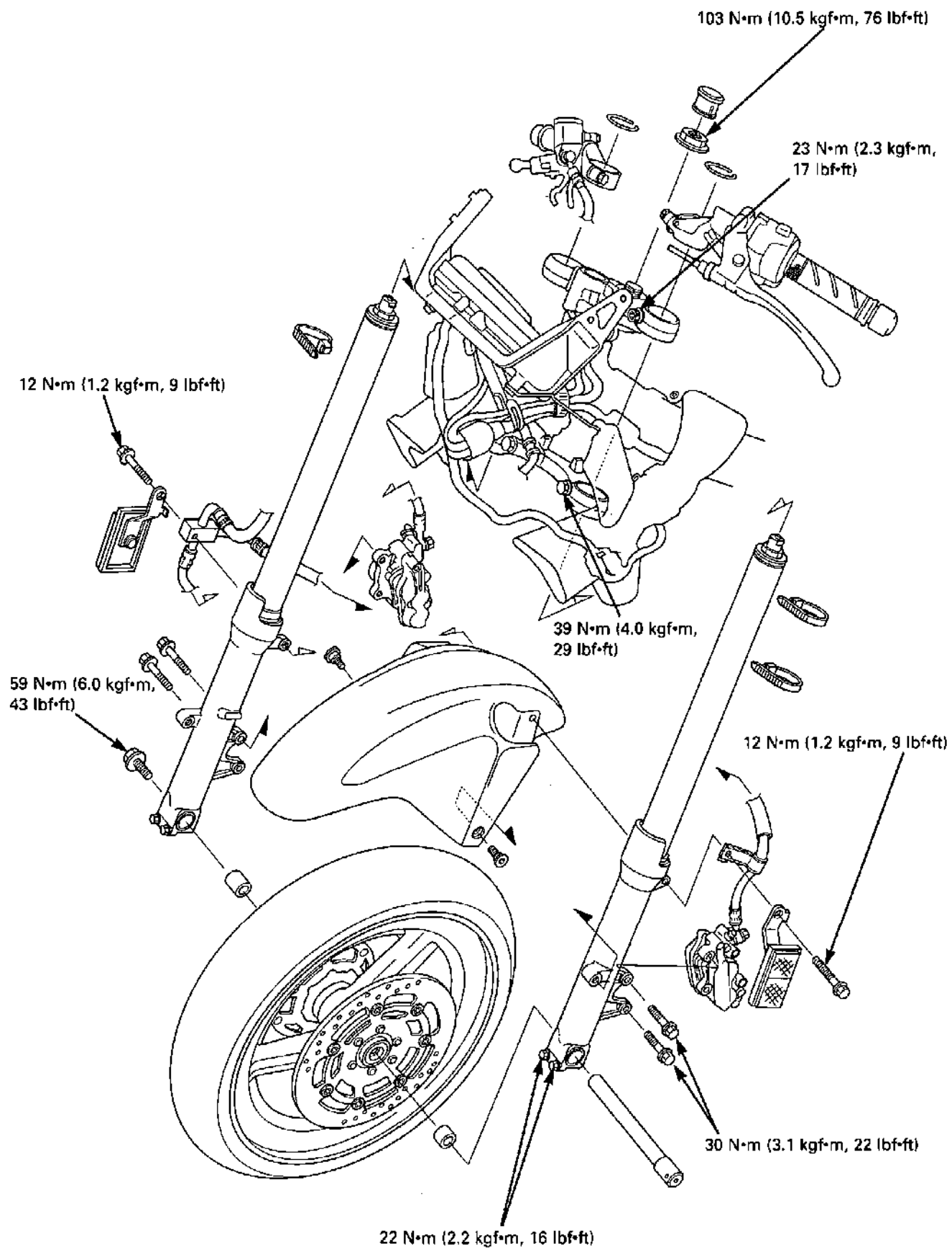


**13-0**



# 13. FRONT WHEEL/SUSPENSION/STEERING

SERVICE INFORMATION	13-1	FRONT WHEEL	13-9
TROUBLESHOOTING	13-2	FORK	13-14
HANDLEBARS	13-3	STEERING STEM	13-24

## 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 front wheel installation, check the brake operation by applying the brake lever.
- Refer to section 15 for brake system information.
- 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	Up to 90 kg (200 lb) load	250 kPa (2.50 kgf/cm <sup>2</sup> , 36 psi)	—
	Up to maximum weight capacity	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 (2.1 oz) max.
Fork	Spring free length	286 (11.3)	280.3 (11.03)
	Tube runout	—	0.20 (0.008)
	Recommended fork fluid	Pro Honda Suspension Fluid SS-8	—
	Fluid level	116 (4.6)	—
	Fluid capacity	462 ± 2.5 cm <sup>3</sup> (15.6 ± 0.08 US oz, 16.3 ± 0.09 Imp oz)	—
	Pre-load adjuster initial setting	4th groove from top	—
	Rebound adjuster initial setting	1-3/4 turns out from full hard	—
	Compression adjuster initial setting	1-1/4 turns out from full hard	—
Steering head bearing pre-load		1.0 – 1.5 kgf (2.2 – 3.3 lbf)	—

## FRONT WHEEL/SUSPENSION/STEERING

### TORQUE VALUES

Handlebar weight mounting screw	10 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 flange bolt	22 N•m (2.2 kgf•m, 16 lbf•ft)	
Front brake hose clamp flange bolt (left fork)	12 N•m (1.2 kgf•m, 9 lbf•ft)	
Front brake hose 3-way joint bolt (right fork)	12 N•m (1.2 kgf•m, 9 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 socket bolt	23 N•m (2.3 kgf•m, 17 lbf•ft)	
Fork bottom bridge pinch flange bolt	39 N•m (4.0 kgf•m, 29 lbf•ft)	
Steering bearing adjustment nut	25 N•m (2.5 kgf•m, 18 lbf•ft)	Apply oil to the threads and seating surface.
Steering bearing adjustment nut lock nut	—	
Steering stem nut	103 N•m (10.5 kgf•m, 76 lbf•ft)	See page 13-29.
Front brake hose clamp bolt (steering stem)	10 N•m (1.0 kgf•m, 7 lbf•ft)	
Front master cylinder mounting 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.

### TOOLS

Bearing remover shaft	07746-0050100
Bearing remover head, 20 mm	07746-0050600
Driver	07749-0010000
Attachment, 42 x 47 mm	07746-0010300
Pilot, 20 mm	07746-0040500
Fork seal driver weight	07947-KA50100
Fork seal driver attachment	07947-KA40200
Steering stem socket	07916-3710101
Ball race remover set	07946-KM90001
– Driver attachment, A	07946-KM90100
– Driver attachment, B	07946-KM90200
– Driver shaft assembly	07946-KM90300
– Bearing remover, A	07946-KM90401
– Bearing remover, B	07946-KM90500
– Assembly base	07946-KM90600
Steering stem driver	07946-MB00000

### TROUBLESHOOTING

#### Hard steering

- Steering head bearing adjustment 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
- Wheel installed incorrectly
- Bent frame
- Worn or damaged wheel bearings
- Worn or damaged swingarm pivot bearings

#### Front wheel wobbles

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

#### Front heel turns hard

- Faulty front wheel bearing
- 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

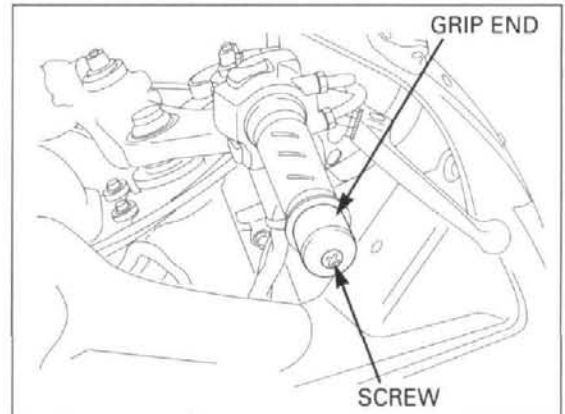
#### Front suspension noise

- Insufficient fluid in fork
- Loose fork fasteners

## HANDLEBARS

### HANDLEBAR REMOVAL

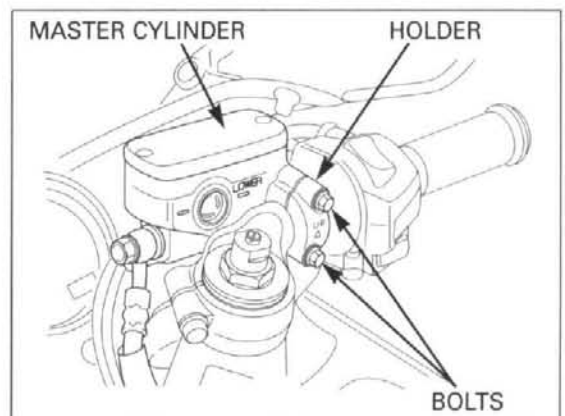
Hold the handlebar weight and remove the mounting screw and the weight.



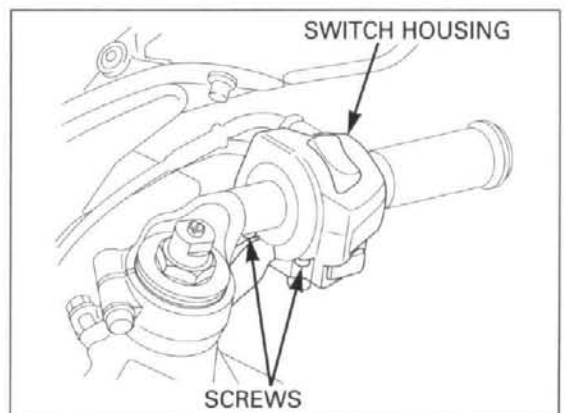
Disconnect the front brake switch wire connectors from the switch.

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

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



Remove the right handlebar switch/throttle housing screws.



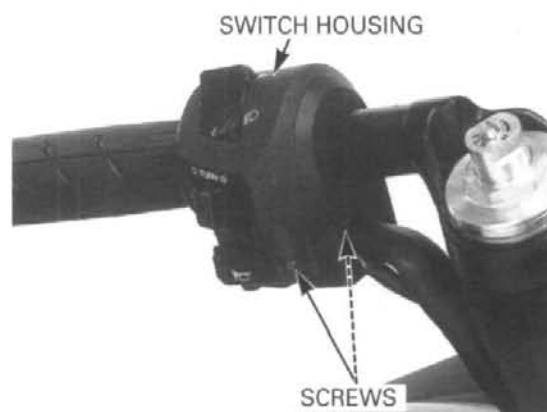
Disconnect the clutch switch wire connectors from the switch.

Remove the clutch lever bracket holder bolts, holder and clutch lever bracket assembly.

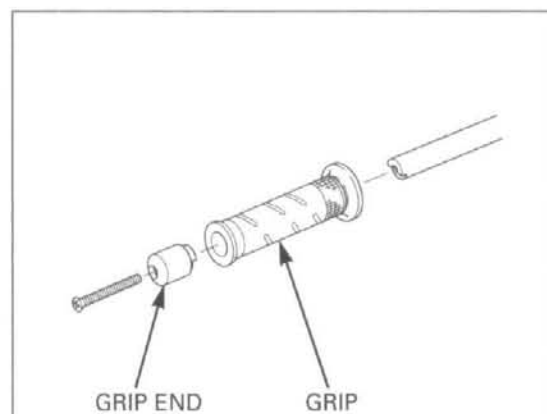


## FRONT WHEEL/SUSPENSION/STEERING

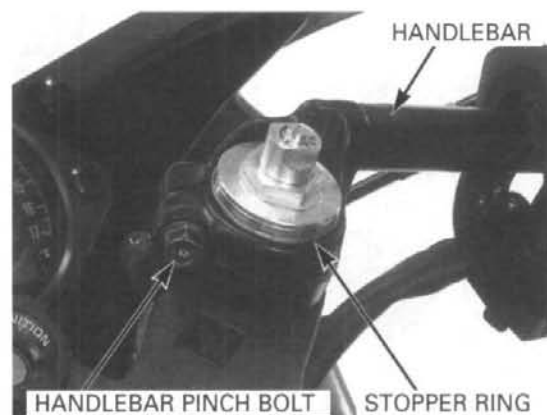
Remove the screws and left handlebar switch housing.



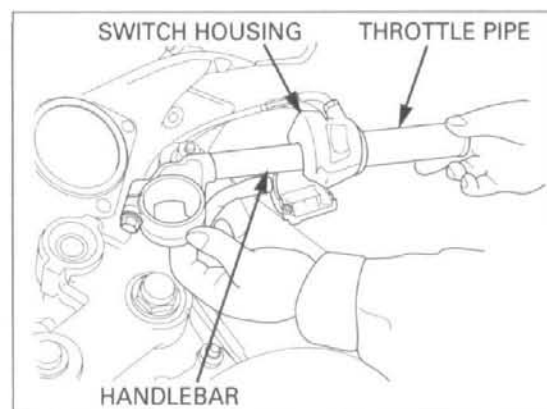
Remove the screw and handlebar grip end.  
Remove the handle grip from the handlebar.



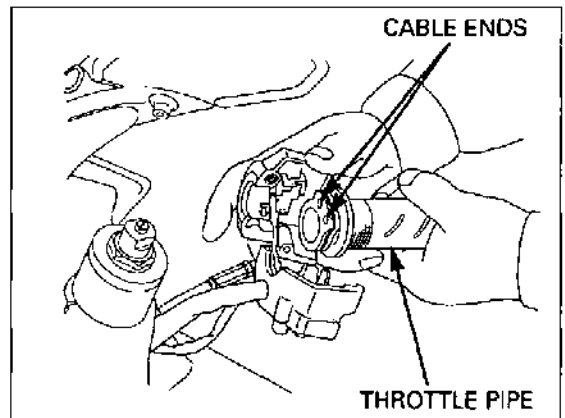
Remove the handlebar stopper ring.  
Loosen the handlebar pinch bolt and remove the handlebar from the fork tube.



