

MD Helicopters, LLC

***MD500/600 Series
Technical Bulletins Package***

This package contains a complete set of
all Technical Bulletins issued through:

22 August 2023

The documents are presented in the order shown in the
CSP-500/600-INDEX.

MODEL 369D, 369E, 369F/FF, 500N, 600N HELICOPTERS (500D, 500E, 530F, 520N, 600N) TECHNICAL BULLETIN PACKAGE TABLE OF CONTENTS

Technical Bulletins

Technical Bulletins (TB) are Service Information Notices (SIN) which are not mandatory and have optional instructions for the performance of maintenance and/or alteration for compliance.

Model Effectivity

This table is a cross reference of the various helicopter designations and technical bulletin prefixes:

DESIGNATION			
MODEL		SERVICE DOCUMENT	
FAA	Marketing	New TB	Old SIN
369D	500D	TB369D–	DN–
369E	500E	TB369E–	EN–
369F	530F	TB369F–	FN–
369FF	530F Plus	TB369F–	FN–
500N	520N	TB500N–	NN–
600N	600N	TB600N–	N/A

NOTE:

As Service Information Notices are re-issued, they will be identified as Technical Bulletins with the helicopter model designation as the prefix.

TECHNICAL BULLETINS

369D (TB369D– or DN–)	369E (TB369E– or EN–)	369F (TB369F– or FN–)	500N (TB500N– or NN–)	600N (TB600N–)	SUBJECT	DATE ISSUED
10					Installation of Auxiliary Drain Valve; Fuel System Installation — PN 369H92255 Drain Kit	03 Oct 1977
12					Installation of Modified (Rotor Brake Handle) Trim Cover Panel Assembly	18 Nov 1977
16					Rework of Turbine Outlet Temperature (TOT) Indicator, PN 369A4521–5 and Torque Pressure Indicator, PN 369A4526–5	01 Feb 1978
17					Installation — Engine Compressor Water Wash Kit, PN 369H92537	06 Feb 1978
18					Removal of Capacitor — Voltage Regulator, AAE or LSI Model VR204; Installation of Varistor — Landing Light Relay, MS24166D1	06 Feb 1978
20					Replacement of Plenum Chamber Fittings — Torque Pressure Gage Tubing and Engine Oil Pressure Gage Tubing	06 Jun 1978
24					Field Inspection and Corrosion Repair — Main Rotor Drive Shaft, PN 369D25510	05 Jul 1978
30					Installation of Anti-Ice Fuel Filter, PN 369H90022	08 Sep 1978
35					Field Repair — Cyclic Trim Actuator Assemblies, PN 369A7170 Series and PN 369A7171 Series	29 Jan 1979

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369D (TB369D– or DN–)	369E (TB369E– or EN–)	369F (TB369F– or FN–)	500N (TB500N– or NN–)	600N (TB600N–)	SUBJECT	DATE ISSUED
36					Installation of Air Baffle, Seal and Cover Assemblies – Transmission Compartment	14 Nov 1978
39					Installation of Stainless Steel Abrasion Tape, PN 369D21104 — Main Rotor Blade Leading Edge	01 Jun 1979
40					Extension of PN 369A8010–615 Overboard Vent Tube, Engine Accessory Drive	15 Dec 1978
43					Field Repair — Trim Tab, Main Rotor Blade, PN 369D21100 Series	15 Feb 1979
46.1					Field Modification of PN 369D21002 Scissors Crank Assembly, Main Rotor Hub — Upgrade to PN 369D21002–21 Configuration	15 Aug 1979
48					Replacement of Radio Transmit/Intercom Trigger Switch; Rework of Cyclic Pitch Stick Grip Assembly	10 May 1979
50.1					Installation of Voltage Transient Suppressors	26 Nov 1979
55					Rework of Ground Handling Wheel Assemblies (Float Type)	20 Aug 1979
56					Installation of Fuselage Access Panels for Cyclic Trim Actuator Assemblies	07 Mar 1980
59					Installation of Cabin Heat Duct (Fiberglass) Assemblies, PN 369D22009–101 and PN 369D22009–103	15 Jan 1980
67					Rework of One-Way Lock Assembly, PN 369A7010 Series	02 Jun 1980
72.1					Drain Kit Installation, PN 369D28300–501 Engine Oil Tank and Oil Cooler; Drain Kit Installation, PN 369D290120 Main Rotor Transmission Cooler	06 Feb 1981
76					Rework of Static Pressure Tube Installation to Minimize Altimeter Needle Oscillation	08 Dec 1980
89.2					Balancing of Main Rotor Hub Assembly, PN 369D21200	24 Sep 1982
100					Relocation of Auto Re-ignition Controls and Modification of System for Full-Time Operation (Ref. FAA AD 80–24–04)	22 Feb 1983
101					Installation of PN 369H4237–21 Resistor Board Assembly for Easier, More Accurate Adjustment of TOT Indicator	01 Feb 1982
103					Modification Kit PN M50459–505 — Double Layer Abrasion Tape for PN 369D21100–505 and PN 369D21100–509 Main Rotor Blades	10 Mar 1982
106					Rework of PN 369A9905–Basic and PN 369A9905–3 Ground Handling Wheel Assemblies to Accommodate Installation of New PN 369D26107 Landing Gear Skid Fitting	29 Jun 1982
120	8				Installation and Replacement of Protective Sleeve (Speedi-Sleeve PN 084957) on Tail Rotor Transmission Output Gearshaft	31 May 1983

TECHNICAL BULLETINS

369D (TB369D- or DN-)	369E (TB369E- or EN-)	369F (TB369F- or FN-)	500N (TB500N- or NN-)	600N (TB600N-)	SUBJECT	DATE ISSUED
140	28	16			Oil Tank Filler Nozzle Strainer Assembly, PN 369D28318	15 Apr 1986
				002R1	Ballast Weight Installation	28 Feb 2017
002	002	002	002	003	Cyclic Grip Modification (Trim Switch Installation)	01 Jun 1999
		003			Fuel System Vapor Vent Line Check Valve Installation	26 Oct 1999
		004			Allison 250- C30 Engine Installation Surge Fix Modification	26 Apr 2000
				004	Fuel Cell Baffle Modification	10 Jan 2001
003	003	005	003	005	Main Transmission Lubrication Pump Modification	09 Apr 2001
004	004	006			Cyclic Trim Actuator Housing Replacement or Modification	12 Jun 2001
				006R1	600N Yaw Stability Augmentation System (YSAS) Installation	07 Apr 2006
				007R3	Fuselage Aft Section and Tailboom Modification	12 Dec 2011
005					Engine Automatic Re- Ignition Modification	13 Mar 2009
			004	008	VSCS Test Box	02 Feb 2010
				009R1	Modification of Engine Control Cable	19 Jul 2010
		007			Cooling Scoop Modification	15 May 2012
	005	008	005	010	Slant Console Installation	15 May 2013
	006R2	009R2	006R2	011R2	LED Anti- Collision (Strobe) and Position Light Installation	11 Jan 2023
	007R1	010R1	007R1		Garmin G500H and Avionics Suite	14 May 2014
006R1	008R1	011R1	008R1		Modification and Installation of a New Engine N ₂ and Rotor Tachometer Indicator	14 May 2021
		015			Increase of Maximum Takeoff Gross Weight to 3350 LB	19 Jun 2020
	011	017		014	Replacement of the MD93 Clock / USB / Chronometer	10 Jan 2022
				018	Software Upgrade of the Engine Control Unit	02 Sep 2022
			013	017	Replacement of the Position and Tail Light Assemblies	27 Sep 2022
	010R1	016R1	012R1	016R1	Replacement of the Anti- Collision Light and Rear Position Light	11 Jan 2023
		019			Auxiliary Fuel Tank Floor Modification	17 Jul 2023
		020			CRFS Auxiliary Fuel Provisions Kit Installation	17 Jul 2023
	015	021	017		Floor Modification for Cargo Tie- Down Holes	02 Aug 2023
		014			GTX 33H to GTX 345R Modification	22 Aug 2023
	016	022	018		Ignition Isolator Switch Modification	22 Aug 2023

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* Supersedes TB369H-001, TB369D-001, TB369E-001, TB369F-001, TB500N-001, TB600N-001, dated 28 April 1998.

DOOR SEAL REPLACEMENT

This Technical Bulletin has been incorporated into the maintenance manual and is cancelled in its entirety.

For 369H Model helicopters, refer to CSP-H-2 (Basic Handbook of Maintenance Instructions), dated 15 May 2001 or later for the current door seal replacement procedure.

For 369D/E/FF, 500N and 600N Model helicopters, refer to CSP-HMI-2 (Basic Handbook of Maintenance Instructions), dated 5 November 2001 or later for the current door seal replacement procedure.

Remove this Technical Bulletin from your files one year after the issue date.

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CYCLIC GRIP MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

All MD Helicopters, Inc. (MDHI) 369H, 369HE, 369HM, 369HS, 369D, 369E, 369F/FF, 500N and 600N series helicopters.

B. Assembly/Components Affected By This Notice:

Pilot/Co-Pilot Cyclic Grip Assemblies (369D27133 and 369H7833)

C. Reason:

To allow operators to install the improved A218-101117-00 cyclic trim switch.

D. Description:

Procedures in this Bulletin provide owners and operators with information to install the A218-101117-00 cyclic trim switch. The modifications necessary to install the A218-101117-00 cyclic trim switch may be performed using the instructions and tooling in this Technical Bulletin or the cyclic stick may be sent to the authorized Service Center listed below for modification.

E. Time of Compliance

Customer option: at the discretion of the owner/operator.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Three (3) man-hours.

H. Interchangeability:

None

I. Authorized Service Centers:

Ro-Wing Aviation Inc.
275 Durley Avenue
Camarillo Airport
Camarillo, CA 93010
Phone: (805) 484-0556
Fax: (805) 388-9906

J. Material/Part Availability:

Commercial sources.

REPLACEMENT PARTS/SUPPLIES/TOOLS			
Nomenclature	Part No.	Qty.	Source
(item1) Switch	A218-101117-00	1	Guardian Electric
(item 2) Solder, tin alloy, rosin core	QQ-S-571 (composition SN60WRP2)	A/R	Commercial

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REPLACEMENT PARTS/SUPPLIES/TOOLS (Cont.)			
Nomenclature	Part No.	Qty.	Source
(item 3) Potting Compound	MIL-S-8802 890	A/R	Coast Proseal, Compton, CA.
	MIL-S-8516 3C-3007 Class II	A/R	Churchill Chemical Corp. L.A. CA.
	PR1422 A 1/2 Type I	A/R	Product Research 2919 Empire Ave. Burbank, CA 91504
	RTV 730 Type I, Class 3	A/R	Dow Corning Midland, MI.
(item 4) Isopropyl Alcohol	TT-I-735	A/R	Commercial
(item 5) Lubricating Oil		A/R	Commercial
(item 6) Tie Strap	MS3367 (size optional)	A/R	Commercial
(item 7) Modification Tool	RBT28477-1	1	Red Barn Machine 4681 Isabelle St. Eugene, OR 97402 (541) 344-9953 FAX: (541)344-3863
(item 8) 1/2 " Drill Press (1000 rpm or less)		1	Commercial
(item 9) Small Hand Drill Motor		1	Commercial
(item 10) Small Tap Handle		1	Commercial
(item 11) Setscrew	AN565D632H4	1	Commercial

K. Warranty Policy:

N/A

L. Weight and Balance:

N/A

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Illustrated Parts Catalog (CSP-IPC-4)

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2. ACCOMPLISHMENT INSTRUCTIONS

Refer to Figure 1

Refer to the following manuals for cyclic switch removal/installation:

CSP-H-2, Section 7 (369H series)

CSP-HMI-2, Section 67-10-20 (369D/E/FF/500N and 600N)

- (1). Remove cyclic stick from helicopter per CSP-H-2 and CSP-HMI-2.
- (2). Remove clamp and/or tie straps at bottom of cyclic stick assembly.
- (3). Remove pivot pin holding trigger switch (S101). The pin is removed serrated end first while holding the grip in the normal position. Carefully pull switch from grip approximately 2 inches (50.8 mm).
- (4). Remove trim switch cap by pulling cap off.
- (5). Remove potting compound from top of grip assembly exposing the 2 screws securing the trim switch. Remove (2) screws. Carefully remove trim switch (S107).
- (6). Tag, identify and unsolder wires from switch (S107) and hook switch (S4) if installed.
- (7). Remove screw at the base of grip and carefully remove grip from stick feeding wires out.
- (8). Install grip into fixture RBT 28477 (Figure 1, -1). Route wires at the bottom of grip over flat on fixture.
- (9). Install "T" pin (-19) into hole for trigger switch pivot pin to secure the grip to fixture RBT 28477 (-1).
- (10). Install arbor (-11) along with sleeve (-9) into fixture (-1) and tighten set screw. Ensure sleeve (-9) is firm atop fixture (-1) and set screw is against flat. Sleeve (-9) should be approximately 5/16" (0.3125) (7.9375 MM) below top of grip.
- (11). If needed, use a piece of 0.032 (0.8128 MM) safety wire and hook any remaining wire inside the grip assembly and pull the wires down to prevent any damage when modifying the grip.
- (12). Put 1 drop of lubricating oil (item 5) on top of arbor.
- (13). With a 1000 RPM or less drill press (item 8), place the cutter assembly (-7) in the chuck and then slowly feed the cutter into the grip. Release for a moment and feed again until the cutter stops cutting.
- (14). Remove cutter (-7) from drill press and arbor (-11), sleeve (-9) from fixture.
- (15). Install drill guide (-5) on top of grip to cut keyway. Use #22 drill bit at 1000 RPM. Drill 1/2" (0.5) (12.7000 MM) deep, remove drill guide.
- (16). Install a #36 bushing into the fixture (-1). With a small hand drill motor (item 9) drill with a #36 bit through to the 1" (25.40 MM) hole.
- (17). Install bushing #27 in the fixture (-1), and tap by hand a 6/32" thread in grip for set screw.
- (18). Remove grip from fixture (-1).

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- (19). Re-solder wires to new cyclic switch (A218-101117-00) and hook switch (S4) if installed using solder (2).
- (20). Clean grip, wiring and switches with alcohol (item 4).
- (21). Remove identification tags from wires.
- (22). Carefully position switches to their approximate location within the grip.

NOTE: Ensure that switches are correctly positioned with any applicable keyway, pin hole, etc., for proper alignment of mating parts.

- (23). Install attaching hardware securing switches onto grip. New trim switch is secured with one set screw (item 11) installed in tapped hole (Step 17). Original two set screw holes are filled with sealing compound (item 3).
- (24). Install trigger and trigger attach pin.
- (25). Install cyclic trim switch cap.
- (26). Reinstall grip on stick tube, pull wiring down through stick and secure with clamp.
- (27). Reinstall cyclic stick per (CSP-H-2) or (CSP-HMI-2).



Cyclic trim actuators should be operated only momentarily to prevent damage to the equipment.

- (28). Check switch operation and wiring continuity.

Example: Trim left, cyclic stick should move left. Repeat in all four directions (right, left, forward and aft).

- (29). Apply sealing compound (item 3) to all screw holes and insert holes.
- (30). Secure wiring to stick with nylon straps (item 6) and/or previously removed clamp.
- (31). Record compliance to the Technical Bulletin in the Compliance Record section of the helicopter Log Book.

3. POINTS OF CONTACT

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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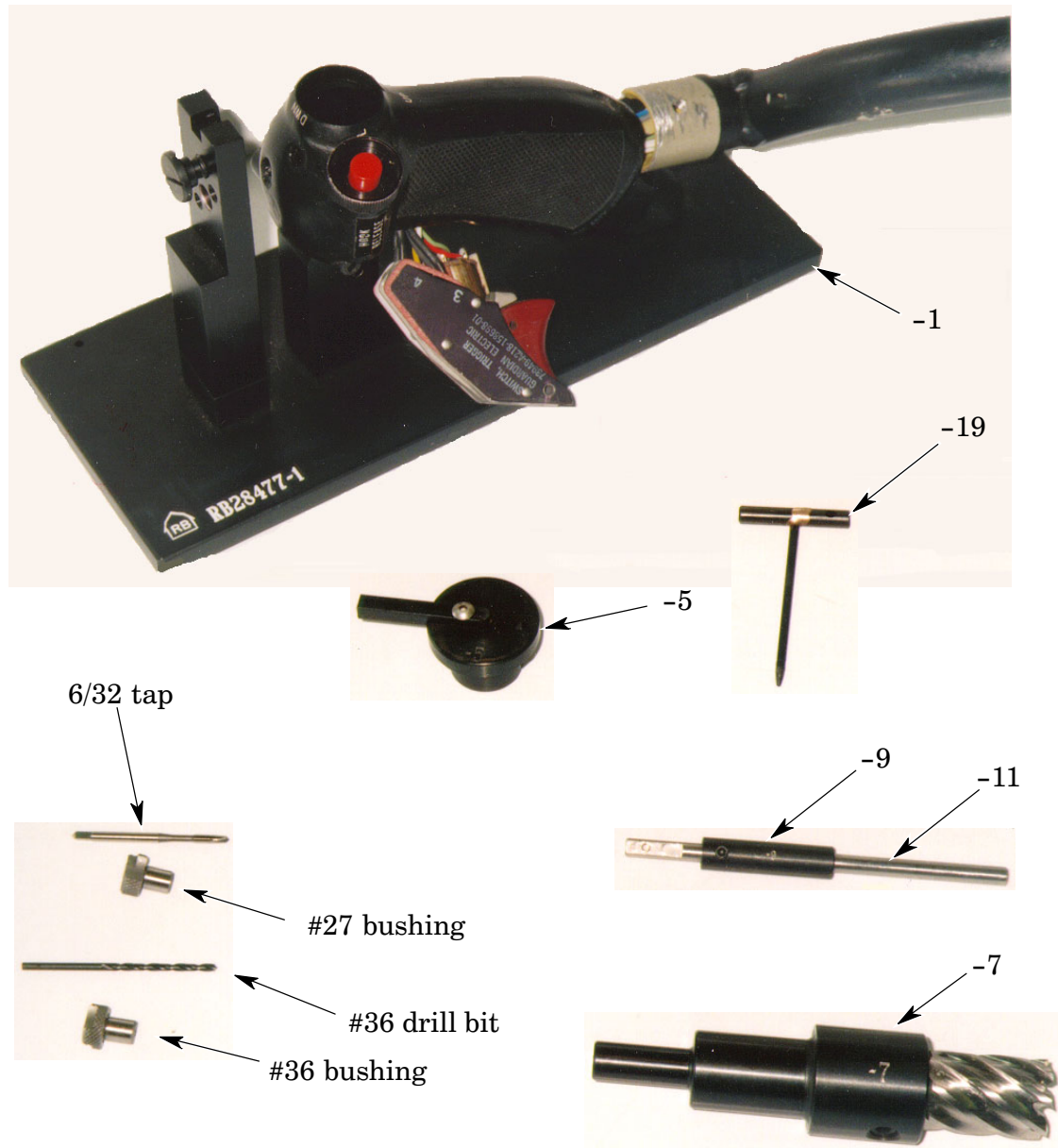


Figure 1. Grip Shown Installed on Fixture with Associated Tools

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MAIN TRANSMISSION LUBRICATION PUMP MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

All Model 369D, 369E, 369FF, 500N, and 600N Helicopters equipped with Main Transmission Assembly, P/N 369F5100-503, -505.

B. Assembly/Components Affected By This Notice:

Main Transmission Assembly (P/N 369F5100-503, -505), Lubrication Pump (P/N 369F5135-1, -3).

C. Reason:

The settings for the main transmission lubrication pump differential pressure indicator and filter bypass valve are too low for the required oil flow. This condition may result in premature differential pressure indication (button pop) with relatively clean filters.

D. Description:

This Bulletin provides operators with information pertaining to installation of a new filter bypass valve and differential pressure indicator in the main transmission lubrication pump.

E. FAA Approval

The technical design aspects of this Service Bulletin are FAA Approved.

F. Manpower:

4 Man-hours.

G. Time of Compliance:

Customer option, at operator's discretion, if repeated instances of differential pressure indicator actuations occur with a relatively clean filter installed in the lubrication pump.

H. Interchangeability:

The modified lubrication pump (P/N 369F5135-5) is one-way interchangeable with previous versions of the lubrication pump (P/N 369F5135-1, -3).

I. Material/Part Availability:

The parts listed below are included in Howden Airdynamics, Inc., Kit P/N H26090. Contact MDHI Warranty and Repair Dept.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Element, Filter	H22990	1	MDHI
Valve, Filter Bypass	H24996	1	MDHI

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Indicator, Differential Pressure	H25074	1	MDHI
Plate, Identification	H26089	1	MDHI
Ring, Retaining	P15035A	1	MDHI or Commercial
O-Ring	M83248/1-016	2	MDHI or Commercial
O-Ring	M83248/1-017	1	MDHI or Commercial
O-Ring	M83248/1-028	1	MDHI or Commercial
O-Ring	M83248/1-140	1	MDHI or Commercial
*Petrolatum (petroleum jelly)	W-P-236 MIL-G-6032	AR	Commercial
*Solvent: Alcohol, Isopropyl or Cleaner	Desoclean 45	AR AR	Commercial DeSoto Aerospace Coatings, Inc. 1608 Fourth Street Berkeley, CA 94710
*Adhesive (epoxy)	EA9330.3	AR	Hysol Division Dexter Corporation P.O. Box 312 Pittsburg, CA

*Not part of Kit.

J. Warranty Policy:

If kits are ordered from MDHI Warranty Department prior to 31 December 2001, kits will be provided at no cost to the operator. After 31 December 2001, parts should be ordered through MDHI Parts Sales at the published price.

K. Tooling:

MDHI will coordinate the field use of a special tool (P/N HT10628) required for modification of the lubrication pump.

L. Weight and Balance

N/A

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Illustrated Parts Catalog CSP-IPC-4.

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation Instructions

- (1). Remove sound insulation, transmission access covers and baffle to gain access to lubrication pump on right side of main transmission.

B. Modification Instructions

(Ref. Figure 1)

- (1). Break safety wire and unscrew and remove filter bowl from lube pump housing. Remove and discard O-ring.
- (2). Remove and discard filter element and two O-rings.
- (3). Remove filter bypass valve and O-ring from pump housing using special tool (P/N HT10628).
 - (a). Hold hex portion of special tool, with ball lever at 90° to tool axis, and rotate cylinder (between lever and hex) CW until snug.
 - (b). Rotate cylinder approximately 270° CCW.
 - (c). Carefully install collet end of special tool into receiving end of pump bypass valve.
 - (d). Support special tool and rotate ball lever 90° CW.
 - (e). Support special tool and swivel ball lever 90° until its axis is in line with hex and cylindrical portions of tool.
 - (f). Pull special tool and filter bypass valve outward, along tool axis and away from pump body.
 - (g). Discard O-ring. Return special tool and removed filter bypass valve to MDHI (Ref. 3. Disposition of Parts Removed).
- (4). Lubricate new M83248/1-028 O-ring with petrolatum and install onto new filter bypass valve.
- (5). Install filter bypass valve into pump housing.
- (6). Remove and discard retaining ring holding differential pressure indicator in filter bowl.
- (7). Remove and discard differential pressure indicator and O-ring.
- (8). Lubricate new M83248/1-017 O-ring and install onto new differential pressure indicator.
- (9). Install differential pressure indicator into filter bowl and secure with new retaining ring.
- (10). Lubricate two new M83248/1-016 O-rings and install them into new filter element.
- (11). Insert filter element over differential pressure indicator boss within filter bowl.
- (12). Install new M83248/1-140 O-ring onto filter bowl.
- (13). Screw filter bowl with filter element into pump housing until hand tight.

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- (14). Use 1-inch (25.4 mm) socket on hex located at back end of filter bowl to secure filter bowl to pump housing. Torque filter bowl to 75-100 in-lbs (8.474-11.298 N.m). Safety wire filter bowl.
- (15). Wipe outer cylindrical surface of pump housing body with solvent.
- (16). Affix identification plate to the cleaned surface of pump housing body.
- (17). Seal outside edges of identification plate with adhesive mixed according to container instructions.
- (18). Reidentify P/N 369F5100-503 main transmission as as P/N 369F5100-503M, as follows.
 - (a). Locate nameplate bonded to left side of main transmission housing.
 - (b). Scribe "M" in close proximity to "-503" dash number.
- (19). Reidentify P/N 369F5100-505 main transmission as as P/N 369F5100-507, as follows.
 - (a). Locate nameplate bonded to left side of main transmission housing.
 - (b). Cross-out existing dash number and scribe "-507" in close proximity to "369F5100" base number.

C. Completion Instructions

- (1). Reinstall baffle, transmission access covers and sound insulation.

3. DISPOSITION OF PARTS REMOVED

Return special tool (P/N HT10628) used for filter bypass valve removal and removed filter bypass valve to MDHI Field Service Department. If tool and removed valve are not received within five days of removal, customer will be billed for tool and valve.

Scrap all other parts removed from lubrication pump.

4. COMPLIANCE RECORD

Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

5. POINTS OF CONTACT:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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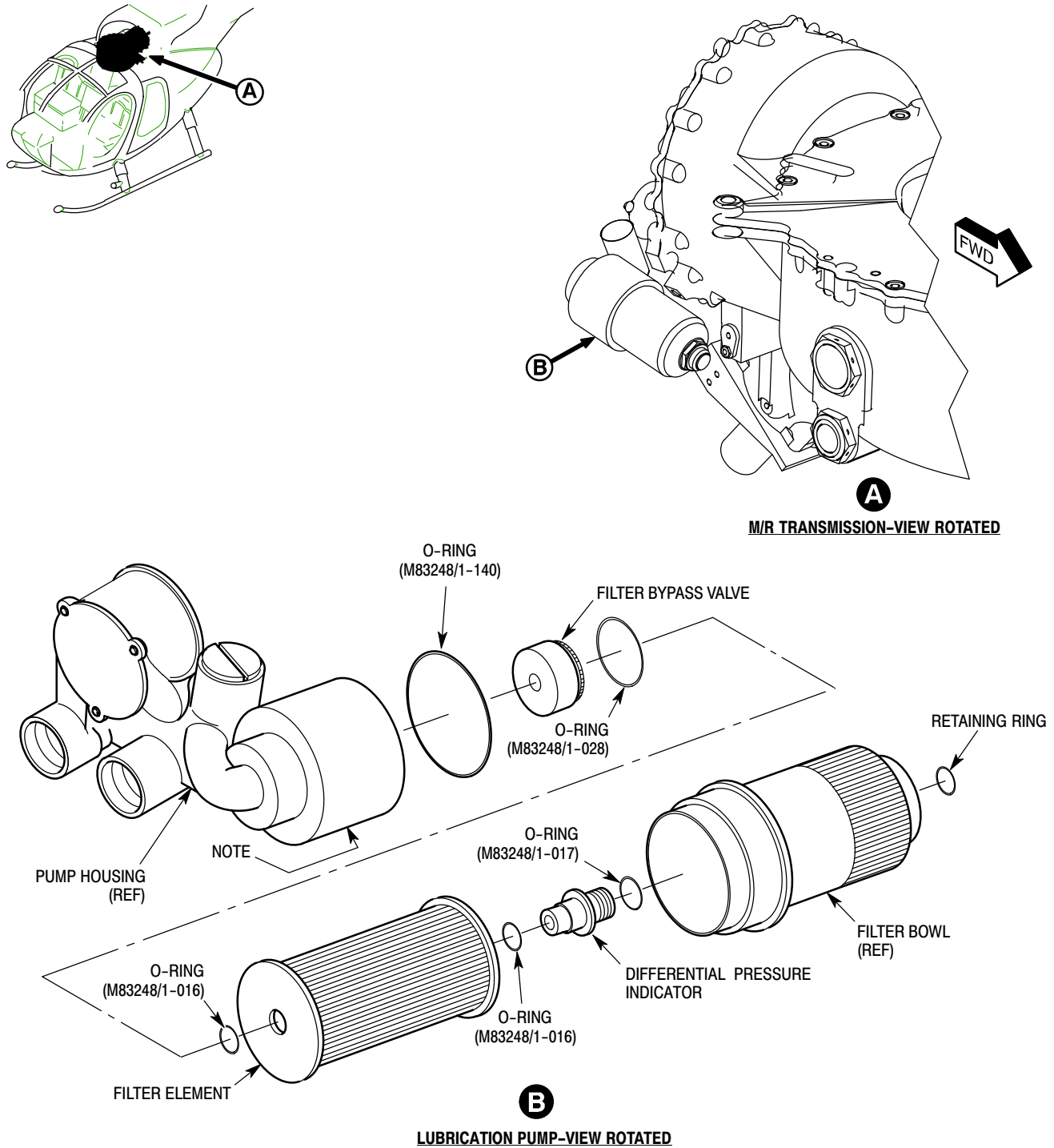


Figure 1. Lubrication Pump Modification

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CYCLIC TRIM ACTUATOR HOUSING REPLACEMENT OR MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

All Model 369H/HE/HM/HS/D/E/FF series helicopters equipped with a lateral cyclic trim actuator assembly and/or longitudinal cyclic trim actuator assembly listed in Paragraph 1.B.

B. Assembly/Components Affected By This Notice:

Lateral Cyclic Trim Actuator Assembly (P/N 369A7170-5, -7, -9)

Longitudinal Cyclic Trim Actuator Assembly (P/N 369A7171-5, -7, -9, -11)

C. Reason:

Removal and installation of the hardware at the lower end of the lateral and longitudinal cyclic trim actuators is difficult because of the location of the nut and cotter pin.

Complying with this Bulletin will facilitate ease of removal and installation of the lateral and longitudinal cyclic trim actuators.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to replacement or modification of the lateral and longitudinal cyclic trim actuator housings. Modification consists of installing a nutplate on the housing, eliminating the need to use the washer, nut and cotter pin on the lower end. Replacement housings have the nutplate installed.

E. Time of Compliance

Customer option, at owner/operator's discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Six (6) man-hours.

H. Interchangeability:

None

I. Material/Part Availability:

Contact MDHI Parts Sales Dept.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Housing, Support (Longitudinal)	80-369A7110-5	1	MDHI
Housing, Support (Lateral)	80-369A7110-6	1	MDHI

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Nutplate	NAS1474A4	2	MDHI or Commercial
Rivet	MS20426AD3-7	4	MDHI or Commercial
Bushing (Longitudinal)	MHS626-4-250	1	MDHI
Bushing (Lateral)	MHS626-4-293	1	MDHI
Bushing (Longitudinal and Lateral)	MHS626-4-440	2	MDHI
Dye Penetrant Kit	MIL-I-25135	A/R	Commercial
Fluorescent dye	ASTM E1417	A/R	Commercial
Epoxy primer	MIL-P-8558, T1, CL C2	A/R	Deft Inc. 17451 Von Karman Ave Irvine, CA 92614 (800) 544-3338

J. Warranty Policy:

N/A

K. Tooling:

N/A

L. Weight and Balance:

N/A

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Basic Handbook of Maintenance Instructions (CSP-HMI-2), Basic Handbook of Maintenance Instructions (CSP-H-2)

2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation Instructions

- (1). Remove cyclic trim actuators from helicopter (CSP-HMI-2, Section 67-10-00, Cyclic Trim Actuator Removal or CSP-H-2, Section 7, Cyclic Trim Actuator Removal) and discard cotter pin, nut and washer (under nut) when disconnecting lower end of actuator.
- (2). Remove actuator from housing (CSP-HMI-2, Section 67-10-00, Cyclic Trim Actuator (Motor/Gear Drive Mechanism) Replacement or CSP-H-2, Section 7, Cyclic Trim Actuator (Motor/Gear Drive Mechanism) Replacement).

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- (3). Replace housing with new housing (which includes nutplate holes) as follows or modify housing per step 2.B., Modification Instructions.
 - (a). Install nutplate on new housing with two rivets.
 - (b). Replace housing (CSP-HMI-2, Section 67-10-00, Cyclic Trim Actuator Housing or Trim Tube Replacement or CSP-H-2, Section 7, Cyclic Trim Actuator Housing or Trim Tube Replacement).
 - (c). Proceed to step 2.C., Completion Instructions.

B. Modification Instructions

(Ref. Figure 1)

- (1). Remove both bushings from housing.
- (2). Machine housing as shown for longitudinal actuator. Machine opposite side of housing for lateral actuator.

(Ref. Figure 2)

- (3). Locate and drill two 0.0980 inch (2.489 mm) nutplate installation holes in housing using #40 drill. Back countersink holes at inside surface of lug using #40 piloted back counter sink.
- (4). Finish machined surfaces to 125 RMS.
- (5). Perform a dye penetrant inspection in accordance with MIL-I-25135 or fluorescent inspection in accordance with ASTM E1417 for cracks in reworked surfaces.
- (6). Chemically treat exposed magnesium (CSP-A-3, Section 5, Magnesium).
- (7). Apply epoxy primer to reworked surface per manufacturer's instructions.

