



TECHNICAL BULLETIN

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MODIFICATION KIT PN M50459-505 – DOUBLE LAYER ABRASION TAPE FOR PN 369D21100-505 AND PN 369D21100-509 MAIN ROTOR BLADES

1. PLANNING INFORMATION

A. Models Affected:

All 500D Model 369D Helicopters equipped with PN 369D21100-505 or PN 369D21100-509 Main Rotor Blades

B. Preface:

The information given in this Service Information Notice lists a procedure for installing a double layer of stainless steel abrasion tape to the leading edge of the subject main rotor blades inboard of existing PN 369D21105 or PN 369D21105-3 abrasion strips. Installation of the stainless steel abrasion tape is recommended for main rotor blades which are subject to a highly abrasive environment, so that the blade life will not be reduced by erosion.

It is to be noted that the below referenced revision to the 500D Rotorcraft Flight Manual must be incorporated in the manual when the helicopter is operated with Main Rotor Blade Abrasion Tape Kit Part No. M50459-505 installed.

C. Time of Compliance:

At owners and operators discretion

D. Reference:

500D Model 369D Basic HMI-Volume I Reissued 15 September 1976; Revision No. 5, 15 May 1981.

500D Rotorcraft Flight Manual (CSP-D-1) Revised 14 January 1982.

E. Weight and Balance Data:

Weight and balance not affected

F. FAA Approval:

The resultant alteration to the affected Model 500D helicopters, described by main rotor blade abrasion tape installation and replacement procedures per Part I and Part II of this Notice, has been shown to comply with Federal Aviation Regulations and is FAA Approved.

G. Parts/Supplies:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Modification Kit – Main Rotor Blade, Double Layer Abrasion Tape consisting of:	M50459-505 *		
Abrasion Tape (6.5 in. wide x 0.0027 in. thick x 12.00 in. long)	M50459 -1*	10	Field Fabricate

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Abrasion Tape (4.5 in. wide x 0.0027 in. thick x 1.00 in. long)	M50459-7 *	5	Field Fabricate
*Fabricate from PN 369D21104 stainless steel abrasion tape as listed below			

H. Materials:

MATERIAL		
Nomenclature		Source
Abrasion tape, stainless steel (6.5 in. wide x 0.0027 in. thick):		
30 ft length roll	87-369D21104	HHI
or		
100 ft length roll	88-369D21104	HHI
Solvent – aliphatic naphtha; TT-N-95, (Standard No. 200 Thinner)		Commercial
Abrasive paper	400 grit	Commercial

I. Tools and Equipment:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Heat gun or equivalent	

2. PART I INSTALLATION PROCEDURE – ABRASION TAPE

- (1). Lightly abrade laying surface of main rotor blade with 400 grit abrasive paper.
- (2). Wipe laying surface of blade with TT-N-95 solvent to remove grease or dirt film.
- (3). Use heat gun or equivalent to warm blade laying surface; temperature is not to exceed 120°F.
- (4). Remove backing and apply stainless steel abrasion tape to leading edge of main rotor blade as follows:
 - (a). Apply M50459-1 bottom abrasion tape along blade leading edge, inboard of existing 169D21105 or 369D21105-3 abrasion strip, as shown, so that tape overlap over bottom and top of blade is equal. Do not touch adhesive side of tape.
 - (b). Smooth and press abrasion tape into place by hand, using heat gun or equivalent to maintain temperature.
 - (c). Reapply pressure by hand following initial installation to ensure proper bonding; the abrasion strip must be free of surface wrinkles or air bubbles.



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- (5). Apply a second M50459-1 abrasion tape by wiping surface of installed bottom strip with solvent and repeating steps (3). and (4). above. Take care not to allow solvent to touch bond line between -1 bottom tape and blade skin. Outer tape must be evenly aligned at top surface of blade with inner tape, per Figure 1, Section A-A.
- (6). Wipe laying surface of upper -1 abrasion strip and existing outboard abrasion strip with solvent; apply a 1-inch wide strip of M50459-7 abrasion tape, per steps (3). and (4). above, so that the -7 tape overlaps evenly as shown in Figure 1. The -7 tape overlap over bottom and top of blade is also equal.
- (7). Check installation M50459-1 and M50459-7 abrasion tape for discrepancies.

