



SCHWEIZER SERVICE INFORMATION NOTICE

SUBJECT: INSTALLATION AND REPLACEMENT OF PROTECTIVE SLEEVE (SPEEDI-SLEEVE PN 084956) ON TAIL ROTOR TRANSMISSION OUTPUT GEARSHAFT.

MODELS AFFECTED: All 269 Series Helicopters equipped with a 369A5400 Series Tail Rotor Transmission.

TIME OF COMPLIANCE: At owners/operators discretion.

REFERENCE: 269 Series - Basic HMI, Reissued 15 March 1982.
269 Series - Appendix C, Part III Issued 15 March 1976,
Reissued 15 September 1981.

PREFACE: Information given in this Service Information Notice provides instructions for installing and replacing a protective sleeve (PN 084956 included in 99091 speedi-sleeve kit) on the output gearshaft of 369A5400 series tail rotor transmissions. The protective sleeve will prevent gearshaft wear caused by the gearshaft rubbing against the output gearshaft cover oil seal lip. The information provided in this Service Information Notice is to be considered as part of the HMI and will be incorporated at the next scheduled revision.

PARTS LIST

<u>Nomenclature</u>	<u>SAC Part Number</u>	<u>Qty.</u>	<u>Source</u>
99091 Speedi-Sleeve Kit	M 21803944	1	SAC

MATERIALS

Solvent, dry cleaning	PD-680		Commercial
Plastic Steel, Devcon A			Devcon Corp. Danvers, MA 01923
Petroleum jelly	VV-P-236		Commercial
Lockwire, CRES Safety Wire	MS20995C		Commercial

TOOLS AND EQUIPMENT

Heat gun or blow dryer

Commercial

PROCEDURE

- a. Remove tail rotor and pitch control assembly (Basic HMI, Section 9).
- b. Drain lubricant from tail rotor transmission (Basic HMI, Section 2).
- c. Remove safety wire, three bolts and washers attaching output gearshaft cover to housing; remove cover and clamp-up shim. Retain all hardware except safety wire for use at reassembly.

NOTE

The clamp-up shim(s) removed in previous step have the same shape as the pattern shim(s), which will be removed in next step. These two sets of shims have different thicknesses and must be reinstalled at the position from which removed. To aid in ease of reassembly, identify shim(s) removed in previous step as "clamp-up shim(s)" and keep them separate from pattern shims, removed in next step.

- d. Using heat gun or blow dryer, heat output housing bore to $275 \pm 25^{\circ}\text{F}$ ($135 \pm 12^{\circ}\text{C}$); remove gearshaft and pattern shim. Retain and identify pattern shim(s).
- e. Replace an installed sleeve, if damaged or grooved, as follows and as shown in Figure 1.

CAUTION

Use care not to cut into or damage gearshaft when removing damaged sleeve from gearshaft. Do not allow filings or other contaminants to enter shaft bearings.

- (1) Use file or other suitable instrument to cut through edge of sleeve; carefully pry cut edge away from shaft.
- (2) Grasp raised edge with pliers and peel damaged sleeve off shaft.
- (3) Remove any Devcon residue from shaft using dry cleaning solvent (PD-680); dry shaft with clean, lint free cloth.

- f. Install Speedi-Sleeve as follows: (See Figure 1.)

CAUTION

Do not allow any contamination to enter shaft bearings. Dust and other contaminants can damage or shorten the service life of the bearings.

- (1) Wipe away dust particles and foreign material from gearshaft using a clean, lint free cloth, dampened by solvent.
 - (2) Inspect shaft for wear. If shaft has been grooved from rubbing against lip of output gearshaft cover seal, and depth of groove exceeds 0.005 inch, shaft must be replaced. (Refer to HMI Appendix C, Part III.)
 - (3) If shaft has been grooved by seal lip and groove does not exceed 0.005 inch depth, fill groove with Devcon A.
 - (4) Apply light coat of plastic steel (Devcon A) to shaft area to be covered by sleeve.
 - (5) Set gearshaft on end, roller bearings down, on hard clean, level surface. While Devcon A is wet, put sleeve on shaft, flange down, and press or tap in place using installation tool bottomed on flange of sleeve. The unflanged end of sleeve must be even with outboard end of 0.9100 - 0.9108-inch diameter seal journal. Tap end of tool with hammer or mallet as necessary to correctly position sleeve on shaft. Wipe any excess Devcon A from shaft using a clean, lint free cloth.
 - (6) Clip flange of sleeve to notch line and peel from shaft.
- g. Reassemble tail rotor transmission as follows:
- (1) Apply heavy coating of petroleum jelly to roller bearings on end of gearshaft.

