
ALPHA ONE GEAR SETS - 43-18411A2, 43-45814A5, 43-55778A3 AND 43-75325A3 BEARING SET - 31-35988A12

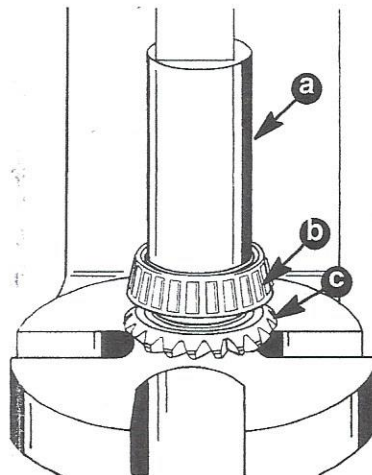
IMPORTANT: The latest Alpha One Sterndrive Units, beginning with Serial Number D492656 and Above, no longer use the cone spacer between the bearings in the U-joint assembly to set the bearing preload. A new procedure has been established for adjusting this preload and is covered in the following instructions. Also, the outer diameter (O.D.) of the drive gear hub was increased by .0014 inches, which means that the bearing cones now have a slight interference fit with the gear. It is also important to note that these gear sets and the bearing set will back-fit to drive units that fall below the above listed serial number and that the following bearing preload procedure should also be used for those units. In those cases where the 31-35988A12 bearing set is used in conjunction with the original gear, the cone space with the bearing set **MUST BE USED**, and the old bearing preload procedure (listed in the Alpha One Service Manual 90-12934--1) must be followed.

For complete precautions and related procedures refer to the appropriate Sterndrive Service Manual.

Assembly

IMPORTANT: Lightly lubricate the gears and bearings with Quicksilver High Performance Gear Lube (92-816026A1) before installing. Bearings and gears must be lubricated to obtain accurate preload readings.

1. Using tool 91-90774, press the first bearing cone onto the pinion gear until it seats fully against the back side of the gear.



- a - Driver Tool (91-90774)
- b - Bearing Cone
- c - Drive Gear

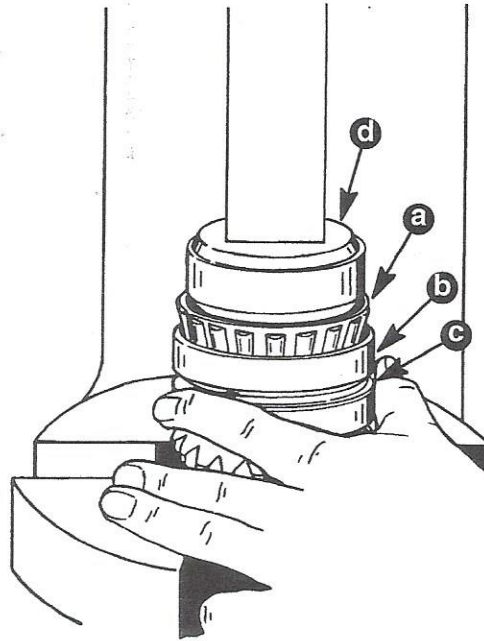
2. Place the bearing cup onto the first bearing cone.
3. Place the large bearing spacer onto the bearing cup.

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- Place the second bearing cup onto the spacer.

IMPORTANT: Do not over-press the second bearing cone, as damage to one or both of the bearings could occur. If an over-pressed condition occurs (the spacer does not move freely), completely disassemble the bearings from the gear and start again.

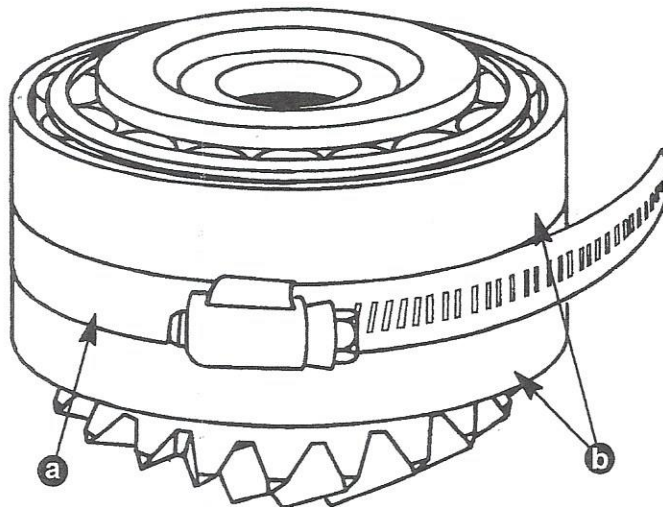
- Press the bearing cone (positioned as shown in the next figures) onto the pinion gear until the bearing rollers make light contact with the bearing cup.



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- a - Bearing Cone
- b - Bearing Cup
- c - Spacer

- Temporarily install a hose clamp on the bearing assembly to keep the bearing cups aligned with the spacer while accomplishing the next step.