NOTE: If original bushing is serviceable, it may be cut down to a length of 0.250 inch (6.35 mm) for longitudinal actuator and 0.293 inch (7.44 mm) for lateral actuator and reinstalled.

- (8). Install reworked or new MHS626-4-250 (longitudinal) or MHS626-4-293 (lateral) bushing in housing on nutplate side.
- (9). Install new MHS626-4-440 bushing in housing on bolt head side.
- (10). Install nutplate on housing with two rivets.

C. Completion Instructions

- (1). Install actuator on housing (CSP-HMI-2, Section 67-10-00, Cyclic Trim Actuator (Motor/Gear Drive Mechanism) Replacement or CSP-H-2, Section 7, Cyclic Trim Actuator (Motor/Gear Drive Mechanism) Replacement).
- (2). Install cyclic trim actuators in helicopter (CSP-HMI-2, Section 67-10-00, Cyclic Trim Actuator Installation or CSP-H-2, Section 7, Cyclic Trim Actuator Installation).

3. DISPOSITION OF PARTS REMOVED

Scrap

4. COMPLIANCE RECORD

Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

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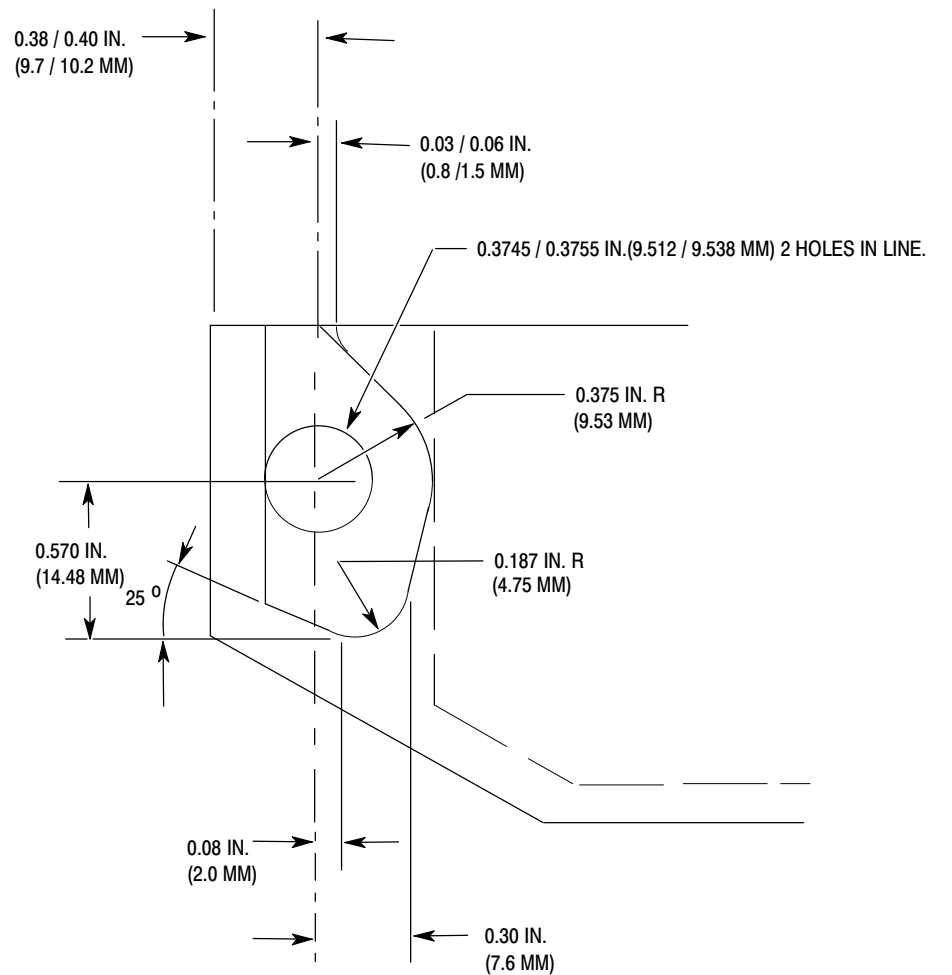
5. POINTS OF CONTACT

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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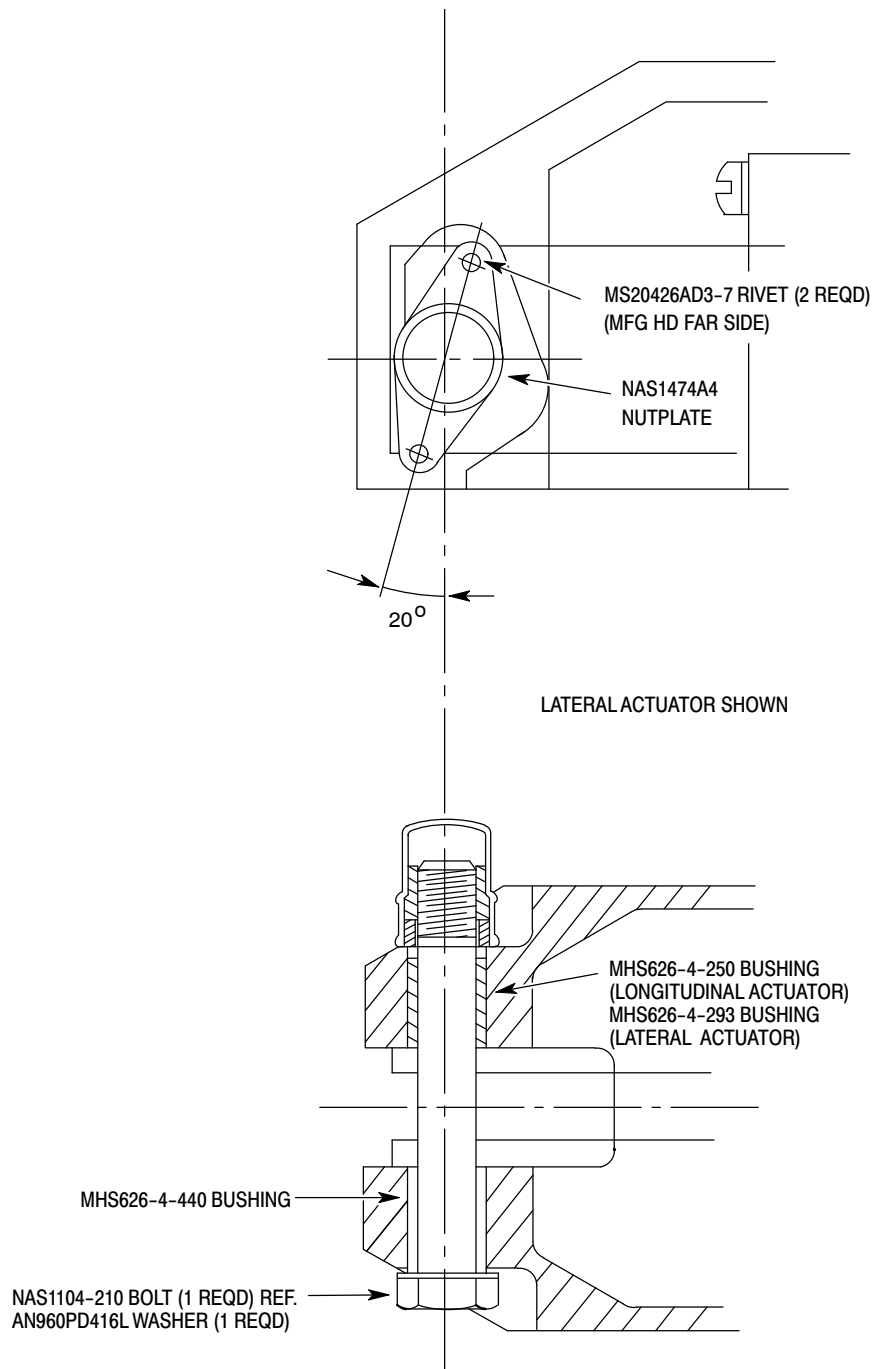
NOTE: LONGITUDINAL ACTUATOR
SHOWN, LATERAL ACTUATOR
IS OPPOSITE.

88-788

Figure 1. Machining of Actuator Housing

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Figure 2. Rework of Actuator Housing

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ENGINE AUTOMATIC RE-IGNITION MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

All Model 369H/HE/HM/HS/D series helicopters with engine automatic re-ignition kit installed.

B. Assembly/Components Affected By This Bulletin:

369H90118 engine automatic re-ignition kit.

C. Reason:

To disconnect a defective switch in the XDS9 assembly from the system because replacement switches are not available. Also to change the manual reset function of the XDS9 engine automatic re-ignition (**RE-IGN**) indicator light to automatic reset after engine re-ignition.

D. Description:

This modification disconnects the wires from the switch in the XDS9 assembly from the system. The disconnected wires are then spliced together to make the XDS9 **RE-IGN** indicator light reset automatically after engine re-ignition.

E. FAA Approval

The technical design aspects of this Bulletin are FAA Approved.

F. Manpower:

Two man-hours.

G. Time of Compliance:

Customer option, at operator's discretion.

H. Interchangeability:

None

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

J. Material/Part Availability:

N/A

K. Warranty Policy:

N/A

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

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N. Weight and Balance

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-HE/HS-1 Rotorcraft Flight Manual, CSP-D-1 Rotorcraft Flight Manual, CSP-H-3 Optional Equipment Manual, and CSP-HMI-3 Handbook of Maintenance Instruction, Instruments - Electrical - Avionics.

2. ACCOMPLISHMENT INSTRUCTIONS**A. Preparation:****NOTE:**

- Make sure you hear engine igniter when you do the operational test.
 - If you do not hear engine igniter during the operational test, repair the defective auto re-ignition system before you do the modification.
- (1). Before you do this modification, do an operational test of the engine automatic re-ignition system. Refer to the before engine start procedures of the applicable Rotorcraft Flight Manual.

B. Modification Instructions:

(Ref. Figure 1 and Figure 2)

NOTE: If it is necessary to disconnect wires for switch access, make sure you put a label on them. You must connect these wires when the modification is complete.

- (1). 369H/HE/HM/HS helicopter, get access to the rear end of XDS9 light assembly (Ref. CSP-H-2 Basic Handbook of Maintenance Instructions and CSP-H-3 Optional Equipment Manual).
- (2). 369D helicopter, get access to the rear end of XDS9 light assembly (Ref. CSP-HMI-3 Handbook of Maintenance Instruction, Instruments - Electrical - Avionics).
- (3). Disconnect all wires from switch S2 Normally Open (NO) terminal.
- (4). Disconnect all wires from switch S1 Normally Closed (NC) terminal.
- (5). Splice the disconnected wires together, use a solder splice or solder and heat shrinkable sleeving.
- (6). 369H/HE/HM/HS helicopter, install components removed for access to XDS9 light assembly (Ref. CSP-H-2 Basic Handbook of Maintenance Instructions and CSP-H-3 Optional Equipment Manual).
- (7). 369D helicopter, install components removed for access to XDS9 light assembly (Ref. CSP-HMI-3 Handbook of Maintenance Instruction, Instruments - Electrical - Avionics).
- (8). Remove, or apply black paint to, the **PRESS TO RESET** decal on the engine automatic re-ignition switch panel.

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C. Ground Operational Test:

- (1). Apply external electrical power to the helicopter.
- (2). Make sure **ARMED** and **RE-IGN** lights come on when test switch is set to **TEST** or arm switch is set to **ARM**.
- (3). Make sure you hear engine igniter.
- (4). Make sure **RE-IGN** light goes off after you release the test or arm switch.
- (5). Disconnect electrical power from helicopter.

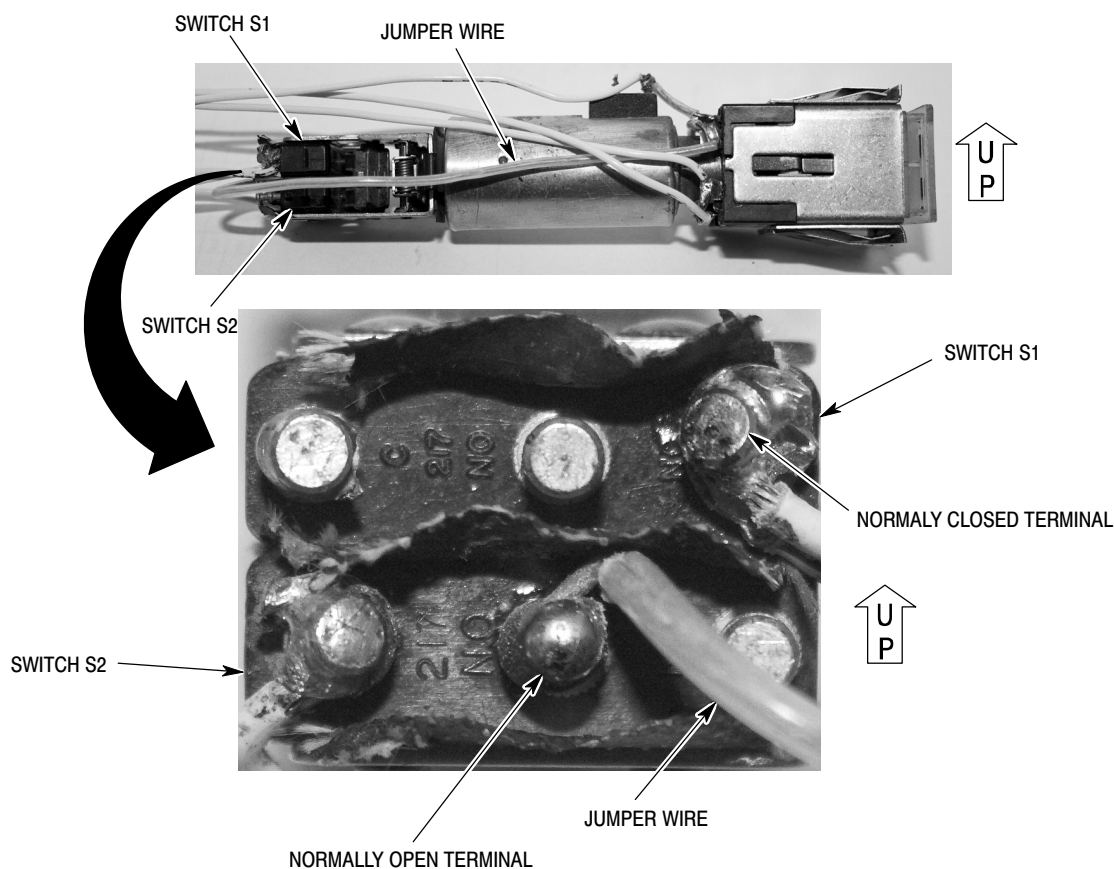
D. Ground Operational Test With Engine In Operation:

- (1). For early systems with the arm switch and torquemeter oil pressure switch, do the steps that follow:
 - (a). Start engine (Ref. applicable Rotorcraft Flight Manual).
 - (b). Set engine torque to approximately 40 psi.
 - (c). Set arm switch to **ARM**, make sure **ARMED** light comes on
 - (d). Decrease engine torque to below 25 psi, make sure **RE-IGN** light comes on.
 - (e). Increase engine torque to approximately 40 psi, make sure **RE-IGN** light goes off.
 - (f). Shut down engine (Ref. applicable Rotorcraft Flight Manual).
- (2). For systems with the arm switch and Engine Power Out (EPO) box, do the steps that follow:
 - (a). Start engine (Ref. applicable Rotorcraft Flight Manual).
 - (b). Set arm switch to **ARM**, make sure the **ARMED** light comes on.
 - (c). Set N₂ above 98%, make sure the **RE-IGN** light is off.
 - (d). Decrease RPM to less than 98%, make sure the **RE-IGN** light comes on.
 - (e). Increase N₂ to 103%, make sure the **RE-IGN** light goes out.
 - (f). Shut down engine (Ref. applicable Rotorcraft Flight Manual).
- (3). For later systems with the test switch, do the steps that follow:
 - (a). Start engine (Ref. applicable Rotorcraft Flight Manual).
 - (b). Make sure the **ARMED** comes on when there is transmission oil pressure.
 - (c). Set N₂ above 98%, make sure the **RE-IGN** light is off.
 - (d). Decrease RPM to less than 98%, make sure the **RE-IGN** light comes on.
 - (e). Increase N₂ to 103%, make sure the **RE-IGN** light goes out.
 - (f). Shut down engine (Ref. applicable Rotorcraft Flight Manual).
- (4). Make a record in the Compliance Record section of the Rotorcraft Log Book that this technical bulletin has been completed.

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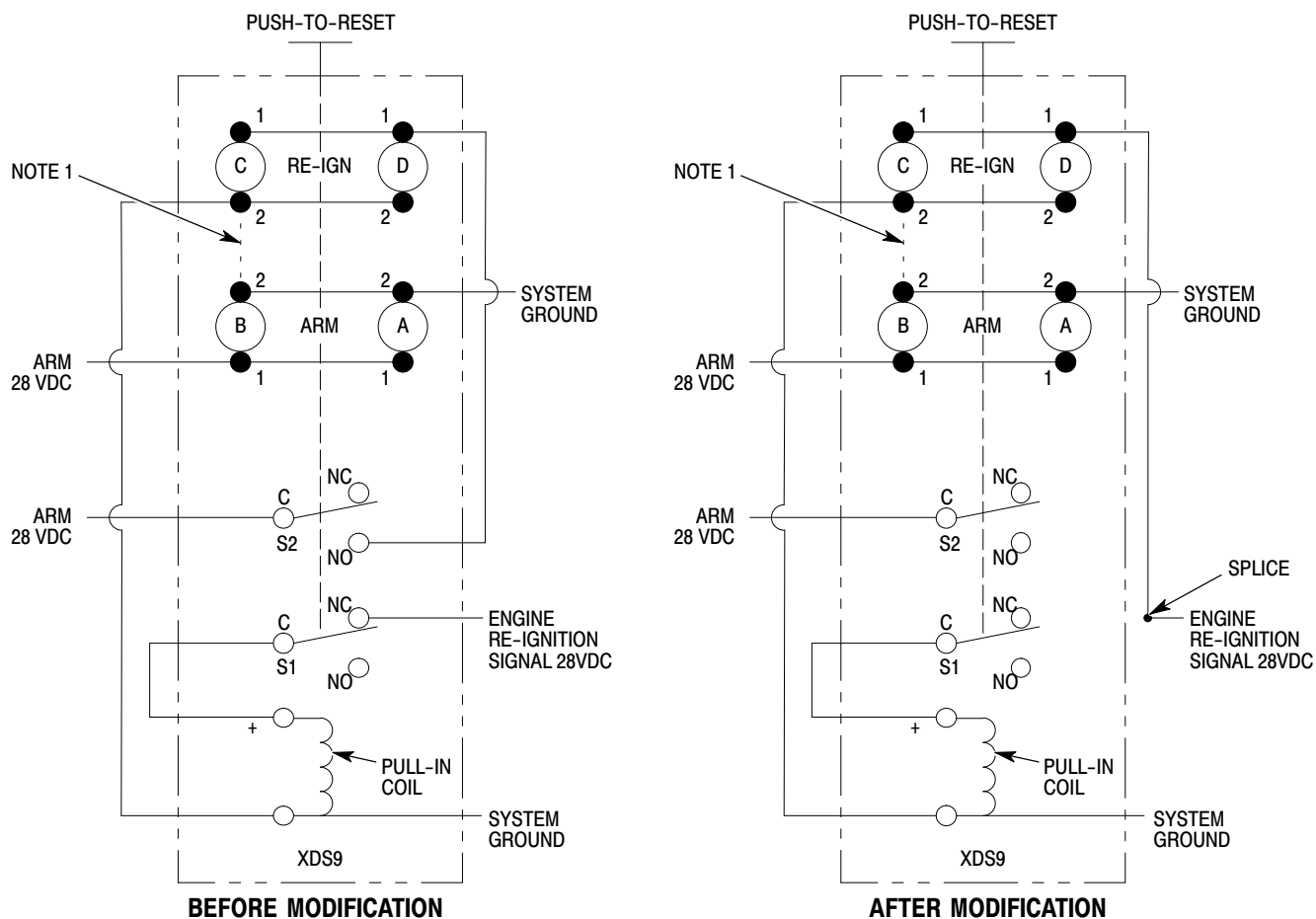
88-815

Figure 1. Engine Automatic Re-Ignition Indicator Light

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NOTES:

1. INSTALLED IN EARLY SYSTEMS. DO NOT CHANGE.
2. WIRE IDENTIFICATION IS DIFFERENT FOR DIFFERENT KITS, BUT INPUT AND OUTPUT SIGNAL FUNCTIONS STAY THE SAME.

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Figure 2. XDS9 Switch Assembly Connection Modification

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INSTALLATION OF AUXILIARY DRAIN VALVE, FUEL SYSTEM INSTALLATION – PN 369H92255 DRAIN KIT

1. PLANNING INFORMATION:

A. Models Affected:

500D Model 369D Helicopter Serial No. 0001D thru 0129D

B. Preface:

The information given in this Service Information Notice lists a procedure for incorporating an auxiliary drain valve at the engine fuel pump filter housing to facilitate draining of water from the filter.

C. Time of Compliance:

At owners and operators discretion

D. Weight and Balance:

Weight and balance not affected.

E. Reference Publications:

500D Series – Model 369D Basic HMI Volume I, Issued 15 September 1976

When ordering, specify PN 369H92255 drain kit which includes the following:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Drain kit	369H92255	1	HH
Tube	369A8100-3	1	HH
Tube	369A8100-5	1	HH
Tube	369A8100-7	1	HH
Tee	6151-0250	1	HH
Valve	CAV-170H-04	1	HH
Packing	MS29512-04	1	HH
Strap	MS3367-1-9 or equivalent	1	Commercial
Tyrap	TY-25M or equivalent	1	Thomas and Betts Elizabeth, NJ

MATERIAL	
Nomenclature	Source
Lockwire (MS20995N32)	Commercial

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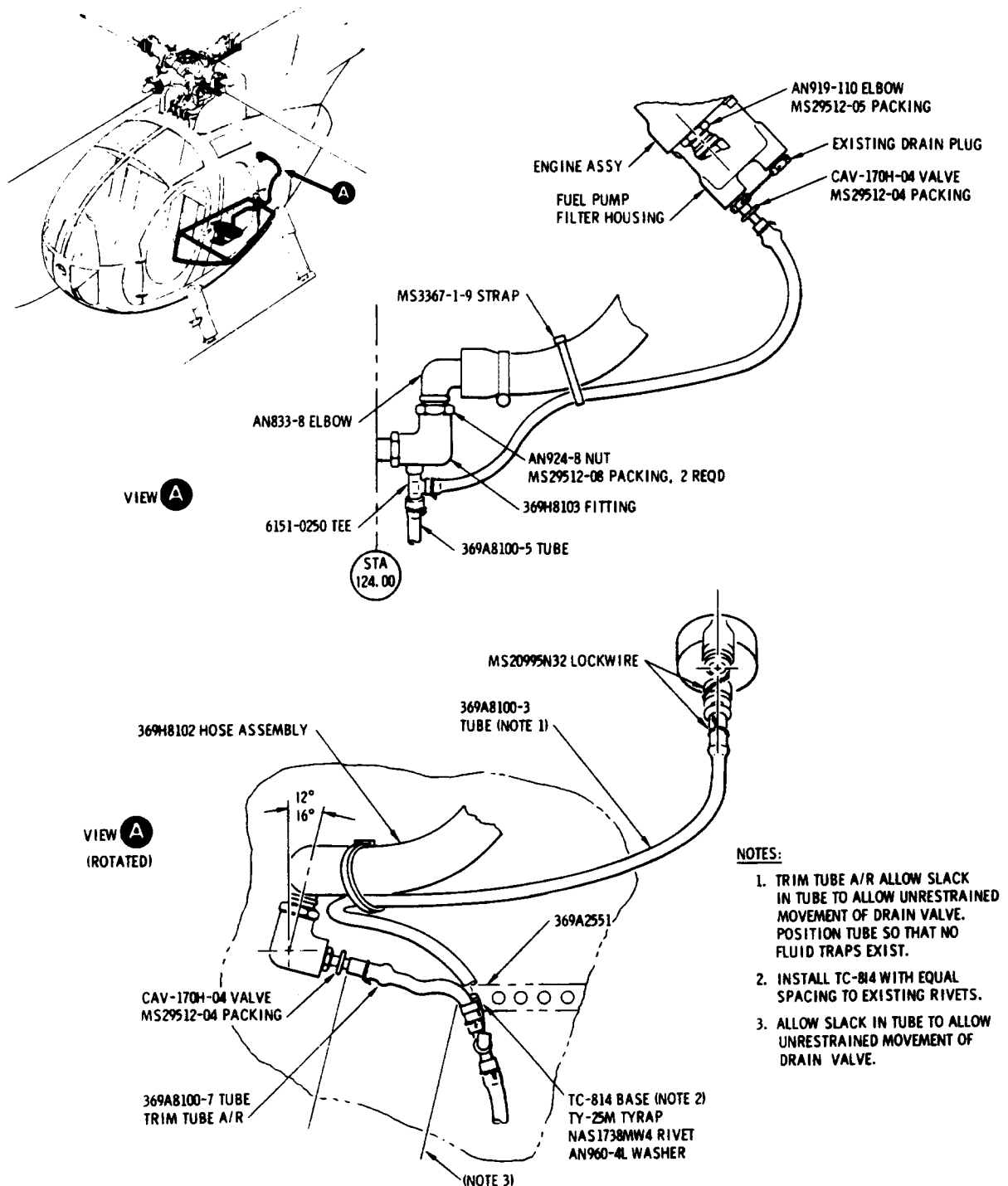
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2. PROCEDURE

- (1). Turn off all electrical switches; disconnect battery, and any external power from helicopter.
- (2). Gain access to engine accessory section and fuel drain firewall fitting. (See Figure 1.)
- (3). Remove lockwire securing existing drain plugs on fuel pump filter housing; remove one drain plug and install new CAV-170H-04 valve with MS29512-04 packing as shown. Secure new drain valve and remaining drain plug with lockwire.
- (4). Disconnect existing 369A8010-85 overboard drain tube from drain valve on firewall fitting. and from tie base on firewall; remove -85 tube.
- (5). Install new 369A8100-7 drain tube on drain valve at firewall fitting and secure with lockwire as shown.
- (6). Install new 6151-0250 tee at other end of -7 drain tube and secure with lockwire; install new 369A8100-5 overboard drain tube on tee as shown and secure with lockwire.
- (7). Install new 369A8100-3 drain tube on tee as shown and secure with lockwire; install other end of -3 tube on new drain valve installed on fuel pump filter housing and secure with lockwire.
- (8). Secure -3 drain tube to existing 369H8102 hose assembly as shown, using MS3367-1-9 strap. Allow sufficient slack in -3 tube to permit unrestrained movement of drain valve. Also position tube so that no fluid traps exist.
- (9). Secure -7 tube at existing tie base on firewall, using Tyrap as shown. Allow sufficient slack in tube to permit unrestrained movement of drain valve.
- (10). Route -5 overboard drain tube down through existing grommet in underside of fuselage; allow drain tube to extend 0.00 to 0.12 inch beyond grommet.
- (11). Check installation of auxiliary drain valve for discrepancies.
- (12). Perform operational check of fuel drain system. (Refer to Basic HMI.)
- (13). Record compliance with this Service Information Notice in Compliance Record of Helicopter Log Book.

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Figure 1. Installation of auxiliary drain valve, engine fuel system - Drain Kit PN 369H2255

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INSTALLATION OF MODIFIED (ROTOR BRAKE HANDLE) TRIM COVER PANEL ASSEMBLY

1. Models Affected:

All 500D Model 369D helicopters equipped with left rotor brake installation PN 369H90123-31 or right rotor brake installation PN 369H90123-32

A. Preface:

The information given in this Service Information Notice provides a procedure for installation of a modified trim cover panel for helicopters equipped with a rotor brake. It has been found that with the rotor brake installed, ambient (hot or cold) air is allowed to exit through the brake handle and handle retainer trim panel cutouts causing discomfort to the pilot. Installation of the modified trim cover panel will eliminate air passage through the brake handle and brake handle retainer (stowage clip) cutouts.

The modified trim panel cover will be provided by Hughes Helicopters; contact your Hughes Service Center or Distributor.

B. Time of Compliance:

At owner's and operators discretion

C. Weight and Balance:

Weight and balance not affected.

D. Reference Publications:

Hughes 500D Helicopter Model 369D Basic HMI Volume 1; Revision No. 15 November 1977

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Trim cover panel assembly (LH brake handle only)	369D26524-25 (modified)	1	HH
Trim cover panel assembly (RH brake handle only)	369D26524-26 (modified)	1	HH

E. TOOLS AND EQUIPMENT

No special tools or equipment required.

2. PROCEDURE

NOTE: The following procedure is applicable for either left or right rotor brake handle installation.

- (1). Remove existing (rotor brake handle) trim cover panel; retain attaching hardware.
- (2). Carefully trim modified panel to match existing panel.

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- (3). Locate and drill screw attach holes in modified panel.
- (4). Slide modified trim panel boot over brake handle, align screw holes and check panel for fit. If required, remove panel and make minor trim adjustments.
- (5). Install panel if removed; secure panel with attaching hardware.
- (6). Push panel boot aft on brake handle approximately 2 inches; secure boot fastener tape.

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REWORK OF TURBINE OUTLET TEMPERATURE (TOT) INDICATOR, PN 369A4521-5; AND TORQUE PRESSURE INDICATOR, PN 369H4526-5

1. PLANNING INFORMATION:

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D thru 0212D, 0214D thru 0225D and 0227D thru 0229D.

All subject TOT and Torque Pressure Indicators in Spares Inventory for Model 369D Helicopter

B. Preface:

The information given in this Service Information Notice provides instructions for optional rework of the PN 369A4521-5 TOT indicator to the current 369A4521-7 configuration, and the PN 369H4526-5 Torque Pressure indicator to the current 369H4526-7 configuration, to allow the usage of higher TOT temperatures at 320 horsepower or less, so that operators may have an additional advantage on hot day conditions.

Certification of the Model 369D helicopter was performed at a maximum continuous power setting of 779° C, and the helicopter is fully capable of operating continuously at that power setting.

The engine manufacturer, however, specifies that if the engine is operated continuously at 74.3 PSI torque pressure (320 HP) or less, the maximum TOT is 755°C. The torque pressure indicator is therefore marked with a blue dot at 74.3 PSI and the TOT indicator with a yellow arc from 755°C to 810° C.

For continuous power in excess of 74.3 PSI but not exceeding 81.3 PSI, the maximum TOT is 738°C. The TOT indicator is thus also marked with a blue dot at 738° C.

It is to be noted that if the engine is operated in excess of the above values, the engine warranty will not be honored by DDA. The new TOT and torquepressure data are incorporated in the below referenced revision to the Model 369D Rotorcraft Flight Manual

C. Time of Compliance:

At owners and operators discretion

D. FAA Approval:

FAA APPROVED

E. Weight and Balance:

Weight and balance not affected

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F. Reference Publications:

Model 369D Basic HMI-Vol 1, Issued 15 September 1976; Revision No. 1, 15 November 1977

Model 369D FAA Approved Rotorcraft Flight Manual, Revised 1 February 1978 Detroit Diesel Allison Engine Operation and Maintenance Manual, 10W2

MATERIAL	
Nomenclature	Source
Paint, red (FED-STD-595) No. 11136	Commercial
Paint, white (FED-STD-595) No. 17875	Commercial
Paint, blue (FED-STD-595) No. 15123	Commercial
Paint, green (FED-STD-595) No. 14260	Commercial
Paint, black (FED-STD-595) No. 37078	Commercial

2. PART I -- REWORK PROCEDURE FOR TORQUE PRESSURE INDICATOR

- (1). Rework PN 369H4526-5 torque pressure indicator to the 369H4526-7 configuration as follows: (See Figure 1.)
 - (a). Clean and wipe dry the glass face of indicator; apply a 0.06 inch diameter blue dot on glass face of torque pressure indicator at 74.3 PSI as shown.
 - (b). Apply a 0.06 inch wide white slippage mark on glass face and indicator housing at three o'clock position as shown.
 - (c). Reidentify instrument with PN 369H4526-7.
- (2). Record rework of PN 369H4526-5 torque pressure indicator to 369H4526-7 configuration in Components Record of helicopter Log Book.

