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1. SERVICE PRECAUTION

1. Always replace gaskets, O-rings, cotter pins, etc. with new ones whenever reassembling.
2. When tightening bolts, nuts or screws, begin on larger-diameter or inner one first and tighten them to specified torque in a criss-cross pattern.
3. Use genuine Honda-recommended parts and lubricants when servicing.
4. Be sure to use a special tool or tools where so specified.
5. A joint work of more than two persons must be carried out with mutual safety attention paid.
6. Wash clean engine parts upon disassembly. Coat their sliding surfaces with high-quality lubricant when reassembling.
7. Coat or pack grease where so specified.
8. After reassembling, check to be sure each part is tightened properly. Also check for proper operation.
9. Be sure to retain fuel and oil pipes with clips.

ENGINE

	Item	Q'ty	Torque values	
			Kg-m	lbs-ft
1.	Tappet adjusting nut	8	1.1–1.5	8.0–10.8
2.	Cam sprocket knock bolt, 7×12	2	1.4–1.8	10.1–10.8
3.	Cylinder head nut, 8mm	12	2.0–2.3	14.5–16.6
4.	A. C. generator rotor set bolt	1	5.0–6.0	28.9–30.3
5.	Starting clutch screw, 6×18 cross flat head screw	3	0.8–1.2	14.5–17.3
6.	Upper crankcase bolt, 8×100 Flange hex bolt	3	2.0–2.5	14.5–18.1
7.	Upper crankcase bolt, 8×145 hex bolt	1	2.3–2.5	16.6–18.0
8.	Lower crankcase bolt, 8×100 hex bolt	10	2.0–2.5	14.5–18.1
9.	Connecting rod nut	8	2.0–2.2	14.5–15.9
10.	Oil pump screw, 6×35 cross flat head screw	3	0.8–1.2	5.7– 8.6
11.	Clutch filter fixing bolt, 6×45 hex bolt	1	0.8–1.2	5.7– 8.6
12.	Spark advancer bolt, 6×55 Flange hex bolt	1	1.1–2.5	8.0–10.8
13.	Tachometer gear holder screw, 6×16 cross flat head screw	1	1.0–1.4	7.2–10.0
14.	Exhaust pipe flange nut, 6mm	8	0.8–1.2	5.7– 8.6
15.	Oil pressure switch	1	1.5–2.0	10.8–14.5
16.	Gear shift lever bolt, 6×20 hex bolt	1	0.8–1.0	5.7– 7.2
17.	Oil filter center bolt	1	2.7–3.3	19.5–23.8
18.	Spark plug	4	1.2–1.6	8.6–11.6
19.	Oil drain bolt	1	3.5–4.0	25.3–28.9
20.	Clutch spring, 6×20 hex bolt	4	1.0–1.4	7.2–10.1
21.	Tappet hole cap	8	1.0–1.4	7.2–10.1
22.	Oil path cap	1	1.0–1.4	7.2–10.1
23.	Gear shift return spring, 8mm bolt	1	2.0–3.0	14.5–21.7
24.	Drive sproket	1	1.1–1.5	
Standard parts			Kg-m	lbs-ft
	SCREW pan 6 mm		0.7–1.1	5.1– 8.0
	SCREW flat 6 mm		0.8–1.2	5.8– 8.7
	BOLT hex 6 mm		0.8–1.2	5.8– 8.7
	BOLT flange 6 mm		1.0–1.4	7.2–10.1
	NUT hex 6 mm		0.8–1.2	5.8– 8.7

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FRAME

	Item	Q'ty	Torque values	
			kg–m	lbs–ft
1.	Rear brake pedal bolt, 8×32 hex holt	1	1. 8–2. 5	13. 0–18. 1
2.	Foot peg nut, 12mm	2	5. 0–6. 0	36. 2–43. 4
3.	Engine hanger bolt A	5	3. 0–4. 0	21. 7–28. 9
4.	Engine hanger plate	6	1. 8–2. 5	13. 0–18. 1
5.	Rear fork pivot nut, 14mm	1	5. 5–7. 0	39. 8–50. 6
6.	Rear suspension upper nut, 10mm cap nut	2	3. 0–4. 0	21. 7–28 ·9
7.	Rear suspension lower bolt, 10×32 hex bolt	2	3. 0–4. 0	21. 7–28. 9
8.	Oil bolt	3	3. 4–4. 0	24. 6–28. 9
9.	Brake stop switch	1	3. 0–4. 0	24. 6–28. 9
10.	Front brake disc nut, 8mm	6	1. 8–2. 5	13. 0–18. 1
11.	Brake oil joint, 6×28 hex bolt	1	0. 8–1. 0	5. 8–87. 2
12.	Brake hose joint	1	0. 6–1. 0	4. 3– 7. 2
13.	Master cylinder bolt, 6×28 hex bolt	2	0. 8–1. 0	5. 7– 7. 2
14.	Caliper set bolt	2	3. 4–4. 0	24. 6–28. 9
15.	Holder joint bolt, 8×40, 8×50 hex bolt	3	1. 8–2. 3	13. 0–16. 6
16.	Front fork bolt	2	5. 5–6. 5	39. 8–47. 0
17.	Steering stem nut	1	8. 0–12. 0	57. 9–86. 7
18.	Steering stem bolt, 10×40 hex bolt	2	3. 0–4. 0	21. 7–28. 9
19.	Rear wheel axle nut	1	8. 0–10. 0	57. 8–72. 3
20.	Front axle holder nut, 8mm	4	1. 8–2. 3	13. 0–16. 6
21.	Handlebar holder bolt, 8×40 hex bolt	4	1. 8–2. 3	13. 0–16. 6
22.	Front wheel axle nut	1	5. 5–6. 5	39. 8–47. 0
23.	Rear brake stopper arm bolt and nut, 8mm	1	1. 8–2. 3	13. 0–16. 6
24.	Fork top bridge bolt, 8×56 hex bolt	2	1. 8–2. 3	13. 0–16. 6
25.	Drive chain adjuster bolt and nut, 8mm hex bolt	2	1. 5–2. 0	10. 8–14. 5
26.	Drive chain adjuster stopper bolt	2	1. 8–2. 3	13. 0–16. 6
27.	Main stand pivot bolt, 8×40 hex bolt	2	1. 5–2. 0	10. 8–14. 5
28.	Rear foot peg nut, 12mm	2	4. 5–6. 0	32. 5–43. 4
29.	Caliper joint pin	1	1. 8–2. 5	13. 0–18. 1
30.	Bottom bridge	2	3. 0–4. 0	21. 7–28. 9
31.	Final driven sprocket	4	3. 0–4. 0	21. 7–28. 9
Standard parts				
	Bolt hex. 6mm		0. 8–1. 2	5. 8– 8. 7
	Bolt hex. 8mm		1. 5–2. 3	10. 8–16. 6

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2. SPECIAL TOOLS

○=USED, ×=NOT USED, (op)=optional tool

Ref. No.	Tool No.	Tool Name	CB 500	CB 550	Q'ty	Remarks
①	07902-2000000	Spanner, pin 48 mm	○	○	1	
②	07906-3230000	Wrench, box 12 mm	○	○	1	Cylinder head locking nut
③	07908-3230000	Wrench, tappet adjusting	○	○	1	
④	07909-3000000	Wrench, spark plug	○	○	1	
⑤	07910-3230101	Wrench, F retainer	○	○	1	Front hub dis/assembling
⑥	07910-3230201	Wrench, R retainer	○	○	1	Rear hub dis/assembling
⑦	07914-3230000	Pliers, Snap ring	○	○	1	Master cylinder piston dis/assembling
⑧	07917-3230000	Wrench, hollow set 6 mm	○	○	1	Front fork bottom case dis/assembling
⑨	07933-2160000	Puller, rotor	○	○	1	
⑩	07936-3230100	Shaft, hammer	○	×	1	Primary shaft removing (Use with item No. 11)
⑪	07936-3230200	Weight, hammer	○	×	1	
⑫	07936-3740100	Shoft, sliding hammer	×	○	1	Primary shaft removing (Use with item No. 17)
⑬	07942-3290100	Driver, valve guide	○	○	1	
⑭	07942-3290200	Remover, valve guide	○	○	1	
⑮	07945-3230100	Driver A, bearing	○	×	1	
⑯	07945-3230200	Driver B, bearing	○	×	1	
⑰	07945-3000500	Weight, sliding hammer	×	○	1	
⑱	07945-3330300	Bearing driver attachment	×	○	1	
⑲	07945-3330200	Driver, attachment	×	○	1	Transmission bearing inner driver 6205 (Use with item No. 23)
⑳	07946-3600000	Driver, attachment	×	○	1	Rear hub bearing driver ATT 6305 (Use with item No. 23)
㉑	07946-9350200	Driver, attachment	×	○	1	Front hub bearing driver ATT 6302 Use with item No. 23)
㉒	07947-3290000	Guide, fork seal	○	○	1	
㉓	07949-6110000	Driver, handle	×	○	1	Use with item Nos. 18, 19, 20, and 21
㉔	07953-3330000	Remover, ball race	×	○	1	
㉕	07954-3230000	Compressor, piston ring	○	○	2	
㉖	07957-3290000	Compressor, valve spring	○	○	1	
㉗	07958-2500000	Base, Piston	○	○	2	
㉘	07959-3290000	Compressor, shock absorber	○	○	1	
㉙	07967-3230100	Attachment A, driver	○	×	1	
㉚	07967-3230200	Attachment B, driver	○	×	1	
㉛	07967-3230000	Attachment remover	○	×	1	
㉜	07974-3230100	Piston cup guide	○	○	1	
㉝	07974-3230200	Cup guide	○	×	1	
㉞	07984-0980000	Reamer, valve guide	×	○	1	
㉟	07908-3230200	Wrench, carburetor adjusting	○	○	1	(op)
㊱	07504-3000100	Gauge set, vacuum	○	○	1	Carburetor adjusting (op)
㊲	07975-3000001	Tool set, chain joint	○	○	1	(op)
	07401-0010000	Gauge, flot level	○	○	1	


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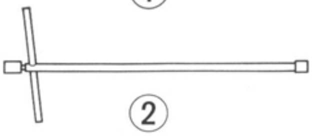
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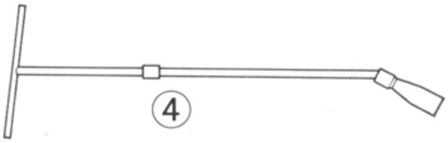
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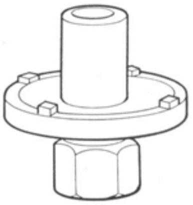
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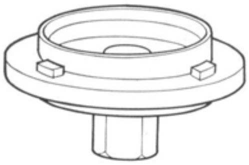
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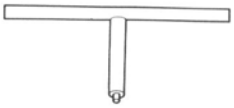
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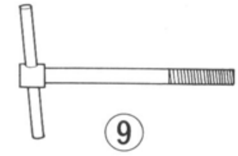
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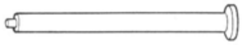
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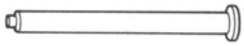
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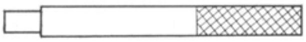
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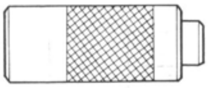
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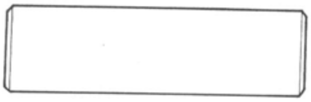
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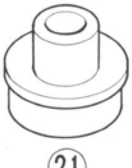
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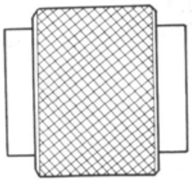
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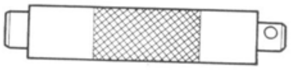

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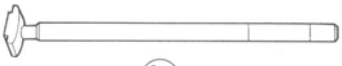

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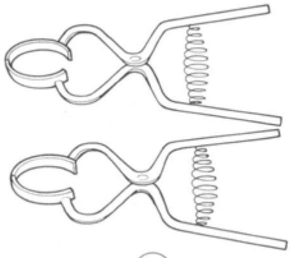

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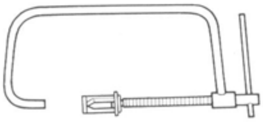

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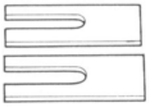

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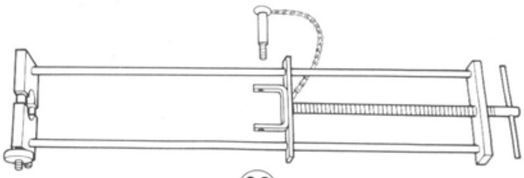

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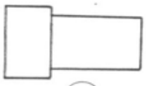

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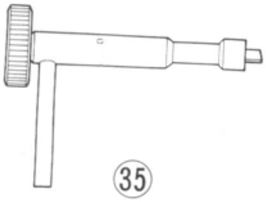

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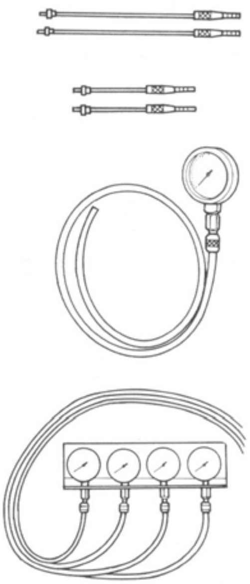

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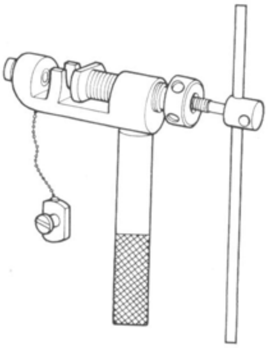

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3. MAINTENANCE OPERATIONS

1. TAPPET ADJUSTMENT

Adjust tappet clearance when the engine is cold.

1. Remove the tank.
2. Unscrew the tappet hole caps.
3. Remove the point cover and align the "T" (1·4) mark on the spark advancer to the timing mark when the No. 1 piston (pistons are numbered from left to right from the rider's position) is at top-dead-center of the compression stroke.
4. Then check and adjust valve tappet clearances indicated by "O" in the chart below.
5. Measure the clearances using a feeler gauge, adjust by loosening the lock nut and turning the adjuster screw, and tighten the lock nut.
   Valve tappet clearances:
   INLET ——— **0.05 mm (0.002 in.)**
   EXHAUST —— **0.08 mm (0.003 in.)**
6. Next, rotate the crankshaft one revolution and realign the "T" (1·4) mark on the spark advancer to the timing mark (in this position, the No. 4 piston is at top-dead-center of the compression stroke). Then check and adjust the valve tappet clearances indicated by "X" in the chart below. See item 5 above for proper valve tappet clearances.

	No. 1 cylinder	No. 2 cylinder	No. 3 cylinder	No. 4 cylinder
Inlet valve	O	X	O	X
Exhaust valve	O	O	X	X

Note:

- **Hold the adjusting screw so that it is not turned when tightening the lock nut.**
- **Make sure the clearance is not disturbed when the lock nut is tightened.**

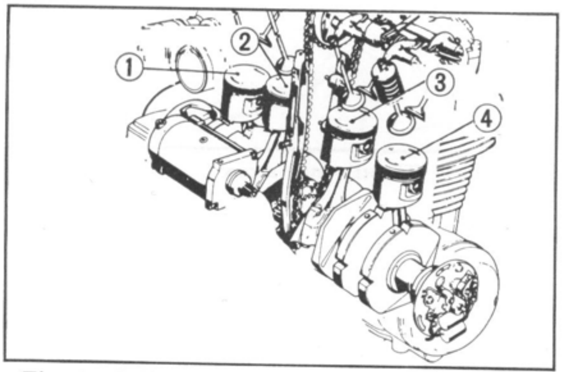

Fig. 1 ① No. 1 piston ② No. 2 piston ③ No. 3 piston ④ No. 4 piston

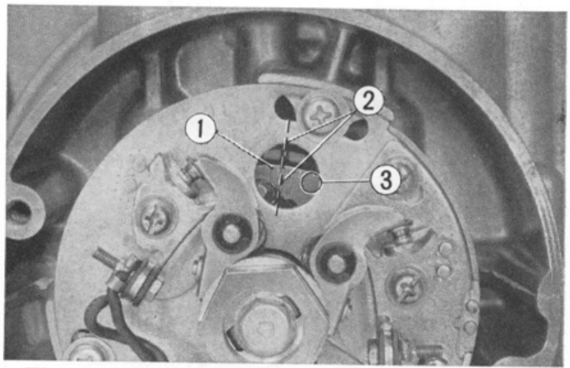

Fig. 2 ① T mark ② Timing mark ③ 1·4 mark

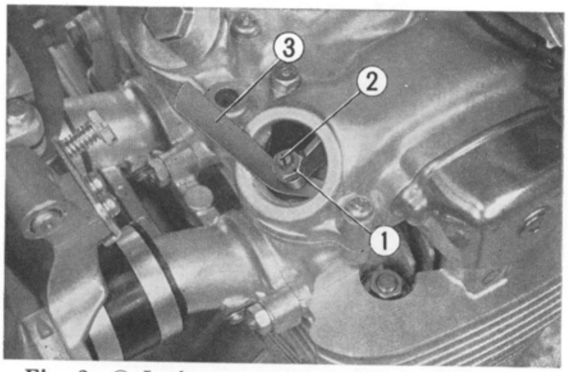

Fig. 3 ① Lock nut ② Adjusting screw ③ Feeler gauge

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5. Snap the throttle several times and recheck vacuum pressures after the four carburetors are indicating the same vacuum pressure.

   Repeat the adjustment in item 4 if vacuum pressures lack uniformity.

   Check the following items if vacuum pressure is less than **15 cm Hg** for any of the carburetor:

   1. Be sure the ignition timing is **−5°/1,150−30°/2,500 rpm BTDC.**
   2. Check the tappet clearances.
      Inlet: **0.05mm (0.002 in.)**
      Exhaust: **0.08mm (0.003 in.)**
   3. Check the spark plug gap.
      Gap: **0.6-0.7 mm (0.024-0.028 in.)**
   4. Check the compression pressure.
      Pressure: **11-12 kg/cm^2**
      (156.45-170.67 psi.)
6. Adjust the throttle stop screw to an engine idle speed of **950~1,050 rpm** after all four carburetors have been adjusted to the same vacuum pressure.
7. Adjust the air screw on each carburetor. (the standard adjustment for the air screws is **1±3/8** turn open from the complete close position)
8. Readjust the engine idle speed to **950−1,050** rpm with the throttle stop screw.

Note:
Tighten the plugs in the inlet manifold after performing the carburetor synchronization.

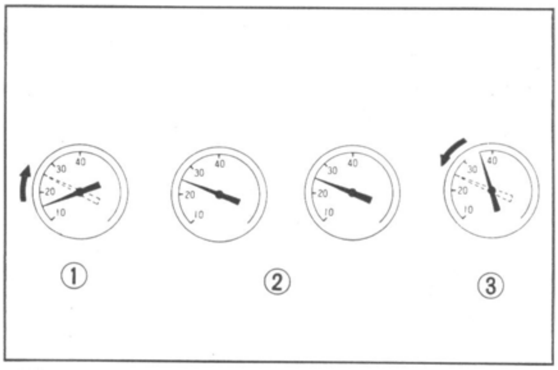

Fig. 8 ① Low vacuum ③ High vacuum
② Normal

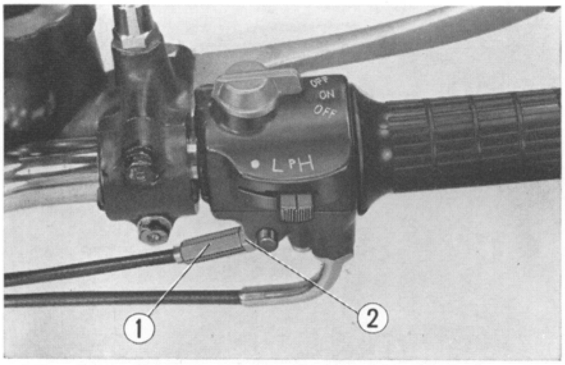

Fig. 9 ① Adjuster ② Lock nut

Throttle Cable Adjustment

1. Turn the adjuster counterclockwise at the handle bar end to increase play in the throttle cable.

Note:
Leave about 3 mm (0.12 in) range of adjustment at the cable adjuster for final micro-adjustment.

2. Loosen the cable lock nut and turn the adjuster at the carburetor end to provide **3~4 mm** ($^1/_8$~$^5/_{32}$ **in.**) play at the throttle grip flange.

Note:
The throttle lever should hit the eccentric pin when the grip is forced to the full closed position. Replace the return cable with new one if it does not hit.

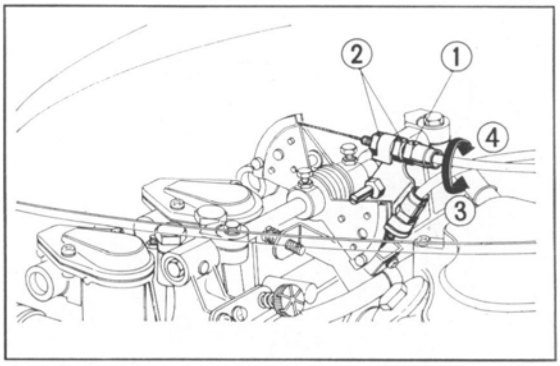

Fig. 10 ① Adjuster ③ Decrease
② Lock nut ④ Increase

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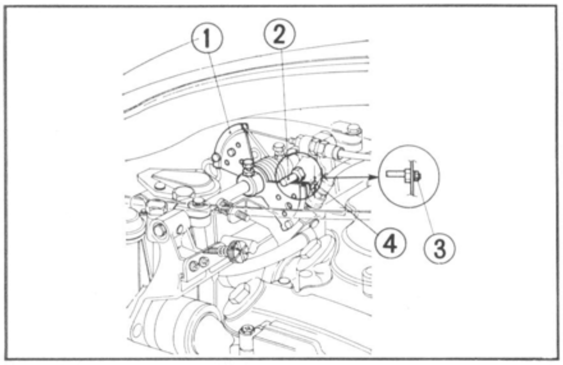

Fig. 11 ① Throttle lever ③ Lock nut
② Eccentric pin
④ 2~3 mm (0. 08~0. 12 in.)

Overtravel stopper adjustment

Loosen the lock nut and turn the eccentric pin. Clearance between the throttle lever and the eccentric pin should be **2~3 mm (0. 08~0. 12 in)**.

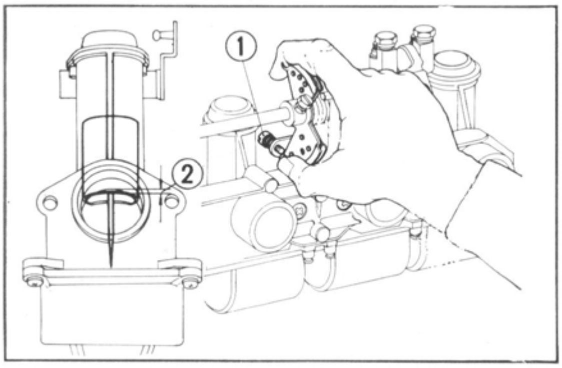

Fig. 12 ① Stop screw ② 0~1.0 mm (0~0, 04 in.)

Full throttle opening stopper adjustment

Adjust the stop screw so that the throttle valve extends **0~1. 0 mm** (**0~0. 04 in.**) above the throttle bore in the full open position.

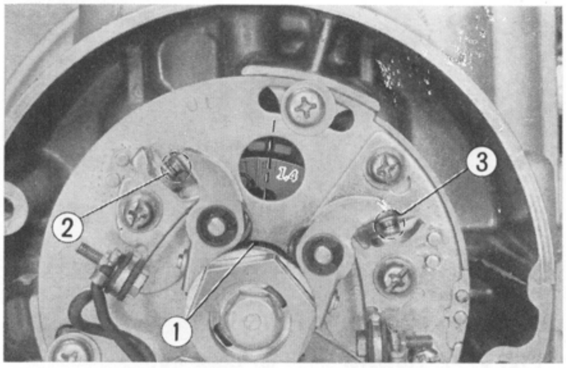

Fig. 13 ① Slipper ③ 2·3 points
② 1·4 points

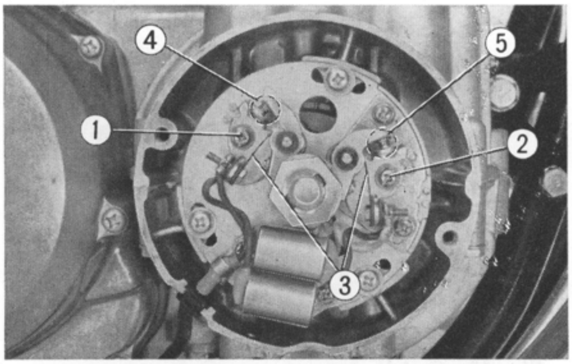

Fig. 14 ① Screw ⓐ ③ Breaker ⑤ 2·3 points
② Screw ⓑ ④ 1·4 points

3. BREAKER POINT GAP AND IGNITION TIMING ADJUSTMENT

Check the condition of the contact points, point gap and ignition timing. Adjust the ignition timing of the 1·4 points first.

Breaker point gap adjustment, 1·4 points

1. Rotate the crankshaft until the slipper on the contact breaker is coming up on the highest position of the cam lobe. Measure the point gap with a feeler gauge.
   Standard point gap : **0.3~0.4 mm** (**0.012~0.016 in.**)
2. Loosen screw ⓐ and move the breaker point assembly if it is necessary to adjust.

Breaker point gap adjustment, 2·3 points

Adjust the 2·3 point gap in the same manner as for 1·4 points by loosening screw ⓑ.

Note:
Clean the point surfaces with a point file or oil stone if they are pitted or rough.

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Ignition timing adjustment, 1·4 points

1. Disconnect the primary cord (blue cord) to the contact breaker at the connector and connect a 12V test lamp at this point.
2. Turn the main switch to the ON position.
3. Rotate the crankshaft slowly. If the test lamp comes on when the "F" (1·4) mark on the spark advancer is aligned to the timing mark (5° BTDC.), the timing is correct.
4. If the adjustment is necessary, align the "F" (1·4) mark to the timing mark and loosen screw ⓑ, and then move the base ⓑ until the lamp goes out. Tighten the screw.

Ignition timing adjustment, 2·3 points

1. Connect the 12V test lamp to the primary cord (yellow cord) of the opposite contact breaker and align the "F" (2·3) mark to the timing mark.
2. Loosen screw ⓒ and move base ⓒ as shown above.

Ignition timing adjustment with stroboscopic timing light

The use of the stroboscopic timing light is recommended to obtain the most accurate timing.

1. Plug the timing light cord into the timing light receptacle.
2. Remove the spark plug cap from the No. 1 cylinder and install the timing attachment between the spark plug and the cap.
3. Connect the high tension cord of the timing light to the timing attachment, position the switch knob to TIMING, and start the engine.
   The timing light will be flashing.
4. Aim the timing light toward the timing mark and make sure the "F" (1·4) mark and the timing mark are in line.
   Next, increase the engine rpm at approx. 2500 rpm and at this speed, if the timing mark is between the two index lines located 23.5~26.5° before "F" mark, the ignition timing at full advance condition is satisfactory.

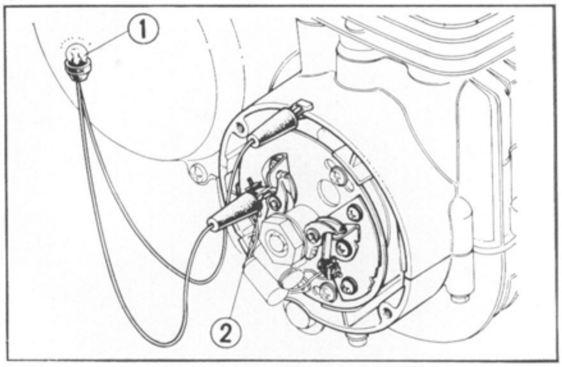

Fig. 15 ① 12V lamp ② Blue cord

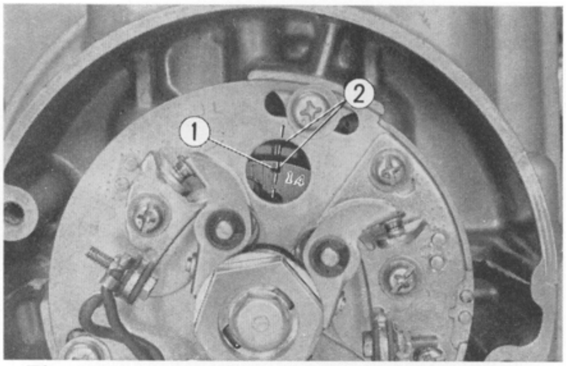

Fig. 16 ① "F" (1·4) mark ② Timing mark

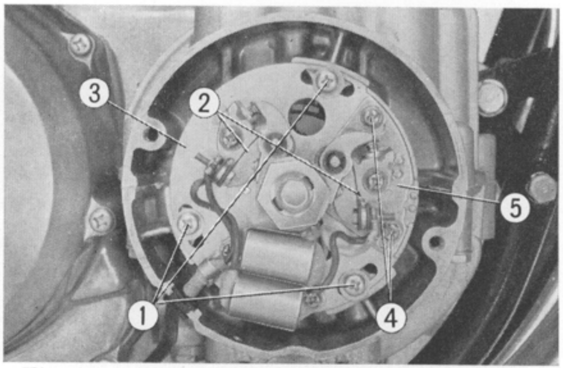

Fig. 17 ① Screw ⓑ ③ Base ⓑ ⑤ Base ⓒ
② Breaker ④ Screw ⓒ

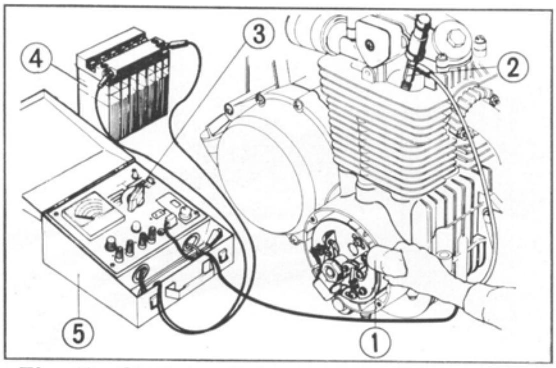

Fig. 18 ① Timing light ④ Battery
② Timing attachment ⑤ Service tester
③ Switch knob

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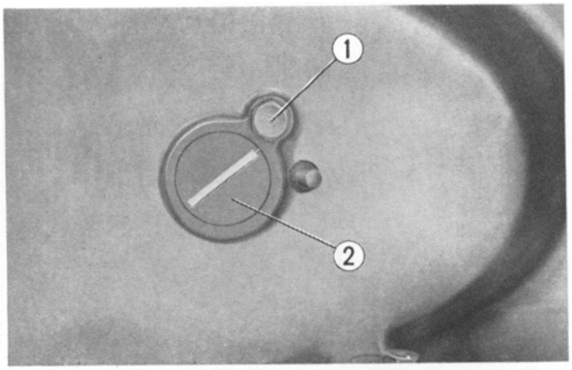

Fig. 19 ① Lock bolt ② Adjuster

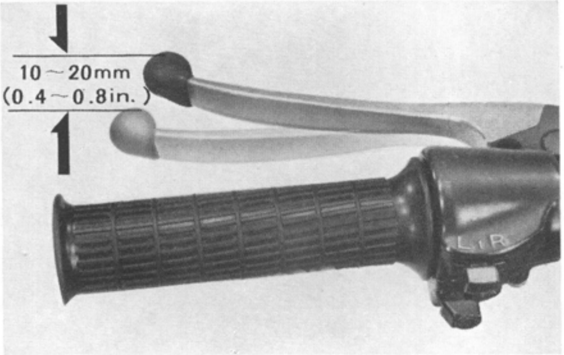

Fig. 20

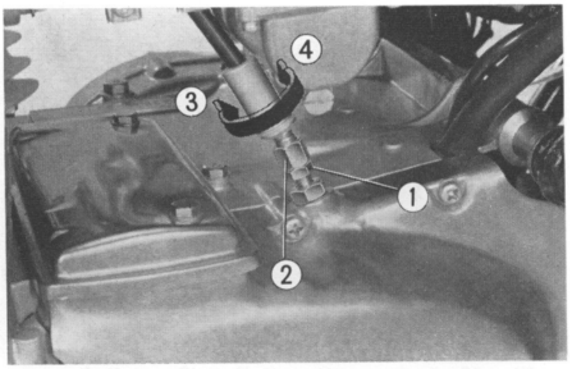

Fig. 21 ① Lock nut ③ Increase free play
② Adjuster ④ Decrease free play

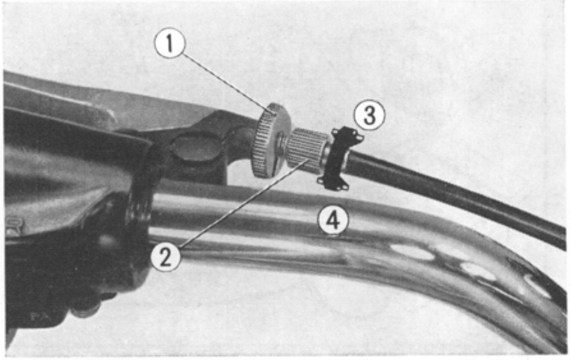

Fig. 22 ① Lock nut ③ Increase free play
② Adjuster ④ Decrease free play

5. Next, remove the spark plug cap from the No. 2 cylinder and install the timing attachment between the spark plug and the cap. Check the ignition timing ("F" 2•3) as described items 1～4.
6. Adjust if timing is incorrect.

4. CLUTCH ADJUSTMENT

1. To provide play in the clutch cable, loosen the clutch adjuster lock bolt.
2. Turn the adjuster clockwise until a slight resistance is felt, and then turn counterclockwise about **3 mm** (**$^1/_8$ in.**). At that point, tighten the lock bolt.
3. Adjust play in the clutch cable at the lock nut and adjuster. The play should be **10～20 mm** (**0.4～0.8 in.**). Perform micro adjustment with the adjuster at the clutch lever end.

5. CAM CHAIN ADJUSTMENTS

Perform camchain tention adjustment in the following manner.

1. Remove the tappet hole caps from the No. 1 cylinder.
2. Remove the point cover, and align the "T" (1•4) mark to the timing mark.
3. Check both valves of No. 1 cylinder. If both valves are free, proceed to next step; if either or both of the valves are

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tight, rotate the crankshaft 360°, and then proceed with the next step.

4. Rotate the crankshaft clockwise until the spring peg on the advancer assembly at the 1·4 position is just to the right of a line from the timing mark. This position is 15° ATDC.
5. At this point, loosen the lock nut so that proper chain tension can be obtained automatically.
6. Retighten the lock nut, and re-install point cover and tappet covers.

6. SPARK PLUG INSPECTION

Remove the spark plug with a spark plug wrench and check the gap and the insulator for damage or fouling.

1. Clean the plug with a spark plug cleaner or a wire brush.
2. Check the gap with a feeler gauge and adjust the opening to the standard **0.6~0.7 mm (0.02~0.03 in).**
3. Replace the plug or plug gasket if the insulator or gasket is damaged.
   Standard spark plugs: **D-7ES (NGK)**
   X22ES (DENSO)

7. ENGINE OIL INSPECTION AND CHANGE

Oil Level Inspection

Check the oil level with the dipstick gauge without screwing it into the case. If the level is below the lower mark on the gauge, add oil to the upper mark.

Recommended oil classification:

SAE 10W-40 or SAE 20W-50

Oil change

Perform the oil change while the engine is warm so that oil will drain properly.

1. Unscrew the drain bolt, and also remove the filler cap to assist draining.
2. Remove the oil filter to drain the oil completely.
3. Tighten the drain bolt and fill with **2.5 *l* (2.6 U.S. qt., 2.2 Imp. qt.)** of new oil through the filler opening. Add oil as necessary to bring the oil level to the upper mark on the gauge.
   Oil capacity: **3.0 liters (3.2 U.S. qt., 2.6 Imp. qt.)**

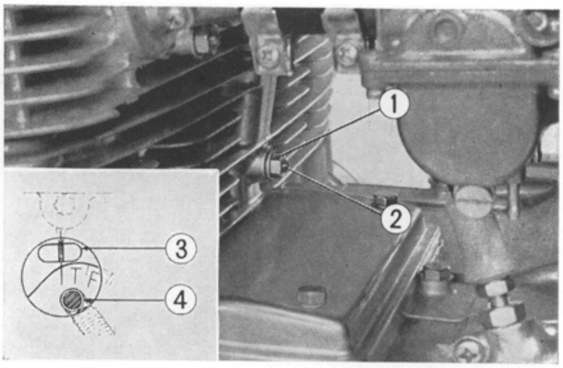

Fig. 23 ① Nut ② Adjusting screw ③ Timing mark ④ Spring peg

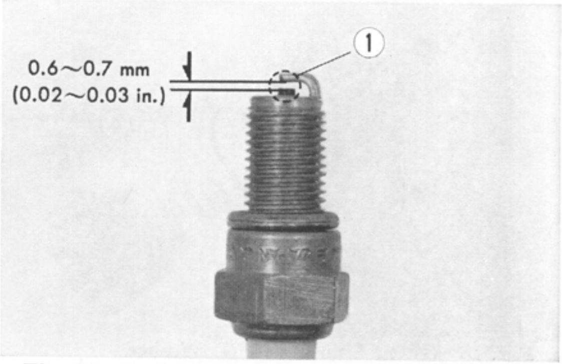

Fig. 24 ① Gap

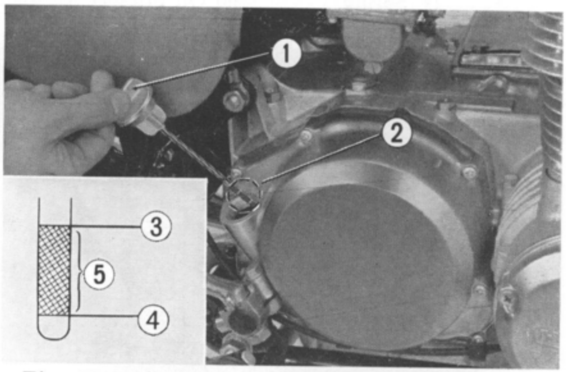

Fig. 25 ① Filler cap ② Oil level gauge ③ Upper level ④ Lower level ⑤ Serviceable range

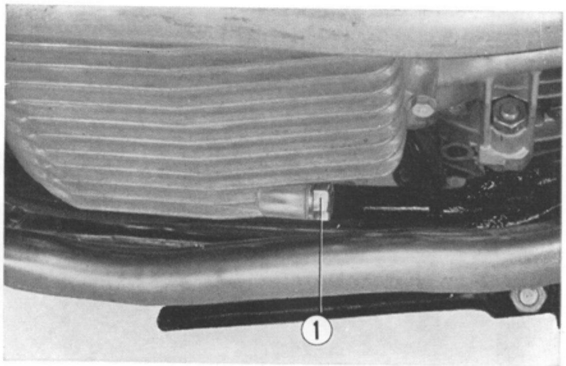

Fig. 26 ① Drain bolt

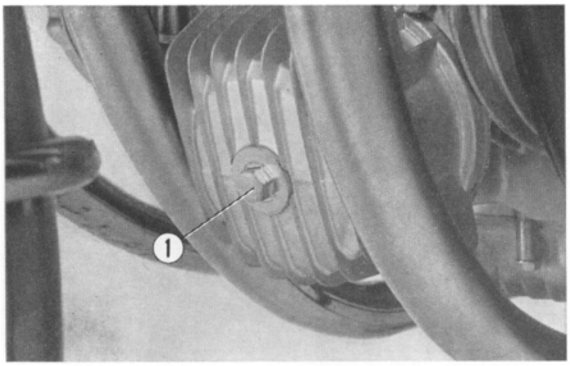

Fig. 27 ① Oil filter center bolt

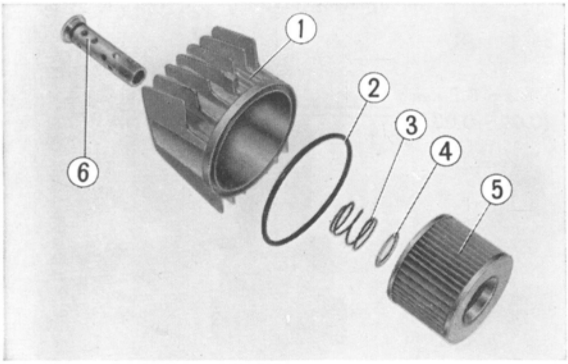

Fig. 28 ① Oil filter cover ② O ring ③ Spring ④ Washer ⑤ Oil filter element ⑥ Oil filter center bolt

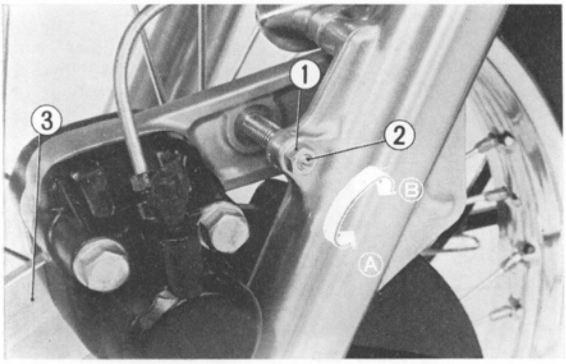

Fig. 29 ① Stopper bolt lock nut ② Stopper bolt ③ Disc

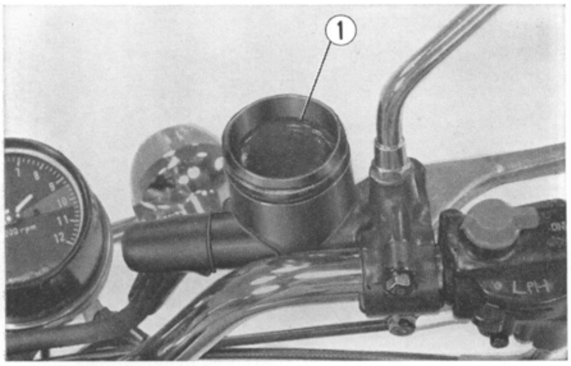

Fig. 30 ① Level mark

8. OIL FILTER SERVICING

Service the oil filter when changing the engine oil.

1. Unscrew the oil filter center bolt and remove the filter element.

Note:

- **Certain amount of oil will drip from the filter when it is removed.**
- **When reinstalling the element, make sure that no parts are forgotten or pieces of rubber left on the seat to cause poor sealing.**
- **Replace the oil filter element with new item every 4,000 miles (6,000 km).**

9. BRAKE INSPECTION AND ADJUSTMENT

Adjusting Brake Caliper

Whenever the brake pads are replaced, the brake caliper must be adjusted. This adjustment is made in the following manner, so that there is a small clearance between the fixed friction pad and the brake disc.

1. Raise the front wheel off the ground using a suitable prop.
2. Loosen the caliper stopper bolt lock nut.
3. Using a suitable screw driver, turn the stopper bolt in direction Ⓐ until the friction pad contacts the brake disc. When the wheel is rotated, slight drag should be noticed.
4. While rotating the front wheel, turn the stopper bolt in direction Ⓑ until the front wheel rotates freely.
5. Turn the stopper bolt 1/2 turn in direction Ⓑ further and tighten the lock nut.

Replenishing Brake Fluid

Remove the reservoir cap, washer and diaphragm, and whenever the level is lower than the level mark engraved inside the reservoir, fill the reservoir with **DOT 3 BRAKE FLUID** up to the level mark. Reinstall the diaphragm and washer, and tighten the reservoir cap securely.

Note:

- **Do not mix different brands of brake fluid as chemical action will take place and may cause brake trouble.**
- **Do not use any other fluid in the brake system.**

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- **Remove any brake fluid which may become spilled on the painted surface, rubber parts, and meter as it will produce chemical action and cause damage to these parts.**

Brake Pad Inspection

Replace both pads A and B with new one when either of the pads is worn to the red serviceable limit mark aroung the pad.

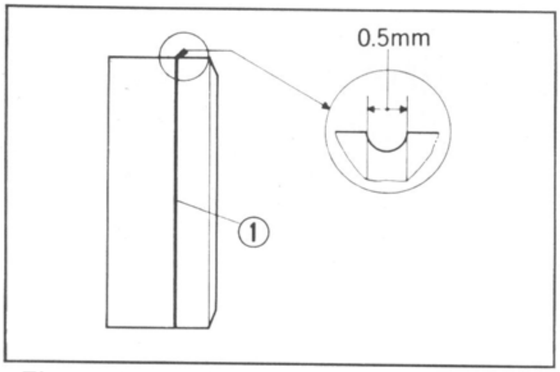

Fig. 31 ① Red line

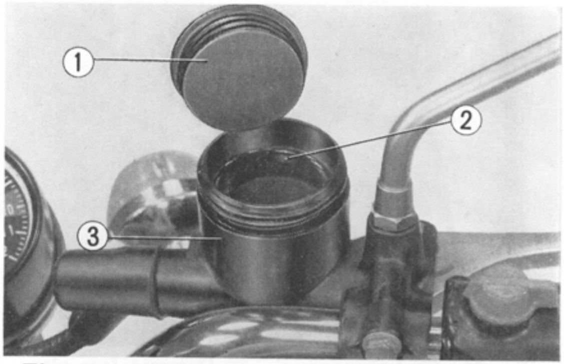

Fig. 32 ① Diaphragm ② Brake fluid ③ Master cylinder

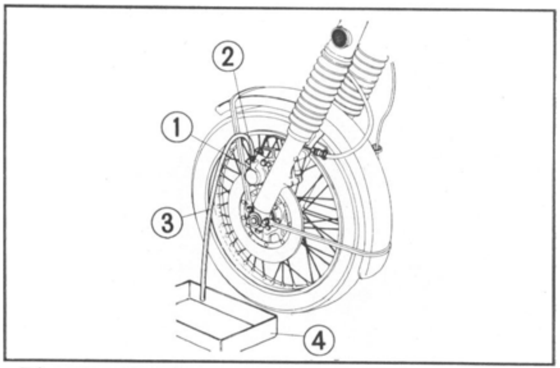

Fig. 33 ① Caliper ② Bleeder ③ Bleeder hose ④ Vessel

Brake Bleeding

The brakes must be bled with great care subsequent to work performed on the brake system, when the lever becomes soft or spongy, or when lever travel is excessive. The procedure is best performed by two mechanics.

1. Remove the dust cap from the bleeder valve and attach bleeder hose.
2. Place the free end of the bleeder hose into a glass container which has some hydraulic brake fluid in it so that the end of the hose can be submerged.
3. Fill the reservoir using only the recommended brake fluid. Screw the cap partially on the reservoir to prevent entry of dust.
4. Pump the brake lever several times until pressure can be felt, holding the lever tight, open the bleeder valve by about one-half turn and squeeze the lever all the way down.
   Do not release the lever until the bleeder valve has been closed again. Repeat this procedure until bubbles cease to appear in the fluid at the end of the hose.
5. Remove the bleeder hose, tighten the bleeder valve and install the bleeder valve dust cap.
6. Do not allow the fluid reservoir to become empty during the bleeding operation as this will allow air to enter the system again. Replenish the fluid as often as necessary while bleeding.
7. Check for proper effect of bleeding and absence of leaks in the front brake lines while holding pressure against the brake lever. Replenish fluid in the reservoir when bleeding is completed. Reinstall the diaphragm, washer and reservoir cap and tighten.

When the hydrulic brake system has been drained, it should be first filled as outlined below.

1. Fill the fluid reservoir.
2. Open the bleeder valve by one-half turn, squeeze the brake lever, close the valve and release the brake lever. This procedure must be repeated in this sequence until hydraulic fluid begins to flow through the bleeder hose. Having filled the hydraulic system with fluid, proceed with the actual bleeding operetion.

Notes:

- **Brake fluid which has been pumped out of the system must not be used agaiu.**
- **Care must be taken, as brake fluid will damage the paint finish and instrument lenses.**

Rear Brake Adjustment

1. Normal play at the end of the brake pedal is **2-3 cm ($^3/_4$~$1^3/_{16}$ in.)**.

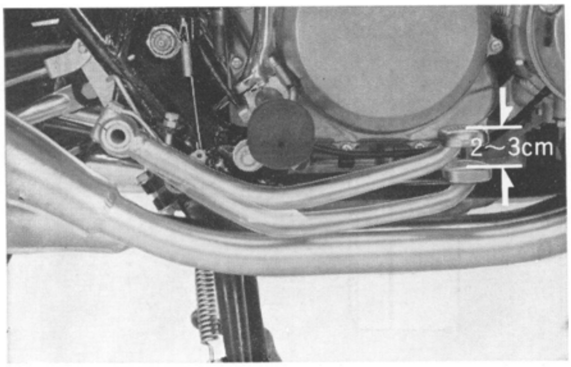

Fig. 34

2. Perform the adjustment with the adjuster nut.

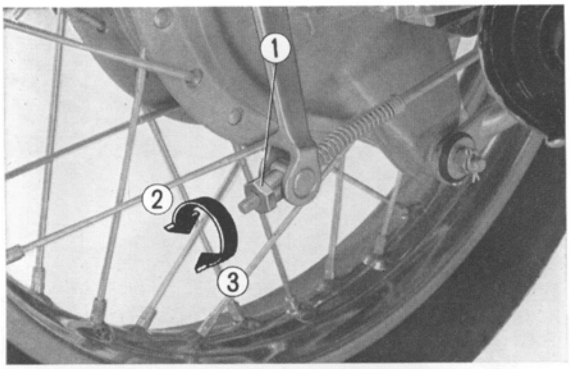

Fig. 35 ① Adjuster nut ③ Decrease free play ② Increase free play

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.

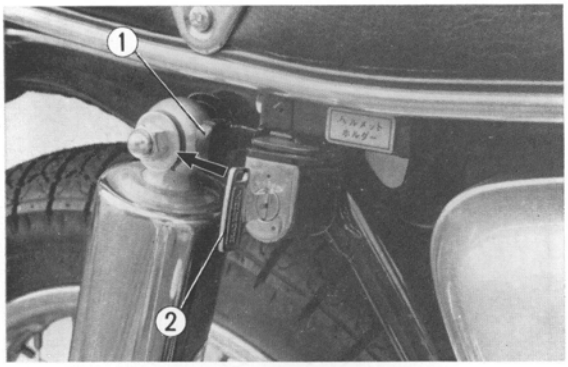

Fig. 36 ① Seat lever ② Seat lock

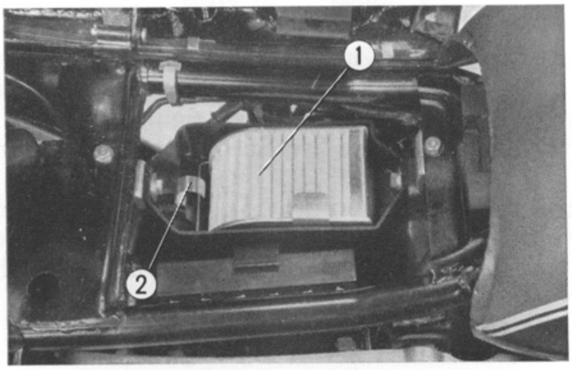

Fig. 37 ① Air cleaner element ② Spring clip

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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** (**$^3/_8$~$^3/_4$ 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.

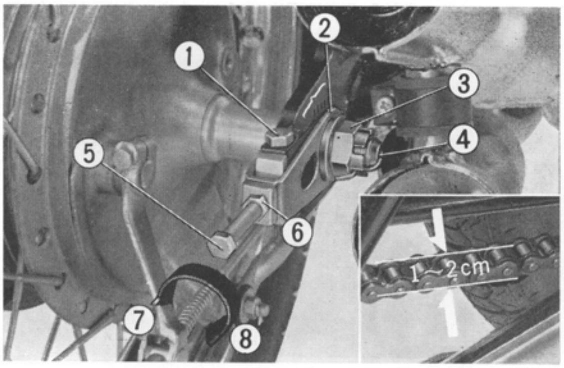

Fig. 38 ① Fork cap bolt ② Mark ③ Axle nut ④ Cotter pin ⑤ Adjust bolt ⑥ Lock nut ⑦ Loosen ⑧ Tighten

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.

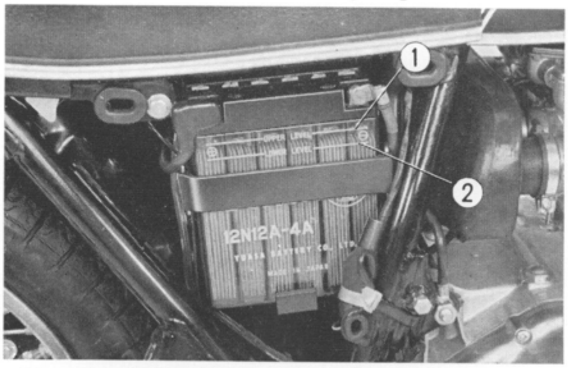

Fig. 39 ① Upper limit ② Lower limit

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)

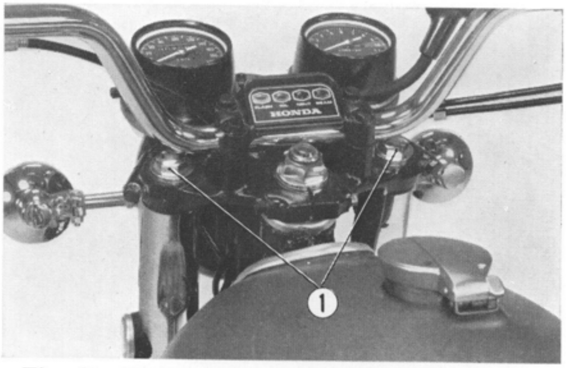

Fig. 40 ① Fork bolts

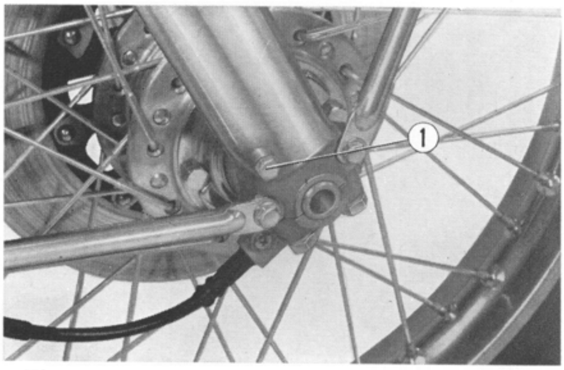

Fig. 41 ① Drain bolt

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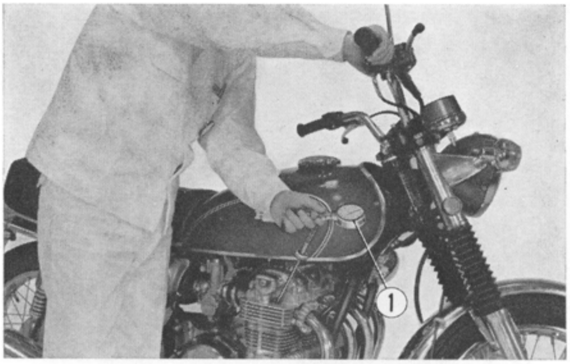

Fig. 42 ① Compression gauge

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.

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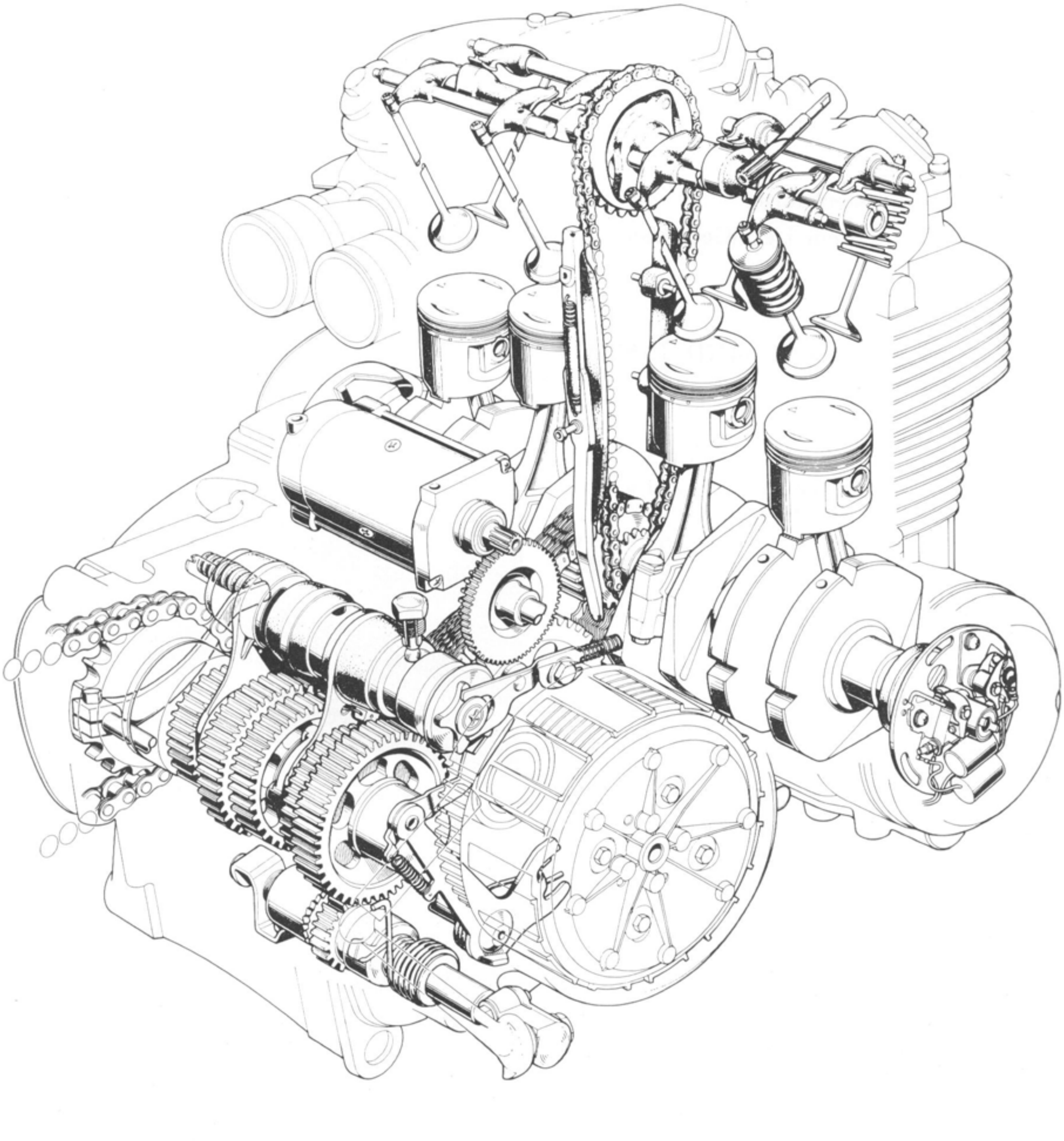
4. ENGINE



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.

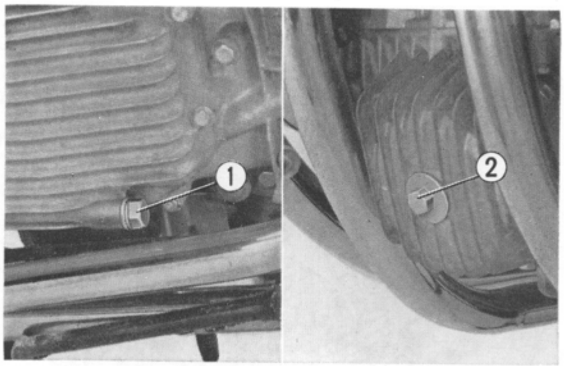


Fig. 43 ① Drain bolt ② Oil filter center bolt

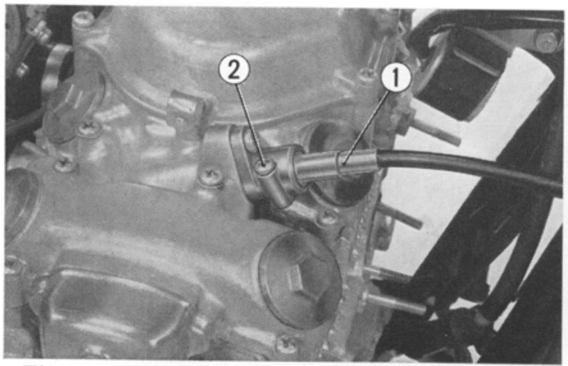


Fig. 44 ① Tachometer cable ② 5 mm screw

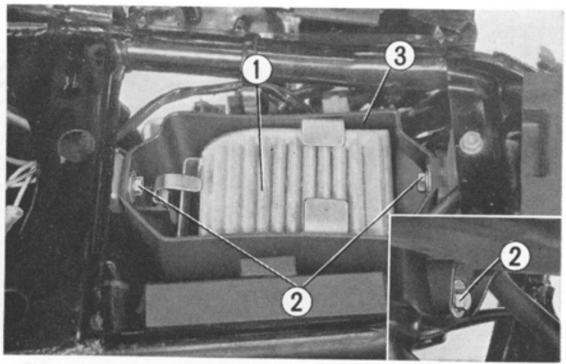


Fig. 45 ① Air cleaner element ② 6 mm bolts ③ Air cleaner case

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8. Disconnect the throttle cable at the carburetor.

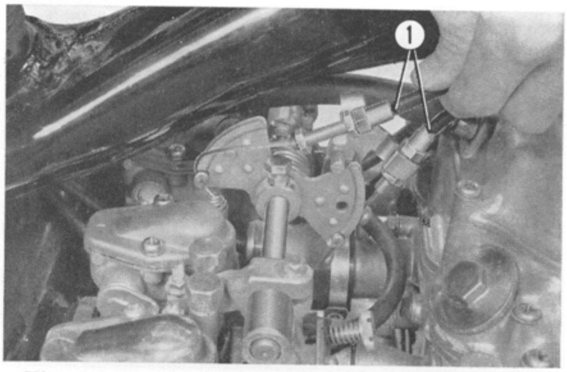

Fig. 46 ① Throttle cable

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

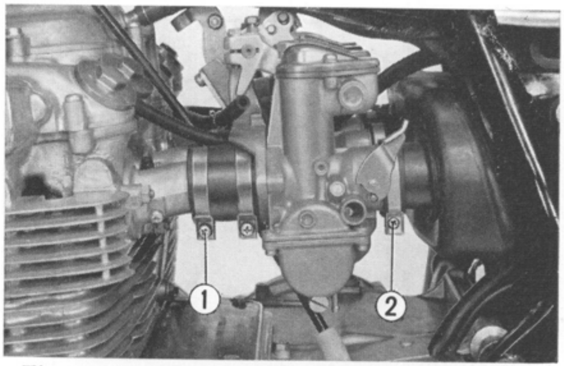

Fig. 47 ① 5mm screw ② 4mm screw

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

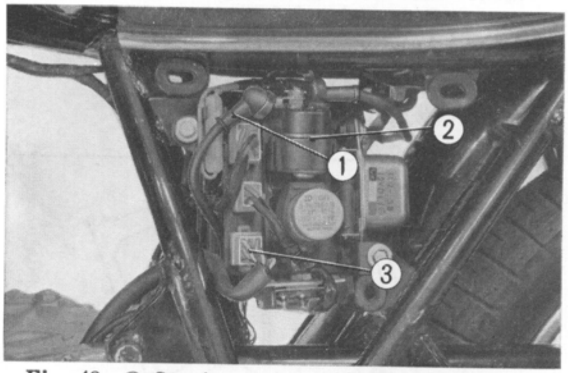

Fig. 48 ① Starting motor cable ② Magnetic switch ③ Wiring coupler

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.

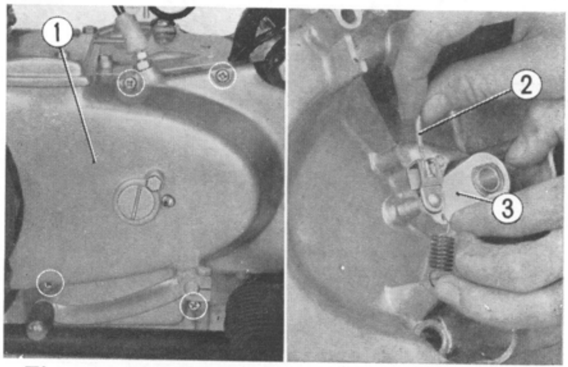

Fig. 49 ① Left crankcase cover ② Clutch cable ③ Clutch lifter

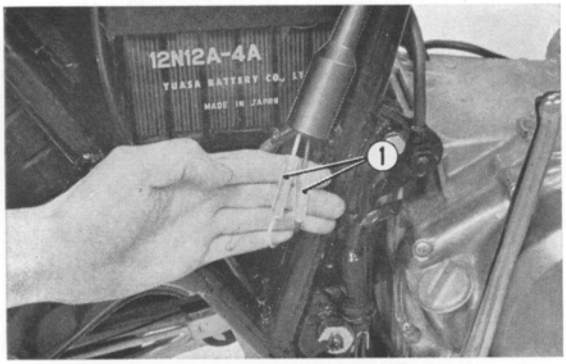

Fig. 50 ① Contact breaker point leads

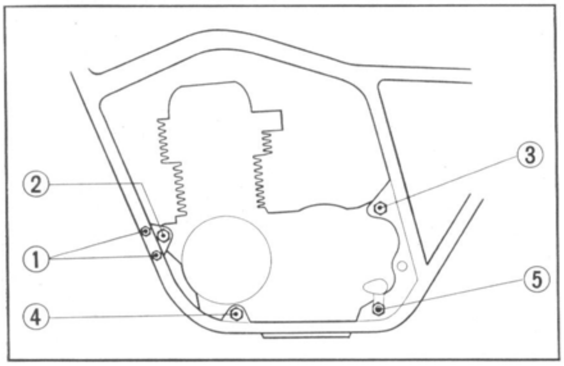

Fig. 51 Left side engine hanger bolts
① 8×50 hex bolt
② 10×50 hex bolt
③ Rear upper hanger bolt
④ 10×80 hex bolt
⑤ Rear lower hanger bolt

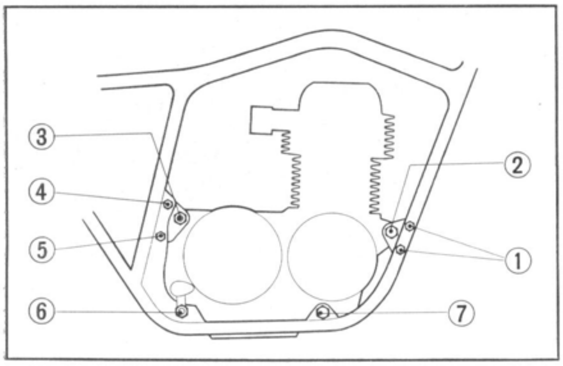

Fig. 52 Right side engine hanger bolts
① 8×50 hex bolt
② 10×50 hex bolt
③ Rear upper hanger bolt
④ 8×100 hex bolt
⑤ 8×40 hex bolt
⑥ Rear lower hanger bolt
⑦ 10×80 hex bolt

12. Remove the final driven sprocket and the drive chain.

13. Disconnect the contact breaker point leads (yellow and blue) at the connectors.

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

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

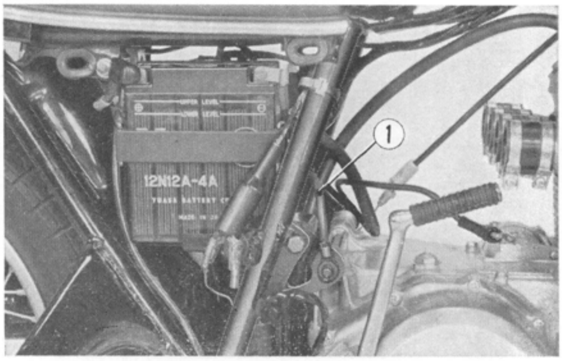

Fig. 53 ① Battery ground cable

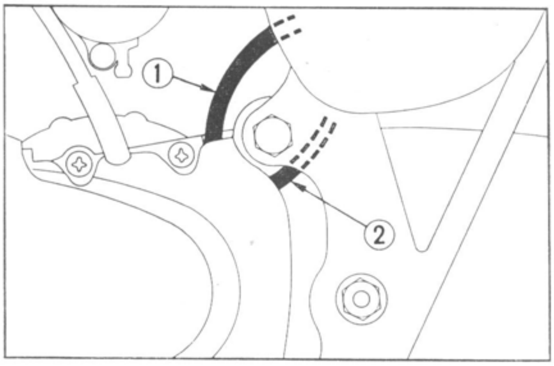

Fig. 54 ① Generator cord
② Starting motor cord

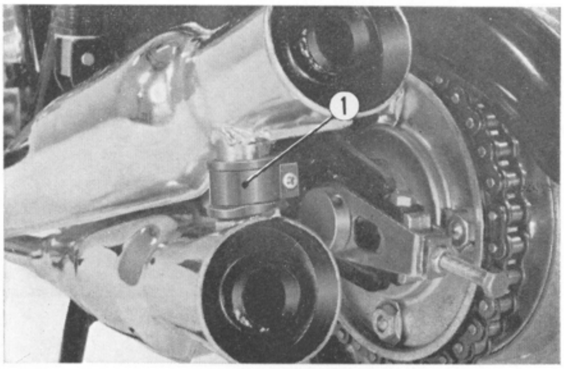

Fig. 55 ① Muffler connecting band

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.**

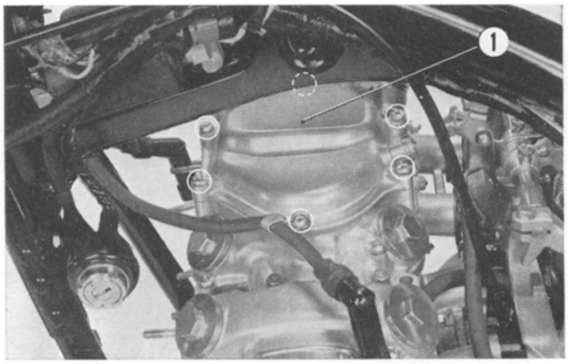

Fig. 56 ① Breather cover

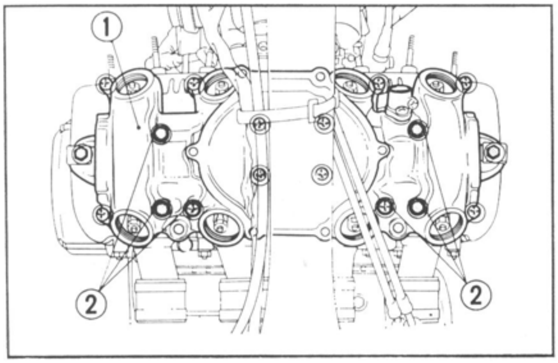

Fig. 57 ① Cylinder head cover
② 6 mm copper washers

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.

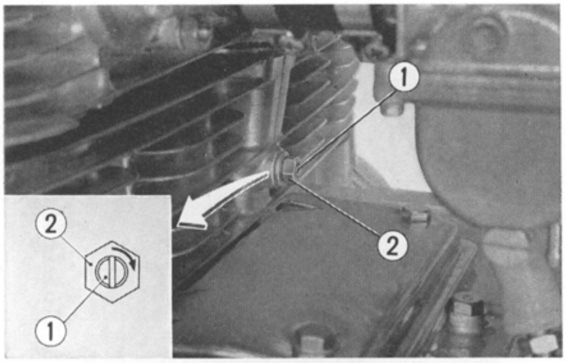

Fig. 58 ① Cam chain tension adjuster
② Lock nut

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

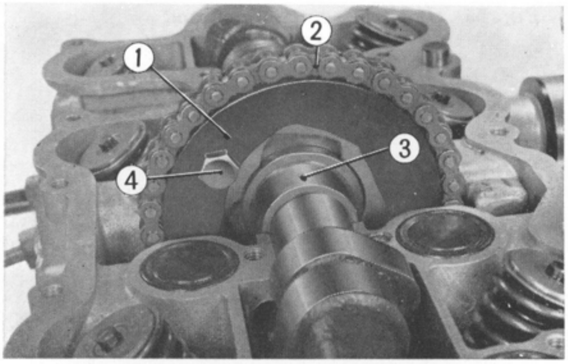

Fig. 59 ① Cam sprocket ③ Camshaft
② Cam chain ④ 7 mm bolt

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

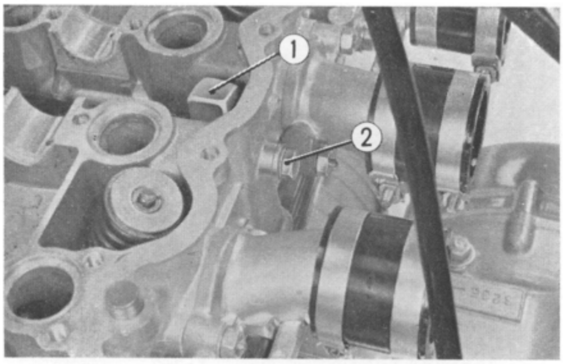

Fig. 60 ① Cam chain tensioner
② Cam chain tensioner mounting bolt

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

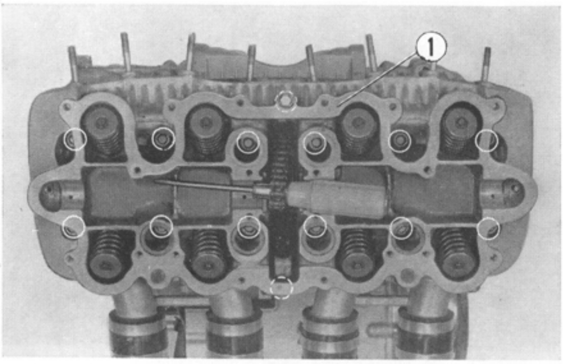

Fig. 61 ① Cylinder head

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.

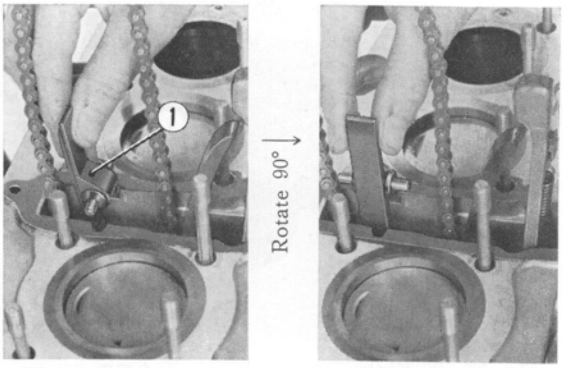

Fig. 62 ① Cam chain guide

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.

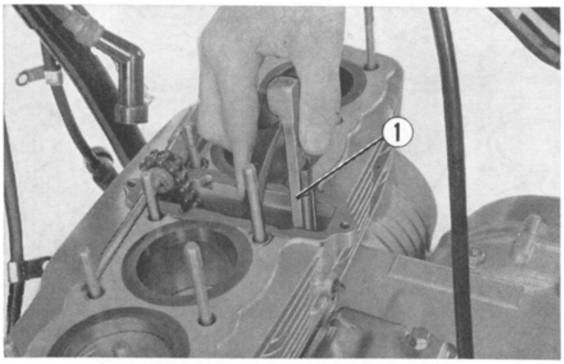

Fig. 63 ① Cam chain tensioner

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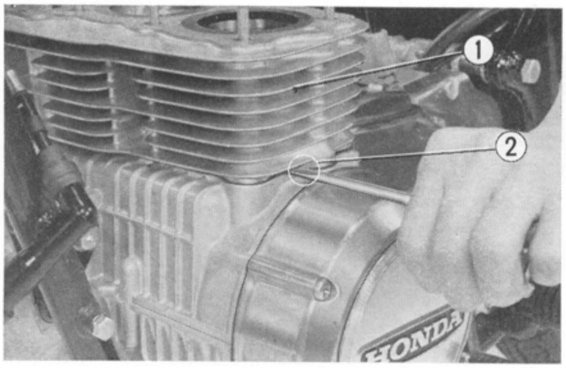

Fig. 64 ① Cylinder ② Cylinder groove

14. Remove the cylinder.
    If the cylinder is tightly stuck pry the cylinder loose with a screwdriver placed in the groove at the base of the cylinder.

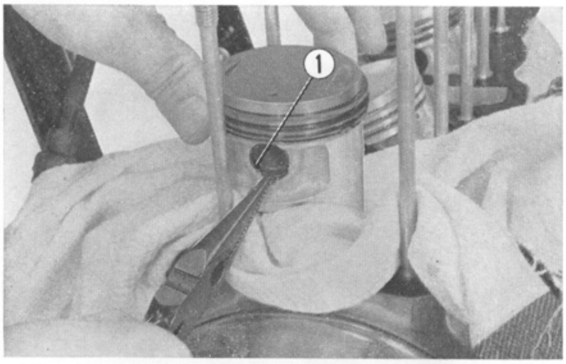

Fig. 65 ① Piston pin clip

15. Remove the piston pin clip, piston pin, and the piston.

Note:

When removing the pin clip, exercise care not to drop the clip into the crankcase.

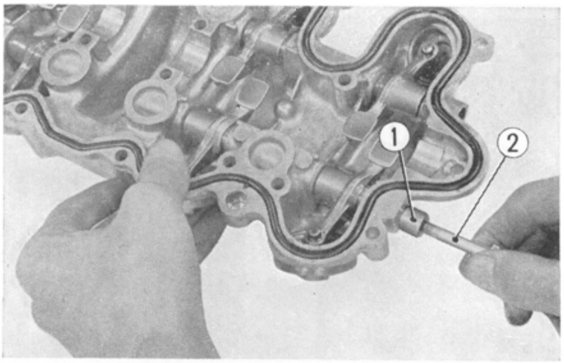

Fig. 66 ① Rocker arm shaft ② 6 mm bolt

16. Remove the piston rings.
17. Screw a 6 mm bolt into the rocker arm shaft and remove the rocker arm shaft from the cylinder head cover.

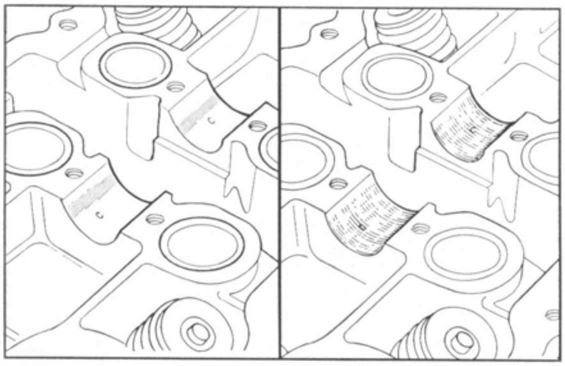

Fig. 67 Good No good

B. Inspection

1. Inspect the camshaft bearing surfaces.
   Camshaft bearing surfaces should be smooth and shiny. If it is scratched or excessively worn, it should be replaced.

2. Measure the height of the cam with a micrometer.
   Replace the camshaft if beyond the serviceable limit.

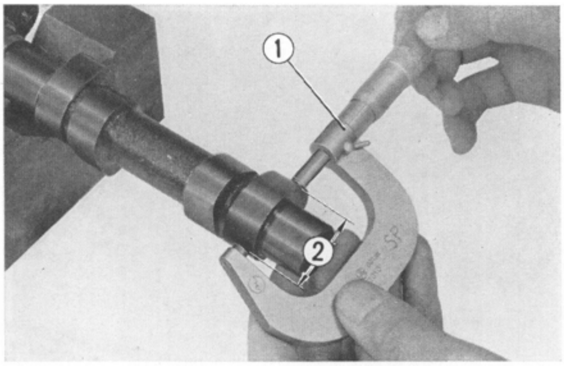

Fig. 68 ① Micrometer ② Cam height

3. Measure camshaft runout.
   Support level both ends of the camshaft on V-blocks and with a dial gauge measure radial runout by rotating the shaft. Replace the camshaft if beyond the serviceable limit.
4. Also check the camshaft for scratch, wear and replace if necessary.

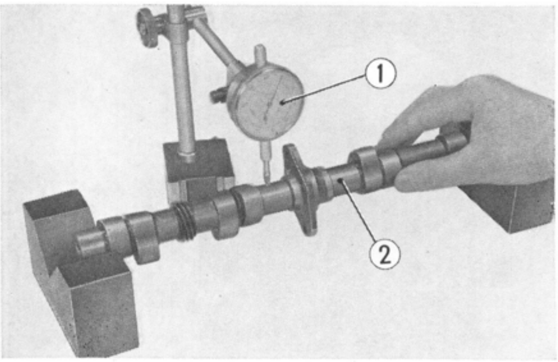

Fig. 69 ① Dial gauge ② Camshaft

5. Measure cylinder diameter at the top, center and bottom in both the X and Y axes. Rebore the cylinder if beyond the serviceable limit at any point.
   When reboring the cylinder, rebore it to fit one of the four standard oversize pistons available.
   Standard oversizes are **0.25, 0.50, 0.75 and 1.00 mm** (**0.009, 0.019, 0.029 and 0.039 in.**).

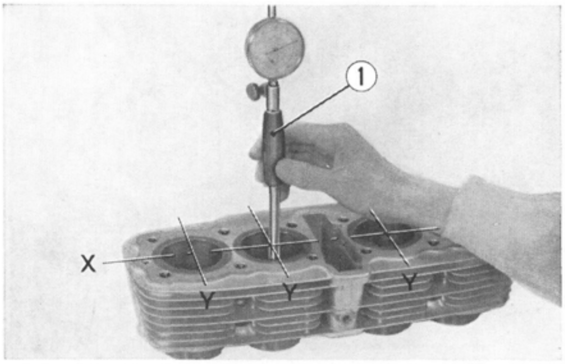

Fig. 70 ① Cylinder gauge

6. Measure piston diameter.
   Measure the diameter at the piston skirt, 90° to the piston pin with a micrometer. Replace the piston if the diameter beyond the serviceable limit.

