

## CHAPTER ELEVEN

### REAR SUSPENSION AND FINAL DRIVE

This chapter includes repair and replacement procedures for the rear wheel and rear suspension components. Tire changing and wheel balancing are covered in Chapter Ten.

Refer to **Table 1** for rear suspension torque specifications. **Table 1** is located at the end of this chapter.

#### REAR WHEEL

##### Removal/Installation

1. Block up the engine so that the rear wheel clears the ground.
2. Completely unscrew the rear brake adjusting nut (**Figure 1**).
3. Depress the brake pedal and remove the brake rod, or cable, from the pivot joint in the brake arm. Remove the pivot joint from the brake arm, then install the pivot joint and the adjusting nut onto the brake rod to avoid misplacing them.
4. To remove the brake torque link from the brake panel, perform the following:
  - a. Remove the cotter pin from the bolt (A, **Figure 2**).
  - b. Remove the bolt, nut and washer.
  - c. Swing the brake arm down and out of the way.
5. On models equipped with a brake cable, disconnect the cable from the receptacle (B, **Figure 2**) on the brake panel.

6. On 1985 and 1986 models, remove the cotter pin from the rear axle nut. Discard the cotter pin. Never reuse a cotter pin because the ends could break off allowing the cotter pin to fall out.

7. On 1987-on models, remove the rear axle trim cap (**Figure 3**).

#### NOTE

*The rear axle may be installed from either side.*

8. Remove the rear axle nut and washer (**Figure 4**).

9. Insert a drift or screwdriver into the hole in the end of the rear axle and withdraw the axle (**Figure 5**). Don't lose the spacer (**Figure 6**) from the right-hand side between the brake panel and the swing arm.

10. Slide the wheel to the right to disengage it from the hub drive splines and remove the wheel.

### Inspection

Measure the axial and radial runout of the wheel with a dial indicator as shown in **Figure 7**. The maximum axial and radial runout is 2.0 mm (0.08 in.). If the runout exceeds this dimension, check the wheel bearing condition.

If the wheel bearings are okay, the wheel will have to be replaced, as it cannot be serviced. Inspect the wheel for signs of cracks, fractures, dents or bends. If it is damaged in any way, it must be replaced.

#### WARNING

*Do not try to repair any damage to an alloy wheel (models so equipped) as it will result in an unsafe riding condition.*



6. On 1985 and 1986 models, remove the cotter pin from the rear axle nut. Discard the cotter pin. Never reuse a cotter pin because the ends could break off allowing the cotter pin to fall out.

7. On 1987-on models, remove the rear axle trim cap (**Figure 3**).

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10. Slide the wheel to the right to disengage it from the hub drive splines and remove the wheel.

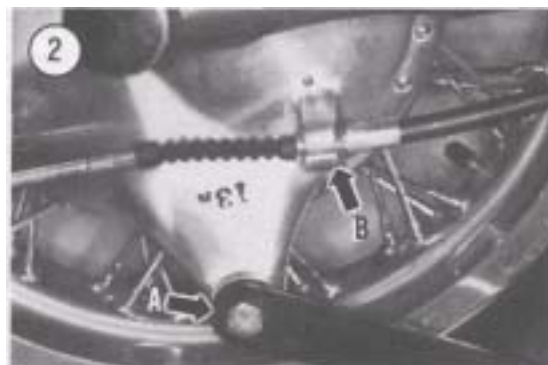
### Inspection

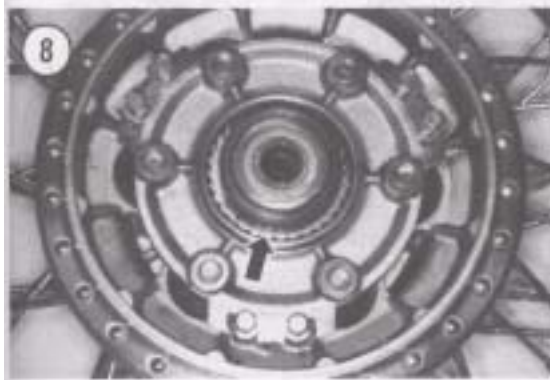
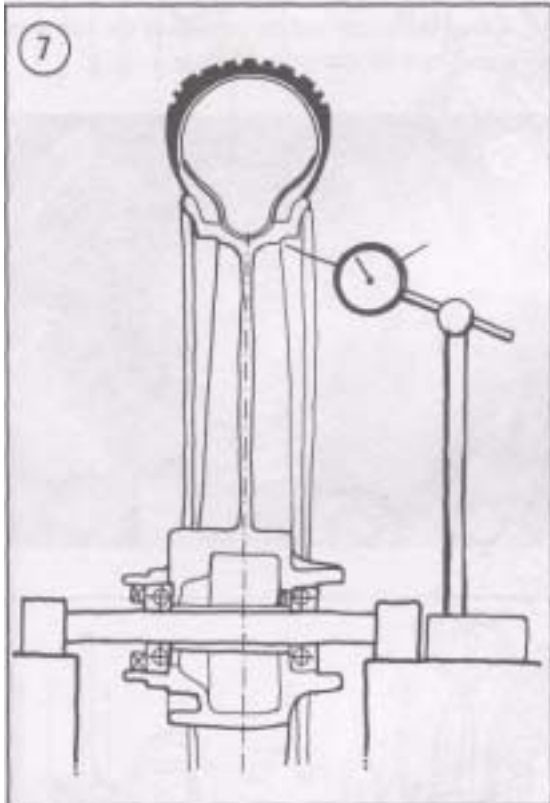
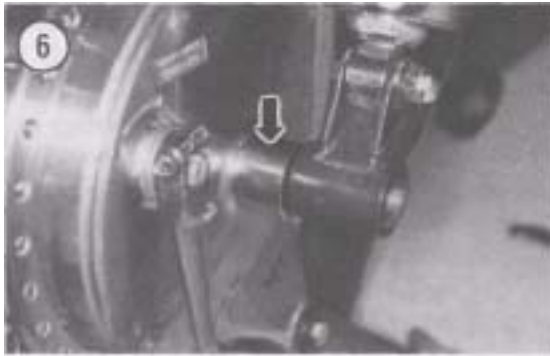
Measure the axial and radial runout of the wheel with a dial indicator as shown in **Figure 7**. The maximum axial and radial runout is 2.0 mm (0.08 in.). If the runout exceeds this dimension, check the wheel bearing condition.

If the wheel bearings are okay, the wheel will have to be replaced, as it cannot be serviced. Inspect the wheel for signs of cracks, fractures, dents or bends. If it is damaged in any way, it must be replaced.

#### WARNING

*Do not try to repair any damage to an alloy wheel (models so equipped) as it will result in an unsafe riding condition.*





Check axle runout as described under *Rear Hub Inspection* in this chapter.

### Installation

1. Apply a light coat of grease (lithium based NLGI No. 2 grease with molybdenum disulfide) to the final driven flange spline and to the rear wheel ring gear (**Figure 8**).
2. Loosen the final drive case mounting nuts.
3. Position the rear wheel so that the splines of the final driven flange and the final drive align. Slowly move the wheel back and forth and push the wheel to the left until it completely seats.
4. Position the spacer (**Figure 6**) on the right-hand side between the brake panel and the swing arm.
5. Insert the rear axle (**Figure 5**) from either side and install the axle nut washer and nut (**Figure 4**). Tighten the nut only finger-tight at this time.
6. To install the brake torque link, perform the following:
  - a. Swing the brake arm up and into position.
  - b. Install the bolt, washer and nut. Tighten the bolt and nut to the torque specification listed in **Table 1**.
  - c. Install a new cotter pin and bend the ends over completely.
7. Insert a drift into the hole in the axle to keep the axle from turning.
8. Tighten the rear axle nut to the torque specifications listed in **Table 1**.
9. On 1985 and 1986 models, install a new cotter pin and bend the ends over completely.
10. On 1987-on models, install the trim cap (**Figure 3**) covering the rear axle nut.
11. Tighten the final drive gear case nuts to the torque specification listed in **Table 1**.
12. After the wheel is installed, completely rotate it and apply the brake several times to make sure it rotates freely and that the brake works properly.
13. Adjust the rear brake free play as described in Chapter Three.

