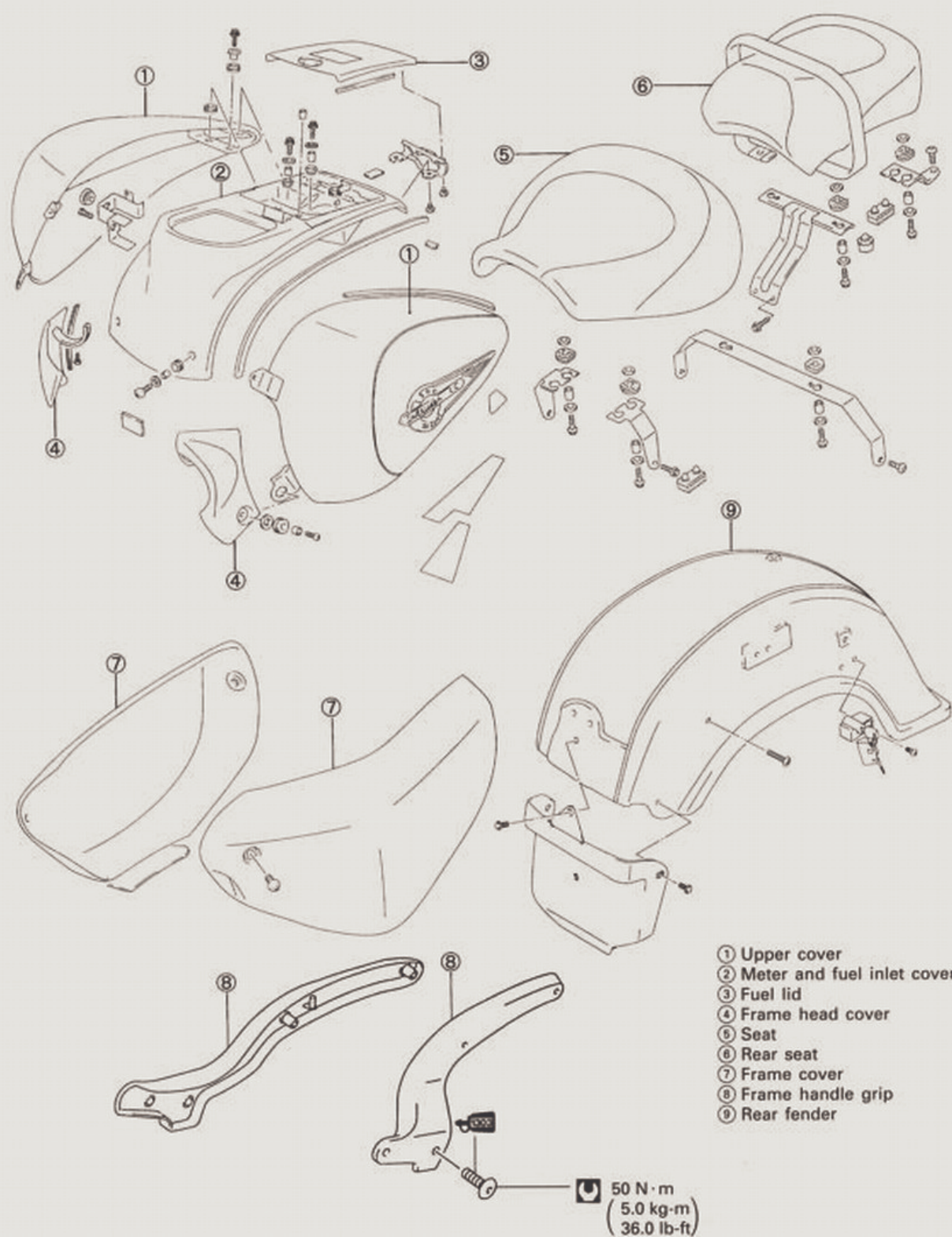


CHASSIS

CONTENTS

EXTERIOR PARTS	6- 1
CONSTRUCTION	6- 1
REMOVAL	6- 2
REMountING	6- 4
FRONT WHEEL	6- 5
CONSTRUCTION	6- 5
REMOVAL	6- 7
INSPECTION AND DISASSEMBLY	6- 8
REASSEMBLY AND REMOUNTING	6- 9
FRONT FORK	6-11
CONSTRUCTION	6-11
REMOVAL AND DISASSEMBLY	6-12
INSPECTION	6-15
REASSEMBLY AND REMOUNTING	6-15
STEERING	6-19
CONSTRUCTION	6-19
REMOVAL AND DISASSEMBLY	6-19
INSPECTION AND DISASSEMBLY	6-22
REASSEMBLY AND REMOUNTING	6-23
STEERING TENSION ADJUSTMENT	6-26
REAR WHEEL	6-27
CONSTRUCTION	6-27
REMOVAL	6-29
DISASSEMBLY	6-30
INSPECTION AND DISASSEMBLY	6-30
REASSEMBLY AND REMOUNTING	6-31
REAR SUSPENSION	6-33
CONSTRUCTION	6-33
REMOVAL	6-35
INSPECTION AND DISASSEMBLY	6-37
REASSEMBLY	6-39
REMountING	6-40
FRONT BRAKE	6-43
CONSTRUCTION	6-43
BRAKE PAD REPLACEMENT	6-44
BRAKE FLUID REPLACEMENT	6-44
BRAKE CALIPER REMOVAL AND DISASSEMBLY	6-45
BRAKE CALIPER INSPECTION	6-46
BRAKE CALIPER REASSEMBLY AND REMOUNTING	6-46
BRAKE DISC INSPECTION	6-47
MASTER CYLINDER REMOVAL AND DISASSEMBLY	6-48
MASTER CYLINDER INSPECTION	6-49
MASTER CYLINDER REASSEMBLY AND REMOUNTING	6-49
REAR BRAKE	6-51
CONSTRUCTION	6-51
BRAKE PAD REPLACEMENT	6-52
BRAKE FLUID REPLACEMENT	6-52
BRAKE CALIPER REMOVAL AND DISASSEMBLY	6-53
BRAKE CALIPER INSPECTION	6-54
BRAKE CALIPER REASSEMBLY AND REMOUNTING	6-54
MASTER CYLINDER REMOVAL AND DISASSEMBLY	6-56
MASTER CYLINDER INSPECTION	6-57
MASTER CYLINDER REASSEMBLY AND REMOUNTING	6-57
CLUTCH RELEASE CYLINDER AND CLUTCH MASTER CYLINDER	6-58
CONSTRUCTION	6-58
CLUTCH FLUID REPLACEMENT	6-59
CLUTCH RELEASE CYLINDER REMOVAL AND DISASSEMBLY	6-59
CLUTCH RELEASE CYLINDER INSPECTION	6-60
CLUTCH RELEASE CYLINDER REASSEMBLY AND REMOUNTING	6-60
CLUTCH MASTER CYLINDER REMOVAL AND DISASSEMBLY	6-62
CLUTCH MASTER CYLINDER INSPECTION	6-63
CLUTCH MASTER CYLINDER REASSEMBLY AND REMOUNTING	6-63
TIRES AND WHEELS	6-65
TIRE REMOVAL	6-65
INSPECTION	6-67
TIRE INSTALLATION	6-68

EXTERIOR PARTS CONSTRUCTION



REMOVAL

SEAT

- Remove the seat by removing the bolts.

▲ CAUTION

Be careful not to scratch the frame covers.

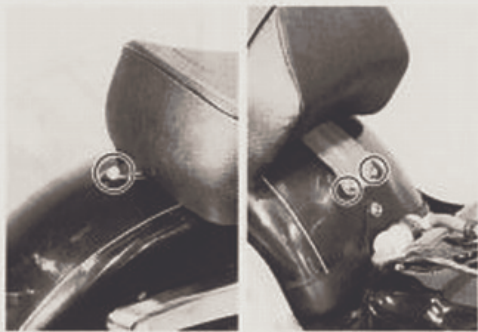
NOTE: When tightening the seat mounting bolt ①, touch the starter knob bracket stopper A to the seat mounting bracket.



- Remove the rear seat by removing the bolts.

▲ CAUTION

Be careful not to scratch the rear fender.

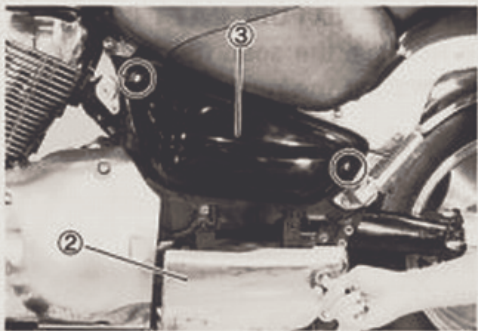


FRAME COVER

- Remove the tool box outer cover ② with the ignition key.
- Remove the frame covers ③ by removing the bolts.

▲ CAUTION

Be careful not to scratch the frame covers.



FRAME HEAD COVER AND UPPER COVER

- Remove the left and right side frame head covers ① by removing the bolts ②.

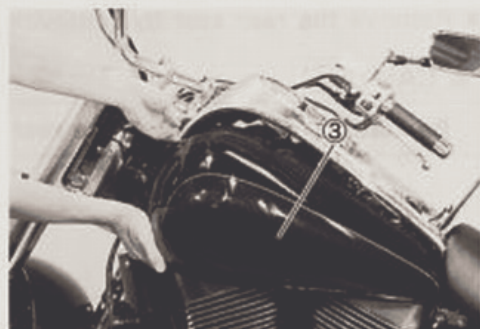
CAUTION

Be careful not to scratch the frame.

- Remove the meter and fuel inlet cover mounting bolts.
- Open the fuel lid with the ignition key.
- Remove the left and right side upper covers ③ by removing the bolts and screws.

CAUTION

Be careful not to scratch the upper covers.



METER AND FUEL INLET COVER

- Remove the seat. (See p. 6-2.).
- Remove the meter and fuel inlet cover mounting bolts.



- Open the fuel lid with the ignition key.
- Remove the fuel filler cap.
- Remove the meter and fuel inlet cover mounting bolts and fuel inlet mounting screws.

NOTE:

Do not drop the bolts and screws into the fuel tank.



- Disconnect the meter coupler and remove the meter and fuel inlet cover.

⚠ CAUTION

Be careful not to scratch the upper covers.



REAR FENDER

- Remove the seat. (See p. 6-2.)
- Disconnect the coupler ①.



- Remove the left or right side frame handle grip.
- Remove the rear fender ③ by removing the other side frame handle grip bolts.

⚠ CAUTION


Be careful not to scratch the frame covers and rear fenders.



NOTE:

When installing the frame handle grip bolts, apply a small quantity of **THREAD LOCK "1303"** to its mounting bolts and tighten them to the specified torque.

 99000-32030: **THREAD LOCK SUPER "1303"**

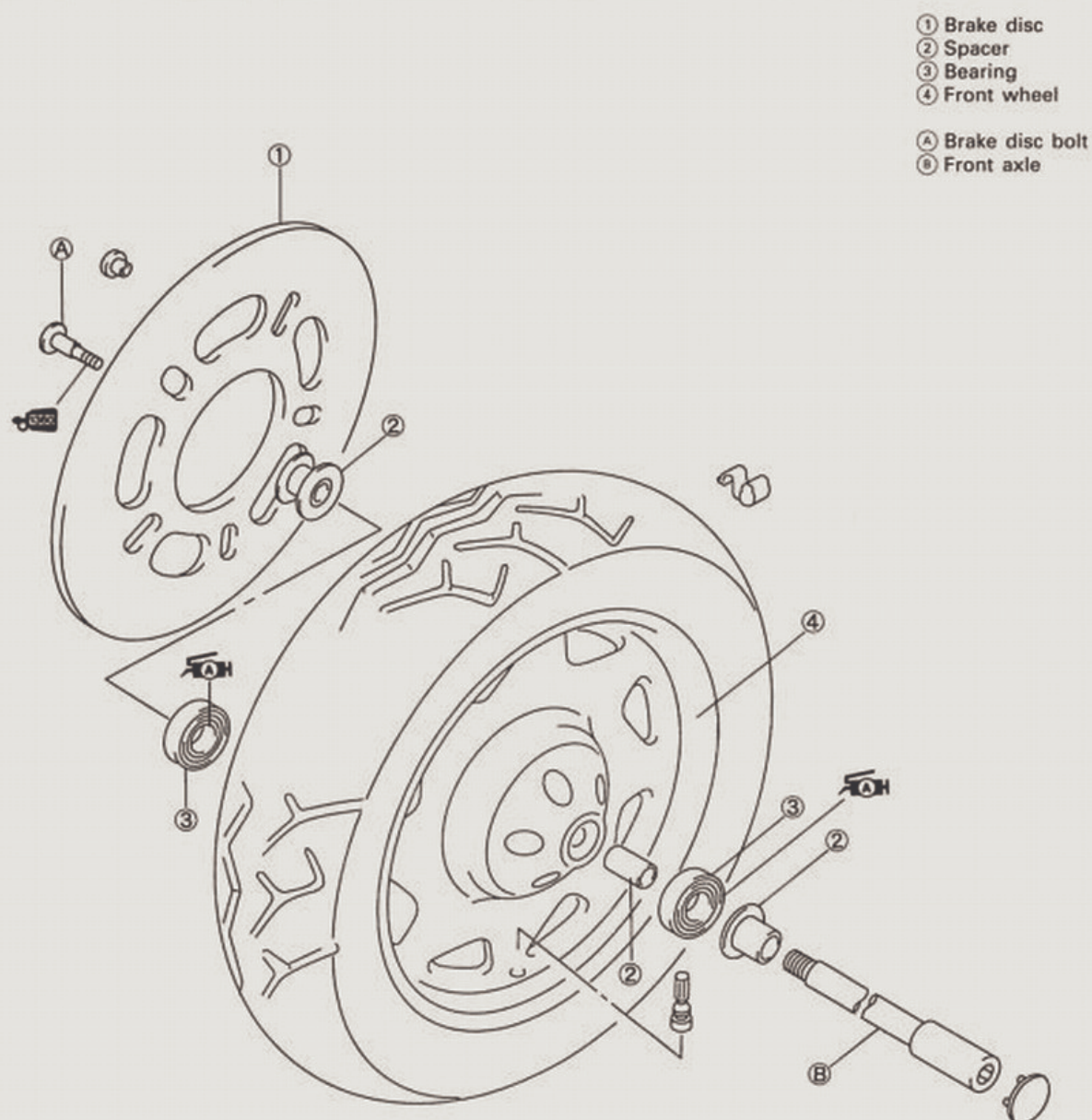
 **Frame handle grip mounting bolt: 50 N·m**
(5.0 kg-m, 36.0 lb-ft)



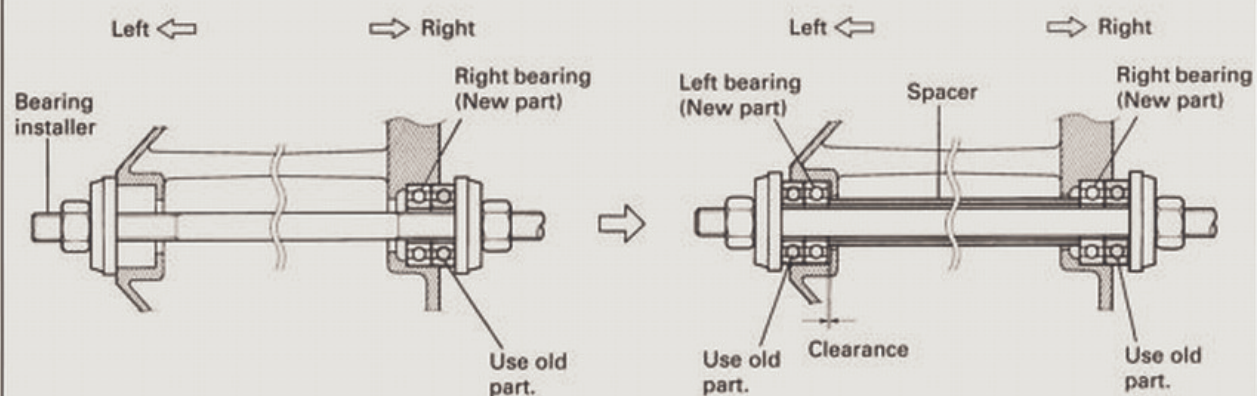
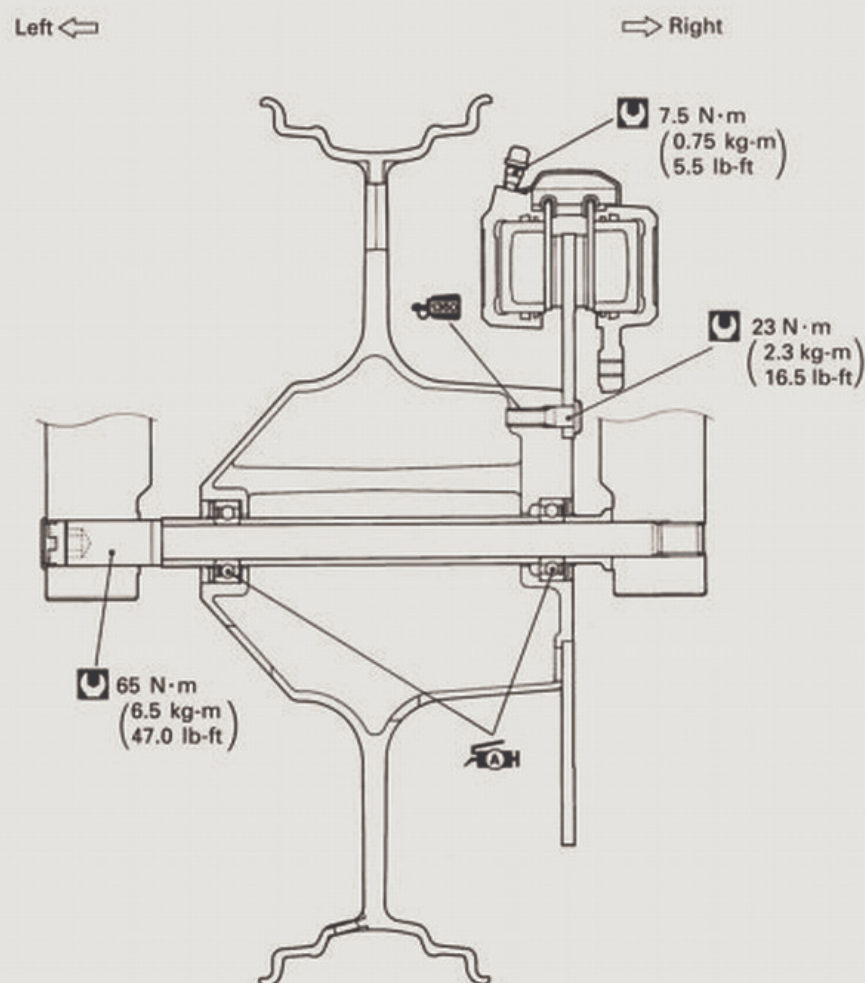
REMountING

Remount the seats, covers and rear fender in the reverse order of removal.

FRONT WHEEL CONSTRUCTION



ITEM	N·m	kg-m	lb-ft
A	23	2.3	16.5
B	65	6.5	47.0



REMOVAL

- Remove the axle caps ①.



- Loosen the front axle pinch bolts ②.
- Loosen the front axle ③ by using the special tool.

 09900-18710: Hexagon socket (12 mm)

- Raise the front wheel off the ground with a jack or a wooden block.



- Remove the front axle ③, spacers ④ and front wheel.

CAUTION

Do not operate the brake lever during or after brake caliper removal.

NOTE:

Remove the front fender when the front wheel does not come off smoothly.



- Remove the brake disc by removing its bolts.



INSPECTION AND DISASSEMBLY

TIRES

See pp. 6-65 to -69.

WHEEL

Make sure that the front and rear wheel runout (axial and rear) does not exceed the service limit when checked as shown. An excessive amount of runout is usually due to worn or loosen wheel bearings and can be corrected by replacing the bearings. If bearing replacement fails to reduce the runout, replace the wheel.

Service Limit

Wheel rim runout (axial and radial): 2.0 mm (0.08 in)

WHEEL BEARINGS

Inspect the play of the wheel bearings by hand while they are in the wheel. Rotate the inner race by hand to inspect it for abnormal noise and smooth rotation.

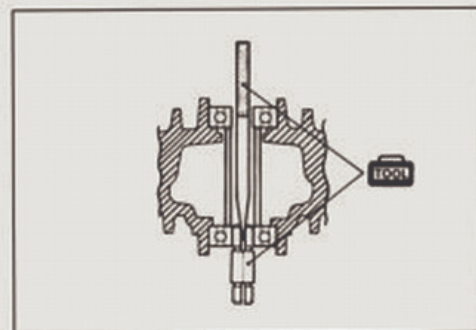
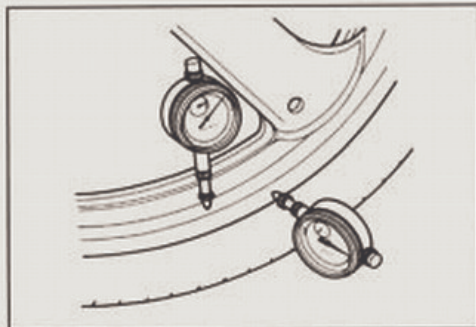
Replace the wheel bearings if there is anything unusual. Remove the wheel bearings as follows:

- Insert the adaptor into the wheel bearing.
- After inserting the wedge bar from the opposite side, lock the wedge bar in the slit of the adaptor.
- Drive out both bearings by striking the wedge bar.

 09941-50111: Bearing remover set


CAUTION

The removed bearings must be replaced with new ones.



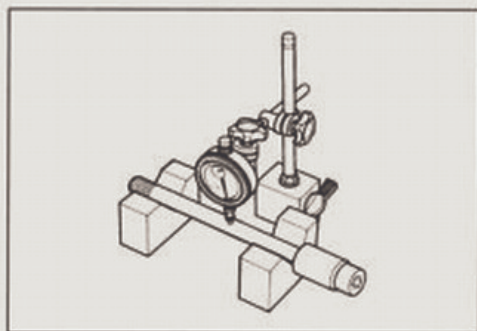
WHEEL AXLE

Measure the wheel axle runout using the dial gauge.
If the runout exceeds the limit, replace the wheel axle.

-  **09900-20606: Dial gauge (1/100 mm, 10 mm)**
09900-20701: Magnetic stand
09900-21304: V-block set (100 mm)

Service Limit


Wheel axle runout (Front and Rear): 0.25 mm (0.010 in)

**REASSEMBLY AND REMOUNTING**


Reassemble and remount the front wheel in the reverse order of removal and disassembly. Pay attention to the following points:

WHEEL BEARING

- Apply SUZUKI SUPER GREASE "A" to the bearings before installing.

 **99000-25030: SUZUKI SUPER GREASE "A"**

- Install the wheel bearings using the used bearings and special tool as described below.

 **09924-84510: Bearing installer set**


CAUTION

- * First install the right wheel bearing, then install the left wheel bearing. (See p. 6-6.)
- * The sealed covers on the bearings must face to the outside.

**BRAKE DISC**

- Make sure that the brake disc is clean and free of any grease. Apply THREAD LOCK SUPER "1360" to the brake disc bolts and tighten them to the specified torque.

 **99000-32130: THREAD LOCK SUPER "1360"**

 **Brake disc bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)**



FRONT WHEEL

- Install the front wheel, spacers and front axle.

