

CHASSIS**CONTENTS**

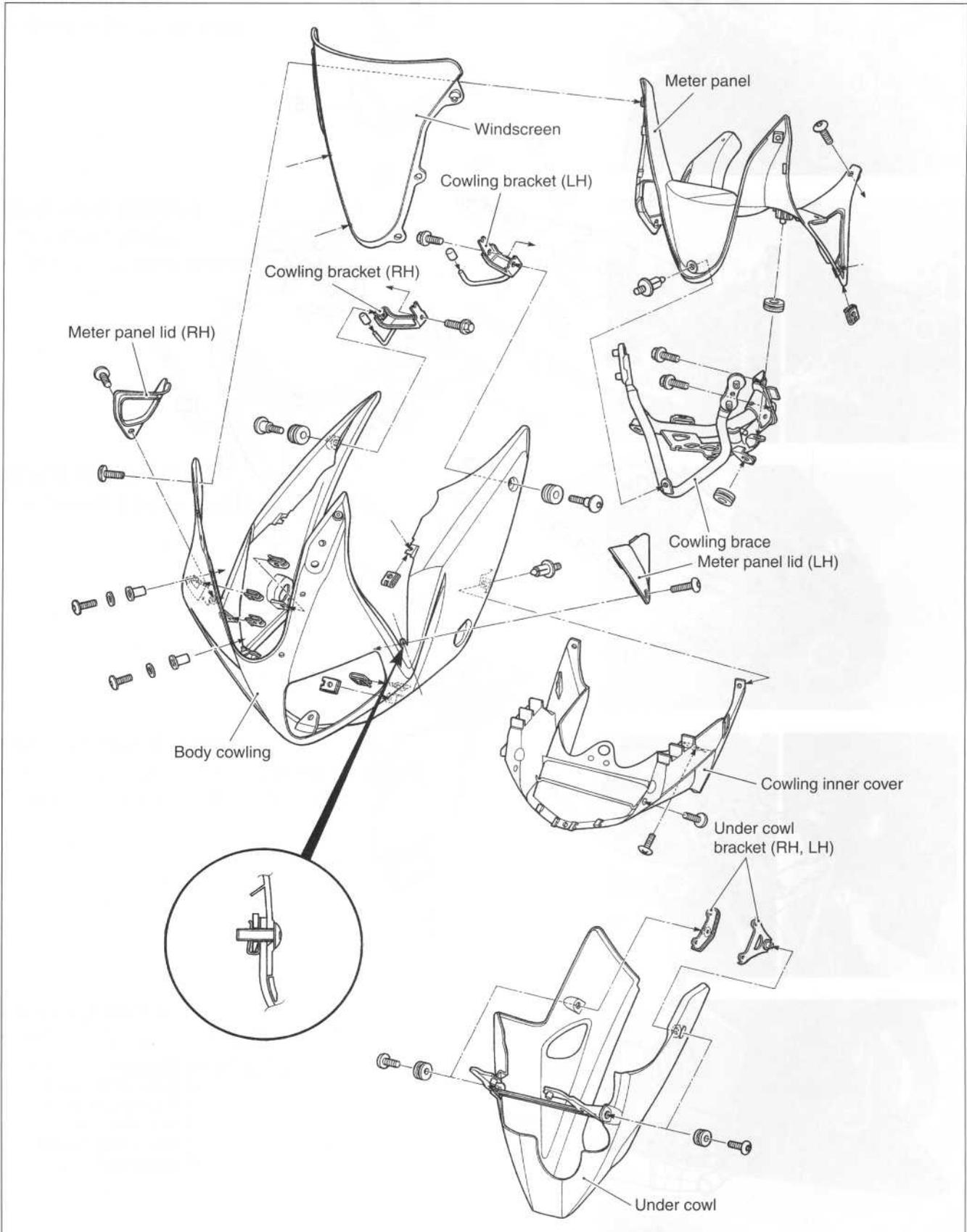
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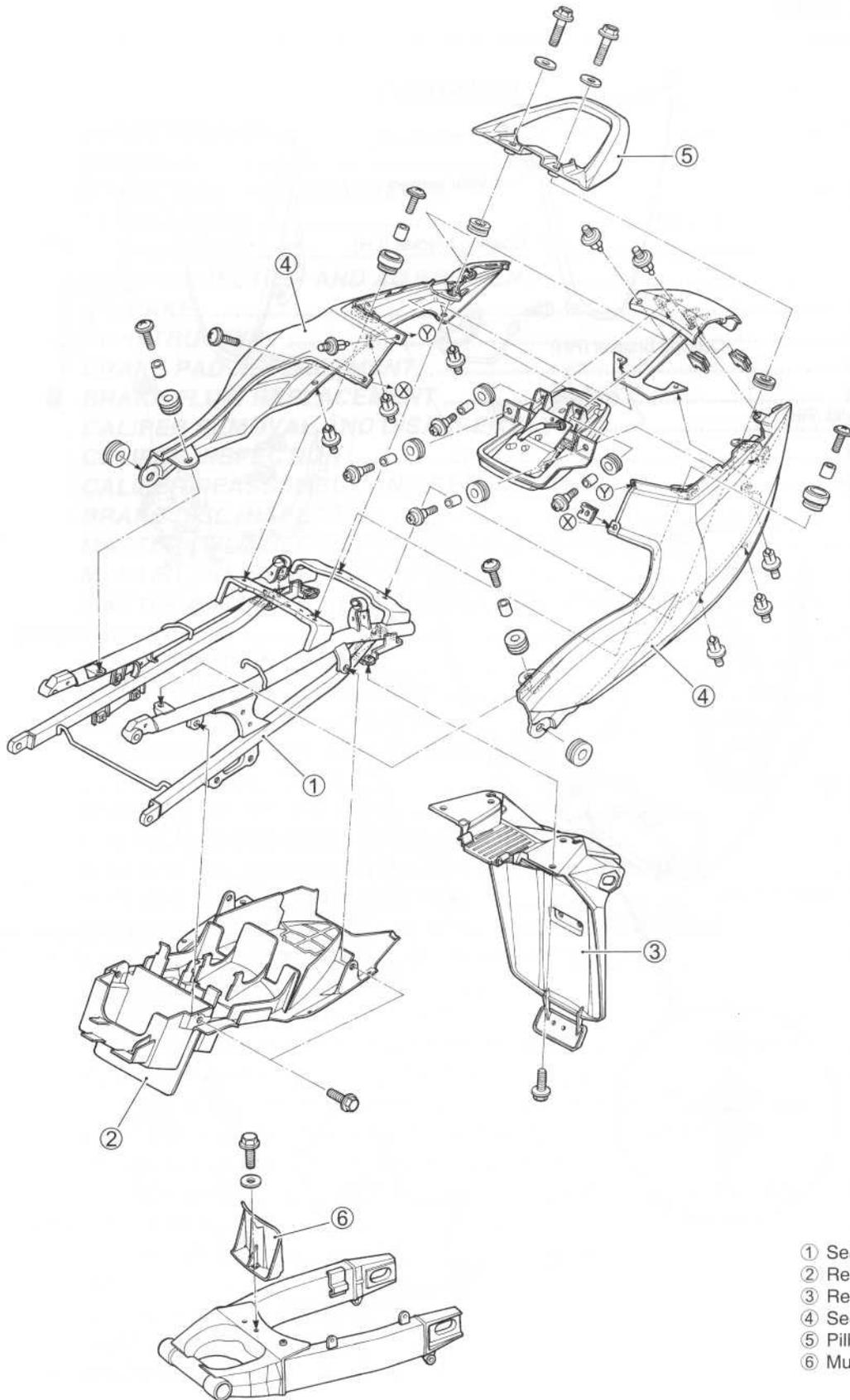
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EXTERIOR PARTS CONSTRUCTION

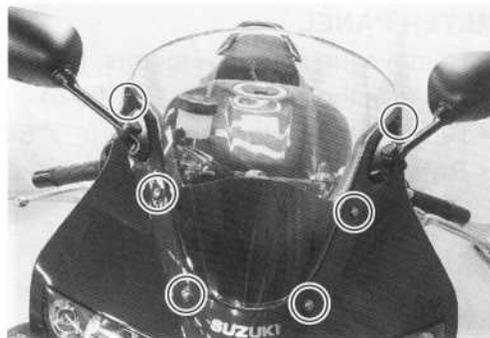




- ① Seat tail
- ② Rear fender No. 1
- ③ Rear fender No. 2
- ④ Seat tail cover
- ⑤ Pillion rider handle
- ⑥ Mud guard

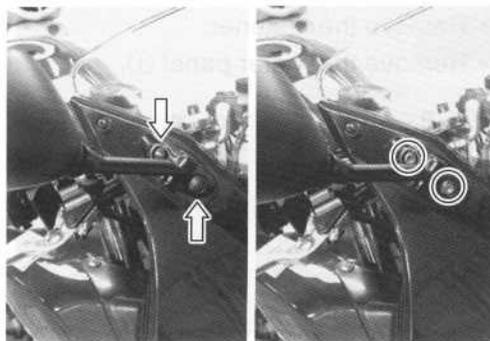
REMOVAL WINDSCREEN

- Remove the screws.
- Remove the windscreen.



REAR VIEW MIRROR

- Remove the caps.
- Remove the bolts and rear view mirrors.



METER PANEL LID

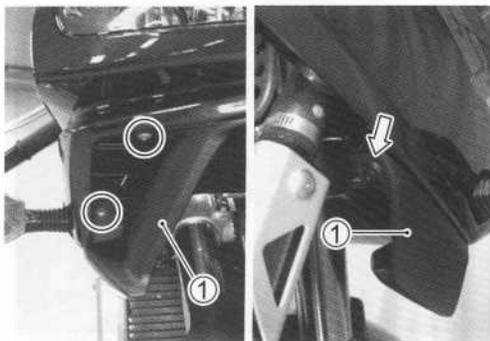
- Remove the meter panel lids ①. (L & R)



☆: Hooked part

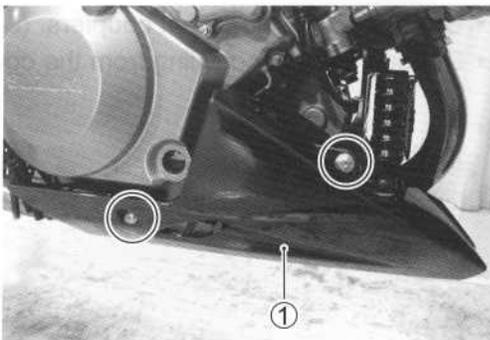
INNER COWLING COVER

- Remove the screws and fasteners. (L & R)
- Remove the inner cowling cover ①.



UNDER COWLING

- Remove the screws. (L & R)
- Remove the under cowling ①.



METER PANEL

- Remove the rear view mirrors. (☞ 6-5)
- Remove the windscreen. (☞ 6-5)
- Remove the meter panel lids. (☞ 6-5)
- Remove the screws. (L & R)



☆: Hooked part

- Remove the fastener.
- Remove the meter panel ①.



BODY COWLING

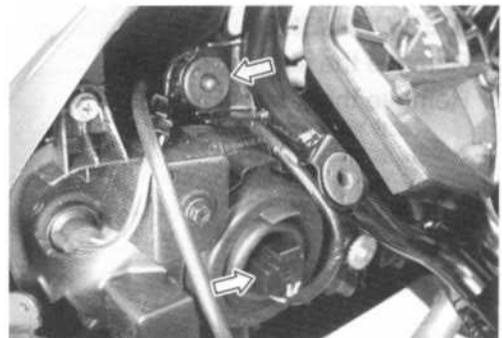
- Remove the meter panel. (☞ above)
- Disconnect the speedometer assembly coupler.



- Remove the screws. (L & R)

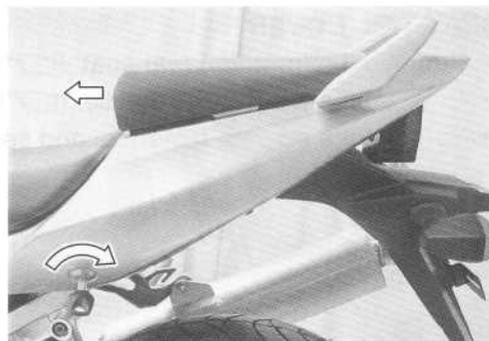


- Disconnect the headlight couplers. (L & R)
- Unhook the body cowl from the cowling brace.

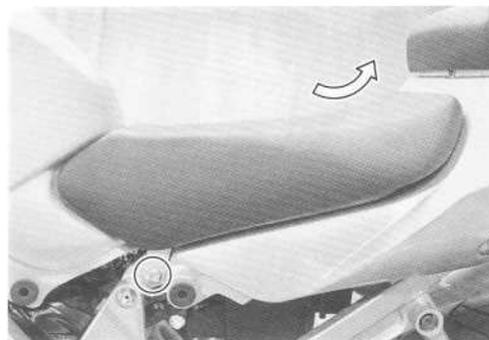


SEAT

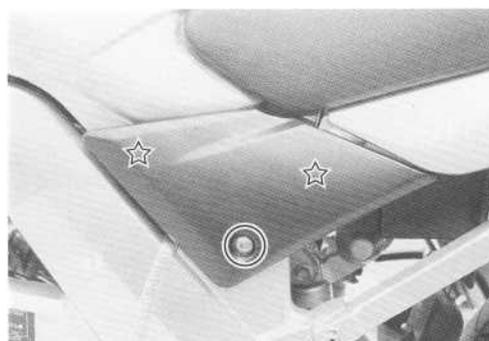
- Remove the rear seat with the ignition key.



- Remove the frame covers. (☞ below)
- Remove the front seat.

**FRAME COVERS**

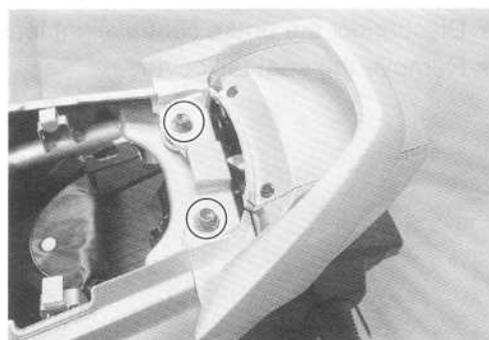
- Remove the frame cover mounting screw.
- Remove the frame cover.



☆: Hooked part

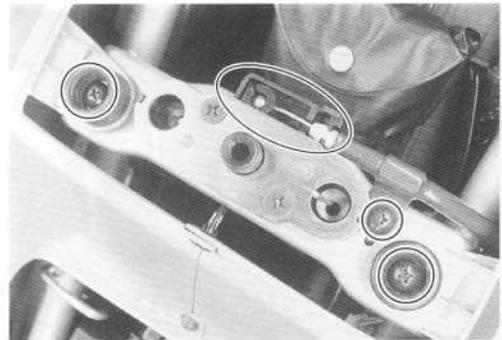
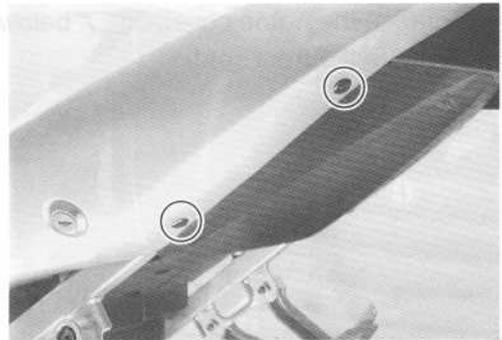
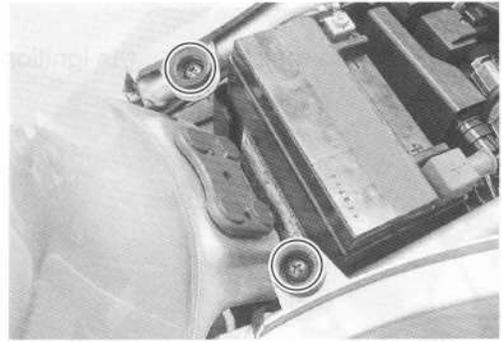
PILLION RIDER HANDLE

- Remove the rear seat. (☞ above)
- Remove the pillion rider handle.

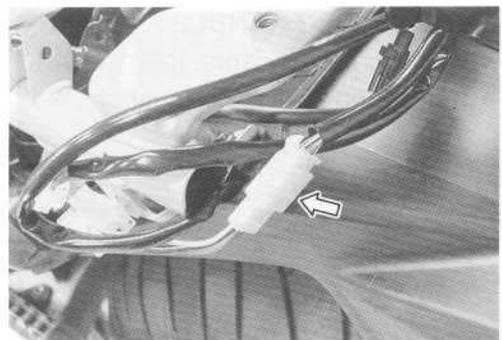


SEAT TAIL COVER

- Remove the front and rear seat. (☞ 6-7)
- Remove the pillion rider handle. (☞ 6-7)
- Remove the screws, fasteners and seat lock cable.

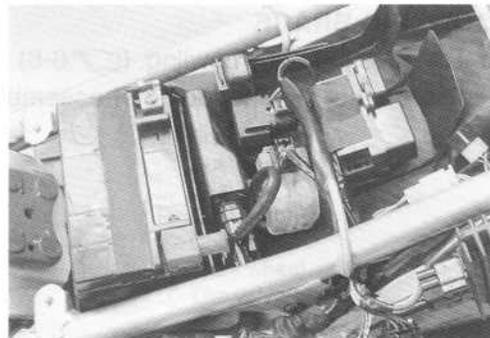


- Disconnect the brake light/taillight lead wire coupler.
- Remove the seat tail cover.



REAR FENDER No. 1

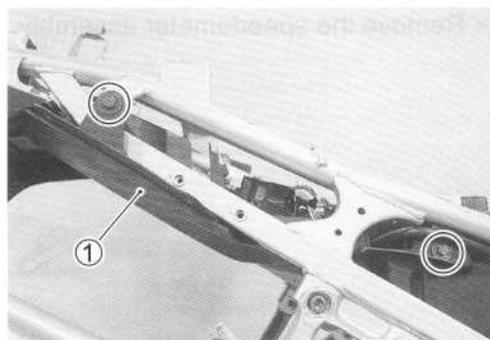
- Remove the seat tail cover. (☞ 6-8)
- Remove the battery, ECM, fuse box, fuel pump relay, AP sensor and starter motor relay.



- Remove the tip over sensor.



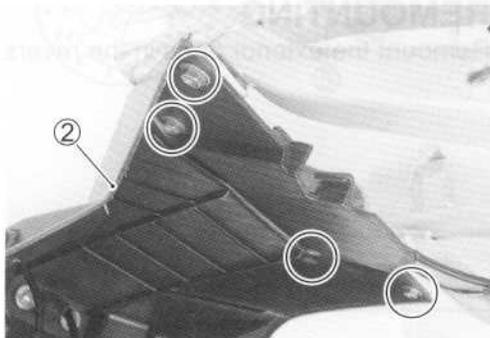
- Remove the rear fender No. 1 ①.

**REAR FENDER No. 2**

- Remove the rear fender No. 1. (☞ above)
- Disconnect the turn signal light and plate light lead wire couplers.

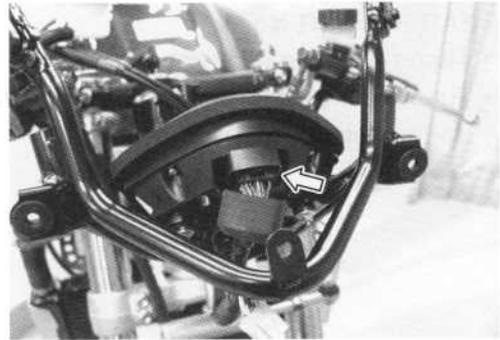


- Remove the rear fender No. 2 ②.



COWLING BRACE

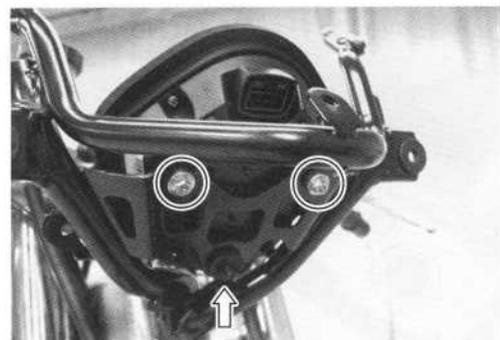
- Remove the body cowling. (☞ 6-6)
- Disconnect the speedometer assembly coupler.



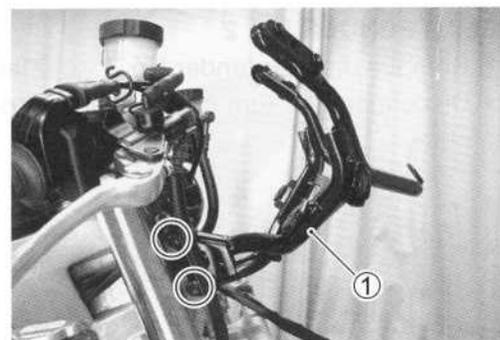
- Unhook the wire harness from the cowling brace.



- Remove the speedometer assembly.



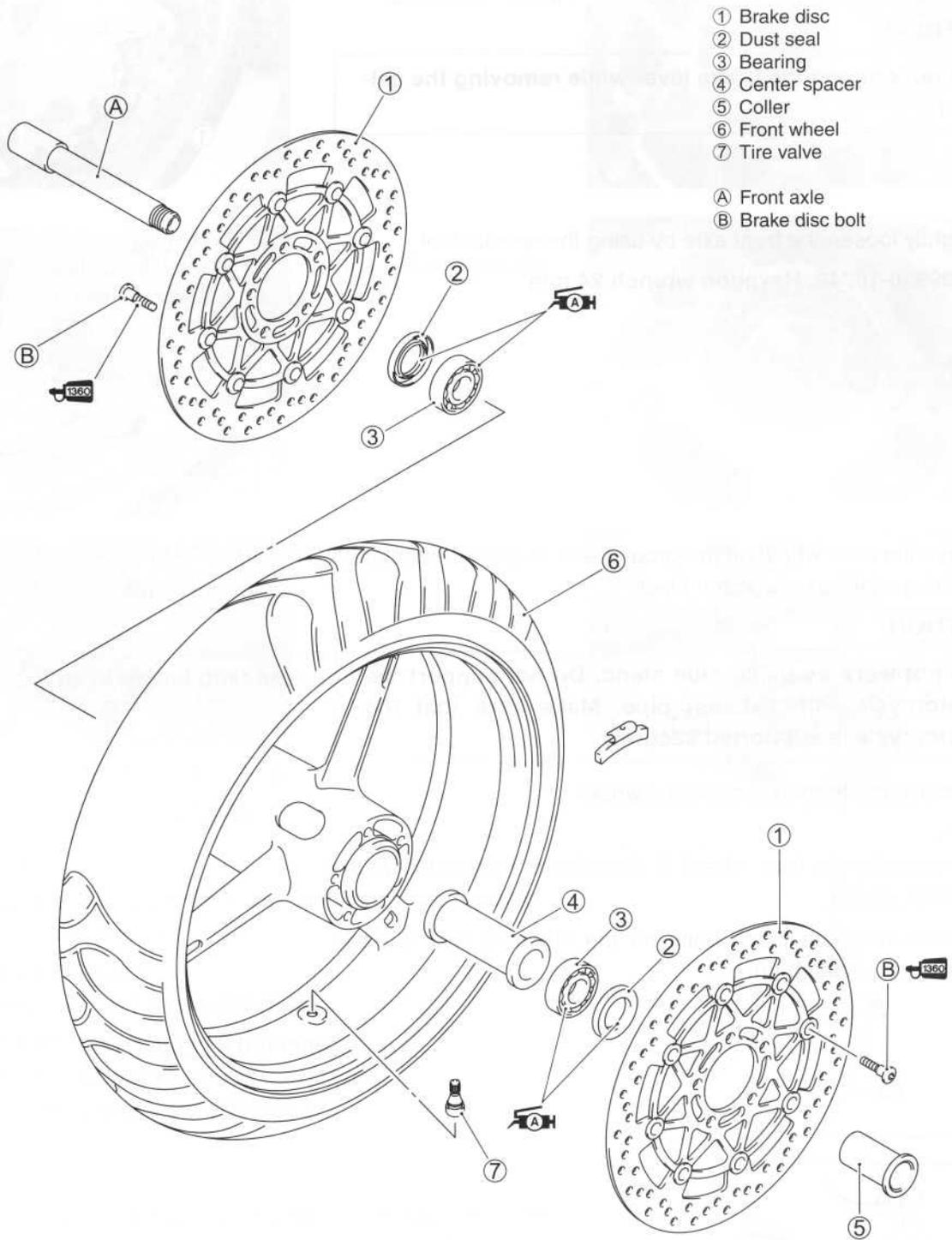
- Remove the cowling brace ①.



REMountING

Remount the exterior parts in the reverse order of removal.

FRONT WHEEL CONSTRUCTION



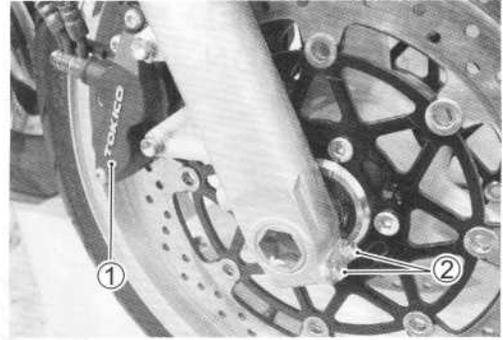
ITEM	N-m	kgf-m	lb-ft
A	100	10.0	72.5
B	23	2.3	16.5

REMOVAL

- Remove the right and left brake calipers ①.
- Loosen two axle pinch bolts ② on the right front fork leg.

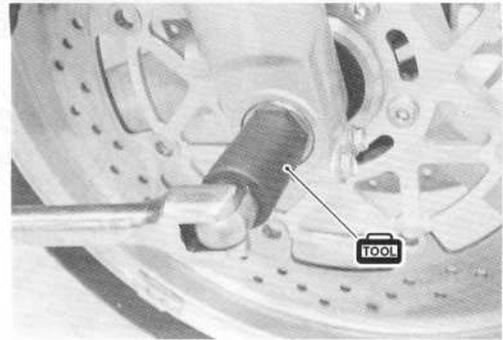
CAUTION

Do not operate the brake lever while removing the calipers.



- Slightly loosen the front axle by using the special tool.

 09900-18740: Hexagon wrench 24 mm



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

CAUTION

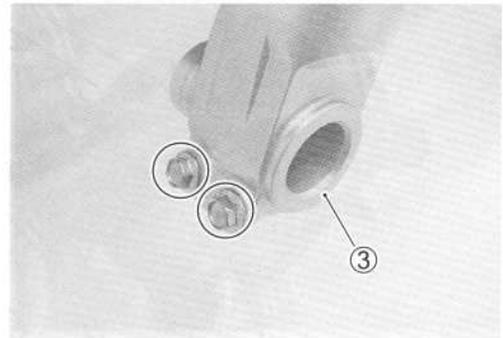
Do not work by using side stand. Do not support the motorcycle with exhaust pipe. Make sure that the motorcycle is supported securely.

- Remove the front axle and front wheel.

NOTE:

After removing the front wheel, fit the calipers temporarily to the original positions.

- Loosen two axle pinch bolts on the left front fork leg and remove the spacer nut ③.

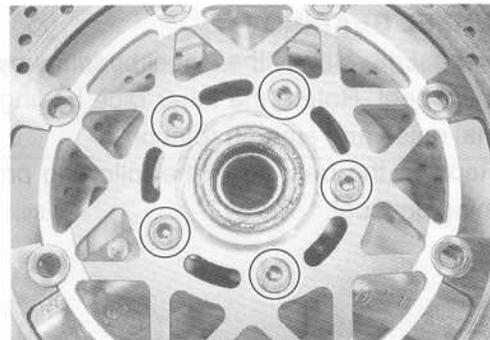


INSPECTION AND DISASSEMBLY

TIRE (👉 6-95)

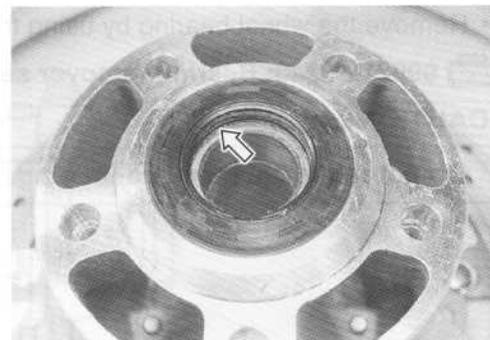
BRAKE DISC (👉 6-71)

- Remove the brake discs.



DUST SEAL

Inspect the dust seal lip for wear or damage. If any damages are found, replace the dust seal with a new one.

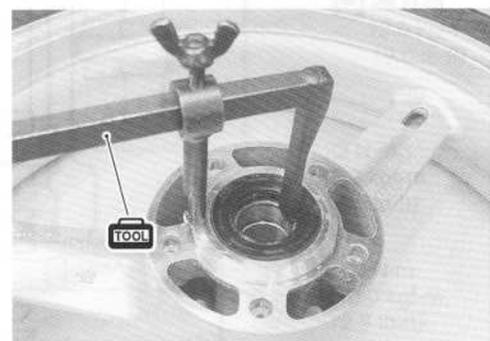


- Remove the dust seal by using the oil seal remover.

TOOL 09913-50121: Oil seal remover

CAUTION

Do not reuse the removed dust seal.



FRONT AXLE

Using a dial gauge, check the front axle for runout and replace it if the runout exceeds the limit.

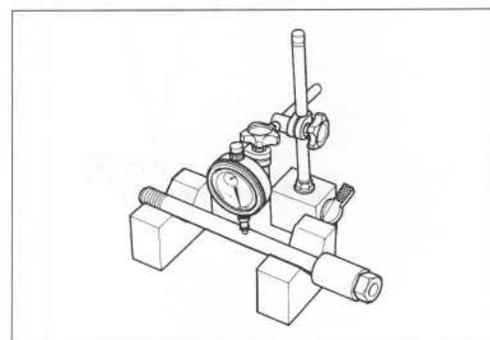
DATA Axle shaft runout

Service Limit: 0.25 mm (0.010 in)

TOOL 09900-20607: Dial gauge (1/100 mm)

09900-20701: Magnetic stand

09900-21304: V-block set (100 mm)



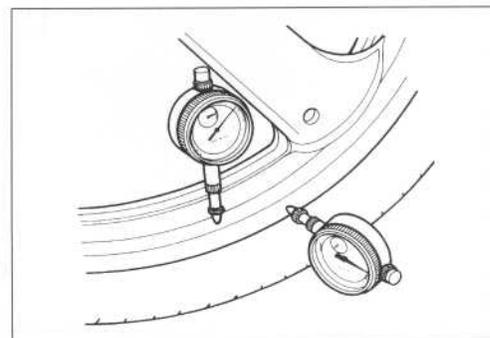
WHEEL

Make sure that the wheel runout checked as shown does not exceed the service limit. An excessive runout is usually due to worn or loosened wheel bearings and can be reduced by replacing the bearings. If bearing replacement fails to reduce the runout, replace the wheel.

(Wheel inspection: 👉 6-95)

DATA Wheel runout

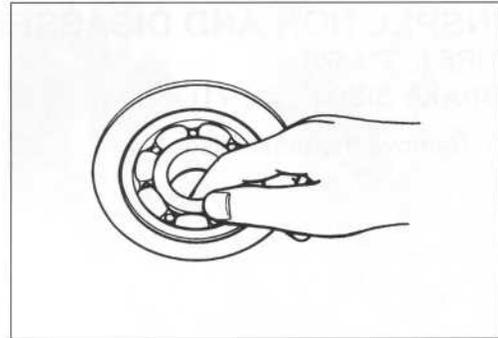
Service Limit (Axial and Radial): 2.0 mm (0.08 in)



WHEEL BEARING

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

Replace the bearing in the following procedure if there is anything unusual.

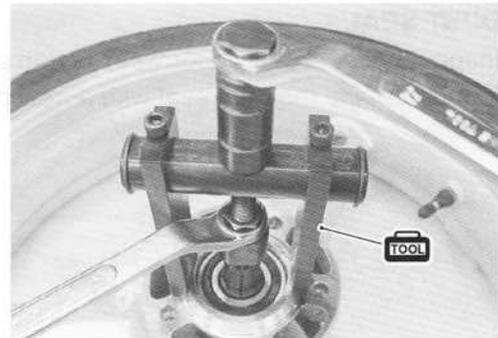


- Remove the wheel bearing by using the special tool.

 **09921-20240: Bearing remover set**

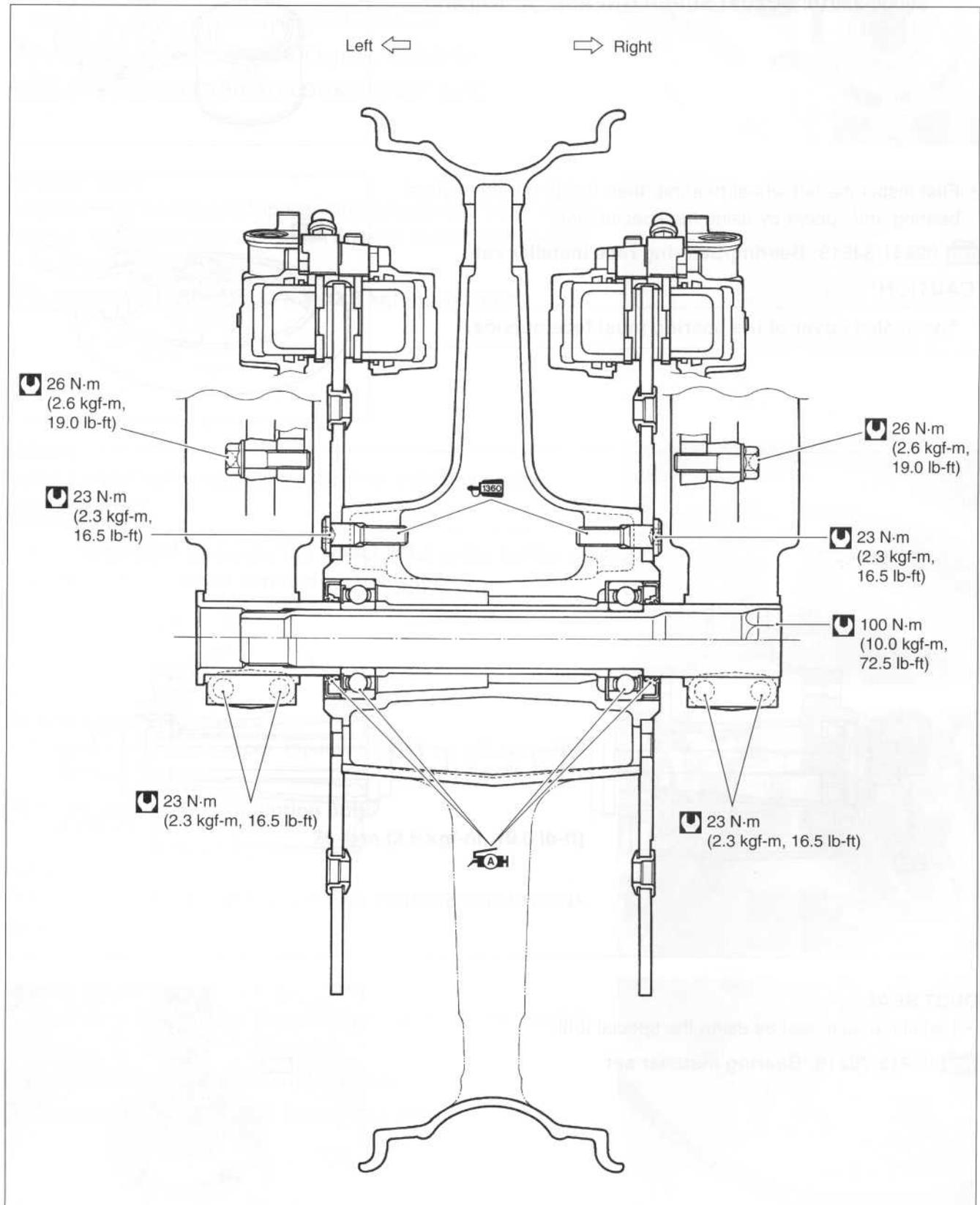
CAUTION

Do not reuse the removed bearing.



