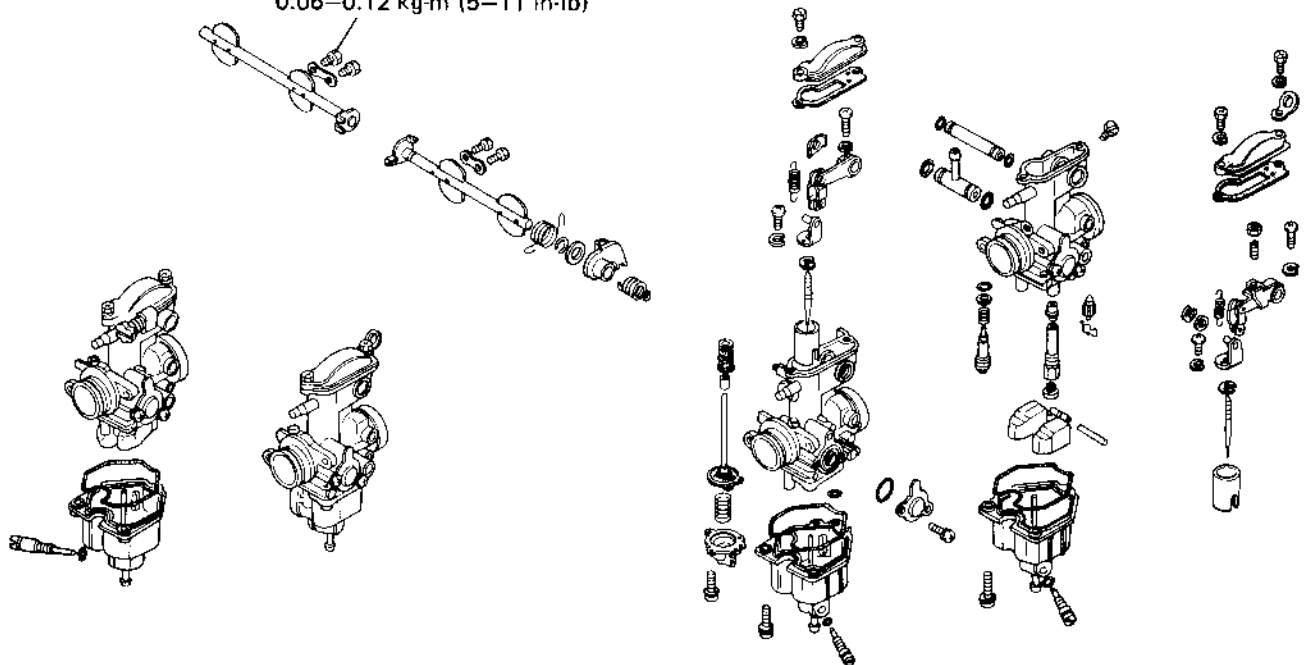


0.06-0.12 kg-m (5-11 in-lb)





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## SERVICE INFORMATION

### GENERAL INSTRUCTIONS

- Use caution when working with gasoline. Always work in a well-ventilated area and away from sparks or flames.
- When disassembling fuel system parts, note the locations of the O-rings. Replace them during assembly.
- The float bowls have drain plugs that can be loosened to drain residual fuel.

### SPECIAL TOOLS

#### Special Tools

Carburetor Throttle Wrench	07908-4220100
Carburetor Pilot Screw Wrench	07908-4220201
Common Tool	
Float Level Gauge	07401-0010000

### TORQUE VALUES

Choke valve	0.06-0.12 kg-m (5-11 in-lb)
-------------	-----------------------------

### SPECIFICATIONS

Venturi dia.	26 mm (1.02 in)
Setting mark	PD50A
Main jet	#90
Float level	12.5 mm (0.50 in)
Idle speed	1,050 ± 100 rpm
Throttle grip free play	2-6 mm (1/8 - 1/4 in)
Fast idle	2,000 ± 700 rpm
Pilot screw opening	See page 4-15



## TROUBLESHOOTING

### Engine cranks but won't start

1. No fuel in tank
2. No fuel to carburetor
3. Engine flooded with fuel
4. No spark at plug (ignition malfunction)
5. Air cleaner clogged
6. Intake air leak
7. Improper choke operation
8. Improper throttle operation

### Hard starting or stalling after starting

1. Improper choke operation
2. Ignition malfunction
3. Fast idle speed incorrect
4. Carburetor malfunction
5. Fuel contaminated
6. Intake air leak
7. Idle speed incorrect

### Rough idle

1. Ignition malfunction
2. Idle speed incorrect
3. Incorrect carburetor synchronization
4. Carburetor malfunction
5. Fuel contaminated

### Misfiring during acceleration

1. Ignition malfunction
2. Faulty accelerator pump

### Backfiring

1. Ignition malfunction
2. Carburetor malfunction
3. Faulty accelerator pump

### Poor performance (driveability) and poor fuel economy

1. Fuel system clogged
2. Ignition malfunction
3. Faulty accelerator pump

### Lean mixture

1. Clogged fuel jets
2. Piston stuck open
3. Faulty float valve
4. Float level low
5. Fuel cap vent clogged
6. Fuel strainer screen clogged
7. Restricted fuel line
8. Air vent tube clogged
9. Intake air leak

### Rich mixture

1. Clogged air jets
2. Faulty float valve
3. Float level too high
4. Choke stuck open
5. Dirty air cleaner



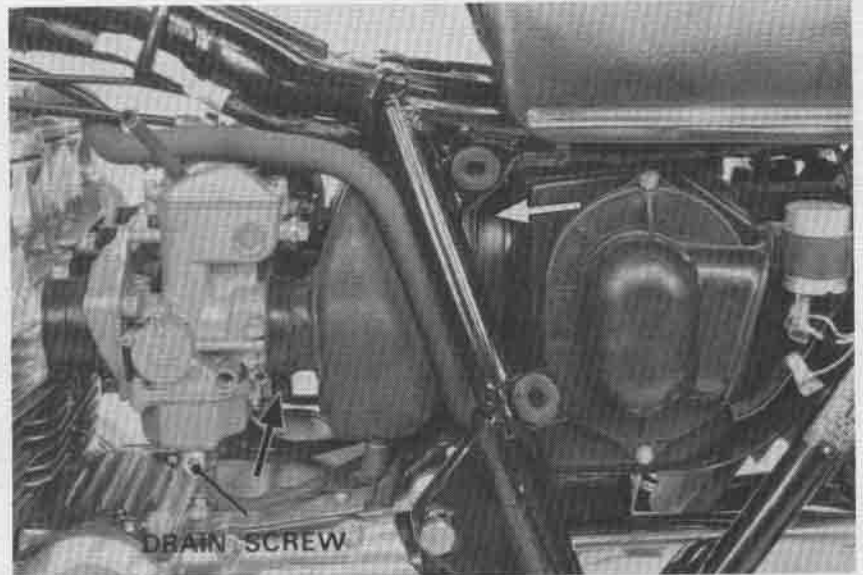
## CARBURETOR REMOVAL

Turn the fuel valve OFF and disconnect the fuel line at the carburetor.

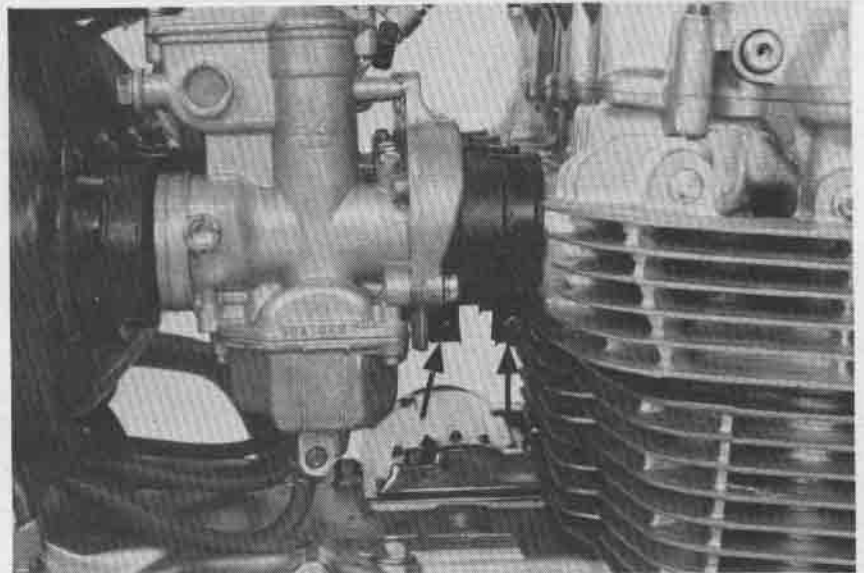
Remove both side covers and raise the seat. Drain residual fuel by loosening each drain screw.

Loosen the air cleaner-to-chamber band. Loosen the air cleaner chamber-to-carburetor bands.

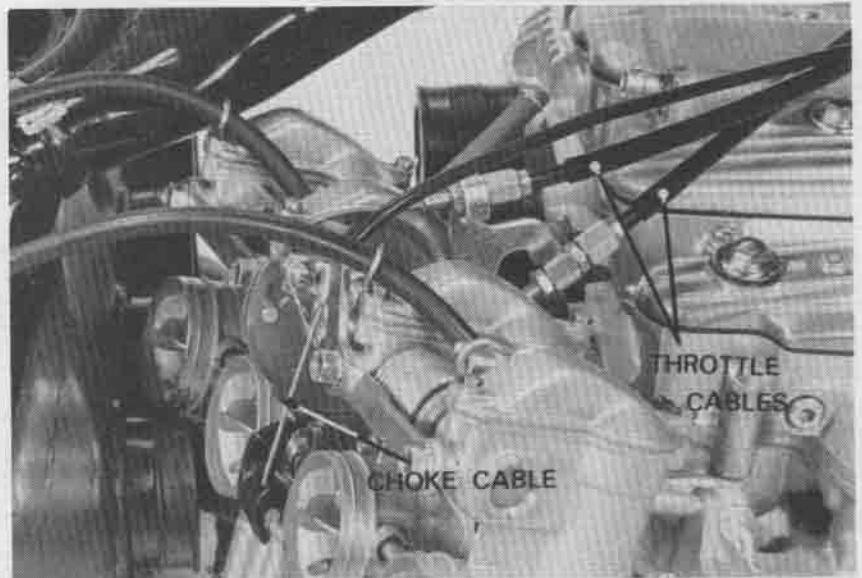
Disconnect the engine breather tube at the breather cover. Move the air cleaner chamber to the rear.



