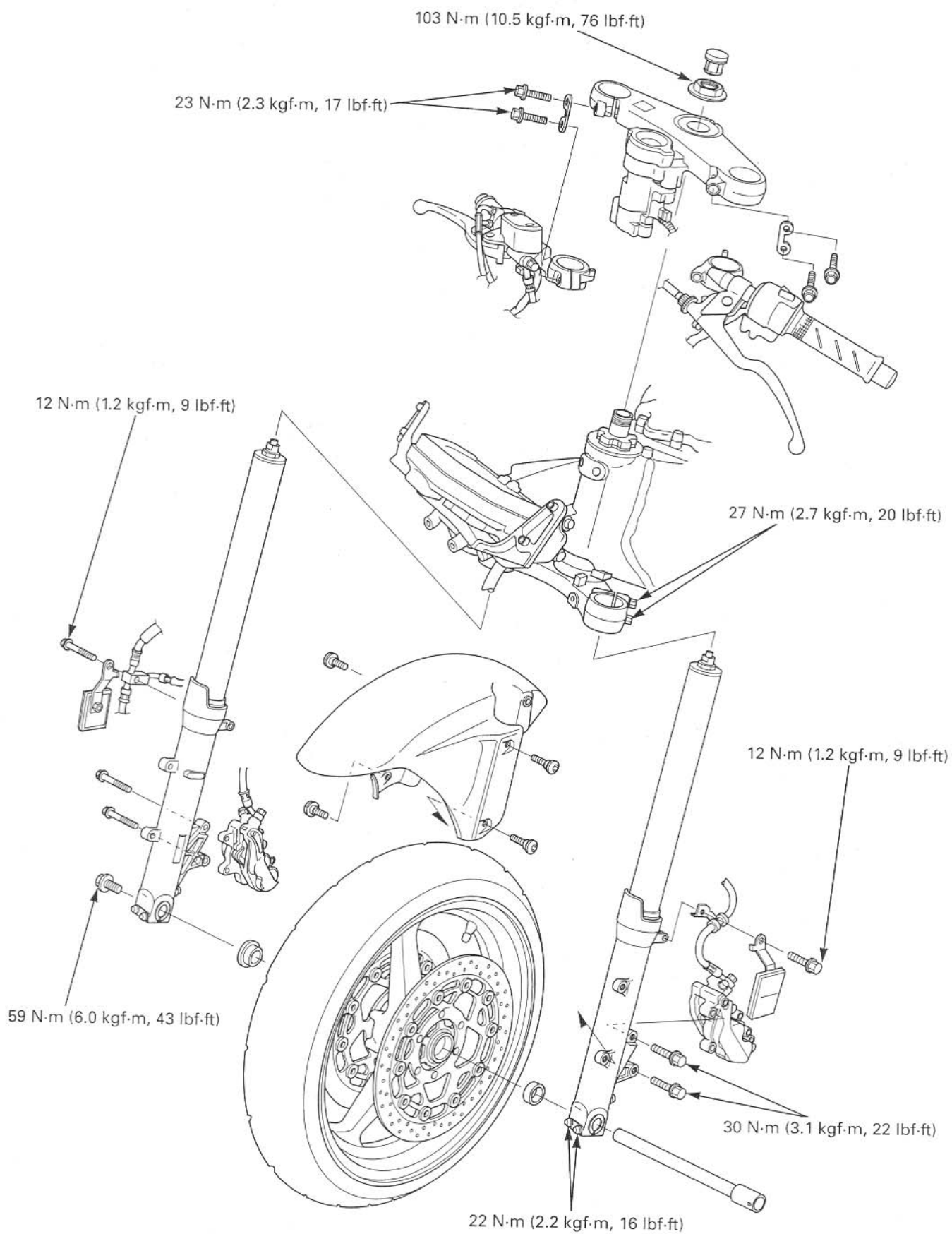


## **14. FRONT WHEEL/SUSPENSION/STEERING**

COMPONENT LOCATION .....	14-2	FRONT WHEEL .....	14-12
SERVICE INFORMATION .....	14-3	FORK .....	14-18
TROUBLESHOOTING .....	14-6	STEERING STEM .....	14-27
HANDLEBARS .....	14-7		

## FRONT WHEEL/SUSPENSION/STEERING

### COMPONENT LOCATION



## SERVICE INFORMATION

### GENERAL

- When servicing the front wheel, fork or steering stem, support the motorcycle using a safety stand or hoist.
- A contaminated brake disc or pad reduces stopping power. Discard contaminated pads and clean a contaminated disc with a high quality brake degreasing agent.
- After the front wheel installation, check the brake operation by applying the brake lever.
- Refer to the brake system information (page 16-4).
- Use only tires marked "TUBELESS" and tubeless valves on rim marked "TUBELESS TIRE APPLICABLE".

### SPECIFICATIONS

Unit: mm (in)

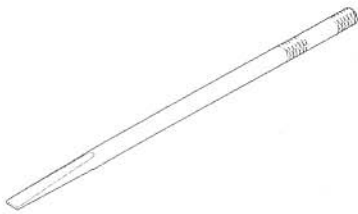






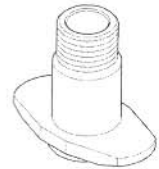
ITEM		STANDARD	SERVICE LIMIT
Minimum tire tread depth		—	1.5 (0.06)
Cold tire pressure	Driver only	250 kPa (2.50 kgf/cm <sup>2</sup> , 36 psi)	—
	Driver and passenger	250 kPa (2.50 kgf/cm <sup>2</sup> , 36 psi)	—
Axle runout		—	0.2 (0.01)
Wheel rim runout	Radial	—	2.0 (0.08)
	Axial	—	2.0 (0.08)
Wheel balance weight		—	60 g (2.1oz) max.
Fork	Spring free length	258.8 (10.19)	253.6 (9.98)
	Tube runout	—	0.20 (0.008)
	Recommended fork fluid	Pro Honda Suspension Fluid SS-8	—
	Fluid level	110 (4.3)	—
	Fluid capacity	531 ± 2.5 cm <sup>3</sup> (18.0 ± 0.08 US oz, 18.7 ± 0.09 Imp oz)	—
	Pre-load adjuster initial setting	14 mm (0.6 in) (4th groove from top)	—
	Rebound adjuster initial setting	2-1/2 turns out from full hard	—
	Compression adjuster initial setting	2 turns out from full hard	—
Steering head bearing pre-load		9.8 – 15 N·m (1.0 – 1.5 kgf·m)	—

### TORQUE VALUES


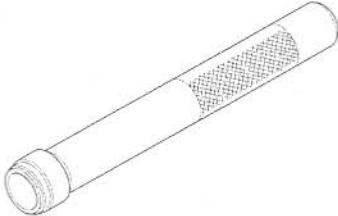





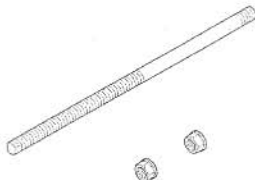


Handlebar weight mounting screw	9.8 N·m (1.0 kgf·m, 7 lbf·ft)	ALOC screw; replace with a new one
Front brake disc bolt	20 N·m (2.0 kgf·m, 14 lbf·ft)	ALOC bolt; replace with a new one
Front axle bolt	59 N·m (6.0 kgf·m, 43 lbf·ft)	
Front axle holder pinch bolt	22 N·m (2.2 kgf·m, 16 lbf·ft)	
Fork socket bolt	34 N·m (3.5 kgf·m, 25 lbf·ft)	Apply a locking agent to the threads
Fork bolt	23 N·m (2.3 kgf·m, 17 lbf·ft)	
Fork top bridge pinch bolt	23 N·m (2.3 kgf·m, 17 lbf·ft)	
Handlebar pinch bolt	23 N·m (2.3 kgf·m, 17 lbf·ft)	
Fork bottom bridge pinch bolt	27 N·m (2.7 kgf·m, 20 lbf·ft)	
Steering stem adjusting nut	47 N·m (4.8 kgf·m, 35 lbf·ft)	
Steering stem adjusting lock nut	—	
Steering stem nut	103 N·m (10.5 kgf·m, 76 lbf·ft)	See page 14-34
Front brake hose clamp bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Front brake hose 3-way joint bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Front master cylinder holder bolt	12 N·m (1.2 kgf·m, 9 lbf·ft)	
Front brake caliper mounting bolt	30 N·m (3.1 kgf·m, 22 lbf·ft)	ALOC bolt; replace with a new one

## FRONT WHEEL/SUSPENSION/STEERING

### TOOLS

<p>Bearing remover shaft 07GGD-0010100</p> 	<p>Bearing remover head, 22 mm 07746-0050700</p> 	<p>Driver 07749-0010000</p> 
<p>Attachment, 42 x 47 mm 07746-0010300</p> 	<p>Pilot, 22 mm 07746-0041000</p> 	<p>Fork seal driver, 45 mm I.D. 07KMD-KZ30100</p>  <p>or 07KMD-KZ3010A (U.S.A. only)</p>
<p>Steering stem socket 07916-3710101</p>  <p>or 07916-3710100 (U.S.A. only)</p>	<p>Driver attachment, A 070MF-MCJ0100</p>  <p>Not available in U.S.A.</p>	<p>Driver attachment, B 070MF-MCJ0200</p>  <p>Not available in U.S.A.</p>
<p>Driver shaft assembly 07946-KM90301</p>  <p>Not available in U.S.A.</p>	<p>Bearing remover, A 07946-KM90401</p>  <p>Not available in U.S.A.</p>	<p>Bearing remover, B 07NMF-MT70110</p>  <p>Not available in U.S.A.</p>

# FRONT WHEEL/SUSPENSION/STEERING

<p>Assembly base 07946-KM90600</p>  <p>Not available in U.S.A.</p>	<p>Steering stem driver 07946-MB00000</p> 	<p>Remover attachment, C 07AMF-MEEA100</p> 
<p>Remover attachment, D 07AMF-MEEA200</p> 	<p>Main bearing driver attachment 07946-ME90200</p> 	<p>Fork seal driver weight 07947-KA50100</p> 
<p>Oil seal driver 07965-MA60000</p> 	<p>Installer shaft 07VMF-KZ30200</p> 	<p>Installer attachment, A 07VMF-MAT0100</p> 
<p>Installer attachment, B 07VMF-MAT0200</p> 		

## FRONT WHEEL/SUSPENSION/STEERING

---

### TROUBLESHOOTING

#### Hard steering

- Steering head bearing adjusting nut too tight
- Worn or damaged steering head bearings
- Bent steering stem
- Insufficient tire pressure

#### Steers to one side or does not track straight

- Damaged or loose steering head bearings
- Bent forks
- Bent axle
- Bent frame
- Worn or damaged wheel bearings
- Worn or damaged swingarm pivot bearings

#### Front wheel wobbling

- Bent rim
- Worn or damaged front wheel bearings
- Faulty tire
- Unbalanced front tire and wheel

#### Front wheel turns hard

- Faulty front wheel bearings
- Bent front axle
- Front brake drag

#### Soft suspension

- Insufficient fluid in fork
- Incorrect fork fluid weight
- Weak fork springs
- Insufficient tire pressure

#### Hard suspension

- Bent fork tubes
- Too much fluid in fork
- Incorrect fork fluid weight
- Clogged fork fluid passage

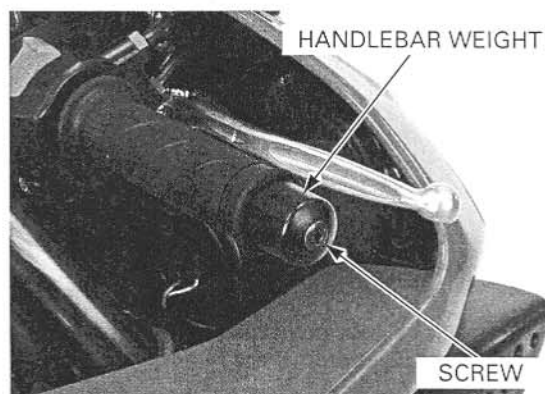
#### Front suspension noise

- Insufficient fluid in fork
- Loose fork fasteners

## HANDLEBARS

### REMOVAL

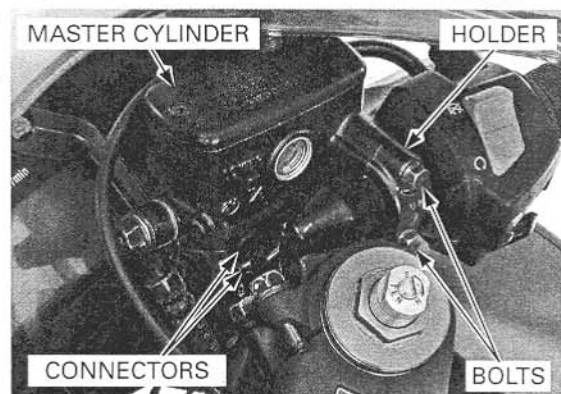
Remove the screw and right handlebar weight.



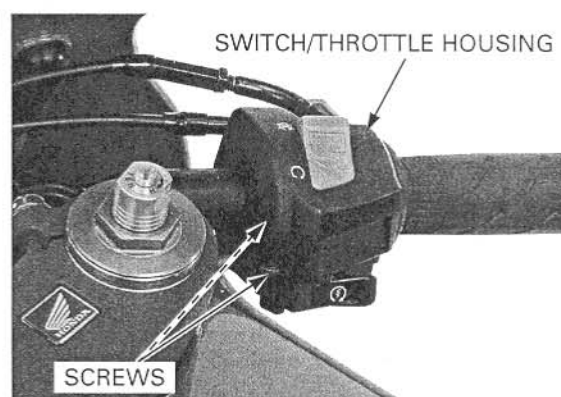
Disconnect the front brake switch wire connectors from the switch.

*Keep the brake master cylinder upright to prevent air from entering the hydraulic system.*

Remove the master cylinder holder bolts, holder and master cylinder assembly.

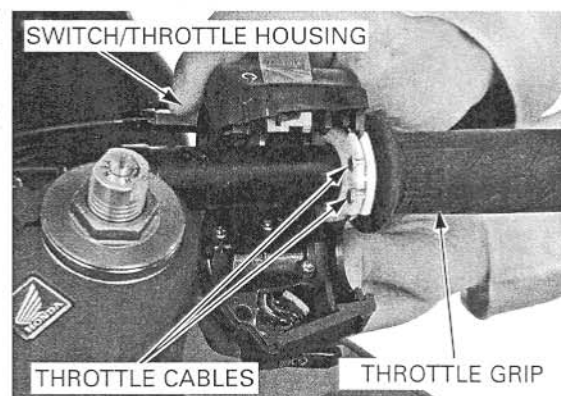


Remove the right handlebar switch/throttle housing screws.



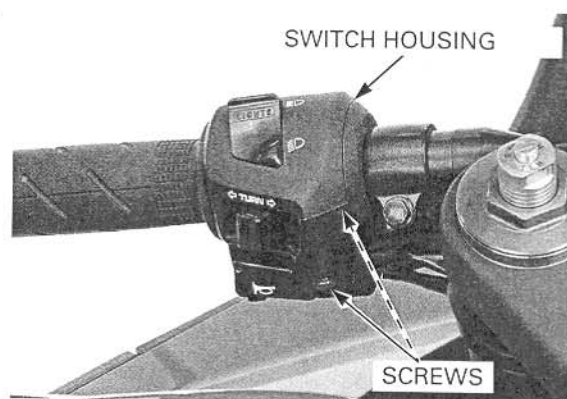
Disconnect the throttle cables from the throttle pipe and remove the throttle grip from the right handlebar.

Remove the right handlebar switch/throttle housing from the right handlebar.

