

**HUGHES
SERVICE INFORMATION
NOTICE**

NOTICE NO. HN-93

DATE 11 March 1976

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SUBJECT: OPERATIONAL CHECK AND ADJUSTMENT OF AUTOLATCHING
MECHANISMS - PILOT AND CARGO DOORS

MODELS AFFECTED: 369H Series Helicopter Serial No. 0201 and subsequent

TIME OF COMPLIANCE: At Owners and Operators discretion

PREFACE: The information given in this Service Information Notice lists procedures for checking and adjusting the pilot and cargo door latches to ensure proper engagement and positive safelock of the door latching mechanisms.

Reference

500 Series - Basic HMI, Issued 1 October 1972; Revision No. 5, 15 June 1975
Hughes Service Information Notice No. HN-90, dated 11 December 1975

Customer Service Department - Hughes Helicopters - Culver City, California

PART I - Operational Check of Autolatching
Mechanism, Pilot and Cargo Doors

a. Remove latch cover (4 places) from door panel; identify covers to facilitate reinstallation.

b. With door open, actuate door handle to REST and SAFELOCK positions (all four safelock triggers must be depressed to operate handle). Check for synchronized movement and operation of all four latch bolts as handle is actuated. If movement of all four latch bolts is not synchronized, adjust rod or cable length per Part II of this Notice.

CAUTION

Do not use door or door handle as hand hold when entering or stepping out of helicopter, as this may result in deformation of door hinges or door contour, and improper adjustment of latch mechanisms.

c. Close door while seated in helicopter; interior door handle should be in REST position (see Figure 1).

d. Visually check that all four SAFELOCK triggers are in positive and simultaneous contact with striker plates at all four latch positions.