Remove the right handlebar switch housing and throttle pipe from the right handlebar.

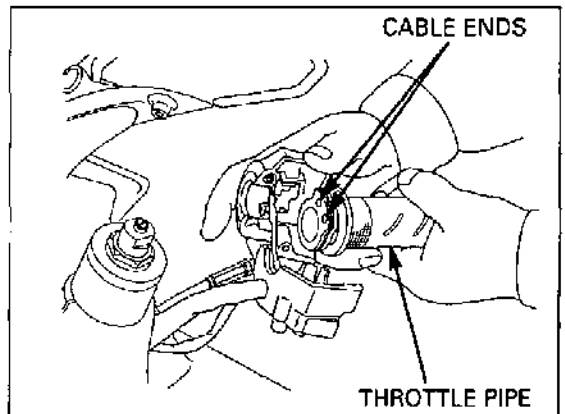


Disconnect the throttle cable ends from the throttle pipe and remove the housing.

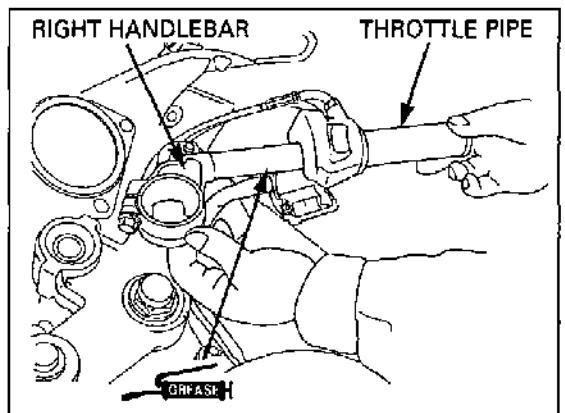


### INSTALLATION

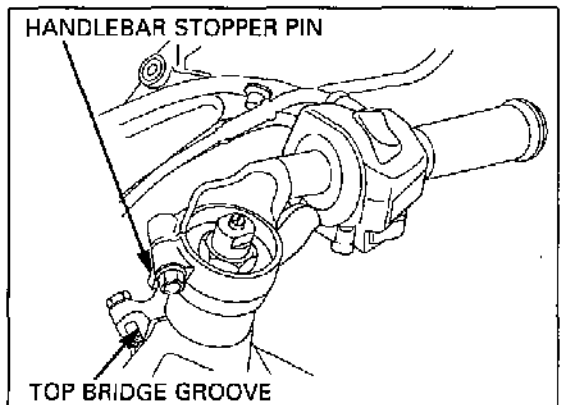
Connect the throttle cable ends to the throttle pipe.



Apply grease to the sliding surface of the throttle pipe.  
Install the throttle pipe into the right handlebar.



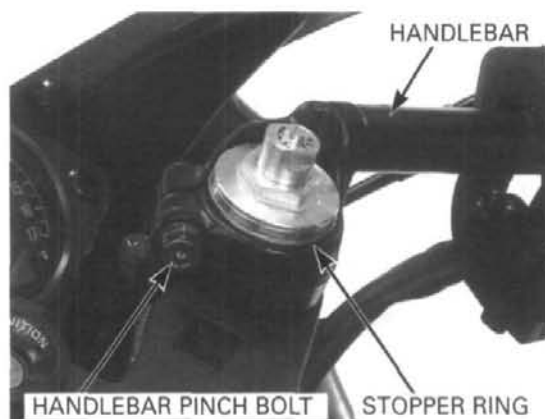
Install each handlebar onto the fork tube, aligning its boss with the groove in the fork top bridge.



## FRONT WHEEL/SUSPENSION/STEERING

Tighten the handlebar pinch bolts securely.

Install the stopper ring into the fork tube groove.



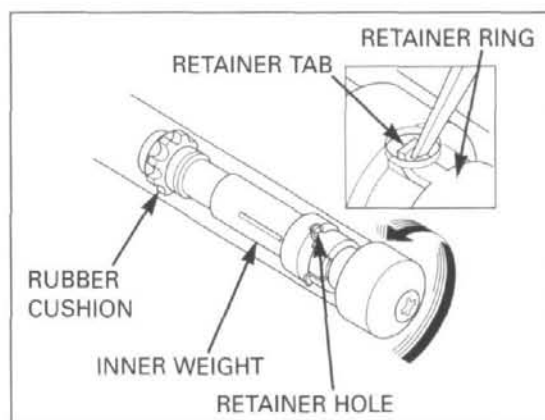
### HANDLEBAR WEIGHT REPLACEMENT

Remove the grip from the handlebar.

Straighten the weight retainer tab with a screwdriver or punch.

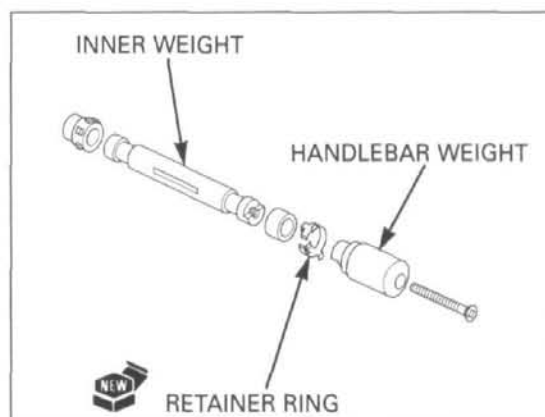
Temporarily install the grip end and screw, then remove the handlebar weight by turning the grip end.

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



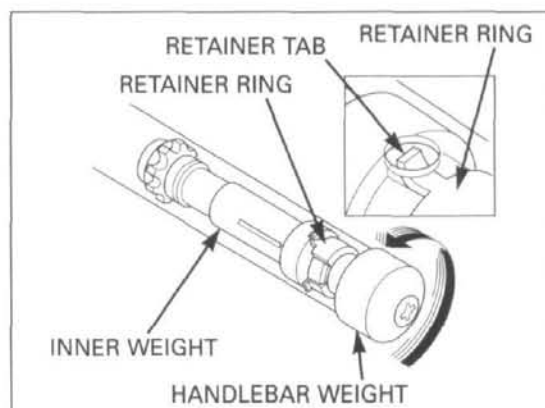
Remove the grip end from the handlebar weight. Discard the retainer.

Install the new retainer onto the handlebar weight. Install the grip end onto the handlebar weight aligning its boss with the slot in the handlebar weight. Install a new mounting screw.



Insert the handlebar weight assembly into the handlebar.

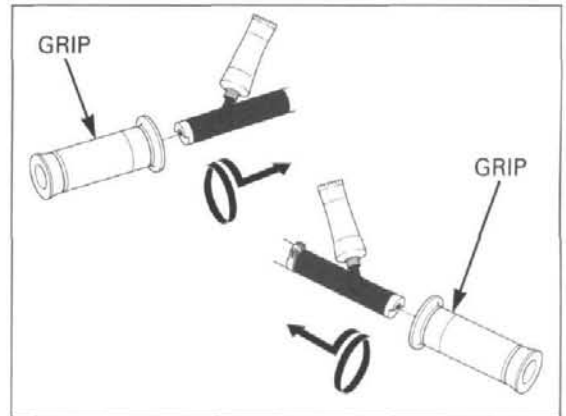
Turn the handlebar weight and hook the retainer tab with the hole in the handlebar.



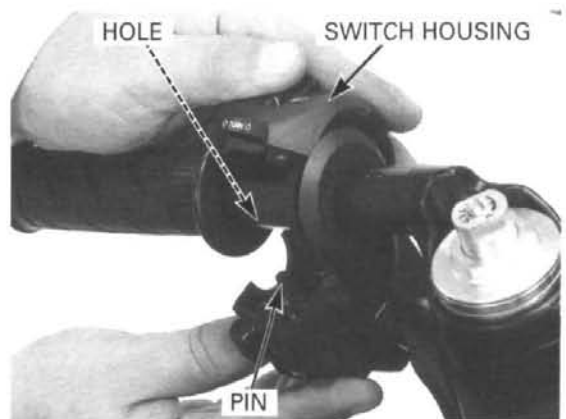
Apply Honda Bond A or Honda Hand Grip Cement (U.S.A. only) to the inside of the grip and to the clean surfaces of the left handlebar and throttle grip.

Wait 3 – 5 minutes and install the grip.  
Rotate the grip for even application of the adhesive.

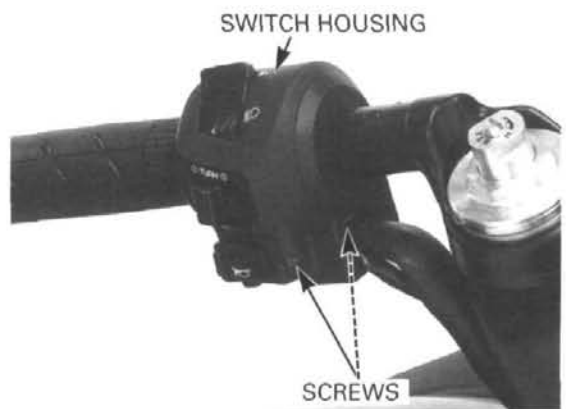
*Allow the adhesive to dry for 1 hour before using.*



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.

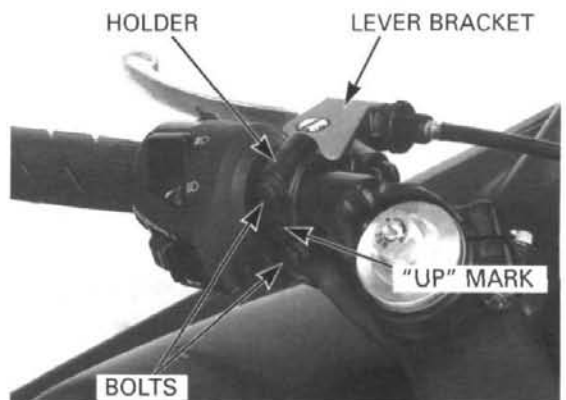


Install the clutch lever bracket assembly by aligning the end of the bracket with the punch mark on the handlebar.

Install the clutch lever bracket holder with the "UP" mark facing up.

Tighten the upper bolt first, then the lower bolt.

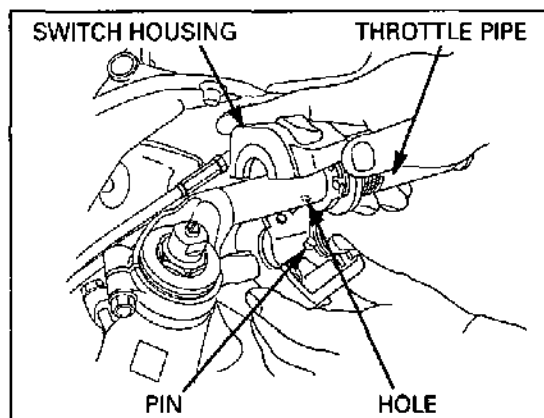
Connect the clutch switch wire connectors.



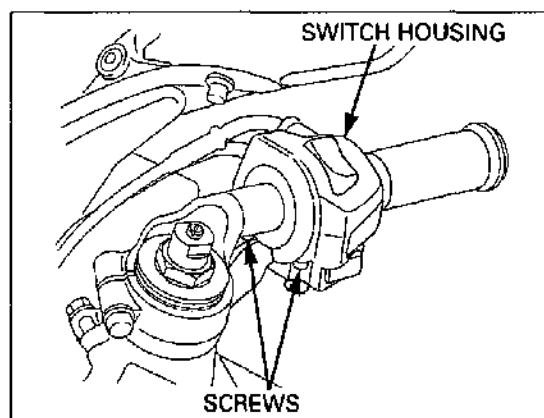


## FRONT WHEEL/SUSPENSION/STEERING

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



Tighten the forward screw first, then the rear screw.

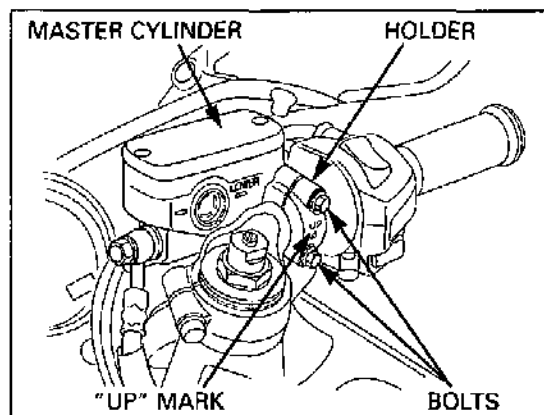


Install the master cylinder by aligning the end of the master cylinder with the punch mark on the handlebar. Install the master cylinder holder with the "UP" mark facing up.

Tighten the upper bolt first, then the lower bolt.

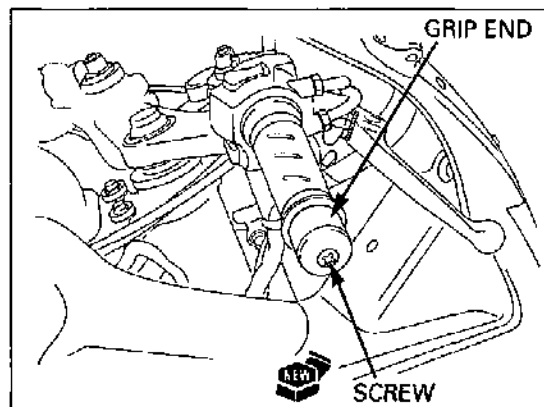
**TORQUE: 12 N·m (1.2 kgf·m, 9 lbf·ft)**

Connect the brake switch wire connectors.



Install the grip end and tighten the new mounting screw to the specified torque.

**TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)**



## FRONT WHEEL

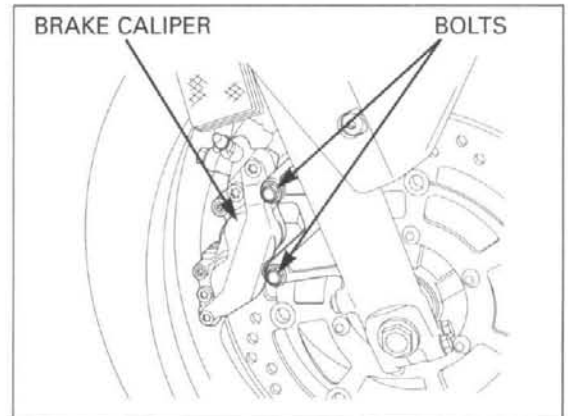
### REMOVAL

Support the motorcycle securely using a safety stand or hoist.

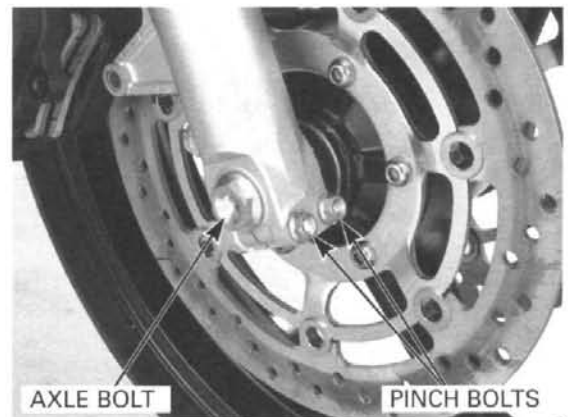
Remove the mounting bolts and both brake calipers.

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

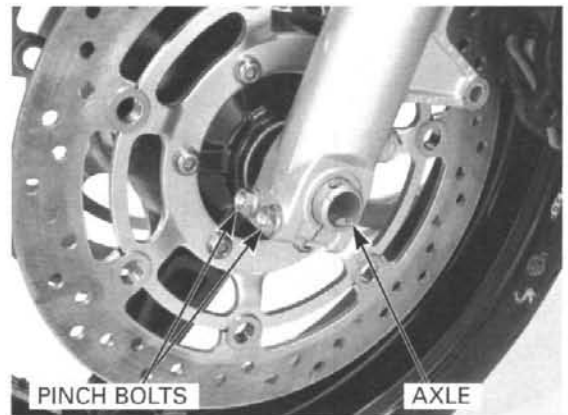
Support the brake caliper with a piece of wire so that it does not hang from the brake hose. Do not twist the brake hose



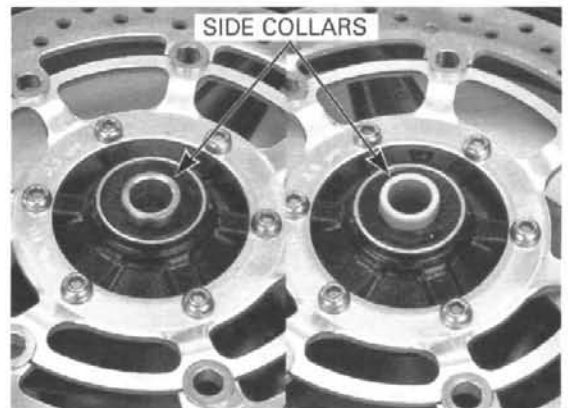
Loosen the right axle pinch bolts.  
Remove the axle bolt.



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



Remove the side collars.

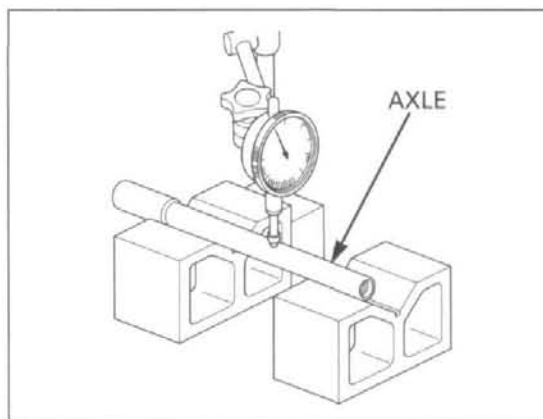


### INSPECTION

#### Axle

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

**SERVICE LIMIT: 0.2 mm (0.01 in)**



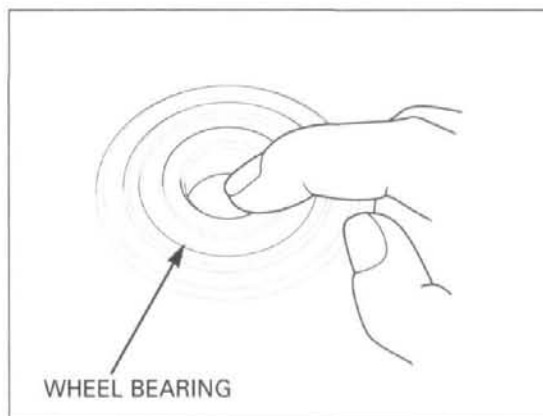
#### Wheel bearing

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.

Install the new bearings into the hub using the special tools (page 13-11).



#### Wheel rim runout

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

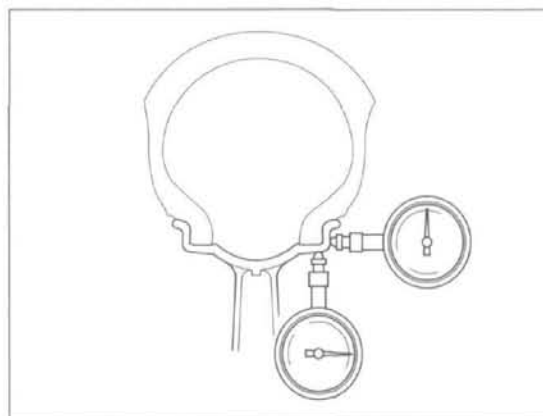
Spin the wheel by hand and read the runout using a dial indicator.

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)**

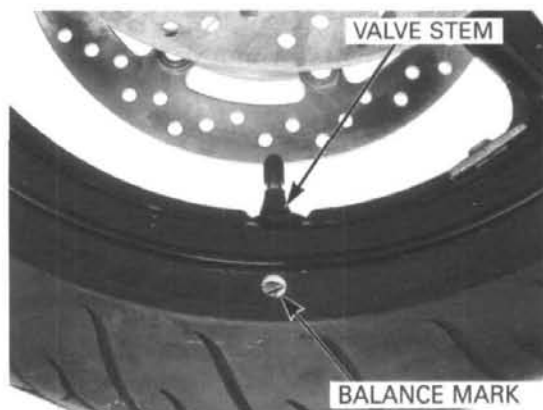


*For optimum balance, the tire balance mark (a paint dot on the side wall) must be located next to the valve stem. Remount the tire if necessary.*

#### Wheel balance

##### NOTICE

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

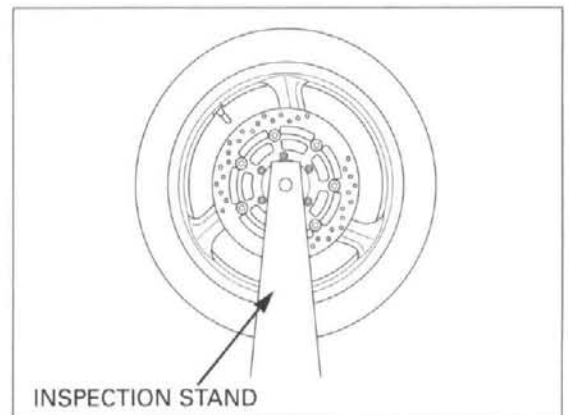


Note the rotating direction marks on the wheel and tire.



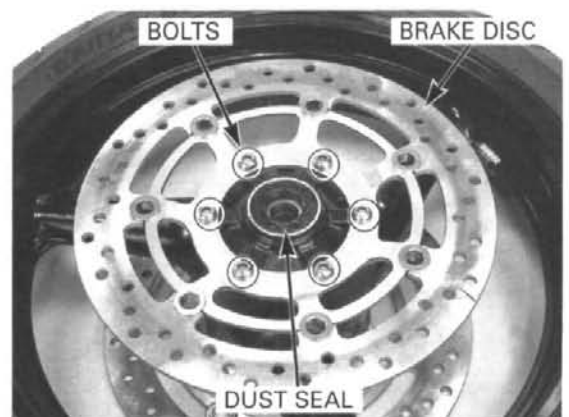
Remove the dust seals from the wheel.  
Mount the wheel, tire and brake disc assembly in an inspection stand.  
Spin the wheel, allow it to stop, and mark the lowest (heaviest) point of the wheel with a chalk.  
Do this two or three times to verify the heaviest area.  
If the wheel is balanced, it will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

To balance the wheel, install 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

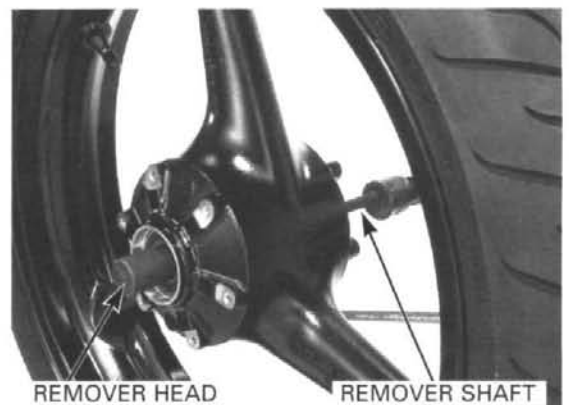
Remove the bolts and brake discs.  
Remove the dust seals.



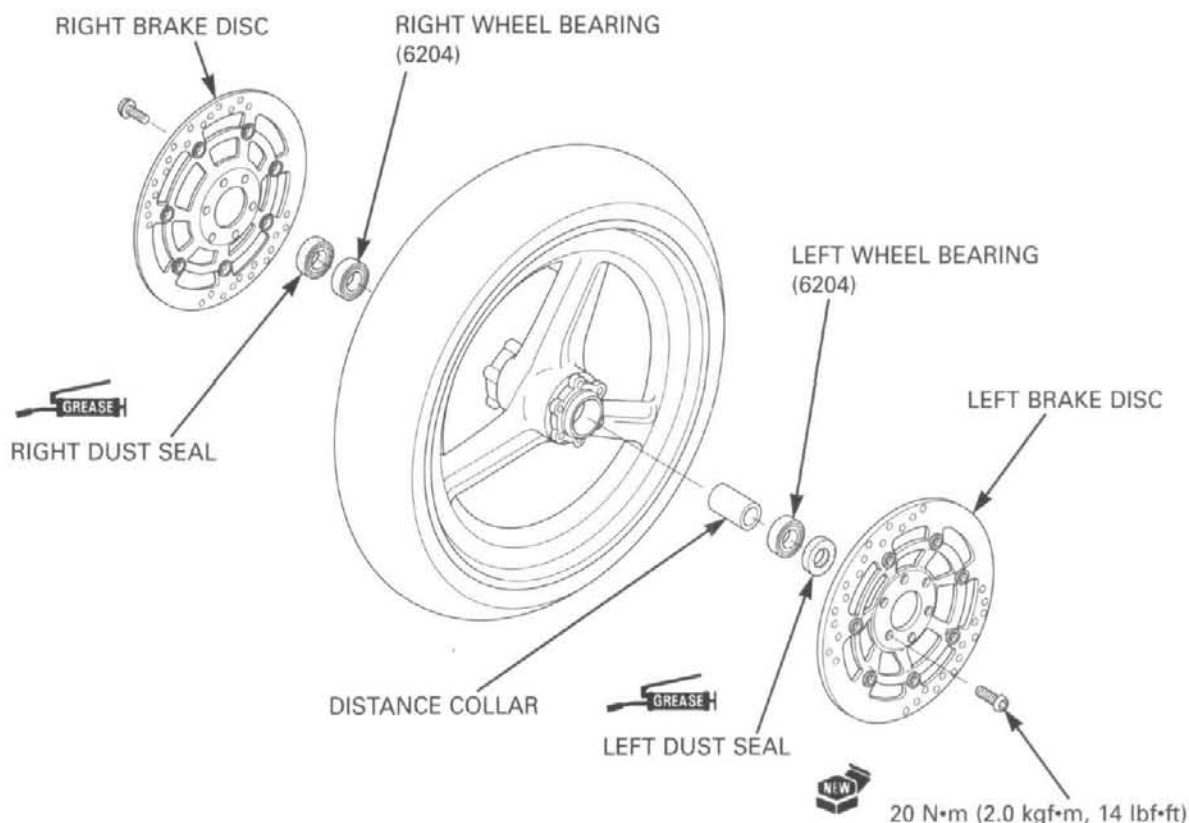
Install the bearing remover head into the bearing.  
From the opposite side, install the bearing remover shaft and drive the bearing out of the wheel hub.  
Remove the distance collar and drive out the other bearing.

### TOOLS:

Bearing remover head, 20 mm 07746-0050600  
Bearing remover shaft 07746-0050100



## ASSEMBLY



Never install the old bearings. Once the bearings have been removed, the bearing 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 tool.

### TOOLS:

**Driver**  
**Attachment, 42 x 47 mm**  
**Pilot, 20 mm**

07749-0010000  
 07746-0010300  
 07746-0040500

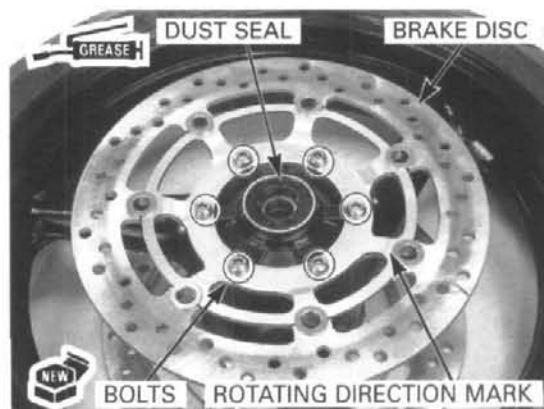


Do not get grease on the brake discs or stopping power will be reduced.