3. PART II FIELD REPLACEMENT PROCEDURE – ABRASION TAPE

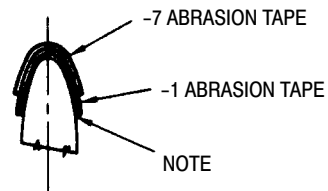
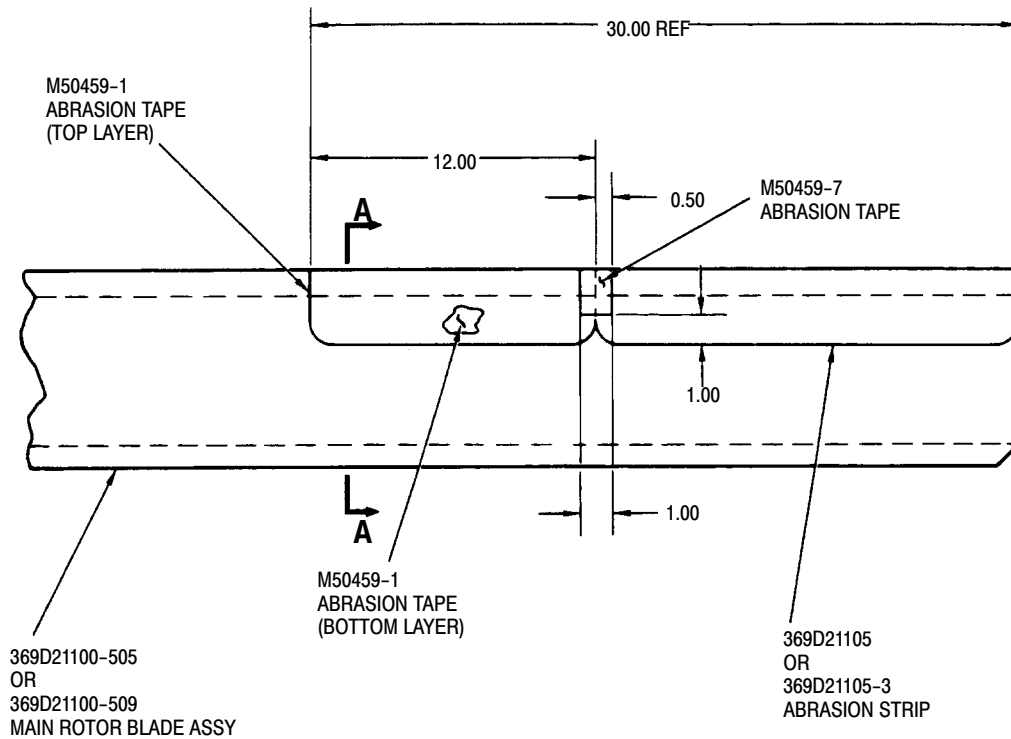
NOTE: Leading edge tape is to be replaced if damaged, or if excessively pitted due to rain or dust.

- (1). Carefully remove M50459-7 overlap tape; remove M50459-1 upper tape by carefully peeling off tape so as not to affect bonding of bottom -1 tape and surface of blade skin.
- (2). Wipe surface of -1 bottom tape with TT-N-95 solvent to remove any adhesive, taking care not to allow solvent to touch bond line between -1 bottom tape and surface of blade skin.

NOTE: Perform step (3). below only if M50459-1 bottom tape is damaged and is to be replaced.

- (3). Remove -1 bottom tape and wipe surface of blade skin with solvent to remove any adhesive; apply new -1 bottom tape per Part I of this Notice.
- (4). Apply new M50459-1 upper tape and new M50459-7 overlap tape, per Part I of this Notice.

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SECTION A - A

NOTE:
ABRASION TAPE MUST BE ALIGNED
AT TOP SURFACE OF BLADE.

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Figure 1. Modification of Main Rotor Blade - Double Layer Abrasion Tape, Kit M50459-505