



# 12. FRONT WHEEL/ SUSPENSION/STEERING

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# SERVICE INFORMATION

### GENERAL INSTRUCTION

• A jack or other support is required to support the motorcycle.

### TOOLS

### SPECIAL

Fork seal driver 07947-4630100

6 mm hex wrench 07917-3230000 or Equivalent tool commercially available in U.S.A.

07914-3230001 Snap-ring pliers

Steering stem socket 07916-3710100

07946-4300001 or - 07946-MB00000 GN-HT-54 (U.S.A. only) Steering stem driver

07946-4300200 or 07746-0010300 07953-KA50000 or 07953-4250002 Ball race remover

### COMMON

07749-0010000 Driver

Pin spanner 07702-0010000 or Equivalent tool commercially available in U.S.A.

Box wrench 30 x 32 mm 07716-0020400-Extension bar 07716-0020500 Attachment, 32 x 35 mm 07746-0010100 Pilot, 15 mm 07746-0040300 07701-0020300-Spoke wrench

Wheel bearing remover head, 15 mm 07746-0050400or Equivalent tool commercially available in U.S.A.

Wheel bearing remover shaft

07746-0050100-

### **SPECIFICATIONS**

ITEM  Axle shaft runout		STANDARD	SERVICE LIMIT
		N	0.2 mm (0.008 in)
Front wheel rim runout	Radial	<del></del>	2.0 mm (0.08 in)
	Axial		2.0 mm (0.08 in)
Front fork spring free length		563.5 mm (22.18 in)	557 mm (21.93 in)
Front fork tube runout			0.2 mm (0.008 in)



### TORQUE VALUES

Handlebar upper holder Front spoke Front axleshaft Front axle shaft holder Fork bolt Fork top bridge pinch bolt Steering stem nut

Fork socket bolt Fork bottom bridge pinch bolt  $18-30 \text{ N-m } (1.8-3.0 \text{ kg-m}, 13-22 \text{ ft-lb}) \\ 2.5-5.0 \text{ N-m } (25-50 \text{ kg-cm}, 1.8-3.6 \text{ ft-lb}) \\ 50-80 \text{ N-m } (5.0-8.0 \text{ kg-m}, 36-58 \text{ ft-lb}) \\ 10-14 \text{ N-m } (1.0-1.4 \text{ kg-m}, 7-10 \text{ ft-lb}) \\ 15-30 \text{ N-m } (1.5-3.0 \text{ kg-m}, 11-22 \text{ ft-lb}) \\ 18-30 \text{ N-m } (1.8-3.0 \text{ kg-m}, 13-22 \text{ ft-lb}) \\ 80-120 \text{ N-m } (8.0-12.0 \text{ kg-m}, 58-87 \text{ ft-lb}) \\ 15-25 \text{ N-m } (1.5-2.5 \text{ kg-m}, 11-18 \text{ ft-lb}) \\ 30-35 \text{ N-m } (3.0-3.5 \text{ kg-m}, 22-25 \text{ ft-lb}) \\ \end{aligned}$ 

### TROUBLESHOOTING

### Hard Steering

- 1. Steering stem nut too tight
- 2. Faulty steering stem bearings
- 3. Insufficient air in front tire.

### Steers to One Side or Does Not Track Straight

- 1. Bent front forks
- 2. Bent front axle, wheel installed incorrectly

### Front Wheel Wobbling

- 1. Distorted rim
- 2. Worn front wheel bearings
- 3. Loose or broken spokes
- 4. Faulty tire
- 5. Axle not tightened properly

### **Soft Suspension**

- 1. Weak fork springs
- 2. Insufficient fluid in front forks
- 3. Incorrect fork air pressure

### Hard Suspension

- 1. Incorrect fluid weight in front forks
- 2. Incorrect fork air pressure
- 3. Fork tube bent

### Front Suspension Noise

- 1. Slider binding
- 2. Insufficient fluid in forks
- 3. Loose front fork fasteners



# HEADLIGHT

### HEADLIGHT REMOVAL

Remove two headlight case mounting bolts. Remove the headlight shell/number plate.

Remove the headlight.

Disconnect the all wires at their couplers and connectors.



HEADLIGHT BRACKET

### HEADLIGHT REPLACEMENT

When installing the headlight bulb, make sure the top mark is up.

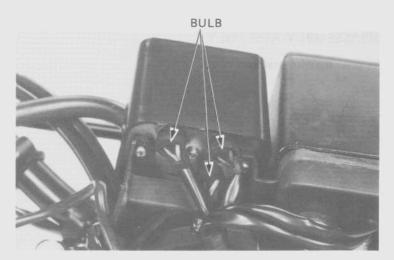


# **INSTRUMENTS**

### INDICATOR LIGHT BULB REPLACEMENT

Gently remove the bulb socket from the back of the instrument.

