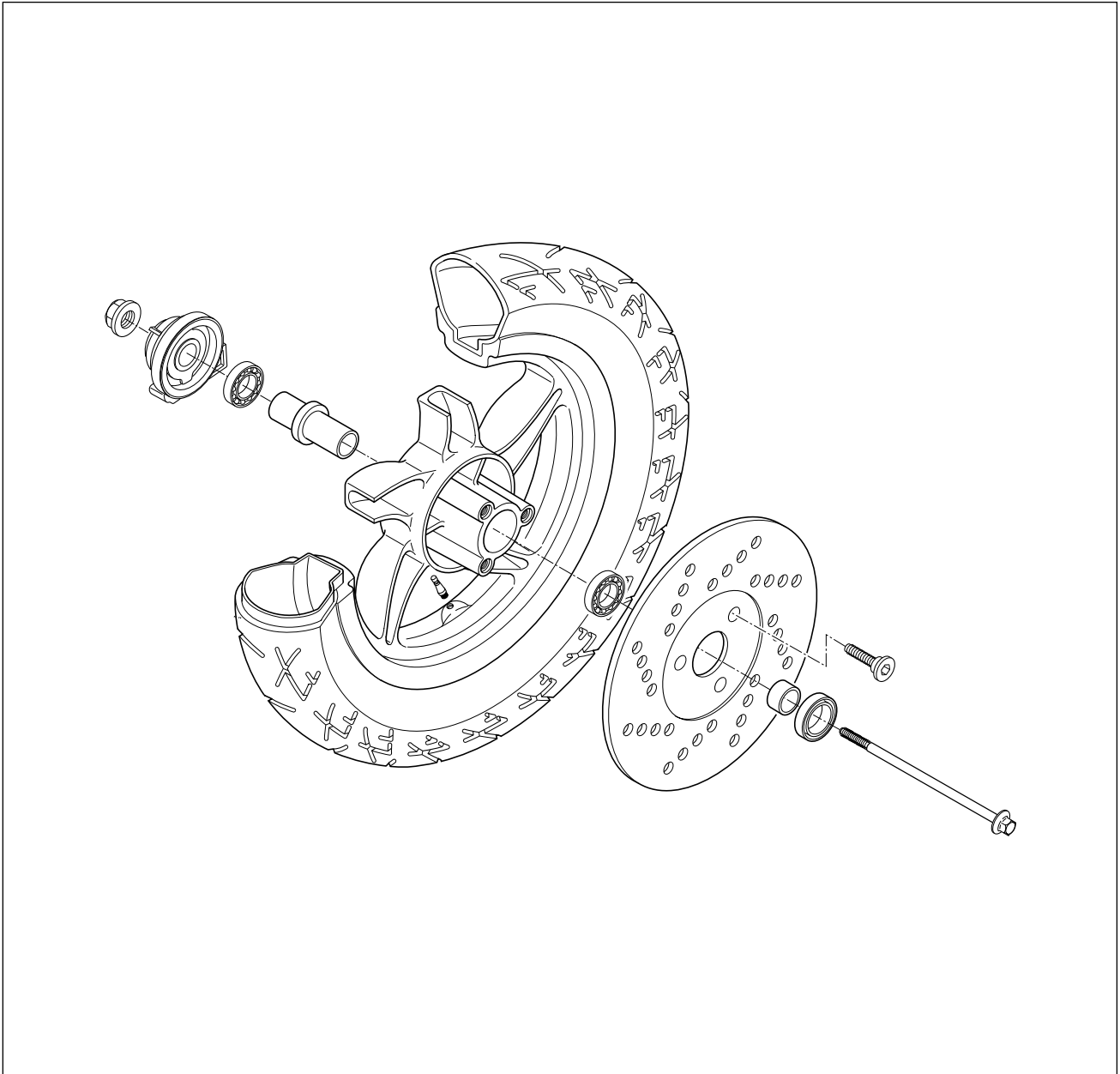


CHASSIS

CONTENTS

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FRONT FORK	6-14
STEERING	6-18
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FRONT WHEEL

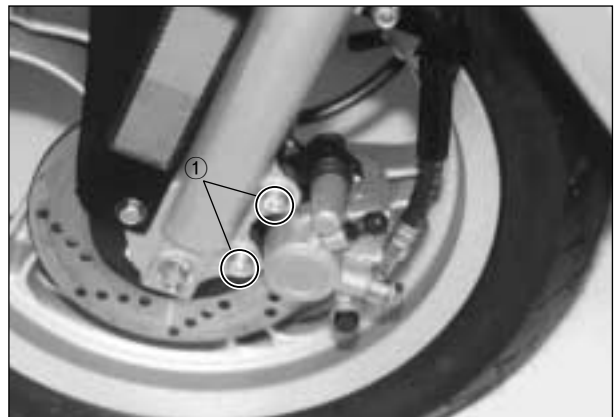


REMOVAL AND DISASSEMBLY

- Remove the front brake caliper by removing the mounting bolts ①.

⚠ CAUTION

Do not operate the front brake lever while dismounting the caliper.



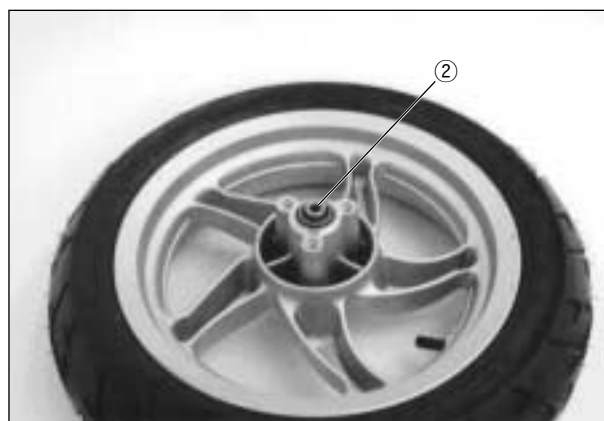
- Remove the front axle nut.
- Support the motorcycle by jack or wooden block.
- Remove the front wheel and speedometer gear box by removing the front axle shaft.



- Remove the disc plate ① by removing the bolts.

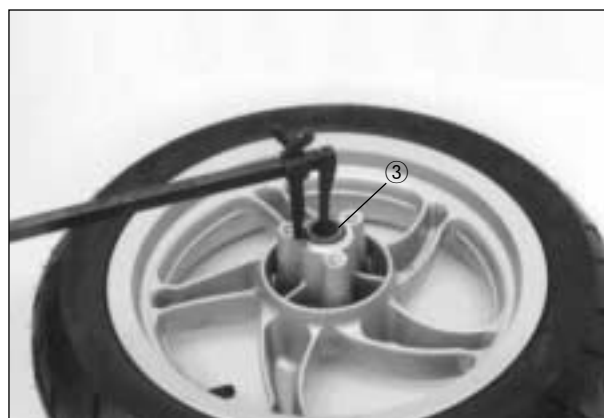


- Remove the spacer ②.



- Remove the oil seal ③ with the special tool.


 Oil seal remover : 09913-50121



6-3 CHASSIS

Drive out the both bearing with the special tool in the following procedures.

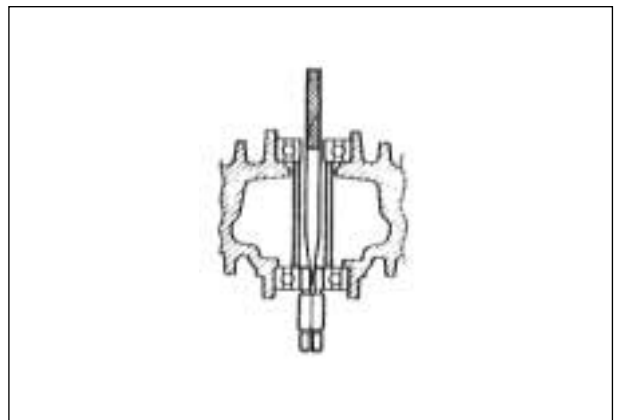
- Insert the adapter into the bearing.
- After inserting the wedge bar from the opposite side, lock the wedge bar in the slit of the adapter.
- Drive out the bearing by knocking the wedge bar.

 Wheel bearing remover : 09941-50111



CAUTION

The removed dust seal and bearing should be replaced with new ones.



INSPECTION


WHEEL RIM

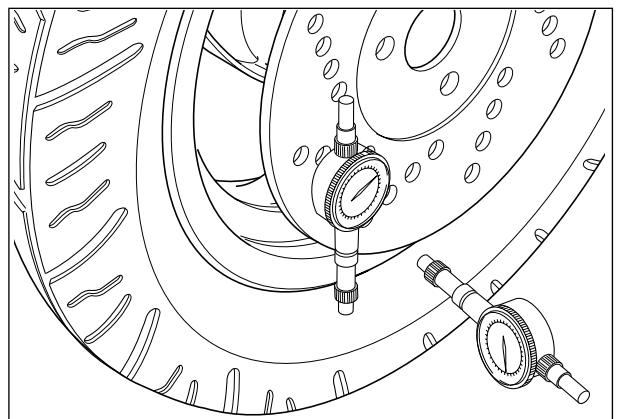
Make sure that the wheel rim runout does not exceed the service limit when checked as shown.

An excessive runout is usually due to worn or loose wheel bearings and can be reduced by replacing the bearings. If bearing replacement fails to reduce the runout, replace the wheel.