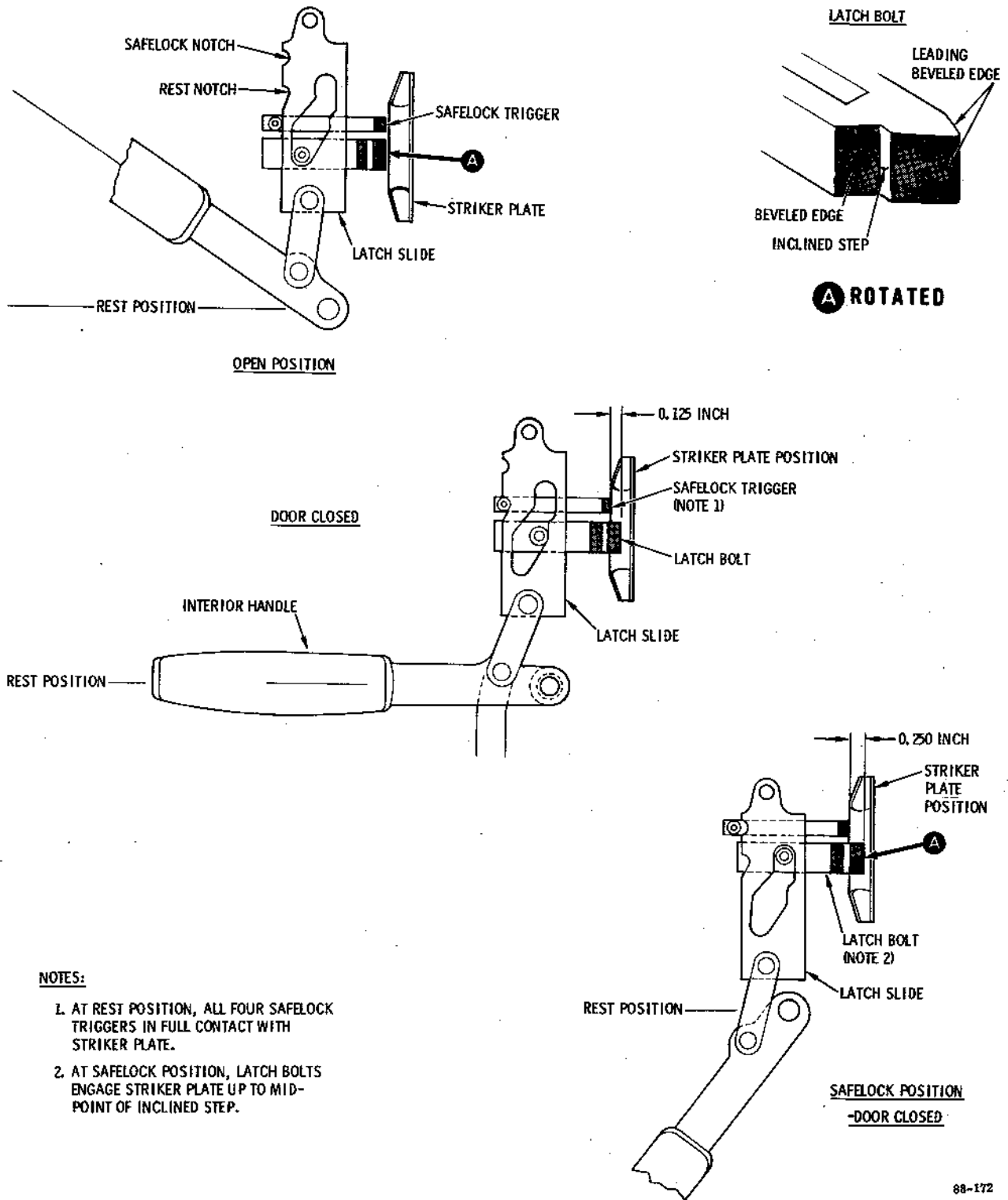
CAUTION

Door will not SAFELOCK unless positive and simultaneous contact of all four triggers with striker plates is obtained.

1. Noncontact of forward and second latch SAFELOCK triggers with striker plates indicates door droop. Check door hinges for deformation; if bent, straighten door hinges so that positive and simultaneous contact between SAFELOCK triggers and door striker plates is obtained at all four latch positions.

NOTE

If hinges are not bent and door contour is in proper alignment, relocate striker plate and/or latch blocks, and adjust rod or cable length as required, per Part II of this Notice.



NOTES:

1. AT REST POSITION, ALL FOUR SAFELock TRIGGERS IN FULL CONTACT WITH STRIKER PLATE.
2. AT SAFELock POSITION, LATCH BOLTS ENGAGE STRIKER PLATE UP TO MID-POINT OF INCLINED STEP.

Figure 1. Door Autolatch Mechanism Positions

2. Noncontact of forward, second and fourth latch SAFELOCK triggers with striker plates indicates door contour alignment is needed. Reshape door with blocks and bending action, so that positive and simultaneous contact between SAFELOCK triggers and door striker plates is obtained at all four latch positions. Use extreme care when reshaping doors, to prevent damaging or breaking door windows.

e. With door closed and interior handle at REST position, visually check that all four latch bolts engage properly with striker plates, as shown.

NOTE

The beveled leading edge step at end of each latch bolt is the key to proper engagement with the door striker plate. At latch REST position, the full face (approximately 1/8-inch) of the short beveled leading edge step should be in positive contact with the striker plate.

Relocate latch blocks and/or striker plates as required to obtain proper latch bolt engagement. If latch block is moved, rod or cable length must be adjusted. See Part II of this Notice.

f. With door closed and interior handle at SAFELOCK position, visually check for positive and simultaneous dead bolt locking at all four door latch positions, as shown.

NOTE

At latch SAFELOCK position, each latch bolt must engage door frame striker plate a minimum of 1/8-inch beyond the beveled leading edge step (at midpoint of inclined step between the two beveled edges). Total throw of each latch bolt into striker should be approximately 1/4-inch at SAFELOCK position.

Shift latch blocks and/or strikers as required to properly engage latch bolts, and adjust rod or cable length per Part II of this Notice.

g. With door closed, actuate interior handle to SAFELOCK and OPEN positions and check for ease of handle operation.

