



SCHWEIZER SERVICE NOTICE

NOTICE NO. N-164

DATE December 7, 1979

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MANDATORY

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SUBJECT: INSPECTION OF PN 269A5573-11 H-FRAME ASSEMBLY

MODELS AFFECTED: All 269C Series helicopters Serial Numbers 0590 thru 0764, 0766 thru 0802, 0804 thru 0808, 0810, 0812 thru 0816, 0818, 0820 and 0821, 0823 thru 0828, 0830 and 0831, 0833 thru 0835, and 083 equipped with a PN 269A5573-11 H-frame assembly. All other 26 helicopters equipped with this assembly.

Spare service units PN 269A5573-11.

TIME OF COMPLIANCE: Part I 269C helicopters shall be inspected within 50 hours of service.

Part II Spare service units of PN 269A5573-11 in stock shall be inspected prior to installation.

Part III Continuing 300 hour inspection of bearings.

PREFACE: Field reports indicate that discrepancies may have occurred which could have an adverse effect on the bearing life of the H-frame. The information given in this Notice lists instructions for a one-time inspection of the H-frame assembly and measuring the bores.

Reference

269 Series — Basic HMI, Issued 1 April 1973; Revision No. 5, 1 February 1978

TOOLS AND EQUIPMENT

Clamping or magnetic base dial indicator .0005 inch increments

PART I — INITIAL (ONE-TIME) INSPECTION OF 269 SERIES HELICOPTERS

- a. Remove V-belt drive cover hat and cover shell.
- b. Inspect H-frame assembly for cap-to-frame match marking. Record number.

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- c. Remove the H-frame assembly from the helicopter. Remove all H-frame end caps, bearings, and pulleys (except idler) per HMI.
- d. Clean parts in preparation for measurements, ensuring that there is no zinc chromate or foreign matter in any bore of frame or cap.
- e. Hold H-frame horizontally in a padded vise as shown in Figure 1. Place PN 269A5050-56 upper bearing on spline PN 269A5430 and install in H-frame bearing bore. Ensure that bearing is on shoulder of H-frame bore, as shown in Figure 1.
- f. Torque both bolts alternately in steps to 20, then 40 and finally 60 inch pounds.
- g. Attach dial indicator to spline (PN 269A5430) as shown. Position dial indicator pointer to read H-frame bearing bore runout.
- h. When spline is rotated, total indicator reading is not to exceed 0.001 inch. Record reading.
- i. Repeat steps d. thru h. for the opposite side.
- j. If either of the upper bearing bores fail the inspection, replace the frame assembly. Notify Hughes Service Department.
- k. If the upper bearing bores pass the inspection, hold the H-frame horizontally in the vise as shown in Figure 2 so the lower pulley is over the workbench and the pulley assembly can be rotated.
- l. Install the pulley assembly on the H-frame so the pulley is outside of the H-frame, as shown. Ensure that the bearing is on the shoulder of the bore as shown in Figure 2 inset.
- m. Torque both bolts alternately in steps to 20, then 40 and finally 60 inch pounds.
- n. Attach dial indicator to the pulley shaft and position dial indicator to read H-frame bearing bore runout.
- o. When pulley assembly is rotated, total indicator reading is not to exceed 0.001 inch. Record reading.

- p. Repeat steps k thru o for opposite side.
- q. If lower cap-to-frame bore did not meet the criteria, reverse the caps and repeat the inspection for both caps.
- r. If cap-to-frame bore did not meet criteria of this Service Notice, continue to use the present frame, discarding bearings and caps. Replace both caps with two lower bearing straps (PN 269A5463). Also required for this installation are 269A5517 bracket to replace 269A5517-1 bracket, 269A5519 bracket to replace 269A5519-7 bracket, four AN4-11A bolts, eight AN960PD416 washers, and four MS20365-428 nuts. Install new components per HMI. Reidentify frame assembly as 269A5573-7 and record new part number in helicopter Log Book.

NOTE

When installing 269A5463 lower bearing straps, torque one side of strap to 5 inch pounds. Install shim washers on opposite side so that a gap of 0.001 inch to 0.010 inch exists between the strap and the H-frame assembly. Remove the strap and divide the shim washers as equally as possible to shim strap on both sides. For shims use HS306-327, HS306-327H or HS306-327L washer; if additional shims are needed, make shims per Figure 3. Install washers with zinc chromate primer. Torque bolts per HMI.

s. If the frame assembly end caps meet the inspection criteria but the match marks are not the same for the caps and frame, grind the match marks off the caps. Steel stamp the end of the caps with the same number marked on the frame.

t. With bearings still on the pulley assembly, remove both grease seals and clean each bearing per the HMI, page 2-19, paragraph 2-28A. Inspect each bearing for damage of individual components (cracked cage, rubbing shoulder on either inner or outer race, spalled or cracked races, damaged seals). Lubricate bearing with light oil. While rotating outer race by hand, check for looseness, roughness or binding. Replace bearing as required. If the bearing and seals pass inspection, regrease and reinstall the seals per the HMI. (Mobil Grease 28 is preferred.)

u. Spray or brush a very light coat of zinc chromate primer onto both the upper and lower H-frame bearing bores before assembly.

