

**HUGHES
SERVICE INFORMATION
NOTICE**

NOTICE NO. HN-72

DATE 5 August 1974

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**SUBJECT: EMERGENCY RELEASE MECHANISM, MODIFICATION (M50041) -
CARGO HOOK KIT INSTALLATION (369H90065)**

MODELS AFFECTED: The following helicopters equipped with subject Cargo Hook Kit having Manual T-Handle Release, or Manual Release Lever on Collective Stick Grip:

369HE Helicopter Serial No. 0101E and subsequent
369HS Helicopter Serial No. 0101S and subsequent

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists a procedure for installing a new trigger-type emergency cable release mechanism on the pilot's cyclic control stick. Located for optimum response, the new trigger release replaces existing T-handle or collective grip lever release mechanisms now installed on the helicopter.

It is noted that the M50041 Modification is compatible only with Eastern Rotorcraft Cargo Hook Assembly #17086-1 or #17086-2. Helicopters presently equipped with Norco Cargo Hook Assembly #CL344-1 or CL1181 must install the Eastern Rotorcraft hook assembly to accomplish the modification.

Reference

500 Series - Basic HMI, Issued 1 October 1972; Revision No. 3, 1 January 1974

500 Series - HMI Appendix A, Issued 1 October 1972; Revision No. 2, 1 January 1974

TOOLS AND EQUIPMENT

Iron, Soldering
Drill, portable
Drill bit - 0.459/0.452 inch diameter

MATERIALS

Insulation Varnish	Glyptal 1201	GE Insulation Dept Schenectady, N. Y.
Solder	QQ-S-571, Sn60WP2	Commercial

PARTS LIST

When ordering, specify Kit No. M50041 which consists of the following items. Also, specify whether new cargo hook assembly or control cable assembly is required.

<u>Nomenclature</u>	<u>Part Number</u>	<u>Qty</u>	<u>Mfr</u>
Screw	NAS603-10	3	Commercial
Grommet	MS35489-6S	2	Commercial
Clamp	MS25281-16	3	Commercial
Clamp	MS25281-4	6	Commercial
† Terminal Lug	MS25036-106	2	Commercial
Cotter Pin	MS24665-300	1	Commercial
Nut	MS21042-3	3	Commercial
Lockwire	MS20995C32	AR	Commercial
Strap	MS17821-4-9	5	Commercial
† Contact	MPCM20M-H2	2	Commercial
Washer	AN960PD716	1	Commercial
Washer	AN960PD10L	3	Commercial
† Wire	47108-B-20	AR	Gen Cable Corp, LA
† Wire	47108-B-16	AR	Gen Cable Corp, LA
Lever	369H92410	1	Hughes
* Hook Assembly, External Cargo	369H92105	1	Hughes
Switch	21495	1	Bendix, Lakewood, Ca
** Control Assembly, Mechanical Cable	14323-1	1	Eastern Rotorcraft Corp, Doylestown, Pa

† Provided for modification of electrical wiring system, if required.
(See Wiring Diagram, Figure 1.) Wire No. M522B20 and P506V16 may already be installed on helicopter.

* Required if Norco CL344-1 or Norco CL1181 Cargo Hook Assembly presently installed on helicopter. Includes control cable and wiring harness.

** Required if Eastern Rotorcraft 17086-1 Cargo Hook Assembly presently installed on helicopter.

PROCEDURE

- a. Check that all electrical power is OFF.
- b. As applicable, remove existing T-handle emergency release and cable, or emergency release lever (on collective stick grip) and cable. Refer to HMI Appendix A.

NOTE

The safety arming switch (S601) is not used, if 369H90129 cyclic stick grip kit is installed.

