



**HUGHES  
SERVICE INFORMATION  
NOTICE**

NOTICE NO. N-127

DATE 5 March 1975

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FAA APPROVED

**MANDATORY**

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**SUBJECT: REINFORCEMENT AND FIELD REPAIR - CANOPY SLAT  
PN 269A2297 or 269A2297-7**

**MODELS AFFECTED: All 269A, A-1, and B Helicopters  
269C Helicopters Serial No. 0001 through 0390**

**TIME OF COMPLIANCE: Shall be accomplished on a mandatory basis within the  
next 50 hours of helicopter operation.**

**PREFACE: This Service Information Notice provides a procedure for field reinforce-  
ment of the canopy slat.**

Hughes 269 series Owner's Manuals have required and continue to require inspection of the slat during preflight inspection. The inspection is included to bring to the operators attention any discrepancies which might occur in the slat installation.

Instances of cracking of canopy slats have been found. Compliance with this Service Notice will return to service a slat with repairable cracks adjacent to the screws securing the slat ends to the canopy frame.

Customer Service Department

## REFERENCES

FAA Airworthiness Directive (AD) 74-21-04,  
Subject: Slat Inspection - All 269 Series Helicopters.

269 Series Helicopters:

Owners Manual for Model 269A, TH-55A, 269A-1, 269B and 269C Helicopters,  
as applicable.

269 Basic Handbook of Maintenance Instructions, issued 1 April 1973,  
Revision No. 2, 1 January 1974

269 Basic Handbook of Maintenance Instructions, HMI Appendix A, Issued 1 April  
1973

## MATERIALS

Fabric Material, woven fiberglass	Commercial Type 181, Type VIII, MIL-C-9084 or equivalent
Tape, Fiberglass	Commercial Type 181, Type VIII, 1.75 inch wide x 0.010 inch thick (2.00 inch width optional) HMS16-1072
Adhesive-resin, epoxy	Narmco 3135
Catalyst, Polyamide	Narmco 7111 or equivalent
Solvent-Aliphatic Naptha	TT-N-95; Standard Oil No. 200
Sandpaper-220 grit, wet or dry	Commercial
NAS1096-2-(7, 9, 12) Screw	Commercial
AN960PD8L Washer	Commercial
MS21042-08 Nut	Commercial

## TOOLS AND EQUIPMENT

Gloves-lint free (cloth, nylon or rubber)	Commercial
Brush (alternate: squeegee)	Commercial
Spatula (alternate: roller)	Commercial
Drill-portable	Commercial
Bit-drill, 0.127/0.135 dia. (No. 30)	Commercial
Bit-drill, 0.0980 dia (No. 40)	Commercial
Tool-spotface - 0.292/0.342 dia (with 0.127/0.135 pilot)	Commercial
Cup-disposable, unwaxed	Commercial
Depressor-tongue, wood	Commercial
File, hand-fine	Commercial

## PROCEDURE

- a. Determine if any cracks or breaks exist at canopy slat.

### NOTE

If position lights are installed on canopy slats, disconnect electrical wiring before removing attaching hardware.

- b. Remove the slat according to Section 13, Basic HMI and determine repairability using criteria shown in Figure 1 and as follows:

(1) Only cracks and breaks at slat end attachment holes within limitations shown are repairable. Any other cracks or breaks on the slat are not repairable and require slat replacement.

(2) Broken off corners at ends of slat are repairable within limits shown; otherwise, slat replacement is required.

- c. Prepare slat, fiberglass cloth strips and epoxy adhesive for repairs or reinforcement as follows:

(1) Clean inner and outer faying surfaces of entire canopy slat with solvent.

