



Fig. 35 ① Adjuster nut ② Decrease free play ③ Increase free play

2. Perform the adjustment with the adjuster nut.

10. AIR CLEANER ELEMENT SERVICING

1. Open the seat and remove the tool tray.
2. Pull out the spring clip and take out the cleaner element.
3. Clean the element by tapping it lightly and blowing compressed air from inside.

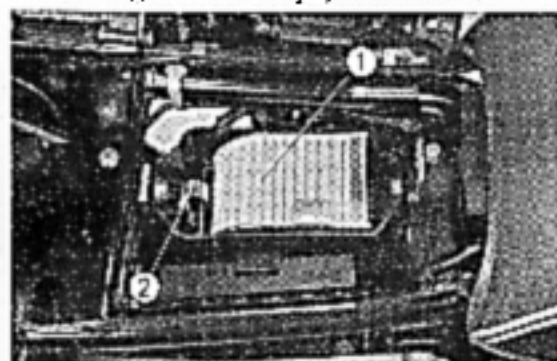


Fig. 37 ① Air cleaner element ② Spring clip

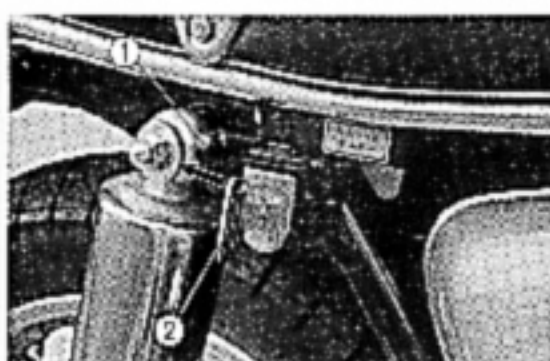


Fig. 36 ① Seat lever ② Seat lock



Fig. 38 ① Fork cap bolt ② Mark ③ Axle nut ④ Cotter pin ⑤ Adjust bolt ⑥ Lock nut ⑦ Lens ⑧ Tighten

11. DRIVE CHAIN INSPECTION AND ADJUSTMENT

1. Check the slack in the chain by raising and lowering the chain at the midpoint between the sprockets. The normal slack is 1~2cm ($\frac{3}{8}$ ~ $\frac{1}{2}$ in).
2. Adjust by loosening the rear axle nut and turning the adjust bolts on both sides.

Note:

The marks on both adjusters should be at the same location when the chain is properly adjusted.

12. BATTERY ELECTROLYTE INSPECTION

Remove the right side cover and check the electrolyte level. The level should be at the upper limit.

1. If the level is low, open the seat and remove the tool tray to add distilled water to the battery.
2. Remove six battery filler caps and fill the water to each cell up to the upper limit.



Fig. 39 ① Upper limit ② Lower limit

13. FRONT FORK OIL REPLACEMENT

1. Remove the fork bolt and drain bolt, and then drain the oil.
Actuate up and down the fork to drain the oil completely.

2. Flush the interior with the solvent.

Note:

Do not use gasoline for flushing.

3. Tighten the drain bolt securely and add new oil to the fork through the top of fork pipe.

Recommended oil: SAE 10W~30

Capacity: 160 cc (5.4 ozs)

