



# HONDA14. REAR WHEEL/SUSPENSION 181

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## SERVICE INFORMATION

### **GENERAL INSTRUCTIONS**

- Do not remove rivets, nuts and pins from the rim, spoke plate and hub.
- · Never ride on the rim or try to bend the wheel.
- · Avoid damaging the aluminum alloy rim.

#### SPECIAL TOOLS

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07946-3290000 Bearing Driver Attachment

#### Common Tools

Bearing Driver Handle (A)	07749-0010000
Bearing Driver Outer (62 x 68 mm)	07746-0010500
Bearing Driver Pilot (20 mm)	077460040500
Bearing Driver Pilot (25 mm)	07746-0040600
Rear Shock Absorber Compressor	07959-3290001
Retainer Wrench Body	07710-0010401
Retainer Wrench (A)	077100010100
Retainer Wrench (C)	07710-0010300

#### TORQUE VALUES

Rear shock absorber	3.0-4.0 kg-m (2229 ft-lb)
Rear Shock absorber locknut	2.0-3.5 kg-m (15-25 ft-lb)
Driven sprocket	8.0-10.0 kg-m (58-72 ft-lb)
Rear axle	8.0-10.0 kg·m (58-72 ft-lb)
Swing arm pivot bolt	6.07.0 kg-m (4351 ft-lb)
Rear brake torque link	1.8-2.5 kg-m (13-18 ft-lb)

#### **SPECIFICATIONS**

ITEM Axle runout		STANDARD	SERVICE LIMIT	
		- <del></del>	0.2 mm	(0.01 in)
Rear wheel rim runout	Radial		2.0 mm	(0.08 in)
	Axial		2.0 mm	(0.08 in)
Shock absorber spring free length		224.7 mm (8.8 in)	220.6 mm	(8.7 in)
Swing arm bushing	I. D.	21.500-21.552 mm (0.8465-0.8485 in)	21.7 mm	(0.854 in)
Swing arm collar	Q. D.	21.427-21.460 mm (0.8436-0.8449 in)	21.4 mm	(0.843 in)
Rear brake lining thickne	ss	5.0 mm (0.197 in)	2.0 mm	(0.08 in)
Rear brake drum I.D.		180-180.3 mm (7.09-7.10 in)	181 mm	(7,1 in)

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#### **REAR WHEEL/SUSPENSION**



### **TROUBLESHOOTING**

#### Wobble or vibration

- 1. Distorted rim
- 2. Loose wheel bearing
- 3. Loose or distorted spokes
- 4. Faulty tire
- 5. Loose axle
- 6. Tire pressure incorrect
- 7. Swing arm bushing worn

#### Soft suspension

- 1. Weak spring
- 2. Shock absorbers improperly adjusted

#### Hard suspension

- 1. Shock absorbers improperly adjusted
- 2. Bent shock absorber

#### Suspension noise

- 1. Shock case binding
- 2. Loose fasteners



### REAR WHEEL

#### REAR WHEEL REMOVAL

Place the motorcycle on its center stand. Loosen the drive chain adjuster lock nuts and bolts.

Disconnect the rear brake torque link by removing the cotter pin and nut.

Remove the rear brake adjusting nut and disconnect the brake rod.

Remove the cotter pin from the rear axle and loosen the nut.

Pull the adjusters down, push the wheel forward and remove the drive chain from the drive sprocket.

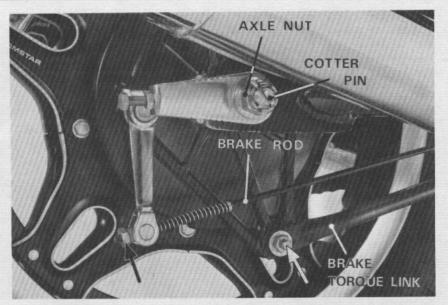
Remove the axle nut.

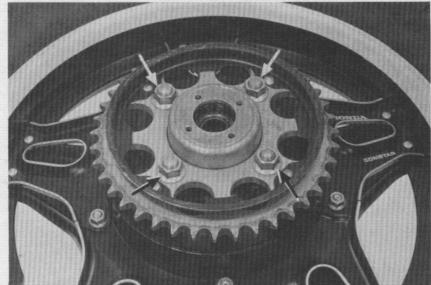
Remove the rear axle.

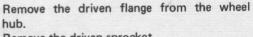
Remove the rear wheel.

