



SCHWEIZER SERVICE NOTICE

NOTICE NO. N-183.3*
DATE: 15 Sept 1989
Page 1 of 8

MANDATORY

*Supersedes Service Information Notice No. N-183.2 Dated 28 March 1988

MANDATORY

MANDATORY

SUBJECT:

- PILOT PREFLIGHT CHECK OF TAIL ROTOR BLADE LEADING EDGE ABRASION STRIP.
- DETAILED INSPECTION OF TAIL ROTOR BLADE LEADING EDGE ABRASION STRIP BONDING.
- INSTALLATION OF RIVETS ON TAIL ROTOR BLADE LEADING EDGE ABRASION STRIP.

MODELS AFFECTED:

- PART I: ● All 269 Series Helicopters equipped with low tip speed tail rotor assemblies incorporating 269A6035 series tail rotor blade assemblies.
- PART II: ● All 269 Series Helicopters equipped with low tip speed tail rotor assemblies incorporating 269A6035 series tail rotor blade assemblies.
- PART III: ● All 269 Series Helicopters equipped with low tip speed tail rotor assemblies incorporating 269A6035 series tail rotor blade assemblies, with a bond date prior to 15 Sept 1989.
- All low tip speed tail rotor blade assemblies in spares inventory, with a bond date prior to 15 Sept 1989.

(■) Denotes a change

TIME OF COMPLIANCE:

- PART I: ● Shall be accomplished at each pilot's preflight inspection.
- PART II: ● Shall be accomplished at every 100 inspection, or as required by Part I.
- PART III: ● Shall be accomplished on the following tail rotor blades before further flight:

<u>Blade S/N</u>	<u>Blade S/N</u>	<u>Blade S/N</u>	<u>Blade S/N</u>
R0056	S550	S607	S660
R0086	S553	S608	THRU
R1059	S556	S611	S662
R1066	THRU	THRU	S664
R1560	S563	S620	THRU
R1922	S565	S623	S666
R3296	S566	THRU	S668
R3314	S568	S626	S670
R3330	THRU	S631	THRU
R3349	S571	THRU	S672
S21	S573	S633	S675
S431	S576	S637	THRU
S513	THRU	S638	S677
S515	S582	S640	S679
S518	S584	THRU	THRU
S521	S586	S644	S682
S524	S588	S646	S684
S534	THRU	S648	THRU
S538	S594	THRU	S688
S539	S596	S650	S691
S544	S598	S653	THRU
S546	THRU	S654	S694
S547	S603	S657	
S549	S605		

- Shall be accomplished on all other installed affected blades within the next 50 hours of helicopter operation, or next thirty days, whichever comes first.
- Shall be accomplished on affected blades in spares inventory (or tail rotor assemblies equipped with affected blades) within six months of issue date of this notice or prior to placement into service, whichever comes first.

REFERENCE:

- 269 Series-Basic HMI, Reissued 15 March 1982
- 269 Series-HMI Appendix B, Reissued 15 August 1982
- 269 Series-HMI Appendix C, Part VII, Issued 15 March 1976, Revised 15 December 1987
- 269 Series-Pilot's Flight Manual, Reissued 21 September 1988
- FAA AD NOTE 87-22-07, or subsequent revision
- FAA AD NOTE (Not released at issue date.)
- Current Cherrylock Bulbed Rivet Catalog
- 269 Series Installation Instructions CKP-C-40 for SA-269K-056 KIT

PREFACE:

Reports indicate that the affected tail rotor blades are subject to possible separation of abrasion strip from blade skin.

Part I of this notice provides preflight inspection of the leading edge abrasion strip to check for evidence of possible separation between blade skin and abrasion strip.

Part II of this notice provides for tap test and dye penetrant inspection to check abrasion strip bond. Tap test and, if necessary, dye penetrant inspections are to be performed every 100 hours or whenever a poor bond is suspected while performing Part I of this notice. Tail rotor blades which do not meet the inspection requirements specified in Part II are not field repairable and must be removed from service. (Contact Schweizer Aircraft Corp. Technical Support Department at (607) 739-3821 ext. 313 for disposition of blades which do not meet the inspection requirements of Part II of this notice.)

Part III of this notice provides instructions for mandatory installation of rivets in abrasion strip. This will prevent total separation of abrasion strip from tail rotor blade in the event of epoxy bond failure. Modified blades must be installed in sets of two.

Failure to comply with the requirements of this notice may result in loss of aircraft control and subsequent injury or loss of life.

PART I- PILOT'S PREFLIGHT CHECK

PROCEDURE:

- a. Visually check each tail rotor blade abrasion strip for any evidence of paint cracking or chipping along the abrasion strip/airfoil bond line.

- b. If paint cracking or chipping is observed, use a 10X magnifying glass to examine the abrasion strip/airfoil bond line and blade tip for any bond separation between epoxy adhesive and abrasion strip. (If bond separation is confirmed, remove blade from service and contact SAC Technical Support Department for blade disposition.)

NOTE

If poor bond is suspected, but not confirmed, inspect blade in accordance with Part II of this notice, prior to further operation.

