SERVICE BULLETIN

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* Supersedes Service Notice EN-13, dated 26 March 1984.

INSPECTION, PN 369A7011 LONGITUDINAL MIXER CONTROL ROD; REPLACEMENT OF PN 369D22509–51 DOUBLER WITH 369DSK169–3 REPAIR DOUBLER

1. PLANNING INFORMATION

A. MODELS AFFECTED:

500E Model 369E Series Helicopters Serial No. 0001E through 0027E, 0029E through 0036E and 0038E through 0043E.

B. PREFACE:

Information in this Notice gives procedures for a one time check of the longitudinal mixer control rod for interference by rivets attaching the 369D22509–51 doubler to the control rod tunnel web, and modification of the doubler installation, or replacement of the doubler to prevent such interference.

Part I provides inspection procedures to check for existing interference, and for removal of rivets attaching the doubler to the controls tunnel' web, which can interfere with movement of the longitudinal mixer control rod. additionally, inspection of PN 369D22509–21 web for missing rivets is included.

Part II 'provides procedures for fabrication and installation of a PN 369DSK169–3 repair doubler channel to replace the existing 369D25509–51 doubler. Additionally, procedures for repairing or replacing damaged longitudinal mixer control rods are included.

Information given in this Notice will be. incorporated as appropriate at the next scheduled revision to the below referenced manuals.

C. TIME OF COMPLIANCE:

Part I of this Notice shall be accomplished within the next 10 hours of helicopter operation following receipt of this Notice, for all affected models.

Part II shall be accomplished prior to further flight as directed in procedure given in Part I.

D. FAA APPROVAL:

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

E. WEIGHT AND BALANCE:

Weight and balance not affected

F. REFERENCE:

Model 369E Supplement to HMI Volume 1 (CSP–E–2), Issued 30 November 1983.

HMI Volume 1 (CSP–D–2), Reissued 15 January 1982; Revision 3, 15 August 1983.

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2. PROCEDURE

PART I - INSPECTION OF PN 369A7011 LONGITUDINAL MIXER CONTROL ROD

PARTS LIST			
Nomenclature	**Part No.**	**Qty.**	**Source**
Rivets	NAS 1738B 4	11 (if required)	Commercial

MATERIALS	
Nomenclature	**Source**
Primer, Zinc Chromate TT–P–1757	Commercial

TOOLS AND EQUIPMENT	
Nomenclature	**Source**
Drill motor, Portable	Commercial
Grinder, Portable	Commercial
Drill (sizes as required)	Commercial
Depth Gage	Commercial

a. Remove all crew compartment interior trim from controls tunnel (Section 4, HMI Vol 1).

b. Remove controls access door (Section 2, HMI Vol 1).

c. Check 369D22509–21 web below shoulder.. beam for presence of 11 rivets as shown in Figure 1. If rivets are missing, install 11 NAS1738B4 rivets as shown.

d. Release cyclic friction; with hand on rivets, (shown in shaded area of Figure 1) connecting 369D22509–51 doubler to controls tunnel web, move cyclic control stick full forward, then slowly to the full aft position. If any movement of the 369D22509–51 doubler is felt, perform Part II of this Notice. Control rod must be repaired or replaced if any damage is noted. If no movement is detected, complete Part I of this Notice.

e. Move cyclic stick to full forward position; using portable drill or grinder, carefully drill out or grind heads off any rivets connecting 369D22509–51 doubler to controls tunnel web in area shown in Figure 1. Carefully press rivet shanks out of holes.

f. Using flashlight, observe longitudinal mixer control rod through holes left by rivet removal, while slowly moving cyclic control stick full aft. If any scratches, nicks or other damage to rod is evident, perform Part II of this Notice.