## REAR HUB

### Inspection

Inspect each wheel bearing prior to removing it from the wheel hub.

### CAUTION

*Do not remove the wheel bearings for inspection because they will be damaged during removal. Remove wheel bearings only if they are to be replaced.*

1. Perform Step 1 and Step 2 of *Disassembly* in this chapter.
2. Turn each bearing by hand (**Figure 9**). Make sure the bearings turn smoothly.
3. On non-sealed bearings, check the balls for evidence of wear, pitting or excessive heat (bluish tint). Replace the bearings if necessary; always replace as a complete set. When replacing the bearings, be sure to take your old bearings along to ensure a perfect matchup.

### NOTE

*Fully sealed bearings are available from many bearing specialty shops. Fully sealed bearings provide better protection from dirt and moisture that may get into the hub.*

4. Check the axle for wear and straightness. Use V-blocks and a dial indicator as shown in **Figure 10**. If the runout is 0.2 mm (0.01 in.) or greater, the axle should be replaced.
5. Inspect the splines of the final driven flange. If any are damaged the flange must be replaced.

## Disassembly

Refer to the following illustrations for this procedure:

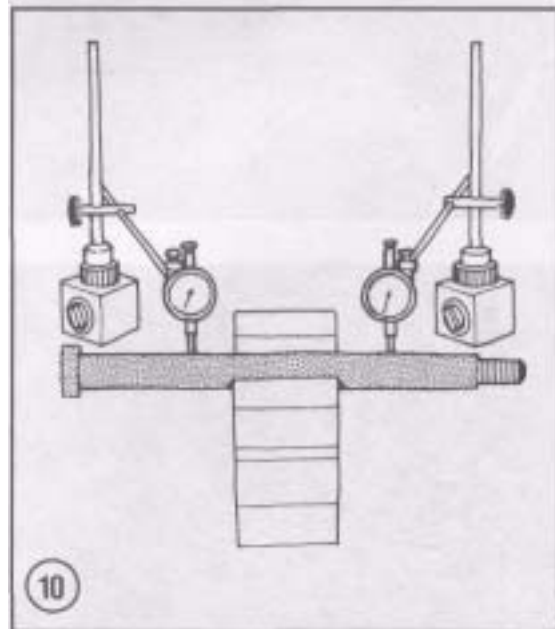
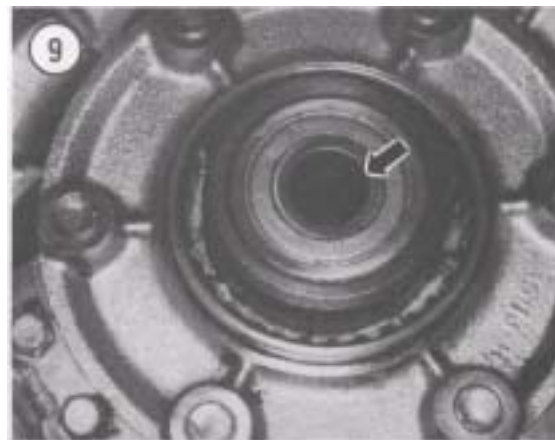
**a. Figure 11:** rear wire wheel.

**b. Figure 12:** rear cast wheel.

1. Remove the rear wheel as described in this chapter.
2. Pull straight up and remove the brake panel assembly from the hub.
3. Straighten the locking tabs on the lockwashers (A, **Figure 13**) then loosen and remove the bolts (B, **Figure 13**).
4. Remove the lockwashers (C, **Figure 13**) and thrust washers (D, **Figure 13**). Remove all 3 sets.
5. Pull straight up and remove the final driven flange from the hub.
6. Remove the O-ring seal (**Figure 14**) from the rear hub.

7. Before proceeding further, inspect the wheel bearings as described in this chapter. If they must be replaced, proceed as follows.

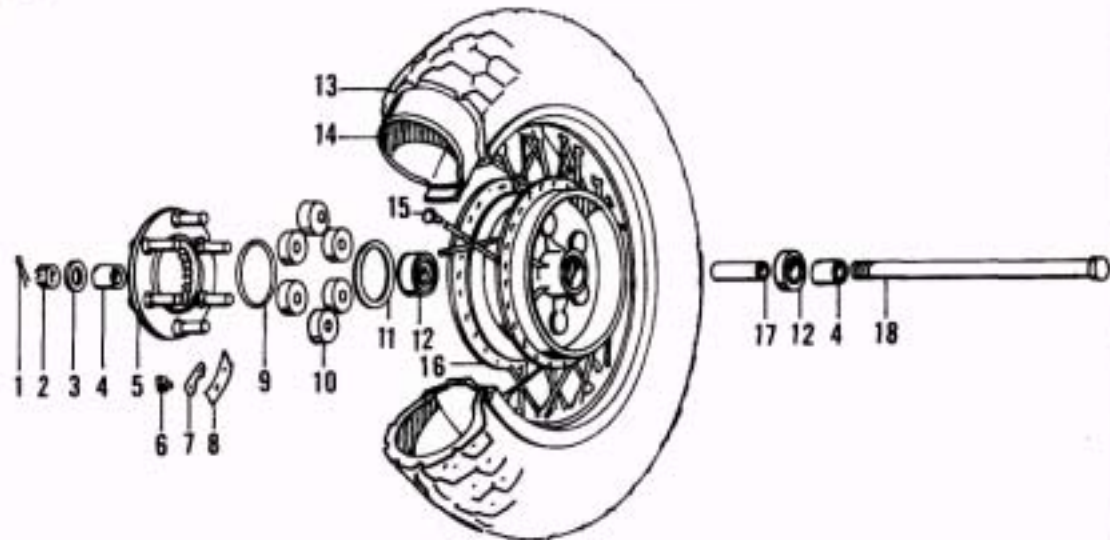
8. To remove the right- and left-hand bearings and distance collar, insert a soft aluminum or brass drift into one side of the hub.
9. Push the distance collar over to one side and place the drift on the inner race of the lower bearing.
10. Tap the bearing out of the hub with a hammer, working around the perimeter of the inner race. Remove the distance collar.
11. Repeat for the other bearing.
12. Clean the inside and the outside of the hub with solvent. Dry with compressed air.





