

## FUEL TANK REMOVAL/INSTALLATION

### REMOVAL

**WARNING**

- Gasoline is extremely flammable and is explosive under certain conditions. Work in a well ventilated area with the engine stopped. Do not allow flames or sparks in your working area or where gasoline is stored.
- Wipe up spilled gasoline at once.



Remove the seat (page 2-2).  
Turn the fuel valve OFF and disconnect the fuel line.  
Remove the mounting strap, bolts and fuel tank.

Check that fuel flows out of the fuel valve freely.  
If flow is restricted, clean the fuel strainer (page 3-5).

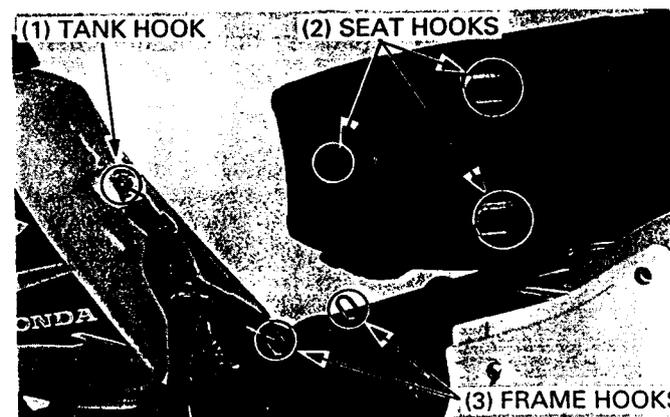
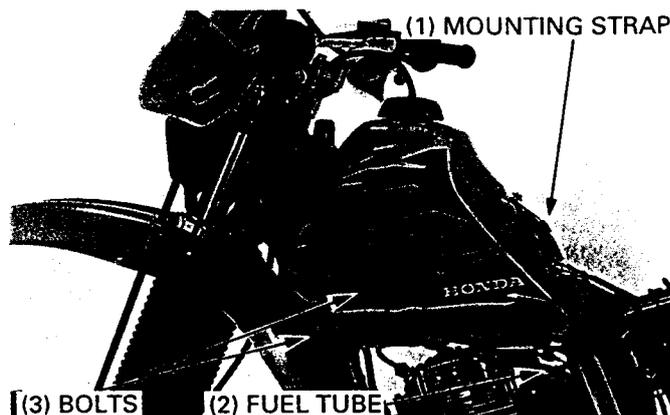
### INSTALLATION

Install the fuel tank with the two mounting bolts and strap.  
Connect the fuel line.

### NOTE

- Do not overtighten the fuel valve screws.
- After assembling, make sure there are no fuel leaks.

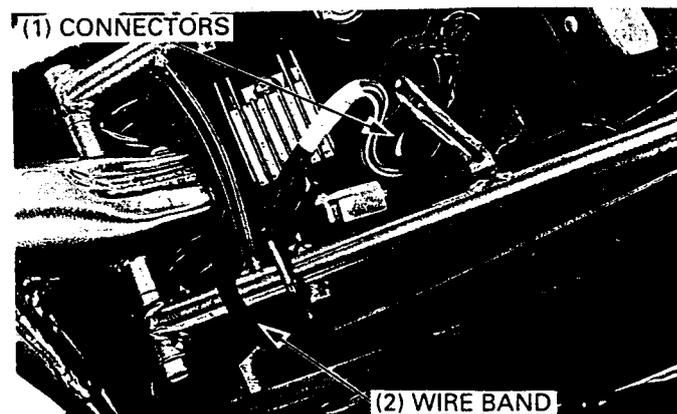
Install the seat (page 2-2).



## AIR CLEANER HOUSING REMOVAL/INSTALLATION

### REMOVAL

Disconnect the alternator connector.  
Disconnect the ignition pulse generator 2P connector.  
Disconnect the AC regulator connector.  
Remove the wire band.



## FUEL SYSTEM

Remove the rear brake reservoir mounting bolt.

### NOTE

- Be sure the reservoir is level before removing the reservoir, so the fluid doesn't spill.

Loosen the connecting tube clamp and remove the connecting tube from the carburetor.  
Remove the rear frame upper and lower side mounting bolts.  
Remove the air cleaner housing and rear frame assembly.

Remove the right and left side covers.

Remove the bolts and air cleaner housing from the sub-frame.

Remove the following:  
— AC regulator

- Mud guard
- Rear brake reservoir bracket

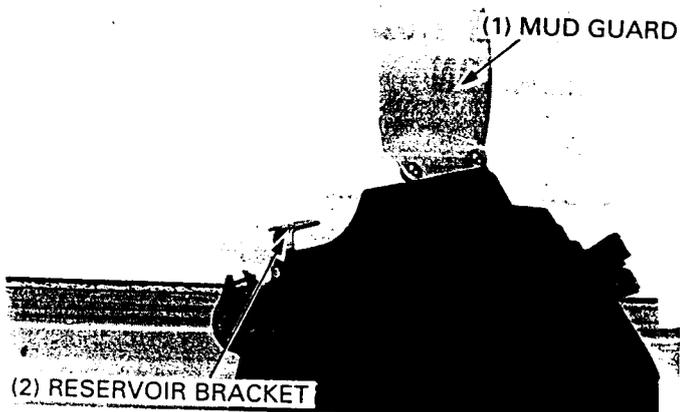
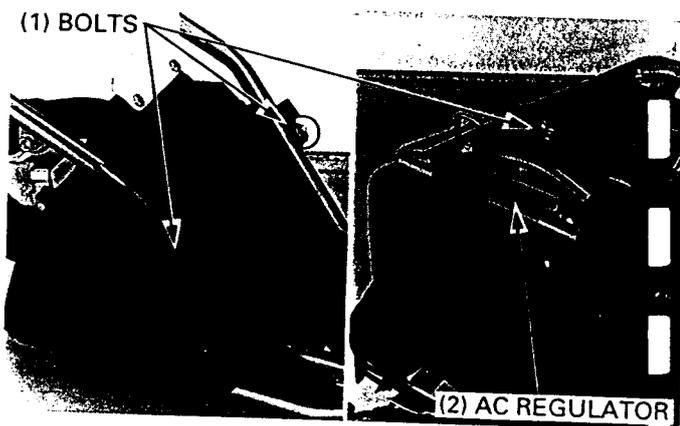
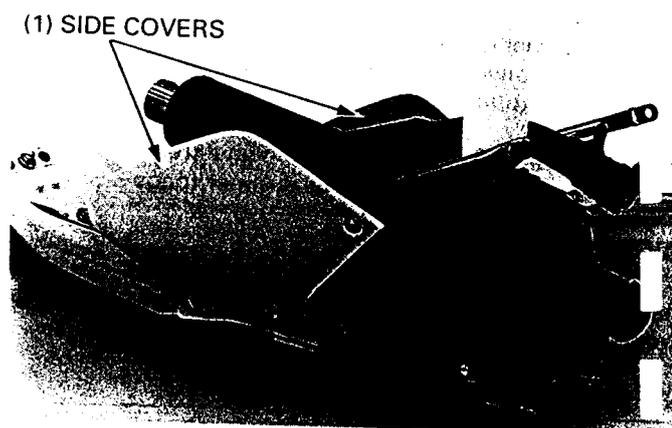
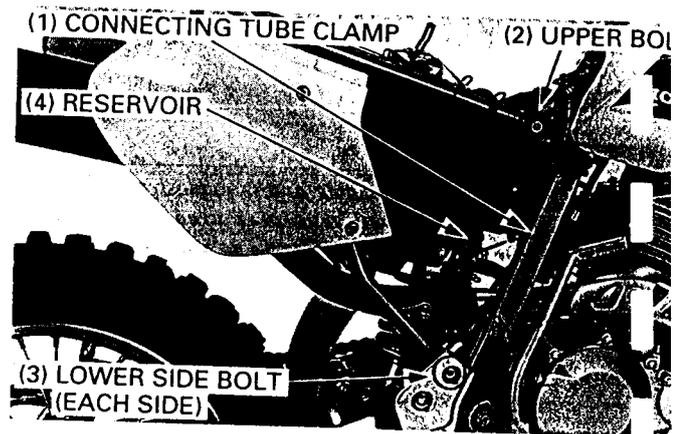
## INSTALLATION

Installation is in the reverse order of removal.

