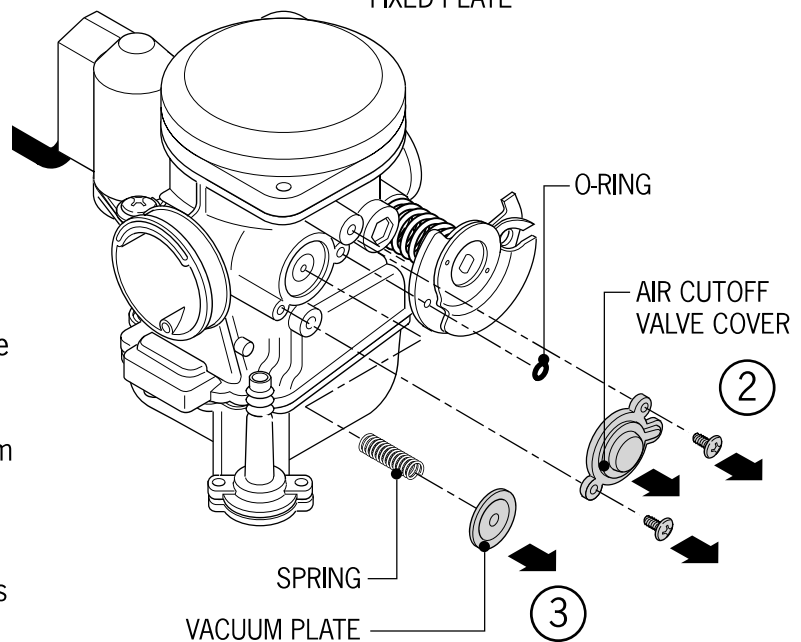


Assembling

1. Install plate to carburetor.
2. Install spring and cover of air cut-off valve.
3. Build up fuel guide line fixed plate and tighten two screws.

⦿ Be sure that furrow of vacuum plate is aligned with the carburetor groove.

⦿ Make sure that cover tightens into place.



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Vacuum Chamber-Break down

1. Remove two screws and take off cover.
2. Remove spring, diaphragm piston.
3. Remove fuel pin and slide.

⊙ Take special care not to damage diaphragm. Replace if damaged.