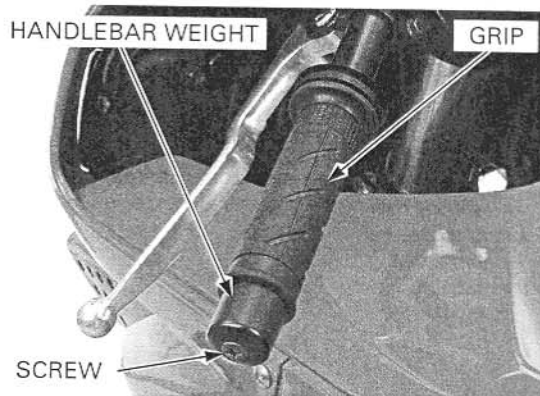


## FRONT WHEEL/SUSPENSION/STEERING

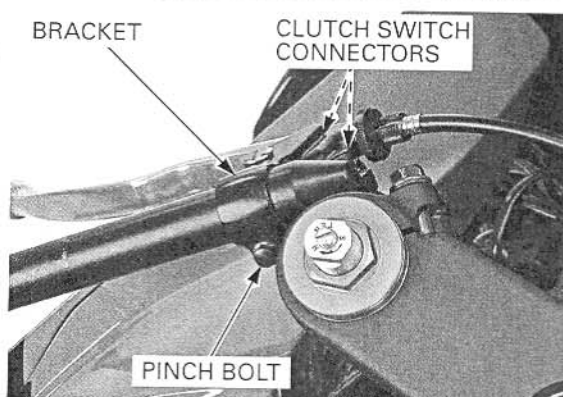
Remove the screws and left handlebar switch housing.



Remove the screw and left handlebar weight.  
Remove the handle grip from the handlebar.



Loosen the clutch lever bracket pinch bolt.  
Disconnect the clutch switch connectors from the clutch switch.

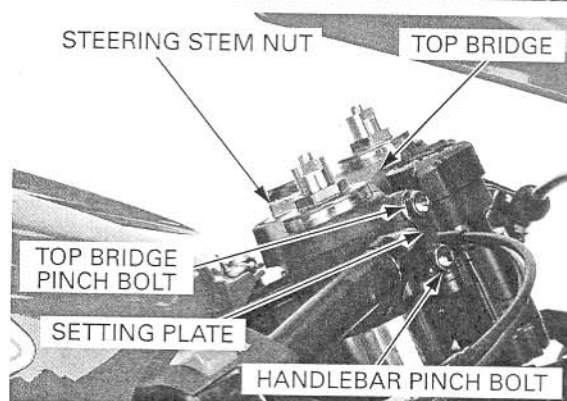


Remove the steering stem cap, top bridge pinch bolts, handlebar pinch bolts and setting plates.

Remove the steering stem nut and top bridge.

Remove the handlebars from the fork tube.

Remove the clutch lever bracket from the left handlebar.



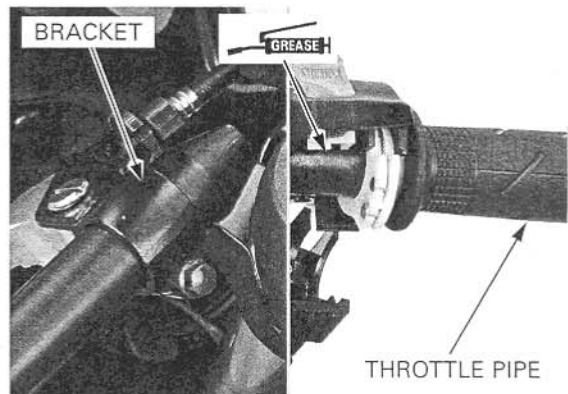


### INSTALLATION

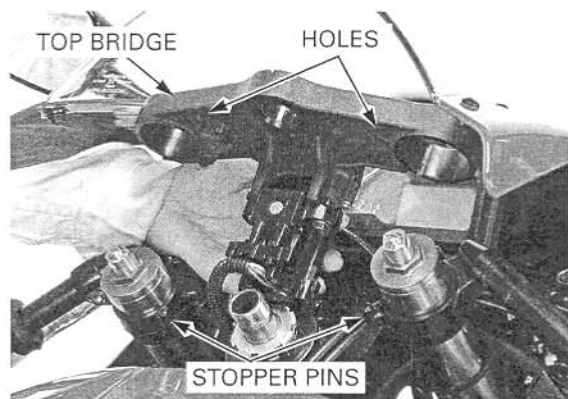
Apply grease to the sliding surface of the throttle pipe.

Install the clutch lever bracket to the left handlebar, and also the throttle pipe to the right handlebar.

Install the handlebars onto the fork tube.



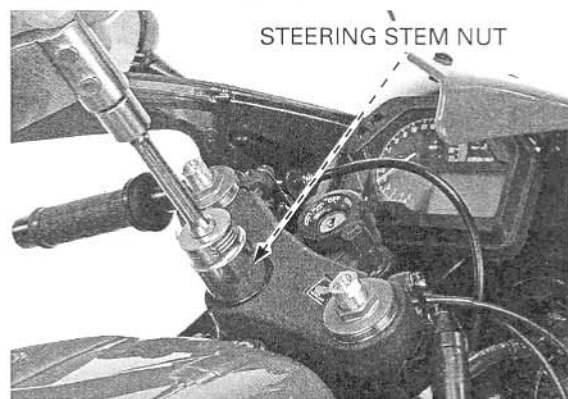
Install the top bridge while aligning its holes with the handlebar stopper pins.



Tighten the steering stem nut to the specified torque.

**TORQUE: 103 N·m (10.5 kgf·m, 76 lbf·ft)**

Install the steering stem cap.



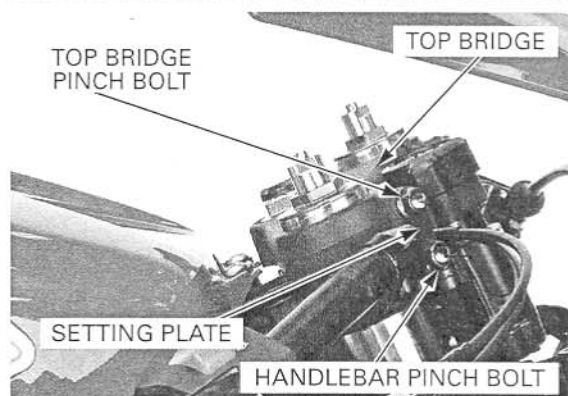
Install the setting plates, top bridge pinch bolts and handlebar pinch bolts.

Tighten the top bridge pinch bolts to the specified torque.

**TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)**

Tighten the handlebar pinch bolts to the specified torque.

**TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)**



## FRONT WHEEL/SUSPENSION/STEERING

### HANDLEBAR WEIGHT REPLACEMENT

Remove the grip from the handlebar.  
Straighten the weight retainer tab by the screwdriver or punch.

*Apply lubricant spray through the tab locking hole to the rubber for easy removal.*

Temporarily install the handlebar weight and screw, then remove the inner weight by turning the handlebar weight.

Remove the handlebar weight from the inner weight.

Discard the retainer ring.

Install the new retainer ring onto the inner weight. Install the handlebar weight onto the inner weight while aligning the bosses and grooves each other. Install a new mounting screw.

Insert the handlebar weight assembly into the handlebar.

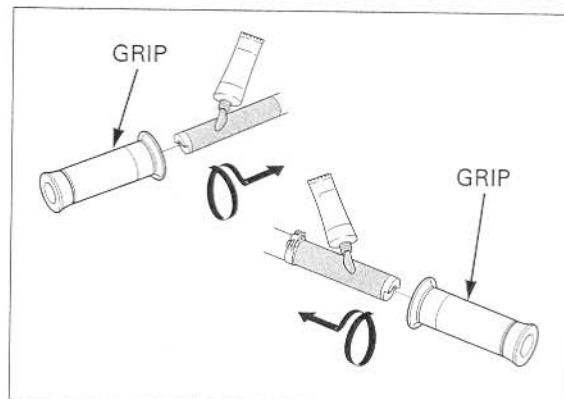
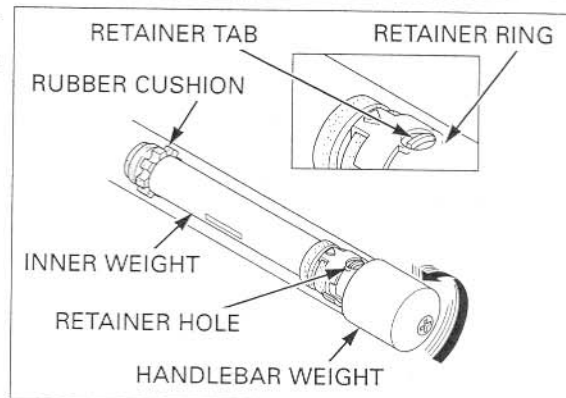
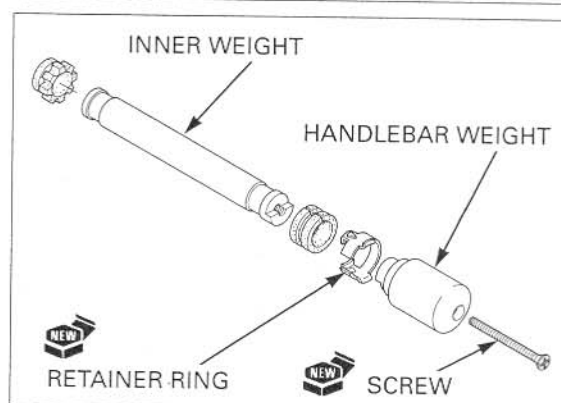
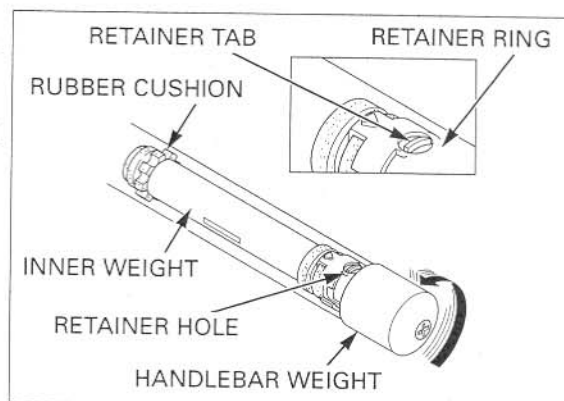
Turn the handlebar weight and hook the retainer ring tab with the hole in the handlebar.

Apply Honda Bond A or equivalent adhesive to the inside of the grip and to the clean surfaces of the left handlebar and throttle grip.

Wait 3 – 5 minutes and install the grip.

Rotate the grip for even application of the adhesive.

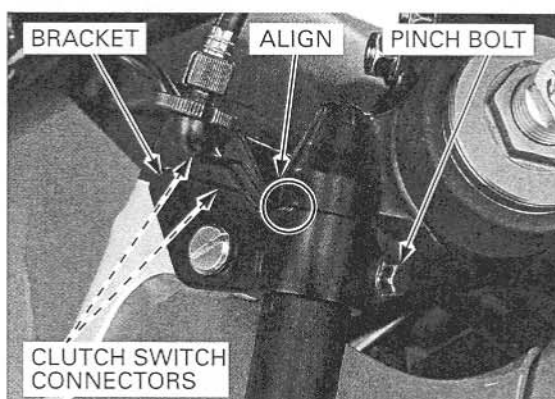
*Allow the adhesive to dry for an hour before using.*



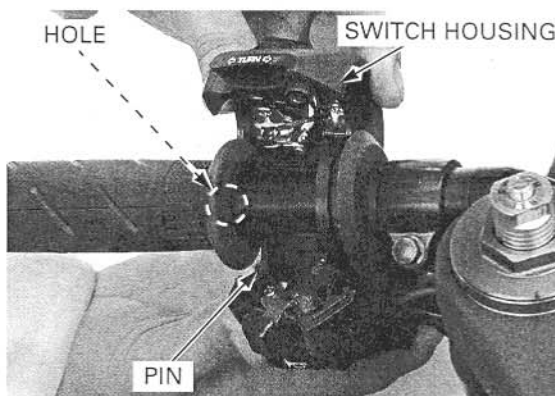
## FRONT WHEEL/SUSPENSION/STEERING

Tighten the clutch lever bracket pinch bolt, aligning the punch mark on the left handlebar and clutch lever bracket.

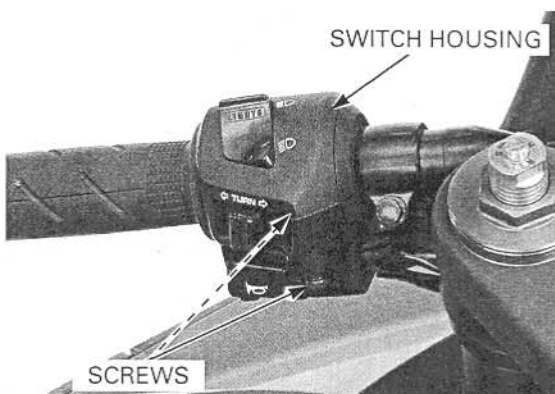
Connect the clutch switch connector.



Install the left handlebar switch housing aligning its locating pin with the hole in the handlebar.

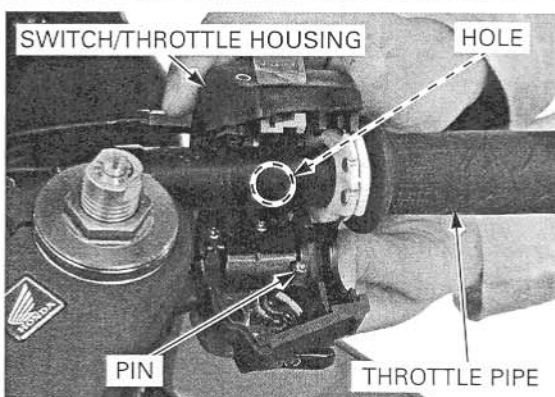


Tighten the forward screw first, then the rear screw.



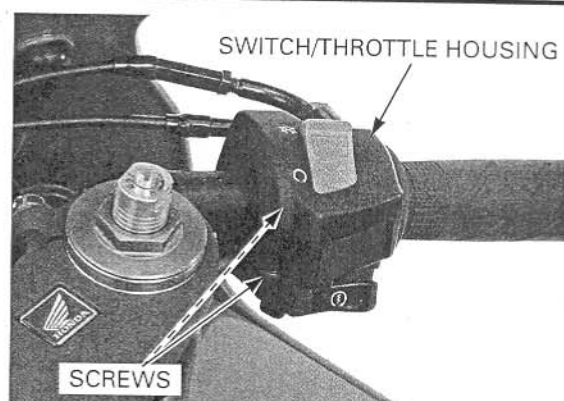
Connect the throttle cables into the throttle pipe.

Install the right handlebar switch/throttle housing by aligning its locating pin with the hole in the handlebar.



## FRONT WHEEL/SUSPENSION/STEERING

Tighten the forward screw first, then the rear screw.



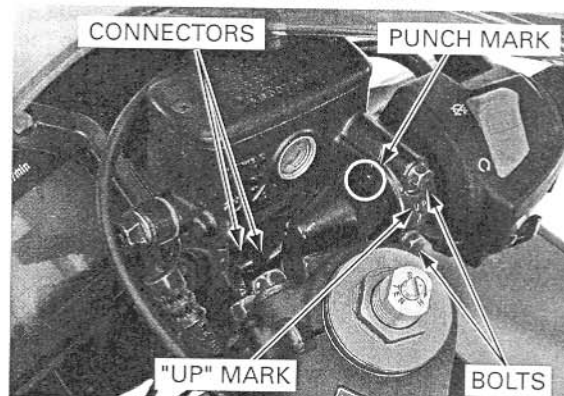
Install the master cylinder by aligning the end of the master cylinder with the punch mark on the handlebar.

