



# SCHWEIZER SERVICE INFORMATION NOTICE

NOTICE NO N-159.1\*  
DATE 18 December 1979  
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Service Information  
Notice No. N-159. Dated  
15 August 1979

**SUBJECT:** FIELD INSTALLATION OF PN 269A5160 ANTI-FRETTING LINER FOR  
PN 269A5179-3 DRIVE SHAFT AND COUPLING ASSEMBLY AND  
PN 269A5194 RING GEAR CARRIER ASSEMBLY

**MODELS AFFECTED:** All Model 269 Series Helicopters equipped with PN 269A5175-  
or 269A5175-9 Main Rotor Gear Drive Assembly

All Model 269 Series Helicopters equipped with PN 269A5175  
Basic, 269A5175-3 or 269A5175-5 Main Rotor Gear Drive  
Assembly having letter "L" following Serial Number on  
nameplate.\*

\*Serial Number suffix letter "L" denotes PN 269A5179-3 Drive  
Shaft and Coupling Assembly installed.

**TIME OF COMPLIANCE:** At owners and operators discretion

**PREFACE:** The information given in this Service Information lists a procedure for  
field replacement of the subject PN 269A5160 anti-fretting liner in event  
the liner is displaced or removed when removing the PN 269A5051-9  
lower bearing cup during disassembly/overhaul of main gear drive  
assembly. Instructions are also provided for a run-out check of the  
installed liner to ensure that the lower bearing cup is properly seated  
at reinstallation.

Specifications are provided for field fabrication of a special locating tool  
to align the anti-fretting liner during bonding to the lower bearing cup seat.  
It is to be noted that the replacement liner, which is prebonded and  
packaged at HH, has a shelf life of six months if stored at 0° F or lower  
and 30 days when removed from 0° F storage.

## Reference

269 Series - Basic HMI, Issued 1 April 1973; Revision No. 5, 1 February 1978  
269 Series - HMI Appendix B, Issued 1 July 1973; Revision No. 5, 1 August 1976  
269 Series - HMI Appendix C, Issued 15 March 1976

( ) Denotes portion of text added or revised

FARTS LIST

| <u>Nomenclature</u>  | <u>Part No.</u> | <u>Qty</u> | <u>Mfg</u> |
|----------------------|-----------------|------------|------------|
| Liner, anti-fretting | 80-269A5160     | 1          | HH         |

NOTE

Liner has bonding agent applied at HH and should be kept refrigerated at 0° F or lower until installed. Shelf life of bonding agent if not refrigerated is 30 days. Usable life can be extended by returning package to 0° F or lower storage before 30 day period expires.

MATERIALS

|                                     |                         |            |
|-------------------------------------|-------------------------|------------|
| Solvent                             | M-114                   | Commercial |
| Solvent                             | 1, 1, 1 Trichloroethane | Commercial |
| Iridite                             |                         | Commercial |
| Abrasive paper or pads              | 320-400 grit            | Commercial |
| Aluminum plate<br>(7.0 x 7.0 x 2.0) |                         | Commercial |

TOOLS AND EQUIPMENT

Tool, locating (see Figure 1 for specifications) Field-Fabricate

Oven, or equivalent

Dial indicator

Drill motor, portable

Drill bit - No. P (0.3230 in. dia)

|           |   |   |            |
|-----------|---|---|------------|
| Bolt      | NAS1305-82<br>(or equivalent 5/16 dia<br>bolt, 5-1/2 in. length)  | 1 | Commercial |
| Washer    | NAS1070-516<br>(or equivalent 5/16 ID<br>washer with oversize OD) | 1 | Commercial |
| Nut, Wing | MS35425-72<br>(or equivalent 5/16 threaded<br>nut)                | 1 | Commercial |

INSTALLATION - PN 269A5160 ANTI-FRETTING LINER

NOTE

The following is to be accomplished for installation of a new PN 269A5160 anti-fretting liner, if the existing liner is inadvertently displaced or removed when removing lower bearing cup from ring gear carrier or shaft and coupling assembly during disassembly/overhaul of the main gear drive assembly.