NOTE

If pattern shim(s) removed at disassembly is not reused, complete reassembly per HMI Appendix C, Part III.

CAUTION

Ensure that the rollers on the cylindrical roller bearing are compressed before installing output shaft in next step. Rollers which are not compressed will contact the outer race of the bearing during installation. This interference could force the roller(s) out of the bearing.

- (2) Install pattern shim(s) removed at disassembly, and gearshaft in housing. Heat output housing bore using heat gun or blow dryer until gearshaft bearing retainer assembly fits easily into housing.

- (3) Install clamp-up shim(s) removed at disassembly and output gear-shaft cover assembly (HMI Appendix C, Part III, Section 5).
- h. Inspect reassembled tail rotor transmission in accordance with HMI Appendix C, Part III, Table 5-1.
- i. Install tail rotor and pitch control assembly. (Basic HMI, Section 8).
- j. Fill tail rotor transmission with approved lubricant (Basic HMI, Section 2).
- k. Record compliance with this Service Information Notice in Compliance Section of Helicopter Log Book.

WEIGHT AND BALANCE DATA

Weight and balance not affected.

The procedures and information provided by this Service Information Notice has been shown to comply with applicable Federal Aviation Regulations and is FAA approved.

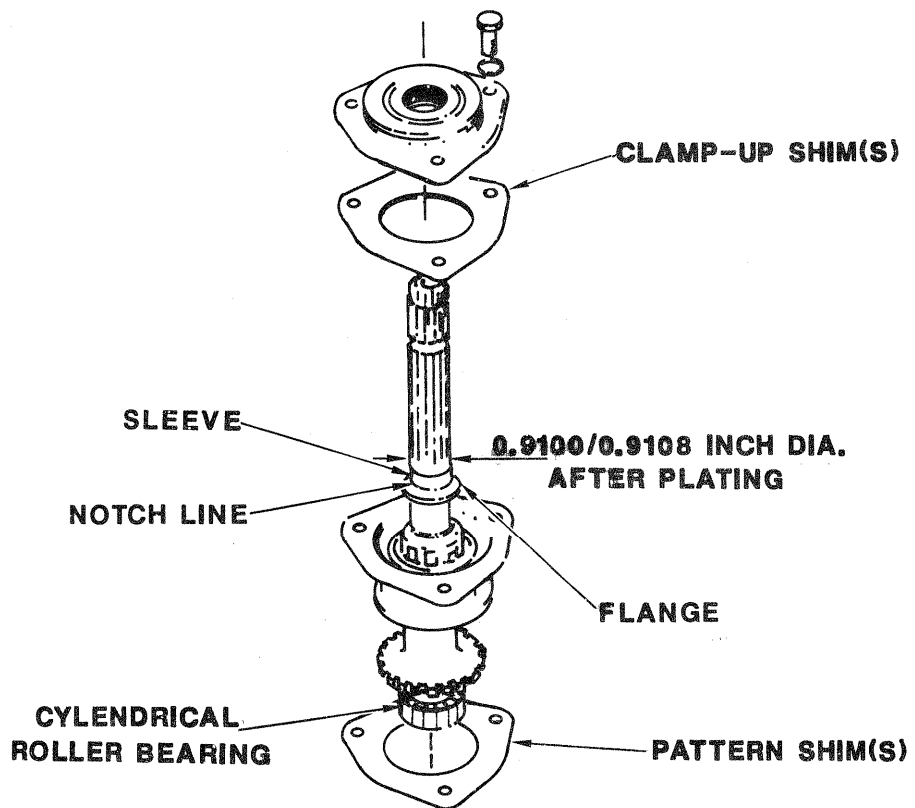


Figure 1. Speedi-Sleeve (PN 084956) Installation/Replacement