

Fig. 218 ① Master cylinder ② Cylinder gauge

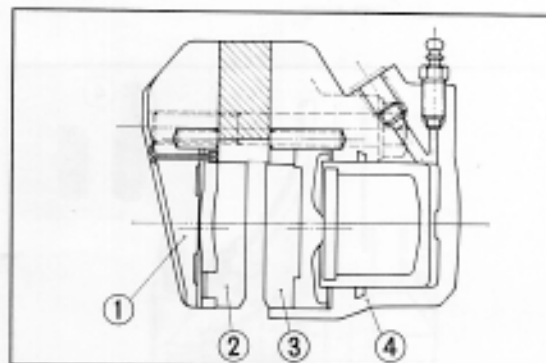


Fig. 219 ① Caliper B ② Pad B ③ Pad A ④ Caliper A

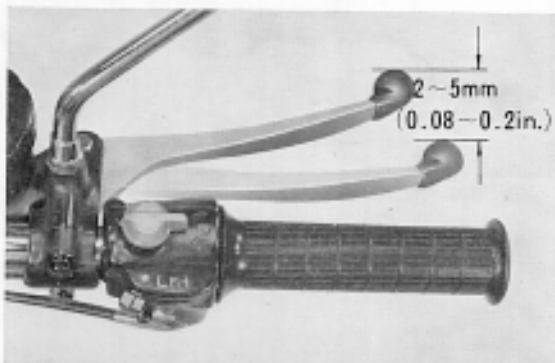


Fig. 220

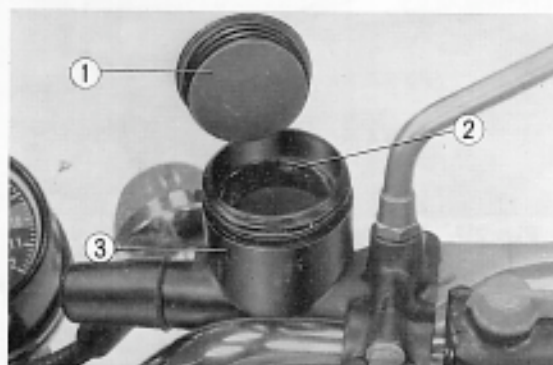


Fig. 221 ① Diaphragm ② Brake fluid ③ Master cylinder

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 assembling 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. Mount the caliper assembly on the front fork.
4. Mount the master cylinder unit on the handle bar.
5. Fill the master cylinder reservoir with **SAE J1703a 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.



3. Air bleeding the brake system

When air enters the brake hydraulic system, braking effectiveness degrades and creates a hazardous condition. If brake lever action becomes soft or spongy, or if the fluid reservoir is allowed to become dry, perform the bleeding in the following manner.

- Fill the reservoir with brake fluid up to the level line.
- Install the diaphragm to prevent loss of brake fluid.
- Attach a bleeder tube to the bleeder screw and place the opposite end into a vessel to catch the fluid.
- Pump the brake lever several times, and open the bleeder screw a half turn while maintaining a grip on the brake lever. When the lever bottoms, first, close the bleeder screw before releasing the lever. Repeat this operation several times until there are no air bubbles in the fluid which flows out of the bleeder tube.

Note:

Replenish the fluid in the reservoir and do not allow the reservoir to become dry as it will permit air to enter the brake hydraulic system.

