

Measuring Valve Stem to Guide Clearance

1. Insert a snap gauge 1/2 way down into each valve guide bore; then remove the gauge and measure it with a micrometer.
2. Using a micrometer, measure the valve stem outside diameter. Valve stem to guide clearance must not exceed specifications.
3. If valve stem to guide clearance exceeds specifications, the cylinder head assembly must be replaced.

Servicing Valves/Valve Guides/Valve Seats

If valves, valve guides, or valve seats require servicing or replacement, Arctic Cat recommends that the components be taken to a qualified machine shop for servicing.

⚠ CAUTION

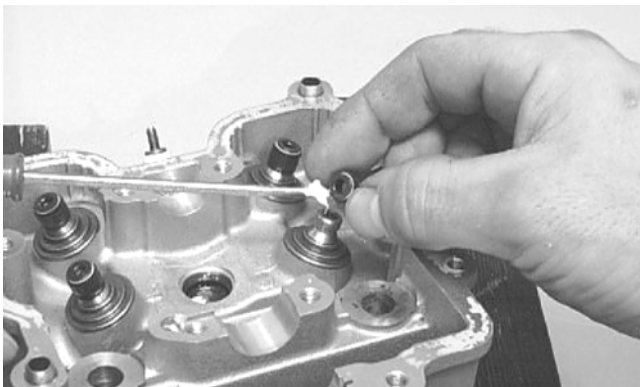
If valves are discolored or pitted or if the seating surface is worn, the valve must be replaced. Do not attempt to grind the valves or severe engine damage may occur.

Measuring Rocker Arm to Shaft Clearance

1. Using a dial calipers, measure the inside diameter of the rocker arm.
2. Using a micrometer, measure the outside diameter of the rocker arm shaft.
3. Subtract the shaft diameter from the rocker arm diameter.
4. Acceptable clearance must be within specifications.

Installing Valves

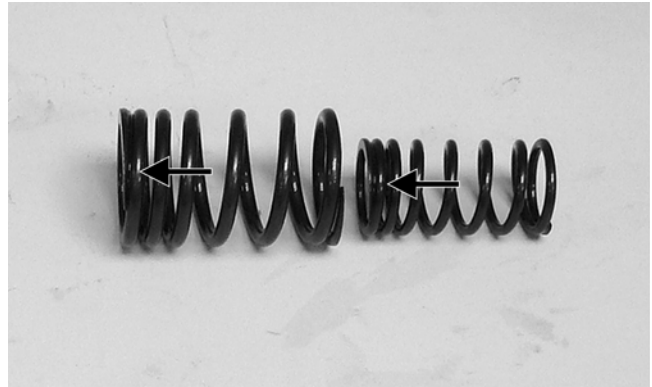
1. Apply grease to the inside surface of the valve seals; then place a valve guide seal over each valve guide.



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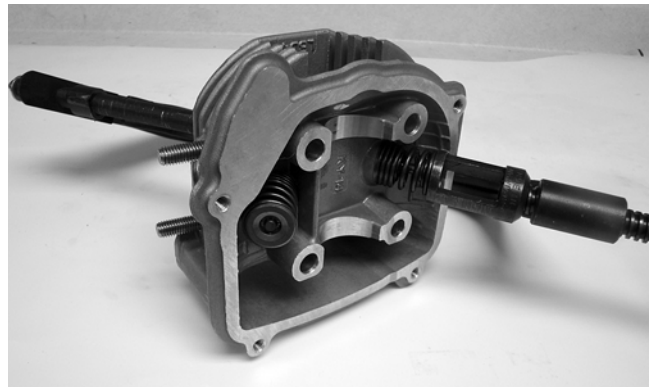
2. Insert each valve into its original valve location.

3. Install the valve springs and seats with the closest wound end of the spring directed toward the cylinder head.



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4. Place a spring retainer over the valve springs; then using the valve spring compressor, compress the valve springs and install the valve keepers.



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PISTON ASSEMBLY

■NOTE: Whenever a piston, rings, or pin are out of tolerance, they must be replaced.

Cleaning/Inspecting Piston

1. Using a non-metallic carbon removal tool, remove any carbon buildup from the top of the piston.
2. Inspect the piston for cracks in the piston pin, boss, top, and skirt areas.
3. Inspect the piston for seizure marks or scuffing. If piston is scored or galled, replace it with a new one.
4. Inspect the perimeter of each piston for signs of "blowby" indicated by dark discoloration. "Blowby" is caused by worn piston rings, excessive carbon in ring grooves, or an out-of-round cylinder.

Removing Piston Rings

1. Starting with the top ring, slide one end of the ring out of the ring-groove.

6. Install the rear wheels/hubs and secure with two flat washers and castle nuts. Tighten to 58 ft-lb; then install new cotter pins.

■**NOTE:** If cotter pin hole and notch in castle nut do not align, tighten the nut until the first notch will align with the cotter pin hole.

7. Install the rubber hub nut covers and remove the ATV from the support stand.

Rear Hub/Drive Axle

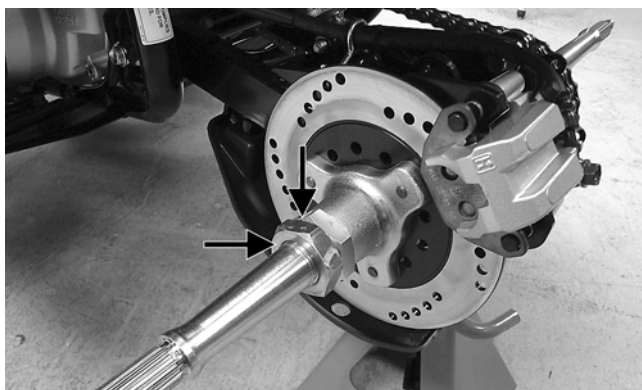
REMOVING REAR HUB/DRIVE AXLE

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.

2. Remove the cotter pins from the castle nuts on the rear wheel hubs.
3. Remove the rear wheel hub castle nuts; then slide the rear wheels and hubs off together. Account for the washers.
4. Remove the two axle nuts securing the brake hub to the axle.



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5. Remove the drive chain (see Removing Drive Chain sub-section).
6. Remove the rear sprocket (see steps 4-5 of Removing Rear Sprocket sub-section).

7. Remove the drive axle by sliding it out the right side of the axle housing.

AT THIS POINT

If the technician's objective is to service/replace the drive axle, the axle housing does not have to be removed from the swing arm. The axle can be pulled out the right side of the axle housing. Axle bearings can also be replaced without removing the axle housing from the swing arm, but the rear axle housing cover and brake hub will need to be removed. The axle housing should only be removed if it needs to be serviced or replaced.

REMOVING BEARINGS AND SEALS

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.

2. Remove the wheels and hubs (see Removing Rear Hub/Drive Axle in this sub-section).
3. Using an appropriate prying tool, carefully pry out the seals from each side of the axle housing.



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4. Drive out the bearings from the axle housing. Account for center axle housing spacer.

REMOVING AXLE HOUSING

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.

2. Remove two cap screws securing the brake caliper to the axle housing; then lift the caliper off the disc.