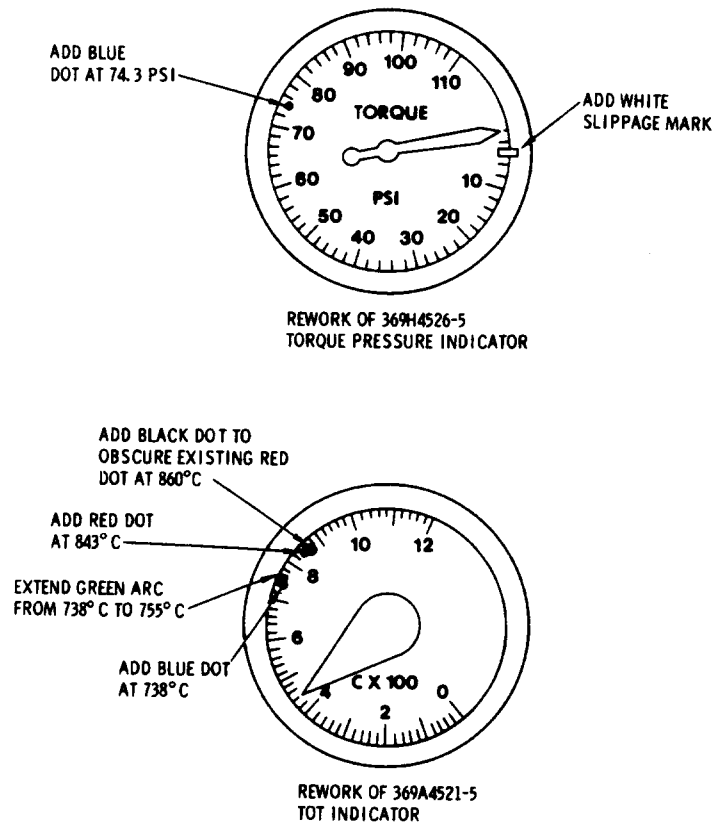
3. PART II – REWORK PROCEDURE FOR TOT INDICATOR

NOTE: The TOT indicator is hermetically sealed and must be evacuated and protected by trained personnel. If the instrument is unsealed by any facility other than an Insko-approved repair station, the vendor warranty is automatically voided.

- (1). As applicable, remove TOT indicator from helicopter. (Refer to Basic HMI-Vol 1.)
- (2). Rework PN 369A4521-5 TOT indicator to the 369A4521-7 configuration as follows: (See Figure 1.)
 - (a). Using soldering iron, soften solder bond at center of instrument. Peel off strap and retain. Remove screws from case and remove instrument from case.
 - (b). Re-mark indicator dial to extend green arc from existing 738°C to 755° C; width of green arc is 0.100 inch.
 - (c). Apply a 0.06 inch diameter blue dot on indicator dial at 738° C.

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Figure 1. Rework of TOT Indicator and Torque Pressure Indicator

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- (d). Apply a 0.06 inch diameter red dot on indicator dial at 843° C as shown.
- (e). Apply a 0.06 inch diameter (or larger) black dot to obscure existing red dot on dial at 860° C.
- (3). Check TOT indicator as follows:
 - (a). Red line at 810°C
 - (b). Yellow arc from 755°C to 810°C
 - (c). Green arc from 360°C to 755°C
 - (d). Red dot at 843°C (refer to DDA Engine Operation and Maintenance Manual)
 - (e). Blue dot at 738°C
- (4). Insert instrument in case and secure with existing screws and strap. Apply solder bond at center of instrument.
 - (a). Reidentify instrument with PN 369A4521-7.
- (5). Reinstall TOT indicator, per Basic HMI-Vol 1.
- (6). Perform calibration check of TOT indicating system, per Basic HMI-Vol 1..
- (7). Record rework of PN 369A4521-5 TOT indicator to 369A4521-7 configuration in Components Record of helicopter Log Book.

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INSTALLATION – ENGINE COMPRESSOR WATER WASH KIT, PN 369H92537

1. PLANNING INFORMATION:

A. Models Affected:

500D Model 369D Series Helicopter Serial No. 0003D thru 0089D

B. Preface:

The information given in this Service Information Notice lists procedures for optional installation of an engine compressor water wash kit on the above affected 369D Series helicopters. The kit is designed to provide a quick, convenient method for removing any contaminants or corrosive air particles (smoke, fumes, salt water air, etc.) from compressor components, and to help ensure optimum performance and service life of the engine.

Detailed information to cover operating procedures, equipment, water availability and flow requirements are provided in the attached below referenced Detroit Diesel Allison Commercial Service Letter and subsequent revisions. The DDA Service Letter, reprinted as part of this Notice, also provides an abbreviated check list for performing the engine water wash.

C. Time of Compliance:

At Owners and Operators discretion.

D. Reference Publications:

369D – Basic HMI, Issued 15 September 1976; Revision No. 1, 15 November 1977 Detroit Diesel Allison Commercial Service Letter 250-C18 CSL-69; 250-C20 CSL-1020, dated 25 June 1973; Revision No. 1, 17 January 1975 or subsequent revisions. FORM 9578A (REV 11/87)

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Hose	369H3048-5	1	HH
Hose	369H3048-3	1	HH
Support	369H3047	1	HH
Cap and lanyard assy	369H3046	1	HH
Spray assy	369H3042	1	HH
Washer	AN960PD716L	2	Commercial
Washer	AN960PD10L	3	Commercial
Nut	AN924-4D	2	Commercial

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Hose elbow	AN848-4D	1	Commercial
Hose adapter	AN807-4D	1	Commercial
Clamp	AN737TW22	4	Commercial
Grommet	MS35489-11	1	Commercial
Clamp	MS25281-4	1	Commercial
Nut	MS21042-3	1	Commercial
Rivet	NAS1398B4-2 (alternate: MS20615-3M5)	6	Commercial
Rivet	NAS1738M4-2	8	Commercial
Screw	NAS632-3-3	2	Commercial

TOOLS AND EQUIPMENT	
Nomenclature	Source
Drill motor – portable	Commercial
Drill bit – No. 29/64 (0.4531 in. dia.)	Commercial
Drill bit – No. 8	Commercial
Drill bit – No. 30	Commercial
Flycutter or equivalent	Commercial
Gun, rivet	Commercial

MATERIAL	
Nomenclature	Source
Silicone adhesive/sealant (RTV732 or equivalent)	Dow Corning or Commercial
Zinc chromate primer	Commercial

2. INSTALLATION INSTRUCTIONS – WATER WASH KIT

- (1). Perform the following, per HMI, to gain access to work area:
 - (a). In aft compartment, remove seat assemblies, LH bulkhead trim, access cover and insulation; gearbox access cover.
 - (b). Remove engine air inlet forward fairings; open plenum chamber access door.

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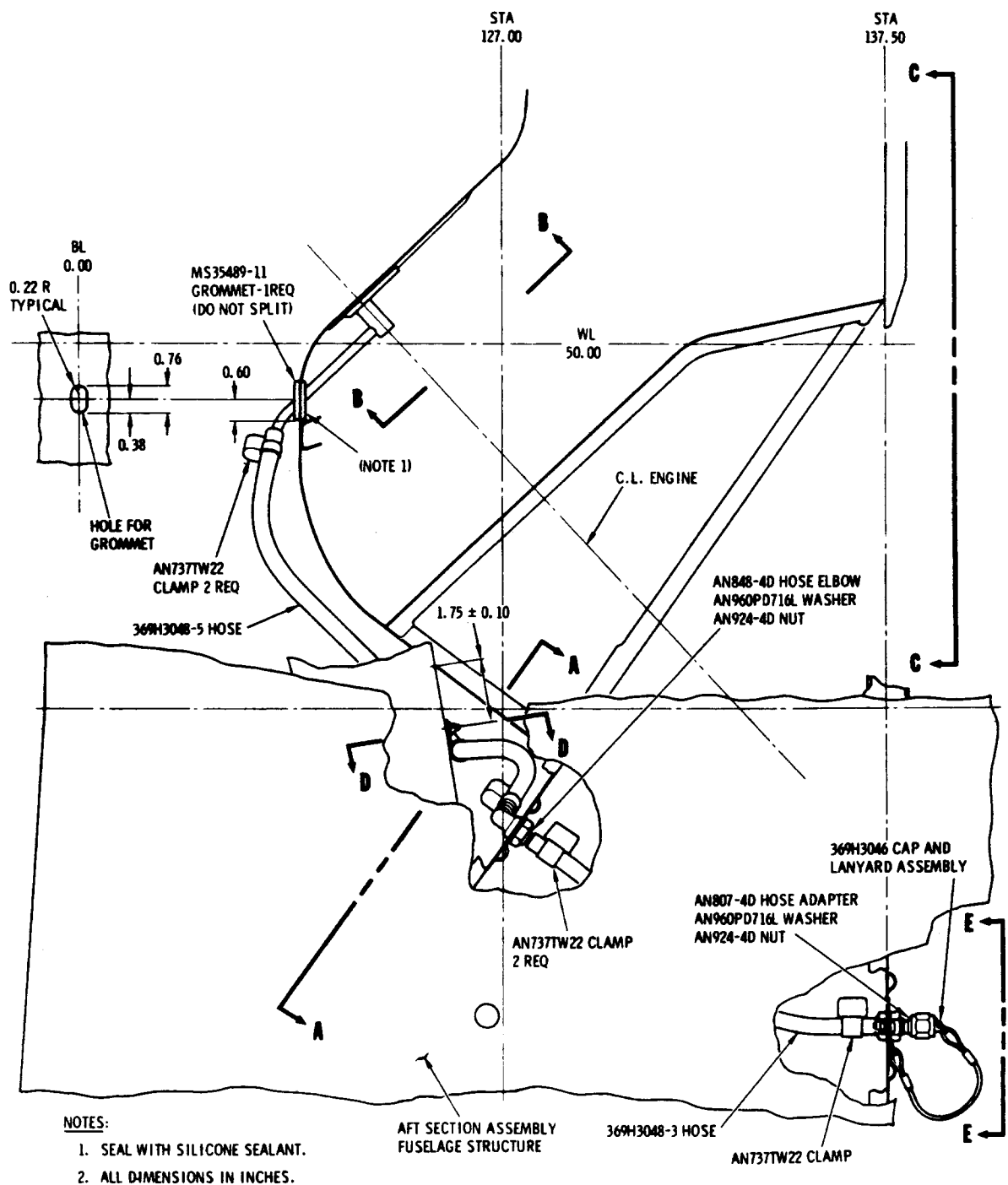


Install temporary cover of cardboard or suitable material over engine air intake.

- (c). Remove engine air shield screen or engine air inlet screen, as applicable; remove access cover from mast support structure panel.
 - (d). Open LH engine compartment access door.
 - (2). Position 369H3047 support on Station 137.50 lower section ring at dimensions shown in Figure 1, view E-E. Mark and drill rivet holes and install support with six NAS1398B4-2 rivets. Install rivets with zinc chromate primer.
 - (3). Drill No. 8 hole in ring assembly as shown; locate from existing hole in support.
 - (4). Install AN807-4D hose adapter in support with hardware as shown; install lanyard clip in No. 8 hole with hardware as shown. Install 369H3046 cap on hose adapter.
 - (5). Drill or cut 29/64 (0.4531 inch diameter) hole in firewall assembly at dimensions shown in view A-A. Position and install AN848-4D hose elbow in firewall with hardware as shown.
 - (6). Cut hole for MS35489-11 grommet in forward wall of plenum chamber per dimensions shown; install grommet with silicone sealant.
 - (7). Position 369H3042 spray assembly on inner side of plenum chamber forward wall as shown in Figure 1, view B-B, with tube inserted forward through grommet. Mark and drill rivet holes and install spray assembly with eight NAS1738M4-2 rivets. Install rivets with zinc chromate primer.
 - (8). Install 369H3048-5 hose on spray assembly tube and on hose elbow at firewall; secure hose at each end with AN737TW22 clamps.
 - (9). Mark and drill No. 8 hole in 369H3024 channel and install MS25281-4 clamp with hardware as shown. Secure -5 hose with clamp.
 - (10). Install 369H3048-3 hose on hose elbow at aft side of firewall, and on hose adapter at forward side of lower section ring. Secure hose at each end with AN737TW22 clamps.
 - (11). Check installation of water wash kit for discrepancies.
 - (12). Carefully check and/or vacuum the plenum chamber for any foreign objects or debris. Remove protective cover from engine air intake.
- NOTE:** Spray kit using 369H3042 nozzle requires 60 pounds PSI to establish water flow rate of one quart in 9 to 10 seconds. A bypass valve or equivalent installed at source hose connection is recommended, in order to relieve pressure and facilitate disconnection at hose adapter.
- (13). Perform operational check of water wash kit installation; refer to attachment Detroit Diesel Allison Commercial Service Letter for operating procedures and check list.
 - (14). Reinstall removed components and assemblies; install and secure access covers and doors.
 - (15). Record installation of 369H92537 engine compressor water wash kit in Components Record of helicopter Log Book.

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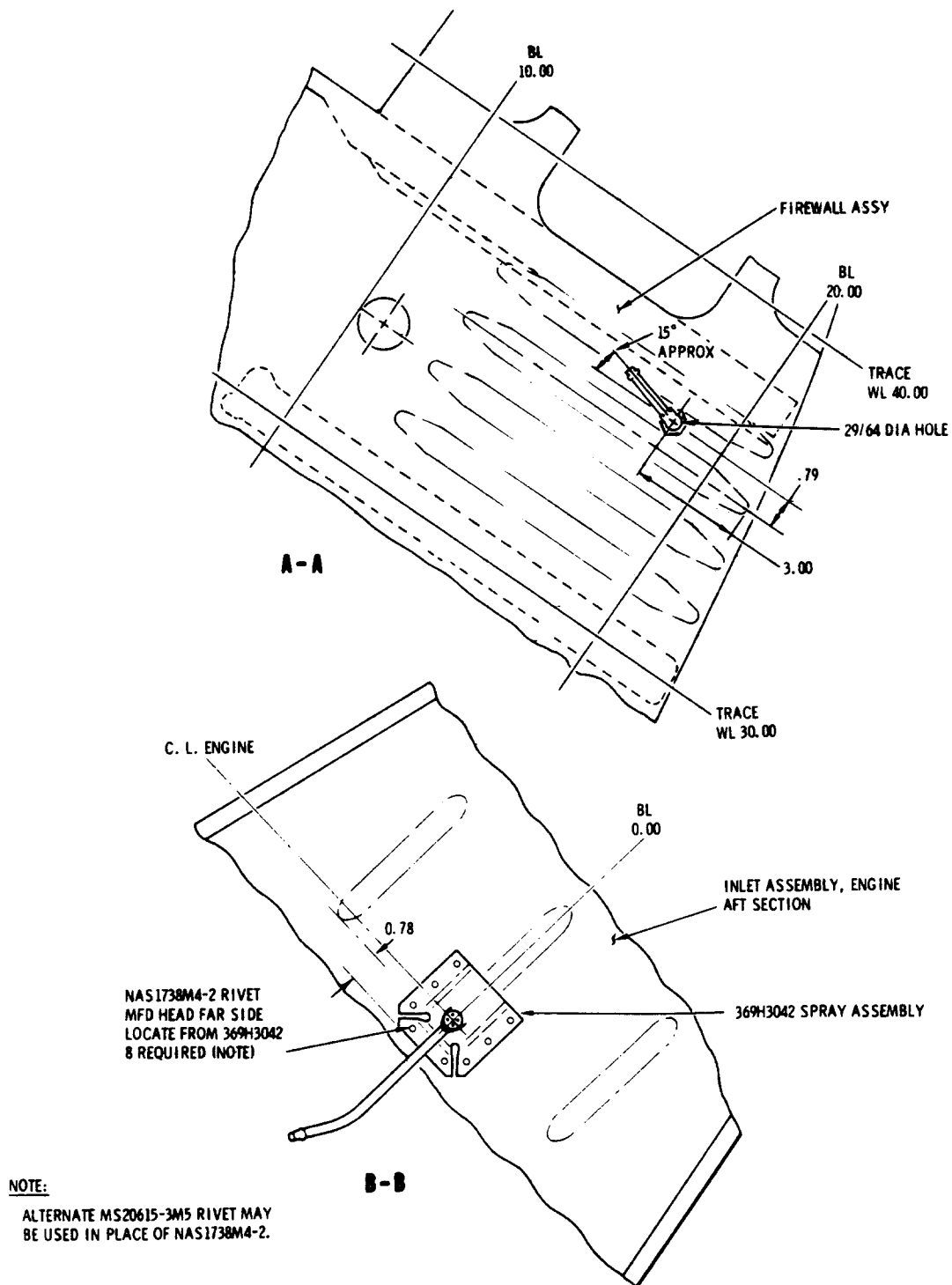


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**Figure 1. Installation - Engine Compressor Water Wash Kit, PN 369H92537
 (sheet 1 of 3)**

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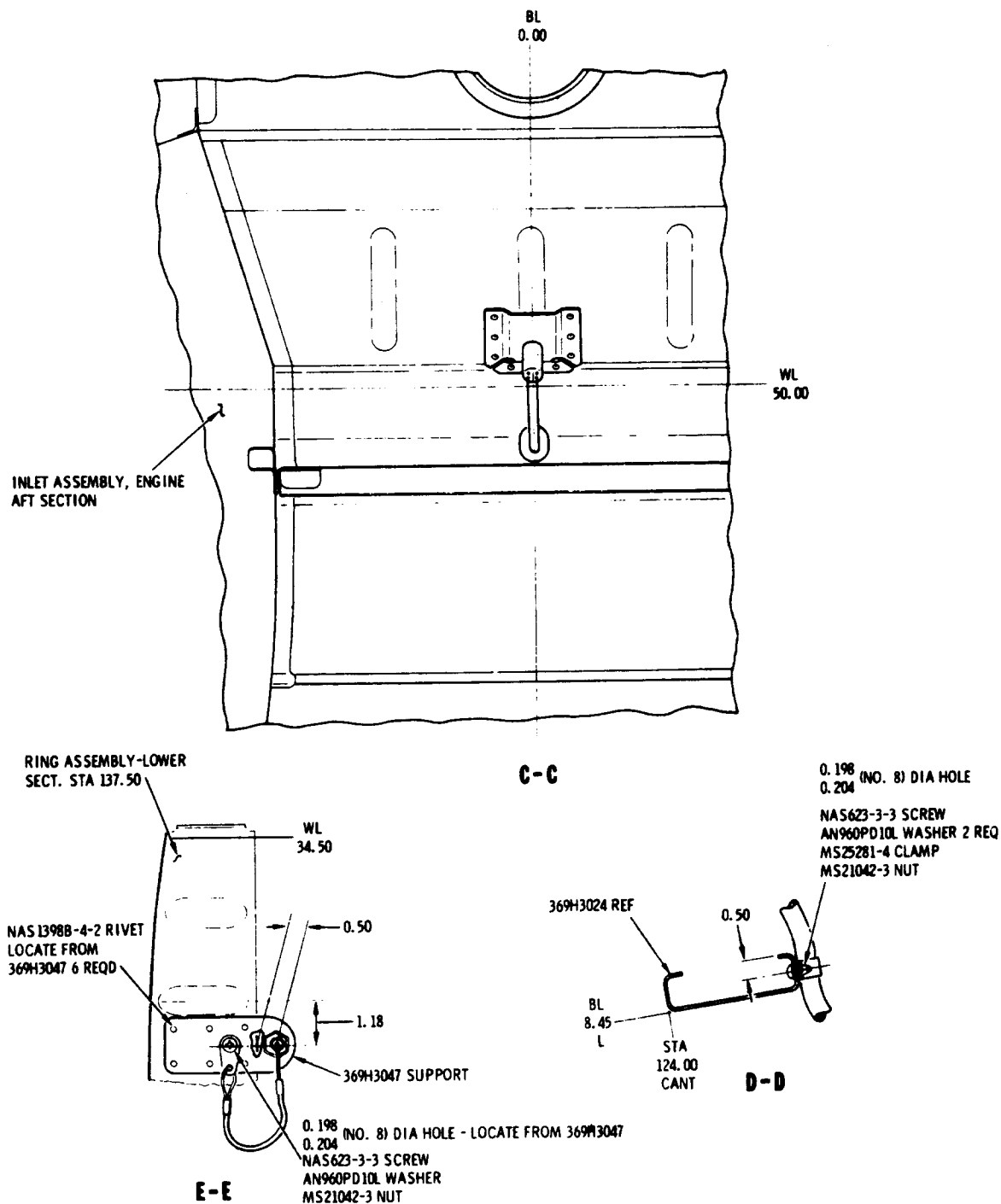


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**Figure 1. Installation- Engine Compressor Water Wash Kit, PN 369H92537
(sheet 2 of 3)**

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**Figure 1. Installation- Engine Compressor Water Wash Kit, PN 369H92537
 (sheet 3 of 3)**

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REMOVAL OF CAPACITOR – VOLTAGE REGULATOR, *AAE OR LSI MODEL VR204; INSTALLATION OF VARISTOR – LANDING LIGHT RELAY, PN MS24166D1

1. PLANNING INFORMATION:

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D thru 0249D All Subject Voltage Regulators in spares at date of this notice.

B. Preface:

The information given in this Service Information Notice lists a procedure for removal of the 8 μ fd capacitor (C5) incorporated in the subject Model VR204 voltage regulator to reduce EMI. The C5 is paralleled by a 1 μ fd capacitor which accomplishes the same function. Since failure of the C5 capacitor due to voltage spikes has been reported, removal of this capacitor is recommended to ensure the operating reliability of the voltage regulator.

Installation of a varistor on the landing light relay is also recommended to help prevent failure of other components of the voltage regulator, and other installed avionics.

*(AAE) Aircraft Appliance and Equipment, Div of Aerospace Div; (LSI) Lear Siegler, Inc.

C. Time of Compliance:

At owners and operators discretion.

D. Weight and Balance:

Weight and balance not affected

E. Reference Publications:

500D HMI - Vol I Issued 15 September 1976; Revision No. 1, 15 November 1977

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Varistor	V47ZA7	1	General Electric
Terminal	MS25036-102	2	Commercial

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2. VOLTAGE REGULATOR – REMOVAL OF C5 CAPACITOR

NOTE: Applicable to voltage regulator in spares or installed on 500D Model Helicopter Serial No. 0003D thru 0249D.

- (1). Check that all electrical power is OFF.
- (2). Gain access to voltage regulator and disconnect electrical connector. (Refer to HMI - Vol I).
- (3). Remove hardware securing regulator to support and lift out regulator.
- (4). Remove cover from regulator: remove four screws, spacers and nuts securing upper circuit board of regulator. (See Figure 1.)
- (5). Remove capacitor C5 as shown; clip wire leads as close as possible to circuit board.
- (6). f. Reinstall upper circuit board and cover.
- (7). Using ink stamp, add “MOD 5C” on vendor nameplate to indicate modified voltage regulator.
- (8). Reinstall voltage regulator and attach electrical connector.
- (9). Perform an operational check of the voltage regulator and make adjustments as necessary. (Refer to HMI - Vol I).

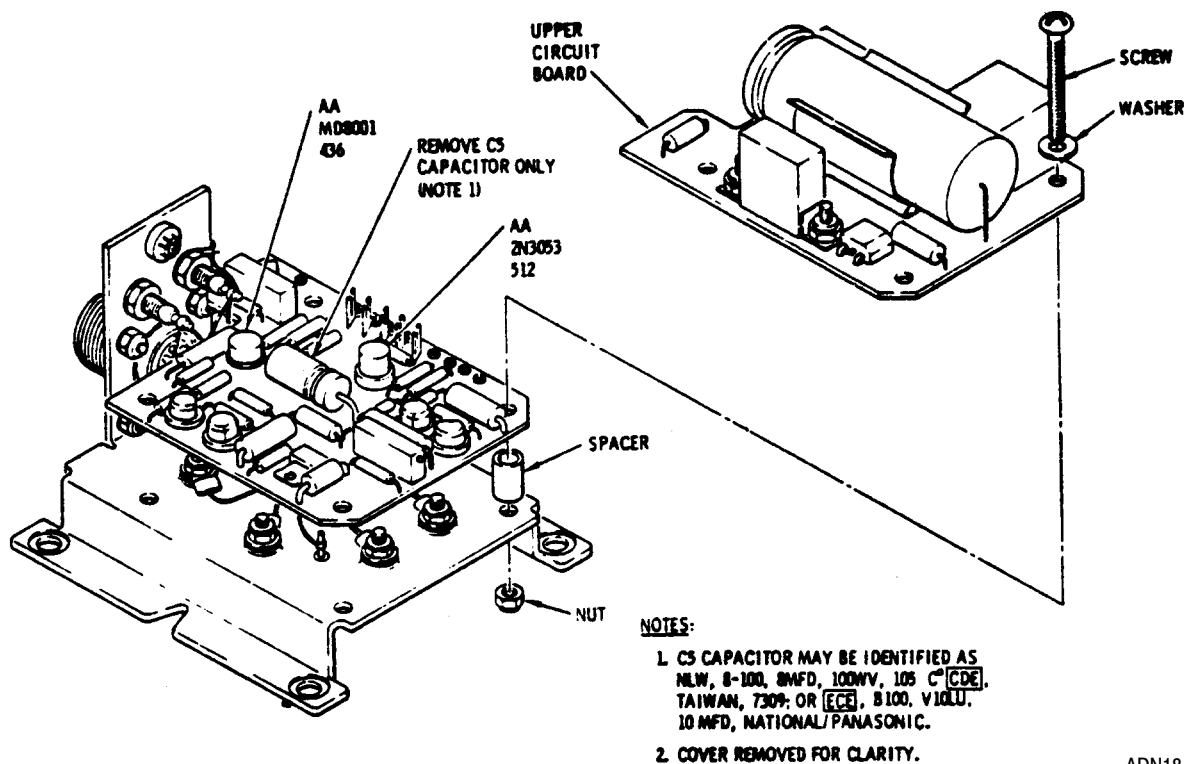
3. LANDING LIGHT RELAY – INSTALLATION OF VARISTOR

NOTE: Applicable to 500D Model 369D Helicopter Serial No. 0003D thru 0149D only.

- (1). Check that all electrical power is OFF.
- (2). Disconnect wiring leads from X1 and X2 on relay (See Figure 2). Disconnect relay panel 369H2502-66 located on lower support of instrument panel assembly. (Refer to HMI - Vol I).
- (3). Crimp terminal to each lead of varistor (trim varistor leads as close as practical to body of resistor).
- (4). Install varistor leads to relay terminals as shown in Figure 2; connect wire leads at XI and X2.
- (5). Reinstall relay panel.

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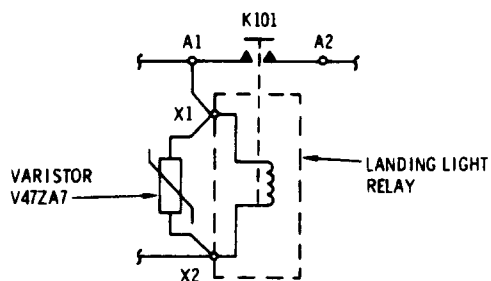


ADN18-1

Figure 1. Installation of Varistor - Landing Light Relay

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ADN18-2

Figure 2. Installation of Varistor - Landing Light Relay

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REPLACEMENT OF PLENUM WALL FITTINGS – TORQUE PRESSURE GAGE TUBING AND ENGINE OIL PRESSURE GAGE TUBING

1. PLANNING INFORMATION:

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D thru 0232D

B. Preface:

Field reports indicate that breakage and damage to the reducer installed on the plenum chamber pan firing has occurred during normal service or removal and installation of the engine oil pressure line. Installation of new type fittings is recommended for both the torque pressure gage and the engine oil pressure gage lines, to facilitate removal and installation of the tube assemblies and preclude possible breakage or failure of the fittings.

C. Time of Compliance:

At owners and operators discretion

D. Weight and Balance:

Weight and balance not affected

E. Reference Publications:

500D Basic HMI-Volume I, Issued 15 September 1976; Revision No. 1, 15 November 1977

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Union	ASI 2-3XH2BZ-SS-T	2	HH

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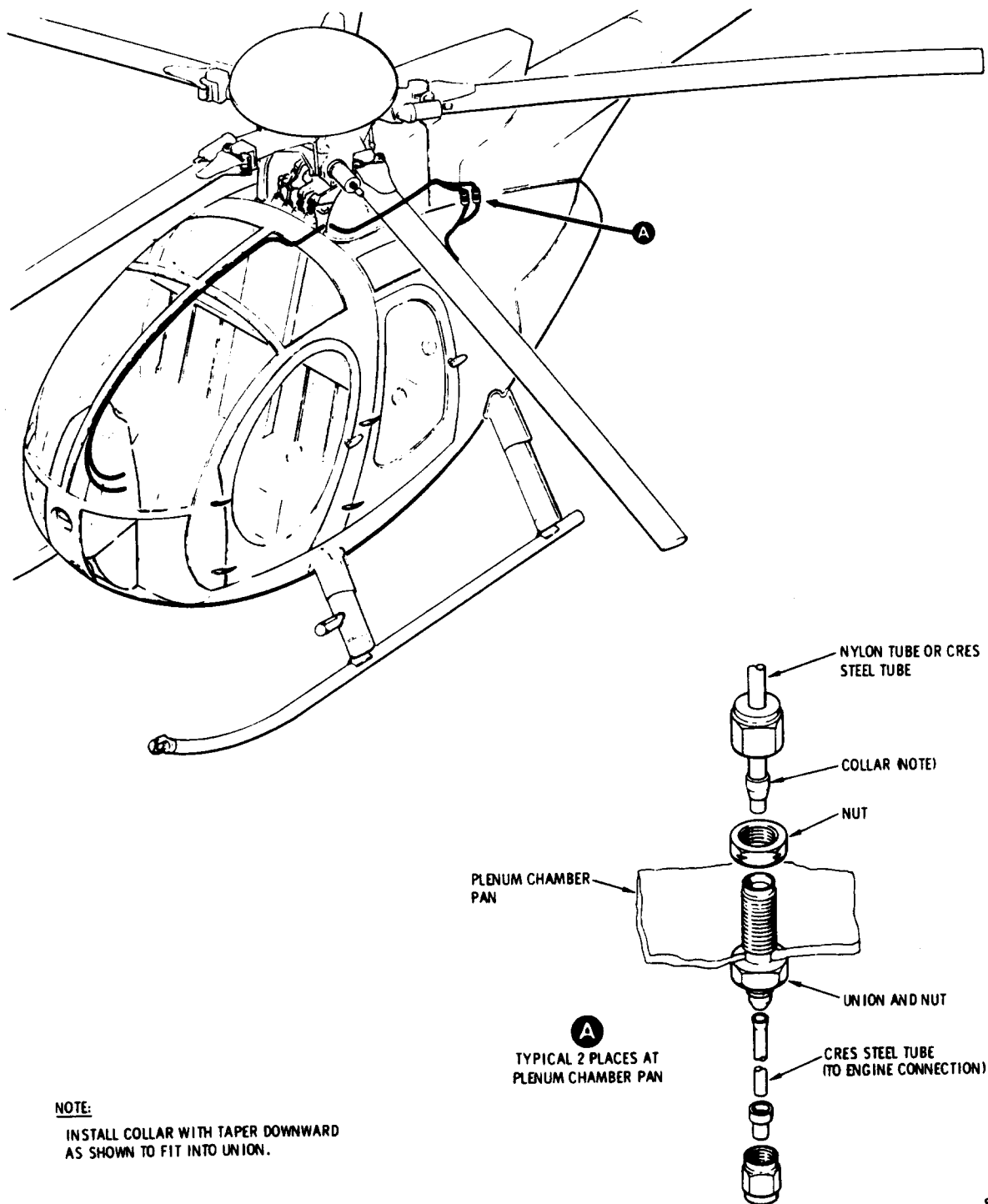
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2. PROCEDURE

- (1). Check that all electrical power is OFF.
- (2). Remove left forward engine air intake rafting, and left aft bulkhead access cover in cargo compartment. Refer to Basic HMI-Vol I.
- (3). Open LH engine compartment access door.
- (4). Disconnect pressure line nuts at forward and aft sides of both plenum chamber pan fittings. Cap pressure lines. Refer to Basic HMI-Vol.I.
- (5). Remove existing fittings (reducers and unions) from plenum chamber pan.
- (6). Install new ASI 2-3XH2BZ-SS-T fittings at plenum chamber pan, as shown in Figure 1.
- (7). Uncap lines and connect forward and aft sections of engine oil pressure and torque pressure gage lines to new fittings.
- (8). Check installation of new fittings for discrepancies.
- (9). Perform pressure and leak test of both lines between engine and gages at 200 psi.
- (10). Bleed and service oil pressure lines, per Basic HMI-Vol I.
- (11). Close engine compartment access door. Reinstall aft bulkhead access cover and engine air intake rafting.

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Figure 1. Replacement of Plenum Wall Fittings - Torque Pressure Gage Tubing and Engine Oil Pressure Gage Tubing

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FIELD INSPECTION AND CORROSION REPAIR – MAIN ROTOR DRIVE SHAFT, PN 369D25510

1. PLANNING INFORMATION:

A. Models Affected:

All 500D Model 369D Series Helicopters

B. Preface:

The information given in this Service Information Notice lists a procedure for field repair of the main rotor drive shaft, if evidence of corrosion pitting through the original phosphate coating on the drive shaft is noted.