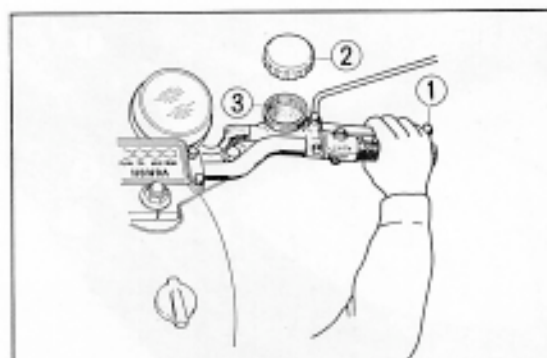


Fig. 222 ① Front brake lever ③ Diaphragm
② Reservoir cap

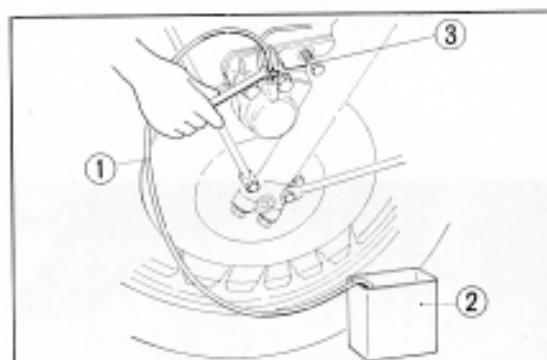


Fig. 223 ① Bleeder tube ② Vessel ③ Bleeder screw

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

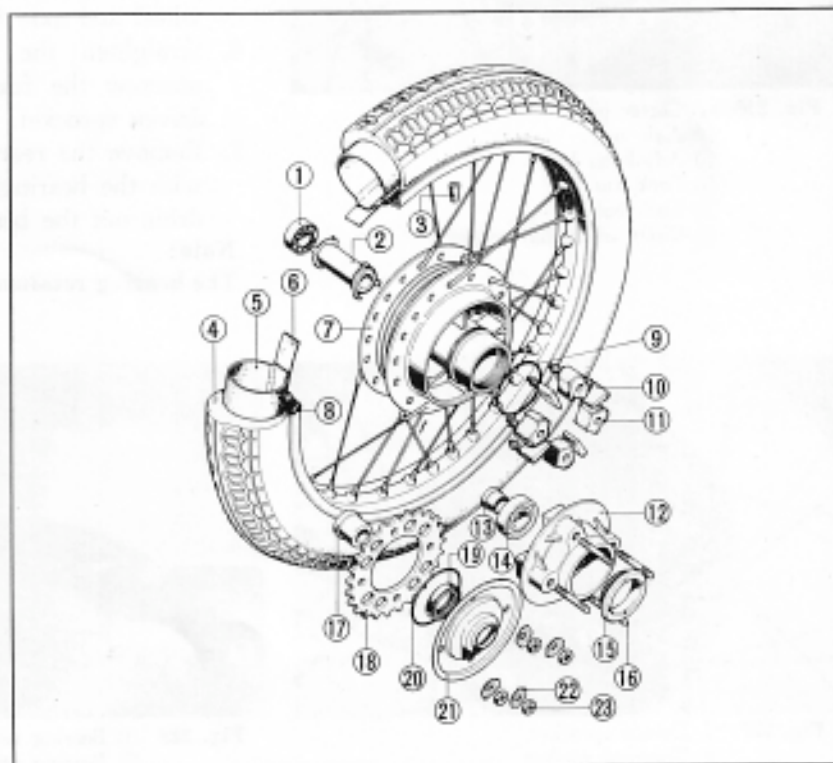


Fig. 224

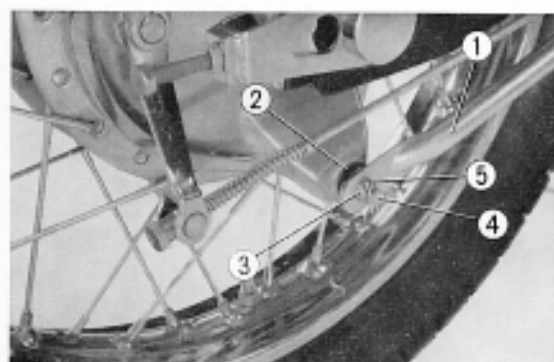


Fig. 225 ① Brake stopper arm
② Stopper arm cushion rubber
③ 8mm nut
④ Panel stopper bolt
⑤ Lock pin

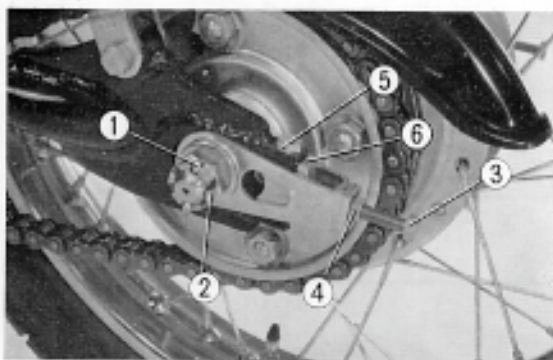


Fig. 226 ① Cotter pin
② Axle nut
③ Adjusting bolt
④ Lock nut
⑤ Lock bolt
⑥ Chain adjusting stopper