- ① For left side
- ② For right side

NOTE:

Refer to the page 6-6 for the spacer positioning.

CAUTION

When installing the front wheel, position the brake disc between the brake pads. Be careful not to damage the brake pads.

- Tighten the front axle to the specified torque.
- Tighten the front axle pinch bolts ③ on the specified torque.



Front axle: 65 N·m (6.5 kg-m, 47.0 lb-ft)

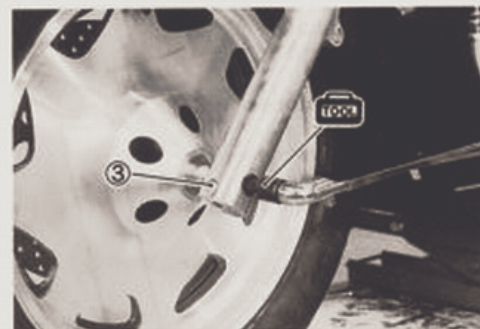
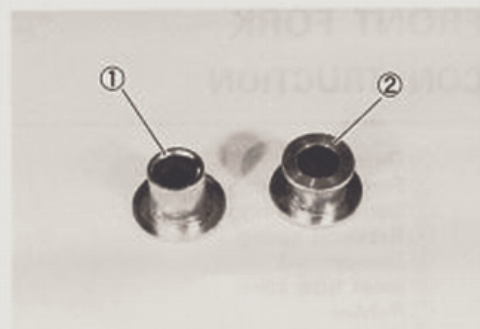
Front axle pinch bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)



09900-18710: Hexagon socket (12 mm)

NOTE:

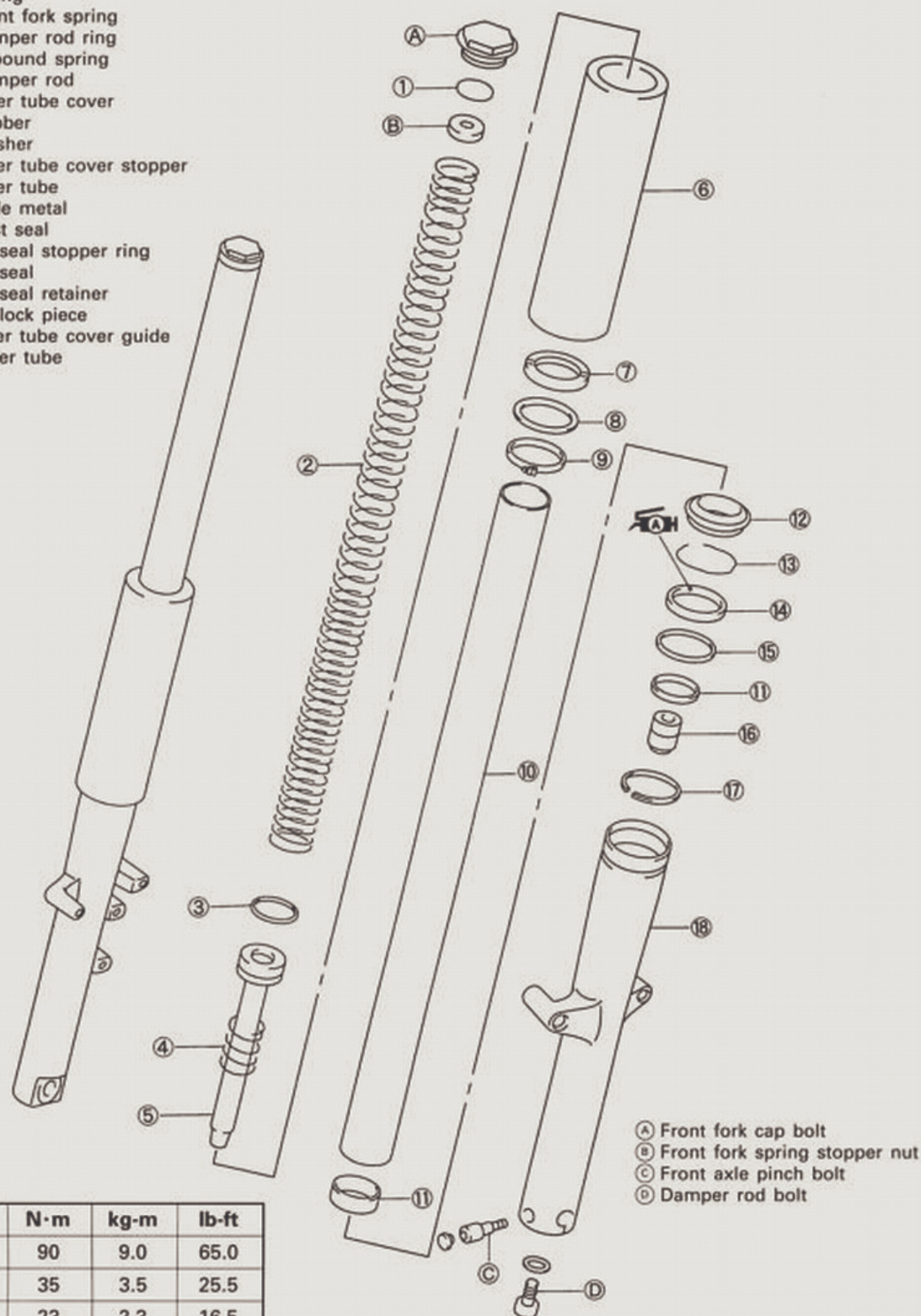
Before tightening the front axle and front axle pinch bolts ③, move the front fork up and down four or five times.

**NOTE:**

After remounting the front wheel, pump the brake lever a few times to check for proper brake operation.

FRONT FORK CONSTRUCTION

- ① O-ring
- ② Front fork spring
- ③ Damper rod ring
- ④ Rebound spring
- ⑤ Damper rod
- ⑥ Inner tube cover
- ⑦ Rubber
- ⑧ Washer
- ⑨ Inner tube cover stopper
- ⑩ Inner tube
- ⑪ Slide metal
- ⑫ Dust seal
- ⑬ Oil seal stopper ring
- ⑭ Oil seal
- ⑮ Oil seal retainer
- ⑯ Oil lock piece
- ⑰ Inner tube cover guide
- ⑱ Outer tube



- A Front fork cap bolt
- B Front fork spring stopper nut
- C Front axle pinch bolt
- D Damper rod bolt



ITEM	N·m	kg·m	lb·ft
A	90	9.0	65.0
B	35	3.5	25.5
C	23	2.3	16.5
D	20	2.0	14.5

REMOVAL AND DISASSEMBLY

- Remove the front wheel. (See p. 6-7.)
- Remove the bolt caps.
- Remove the brake hose from the hose guide.



- Remove the front fender by removing its mounting bolts.

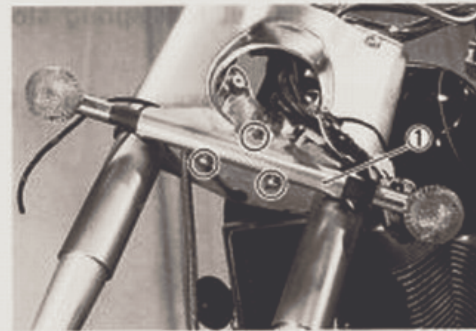
CAUTION

Be careful not to scratch the front fender.

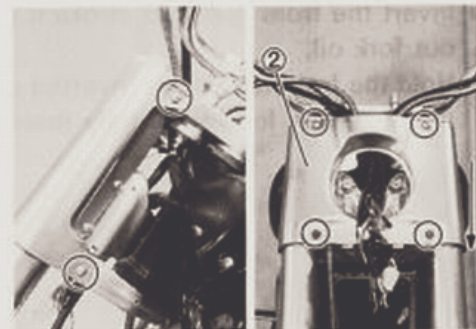
- Remove the front brake caliper by removing the bolts.



- Remove the headlight by removing the mounting screws.
- Disconnect the couplers.
- Remove the headlight housing.
- Remove the turn signal light bracket ①.



- Remove the front fork upper cover bolts.
- Slightly move the front fork upper cover ② down.



- Remove the front fork cap bolts ①.

NOTE:

Slightly loosen the front fork spring stopper nut to facilitate later disassembly.

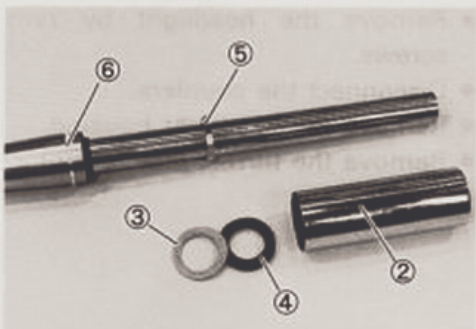
TOOL 09900-18720: Hexagon socket (14 mm)



- Remove the front forks after loosening the front fork lower clamp bolts.

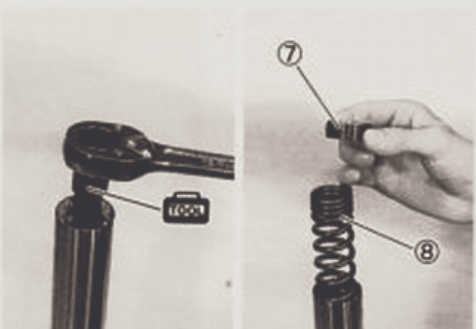


- Remove the front fork inner tube cover ②, washer ③ and rubber ④.
- Remove the inner tube cover stopper ⑤ by loosening the bolt.
- Remove the inner tube cover guide ⑥.

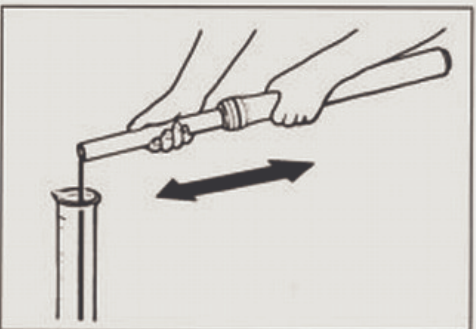


- Remove the front fork spring stopper nut ⑦ and fork spring ⑧.

TOOL 09900-18720: Hexagon socket (14 mm)



- Invert the front fork and stroke it several times to drain out fork oil.
- Hold the front fork in the inverted position for a few minutes to allow fork oil to fully drain.



- Remove the damper rod bolt using a 6-mm hexagon wrench and the special tools.

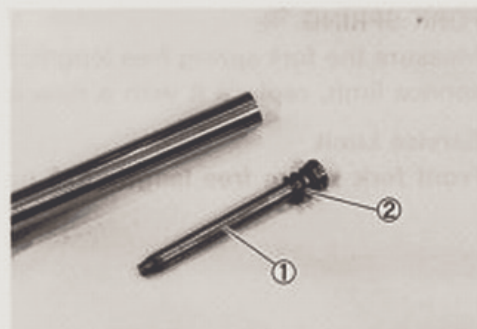


09940-34520: "T" handle

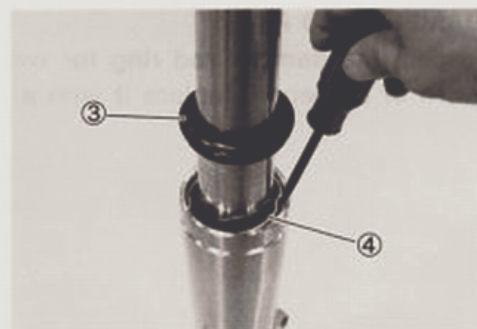
09940-34531: Attachment "A"



- Remove the damper rod ① and Rebound spring ②.



- Remove the dust seal ③ and the oil seal stopper ring ④.



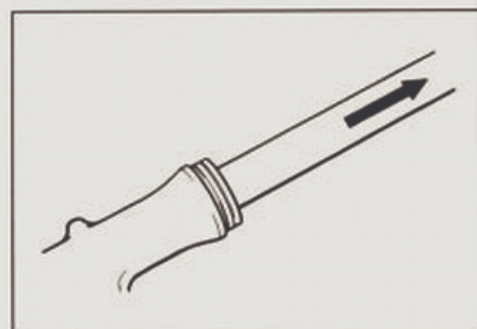
- Remove the oil seal by slowly pulling out the inner tube.

NOTE:

Be careful not to damage the inner tube.

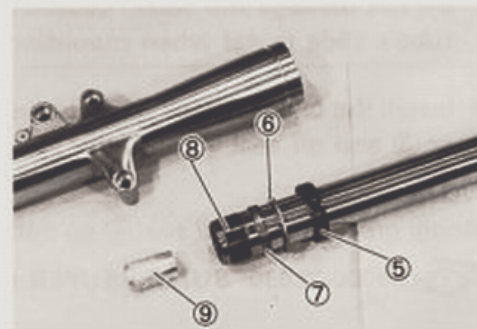
CAUTION

The outer and inner tube's slide metals must be replaced along with the oil seal and dust seal when assembling the front fork.



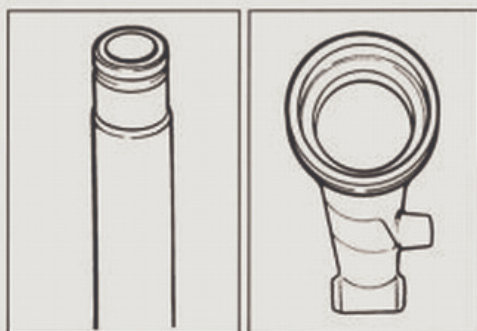
- Remove the following parts.

- ⑤ Oil seal
- ⑥ Oil seal retainer
- ⑦ Outer tube slide metal
- ⑧ Inner tube slide metal
- ⑨ Oil lock piece



INSPECTION**INNER AND OUTER TUBES**

Inspect the inner tube sliding surface and outer tube sliding surface for scuffing.

**FORK SPRING**

Measure the fork spring free length. If it is shorter than the service limit, replace it with a new one.

Service Limit

Front fork spring free length: 573 mm (22.56 in)

**DAMPER ROD RING**

Inspect the damper rod ring for wear or damage. If it is worn or damaged, replace it with a new one.

**REASSEMBLY AND REMOUNTING**

Reassemble and remount the front fork in the reverse order of removal and disassembly. Pay attention to the following points:

SLIDE METALS AND OIL AND DUST SEALS

- Hold the inner tube vertically, clean the metal groove and install the slide metal by hand.


CAUTION

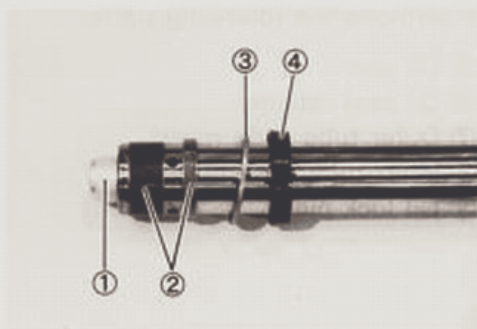
Do not damage the Teflon coated surface of the inner tube's slide metal when mounting it.

- Install the oil lock piece ①, slide metals ②, oil seal retainer ③ and oil seal ④ onto the inner tube.

NOTE:

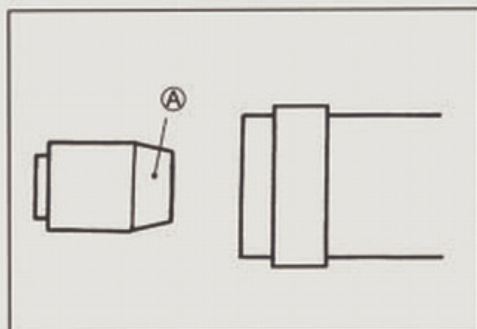
Apply grease to the oil seal ④ lip lightly before installing it.

 99000-25030: SUZUKI SUPER GREASE "A"



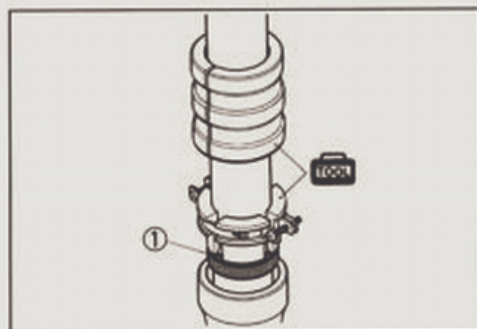
NOTE:

When installing the oil lock piece, insert the tapered end **A** of oil lock piece into the inner tube.



- Insert the inner tube into the outer tube and install the oil seal **1** using the special tool.

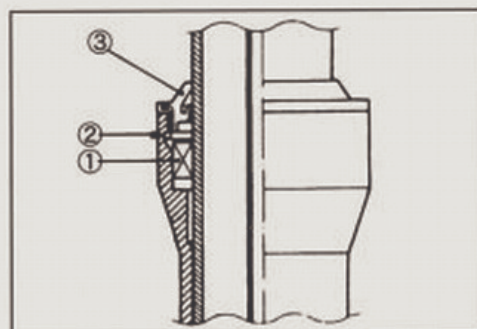
TOOL 09940-52861: Front fork oil seal installer



- Install the oil seal stopper ring **2**.

CAUTION

Make sure that the oil seal stopper ring is fitted securely.



- Install the dust seal **3**.

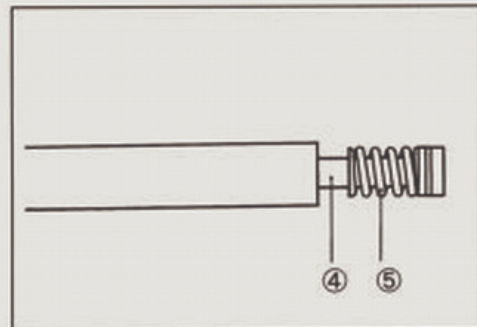
DAMPER ROD

- Install the damper rod **4** and rebound spring **5** as shown.

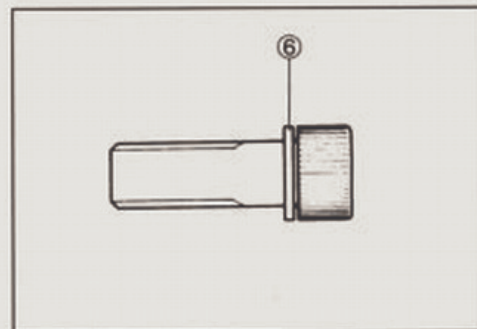
Tighten the damper rod bolt to the specified torque using a 6-mm hexagon wrench and the special tools.

TOOL 09940-34520: "T" handle
09940-34531: Attachment "A"

U Damper rod bolt: 20 N·m (2.0 kg-m, 14.5 lb-ft)

**CAUTION**


Use a new damper rod bolt gasket **6** to prevent oil leakage.



FORK OIL

- Pour the specified fork oil into the inner tube.

Fork oil type: **SUZUKI FORK OIL SS-08 (#10)** or equivalent fork oil

 **99000-99001-SS8: SUZUKI FORK OIL SS-08**

Specification

Front fork oil capacity (each leg): **439 ml**
(14.8/15.5 US/Imp oz)

- Hold the front fork in a vertical position and adjust the fork oil level using the special tool.

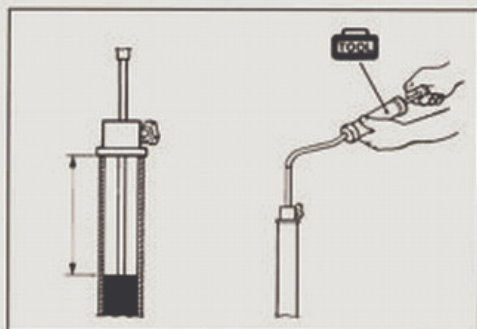
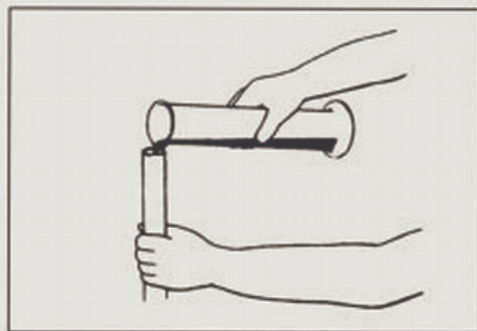
 **09943-74111: Front fork oil level gauge**

Service limit

Front fork oil level: **169.0 mm (6.65 in)**

NOTE:

When adjusting the oil level, remove the fork spring and compress the inner tube fully.

**FORK SPRING**


- Install the fork spring as shown.

NOTE:

The end of the fork spring with the widely close pitch **A** side should be at the bottom **B** of the front fork.



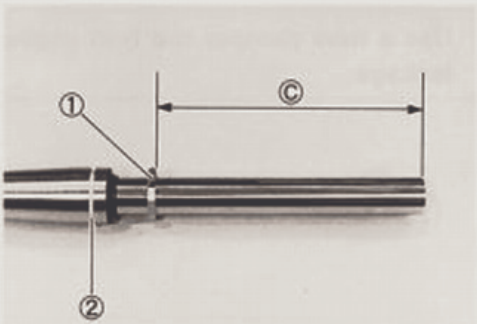
- Install the front fork spring stopper nut temporarily.

 **09900-18720: Hexagon socket (14 mm)**

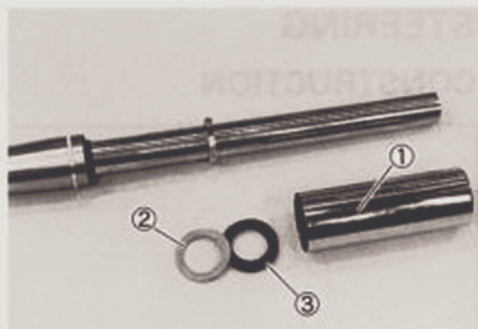
**REMOUNTING**

Remount the front forks in the reverse order of removal. Pay attention to the following points.

- Install the inner tube cover stopper **①** at 281.3 mm (11.07 in) **C** from the upper surface of the inner tube.
- Install the inner tube cover guide **②**.



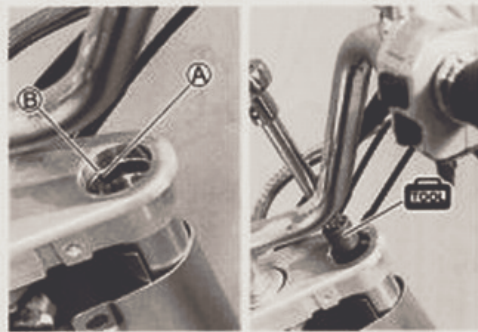
- Install the inner tube cover ①, washer ② and rubber ③.



- Remount the front fork and tighten the front fork lower clamp bolts temporarily.

NOTE:

Touch the upper surface ① of the inner tube with the stopper part ② of the steering stem upper bracket.



- Tighten the front fork spring stopper nut to the specified torque.

Front fork spring stopper nut: 35 N·m
(3.5 kg-m, 25.5 lb-ft)

09900-18720: Hexagon socket (14 mm)

- After loosening the front fork lower clamp bolts slightly, tighten the front fork cap bolt to the specified torque.

Front fork cap bolt: 90 N·m (9.0 kg-m, 65.0 lb-ft)



CAUTION

Replace the front fork cap bolt's O-ring to prevent oil leakage.

NOTE:

Remove the handlebars, when it is difficult to tighten the front fork cap bolts. Install the handlebars to the specified manner. (See p. 6-25).

- Tighten the front fork lower clamp bolts to the specified torque.