Install the master cylinder holder with its "UP" mark facing up.

Tighten the upper bolt first, then the lower bolt.

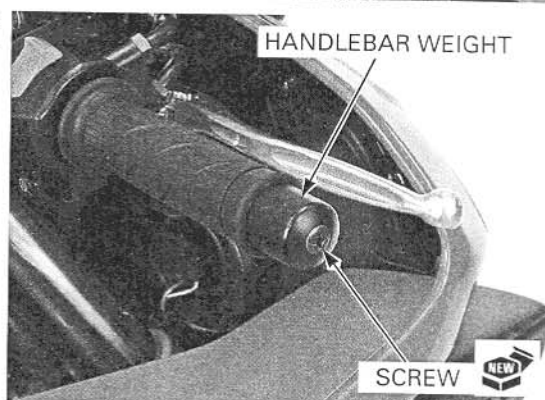
**TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)**

Connect the front brake switch wire connectors.



Install the handlebar weights on both handlebars and tighten the new mounting screws to the specified torque.

**TORQUE: 9.8 N·m (1.0 kgf·m, 7 lbf·ft)**



## FRONT WHEEL

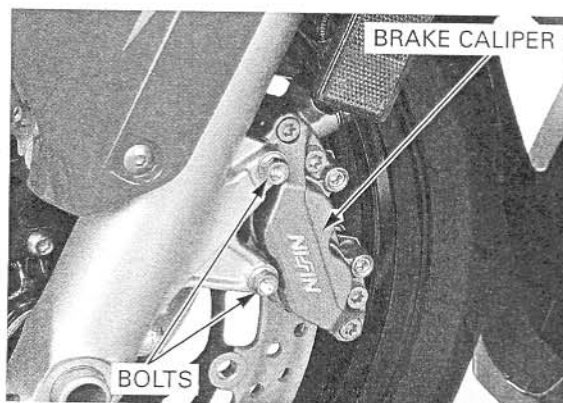
### REMOVAL

Support the motorcycle securely and raise the front wheel off the ground using a safety stand or a hoist.

Remove the brake caliper mounting bolts and both brake calipers.

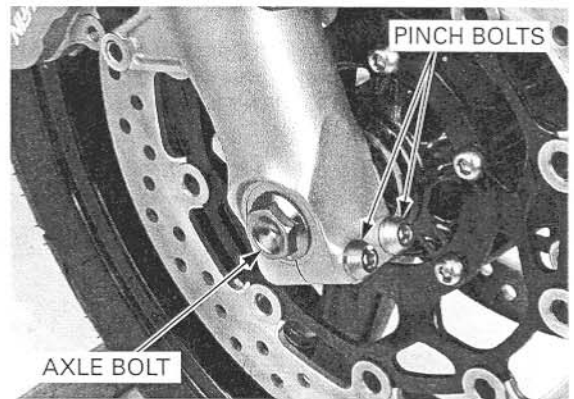
*Do not operate the brake lever after the brake caliper is removed.*

Support the brake caliper with a piece of wire so that it does not hang from the brake hose. Do not twist the brake hose.

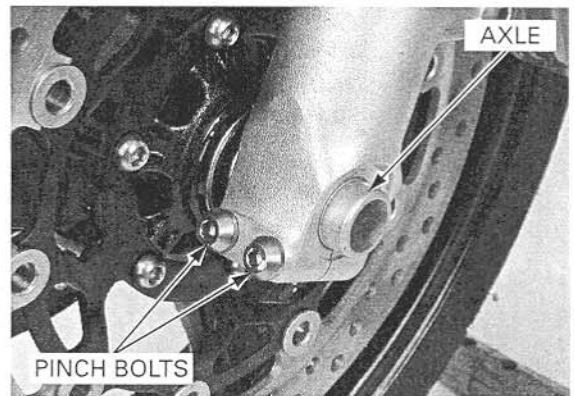


## FRONT WHEEL/SUSPENSION/STEERING

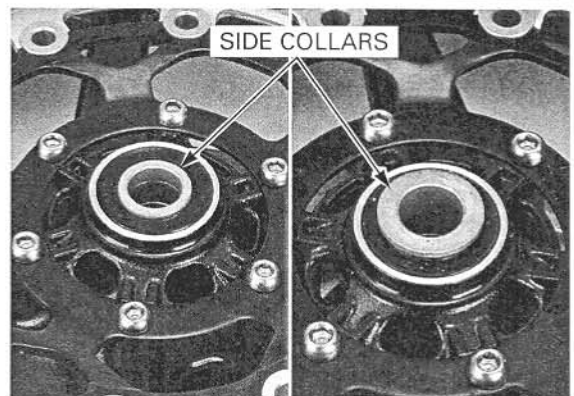
Loosen the right axle pinch bolts.  
Remove the axle bolt.



Loosen the left axle pinch bolts.  
Remove the axle and front wheel.



Remove the side collars.

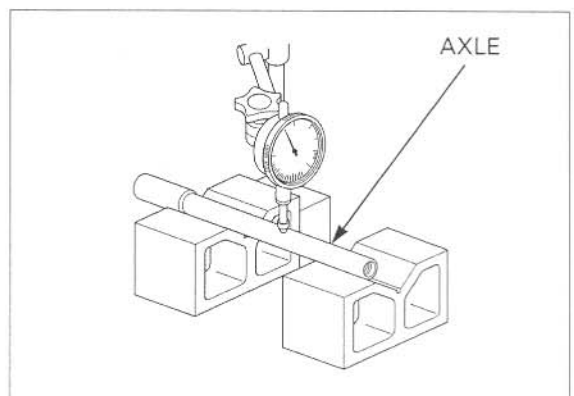


### INSPECTION

#### Axle

Set the axle on V-blocks and measure the runout.  
Actual runout is 1/2 the total indicator reading.

**SERVICE LIMIT:** 0.2 mm (0.008 in)



## FRONT WHEEL/SUSPENSION/STEERING

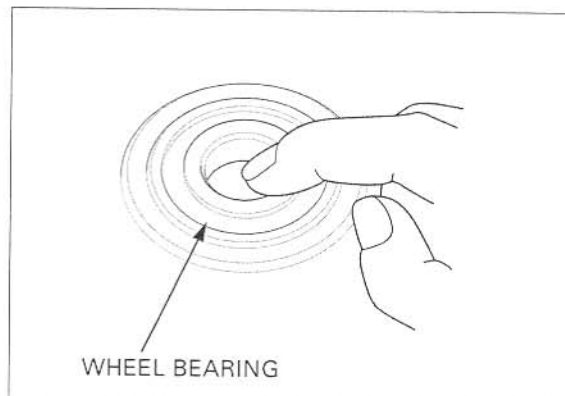
### Wheel bearing

Turn the inner race of each bearing with your finger. The bearings should turn smoothly and quietly. Also check that the bearing outer race fits tightly in the hub.

*Replace the bearings in pairs.*

Remove and discard the bearings if they do not turn smoothly, quietly, or if they fit loosely in the hub.

Replace the wheel bearings, if necessary (page 14-15).



### Wheel rim runout

Check the rim runout by placing the wheel in a turning stand.

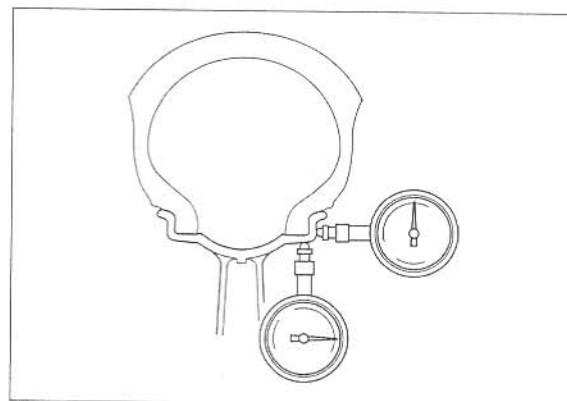
Spin the wheel by hand, and read the runout using a dial indicator.

Actual runout is 1/2 the total indicator reading.

#### SERVICE LIMITS:

Radial: 2.0 mm (0.08 in)

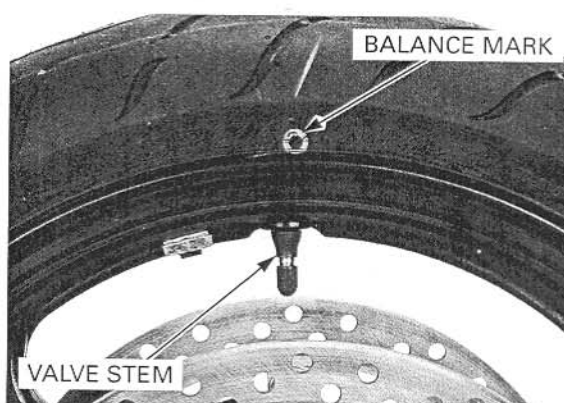
Axial: 2.0 mm (0.08 in)



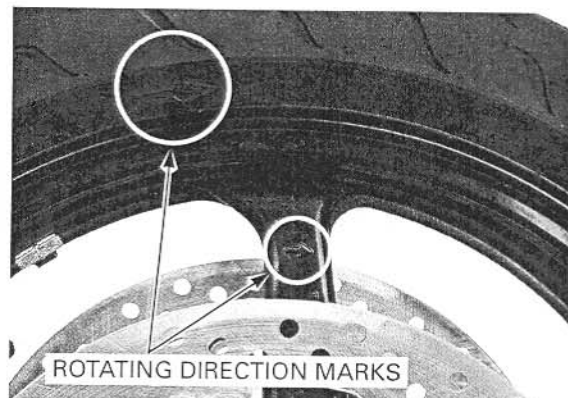
*For optimum balance, the tire balance mark (a paint dot on the side wall) must be located next to the valve stem. Remount the tire if necessary.*

### Wheel balance

- Wheel balance directly affects the stability, handling and over all safety of the motorcycle. Always check balance when the tire has been removed from the rim.



Note the rotating direction marks on the wheel and tire.

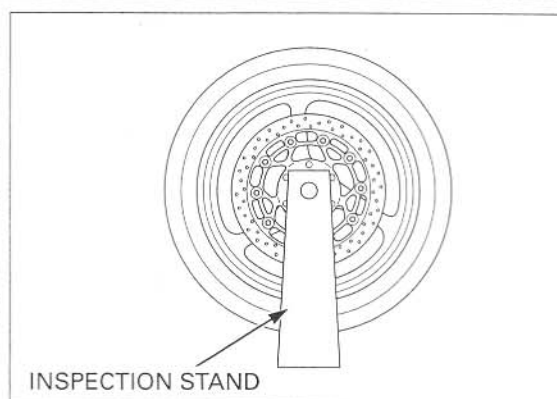




## FRONT WHEEL/SUSPENSION/STEERING

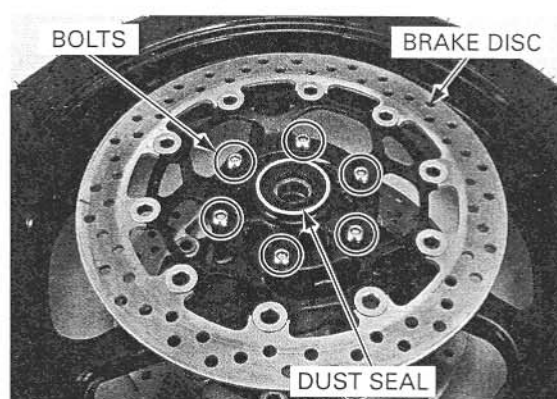
Remove the dust seals from the wheel.  
Mount the wheel, tire and brake discs assembly in an inspection stand.  
Spin the wheel, allow it to stop, and mark the lowest (heaviest) point of the wheel with a chalk.  
Do this two or three times to verify the heaviest area.  
If the wheel is balanced, it will not stop consistently in the same position.

To balance the wheel, install the wheel weights on the highest side of the rim, the side opposite the chalk marks. Add just enough weight so the wheel will no longer stop in the same position when it is spun. Do not add more than 60 grams to the wheel.



### DISASSEMBLY

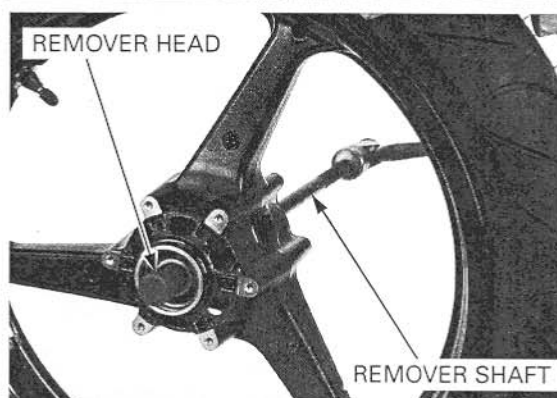
Remove the bolts and brake discs.  
Remove the dust seals.



Install the bearing remover head into the bearing.  
From the opposite side, install the bearing remover shaft and drive the bearing out of the wheel hub.  
Remove the distance collar and drive out the other bearing.

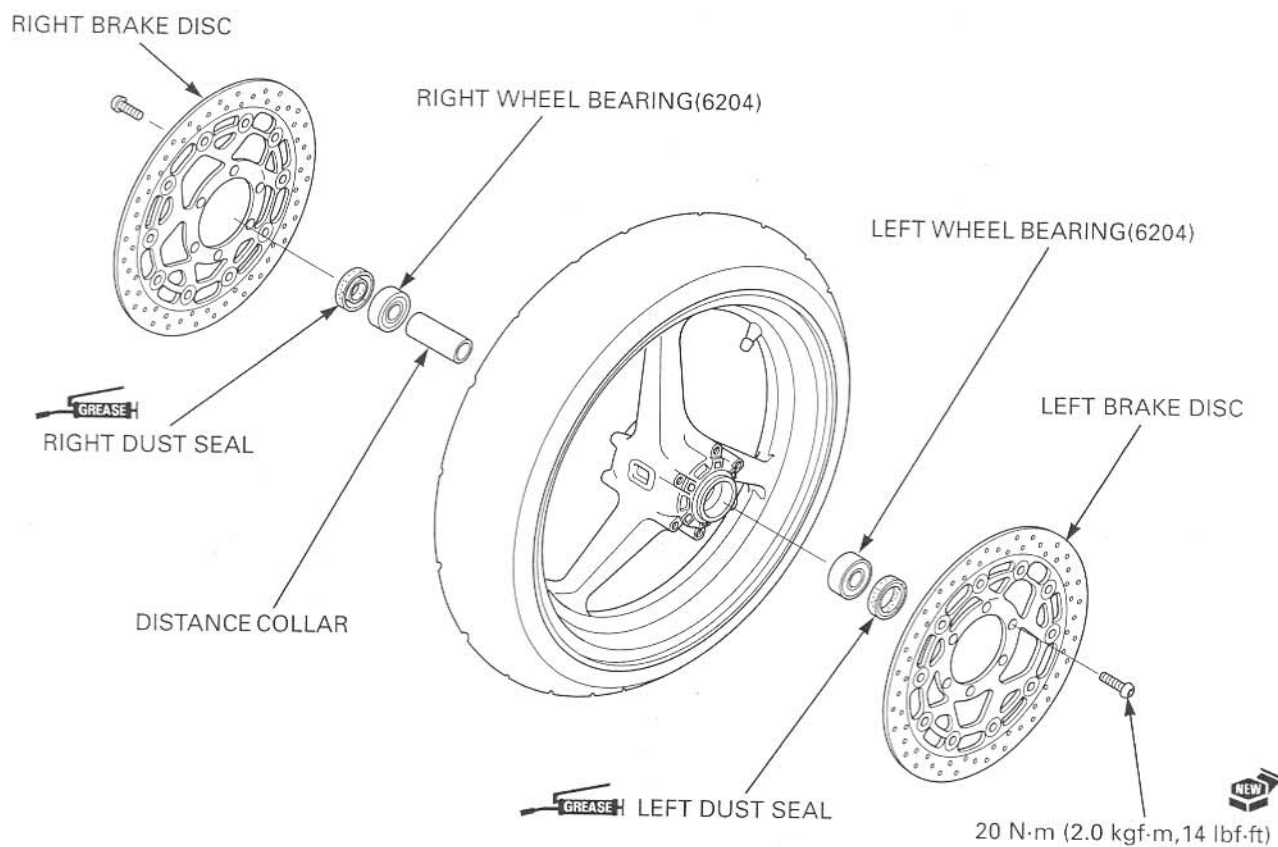
#### TOOLS:

Bearing remover head, 22 mm 07746-0050700  
Bearing remover shaft 07GGD-0010100



## FRONT WHEEL/SUSPENSION/STEERING

### ASSEMBLY



Never install the old bearings. Once the bearings have been removed, the bearings must be replaced with new ones.

