

## SUPPLEMENT TO CB 400 F

### I. TECHNICAL FEATURE

#### BLOW-BY GAS CIRCULATOR

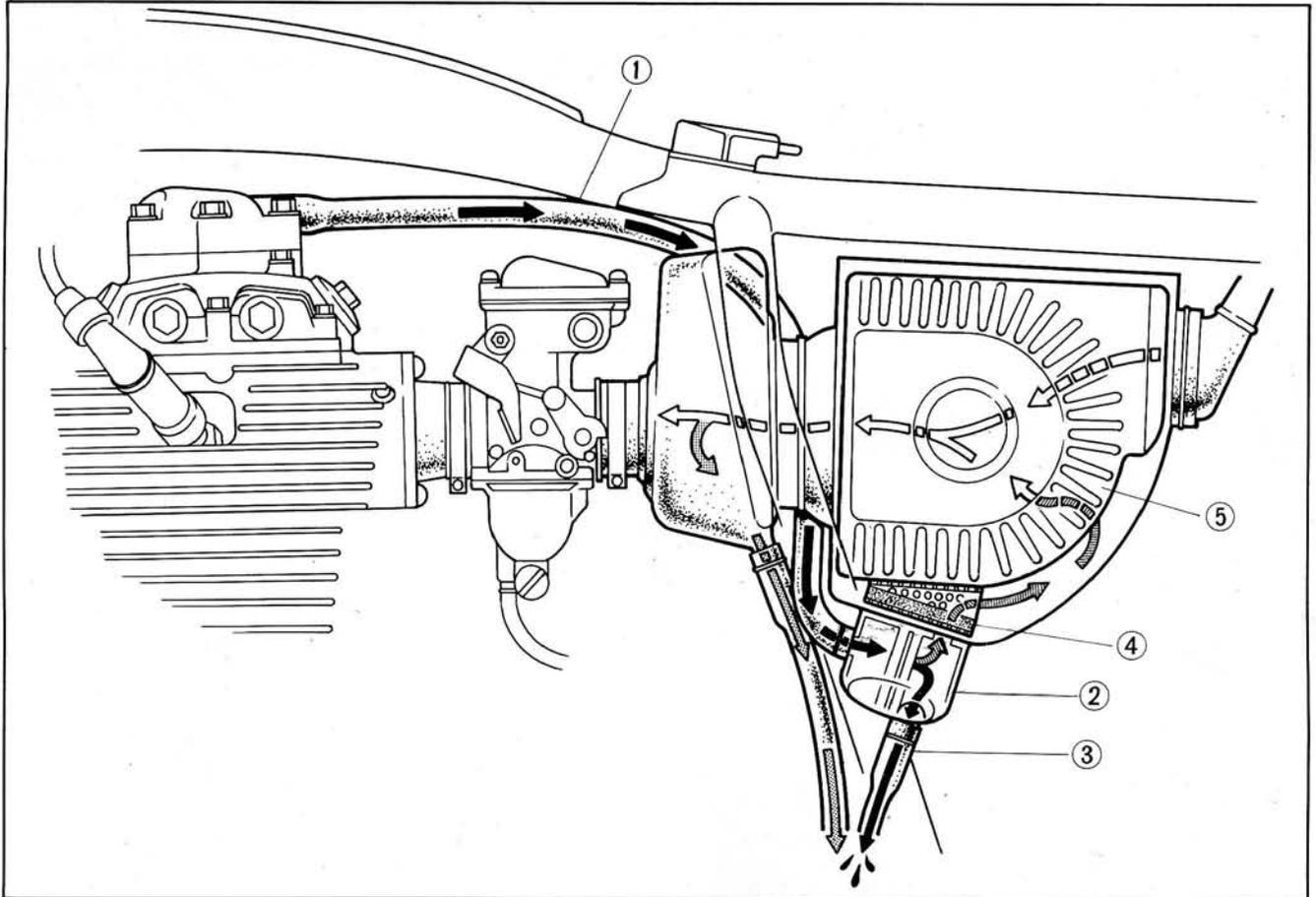


Fig. 1-1 ① Breather tube ③ Oil drain tube ⑤ Air cleaner element  
② Breather case ④ Breather element

The blow-by gas from the inside of the cylinder head through breather tube enters the breather box, the oil is separated by the breather element and the gas is then led to the air cleaner. The gas enters the air cleaner and is filtered together with the fresh air by the air cleaner element and is then again led to the combustion chambers through the carburetors. Therefore, the blow-by gas is reduced by recombustion of the unburned gas.

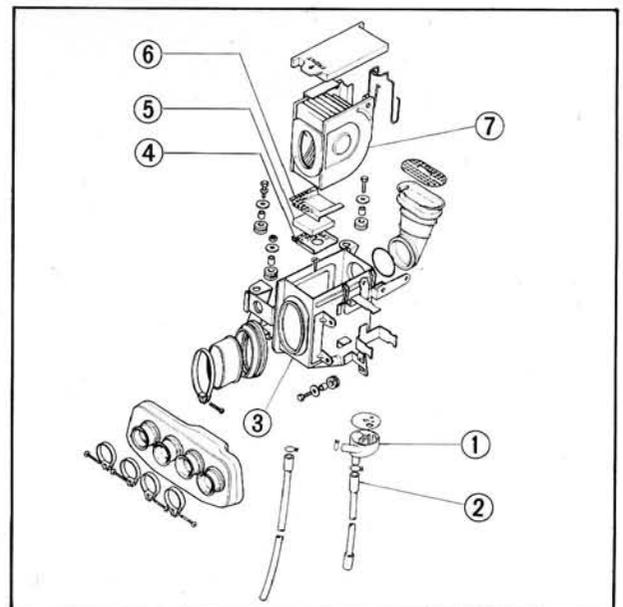


Fig. 1-2 ① Breather box  
② Oil drain tube  
③ Air cleaner case  
④ Lower element holder  
⑤ Breather element  
⑥ Upper element holder  
⑦ Air cleaner element

## II. INSPECTION AND ADJUSTMENT

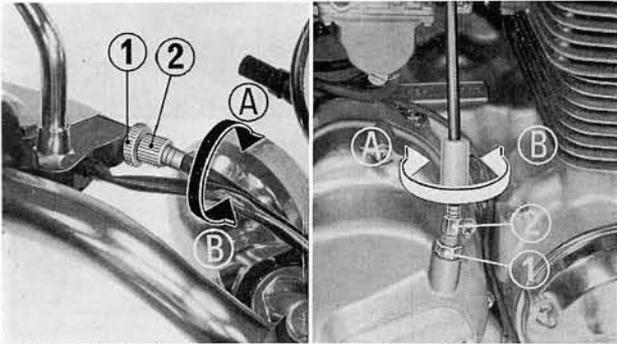


Fig. 2-1 ① Lock nut ② Clutch cable adjuster

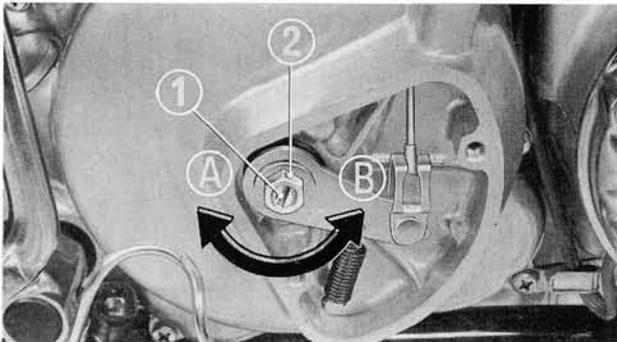


Fig. 2-2 ① Clutch adjusting screw  
② Adjusting screw lock nut

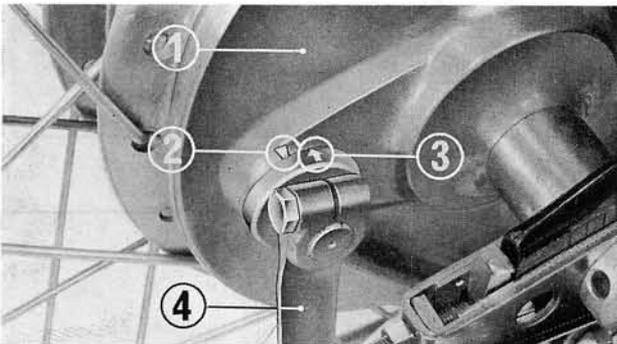


Fig. 2-3 ① Brake panel ③ Arrow  
② Reference mark ④ Brake arm

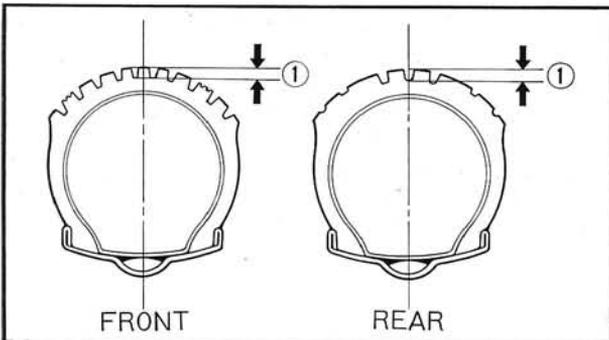


Fig. 2-4 ① Center tread depth

### 1. CLUTCH

1. Check the clutch lever for free play at its tip.  
**Standard play: 10-20 mm (0.4-0.8 in.)**
2. Screw the clutch cable adjuster located at the clutch lever, all the way into (A) the clutch lever bracket.
3. Turn the clutch cable adjuster located at the clutch housing, in the direction (A) to loosen the clutch cable.
4. Remove the clutch cover. Loosen the clutch lifter adjusting screw lock nut (see Fig. 2-2), turn the clutch adjusting screw in the clockwise direction (A) until a slight resistance is felt. From this position, turn the adjusting screw in the counterclockwise direction (B) 1/4~1/2 turn. Tighten the lock nut.
5. Turn the clutch cable adjuster located at the clutch housing side of engine, in the (A) direction so that there is approximately 3/4" of free play at the end of the clutch lever, then tighten lock nut.
6. The remaining clutch lever free play is obtained by the clutch cable adjuster at the clutch lever.
7. After the adjustment has been made, check to see that the clutch is not slipping and that the clutch is properly disengaging.

After the engine starts, pull in the clutch lever and shift into gear, and make sure that the engine does not stall, and the motorcycle does not creep. Gradually release the clutch lever and open the throttle, the motorcycle should start smoothly and gradually accelerate.

### 2. REAR BRAKE

#### Brake shoes

1. Check the distance between the arrow adjacent to the brake arm and reference mark on the brake on the brake panel of full application of the brake.
2. If the arrow aligns with the reference mark on full application of the brake, replace the brake shoes and check the brake drum for wear.

### 3. WHEEL

#### Tire tread wear

Tire should be replaced when center tread depth is worn to the following limits.

#### Center tread depth:

Front — 1.5 mm (0.06-in.)

Rear — 2.0 mm (0.08-in.)

#### 4. SPARK PLUG

1. Remove the spark plug cap from the spark plug. Unscrew the plug, using a spark plug wrench, and remove the spark plug from the cylinder head.
2. Check the spark plug for deposits, electrode erosion and damaged gasket. A spark plug with burned electrodes, bristered insulator or damaged gasket should be replaced with a new one. Fouled spark plug can be cleaned in spark plug cleaner or with a wire brush.
3. Using a feeler gauge, adjust the gap to the specification.

**Specified plup gap: 0.7–0.8mm (0.028–0.032-in.)**

To adjust, bend the side electrode only.

4. Clean the plug seat in the cylinder head. Screw the plug into the thread hole in two steps; first, finger-tight, and then use a spark plug wrench to tighten the plug an additional 1/2 to 3/4 turn or until the sealing gasket is compressed.

#### 5. FUEL FILTER

1. Place the fuel cock lever in the "OFF" position; disconnect the fuel tubes. Take out the fuel tank.
2. Loosen the fuel cock fixing nut and then remove the fuel cock and fuel filter from the fuel tank.

