

STEERING AND FRONT SUSPENSION

GROUP

11

CONTENTS

11-1 GENERAL DESCRIPTION	115
DESCRIPTION	115
SPECIFICATIONS	115
DIAGNOSIS	116
11-2 STEERING	117
a. Description	117
b. Disassembly	117
c. Inspection	118
d. Reassembly	118
11-3 FRONT SUSPENSION	119
a. Description	119
b. Disassembly	120
c. Inspection	120
d. Reassembly	121

11-1 GENERAL DESCRIPTION

DESCRIPTION

The steering and the front suspension have been designed particularly to provide comfort and prevent riding fatigue caused from long distance traveling.

SPECIFICATIONS

Steering handle type	Up-handle type
Steering handle width	31.89 in (810 mm)
Steering angle	40° right and left from center
Front suspension type	Telescopic fork
Front fork oil	
Oil used	SAE 10 W-30 or its equivalent
Oil capacity	7.0~7.3 ozs. (220~230 cc)

Item	Standard value	Serviceable limit
Front cushion spring		
Spring outer diameter	0.992~1.008 in 25.2~25.6 mm	—
Free length	19.075 in 484.5 mm	18.11 in 460 mm
Coil dia	0.185 in 4.7 mm	—
Installation load	17.579 in/71.2 lbs 446.5 mm/32.3 kg	—
Tilt	within 1.5°	Over 2.5°
Front fork piston		
Outer diameter	1.552~1.553 in 39.425~39.45 mm	1.5512 in 39.4 mm
Taper, out of round	within 0.0003 in 0.008 mm	over 0.0006 in 0.015 mm
Front fork bottom case		
Inner diameter	1.555~1.556 in 39.50~39.534 mm	1.5591 in 39.68 mm
Taper, out of round	within 0.0012 in 0.03 mm	over 0.0012 in (0.03 mm)

DIAGNOSIS

Trouble	Probable Causes	Remedy
Heavy steering	1. Steering stem excessively tightened. 2. Damaged steering stem steel balls. 3. Bent steering	Loosen the steering stem nut. Replace Replace
Wheel wobble	Loose steering stem mounting bolts	Retorque
Soft suspension	1. Loss of spring tension 2. Excessive load	Replace
Hard suspension	1. Ineffective front cushion damper 2. Ineffective rear cushion damper	Repair Replace
Suspension noise	1. Cushion case rubbing 2. Interference between cushion case and spring 3. Damaged cushion stopper rubber 4. Insufficient spring damper oil	Inspect cushion spring and case Repair or replace Replace Add damper oil

11-2 STEERING

a. Description

The handle bar is mounted on the fork top bridge and is fixed with the two handle bar holders.

The fork top bridge is mounted on the front forks with the two front fork top bolts, the fork top bridge in turn is mounted to the steering stem with the steering stem nut.

The steering stem is mounted on the frame head pipe and pivots on the upper and lower sets of the ball bearings. (Fig. 11-1)

b. Disassembly

1. Remove the master cylinder body by unscrewing the two master cylinder body mounting bolts and disconnect the clutch cable from the clutch lever. (Fig. 11-2)
2. Remove the starter lighting ignition switch and disconnect the throttle cable from the throttle grip pipe.
3. Detach the headlight assembly from the headlight case and disconnect the wiring at the connectors.
4. Remove the two upper handle holders and then remove the handle bar. (Fig. 11-3)

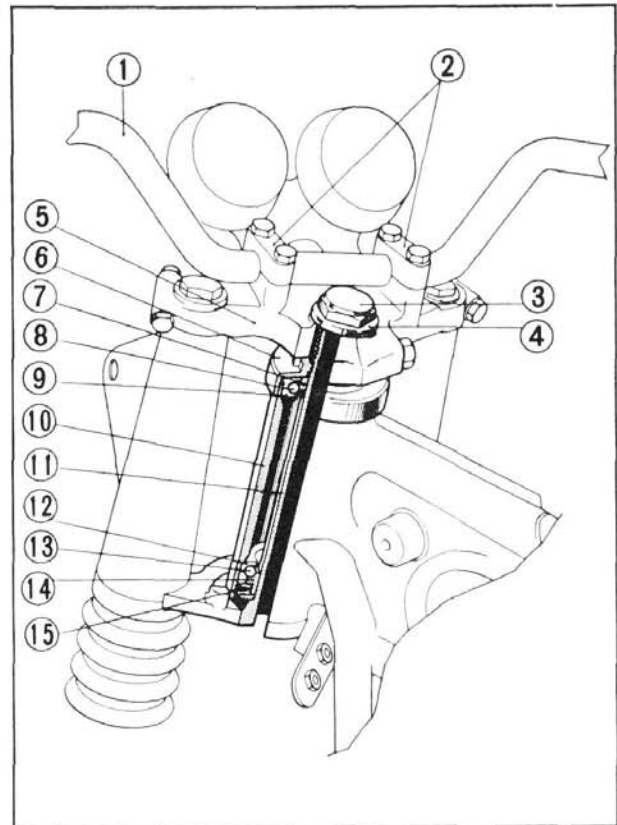


Fig. 11-1 ① Steering handle pipe
② Handle pipe holder
③ Steering stem nut
④ Steering stem washer
⑤ Fork top bridge
⑥ Steering head top thread
⑦ Steering top cone race
⑧ Steel ball
⑨ Steering top ball race
⑩ Steering head
⑪ Steering stem
⑫ Steering bottom ball race
⑬ Steel ball
⑭ Steering bottom cone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



Fig. 11-3 ① Upper handle holders
② Handle bar

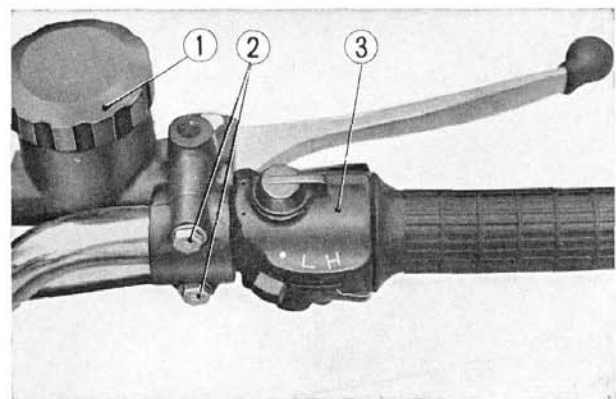


Fig. 11-2 ① Master cylinder body
② Cylinder body mounting bolts
③ Starter lighting ignition switch

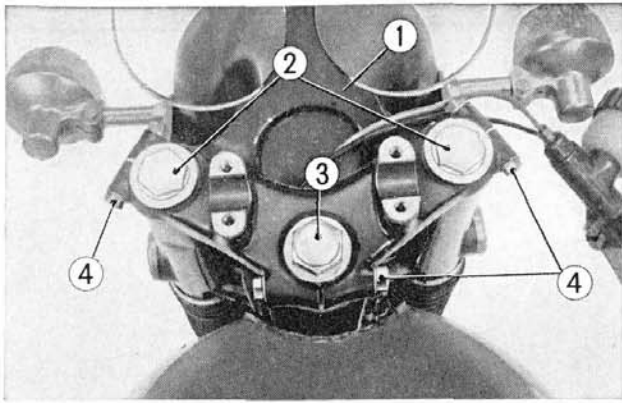


Fig. 11-4 ① Fork top bridge ③ Stem nut
② Front fork top bolts ④ 8mm setting bolts

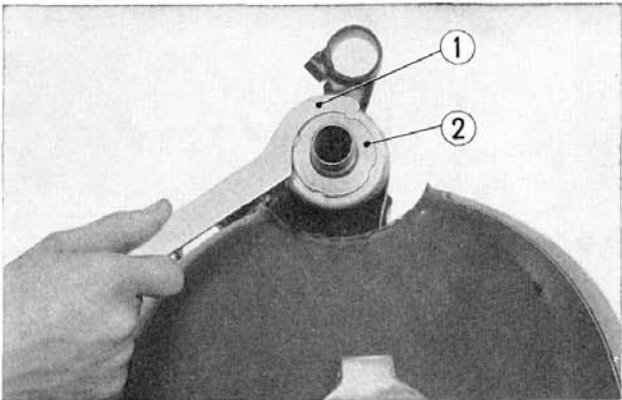


Fig. 11-5 ① Steering stem thread wrench
② Steering stem thread

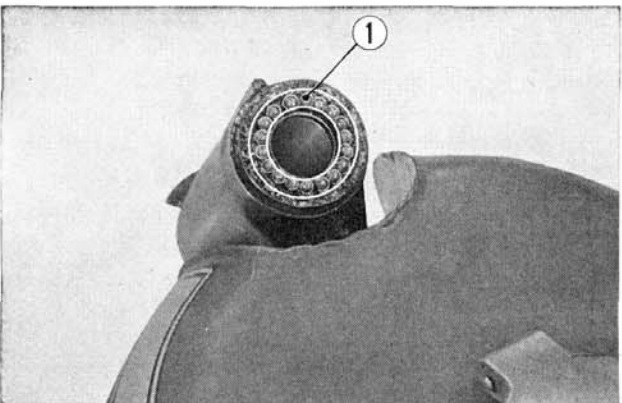


Fig. 11-6 ① Steel balls

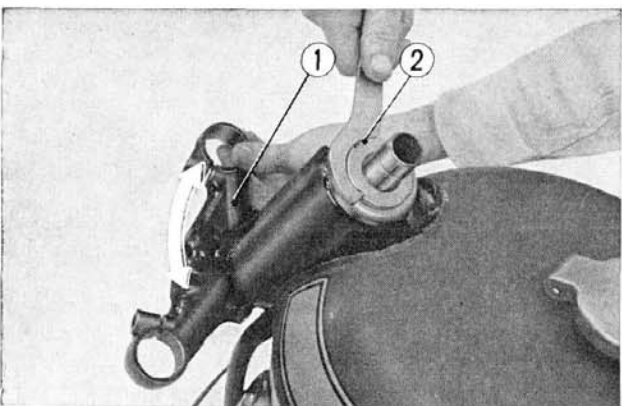


Fig. 11-7 ① Steering stem
② Steering stem thread

5. Loosen the speedometer/tachometer holding clamp and remove the speedometer/tachometer from the fork top bridge.
6. Loosen the stem nut, two front fork top bolts, three 8mm setting bolts and then remove the fork top bridge. (Fig. 11-4)
7. Place a support block under the engine to raise the front wheel off the ground and remove the front suspension in accordance with section 11-3 b. on page 120.
8. Remove the steering stem thread. Work can be facilitated by using the special wrench (Tool No. 07902-2000000). (Fig. 11-5)
9. Pull the steering stem out the bottom, exercising care not to lose the steel balls.

c. Inspection

1. Check the steering handle bar for damage and distortion.
2. Check the steering stem for distortion or cracks.
3. Check to make sure that there is adequate grease in the cone race and also check the steel balls and if found to be excessively worn, they should be replaced.

d. Reassembly

1. Apply a liberal amount of grease on the steering ball races and assemble the steel balls 18 on the upper side and 19 on the lower side. (Fig. 11-6)
2. Exercise care installing the steering stem into the head pipe so that the steel balls are not dropped. Install the top cone race and then screw on the steering stem thread so that there is no clearance between the steering stem and the head pipe in the vertical direction and that the handle turns lightly through the full range of travel. (Fig. 11-7)
3. Assemble the front fork in accordance with 11-3 d on page 121~122.

4. Install the front fork bridge, the stem nut, the two front fork bolts and then fix in place with three 8 mm bolts.
5. Install the speedo/tachometer unit and attach the drive cables.
6. Set the handle bar on the handle holder and mount in place with the upper handle holders.

Position the handle bar by aligning the punch marks on the handle bar to the upper surface of the handle holder. (Fig. 11-8)

7. Connect the electrical wires within the headlight case by matching the same colored wires.
8. Connect the throttle cable to the throttle grip pipe and then mount the throttle grip bracket on the handle. Install the lower bracket by positioning the dowel pin into the hole in the handle bar.
9. Connect the clutch cable to the clutch lever and mount the master cylinder bracket on the handle bar. The cables, wire harness and brake hose should be routed as shown in Fig. 11-9.

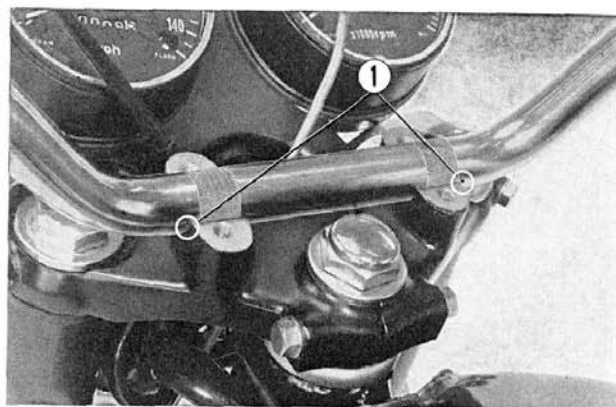


Fig. 11-8 ① Punch marks

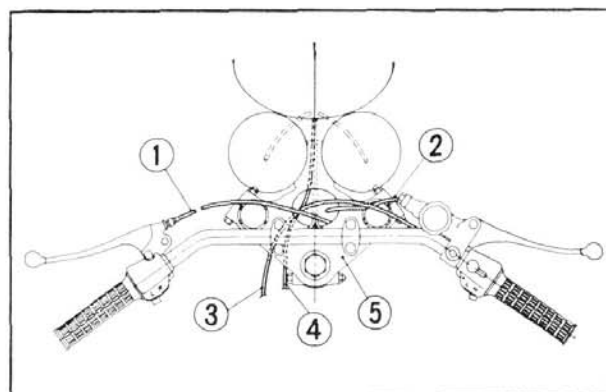


Fig. 11-9

- | | |
|--------------------|-------------------|
| ① Clutch cable | ④ Wire harness |
| ② Front brake hose | ⑤ Fork top bridge |
| ③ Throttle cable | |

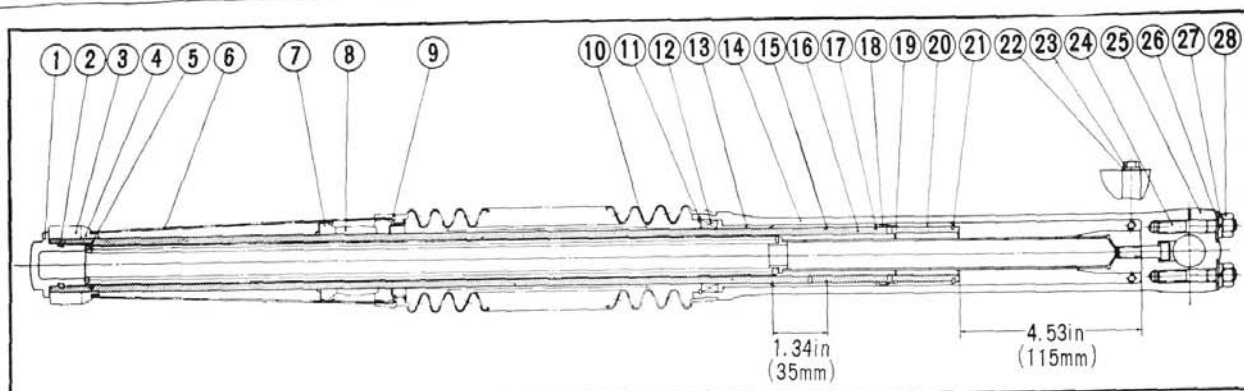
11-3 FRONT SUSPENSION

Piston type

a. Description

The front suspension is a telescoping oil damper type with an aluminum front fork bottom case used for lightness. (Fig. 11-10)

It consists mainly of a fork pipe ① complete with piston ④, a fork bottom case ③ and a cushion spring. On "compression", that is, when any downward load is imposed on the front fork, for example, under heavy front braking, the piston moves down, compressing the oil in chamber "A", and forcing it into chamber "B" through orifices "a" in the periphery of the fork pipe to lift damper valve ⑤ off its seat. On the other hand, the cushion spring, now compressed, exerts an upward reaction to move up the piston. The piston when so moved compresses the oil in chamber "B" and forces it back into chamber "A" through orifice "b" to provide damping action. On "full bump", or bump overcoming the capacity of the cushion spring, the pipe is moved down toward the bottom end of the bottom case, trapping the oil in the space between the pipe and tapered lock piece ⑥ to provide maximum damping. On "full rebound", the orifice "b" is covered by guide ③ and the oil is trapped within chamber "B" to provide damping on the extension side.



