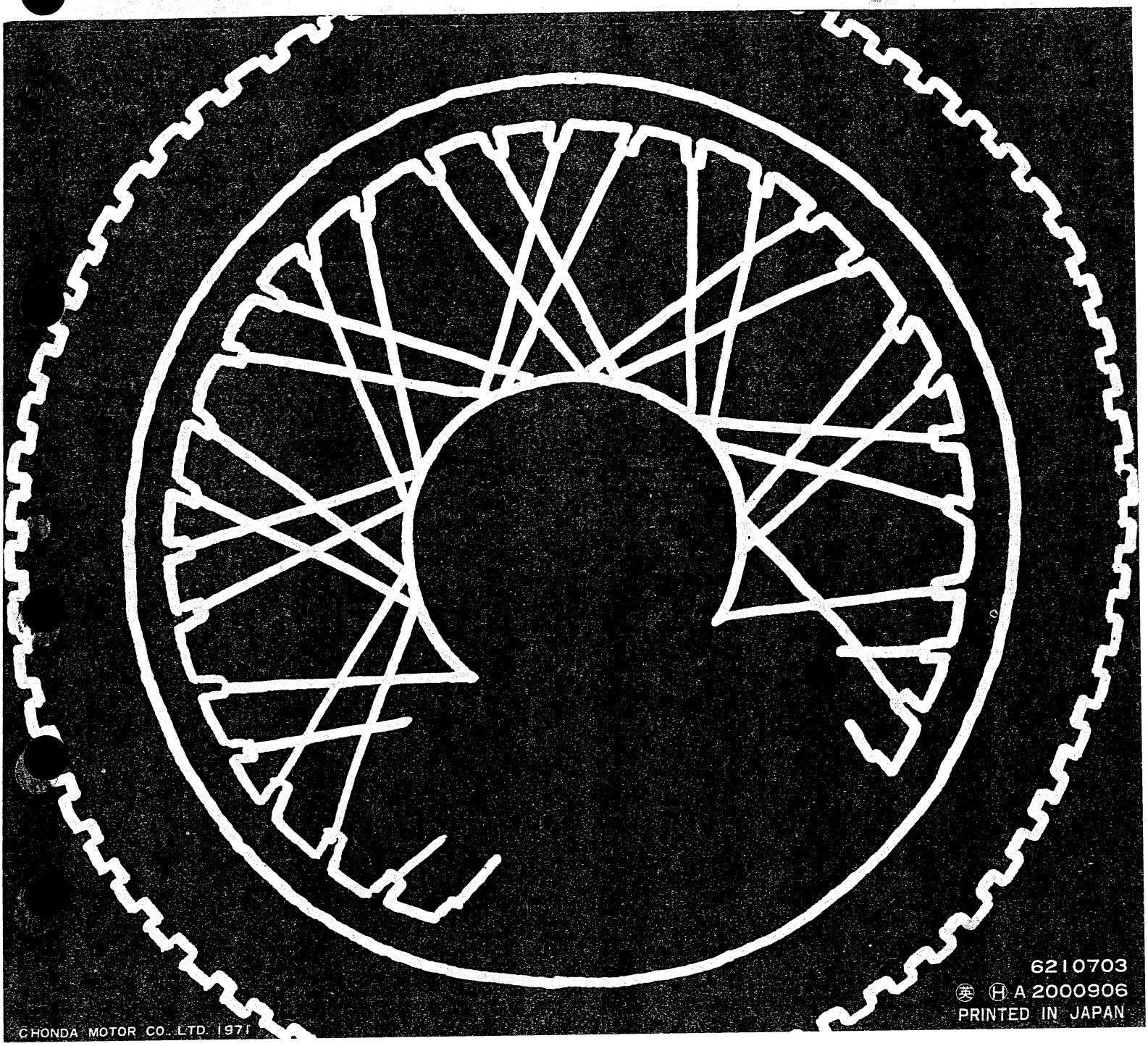
SHOP MANUAL

HONDA 100·125

MODEL CB100.CL100.SL100
CB125S.CD125S.SL125



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4. CLUTCH ADJUSTMENT

Check the clutch free play at the end of the clutch lever. The play should be **1–2 cm (2/5–3/4 in.)**. (Fig. 8) If it is not within this range, adjust it in accordance with the following procedure.

1) Loosen the clutch cable adjuster lock nut and turn the adjuster clockwise to make the cable free. Then loosen the lock nut of the clutch adjuster on the right crankcase cover. Turn the adjuster screw counter clockwise until a slight drag is felt and return it by 1/8 to 1/4 turn. Tighten the lock nut securely. (Fig. 9)
2) Turn the adjuster in the cable counter clockwise to adjust the lever end play. (Fig. 10)
3) Check for proper adjustment by starting the engine, applying clutch, and operating gear change. If the clutch does not disengage, the engine will stall or the motorcycle will tend to creep.
   If the clutch does not fully engage, the clutch will slip and the motorcycle will not accelerate in response to the acceleration of engine.