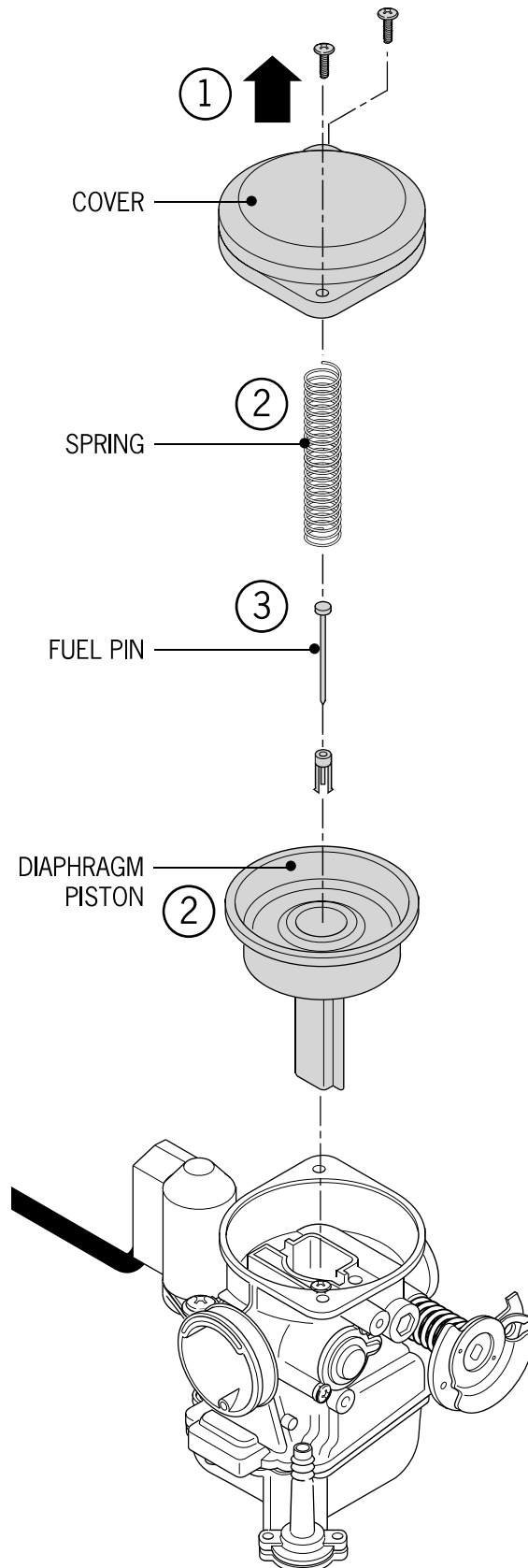
Checking

1. Check pin for wear and replace if necessary.

Assembling

1. Install piston or plate to body of carburetor.
2. Push the button of the piston to vacuum chamber side and keep open completely. Install spring and cover.
3. Install screw.

⊙ Be sure to hold slide and piston in up position when installing cover and tighten screw.



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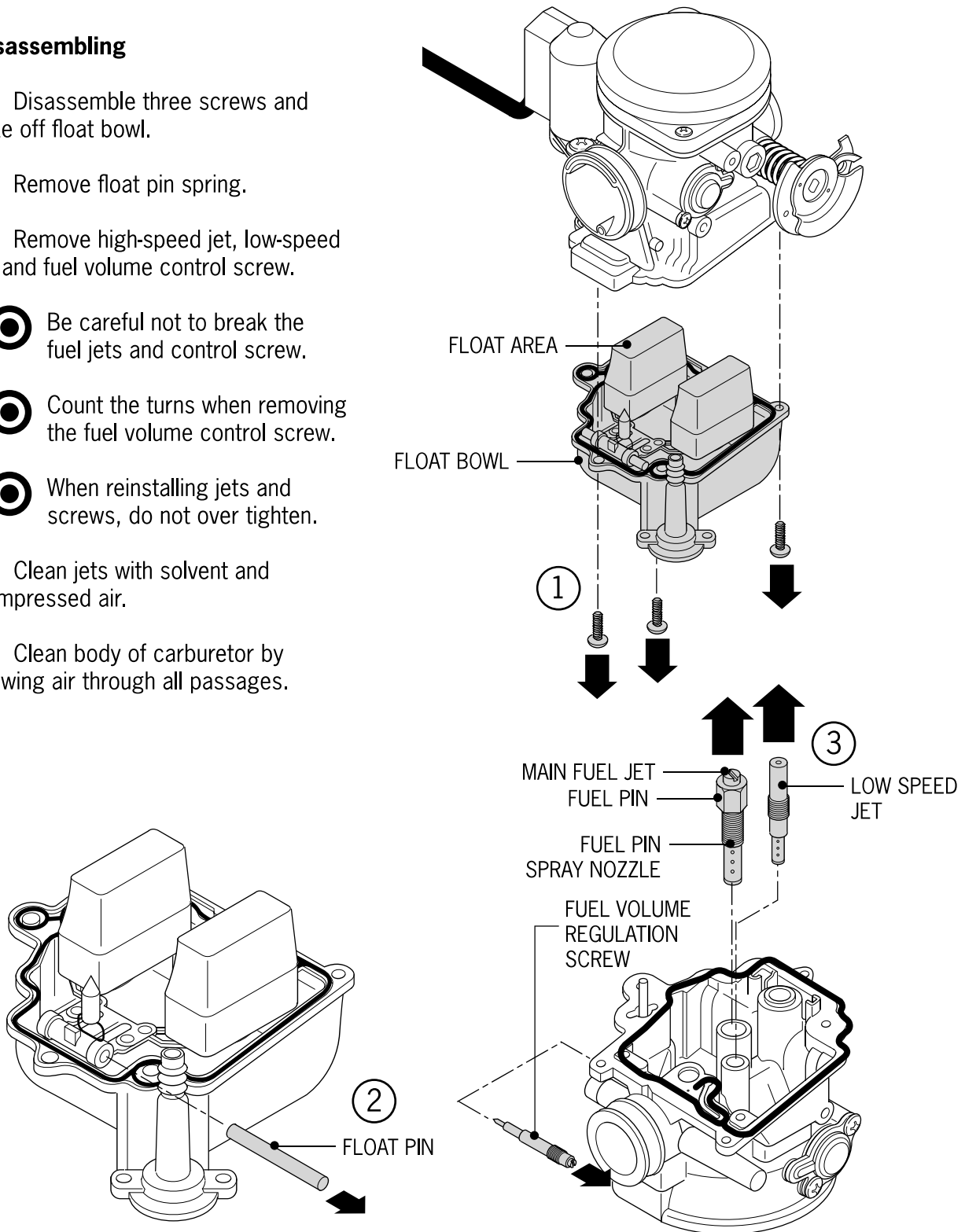
Float Bowl