C. Time of Compliance:

At owners and operators discretion; recommended whenever subject main rotor drive shaft is removed from helicopter

D. Weight and Balance:

Weight and balance not affected.

E. Reference Publications:

500D Basic HMI- Vol I, Issued 15 September 1976; Revision No. 1, 15 November 1977

MATERIAL	
Nomenclature	Source
1,1,1 Trichloroethane (O-T-620)	Commercial
Surface Cleaner (TT-C-490 or MIL-C-10578, Type II)	Turco Products Inc. Wilmington, CA
Crocus Cloth (P-C-458)	Commercial
Primer, Zinc Chromate (MIL-P-8585)	W.P. Fuller & Co. Los Angeles, CA
Oil Preservative (VV-L-800)	Commercial
Sealing Compound (MIL-S-7502) PR1221 or EP711	Product Research Burbank, CA or Coast ProSeal Compton, CA

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2. PROCEDURE

- (1). Remove main rotor drive shaft, per Basic HMI-Vol I.
- (2). Inspect all surfaces of drive shaft for dents, nicks, scratches and evidence of deformation. Inspect splines on end of drive shaft for excessive wear. (Refer to Basic HMI-Vol I.)
- (3). Inspect all external surfaces of shaft for corrosion. Remove corrosion as follows:
 - (a). Degrease corroded area of drive shaft with clean cloth saturated in trichloroethane.

WARNING

Surface cleaner irritates hands on repeated exposure. Rubber gloves should be worn.

- (b). Swab shaft exterior with diluted solution of surface cleaner (mix one part Turco #1 with four parts water). Keep wet with solution for ten minutes, or until corrosion appears to be removed, Wipe, clean and inspect, and repeat as necessary until there is no further evidence of corrosion.
 - (c). Rinse with water and dry thoroughly with compressed air.

CAUTION

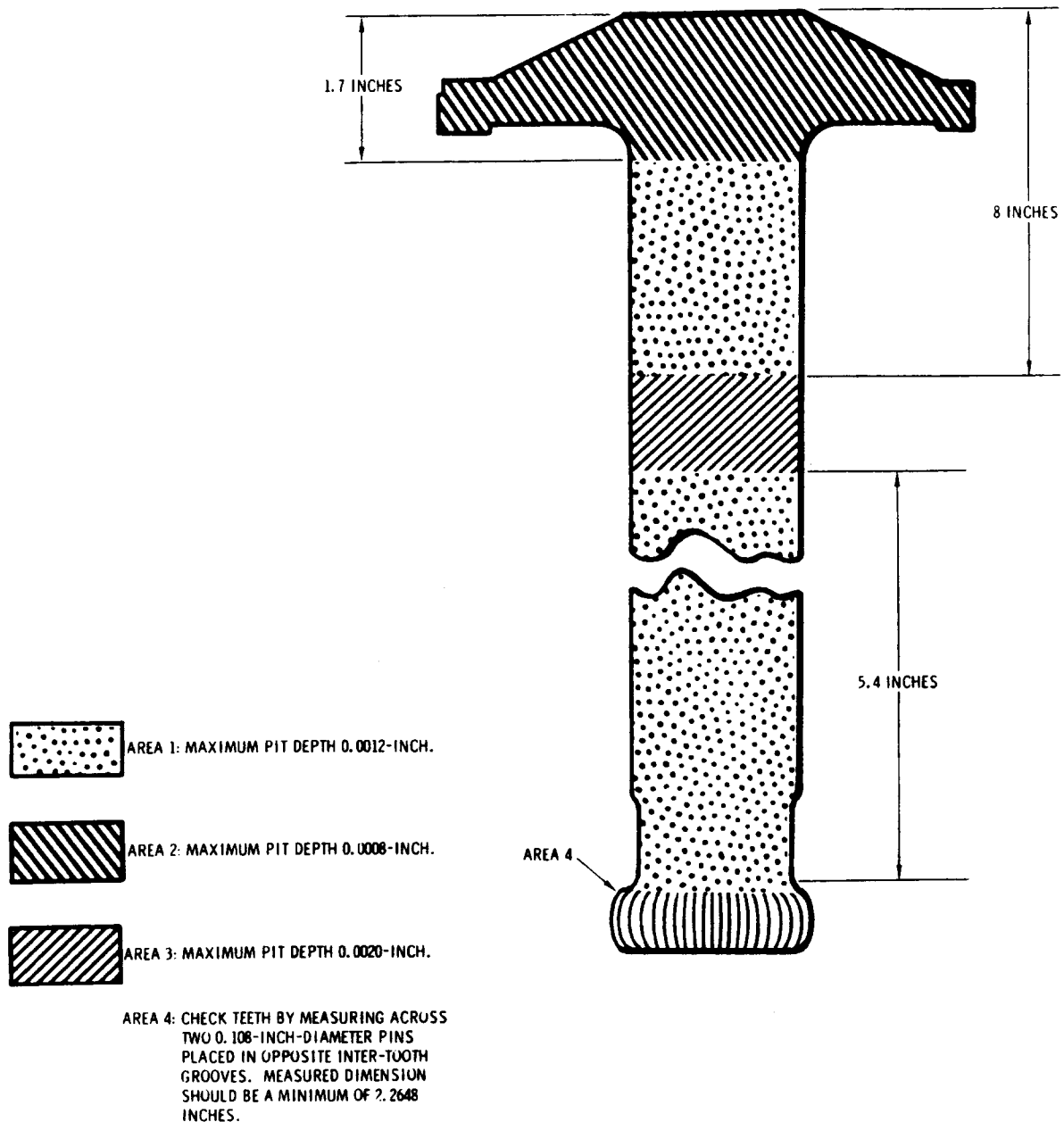
Exercise care when removing pits to ensure that shot peening is not completely penetrated. Also, remove only minimum material necessary to remove pits. Minimum wall thickness of 0.1775 inch must be maintained.

- (d). Lightly abrade corroded surface with crocus cloth to remove pits. If pit removal exceeds depth of 0.0012-inch in Area 1 or 0.0008-inch in Area 2 (See Figure 1), shaft is unserviceable and must be replaced.
 - (e). Repeat 1 through 3 above.
 - (f). Spray two coats of zinc chromate primer on shaft exterior. Do not prime spline teeth or mounting surface.
- (4). Apply preservative oil to spline teeth.
- (5). Immediately reinstall main rotor drive shaft, per Basic HMI.
- (6). Apply a 0.06-inch bead of sealing compound around interface of hub and drive shaft.

NOTE: Main rotor drive shafts on early Model 500D helicopters have a recessed area at the top of the drive shaft ID to accommodate phasing tool. This recess is no longer required and should be filled to prevent water accumulation and possible corrosion. Clean the recessed area (shaft ID and cork plug) of any dirt, debris, water, etc. and fill recess flush to top of shaft with sealing compound. On late Model 500D helicopters, the cork plug is installed flush with top of shaft to eliminate the recessed area.

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Figure 1. Inspection and Repair - Main Rotor Drive Shaft

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INSTALLATION OF ANTI-ICE FUEL FILTER, PN 369H90022

1. PLANNING INFORMATION

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D and subs equipped with PN 369H6416 Instrument Panel

B. Time of Compliance:

At owners and operators discretion -

Installation of the PN 369H90022 anti-ice fuel filter deletes the requirement for use of fuel containing anti-ice additives.

C. Preface:

The information given in this Service Information Notice provides instructions for incorporating an anti-ice fuel filter between the helicopter fuel system and the engine fuel system. The filter is designed to strip the fuel of ice particles prior to entering the engine fuel system. Electrical and mechanical equipment sense the build up of ice in the filter unit, and automatically illuminate a cockpit caution and activate the helicopter start pump. When the filter becomes fully clogged, a bypass valve contained in the filter unit opens and the fuel bypasses the anti-ice fuel filter element.

D. Reference:

500D Model 369D Basic HMI - Volume I, Issued 15 September 1976

E. Weight and Balance

Add/Subtract	Weight (lbs.)	Arm (inches)	Moment (inch-pounds)
Add	7.5	112.4	840

F. Parts List

When ordering, specify PN 369H90022 Anti-Ice Fuel Filter Installation which consists of the following:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Doubler	369H9022-1	1	HH
Tube	369H9022-2	1	HH
Filter Assembly	369H8021	1	HH
Fitting	369H8023	1	HH
Hose Assembly	369H8024-5	1	HH

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Hose Assembly	369H8025	1	HH
Bracket	369H8032	1	HH
Placard	369H8100	1	HH
Drain Valve	CAV-170H-4	1	Commercial
Tie Wrap	TY-25M	1	Commercial
Tee	6151-0250	1	Commercial
Clamp	AN737TW38	2	Commercial
Bolt	AN775-4	1	Commercial
Gasket	AN901-4A	2	Commercial
Reducer	AN919-19	2	Commercial
Washer	AN960PD416L	3	Commercial
Washer	AN960PDL10	2	Commercial
Washer	AN960-10	4	Commercial
Rivet	MS20615-3M	30	Commercial
Rivet	MS20615-4M	10	Commercial
Lockwire	MS20995C3M	AR	Commercial
Nut	MS21042-3	5	Commercial
Clamp	MS21919H2	5	Commercial
Packing	MS29512-04	1	Commercial
Packing	MS29512-012	2	Commercial
Screw	NAS603-7	5	Commercial
Bolt	NAS1304-5H	3	Commercial
Spacer	NAS43DD4-19	3	Commercial
Anti-Ice Fuel Filter Electrical Installation			
Harness Assembly	369H90161-3	1	HH
Panel	369H4735"A"	1	HH
Cover	369H4739	1	HH
Rivnut	S10K80	3	BF Goodrich
Washer	AN960PD10L	3	Commercial
Spacer	NAS43DD3-10	3	Commercial

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Screw	NAS603-8	3	Commercial
Screw	SFSW8CP-L01 BK	5	Commercial
Sleeve	MS21266-2	AR	Commercial
Rotorcraft Flight Manual Supplement	CSP-D-II	1	HH

G. Tools, Equipment and Materials

TOOLS AND EQUIPMENT	
Nomenclature	Source
Rivet tool, C800 Heading Tool or equivalent	BF Goodrich
Rivet gun	
Cutting shears	
Drill motor, portable	
Drill bit – No. G	
Drill bit – No. 2	
Drill bit – No. 30	

MATERIALS

Name	Specification	Part No.	Source
Anti-seize compound	MIL-T-5544B	Thread Lube or equivalent	Parker –Hannifin Cleveland, OH
Sealant	MIL-S-8660B	732RTV or equivalent	Dow Corning
Primer, zinc chromate	MIL-P-8585		Commercial
Paint, heat resistant – epoxy white	FED-STD-595	No. 17875	Commercial
Primer – epoxy yellow, polyimide			Commercial

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Helicopter Safety Procedures

WARNING

Prior to performing modification of fuel system, perform the following to avoid possibility of fuel vapor ignition or fire:

- (1). Turn OFF all electrical power
- (2). Electrically ground helicopter (Section 2, Basic HMI)
- (3). Disconnect battery and external power (Section 17)

B. Access

NOTE: Perform the following to gain access to work areas:

- (1). Open engine access doors (Section 2)
- (2). Remove aft compartment seats; remove upper LH aft bulkhead panel and lower aft bulkhead panel (Section 2).
- (3). Remove pilot compartment LH floor access door (Section 2)
- (4). Remove instrument panel hood and instrument panel LH side fairing (Section 17)

C. Part I - Installation of Anti-Ice Fuel Filter

- (1). Close fuel shut off valve; drain fuel from supply line drain valve. (Section 2, Basic HMI.)
- (2). Disconnect and remove existing fuel supply hose from engine driven fuel pump and from elbow on Station 124.0 firewall fitting. (Section 12, Basic HMI.)

NOTE: Remove insulation from aft side of Station 124.0 firewall at area shown (View C). Clean firewall area with MEK or equivalent. Removal of L-shape section of insulation is required to install 369H90022-1 doubler.

- (3). Using existing rivet pattern on Station 124.0 firewall, drill 0.1295-inch diameter holes and install 369A90022-1 doubler on FORWARD side of firewall as shown. Install rivets with zinc chromate primer. (View A-A and A, Figure 1.)
- (4). Using 369H8032 bracket as template, mark and drill 0.1285-inch diameter rivet holes and install bracket on AFT side of firewall as shown. Use existing rivet pattern as applicable. Install rivets with zinc chromate primer.
- (5). Touch up firewall area where insulation was removed with primer and heat resistant paint.
- (6). Remove 369A8050-11 clip securing engine gearcase cooling duct to fuselage structure; drill 0.260-inch diameter hole and relocate clip on structure per dimension shown.
- (7). Install 369H8021 filter assembly on bracket with three bolts and washers as shown; lockwire bolts.
- (8). Connect new 369H8024-5 hose with firesleeve to filter and to engine driven fuel pump as shown.
- (9). Connect new 369H8025 hose with firesleeve to filter and to existing 369H8103 fitting and elbow on firewall; reposition fitting and elbow as shown. As required, install clamp on hose and secure clamp to stiffener, to prevent chaffing of hose on structure.

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- (10). Install new CAV-170H-4 valve with packing to filter, using anti-seize compound. Install new 369H90022-3 drain tube to valve with lockwire.
- (11). Splice new 6151-0250 tee into existing drain tube arrangement as shown; allow slack to permit unrestrained movement of drain tube. For helicopter with 369H92255 drain kit installed, reposition existing tee as shown.
- (12). Connect other end of 369H90022-3 drain tube to tee with lockwire.
- (13). Route 369H90161-3 wiring harness from filter down and aft, then forward through 369H2500 conduit left side. Install clamps four places at existing tooling holes in structure as shown; secure wiring harness with clamps. Route wiring forward through conduit to pilot compartment.

D. Part II - Electrical Installation

- (1). Using 369H4735 panel as template, mark and drill three 0.219-inch diameter holes in LH side of instrument console as shown in Figure 2; install rivets.

NOTE: Use existing nutplate and/or hole as reference point.

- (2). Install 369H4735 panel on LH side of instrument console, using three screws, washers and spacers as shown.
- (3). Route filter wiring harness from conduit to instrument console; tie in with existing wiring harness.
- (4). Connect electrical wiring per wiring diagram and wire table.
- (5). Reconnect battery and perform ground operational check of anti-ice fuel filter installation. (Refer to Section II of RFM Supplement No. CSP-D-II.)
- (6). Record helicopter serial number on 369H8100 placard; install placard on overhead duct in pilot compartment at location shown.
- (7). Install 369H4739 cover on 369H4735 panel, using five screws.
- (8). Make cutout in instrument console LH fairing as shown; reinstall fairing.
- (9). Make cutout in instrument console hood as shown; reinstall hood.
- (10). Reseal both ends of 369H2500 conduit with 732RTV sealant.
- (11). Reinstall removed components and access doors and panels.
- (12). Insert Rotorcraft Flight Manual Supplement in Section IX of flight manual.
- (13). Record installation of 369H90022 anti-ice fuel filter installation in Components Record of helicopter Log Book.

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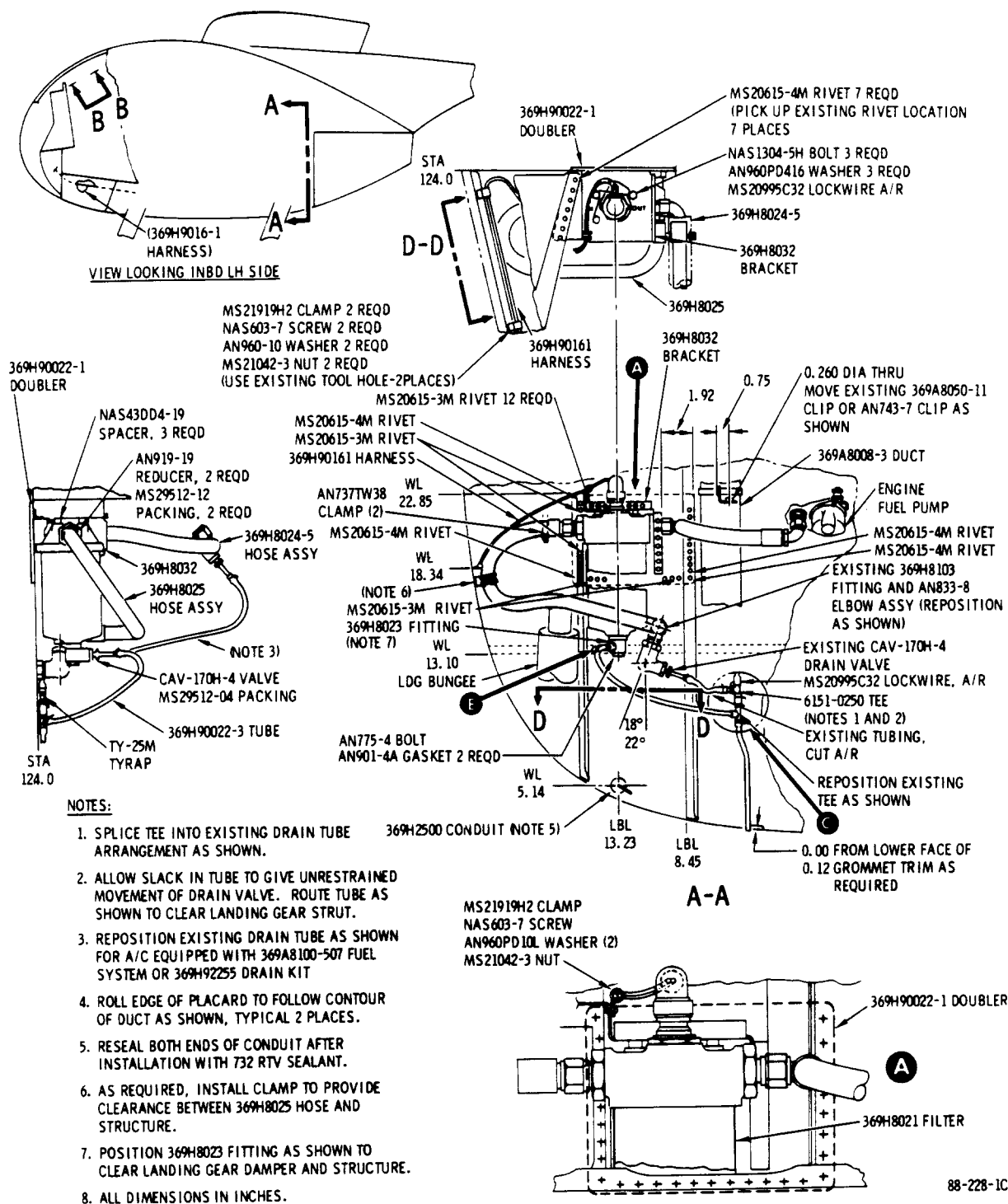
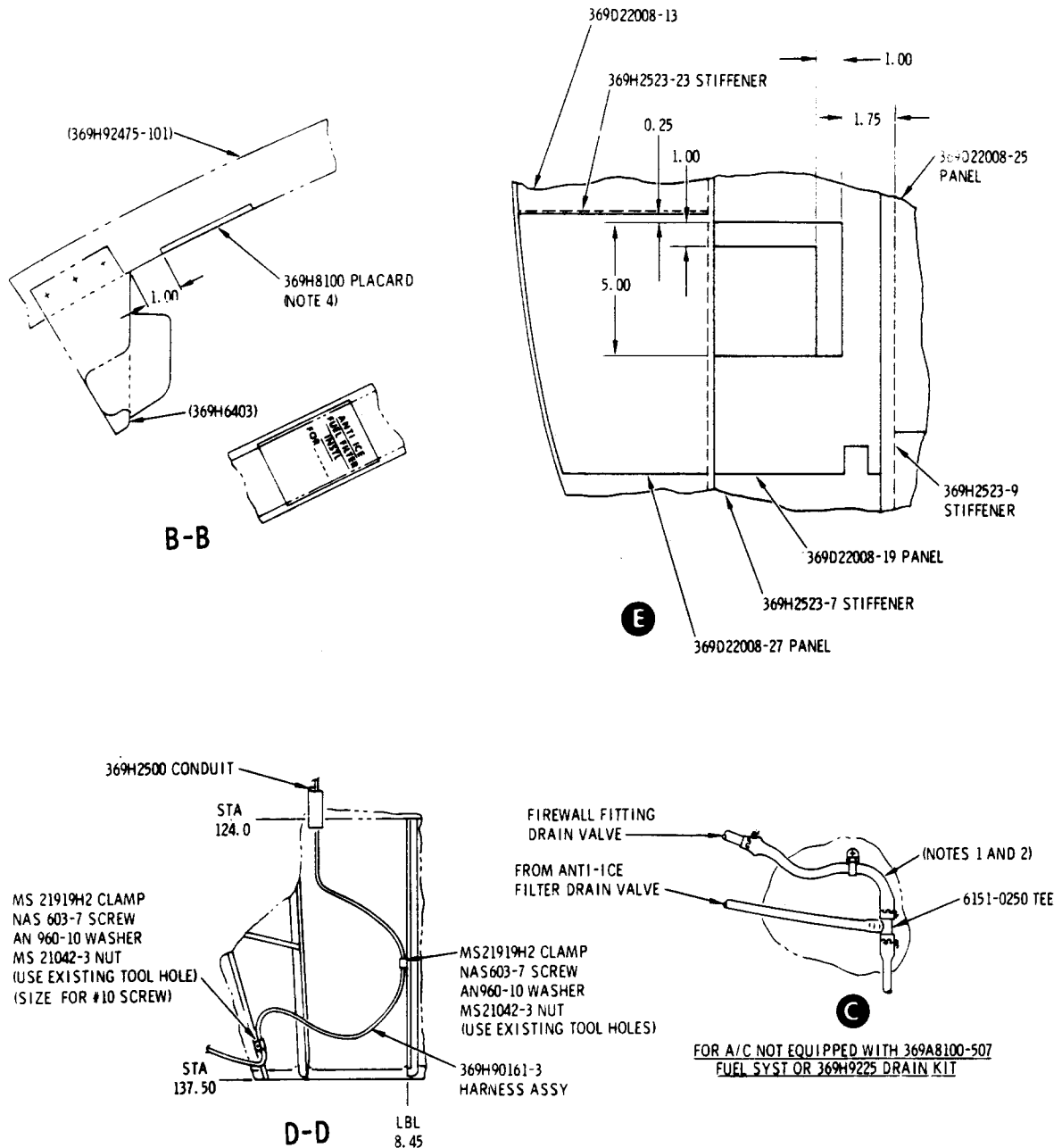


Figure 1. Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 1 of 2)

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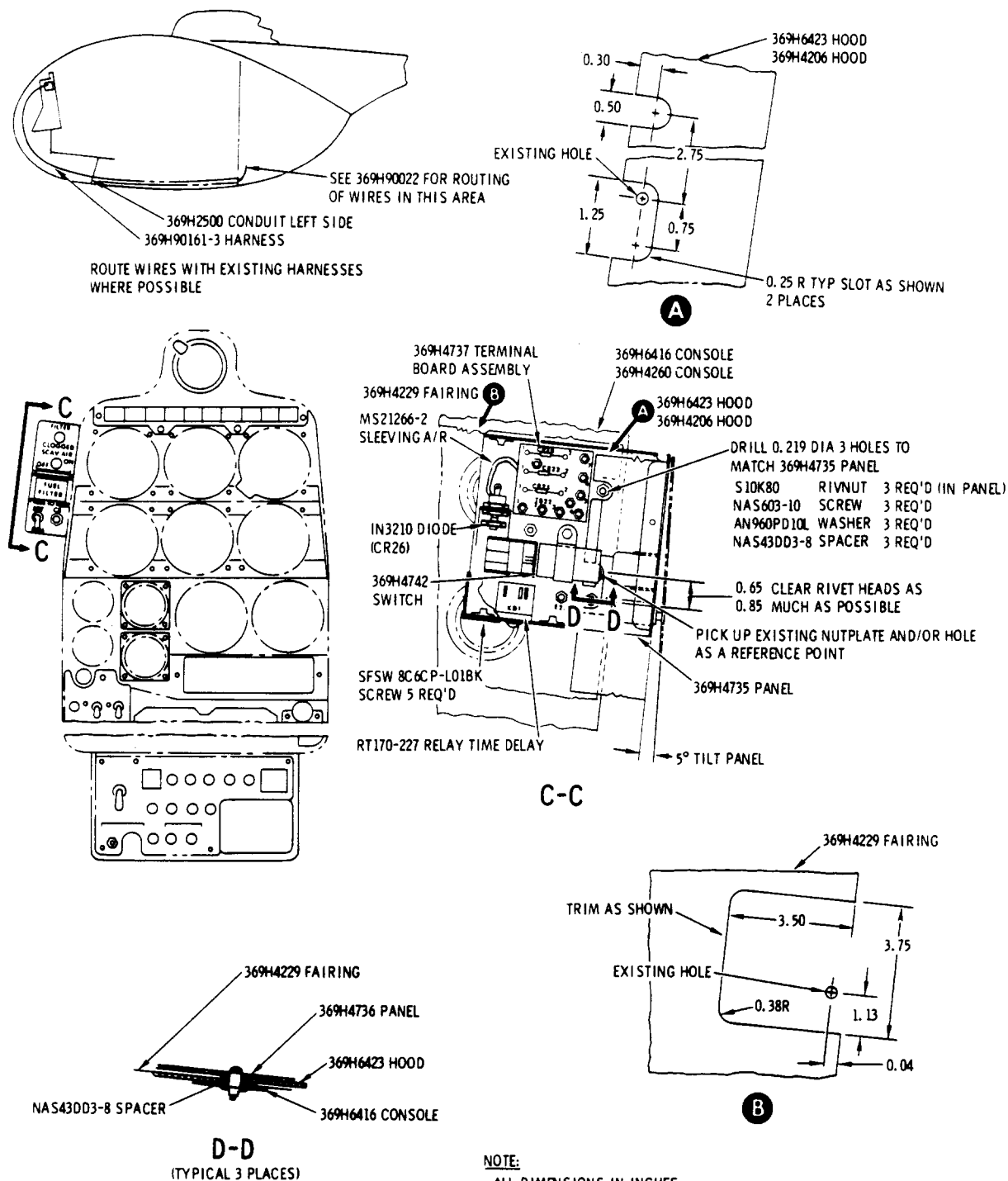
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Figure 1. Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 2 of 2)

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Figure 2. Electrical Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 1 of 3)

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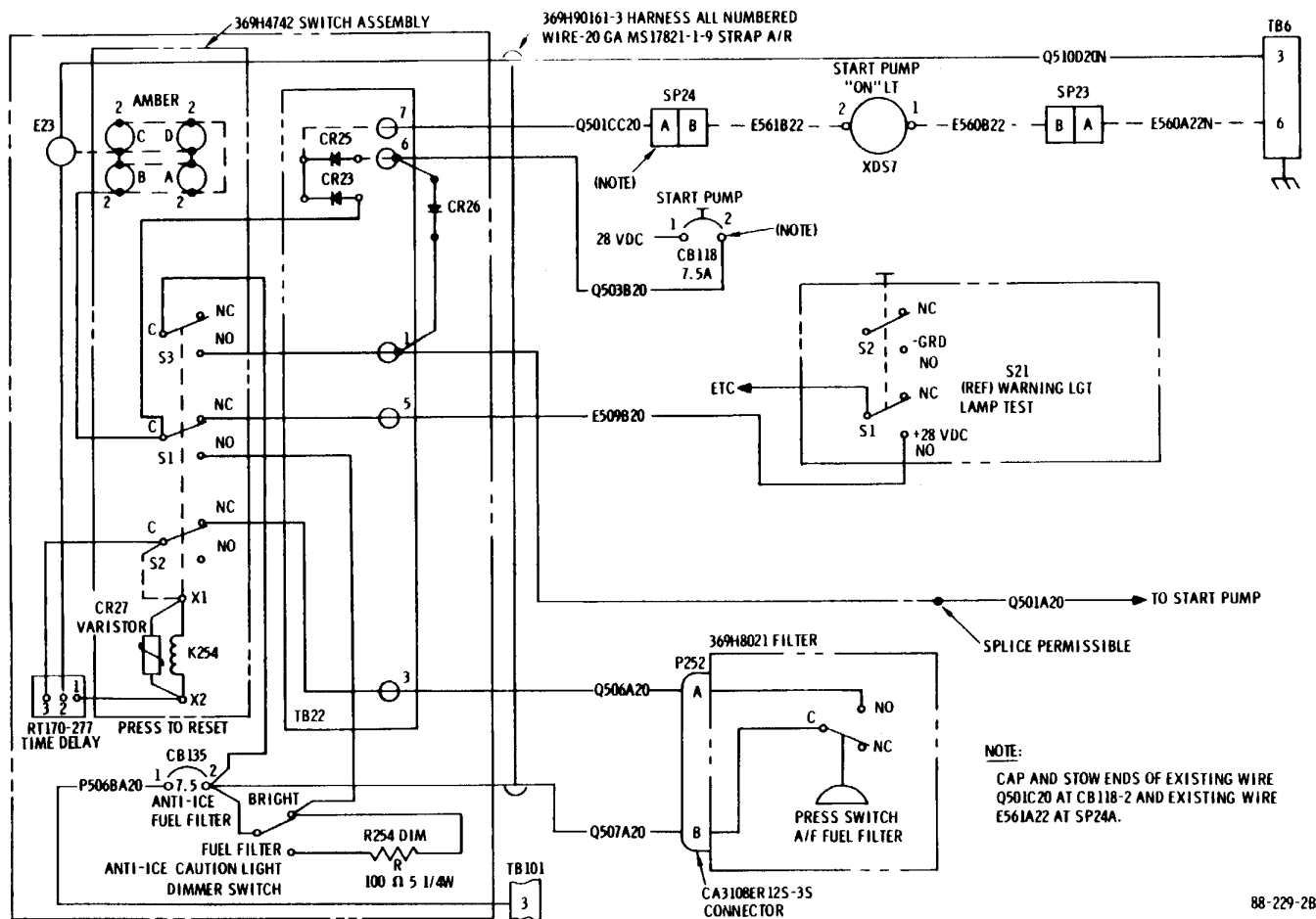
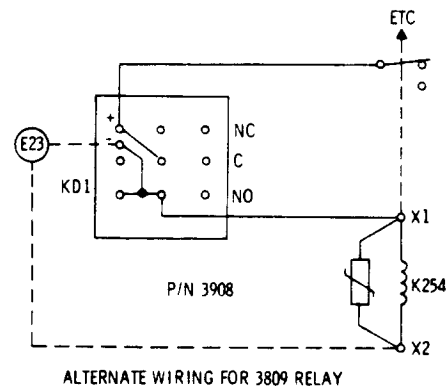


Figure 2. Electrical Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 2 of 3)

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WIRE TABLE				
WIRE NO.	FROM	TERMINATION	TO	TERMINATION
Q507A20	CB 135-2	MS25036-149	P252-B	CRIMP
Q506A20	TB22-3	MS25036-101	P252-A	CRIMP
E509B20	TB22-5	MS25036-101	S21-S1 (NO)	SOLDER
Q510D20N	E23	MS25036-101	TB6-3	MS25036-101
Q501A20	TB22-1	MS25036-101	TO START PUMP	
Q501CC20	TB22-7	MS25036-101	SP24A	32445 (AMP)
Q503B20	TB22-6	MS25036-101	CB 118-2	MS25036-149
P506BA20	CB 135-1	MS25036-149	TB 101-3	MS25036-101

88-229-3A

Figure 2. Electrical Installation - 369H90022 Anti-Ice Fuel Filter (Sheet 3 of 3)

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FIELD REPAIR – CYCLIC TRIM ACTUATOR ASSEMBLIES, PN 369A7170 SERIES AND PN 369A7171 SERIES*

1. PLANNING INFORMATION

A. Models Affected

500D Model 369D Helicopter Serial No. 0003D through 0439D.

All spares trim actuator assemblies with actuator having Calco Part Number and Serial Number listed below:

Calco P/N	Calco S/N
8222M7*	212 or below
8222M6*	860 or below

*Actuators identified with letter “R” following Calco Part Number on housing are NOT affected by this Notice.

B. Time of Compliance

At owners and operators discretion.

C. Preface

Tests at HH indicate that loosening of the drive gear retention nut of the cyclic trim actuator may occur. The information given in this Service Information Notice lists procedures to remove and reinstall the retention nut with a Loctite sealant. In addition, procedures are given to determine whether the actuator is inoperative due to a stalled rather than an electrical failure.

It is to be noted that the helicopter can be operated safely with the trim actuators inoperative, even at the extreme of trim travel.

For helicopters not experiencing any problems with the trim actuators, it is recommended that at owners and operators discretion the actuator be reworked per this Notice at the next major inspection period.

D. Reference

500D Basic HMI – Vol I, Issued 15 September 1976; Revision No. 2, 27 November 1978

E. Weight and Balance

Weight and balance not affected.

F. FAA Approval

The technical design aspects of this Bulletin are FAA Approved.