PART II - FABRICATION AND INSTALLATION OF 369DSK169-3 REPAIR DOUBLER

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	**Part No.**	**Qty.**	**Source**
Repair doubler	369DSK169–3	1	Locally fabricated
Rivet	NAS1738B4–2	26	Commercial
Clamp (tie–straps)	SST–4	3	Commercial

MATERIAL	
Nomenclature	**Source**
Aluminum Alloy Sheet 2024–T3 QQ–A–250 /4 or /5	Commercial
Primer, Zinc Chromate TT–P–1757	Commercial
Abrasive Paper, Grade 400, wet or dry P–P–101	Commercial

TOOLS AND EQUIPMENT	
Nomenclature	**Source**
Grinder, Portable (Hand held)	Commercial
Drill motor (Portable)	Commercial
Dril (Sizes as required)	Commercial

NOTE: If crew compartment trim and controls access door has been reinstalled, remove per Sections 4 and 2 of HMI Vol 1.

CAUTION Use care during removal and installation of control rod to avoid striking other installed control rods.

a. Remove control tunnel cover boot. Disconnect and remove longitudinal mixer control rod (Section 7, HMI Vol 1). Ensure that other control rods are in the full aft position.

b. Using portable drill or grinder, carefully drill out or grind heads off rivets attaching 369D22509–51 doubler. Carefully press rivets out of holes.

c. Fabricate 369DSK169–3 repair doubler channel from 2024–T3 aluminum alloy sheet, 0.32 inch thick, as shown in Figure 2. Apply zinc chromate primer to all bare metal; paint to match helicopter finish.

d. Using removed doubler as template, drill holes in 369DSK169–3 repair doubler to match existing rivet pattern; do not drill holes in area shown in Figure 2 (three places). Center 369D22509–51 doubler to 369DSK169–3 repair doubler when drilling holes.

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e. Attach repair doubler using NAS1738B4–2 rivets.

CAUTION When removing notches from damaged control rod, rub or polish along length of rod only. Rod will be damaged beyond repairable limits if rubbed or polished around rod circumference. If repair requires removal of material exceeding 0.040 inch or if damage depth exceeds 0.040 inch, rod must be replaced.

f. Inspect longitudinal mixer control rod for damage caused by rubbing or striking tunnel beam doubler rivets. If damage does not exceed 0.040 inch depth, and cracks or sharp notches are not present, repair by applying zinc chromate primer to damaged area. If sharp notches are present, remove sharpness by rubbing along length of rod with 400 grade abrasive paper. Depth after repair may not exceed 0.040 inch. Apply zinc chromate primer to entire damaged area after repair. Replace rod if cracked or if damage exceeds depth limit.

g. Carefully lower riveted end of repaired or replacement 369A7011 control rod (reinstall removed control rod if not damaged) through tunnel opening.

h. Reinstall control tunnel cover boot; secure with tie–straps.

CAUTION Do not tighten loosened jam nut on rod end beating without holding rod end with wrench.

i. Reattach upper end of longitudinal mixer control rod to longitudinal pitch idler (Section 7, HMI Vol 1).

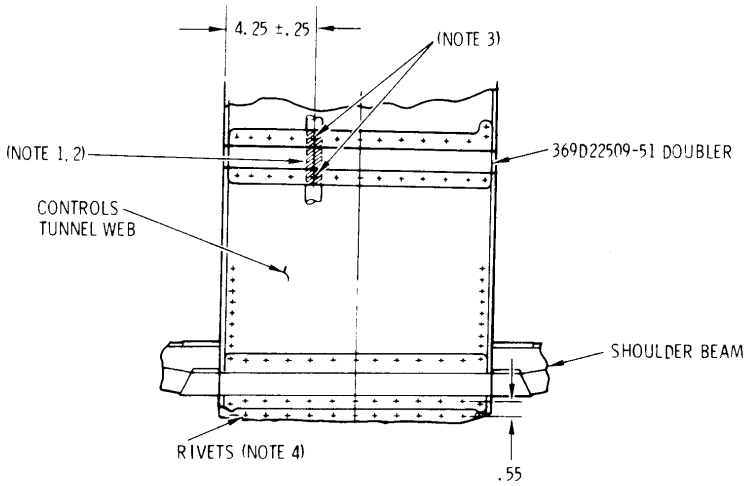
j. Align lower rod end with longitudinal mixer bellcrank and attach with hardware removed.

k. Perform controls rigging (Section 7, HMI Vol 1).

l. Reinstall crew compartment trim removed for access (Section 4, HMI Vol 1).

m. Reinstall controls access door (Section 2, HMI Vol 1).

n. Record compliance with Part II of this Notice in Compliance Record of Helicopter Log Book.



