

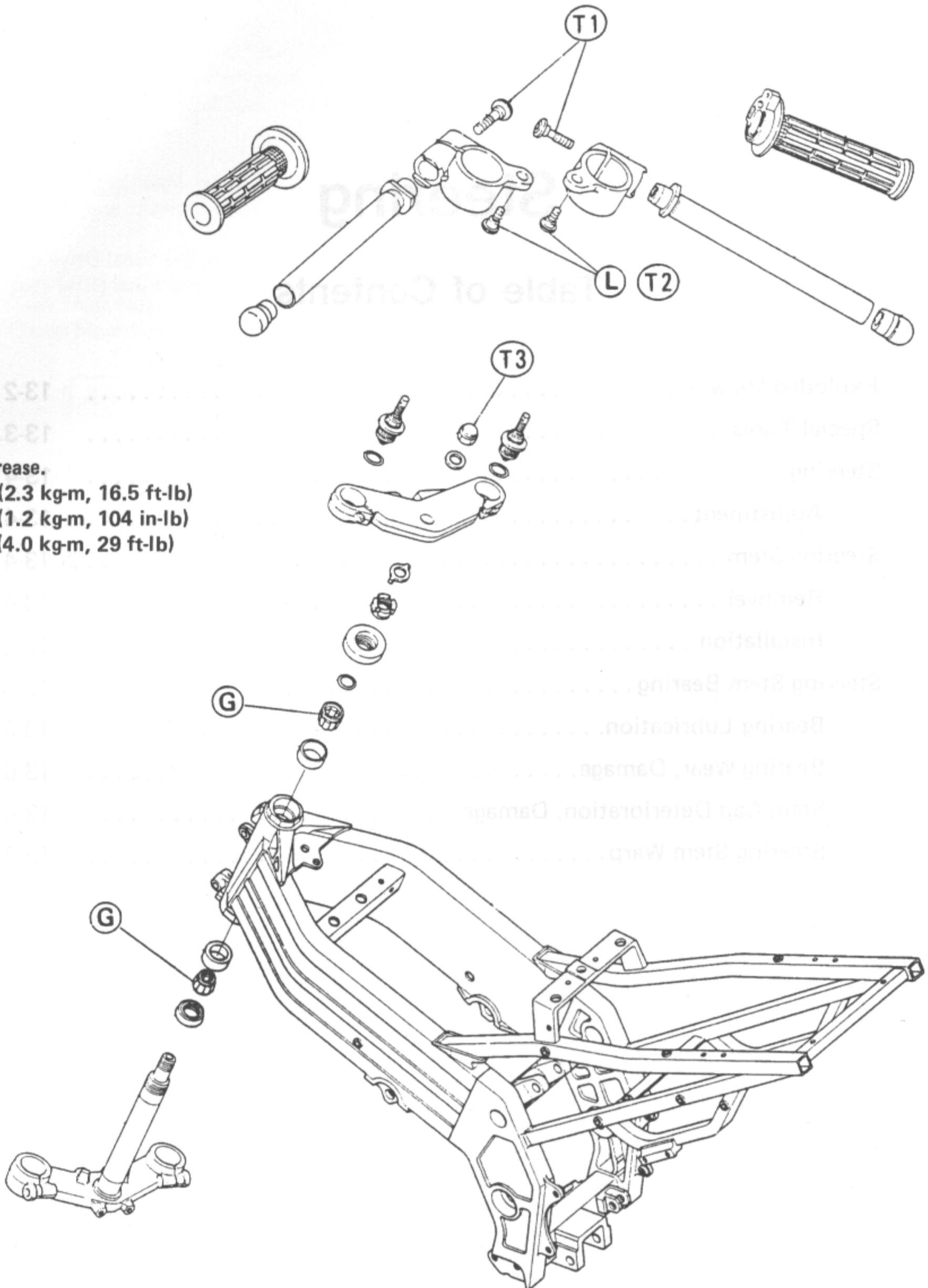
Steering

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13-2 STEERING

Exploded View



G : Apply grease.

T1: 23 N-m (2.3 kg-m, 16.5 ft-lb)

T2: 12 N-m (1.2 kg-m, 104 in-lb)

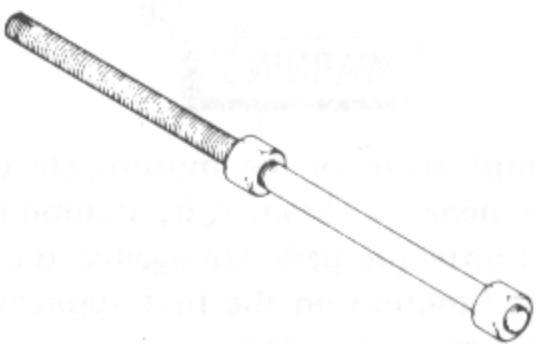
T3: 39 N-m (4.0 kg-m, 29 ft-lb)