PART II- TAP TEST AND DYE PENETERANT INSPECTION

PROCEDURE:

- a. Perform tail rotor blade abrasion strip 100 hour inspection in accordance with HMI, Appendix C, Part VII, Table 3-2; as amended by Temporary Revision R-27.
- b. Remove blade from service if bond separation is confirmed.
- c. Record compliance with Part II of this notice in Compliance Section of Helicopter Log Book.

PART III- INSTALLATION OF RIVETS IN ABRASION STRIP

MATERIALS

<u>Nomenclature</u>	<u>Source</u>
Adhesive, epoxy (EA9314/EA9309-preferred)	Commercial/Hysol Division
OR	
Adhesive, epoxy (Room temperature cure)	Commercial
*Rivets (CR2545-4-2)	
(4 req. per blade -no alternates)	Commercial/SAC

*Included in SA-269K-056 KIT.

TOOLS AND EQUIPMENT

<u>Nomenclature</u>	<u>Source</u>
*Drill bit, No. 27 Cobalt	Commercial
Drill bits (number set)	Commercial
Drill, portable hand	Commercial
Countersink (100°)	Commercial
Drill stop (Kwik-Lok)	Commercial/Advanced Air Tool Co.
**Riveter (bulbed Cherrylock type)	Commercial/Cherry
**Unisink pulling head (preferred)	Commercial/Cherry
OR	
**Flat pulling head	Commercial/Cherry

*Included in SA-269K-056 Kit.
**Refer to current Cherrylock bulbed rivet catalog.

CAUTION

DO NOT ATTEMPT TO PERFORM THIS PROCEDURE WITH THE TAIL ROTOR BLADES ON THE HELICOPTER. FAILURE TO COMPLY WITH THIS CAUTION MAY RESULT IN DEFECTIVE RIVETS AND POSSIBLE BLADE DAMAGE.

PROCEDURE:

- a. Remove tail rotor blades in accordance with Basic HMI, Section 9, if not already accomplished.

WARNING

IT IS IMPORTANT TO LOCATE RIVET HOLES EXACTLY AS SPECIFIED IN THE FOLLOWING. FAILURE TO DO SO MAY AFFECT STRUCTURAL INTEGRITY.

- b. Perform tail rotor blade abrasion strip 100 hour inspection in accordance with HMI, Appendix C, Part VII, Table 3-2; as amended by Temporary Revision R-27.

CAUTION

IN STEP **c.** BELOW, OBSERVE THE FOLLOWING:

- IT IS IMPORTANT TO MAINTAIN ADEQUATE EDGE DISTANCE WHEN DRILLING THE TWO OUT-BOARD RIVET HOLES. LACK OF EDGE DISTANCE WILL WEAKEN THE MATERIAL AND MAY CAUSE CRACKING WHEN THE RIVETS ARE INSTALLED.
 - USE A DRILL STOP TO PREVENT DRILLING INTO OPPOSITE SIDE.
 - TO MAINTAIN PROPER HOLE SIZE AND SATISFACTORY RIVET INSTALLATION, IT IS IMPORTANT TO HAVE BLADE RESTING FLAT ON WORK SURFACE DURING DRILLING AND RIVETING OPERATIONS.
- c. Using a No. 27 Cobalt drill, locate and drill four rivet holes as shown on Figure 1.
- d. Hand deburr rivet holes using 100° countersink.
- e. Using epoxy adhesive, wet install four CR2545-4-2 rivets. (Allow adequate drying time prior to performing step h. below.)

CAUTION

INSTALLED RIVET STEMS MAY BE DEBURRED USING A FILE, BUT DO NOT REMOVE MATERIAL FROM LOCKING COLLAR.

- f. Inspect the installed rivets in accordance with current Cherrylock bulbed rivet catalog. (If rivet installation is satisfactory, proceed to step h. below.)

CAUTION

DURING RIVET REMOVAL OBSERVE THE FOLLOWING:

- DO NOT DAMAGE OR ENLARGE RIVET HOLE.
- DO NOT DRIVE, OR FORCE RIVET STEM FROM HOLE.

- DO NOT REMOVE RIVETS COMMON TO TIP CAP. IF DEFECTIVE, CONSULT SAC FOR TIP RIB REPLACEMENT.

- g. Remove defective rivet(s) as follows:
- (1) Carefully grind off locking collar and upper portion of rivet stem.
 - (2) Using a drill stop, drill through rivet stem using care to prevent hole enlargement.
 - (3) Push remaining rivet stem (with sheer ring) from hole, and remove from spar.
 - (4) Inspect hole in spar. If defective, consult SAC.
 - (5) Return to step d. above and install new rivet(s).
- h. Coat the exposed rivet heads with epoxy adhesive. Ensure that stems and rivet head edges are sealed, but do NOT apply excessive adhesive. (See Detail A, Figure 1.) Also ensure that adhesive is smooth without voids.

CAUTION

COMPLETION OF RIVET INSTALLATION DOES NOT ELIMINATE THE NEED TO PERFORM PART I INSPECTIONS.