Loosen the carburetor manifold bands. Disconnect the carburetor assembly.



Disconnect the throttle and choke cables. Remove the carburetor assembly.

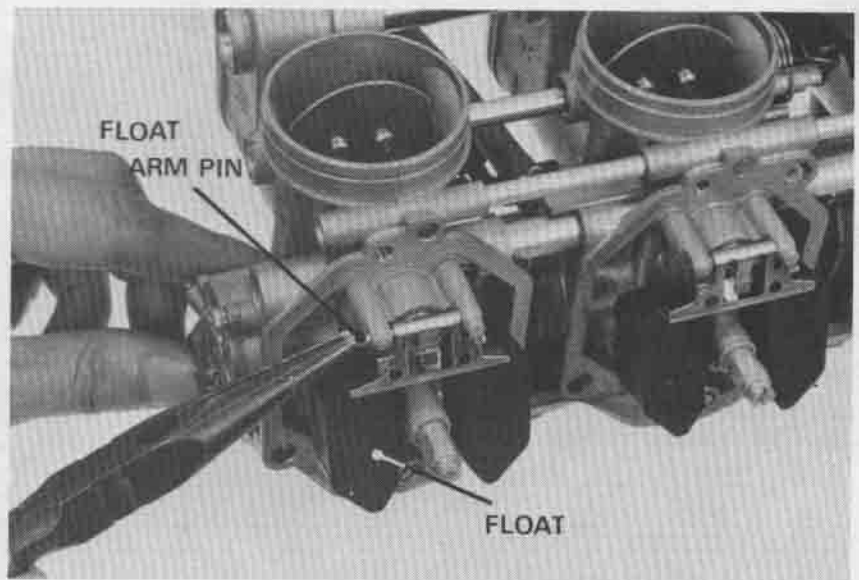




## FLOAT CHAMBER DISASSEMBLY

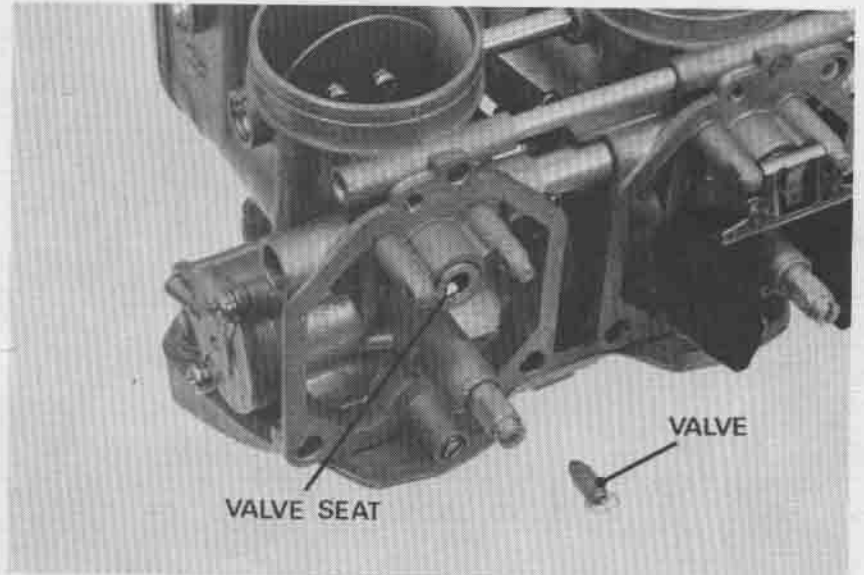
Remove the float chamber body.  
 Pull out the float arm pin with a pair of pliers.

Remove the float and float valve.



Inspect the float valve and seat for grooves, nicks or deposits.

Inspect the float valve operation.



Remove the main jet.  
 Remove the jet needle holder.  
 Tilt the carburetor to remove the needle jet.

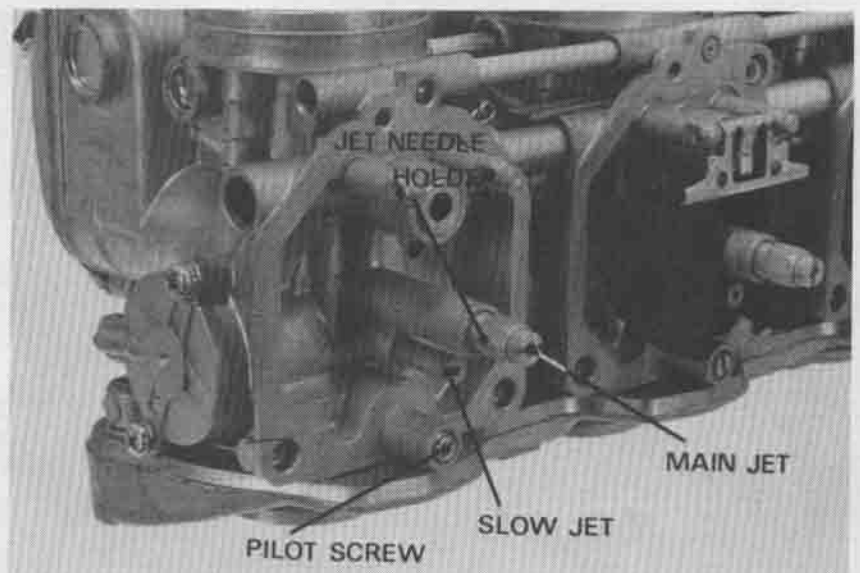
### NOTE

The slow air jet cannot be removed. It is a press fit.

Blow out all jets and body passages with compressed air.

### NOTE

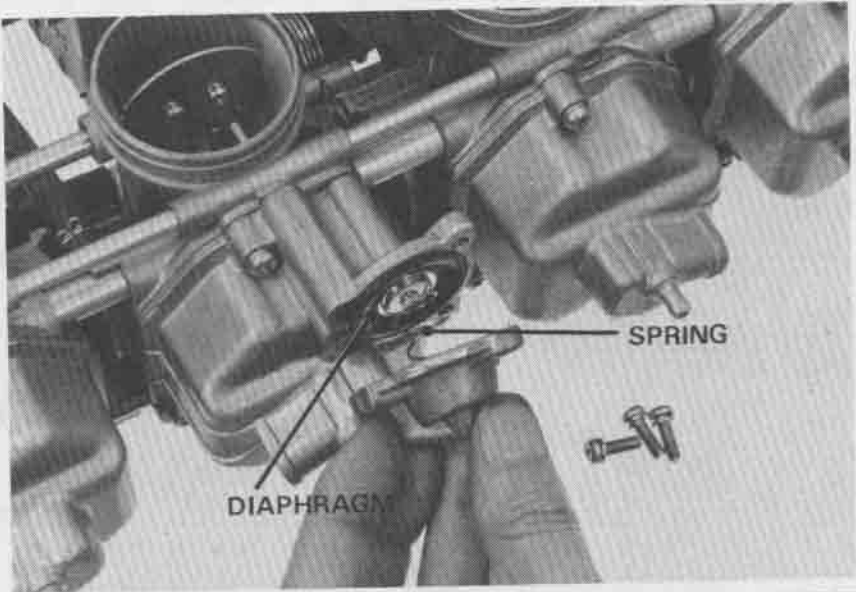
- If the needle jet is difficult to remove, carefully push the needle jet from the throttle valve side with a soft material after separating the carburetors (Page 4-6).
- Before removing the pilot screws, record the number of turns necessary to make them seat to ensure correct reassembly.
- Do not damage the pilot screw threads when removing the plain washer and O-ring





### ACCELERATOR PUMP DISASSEMBLY

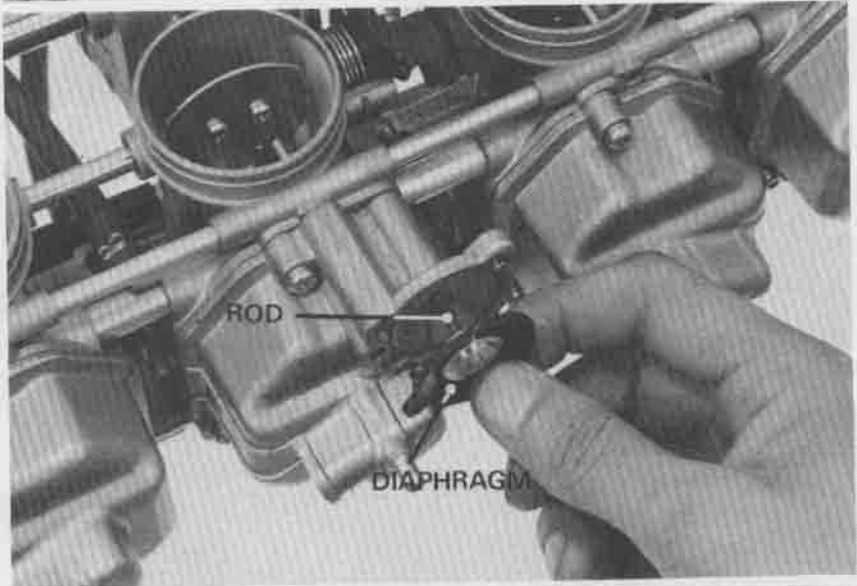
Remove the accelerator pump cover and spring.