Disassembling

1. Disassemble three screws and take off float bowl.
2. Remove float pin spring.
3. Remove high-speed jet, low-speed jet and fuel volume control screw.

- ⦿ Be careful not to break the fuel jets and control screw.
- ⦿ Count the turns when removing the fuel volume control screw.
- ⦿ When reinstalling jets and screws, do not over tighten.

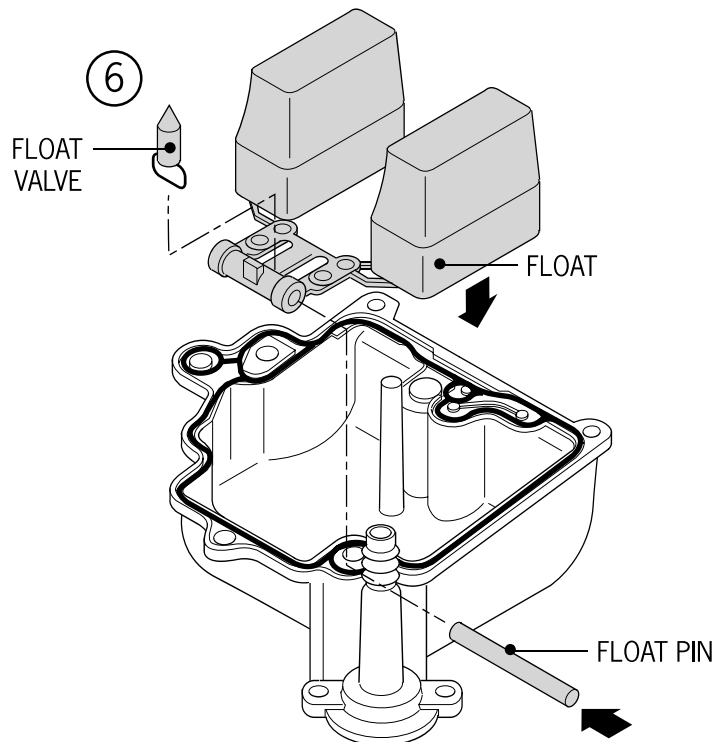
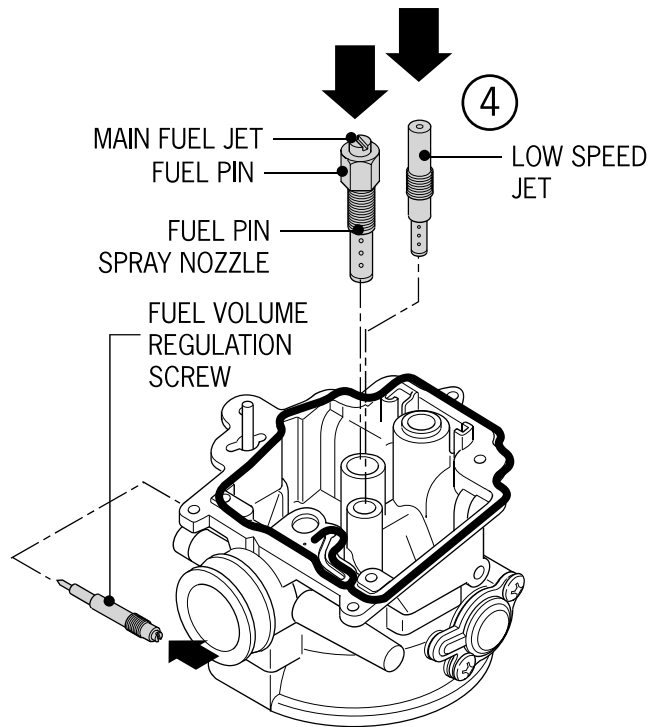
4. Clean jets with solvent and compressed air.
5. Clean body of carburetor by blowing air through all passages.