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 grease to the wheel bearings.

TOOL 99000-25030: SUZUKI SUPER GREASE "A" (USA)
 99000-25010: SUZUKI SUPER GREASE "A" (Others)

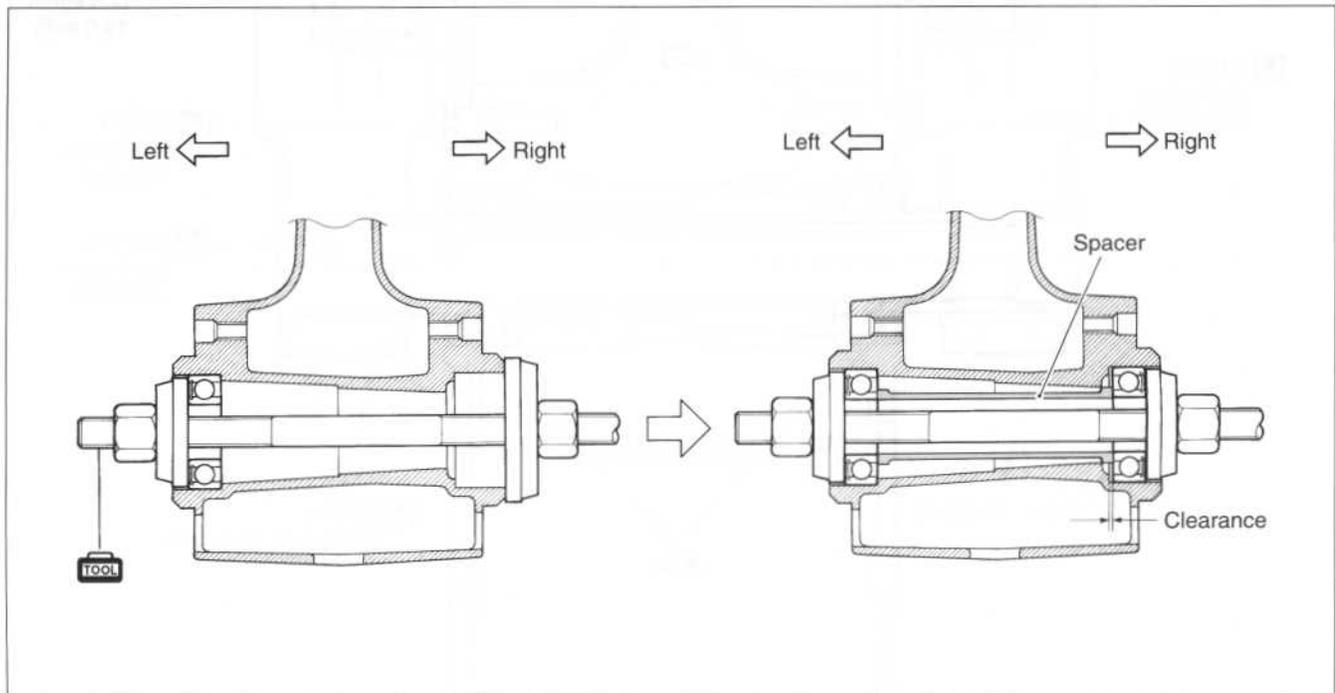
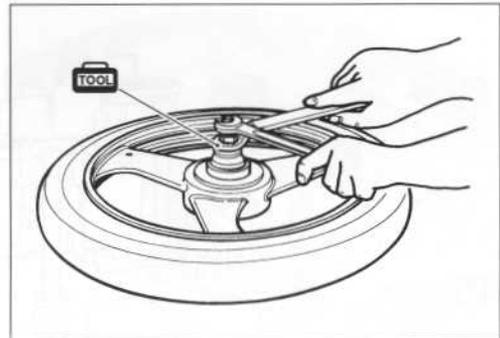


- First install the left wheel bearing, then install the right wheel bearing and spacer by using the special tool.

TOOL 09941-34513: Bearing/Steering race installer set

CAUTION

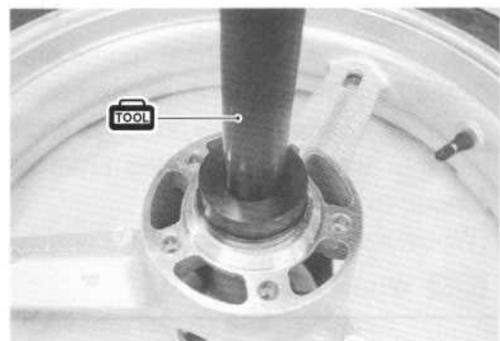
The sealed cover of the bearing must face outside.



DUST SEAL

- Install the dust seal by using the special tool.

TOOL 09913-70210: Bearing installer set



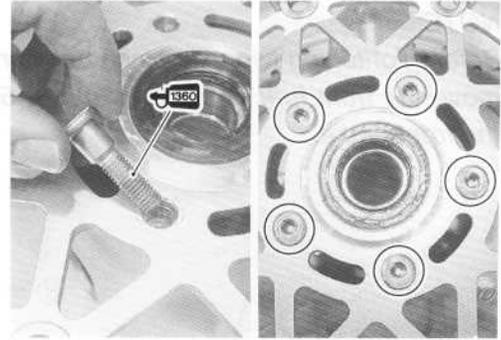
BRAKE DISC

Make sure that the brake disc is clean and free of any greasy matter.

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

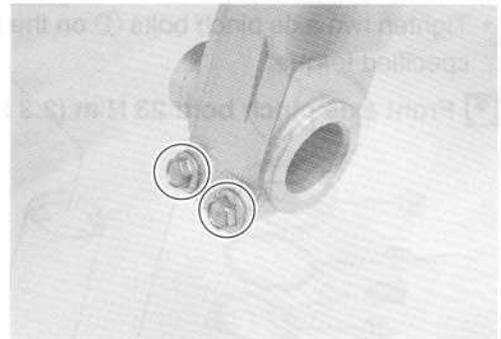
 **Brake disk bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)**

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

**SPACER NUT**

After touching the flange of spacer nut being contact with the left front fork leg, tighten two axle pinch bolts on the left front fork leg to the specified torque.

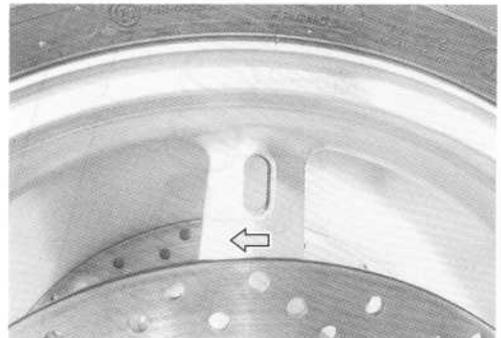
 **Front axle pinch bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)**

**WHEEL**

Install the front wheel and tighten the front axle temporarily.

⚠ WARNING

The directional arrow on the wheel must point to the wheel rotation, when remounting the wheel.

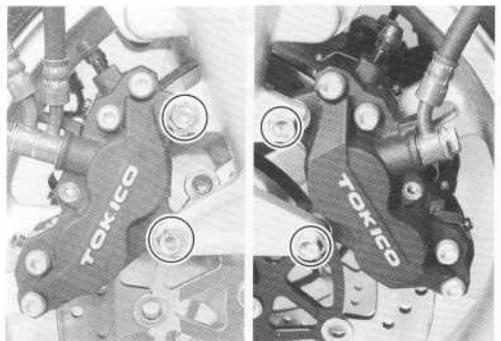
**BRAKE CALIPER**

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

 **Front brake caliper mounting bolt:**
26 N·m (2.6 kgf-m, 19.0 lb-ft)

NOTE:

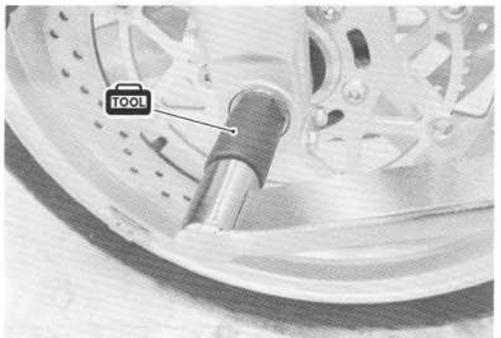
Push the pistons all the way into the caliper and remount the calipers.

**FRONT AXLE**

- Tighten the front axle to the specified torque with the special tool.

 **09900-18740: Hexagon wrench 24 mm**

 **Front axle: 100 N·m (10.0 kgf-m, 72.5 lb-ft)**



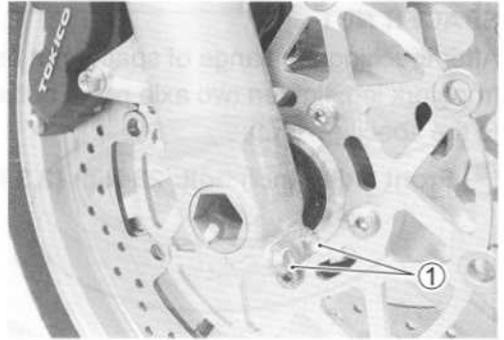
NOTE:

Before tightening two axle pinch bolts on the right front fork leg, move the front fork up and down 4 or 5 times without applying the front brake.



- Tighten two axle pinch bolts ① on the right front fork leg to the specified torque.

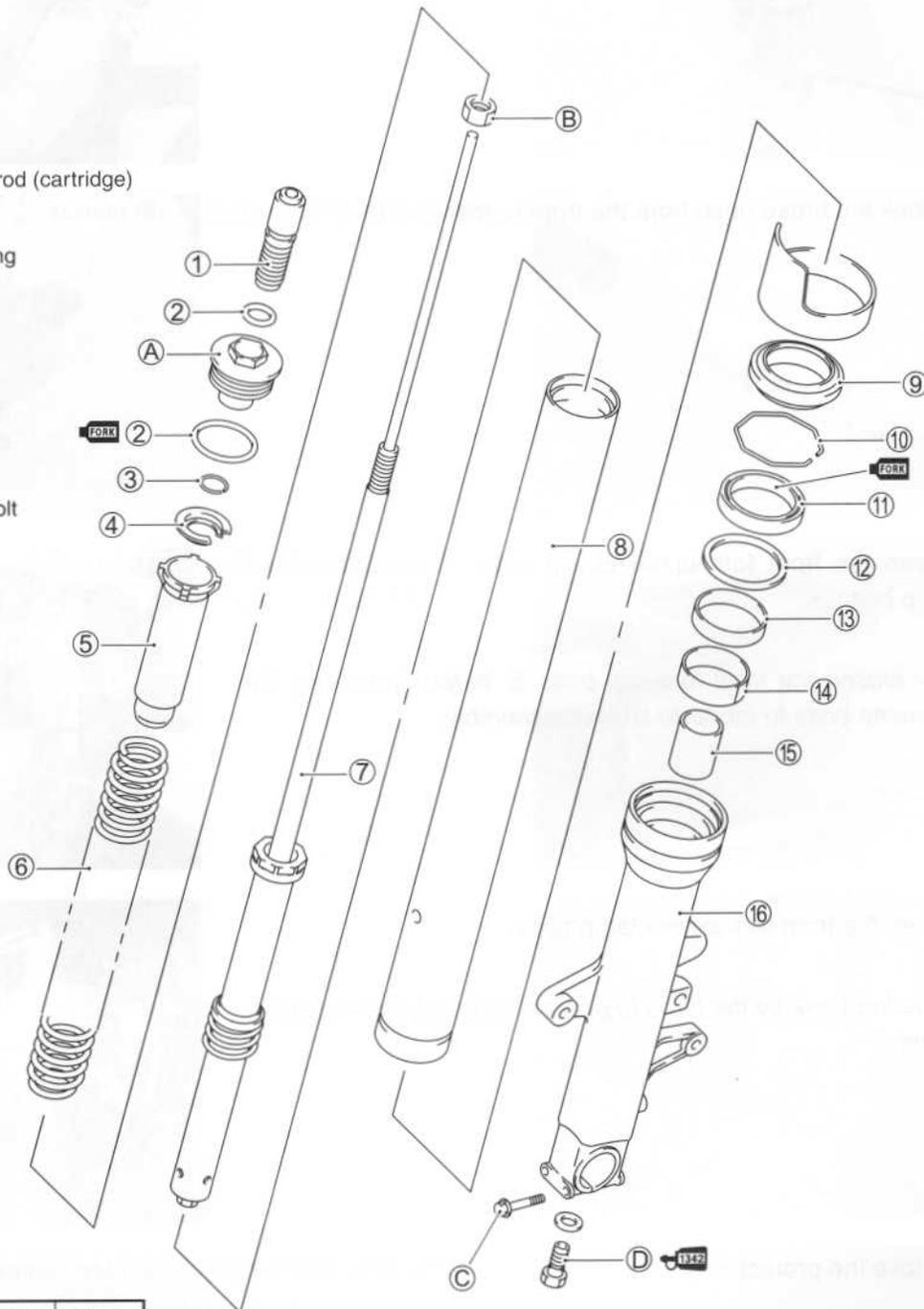
🔧 Front axle pinch bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)



FRONT FORK CONSTRUCTION

- ① Adjuster
- ② O-ring
- ③ C-ring
- ④ Washer
- ⑤ Spacer
- ⑥ Spring
- ⑦ Inner rod/damper rod (cartridge)
- ⑧ Inner tube
- ⑨ Dust seal
- ⑩ Oil seal stopper ring
- ⑪ Oil seal
- ⑫ Oil seal retainer
- ⑬ Guide metal
- ⑭ Slide metal
- ⑮ Oil lock piece
- ⑯ Outer tube

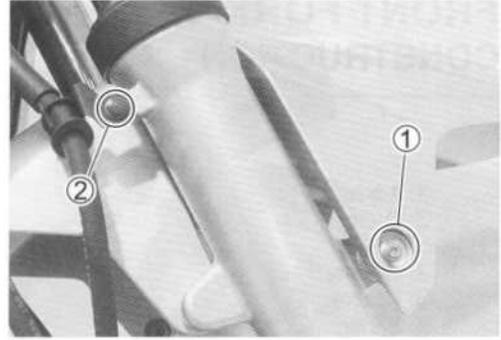
- A Front fork cap bolt
- B Inner rod lock nut
- C Front axle pinch bolt
- D Damper rod bolt



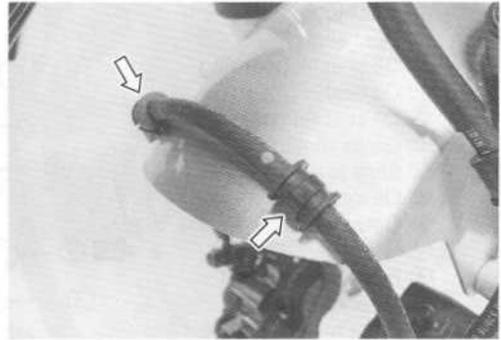
ITEM	N-m	kgf-m	lb-ft
A	23	2.3	16.5
B	15	1.5	11.5
C	23	2.3	16.5
D	23	2.3	16.5

REMOVAL AND DISASSEMBLY

- Remove the front wheel. (☞ 6-12)
- Remove the front fender bolt ① and brake hose clamp bolt ②.



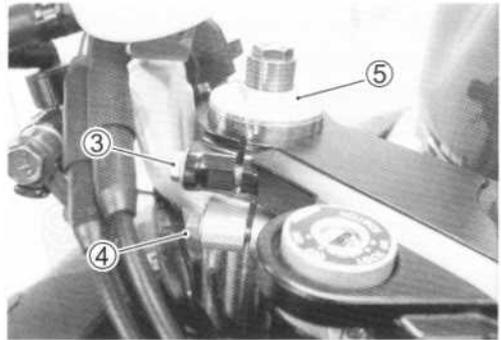
- Unhook the brake hose from the front fender.



- Loosen the front fork upper clamp bolts ③ and handlebar clamp bolts ④.

NOTE:

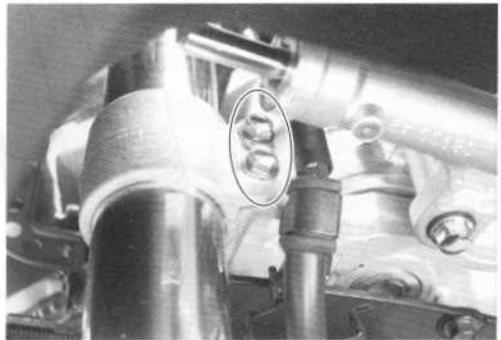
Slightly loosen the front fork cap bolts ⑤ before loosening the lower clamp bolts to facilitate later disassembly.



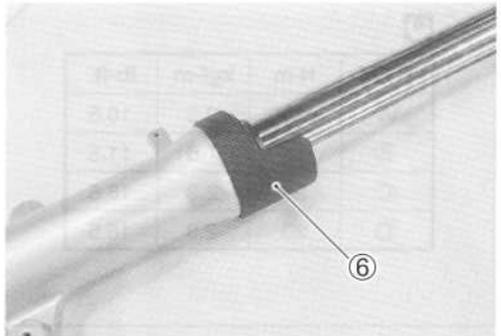
- Loosen the front fork lower clamp bolts.

NOTE:

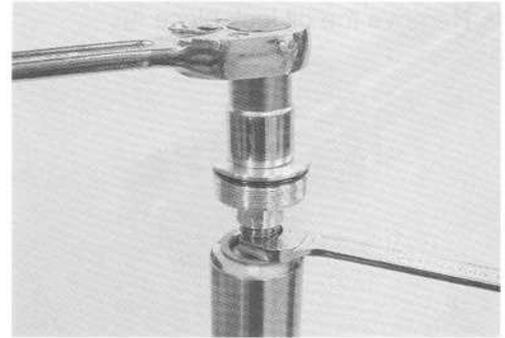
Hold the front fork by the hand to prevent sliding out of the steering stem.



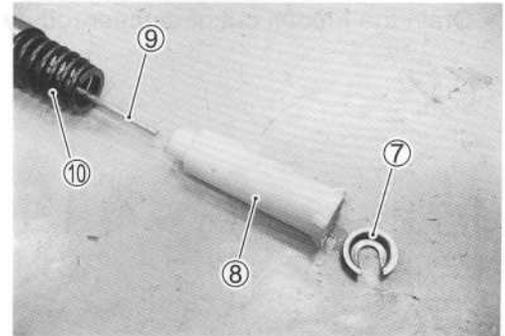
- Remove the protector ⑥.



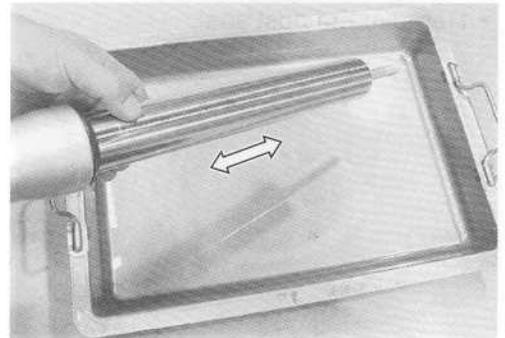
- Remove the front fork cap bolt.



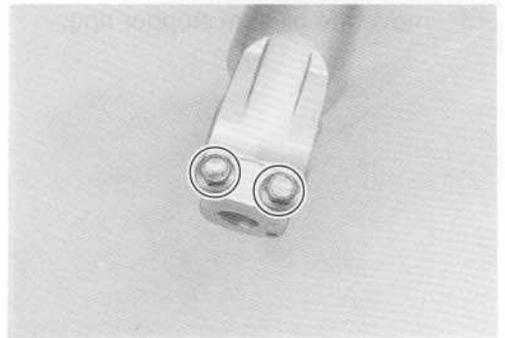
- Remove the washer (7), spacer (8), adjuster rod (9) and spring (10).



- Invert the front fork and drain the fork oil by stroking.
- Hold the front fork inverted for a few minutes to drain oil.



- Remove the front axle pinch bolts.

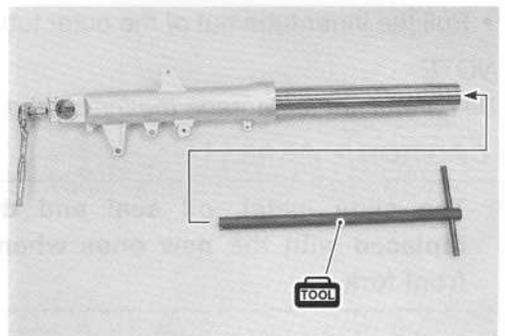


- Remove the inner/damper rod (cartridge) with the special tool.

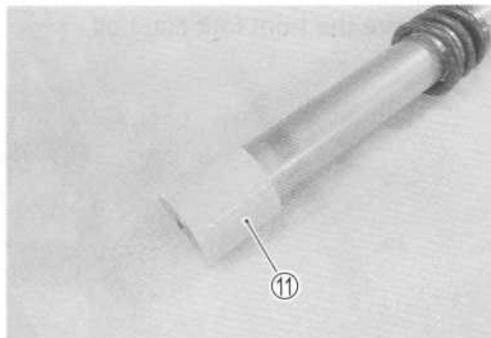
TOOL 09940-30250: Front fork assembling tool

CAUTION

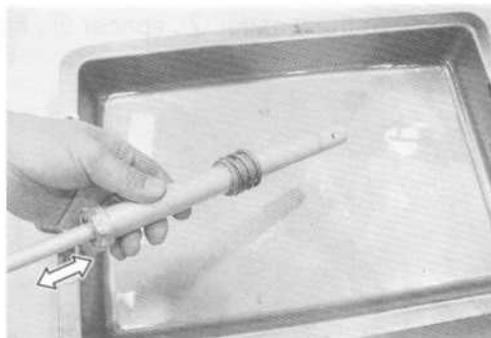
Do not disassemble the inner/damper rod (cartridge).



- Remove the oil lock piece ⑪.



- Drain the fork oil out of damper rod by pumping the rod.



- Remove the dust seal.



- Remove the oil seal stopper ring.



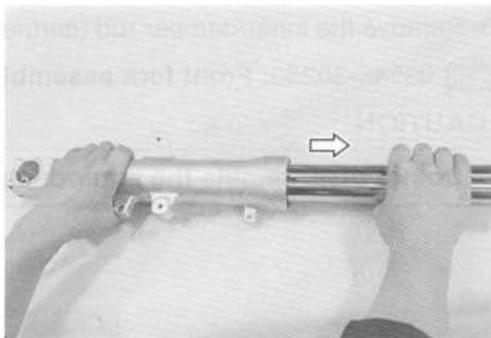
- Pull the inner tube out of the outer tube.

NOTE:

Be careful not to damage the inner tube.

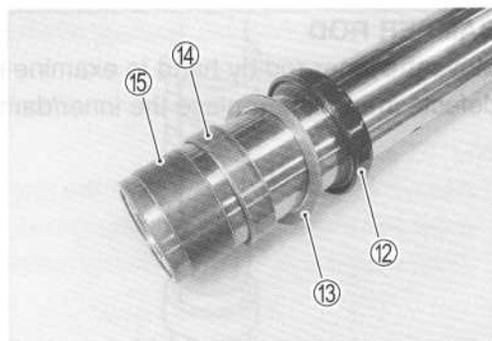
CAUTION

The slide metal, oil seal and dust seal must be replaced with the new ones when reassembling the front fork.



- Remove the following parts.

- ⑫ Oil seal
- ⑬ Oil seal retainer
- ⑭ Guide metal
- ⑮ Slide metal



- Remove the front fork cap and spring adjuster.

CAUTION

Use a new O-ring to prevent oil leakage.



INSPECTION

INNER AND OUTER TUBES

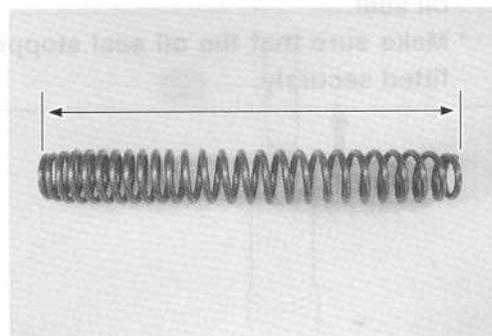
Inspect the inner tube outer surface and the outer tube inner surface for scratches. If any defects are found, replace them with the new ones.



FORK SPRING

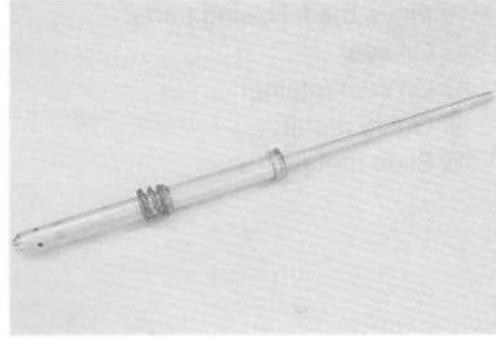
Measure the fork spring free length. If it is shorter than the service limit, replace it with a new one.

DATA Front fork spring free length
Service limit: 290 mm (11.4 in)



DAMPER ROD

Move the inner rod by hand to examine it for smoothness. If any defects are found, replace the inner/damper rod (cartridge).

**REASSEMBLY AND REMOUNTING**

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

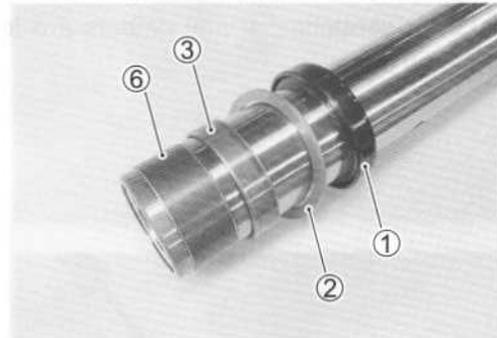
TUBE METALS AND SEALS

- Hold the inner tube vertically and clean the metal groove and install the guide metal by hand as shown.

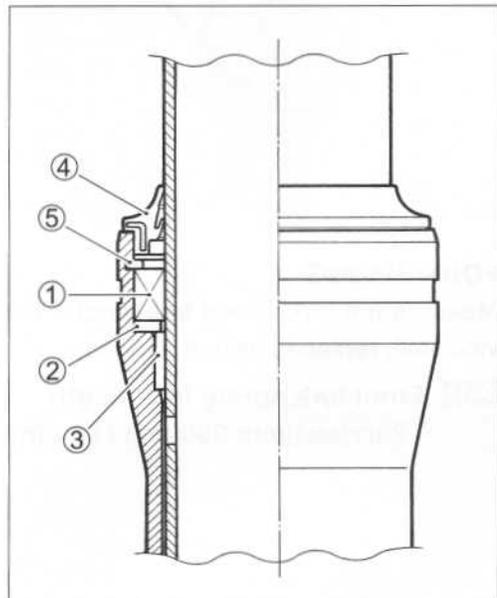


- Apply fork oil to the oil seal lip lightly before installing it.
- Assemble the following parts as shown.

- ① Oil seal
- ② Oil seal retainer
- ③ Guide metal
- ④ Dust seal
- ⑤ Oil seal stopper ring
- ⑥ Slide metal

**CAUTION**

- * When installing the oil seal to the outer tube, be careful not to damage the oil seal lip.
- * Do not use solvents for washing to prevent oil seal damage.
- * Apply fork oil to the Anti-friction metals and lip of the oil seal.
- * Make sure that the oil seal stopper ring ⑤ has been fitted securely.

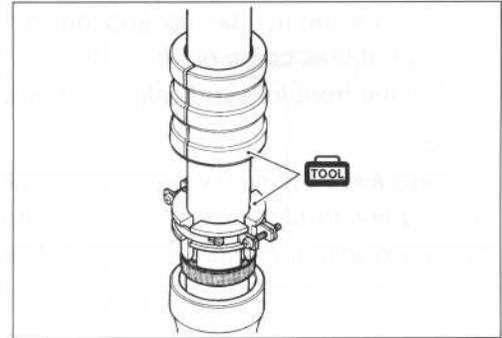


- Insert the inner tube into the outer tube and fit the oil seal and dust seal with the special tool.

TOOL 09940-52861: Front fork oil seal installer

NOTE:

Stamped mark on the oil seal should face outside.



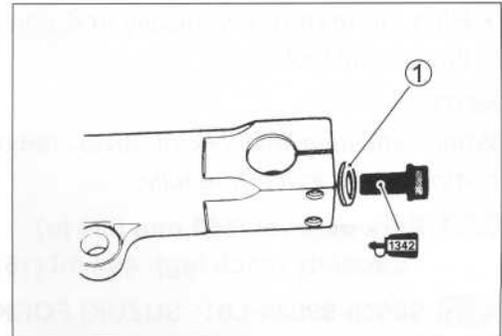
DAMPER ROD BOLT

- Insert the inner rod/damper rod (cartridge) into the outer tube.
- Apply THREAD LOCK to the damper rod bolt and tighten it to the specified torque.

1342 99000-32050: THREAD LOCK "1342"

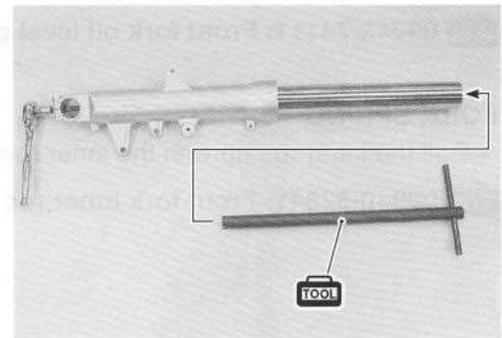
TOOL 09940-30250: Front fork assembling tool

U Damper rod bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)



CAUTION

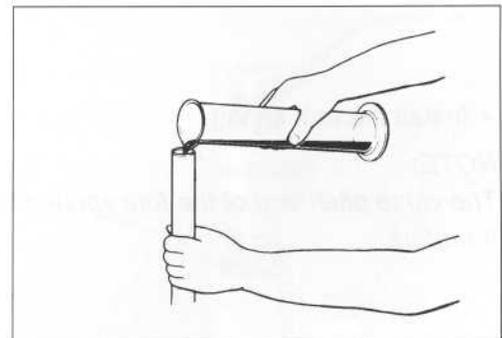
Use a new gasket washer ① to prevent oil leakage.



FORK OIL

- Place the front fork vertically without spring.
- Compress the front fork fully.
- Pour the specified front fork oil into the front fork up to the top of the inner rod.

FORK 99000-99044-L01: SUZUKI FORK OIL L01 or an equivalent fork oil

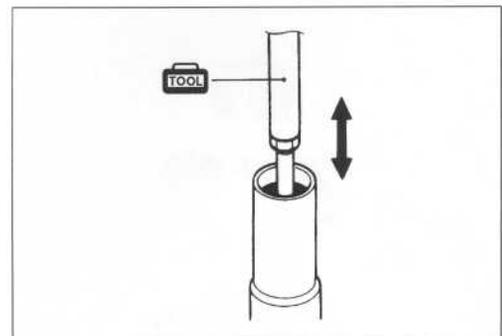


- Move the inner rod slowly more than ten times until no more air bubbles come out from the oil.

TOOL 09940-52841: Front fork inner rod holder

NOTE:

Refill the front fork oil up to the top of the inner tube in order to find air bubbles while bleeding air.

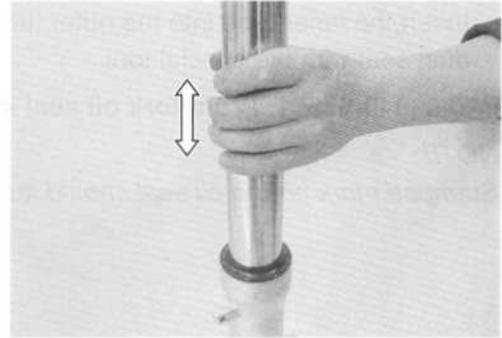


- Move the inner tube up and down several strokes until no more bubbles come out from the oil.
- Keep the front fork vertically and leave it during 5 – 6 minutes.

NOTE:

* Always keep the oil level over the cartridge top end, or air may enter the cartridge during this procedure.

* Take extreme attention to pump out air completely.



- Hold the front fork vertically and adjust the fork oil level with the special tool.

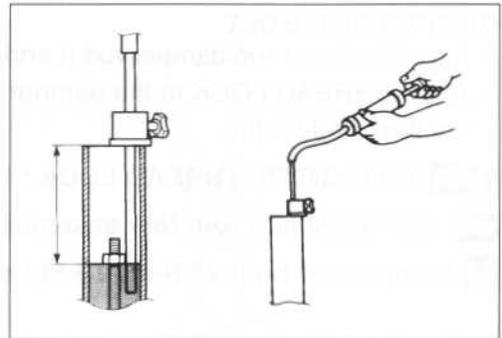
NOTE:

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

DATA Fork oil level: 162 mm (6.4 in)
Capacity (each leg): 494 ml (16.69/17.39 US/Imp oz)

FORK 99000-99044-L01: SUZUKI FORK OIL L01 or an equivalent fork oil

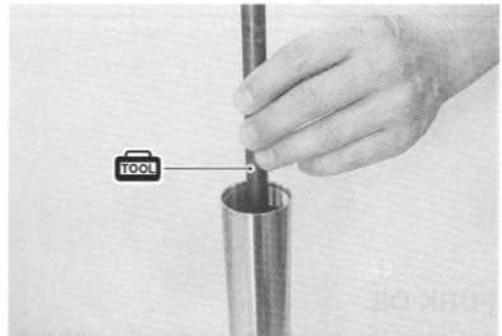
TOOL 09943-74111: Front fork oil level gauge



FORK SPRING

- Pull the inner rod up with the inner rod holder.

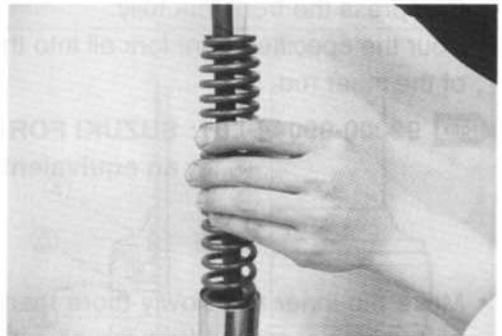
TOOL 09940-52841: Front fork inner rod holder



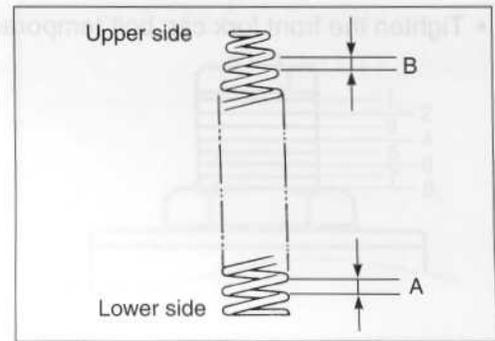
- Install the fork spring.