### TORQUE:

Rear frame lower side mounting bolt: 42 N-m (4.3 kgf-m, 31 lbf-ft)

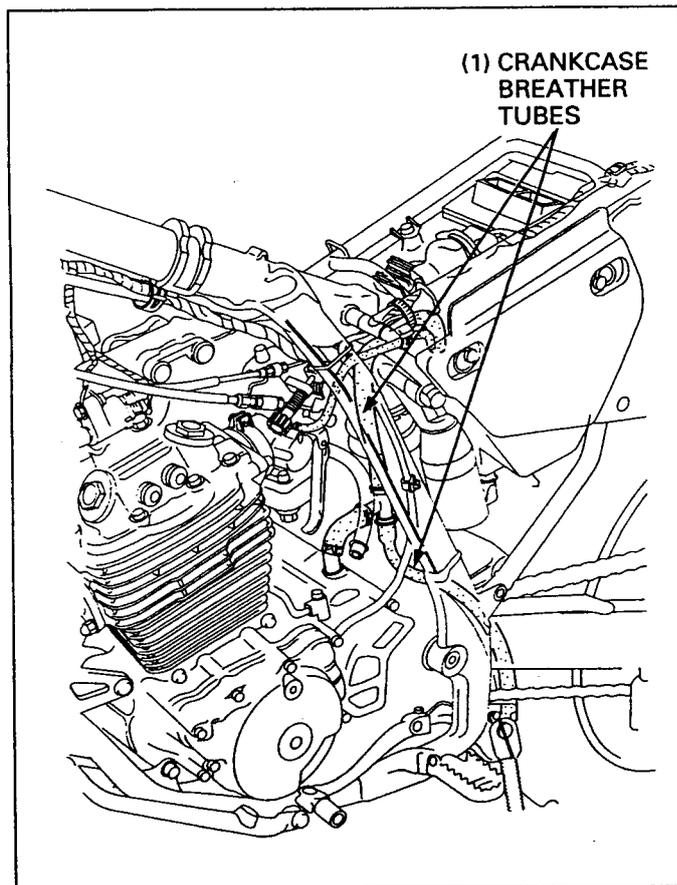
Upper mounting bolt: 26 N-m (2.7 kgf-m, 20 lbf-ft)



## CRANKCASE BREATHER

### INSPECTION

Route the crankcase breather tube as shown.  
Check the crankcase breather tube for kinks or clogs.

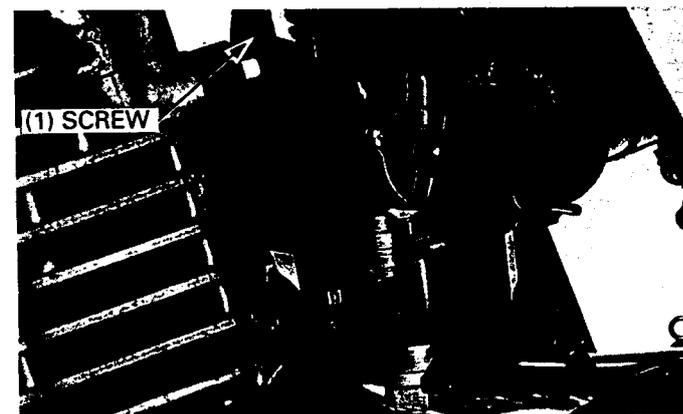


## CARBURETOR REMOVAL/DISASSEMBLY

### REMOVAL

#### ⚠ WARNING

- Gasoline is extremely flammable and is explosive under certain conditions. Work in a well ventilated area with the engine stopped. Do not allow flames or sparks in your working area or where gasoline is stored.
- Wipe up spilled gasoline at once.



Turn the fuel valve OFF.  
Place a suitable gasoline container under the drain tube and loosen the drain screw to drain the fuel.  
Loosen the carburetor insulator clamp screw and connecting tube clamp screw.

Remove the carburetor to the left.



## FUEL SYSTEM

Remove the over flow/drain tube, air vent tubes and fuel line from the carburetor.

Remove the throttle cables from the carburetor.



### DISASSEMBLY

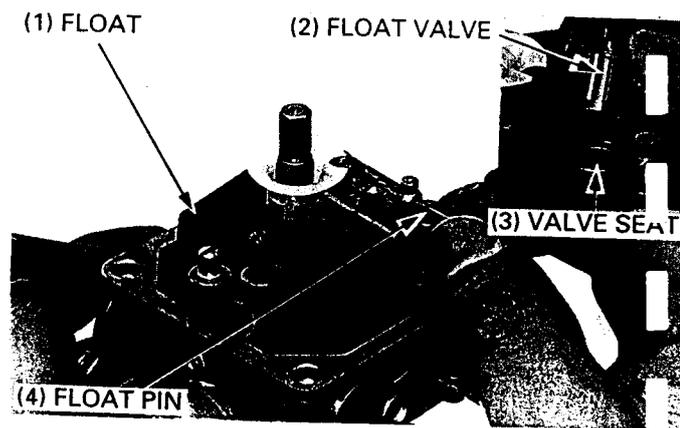
Remove the following:

- Float chamber screws
- Float chamber
- Float pin
- Float
- Float valve

Check the float for damage.

Check the float valve and its seat for grooves, nicks, or contamination.

Check the operation of the float valve.



Remove the following:

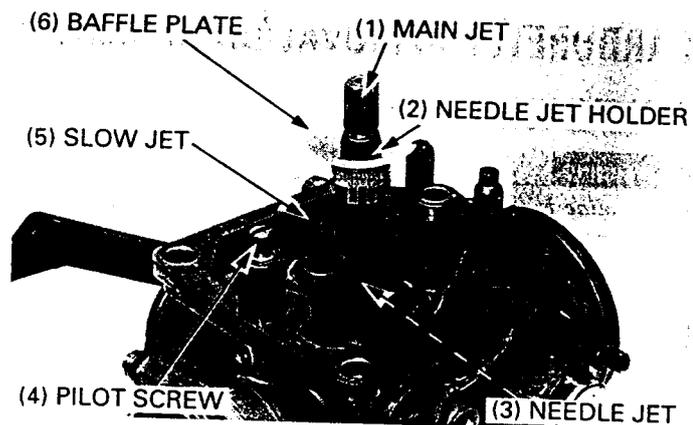
- Baffle plate
- Main jet
- Needle jet holder
- Needle jet

### NOTE

- Before removing the pilot screw, turn it in, counting the number of turns until it seats lightly so you can return the pilot screw to its original position when reassembling.

### CAUTION

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



- Slow jet
- Pilot screw
- Spring, washer and O-ring

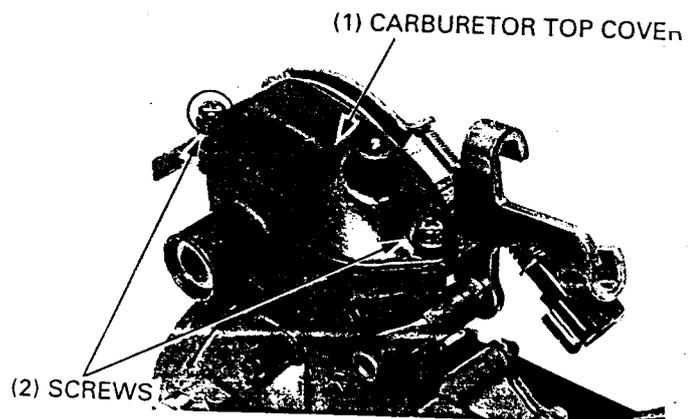
Inspect the following:

Check the main jet and slow jet for clogs.  
Check the pilot screw for damage.