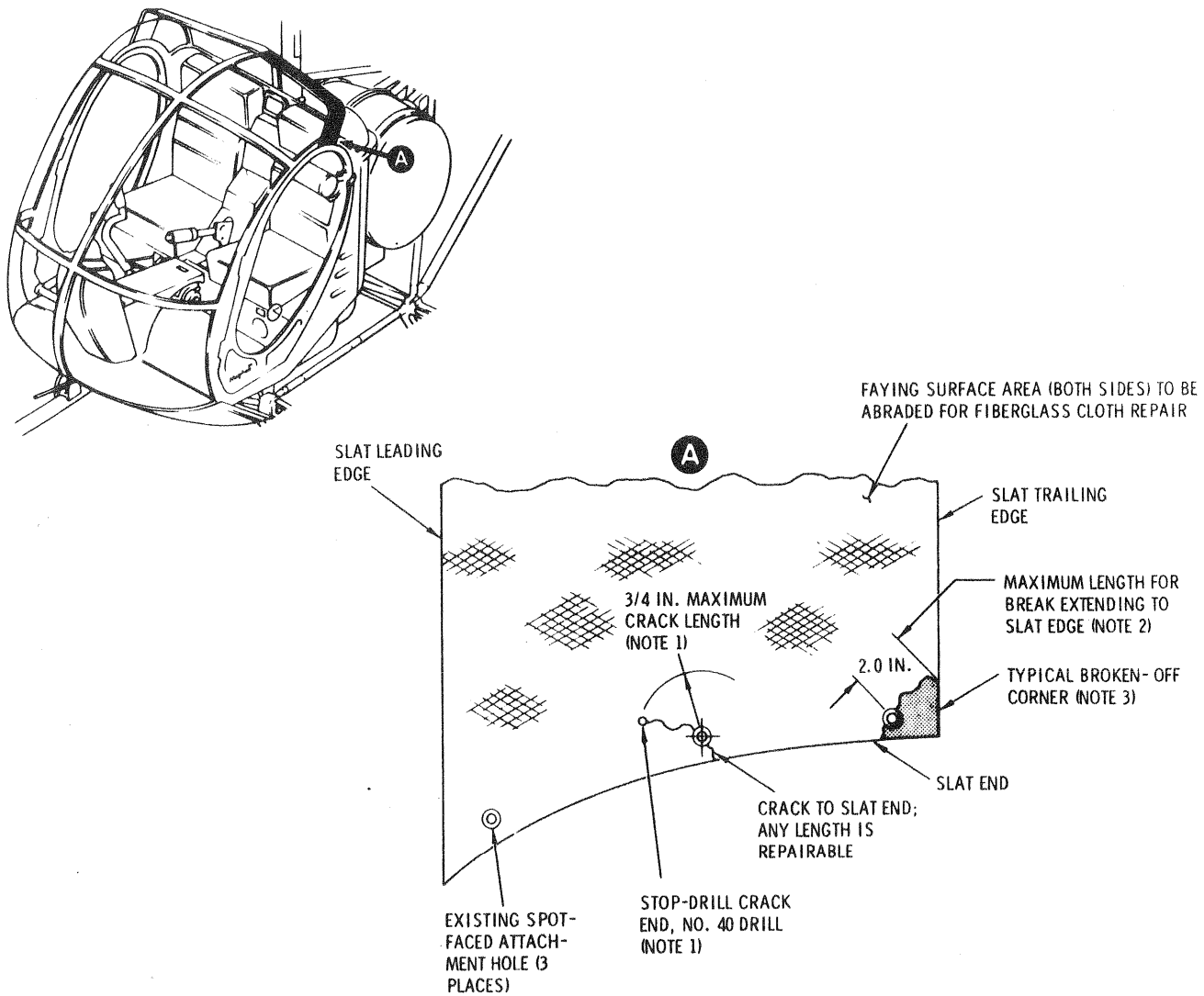
(2) Lightly abrade inner and outer faying surfaces with sandpaper. Wipe abraded surfaces clean with solvent and air dry a minimum of 30 minutes at room temperature.

(3) Cut to size, four fiberglass cloth strips to dimensions shown in Figure 2; the strips are to be used for the two required wraps of cloth as required.

### NOTE

If position lights are to be used on slat, vertical height of wraps is to be increased as necessary to provide a flat surface for mounting position light after completion of repair. The second wrap must overlap top of previous wrap a minimum of 1/4-inch. In such a case, it is recommended that size of the fiberglass strips for the two wraps be approximately as follows:

1st Wrap: 13 x 9 inches  
2nd Wrap: 13.5 x 9 inches



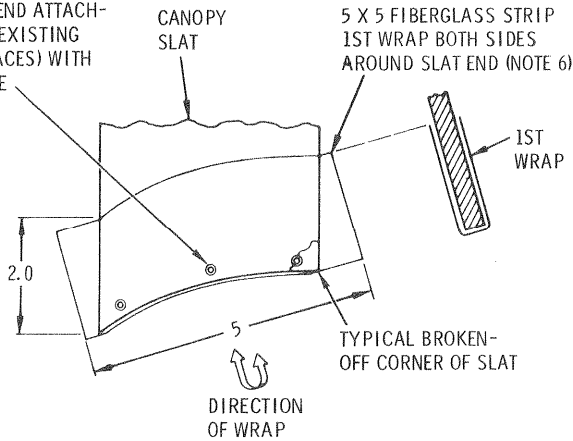
**NOTES:**

1. FOR ANY CRACK EMANATING FROM HOLE AND NOT EXTENDING TO SLAT END, CRACK END MUST BE STOP-DRILLED.
2. FOR BROKEN END EDGE OF BROKEN-OFF CORNER.
3. BROKEN-OFF CORNER IS REPAIRABLE WITHIN LIMITS SHOWN.
4. ANY CRACK(S) OR BREAKS LOCATED ON SLAT AT OTHER THAN END ATTACHMENT HOLES ARE NOT REPAIRABLE.