Front fork lower clamp bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)

- Tighten the front brake caliper mounting bolts to the specified torque.

Front brake caliper mounting bolt: 35 N·m
(3.5 kg-m, 25.5 lb-ft)

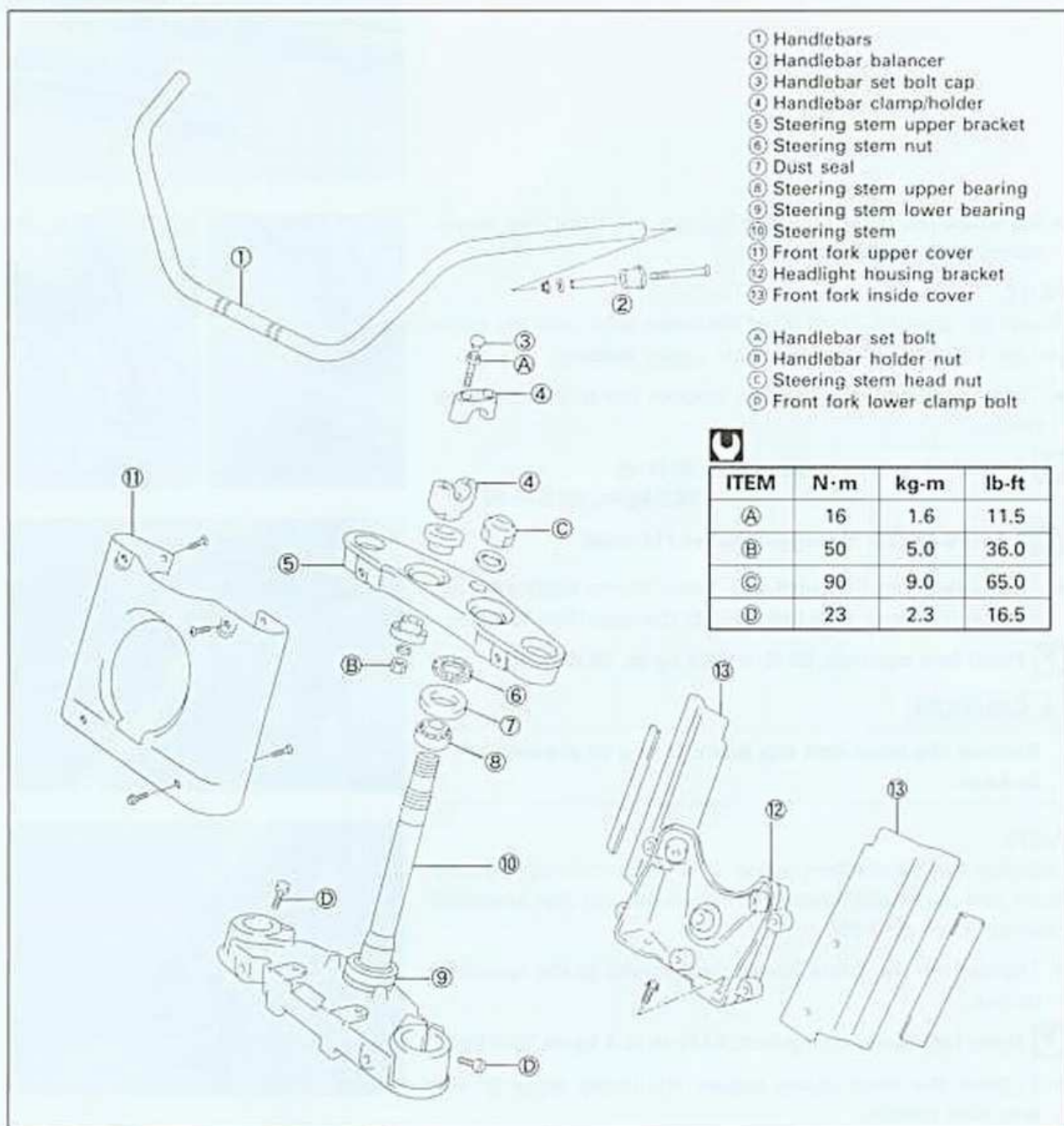
- Install the front wheel. (See p. 6-10.)

NOTE:

Before tightening the front axle and front axle pinch bolts, move the front fork up and down four or five times.



STEERING CONSTRUCTION

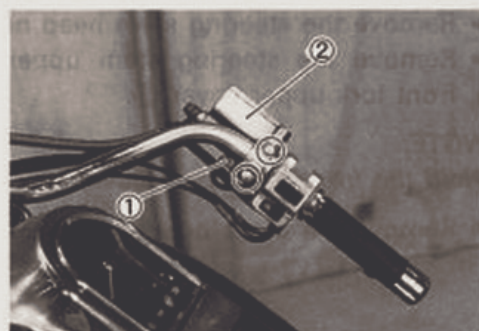


REMOVAL AND DISASSEMBLY

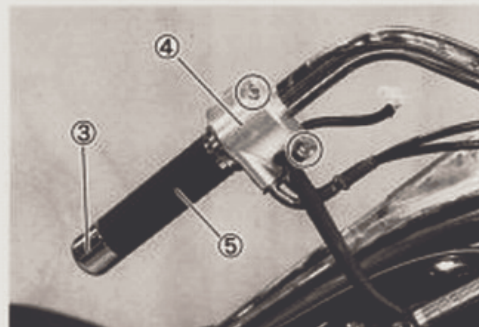
- Remove the front wheel. (See p. 6-7.)
- Remove the front fork. (See pp. 6-12 and -13.)
- Remove the rear view mirrors ①.



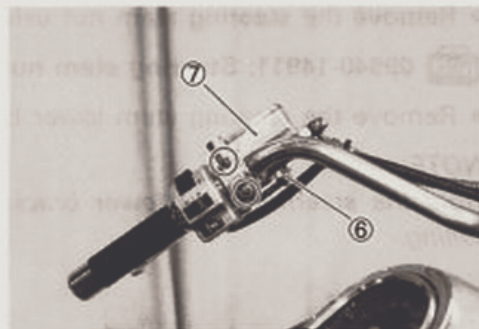
- Disconnect the front brake light switch lead wires ①.
- Remove the bolt caps.
- Remove the front brake master cylinder ②.



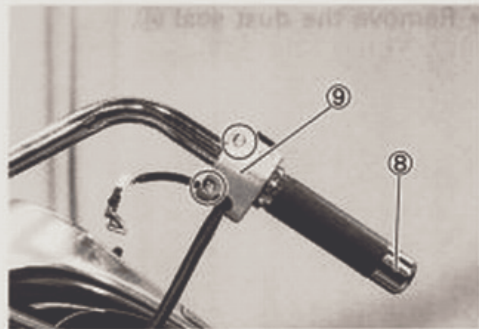
- Remove the right handlebar balancer ③, the right handlebar switch ④ and the throttle grip ⑤.



- Disconnect the clutch lever position switch lead wires ⑥.
- Remove the bolt caps.
- Remove the clutch master cylinder ⑦.



- Remove the left handlebar balancer ⑧ and the left handlebar switch ⑨.



- Remove the handlebars by removing the handlebar clamp bolt caps, handlebar clamp bolts and handlebar clamps.



- Remove the steering stem head nut ① and washer.
- Remove the steering stem upper bracket ② and the front fork upper cover ③.

NOTE:

Hold the front fork upper cover to prevent it from falling.

- Remove the brake hose from the hose guide.



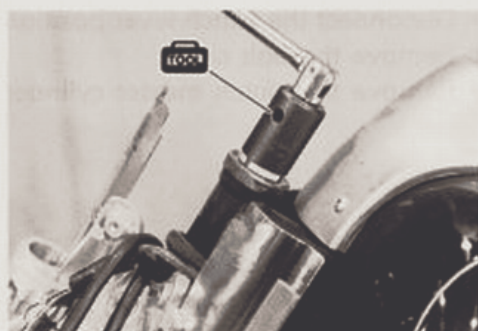
- Remove the steering stem nut using the special tool.

TOOL 09940-14911: Steering stem nut wrench

- Remove the steering stem lower bracket.

NOTE:

Hold the steering stem lower bracket to prevent it from falling.



- Remove the dust seal ④.



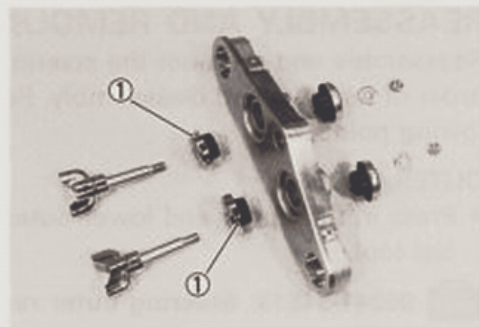
- Remove the steering stem upper bearing ⑤.



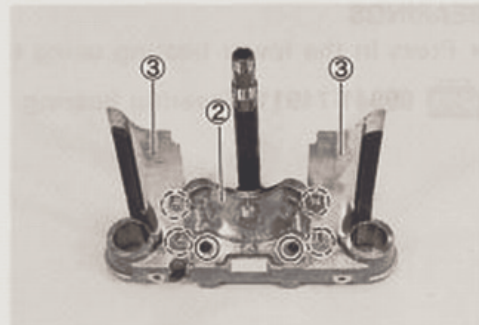
- Remove the handlebar holders from the steering stem upper bracket.

NOTE:

The plating handlebar bushes ① is positioned upside.



- Remove the headlight housing bracket ② and front fork inside covers ③ from the steering stem lower bracket.

**INSPECTION AND DISASSEMBLY**

Inspect the removed parts for the following abnormalities.

- * Handlebars distortion
- * Race wear and brinelling
- * Bearing wear or damage
- * Abnormal bearing noise
- * Distortion of the steering stem



- Remove the steering stem lower bearing and inner race by using a chisel.

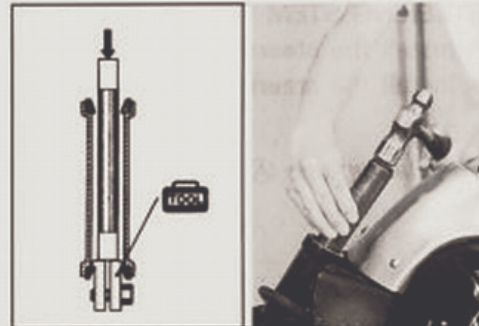
▲ CAUTION

The removed bearing and inner race must be replaced with a new one.



- Drive out the steering stem upper and lower bearing races by using the special tools and suitable bar.

TOOL 09941-54911: Bearing outer race remover



REASSEMBLY AND REMOUNTING

Reassemble and remount the steering stem in the reverse order of removal and disassembly. Pay attention to the following points.

OUTER RACES

- Press in the upper and lower outer races using the special tool.


 **09941-34513: Steering outer race installer**

BEARINGS

- Press in the lower bearing using the special tool.

 **09941-74911: Steering bearing installer**

- Apply grease to the upper and lower bearings before re-mounting the steering stem.

 **99000-25030: SUZUKI SUPER GREASE "A"**

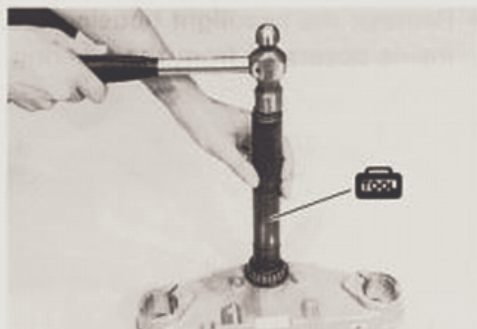
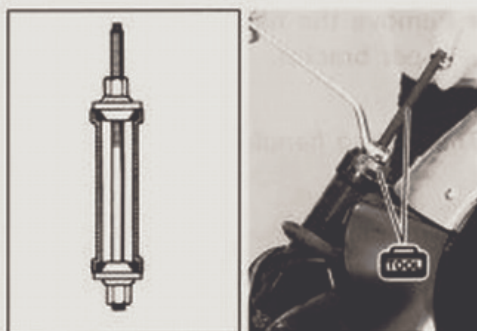
- Install the bearings and the dust seal.

STEERING STEM NUT

- Install the steering stem.
- Install the steering stem nut as shown.

NOTE:

The flange side (A) of the steering stem must face down.



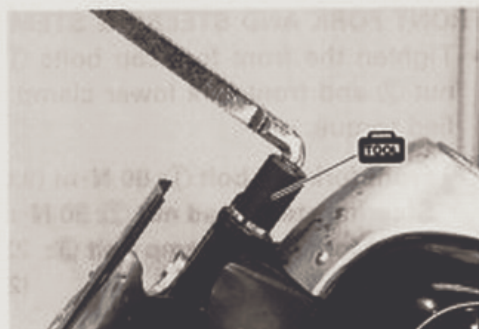
- Tighten the steering stem nut to the specified torque using the special tools.



09940-14911: Steering stem nut wrench



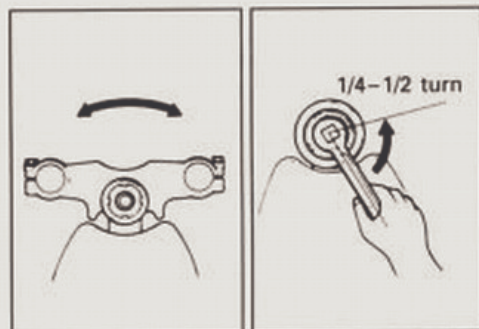
Stem nut: 45 N·m (4.5 kg-m, 32.5 lb-ft)



- Turn the steering stem lower bracket about five or six times to the left and right so that the bearings seat properly.
- Loosen the steering stem nut by 1/4–1/2 of a turn.

NOTE:

This adjustment will vary from motorcycle to motorcycle.



HANDLEBAR HOLDER

- Install the handlebar holders and related parts to the steering stem head.
- Hold the handlebar holder with a vise and tighten the handlebar holder nuts to the specified torque.



Handlebar holder nut: 50 N·m (5.0 kg-m, 36.0 lb-ft)

NOTE:

The plating handlebar bushes is positioned upside.

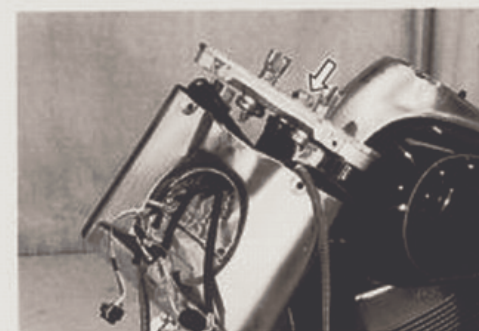


STEERING STEM UPPER BRACKET

- Install the front fork upper cover, steering stem upper bracket, washer and steering stem head nut.


NOTE:

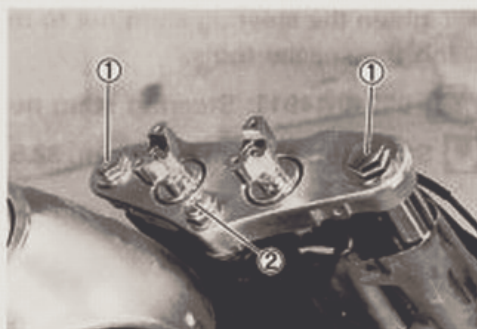
Before installing the panel, set the brake hose to the hose guide.



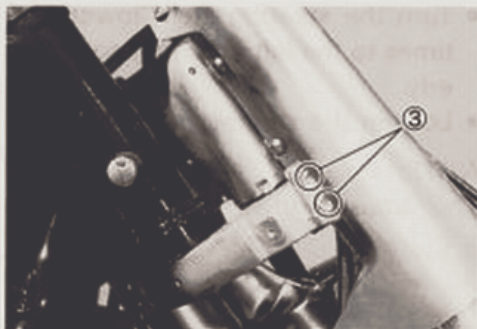
FRONT FORK AND STEERING STEM HEAD NUT

- Tighten the front fork cap bolts ①, steering stem head nut ② and front fork lower clamp bolts ③ to the specified torque.


-  **Front fork cap bolt ①: 90 N·m (9.0 kg-m, 65.0 lb-ft)**
Steering stem head nut ②: 90 N·m (9.0 kg-m, 65.0 lb-ft)
Front fork lower clamp bolt ③: 23 N·m (2.3 kg-m, 16.5 lb-ft)

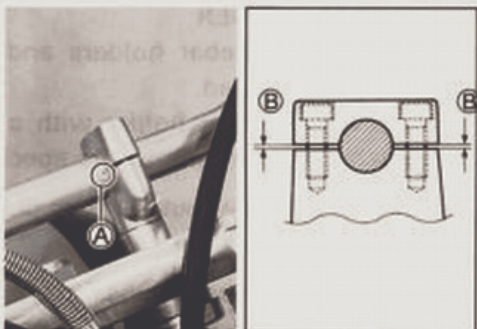
**NOTE:**

- * Tighten the front fork cap bolts first, and the lower clamp bolts finally.
- * Rout the brake hose, clutch hose, throttle cables and handlebar switch lead wires, before installing the front forks. (See pp. 8-15 and -17.)


**HANDLEBARS**

- Install the handlebars with the punch mark (A) aligned with the handlebar clamp as shown.
- The gap (B) between the handlebar clamp and holder should be even.


-  **Handlebar set bolt: 16 N·m (1.6 kg-m, 11.5 lb-ft)**
- Install the handlebar set bolt cap.

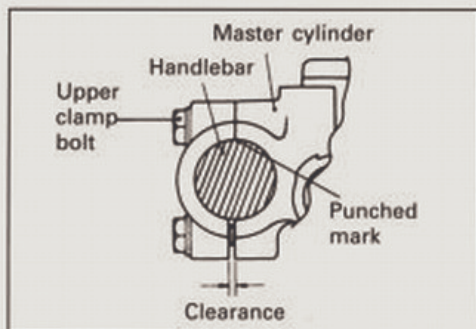


- Apply grease to the throttle cable end.

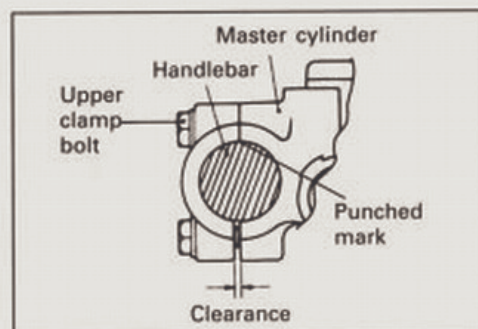
 **99000-25030: SUZUKI SUPER GREASE "A"**

- Install the front brake master cylinder. (See p. 6-50.)

-  **Front master cylinder mounting bolt: 10 N·m (1.0 kg-m, 7.0 lb-ft)**



- Install the clutch master cylinder. (See p. 6-64.)
- Install the front wheel. (See p. 6-10.)
- Adjust the throttle cable play. (See p. 2-10.)



STEERING TENSION ADJUSTMENT

Check the steering movement after reassemble and re-mount the all parts. If play or stiffness is noticeable, adjust the steering tension as follows.



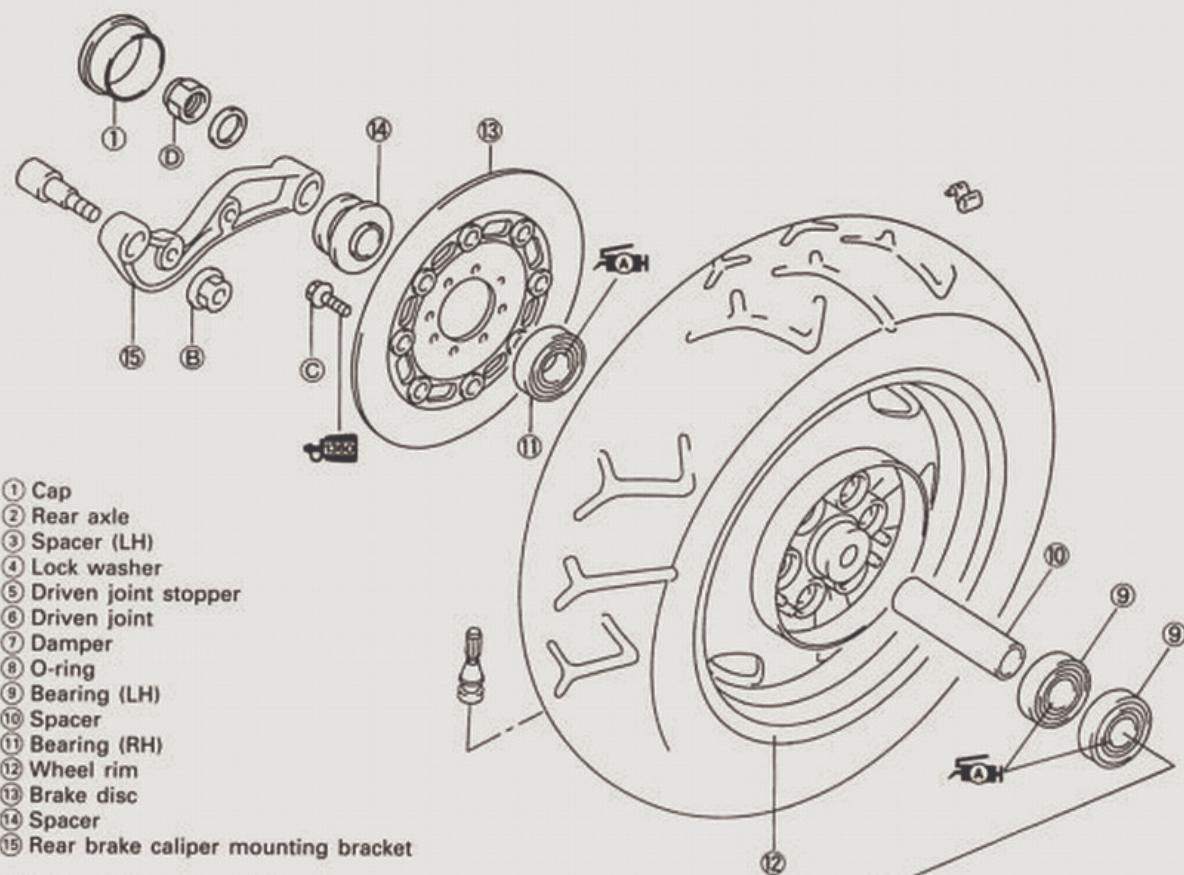
- Remove the headlight, its housing and turn signal light bracket.
- Slightly move the cover down.



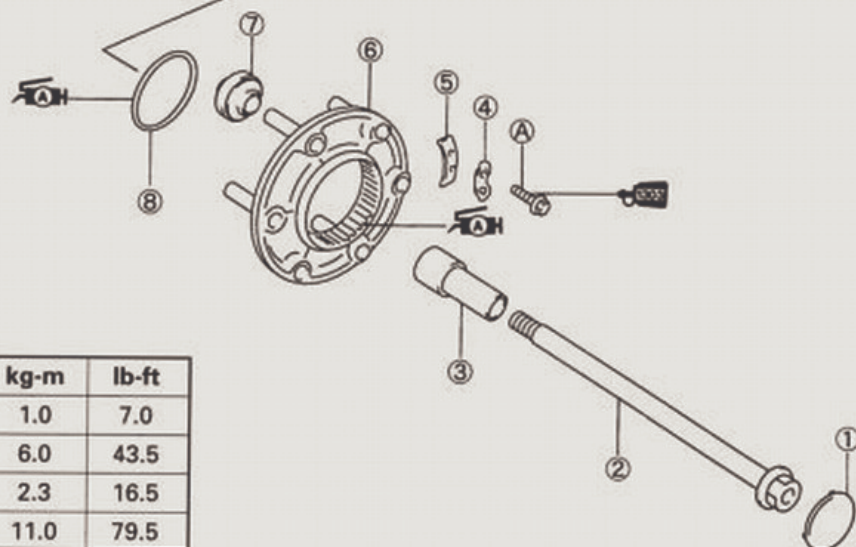
- Loosen the front fork lower clamp bolts and the steering stem head nut. Then, adjust the steering stem nut by either loosening or tightening it.
- Tighten the steering stem head nut and front fork lower clamp bolts to the specified torque and recheck. (See p. 6-25.)