Remove the diaphragm.  
Inspect the diaphragm for cracks and brittleness.

**NOTE**

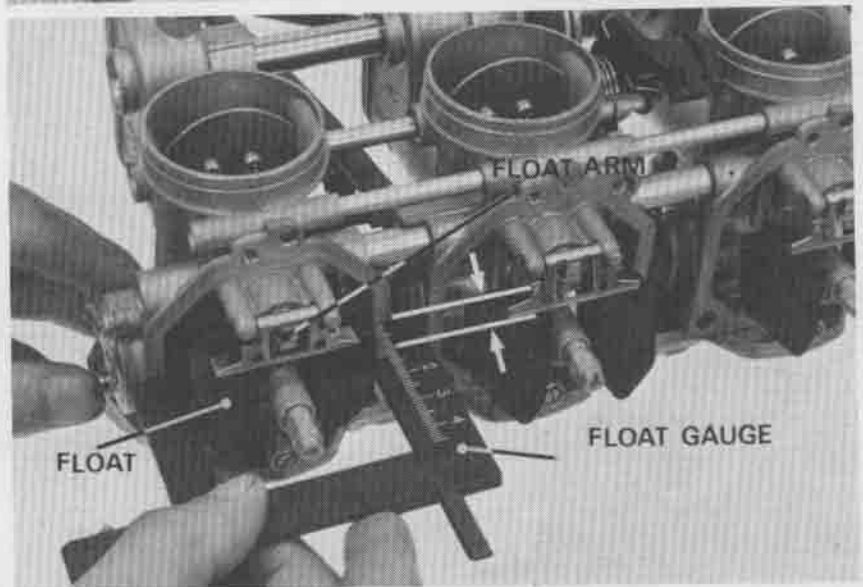
Be sure the accelerator pump rod is not bent.



### FLOAT LEVEL ADJUSTMENT

Remove float chambers.  
Adjust the float level by bending the float arm carefully until it just contacts the float valve.

**FLOAT LEVEL: 12.5 mm (0.50 in)**



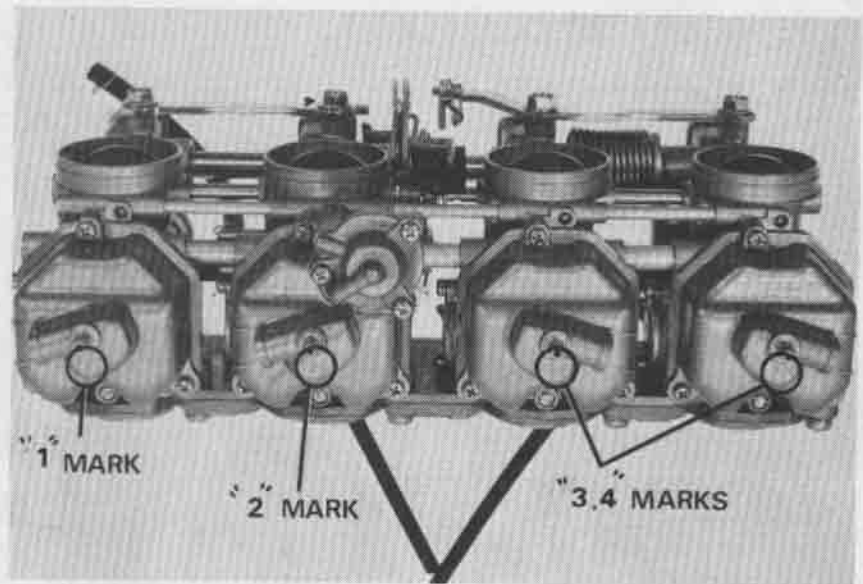


## COMPONENT ASSEMBLY

Assemble the accelerator pump and float chamber.

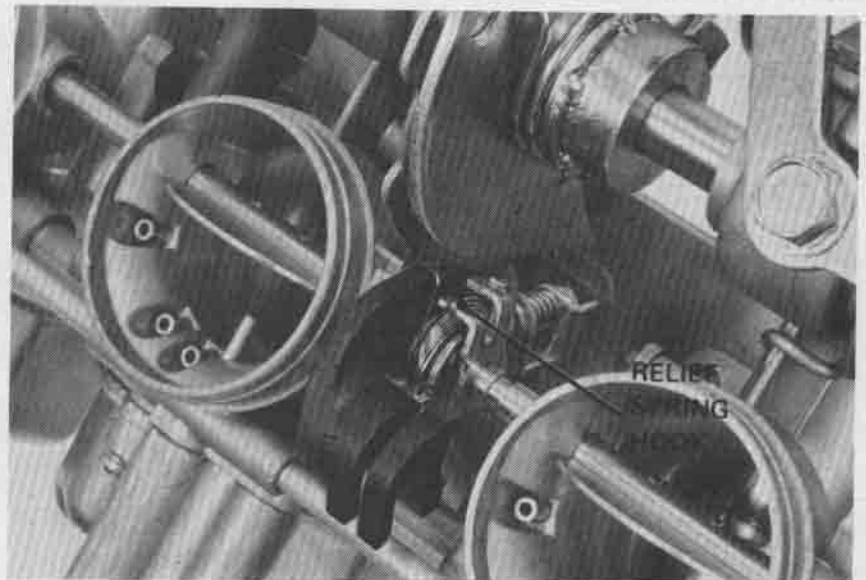
### NOTE

Note the carburetor number on the float chamber body.

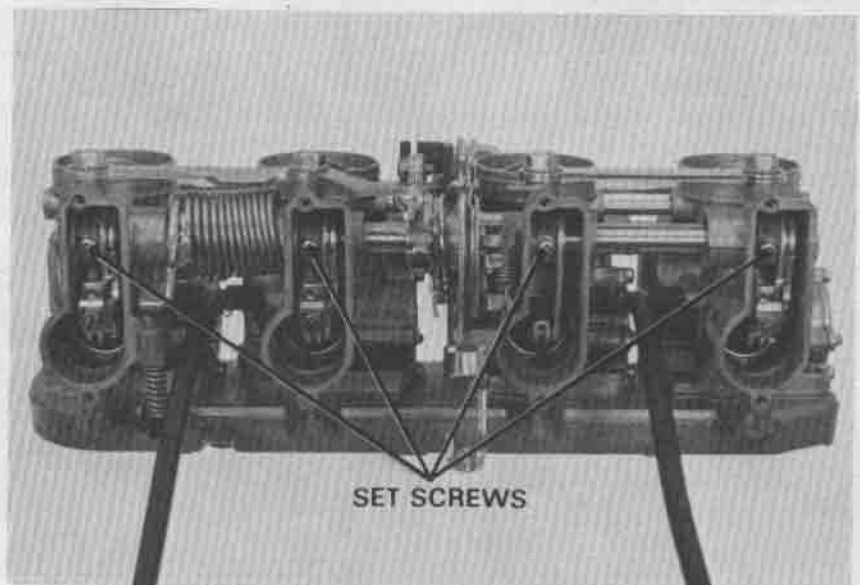


## CARBURETOR SEPARATION

Unhook the choke relief spring from the choke shaft arm of the No.3 and No.4 carburetors.



Remove the carburetor top covers.  
Remove the throttle link arm set screws.



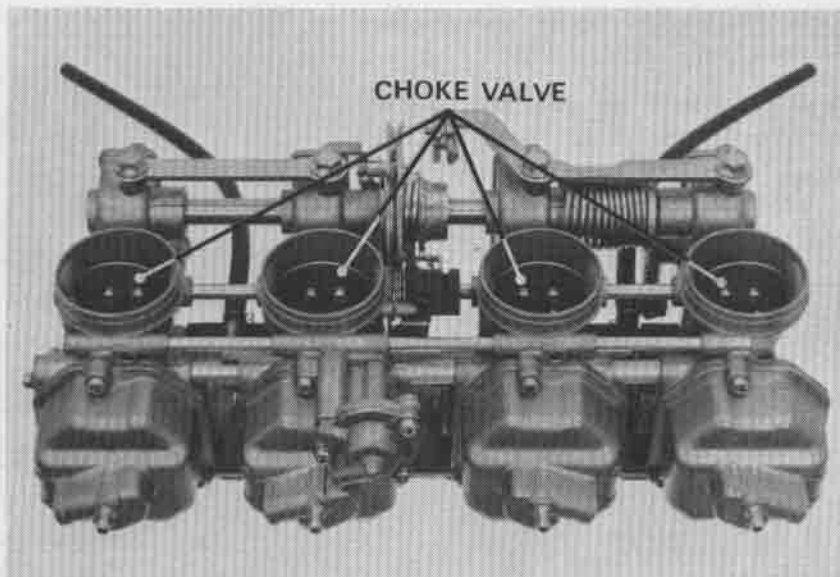


File off the staked ends of the choke valve screws.