Drive in a new right bearing squarely. Install the distance collar, then drive in the left bearing using the special tools.

#### TOOLS:

Driver

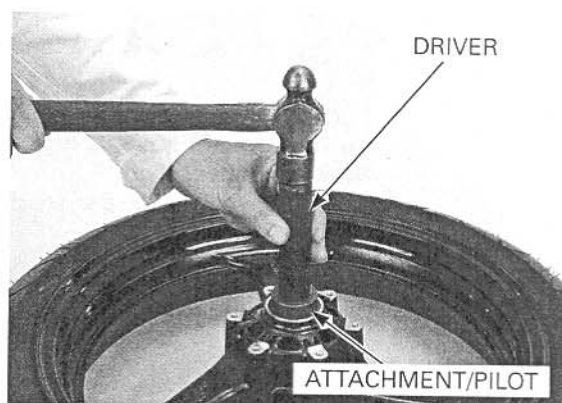
Attachment, 42 X 47 mm

Pilot, 22 mm

07749-0010000

07746-0010300

07746-0041000

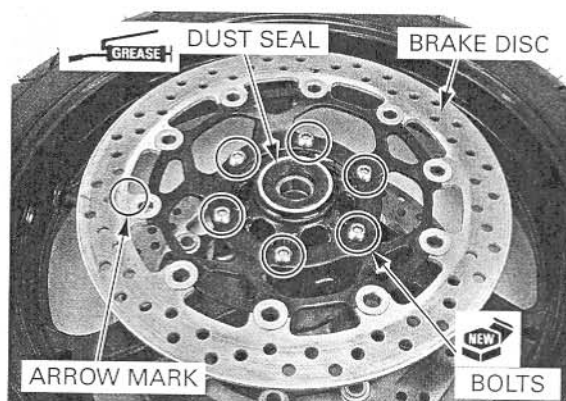


Do not get grease on the brake discs or stopping power will be reduced.

Install the brake discs with the arrow mark facing in the normal rotating direction. Install new disc bolts and tighten them in a criss-cross pattern in two or three steps.

**TORQUE: 20 N·m (2.0 kgf·m, 14 lbf·ft)**

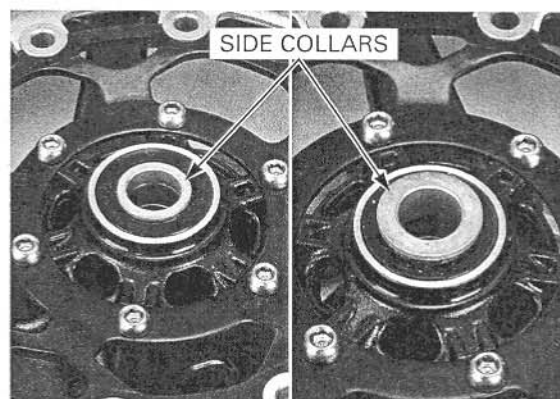
Apply grease to the dust seal lips, then install them into the wheel hub.





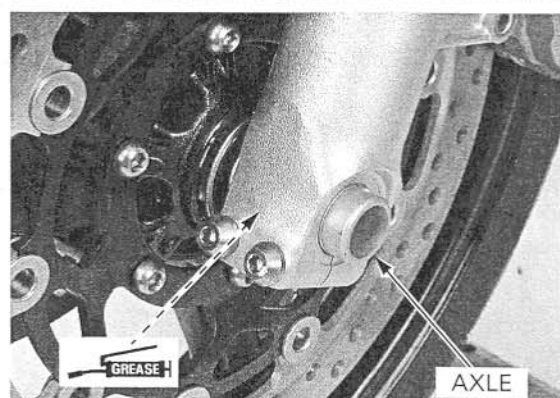
## INSTALLATION

Install the right and left side collars.



Install the front wheel between the fork legs.

Apply a thin layer of grease to the front axle surface.  
Install the front axle from the left side.

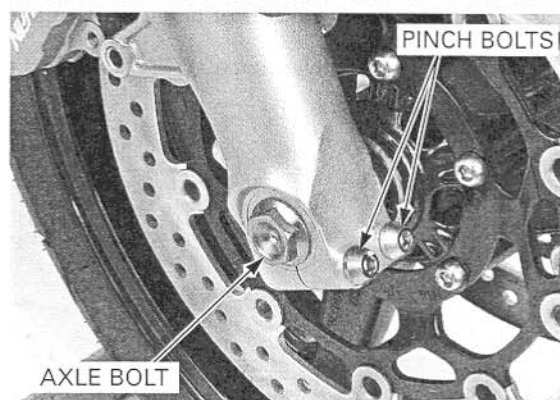


Hold the axle and tighten the axle bolt to the specified torque.

**TORQUE: 59 N·m (6.0 kgf·m, 43 lbf·ft)**

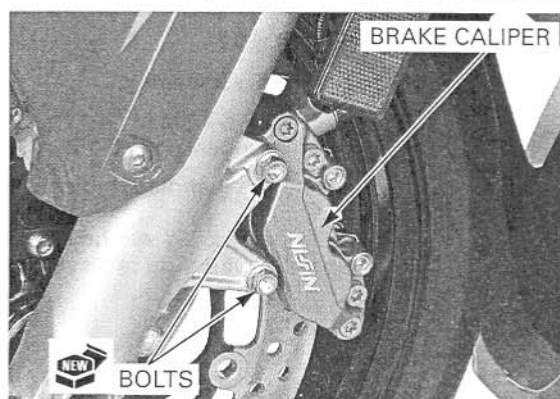
Tighten the right axle pinch bolts to the specified torque.

**TORQUE: 22 N·m (2.2 kgf·m, 16 lbf·ft)**



Install the both brake caliper and tighten the new mounting bolts to the specified torque.

**TORQUE: 30 N·m (3.1 kgf·m, 22 lbf·ft)**



## FRONT WHEEL/SUSPENSION/STEERING

With the front brake applied, pump the fork up and down several times to seat the axle and check brake operation.

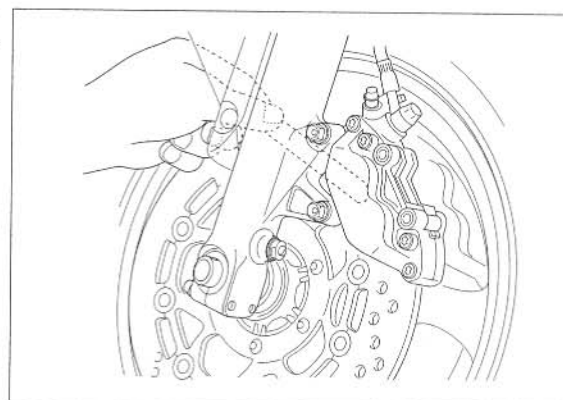
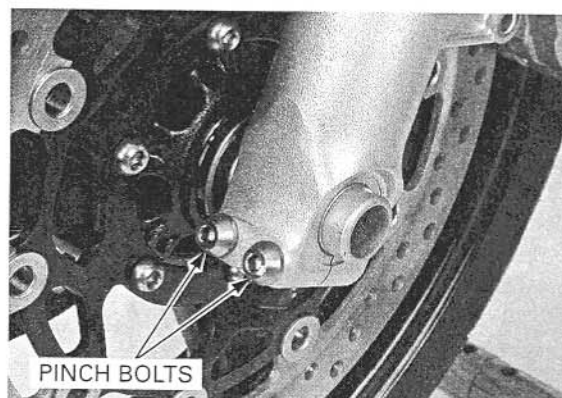
Check the brake operation by applying the brake lever.

Tighten the left axle pinch bolts to the specified torque.

**TORQUE: 22 N·m (2.2 kgf·m, 16 lbf·ft)**

Check the clearance between the brake disc and caliper body (not brake pad) on each side after installation.

The clearance should be at least 0.7 mm (0.03 in).



## FORK

### REMOVAL

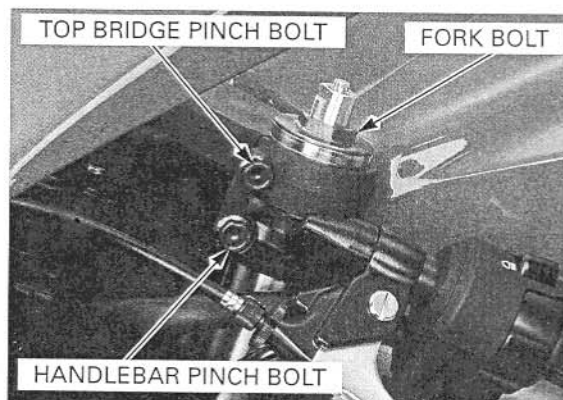
*Keep the brake master cylinder upright.*

Remove the following:

- Front wheel (page 14-12)
- Front fender (page 3-15)

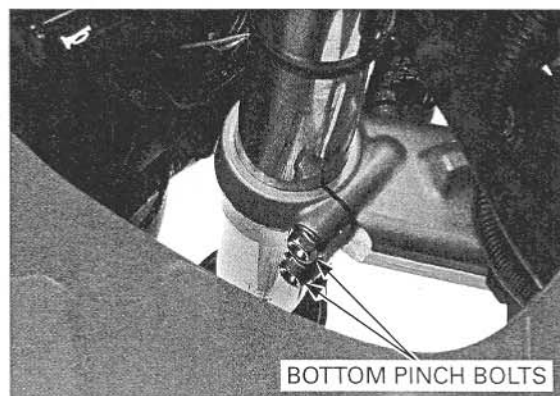
Loosen the handlebar pinch bolt and top bridge pinch bolt.

When the fork leg will be disassembled, loosen the fork bolt, but do not remove it yet.



## FRONT WHEEL/SUSPENSION/STEERING

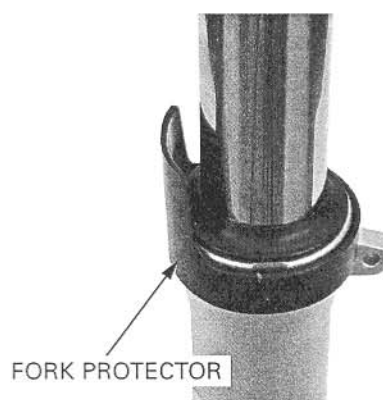
Loosen the fork bottom pinch bolts and remove the fork tube from the fork top bridge and steering stem.



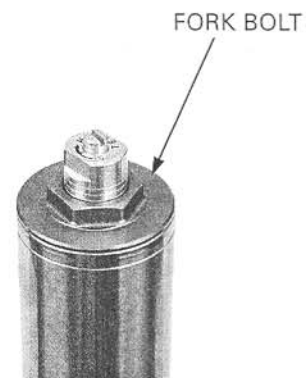
### DISASSEMBLY

*Be careful not to scratch the fork tube or damage the dust seal.*

Remove the fork protector by prying it carefully using a screwdriver.



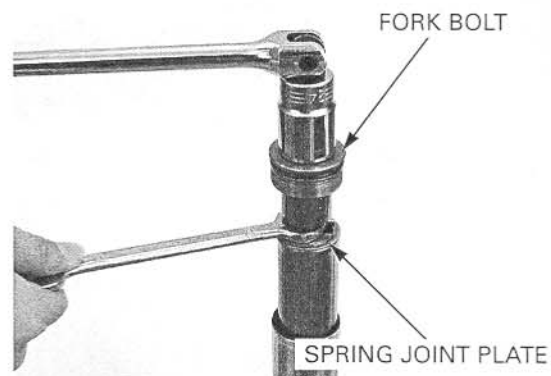
Remove the fork bolt from the fork tube.



Push down the spring joint plate and install the 14 mm wrench onto the rebound adjuster.

*Do not remove the rebound damping adjuster from the damper rod, or fork damping force will be changed.*

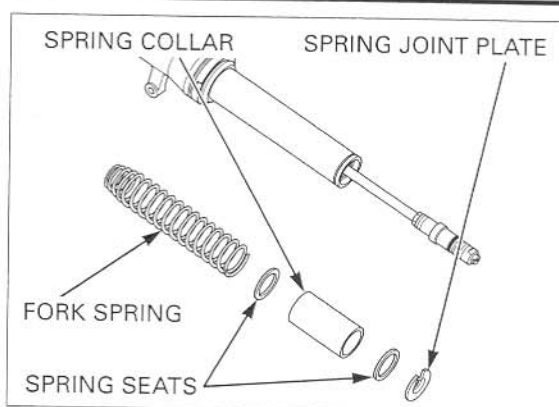
Hold the rebound adjuster, then loosen and remove the fork bolt from the rebound adjuster.



## FRONT WHEEL/SUSPENSION/STEERING

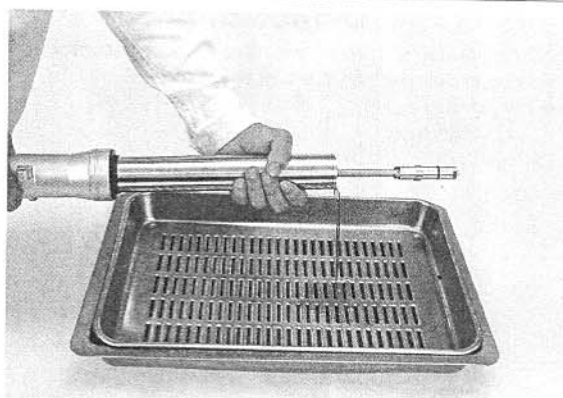
Remove the following:

- Spring joint plate
- Spring collar
- Spring seats
- Fork spring



Pour out the fork fluid by pumping the fork tube several times.

Pour out the fork fluid from the fork damper by pumping the damper rod several times.

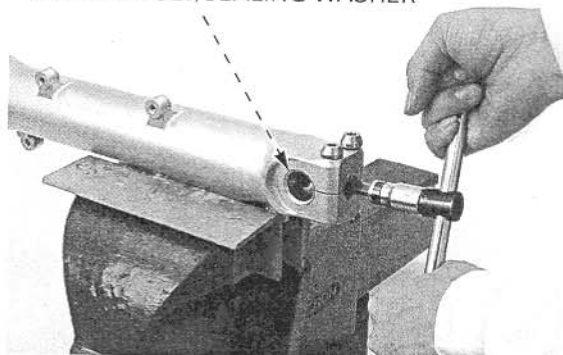


Hold the fork slider in a vice with soft jaws or a shop towel.