Blow open all jets with compressed air.

Remove the following:

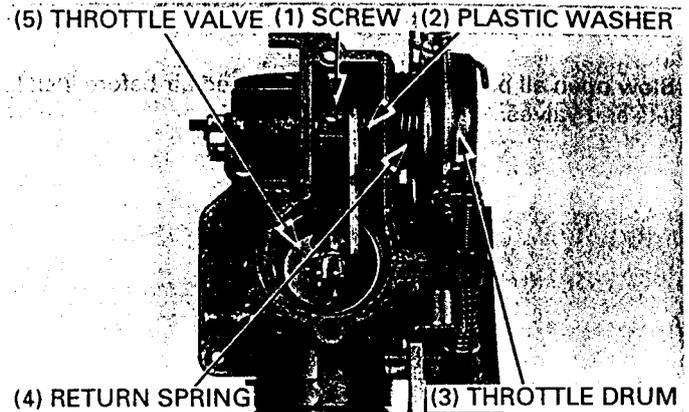
- Carburetor top cover screws
- Carburetor top cover



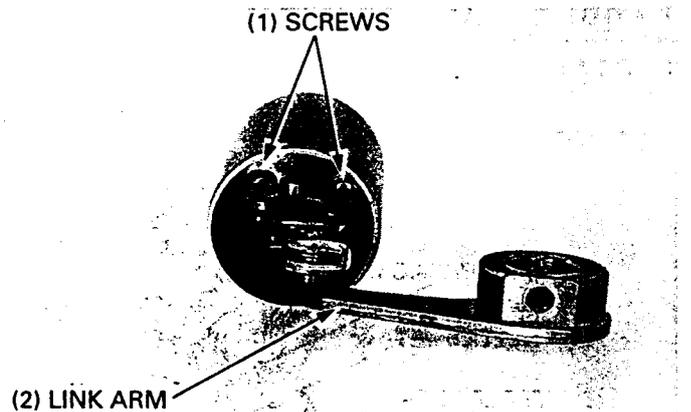
## FUEL SYSTEM

Remove the following:

- Link arm set screw
- Throttle drum assembly
- Return spring
- Plastic washer
- Throttle valve assembly

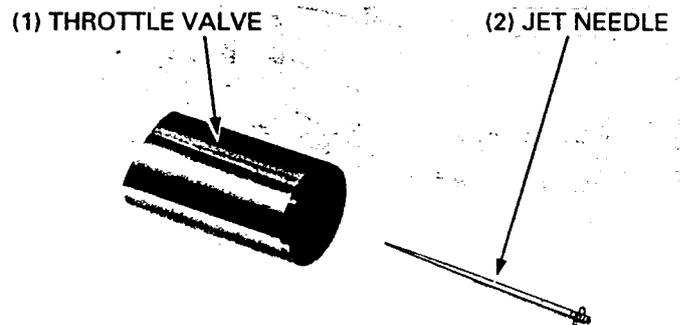


Remove the two screws attaching the link arm to the throttle valve and separate the link arm from the throttle valve.



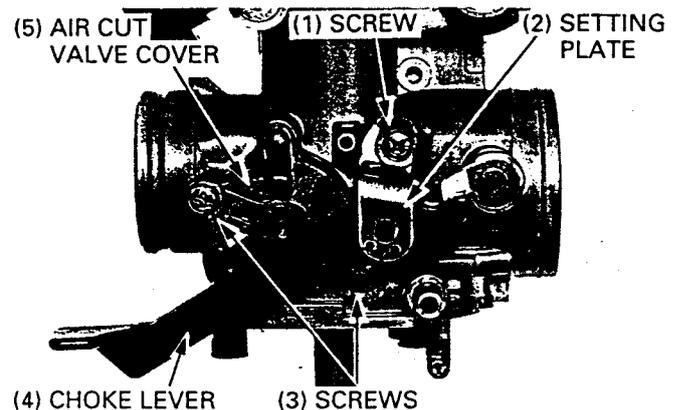
Remove the jet needle.

Check the throttle valve and jet needle for wear, nicks or other damage.



Remove the following:

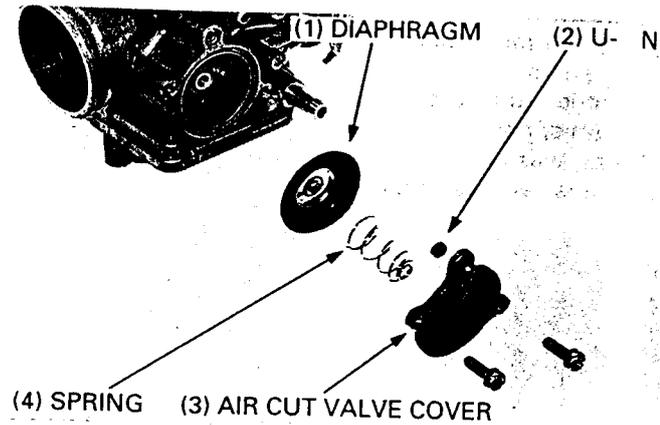
- Choke lever setting plate screw
- Choke lever setting plate
- Choke lever
- Air cut-off valve cover setting screws
- Air cut-off valve cover
- Spring
- Diaphragm and U-ring



## FUEL SYSTEM

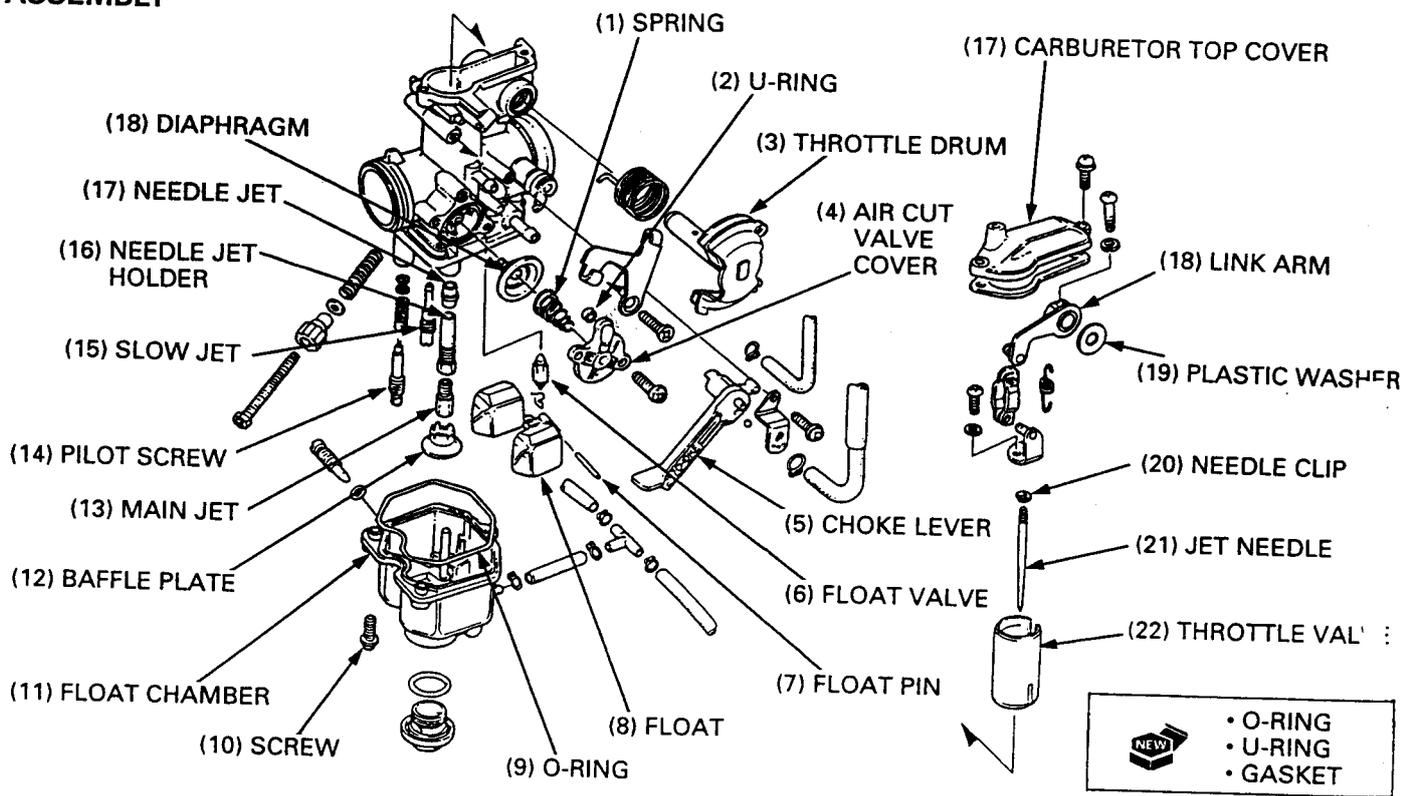
Check the diaphragm for damage.