- c. As applicable, remove safety arming switch from pilot's cyclic stick; disconnect wiring.
- d. Remove existing cargo release pushbutton switch (S4 or S114), and switch guard if installed, from cyclic stick grip; disconnect wiring from soldered connections at switch.
- e. Solder existing blue wire to Pin 1 of new release switch #21495; solder existing gray wiring to Pin 2. Apply a light coat of Glyptal to soldered contacts. Install new switch in cyclic stick grip. Refer to wiring diagram, Figure 1.
- f. As required, modify cargo hook electrical wiring, per wiring data list and wiring diagram. (Wire No. M522B20 and P506V16 may already be installed on helicopter.)
- g. Install new 369H92410 cargo hook release lever assembly on pilot's cyclic stick at location and dimension shown in Figure 1. Do not lockwire screws.
- h. Drill 0.459/0.452 hole in pilot's compartment floor structure at dimension shown (View A-A). Install grommet.
- i. Enlarge existing hole in cargo hook fairing assembly to 0.459/0.452 inch diameter, as required. Install grommet.
- j. Insert ball terminal of cable in slotted bushing of release lever; secure with washer and cotter pin. Secure cable loosely with locking nut.
- k. Route release cable down cyclic stick, through grommets in pilot's floor and fairing assembly, and aft to cargo hook.
- l. As required, replace existing Norco cargo hook with Eastern Rotorcraft cargo hook; secure ball terminal of cable to cargo hook.
- m. Secure release cable to cyclic stick and fuselage structure with clamps and tie straps as shown.

NOTE

Check for sufficient slack in aft section of cable and harness so that hook may swing 30° conically from centerline of helicopter without introducing tension in the system.

n. Rig emergency release lever as follows.

1. Position lever at angular location desired and required for correct cable release operation of cargo hook. Tighten two screws securing release bracket clamp to cyclic stick.
2. With locking nut loosened, adjust to set lever at desired hook closed position. Adjustment simultaneously shifts both closed and open position same direction and distance.