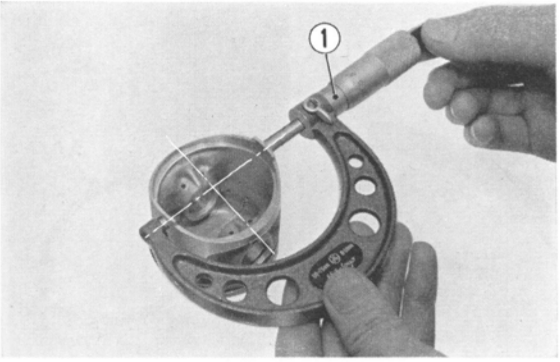

Fig. 71 ① Micrometer

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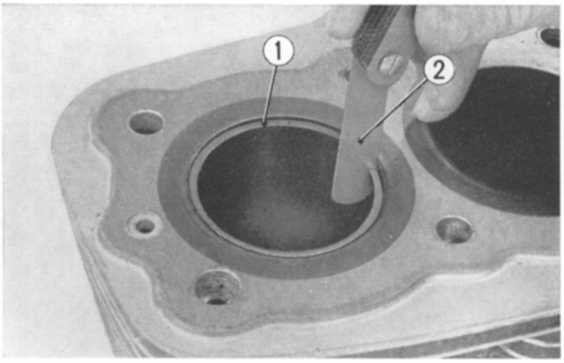

Fig. 72 ① Piston ring ② Feeler gauge

7. Measure piston ring end gap.
   Insert the piston ring into the skirt of the cylinder so that it is squarely positioned, and measure the gap with a feeler gauge.

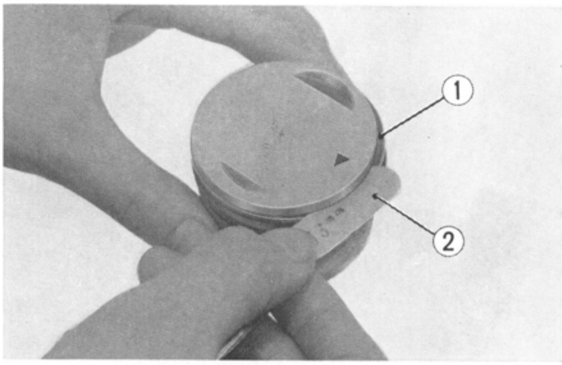

Fig. 73 ① Piston ring ② Feeler gauge

8. Measure piston ring side clearance.
   Install the rings on the piston and measure the side clearance of the piston ring in the ring groove with a feeler gauge.

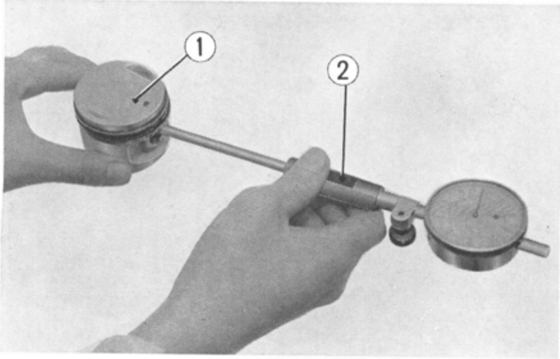

Fig. 74 ① Piston ② Cylinder gauge

9. Measure the piston pin hole using an inside micrometer or cylinder gauge.
10. Inspect the piston for damage, distortion and excessive wear.

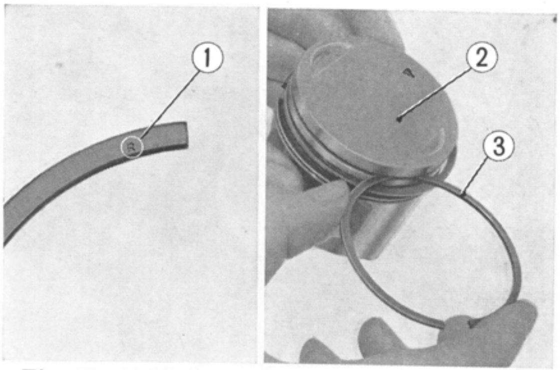

Fig. 75 ① Marks ② Piston ③ Piston ring

C. Reassembly

1. Install the rocker arm and the rocker arm shaft in the cylinder head cover.
   Install the rocker arm shafts with the side having a hole facing outward.
2. Install the piston rings on the piston with the marking on the rings toward the top.

Note:
When installing new rings on the piston, roll the rings in the ring grooves to assure proper clearance. If the rings roll smoothly, the clearance is satisfactory.
Use piston rings of the same maker as a set.

3. Install the piston on the connecting rod with the piston pin and clips so that the ▲ mark on the piston head points toward the front (exhaust side) as shown in the figure.

Note:
Always use new pin clips.

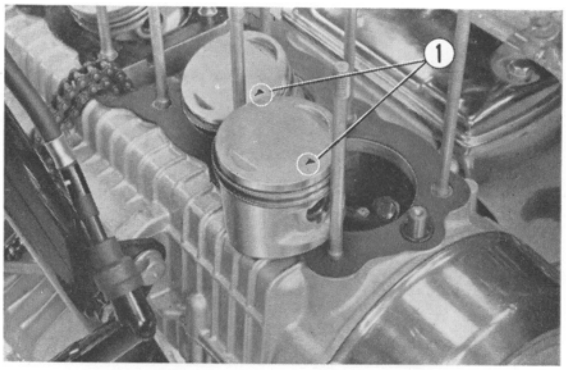

Fig. 76 ① ▲ marks

4. Stagger the end gaps of the top, 2nd and oil rings 120° apart. Install so that none of the gaps are on the piston boss axis or 90° away from it.

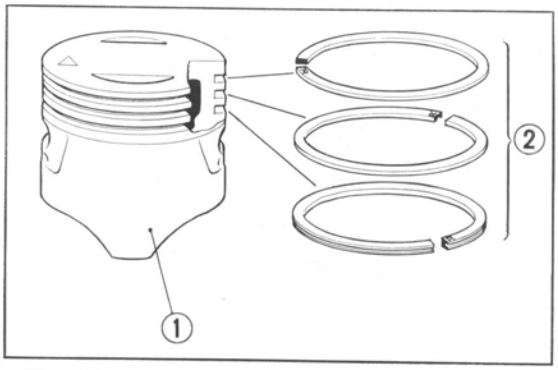

Fig. 77 ① Piston ② Rings

(Three-piece type oil ring)

a. When installing the oil ring, first place the spacer and then the rails in position.
b. The spacer and rail gaps must be staggered **2~3 cm** (**0.783~1.181 in.**).

Note:
The gap of the oil ring refers to that of the spacer.

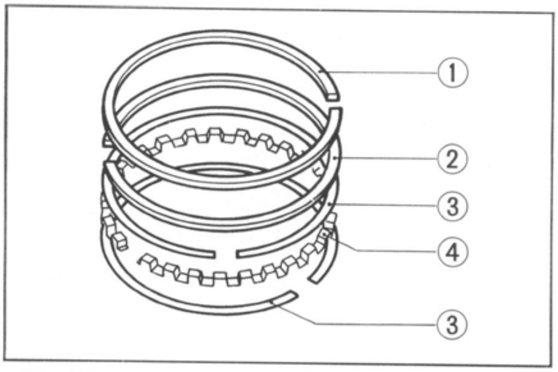

Fig. 77–1 ① Top ring ② Second ring ③ Rails ④ Spacer

5. Install the cylinder gasket, two dowel pins (orifice valve) and two O-rings on the upper crankcase.

Note:
Before installing the dowel pin, blow compressed air through the hole to assure that it is not clogged.

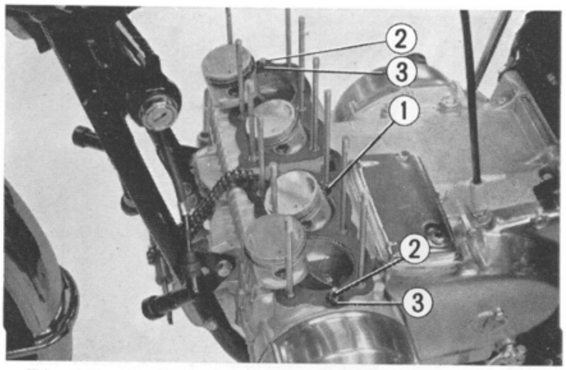

Fig. 78 ① Cylinder gasket ② Dowel pins ③ O-rings

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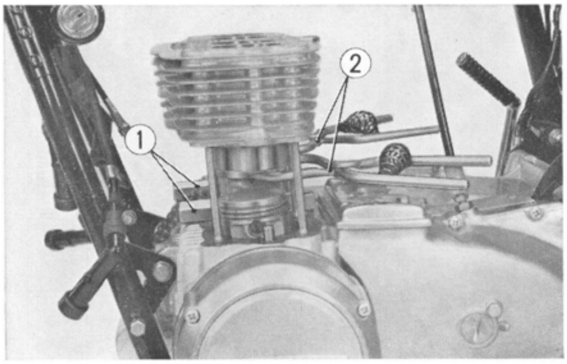

Fig. 79 ① Piston bases ② Piston ring compressors

6. Turn the crankshaft and place the piston base (Tool No. 07958-2500000) under No. 2 and 3 pistons, and install the piston ring compressors (Tool No. 07957-3230000) on the piston rings, and insert the pistons into the cylinder. When the No. 2 and 3 pistons have entered the cylinder, remove the bases and piston ring compressors. Next turn the crankshaft slightly and install the No. 1 and 4 pistons being careful not to expose the rings of the No. 2 and 3 pistons. Raise the cam chain at the same time.

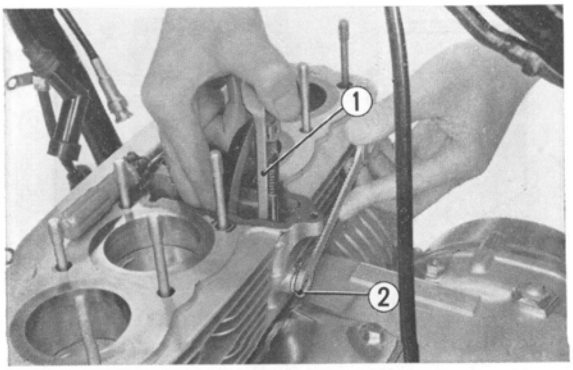

Fig. 80 ① Cam chain tensioner ② Lock nut

7. With the cylinder held approx. 20 mm from the crankcase, install the cam chain tensioner in the cylinder, hold the tensioner down by hand and install the O ring, steel washer, and tighten the lock nut.

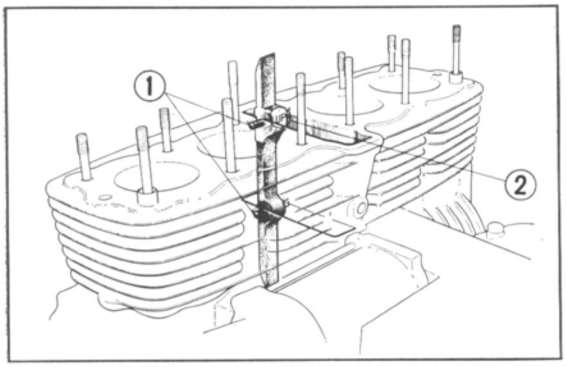

Fig. 81 ① Pins ② "UP" mark

8. Insert the cam chain guide into the cylinder as shown in Fig. 81.

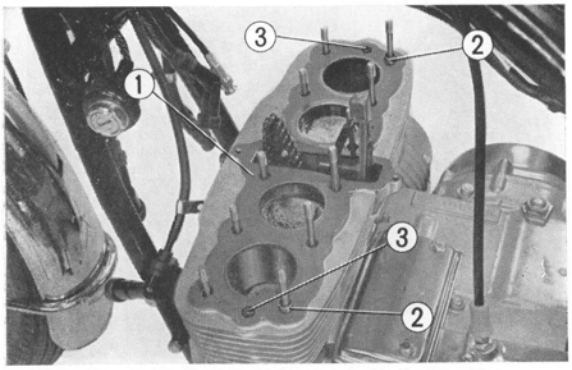

Fig. 82 ① Cylinder head gasket ③ O-rings
② Dowel pins

9. Install the cylinder head gasket, two dowel pins and two O-rings on the cylinder.

10. Place the cylinder head and hold the cam chain with a screw driver to prevent cam chain from dropping.
11. Tighten the twelve 8 mm nuts uniformly with the special tool (Tool No. 07906-3230000) to a torque of **2.0~2.2 kg-m.** (**14.46~16.63 ft-lbs**) in the sequence shown in Fig. 83.

    Next, install and torque two 6 mm flange bolts.

    Mount the cam chain tensioner on the cylinder head with the aluminum washer and 6 mm bolt.

Note:
Exercise care not to drop nuts or washers into the cylinder head as it will be difficult to remove them.

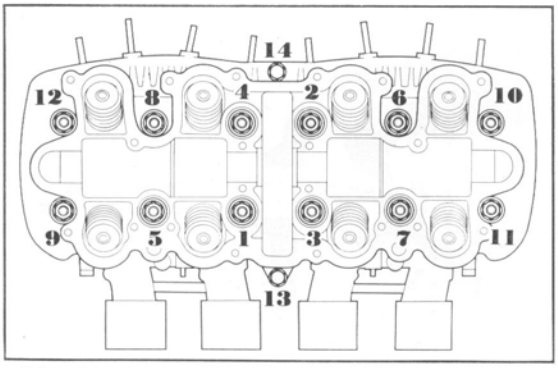

Fig. 83

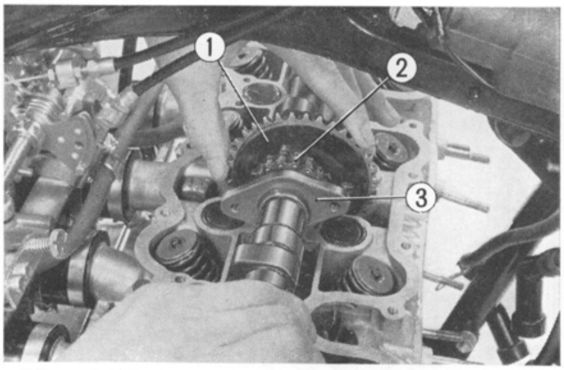

Fig. 84 ① Cam sprocket ③ Camshaft
② Cam chain

12. Hold the cam chain sprocket and cam chain together and slide the camshaft through them from the right side, and set it on the bearings in the cylinder head. Install the cam chain on the cam sprocket.
13. Adjustment of valve timing

    Remove the point cover, rotate the crankshaft in the clockwise direction and align the "T" (1.4) mark of the spark advancer to the timing mark. Next, position the camshaft so that the center of the cutout notch on the right end of the camshaft is aligned to the cylinder head flange surface.

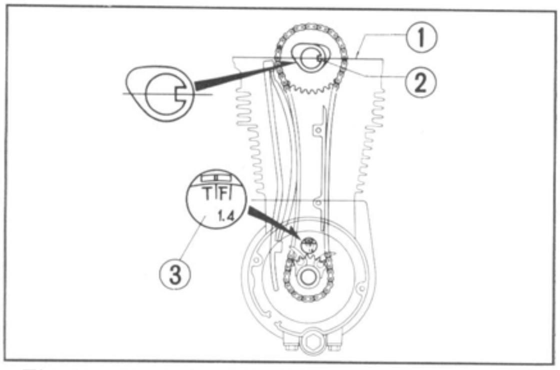

Fig. 85 ① Cylinder head flange surface
② Cutout notch ③ Spark advancer

14. Mount the cam sprocket on the camshaft with two 7 mm bolts.
15. Mount the carburetor assembly on the cylinder head.
16. Install the two dowel pins and six sealing rubbers on the cylinder head.

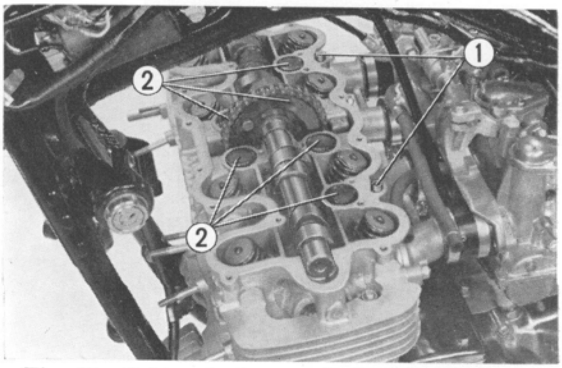

Fig. 86 ① Dowel pins ② Sealing rubbers

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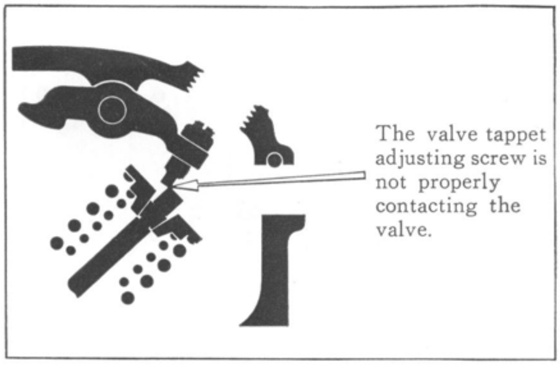
The valve tappet adjusting screw is not properly contacting the valve.

Fig. 87

17. Install the cylinder head cover with twelve 6 mm screws and six 6 mm bolts, and torque to **0.8～1.2 kg-m** (**5.78～8.67 lbs-ft**) so that torque difference is not over **0.2 kg-m** (**1.44 lbs-ft**).

Note:

- **Insert fingers into the tappet hole cap opening and lift the valve tappet adjusting screw to check that they are properly meeting the valves.**
- **Use the six 6 mm copper washers as shown in Fig. 57.**
- **Install the head side cover set plate with washers mounted on both sides of the 6 mm screws (Chromium-plated copper washer on top and alminum washer on bottom).**

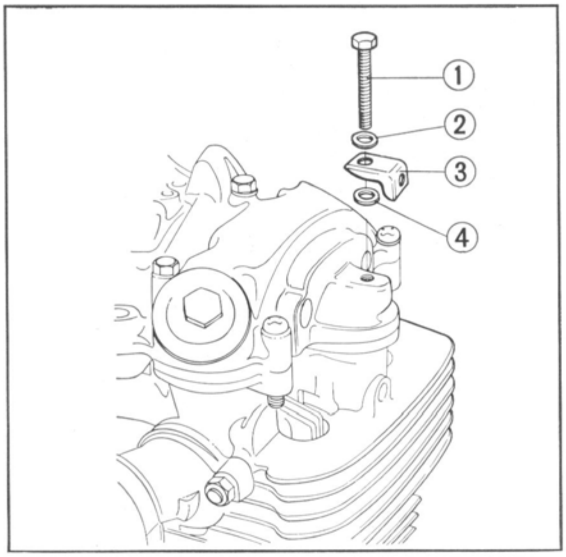

Fig. 88 ① 6 mm screw
② Chromium-plated copper washer
③ Head side cover set plate
④ Alminum washer

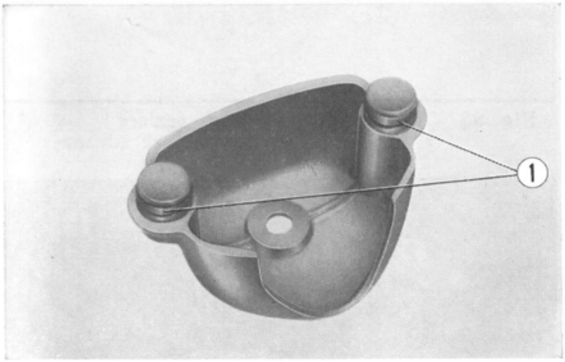

Fig. 89 ① O-ring

18. Install O-rings on the dowel pins of the the left and right side covers, and install the side covers on the cylinder head.
19. Install the breather cover with six 6 mm screws.

Note:
High tension cord clips are mounted on both sides with the clips facing forward.

20. Adjust the cam chain by referring to page 12.
21. Adjust the tappets by referring to page 7.

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4. VALVES AND VALVE SPRINGS

A. Disassembly

1. Remove the cylinder head by referring to section 3. A.
2. Compress the valve springs with a valve spring compressor (Tool No. 07957-3290000), remove the valve cotters, and the valves.

Note:

Do not compress the springs more than necessary. Compressing them excessively may damage the valve stem seals.

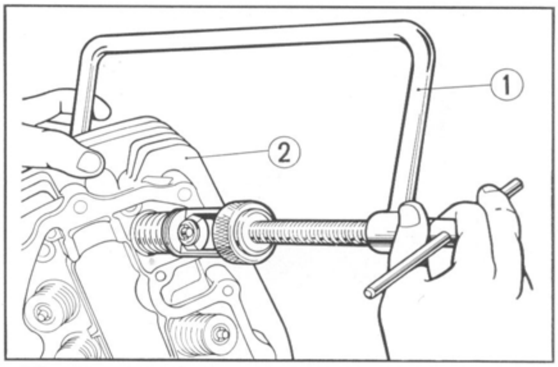

Fig. 90 ① Valve spring compressor
② Cylinder head

3. Drive the valve guide out of the cylinder head using the valve guide remover (Tool No. 07046-32301).

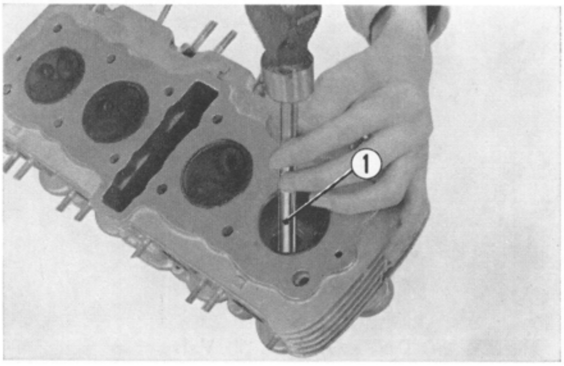

Fig. 91 ① Valve guide remover

B. Inspection

1. Measure valve stem clearance.
   Insert the valve into the guide and measure the clearance in both the X and Y directions using a dial gauge. Replace the valve and guide in set if clearance beyond the serviceable limit.
   Drive the guide into the cylinder head using a valve guide driver (Tool No. 07942-3290100) and finish ream the guide to the proper size with the reamer (Tool No. 07984-0980000). Standard valve guide inside diameter for both the inlet and exhaust is **5.475～5.485 mm (0.2153 in.～0.2157 in.)**

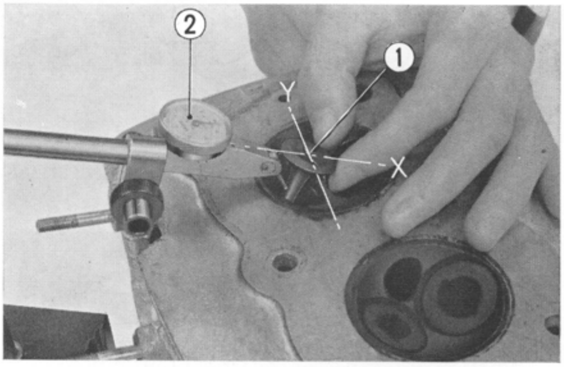

Fig. 92 ① Valve ② Dial gauge

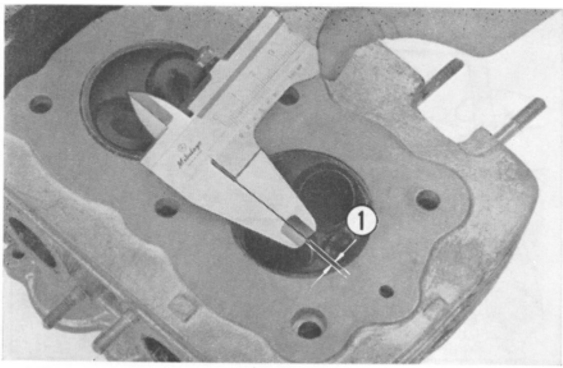

Fig. 93 ① Valve seat width

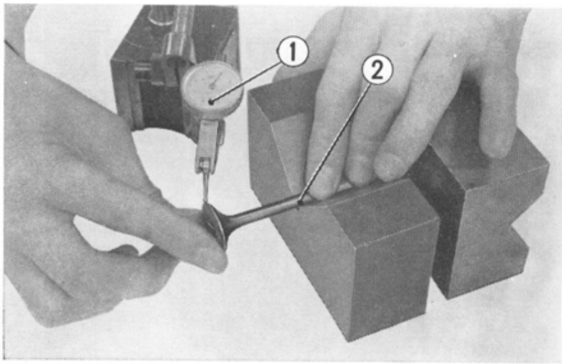

Fig. 94 ① Dial gauge ② Valve

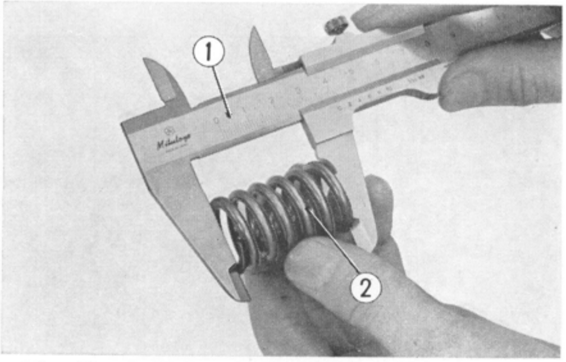

Fig. 95 ① Vernier caliper ② Valve spring

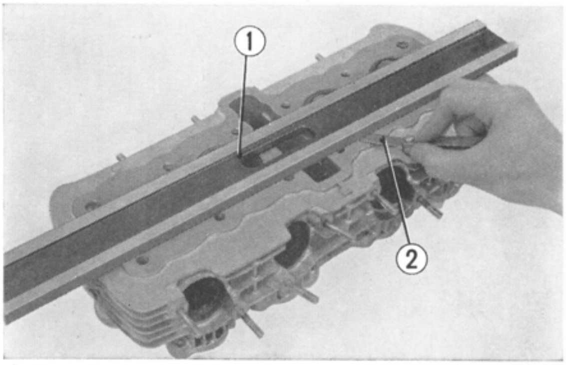

Fig. 96 ① Straight edge ② Feeler gauge

2. Check the valve seat contact width and if necessary recondition.
   Apply a thin coat of red lead to the valve seat surface. Press the valve against the seat and rotate it to check if the contact width is uniform. If not, lap the valve, seat and again check the contact width. If necessary, recondition the valve seat using a valve seat grinder.
   Seat width **1.0~1.5mm** (**0.039~0.059 in.**).

Caution:

Use the valve seat grinder in accordance with the instruction manual.

3. Measure valve runout.
   Place the valve on V-block and measure the runout of the valve with a dial gauge applied to the face of the valve while turning the valve. Replace the valve if the runout beyonds the serviceable limit.
4. Measure the valve spring.
   Measure the free length of the valve spring with a vernier caliper.

5. Measure the flatness of the cylinder head.
   Place a straight edge on the cylinder head surface and measure the clearance at several points with a feeler gauge. If there is a clearance of over the serviceable limit, lap the cylinder head surface on the surface plate using lapping compound or replace the head if it cannot be repaired.

C. Reassembly

1. Wash all of the component parts in kerosene and reassemble the parts in the reverse order of disassembly.

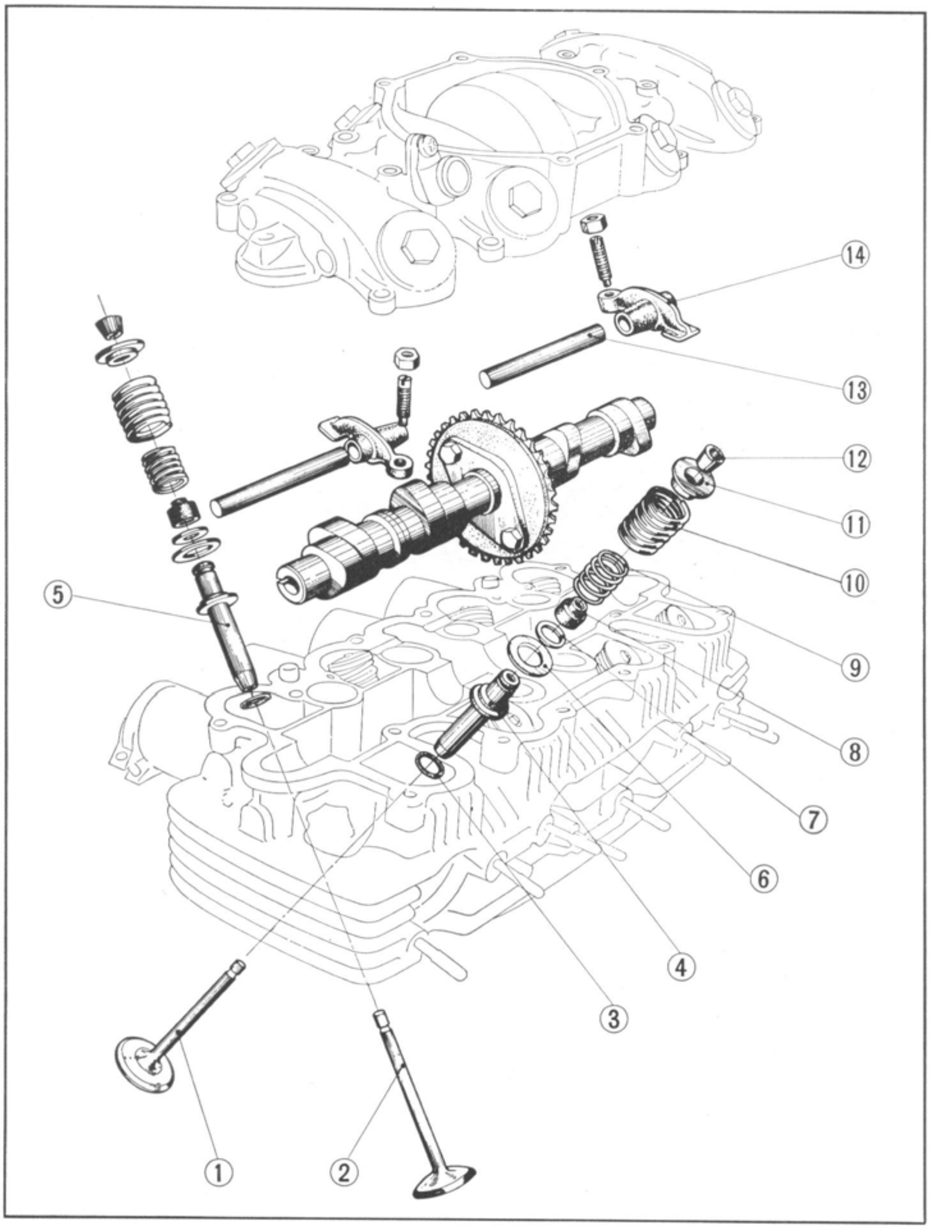

Fig. 97 Component parts of the cylinder head

① Exhaust valve
② Inlet valve
③ 10×1.6 O ring
④ Exhaust valve guide
⑤ Inlet valve guide
⑥ Valve spring outer seat
⑦ Valve spring inner seat
⑧ Valve stem seal
⑨ Inner valve spring
⑩ Outer valve spring
⑪ Retainer
⑫ Cotter
⑬ Valve rocker arm shaft
⑭ Valve rocker arm

Note:
When installing the valves, apply a liberal amount of oil on the valve stem.

2. Install the cylinder head in accordance with section 3. C.

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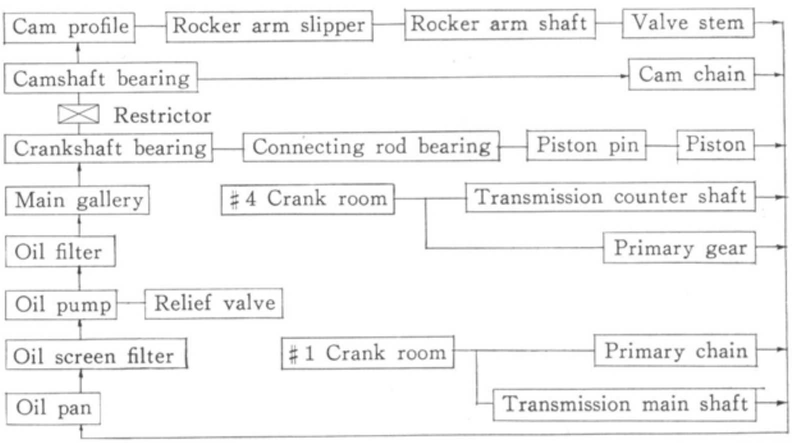
5. Oil Pump and Oil Filter

The oil pump is a trochoid type driven by the primary shaft. Screen and paper element filters are used to provide clean oil to the engine.

Lubricating System Block Diagram



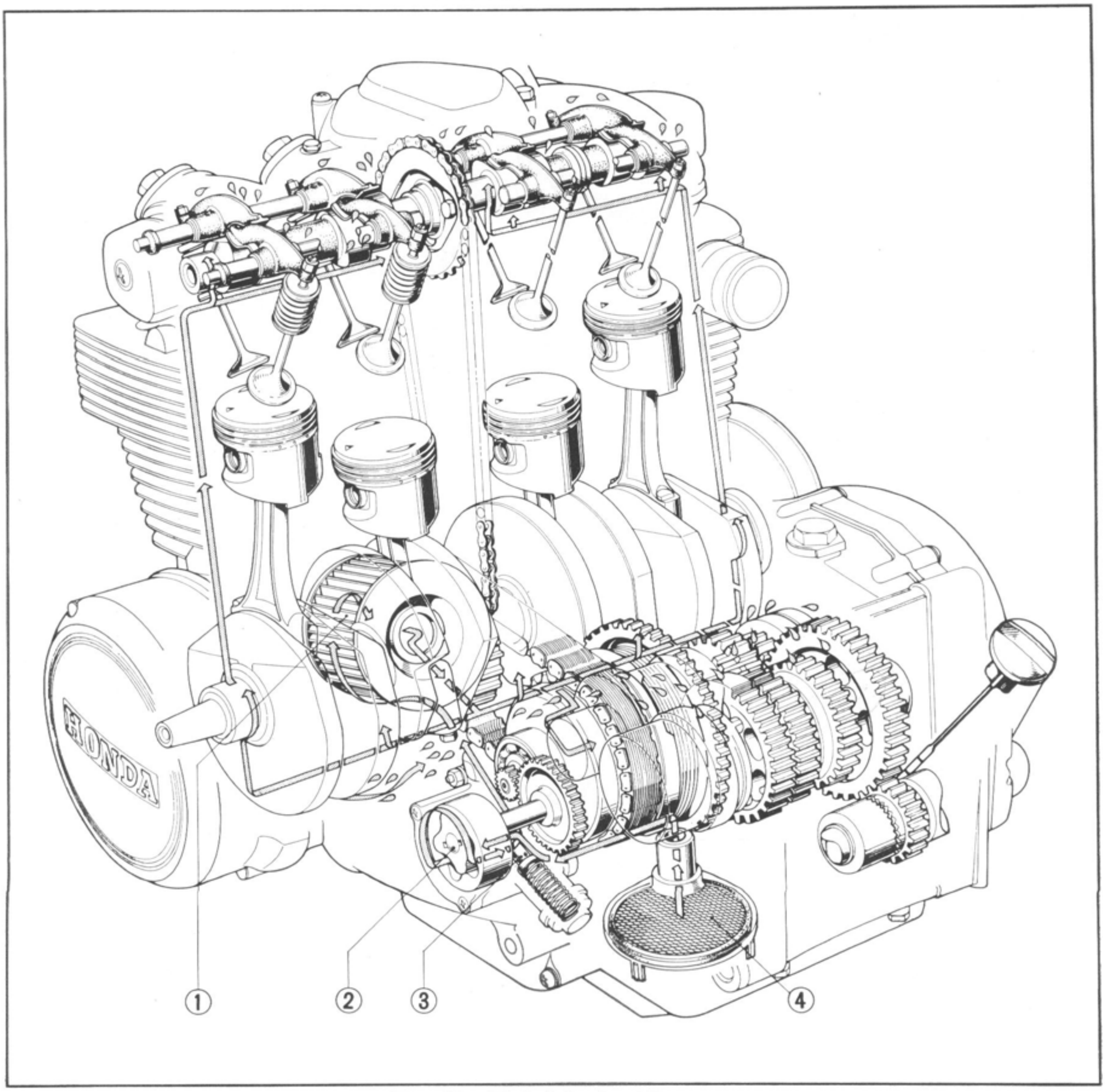


Fig. 98 Oil Lubricating Diagram
① Oil cleaner element ② Oil pump ③ Relief valve ④ Oil screen filter

A. Disassembly

Oil Pump

1. Drain the engine oil in accordance with section 2. A.
2. Remove the starting motor cover and the left crankcase cover.
3. Unscrew the 4 mm bolt and remove the pressure switch wiring. Next remove three 6 mm screws, and the oil pump.

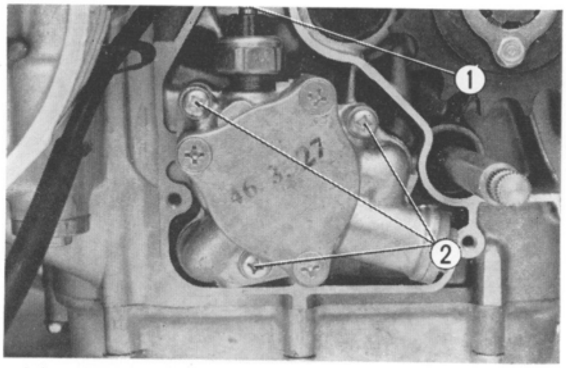


Fig. 99 ① 4 mm bolt
② 6 mm screws

4. Remove the cap and disassemble the relief valve and spring.

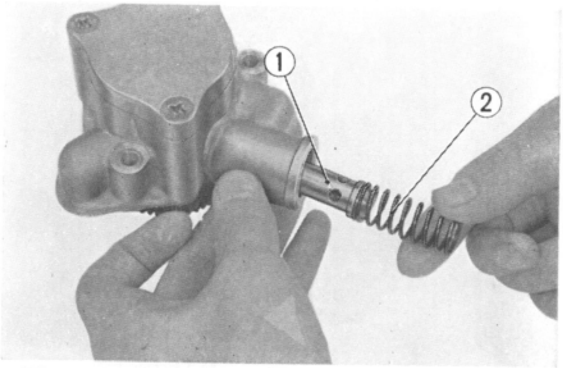


Fig. 100 ① Relief valve ② Spring

Oil Screen Filter

1. Drain the engine oil in accordance with section 2. A.
2. Unscrew ten 6 mm bolts from the oil pan. Remove the oil pan, and the oil screen filter can be removed.

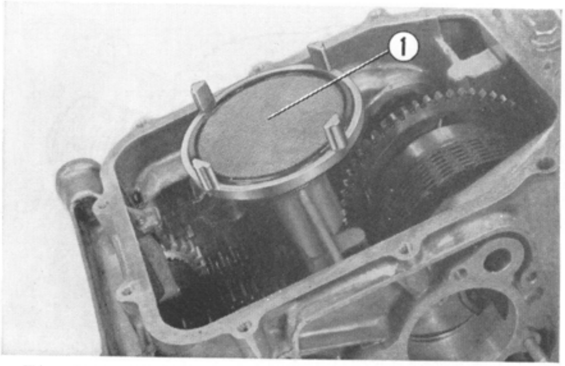


Fig. 101 ① Oil screen filter

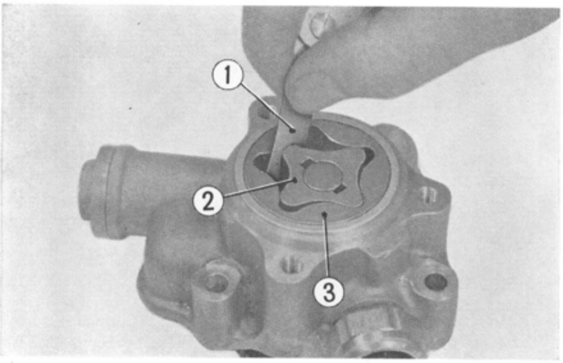


Fig. 102 ① Feeler gauge ③ Outer rotor
② Inner rotor

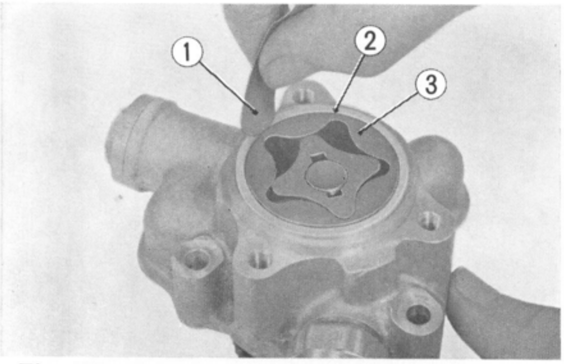


Fig. 103 ① Feeler gauge ③ Outer rotor
② Pump body

Oil Filter

1. Drain the engine oil in accordance with section 2. A.
2. Unscrew the center bolt to remove the oil filter.

B. Inspection

1. Measure the clearance between the inner and outer rotors.
   Use a feeler gauge to measure the clearance between the rotors. If the clearance beyonds the serviceable limit, replace the pump.
2. Measure the clearance between the outer rotor and the pump body.
   Use a feeler gauge to measure the clearance between the outer rotor and the pump body. If the clearance beyonds the serviceable limit, replace the pump.

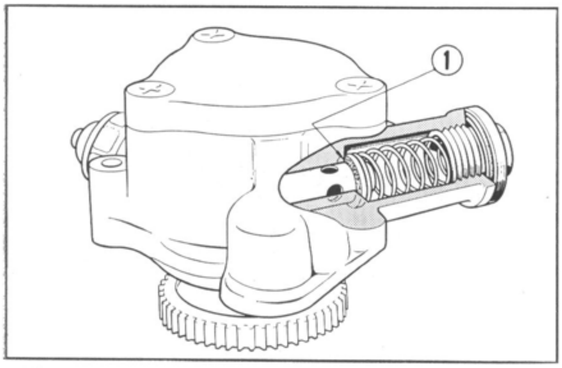


Fig. 104 ① Relief valve seat

3. Inspect the operation of the relief valve.
   Make sure that the relief valve is not stuck in the pump body. Also check for any foreign objects which may be lodged between the valve and seat.
4. Inspect the screen filter
   Wash and inspect the screen filter. Replace the filter if damaged.

C. Reassembly

Oil Filter

1. Insert the oil filter center bolt through the oil filter case and assemble the spring, spring seat and element. Screw the center bolt into the engine.

Oil Screen Filter

1. Mount the screen filter on the lower crankcase.
2. Mount the oil pan on the engine with ten 6 mm bolts.

Oil Pump

1. Insert the drive pump shaft into the oil pump body and install the drive pin into the shaft.
2. Align the outer and inner rotor punch marks and install into the pump body (the surfaces with the punch marks may be set to the pump body side or the pump cover side).
3. Install the 47 mm O-ring on the oil pump body and install the oil pump cover with three 6 mm screws.
4. Install the relief valve and spring into the oil pump body, and install the cap.
5. Install the two O-ring collars, two 14 mm O-rings, and a 47 mm O-ring into the oil pump body and then install the oil pump on the crankcase with three 6 mm screws.
6. Connect the pressure switch wires.
7. Install the left crankcase with four 6 mm screws, and the gear change pedal.
8. Install the starting motor cover.

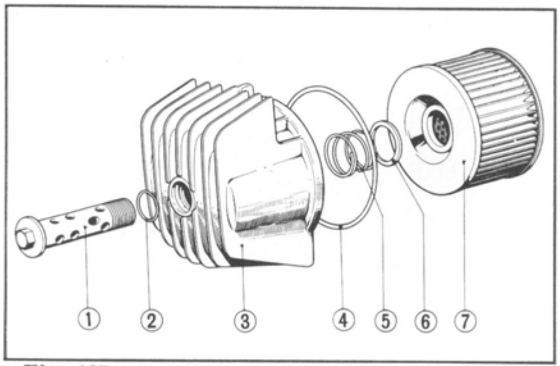


Fig. 105
① Oil filter center bolt
② 15×2.5 O-ring
③ Oil filter case
④ 89×4.5 mm O-ring
⑤ Filter element set spring
⑥ Oil filter spring seat
⑦ Oil filter element

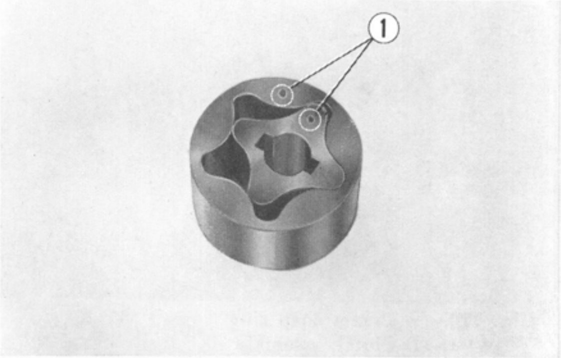


Fig. 106 ① Punch marks

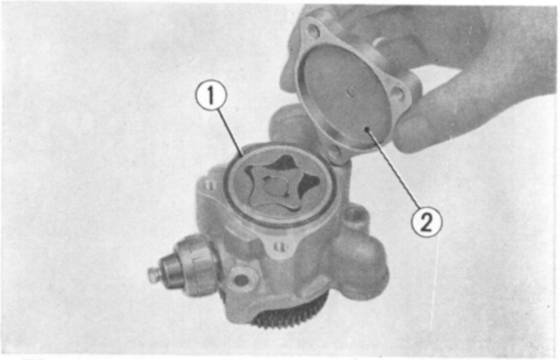


Fig. 107 ① 47 mm O-ring ② Oil pump cover

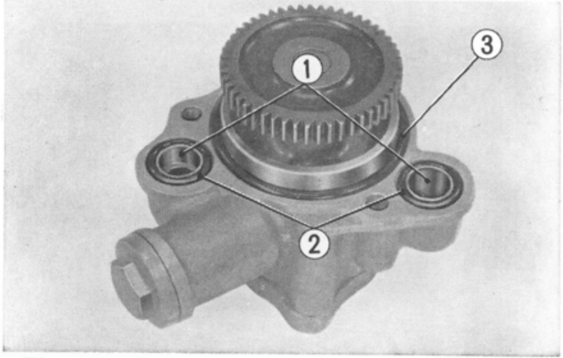


Fig. 108 ① O-ring collar ③ 47 mm O-ring
② 14 mm O-ring

6. CLUTCH

A. Disassembly

1. Drain the engine oil in accordance with section 2. A.
2. Remove the kick starter pedal.
3. Unscrew ten 6 mm screws and remove the R. crank case cover.
4. Unscrew the four clutch pressure plate mounting bolts, and remove the clutch pressure plate and four clutch springs.

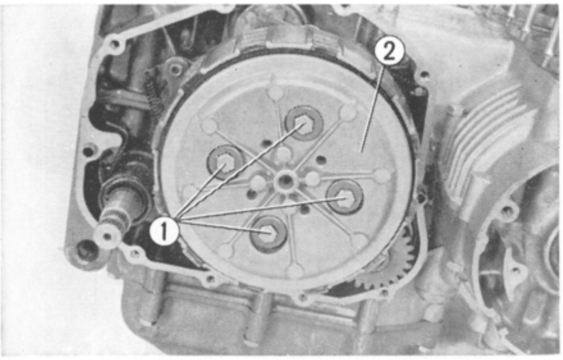


Fig. 109 ① Bolts ② Clutch pressure plate

5. Remove the clutch lifter joint piece.
6. Remove the 25 mm snap ring, shims (some engine may not have shims installed), and the clutch assembly from the main shaft.

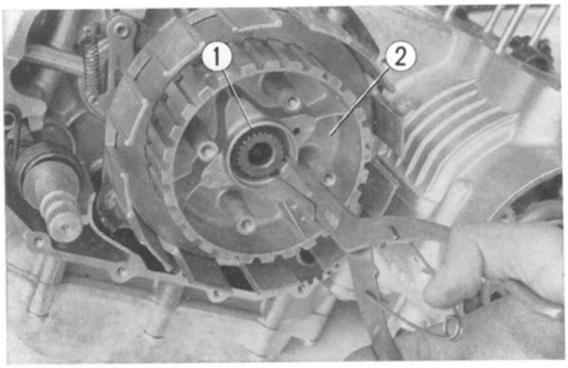


Fig. 110 ① 25 mm snap ring
② Clutch assembly

7. Disassemble the clutch disc, clutch plate and clutch center from the clutch outer.
8. Remove the left crankcase cover.
9. Disconnect the clutch cable from the clutch lifter.
10. Unscrew the clutch adjuster lock bolt and remove the clutch adjuster from the left crankcase cover.

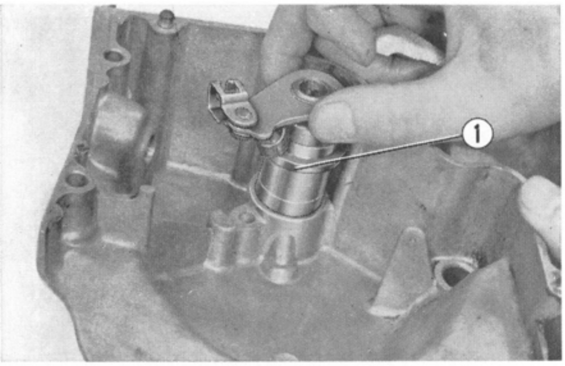


Fig. 111 ① Clutch adjuster

11. Pull out the clutch lifter rod.

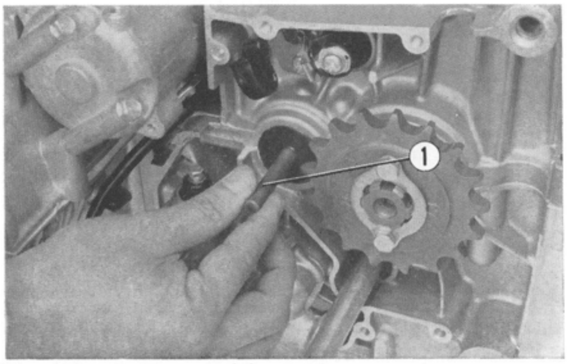


Fig. 112 ① Clutch lifter rod

B. Inspection

1. Measure the thickness of the friction disc.
   Measure the thickness with a vernier caliper and replace if beyond the serviceable limit.

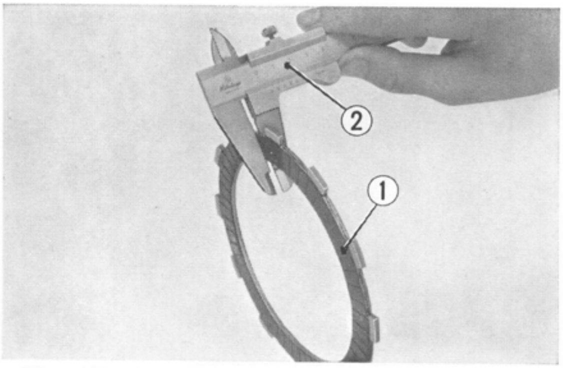


Fig. 113 ① Friction disc ② Vernier caliper

2. Check the clutch plate for warp.
   Place the clutch plate on the surface plate and measure the amount of warp using a feeler gauge. If the warp beyonds the serviceable limit, replace the clutch plate.
3. Measure the clutch spring.
   Measure the free length of the clutch spring with a vernier caliper and replace if beyond the serviceable limit.

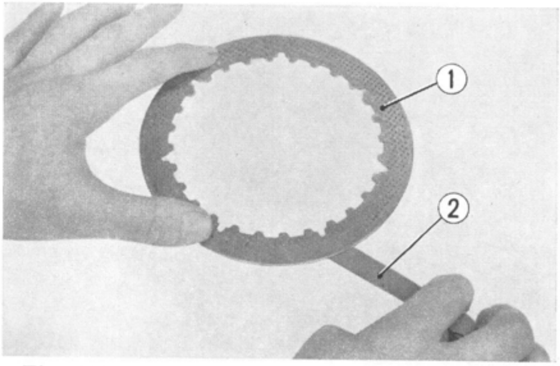


Fig. 114 ① Clutch plate ② Feeler gauge

4. Inspect the rivets mounting the clutch outer to the driven gear for looseness, and replace the clutch outer if any of rivets are loose.

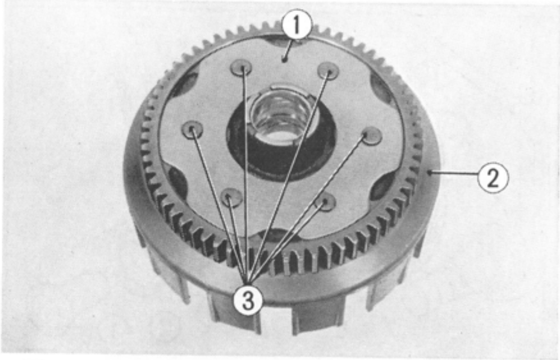


Fig. 115 ① Driven gear ③ Rivets
② Clutch outer

C. Reassembly

1. Assemble the clutch lifter rod into the main shaft so that the spherical end is toward the right side.
2. Apply grease to the clutch lifter and assemble it to the left crankcase cover together with the adjuster. Tighten the lock bolt and reconnect the clutch cable to the clutch lifter.
3. Install the clutch lifter rod, set the steel ball into the clutch lifter, and mount the left crankcase cover with four 6mm screws.

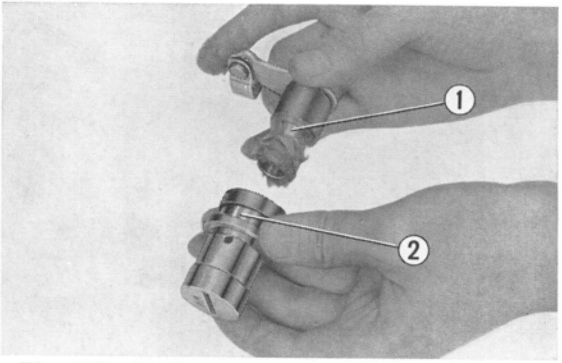


Fig. 116 ① Clutch lifter ② Adjuster

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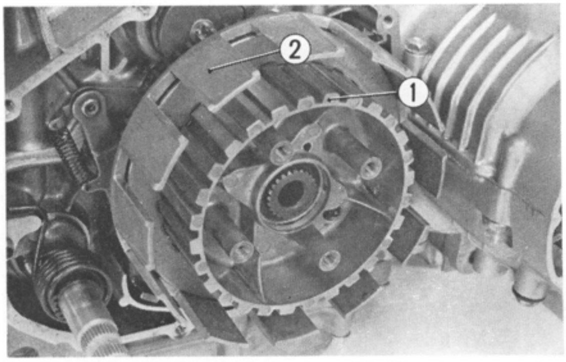

Fig. 117 ① Clutch center ② Clutch outer

4. Install the clutch outer to the mainshaft and then, install the clutch center.

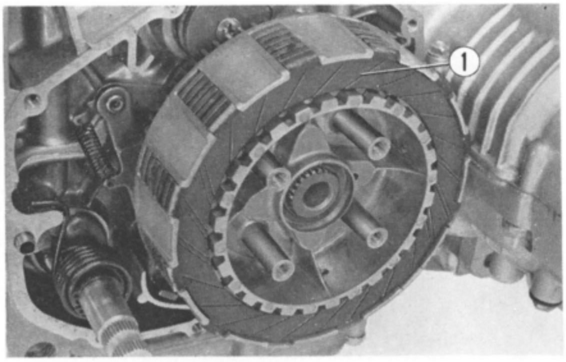

Fig. 118 ① Oil grooves

5. Apply engine oil on the friction discs (7 pcs.) and assemble them on the clutch center alternately with the clutch plates (6 pcs.), and then, assemble into the clutch outer.

   Note:

   When assembling the friction discs, assemble them on the clutch center so that the oil grooves are facing as per Fig. 118.

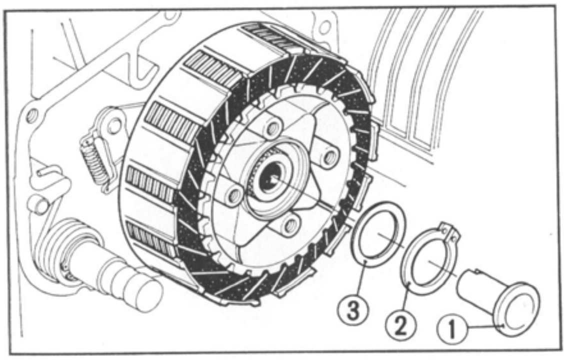

Fig. 119 ① Joint piece ③ 25 mm snap ring
② Spacer

6. After assembling the friction discs and clutch plates, set them with the snap ring. Place a dial gauge against the end of the clutch assembly to check for looseness. If the measured value of looseness is greater than **0.1 mm** (**0.004 in.**), install a spacer on the inside of the snap ring. Spacer are available in the thickness of 0.1, 0.3 and 0.5 mm.

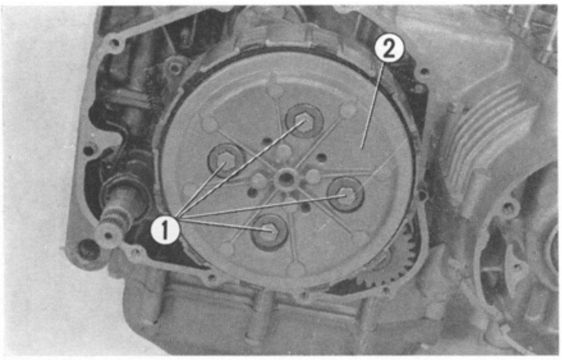

Fig. 120 ① Bolts ② Clutch pressure plate

7. Insert the clutch lifter joint piece into the mainshaft and fix the clutch plates with four pcs. each of the clutch spring, washer and 6 mm screw.
8. Install the R. crank case cover.
9. Ajast the clutch.

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7. GEAR SHIFT MECHANISM

A. Disassembly

1. Disassemble the clutch in accordance with the section 6. A.
2. Remove the gear change pedal.
3. Remove the gear shift arm while holding the gear shift arm down.

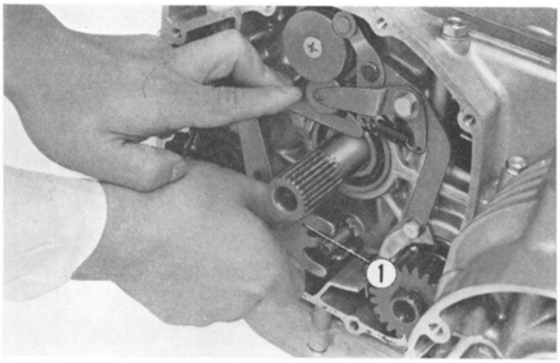

Fig. 121 ① Gear shift arm

4. Remove the shift drum stopper bolt and shift drum neutral stopper bolt, and then, remove the shift drum stopper and shift drum neutral stopper.
5. Unscrew the 6 mm screw and then, remove the oil guide plate and bearing set plate.
6. Unscrew the 6 mm screw and cam plate.
7. Disassemble the upper and lower crankcase and disassemble the transmission gears in accordance with the section 9. A.
8. Remove the neutral stopper switch from the gear shift drum.
9. Remove the shift drum guide screw from the upper crankcase and then remove the guide screw collar.

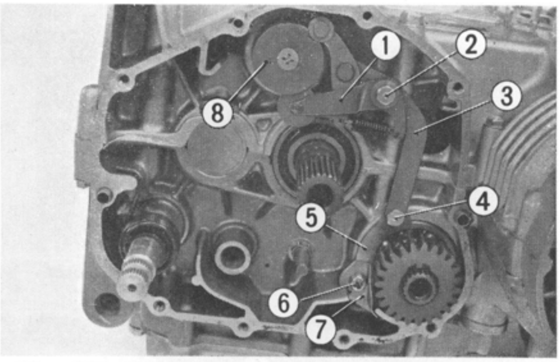

Fig. 122 ① Shift drum stopper
② Shift drum stopper bolt
③ Shift drum neutral stopper
④ Shift drum neutral stopper bolt
⑤ Bearing set plate
⑥ 6 mm screw
⑦ Oil guide plate
⑧ Cam plate

10. Remove the guide pin clip and guide pin and pull out the gear shift drum from the crankcase.

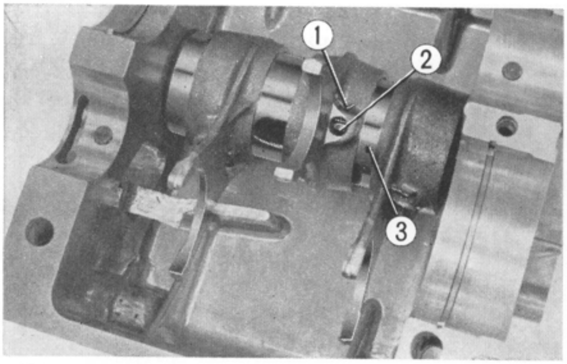

Fig. 124 ① Guide pin clip ③ Gear shift drum
② Guide pin

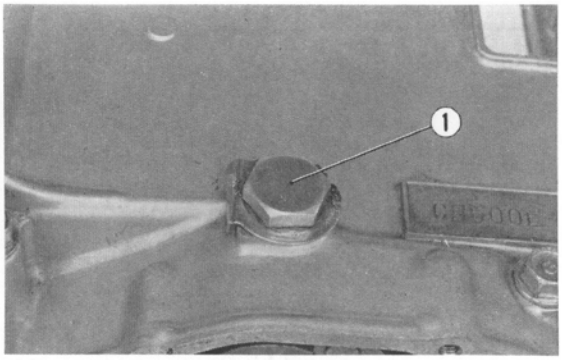

Fig. 123 ① Shift drum guide screw

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B. Inspection

1. Measure the diameter of the gear shift drum with a micrometer and the shift fork with an inside micrometer. Replace any part which exceeds the serviceable limit.

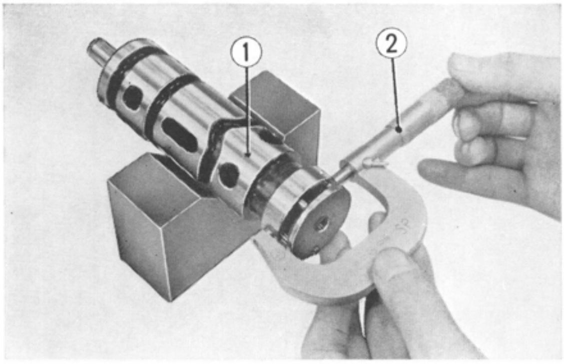

Fig. 125 ① Gear shift drum ② Micrometer

2. Measure the width of the gear shift fork fingers with a micrometer.
   Replace if beyond serviceable limit.

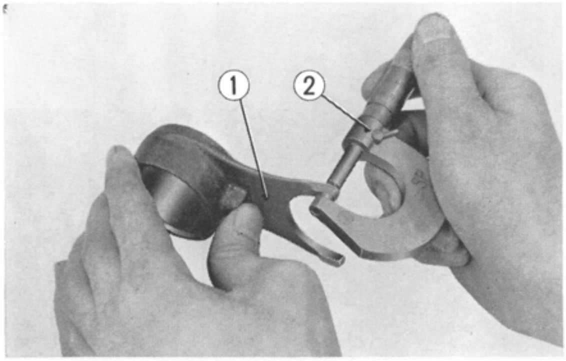

Fig. 126 ① Gear shift fork ② Micrometer

C. Reassembly

1. Set the left, right and center gear shift forks into the upper crankcase as shown in Fig. 126, then install the gear shift drum.

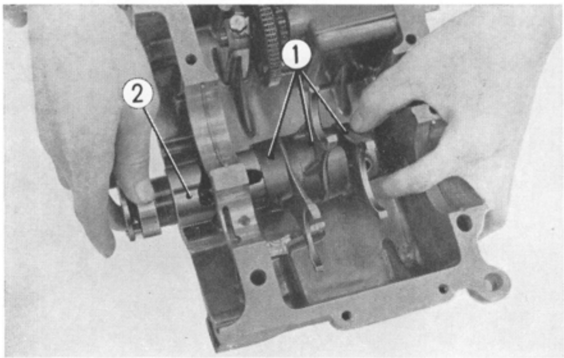

Fig. 127 ① Gear shift forks ② Gear shift drum

2. Insert the guide pin into the shift fork and fix it with the guide pin clip.

Note:
Make sure that the guide pin clip is installed in the proper direction.

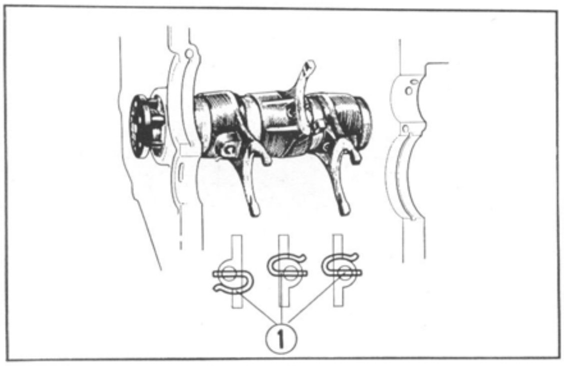

Fig. 128 ① Guide pin clips

3. Place the counterbored section of the shift drum as shown Fig. 128, and install the steel ball, the spring cap, and the spring then lock with the shift drum screw.
   Next, bend up the tab on the guide screw lock washer to lock the guide screw.

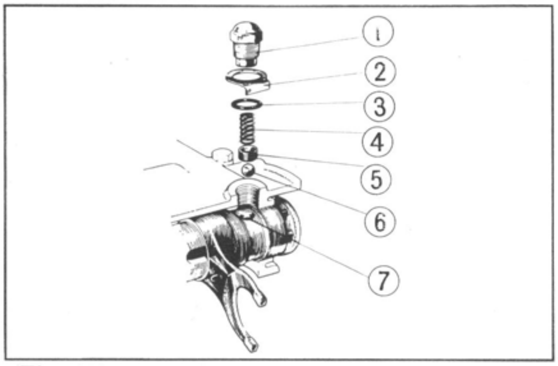

Fig. 129 ① Guide screw ② Guide screw lock washer ③ O-ring ④ Spring ⑤ Spring cap ⑥ Steel ball ⑦ Counterbored section

4. Align the neutral switch to the groove in the gear shift drum and lock in place with the 6 mm screw.

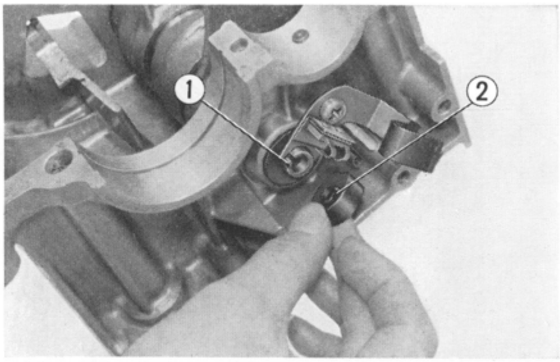

Fig. 130 ① Gear shift drum ② Neutral switch

5. Assemble the transmission into the upper crankcase in accordance with section 10. C, and assemble the upper and lower crankcase.
6. Install the cam plate on the pin of the gear shift drum with the 6 mm flat head screw which has been coated with thread lock cement.

Note:
The pin and the pin hole in the cam plate must be aligned.

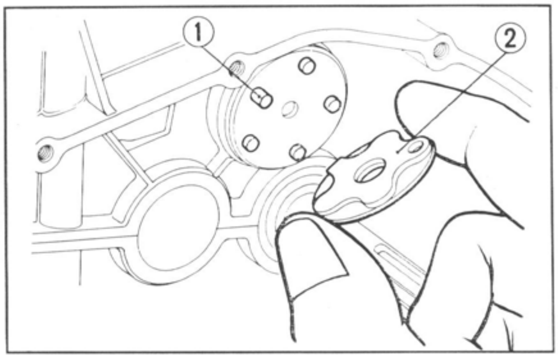

Fig. 131 ① Pin ② Cam plate

7. Attach the shift drum stopper spring to the drum stopper and to the drum neutral stopper as shown in Fig. 132, then tighten the drum stop bolt and neutral stop bolt. Also tighten the bearing set plate together.
8. Tighten the oil guide plate. After tightening, rotate the shift drum and check to be sure that each component part operates smoothly.

Note:
Check if the guide plate comes in contact with the primary drive gear.

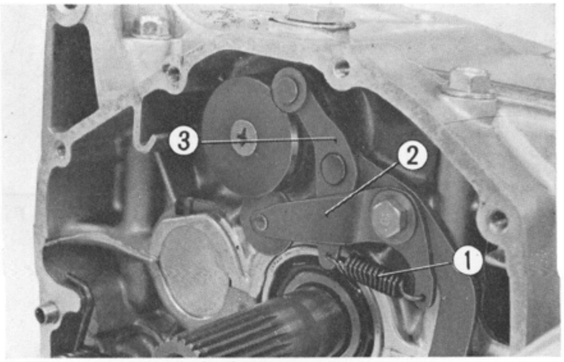

Fig. 132 *① Shift drum stopper spring*
② Shift drum stopper
③ Shift drum neutral stopper

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9. Install the gear shift arm and make sure that it operates smoothly in both direction.
10. Install the clutch in accordance with section 6. C.

8. CAM CHAIN TENSIONER

The cam chain tensioner is constructed of spring steel on which a layer of heat resistant rubber is vulcanized and a sheet of teflon cemented. It applies pressure against the cam chain and absorbs the shocks produced by the chain. The cam chain guide on the tension side of the cam chain also controls chain vibration.
An adjustment screw is located at the rear of the cylinder block.

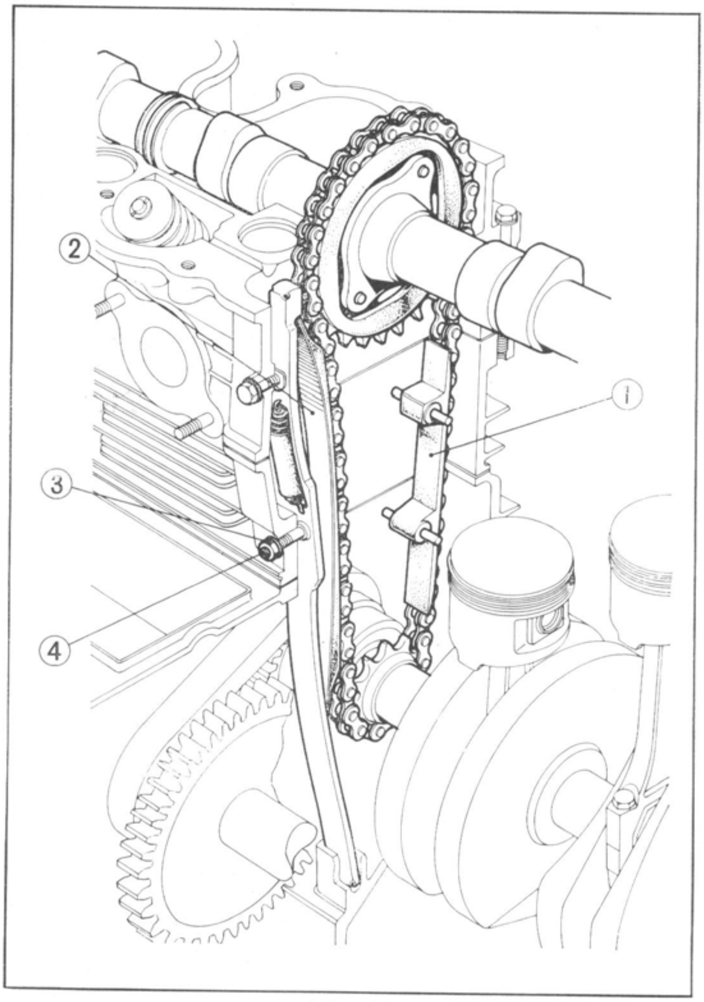

Fig. 133

① Cam chain guide
② Cam chain tensioner
③ Lock nut
④ Screw

A. Disassembly

1. Remove the cam chain tensioner and the chain guide in accordance with section 3. A.

B. Inspection

1. Make sure that the gear of the cam chain tensioner adjuster is properly meshed with the rack, and inspect for smooth operation.
   To adjust the cam chain, see page 13.

C. Reassembly

1. Perform reassembly in accordance with section 3. C.

9. CRANKSHAFT AND CONNECTING ROD

A. Disassembly

1. Dismount the engine in accordance with section 2. A.
2. Disassemble the cylinder head, cylinder, and piston in accordance with section 3. A.
3. Remove the generator cover and remove the rotor using a generator rotor puller. (Tool No. 07933-2160000)
4. Remove the point cover, and the special washer by removing the 6 mm bolt. Next, unscrew the three 5 mm screws and remove the contact breaker assembly and the spark advancer.
5. Remove the clutch and the gear shift arm in accordance with section 6. A.
6. Remove the starting motor cover, and dismount the starting motor.

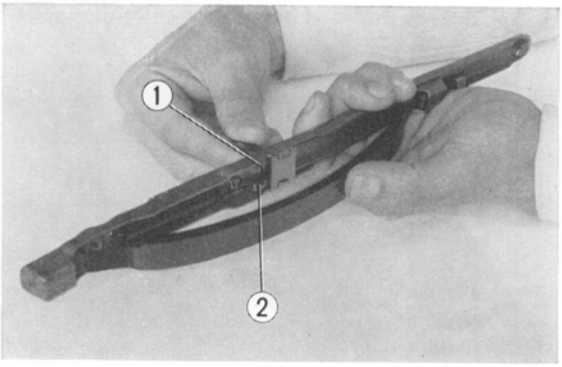

Fig. 134 ① Gear ② Rack

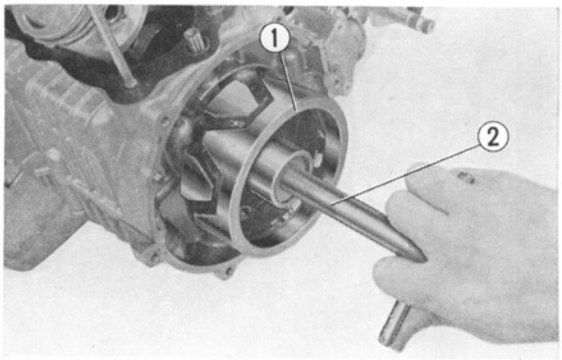

Fig. 135 ① Generator rotor
② Generator rotor puller

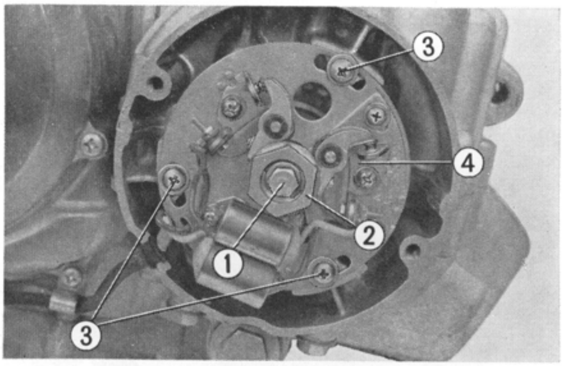

Fig. 136 ① 6 mm bolt
② Special washer
③ 5 mm screws
④ Contact breaker assembly

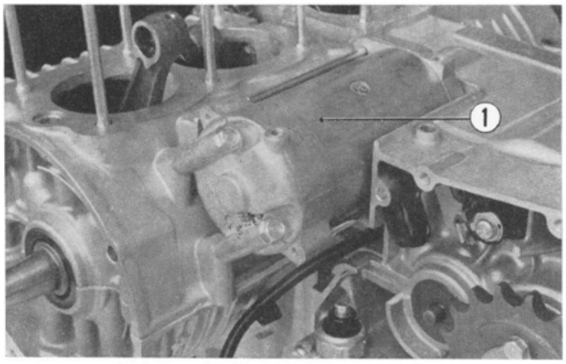

Fig. 137 ① Starting motor

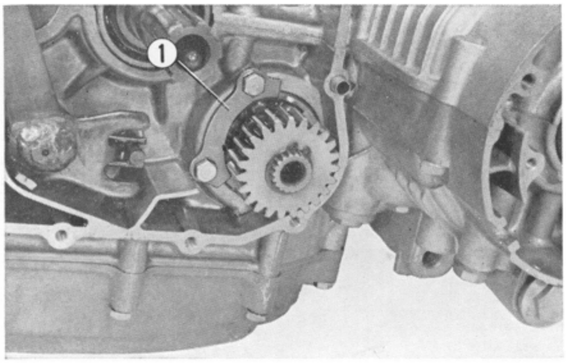

Fig. 138 ① Bearing set plate

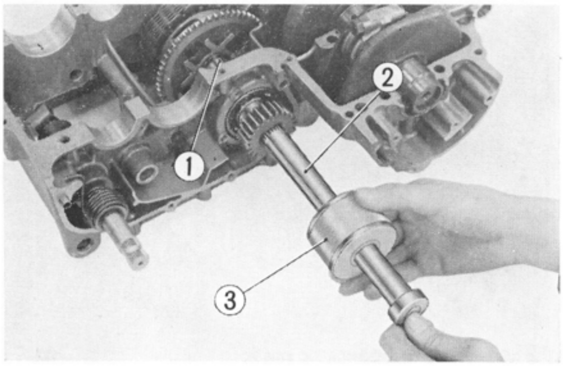

Fig. 139 ① Primary shaft ② Primary shaft puller ③ Weight hammer

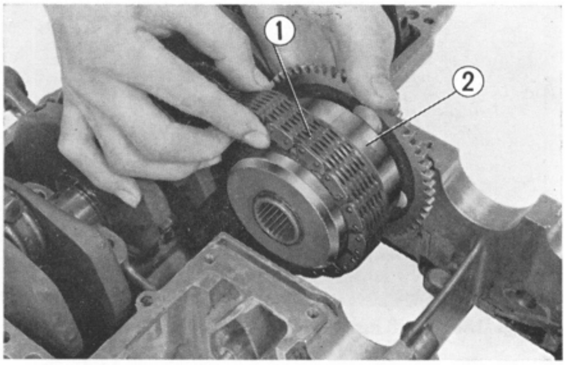

Fig. 140 ① Primary chain ② Starting clutch

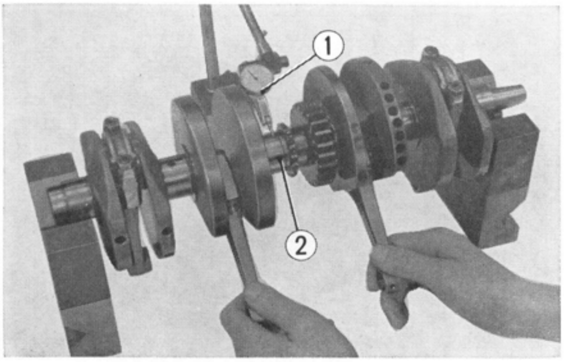

Fig. 141 ① Dial gauge ② Crankshaft

7. Place the engine upside down and unscrew the ten 6 mm bolts to remove the oil pan.
8. Unscrew ten 8 mm bolts and twelve 6 mm bolts from the lower crankcase. Loosen the 8 mm bolts in the reverse order shown in Fig. 151.
9. Then, put the engine in correct position and unscrew three each 8 mm and 6 mm bolts. Tap the upper crankcase lightly with a wooden hammer and separate the upper and lower crankcases.
10. Unscrew two 6 mm bolts and remove the bearing set plate.
11. Pull out the primary shaft using a primary shaft hammer (Tool No. 07936-3230100) and weight hammer (Tool. No. 07936-3230200). On the model CB 550, use a primary shaft hammer (Tool No. 07936-3740100) and weight hammer (Tool No. 07945-3000500).

Note:

Disassembly of the primary shaft, transmission, and kick starter can be performed without removing the cylinder head, cylinder or piston. When removing lower crankcase, follow the sequence 10, 11, 9 and 8 above.

12. Remove the starting clutch from the primary chain.
13. Remove the primary chain and the cam chain from the crankshaft.

B. Inspection

1. Measure crankshaft runout
   Support both ends of the crankshaft on V-block and measure the amount of bend in the crankshaft by applying a dial gauge to the center journal and rotating the crankshaft. If the runout beyonds the serviceable limit on the dial gauge, the crankshaft should be replaced.

2. Inspect the crankshaft journals for scoring and uneven wear with a micrometer. If any journal is out-of-round or tapered more than serviceable limit, the crankshaft should be replaced.

3. Measure the crankshaft journal wear.
   Cut a length of plasti gauge to the width of the bearing cap. Place the gauge on the bearing parallel to the crankshaft, assemble the crankshaft and torque down the crankcase in accordance with Fig. 151.
   Disassemble the crankcase and measure the plasti gauge using the scale provided. If there is a clearance in excess of **0.08 mm** (**0.0031 in.**), the bearing should be replaced.

Note:
When measuring with the plasti gauge, do not turn the crankshaft.

Selection of The Bearing

1. Remove the bearing, assemble and tighten the upper and lower crankcases. Refer to Fig. 151.
2. Measure the inside diameter of all the bearing seats in the vertical direction with a cylinder gauge and select out the corresponding alphabet from the table below.

mm (in.)

C	36. 016～36. 024 (1. 4179～1. 4182)
B	36. 008～36. 016 (1. 4176～1. 4179)
A	36. 000～36. 008 (1. 4173～1. 4176)

3. Measure the diameter of all the crankshaft journal with a micrometer and also select out the corresponding figure 1 or 2 from the table below.