- i. Perform tail rotor blade abrasion strip 100 hour inspection in accordance with HMI, Appendix C, Part VII, Table 3-2; as amended by Temporary Revision R-27.
- j. Determine new blade static balance moment by performing step (1) or (2) below, as applicable.
- (1) Use special balancing fixture P/N 369A1710-80901 as specified in HMI Appendix C, Part VII, Section 6, Paragraph 6-6.
 - (2) If special balancing fixture is not available; add 70 gram-inches to the gram-inch moment number on the blade serial number data plate.
- k. Record new moment data (from step j.(1) or j.(2) above) in Helicopter Log Book.
- l. Carefully burnish the old gram-inch moment number on blade serial number data plate; only as necessary to make it unreadable. Coat burnished area with epoxy adhesive or paint.

- m. Install modified tail rotor blades in accordance with Basic HMI, Section 9, in sets of two.
- n. Balance tail rotor assembly in accordance with Basic HMI, Section 9.
- o. Record compliance with Part III of this notice in Compliance Section of Helicopter Log Book.

WEIGHT AND BALANCE DATA

Helicopter Weight and Balance not affected.

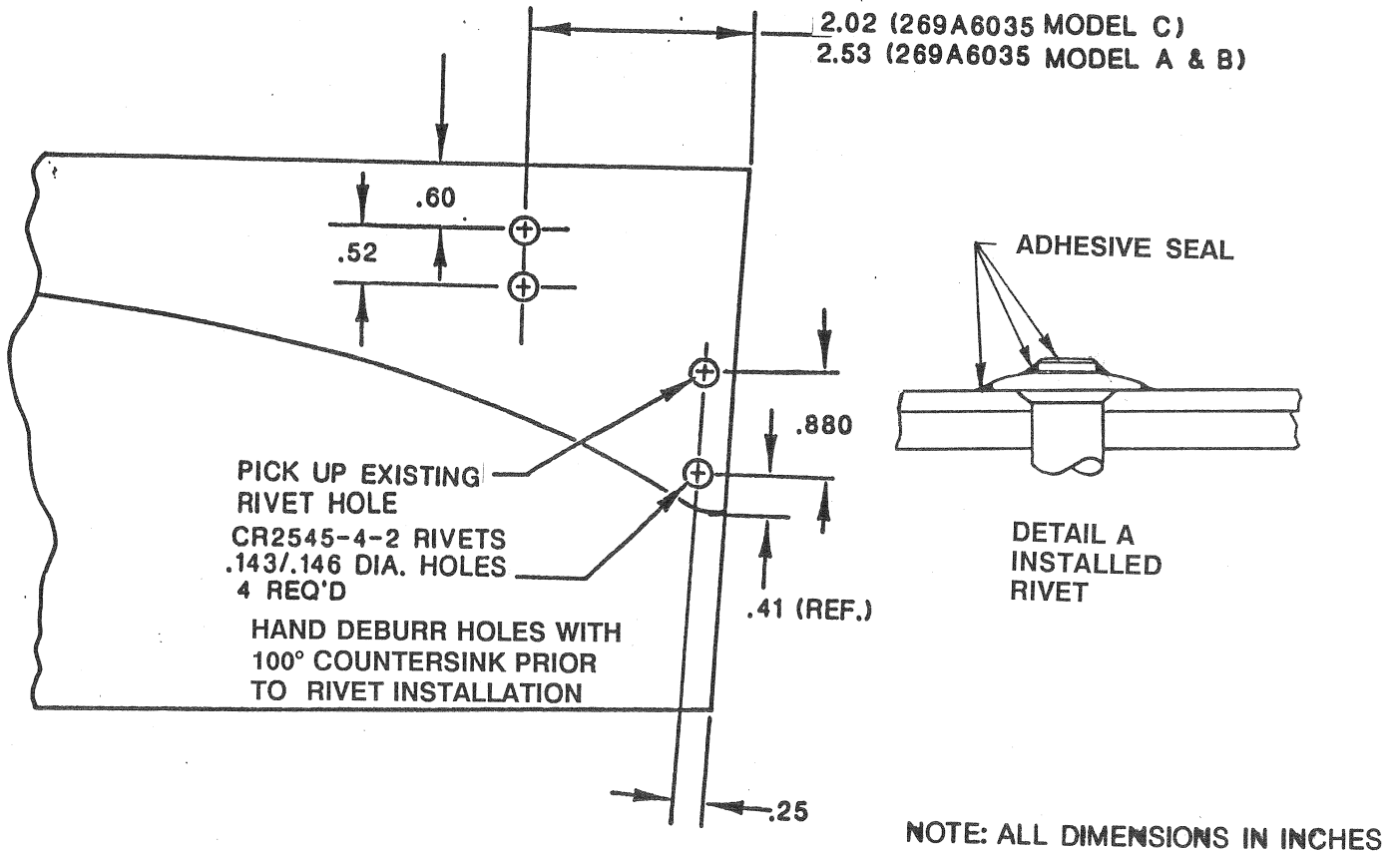


FIGURE 1. ABRASION STRIP RIVET HOLE LOCATION