Blow open all passages with compressed air before installing jets and valves.



## CARBURETOR ASSEMBLY/ INSTALLATION

### ASSEMBLY

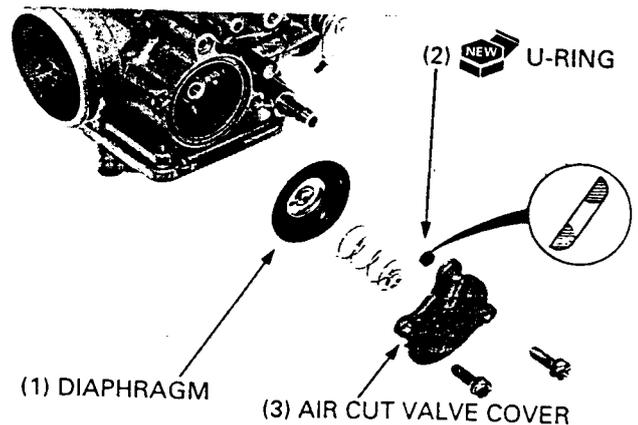


Install the following:  
— Diaphragm and U-ring

#### NOTE

- Install the U-ring with its flat side toward the carburetor body as shown.

- Spring
- Air cut-off valve cover and screws
- Choke lever
- Setting plate and screw

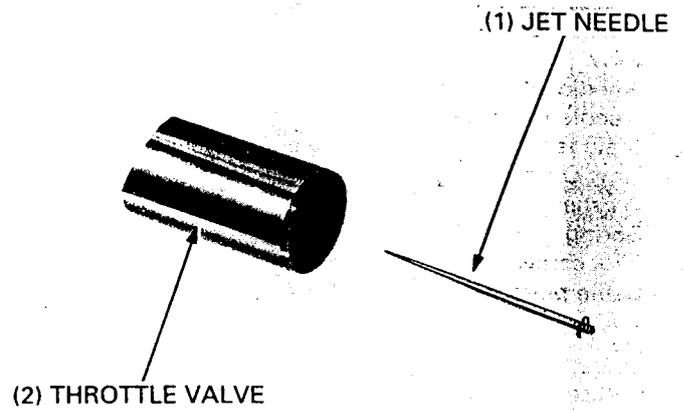


## FUEL SYSTEM

Install the needle clip on the jet needle.

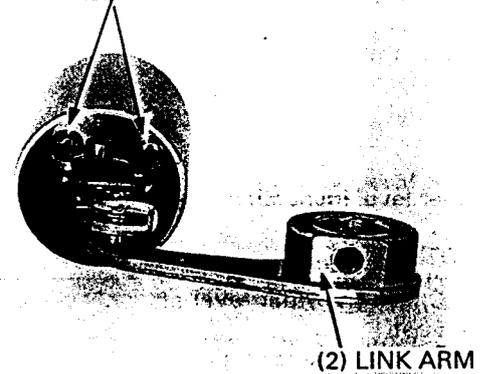
**STANDARD: 3rd groove from top**

Install the jet needle in the throttle valve.



Assemble link arm to the throttle valve.  
Tighten the two screws securely.

(1) SCREWS

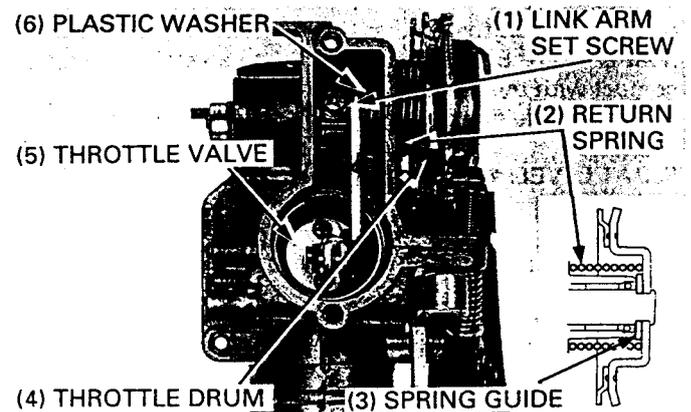


Install the following:

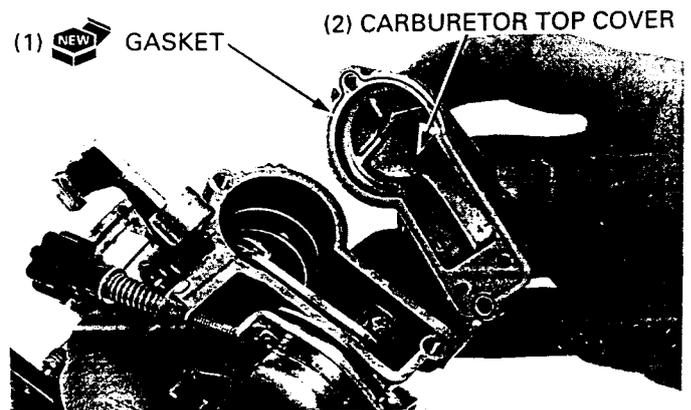
- Throttle valve assembly
- Plastic washer
- Return spring
- Throttle drum assembly
- Link arm set screw

### NOTE

- Return spring shall not hang over spring guide on the throttle drum.
- Align the hole in the link arm with the threaded hole in the link arm shaft and install the set screw.



Install a new gasket and carburetor top cover.



## FUEL SYSTEM

Install the following:

- Slow jet
- Needle jet
- Needle jet holder
- Main jet
- New O-ring
- Washer
- Spring
- Pilot screw
- Baffle plate

### NOTE

- Return the pilot screw to its original position as noted during removal.

### STANDARD PILOT SCREW INITIAL OPENING: 1-3/4 turns out

Install the following:

- Float valve
- Float
- Float pin

### Float level inspection

### NOTE

- Check the float level after checking the float valve and float.
- Set the float level gauge so that it is perpendicular to the float chamber face and in line with the main jet.

Set the carburetor so that the float valve just contacts the float arm lip. Be sure that the float valve tip is securely in contact with the valve seat.

Make sure the float level with the float level gauge.

**FLOAT LEVEL: 12.5 mm (0.49 in)**

### TOOL:

Float level gauge 07401 - 0010000

If the level is out of specification, adjust the float level by carefully bending the float tang.

Install a new O-ring.