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### REAR WIRE WHEEL



1. Cotter pin  
(1988-1986)
2. Nut
3. Washer
4. Spacer

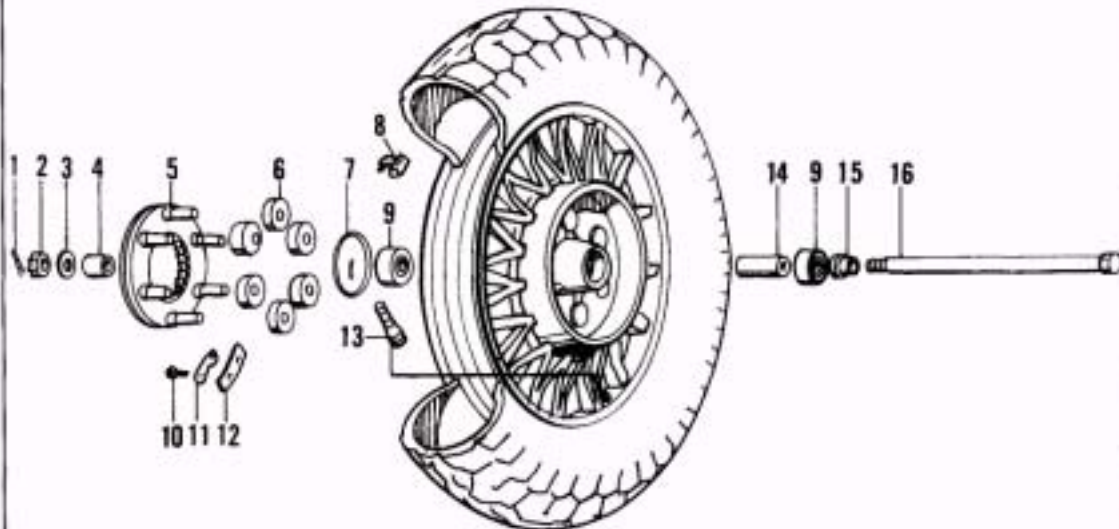
5. Final driven flange
6. Bolt
7. Lockwasher
8. Thrust washer
9. O-ring

10. Rubber cushion
11. O-ring
12. Bearing
13. Tire
14. Inner tube

15. Spoke and nipple
16. Hub
17. Distance collar
18. Rear axle

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### REAR CAST WHEEL



1. Cotter pin  
(1985-1986)
2. Nut
3. Washer
4. Spacer

5. Final driven flange
6. Rubber cushion
7. O-ring
8. Balance weight

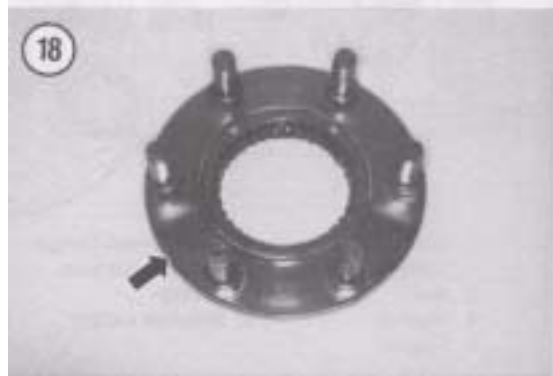
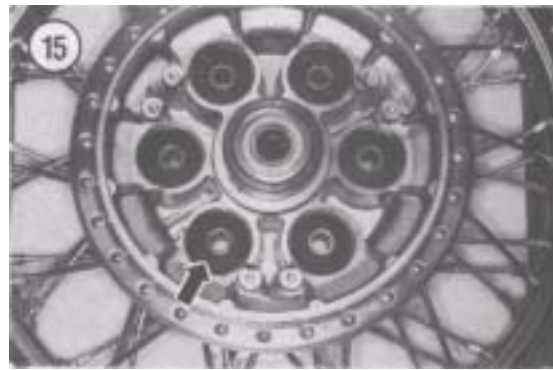
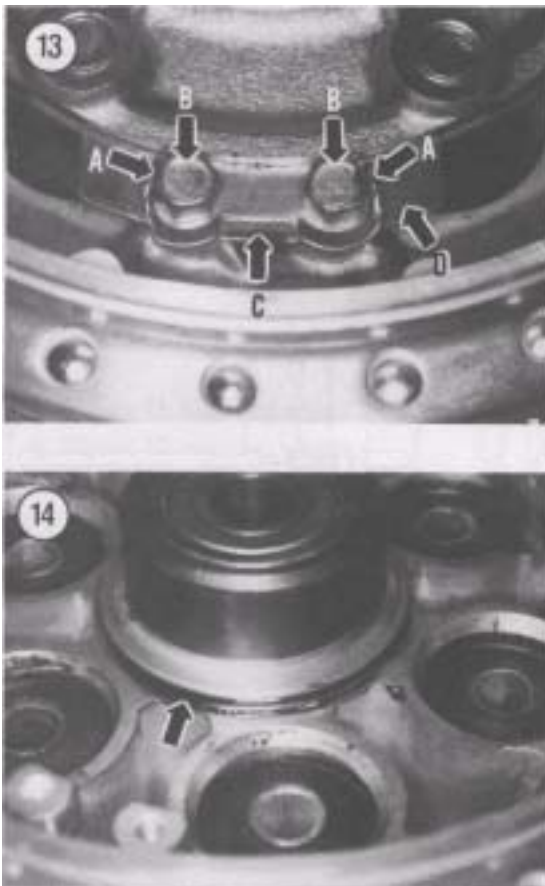
9. Bearing
10. Bolt
11. Lockwasher
12. Thrust washer

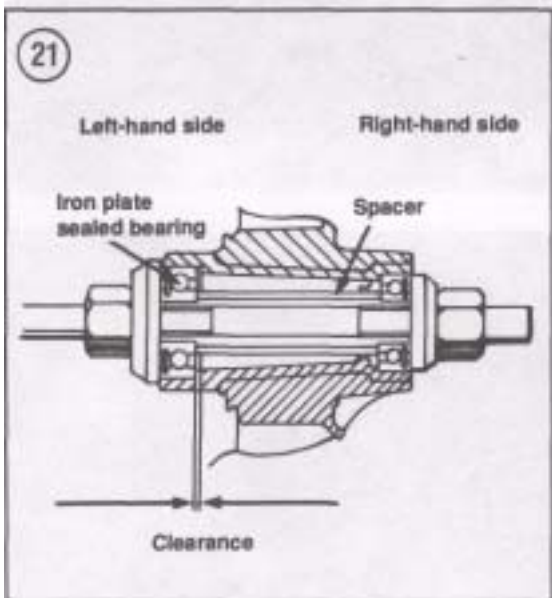
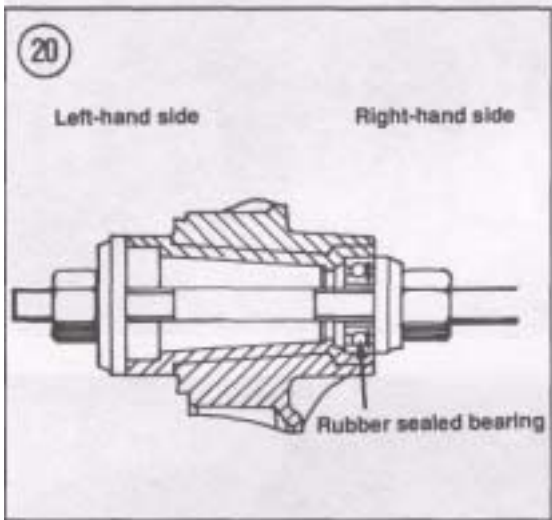
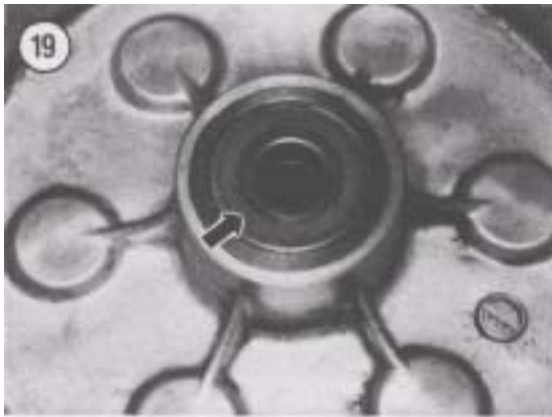
13. Valve stem
14. Distance collar
15. Spacer
16. Rear axle

13. Clean the inside and the outside of the final driven flange with solvent. Dry with compressed air.
14. Inspect each rubber cushion (**Figure 15**) for wear or deterioration. Replace if necessary.
15. Inspect the final driven flange as follows:
  - a. Inspect the inner splines (**Figure 16**) for wear or missing teeth.
  - b. Inspect the studs (**Figure 17**) for cracks or damage.
  - c. Inspect the flange (**Figure 18**) for cracks or warpage.
  - d. Replace the driven flange if any of these areas are damaged.