NOTE:

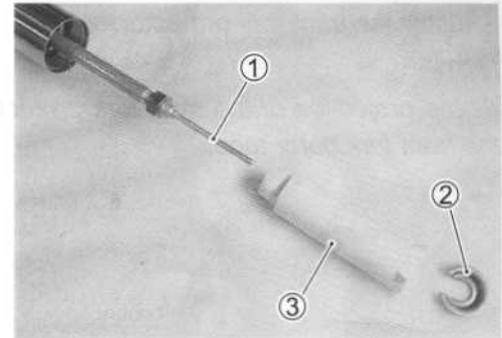
The close pitch end of the fork spring should be at the top of the front fork.



(A wider than B)

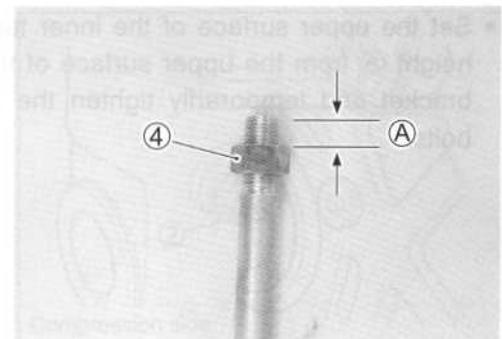
**FRONT FORK CAP BOLT**

- Install the adjuster rod ①, washer ② and spacer ③.



- Adjust the height ④ of the inner rod threads by turning the lock nut ④ as shown.

④: 11.0 mm (0.43 in)



- Tighten the front fork cap bolt to seat at lock nut by hand tightening.
- With holding the front fork cap bolt, tighten the lock nut to the specified torque.

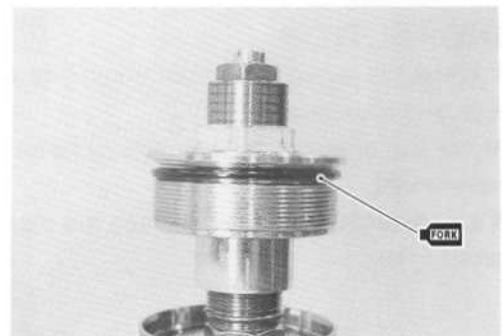
 **Inner rod lock nut: 15 N·m (1.5 kgf·m, 11.5 lb-ft)**



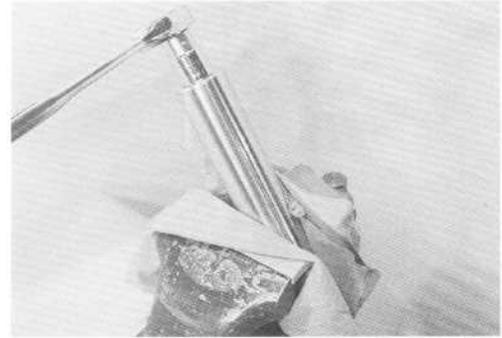
- Apply fork oil lightly to the O-ring.

CAUTION

Use a new O-ring to prevent oil leakage.



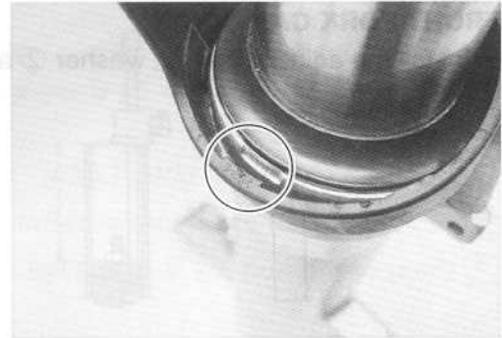
- Tighten the front fork cap bolt temporarily.



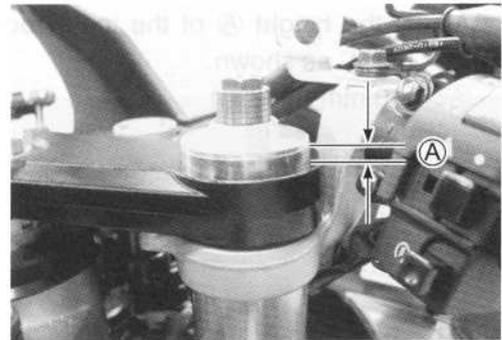
- Install the front fork protector.

NOTE:

Fit the projection of the front fork protector to the depression of the front fork outer tube.



- Set the upper surface of the inner tube at 6.3 mm (0.26 in) height **A** from the upper surface of the steering stem upper bracket and temporarily tighten the front fork lower clamp bolts.



- Tighten the front fork cap bolt **5** to the specified torque.

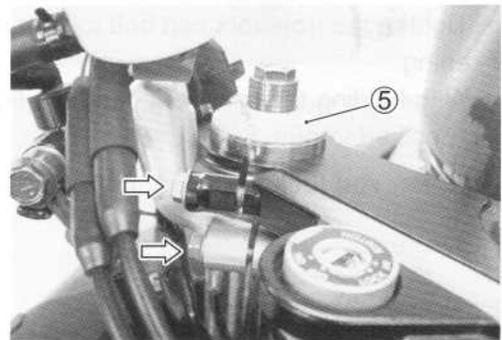
🔩 Front fork cap bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)

- Tighten the front fork upper and lower clamp bolts.

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

- Tighten the handlebar clamp bolts.

🔩 Handlebar clamp bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)



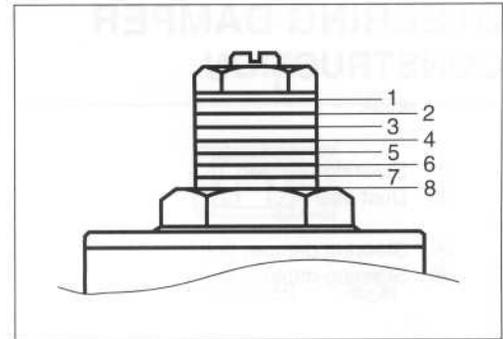
SUSPENSION SETTING

After installing the front fork, adjust the spring pre-load and damping force as follows.

SPRING PRE-LOAD ADJUSTMENT

There are eight grooves on the spring adjuster. Position 1 provides the maximum spring pre-load and position 8 provides the minimum spring pre-load.

STD position: 6



DAMPING FORCE ADJUSTMENT

Rebound damping force

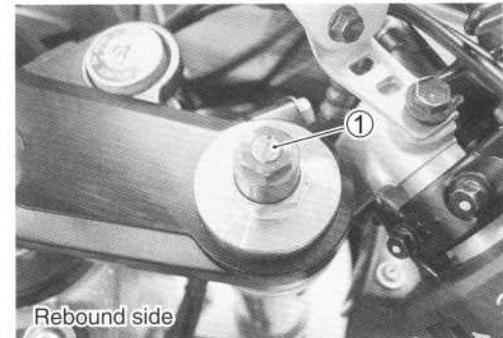
Fully turn the damping force adjuster ① clockwise. It is at stiffest position and turn it out to standard setting position.

STD position: 1 turn out from stiffest position

Compression damping force

Fully turn the damping force adjuster ② clockwise. It is at stiffest position and turn it out to standard setting position.

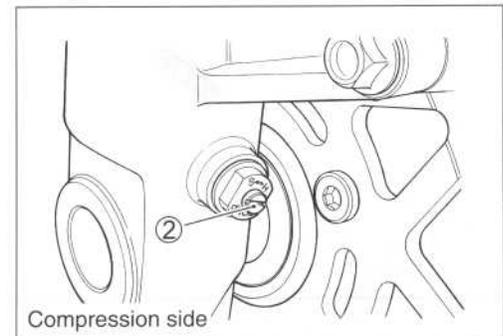
STD position: 1 turn out from stiffest position



Rebound side

STANDARD FRONT SUSPENSION SETTING

	FRONT		
	Spring pre-load adjuster	Damping force adjuster	
		Rebound	Compression
Solo and dual riding	6	1 turn out from stiffest position	1 turn out from stiffest position



Compression side

⚠ WARNING

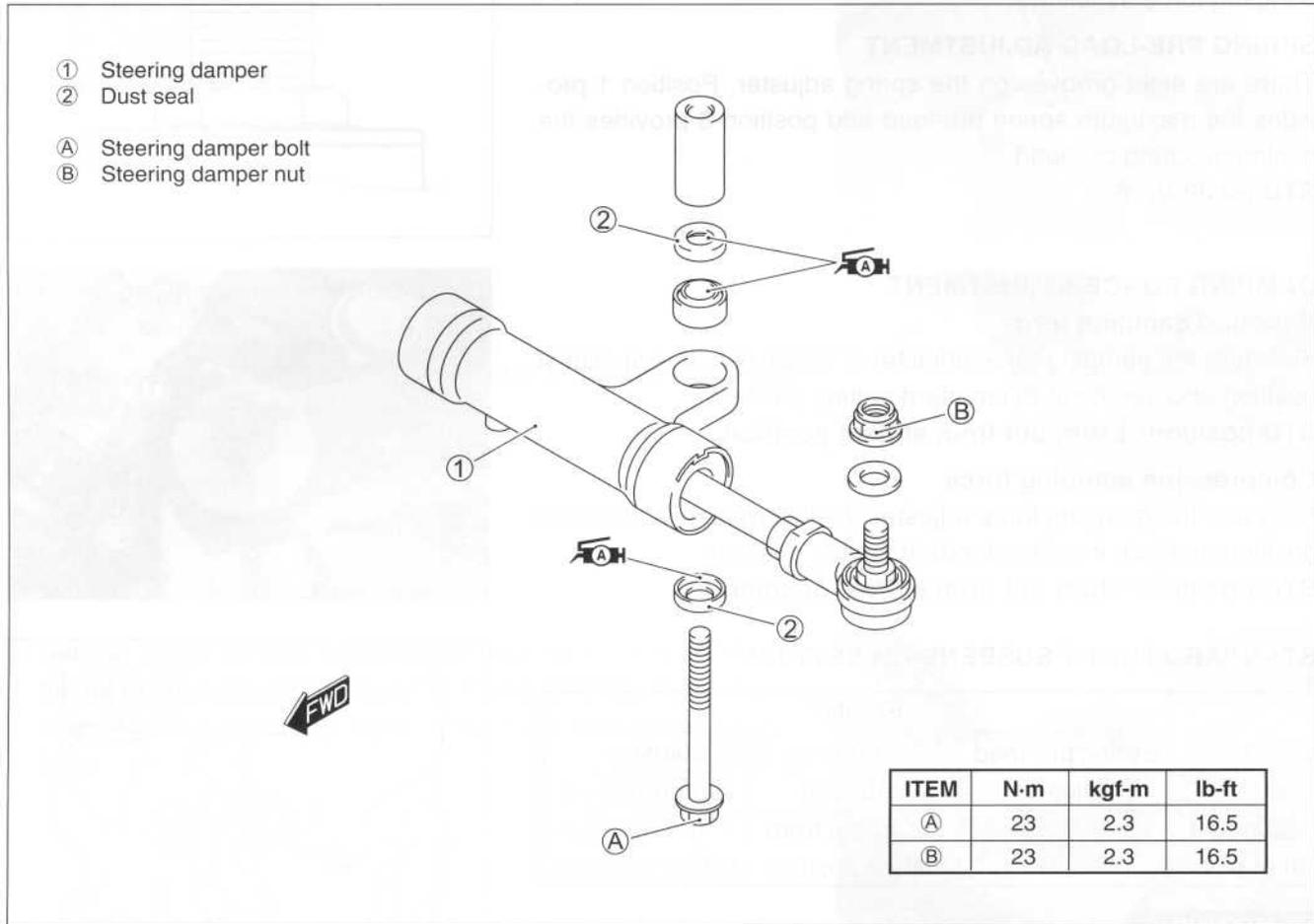
Be sure to adjust the spring pre-load and damping force on both front fork legs equally.

- Install the front wheel. (☞ 6-17)
- Install the front brake calipers. (☞ 6-17)

NOTE:

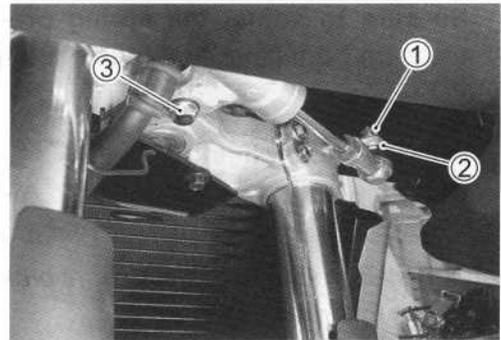
After install the brake calipers, front brake should be efficient by pumping the front brake lever.

STEERING DAMPER CONSTRUCTION



REMOVAL

- Remove the nut ① by holding the bolt ②.
- Remove the bolt ③ and remove the steering damper.

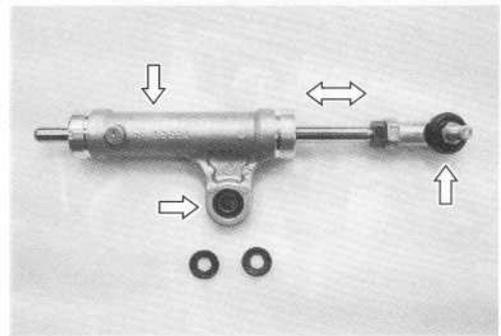


INSPECTION

Inspect the steering damper body, bearing and oil seal for damage and oil leaking.

Move the steering damper rod by hand to inspect for a smooth movement.

If any defects are found, replace the steering damper with a new one.



REMountING

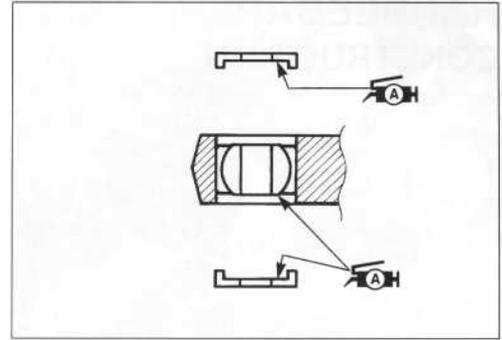
- Install the steering damper and tighten the bolt and nut.

Steering damper bolt and nut:

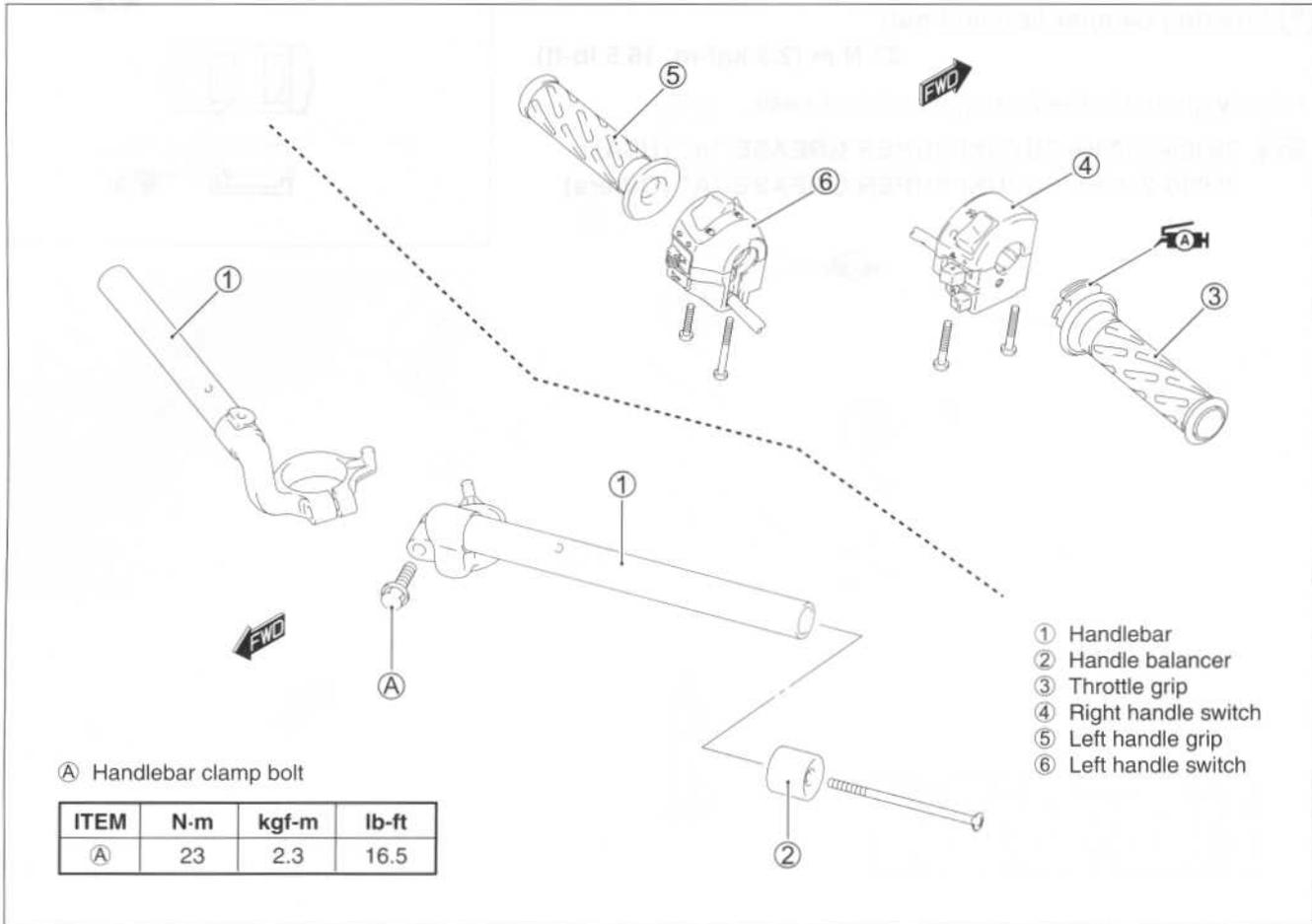
23 N·m (2.3 kgf·m, 16.5 lb·ft)

- Apply grease to the bearings and dust seals.

-  99000-25030: SUZUKI SUPER GREASE "A" (USA)
- 99000-25010: SUZUKI SUPER GREASE "A" (Others)

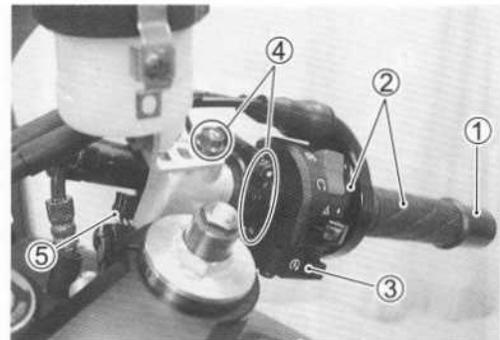


HANDLEBAR CONSTRUCTION

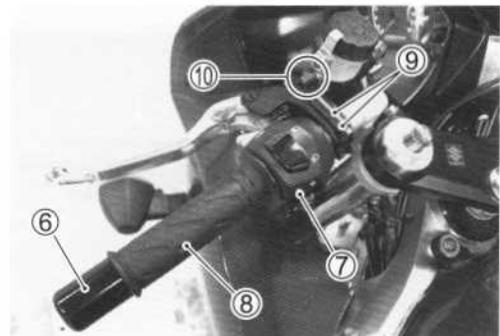


REMOVAL AND DISASSEMBLY

- Remove the handle balancer ①.
- Remove the throttle grip ②.
- Remove the right handle switch ③.
- Remove the brake master cylinder ④.
- Disconnect the front brake light switch coupler ⑤.



- Remove the handle balancer ⑥.
- Remove the left handle switch ⑦.
- Remove the left handle grip ⑧.
- Remove the clutch lever holders ⑨.
- Disconnect the clutch switch lead wires ⑩.

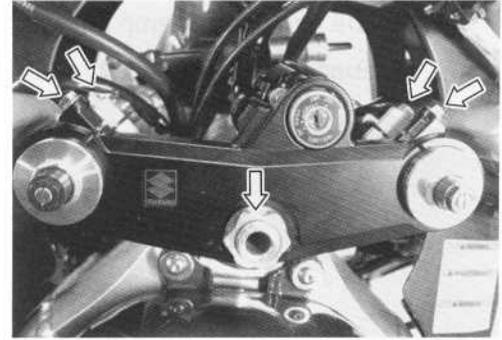


- Loosen the handlebar clamp bolts.
- Loosen the front fork upper clamp bolts.
- Remove the steering stem upper bracket by removing the steering stem head nut.

NOTE:

Place the rags under the steering stem upper bracket to prevent scratching the body cowling and other parts.

- Draw out the handlebars to upward.

**REASSEMBLY AND REMOUNTING**

Reassemble and remount the handlebar in the reverse order of removal and disassembly.

Pay attention to the following points:

- Install the steering stem upper bracket.

NOTE:

Raise the motorcycle with a jack, so that make easy to install the upper bracket.

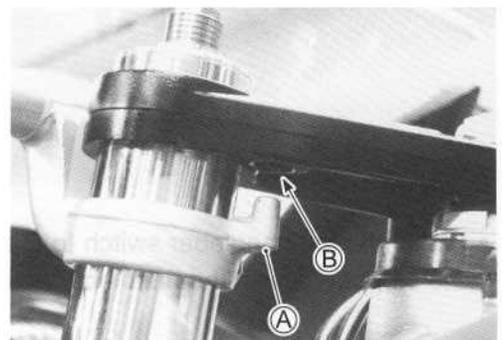
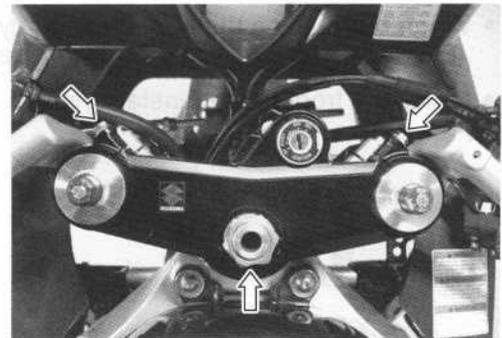
- Tighten the front fork upper clamp bolts.

🔩 Front fork upper clamp bolt: 23 N·m (23 kgf-m, 16.5 lb-ft)

- Tighten the steering stem head nut.

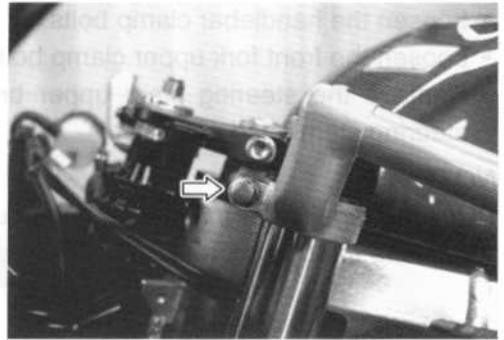
🔩 Steering stem head nut: 90 N·m (9.0 kgf-m, 65.0 lb-ft)

- Align the projection **(A)** of the handlebars and the hole **(B)** of the steering stem upper bracket.

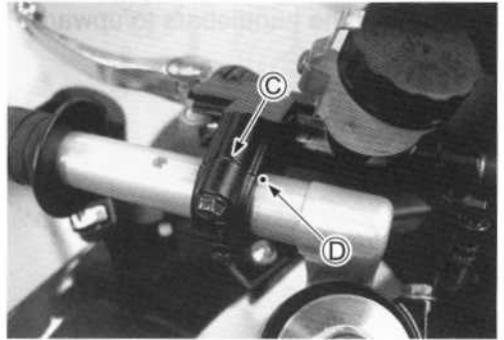


- Tighten the handlebar clamp bolts.

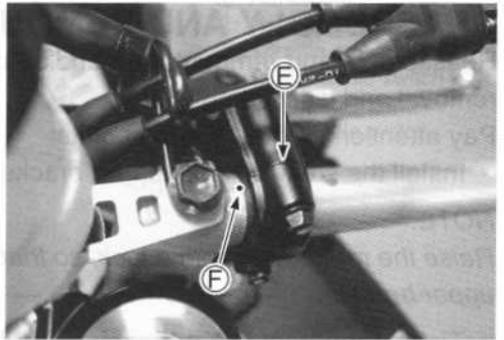
 **Handlebar clamp bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)**



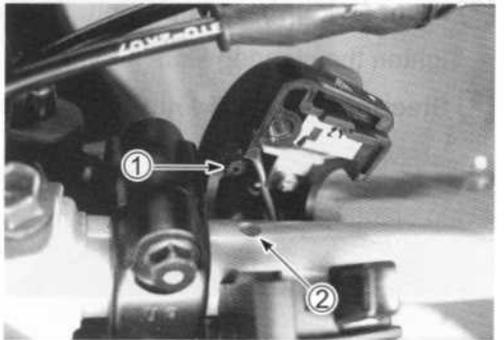
- When remounting the clutch master cylinder, align the holders mating surface **C** with punch mark **D** on the handlebar.
- Install the clutch master cylinder. ( 6-94)



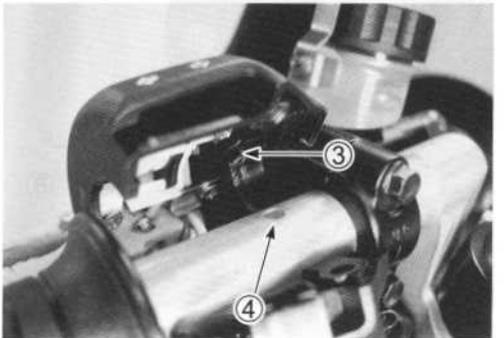
- When remounting the brake master cylinder, align the holders mating surface **E** with punch mark **F** on the handlebar.
- Install the front brake master cylinder. ( 6-75)



- Install the right handlebar switch to the handlebar by engaging the stopper **1** with the handlebar hole **2**.

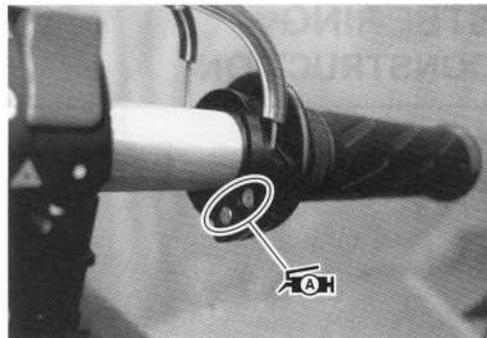


- Install the left handlebar switch to the handlebar by engaging the stopper **3** with the handlebar hole **4**.



- Install the throttle grip and cables. (Throttle cable routing:  8-18)
- Apply SUZUKI SUPER GREASE to the throttle cables and their holes.

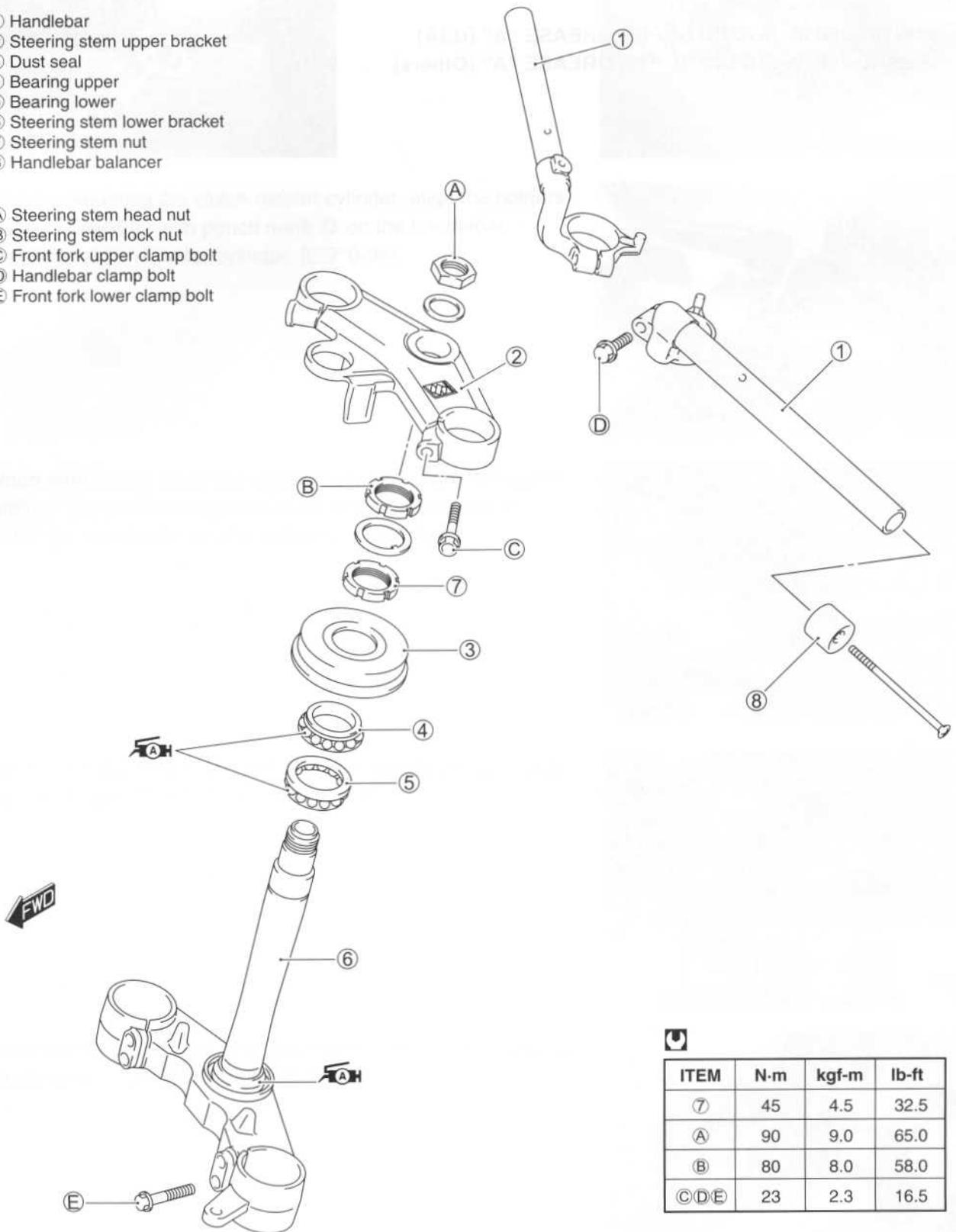
 99000-25030: SUZUKI SUPER GREASE "A" (USA)
99000-25010: SUZUKI SUPER GREASE "A" (Others)



STEERING CONSTRUCTION

- ① Handlebar
- ② Steering stem upper bracket
- ③ Dust seal
- ④ Bearing upper
- ⑤ Bearing lower
- ⑥ Steering stem lower bracket
- ⑦ Steering stem nut
- ⑧ Handlebar balancer

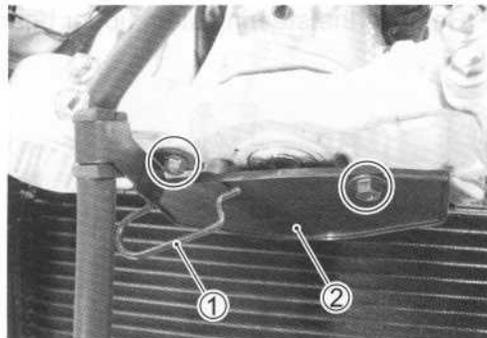
- A Steering stem head nut
- B Steering stem lock nut
- C Front fork upper clamp bolt
- D Handlebar clamp bolt
- E Front fork lower clamp bolt



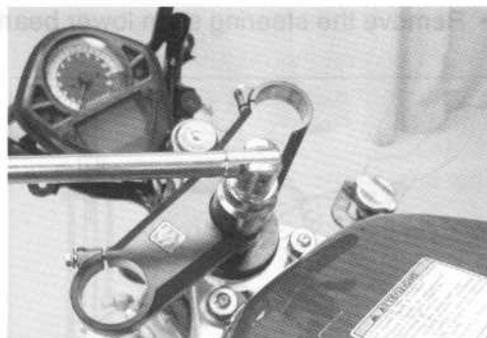
ITEM	N-m	kgf-m	lb-ft
⑦	45	4.5	32.5
A	90	9.0	65.0
B	80	8.0	58.0
C D E	23	2.3	16.5

REMOVAL AND DISASSEMBLY

- Remove the body cowling. (☞ 6-6)
- Remove the front wheel, front forks and front fender. (☞ 6-12 and -20)
- Remove the steering damper. (☞ 6-30)
- Remove the brake hose guide ① and plate ②.



- Remove the steering stem upper bracket by removing the steering stem nut.



- Remove the ignition switch ③ by using the special tools.

TOOL 09930-11920: Torx bit JT40H

09930-11940: Bit holder

NOTE:

It is not necessary to remove the ignition switch, only when replacing the steering stem lower bracket and bearings.



- Remove the steering stem nuts with the special tools.

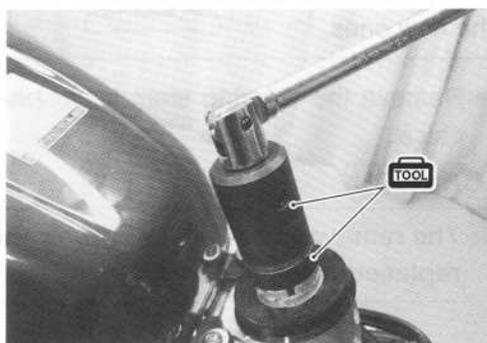
TOOL 09940-14911: Steering stem nut wrench

09940-14960: Steering stem nut wrench socket

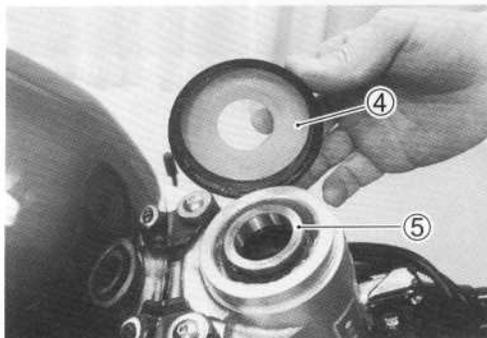
NOTE:

When loosening the stem nuts, hold the steering stem lower bracket to prevent it from falling.

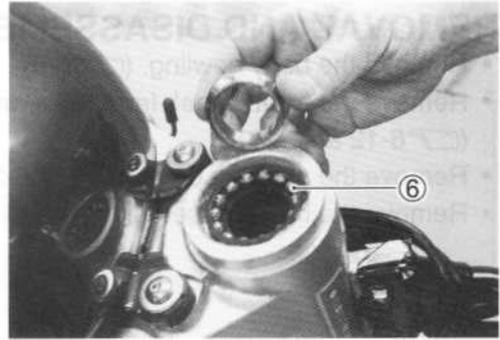
- Remove the steering stem lower bracket.