- ① Front fork bolt
- ② 23×2.8 "O" ring
- ③ Fork top bridge
- ④ Fork cover upper cushion
- ⑤ Front cushion spring
- ⑥ Front fork cover
- ⑦ Fork cover lower cushion
- ⑧ Steering stem
- ⑨ Front fork rib
- ⑩ Front fork boot

- ⑪ 47 mm circlip
- ⑫ 354611 oil seal
- ⑬ Front fork pipe guide
- ⑭ Front fork bottom case
- ⑮ Fork pipe stopper ring
- ⑯ Front fork pipe
- ⑰ Fork valve stopper ring
- ⑱ Front damper valve
- ⑲ Piston stopper ring
- ⑳ Front fork piston

- ㉑ Fork piston snap ring
- ㉒ Drain cock packing
- ㉓ 6mm hex bolt
- ㉔ 8mm stud bolt
- ㉕ Front axle holder
- ㉖ 8mm flat washer
- ㉗ 8mm spring washer
- ㉘ 8mm hex nut

Fig. 11-10

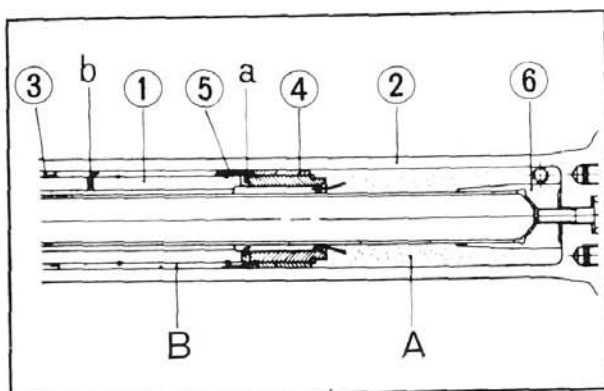


Fig. 11-10-1

- ① Front fork pipe complete
- ② Front fork bottom Case complete

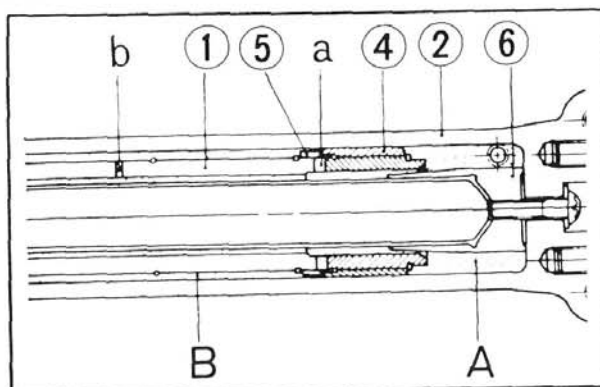


Fig. 11-10-2

- ③ Front fork pipe guide
- ④ Front fork piston
- ⑤ Front damper valve
- ⑥ Oil lock piece

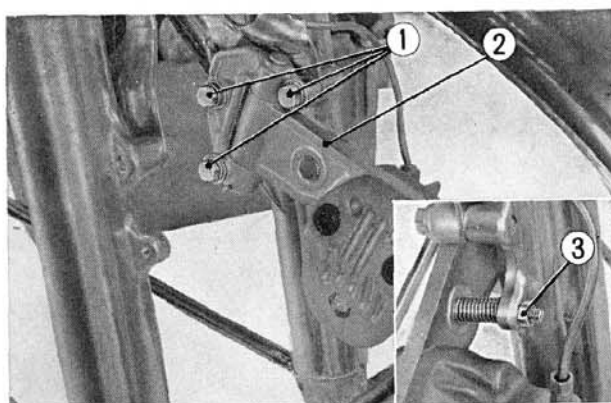


Fig. 11-11 ① Caliper setting bolts
② Caliper assembly ③ Adjuster nut

b. Disassembly

1. Remove the front wheel in accordance with section 13-1b. on page 132~133.
2. Remove the three caliper setting bolts and adjuster nut, and separate the caliper from the left front fork. (Fig. 11-11)
3. Loosen the 8×56 mm front fork pipe mounting bolts (located on the fork top bridge) and the 10×40 mm front fork pipe mounting bolts (located on the steering stem). Pull the front fork gently out the bottom. (Fig. 11-12)

4. Disassemble the front fork by removing the internal circlip with a circlip pliers and separating the front fork pipe from the bottom case (Fig. 11-13).
5. By removing the fork piston snap ring, the front fork piston and the front fork damper valve may be disassembled from the front fork pipe. (Fig. 11-14)

c. Inspection

1. Checking front fork oil

To maintain good riding characteristics and increase fork service life, the oil in the front fork should be changed periodically.

Unscrew the front fork drain plug at the bottom of the fork cylinder, drain the oil by pumping the forks while plug is out. Replace the plug securely after draining. (Fig. 11-15)

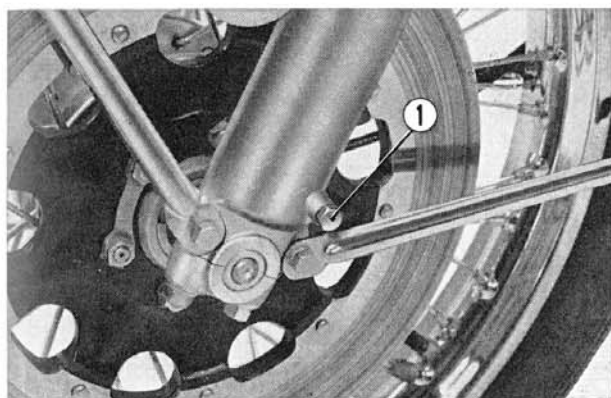


Fig. 11-15 ① Front fork drain plug

Remove the top filler plug and fill the front fork cylinder with 7.0~7.3 ozs. (220~230 cc) of premium quality oil of SAE 10 W-30 grade. (Fig. 11-16)

Securely tighten the top filler plug after filling.

2. Check the front fork assembly by locking the front brake and pumping the fork up and down vigorously.
 - Smooth cushion action.
 - Oil seepage around the cushion oil seals.

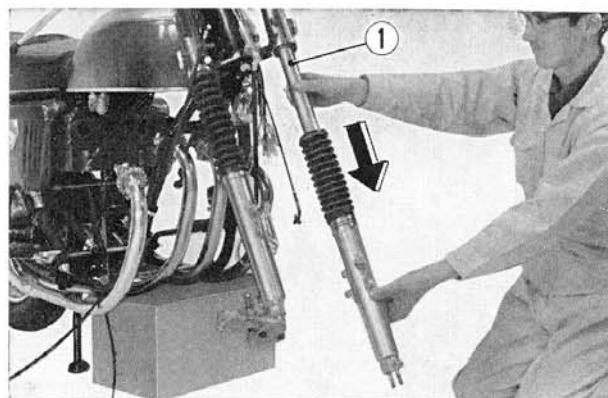


Fig. 11-12 ① Front fork

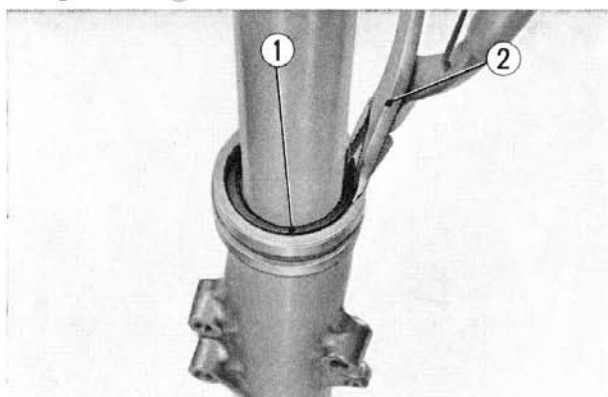


Fig. 11-13 ① Internal circlip ② Pliers

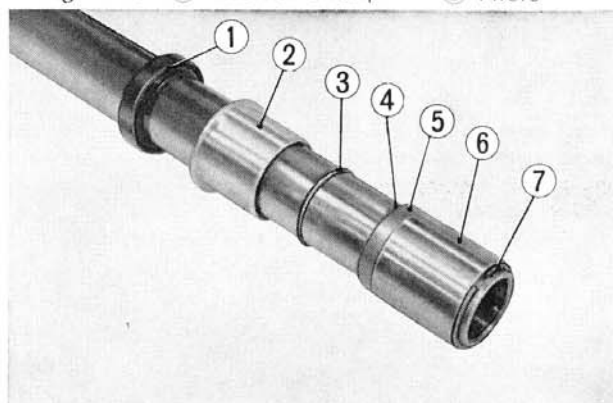


Fig. 11-14

- | | |
|---------------------------|-------------------------|
| ① 354611 oil seal | ⑤ Front damper valve |
| ② Front fork pipe guide | ⑥ Front fork piston |
| ③ Fork pipe stopper ring | ⑦ Fork piston snap ring |
| ④ Fork valve stopper ring | |

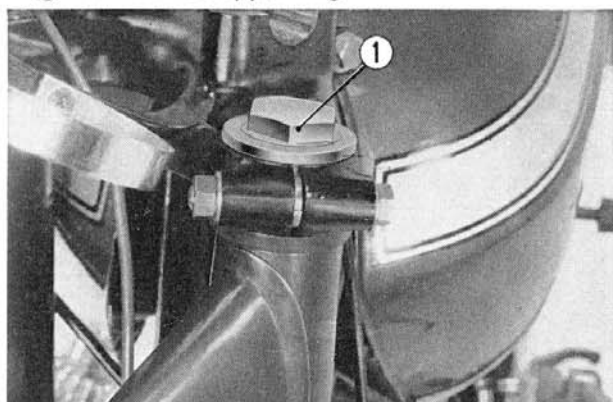


Fig. 11-16 ① Top filler plug

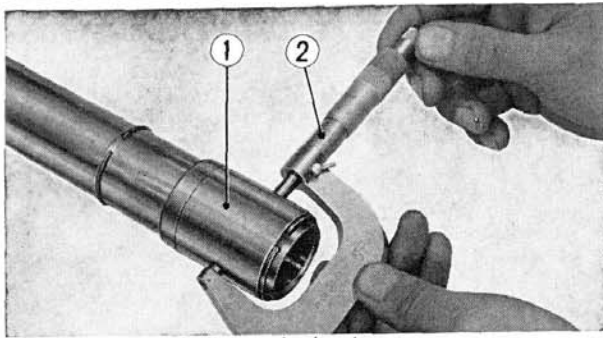


Fig. 11-17 ① Front fork piston
② Micrometer

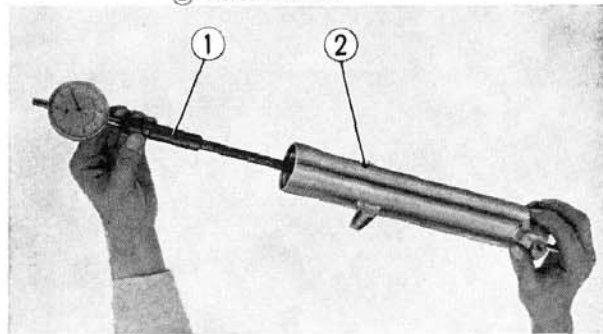


Fig. 11-18 ① Cylinder gauge ② Bottom case

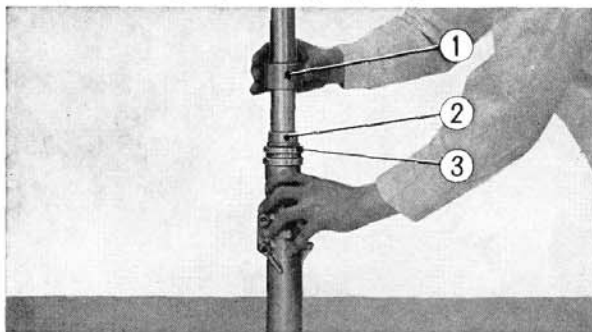


Fig. 11-19 ① Oil seal driving weight
② Oil seal driving guide
③ Oil seal

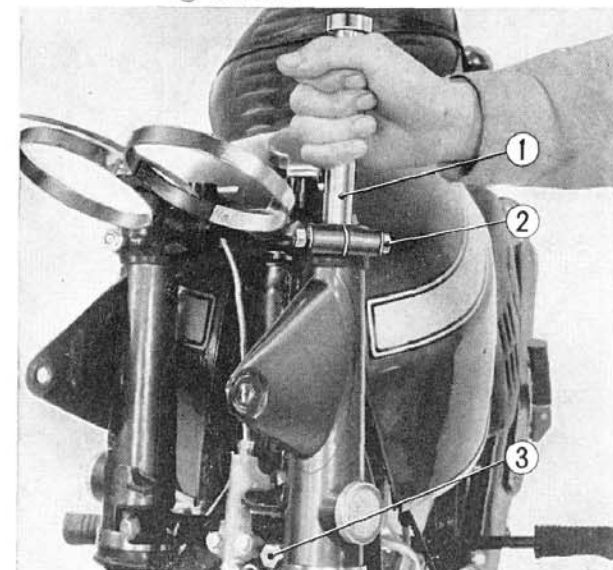


Fig. 11-20 ① Front fork assembling bar
② Front fork pipe setting bolt (8 mm)
③ Front fork pipe setting bolt (10 mm)

3. Measure the diameter of the front fork piston. Use a micrometer to perform this check and if it is found to be less than 1.551 in. (39.4 mm), the piston should be replaced. (Fig. 11-17)

4. Measure the inner diameter of the front fork bottom case. Use a cylinder gauge to perform this check and if it is found to be over than 1.562 in (39.68 mm), the front fork bottom case should be replaced. (Fig. 11-18)

d. Reassembly

1. Wash all the parts and then assemble the pipe guide, stopper rings, damper valve, piston and snap ring in that order on the front fork pipe. (Fig. 11-14)

2. Assemble the front fork pipe into the front fork bottom case and install the oil seal using the oil seal guide (Tool No. 07947-3290000). (Fig. 11-19)

Exercise care that the oil seal is not damaged during installations and install the circlip into the groove in the bottom case.

Note: To disassemble the front forks of motorcycles from Frame No. 1044650 to 2089878, proceed as follows:

- Replace the oil seals with new ones (double lip type) (Part No. 91255-341-305).

Replacement

- The employment of new oil seals abolished higherto used back-up rings due to the change in seal width.
- Apply a coat of oil to the seals and insert them from the piston side while rotating.

3. Install the front fork upper cover on the steering stem (above and below the cushion rubbers) and insert the front fork pipe assembly through the steering stem, and temporarily tighten with the 10mm front fork setting bolt. (Fig. 11-20)

4. Fill the front fork cylinder with 7.0~7.3 ozs (220~230 cc) of premium quality oil of SAE 10W-30 grade, and securely tighten the top filler plug after filling.

5. Properly tighten the front fork pipe setting bolts (8, 10 mm).

6. Adjust the front brake caliper by referring to page 147~148.

REAR SUSPENSION

GROUP

12

CONTENTS

12-1 GENERAL DESCRIPTION	123
DESCRIPTION	123
SPECIFICATIONS	123
DIAGNOSIS	124
12-2 REAR SHOCK ABSORBERS	124
a. Description	124
b. Disassembly	125
c. Inspection	125
d. Reassembly	125
12-3 REAR FORK	127
a. Description	127
b. Disassembly	127
c. Inspection	127
d. Reassembly	128

12-1 GENERAL DESCRIPTION

DESCRIPTIONS

The suspensions must not only absorb the vertical shock caused from the road conditions but must also be able to sustain applied force resulting from steering function. The rear suspension mechanism consists of the rear cushion and rear fork.