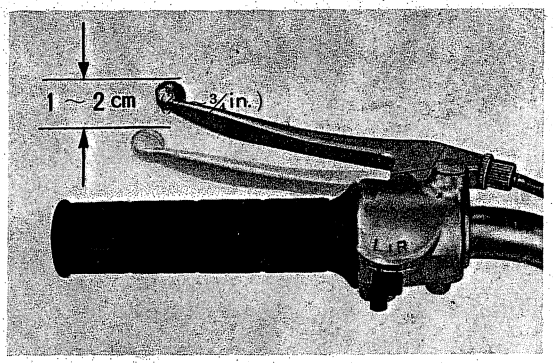

Fig. 8 Clutch lever play

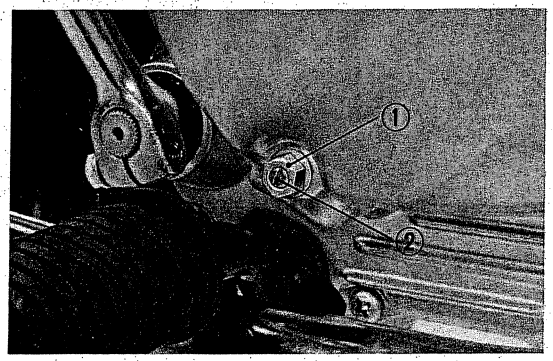

Fig. 9 Clutch adjustment
① Lock nut ② Adjuster screw

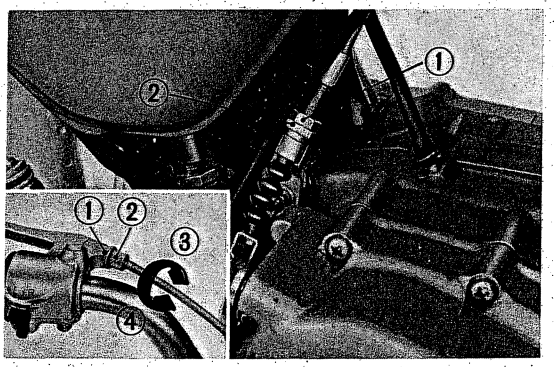

Fig. 10 ① Lock nut ② Adjuster ③ Increase ④ Decrease

5. SPARK PLUG INSPECTION

Remove the spark plug with a spark plug wrench and visually check conditions of electrodes and insulator.

The standard spark plugs equipped in the original engine are **D-8ES (NGK)** or **X24ES (Nihon denso)**.

1) If the plug is carboned up, sooty or has a hard deposit from the chemical fuel additivies, it should be cleaned with a spark plug cleaner or a wire brush.
2) Replace the plug if it insulator is cracked or chipped.
3) Check the gap between the electrodes with a thickness gauge and if necessary, adjust the ground electrode by bending. The standard clearance is **0.6–0.7 mm (0.025–0.028 in.)**. (Fig. 11)
4) Check the plug gasket before installation and replace if it is damaged.

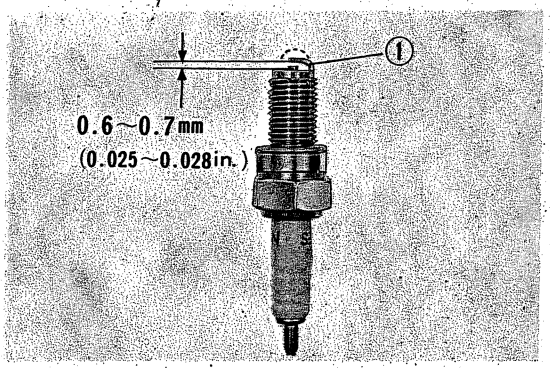

Fig. 11 ① Electrode

2) Piston diameter inspection
Measure the piston at the skirt. (Fig. 39)

Item	Standard value		Serviceable limit
Piston diameter	CB100 CL100 SL100	50.47–50.49mm (1.987–1.988 in.)	50.3mm (1.980 in.)
	CB125S CD125S SL125	55.97–55.99mm (2.2035–2.2043 in.)	55.80mm (2.1968 in.)

Replace if beyond the serviceable limit.

3) Measure the piston ring side clearance using a thickness gauge. Replace the piston ring or piston if beyond the serviceable limit.

Item	Standard value	Serviceable limit
Piston ring side clearance	0.025–0.030mm (0.0008–0.0011 in.)	0.7mm (0.0275 in.)

4) Piston ring gap
Insert the piston ring into the cylinder so that it is normal to the cylinder axis and then measure the ring gap using a thickness gauge. (Fig. 40)

Item	Standard value	Serviceable limit
Top and second rings	0.15–0.35mm (0.0059–0.0138 in.)	0.5mm max. (0.0197 in.)
Oil ring	0.15–0.04mm (0.0059–0.0158 in.)	0.5mm max. (0.0197 in.)

Replace if beyond the serviceable limit.

C. Reassembly

1) Assemble the piston ring on the piston.

Note:

The ring marking located adjacent to the ring gap should be toward the top. (Fig. 41)

When installing new piston rings, roll the rings over their respective piston ring grooves to make sure that the ring side clearances are adequate. Rings should roll smoothly.

2) Install the piston. (Fig. 42)

Note:

Install the piston so that the IN marking on the piston head is toward the rear.

Replace all piston pin clips with new items.

3) Space the piston ring gaps equally apart (120°) and then install the cylinder.

Note:

Do not forget to install the two dowel pins in the mounting base.