Replace the bulb.





### SPEEDOMETER REMOVAL/ INSTALLATION

Disconnect the speedometer cable. Remove the speedometer attaching nuts. Remove the speedometer.

Installation is the reverse of removal.



NUTS

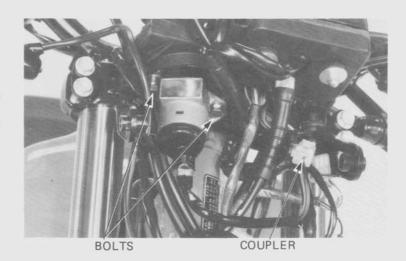
# IGNITION SWITCH REMOVAL/INSTALLATION

Remove the headlight (Page 12-3).

Disconnect the ignition switch wire coupler.

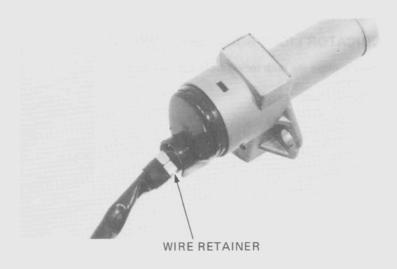
Remove the ignition switch mounting bolts, and ignition switch.

Install the ignition switch in the reverse order of removal.



### DISASSEMBLY/ASSEMBLY

Pry open the wire retainer.





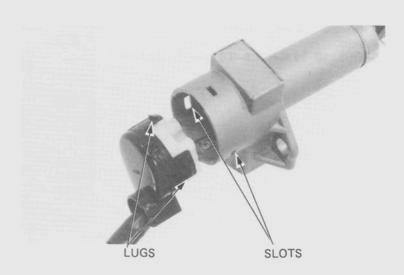
Insert the ignition key and turn it partway between the ON and OFF detent positions.



BETWEEN "ON" AND "OFF"

Push in the lugs, that are locked in the slots then pull the contact base from the switch.

Assemble the ignition switch in the reverse order of disassembly.



# HANDLEBAR

### REMOVAL

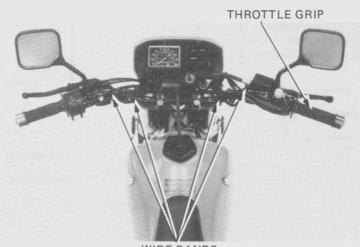
Remove the wire harness bands.

Remove the throttle grip.

Remove the engine stop switch and front brake lever bracket.

Remove the clutch lever.

Remove the handlebar holder bolts and the handlebar.



WIRE BANDS



### HANDLEBAR INSTALLATION

Install the handlebar.

Align the punch mark on the handlebar with the top of the lower holders.

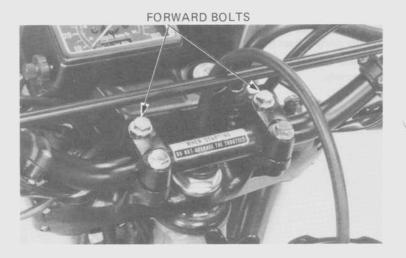
Place the upper holders on the handlebar with the punch marks forward.



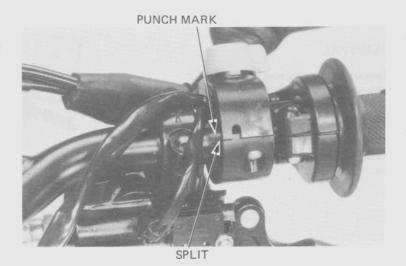
**PUNCH MARK** 

Tighten the forward bolts first, then tighten the rear bolts.

TORQUE: 18-30 N·m (1.8-3.0 kg-m, 13-22 ft-lb)

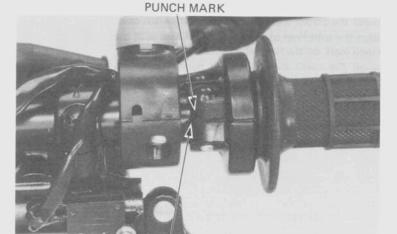


Install the engine stop switch housing. Align the split line of the switch with the punch mark on the handlebar.



