

# 15. REAR BRAKE/REAR FORK/REAR WHEEL/REAR SHOCK ABSORBER

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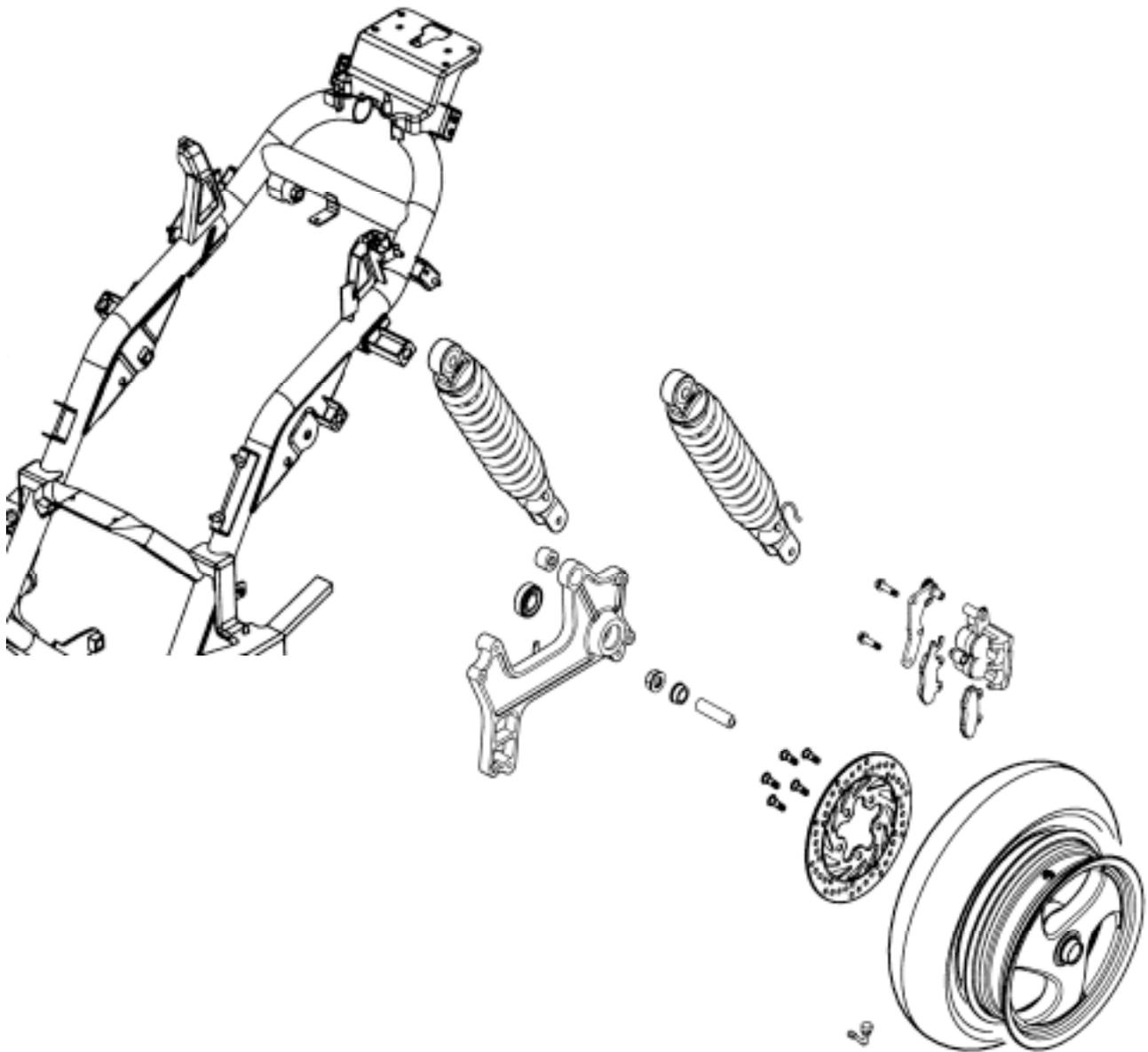
## REAR BRAKE/REAR FORK/REAR WHEEL/ REAR SHOCK ABSORBER

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## SCHEMATIC DRAWING



# 15. REAR BRAKE/REAR FORK/REAR WHEEL/REAR SHOCK ABSORBER

## SERVICE INFORMATION

### GENERAL INSTRUCTIONS

- When performing the services stated in this section, the engine and exhaust muffler must be cold to avoid scalding.
- During servicing, keep oil or grease off the brake pads and brake disk.