**Wheel rim runout
(Axle and Radial)**

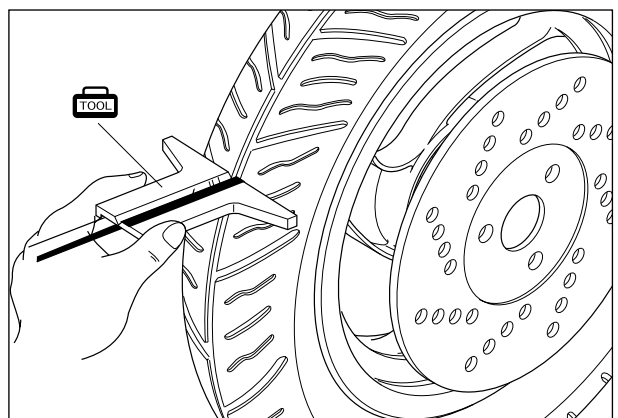
Service limit 3.0 mm

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



TIRE

Inspect the tires for wear and damage, and check the tire tread depth as shown. Replace a badly worn or damaged tire. A tire with its tread worn down to the limit(in terms of tread depth) must be replaced.



Tire depth service limit	Front	1.6 mm
	Rear	1.6 mm

Check the tire pressure, and examine the value for evidence of air leakage.

TIRE PRESSURE Cold inflation	Normal riding			
	Solo riding		Dual riding	
	kg/cm ²	kPa	kg/cm ²	kPa
Front	1.25	123	1.75	172
Rear	2.00	196	2.25	221

REASSEMBLY AND REMOUNTING

Reassemble and remount the front wheel in the reverse order disassembly and removal, and also carry out the following steps.

WHEEL BEARING

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

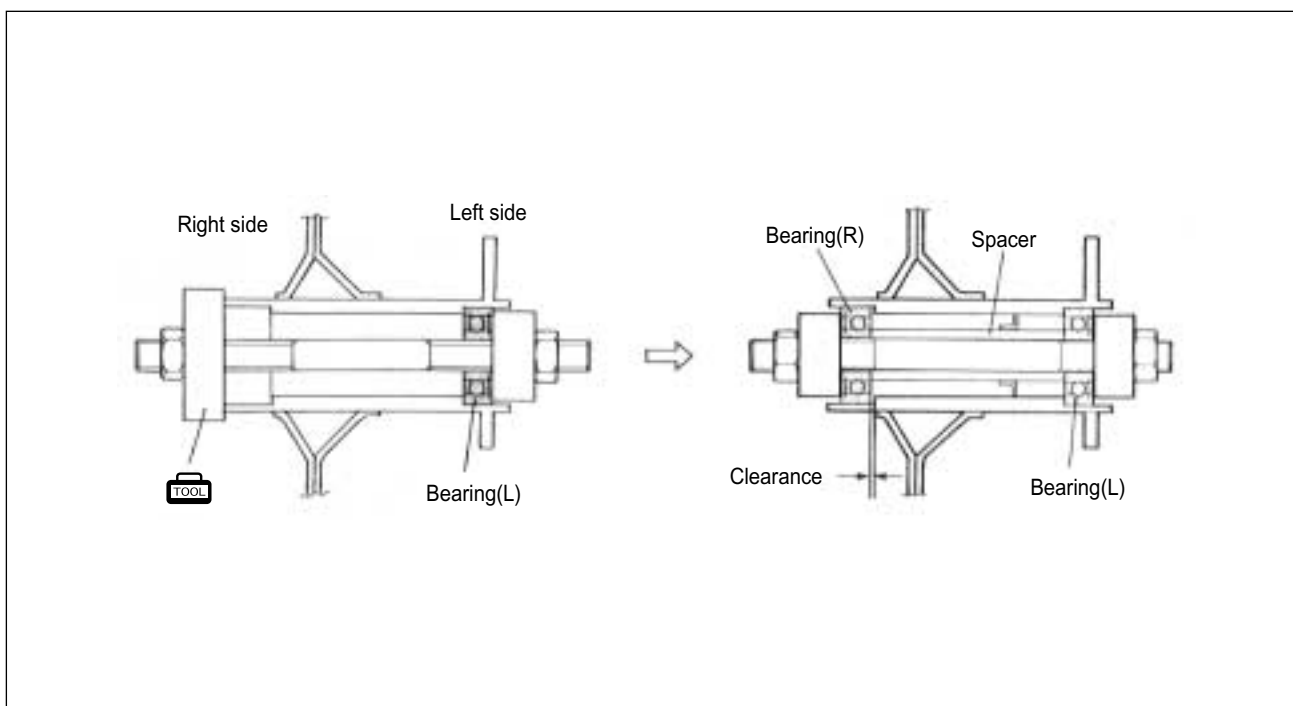
 Super Grease "A"

- Install the wheel bearings by using the special tool.

 Bearing installer set : 09924-84521

 **CAUTION**

First install the wheel bearing for left side.

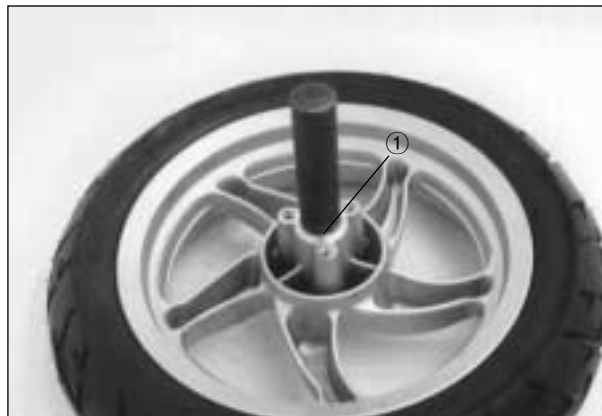


6-5 CHASSIS

OIL SEAL

- Install the oil seal ① with the special tool.

 Oil seal installer : 09923-55131




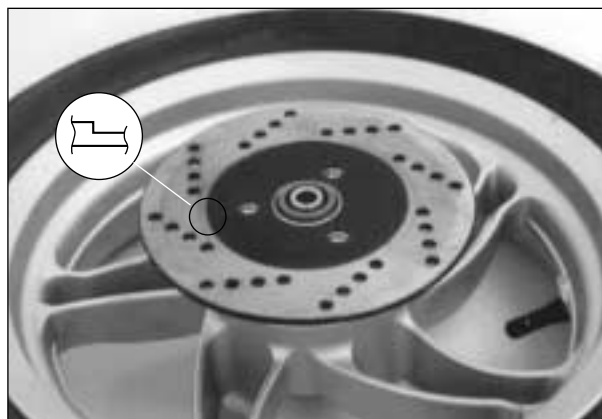
- Install the spacer ②.



DISC PLATE

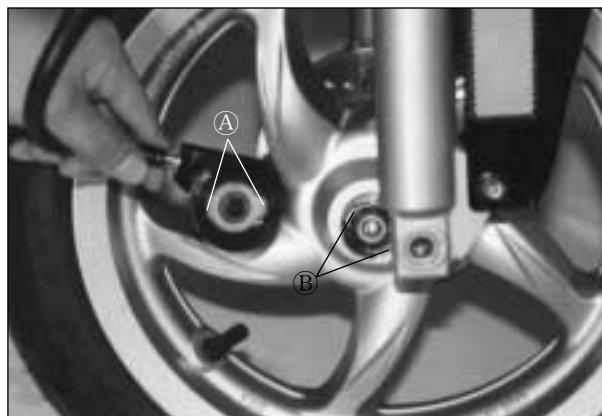
- Install the disc plate and tighten them to the specified torque.

 Front brake disc bolt : 18 ~ 28 N · m (1.8 ~ 2.8 kg · m)



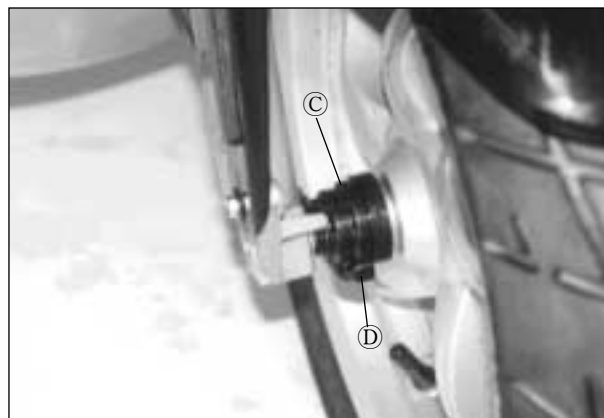
SPEEDOMETER GEAR BOX

- When installing the speedometer gear box, align the two drive pawls ① with the two recesses ② of the wheel hub.




⚠ CAUTION

After touching the speedometer gear box ③ to the stopper ④, tighten the axle shaft.


**FRONT WHEEL**

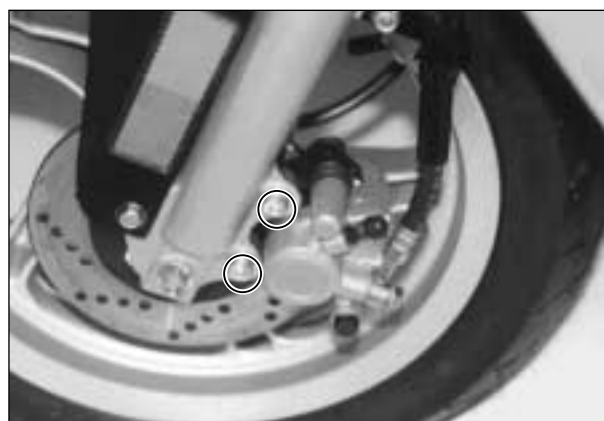
- Tighten the front axle nut to the specified torque.