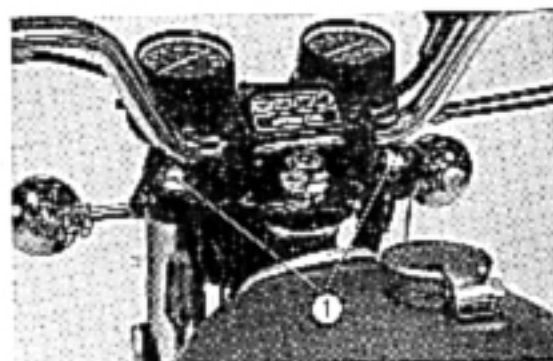


Fig. 40 ① Fork bolts

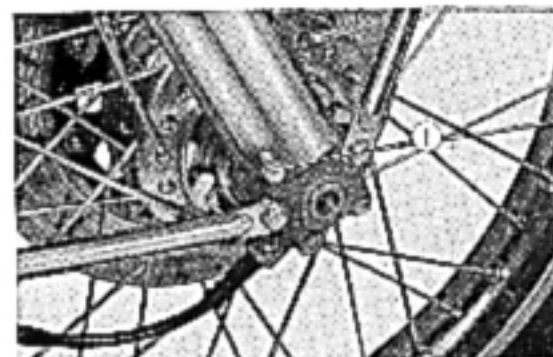


Fig. 41 ① Drain bolt

14. COMPRESSION PRESSURE CHECK

1. Remove the spark plugs.
2. Insert the end of the compression gauge into the spark plug hole.
3. Set both the throttle and choke to full open position and kick the kick starter.

Standard compression pressure:

12 kg/cm² (170.67 psi)

Note:

- Fully open the throttle and choke so that the true compression pressure will be indicated on the gauge.
- Continue the kicking until the compression reading is at maximum because the reading will increase with each kicking.
- To obtain the true pressure reading, perform the measurement after warming up the engine.

(Low compression pressure)

When the compression pressure is below 10 kg/cm² (142.23 psi), the probable causes are leaks around the valves and piston rings, or from the head and cylinder gaskets.

Adjust the valve tappet clearances, or disassemble the engine and inspect the piston rings and gaskets.

(High compression pressure)

When the pressure is greater than 12 kg/cm² (170.67 psi), the probable cause is excessive carbon deposits on the combustion chamber, piston head and the valves. Disassemble the head and cylinder, to remove the carbon.



Fig. 42 ① Compression gauge

4. ENGINE

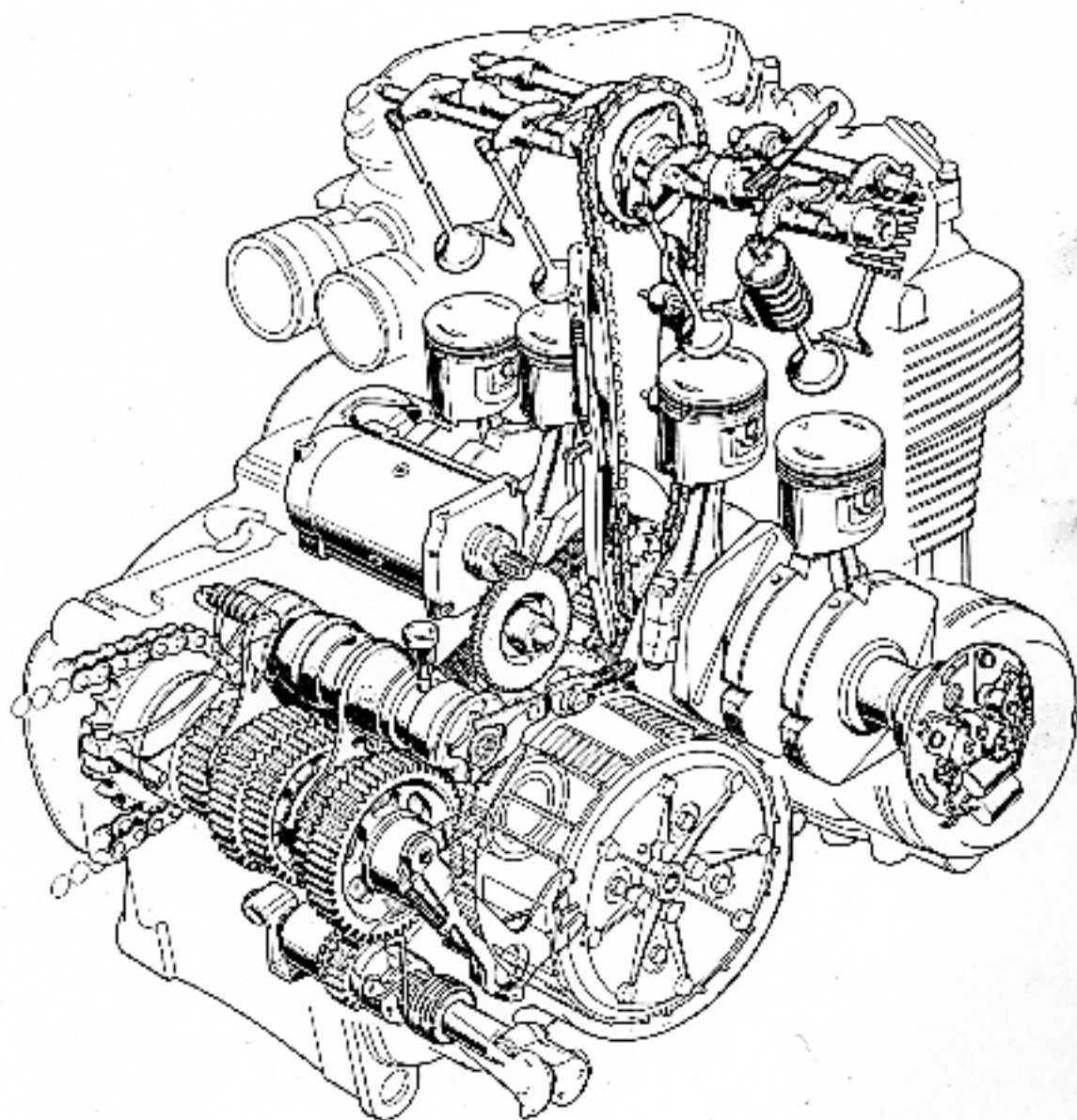
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1. SERVICING WITH ENGINE MOUNTED IN FRAME