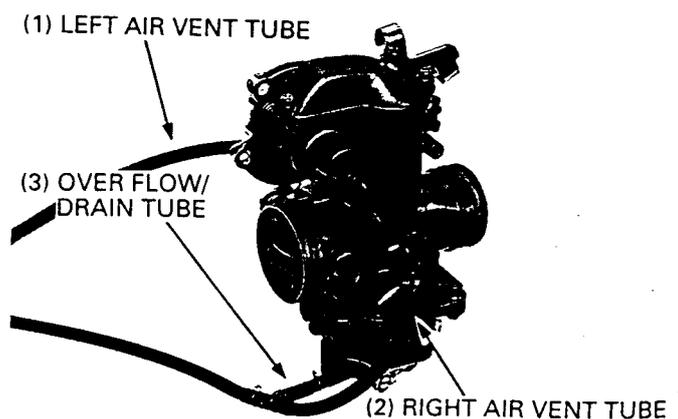
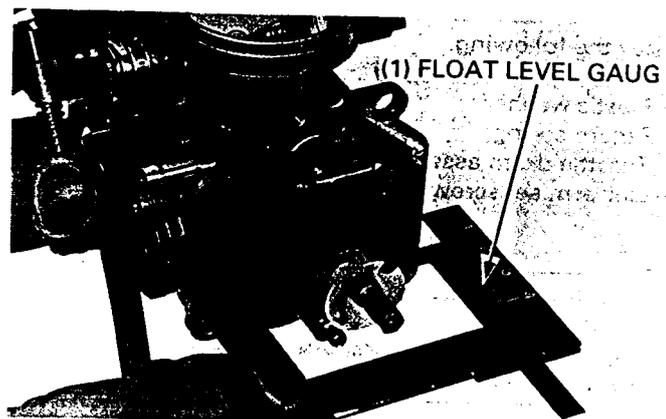
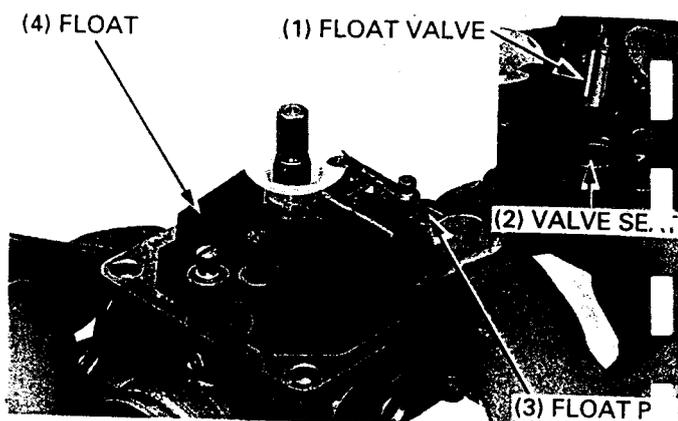
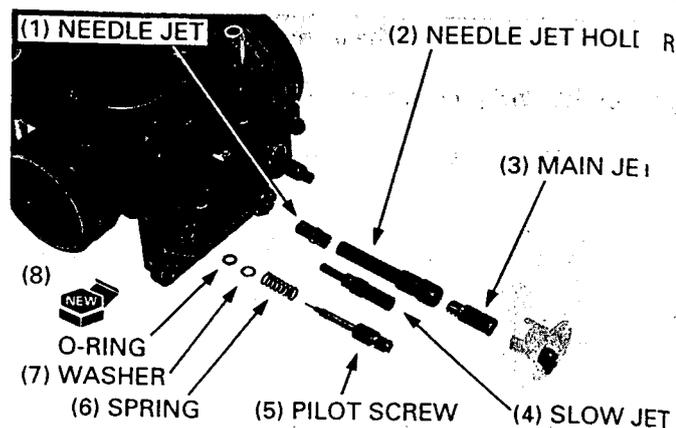
Install the float chamber with four screws and tighten it.

## INSTALLATION

Install the over flow/drain tube, air vent tubes and fuel line. Connect the throttle cables to the carburetor.

### NOTE

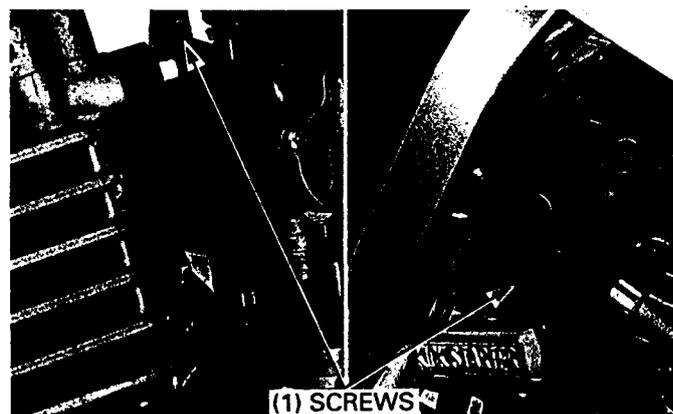
- Route the cables and tubes properly (page 1-21).



Install the carburetor from the left side of the engine. Tighten the carburetor insulator clamp screw and connecting tube clamp screw.



Perform the following inspections and adjustments.  
 — Throttle operation (page 3-5)  
 — Pilot screw adjustment below



## PILOT SCREW ADJUSTMENT

### NOTE

- The pilot screw is factory pre-set. Adjustment is not necessary unless the carburetor is overhauled or a new pilot screw is installed.

### CAUTION

- *Tightening the pilot screw hard against its seat will damage the seat.*

1. Turn the pilot screw clockwise until it seats lightly, then back it out to the specification given. This is an initial setting prior to the final pilot screw adjustment.



### PILOT SCREW OPENING: 1-3/4 turns out

2. Warm up the engine to operating temperature. Ten minutes of stop and go driving is sufficient.
3. Stop the engine and connect a tachometer according to the tachometer manufacturer's instructions.
4. Start the engine and adjust the idle speed with the throttle stop screw.