### SPECIFICATIONS

Item	Standard (mm)	Service Limit (mm)
Rear wheel rim runout	□	2.0
Rear shock absorber spring free length	232.9	226
Rear brake disk thickness	3.5_ 3.8	3.0
Rear brake disk runout	□	0.30
Rear brake master cylinder I.D.	12.700_ 12.743	12.755
Rear brake master cylinder piston O.D.	12.657_ 12.684	12.645
Rear brake caliper cylinder I.D.	25.400_ 25.45	25.45
Rear brake caliper piston O.D.	25.335_ 25.368	25.30

### TORQUE VALUES

Exhaust muffler lock bolt	32_ 38N-m
Rear axle nut	110_ 130N-m
Rear shock absorber lower mount bolt	35_ 45N-m
Rear shock absorber upper mount bolt	35_ 45N-m
Rear damper lock nut	14.7_ 24.5N-m (apply locking agent)
Rear brake caliper bolt	29_ 35N-m

### SPECIAL TOOLS

- Rear shock absorber remover
- Shock absorber spring compressor

## TROUBLESHOOTING

### Rear wheel wobbling

- Bent rim
- Faulty tire
- Axle not tightened properly

### Soft rear shock absorber

- Weak shock absorber spring
- Damper oil leaks

### Rear wheel noise

- Worn rear wheel axle bearings
- Worn rear fork bearings
- Deformed rear fork

### Poor brake performance

- Air in brake system
- Deteriorated brake fluid
- Contaminated brake pad surface
- Worn brake pads
- Clogged brake fluid line
- Deformed brake disk
- Unevenly worn brake caliper

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## REAR BRAKE

### REAR BRAKE CALIPER REMOVAL

First remove the exhaust muffler. (⇒2-10)  
Remove the rear brake fluid tube bolt and disconnect the brake fluid tube.  
Remove the two bolts attaching the rear brake caliper.  
Remove the rear brake caliper.

\* When removing the brake fluid tube, use shop towels to cover plastic parts and coated surfaces to avoid damage.

### INSPECTION

Inspect the brake pads and brake disk.  
Visually check the brake pad thickness and it should not exceed the wear indicator mark.  
Measure the brake disk thickness.

**Service Limit:** 3.0mm replace if below

### DISASSEMBLY

Disassemble the rear brake caliper. (⇒14-11)  
Inspect and assemble the rear brake caliper . (⇒14-12)

Note: The rear brake caliper and front brake caliper have the same specification.