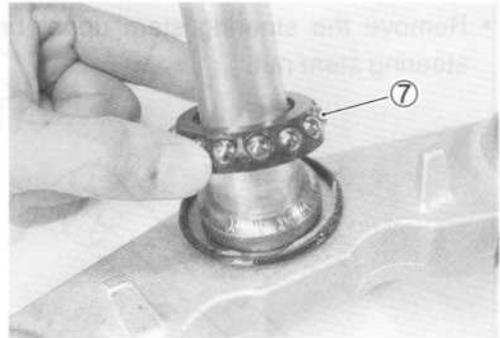
- Remove the dust cover ④ and bearing inner race ⑤.



- Remove the steering stem upper bearing ⑥.



- Remove the steering stem lower bearing ⑦.



INSPECTION AND DISASSEMBLY

Inspect the removed parts for the following abnormalities.

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

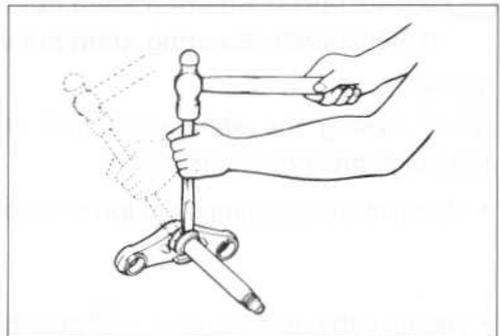
If any abnormal points are found, replace defective parts with the new ones.



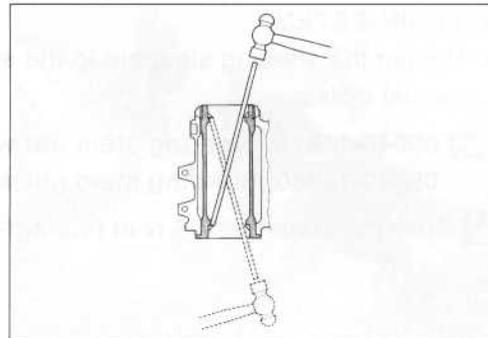
- Remove the steering stem lower bearing inner race using a chisel.

CAUTION

The removed bearing inner race and dust seal must be replaced with the new ones.



- Drive out the steering stem upper and lower bearing races using a suitable wedge bar.



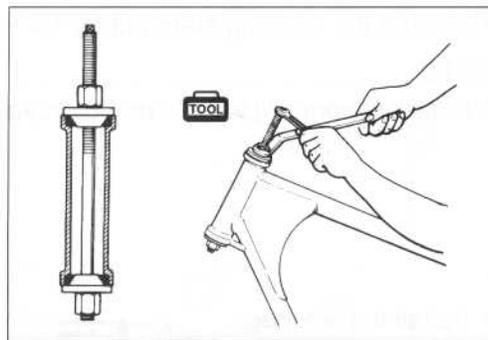
REASSEMBLY AND REMOUNTING

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 tools.

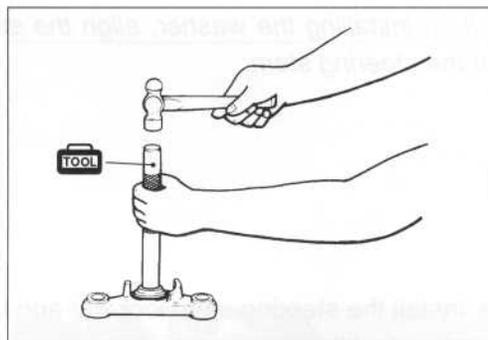
 **09941-34513: Steering outer race installer**
09924-84510: Bearing installer set



BEARINGS

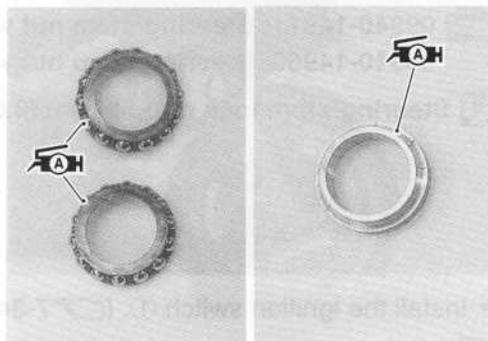
- Press in the dust seal and lower bearing using the special tool.

 **09925-18011: Steering bearing installer**



- Apply grease to the bearings and bearing inner races.
- Install the lower bearing to the steering stem lower bracket.
- Install the upper bearing, bearing inner race and dust cover onto the frame.

 **99000-25030: SUZUKI SUPER GREASE "A" (USA)**
99000-25010: SUZUKI SUPER GREASE "A" (Others)

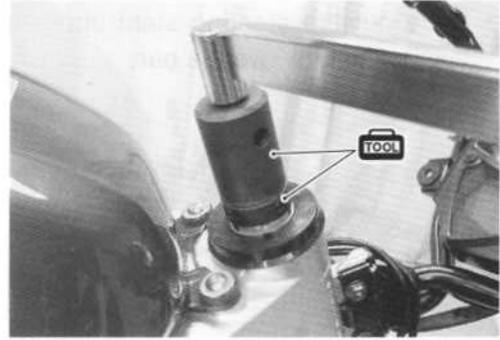


STEERING STEM

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

 **09940-14911: Steering stem nut wrench**
09940-14960: Steering stem nut wrench socket

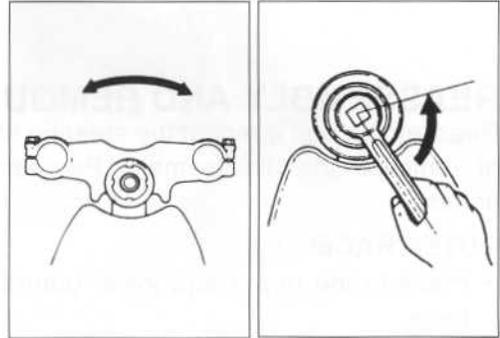
 **Steering stem nut: 45 N·m (4.5 kgf-m, 32.5 lb-ft)**



- Turn the steering stem about five or six times to the left and right so that the angular ball bearing will be seated properly.
- Loosen the steering stem nut by 1/4 – 1/2 turn.

NOTE:

This adjustment will vary from motorcycle to motorcycle.



- Install the washer.

NOTE:

When installing the washer, align the stopper lug to the groove of the steering stem.



- Install the steering stem lock nut and tighten it to the specified torque with the special tools.

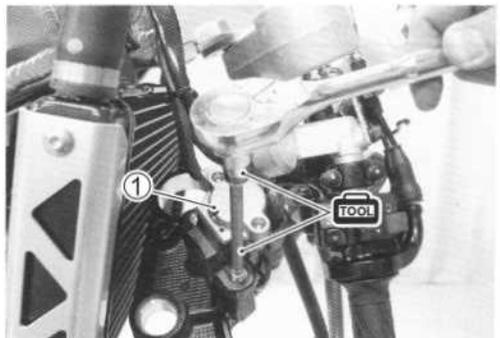
 **09940-14911: Steering stem nut wrench**
09940-14960: Steering stem nut wrench socket

 **Steering stem lock nut: 80 N·m (8.0 kgf-m, 58.0 lb-ft)**



- Install the ignition switch ①. (➡7-34)

 **09930-11920: Torx bit JT40H**
09930-11940: Bit holder



- Install the steering damper. (☞ 6-31)
- Install the front fork to the steering stem and remount the handlebars. (☞ 6-33)
- Tighten the lower clamp bolts temporarily.
- Tighten the steering stem head nut to the specified torque.

☑ Steering stem head nut: 90 N-m (9.0 kgf-m, 65.0 lb-ft)

- Remount the front forks and the front fender. (☞ 6-20 and -28)

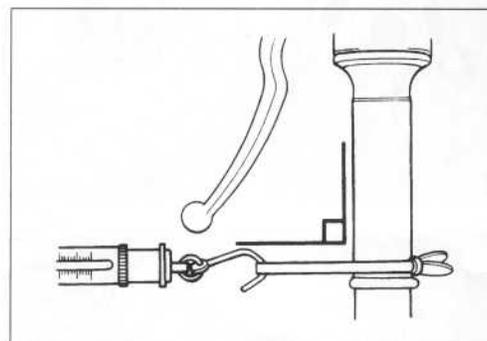
- Install the front wheel. (☞ 6-17)
- Install the cowlings.



STEERING TENSION ADJUSTMENT

Check the steering movement in the following procedure.

- By supporting the motorcycle with a jack, lift the front wheel until it is off the floor by 20 – 30 mm (0.8 – 1.2 in).
- Check to make sure that the cables and wire harnesses are properly routed.
- With the front wheel in the straight ahead state, hitch the spring scale (special tool) on one handlebar grip end as shown in the figure and read the graduation when the handlebar starts moving. Do the same on the other grip end.



DATA Initial force: 200 – 500 grams

TOOL 09940-92720: Spring scale

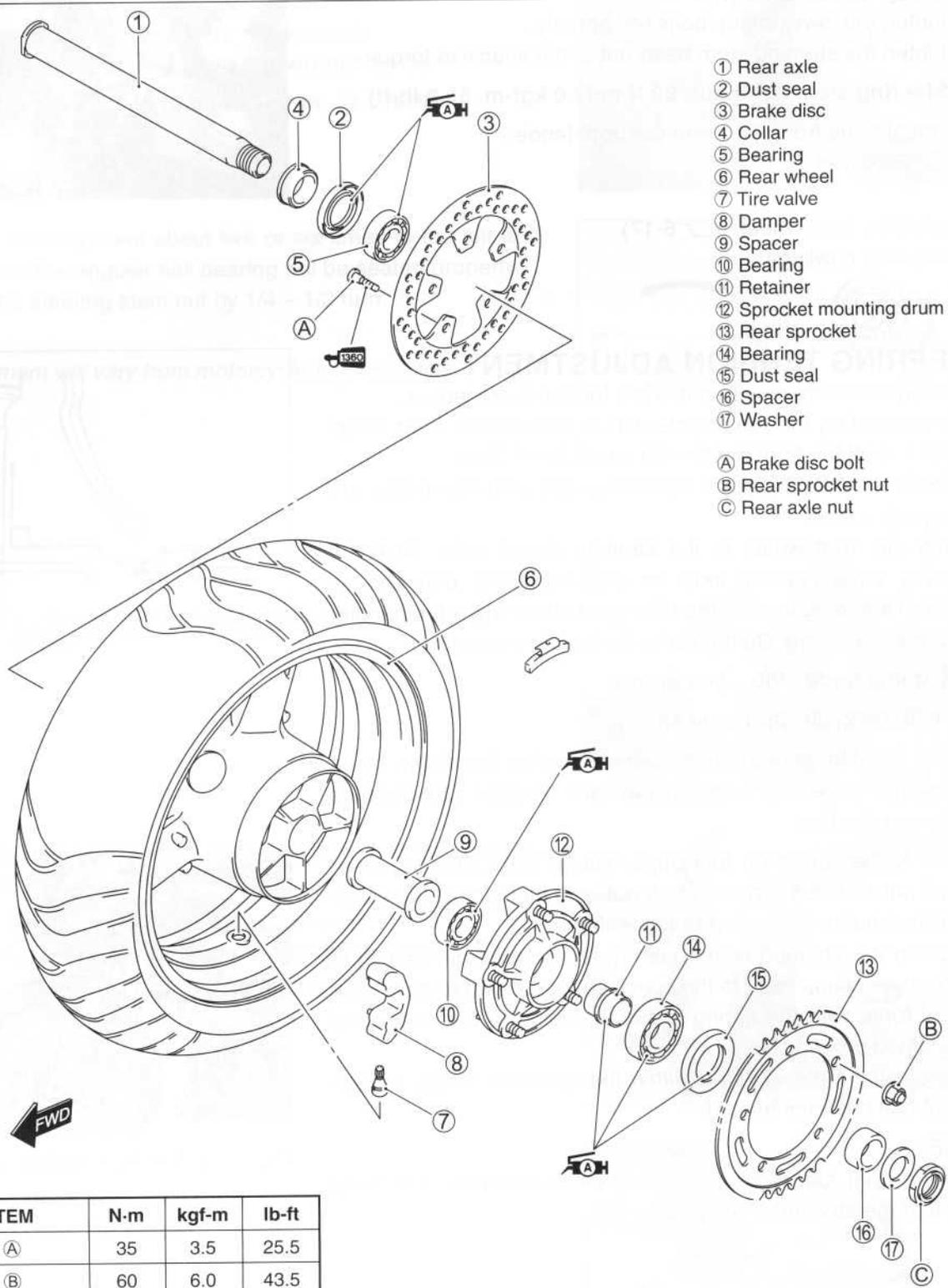
- If the initial force read on the scale when the handlebar starts turning is either too heavy or too light, adjust it till it satisfies the specification.
- 1) First, loosen the front fork upper clamp bolts, steering stem head nut and steering stem lock nut, and then adjust the steering stem nut by loosening or tightening it.
 - 2) Tighten the steering stem lock nut, stem head nut and front fork upper clamp bolts to the specified torque and re-check the initial force with the spring scale according to the previously described procedure.
 - 3) If the initial force is found within the specified range, adjustment has been completed.

NOTE:

Hold the front fork legs, move them back and forth and make sure that the steering is not loose.



REAR WHEEL CONSTRUCTION



- ① Rear axle
 - ② Dust seal
 - ③ Brake disc
 - ④ Collar
 - ⑤ Bearing
 - ⑥ Rear wheel
 - ⑦ Tire valve
 - ⑧ Damper
 - ⑨ Spacer
 - ⑩ Bearing
 - ⑪ Retainer
 - ⑫ Sprocket mounting drum
 - ⑬ Rear sprocket
 - ⑭ Bearing
 - ⑮ Dust seal
 - ⑯ Spacer
 - ⑰ Washer
- A Brake disc bolt
 B Rear sprocket nut
 C Rear axle nut



ITEM	N-m	kgf-m	lb-ft
A	35	3.5	25.5
B	60	6.0	43.5
C (For E-03, 28, 33)	100	10.0	72.5
C (For the others)	120	12.0	87.0

REMOVAL

- Remove the cotter pin. (For E-03, 28, 33)
- Loosen the rear axle nut ①.
- Raise the rear wheel off the ground and support the motorcycle with a jack or wooden block.
- Remove the axle nut and draw out the rear axle.

CAUTION

Do not operate the brake pedal while removing the rear wheel.

- Remove the spacer ② and collar ③.

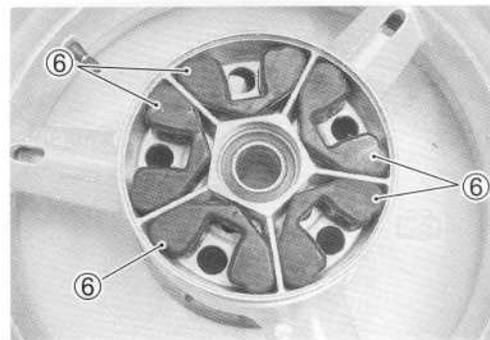
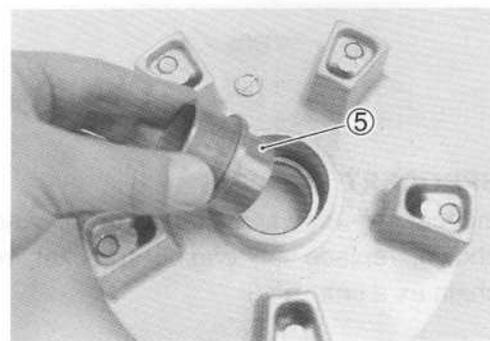
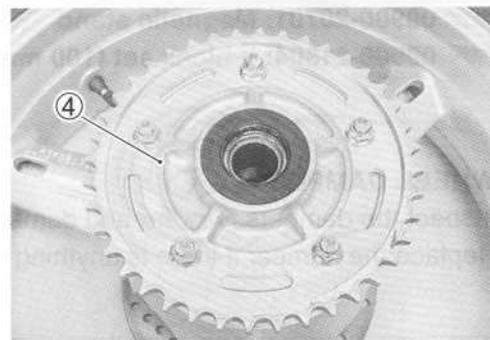
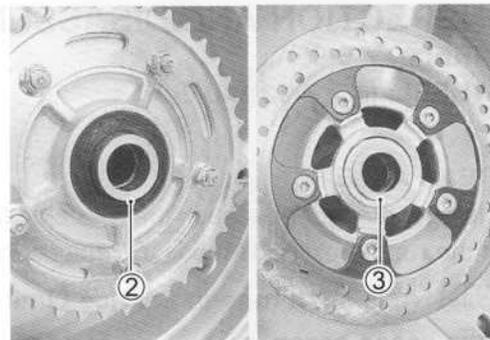
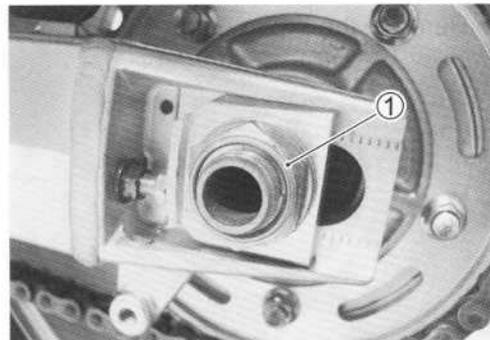
- Remove the rear sprocket mounting drum assembly ④ from the wheel hub.

NOTE:

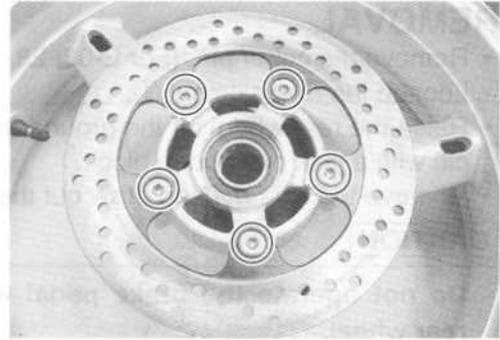
Before removing the rear sprocket mounting drum, slightly loosen the rear sprocket nuts to facilitate later disassembly.

- Remove the rear sprocket mounting drum retainer ⑤.
- Remove the rear sprocket from sprocket mounting drum.

- Remove the wheel dampers ⑥.



- Remove the brake disc.



INSPECTION AND DISASSEMBLY

TIRE: (☞ 6-95)

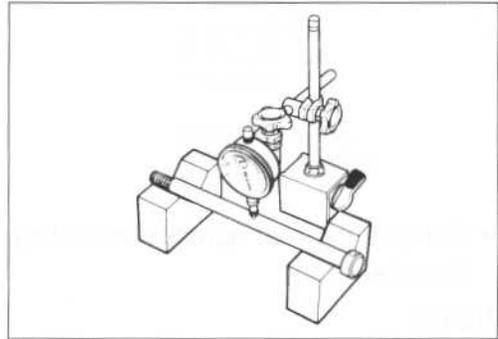
WHEEL: (☞ 6-13 and 6-95)

REAR AXLE

Using a dial gauge, check the rear axle for runout. If the runout exceeds the limit, replace the rear axle.

DATA Axle shaft runout: Service Limit: 0.25 mm (0.010 in)

- TOOL** 09900-20607: Dial gauge (1/100 mm)
- 09900-20701: Magnetic stand
- 09900-21304: V-block set (100 mm)



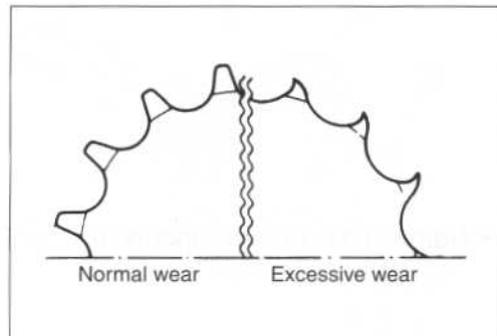
WHEEL DAMPER

Inspect the dampers for wear and damage. Replace the damper if there is anything unusual.



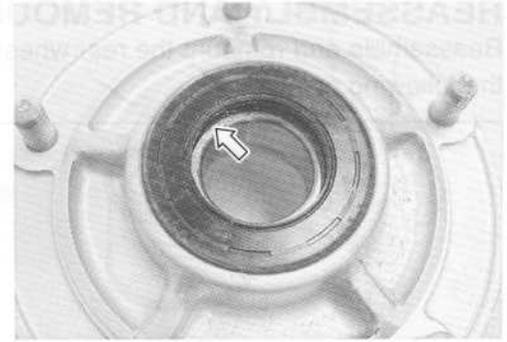
SPROCKET

Inspect the rear sprocket teeth for wear. If they are worn as shown, replace the engine sprocket, rear sprocket and drive chain as a set.



DUST SEAL

- Inspect the dust seal lip for wear or damage. If any damages are found, replace the dust seal with a new one.

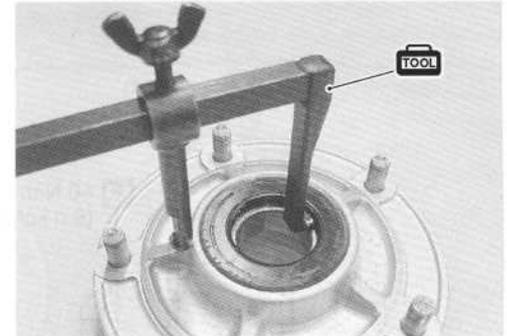


- Remove the dust seal with the special tool.

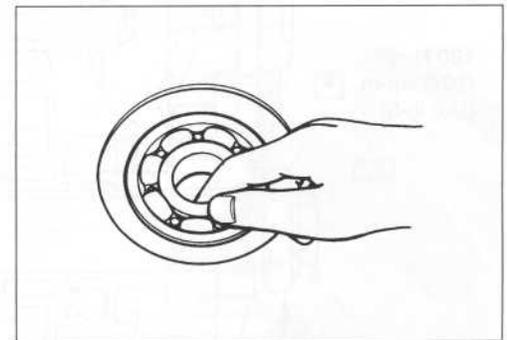
TOOL 09913-50121: Oil seal remover

CAUTION

Do not reuse the removed dust seal.

**BEARING**

Inspect the play of the wheel and sprocket mounting drum bearings by hand while they are in the wheel and drum. Rotate the inner race by hand to inspect for abnormal noise and smooth rotation. Replace the bearing if there is anything unusual.

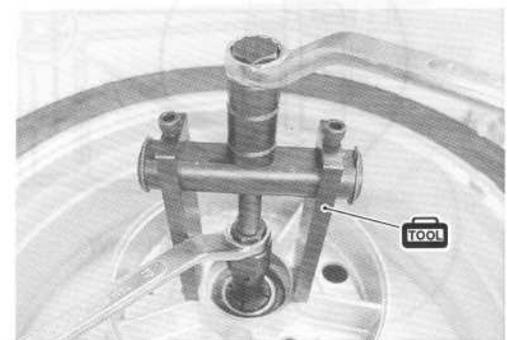
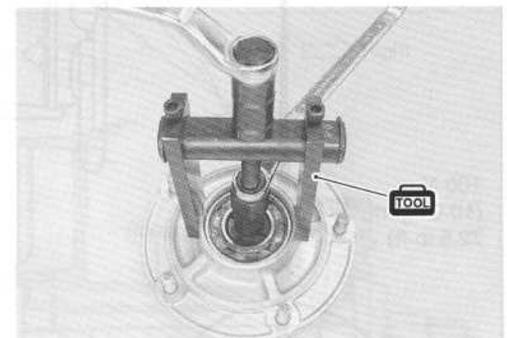


- Remove the sprocket mounting drum bearing and wheel bearings by using the special tool.

TOOL 09921-20240: Bearing remover set

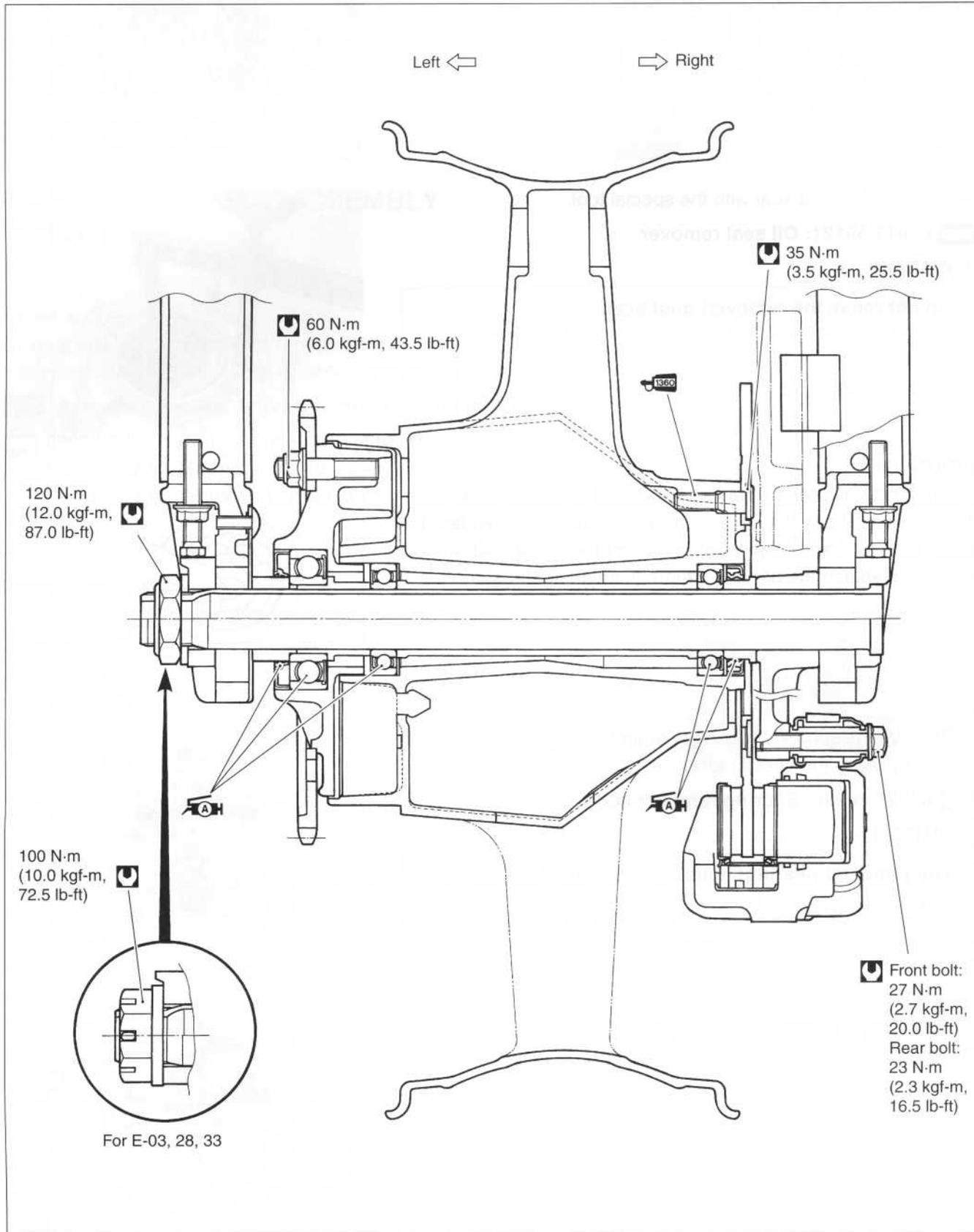
CAUTION

The removed bearings must be replaced with the new ones.



REASSEMBLY AND REMOUNTING

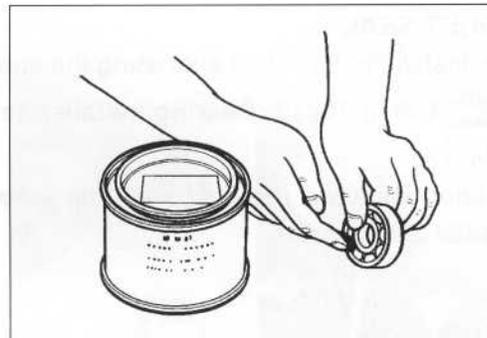
Reassemble and remount the rear wheel in the reverse order of removal and disassembly. Pay attention to the following points:



BEARING

- Apply SUZUKI SUPER GREASE to the bearings before installing.

99000-25030: SUZUKI SUPER GREASE "A" (USA)
99000-25010: SUZUKI SUPER GREASE "A" (Others)

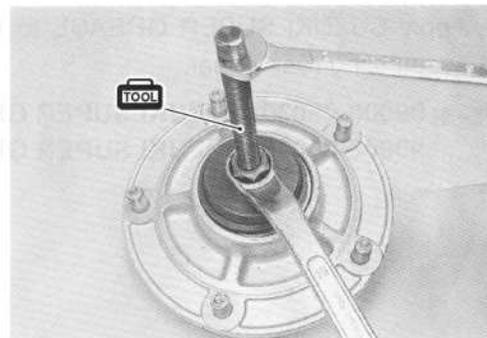


- Install the new bearing to the sprocket mounting drum using the special tool.

TOOL 09924-84510: Bearing installer set

NOTE:

When installing the bearing, sealed side of bearing must face inside.

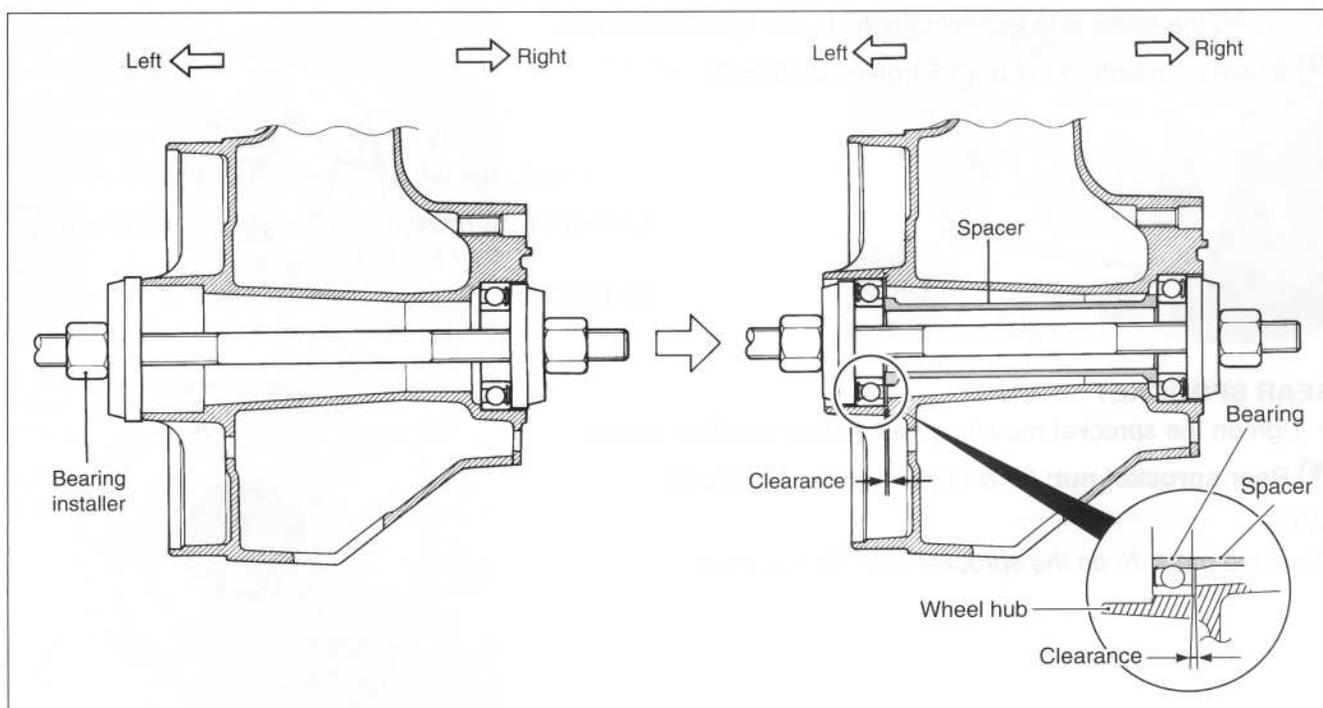
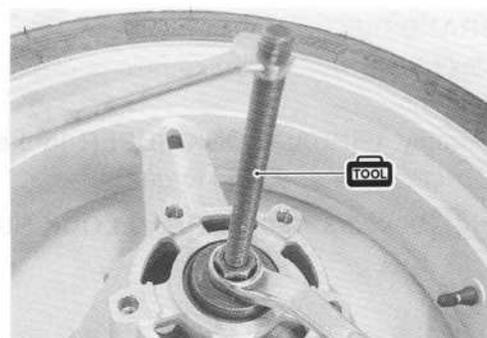


- First install the right wheel bearing, then install the left wheel bearing and spacer using the special tool.

TOOL 09941-34513: Bearing/Steering race installer set

CAUTION

The sealed cover of the bearing must face outside.



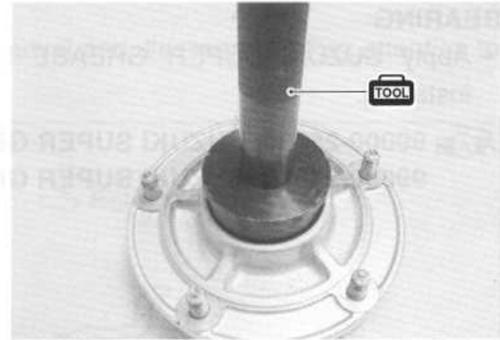
DUST SEAL

- Install the new dust seal using the special tool.

 **09913-70210: Bearing installer set**

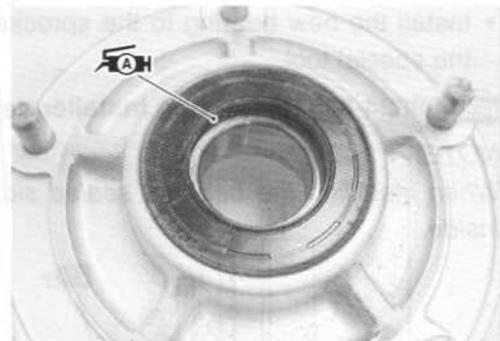
NOTE:

When installing the dust seal, the stamped mark of dust seal must face outside.



- Apply SUZUKI SUPER GREASE to the dust seal lip before assembling rear wheel.

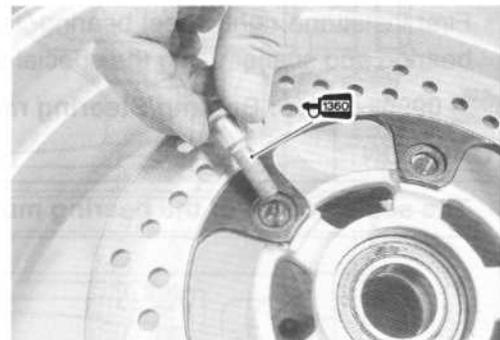
 **99000-25030: SUZUKI SUPER GREASE "A" (USA)**
99000-25010: SUZUKI SUPER GREASE "A" (Others)

**BRAKE DISC**

Make sure that the brake disc is clean and free of any greasy matter.