SPECIFICATIONS

Item	Standard value	Serviceable limit
Rear cushion spring		
Spring inner diameter	1.401~1.429 in. 35.7~36.3 mm	—
Free length	8.74 in. 222 mm	8.504 in. 216 mm
Coil diameter	0.276 in. 7 mm	—
Installation load	8.17 in./66.6 lbs 207.5 mm/30.2 kg	—
Tilt	within 1.5°	Over 2.5°

Item	Standard value	Serviceable limit
Rear fork		
Pivot bush inner diameter	0.8426~0.8447 in. 21.403~21.455 mm	0.8504 in. 21.6 mm
Center collar outer diameter	0.8412~0.8425 in. 21.367~21.400 mm	0.8386 in. 21.3 mm

DIAGNOSIS

Trouble	Probable Causes	Remedy
Soft suspension	1. Loss of spring tension 2. Excessive load	Replace
Hard suspension	1. Ineffective front cushion damper 2. Ineffective rear cushion damper	Replace Replace
Suspension noise	1. Cushion case rubbing 2. Interference between cushion case and spring 3. Damaged cushion stopper rubber 4. Insufficient spring damper oil (front and rear)	Inspect cushion spring and case Repair Replace Replace

12-2 REAR SHOCK ABSORBERS

a. Description

The rear suspension is a swing arm type with a large stroke of 3.43 in. (87 mm).

A De Carbon type rear damper is employed on the CB 750 is of a single cylinder double acting type. (Fig. 12-1)

This damper is, as shown in the figure below, a double-acting type single cylinder in which nitrogen gas and oil are used to give an optimum damping performance under all bumping and rebounding conditions. Over the damper is installed a dual-pitch spring which absorbs a wide range of vibrations or shocks and maintains the unit in accurate alignment. Another design feature is that the cushion is adjustable for different riding, loading and road conditions.

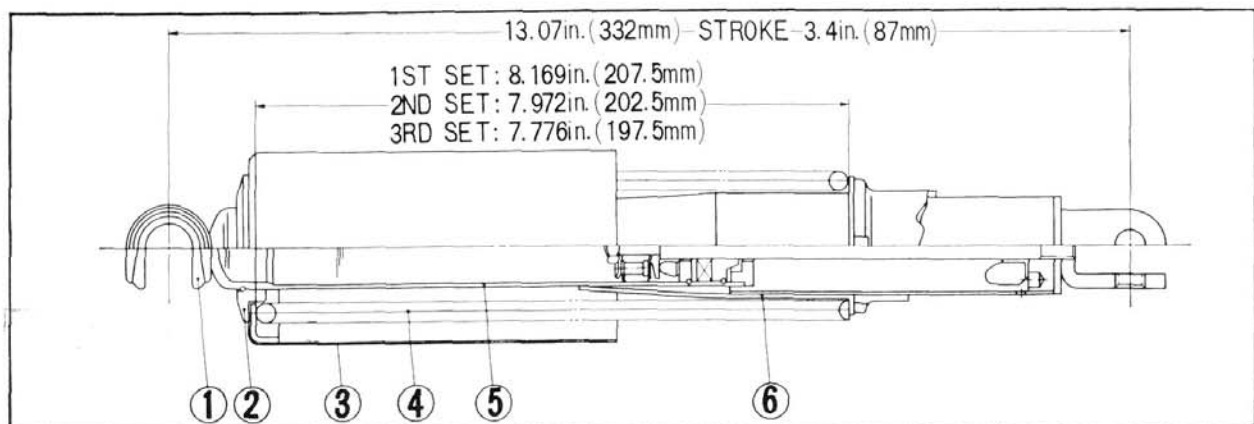


Fig. 12-1

- | | |
|----------------------------|-----------------------------|
| ① Joint rubber | ④ Rear cushion spring |
| ② Spring seat stopper | ⑤ Rear damper assembly |
| ③ Rear cushion upper cover | ⑥ Rear cushion spring guide |

Simple type of a construction the heat radiation is good, therefore, performance being especially good at low speed. Further, vibration stabilizes very quickly.

Air and oil mixture will not occur and function will not be deteriorates even when operated for extended period over adverse road condition.

The difference in pressure between the front and rear of the valve is small; since form does not form, noise is minimized; deterioration of the damping force is prevented. (Fig. 5-61)

The rear cushion employs a dual pitch spring, the section with the larger pitch absorbs the large vibration while the section with the smaller pitch absorbs the smaller vibration. This provides for exceptionally smooth riding. Further, there are three ranges of adjustment incorporated in the rear cushion, making it possible to adjust the cushion to the different riding, loading and road conditions.

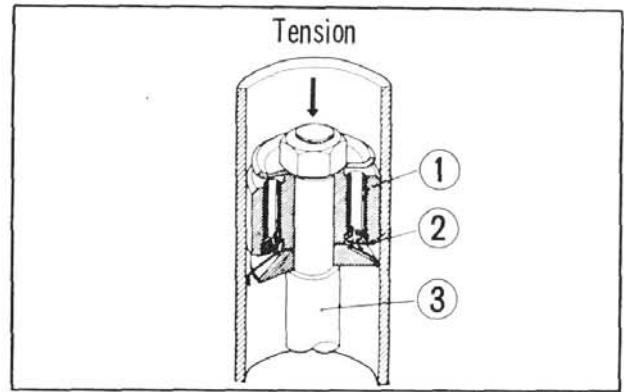


Fig. 12-1-1 ① Piston ② Valve ③ Rod

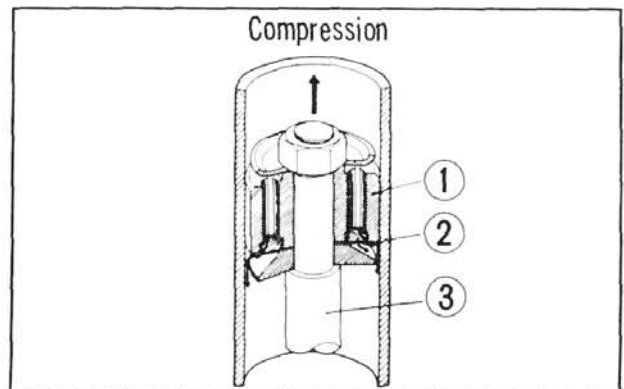


Fig. 12-1-2 ① Piston ② Valve ③ Rod

b. Disassembly

1. Unscrew the rear cushion cap nut and bolt, and remove the rear cushion from the frame. (Fig. 12-2)
2. Remove the rear cushion spring using the rear cushion disassembling tool (Tool No. 07959-3290000). (Fig. 12-3)

Note: The rear cushion contains nitrogen gas under high pressure, therefore, disassembly should not be attempted because possible injury may result.

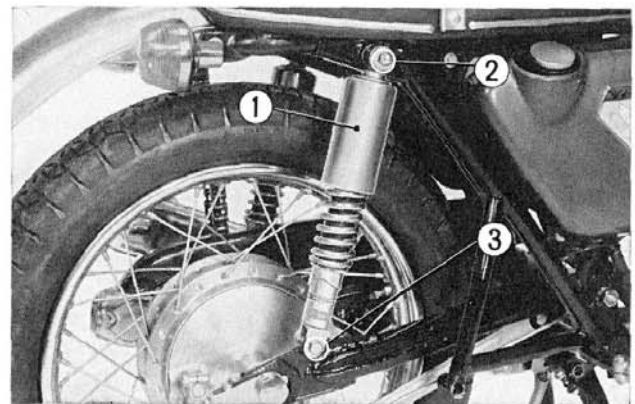


Fig. 12-2 ① Rear cushion ② Cap nut ③ Setting bolt

c. Inspection

1. Rear cushion spring free length

Measure the free length of the rear cushion spring using a vernier caliper, if it is under 18.11 in. (460 mm), the spring should be replaced with a new part. (Fig. 12-4)

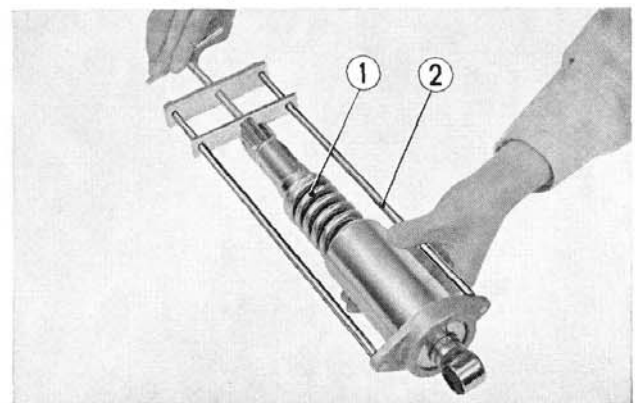


Fig. 12-3 ① Rear cushion spring ② Rear cushion disassembling tool

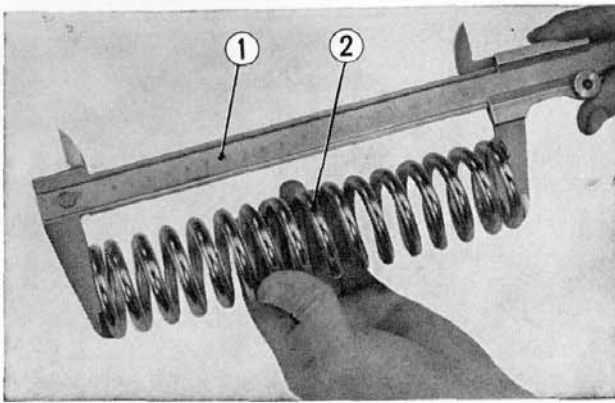


Fig. 12-4 ① Vernier caliper
② Rear cushion spring

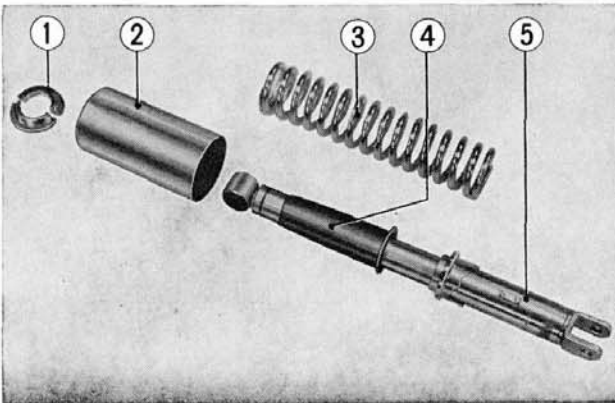


Fig. 12-5 ① Spring seat stopper
② Rear cushion upper case ③ Rear cushion spring
④ Rear cushion spring guide ⑤ Rear damper unit

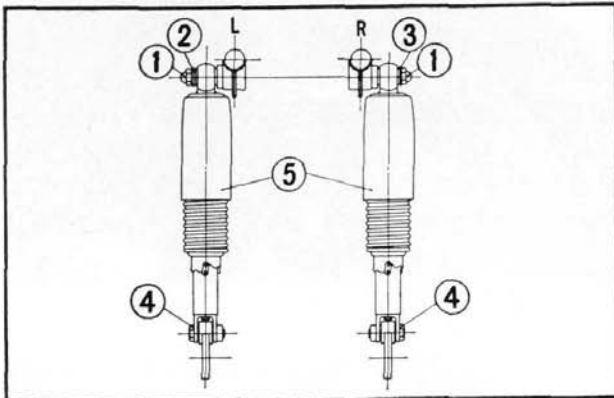


Fig. 12-6 ① 10 mm cap nuts ④ 10 mm bolts
② Side grip ⑤ Rear cushions
③ Washer

2. Rear cushion spring trueness

Set the spring up on its end on the surface gauge and measure the amount of tilt with a square and vernier caliper.

If the tilt is over 2.5° , the rear cushion should be replaced.

3. Inspect the cushion damper to insure that there is no fluid leakage.

4. Inspect the damper case and rod to insure that they are not damped or deformed.

5. Inspect the rear cushion stopper to insure that it is not damaged or deformed.

d. Reassembly

1. Assemble the under seat, spring and upper case to the damper. Compress the assembly using a rear cushion assembly tool (Tool No. 07959-3290000) and lock the assembly with spring seat stopper. (Fig. 12-5)

Note : Upon completing the assembly, actuate the cushion assembly by hand to make sure that they are not binding.

2. Mount the rear cushion on the frame with the rear cushion cap nut and bolt.

Note : After installing the cushion, check the alignment of the right and left cushion and also the alignment of the cushion mounting bolt for both right and left sides (Fig. 12-6).

12-3 REAR FORK

a. Description

The rear fork has a rectangular cross section made from pressed steel plate to provide greater rigidity at the wheel mounting which is a clamp design.

One end of the rear fork is fitted to a section on the frame and the other end is fitted to the frame through the rear cushion. When the rear wheel moves in the vertical direction, the section which is fitted to the frame becomes the pivot point and the rear wheel moves in an arc.

The close proximity of the pivot point to the drive sprocket poses negligible effect on the chain tension.

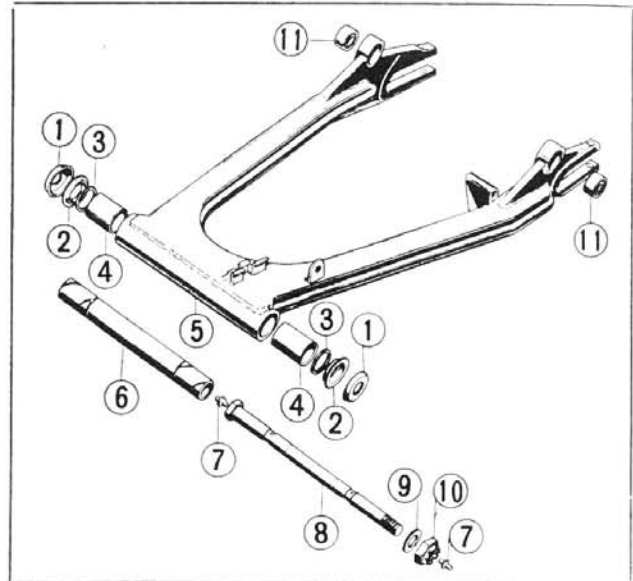


Fig. 12-7

- | | |
|---------------------------|----------------------------------|
| ① Dust seal cap | ⑦ Grease nipple |
| ② Pivot thrust bush | ⑧ Rear fork pivot bolt |
| ③ Rear fork felt ring | ⑨ Rear fork pivot bolt washer |
| ④ Rear fork pivot bush | ⑩ 14mm self lock nut |
| ⑤ Rear fork | ⑪ Rear cushion under rubber bush |
| ⑥ Rear fork center collar | |

b. Disassembly

1. The exhaust mufflers must first be removed before the rear fork can be removed.
2. Remove the cotter pin from the rear wheel axle, loosen the axle nut and remove the drive chain.
3. Unscrew the rear brake adjuster nut, the rear brake torque bolt and remove the axle to separate the rear wheel. (refer to page 137)
4. Unscrew the rear fork pivot nut and bolt, and then separate the rear fork from the frame. The rear fork side washer and the pivot collar can be removed. (Fig. 12-8)

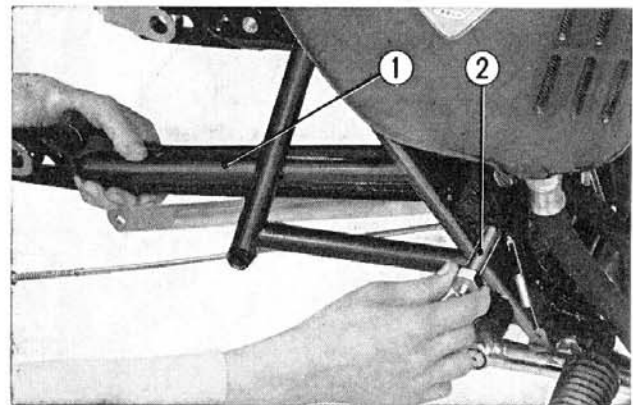


Fig. 12-8 ① Rear fork
② Rear fork pivot bolt

c. Inspection

1. Visually check the rear fork for bend and distortion, and if found to be excessive, it should be replaced with a new part.
2. Scratched and deformed part should be either repaired or replaced.
3. Measure the bores of the rear fork pivot bushing with a inner dial gauge and the outside diameter of the center collar with micrometer, and if they are not within the serviceable limit shown below, they should be replaced. (Fig. 12-9)