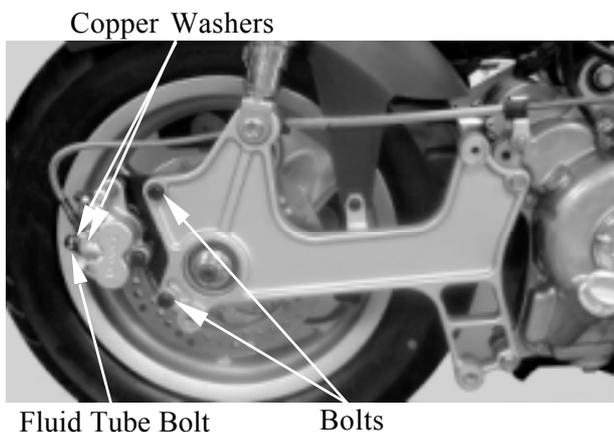
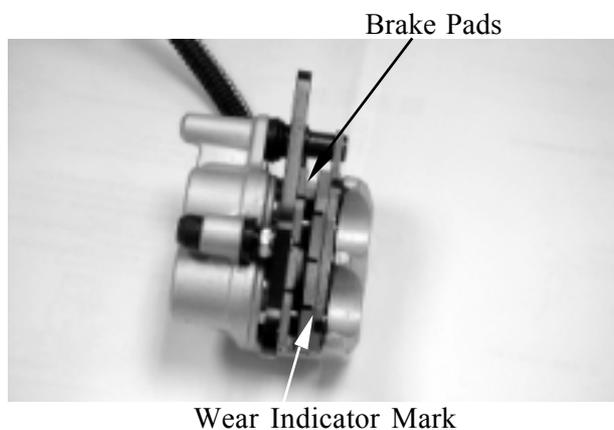
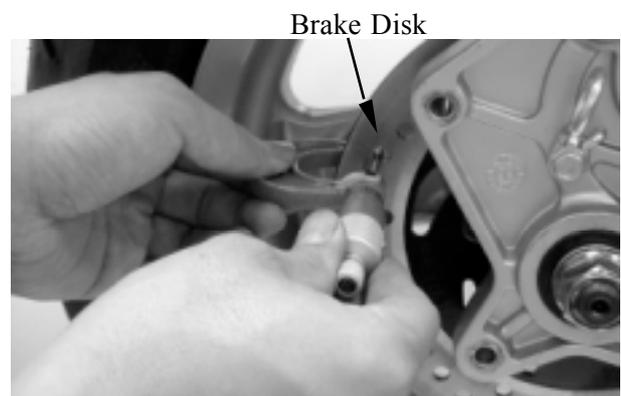
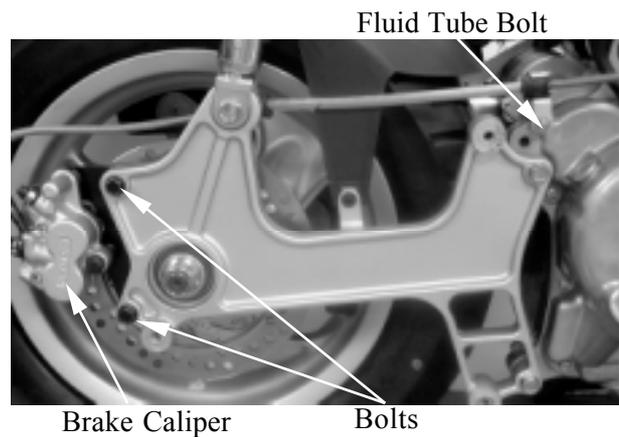
### INSTALLATION

Install the brake caliper to the rear fork and tighten the two bolts.

**Torque:** 29\_ 35N-m

Connect the brake fluid tube to the brake caliper and tighten the fluid tube bolt.  
Fill the brake reservoir with the specified brake fluid and bleed air from the brake system. (⇒14-10)

\* When installing the brake fluid tube, be sure to install the two copper sealing washers.

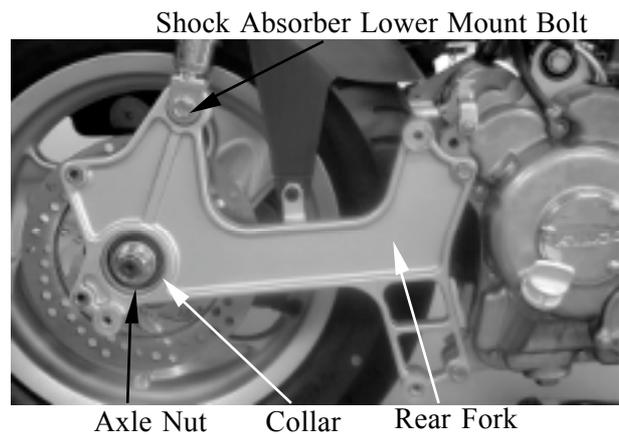


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## REAR FORK

### REMOVAL

Remove the exhaust muffler. (⇒2-10)  
Remove the rear brake caliper. (⇒15-3)  
Remove the right rear shock absorber lower mount bolt.  
Remove the rear axle nut and remove the collar.  
Remove the rear fork.  
The installation sequence is the reverse of removal.



Turn the inner race of each bearing with your finger to see if they turn smoothly and quietly.

Also check if the outer race fits tightly in the hub.