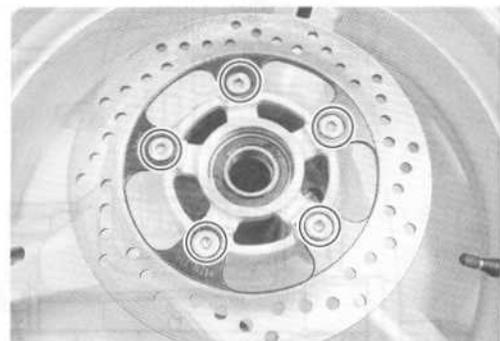
- Apply THREAD LOCK SUPER to the disc bolts and tighten them to the specified torque.

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



- Tighten the brake disc mounting bolts to the specified torque.

 **Brake disc bolt: 35 N·m (3.5 kgf-m, 25.5 lb-ft)**

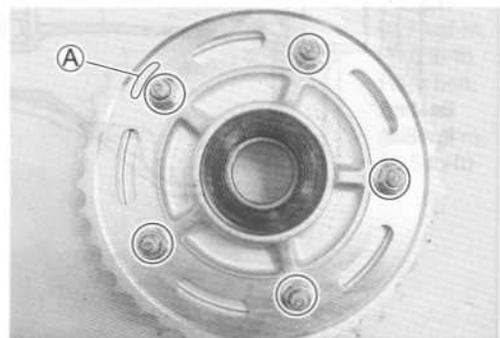
**REAR SPROCKET**

- Tighten the sprocket mounting nuts to the specified torque.

 **Rear sprocket nut: 60 N·m (6.0 kgf-m, 43.5 lb-ft)**

NOTE:

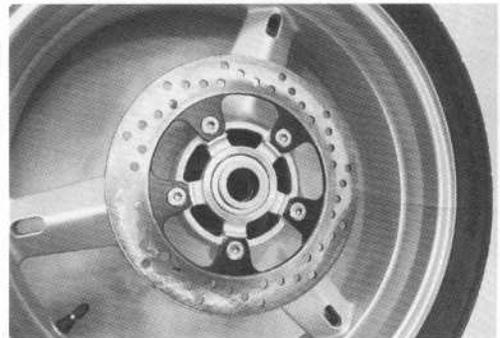
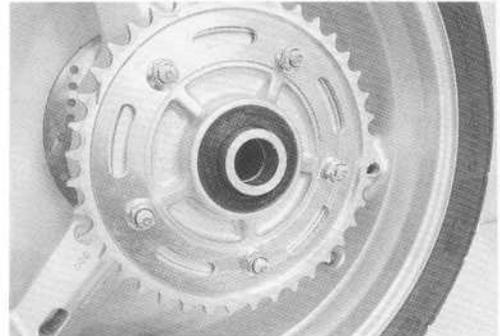
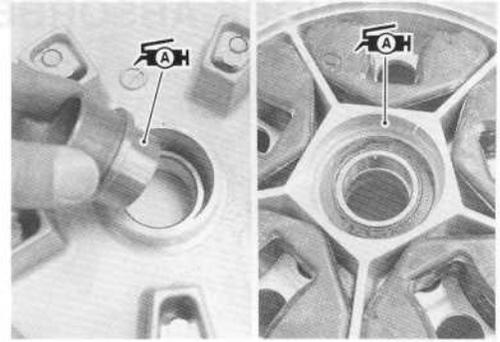
Stamped mark  on the sprocket must face outside.



- Apply SUZUKI SUPER GREASE to the rear sprocket mounting retainer.
- Install the rear sprocket mounting drum retainer.
- Apply SUZUKI SUPER GREASE to the contacting surface of the rear wheel.

 99000-25030: SUZUKI SUPER GREASE "A" (USA)
99000-25010: SUZUKI SUPER GREASE "A" (Others)

- Install the rear sprocket mounting drum to the rear wheel.
- Install the spacer and collar.

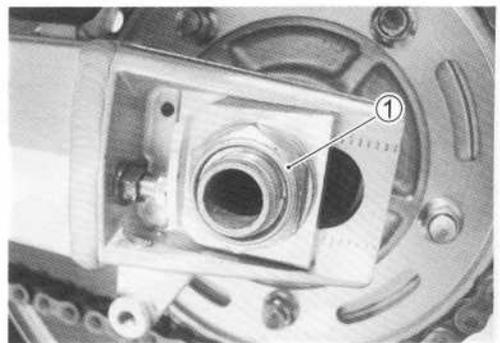


REAR AXLE

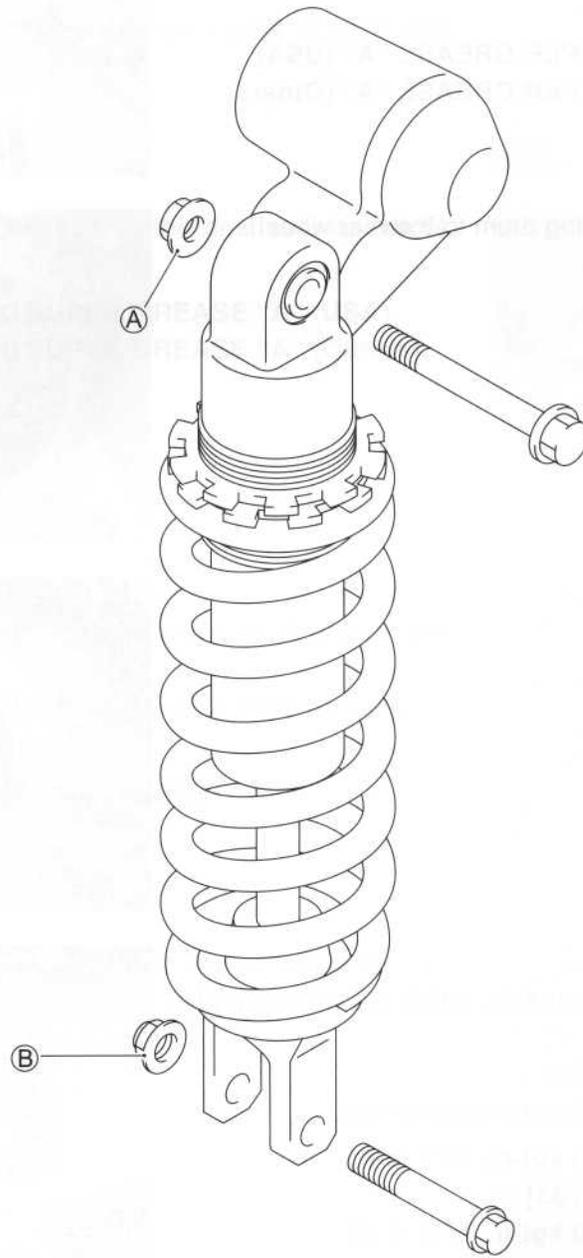
- Remount the rear wheel and rear axle, install the washer and rear axle nut ①.
- Adjust the chain slack. (➡ 2-22)
- Tighten the rear axle nut ① to the specified torque.

 **Rear axle nut: 100 N·m (10.0 kgf-m, 72.5 lb-ft)**
[For E-03, 28, 33]
120 N·m (12.0 kgf-m, 87.0 lb-ft)
[For the others]

- Install the new cotter pin. (For E-03, 28, 33)



REAR SHOCK ABSORBER CONSTRUCTION



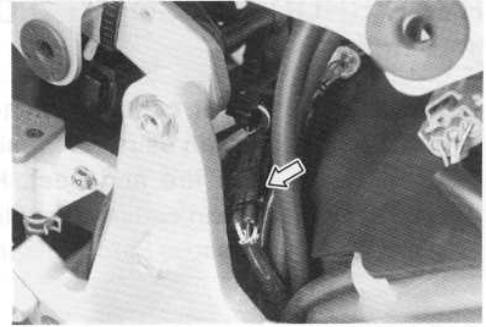
- Ⓐ Rear shock absorber upper mounting nut
- Ⓑ Rear shock absorber lower mounting nut



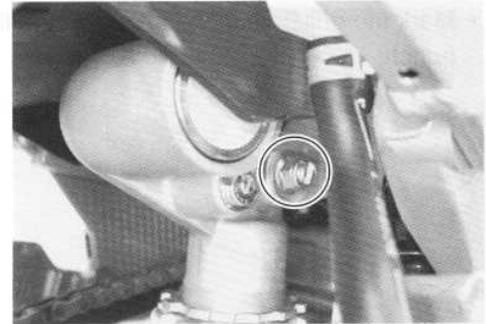
ITEM	N-m	kgf-m	lb-ft
Ⓐ	50	5.0	36.0
Ⓑ	50	5.0	36.0

REMOVAL

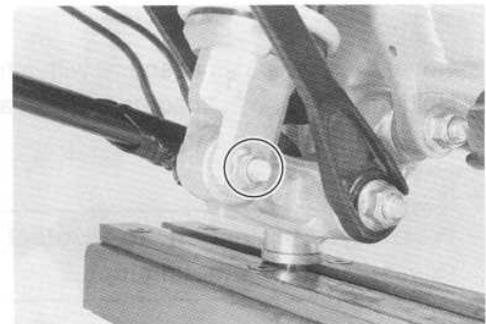
- Lift and support the fuel tank. (☞ 4-65)
- Disconnect the HO2 sensor lead wire coupler.
- Remove the exhaust muffler and exhaust pipe. (☞ 3-6)
- Raise the rear wheel off the ground and support the motorcycle with a jack or wooden block.



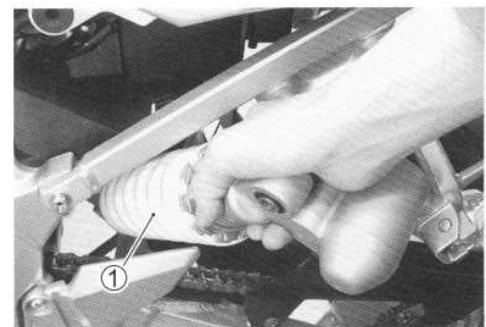
- Remove the rear shock absorber upper mounting bolt.



- Remove the rear shock absorber lower mounting bolt.



- Remove the rear shock absorber ①.



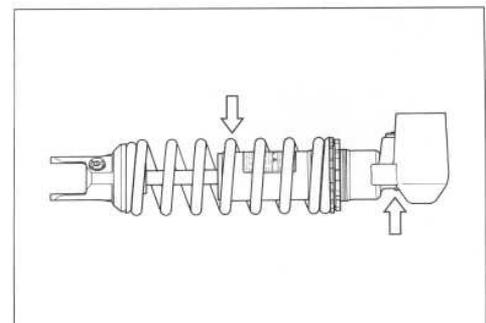
INSPECTION

Inspect the shock absorber body and bushing 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.



REAR SHOCK ABSORBER DISPOSAL

⚠ WARNING

- The rear shock unit contains high-pressure nitrogen gas. Mishandling can cause explosion.
- * Keep away from fire and heat. High gas pressure caused by heat can cause an explosion.
 - * Release gas pressure before disposing.

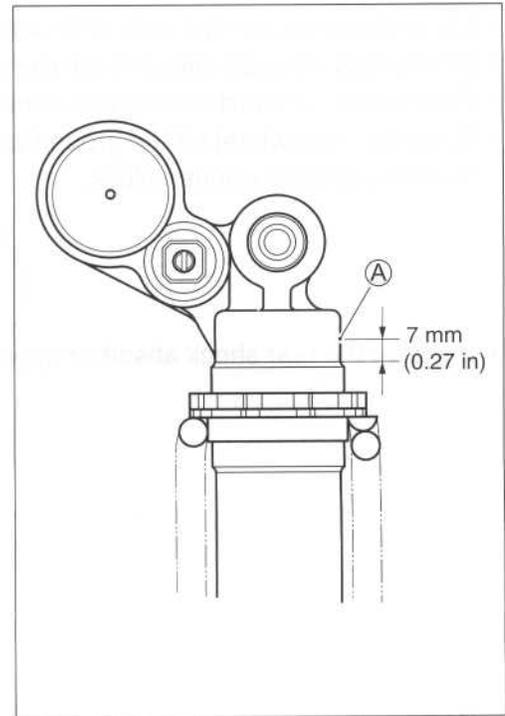
GAS PRESSURE RELEASE

- Mark the drill hole at (A), shown in the illustration, with a center punch.

- Cover the rear shock absorber with a transparent vinyl bag (1).
- Hold the rear shock absorber (2) with a vice.
- Make a hole with a 3 mm drill.

⚠ WARNING

- Wear eye protection to protect your eyes from released gas and metal chips.



REMOUNTING

Remount the rear shock absorber in the reverse order of removal. Pay attention to the following points:

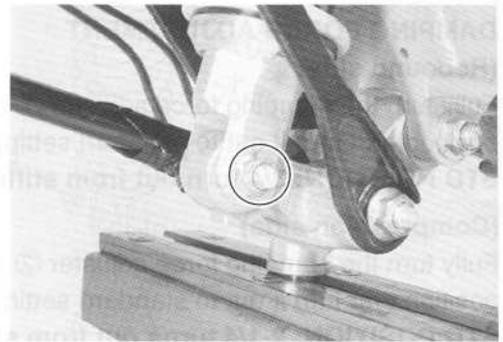
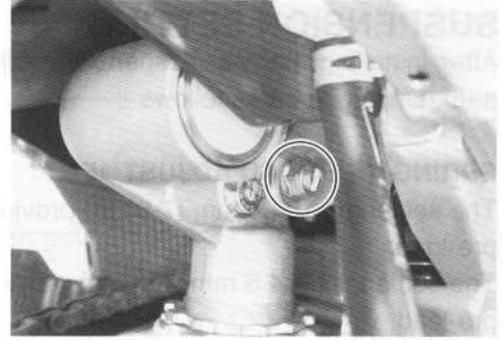
- Install the rear shock absorber and tighten the rear shock absorber upper/lower mounting nuts.

Rear shock absorber mounting lower nut:

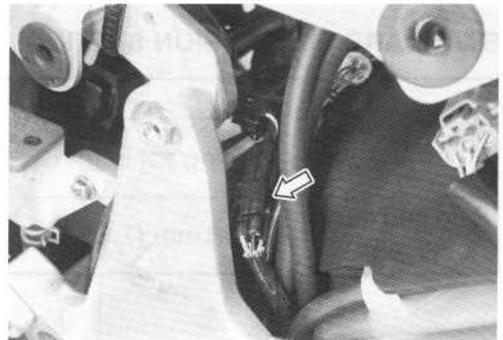
50 N·m (5.0 kgf-m, 36.0 lb-ft)

Rear shock absorber mounting upper nut:

50 N·m (5.0 kgf-m, 36.0 lb-ft)



- Connect the HO2 sensor lead wire coupler.
- Install the exhaust pipe and exhaust muffler. ( 3-13)



SUSPENSION SETTING

After installing the rear suspension, adjust the spring pre-load and damping force as follows.

SPRING PRE-LOAD ADJUSTMENT

The set length 194.5 mm (7.66 in) provides the maximum spring pre-load.
 The set length 204.5 mm (8.05 in) provides the minimum spring pre-load.

STD LENGTH: 199.5 mm (7.85 in)

DAMPING FORCE ADJUSTMENT

(Rebound side)

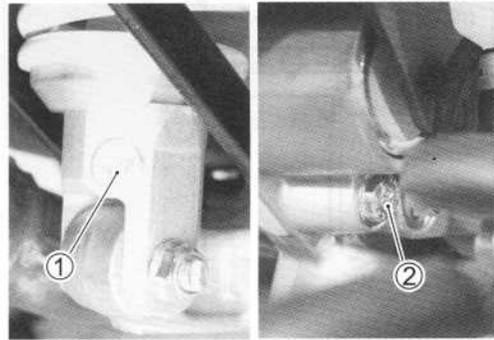
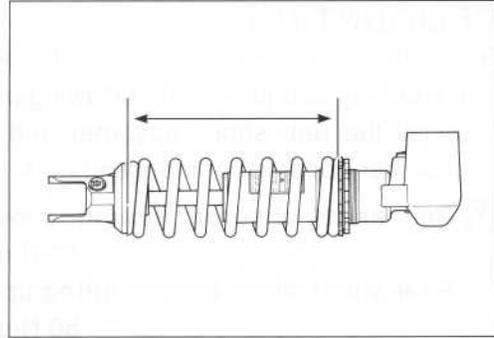
Fully turn the damping force adjuster ① clockwise. It is at stiffest position and turn it out to standard setting position.

STD POSITION: 3/4 turn out from stiffest position

(Compression side)

Fully turn the damping force adjuster ② clockwise. It is at stiffest position and turn it out to standard setting position.

STD POSITION: 2-1/4 turns out from stiffest position



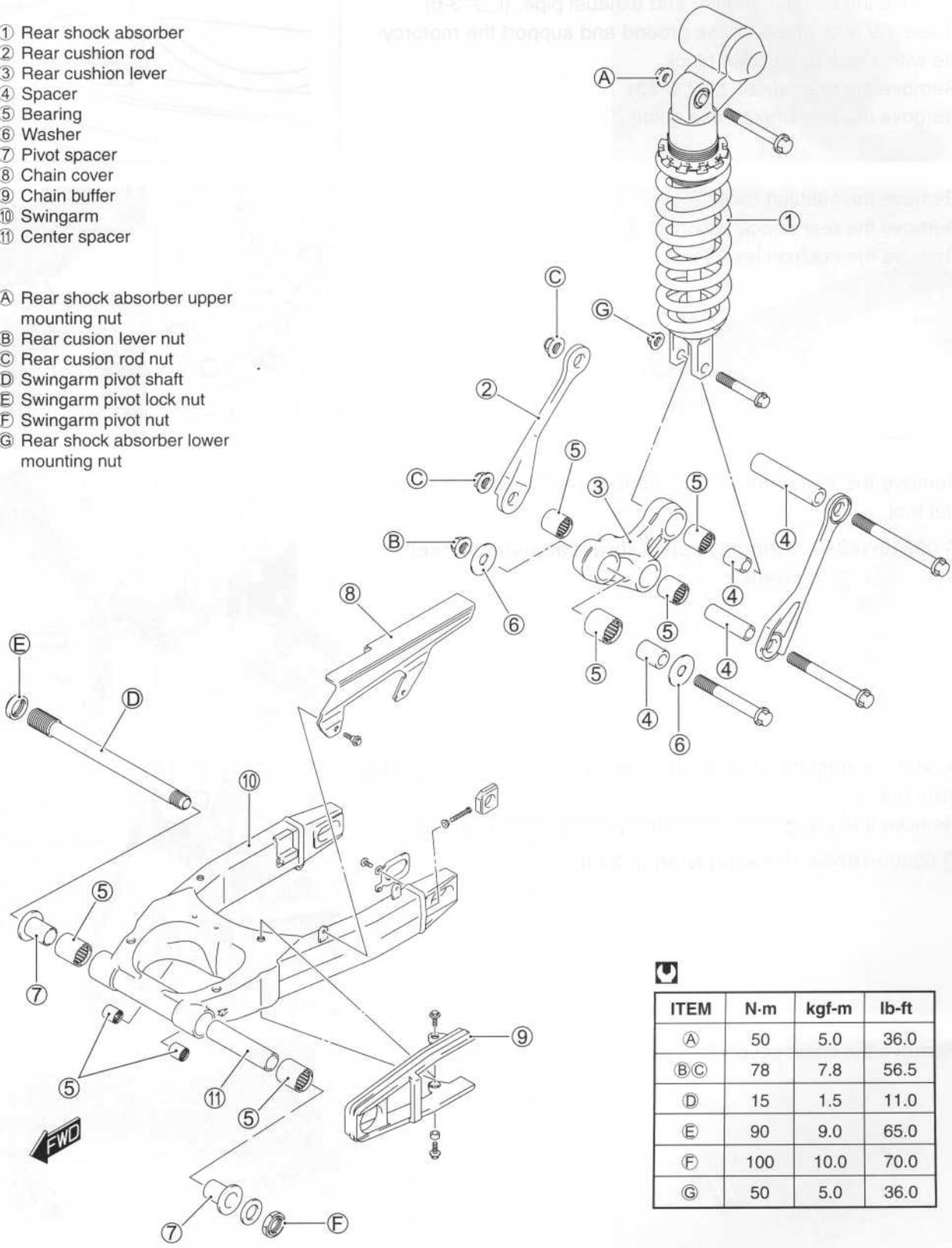
STANDARD SUSPENSION SETTING

	REAR		
	Spring set length	Damping force adjuster	
		Rebound	Compression
Solo and dual riding	199.5 mm (7.85 in)	3/4 turn out from stiffest position	2-1/4 turns out from stiffest position

REAR SWINGARM CONSTRUCTION

- ① Rear shock absorber
- ② Rear cushion rod
- ③ Rear cushion lever
- ④ Spacer
- ⑤ Bearing
- ⑥ Washer
- ⑦ Pivot spacer
- ⑧ Chain cover
- ⑨ Chain buffer
- ⑩ Swingarm
- ⑪ Center spacer

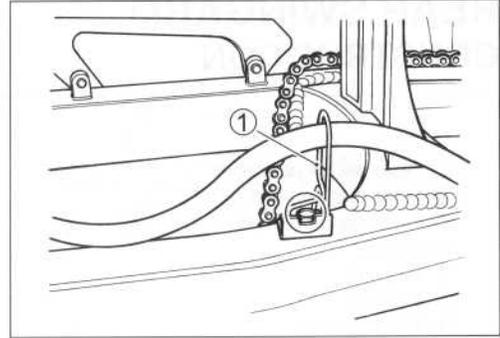
- A Rear shock absorber upper mounting nut
- B Rear cushion lever nut
- C Rear cushion rod nut
- D Swingarm pivot shaft
- E Swingarm pivot lock nut
- F Swingarm pivot nut
- G Rear shock absorber lower mounting nut



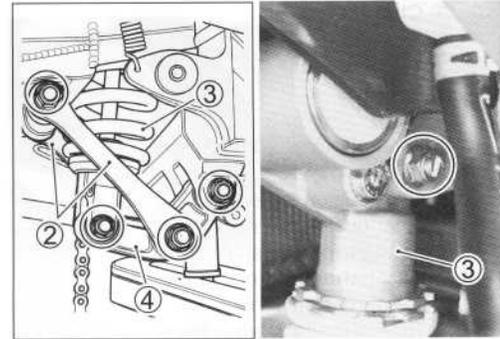
ITEM	N-m	kgf-m	lb-ft
A	50	5.0	36.0
B/C	78	7.8	56.5
D	15	1.5	11.0
E	90	9.0	65.0
F	100	10.0	70.0
G	50	5.0	36.0

REMOVAL

- Lift and support the fuel tank. (☞ 4-65)
- Disconnect the HO2 sensor lead wire coupler. (☞ 6-51)
- Remove the exhaust muffler and exhaust pipe. (☞ 3-6)
- Raise the rear wheel off the ground and support the motorcycle with a jack or wooden block.
- Remove the rear wheel. (☞ 6-43)
- Remove the rear brake hose guide ①.

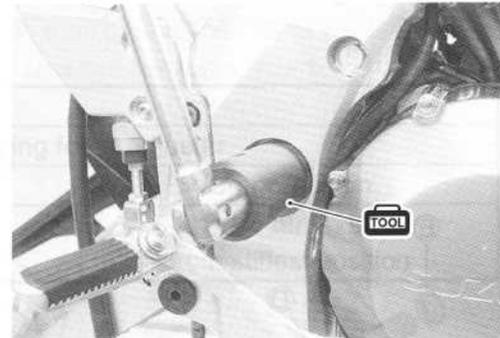


- Remove the cushion rods ②.
- Remove the rear shock absorber ③.
- Remove the cushion lever ④.



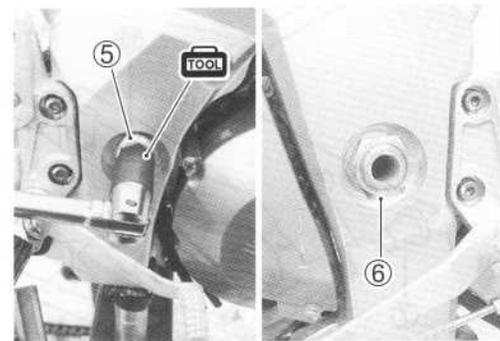
- Remove the swingarm pivot shaft lock nut by using the special tool.

TOOL 09940-14940: Swingarm pivot thrust adjuster socket wrench

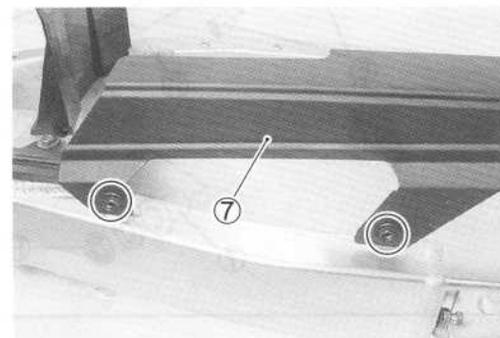


- Hold the swingarm pivot shaft ⑤ and remove the swingarm pivot nut ⑥.
- Remove the swingarm pivot shaft by using the special tool.

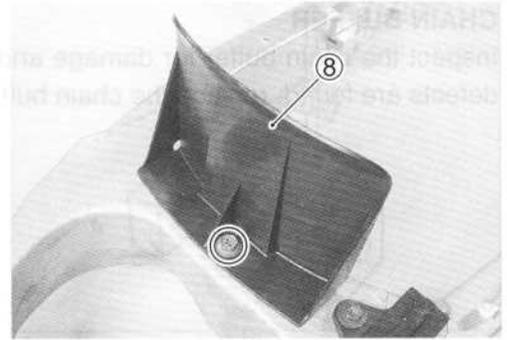
TOOL 09900-18740: Hexagon wrench 24 mm



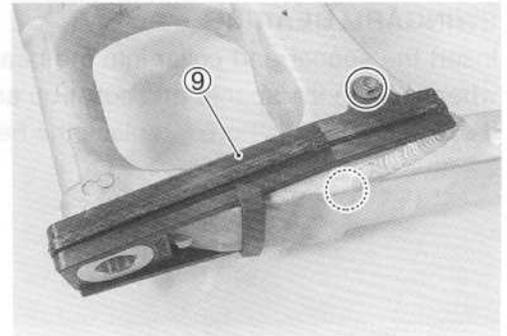
- Remove the chain cover ⑦.



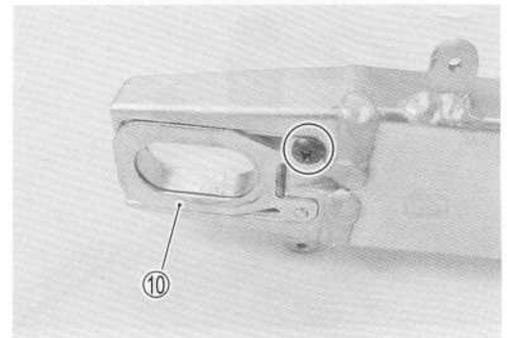
- Remove the mud guard ⑧.



- Remove the chain buffer ⑨.



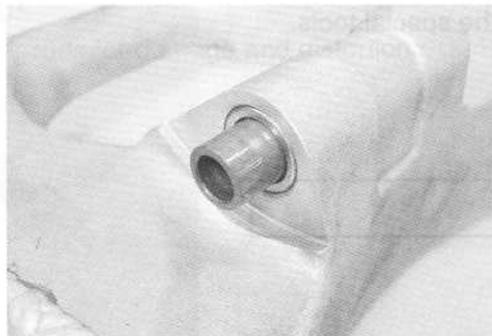
- Remove the plate ⑩.



INSPECTION AND DISASSEMBLY

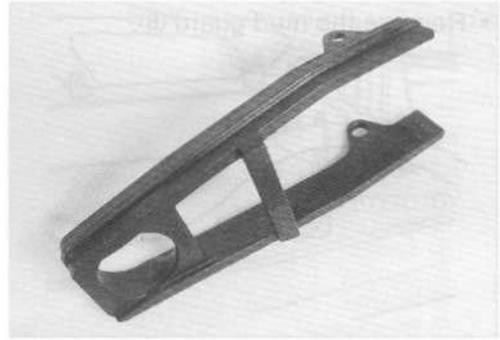
SPACER

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



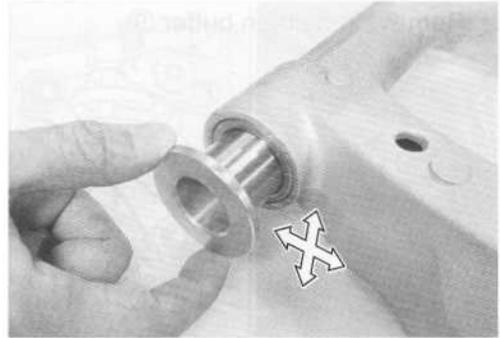
CHAIN BUFFER

Inspect the chain buffer for damage and excessive wear. If any defects are found, replace the chain buffer with a new one.



SWINGARM BEARING

Insert the spacer and collar into the bearing and check the play when moving the spacer and collar up and down. If excessive play is noted, replace the bearing with a new one.

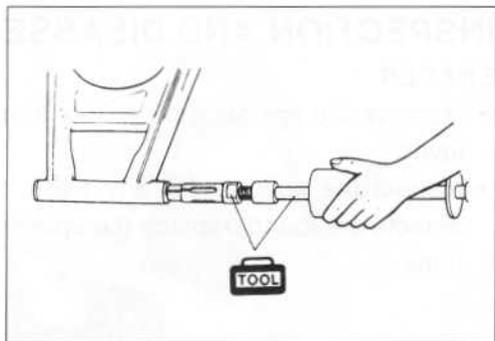


- Remove the swingarm pivot bearing and spacer with the special tools.

- TOOL** 09923-74511: Bearing remover
- 09930-30102: Sliding shaft

CAUTION

Do not reuse the removed bearings.

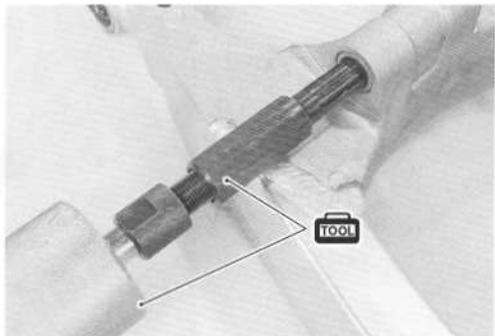


- Remove the cushion rod bearing by using the special tools.

- TOOL** 09923-73210: Bearing remover
- 09930-30102: Sliding shaft

CAUTION

Do not reuse the removed bearings.

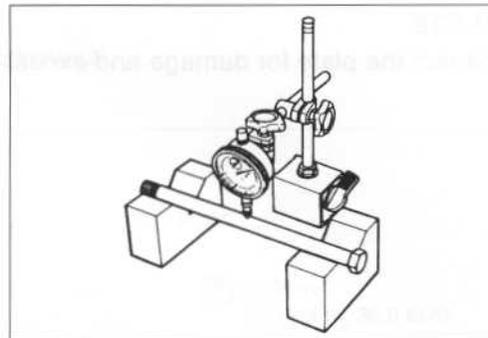


SWINGARM PIVOT SHAFT

Using a dial gauge, check the pivot shaft runout and replace it if the runout exceeds the limit.

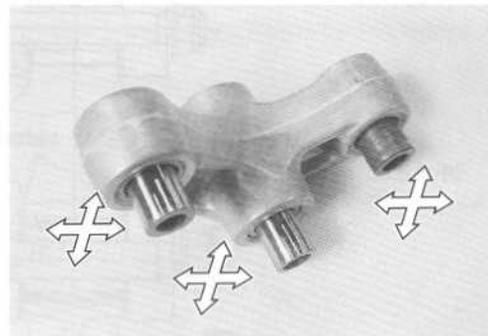
DATA Swingarm pivot shaft runout:
Service limit: 0.3 mm (0.01 in)

TOOL 09900-20607: Dial gauge (1/100 mm, 10 mm)
09900-20701: Magnetic stand
09900-21304: V-block (100 mm)

**CUSHION LEVER BEARING**

Insert the spacer into the bearing and check the play when moving the spacer up and down.

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



- Draw out the cushion lever bearings with the special tool.

TOOL 09921-20240: Bearing remover set

CAUTION

The removed bearings must be replaced with new ones.

**SWINGARM**

Inspect the swingarm for damage. If any damages are found, replace the swingarm with a new one.

**CUSHION LEVER RODS**

Inspect the cushion lever rods for damage and distortion.



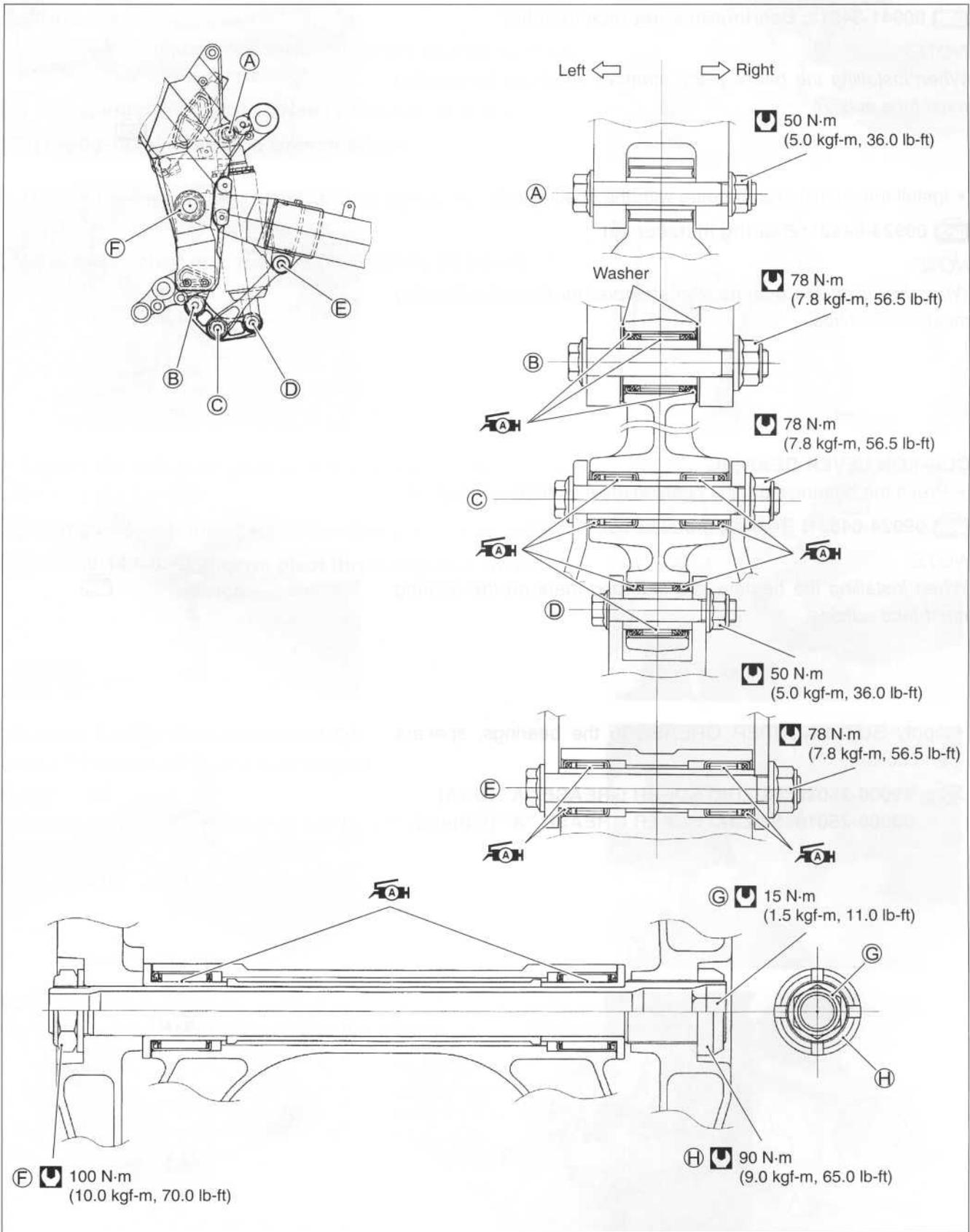
PLATE

Inspect the plate for damage and excessive bend.