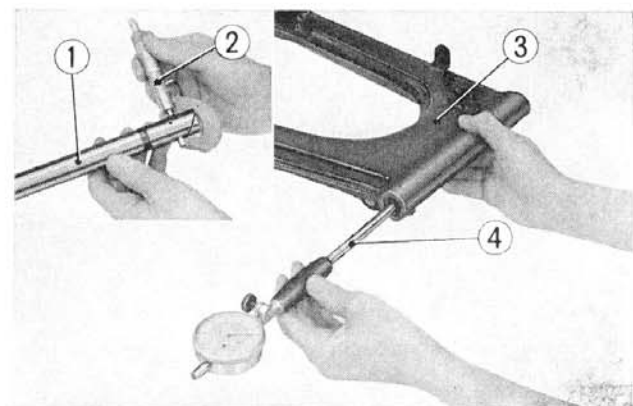


Fig. 12-9 ① Center collar
② Micrometer
③ Rear fork
④ Inner dial gauge

Item	Serviceable limit
Rear fork pivot bush inner diameter	0.858 in. (21.8 mm)
Rear fork center collar outer diameter	0.8452 in. (21.4 mm)

4. There are two lubrication points as shown in the **Fig. 19-18**. It is recommended that lubrication be performed in accordance with section 19 on page 185.

d. Reassembly

1. Apply a liberal amount of grease on the pivot collar and assemble it into the rear fork. Insert the pivot bolt from the right side while holding the dust seal caps on both sides of the rear fork, and then install and tighten the 14 mm self lock nut.
2. Install the rear wheel.
3. Install the drive chain.
4. When the assembly is completed, adjust the rear brake pedal and drive chain tension. (refer to page 149 and 186)

WHEELS, TIRES AND FINAL DRIVE

GROUP 13

CONTENTS

13-1 GENERAL DESCRIPTION	129
DESCRIPTION	129
SPECIFICATIONS.....	130
DIAGNOSIS.....	130
13-2 FRONT WHEEL AND TIRE	131
a. Description.....	131
b. Disassembly	132
c. Inspection	133
d. Reassembly.....	133
13-3 REAR WHEEL AND TIRE.....	135
a. Description.....	135
b. Disassembly	137
c. Inspection.....	138
d. Reassembly.....	138
13-4 FINAL DRIVE	139
a. Description.....	139
b. Disassembly	139
c. Inspection	139
d. Reassembly.....	139

13-1 GENERAL DESCRIPTION

DESCRIPTION

Carefully check to make sure that the front and rear wheels are properly aligned and both tires have specified air pressure.

If these are not properly maintained, it will be dangerous, especially when riding at a high speed.

SPECIFICATIONS

Item	Standard value		Serviceable limit	
Rim runout	Within	0.02 in. 0.5 mm	Over	0.08 in. 2.0 mm
Ball bearing diametrical runout (F)	Within	0.00012 in. 0.003 mm	Over	0.002 in. 0.05 mm
" (R)	Within	0.0002 in. 0.005 mm	Over	0.0024 in. 0.06 mm
Ball bearing axial runout	Within	0.0028 in. 0.07 mm	Over	0.004 in. 0.1 mm
Rear brake lining	7.0787~7.0866 in. 179.8~180 mm		7.205 in. 183 mm	
Rear brake shoe thickness	0.197 in. 5.0 mm		0.08 in. 2.0 mm	

DIAGNOSIS

Trouble	Probable Causes	Remedy
Heavy steering	Low tire pressure	Add air to the specified tire pressure 28.5 lbs/in ² /(2 kg/cm ²)
Front and rear wheel wobble	1. Worn front and rear wheel bearings. 2. Front or rear wheel runout of distorted. 3. Loose spoke. 4. Defective tire.	Replace bearing Repair or replace. Retorque. Replace.

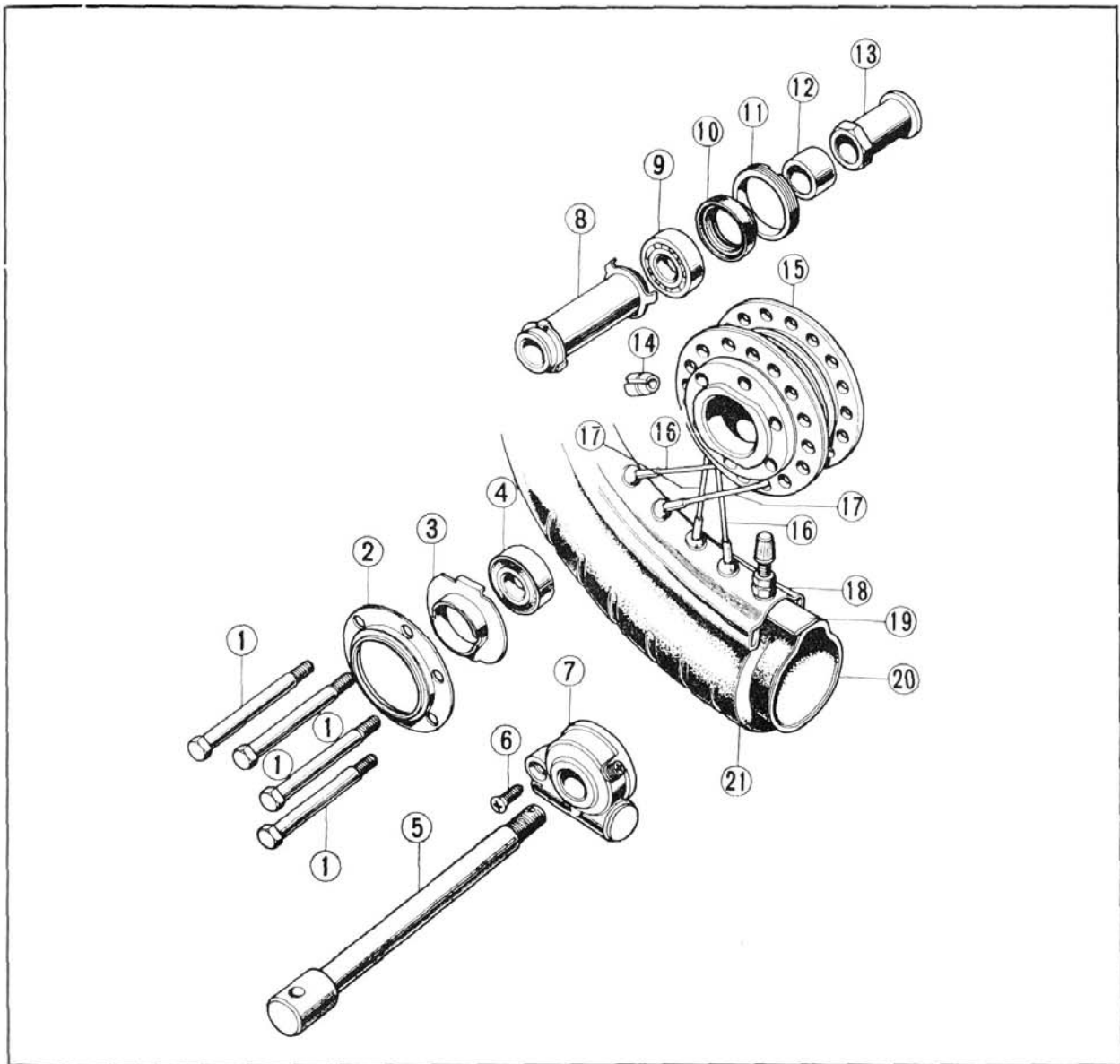
13-2 FRONT WHEEL AND TIRE

a. Description

For the front wheel, large size tire, 3.25-19, is used to provide a greater safety factor and a comfortable riding.

The cast aluminum hub houses the front brake disc, two 6302 Z ball bearings, front axle distance collar, dust seal and bearing retainer.

The Fig. 13-1 shows the front wheel component parts.



- ① 8×10 mm bolt
- ② Gear box retainer cover
- ③ Gear box retainer
- ④ 6302 Z ball bearing
- ⑤ Front wheel axle
- ⑥ 5×15 mm oval screw
- ⑦ Speedometer gear box

- ⑧ Front axle distance collar
- ⑨ 6302 Z ball bearing
- ⑩ 22368 dust seal
- ⑪ Front wheel bearing retainer
- ⑫ Front wheel collar
- ⑬ Front wheel axle nut
- ⑭ Wheel balancer

- ⑮ Front wheel hub
- ⑯ Front spoke A
- ⑰ Front spoke B
- ⑱ Front wheel rim
- ⑲ Front tire flap
- ⑳ Front wheel tube
- ㉑ Front wheel tire

Fig. 13-1

13-2 FRONT WHEEL AND TIRE

a. Description

For the front wheel, large size tire, 3.25-19, is used to provide a greater safety factor and a comfortable riding.

The cast aluminum hub houses the front brake disc, two 6302 Z ball bearings, front axle distance collar, dust seal and bearing retainer.

The Fig. 13-1 shows the front wheel component parts.

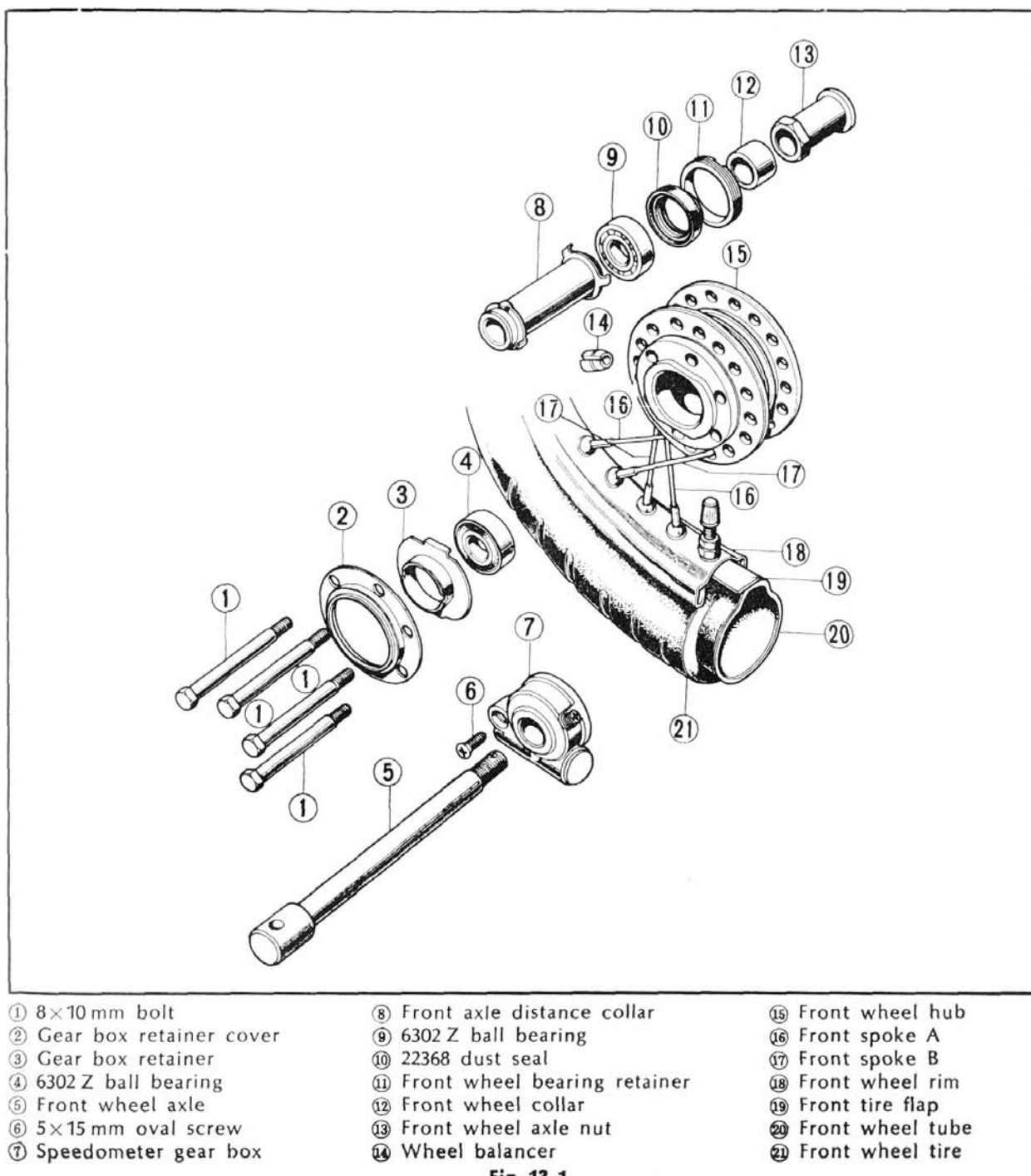


Fig. 13-1

ceed in this manner until the entire side of the tire casing is above and clear of the rim edge.

- e. The deflated inner tube can now be pulled from the tire casing and the inner tire casing inspected for damage or protruding sharp object etc. Locate and eliminate cause of flat or puncture.

c. Inspection

1. Check the flatness of front brake disc.

Place the disc on the surface plate and measure the flatness using the dial gauge. If the difference is greater than **0.012 in. (0.3 mm)**, the disc should be replaced with a new part. Further, the disc should also be changed if the thickness of the disc is less than **0.217 in. (5.5 mm)**. (Fig. 13-6)

2. Checking the rim runout

Pass a shaft through the front wheel and spin the wheel by hand, and read the runout at the rim using a dial gauge. If the runout is greater than **0.080 in. (2.0 mm)**, the rim should be either repaired or replaced. (Fig. 13-7)

3. Wheel ball bearing

Measure the axial and diametrical runout of the ball bearing with a dial gauge. If the value is over serviceable limit listed below the ball bearing should be replaced. (Fig. 13-8)

Item	Serviceable limit
Axial runout	0.004 in (0.1 mm)
Diametrical runout	0.002 in (0.05 mm)

d. Reassembly

1. Install the tire in accordance with following manner.

- a. Install a new inner tube of the correct size by inflating very slightly, leave the valve core in the valve stem.

- b. Inspect the wheel rim strip inner tube protector to see that it is in good condition and centered over the spoke nipples in the rim recess.

- c. Align the tire balance mark with the valve stem hole in the rim and insert the partially inflated inner tube into the tire casing. With the valve stem aligned with the valve stem hole in the rim.

- d. Work the inner tube into proper position in the tire casing and insert the valve stem through the valve stem hole in the rim. Install a valve stem retaining nut partially on to the valve stem. (1/4-1/2 in. do not tighten.) Remove valve core.

- e. Apply a light coating of tire mounting solution (liquid detergent can be used in an emergency) to each of the tire bead surfaces and between the free tire bead and rim edge.

- f. The tire can now be stepped into place using your heels. Placing both heels on the tire bead opposite the valve core and depressing the tire bead into place a slight amount with each step in opposite directions around the wheel.