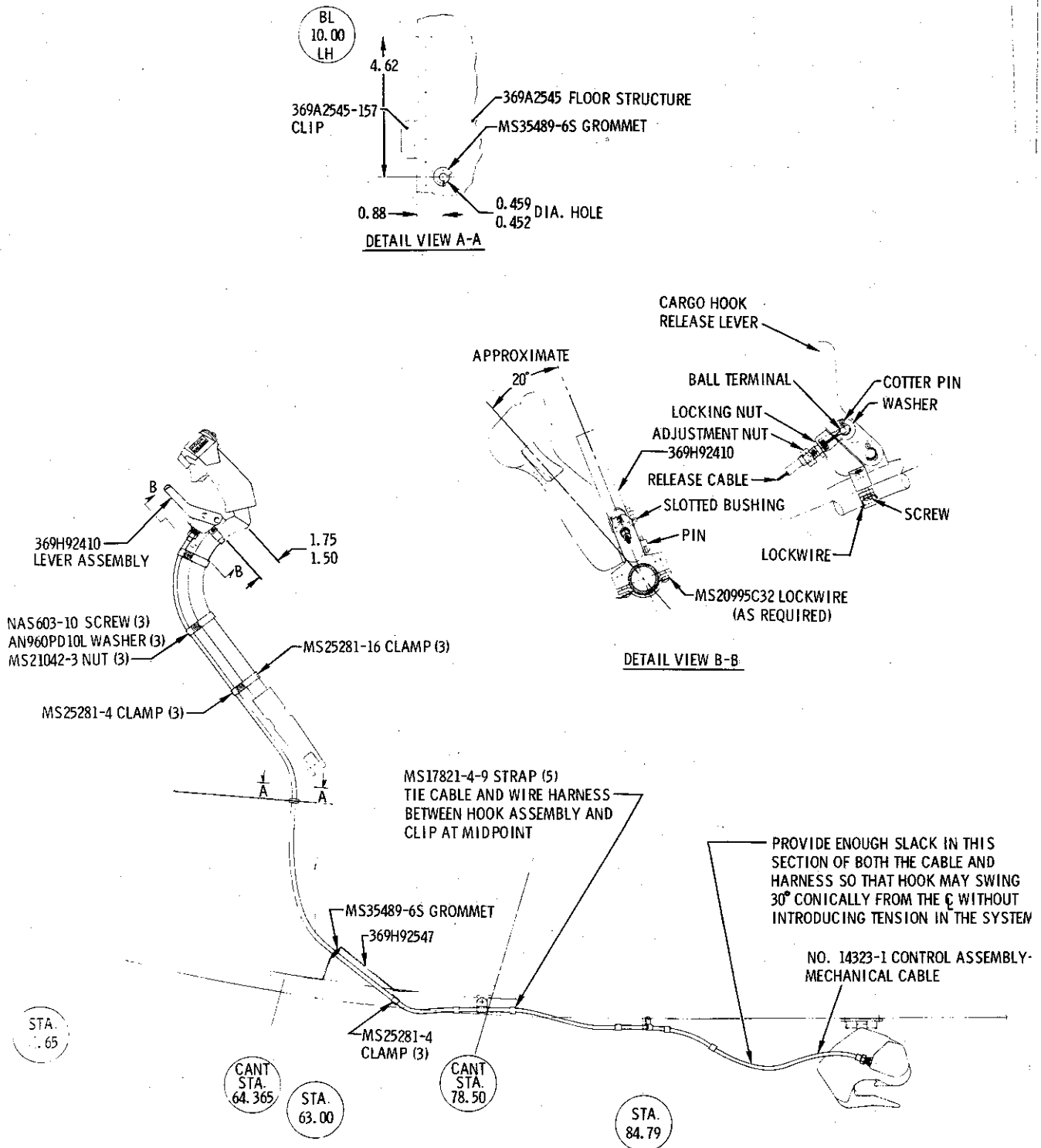
NOTE

Hook open position for lever is aft to position required for ball terminal aft travel of approximately one-half inch.

3. With release lever in correct position, tighten locknut.
 4. Lockwire screws securing release bracket clamp to cyclic stick.
- o. Check modification of cargo hook installation for discrepancies.
- p. Perform operational check of cargo hook release system.
1. Turn electrical power ON.
 2. With circuit breaker pushed in, depress cyclic stick release button and check that hook opens (latching bar is retracted).
 3. Manually close latching bar after each operational check.
 4. With hook closed, operate emergency release lever and check that hook opens.
 5. In pilot's compartment, check emergency release cable for sufficient slack, when pilot's cyclic stick is in full aft position. The release lever should not leave the full closed position.
 6. Actuate cargo hook external release and check that hook opens.
- q. In Component Record of helicopter Log Book, enter M50041 modification to existing 369H90065 Cargo Hook Installation.

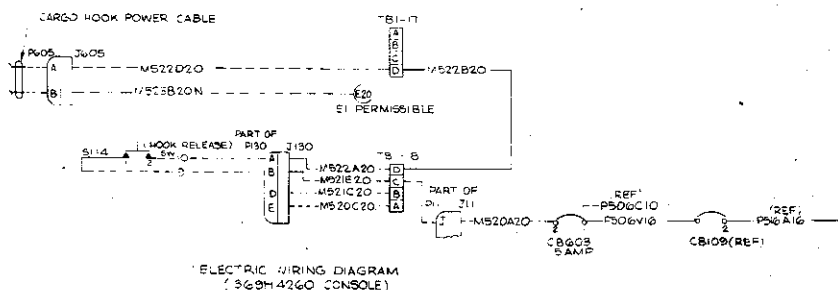
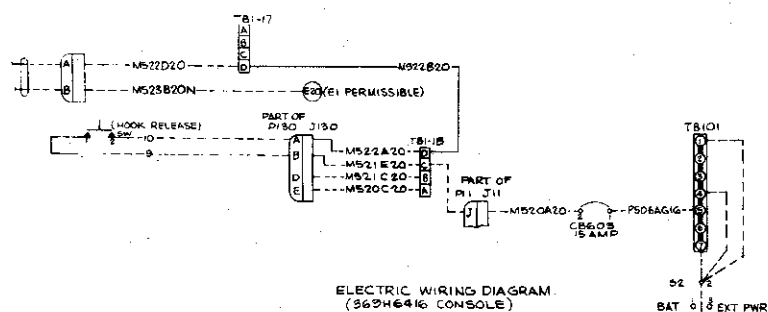
WEIGHT AND BALANCE DATA

Weight and balance not affected.



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Figure 1. Modification of Emergency Release Mechanism (M50041) - Cargo Hook Kit Installation (369H90065) (Sheet 1 of 2)



PS06V16		CB109-1	MS25086-106	CB608-1	MS25086-106
MS22B20		TB1-18D	MPCW20M-H2	TB1-17D	MPCW20M-H2
WIRE NO	LENGTH	FROM	TERMINATION	TO	TERMINATION
WIRE DATA LIST					

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Figure 1. Modification of Emergency Release Mechanism (M50041) -
Cargo Hook Kit Installation (369H90065) (Sheet 2 of 2)