### Assembly

1. On non-sealed bearings, pack the bearings with a good quality bearing grease. Work the grease in between the balls thoroughly; turn the bearing by hand a couple of times to make sure the grease is distributed evenly inside the bearing.





2. Blow any dirt or foreign matter out of the hub prior to installing the bearings.

**CAUTION**

*Install non-sealed bearings with the single sealed side facing outward (Figure 19).*

3. Pack the hub with multipurpose grease.

4A. A special Suzuki tool set-up (Suzuki part No. 09924-84510) can be used to install the wheel bearings as follows:

- a. Install the right-hand bearing into the hub first.
- b. Set the bearing with the sealed side facing out and install the bearing installer as shown in **Figure 20**.

c. Tighten the bearing installer and pull the bearing into the hub until it is completely seated. Remove the bearing installer.

d. Turn the wheel over (left-hand side up) on the workbench and install the distance collar.

e. Set the bearing with the sealed side facing out and install the bearing installer as shown in **Figure 21**.

f. Tighten the bearing installer and pull the bearing into the hub until there is a small amount of clearance between the inner race and the distance collar. Suzuki does not specify this clearance, just make sure they do not touch.

g. Remove the bearing installer.

41<sup>^</sup>. If special/tools are not used, perform the following<sup>^</sup>

- a. Tap the left-hand bearing squarely into place and tap on the outer race only. Use a socket (**Figure 22**) that matches the outer race diameter. Do not tap on the inner race or the bearing might be damaged. Be sure that the bearing is completely seated.





- b. Turn the wheel over (right-hand side up) on the workbench and install the distance collar.
- c. Use the same tool set-up and drive in the right-hand bearing.
5. Install a new O-ring seal (**Figure 14**) into the groove in the hub. Coat the O-ring with multipurpose grease.
6. Install the final driven flange (**Figure 23**) into the rear hub. Push it down until it is completely seated in the rear hub (**Figure 24**).
7. Install the 3 thrust washers (D, **Figure 13**) into the locking ring in the final driven flange.
8. Install new lockwashers (C, **Figure 13**).
9. Apply red Loctite (No. 271) to the bolts prior to installation, then install the bolts (B, **Figure 13**).
10. Tighten the bolts to the torque specification listed in **Table 1**.
11. Bend up the locking tab (A, **Figure 13**) against a flat of each bolt.
12. Install the brake panel assembly into the hub.
13. Install the rear wheel as described in this chapter.

## FINAL DRIVE UNIT, DRIVE SHAFT AND UNIVERSAL JOINT

### Removal

#### NOTE

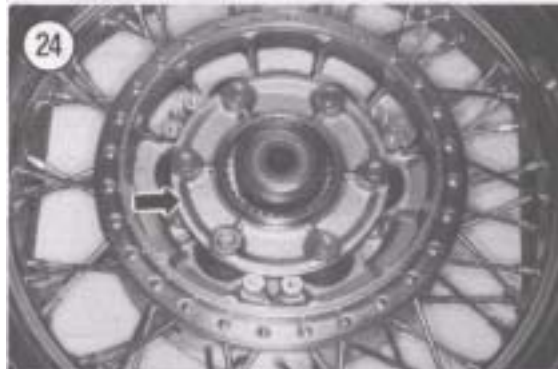
*The rear wheel can remain in place after the rear axle and spacers are removed. The procedure shown leaves the rear wheel in place.*

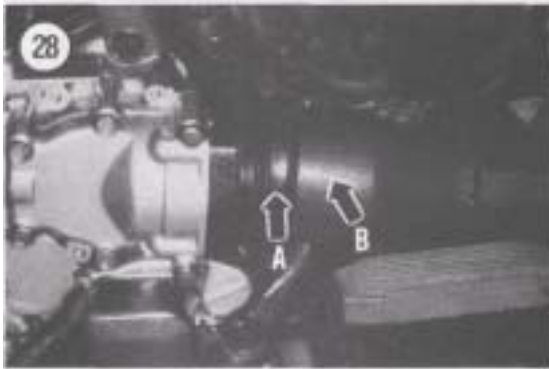
1. Remove the rear axle and spacers as described in *Rear Wheel Removal* in this chapter.
2. Drain the final drive unit oil as described in Chapter Three.
3. Remove the upper and lower mounting nuts and washers (**Figure 25**), then remove the left-hand shock absorber.

#### NOTE

*In **Figure 26** only 2 of the nuts and washers are shown. Be sure to remove all 3 nuts and washers.*

4. Remove the nuts and washers (**Figure 26**) securing the final drive unit to the swing arm.
5. Pull the final drive unit and drive shaft straight back (**Figure 27**) until it is disengaged from the splines on the universal joint.





6. Loosen the clamping band (A, **Figure 28**) securing the rubber boot to the swing arm and move the rubber boot away from the swing arm.
7. Remove the screw securing the swing arm trim panel (B, **Figure 28**) and remove the panel.
8. Pull the universal joint (**Figure 29**) toward the rear and disengage it from the bevel gear drive unit.
9. Carefully pull the universal joint out through the swing arm opening (**Figure 30**) and remove it.

### Final Drive Unit and Drive Shaft Inspection

The final drive unit requires a considerable number of special Suzuki tools for disassembly and assembly. The price of all of these tools could be more than the cost of most repairs or seal replacement by a dealer.

All of the internal components of the final drive unit are shown in **Figure 31**.

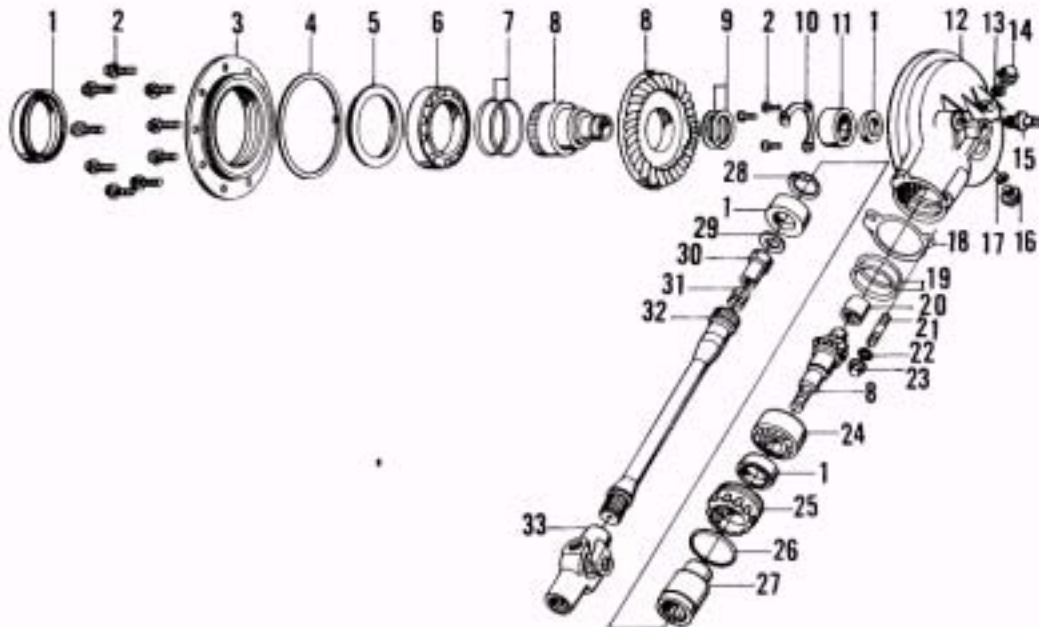
1. Check that the bearing case flange bolts (**Figure 32**) are in place and are tight.
2. Inspect the splines on the final driven ring gear (**Figure 33**). If they are damaged or worn, the ring gear must be replaced.