- g. When 80~90% of the tire bead is in place, use a tire mounting mallet (heavy rub-

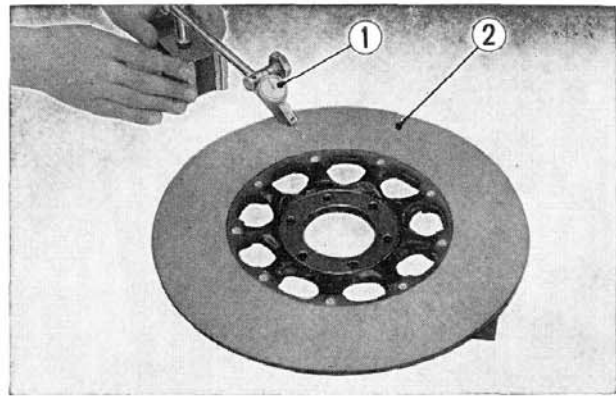


Fig. 13-6 ① Dial gauge
② Front brake disc

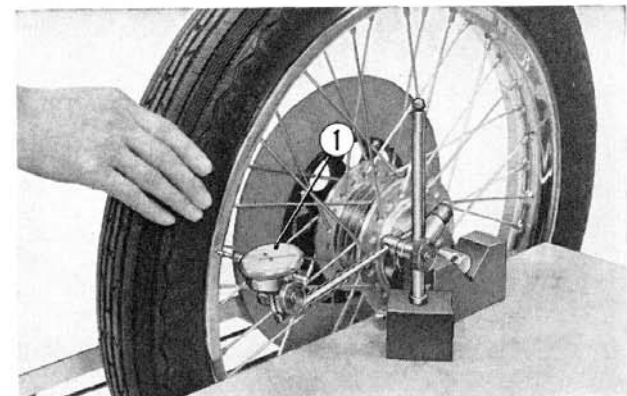


Fig. 13-7 ① Dial gauge

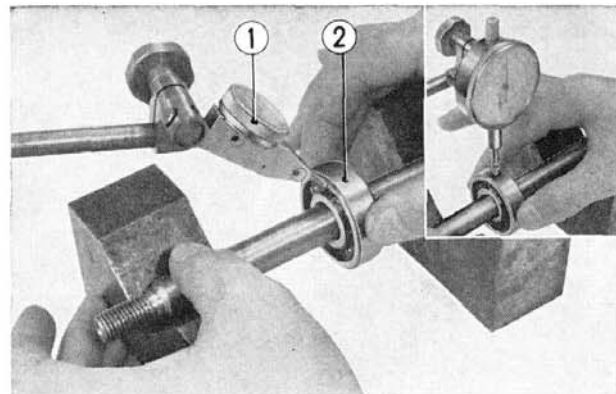


Fig. 13-8 ① Dial gauge
② Ball bearing

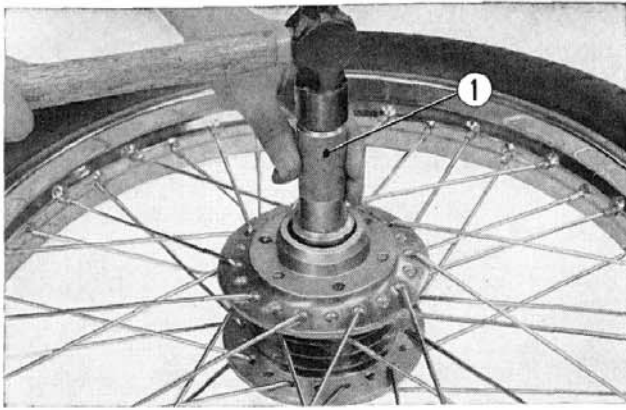


Fig. 13-9 ① Bearing driver

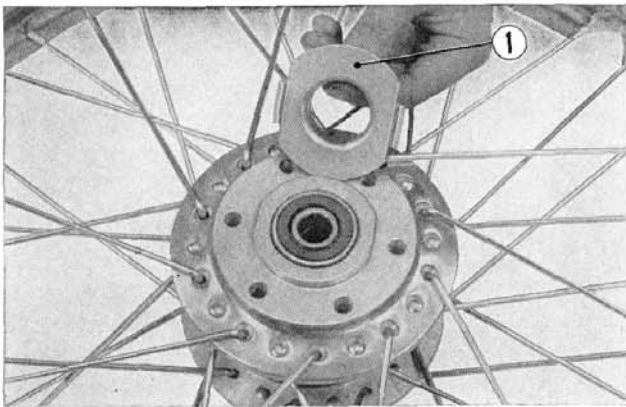


Fig. 13-10 ① Gear box retainer

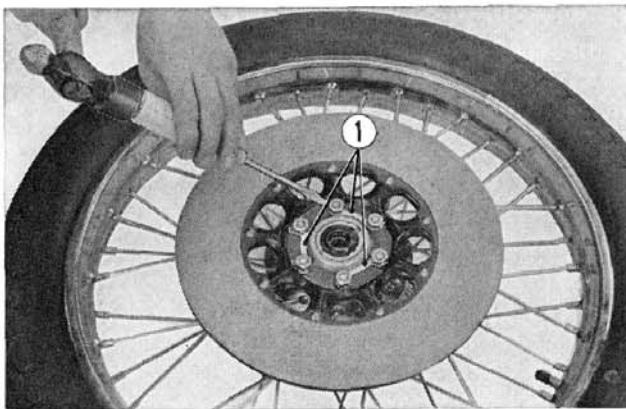
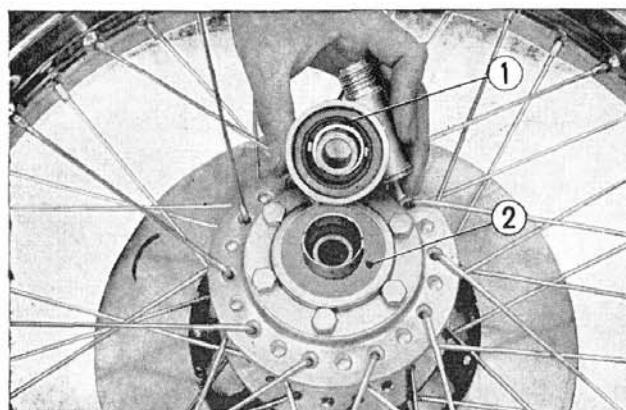


Fig. 13-11 ① Tongued washer

Fig. 13-12 ① Speedometer gear box
② Gear box retainer

ber, leather or plastic hammer) to force the remaining to section into position. Avoid using tire irons or screw drivers for this operation as inner tube punctures will result due to pinching with the tool.

- h. Insert the valve core and over inflate the standard pressure by approximately 10 psi. This will help to properly seat the tire beads into the rim. Inspect for proper tire bead seating and deflate the tire. Reinflate to the correct specified pressure 28.5 lb/in² (2.0 kg/cm²), and tighten the valve stem retaining nut lightly.
 - i. Recheck the tire pressure and install the valve stem cap.
 2. Drive the wheel bearing into the wheel using a bearing driver (Tool No. 07949~3000100). (Fig. 13-9)
 3. Install the dust seal into the front wheel bearing retainer, mount the front wheel bearing retainer into the wheel hub.
 4. Align the gear box retainer to the cutout in the wheel hub and install the gear box retainer cover from above, and install the six disc mounting bolts. Mount the disc of the opposite side and fix in place with the nuts. (Fig. 13-10)
- Note :** New tongued washers should be used and the tab on the washers bent up to lock. (Fig. 13-11)
5. Insert the front axle through the speedometer gear box from the right side and tighten the front axle nut. (Fig. 13-12)
 6. Mount the front wheel on the front forks and mount the axle holders and tighten the setting nuts.

7. Connect the speedometer cable to the gear box. (Fig. 13-13)

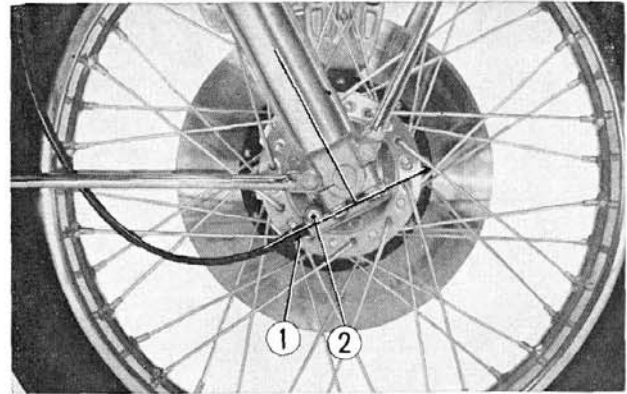


Fig. 13-13 ① Speedometer cable
② Setting screw

8. Balance the wheel (Fig. 13-22)

Perform the balancing in the following manner.

- a. Raise the wheel off the ground and lightly rotate.

Note: If the front wheel does not rotate freely, turn the front brake stopper bolt clockwise until the front wheel rotate freely.

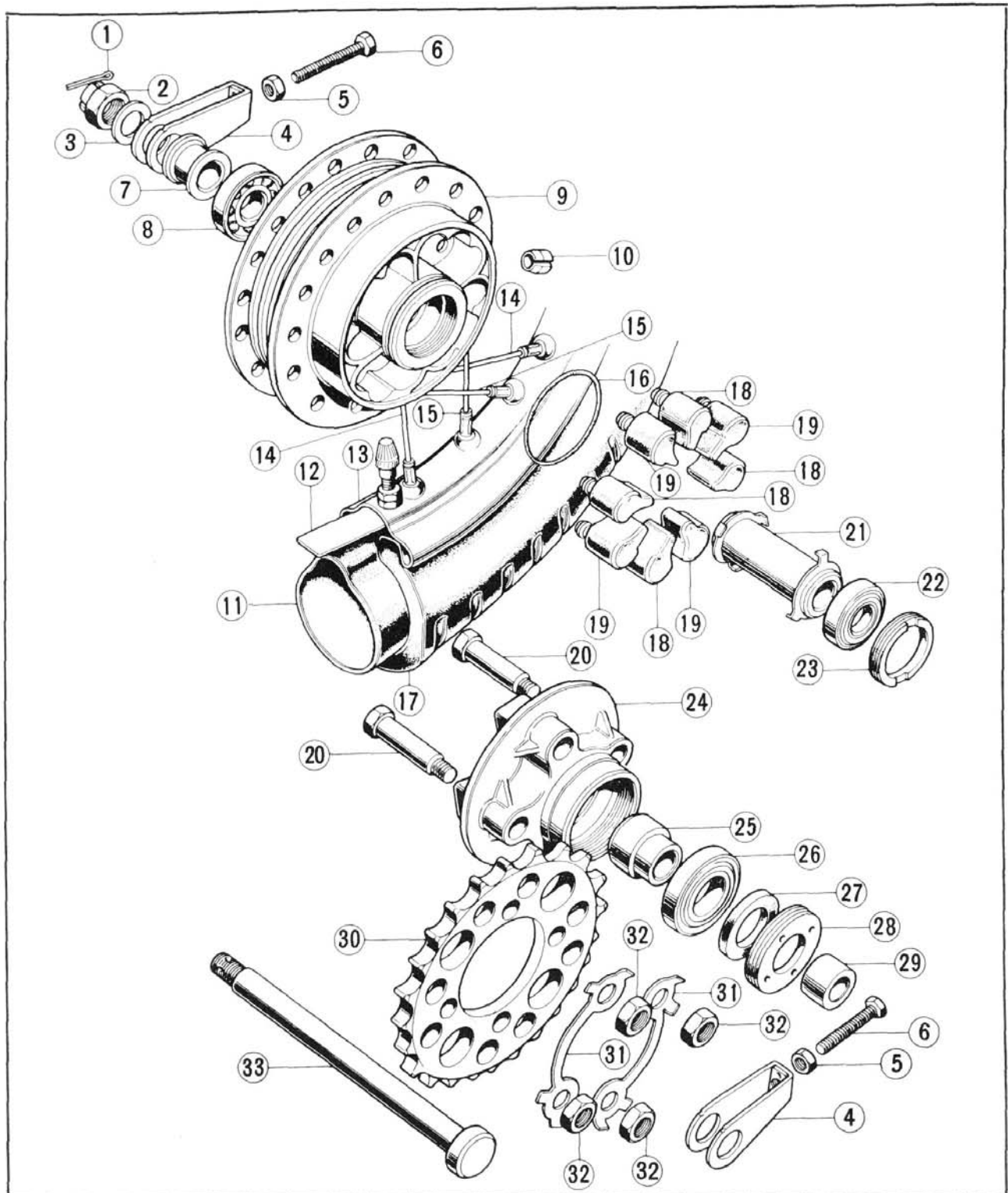
- b. Lightly attach an appropriate weight on the spoke adjacent to the nipple which stop at the highest position. Weights are available in four types, 5 gr, 10 gr, 15 gr and 20 gr.
- c. The wheel is in proper balance if the wheel after spinning will come to rest at no definite position.
- d. If the wheel does not statically balance, change the weight and reperform items b and c.
- e. Lock the weight with pliers after completing the balance.

13-3 REAR WHEEL AND TIRE

a. Description

For the rear wheel, a tire size, 4.00-18, is used to provide a greater safety factor. The wheel consists of an aluminum casting rear wheel hub which contain two 6304 ball bearings, final drive flange and brake panel.

Also, eight rear wheel dampers are mounted in the wheel hub to reduce the vibration or shock from the final driven sprocket. Fig. 13-14 shows the rear wheel component parts.



- ① 4×30 Cotter pin
- ② Rear axle nut
- ③ 18.5×34 washer
- ④ Chain adjuster
- ⑤ 8 mm hex nut
- ⑥ Chain adjusting bolt
- ⑦ Rear brake panel side collar
- ⑧ 6304 ball bearing
- ⑨ Rear wheel hub
- ⑩ Wheel balancer
- ⑪ Rear wheel tube

- ⑫ Rear tire flap
- ⑬ Rear wheel rim
- ⑭ Rear spoke B
- ⑮ Rear spoke A
- ⑯ 68×2.6 "O" ring
- ⑰ Rear wheel tire
- ⑱ Left rear wheel damper
- ⑲ Right rear wheel damper
- ⑳ Driven sprocket fixing bolt
- ㉑ Rear axle distance collar
- ㉒ 6304 ball bearing

- ㉓ Rear wheel bearing retainer
- ㉔ Final drive flange
- ㉕ Rear axle sleeve
- ㉖ 6305 ball bearing
- ㉗ 34×56×9 Oil seal
- ㉘ Rear wheel bearing retainer
- ㉙ Rear wheel side collar
- ㉚ Final driven sprocket
- ㉛ 12 mm tongued washer
- ㉜ 12 mm hex nut
- ㉝ Rear wheel axle

Fig. 13-14

b. Disassembly

1. Place the motorcycle on the main stand.
2. Remove the rear brake adjusting nut and brake rod from the brake arm. (Fig. 13-15)
3. Remove rear brake stopper arm lock pin, nut, flat washer, spring washer and bolt. (Fig. 13-16)
4. Remove the cotter pin from the right side of the rear axle and loosen the axle nut. (Fig. 13-17)
5. Loosen the drive chain adjusting bolt lock nuts, back out the abjuster bolts and turn the chain adjusters downward. Remove the rear fork cap fixing bolts and fork caps. (Fig. 13-17)
6. Push the wheel forward, lift the chain off the sprocket, then pull the wheel rearward, clear of the rear fork.
7. Remove the rear wheel from the frame.
8. Unlock the tongued washers, remove the nuts and the driven sprocket can then be removed. (Fig. 13-18)
9. Remove the rear wheel bearing retainer, and remove the bearing from the wheel hub. (Fig. 13-19)

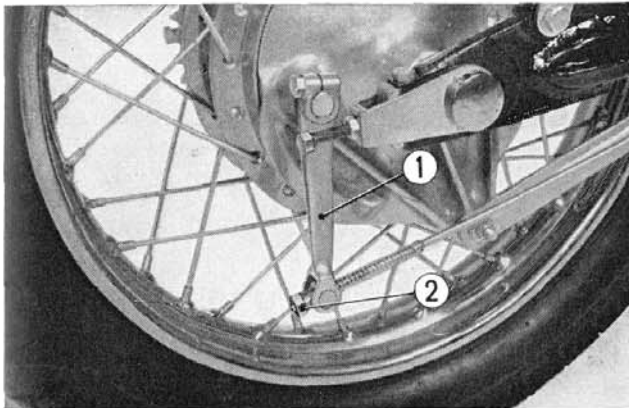


Fig. 13-15 ① Rear brake arm
② Rear brake adjusting nut

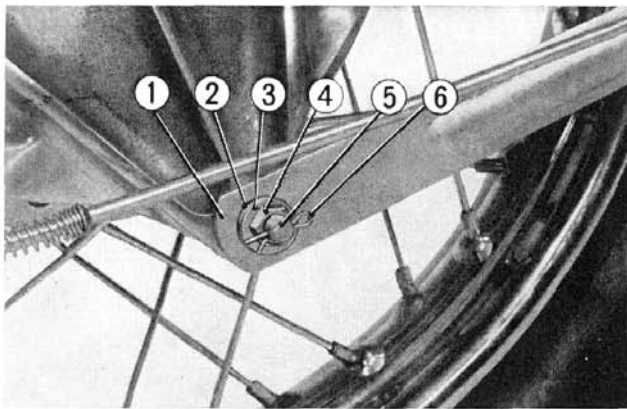


Fig. 13-16 ① Rear brake stopper arm
② 10 mm spring washer
③ 8 mm flat washer
④ 8 mm nut
⑤ Rear brake panel stopper bolt
⑥ Lock pin

