

SECTION 6 - DRIVE SYSTEM

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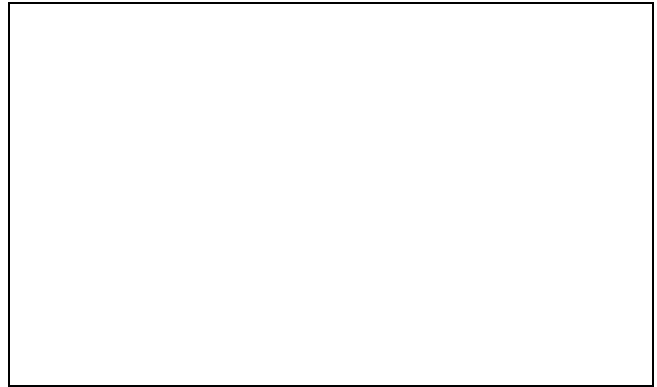
Drive System

■ **NOTE:** Some photographs and illustrations used in this section are used for clarity purposes only and are not designed to depict actual conditions.

General Information

SPECIAL TORQUE WRENCH ADAPTER

A special adapter is needed to properly tighten the drive axle nuts to specifications.



ATV2189

Rear Drive Assembly Schematics

LEFT REAR WHEEL ASSEMBLY

KEY

1. Hub
2. Wheel
3. Nut
4. Washer
5. Hub Nut
6. Cotter Pin
7. Axle Nut
8. Washer
9. Sprocket Hub
10. Sprocket
11. Bolt
12. Washer
13. Tire
14. Valve Assy

0739-258

RIGHT REAR WHEEL ASSEMBLY

KEY

1. Hub
2. Wheel
3. Nut
4. Washer
5. Hub Nut
6. Cotter Pin
7. Axle
8. Axle Nut
9. Axle Housing
10. Spacer
11. Bearing
12. Dust Seal
13. Brake Disc
14. Cap Screw
15. Tire
16. Valve Assy

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Rear Drive Axle

REMOVING

1. Secure the ATV on a support stand to elevate the rear wheels.

 **WARNING**

Make sure the ATV is solidly supported on the support stand to avoid injury.

SP061A

2. Apply and lock the parking brake; then remove the wheels.
3. Loosen (but do not remove) the four cap screws on the swing arm; then turn the adjuster nut counterclockwise to slacken the chain.

SP061B

4. Remove the rear wheel hubs; then remove the left-side axle nuts (1). Account for two concave washers (2).

8. Remove the axle housing from the swing arm.

CLEANING AND INSPECTING

1. Inspect the sprocket teeth for wear. If they are worn as shown, replace the engine sprocket, rear sprocket, and drive chain as a set.



ATV2185

2. Measure the rear axle runout as shown using a V blocks and a dial indicator. If the axle runout exceeds 6 mm (0.24 in.), the axle must be replaced.



ATV2186

3. Inspect the dust seals for wear of damage. If any defect is found, replace the dust seal.
4. Inspect the axle bearings by rotating them by hand. If any roughness, binding, or excessive looseness is found, replace the axle bearings.

■ **NOTE:** If the axle bearings are replaced, replace the dust seals with new ones. Always pack the bearings with a good quality wheel bearing grease.

REMOVING BEARINGS

1. Remove the dust seal using an appropriate seal removal tool; then using an appropriate bar (1), drive the bearings out of the axle housing. Account for one spacer.

■ **NOTE:** Do not reuse bearings after removal.

SP315

5. Remove the sprocket and sprocket hub assembly; then remove the brake caliper and lay aside.

■ **NOTE:** Do not apply pressure to the brake pedal with the caliper removed. The brake piston will be pushed out and brake fluid will be spilled.

6. Slide the axle to the right and out of the axle housing; then remove the brake disc from the flange.

SP316

■ **NOTE:** It is not necessary to remove the right-side axle nut.

SP317

■ **NOTE:** Do not attempt to remove the brake disc flange. The axle and brake flange are an assembly.

