



SERVICE BULLETIN

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* Supersedes Service Information Notice EN-40 and FN-29, dated 30 October 1987.

REWORK OF HORIZONTAL STABILIZER ASSEMBLY (P/N 421-087-503 AND -505).

1. PLANNING INFORMATION

A. MODELS AFFECTED:

All McDonnell Douglas Helicopter Company (MDHC) 369E and 369F/FF Series helicopters.

B. PREFACE:

MDHC has received reports of the horizontal stabilizer skin and tabs cracking as a result of a vibration at the outboard ends of the horizontal stabilizer tabs. Therefore, MDHC is requiring operators to perform the following rework of the horizontal stabilizer assembly.

The cost of the 421-087-21 and -22 horizontal stabilizer stiffeners is \$43.56 each and the 421-087-9 weights are \$34.68 each (U.S. funds).

NOTE: Helicopters which have complied with the requirements of EN-40/FN-29, dated 30 October 1987, do not have to comply with this Notice. Revisions to this Notice provide instructions for those helicopters which develop horizontal tab stabilizer resonance due to the addition of stiffeners with the removal of the tab weights on the horizontal stabilizer.

C. TIME OF COMPLIANCE:

The requirements of this Notice shall be accomplished within the next 100 hours of helicopter operation or 90 days, whichever occurs first.

D. FAA APPROVAL:

The resultant alteration to affected models as described by the procedures in this Notice has been shown to comply with Federal Aviation Regulations and is FAA Approved.

E. WEIGHT AND BALANCE:

Weight and balance data not affected

F. REFERENCE:

- 369D/E HMI Vol. I (CSP-D-2) Revised 01 March 1989
- 369F/FF HMI Vol. I (CSP-F-2) Revised 15 April 1986
- 369D/E/F Structural Repair Manual (CSP-DEF-6) Revised 15 Nov. 1984 369E Pilot's Flight Manual (CSP-E-1) Revised 19 October 1988
- 369FF Pilot's Flight Manual (CSP-FF-1) Issued 25 October 1985

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G. PARTS LIST:

PARTS LIST			
Nomenclature	Part No.	Qty.	Source
Stiffener	421-087-21	1	MDHC
Stiffener	421-087-022	1	MDHC
Rivet, blind	NAS173884-3	4	MDHC
Rivet	M S20470AD3-4	6*	MDHC
Tab weight	421-087-9	A/R	MDHC or field fabricate

* Additional rivets will be required for those operators who reinstall tab weights to obtain acceptable tail rotor balance and for eliminating tab resonance.

H. TOOLS AND MATERIALS:

TOOLS AND MATERIALS	
Nomenclature	Source
Heat gun	Commercial
Drill	Commercial
Drill bit (#27, #30 & #40)	Commercial (RM#000150)
Solvent, MEK (TT-M-261)	Commercial (RM#008922)
Abrasive paper, 400 grit	Commercial
Primer (HMS-15-1100, Type 1)	Commercial (RM#009924)
Primer, zinc-chromate (TT-P-1757)	Commercial (RM#009222)
Aluminum alloy 2024 (alternate 2024-T42) .032 inch thick	Commercial (RM#000163)

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2. PROCEDURE

- a. Remove horizontal stabilizer from aircraft per Section 5 of applicable HMI and support safely on suitable work table to accomplish the following steps.
- b. Install stiffeners on outboard ends of horizontal stabilizer as shown in Figure 1 and the following instructions:
 1. Drill out existing NAS1738B4-3 rivets as shown in Figure 1 using #27 size drill bit.
 2. Position stiffeners as shown in Fig. 1 and drill remaining holes using #40 size drill bit.
 3. Apply zinc-chromate primer to holes.
 4. Install NAS1738B4-3 and MS20470AD3-4 rivets per Figure 1.
- c. Perform tail rotor balancing per Section 8 of applicable HMI.
- d. Install horizontal stabilizer per Section 5 of applicable HMI.
- e. With helicopter located on a flat smooth surface, operate the 369E Series helicopter engines at 102 - 105 percent N2 and 369F/FF Series helicopter engines at 99 - 102 percent N2 per applicable PFM. Observe the horizontal stabilizer tab.
- f. If tab resonance occurs and tail rotor balancing is unacceptable, fabricate, apply primer to non-bonding surfaces and install (2) 421-087-9 tab weights adjacent and immediately inboard from the existing tab weights (if installed, see the following note) per the following instructions and as shown in Figure 1.