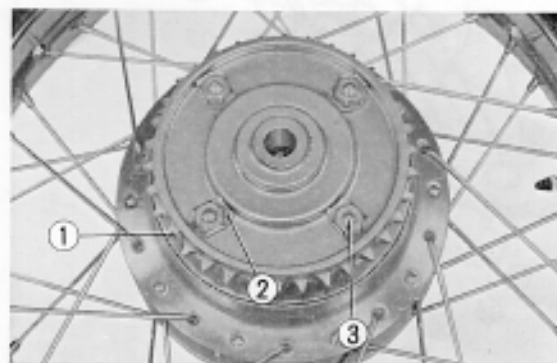


Fig. 227 ① Driven sprocket
② Tongue washer
③ Lock nut

A. Disassembly

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

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.

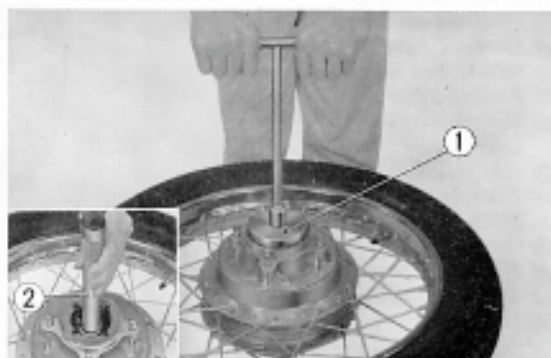


Fig. 228 ① Bearing retainer remover
② Bearing driver



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.