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Checking

1. Check float valve and valve seat for damage.
2. Check float valve and valve seat wear, pitting or buildup of dirt.
3. Any leakage of the valve or a buildup of dirt will affect the fuel level in the float bowl and cause drivability problems.
4. Assemble the low speed jet, fuel pin spray nozzle, fuel pin spray seat and main jet into the bottom of the carburetor housing.
5. Set the fuel level in the bowl by adjusting the fuel regulation screw. The standard setting is 2 turns, plus or minus a 1/4 turn.
6. Assemble the float valve, float and float pin to the bottom of the carburetor using the retainer pin.
7. Check the operation of the float and valve. All parts should move freely and not bind.
8. After assembling the float, check for proper fuel level using a small ruler or a float gage. The proper fuel level is 20.5mm (.807 in.).



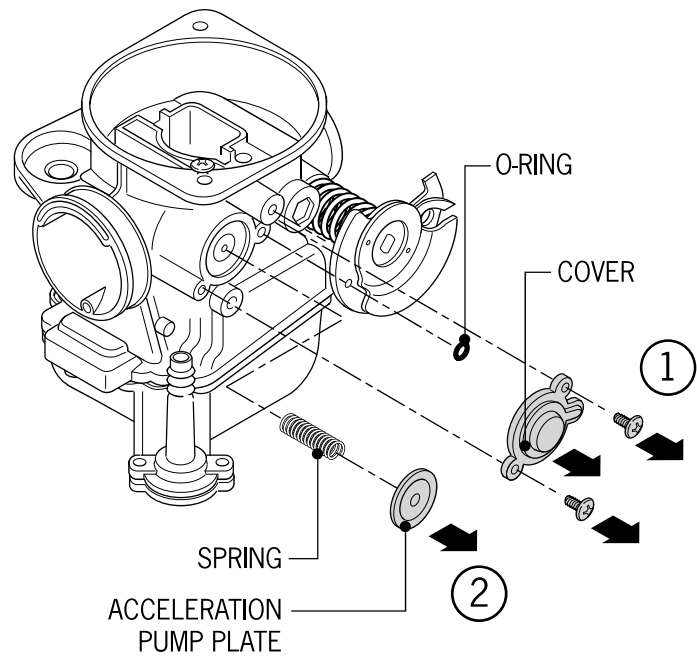
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Accelerator Pump

1. Remove two screws on pump and take off cover.
2. Take off spring and acceleration pump plate.

Checking

1. Check acceleration pump plate for cracks or hardening of the rubber. Replace as necessary.
2. Check for blocked fuel passages.
3. Clean by high pressure air.
4. Reverse steps to reassemble.
5. Take special care with the accelerator pump plate to avoid damage.



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Assembly of Carburetor

1. Slide carburetor carefully into the manifold, making sure to align the tab on the manifold with the notch on the carburetor. Securely tighten the clamp screw to fix the carburetor in place. Do not over tighten the screws as this can cause damage to the manifold.