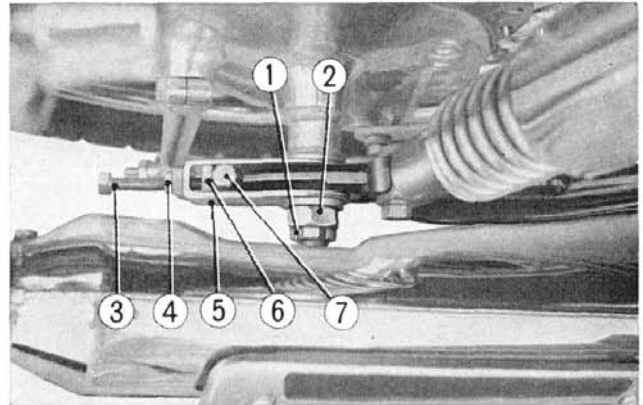


Fig. 13-17 ① Cotter pin ⑤ Chain adjuster
② Rear axle nut ⑥ Fork cap
③ Drive chain adjusting bolt ⑦ Fork cap fixing bolt
④ Lock nut

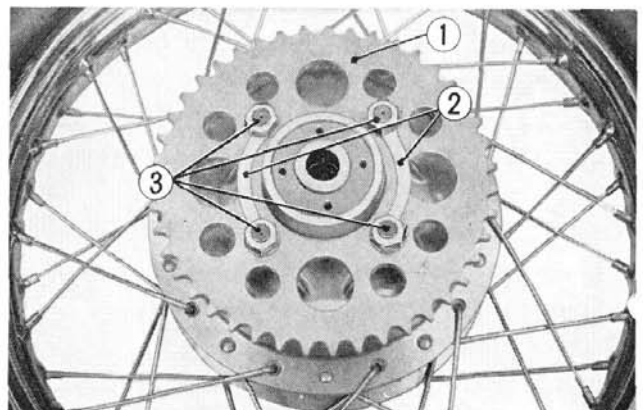


Fig. 13-18 ① Final driven sprocket
② Tongued washers
③ Sprocket setting bolts

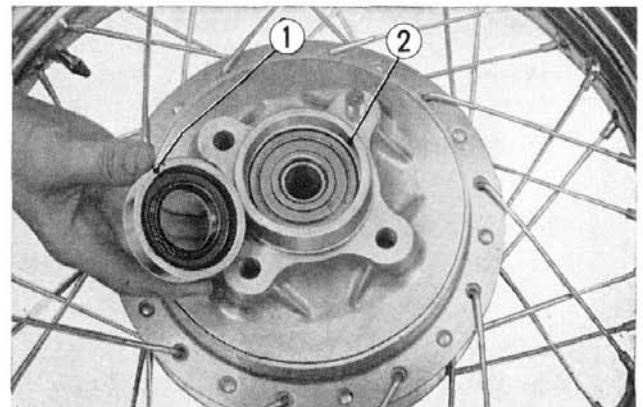


Fig. 13-19 ① Rear wheel bearing retainer
② 6304 ball bearing

10. Remove the two cotter pin, washer and then the rear brake shoes can be removed from the rear brake panel. (Fig. 13-20)

c. Inspection

1. Rear brake lining
Refer to section 14-3 c on page 148.
2. Rear brake shoes
Refer to section 14-3 c on page 148.
3. Wheel ball bearing (Fig. 13-8)
Measure the axial and diametrical runout of the ball bearing with a dial gauge. If the value is over serviceable limit listed below the ball bearing should be replaced.

Item	Serviceable limit
Axial runout	0.004 in. (0.1 mm)
Diametrical runout	0.002 in. (0.05 mm)

d. Reassembly

1. Install the rear brake shoes on the rear brake panel and install the washer, two cotter pins and bend the pins.
2. Clean the inside of the drum so that it is free of oil, dust and other foreign objects, and then install the brake panel.
3. Mount the bearing retainer on the wheel hub, install the driven sprocket with the mounting nuts and bend up the tab on the locking washer to prevent loosening.
4. Install the rear wheel on the frame.
5. Assemble the torque link bolt, washers, nut and lock pin on the rear brake panel. Install the brake lever rod on the brake arm and install the brake adjusting nut.
6. Adjust the drive chain tension with the adjuster bolt so that there is a slack of **0.40 to 0.80 in. (10~20 mm)**, at the center of the chain. After completing the adjustment tighten the axle nut and lock with a cotter pin. (Fig. 13-21)
7. Adjust rear brake pedal free play. (refer to page 48).

Note: At any time the front or rear wheel is removed, take the opportunity to thoroughly inspect the suspension components, brake friction linings and wheel assemblies. Pay particular attention to the condition of the wheel bearings, wheel rim, tire bead seating and spoke tension.

8. Balance the wheel
Perform the balancing in the following procedures. (Fig. 13-22)
 - a. Raise the wheel off the ground and lightly rotate.
 - b. Lightly attach an appropriate weight on the spoke adjacent to the nipple which stop at the highest position. Weights are available in four types, 5 gr, 10 gr, 15 gr and 20 gr.
- c. The wheel is in proper balance if the

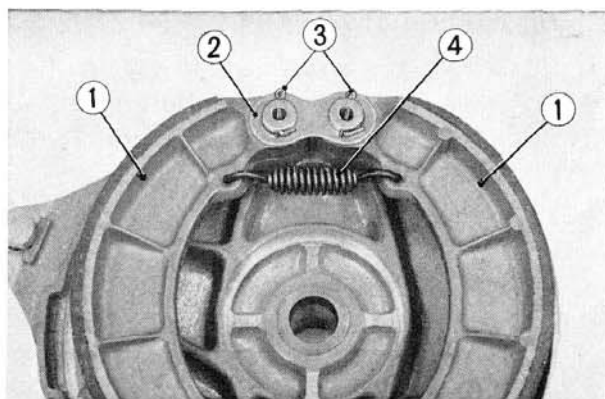


Fig. 13-20

- ① Rear brake shoes ③ 25×20 cotter pin
② Anchor pin washer ④ Brake shoe spring

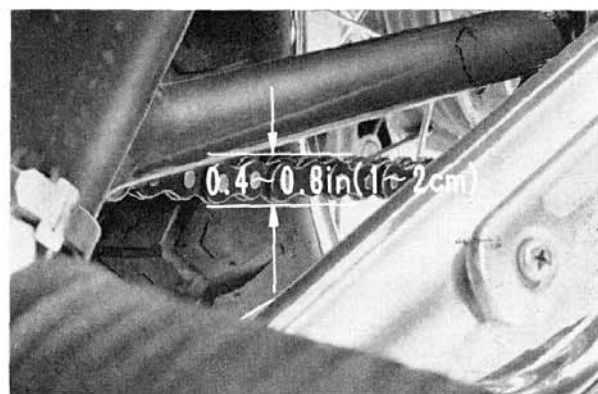


Fig. 13-21

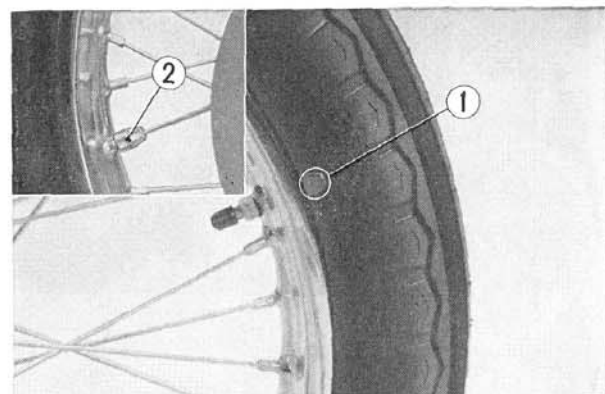


Fig. 13-22

- ① Balance mark
② Balance weight

- wheel after spinning will come to rest at no definite position.
- d. If the wheel does not statically balance, change the weight and reperform items b and c.
- e. Lock the weight with pliers after completing the balance.

13-4 FINAL DRIVE

a. Description

The power from the engine is transmitted from the final drive sprocket by the drive chain to the final driven sprocket mounted on the rear wheel and turns the rear wheel.

b. Disassembly

1. Remove the rear crankcase cover.
2. Remove the joint clip with a pliers to disconnect the chain. (Fig. 13-23)
3. Disconnect the chain by separating the retainer plate and retainer, and remove the chain from the sprocket.
4. For the procedure on the removal of the final drive sprocket, refer to page 137, rear wheel removal section.

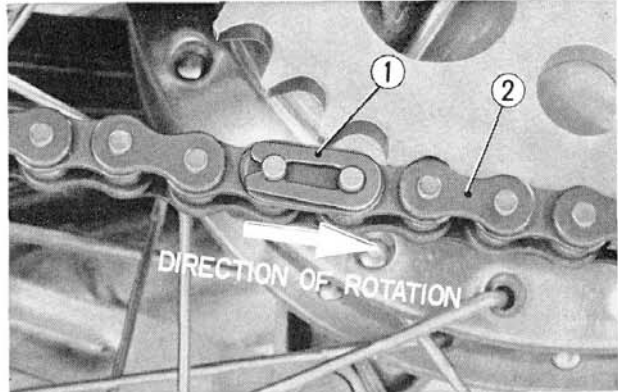


Fig. 13-23 ① Joint clip
② Drive chain

c. Inspection

1. Check the chain stretch

Hang the chain by one end and measure the entire length of the chain between the two pin holes. If the stretch of the chain is computed to be greater than **0.4 in (10 mm)** for one meter of length, the chain should be replaced. (Fig. 13-24)

2. Check for any cracks in the chain.
3. Visually inspect the sprocket teeth and replace the sprocket if there are any broken teeth or excessively worn teeth.
4. If the chain is excessively dirty, clean the drive chain by referring to page 187.

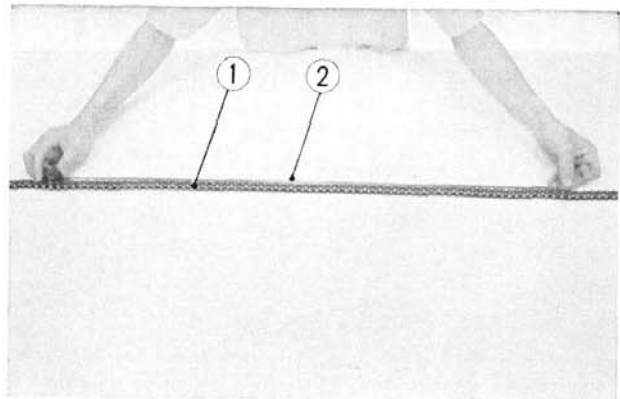


Fig. 13-24 ① Drive chain
② Scale

d. Reassembly

1. Reassembly is performed in the reverse order of disassembly, however, exercise care on the following points:
 - a. After reassembly, perform the drive chain adjustment by referring to page 178.
 - b. The drive chain clip must be installed so that the cutout is toward the trailing end.

BRAKES

GROUP

14

CONTENTS

14-1 GENERAL DESCRIPTION	141
SPECIFICATIONS	141
DIAGNOSIS	142
14-2 FRONT BRAKE	142
a. Description	142
b. Disassembly	143
c. Inspection	145
d. Reassembly	146
14-3 REAR BRAKE	148
a. Description	148
b. Disassembly	148
c. Inspection	148
d. Reassembly	148

14-1 GENERAL DESCRIPTION

SPECIFICATIONS

Item	Standard value	Serviceable limit	
Front brake disc thickness	0.272~0.279 in 6.9~7.1 mm Max. 0.004 in	under	0.217 in 5.5 mm
Front brake disc deflection	0.1 mm	over	0.012 in 0.3 mm
Master cylinder inner diameter	0.5512~0.5529 in 14.0~14.043 mm	over	0.553 in 14.055 mm
Master cylinder piston diameter	0.550~0.5506 in 13.957~13.984 mm	under	0.549 in 13.940 mm
Caliper cylinder inner diameter	1.503~1.504 in 38.18~38.20 mm	over	1.504 in 38.215 in
Caliper cylinder piston diameter	1.505~1.515 in 38.115~38.48 mm	under	1.500 in 38.105 mm

DIAGNOSIS

Trouble	Probable Causes	Remedy
Defective brake	<ol style="list-style-type: none"> Front brake <ul style="list-style-type: none"> Insufficient brake fluid. Air in the brake system. Worn brake pad. Worn piston. Worn or distorted front brake disc. Brake lever out of adjustment. Rear brake <ul style="list-style-type: none"> Worn brake lining. Worn brake shoe or poor contacts. Worn brake cam. Wet brake from water or oil. Worn brake shaft. Brake pedal out of adjustment. 	<p>Add brake fluid. Bleed brake system Replace pad Replace piston Replace disc</p> <p>Readjust</p> <p>Replace Replace Replace Clean Replace Readjust</p>

14-2 FRONT BRAKE

a. Description

The CB 750 employs a hydraulically operated disc brake on the front wheel which provides smooth and stable braking from slow to high speed.

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

Operation takes place in the following sequence. (Fig. 14-1)

- When the front brake lever ① is gripped, the cam ② at the base of the brake lever will actuate the master cylinder ③ and pressurizes the fluid within chamber A.
- Pressurized fluid in the system actuates the stop light switch ⑧ installed in the 3-way joint ⑦, and pad A ⑪.

The pressure built-up within chamber B forces pad A ⑪ against disc to produce braking. As the caliper assembly is pivoted to the front fork housing, the reaction from pad A ⑪ is transmitted to pad B ⑭.

- The clearance of 0.002~0.004 in (0.05~0.1 mm) between the disc and the pad to be consistent with the wear of the pad. When hydraulic pressure is applied against the back of the piston, the piston seal first deforms and as the piston moves further, the piston slides over the piston seal until the pad contacts the disc (Fig. 14-2). When the hydraulic pressure is released, the deformed piston seal will return to its normal shape, and consequently, pulls the piston away from the disc by the amount of the piston seal deformation.
- When the brake lever is released, the spring within the master cylinder returns the primary cup and the piston to their original positions, pressure within the brake system is relieved.