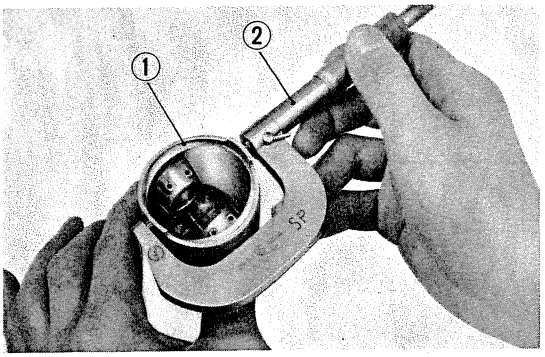

Fig. 39 Piston diameter measurement
① Piston ② Micrometer

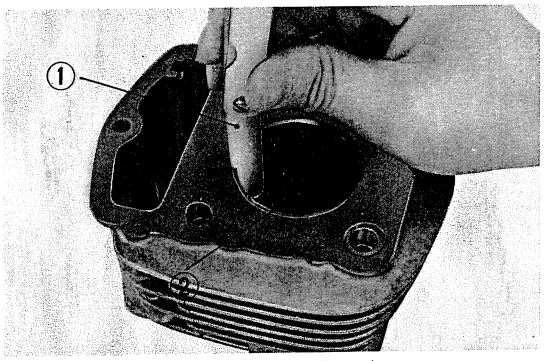

Fig. 40 Piston ring gap measurement
① Thickness gauge ② Piston ring

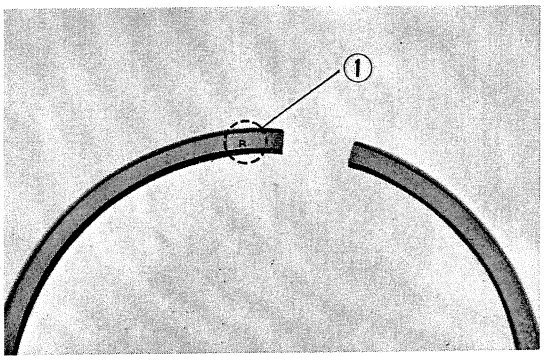

Fig. 41 ① Piston ring marking

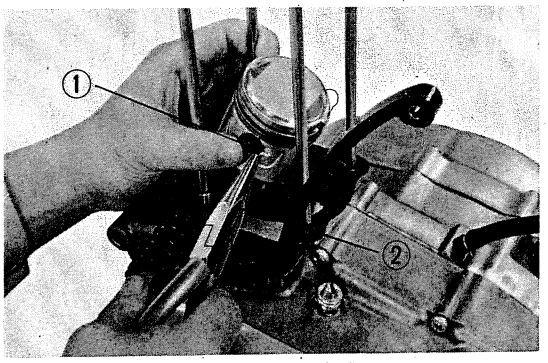

Fig. 42 Piston installation
① Piston pin clips ② Long nose pliers

4) Install the 20mm set ring.
5) Assemble the clutch spring and install with the 6mm mounting bolts.
Torque to **0.8–1.2kg-m (5.8–8.7 ft-lbs).**

Note:

Do not forget to install the clutch lifter guide pin. (Fig. 70)

6) Assemble the oil filter rotor, and install the right crankcase cover in accordance with section 5.C.

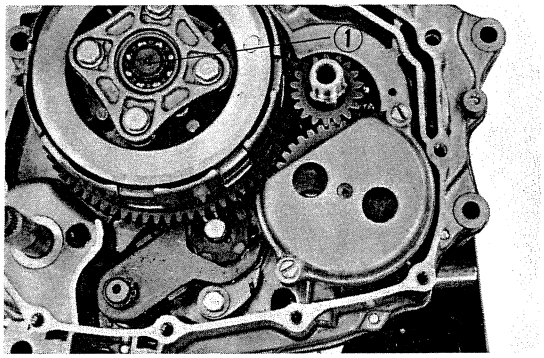

Fig. 70 ① Clutch lifter guide pin

7. GEAR SHIFT MECHANISM

The gear shift mechanism consists of gear shift plate, gear shift drum, three gear shift forks, gear shift cam and the gear shift drum stopper bar. When the gear shift pedal is depressed, the gear shift cam drum rotates to perform the gear shifting. Also, a feature is incorporated into the system to prevent gear jumping during shifting.