2. Attach the inlet pipe to the rear of the carburetor and tighten the clamp screw.

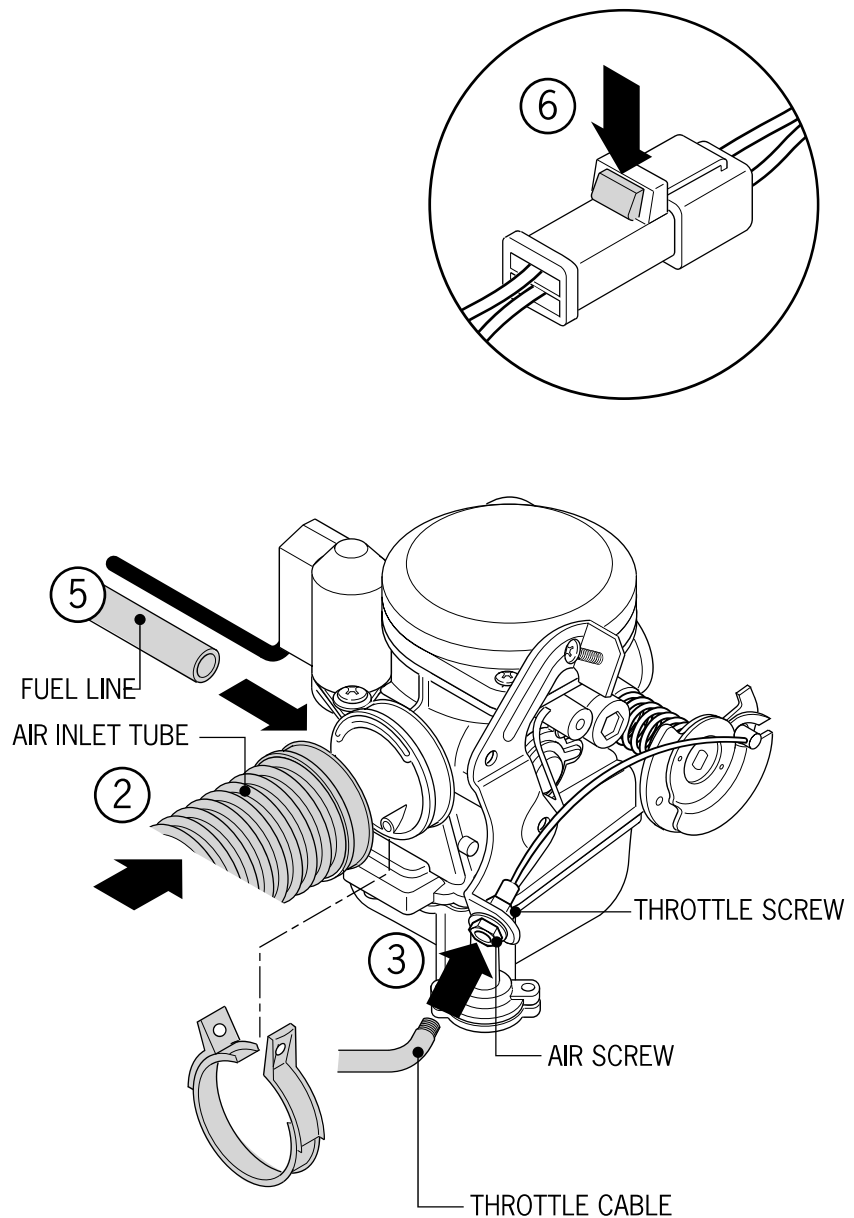
3. Attach the throttle cable to the throttle by installing the cable lug into the notch on the throttle plate. Insert the outer casing of the throttle cable into the cable support bracket. Make sure to align the "D" shape of the adjusting sleeve with the "D" shape hole of the bracket.

4. Use the adjusting nut and stop nut to set the cable tension. Correct adjustment should allow 1/4 inch of free play in the cable.

5. Attach the fuel line from the tank to the inlet on the carburetor and clamp securely.

6. Connect the wiring harness from the auto choke to the proper connection on the main wiring harness.

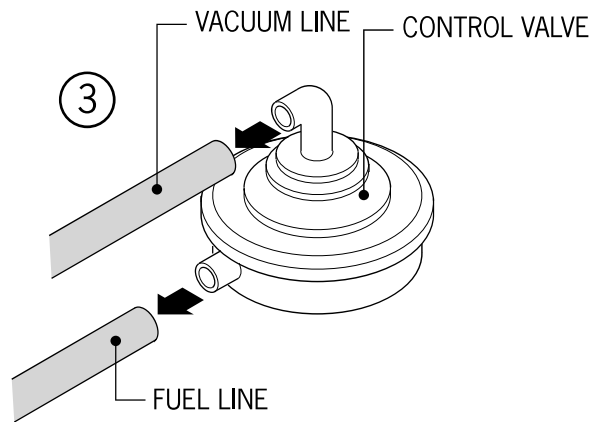
7. After starting the engine, set the idle speed using the idle adjusting screw.