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Tools, Equipment, and Materials

TOOLS AND EQUIPMENT	
Nomenclature	Source
DC Milliammeter, 0 – 5 amperes	Weston Model 931 or equivalent
DC Voltmeter, 0 – 50 volts	Weston Model 931 or equivalent
Variable DC Power Supply, 10 – 36 volts	NJE Model SY 36–10 or equivalent

MATERIAL	
Nomenclature	Source
Sealant; Loctite #290	Loctite, Inc.

B. Procedure

NOTE:

- Rework of operative trim actuators is recommended at major inspection period.
 - Rework is NOT applicable to actuators having letter “R” following vendor part number on actuator housing.
- (1). Remove cyclic trim actuator from helicopter, per Basic HMI – Vol I.
 - (a). If actuator is inoperative, bench test unit to determine whether mechanical (stalled), electrical or other mechanical failure exists.
 - 1). A reading of 0.0 to 0.1 amperes indicates electrical failure; replace actuator.
 - 2). The motor runs, but the output shaft does not move, indicates a mechanical failure; replace actuator.
 - 3). A reading of 0.7 amperes (approximately), or actuator extends part way and stalls, indicates stalled failure; rework actuator per steps (2). through (8). below.
 - (2). Remove lockwire and six screws securing actuator cover to housing.



When removing housing, note location and number of shims on each gear for reassembly in proper location.

NOTE: Step (3). not applicable if actuator is operative. Perform steps (4). through (8). below.

- (3). Using fingers only, check gear drive retention (hex) nut for looseness. If nut is loose, rework per instructions below. If nut is NOT loose, replace actuator assembly.
- (4). Remove nut and clean threads. Reinstall nut using Loctite #290 on threads. Torque nut to 30 to 40 inch-pounds.
- (5). Reinstall actuator cover with existing screws; lockwire screws.

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- (6). Add letter “R” at end of vendor part number on actuator housing.
- (7). As applicable, reinstall trim actuator, per Basic HMI - Vol I.
- (8). Record rework of trim actuator per this Notice in Components Record of helicopter Log Book.

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INSTALLATION OF AIR BAFFLE, SEAL AND COVER ASSEMBLIES – TRANSMISSION COMPARTMENT

1. PLANNING INFORMATION

A. Models Affected

500D Model 369D Helicopter Serial No. 0003D through 0333D.

B. Time of Compliance

At owners and operators discretion.

C. Preface

The information given in this Service Information Notice lists a procedure for field installation of air baffles and seals and cover assemblies in the upper section of the aft transmission compartment to prevent entry of plenum air and moisture into the cabin area.

D. Reference

500D Basic HMI-Volume I, Issued 15 September 1976; Revision No. 1, 15 November 1977.

Hughes Service Information Notice No. DN-I2, dated 18 November 1977.

E. Weight And Balance

Changed Weight:

Weight (lbs): +1.5

Arm (inch): Station 110.2

Moment (inch- lbs): +169

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Parts, Supplies, and Materials

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Aft Baffle Assembly, Upper –Aft Transmission Compartment	369D26541–19	1	HH
Aft Baffle Assembly, Lower –Aft Transmission Compartment	369D26542	1	HH
Air Seal Assembly, LH – Aft Transmission Compartment	369D26543–11	1	HH
Air Seal Assembly, RH– Aft Transmission Compartment	369D26543–21	1	HH
Cover Assembly, LH – Transmission Compartment	80–369D26545–11	1	HH
Cover Assembly, RH – Transmission Compartment	80–369D26545–21	1	HH
Screw	NAS603–8	16	Commercial
Washer	AN960PD10L	16	Commercial
Nut	MS21042L3	4	Commercial
Trim Cover Panel Assembly (LH Rotor Brake Handle Assembly)	369D26524–25 (Modified)	1	HH
	or		
*Trim Cover Panel Assembly (RH Rotor Brake Handle Assembly)	369D26524–26 (Modified)	1	HH

*Not applicable if presently installed on helicopter, per Hughes Notice No. DN–12.

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MATERIAL	
Nomenclature	Source
Sealing Compound, EP711	Coast ProSeal, Compton, CA
Caulking Compound, PR1221	Product Research, Burbank, CA
Seal, Sponge Rubber, DE-41	Armstrong Cork Co., Lancaster, PA

B. Installation Procedure

- (1). Remove engine air inlet forward fairings. (Refer to Basic HMI - Vol I.)
- (2). Remove PN 369D25640 cooling fan inlet screw.
- (3). Remove aft compartment interior trim panels and blower access door.
- (4). Install PN 369D26541-19 upper baffle assembly as follows:
 - (a). Position baffle between main transmission and mast support structure; align four attach holes in baffle with existing holes in structure. (See Figure 1.)
 - (b). Install baffle with screws, washers and nuts; seal screw heads with sealant.
- (5). Install PN 369D26542 lower baffle assembly as follows:

NOTE: During installation of lower baffle, disconnect heater duct at forward attach point and insert duct through 2.00-inch diameter hole in baffle.

- (a). Secure lower baffle to upper baffle with two screws and washers at matching nutplates in upper baffle.
- (b). Disconnect 5/8-inch diameter drain tube at mast support base and insert tube through hole in baffle. Safetywire drain tube to structure.
- (6). Reinstall PN 369D22070 blower access door.
- (7). Position and install PN 369D26543-11 and -21 seal assemblies at lower baffle and blower access door as shown. Install seal assemblies with screws and washers at matching clipnuts on lower baffle and on blower access door.

NOTE: If excessive gap (0.06 or more) exists between structure and rubber extrusion on seals, fill gap by bonding strip of adhesive-backed gasket to structure, (See Detail A.)

- (8). Position PN 369D26545-11 and -21 cover assemblies as shown; align cover attach holes with existing fairing attach nutplates. Temporarily secure cover assemblies with screws and washers, 5 places each.
- (9). Check installation of baffles, seals and cover assemblies for discrepancies.
- (10). Using caulking compound, seal all gaps between fuselage structure and baffle, seal and cover assemblies.
- (11). Remove screws securing cover assemblies; reinstall engine air inlet forward fairings.

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(12). Reinstall aft compartment trim.

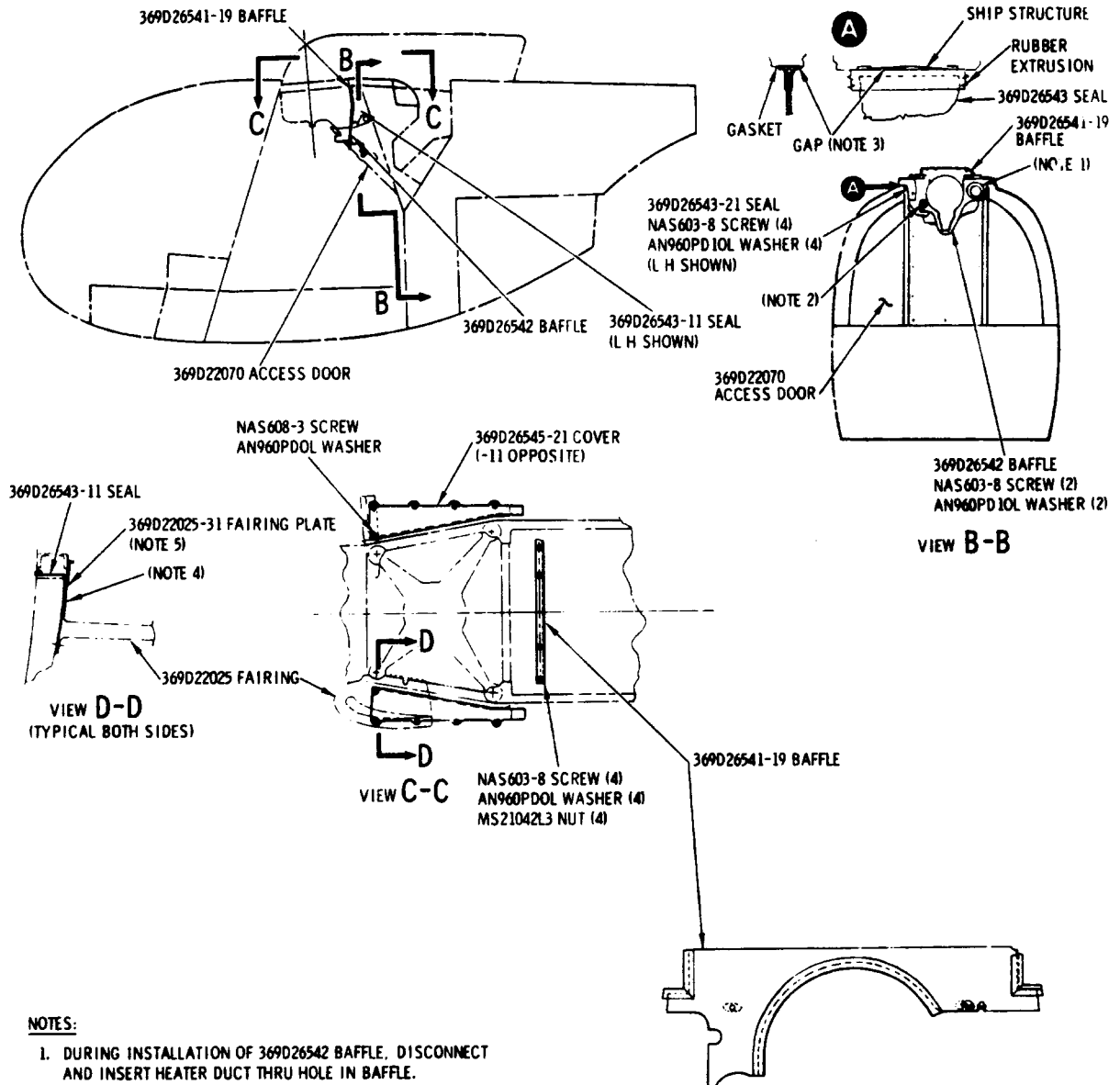
(13). For helicopters equipped with Rotor Brake Kit, perform the following:

NOTE: Not applicable if modified rotor brake handle trim cover panel has already been installed, per Hughes Notice No. DN-12.

- (a). Carefully trim modified trim cover panel assembly (for LH or RH rotor brake handle assembly); locate and drill screw attach holes in modified panel.
- (b). Slide modified trim panel boot over brake handle; align screw holes and check panel for fit. As required, remove panel and make minor trim adjustments.
- (c). Install panel, if removed; secure panel with attaching hardware.
- (d). Push panel boot aft on brake handle approximately two inches; secure boot with fastener tape.

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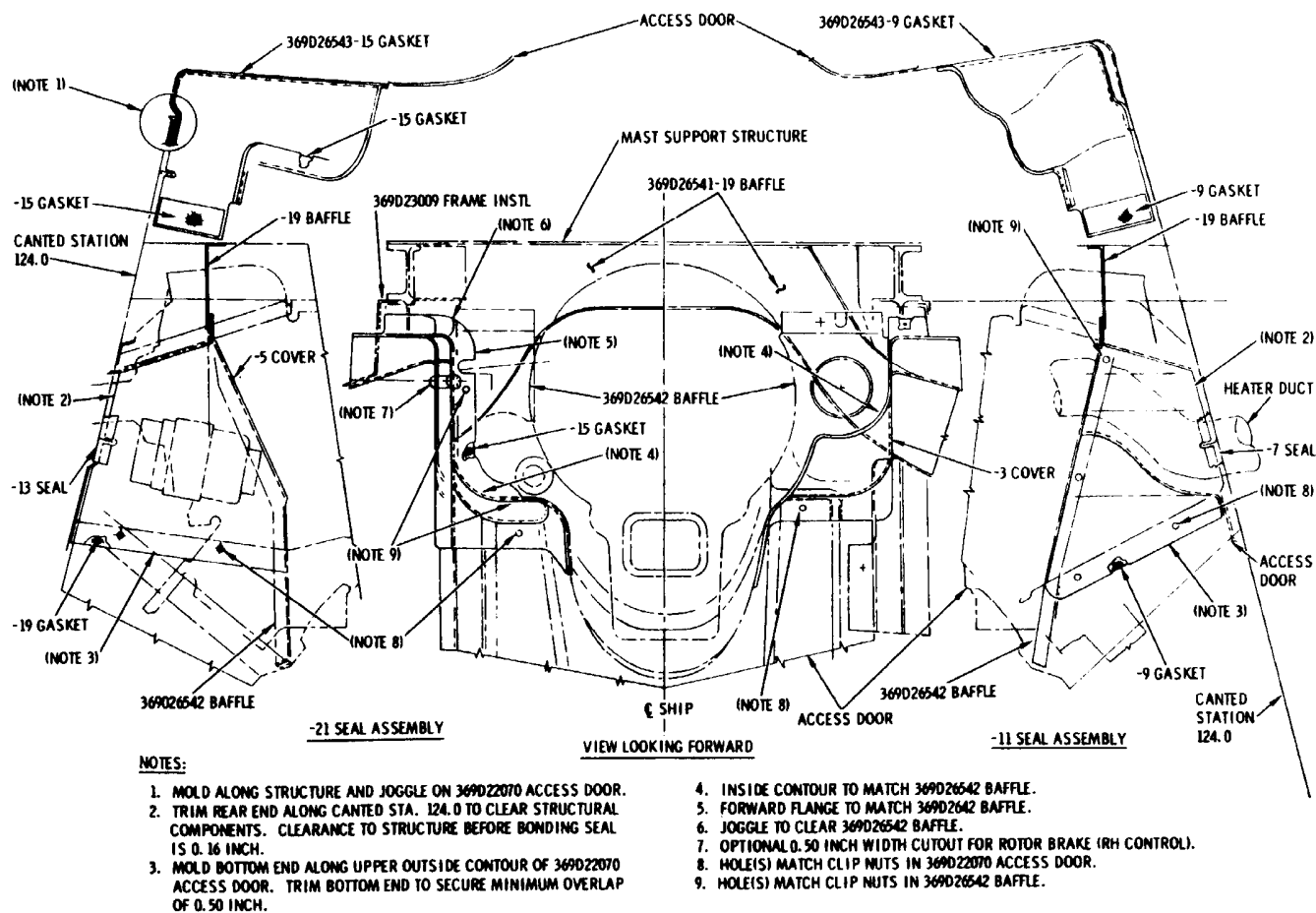
88-281-2

Figure 1. Installation of Air Baffle, Seal and Cover Assemblies (Sheet 1 of 2)

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88-281-1

Figure 1. Installation of Air Baffle, Seal and Cover Assemblies (Sheet 2 of 2)

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SUBJECT: INSTALLATION OF STAINLESS STEEL ABRASION TAPE, PN
369D21104 - MAIN ROTOR BLADE LEADING EDGE

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0003D and subs

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists a procedure for installing stainless steel abrasion tape to the leading edge of the main rotor blades. Installation of the stainless steel abrasion tape is recommended for blades which are subject to a highly abrasive environment, so that blade life will not be reduced by erosion.

It is to be noted that Rotorcraft Flight Manual Supplement CSP-D-1S must be incorporated in the Flight Manual when helicopter is operated with Main Rotor Blade Abrasion Tape Kit Part No. 369D21104 installed.

REFERENCE PUBLICATIONS:

500D HMI - Volume I, Issued 15 September 1976; Revision No. 2, 27 November 1978.
500 D Rotorcraft Flight Manual Supplement No. CSP-D-1S, Dated 21 May 1979.

DATE: 1 JUNE 1979

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PART LIST

Nomenclature	Part No.	Qty	Mfr
Abrasion tape, stainless steel (6.5 in. wide x 0.0027 in thick):			
30 ft length roll	87-369D21104	1	HH
or			
100 ft length roll	88-369D21104	1	HH

MATERIALS

Solvent - aliphatic naphtha	TT-N-95 (Standard No. 200 Thinner)	Commercial
Abrasive paper - 400 grit		Commercial

TOOLS AND EQUIPMENT

Heat gun or equivalent

INSTALLATION PROCEDURE - ABRASION TAPE

- a. Lightly abrade laying surface of main rotor blade with 400 grit abrasive paper. (See Figure 1.)
- b. Wipe faying surface of blade with solvent to eliminate grease or dirt film.
- c. Use heat gun or equivalent to warm blade laying surface; temperature is not to exceed 120°F.
- d. Remove backing and apply stainless steel abrasion tape to outboard leading edge of main rotor blade as follows:
 - 1). Apply the 6.50 inch wide and 24.00 inch long abrasion tape along blade leading edge, as shown, so that tape overlap over bottom and top of blade edge is equal.

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- 2). Smooth and press abrasive tape into place by hand, using heat gun or equivalent to maintain temperature.
- 3). Reapply pressure by hand following initial installation to ensure proper bonding; the abrasive tape must be free of surface wrinkles or air bubbles.

NOTE

A second abrasion tape may be applied on top of the first tape at owner/operator option, to facilitate future replacement when top tape becomes eroded. Perform step e below, if installation of second abrasion tape is desired for all blades.

- e. Apply a second abrasion tape, by wiping surface of installed strip with solvent and-repeating steps c and d above. Abrasion tape must be evenly aligned at top surface of blade as shown.
- f. Check installation of stainless steel abrasion tape for discrepancies.
- g. Insert RFM Supplement CSP-D-1S in Rotor craft Flight Manual, Section IX.

WEIGHT AND BALANCE:

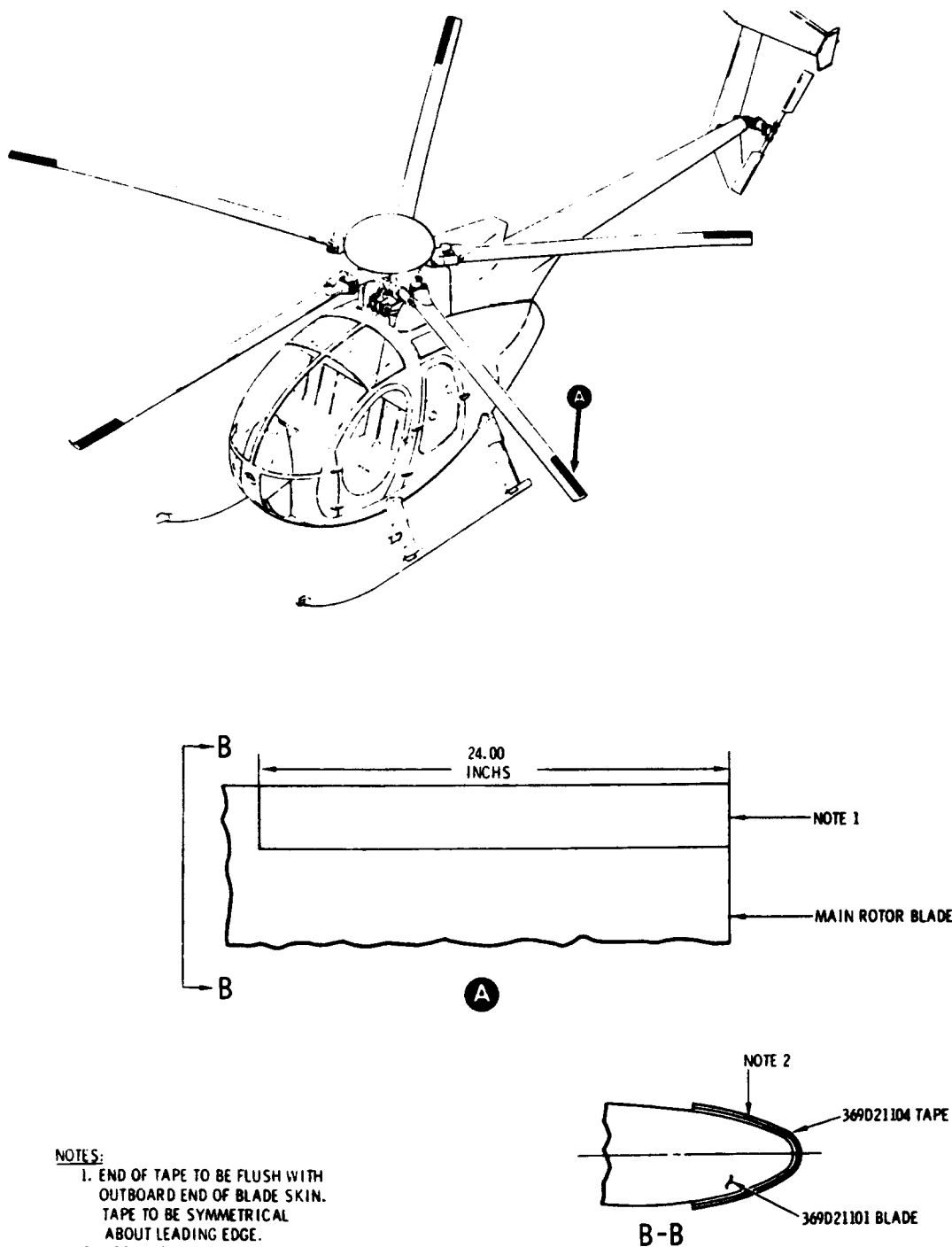
Weight and balance not affected.

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88-286A

Figure 1. Installation of Stainless Steel Abrasion Tape,
 PN 369D21104, Main Rotor Blade Leading Edge

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SUBJECT: EXTENSION OF PN 369A8010-615 OVERBOARD VENT TUBE ENGINE ACCESSORY DRIVE

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0004D through 0519D

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists a procedure for adding an extension tube to the existing engine accessory drive overboard vent tube. The rework extends the vent tube four inches below the skin of the helicopter, to reduce oil spattering onto the lower fuselage.

REFERENCE PUBLICATIONS: 500D Basic HMI – Volume 1, Issued 15 September 1976; Revision No. 2, 27 November 1978

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PARTS LIST			
Nomenclature	Part No.	Qty.	Source
Rivet	NAS1738B4-2	2	Commercial
Grommet	MS35489-22	1	Commercial

MATERIALS

Tubing - 4.85 in. long X 0.875 in. OD x 0.058 in wall Commercial
(5052-0 Al Aly, WW-T-700/4, Type I, Temp 0)

Sealant PR1221 Product Research

or

Pro-Seal 247 or 890 Coast Pro-Seal

TOOLS AND EQUIPMENT

Gun, rivet

Drill motor, portable

Drill bit - 0.1285 in. (No. 30)

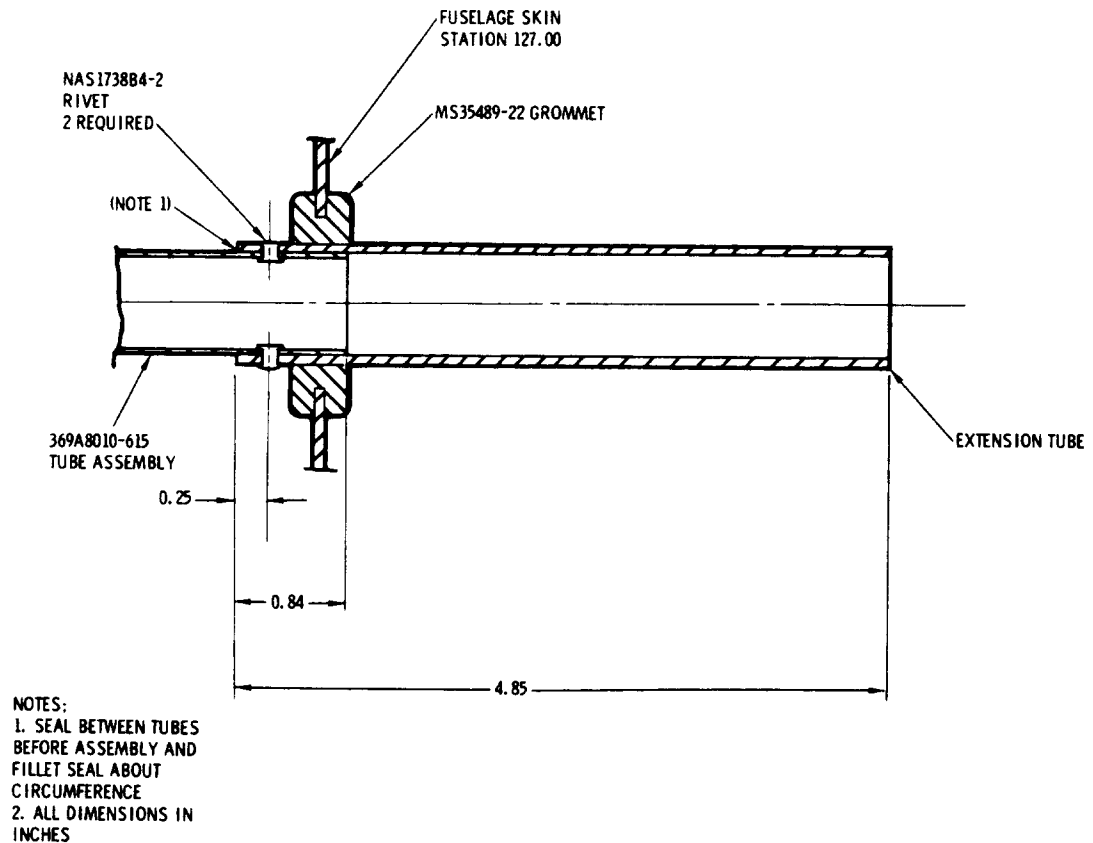
PROCEDURE

- a. Open engine access doors.
- b. Disconnect accessory drive overboard vent tube from elbow on engine accessory case; remove vent tube from helicopter.
- c. Install extension tube to existing vent tube as follows:
 - 1). Position extension tube over vent tube as shown in Figure 1; drill rivet holes in line thru tubing; install two NAS1738B4-2 rivets.
 - 2). Apply sealant between tubes as shown; fillet seal about circumference of tubes.

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Figure 1. Extension of Overboard Vent Tube, Engine Accessory Drive

- d. Remove existing grommet at lower fuselage Station 127.0 and install new MS35489-22 grommet.
- e. Insert extension tube through grommet and connect vent tube to elbow on engine accessory case. Torque line nut to 120 to 140 inch-pounds.
- f. Check installation of vent tube and extension for discrepancies.
- g. Close engine access doors.

WEIGHT AND BALANCE:

Weight and balance not affected.

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SUBJECT: FIELD REPAIR - TRIM TAB, MAIN ROTOR BLADE, PN 369D21100 SERIES

MODELS AFFECTED: All 500D Model 369D Series Helicopters equipped with subject Main Rotor Blades

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists a procedure for field repair of the trim tab on the trailing edge of the main rotor blade; and for removal of the trim tab or portions of the trim tab, if required.

It is to be noted that instructions in the Basic HMI specify that the blade must be rejected, if specified damage limitations for the tab area are exceeded. In the interest of safety and economy, the procedures given in this Notice provide a broader cleanup of the damaged trim tab area, which distributes stresses over a larger area to preclude cracking and permit continued use of the blade.

No minimum length of trim tab is required. In addition, the entire trim tab, or portion of the trim tab, may be removed if required. Main rotor blades with and without trim tabs are 100% interchangeable, individually and in ship sets.

The information given in this Service Notice is to be considered as part of the HMI and will be incorporated in the next scheduled revision to the below referenced Basic HMI – Vol I.

REFERENCE PUBLICATIONS:

Model 500D – Basic HMI – Vol I, Revised 15 September 1976;
Revision No. 2, 27 November 1978

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TOOLS AND EQUIPMENT

Shears, Metal Cutting

Saw, Metal Cutting - Power, Portable

Grinder or File

MATERIALS

Exterior Surface Touchup Treatment	Iridite	Eichardson Co. Allied-Kelite Div Des Plaines, Ill
Paint, Flat Black		Advance Coating Co So. El
Primer, Yellow	MIL-P-23377B	Commercial
Solvent - Aliphatic Naphtha	TT-N-95	Commercial
Solvent - Dry Cleaning	P-D-680	Commercial
Tape	#850	3M Company St Paul, Minn

- a. Inspect trim tab area of main rotor blade and repair tab area, as per Basic HMI - Vol I.

NOTE

If damage to trim tab area exceeds limitations specified in Basic HMI - Vol I, perform the following:

- b. As applicable, remove main rotor blade, per Basic HMI - Vol I.

CAUTION

Provide protective surface and/or covering to prevent scratching, nicking or other damage to blade during rework. Position blade on work bench or equivalent.

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- c. Wipe away dirt on and around trim tab area with clean cloth dampened with dry cleaning solvent.
- d. Mask edges of blade area around trim tab area with tape; do NOT cut tape after it has been applied to blade
- e. Remove damaged area of trim tab by making V-type cut with 45° sides joined by a 0.25-inch radius at the bottom of the V, as shown in Figure I. Blend into trailing edge of the blade with a 0.25-inch radius as shown. Maximum V-cut depth is 0.35-inch; do not cut past trim tab area into main portion of blade.
- f. If damage occurs within 1 inch of either or both ends of trim tab, remove tab end(s) and restore contour as shown.
- g. If excessive damage requires full or partial removal of trim tab from blade, perform the following (no minimum length of trim tab is required):
 - 1. Position blade on workbench so that a firm straight edge is provided for cutting or filing off trim tab.



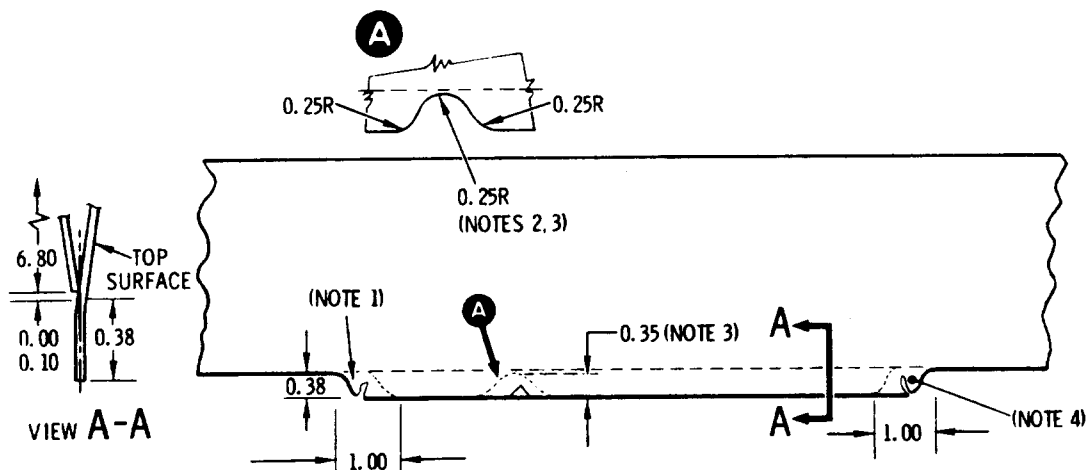
Cutting, grinding or filing to remove trim tab, and deburring of reworked blade trailing edge, are to be performed in a SPANWISE direction only. Do NOT use shears or clippers to remove trim tab.

- 2. Use metal cutting saw or equivalent to remove the 0.38-inch wide trim tab per dimensions shown in Figure 1, View A-A. Deburr edges in a SPANWISE direction only.
- h. Peel and remove tape from blade and inspect area around repair; clean repaired area with cloth dampened in solvent (aliphatic naphtha).
- i. Apply chemical film treatment (Iridite) to reworked area of blade trailing edge or trim tab; apply a thin film of primer and paint lightly.
- j. As applicable, reinstall main rotor blades, per Basic HMI - Vol I.

WEIGHT AND BALANCE: Weight and balance not affected.

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NOTES:

1. REMOVE DAMAGED END(S) IF THEY OCCUR WITHIN 1 INCH OF TAB ENDS.
2. 0.25 RADIUS CLEANUP. FINISH PER BASIC HMI.
3. MAXIMUM DEPTH OF REPAIR 0.35.
4. NO MINIMUM LENGTH OF TAB REQUIRED. IF DAMAGE OCCURS AT BOTH ENDS, IT IS PERMISSIBLE TO REMOVE AT BOTH ENDS.
5. ENTIRE TAB MAY BE REMOVED IF REQUIRED.

ADN43-1

Figure 1. Repair and Removal of Trim Tab, Main Rotor Blade

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REFERENCE SHEET

SERVICE INFORMATION NOTICES AND LETTERS

Action Reference:

When performing maintenance or inspection

of main rotor blades, refer to Service Information Notice No. DN-43.

HMI Reference:

Insert this sheet in 369D Series Basic-HMI -Volume I, Section 7. Page 7-17.

This reference sheet shall be kept as a .Dart of the manual until the data is incorporated in the next revision of the Basic-HMI-Volume I. (See Service Information Summary, Basic HMI-Volume I, Page i.)

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DATE: 15 AUGUST 1979

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* Supersedes Service Information Notice No. DN-46, Dated 16 April 1979

SUBJECT: FIELD MODIFICATION OF PN 369D21002 SCISSORS CRANK ASSEMBLY, MAIN ROTOR HUB - UPGRADE TO PN 369D21002-21 CONFIGURATION

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0003D thru 0209D

TIME OF COMPLIANCE: At owners and operators discretion.