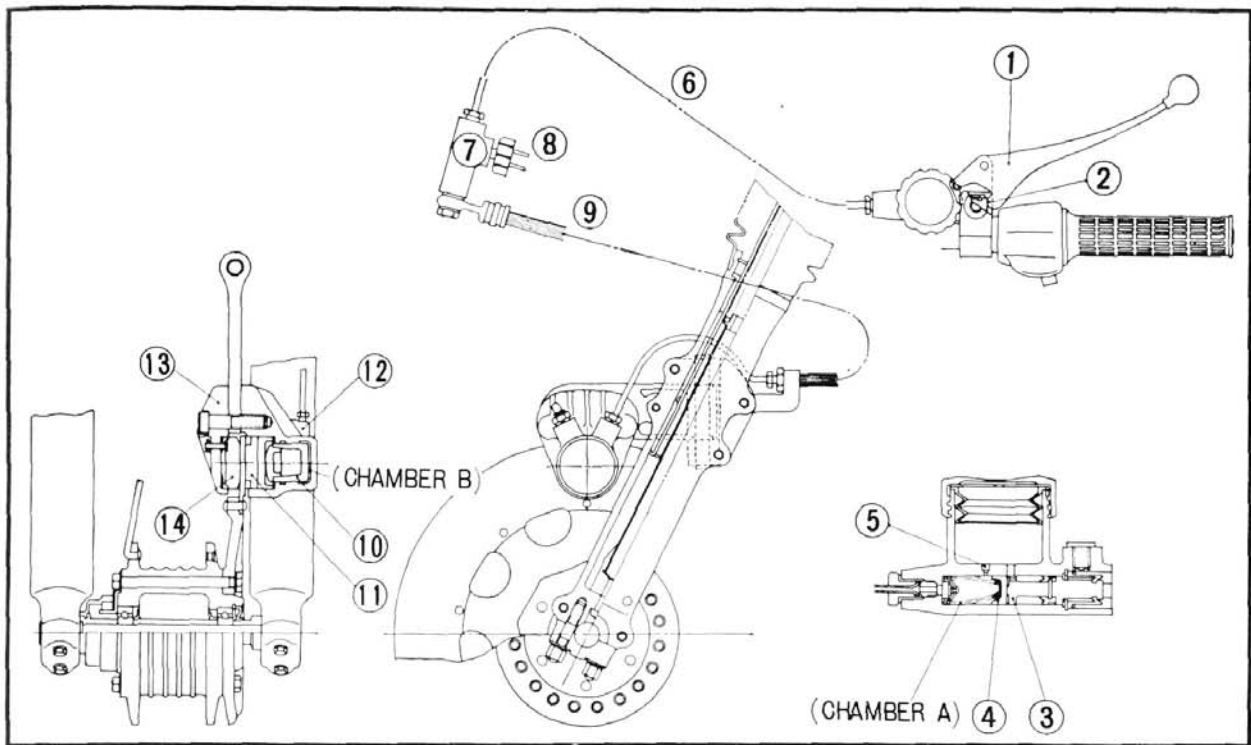


Fig. 14-1 ① Front brake lever
② Front brake lever cam
③ Master cylinder
④ Primary cup
⑤ Fluid passage

⑥ Front brake hose B
⑦ Three way joint
⑧ Stoplight switch
⑨ Front brake hose
⑩ Piston

⑪ Pad A
⑫ Caliper A
⑬ Caliper B
⑭ Pad B

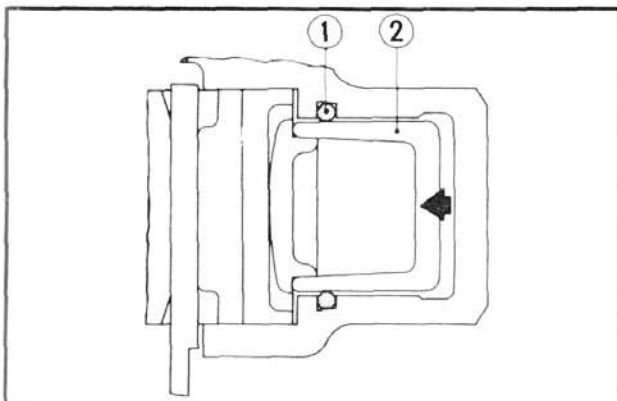


Fig. 14-2 ① Piston seal
② Piston

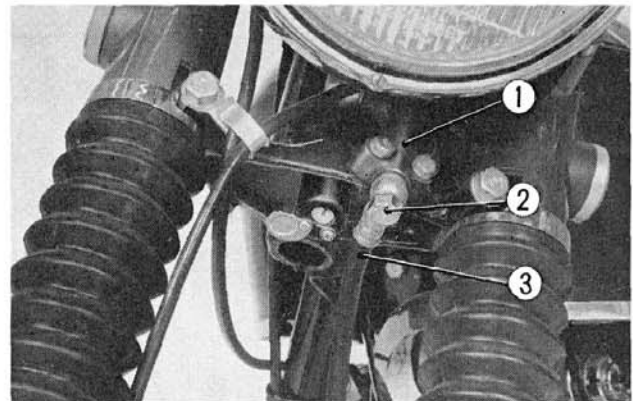


Fig. 14-3 ① Joint ③ Oil hose
② Oil bolt

b. Disassembly

1. Remove the front wheel by referring to page 132.
2. Disconnect the front brake hose at the joint by removing the oil bolt. (Fig. 14-3)
3. Unscrew the three caliper mounting bolts from the fork bottom case, and remove the caliper assembly.

To remove caliper B, unscrew the two hollow head set bolts and this will also permit caliper A to remove. (Fig. 14-4)

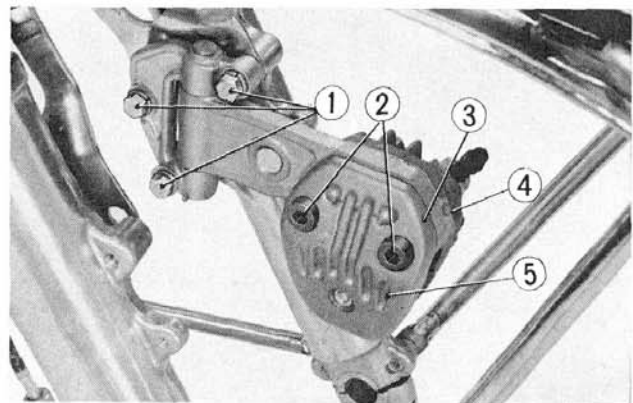


Fig. 14-4 ① Caliper mounting bolts
② Hollow head set bolts
③ Caliper ⑤ Caliper B
④ Caliper A

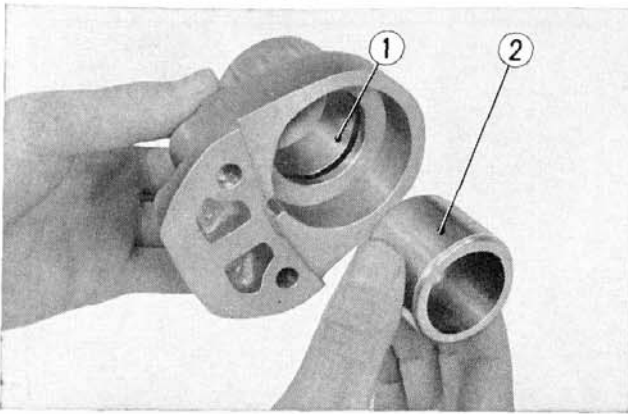


Fig. 14-5 ① Caliper A ② Piston

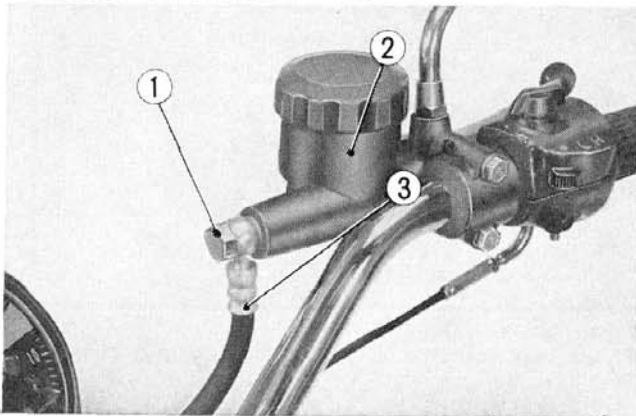
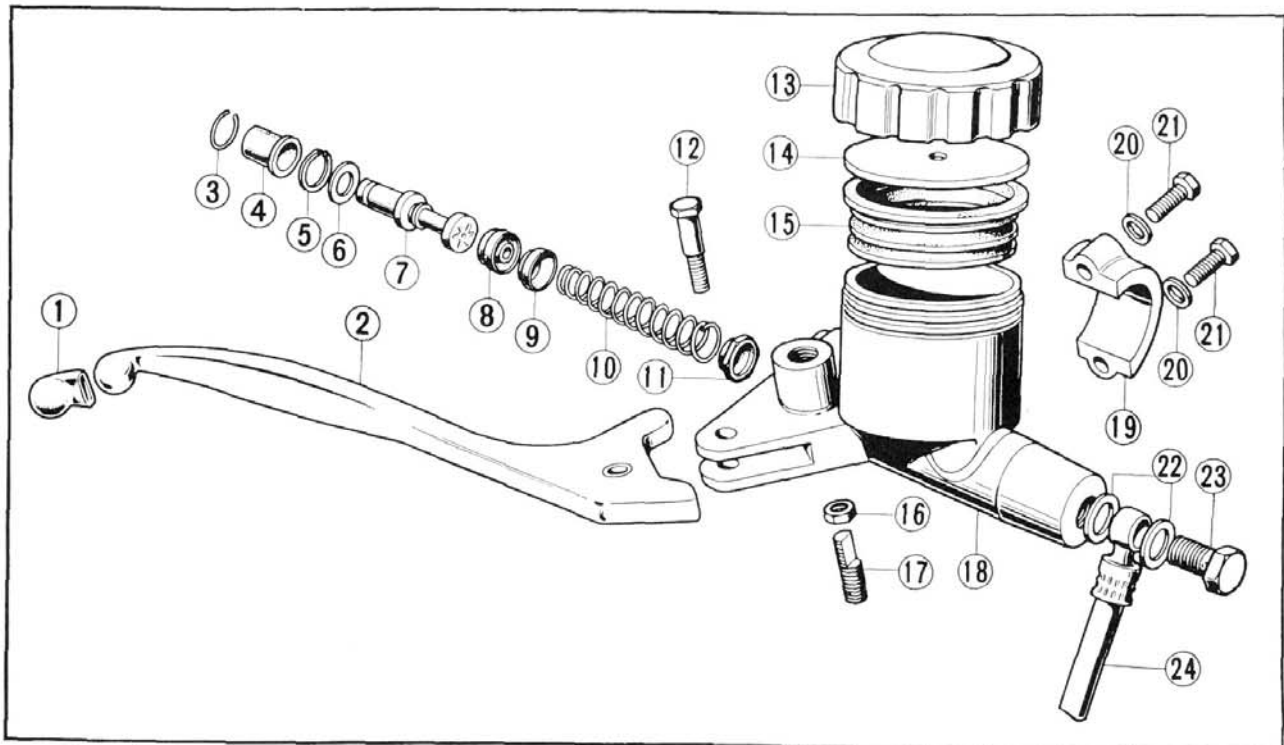


Fig. 14-6 ① Oil bolt ② Master cylinder ③ Oil hose

4. Remove the pad A, pad seat and cylinder piston from caliper A. (Fig. 14-5)
5. Remove the pad B from the caliper B by removing the cotter pin.
6. The master cylinder assembly removal can be performed in the following manner. First unscrew the oil bolt at the master cylinder. (Fig. 14-6)
7. Unscrew the two master cylinder setting bolts and remove the master cylinder from the right side handle grip.
8. Remove the stopper washer and boot from the master cylinder body. (Fig. 14-7)



- ① Brake lever cap
- ② Brake lever
- ③ Stopper washer
- ④ Boot
- ⑤ 18 mm internal circlip
- ⑥ 10.5 mm washer
- ⑦ Piston
- ⑧ Secondary cap

- ⑨ Primary cap
- ⑩ Spring
- ⑪ Check valve
- ⑫ Handle lever pivot bolt
- ⑬ Oil cup cap
- ⑭ Master cylinder plate
- ⑮ Diaphragm
- ⑯ 8 mm hex nut

- ⑰ Lever adjusting bolt
- ⑱ Master cylinder body
- ⑲ Master cylinder holder
- ⑳ 6 mm spring washer
- ㉑ 6 mm hex bolt
- ㉒ Oil bolt washer
- ㉓ Oil bolt
- ㉔ Front brake hose

Fig. 14-7

9. Remove the circlip from the master cylinder body using the special circlip pliers (Tool No. 07914-3230000). (Fig. 14-8)
10. Next, remove 10.5 mm washer, piston, secondary cup, primary cup, spring and check valve. (Fig. 14-7)

c. Inspection

1. Brake friction pads

If the clearance between the front of the caliper and brake disc face becomes **0.06~0.08 in. (1.5~2 mm)**, friction pads should be replaced with new Honda genuine friction pads. (Refer to page 185)

Both friction pads (the one which is on the caliper piston and the other on the opposite side) should be changed in set at the same time.

2. Front disc brake inspection

Raise the stand, push the motorcycle, apply the brake lever and check to make sure that the front brake is fully operational. If a large stroke of the lever is required before the braking becomes effective, the cause may be either low brake fluid in the system or air may be present in the system; in which case, check the reservoir and replenish the fluid if necessary or if air bleeding is required, refer to the section on bleeding of braking system (page 138~139). This should automatically correct the level breaking stroke.

However, if the length of the free stroke is excessively large, brake lever adjustment may be necessary.

Loosen the brake lever adjusting lock nut and turn the adjusting bolt to obtain the proper play.

After completing the adjustment, do not forget to tighten the lock nut. (Fig. 14-9)

3. Caliper cylinder piston

Accurately measure the caliper cylinder using inside dial gauge, and the piston using a micrometer. When the clearance between piston and the cylinder is greater than **0.004 in. (0.11 mm)**, the worn parts

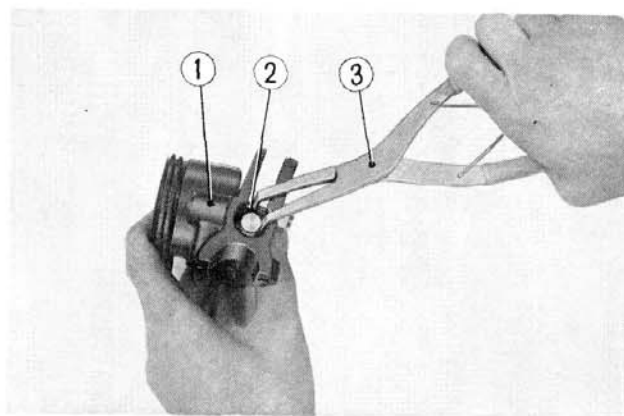


Fig. 14-8 ① Master cylinder body
② Circlip
③ Special pliers

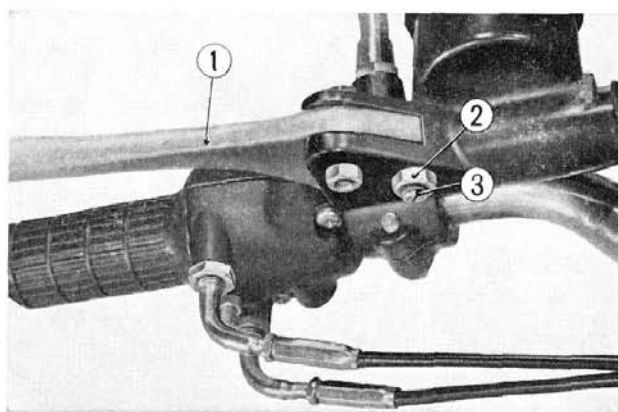


Fig. 14-9 ① Front brake lever
② Lock nut
③ Brake lever adjusting bolt

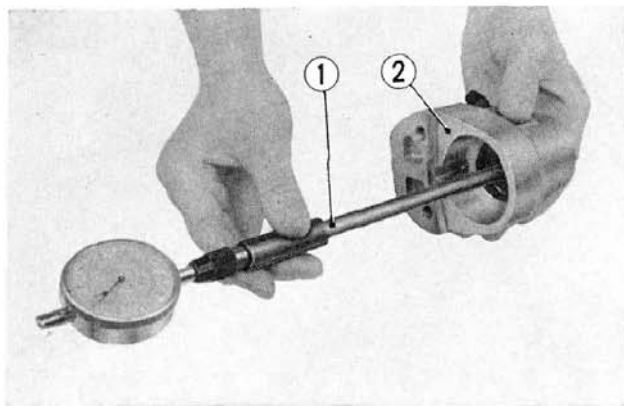


Fig. 14-10 ① Cylinder gauge
② Caliper cylinder

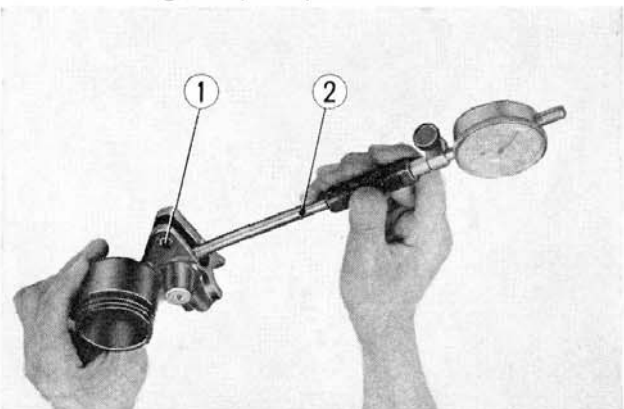


Fig. 14-11 ① Master cylinder body
② Inside dial gauge

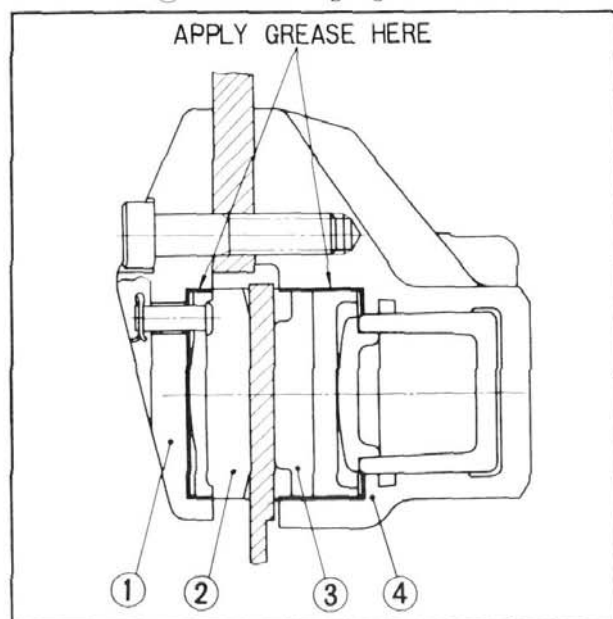


Fig. 14-12 ① Caliper B ③ Pad A
② Pad A ④ Caliper B

should be replaced. (Fig. 14-10)