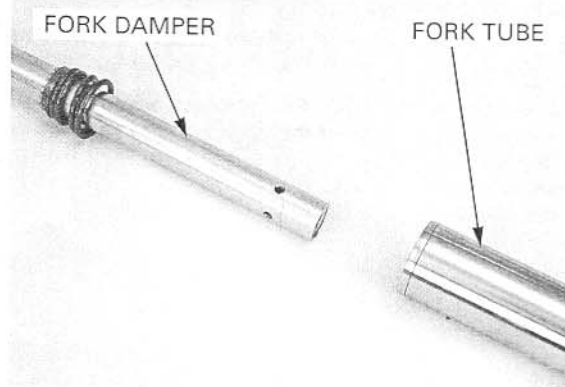
Remove the fork damper socket bolt and sealing washer.

*If the fork damper turns together with the socket bolt, temporarily install the fork spring, spring seats, collar, joint plate and fork bolt.*

SOCKET BOLT/SEALING WASHER

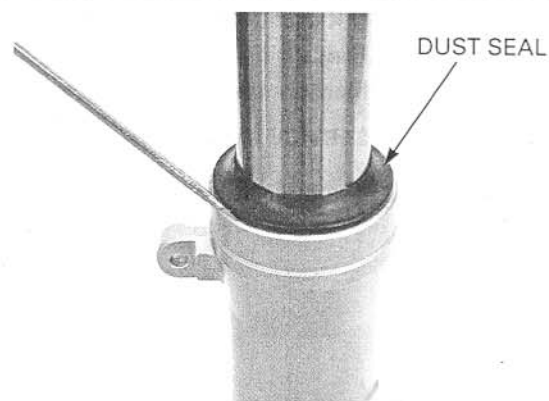


Remove the fork damper assembly from the fork tube.



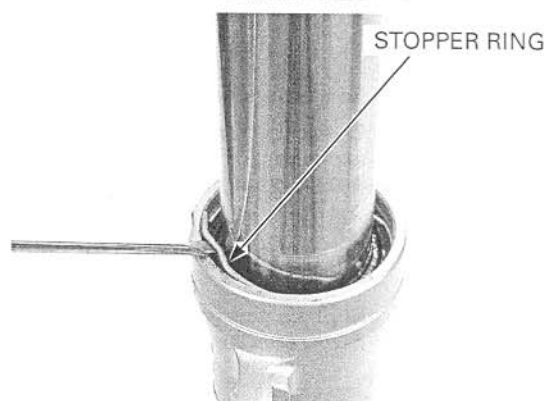
## FRONT WHEEL/SUSPENSION/STEERING

Remove the dust seal.

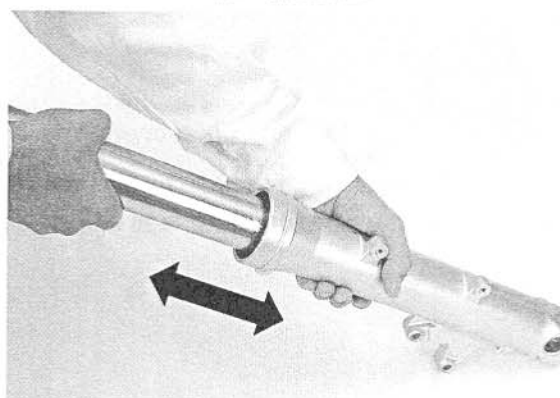


*Do not scratch the fork tube sliding surface.*

Remove the oil seal stopper ring.



Pull the fork tube out until you feel resistance from the slider bushing. Then move it in and out, tapping the bushing lightly until the fork tube separates from the fork slider. The slider bushing will be forced out by the fork tube bushing.

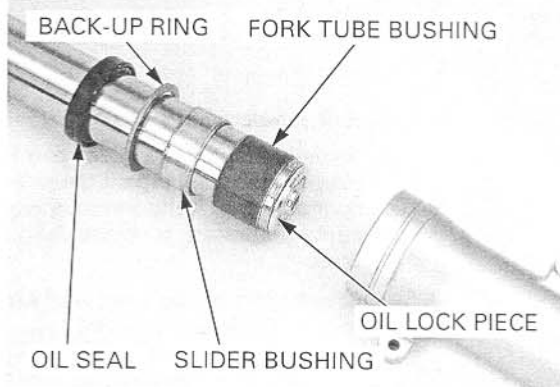


Remove the oil lock piece from the fork tube.

Remove the oil seal, back-up ring and slider bushing from the fork tube.

*Do not remove the fork tube bushing unless it necessary to replace it with a new one.*

Carefully remove the fork tube bushing by prying the slit with a screwdriver until the bushing can be pulled off by hand.



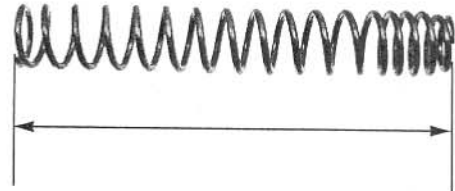
## FRONT WHEEL/SUSPENSION/STEERING

### INSPECTION

#### Fork spring

Measure the fork spring free length.

**SERVICE LIMIT:** 253.6 mm (9.98 in)

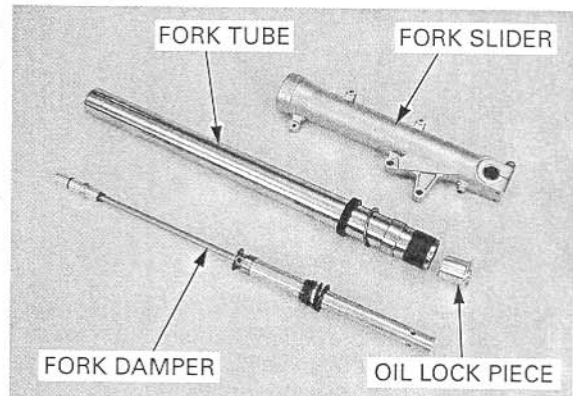


#### fork tube/slider/damper

Check the fork tube and fork slider for score marks, scratches, or excessive or abnormal wear. Replace any components which are worn or damaged.

Check the fork damper for damage.  
Check the oil lock piece for wear or damage.

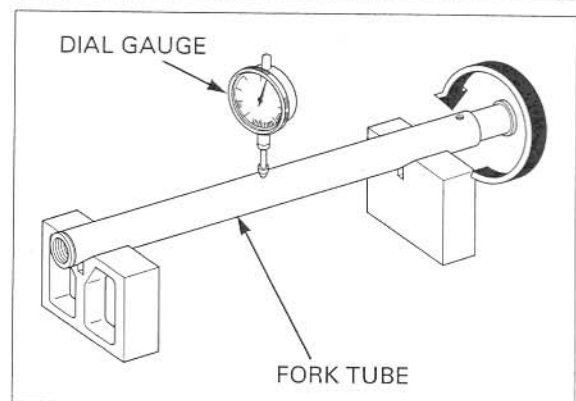
Replace the fork damper assembly, if any components are damaged.



Place the fork tube on V-blocks and measure the runout.

Actual runout is 1/2 the total indicator reading.

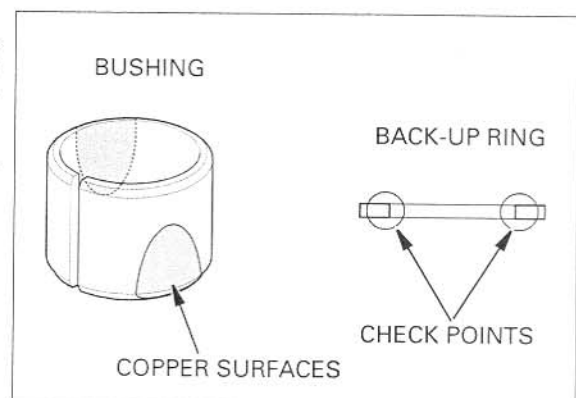
**SERVICE LIMIT:** 0.20 mm (0.008 in)



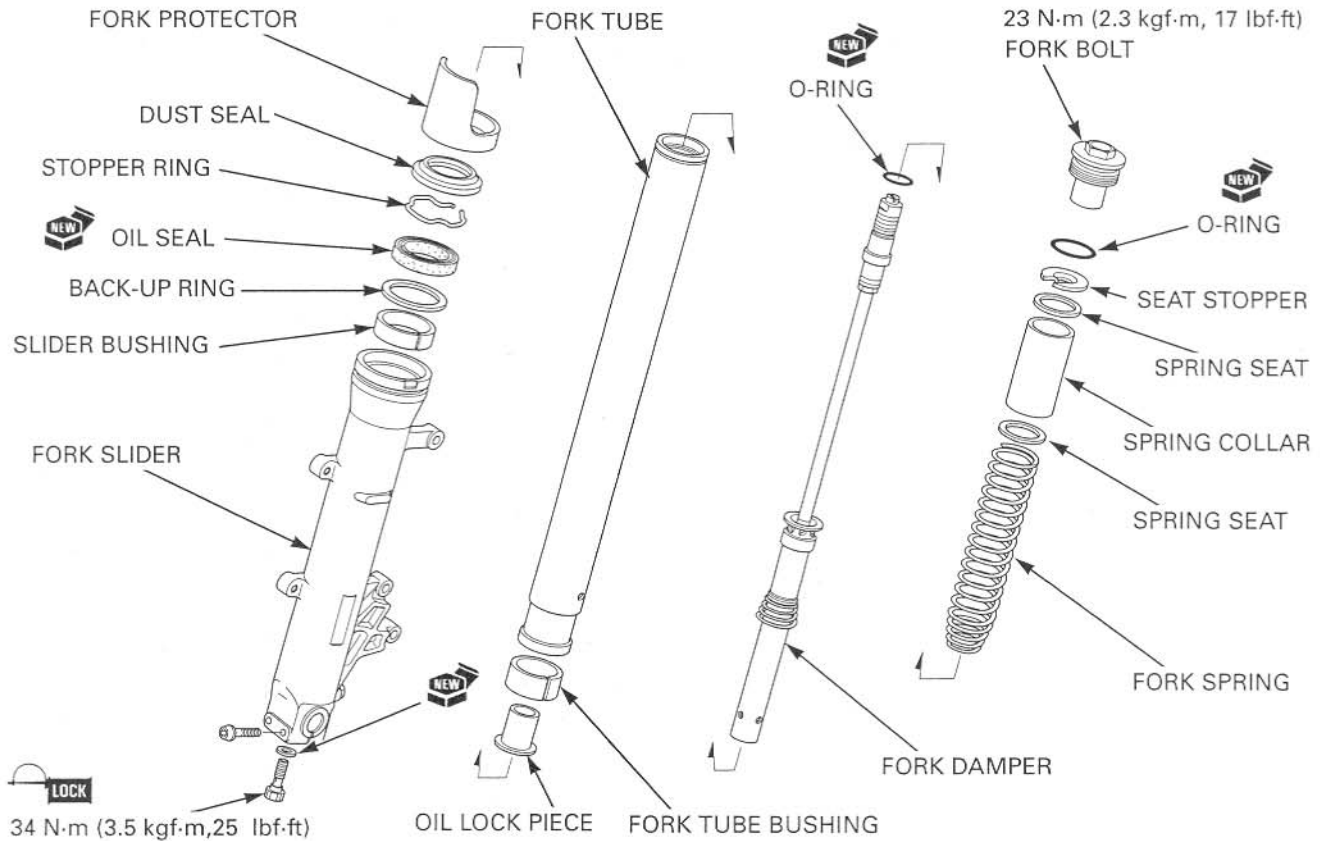
#### fork tube bushing

Visually inspect the slider and fork tube bushings. Replace the bushings if there is excessive scoring or scratching, or if the teflon is worn so that the copper surface appears on more than 3/4 of the entire surface.

Check the back-up ring; replace it if there is any distortion at the points shown.



# ASSEMBLY



Before assembly, wash all parts with a high flash or non-flammable solvent and wipe them dry.

*Do not open the bushing slit more than necessary.*

Install the new fork tube bushing being careful not to damage the coating of the bushing if it has been removed.

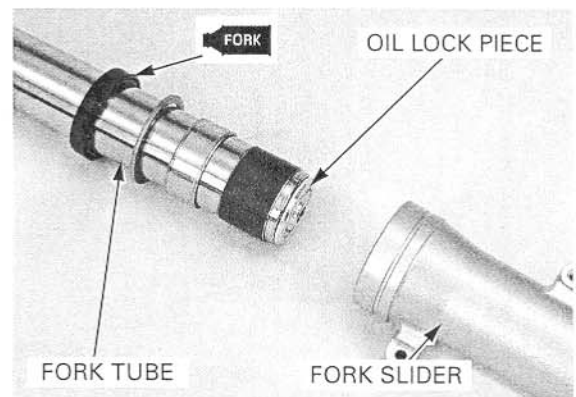
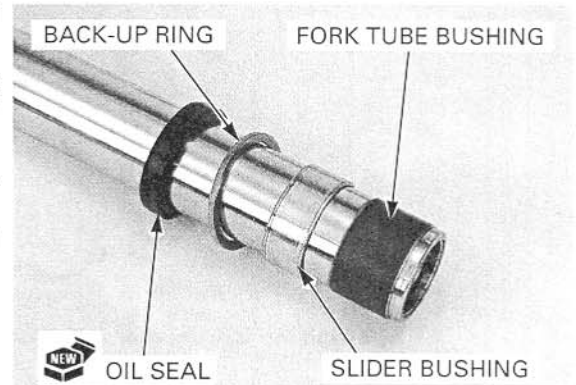
Remove the burrs from the bushing mating surface, being careful not to peel off the coating.

*Install the oil seal with its marked side facing up.*

Install the slider bushing, back-up ring and new oil seal onto the fork tube.

Install the oil lock piece into the fork tube.

Apply fork fluid to the oil seal lips.  
Install the fork tube into the fork slider.



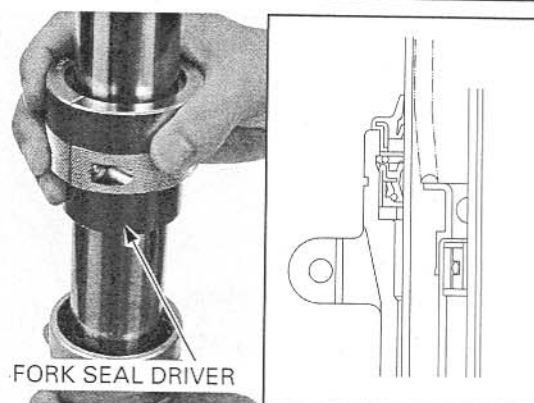


## FRONT WHEEL/SUSPENSION/STEERING

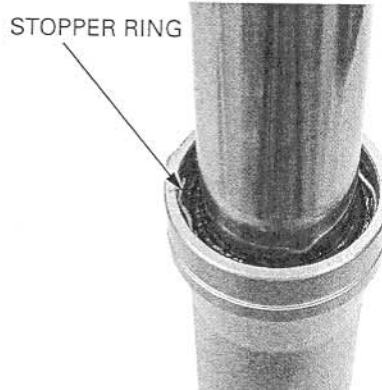
Drive the oil seal in using the special tool.

**TOOL:**

Fork seal driver, 45 mm I.D. 07KMD-KZ30100 or  
07KMD-KZ3010A  
(U.S.A. only)



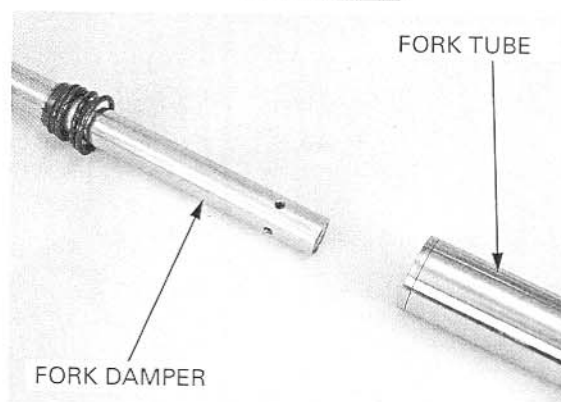
Install the stopper ring into the fork slider groove securely.