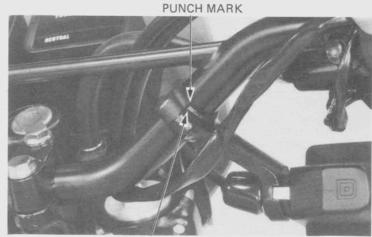


Install the throttle grip.
Align the split line of the throttle housing with the punch mark on the handlebar.



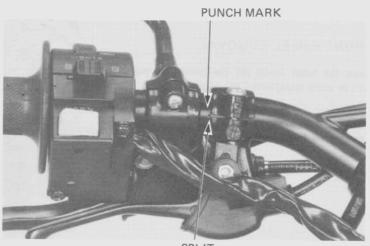
SPLIT

Install the right turn signal.
Align the split line of the bracket with the punch mark on the handlebar.
Tighten the screw.



SPLIT

Install the manual decompressor lever.
Align the split line of the bracket with the punch mark on the handlebar.

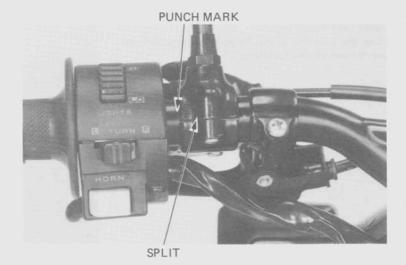


SPLIT



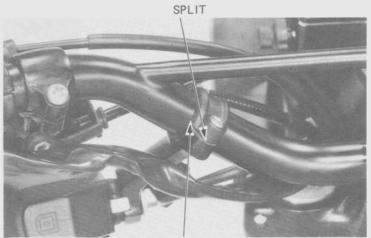
Install the clutch lever bracket and left switch case. Align the split lines of the bracket and case with the punch mark on the handlebar.

Install the dwell pin of the left handlebar switch bracket into the hole of the handlebar.



Install the left turn signal.

Align the split in the bracket with the punch mark on the handlebar.



**PUNCH MARK** 

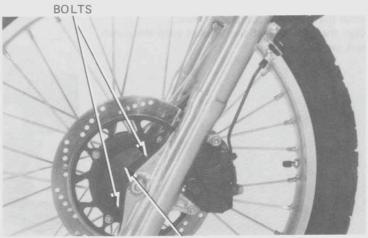
# FRONT WHEEL

### FRONT WHEEL REMOVAL

Raise the front wheel off the ground by placing a box or work stand under the engine.

Disconnect the speedometer cable from the speedometer gearbox at the front wheel.

Remove the front fork guard.



FRONT FORK GUARD



Loosen the axle shaft holder nuts. Remove the front axle. Remove the front wheel.



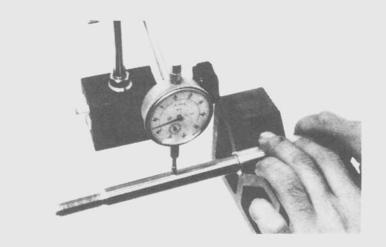
FRONT AXLE

**AXLE HOLDER NUTS** 

### **AXLE INSPECTION**

Set the axle in V blocks and measure the runout. The actual runout is 1/2 of the total indicator reading.

SERVICE LIMIT: 0.2 mm (0.01 in)



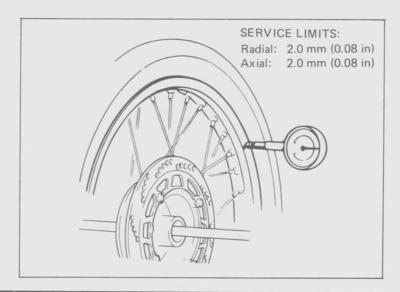
### WHEEL

Check the rim runout by placing the wheel on a truing stand. Then spin the wheel by hand, and read the runout using a dial indicator.

Check the spokes and tighten any that are loose.

TORQUE: 2.5-5.0 N·m

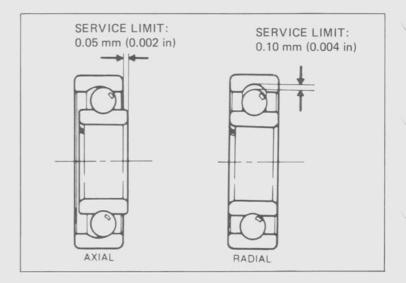
(25-50 kg-cm, 1.8-3.6 ft-lb)