Special Tools

Stem Bearing Remover: 57001-1107



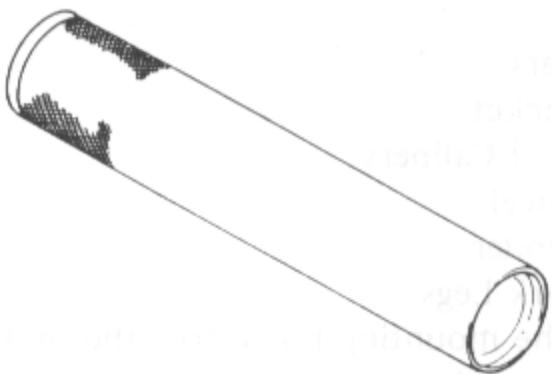
Stem Bearing Press Shaft: 57001-1075



Outer Race Driver: 57001-1106



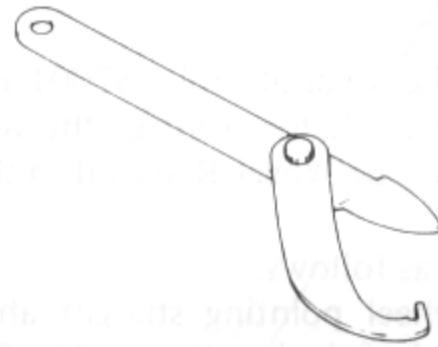
Stem Bearing Driver: 57001-137



Adapter: 57001-1092



Stem Nut Wrench: 57001-1100



NOTE: The front wheel should swing fully left and right under the force of gravity until the fork hits the stop. Feel for steering resistance during and pulling the wheel back to the stop. Before the stop, the wheel should swing freely.

1. Driver: 57001-1106
 2. Driver: 57001-1075
 3. Driver: 57001-1107
- NOTE: The driver will have some effect on the steering which must be taken into account. The driver must be in good condition and properly adjusted in order to test to level.

*Adjust the steering if necessary.
 Remove the following parts:
 Fuel Tank
 Fork Lower Clamp Bolts (both sides)
 Stem Head Nut (Loosen)
 Adjust the steering with the stem nut wrench (special tool).



NOTE: The stem nut wrench is used to adjust the steering. The stem nut wrench is used to adjust the steering. The stem nut wrench is used to adjust the steering.

13-4 STEERING

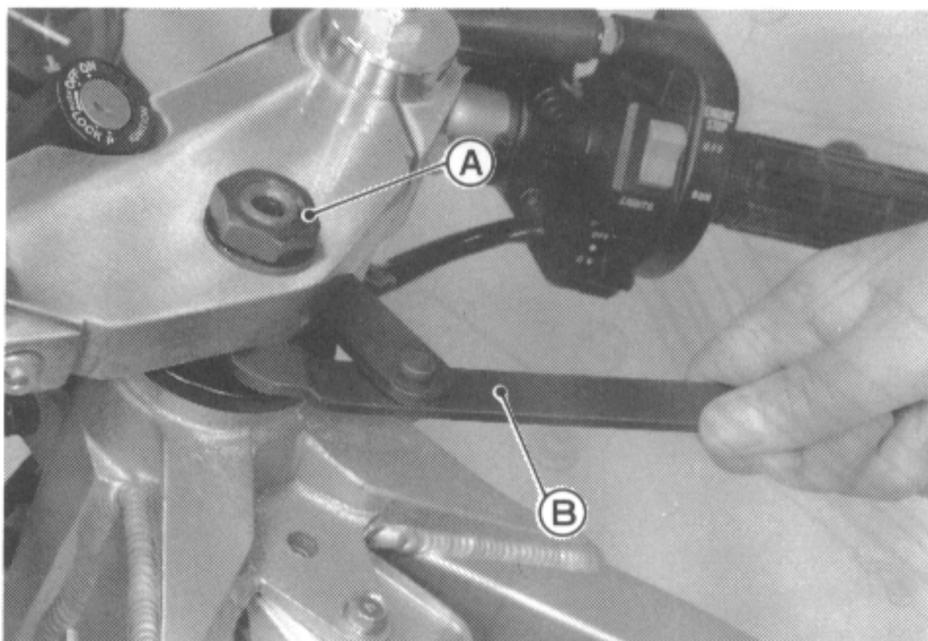
Steering

Adjustment

- Using the jack stand (special tool: 57001-1238), support the vehicle and lift the front of the vehicle by a suitable jack (see Front Wheel Removal in the Wheels/Tires chapter).
- Check the steering as follows.
 - With the front wheel pointing straight ahead, alternately tap each end of the handlebar. The front wheel should swing fully left and right from the force of gravity until the fork hits the stop.
 - Feel for steering looseness by pushing and pulling the forks.
- ★ If the wheel binds or catches before the stop, the steering is too tight.
- ★ If you feel looseness, the steering is too loose.