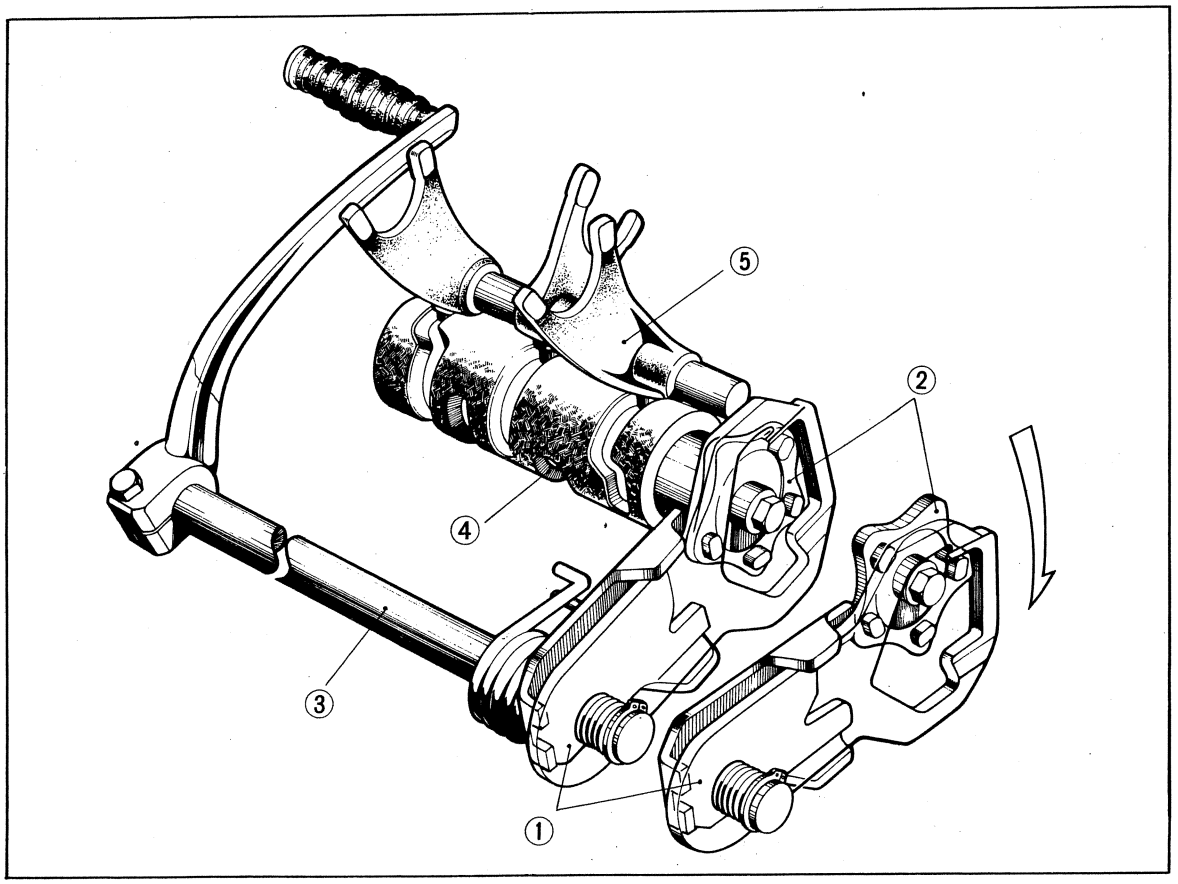

Fig. 71 ① Gear shift plate ② Gear shift cam ③ Gear shift spindle ④ Gear shift drum ⑤ Gear shift fork

1. FRONT BRAKE AND FRONT WHEEL

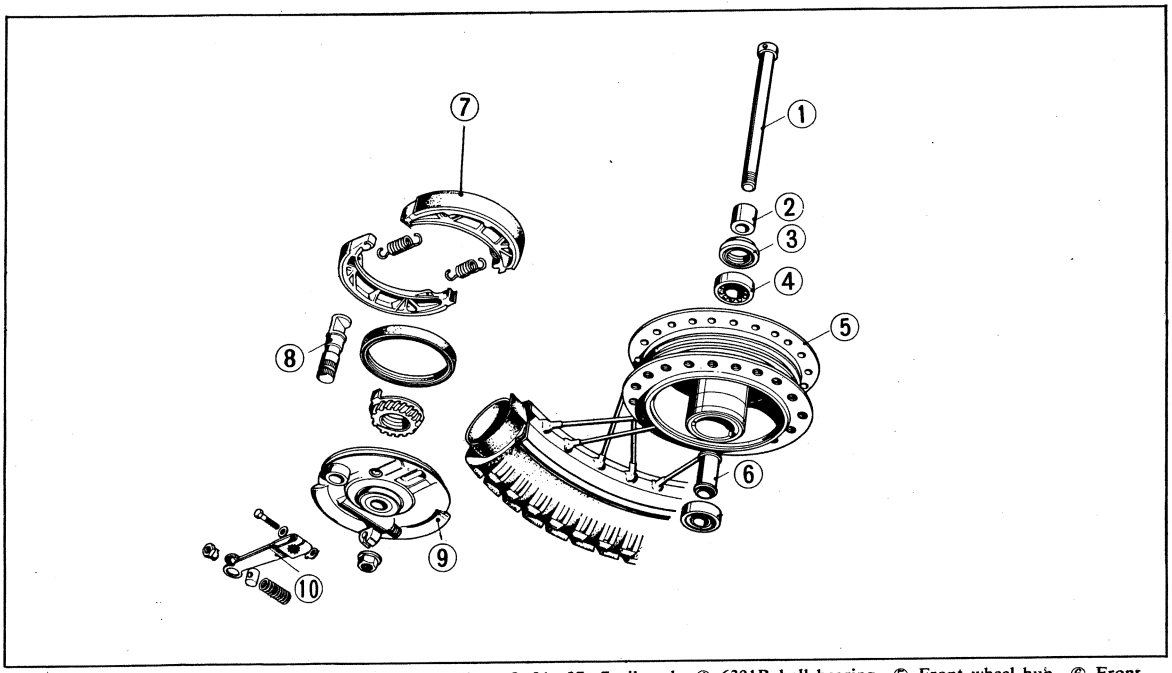

Fig. 99 ① Front wheel axle ② Front wheel side collar ③ 21×37×7 oil seal ④ 6301R ball bearing ⑤ Front wheel hub ⑥ Front axle distance collar ⑦ Brake shoe ⑧ Front brake cam ⑨ Front brake panel ⑩ Front brake arm

A. Disassembly

1) Place an appropriate stand under the engine.
2) Disconnect the front brake cable.
3) Disconnect the speedometer cable.
4) Remove front wheel axle nut, extract the front wheel axle and then drop the wheel (Fig. 100)
5) Remove the brake arm, unhook the two brake shoe springs and then disassemble the brake shoes from the brake panel. (Fig. 101)
6) Remove the oil seal, the two ball bearings (#6301R), and then pull out the front axle distance collar.