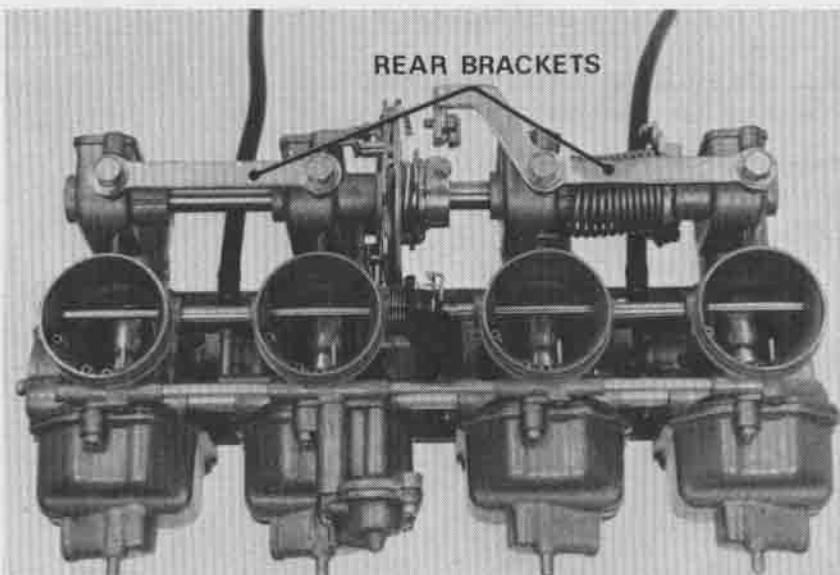
Remove the choke valves and discard the screws.

**CAUTION**

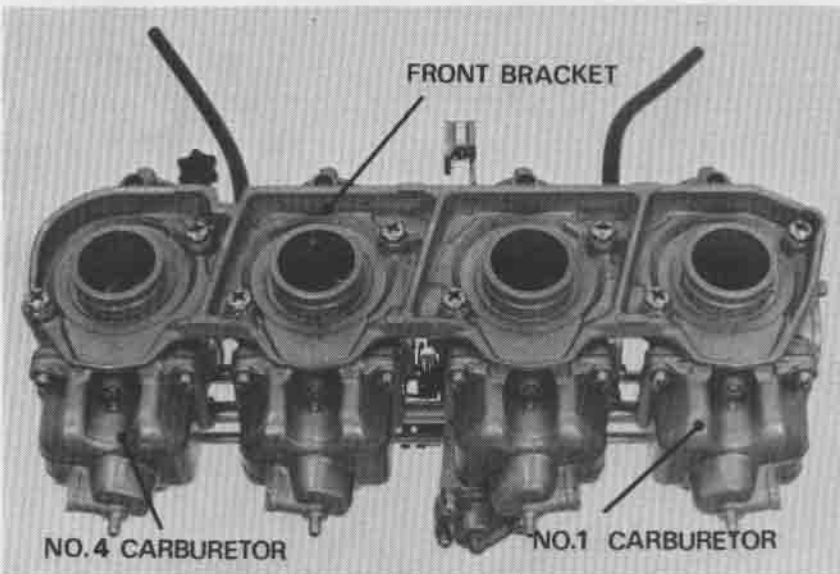
*Do not allow the filings to enter the carburetors.*



Remove the rear bracket.



Remove the front bracket.



Carefully separate the No.1 and No.4 carburetors.

**CAUTION**

*Separate the carburetors horizontally to prevent damage to the fuel and air joint pipes and choke link.*



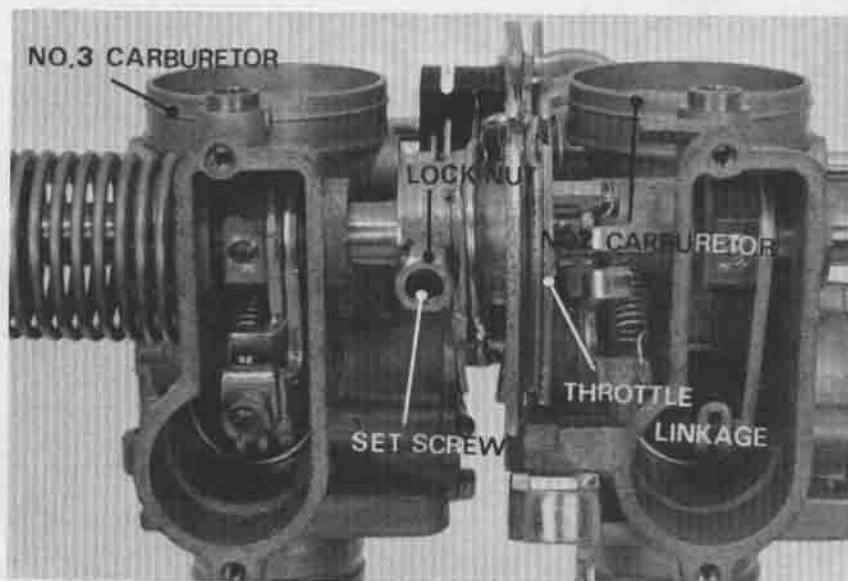


Loosen the throttle linkage set screw lock nut and screw.

Carefully separate the No.2 and No.3 carburetors, throttle linkage and throttle shaft.

**CAUTION**

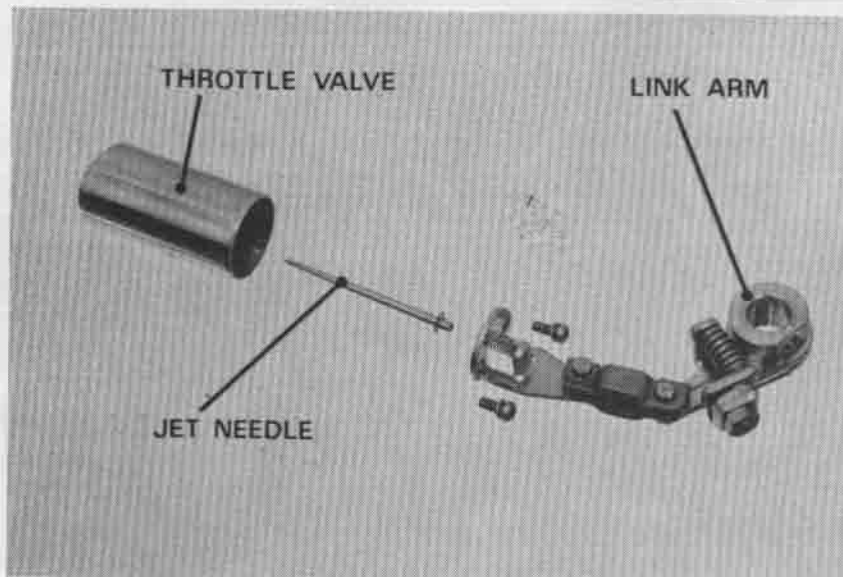
*Separate the carburetor horizontally to prevent damage to the fuel and air joint pipes and choke link.*



**THROTTLE VALVE DISASSEMBLY**

Loosen the two screws and remove the throttle valve and jet needle from the link arm.

Inspect the jet needle and throttle valve for wear, damage or scoring.



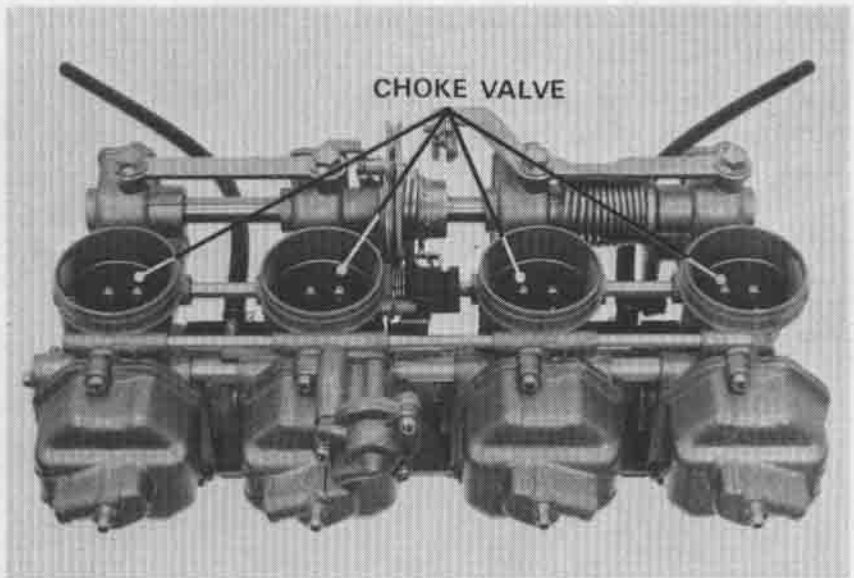


File off the staked ends of the choke valve screws.

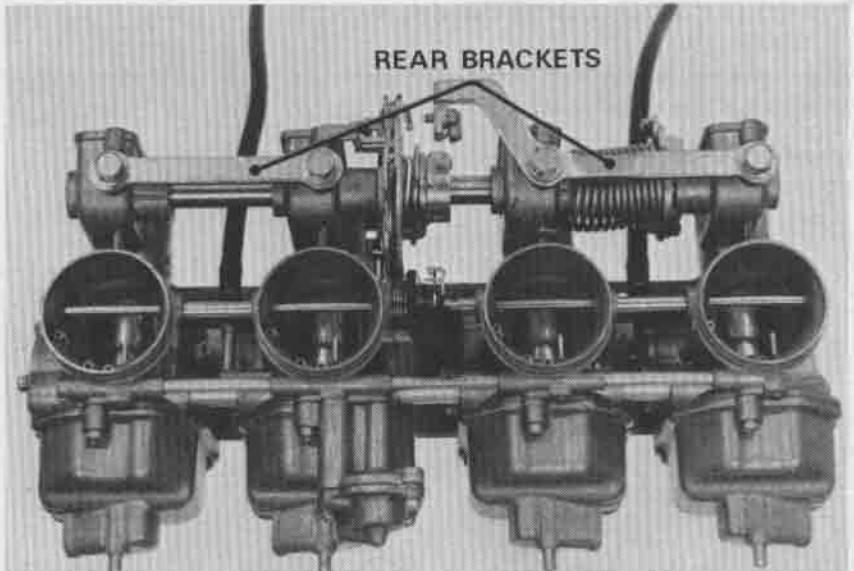
Remove the choke valves and discard the screws.