#### REAR WHEEL DISASSEMBLY

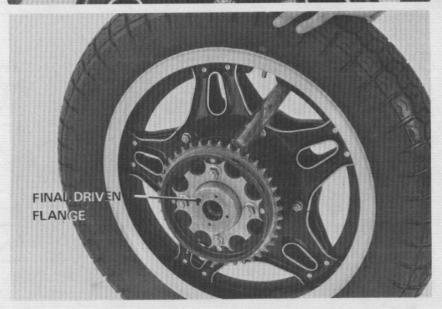
Remove the brake panel. Loosen the driven sprocket nuts.







Remove the driven sprocket.





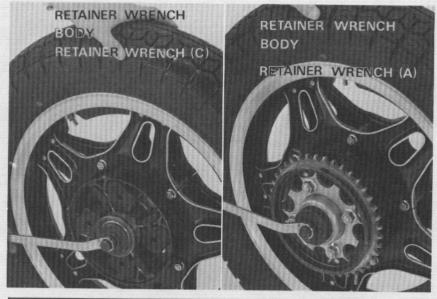
Remove the bearing retainer.

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

Remove the bearing from the final driven flange.

#### NOTE

If the bearings are removed, replace them with new bearings during assembly.

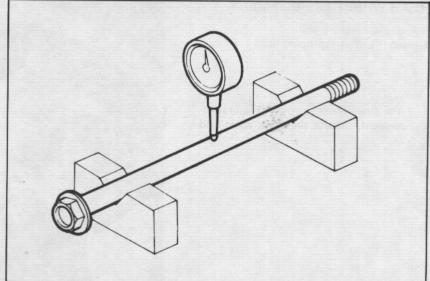


#### **AXLE INSPECTION**

Set the axle in V blocks and measure the axle runout with a dial indicator.

The actual runout is 1/2 of TIR (Total Indicator Reading).

SERVICE LIMIT: 0.2 mm (0.01 in)

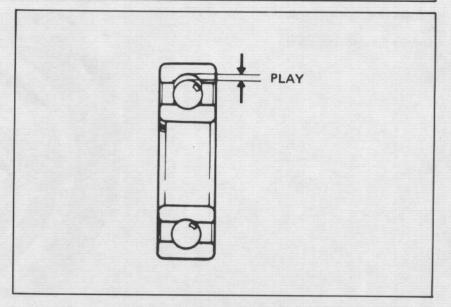


# REAR WHEEL BEARING PLAY INSPECTION

Check wheel bearing play by rotating the wheel by hand. Replace the bearings with new ones if they are noisy or have excessive play.

#### SERVICE LIMIT:

HUB BEARING: 0.048 mm (0.0019 in)
DRIVEN FLANGE BEARING:
0.052 mm (0.0020 in)



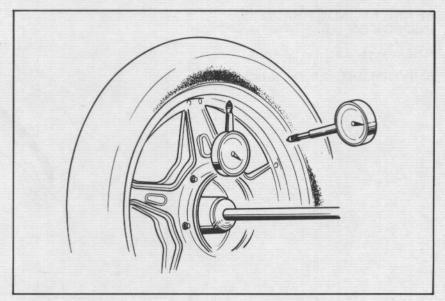


# REAR WHEEL RIM RUNOUT INSPECTION

Place the wheel in a truing stand. Spin the wheel slowly and measure the runout with a dial indicator.

#### SERVICE LIMITS:

RADIAL RUNOUT: 2.0 mm (0.08 in) AXIAL RUNOUT: 2.0 mm (0.08 in)

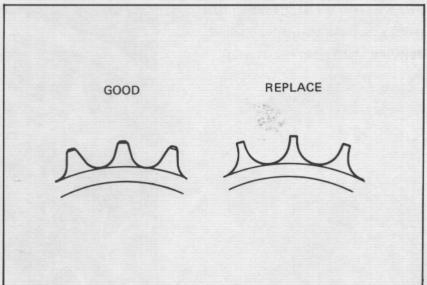


# FINAL DRIVEN SPROCKET INSPECTION

Replace the sprocket if worn, bent or damaged.

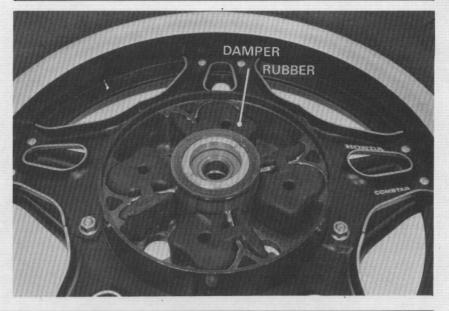
#### NOTE

If the final driven sprocket requires replacement, inspect the drive chain and driven sprocket (Page 3–12).



#### DAMPER INSPECTION

Replace the damper rubbers if they are, damaged or deteriorated.