#### NOTE

*If these splines are damaged, also inspect the splines (**Figure 34**) on the rear wheel final driven flange, which may also need to be replaced.*

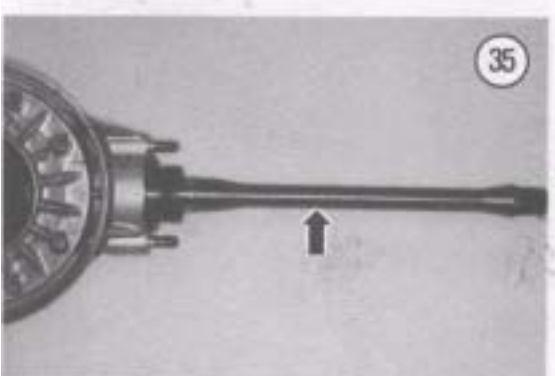
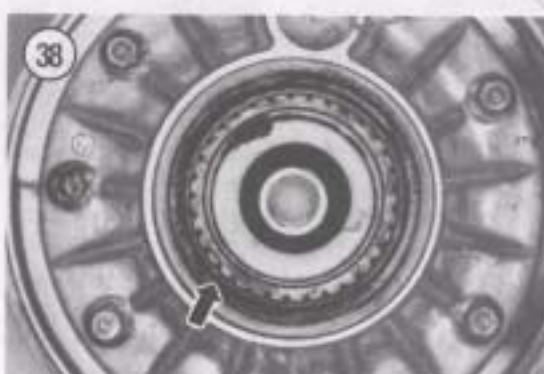
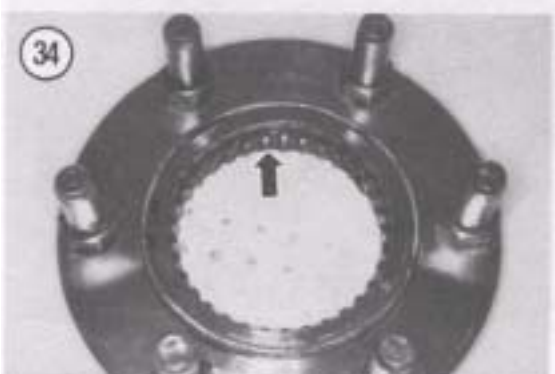
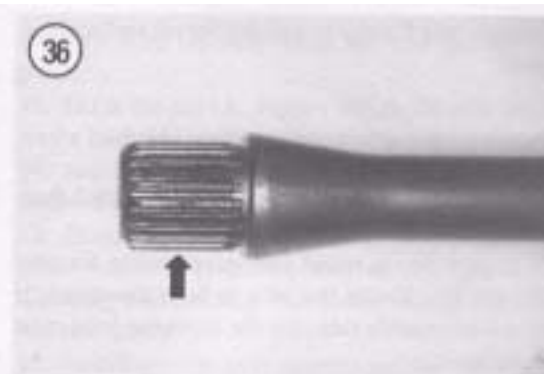
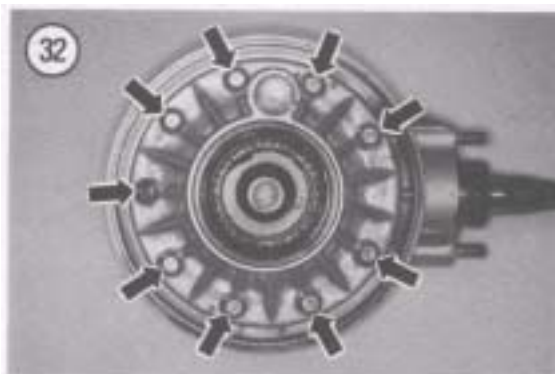
3. If removal is necessary, carefully pull the drive shaft (**Figure 35**) from the final drive unit, using a circular motion.
4. Inspect the splines on the universal joint end of drive shaft (**Figure 36**). If they are damaged or worn, the drive shaft must be replaced. If these splines are damaged, also inspect the splines on the universal joint; it may also need to be replaced.
5. Inspect the splines on the final drive unit end of drive shaft. If they are damaged or worn, the drive shaft must be replaced. If these splines are damaged, also inspect the splines in the final drive unit; it may also need to be replaced.
6. Check the threads on the threaded studs (**Figure 37**) for wear or thread damage. If necessary, clean the threads with an appropriate size metric die.
7. Check that gear oil has not been leaking from either the ring gear side (**Figure 38**) or pinion joint side (**Figure 39**) of the unit. If there are traces of oil

# FINAL DRIVE UNIT



- |                         |                           |
|-------------------------|---------------------------|
| 1. Oil seal             | 17. O-ring                |
| 2. Bolt                 | 18. Bearing stopper plate |
| 3. Bearing case         | 19. Shims                 |
| 4. O-ring               | 20. Needle bearing        |
| 5. Bearing plate        | 21. Threaded stud         |
| 6. Bearing              | 22. Washer                |
| 7. Shims                | 23. Cap nut               |
| 8. Final bevel gear set | 24. Bearing               |
| 9. Shims                | 25. Bearing stopper       |

- |                            |                     |
|----------------------------|---------------------|
| 10. Bearing retainer plate | 26. O-ring          |
| 11. Needle bearing         | 28. Circlip         |
| 12. Final gear case        | 29. Washer          |
| 13. O-ring                 | 30. Special nut     |
| 14. Oil fill cap           | 31. Spring          |
| 15. Threaded stud          | 32. Drive shaft     |
| 16. Drain cap              | 33. Universal joint |





leakage, take the unit to a dealer for oil seal replacement.

### Universal Joint Inspection

1. Clean the universal joint in solvent and thoroughly dry with compressed air.
2. Inspect the universal joint pivot points for play (**Figure 40**). Rotate the joint in both directions. If there is noticeable side play the universal joint must be replaced.
3. Inspect the splines at each end of the universal joint. Refer to **Figure 41** and **Figure 42**. If they are damaged or worn, the universal joint must be replaced.