PREFACE: The information given in this Service Information Notice lists a procedure for modification of the subject PN 369D21002 main rotor hub scissors crank assembly to the current PN 369D21002-21 configuration, to preclude shimming problems experienced with the early crank configuration. Field rework consists primarily of relocating existing bushings in the crank outboard attach lugs to the inboard lugs, and installing new flanged type bushings in the outboard lugs. The wall thickness of the crank outboard attach lugs must be reduced to accommodate installation of the flanged bushings.

Instructions are also provided for replacement of existing attach hardware for the crank assembly. Field reports indicate that existing attach bolts may have insufficient thread length which in some cases caused loosening of the bolts in service.

It is to be noted that the field modification and installation of the PN 369D21002-21 crank assembly with new attach hardware per this Notice also upgrades the PN 369D21001 scissors assembly to the new PN 369D21001-501 configuration.

REFERENCE PUBLICATIONS:

500 D Basic HMI—Volume I, Issued 15 September 1976; Revision No. 3, 15 March 1979

DATE: 15 AUGUST 1979

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PARTS LIST

Nomenclature	Part No.	Qty
Bushing	NAS77-4-23	2
Bolt	NAS6204-18D	2
Bolt	NAS6204-38D	1
Washer	AN960PD416L	4
*Washer	AN960C416	2
Nut	MS17826-4	3
Pin, cotter	MS24665-153	3

*AN960PD416L may be used as alternate

TOOLS AND EQUIPMENT

Drill motor, portable

Drill bit - 0.3750 inch diameter

Ream bit - 0.3750 - 0.3755 inch diameter

■ Grinder, portable or file

MATERIALS

Primer, zinc chromate

■ Chemical film treatment	MIL-C-5541, Class 2	Iridite 14-2 Al - Coat	Richardson Co. Allied-Kelite Products
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PROCEDURE

a. Disconnect scissors crank from hub lower shoe and scissors link. (Refer to Basic HMI-Vol I)

b. Remove existing HS626-S-4-500 bushings from outboard lugs of scissors crank. (See Figure 1.)

■ c. Using grinder or file, remove minimum 0.063 inch material from inner side of both outboard attach lugs, to obtain distance of 9.736 inches between lugs (See Figure 1). After removal of material, wall thickness of lug should not be less than 0.230 inch. Coat reworked area of lugs with iridite or equivalent corrosion protection chemical film.

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NOTE

Remove material from inner side only of existing crank outboard attach lugs.

- d. Using existing hole in outboard lugs as guide, drill and ream 0.252 inch diameter hole in inboard lugs to 0.3750 - 0.3755 inch diameter for press fit of HS626-S-4-500 bushings.
- e. Install HS626-S-4-500 bushings in inboard lugs of scissors crank with zinc chromate primer.
- f. Install new NAS77-4-23 flanged bushings with zinc chromate primer in outboard lugs as shown.
- g. Reidentify crank assembly as PN 369D21002-21 on ID plate.
- h. Reinstall scissors crank assembly using new attach hardware as follows:
 - 1. Install scissors crank to hub lower shoe with NAS6204-18D bolts, AN960PD416L washers, MS178 26-4 nuts and cotter pins as shown in Figure 2. Torque nuts to 30 to 60 inch-pounds.
 - a. Install scissors link to scissors crank assembly with NAS6204-38D bolt, AN960C416 washers, MS178 26-4 nut and cotter pins, as shown in Figure 1. Torque nut to 30 to 40 inch-pounds.
- i. Record upgrade of PN 369D21002 main rotor hub scissors crank assembly to PN 369A21002-21 configuration per this Notice in Component Record of helicopter Log Book.
- j. Record upgrade of PN 369D21001 main rotor hub scissors assembly to PN 369D21001-501 configuration per this Notice in Component Record of helicopter Log Book.

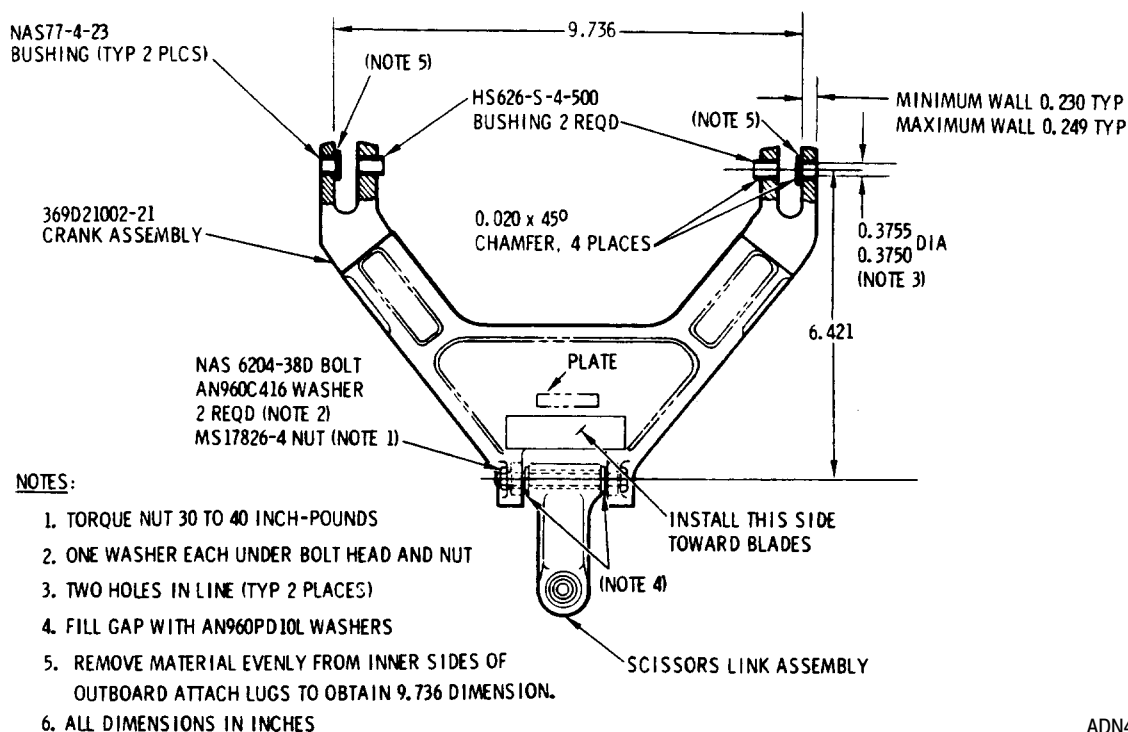
WEIGHT AND BALANCE: Weight and balance not affected.

FAA APPROVED

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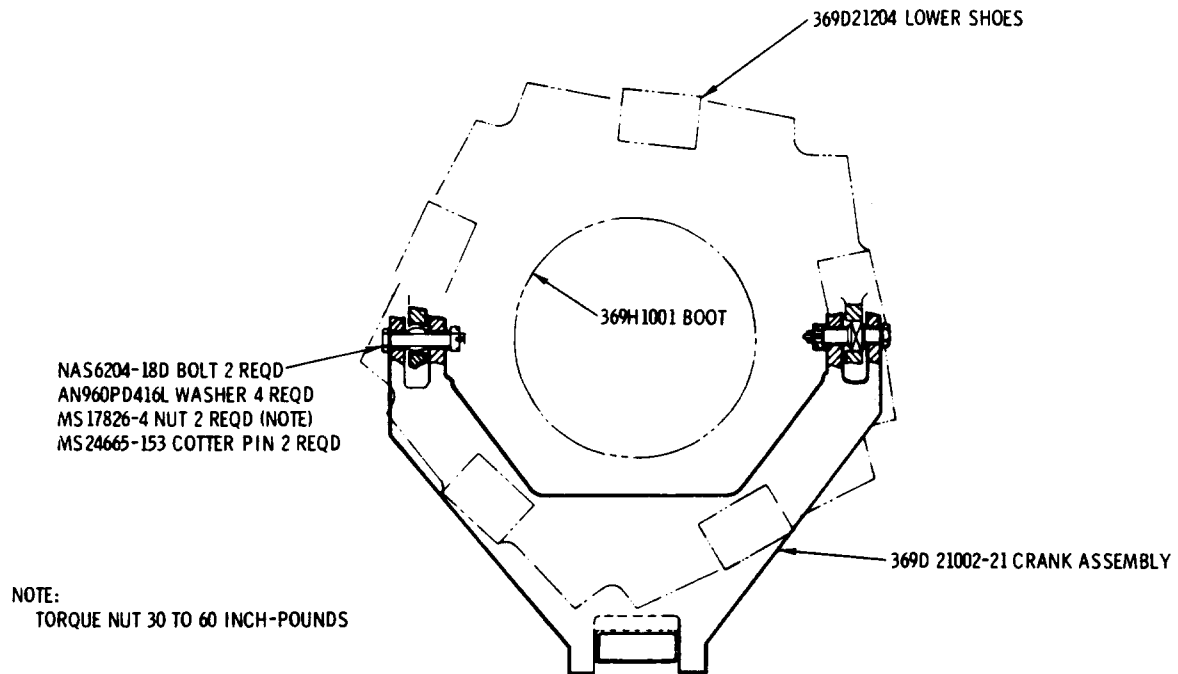
ADN461-1

Figure 1. Field Modification - 369D21002-11 Crank Assembly to 369D21002-21 Configuration

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ADN461-2

Figure 2. Installation of 369D21002-21 Crank to Hub Lower Shoes

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SUBJECT: REPLACEMENT OF RADIO TRANSMIT/INTERCOM TRIGGER SWITCH;
REWORK OF CYCLIC PITCH STICK GRIP ASSEMBLY*

*Rework not required for Hughes PN 369D27133 or
Guardian PN A218-964401-00 Cyclic Pitch Stick Grip Assemblies

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0003D through 0480D

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: A new improved Guardian PN A218-158698-05 radio transmit/intercom switch is now provided as replacement, when required, for existing trigger switches in cyclic grip assemblies installed on the above-affected helicopters.

The information given in this Service Information Notice provides instructions for replacement of the trigger switch, including a one-time modification of the cyclic grip assembly, as required to accommodate the design configuration of the new replacement switch.

It is to be noted that rework of Hughes PN 369D27133 or Guardian PN A218-964401-00 cyclic grip assemblies is not required for installation of replacement PN A218-158698-05 trigger switch.

REFERENCE PUBLICATIONS:

500D Basic HMI – Volume I, Issued 15 September 1976; Revision No. 2,
27 November 1978

Publication No. CSP-023, Illustrated Parts List and Maintenance
Instructions for Cyclic Stick Grip Kit Installation, PN 369H90129-31 and
-505, Issued 1 June 1977

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PARTS LIST

Nomenclature	Part No.	Qty	Mfr
Switch – RADIO/ICS	A218-158698-05	1	Guardian Electric

TOOLS & EQUIPMENT

Routing tool – blade, rotary file or equivalent

MATERIALS

Potting compound

PROCEDURE

- a. Check that all electrical power is OFF.
- b. Disconnect cyclic grip wiring connector from plug at lower end of cyclic stick.
- c. Remove strap securing wiring to stick socket; remove strap mounting plate if it is unserviceable.
- d. Remove screw from grip and separate grip from stick tube.
- e. Tie a string to each wire bundle at lower end of cyclic stick. Push slack wiring into wiring exit holes in stick socket while pulling grip wiring from stick tube. Remove grip and wiring; leave strings in tube for reassembly.
- f. Remove the two exposed spring tension screws, springs, ball and pin securing trigger switch in grip (located on top and right-hand side of grip).
- g. Drive trigger pivot pin from grip to release the trigger. Pin is removed from right to left while holding grip in normal position. Remove Trigger.
- h. Remove potting compound and two switch retaining screws at front of grip. Pull switch forward out of grip, feeding wiring up through grip at same time. Unsolder wiring terminals on trigger switch.

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Protect all wiring and switches during rework of grip; or remove wiring and switches from grip, noting all electrical connections.

i. Rework cyclic grip as follows (see Figure 1):

1. Press or pull insert from top of grip.
2. Make template of profile of new A218-158698-05 trigger switch.'
3. Using file, blade or equivalent routing tool, remove material from lower inside edge of hole for trigger switch to permit installation of new switch. Use template to determine amount and location of material to be removed.

j. Clean grip, wiring and switches. Reconnect (solder) all electrical wires and reinstall switches, as applicable. New trigger switch is retained by trigger pivot pin.

k. Apply potting compound to all open screw holes and insert hole.

1. Reinstall grip on stick tube. Using attaching strings, route grip wiring through stick tube and reconnect at electrical plug.

m. Check switch operation and wiring continuity.

n. Secure wiring to stick socket with nylon strap.

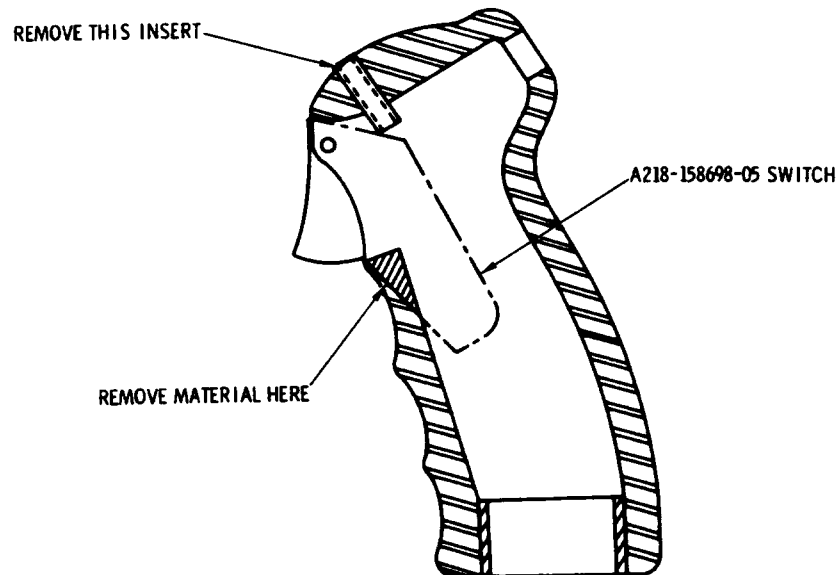
WEIGHT AND BALANCE:

Weight and balance not affected.

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88-323

Figure 1. Rework of Cyclic Pitch Stick Grip Assembly

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* Supersedes Service Information Notice No. DN-50, dated 29 June 1979

SUBJECT: INSTALLATION OF VOLTAGE TRANSIENT SUPPRESSORS

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0003D through 0539D.

The following optional kits installed on helicopter or in Spares Inventory at date of this Notice:

PN 369H90148-503/-505 Engine Air Particle Separator Filter

PN 369H90142-501 Manually Operated Searchlight PN

369D2-90121-501/-505/-507 Emergency Floats.

TIME OF COMPLIANCE: At owners and operators discretion.

PREFACE: Part I of this Service Information Notice lists a procedure for installing voltage transient suppressors to the helicopter electrical system at the main bus and at the start relay, to reduce the possibility of voltage spikes damaging solid state circuits, including the reversing circuit in the longitudinal and lateral trim actuator assemblies installed on the helicopter.

Part II of this Notice provides instructions for installing additional suppressors, if the helicopter is equipped with optional engine air particle separator filter kit, manually operated searchlight kit, and/or emergency float kit with solenoid valves. Helicopters equipped with squib actuated emergency floats are not affected by Part II of this Notice.

REFERENCE PUBLICATIONS:

500D Basic HMI—Volume I, Issued 15 September 1976; Revision No. 2, 27 November 1978

PN 369H90148 Engine Air Particle Separator Kit Installation, IPL and Maintenance Instructions, No. CSP-004, dated 15 May 1976

PN 369H90141 Manually Operated Searchlight Kit Installation, IPL and Maintenance Instructions, No. CSP-03, dated 1 December 1977

PN 369D290121 Emergency Float Kit—Extended Landing Gear, IPL and Maintenance Instructions, No. CSP-025, dated 15 August 1977

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PARTS LIST

<u>Nomenclature</u>	<u>Part Number</u>	<u>Qty</u>	<u>Mfg</u>
Transient suppressor	16055 Transzorb	2*	General Semiconductor Industries
	or V47ZA7 Varistor	2*	GE
Terminal	MS25036-101	2	Commercial
Terminal	MS25036-102	2	Commercial
Nut	MS21042-3	1	Commercial
Washer	AN960D10L	4	Commercial
Screw	NAS1096-3-8	1	Commercial
Tubing, thermofit	0.25x(RNF- 100)	AR	Raychem
Wire, jumper	22GA	AR**	Commercial
Sleeving, insulation	No. 20	AR**	Commercial
Tie straps	MS17821-4-9	AR**	Commercial
	or MS3367-4-0	AR**	Commercial

*One each additional required if particle separator and/or searchlight kit installed; three each additional required if emergency float kit installed.

**Required if emergency float kit installed.

MATERIALS

Solder SN60WRP2

TOOLS AND EQUIPMENT

Drill motor, portable

Drill bit -- 0.190/0.194 inch diameter

Soldering iron

PART I- INSTALLATION OF VOLTAGE TRANSIENT SUPPRESSORS

(Applicable all Model 369D helicopters Serial No. 0003D through 0539D.)

Install suppressor to main bus as follows:

1. Check that all electrical power is OFF.
2. Remove instrument console fairing, as applicable, to gain access to TB101 (369D helicopters) or TB10 (369MD helicopters).

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3. Drill 0.190/0.194 inch diameter hole for ground stud in instrument panel support at location shown in Figure 1.
 4. Install new ground stud as shown; connect suppressor to terminal board TB101 for 369D helicopters, or TB10 for 369MD helicopters, and ground stud.
 5. Reinstall fairing as applicable.
- b. Install suppressor to start relay as follows:
1. Open engine access door.
 2. Disconnect and remove start relay (Section 19, HMI - Volume I).
 3. Connect suppressor to terminals X1 and X2 of start relay, as shown in Figure 2.
 4. Reinstall start relay, per HMI - Volume I.
 5. Close engine access. door.

PART II - INSTALLATION OF VOLTAGE TRANSIENT SUPPRESSORS

(Applicable 369D helicopter Serial No. 0003D through 0539D equipped with engine air particle separator filter kit, searchlight kit, and/or emergency float kit.)

- a. If particle separator filter kit is installed, install suppressor as follows:
1. Check that all electrical power is OFF.
 2. Remove interior trim and access panels to gain access to scavenge air solenoid at forward side of canted firewall. (See referenced No. CSP-004.)
 3. Disconnect plug (P206) from solenoid valve connector; install suppressor to solenoid plug (P206) as shown in Figure 3.
 4. Connect plug to solenoid valve connector.
 5. Reinstall access panels and interior trim.

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b. If manually operated searchlight kit is installed, install suppressor as follows:

1. Check that all electrical power is OFF.
2. Remove access cover to gain access to K302 and K303 relays.
(See referenced No. CSP-032)
3. Remove existing diode and install new suppressor to K302 terminals X1 and X2, as shown in Figure 4.
4. Reinstall access cover.

c. If emergency float kit (with solenoid valves) is installed, install suppressor as follows:

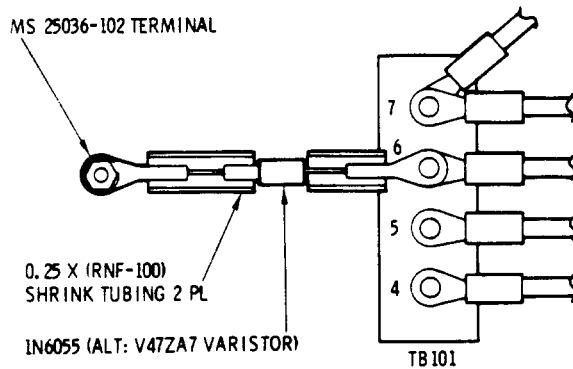
1. Check that all electrical power is OFF.
2. If floats are stowed, unsnap containment cover and loosen restraining lacing to gain access to solenoid valve and wire splices on RH and LH floats,
(See referenced No. CSP-025.)
3. Install suppressor with jumper wires to LH and RH float solenoid valve wire splices, as shown in Figure 5; use tie straps to secure sleeving at both ends of each suppressor.
4. Remove pilot left floor access cover; disconnect and remove relay from floor support forward bulkhead.
5. Remove existing diode between terminals X1 and X2 of relay; Install suppressor as shown in Figure 5.
6. Reinstall access cover; as applicable, tighten restraining lacing and secure float snap fasteners.

WEIGHT AND BALANCE: Weight and balance not affected.

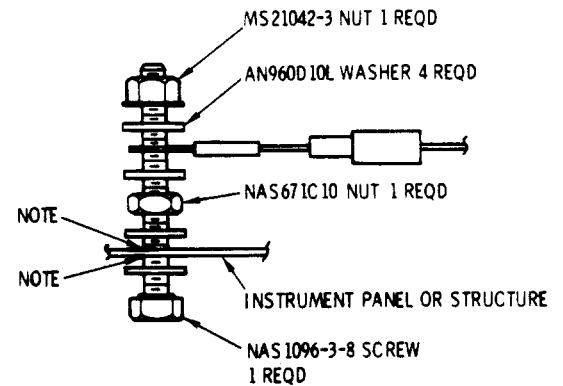
FAA APPROVED

TECHNICAL BULLETIN

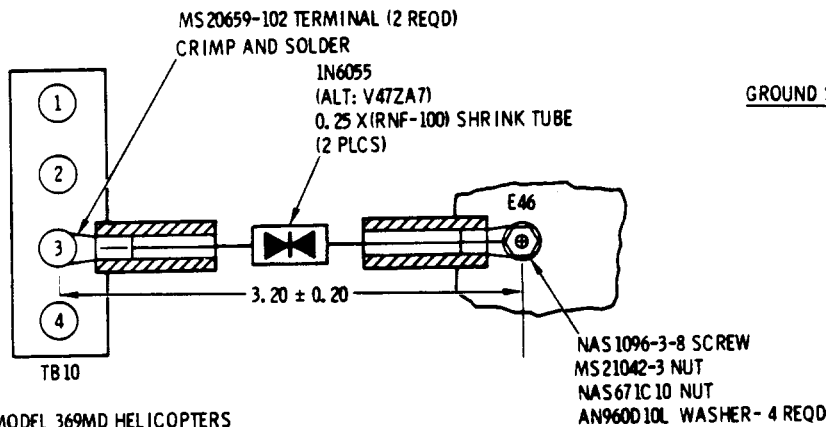
DATE: 26 NOVEMBER 1979
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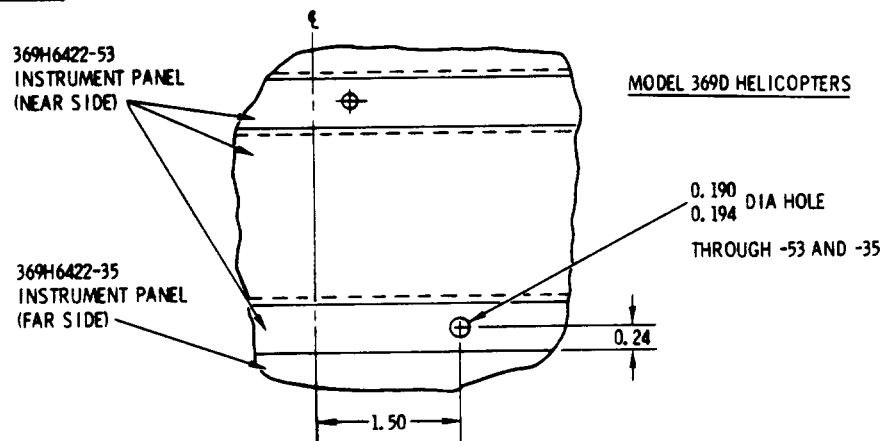
MODEL 369D HELICOPTERS



GROUND STUD (TYPICAL)



MODEL 369MD HELICOPTERS



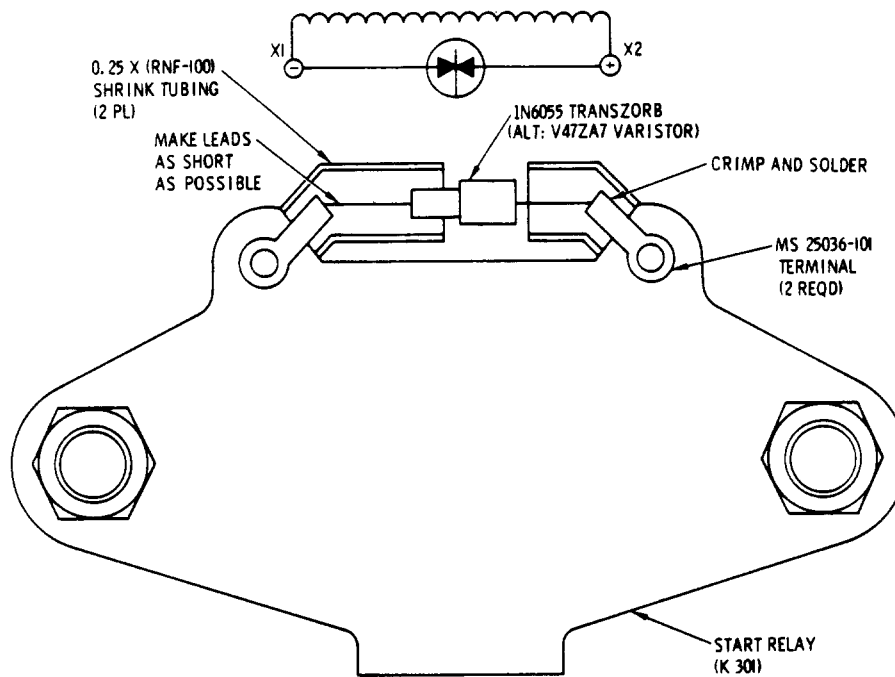
MODEL 369D HELICOPTERS

NOTE:
ELECTRICAL BOND PER MIL-B-5087 CLASS A

Figure 1. Installation of Transient Suppressor and Ground Stud - Main Bus

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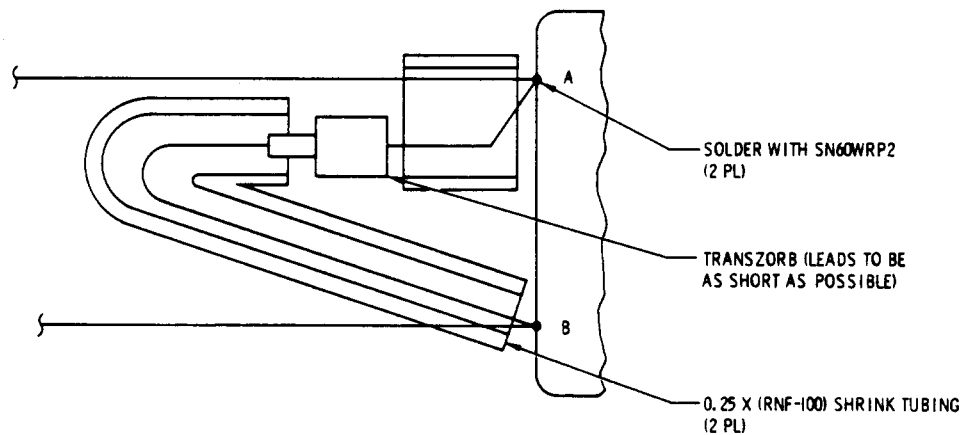
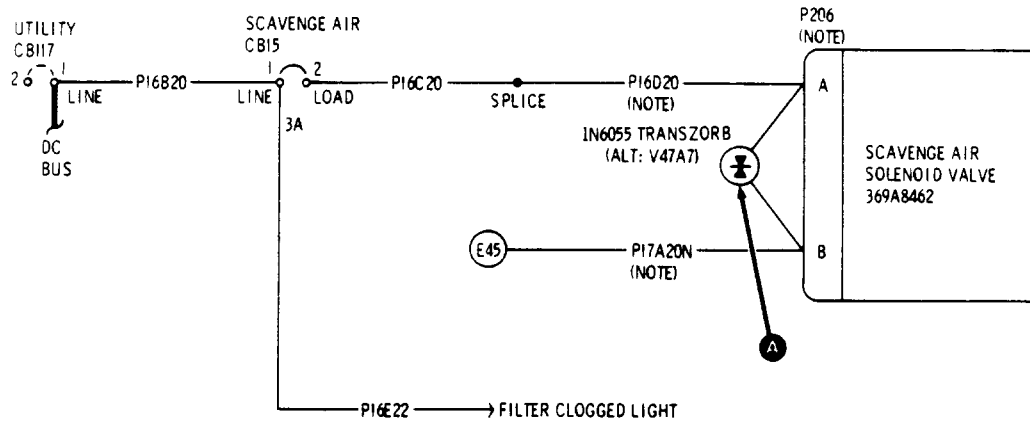


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Figure 2. Installation of Transient Suppressor - Start Relay (K301)

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NOTE: PART OF WIRE HARNESS 369A4163

A

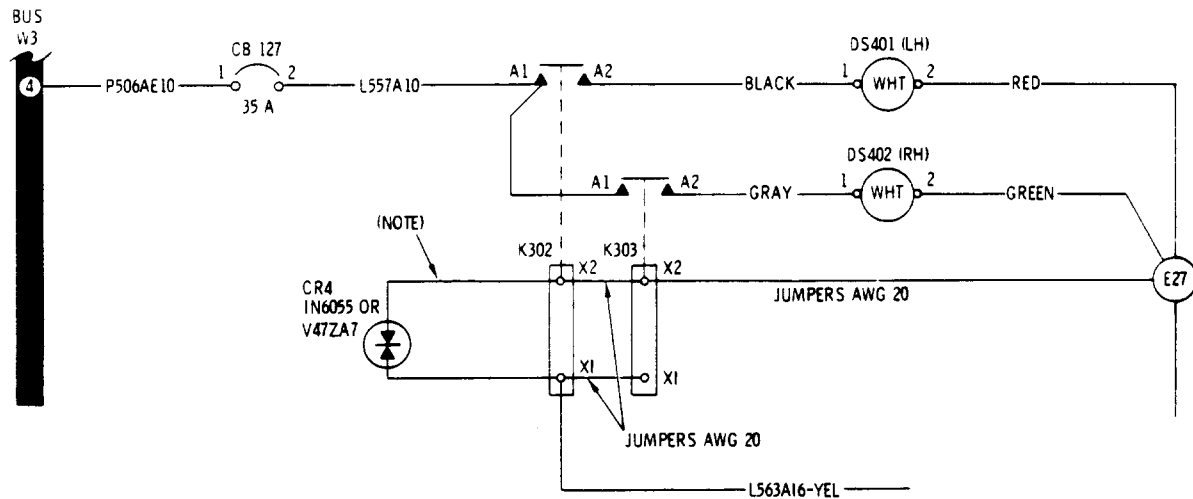
88-332

Figure 3. Installation of Transient Suppressor - Scavenge Air Solenoid Valve, Particle Separator Filter

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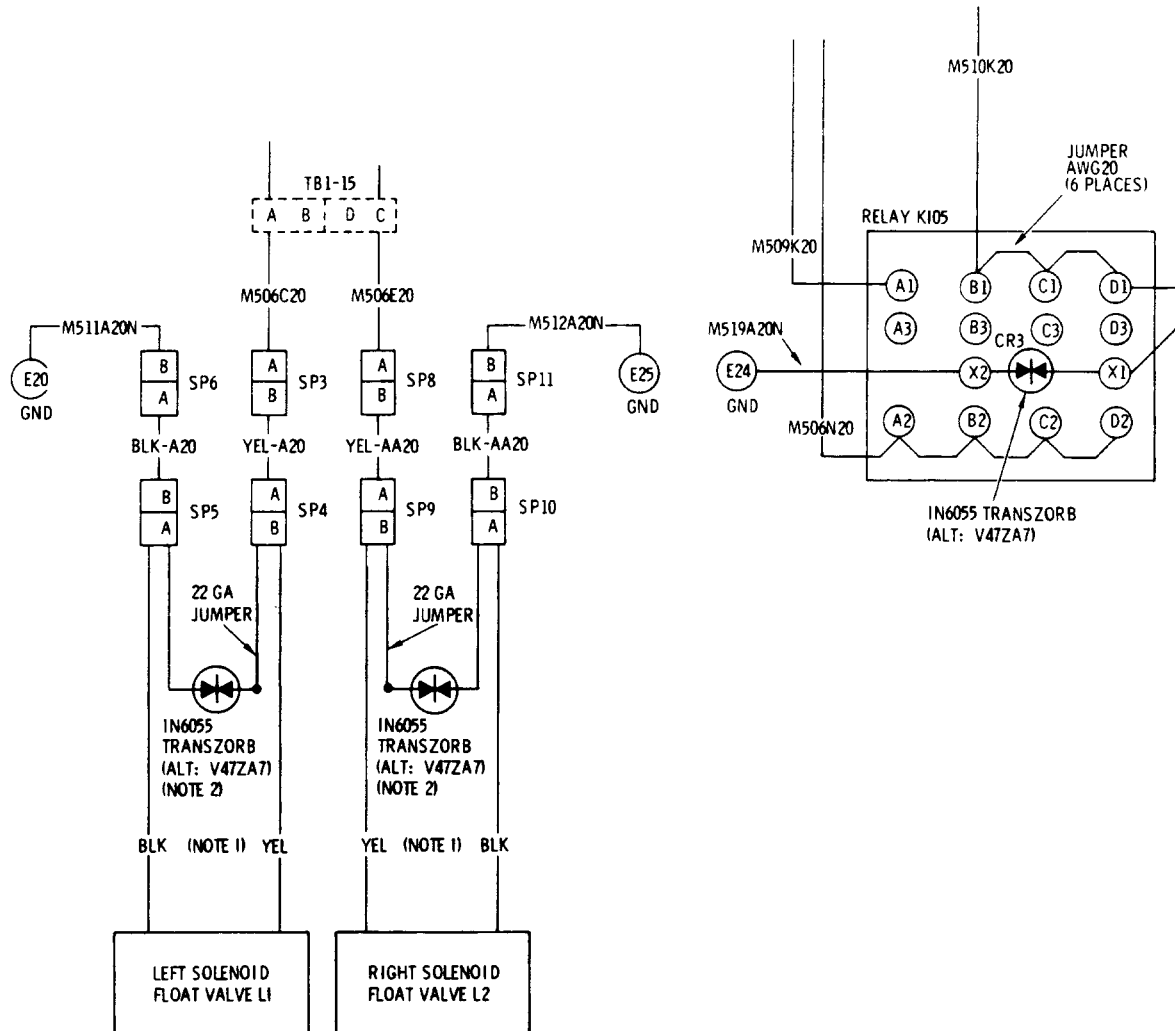
NOTE:
 MAKE LEADS AS SHORT AS POSSIBLE

88-333

Figure 4. Installation of Transient Suppressor - Manually Operated Searchlight

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NOTES:

1. PART OF SOLENOID FLOAT VALVE
2. INSTALL BETWEEN SPLICES WITH NO. 2 SLEEVE AND SECURE SLEEVE 2 PLACES (TYP) WITH THE STRAPS

88-334

Figure 5. Installation of Transient Suppressor - Solenoid Float Valves and Relay Assembly

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SUBJECT: REWORK OF GROUND HANDLING WHEEL ASSEMBLIES (FLOAT TYPE)

MODELS AFFECTED: All float type ground handling wheel assemblies not equipped with wheel fender guards*.