 Front axle nut : 33 ~ 52 N · m (3.3 ~ 5.2 kg · m)

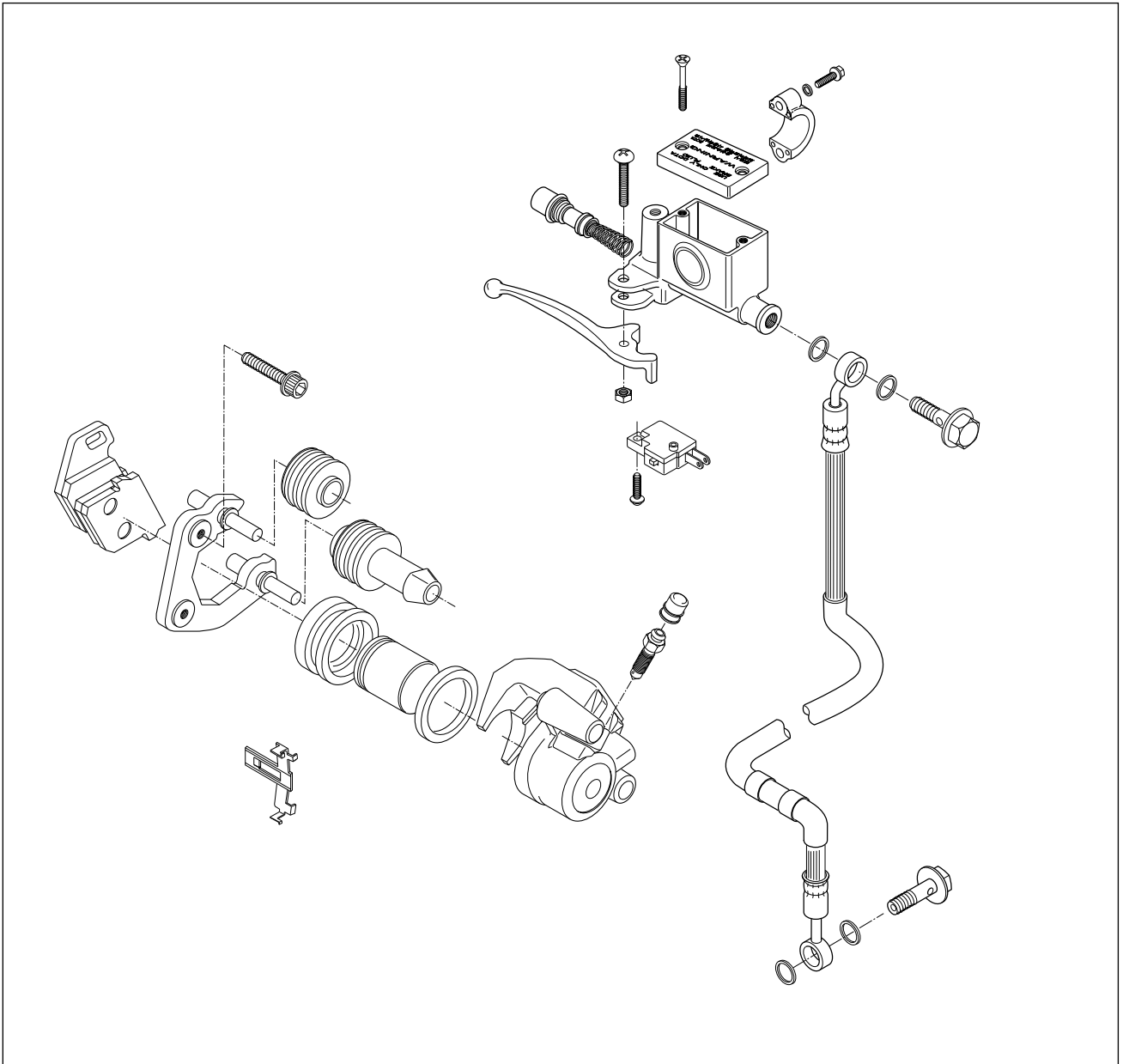


- Tighten the caliper mounting bolts to the specified torque.

 Front brake caliper mounting bolt
: 18 ~ 28 N · m (1.8 ~ 2.8 kg · m)



FRONT BRAKE

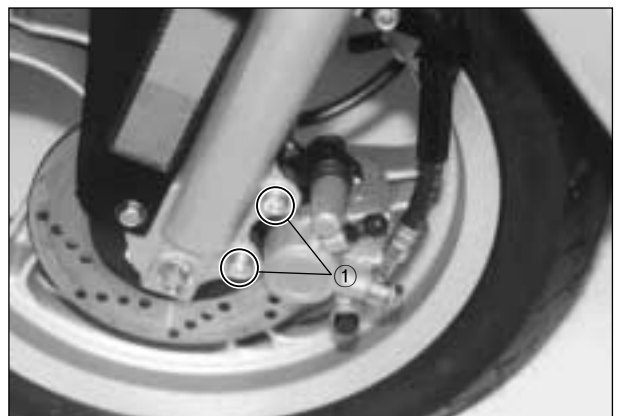


BRAKE PAD REPLACEMENT

- Remove the caliper by removing the brake caliper mounting bolts ①.

⚠ CAUTION

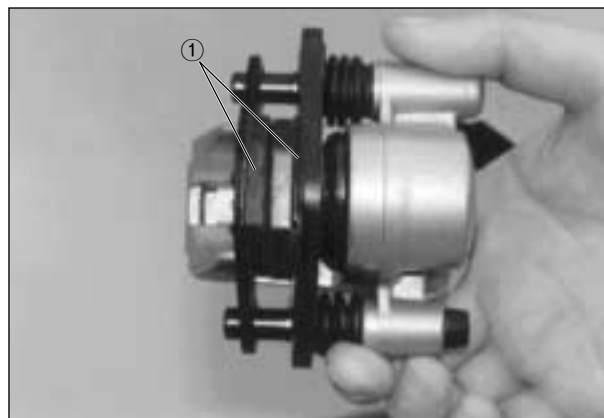
Do not operate the front brake lever while dismounting the caliper.



- Reassemble it after remove the brake pads ①.

⚠ CAUTION

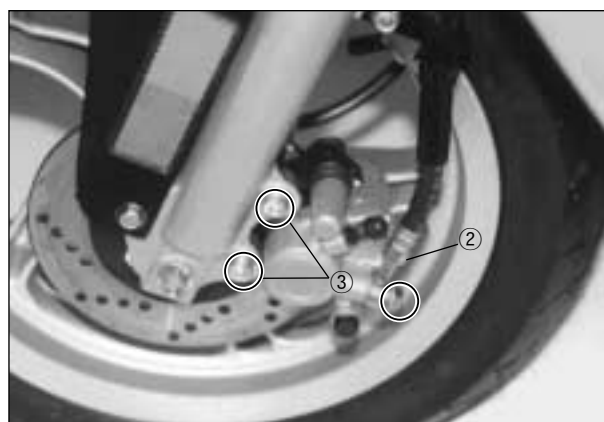
Replace the brake pads as a set, otherwise braking performance will be adversely affected.

**CALIPER REMOVAL AND DISASSEMBLY**

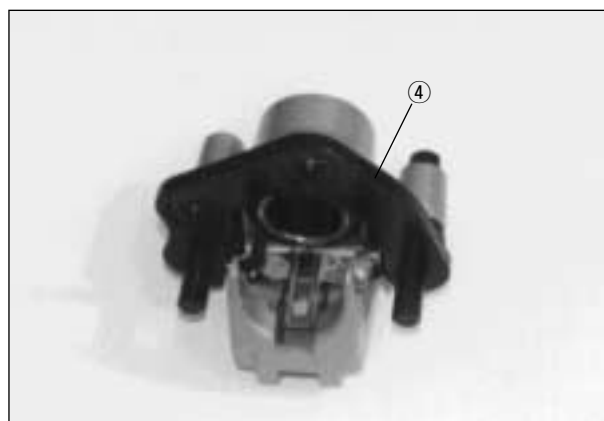
- Remove the brake hose ② and catch the brake fluid in a suitable receptacle.
- Remove the caliper mounting bolt ③.

⚠ CAUTION

Never re-use the brake fluid left over from the last servicing and stored long periods.



- Remove the caliper.
- Remove the brake pads.
- Remove the pad holder ④.



- Remove the spring ⑤.



6-9 CHASSIS

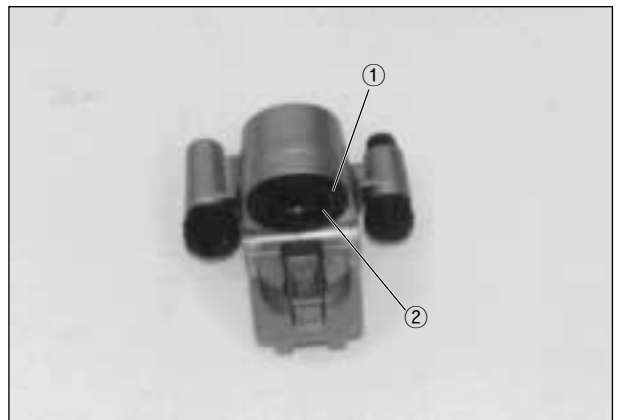
- Place a rag over the piston to prevent popping up.
Force out the piston with an air gun.