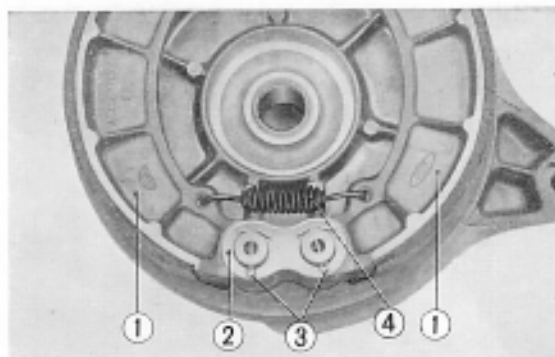


Fig. 229 ① Brake shoes ③ Cotter pins
② Pin washer ④ Brake shoe spring

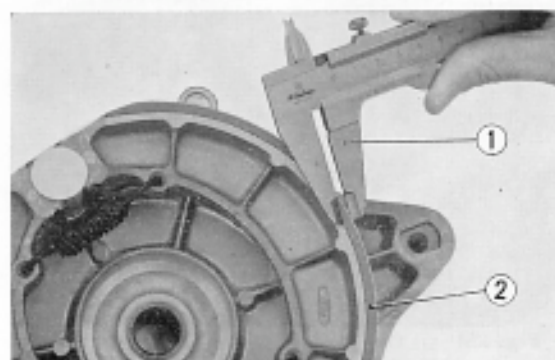


Fig. 230 ① Vernier caliper ② Brake shoe

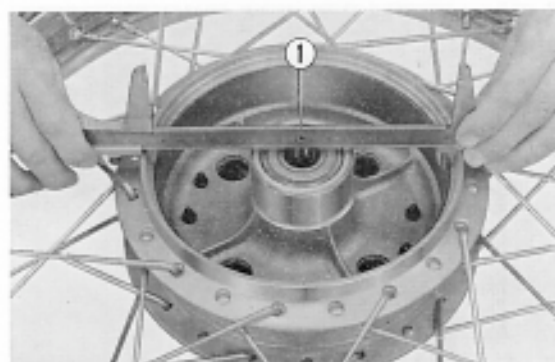


Fig. 231 ① Vernier caliper

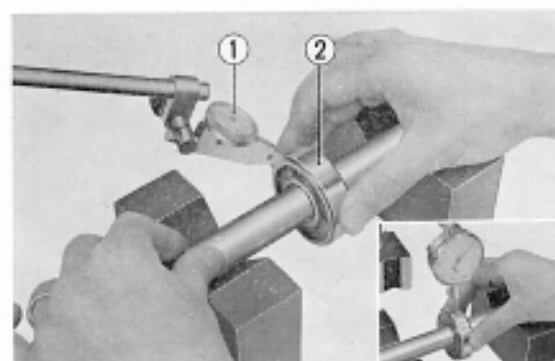


Fig. 232 ① Dial gauge ② Ball bearing

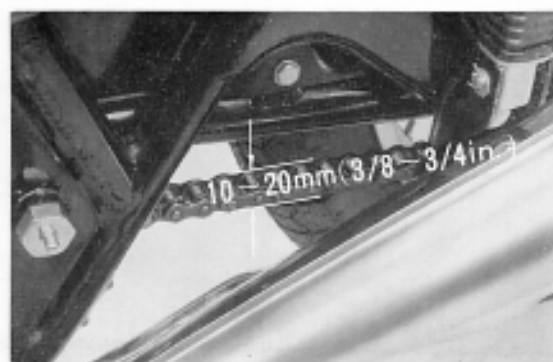


Fig. 233

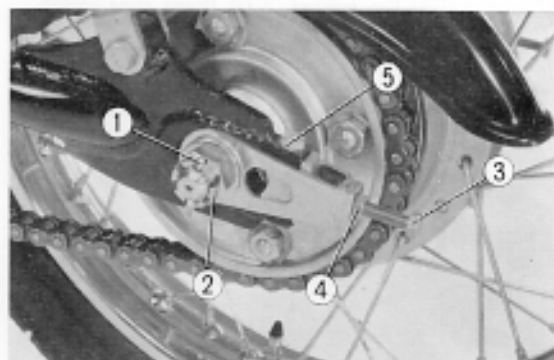


Fig. 234 ① Cotter pin ④ Lock nut
② Axle nut ⑤ Lock bolt
③ Adjusting bolt

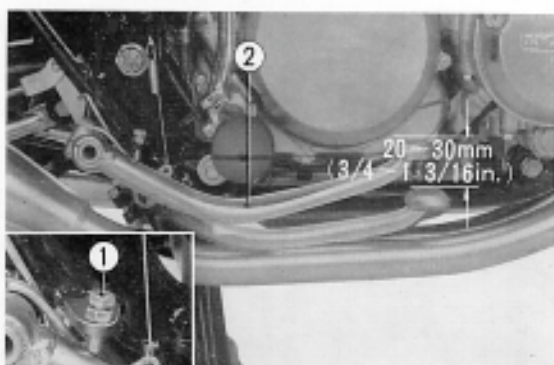


Fig. 235 ① Adjusting bolt
② Brake pedal



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:

Use thread lock cement when installing the bearing retainer.

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

3. 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.
4. After completing the reassembly, adjust the slack of the drive chain.
 - a. Normal chain slack is 10~20 mm ($3/8 \sim 3/4$ 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.
5. 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 ($3/4 \sim 1 \frac{3}{16}$ in) with the adjusting nut on the end of the brake rod.



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.

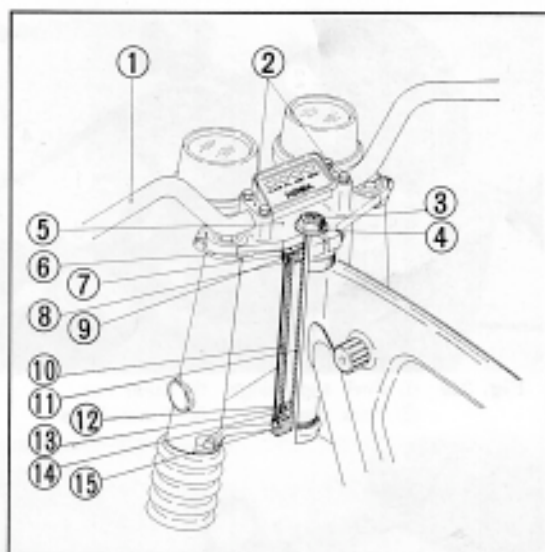


Fig. 237 ① Steering handle bar
② Handle bar holder
③ Steering stem nut
④ Steering stem washer
⑤ Fork top bridge
⑥ Steering head top nut
⑦ Steering head top cone race
⑧ Steel ball
⑨ Steering top ball race
⑩ Steering head
⑪ Steering stem
⑫ Steering bottom ball race
⑬ Steel ball
⑭ Steering bottom cone race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

