



REVOLUTION
HELICOPTER CORP., INC.



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July 7, 1995

Revolution Helicopter Airworthiness Directive (AD) #070795

Effected Aircraft: All Mini-500 helicopters.

AD Type: Urgent (Must be complied with before further operation of the aircraft)

Subject: Main rotor cones. It has been discovered that the locking ring for the gland nut, on the end of the spindle inside the rotor cone, may not have had the tab bent over into the locking groove on the nut.

Corrective Action: The locking ring on the spindle must be inspected to insure that the tab has been bent into the groove on the gland nut. You may either send your main rotor cone assemblies to Revolution Helicopter and we will complete the inspection, or you may follow the attached instructions and complete the inspection yourself.

You must pay for shipping charges to and from Revolution Helicopter. Unless otherwise requested, the cones will be sent back to you freight collect.

If you have any questions, please do not hesitate to contact Brian Thomas.

Please date and sign, then mail or fax a copy to Revolution Helicopter indicating receipt of this AD.

Revolution Helicopter Corp.
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Check one block only:

_____ Both main rotor cone assemblies have been sent to Revolution Helicopter for AD compliance.

_____ I have inspected both main rotor cone assemblies as per the supplied instructions and have taken any corrective action necessary to comply with this AD.

Date: _____

Signature: _____

CONE INSPECTION INSTRUCTIONS

1. Using felt tip pen, place an index mark across cone #0006, pitch arm plate #0011, and hub plate #0022. This mark will be used to align the parts during re-assembly.
 2. Remove the drain plug and drain out any fluid.
 3. Using a bench vise with soft jaws, clamp spindle forks in vise.
 4. Remove twelve #0367 bolts, #0470 nuts, and #0473 washers. See Fig. 1
NOTE: Be careful not to let the pitch arm plate cock to one side, as it could damage the seal.
 5. With a rosebud tip on an acetylene torch, slowly heat the cone. Rotate the cone as you heat to get even heat distribution. Pull on the cone as you heat until the cone slips off.
 6. Check to insure that one of the tabs on the locking ring is bent up into the slot in the gland nut. See Fig. 1.
 7. If the tab is not bent into place, then bend one tab into the slot in the gland nut. If the slot in the gland nut doesn't line up with one of the tabs on the locking ring, tighten the nut until the slot does line up.
 8. Clean any Loctite residue from the outer bearing surfaces and from the inside of the cone.
 9. Insure that the O-ring #0623 is seated properly. See Fig 2.
 10. Align the index mark on the pitch arm plate #0011 and the hub plate #0022. Insert three bolts #0367 through both plates to hold alignment.
 11. Heat the cone in an oven to 160 deg. Fahrenheit.
 12. As soon as you remove the cone from the oven, apply a light coat of #7331 Loctite to the inside of the cone.
 13. Slide the cone over the bearings making sure to align the index marks. Using the three bolts you installed earlier and three #0473 washers, and three #0470 nuts, snug the cone down.
 14. Install the remainder of the nuts, bolts, and washers. Torque the nuts to 90 in. Lb.
- Now you must pressure check the assembly for leaks. Use the following procedure.
1. Purchase a 1/2 20 drain plug at the local hardware or auto parts store.
 2. Drill a hole through the center of the plug, and tap the hole for 1/8 in. national pipe thread (NPT).
 3. Purchase an 1/8 in. NPT. Schrader fitting from the local hardware or auto parts store. (A Schrader fitting looks like a valve stem, and is used to pressure check pipes)

4. Install Schrader fitting into drain plug.
5. Install fitting assembly into the fill plug hole in the cone.
6. Pressurize the cone to 12 psi. Using a soapy water solution, check for leaks around the seal #0588, and between the pitch arm plate #0011, and the hub plate #0022.

