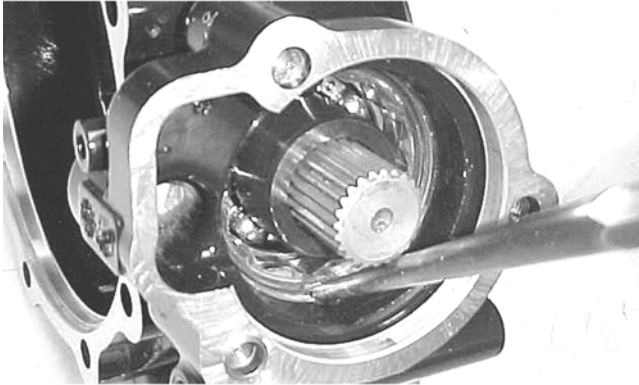


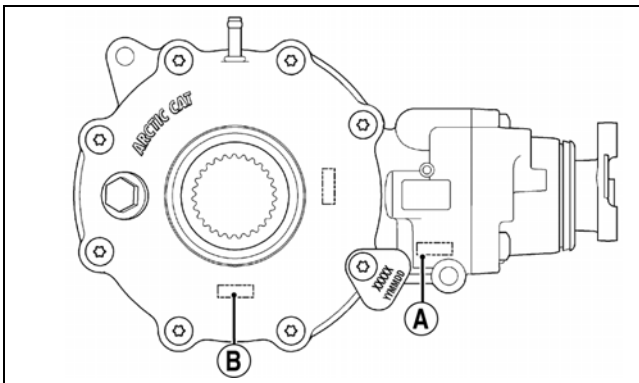
Shimming Procedure/ Shim Selection

1. Press bearings into bores by outer ring to hard contact with seat.
2. Install the lock collar and tighten to 125 ft-lb; then stake the lock collar edge approximately 1.5 mm (0.060 in.) into the lower oil channel.



CC891

3. Note the following shim selections (shims are nominally 1.5 mm/0.060 in. thick):

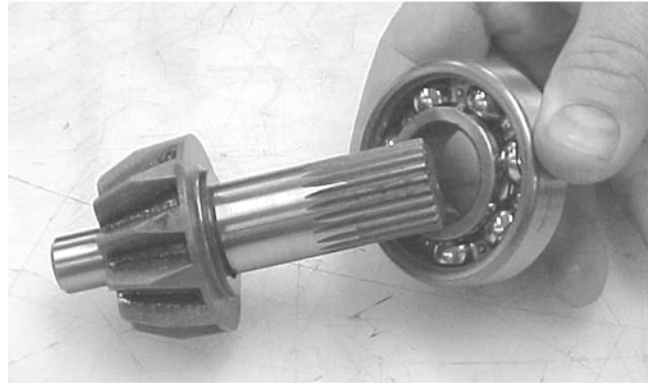


738-268C

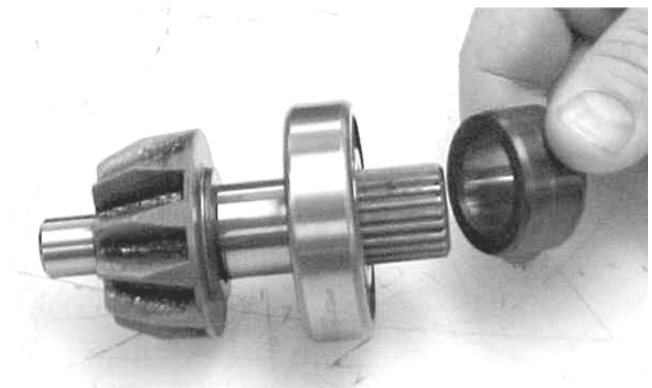
- A. Cover Side - add value A on the gear case housing to value B on the gear case cover; then add 1.5 mm (0.060 in.). This will give you the proper shim thickness.
 - B. Gear Case Side - install a 1.3-1.4 mm (0.050-0.055 in.) shim and tighten the bolts to 25-31 ft-lb. Verify backlash to be within a range of 0.28-0.38 mm (0.011-0.015 in.) and end-play to be within a range of 0.10-0.20 mm (0.004-0.008 in.). If not within specification range, reselect shim until backlash specification range can be verified.
4. Prior to final assembling, apply molybdenum disulfide grease to all oil seal lips.
 5. Prior to final assembling, prelubricate journal on pinion assembly with SAE 80W-90 hypoid gear lubricant prior to pressing assembly into gear case housing.