⚠ CAUTION

Do not use high pressure air to prevent piston damage.



- Remove the dust seal ① and piston seal ②.

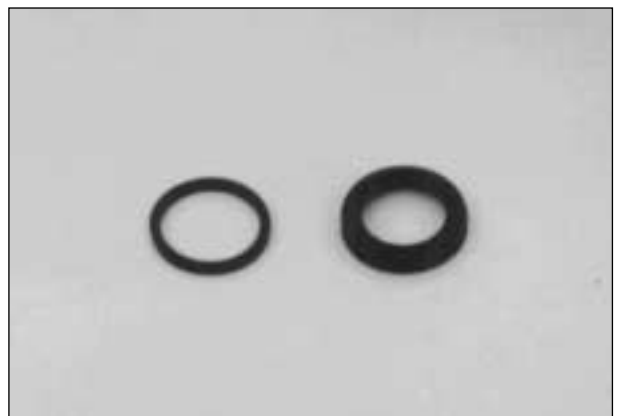


CALIPER INSPECTION

Inspect the caliper cylinder bore wall for nicks, scratches or other damage.
Inspect piston for damage and wear.



Inspect each rubber part for damage and wear.



CALIPER REASSEMBLY

Reassemble and remount the caliper in the reverse order of removal and disassembly, and also carry out the following steps.

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.

- Apply **SILICONE GREASE** to the caliper holder.

 Silicone Grease

SPECIFIED TORQUE		
Item	N · m	kg · m
①	18 ~ 28	1.8 ~ 2.8
②	20 ~ 25	2.0 ~ 2.5

WARNING

Bleed the air from brake fluid circuit after reassembling caliper.(Refer to page 2-9)

DISC PLATE REMOVAL AND DISASSEMBLY


- Remove the front wheel.(Refer to page 6-2)
- Remove the disc plate.(Refer to page 6-2)
- Install the disc plate.(Refer to page 6-4)

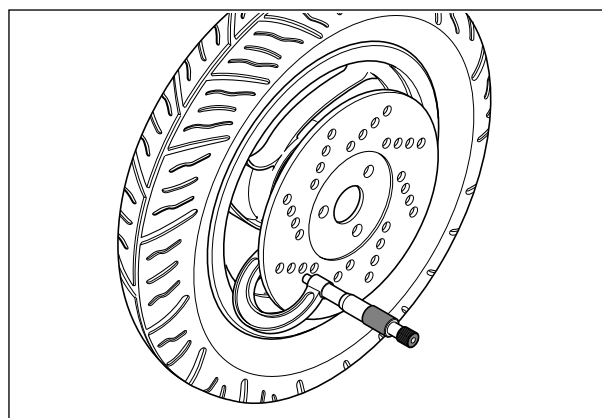
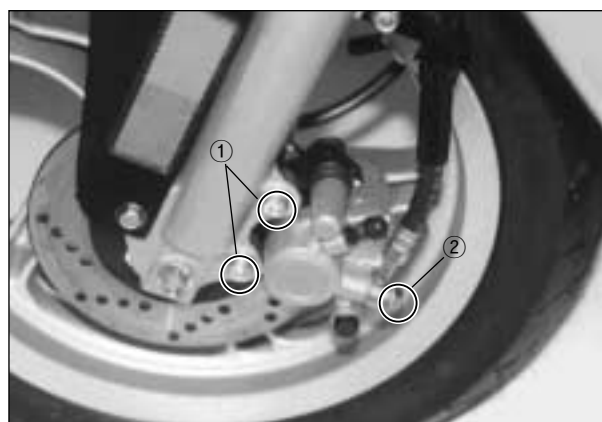
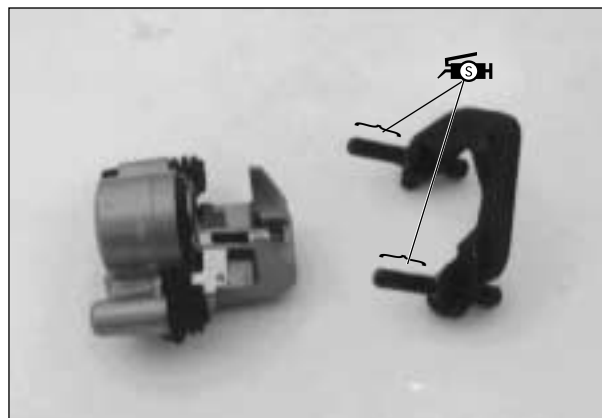
DISC PLATE INSPECTION

- Check the disc for wear with a micrometer. Its thickness can be checked with disc and wheel in place. Replace the disc if the thickness exceeds the service limit.

Disc thickness


Service limit 3.5 mm

 **TOOL** Micrometer(0 ~ 25mm) : 09900-20201



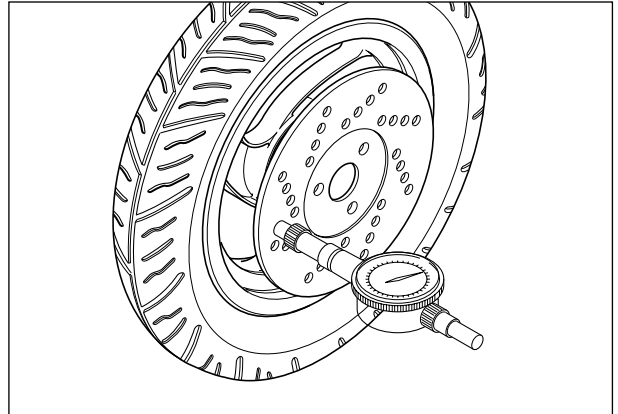
6-11 CHASSIS

- With the disc mounted on the wheel, check the disc for face runout with a dial gauge as shown. Replace the disc if the runout exceeds the service limit.

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

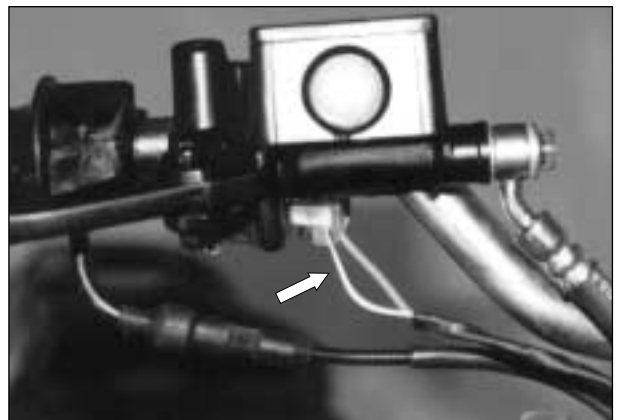
Disc runout

Service limit 0.3 mm



MASTER CYLINDER REMOVAL AND DISASSEMBLY

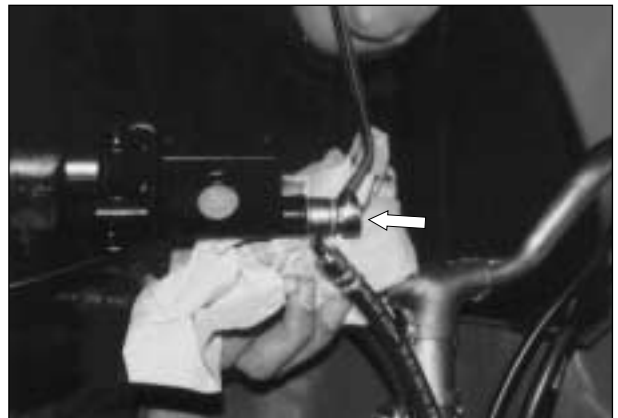
- Remove the handlebar cover.
- Disconnect the front brake lamp switch lead wires.



- Place a cloth underneath the union bolt on the master cylinder to catch spilled drops of brake fluid. Unscrew the union bolt and disconnect the brake hose/master cylinder joint.

 **CAUTION**

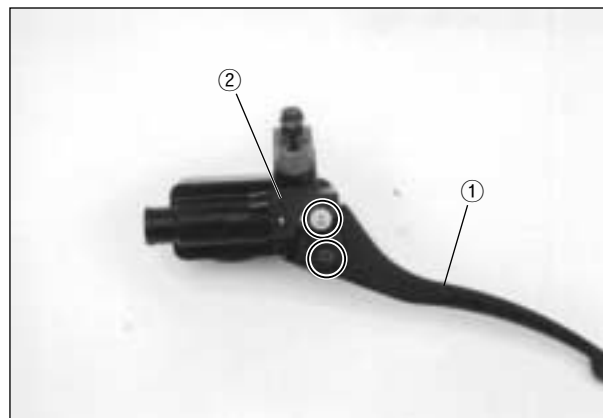
Completely wipe off any brake fluid adhering to any part of motorcycle. The fluid reacts chemically with paint, plastics, rubber materials, etc.



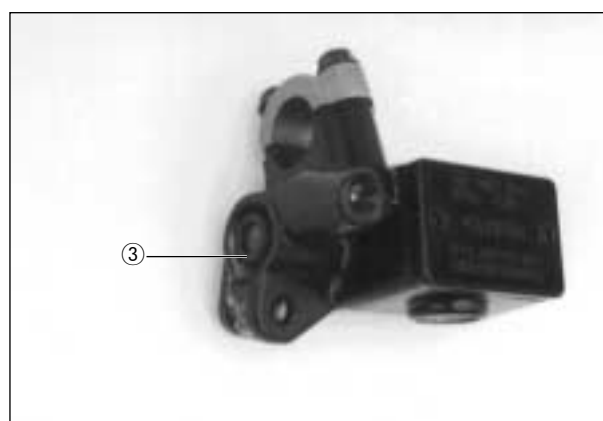
- Remove the master cylinder.