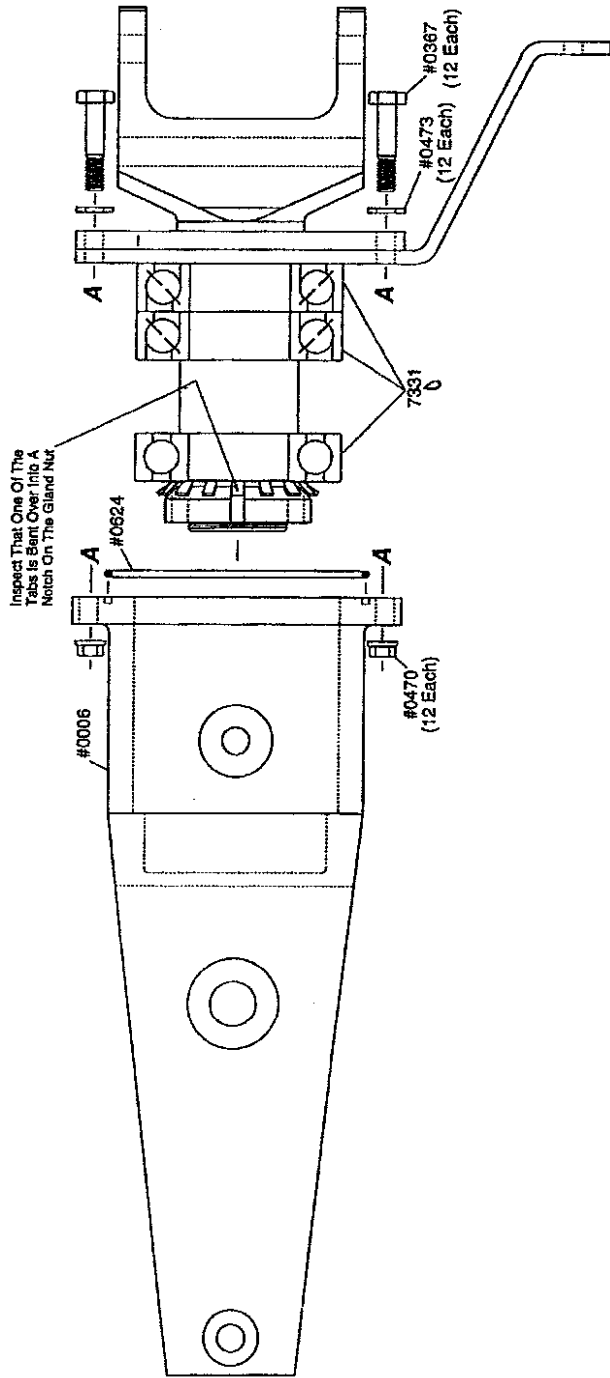


Fig 1 - Disassembled View For A.D Compliance

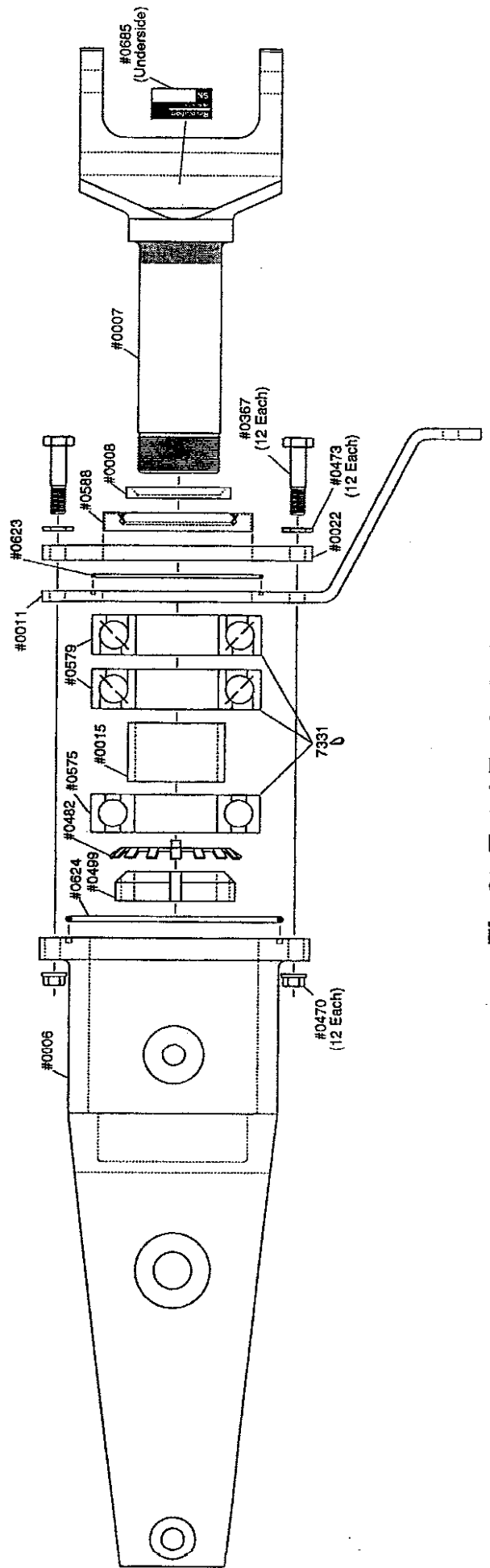


Fig 2 - Total Exploded View