Figure 1. Repair limits - canopy slat ends (end view)

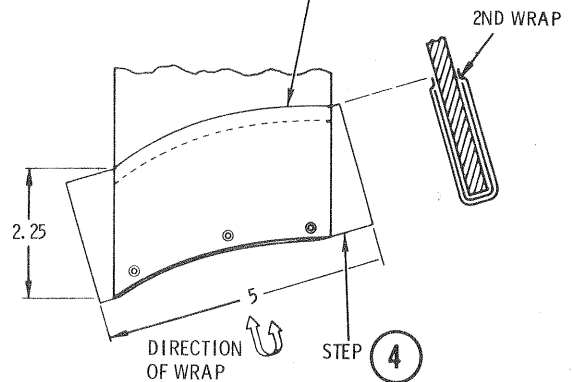
STEP 1

PRIOR TO FIRST WRAP, FILL EXISTING SLAT END ATTACHMENT HOLE AND EXISTING SPOTFACE (3 PLACES) WITH EPOXY ADHESIVE



STEP 2 1ST WRAP - END

6 X 5 FIBERGLASS STRIP 2ND WRAP, BOTH SIDES, OVER 1ST WRAP AROUND SLAT END (NOTE 6)



STEP 3 2ND WRAP - END

STEP 4  
 AFTER ADHESIVE CURES, TRIM OFF EXCESS LEADING AND TRAILING EDGES OF 1ST AND 2ND WRAP FLUSH WITH SLAT EDGES

NOTES:

1. ALL DIMENSIONS IN INCHES.
2. EACH WRAP ONE THICKNESS OF FIBERGLASS CLOTH.
3. EACH WRAP BONDED IN PLACE WITH EPOXY ADHESIVE. (REFER TO TEXT.)
4. OVERLAP FINISH END OF WRAP OVER START END TOWARD TRAILING EDGE OF SLAT AS SHOWN.
5. SPACING SHOWN BETWEEN SLAT AND WRAP THICKNESS IS EXAGGERATED FOR CLARITY.
6. IF POSITION LIGHTS ARE TO BE USED, REFER TO TEXT FOR DIMENSIONS REQUIRED.
7. FOR SLAT PREPARATION FOR REPAIR, REFER TO TEXT.

Figure 2. Fiberglass cloth repair of cracks and breaks - canopy slat end

(4) Stop drill inboard ends of any allowable cracks (Figure 2).

(5) Thoroughly mix equal parts by weight of Narmco 3135 epoxy resin and Narmco 7111 catalyst (or equivalents in a 50-50 parts mix) in an unwaxed disposable cup; use wooden tongue depressor for mixing.

#### NOTE

Usable pot life of mixed epoxy adhesive is 1 hour at room temperature. Immediately following steps provide the procedure for fiberglass cloth repair of slat ends. Steps that follow the slat end repair describe the slat wrapping method.

d. Using mixed epoxy adhesive, fill existing attachment spotfaced screw holes flush with slat surfaces at slat end. (See Figure 2.) Also, fill any stop drilled holes.

e. Apply two wraps of fiberglass cloth to slat end as follows:

(1) Spread a thin layer of epoxy adhesive on the abraded faying surface area (both sides) of slat end for the first wrap of fiberglass cloth.

(2) Place first strip of fiberglass cloth in position shown on slat end for first wrap and press firmly in place, maintain contour of slat end.

(3) Add second layer of epoxy adhesive and apply second strip of cloth for second wrap as shown and press firmly in place.

(4) Using spatula, roller or other suitable tool, slowly wipe and work air and excessive adhesive from cloth layers. Continue wiping until all entrapped air is moved past cloth edges and impregnated plies are pressed firmly together.

(5) Trim off excess of first and second wraps flush with slat edges.

f. Fill any broken corner cavity with epoxy adhesive; form the filled edge to conform to original contour of slat end.

g. Air dry at room temperature for 24 hours.

h. Repeat above procedures at opposite end of canopy slat.

- i. Wrap the slat with two layers of fiberglass cloth tape as follows (see Figure 3):
  - (1) Spread thin layer of epoxy adhesive on the abraded surfaces of the slat.
  - (2) Starting at one end of slat, wrap 1.5 inch wide strip of fiberglass cloth type (2.0 inch wide tape may optionally be used) around the entire length of the slat. Spiral the tape around the slat, butting adjacent cloth edges together without overlapping edges. Press firmly in place and remove all entrapped air from under cloth by wiping according to step e(4) above. Cutt off tape at required angle to match slat contour.
  - (3) Spread thin layer of epoxy adhesive over first wrap (layer) of fiberglass cloth tape and repeat the wrapping process with a second wrap of tape, except starting at opposite end of slat and positioning the tape edge of the second wrap at an angle to the first wrap. Remove entrapped air and excess adhesive from under second cloth wrap.
- j. Air dry for 24 hours at room temperature.
- k. Drill out rivet and screw holes to original diameters at original hole locations. Spotface three slat end attachment holes through added cloth layers at outside of slat ends.
  - l. If desired, refinish exterior of slat with paint (Section 2, Basic HMI).
  - m. On slat end filler block, check surface that mates with canopy structure for flatness. Surface must be flat within 0.010 inch. If necessary, sand block surface to required flatness.
  - n. If filler block is not bonded to slat end, bond block to interior side of slat end (Section 13, Basic HMI).
  - o. Reinstall canopy slat on helicopter (Section 13, Basic HMI) and check slat installation for discrepancies.
  - p. Record compliance with this Service Information Notice in Compliance section of Helicopter Log Book.