1	2
32. 99～33. 00 (1. 2987～1. 2992)	32. 98～32. 99 (1. 2983～1. 2987)

4. According to the alphabet and the figure from item 2 and 3, pick out the proper bearing from A, B, C and D.

Crankshaft classification No. / Crankcase classification mark	1	2
C	B (Brown)	A (Black)
B	C (Green)	B (Brown)
A	D (Yellow)	C (Green)

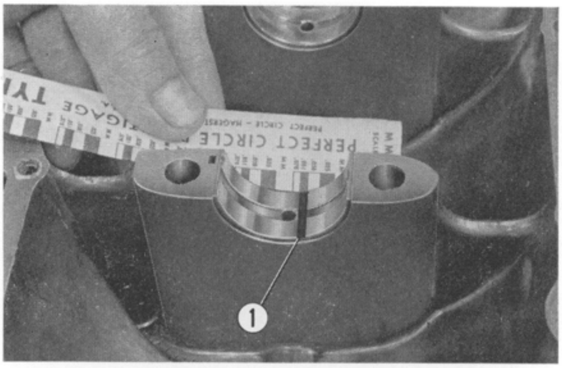

Fig. 142 ① Plasti gauge

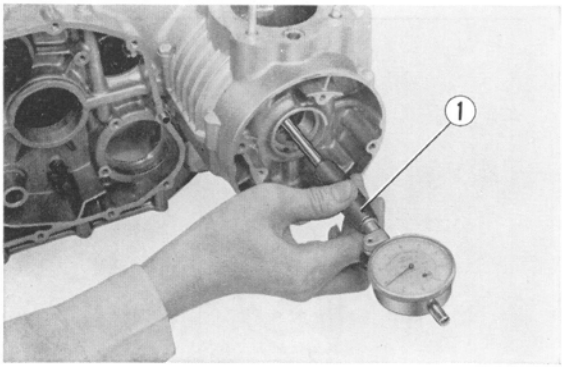

Fig. 143 ① Cylinder gauge

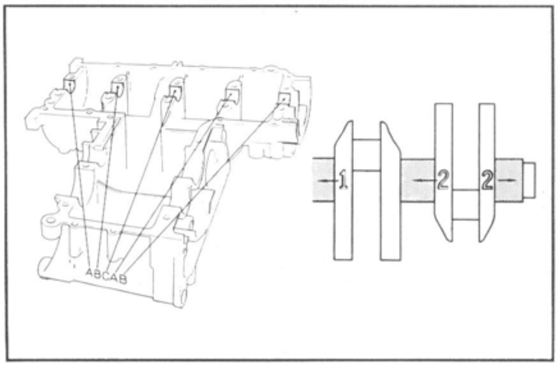

Fig. 144

Note:
The lower crankcase and crankshaft are marked with letters or number at the factory. These are production codes and should not be used or refered to during servicing or repair.

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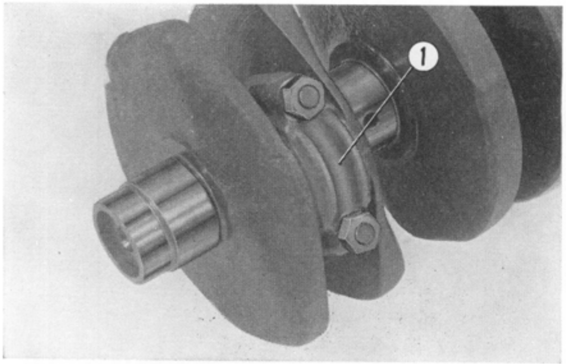


Fig. 145 ① Connecting rod cap

5. Measure connecting rod large end wear. Separate the cap from the connecting rod and after setting the plasti gauge in place, torque the two rod nuts to **2.0–2.2 kg-m (14.46–15.91 lbs-ft)**.
   Disassemble the cap and measure the plasti gauge. Replace the bearing with new one if beyond the serviceable limit.

Note:
Do not turn the crankshaft while the plasti gauge is installed.

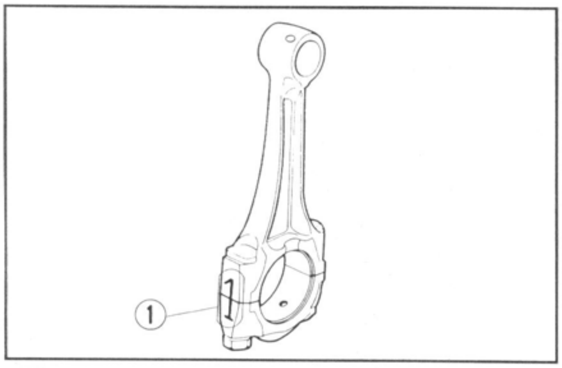


Fig. 146 ① Connecting rod code number

Selection of The Bearing

1. Measure crankshaft pin diameter with a micrometer and select out the corresponding alphabet from the table below.

A	B
34. 99∼35. 00 (1. 3775∼1. 3780)	34. 98∼34. 99 (1. 3771∼1. 3775)

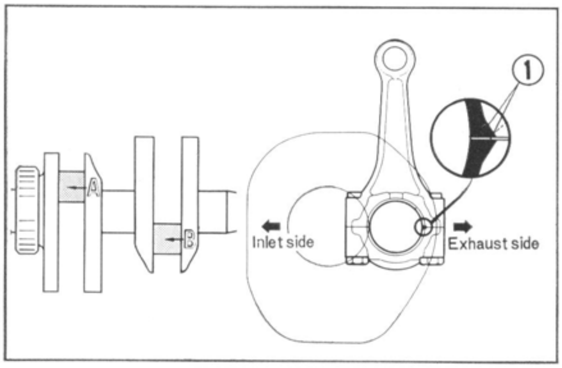


Fig. 147 ① Key (projection)

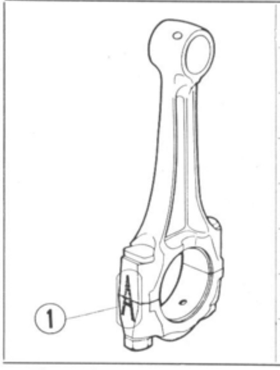
2. Select out the bearing from the table below which coincides with the number (1, 2, 3) stamped on the large end of the connecting rod.

Crank pin classification mark / Connecting rod code No.	A	B
3	B (Brown)	A (Black)
2	C (Green)	B (Brown)
1	D (Yellow)	C (Green)

Note:
- **The numbers marked on the crankshaft are production codes and should not be referred to during servicing.**
- **The bearings must be installed on the connecting rod with the key toward the front.**

6. Method of designating connecting rod weight.
   When replacing connecting rod, replace with one having the same weight code. The weight code is stamped at the large end of the connecting rod. When replacing all of the connecting rods, the tolerance of the respective rods should be within 5 grams.

Note:
In the connecting rod weight, that weight of cap and two bolts are included but does not include the bearings.



Code	Weight (gr.)
A	281~285
B	286~290
C	291~295
D	296~300
E	301~305
F	306~310
G	311~315

Fig. 148 ① Weight code number

7. Measure axial clearance using a feeler gauge.
   Replace if beyond the serviceable limit

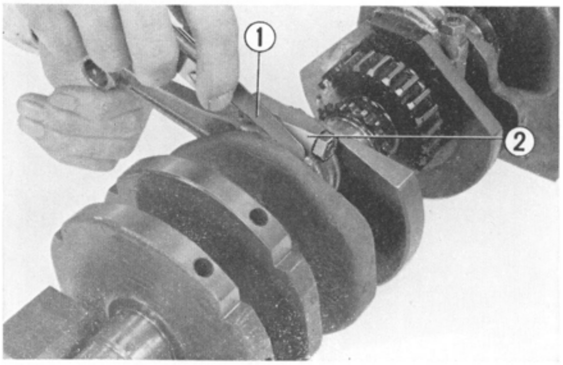


Fig. 149 ① Feeler gauge
② Connecting rod

8. Measure the connecting rod small end.
   Measure the diameter of the connecting rod small end with an inside dial gauge. Replace if beyond serviceable limit.

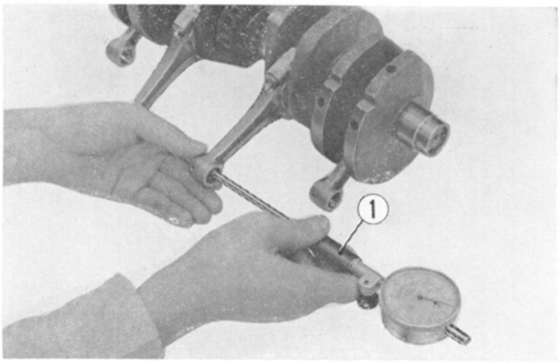


Fig. 150 ① Inside dial gauge

C. Reassembly

1. Install the primary chain and cam chain on the crankshaft.
2. Install the crankshaft into the lower crankcase.
3. Position the starting clutch and starter gear as in Fig. 150, then drive the primary shaft in from the right to left. Exercise care in the needle bearing assembly sequence shown in Fig. 165.

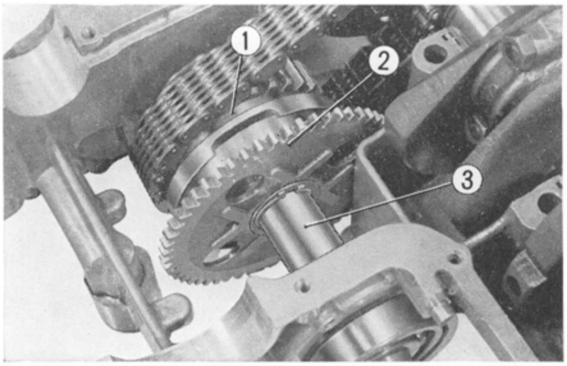


Fig. 151 ① Starting clutch
② Starter gear ③ Primary shaft

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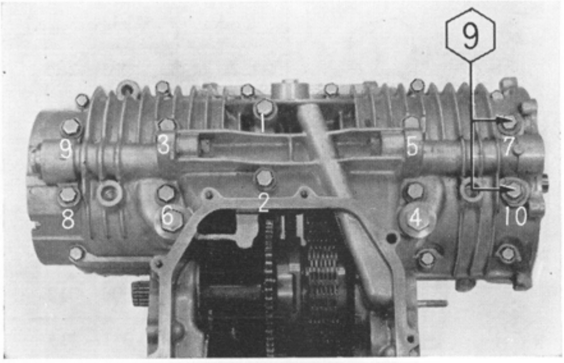

Fig. 152 8 mm mounting bolts

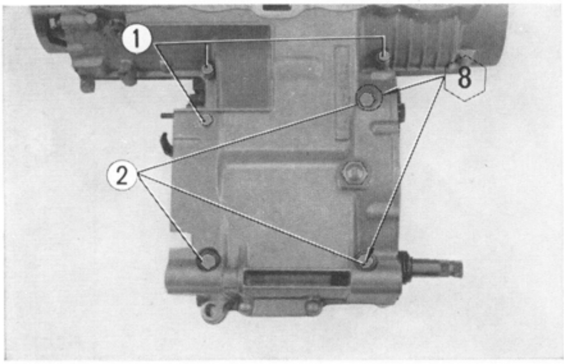

Fig. 154 ① 6 mm bolts
② 8 mm bolts

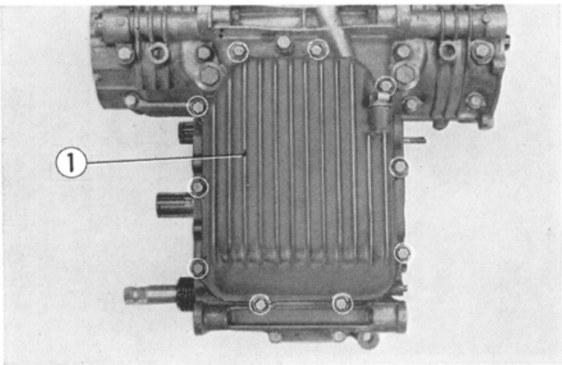

Fig. 155 ① Oil pan

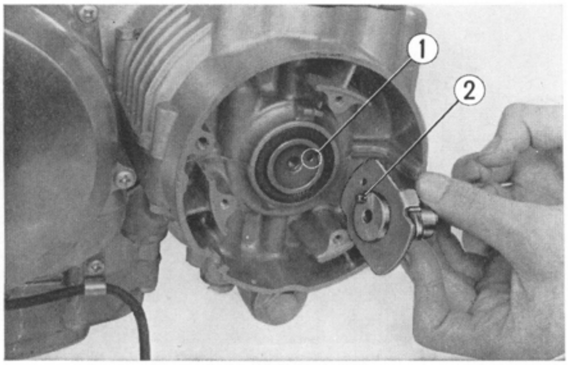

Fig. 156 ① Dowel pin hole ② Dowel pin

4. Install the bearing set plate with two 6 mm bolts.
5. Apply a thin coat of gasket paste on the mounting flange of the lower crankcase (heavy coat will cause the paste to fall inside the crankcase).
   Install two dowel pins, mount the upper crankcase on the lower crankcase.

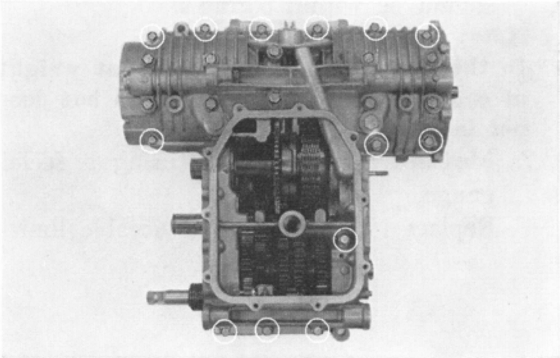

Fig. 153 6 mm mounting bolts

6. Place the engine upside down so as not to separate the parting surfaces by holding them by hands and install the ten 8 mm bolts. Torque the 8 mm bolts in the sequence shown in Fig. 151 to a torque of **2.3–2.5 kg-m**. (**16.63–18.08 lbs-ft**).
   Next, tighten thirteen 6 mm bolts. (Fig. 152)

Note:
Note position of the two 8 mm bolts which are stamped on the bolt head with numeral "9".

7. Position the upper crankcase on top and install with three each, 6 mm and 8 mm bolts. (Fig. 153)

Note:
Note position of the two 8 mm bolts which are stamped on the bolt head with numeral "8".

8. Install the oil screen filter and mount the oil pan with ten 6 mm bolts.
9. Mount the starting motor with two 6 mm screws.
10. Install the gear shift arm in accordance with section 7. C.
11. Install the clutch in accordance with section 6. C.
12. Insert the spark advancer dowel pin into the pin hole in the crankshaft, and then mount the contact breaker with three 5 mm screws.

13. Install the special advancer washer with the 6 mm bolt, and install the point cover.
14. Mount the generator rotor with the 10 mm bolt.
15. Install the generator cover.
15. Assemble the piston, cylinder, cylinder head, and head cover in accordance with section 3. C.

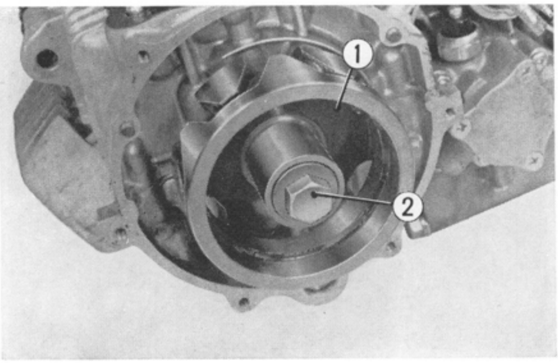

Fig. 157 ① Generator rotor
② 10 mm bolt

10. TRANSMISSION, KICK STARTER AND PRIMARY SHAFT

A. Disassembly

1. Dismount the engine from the frame in accordance with section 2. A.
2. Remove the clutch in accordance with section 6. A.
3. Separate the upper and lower crankcase in accordance with section 9. A.
4. Remove the transmission and disassemble the gears from the respective shafts.

Kick Starter

5. Remove the 18 mm snap ring and the return spring.
6. Remove the 12 mm snap ring and disassemble the kick starter shaft from the lower crankcase.

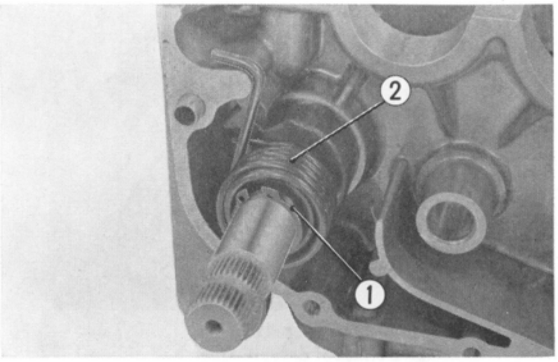

Fig. 158 ① 18 mm snap ring
② Return spring

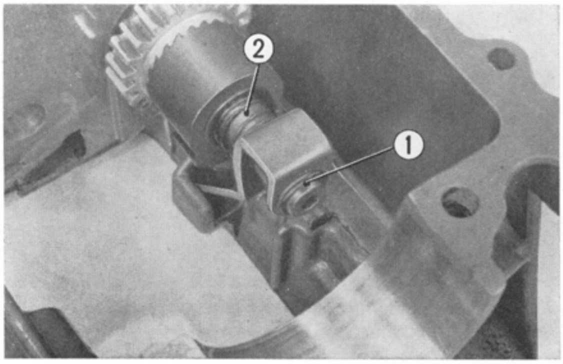

Fig. 159 ① 12 mm snap ring ② Kick starter shaft

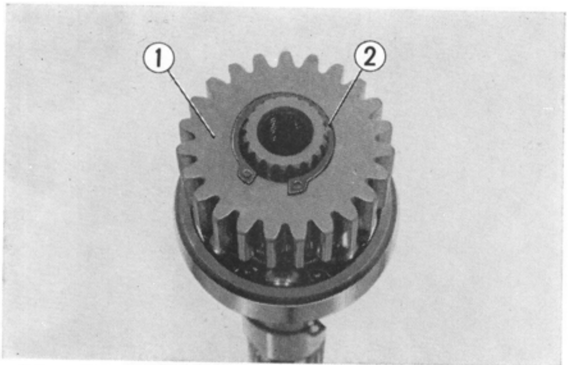

Fig. 160 ① Primary drive gear ② 20 mm snap ring

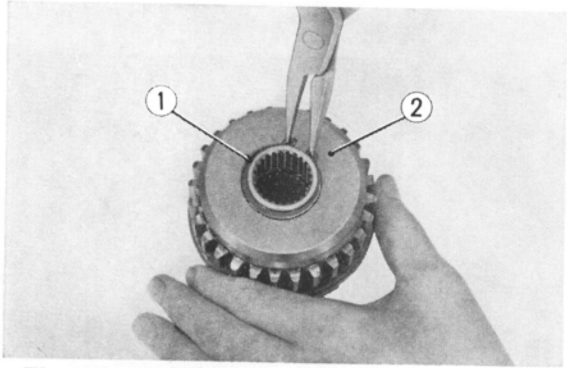

Fig. 161 ① 30 mm snap ring
② Primary driven sprocket

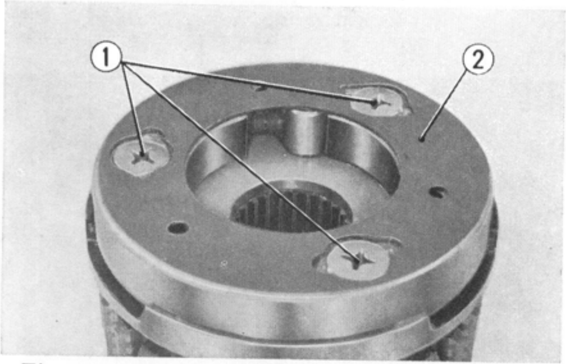

Fig. 162 ① 6 mm flat head screws
② Starting clutch outer

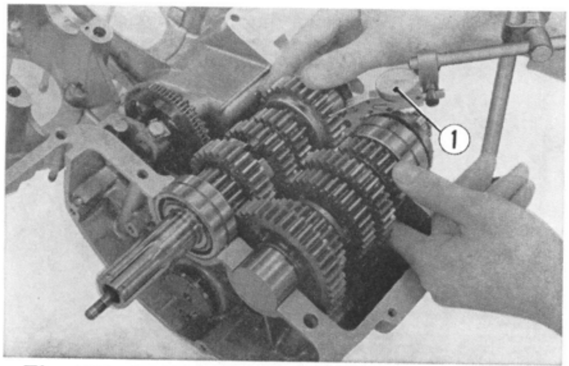

Fig. 163 ① Dial gauge

Primary Shaft

7. Remove the primary shaft in accordance with section 9. A, and remove the 20 mm snap ring and primary drive gear.

8. Remove the side collar and pull out the #6205 ball bearing.
9. Remove the 30 mm snap ring, primary driven sprocket, starting clutch, and pull out the damper rubbers.

10. Unscrew the three 6 mm flat head screws and remove the starting clutch outer.

B. Inspection

1. Measure gear backlash.
   Set the pointer of a dial gauge against the tooth of the gear and measure the backlash.

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2. Inspect the dogs and replace any gears with excessively worn dogs. Also, make sure that the gears slide smoothly over the splined shaft.

C. Reassembly

Primary Shaft

1. Install the starting clutch outer and primary driven sprocket hub with the three 6 mm flat head screws coated with thread lock cement, and then stake the screw heads with a punch to prevent loosening.

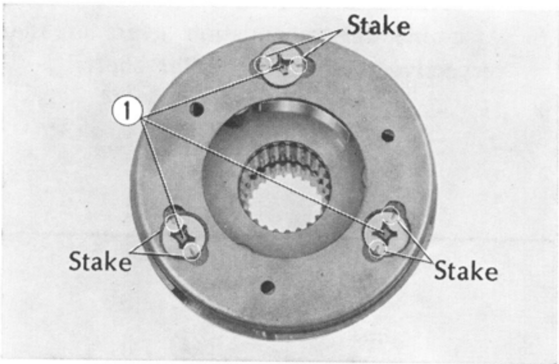


Fig. 164 ① 6 mm flat head screw

2. Assemble the damper rubbers on the primary driven sprocket, and install on the starting clutch with 30 mm set ring.
3. Drive the ♯6205 ball bearing into the primary shaft.

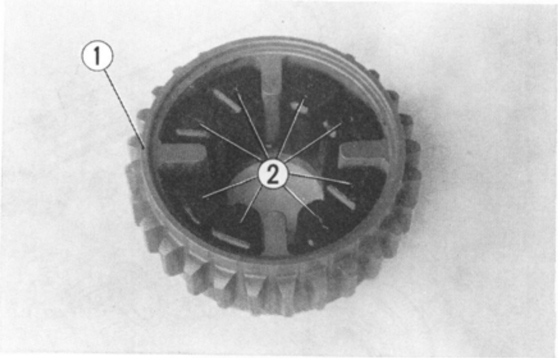


Fig. 165 ① Primary driven sprocket
② Damper rubbers

4. Mount the starting clutch gear on the starting clutch, insert the needle bearing and 25 mm spacer into the starting clutch gear, fit the 25 mm thrust washer and the snap ring on the primar shaft, and install the primary shaft in the crankcase.

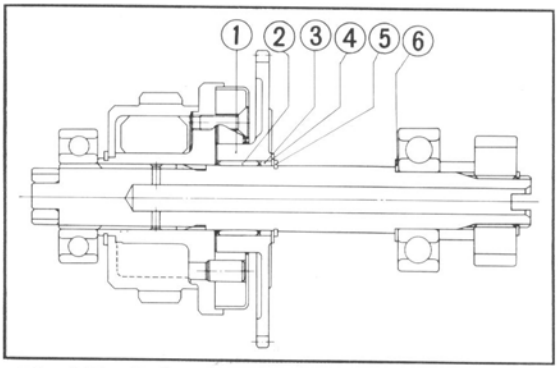


Fig. 166 ① Starting clutch gear
② Needle bearing (25×29×17)
③ 25 mm spacer
④ 25 mm thrust washer
⑤ 25 mm snap ring
⑥ 22 mm thrust washer

Kick Starter

5. Reassemble the kick starter components in accordance with Fig. 166.

Note:

Do not forget to install the 18 mm washer.

Transmission

6. Assemble the transmission gears on the respective main and counter shafts.

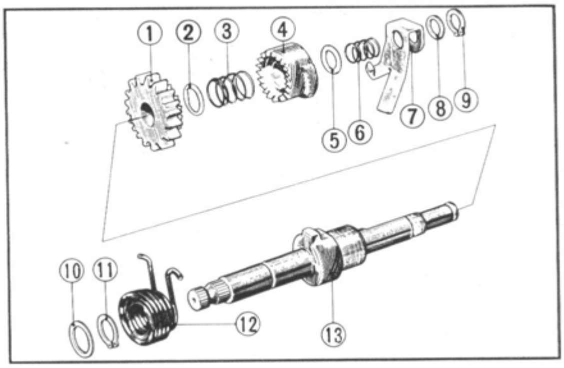
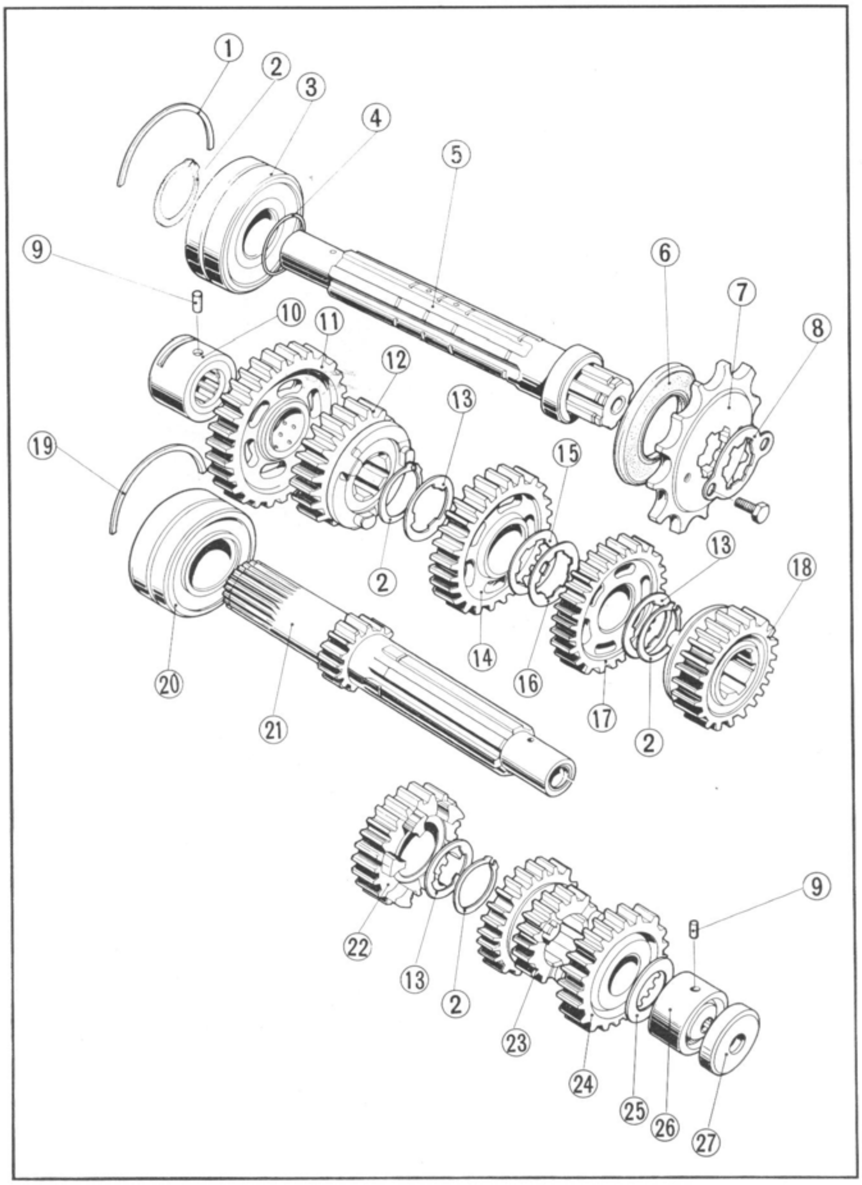


Fig. 167
① Kick starter pinion
② 20 mm thrust washer
③ Starter pinion set spring
④ Kick starter rachet
⑤ 15 mm thrust washer
⑥ Kick starter rachet spring
⑦ Rachet guide plate
⑧ Chain guide thrust
⑨ 12 mm snap ring
⑩ 18 mm washer
⑪ 18 mm snap ring
⑫ Kick starter spring
⑬ Kick starter spindle



① 57 mm bearing set ring
② 25 mm snap ring
③ 5205 special ball bearing
④ 24.5 mm O-ring
⑤ Transmission counter shaft
⑥ 33×57×7 oil seal
⑦ Drive sprocket (17T)
⑧ Drive sprocket fixing plate
⑨ Gear shift fork pin
⑩ 20 mm needle bearing
⑪ Counter shaft low gear (40 T)
⑫ Counter shaft fourth gear (29 T)
⑬ 25 mm thrust washer
⑭ Counter shaft third gear (33T)
⑮ 25 mm lock washer
⑯ 25 mm thrust washer
⑰ Counter shaft second gear (36 T)
⑱ Counter shaft top gear (27 T)
⑲ 52 mm bearing set ring
⑳ 5205 HS ball bearing
㉑ Transmission main shaft (24 T)
㉒ Main shaft fourth gear (28 T)
㉓ Main shaft second, third gear (22 T, 26 T)
㉔ Main shaft top gear (30 T)
㉕ 20 mm thrust washer
㉖ 22 mm needle bearing
㉗ 8×34×8 oil seal

Fig. 168

7. Install the two each bearing set rings and the dowel pins in the upper crankcase, and install the transmission.
8. Reassemble the upper and the lower crankcase in accordance with section 9. C.
9. Install the clutch in accordance with section 6. C.
10. Mount the engine in the frame in accordance with 2. B.

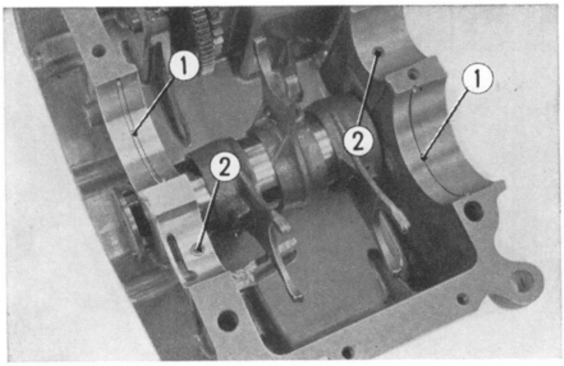


Fig. 169 ① Bearing set rings ② Dowel pins

11. CARBURETOR

A. Disassembly

1. Remove the carburetor unit from the engine in accordance with section 2 A.

Stay Plate And Carburetor

2. Unhook the throttle return spring off the link lever.

Note:

Exercise care not to damage the hook end of the spring.

3. Unscrew the hex. nuts, and remove the dust plate B. Remove the cap nuts.

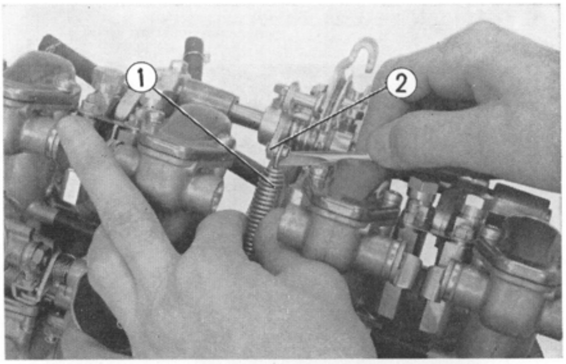


Fig. 170 ① Throttle return spring
② Link lever

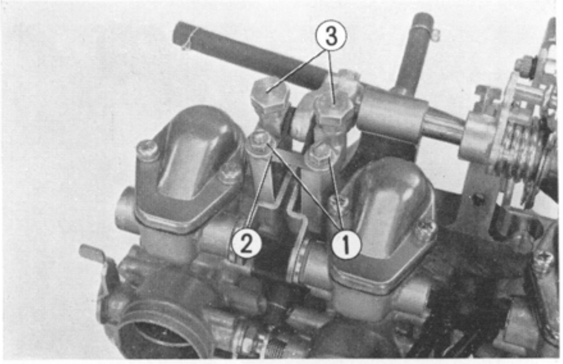


Fig. 171 ① Hex. nuts ③ Cap nuts
② Dust plate B

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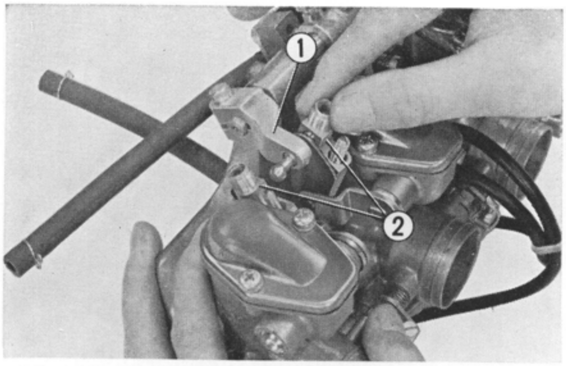

Fig. 172 ① Link arm ② Adjuster holders

4. Remove the adjuster holders from the link arm.
5. Unscrew the eight 6 mm flat head screws from the stay plate and remove the carburetor unit.

Throttle Valve And Jet Needle

6. Unscrew the two carburetor top mounting screws from each carburetor and remove the tops.

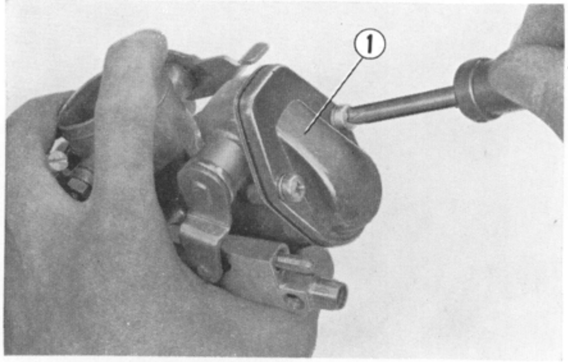

Fig. 173 ① Carburetor top

7. Position the throttle valve to full open and straighten the tab of the two tongued washers.

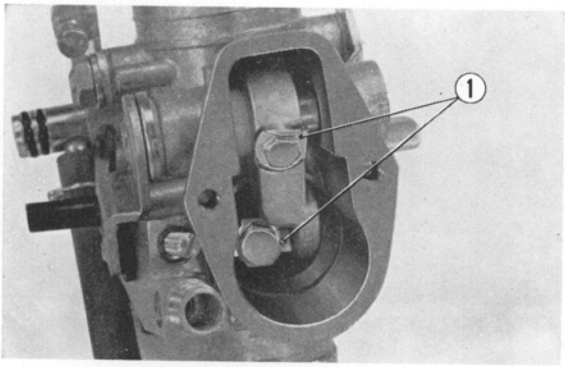

Fig. 174 ① Tongued washer

8. Remove the 6 mm bolt from the shaft end and remove the link arm in direction A using a screw driver.

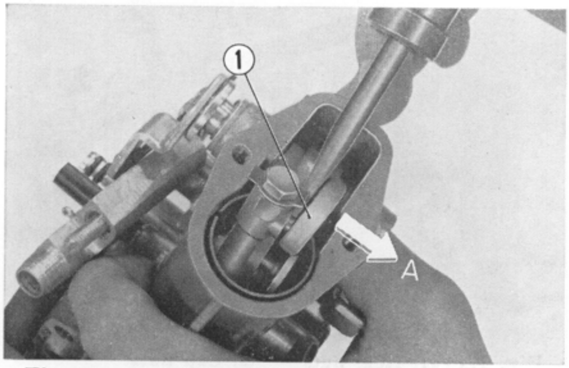

Fig. 175 ① Link arm

9. Loosen the 6 mm bolt on the throttle side about 1/2 turn, insert a screwdriver between the throttle shaft and link arm and pry loose in direction A.

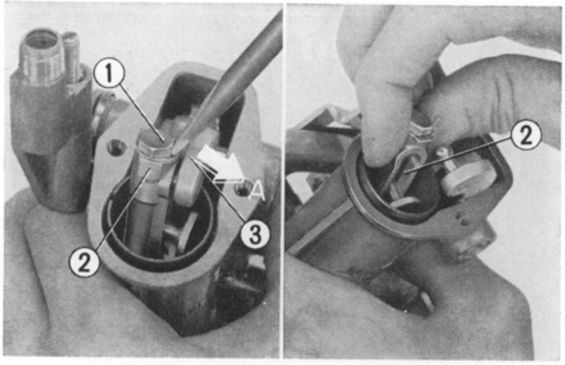

Fig. 176 ① 6 mm bolt ③ Link arm
② Throttle shaft

10. Unscrew the two 3 mm screws, rotate the valve plate 90° in either direction and align the tab on the valve plate to the groove in the shaft, and remove the valve plate.
11. Remove the jet needle from the throttle valve.

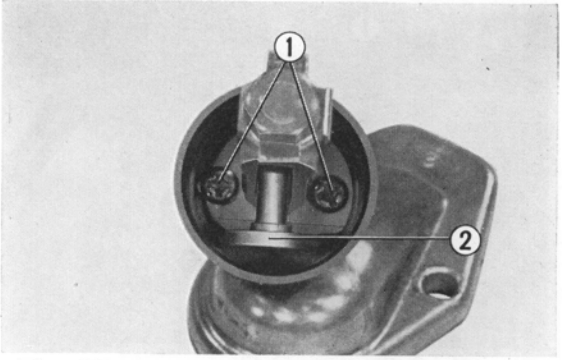

Fig. 177 ① 3 mm screws ② Valve plate

Adjuster Holder

1. Remove the carburetor from the stay plate in accordance with section 1∼5.
2. Remove the adjusting screw from the adjuster holder.

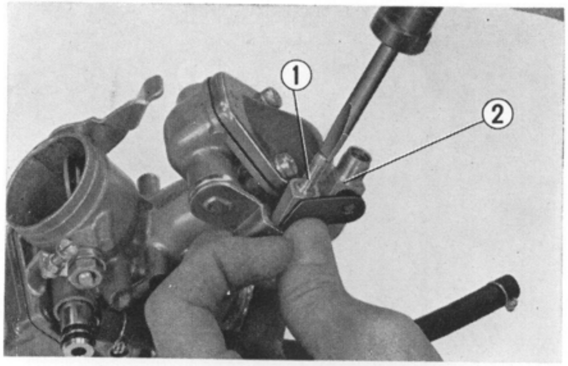

Fig. 178 ① Adjusting screw
② Adjuster holder

3. Position the throttle valve at the intermediate position and remove the adjuster holder.

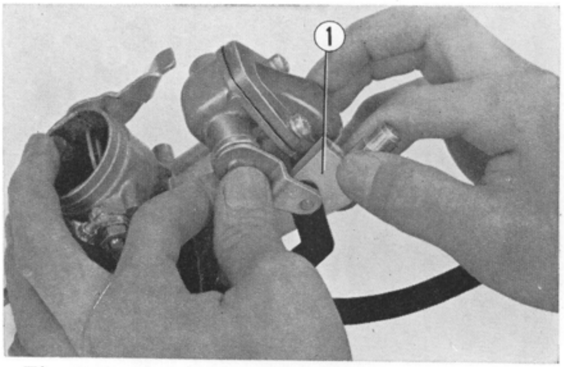

Fig. 179 ① Adjuster holder

Float, Main Jet, And Slow Jet

1. Remove the float chamber body.
2. Remove the leaf spring and the main jet.

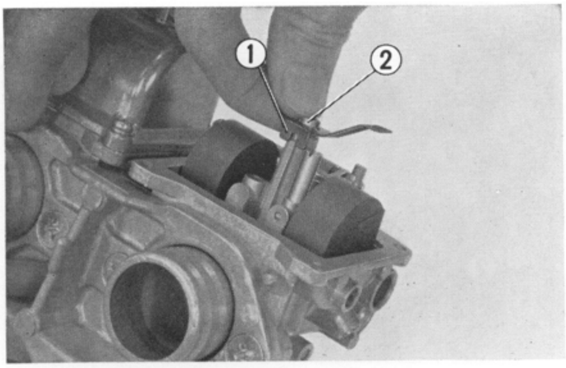

Fig. 180 ① Leaf spring ② Main jet

3. Pull out the float arm pin and remove the float.

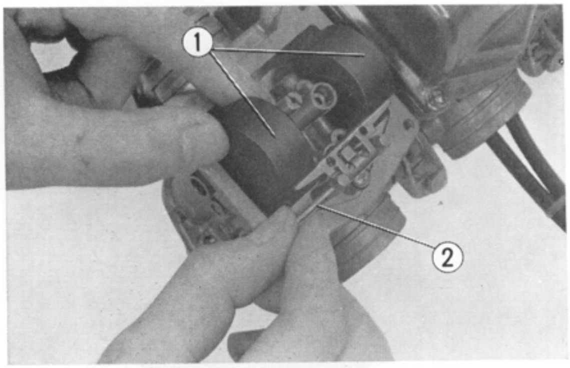

Fig. 181 ① Float ② Float arm pin

4. Disengage the clip plate and remove the valve seat.

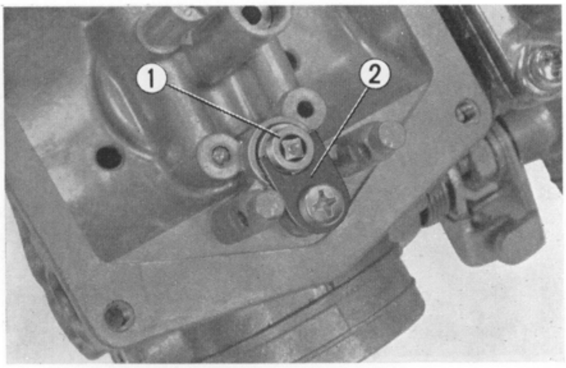

Fig. 182 ① Valve seat ② Clip plate

B. Inspection

1. Fuel level adjustment.
   Position the float so that the float arm barely touches the tip of the float valve. Measure the distance from the flange to the top of the float with the float level gauge. The standard value is **22 mm** (**0.89 in.**)

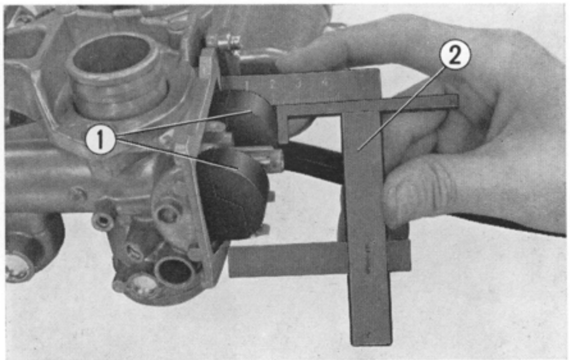

Fig. 183 ① Floats ② Float level gauge

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C. Reassembly

Float, Main Jet, And Slow Jet

1. Install the valve seat with the clip plate.
2. Install the float.
3. Place the leaf spring on the main jet, and install them on top of the needle jet holder.
4. Install the float chamber body.

Carburetor setting data	
Description	No.
Main jet	♯100
Air jet	♯150
Slow jet	♯40
Throttle valve	♯2. 5
Air screw opening	1±1/8

Adjuster Holder

1. Insert the coil spring B and spring seat B into the adjuster holder. Position the throttle valve to about 1/2 open and insert approximately 1/4 of the connector shaft into the holder window. Install them while holding the spring seat down with a thin screwdriver.
2. Mount the carburetor on the stay plate in accordance with section 7 and 8.

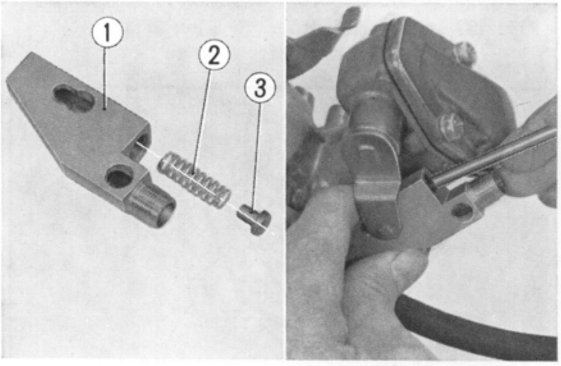

Fig. 184 ① Adjuster holder ② Coil spring B ③ Spring seat B

Throttle Valve And Jet Needle

1. Install the jet needle on the throttle valve.
2. Place two each spring washers and 3 mm screws on the valve plate, and then place the tab of the valve plate to the slot of the throttle valve and push down to the bottom. Then rotate the valve plate 90° toward the link arm and install the 3 mm screws.

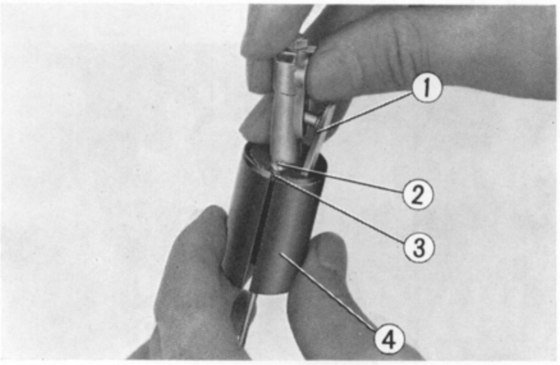

Fig. 185 ① Valve plate ② 3 mm screw ③ Spring washer ④ Throttle valve

3. Install the throttle valve in the carburetor body so that the throttle valve cutaway section is toward the choke valve.

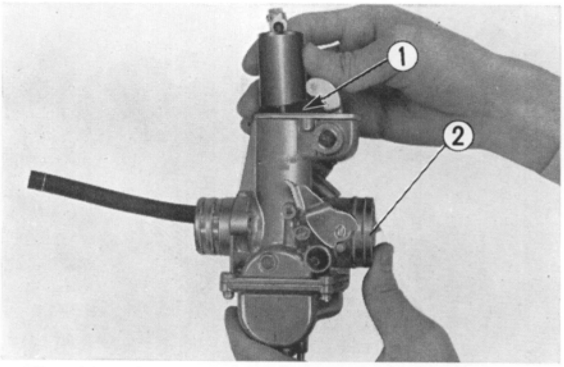

Fig. 186 ① Cutaway section ② Choke valve

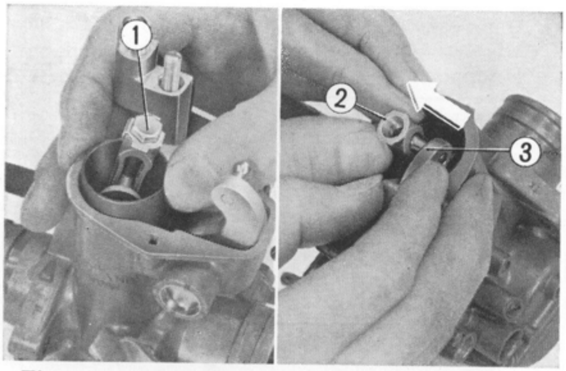

Fig. 187 ① 6 mm bolt ③ Link arm
② Throttle shaft

4. Unscrew the 6 mm bolt from the throttle shaft and push the spherical end of the link arm into the throttle shaft while pulling up the throttle shaft.

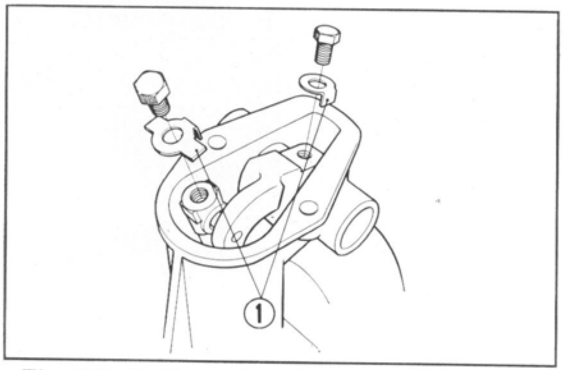

Fig. 188 ① Tongued washer

5. Install the tongued washer with the tongue positioned as shown in Fig. 187, tighten the 6 mm bolt, and then bend up the washer tongue against the bolt head.
6. Install the carburetor top with the two 5 mm screws.

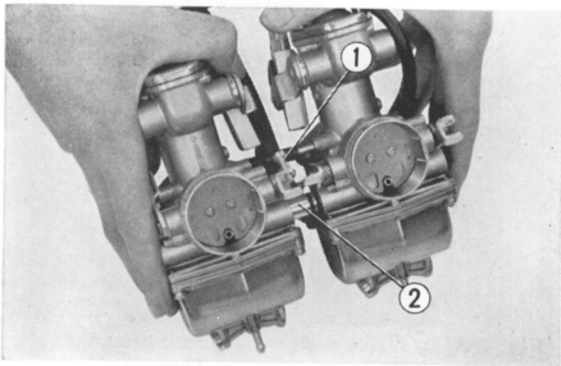

Fig. 189 ① Rubber pipe ② T type joint

7. Combine the two carburetors with the T type joint and the rubber pipe.

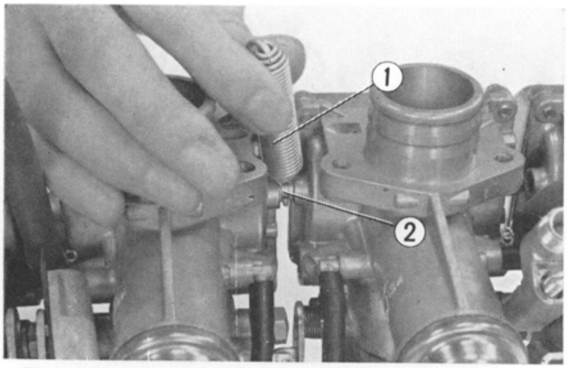

Fig. 190 ① Return spring ② Spring set plate

8. Mount the spring set plate, and then hook up the return spring.
Position the four carburetors, install the set plate, and tighten with the eight 6 mm flat head screws.

9. Install the dust plate A, and mount the adjuster holder to the link arm.

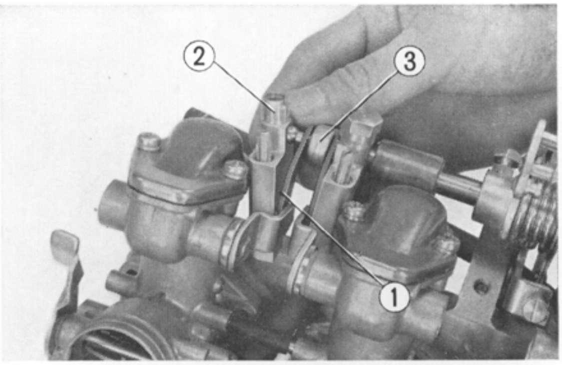

Fig. 191 ① Dust plate A ③ Link arm
② Adjuster holder

10. Insert the coil spring B and tighten it with the cap nut.

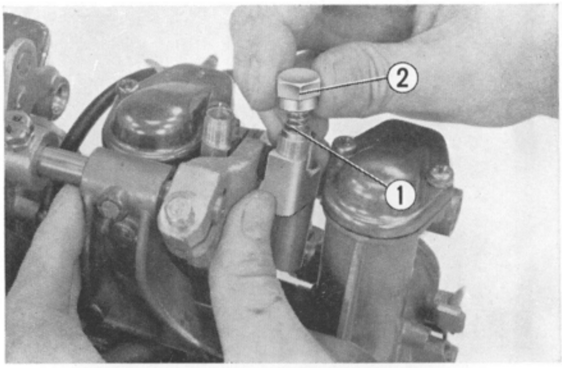

Fig. 192 ① Coil spring B ② Cap nut

11. Install the special washer D, dust plate B, and flat washer on the adjuster screw and tighten with the nuts.

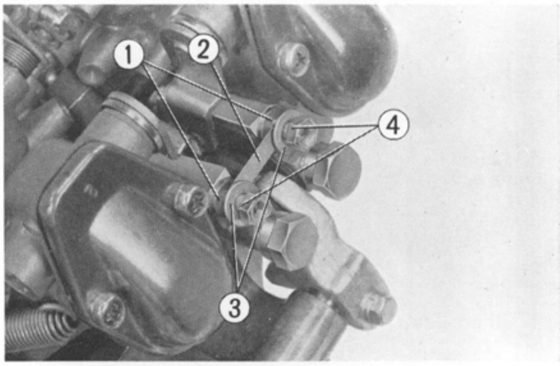

Fig. 193 ① Special washer D ③ Washers
② Dust plate B ④ Nuts

12. Connect the throttle return spring on the link lever, being careful not to damage the hook.
13. Install and route the two fuel tubes as shown in Fig. 193.
14. Mount the carburetor unit on the engine in the reverse order as described in section 2. A.

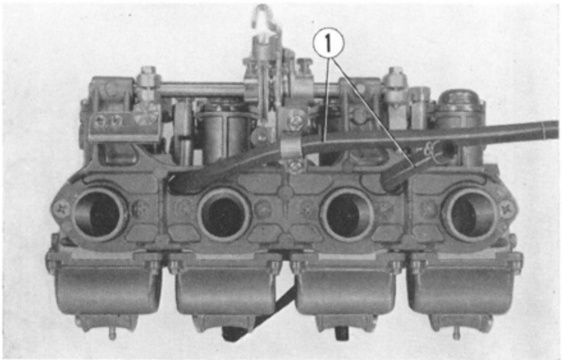

Fig. 194 ① Fuel tubes

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5. CHASSIS

1. FRONT WHEEL AND FRONT BRAKE

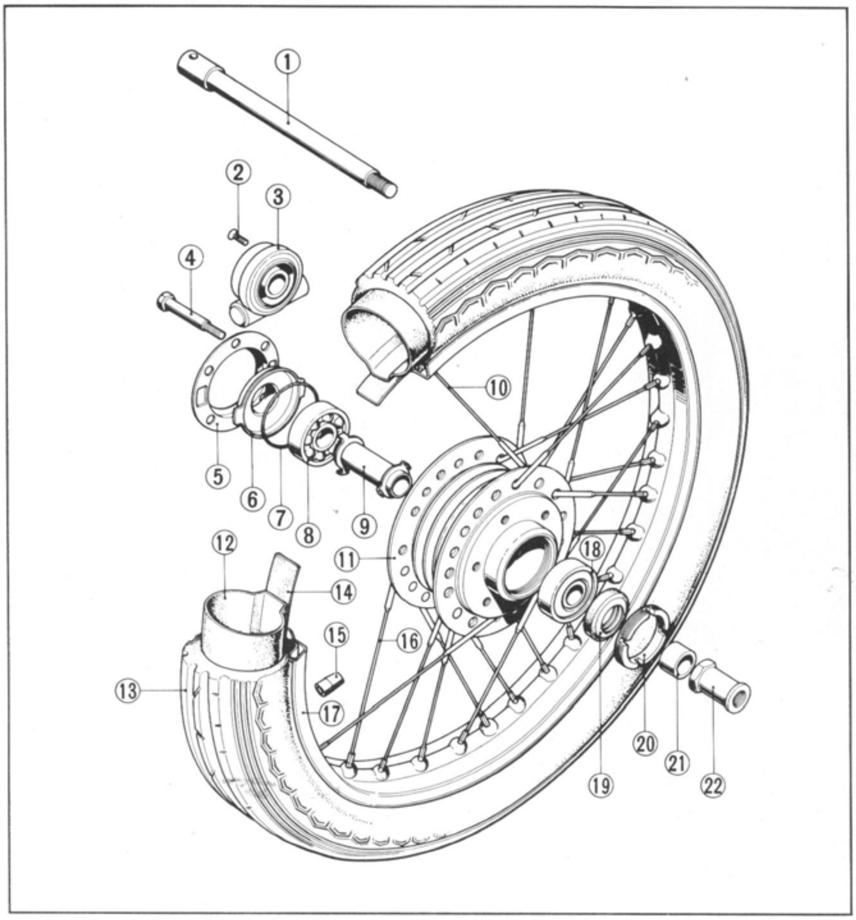

Fig. 195

① Axle shaft
② 5×15 mm oval screw
③ Speedometer gear box
④ 8×102 mm bolt
⑤ Gear box retainer cover
⑥ Gear box retainer
⑦ O-ring
⑧ 6302 R ball bearing
⑨ Front axle distance collar
⑩ Front spoke B
⑪ Front wheel hub
⑫ Front wheel tube
⑬ Front wheel tire
⑭ Front tire flap
⑮ Wheel balancer
⑯ Front spoke A
⑰ Front wheel rim
⑱ 6302 R ball bearing
⑲ 22368 dust seal
⑳ Front wheel bearing retainer
㉑ Front wheel collar
㉒ Front wheel axle nut

Front Wheel

A. Disassembly

1. Place a suitable block under the engine to raise the front wheel off the ground.
2. Disconnect the speedometer cable from the speedometer gear box.
3. Unscrew the axle holder mounting nuts and remove the front wheel assembly from the front fork.
4. Unscrew the front wheel axle nut and remove the front axle.

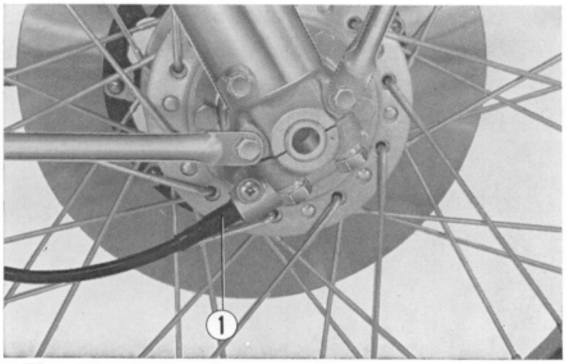

Fig. 196 ① Speedometer cable

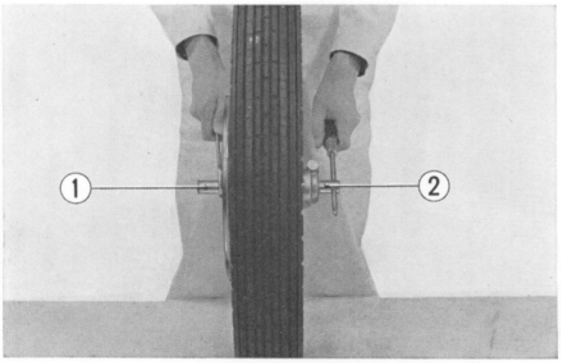

Fig. 197 ① Front axle nut ② Front axle

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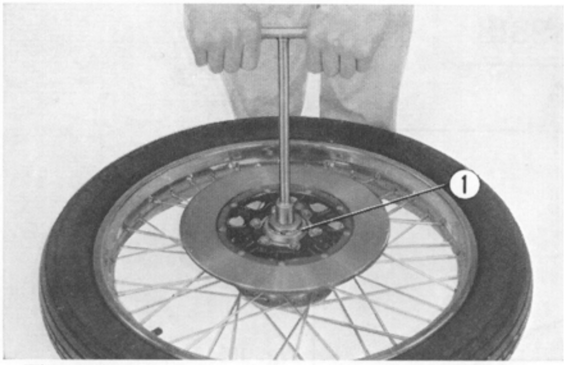


Fig. 198 ① Front wheel bearing retainer

5. Remove the bearing retainer (Tool No. 07910-3230100) from the wheel hub, and the dust seal from the bearing retainer.

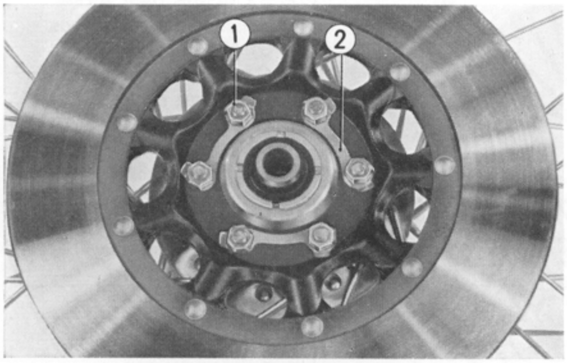


Fig. 199 ① Disc mounting nuts
② Tongued washers

6. To remove the brake disc from the wheel, first, straighten the tongues on the tongued washers, and unscrew the disc mounting nuts.
7. Remove the speedometer gear box and retainer cover from the opposite side.
8. Remove the front wheel bearing.

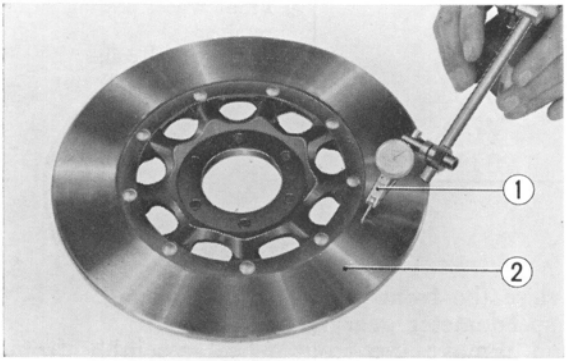


Fig. 200 ① Dial gauge ② Front brake disc

B. Inspection

1. Checking the brake disc.
   Place the disc on a surface plate and measure the trueness using a dial gauge as shown in Fig. 199. Replace the disc if beyond the serviceable limit.

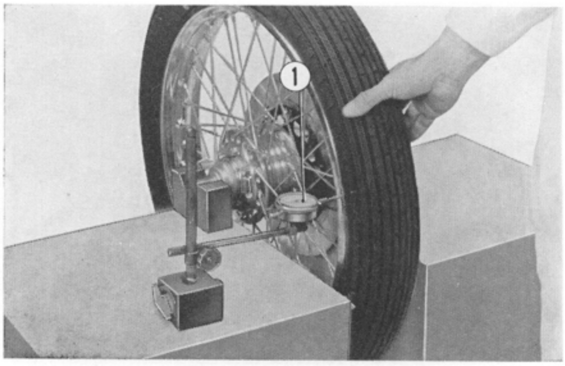


Fig. 201 ① Dial gauge

2. Checking rim wobble and wheel runout.
   Spin the wheel by hand and check both wobble and runout using a dial gauge as shown in Fig. 200.

3. Checking the wheel bearings.
   Measure bearing wear in both axial and radial directions.
4. Check for loose or bent spokes.
   Tighten loose spokes, and straighten or replace bent spokes.
5. If tire pressure is low, check for leaks around the valve stem and also the valve.
6. Check the condition of the tire both inside and outside for cuts, bruises, and imbedded nails.
7. Check to be sure that the tire is correctly inflated.
   Tire inflation pressure: 1.3 kg/cm^2 (25.6 psi)
8. Check if air leaks from the tire valve.

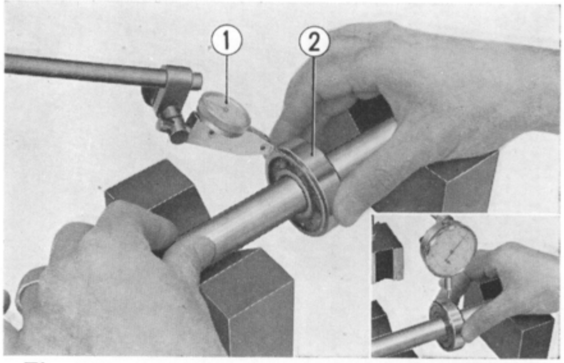


Fig. 202 ① Dial gauge ② Ball bearing

C. Reassembly

1. Drive the 6302R wheel ball bearing into the hub using a bearing driver.
   On the model CB 550, use driver attachment (Tool No. 07946-935020) and driver handle (Tool No. 07949-6110000).
2. Install the dust seal in the wheel bearing retainer, mount the retainer into the wheel hub, and install the O-ring into the hub.
3. Install the gear box retainer cover on the gear box retainer so that the cover matches the slot.

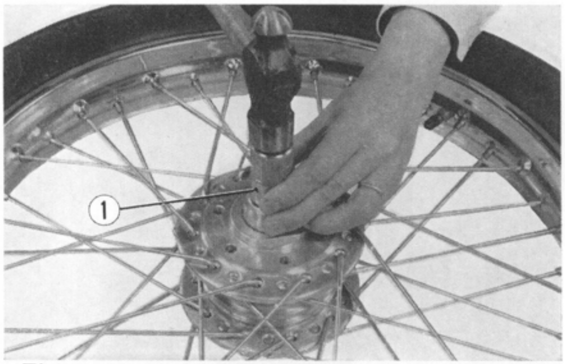


Fig. 203 ① Bearing driver

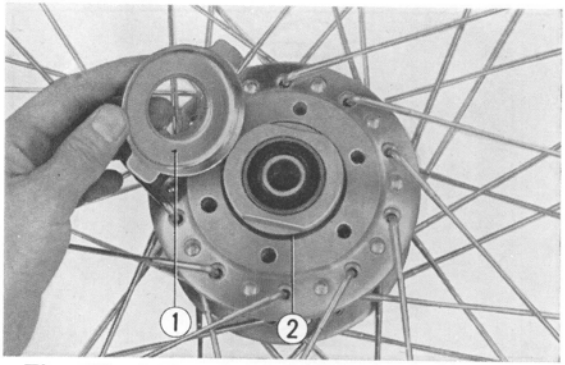


Fig. 204 ① Gear box retainer
② O-ring

4. Mount the brake disc on the wheel with bolts, tongued washers, and nuts. After tightening, bend up the tongues on the washers to lock the nuts.

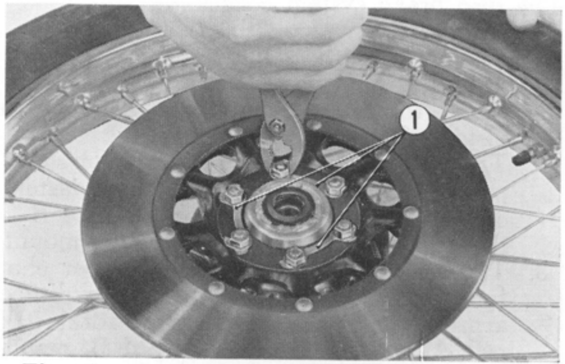


Fig. 205 ① Tongued washers

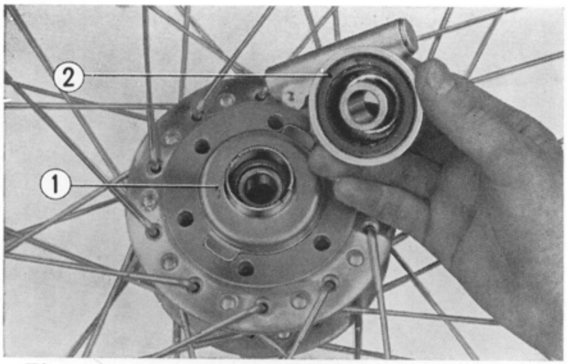


Fig. 206 ① Gear box retainer
② Speedometer gear box

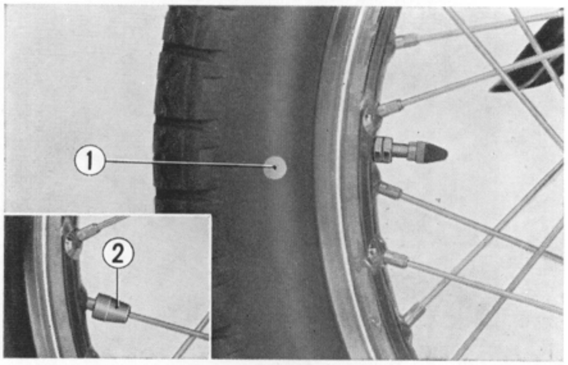


Fig. 207 ① Balance marking ② Balance weight

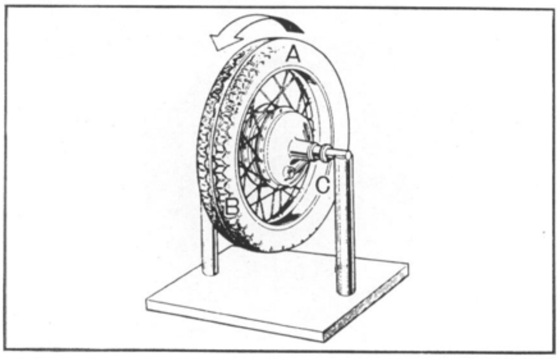


Fig. 208

5. Install the speedometer gear box on the opposite side of the brake disc, and insert front axle into the hub through the speedometer gear box.
6. Mount the front wheel on the front fork, install the axle holders, and tighten the nuts.

Note:
Make sure that the speedometer gear box is mounted in the proper position.
First tighten the axle holder on the left side (brake disc side), and then the right side.

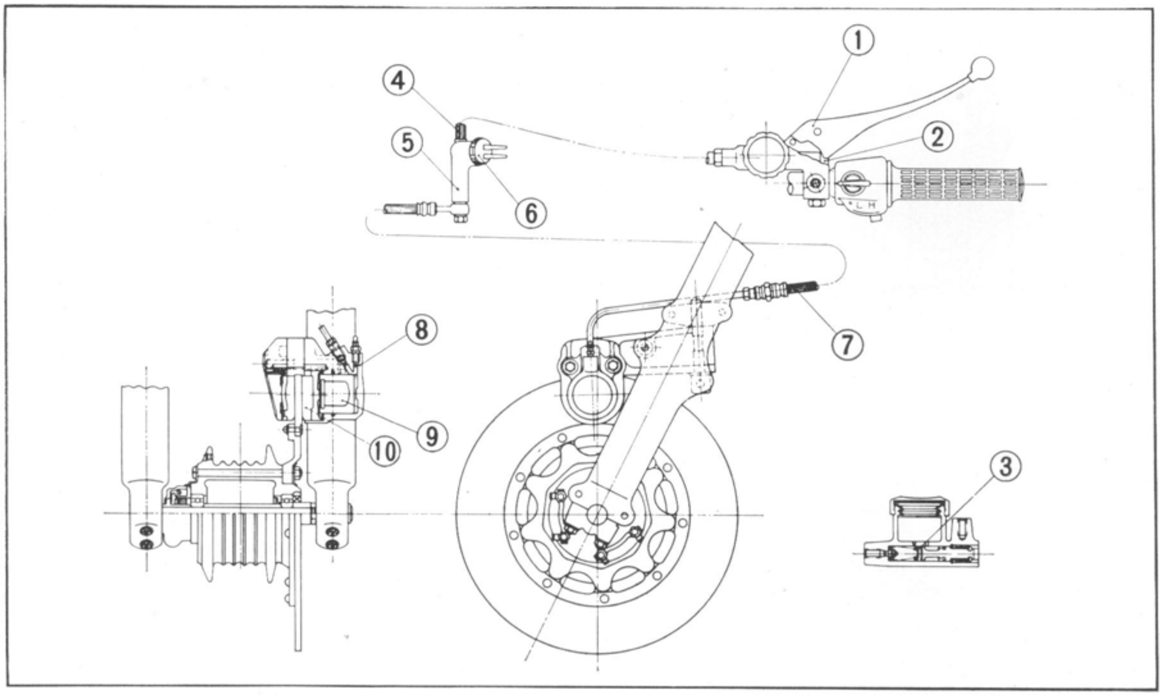
7. Connect the speedometer cable to the gear box.
8. Checking the wheel balance
   a. Mark the side of the tire and rotate the wheel lightly several times and observe the position where the mark comes to rest.
   b. If the wheel is not statically balanced, the mark on the tire will come to rest at the same position. (heavier section will be at the bottom).
   c. Attach a balance weight on the spoke at the lighter section (at the top).
   d. The wheel is in balance when it does not stop at any definite position after rotating the wheel several times.
   The balance weights are available in four different weight sizes (5, 10, 15 and 20 gr).
   e. The front wheel should be balanced with the brake disc installed.

Front disc brake

The disc brake system consists of the brake lever and master cylinder on the right handle bar, caliper mounted on the front fork left side, and the special stainless steel brake disc mounted on the wheel hub.

(**Operation**)

1. When the brake lever ① is gripped, the cam ② at the base of the lever actuates a piston of the master cylinder.
2. The piston moves the primary cup ③ which blocks the passage to the reservoir and pressurizes the fluid within the master cylinder. This pressure is transmitted to the caliper chamber through brake hose B ④, 3 way joint ⑤, and brake hose A ⑦. Also, the stop light pressure switch ⑥ mounted on the 3 way joint is actuated.
3. The hydraulic pressure within caliper chamber A applies pressure against piston ⑨, which forces pad A ⑩ against the brake disc. Since the caliper assembly is mounted on an arm which pivots at the front fork, it is free to swivel, therefore, the reaction from pad A ⑩ is transmitted to pad B, resulting in equalized pressure being applied by the pads to both sides of the brake disc.



① Front brake lever
② Front brake lever cam
③ Primary cup
④ Front brake hose B
⑤ Three way joint
⑥ Stop switch
⑦ Front brake hose A
⑧ Caliper A
⑨ Piston
⑩ Pad A

Fig. 209

A. Disassembly

1. Remove the front wheel.
2. Unscrew the oil joint bolt and disconnect the brake hose.

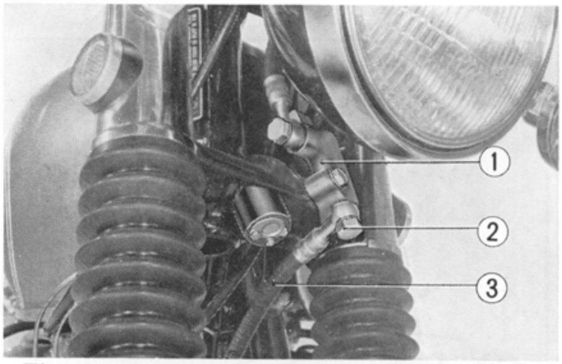


Fig. 210 ① Oil joint ② Oil joint bolt ③ Brake hose

3. Unscrew the three caliper mounting bolts and a caliper adjusting bolt, and remove the caliper assembly.
4. Unscrew the two caliper set bolts and separate caliper A and B.

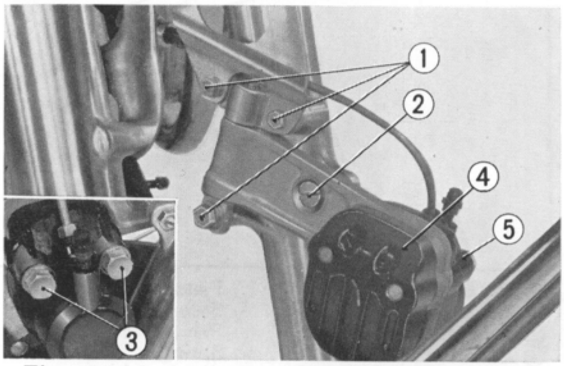


Fig. 211 ① Caliper mounting bolts
② Caliper adjusting bolt
③ Caliper set bolts
④ Caliper B
⑤ Caliper A

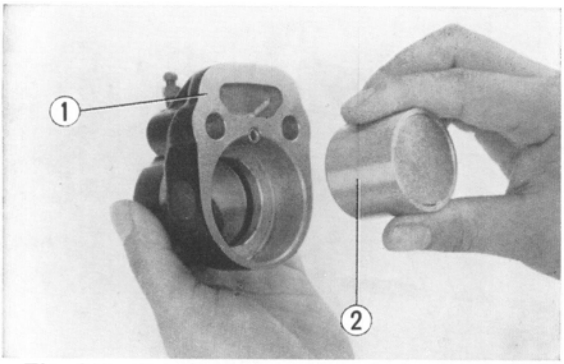


Fig. 212 ① Caliper A ② Piston

5. Remove pad A and piston from caliper A.
   Use compressed air to remove the piston.
6. Remove pad B from caliper B.

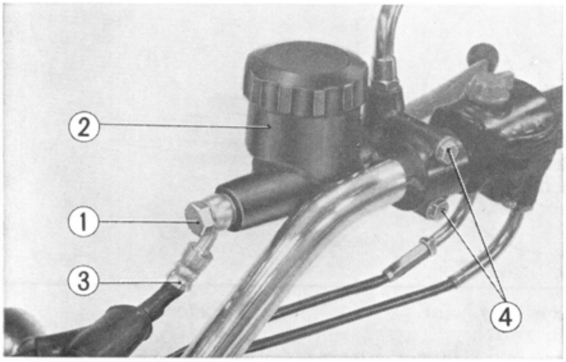
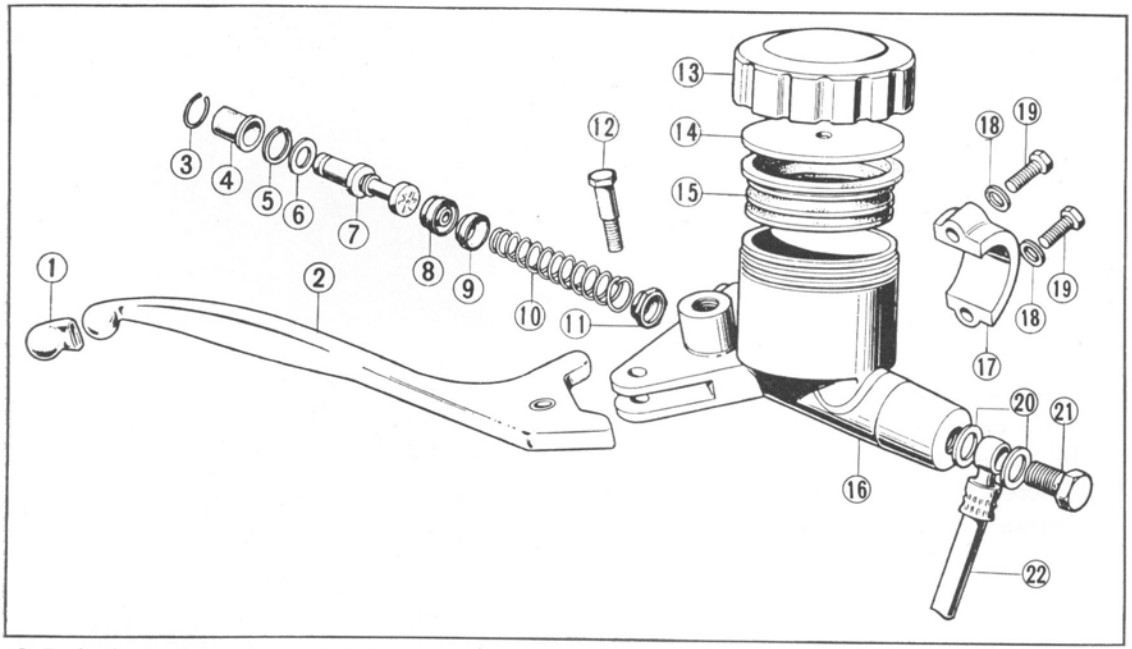


Fig. 213 ① Joint bolt
② Master cylinder unit
③ Brake hose
④ Master cylinder mounting bols

7. Unscrew the master cylinder joint bolt and remove the brake hose.
8. Unscrew the master cylinder mounting bolts and remove the master cylinder unit from the handle bar.
9. Disassemble the master cylinder.



① Brake lever cap
② Brake lever
③ Stopper washer
④ Boot
⑤ 18mm internal snap ring
⑥ 10.5mm washer
⑦ Piston
⑧ Secondary cup
⑨ Primary cup
⑩ Spring
⑪ Check valve
⑫ Handle lever pivot bolt
⑬ Reservoir cap
⑭ Master cylinder plate
⑮ Diaphragm
⑯ Master cylinder body
⑰ Master cylinder holder
⑱ 6mm spring washer
⑲ 6mm hex bolt
⑳ Joint bolt washer
㉑ Joint bolt
㉒ Front brake hose

Fig. 214

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10. Remove the boot and remove the snap ring from the master cylinder body with the snap ring plier (Tool No. 07914-3230000) Next, remove the 10.5 mm washer, piston, secondary cup, spring, and check valve.

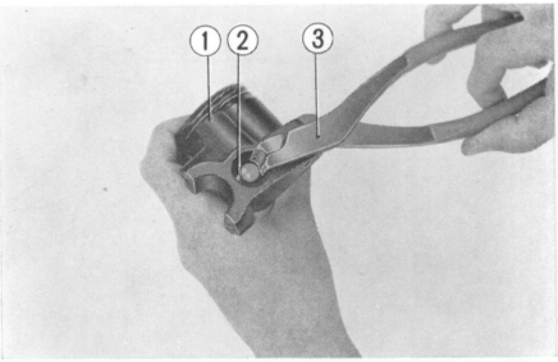

Fig. 215 ① Master cylinder body ③ Special pliers
② Snap ring

B. Inspection

1. Checking the wear of the disc brake pad. Red grooves are provided for both pad A and B as a wear limit indicator. When the pad is worn to this red groove, the pad should be replaced. After replacing the pads, adjust the clearance between the brake disc and pad to **0.15 mm (0.006 in.)** with the caliper adjusting bolt.
Adjust by turning the caliper adjusting bolt until the pad drags slightly against the brake disc, and from this position back off 1/2 turn and tighten the lock nut.

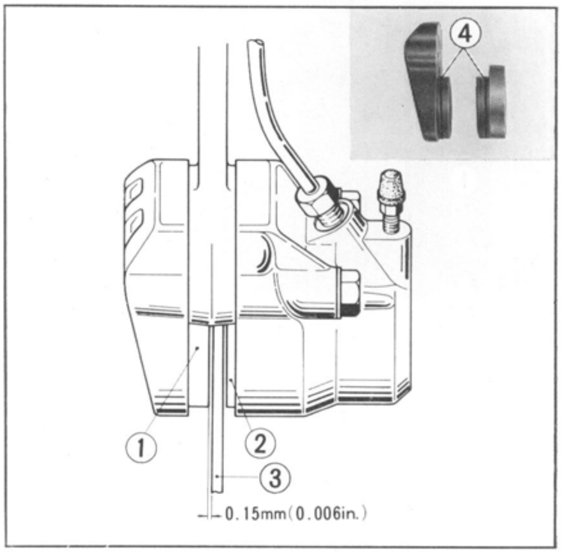

Fig. 216 ① Pad B ③ Brake disc
② Pad A ④ Wear limit indicator

2. Checking the caliper cylinder and piston. Measure the inside diameter of the caliper cylinder and the outside diameter of the piston using a cylinder gauge and a micrometer. If the clearance is greater than serviceable limit, replace the part.