**CAUTION**

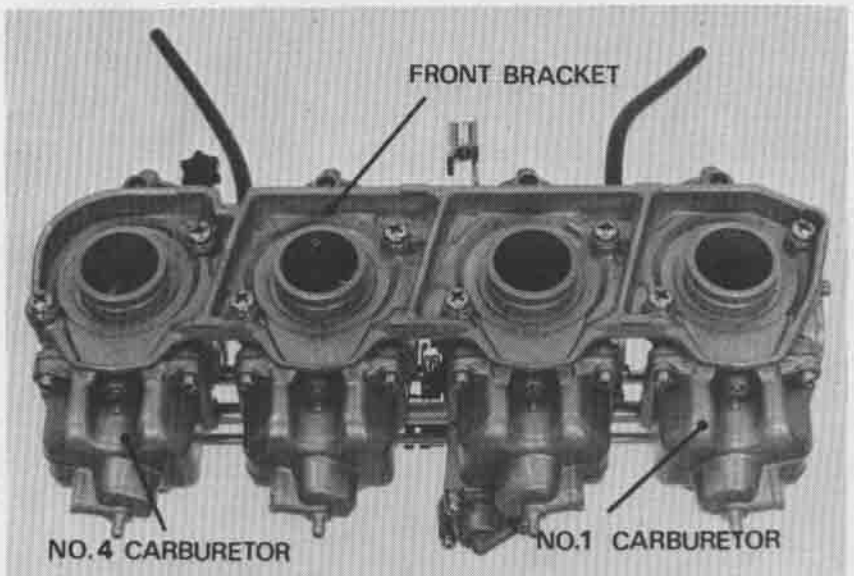
*Do not allow the filings to enter the carburetors.*



Remove the rear bracket.



Remove the front bracket.



Carefully separate the No.1 and No.4 carburetors.

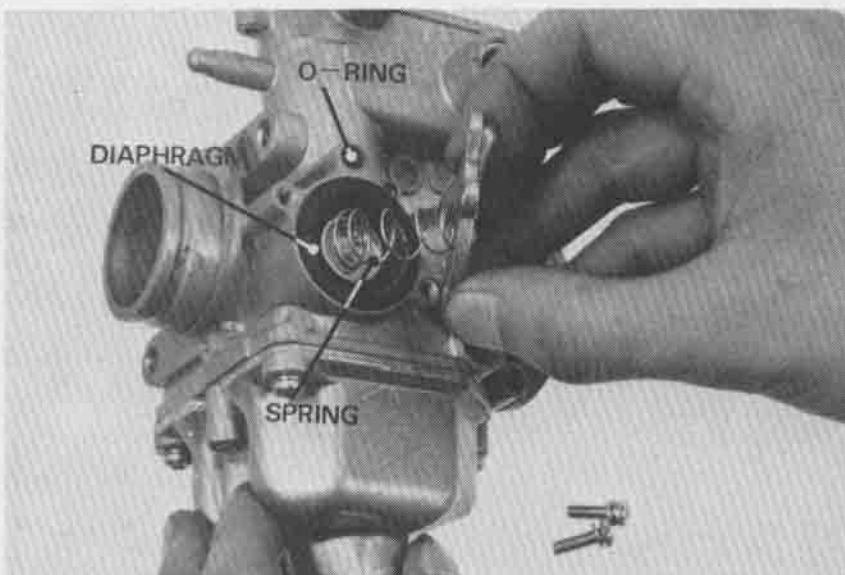
**CAUTION**

*Separate the carburetors horizontally to prevent damage to the fuel and air joint pipes and choke link.*



**AIR CUTOFF VALVE**

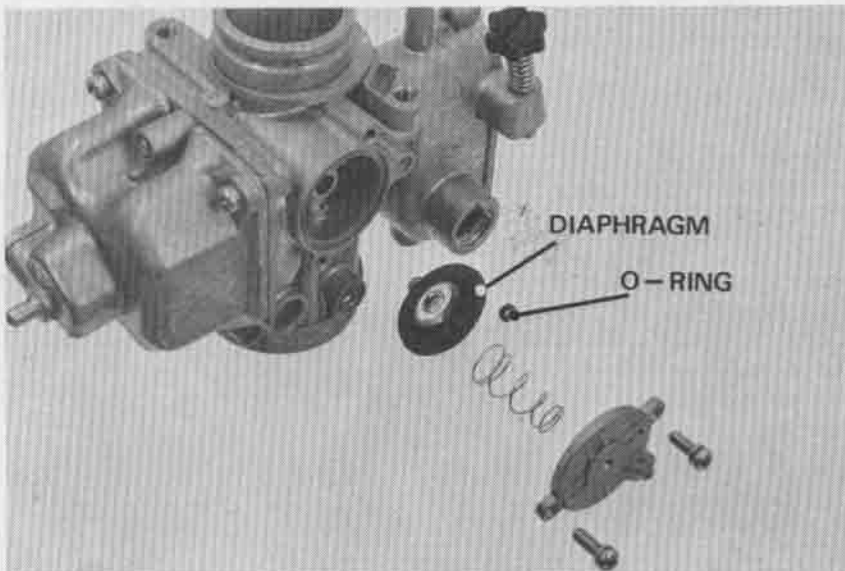
Remove the valve cover and spring.  
Remove the diaphragm and O-ring.



Inspect the diaphragm and valve for cracks and brittleness.

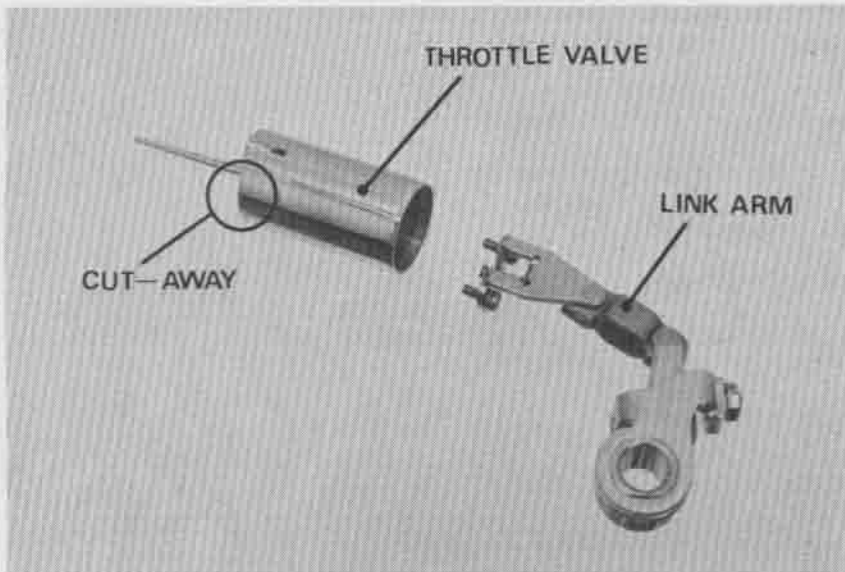
**NOTE**

When installing the air cutoff valve O-ring, make sure the flat surface is toward the carburetor body.



**CARBURETOR ASSEMBLY**

Install the throttle valve to the link arm so that the cut-away is facing the choke valve.

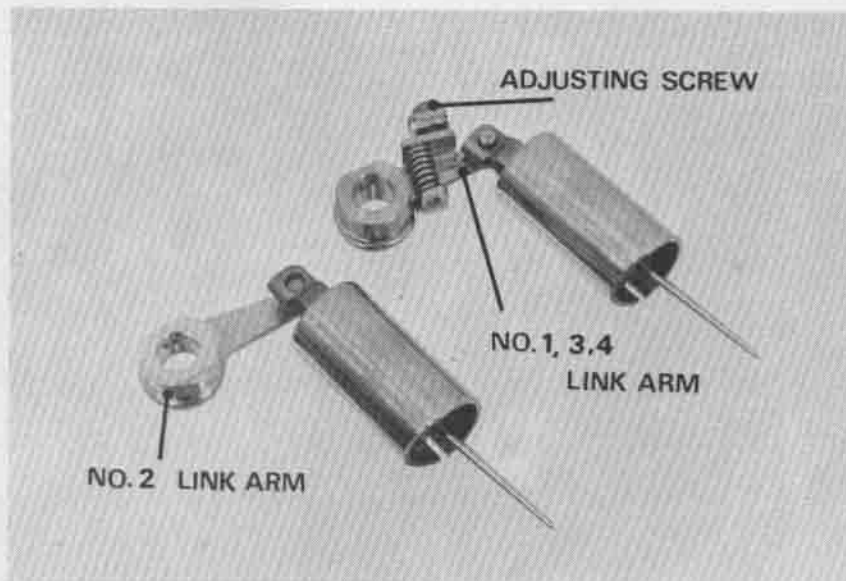




Install the throttle valves in the carburetor bodies.

**NOTE**

The link arm without an adjusting screw should be installed in the No.2 carburetor.



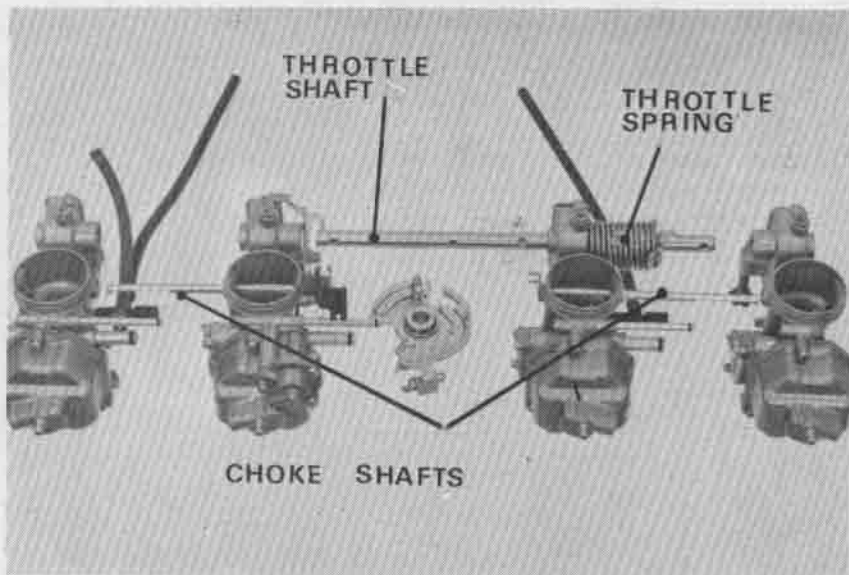
Insert the throttle shaft into the No.3 carburetor through the throttle spring.