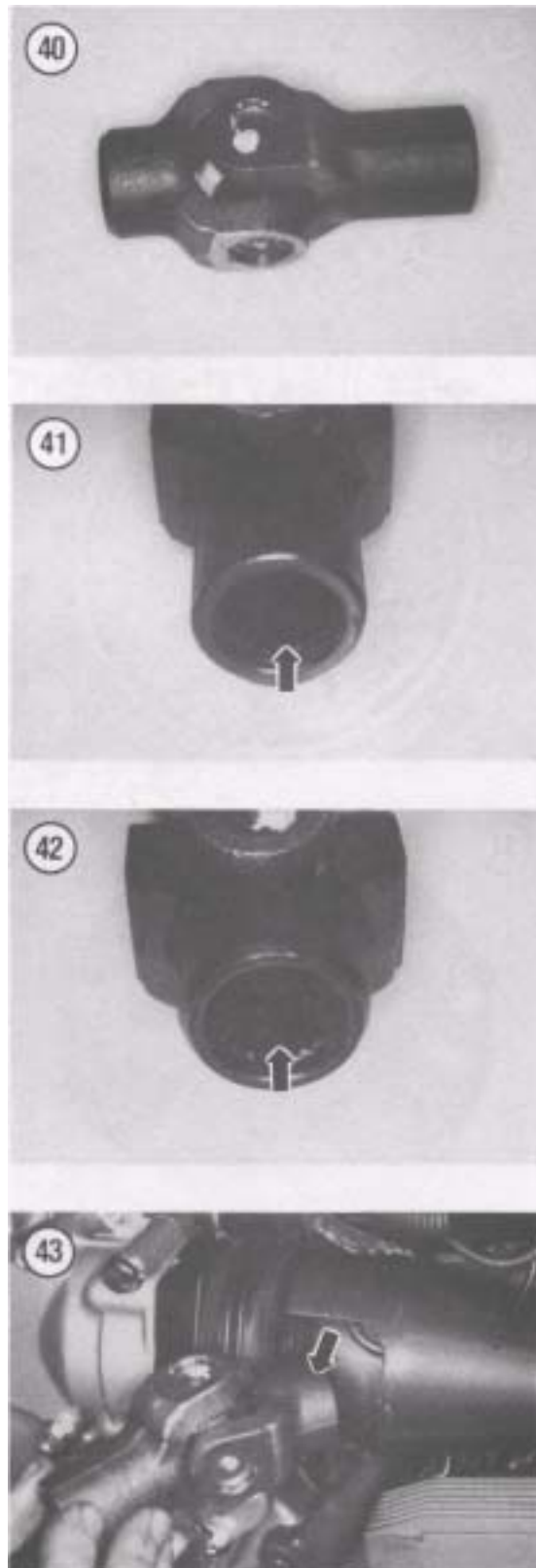
#### NOTE

*If these splines are damaged, also inspect the splines in the final drive unit and the engine output shaft; they may also need to be replaced.*

4. Apply a light coat of molybdenum disulfide grease (NGLI No. 2) to both splined ends.

### Installation

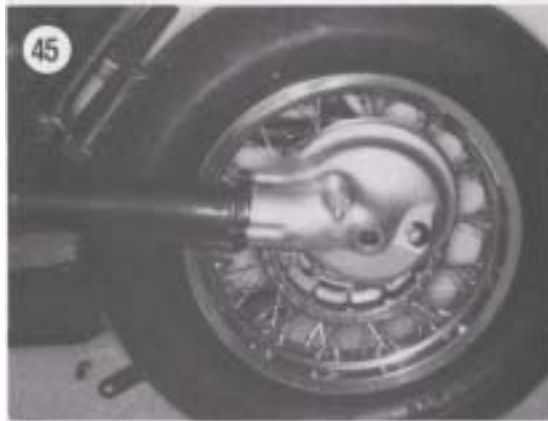
1. Apply a light coat of molybdenum disulfide grease (NGLI No. 2) to the splines at each end of the universal joint.
2. Position the universal joint with the short end (**Figure 43**) going in first toward the drive shaft.
3. Carefully push the universal joint in through the swing arm opening (**Figure 30**).
4. Align the splines and push the universal joint (**Figure 29**) forward and engage it with the bevel gear drive unit. Push the universal joint in until it seats completely.
5. If removed, install the drive shaft onto the final drive unit. Using a soft-faced mallet, tap on the end of the drive shaft to make sure the drive shaft is completely seated into the final drive unit splines.
6. Apply a light coat of molybdenum disulfide grease (NGLI No. 2) to the splines of the drive shaft.
7. Install the final drive unit and drive shaft into the swing arm (**Figure 44**). Insert your fingers into the opening in the drive shaft to hold the rear end of the universal joint up to accept the drive shaft.
8. Slowly push the final drive unit forward and mesh the drive shaft with the universal joint. It may be necessary to slightly rotate the final driven spline



back and forth to align the splines of the drive shaft and the universal joint.

9. Push the final drive unit all the way forward (**Figure 45**) until it is seated correctly.

10. Install the final drive unit's mounting nuts and washers only finger-tight at this time. Do not tighten



the nuts until the rear wheel and rear axle are in place.

11. **Hook** the tab (A, **Figure 46**) on the trim panel on the backside opening of the swing arm (B, **Figure 46**) and install the trim panel (B, **Figure 28**) and screw. Tighten the screw securely.

12. Install the rubber boot onto the swing arm. Make sure it is correctly installed and tighten the clamping bolt securely. This is necessary to keep out dirt and water.

13. Install the rear axle, spacers and the rear wheel as described in this chapter.

14. Tighten the final drive unit nuts to the specifications listed in **Table 1**.

15. Install the shock absorber and the upper and lower washers and nuts. Tighten to the torque specifications listed in **Table 1**.

16. Refill the final drive unit with the correct amount and type of gear oil. Refer to Chapter Three.

## SWING ARM

In time, the needle bearings will wear and will have to be replaced. The condition of the bearings can greatly affect handling performance and if worn parts are not replaced they can produce erratic and dangerous handling. Common symptoms are wheel hop, pulling to one side during acceleration and pulling to the other side during braking.

Refer to **Figure 47** for this procedure.

## Removal

1. Remove the rear wheel as described in this chapter.
2. Remove the final drive unit, drive shaft and universal joint as described in this chapter.

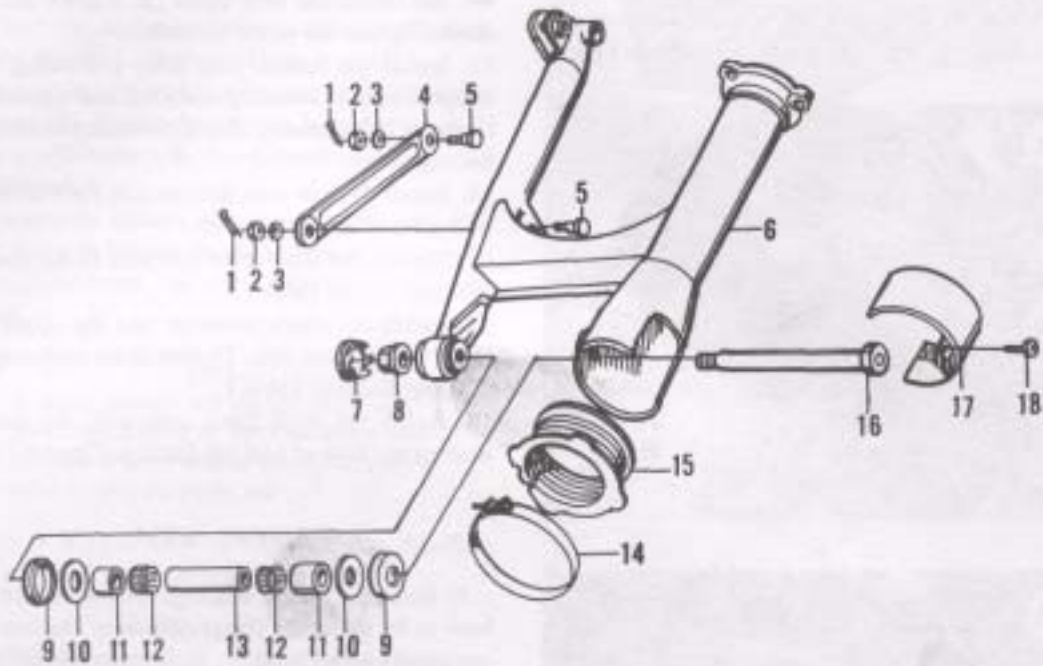
### NOTE

*It is not necessary to remove the shock absorber unit, just pivot the unit up and out of the way (**Figure 48**).*

3. Remove the lower mounting bolt and nut (**Figure 49**) securing the right-hand shock absorber.
4. Remove the trim cap (**Figure 50**) from the right-hand side covering the pivot bolt nut.
5. Grasp the rear end of the swing arm and try to move it from side to side in a horizontal arc. There should be no noticeable side play. If play is evident