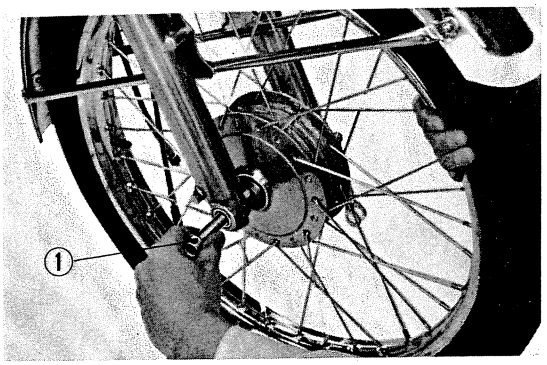

Fig. 100 Front wheel removal
① Front wheel axle

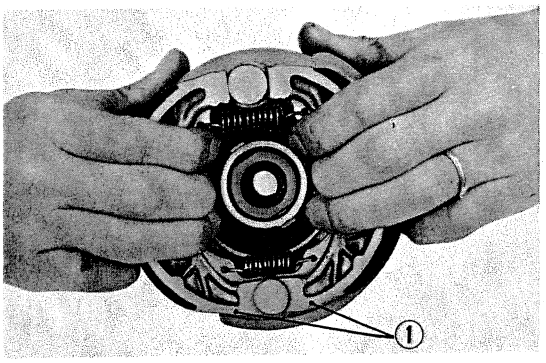

Fig. 101 Brake shoe removal
① Brake shoe

C. Inspection

1) Front fork spring. (Fig. 132)

Item	Standard value		Serviceable limit
Free length	CB100 CL100	184mm (7.2440 in.)	160mm (6.2992 in.)
	SL100	484.2mm (19.0629 in.)	460mm (18.1102 in.)
	CB125S CD125S	205.5mm (8.0905 in.)	180mm (7.0866 in.)
	SL125	482.3mm (18.9881 in.)	460mm (18.1102 in.)

Replace if beyond the serviceable limit.

2) Wear of front fork piston.

Item	Standard value		Serviceable limit
Outside diameter	CB100 CL100 CB125S CD125S	30.936–30.975mm (1.2174–1.2194 in.)	30.9mm (1.2165 in.)
	SL100 SL125	35.425–35.450mm (1.3946–1.3956 in.)	35.4mm (1.2937 in.)

Replace if beyond the serviceable limit.

3) Check the front fork oil seal for damage. If damaged, replace with new one.

4) Check the front fork pipe and bottom case for bend or crank. If badly damaged, replace with new one.

D. Reassembly

1) Assemble piston stopper and piston on the front fork pipe.

2) Fill front fork bottom case with **SAE 10W-30.**

CB100, CL100, CB125S, CD125S: 130–140cc (4.4–4.7 ozs)

SL100, SL125: 180–190cc (6.1～6.4 ozs)

3) **(CB100, CL100, CB125S, CD125S)**

Insert the front fork pipe assembly into the bottom case, install the oil seal and circlip, and assemble the front fork spring into the fork pipe so that the end with the large pitch is at the bottom. (Fig. 134)

(SL100, SL125)

Place the large pitch end of the front fork spring into the bottom case, insert the front fork pipe and assemble the oil seal and circlip.

4) **(CB100, CL100, CB125S, CD125S)**

Attach the front fork upper and lower covers or fork boots, and install the front fork as a unit. Tighten the front fork bolt and mounting bolt. Attach the front fender

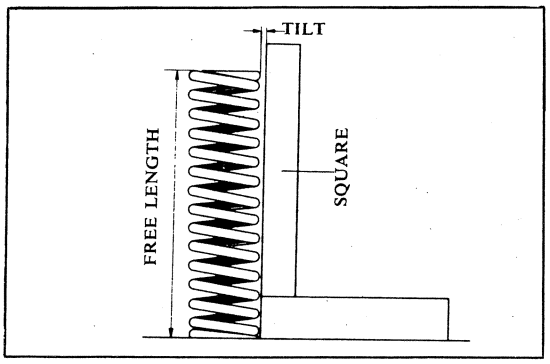

Fig. 132 Spring free length measurement

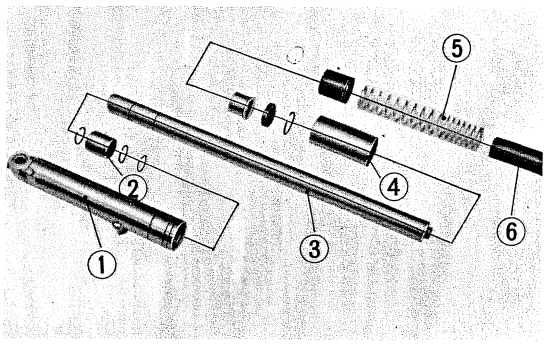

Fig. 133 ① Front fork bottom pipe ② Fork piston ③ Front fork pipe ④ Bottom case cover ⑤ Front fork spring ⑥ Front fork spring guide