3. Check the gasket to see if it is not damaged. Replace with a new one, if found to be damaged too badly beyond use.

4. Wash the fuel filter in solvent and dry with compressed air. Any slightest damage can not be tolerated here. Also replace the filter with a new one if found to be clogged.

5. 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.

6. Install the fuel cock to the fuel tank with the fixing nut.

7. Install the fuel tank in place on the frame; connect tubes and secure with the clips.

8. Fill the tank with fuel. With the fuel cock lever in the "ON" position, check for any leakage past the tube joints or connections.

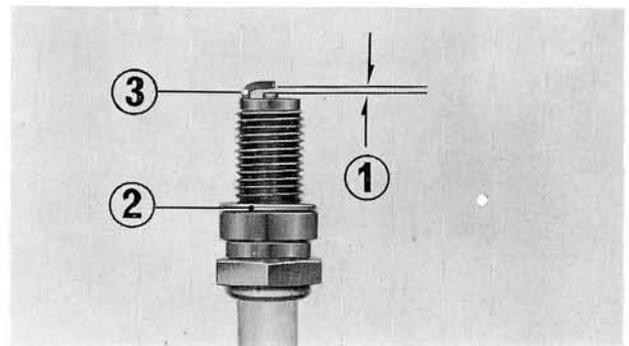


Fig. 2-5 ① Spark plug gap ③ Side electrode  
② Gasket

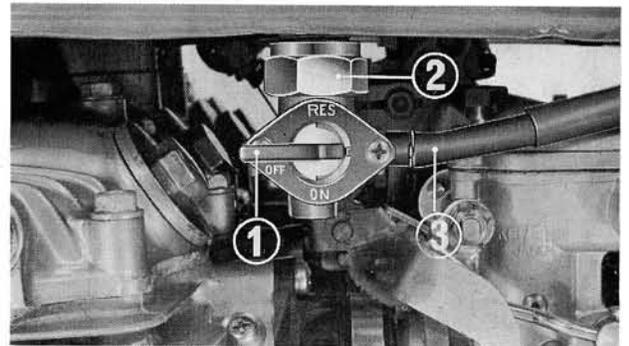


Fig. 2-6 ① Fuel cock lever ③ Fuel tube  
② Fuel cock fixing nut

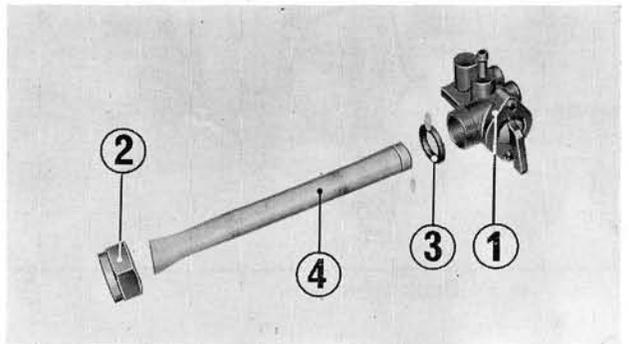


Fig. 2-7 ① Fuel cock ③ Gasket  
② Fixing nut ④ Fuel filter

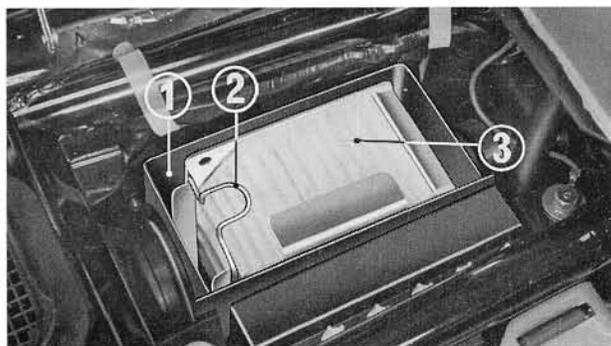


Fig. 2-8 ① Air cleaner case  
② Retaining clip  
③ Air cleaner element

## 6. AIR CLEANER

1. Raise the seat and remove the tool compartment together with the air cleaner cover.
2. Lift out the air cleaner element retaining clip. Remove the air cleaner element.
3. Clean the air cleaner element by tapping it lightly to loosen dust. The remaining dust can be brushed from the outer element surface or blown away by applying compressed air from the inside of the element.

4. Remove the element holders and breather element.
5. Wash the breather element in clean solvent. Squeeze out excess solvent and then dry the element thoroughly.

### WARNING:

- Gasoline or low flash point solvents are highly flammable and must not be used to clean the breather element.
- Do not use acid, alkali or organic solvent for washing the breather element.

6. Squeeze to open lower end of the drain tube, and remove any oil or water which may have accumulated.
7. To reinstall the air cleaner, reverse the removal procedures.

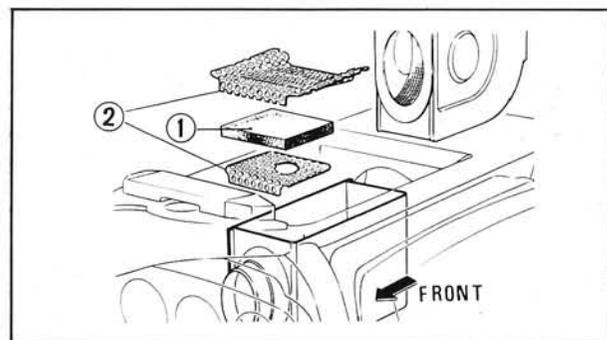


Fig. 2-9 ① Breather element ② Element holder

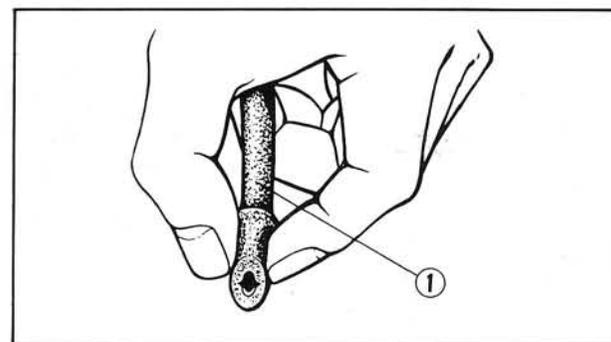


Fig. 2-10 ① Drain tube

## 7. FRONT SUSPENSION

### Checking

1. With the front brake applied, check the action of the shock absorbers. This can be done by jouncing the shock absorbers up and down several times by hands. Also check for leaks, twist or bends, and replace, if any, parts worn or damaged beyond repair.
2. Check the front forks and handlebar mounting bolts for looseness.



Fig. 2-11 ① Checking front suspension

### Changing front fork oil

1. Remove the drain plugs from the both forks. Grasp the handlebar and jounce up and down several times to aid in draining the remaining oil.
2. Replace the drain plugs. Place a suitable stand under the engine to raise the front wheel off the ground.

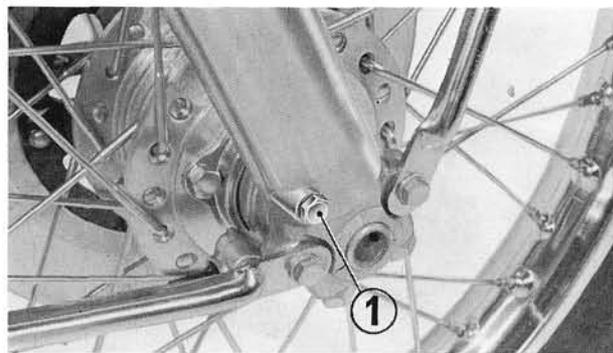


Fig. 2-12 ① Front fork drain plug

3. Remove the oil filler plugs and pour the specified amount of ATF (permanent quality automatic transmission fluid) into the holes.

**Capacity: 145–150 cc (4.8–4.9 ozs.)**

#### NOTE:

Specified amount of fluid will be required to fill one fork whenever disassembled.

**Specified amount: 160–165 cc (5.6–5.8 ozs.)**

4. Replace the filler plugs and remove the stand under the engine.

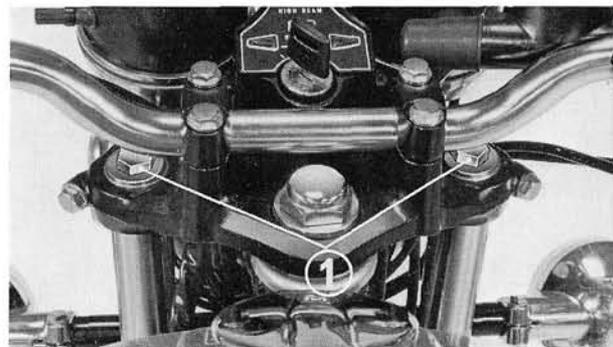


Fig. 2-13 ① Oil filler plug

## 8. REAR SUSPENSION

### Inspection

1. Raise the rear wheel off the ground. Axially move the rear wheel in and out with force to see if the rear fork bushings are worn. If worn excessively beyond use, replace.
2. Check the suspension mountings for looseness.

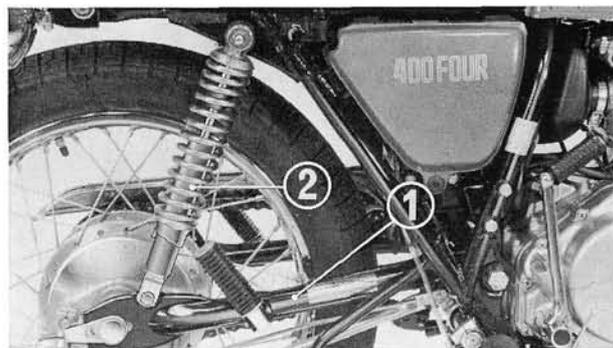


Fig. 2-14 ① Rear fork ② Rear shock absorber

### Rear fork Bushing Lubrication

There is a lubrication point as shown in the figure. It is recommended that lubrication be performed every 6 months or 3,000 miles whichever occurs first. Use multipurpose grease, Type NLGI No. 2.

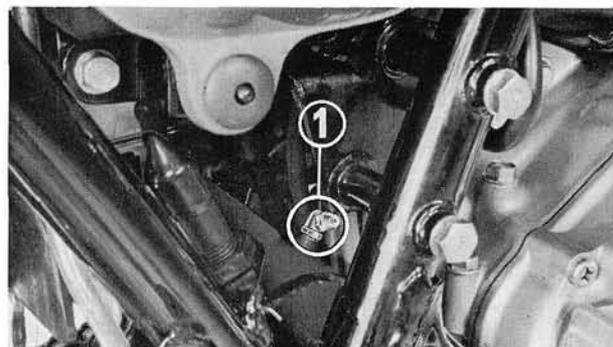


Fig. 2-15 ① Grease fitting

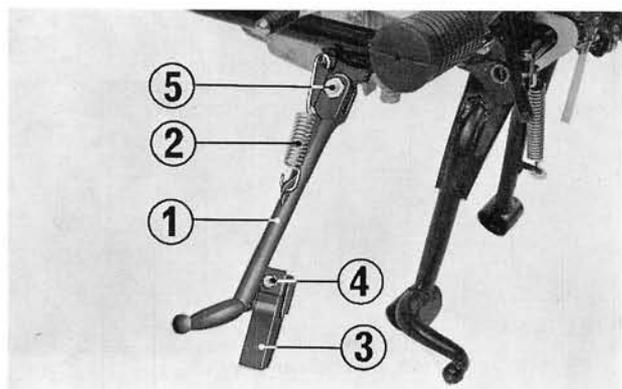


Fig. 2-16 ① Side stand bar ④ 6mm bolt  
② Spring ⑤ Side stand pivot bolt  
③ Rubber block

### 9. SIDE STAND

1. Check the entire stand assembly (side stand bar, bracket and rubber block) for installation, deformation or otherwise excessive damage.
2. Check the spring for freedom from damage or other defects.

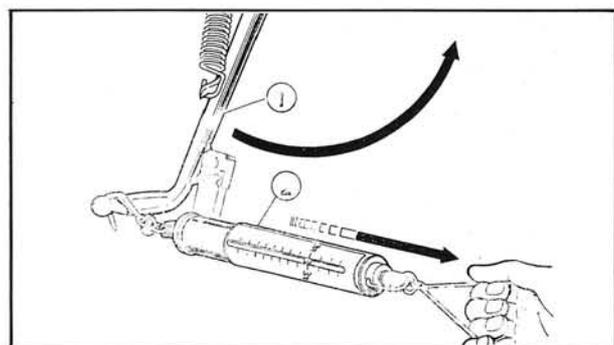


Fig. 2-17 ① Side stand bar ② Spring scale

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 **2-3kg (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. Repair as necessary.