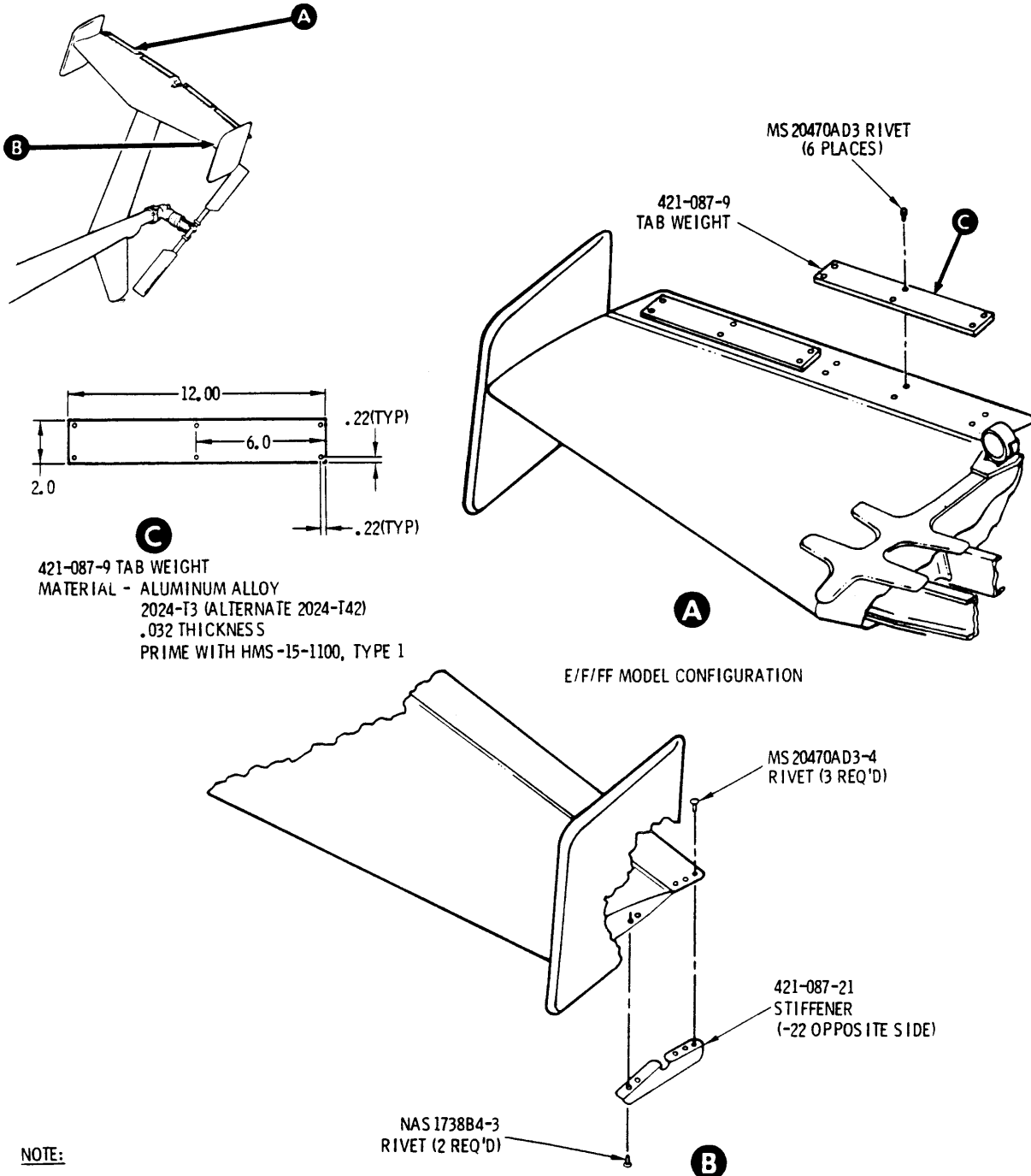
NOTE:

- If tab resonance is not evident and the tabs weights are not installed, proceed to Step h.
 - If the outboard tab weights have been previously removed, install weights in the outboard locations as shown in Figure 1. If required, a maximum of two sets of tab weights may be installed to eliminate tab resonance.
1. Clean all tab weight and horizontal stabilizer bonding surfaces down to the primer in the area to be bonded.
 2. Apply adhesive to tab weights and horizontal stabilizer and position tab weights as shown in Figure 1. Fair in edges with adhesive squeeze out.
 3. Install rivets in the same pattern as existing tab weights prior to adhesive curing. Allow adhesive to cure and touch up finish to match adjacent area.
- g. Repeat tail rotor balancing per Section 8 of applicable HMI. Operate 369E Series helicopter engines at 102 - 105 percent N2 and 369F/FF Series helicopter engines at 99-102 percent N2 and verify observe horizontal stabilizer tab resonance has been eliminated. If tab resonance still exists, contact a MDHC Field Service Representative for disposition.
 - h. Record compliance to this Notice in the Compliance Record section of the helicopter Log Book.

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421-087-9 TAB WEIGHT
MATERIAL - ALUMINUM ALLOY
2024-T3 (ALTERNATE 2024-T42)
.032 THICKNESS
PRIME WITH HMS-15-1100, TYPE 1

NOTE:
DIMENSIONS SHOWN IN INCHES

88-635-2B

Figure 1. Horizontal Stabilizer Rework.

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