Install new O-rings on the fuel joint pipes.

**NOTE**

Apply a thin coat of oil to the O-rings.

Insert a new choke shaft into the No.2 and No.3 carburetors.

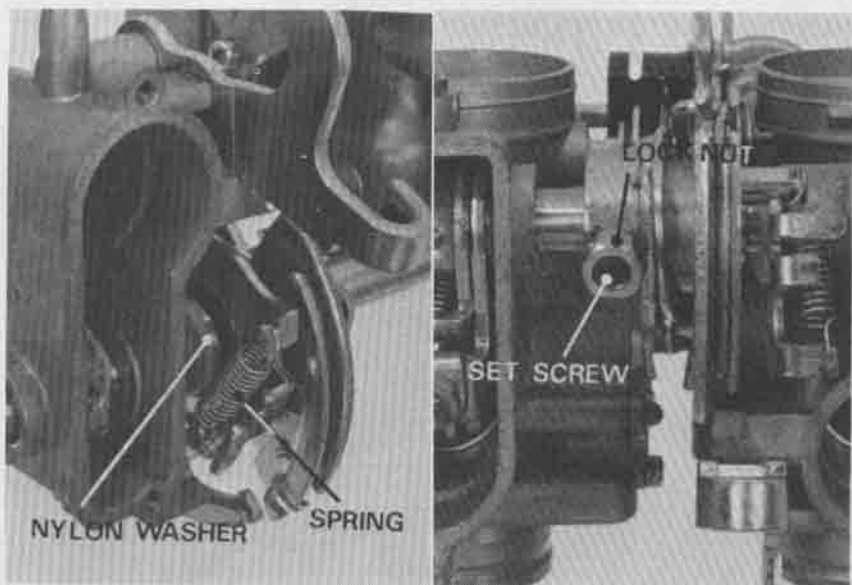


Install the throttle linkage and nylon washer onto the throttle shaft.

Assemble the No.3 and No.2 carburetors, pressing them together carefully.

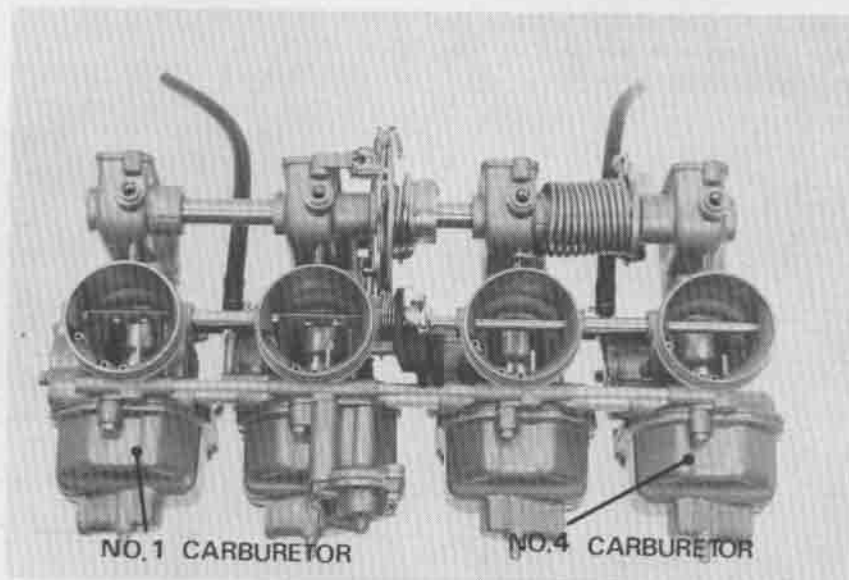
Align the hole in the throttle shaft with the throttle linkage set screw and tighten the set screw and lock nut.

Install the spring.





Assemble the No.1 and 4 carburetors to the No.2 and No.3 carburetor assembly, pressing them together carefully.

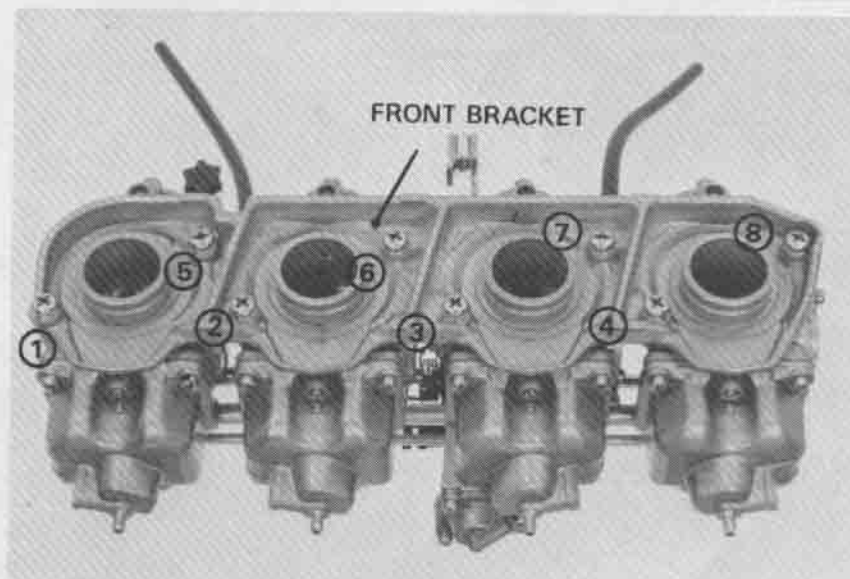


Install the front bracket loosely.

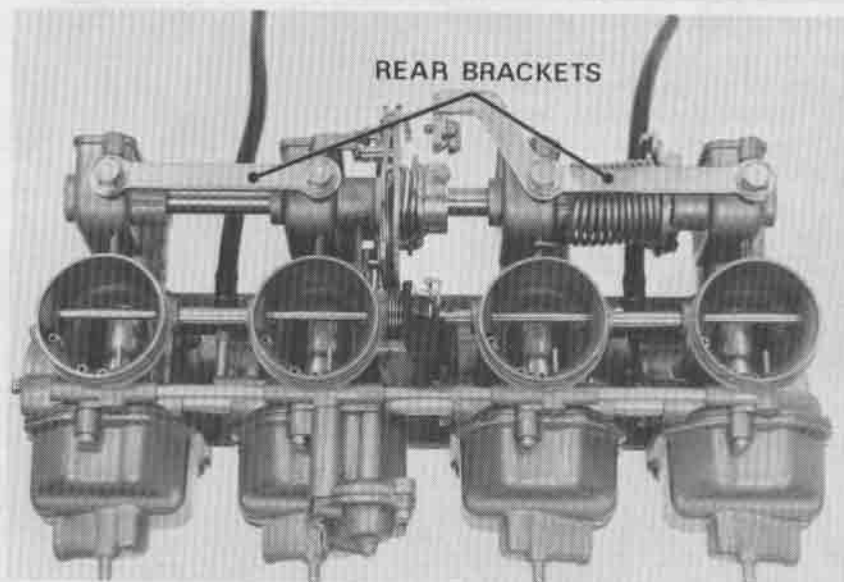
Tighten the screws in the sequence shown in two or more steps to prevent improper carburetor alignment.

**NOTE**

Check for smooth choke shaft operation. If not smooth, recheck the carburetor alignment.



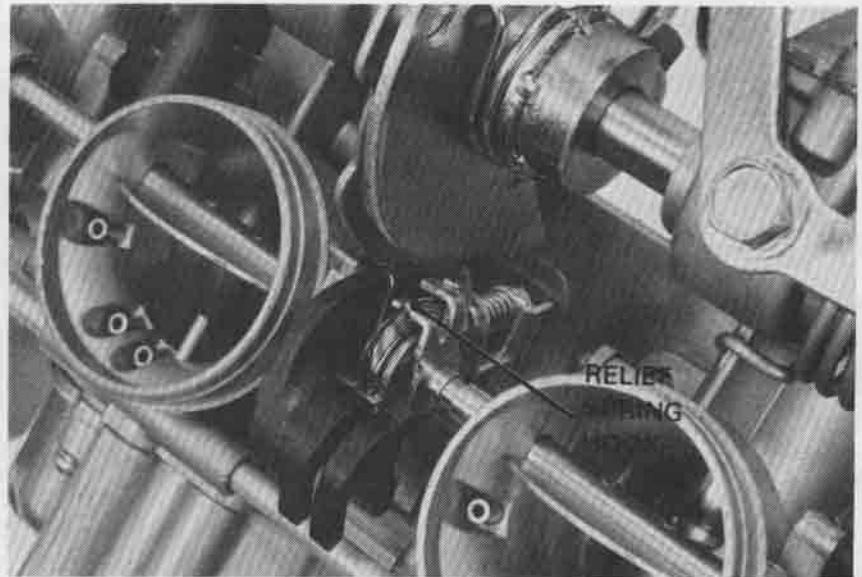
Install the rear bracket.



