

Bearing & Gear Set Installation



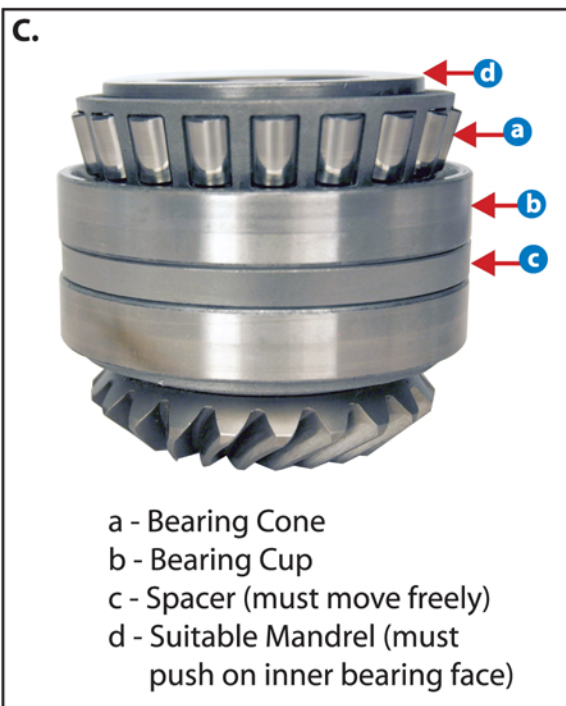
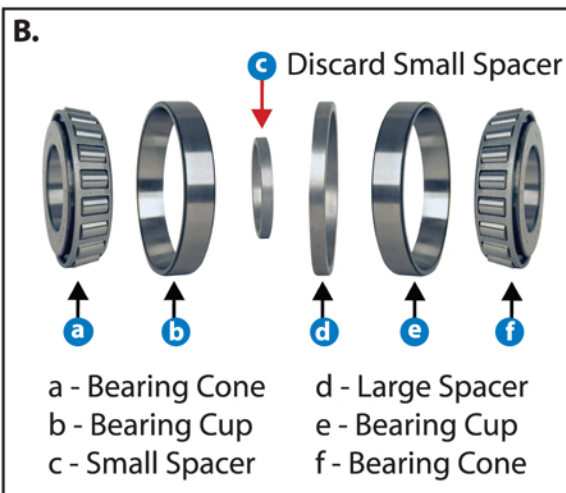
IMPORTANT: The latest Alpha One Drive Units, beginning with sn# 0D492656 and above, no longer use the cone spacer between the bearings in the U-joint assembly to set the bearing preload and is covered in the following instructions. Also, the O.D. of the new drive gear hub was increased by .0014 inch, which means that the bearing cones (old or new) now have a slight "interference fit" with the gear. It is important to note that these gear sets and bearing sets will back-fit to drive units that fall below the above listed sn# and that the new bearing preload procedure must also be used for those units.

In those cases where the 21520 Bearing Set is used in conjunction with the original (slip fit) gear, the cone spacer **must be used**, and the old bearing preload procedure must be followed.

1. Using an adequate tool, press the bearing cone (positioned as shown in Figure A) onto the pinion gear until it seats fully against the back side of the gear.
2. Place the bearing cup onto the bearing cone.
Note: Discard (Do Not Reuse) the small spacer from the old gear/bearing set. (Figure B)
3. Place the large spacer onto the bearing cup.
4. Place the second bearing cup onto the spacer.

IMPORTANT: The spacer between the bearing cups must be free to move. 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.

5. Press the bearing cone (oriented like Figure C) onto the pinion gear until the bearing rollers make light contact with the bearing cup.



6. Temporarily install a hose clamp on the bearing assembly to keep the bearing cups and spacer aligned with each other while accomplishing the next step. (Figure D)

Assembling the U-joint / Gear Assembly

7. Assemble the remaining components to the U-joint, (in the order shown in Figure E), then assemble the gear / bearing assembly, the washer and the nut (add Loctite to nut). Screw down the nut finger tight.
8. Clamp GLM No. 90100 (U-joint retainer tool) in a vise and place the U-joint into it. (Figure F)
9. Insert a suitable tool, such as a screwdriver, between the U-joint yokes (as shown in Figure F), to prevent the U-joint from rotating when screwing down the pinion nut. Screw the pinion nut down until the preload on the bearings starts to go up just slightly.

Setting the Preload

10. While holding the bearings, slowly rotate the pinion nut (Figure G). Check preload by rotating the pinion nut very slowly and while rotating, take a reading of the preload. If the preload is under the specifications 6-10 lb.in. (0.7-1.1 N-M), torque the pinion nut slightly more as instructed in the previous step and recheck preload as outlined above. Continue this sequence until the proper preload is achieved.

IMPORTANT: If while accomplishing the preceding procedure the preload goes over the specified limit, 6-10 lb.in. (0.7-1.1 N-M), the bearings must be totally separated from the gear and re-assembled following the instructions on this sheet. Failure to follow these instructions will cause premature failure of the unit.

New Bearings **6-10 lb.in.**
Used Bearings **2.5-4 lb.in.**