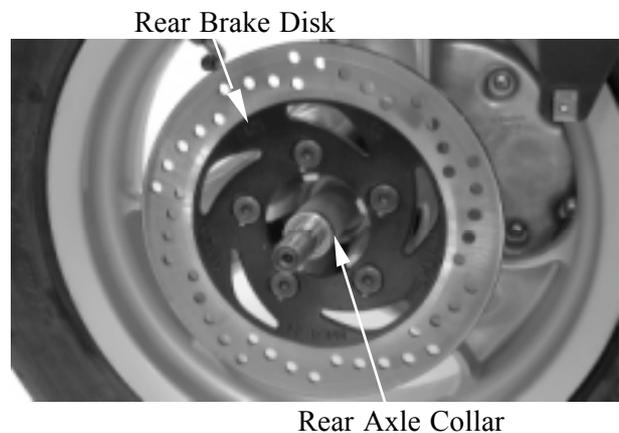
Replace the bearings if the races do not turn smoothly, quietly, or if they fit loosely in the hub.



## REAR WHEEL

### REMOVAL

Remove the exhaust muffler. (⇒2-10)  
Remove the rear brake caliper. (⇒15-3)  
Remove the rear fork.  
Remove the rear axle collar.  
Remove the rear wheel.

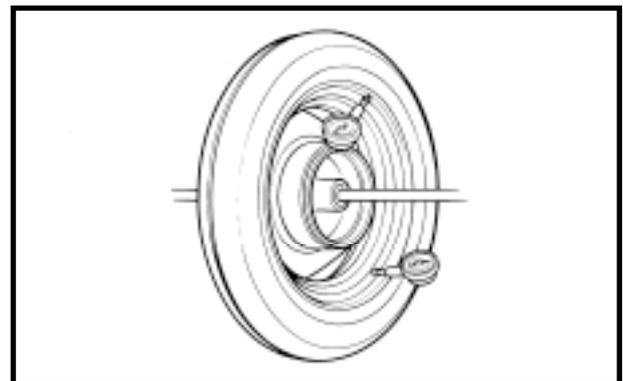


### INSPECTION

Measure the rear wheel rim runout.

#### Service Limits:

- Radial:** 2.0mm replace if over
- Axial:** 2.0mm replace if over



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## INSTALLATION

The installation sequence is the reverse of removal.

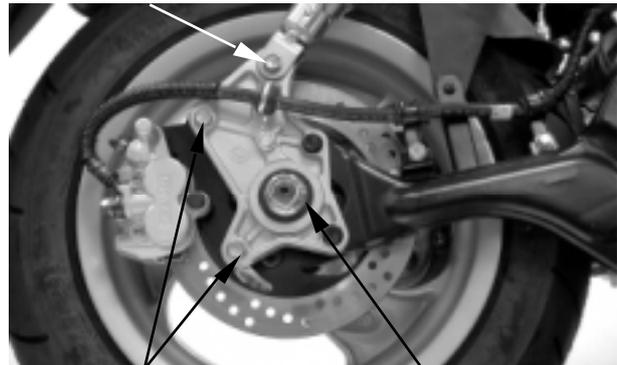
### Torque:

Rear shock absorber lower mount bolt:

35\_ 45N-m

Rear axle nut: 110\_ 130N-m

Shock Absorber Lower Mount Bolt



Brake Caliper Bolts

Axle Nut

## ADJUSTABLE REAR CUSHION

To suit scooter behaviour to load condition rear cushion could be adjusted in spring preload.

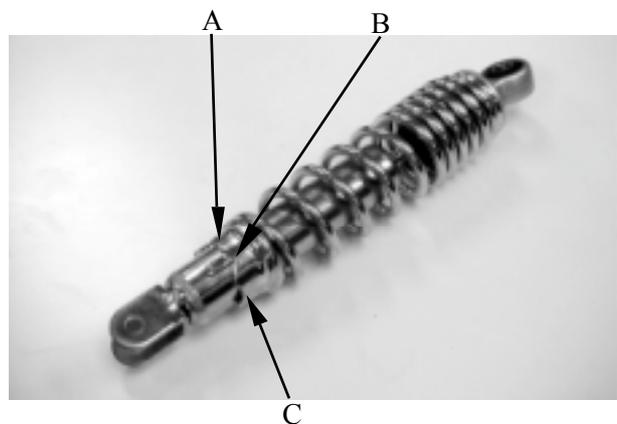
It is possible to adjust rear cushion in three positions:

A position "soft"

B position "medium"

C position "hard"

When you adjust rear cushion, the spring preload of rear cushions must be the same.