4. Check the rubber block for deterioration or wear. When the rubber block wear is excessive so that it is worn down to the wear line, replace it with a new one.

#### Rubber block replacement

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

#### NOTE:

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

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

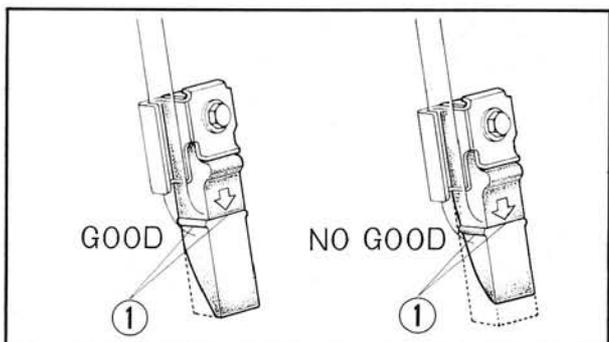


Fig. 2-18 ① Wear line

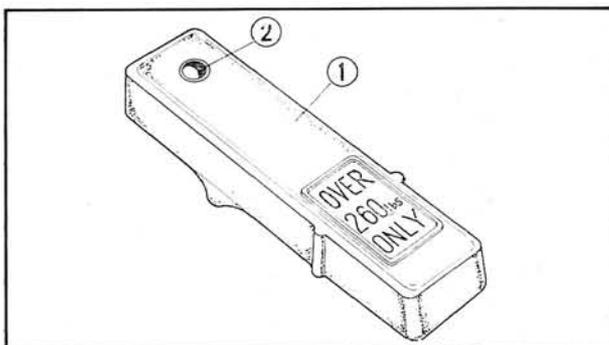


Fig. 2-19 ① Rubber block ② Collar

### III. ENGINE

#### 1. PISTON RINGS

##### Assembly

1. To install the oil ring, first place the spacer and then the rails in position. The spacer and rail gaps must be staggered **20-30 mm (0.8-1.2-in.)**.
2. Install the second and top rings in this order in the piston with their markings facing upward.

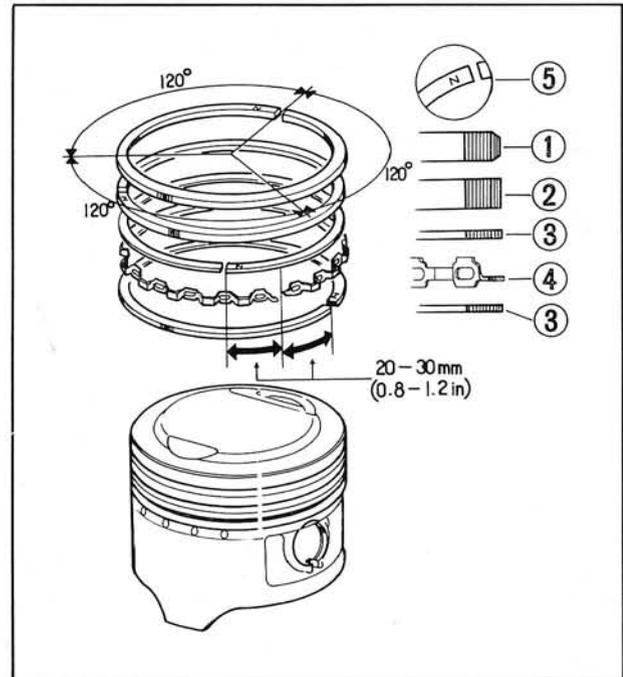
##### NOTE:

- a. Do not mix the top and second rings.
  - b. After installing all rings in the piston, hand-rotate them and check to be sure they move smoothly without any sign of binding.
3. The ring gaps must be staggered 120 deg. and must not be in the direction of the piston pin boss or at right angle to the pin.

##### NOTE:

On the gap of the three-piece type oil ring refer to that of the spacer.

Fig. 3-1 ① Top ring ④ Spacer  
② Second ring ⑤ Piston ring marking  
③ Rail



#### 2. CLUTCH

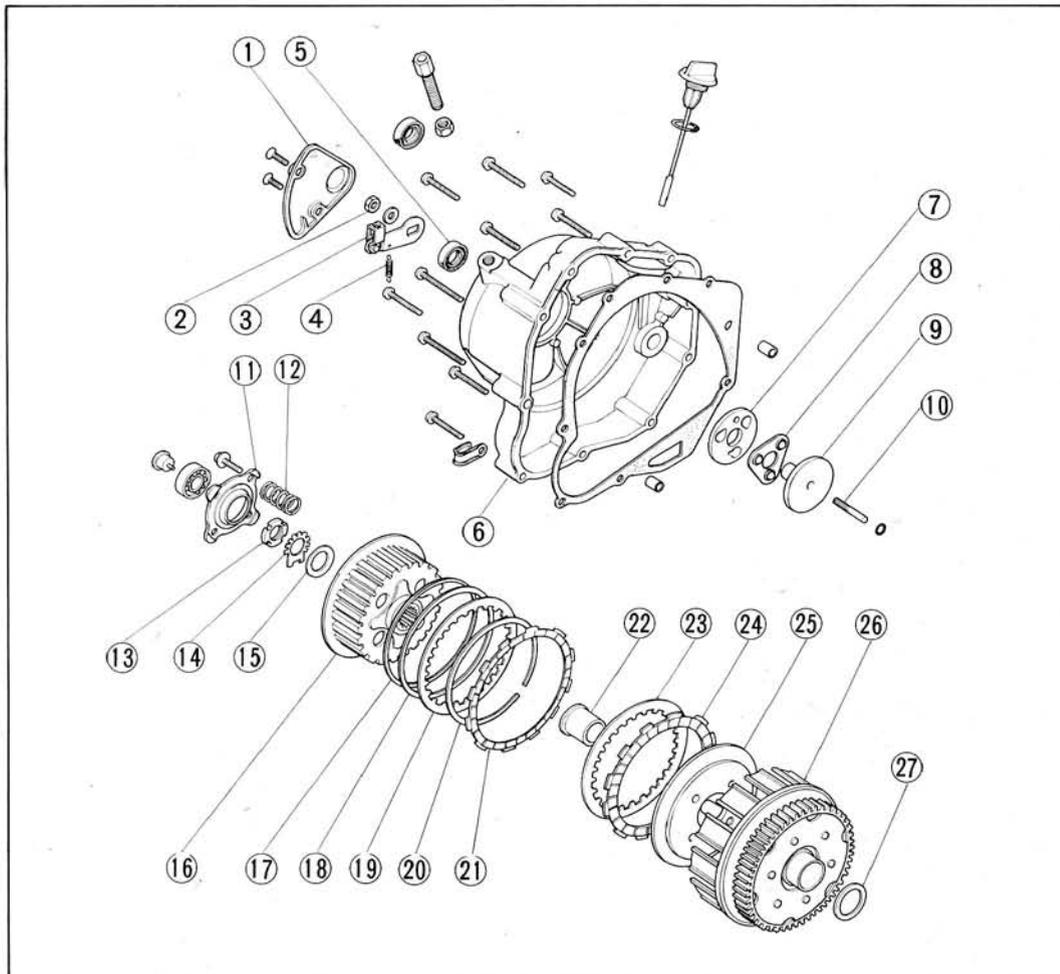


Fig. 3-2

- ① Clutch cover
- ② Lock nut
- ③ Clutch lifter lever
- ④ Clutch lever spring
- ⑤ Oil seal
- ⑥ Right crankcase cover
- ⑦ Clutch cam plate
- ⑧ Ball retainer
- ⑨ Clutch lifter
- ⑩ Clutch adjusting screw
- ⑪ Clutch lifter plate
- ⑫ Clutch spring
- ⑬ Lock nut
- ⑭ Lock washer
- ⑮ Lock washer
- ⑯ Clutch center
- ⑰ Disc spring seat
- ⑱ Clutch disc spring
- ⑲ Clutch plate B
- ⑳ Special set ring
- ㉑ Clutch friction disc
- ㉒ Collar
- ㉓ Clutch plate (six)
- ㉔ Clutch friction disc (six)
- ㉕ Clutch pressure plate
- ㉖ Clutch outer
- ㉗ Thrust washer

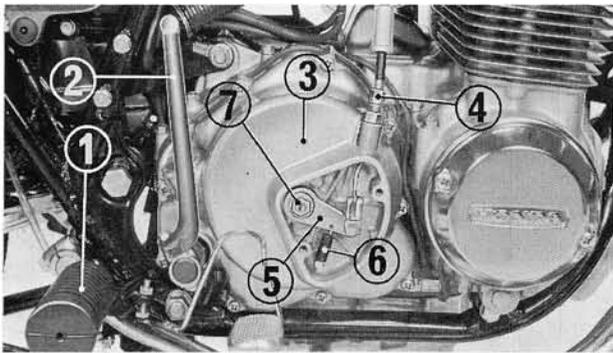


Fig. 3-3 ① Foot rest ⑤ Clutch lifter lever  
② Kick starter pedal ⑥ Spring  
③ Right crankcase cover ⑦ Lock nut  
④ Clutch adjuster

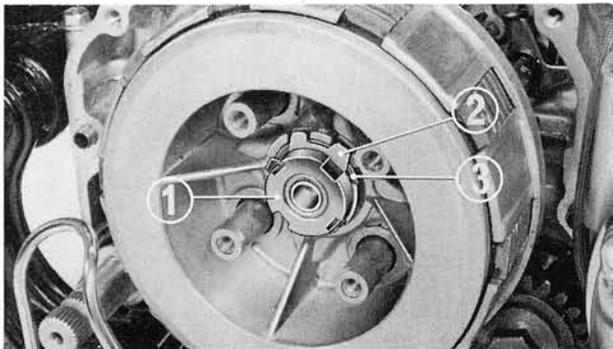


Fig. 3-4 ① 16mm lock nut ③ Lock washer  
② Lock washer

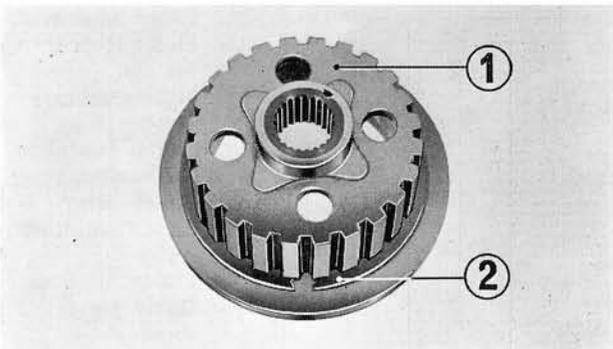


Fig. 3-5 ① Clutch center  
② 92mm special set ring

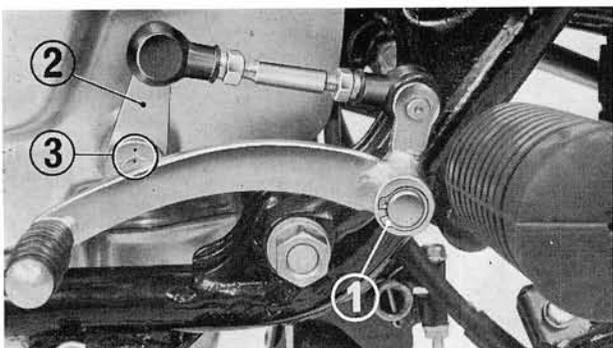


Fig. 3-6 ① Snap ring ③ Punch marks  
② Gearshift lever

### Disassembly

1. Drain the engine thoroughly by removing the drain plug.
2. Remove the rear brake adjusting nut.
3. Remove the right foot rest and kick starter pedal.
4. Remove the clutch cover from the right crankcase cover.
5. Turn the clutch adjusters to loosen the clutch cable.
6. Disconnect the clutch cable from the clutch lifter lever.
7. Remove the right crankcase cover.
8. Screw off the clutch adjusting screw lock nut and remove the clutch lifter lever and spring.
9. Remove the clutch cam plate, ball retainer, clutch lifter and adjusting screw from the right crankcase cover.
10. Screw off the bolts and remove the clutch lifter plate and clutch springs.
11. Using special tool "Lock Nut Wrench" (Tool No. 07916-6390000), loosen off the 16mm lock nut and remove the clutch assembly.
12. Remove the 92mm special set ring from the clutch center. Disassemble the clutch plate B, clutch disc spring and disc spring seat.