Items	Pages
1. Cylinder Head Cover and Camshaft	24
2. Cylinder Head	24
3. Cylinder and Piston	24
4. Cam Chain Tensioner	25
5. Oil Filter and Oil Pump	36
6. Clutch	40
7. Gear Shift Mechanism	43
8. Electrical System i.e., (Generator and Starting motor)	95

2. ENGINE REMOVAL AND INSTALLATION

A. Removal

1. Turn the fuel cock to the "STOP" position, disconnect the fuel pipe at the tank, and dismount the fuel tank.
2. Unscrew the oil drain bolt and the oil filter center bolt, and drain the engine oil.
3. Remove the exhaust pipe and the muffler.
4. Disconnect the high tension cords at the spark plugs.
5. Disconnect the ground cable at the battery terminal.
6. Unscrew the 5 mm screw and disconnect the tachometer cable at the cylinder head cover.
7. Open the seat, take out the air cleaner element, unscrew three 6 mm bolts and remove the air cleaner case.

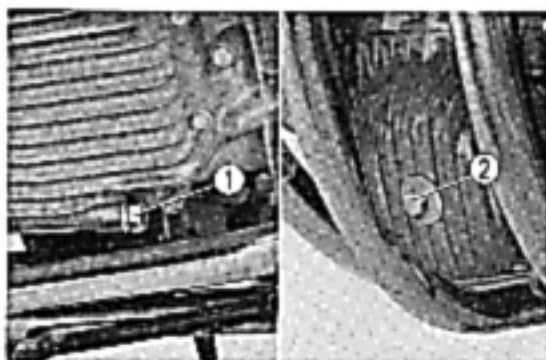


Fig. 43 ① Drain bolt ② Oil filter center bolt

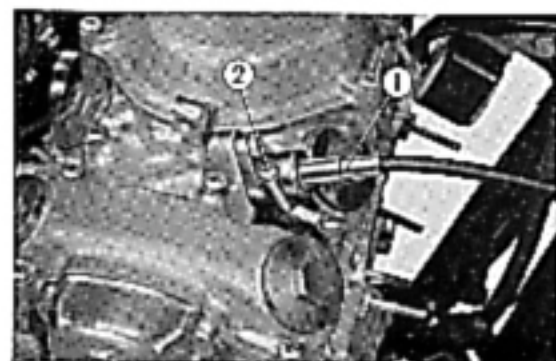


Fig. 44 ① Tachometer cable ② 5 mm screw

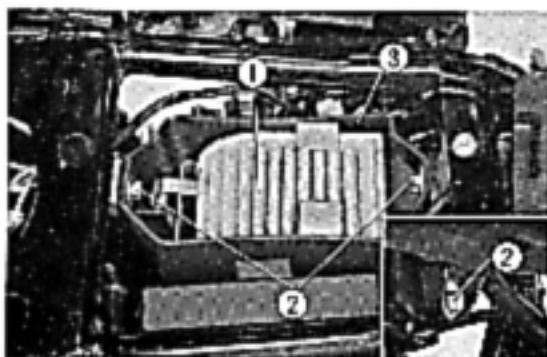


Fig. 45 ① Air cleaner element ② 6 mm bolts ③ Air cleaner case



8. Disconnect the throttle cable at the carburetor.



Fig. 46 ① Throttle cable

9. Loosen the two 5mm screws at the carburetor insulator and the 4mm screws at the air cleaner chamber. Remove the carburetor.

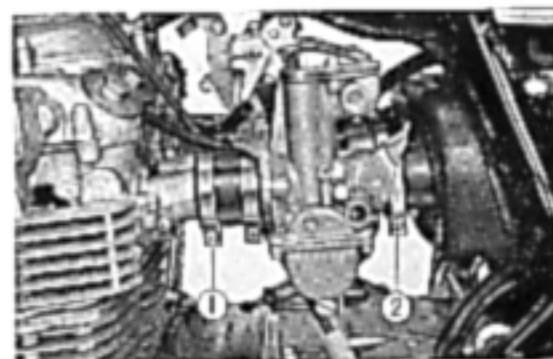


Fig. 47 ① 5 mm screw ② 4 mm screw

10. Disconnect the starting motor cable from the magnetic switch, and then the generator wiring at the coupler.

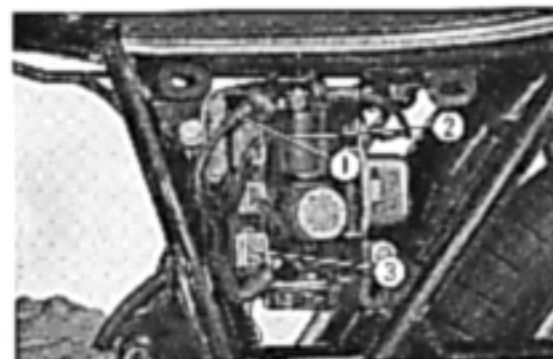


Fig. 48 ① Starting motor cable ② Magnetic switch ③ Wiring coupler

11. Remove the gear change pedal, unscrew the starting motor cover bolts, remove the starting motor cover, and then remove the left crankcase cover. Disconnect the clutch cable at the clutch lifter.



Fig. 49 ① Left crankcase cover ② Clutch cable ③ Clutch lifter



Fig. 50 (2) Contact breaker point leads

12. Remove the final driven sprocket and the drive chain.
13. Disconnect the contact breaker point leads (yellow and blue) at the connectors.

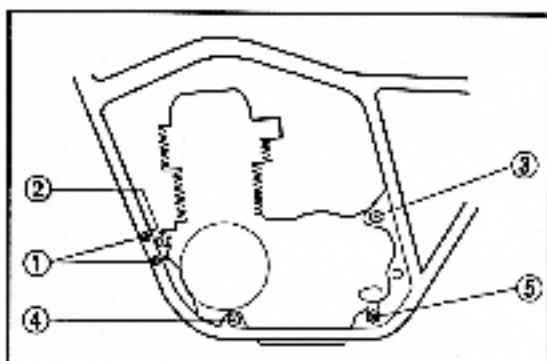


Fig. 51 Left side engine hanger bolts

- ① 8×50 hex bolt
- ② 10×50 hex bolt
- ③ Rear upper hanger bolt
- ④ 10×80 hex bolt
- ⑤ Rear lower hanger bolt

14. Unscrew the nuts from the engine hanger bolts, and dismount the engine from the right side by raising it's rear slightly.