## REAR SHOCK ABSORBER

### REMOVAL

Remove the rear carrier. (⇒2-6)

Remove the met-in box. (⇒2-6)

Remove the rear body cover. (⇒2-8)

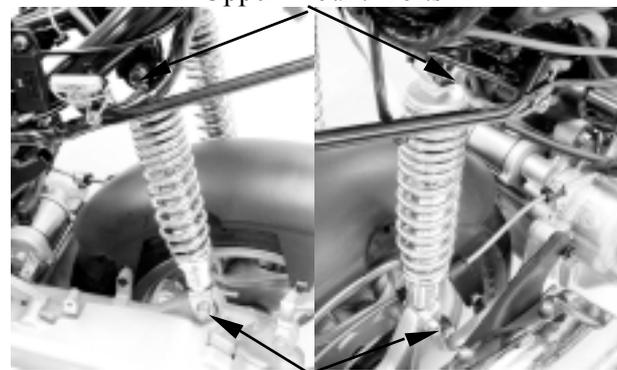
Remove the air cleaner.

Remove the rear shock absorber upper mount bolt.

Remove the right/left rear shock absorber upper and lower mount bolts.

Remove the right and left rear shock absorbers.

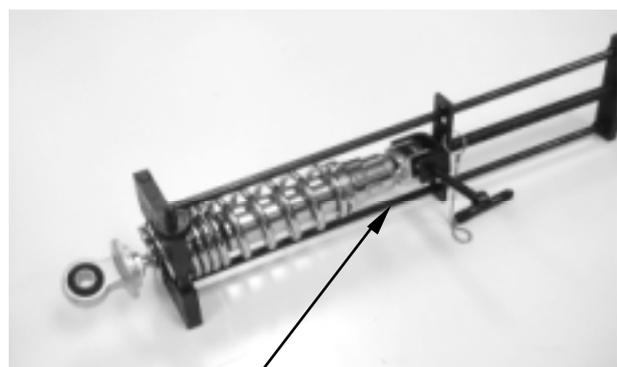
Upper Mount Bolts



Lower Mount Bolts

### DISASSEMBLY

Disassemble the right and left rear shock absorbers using the rear shock absorber remover.

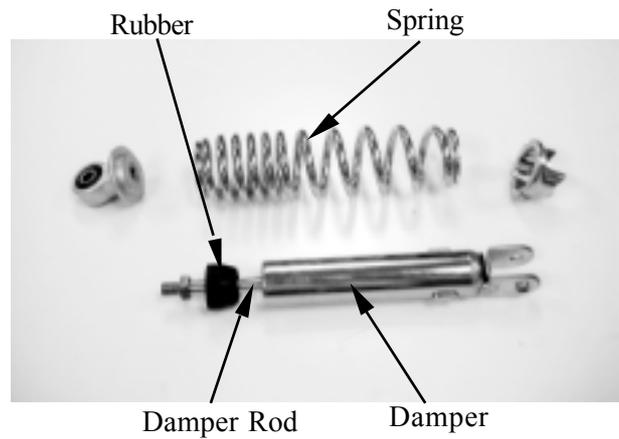


Rear Shock Absorber Remover

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## INSPECTION

Inspect the damper rod for bending or damage.  
Inspect the damper for oil leaks.  
Inspect the damper rubber for deterioration or damage.



## ASSEMBLY

Assemble the rear shock absorbers in the reverse order of disassembly.



## INSTALLATION

Install the rear shock absorbers in the reverse order of removal.

### Torque:

Upper Mount Bolt: 35\_ 45N-m

Lower Mount Bolt: 35\_ 45N-m