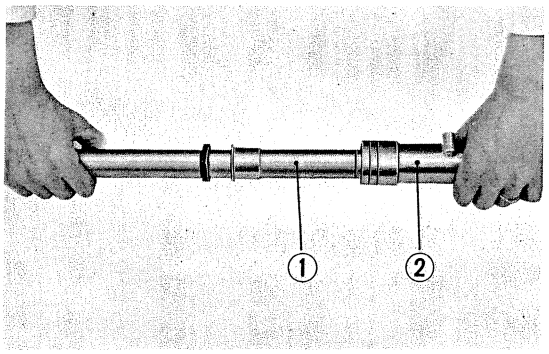

Fig. 134 Front fork assembly
① Front fork pipe ② Front fork bottom pipe

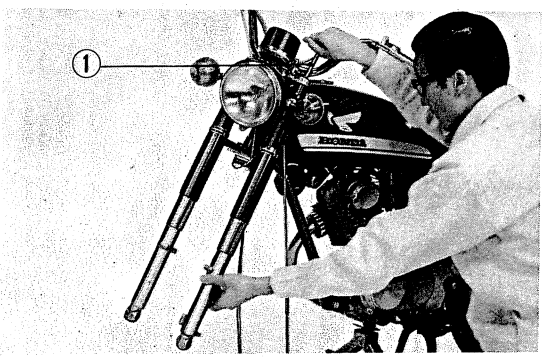

Fig. 135 Front fork installation
① Front fork puller

B. Inspection and Servicing

1) Measure the specific gravity of the battery electrolyte with a hydrometer and if it is below 1.200 (corrected to 20°C), the battery should be recharged. The specific gravity is calibrated on the stem of the float and the reading is taken at the fluid level with the float buoyant. (Fig. 160)

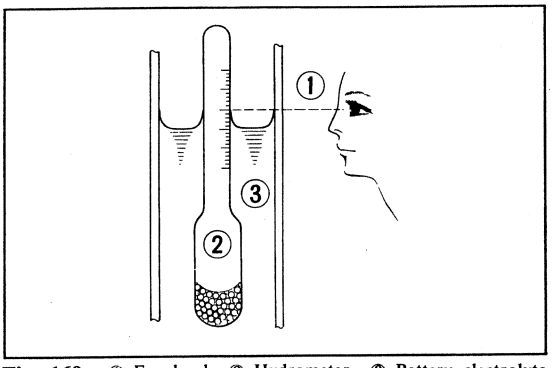

Fig. 160 ① Eye level ② Hydrometer ③ Battery electrolyte

2) If any cell is found to be below the lower level mark on the battery case, add distilled water to bring the level up to the upper level mark. If the electrolyte evaporation rate is unusually great, the charging system should be checked for possible malfunction. If the battery case is cracked or damaged, replace with new one.

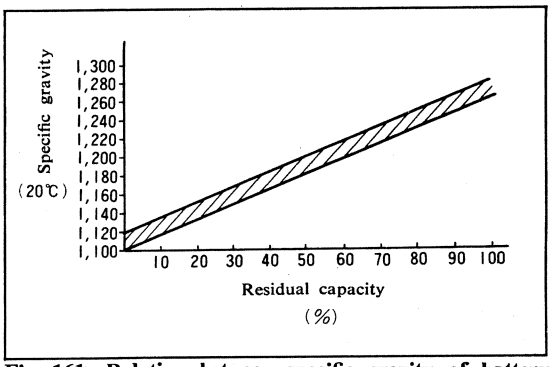

Fig. 161 Relation between specific gravity of battery electrolyte and electrical capacity

3) Check the poor battery connection due to corrosion of the connector and terminal, flaking of the paste from vibration and sulfation. The flaked paste remains on bottom remarkably, replace with new one. (Fig. 162)

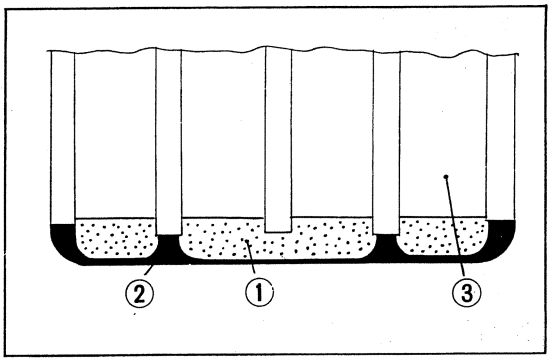

Fig. 162 ① Flaked paste ② Bottom ③ Cathode plate

C. Battery Charging

1) Quick-charge method of charging the battery will seriously effect the battery service life, therefore, it is recommended that this method not be used. When the rapid charge is required, the battery should be recharged at a rate of **0.2 AH.**
2) During the charging process, hydrogen gas will be generated, therefore, open flame should be kept away.
3) After the recharging is completed, the battery should be washed with water to remove spilled electrolyte and the terminals coated with grease.