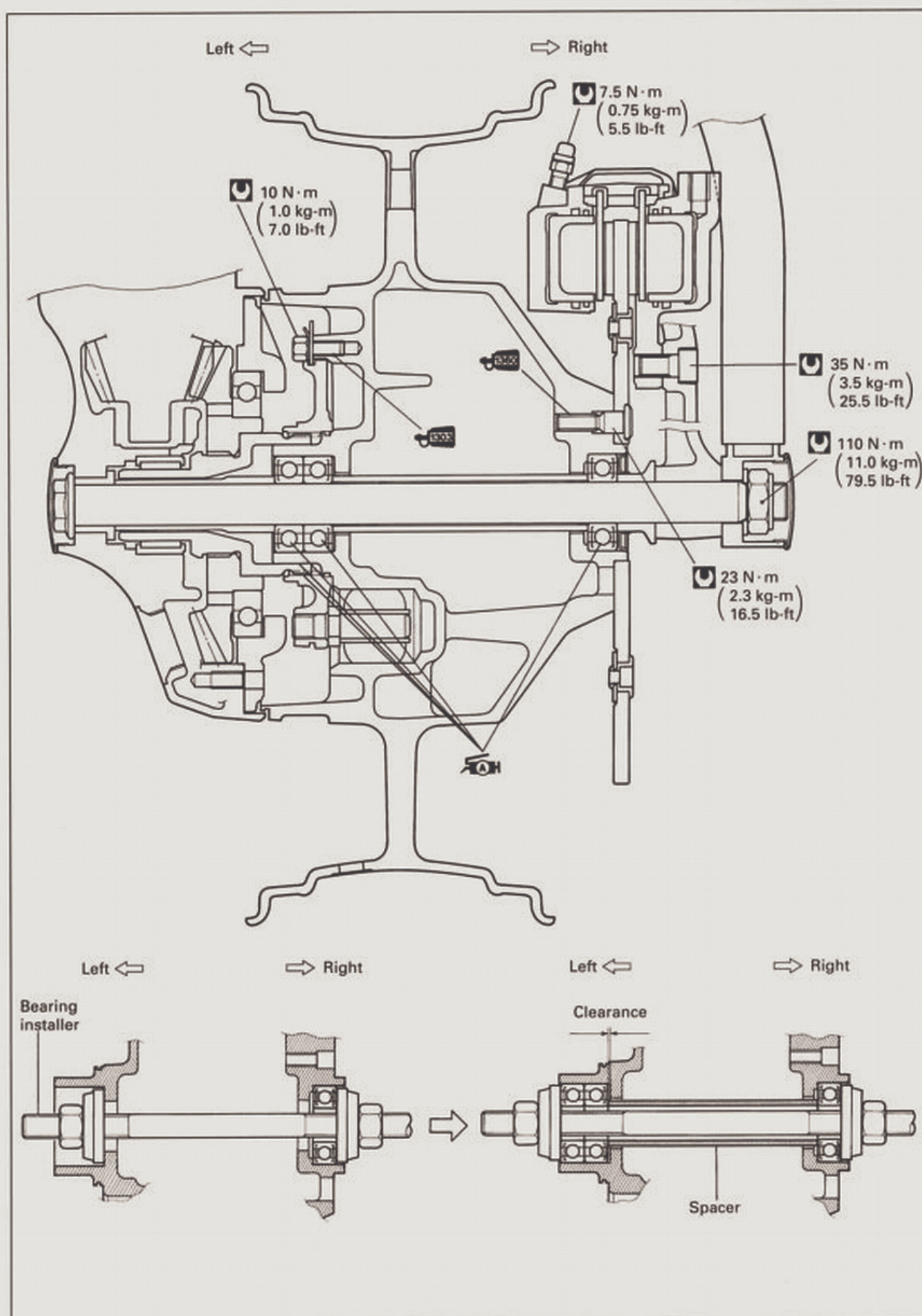
REAR WHEEL CONSTRUCTION



- ① Cap
 ② Rear axle
 ③ Spacer (LH)
 ④ Lock washer
 ⑤ Driven joint stopper
 ⑥ Driven joint
 ⑦ Damper
 ⑧ O-ring
 ⑨ Bearing (LH)
 ⑩ Spacer
 ⑪ Bearing (RH)
 ⑫ Wheel rim
 ⑬ Brake disc
 ⑭ Spacer
 ⑮ Rear brake caliper mounting bracket
 A Driven joint stopper bolt
 B Rear caliper mounting bracket nut
 C Brake disc mounting bolt
 D Rear axle nut



ITEM	N·m	kg-m	lb-ft
A	10	1.0	7.0
B	60	6.0	43.5
C	23	2.3	16.5
D	110	11.0	79.5



REMOVAL

- Remove the seat ①. (See p. 6-2.)
- Remove the rear fender ②. (See p. 6-4.)

NOTE:

The rear fender removal is not necessary when the rear part of motorcycle can be lifted high enough to take the rear wheel out smoothly.

- Remove the engine side box. (See p. 3-3.)

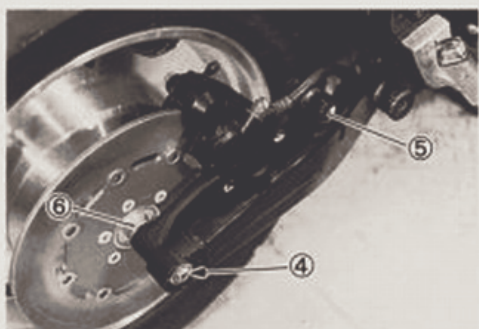
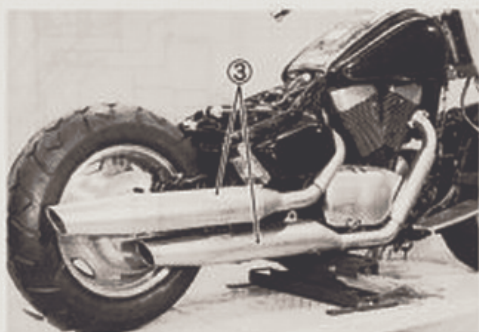
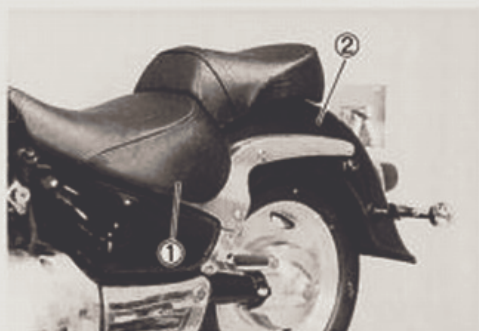
- Remove the exhaust pipes and mufflers assembly ③. (See p. 3-5.)

- Remove the axle cap.

- Loosen the axle nut ④.
- Remove the rear brake caliper mounting bracket bolt ⑤.
- Support the motorcycle using a suitable jack on the frame.
- Remove the rear axle nut ④.
- Remove the rear axle, spacer ⑥ and rear wheel.

CAUTION

Do not operate the brake pedal during or after rear wheel removal.

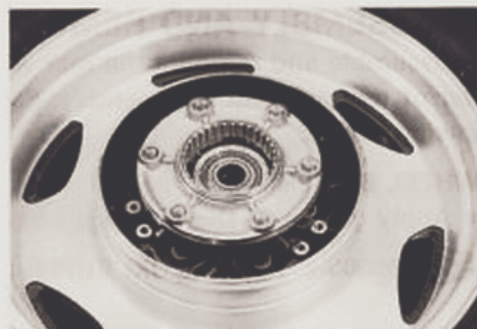


DISASSEMBLY

- Flatten the lock washers.
- Remove the fitting bolts, washers and plates.



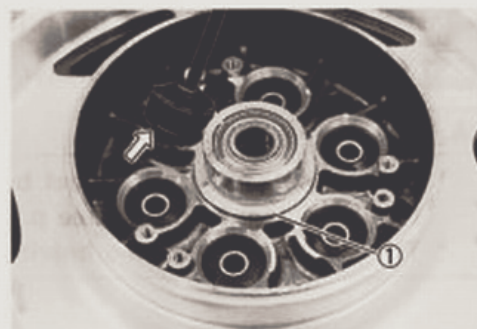
- Pull off the driven joint.



- Remove the O-ring ①.
- Take off the dampers with a screw driver.

▲ CAUTION

The removed O-ring must be replaced with a new one.



- Remove the brake disc from the rear wheel.

**INSPECTION AND DISASSEMBLY**

WHEEL BEARING	See p. 6-8.
WHEEL AXLE	See p. 6-9.
WHEEL RIM	See p. 6-8.
TIRE	See pp. 6-65 to -69.

WHEEL DAMPER


Inspect the wheel dampers for damage or wear.

**REASSEMBLY AND REMOUNTING**

Reassemble and remount the rear wheel in the reverse order of removal and disassembly. Pay attention to the following points:


WHEEL BEARING

- Apply grease to the bearings before installation.

 99000-25030: SUZUKI SUPER GREASE "A"



- Install the wheel bearings using the special tool.

 09941-34513: Bearing installer set

CAUTION

- * First, install the right wheel bearing, then install the left wheel bearing. (See p. 6-28.)
- * The sealed cover on the bearing must face out.


**BRAKE DISC**

- Apply THREAD LOCK SUPER "1360" to the brake disc bolts and tighten them to the specified torque.

NOTE:

- * Make sure that the brake disc is clean and free of any grease.
- * The stamped mark (A) on the brake disc should face to outside.

 99000-32130: THREAD LOCK SUPER "1360"

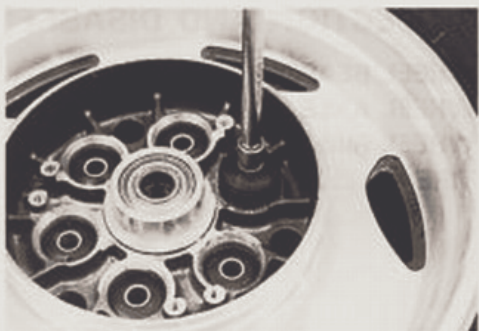
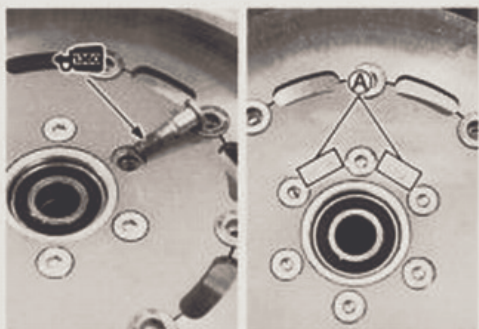
 Brake disc bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)

WHEEL DAMPER

- Install the dampers.

NOTE:

If soap water is applied around the damper, it makes the job easier.




DRIVEN JOINT

- Install the driven joint.

NOTE:


Apply grease to the O-ring and the final gear spline before installing the driven joint.

 99000-25030: SUZUKI SUPER GREASE "A"

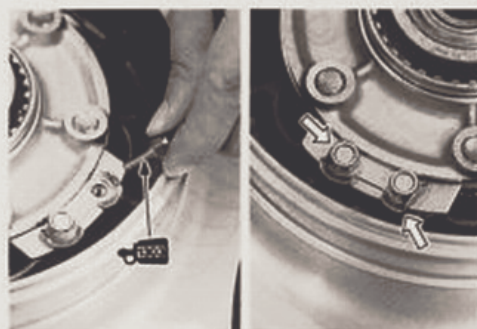
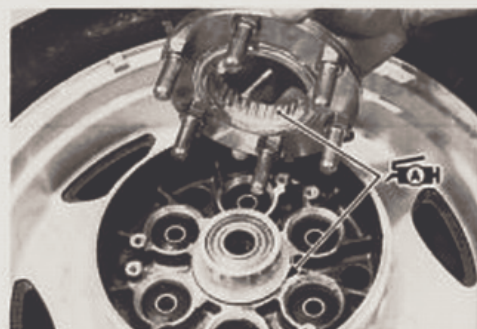
- Apply THREAD LOCK SUPER "1303" to the thread of driven joint stopper bolts.

 99000-32030: THREAD LOCK SUPER "1303"


- Tighten the driven joint stopper bolts to the specified torque.

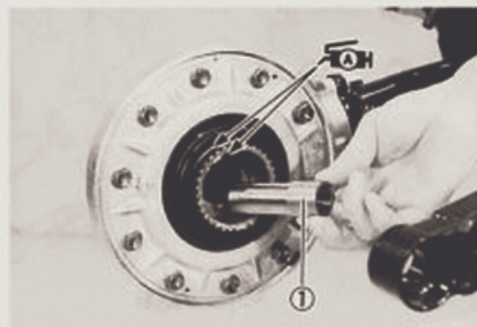
 Driven joint stopper bolt: 10 N·m (1.0 kg-m, 7.0 lb-ft)

- Bend up the washer to lock the bolts.

**REAR WHEEL**

- Install the spacer ①.
- Apply grease to the final gear spline before installing the rear wheel.

 99000-25030: SUZUKI SUPER GREASE "A"



- Remount the rear wheel spacer and rear axle.

NOTE:


Refer to the page 6-28 for the spacer positioning.

CAUTION

When installing the rear wheel, position the brake disc between the brake pads. Be careful not to damage the brake pads.



- Tighten the rear axle nut and the caliper mounting bracket bolt to the specified torque.

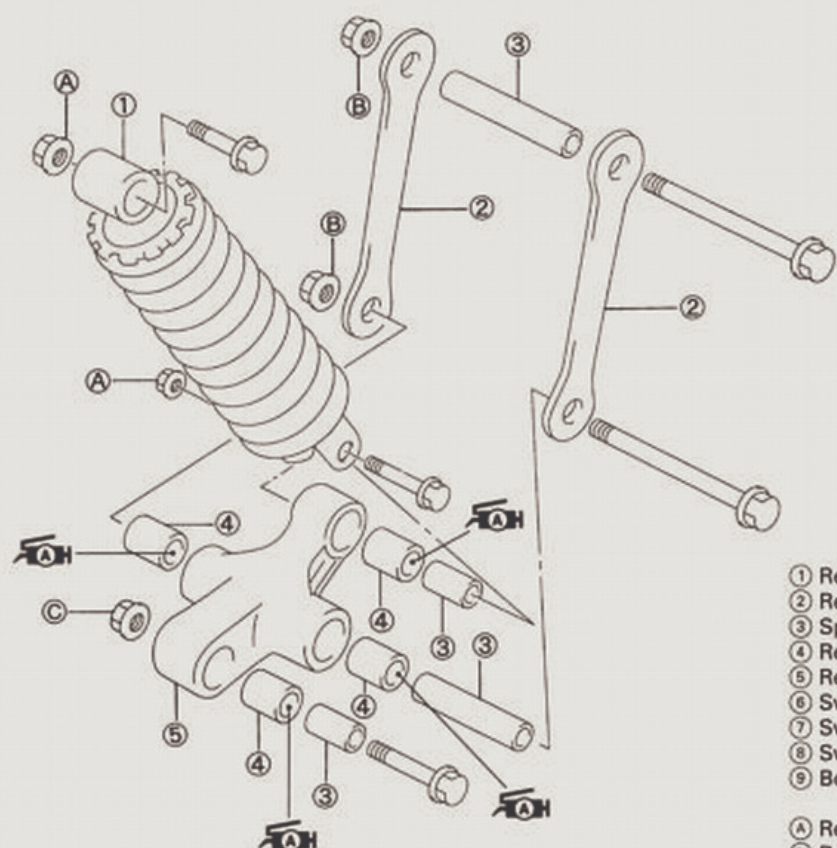
 Rear axle nut: 110 N·m (11.0 kg-m, 79.5 lb-ft)
Rear brake caliper mounting bracket nut: 60 N·m
(6.0 kg-m, 43.5 lb-ft)

NOTE:

After remounting the rear wheel, pump with the brake pedal a few times to check for proper brake operation.

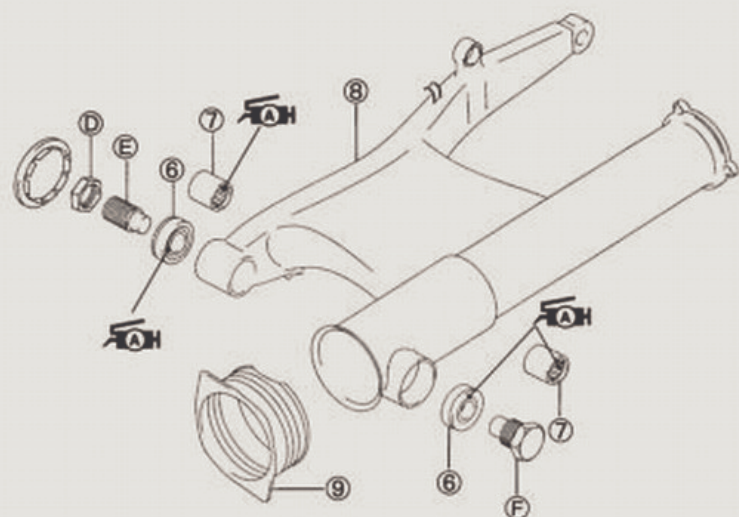
- Install the exhaust pipe and muffler. (See p. 3-15.)
- Install the rear fender (See p. 6-4.)

REAR SUSPENSION CONSTRUCTION

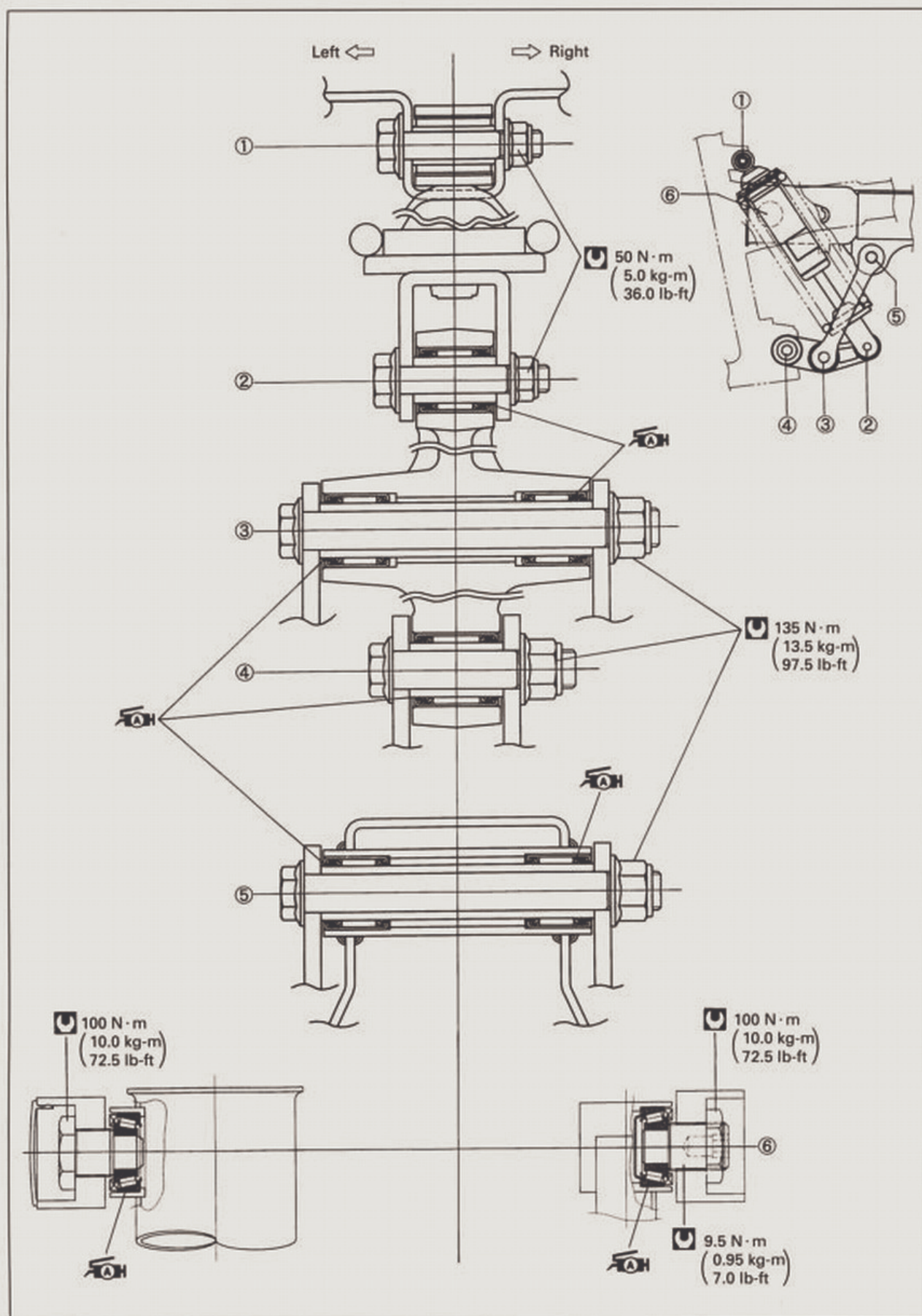


- ① Rear shock absorber
- ② Rear cushion rod
- ③ Spacer
- ④ Rear cushion lever bearing
- ⑤ Rear cushion lever
- ⑥ Swingarm pivot bearing
- ⑦ Swingarm bearing
- ⑧ Swingarm
- ⑨ Boot

- A Rear shock absorber mounting nut
- B Rear cushion rod mounting nut
- C Rear cushion lever mounting nut
- D Rear swingarm pivot bolt lock nut
- E Rear swingarm pivot bolt (Right)
- F Rear swingarm pivot bolt (Left)

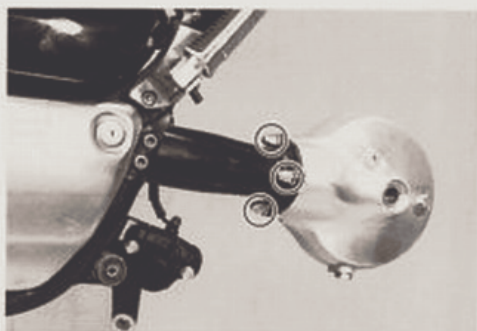


ITEM	N·m	kg-m	lb-ft
A	50	5.0	36.0
B	135	13.5	97.5
C	135	13.5	97.5
D	100	10.0	72.5
E	9.5	0.95	7.0
F	100	10.0	72.5



REMOVAL

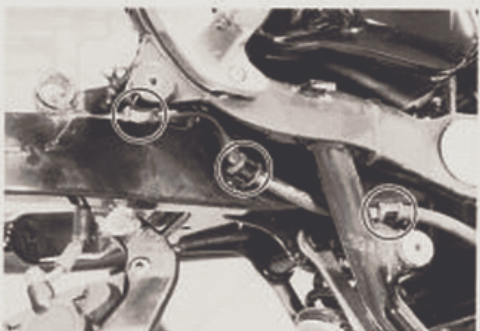
- Remove the rear wheel. (See. p. 6-29.)
- Remove the final gear case with propeller shaft.