Assembling Pinion Gear

1. Install the bearing onto the pinion shaft. Install the pinion shaft collar.

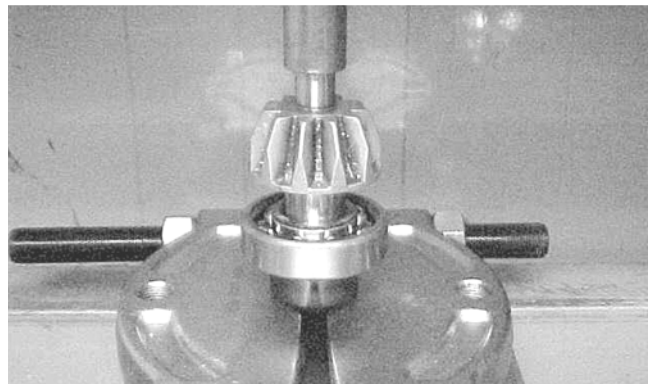


CC882



CC883

2. Place the pinion assembly in a bearing puller; then install the bearing using a press.

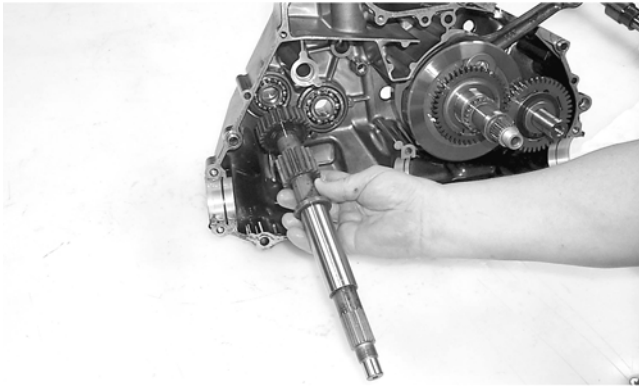


CC884

3. Install the pinion gear assembly into the housing. Using the 48 mm Internal Hex Socket, secure the pinion gear assembly with the existing lock collar. Tighten to 125 ft-lb.

■ **NOTE:** On a front differential, the lock collar has right-hand threads. On a rear gear case/differential, the lock collar has left-hand threads.

6. Using a rubber mallet, tap on the crankcase to remove the driveshaft (E).



CC675

7. Note the timing marks on the crank balancer gear (B) and crankshaft gear (C) for assembling purposes; then slide the crank balancer gear off the crank balancer. Account for the key in the keyway.



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8. Remove the crank balancer.

■NOTE: There is a flat spot on the crank balancer bearing flange to allow clearance past the crankshaft.



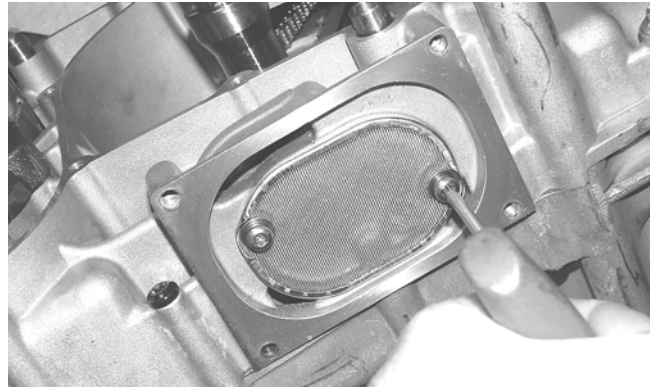
CD832B

9. Remove the snap ring securing the water pump driven gear shaft.
10. Using a hydraulic press, remove the crankshaft assembly.

■NOTE: Use a protective end cap to prevent damage.

11. Remove the cap screws securing the oil strainer cap; then remove the cap.

12. Remove the two cap screws securing the oil strainer; then remove the strainer.



PR406

⚠ CAUTION

Do not remove the remaining output shaft assembly unless absolutely necessary. If the shaft is removed, the shaft nut must be replaced with a new one and the shaft must be re-shimmed.

13. To remove the assembly, remove the nut securing the secondary drive gear and secondary driven gear; then from the inside of the crankcase using a rubber mallet, remove the output shaft assembly. Account for the output shaft, two gears, a shim, a washer, and the nut.



CC686

Servicing Center Crankcase Components

■NOTE: Whenever a part is worn excessively, cracked, damaged in any way, or out of tolerance, replacement is necessary.