Install the brake discs on the wheel hub. Install and tighten the new mounting bolts to the specified torque.

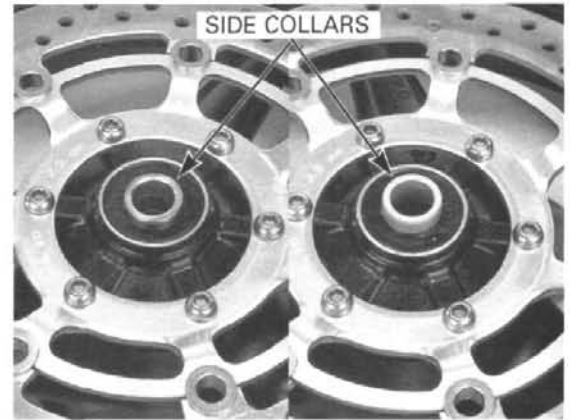
**TORQUE: 20 N·m (2.0 kgf·m, 14 lbf·ft)**

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



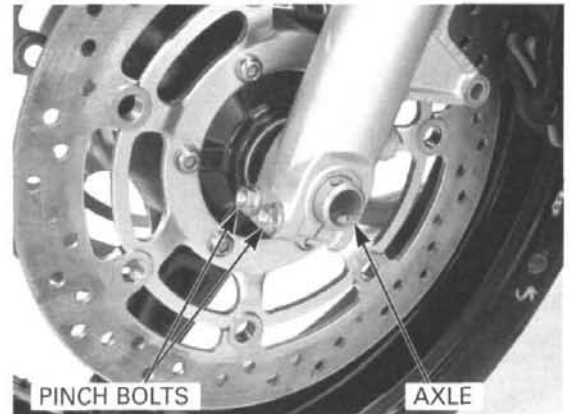
## INSTALLATION

Install the 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.

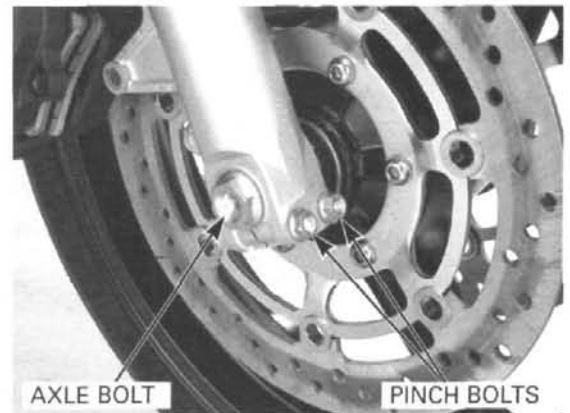


Hold the axle and tighten the axle bolt to the specified torque.

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

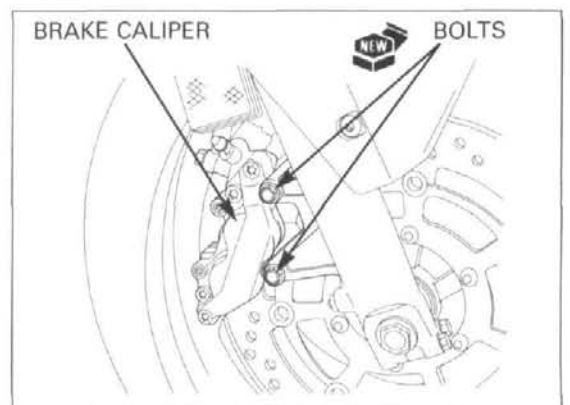
Tighten the right axle pinch bolts to the specified torque.

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



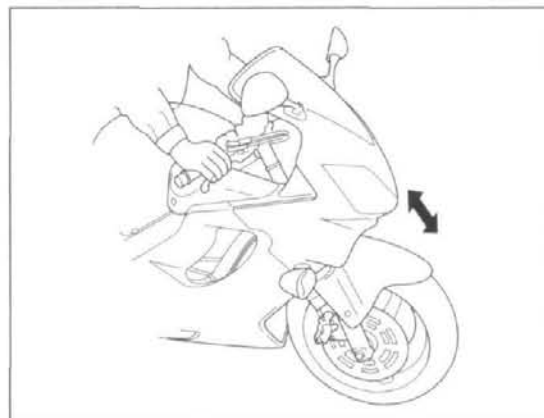
Install both brake calipers and tighten the new mounting bolts to the specified torque.

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



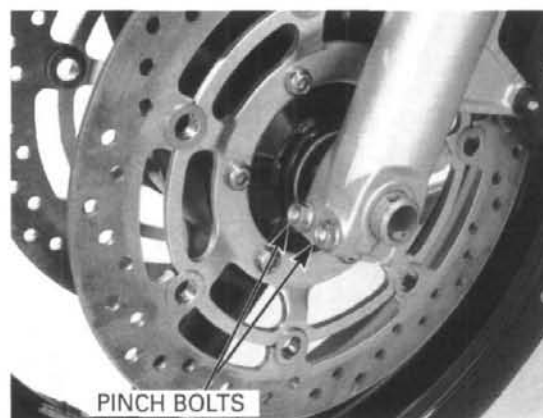
## FRONT WHEEL/SUSPENSION/STEERING

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

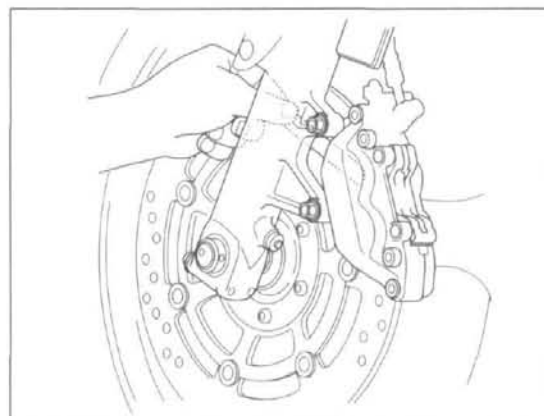


Tighten the left axle pinch bolts to the specified torque.

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



Check the clearance between the brake disc and caliper bracket on each side after installation. The clearance should be at least 0.7 mm (0.03 in).

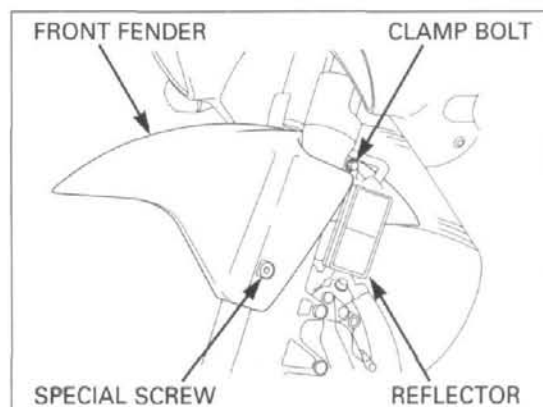


## FORK

### REMOVAL

Remove the front wheel (page 13-9)

Remove the special screws, brake hose clamp bolts, reflectors and front fender.



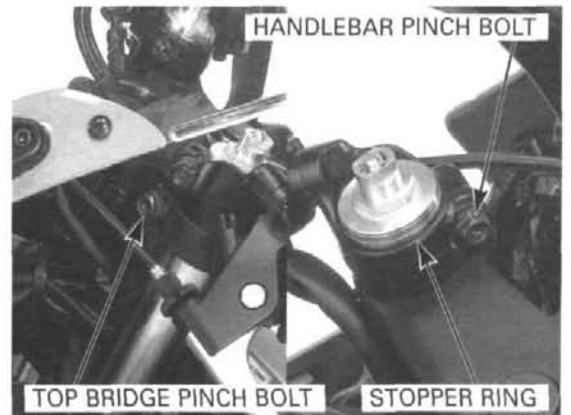
Remove the handlebar switch wire band.



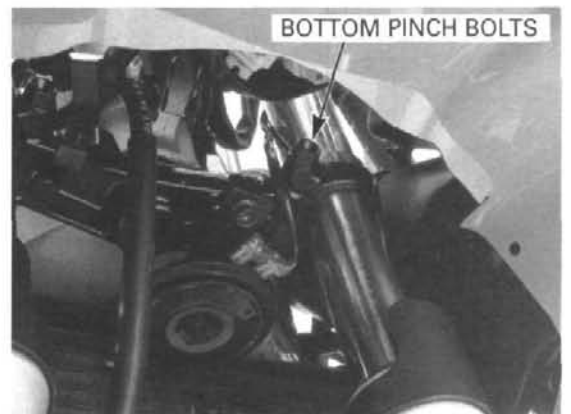
Remove the handlebar stopper ring.  
Loosen the handlebar pinch bolt and top bridge pinch bolt.  
When the fork leg will be disassembled, loosen the fork cap, but do not remove it yet.

*Keep the brake master cylinders upright.*

Remove the handlebar assembly and secure it.



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.*

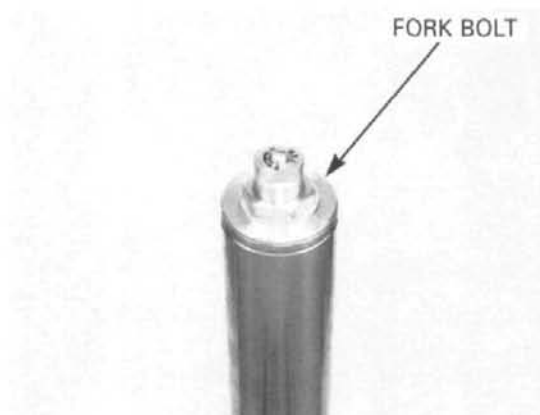
Remove the fork protector by prying it carefully using a screwdriver.



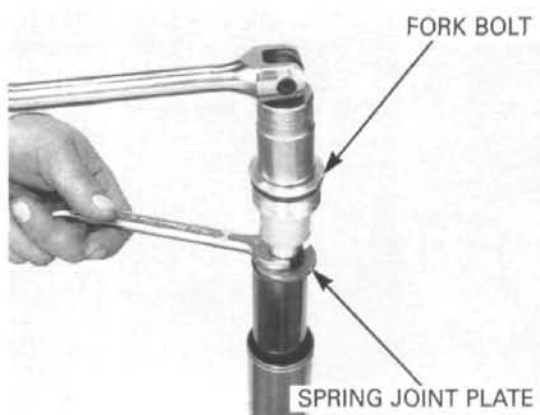


## FRONT WHEEL/SUSPENSION/STEERING

Remove the fork bolt from the fork tube.



Push down the joint plate and install the 17-mm wrench onto the rebound adjuster.

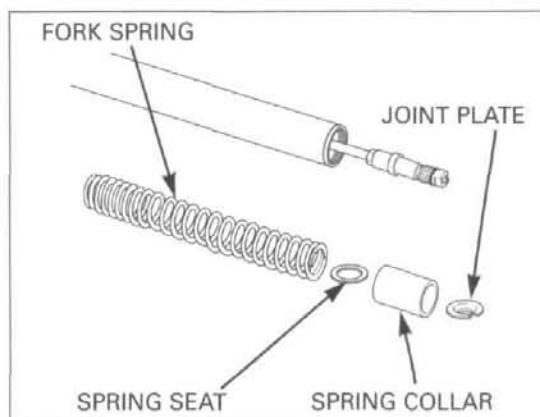


*Do not remove the rebound damping adjuster from the damper rod, or fork damping force will be changed.*

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

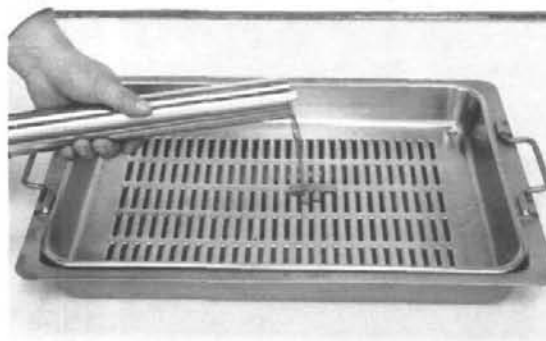
Remove the following:

- Spring joint plate
- Spring collar
- Spring seat
- Fork spring



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

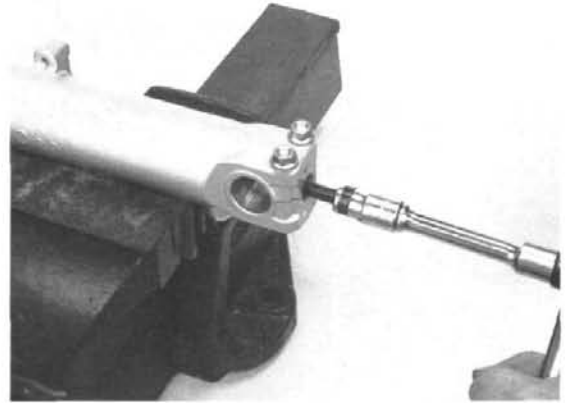
Pour out the fork fluid from the fork damper by pumping the damper rod several times.



Hold the axle holder in a vice with soft jaws or a shop towel.

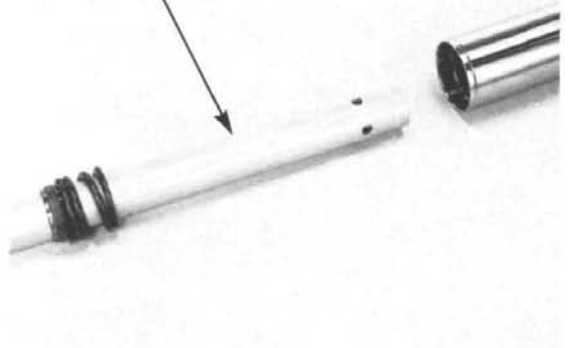
Remove the fork damper socket bolt and sealing washer.