Install the dust seal.



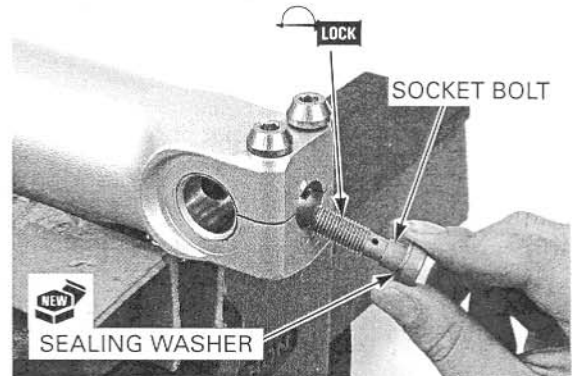
Install the fork damper assembly into the fork tube.





## FRONT WHEEL/SUSPENSION/STEERING

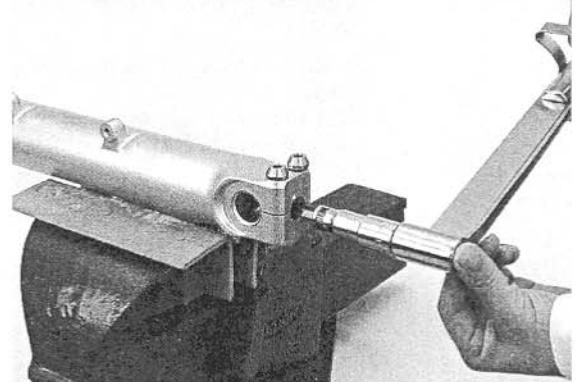
Apply a locking agent to the fork socket bolt threads.  
Install the socket bolt with a new sealing washer.



Hold the fork slider in a vise with soft jaws or a shop towel.

Tighten the fork socket bolt to the specified torque.

**TORQUE: 34 N·m (3.5 kgf·m, 25 lbf·ft)**



*If the fork damper turns together with the socket bolt, temporarily install the fork spring, spring seats, collar, joint plate and fork bolt.*

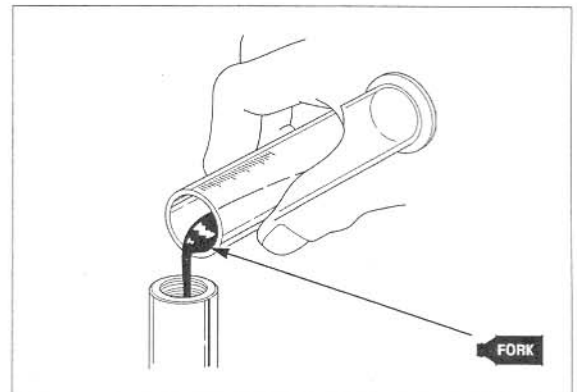
Pour the specified amount of recommended fork fluid into the fork tube.

### RECOMMENDED FORK FLUID:

**Pro Honda Suspension Fluid SS-8**

### FORK FLUID CAPACITY:

**531 ± 2.5 cm<sup>3</sup> (18.0 ± 0.08 US oz, 18.7 ± 0.09 Imp oz)**



Pump the damper rod several times until the fork fluid flows out of the oil hole in the rebound damping adjuster.

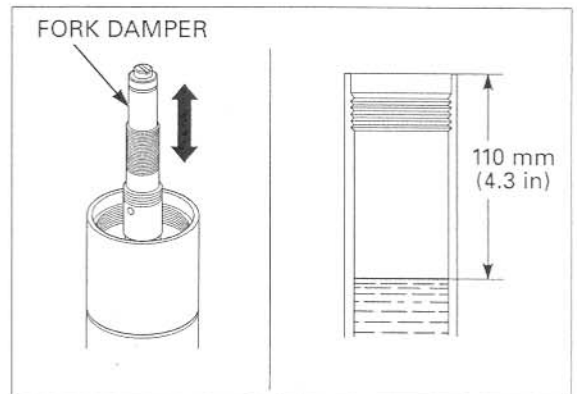
Slowly pump the fork tube several times to remove the trapped air.

Compress the fork tube slowly.

Measure the fluid level from the top of the fork tube.

**FORK FLUID LEVEL: 110 mm (4.3 in)**

*Be sure the fluid level is the same in the both forks.*

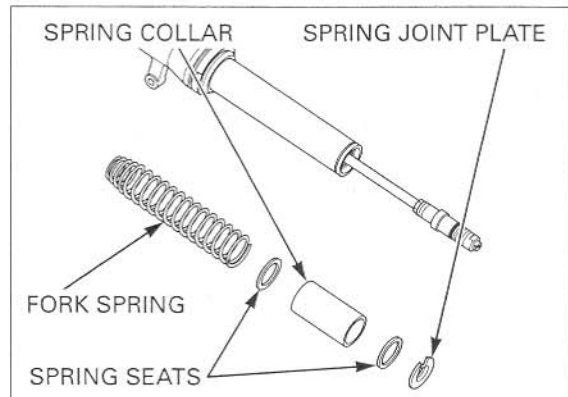


## FRONT WHEEL/SUSPENSION/STEERING

Pull the damper rod up and install the fork spring with the tapered end facing up.

Install the following:

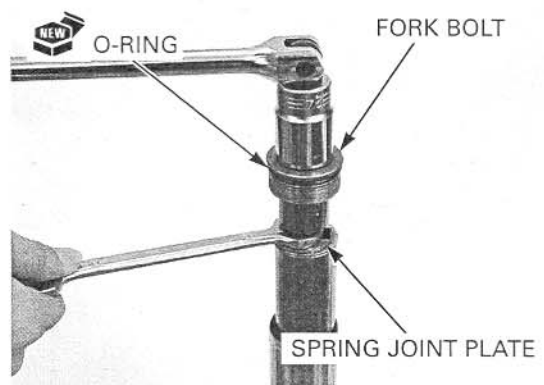
- Spring seats
- Spring collar
- Spring joint plate



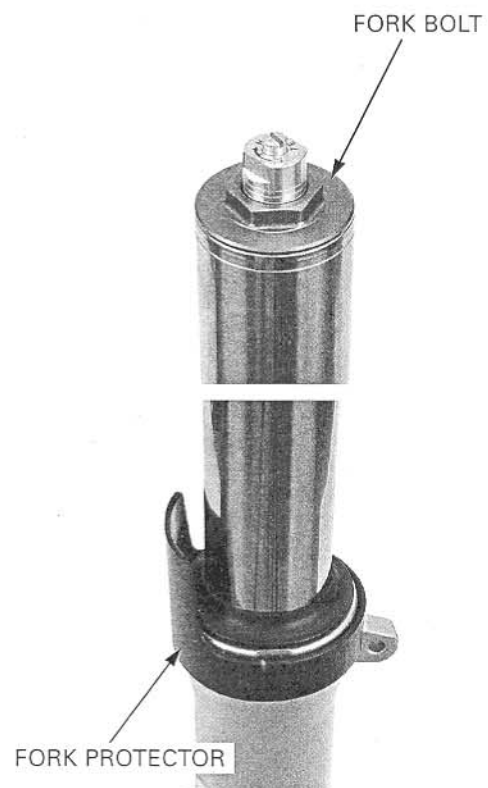
Apply fork fluid to a new O-ring and install it onto the fork bolt.

Screw the fork bolt to the rebound adjuster until it seats.

Hold the rebound adjuster with a 14 mm wrench and tighten the fork bolt.



Screw the fork bolt into the fork tube.

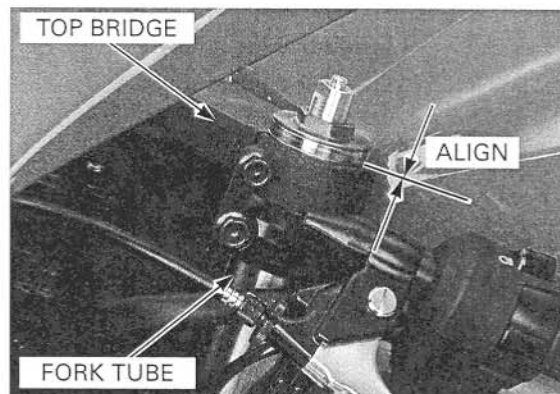


Install the fork protector.

## INSTALLATION

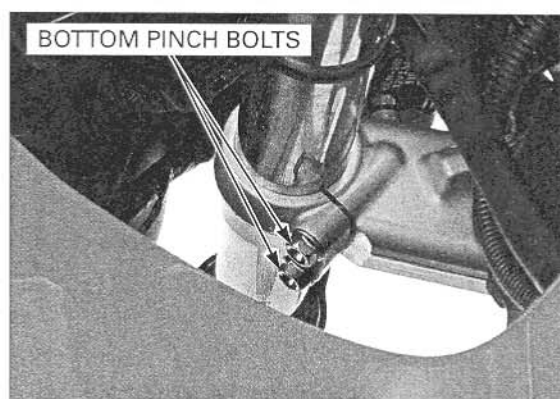
Install the fork leg through the bottom bridge, handlebar and top bridge (page 14-37).

Align the top surface of the top bridge with the index line of the outer tube as shown.



Tighten the bottom pinch bolts to the specified torque.

**TORQUE: 27 N·m (2.7 kgf·m, 20 lbf·ft)**



If the fork bolt was loosened, tighten it to the specified torque.

**TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)**

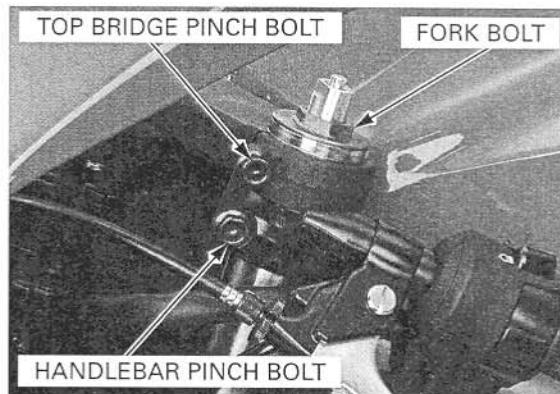
Tighten the handlebar pinch bolt securely.

Tighten the top bridge pinch bolt to the specified torque.

**TORQUE: 23 N·m (2.3 kgf·m, 17 lbf·ft)**

Install the front fender (page 3-15) and front wheel (page 14-17).

Adjust the pre-load and damping adjusters (page 4-30).



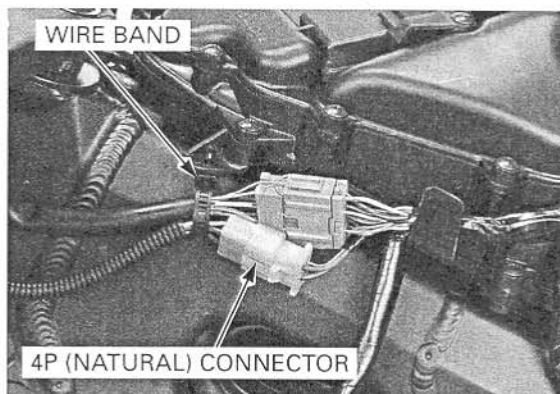
## STEERING STEM

### REMOVAL

Remove the following:

- Front wheel (page 14-12)
- Front fender (page 3-15)
- Upper cowl (page 3-9)
- Fuel tank cover (page 3-15)

Release the wire band and disconnect the ignition switch 4P (Natural) connector.

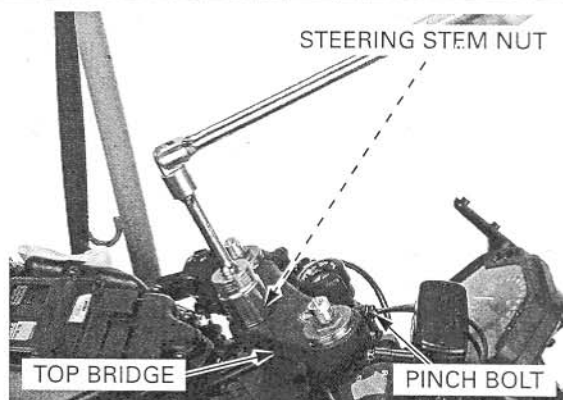


## FRONT WHEEL/SUSPENSION/STEERING

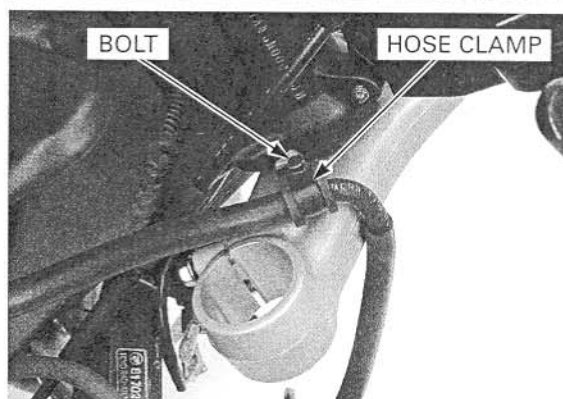
Remove the steering stem nut cap and stem nut.  
Remove the top bridge pinch bolts and top bridge.

Remove the following:

- Handlebars (page 14-7)
- Fork legs (page 14-18)

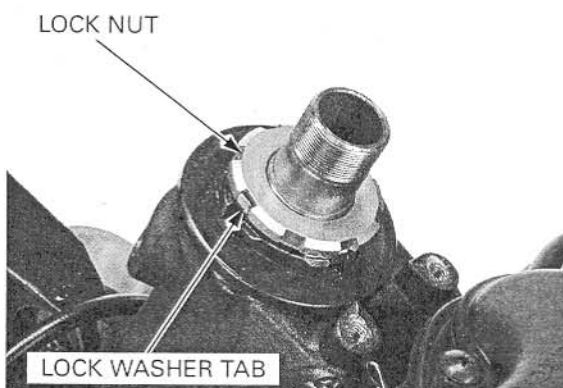


Remove the bolt and front brake hose clamp.



Straighten the tabs of the lock washer.

Remove the adjusting lock nut and lock washer.

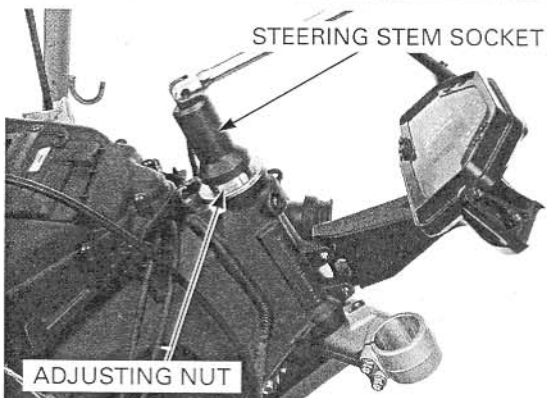


Remove the steering stem adjusting nut using the special tool.