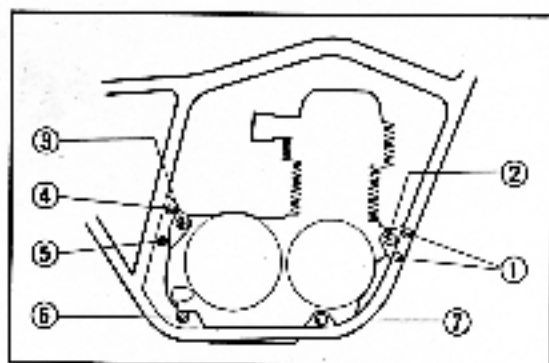


Fig. 52 Right side engine hanger bolts

- ① 8×50 hex bolt
- ② 10×50 hex bolt
- ③ Rear upper hanger bolt
- ④ 8×100 hex bolt
- ⑤ 8×40 hex bolt
- ⑥ Rear lower hanger bolt
- ⑦ 10×80 hex bolt

B. Engine Installation

1. Remount the engine in the reverse order of dismounting, however, attention should be given to the following points:
 - Install the engine from the right side and tighten the hanger bolts. The battery ground cable terminal is installed together with the rear hanger bolt.
 - Make sure that the generator cord and starting motor cord are not pinched when the left crankcase cover is installed.
 - Make sure that the two mufflers on each side are properly connected with the muffler connecting band.
 - Perform the following adjustments after the engine is installed.
 - Clutch adjustment
 - Drive chain slack adjustment
 - Carburetor adjustment