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



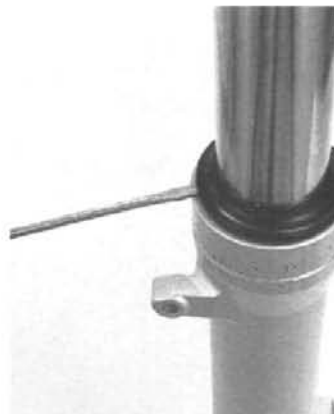
Remove the fork damper assembly from the fork tube.

FORK DAMPER



Remove the dust seal.

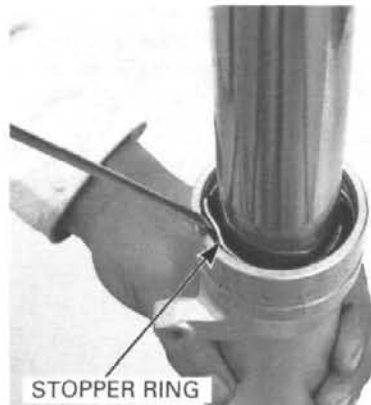
DUST SEAL



*Do not scratch the fork tube sliding surface.*

Remove the oil seal stopper ring.

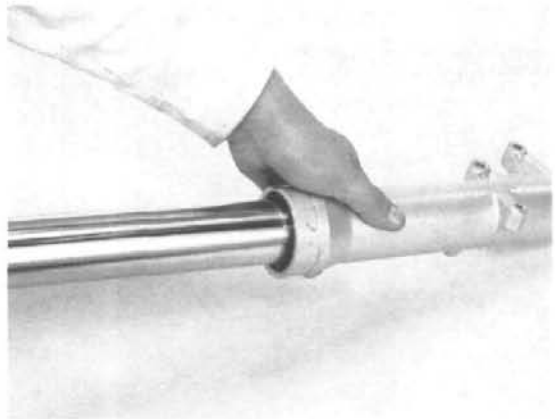
STOPPER RING



## FRONT WHEEL/SUSPENSION/STEERING

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.

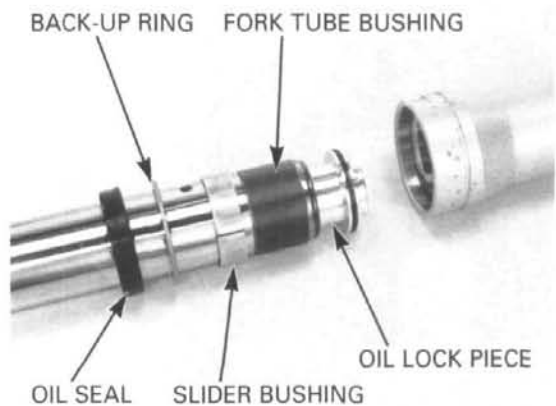


Remove the oil lock piece from the fork slider.

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

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

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

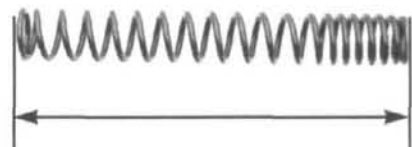


## INSPECTION

### Fork spring

Measure the fork spring free length.

**SERVICE LIMIT: 280.3 mm (11.03 in)**



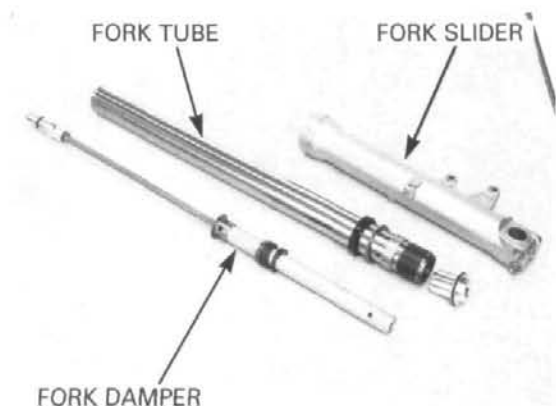
### Fork tube/slider/damper

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.

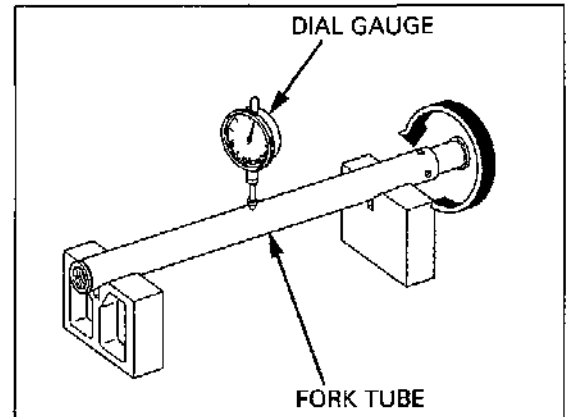
Check the oil lock valve for wear or damage.

Replace the fork damper assembly, if any component is damaged.



Place the fork tube in V-blocks and measure the runout.  
Actual runout is 1/2 the total indicator reading.

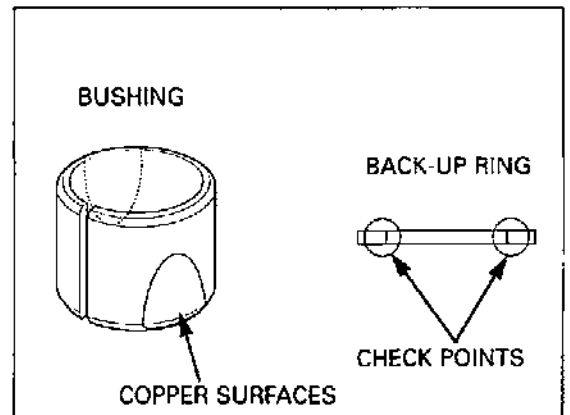
**SERVICE LIMIT: 0.20 mm (0.008 in)**



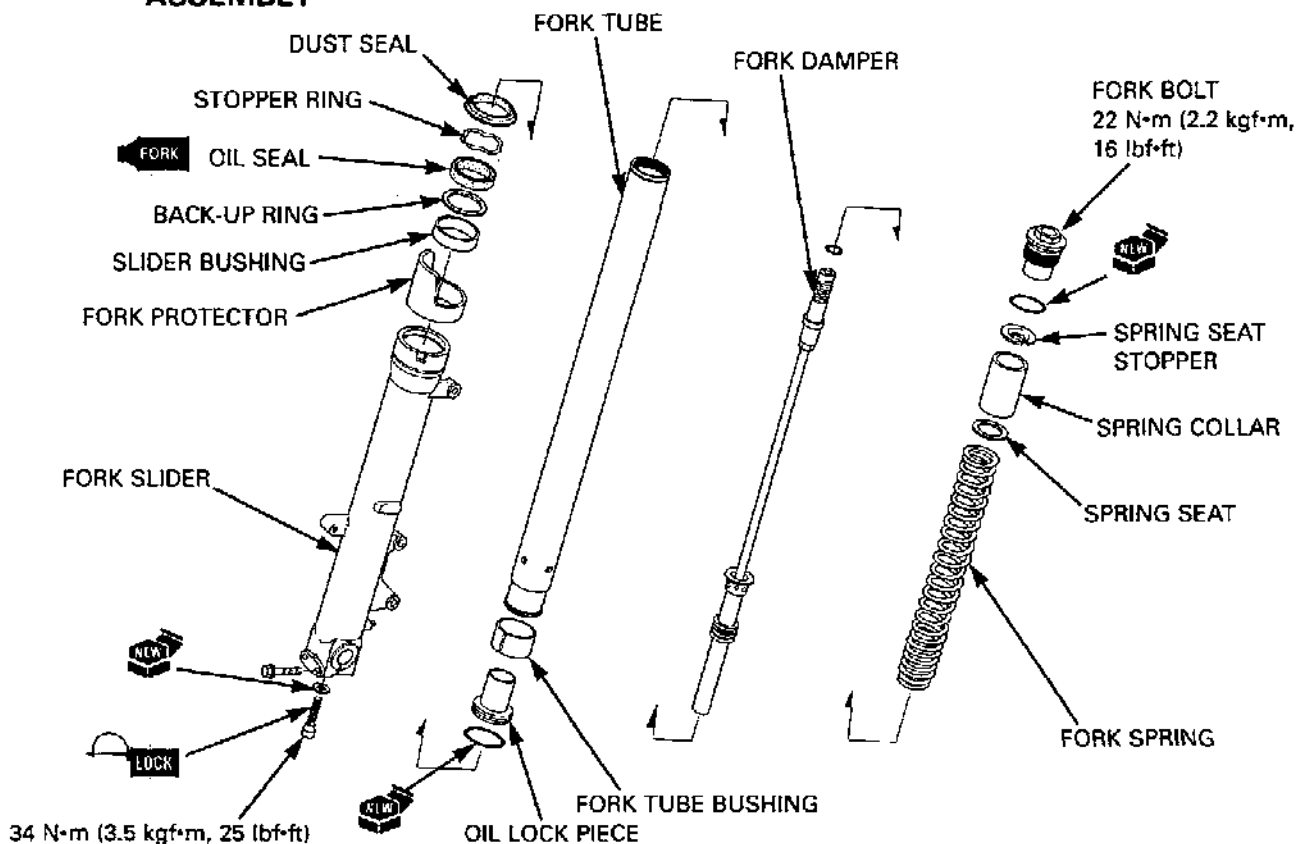
## Fork tube bushing

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



## FRONT WHEEL/SUSPENSION/STEERING

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

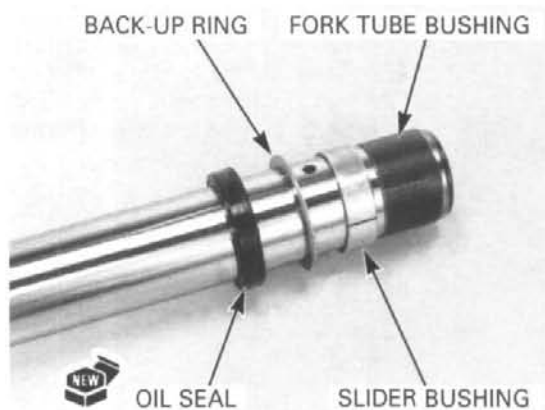
*Do not open the bushing slit more than necessary*

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



Coat a new O-ring with fork fluid and install it into the groove in the oil lock piece.

Install the oil lock piece into the fork tube.

Apply fork fluid to the oil seal lips.

Install the fork slider into the fork tube.

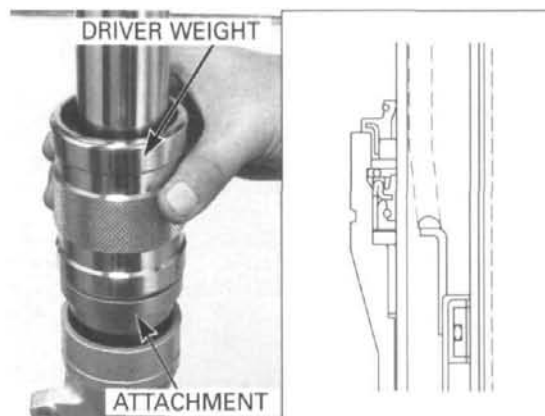


Drive the oil seal in using the special tools.

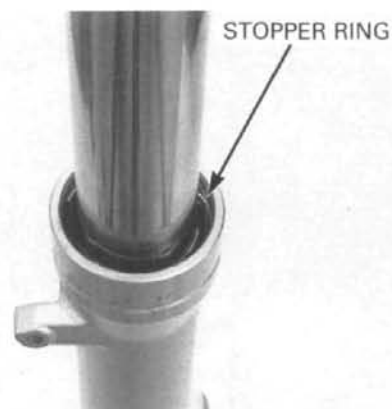
### TOOL:

Fork seal driver weight 07947-KA50100

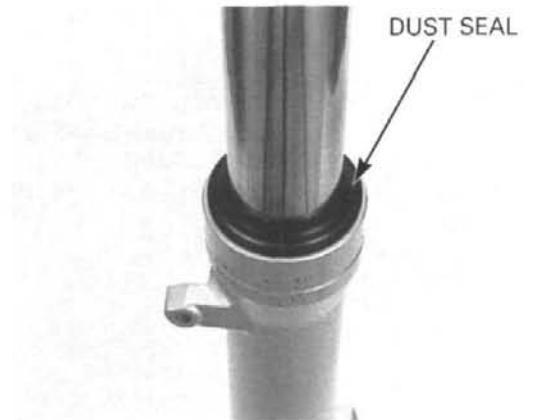
Fork seal driver attachment 07947-KA40200



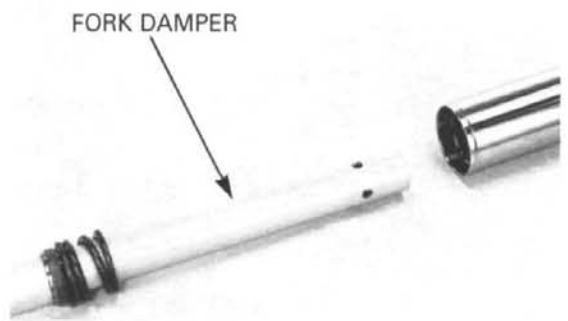
Install the stopper ring into the fork slider groove securely.



Install the dust seal.



Install the fork damper assembly into the fork tube.