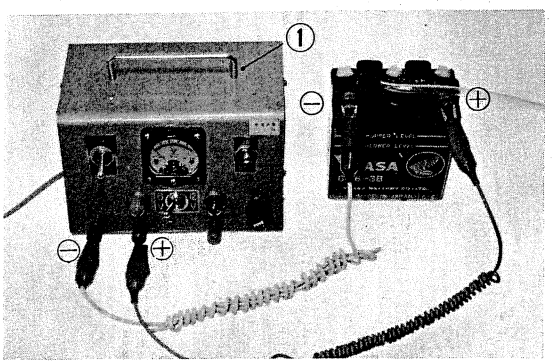

Fig. 163 Battery charging
① Battery charger

TECHNICAL DATA

ITEM	CB100	CL100	CL100
DIMENSION			
Overall length	74.2 in. (1,885mm)	71.6 in. (1,820mm)	75.4 in. (1,915mm)
Overall width	29.5 in. (750mm)	32.5 in. (825mm)	31.9 in. (810mm)
Overall height	40.0 in. (1,015mm)	40.5 in. (1,030mm)	42.9 in. (1,090mm)
Wheel base	47.4 in. (1,205mm)	47.8 in. (1,215mm)	49.4 in. (1,255mm)
WEIGHT			
Dry weight	191.8 lbs (87 kg)	191.8 lbs (87 kg)	211.7 lbs (96 kg)
CAPACITIES			
Engine oil	2.1 US pt (1.0 liter)	2.1 U.S. pt (1.0 liter)	2.1 U.S. pt. (1.0 liter)
Fuel tank	2.0 US gal. (7.5 liter)	2.0 U.S. gal. (7.5 liter)	2.0 U.S. gal. (7.5 liter)
Fuel reserve tank	2.5 US pt (1.2 liter)	2.5 U.S. pt (1.2 liter)	2.5 U.S. pt. (1.2 liter)
ENGINE			
Bore and stroke	1.988×1.944 in. (50.5×49.5mm)	1.988×1.949 in. (50.5×49.5mm)	1.988×1.949 in. (50.5×49.5mm)
Compression ratio	9.5: 1	9.5: 1	9.5: 5
Displacement	6.04 cu in. (99 cc)	6.04 cu in. (99 cc)	6.04 cu in. (99 cc)
Horse power	11.5 ps/11,000 rpm	11.5 ps/11,000 rpm	11.5 ps/11,000 rpm
Contact breaker point gap	0.012~0.016 in. (0.3~0.4mm)	0.012~0.016 in. (0.3~0.4mm)	0.012~0.016 in. (0.3~0.4mm)
Spark plug gap	0.024~0.028 in. (0.6~0.7mm)	0.024~0.028 in. (0.6~0.7mm)	0.024~0.028 in. (0.6~0.7mm)
Valve tappet clearance	0.002 in. (0.05mm)	0.002 in. (0.05mm)	0.002 in. (0.05mm)
CHASSIS AND SUSPENSION			
Caster	64°	63°40′	61.5°
Trail	2.95 in. (75mm)	3.07 in. (78mm)	3.7 in. (95mm)
Tire size, front	2.50~18 (4 PR)	2.50-18 (4 PR)	2.75-19 (4 PR)
Tire size, rear	2.75~18 (4 PR)	3.00-18 (4 PR)	3.25-17 (4 PR)
POWER TRANSMISSION			
Primary reduction	4.055	4.055	4.055
Final reduction	2.857	3.071	3.142
Gear ratio, 1 st.	2.500	2.500	2.500
2 nd.	1.722	1.722	1.722
3 rd.	1.333	1.333	1.333
4 th.	1.083	1.083	1.083
5 th.	0.923	0.923	0.923
ELECTRICAL			
Battery	6V-6AH	6V-6AH	6V-6AH
Generator	A.C. generator	A.C. generator	A.C. generator
Fuse	15 amp	15 amp	15 amp
LIGHTS			
Headlight	6V-35/25W	6V-35/25W	6V-35/25W
Tail/stoplight	6V-5.3/17W	6V-5.3/17W	6V-5.3/17W
Turn signal light	6V-18W	6V-18W	—
Meter light	6V-1.5W	6V-1.5W	6V-1.5W
Neutral indicator light	6V-1.5W	6V-1.5W	6V-1.5W
Turn signal indicator light	6V-1.5W	6V-1.5W	—
High beam indicator light	6V-1.5W	6V-1.5W	6V-1.5W

1. TAPPET CLEARANCE ADJUSTMENT

Tappet clearance check and adjustment should be made the with engine is cold.

1) For adjustment, refer to page 5.

Remove the ACG caps A and B to observe whether or not the T mark is lined up with the index mark on the left crankcase cover. Specified tappet clearance: (Fig. 1)

Intake 0.002in (0.05mm)
Exhaust 0.002in (0.05mm)

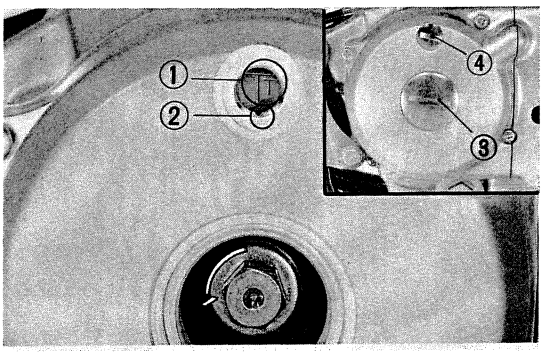

Fig. 1 ① T mark ② INDEX mark ③ ACG Cap A. ④ ACG Cap B.

2. CARBURETOR ADJUSTMENT

1) Refer to page 5. (Fig. 2)

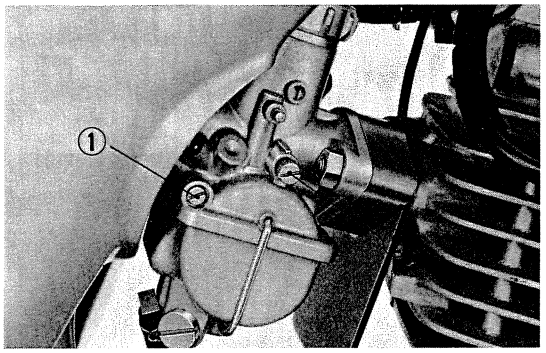

Fig. 2 ① Air screw ② Throttle stop screw

3. BREAKER POINT AND IGNITION TIMING ADJUSTMENT

1) Refer to page 6.