### 3. GEARSHIFT MECHANISM

#### Gearshift pedal

##### Removal

1. Pry off the snap ring and loosen off the gearshift lever locking bolt.
2. Remove the gearshift pedal assembly.

##### Installation

1. Install the gearshift pedal assembly with the punch mark on the gearshift lever lined up with that on the gearshift spindle.

2. Adjust the gearshift pedal position so that the pedal lever is in parallel with the gearshift lever on the spindle.  
This adjustment is made by turning the adjuster after loosening the lock nuts. After adjustment, tighten the lock nuts firmly.

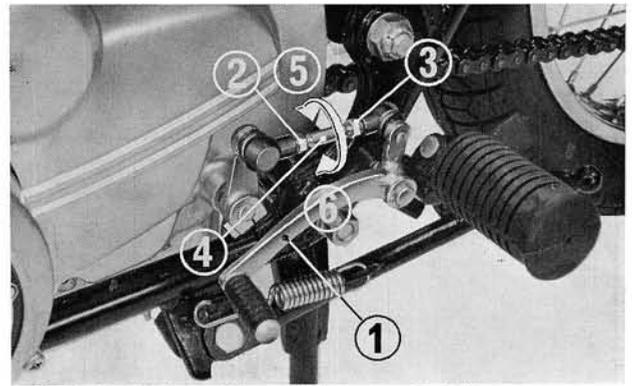
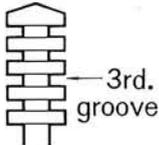


Fig. 3-7 ① Gearshift pedal ④ Adjuster  
② Lock nut ⑤ To open  
(left hand thread) ⑥ To close  
③ Lock nut

#### 4. CARBURETOR

Setting table

ITEM	
Setting number	054-A
Main jet	# 75
Slow jet	# 40
Jet needle setting	
Air screw opening	.2±1/2
Float height (gauge)	21 mm (0.827-in.)

## FRONT SUSPENSION

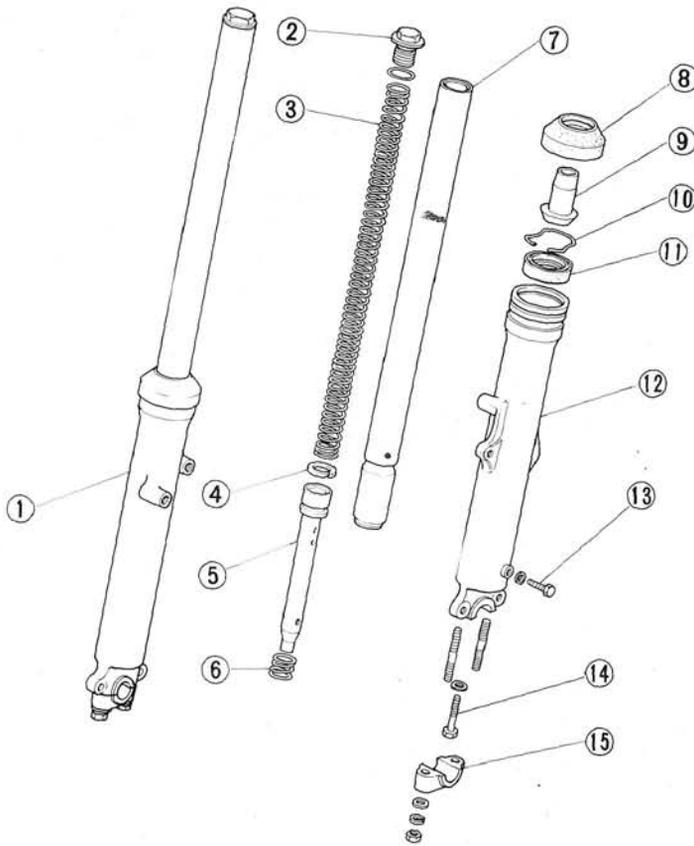


Fig. 4-1

- ① Right front shock absorber
- ② Fork bolt
- ③ Front shock absorber spring
- ④ Piston ring
- ⑤ Under seat pipe
- ⑥ Rebound spring
- ⑦ Front fork pipe
- ⑧ Bottom case cover
- ⑨ Oil lock piece
- ⑩ Oil seal stop
- ⑪ Oil seal
- ⑫ Bottom case
- ⑬ Drain bolt
- ⑭ Socket bolt
- ⑮ Front axle holder

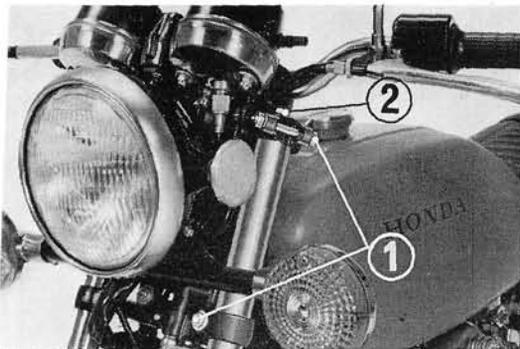


fig 4-2 ① Front fork securing bolt  
② Front fork bolt

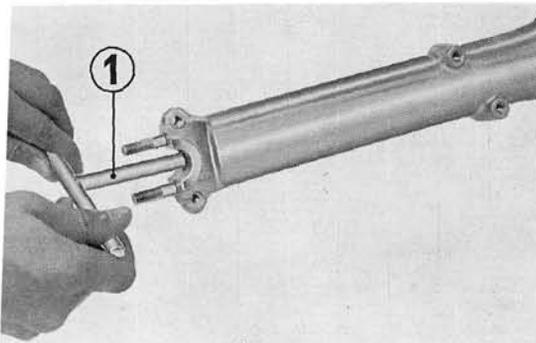


fig 4.3 1 Allen Head Wrench

### Disassembly

1. Remove the front wheel.
2. Remove the caliper assembly from the left front fork.
3. With the front fork bolt loosened, loosen the bolts at the fork top bridge and steering stem, which secure the front fork. Pull the front fork toward the bottom.
4. Drain the front suspension oil.
5. Remove the rust on the front fork pipe, if any, with fine emery cloth.
6. Remove the socket bolt and separate the front fork pipe and oil lock piece from the bottom case. Use "Allen Head Wrench" (Tool No. 07917-3230000) to remove the socket bolt. Protect the shock absorber with rug when holding it on a vice. Remove the front fork bolt on top of the front fork pipe; remove the front shock absorber spring, under seat pipe and rebound spring.

8. Remove the bottom case cover. Pry off the oil seal stop and remove the oil seal from the bottom case.

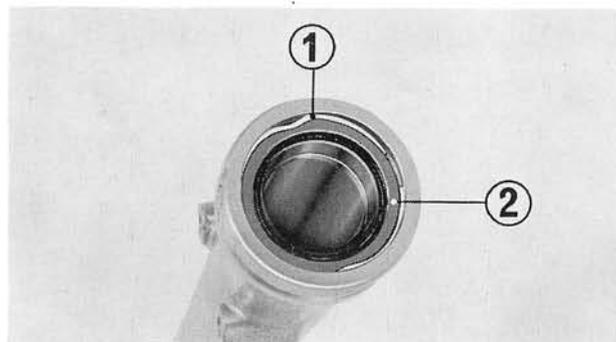


Fig. 4-4 ① Oil seal stop  
② Oil seal

### Inspection

1. Check the free length of the front shock absorber spring.
2. Check the seat pipe for wear on the piston ring.
3. Check the bottom case and fork pipe for wear, crack or any other defect.
4. Check the oil seal for wear or damage.

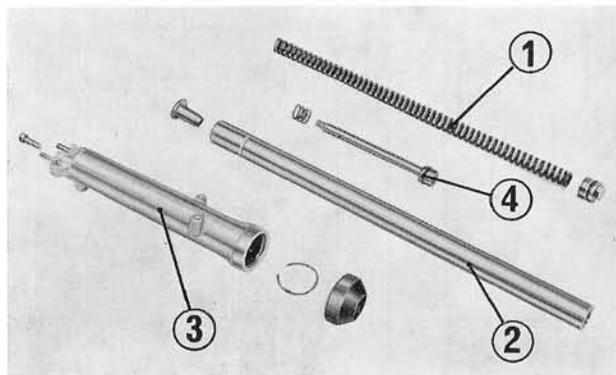


Fig. 4-5 ① Front shock absorber spring  
② Front fork pipe  
③ Bottom case  
④ Piston ring

### Assembly

1. Clean all parts in solvent before assembly.
2. Apply a coating of ATF (automatic transmission fluid) to the entire surface of a new oil seal. Install the oil seal to the bottom case. Drive fit the oil seal using "Fork Seal Driver" (Tool No. 97947-3330000). Install the oil seal stop and bottom case cover.
3. Install the rebound spring and seat pipe into the front fork pipe.
4. After installing the oil lock piece, insert the front fork pipe to the bottom case and secure with the socket bolt.

#### NOTE:

Apply liquid sealant to the threads of the socket bolt.

5. Fill each front fork with 160-165 cc (5.6-5.8 ozs.) of ATF before installation.
6. Install the front fork assembly so that the chamfered edge on the fork pipe aligns with the upper surface of the fork top bridge as shown.
7. After all parts have been installed, check the action of the front shock absorbers by grasping the handlebar and jouncing the front forks up and down. Also, check the front forks for signs of leaks from the oil seal.