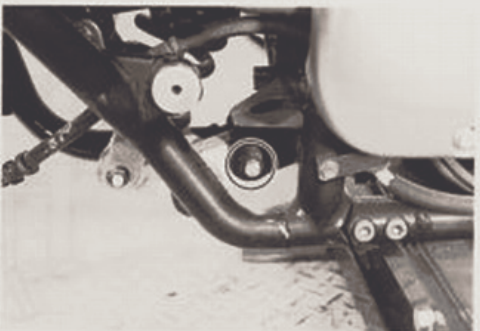
- Remove the left and right side frame covers. (See p. 6-2.)
- Remove the tool box outer cover and the tool box.



- Remove the brake hose from the brake hose guides.



- Remove the cushion lever mounting bolt and nut.



- Remove the shock absorber upper mounting bolt and nut.



- Remove the swingarm pivot bolt caps.

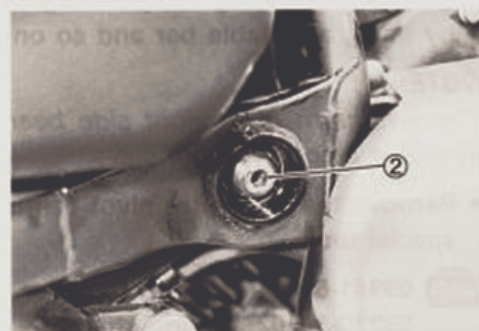
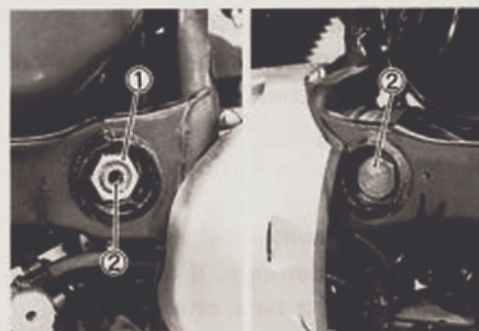


- Remove the right side swingarm pivot bolt lock nut ①.
- Remove the left and right side swingarm pivot bolts ②.

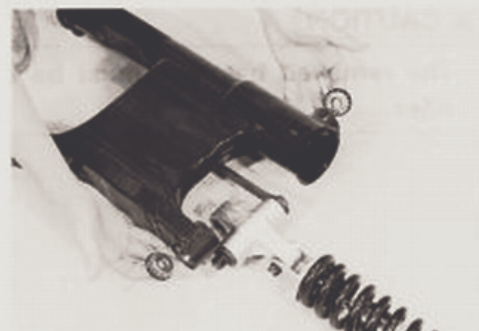
NOTE:

Slightly loosen the cushion rod mounting nuts and the shock absorber lower mounting nut before removing the swingarm to facilitate later disassembly.

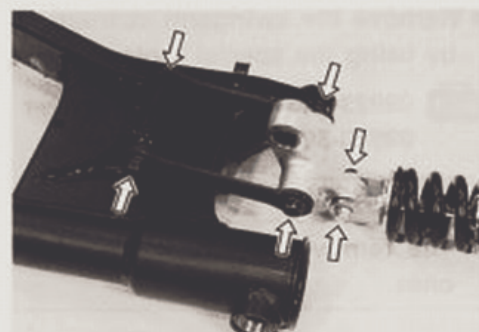
- Remove the rear suspension assembly.



- Remove the tapered roller bearings.



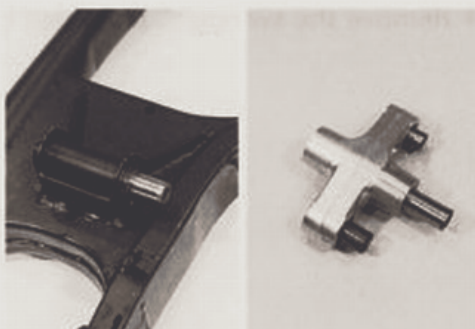
- Remove the shock absorber, cushion lever and cushion rod.



INSPECTION AND DISASSEMBLY

SPACER

- Remove spacer from swingarm.
- Remove the spacers from the cushion lever.
- Inspect the spacers for any flaws or other damage. If any defects are found, replace the spacers with new ones.



SWINGARM BEARING

Insert the spacer into swingarm cushion rod upper side bearing and check the play to move the spacer up and down.

If excessive play is noted, replace the bearing with a new one.

Inspect the swingarm pivot bearing, its race and dust seal for wear or damage. If any defects are found, replace the bearing with a new one.

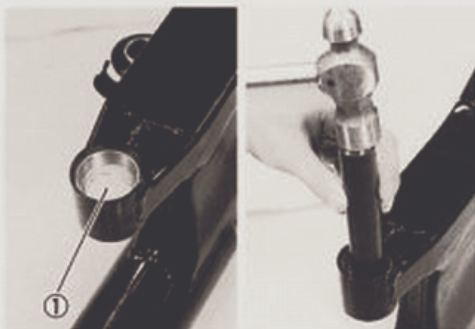
- Remove the swingarm pivot right side bearing plate ① by using a suitable bar and so on.

NOTE:

The swingarm pivot right side bearing and its plate are available as one component.

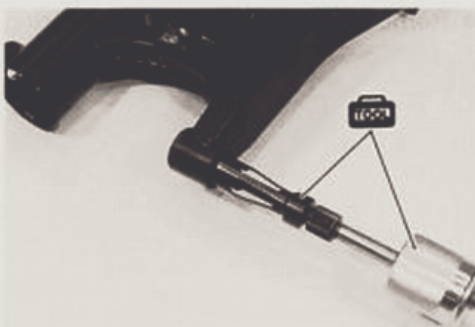
- Remove the swingarm pivot bearing races by using the special tools.

TOOL 09941-64511: Bearing remover
09930-30102: Sliding shaft



CAUTION

The removed bearings must be replaced with new ones.

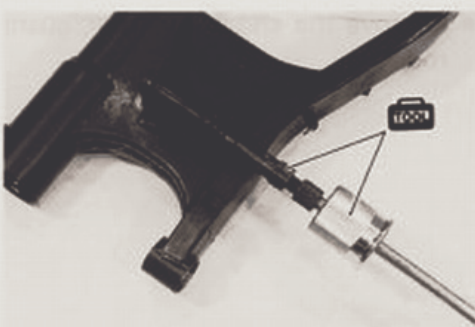


- Remove the swingarm cushion rod upper side bearing by using the special tools.

TOOL 09923-74510: Bearing remover
09930-30102: Sliding shaft

CAUTION

The removed bearings must be replaced with new ones.



CUSHION LEVER BEARING

Insert the spacer into bearing and check the play to move the spacer up and down. If an excessive play is noted, replace the bearing with a new one.

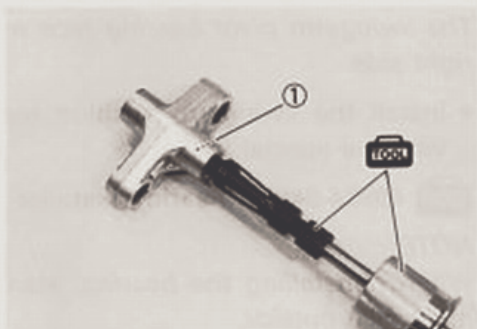


- Remove the cushion rod lower side bearing ① by using the special tools.

TOOL 09923-74510: Bearing remover
09930-30102: Sliding shaft

CAUTION

The removed bearings must be replaced with new ones.

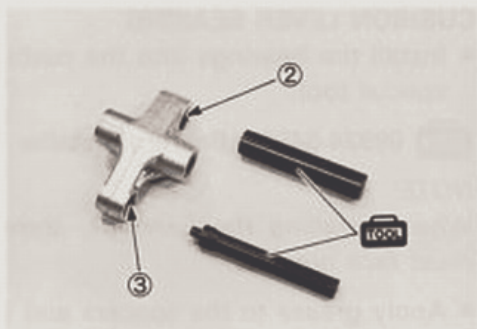


- Remove the cushion lever mounting bearing ② and shock absorber lower side bearing ③ by using the special tools.

TOOL 09925-98221: Bearing remover (for ②)
09943-88211: Bearing remover (for ③)

CAUTION

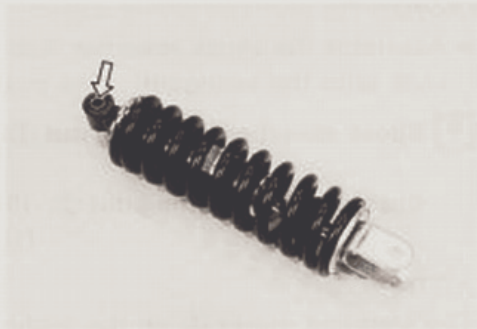
The removed bearings must be replaced with new ones.

**SHOCK ABSORBER**

Inspect the shock absorber body and bush for damage and oil leakage. If any defects are found, replace the shock absorber with a new one.

CAUTION

Do not attempt to disassemble the rear shock absorber unit. It is unserviceable.

**SPRING PRE-LOAD ADJUSTMENT**

The set length 217 mm (8.54 in) provides the maximum spring pre-load.

The set length 227 mm (8.94 in) provides the minimum spring pre-load.

Standard

Rear shock absorber spring set length: 222.0 mm
(8.74 in)



REASSEMBLY

Reassemble the swingarm and shock absorber in the reverse order of disassembly and removal, and pay attention to the following points:

SWINGARM BEARING


- Install the swingarm pivot bearing races by using the special tool.

 **09913-84510: Bearing installer**

NOTE:

The swingarm pivot bearing race with plate is positioned right side.

- Install the swingarm cushion rod upper side bearing with the special tool.


 **09924-84521: Bearing installer**

NOTE:

When reinstalling the bearing, stamped mark of bearing must face outside.

CUSHION LEVER BEARING

- Install the bearings into the cushion lever by using the special tool.

 **09924-84521: Bearing installer**


NOTE:

When installing the bearings, stamped mark of bearing must face outside.

- Apply grease to the spacers and bearings.


 **99000-25030: SUZUKI SUPER GREASE "A"**

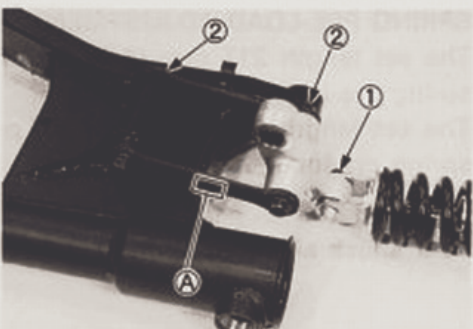
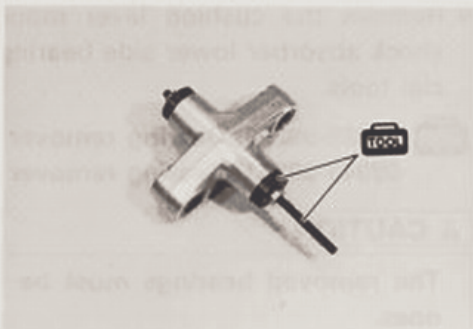
- Assemble the shock absorber, cushion lever and cushion rods onto the swingarm. (See p. 6-34.)

 **Shock absorber mounting nut ①: 50 N·m**
(5.0 kg-m, 36.0 lb-ft)

Cushion rod mounting nut ②: 135 N·m
(13.5 kg-m, 97.5 lb-ft)

NOTE:

The stamped marks  on the cushion rod should be face outside.



REMOUNTING

Remount the swingarm and shock absorber in the reverse order of disassembly and removal, and pay attention to the following points.

SWINGARM

- Before installing the swingarm, install the boot and the universal joint.

NOTE:

Make sure that the "UP" mark  on the boot faces up.

- Install the swingarm assembly, its pivot bearings and bolts (1, 2).

NOTE:

Apply grease to the swingarm pivot bearings.

 99000-25030: SUZUKI SUPER GREASE "A"

- ①: For left side swingarm pivot bolt
- ②: For right side swingarm pivot bolt

- Tighten the left side swingarm pivot bolt ① to the specified torque.

 **Swingarm pivot bolt (left side): 100 N·m**
(10.0 kg-m, 72.5 lb-ft)


NOTE:

Before tightening the left side swingarm pivot bolt ①, loosen the right side one ②.

- Tighten the right side swingarm pivot bolt ② to the specified torque.

 **Swingarm pivot bolt (right side): 9.5 N·m**
(0.95 kg-m, 7.0 lb-ft)

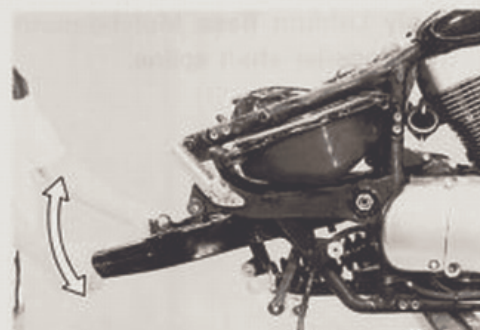
- Tighten the swingarm pivot lock nut ③ to the specified torque.

 **Swingarm pivot lock nut: 100 N·m (10.0 kg-m, 72.5 lb-ft)**

- Install the swingarm pivot bolt caps.


NOTE:

After tightening the swingarm pivot lock nut, be sure to check the swingarm operation.




SHOCK ABSORBER AND CUSHION LEVER MOUNTING NUT

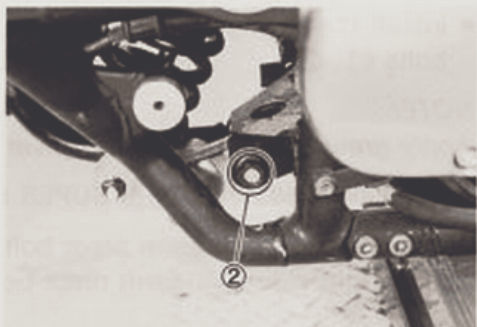
- Tighten the shock absorber upper mounting nut ① to the specified torque.

 Shock absorber mounting nut: 50 N·m
(5.0 kg-m, 36.0 lb-ft)




- Tighten the cushion lever mounting nut ② to the specified torque.

 Cushion lever mounting nut: 135 N·m
(13.5 kg-m, 97.5 lb-ft)



FINAL GEAR CASE

- Before installing the tool box and frame covers, install the final gear case as follows.
- Install the plate to the final gear case ①. Apply SUZUKI BOND "1207B" to the mating surface of swingarm and final gear case.

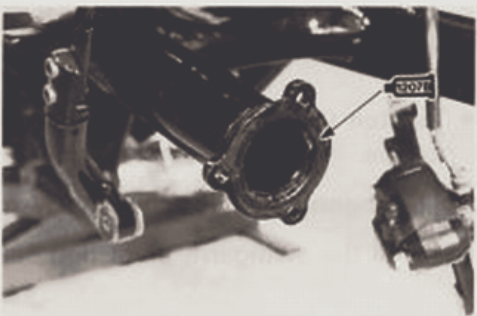
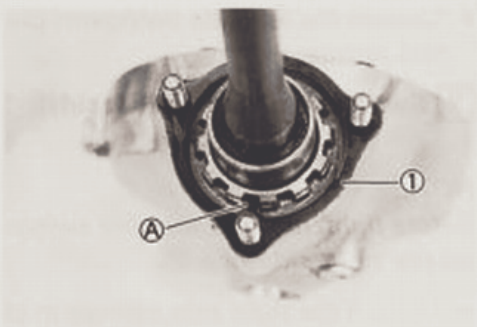
 99104-31140: SUZUKI BOND "1207B"

CAUTION

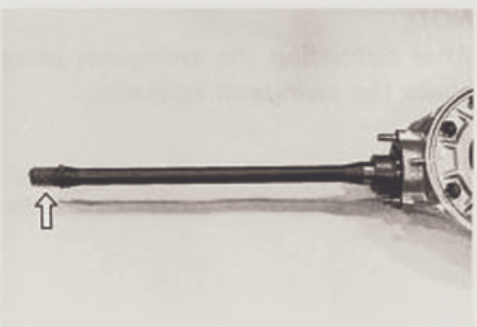
When installing the plate ①, align the lug A of the plate ① to the bearing retainer groove.

NOTE:

Two kinds of plates are available to lock the bearing retainer at the proper position.

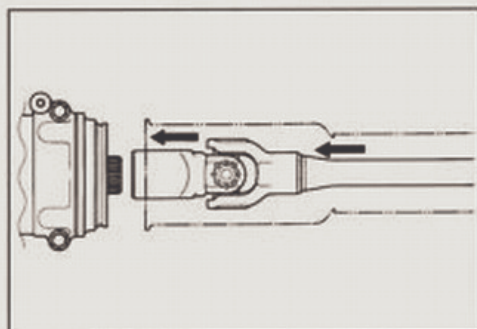
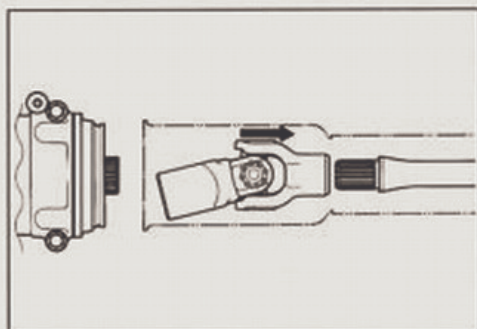


- Apply Lithium Base Molybdenum grease (NLGI #2) to the propeller shaft spline.




NOTE:

To install the final gear case easily, move the dust boot front and the universal joint back. Engage the universal joint to the propeller shaft first and then engage it to the secondary driven bevel gear shaft.



- Install the final gear case nuts and washers.
- Tighten the final gear case mounting nuts to the specified torque.

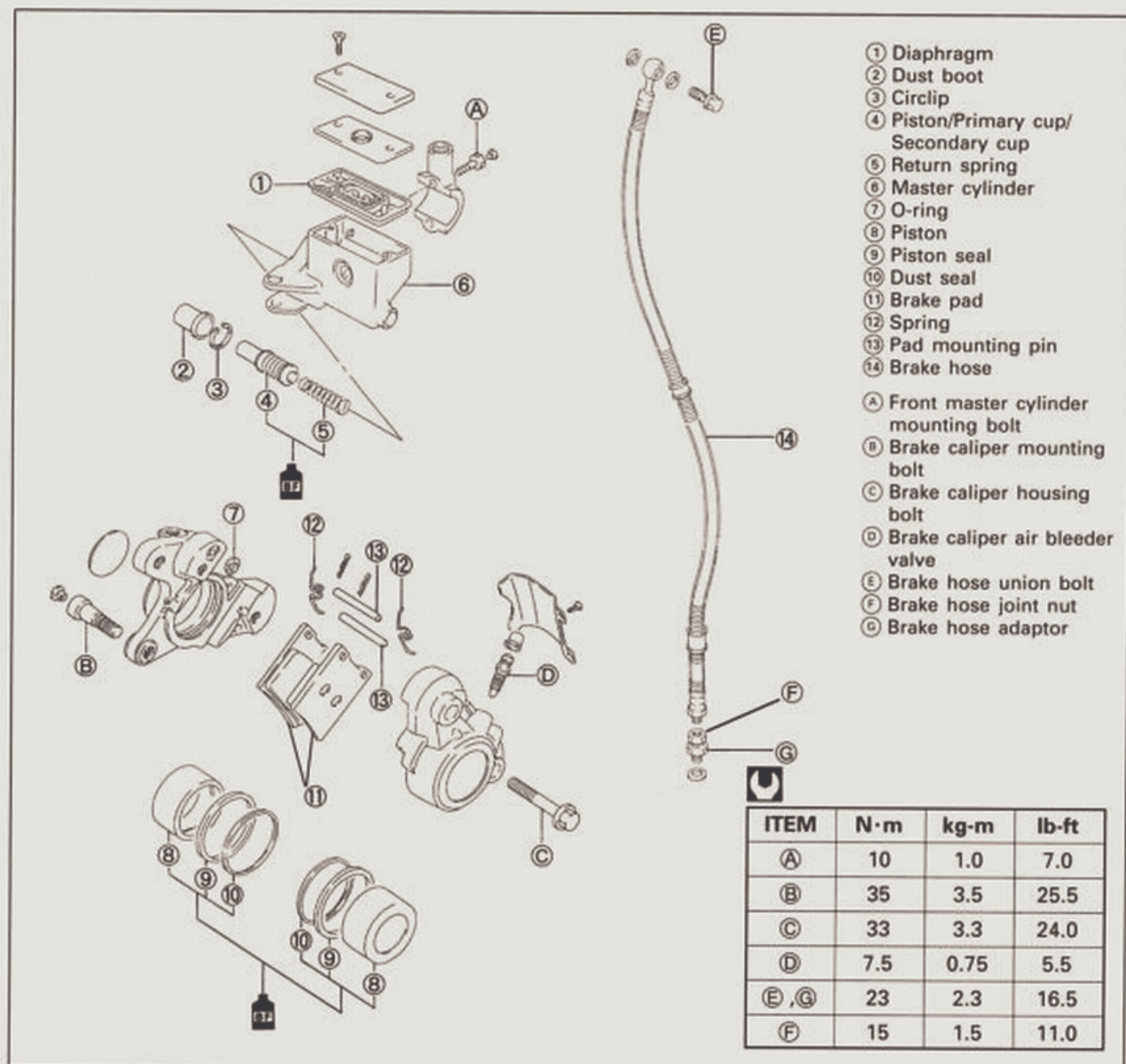
 **Final gear case mounting nut: 40 N·m**
(4.0 kg-m, 29.0 lb-ft)



- Install the rear wheel. (See p. 6-32.)
- Install the exhaust pipes and mufflers. (See p. 3-15.)



FRONT BRAKE CONSTRUCTION



⚠ WARNING

- * This brake system is filled with a ethylene glycol-based DOT 4 brake fluid. Do not use or mix different types of fluid, such as silicone-based or petroleum-based brake fluids.
- * Do not use any brake fluid taken from old, used or unsealed containers. Never reuse brake fluid left over from the last servicing or which has been stored for long periods of time.
- * When storing the brake fluid, seal the container completely and keep it away from children.
- * When replenishing brake fluid, take care not to get dust into fluid.
- * When washing brake components, use new brake fluid. Never use cleaning solvent.
- * A contaminated brake disc or brake pad reduces braking performance. Discard contaminated pads and clean the disc with high quality brake cleaner or a neutral detergent.

⚠ CAUTION

Handle brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials etc.

BRAKE PAD REPLACEMENT

- Remove the bolt caps and brake caliper mounting bolts ①.
- Remove the dust cover ②.
- Remove the brake pads by removing the clips ③, pad mounting pins ④ and springs ⑤.

CAUTION

- * Do not operate the brake lever during or after brake pad removal.
- * Replace the brake pads as a set, otherwise braking performance will be adversely affected.

- Install the new brake pads.
- Tighten the brake caliper mounting bolts to the specified torque.


 Brake caliper mounting bolt: 35 N·m (3.5 kg-m, 25.5 lb-ft)

NOTE:

After replacing the brake pads, pump the brake lever a few times to check for proper brake operation and then check the brake fluid level.