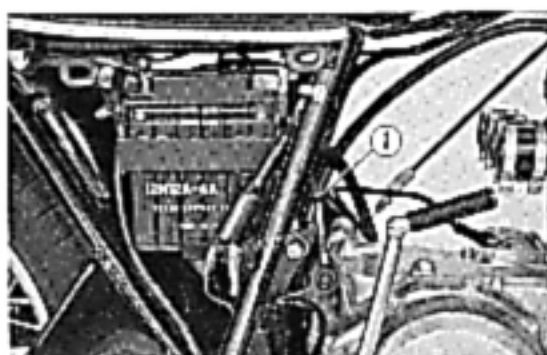


Fig. 53 ① Battery ground cable

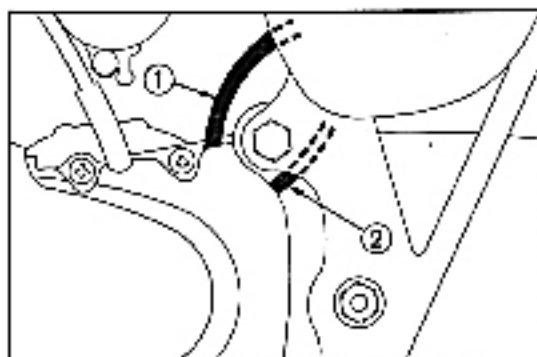


Fig. 54 ① Generator cord
② Starting motor cord



Fig. 55 ① Muffler connecting band



Fig. 56 (1) Breather cover

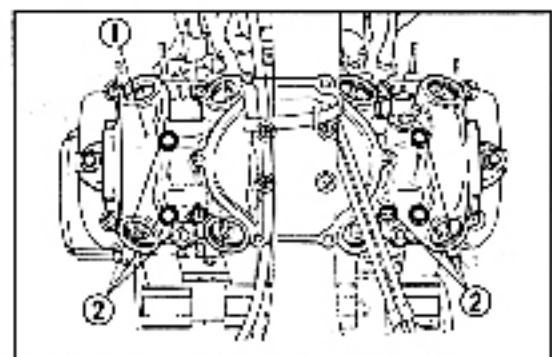


Fig. 57 (1) Cylinder head cover
(2) brass copper washers



Fig. 58 (1) Cam chain tension adjuster
(2) Lock nut

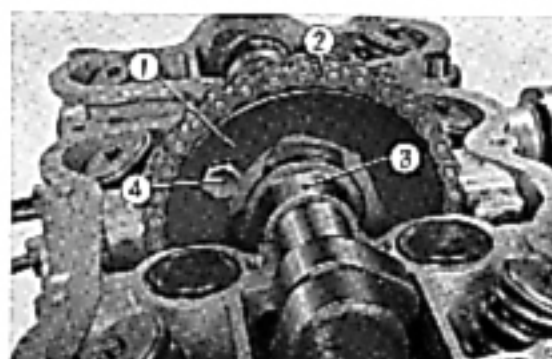


Fig. 59 (1) Cam sprocket (2) Cam chain
(3) Camshaft (4) 7 mm bolt

3. CYLINDER HEAD, CYLINDER AND PISTON

A. Disassembly

1. Turn the fuel cock to the "STOP" position, disconnect the fuel lines at the tank, and dismount the fuel tank.
2. Remove the exhaust pipe and muffler.
3. Disconnect the tachometer cable.
4. Disconnect the high tension cords at the spark plugs, unscrew six 6 mm screws and remove the breather cover.
5. Remove the tappet hole caps, left and right side covers, unscrew twelve 6 mm screws and six bolts, and remove the cylinder head cover.

Note:

- Loosen the screws and bolts uniformly to relieve the stress gradually.

6. Loosen the lock nut of the cam chain tension adjuster (leave the wrench on the nut), turn the screw fully (approximately 90°) clockwise, and then tighten the lock nut.