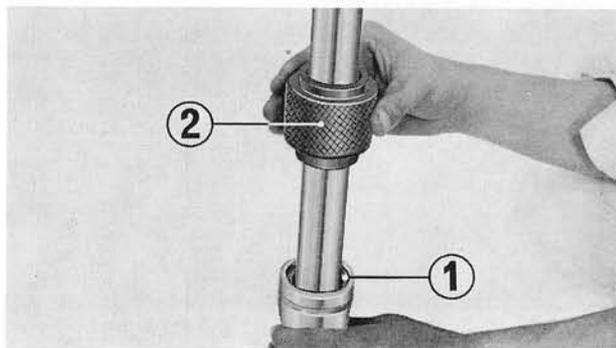


Fig. 4-6 ① Oil seal  
② Fork seal driver

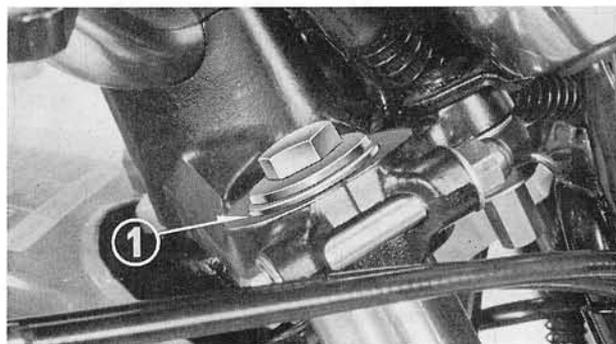
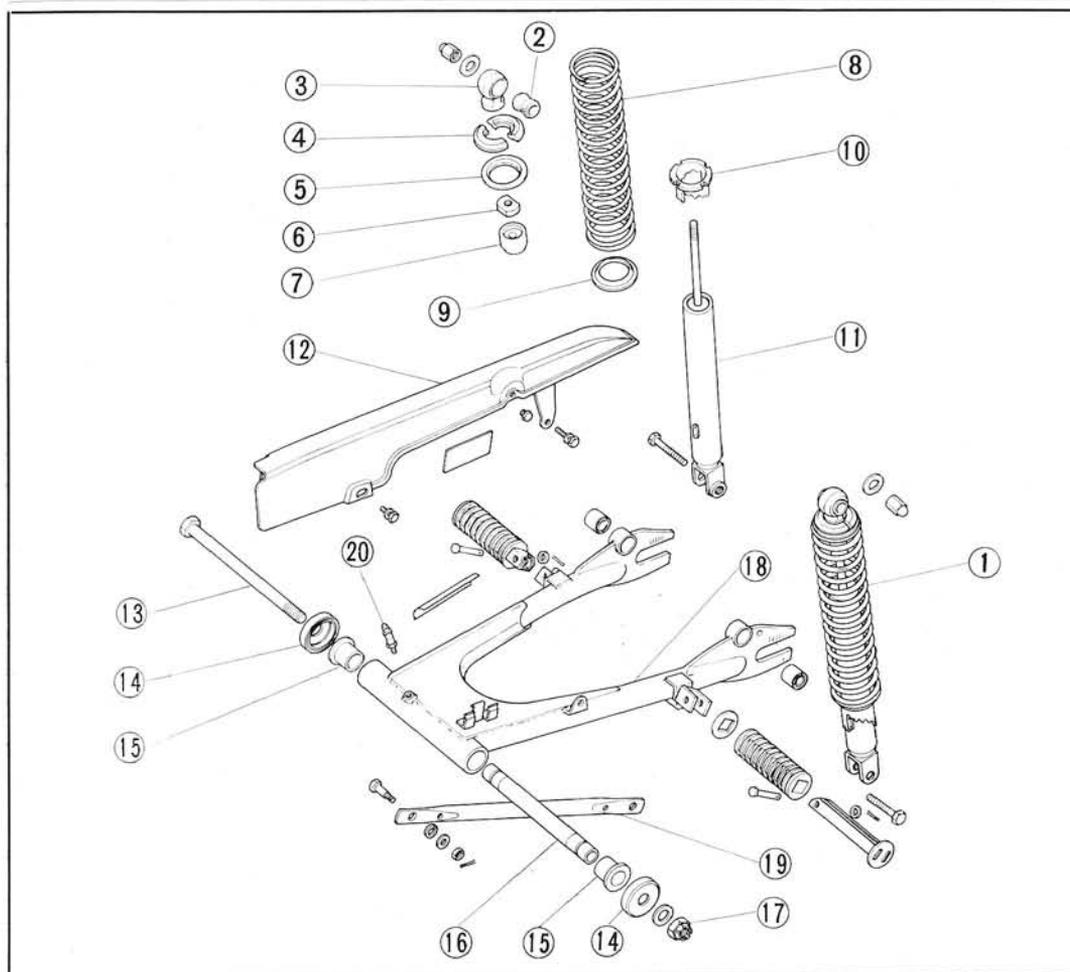


Fig. 4-7 Chamfered edge of front fork pipe



## 2. REAR SUSPENSION

Fig. 4-5

- ① Rear shock absorber assembly
- ② Joint rubber
- ③ Upper joint
- ④ Spring seat stop
- ⑤ Spring upper seat
- ⑥ Lock nut (10mm)
- ⑦ Stop rubber
- ⑧ Rear shock absorber spring
- ⑨ Spring lower seat
- ⑩ Spring adjuster
- ⑪ Rear damper
- ⑫ Drive chain case
- ⑬ Rear fork pivot bolt
- ⑭ Dust seal cap
- ⑮ Rear fork pivot bushing
- ⑯ Rear fork center collar
- ⑰ Self-locking nut (14mm)
- ⑱ Rear fork
- ⑳ Grease fitting

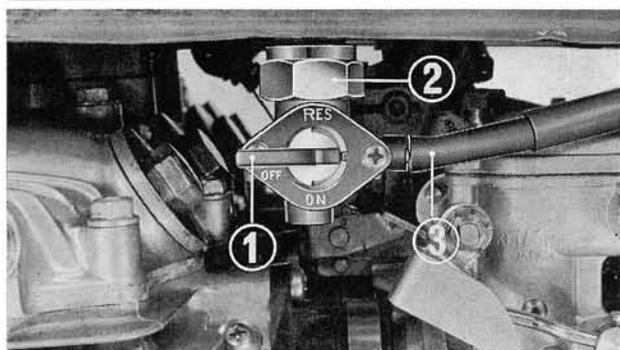


Fig. 4-9 ① Fuel cock lever ② Fuel cock fixing nut ③ Fuel tube

## 3. FRAME BODY

### Fuel Cock

1. Place the fuel cock lever in the "OFF" position; disconnect the fuel tubes. Take out the fuel tank.
2. Loosen the fuel cock fixing nut and then remove the fuel cock and fuel filter from the fuel tank.
3. Disassemble the fuel cock. Loosen off the screws and remove the plate, washer, lever, spring, O-ring and valve from the fuel cock body.
4. Check the valve faces of the fuel cock for scores or any other damage. Replace with a new cock assembly, if necessary.
5. Check the gasket to see if it is not damaged. Replace with a new one, if found to be damaged too badly beyond use.
6. Wash the fuel filter in solvent and dry with compressed air. Any slightest damage can not be tolerated here. Also replace the filter with a new one if found to be clogged.
7. 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.
8. Install the fuel cock to the fuel tank with the fixing nut.
9. Install the fuel tank in place on the frame; connect tubes and secure with the clips.
10. Fill the tank with fuel. With the fuel cock lever in the "ON" position, check for any leakage past the tube joints or connections.

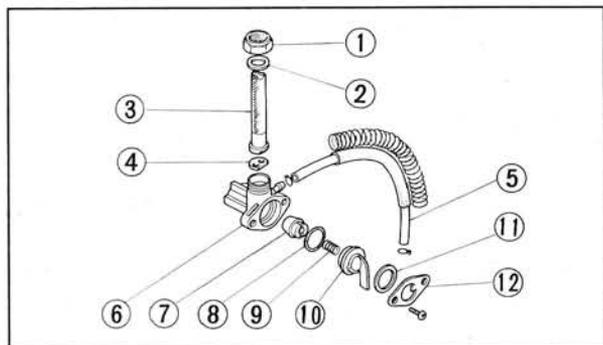


Fig. 4-10  
 ① Nut ⑤ Fuel tube ⑨ Spring  
 ② Gasket ⑥ Fuel cock body ⑩ Cock lever  
 ③ Fuel filter ⑦ Valve ⑪ Washer  
 ④ Filter seat ⑧ O-ring ⑫ Lever setting plate

### Muffler

#### Removal

1. Loosen off two bolts that secure the muffler to the frame.

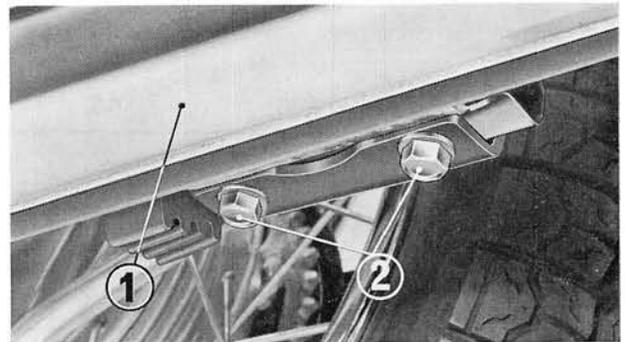


Fig. 4-11 ① Muffler  
② Bolt

2. Loosen off eight joint nuts and remove the muffler assembly, exhaust pipe joints and joint collars.

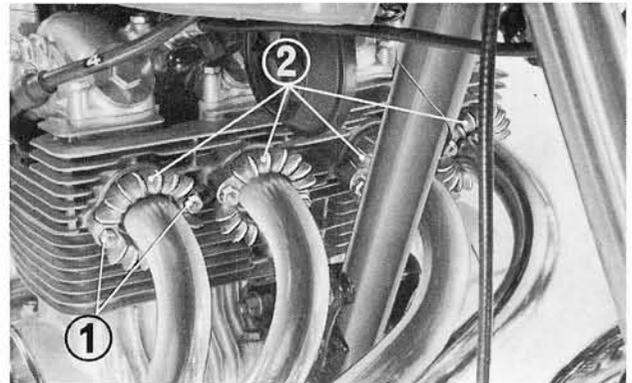


Fig. 4-12 ① Joint nut  
② Exhaust pipe joint

3. Loosen the muffler band bolts and remove the two exhaust pipes and sealing gaskets from the muffler assembly.

#### Inspection

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

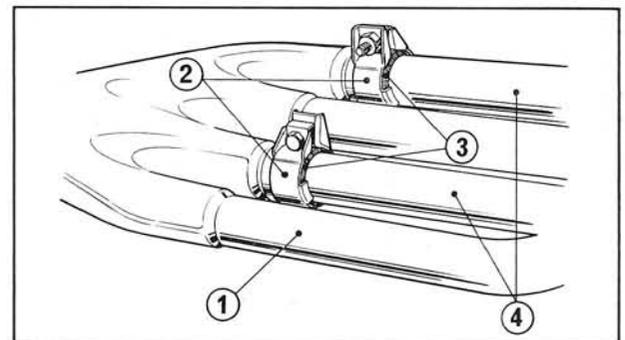


Fig. 4-13 ① Muffler assembly  
② Band  
③ Gasket  
④ Exhaust pipe

#### Installation

1. Install the exhaust pipes to the muffler assembly through the sealing gaskets.
2. Tighten the muffler bands so that the bolts are at the upper part of the muffler.
3. Install the muffler assembly.

V. ELECTRICAL SYSTEM

1. CHARGING SYSTEM

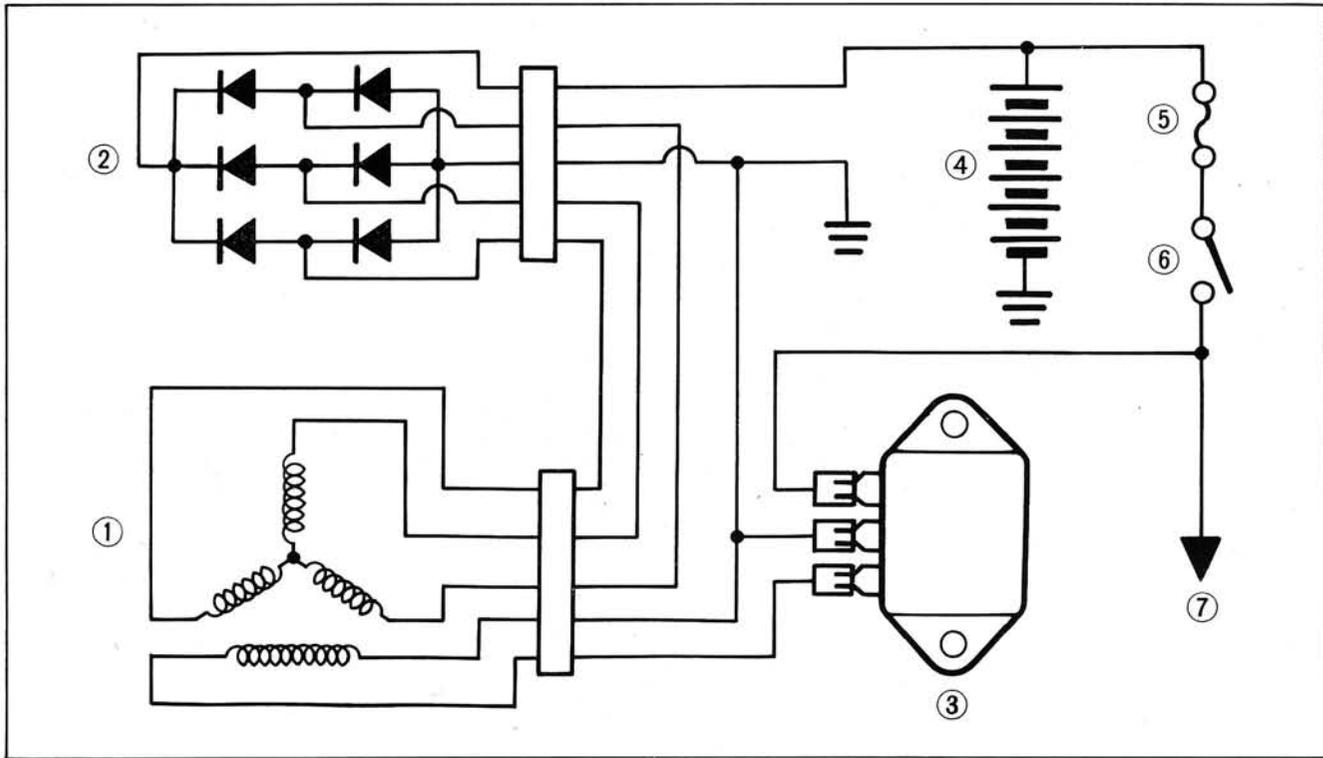


Fig. 5-1 ① A-C generator ③ Pointless regulator ⑤ Fuse ⑦ Load  
② Silicon diode rectifier ④ Battery ⑥ Main switch