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

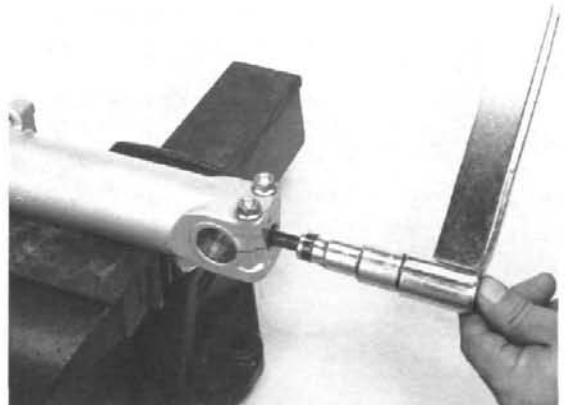


Hold the axle holder in a vise with soft jaws or a shop towel.

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 seat, collar and fork bolt.*



## FRONT WHEEL/SUSPENSION/STEERING

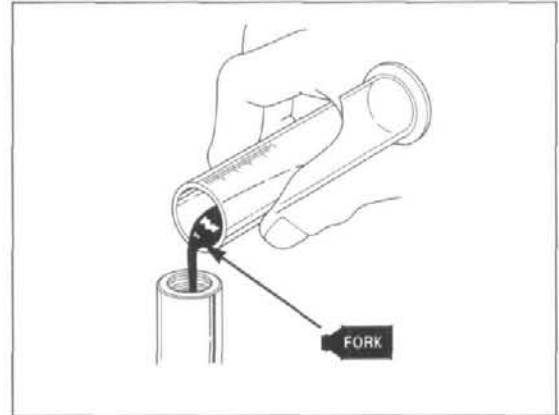
Pour the specified amount of the recommended fork fluid into the fork tube.

### RECOMMENDED FORK FLUID:

Pro Honda Suspension Fluid SS-8

### FORK FLUID CAPACITY:

$462 \pm 2.5 \text{ cm}^3$  ( $15.6 \pm 0.08 \text{ US oz}$ ,  $16.3 \pm 0.09 \text{ Imp oz}$ )



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

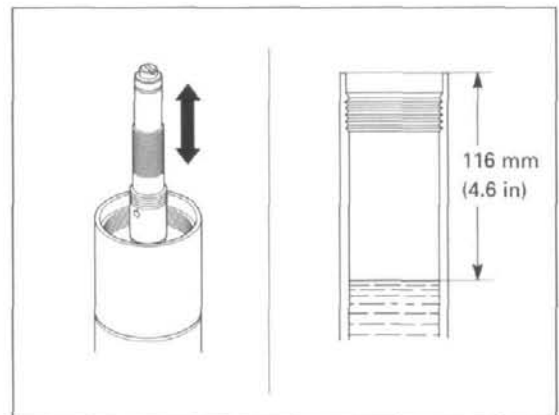
Slowly pump the fork tube several times to remove the trapped air.

Compress the fork tube slowly.

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

**FORK OIL LEVEL: 116 mm (4.6 in)**

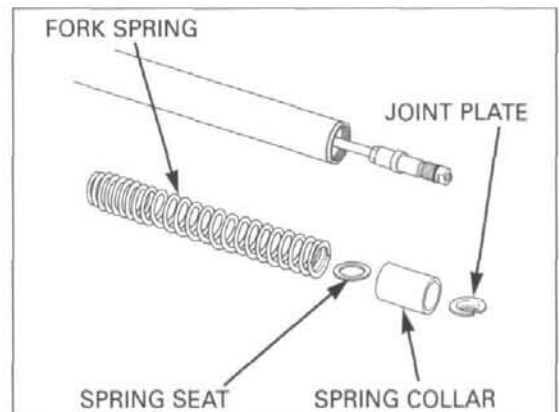
*Make sure the oil level is the same in both forks.*



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

Remove the following:

- Spring seat
- Spring collar
- Spring joint plate

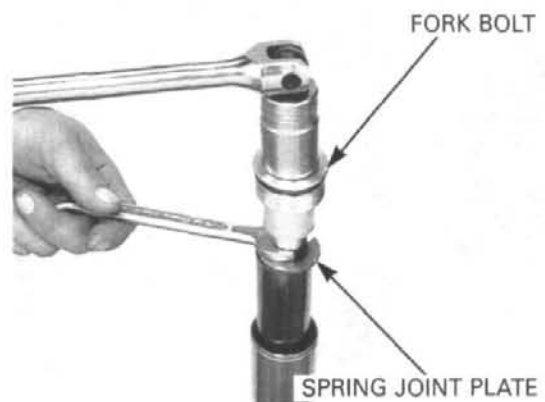


Install a new O-ring onto the fork bolt.

Apply fork fluid onto the new O-ring.

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

Hold the rebound adjuster with a 17-mm wrench and tighten the fork bolt.



Screw the fork bolt into the fork tube.



Install the fork protector.

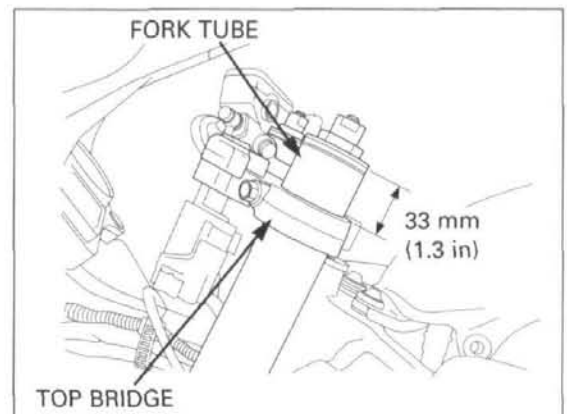


### INSTALLATION

Install the fork leg through the bottom bridge and top bridge so that the height from the top bridge upper surface to the fork tube end is 33 mm (1.3 in).

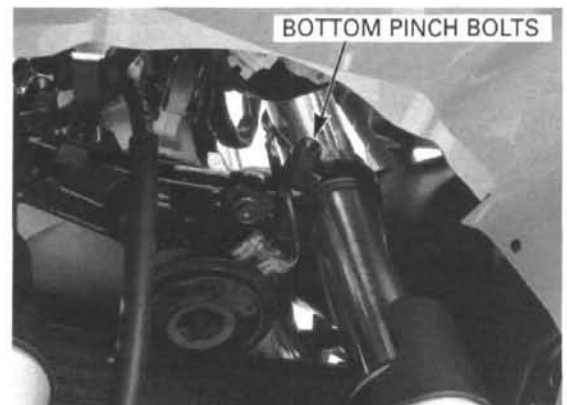
Tighten the fork top bridge pinch bolt to the specified torque.

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



Tighten the bottom bridge pinch bolts to the specified torque.

**TORQUE: 39 N·m (4.0 kgf·m, 29 lbf·ft)**





## FRONT WHEEL/SUSPENSION/STEERING

Tighten the fork bolt to the specified torque if it was removed.

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

Install the handlebar.

Make sure the handlebar boss is positioned in the fork top bridge groove.

Tighten the handlebar pinch bolt securely.



*Right fork:* Secure the handlebar switch wire with the wire band.

*Left fork:* Secure the handlebar switch and horn wire with the wire bands (page 1-23).

Install the front wheel (page 13-13).



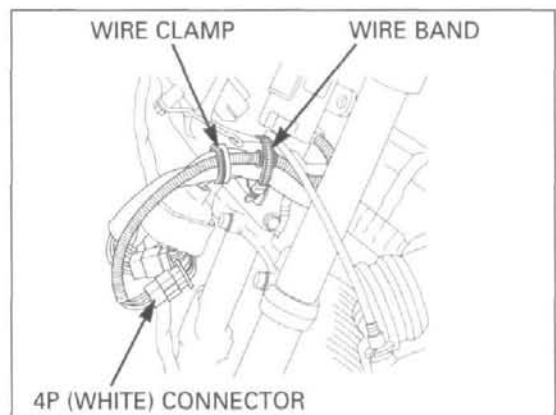
## STEERING STEM

### REMOVAL

Remove the following:

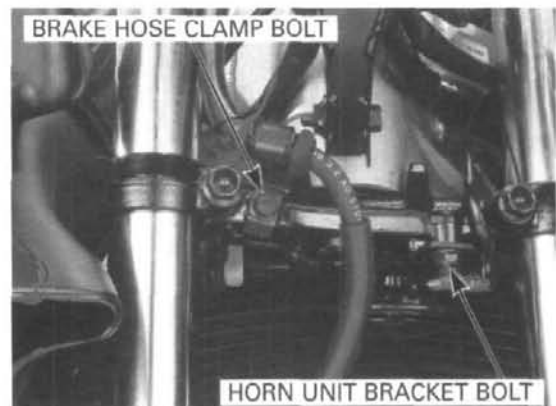
- Front wheel (page 13-9)
- Upper cowl (page 2-9)
- Handlebars (page 13-3)

Release the wire band and clamp, then disconnect the ignition switch 4P (White) connector.

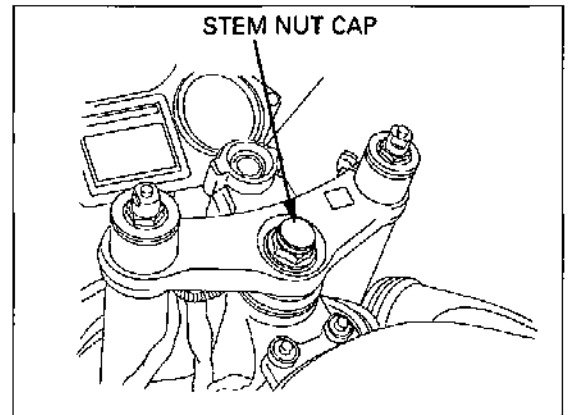


Remove the bolt and front brake hose clamp.

Disconnect the horn connector.  
Remove the bolt and horn unit.

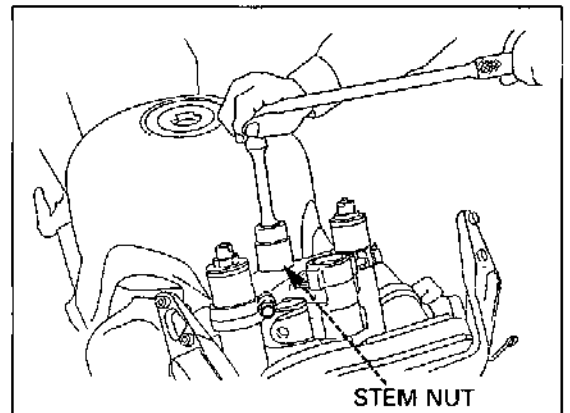


Remove the steering stem nut cap.



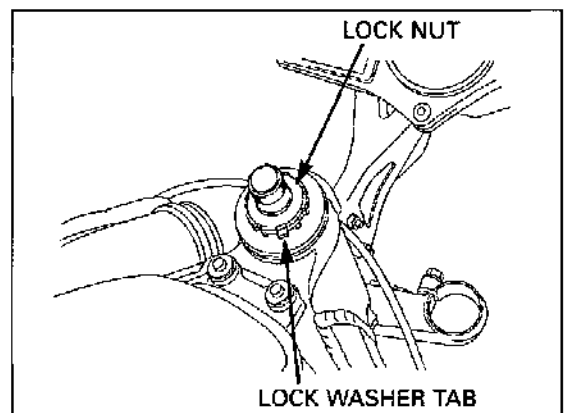
Remove the stem nut and the top bridge.

Remove the fork legs (page 13-14).



Straighten the tabs of the lock washer.

Remove the steering bearing adjustment nut lock nut and lock washer.

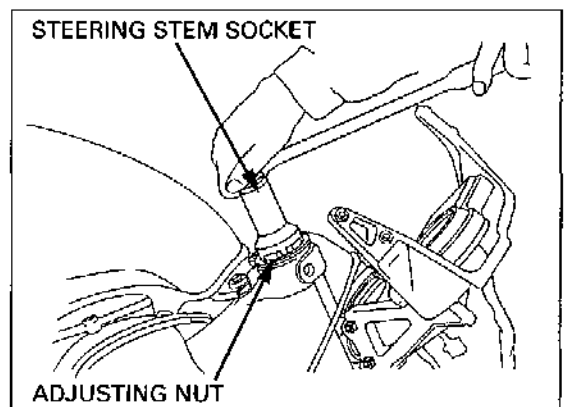


Remove the steering stem bearing adjustment nut using the special tool.

**TOOL:**

**Steering stem socket**

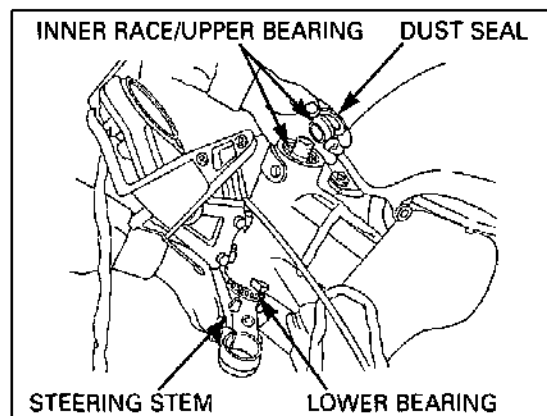
**07916-3710101**



## FRONT WHEEL/SUSPENSION/STEERING

Remove the following:

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



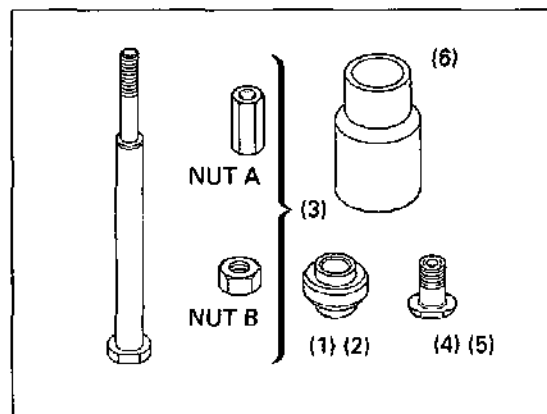
### BEARING REPLACEMENT

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

Replace the races using the ball race remover set as described in the following procedure.