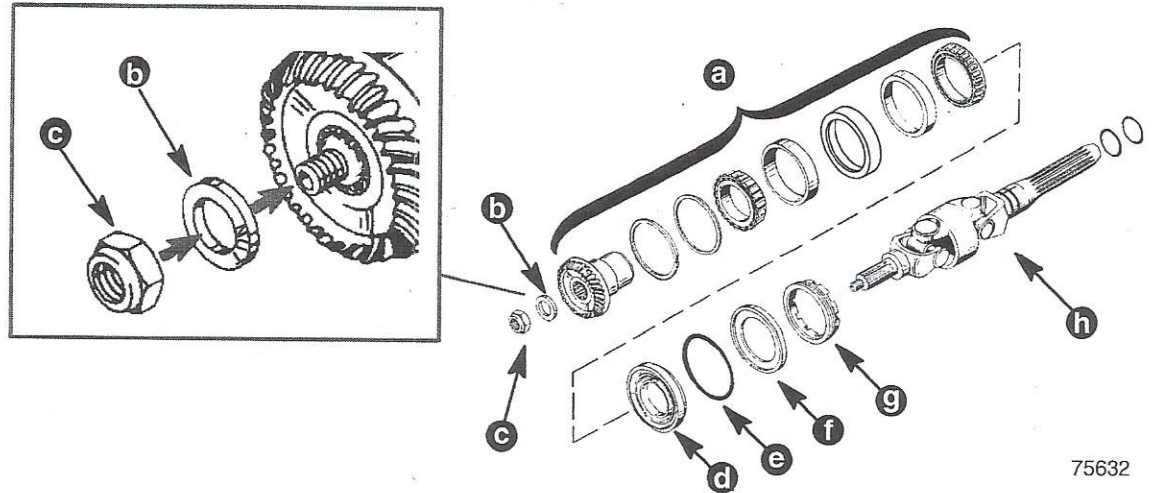


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- a - Hose Clamp
- b - Bearing Cups

7. Assemble the retainer ring, thrust washer, O-ring and oil seal carrier. Then install the gear/bearing assembly, the washer and the nut. Tighten the nut finger tight.

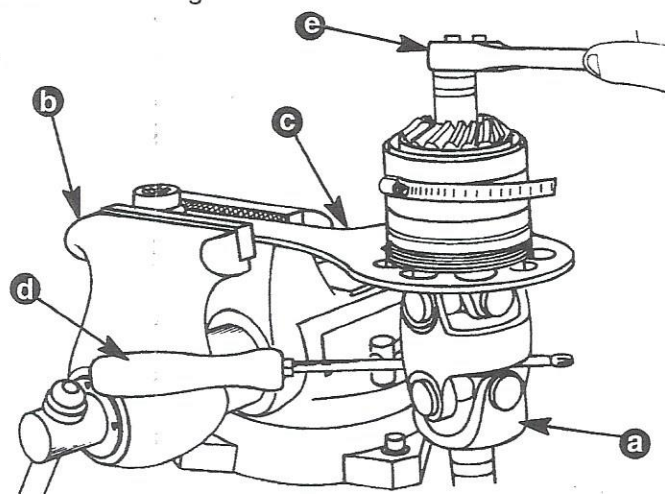
IMPORTANT: When the washer is installed properly on the U-joint assembly shaft, the word "NUT" (on side facing nut) will be visible.



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- a - Gear Assembly
- b - Washer
- c - Nut
- d - Oil Seal Carrier
- e - O-Ring
- f - Thrust Washer
- g - Retainer Ring
- h - U-Joint Assembly

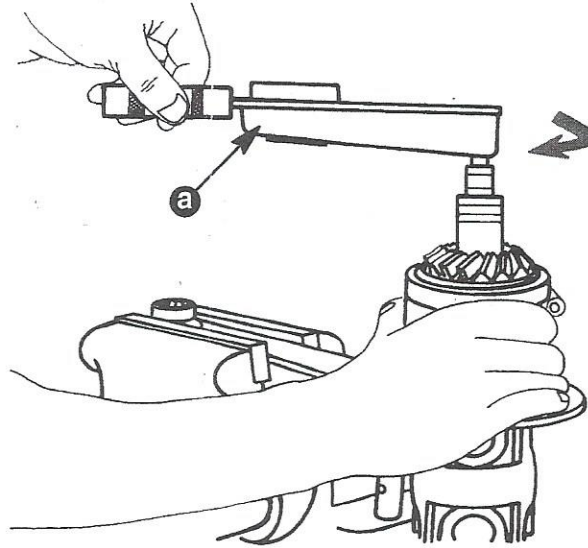
8. Place the U-joint into the U-joint retainer tool.
9. Insert a suitable tool, such as a screwdriver, between the U-joint yokes as shown in the next figure, to prevent the U-joint from rotating when turning down the pinion nut. Turn the pinion nut down 1/16 of a turn at a time. Check for proper preload by turning gear using a torque wrench until a 6-10 lb-in. (0.7-1.1 Nm) preload is on the bearings. Remove the screwdriver or holding device.



- a - U-Joint Assembly
- b - Vice
- c - U-Joint Retainer Tool (91-17256)
- d - Screwdriver
- e - Socket and Ratchet Wrench

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IMPORTANT: If the preload goes over the specified limit of 6-10 lb-in. (0.7-1.1 Nm) the bearings must be totally separated from the gear and reassembled following the appropriate previous instructions. Failure to follow these instructions will cause premature failure of the unit.



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a - Torque Wrench (lb-in.)

Refer to Sterndrive Service Manual for "Adjusting Pinion Depth." This procedure has not changed.