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## SWING ARM

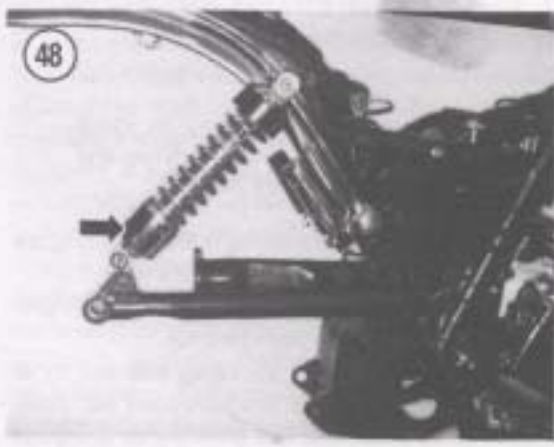


1. Cotter pin
2. Nut
3. Washer
4. Torque link
5. Bolt
6. Swing arm

7. Trim cap
8. Nut
9. Dust cover
10. Washer
11. Spacer
12. Needle bearing

13. Center collar
14. Clamp
15. Rubber boot
16. Pivot bolt
17. Trim panel
18. Screw

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and the pivot bolt nut is tightened correctly, the bearings should be replaced.

6. Hold onto the pivot bolt and loosen, then remove the pivot bolt nut (**Figure 51**).

7. Using a long drift, carefully tap the pivot bolt (**Figure 52**) out toward the left-hand side.

8. Have an assistant hold onto the swing arm and withdraw the pivot bolt (**Figure 53**) from the swing arm and frame.

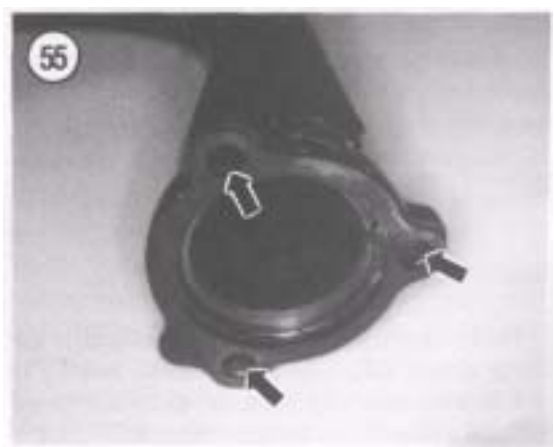
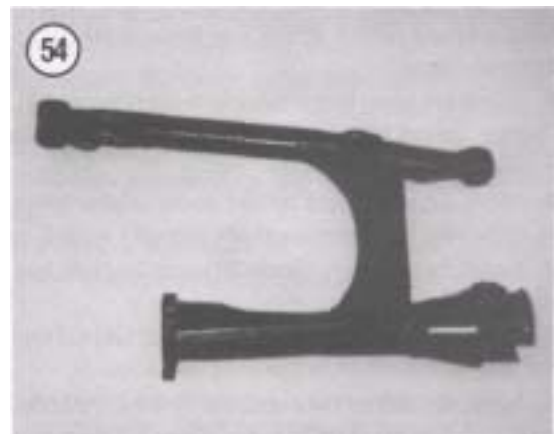
9. Pull back on the swing arm, free it from the frame and remove it from the frame.



### Inspection

1. Check the welded sections on the swing arm for cracks or fractures (**Figure 54**).

2. Inspect the final drive unit mounting bolt holes (**Figure 55**) in the swing arm. If the holes are elongated or worn, replace the swing arm.



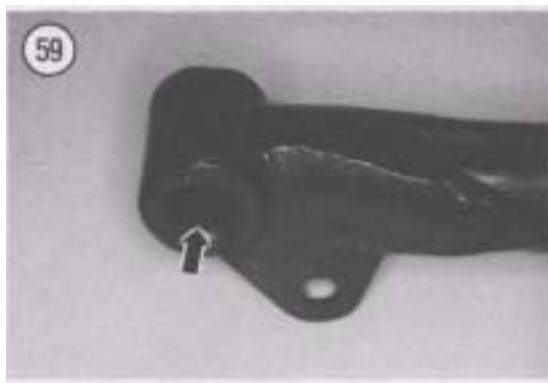
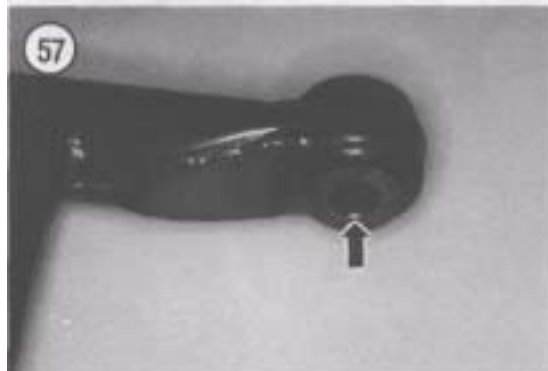
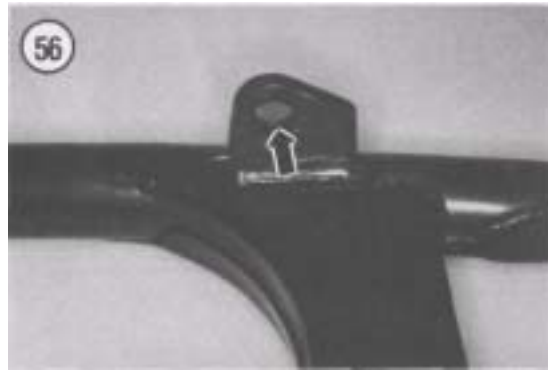
3. Inspect the right-hand shock absorber mounting bracket and pivot hole (**Figure 56**) on the swing arm. If the hole is elongated or worn, replace the swing arm.
4. Inspect the swing arm pivot points for wear or damage. Refer to **Figure 57** for the right-hand side or **Figure 58** for the left-hand side.
5. Inspect the rear axle mounting boss for wear or damage (**Figure 59**).

### Installation

1. Make sure the needle bearing dust cover (**Figure 60**) is in place on each side of the frame.
2. Position the swing arm into the mounting area of the frame. Align the holes in the swing arm with the holes in the frame. Make sure both dust covers are still in place. Reposition if necessary.
3. Apply a light coat of molybdenum disulfide grease to the pivot bolt.
4. Install the pivot bolt (**Figure 53**) from the left-hand side and push it all the way through the swing arm and frame.
5. Install the pivot bolt washer and nut (**Figure 51**). Tighten the nut to the torque specifications listed in **Table 1**.
6. Move the swing arm up and down several times to make sure all components are properly seated.
7. Install the trim cap (**Figure 50**) over the pivot bolt nut.
8. Install the final drive unit, drive shaft and universal joint as described in this chapter.
9. Install the rubber boot onto the swing arm. Make sure it is correctly installed and tighten the clamping bolt securely. This is necessary to keep out dirt and water.
10. Attach the lower end of the right-hand shock absorber to the swing arm and tighten the bolt and nut to the torque specification listed in **Table 1**.
11. Install the rear wheel as described in this chapter.

### Bearing Replacement

The swing arm needle bearings are installed in the frame at each side. Whenever a needle bearing is removed from the frame it must be discarded. Never reinstall a bearing that has been removed.





The bearing must be removed with special tools that are available from a Suzuki dealer. The special tools are as follows.

a. Bearing remover: part No. 09921-20210.

b. Slide hammer weight: part No. 09930-30102.

1. Remove the swing arm as described in this chapter.



2. Remove the dust seal and washer (**Figure 60**) from each side of the frame.

3. Remove the spacer from each bearing. Refer to **Figure 61** for the right-hand side or **Figure 62** for the left-hand side.