2. STARTING SYSTEM

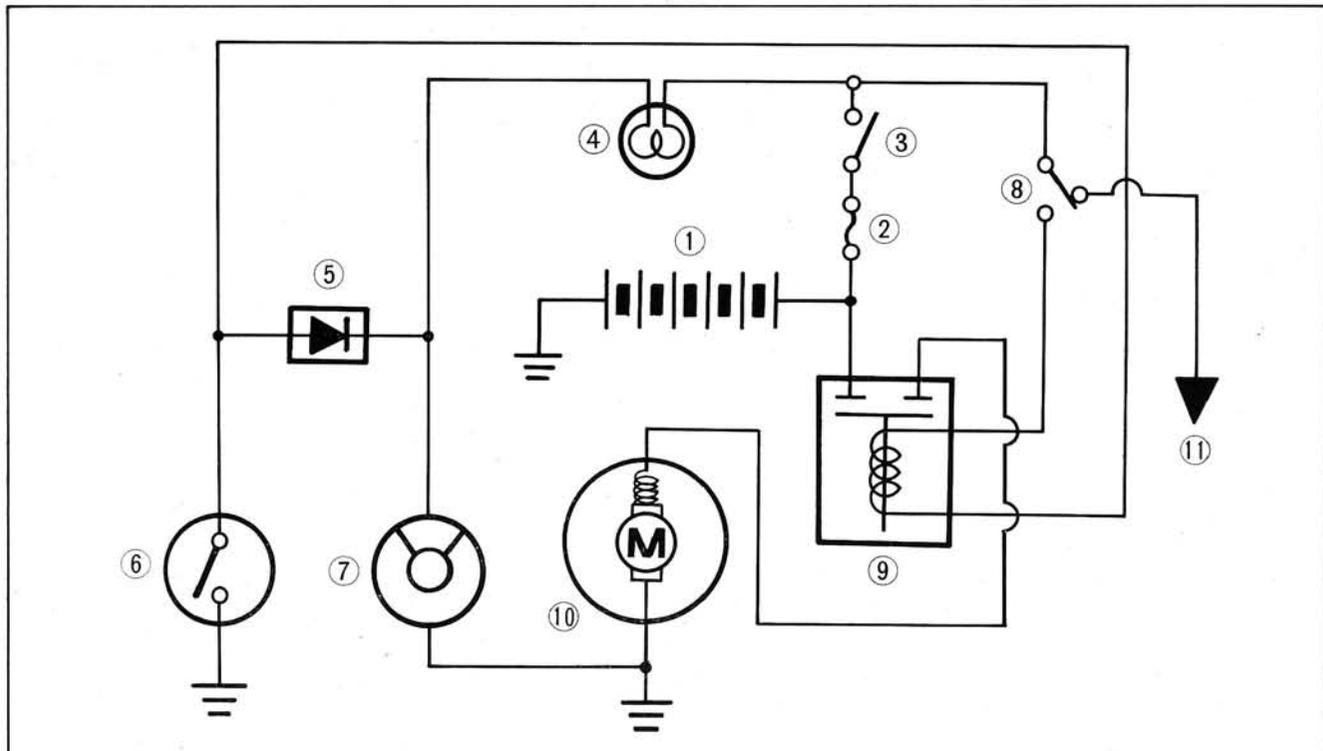


Fig. 5-2 ① Battery ④ Neutral pilot light ⑦ Neutral switch ⑩ Starting motor  
② Fuse ⑤ Silicon diode ⑧ Starting switch ⑪ To lighting system  
③ Main switch ⑥ Clutch switch ⑨ Starting magnetic switch

### Clutch switch

Check the continuity between the green and green/red leads of the switch in the headlight case. Continuity should exist only when the clutch is disengaged.

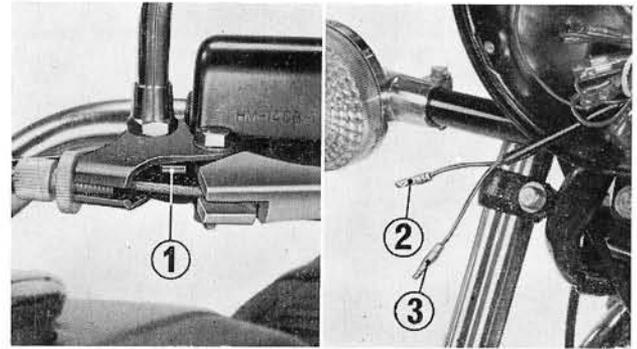


Fig. 5-3 ① Clutch switch  
② Green lead  
③ Green/red lead

### Starting switch

Disconnect the terminals of the starting switch leads in the connector cover. Check for continuity between the circuits (o—o) as shown in the table immediately below.

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

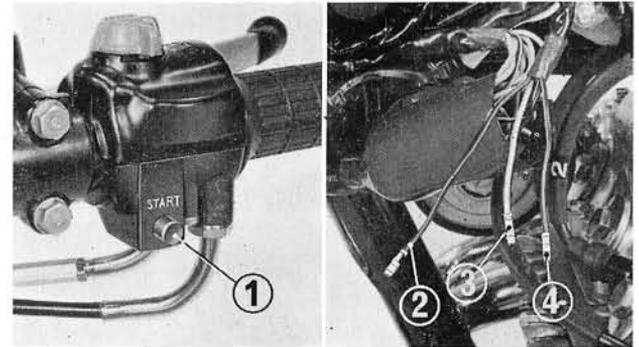


Fig. 5-9 ① Starting switch  
② Black lead  
③ Yellow/red lead  
④ Black/red lead

### Silicon diode

Check the diode for continuity with a radio tester in high-reading range. If current flows only one direction (From cathode to anode), the diode is normal. Current flow in both directions or no current is a sign of malfunction of the diode.

**NOTE:**

Do not use a megger as a high voltage generated in the megger will damage the diode.

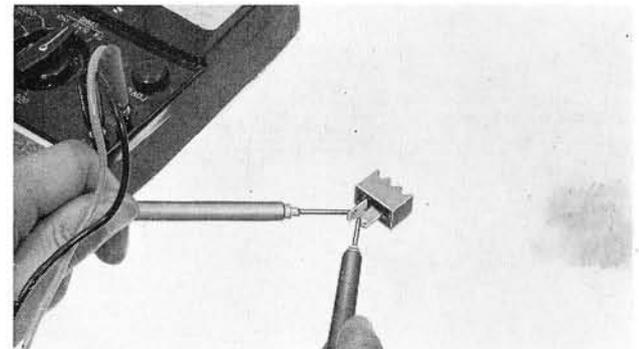


Fig. 5-5 Checking silicon diode

## 3. ELECTRICAL EQUIPMENTS

### Main switch

With the key in OFF, ON or PARK, check the main switch for continuity. The switch is normal if continuity exists in the circuit (o—o). Discard the switch if there is any continuity in other circuits shown below.

Terminal	BAT	IG	TL1	TL2	PA
Wire color	Red	Black	Brown	Brown/white	Brown
PARK	○			○	○
ON	○	○	○	○	○
OFF					
LOCK					

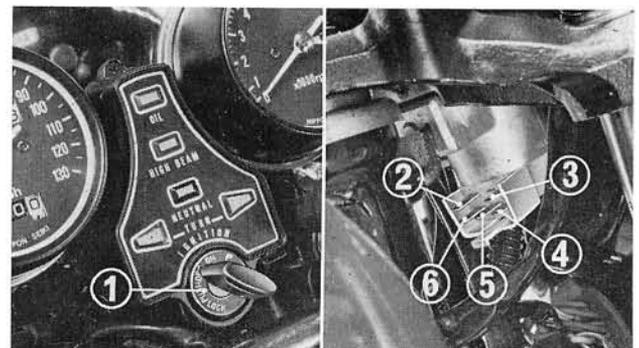


Fig. 5-6 ① Main switch  
② Brown  
③ Brown/white  
④ Brown  
⑤ Red  
⑥ Black

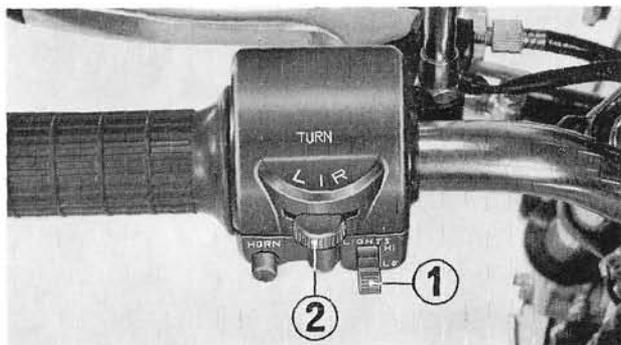


Fig. 5-7 ① Dimmer switch  
② Turn signal control switch

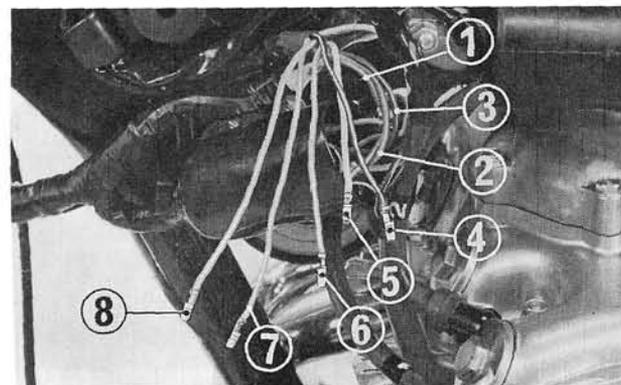


Fig. 5-8 ① Grey lead ⑥ Blue lead  
② Orange lead ⑦ Orange/white lead  
③ Light blue lead ⑧ Light blue/white lead  
④ Black/yellow lead  
⑤ White lead

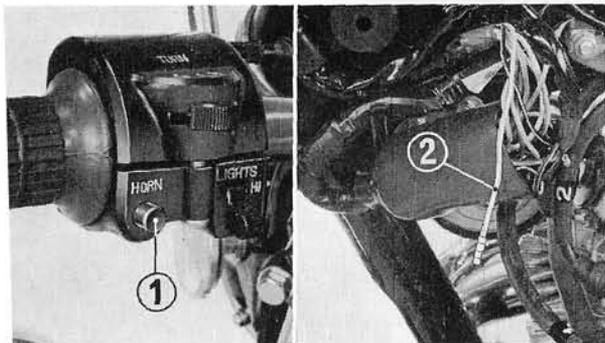


Fig. 5-9 ① Horn switch  
② Grey lead

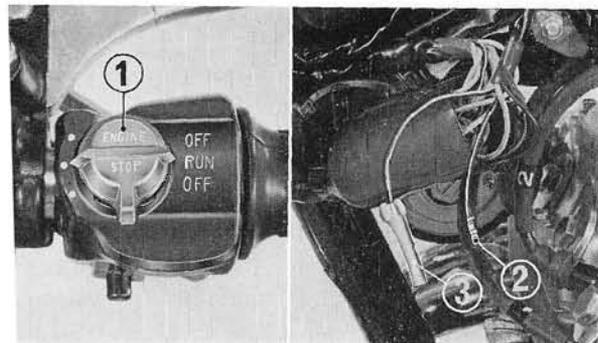


Fig. 5-10 ① Engine stop switch  
② Black  
③ Black white

### Dimmer and turn signal control switch

Check for continuity between respective terminals of the switch leads in the connector cover. The switch is normal if there is continuity as specified below (o—o) with the switch selector knob in each position.