**IDLE SPEED: 1,300 ± 100 min<sup>-1</sup> (rpm)**



## **FUEL SYSTEM**

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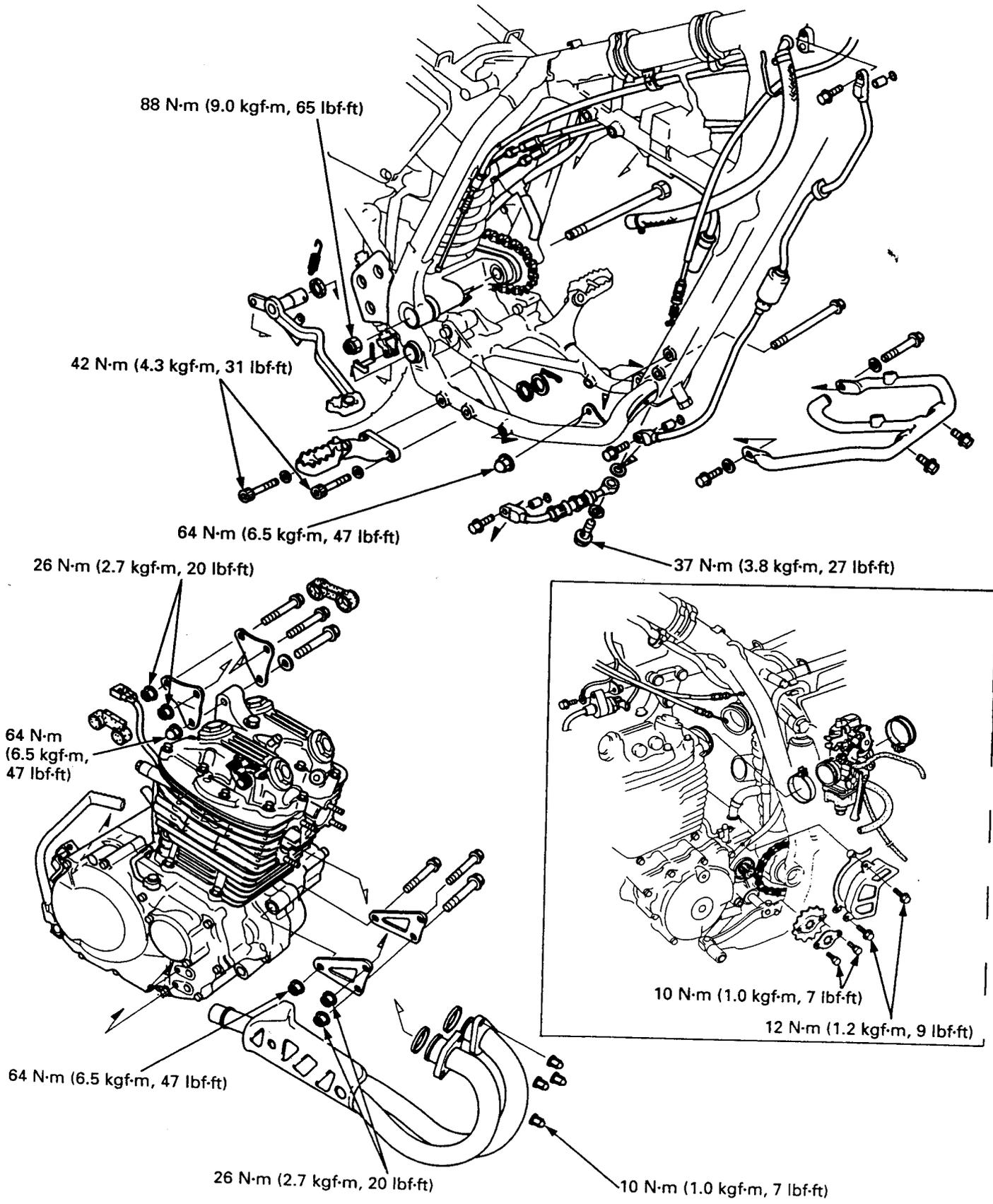
5. Turn the pilot screw in or out slowly to obtain the highest engine speed.
6. Readjust the idle speed to the specified value with the throttle stop screw.
7. Make sure that the engine does not miss or run erratically. Repeat steps 5 and 6 until engine speed increases smoothly.

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MEMO

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# ENGINE REMOVAL/INSTALLATION



# 6. ENGINE REMOVAL/INSTALLATION

SERVICE INFORMATION	6-1	ENGINE INSTALLATION	6-5
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ENGINE REMOVAL	6-3		

## SERVICE INFORMATION

### GENERAL

- During removal and installation, support the motorcycle with a work stand or box.
- A jack or adjustable support is required to maneuver the engine.
- The following components can be serviced with the engine installed in the frame.
  - Oil pump (Section 4)
  - Cylinder head/valves (Section 7)
  - Cylinder/piston (Section 8)
  - Clutch/kickstarter/gearshift linkage (Section 9)
  - Alternator (Section 10)
- The following components require engine removal for service.
  - Crankshaft/balancer (Section 11)
  - Transmission/shift forks/shift drum (Section 12)

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### SPECIFICATIONS

ITEM		SPECIFICATIONS
Engine oil capacity	at draining	1.3 liter (1.37 US qt, 1.14 Imp qt)
	at disassembly	1.7 liter (1.79 US qt, 1.50 Imp qt)
	at oil filter change	1.4 liter (1.47 US qt, 1.23 Imp qt)
Engine dry weight		33.7 kg (74.3 lbs)

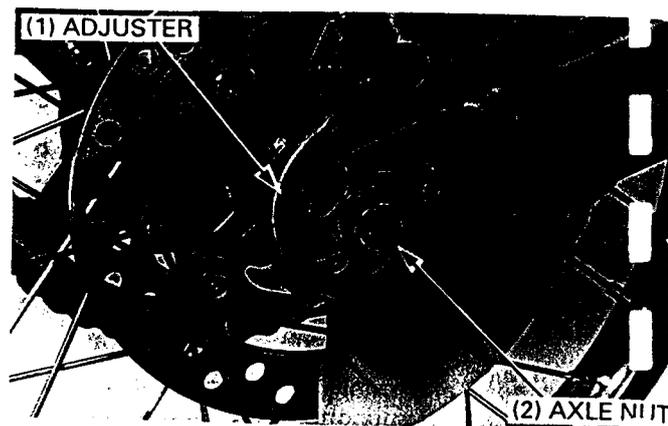
### TORQUE VALUES

Swingarm pivot nut	88 N·m (9.0 kgf·m, 65 lbf·ft)
Engine hanger plate bolt (10 mm)	64 N·m (6.5 kgf·m, 47 lbf·ft)
(8 mm)	26 N·m (2.7 kgf·m, 20 lbf·ft)
Right foot peg mounting bolt	42 N·m (4.3 kgf·m, 31 lbf·ft)
Drive sprocket bolt	10 N·m (1.0 kgf·m, 7 lbf·ft)
Drive sprocket cover bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)

## ENGINE REMOVAL/INSTALLATION

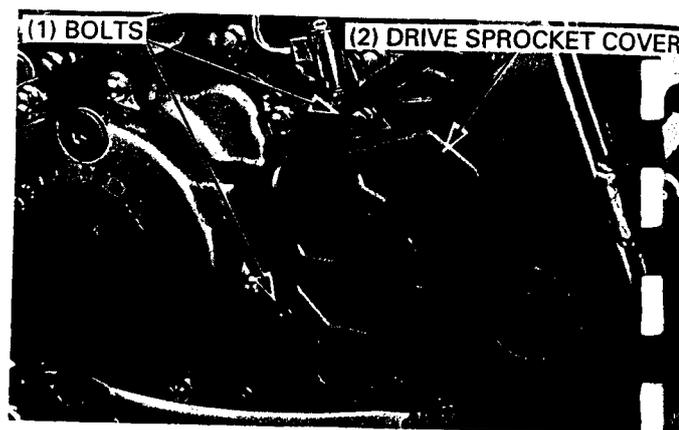
### DRIVE SPROCKET REMOVAL

Loosen the rear axle nut and turn the drive chain adjusters to loosen the drive chain.

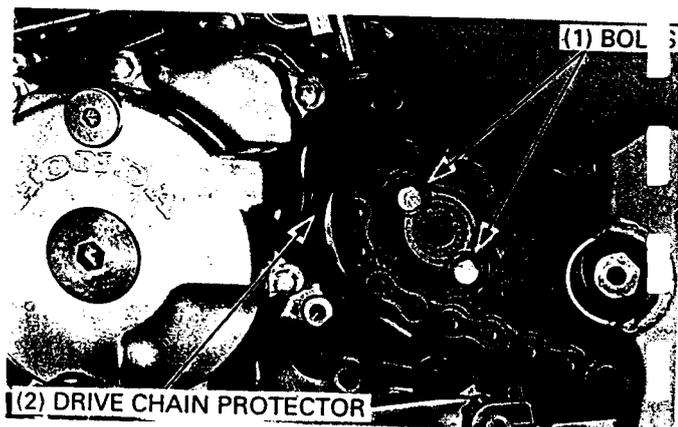


Remove the following:

- Drive sprocket cover bolts
- Drive sprocket cover



- Drive chain protector
- Drive sprocket bolts



- Fixing plate



— Drive sprocket

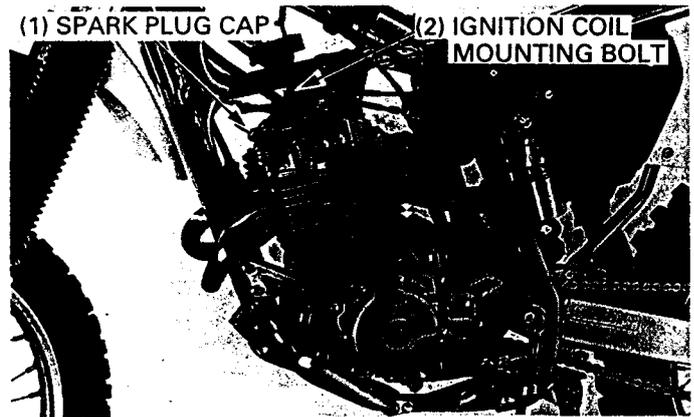


## ENGINE REMOVAL

Drain the engine oil (page 3-10).