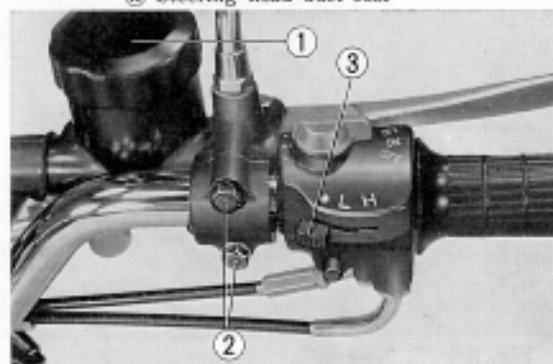


Fig. 238 ① Master cylinder unit ③ Lighting switch
② 6 mm bolts



Fig. 239 ① Upper handle bar holders ② Handle bar

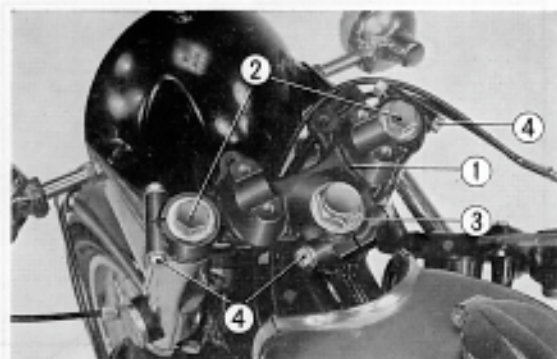


Fig. 240 ① Fork top bridge ② Fork top bolts ③ Stem nut ④ 8mm bolts

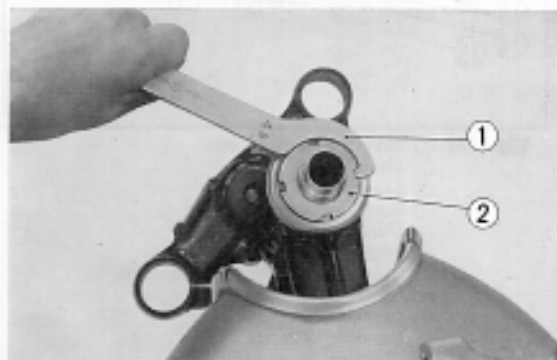


Fig. 241 ① Steering stem wrench ② Steering stem head nut

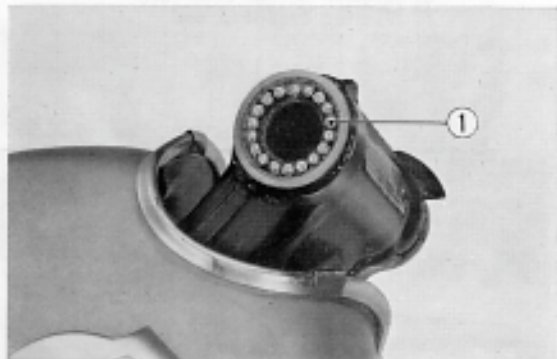


Fig. 242 ① Steel balls

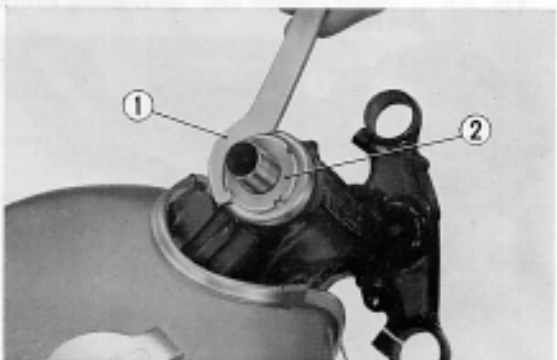


Fig. 243 ① Steering stem wrench ② Steering stem head nut

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

8. Remove the front fork.
9. Unscrew the steering stem head nut with the stem wrench.
10. Remove the steering stem out the bottom.