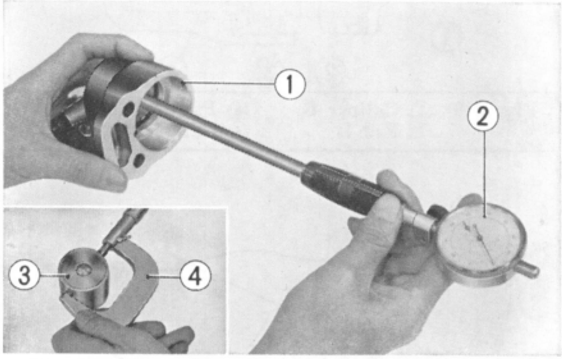

Fig. 217 ① Caliper cylinder ③ Piston
② Cylinder gauge ④ Micrometer

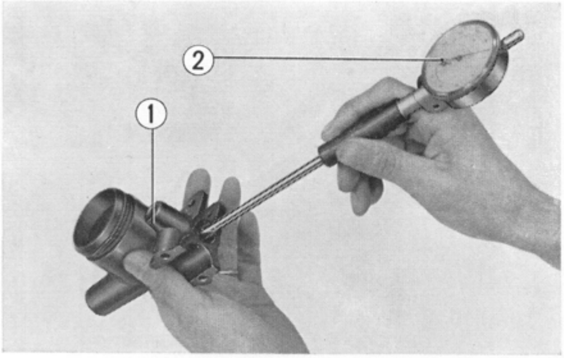

Fig. 218 ① Master cylinder ② Cylinder gauge

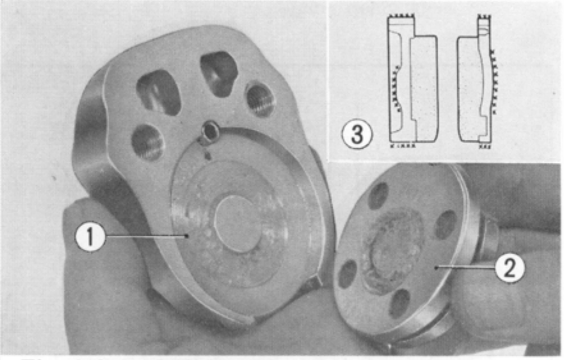

Fig. 218-1 ① Caliper B
② Pad B
③ Apply grease to part marked (X)

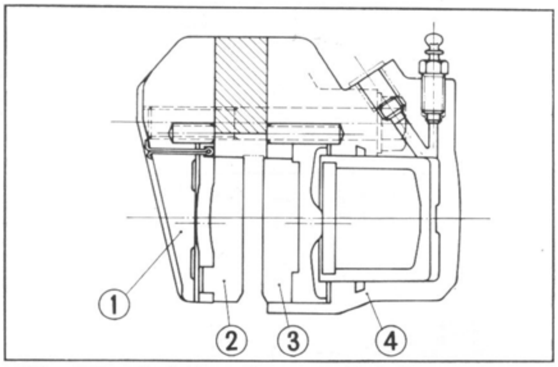

Fig. 219 ① Caliper B ③ Pad A
② Pad B ④ Caliper A

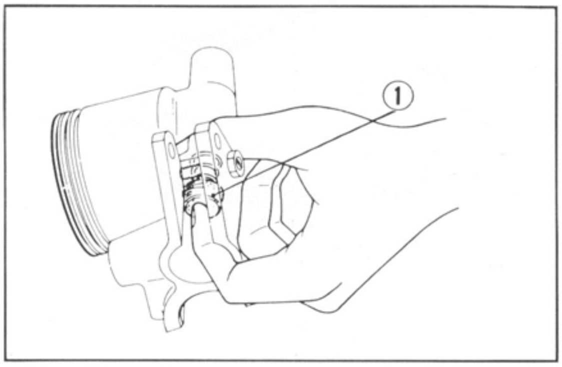

Fig. 220 ① Primary cup

3. Checking the master cylinder and piston. Measure the inside diameter of the cylinder and the outside diameter of the piston using cylinder gauge and a micrometer. If the clearance is greater than serviceable limit, replace the part.

C. Reassembly

1. Perform reassembly in the reverse order of disassembly.
2. Assemble pad A and B.

Note:

Apply silicone sealing grease on the pads sliding surfaces of the caliper before assemblying pad A and B. This serves as a dust preventative as well as water repellent. Do not apply grease on the pad friction surface.

3. Apply a coat of brake fluid to the inside surface of the cylinder.
4. Install the check valve to the return spring and install them in the cylinder.

CAUTION:

When installing the check valve and return spring in the cylinder, make sure that the valve is facing correctly and that the spring is in correct position.

5. Apply a thin coat of brake fluid to the outside surface of the primary cup.
   Install the primary cup taking care not to allow dust to attach to it or not to damage it. Make sure that the cup is not inclined or not reversed in the cylinder.

Note:

When the primary cup has been disassembled, replace it with a new one.

6. Install the 18 mm internal snap ring.
   Turn the snap ring to check for proper fit.

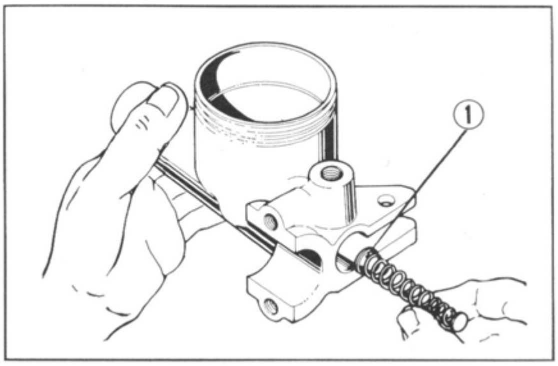

Fig. 221 ① Diaphragm ③ Master clinder
② Brake fluid

D. Brake adjustment

When the brake has been disassembled always perform the air bleeding operation of the hydraulic brake and then adjust the brake.

1. Brake lever free play

   Lever free play of **2~5 mm (0.08~0.2 in.)** measured at the end of the lever is normal. If the play is excessive, inspect the brake system and replace any worn or defective part.

2. Brake fluid level

   Fill the reservoir with brake fluid to the level line.

Note:

Brake fluid will damage paint finish, rubber parts, and meter components, therefore, exercise care in handling and immediately wipe in case of spillage.

- To air bleeding the brake system refer page 15.

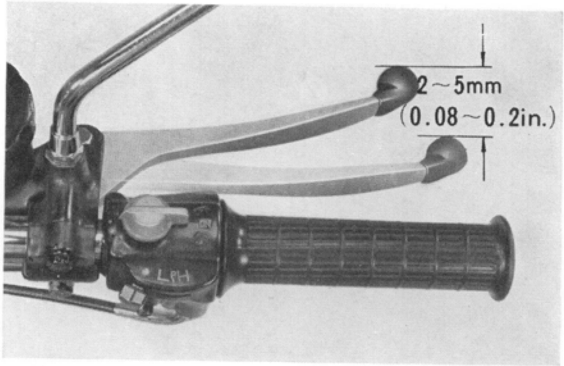

Fig. 222

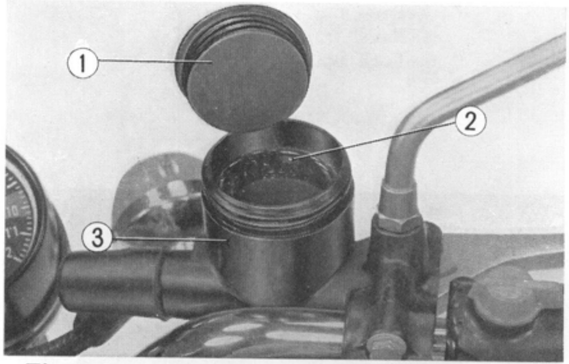

Fig. 223 ① Diaphragm ② Brake fluid ③ Master cylinder

2. REAR WHEEL AND REAR BRAKE

① 6304 U ball bearing
② Distance collar
③ Wheel balancer
④ Tire
⑤ Tube
⑥ Tire flap
⑦ Wheel hub
⑧ Rim
⑨ O-ring
⑩ Wheel damper A
⑪ Wheel damper B
⑫ Final driven flange
⑬ Distance collar B
⑭ 6305 U ball bearing
⑮ Bearing retainer
⑯ 10×48 driven sprocket bolt
⑰ Side collar
⑱ Final driven sprocket
⑲ 34559 oil seal
⑳ O-ring
㉑ Sprocket side plate
㉒ Tongued washer
㉓ 10 mm nut

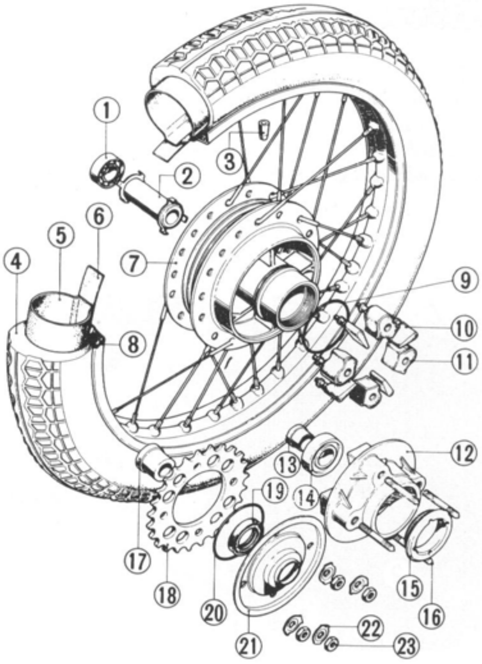

Fig. 224

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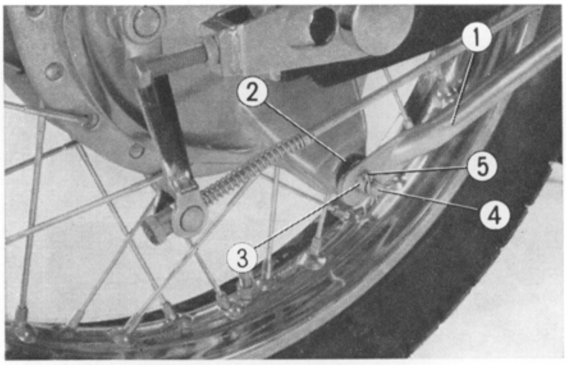

Fig. 225 ① Brake stopper arm
② Stopper arm cushion rubber
③ 8mm nut
④ Panel stopper bolt
⑤ Lock pin

A. Disassembly

1. Remove the rear brake rod.
2. Remove the rear brake panel stopper bolt to disconnect the brake stopper arm.

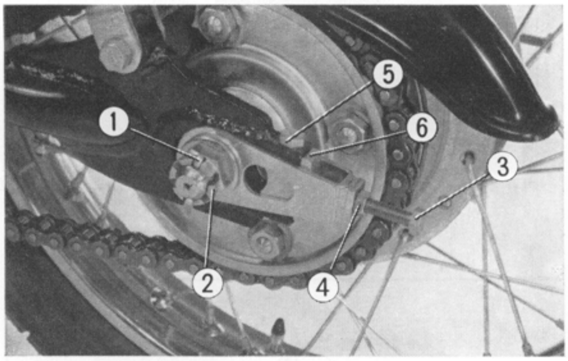

Fig. 226 ① Cotter pin
② Axle nut
③ Adjusting bolt
④ Lock nut
⑤ Lock bolt
⑥ Chain adjusting stopper

3. Remove the both left and right mufflers.
4. Loosen the drive chain adjusting bolt on both sides, remove the cotter pin, and loosen the axle nut.
5. Push the wheel forward, and lift the chain off the driven sprocket. Remove the lock bolts, chain adjusting stoppers and pull the wheel rearward to remove the wheel and axle from the rear wheel.
6. Straighten the tongued washers and unscrew the four nuts to remove the driven sprocket.
7. Remove the rear wheel bearing retainer with the bearing retainer remover, and drive out the bearing from the hub.

Note:
The bearing retainer has a left hand thread.

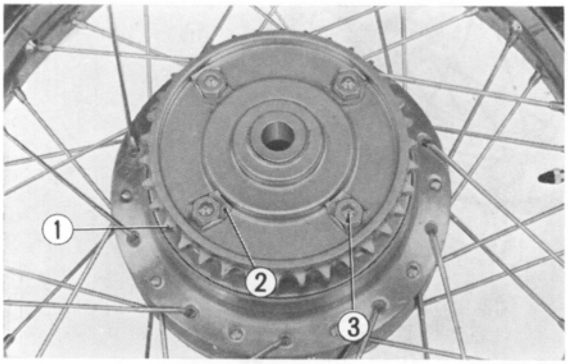

Fig. 227 ① Driven sprocket
② Tongued washer
③ Lock nut

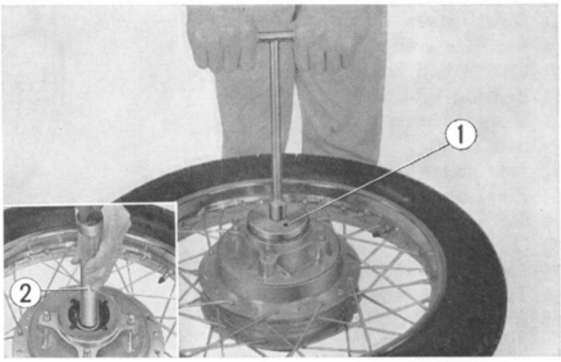

Fig. 228 ① Bearing retainer remover
② Bearing driver

8. Remove the two cotter pins and washer from the brake shoe anchor posts.

B. Inspection

1. Check rim runout and wobble.
2. Check rear axle shaft runout.
3. Check brake lining wear.
4. Check brake drum wear.
5. Check ball bearing wear.
6. Check for loose spokes, bending and damage. Tighten, straighten or replace as necessary.
7. Check tire on both inside and outside for cuts, bruises, and imbedded of nails. Repair or replace as necessary.

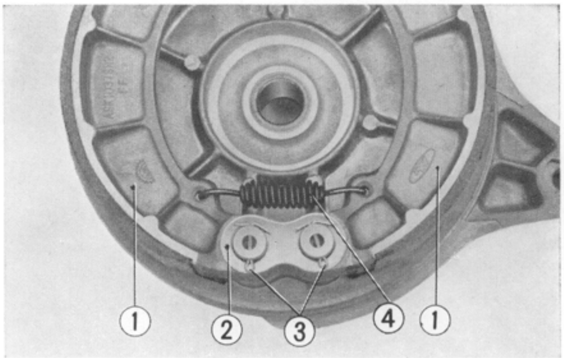

Fig. 229 ① Brake shoes ② Pin washer ③ Cotter pins ④ Brake shoe spring

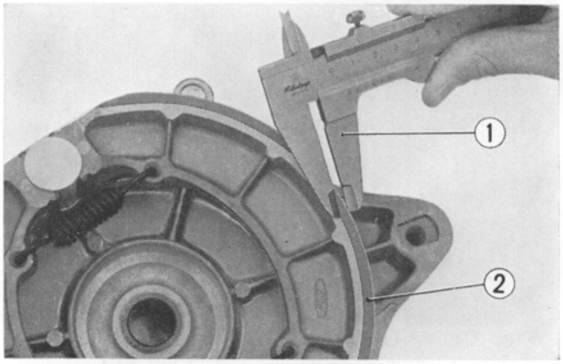

Fig. 230 ① Vernier caliper ② Brake shoe

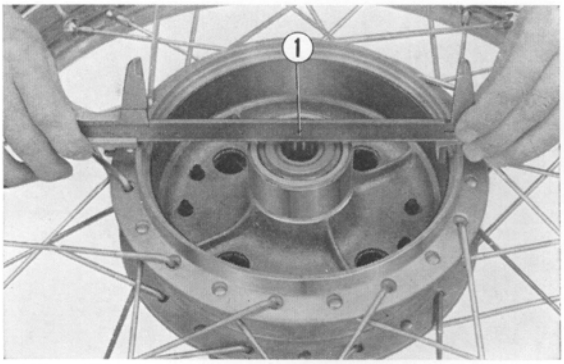

Fig. 231 ① Vernier caliper

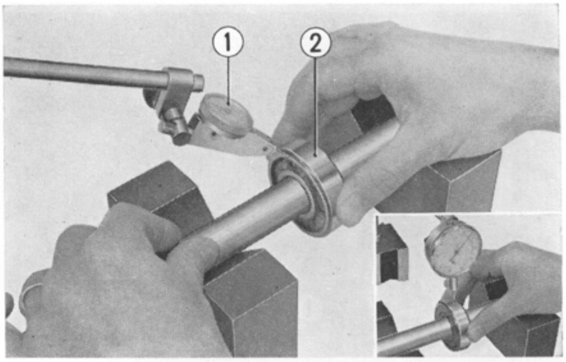

Fig. 232 ① Dial gauge ② Ball bearing

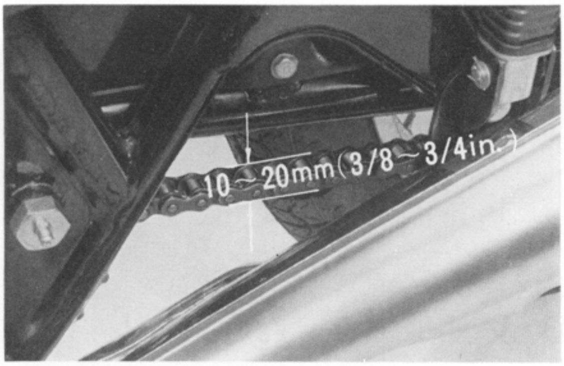

Fig. 233

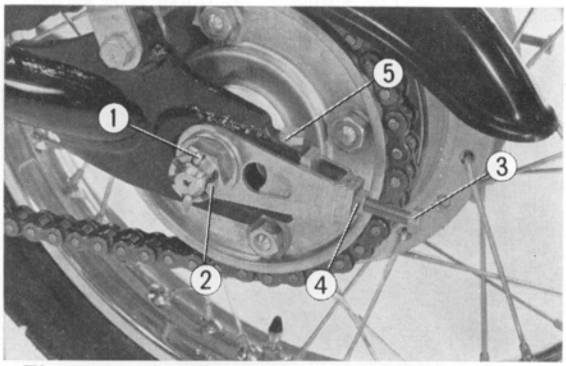

Fig. 234 ① Cotter pin ② Axle nut ③ Adjusting bolt ④ Lock nut ⑤ Lock bolt

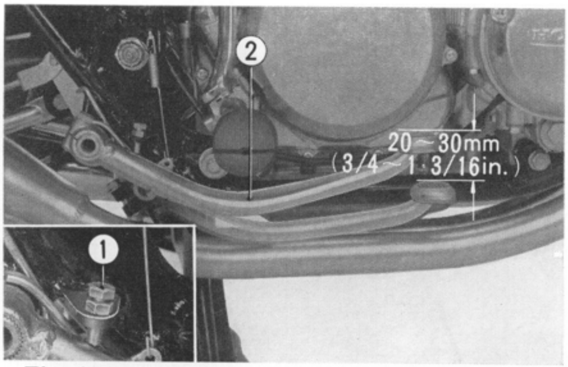

Fig. 235 ① Adjusting bolt ② Brake pedal

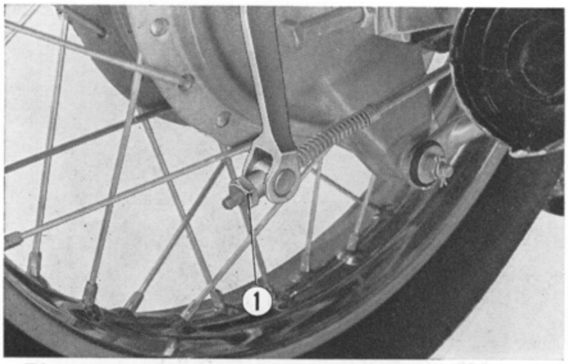

Fig. 236 ① Adjusting nut

C. Reassembly

1. Perform reassembly in the reverse order of disassembly.
2. Install the brake shoes on the brake panel.

Note:

Pay special attention not to allow oil, grease, dust or dirt to get inside the brake shoes and wheel hub.

Use thread lock cement when installing the bearing retainer.

Apply grease on the friction surfaces of the flange and wheel hub.

3. Fill the cavity in each ball bearing and inside the wheel hub with grease. Install the bearings using the bearing driver B attachment (Tool No. 07945-3230200), on the model CB 550, use a driver attachment (Tool No. 07946-3600000) and driver handle (Tool No. 07949-6110000), taking care not to allow the space collars to incline.
4. Mount the brake panel on the hub and the drive chain on the sprocket. Insert the wheel axle through the assembled wheel hub, and mount the wheel on the rear fork.
5. After completing the reassembly, adjust the slack of the drive chain.
   a. Normal chain slack is 10~20 mm (3/8~3/4 in) with a slight force.
   b. Loosen the axle nut and adjust the drive chain with the adjusting bolt, making sure the adjuster marks on both sides are in the same position when completed.
6. Install the rear brake stopper arm, and adjust the height and play of the brake pedal.
   a. Adjust the height of the pedal with the adjusting bolt.
   b. Adjust the free play of the pedal to 20~30 mm ($^{3}/_{4}$~1 $^{3}/_{16}$ in) with the adjusting nut on the end of the brake rod.
7. Chack to be sure that is correctly inflated.

   Tire inflation pressure: 2.0 kg/cm^2 (28.5)

3. STEERING

The steel tube handle bar is mounted on the front fork top bridge with the handle bar holders. The top bridge is bolted to the front fork and steering stem. The steering stem is mounted on the frame head pipe.

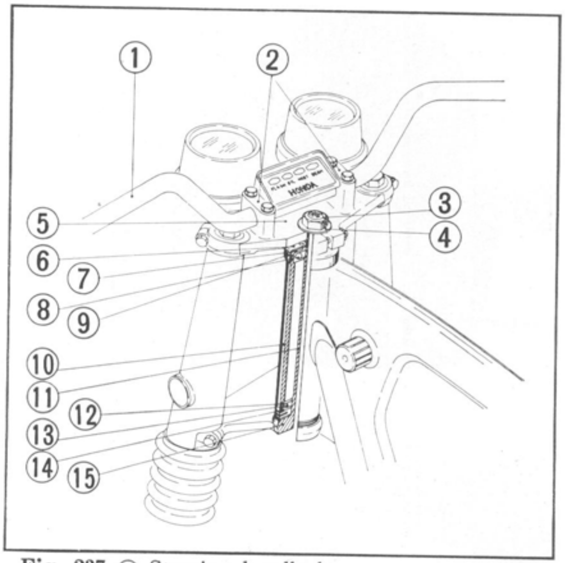

Fig. 237 ① Steering handle bar
② Handle bar holder
③ Steering stem nut
④ Steering stem washer
⑤ Fork top bridge
⑥ Steering head top nut
⑦ Steering head top cone race
⑧ Steel ball
⑨ Steering top ball race
⑩ Steering head
⑪ Steering stem
⑫ Steering bottom ball race
⑬ Steel ball
⑭ Steering bottom cone race
⑮ Steering head dust seal

A., Disassembly

1. Unscrew two bolts to remove the master cylinder unit.
2. Disconnect the clutch cable at the clutch lever.
3. Remove the lighting switch and disconnect the throttle cable from the throttle grip pipe.
4. Remove the head light unit from the head light case and disconnect the wiring at the harness within the case.
5. Unscrew four bolts, remove the handle bar holders and disconnect the wire harness.

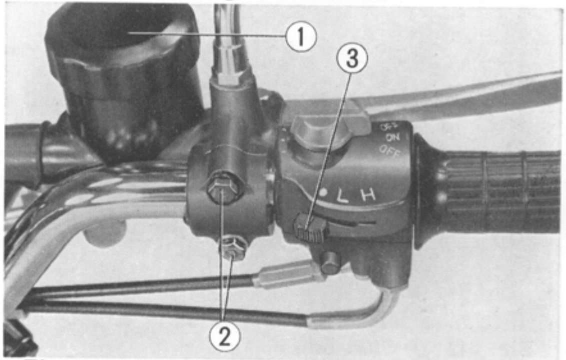

Fig. 238 ① Master cylinder unit ③ Lighting switch
② 6 mm bolts

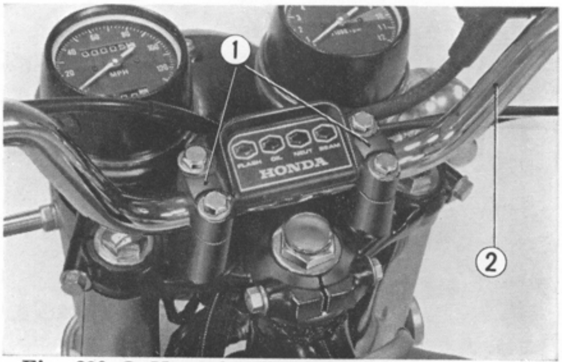

Fig. 239 ① Upper handle bar holders ② Handle bar

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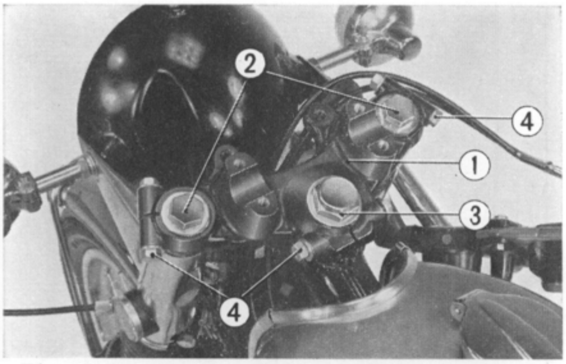

Fig. 240 ① Fork top bridge ③ Stem nut
② Fork top bolts ④ 8 mm bolts

6. Unscrew the two mounting bolts and remove the speedometer and tachometer.
7. Unscrew the stem nut, remove the 8 mm bolts and the fork top bridge.

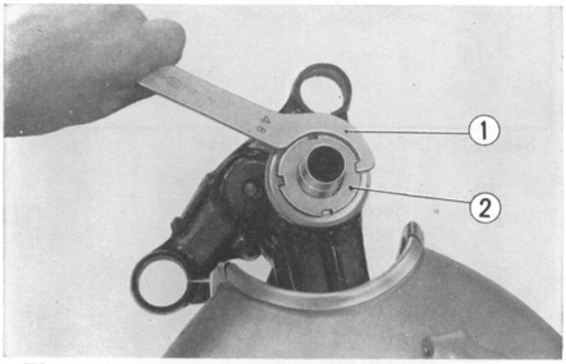

Fig. 241 ① 48 mm pin spanner
② Steering stem head nut

8. Remove the front fork.
9. Unscrew the steering stem head nut with the 48 mm pin spanner (Tool No. 07902–200000).
10. Remove the steering stem out the bottom.

Note:

#8 Steel balls will drop out, therefore, exercise care not to loose them.

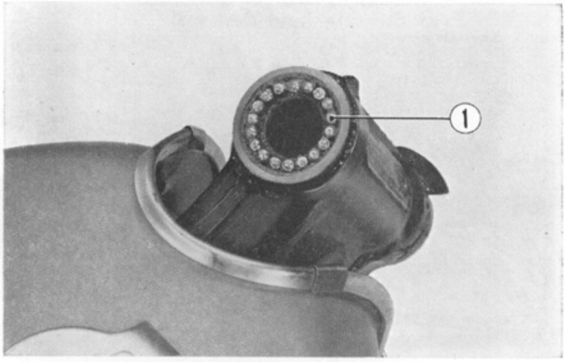

Fig. 242 ① Steel balis

B. Inspection

1. Check the handle bar for twisting and damage.
2. Check the steering stem for twisting and cracking.
3. Check the steel balls for cracks and wear.
4. Check the cone race for wear.
5. Check the stop for deformation or craks.

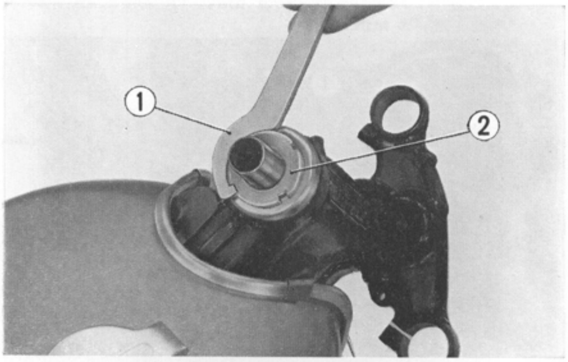

Fig. 243 ① 48 mm pin spanner
② Steering stem head nut

C. Reassembly

1. Mix the steel balls in grease and assemble 18 into the upper race and 19 into the lower cone.
2. Install the steering stem into the head pipe being careful not to drop the steel balls.
3. Assemble the top cone race and tighten the steering stem head nut.
   First tighten the steering head top thread fully, then back it off just to the point where the handlebar can be turned with reasonable ease.

Note:

Before assembly, wash the cone and ball races, and steel balls. Mix the balls in new grease.

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4. Assemble the front fork.
5. Assemble the front fork top bridge, and mount the speedometer and tachometer.
6. Install the handle bar.

Note:
Align the punch marks on the handle bar to the parting surface of the holder.

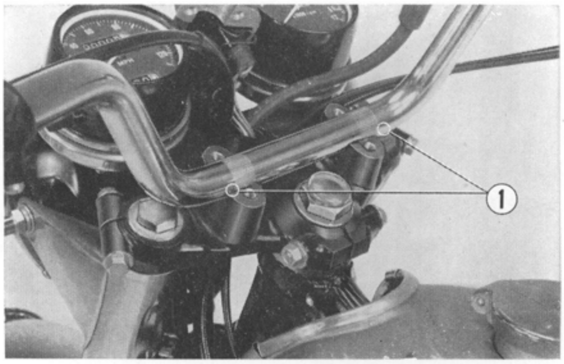

Fig. 244 ① Punch marks

7. Reconnect the electrical wiring.
8. Reconnect the clutch and throttle cables, and the brake hose to the master cylinder unit.

Note:

- **Make sure the cables and the electrical wirings are free from binding when the handle is turned fully to both sides.**
- **Adjust the play in the cables.**
  Clutch lever: 10.0~20.0 mm (3/8~3/4 in.) at the end of the lever.
  Brake lever: 2~5 mm (5/64~13/64 in.) at the end of the lever.

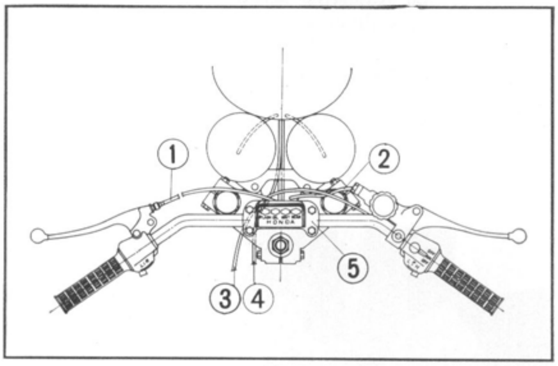

Fig. 245 ① Clutch cable
② Front brake hose
③ Throttle cable
④ Wire harness
⑤ Fork top bridge

4. FRONT SUSPENSION

The front fork unit consist of a lightweight aluminium front fork bottom case with a dual action telescoping shock absorber oil damper. Cushioning travel is 91 mm (3.15 in.) on compression and 31 mm (1.22 in.) on extension strokes.

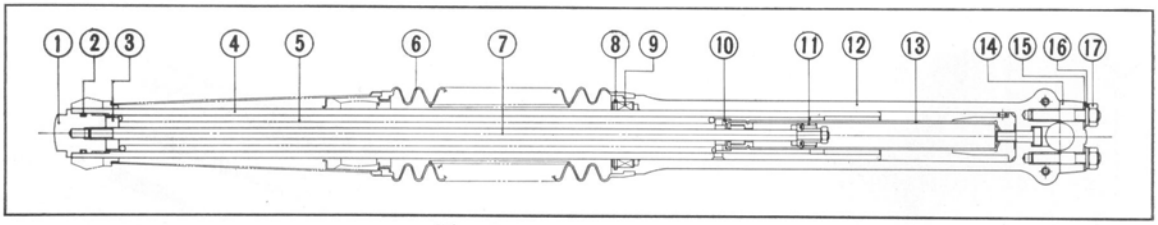

Fig. 246 Front fork unit

① Front fork bolt
② O-ring
③ Lock nut
④ Front fork pipe
⑤ Front suspension spring
⑥ Front fork boot
⑦ Damper rod
⑧ Snap ring
⑨ Oil seal
⑩ Holder
⑪ Collar
⑫ Front fork bottom case
⑬ Damper case
⑭ Axle holder
⑮ Plain washer
⑯ Spring washer
⑰ Nut

A. Disassembly

1. Loosen the fork bolt, remove the drain plug and drain the damper oil.
2. Remove the front wheel.
3. Unscrew the three caliper mounting bolts and an adjusting screw, and remove the caliper from the left front fork.

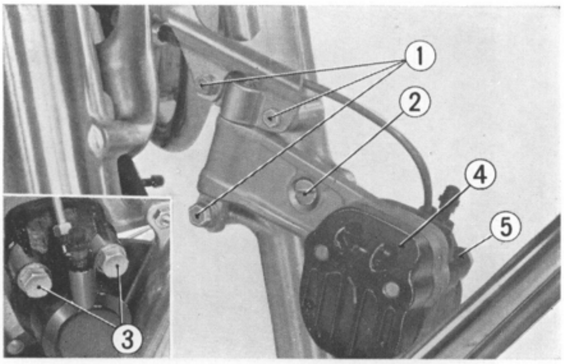

Fig. 247 ① Caliper mounting bolts
② Adjusting screw
③ Caliper set bolts
④ Caliper B
⑤ Caliper A

4. Unscrew the 8×56 mm and the 10×35 mm bolts, and pull the forks off the bottom.

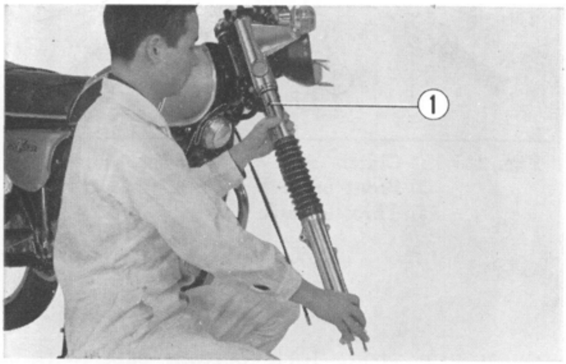

Fig. 248 ① Front fork

5. Unscrew the front fork bolt, loose from the piston rod lock nut, and remove the front fork spring and cushion spring seat.

   Separate the front fork pipe and bottom case.
6. Unscrew the 8 mm bottom case bolt using a hollow set wrench (Tool No. 07917-3230000) and remove the damper unit from the bottom case. (Fig. 252)

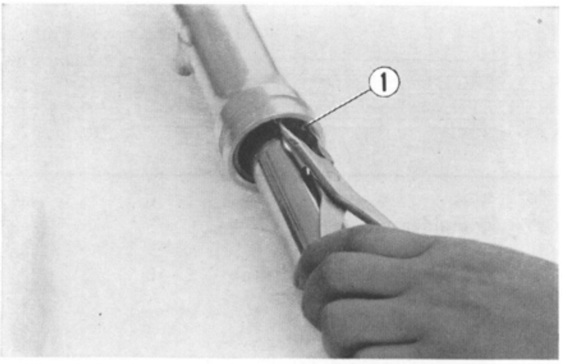

Fig. 249 ① Snap ring

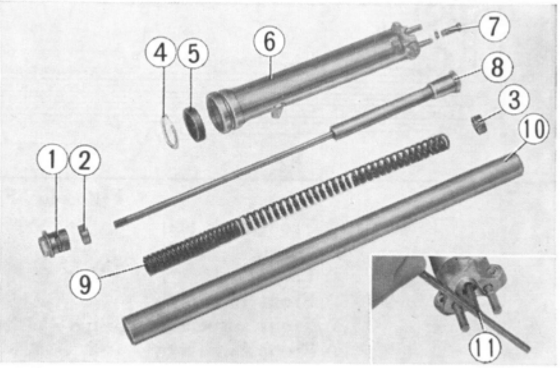

Fig. 250 ① Front fork bolt
② Lock nut
③ Cushion spring seat
④ Snap ring
⑤ Oil seal
⑥ Bottom case
⑦ 8 mm bolt
⑧ Damper unit
⑨ Fork spring
⑩ Fork pipe
⑪ Special tool

B. Inspection

1. Check the front suspension spring.
2. Check the fork pipe and bottom case for damage or looseness.
3. Check the oil seal for scratches and damage.
4. Check for excessive clearance between the shock absorber piston and the cylinder.

C. Reassembly

1. Reassemble in the reverse order of disassembly. Take care not to allow dust, or other foreign matters to adhere to the component parts.
2. Install the fork pipe into the bottom case. Apply a coat of thread lock cement to the socket bolt and tighten it using a socket wrench.
3. Apply a coat of Honda ATF to both sides of the oil seal and install it using a fork seal guide (Tool No. 07947-3290000).

Note:

- **Do not forget to install the snap ring.**
- **Replace the removed seal with a new one.**

4. Apply a coat of thread lock cement to the threaded part of the damper. Making sure that the 8 mm lock nut is completely screwed on the threaded part of the damper, tighten the fork bolt.
5. Remove the front fork bolt and pour a specified amount of Honda ATF into the front fork pipe.
   Capacity : 155∼165 cc (5.3∼5.6 oz.)
   (at disassembly)
6. Install and tighten the front fork bolt.
7. Route the front forks through the holes in the fork top bridge and tighten them with the 8 mm setting bolts and 10 mm setting bolts.

Note:
Remove oil, it any, from around the front forks.

8. After reassembling, check the front forks for smooth movement. Also check if oil leaks from the oil seals.

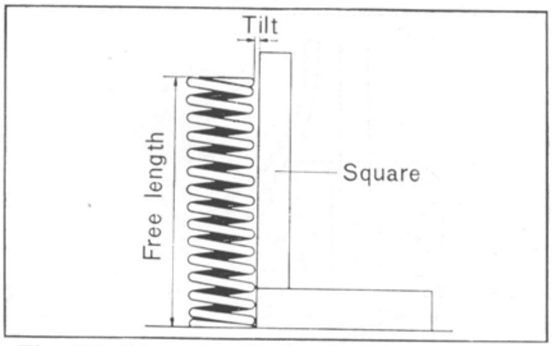

Fig. 251 Measuring the free length

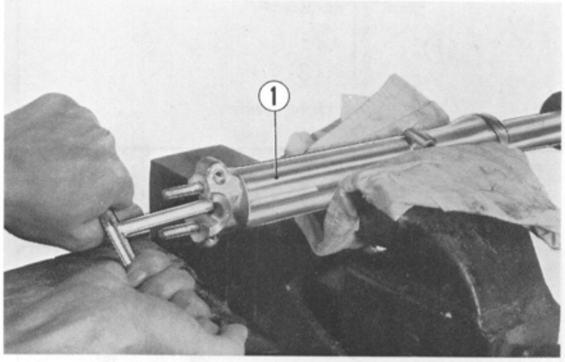

Fig. 252 ① Fork pipe

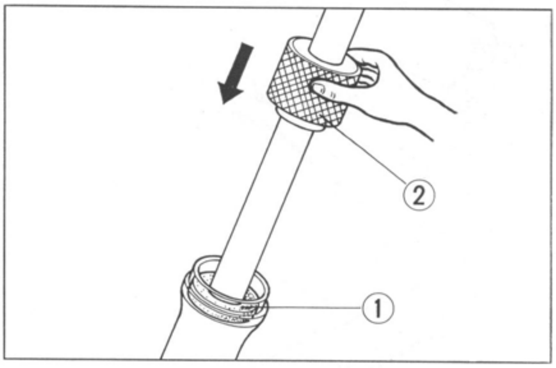

Fig. 252-1 ① Oil seal ② Fork seal guide

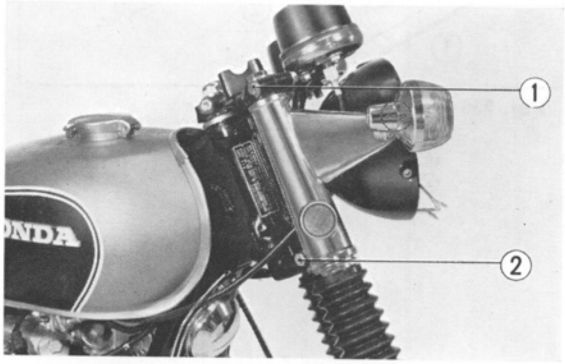

Fig. 253 ① 8 mm setting bolt
② 10 mm setting bolt

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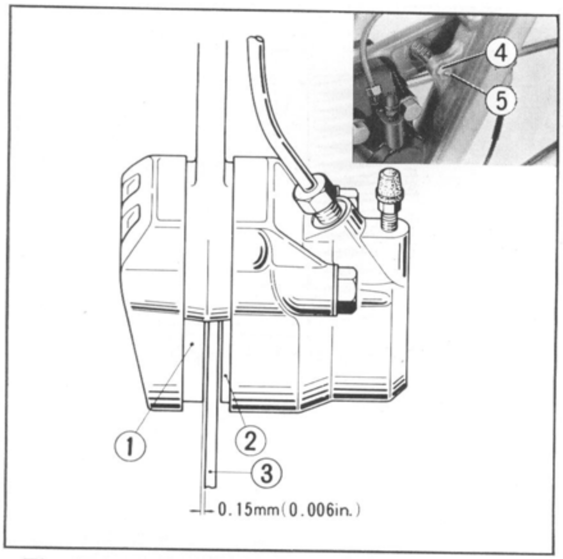

Fig. 254 ① Pad B ② Pad A ③ Brake disc ④ Nut ⑤ Caliper adjusting screw

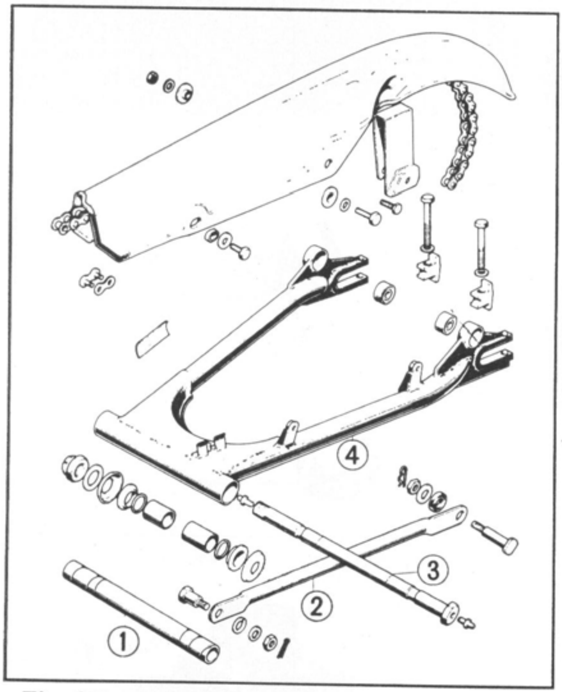

Fig. 255 ① Rear fork pivot collar
② Torque link arm
③ Rear fork pivot shaft
④ Rear fork

9. Adjust the front brake caliper.
   Adjust the clearance between brake disc and pad B to **0.15 mm** (**0.006 in.**) with the caliper adjusting screw.

5. REAR SUSPENSION

The rear suspension is equipped with dual action telescoping shock absorbers.

Rear fork is a swing arm type of tubular construction which provides greater rigidity.

A. Disassembly

1. Remove the mufflers.
2. Remove the rear wheel.
3. Remove the rear suspension mounting nut and bolt, and then remove the suspension from the frame and rear fork.
4. Compress the rear suspension spring using a special suspension compressor tool (Tool No. 07959-3290000) and disassemble.

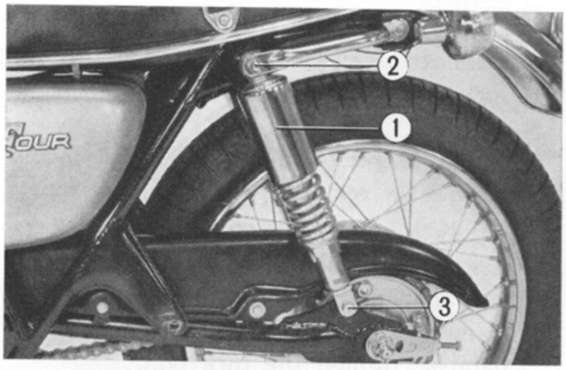

Fig. 256 ① Rear suspension ② Nut ③ Bolt

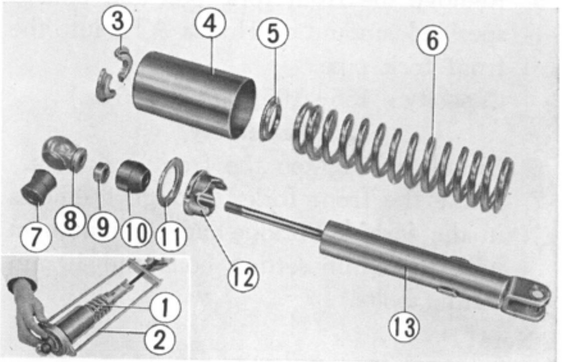

Fig. 257 ① Rear suspension assembly
② Suspension compressor tool
③ Spring seat stopper
④ Rear suspension upper cover
⑤ Spring seat
⑥ Rear suspension spring
⑦ Joint rubber
⑧ Joint
⑨ Nut
⑩ Rubber
⑪ Spring seat
⑫ Spring adjuster
⑬ Rear damper

5. Remove the rear fork pivot nut and shaft, and separate the fork from the frame.

B. Inspection

1. Check the rear suspension spring.
2. Check damper for oil leaks.
3. Inspect the damper upper case and rod for dent and bend. Make sure the oil damper operates smoothly in both directions.
4. Inspect the damper case and stopper for damage and dent.
5. Check the clearance between the rear fork pivot bushing and shaft.
6. Check the pivot shaft for bending.
7. Check the rear fork swing arm for bending, twisting, and cracks.

C. Reassembly

1. Mount the rear brake arm stopper to the rear fork.
2. Apply grease on the fork pivot bushing and install the rear fork on the frame with the pivot shaft.
3. Mount the rear suspension between the frame and fork on both sides and tighten the cap nuts and bolts.
4. Mount the rear wheel.

Note:
When the reassembly is completed, adjust the rear brake and the drive chain tension.

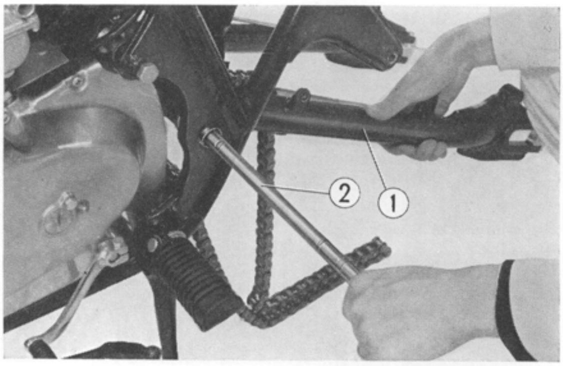

Fig. 258 ① Rear fork ② Rear fork pivot shaft

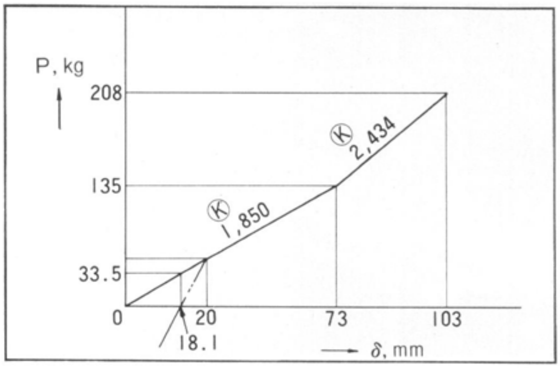

Fig. 259 Rear shock absorber spring characteristic

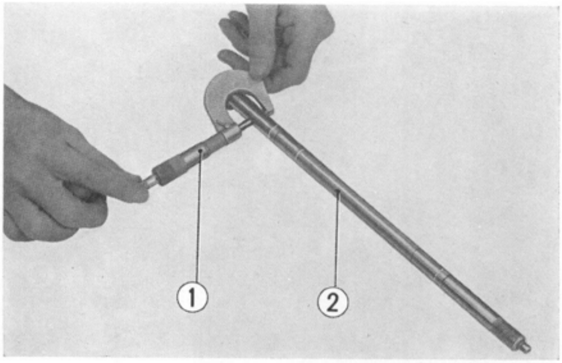

Fig. 260 ① Micrometer ② Rear fork pivot shaft

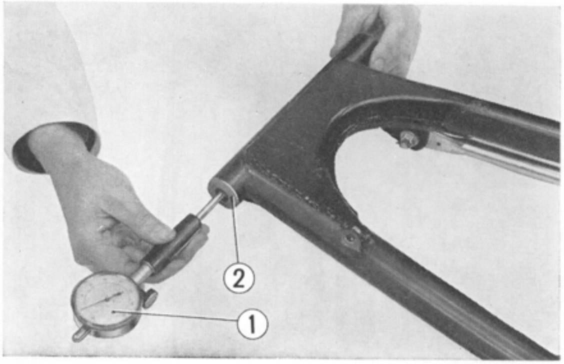

Fig. 261 ① Inside dial gauge
② Rear fork bushing

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6. FRAME BODY

A. Construction

The double cradle frame is constructed of steel tubes and plates. The head pipe section is of drawn tubing construction which provides high rigidity and strength for good handling at high riding speed.

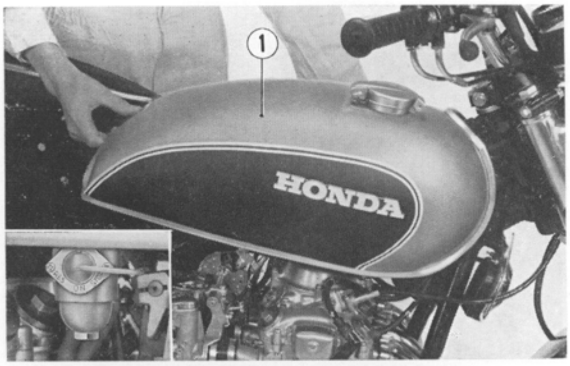

Fig. 262 ① Fuel tank

B. Disassembly

1. Position the fuel cock lever to 'STOP', disconnect the fuel tube from the fuel cock, and dismount the fuel tank from the frame.
2. Remove the mufflers, and dismount the engine.
3. Remove the front wheel, and the front fork.
4. Remove the handle bar and the steering stem from the frame.
5. Remove the rear wheel, rear fork, and rear fender.
6. Remove the seat, the tool tray, and the air cleaner element.

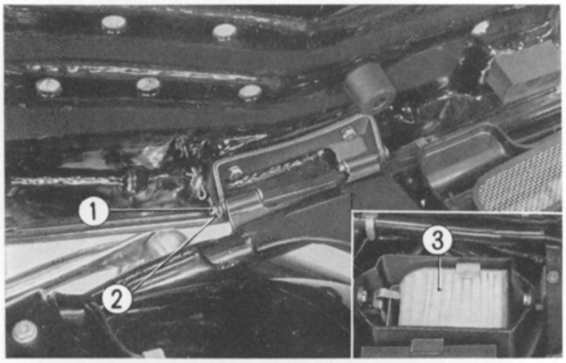

Fig. 263 ① Seat mounting bolt
② Cotter pin
③ Air cleaner

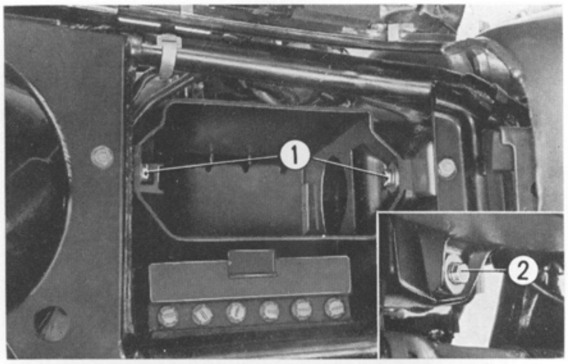

Fig. 264 ① 6 mm bolt ② 6 mm bolt

7. Detach the electrical equipment.
8. To remove the main stand, unscrew the two mounting bolts, remove the cotter pin, and extract the main stand pivot pipe.

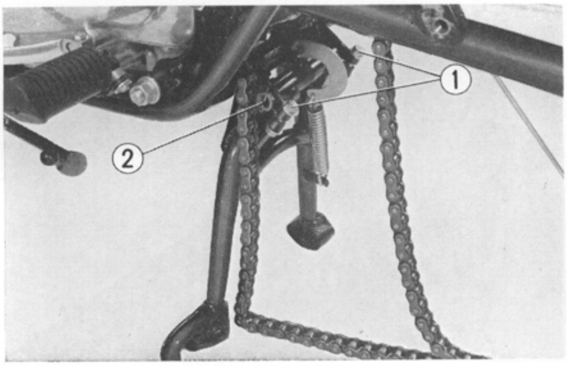

Fig. 265 ① Mounting bolt
② Cotter pin

9. Remove the top and bottom ball races from the steering head pipe.

Note:
Use a Ball race remover (Tool No. 07953-3330000) to prevent damage when driving out the ball races.

C. Inspection

1. Check the frame main unit for twisting, deformation, and cracks around the welded areas, and the pipes for bending and cracks.
2. Inspect the top and bottom races for scoring and wear.
3. Check the head pipe for misalignment.
4. Check seat cover for tears.
5. Check fuel tank for leaks, fuel tubes for aging or damage, and fuel cock gasket and strainer cup O-ring for damage. Flush the tank interior with clean gosoline.
6. Remove dust from the air cleaner element by blowing compressed air from the inside. Check element for damage.
7. Replace exhaust pipe gasket if damaged.

D. Reassembly

1. Install the main stand on the frame.
2. Install the rear fender and the electrical equipments on the frame.
3. Install the rear fork, rear cushion and rear wheel.
4. Install the steering stem, front fork and front wheel.
5. Mount the air cleaner case, the battery, the seat, and the fuel tank.

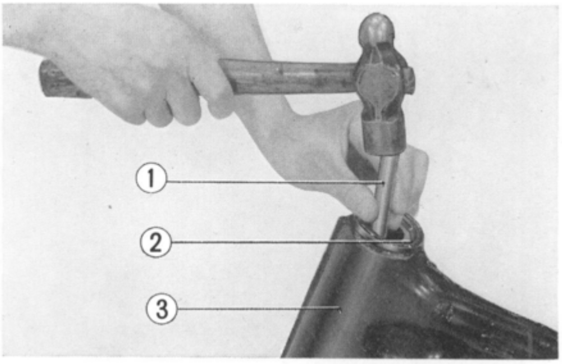

Fig. 265 ① Ball race remover
② Ball race
③ Head pipe

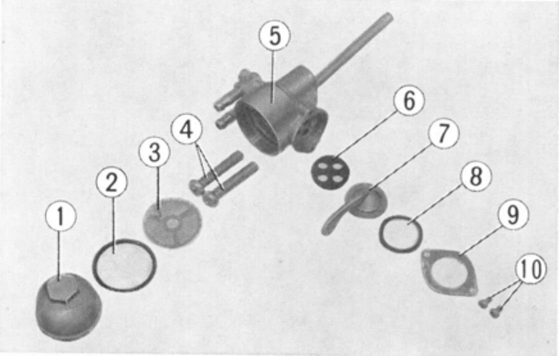

Fig. 267 ① Fuel strainer cup
② O-ring
③ Fuel strainer screen
④ 6 mm cross screws
⑤ Fuel cock body
⑥ Fuel cock gasket
⑦ Fuel cock lever
⑧ Cock lever spring
⑨ Setting plate
⑩ 6 mm screw

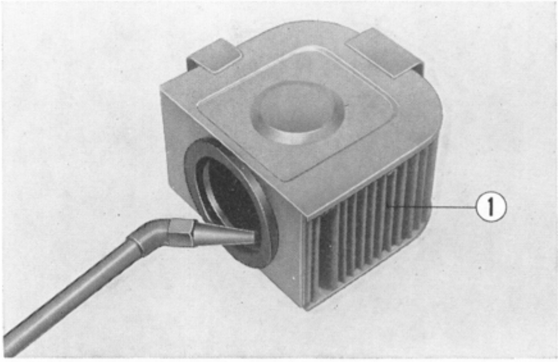

Fig. 268 ① Air cleaner element

6. ELECTRICAL

1. GENERAL DESCRIPTION

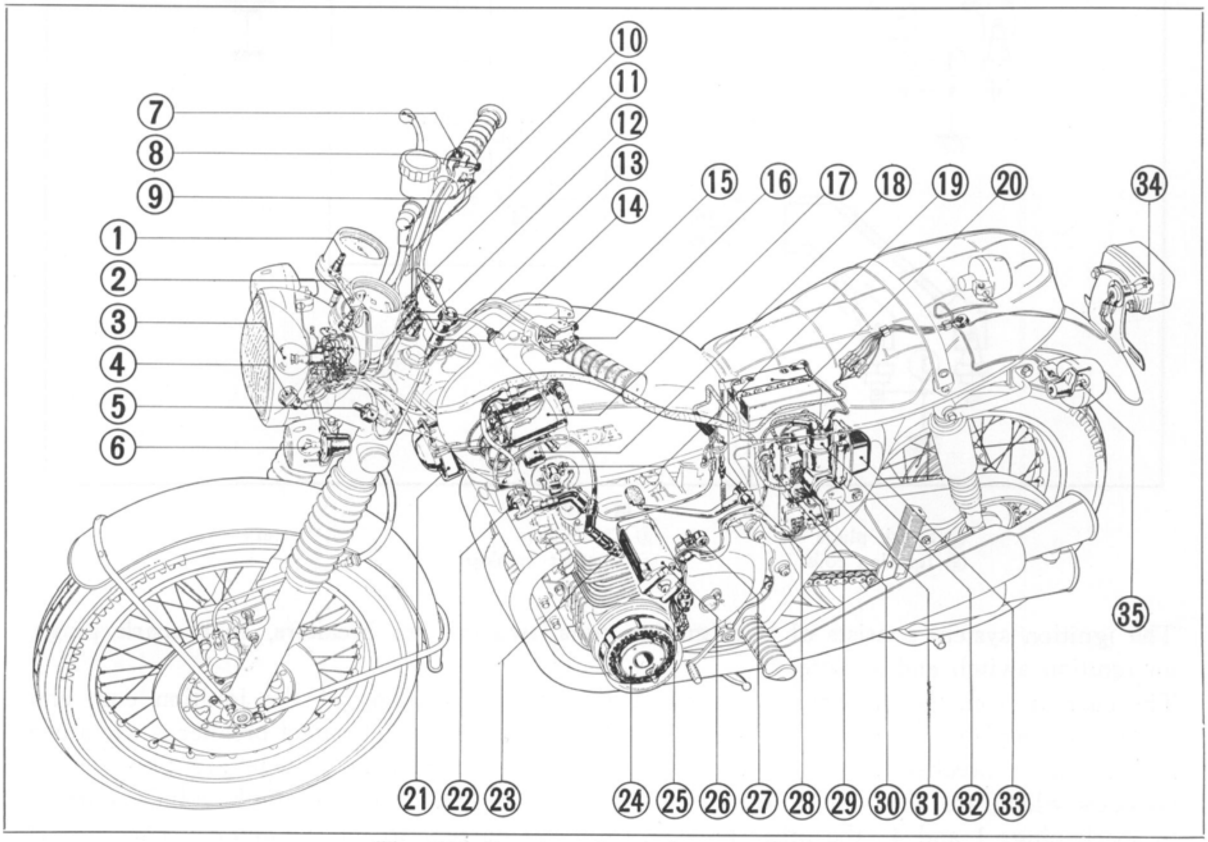

Fig. 269 Complete electrical system diagram

① Tachometer pilot lamp
② Speedometer pilot lamp
③ Head light
④ Position lamp (except USA type)
⑤ Front brake stop switch
⑥ Front winker lamp
⑦ Emergency switch
⑧ Head light switch
⑨ Starter switch
⑩ High beam pilot lamp
⑪ Neutral lamp
⑫ Oil warning lamp
⑬ Winker pilot lamp
⑭ Speed warning lamp (except USA type)
⑮ Winker switch
⑯ Horn button
⑰ Ignition coil
⑱ Speed warning system (except USA type)
⑲ Contact breaker assembly
⑳ Battery
㉑ Horn
㉒ Main switch
㉓ Spark plug
㉔ AC generator
㉕ Oil pressure switch
㉖ Starting motor
㉗ Neutral switch
㉘ Rear brake stop switch
㉙ Fuse holder
㉚ Silicon rectifier
㉛ Winker relay
㉜ Magnetic switch
㉝ Voltage regulator
㉞ Tail/stop lamp
㉟ Rear winker lamp

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2. IGNITION SYSTEM

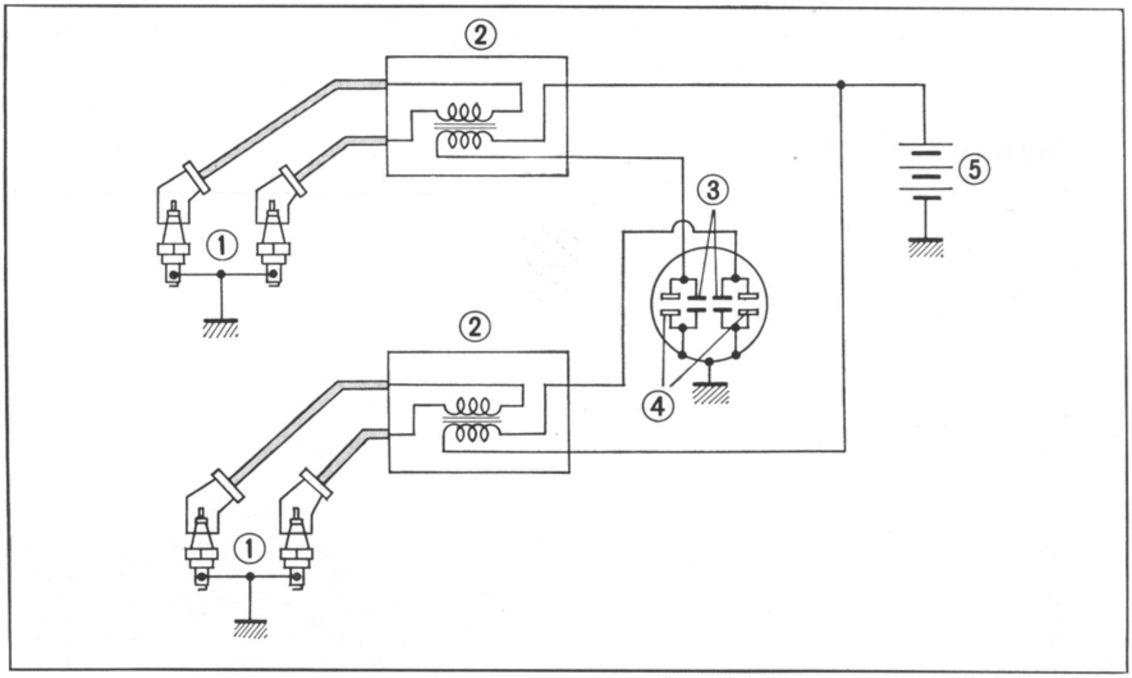

Fig. 270

① Spark plugs
② Ignition coils
③ Condensers
④ Contact breaker
⑤ Battery

The ignition system consists of two ignition coils, two contact breakers, four spark plugs, an ignition switch and a battery.

The current from the battery flows through the primary winding of the ignition coil, and circuit is completed by grounding through the contact breaker. Contact breaker is contained in the contact breaker housing at the right end of the crankshaft. There are two contact breakers which are 180° out of phase. One of the breakers furnishes high voltage current to spark plugs 1 and 4; the other breaker furnishes current to plugs 2 and 3. The contact breakers ignite the spark plugs in a firing sequence of 1, 2, 4 and 3 which is indicated on the high tension plug cords. Since no distributor is used, the construction is simple and the system is easy to service.

SERVICE DATA

Ignition coil	
3 point spark gap opening	7 mm min. (0. 27 in.)
Spark plug	
Type (standard)	NGK D-7 ES, DENSO X 22 ES
Plug gap	0. 6~0. 7 mm (0. 023~0. 027 in.)
Contact breaker	
Point gap	0. 3~0. 4 mm (0. 012~0. 016 in.)
Spring force	680~850 g (1. 43~1. 87 lbs.)
Condenser	
Capacity	0. 24 μF±10%
Insulation resistance	Over 10 MΩ (1, 000 megger)
Spark advancer	
Start of advance (crankshaft speed)	1, 150 rpm
Full advance (crankshaft speed)	2, 300~2, 500 rpm
Advance angle	25°

Ignition Coil

The ignition coil consists of a primary coil with 420 turns of copper wire wound around an iron core of laminated silicon steel sheets. A secondary coil with 13,000 turns of wire is wound on top of the primary coil. Each secondary coil has two high tension cords to two spark plugs.

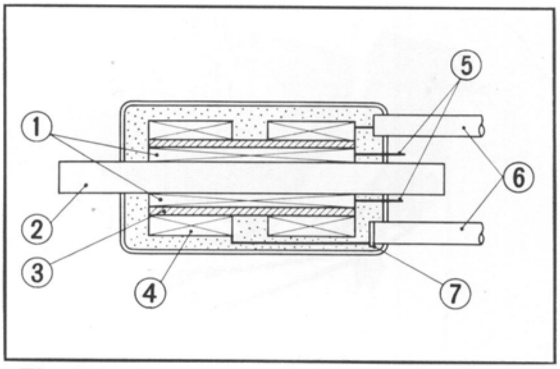

Fig. 271 ① Primary coil
② Iron core
③ Bobbin
④ Secondary coil
⑤ Primary terminal
⑥ High tension cord
⑦ High tension terminal

A. Disassembly

1. Open the seat and remove the fuel tank.
2. Disconnect the ignition coil leads. (yellow, blue and black/white)
3. Unscrew the two ignition coil mounting bolts, and separate the ignition coil from the frame.

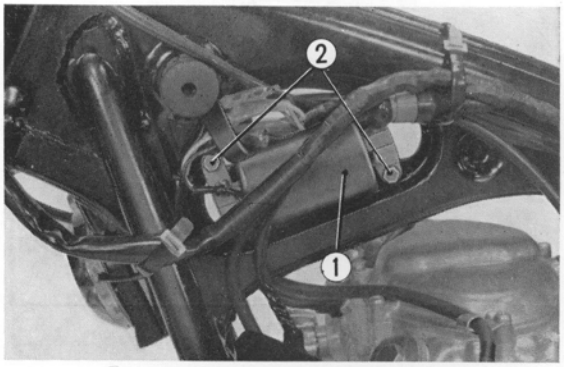

Fig. 272 ① Ignition coil ② Bolts

B. Inspection

1. Ignition coil continuity test

   Primary coils:

   Check for continuity between the terminals of the primary coil.

   Right coil: yellow and black/white leads
   Left coil: blue and black/white leads

   Secondary coils

   Check for continuity between the terminals of the high tension cords.

   If there is no continuity, the coil is open and must be replaced.

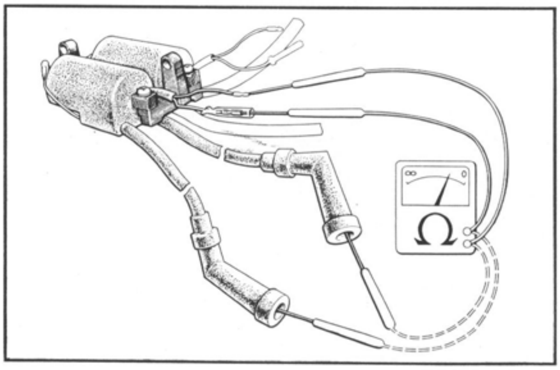

Fig. 273 Ignition coil continuity test

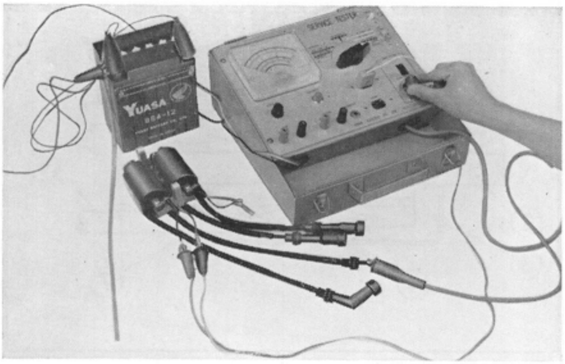

Fig. 274 Ignition coil performance test

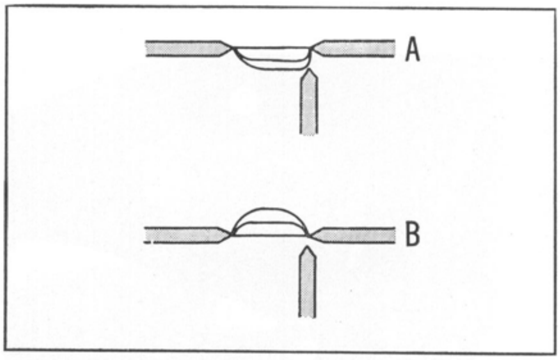

Fig. 275 Spark performance

Ignition coil perfomance test

Coil may test satisfactorily for continuity but it may not perform satisfactorily due to deterioration from long use, therefore, performance should be checked to determine its condition.

Connect the service tester power cord to a 12 V battery and ground the ground cable. Connect the ignition primary test lead to the tester and connect the opposite terminal ends to the primary terminals of the coil. Connect red test lead to the black terminal of the ignition coil and the white test lead to the yellow cord of the left coil (to the blue cord for the right coil).

Position the selector knob to COIL TEST. Adjust the three point spark tester to the maximum distance spark is maintained and then measure this distance. The coil is satisfactory if the distance is greater than **7 mm**. (**0.27 in.**)

> **Note:**
> **Since a dual sparking ignition coil is used, note the spark condition. If the spark appears as B in Fig. 274, the connection to the primary coil is reversed.**

Spark plug

A. Removal

1. Remove any dirt from around the spark plug by using compressed air.
2. Remove the spark plugs with a plug wrench.

B. Inspection

Inspect the spark plug for worn electrodes, excessive gap, fouled condition and damaged porcelain insulator.

1. Clean dirty spark plug with a plug cleaner or wire brush.
2. Measure the electrode gap with a feeler gauge and, if necessary, adjust to the specified gap.
   Standard gap: **0.6~0.7 mm (0.023~0.027 in.)**
3. Replace the spark plug if the porcelain insulator is damaged, or the gasket if it is damaged or distorted.
   Standard spark plug: **D-7ES (NGK), X22ES (DENSO)**

C. Reinstallation

1. Install the spark plugs in the reverse order of removal.
   Torque: **1.5~2.0 kg-m (11~14 ft-lbs)**

Note:

1. Exercise care not to drop the plug gasket.

2. Loose plug will not properly dissipate the heat and may result in engine malfunction.

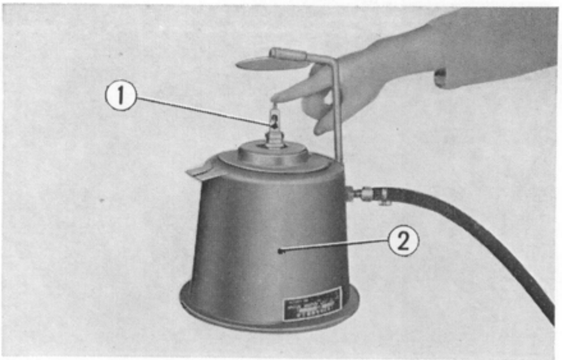

Fig. 276 ① Spark plug ② Spark plug cleaner

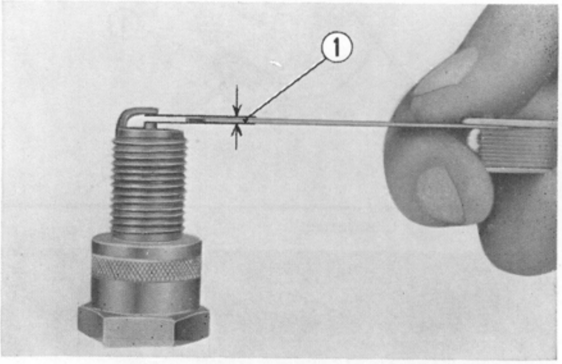

Fig. 277 ① Feeler gauge

Contact Breaker and Condenser

A. Disassembly

1. Remove the point cover.
2. Disconnect the leads (yellow, blue) at the connectors located at the center of the frame.
3. Unscrew the 6 mm bolt, remove the special washer, loosen the base plate mounting screws, and then remove the contact breaker assembly.

B. Inspection

- For adjustment of the breaker point and ignition timing, refer to the section "Maintenance Operations".
- Condenser
  Measure the capacitance of the condenser using the service tester.
  Standard value: **0.22~0.26 μF**

Note:
The points should be open when testing.

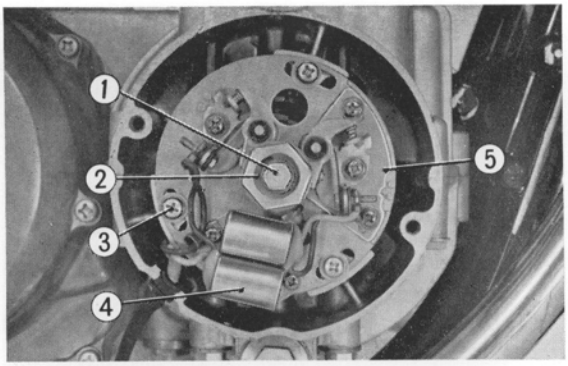

Fig. 278 ① 6 mm bolt
② Special washer
③ Screws
④ Condensers
⑤ Contact breaker plate

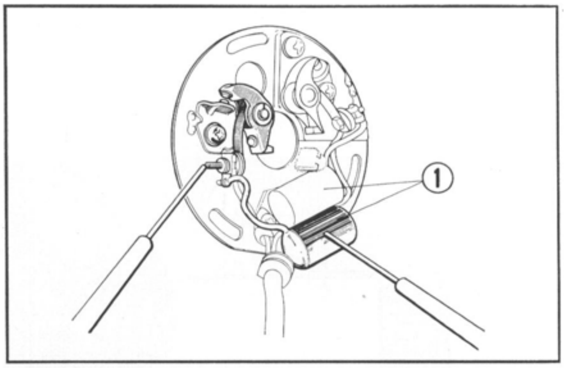

Fig. 279 ① Condenser

Spark Advancer

A. Disassembly

1. Remove the point cover and contact breaker assembly.
2. Remove the spark advancer from the spark advancer shaft.

B. Inspection

1. Clean dust and foreign matters from friction surfaces, and assure that operation is smooth.
2. Check spring tension, and advancer pin wear.
   Standard spring tension:
   680~850 gr. (1.43~1.87 lbs)

C. Reassembly

1. Install the dowel pin by aligning the hole.
2. Reassemble in the reverse order of removal.

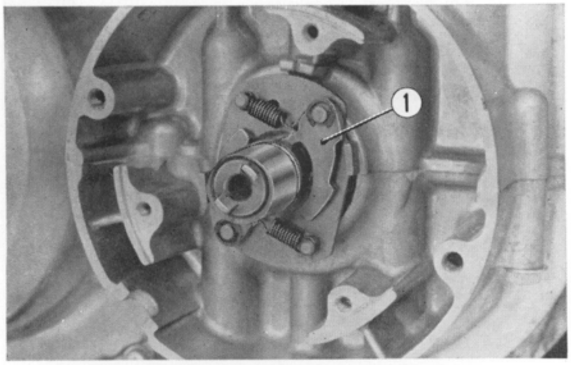

Fig. 280 ① Spark advancer

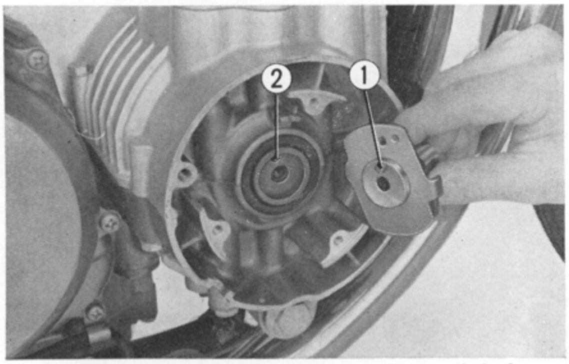

Fig. 281 ① Spark advancer ② Crankshaft

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3. CHARGING SYSTEM

The charging system for the CB500 is made up of the exciter field 3-phase AC generator, rectifier, voltage regulator and the fuse. The generator consists of the field coil, stator coil and the rotor; it does not contain slip rings or brushes.

In order for the stator coil to produce a constant voltage, the current from the battery to produce the exciter field is regulated to very close limits by the dual contact regulator. The output from the generator is rectified by the silicon rectifier before being sent to recharge the battery.

The generator performs two functions depending upon the charge condition of the battery. The electrical current from the battery flows through the switch and into the regulator. When the battery voltage is lower than normal (less than 13.5 V at the battery terminal), the current flows through the upper contact and to the field coil. The strength of the magnetic field is dependent upon the strength of the battery voltage. When the battery terminal voltage is 12 V, the field coil current is 1.6 A. This produces an output voltage of corresponding strength which is used to charge the battery.

When the battery voltage exceeds approximately 14.5 V, the armature coil pulls the armature away from the upper contacts and closes the lower contacts to insert a 10 Ω resistance into the field coil circuit. The current to the field coil is thus reduced to 0.7 A and, consequently, a lower voltage is produced by the generator, limiting the amount of charge to the battery. This function of inserting or removing the resistance into the generator field coil is performed by the voltage regulator in accordance with the charge condition of the battery.

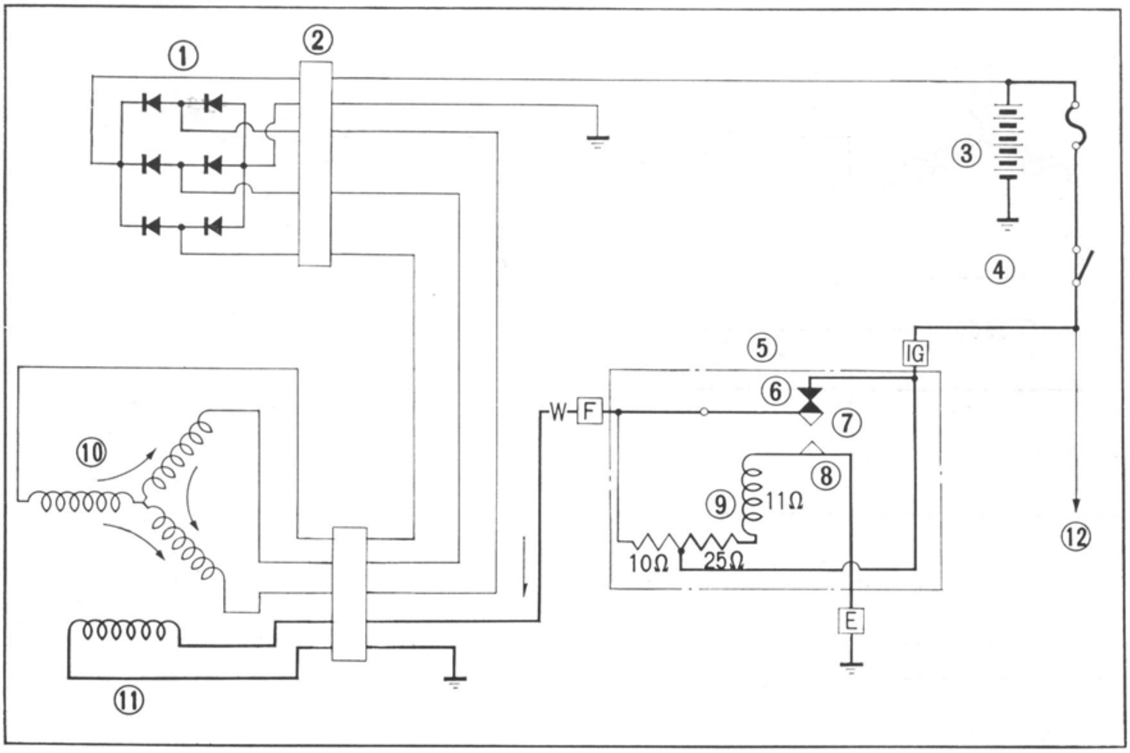

Fig. 282

① Silicon rectifier
② Coupler
③ Battery 12 V, 12 AH
④ Main switch
⑤ Regulator
⑥ Upper contact
⑦ Moving contact
⑧ Lower contact
⑨ Relay coil
⑩ Stator coil
⑪ Field coil
⑫ To load

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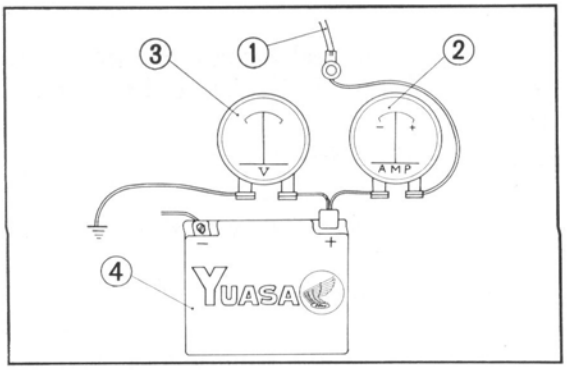

Fig. 283 ① Red/white lead ③ Voltmeter
② Ammeter ④ Battery

Charging Test

1. Perform the test using ammeter and voltmeter.
2. The battery charge condition is determined by measuring the specific gravity of the battery electrolyte. If the specific gravity is lower than **1.26** (at 20°C/68°F), recharge the battery so that the specific gravity is up to **1.26~1.28** (at 20°C/68°F), and then perform the following test.
3. Disconnect the battery cable from the ⊕ terminal of the battery, and connect it to the ⊕ side of the ammeter.
   Next, connect the ⊖ side of the ammeter to the ⊕ terminal of the battery.
   Connect the ⊕ side of the voltmeter to the ⊕ end of the battery cable, and ground the ⊖ side of the voltmeter. (Fig. 282)
4. Start the engine, operate the engine under both the NIGHT RIDING and DAY RIDING conditions and check to see if the measured values conform to those specified in the table below.
   If the values are less than those specified, adjust the regulator.

Note:
The charge condition of the battery may cause the charge current to vary slightly.