7. Remove the four swing-arm cap screws; then remove the adjuster nut (from step 3).

3. Install new dust seals and lightly coat with grease.

INSTALLING

1. Install the axle housing in the swing arm; then install and finger-tighten the four cap screws.
2. Install the adjuster nut loosley; then install the brake disc applying red Loctite #271 to the Allen-head cap screws. Tighten to specifications.
3. Slide the axle into the axle housing from the right side; then apply multipurpose grease to all splined areas of the axle.

SP318

SP319

2. Clean the axle housing and inspect for cracks, elongated holes, and wear in bearing bores.

SP320

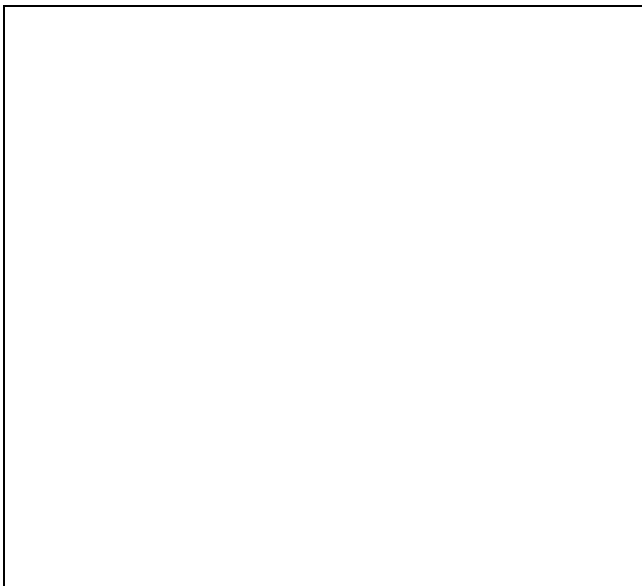
INSTALLING BEARINGS

1. Pack the new bearings with a good quality wheel bearing grease; then install the right bearing (1) first using an appropriate bearing installer. The sealed side of the bearing must be directed outward.
2. Install the spacer; then install the left bearing (2).

SP321

4. Apply Three Bond Sealant (p/n 0636-070) to the left and right ends of the sprocket hub; then install the hub on the axle.

■ **NOTE:** If the sprocket was removed, see Section 2 for sprocket installation procedure.



ATV2187

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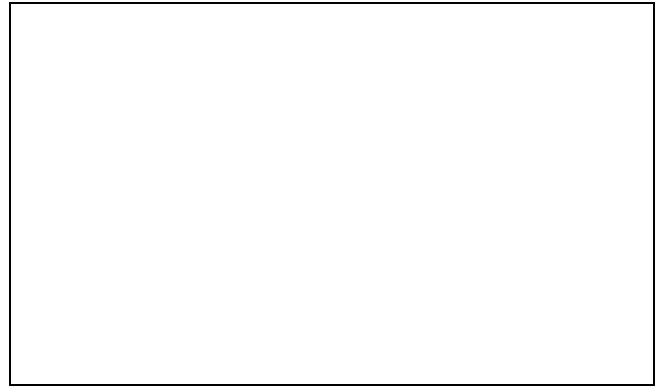
SP322

5. On the left-side, install the concave washers (3); then apply red Loctite #271 to the threads on the axle and using the torque wrench adapter, tighten the inner axle nut to the calculated specification.

■ **NOTE: It is necessary to calculate the torque value using the following formula due to the offset of the special tool used to tighten the axle nuts.**



ATV2188



ATV2189

6. Install the outer axle nut (5) and tighten to calculated specification.

SP324

7. Adjust the drive chain (see Section 2); then tighten the four cap screws.
8. Install the brake caliper and tighten the mounting cap screws to specifications; then install the wheel hubs and tighten the rear wheel hub nuts to specifications.
9. Install the rear wheels and tighten to specifications.

SP323

$$\frac{L \times Ts}{L + Ls} = T$$

T: Torque wrench reading to be calculated

Ts: Specified torque value (130 ft-lb)

Ls: Tool offset length (center to center)

L: Length of torque wrench (handle pivot to head center)