REASSEMBLY

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



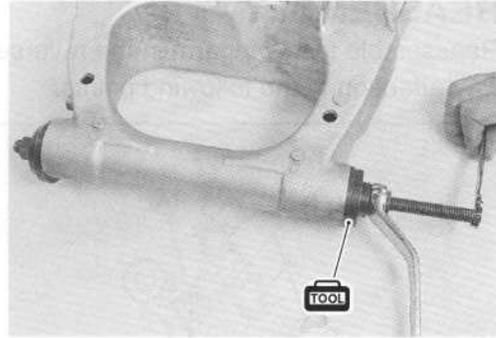
SWINGARM BEARING

- Install the bearings and spacer into the swingarm pivot all together by using the special tool.

TOOL 09941-34513: Bearing/Steering race installer

NOTE:

When installing the bearing, the stamped mark on the bearing must face outside.

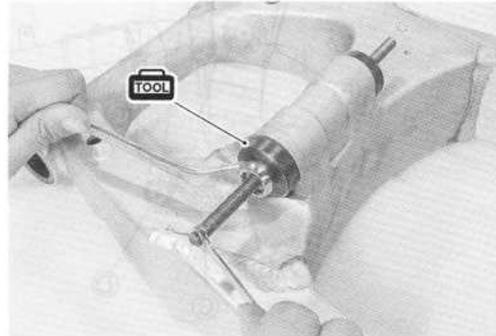


- Install the cushion rod bearing with the special tool.

TOOL 09924-84521: Bearing installer set

NOTE:

When installing the bearing, the stamped mark on the bearing must face outside.



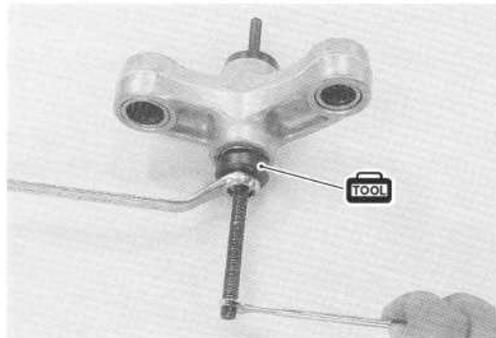
CUSHION LEVER BEARING

- Press the bearings into the cushion lever with the special tool.

TOOL 09924-84521: Bearing installer set

NOTE:

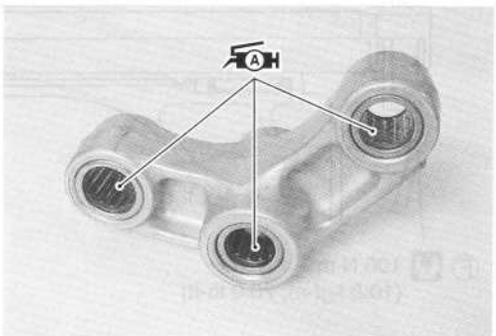
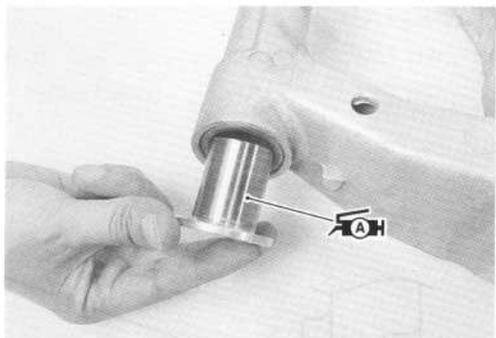
When installing the bearing, the stamped mark on the bearing must face outside.



- Apply SUZUKI SUPER GREASE to the bearings, spacers and collars.

AH 99000-25030: SUZUKI SUPER GREASE "A" (USA)

99000-25010: SUZUKI SUPER GREASE "A" (Others)



REMOUNTING

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

SWINGARM

- Insert the swingarm pivot shaft and tighten it to the specified torque by using the special tool.

 **Swingarm pivot shaft: 15 N·m (1.5 kgf-m, 11.0 lb-ft)**

 **09900-18740: Hexagon wrench 24 mm**

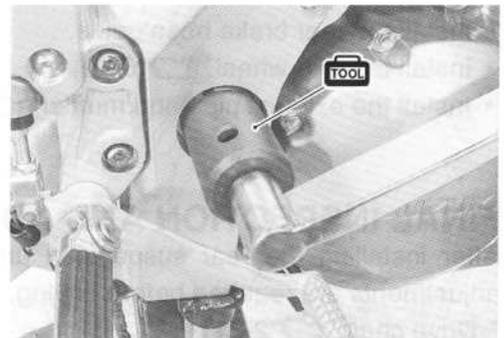
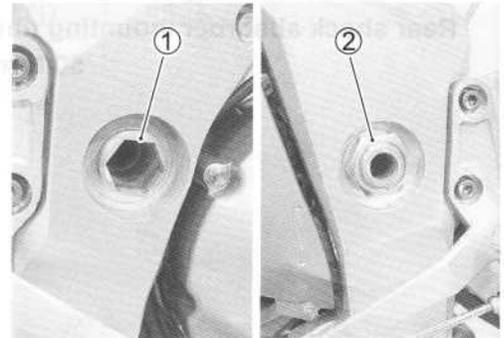
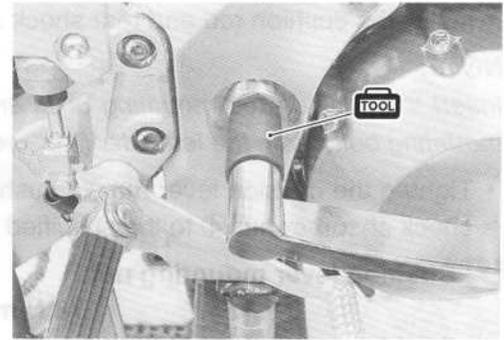
- Hold the swingarm pivot shaft ① and tighten the swingarm pivot nut ② to the specified torque.

 **Swingarm pivot nut: 100 N·m (10.0 kgf-m, 70.0 lb-ft)**

- Tighten the swingarm pivot lock nut to the specified torque with the special tool.

 **Swingarm pivot lock nut: 90 N·m (9.0 kgf-m, 65.0 lb-ft)**

 **09940-14940: Swingarm pivot thrust adjuster socket wrench**



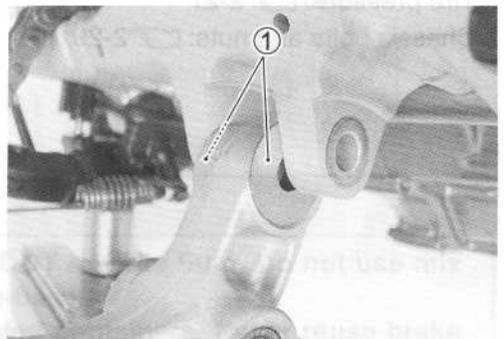
CUSHION LEVER AND CUSHION ROD

- Install the washers ① and cushion lever.

NOTE:

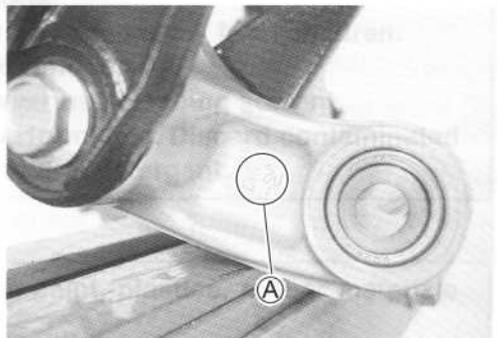
Insert the cushion lever mounting bolt from the left side.

 6-61)



NOTE:

The stamped mark (A) should come to the left side.



- Install the cushion rod and rear shock absorber.

NOTE:

Insert the cushion rod mounting bolts and rear shock absorber mounting bolts from the left side. (☞ 6-61)

- Tighten the cushion lever nut ②, cushion rod nut ③ and rear shock absorber nut ④ to the specified torque.

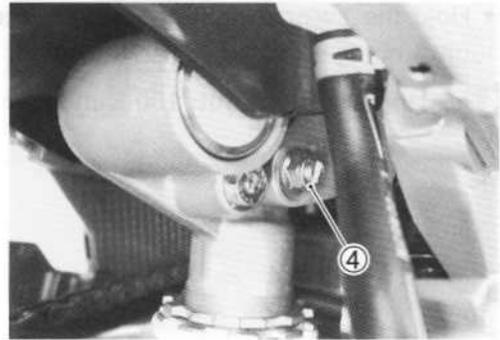
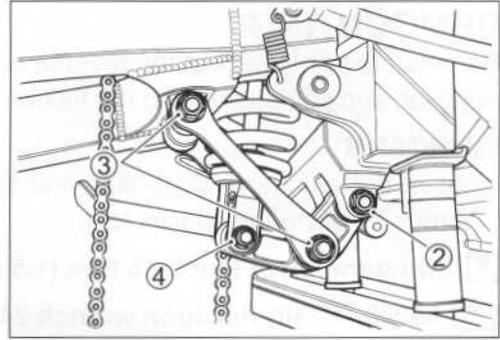
☑ Cushion lever mounting nut:

78 N·m (7.8 kgf-m, 56.5 lb-ft)

Cushion rod nut: 78 N·m (7.8 kgf-m, 56.5 lb-ft)

Rear shock absorber mounting nut:

50 N·m (5.0 kgf-m, 36.0 lb-ft)



- Install the rear brake hose guide.
- Install the rear wheel. (☞ 6-49)
- Install the exhaust pipe and muffler. (☞ 3-13)

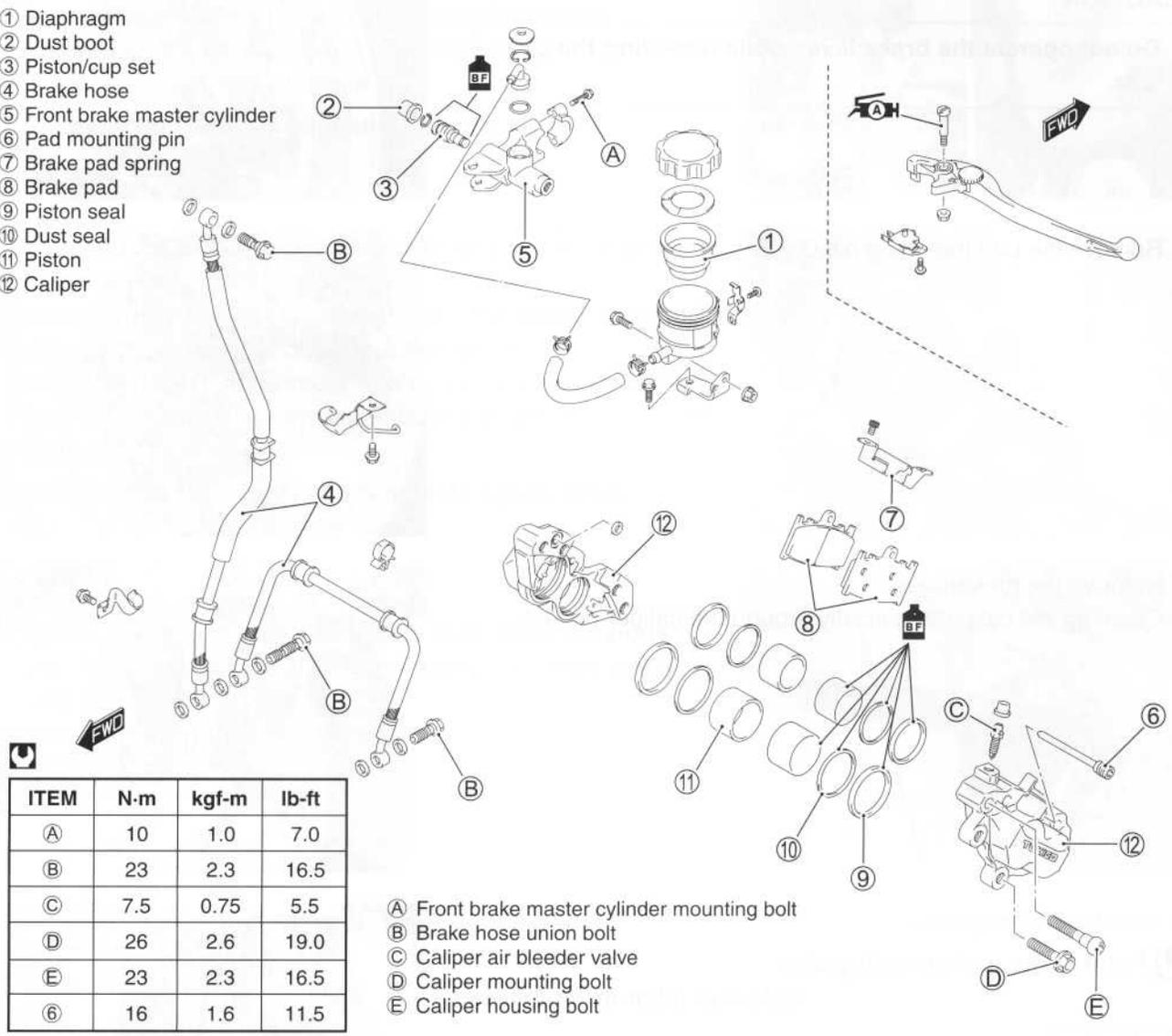
FINAL INSPECTION AND ADJUSTMENT

After installing the rear suspension and wheel, the following adjustments are required before driving.

- * Drive chain: ☞ 2-21
- * Tire pressure: ☞ 2-27
- * Chassis bolts and nuts: ☞ 2-29

FRONT BRAKE CONSTRUCTION

- ① Diaphragm
- ② Dust boot
- ③ Piston/cup set
- ④ Brake hose
- ⑤ Front brake master cylinder
- ⑥ Pad mounting pin
- ⑦ Brake pad spring
- ⑧ Brake pad
- ⑨ Piston seal
- ⑩ Dust seal
- ⑪ Piston
- ⑫ Caliper



ITEM	N-m	kgf-m	lb-ft
A	10	1.0	7.0
B	23	2.3	16.5
C	7.5	0.75	5.5
D	26	2.6	19.0
E	23	2.3	16.5
⑥	16	1.6	11.5

- A Front brake master cylinder mounting bolt
- B Brake hose union bolt
- C Caliper air bleeder valve
- D Caliper mounting bolt
- E Caliper housing bolt

▲ WARNING

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

CAUTION

Handle brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials etc. and will damage them severely.

BRAKE PAD REPLACEMENT

- Remove the caliper.

CAUTION

Do not operate the brake lever while removing the caliper.

- Remove the pad mounting pin ①.

- Remove the brake pads.
- Clean up the caliper especially around the caliper pistons.

- Install the brake pads.

 **Front brake pad mounting pin:**
16 N·m (1.6 kgf·m, 11.5 lb·ft)

CAUTION

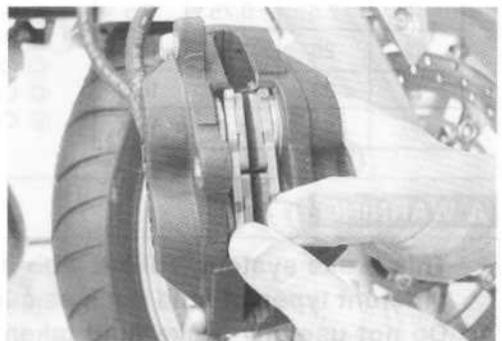
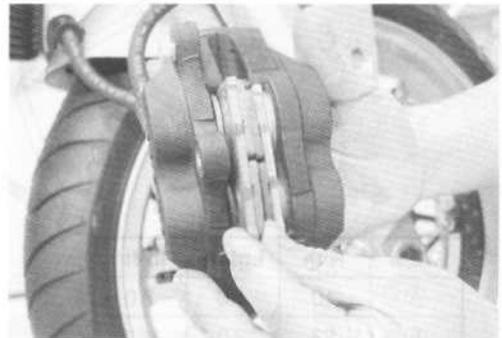
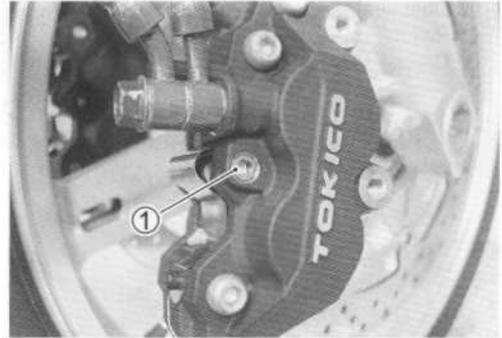
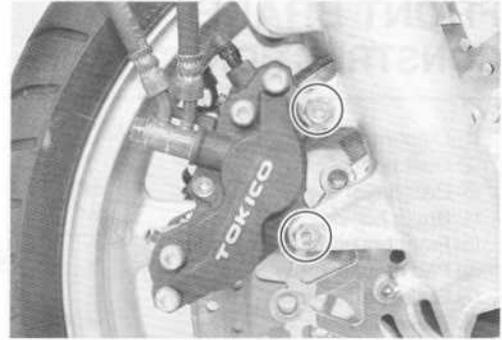
Replace the brake pads as a set, otherwise braking performance will be adversely affected.

- Remount the caliper.
- Tighten the caliper mounting bolts to the specified torque.

 **Front brake caliper mounting bolt:**
26 N·m (2.6 kgf·m, 19.0 lb·ft)

NOTE:

After replacing the brake pads, pump the brake lever several 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 brake fluid reservoir cap and diaphragm.
- Suck up the old brake fluid as much as possible.
- Fill the reservoir with new brake fluid.

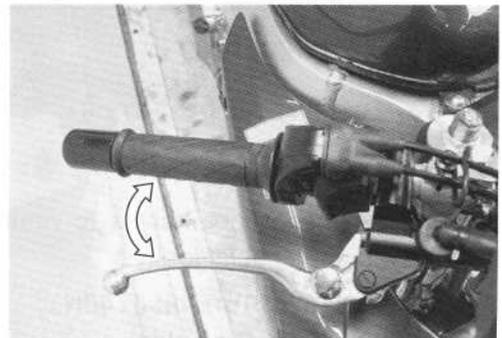
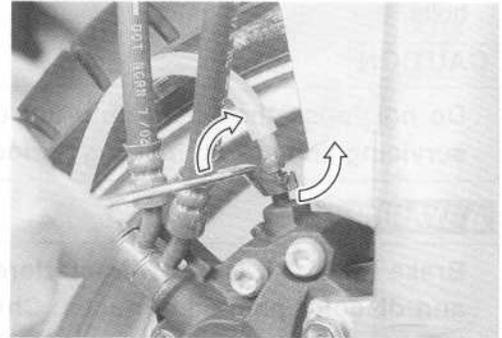
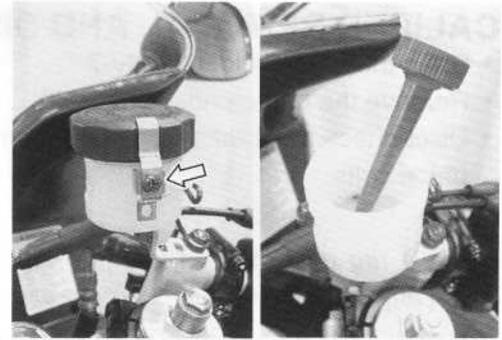
BF Specification and Classification: DOT 4

- Connect a clear hose to the caliper air bleeder valve and insert the other end of hose into a receptacle.
- Loosen the air bleeder valve and pump the brake lever until old brake fluid flows out of the bleeder system.
- Close the caliper air bleeder valve and disconnect a clear hose. Fill the reservoir with new fluid to the upper mark of the reservoir.

U Brake air bleeder valve: 7.5 N·m (0.75 kgf-m, 5.5 lb-ft)

CAUTION

- * Never reuse the brake fluid left over from previous servicing and which has been stored for long periods of time.
- * Bleed air from the brake system.
( 2-26)



CALIPER REMOVAL AND DISASSEMBLY

- Drain the brake fluid. (☞ 6-67)
- Remove the brake pads. (☞ 6-66)
- Disconnect the brake hoses by removing the brake hose union bolts.

NOTE:

Place a rag underneath the union bolt on the brake caliper to catch any spilt brake fluid.

- Remove the brake calipers by removing the caliper mounting bolts.

CAUTION

Do not reuse the brake fluid left over from previous servicing and 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.

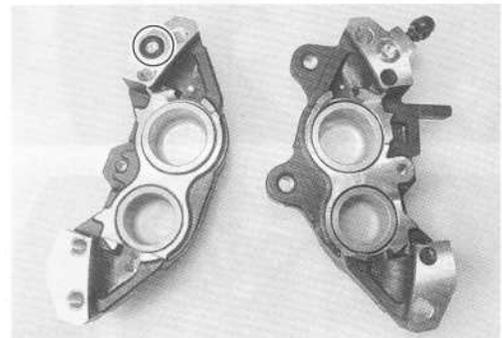
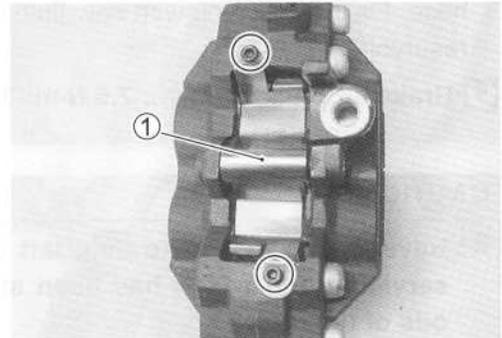
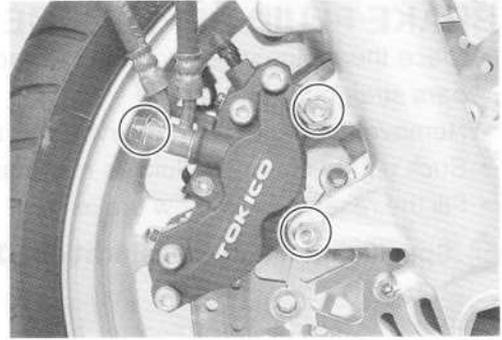
- Remove the pad spring ①.
- Separate the caliper halves to remove the caliper housing bolts with the special tools.

TOOL 09930-11920: Torx bit JT40H
09930-11940: Bit holder

- Remove the O-ring.

CAUTION

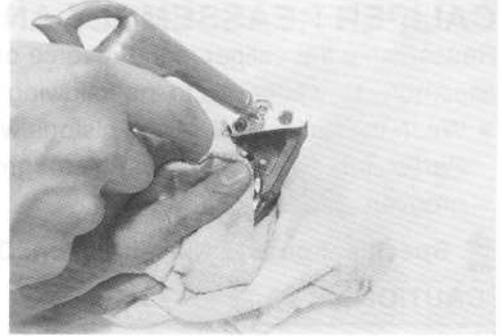
Replace the O-ring with a new one.



- Place a rag over the pistons to prevent them from popping out and then force out the pistons using compressed air.

CAUTION

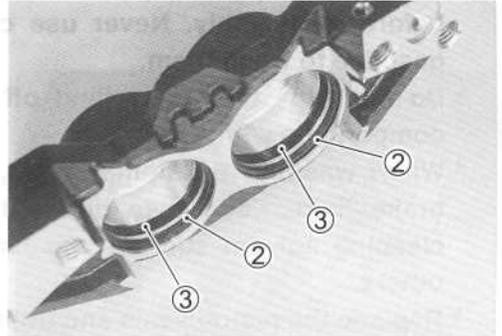
Do not use high pressure air to prevent piston damage.



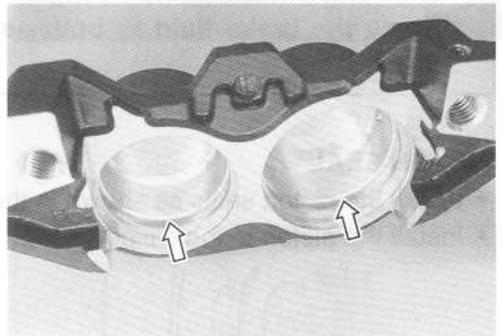
- Remove the dust seals (2) and piston seals (3).

CAUTION

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

**CALIPER INSPECTION****BRAKE CALIPER**

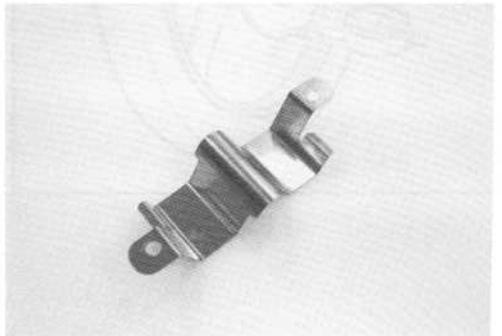
Inspect the brake caliper cylinder wall for nicks, scratches and other damage. If any damage is found, replace the caliper with a new one.

**BRAKE CALIPER PISTON**

Inspect the brake caliper piston surface for any scratches and other damage. If any damage is found, replace the caliper piston with a new one.

**BRAKE PAD SPRING**

Inspect the brake pad spring for damage excessive bend. If any damage is found, replace it with a new one.



CALIPER REASSEMBLY AND REMOUNTING

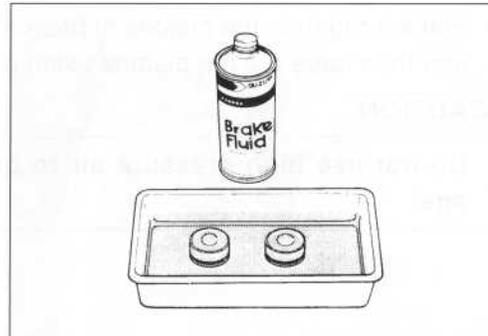
Reassemble the caliper in the reverse order of removal and disassembly. Pay attention to the following points:

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

BF Specification and Classification: DOT 4

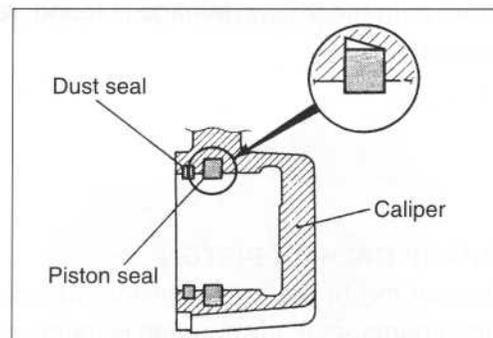
CAUTION

- * Wash the caliper components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Do not wipe the brake fluid off after washing the components with a rag.
- * When washing the components, use the specified brake fluid. Never use different types of fluid or cleaning solvent such as gasoline, kerosine or the others.
- * Replace the piston seals and dust seals with the new ones when reassembly.
- * Apply the brake fluid to both seals when installing them.



PISTON SEAL

- Install the piston seals as shown in the illustration.
- Install the piston to the caliper.



O-RING

- Install the new O-ring and reassemble caliper halves.

CAUTION

Replace the O-ring with a new one.



- Tighten each bolt to the specified torque. (Front brake hose routing:  8-23)

 **Front brake caliper housing bolt ①:**

23 N·m (2.3 kgf-m, 16.5 lb-ft)

 **09930-11920: Torx bit JT40H**

09930-11940: Bit holder

- Install the brake pads. ( 6-66)

NOTE:

Before remounting the caliper, push the piston all the way into the caliper.

- Remount the brake caliper to the front fork.
- Tighten each bolt to the specified torque.

 **Front brake caliper mounting bolt ②:**

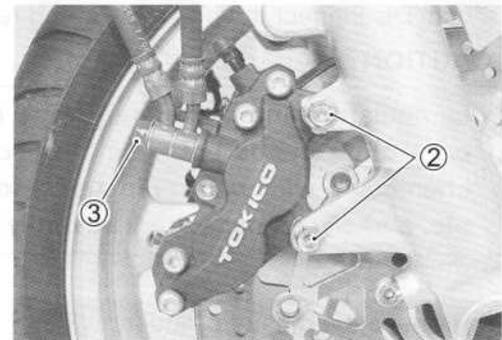
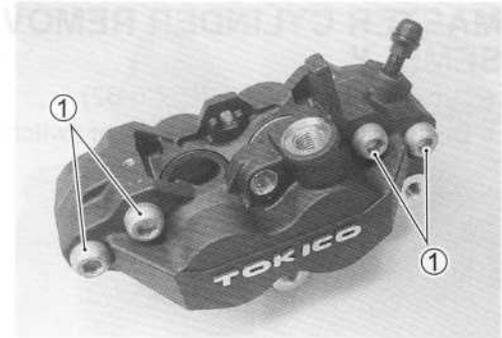
26 N·m (2.6 kgf-m, 19.0 lb-ft)

Front brake hose union bolt ③:

23 N·m (2.3 kgf-m, 16.5 lb-ft)

CAUTION

- * The seal washers should be replaced with the new ones to prevent fluid leakage.
- * Bleed air from the system after reassembling the caliper. ( 2-26)



BRAKE DISC INSPECTION

Visually check the brake disc for damage or cracks.

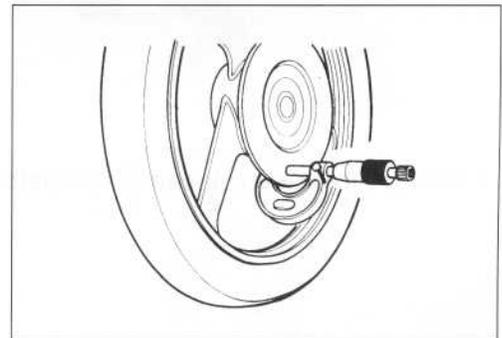
Measure the thickness with a micrometer.

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

 **Front disc thickness:**

Service Limit: 4.5 mm (0.18 in)

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



Measure the runout with a dial gauge.

Replace the disc if the runout exceeds the service limit.

 **Front disc runout:**

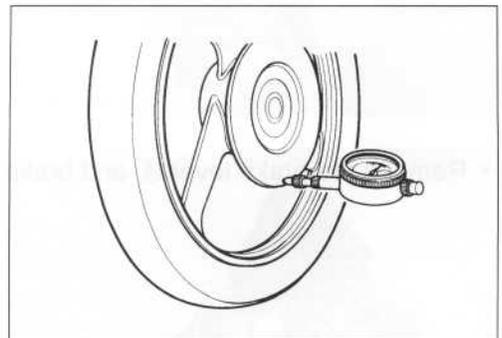
Service Limit: 0.30 mm (0.012 in)

 **09900-20607: Dial gauge (1/100 mm)**

09900-20701: Magnetic stand

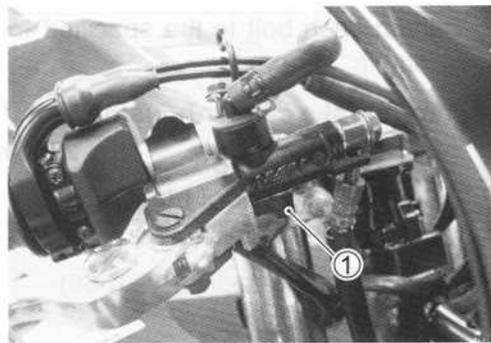
* Brake disc removal ( 6-13)

* Brake disc installation ( 6-17)



MASTER CYLINDER REMOVAL AND DISASSEMBLY

- Drain the brake fluid. (☞ 6-67)
- Disconnect the front brake light switch coupler ①.



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

CAUTION

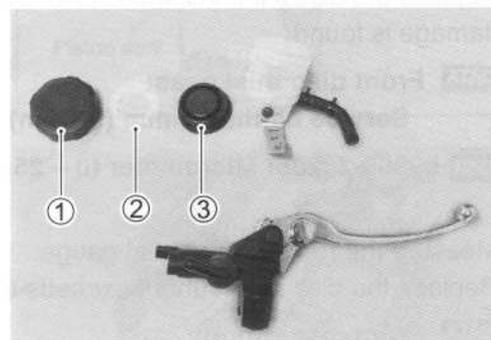
Immediately and completely wipe off any brake fluid contacting any part of the motorcycle. The fluid reacts chemically with paint, plastics and rubber materials, etc. and will damage them severely.



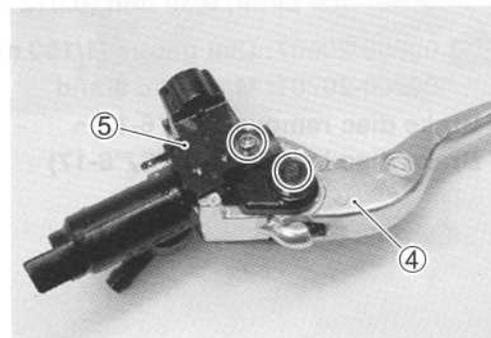
- Remove the master cylinder.



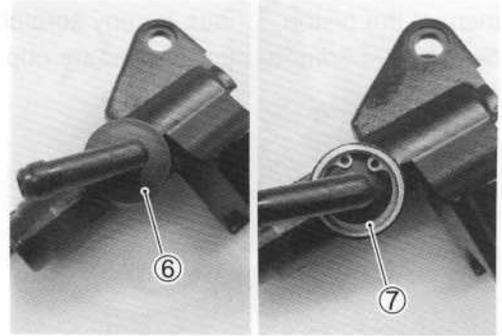
- Remove the reservoir cap ①, insulator ② and diaphragm ③.



- Remove the brake lever ④ and brake switch ⑤.

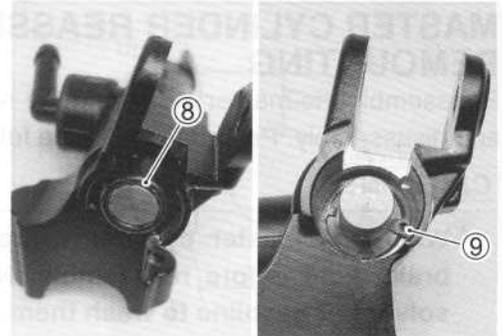


- Remove the dust rubber ⑥ and snap ring ⑦.



- Remove the dust boot ⑧ and snap ring ⑨.

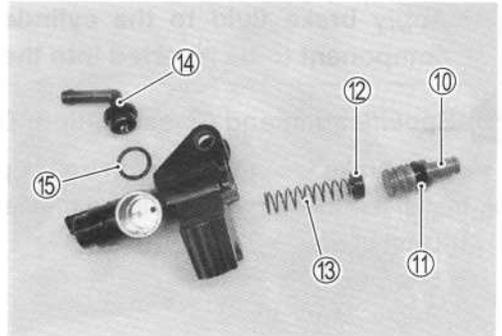
TOOL 09900-06108: Snap ring pliers



- Remove the piston and return spring.