BRAKE FLUID REPLACEMENT

- Place the motorcycle on a level surface and keep the handlebars straight.
- Remove the master cylinder reservoir cap and diaphragm.
- Suck up the old brake fluid as much as possible.
- Fill the reservoir with new brake fluid.

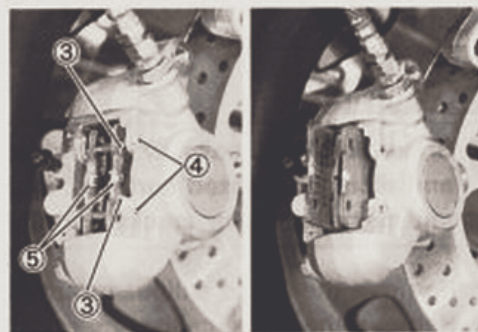
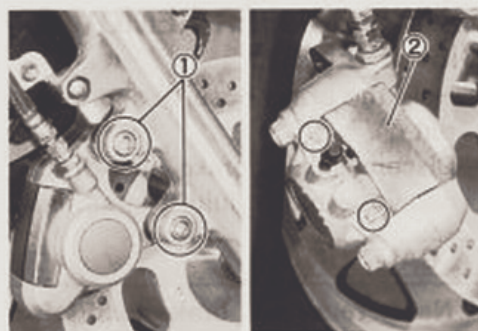
 Specification and Classification: DOT 4

- Connect a clear hose ① to the air bleeder valve ② and insert the other end of the hose into a receptacle.
- Loosen the air bleeder valve and pump the brake lever until the old brake fluid is completely out of the brake system.
- Close the air bleeder valve and disconnect the clear hose. Fill the reservoir with new brake fluid to the upper end of the inspection window.

CAUTION

Bleed air from the brake system. (See p. 2-13.)

 Air bleeder valve: 7.5 N·m (0.75 kg-m, 5.5 lb-ft)



BRAKE CALIPER REMOVAL AND DISASSEMBLY

- Hold the brake hose ① and loosen the brake hose joint nut ②.
- Disconnect the brake hose from the brake caliper and allow the brake fluid to drain into a suitable receptacle.

▲ CAUTION

Never reuse the brake fluid left over from previous servicing and which has been stored for long periods of time.

▲ WARNING

Brake fluid, if it leaks, will interfere with safe running and discolor painted surfaces. Check the brake hose and hose joints for cracks and fluid leakage.

- Remove the brake caliper mounting bolt caps.
- Remove the brake caliper by removing the brake caliper mounting bolts ③.

NOTE:

Slightly loosen the brake caliper housing bolts ④ to facilitate later disassembly before removing the brake caliper mounting bolts ③.

- Remove the brake pads. (See p. 6-44.)
- Remove the brake caliper housing bolts ④.
- Separate the brake halves.

- Remove the O-ring ⑤.

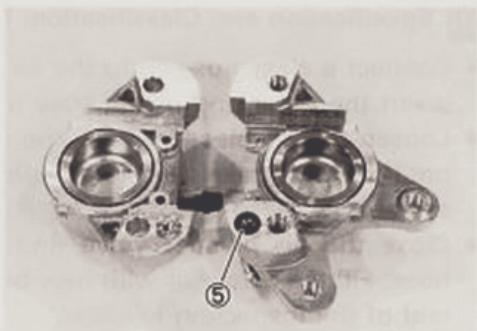
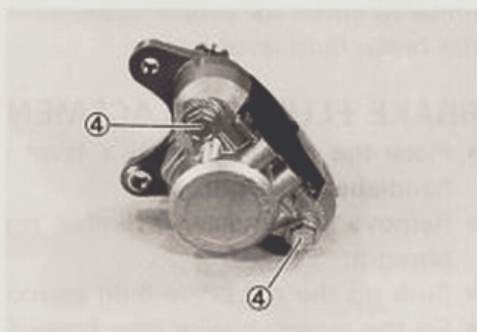
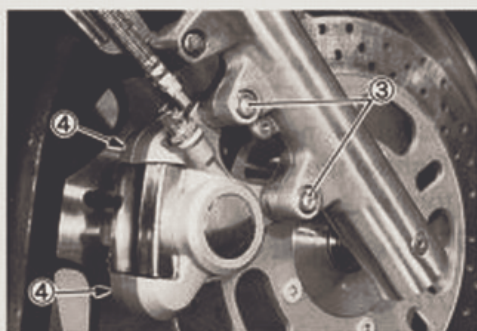
▲ CAUTION

Replace the O-ring with a new one.

- Place a rag over the brake caliper piston to prevent it from popping out and then force out the piston using compressed air.

▲ CAUTION

Do not use high pressure air to prevent brake caliper piston damage.



- Remove the dust seals and piston seals.

▲ CAUTION

Do not reuse the dust seals and piston seals to prevent fluid leakage.

BRAKE CALIPER INSPECTION

BRAKE CALIPER

Inspect each brake caliper cylinder wall for nicks, scratches or other damage.

BRAKE CALIPER PISTONS

Inspect the brake caliper pistons for any scratches or other damage.



BRAKE CALIPER REASSEMBLY AND REMOUNTING

Reassemble and remount the brake caliper in the reverse order of removal and disassembly. Pay attention to the following points:

- Wash the caliper bores and pistons with the specified brake fluid. Thoroughly wash the dust seal grooves and piston seal grooves.



Specification and classification: DOT 4

▲ CAUTION

- * Wash the brake caliper components with new brake fluid before reassembly.
- * Do not wipe the brake fluid off after washing the components.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvent such as gasoline, kerosine, etc.
- * Replace the piston seals and dust seals with new ones.
- * Apply brake fluid to all of the seals, brake caliper bores and pistons before reassembly.



- Tighten the brake caliper mounting bolts ①, housing bolts ② and brake hose joint nut ③ to the specified torque.

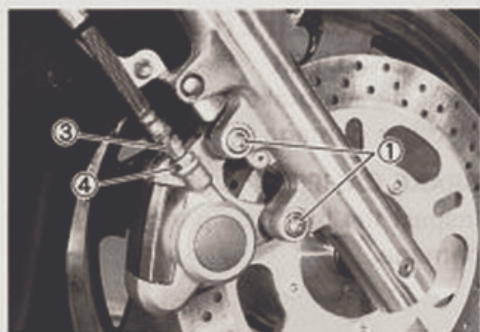
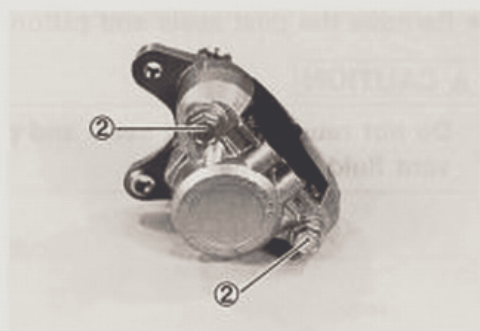
- Brake caliper mounting bolt ①: 35 N·m**
(3.5 kg-m, 25.5 lb-ft)
- Brake caliper housing bolt ②: 33 N·m**
(3.3 kg-m, 24.0 lb-ft)
- Brake hose joint nut ③: 15 N·m (1.5 kg-m, 11.0 lb-ft)**
- Brake hose adaptor ④: 23 N·m (2.3 kg-m, 16.5 lb-ft)**

NOTE:

Before remounting the brake caliper, push the brake caliper pistons all the way into the caliper.

CAUTION

Bleed air from the system after installing the brake caliper. (See p. 2-13.)

**BRAKE DISC INSPECTION**

- Remove the front and rear wheels. (See pp. 6-7 and 6-29.)

Check the brake disc for damage or cracks. Measure the thickness using the micrometer.

Replace the brake disc if the thickness is less than the service limit or if damage is found.

TOOL 09900-20205: Micrometer (0–25 mm)

Service Limit

Brake disc thickness (Front): 5.5 mm (0.22 in)
(Rear) : 6.3 mm (0.25 in)

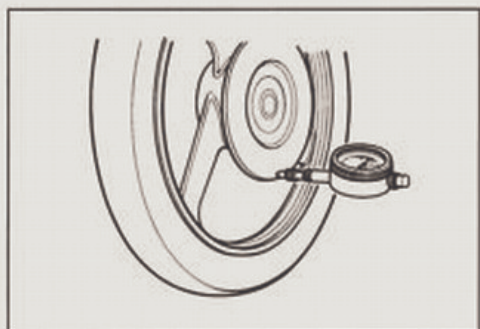
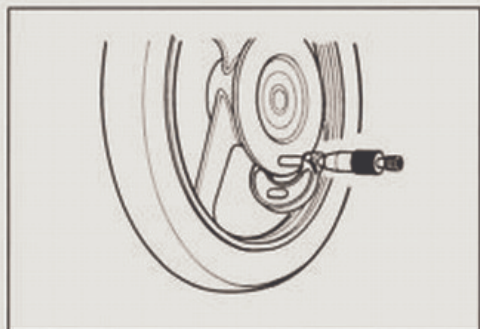
Measure the runout using the dial gauge.

Replace the disc if the runout exceeds the service limit.

TOOL 09900-20606: Dial gauge (1/100 mm, 10 mm)
09900-20701: Magnetic stand

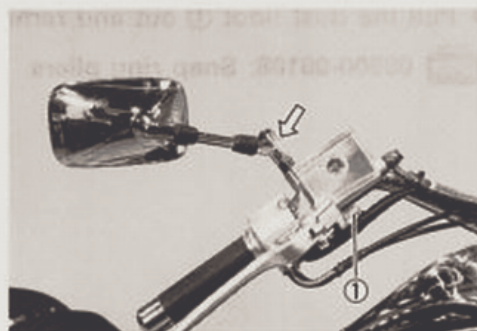
Service Limit

Brake disc runout (Front and Rear): 0.3 mm (0.012 in)



MASTER CYLINDER REMOVAL AND DISASSEMBLY

- Disconnect the front brake light switch lead wires ①.
- Remove the rear view mirror.



- Place a rag underneath the brake hose union bolt on the master cylinder to catch any spilt brake fluid. Remove the brake hose union bolt and disconnect the brake hose.



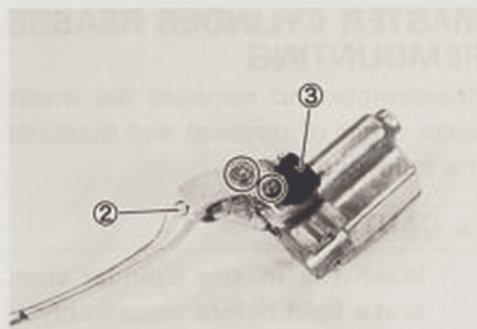
▲ CAUTION

Immediately wipe off any brake fluid contacting any part of the motorcycle. The brake fluid reacts chemically with paint, plastics and rubber materials, etc., and will damage them severely.

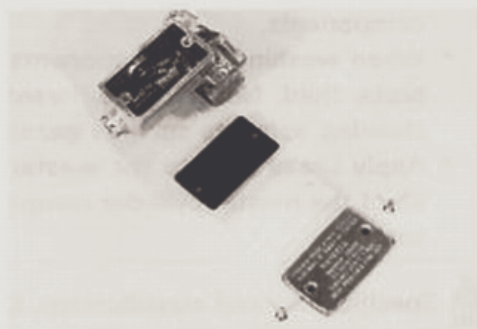
- Remove the bolt caps.
- Remove the master cylinder assembly by removing its mounting bolts.




- Remove the brake lever ② and brake light switch ③.

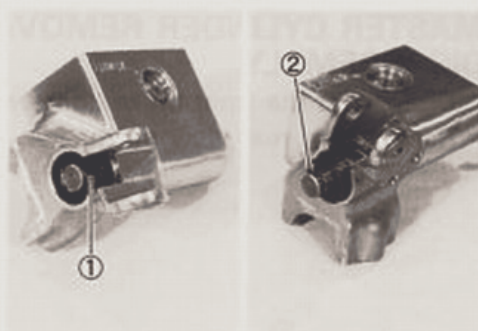


- Remove the reservoir cap and diaphragm.
- Drain the brake fluid.



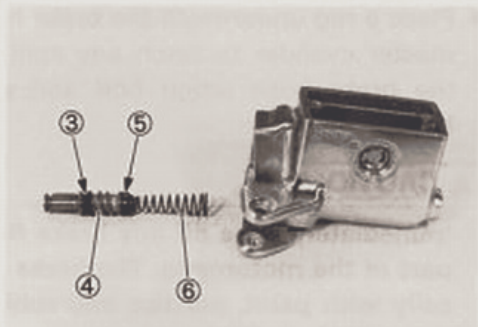
- Pull the dust boot ① out and remove the circlip ②.

 09900-06108: Snap ring pliers



- Remove the piston/secondary cup/primary cup and spring.

- ③ Secondary cup
- ④ Piston
- ⑤ Primary cup
- ⑥ Spring



MASTER CYLINDER INSPECTION

MASTER CYLINDER

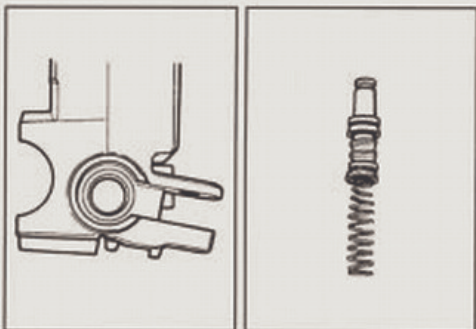
Inspect the master cylinder bore for any scratches or other damage.

PISTON

Inspect the piston surface for any scratches or other damage.

RUBBER PARTS

Inspect the primary cup, secondary cup and dust seal for wear or damage.

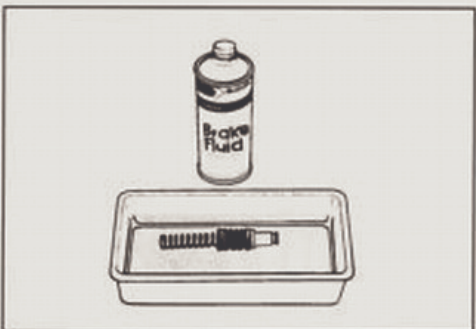


MASTER CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the master cylinder in the reverse order of removal and disassembly. Pay attention to the following points:

⚠ CAUTION

- * Wash the master cylinder components with new brake fluid before reassembly.
- * Do not wipe the brake fluid off after washing the components.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvents such as gasoline, kerosene, etc.
- * Apply brake fluid to the master cylinder bore and all of the master cylinder components before reassembly.



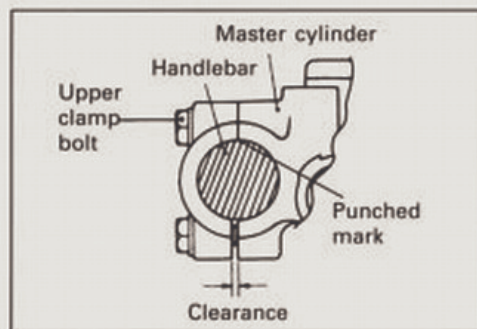
Specification and classification: DOT 4

- When installing the brake light switch, align the projection on the switch with the hole in the master cylinder.




- When remounting the master cylinder onto the handlebars, align the master cylinder holder's mating surface ① with the punch mark ② on the handlebars and tighten the upper clamp bolt first.

 **Master cylinder mount bolt: 10 N·m (1.0 kg-m, 7.0 lb-ft)**



- Tighten the brake hose union bolt to the specified torque.

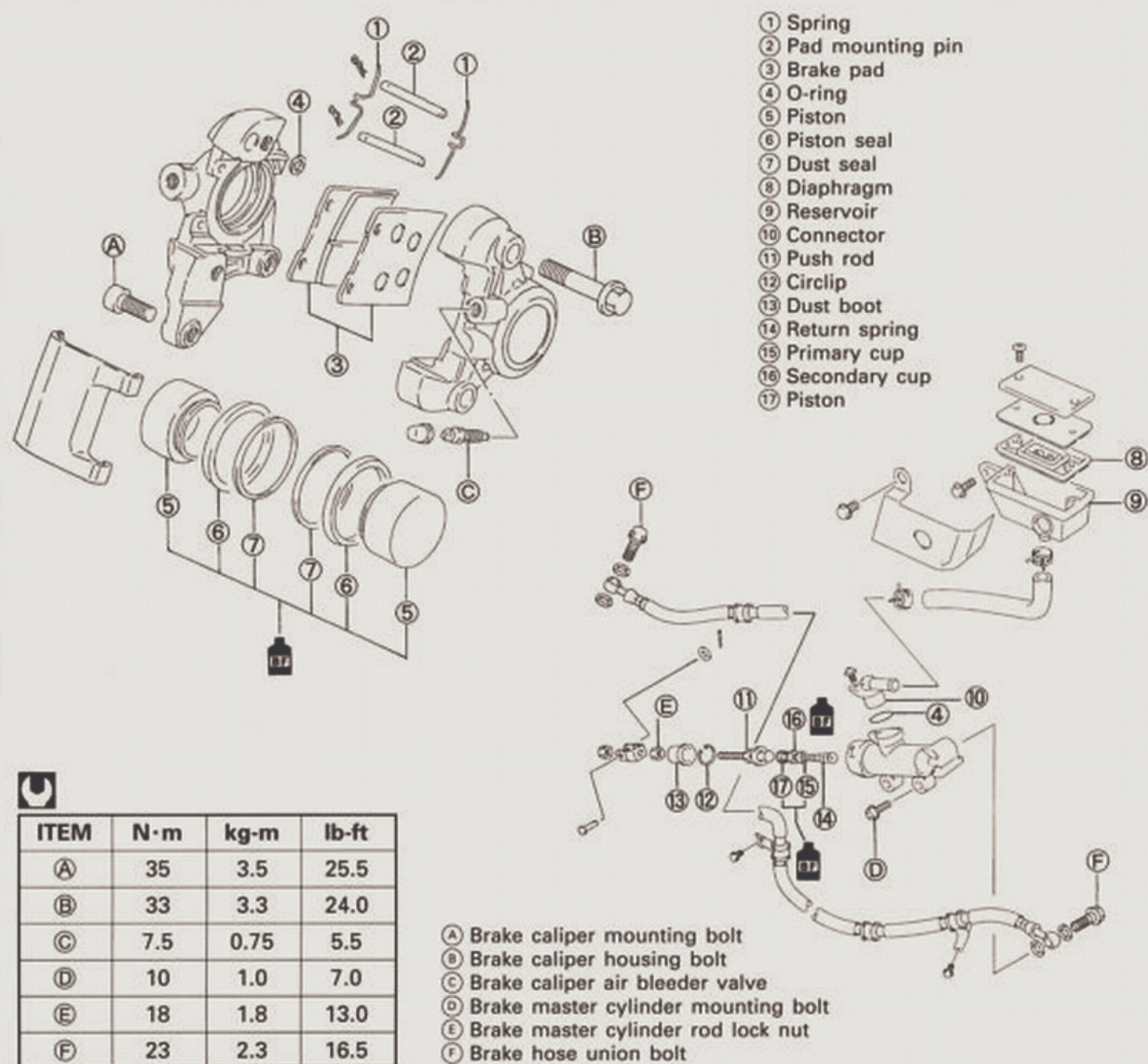
 **Brake hose union bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)**

CAUTION

Bleed air from the brake system after installing the master cylinder. (See p. 2-13.)



REAR BRAKE CONSTRUCTION



⚠ WARNING

- * This brake system is filled with a ethylene glycol-based DOT 4 brake fluid. Do not use or mix different types of fluid, such as silicone-based or petroleum-based brake fluids.
- * Do not use any brake fluid taken from old, used or unsealed containers. Never reuse brake fluid left over from the last servicing or which has been stored for long periods of time.
- * When storing the brake fluid, seal the container completely and keep it away from children.
- * When replenishing brake fluid, take care not to get dust into fluid.
- * When washing brake components, use new brake fluid. Never use cleaning solvent.
- * A contaminated brake disc or brake pad reduces braking performance. Discard contaminated pads and clean the disc with high quality brake cleaner or a neutral detergent.

⚠ CAUTION

Handle brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials etc.

BRAKE PAD REPLACEMENT

- Remove the brake pad cover.

- Remove the brake pads by removing the clips ①, pad mounting pins ② and springs ③.

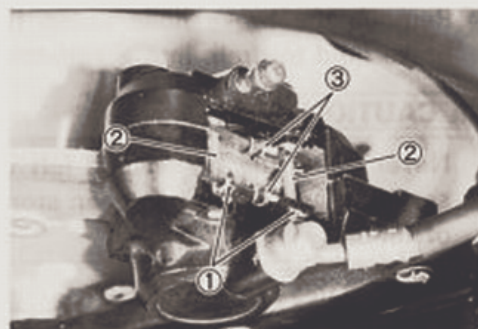
▲ CAUTION

- * Do not operate the brake pedal during or after brake pad removal.
- * Replace the brake pad as a set, otherwise braking performance will be adversely affected.

- Install the new brake pads.

NOTE:

After replacing the brake pads, pump the brake pedal a few times to check for proper brake operation and then check the brake fluid level.



BRAKE FLUID REPLACEMENT

- Place the motorcycle on a level surface and keep the handlebar straight.
- Remove the master cylinder reservoir cap and diaphragm.
- Suck up the old brake fluid as much as possible.
- Fill the reservoir with fresh brake fluid.

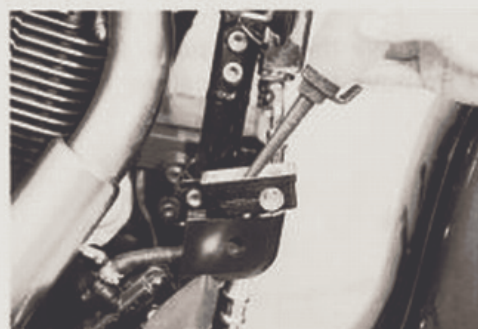
Specification and classification: DOT 4

- Connect a clear hose ① to the air bleeder valve ② and insert the other end of the hose into a receptacle.
- Loosen the air bleeder valve and pump the brake pedal until the old brake fluid is completely out of the brake system.
- Close the air bleeder valve, and disconnect the clear hose. Fill the reservoir with new brake fluid to the upper end of the inspection window.

▲ CAUTION

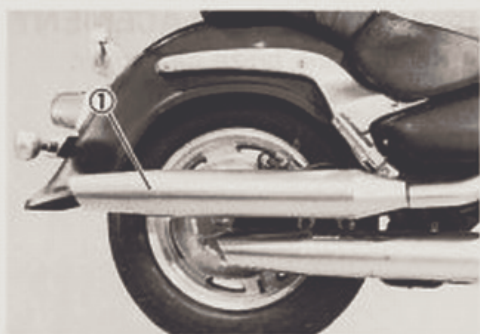
Bleed air from the brake system. (See p. 2-13.)

-  Air bleeder valve: 7.5 N·m (0.75 kg-m, 5.5 lb-ft)



BRAKE CALIPER REMOVAL AND DISASSEMBLY

- Remove the upper muffler ①. (See p. 3-5.)



- Remove the brake hose union bolt ② and allow the brake fluid to drain into a suitable receptacle.