TIME OF COMPLIANCE: At owners and operators discretion.

PREFACE: Field reports indicate that chafing and damage to floats, and/or shearing of the bolts attaching the floats and gravel guards to the landing gear skids, have occurred when using early type ground handling wheel assemblies that do not have protective fender guards,

The information given in this Notice lists instructions for reworking the early float type ground handling wheel assemblies, to add wheel fender guards and protective padding to help prevent handling damage.

*It is to be noted that PN 369H90126-1 and -2 ground handling wheel assemblies incorporate the wheel fender guards and padding and do not require rework per this Notice.

REFERENCE PUBLICATIONS:

500D Basic HMI-Volume I, Issued 15 September 1976; Revision No. 3, 15 March 1979.

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MATERIALS

Neoprene rubber sheet-	0.12 x 2.50 x 16.50	COMMERCIAL
Rubber cement	Grip	Taylor Industry
	Lockbond	Industrial Rubber Cement Co.
	EC1300L	3M Co.
Al Aly Sheet (2) --	0.092 x 2.50 x 6.00	6061-O;QQ-A-25/11; Temp 0
Al Aly Sheet (2) --	0.093 x 3.25 x 6.00	6061-O;QQ-A-25/11; Temp 0

TOOLS AND EQUIPMENT

Welding equipment

Shears or saw, metal cutting

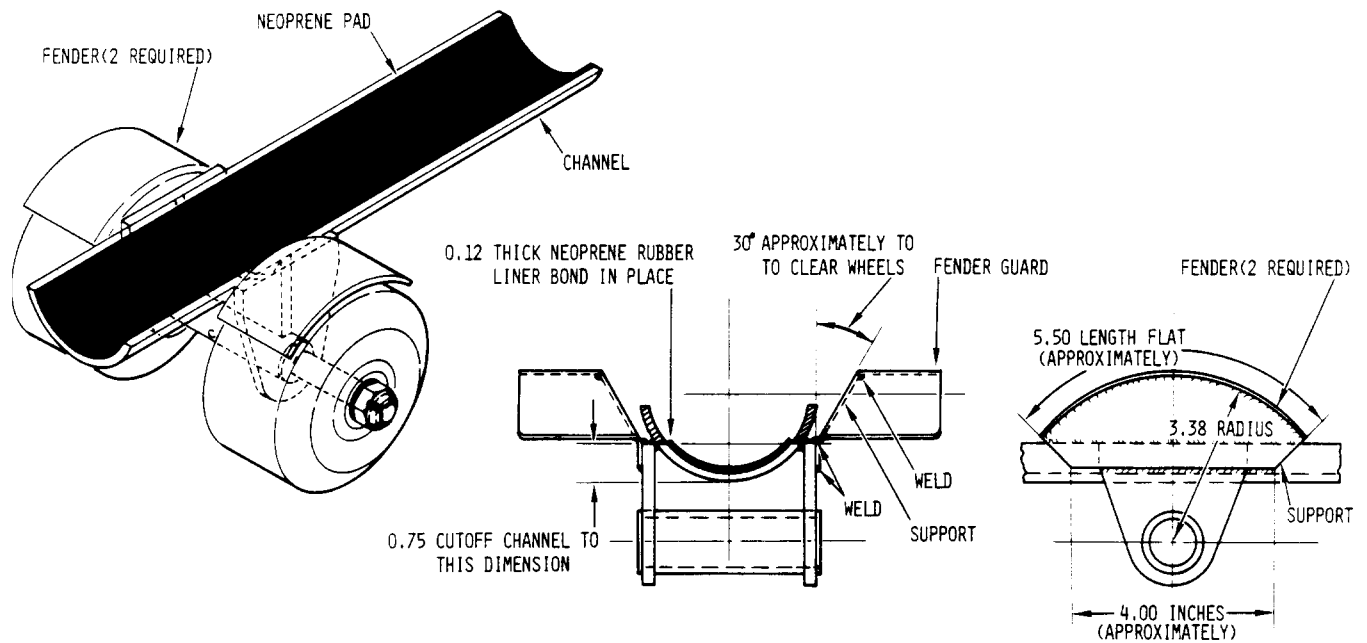
Grinder, portable

REWORK OF GROUND HANDLING WHEELS

- a. Fabricate fender guards (2) and supports (2) per dimensions shown in Figure 1; bend supports 30 degrees as shown; weld supports to fender guards.
- b. Cut off existing channel to 0.75 inch dimension shown.
- c. Weld fender guard assemblies in place on wheel assembly.
- d. Clean channel and bond neoprene rubber sheet to channel.
- e. Grind off burrs or sharp edges on fender guards and channel.

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ADN55-1

Figure 1. Rework of Ground Handling Wheel Assemblies

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SUBJECT: INSTALLATION OF FUSELAGE ACCESS PANELS FOR CYCLIC TRIM ACTUATOR ASSEMBLIES

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0004D thru 0454D

TIME OF COMPLIANCE: At owners and operators discretion

PREFACE: The information given in this Service Information Notice lists instructions for rework of the helicopter lower fuselage section and installation of two access panels to facilitate removal, inspection, maintenance, etc of the cyclic trim actuator assemblies.

REFERENCE PUBLICATIONS:

500D Basic HMI—Vol I, Issued 15 September 1976; Revision No. 3,
15 March 1979

Transponder Installation Instructions (KT—76),
Publication No. CSP—012

Automatic Direction Finder Installation Instructions, (KR—85),
Publication No. CSP—015

Automatic Direction Finder Installation Instructions, (KR—86),
Publication No. CSP—019.

DATE: 7 MARCH 1980

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Parts List

* Door Assembly (LH)	369D22501-11	1	HH
Door Assembly (RH)	369D22501-21	1	HH
Doubler	369H2500-41	1	HH
Doubler	369H2500-43	1	HH
*Washer	AN960C416L	2	Commercial
**Washer	AN960C8	8	Commercial
Rivet	MS20470AD3	A/R	Commercial
Nutplate	MS21076L4	2	Commercial
**Screw	NAS602-7P	8	Commercial
*Screw	NAS604-6P	2	Commercial
Nutplace	NAS697C08M	8	Commercial

*Not required if ADF loop antenna installed.

**4 required if ADF loop antenna installed.

TOOLS AND EQUIPMENT

Shears, metal cutting

Gun, rivet

Drill motor, portable

Drill bit - No. 41 (0.096 inch dia)

Drill bit - No. 5/16 (0.311/0.318 inch dia)

Drill bit - No. 11/64 (0.169/0.175 inch dia)

**Flycutter or hole punch (0.75 inch dia)

***Required if transponder antenna installed.

MATERIALS

Sealing Compound	MIL-S-7502	PR1221	Product Research Burbank, CA
Sealant	MIL-S-8802	Pro Seal 890	Coast Pro Seal Compton, CA

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PROCEDURE

- a. Gain access to pilots underfloor compartment (Section 2, HMI-Vol I.)
- b. Jack up helicopter to provide access to work area at underside of fuselage structure. (Section 2, HMI-Vol I.)

NOTE

If ADF or transponder antenna is installed, remove antenna per referenced instructions (page 1.)

- c. Drill out rivets securing 369A2500-163 stiffener and 369A2500-169 doubler (see Figure 1). Drill out rivets securing 369A2500-164 stiffener and 369A2500-169 doubler. Drill out rivets securing 369A2500-165 doubler. Remove doublers and stiffeners; remove any sealing compound residue.
- d. Drill out rivets securing 369A2500-9 stiffeners, 369A2500-10 stiffener, and 369A2524 center beam assembly to fuselage skin between Station 60.73 and Station 74.287 as shown in Figure 2. Remove any sealing compound residue.

NOTE

Read step 1 below (criteria for reinstalling rivets in existing holes) completely, before drilling or riveting per steps e through k, since the number and placement of rivets to be installed may have to be altered accordingly.

- e. Insert 369D22501-43 doubler (RH) in position between -10 stiffener and 369H2524 center beam assembly, and fuselage skin. Mark rivet hole centers on doubler; remove doubler and drill rivet holes.
- f. Insert 369D22501-41 doubler (LH) in position between -9 stiffener and 369H2524 center beam assembly, and fuselage skin. Mark rivet hole centers on doubler; also mark hole centers on doubler for two existing 0.311/0.318 inch diameter holes in fuselage skin. Remove -41 doubler; drill rivet holes and two 0.311/0.318 inch diameter holes in doubler.

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g. Position 369D22501-2l door on -43 doubler; mark and drill four 0.169/0.175 inch diameter holes and eight 0.096 inch diameter rivet holes in doubler for nutplates. Install four NAS697G08M nutplates on upper side of doubler as shown. Drill fourteen 0.096 inch diameter rivet holes in doubler around circumference of cutout as shown.

h. Position 369D22501-11 door on -41 doubler; mark and drill four 0.169/0.175 inch diameter, and 0.096 inch diameter rivet holes for six nutplates. Install four NAS697G08M nutplates and two MS21076L4 nutplates on upper side of doubler as shown. Drill sixteen 0.096 inch diameter rivet holes in doubler around circumference of cutout as shown.

i. Using doublers as templates, mark and make cutouts in fuselage skin to match doublets as shown. Drill four 0.169/0.175 inch diameter holes in skin to match nutplate holes in doublers, as applicable. Also, cut or drill 0.75 inch diameter hole thru skin to match -41 doubler if transponder antenna is to be installed. Drill 0.096 inch diameter rivet holes in skin to match rivet around circumference of each cutout as shown.

j. Insert -43 doubler in place between -10 stiffener and center beam assembly, and fuselage skin; secure with rivets 34 places as shown; install additional rivets 14 places around circumference of cutout.

k. Insert -41 doubler in place between -9 stiffener and center beam assembly, and fuselage skin; secure with rivets 39 places as shown; install additional rivets 16 places around circumference of cutout.

l. Where removed in step d above, replace rivets as required to secure stiffeners and center beam assembly to fuselage skin between Station 60.73 and Station 74.287. Also, install rivets (through both skin and doubler) to plug any open rivet holes that exist in skin due to step c above, following criteria specified below:

1. Rivets reinstalled in existing holes must NOT be closer than 1.5 x diameter (edge distance) minimum from edge of applicable parts involved. If this criteria cannot be met, leave rivet hole in skin blank and fill in with ProSeal 890 sealant.

2. Rivets reinstalled in existing holes must NOT be closer than 3.0 x diameter (rivet spacing) minimum from location of any new rivet added per this installation. If this criteria cannot be met, install ONLY the rivet through the existing hole in the structure and eliminate the new rivet intended for this location.

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m. Apply a 0.06 inch bead of PR1221 sealant on inside skin surface at stiffeners, and center beam assembly; apply a 0.03 inch bead of sealant at doubler attachments.

NOTE

Perform step n below if ADF antenna is not to be installed.

n. Install two NAS604-6P screws and AN960C416L washers as plugs MS21076L4 nutplates on LH side installation as shown.

o. Install access door(s) using NAS602-7P screws and AN960C8 washers. The PN 369D22501-11 door (LH) and its attaching hardware to be eliminated if antenna is to be installed.

p. Check installation of doublers and access doors for discrepancies.

NOTE

Paint access door(s) to match exterior finish of helicopter, if desired.

q. As applicable, install ADF or transponder antenna, per referenced instructions.

WEIGHT AND BALANCE: Weight and balance change negligible.

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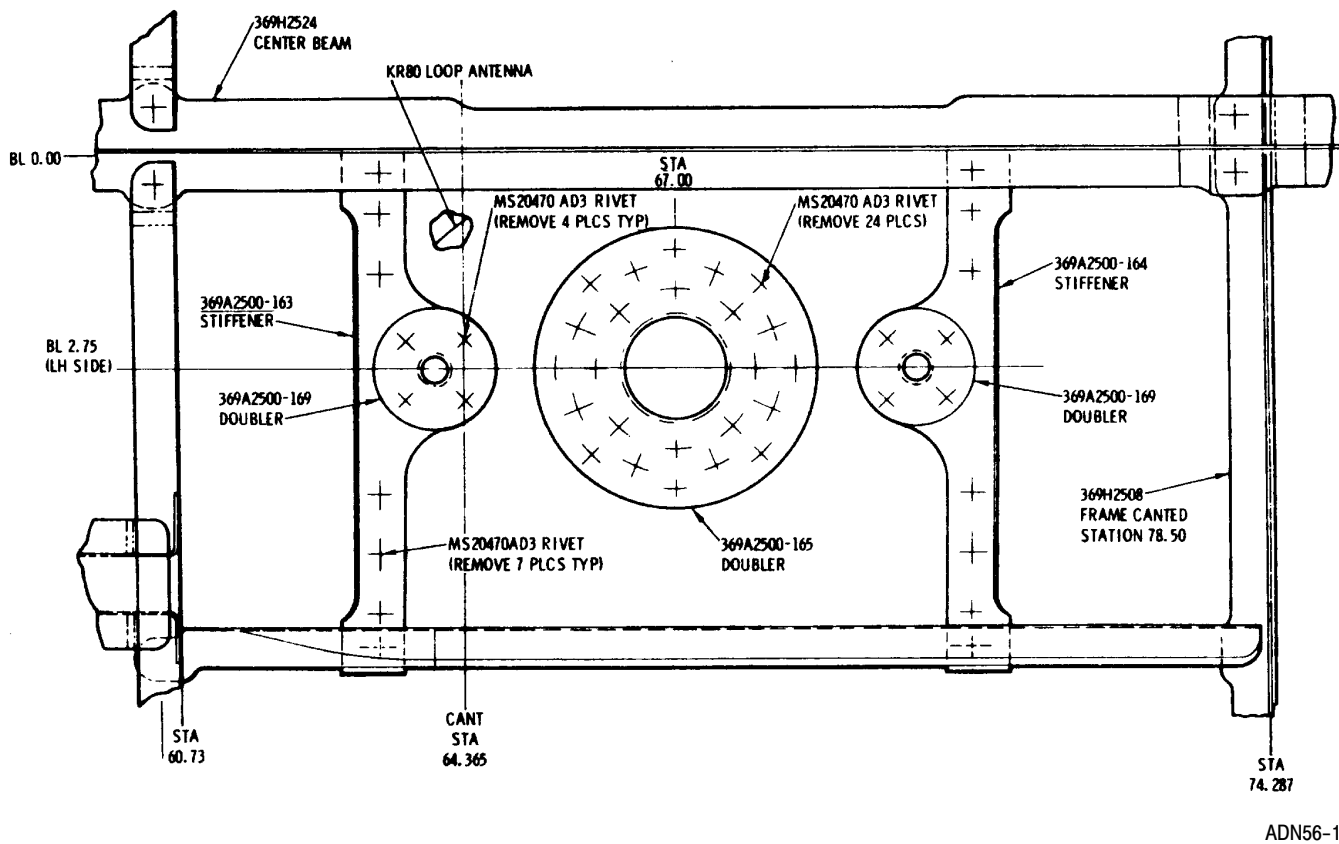
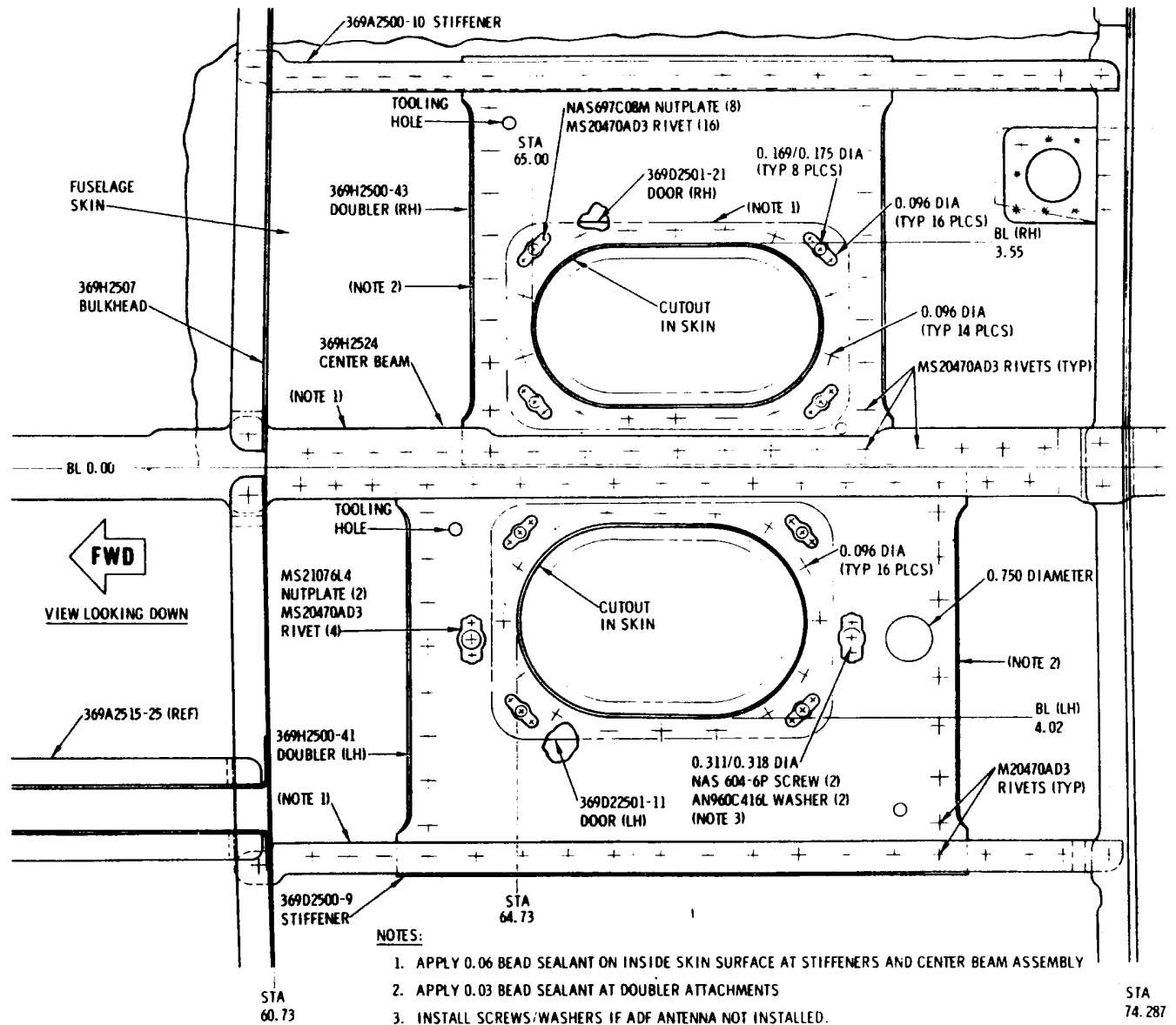


Figure 1. Removal of Stiffeners and Doublers

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ADN56-2

Figure 2. Installation of Trim Actuator Assembly Access Panels

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DATE: 15 JANUARY 1980
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SUBJECT: INSTALLATION OF CABIN HEAT DUCT (FIBERGLASS) ASSEMBLIES,
PN 369D22009-101 AND PN 369D22009-103

MODELS AFFECTED: 500D Model 369D Helicopter Serial No. 0003D through 0660D
equipped with PN 369H90020-517 Heating System

TIME OF COMPLIANCE: At owners and operators discretion, when duct replacement is
required

PREFACE: The information given in this Service Information Notice lists instructions
for replacement of the existing Lexan-type cabin heat duct, PN
369H92475-83 or -107, with a new fiberglass-type cabin heat duct, PN
369D22009-101. The fiberglass duct configuration is designed to provide
greater resistance against heat, deformation and wear.

It is to be noted that the PN 369H4535-7 and 369H4535-9 control cable as-
semblies utilized with the existing PN 369H92475-107 duct are also to be
used with the new, 369D22009-101 fiberglass duct assembly. For 369D heli-
copter Serial No. 0003D through 0330D with 369H92475-83 duct installed,
the existing 369H4535-3 and 5 control cable assemblies must be replaced, or
reworked per this Notice to the 369H4535-7 and -9 configurations, to be
compatible with the new fiberglass duct installation. Instructions are also
provided for replacement of PN 369H92475-31 or -101 lexan cabin heat
lower duct with a new Fiberglass duct assembly, PN 369D22009-103.

REFERENCE PUBLICATIONS:

500D Basic HMI-Volume I, Issued 15 September 1975; Revision No. 3,
15 March 1979

Illustrated Parts List and Maintenance Instructions for PN 369H90020-517,
Publication No. CSP-013, Issued 15 August 1976

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PARTS LIST

<u>Nomenclature</u>	<u>Part No.</u>	<u>Qty</u>	<u>Mfr</u>
Duct, cabin heat	369D22009-101	1	HH
Duct, cabin heat	369D22009-103	1	HH
Control Assembly - Cabin Heat	369H4535-7*	1	HH
Control Assembly - Engine Anti-Ice	369H4535-9*	1	HH

*369H4535-3 and 369H4535-5 control assemblies used with 369H92475-83 cabin heat duct assembly may be reworked to 369H4535-7 and -9 configurations required for use with new 369D22009-101 heating duct assembly. See Figure 1 for rework dimensions.

PROCEDURE

- a. Remove outer box from PN 369H92475-83 or -107 cabin heat duct and canopy frame. (Refer to referenced CSP-013.)
- b. Remove hardware securing heating and anti-ice control cable assemblies to heat duct; remove heat duct assembly. Remove existing PN 369H92475-31 or -101 cabin heat (lower) duct assembly. (See Figure 1.)

NOTE

1. If PN 369H92475-83 heat duct was installed, rework existing PN 369H4535-3 and -5 control cable assemblies to new 369H4535-7 and -9 configurations per step c below.
 2. If PN 369H92475-107 heat duct was installed, rework of existing 369H4535-7 and -9 control cable assemblies is not required.
- c. Using file or equivalent, rework control handle shafts to provide detents, per dimensions shown in Figure 1.
 - d. Install new PN 369D22009-103 and 369D22009-101 fiberglass heat duct assemblies.

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- e. Install control cable assemblies to new -101 duct assembly; secure clamps and position retainers with hardware as shown.
- f. Adjust spring plunger in position retainers so that 5 to 8 pounds of force is required to pull 369H4535-7 and -9 controls out of locked position in detents.
- g. Remove aft bulkhead access cover; open plenum chamber access door. (Refer to Section 2 of Basic HMI - Volume I.)

NOTE

Performance of step h below required only if PN 369H4535-3 and -5 control assemblies were originally installed.

- h. Adjust preload of new PN 369H4535-7 and -9 control assemblies as follows: (See Figure 1.)
 - 1. Remove clevis from lever of applicable valve and loosen jam nut above clevis.
 - 2. With handle of 369H4535-7 or -9 control assembly in CLOSED position, adjust control cable clevis to initially align holes in clevis and valve lever.
 - 3. After initial adjustment has been made, turn clevis 1 to 2 turns, in extension, to achieve offset as shown.
 - 4. Tighten jam nut and install clevis pin.
- i. Perform operational check of heating system, per referenced CSP-013. Reinstall aft bulkhead access cover and interior trim.
- j. Perform operational check of anti-icing system, per Section 11 of Basic HMI-Volume I. Close plenum chamber access door.
- k. Install new PN 369D22009-45 cover with hardware as shown.

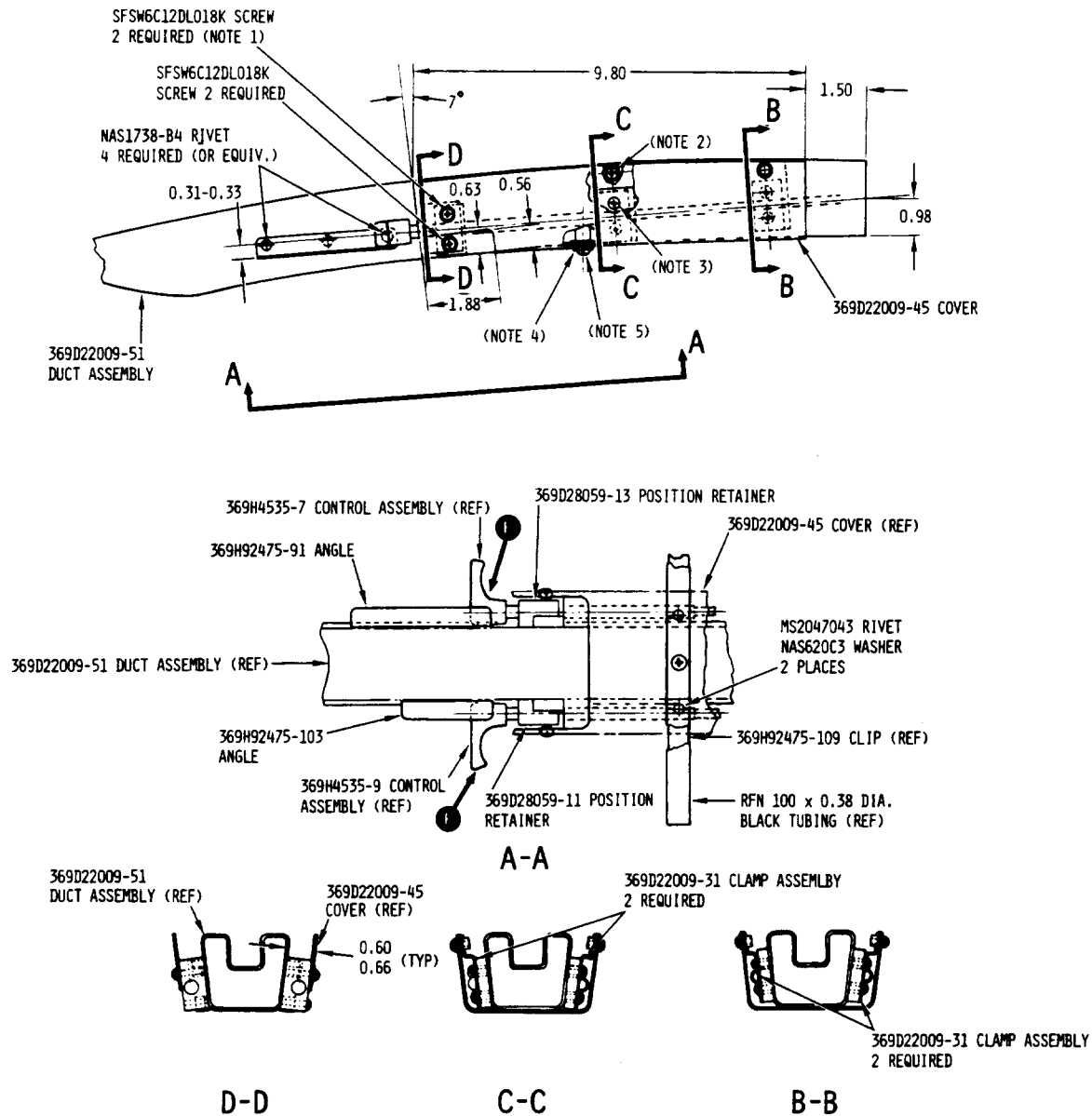
WEIGHT AND BALANCE: Weight and balance not affected.

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NOTES:

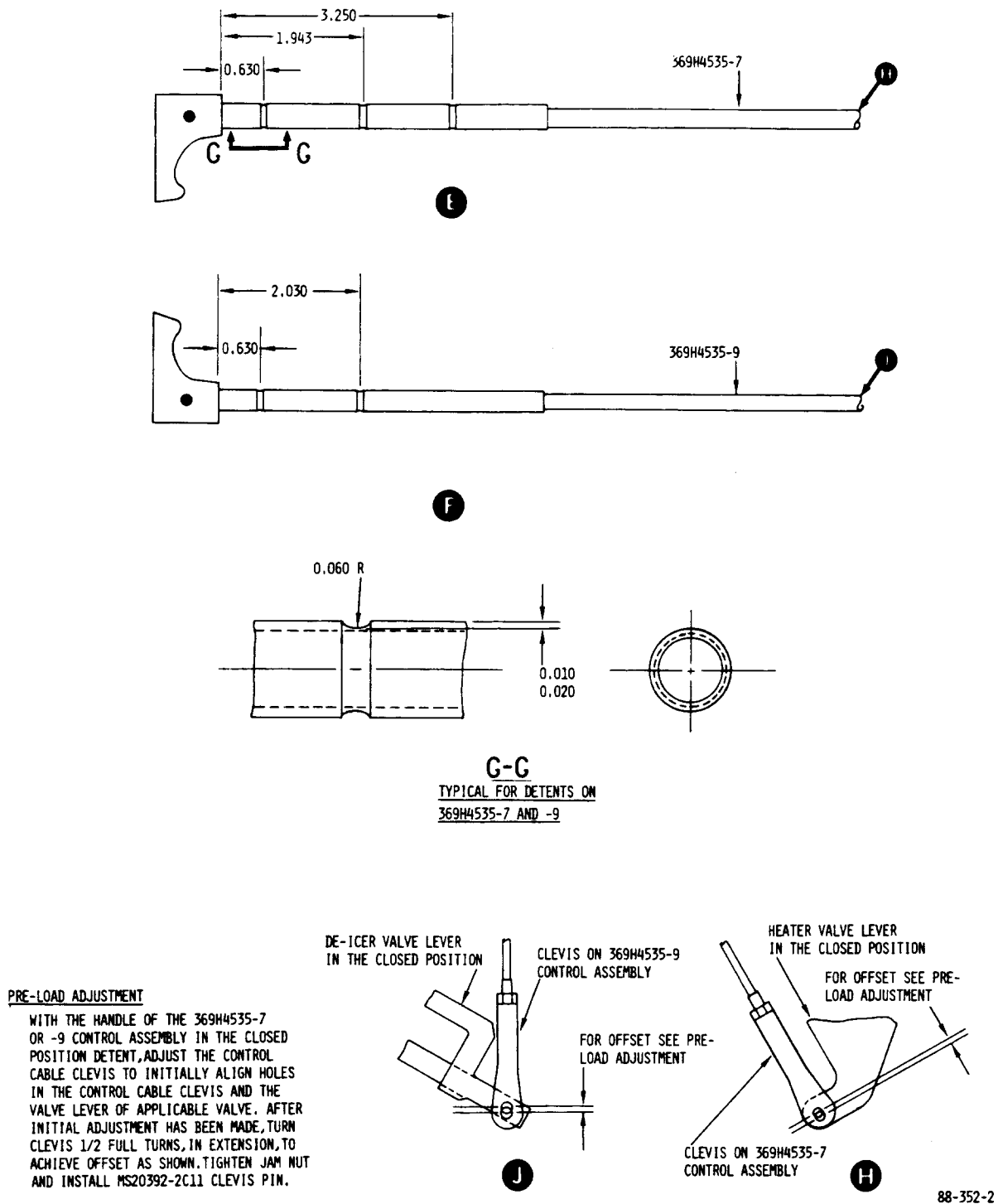
1. 0.165
0.177 DIAMETER HOLE TO MATCH HOLES
IN 369D22009-5 BLOCK AND
369D28059-11 AND 369D28059-13 POSITION
RETAINER 2 PLACES.
2. 0.165
0.177 DIAMETER HOLE TO MATCH HOLES
IN 369D22009-31 AND 369D22009-41
CLAMP ASSEMBLIES 4 PLACES.
3. NAS620C6 WASHER 8 REQUIRED
NAS601-4P SCREW 8 REQUIRED.
4. 369H92475-109 CLIP RFN 100 x 0.38
DIAMETER BLACK TUBING.
5. 0.250 DIAMETER HOLE THUR 369D22009-45
COVER TO MATCH 369D22009-51 DUCT ASSY,
INSTALL EXISTING SCREW.