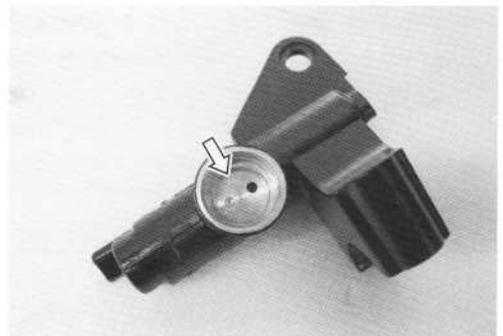
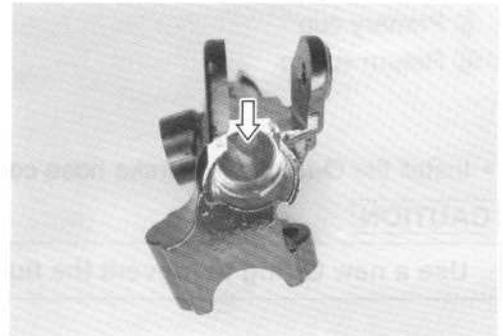
- ⑩ Piston
- ⑪ Secondary cup
- ⑫ Primary cup
- ⑬ Return spring

- Remove the connector ⑭ and O-ring ⑮.



MASTER CYLINDER INSPECTION

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



Inspect the piston surface for any scratches or other damage. Inspect the primary cup, secondary cup and dust seal for wear or damage.

MASTER CYLINDER REASSEMBLY AND REMOUNTING

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

CAUTION

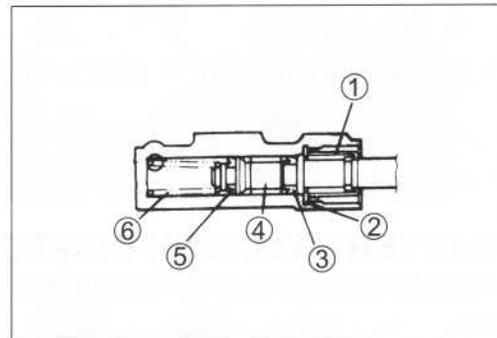
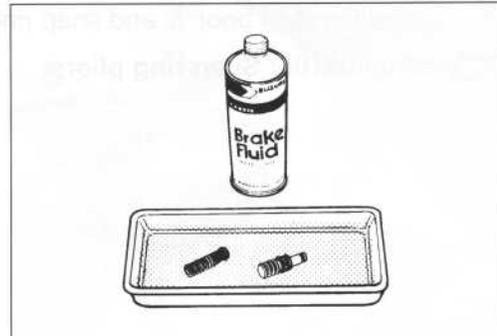
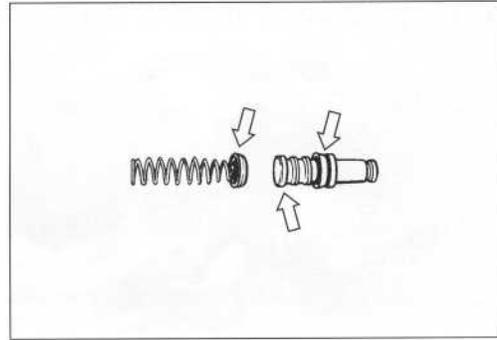
- * Wash the master cylinder components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Do not wipe the components with a rag.
- * Apply brake fluid to the cylinder bore and all the component to be inserted into the bore.

Specification and Classification: DOT 4

- Apply brake fluid to the piston and cups.
- Install the following parts to the master cylinder.
 - ① Dust boot
 - ② Snap ring
 - ③ Secondary cup
 - ④ Piston
 - ⑤ Primary cup
 - ⑥ Return spring
- Install the O-ring to the brake hose connector.

CAUTION

Use a new O-ring to prevent the fluid leakage.



- Apply SUZUKI SUPER GREASE to the bolt.

AH 99000-25030: SUZUKI SUPER GREASE "A" (USA)
99500-25010: SUZUKI SUPER GREASE "A" (Others)

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

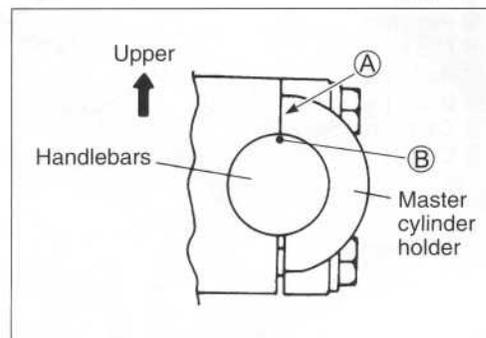
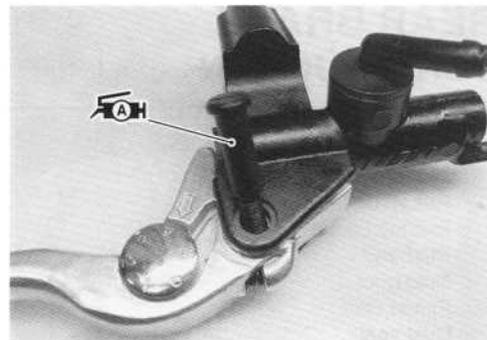
U Front brake master cylinder mounting bolt:
10 N·m (1.0 kgf-m, 7.0 lb-ft)

- Tighten the union bolt. (Brake hose routing:  8-23)
- Connect the reservoir tank hose and front brake light switch coupler.

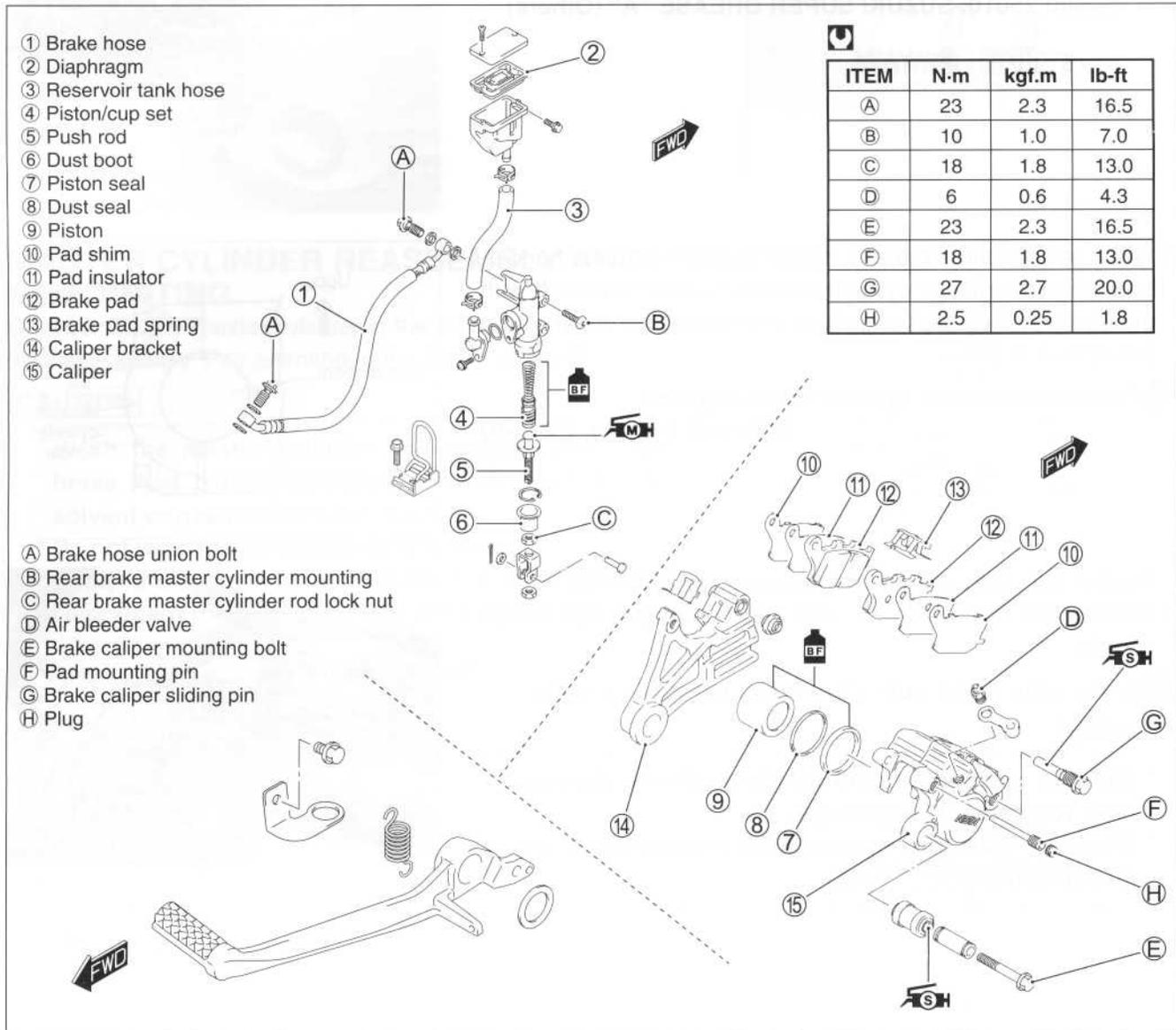
U Brake hose union bolt: 23 N·m (2.3 kgf-m, 16.5 lb-ft)

CAUTION

- * The seal washers should be replaced with the new ones to prevent fluid leakage.
- * Bleed air from the system after reassembling the master cylinder. ( 2-26)



REAR BRAKE CONSTRUCTION



⚠ WARNING

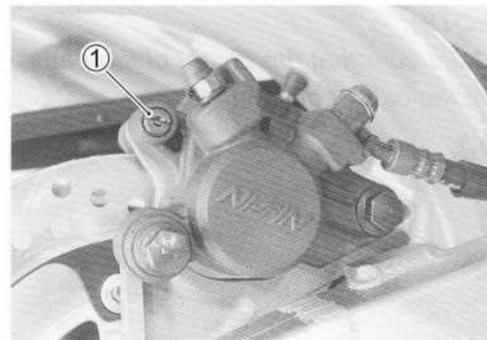
- * This brake system is filled with an ethylene glycol-based DOT 4 brake fluid. Do not use or mix different types of fluid such as silicone-based or petroleum-based.
- * Do not use any brake fluid taken from old, used or unsealed containers. Never reuse brake fluid left over from the last servicing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

CAUTION

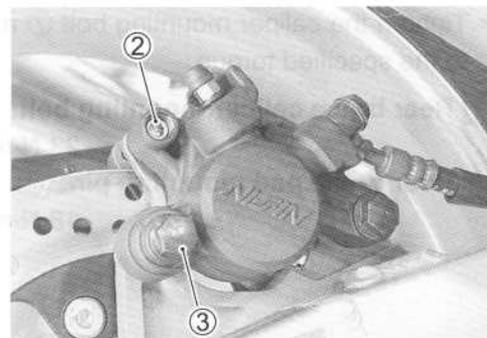
Handle brake fluid with care: the fluid reacts chemically with paint, plastics, rubber materials etc. and will damage them severely.

BRAKE PAD REPLACEMENT

- Remove the plug ①.



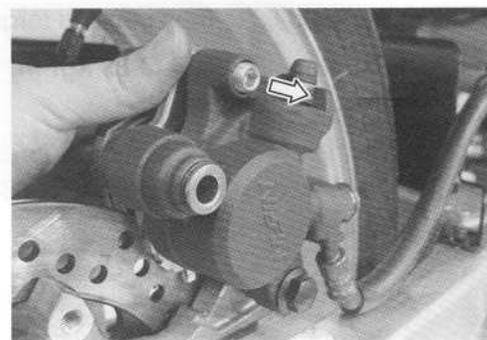
- Loosen the pad mounting pin ②.
- Remove the caliper bracket bolt ③.



CAUTION

- * Do not operate the brake pedal while dismantling the pads.
- * Replace the brake pads as a set, otherwise braking performance will be adversely affected.

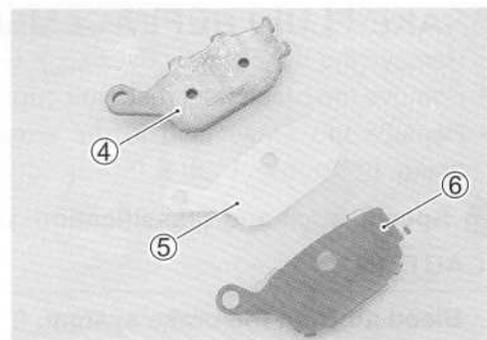
- Remove the pad mounting pin and brake pads with the rear caliper pivoted up.
- Clean up the caliper especially around the caliper piston.



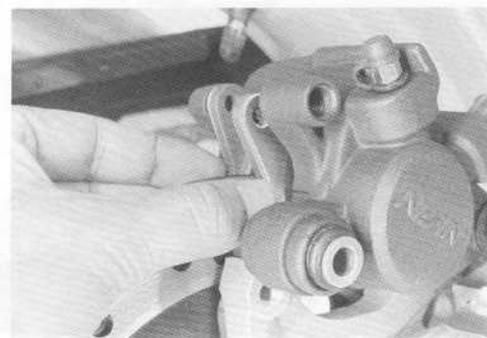
- Assemble the new brake pad ④, insulator ⑤ and shim ⑥.

CAUTION

- Replace the brake pads as a set, otherwise braking performance will be adversely affected.



- Install the new brake pads.



NOTE:

Make sure that the detent of the pad is seated onto the retainer on the caliper bracket.

- Tighten the caliper mounting bolt ⑦ and pad mounting pin ⑧ to the specified torque.

🔧 Rear brake caliper mounting bolt:

23 N·m (2.3 kgf-m, 16.5 lb-ft)

Rear brake pad mounting pin:

18 N·m (1.8 kgf-m, 13.0 lb-ft)

- Install the plug ⑨ to the specified torque.

🔧 Pad pin plug: 2.5 N·m (0.25 kgf-m, 1.8 lb-ft)

NOTE:

After replacing the brake pads, pump the brake pedal several times in order to operate the brake correctly and then check the brake fluid level.

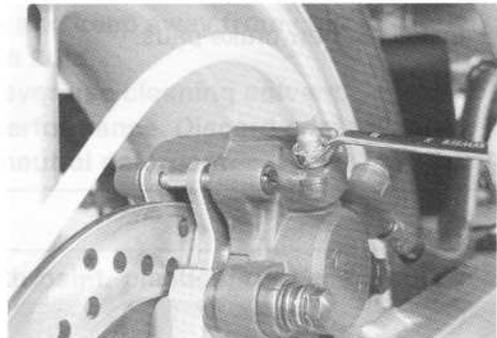
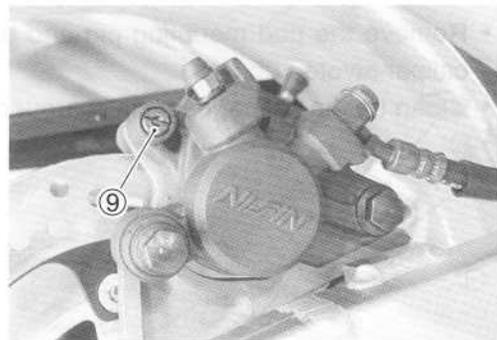
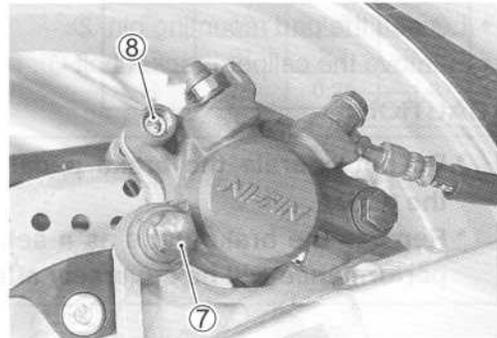
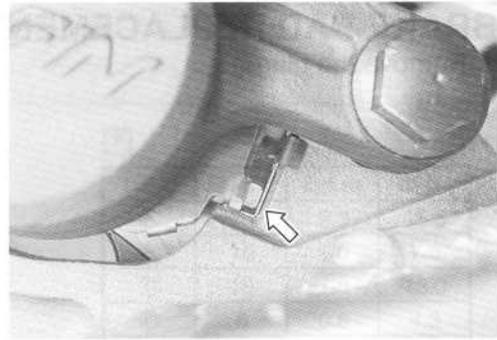
BRAKE FLUID REPLACEMENT

- Remove the right frame cover. (👉 6-7)
- Remove the brake fluid reservoir cap.
- Replace the brake fluid in the same manner as the front brake. (👉 6-67)

🔧 Specification and Classification: DOT 4

CAUTION

Bleed air from the brake system. (👉 2-26)



CALIPER REMOVAL AND DISASSEMBLY

- Drain the brake fluid. (☞ 6-67)
- Remove the brake pads. (☞ 6-77)
- Place a rag underneath the union bolt to catch any spilt brake fluid.
- Disconnect the brake hose by removing the brake hose union bolt.

CAUTION

Do not reuse the brake fluid left over from previous servicing and stored for long periods.

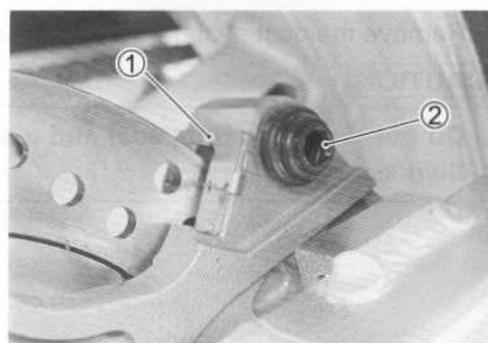
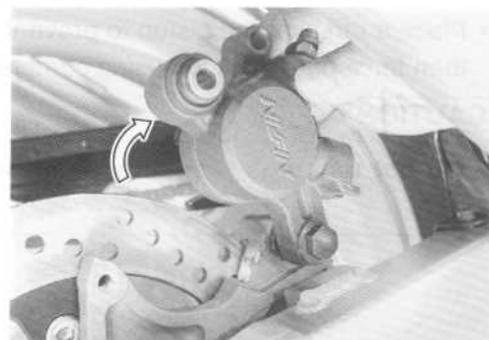
⚠ WARNING

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.

- Pivot the caliper up and remove the caliper from the caliper bracket.



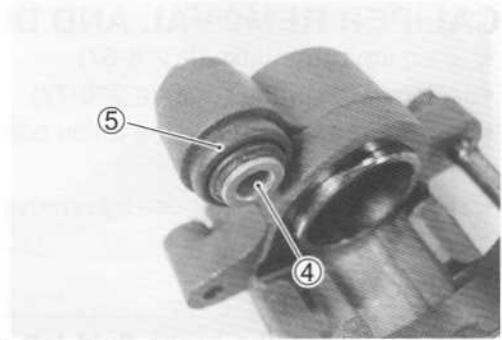
- Remove the pad spring ① and rubber boot ②.



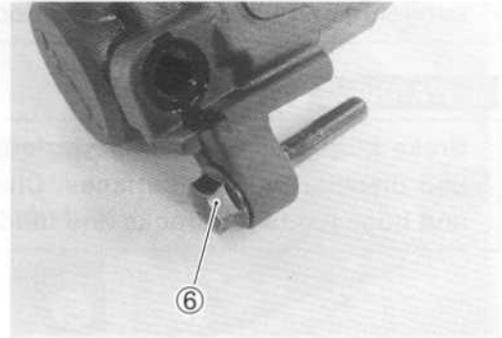
- Remove the pad spring ③.



- Remove the spacer ④ and rubber boot ⑤ from the caliper.



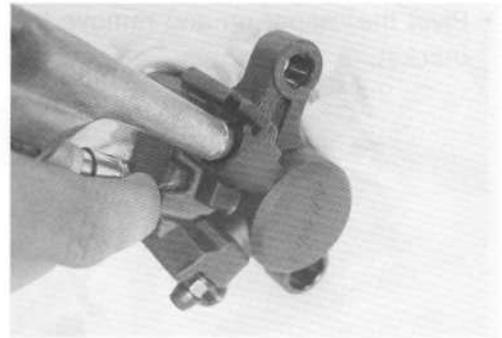
- Remove the slide pin ⑥.



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

CAUTION

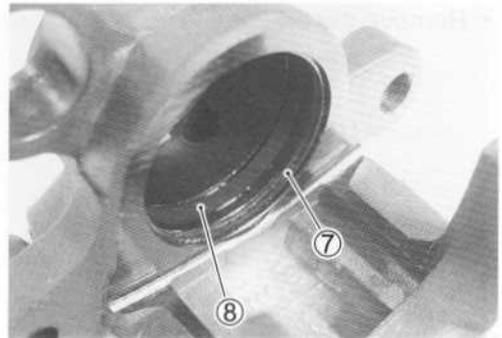
Do not use high pressure air to prevent piston damage.



- Remove the dust seal ⑦ and piston seal ⑧.

CAUTION

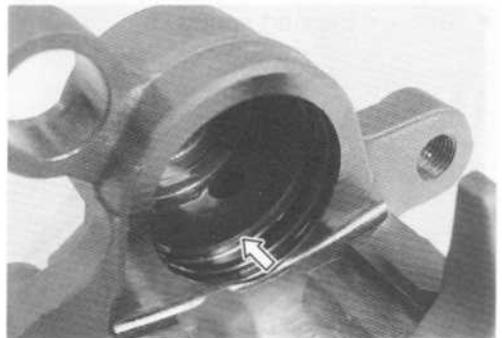
Do not reuse the dust seal and piston seal to prevent fluid leakage.



CALIPER INSPECTION

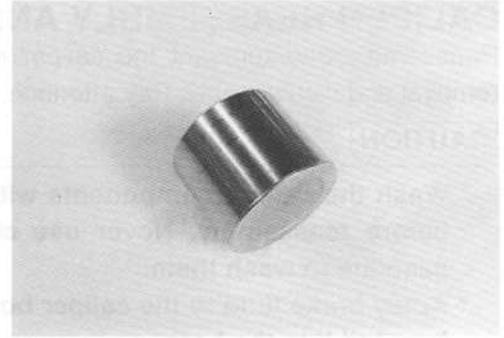
BRAKE CALIPER

Inspect the brake caliper cylinder wall for nicks, scratches and other damage. If any damage is found, replace the caliper with a new one.

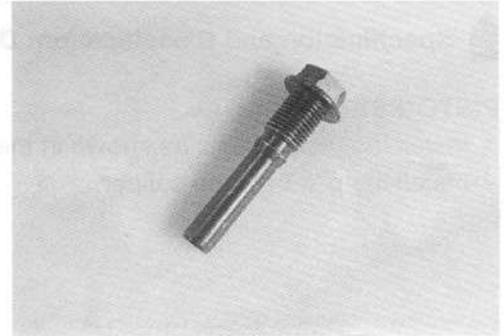


BRAKE CALIPER PISTON

Inspect the brake caliper piston surface for any scratches and other damage. If any damage is found, replace the caliper piston with a new one.

**BRAKE CALIPER SLIDING PIN**

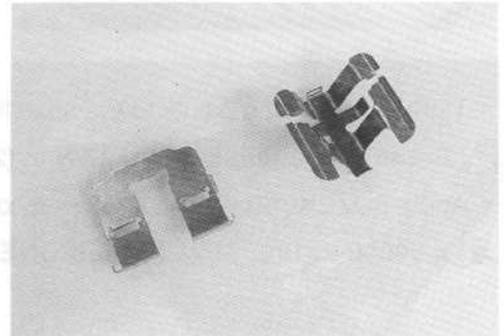
Inspect the brake caliper sliding pin for wear and other damage. If any damage is found, replace the sliding pin with a new one.



Inspect the boot and spacer for damage and wear. If any damage is found, replace boot and spacer with new ones.

**BRAKE PAD SPRING**

Inspect the brake pad spring for damage and excessive bend. If any damage is found, replace the brake pad spring with a new one.

**BRAKE DISC INSPECTION**

Inspect the rear brake disc in the same manner as the front brake disc. (☞ 6-71)

DATA Service Limit

Rear disc thickness: 4.5 mm (0.18 in)

Rear disc runout: 0.30 mm (0.012 in)

* Brake disc removal (☞ 6-44)

* Brake disc installation (☞ 6-48)

CALIPER REASSEMBLY AND REMOUNTING

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

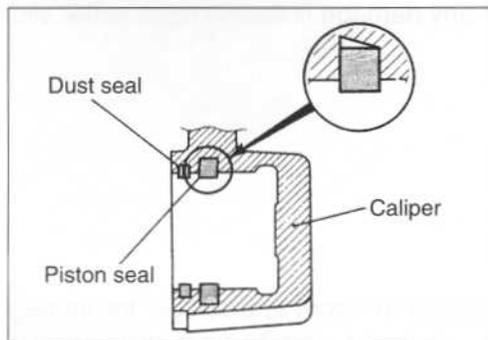
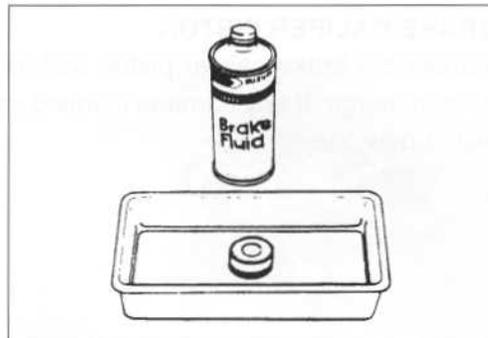
CAUTION

- * Wash the caliper components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Apply brake fluid to the caliper bore and piston to be inserted into the bore.

 Specification and Classification: DOT 4

PISTON SEAL

- Install the piston seals as shown in the right illustration.
- Install the piston to the caliper.

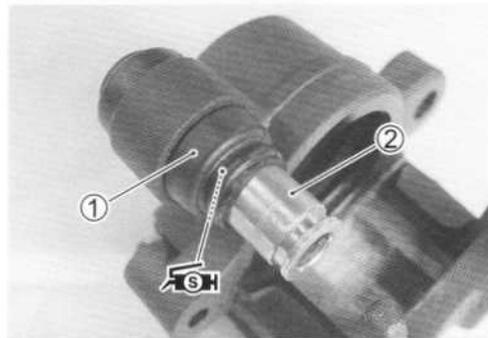


SLIDING PIN

- Install the rubber boot ①.
- Apply SUZUKI SILICONE GREASE to the inside of the boot.

 99000-25100: SUZUKI SILICONE GREASE

- Install the spacer ②.

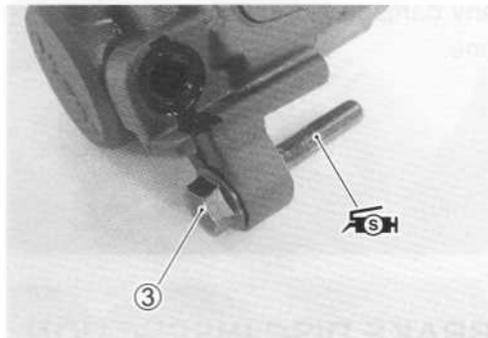


- Tighten the sliding pin ③ to the specified torque.

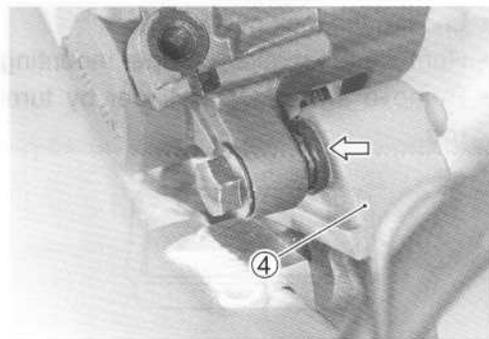
 Brake caliper sliding pin: 27 N·m (2.7 kgf·m, 20.0 lb·ft)

- Apply SUZUKI SILICONE GREASE to the sliding pin.

 99000-25100: SUZUKI SILICONE GREASE



- Install the caliper to the caliper bracket ④.
- Set the rubber boot onto the sliding pin securely.
- Install the brake pads. (☞ 6-77)

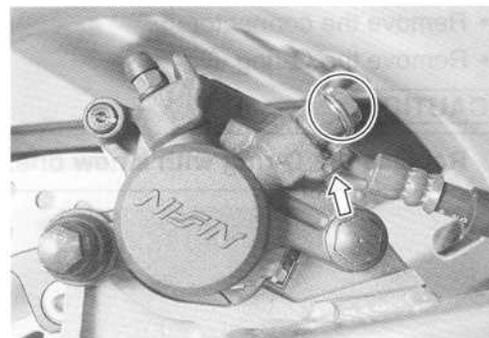


- Tighten the brake hose union bolt with the brake hose union pipe seated in the stopper.
(Rear brake hose routing: ☞ 8-24)

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

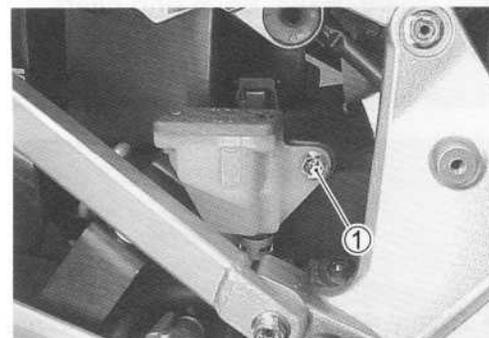
CAUTION

- * The seal washers should be replaced with the new ones to prevent fluid leakage.
- * Bleed air from the system after reassembling the caliper. (☞ 2-26)



MASTER CYLINDER REMOVAL AND DISASSEMBLY

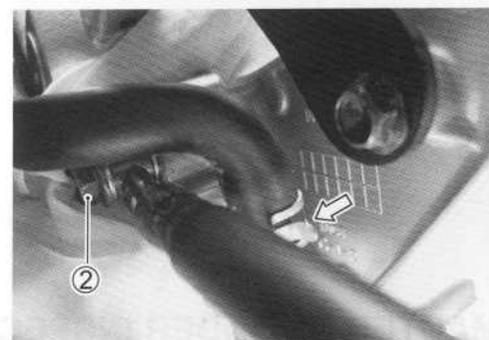
- Remove the frame cover (right). (☞ 6-7)
- Drain the brake fluid. (☞ 6-78)
- Remove the brake fluid reservoir tank mounting bolt ①.



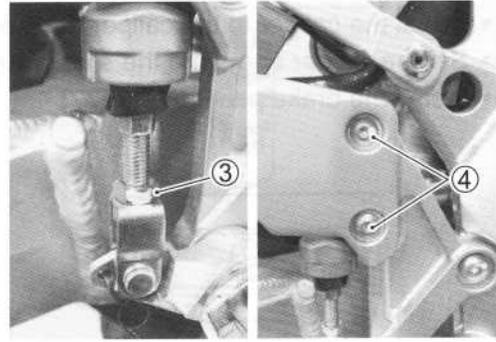
- Place a rag underneath the union bolt on the master cylinder to catch spilled drops of brake fluid. Remove the union bolt ② and disconnect the brake hose.
- Disconnect the reservoir tank hose.

CAUTION

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



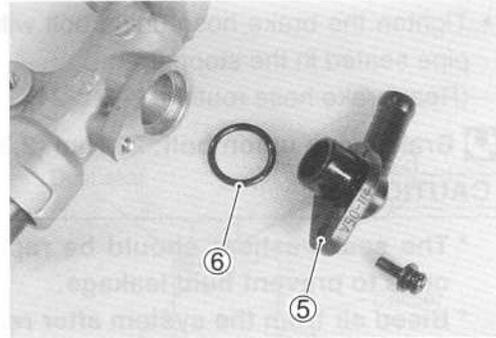
- Loosen the lock nut ③.
- Remove the master cylinder mounting bolts ④.
- Remove the master cylinder by turning the master cylinder rod.



- Remove the connector ⑤.
- Remove the O-ring ⑥.

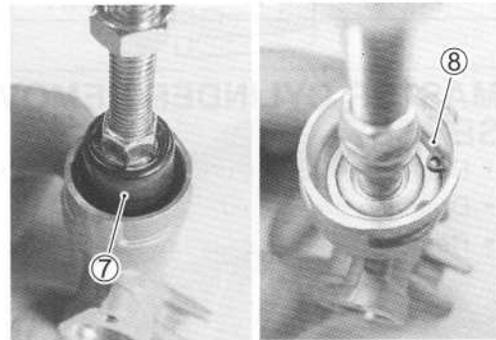
CAUTION

Replace the O-ring with a new one.

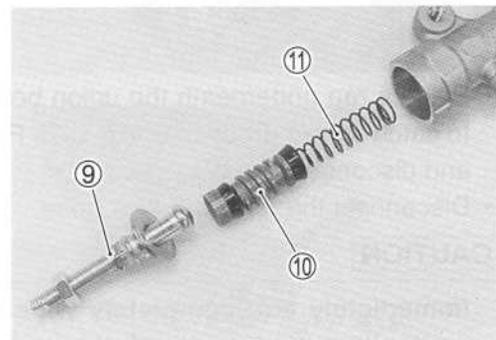


- Pull out the dust boot ⑦, then remove the snap ring ⑧.

TOOL 09900-06108: Snap ring pliers



- Remove the push rod ⑨, piston/primary cup ⑩ and spring ⑪.

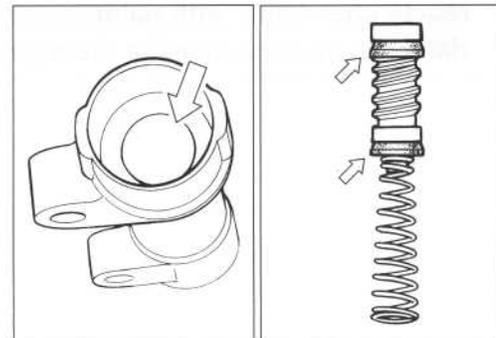


MASTER CYLINDER INSPECTION

CYLINDER, PISTON AND CUP SET

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

Inspect the cup set and each rubber part for 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 fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Do not wipe the components with a rag.
- * Apply brake fluid to the cylinder bore and all the component to be inserted into the bore.