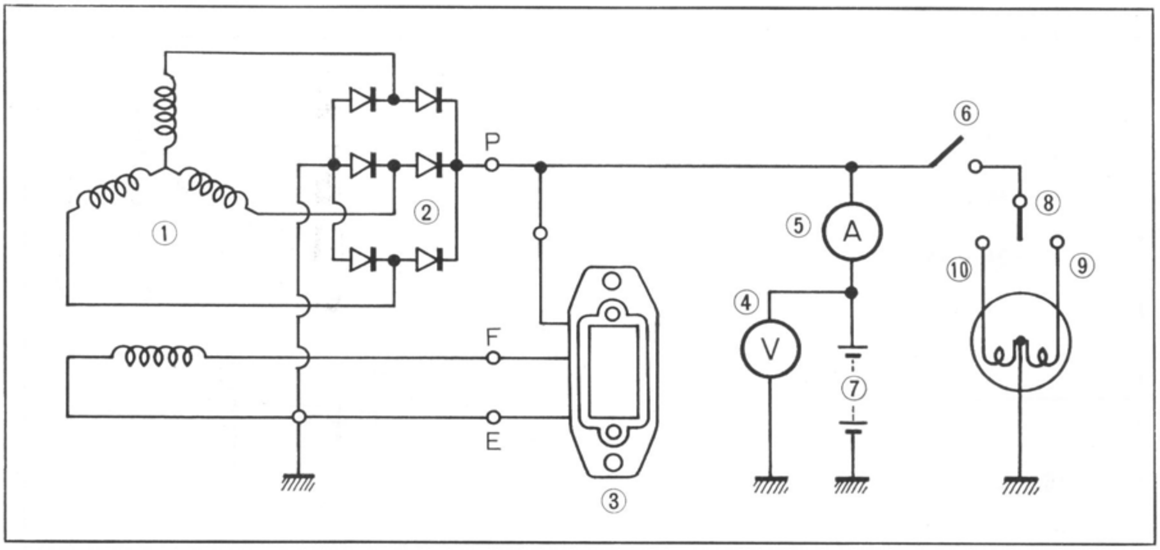

Fig. 284

① A. C. Generator
② Silicon rectifier
③ Voltage regulator
④ Volt meter
⑤ Ammeter
⑥ Main switch
⑦ Battery
⑧ Headlight switch
⑨ Headlight low beam
⑩ Headlight high beam

Engine RPM / Charging current (A)	1, 000	2, 000	3, 000	4, 000	5, 000	6, 000	7, 000	8, 000
Day riding	6. 5	0	2. 4	1. 3	1. 0	1. 0	0. 8	0. 6
Night riding	2–3	1	1	1	1	1	1	1
Battery terminal voltage (v)	12	12. 4	13. 2	14. 5	14. 5	14. 5	14. 5	14. 5

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A.C. Generator

Specifications

Type and maker	LD 110-01, Hitachi
Output	150 W
Battery voltage	12 V
Polarity	⊖ ground
Charging speed	1000–9000 rpm
Weight	3 kg (6.6 lbs)

A. Disassembly

1. Remove the generator cover and pull out the rotor using the rotor puller (special tool No. 07011-21601).
2. Unscrew the three 6 mm screws from inside the generator cover and remove the stator coil.
3. Unscrew the three 6 mm screws from the outside the generator cover and remove the field coil.

B. Inspection

1. Field coil resistance test

   Check resistance between the two field coil leads (White, Green) using the Service Tester OHMS function.

   STANDARD RESISTANCE VALUE:

   4.9Ω±10%

NOTE: Test may be performed without removing field coil.

2. Stator coil resistance test
   a. Check resistance between any two of the three yellow alternator (stator) leads.
   b. Leave either tester lead connected to yellow wire. Attach other tester lead to third yellow stator wire.

   STANDARD RESISTANCE VALUE:

   0.35Ω±10% at a.

   0.35Ω±10% at b.

NOTE: Test may be performed without removing stator.

TEST	RESULT	INDICATION
1 (field coil)	No reading or low reading	Defective
2 (stator) a or b	No reading or low reading	Defective

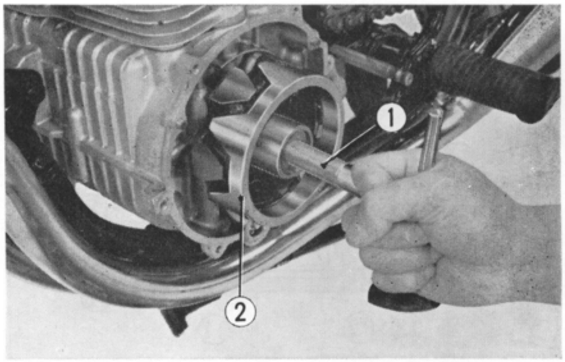

Fig. 285 ① Rotor puller ② Rotor

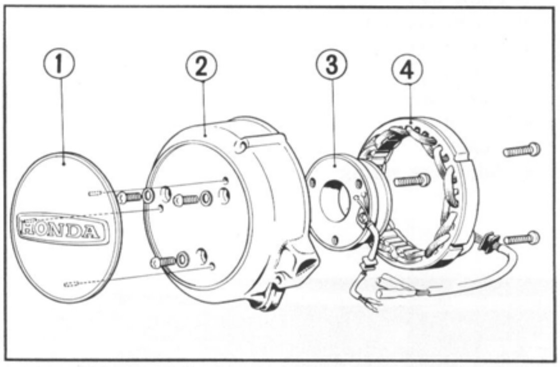

Fig. 286 ① Side cover ② Generator cover ③ Field coil ④ Stator coil

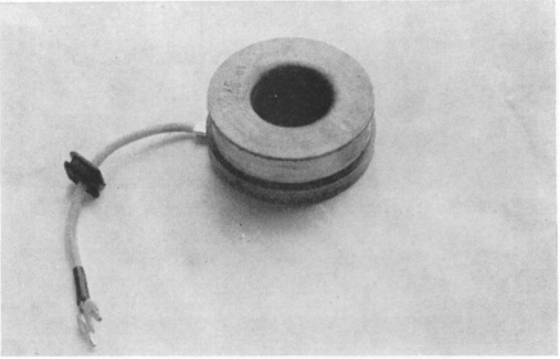

Fig. 287 Field coil

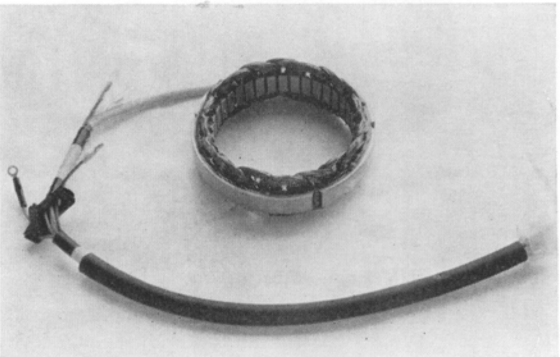

Fig. 288 Stator coil

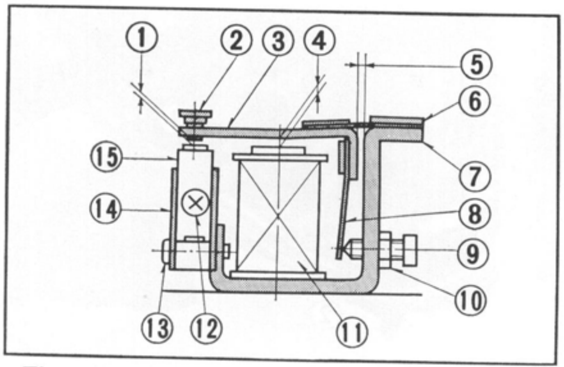

Fig. 289

① Point gap
② Upper contact
③ Armature
④ Core gap
⑤ Yoke gap
⑥ Spring
⑦ Yoke
⑧ Adjusting spring
⑨ Voltage adjusting screw
⑩ Lock nut
⑪ Coil
⑫ Point gap adjusting screw
⑬ Core gap adjusting screw
⑭ Contact set
⑮ Lower contact

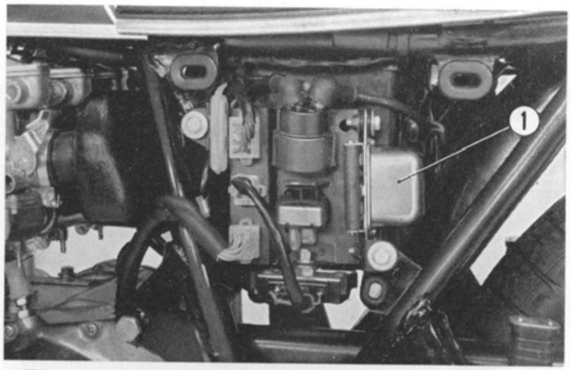

Fig. 290 ① Regulator

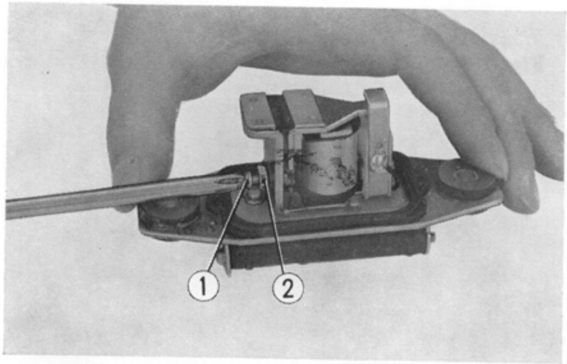

Fig. 291 ① Voltage adjusting screw
② Lock nut

Regulator

The regulator is a dual contact type. If maintains a constant voltage by placing the resistance circuit into the field coil circuit when the generating voltage rises to a certain value, and cutting out the resistance circuit when the voltage drops below a set limit.

A. Disassembly

1. Disconnect the leads at the connectors and unscrew the two 6 mm regulator mounting bolts.
2. Unscrew the two screws and remove the regulator cover.

B. Inspection and Adjustment

Regulating voltage adjustment

1. To adjust for low charge current or low battery voltage, loosen the lock nut on the voltage adjusting screw and turn the adjusting screw clockwise. When the regulator is set too high, turn the adjusting screw counterclockwise.
2. Upon completing the adjustment, recheck regulator performance after installation.

Core gap adjustment

Measure the core gap with a feeler gauge. If it requires adjustment, loosen the core gap adjusting screw and move the point body up or down.

Standard core gap value:

0.6~1.0 mm (**0.02~0.40 in.**)

Point gap adjustment

Measure the point gap with a feeler gauge. If it requires adjustment, loosen the point gap adjusting screw and move the lower point up or down. Standard point gap value:

0.2 mm (**0.008 in.**)

Note: If the points are pitted or fouled, polish with a ♯500~600 emery paper.

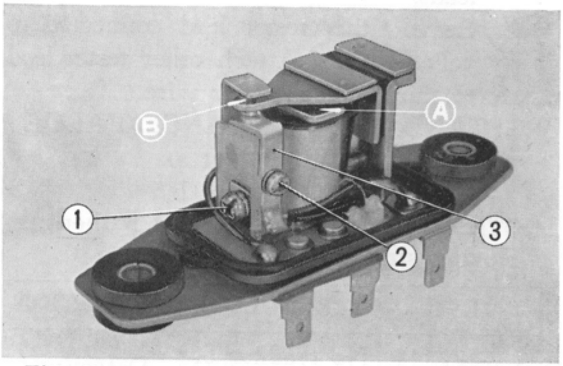

Fig. 292 Ⓐ Core gap
Ⓑ Point gap
① Core gap adjusting screw
② Point gap adjusting screw
③ Lower point

Silicon Rectifier

Inspection

The condition of the silicon rectifier is tested by disconnecting the electrical connections and testing the rectifying function in both the normal and reverse directions. Continuity in the normal direction only indicates good condition. Continuity in both direction indicates a defective rectifier.

Note:

1. **Do not use a megger for the test as the high voltage will damage the silicon diodes.**
2. **Observe the polarity of the battery. Connecting the battery terminals in reverse will shorten the life of the battery as well as causing a large current to flow through the electrical system, causing damage to the silicon rectifier, and also destroying the wire harness.**
3. **Do not operate the generator at a high RPM with the "P" terminal (red/white cord from the magnetic switch) of the silicon rectifier disconnected. The high voltage generated may damage the silicon rectifier.**
4. **When charging the battery mounted on the motorcycle from an external source with high charge rate such as a "quick charge", the wiring to the silicon rectifier should be disconnected at the coupler to prevent damage.**

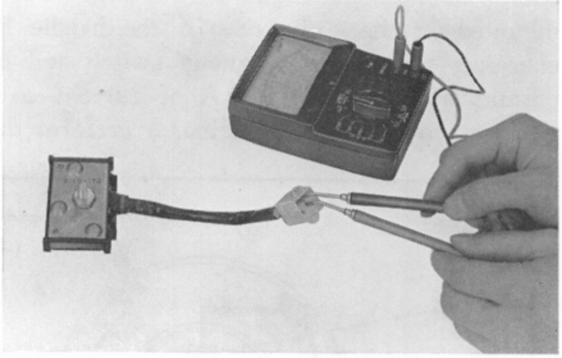

Fig. 293 Silicon rectifier inspection

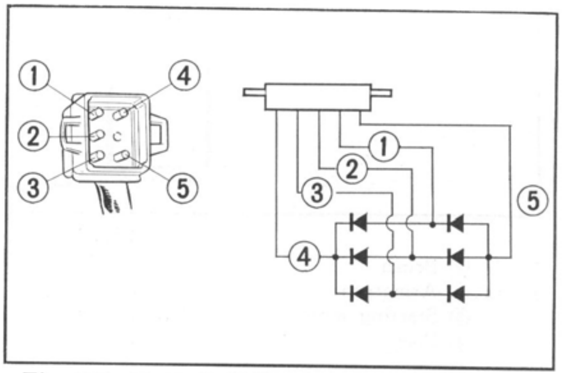

Fig. 294 ①, ②, ③ Yellow
④ Yellow/White
⑤ Green

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4. STARTING SYSTEM

The starter is a device which converts the electrical energy of the battery to the mechnical energy to crank the engine for starting. The starting circuit consists of a push button switch mounted on the right side of the handle bar which, when the starter button is pressed, energizes the starter magnetic switch and closes the contacts of the starter circuit. This permits approximately 120 A of current to flow from the battery to the starting motor, which then rotates the engine to perform the starting.

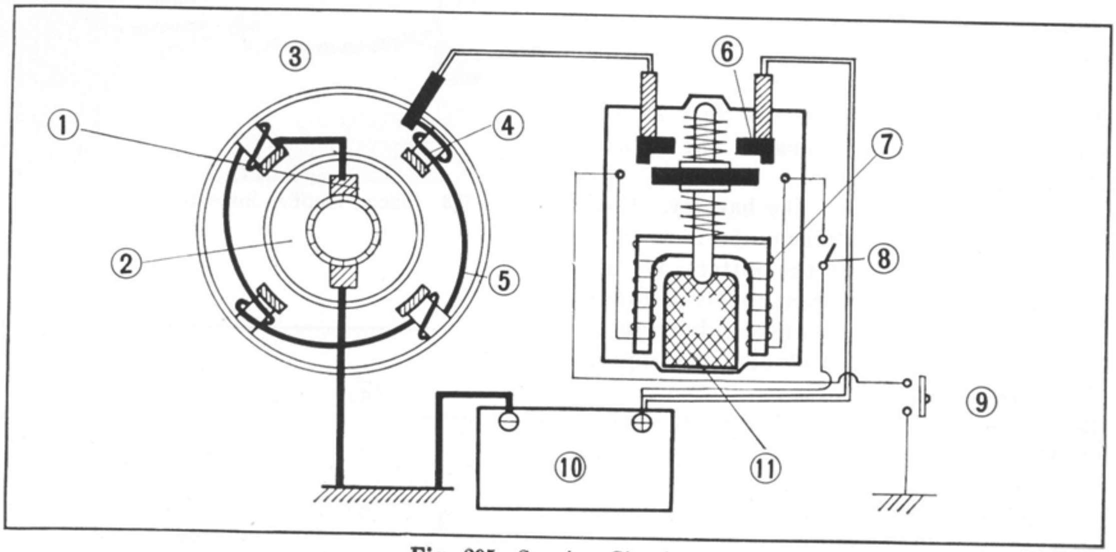

Fig. 295 Starting Circuit

① Brush
② Armature
③ Starting motor
④ Pole
⑤ Field coil
⑥ Starter magnetic switch
⑦ Electromagnet
⑧ Ignition switch
⑨ Starter button
⑩ Battery
⑪ Plunger

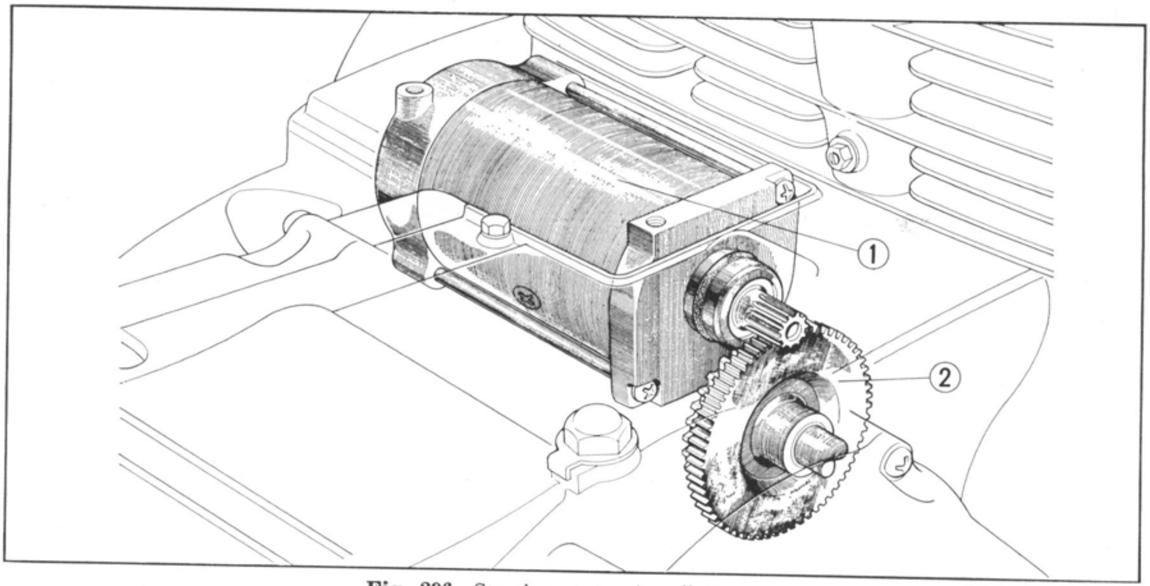

Fig. 296 Starting motor installation

① Starting motor ② Starter reduction gear

Starting Motor

The starting motor is mounted on the crankcase behind the cylinder and drives the crankshaft through the starting clutch.

Specifications

Rated voltage	12 V
Rated output	0.6 KW
Rated operation	Continuous for 30 seconds

	Without load	With load
Voltage	8.5 V	11 V
Amperage	35 A	120 A
Torque	——	0.12 kg-cm (0.86 ft-lbs)
Revolution	11000～ 20000 rpm	3200 rpm

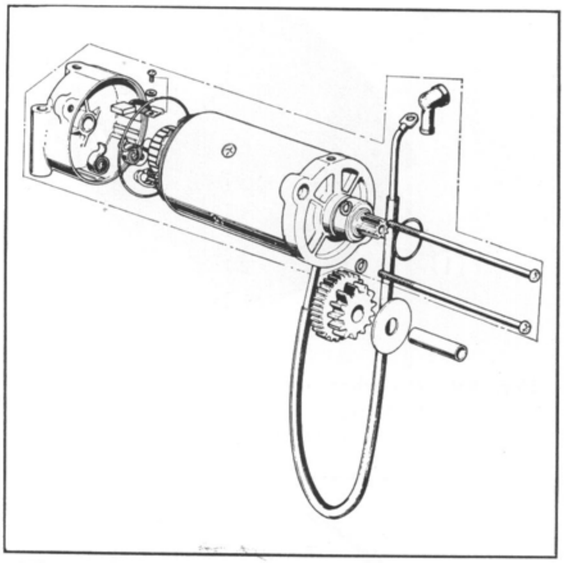

Fig. 297 Starting motor disassembly drawing

A. Disassembly

1. Disconnect the starting motor cable at the magnetic switch.
2. Remove the starting motor cover, left crankcase cover and unscrew the two 6 mm starting motor mounting bolts.
3. Starting motor can now be pulled out.
4. Unscrew the two 6 mm screws and remove the starting motor side cover.

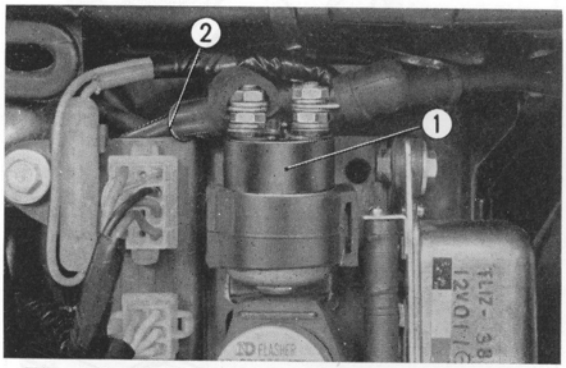

Fig. 298 ① Magnetic switch
② Starting motor cable

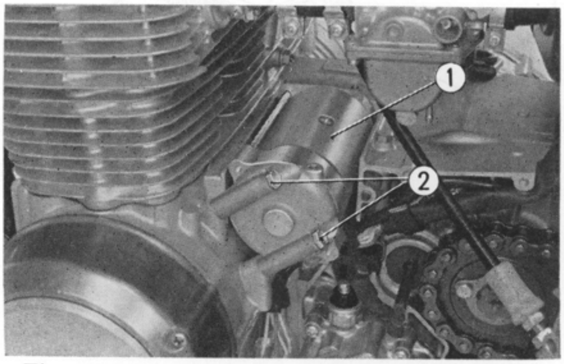

Fig. 299 ① Starting motor
② 6 mm bolts

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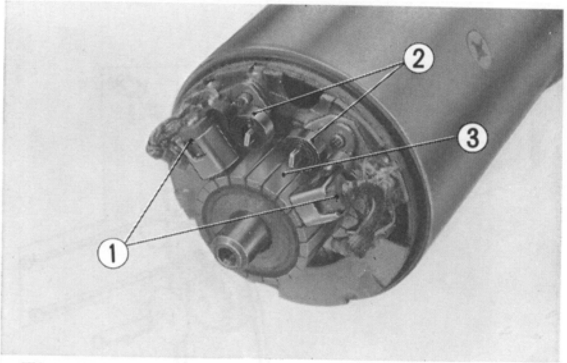

Fig. 300 ① Carbon brushes
② Springs
③ Commutator

B. Inspection

1. Carbon brush inspection

   Worn carbon brush, pitted or rough contact surface and weakened brush spring will cause starting difficulty, therefore, they should be replaced.

2. Commutator cleaning

   Dirty commutator will give poor starting motor performance.

   Surface of the commutator should be polished with a fine grade emery paper and completely washed before reassembly.

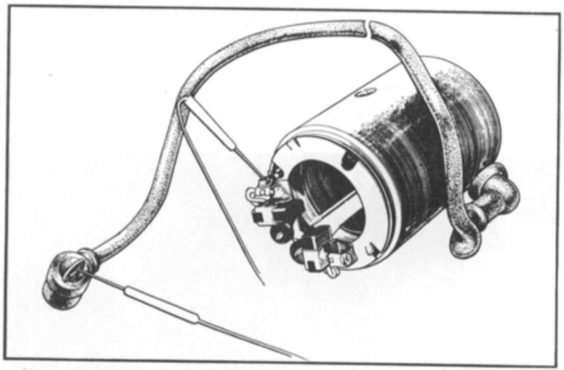

Fig. 301 Stator coil inspection

3. Stator coil inspection

   Check continuity between the brush wired to the stator coil and the starting motor cable. Lack of continuity indicates an open stator coil and should be replaced.

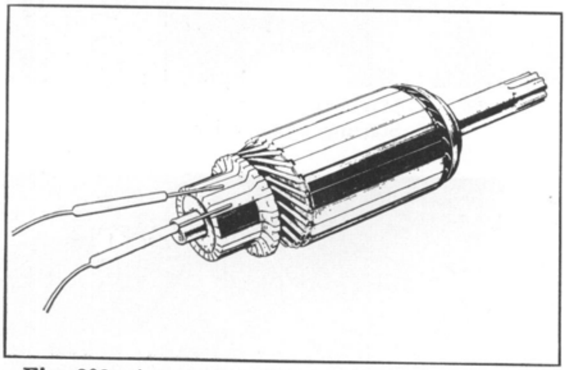

Fig. 302 Armature coil inspection

4. Armature coil inspection

   A grounded armature coil will render the starting motor inoperative.

   Perform a continuity test between the commutator and the core. A continuity condition indicates a grounded stator coil and should be replaced.

Starter Magnetic Switch

The starting motor requires a large current of approximately 100 A to operate. To minimize resistance, a large cable is used for wiring, also, a switch with heavy duty contacts is required. Sparking across the contacts will result, as well as resistance depending upon the contact pressure, when the contacts are opened suddenly to shut off the flow of large current. To cope with these conditions, a magnetic switch is used separately which is operated electrically by a small current through a push button starter switch.

Inspection

1. Primary coil continuity test.
   If there is no continuity, the primary coil is open.
   - If a clicking noise is heard when a 12 V battery is connected to the two leads of the coil, the primary coil is satisfactory.
2. After long use, the magnetic switch contacts will become pitted or burnt from the large current which flows across it, and gradually build up resistance which may prevent the current from flowing. Connect 12 V to the primary coil leads of the magnetic switch. If there is no continuity across the switch contacts, the switch is defective.

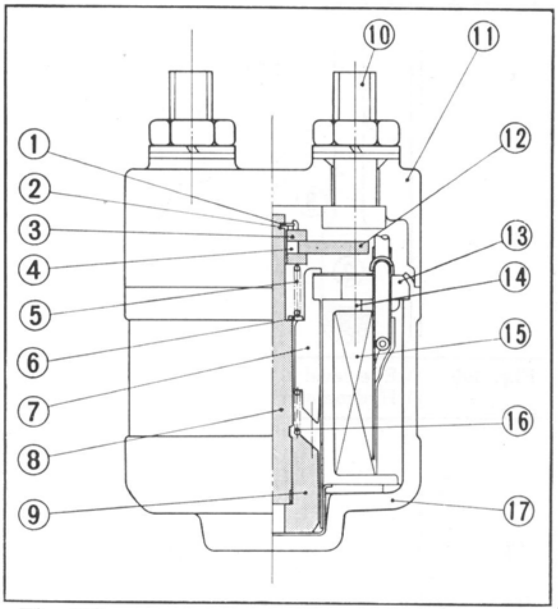

Fig. 303

① Stopper
② Stopper holder
③ Washer
④ Roller A
⑤ Contact spring
⑥ Flat washer
⑦ Plunger holder
⑧ Plunger shaft
⑨ Plunger
⑩ Contact bolt
⑪ Case
⑫ Contact plate
⑬ Yoke
⑭ Coil bobbin
⑮ Coil complete
⑯ Return spring
⑰ Body

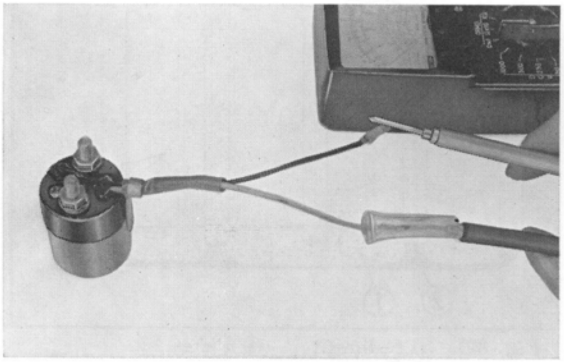

Fig. 304 Primary coil continuity test

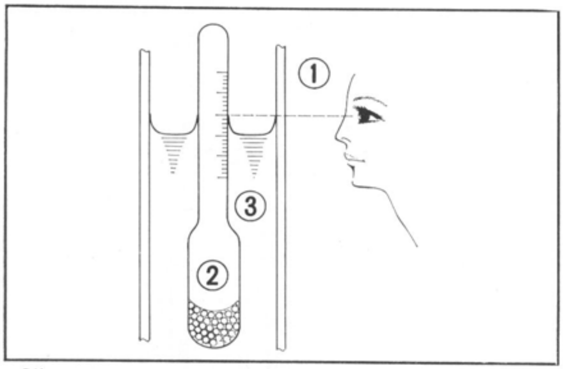

Fig. 305 ① Eye level ③ Electrolyte
② Hydrometer

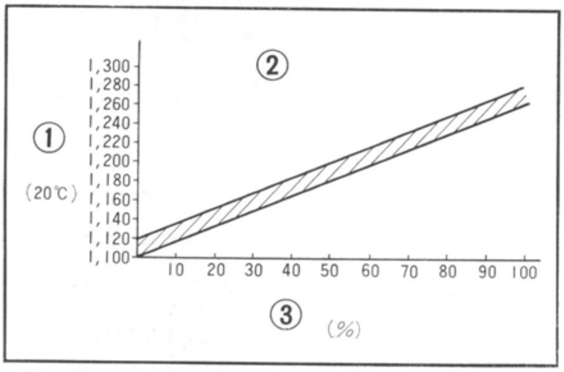

Fig. 306 ① Specific gravity
② Relation between specific gravity
③ Residual charge (%)

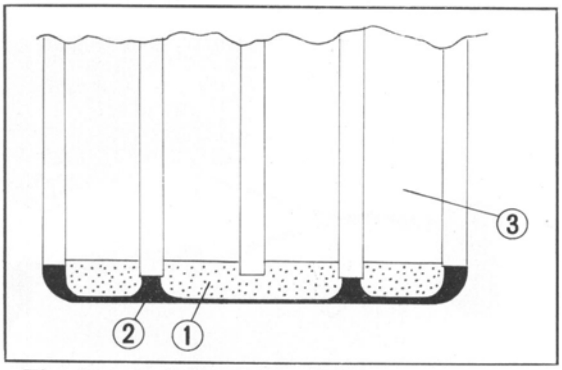

Fig. 307 ① Sediment ③ Plates
② Battery case

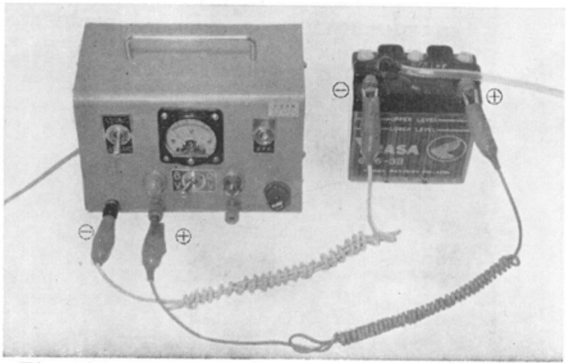

Fig. 308 Charger hook-up

Battery

A. Specification

Type	12 N 12 A-4 A・1
Voltage	12 V
Capacity	12 AH

B. Specific gravity measurement

Battery electrolyte is measured with a bulb type hydrometer. When the specific gravity is below 1.200 (at 20°C), the battery should be recharged.

When making a reading, the hydrometer should be held vertical with the electrolyte liquid level, held at the eye level and the value on the floating scale read at point where the liquid separates from the stem of the float.

C. Inspection and replenishment

1. Electrolyte in each cell of the battery should be inspected every half month to a month, and distilled water added to bring the level to the upper mark whenever the electrolyte level is below the level mark.
2. Whenever there is rapid lowering of the electrolyte level, the charging system should be inspected.
3. Periodically measure the specific gravity. After adding distilled water, allow the battery to be charged and the electrolyte sufficiently agitated before making the measurement.
4. Primary battery troubles are due to corrosion around the connetors and terminals causing poor contact, separation of the battery paste, and sulfation (battery which is left in a discharged condition for a long period will have lead sulfate formed on the plates and recharging will not restore it to its original condition), therefore, the inspection should be performed periodically and thoroughly.

Note:
When sediment are formed at the bottom as shown in the figure, the battery should be replaced.

D. Battery charging

(Caution)

1. Refrain from charging the battery at a fast rate (quick charge) as it shortens battery life. When rapid charging is necessary, limit the charging rate to maximum of 2.0 A.
2. Hydrogen gas is generated during the charging process, therefore, keep fire away.
3. After battery charging is completed, wash the battery with water to remove spilled electrolyte, and apply grease to the terminals.

5. ELECTRICAL EQUIPMENTS

1. Main switch inspection

With the switch in both ON and OFF positions check to see that the continuity conditions in the chart below are satisfied. The switch is defective if there is no continuity where specified, or if there is continuity where not specified.

		BAT	IG	TL$_1$	TL$_2$
Color of cords		Red	Black	Brown/white	Brown
Key position	OFF				
	1	○—	—○	○—	—○
	2	○—	—	—	—○

2. Front stop switch inspection

Apply tester lead probes to the terminals of the front stop switch cords (black, green/yellow), operate brake lever and check for continuity.

- Take into consideration the lever play **2~5 mm (0.08~0.2 in.)**.

The stop light should come on when the brake lever travels beyond the play in the lever.

3. Rear stop switch inspection

After making sure that the stop switch spring is disconnected, apply tester lead probes to the switch terminals (green/yellow, black cords) and check for continuity. When the brake pedal is depressed 20 mm (0.8 in.) at the front end of the pedal, the stop light should come on at this point.

Adjustment.

If the stop light is late in coming on, turn the adjuster nut clockwise, and if too early, turn counterclockwise.

4. Horn Inspection

- Check for continuity across the horn lead terminals.
- Alternate method is to connect the horn to a fully charged 12 V battery and check its operation.

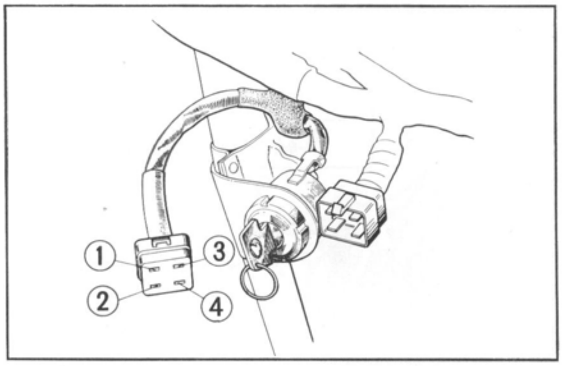

Fig. 309 ① Black ③ Brown
② Brown/white ④ Red

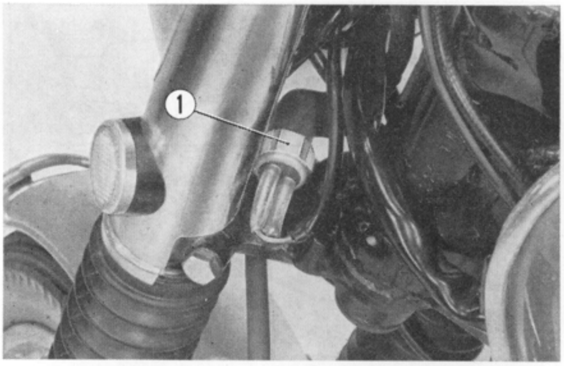

Fig. 310 Front stop switch inspection
① Front stop switch

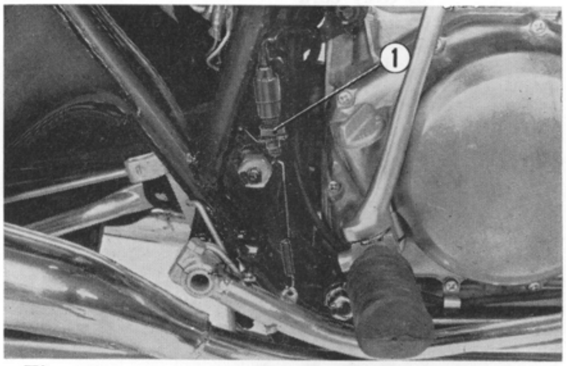

Fig. 311 ① Rear stop switch adjuster nut

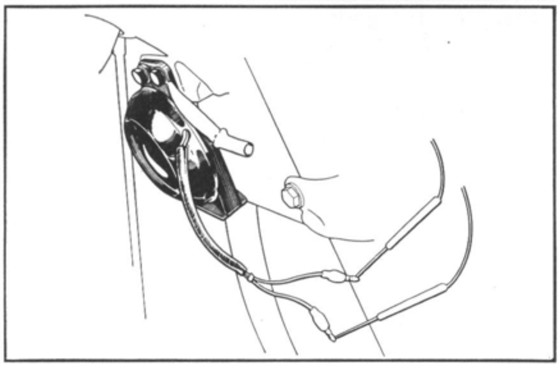

Fig. 312 Horn continuity test

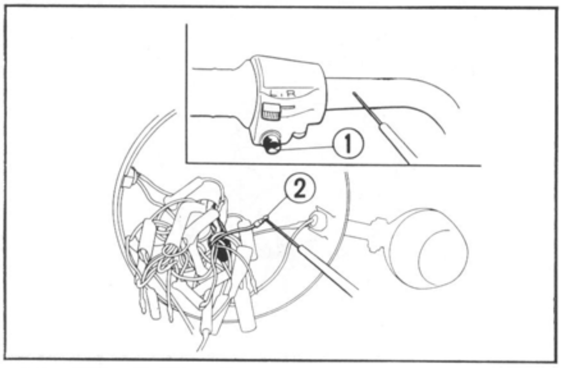

Fig. 313 ① Horn button
② Light green cord

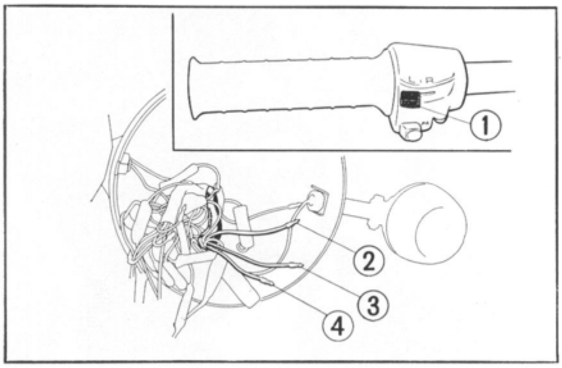

Fig. 314 ① Winker switch
② Light blue cord
③ Gray cord
④ Orange cord

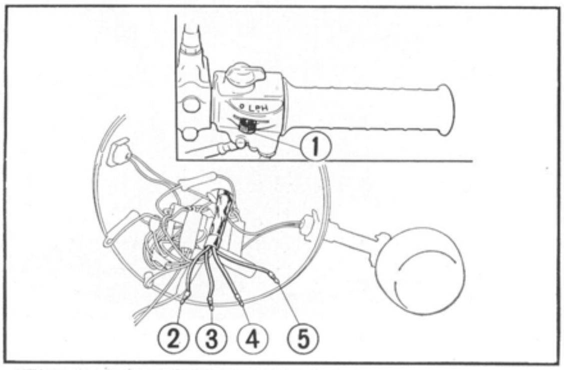

Fig. 315 ① Lighting switch
② Black cord
③ Blue cord
④ Brown/white cord
⑤ White cord

5. Horn button inspection
With the tester lead probes contact the light green cord terminal within the head light case and the the handle bar, and then press the horn button to check for continuity. If continuity exists, the horn button is satisfactory.

6. Winker switch inspection.
Disconnect the winker switch wiring within the head light case. Check continuity between the gray cord terminal and orange cord terminal (left winker), and between the gray cord terminal and light blue cord terminal (right winker) respectively of the winker switch. Continuity for the respective tests should exist according to the switch connections shown in the table below.

Knob	Blue cord	Gray cord	Orange cord
R	○—	—○	
OFF (center)			
L		○—	—○

7. Lighting switch inspection.
Inspect for broken wire and defective contact between the respective switch cords, using a tester. Continuity between the different cords should exist in accordance with the switching position table shown below. If continuity exists where not indicated the switch is defective.

Cord color		IG Black	HB Blue	TL Brown/white	LB White
ON	H	○—	—○—	—○	
	P	○—	——	—○	
	L	○—	——	—○—	—○
OFF					

8. Emergency switch and starter switch inspection

Inspect for broken wire and defective contact between the respective switch cords. Continuity between the different cords should exist in accordance with the switching position table shown below.
If continuity exist where not indicated, the switch is defective.

Emergency switch		
Cord color	Black	Black/white
ON	○—	—○
OFF		

Starter switch		
Cord color		Yellow/red
ON	○—	—○
OFF		

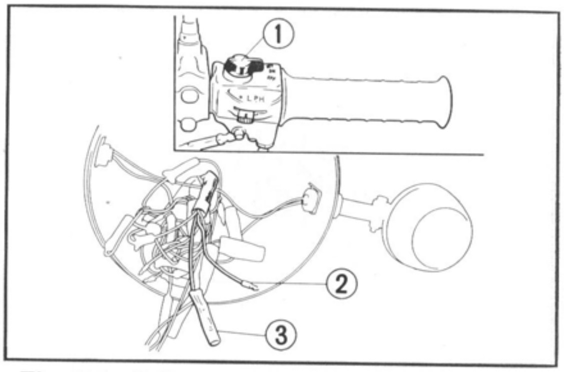

Fig. 316 ① Emergency switch ③ Black/white
② Black

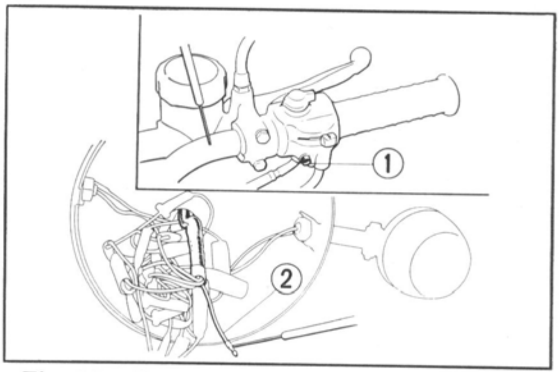

Fig. 317 ① Starter switch
② Yellow/red

9. Oil pressure switch inspection

Lubricating oil is supplied under pressure of **4～6 kg/cm²** (**56.8～85.3 lbs/in.²**) by the oil pump to various parts of engine. When the oil pressure drops, the oil supply becomes insufficient. The oil system is designed so that when the oil pressure drops below **0.5 kg/cm²** (**7 lbs/in.²**), the oil pressure switch operates and the warning lamp comes on.
Check the oil pressure switch for continuity without starting the engine and with the main switch on. If there is continuity, the switch is satisfactory. It is normal for the warning lamp to go out when the engine is started.
If the warning lamp does not go out after starting, and the pressure switch is satisfactory, the oil system should be inspected for trouble.

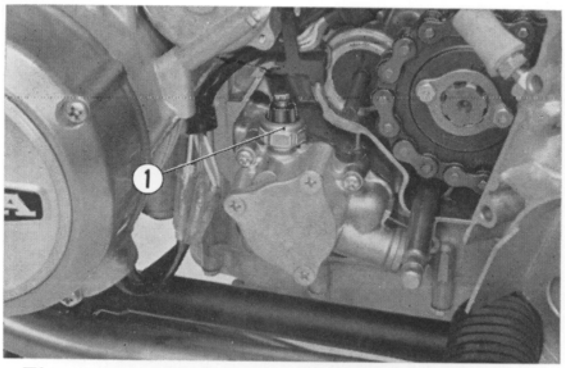

Fig. 318 ① Oil pressure switch

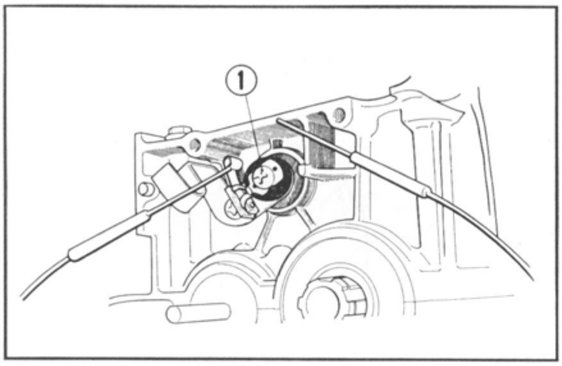

Fig. 319 Neutral switch inspection
① **Neutral switch**

10. Neutral switch inspection

The neutral switch is mounted on the left side of the upper crankcase. When the transmission is in neutral, the switch becomes grounded and the neutral pilot lamp comes on. Position the transmission in neutral, remove the left crankcase cover and check the continuity of the neutral switch. The switch is satisfactory if there is continuity.

1. Clutch

The clutch must be adjusted so that the engine can be completely disconnected from the transmission when the clutch lever is squeezed, but not to the point where the clutch will slip when the motorcycle is accelerating.

The clutch cable should be adjusted to provide **10~20 mm (0.4~0.8 in.)** free play as measured at the tip of the clutch lever.

To adjust, proceed as follows:

1. Loosen the clutch adjuster lock nut ① and turn the adjuster ② to align the marks ③ on the actuating arm and engine side cover.
2. Clutch cable adjustment can be made by means of the adjusters at the upper and lower ends of the clutch cable. Loosen the lock nut ⑤ (⑥ at the lower end) at the clutch lever and turn the cable adjuster bolt ④ (nut ⑦ at the lower end) in either direction. Turning the cable adjuster bolt or nut at the lower end in the direction Ⓐ will increase the free play and turning it in the direction Ⓑ will decrease the free play. Tighten the lock nut.
3. After adjusting, check to see if the clutch is not slipping or if the clutch is properly disengaging.

Start the engine and shift into gear. There should be no excessive grinding from the transmission, and the motorcycle should not begin to creep forward while the clutch lever is squeezed. Drive the motorcycle to check for clutch slippage.

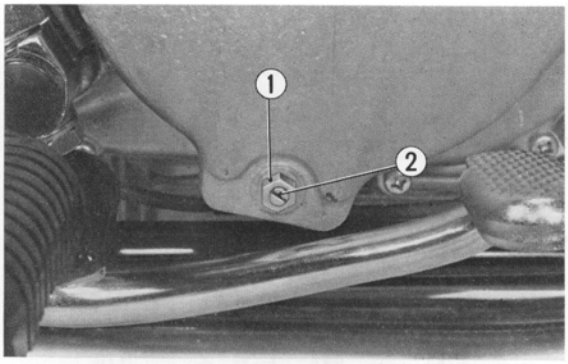

Fig. 320 ① Clutch adjuster lock nut
② Clutch adjuster

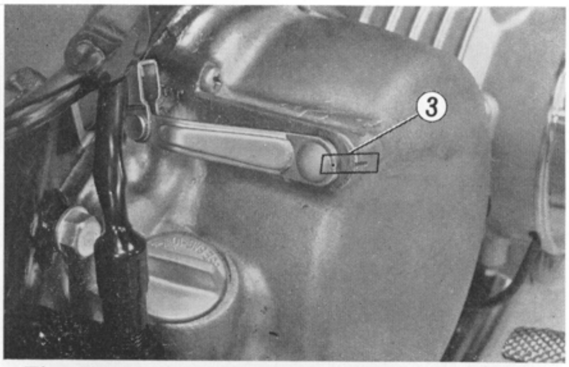

Fig. 321 ③ Alignment marks

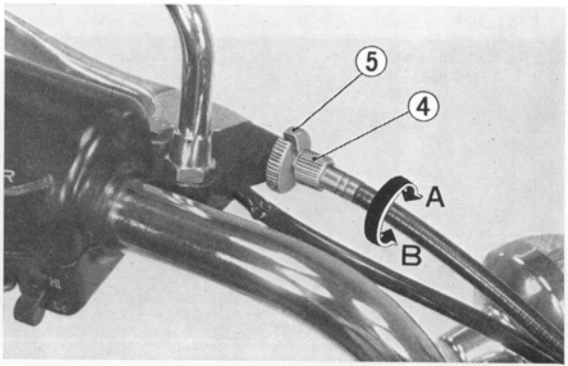

Fig. 322 ④ Clutch cable adjuster bolt
⑤ Lock nut

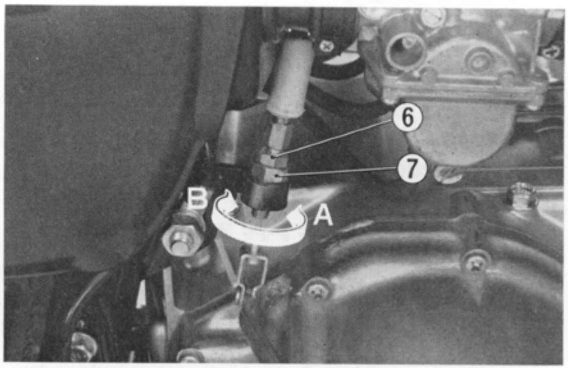

Fig. 323 ⑥ Lock nut
⑦ Clutch cable adjuster nut

8. NEW FEATURES OF CB550

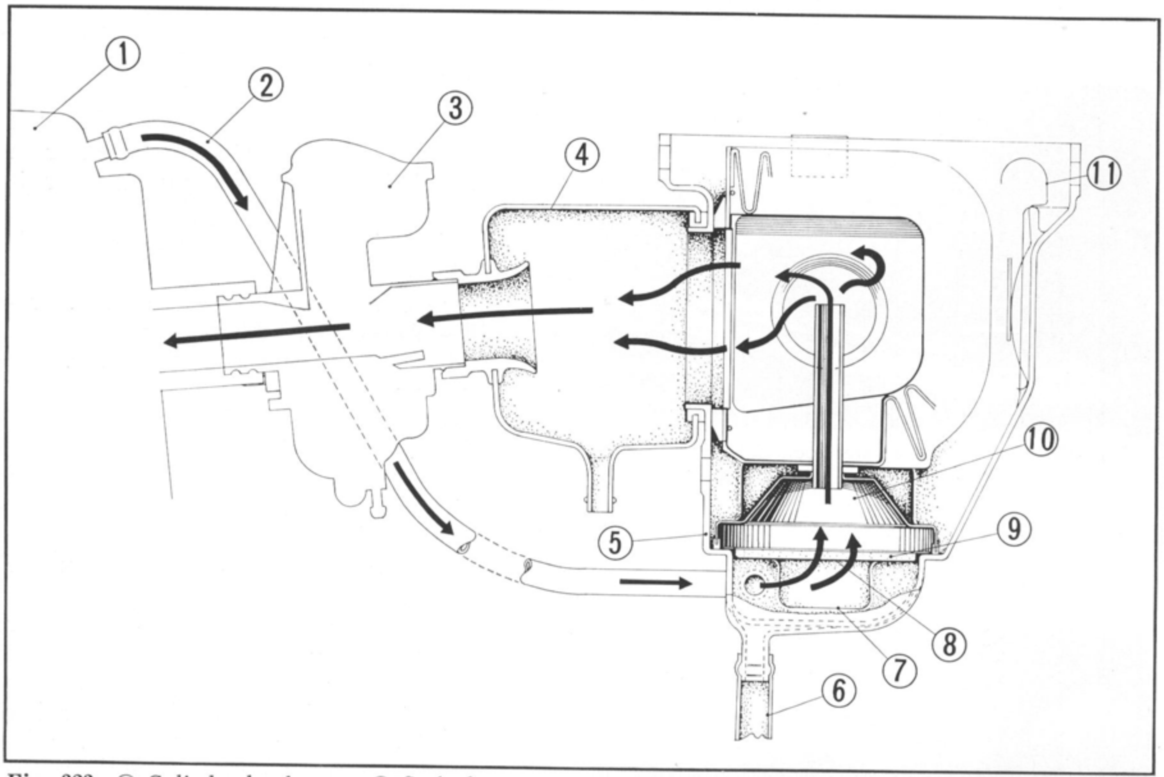

Fig. 323 ① Cylinder head
② Breather tube
③ Carburetor
④ Air cleaner chamber
⑤ Element seal case
⑥ Drain tube
⑦ Seal plate
⑧ Punching metal
⑨ Element B
⑩ Element cover
⑪ Air cleaner element spring

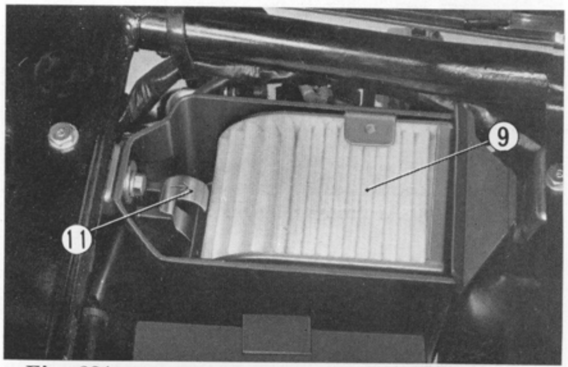

Fig. 324

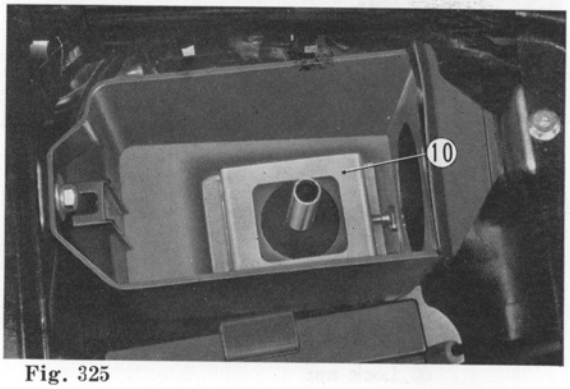

Fig. 325

1. BLOW-BY GAS SCAVENGING DEVICE

The blow-by gas scavenging device was newly employed for contributing to minimize pollution. The description is given here, referring to Fig. 5 above.

The blow-by gas within the cylinder head is conducted into the element seal case through the breather tube. The gas is then conducted into the element B through the openings on both sides in the seal plate and punching metal, where oil is separated from the gas at each section. Further the gas enters the air cleaner element on the upper part of the seal case through the pipe within the element cover and is filtered again. The gas so filtered is drawn into the carburetor chamber and returns to the combustion chamber for burning through the carburetor. Now the gas is again burnt in the combustion chamber to minimize pollution by the exhaust gases.

- Blow-by gas

  The exhaust gases from automobiles contain carbon monoxide, hydrocarbon, hydrogen sulfide, nitrogen dioxide, selenium oxide, etc. which are poisonous ingredients contributing to pollution.

  The exhaust gases consist of not only the remainder of burned mixture and combustion products but also a leakage of compression past the cylinder wall or from the crankcase. The latter is known as "blow-by gas", and accounts for 20 to 40% of the total amount of hydrocarbon to be emitted in the air. Since blow-by gases have not been completely burned and, therefore, must be burned again by means of the blow-by gas scavenging device to minimize the amount of the gas to be emitted into the air.

2. STARTING MOTOR SAFETY UNIT

- Description

  The starting motor safety unit operates in the way that the starting motor functions only when the transmition is in neutral or while the clutch lever is being squeezed in any gear position, assuring rider safety and preventing damage of the motor and transmission gears.

- Circuits and operations

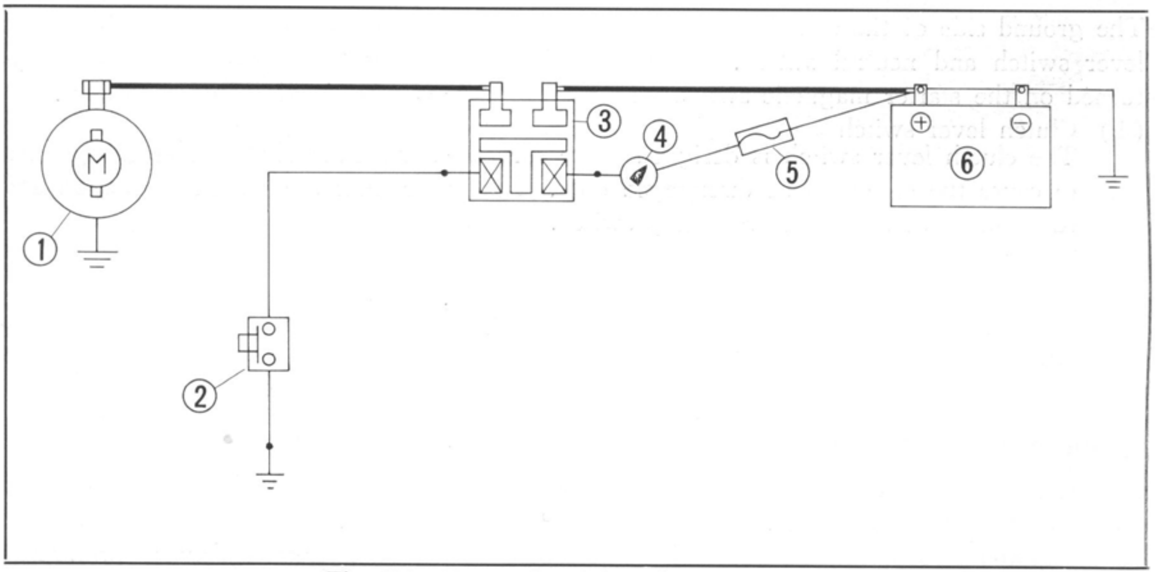

Fig. 326 Circuit of models without safety unit

① Starting motor	④ Main switch
② Starter button switch	⑤ Fuse
③ Starter magnetic switch	⑥ Battery

When the engine switch is turned on, some amount of electricity is usually applied to the starter magnetic switch coil. If the starter button switch is then turned on, the starter magnetic switch will operate to cause the starting motor to turn. In other words, the motorcycle begines to move when the main switch and starter button switch are turned on with the transmission in gear.

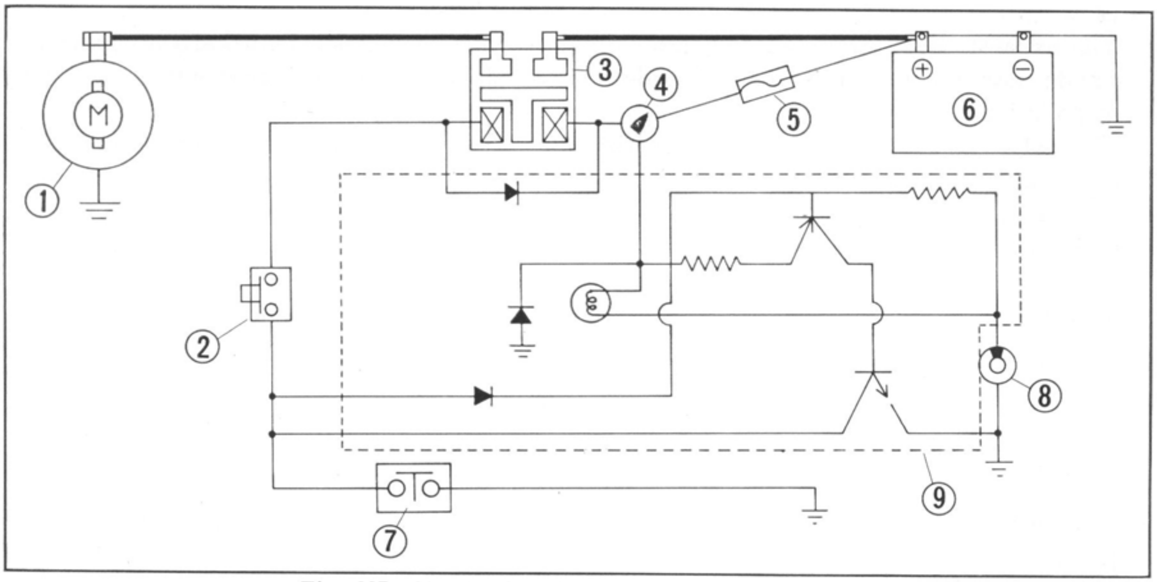

Fig. 327 Circuit of model (CB 550) with safety unit

① Starting motor
② Starter button Switch
③ Starter magnetic switch
④ Main switch
⑤ Fuse
⑥ Battery
⑦ Clutch lever switch
⑧ Neutral switch
⑨ Safety unit

The ground side of the starter button switch is connected to the body through the clutch lever switch and neutral switch. When the clutch lever switch or the neutral switch is turned on the starter magnetic switch will operate to cause the starting motor to turn.

(1) Clutch lever switch

The clutch lever switch is designed to be turned on when the clutch lever is squeezed to cause the clutch to be disengaged only. (This switch has the same construction and function as those of the front stop switch.)

3. FRONT SUSPENSION

The front fork used on CB 550 is of a free valve type which is widely employed in a telescopic type shock absorber.

As its damping force can be adjusted by changing its stroke to meet a driver's preference or conditions of a road or surfaces, it always provides a comfortable ride even under severe driving conditions. On the other hand, CB 500 is incorporated with a rod type shock absorber which is also used in a Telescopic type.

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Operation

- When the wheel meets holes or bumps in the road, it moves up and down. This up-and-down movement of the wheel is transmitted to the bottom leg.

  Since the bottom leg is integrated with a pipe, the pipe also moves up and down. With either action, two springs on the pipe flux and rebound, absorbing the road shocks to the motorcycle.

  In this case, oil in the chamber Ⓑ pushes up the free valve and flows into the space Ⓐ freely.

  At the same time, oil in the chamber Ⓑ also flows through orifices in the lower end of the spring under seat into the space Ⓒ by the amount by which the pipe is moved up

- Extension

  As the wheel has passed the bump or hole, it moves down. To eliminate excessive up-and-down motion of the spring and wheel, there will be a restraint on the spring and wheel action.

  In operation, as the wheel moves down, the free valve is closed, introducing high pressure in the space Ⓐ. This high pressure then forces the oil out and into the space Ⓒ through the orifices in the spring under seat.

  Since the oil encounters a restraint as it passes through the orifices, excessive wheel and spring movement as well as spring oscillation are prevented.

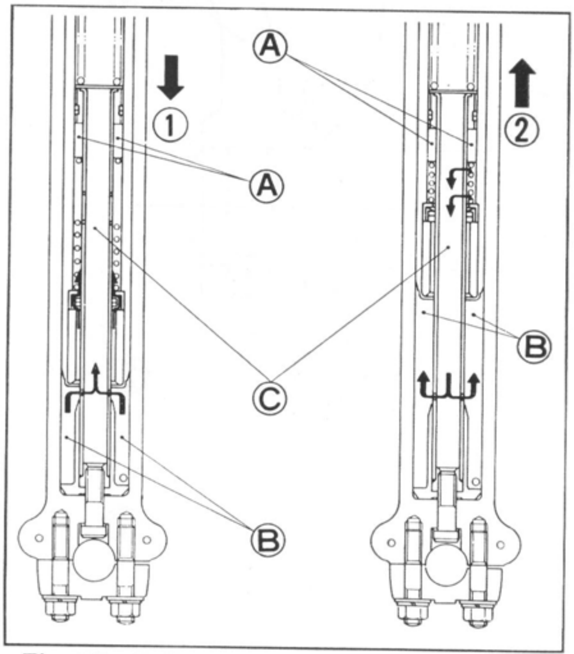


Fig. 328 ① Compression ② Extension

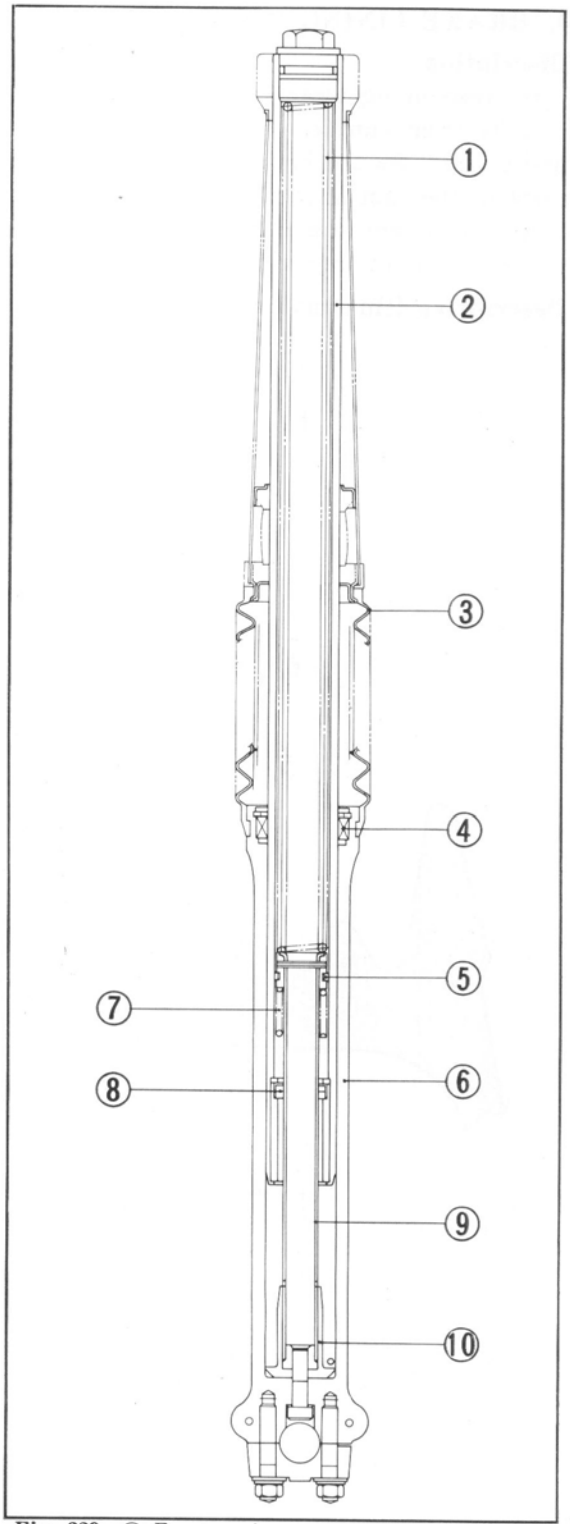


Fig. 329
① Front spring
② Front fork pipe
③ Front fork dust seal
④ Oil seal
⑤ Piston ring
⑥ Front fork bottom leg
⑦ Front rebound spring
⑧ Free valve
⑨ Bottom pipe
⑩ Oil lock piece

4. BRAKE LINING WEAR INDICATOR

Discription

The brake lining wear indicator is provided to check the wear condition of the brake linings visually from outside. As shown in the figure below, the indicator plate is attached to the brake cam. As the brake lining has worn, the brake cam moves excessively. Such a movement of the cam is checked by the arrow on the periphery of the indicator. Further the brake panel cam boss is provided with the "wear limit" mark to make it possible to check the service limit (replacement time) of the lining easily with the brake panel installed.

Descriptive illustration

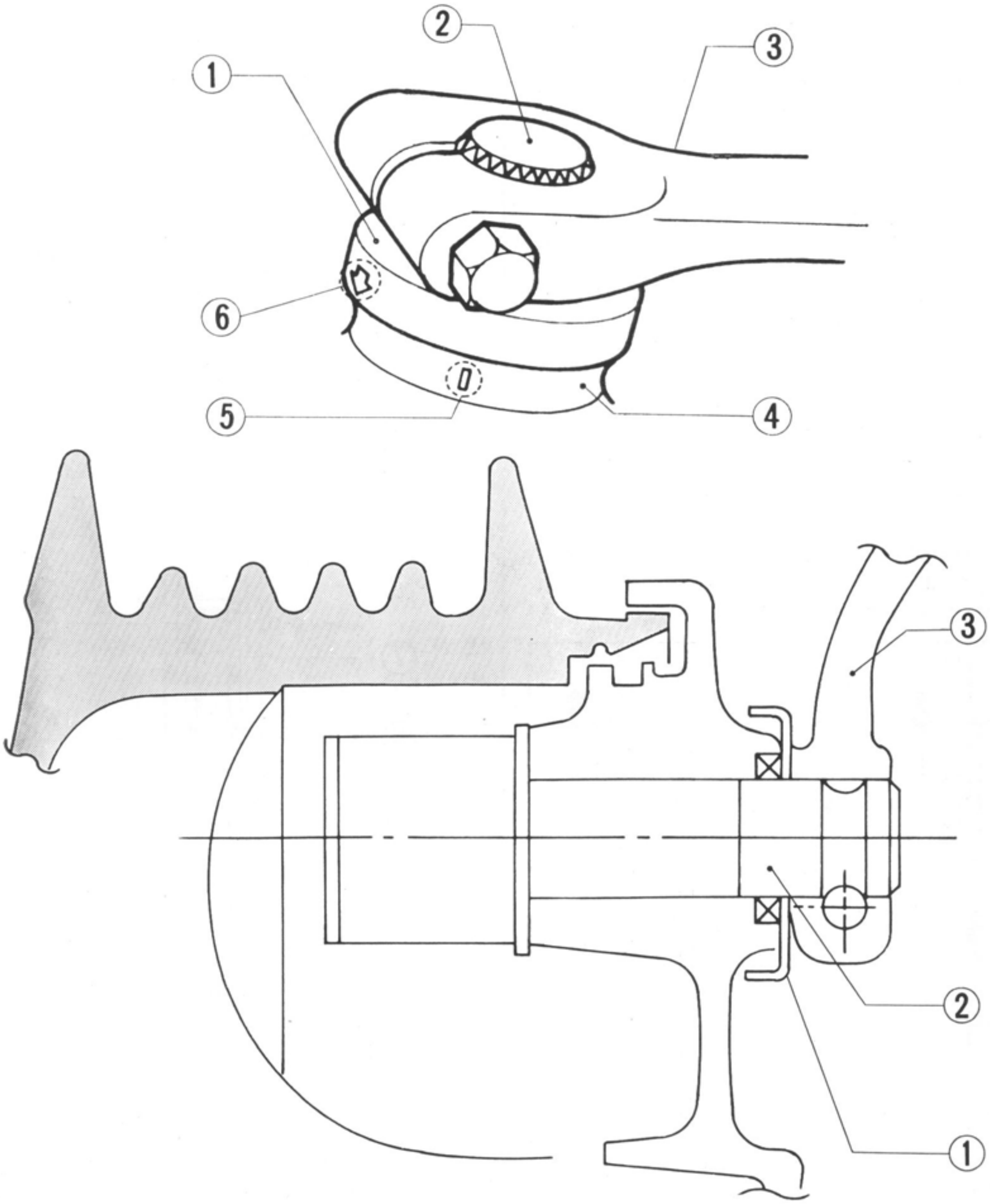
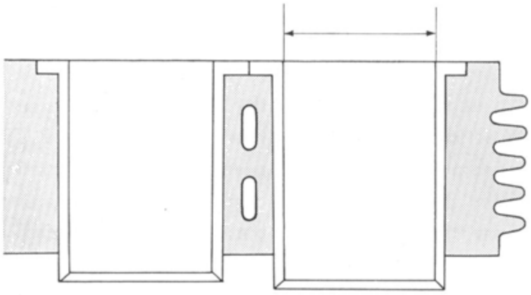
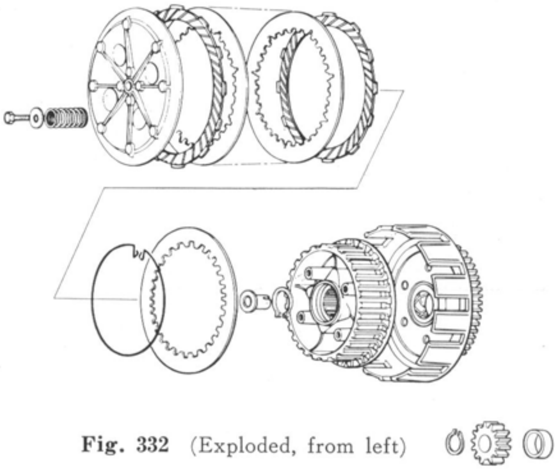


Fig. 330 ① Indicator plate
② Brake cam
③ Brake arm
④ Brake panel cam boss
⑤ "Wear limit" mark
⑥ Arrow

9. COMPARISON OF CB550 TO CB500

(Engine)

<table>
<tr><th>Part or item</th><th>Model CB500</th><th>Model CB550</th><th>Modified part</th></tr>
<tr><td rowspan="2">Cylinder bore</td><td colspan="2">
Fig. 331</td><td rowspan="2">• Cylinder
• Pistons
• Piston rings
• Upper crankcase
• Cylinder gasket
• Cylinder head gasket</td></tr>
<tr><td>Diameter : 56.0 mm (2.205 in.)
(Piston displacement : 498 cc or 30.4 cu. in.)</td><td>Diameter : 58.5 mm (2.303 in.)
(Piston displacement : 544 cc or 33.2 cu. in.)</td></tr>
<tr><td>Clutch</td><td colspan="2">
Fig. 332 (Exploded, from left)

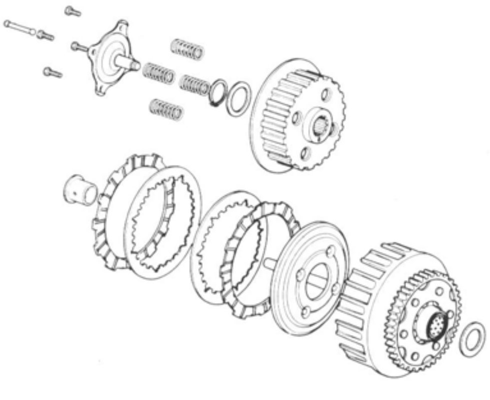



Fig. 333 (Exploded, from right)</td><td>• Clutch outer
• Clutch center
• Clutch pressure plate
• Clutch springs
• Clutch lifter rod
• Right and left crankcase cover
• Friction discs</td></tr>
</table>

Clutch operation

Model **CB500**	Model **CB550**
Refer to Fig. 13 on page 12. The clutch connects and disconnects the engine from the transmission. As shown in Fig. 13, the clutch plates ④ ("drive plates"), which are capable of sliding axially on the clutch center ⑤, are "sandwiched" between the friction discs ③ ("driven discs") engaged in the clutch outer ②. In normal engaged condition of the clutch, the pressure plate ⑦, upon which the force of the clutch springs ⑥ is acting, presses the stacks of the discs and plates against the clutch outer. Under this condition, the engine power is transmitted through the primary drive gear ①, clutch outer, friction discs, plates and clutch center to the transmission main shaft. As the clutch lever is squeezed to disengage the clutch, the clutch lifter ⑪ connected to the clutch cable is rotated and then is forced out the ⑪ connected to the cable through the thread type cam mechanism of the lifter cam and the clutch adjuster cam. This force of the clutch ball is transmitted through the #10 steel ball ⑩, clutch lifter rod ⑨ and clutch lifter joints piece ⑧ to the clutch pressure plate to cause the clutch springs to be compressed, producing clearance between the friction discs and plates. Now the face pressure on the friction surfaces of the power transmitting parts is reduced to zero, resulting in disengagement of the clutch.	Refer to Fig. 14 on page 12. As shown in the figure, the clutch plates ⑨, which are capable of sliding axially on the clutch center ⑥, are sandwiched between the friction discs ⑧ engaged in the clutch outer ⑦. In normal engaged condition of the clutch, the pressure plate ⑩, upon which the force of the clutch springs ⑤ is acting, presses the stacks of the discs and plates against the clutch outer. Under this condition, the engine power is transmitted through the primary drive gear, clutch outer, friction discs, plates and clutch center to the transmission mainshaft. As the clutch lever is squeezed to disengage the clutch, the clutch arm connected to the clutch cable operates and the clutch lifter cam ① rotates to cause the clutch adjusting lever ② to be forced against the clutch lifter rod ③. This force is transmitted through the clutch lifter plate ④ to the clutch center, producing clearance between the friction discs and plates. Now the face pressure on the friction surfaces of the power transmitting parts is reduced to zero, resulting in disengagement of the clutch.

Construction of CB500 clutch system

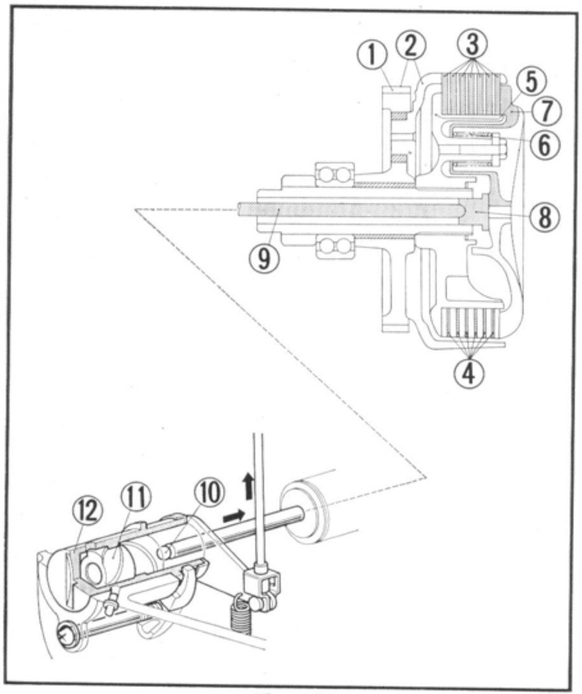


Fig. 334

Construction of CB550 clutch system

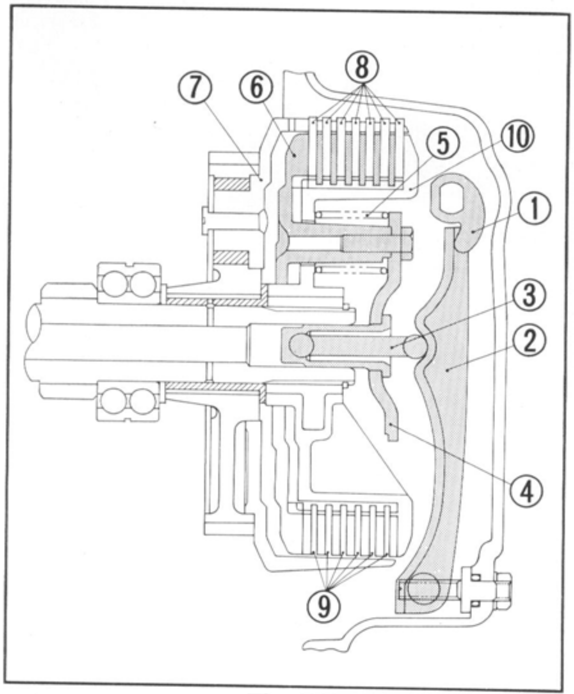
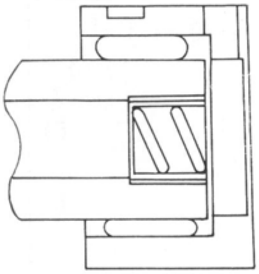
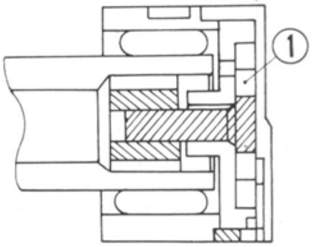


Fig. 335

Part or item	Model CB500	Model CB550	Modified part
Countershaft lubrication	 **Fig. 336** By splashing	 **Fig. 337** By pump pressure ① Trochoid pump • The oil strainer assembly is provided with the transmission oil pipe. The oil comes up to the right side of the countershaft through the oil passage in the right side of the lower crankcase and is fed to the countershaft assembly by means of the trochoid pump. (See Fig. 17.)	• Countershaft • Trochoid pump bearing (Added)

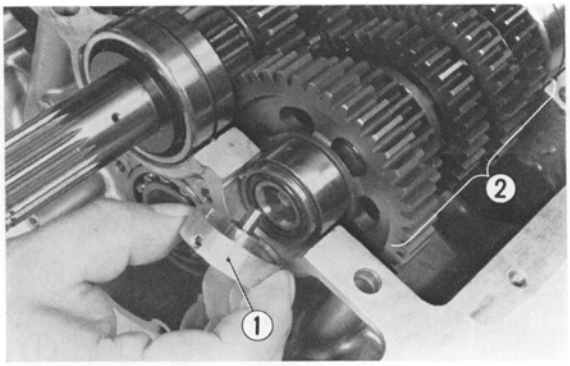


Fig. 338 ① Trochoid pump
② Countershaft assembly

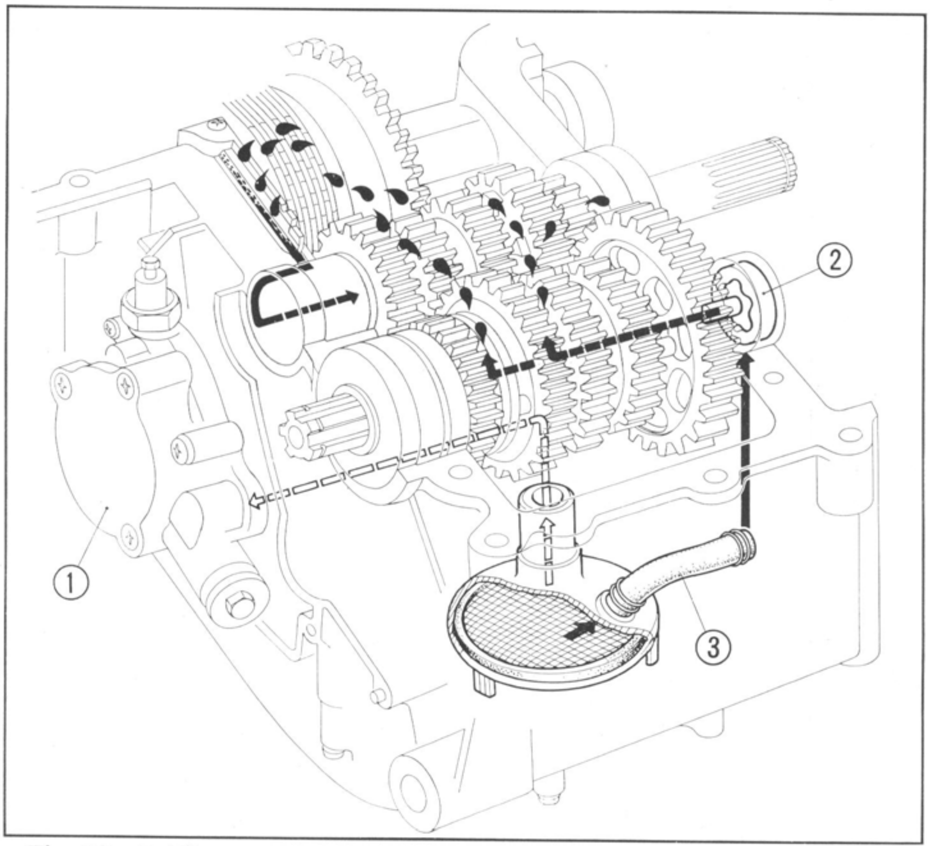


Fig. 339 ① Oil pump
② Trochoid pump
③ Transmission oil pipe

➡ Oil to countershaft
□□□⇨ Oil to cylinder head and crankshaft through oil pump

Unit: mm

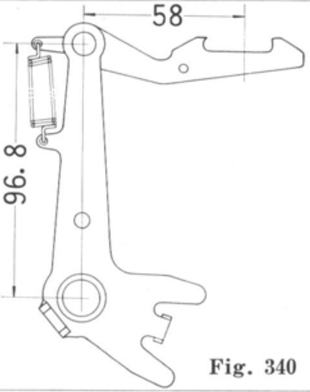
<table>
<tr><th>Part or item</th><th>Model CB500</th><th>Model CB550</th><th>Modified part</th></tr>
<tr><td>Gear shaft spindle</td><td>

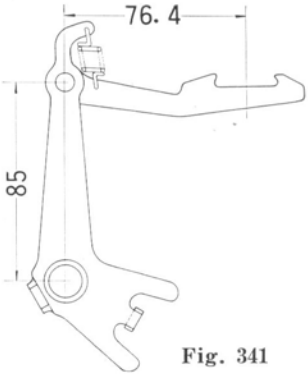
Fig. 340</td><td>

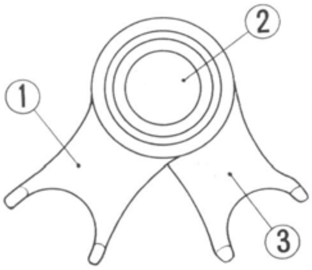
Fig. 341</td><td>· Gear shift spindle</td></tr>
<tr><td>Gear ratio</td><td colspan="2"><table>
<tr><th>No. of teeth</th><th>Part name</th><th>No. of teeth</th></tr>
<tr><td>64</td><td>Primary driven gear</td><td>63</td></tr>
<tr><td>23</td><td>Primary drive gear</td><td>24</td></tr>
</table></td><td></td></tr>
<tr><td>Gear shift fork shaft (Added)</td><td>

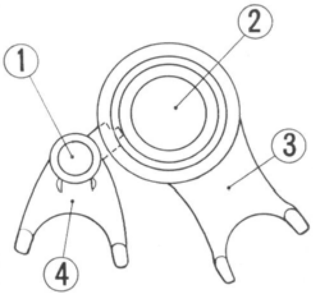
Fig. 342
① Right and left gear shift forks
② Gear shift drum
③ Center gear shift fork
· All forks are installed to the drum.</td><td>

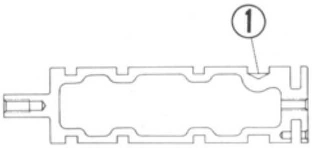
Fig. 343
① Gear shift fork shaft
② Gear shift drum
③ Center gear shift fork
④ Right and left gear shift forks
· The center fork is installed to the drum and the right and left forks to the fork shaft.</td><td>· Right gear shift fork
· Left gear shift fork
· Center gear shift fork
· Gear shift fork shaft (Added)</td></tr>
<tr><td>Gear shift drum</td><td>

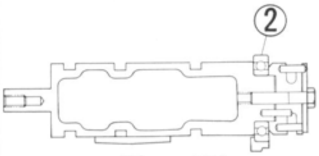
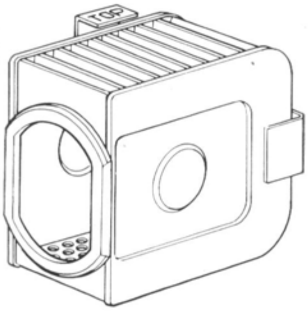
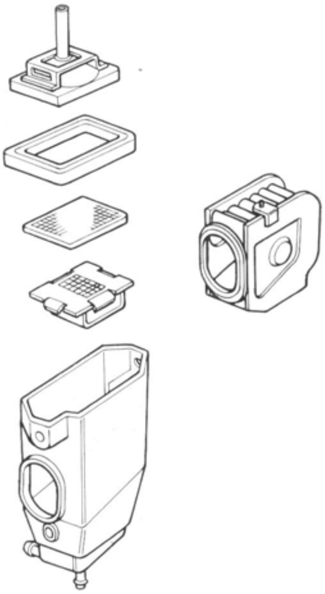
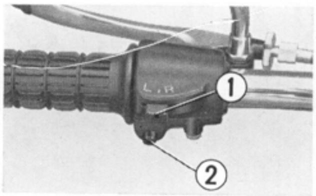
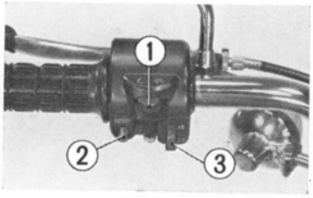
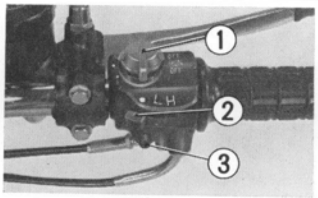
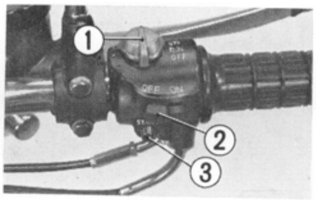
Fig. 344
① Groove for gear shift drum gide screw</td><td>

Fig. 345
② Press bearing in here
· The groove for the drum guide screw was abolished. Instead the 16005 radial ball bearing was pressed in.</td><td>· Gear shift drum
· Upper crankcase</td></tr>
</table>

(Frame)

Part or item	Model CB500	Model CB550	Modified part
Air cleaner	 **Fig. 346** Air cleaner element seal case	 **Fig. 347** • In connection with employment of the blow-by gas scavenging device, the air cleaner was changed in shape.	• Air cleaner chamber • Element cover • Element cover seal • Element (wet type) • Plate seal • Air cleaner element (dry type)
Final driven sprocket	Number of teeth : 34	Number of teeth : 37	
Turn signal/ horn switch	 **Fig. 348** ① Turn signal switch ② Horn switch	 **Fig. 349** ① Turn signal switch ② Horn switch ③ Dimmer switch	• The turn signal/ horn switch was changed to the turn signal/horn/ dimmer switch (common with that of CB750).
Starter/ headlight/ ignition switch	 **Fig. 350** ① Ignition switch ② Headlight switch ③ Starter switch	 **Fig. 351** ① Ignition switch ② Headlight switch ③ Starter switch	• The starter/headlight/ignition switch was changed in shape.