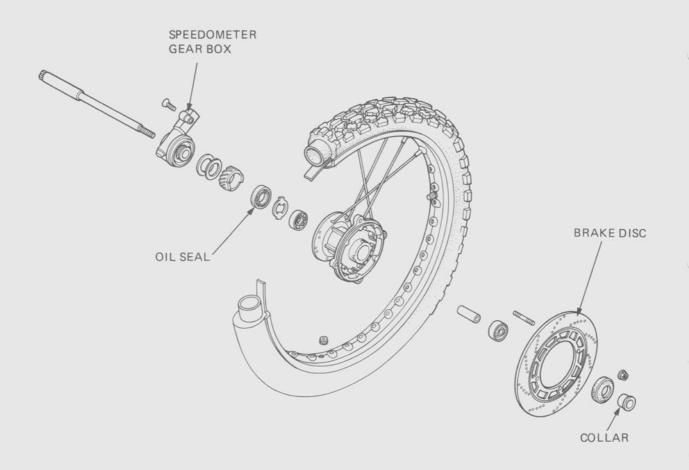


### WHEEL BEARING

Check the wheel bearing play by placing the wheel on a truing stand and spinning the wheel by hand. Replace the bearings with new ones if they are noisy or have excessive play.



### FRONT WHEEL DISASSEMBLY



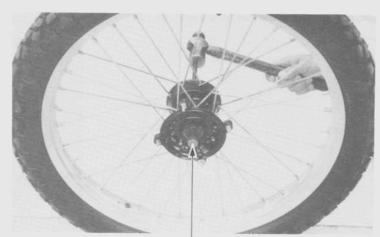


### FRONT WHEEL DISASSEMBLY

Remove the wheel bearings and the distance collar from the hub.

### NOTE

Never reinstall old bearings, once the bearings are removed, they must be replaced with new ones.



WHEEL BEARING REMOVER HEAD 15 mm 07746-0050400 WHEEL BEARING REMOVER SHAFT 07746-0050100 OR EQUIVALENT COMMERCIALLY AVAILABLE IN U.S.A.

### **ASSEMBLY**

Pack the bearing cavities with grease.

Drive in the left bearing and install the distance collar.

Drive in the right bearing.

### NOTE

- · Install the bearings with the sealed end toward the outside.
- · Be sure to drive the bearing in squarely.

# DRIVER 07749-0010000

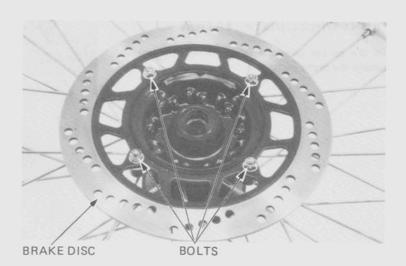


ATTACHMENT, 32 x 35 mm 07746-0010100 PILOT, 15 mm 07746-0040300

Install the brake disc and tighten its nuts.

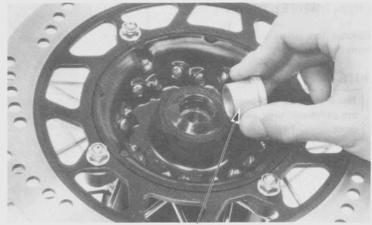
### Torque specification:

14-16 N·m (1.4-1.6 kg-m, 10-12 ft-lb)





Install the collar in the hub on the left side.



COLLAR

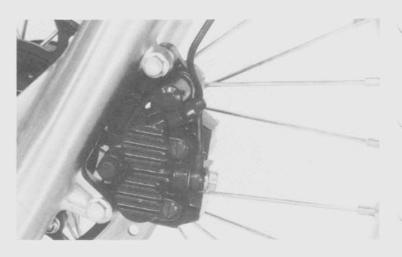
Install the speedometer gear in the wheel hub, aligning the groove in the speedometer gearbox with the slots.



SLOTS

### FRONT WHEEL INSTALLATION

Fit the caliper over the disc, taking care not to damage the brake pads.





Clean the axle shaft and holder.

Install the shaft through the speedometer gearbox and wheel hub.

Temporarily tighten the axle shaft.

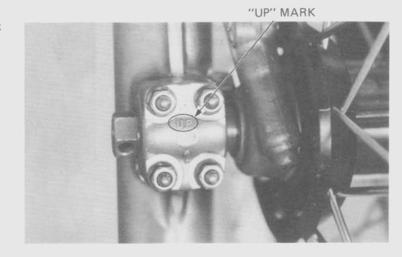
### NOTE

Set the tang on the gearbox under the tang on the front fork.



Install the axle shaft holder with the ''UP'' mark facing up.

Temporarily tighten the holder nuts lightly.



Torque the axle.

TORQUE: 50-80 N·m

(5.0-8.0 kg-m, 36-58 ft-lb)

Temporarily tighten the axle holder nuts. Connect the front brake cable and speedometer cable.