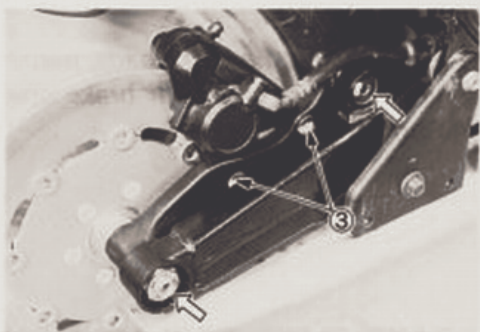
⚠ CAUTION

Never reuse the brake fluid left over from previous servicing and which has been stored for long periods of time.

⚠ WARNING

Brake fluid, if it leaks, will interfere with safe running and discolor painted surfaces. Check the brake hose and hose joints for cracks and fluid leakage.

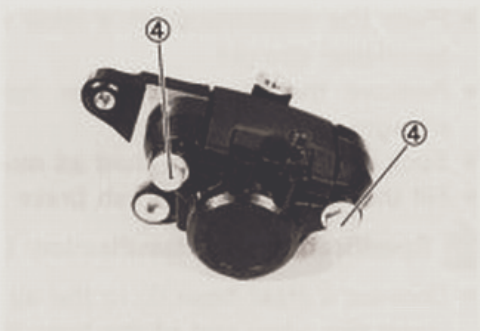
- Remove the axle cap and loosen the axle nut.
- Remove the caliper mounting bracket bolt.
- Remove the brake caliper mounting bolts ③.



NOTE:

Slightly loosen the brake caliper housing bolts ④ to facilitate later disassembly before removing the brake caliper mounting bolts.

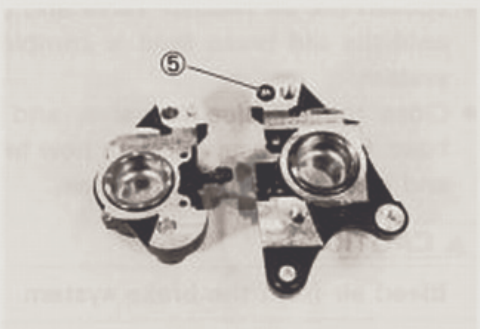
- Remove the brake pads. (See p. 6-52.)
- Remove the brake caliper housing bolts ④.



- Separate the brake caliper halves.
- Remove the O-ring ⑤.

⚠ CAUTION

Replace the O-ring with a new one.



- Place a rag over the brake caliper piston to prevent it from popping out and then force out the piston using compressed air.

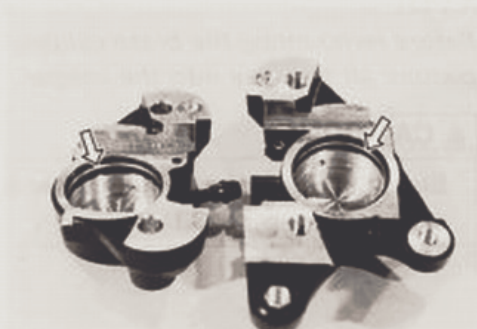
⚠ CAUTION

Do not use high pressure air to prevent brake caliper piston damage.

- Remove the dust seals and piston seals.

⚠ CAUTION

Do not reuse the dust seals and piston seals to prevent fluid leakage.



BRAKE CALIPER INSPECTION

BRAKE CALIPER See p. 6-46.

BRAKE CALIPER PISTONS See p. 6-46.

BRAKE DISC See p. 6-47.

Service Limit

Brake disc thickness (Rear): 6.3 mm (0.25 in)

Brake disc runout (Rear): 0.3 mm (0.012 in)

BRAKE CALIPER REASSEMBLY AND REMOUNTING

Reassemble and remount the brake caliper in the reverse order of removal and disassembly. Pay attention to the following points:


⚠ CAUTION

- * Wash the brake caliper components with new brake fluid before reassembly.
- * Do not wipe the brake fluid off after washing the components.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvents such as gasoline, kerosine, etc.
- * Replace the piston seals and dust seals with new ones.
- * Apply brake fluid to all of the seals, brake caliper bores and pistons before reassembly.



Specification and classification: DOT 4

- Tighten each bolts and nut to the specified torque.

 **Brake caliper housing bolt ①:** 33 N·m
(3.3 kg-m, 24.0 lb-ft)

Brake caliper mounting bolt ②: 35 N·m
(3.5 kg-m, 25.5 lb-ft)

Brake hose union bolt ③: 23 N·m (2.3 kg-m, 16.5 lb-ft)

Brake caliper mounting bracket nut ④: 60 N·m
(6.0 kg-m, 43.5 lb-ft)

Rear axle nut ⑤: 110 N·m (11.0 kg-m, 79.5 lb-ft)

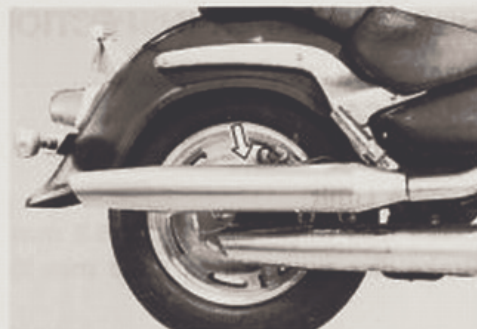
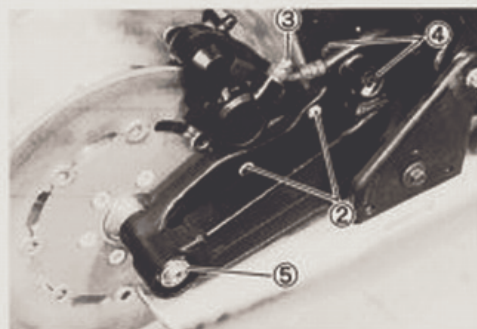
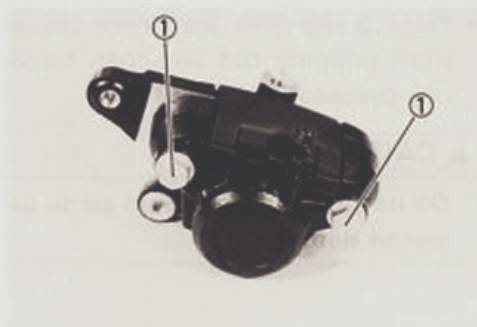
NOTE:

Before remounting the brake caliper, push the brake caliper pistons all the way into the caliper.

⚠ CAUTION

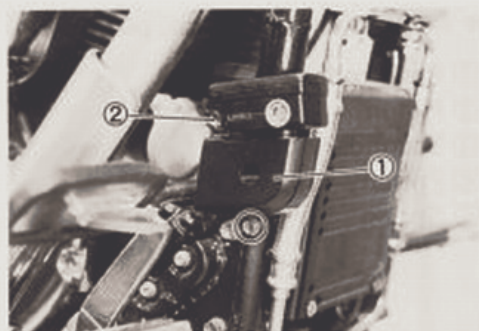
Bleed air from the system after installing the brake caliper. (See p. 2-13.)

- Install the muffler. (See p. 3-15.)

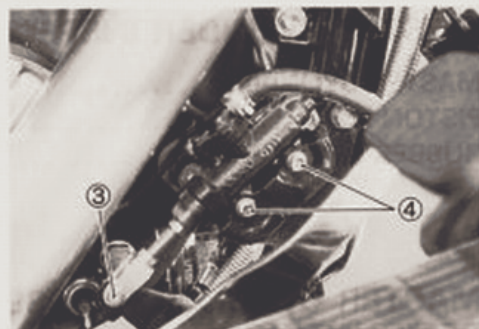


MASTER CYLINDER REMOVAL AND DISASSEMBLY

- Remove the hose cover ①.
- Remove the master cylinder mounting bolts ②.



- Remove the pin ③.
- Remove the master cylinder along with the reservoir tank by removing the mounting bolts ④.



- Place a rag underneath the brake hose union bolt on the master cylinder to catch any spilt brake fluid. Remove the brake hose union bolt ⑤.

▲ CAUTION

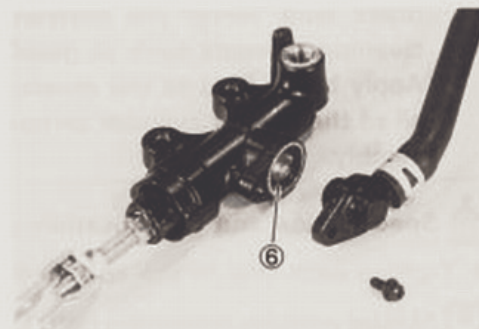
Immediately wipe off any brake fluid contacting any part of the motorcycle. The brake fluid reacts chemically with paint, plastics and rubber materials, etc., and will damage them severely.



- Remove the brake hose connector by removing the screw.
- Remove the O-ring ⑥.

▲ CAUTION

Replace the O-ring with a new one.



- Pull the dust boot out and remove the circlip.

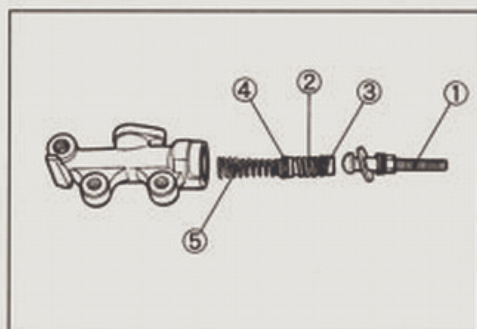


09900-06108: Snap ring pliers



- Remove the push rod, piston/primary cup and spring.

- ① Push rod
- ② Piston
- ③ Secondary cap
- ④ Primary cap
- ⑤ Spring



MASTER CYLINDER INSPECTION

MASTER CYLINDER See p. 6-49.

PISTON See p. 6-49.

RUBBER PARTS See p. 6-49.

MASTER CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the master cylinder in the reverse order of removal and disassembly. Pay attention to the following points:

⚠ CAUTION

- * Wash the master cylinder components with new brake fluid before reassembly.
- * Do not wipe the brake fluid off after washing the components.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvents such as gasoline, kerosene, etc.
- * Apply brake fluid to the master cylinder bore and all of the master cylinder components before reassembly.



⚡ Specification and Classification: DOT 4

- Tighten each bolt to the specified torque.

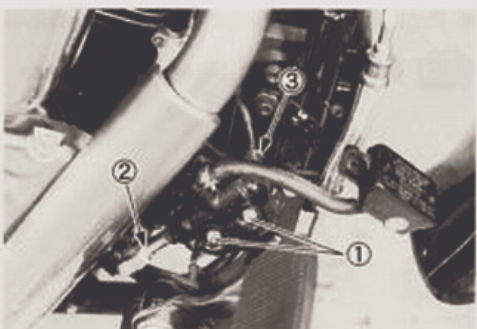
- ⚡ Master cylinder mounting bolt ①: 10 N·m
(1.0 kg-m, 7.0 lb-ft)
- Master cylinder rod lock nut ②: 18 N·m
(1.8 kg-m, 13.0 lb-ft)
- Brake hose union bolt ③: 23 N·m (2.3 kg-m, 16.5 lb-ft)

⚠ CAUTION

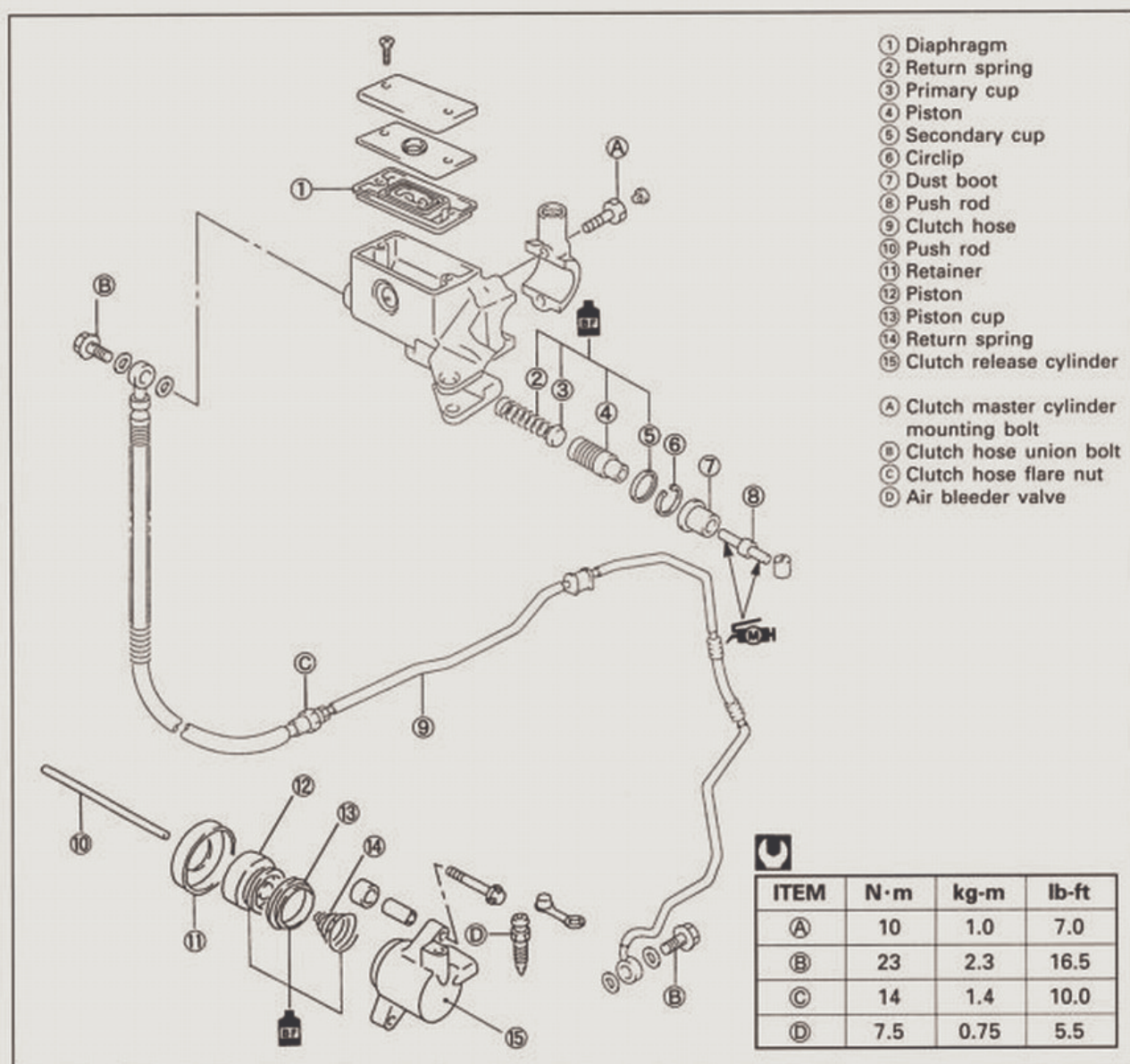
Bleed air from the system after installing the master cylinder. (See p. 2-13.)

- Adjust the following item.

- * Brake pedal height 2-14



CLUTCH RELEASE CYLINDER AND CLUTCH MASTER CYLINDER CONSTRUCTION



▲ WARNING

- * This clutch system is filled with a ethylene glycol-based DOT 4 brake fluid. Do not use or mix different types of fluid, such as silicone-based or petroleum-based brake fluids.
- * Do not use any brake fluid taken from old, used or unsealed containers. Never reuse brake fluid left over from the last servicing or which has been stored for long periods of time.
- * When storing brake fluid, seal the container completely and keep it away from children.
- * When replenishing brake fluid, take care not to get dust into fluid.
- * When washing clutch components, use fresh brake fluid. Never use cleaning solvent.

▲ CAUTION

Handle brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials etc.

CLUTCH FLUID REPLACEMENT

- Place the motorcycle on a level surface and keep the handlebars straight.
- Remove the clutch master cylinder reservoir cap and diaphragm.
- Suck up the old brake fluid as much as possible.
- Fill the reservoir with new brake fluid.

BF Specification and classification: DOT 4

- Remove the secondary bevel gear case cover bolts.
- Disconnect the regulator/rectifier lead wire coupler and remove the secondary bevel gear case cover.

- Connect a clear hose ① to the air bleeder valve ② and insert the other end of hose into a receptacle.
- Loosen the air bleeder valve and pump the clutch lever until the old brake fluid is completely out of the clutch system.
- Close the air bleeder valve and disconnect the clear hose. Fill the reservoir with new brake fluid to the upper end of the inspection window.

CAUTION

Bleed air from the clutch system. (See p. 2-11.)

U Air bleeder valve: 7.5 N·m (0.75 kg-m, 5.5 lb-ft)

CLUTCH RELEASE CYLINDER REMOVAL AND DISASSEMBLY

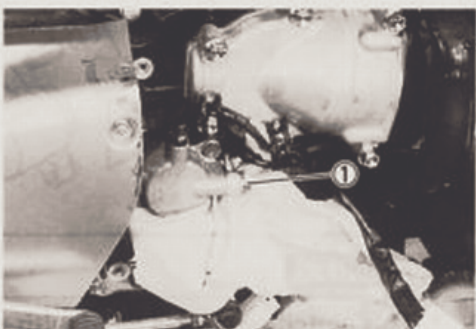
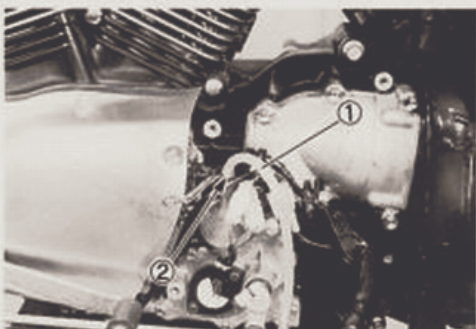
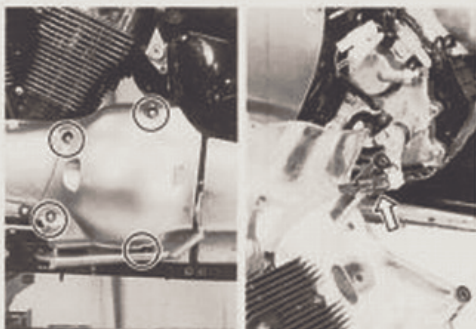
- Remove the secondary bevel gear case cover bolts.
- Disconnect the regulator/rectifier lead wire coupler and remove the secondary bevel gear case cover.
- Disconnect the clutch hose from the clutch release cylinder by removing the clutch hose union bolt ① and allow the brake fluid to drain into a suitable receptacle.

CAUTION

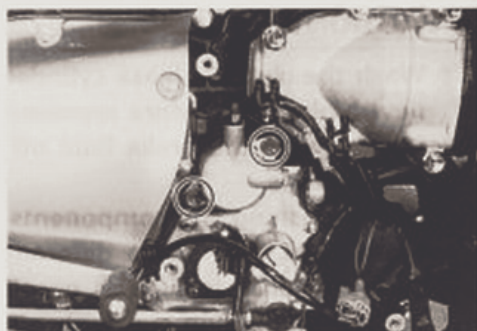
Never reuse the brake fluid left over from previous servicing and which has been stored for long periods of time.

WARNING

Brake fluid, if it leaks, will interfere with safe running and discolor painted surfaces. Check the clutch hose, pipe and hose joints for cracks and fluid leakage.



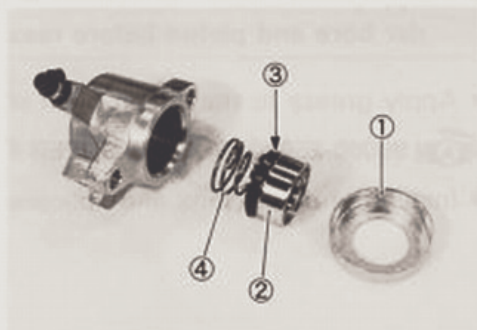
- Remove the clutch release cylinder by removing its mounting bolts, spacers and dowel pins.



- Remove the retainer ①, piston ②, piston cup ③ and spring ④.

▲ CAUTION

Do not reuse the piston cup to prevent fluid leakage.



CLUTCH RELEASE CYLINDER INSPECTION

CLUTCH RELEASE CYLINDER

Inspect clutch release cylinder wall for nicks, scratches or other damage.

CLUTCH RELEASE PISTONS


Inspect the clutch release piston for any scratches or other damage.



CLUTCH RELEASE CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the clutch release cylinder in the reverse order of removal and disassembly. Pay attention to the following points:

- Wash the clutch release cylinder bores and pistons with specified brake fluid. Thoroughly wash piston cup grooves.


 Specification and classification: DOT 4



▲ CAUTION

- * Wash the clutch release cylinder components with new brake fluid before reassembly.
- * Do not wipe the brake fluid off after washing the components.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvents such as gasoline, kerosine, etc.
- * Replace the piston cup with a new one.
- * Apply brake fluid to the seals, clutch release cylinder bore and piston before reassembly.

- Apply grease to the clutch push rod retaining hole.

 99000-25030: SUZUKI SUPER GREASE "A"

- Install the dowel pins and spacers.

- Tighten the clutch release cylinder mounting bolts and clutch hose union bolt to the specified torque.

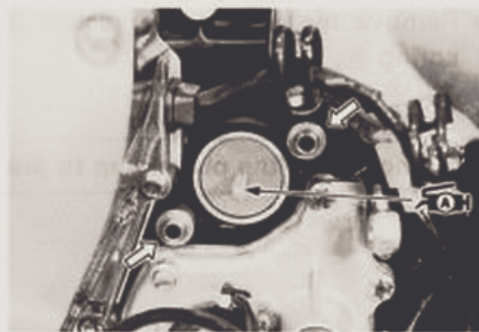
 Clutch hose union bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)

NOTE:

Before remounting the clutch release cylinder, push the piston all the way into the cylinder.

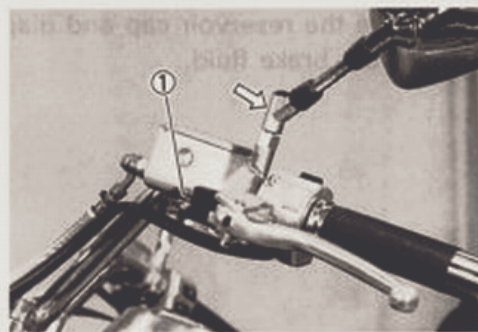
▲ CAUTION

Bleed air from the system after installing the clutch release cylinder. (See p. 2-11.)



CLUTCH MASTER CYLINDER REMOVAL AND DISASSEMBLY

- Disconnect the clutch lever position switch lead wires ①.
- Remove the rear view mirror.



- Place a rag underneath the clutch hose union bolt on the clutch master cylinder to catch any spilt brake fluid. Remove the clutch hose union bolt and disconnect the clutch hose.



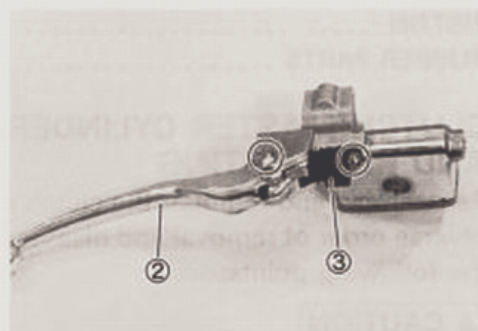
⚠ CAUTION

Immediately wipe off any brake fluid contacting any part of the motorcycle. The brake fluid reacts chemically with paint, plastics and rubber materials, etc., and will damage them severely.