- Remove the brake lever ① and brake switch ②.

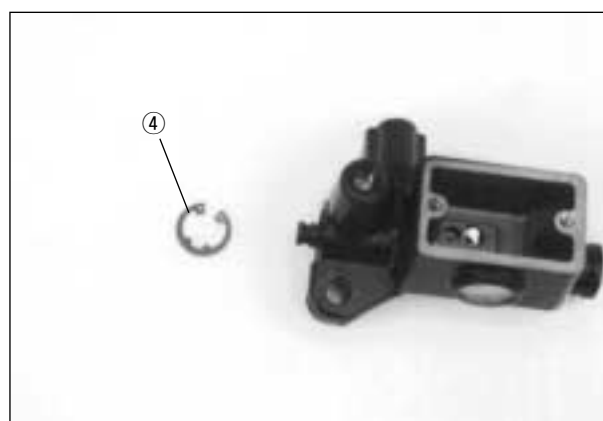


- Remove the dust boot ③.

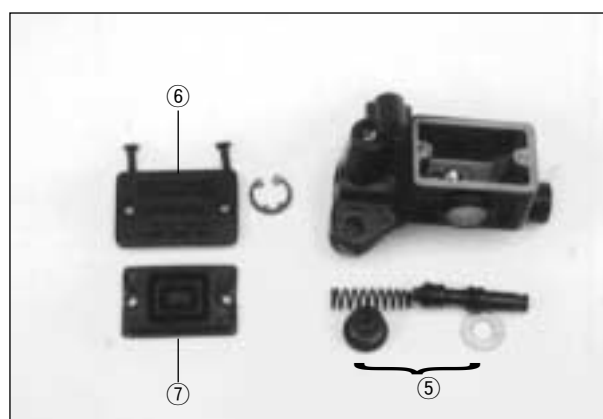


- Remove the circlip ④ with the special tool.

 Snapping pliers : 09900-06108



- Remove the piston/primary cup with return spring ⑤.
- Remove the reservoir cap ⑥ and diaphragm ⑦.
- Drain brake fluid.



MASTER CYLINDER INSPECTION

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

Inspect the piston surface for scratches or other damage.

Inspect the primary cup and dust boot for wear or damage.

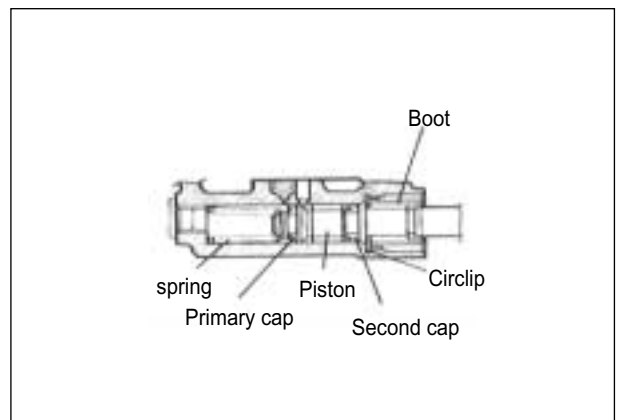


MASTER CYLINDER REASSEMBLY AND REMOUNTING

Reassemble and remount the master cylinder in the reverse order of removal and disassembly, and also carry out the following steps.

⚠ CAUTION

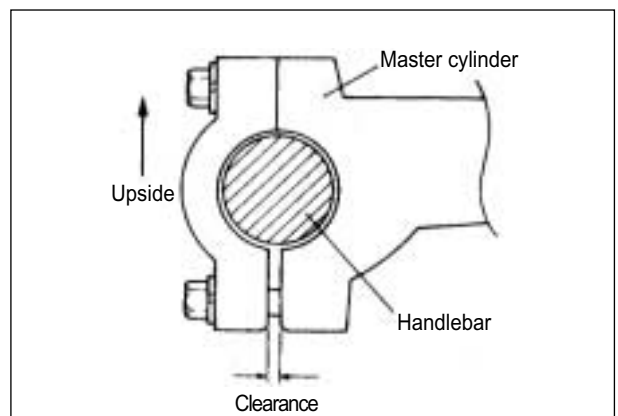
Wash the master cylinder components with fresh brake fluid before reassembly. Never use cleaning solvent or gasoline to wash them. Apply brake fluid to the cylinder bore and all the internals to be inserted into the bore.



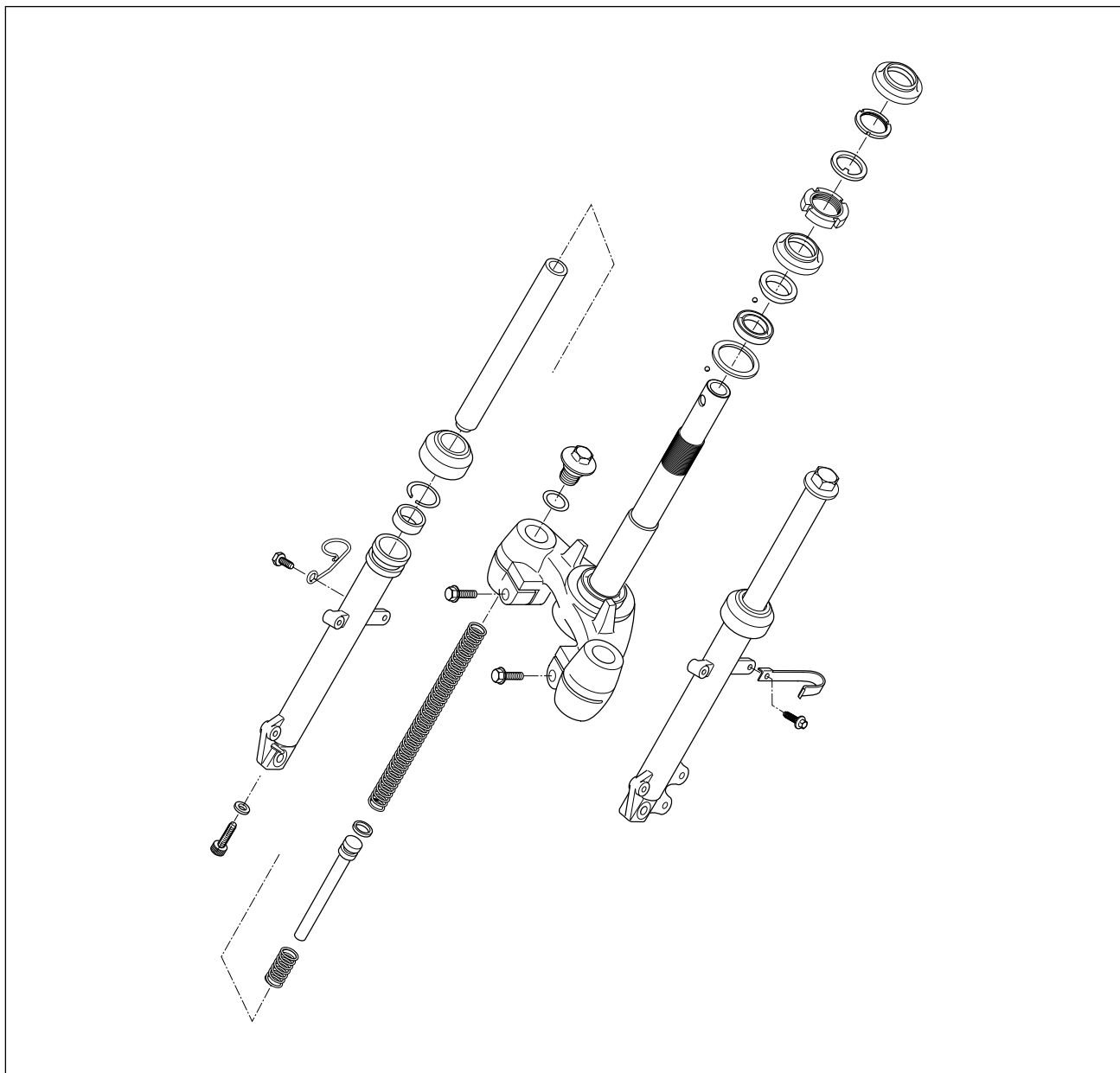
- Reassemble and remount the master cylinder. (Refer to page 6-11)
- When remounting the master cylinder on the handlebar, first tighten the clamp bolt for upside.

⚠ CAUTION

Bleed air after remounting the master cylinder.



FRONT FORK

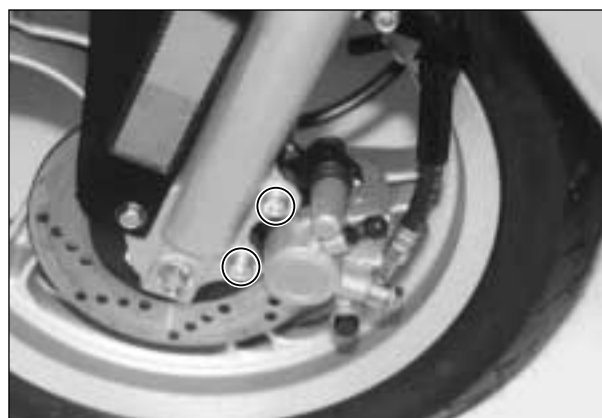


REMOVAL AND DISASSEMBLY

- Remove the front leg shield.
- Remove the front brake caliper by removing the mounting bolts.