#### TOOLS:

- |                             |               |
|-----------------------------|---------------|
| Ball race remover set       | 07946-KM90001 |
| - Driver attachment, A (1)  | 07946-KM90100 |
| - Driver attachment, B (2)  | 07946-KM90200 |
| - Driver shaft assembly (3) | 07946-KM90300 |
| - Bearing remover, A (4)    | 07946-KM90401 |
| - Bearing remover, B (5)    | 07946-KM90500 |
| - Assembly base (6)         | 07946-KM90600 |



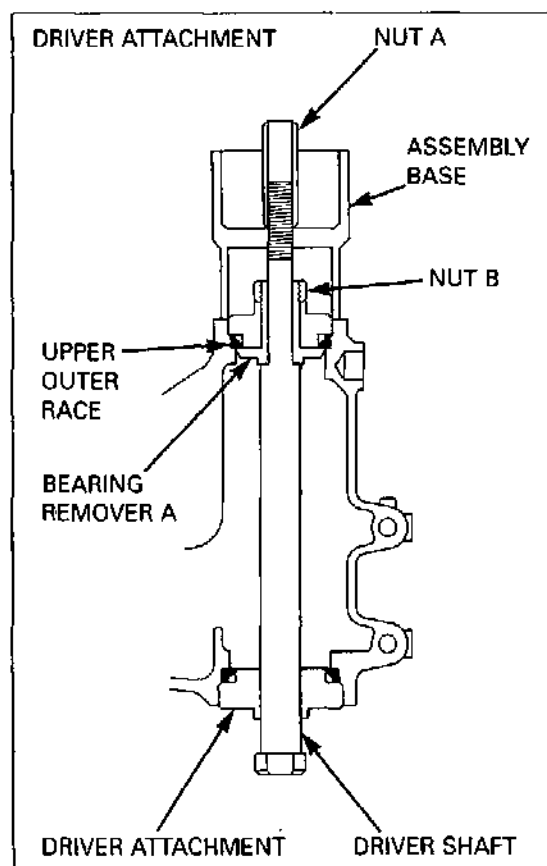
*Note the installation direction of the assembly base.*

Install the ball race remover into the head pipe as shown.

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

Lightly tighten nut B with a wrench.

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



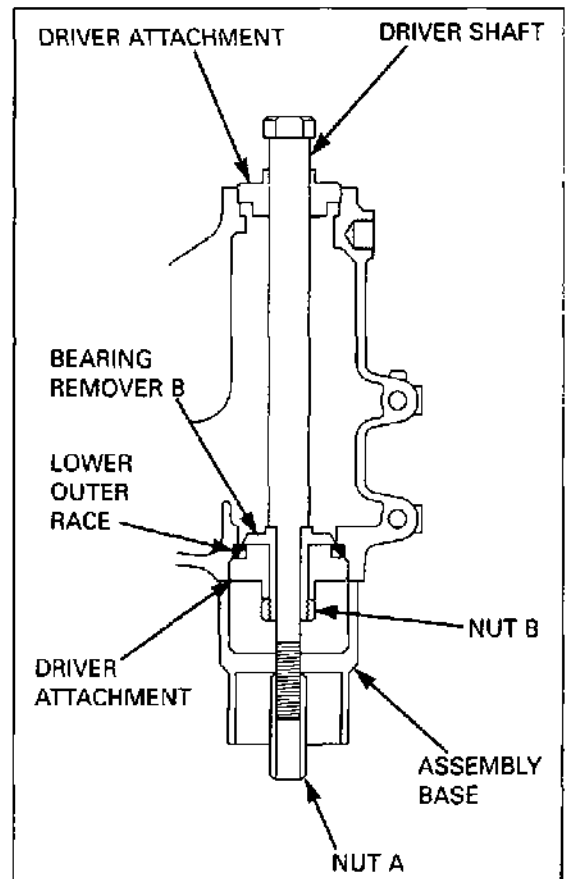
*Note the installation direction of the assembly base.*

Install the ball race remover into the steering head pipe as shown.

Align bearing remover B with the groove in the steering head.

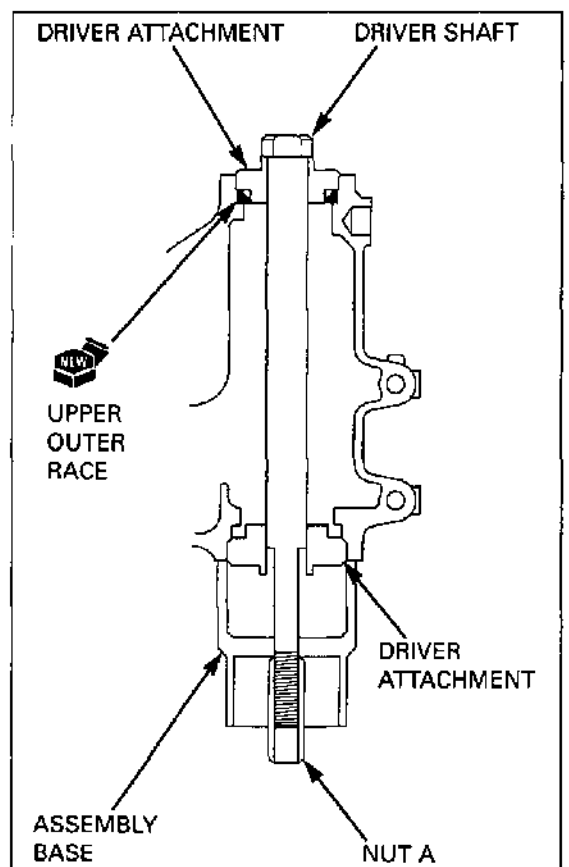
Lightly tighten nut B.

While holding the driver shaft, turn nut A gradually to remove the lower bearing outer race.



Install a new upper outer race and the ball race remover as shown.

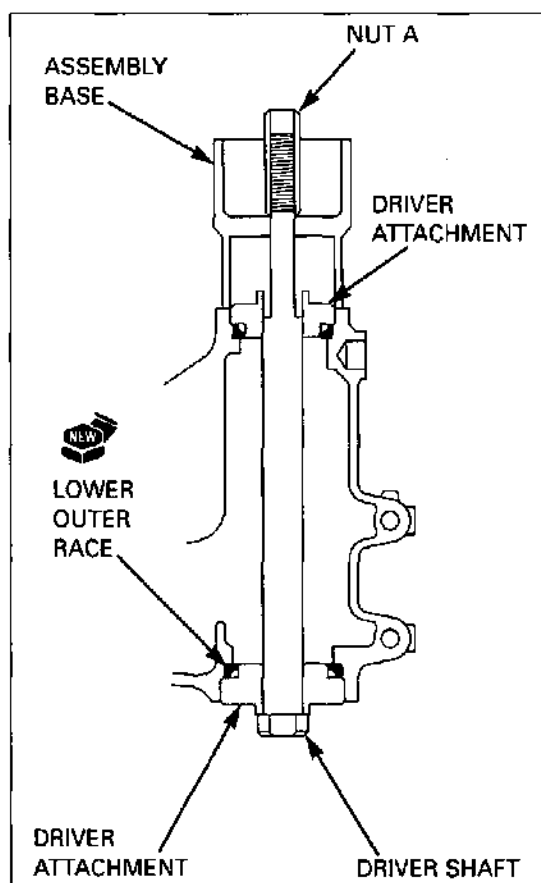
While holding the driver shaft with a wrench, turn nut A gradually until the groove in driver attachment A aligns with the upper end of the steering head. This will allow you to install the upper bearing outer race.



## FRONT WHEEL/SUSPENSION/STEERING

Install a new lower outer race and ball race remover as shown.

While holding the driver shaft with a wrench, turn nut A gradually until the groove in driver attachment B aligns with the lower end of the steering head. This will allow you to install the lower bearing outer race.



### U.S.A. only:

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

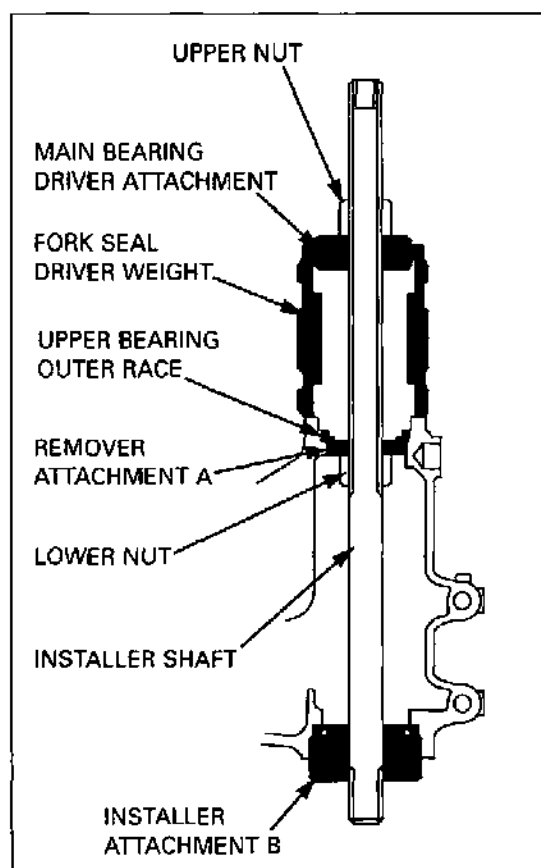
#### TOOLS:

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 A	07VMF-MAT0300
Remover attachment B	07VMF-MAT0400

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

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

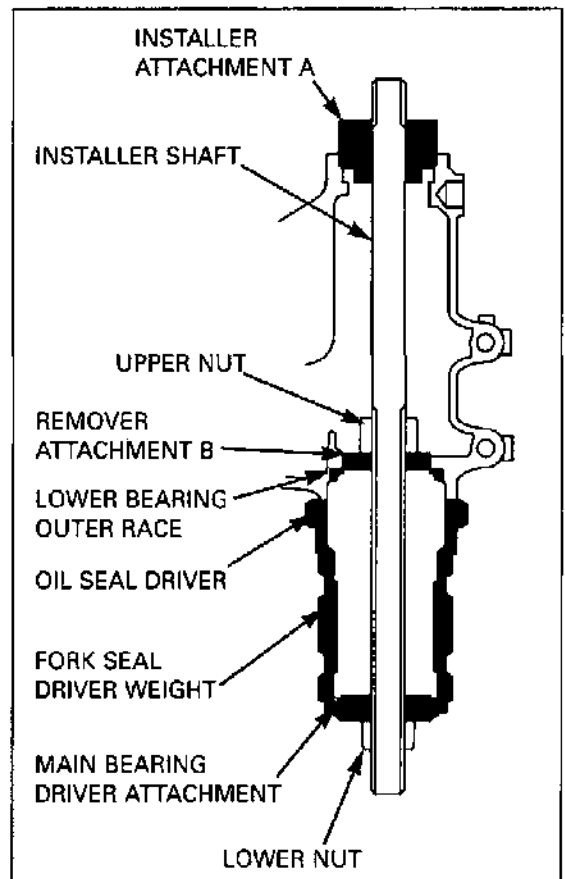
While holding the installer shaft with the wrench, turn the upper nut gradually to remove the upper bearing outer race.



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

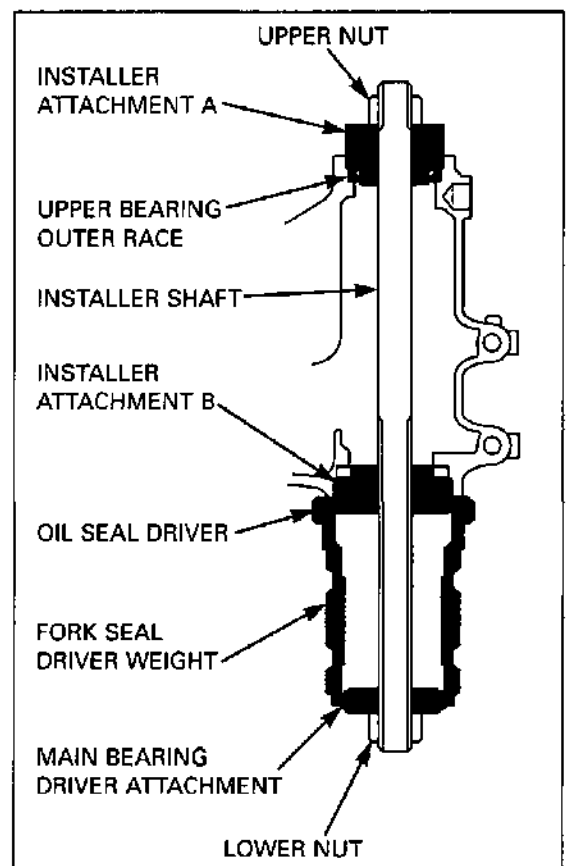
Align remover attachment B with the groove in the steering head.

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



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

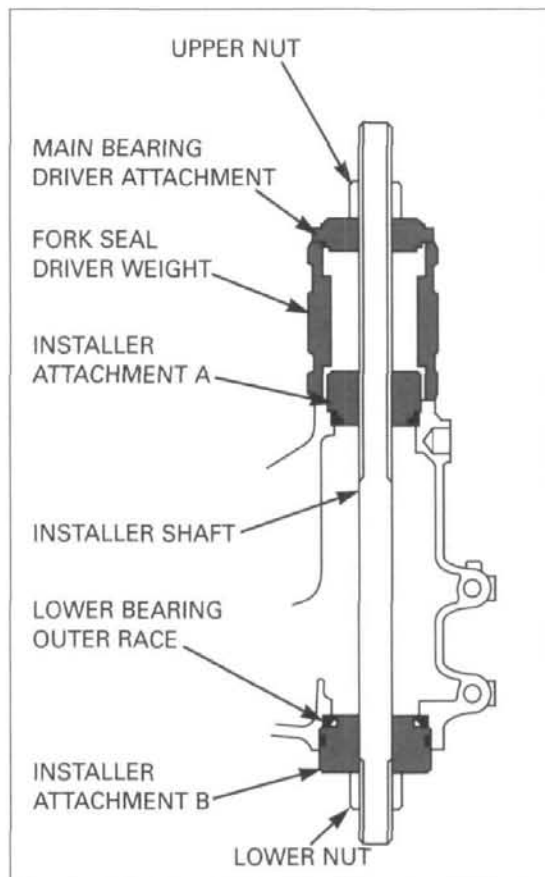
While holding the installer shaft with the wrench, turn the lower nut gradually until the groove in installer attachment A aligns with the upper end of the steering head. This will allow you to install the upper bearing outer race.