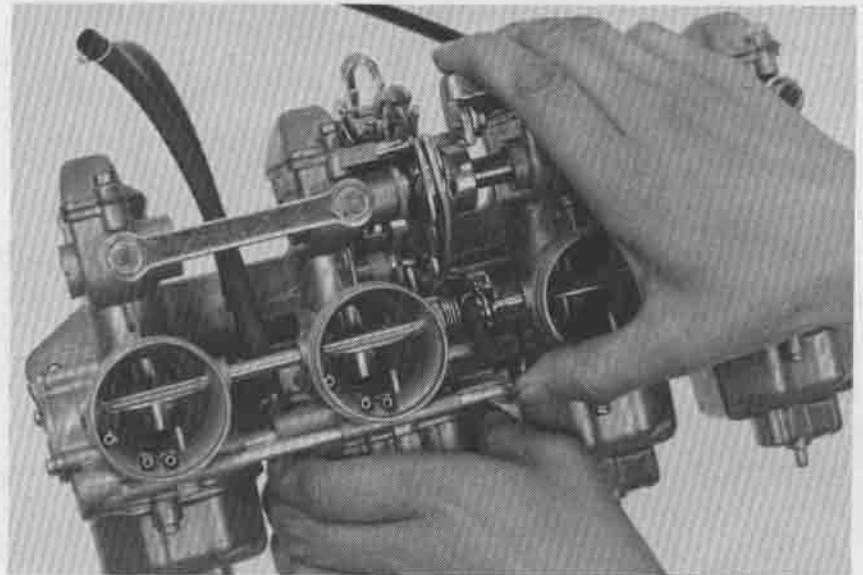


Install the choke valves, but do not tighten the bolts.

Hook the choke relief spring to the choke shaft arm of the No.2 and 3 carburetors.



Close the choke valve with the choke linkage. Release the choke linkage and make sure that it returns smoothly.

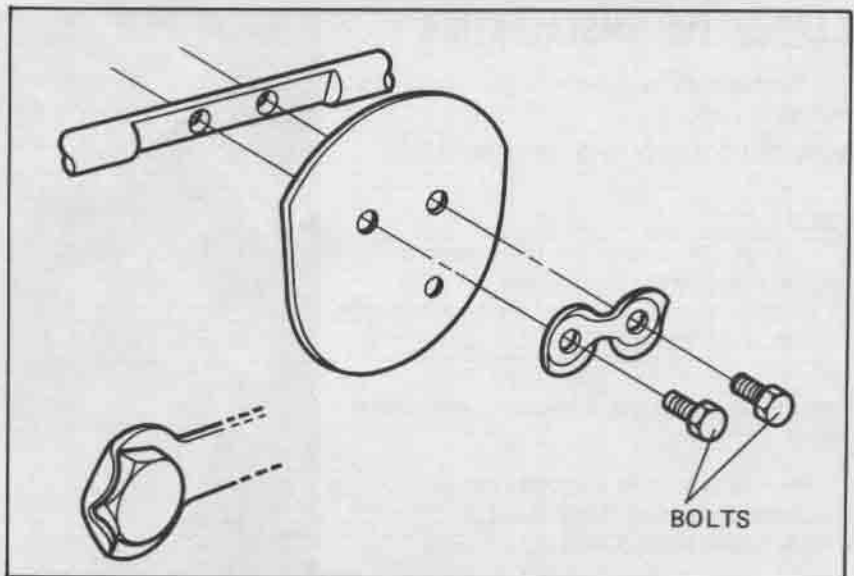


Tighten the choke valve bolts.

**TORQUE: 0.06–0.12 kg-m (0.4–0.9 ft-lb, 5–11 in-lb)**

Fold the tabs of the lock washer against the bolts.

Recheck the throttle and choke operation.





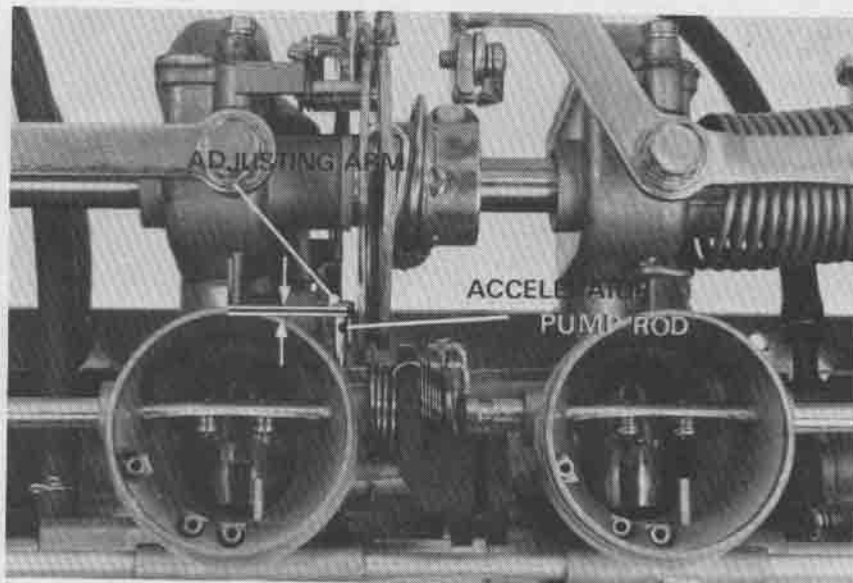
## ACCELERATOR PUMP ADJUSTMENT

Measure the clearance between the accelerator pump rod and adjusting arm with the throttle valve closed.

### CLEARANCE:

0.4–0.6 mm (0.016–0.024 in)

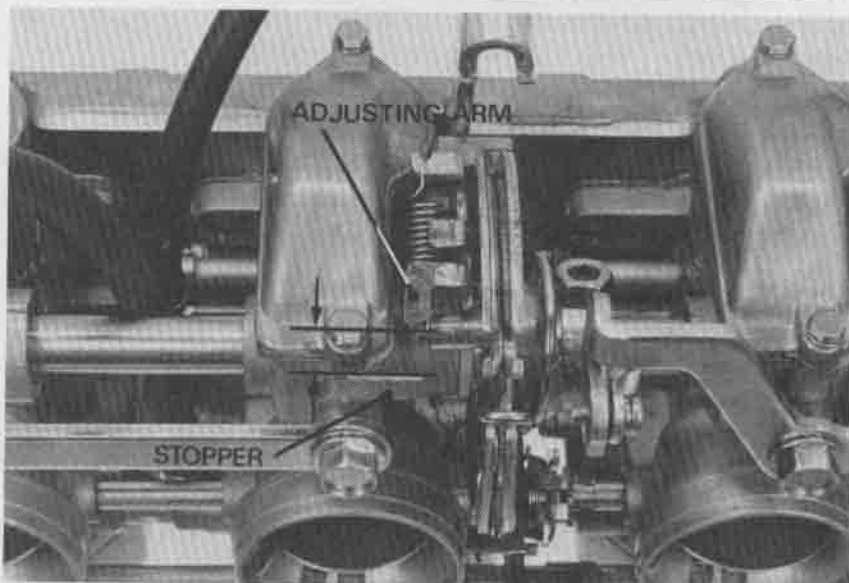
Adjust by bending the adjusting arm.



Measure the clearance between the adjusting arm and stopper on the carburetor body.

**CLEARANCE:** 8–10 mm (5/16–3/8 in)

Adjust by bending the adjusting arm.



## CARBURETOR INSTALLATION

The installation sequence is essentially the reverse of removal.

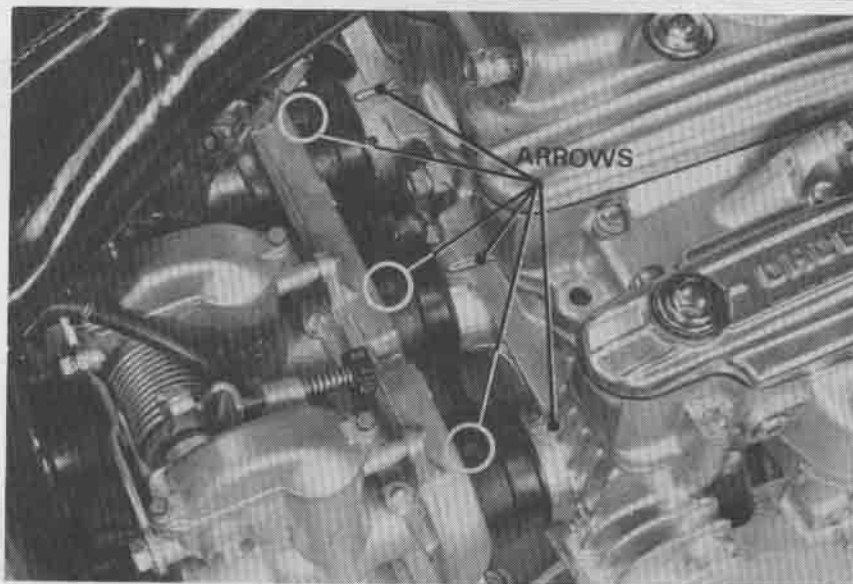
**MANIFOLD BAND:** 3–5 mm (1/8 in) GAP

### NOTE

- Align the arrows on the carburetor manifold and cylinder head.
- Route the throttle and choke cables properly (Page 1–10).

Perform the following inspections and adjustments.

- Throttle cable free play (Page 3–7)
- Choke mechanism (Page 3–8)
- Idle speed (Page 3–11)





## PILOT SCREW ADJUSTMENT

### IDLE DROP PROCEDURE

#### NOTE

- The pilot screw is factory pre-set and no adjustment is necessary unless the carburetor is overhauled.
- Use a tachometer with graduations of 50 rpm or smaller and that will accurately indicate a 50 rpm change.

1. Turn the pilot screw clockwise until it seats lightly and back it out to the specification.  
This is a preliminary setting prior to the final pilot screw adjustment.