#### CAUTION

*Do not try to remove the needle bearings without the use of these special tools as the bearing mounting receptacle in the frame may be damaged. If damaged, the new needle bearings will not be properly aligned and the swing arm will not pivot correctly.*

4. Insert the bearing remover into the needle bearing and attach it to the backside of the bearing. Attach the slide hammer and weight to the bearing remover.

5. Using the slide hammer, slowly withdraw the needle bearing from the frame receptacle. Discard the needle bearing.

6. Repeat Step 4 and Step 5 for the other bearing. Discard this needle bearing also.

7. Remove the center collar from the frame pivot area.

8. Thoroughly clean out the inside of the frame pivot area with solvent and dry with compressed air.

9. Apply a light coat of molybdenum disulfide grease to all parts before installation.

#### CAUTION

*Never reinstall a needle bearing that has been removed. During removal it becomes slightly damaged and is no longer true to alignment and will create an unsafe riding condition.*

#### NOTE

*Either the right- or left-hand needle bearing can be installed first.*

10. Position the new needle bearing with the markings facing outward.

11. To install the new needle bearing, place the bearing over the bearing receptacle in the frame and drive the needle bearing into place slowly and squarely.

12. Install the center collar, then repeat Step 10 and Step 11 for the other bearing.

13. Make sure both bearings are properly seated. Refer to **Figure 63** for the right-hand side or **Figure 64** for the left-hand side.
14. Apply molybdenum disulfide grease to the new needle bearings
15. Apply molybdenum disulfide grease to the spacers and install the spacer into each bearing. Refer to **Figure 61** for the right-hand side or **Figure 62** for the left-hand side. Push the spacers all the way in until they are seated (**Figure 65**).
16. Apply molybdenum disulfide grease to the dust seals and washers. Install a washer into each dust seal.
17. Install the dust seal and washer (**Figure 60**) onto each side of the frame.
18. Install the swing arm as described in this chapter.

## SHOCK ABSORBERS

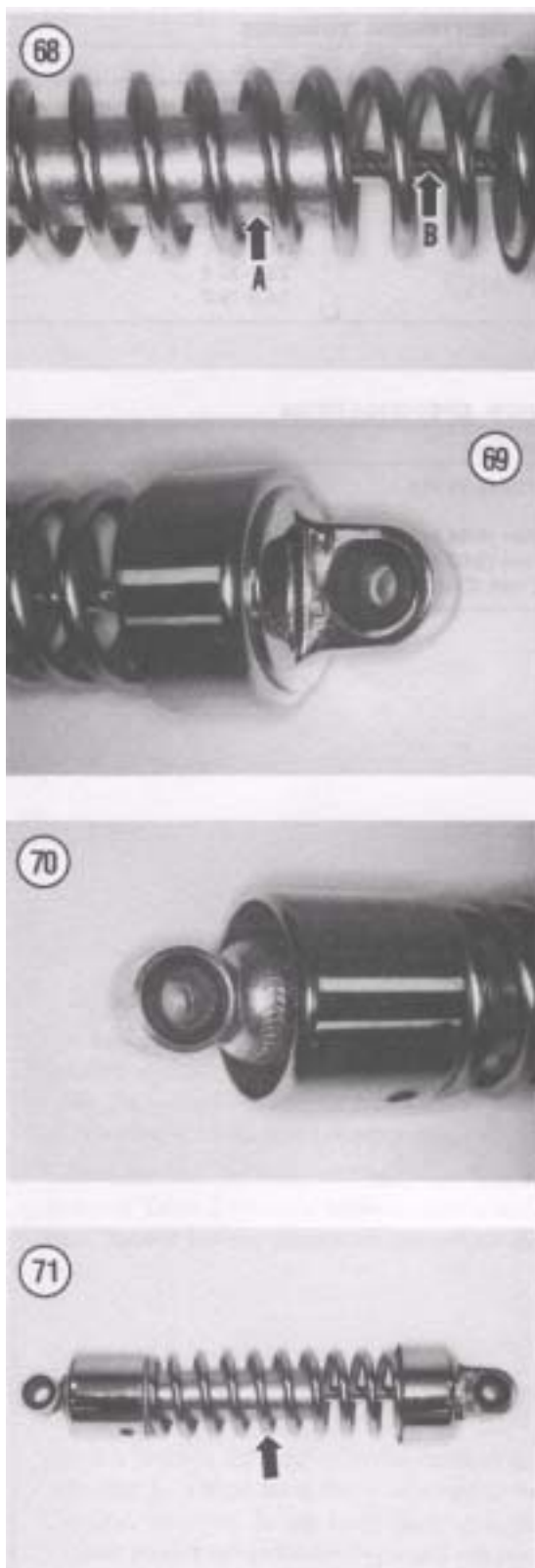
The shock absorbers are spring controlled and hydraulically dampened. Spring preload can be adjusted by rotating the spring lower seat at the base of the spring *clockwise* to increase preload and *counterclockwise* to decrease it.

### NOTE

*Use the wrench furnished in the factory tool kit.*

Both spring lower seats must be indexed on the same detent. The shocks are sealed and cannot be rebuilt. Service is limited to removal and replacement of the hydraulic unit.





## Removal/Installation

Removal and installation of the rear shocks is easier if done separately. The remaining unit will support the rear of the bike and maintain the correct relationship between the top and bottom shock mounts.

### NOTE

*Some prefer to remove the seat (A, **Figure 66**) as a precaution to avoid damage to the seat should a tool slip while removing the shock absorber upper nut.*

1. Block up the engine so that the rear wheel clears the ground. Tie the front of the motorcycle down to remove weight from the rear wheel.
2. Adjust both shocks to their softest setting, completely *counterclockwise*.
3. On models so equipped, remove the trim cap from the upper mount.
4. On the right-hand side, remove the upper nut and washer (B, **Figure 66**) and the lower bolt, nut and washers (C, **Figure 66**) securing the shock absorber to the frame and to the swing arm.
5. On the left-hand side, remove the upper and lower nuts and washers (**Figure 67**) securing the shock absorber to the frame and to the final drive unit.
6. Pull the unit straight off the upper mount and remove it.
7. Install by reversing these removal steps. Tighten the upper and lower mounting nut or bolt to the torque specifications listed in **Table 1**.

## Preliminary Inspection

1. Check the damper unit (A, **Figure 68**) for leakage and make sure the damper rod (B, **Figure 68**) is straight.

### NOTE

*The damper unit cannot be rebuilt; it must be replaced as a unit.*

2. Inspect the rubber bushings in the upper (**Figure 69**) and lower (**Figure 70**) joints for wear or deterioration. If damaged, replace the shock absorber as they cannot be replaced.
3. Inspect the spring (**Figure 71**) for wear, damage or sagging. If damaged, replace the shock absorber as the spring cannot be replaced.

**Table 1 REAR SUSPENSION TIGHTENING TORQUES**

Item	N.m	tt-lb.
Rear axle nut	60-96	43.5-69.5
Brake torque rod bolt and nut	20-30	14.5-21.5
Final driven flange bolts	8-12	6-8.5
Shock absorber mounting nuts		
Upper and lower	20-30	14.5-21.5
Swing arm pivot bolt and nut	50-80	36-58
Final drive unit		
Mounting nuts	35-45	25.5-32.5
Bearing case flange bolts	20-26	14.5-19.0

**Table 2 REAR SUSPENSION SPECIFICATIONS**

Item	Wear limit
Rear axle runout	0.2 mm (0.01 in.)
Rear wheel rim runout Radial	
2.0 mm (0.08 in.) Axial	2.0
mm (0.08 in.) Swing arm pivot shaft runout	0.30 mm
(0.01 2 in.)	