WEIGHT AND BALANCE DATA

Plus (+) 1 pound at Station 89.0.

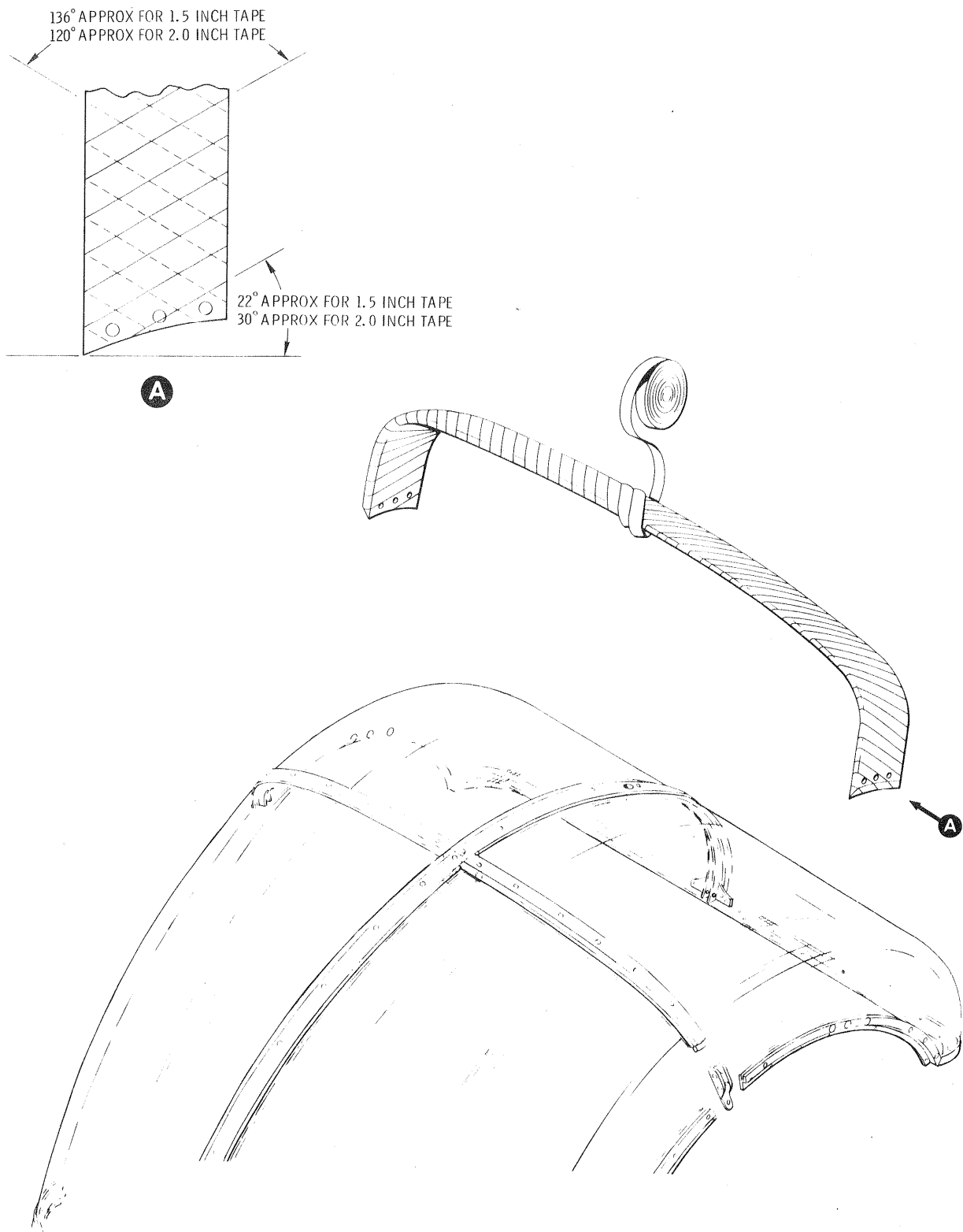


Figure 3. Slat Wrapping Method