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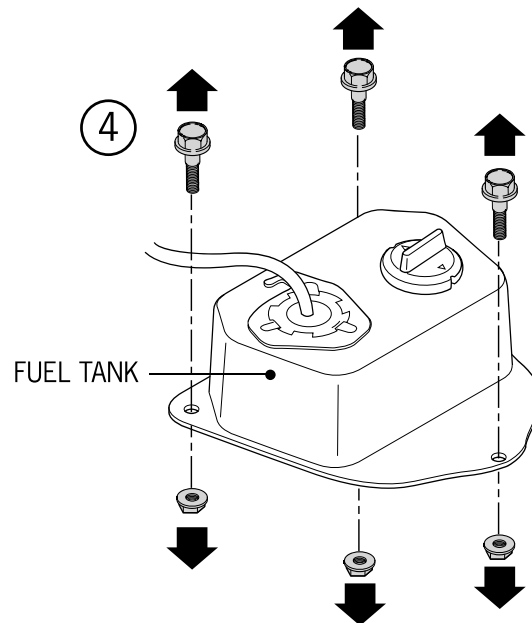
Disassembling Fuel Tank

1. Disassemble the body cover.
2. Disconnect the wiring harness from the fuel level sending unit.
3. Disconnect the fuel line and vacuum line from the auto fuel valve.
4. Remove three bolts and nuts to loosen the fuel tank.
5. Remove the fuel tank from the frame.



Assembly of Fuel Tank

1. Reverse steps for reassembly.



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Carburetor Adjustment

It is generally not necessary to adjust the mixture screw on the side of the carburetor. This screw is preset at the factory and will have little effect on the performance of the carburetor.

1. If this screw has been removed for cleaning of the carburetor, it should be reset carefully. The standard setting is two turns out, plus or minus 1/4 turn.

2. To set this position, run the engine until warm and allow it to idle. Turn the screw in or out a little at a time and measure the idle RPM. The correct setting is achieved when the idle speed is maximized.