10. ENGINE

1. CLUTCH

A. Disassembly

1. Drain the engine oil. (See page 20 of the CB500 Shop Manual separately issued).
2. Remove the kick starter pedal.
3. Remove the ten 6mm screws and remove the right crankcase cover.

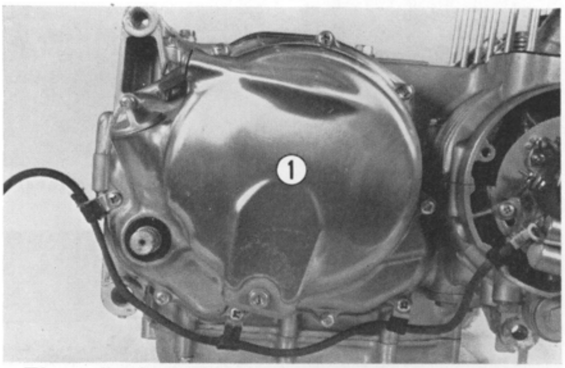


Fig. 352 ① Right crankcase cover

4. Remove the clutch lifter rod.
5. Remove the four clutch pressure plate mounting bolts.
6. Remove the clutch lifter plate.

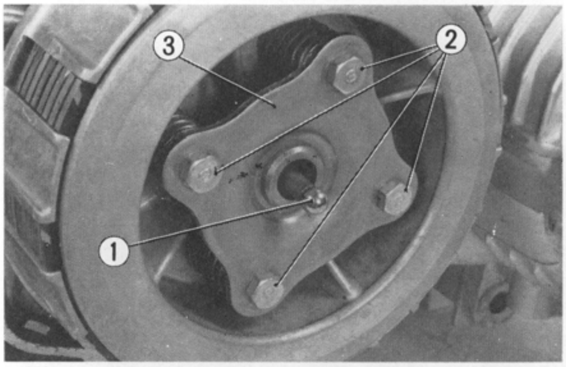


Fig. 353 ① Clutch lifter rod
② Mounting bolts
③ Lifter plate

7. Remove the 25mm snap ring and shim and remove the clutch assembly from the mainshaft.
8. Remove the clutch outer and inner at at the same time.

(Refer to page 113 Fig. 116)

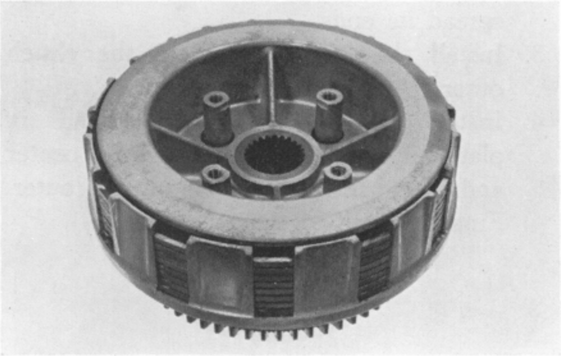


Fig. 354 ① Clutch assembly

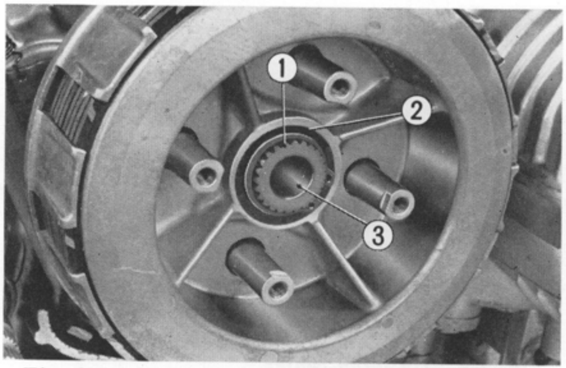


Fig. 355 ① 25mm snap ring
② Shim
③ Main shaft

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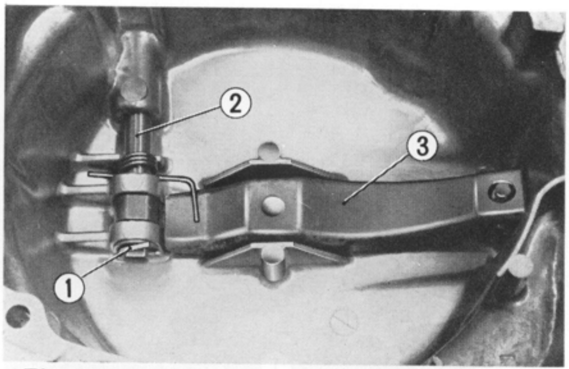

Fig. 356 ① Cotter pin ③ Clutch adjusting lever ② Clutch lever

9. Remove the cotter pin from inside the right crankcase cover and pull out the clutch lever.

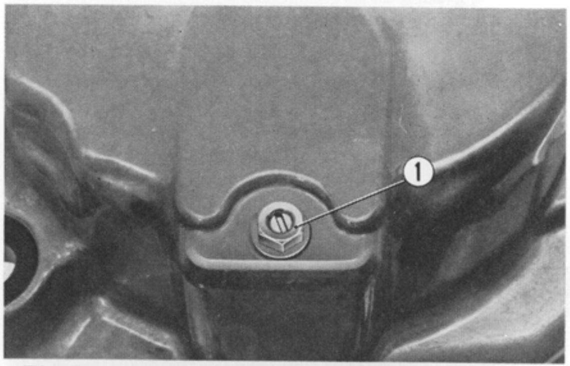

Fig. 357 ① 6mm nut

10. Remove the 6mm nut and remove the clutch adjusting lever.

B. Inspection

See page 41 of the CB500 Shop Manual separately issued. Measurement of friction disk thickness. Using a vernier caliper, measure the thickness of each friction. Replace a disk whose thickness is below the service limit.

Unit: mm (in.)

Assembly standard	Service limit
2.7 (0.1063)	2.4 (0.0945)

C. Assembly

1. Install and tighten the 6mm nut attaching the clutch adjusting lever.
2. As shown in Fig. 38, install the clutch lever spring and 10mm washer on the clutch lever. Insert the cotter pin and spread its ends.
3. Install the 25mm collar in the clutch outer.
4. Install the seven friction disks and six plates alternatively to the clutch center and then install to the clutch outer. Finally install to the mainshaft.

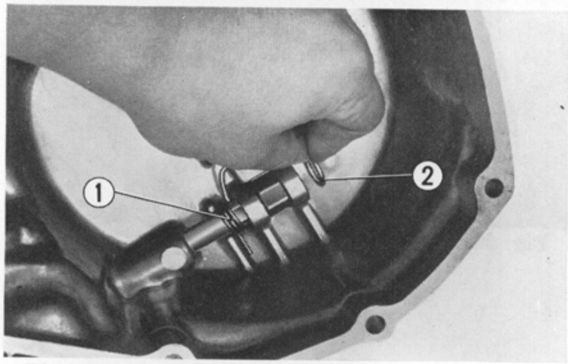

Fig. 358 ① Clutch lever spring ② 10mm washer

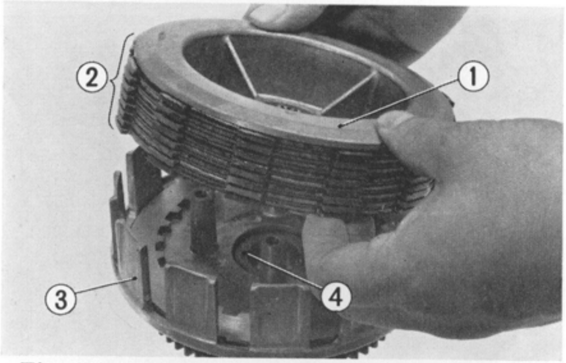

Fig. 359 ① Clutch center
② Friction disks and plates
③ Clutch outer
④ 25mm collar

5. Attach a dial gauge to the end face of the clutch assembly to check for excessive looseness. It is above 0.1 mm (0.0039 in.), install a washer or washers inside the snap ring. The washers are available in three thicknesses, namely, 0.1 mm (0.0039 in.), 0.3 mm (0.0118 in.) and 0.5 mm (0.0197 in.).
6. Install the four clutch springs. Install the lifter plate and tighten the four 6 mm bolts slowly in a criss-cross pattern.
7. Insert the lifter rod.
8. Install the right crankcase cover and kick starter pedal.

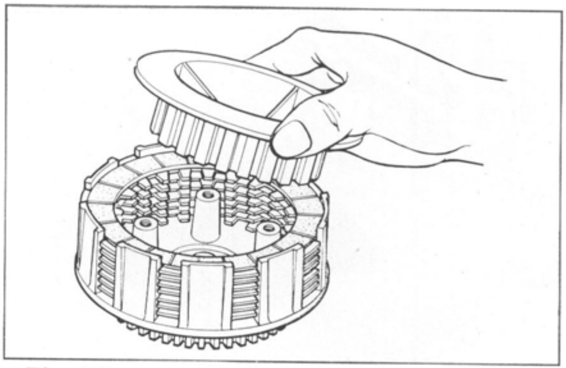

Fig. 360

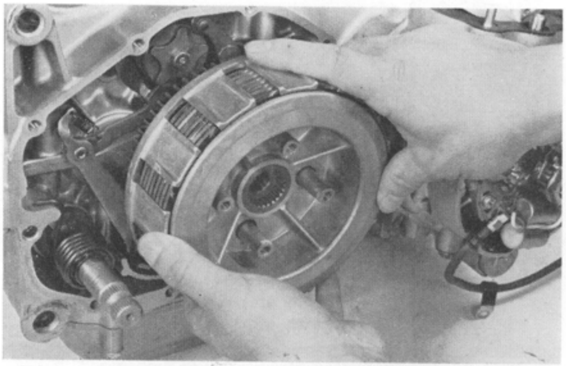

Fig. 361

2. GEARSHIFT MECHANISM

A. Disassembly

1. Remove the clutch. (See page 120.)
2. Remove the gear change pedal.
3. While holding down the gearshift arm as shown, pull out the gearshift spindle.

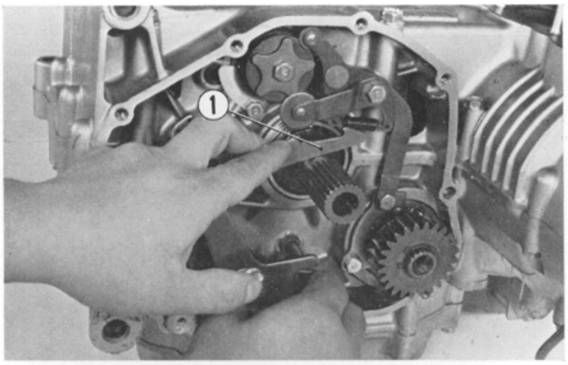

Fig. 262 ① Gearshift arm

4. Remove the shift drum stop bolt and neutral stop bolt and remove the shift drum stop and neutral stop.

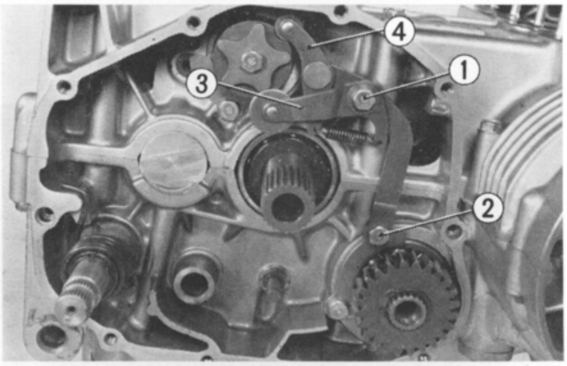

Fig. 363 ① Shift drum neutral stop bolt
② Shift drum stop bolt
③ Shift drum stop ④ Neutral stop

5. Remove the 6mm bolt and remove the bearing set plate on the primary shaft side.
6. Remove the two 6mm bolts and remove the bearing set plate on the gearshift drum side.

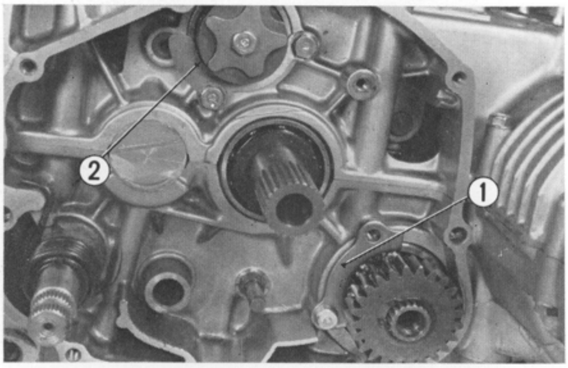

Fig. 364 ① Bearing set plate on primary shaft side
② Bearing set plate on shift drum side

7. Remove the 6mm bolt and remove the drum stop cam plate and drum gearshift center.

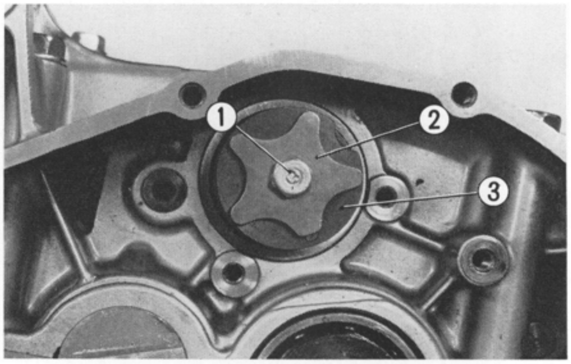

Fig. 365 ① 6mm bolt ③ Drum gearshift center
② Stop cam plate

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8. Separate the crankcase into the upper and lower parts and remove the transmission gears. (See page 43 of the CB500 Shop Manual separately issued.)
9. Remove the neutral stop switch from the gearshift drum.

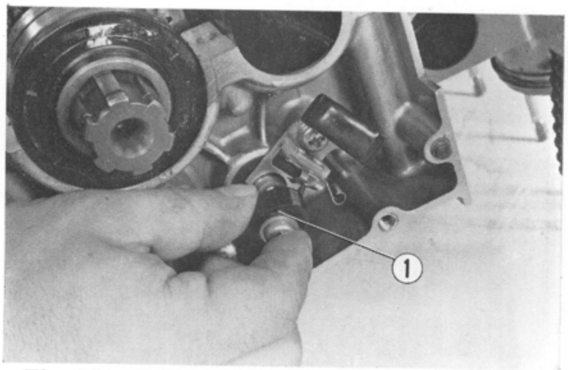

Fig. 366 ① Neutral stop switch

10. Remove the guide pin clip and guide pin and pull the gearshift drum from the upper crankcase.

B. Inspection

See page 44 of the CB500 Shop Manual separately issued.

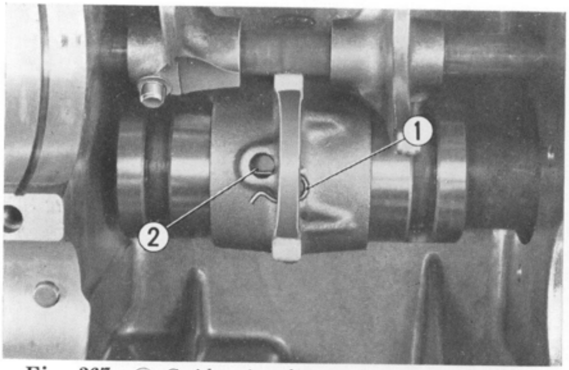

Fig. 367 ① Guide pin clip ② Guide pin

C. Assembly

1. Position the center gearshift fork on the drum as shown in Fig. 48.
2. Insert the guide pin into the center gearshift fork and secure with the guide pin clip.

NOTE:

Install the guide pin clip with it facing correctly. (See Fig. 366.)

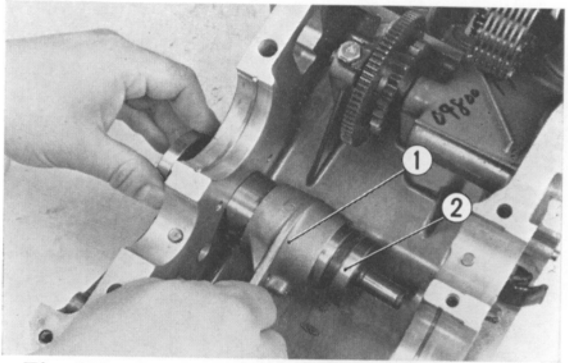

Fig. 368 ① Center gearshift fork ② Drum

3. Put the right and left gearshift forks in the upper crankcase and insert the gearshift fork shaft as shown in Fig. 368.

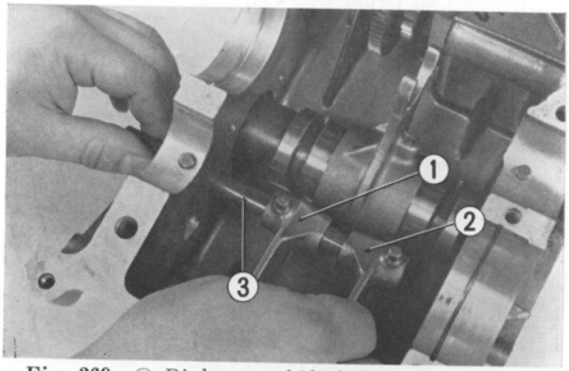

Fig. 369 ① Right gearshift fork
② Left gearshift fork
③ Gearshift fork shaft

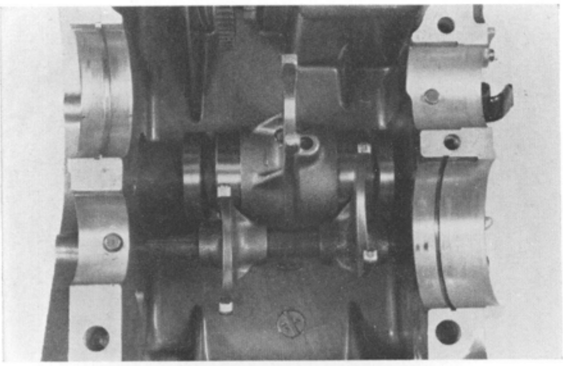

Fig. 370

4. Make sure that the gearshift forks are installed correctly and securely.
5. Instal the neutral stop switch to the gearshift drum by fitting the lug into the groove in the drum and secure with 6mm screw.

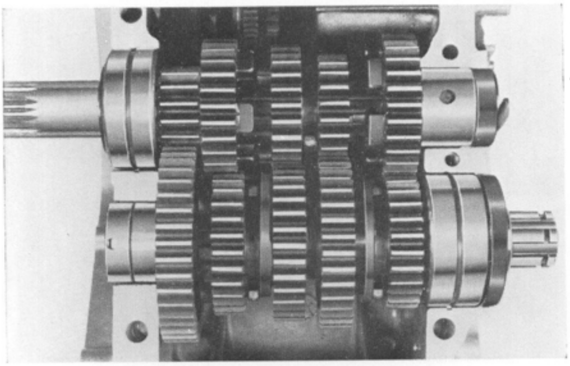

Fig. 371

6. Install the transmission gears in the upper crankcase and put the upper and lower crankcases together. Install the primary shaft and then tighten the crankcases securely.
7. Install the bearing set plate on the drum side and secure with the two 6mm bolts.

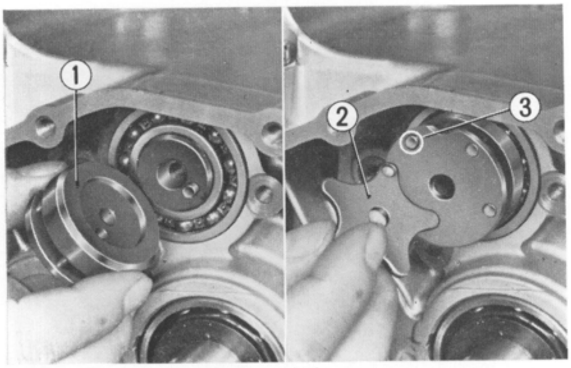

Fig. 372 ① Drum gearshift center
② Drum stop cam plate
③ Lug

8. Install the drum gearshift center.

NOTE:
Properly fit the lug of the drum into the hole in the drum gearshift center.

9. Install the drum stop cam plate.

NOTE:
Properly fit the gearshift drum pin into the hole in the drum stop cam plate.

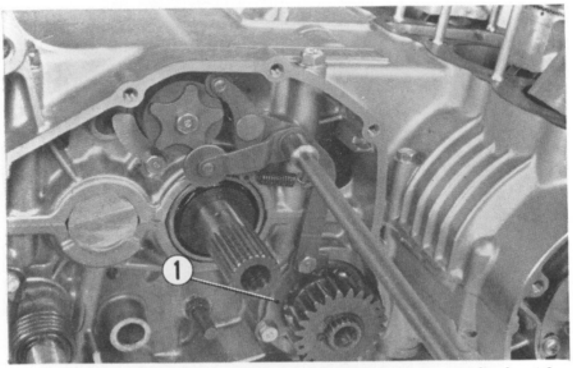

Fig. 373 ① Bearing set plate on primary shaft side

10. Instal the bearing set plate on the drum side.
11. As shown in Fig. 377, install the gearshift drum stop spring to the drum stop and to the neutral stop and tighten the drum stop bolt and neutral stop bolt and neutral stop bolt securely. Also tighten the bearing set plate on the primary shaft side together as shown.

12. Rotate the gearshift drum and check each component for smooth movement.
13. Install the gearshift arm and check to see if it moves smoothly and equally in booth directions.
14. Install the clutch. (See page 121.)

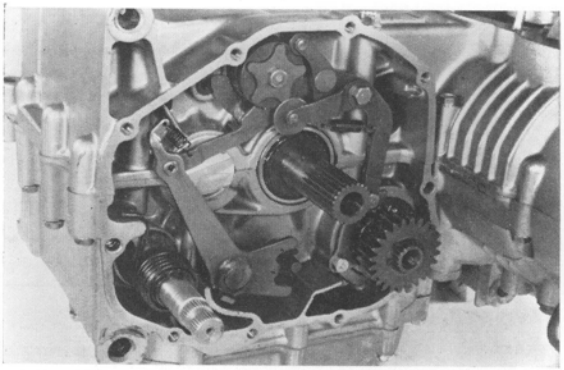

Fig. 374

11. TROUBLE SHOOTING

ENGINE

Trouble	Probable Causes	Remedies
Engine does not start	1. Excessive wear of piston ring or cylinder	Replace
	2. Seized valve in valve guide	Replace
	3. Seized piston	Replace
	4. Faulty valve timing	Adjust
	5. Low or lack of compression prssure • Pressure leak	Lap the valve to obtain good valve seating or replace
	5. Blown out cylinder head gasket	Replace
	6. Warped gasketing surface of the cylinder and cylinder head	Repair or replace
Poor engine idling	**Valve Mechanism**	
	1. Incorrect tappet clearance	Adjust to standard value
	2. Low or lack of compression pressure	Repair
	3. Excessive valve guide clearance	Replace valve and guide
Loss of power	1. Valve sticking open	Replace
	2. Incorrect seating of valve	Lap valve
	3. Weak or broken valve spring	Replace
	4. Faulty valve timing	Check valve timing and adjust if necessary
	5. Blown out cylinder head gasket	Replace
	6. Excessive wear of cylinder and piston	Replace
	7. Worn, weak or broken piston ring	Replace
	8. Loose spark plug	Retighten
Overheating	1. Heavy carbon deposit on combustion chamber and piston head	Remove carbon
	2. Lean fuel mixture	Adjust the carburetor
	3. Retarded ignition timing	Adjust ignition timing
	4. Low oil level, poor quality	Add good grade oil
	5. Extended operation in low gear	
Backfire	1. Incorrect seating of inlet valve	Check the valve seating
	2. Faulty valve timing	Adjust
	3. Incorrect ignition timing	Adjust
	4. Excessive spark plug gap	Adjust the gap to 0.024～0.028 in (0.6～0.7 mm)
	5. Improper fuel	Replace
White exhaust smoke	1. Excessive wear of cylinder and piston	Replace the piston
	2. Overfilled engine oil	Adjust the oil level
	3. Excessively high oil pressure	Check the breather
	4. Poor quality oil	Replace with good quality oil
Black exhaust smoke	Rich fuel mixture	Adjust the carburetor

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Trouble	Probable Causes	Remedies
Difficult gear shifting	1. Improper clutch disengagement 2. Damaged gear or foreign object lodged in the gear 3. Gear shift fork inoperative 4. Incorrect operation of the gear shift drum stopper and change pedal 5. Mainshaft and countershaft out of alignment 6. High oil viscosity	Adjust the clutch Replace the defective parts Repair or replace Repair or replace Repair or replace Change the oil
Excessive high gear noise	1. Excessive gear backlash 2. Worn main and countershaft bearing	Repair or replace Repair or replace
Gear slip out	1. Worn fingers on gear shift fork 2. Worn gear dog hole 3. Worn spline	Replace Replace Replace
Clutch slippage	1. No play in the clutch lever 2. Weak or none uniform clutch pressure plate spring 3. Worn or glazed friction disc	Adjust the clutch lever Replace the weak spring Replace
Poor clutch engagement	1. Excessive play of clutch lever 2. Warped friction disc 3. Warped pressure plate 4. Bent main shaft	Adjust clutch lever play Replace Replace Replace
Pedal does not return	1. Faulty return spring 2. Unhook return spring	Replace Hook return spring
Kick starter gear does not rotate	1. Excessive wear of kick starter pawl	Replace
Engine does not start	**Carburetor** 1. Choke fully open 2. Carburetor air screw improperly set 3. Air leaking into the cylinder head 4. Clogged carburetor slow jet 5. Clogged fuel valve or piping 6. Clogged vent hole in the fuel tank cap 7. No fuel in the tank	Close choke Adjust air screw Retighten carburetor connecting tube Check, clean and retighten Disassemble and clean Disassemble and clean Fill tank with gasoline
Poor engine idling	**Carburetor** 1. Clogged or loose carburetor slow jet 2. Improper float level 3. Incorrect air screw adjustment 4. Carburetor linkage mulfunction 5. Air leaks	Check, clean and retighten Adjust Adjust Adjust Tighten all air passage connection
Improper running of engine	**Carburetor** 1. Jet size too small 2. Improper float level 3. Clogged carburetor main jet 4. Carburetor linkage mulfunction 5. Air leaks	Replace with larger size jet Adjust Clean and retighten Adjust Tighten all air passage connection

CHASSIS

Trouble	Probable Causes	Remedies
Heavy steering	1. Steering stem excessively tightened	Loosen the steering stem nut
	2. Damaged steering stem steel balls	Replace
	3. Bent steering	Replace
	4. Low front tire pressure	Add air to the specified pressure of 1.8 kg/cm² (25.6 psi)
Front and rear wheel wobble	1. Loose steering stem mounting bolt	Retorque
	2. Worn front and rear wheel bearings	Replace bearing
	3. Front or rear wheel runout or distorted	Repair or replace
	4. Loose spoke	Retorque
	5. Defective tire	Replace
Soft suspension	1. Loss of spring tension	Replace
	2. Excessive load	
Hard suspension	1. Ineffective front fork damper	Repair
	2. Ineffective rear damper	Replace
Suspension noise	1. Front case or rear damper rubbing	Inspect cushion spring and case
	2. Interference between cushion case and spring	Repair or replace
	3. Faulty fork stopper rubber	Replace
	4. Insufficient front fork oil	Add damper oil
Defective brake	1. Front brake fluid	
	· Insuffcient brake fluid	Add brake fluid
	· Air in the brake system	Bleed brake 'system
	· Worn brake pad	Replace pad
	· Worn piston	Replace piston
	· Worn or distorted front brake disc	Replace disc
	· Brake lever out of adjustment	Readjust
	2. Rear brake	
	· Worn brake lining	Replace
	· Worn brake shoe or poor contacts	Replace
	· Worn brake cam	Replace
	· Wet brake from water or oil	Clean
	· Worn brake shaft	Replace
	· Brake pedal out of adjustment	Readjust

ELECTRICAL

Troubles	Probable causes	Remedies
Engine does not start	1. Battery	
	• Discharged	Recharge or replace
	• Poor contact of battery terminals	Repair
	2. Main switch	
	• Open or shorted circuit, disconnected connections	Repair
	• Poor contact between main switch wire and wire harness	Repair
	3. Ignition coil	
	• Improperly insulated high tension coil	Replace
	• Open or shorted circuit in ignition coil	Replace
	4. Contact breaker	
	• Open circuit in the primary coil	Repair
	• Dirty ground point with oil or dust	Clean
	• Point gap out of adjustment	Readjust
	• Improperly charged condenser	Replace
Starting motor does not operate	1. Defective battery	Charge or replace
	2. Poor contact of magnetic switch	Repair or replace
	3. Poor contact of starting motor carbon brush	Repair or replace
Horn inoperative, poor sound or too weak sound	1. Horn	
	• Cracked diaphragm	Replace
	2. Horn button	
	• Poor grounding	Repair
	3. Wiring	
	• Poor contact	Repair
	4. Adjusting screw	
	• Out of adjustment	Readjust
Tail light and head light inoperative	1. Fuse	
	• Blown fuse or hurnt bulb filament	Replace
	2. Bulb	
	• Burnt bulb filament	Readjust
	3. Switch	
	• Poor contact of lighting switch	Readjust
	4. Wiring	
Stop light inoperative	1. Bulb	
	• Burnt or broken bulb filament	Replace
	2. Front and tail stop light switch	
	• Malfunction of switch	Readjust
	3. Wiring	
	• Poor contact of leads	Readjust
Winker lamp blinks too fast or too slow	1. Bulb	
	• Blinks unusually fast: improperly connected relay	Replace
	2. Wiring	
	• Blinks too fast: bulb with unsitable wattage	Replace
	• Blinks too slow: burnt or broken bulb	Replace
	3. Defective relay	Replace

Trouble	Probable causes	Remedies
Winker lamp inoperative	1. Winker lamp switch	
	• Poor contact of winker relay	Replace
	• Open circuit in winker relay coil	Replace
	2. Bulb	
	• Bulb wattage is smaller than rated wattage	Replace
	3. Relay	
	• Poor contact of winker relay	Replace
	• Improperly connected leads	Replace
No charging	1. Broken wire or shorted, loose connection	Repair or replace
	2. Faulty coil due to short or grounding	Replace
	3. Faulty or shorted silicon diode	Replace
	4. Broken or shorted lead wire at regulator	Repair or replace
	5. Regulator voltage at no load is too low	Readjust
Insufficient charging	1. Wiring	
	• Broken wire, intermittent shorting or loose connection	Repair, retighten
	2. Generator	
	• Shorting across layer in the field coil (resistance indicated in continuity test)	Replace
	• Shorting across layer in stator coil	Replace
	• Open circuit in one of the stator coil	Replace
	• Faulty or shorted silicon diode	Replace
	3. Regulator	
	• Voltage below specified value at no load	Readjust
	• Dirty of pitted points	Polish or replace
	• Coil or resistor internally shorted	Replace
	4. Battery	
	• Low electrolyte level	Add distilled water
	• Defective battery plates	Replace
Excessive charging	1. Wiring	
	P terminal circuit and F terminal circuit shorted resulting in split wound generator	Repair
	2. Battery	
	Internal short	Replace
	3. Regulator	
	• Excessive voltage at no load voltage	Repair
	• Improper grounding	Provide proper ground
	• Broken coil lead wire	Repair, replace
Unstable charging voltage	1. Wiring	
	• Bare wire shorting intermittently under vibration or broken wire making partial contact	Repair or replace
	2. Generator	
	• Layer short (intermittent shorting)	Repair or replace
	3. Generator	
	• Intermittent open circuit in the coil	Repair or replace
	• Improperly adjusted voltage	Readjust
	• Defective key switch	Replace
	• Dirty points	Clean

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Trouble	Probable causes	Remedies
Self discharge Battery discharges in addition to that caused by the connected load.	1. Dirty contact areas and case. 2. Contaminated electrolyte or electrolyte excessively concentrated.	1. Always maintain the exterior clean. 2. Handle the replenishing electrolyte with care.
C. Large discharge rate Specific gravity gradually lowers and around 1.100 (S. G.), the winker and horn no longer function.	1. The fuse and the wiring are satisfactory, but loads such as winker and horn do not function. In this condition the motorcycle will operate but with long use, both ⊕ and ⊖ plates will react with the sulfuric acid and form lead sulfide deposits, (sulfation) making it impossible to recharge.	1. When the specific gravity falls below 1,200 (20°C: 68°F), the battery should be recharged immediately. 2. When the battery frequently becomes discharged while operating at normal speed, check the generator for proper output. 3. If the battery discharges under normal charge output, it is an indication of overloading, remove some of the excess load.
High charging rate The electrolyte level drops rapidly but the charge is always maintained at 100% and the condition appears satisfactory. (Specific gravity over 1.260)	1. The deposit will heavily accumulate at the bottom and will cause internal shorting and damage the battery.	1. Check to assure proper charging rate.
Specific gravity drop Electrolyte evaporates	1. Shorted. 2. Insufficient charging. 3. Distilled water overfilled. 4. Contaminated electrolyte.	1. Check specific gravity measurement. 2. If the addition of distilled water causes a drop in specific gravity, add sulfuric acid and adjust to proper value.
Sulfation The electrode plates are covered with white layer or in spot.	1. Charging rate is too small or else excessively large. 2. The specific gravity or the mixture of the electrolyte is improper. 3. Battery left in a discharge condition for a long period. (left with the switch turned on) 4. Exposed to excessive vibration due to improper insulation. 5. Motorcycle stored during cold season with battery connected.	1. When motorcycle is in storage, the battery should be recharged once a month even though the motorcycle is not used. 2. Check the electrolyte periodically and always maintain the proper level. 3. In a lightly discharged condition, perform recharging and discharging several times by starting the engine may be sufficient.
Spark plug electrode coated with carbon deposit	1. Too rich a fuel. 2. Excessive idle speed. 3. Poor quality gasoline. 4. Clogged air cleaner. 5. Use of cold spark plug.	Adjust carburetor. Adjust idle speed. Use good quality gasoline. Service the air cleaner. Use proper heat range plug.
Spark plug electrode fouled with oil	1. Worn piston ring. 2. Worn piston and cylinder. 3. Excessive clearance between valve guide and valve stem.	Replace piston ring. Replace piston or cylinder. Replace valve guide or valve.
Spark plug electrode overheated or burnt	1. Use of hot spark plug. 2. Engine overheating. 3. Improper ignition timing 4. Loose spark plug or damaged spark plug hole thread. 5. Too lean a fuel mixture.	Use proper heat range plug. Readjust ignition timing. Retighten plug or replace cylinder head. Adjust carburetor.
Damage	Spark plug overtorqued.	Replace with a new spark plug.

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12. MAINTENANCE SCHEDULE

This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.	**INITIAL SERVICE PERIOD**	**REGULAR SERVICE PERIOD** Perform at every indicated month or mileage interval, whichever occurs first.			
	500 miles	**1 month** **500 miles**	**3 months** **1,500 miles**	**6 months** **3,000 miles**	**12 months** **6,000 miles**
ENGINE OIL—Change	●		○		
OIL FILTER ELEMENT—Replace	●			○	
OIL FILTER SCREEN—Clean					○
SPARK PLUGS —Clean and adjust gap or replace if necessary.				○	
*CONTACT POINTS AND IGNITION TIMING —Clean, check, and adjust or replace if necessary.	●			○	
*VALVE TAPPET CLEARANCE —Check, and adjust if necessary.	●			○	
*CAM CHAIN TENSION—Adjust	●			○	
PAPER AIR FILTER ELEMENT AND POLYURETHAN FOAM ELEMENT—Clean	(Service more frequently if operated in dusty areas)			○	
PAPER AIR FILTER ELEMENT—Replace					○
*CARBURETORS—Check, and adjust if necessary.	●			○	
THROTTLE OPERATION —Inspect cables. Check, and adjust free play.	●			○	
FUEL FILTER SCREEN—Clean				○	
FUEL LINES—Check				○	
*CLUTCH—Check operation, and adjust if necessary.	●			○	
DRIVE CHAIN —Check, lubricate, and adjust if necessary.	**●	○			
BRAKE FLUID LEVEL —Check, and add fluid if necessary.	●			○	
*BRAKE SHOES/PADS —Inspect, and replace if worn.				○	
BRAKE CONTROL LINKAGE —Check linkage, and adjust free play if necessary.	●			○	
*WHEEL RIMS AND SPOKES—Check. Tighten spokes and true wheels, if necessary.	●			○	
TIRES—Inspect and check air pressure.	●	○			
FRONT FORK OIL—Drain and refill.	***●				○
FRONT AND REAR SUSPENSION —Check operation.	●			○	
REAR FORK BUSHING —Grease, check for excessive looseness.				○	
*STEERING HEAD BEARING—Adjust					○
BATTERY—Check electrolyte level, and add water if necessary.	●		○		
LIGHTING EQUIPMENT —Check and adjust if necessary.	●	○			
ALL NUTS, BOLTS, AND OTHER FASTENERS —Check security and tighten if necessary.	●	○			

Items marked * should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically proficient. Other maintenance items are simple to perform and may be serviced by the owner.

** INITIAL SERVICE PERIOD 200 MILES
*** INITIAL SERVICE PERIOD 1,500 MILES

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13. TECHNICAL DATA

A. Specifications of CB 500 〔CB 500 K1, K2〕

	Item	English	Metric
DIMENSION	Overall Length	83. 0 in. 〔83. 5i n.〕	2, 105 mm 〔2, 120 mm〕
	Overall Width	32. 5 in.	825 mm
	Overall Height	44. 0 in.	1, 115 mm
	Wheel Base	55. 5 in.	1, 405 mm
	Seat Height	31. 7 in.	805 mm
	Foot Peg Height	12. 4 in.	315 mm
	Ground Clearance	6. 5 in.	165 mm
	Dry Weight	403. 5 lb.	183 kg
FRAME	Type	Double cradle tubular steel	
	F. Suspension, Travel	Telescopic fork, travel 4. 8 in.,	121 mm
	R. Suspension, Travel	Swing arm, travel 3. 1 in.,	78. 5 mm
	F. Tire Size, Type	3. 15–19 (4 PR) 〔3. 25–19〕 (4 PR) Rib tire, tire air pressure 25. 6 psi 28. 5 psi	1. 8 kg/cm^2 2. 0 kg/cm^2
	R. Tire Size, Type	3. 50–18 (4 PR) Block tire, tire air pressure 28. 5 psi	2. 0 kg/cm^2
	F. Brake, Lining Area	Disc brake, lining area 32. 36 $\text{in}^2 \times 2$	288. 8 $\text{cm}^2 \times 2$
	R. Brake, Lining Area	Internal expanding shoe, lining area 26. 28 $\text{in}^2 \times 2$	169. 6 $\text{cm}^2 \times 2$
	Fuel Capacity	3. 7 U.S. gal. 3. 1 Imp. gal.	14. 0 lit.
	Fuel Reserve Capacity	1. 6 U.S. gal. 0. 9 Imp. gal.	4. 0 lit.
	Caster Angle	64°	
	Trail Length	4. 1 in.	105 mm
	Front Fork Oil Capacity	5. 4 ozs	160 cc
ENGINE	Type	Air-cooled, 4-stroke, O.H.C. engine	
	Cylinder Arrangement	4-cylinder in-line	
	Bore and Stroke	2. 205 × 1. 992 in.	56. 0 × 50. 6 mm
	Displacement	30. 38 cu in.	498 cc
	Compression Ratio	9. 0	
	Carburetor, Venturi Dia.	Four, piston valve, 22 mm dia.	
	Valve Train	Chain drive overhead camshaft	
	Maximum Horsepower	50 BHP (SAE)/9, 000 rpm 〔44 BHP (SAE)/9, 000 rpm〕	
	Maximum Torque	30. 4 lb-ft/7, 500 rpm	4. 2 kg-m/7, 500 rpm
	Oil Capacity	3. 2 U.S. qt., 2. 6 Imp. qt	3. 0 lit.
	Lubrication System	Forced pressure and wet sump	

Prev Page Contents Next Page

	Item	English	Metric
ENGINE	Air Filtration	Paper element	
	Valve Tappet Clearance	IN : 0. 002, EX : 0. 003 in.	IN : 0. 05, EX : 0. 08 mm
	Engine weight	152 lb.	69 kg
	Air Screw Opening	1±1/8 turns	
	Idle Speed	1,000 rpm	
DRIVE TRAIN	Clutch	Wet, multi-plate	
	Transmission	5-speed, constant mesh	
	Primary Reduction	2. 000	
	Gear Ratio I	2. 353	
	〃 II	1. 636	
	〃 III	1. 269	
	〃 IV	1. 036	
	〃 V	0. 900	
	Final Reduction	2. 000, drive sprocket 17, driven sprocket 34 T	
	Gear Shift Pattern	Left foot return type	
ELECTRICAL	Ignition	Battery and ignition coil	
	Starting System	Electrical motor and kick pedal	
	Alternator	Three phase A.C. 12 V-0. 2 KW/5, 000 rpm	
	Battery Capacity	12 V-12 AH	
	Spark Plug	NGK D-7 ES, DENSO X-22 ES	
	Headlight	Low/high, 12 V-40 W/50 W	
	Tail/stoplight	Tail/Stop, 12 V- 7 W/23 W	〔12 V-4 CP/32 CP〕
	Turn Signal light	Front/Rear 12 V-25 W/25 W	〔12 V-32 CP/32 CP〕
	Speedometer Light	12 V- 3 W	〔12 V-2 CP〕
	Tachometer Light	12 V- 3 W	〔12 V-2 CP〕
	Neutral Indicator Light	12 V- 3 W	〔12 V-2 CP〕
	Turn Signal Indicator Light	12 V- 3 W	〔12 V-2 CP〕
	High Beam Indicator Light	12 V- 3 W	〔12 V-2 CP〕

A. Specifications of CB 550

	Item	English	Metric
DIMENSION	Overall Length	83.5 in.	2.120 mm
	Overall Width	32.5 in.	825 mm
	Overall Height	43.9 in.	1,115 mm
	Wheel Base	55.3 in.	1,405 mm
	Seat Height	31.7 in.	805 mm
	Foot Peg Height	12.4 in.	315 mm
	Ground Clearance	6.3 in.	160 mm
	Dry Weight	423 lb.	192 kg
FRAME	Type	Double cradle frame	
	F. Suspension, Travel	Telescopic fork, travel 4.8 in.	121 mm
	R. Suspension, Travel	Swing arm, travel 3.0 in.	77.3 mm
	F. Tire Size, Type	3.25–19 (4 PR) Rib tire, tire air pressure 28 psi	2.0 kg/cm²
	R. Tire Size, Type	3.75–18 (4 PR) Block tire, tire air pressure 34 psi	2.4 kg/cm²
	F. Brake, Lining Area	Disk brake, lining area 32.36 in²×2	288.8 cm²×2
	R. Brake, Lining Area	Internal expanding shoe, lining area 26.28 in²×2	169.6 cm²×2
	Fuel Capacity	3.7 U.S. gal. 3.1 Imp. gal.	14.0 lit.
	Fuel Reserve Capacity	1.1 U.S. gal. 0.9 Imp. gal.	4.0 lit.
	Caster Angle	64°	
	Trail Length	4.1 in.	105 mm
	Front Fork Oil Capacity	6.3–6.5 ozs	185–191 cc
ENGINE	Type	Air-cooled, 4-stroke, O.H.C. engine	
	Cylinder Arrangement	4-cylinder in-line	
	Bore and Stroke	2.303×1.992 in.	58.5×50.6 mm
	Displacement	33.19. cu. in.	544 cc
	Compression Ratio	9.0	
	Carburetor, Venturi Dia.	Four, piston valve, 22 mm dia.	
	Valve Train	Chain drive overhead camshaft	
	Maximum Horsepower	50 BHP (SAE)/8,500 rpm	
	Maximum Torque	30.4 lb-ft/7,500 rpm	4.2 kg-m/7,500 rpm
	Oil Capacity	3.2 U.S. qt., 2.6 Imp. qt	3.0 lit.
	Lubrication System	Forced pressure and wet sump	

Prev Page Contents Next Page

	Item	English	Metric
ENGINE	Air Filtration	Paper element	
	Valve Tappet Clearance	IN : 0.002, EX : 0.003 in.	IN : 0.05, EX : 0.08 mm
	Engine weight	159 lb.	72 kg
	Air Screw Opening	$1\,{}^{1}/_{2} \pm {}^{3}/_{8}$ turns	
	Idle Speed	1,000 rpm	
DRIVE TRAIN	Clutch	Wet, multi-plate	
	Transmission	5-speed, constant mesh	
	Primary Reduction	3.063	
	Gear Ratio I	2.353	
	〃 II	1.636	
	〃 III	1.269	
	〃 IV	1.036	
	〃 V	0.900	
	Final Reduction	2.176, drive sprocket 17, driven sproket 37 T	
	Gear Shift Pattern	Left foot return type	
ELECTRICAL	Ignition	Battery and ignition coil	
	Starting System	Electrical motor and kick pedal	
	Alternator	Three phase A.C. 12 V–0.11 KW/2,000 rpm	
	Battery Capacity	12 V–12 AH	
	Spark Plug	NGK D–7 ES, DENSO X–22 ES	
	Headlight	Low/high,	12 V–40 W/50 W
	Tail/stoplight	Tail/Stop	12 V– 4 W/32 W
	Turn Signal light	Front/Rear	12 V–32 W/32 W
	Speedometer Light		12 V–2 W
	Tachometer Light		12 V–2 W
	Neutral Indicator Light		12 V–2 W
	Turn Signal Indicator Light		12 V–2 W
	High Beam Indicator Light		12 V–2 W

B. Service Data (CB 500)

ENGINE

mm (in.)

Item	Standard value	Serviceable limit
Inlet cam height	34. 93～34. 97 (1. 3742～1. 3768)	35. 85 (1. 4075)
Exhaust cam height	34. 53～34. 57 (1. 3595～13. 610)	34. 45 (1. 3563)
Runout	——	0. 1 (0. 004)

Item	Standard value	Serviceable limit
Cylinder bore	56～56. 01 (2. 204～2. 205)	56. 1 (2. 208)

Item	Standard value	Serviceable limit
Piston dia.	55. 99～55. 97 (2. 204～2. 203)	55. 85 (2. 198)
Piston pinhole	——	15. 08 (0. 593)

Item	Standard value	Serviceable limit
Piston ring end gap	0. 15～0. 35 (0. 005～0. 013)	0. 7 (0. 027)

Piston ring Side clearance	Standard value	Serviceable limit
Top ring	0. 040～0. 075 (0. 0015～0. 0029)	0. 18 (0. 007)
Second ring	0. 025～0. 06 (0. 0009～0. 0023)	0. 15 (0. 005)
Oil ring	0. 020～0. 055 (0. 0007～0. 0021)	0. 15 (0. 005)

Item	Standard value	Serviceable limit
Ring groove clearance	15. 002～15. 008 (0.59063～0.59087)	Replace if over 15. 080 (0. 5937)

	Standard value	Serviceable limit
Valve stem clearance	Inlet 0. 010～0. 035 (0. 00039～0. 00137)	0. 080 (0. 0031)
	Exhaust 0. 030～0. 050 (0. 0011～0. 0019)	0. 10 (0. 0039)
Valve stem diameter	Inlet 5. 450～5. 465 (0. 2145～0. 2150)	
	Exhaust 5. 430～5. 445 (0. 2137～0. 2142)	
Valve face runout	——	0. 05 (0. 009)

mm (in.)

Item	Standard value	Serviceable limit
Cylinder head flatness	——	0. 3 (0. 011)

Item	Standard value	Serviceable limit
Valve spring free length	Outer 40. 4 (1. 59)	39 (1. 53)
	Inner 35. 7 (1. 40)	34. 5 (1. 35)
Loading (reference)	Outer 27. 9 mm/45. 6～50. 6 kg (1. 0 in/ 100. 54～111. 57 lbs-ft) Inner 23. 2 mm/19. 1～21. 1 kg (0. 9 in/ 421. 15～464. 35 lbs-ft)	
Clutch plate warp	——	0. 3 (0. 011)

Oil pump	Standard value	Serviceable limit
Inner and outer rotor clearance	——	0. 35 (0. 013)
Outer rotor and body clearance	——	0. 35 (0. 013)

Item	Standard value	Serviceable limit
Friction disc thickness	3. 3 (0. 13)	3. 0 (0. 11)

	Standard value	Serviceable limit
Clutch spring free length	31. 9 (1. 25)	30. 5 (1. 20)
Spring strength	31. 4～33 kg at 23 mm (227. 84～238. 6 at 0. 90 in)	

Item	Standard value	Serviceable limit
Gear shift drum O. D.	39. 975～39. 95 (1. 5738～1. 5728)	39. 9 (1. 5709)
Shift fork I. D.	40. 00～40. 025 (1. 5748～1. 5757)	40. 075 (1. 5797)

Gear shift fork	Standard value	Serviceable limit
Center	5. 93～6. 00 (0. 233～0. 236)	5. 60 (0. 220)
Right & left	4. 93～5. 0 (0. 194～0. 197)	4. 60 (0. 181)

Item	Standard value	Serviceable limit
Crankshaft journal clearance	0. 020～0. 046 (0. 00079～0. 00181)	0. 080 (0. 0031)
Runout	——	0. 05 (0. 0019)
Journal and taper	——	0. 05 (0. 0019)

Item	Standard value	Serviceable limit
Connecting rod large end clearance	0. 02~0. 046 (0. 00079~0. 00181)	0. 08 (0. 0031)

mm (in.)

Item	Standard value	Serviceable limit
Connecting rod side clearance	0. 12~0. 27 (0. 0047~0. 0106)	0. 35 (0. 0138)

Item	Standard value	Serviceable limit
Connecting rod small end clearance	15. 016~15. 034 (0. 5911~0. 5918)	15. 07 (0. 5930)

Item	Standard value	Serviceable limit
1st, 2nd, 3rd gears backlash	0. 044~0. 133 (0. 0017~0. 0051)	0. 2 (0. 0078)
4th and 5th gears backlash	0. 046~0. 140 (0. 0018~0. 0055)	0. 2 (0. 0078)

CHASSIS

Wheel	Standard value	Serviceable limit
Rim wobble	0. 5 (0. 020)	2. 0 (0. 08)
Wheel runout	0. 5 (0. 020)	2. 0 (0. 08)

Wheel bearing	Standard value	Serviceable limit
Front wheel bearing axial direction, TIR	0. 07 (0. 028)	0. 1 (0. 004)
Front wheel bearing radial direction, TIR	0. 003 (0. 00012)	0. 05 (0. 002)

Front brake	Standard value	Serviceable limit
Caliper cylinder inside dia.	38. 18~38. 20 (1. 5031~1. 5039)	38. 215 (1. 504)
Caliper piston outside dia.	38. 115~38. 48 (1. 5006~1. 5149)	38. 105 (1. 500)

Front brake	Standard value	Serviceable limit
Master cylinder	14. 0~14. 043 (0. 5511~0. 5528)	14. 055 (0. 533)
Piston	13. 957~13. 984 (0. 5494~0. 5505)	13. 940 (0. 549)

Wheel	Standard value	Serviceable limit
Rim runout, TIR (vertical and side)	0. 5 (0. 02)	2. 0 (0. 08)

Item	Standard value	Serviceable limit
Disc trueness	——	0. 3 (0. 011)
Caliper and piston clearance	——	0. 11 (0. 004)
Master cylinder and piston clearance	——	0. 11 (0. 004)

mm (in.)

Rear axle shaft	Standard value	Serviceable limit
Bent, TIR	0. 01 (0. 0004)	0. 2 (0. 009)

Brake lining	Standard value	Serviceable limit
Thickness	5. 0 (0. 200)	2. 0 (0. 080)

Brake Drum	Standard value	Serviceable limit
Inside dia.	179. 8~180. 0 (7. 079~7. 087)	181. 0 (7. 125)

Item	Standard value	Serviceable limit
Axial, TIR	0. 07 (0. 0028)	0. 1 (0. 004)
Radial, TIR	0. 003 (0. 00011)	0. 05 (0. 002)

	Standard value	Serviceable limit
Front suspension spring I.D.	42 (1. 65)	
Free length	451. 7 (17. 78)	425 (16. 73)
Tilt	5 (0. 02)	8 (0. 03)

Item	Standard value	Serviceable limit
Rear suspension free length	210. 4 (8. 283)	205 (8. 070)

Item	Standard value	Serviceable limit
Clearance	0. 1~0. 3 (0. 004~0. 012)	0. 5 (0. 02)
Rear fork bushing inside dia.	21. 448~21. 5 (0. 844~0. 846)	21. 8 (0. 858)
Center collar outside dia.	21. 427~21. 46 (0. 843~0. 844)	21. 4 (0. 842)

ELECTRICAL

Item	Standard value	Serviceable limit
Carbon brush length	12~31 mm (0. 47~0. 51 in)	5. 5 mm (0. 22 in)
Brush spring tension	0. 5~0. 5 kg (1. 1~1. 3 lbs)	0. 4 kg (0. 8 lbs)

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B. Service Date (CB 550)

ENGINE

mm (in.)

Item	Standard value	Serviceable limit
Inlet cam height	34. 93～34. 97 (1. 3742～1. 3768)	35. 85 (1. 4075)
Exhaust cam height	34. 53～34. 57 (1. 3595～13. 610)	34. 45 (1. 3563)
Runont	——	0. 1 (0. 004)

Item	Standard value	Serviceable limit
Cylinder bore	58. 50～58. 51 (2. 303～2. 304)	58. 6 (2. 307)

Item	Standard value	Serviceable limit
Piston dia.	54. 47～58. 49 (2. 301～2. 30)	58. 35 (2. 302)
Piston pinhole	——	15. 08 (0. 593)

Item		Standard value	Serviceable limit
Piston ring end gap	Top	0. 15～0. 35 (0. 005～0. 013)	0. 7 (0. 027)
	2nd		
	oil	0. 3～0. 9 (0. 01～0. 035)	1. 1 (0. 043)

Piston ring Side clearance	Standard value	Serviceable limit
Top ring	0. 040～0. 075 (0. 0015～0. 0029)	0. 18 (0. 007)
Second ring	0. 025～0. 06 (0. 0009～0. 0023)	0. 15 (0. 005)
Oil ring	——	——

Item	Standard value	Serviceable limit
Ring groove clearance	15. 002～15. 008 (0.59063～0.59087)	Replace if over 15. 080 (0. 6937)

	Standard value	Serviceable limit
Valve stem clarance	Inlet 0. 020～0. 045 (0. 00079～0. 00177)	0. 080 (0. 0031)
	Exhaust 0. 030～0. 050 (0. 0011～0. 0019)	0. 10 (0. 0039)
Valve stem diameter	Inlet 5. 450～5. 465 (0. 2145～0. 2150)	
	Exhaust 5. 430～5. 445 (0. 2137～0. 2142)	
Valve face runount	——	0. 05 (0. 009)

mm (in.)

Item	Standard value	Serviceable limit
Cylinder head flatness	——	0. 3 (0. 011)

Item	Standard value	Serviceable limit
Valve spring free length	Outer 40. 4 (1. 59)	39 (1. 53)
	Inner 35. 7 (1. 40)	34. 5 (1. 35)
Loading (reference)	Outer 27. 9 mm45. 6～50. 6 kg/ (1. 0 in/ 100. 54～111. 57 lbs-ft) Inner 23. 2 mm/19. 1～21. 1 kg (0. 9 in/ 421. 15～464. 35 lbs-ft)	
Clutch plate warp	——	0. 3 (0. 011)

Oil pump	Standard value	Serviceable limit
Inner and outer rote clearance	——	3. 35 (0. 013)
Outer rotor and body clearance	——	0. 35 (0. 013)

Item	Standard value	Serviceable limit
Friction disc thickness	2. 6 (0. 12)	2. 3 (0. 09)

	Standard value	Serviceable limit
Cutch spring free length	36. 8 (1. 45)	35. 4 (1. 39)
Spring strength	22. 1～33. 2 at 23 mm (227. 84～238. 6 at 0. 90 in)	

Item	Standard value	Serviceable limit
Gear shift drum O. D.	39. 975～59. 95 (1. 5738～1. 5728)	39. 9 (1. 5709)
Shift fork I. D.	40. 00～40. 025 (1. 5748～1. 5757)	40. 075 (1. 5797)

Gear shift fork	Standard value	Serviceable limit
Center	5. 93～6. 00 (0. 233～0. 236)	5. 60 (0. 220)
Right & left	4. 93～5. 0 (0. 194～0. 197)	4. 60 (0. 181)

Item	Standard value	Serviceable limit
Crankshaft journal clearance	0. 020～0. 046 (0. 00079～0. 00181)	0. 080 (0. 0031)
Runout	——	0. 05 (0. 0019)
Journal and taper	——	0. 05 (0. 0019)

Item	Standard value	Serviceable limit
Connecting rod large end clearance	0. 02~0. 046 (0. 00079~0. 00181)	0. 08 (0. 0031)

mm (in.)

Item	Standard value	Serviceable limit
Connecting rod side clearance	0. 12~0. 27 (0. 0047~0. 0106)	0. 35 (0. 0138)

Item	Standard value	Serviceable limit
Connecting rod small end clearance	15. 016~15. 034 (0. 5911~0. 5918)	15. 07 (0. 5930)

Item	Standard value	Serviceable limit
1st, 2nd, 3rd gears backlash	0. 044~0. 133 (0. 0017~0. 0051)	0. 2 (0. 0078)
4th and 5th gears backlash	0. 046~0. 140 (0. 0018~0. 0055)	0. 2 (0. 0078)

CHASSIS

Wheel	Standard value	Serviceable limit
Rim wobble	0. 5 (0. 020)	2. 0 (0. 08)
Wheel runout	0. 5 (0. 020)	2. 0 (0. 08)

Wheel bearing	Standard value	Serviceable limit
Front wheel bearing axial direction, TIR	0. 07 (0. 028)	0. 1 (0. 004)
Front wheel bearing radial direction, TIR	0. 003 (0. 00012)	0. 05 (0. 002)

Front brake	Standard value	Serviceable limit
Caliper cylinder inside dia.	38. 18~38. 20 (1. 5031~1. 5039)	38. 215 (1. 504)
Caliper piston outside dia.	38. 115~38. 48 (1. 5006~1. 5149)	38. 105 (1. 500)

Front brake	Standard value	Serviceable limit
Master cylinder	14. 0~14. 043 (0. 5511~0. 5528)	14. 055 (0. 533)
Piston	13. 957~13. 984 (0. 5494~0. 5505)	13. 940 (0. 549)

Wheel	Standard value	Serviceable limit
Rim runout, TIR (vertical and side)	0. 5 (0. 02)	2. 0 (0. 08)

Item	Standard value	Serviceable limit
Disc trueness	——	0. 3 (0. 011)
Caliper and piston clearance	——	0. 11 (0. 004)
Master cylinder and piston clearance	——	0. 11 (0. 004)

mm (in.)

Rear axle shaft	Standard value	Serviceable limit
Bent, TIR	0. 01 (0. 0004)	0. 2 (0. 009)

Brake lining	Standard value	Serviceable limit
Thickness	5. 0 (0. 200)	2. 0 (0. 080)

Brake Drum	Standard value	Serviceable limit
Inside dia.	179. 8~180. 0 (7. 079~7. 087)	181. 0 (7. 125)

Item	Standard value	Serviceable limit
Axial, TIR	0. 07 (0. 0028)	0. 1 (0. 004)
Radial, TIR	0. 003 (0. 00011)	0. 05 (0. 002)

	Standard value	Serviceable limit
Front suspension spring I.D.	42 (1. 65)	
Free length	451. 7 (17. 78)	425 (16. 73)
Tilt	5 (0. 02)	8 (0. 03)

Item	Standard value	Serviceable limit
Rear suspension free length	210. 4 (8. 283)	205 (8. 070)

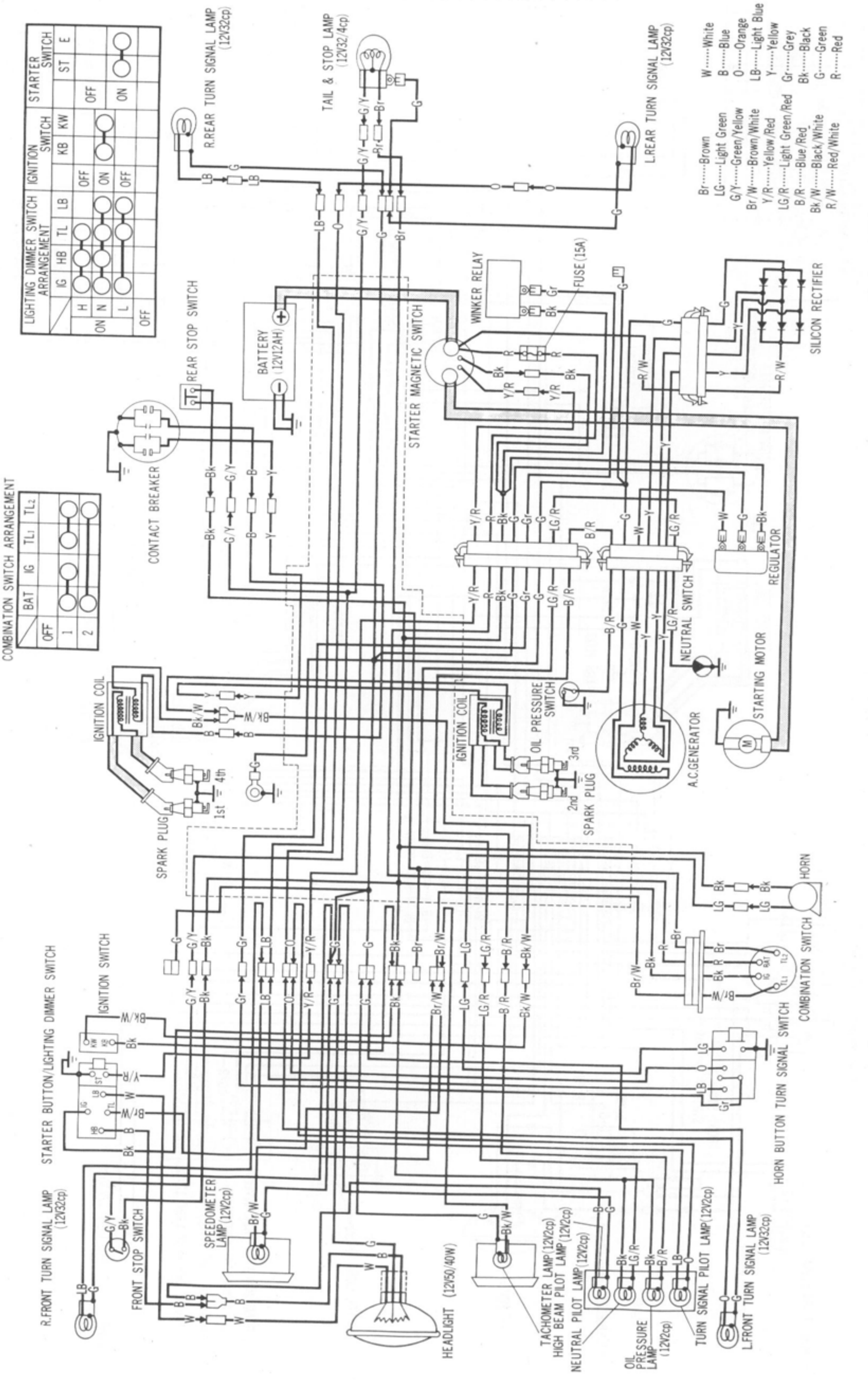
Item	Standard value	Serviceable limit
Clearance	0. 1~0. 3 (0. 004~0. 012)	0. 5 (0. 02)
Rear fork bushing inside dia.	21. 448~21. 5 (0. 844~0. 846)	21. 8 (0. 858)
Center collar outside dia.	21. 427~21. 46 (0. 843~0. 844)	21. 4 (0. 842)

ELECTRICAL

Item	Standard value	Serviceable limit
Carbon brush length	12~31 mm (0. 47~0. 51 in)	5. 5 mm (0. 22 in)
Brush spring tension	0. 5~0. 5 kg (1. 1~1. 3 lbs)	0. 4 kg (0. 8 lbs)

14. WIRING DIAGRAM

CB 500



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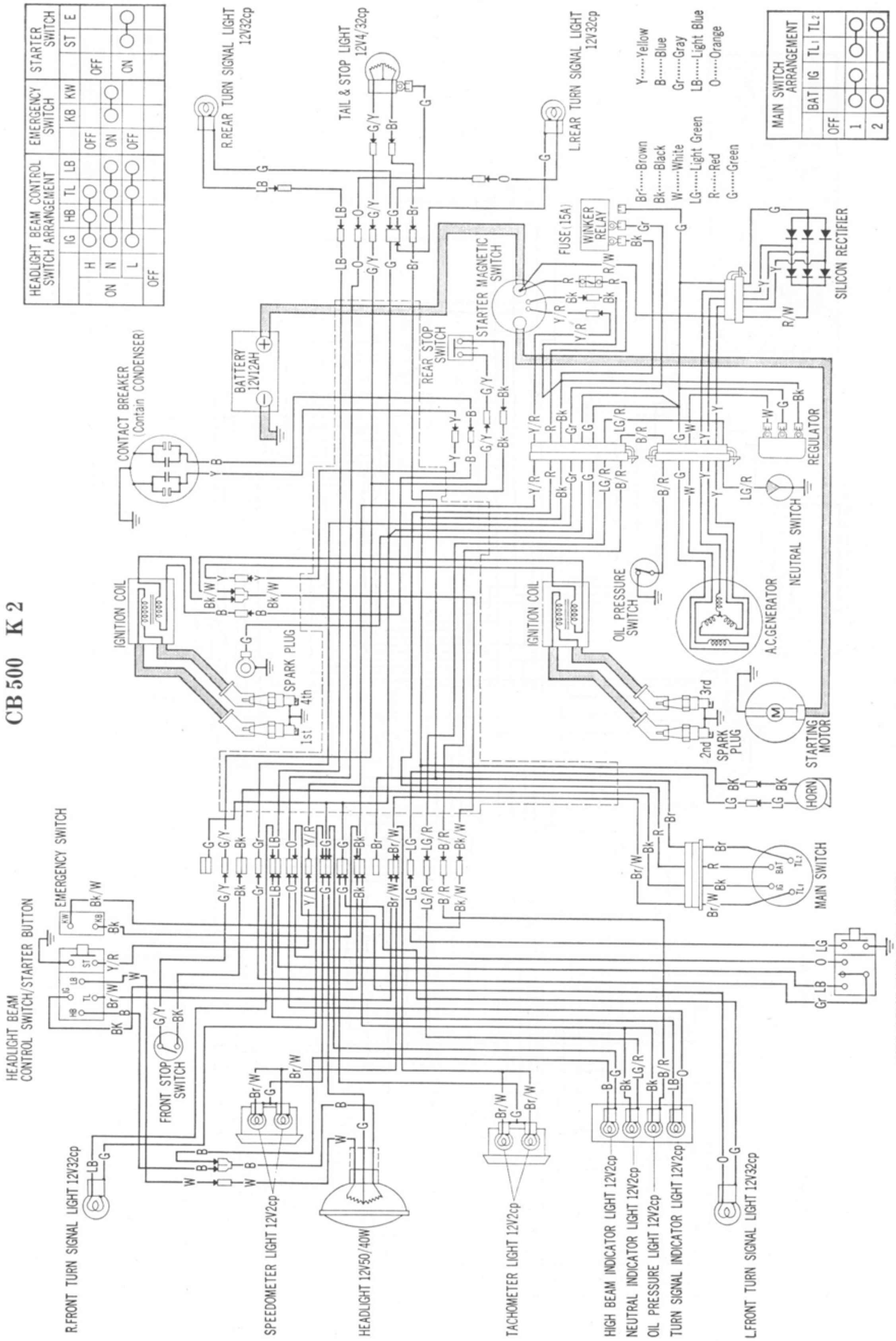
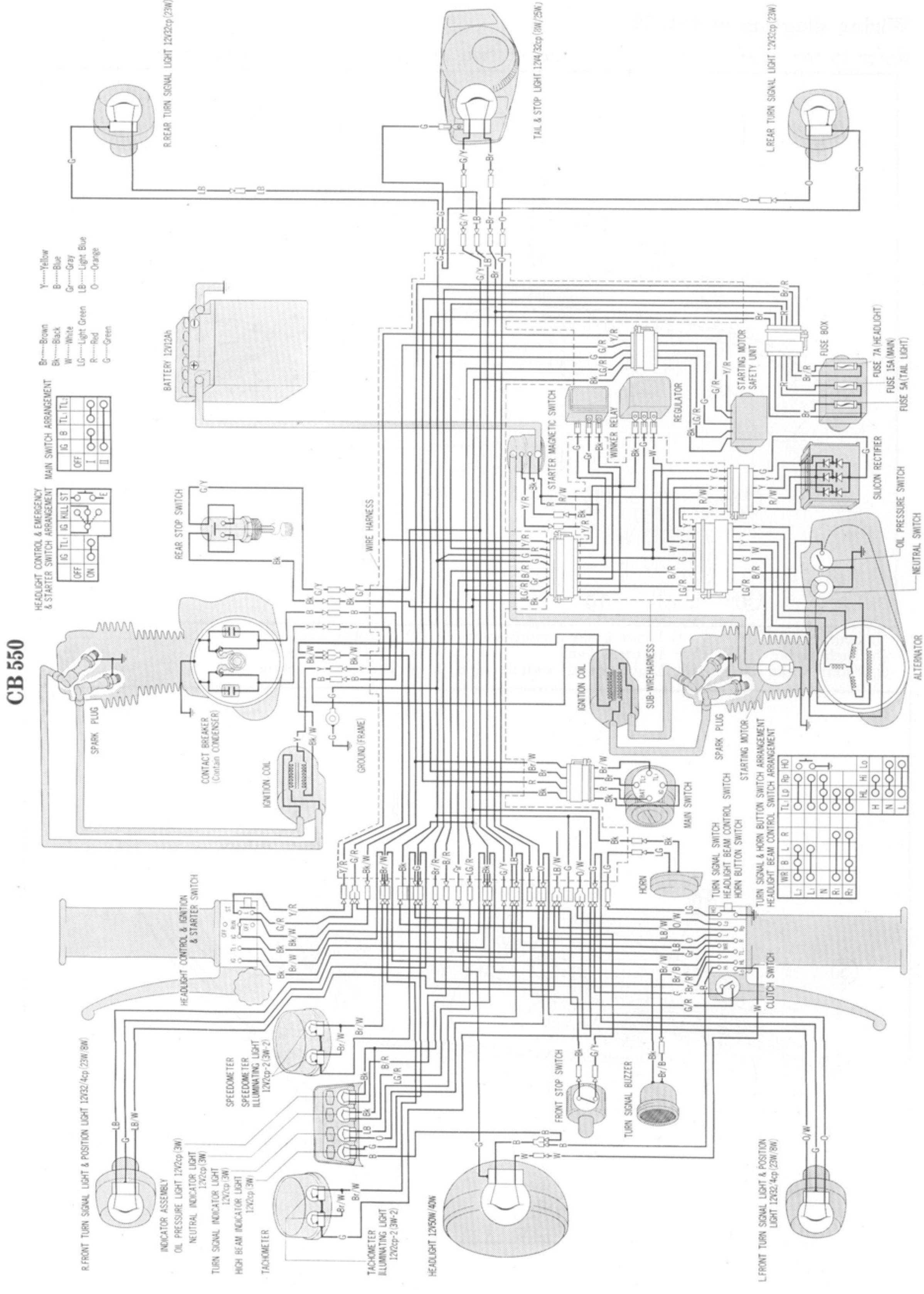


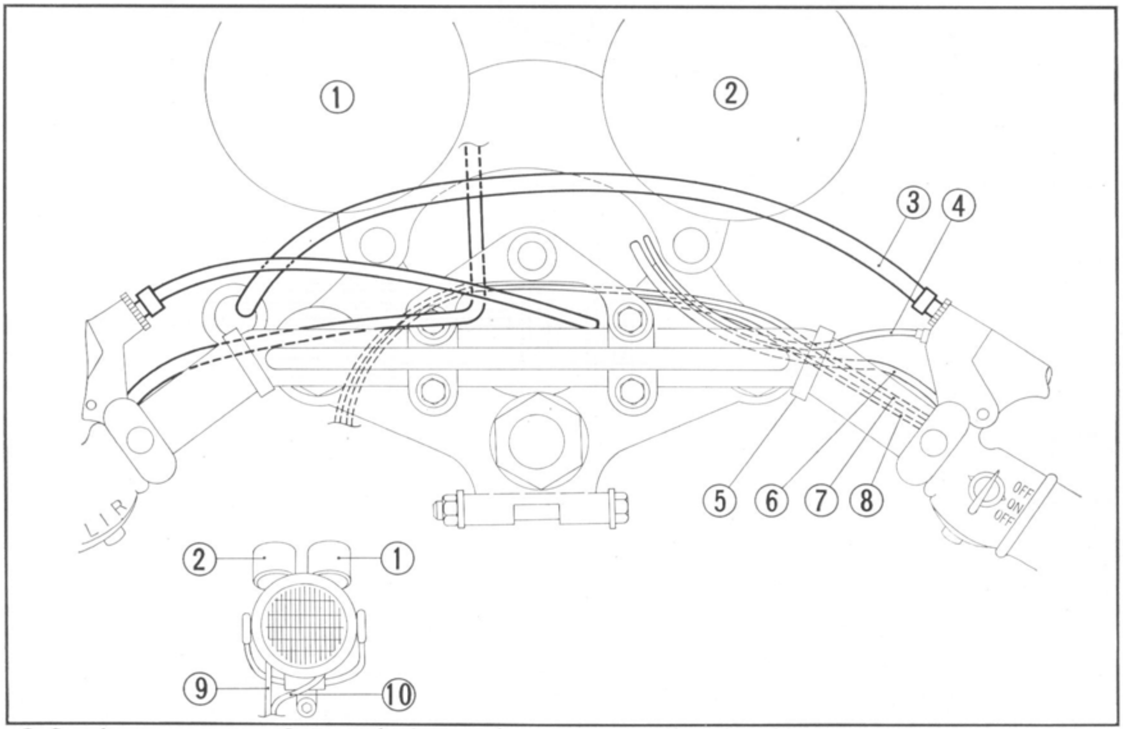
CB 500 K 2

HEADLIGHT BEAM CONTROL SWITCH ARRANGEMENT
IG HB TL LB
ON H N L
OFF
EMERGENCY SWITCH
KB KW
OFF ON OFF
STARTER SWITCH
ST E
OFF ON
R.REAR TURN SIGNAL LIGHT 12V32cp
TAIL & STOP LIGHT 12V4/32cp
L.REAR TURN SIGNAL LIGHT 12V32cp
Y……Yellow
B……Blue
Gr……Gray
LB……Light Blue
O……Orange
Br……Brown
Bk……Black
W……White
LG……Light Green
R……Red
G……Green
MAIN SWITCH ARRANGEMENT
BAT IG TL1 TL2
OFF 1 2
FUSE (15A)
WINKER RELAY
STARTER MAGNETIC SWITCH
SILICON RECTIFIER
BATTERY 12V12AH
REAR STOP SWITCH
CONTACT BREAKER (Contain CONDENSER)
REGULATOR
NEUTRAL SWITCH
OIL PRESSURE SWITCH
A.C.GENERATOR
IGNITION COIL
SPARK PLUG
1st 4th
2nd 3rd
STARTING MOTOR
HORN
MAIN SWITCH
EMERGENCY SWITCH
HEADLIGHT BEAM CONTROL SWITCH/STARTER BUTTON
FRONT STOP SWITCH
HORN BUTTON TURN SIGNAL SWITCH
R.FRONT TURN SIGNAL LIGHT 12V32cp
SPEEDOMETER LIGHT 12V2cp
HEADLIGHT 12V50/40W
TACHOMETER LIGHT 12V2cp
HIGH BEAM INDICATOR LIGHT 12V2cp
NEUTRAL INDICATOR LIGHT 12V2cp
OIL PRESSURE LIGHT 12V2cp
TURN SIGNAL INDICATOR LIGHT 12V2cp
L.FRONT TURN SIGNAL LIGHT 12V32cp

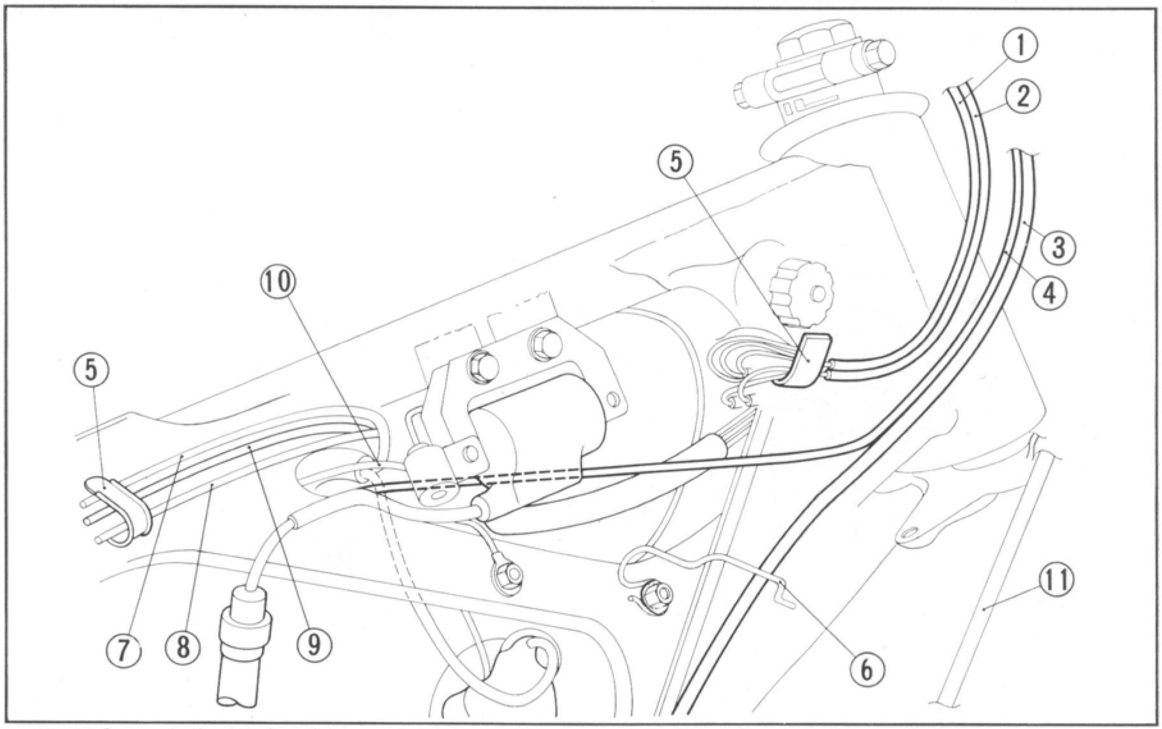

CB 550
HEADLIGHT CONTROL & EMERGENCY & STARTER SWITCH ARRANGEMENT
OFF
ON
IG
TL1
KILL
ST
E
MAIN SWITCH ARRANGEMENT
OFF
I
II
B
TL2
Br······Brown
Bk······Black
W······White
LG······Light Green
R······Red
G······Green
Y······Yellow
B······Blue
Gr······Gray
LB······Light Blue
O······Orange
R.REAR TURN SIGNAL LIGHT 12V32cp (23W)
TAIL & STOP LIGHT 12V4/32cp (8W/25W)
L.REAR TURN SIGNAL LIGHT 12V32cp (23W)
BATTERY 12V12Ah
REAR STOP SWITCH
WIRE HARNESS
STARTER MAGNETIC SWITCH
WINKER RELAY
REGULATOR
STARTING MOTOR SAFETY UNIT
FUSE BOX
FUSE 7A (HEADLIGHT)
FUSE 15A (MAIN)
FUSE 5A (TAIL LIGHT)
SILICON RECTIFIER
OIL PRESSURE SWITCH
NEUTRAL SWITCH
ALTERNATOR
SPARK PLUG
CONTACT BREAKER (Contain CONDENSER)
IGNITION COIL
GROUND (FRAME)
SUB-WIREHARNESS
STARTING MOTOR
MAIN SWITCH
HORN
TURN SIGNAL SWITCH
HEADLIGHT BEAM CONTROL SWITCH
HORN BUTTON SWITCH
TURN SIGNAL & HORN BUTTON SWITCH ARRANGEMENT
HEADLIGHT BEAM CONTROL SWITCH ARRANGEMENT
WR
B
L
R
L2
L1
N
R1
R2
TL
Lo
Rp
HO
HL
Hi
H
HEADLIGHT CONTROL & IGNITION & STARTER SWITCH
CLUTCH SWITCH
FRONT STOP SWITCH
TURN SIGNAL BUZZER
SPEEDOMETER
SPEEDOMETER ILLUMINATING LIGHT 12V2cp-2 (3W-2)
INDICATOR ASSEMBLY
OIL PRESSURE LIGHT 12V2cp (3W)
NEUTRAL INDICATOR LIGHT 12V2cp (3W)
TURN SIGNAL INDICATOR LIGHT 12V2cp (3W)
HIGH BEAM INDICATOR LIGHT 12V2cp (3W)
TACHOMETER
TACHOMETER ILLUMINATING LIGHT 12V2cp-2 (3W-2)
HEADLIGHT 12V50W/40W
R.FRONT TURN SIGNAL LIGHT & POSITION LIGHT 12V32/4cp (23W/8W)
L.FRONT TURN SIGNAL LIGHT & POSITION LIGHT 12V32/4cp (23W/8W)

Wiring diagram of CB 550

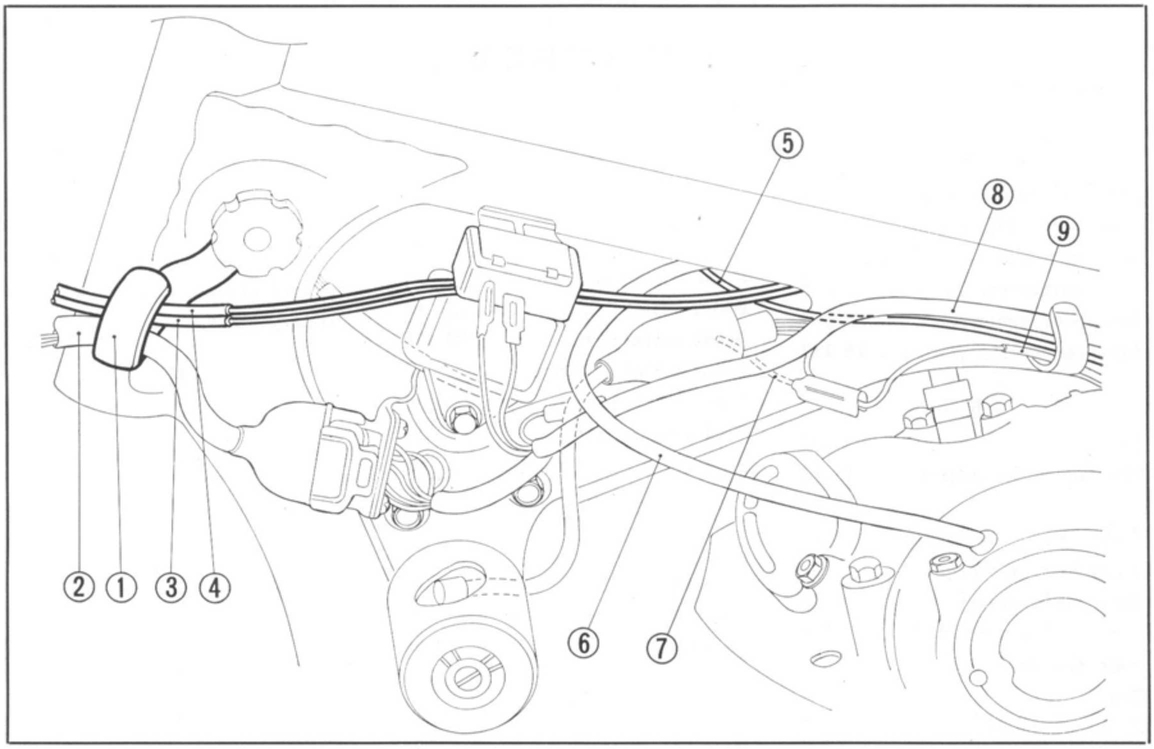
Refer to the following illustrations for location of the wires, cables, and leads.