**PILOT SCREW OPENING: 1-5/8**

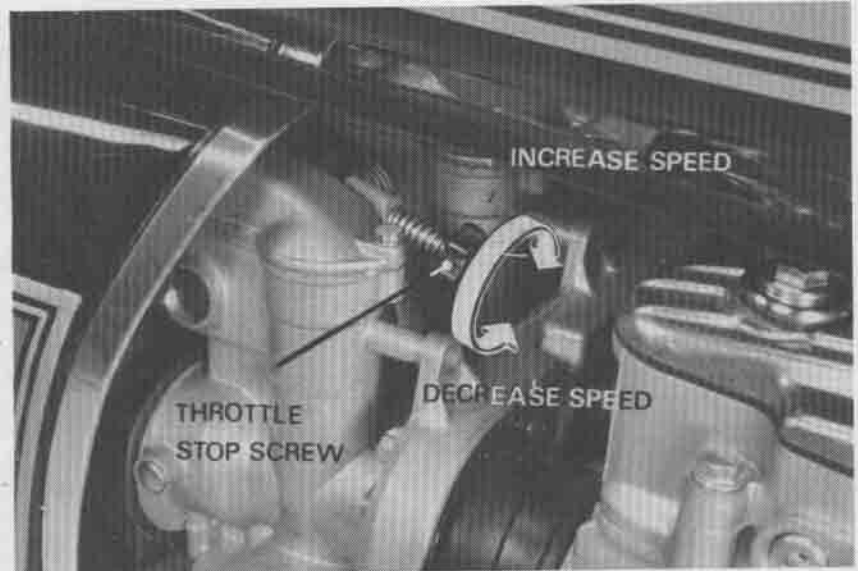
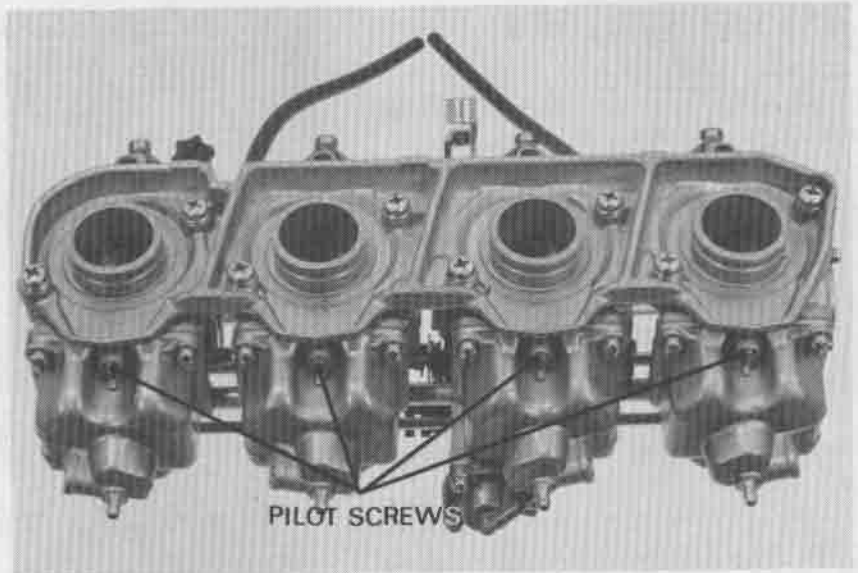
#### CAUTION

*Damage to the pilot screw seat will occur if the pilot screw is tightened against the seat.*

2. Start the engine and warm it up to operating temperature. Stop and go driving for 10 minutes is sufficient.
3. Attach a tachometer.
4. Adjust the idle speed with the throttle stop screw.

**IDLE SPEED: 1,050 ± 100 rpm**

5. Turn each pilot screw 1/2 turn out from the initial setting. If engine speed DOES NOT increase by 50 rpm or more, proceed to step 8.
6. Turn the No.1 carburetor pilot screw 1/2 turn out. Repeat for the No.2, 3 and 4 carburetors. When the engine speed does not change by 50 rpm or more, discontinue the 1/2 turn out increments at the No. 4 carburetor. All four pilot screws should now be an equal number of turns out.
7. Adjust the idle speed with the throttle stop screw.
8. Turn the No.1 carburetor pilot screw in until engine speed drops 50 rpm.
9. Turn the No.1 carburetor pilot screw 7/8 turn out from the position obtained in Step 8.
10. Adjust the idle speed with the throttle stop screw.
11. Perform Step 8, 9 and 10 for the No. 2, 3 and 4 carburetor pilot screws.







## FAST IDLE ADJUSTMENT

### NOTE

Inspection and adjustment must be performed while the engine is cold.

Pull the choke knob out completely and check that fast idle is within specifications immediately after the engine starts.

**FAST IDLE: 2,000 ± 700 rpm**  
**(COLD ENGINE)**

To adjust, stop the engine, turn the fuel valve OFF, disconnect the fuel line and remove the fuel tank. Turn the fast idle adjusting screw until it touches the cam surface.

Push the choke knob in and turn the adjusting screw in 2-1/2 turns.

Install the fuel tank and fuel line.

Recheck the fast idle.



## CHOKE CABLE REPLACEMENT

Remove the fuel tank.

Disconnect the choke cable from the lower choke cable bracket.

Remove the cable end from the choke lever.



Remove the choke cable from the choke cable bracket on the handlebar holder.

### NOTE

Before removing the cable, tie a string to the cable end. This string can be used as a draw cord when installing a new choke cable.

Install a new choke cable.

Lubricate the choke cable.

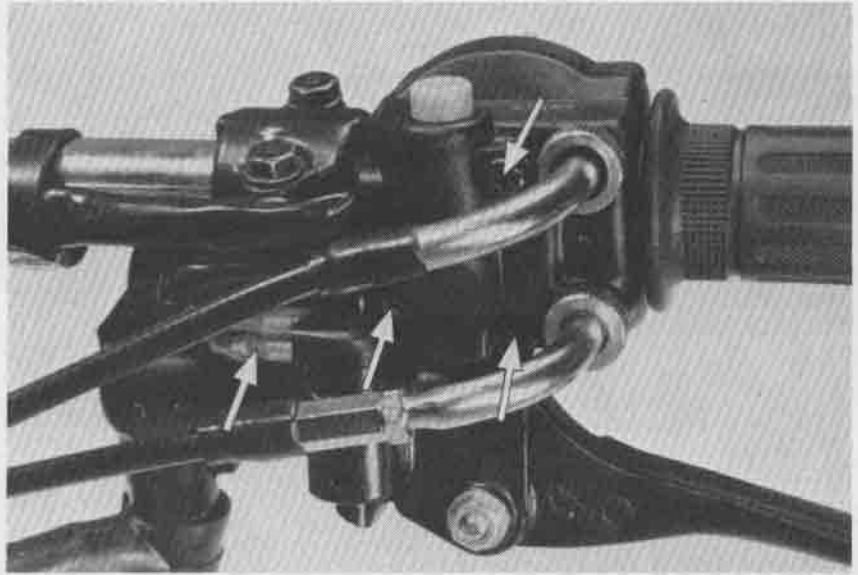
After installation, adjust the choke cable (Page 3-8). Refer to Cable Routing (Page 1-10).



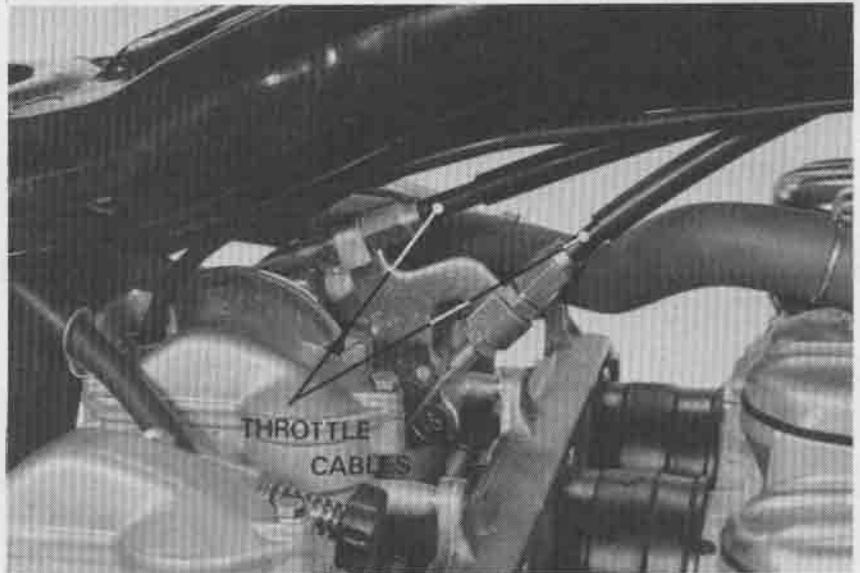


## THROTTLE CABLE REPLACEMENT

Remove the fuel tank.  
Remove the right handlebar switch/throttle housing.  
Remove the throttle cables from the throttle housing.



Remove the throttle cables from the carburetors.  
Install a new throttle cable.  
Lubricate the throttle cables.  
After installation, adjust throttle cable free play (Page 3-7).





## FUEL TANK

### WARNING

*Do not allow flames or sparks near gasoline. Wipe up spilled gasoline at once.*

Check the vent hole of the filler cap for blockage.

Check that fuel is flowing out of the fuel valve freely.

If fuel flow is restricted, clean the fuel strainer.

### NOTE

Do not overtighten the fuel valve lock nut.

Make sure there are no fuel leaks.

## AIR CLEANER CASE

### AIR CLEANER CASE/CHAMBER

Check the air cleaner case for deterioration.

## CRANKCASE VENTILATION SYSTEM

Check that the breather tube is not restricted.