Terminal	W	L	R	P(F)	PL	PR
Wire color	Grey	Orange	Light blue	—	Light blue/white	Orange/white
L	o—o			o—o		o—o
N				o—o	o—o	o—o
R	o—o		o—o	o—o		
Terminal	HL	Hi	Lo	P(F)		
Wire color	Black/Yellow	Blue	White	—		
Hi	o—o					
(N)	o—o	o—o	o—o	o—o		
Lo	o—o		o—o	o—o		

### Horn switch

Disconnect the terminal of the horn switch lead in the connector cover. Check the continuity between the grey lead and ground. Continuity should exist only when the button is depressed.

### Engine stop switch

Check for continuity between the respective terminals of the switch leads in the connector cover. The switch is good condition if there is continuity in the circuit (o—o) with the switch selector knob in each position.

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

**VI. SERVICE DATA**

**1 SPECIAL TOOLS**

No.	Tool No.	Description
	07900-3770000	CB 400F special tool set
1	07902-2000000	Pin spanner (48 mm)
2	07906-3230000	Box wrench (12 mm)
3	07908-0010000	Tappet adjusting wrench
4	07901-3230101	Front wheel bearing retainer wrench
5	07910-3290000	Rear wheel bearing retainer wrench
6	07914-3230000	Snap ring pliers
7	07916-6390000	Lock nut wrench 16 mm)
8	07917-3230000	Allen head wrench (6 mm)
9	07933-3330000	Rotor puller
10	07942-3290100	Valve guide driver
11	07942-3290200	Valve guide compressor
12	07945-3330100	Bearing driver attachment (inner)
13	07945-3330200	Bearing driver attachment (Outer)
14	07945-3330300	Ball race driver attachment
15	07947-3330000	Fork seal driver
16	07949-6110000	Driver handle
17	07953-3330000	Ball race remover
18	07955-3770000	Piston ring compressor
19	07957-3290000	Valve spring compressor
20	07958-3330000	Piston base
21	07959-3290000	Shock absorber compressor
22	07984-2000000	Valve guide reamer (Intake)
23	07984-3770000	Valve guide reamer (Exhaust)
24	07921-0010000	Flare nut wrench
25	07922-2870000	Drive sprocket holder
26	07797-2920300	Special tool case
<b>OPTIONAL</b>		
27	07504-3000100	Vacuum gauge set
28	07908-3230200	Carburetor synchronization wrench set

2. 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	3 months	6 months	12 months
		500 miles	1,500 miles	3,000 miles	6,000 miles
Engine Oil—Change	●		○		
Oil Filter Element—Replace	●			○	
Oil Filter Screen—Clean					○
Spark Plug—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 Breather Element—Clean	(service more frequently if operated in dusty areas)			○	
Paper Air Filter Element—Replace					○
*Carburetor—Check, and adjust if necessary.	●			○	
Throttle Operation—Inspect cable. 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 Bearings—Adjust.					○
*Side Stand—Check installation, operation, deformation, damage and wear.				○	
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.

**3. TORQUE SPECIFICATIONS****ENGINE**

Tightening point	Thread dia. (mm)	Torque	
		kg-cm	lbs-ft
Crankcase and crankcase covers	6, P1.0	70-110	5.1-8.0
Cylinder head	8, P1.25	200 (Apply oil to the nuts before tightening)	14.5
Carburetor insulator-to-cylinder head	6, P1.0	70-110	5.1-8.0
Cam sprocket	7, P1.0	160-200	11.6-14.5
A-C generator rotor	10, P1.25	300-400	21.7-29.0
Primary drive gear	12, P1.25	300-400	21.7-29.0
Tappet adjusting nut	5, P0.5	70-110	5.1-8.0
Upper and lower crankcases	8, P1.25	220-260	15.2-18.9
Cylinder head cover	6, P1.0	70-110	5.1-8.0
Clutch center	16, P1.0	400-450	29.0-32.6
Connecting rod	8, P1.25	200-220	14.5-15.2

**FRAME**

Tightening point	Thread dia. (mm)	Torque	
		kg-cm	lbs-ft
Steering stem nut	24, P1.0	800-1,200	57.9-86.9
Fork top bridge to front forks	8, P1.25	180-230	13.1-16.7
Handlebar holder	8, P1.25	180-230	13.1-16.7
Front fork bottom bridge to front forks	8, P1.25	180-230	13.1-16.7
Spokes	—		
Front wheel	—	25-30	1.9-2.2
Rear wheel	—	20-25	1.5-1.9
Rear fork pivot bolt	14, P1.5	550-700	39.8-50.7
Front wheel axle nut	12, P1.5	450-550	32.6-39.8
Front fork axle holder	8, P1.25	180-230	13.1-16.7
Engine hanger bolt	10, P1.25	300-400	21.7-29.0
Rear wheel axle nut	16, P1.5	800-1,000	57.9-72.4
Final driven sprocket	10, P1.25	400-500	29.0-36.2
Brake arm	6, P1.0	80-100	5.9-7.3
Front and rear brake torque links	8, P1.25	180-230	13.1-16.7
Rear suspension	10, P1.25	300-400	21.7-29.0
Step bar	12, P1.25	450-550	32.6-39.8
Gear change pedal and kick arm	6, P1.0	80-100	5.9-7.3

## 4. SERVICE DATA

## ENGINE

Unit: mm (in.)

Item	Assembly standard	Service limit
Rocker arm-to-rocker arm shaft clearance	0.016–0.052 (0.0006–0.0020)	0.1 (0.0039)
Cam height of camshaft		
Intake	28.185–28.225 (1.1096–1.1112)	28.0 (1.1024)
Exhaust	28.184–28.224 (1.1096–1.1111)	28.0 (1.1024)
Camshaft center journal	—	0.1 (0.0039)
Valve seat width	0.7 (0.03)	1.5 (0.0039)
Valve stem O.D.		
Intake	5.48–5.49 (0.2158–0.2161)	5.35 (0.2106)
Exhaust	5.47–5.48 (0.2154–0.2158)	5.35 (0.2106)
Valve-to-valve guide clearance		
Intake	0.01–0.03 (0.0004–0.0012)	0.3 (0.0118)
Exhaust	0.01–0.03 (0.0004–0.0012)	0.3 (0.0118)
Valve spring preload		
Inner	19.2/13.0–14.6 kg (0.7559/28.665–32.1930 lbs)	—
Outer	23.7/32.0–32.4 kg (0.9330/70.560–71.4420 lbs)	—
Valve spring free length		
Inner	29.0 (1.1417)	27.0 (1.0630)
Outer	34.5 (1.3583)	32.5 (1.2795)
Cylinder head flatness	—	0.3 (0.0118)
Cylinder I.D.	51.00–51.01 (2.0079–2.0083)	51.1 (2.0118)
Piston skirt O.D.	50.97–50.99 (2.0067–2.0075)	50.85 (2.0020)
Piston pin hole I.D.	13.002–13.008 (0.5119–0.5121)	13.05 (0.5138)
Piston pin O.D.	12.994–13.00 (0.5116–0.5118)	12.9 (0.5079)
Piston ring-to-piston ring groove clearance		
Top ring	0.025–0.055 (0.0010–0.0022)	0.15 (0.0059)
Second ring	0.015–0.045 (0.0006–0.018)	0.15 (0.0059)
Piston ring end gap		
Top ring	0.15–0.35 (0.0059–0.0138)	0.7 (0.0276)
Second ring	0.15–0.35 (0.0059–0.0138)	0.7 (0.0276)
Oil ring	0.2–0.5 (0.0079–0.0197)	0.9 (0.0035)
Outer rotor O.D.-to-pump body clearance		
Main pump	0.06–0.12 (0.0024–0.0047)	0.35 (0.0138)
Auxiliary pump	0.15–0.20 (0.0059–0.0079)	0.35 (0.0138)
Outer rotor-to-inner rotor clearance		
Main pump	0.15 (0.0059), max.	0.3 (0.0118)
Auxiliary pump	0.15 (0.0059), max.	0.3 (0.0118)
Friction disc thickness	2.62–2.78 (0.1032–0.1095)	2.3 (0.0906)
Clutch plate surface warpage	0.1 (0.0039), max.	0.2 (0.0079)
Clutch spring free length	31.25 (1.2303)	29.75 (1.1712)
Clutch center-to-clutch plate B clearance	0.1–0.5 (0.004–0.02)	Beyond assembly standard
Gearshift fork finger width	5.93–6.00 (0.2335–0.2362)	5.5 (0.2165)

Unit: mm (in.)

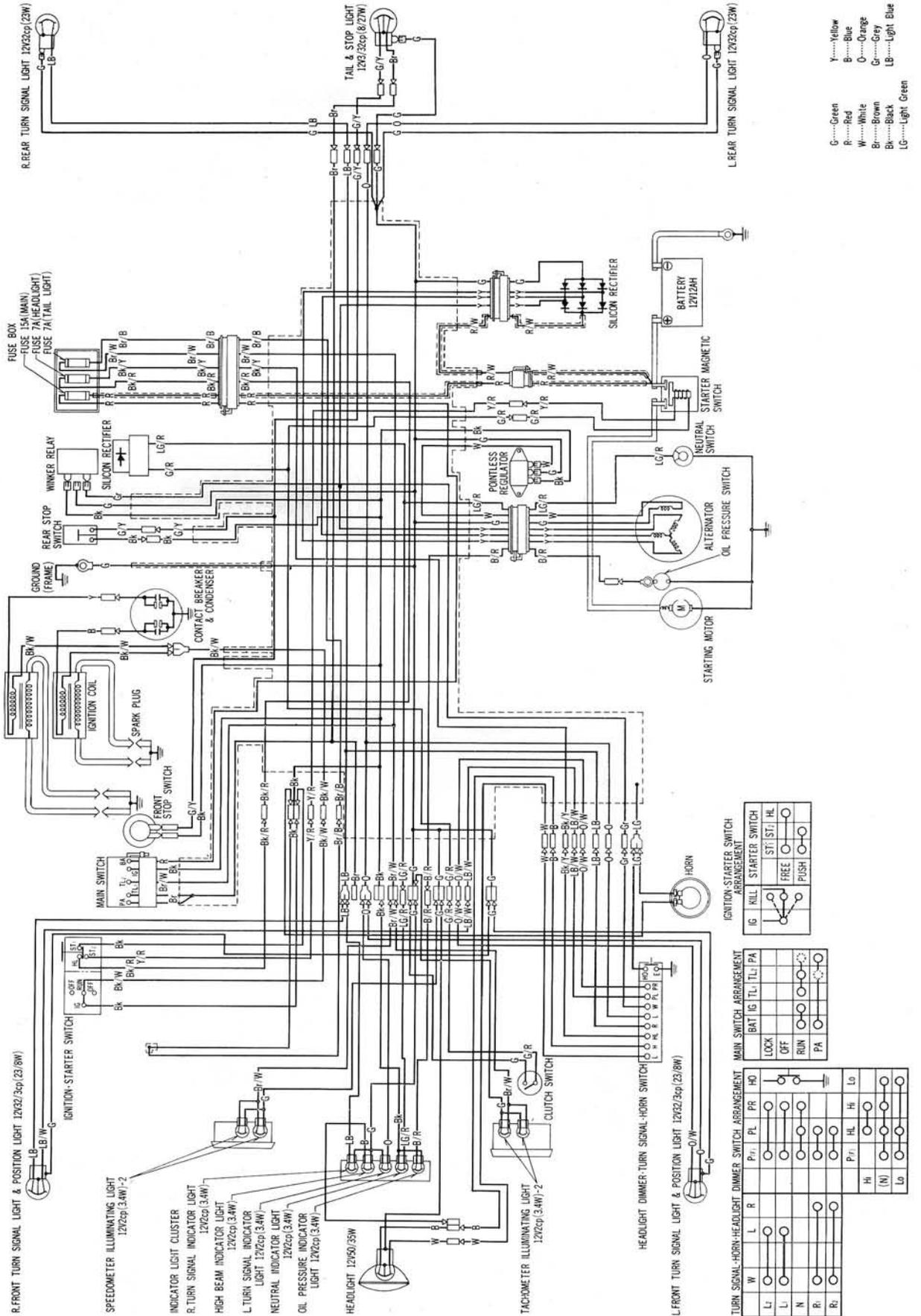
Item	Assembly standard	Service limit
Gearshift guide shaft O.D.	12.957-12.984 (0.5101-0.5112)	12.9 (0.5079)
Gearshift fork I.D.	13.000-13.018 (0.5118-0.5125)	12.95 (0.5098)
Kick starter pinion-to-shaft clearance	0.04-0.082 (0.0016-0.0032)	0.1 (0.004)
Gearshift fork dowel-to-drum groove clearance	0.05-0.22 (0.0020-0.0087)	0.3 (0.0118)
Transmission gear backlash	—	0.2 (0.0079)
Transmission gear-to-shaft clearance		
C-1	0.04-0.074 (0.0016-0.0029)	0.2 (0.0079)
Other gears	0.04-0.081 (0.0016-0.0032)	0.2 (0.0079)
Cam chain tensioner slipper thickness (center)	4.0 (0.1575)	3.0 (0.118) max.
Cam chain guide thickness	6.1-6.3 (0.2402-0.2480)	5.0 (0.197)
Crankshaft runout (center)	0.03 (0.0012), max.	0.05 (0.0020)
Crankshaft journal clearance	0.018-0.048 (0.0007-0.0019)	0.08 (0.0032)
Connecting rod small end I.D.	13.012-13.033 (0.5123-0.5131)	13.10 (0.5158)
Connecting rod big end side clearance	0.02-0.07 (0.0008-0.0028)	0.15 (0.0059)
Connecting rod big end-to-crankshaft journal clearance	0.018-0.048 (0.0007-0.0019)	0.08 (0.0032)
Primary chain guide thickness (center)	6.0-6.3 (0.236-0.248)	5.0 (0.197)