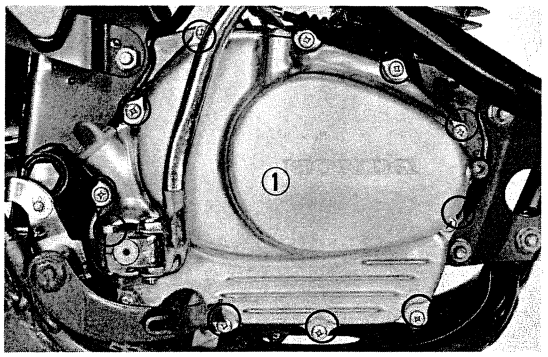

Fig. 3 ① Right crankcase cover

4. OIL FILTER CLEANING

1) Drain the engine.
2) Remove the kick starter pedal.
3) Disengage the clutch cable from the clutch lever.
4) Remove the right crankcase cover.(Fig. 3)
5) Remove the oil filter rotor cover.
6) Clean any sludge off the center of the oil filter rotor. (Fig. 4) Reassemble the filter.

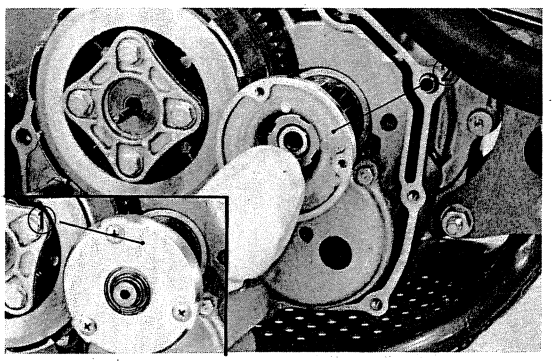

Fig. 4 ① Oil filter rotor cover ② Oil filter rotor

• CHASSIS

1. BRAKE ARM

After putting the brake panel assembly on the wheel hub, install the brake arm on the brake camshaft, aligning the mark on the arm with index on the shaft. (Fig. 34)

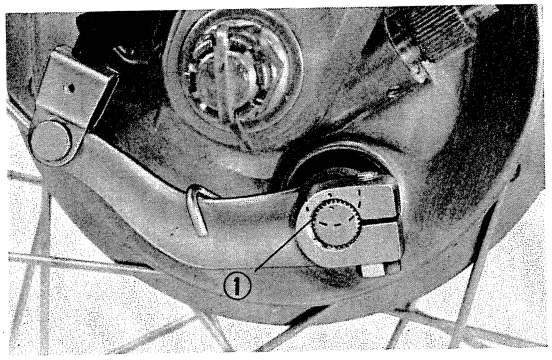

Fig. 34 ① Aligning marks

2. HANDLEBAR

Be sure and keep the punch mark on the handlebar flush with the top face of the holder as shown. (Fig. 35)

Note:

After making sure that the punch mark and top face of the holder match up, tighten the holder firmly, starting with the front toward the rear.

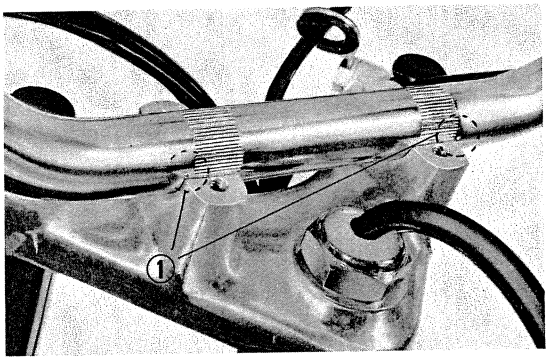

Fig. 35 ① Punch mark

3. CABLES AND LEAD WIRES

All cables and lead wires should be positioned as per the instructions given in Figs. 36 and 37.

Note:

Be sure that cables and wires are not binding or stressed when the handle is operated between two extremes.

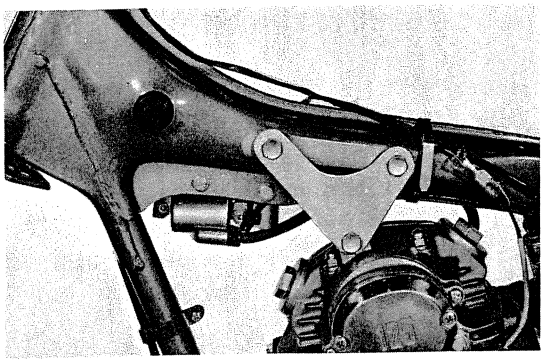

Fig. 36

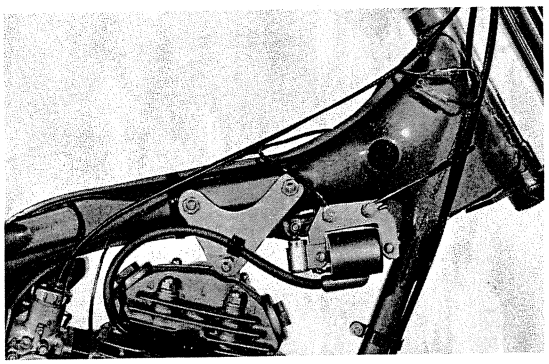

Fig. 37

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