The replacement liner/adhesive package must be at room temperature for approximately 30 minutes prior to opening the sealed bag.

a. As applicable, remove displaced liner from lower bearing cup seat of PN 269A519-3 drive shaft and coupling assembly or PN 269A519 ring gear carrier assembly. Discard liner.

b. Install new PN269A5160 liner to lower bearing cup seat as follows:

1. Degrease the drive shaft and coupling assembly or ring gear carrier assembly; or wipe lower bearing cup seat clean with M-114 solvent using clean wiping towels at least four times.
2. Lightly abrade area of lower bearing cup seat with 320-400 grit abrasive; wipe clean with trichloroethane solvent using clean wiping towels.

NOTE

Adhesive primer (EA9210, Hysol Div Dexter Corp) must be applied to lower bearing cup seat, if liner is not bonded immediately after abrading cup seat.

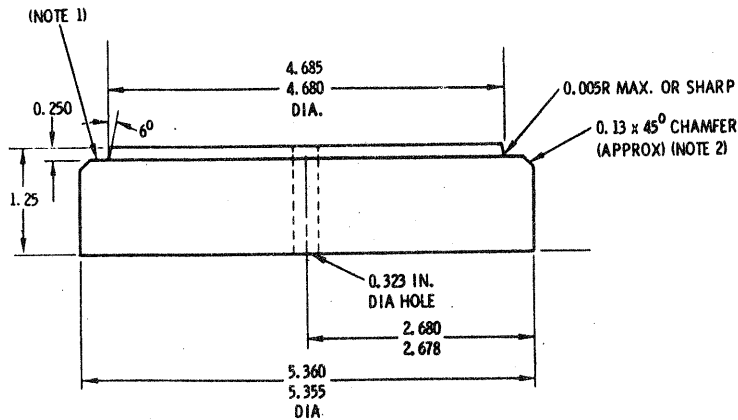
3. Remove polyethylene film from adhesive and install liner with adhesive side down.
4. Position locating tool (see Figure 2) on liner and secure tool as follows: Insert 5/16 bolt through locating tool and through coupling or carrier assembly; install washer and wing nut on bolt. Tighten wing nut finger tight only.
5. Place carrier in oven or equivalent and heat to 250°F to 275°F for 1.5 hours. Cool to room temperature before removal of locating tool.
6. Using dial indicator, check that surface of installed liner runs true within 0.002 inch TIR to gear mounting surface. See HMI Appendix C, Part 1, Section 5, page 5-4 and Figure 5-3, reversing dial indicator setup shown. If liner passes this check, go to step 8.
7. If liner runout is over 0.002 inch TIR, pull liner off and install another one using steps 2 through 6.
8. Install PN 269A5051-9 lower bearing cup per HMI Appendix C: heat shaft to 275°F for bearing installation.

c. Reassemble and install removed components per HMI Appendix C Overhaul Manual and Basic HMI.

WEIGHT AND BALANCE DATA

Weight and balance not affected

FAA APPROVED



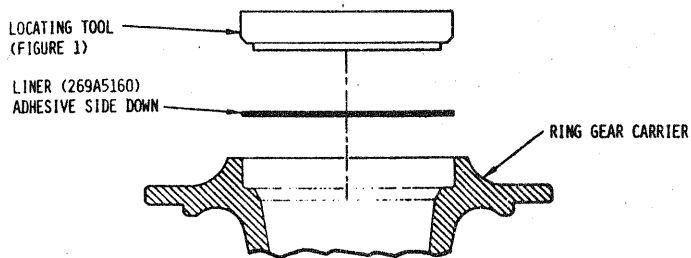
MAT'L: 6061  
 2024 OR  
 7075  
 AL. ALY

NOTES:

1. THIS SURFACE IS TO BE FLAT WITHIN 0.001 INCH TIR. APPLY BOND RELEASE AGENT TO THIS SURFACE PRIOR TO BONDING LINER.
2. AFTER CHAMFERING, CHECK TO CLEAR WITH 269A5179 SHAFT.

88-315A

Figure 1. Field fabrication of locating tool,  
 PN 269A5160 liner installation



88-358

Figure 2. Installation of PN269A5160 liner into  
 ring gear main rotor drive carrier assembly  
 PN 269A5194 or PN 269A5173-3