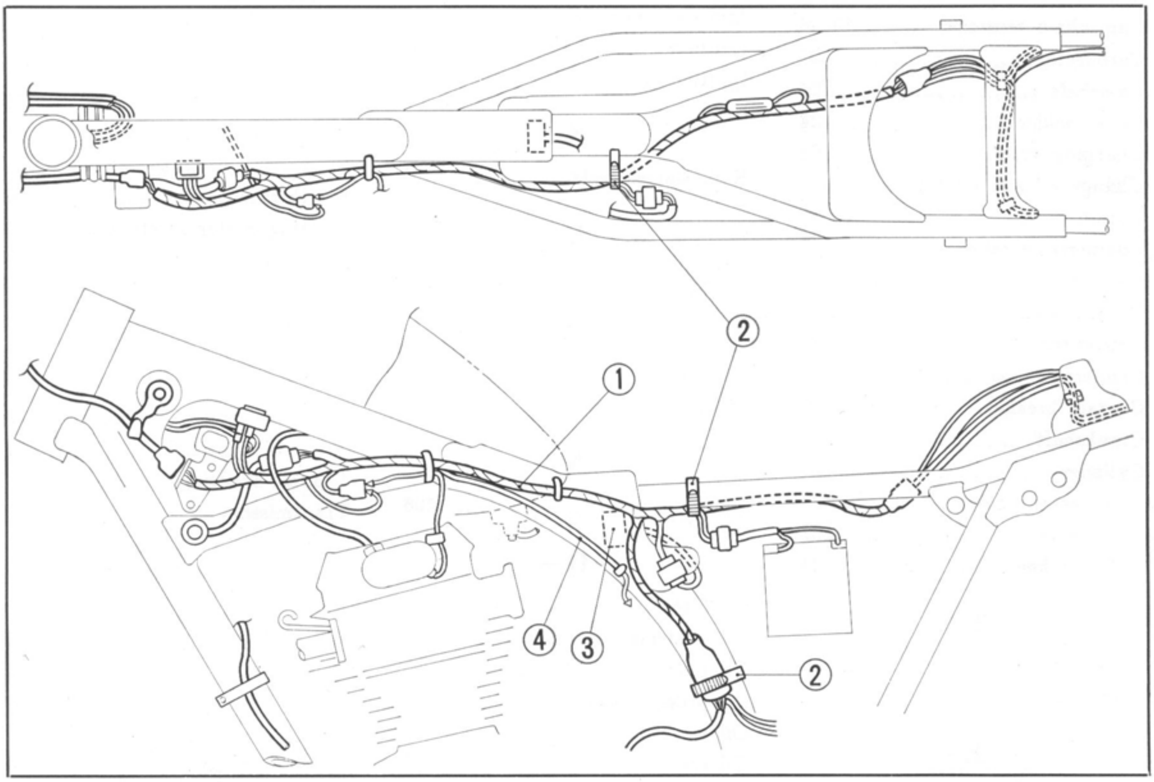
① Speedometer
② Tachometer
③ Front brake cable
④ Front brake switch wire
⑤ Harness band
⑥ Lighting kill switch wire
⑦ Throttle cable A
⑧ Throttle cable B
⑨ Tachometer cable
⑩ Speedometer cable



① Lighting kill switch cable
② Front brake switch cable
③ Clutch cable
④ Choke cable
⑤ Wire harness clip
⑥ Clutch clamp
⑦ Throttle cable B
⑧ Throttle cable A
⑨ Point breather tube
⑩ Primary lead
⑪ Tachometer cable



① Wire harness clip
② Wire harness B
③ Throttle cable B
④ Throttle cable A
⑤ Choke cable
⑥ Point breather tube
⑦ Ignition coil primary lead
⑧ Wire harness A
⑨ Contact breaker wire



① Wire harness assy ② Wire harness band ③ Siricon rectifier ④ Throttle cable

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15. INDEX

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16. SUPPLEMENT TO CB550K1

1. FUEL COCK

The fuel cock is new for the revised model. Concurrent with this change, the indication marks and their positions on fuel cock was changed.

Inspection and cleaning

1. Place the fuel lever in the "OFF" position; disconnect the fuel tubes. Take out the fuel tank.
2. Drain the fuel tank thoroughly.
3. Loosen the fuel cock fixing nut and then remove the fuel cock and fuel filter from the fuel tank.
4. Check the gasket to see if it is not damaged. Replace with a new one, if found to be damaged too badly beyond use.
5. Wash the fuel filter in solvent and dry with compressed air. Any slightest damage cannot be tolerated here. Also replace the filter with a new one if found to be clogged.
6. Install the fuel filter to the fuel cock with the fixing nut. Do not forget to install the gasket into the groove of the fixing nut.
7. Install the fuel cock to the fuel tank with the fixing nut.
8. Install the fuel tank in place on the frame; connect tubes and secure with the clips.
9. Fill the tank with fuel. With the fuel cock lever in the "ON" position, check for any leakage past the tube joints or connections.

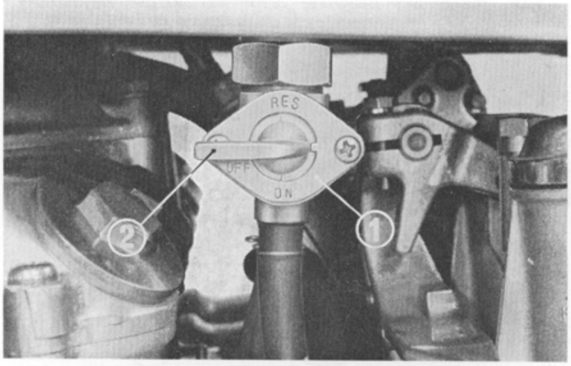

Fig. K1-1 ① Fuel cock
② Lever
③ Fuel cock fixing nut

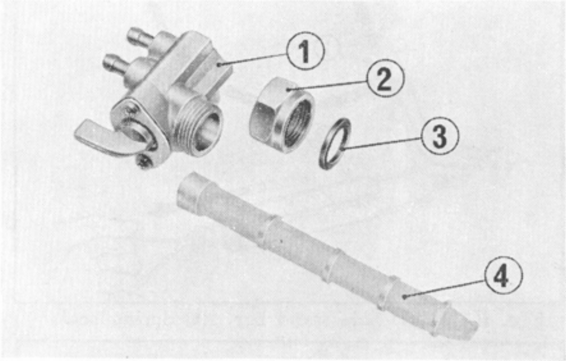

Fig. K1-2 ① Fuel cock
② Fixing nut
③ Gasket
④ Fuel filter

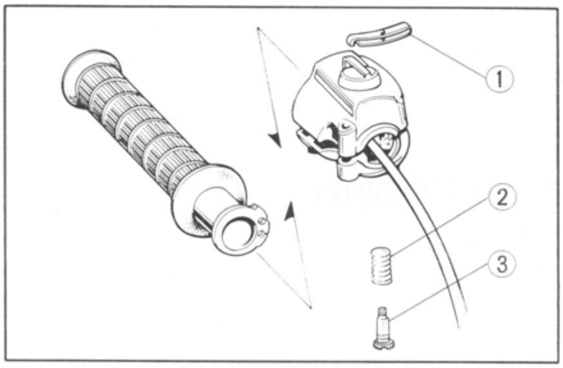

Fig. K1–3 ① Throttle grip ② Spring adjuster ③ Adjusting bolt

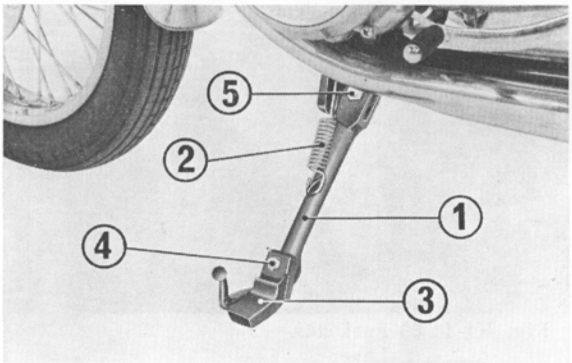

Fig. K1–4 ① Side stand bar ② Spring ③ Rubber pad ④ 6 mm bolt ⑤ Side stand pivot bolt

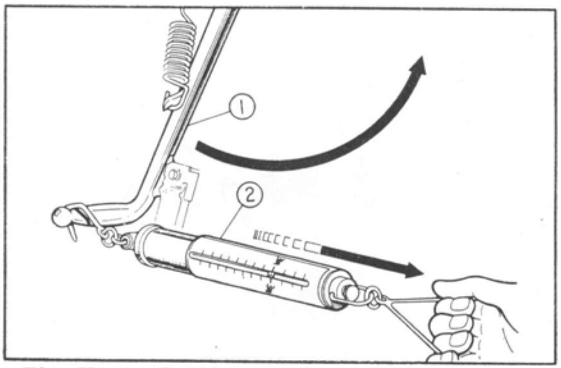

Fig. K1–5 ① Side stand bar ② Spring scale

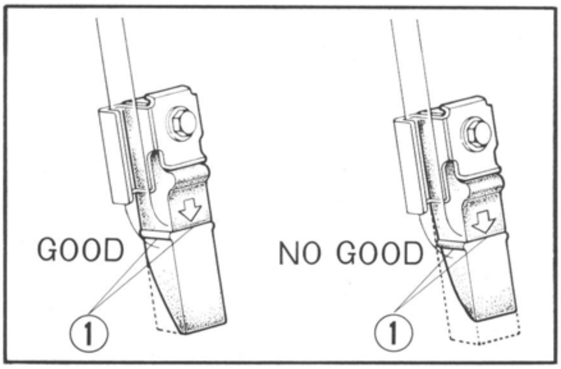

Fig. K1–6 ① Wear line

2. THROTTLE GRIP

The throttle grip adjuster, Fig. K1–3, hitherto offered, was discontinued.

3. SIDE STAND

The side stand was changed to a new type with a shock absorbing rubber pad. The side stand must be inspected periodically to determine that it is in good condition.

Inspection

1. Check the entire stand assembly (side stand bar, bracket and rubber pad) for installation, deformation or otherwise excessive damage.
2. Check the spring for freedom from damage or other defects.
3. Check the side stand for proper return operation:
   a. With the side stand applied, raise the stand off the ground by using the main stand.
   b. Attach a spring scale to the lower end of the stand and measure the force with which the stand is returned to its original position.
   c. The stand condition is correct if the measurement falls within 2∼3 kg (4.4∼6.6 lbs.).
   If the stand requires force exceeding the above limit, this might be due to neglected lubrication, overtightened side stand pivot bolt, worn stand bar or bracket, or otherwise excessive tension. Replace as necessary.
4. Check the rubber pad for deterioration or wear. When the rubber pad wear is excessive so that it is worn down to the wear line, replace it with a new one.

Rubber pad replacement

1. Remove the 6mm bolt; separate the rubber pad from the bracket at the side stand.
2. After making sure the collar is installed, put a new rubber pad in place in the bracket with the arrow mark out.

Note:

Use rubber pad having the mark "OVER 260 lbs ONLY".

3. Secure the rubber pad with the 6mm bolt.

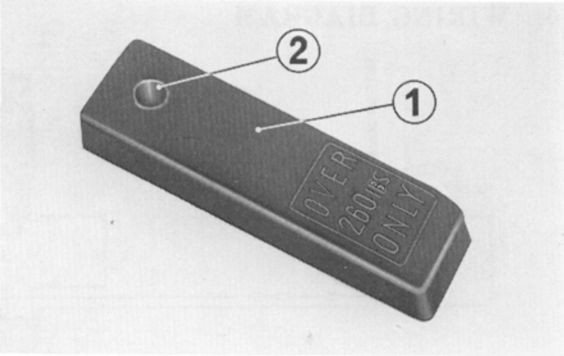

Fig. K1-7 ① Rubber pad
② Collar

4. TURN SIGNAL LIGHT

The front and rear turn signal lights were changed to new, larger types. See Figs. K1-8 and K1-9.

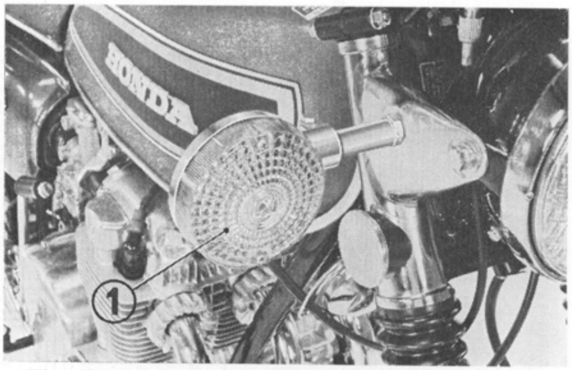

Fig. K1-8 ① Front turn signal light

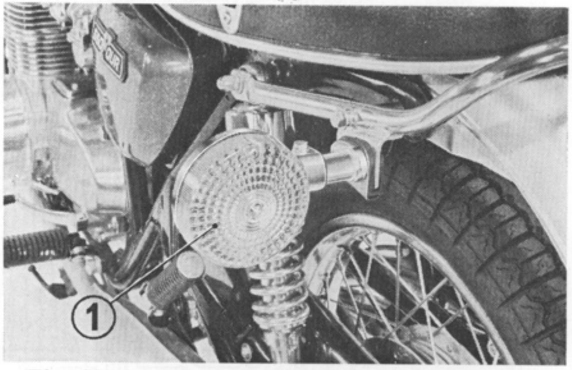

Fig. K1-9 ① Rear turn signal light

5. MAINTENANCE SCHEDULE

Some additions occured in the MAINTENANCE SCHEDULE, of which detailes are as shown immediately below:

This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.	**INITIAL SERVICE PERIOD**	**REGULAR SERVICE PERIOD** Perform at every indicated month or mileage interval, whichever occures first.			
	500 miles	1 month	3 months	6 months	12 months
		500 miles	1,500 miles	3,000 miles	6,000 miles
*SIDE STAND—Check installation, operation, deformation, damage and wear.				○	

Items marked * should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically proficient. Other maintenance items are simple to perform and may be serviced by the owner.

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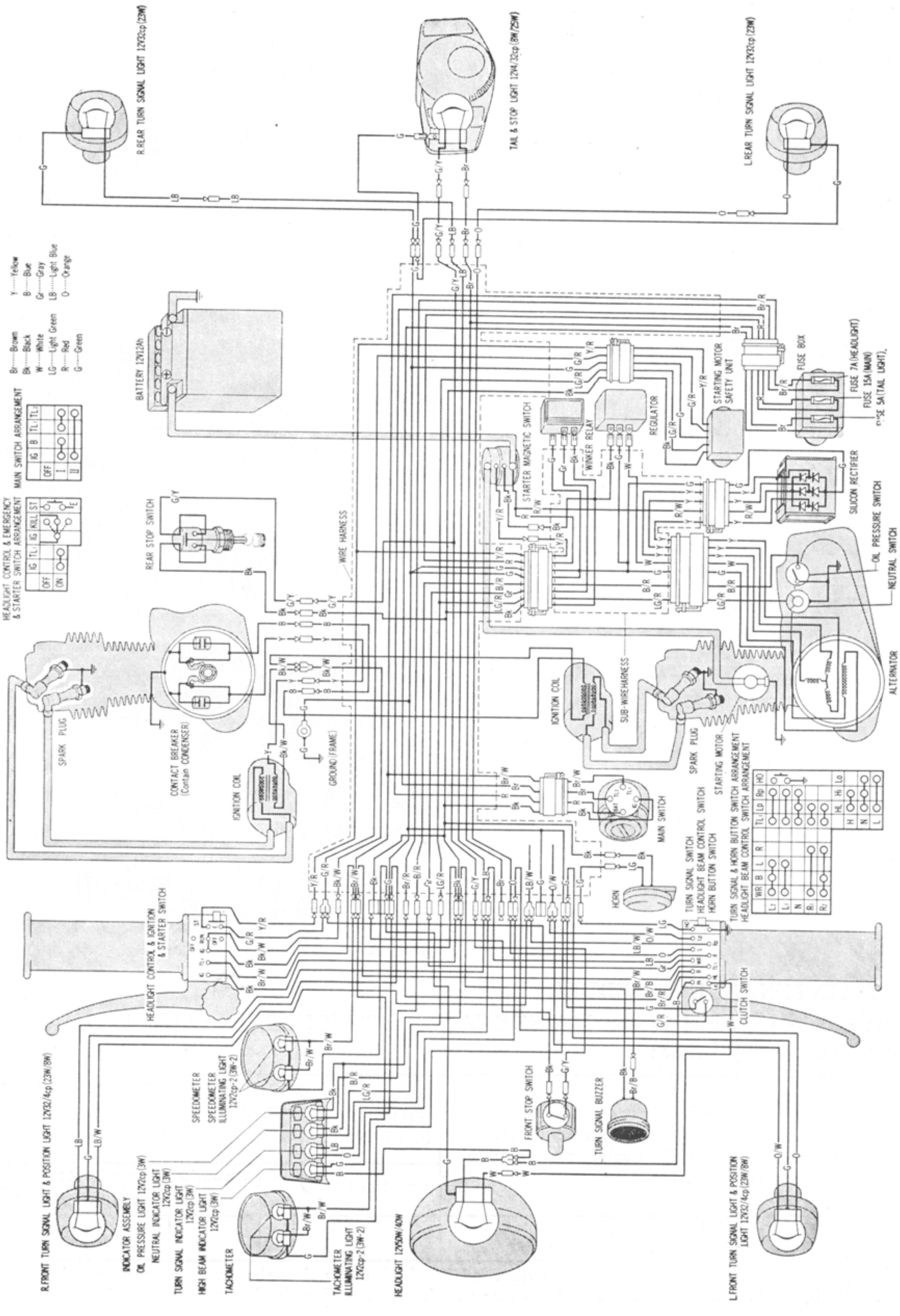
6. WIRING DIAGRAM



CB550F-A ADDENDUM SHEET

Engine No. CB550FE-1000001 and subsequent.
Frame No. CB550F -1000001 and subsequent.
Insert this addendum in rear of page 152 of the CB 550 Shop Manual.

ENGINE

GEAR SHIFT MECHANISM

A. Disasembly

1. Remove the clutch assembly. (See page 121.)
2. Remove the gear change pedal.
3. Remove the shift drum stop bolt, then remove the neutral stop bolt, shift drum stop and neutral stop.

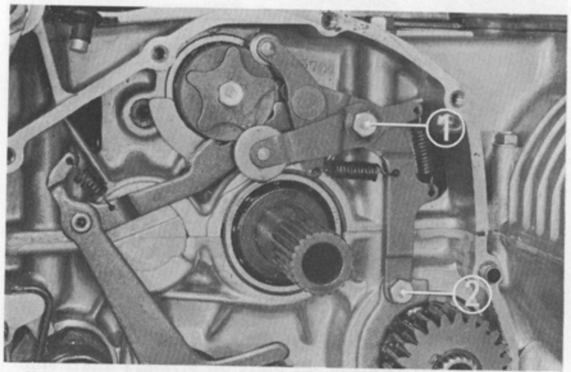


Fig. 1-1 ① Shift drum stop bolt
② Neutral stop bolt

4. Lower the gear shift arm as shown and remove the gear shift spindle.

B. Inspection

1. Check the shift drum stop and neutral stop for bend or damage.
2. Check the shift drum stop and neutral stop rollers for wear.

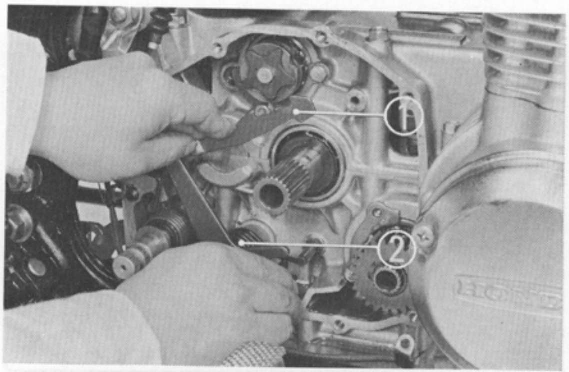


Fig. 1-2 ① Gear shift arm
② Gear shift spindle

Date of Issue: April 10, 1975

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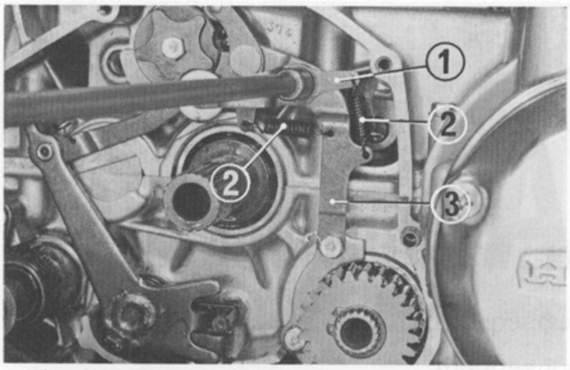

Fig. 1-3 ① Shift drum stop
② Shift drum stop springs
③ Shift drum neutral stop

C. Reassembly

To reassemble the gear shift mechanism, reverse the disassembly procedures. Pay attention to the following points:

1. As shown in Fig. 1-3, attach one of the shift drum stop springs to the shift drum stop and shift drum neutral stop, then attach the other shift drum stop spring to the arm and body of the shift drum stop. After that, secure the shift drum stop and shift drum neutral stop using the neutral stop bolt and shift drum stop bolt and collar.
2. Turn the gear shift drum and check if each part moves smoothly.
3. Install the gear shift arm and check if it moves smoothly in either direction.
4. Install the clutch assembly. (See page 122.)

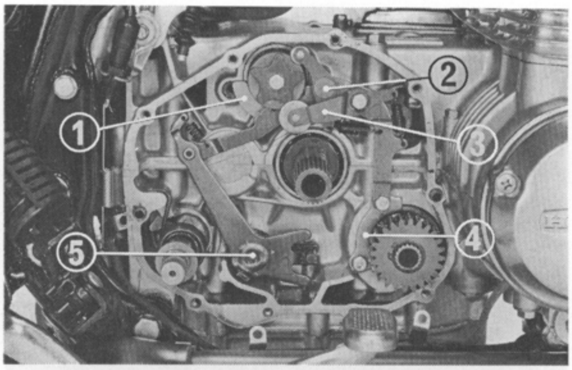

Fig. 1-4 ① Bearing set plate on primary shaft side
② Shift drum neutral stop
③ Shift drum stop
④ Bearing set plate on shift drum side
⑤ Gear shift spindle

Bushings

A bushing is pressed in the main shaft fourth gear and top gear respectively. (Those gears of the model CB550 do not contain bushings.)

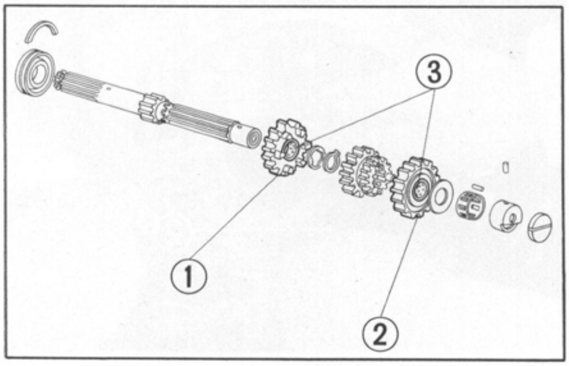

Fig. 1-5 ① Main shaft fourth gear
② Main shaft top gear
③ Bushings

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FRAME

FRONT SUSPENSION

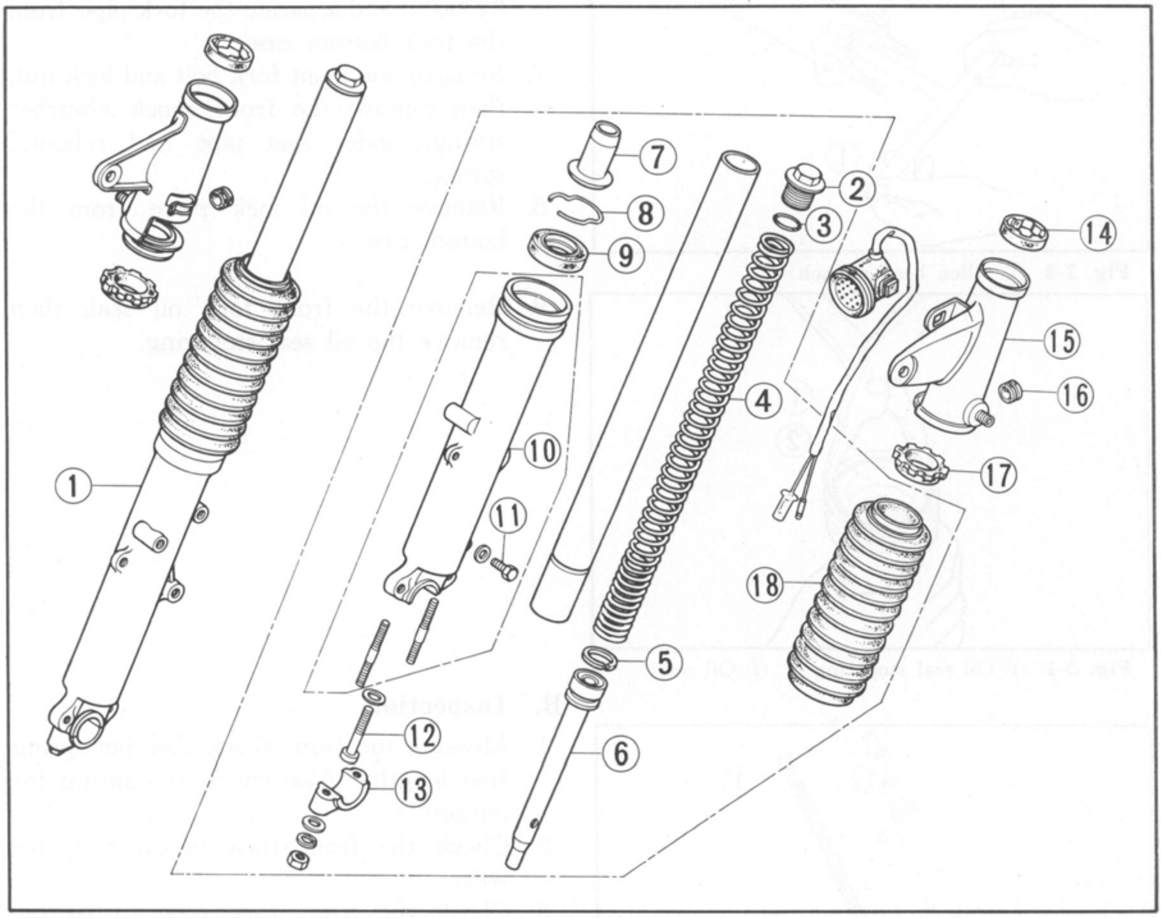

Fig. 2-1
① Right front frok
② Front fork bolt
③ 23×2.8 mm O-ring
④ Front shock absorber spring
⑤ Piston ring
⑥ Bottom pipe
⑦ Oil lock piece
⑧ Oil seal stop ring
⑨ 35×48×11 mm oil seal
⑩ Bottom case
⑪ 6×10 mm bolt
⑫ Oil lock bolt
⑬ Axle holder
⑭ Fork cover shock absorber A
⑮ Left front cover
⑯ Wire cord grommet
⑰ Fork cover shock absorber B
⑱ Front fork boot

A. Disassembly

1. Before remove the front fork bolt, leave it loosened.
2. Remove the front wheel referring to page 65.
3. Remove the caliper assembly from the left front fork.
4. Remove the front fender, remove the front fork pipe retaining bolts, then pull the front fork out downward.
5. Remove the front fork bolt and drain the front shock absorber oil.

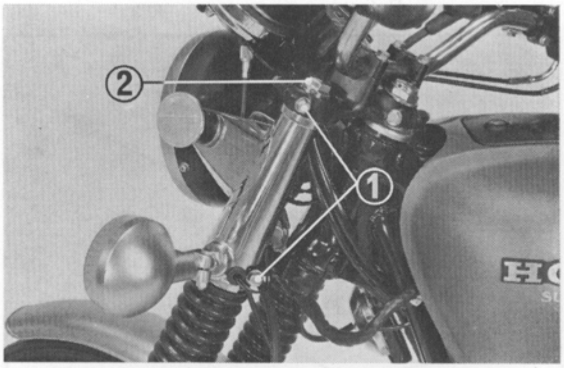

Fig. 2-2 ① Front fork retaining bolt
② Front fork bolt

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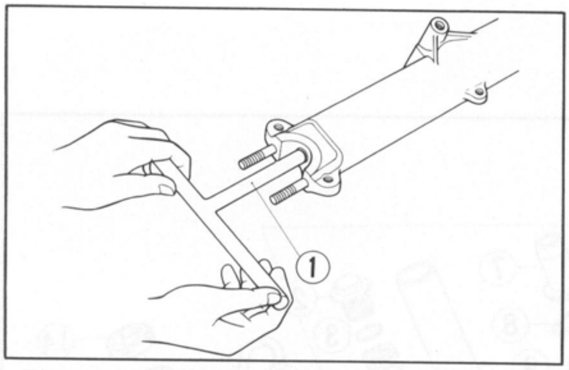

Fig. 2-3 ① Allen head wrench

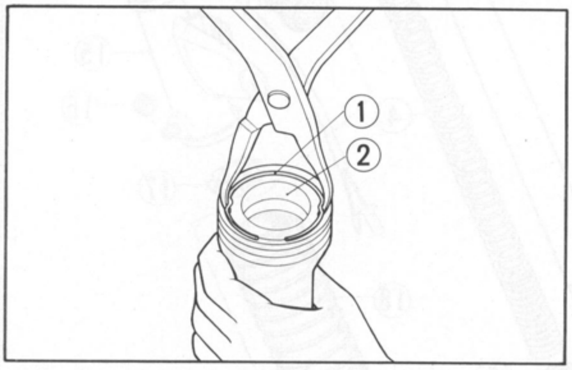

Fig. 2-4 ① Oil seal stop ring ② Oil seal

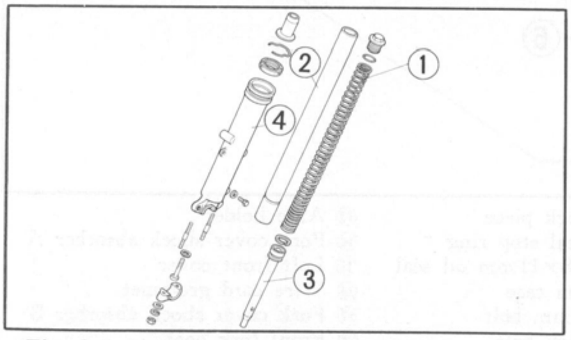

Fig. 2-5 ① Front shock absorber spring
② Front fork pipe
③ Bottom pipe
④ Bottom case

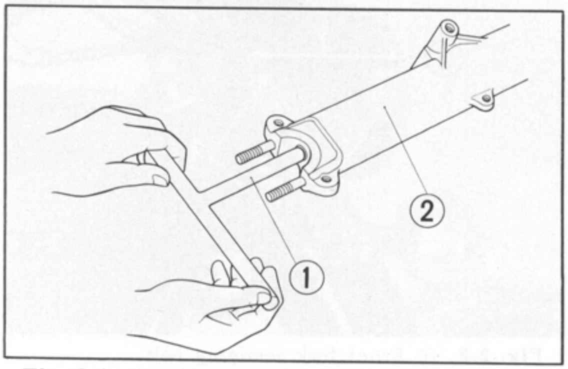

Fig. 2-6 ① Allen head wrench ② Bottom case

6. With the front fork bottom case held in a vise, remove the socket bolt using an Allen head wrench (Tool No. 07917-3230000) and separate the fork pipe from the fork bottom case.
7. Remove the front fork bolt and lock nut, then remove the front shock absorber spring, under seat pipe and rebound spring.
8. Remove the oil lock piece from the bottom case.
9. Remove the front fork oil seal, then remove the oil seal stop ring.

B. Inspection

1. Measure the front shock absorber spring free length. Also check the spring for tension.
2. Check the front fork piston ring for wear.
3. Check the front fork pipe to bottom case clearance.
4. Check the oil seal for scores, scratches or breakage.
5. Check the front fork pipe sliding surface for scores or scratches.

C. Reassembly

To reassemble the front suspension, reverse the disassembly procedures. Pay attention to the following points:

1. Install the fork pipe into the bottom case. Apply a coat of thread lock cement to the socket bolt and tighten it using an Allen head wrench.

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2. Apply a coat of ATF (automatic transmisson fluid) to the inner and outer circumferences of the oil seal, then install it using a fork seal driver (Tool No. 07947-3290000).

NOTES:

1. **Do not forget to install the oil seal stop ring. Install it properly.**
2. **Use a new oil seal.**

3. Fill the fork pipe with ATF up to the specified level mark.

Capacity: 165～170cc (5.6～5.8ozs)
To fill dry fork assembly

4. Install the right and left front forks so their heights are equal. The chamfered edge on the fork pipe should align with the upper surface of the fork top bridge as shown.

NOTE:

Wipe oil, if any, off the fork pipes completely.

5. After installing the front fork, check:
   - Smooth movement of the fork.
   - Oil leakage from the oil seal.

Front shock absorber oil change

1. Remove the front fork bolt and drain bolt. With the front brake applied and the handlebar held, move the front five or six times to drain the oil.
2. Install the drain bolt and fill the fork pipe with new ATF from the upper side up to the specified level mark.

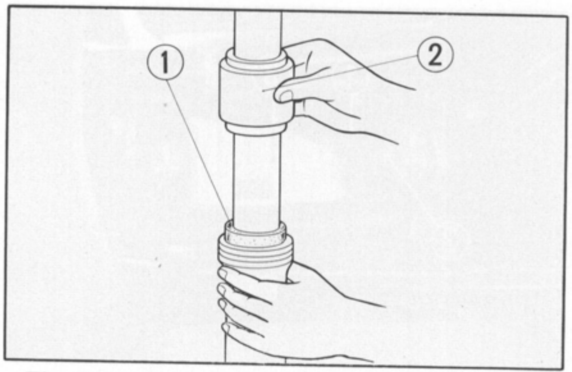

Fig. 2-7 ① Oil seal
② Fork seal driver

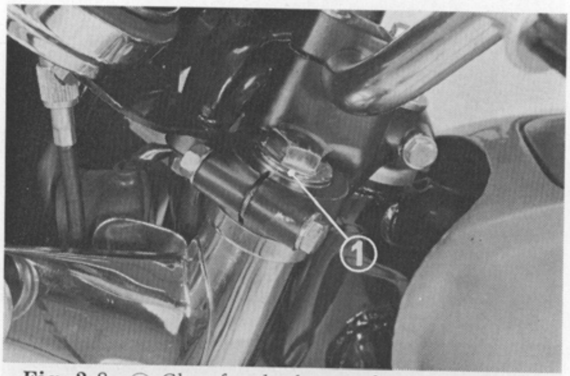

Fig. 2-8 ① Chamfered edge on front fork pipe

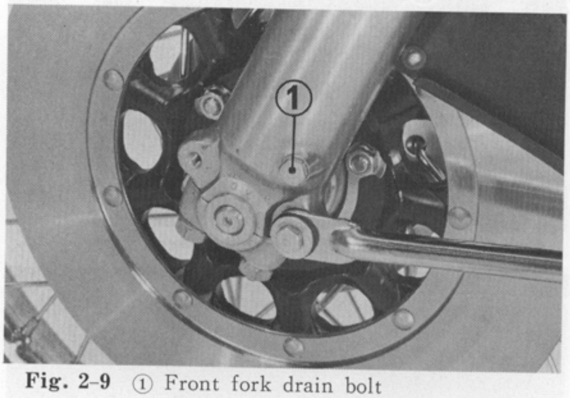

Fig. 2-9 ① Front fork drain bolt

AIR CLEANER

1. Raise the seat, loosen the wing nuts, then remove the air cleaner cover.
2. Remove the retaining clip, then remove the air cleaner element.

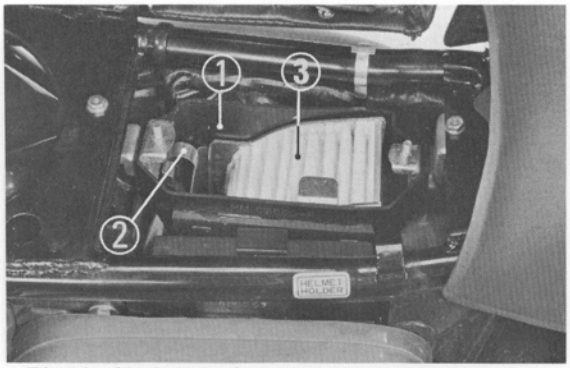

Fig. 2-10 ① Air cleaner case
② Retaining clip
③ Air cleaner element

3. Clean the element by tapping it lightly. If the element is still dirty, aplly air inside of the element.

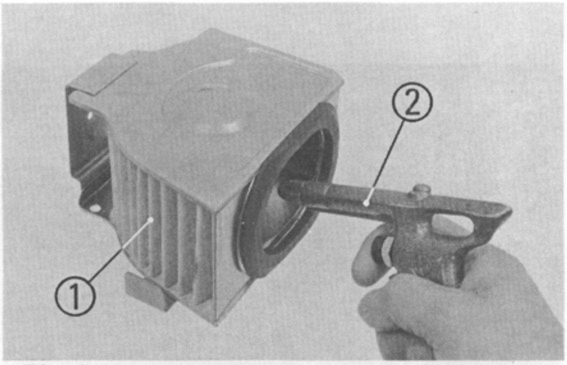

Fig. 2-11 ① Air cleaner element ② Air gun

4. Remove the element cover, then remove the breather element.

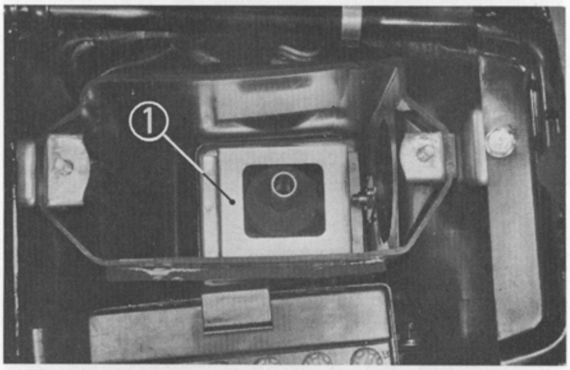

Fig. 2-12 ① Breather element cover

5. Immerse the breather element in soapsuds and lightly squeeze it for cleaning. After that immerse the element in new ATF, squeeze it lightly, then install.

WARNING:

Gasoline or low flash point solvents are highly flammable and must not be used to clean the breather elements.

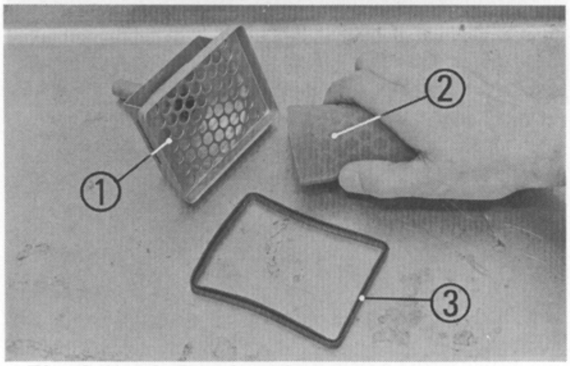

Fig. 2-13 ① Breather element cover
② Breather element
③ Element cover seal

6. Squeeze the end of the drain tube as shown Fig. 2–14 and drain the oil or water which may remain in the tube.
7. Install the air cleaner reversing the removal procedures.

NOTE:
Check the drain tube for clogging and routing.

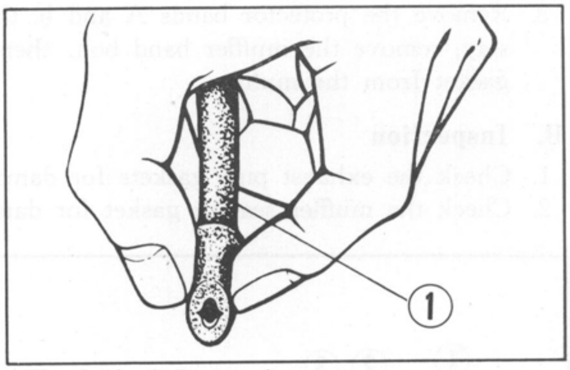

Fig. 2–14 ① Drain tube

EXHAUST MUFFLER

A. Disassembly

1. Remove the 10 mm bolt, then remove the exhaust muffler.

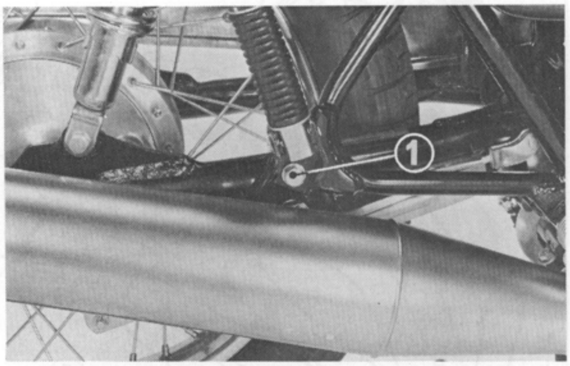

Fig. 2–15 ① 10 mm bolt

2. Remove the eight joint nuts, loosen the exhust pipe joints and joint collars, then remove the exhaust muffler.

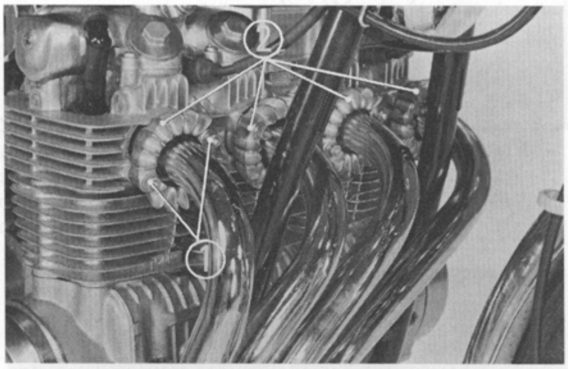

Fig. 2–16 ① Joint nuts
② Exhaust pipe joints

3. Remove the protector bands A and b, then remove the protector. Remove the muffler stay, remove the muffler band bolt, then separate the four exhaust pipes and sealing gasket from the muffler.

B. Inspection

1. Check the exhaust pipe gaskets for damage.
2. Check the muffler sealing gasket for damage.

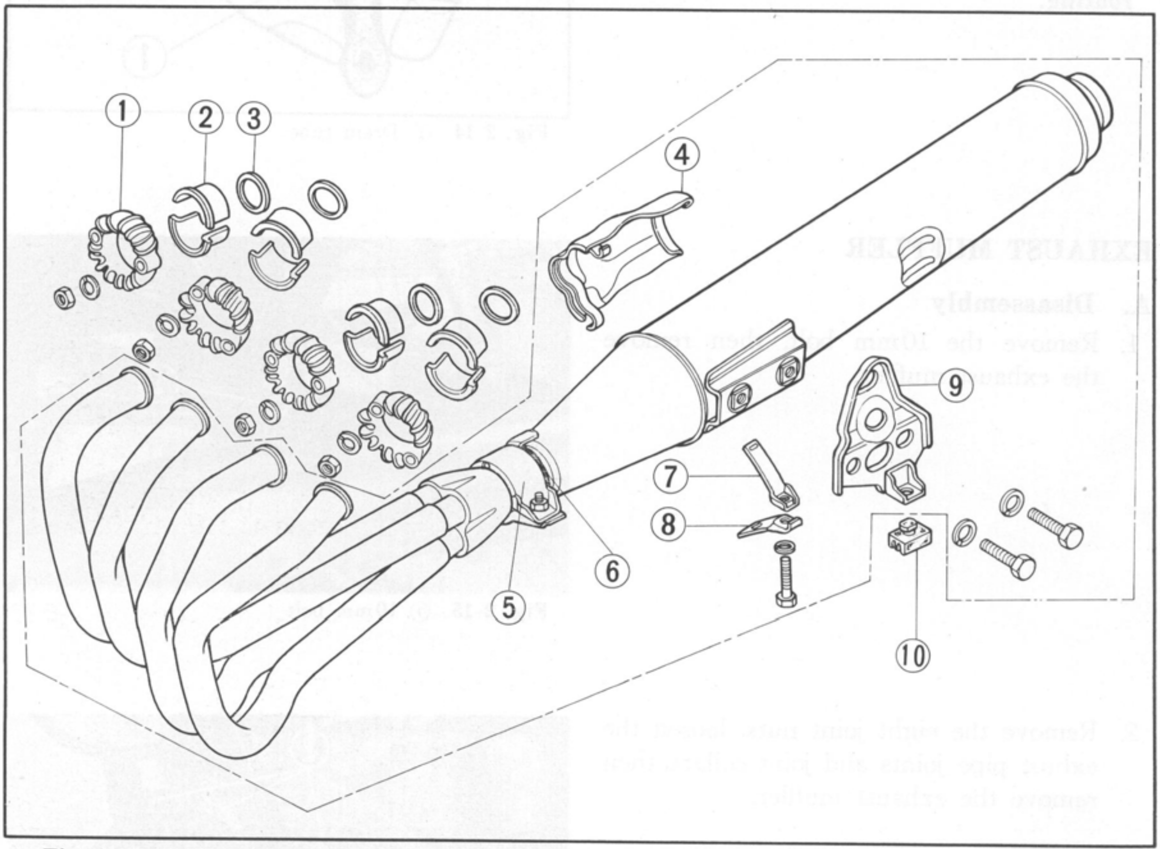

Fig. 2-17 ① Exhaust pipe joint
② Exhaust pipe joint collar
③ Exhaust pipe gaskets
④ Muffler stay
⑤ Muffler band
⑥ Muffler sealing gasket
⑦ Protector band B
⑧ Protector band A
⑨ Exhaust pipe protector
⑩ Stand stop rubber A

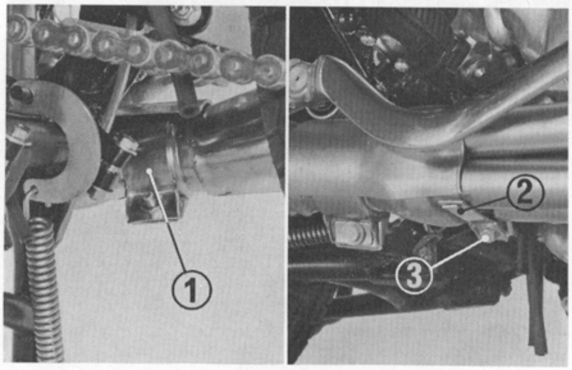

Fig. 2-18 ① Muffler band
② Protector band A
③ Muffler band bolt

C. Reassembly

1. Install the sealing gasket, then connect the exhaust pipes to the muffler.
2. Install the muffler band, set the protector bands A and B to the exhaust pipe protector, then tighten the screw securely.
3. Install the exhaust muffler.

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INSEPCCTION OF ELECTRICAL SYSTEM

1. Clutch switch

Attach the probes of a tester to the green and green/red leads of the clutch switch contained in the headlight case and operate the clutch lever to check for continuity. There should be continuity only when the clutch is disengaged.

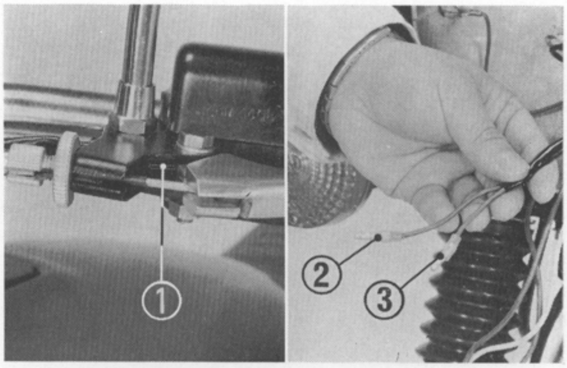

Fig. 2-19 ① Clutch switch ③ Green/red lead ② Green lead

2. Starting Switch

Remove the fuel tank and remove the connector cover by lcosening the 6 mm screw. Take the starting switch terminal out of the connector.

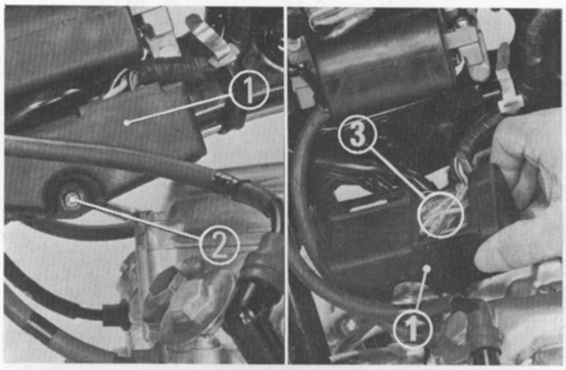

Fig. 2-20 ① Connector cover ③ Connector ② 6 mm screw

Check the switch for continuity between the circuits (○—○) shown in the table below. If there is continuity, the switch is in good condition.

Terminal	ST1	ST2	HL
Wire color	Black	Yellow/red	Black/red
FREE	○—	——	—○
PUSH	○—	—○	

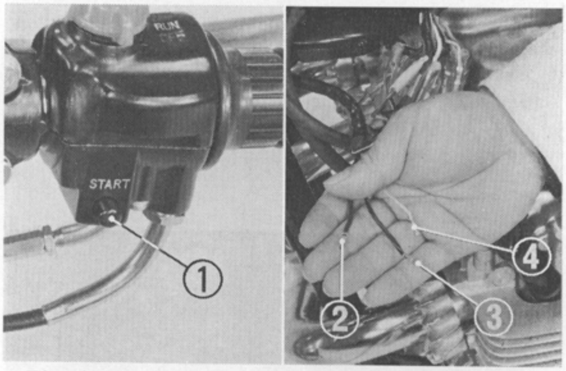

Fig. 2-21 ① Starting switch ③ Black/red lead ② Black lead ④ Yellow/red lead

3. Silicon diode

Using a tester check the diode for continuity in the normal and reverse directions. If there is continuity in the normal direction only, the diode is in good condition. If there is continuity or no continuity in both directions, the diode is defective.

CAUTION:

Do not use a megger for this test. High voltage may be applied to the diode, resulting in the damaged diode.

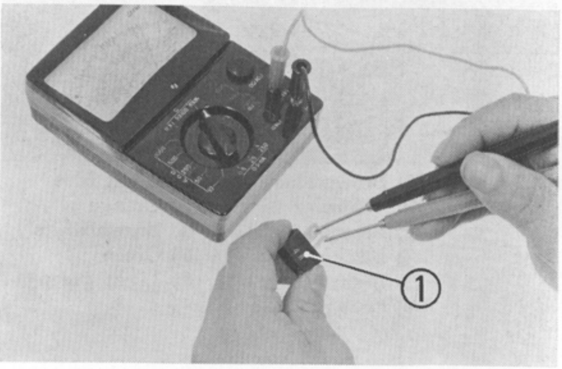

Fig. 2-22 ① Silicon diode

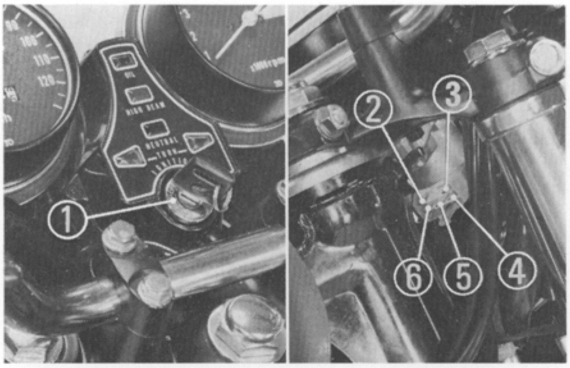

Fig. 2-23 ① Main switch
② Brown
③ Brown/white
④ Brown
⑤ Red
⑥ Black

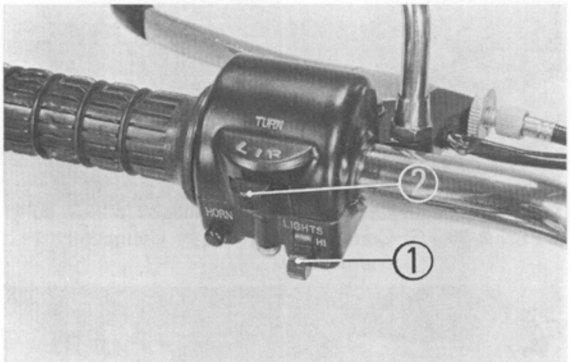

Fig. 2-24 ① Dimmer switch
② Turn signal control switch

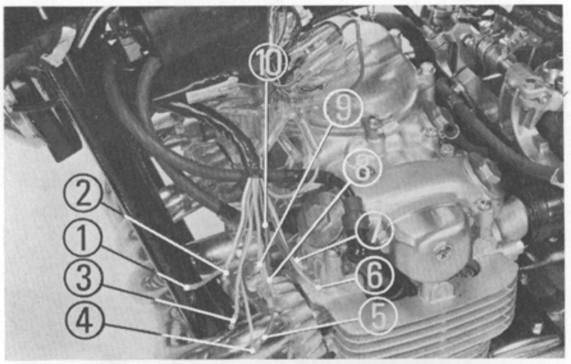

Fig. 2-25 ① Brown/blue
② White
③ Blue
④ Black/yellow
⑤ Light blue/white
⑥ Orange/white
⑦ Light blue
⑧ Orange
⑨ Brown/white
⑩ Green
⑪ Light green

4. Main switch

Place the switch key inOFF, ON or PARK position and check the switch for continuity between the circuits (○—○) shown in the table below. If there is no continuity or if there is continuity between other circuits than those shown in the table, the switch is defective.

Terminal	BAT	IG	TL1	TL2	PA
Wire color	Red	Black	Brown	Brown/White	Brown
Lock					
OFF					
RUN	○	○	○	○	◌
PA	○	—	◌	—	○

5. Dimmer switch and turn signal control switch

Remove the fuel tank, remove the connector cover, then take out the leads shown in the table below. Check each switch for continuity between the circuits (○—○) shown in the table. If there is continuity, the switch is in good condition. If there is no continuity, the switch is defective.

Terminal	W	B	L	R
Wire color	Green	Blue Brown	Orenge	Light Blue
L_2	○	○	○	
L_1	○	—	○	
N				
R_1	○	—	—	○
R_2	○	○	—	○

Terminal	TL_1	PL	PR	HO
Wire color	Brown white	Orenge white	Light blue white	Liht green
L_2	○	—	○	
L_1	○	—	○	○
N	○	○	○	○
R_1	○	○		
R_2	○	○		

Terminal	HL	Hi	Lo
Wire color	Black/yellow	Blue	white
Hi	○	○	
(N)	○	○	○
Lo	○	—	○

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6. Horn switch

Remove the fuel tank, remove the connector cover, then take out the gray lead as shown. Attach one prove of a radio tester to the body and the other probe to the gray lead. There should be continuity when the horn button is pushed.

Fig. 2-26 ① Horn switch
② Gray lead

7. Engine stop switch

Remove the fuel tank and remove the connector cover. Check the switch for continuity between the circuits (○—○) shown in the table below. If there is no continuity, the switch is defective.

Terminal	IG	RUN
Wire color	Black	Black/white
OFF		
RUN	○—	—○
OFF		

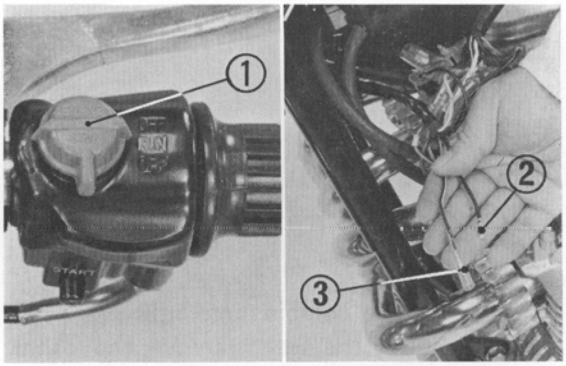

Fig. 2-27 ① Engine stop switch
② Black
③ Black/white

COMBINATION LIGHT

A. Disassembly

1. Remove the three 4mm screws and remove the combination light cover.

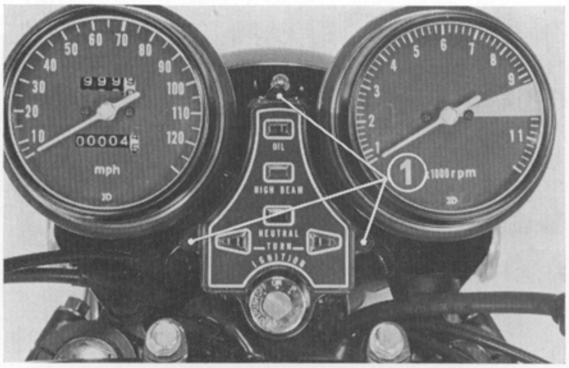

Fig. 2-28 ① 4mm tapping screws

2. Remove each bulb.
   To remove the bulb, turn to counter-clockwise while pushing,

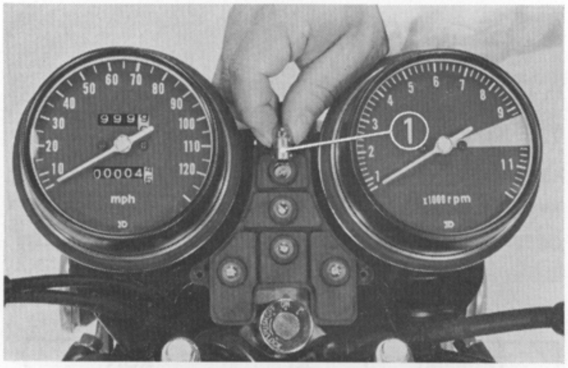

Fig. 2-29 ① Bulb (12V, 3.4W)

3. Remove the combination light case.
   To remove the case, remove the 8mm nut securing the speedometer and tachometer stay together, straighten the stay, then remove the 5mm screws as shown.

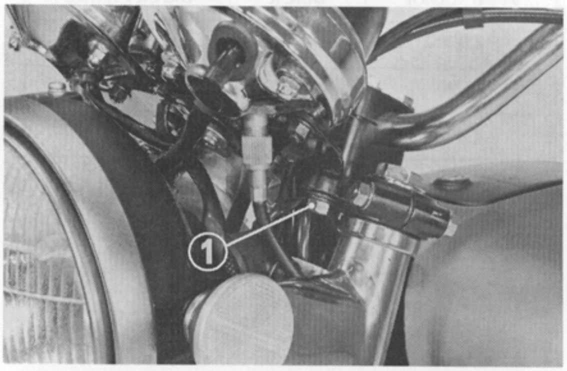

Fig. 2-30 ① 8mm nut

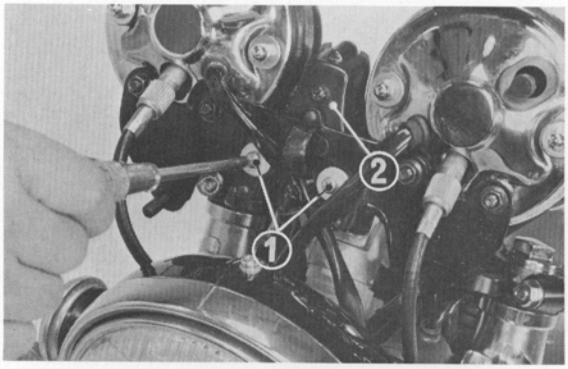

Fig. 2-31 ① 5mm screws
② Combination light case

B. Reassembly

To reassemble the combination light, reverse the disassembly procedures.

REAR WHEEL

The CB550F-A is different from the CB550 in that the rear ends of the rear fork is so constructed to prevent the rear wheel from coming off.

A. Disassembly

For the steps 1∼4, see page 74 of CB500∼550. Push the wheel forward, and left the chain off the driven sprocket. Remove the back bolts and chain adjusting stoppers, and pull the wheel rearward and the axle to left to remove the wheel.

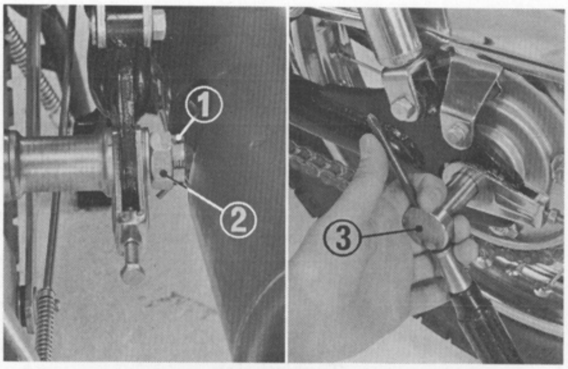

Fig. 2-32 ① Cotter pin
② Axle nut
③ Rear wheel axle shaft

Carburetor setting table

CB500	Item	CB550F-A
022A	Setting no.	069A
#100	Main jet	#98
2.515φ—2°30′—4 grooves	Jet needle	2.495φ—3°00′—2 grooves
1-1/2±3/8 taper 12°	Air screw	1-1/2±1/2 taper 18°
0.9φ×2	Air bleed 1	0.7φ×2
0.9φ×2	Air bleed 2	0.7φ×2
0.9φ×2	Air bleed 3	0.7φ×2
0.9φ×2	Air bleed 4	0.7φ×2
0.9φ×2	Air bleed 5	0.7φ×2

	Item	English	Metric
ENGINE	Air Filtration	Paper element	
	Valve Tappet Clearance	IN: 0.002, EX: 0.003 in.	IN: 0.05, EX: 0.08 mm
	Engine weight	159 lb.	72 kg
	Air Screw Opening	1–3/4±1/2 turns	
	Idle Speed	1,000 rpm	
DRIVE TRAIN	Clutch	Wet, multi-plate	
	Transmission	5-speed, constant mesh	
	Primary Reduction	3.062	
	Gear Ratio I	2.353	
	〃 II	1.636	
	〃 III	1.269	
	〃 IV	1.036	
	〃 V	0.900	
	Final Reduction	2.176, drive sprocket 17, driven sproket 37T	
	Gear Shift Pattern	Left foot return type	
ELECTRICAL	Ignition	Battery and ignition coil	
	Starting System	Electrical motor and kick pedal	
	Alternator	Three phase A.C. 12V–0.11 kW/2,000 rpm	
	Battery Capacity	12V–12AH	
	Spark Plug	NGK D–7ES. DENSO X–22ES	
	Headlight	Low/high, 12V–50W/50W	
	Tail/stoplight	Tail/Stop 12V– 8W/27W	
	Turn Signal light	Front/Rear 12V–23W/23W	
	Speedometer Light	12V–3.4W	
	Tachometer Light	12V–3.4W	
	Neutral Indicator Light	12V–3.4W	
	Turn Signal Indicator Light	12V–3.4W	
	High Beam Indicator Light	12V–3.4W	

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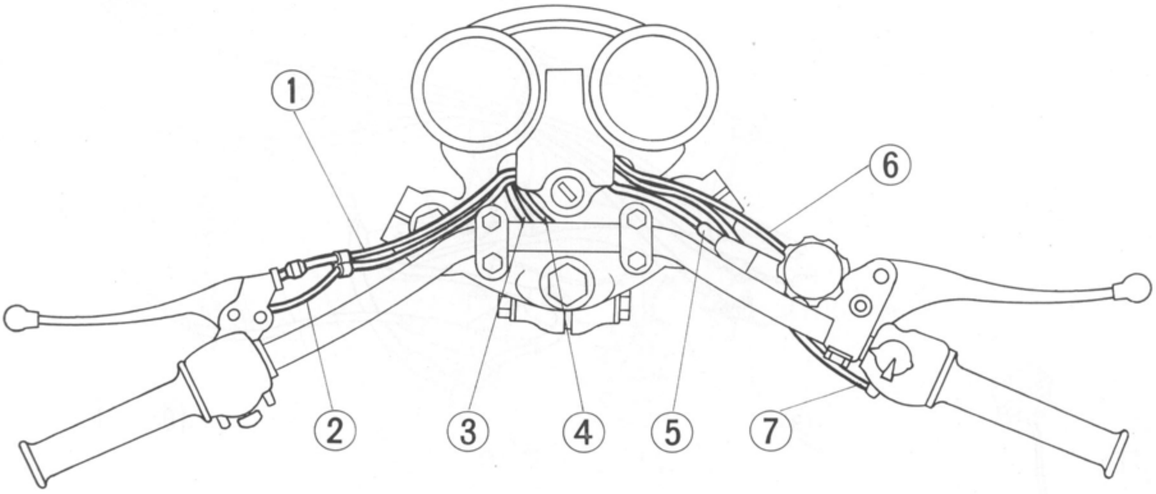
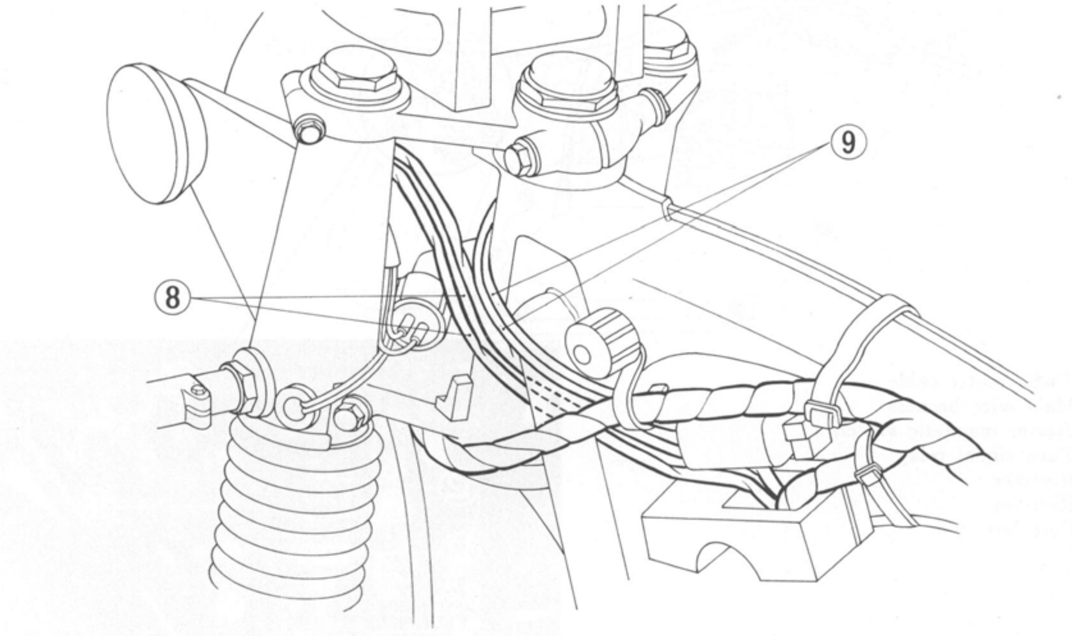
WIRING ILLUST





① Clutch cable
② Clutch lever switch cable
③ Handle switch (L) cord
④ Handle switch (R) cord
⑤ Front brake hose
⑥ Throttle cable
⑦ Throttle cable
⑧ Handle (R) (L) switch cord
⑨ Throttle cable (R) (L)

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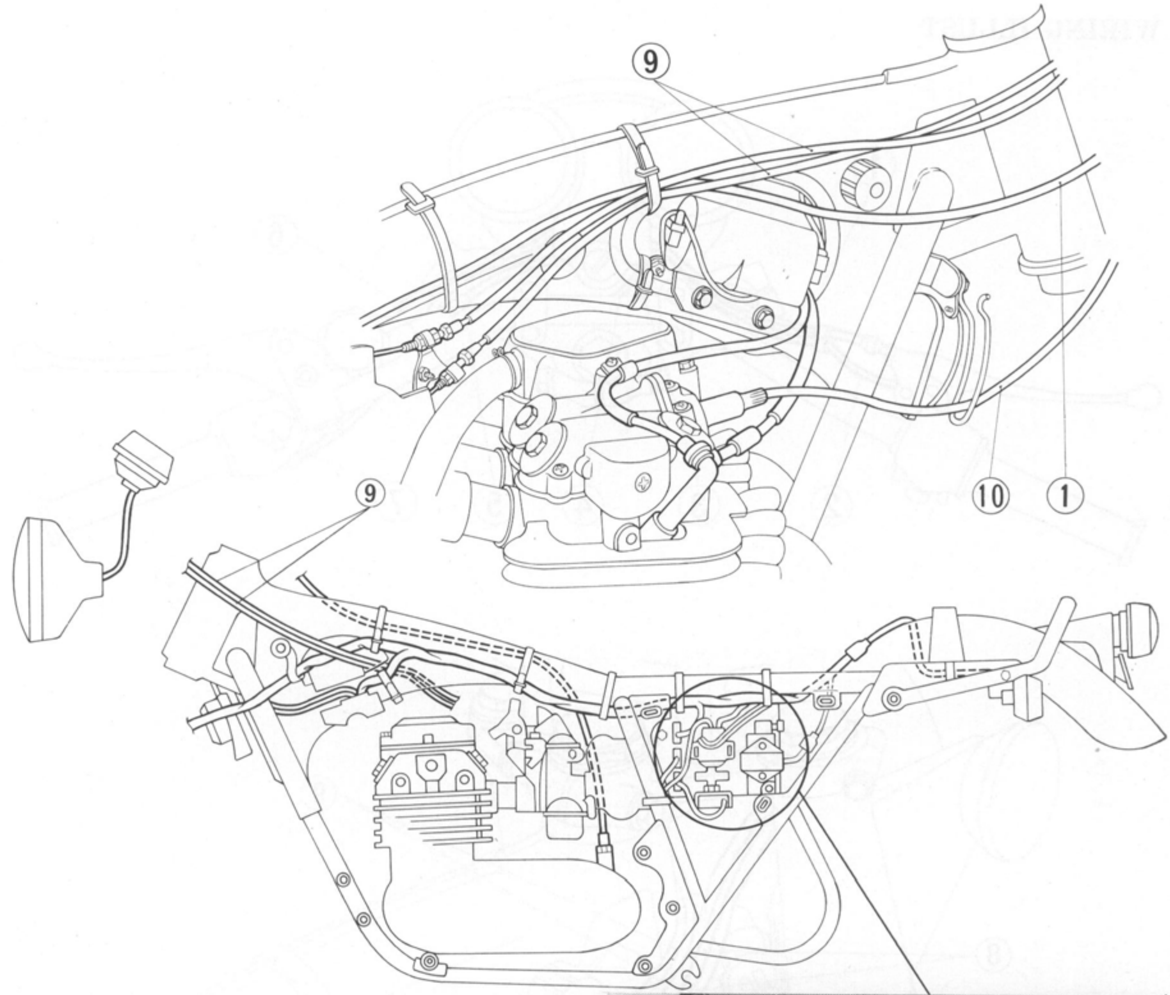
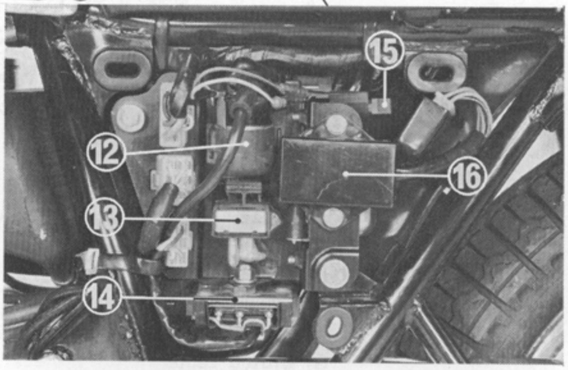
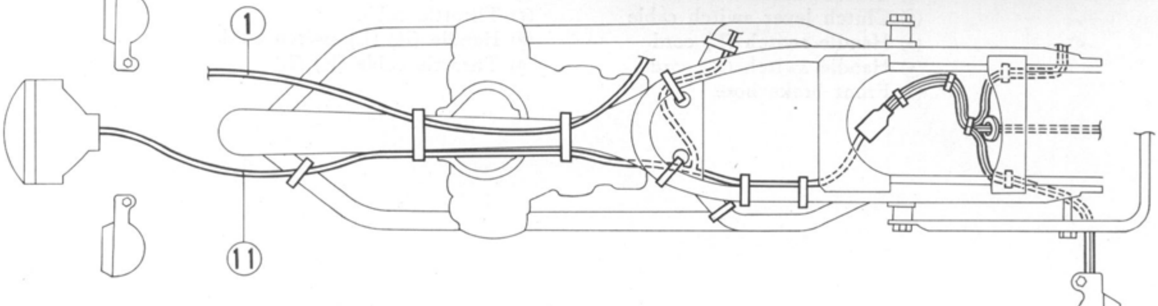
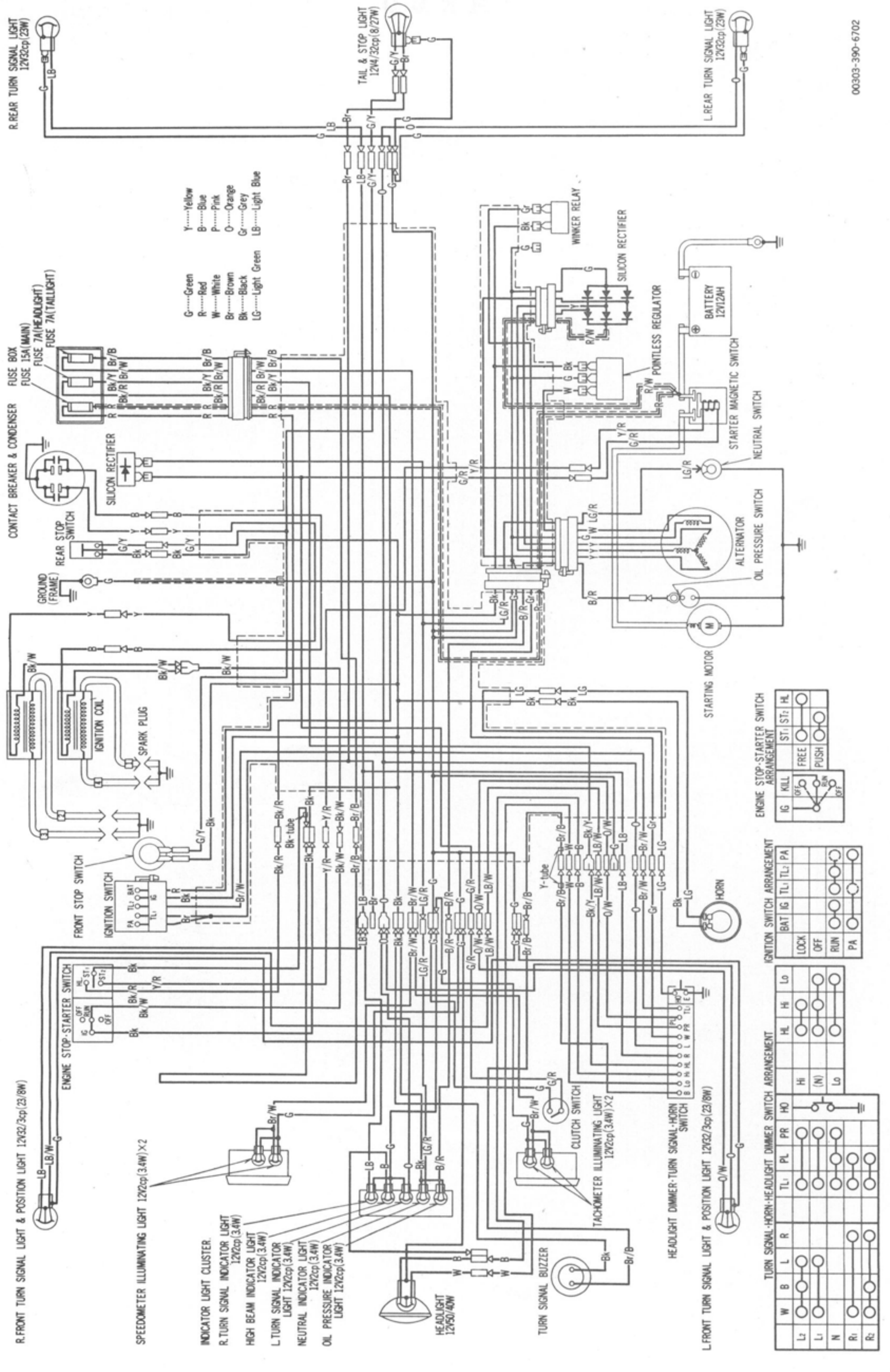




⑩ Tacho meter cable
⑪ Main wire harness
⑫ Starter magnetic switch
⑬ Turn signal relay
⑭ Rectifier
⑮ Rectifier
⑯ Fuse box



WIRING DIAGRAM CB550 F–A



Insert this addendum after page 169 of the CB500, 550 Shop Manual.