## FRONT WHEEL/SUSPENSION/STEERING

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 installer attachment B aligns with the lower end of the steering head. This will allow you to install the lower bearing outer race.



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.

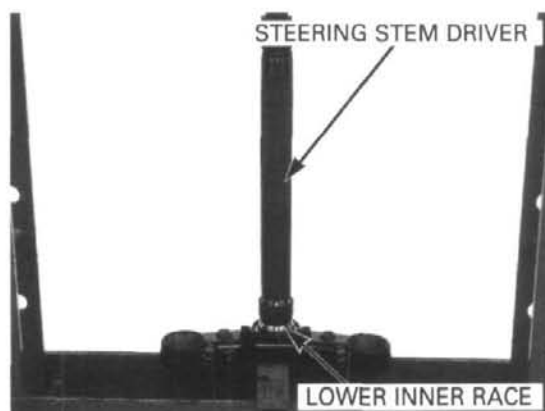


Apply grease to a new dust seal lips and install it over the steering stem. Install a new lower bearing inner race using the special tool and a hydraulic press.

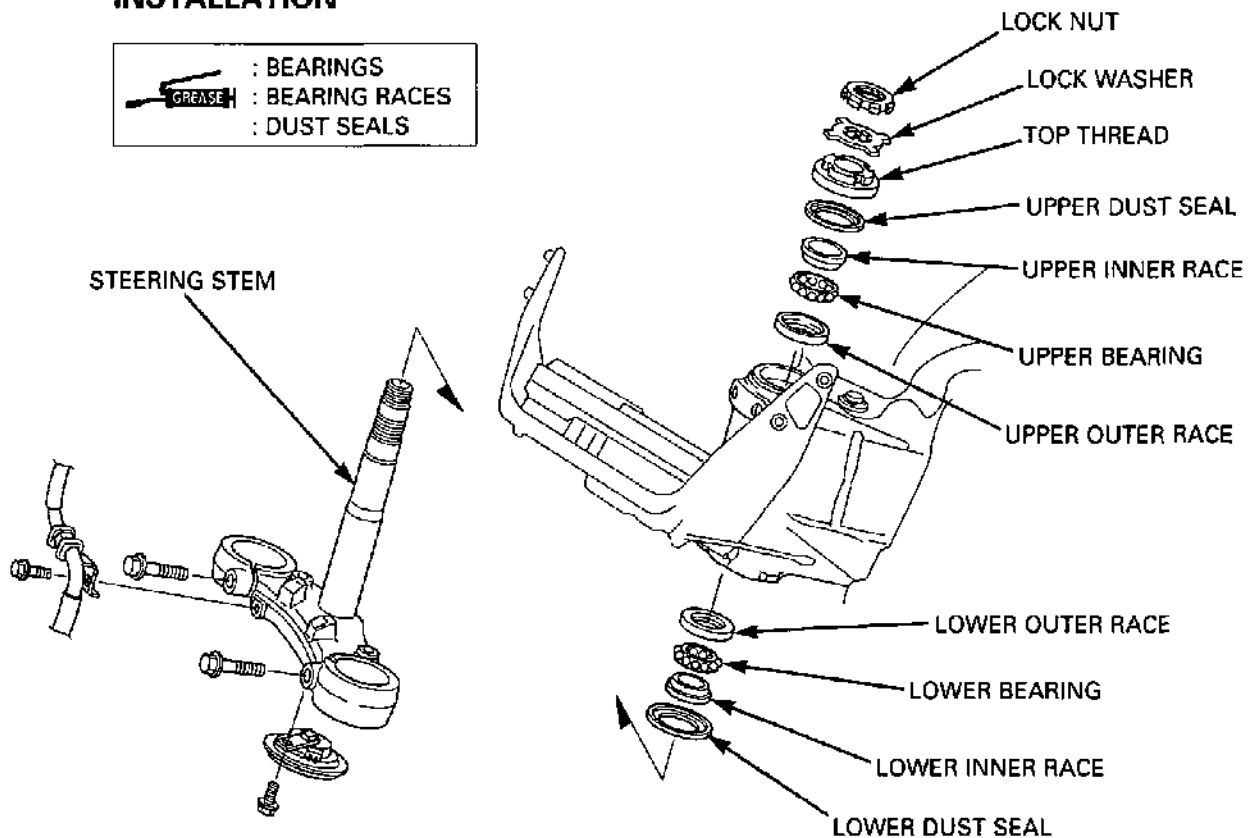
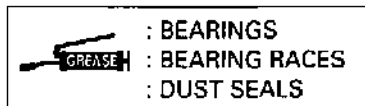
### TOOL:

Steering stem driver

07946-MB00000



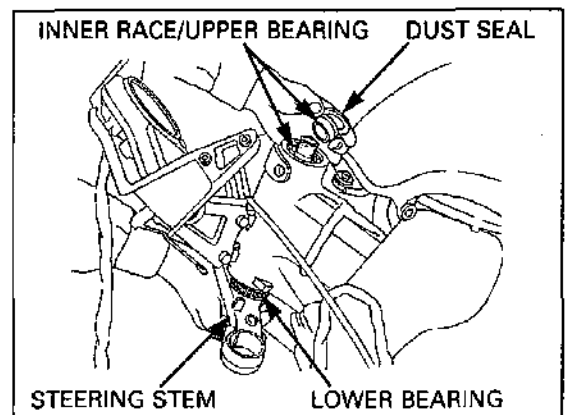
## INSTALLATION



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.

Install upper bearing, inner race and dust seal.

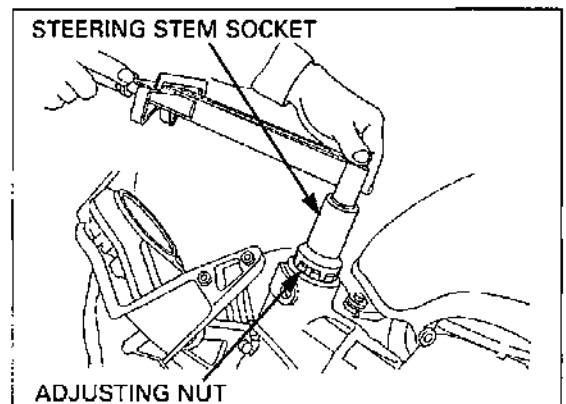


Apply oil to the bearing adjustment nut threads.  
Install and tighten the stem bearing adjusting nut to the initial torque.

### TOOL:

Steering stem socket 07916-3710101

TORQUE: 25 N·m (2.5 kgf·m, 18 lbf·ft)





## FRONT WHEEL/SUSPENSION/STEERING

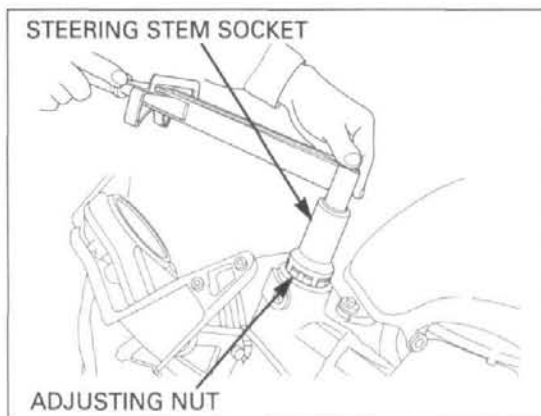
Move the steering stem to the right and left, lock-to-lock, five times to seat the bearings. Make sure the steering stem moves smoothly, without play or binding; then loosen the bearing adjusting nut.



Retighten the bearing adjusting nut to the specified torque.

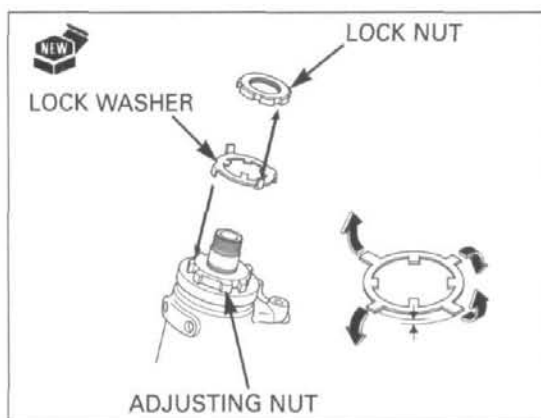
**TORQUE: 25 N·m (2.5 kgf·m, 18 lbf·ft)**

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



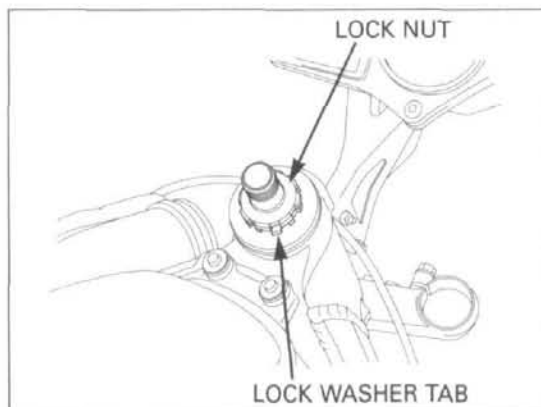
Install the new lock washer onto the steering stem.

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

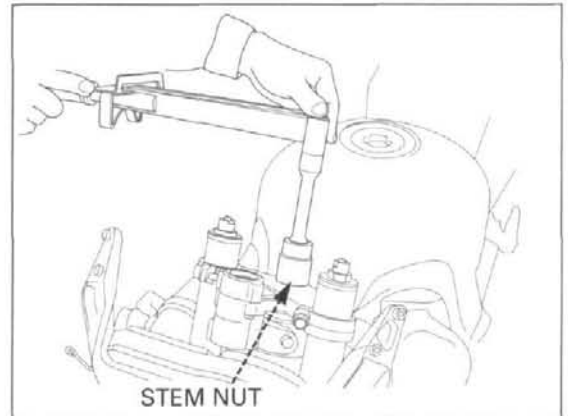
Bend the lock washer tabs up into the lock nut groove.



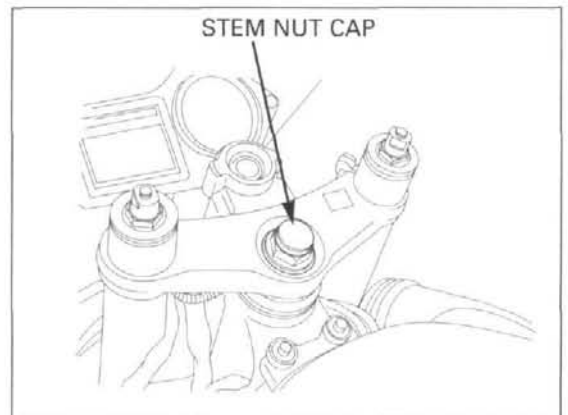
Install the fork legs (page 13-23).

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)**



Install the steering stem nut cap.

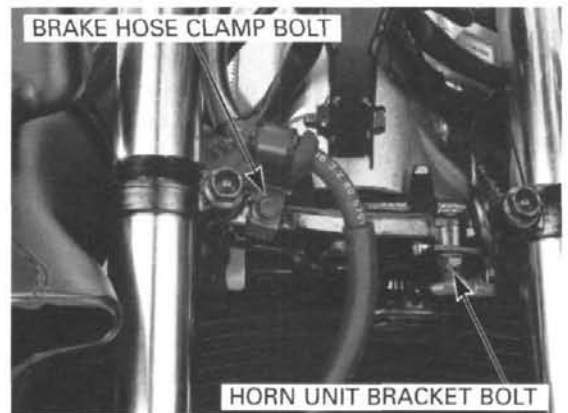


Install the front brake hose clamp, tighten the bolt to the specified torque.

**TORQUE: 10 N·m (1.0 kgf·m, 7 lbf·ft)**

Install the horn unit assembly and tighten the mounting bolt.

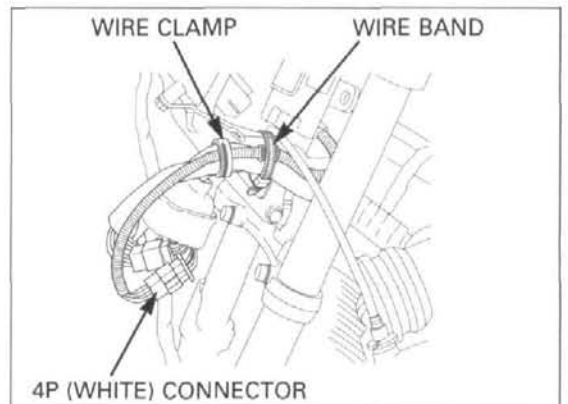
Connect the horn wire connectors.



Connect the ignition switch 4P (White) connector and secure the wires with the wire band and clamp (page 1-23).

Install the following:

- Front wheel (page 13-13)
- Handlebar (page 13-5)
- Upper cowl (page 2-12)



## FRONT WHEEL/SUSPENSION/STEERING

### STEERING HEAD BEARING PRE-LOAD

Support the motorcycle so the front wheel is off the ground.

Position the steering stem straight ahead.

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

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

The pre-load should be within 1.0 – 1.5 kgf (2.2 – 3.3 lbf). If the readings do not fall within the limits, lower the front wheel to the ground and adjust the steering bearing adjusting nut.