NOTE

- The cables and wiring will have some effect on the motion of the fork which must be taken into account. Be sure the wires and cables are properly routed.
 - The bearings must be in good condition and properly lubricated in order for any test to be valid.
- T2: 12 N·m (1.2 kg·m)
- ★ Adjust the steering if necessary.
 - Remove the following parts.
 - Fuel Tank
 - Fork Lower Clamp Bolts (both sides)
 - Stem Head Nut (Loosen)
 - Adjust the steering with the stem nut wrench (special tool).



A. Stem Head Nut

B. Stem Nut Wrench: 57001-1100

- ★ If the steering is too tight, loosen the stem locknut a fraction of a turn.
- ★ If the steering is loose, tighten the locknut a fraction of a turn.

NOTE

- Turn the locknut 1/8 turn at a time maximum.

- Tighten the steering stem head nut to the specified torque (see General Information chapter).
- Tighten the front fork lower clamp bolts to the specified torque (see General Information chapter in Suspension chapter).
- Check the steering again.
- ★ If the steering is still too tight or too loose, repeat the adjustment.
- Install the removed parts.
- Apply a non-permanent locking agent to the threads of side stand bracket mounting bolts.
- Tighten the following parts to the specified torque (see General Information chapter).
 - Axle Nut
 - Axle Clamp Bolts
 - Brake Caliper Mounting Bolts
 - Side Stand Bracket Mounting Bolts

WARNING

- Do not attempt to drive the motorcycle until a full brake lever or pedal is obtained by pumping the brake lever or pedal until the pads are against the disc. The brake will not function on the first application of the lever or pedal if this is not done.

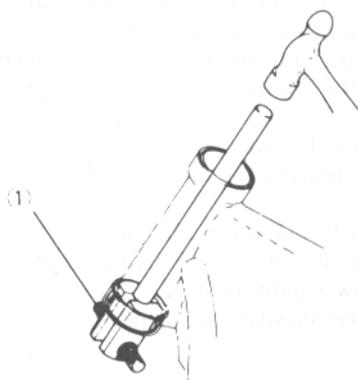
Steering Stem

Removal

- Remove the following parts.
 - Fuel Tank
 - Fairing
 - Handlebars
 - Horn Bracket
 - Both Front Calipers
 - Front Wheel
 - Front Fender
 - Front Fork Legs
- Remove the mounting bolts, free the brake hose joint from the stem base, and remove the front brake assembly as a set.
- Remove the stem head nut.
- Remove the steering stem head.
- Push up on the stem base, and remove the steering stem locknut using the stem nut wrench (special tool), then remove the steering stem and stem base (single unit).
- Remove the upper tapered roller bearing inner race and O-ring.
- To remove the outer races pressed into the head pipe, install the stem bearing remover (special tool) as shown below, and hammer the stem bearing remover to drive it out.

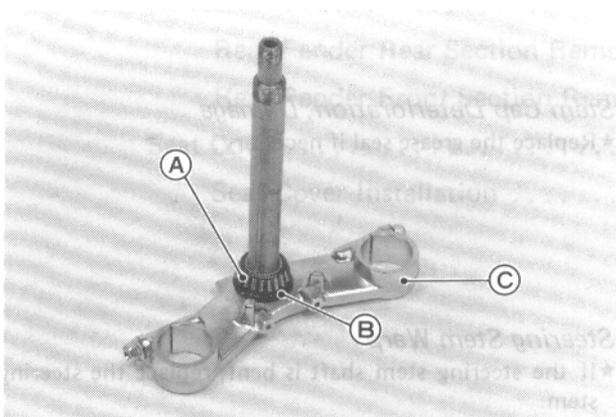
NOTE

○ If either steering stem bearing is damaged, it is recommended that both the upper and lower bearings (including outer races) should be replaced with new ones.



1. Stem Bearing Remover: 57001-1107

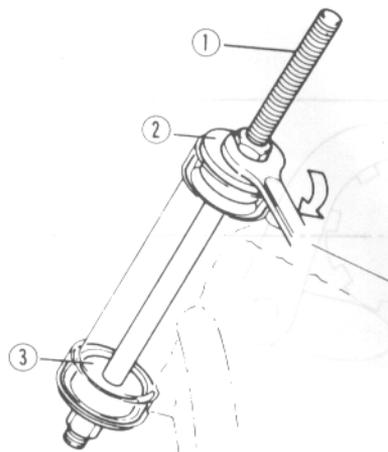
● Remove the lower inner race (with its grease seal) which is pressed onto the steering stem.