**FRAME**

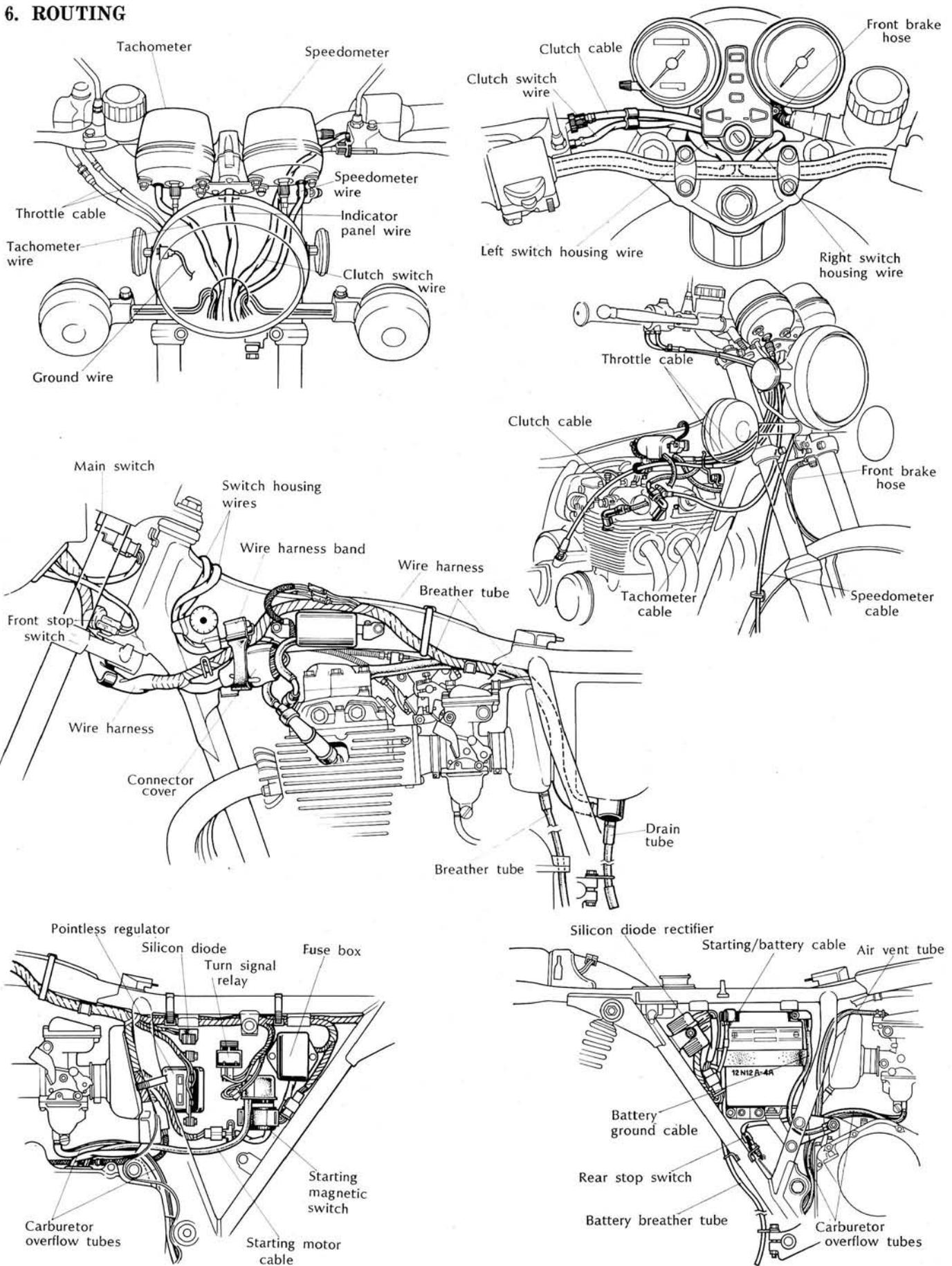
Unit: mm (in.)

Item	Assembly standard	Service limit
Brake disc face runout	0.3 (0.0118), max.	0.3 (0.0118), min.
Brake disc thickness	6.9-7.1 (0.2717-0.2795)	—
Wheel rim face runout	0.5 (0.0197), max.	2.0 (0.079)
Wheel bearing end play	0.07 (0.0028) max.	0.1 (0.0039)
Wheel bearing radial play	0.03 (0.0012), max.	0.05 (0.0020)
Front axle runout	0.01 (0.0004)	0.2 (0.0079)
Caliper cylinder I. D.	38.18-38.20 (1.5032-1.5039)	38.215 (1.5045)
Caliper piston O. D.	38.115-38.480 (1.5006-1.5150)	38.105 (1.5002)
Master cylinder I. D.	14.00-14.043 (0.5512-0.5529)	14.055 (0.5533)
Master cylinder piston O. D.	13.957-13.984 (0.5495-0.5505)	13.940 (0.5488)
Rear axle runout	0.01 (0.0004)	0.2 (0.0079)
Rear brake lining thickness	4.9-5.0 (0.1929-0.1969)	2.5 (0.0984)
Rear brake drum I. D.	160.0-160.3 (6.2992-6.3110)	161 (6.3386)
Front suspension spring free length	478.6 (18.843)	450 (17.717)
Rear suspension spring free length	210.4 (8.284)	190 (7.480)
Rear fork pivot bushing-to-center collar clearance	0.1-0.3 (0.0039-0.0118)	0.5 (0.02)
Rear fork bushing I. D.	21.5-21.552 (0.8465-0.8485)	21.70 (0.8543)
Center collar O. D.	21.427-21.460 (0.8436-0.8449)	21.35 (0.8406)
Front fork bottom case I. D.	33.000-33.039 (1.2992-1.3007)	33.18 (1.3063)
Front fork Pipe O. D.	32.90-32.98 (1.2952-1.2984)	32.875 (1.2944)

5. WIRING DIAGRAM



### 6. ROUTING



7. SPECIFICATION

	Item	Specification	
<b>Dimension</b>	Overall length	2,040mm (80.3in.)	
	Overall width	705 mm (27.8in.)	
	Overall height	1,040mm (40.9in.)	
	Wheel base	1,355 mm (53.3 in.)	
	Seat height	790mm (31.1 in.)	
	Foot peg height	330mm (13.0in.)	
	Ground clearance	150mm ( 5.9in.)	
	Dry weight	170kg (375 lbs.)	
<b>Frame</b>	Type	Semi-double cradle	
	F. suspension, travel	Telescopic fork, Travel 114.5mm (4.5in.)	
	R. suspension, travel	Swing arm, Travel 79.0mm (3.1in.)	
	F. tire size, pressure	3.00S18 (4PR), Air pressure 1.8kg/cm <sup>2</sup> (26psi)	
	R. tire size, pressure	3.50S18 (4PR), Air pressure 2.0/25 kg/cm <sup>2</sup> (28/36 psi)	
	F. brake, lining area	Disc brake, Lining swept areas 38cm <sup>2</sup> (5.9sq. in)	
	R. brake, lining area	Internal expanding shoes, Lining swept areas 70cm <sup>2</sup> (10.9sq. in.)	
	Fuel capacity	14lit. (3.7 U.S.gal. 3.1 Imp.gal.)	
	Fuel reserve capacity	3 lit. (0.8 U.S.gal. 0.7 Imp.gal.)	
	Caster angle	63°30'	
	Trail length	85 mm (3.3in.)	
	Front fork oil capacity	160-165cc (to fill if dry) (5.6-5.8ozs.)	
	Front fork oil capacity	145-150cc (refill after draining) (4.8-4.9ozs.)	
<b>Engine</b>	Type	Air cooled, 4-stroke O.H.C. engine	
	Cylinder arrangement	Vertical four parallel	
	Bore and stroke	51.0×50.0 mm (2.008×1.969in.)	
	Displacement	408cc (24.9cu.in.)	
	Compression ratio	9.4:1	
	Valve train	Chain driven over head camshaft	
	Oil capacity	3.5 lit. (3.7 U.S.qt. 3.1 Imp.qt.)	
	Lubrication system	Forced and wet sump	
	Cylinder head compression pressure	12 kg/cm <sup>2</sup> (170.7 psi)	
	Intake valve	Opens	At 5° (before top dead center)
		Closes	At 35° (after bottom dead center)
	Exhaust valve	Opens	At 35° (before bottom dead center)
		Closes	At 5° (after top dead center)
	Valve tappet clearance		IN·EX 0.05 mm (0.002 in.)
	Idle speed		1,200rpm

	Item	Specifications
<b>Carburetor</b>	Type	Piston valve
	Setting mark	054-A
	Main jet	# 75
	Slow jet	# 40
	Air screw opening	2± <sup>1</sup> / <sub>2</sub>
	Float height	21 mm (0.827 in.)
<b>Drive train</b>	Clutch	Wet, multi-plate type
	Transmission	6-speed constant mesh
	Primary reduction	3.423
	Gear ratio I	2.733
	Gear ratio II	1.800
	Gear ratio III	1.375
	Gear ratio IV	1.111
	Gear ratio V	0.965
	Gear ratio VI	0.866
	Final reduction	2.235
	Gear shift pattern	Left foot operated return system
	<b>Electrical</b>	Ignition
Starting system		Starting motor and kick starter
Alternator		A-C generator 0.156 kW/5,000 rpm
Battery capacity		12V-12 AH
Spark plug		NGK D8ESL, ND X24ES
Headlight		Low/High beam 12V-35 W/50 W
Tail/stoplight		Tail/Stop 12V-3/32 cp (SAE TRADE NO. 1157)
Turn signal light		12V-32 cp (SAE TRADE NO. 1157/1073)]
Speedometer light		12V-2 cp (SAE TRADE NO. 57)
Tachometer light		12V-2 cp (SAE TRADE NO. 57)
Neutral indicator light		12V-2 cp (SAE TRADE NO. 57)
Turn signal indicator light		12V-2 cp (SAE TRADE NO. 57)
High beam indicator light		12V-2 cp (SAE TRADE NO. 57)
Position light		12V-3 cp (SAE TRADE NO. 1757)