1. Difficult door handle movement indicates (a) excessive throw (over 1/4-inch total engagement) of latch bolt in striker, (b) binding of latch mechanisms, or (c) excessive spring tension at the third latch position.

NOTE

To remedy condition (a) above, relocate or reshim striker plate or latch block to obtain proper engagement of latch bolt in striker; for condition (b), inspect and lubricate latch mechanisms per Basic HMI; for condition (c), adjust preload of compression spring at third latch position per Part II of this Notice.

2. Looseness or lack of firmness in door handle operation indicates insufficient spring compression at the third latch position. Adjust spring preload per Part II of this Notice.

PART II - Adjustment of Autolatching Mechanisms

a. With latch covers removed, adjust rod or cable length as follows:

CAUTION

Readjustment of rod or cable length is required whenever latch block is removed or relocated, or whenever latch bolts fail to engage strikers properly and simultaneously.

NOTE

Do not adjust third position latch spring position clevis, except when required to adjust spring preload per step c below.

1. With door open, hold interior handle firmly against the REST notch of the third latch slide; use moderate hand pressure to hold this position for all rod or cable adjustments (refer to Basic HMI).
2. Disconnect fourth latch rod from interior handle (top position).
3. Hold fourth latch rod down with moderate pressure to firmly make slide contact with REST notch of fourth latch.

4. Ensure that fourth latch rod attachment clevis pin can be installed freely to attach rod to interior handle; adjust fourth latch slide rod clevis as required.

5. Disconnect both clevis pins from second latch slide position; push second latch slide downward to firmly make contact with REST notch. Adjust lower latch slide clevis for a free fit.

6. Hold forward latch in REST position and adjust clevis at upper end of second latch slide for a free fit.

b. With door closed and latch covers removed, adjust position of latch blocks and striker plates as follows:

NOTE

Readjustment of rod or cable length is required, whenever latch block is removed or relocated, to ensure synchronized SAFELock engagement of all four latches.