3. Adjust the idle speed of the engine once the engine has been warmed up.

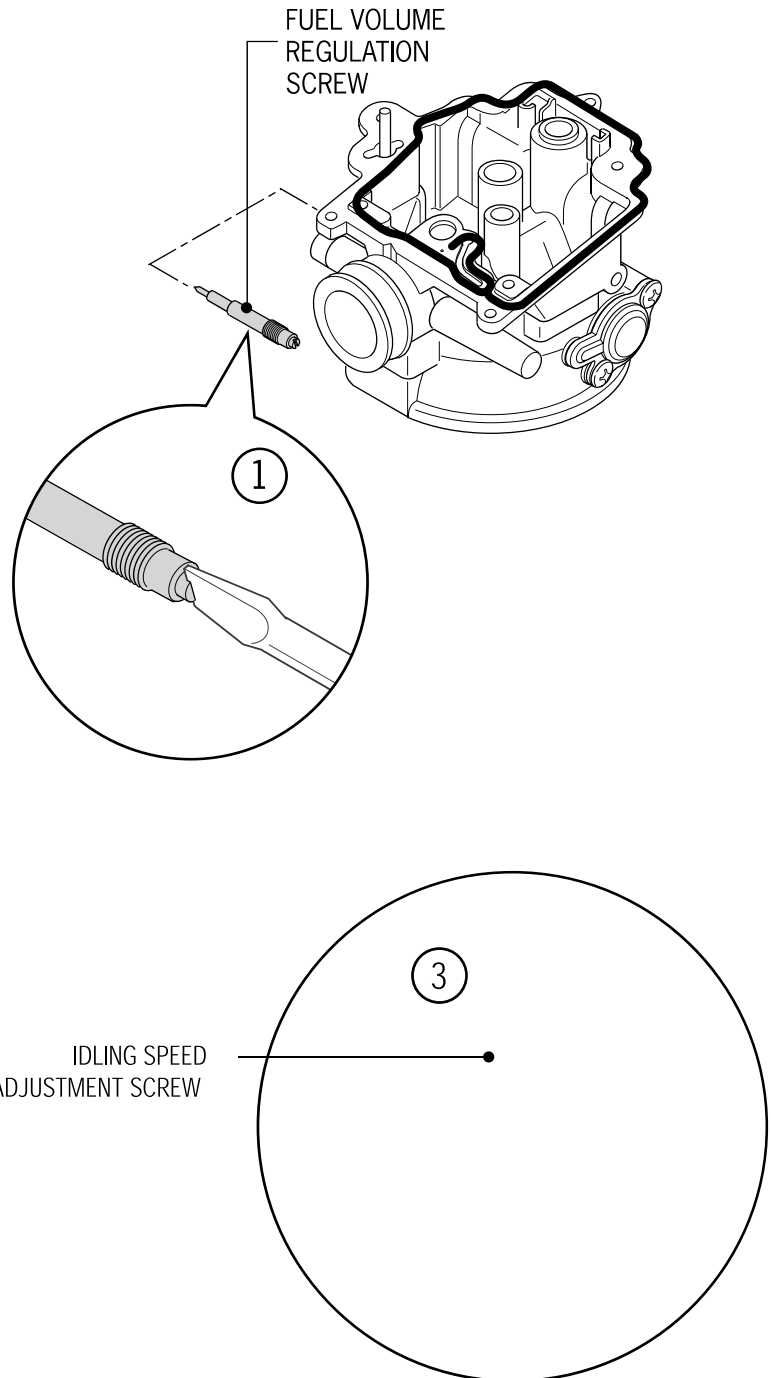
4. Set the warm idle speed to 1900RPM, plus or minus 100RPM.

5. Check for engine return to idle speed after running at part throttle.

6. Make sure that the throttle cable allows the throttle control plate to return to the stop screw.

7. If needed, readjust the mixture screw to help stabilize idle performance.

NOTE: SOME COMPONENTS REMOVED FOR CLARITY.



5. Fuel System

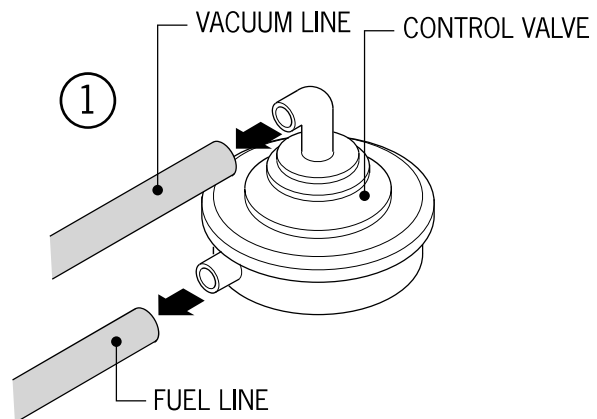
Automatic Fuel Valve

1. Disconnect the fuel line and the vacuum line from the control valve and from the carburetor and intake manifold. Carefully inspect these lines. Any blockage, deterioration, damage, or cracking of these lines can cause improper functioning of the fuel valve. Replace these lines as necessary.

2. Always make sure that the clamps work properly when replacing these lines in order to assure a tight seal of the lines at the fittings on the valve, carburetor and manifold.

3. To check the operation of the valve, apply a vacuum to the input fitting of the valve. Fuel should flow freely when the vacuum is applied and stop when it is removed.

4. Never attempt to clean the valve with high-pressure air. This will damage the valve and require replacement.



Fuel Meter Sending Unit

1. Disconnect the sending unit wiring harness.

2. Disconnect four mounting screws.

3. Lift and turn the sending arm to allow the float arm and float to be removed from the fuel tank. Take care not to bend or damage the float arm as this can cause improper readings.

4. Check the movement of the arm. It should move freely without binding or hesitation. Check the continuity of the coil. If it is open, the unit needs replacement. When reassembling the sending units, make sure that the gasket is not damaged to avoid leakage.