Remove the following:

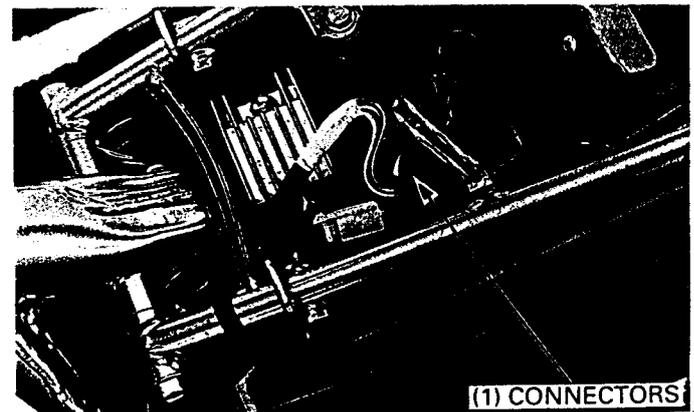
- Seat (page 2-3)
- Fuel tank (page 5-3)
- Drive sprocket (page 6-2)
- Carburetor (page 5-5)
- Spark plug cap
- Clutch cable (page 9-3)
- Decompressor cable (page 7-3)
- Ignition coil mounting bolt/ground cable



Disconnect the following:

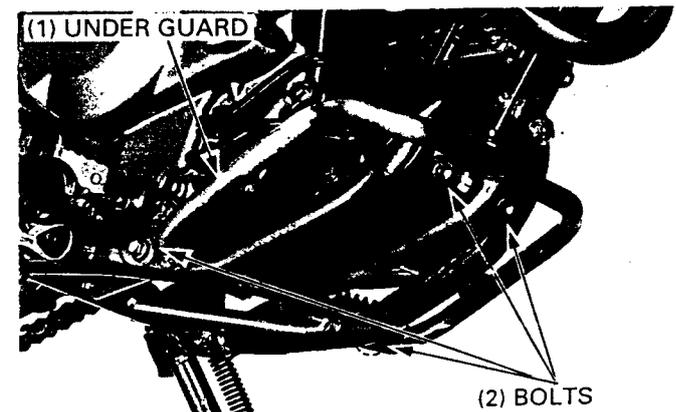
- Alternator connectors (P and Y wires)
- Ignition pulse generator 2P connector
- Exciter coil connector (BI/R wire)

Remove the wire band and unhook the harness clip from the frame down tube.



Remove the following:

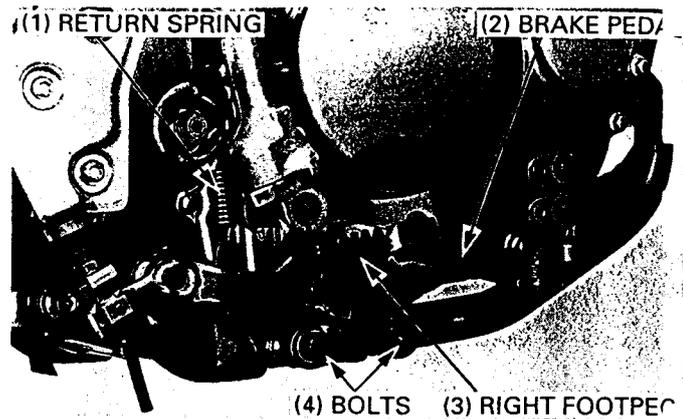
- Under guard bolts
- Under guard



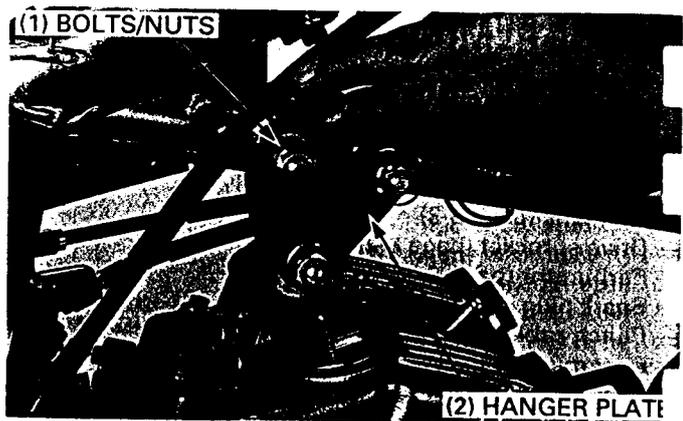
## ENGINE REMOVAL/INSTALLATION

Remove the following:

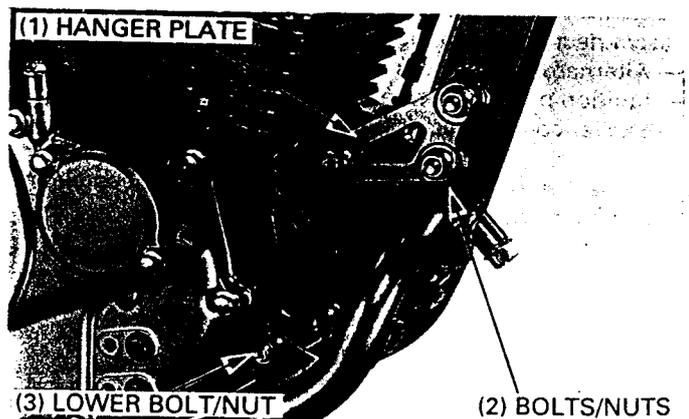
- Oil pipes (page 4-9)
- Brake pedal return spring
- Brake pedal (page 15-26)
- Right foot peg mounting bolts/washers
- Right foot peg



- Exhaust pipe (page 2-3)
- Breather tube (disconnect from crankcase)
- Rubber cap
- Upper engine hanger bolt/nut
- Upper engine hanger plate bolts/nuts
- Upper engine hanger plates

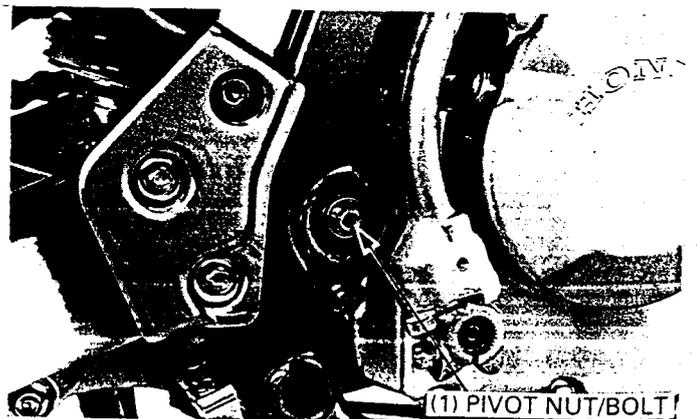


- Front engine hanger bolt/nut
- Front engine hanger plate bolts/nuts
- Front engine hanger plates
- Lower engine mounting bolt/nut



- Swingarm pivot nut/bolt

Pull the swingarm back.  
Remove the engine to the right.



## ENGINE INSTALLATION

- Install the engine from the right side.
- Apply a thin coat of grease to the swingarm pivot bolt sliding surface.
- Install the swingarm pivot bolt from the left side. Install the nut.
- Install the upper and front engine hanger plates.

### NOTE

- Install the upper engine hanger plates with the marks facing out.
  - Right side: KCZ-R
  - Left side: KCZ-L

Install the three 10 mm bolts from the left side.