⚠ CAUTION

Do not operate the front brake lever while dismounting the caliper.

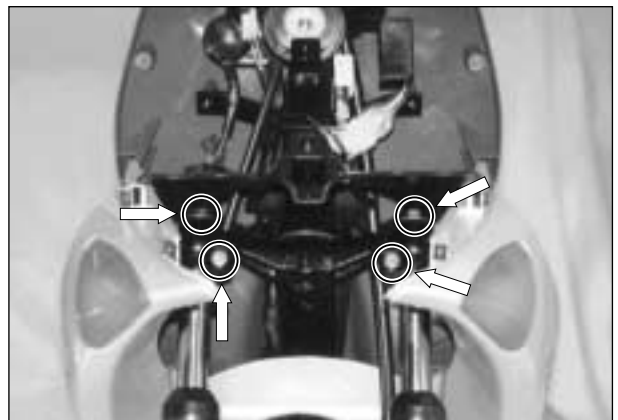
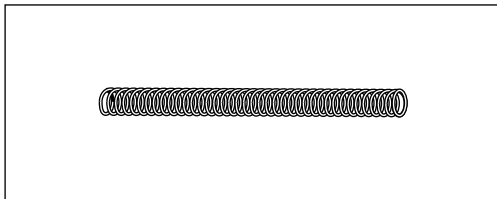


6-15 CHASSIS

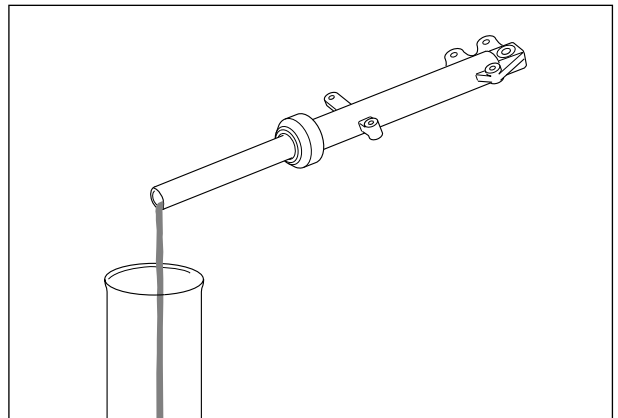
- Remove the front axle nut.
- Support the motorcycle by jack or wooden block.
- Remove the front wheel by removing the front axle shaft.



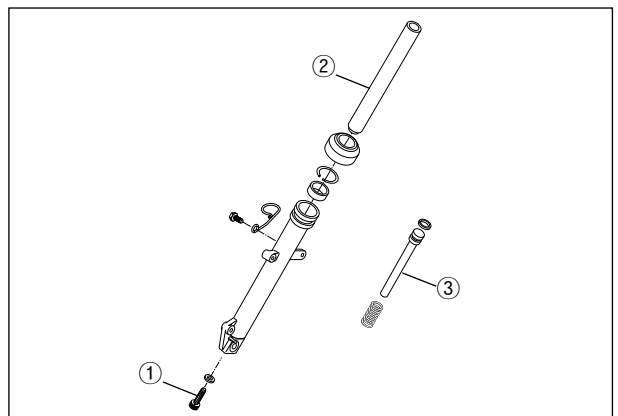
- Loosen the front fork bolt, then draw out the fork spring.
- Loosen the front fork lower clamp bolts.



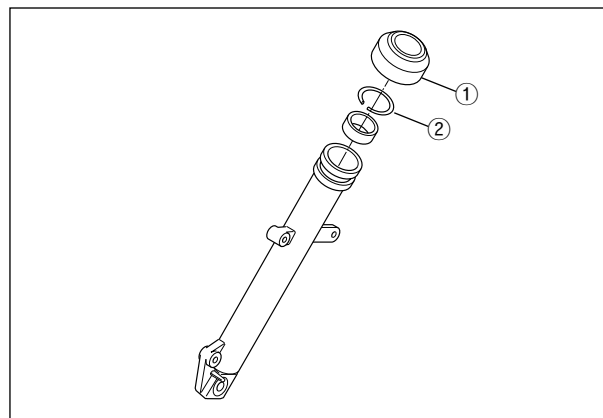
- Invert the fork and stroke it several times to remove the oil.
- Hold the fork inverted for a few minutes.



- Remove the socket bolt ① with the hexagon wrench.
- Separate the fork pipe ② and pipe seat ③.



- Remove the dust boot ① and stopper ring ②.

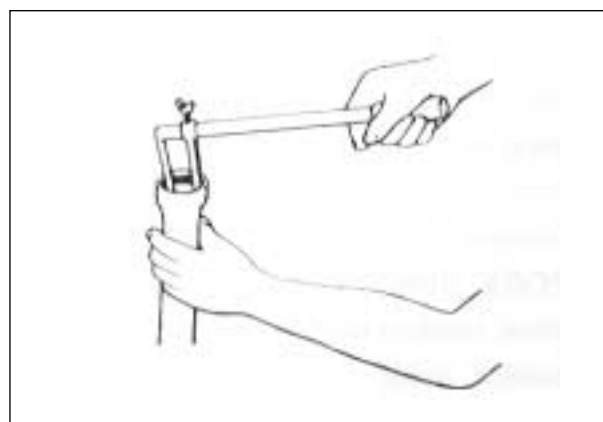


- Remove the oil seal by using the special tool.

CAUTION

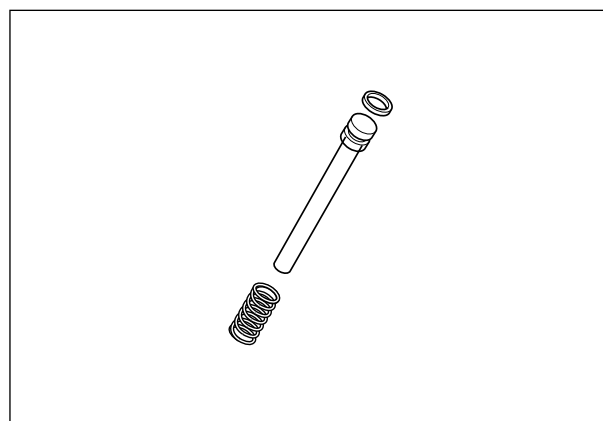
The oil seal removed should be replaced with a new oil seal.

TOOL Oil seal remover : 09913-50121

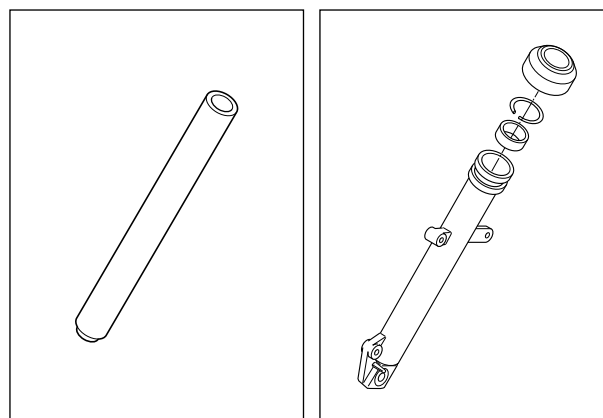


INSPECTION

- Inspect pipe seat for wear and damage.



- Inspect fork pipe and bottom case sliding surfaces for any scuffing or flaws.

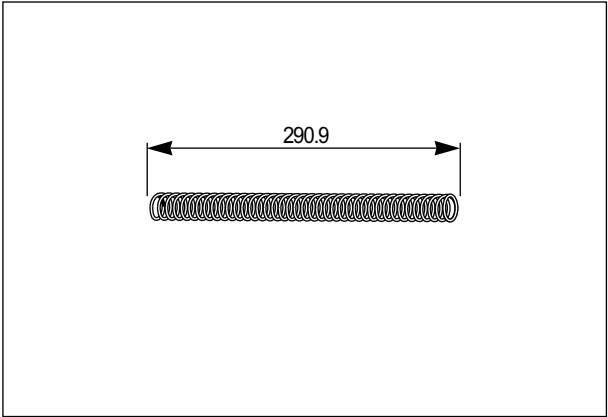


6-17 CHASSIS

FORK SPRING

- Measure the fork spring free length.

Fork spring free length	Standard 290.9 mm
--------------------------------	-------------------




REASSEMBLY AND REMOUNTING


Reassemble and remount the fork in the reverse order of removal and disassembly, and also carry out the following steps.

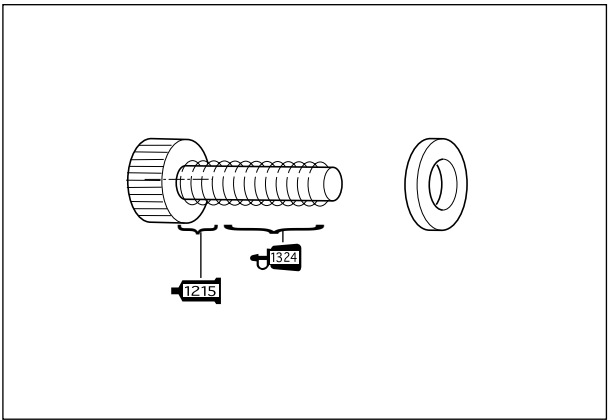
FRONT FORK BOLT

- Apply **BOND "1215"** and **THREAD LOCK "1324"** to the fork bolt and tighten the bolt with specified torque.