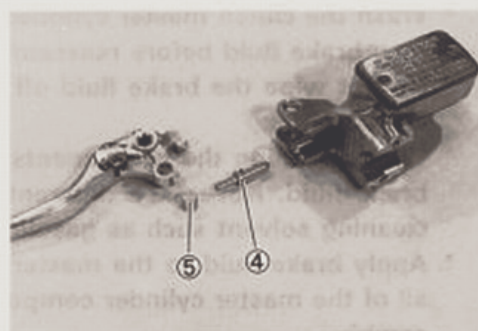
- Remove the bolt caps.
- Remove the clutch master cylinder assembly by removing its mounting bolts.



- Remove the clutch lever ② and clutch lever position switch ③.




- Remove the push rod ④ and bush ⑤.



- Remove the reservoir cap and diaphragm.
- Drain the brake fluid.

- Pull the dust boot ③ out and remove the circlip ④.

 09900-06108: Snap ring pliers

- Remove the piston/secondary cup, primary cup and spring.
 - ⑤ Washer
 - ⑥ Secondary cup
 - ⑦ Piston
 - ⑧ Primary cup
 - ⑨ Spring

CLUTCH MASTER CYLINDER INSPECTION


MASTER CYLINDER See p. 6-49.
 PISTON See p. 6-49.
 RUBBER PARTS See p. 6-49.

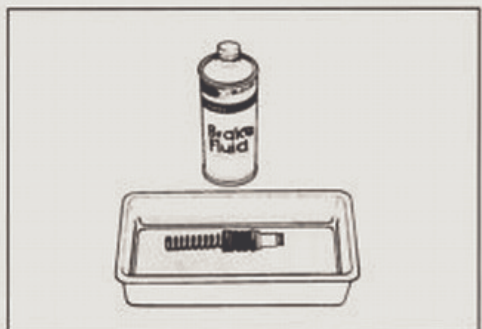
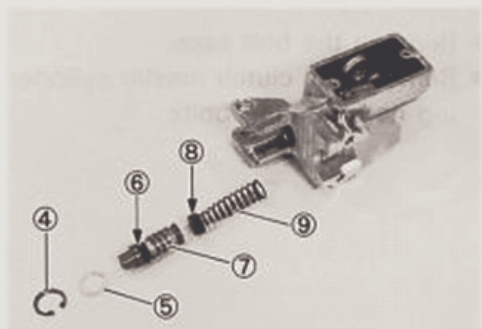
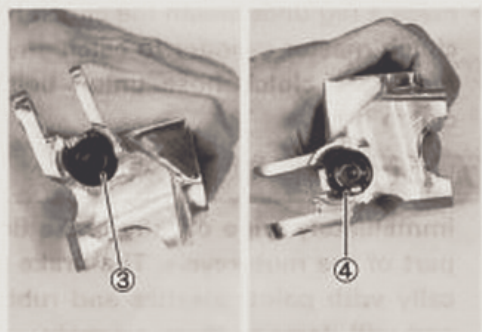
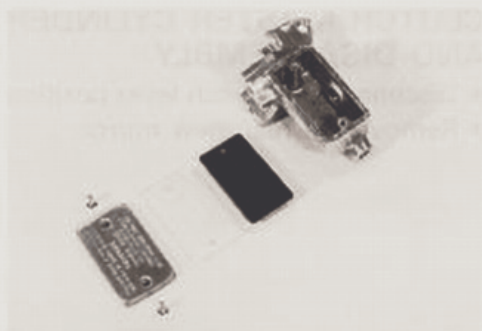
CLUTCH MASTER CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the clutch master cylinder in the reverse order of removal and disassembly. Pay attention to the following points:


⚠ CAUTION

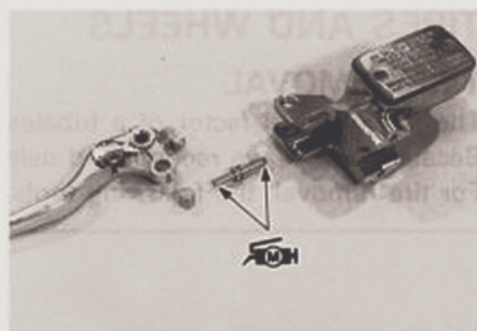
- * Wash the clutch master cylinder components with new brake fluid before reassembly.
- * Do not wipe the brake fluid off after washing the components.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvent such as gasoline, kerosine, etc.
- * Apply brake fluid to the master cylinder bore and all of the master cylinder components before reassembly.

 Specification and classification: DOT 4

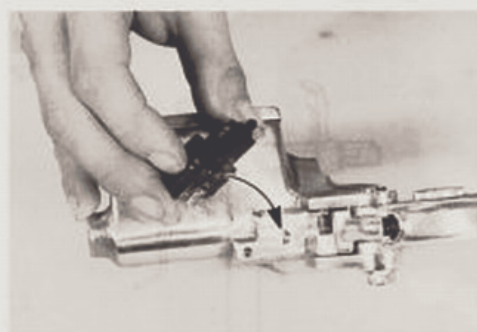


- Before reassemble the clutch lever, apply SUZUKI MOLY PASTE to both ends of the push rod.

 99000-25140: SUZUKI MOLY PASTE

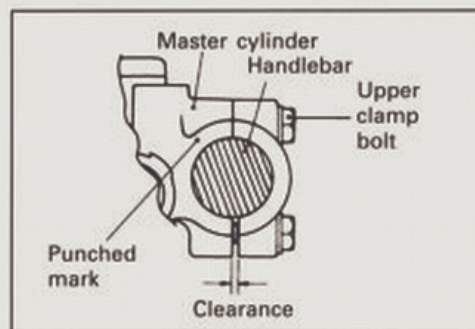
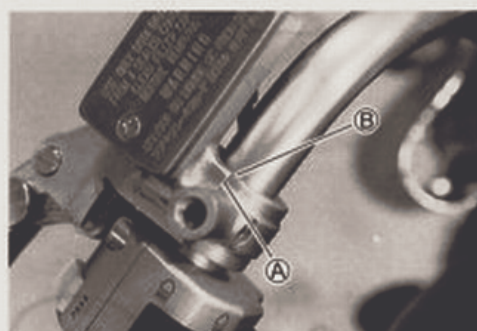


- When installing the clutch lever position switch, align the projection on the switch with the hole in the clutch master cylinder.



- When remounting the clutch master cylinder onto the handlebars, align the clutch master cylinder holder's mating surface (A) with the punch mark (B) on the handlebars and tighten the upper clamp bolt first.

 Clutch master cylinder clamp bolt (upper and lower):
10 N·m (1.0 kg-m, 7.0 lb-ft)



- Tighten the clutch hose union bolt to the specified torque.

 Clutch hose union bolt: 23 N·m (2.3 kg-m, 16.5 lb-ft)

CAUTION

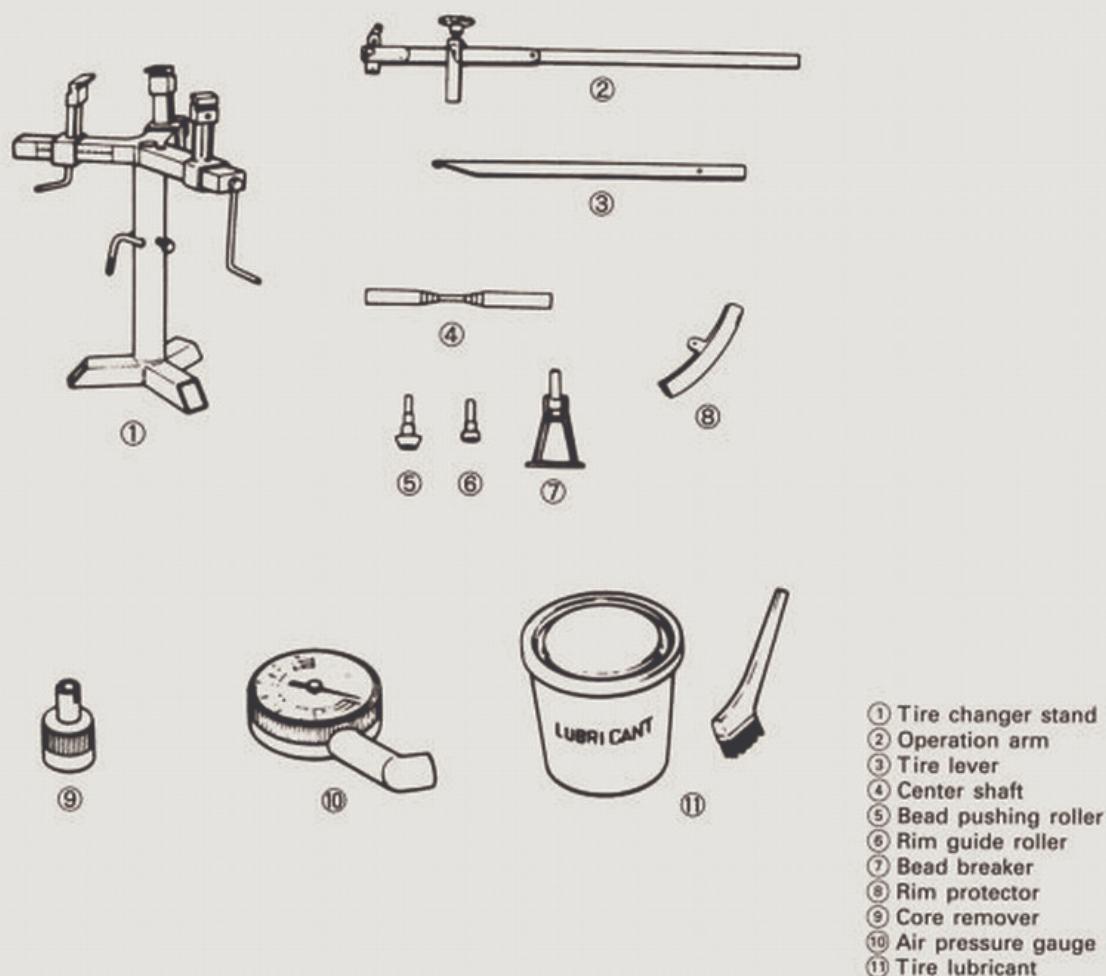
Bleed air from the clutch system after installing the clutch master cylinder. (See p. 2-11.)



TIRES AND WHEELS

TIRE REMOVAL

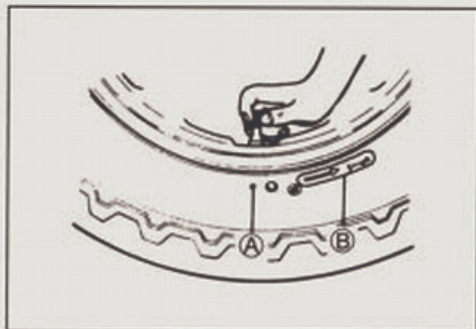
The most critical factor of a tubeless tire is the seal between the wheel rim and the tire bead. Because of this, we recommend using a tire changer which is also more efficient than tire levers. For tire removal, the following tools are required.



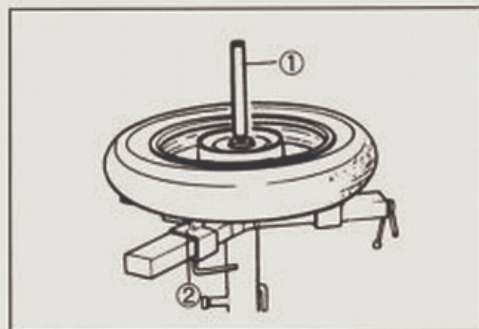
- Remove the valve core from the valve stem, and deflate the tire completely.

NOTE:

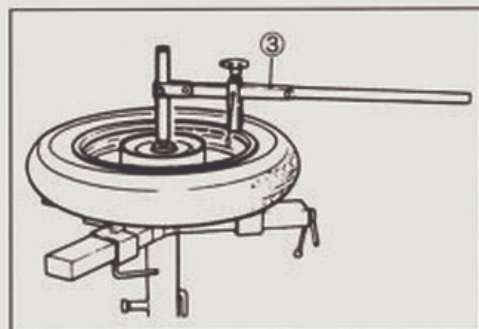
Mark the tire with chalk to note the position **A** of the tire on the rim and rotational direction **B** of the tire.



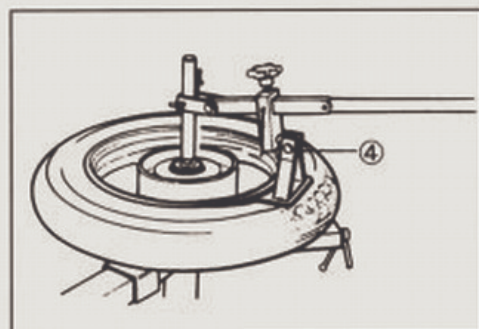
- Place the center shaft ① to the wheel, and fix the wheel using the rim holder ②.



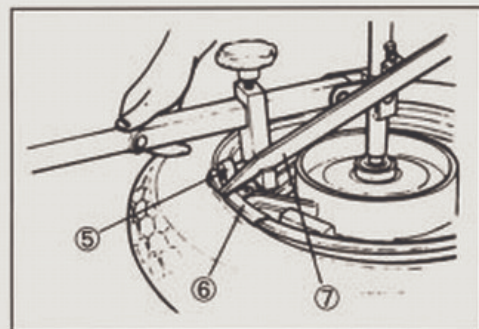
- Attach the operation arm ③ to the center shaft.



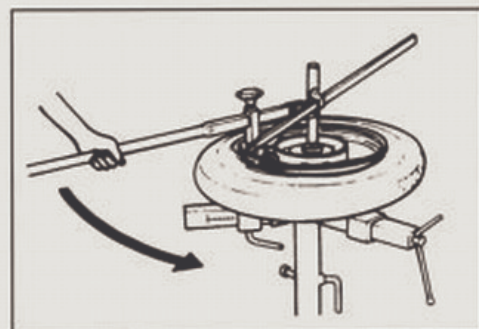
- Attach the bead breaker ④ to the operation arm, and dismount the bead from the rim. Turn the wheel over and dismount the other bead from the rim.



- Install the rim guide roller ⑤.
- Install the rim protector ⑥, and raise the bead using the tire lever ⑦.



- Set the tire lever against the operation arm, and rotate the lever around the rim. Repeat this procedure to remove the other bead from the rim.



INSPECTION

WHEELS

Wipe off any rubber substance or rust from the wheel, and inspect the wheel rim. If any one of the following items are observed, replace the wheel with a new one.

- * A distortion or crack.
- * Any scratches or flaws in the bead seating area.
- * Wheel runout (axial & radial) of more than 2.0 mm (0.08 in).


Service Limit

Wheel rim runout (axial and radial): 2.0 mm (0.08 in)

TIRES

Thoroughly inspect the removed tire, and if any one of the following items are observed, replace the tire with a new one; do not repair it.

- * A puncture or a split whose total length or diameter exceeds 6.0 mm (0.24 in).
- * A scratch or split on the side wall.
- * Tread depth less than 1.6 mm (0.06 in) in the front tire and less than 2.0 mm (0.08 in) on the rear tire.

 **09900-20805: Tire depth gauge**

Service Limit

Tire tread depth limit (Front): 1.6 mm (0.06 in)
(Rear) : 2.0 mm (0.08 in)

- | | |
|--|---|
| <ul style="list-style-type: none"> * Ply separation. * Tread separation. * Tread wear is extraordinarily deformed or distributed around the tire. | <ul style="list-style-type: none"> * Scratches at the bead. * Cord is cut. * Damage from skidding (flat spots). * Abnormality in the inner liner. |
|--|---|

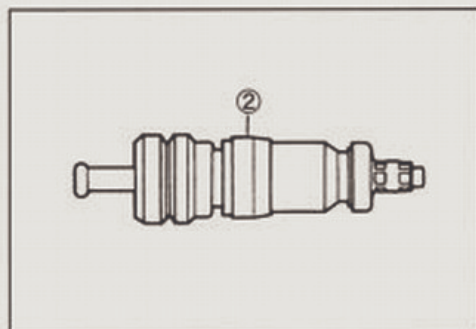
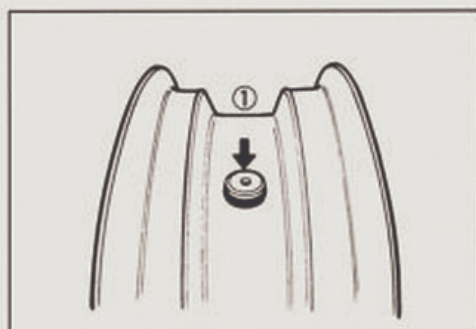
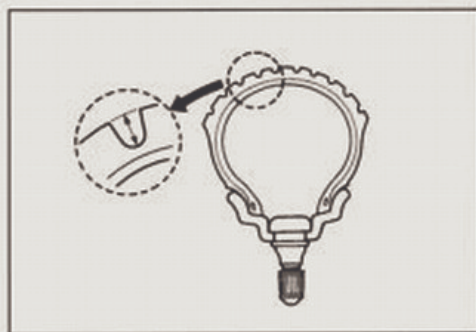
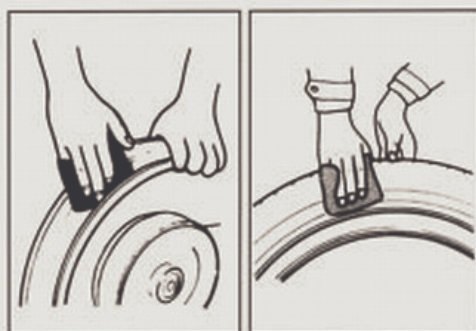
NOTE:

When repairing a flat tire, follow the repair instructions and use only recommended repairing materials.

VALVE INSPECTION

Inspect the valve ① after the tire is removed from the rim, and replace the valve with a new one if the seal rubber has any splits or scratches.

Inspect the removed valve core and replace it with a new one if the seal ② is abnormally deformed or worn.



VALVE INSTALLATION

Clean any dust or rust which is around the valve hole ① and then install the valve in the rim.

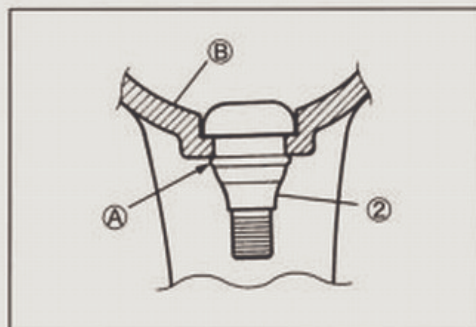
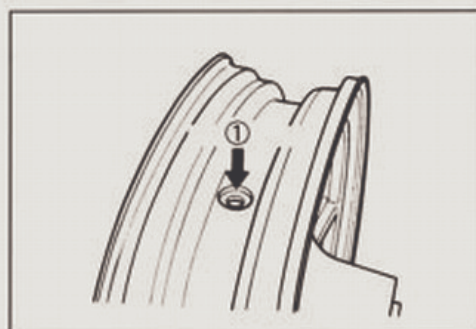
NOTE:

To properly install the valve ② into the valve hole, apply a special tire lubricant or neutral soapy liquid to the valve.

▲ CAUTION

Be careful not to damage the valve lip ①.

② Wheel

**TIRE INSTALLATION**

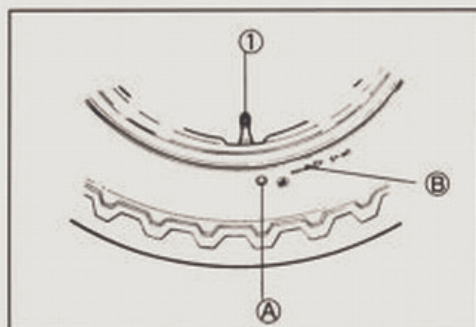
- Apply a special tire lubricant or neutral soapy liquid to the tire bead.

▲ CAUTION

Never apply grease, oil or gasoline to the tire bead.



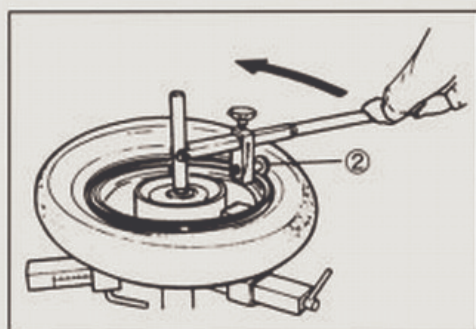
- When installing the tire, make sure that the arrow ① faces the direction of wheel rotation and align the balancing mark ② of the tire with the valve ① as shown.



- Set the bead pushing roller ②.
- Rotate the operation arm around the rim to seat the tire bead completely. Seat the bottom bead first, then the upper bead.
- Remove the wheel from the tire changer, and install the valve core in the valve stem.

NOTE:

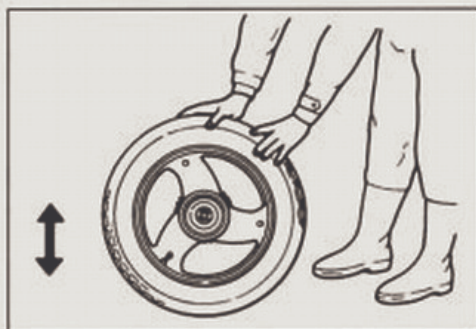
Before installing the valve core, inspect it.



- Bounce the tire several times while rotating it. This will allow the tire bead to expand outwards, making inflation easier.

NOTE:

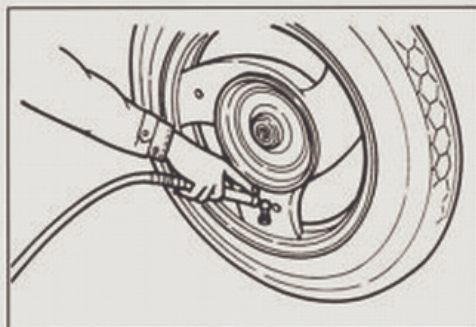
Before inflating the tire, make sure that the balance mark is aligned with the valve stem.



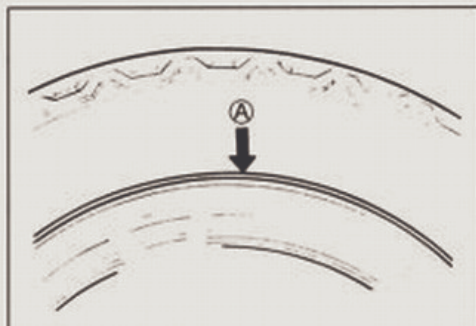
- After tire is properly seated to the wheel rim, inflate the tire to the recommended pressure. Correct the wheel balance if necessary.

⚠ WARNING

Do not inflate the tire to more than 400 kPa (4.0 kg/cm², 56 psi). The tire could burst with sufficient force to cause severe injury. Never stand directly over the tire while inflating it.

**NOTE:**

Check the "rim line (A)" cast on the tire side walls. It must be equidistant from the wheel rim all the way around. If the distance between the rim line and wheel rim varies, this indicates that the bead is not properly seated. If this is so, deflate the tire completely, and unseat the bead on both sides. Then, coat the bead with lubricant, and re-seat the tire.

**⚠ WARNING**

- * Do not run a repaired tire more than 50 km/h (30 mph) within 24 hours after repairing a tire, since the patch may not be completely cured.
- * Do not exceed 130 km/h (80 mph) with a repaired tire.

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kgf/cm ²	psi	kPa	kgf/cm ²	psi
FRONT	200	2.00	29	200	2.00	29
REAR	250	2.50	36	250	2.50	36