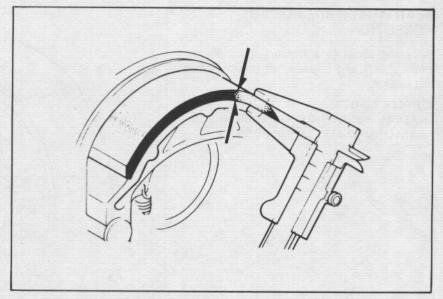




# BRAKE LINING THICKNESS INSPECTION

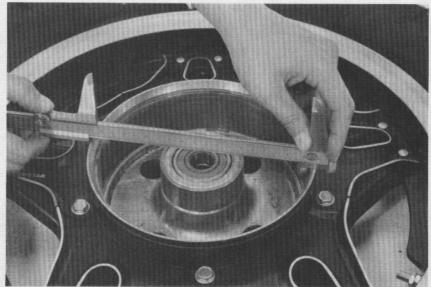
Measure the brake lining thickness.

SERVICE LIMIT: 2.0 mm (0.08 in)



# BRAKE DRUM I. D. INSPECTION Measure the brake drum inside diameter.

SERVICE LIMIT: 181 mm (7.1 in)



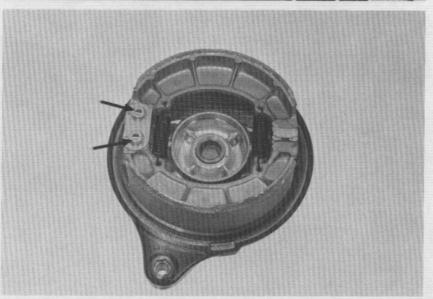
#### BRAKE SHOE REPLACEMENT

Remove the brake arm. Remove the cotter pins. Replace the brake shoes with new ones.

Apply a light coat of grease to the faces of the anchor pins and brake cam and groove in the brake cam.

#### WARNING

Keep grease off the brake linings. Wipe excess grease off the cam and anchor pins. If grease gets on the brake linings the stopping power will be reduced.

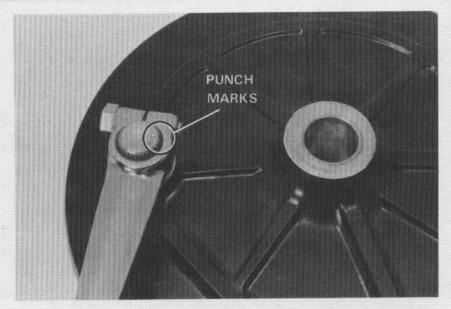




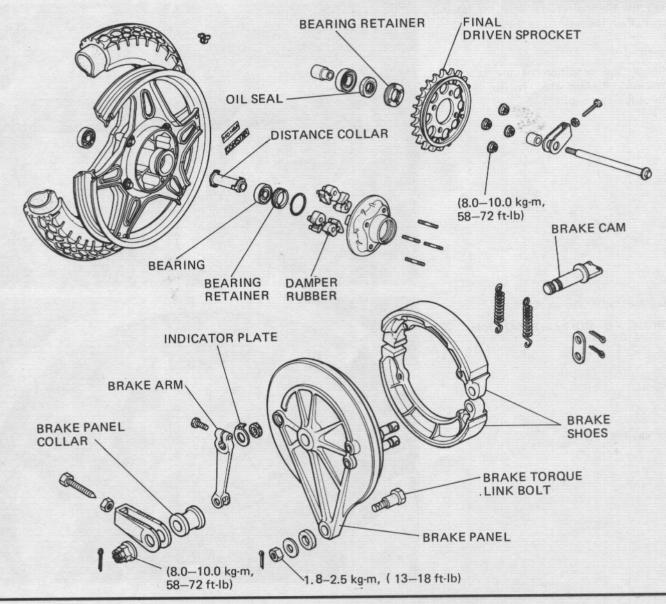
Align the punch marks on the brake cam and brake arm.

Tighten the brake arm bolt.

TORQUE: 2.4-3.0 kg-m (17-22 ft-lb)



REAR WHEEL ASSEMBLY



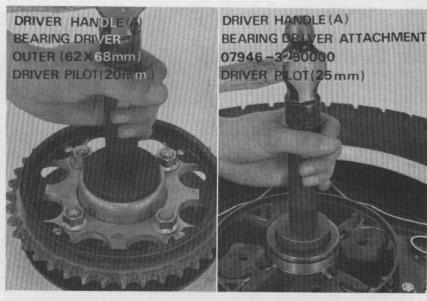


Pack all bearing cavities with bearing grease. Press the distance collar into place from the left side.

Drive the right bearing in first, then the left bearing.