Specification and Classification: DOT 4

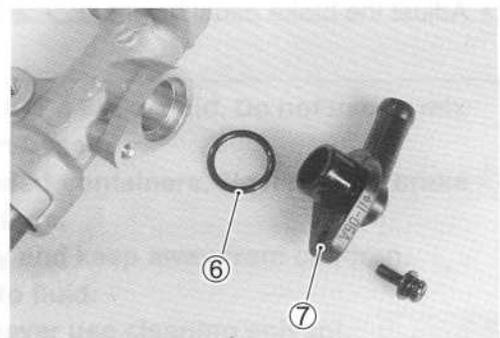
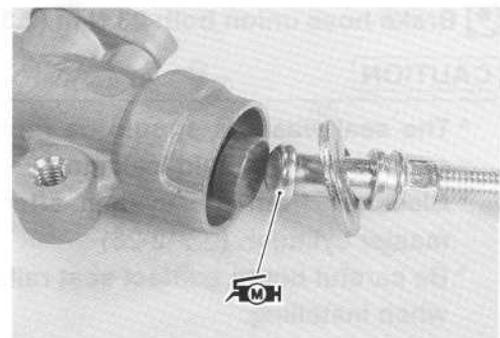
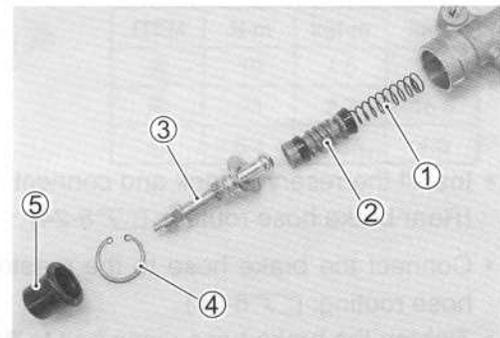
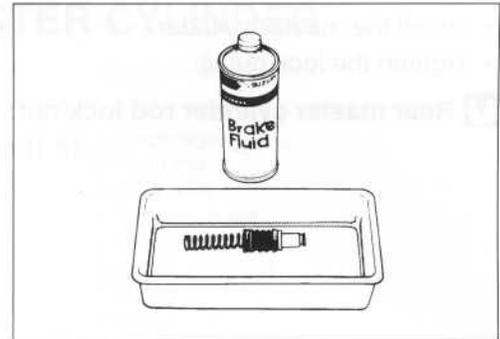
- Apply brake fluid to the piston/cup set.
- Install the following parts.
 - ① Spring
 - ② Piston/primary cup
 - ③ Push rod
 - ④ Snap ring
 - ⑤ Dust boot
- Apply the SUZUKI MOLY PASTE to the push rod.

99000-25140: SUZUKI MOLY PASTE

- Install the O-ring ⑥ and connector ⑦ to the master cylinder.

CAUTION

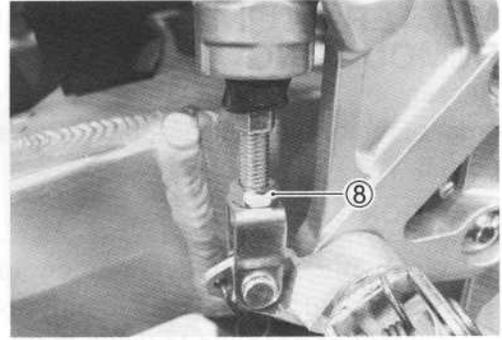
Replace the removed O-ring with a new one.



- Install the master cylinder.
- Tighten the lock nut ⑧.

🔧 Rear master cylinder rod lock nut:

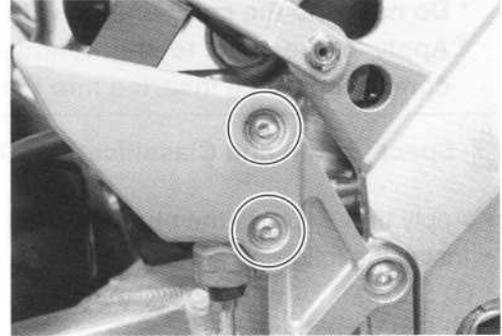
18 N·m (1.8 kgf-m, 13.0 lb-ft)



- Tighten the master cylinder mounting bolts to the specified torque.

🔧 Rear master cylinder mounting bolt:

10 N·m (1.0 kgf-m, 7.0 lb-ft)



- Install the reservoir tank and connect the reservoir tank hose. (Rear brake hose routing:  8-24)
- Connect the brake hose to the master cylinder. (Rear brake hose routing:  8-24)
- Tighten the brake hose union bolt to the specified torque.

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

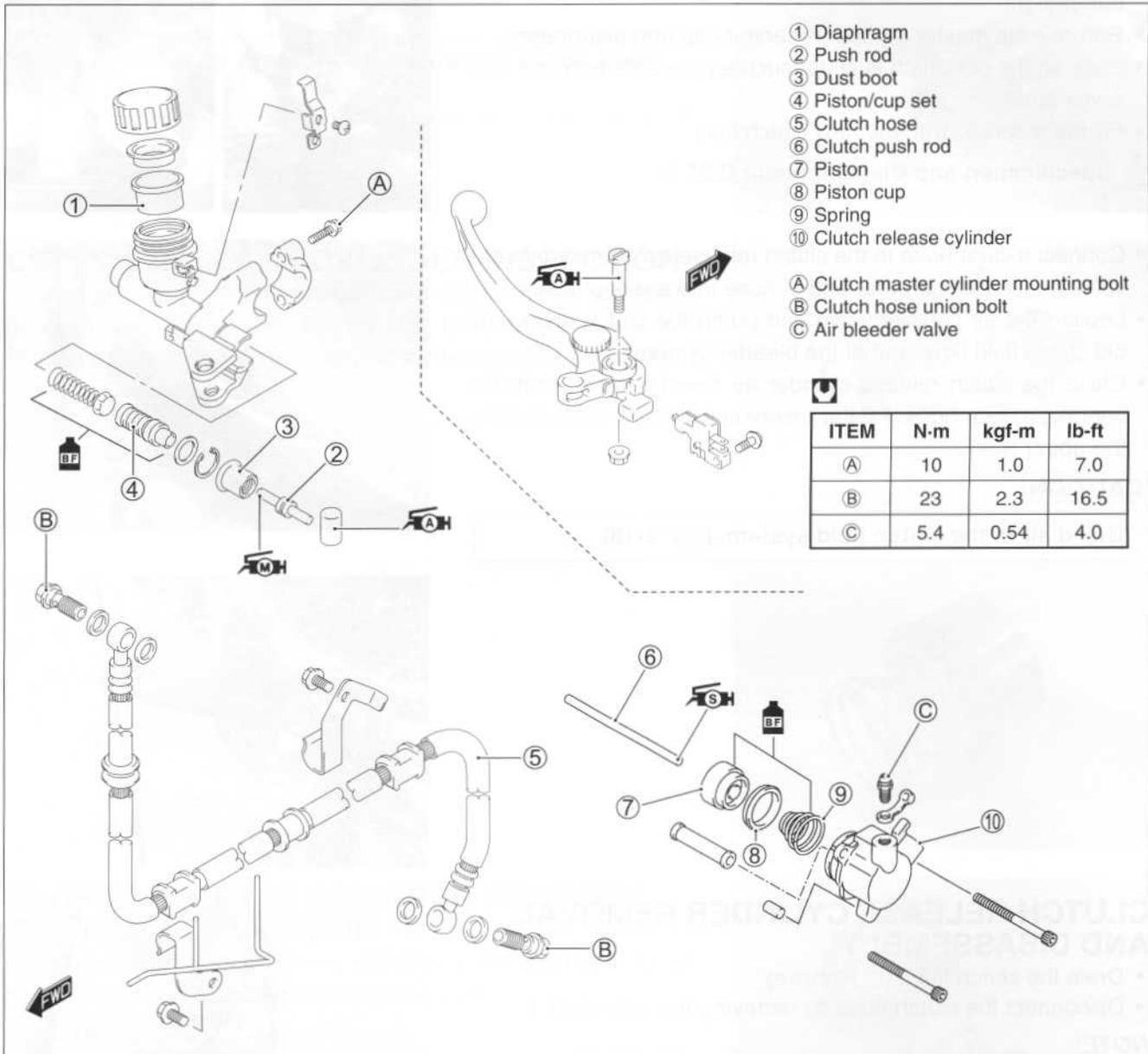
CAUTION

- * The seal washers should be replaced with the new ones to prevent fluid leakage.
- * Bleed air from the system after reassembling the master cylinder. ( 2-26)
- * Be careful not to contact seat rail and reservoir tank, when installing.



- Adjust the brake pedal height. ( 2-25)

CLUTCH RELEASE CYLINDER AND MASTER CYLINDER CONSTRUCTION



⚠ WARNING

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

CLUTCH FLUID REPLACEMENT

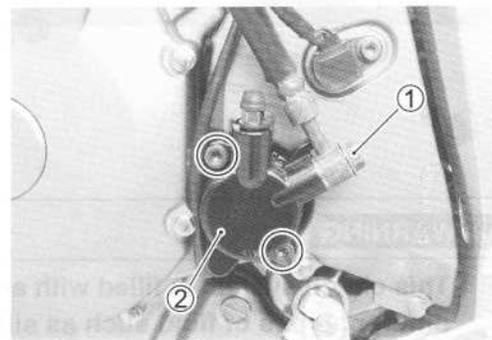
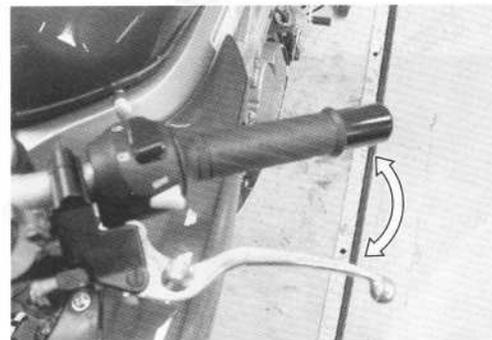
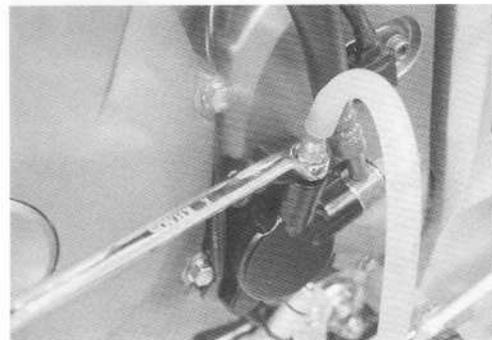
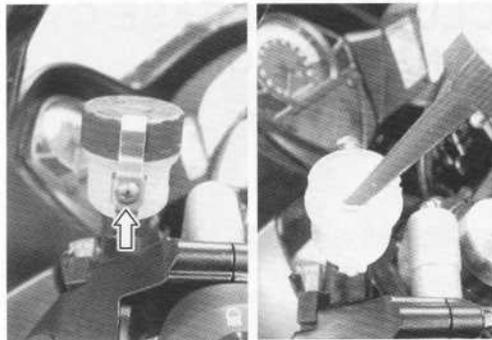
- Place the motorcycle on a level surface and keep the handlebar straight.
- Remove the master cylinder reservoir cap and diaphragm.
- Suck up the old clutch fluid as much as possible from the reservoir tank.
- Fill the reservoir with the new clutch fluid.

Specification and Classification: DOT 4

- Connect a clear hose to the clutch release cylinder air bleeder valve and insert the other end of hose into a receptacle.
- Loosen the air bleeder valve and pump the clutch lever until old clutch fluid flows out of the bleeder system.
- Close the clutch release cylinder air bleeder valve, and disconnect a clear hose. Fill the reservoir with fresh brake fluid to the upper level.

CAUTION

Bleed air in the clutch fluid system. ( 2-18)



CLUTCH RELEASE CYLINDER REMOVAL AND DISASSEMBLY

- Drain the clutch fluid. ( above)
- Disconnect the clutch hose by removing the union bolt ①.

NOTE:

Place a rag underneath the union bolt on the release cylinder to catch any spilled brake fluid.

- Remove the clutch release cylinder ②.

CAUTION

Do not reuse the brake fluid left over from previous servicing and stored for long periods of time.

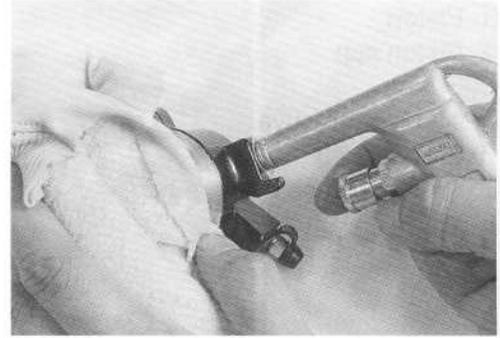
WARNING

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.

- Place a rag over the piston to prevent it from popping out.
- Force out the piston by using compressed air.

CAUTION

Do not use high pressure air to prevent piston damage.

**CLUTCH RELEASE CYLINDER INSPECTION**

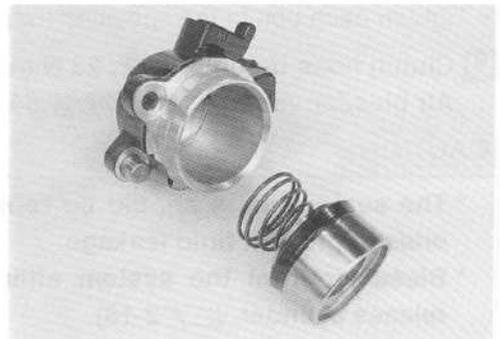
Inspect the clutch release cylinder bore wall for nicks, scratches or other damage. Inspect the oil seal for damage and wear. Inspect the piston surface for any scratches or other damage.

**CLUTCH RELEASE CYLINDER REASSEMBLY AND REMOUNTING**

Reassemble the clutch release cylinder in the reverse order of disassembly and by taking the following steps:

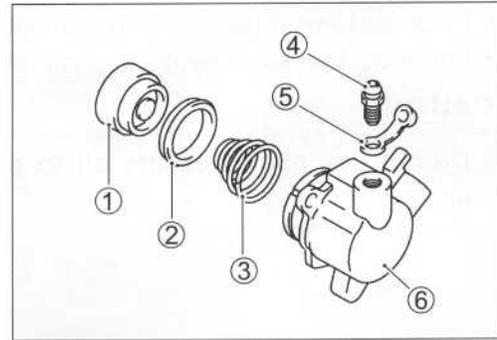
CAUTION

- * Wash the clutch cylinder components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Do not wipe the components with a rag.
- * Apply brake fluid to the cylinder bore and piston to be inserted into the bore.



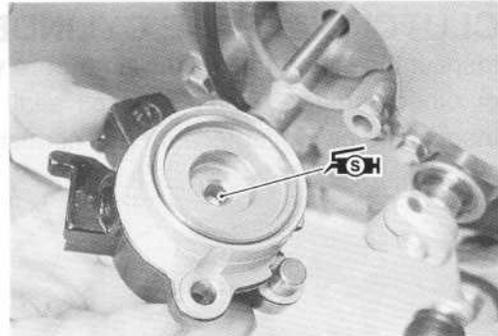
 Specification and Classification: DOT 4

- ① Piston
- ② Piston cup
- ③ Spring
- ④ Air bleeder valve
- ⑤ Bleeder cap
- ⑥ Clutch release cylinder body

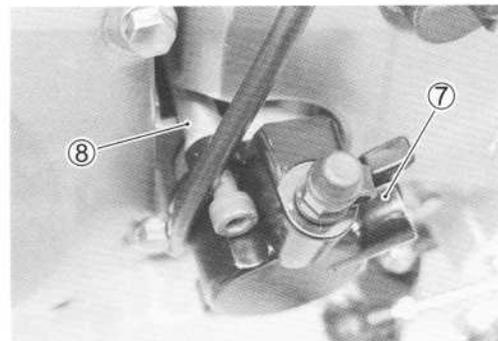


- Apply SUZUKI SILICONE GREASE to the concavity of piston.

 99000-25100: SUZUKI SILICONE GREASE



- Install the clutch release cylinder ⑦ and spacer ⑧.

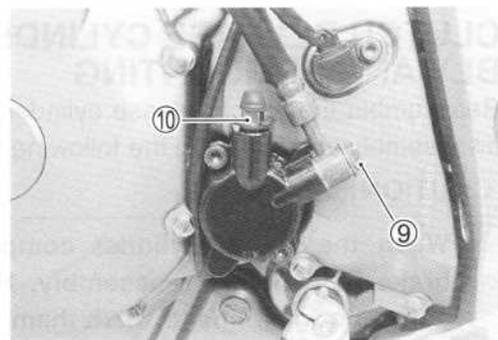


- Tighten each bolt to the specified torque.

 Clutch hose union bolt ⑨: 23 N·m (2.3 kgf-m, 16.5 lb-ft)
Air bleeder valve ⑩: 5.4 N·m (0.54 kgf-m, 4.0 lb-ft)

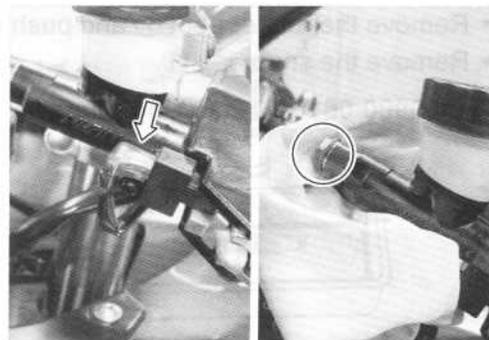
CAUTION

- * The seal washers should be replaced with the new ones to prevent fluid leakage.
- * Bleed air from the system after reassembling the release cylinder. (↗ 2-18)



CLUTCH MASTER CYLINDER REMOVAL AND DISASSEMBLY

- Drain clutch fluid. (☞ 6-88)
- Disconnect the clutch lever position switch lead wires.
- Place a rag underneath the union bolt on the master cylinder to catch spilled drops of brake fluid. Remove the union bolt and disconnect the clutch hose from the master cylinder.



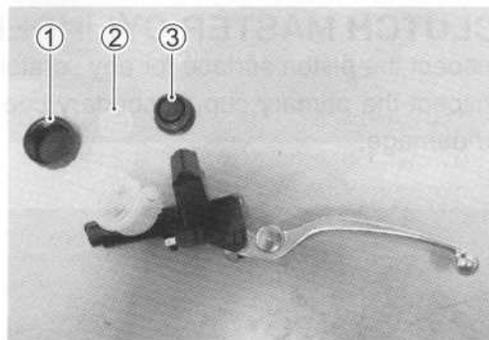
- Remove the clutch master cylinder.

CAUTION

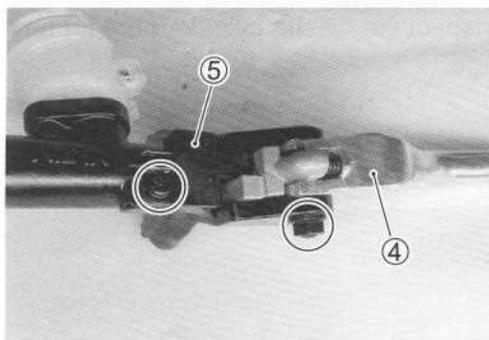
Completely wipe off any brake fluid adhering to any parts of motorcycle. The fluid reacts chemically with paint, plastics, rubber materials, etc. and will damage them severely.



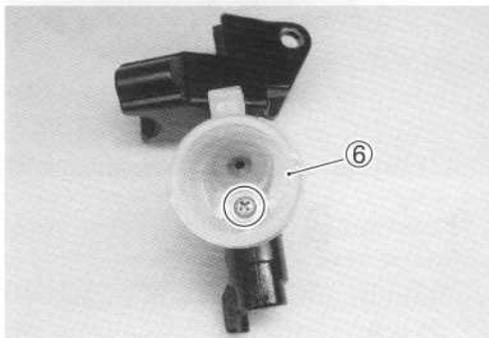
- Remove the reservoir cap ①, insulator ② and diaphragm ③.



- Remove the clutch lever ④ and clutch lever position switch ⑤.

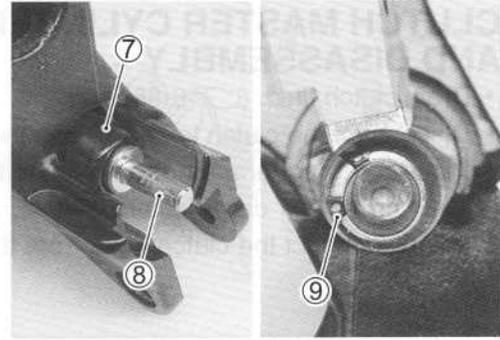


- Remove the reservoir tank ⑥.

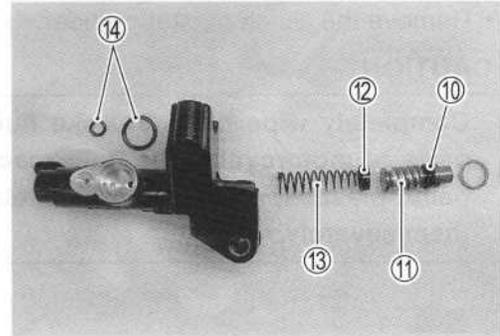


- Remove the rubber boot ⑦ and push rod ⑧.
- Remove the snap ring ⑨.

TOOL 09900-06108: Snap ring pliers

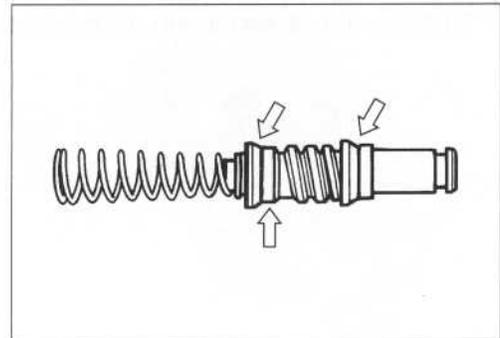


- Remove the piston/cup set.
 - ⑩ Secondary cup
 - ⑪ Piston
 - ⑫ Primary cup
 - ⑬ Spring
- Remove the O-ring ⑭.

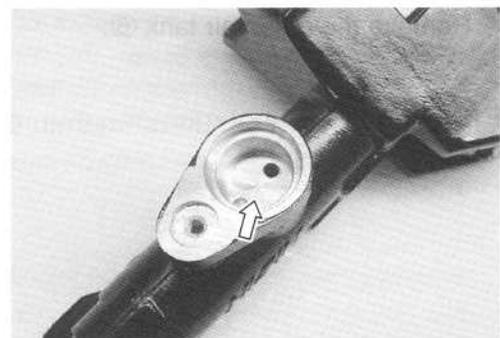
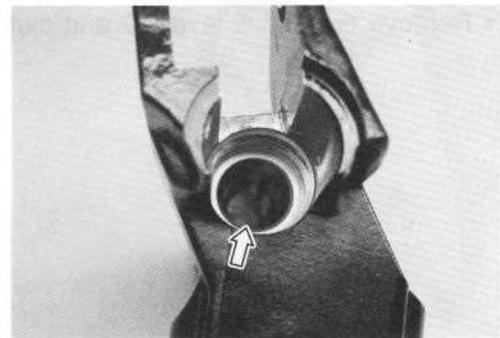


CLUTCH MASTER CYLINDER INSPECTION

Inspect the piston surface for any scratches or other damage. Inspect the primary cup, secondary cup and dust seal for wear or damage.



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



CLUTCH MASTER CYLINDER REASSEMBLY AND REMOUNTING

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

CAUTION

- * Wash the master cylinder components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them.
- * Do not wipe the components with a rag.
- * Apply brake fluid to the cylinder bore and all the component to be inserted into the bore.

Specification and Classification: DOT 4

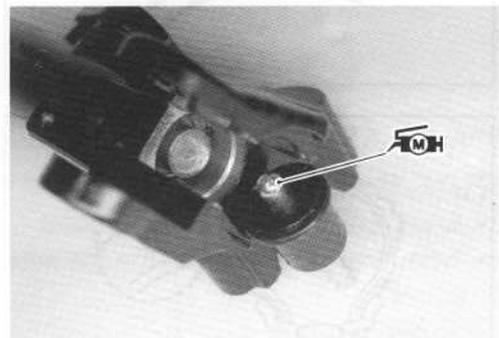
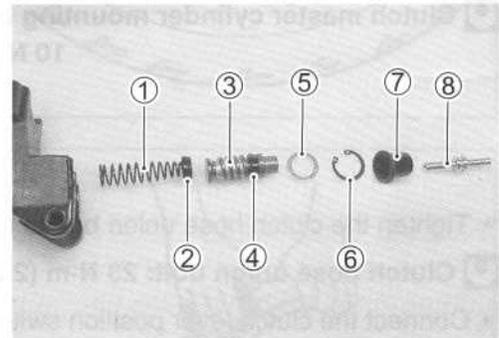
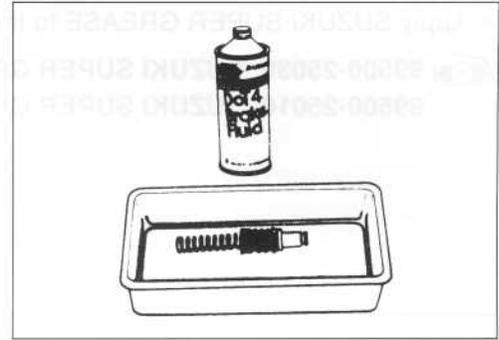
- Apply brake fluid to the piston/cup set and install them to the clutch master cylinder.
 - ① Spring
 - ② Primary cup
 - ③ Piston
 - ④ Secondary cup
 - ⑤ Stopper plate
 - ⑥ Snap ring
 - ⑦ Dust boot
 - ⑧ Push rod
- Install the O-ring to the master cylinder and reservoir tank ⑨.
- Install the reservoir tank ⑨.

CAUTION

Use new O-rings to prevent the fluid leakage.

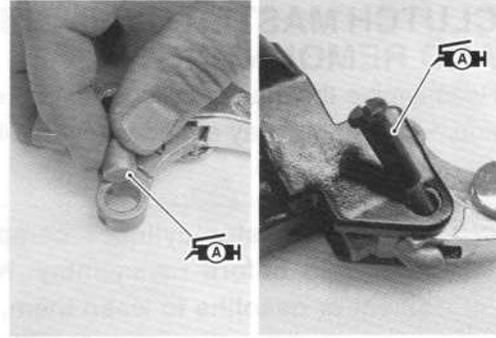
- Apply SUZUKI MOLY PASTE to the push rod.
- Install the push rod and dust boot.

 99000-25140: SUZUKI MOLY PASTE



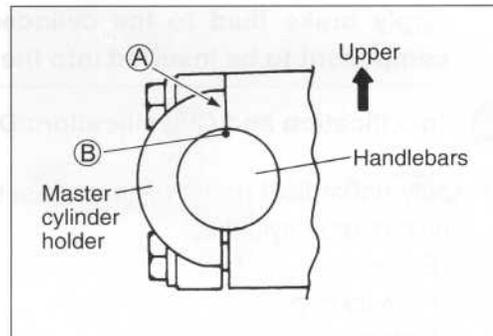
- Apply SUZUKI SUPER GREASE to the bolt and pin.

 99500-25030: SUZUKI SUPER GREASE "A" (USA)
99500-25010: SUZUKI SUPER GREASE "A" (Others)



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

 **Clutch master cylinder mounting bolt:**
10 N·m (1.0 kgf·m, 7.0 lb·ft)



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

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

- Connect the clutch lever position switch lead wires.
(Clutch hose routing:  8-21)

CAUTION

- * The seal washers should be replaced with the new ones to prevent fluid leakage.
- * Bleed air from the system after reassembling the master cylinder. ( 2-18)



TIRE AND WHEEL

TIRE REMOVAL

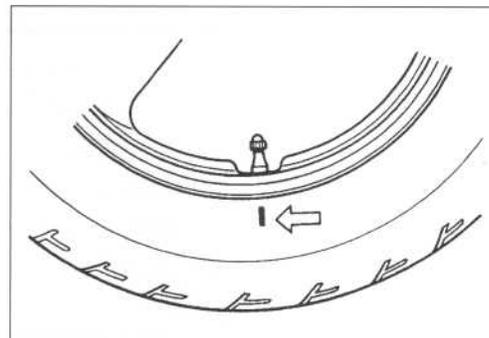
The most critical factor of a tubeless tire is the seal between the wheel rim and the tire bead. For this reason, it is recommended to use a tire changer that can satisfy this sealing requirement and can make the operation efficient as well as functional.

For operating procedures, refer to the instructions supplied by the tire changer manufacturer.

NOTE:

When removing the tire in the case of repair or inspection, mark the tire with a chalk to indicate the tire position relative to the valve position.

Even though the tire is refitted to the original position after repairing puncture, the tire may have to be balanced again since such a repair can cause imbalance.

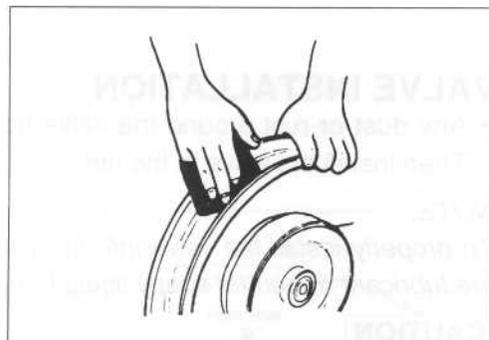


INSPECTION

WHEEL

Wipe the wheel clean and check for the following:

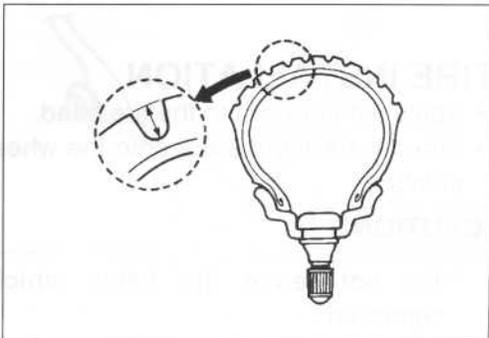
- * Distortion and crack
- * Any flaws and scratches at the bead seating area.
- * Wheel rim runout (☞ 6-13)



TIRE

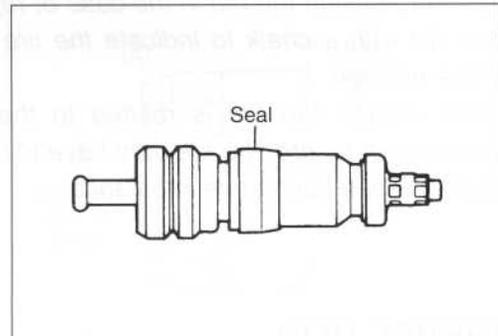
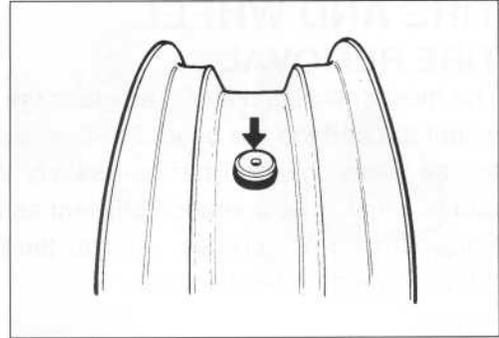
Tire must be checked for the following points:

- * Nick and rupture on side wall
- * Tire tread depth (☞ 2-27)
- * Tread separation
- * Abnormal, uneven wear on tread
- * Surface damage on bead
- * Localized tread wear due to skidding (Flat spot)
- * Abnormal condition of inner liner



VALVE

- Inspect the valve after the tire is removed from the rim. Replace the valve with a new one if the seal rubber is peeling or has damage.
- Inspect the valve core. If the seal has abnormal deformation, replace the valve with a new one.

**VALVE INSTALLATION**

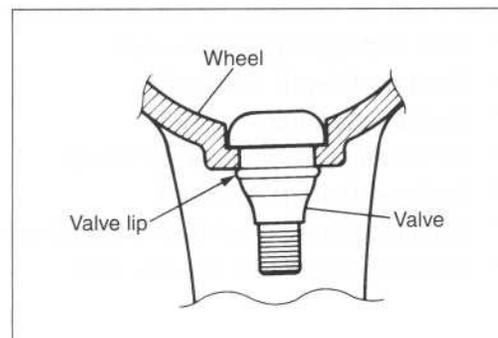
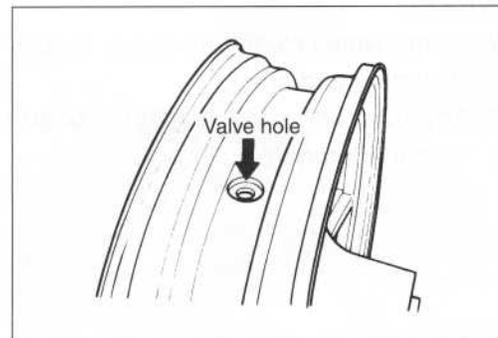
- Any dust or rust around the valve hole must be cleaned off. Then install the valve in the rim.

NOTE:

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

CAUTION

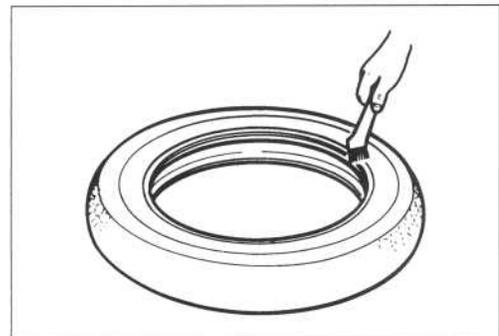
Be careful not to damage the lip of valve.

**TIRE INSTALLATION**

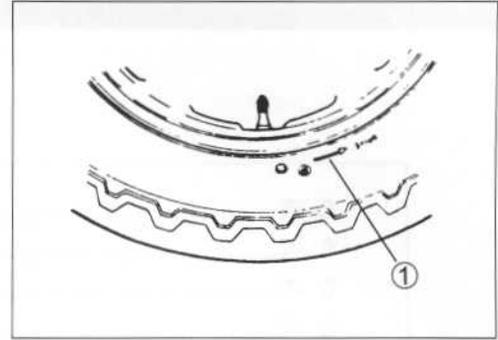
- Apply tire lubricant to the tire bead.
- When installing the tire onto the wheel, observe the following points.

CAUTION

- * Do not reuse the valve which has been once removed.
- * Do not use oil, grease or gasoline on the tire bead in place of tire lubricant.



- When installing the tire, the arrow ① on the side wall should point to the direction of wheel rotation.
- Align the chalk mark put on the tire at the time of removal with the valve position.



- For installation procedure of tire onto the wheel, follow the instructions given by the tire changer manufacturer.
- Bounce the tire several times while rotating. This makes the tire bead expand outward to contact the wheel, thereby facilitating air inflation.
- Inflate the tire.

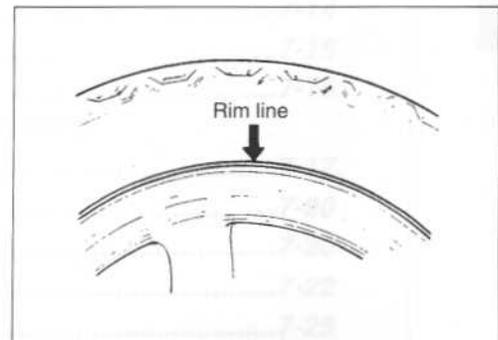
⚠ WARNING

- * Do not inflate the tire to more than 400 kPa (4.0kgf/cm²). If inflated beyond this limit, the tire can burst and possibly cause injury. Do not stand directly over the tire while inflating.
- * In the case of preset pressure air inflator, pay special care for the set pressure adjustment.

- In this condition, check the "rim line" cast on the tire side walls. The line must be equidistant from the wheel rim all around. If the distance between the rim line and wheel rim varies, this indicates that the bead is not properly seated. If this is the case, deflate the tire completely and unseat the bead for both sides. Coat the bead with lubricant and fit the tire again.
- When the bead has been fitted properly, adjust the pressure to specification. (☞ 2-27)
- As necessary, adjust the tire balance.

CAUTION

Do not run with a repaired tire at a high speed.



BALANCER WEIGHT INSTALLATION

- When installing the balancer weights to the wheel, set the two balancer weights on both sides of wheel rim.

CAUTION

Weight difference between the two balancer weights must be less than 10 g.