**TOOL:**

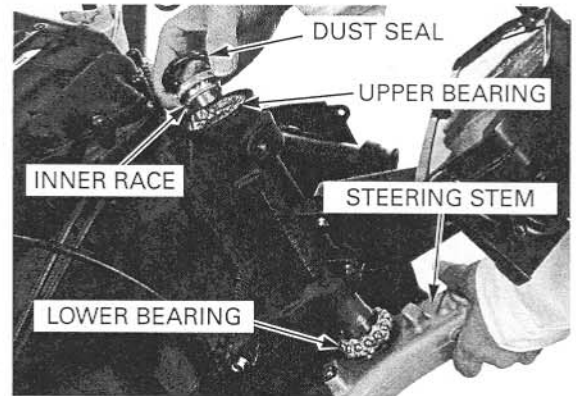
Steering stem socket

07916-3710101 or  
07916-3710100  
(U.S.A. only)



Remove the following:

- Dust seal
- Upper bearing inner race
- Upper bearing
- Steering stem
- Lower bearing



## BEARING REPLACEMENT

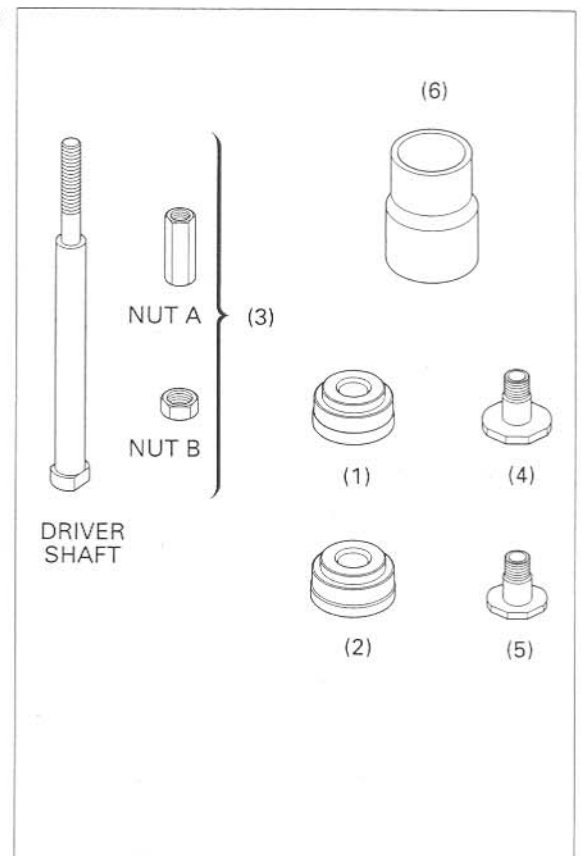
*Always replace the bearings and races as a set.*

Replace the races using the special tools as described in the following procedure.

*For U.S.A. only  
outer race replacement, refer to (page 14-32).*

### TOOLS: (Not available in U.S.A.)

- |                               |               |
|-------------------------------|---------------|
| (1) Driver attachment (upper) | 070MF-MCJ0100 |
| (2) Driver attachment (lower) | 070MF-MCJ0200 |
| (3) Driver shaft assembly     | 07946-KM90301 |
| (4) Bearing remover, A        | 07946-KM90401 |
| (5) Bearing remover, B        | 07NMF-MT70110 |
| (6) Assembly base             | 07946-KM90600 |



## FRONT WHEEL/SUSPENSION/STEERING

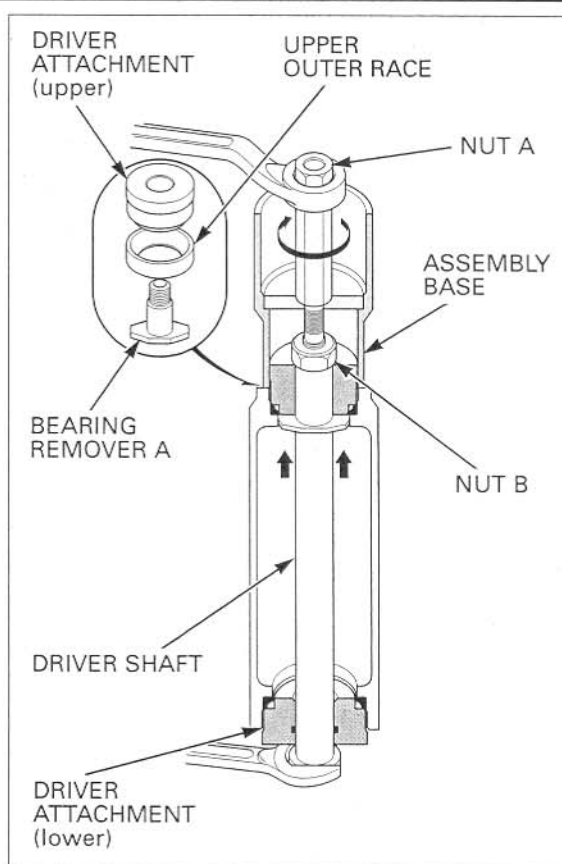
*Note the installation direction of the assembly base; the small I.D. side facing the upper attachment.*

Install the special tools into the steering head as shown.

Align the bearing remover A with the grooves in the steering head.

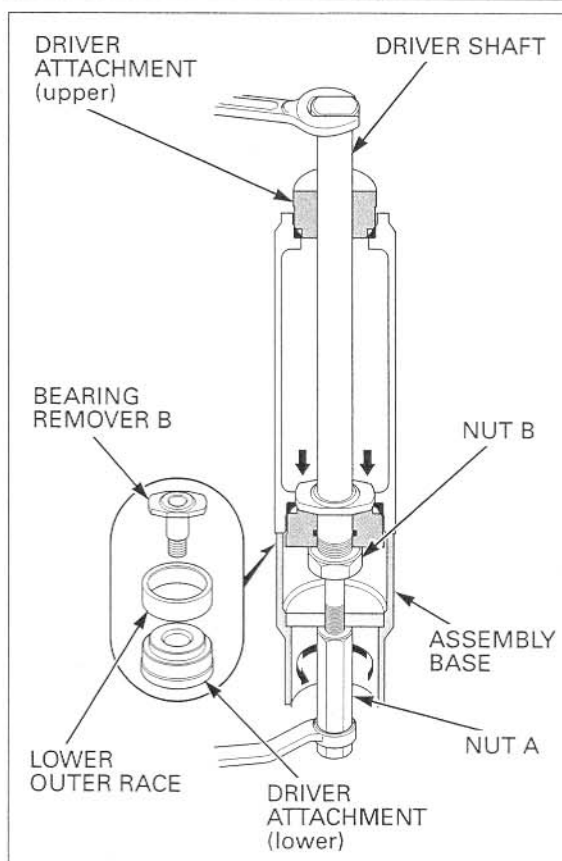
Lightly tighten the nut B with a wrench.

Holding the driver shaft with a wrench, turn the nut A gradually to remove the upper outer race.



*Note the installation direction of the assembly base; the large I.D. side facing the lower attachment.*

Install the special tools into the steering head as shown and remove the lower outer race using the same procedure as for the upper outer race.

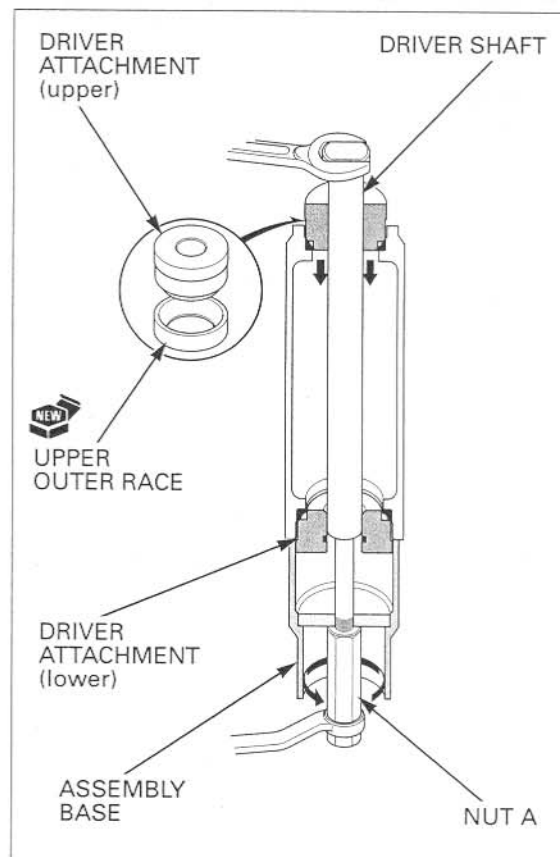


## FRONT WHEEL/SUSPENSION/STEERING

Remove any burrs from the outer race installation surface of the steering head.

*Note the installation direction of the assembly base; the large I.D. side facing the lower attachment.*

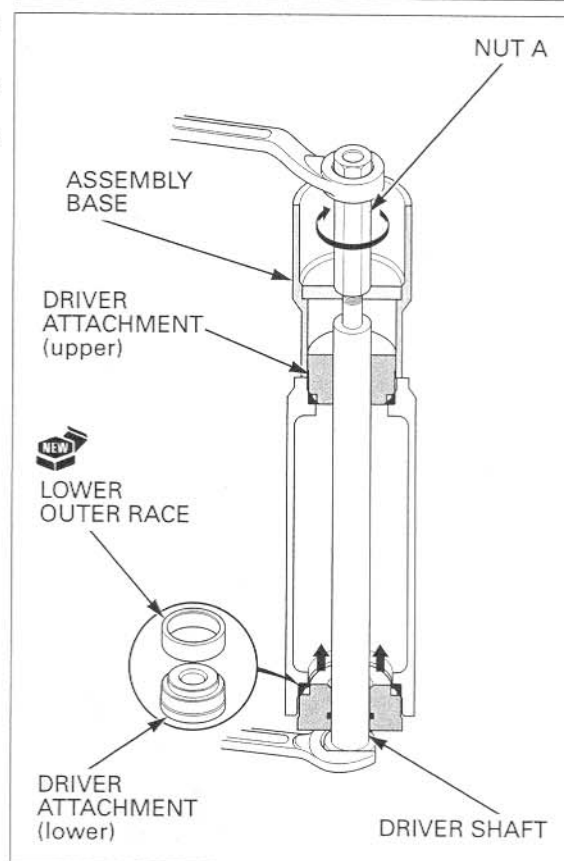
Install a new upper outer race with the special tools as shown.  
Hold the driver shaft with a wrench and turn the nut A gradually until upper outer race is fully seated.



Remove any burrs from the outer race installation surface of the steering head.

*Note the installation direction of the assembly base; the small I.D. side facing the upper attachment.*

Install a new lower outer race with the special tools as shown.  
Hold the driver shaft with a wrench and turn the nut A gradually until lower outer race is fully seated.



## FRONT WHEEL/SUSPENSION/STEERING

### U.S.A. only:

Place the steering head bearing outer races using the special tools listed below.

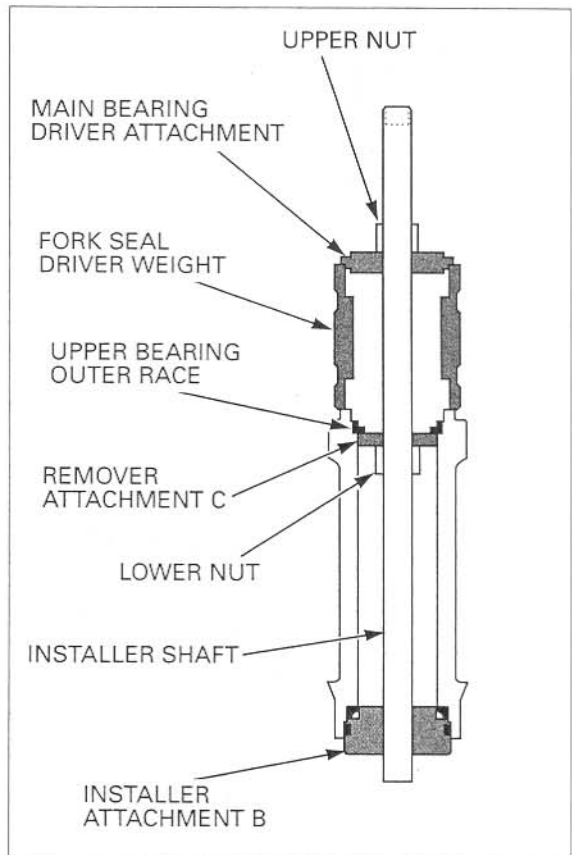
### TOOLS:

Main bearing driver attachment	07946-ME90200
Fork seal driver weight	07947-KA50100
Oil seal driver	07965-MA60000
Installer shaft	07VMF-KZ30200
Installer attachment A	07VMF-MAT0100
Installer attachment B	07VMF-MAT0200
Remover attachment C	07AMF-MEEA100
Remover attachment D	07AMF-MEEA200

Install the special tools into the steering head pipe as shown.

Align the remover attachment C with the groove in the steering head.

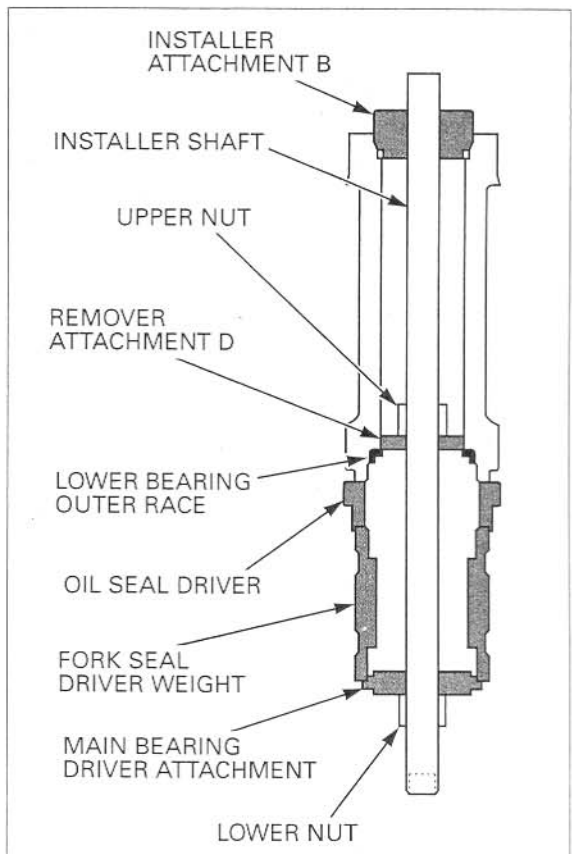
While holding the installer shaft with the wrench, turn the upper nut gradually to remove the upper bearing outer race.



Install the special tools into the steering head pipe as shown.

Align the remover attachment D with the groove in the steering head.

While holding the installer shaft with the wrench, turn the lower nut gradually to remove the lower bearing outer race.