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CAUTION

Thick or excessive primer could reduce the bearing life.
Thin primer for brushing if required.

v. Reassemble and install removed components per basic HMI. Record compliance with Part I of the Service Notice in Compliance Record section of helicopter Log Book.

w. Identify compliance with this Service Notice by painting a green stripe 0.25 inch by 3 inches long on the forward leg of the H-frame so it is visible from the left side of the ship.

x. H-frame assemblies inspected and reworked as required, at the factory, are identified by red paint dots applied 16 places on the inner and outer faces of the caps and frames. These assemblies are not subject to the service notice.

NOTE

Complete compliance with the 300 hour inspection per the HMI is stressed for bearing life longevity and safety.

PART II - INITIAL (ONE-TIME) INSPECTION OF SPARE
PART H-FRAME (PN 269A5573-11)

- a. Inspect frame assembly for cap-to-frame match markings.
- b. Perform operations described in steps d. thru s. and w. of Part I.
- c. If the frame assembly meets the above criteria, tag it as having been inspected and return it to parts storage.
- d. If the H-frame does not meet the above criteria, reidentify it as a PN 269A5573-7 and return it to spares storage.

PART III - 300 HOUR INSPECTION, CLEANING AND REGREASING

- a. Remove upper H-frame bearings and lower pulley assembly from the helicopter per the HMI.
- b. Remove both grease seals and clean each bearing per section 2-28A.

NOTE

Lower pulley bearings need not be removed from lower pulley assembly to clean. Remove inboard seals from bearings and leave seals on the pulley assembly. Immerse pulley assembly in oil-based cleaning fluid while cleaning.

CAUTION

Do not use a carburetor type cleaner since it will damage the seals and could cause bearing corrosion.

c. Inspect each bearing for damage of individual components (cracked cage, cage rubbing shoulder on either inner or outer race, spalled or cracked races, damaged seals). Lubricate bearing with light oil. While rotating outer race by hand, check for looseness, roughness or binding. Replace bearing as required.

d. If bearing passes inspection, pack bearing cavity 40 percent full of grease (Item 7, Table 2-2). (Mobil Grease 28 is preferred.) Reinstall grease seals per the HMI.

NOTE

Pulley bearings are filled approximately 40 percent with 7.2 grams of grease in each lower bearing and with 3.7 grams in each upper bearing.

CAUTION

Use no more lubricant than specified; damage to bearing can result from excessive quantity of lubricant.

e. Spray or brush a very light coat of zinc chromate primer onto both the upper and lower H-frame bearing bores before assembly.

CAUTION

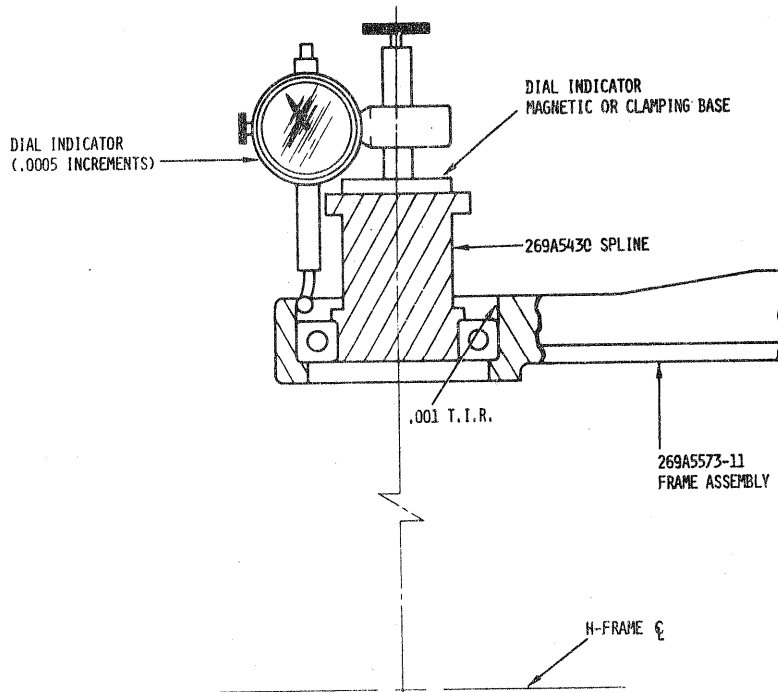
Thick or excessive primer could reduce the bearing life. Thin primer for brushing if required.

- f. Reassemble and install removed components per basic HMI.
- g. Record compliance with this notice in Compliance Record section of helicopter Log Book.