 Bond "1215"

 Thread Lock "1324"

 Front fork bolt : 35 ~ 55 N · m (3.5 ~ 5.5 kg · m)



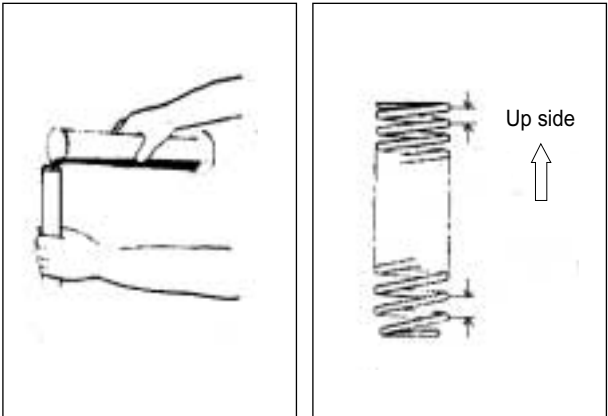
FORK OIL

- For the fork oil, be sure to use a front fork oil whose viscosity rating meets specification below.

Fork oil type	TELLUS # 37
Capacity	50 cc(One side)

CUSHION SPRING

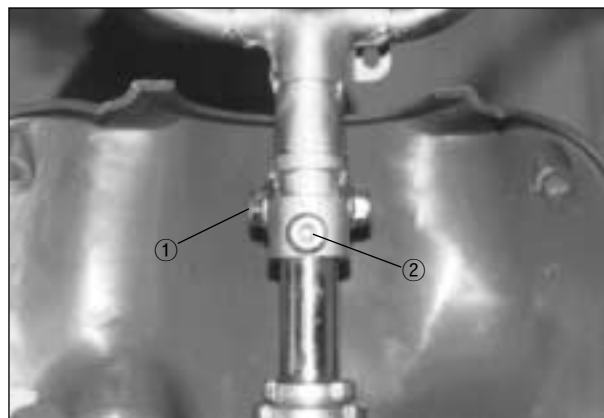
- When installing the front fork spring, the close end should position upside.



STEERING

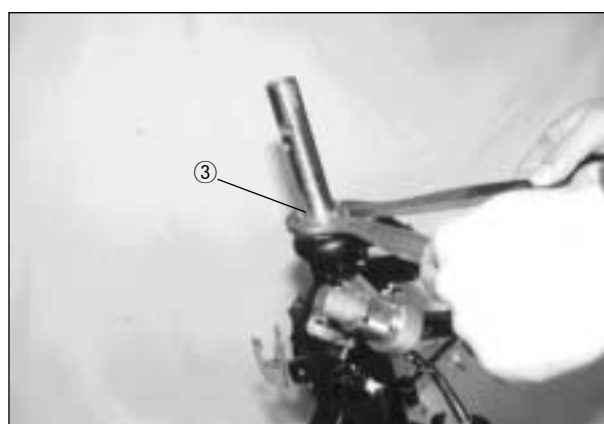
REMOVAL AND DISASSEMBLY

- Remove the handlebar cover.
- Remove the handlebar by removing the clamp bolt ① and set bolt ②.



- Loosen the steering stem lock nut ③ with the special tool.

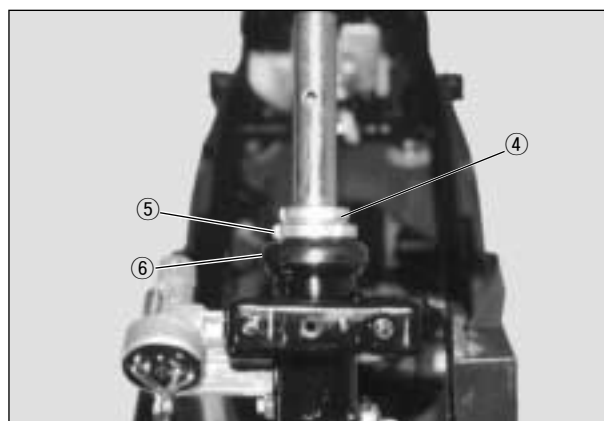
 Clamp wrench : 09940-10122



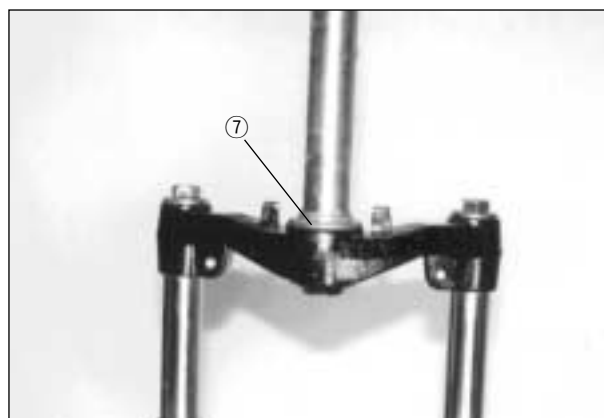
- Remove the front fork assembly by removing the lock washer ④, steering outer upper race ⑤ and dust seal ⑥.

⚠ CAUTION

Do not drop the steering stem steel balls.



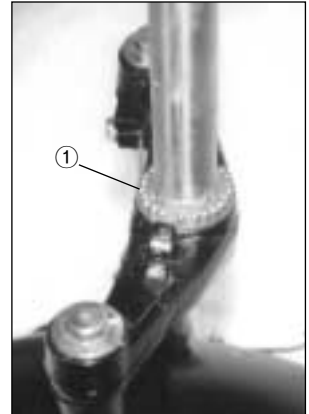
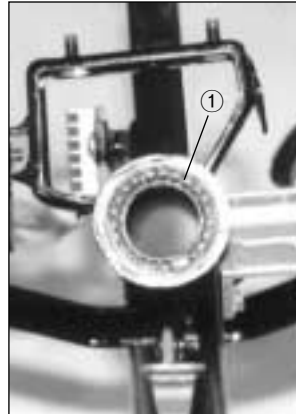
- Remove the steering outer lower race ⑦ with a chisel.



6-19 CHASSIS

- Remove the steering stem steel balls ①.

Number of steel ball	
Upper	22 pcs
Lower	25 pcs



- Remove the upper and lower bearing inner race with an appropriate bar.



INSPECTION

Inspect the removed parts for the following abnormalities.

- Bearing race wear and brinelling.
- Worn and damaged steel balls.
- Distortion of steering stem or handlebar.

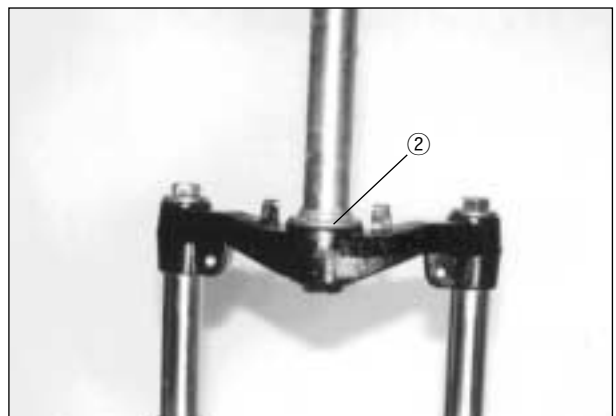


REASSEMBLY AND REMOUNTING

Reassemble and remount the steering stem, handlebar and front fork in the reverse order of disassembly and removal, and also carry out the following steps.


OUTER LOWER RACE

- Press in the outer lower race ②.



INNER RACE

- Press in the upper and lower inner races with the special tool.

 Steering race installer : 09941-34513



STEEL BALL

- Apply **SUPER GREASE "A"** when installing the upper and lower steel balls.

 Super Grease "A"

Number of steel ball	
Upper	22 pcs
Lower	25 pcs

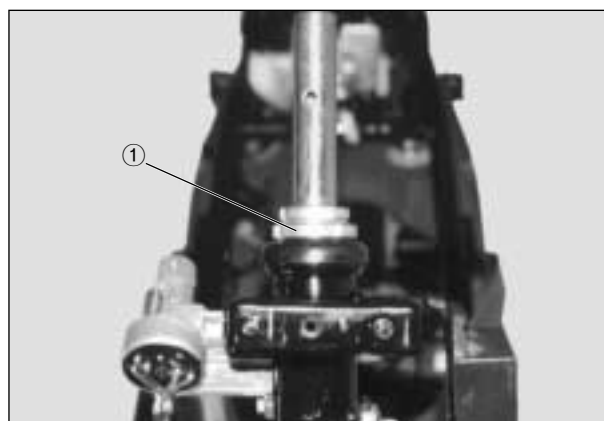


STEERING OUTER UPPER RACE NUT

- Tighten the steering outer upper race ① until resistance is felt, then loosen it 1/8 ~ 1/4 turn.