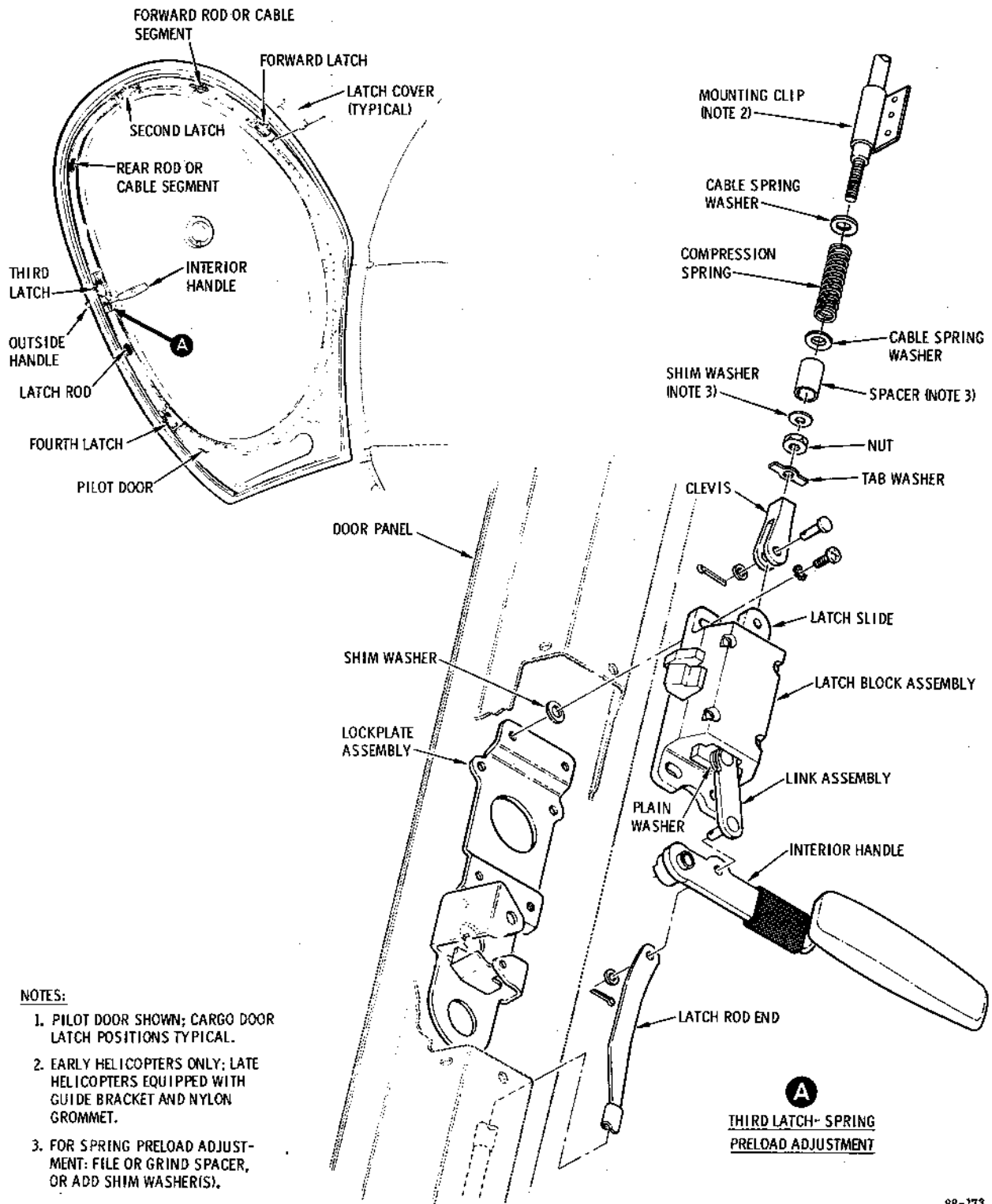
1. If more or less engagement of latch bolt is required, loosen the four latch attaching screws and reposition the latch block in elongated mounting holes for correct engagement with striker plate. Resecure latch with existing screws.

2. If inboard or outboard (lateral) adjustment of latch bolt to striker plate is required, remove existing latch attaching screws; reinstall latch block with new attaching screws and MS9320-08 shim washers.

3. If necessary, striker plates may be adjusted (with door open) by removing sealant, loosening attaching screws, and relocating striker plate in elongated mounting holes; and/or by removing attaching screws and installing existing striker plate base (serrated) under striker plate, and reinstalling with existing screws. Rebond striker (and shim) to door frame; reseal around edges of striker; fill gaps between striker and bumper to height of bumper (refer to Basic HMI). Also inspect door seal installation and perform door seal compression check, per Basic HMI.

c. With door open and third latch cover removed, adjust preload of latch compression spring as follows: (See Figure 2.)

1. Depress all four safelock triggers and set door handle to SAFELock position.



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Figure 2. Door Autolatch Mechanism, Third Latch Position

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2. Remove screws and lockwashers securing third latch block to door panel. Note or index location of latch block on mounting plate to facilitate reinstallation.
3. Remove link from interior handle; removal of link at latch slide not required.
4. Note and record number of threads on rod or cable and extending through clevis at top of third latch.
5. Remove clevis from upper end of third latch slide; if installed, remove tab washer and locknut.

NOTE

If existing handle operation is difficult, remove and file or grind existing NAS43DD3 spacer as required to decrease spring compression. Reinstall spacer.

If existing handle operation lacks firmness, add AN960-10L shim washer(s) as required at existing spacer to increase spring compression.

6. Reinstall locknut and tab washer, as applicable; reinstall clevis at end of rod or cable at position noted in step 4, above. As applicable, tighten locknut and bend tab of washer over clevis.
7. Reinstall third latch at location noted in step 2, above; reinstall rod or cable end clevis to the latch slide, and link to interior door handle.
8. Adjust rod or cable length, per step II a above.