A. Inner Race
B. Grease Seal
C. Stem Base

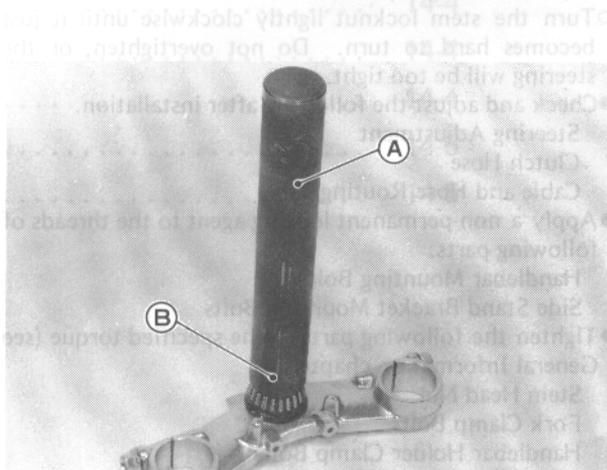
Installation

● Installation is reverse of removal. Note the following.
○ Apply grease to the outer races, and then drive them into the head pipe using the drivers and the driver press shaft (special tools).



1. Driver Press Shaft: 57001-1075
2. Driver: 57001-1106
3. Driver: 57001-1106

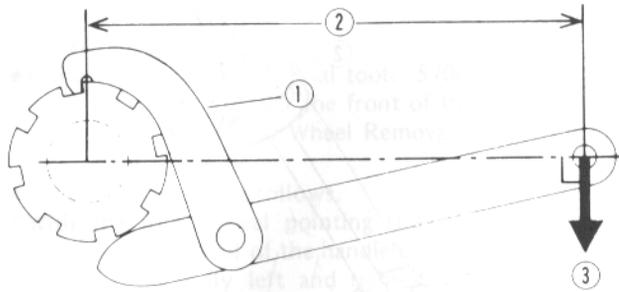
● Apply grease to the lower tapered roller bearing, and drive it onto the steering stem using the stem bearing driver and adapter (special tools: 57001-137 and 57001-1092).



A. Stem Bearing Driver: 57001-137
B. Adapter: 57001-1092

★ Check the O-ring on the upper tapered roller bearing for damage. Replace it if necessary.
● The following four steps should be performed after steering bearing installation. This procedure settles the bearings in place.
○ Using the stem nut wrench, tighten the stem locknut to 39 N-m (4.0 kg-m, 29 ft-lb) of torque. (To tighten the steering stem locknut to the specified torque, hook the wrench on the stem locknut, and pull the wrench at the hole by 22.2 kg force in the direction shown.)

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1. Stem Nut Wrench: 57001-1100
2. 180 mm
3. 22.2 kg

- Check that there is no play and the steering stem turns smoothly without the rattle.
- ☆ If not, the steering stem bearing may be damaged.
- Again back out the stem locknut a fraction of a turn until it turns lightly.
- Turn the stem locknut lightly clockwise until it just becomes hard to turn. Do not overtighten, or the steering will be too tight.
- Check and adjust the following after installation.
 - Steering Adjustment
 - Clutch Hose
 - Cable and Hose Routing
- Apply a non-permanent locking agent to the threads of following parts.
 - Handlebar Mounting Bolts
 - Side Stand Bracket Mounting Bolts
- Tighten the following parts to the specified torque (see General Information chapter).
 - Stem Head Nut
 - Fork Clamp Bolts
 - Handlebar Holder Clamp Bolts
 - Handlebar Holder Mounting Bolts
 - Front Axle Nut
 - Front Axle Clamp Bolts
 - Brake Caliper Mounting Bolts
 - Side Stand Bracket Mounting Bolts

WARNING

- Do not attempt to drive the motorcycle until a full brake lever or pedal is obtained by pumping the brake lever or pedal until the pads are against the disc. The brake will not function on the first application of the lever or pedal if this is not done.

Steering Stem Bearing

Bearing Lubrication

- Perform the following.
 - Remove the steering stem.
 - Using a high flash-point solvent, wash the upper and lower tapered roller bearings in the cages.
 - Wipe the upper and lower outer races, which are press-fitted into the frame head pipe, clean of grease and dirt.
 - Visually check the outer races and the rollers.
 - ☆ Replace the bearing assemblies if they show wear or damage.
 - Pack the upper and lower tapered roller bearings in the cages with grease, and apply light coat of grease to the upper and lower outer races.
 - Install the steering stem, and adjust the steering.

Bearing Wear, Damage

- ☆ Replace the bearing assemblies if they show damage.

Stem Cap Deterioration, Damage

- ☆ Replace the grease seal if necessary.

Steering Stem Warp

- ☆ If the steering stem shaft is bent, replace the steering stem.