#### CAUTION

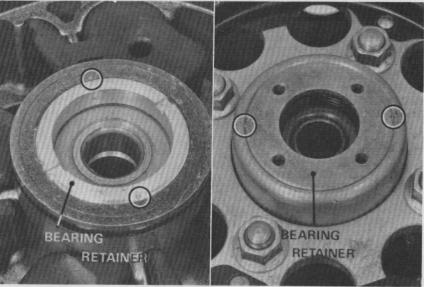
- · Drive the bearing squarely.
- Install the bearings with the sealed end facing out, making sure they are fully seated.



Install the bearing retainer with the retainer wrench. Peen the retainer to the hub.

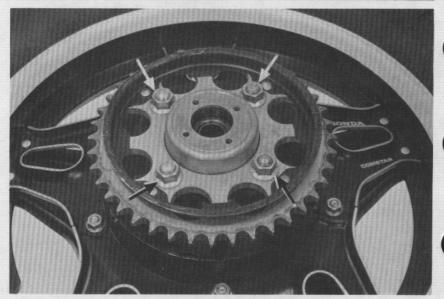
#### NOTE

Check the condition of the bearing retainer. Replace the retainer if the threads are damaged.



Install the final driven sprocket.

TORQUE: 8.0-10.0 kg-m (58-72 ft-lb)





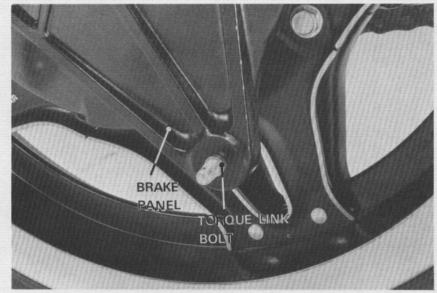
#### REAR WHEEL INSTALLATION

Install the rear wheel in the reverse order of removal.

#### NOTE

After installing the wheel, apply the brakes several times, and then check to be sure that the wheel rotates freely. Recheck the installation if the brake drags or wheel does not rotate freely.

Install the brake torque link bolt into the hole in the brake panel before installing the axle shaft.



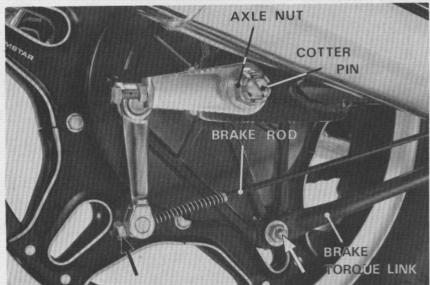
Use a new cotter pin to secure the axle nut.

TORQUE: 8.0-10.0 kg-m (58-72 ft-lb)

Use a new cotter pin to secure the rear brake torque link.

TORQUE: 1.8-2.5 kg-m (13-18 ft-lb)

Adjust drive chain free play (Page 3-12). Adjust the rear brake (Page 3-14).



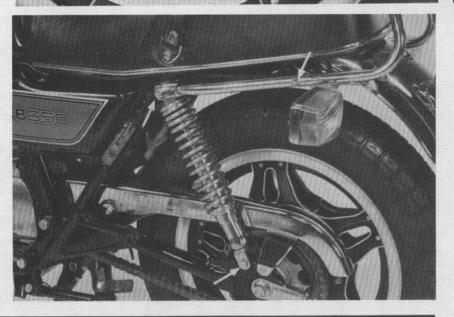
### SHOCK ABSORBER

SHOCK ABSORBER REMOVAL

Remove the mufflers.

Remove the rear carrier pipe attaching bolts.

Remove the upper and lower shock absorber mounting bolts and nuts, and remove the shock absorbers.

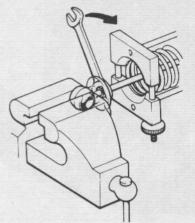




#### SHOCK ABSORBER DISASSEMBLY

Compress the spring just enough to remove the lock nut.

Loosen the lock nut and remove the upper mount.



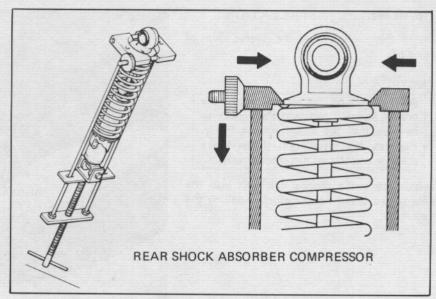
# SHOCK ABSORBER SPRING FREE LENGTH

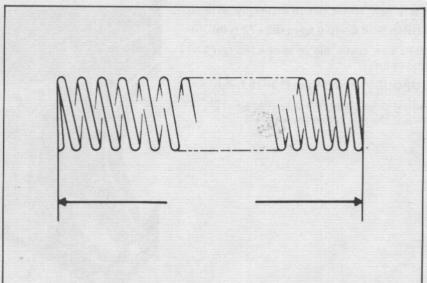
Disassemble the unit.