In this condition the cam chain tensioner is not applying tension to the cam chain.

7. Unscrew two cam sprocket mounting bolts and remove the camshaft from the sprocket.
8. Remove the cam chain from the sprocket.

9. Separate the carburetor assembly from the cylinder head.
10. Unscrew the cam chain tensioner mounting bolt.



Fig. 60 ① Cam chain tensioner
② Cam chain tensioner mounting bolt

11. Unscrew twelve cylinder head mounting nuts and two 6mm flange bolts, and remove the head. Loosen the nuts uniformly in the reverse order of tightening shown in Fig. 83.

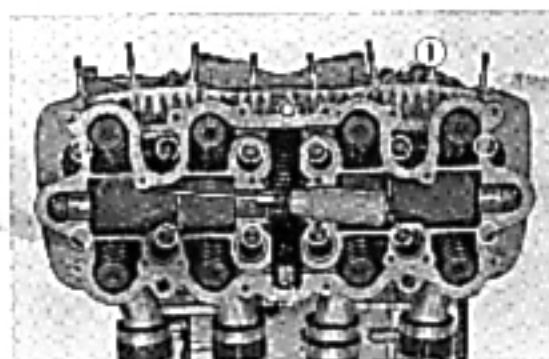


Fig. 61 ① Cylinder head

12. Remove the cam chain guide from the cylinder by raising the cam chain guide slightly, and rotate the guide 90° and removing it toward the top. During this operation, do not drop the cam chain.

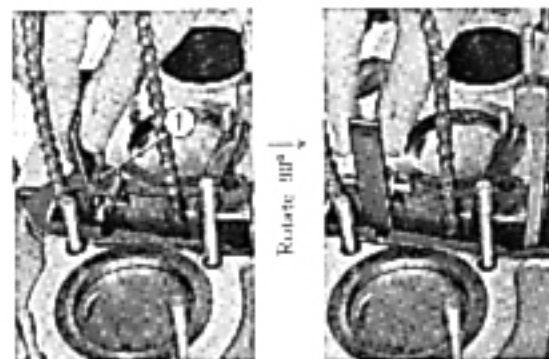


Fig. 62 ① Cam chain guide

13. Unscrew the cam chain adjuster lock nut (Fig. 58) and remove the chain tensioner from the cylinder. To facilitate removal, raise the cylinder about 20 mm/1 in., and remove the cam chain tensioner.

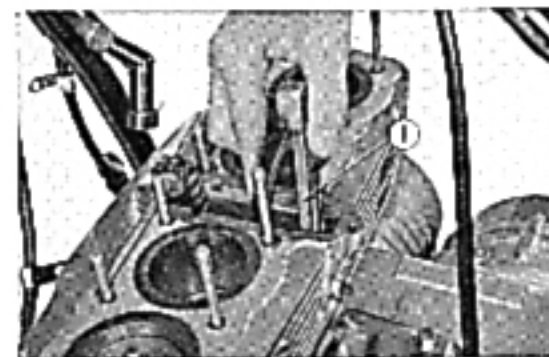


Fig. 63 ① Cam chain tensioner