WEIGHT AND BALANCE DATA

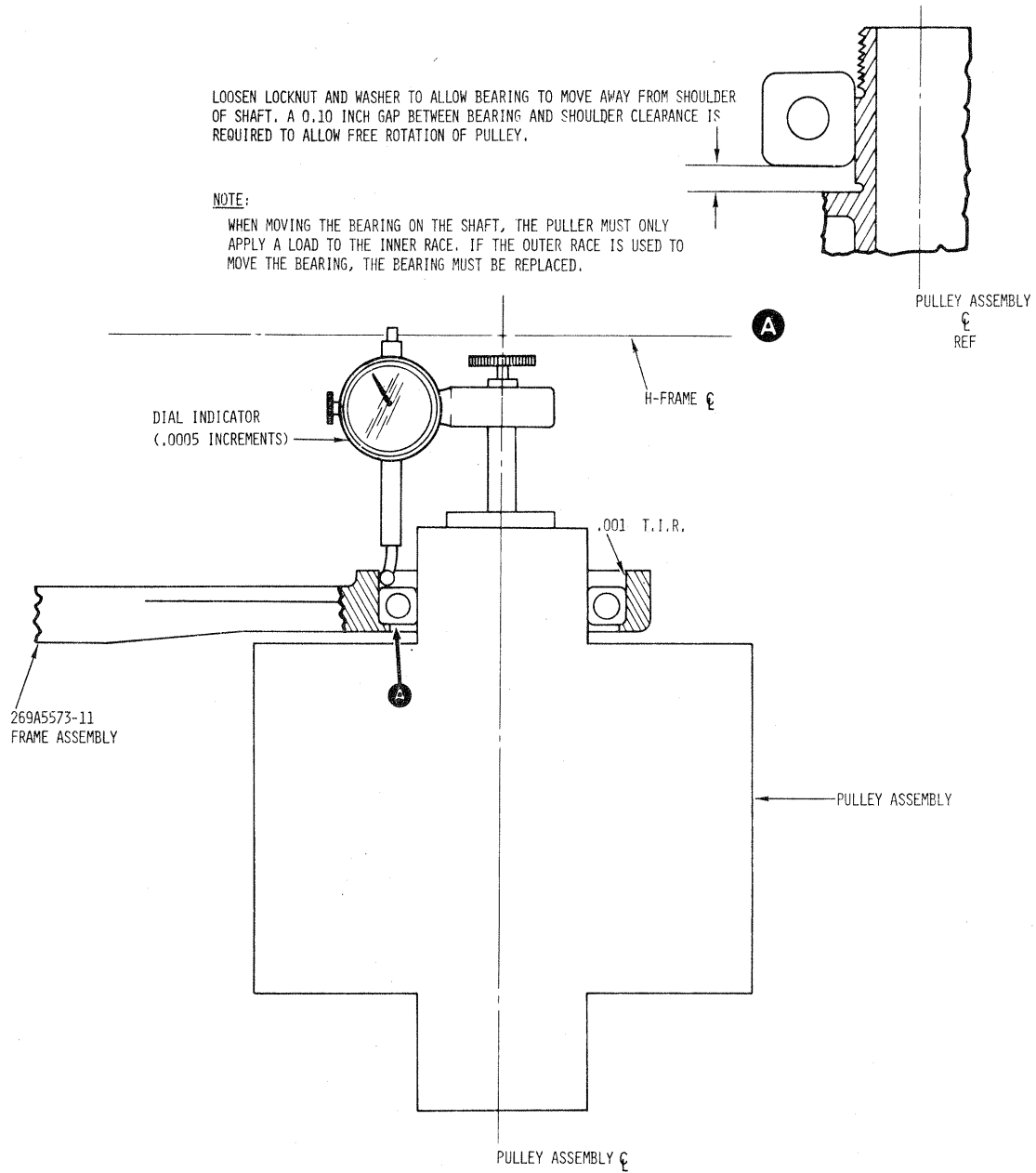
Weight and balance not affected.

FAA APPROVED.



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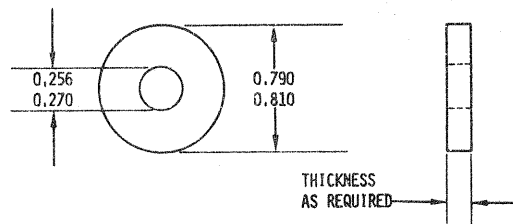
Figure 1. Upper Bore Inspection Set Up



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Figure 2. Lower Bore Inspection Set Up

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MATERIAL:
AL ALLOY 5052 OR 6061 SHEET STOCK
OR LAMINATED AL ALLOY 5052 SHIM STOCK.

NOTE:
ALL DIMENSIONS IN INCHES.

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Figure 3. Additional Shims