Measure the free length of spring.

Inspect the shock body for oil leaks.

SERVICE LIMIT: 220.6 mm (8.7 in)

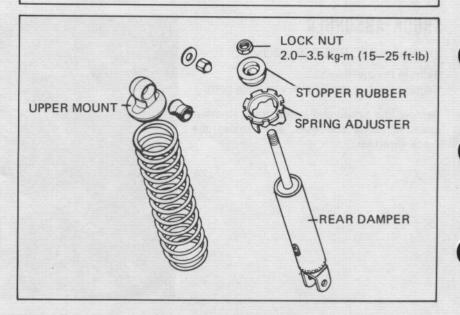




#### SHOCK ABSORBER ASSEMBLY

#### NOTE

Install the spring with the tight coils at the bottom.



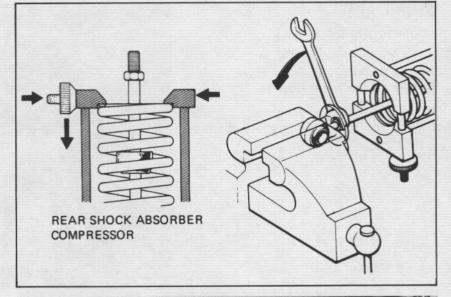


NOTE

Apply a locking agent to the lock nut at time of assembly.

Tighten the lock nut.

TORQUE: 2.0-3.5 kg-m (15-25 ft-lb)

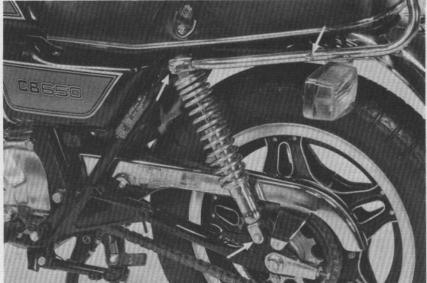


### SHOCK ABSORBER INSTALLATION

Tighten the shock absorber bolts and nuts.

TORQUE: 3.0-4.0 kg-m (22-29 ft-lb)

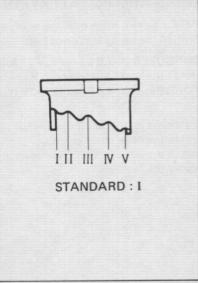
Install the mufflers.



Adjust the right and left absorbers equally with the spring adjuster.

Check shock absorber operation after installation.





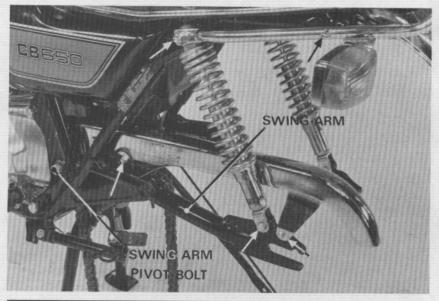


### SWING ARM

#### SWING ARM REMOVAL

Remove the mufflers (Page 5-3). Remove the left crankcase rear cover. Remove the rear wheel (Page 14-3).

Remove the drive chain guard. Remove the right and left shock absorbers (Page 14-9). Remove the swing arm.



#### SWING ARM DISASSEMBLY/ **ASSEMBLY**

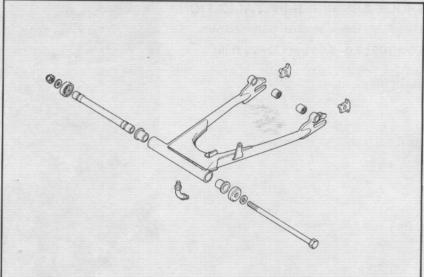
#### NOTE

Drive the bushings into place, with a soft hammer. Make sure that they are not damaged.

Lubricate with grease after installation.

#### SERVICE LIMITS:

BUSHING I. D.: 21.7 mm (0.854 in) COLLAR O. D.: 21.4 mm (0.843 in)



### SWING ARM INSTALLATION

Place the drive chain over the swing arm. Tighten the swing arm pivot bolt.

TORQUE: 6.0-7.0 kg-m (43-51 ft-lb) Install the shock absorbers.

TORQUE: 3.0-4.0 kg-m (22-29 ft-lb)

Install the rear wheel (Page 14-9). Install the drive chain guard. Install the left crankcase rear cover. Install the mufflers.