Inspecting item	Serviceable limit
Cylinder	Replace if beyond 1.504 in. (38.215 mm)
Piston	Replace if under 1.500 in. (38.105 mm)

4. Master cylinder piston (Fig. 14-11)

Accurately measure the cylinder using an inside dial gauge, and the piston using a micrometer. If the clearance between the cylinder and piston is greater than **0.0045 in. (0.115 mm)**, the worn parts should be replaced.

Inspecting item	Serviceable limit
Master cylinder	Replace if beyond 0.553 in. (14.055 mm)
Master cylinder piston	Replace if under 0.549 in. (13.940 mm)

5. Check seal of the caliper piston and if found to be damaged, replace with a new part.

6. Check the oil hose for damage, if it is defective, replace it with new part.

d. Reassembly

1. Before mounting the pads A and B, apply a small amount of the specified grease (0.3~0.5 g) evenly on the caliper as shown in Fig. 14-12. When mounting the pads, take care not to smear the braking surface of the pad with grease. The applied grease serves to prevent dust and water from entering the pad sliding surface, as well to lubricate the sliding surface in order to ensure the smooth operation of the pads.

Note: Use silicon sealing grease (temperature range of $-67\sim 392^{\circ}\text{F}$, $-55\sim 200^{\circ}\text{C}$). Do not use molybdenum grease known as brake grease.

2. Mount the component parts into the caliper and assemble it on the front fork bottom case.

3. Install the front wheel (Refer to page 133~134).

4. Bleeding the brake system

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. This procedure is best performed by two mechanics.

a. Remove the dust cap from the bleeder valve and attach bleeder hose. (Fig. 14-13)

Place the free end of the bleeder hose into a glass container.

- b. Remove the reservoir cap and fill the reservoir with **DOT 3** or **SAE J1703a BRAKE FLUID**. Place the cap on the reservoir to prevent the entry of dust. (Fig. 14-14)
- c. As shown at right, attach a rubber of about 15mm thick to the end of the handle grip to decrease the stroke as measured at the tip of the handle lever.

Rapidly 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. 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.

- d. Remove the bleeder hose, tighten the bleeder valve and install the bleeder valve dust cap. Tighten the reservoir cap after filling brake fluid to proper level.

- e. Check for proper effect of bleeding and absence of leaks while holding pressure against the brake lever.

When the hydraulic brake system has been drained, the reservoir should be first filled with brake fluid.

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 operation.

Note:

- Brake fluid which has been pumped out of the system must not be used again.
- Brake fluid will damage the paint finish and meter cases.
- The hydraulic fluid level in the reservoir must be checked at regular intervals and replenished whenever low. Use only **SAE TYPE 70R3 BRAKE FLUID** in this system.

5. Brake caliper adjustment

The brake caliper must be adjusted so that there is a small clearance between the fixed friction pad and the brake disc. This adjustment is made in the following manner. (Fig. 14-15)

- a. Raise the front wheel off the ground using a suitable prop.

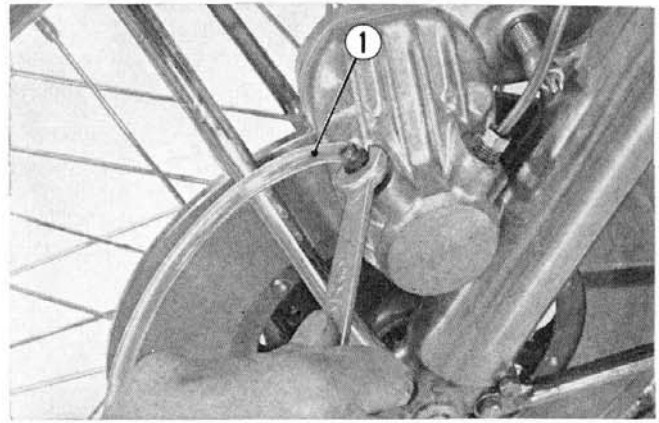


Fig. 14-13 ① Bleeder hose

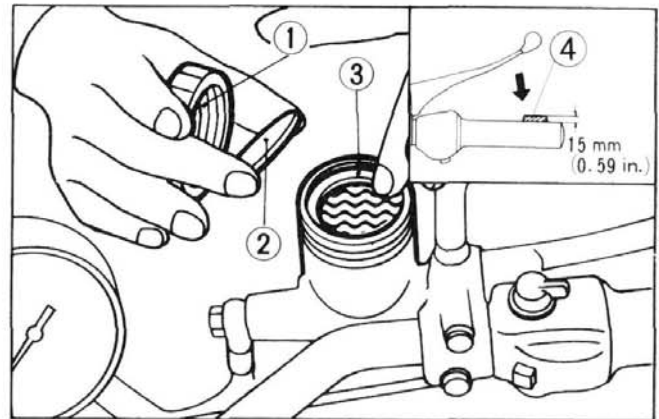


Fig. 14-14 ① Reservoir cap ③ Diaphragm
② Washer ④ Rubber

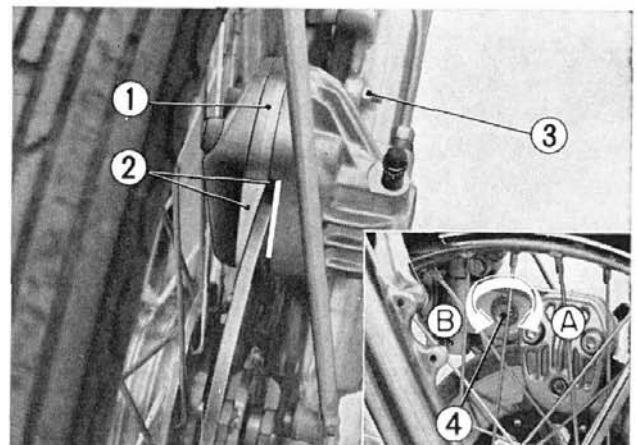


Fig. 14-15 ① Brake caliper
② Friction pads
③ Stopper colt lock nut
④ Stopper bolt

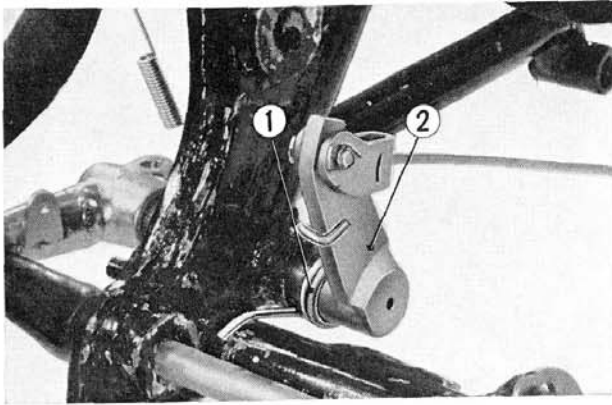


Fig. 14-16 ① Rear brake return spring
② Rear brake shaft

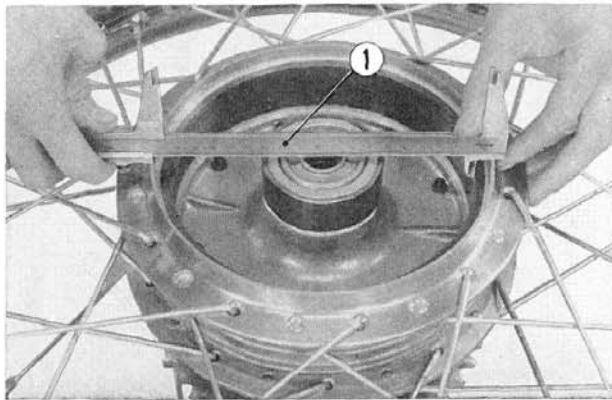


Fig. 14-17 ① Vernier caliper

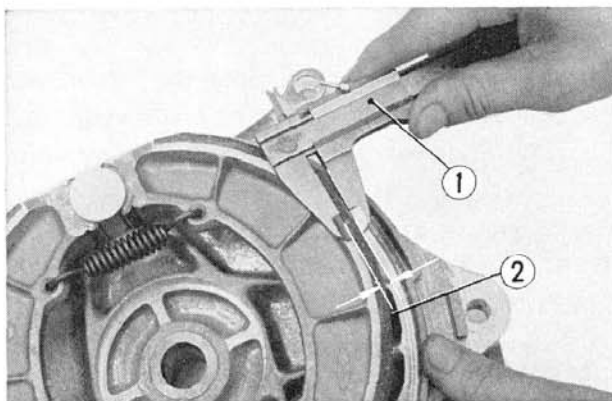


Fig. 14-18 ① Vernier caliper
② Rear brake shoe

- b. Loosen the caliper stopper bolt lock nut.
- c. Turn the stopper bolt in direction Ⓐ until the friction pad contacts the brake disc. When the wheel is rotated some resistance should be noticed.
- d. While rotating the front wheel, turn the stopper bolt in direction Ⓑ until the front wheel rotates freely.
- e. Turn the stopper bolt in direction Ⓑ 1/8 ~ 1/4 turn further and tighten the lock nut.

14-3 REAR BRAKE

a. Description

The rear brake has a large 7.09 in. (180 mm) diameter drum, providing a large friction surface for an effective braking performance.

b. Disassembly

1. Unscrew the rear brake pedal mounting bolt, disconnect the stop switch spring and remove the rear brake pedal from the shaft.
2. Unscrew the rear brake adjuster nut and remove the rear brake rod from the rear brake arm.
3. Unhook the rear brake return spring, and remove the rear brake shaft. (Fig. 14-16)
3. Remove the rear brake shoe from the rear wheel in accordance with page 130.

c. Inspection

1. Rear brake lining

Measure the rear brake drum diameter with a vernier caliper and if it is greater than 7.205 in. (183 mm), the rear wheel should be replaced. (Fig. 14-17)

Further, the rear wheel should also be replaced, if there are severe grooves in the drum.

2. Rear brake shoes

Measure the thickness of the brake shoe with a vernier caliper and if it is less than 0.080 in. (2.0 mm) the shoe should be replaced. Further, shoe should also be replaced, if there is severe uneven wear to the lining. (Fig. 14-18)

d. Reassembly

1. Connect the rear brake rod to the rear brake shaft.

2. Hook the rear brake return spring and connect the rear brake shaft to the frame.
3. Install the rear brake rod on the rear brake arm.
4. Install the rear brake pedal and tighten the setting bolt. (Fig. 14-19)
5. Mount the rear wheel in accordance with group rear wheel on page 138.
6. To check the rear brake pedal free travel, raise the rear wheel off the ground by placing the motorcycle on the main stand. Rotate the wheel by hand and note the distance the pedal tip travel before the brake takes hold. Nominal free travel is approximately **1 in. (25 mm)** (Fig. 14-20). If adjustment is necessary, make the adjustment by turning the adjusting nut. Turn clockwise for less free travel, counterclockwise for greater free travel. (Fig. 14-21)

Note: Make sure that the cut-out on the adjusting nut is seated on the brake arm pin after the final adjustment has been made. If the rear wheel assembly has been moved forward or rearward, as during drive chain adjustment, the rear brake may require adjustment.

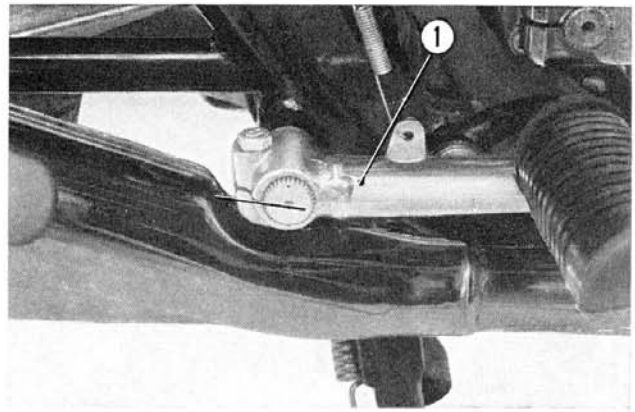


Fig. 14-19 ① Rear brake pedal

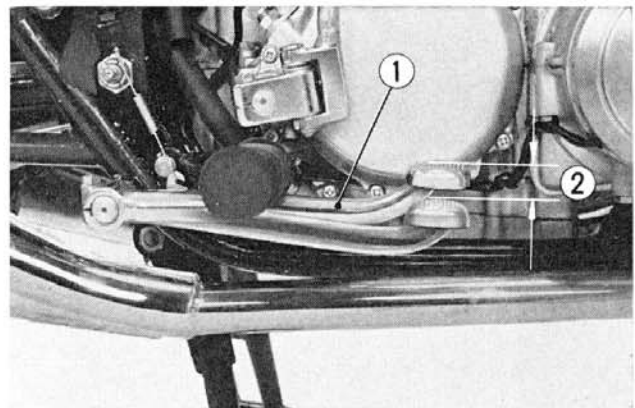


Fig. 14-20 ① Rear brake pedal
② Rear brake pedal free travel

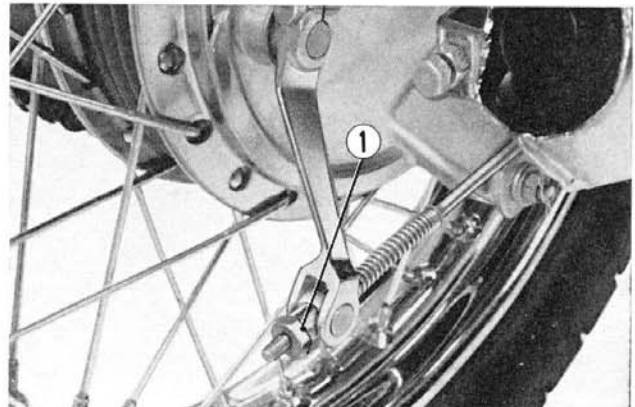


Fig. 14-21 ① Rear brake adjusting nut