NOTES:

1. PLACE FINGERS ON RIVETS IN SHADED AREA WHILE MOVING CYCLIC STICK FULL AFT TO CHECK FOR CONTROL ROD INTERFERENCE.
2. REMOVE ANY RIVETS IN THIS AREA.
3. LEAVE THESE HOLES OPEN. (2 PL)
4. IF RIVETS NOT INSTALLED, INSTALL 11 NAS1738B4 RIVETS AS SHOWN.

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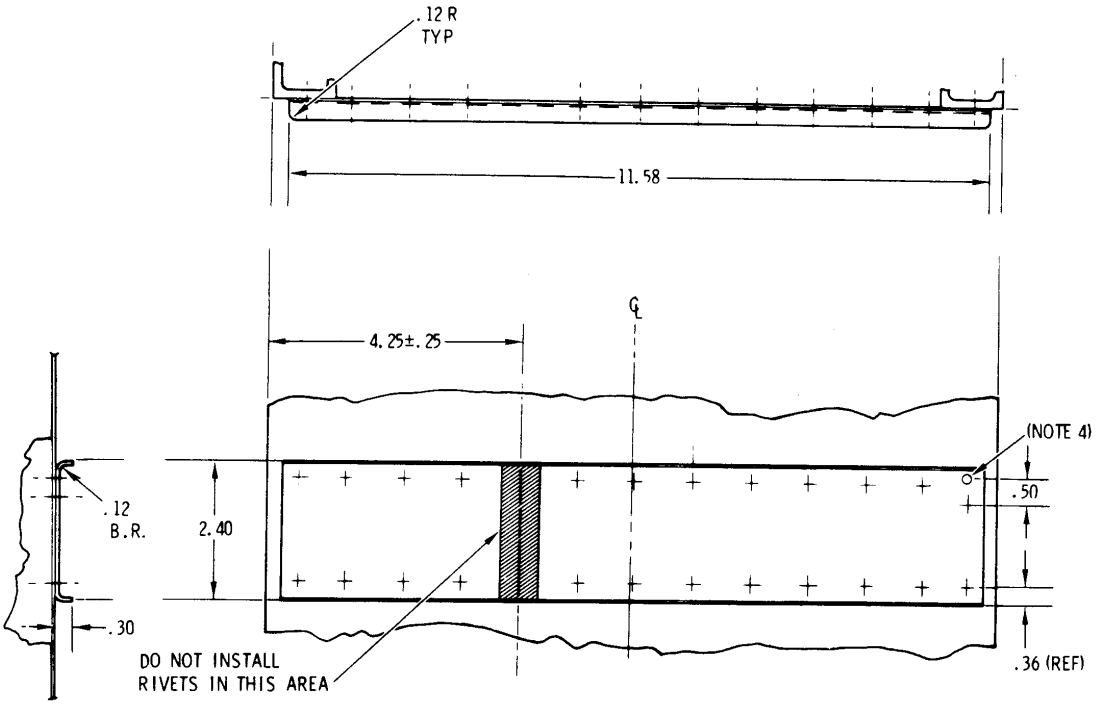
Figure 1. Interference Check and Rivet Removal; Check for Missing Rivets



NOTES:

1. FABRICATE FROM 0.032 INCH THICK, 2024-T3 ALUMINUM ALLOY SHEET.
2. RELOCATE RIVET HOLE FROM HOLE IN 369D22509-51 AS SHOWN.
3. CENTER 369D22509-51 DOUBLER TO REPAIR DOUBLER AND MATCH DRILL HOLES EXCEPT AS NOTED.

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Figure 2. Fabrication of Repair Doubler Channel