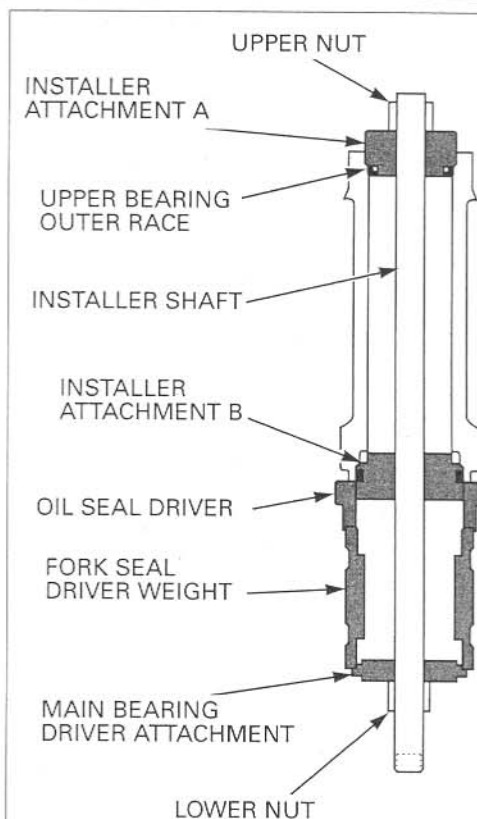




## FRONT WHEEL/SUSPENSION/STEERING

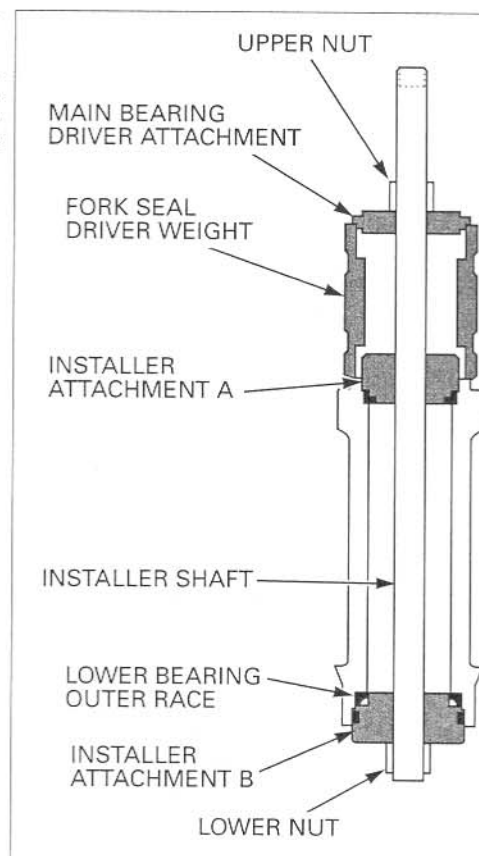
Install a new upper bearing outer race and the special tools as shown.

While holding the installer shaft with the wrench, turn the lower nut gradually until the groove in the steering head. This will allow you to install the upper bearing outer race.



Install a new lower bearing outer race and the special tools as shown.

While holding the installer shaft with the wrench, turn the upper nut gradually until the groove in the installer attachment B aligns with the lower end of the steering head. This will allow the installation of the lower bearing outer race.



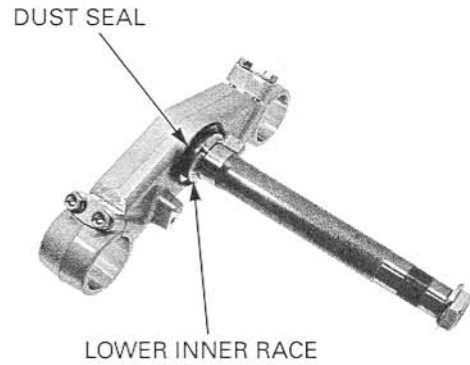
## FRONT WHEEL/SUSPENSION/STEERING

### LOWER INNER RACE REPLACEMENT

Temporarily install the steering stem nut onto the stem to prevent the threads from being damaged when removing the lower bearing inner race from the stem.

Remove the lower bearing inner race with a chisel or equivalent tool, being careful not to damage the stem.

Remove the dust seal.



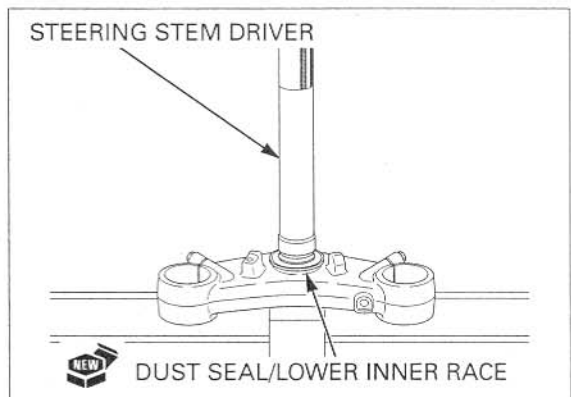
Apply grease to a new dust seal lips and install it over the steering stem.

Install a new lower bearing inner race using a special tool and a hydraulic press.

#### TOOL:

Steering stem driver

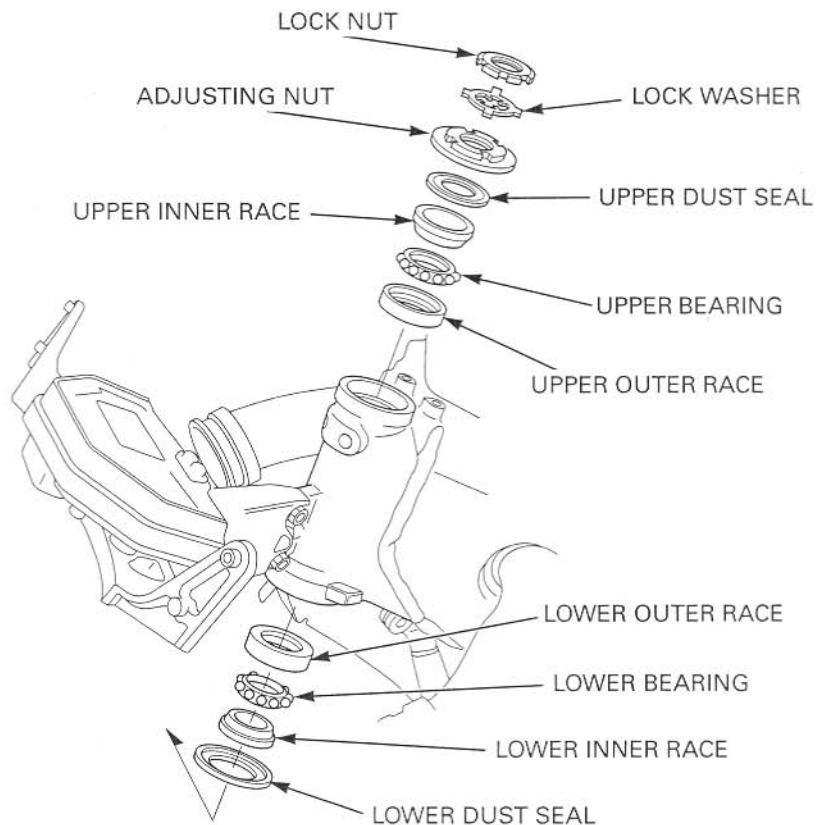
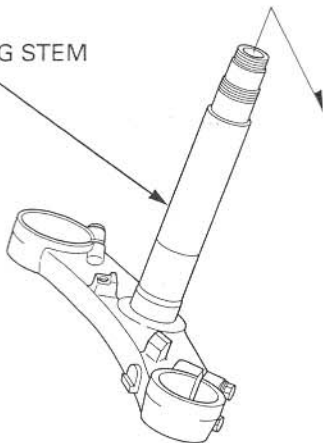
07946-MB00000



### INSTALLATION



STEERING STEM

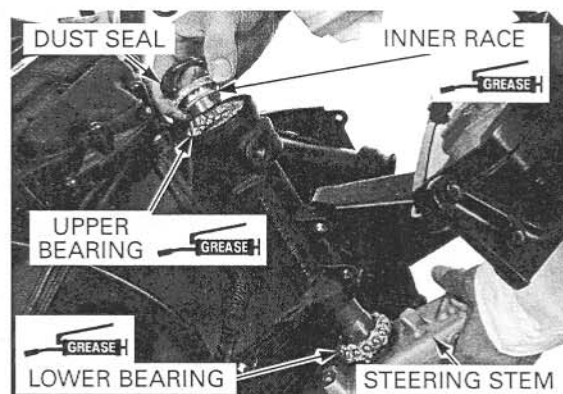


## FRONT WHEEL/SUSPENSION/STEERING

Apply grease to the upper and lower bearings and bearing races.

Install the lower bearing onto the steering stem.

Insert the steering stem into the steering head pipe.



Apply oil to the adjusting nut threads.

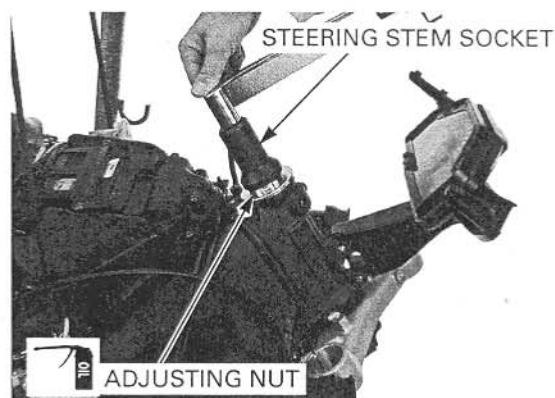
Install and tighten the steering stem adjusting nut to the initial torque.

### TOOL:

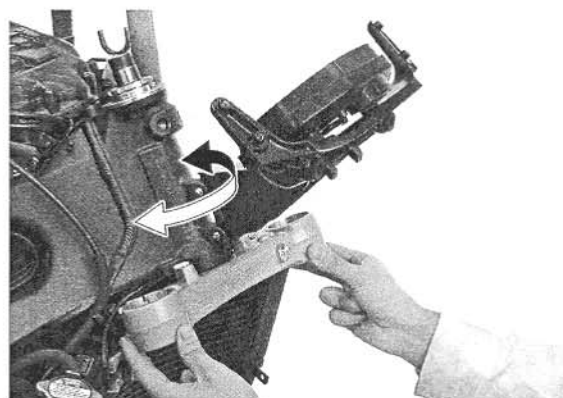
Steering stem socket

07916-3710101 or  
07916-3710100 or  
07702-0020001  
(U.S.A. only)

**TORQUE: 30 N·m (3.1 kgf·m, 22 lbf·ft)**



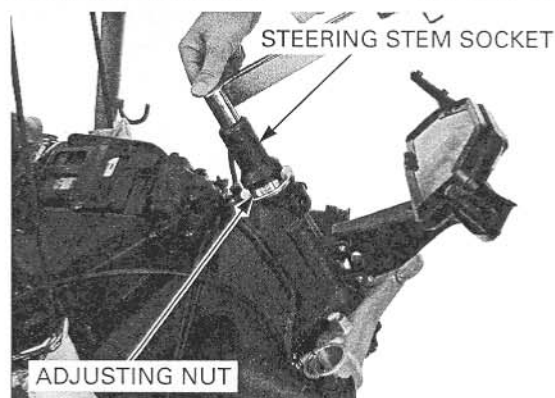
Move the steering stem right and left, lock-to-lock, several times to seat the bearings.



Retighten the bearing adjusting nut to the specified torque.

**TORQUE: 47 N·m (4.8 kgf·m, 35 lbf·ft)**

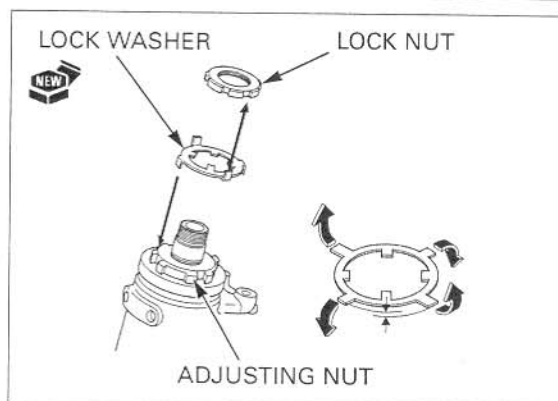
Recheck that the steering stem moves smoothly without play or binding.



## FRONT WHEEL/SUSPENSION/STEERING

Install the new lock washer onto the steering stem.

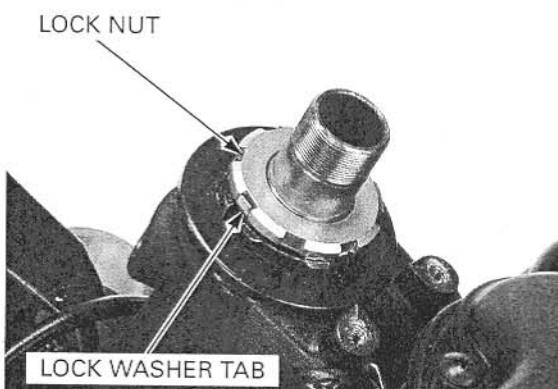
Align the tabs of the lock washer with the grooves in the adjusting nut and bend two opposite tabs (shorter) down into the adjusting nut groove.



Install and finger tighten the lock nut.

Hold the lock nut and further tighten the lock nut within 1/4 turn (90°) enough to align its grooves with the lock washer tabs.

Bend the lock washer tabs up into the lock nut grooves.

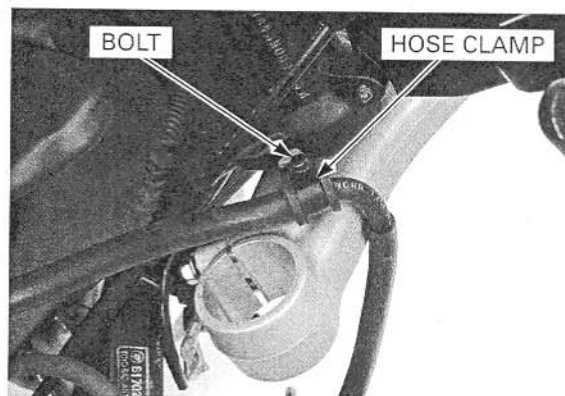


Install the front brake hose clamp and tighten the bolt to the specified torque.

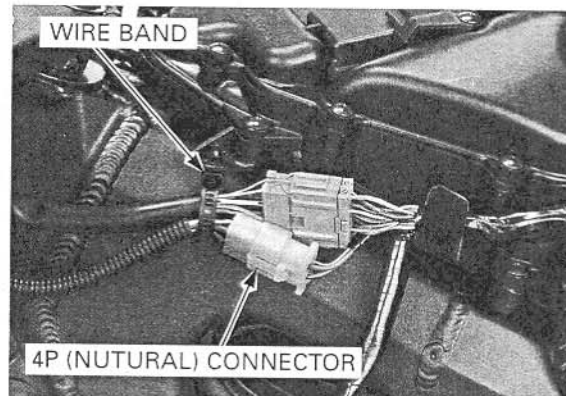
**TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)**

Install the following:

- Handlebar (page 14-9)
- Fork legs (page 14-27)



Connect the ignition switch 4P (Natural) connector and clamp the wire band.



Install the top bridge and steering stem nut.  
Tighten the steering stem nut to the specified torque.

**TORQUE: 103 N·m (10.5 kgf·m, 76 lbf·ft)**

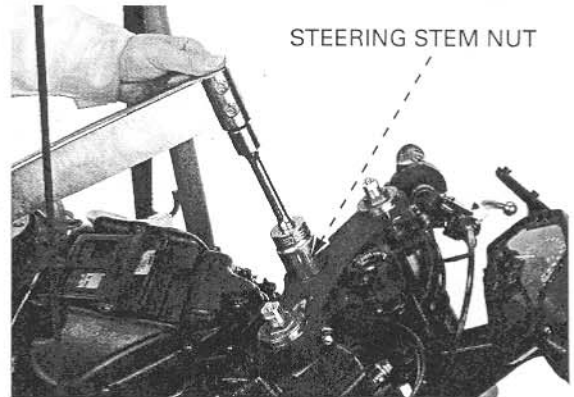
Move the steering stem right and left, lock-to-lock, several times.

Make sure the steering stem moves smoothly, without play or binding; then loosen the steering stem adjusting nut.

Install the steering stem nut cap.

Install the following:

- Upper cowl (page 3-9)
- Front fender (page 3-15)
- Front wheel (page 14-17)
- Fuel tank cover (page 3-15)



### STEERING HEAD BEARING PRE-LOAD

Jack-up the motorcycle to raise the front wheel off the ground.

Position the steering stem to the straight ahead position.

*Make sure that there is no cable or wire harness interference.*

Hook a spring scale to the fork tube and measure the steering head bearing pre-load.

The pre-load should be within 9.8 – 15 N·m (1.0 – 1.5 kgf·m).

If the readings do not fall within the limits, lower the front wheel to the ground and adjust the steering bearing adjusting nut.