Tighten the bolts/nuts to the specified torque.

### TORQUE:

- Swingarm pivot bolt/nut: 88 N-m (9.0 kgf-m, 65 lbf-ft)
- Engine hanger plate bolt/nut (10 mm): 64 N-m (6.5 kgf-m, 47 lbf-ft)
- Engine hanger plate bolt/nut (8 mm): 26 N-m (2.7 kgf-m, 20 lbf-ft)

Install the rubber cap.

Install the following:

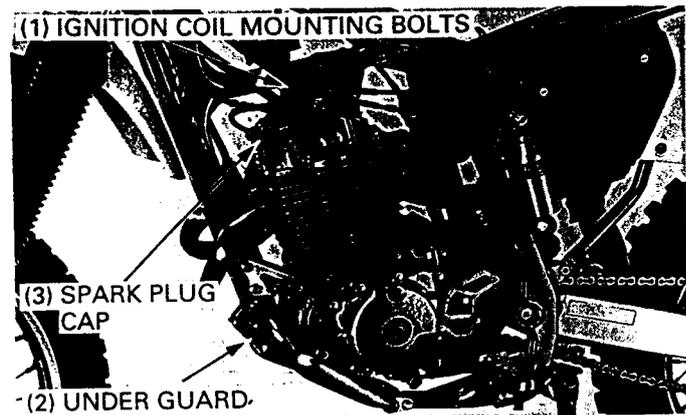
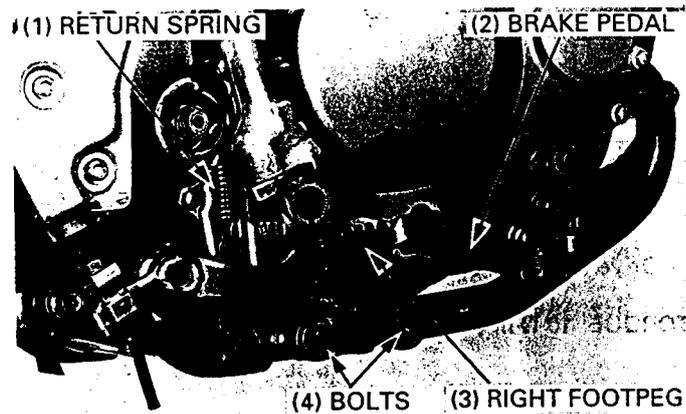
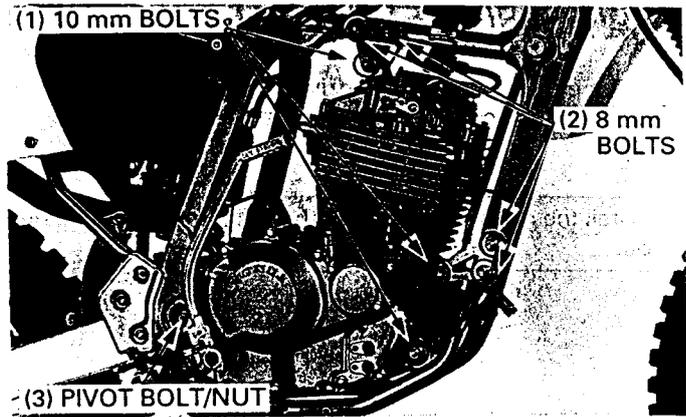
- Breather tube (page 7-22)
- Exhaust pipe (page 2-5)
- Right foot peg
- Right foot peg mounting bolts/washers

**TORQUE: 42 N-m (4.3 kgf-m, 31 lbf-ft)**

- Brake pedal (page 15-27)
- Brake pedal return spring
- Oil pipe (page 4-10)
- Under guard
- Under guard bolts
- Ignition coil mounting bolt/ground cable
- Decompressor cable (page 7-22)
- Clutch cable (page 9-18)
- Spark plug cap

- Carburetor (page 5-10)
- Alternator connectors (P and Y wires)
- Ignition pulse generator 2P connector
- Exciter coil connector (BI/R wire)

Fill to the filler neck with the correct quantity of the recommended engine oil (page 3-11).



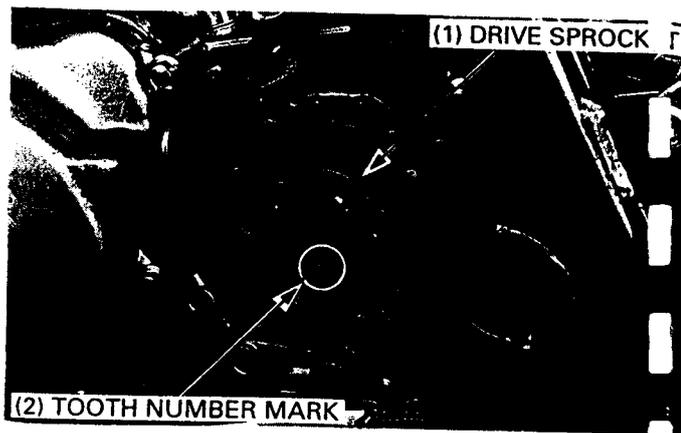
## ENGINE REMOVAL/INSTALLATION

### DRIVE SPROCKET INSTALLATION

Install the drive chain to the drive sprocket.  
Install the drive sprocket to the countershaft.

#### NOTE

- Install the drive sprocket with the tooth number mark facing out.



Install the following:  
— Fixing plate

#### NOTE

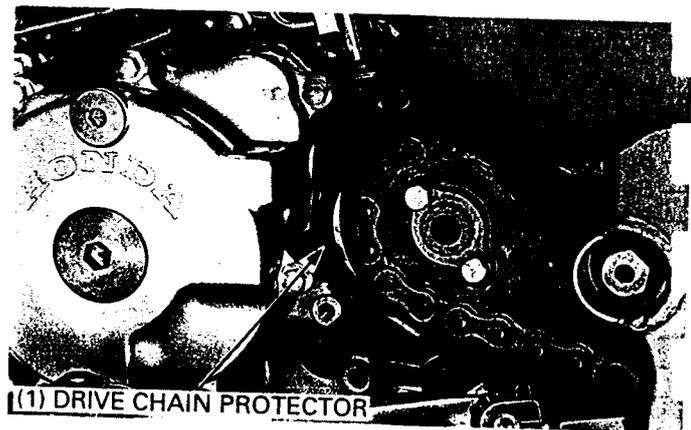
- Install the fixing plate onto the countershaft and align the bolt holes on the plate with the holes of the sprocket.

— Drive sprocket bolts

**TORQUE: 10 N·m (1.0 kgf·m, 7.2 lbf·ft)**



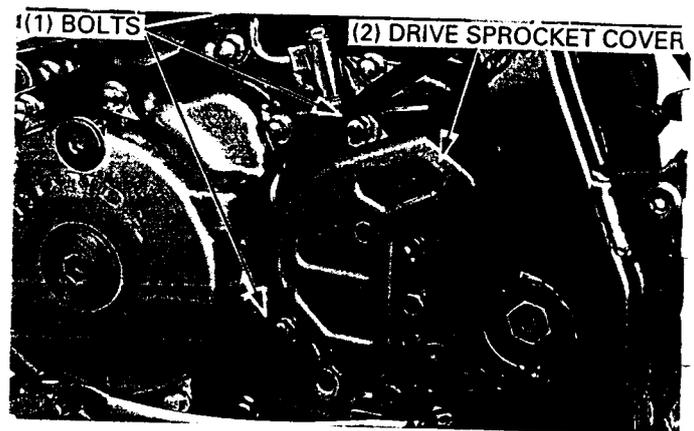
— Drive chain protector



— Drive sprocket cover  
— Bolts

**TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)**

After installation, adjust the drive chain slack (page 3-13).



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MEMO

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# CYLINDER HEAD/VALVES