Note:

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

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.

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.

Note:

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



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.

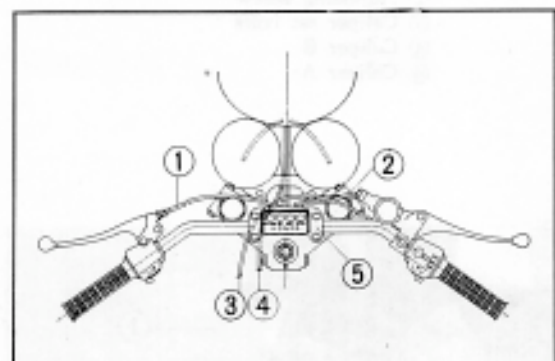


Fig. 245 ① Clutch cable ② Front brake hose ③ Throttle cable ④ Wire harness ⑤ Fork top bridge

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.

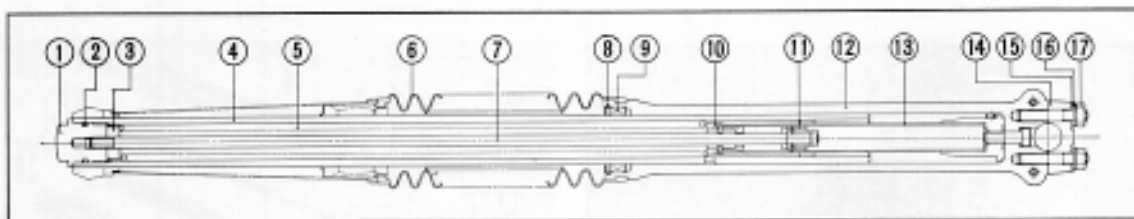


Fig. 246 Front fork unit

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

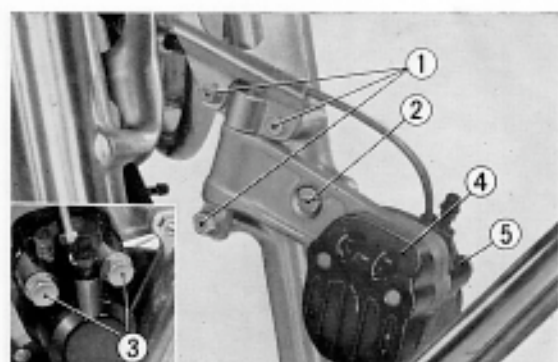


Fig. 247 ① Caliper mounting bolts
② Adjusting screw
③ Caliper set bolts
④ Caliper B
⑤ Caliper A

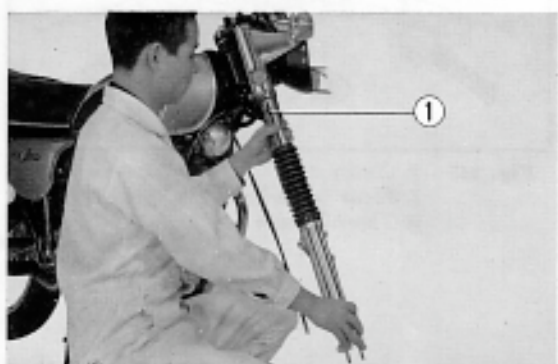


Fig. 248 ① Front fork

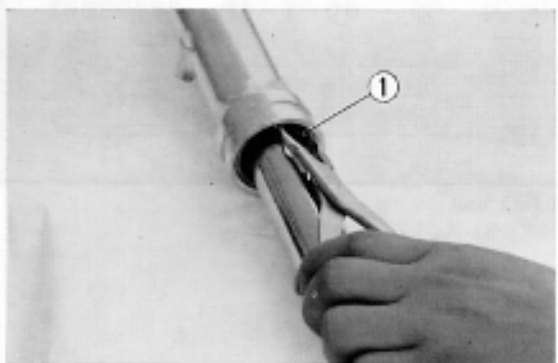


Fig. 249 ① Snap ring

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.
4. Unscrew the 8×56 mm and the 10×35 mm bolts, and pull the forks off the bottom.
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 special tool and remove the damper unit from the bottom case.



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