 **CAUTION**

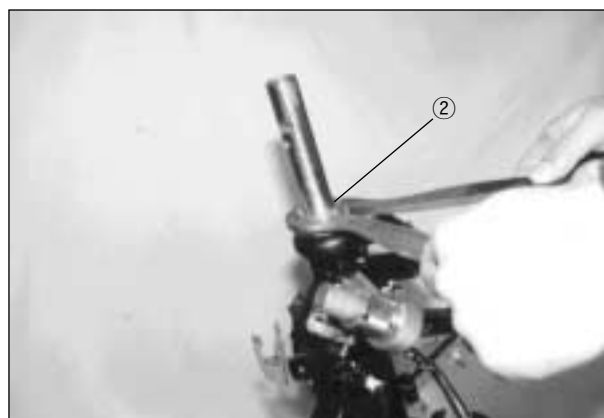
Make sure that the steering turns smoothly and easily, left to right.



- Tighten the steering stem lock nut ② with the special tool.

 Clamp wrench : 09940-10122

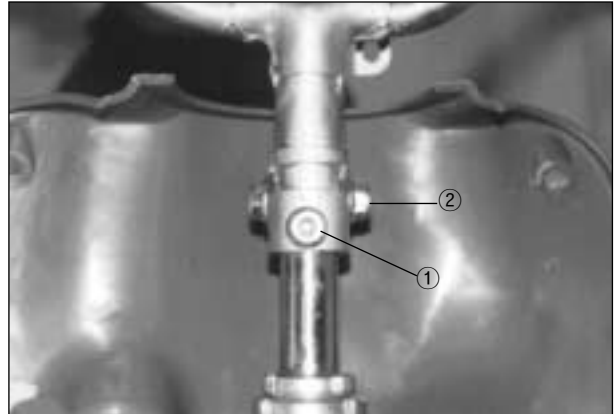
 Steering stem lock nut
: 60 ~ 100 N · m (6.0 ~ 10.0 kg · m)



6-21 CHASSIS

- Install the handlebar and tighten the set bolt ① and clamp bolt ② to the specified torque.

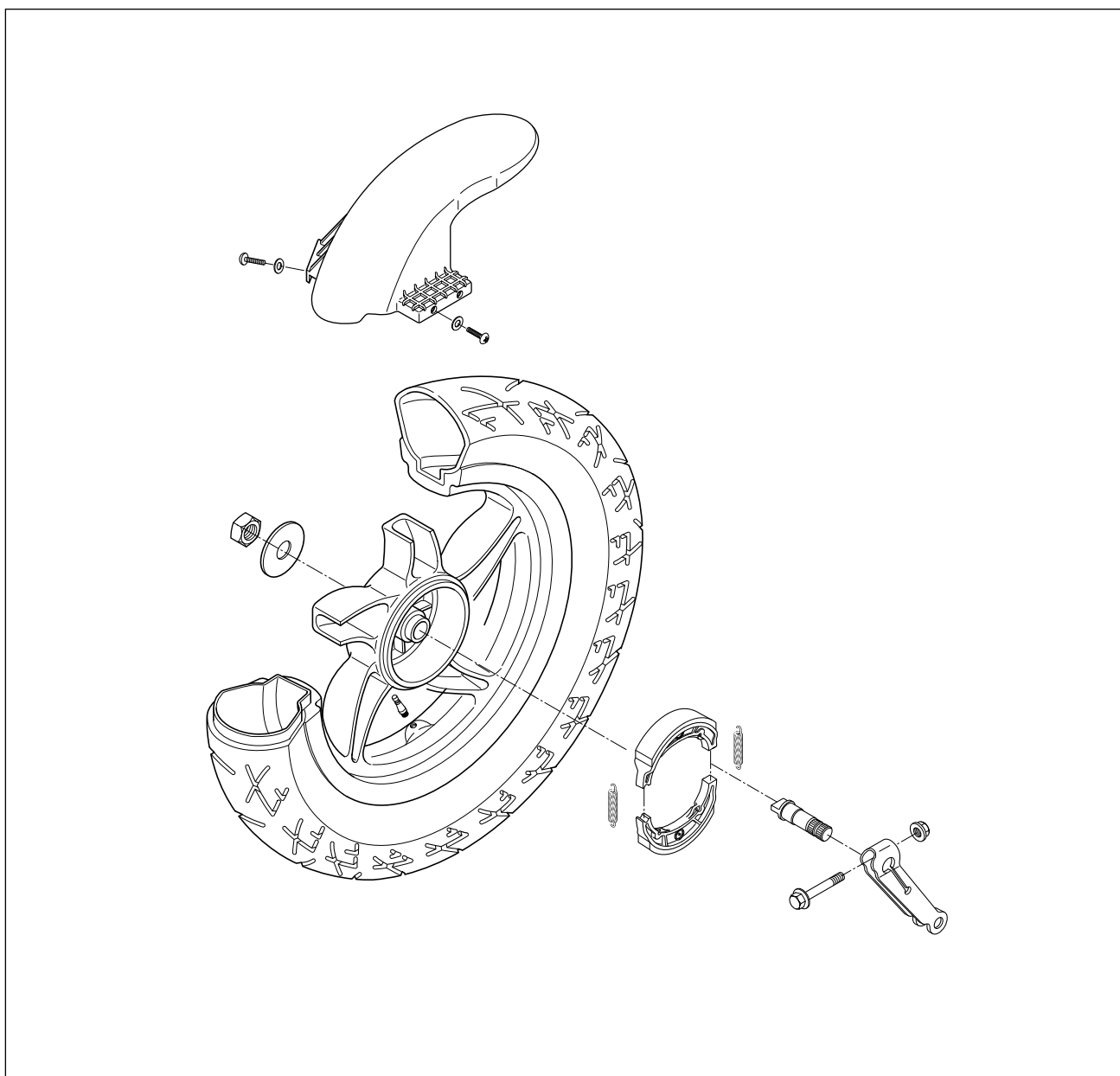
- ☑ Handlebar set bolt : 22 ~ 28 N · m (2.2 ~ 2.8 kg · m)
Handlebar clamp bolt : 48 ~ 52 N · m (4.8 ~ 5.2 kg · m)



- After install the front fork and steering stem, inspect the following items.
 - Lift the front fork.
 - Inspect play of the front fork as that grasp lower of the front fork and shake it by the front and rear.
 - By the handle turning the right or left, inspect whether turning smoothly.
 - Adjust the outer upper race, if the steering is comed heavy and tight.
- Bleed air of the front brake.(Refer to page 2-9)



REAR WHEEL AND REAR BRAKE



REMOVAL AND DISASSEMBLY

- Place the motorcycle on level ground.
- Remove the muffler. (Refer to page 3-4)
- Remove the rear wheel by removing the axle nut ①.



INSPECTION

REAR BRAKE DRUM

Measure the brake drum I.D. to determine the extent of wear and, if the limit is exceeded by the wear noted, replace the drum. The value of this limit is indicated inside the drum.

Rear brake drum I.D	Service limit 100.7 mm
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BRAKE SHOE

Using a vernier calipers, measure the brake shoe outside diameter at the place as shown in the photo. If the measurement is less than the limit, replace the brake shoe.

Brake shoe lining for thickness	Service limit 96 mm
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CAUTION

Replace the brake shoe with a set, otherwise braking performance will be adversely affected.

WHEEL

Refer to page 6-3.

TIRE


Refer to page 6-4.

REASSEMBLY AND REMOUNTING

Reassemble and remount the rear wheel and brake in the reverse order of removal, and disassembly.

BRAKE CAM LEVER

● When installing the brake cam lever, align the punched mark of camshaft with the slit on cam lever.

 Brake cam lever bolt : 6 ~ 9 N · m (0.6 ~ 0.9 kg · m)

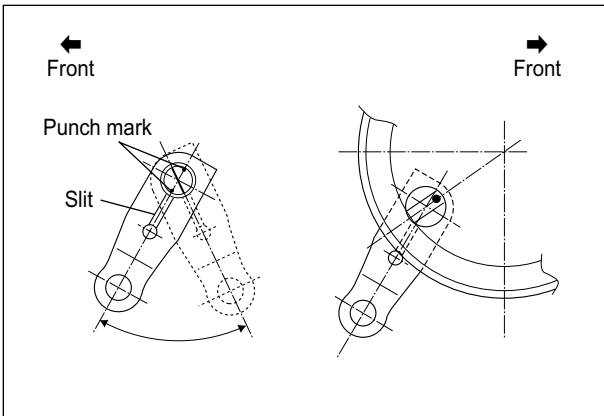
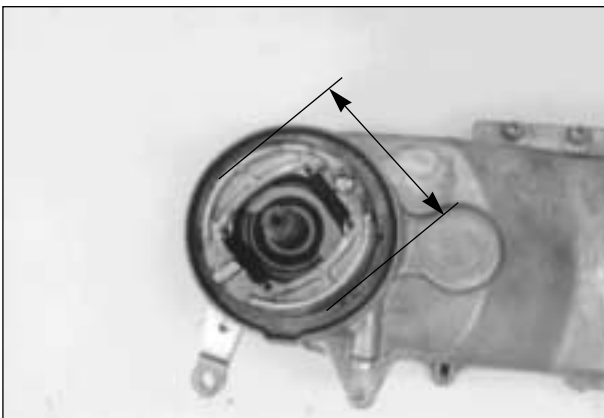
REAR BRAKE SHOE

● Apply **SUPER GREASE “A”** to the camshaft and pin before installing the brake shoes.

 Super Grease “A”

CAUTION

Be careful not to apply too much grease to the camshaft and pin. If grease gets on the lining, brake effectiveness will be lost.



REAR AXLE NUT

● Tighten the rear axle nut to the specified torque.

🔧 Rear axle nut : 60 ~ 90 N · m (6.0 ~ 9.0 kg · m)