Engine No. CB550E—1067334 and subsequent

Frame No. CB550E—1230001 and subsequent

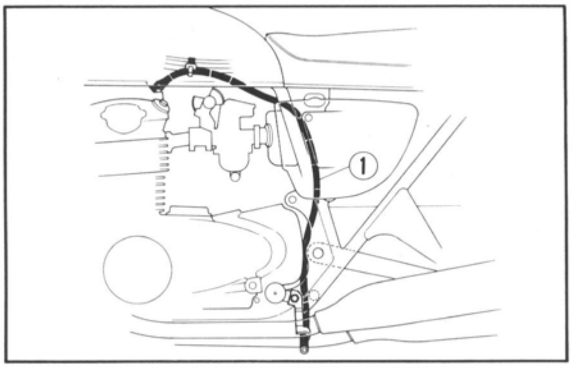


Fig. K2-1 ① Breather tube

1. BREATHER TUBE

The breather tube has been rerouted as shown in Fig. K2-1.

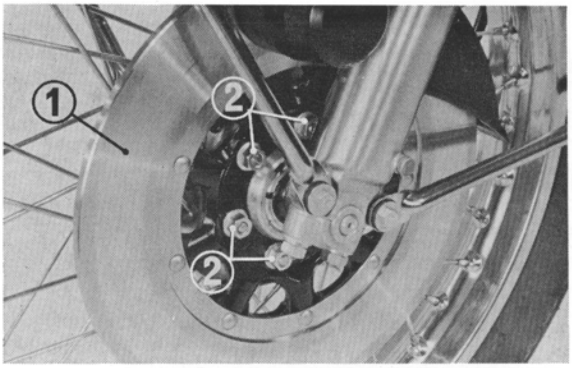


Fig. K2-2 ① Front brake disc
② UBS nut

2. FRONT WHEEL

The front brake will no longer use the tanged washer and nut arrangement for the attachment of the brake disc to the wheel hub. The disc is now tightened with UBS nuts.
Tightening torque: 270–330 kg-cm
(20–24 lbs-ft)

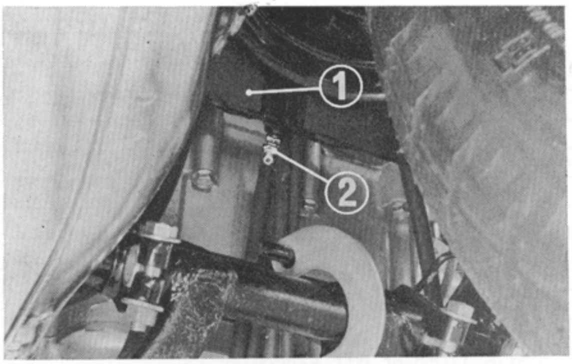


Fig. K2-3 ① Rear fork
② Grease nipple

3. FORK TOP BRIDGE

The flange bolts used for tightening the fork top bridge will be changed in size from 8 mm to 7 mm.
Tightening torque: 180–250 kg-cm
(13–18 lbs-ft)

4. REAR FORK

The rear fork pivot pipe now has a grease nipple at its center. The grease nipples formerly located at both ends of the rear fork pivot bolt were discontinued.

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4. SPECIFICATIONS (CB550 '76)

Item	
DIMENSION	
Overall Length	2,120 mm (83.5 in.)
Overall Width	825 mm (32.5 in.)
Overall Height	1,115 mm (44.0 in.)
Wheel Base	1,405 mm (55.5 in.)
Seat Height	805 mm (31.7 in.)
Foot Peg Height	315 mm (12.4 in.)
Ground Clearance	150 mm (6.3 in.)
Dry Weight	192 kg (423 lb.)
FRAME	
Type	Double cradle frame
F. Suspension, Travel	Telescopic fork, travel 121 mm (4.8 in.)
R. Suspension, Travel	Swing arm, travel 77.3 mm (3.0 in.)
F. Tire Size, Type	3.25-19-4 PR Rib, tire air pressure 1.75/2.0 kg/cm² (25/28 psi)
R. Tire Size, Type	3.75-18-4 PR Block, tire air pressure 2.0 /2.5 kg/cm² (28/36 psi)
F. Brake	Disk brake
R. Brake	Internal expanding shoe
Fuel Capacity	14.0 lit. (3.7 U.S.gal. 3.1 Imp.gal.)
Fuel Reserve Capacity	5.0 lit. (1.3 U.S.gal. 1.1 Imp.gal.)
Caster Angle	64°
Trail Length	105 mm (4.1 in.)
ENGINE	
Type	Air-cooled 4-stroke O.H.C. engine
Cylinder Arrangement	4 cylinder in line
Bore and Stroke	58.5×50.6 mm (2.303×1.992 in.
Displacement	544 cc (33.19 cu in.)
Compression Ratio	9 : 1
Carburetor, Venturi Dia.	Four Piston valve type, venturi dia. 22 mm (0.866 in.)
Valve Train	Chan driven over head camshaft
Oil Capacity	3.0 lit. (3.2 U.S. qt 2.6 Imp. qt)
Lubrication System	Forced pressure and wet sump
Fuel Required	Low-lead gasoline with 91 octane number or higher
Air Filtration	Paper filter
Valve Tappet Clearance	IN : 0.05, EX : 0.08 mm (IN : 0.002, EX : 0.003 in.)
Air Screw Opening	1 1/2
Idle Speed	1000 rpm
DRIVE TRAIN	
Clutch	Wet multi-plate
Transmission	5-Speed constant mesh
Primary Reduction	3.063
Gear Ratio I	2.353
II	1.636
III	1.269
IV	1.036
V	0.900
Final Reduction	2.176, drive sprocket 17 T, driven sprocket 37 T
Gear Shift Pattern	Left foot operated return system
ELECTRICAL	
Ignition	Battery and ignition coil
Starting System	Starting motor and kick starter
Alternator	A.C. Generator 0.13 kw/2,000 rpm
Battery Capacity	12 V-12 AH
Spark plug	NGK D7ES or ND X22ES

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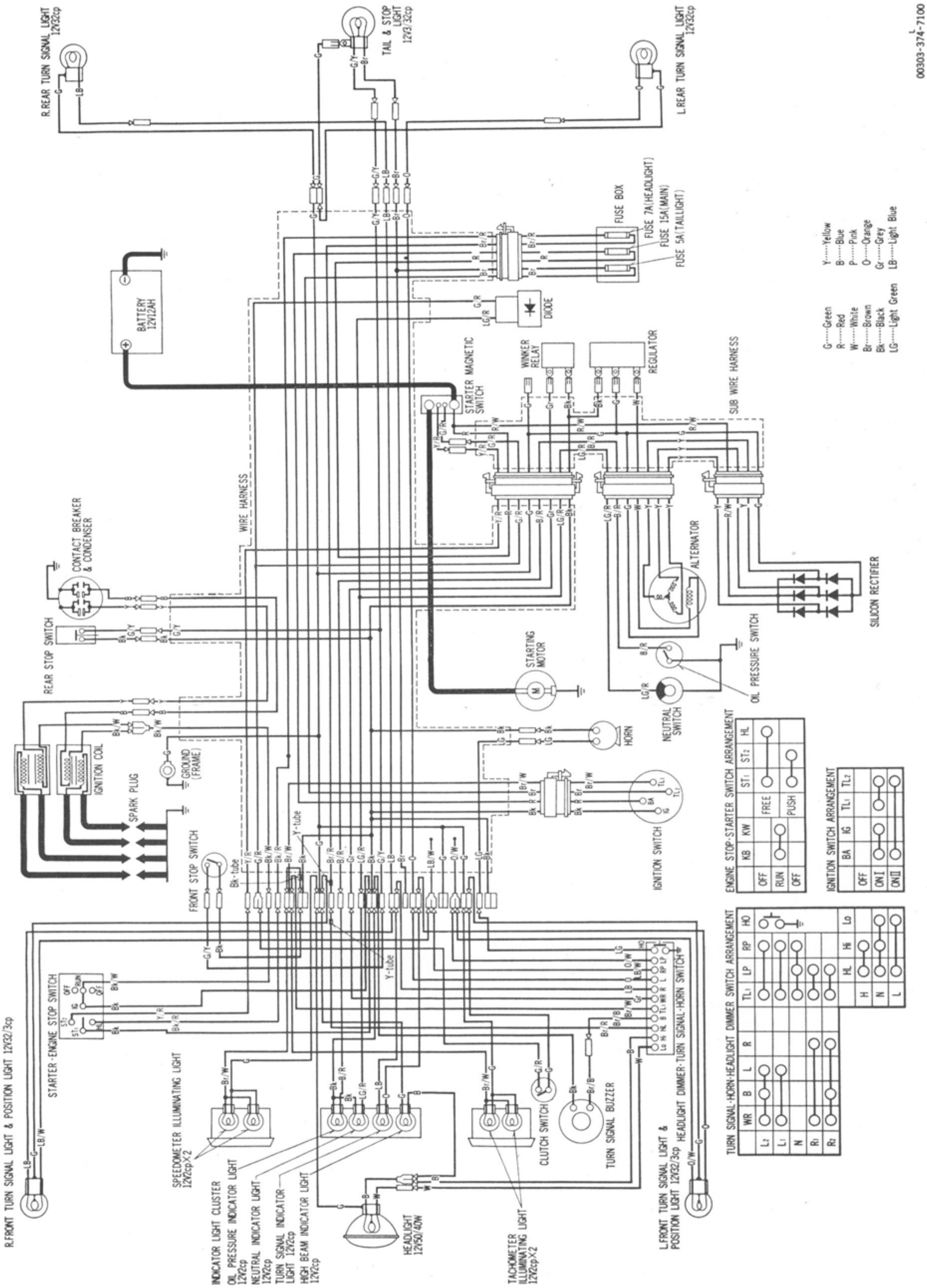
5. WIRING DIAGRAM (CB550 '76)



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19. SUPPLEMENT TO CB500K3/CB550K3 ('77)

Engine No. CB550E—2000001 and subsequent
Frame No. CB550K—2000001 and subsequent
Engine No. CB500E—2200001 and subsequent
Frame No. CB500—1000001 and subsequent

1. CARBURETOR

A. Removal and installation

1. Turn the fuel valve lever to the "OFF" position and disconnect the fuel tube at the fuel valve and remove the over flow tube.
2. Open the seat and remove the fuel tank.
3. Remove the air cleaner case.
4. Remove the choke and throttle cables from the cable holders and disconnect them from each shaft lever.

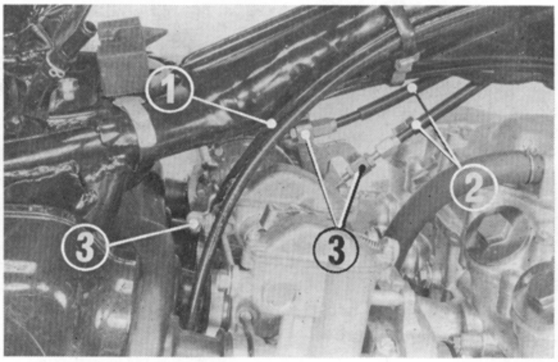

Fig. K3-1 ① Choke cable
② Throttle cables
③ Cable holders

5. Loosen the carburetor insulator bands and the air cleaner connecting bands. Take the carburetor assembly out.
6. To install the carburetor assembly, reverse the removal procedure.

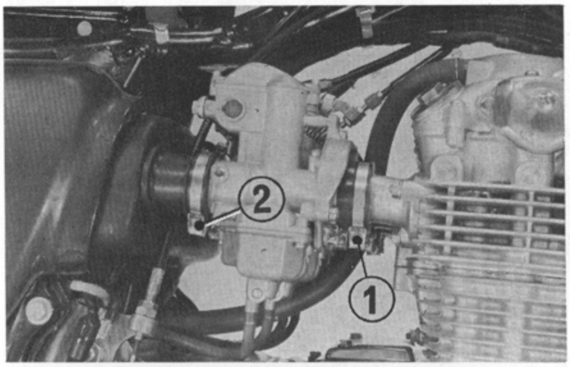

Fig. K3-2 ① Carburetor insulator band
② Air cleaner connecting band

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B. Disassembly

Carburetor, throttle valve and jet needle:

1. Remove the carburetor assembly from the engine.
2. Remove the rear stays from the carburetor assembly by removing the four bolts.

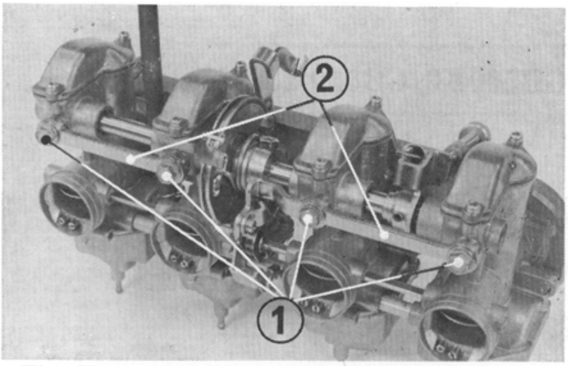

Fig. K3-3 ① Bolt ② Rear stay

3. Unhook the throttle return spring from the stopper arm. Remove the stay plate by removing the eight screws.
   Unhook the choke relief spring at the choke lever.

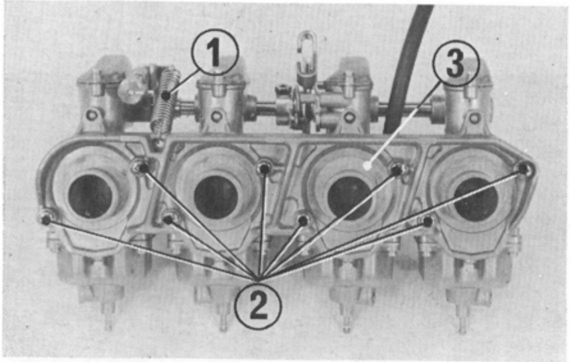

Fig. K3-4 ① Throttle return spring
② Screw ③ Stay plate

4. Remove the carburetor top by removing the two screws. Loosen the link arm fixing screw.
   Loosen the lock nut and remove the throttle lever set screw.

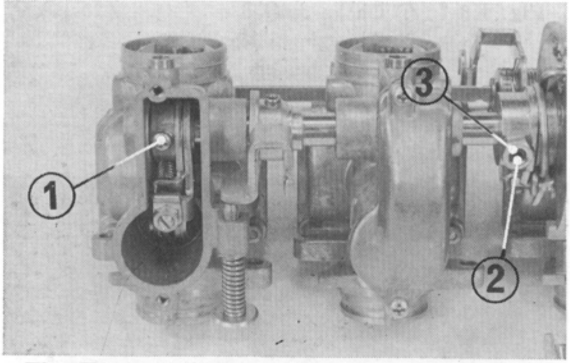

Fig. K3-5 ① Link arm fixing screw
② Set screw ③ Lock nut

5. Remove the choke valve from the choke shaft by removing the two screws.
6. Separate the carburetors.

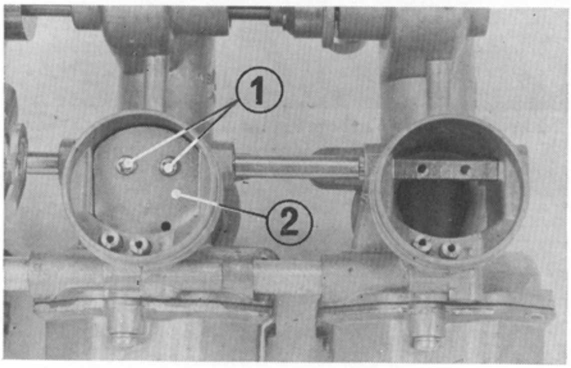

Fig. K3-6 ① Screw ② Choke valve

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7. Remove the link arm assembly from the carburetor.
8. Remove the two screws and remove the throttle valve and jet needle from the link arm.

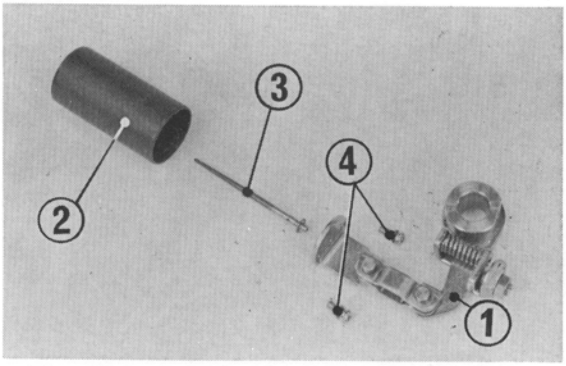

Fig. K3-7 ① Link arm ② Throttle valve ③ Jet needle ④ Screw

Float, main jet and slow jet:

1. Remove the carburetor assembly from the engine.
2. Remove the three screws and the float chamber body from the carburetor.
3. Remove the float and float valve by pulling the float arm pin out.
4. Remove the main jet and slow jet.

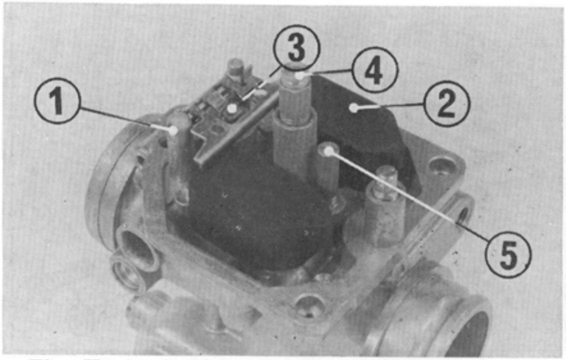

Fig. K3-8 ① Float arm pin ② Float ③ Float valve ④ Main jet ⑤ Slow jet

C. Assembly

To assemble the carburetors reverse the disassembly procedure. Observe the following notes:

1. Install the throttle valve to the link arm so that the throttle valve cutaway faces the choke valve when it is installed in the carburetor body.

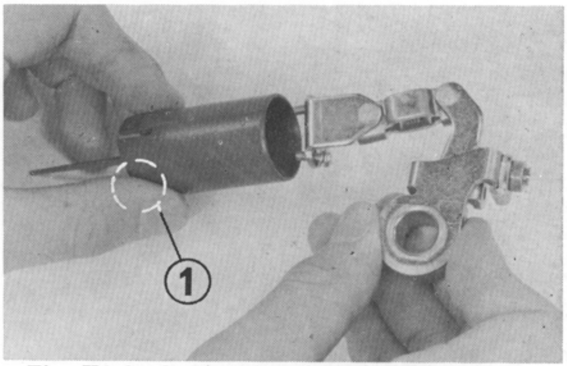

Fig. K3-9 ① Throttle valve cutaway

2. The link arm which is not equipped with the adjusting screw should be installed in the No. 2 carburetor.

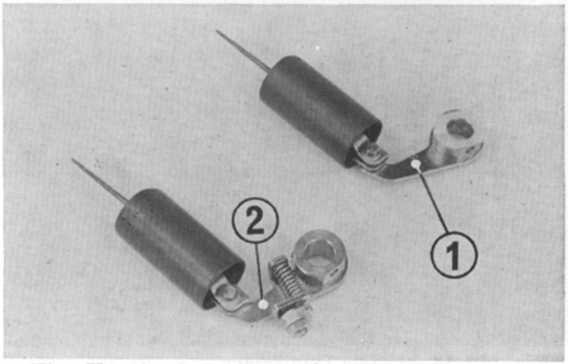

Fig. K3-10 ① Link arm for No. 2 carburetor ② Link arm for No. 1, 3 and 4 carburetor

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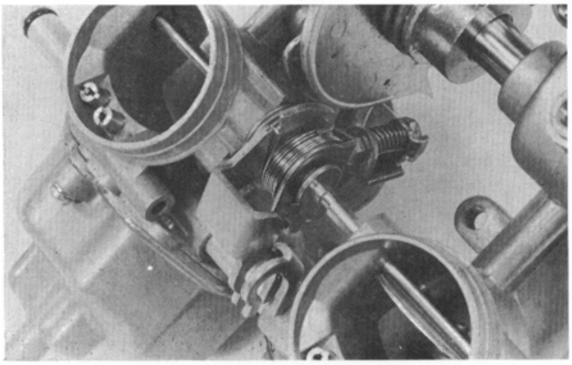

Fig. K3-11

3. Install the choke shaft levers and springs as shown in Fig. K3-11.

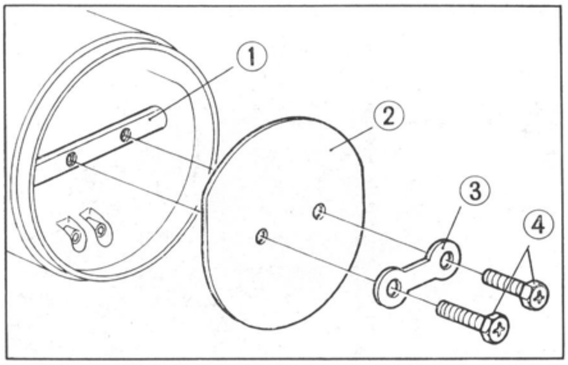

Fig. K3-12 ① Choke shaft
② Choke valve
③ Lock washer
④ Hex head screw

4. Install the choke valve to the choke shaft by using the lock washer and hex head screws. Bend the lock tabs to lock the screws.

NOTE:
The choke valve securing screws are peened when assembling the carburetor at the factory. Discard the used screws.

D. Carburetor setting table

Item	CB550K3	CB500K3
Main jet	#90	#90
Air jet	#130	#120
Slow jet	#38	#42
Slow air jet	#150	#150
Jet needle setting	3rd. groove E2349F	2nd groove E2350F
Float height	14.5mm (0.57in.)	14.5mm (0.57in.)

E. Adjustment

Idle speed:

Make the adjustment with the engine warmed up.

1. Adjust the idle stop screw to allow the engine to run at the idle speed of 1050 rpm.
2. Turn the pilot screws either in or out to obtain the highest idle speed. Usually the correct setting will be found to be $1^1/_2$ turns open from a fully closed position.
3. If idle speed changes after adjusting the pilot screw, readjust the idle stop screw.

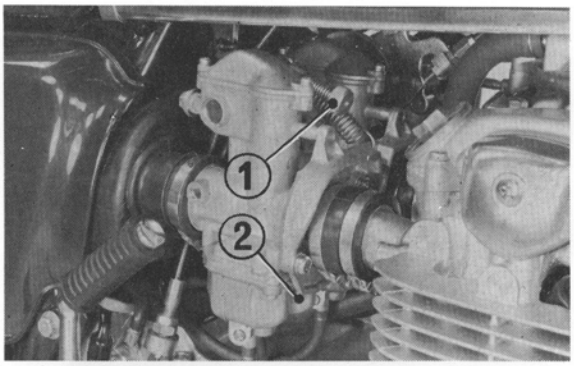

Fig. K3-13 ① Idle stop screw
② Pilot screw

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Synchronizing carburetors:

1. Remove the fuel tank. Position the fuel tank higher than the carburetors and reconnect with a longer fuel tube.
2. Connect the vacuum gauge set to the carburetors.
3. Run the engine at the specified idle speed and read the vacuum. The vacuum gauge readings should be the same on all four gauges.
4. To adjust, proceed as follows:
   a. Remove the carburetor tops from the No. 1, 3 and 4 carburetors.
   b. Loosen the lock nut and turn the adjusting screw until the vacuum reading is the same as the No. 2 carburetor reading.

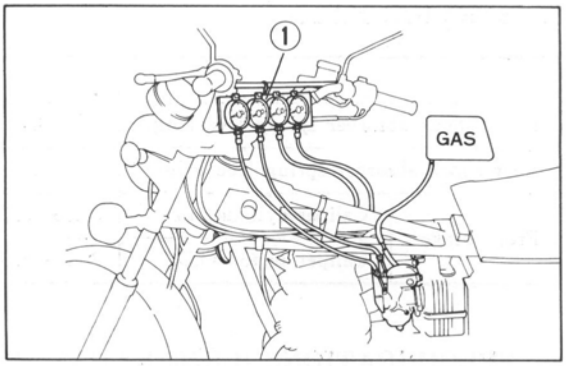

Fig. K3-14 ① Vacuum gage set

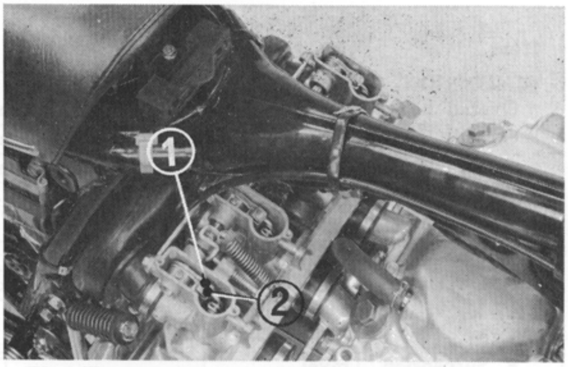

Fig. K3-15 ① Lock nut
② Adjusting screw

Fast idle:

1. Remove the fuel tank.
2. Pull the choke knob out fully and turn the adjusting screw until it touches the stopper.
3. Push the choke knob in and turn the adjusting screw in $2^1/_2$ turns.
   Fast choke idle speed: 3000–4000 rpm

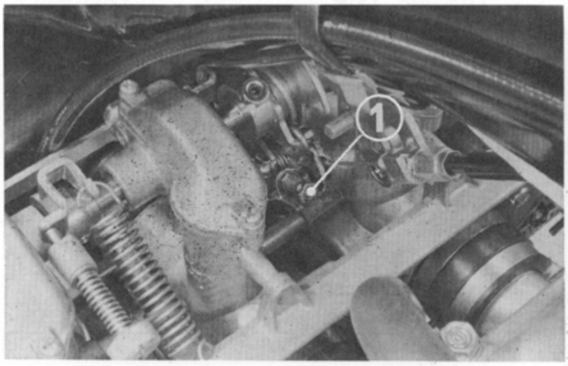

Fig. K3-16 ① Adjusting screw

2. SWITCH HOUSING

When installing the right or left switch housing, align the mating edges of the housing with the punch mark on the handlebar and tighten the two screws securely.
The aligning mark on the brake lever bracket holder should also be lined up with the punch mark.

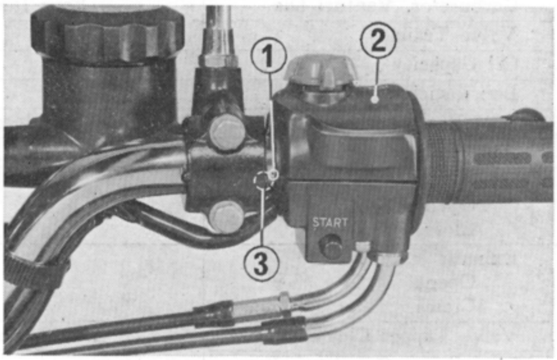

Fig. K3-17 ① Punch mark
② Switch housing
③ Aligning mark on holder

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3. SERVICE DATA

		Standard value	Service limit
Front shock absorber spring free length		443.5 mm (17.46 in.)	409.5 mm (16.12 in.)
Rear shock absorber spring free length		210.4 mm (8.28 in.)	205 mm (8.07 in.)
Front brake	Caliper cylinder I.D.	38.18–38.23 mm (1.503–1.505 in.)	38.245 mm (1.506 in.)
	Caliper piston O.D.	38.115–38.148 mm (1.501–1.502 in.)	38.105 mm (1.500 in.)

4. SPECIFICATIONS (CB500K3/CB550K3 '77)

Type Item	U.S.A. 〔Canada〕	General and Australia	Europe 〈CB500〉	France
DIMENSION				
Overall Length	2,150 mm (84.7 in.)		2,160 mm	2,155 mm
Overall Width	825 mm (32.5 in.)		750 mm	
Overall Height	1,115 mm (44.0 in.)		1,100 mm	
Wheel Base	1,405 mm (55.5 in.)			
Seat Height	800 mm (31.5 in.)	825 mm (32.5 in.)		
Ground Clearance	160 mm (6.3 in.)			
Dry Weight	193.5 kg (426 lb.)		196 kg	
FRAME				
Type	Double cradle frame			
F. Suspension, Travel	Telescopic fork, travel 121 mm (4.8 in.)			
R. Suspension, Travel	Swing arm, travel 90.0 mm (3.5 in.)			
F. Tire Size, Type	3.25S19–4PR Rib, tire air pressure 1.75/2.0 kg/cm^2 (25/28 psi)			
R. Tire Size, Type	3.75S18–4PR Block, tire air pressure 2.0 /2.5 kg/cm^2 (28/36 psi)			
F. Brake	Disc brake			
R. Brake	Internal expanding shoe			
Fuel Capacity	16.0 lit. (4.2 U.S.gal. 3.5 Imp.gal.)			
Fuel Reserve Capacity	4.0 lit. (1.0 U.S.gal. 0.9 Imp.gal.)			
Caster Angle	64°			
Trail Length	104 mm (4.1 in.)			
ENGINE				
Type	Air-cooled 4-stroke O.H.C. engine			
Cylinder Arrangement	4 cylinder in line			
Bore and Stroke	58.5×50.6 mm (2.303×1.992 in.) 〈56.0×50.6 mm〉			
Displacement	544 cc (33.19 cu-in.) 〈498 cc〉			
Compression Ratio	9 : 1			
Carburetor, Venturi Dia.	Four Piston valve type, venturi dia. 22 mm (0.866 in.)			
Valve Train	Chain driven overhead camshaft			
Oil Capacity	3.2 lit. (3.4 U.S. qt 2.8 Imp. qt)			
Lubrication System	Forced pressure and wet sump			
Fuel Required	Low-lead gasoline with 91 octane number or higher			
Air Filtrer	Paper filter			
Intake Valve: Opens Closes	5° BTDC 35° ABDC			
Exhaust Valve: Opens Closes	35° BBDC 5° ATDC			
Valve Tappet Clearance	IN: 0.05 mm, EX: 0.08 mm (IN: 0.002 in, EX: 0.003 in.)			
Pilot Screw Opening	$1\,^{1}/_{2}\pm{}^{1}/_{2}$			
Idle Speed	1050 rpm			

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Item		
DRIVE TRAIN		
Clutch	Wet multi-plate	
Transmission	5-Speed constant mesh	
Primary Reduction	3.063	
Gear Ratio I	2.353	
II	1.636	
III	1.269	
IV	1.036	
V	0.900	
Final Reduction	2.176, drive sprocket 17T, driven sprocket 37T	
Gear Shift Pattern	Left foot operated return system	
ELECTRICAL		
Ignition	Battery and ignition coil	
Ignition Advance:		
"F" mark	5° BTDC	
Max. advance	28°–31° BTDC	
PPM from "F" to max. advance	1,200–2,500 rpm	
Dwell Angle	190±5°	
Starting System	Starting motor and kick starter	
Alternator	A.C. Generator 0.13 kw/2,000 rpm	
Battery	12 V–12 AH	
Spark plug	NGK D7ES or ND X22ES 〔NGK DR7ES or ND X22ESR-V〕	NGK DR7ES or ND X22ESR-U
Condenser Capacity	0.02–0.24 μF	

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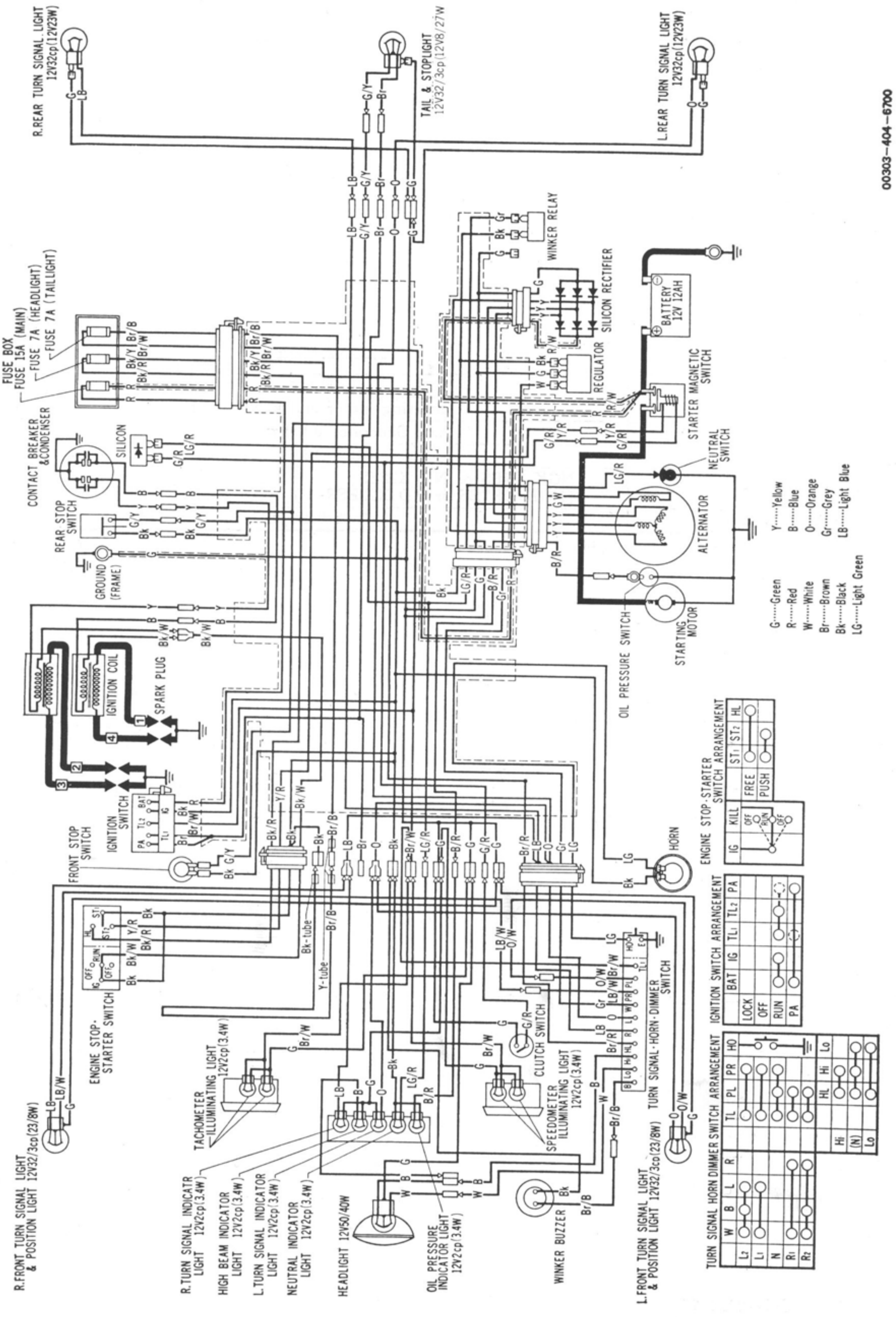
5. WIRING DIAGRAM
CB550 K3 '77 (U.S.A. Type and Canada Type)



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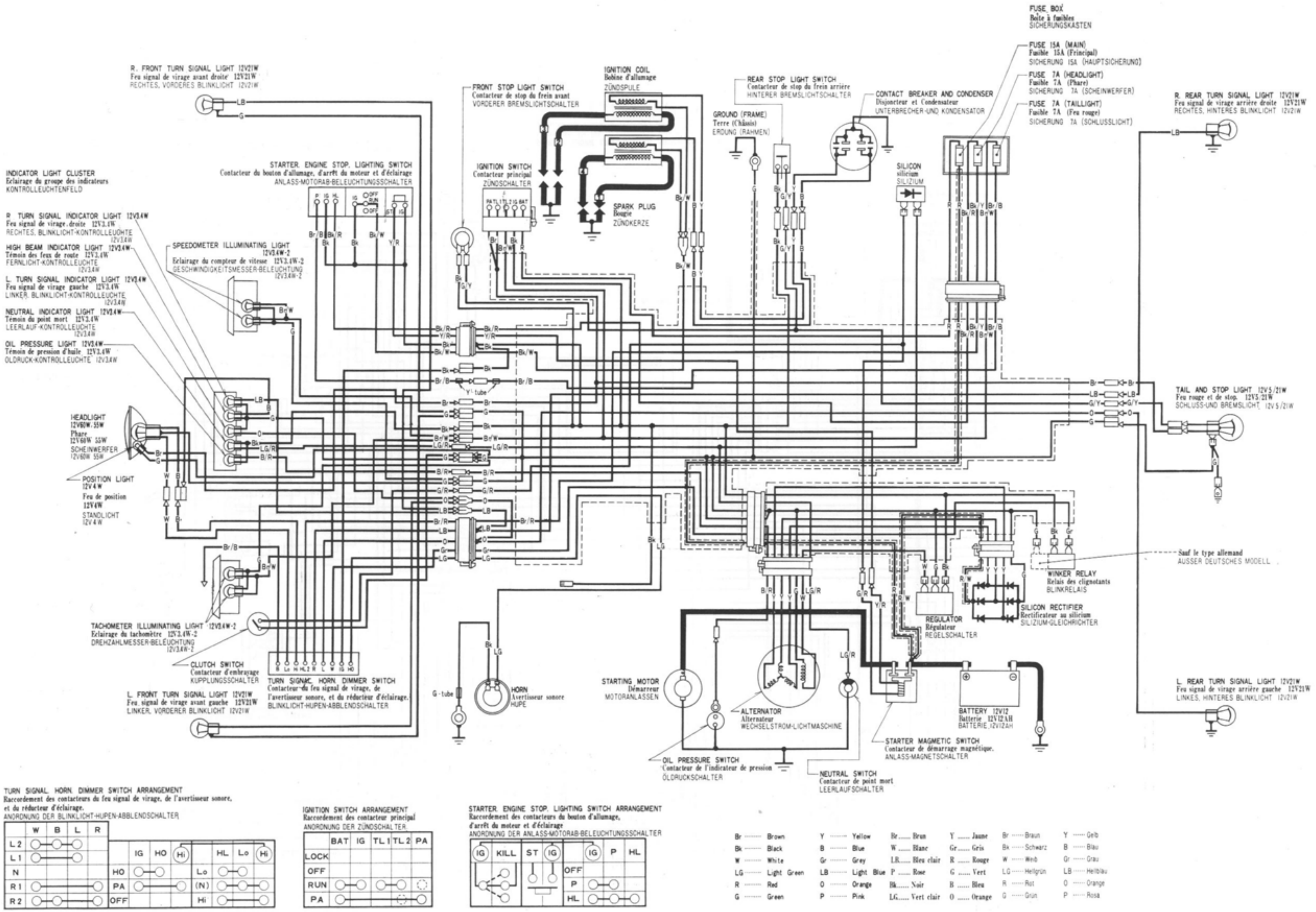
CB500K3/CB550K3 '77 (Europe Type)



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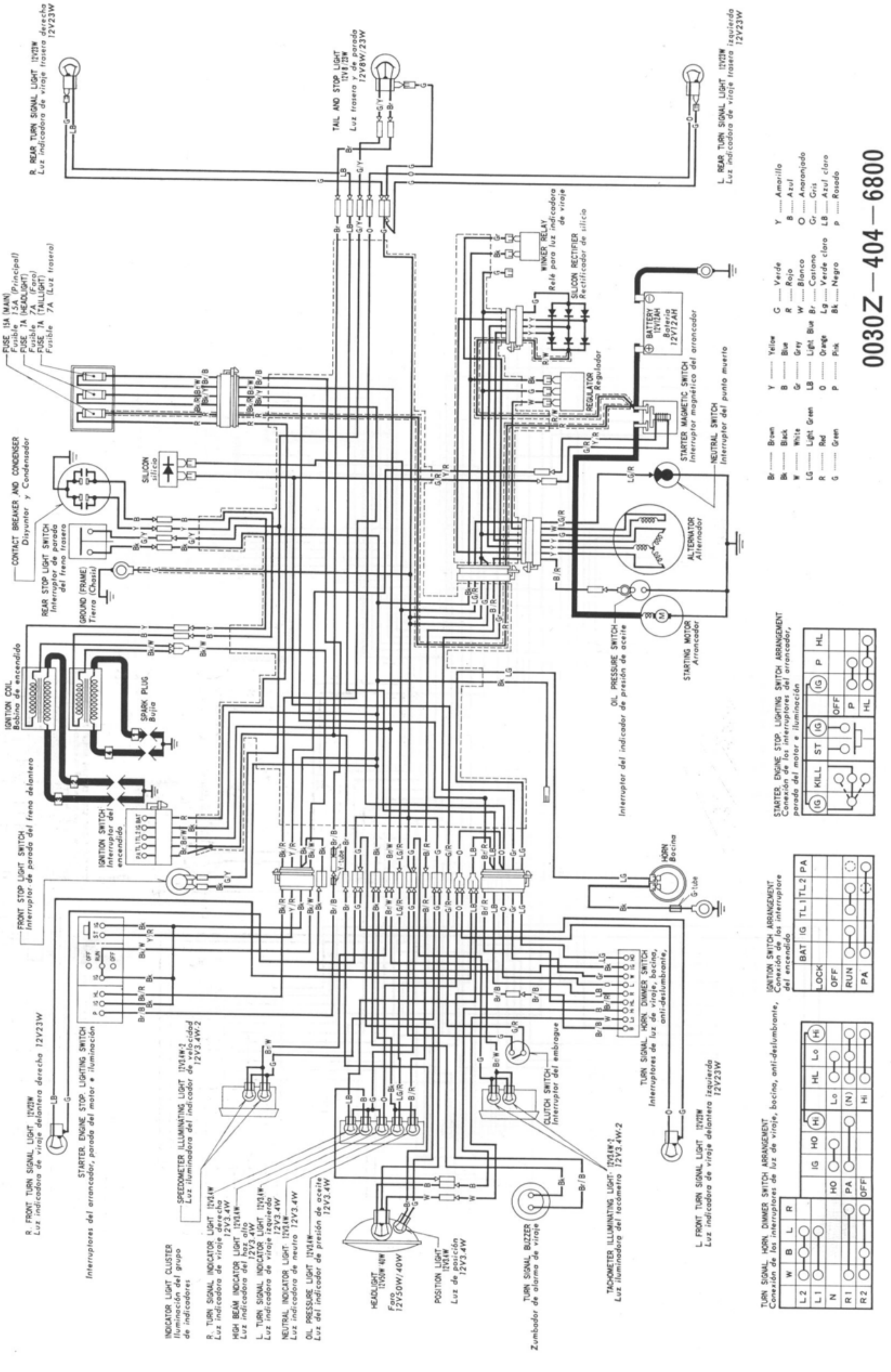
CB550K3 '77 (General Type and Australia Type)



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20. SUPPLEMENT TO CB550F2 ('77)

Engine No. CB550E—1135380 and subsequent
Frame No. CB550F—2100001 and subsequent

1. CLUTCH

The clutch plate B ⑤ differs in construction from the five other cluch plates B ③.
Install the clutch plate B ⑤ at the fourth position as counted from the clutch center ①.

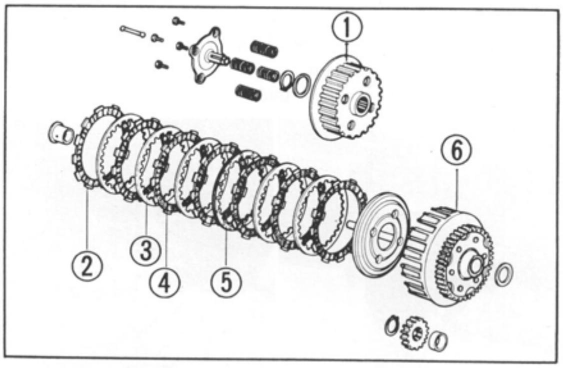

Fig. F2-1 ① Clutch center
② Clutch friction disk B
③ Clutch plate B
④ Clutch friction disk
⑤ Clutch plate B comp.
⑥ Clutch outer comp.

2. FUEL VALVE

The valve positions are indicated by the arrow on the lever.

Inspection and cleaning:

1. Place the fuel lever in the "OFF" position and disconnect the fuel lines. Remove the fuel tank.
2. Drain the fuel tank thoroughly.
3. Loosen the fuel valve fixing nut and remove the fuel valve and fuel filter from the fuel tank.
4. Check the gasket to see that it is not damaged.
5. Wash the fuel filter in solvent and dry with compressed air. No damage can be tolerated here. Replace the filter with a new one if it is clogged and not cleanable.
6. Install the fuel filter to the fuel valve with the fixing nut. Do not forget to install the gasket into the groove of the fixing nut.
7. Install the fuel valve to the fuel tank with the fixing nut.
8. Install the fuel tank on the frame and connect the fuel lines and secure with the clip.
9. Fill the tank with fuel. With the fuel valve lever in the "ON" position, check for any leakage past the tube joints or connections.

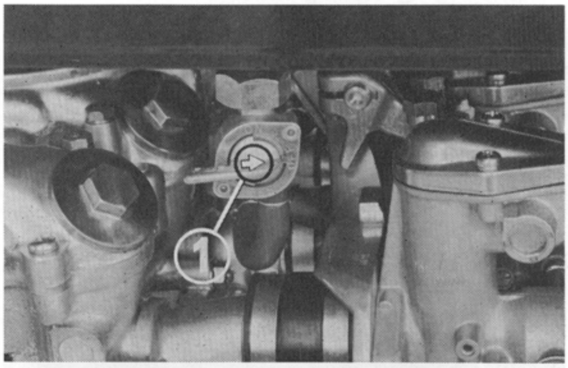

Fig. F2-2 ① Arrow

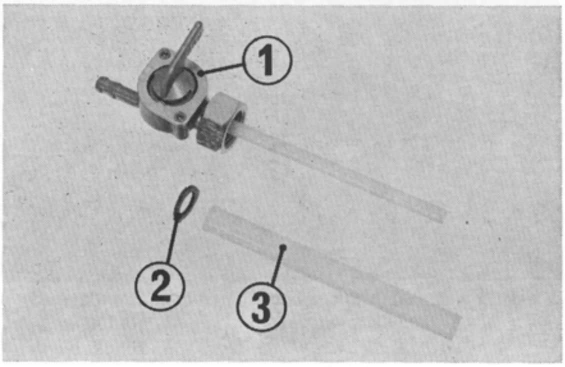

Fig. F2-3 ① Fuel valve
② Gasket
③ Fuel filter screen

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3. SIDE STAND (German Type)

Two springs are installed on the side stand.

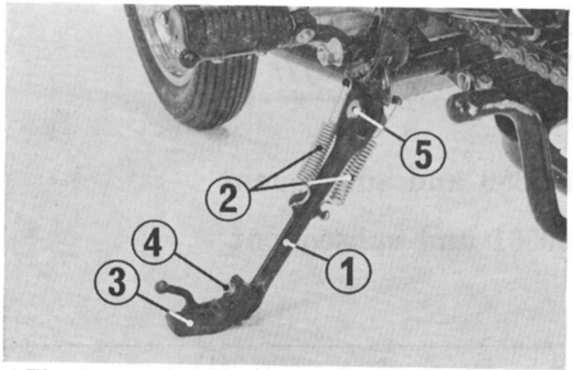

Fig. F2-4 ① Side stand bar ② Spring ③ Rubber pad ④ 6 mm bolt ⑤ Side stand pivot bolt

4. ELECTRICAL SYSTEM INSPECTION (Except U.S.A. and Canadian Type)

1. Clutch switch

See Page 161.

2. Starting switch

Remove the fuel tank and the connector cover by loosening the 6 mm screw. Take the starting switch terminal out of the connector. Check the switch for continuity between the sircuits (○—○) shown in the table below. If there is continuity, the switch is in good condition.

Terminal	ST1	ST2	HL
Wire color	Black	Yellow/red	Black/red
FREE	○—	—	—○
PUSH	○—	—○	

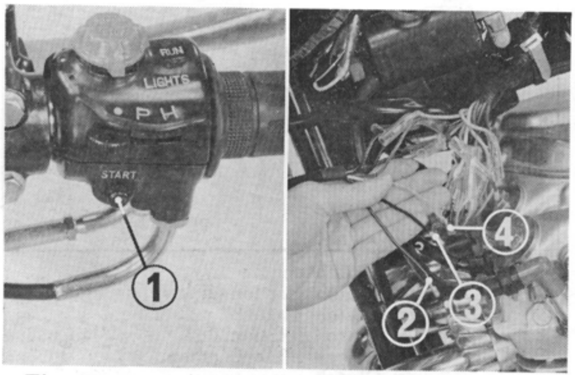

Fig. F2-5 ① Starting switch ② Black/red lead ③ Black lead ④ Yellow/red lead

3. Main switch

Place the switch key in OFF, ON or PARK position and check the switch for continuity between the circuits (○—○) shown in the table below. If there is no continuity or if there is continuity between circuits other than those shown in the table, the switch is defective.

Terminal	BAT	IG	TL1	TL2	PA
Wire color	Red	Black	Brown	Brown/White	Brown
OFF					
ON	○—	—○	○—	—○—	—◌
PA	○—	—	—◌—	—	—○

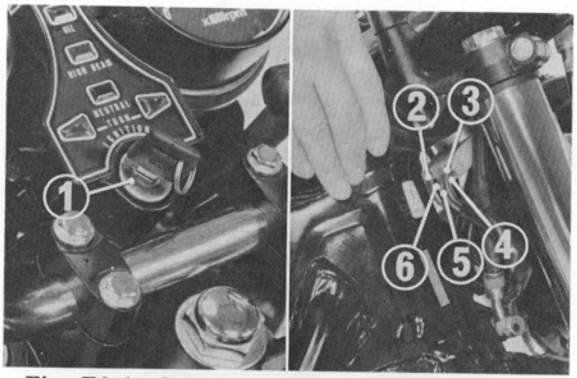

Fig. F2-6 ① Main switch ② Brown lead ③ Brown/white lead ④ Brown lead ⑤ Red lead ⑥ Black lead

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4. Dimmer switch and turn signal control switch

Remove the fuel tank, and the connector cover. Then take out the leads shown in the table below. Check each switch for continuity between the circuits (○—○) shown in the table. If there is continuity, the switch is in good condition. If there is no continuity, the switch is defective.

Terminal	W	B	L	R
Wire color	Green	Brown/Blue	Orange	Light Blue
L_2	○	○	○	
L_1	○	—	○	
N				
R_1	○	—	—	○
R_2	○	○	—	○

Terminal	HL	Lo	Hi
Wire color	Black/Yellow	White	Blue
L	○	○	
H	○	—	○

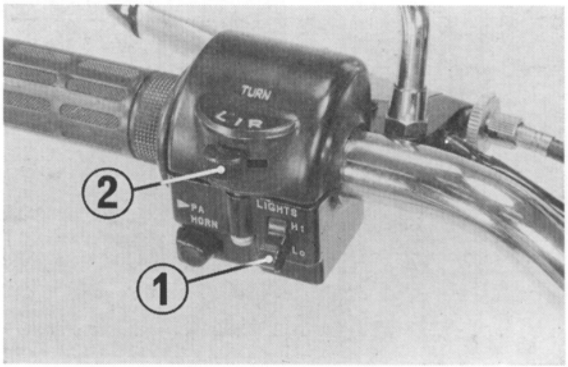

Fig. F2-7 ① Turn signal control switch
② Dimmer switch

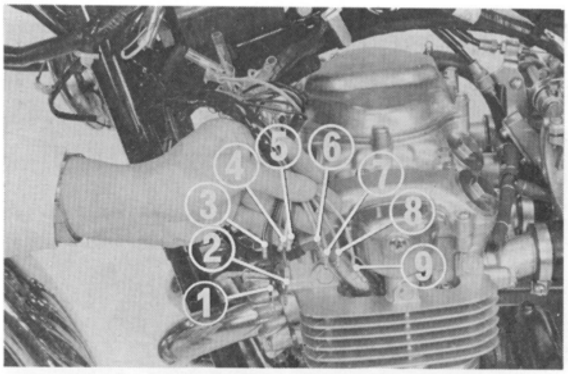

Fig. F2-8 ① Brown lead
② Brown/blue lead
③ Black/yellow lead
④ White lead
⑤ Blue lead
⑥ Light blue lead
⑦ Orange lead
⑧ Green lead
⑨ Light green lead

5. Horn switch and passing switch

Remove the fuel tank, and the connector cover. Then take out the light green lead as shown. Attach one probe of a radio tester to the body or the black lead and the other probe to the light green lead.

There should be continuity when the horn button is pushed.

To test the passing switch, follow the same instructions as for the horn switch.

Terminal	IG	HO	Hi
Wire color	Black	Light green	Blue
HORN(push)	○	○	
PA(push)	○	—	○

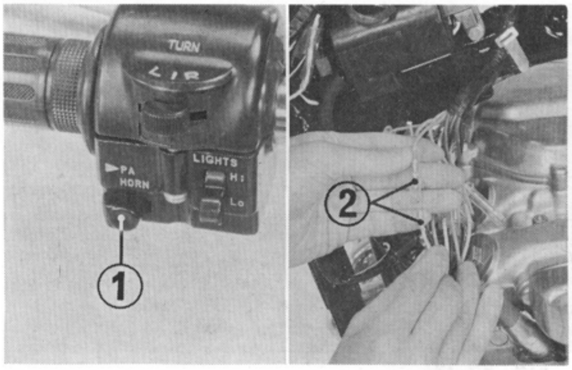

Fig. F2-9 ① Horn and passing switch
② Light green lead

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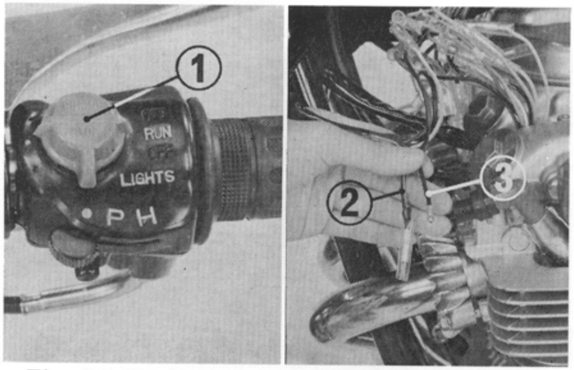

Fig. F2-10 ① Engine stop switch
② Black/white lead
③ Black lead

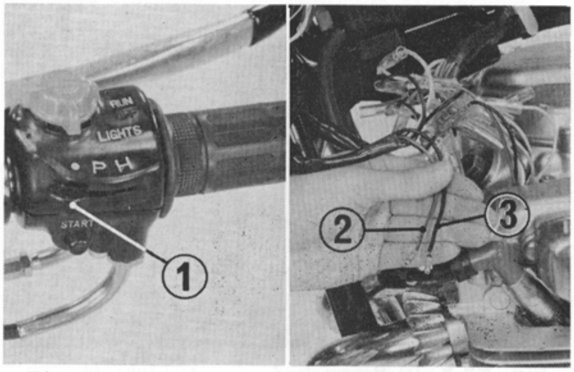

Fig. F2-11 ① Lighting switch
② Brown/blue lead
③ Black/red lead

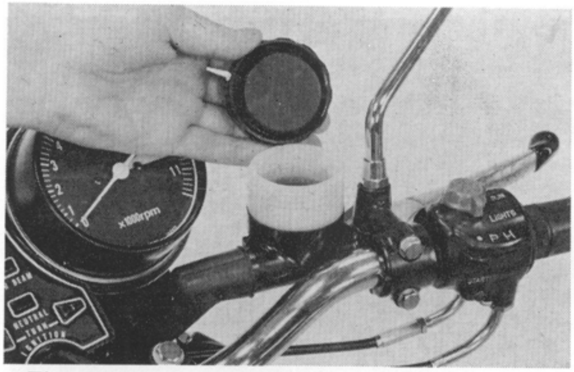

Fig. F2-12

6. Engine stop swich

Remove the fuel tank and the connector cover. Check the switch for continuity between the circuits (○—○) shown in the table below. If there is no continuity, the switch is defective.

Terminal	IG	RUN
Wire color	Black	Black/white
OFF		
RUN	○—	—○
OFF		

7. Lighting switch

Remove the Fuel tank and the connector cover. Check the switch for continuity between the circuits (○—○) shown in the table below. If there is no continuity, the switch is defective.

Terminal	IG	P	HL
Wire color	Black	Brown/blue	Black/red
●			
P	○—	—○	
H	○—	—○—	—○

5. BRAKE INSPECTION

Replenishing Brake Fluid

Remove the reservoir cap, washer and diaphram, and whenever the level is lower than the level mark engraved inside the reservoir (Up to the line shown for semi-transparent reservoir), fill the reservoir with DOT 3 BRAKE FLUID (or SAE J 1703) up to the level mark. Reinstall the diaphram and washer, and tighten the reservoir cap securely.

NOTE:

- **Do not mix different brands of brake fluid as chemical action will take place and may cause brake trouble.**
- **Do not use any other fluid in the brake system.**
- **Remove any brake fluid which may become spilled on the painted surface, rubber parts, and meter as it will produce chemical action and cause damage to these parts.**

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3. SPECIFICATIONS (CB 550 F 2 '77)

Type Item	U.S.A. (Canada)	Australia	General	France	U.K.	Europe	Germany
DIMENSION							
Overall Length mm (in.)	2,115 (83.3)			2,105 (82.8)	2,110 (83.1)	2,115 (84.8)	
Overall Width mm (in.)	835 (32.9)						
Overall Height mm (in.)	1,100 (43.3)	1,111 (43.7)					
Wheel Base mm (in.)	1,405 (55.3)						
Seat Height mm (in.)	805 (31.7)	800 (31.5)					
Ground Clearance mm (in.)	160 (6.3)						
Dry Weight	191 kg (421 lb.)			192 kg (423 lb.)			
FRAME							
Type	Double cradle frame						
F. Suspension, Travel	Telescopic fork, Travel 121 mm (4.8 in.)						
R. Suspension, Travel	Swing Arm, Travel 90 mm (3.5 in.)						
F. Tire Size, Type	3.25S19-4PR Rib, tire air pressure 2.0 kg/cm² (28 psi)						
R. Tire Size, Type	3.75S18-4PR Block, tire air pressure 2.5 kg/cm² (36 psi)						
F. Brake	Disc brake						
R. Brake	Internal expanding shoe						
Fuel Capacity	16.0 lit. (4.2 U.S. gal. 3.5 Imp. gal.)						
Caster Angle	26°						
Trail Length	105 mm (4.1 in.)						
ENGINE							
Type	Air cooled 4-stroke O.H.C. engine						
Cylinder Arrangement	4 cylinder in line						
Bore and Stroke	58.5×50.6 mm (2.303×1.992 in.)						
Displacement	544 cc						
Compression Ratio	9.0 : 1						
Carburetor, Venturi Dia.	4 Piston valve Type, Venturi dia. 22 mm (0.866 in.)						
Valve Train	Chain driven over head camshaft						
Oil Capacity	3.2 lit. (3.4 U.S. qt. 2.8 Imp. qt)						
Lubrication System	Forced pressure and wet sump						
Fuel Required	Low-lead gasoline with 91 octane number or higher						
Air Filtration	Paper filter						
Valve Tappet Clearance	IN.: 0.05 mm (0.002 in.) EX.: 0.08 mm (0.003 in.)						
Air Screw Opening	1 1/2						
Idle Speed	1,000 r.p.m.						
DRIVE TRAIN							
Clutch	Wet malti plate						
Transmission	5-Speed constant mesh.						
Primary Reduction	3.062						
Gear Ratio I	2.353						
〃 II	1.636						
〃 III	1.269						
〃 IV	1.036						
〃 V	0.900						
Final Reduction	2.176 drive sprocket 17T, driven sprocket 37T						
Gear Shift Pattern	Left foot operated return system						
ELECTRICAL							
Ignition	Battery and Ignition coil						
Starting System	Electric motor and kick pedal						
Alternator	A.C. Generator 0.13 kW/2,000 r.p.m.						
Battery Capacity	12 V-12 AH						
Spark plug	NGK D7ES or ND X22ES 〔NGK DR7ES or ND X22ESR-U〕						

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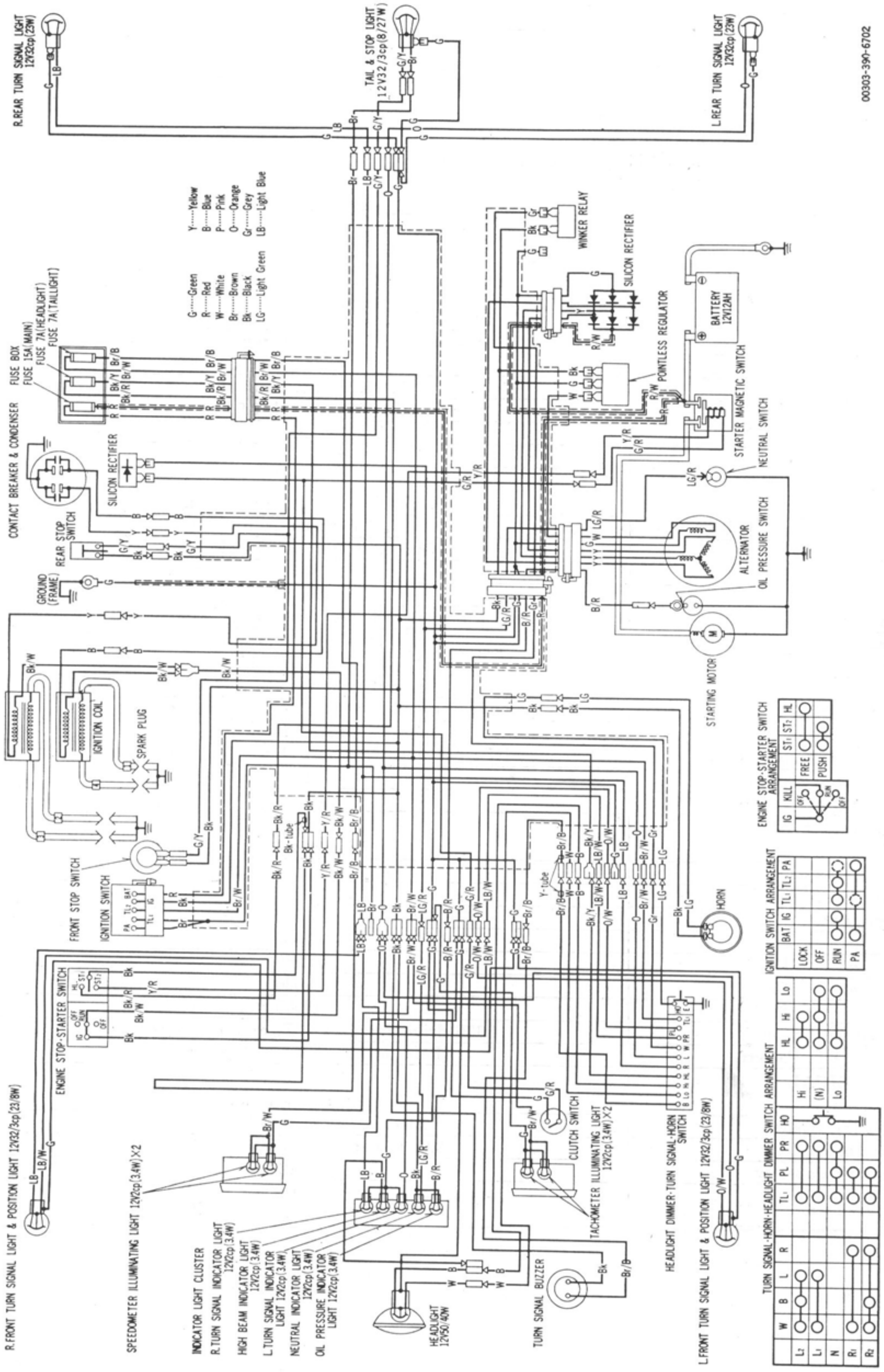
4. WIRING DIAGRAM CB 550 F 2 '77

(U.S.A. Type and Canada Type)



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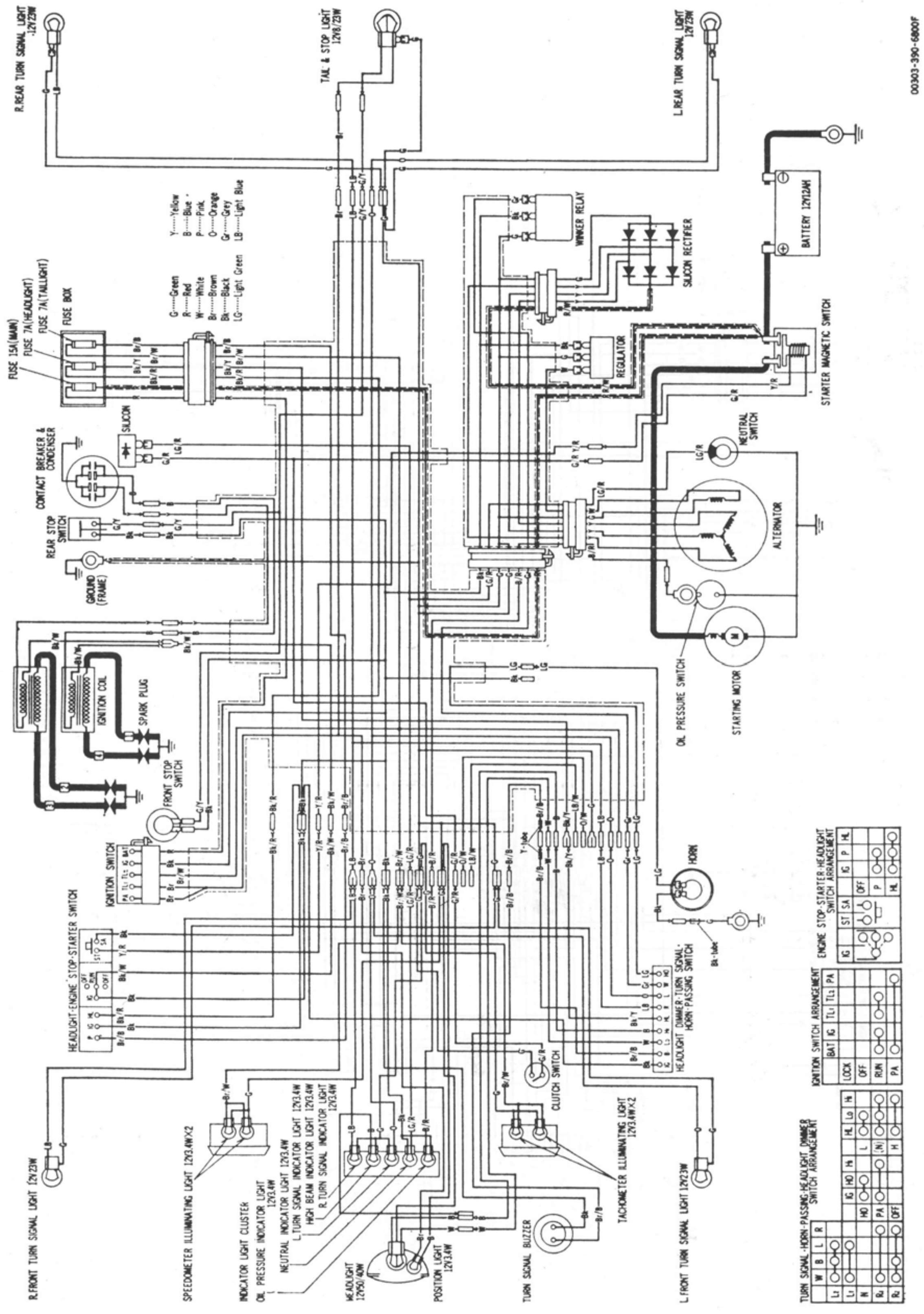
(GENERAL TYPE)



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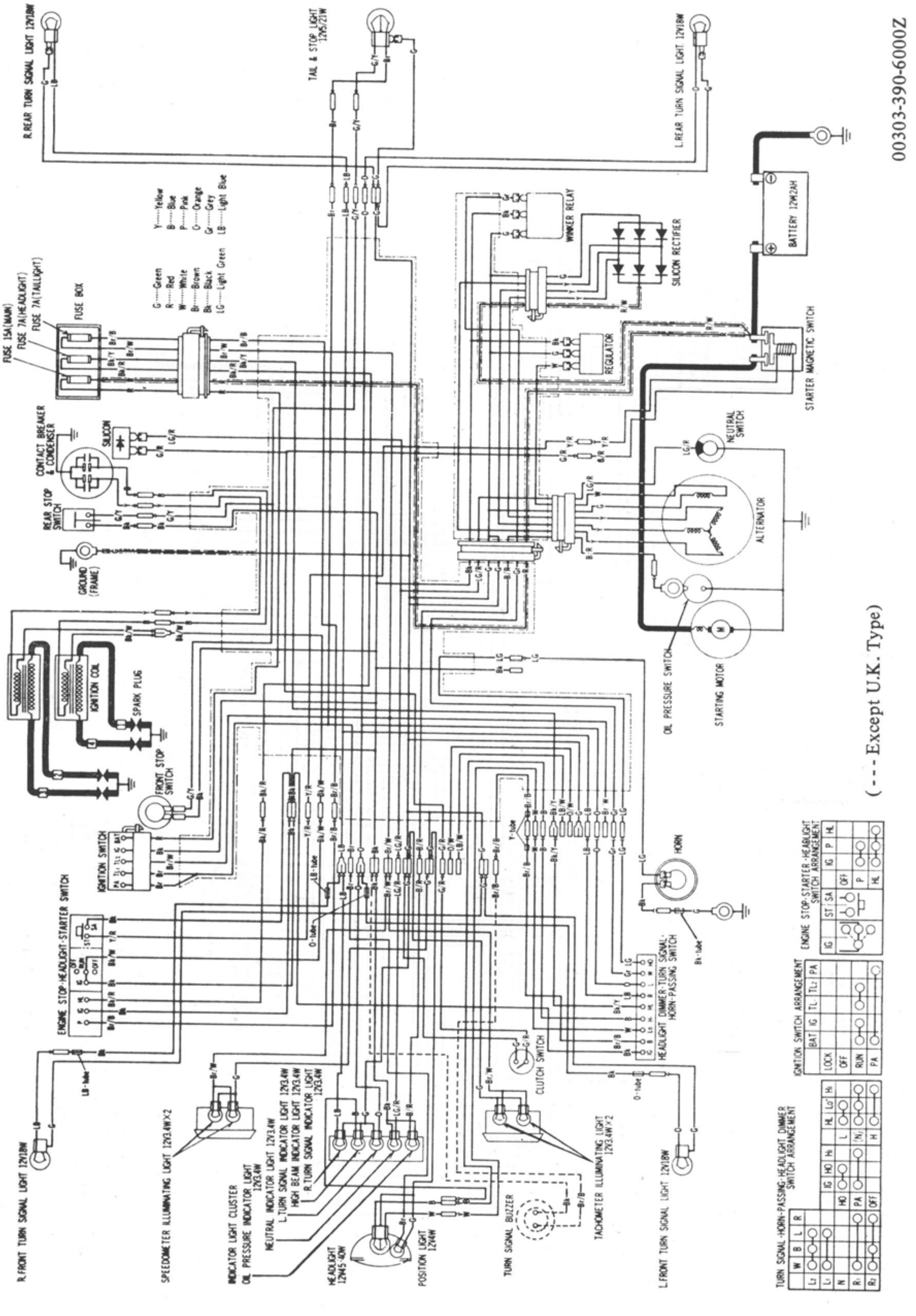
(U.K. EUROPEAN TYPE)



(--- Except U.K. Type)

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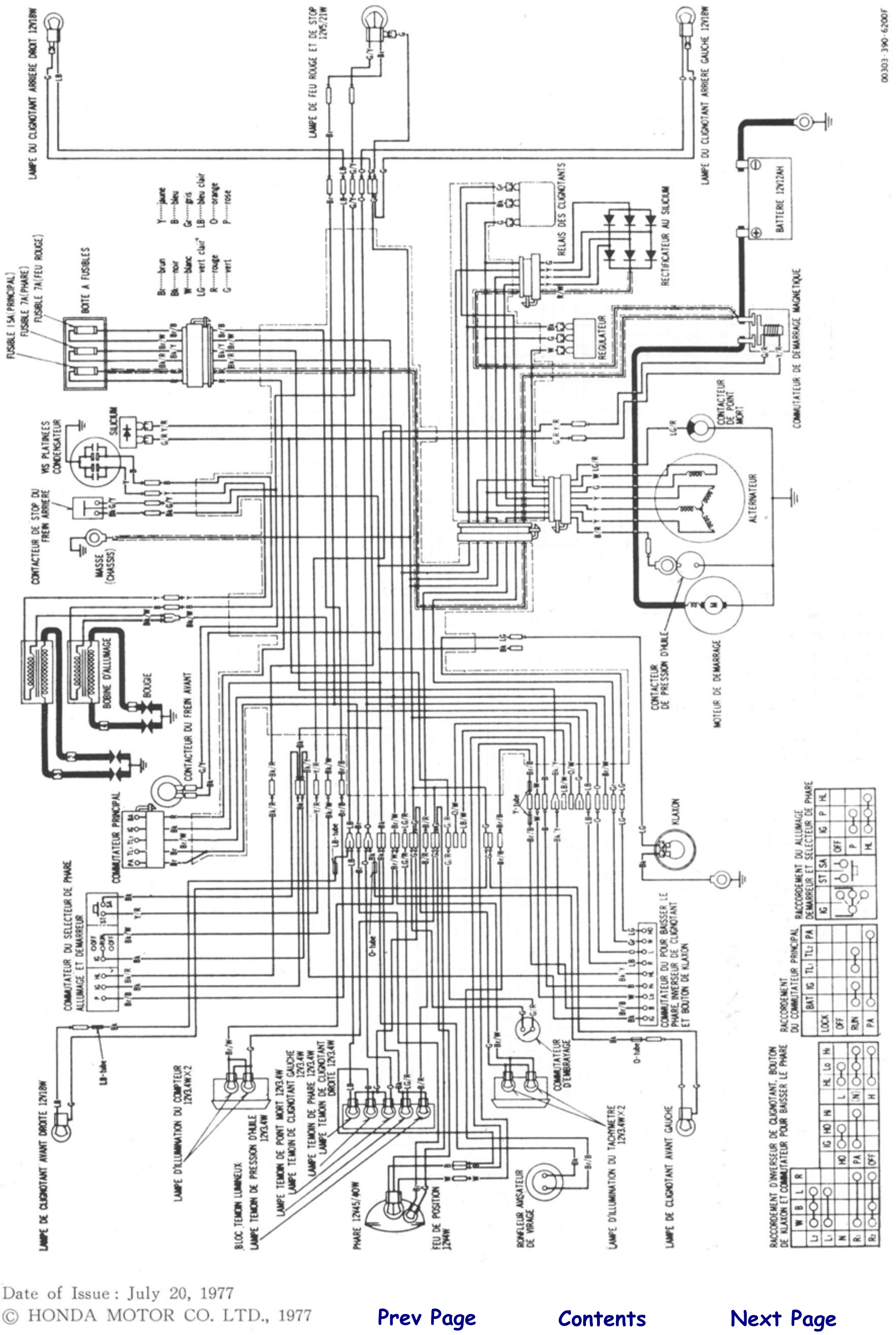
(FRENCH TYPE)



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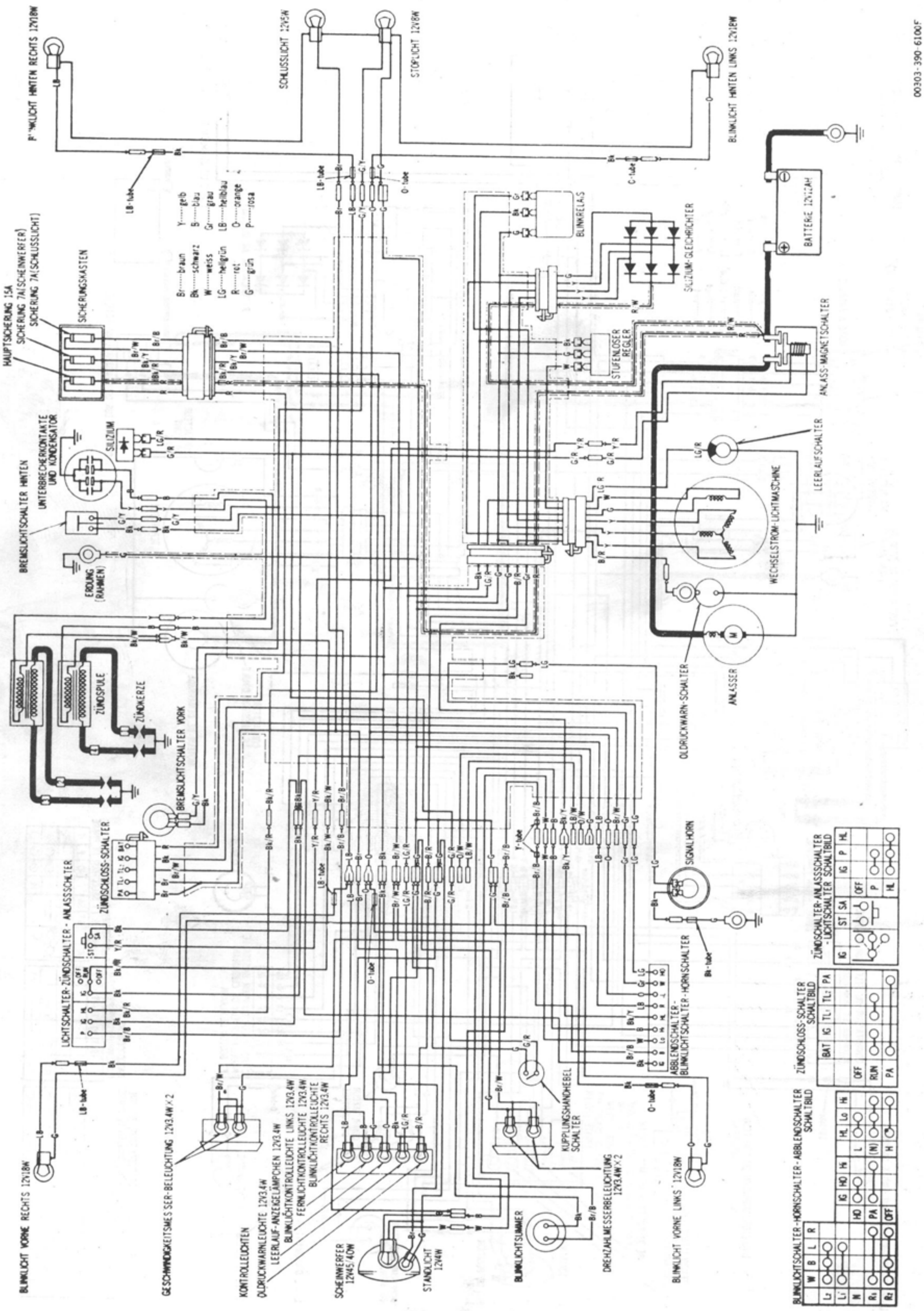

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