88-352-1

Figure 1. Installation of Fiberglass Cabin Heat Ducts,
 PN 369D22009-101 and -103 (Sheet 1 of 2)

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Figure 1. Installation of Fiberglass Cabin Heat Ducts, PN 369D22009-101 and -103 (Sheet 2 of 2)

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REWORK OF ONE-WAY LOCK ASSEMBLY, PN 369A7010 SERIES

1. PLANNING INFORMATION

A. MODELS AFFECTED:

500D Model 369D helicopter Serial No. 0003D through 0818D
All PN 369A7010 Series One-Way Lock Assemblies in
Spares Inventory at date of this Notice.

B. PREFACE:

This Service Information Notice lists a procedure-to seal the One-Way Lock Assembly to preclude leakage and loss of fluid from around base of bowl.

NOTE: Rapid movement of the cyclic can cause fluid to splash against and leak from under the filler cap. If a leak is suspected, clean the bowl area of the lock assembly with isopropyl alcohol and allow to set static. for several hours. Recheck and if .no leakage is evident, oil may be from splash out rather than a leak.

C. TIME OF COMPLIANCE:

At owners discretion if not already accomplished; or if bowl is leaking.

D. FAA APPROVAL:

DER/FAA APPROVED 27 May 1980

E. WEIGHT AND BALANCE:

Weight and balance not affected

F. MATERIALS:

MATERIALS	
Nomenclature	Source
No. 2216 Sealant or PR1221 Sealant	3M Co. Products Research and Chemical Corp. Glendale, CA

G. TOOLS AND EQUIPMENT:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Spatula of Extrusion Gun	

H. REFERENCE:

500D Model 369D Basic HMI-Volume 1, Issued 15 September 1976; Revision No. 3, 15 March 1979

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2. REWORK PROCEDURE

- a. Remove one-way lock from helicopter. (Refer to Section 7 of Basic HMI-Vol 1.)
- b. Prepare No. 2216 or PR1221 class B per manufacturer's instructions.
- c. Using extrusion gun or spatula, apply 0.18/0.13-inch bead of sealant full circumference between base of reservoir and bowl flange and dry per manufacturer's instructions.
(See Figure 1.)

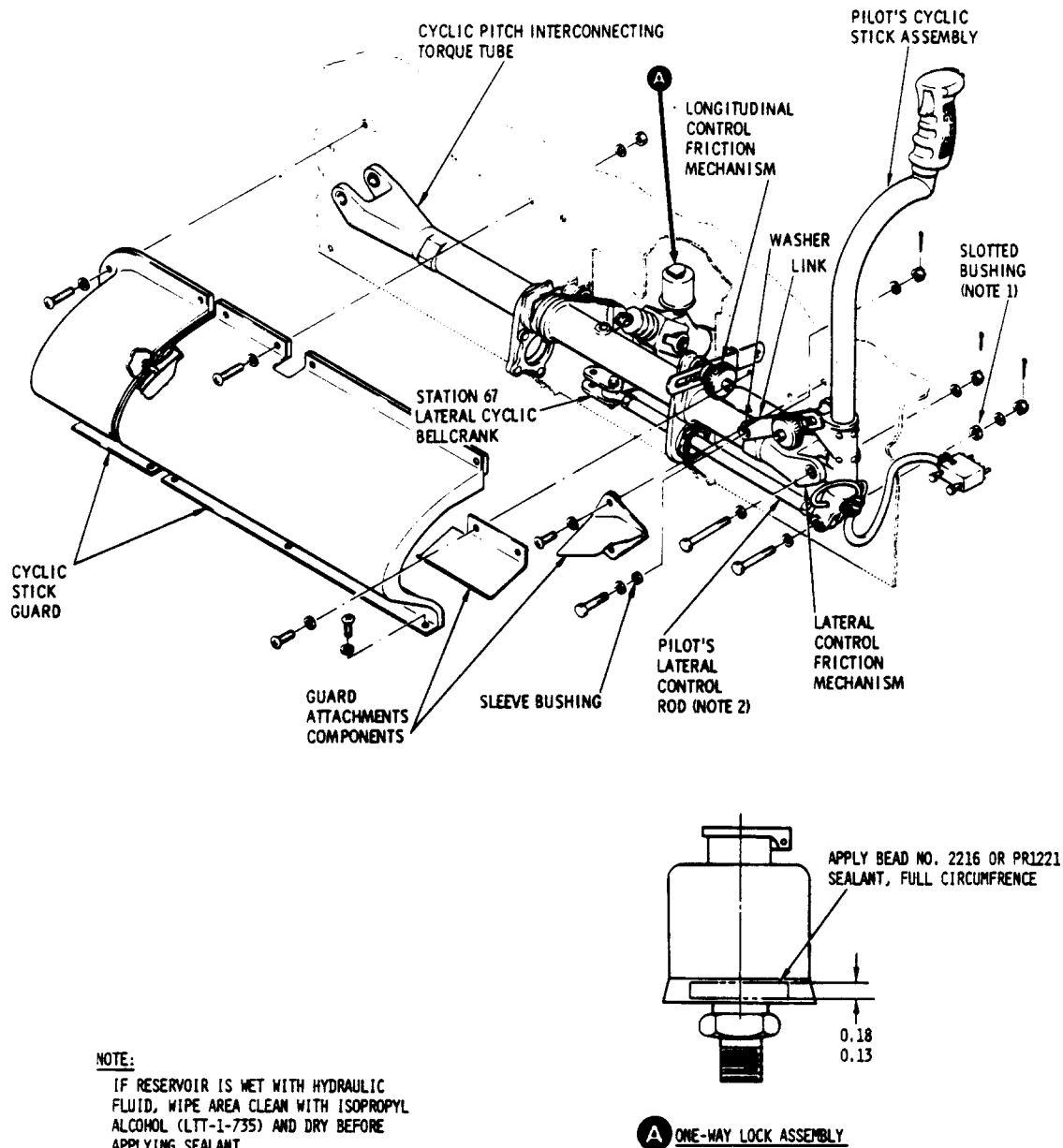
NOTE: If reservoir is wet with hydraulic fluid, wipe area clean with isopropyl alcohol (LTT-1-735) and dry before applying sealant.

- d. Reinstall one-way lock assembly in helicopter. (Refer to Section 7 of Basic HMI-Vol 1.)

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Figure 1. Rework of One-Way Lock Assembly

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* Supersedes Service Information Notice No. DN-72, Dated 18 August 1980

DRAIN KIT INSTALLATION, PN 369D28300-501 ENGINE OIL TANK AND OIL COOLER; DRAIN KIT INSTALLATION, PN 369D290120 MAIN ROTOR TRANSMISSION OIL COOLER

1. PLANNING INFORMATION

A. MODELS AFFECTED:

500D Model 369D Helicopter Serial No. 0003D thru 0604D

B. PREFACE:

The information given in this Service Information Notice lists a procedure for incorporating more readily accessible oil drain installations on the above affected helicopters, to facilitate draining and maintaining the engine oil system, and the main rotor transmission oil cooler assembly. Field modification consists primarily of removing the existing quick-drain valve on the forward side of the engine firewall, and routing new drain tubes with end caps located on the aft side of the ring structures in the engine compartment. Decals are also provided to identify each oil drain installation.

C. TIME OF COMPLIANCE:

At owners and operators discretion

D. FAA APPROVAL:

FAA/DER APPROVED 9 February 1981

E. WEIGHT AND BALANCE:

Weight and balance change negligible

F. REFERENCE:

500D HMI-Volume I, Issued 15 September 1976; Revision No. 3, 15 March 1979

DATE: 6 FEBRUARY 1981

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G. PARTS LIST / MATERIALS / TOOLS AND EQUIPMENT:

PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
PN 369D28300-501 Engine Oil Tank and Oil Cooler			
Drain Kit Consisting of the following:			
Decal	369D24044	1	HH
Doubler	369D28300-3	1	HH
Doubler	369H2532-17	1	HH
Tube Assembly	369D28313	2	Commercial
Tube Assembly	369D28314-11	1	Commercial
Tube Assembly	369D28314-21	1	Commercial
Bracket	369D28315	1	Commercial
Union	AN815-4J	2	Commercial
Elbow	AN833-4J	2	Commercial
Nut	AN924-4J	4	Commercial
Cap Assembly	AN929-4J	2	Commercial
Elbow	AN939-4J	2	Commercial
Washer	AN960-C716	8	Commercial
Rivet	MS20615-3M	6	Commercial
Tie Strap	MS3367-2-9	2	Commercial
Grommet	MS35489-6	1	Commercial
Packing	NAS617-4	4	Commercial
Rivet	NAS1738M4 - 1	6	Commercial
Union, bulkhead	SS-400-61	2	Commercial
Nut	SS-402-1	2	Commercial
Ferrule, front	SS-403-1	2	Commercial
Ferrule, back	SS-404-1	2	Commercial
PN 369D290120 Main Rotor Transmission Oil Cooler			
Drain Installation consisting of the following:			
Decal	369D24045	1	HH
Fitting	369D25717	1	HH
Tube Assembly	369D25718	1	HH
Elbow	MS20822-4J	1	Commercial
Elbow	AN833-4J	1	Commercial
Nut	AN924-4J	1	Commercial
Cap Assembly	AN929-4J	1	Commercial
Washer	AN960-C716	2	Commercial
Washer	AN960PD10L	1	Commercial
Nut	MS21042-3	1	Commercial
Clamp	MS21919DF4	1	Commercial
Clamp	MS21919DF8	1	Commercial

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PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Bolt	NAS1303 -3	1	Commercial
Tape thread seal	TFE Fluorocarbon	AR	Parker Fluid Connector Cleveland OH or L.A. Rubber Co LA, CA

MATERIALS	
Nomenclature	Source
Primer, zinc chromate	

TOOLS AND EQUIPMENT	
Nomenclature	Source
Gun, rivet	
Drill motor, portable	
Drill bit - 0.500 inch dia (1/2)	
Drill bit - 0.451 inch dia (29/64)	
Drill bit - 0.437 inch dia (7/16)	
Drill bit - 0.140 inch dia (#28)	
Drill bit - 0.094 inch dia (#41)	

2. PROCEDURE - PN 169D28300-501 DRAIN KIT INSTALLATION

- a. Open engine access doors; remove aft compartment interior trim and aft bulkhead access covers, (Refer to Section 2 of Basic HMI-Vol I.)
- b. Drain engine oil system. (Refer to Section 2 of Basic HMI-Vol I;)
- c. Remove existing PN 369A8324 quick drain valve,- overboard drain tube and related components as follows:
 1. Disconnect and remove PN 369A8010-41 overboard drain tube from drain valve and helicopter structure. (Refer to Section 13 of HMI-Vol I.)
 2. Disconnect and remove drain valve from PN 369A8010-601 and 603 tube assemblies (or 369D28314-11 and -21 tube assemblies, if installed from engine oil tank and oil cooler.
 3. Remove two PN NAS1303-1 bolts, MS21042-3 nuts and AN960PD10L Washers securing PN 369A8325 drain valve bracket (with drain valve) to firewall. Discard valve and bracket; retain attaching hardware.
- d. Rework helicopter structure as follows:

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1. Using PN 369H2532-17 doubler as template, mark and drill two 0.453 inch diameter holes and six 0.094 inch diameter rivet holes in RH side of PN 369H2532 ring assembly. Install doubler on aft side of ring, using MS20615-3M rivets with zinc chromate primer. (See Figure 1.)

2. Drill 0.437 inch diameter hole outboard of existing hole in 369D23016-6 rib at dimensions shown in View A-A. Install MS35489-6 grommet in hole in rib.

3. Using PN 369D28300-3 doubler as template, mark and drill 0.500 inch diameter hole and six 0.140 inch diameter rivet holes in 369D23020 firewall at dimensions shown in Detail B. Install doubler using NAS1738M4-1 rivets with zinc chromate primer.

e. Install new drain tubes and fittings as follows:

1. Assemble AN815-4J union on AN939-4J elbows as shown, using NAS617 packing. Install SS-400-61 unions on 369D28315 bracket and AN939-4J elbows and secure with AN924-4J nuts.

2. Install 369D28315 bracket on firewall, using existing attach hardware.

3. Connect 369D28313 drain tubes to unions with SS-402-1 nuts, SS-403-1 and SS-404-1 ferrules as shown. Do not tighten nuts at this time.

4. Route 369D29313 tube assemblies between firewall and ring assembly as shown; secure tubes at ring assembly using AN833-4J elbows, AN960-C716 washers and AN924-4J nuts as shown.

5. Connect existing 369A8010-601 and -603 (or 369D283 14-11 and -21) tube assemblies to unions on elbows as shown.

6. Secure 369D28313 tube assemblies to 369H8306 oil OUT hose, assembly with tie straps as shown. Tighten SS-402-1 nuts (securing drain tubes to unions) 1.25 turns from finger-tight.

7. Install AN929-4J cap assemblies.

8. Install 369D24044 engine oil drain decal on aft side of ring assembly as shown.

f. Check new engine oil system drain installation for discrepancies.

g. Service engine oil system, per Section 2 of Basic HMI-Vol I.

3. PROCEDURE – PN 369D290120 MAIN ROTOR TRANSMISSION OIL COOLER DRAIN KIT INSTALLATION

a. Drain main rotor transmission oil cooler assembly, per Section 2 of Basic HMI-Vol I. Discard existing AN929-8D end cap.

b. Drill 0.453 inch diameter hole in LH side of 369H2532 ring assembly at dimensions shown in Figure 2. Install AN833-4J elbow with AN960-C716 washers and AN924-4J nut.

c. Install new 369D25717 fitting with MS20822-4J elbow to tee on oil cooler.

d. Connect 369D25718 tube assembly to AN821-4J elbow; apply seal tape to threads of elbow; do not apply to first two threads.

e. Connect 369D25718 Cube assembly to AN833-4J elbow at ring assembly; install AN929-4J cap assembly.

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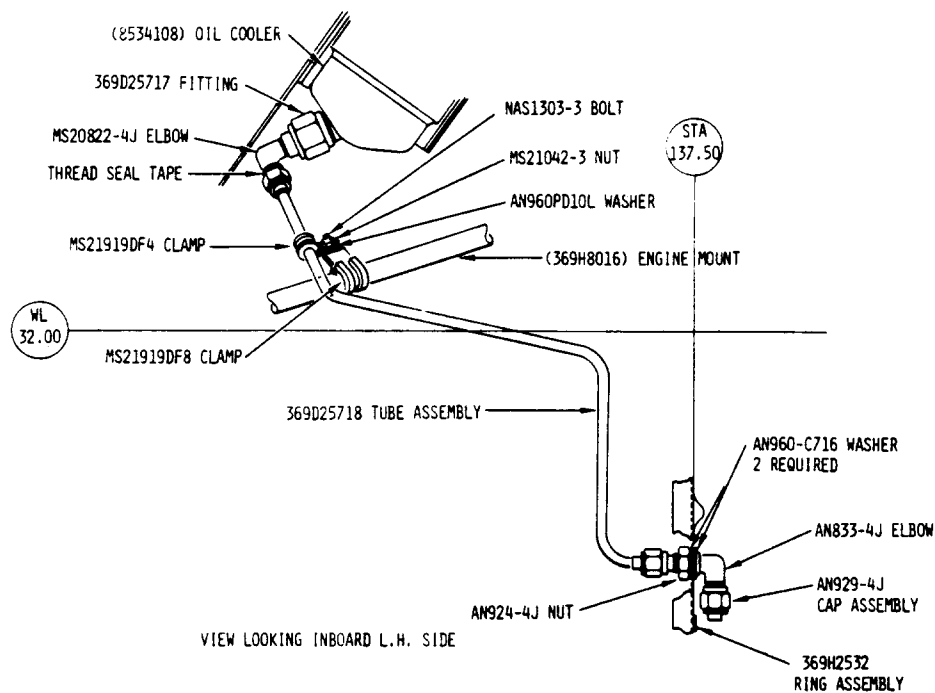
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- f. Secure drain tube to 369H8016 engine mount, using clamps and attach hardware as shown.
- g. Install 369D24045 oil cooler drain decal on aft side of ring assembly as shown.
- h. Check oil cooler drain kit installation for discrepancies.
- i. Service main rotor transmission oil cooler assembly per Section 2 of Basic HMI-Vol I.
- j. Reinstall interior trim and aft bulkhead access covers; close engine access doors.

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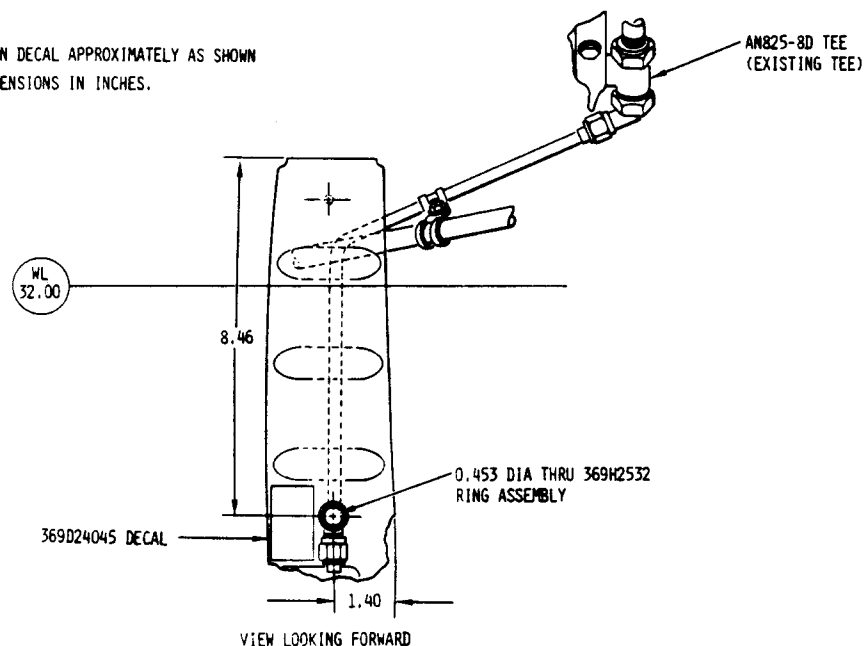
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NOTES:

1. POSITION DECAL APPROXIMATELY AS SHOWN
2. ALL DIMENSIONS IN INCHES.

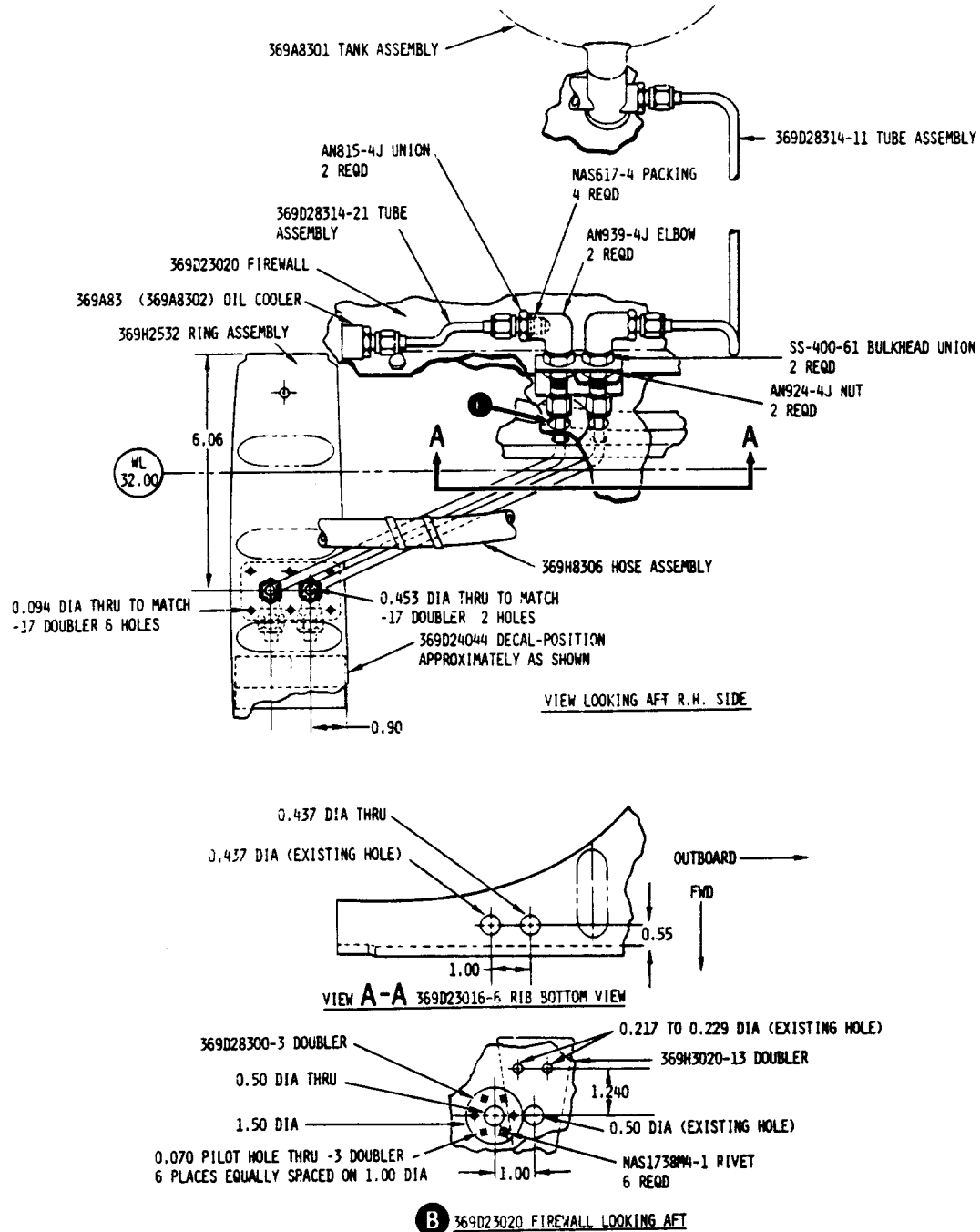


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Figure 1. Drain Kit Installation - PN 369D28300-501 Engine Oil Tank and Cooler

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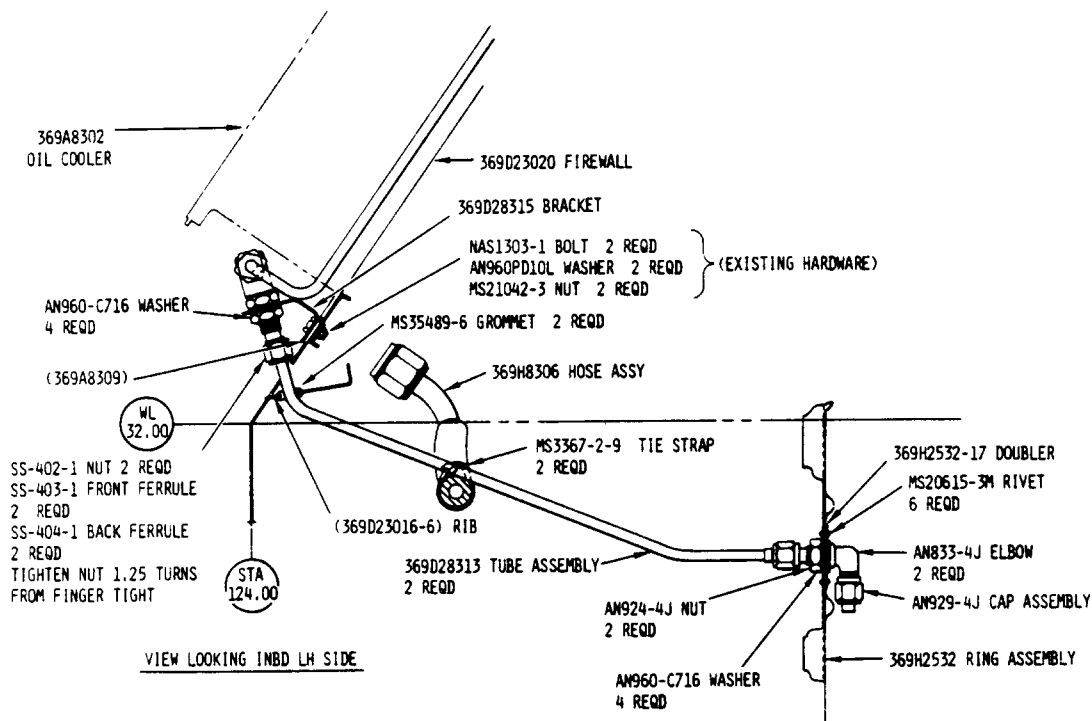
88-376-1A

Figure 2. Drain Kit Installation - PN 369D290120 Transmission Oil Cooler (Sheet 1 of 2)

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**Figure 2. Drain Kit Installation - PN 369D290120
Transmission Oil Cooler (Sheet 2 of 2)**

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REWORK OF STATIC PRESSURE TUBE INSTALLATION TO MINIMIZE ALTIMETER NEEDLE OSCILLATION

1. PLANNING INFORMATION

A. MODELS AFFECTED:

500D Model 369D Helicopter Serial No. 0003D thru 0731D

B. PREFACE:

The information given in this Service Information Notice lists a procedure for rework of the hardware connecting the crossover tube between the altimeter and airspeed indicators on the instrument panel to reduce needle bounce. The rework consists primarily of removing the existing 369H6610-3 plug from the connector at the airspeed indicator and installing a new 369H6610-23 plug in the existing tee at the altimeter indicator.

C. TIME OF COMPLIANCE:

At owners and operators discretion

D. FAA APPROVAL:

FAA/DER APPROVED 17 December 1980

E. WEIGHT AND BALANCE:

Weight and balance not affected

F. REFERENCE:

500D Series Basic HMI-Volume I, Issued 15 September 1976,
Revision No. 3, 15 March 1979

G. PARTS LIST:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Plug	369H6610-23	1	HH

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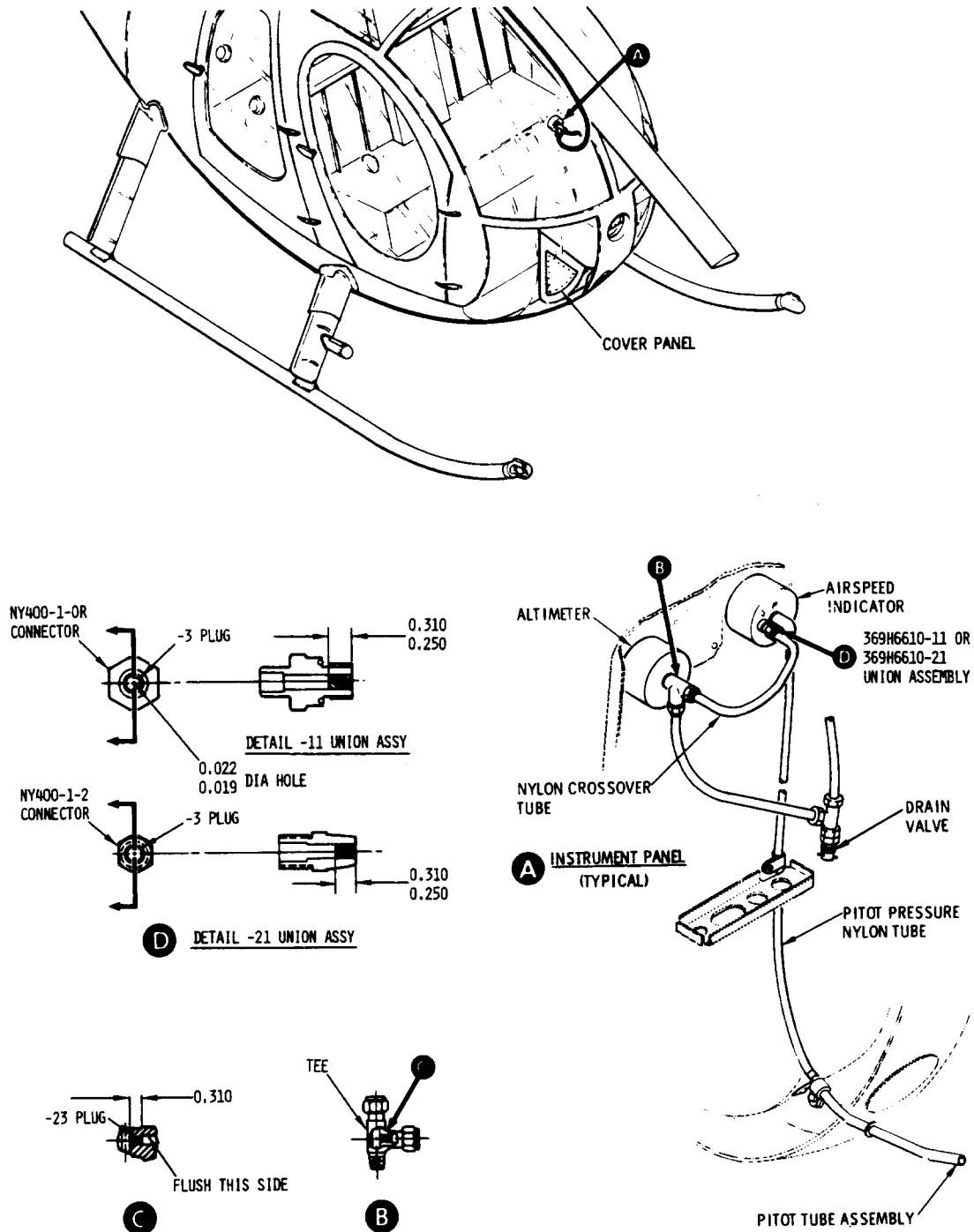
2. REWORK PROCEDURE

- (1). Check that all electrical power is OFF.
- (2). Remove instrument panel fairing and hood, per HMI-Vol I.
- (3). Disconnect drain tube from 369H6628 tee at altimeter indicator. (See Figure 1.)
- (4). Press fit new 369H6610-23 plug into tee as show, reconnect drain tube to tee. (See View B.)
- (5). Disconnect crossover tube from connector at airspeed indicator.
- (6). Remove existing -3 plug from 369H6610-11 or -21 union assembly,
- (7). Reconnect crossover tube to connector at airspeed indicator.
- (8). Reinstall instrument panel fairing and hood.
- (9). Perform flight test to check instrument operation.

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Figure 1. Rework of Static Pressure Tube Installation

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* Supersedes Service Information Notice No. DN-89.1, dated 21 August 1981

BALANCING OF MAIN ROTOR HUB ASSEMBLY, PN 369D21200

1. PLANNING INFORMATION

A. MODELS AFFECTED:

All 500D Model 369D Helicopters

B. PREFACE:

This Service Information Notice provides procedures for main rotor hub balancing prior to installing one or more new blades, or one or more new dampers, when the operator wishes to check the balance of the hub alone.

C. TIME OF COMPLIANCE:

At owners and operators discretion.

D. FAA APPROVAL:

The resultant alteration to the affected helicopters described by the Field Balancing Procedure in this Notice (Bulletin) has been shown to comply with the Federal Aviation Regulations and is FAA Approved.

E. WEIGHT AND BALANCE:

Weight and balance not affected

F. REFERENCE:

500D Model 369D Basic HMI - Volume 1, Reissued 15 January 1982; Revision No. 1, 15 March 1982

G. TOOLS AND EQUIPMENT:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Balancer/Phazor, Chadwick-Helmuth Model 177	
Volt-ohm meter, Simpson 260	

H. MATERIALS:

MATERIALS			
Nomenclature	Part No.	Qty.	Source
Sealing compound, corrosion preventive (MIL-S-81733, Type II-2)	PR1436-G, Class B-2 PR14226, Class B PRI221	AR	Products Research and Chemical Corp. 543 San Fernando Rd. Glendale, Calif. 91302

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I. PARTS LIST:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
(Early Configuration) Main Rotor Balance Kit, consisting of the following:	369D29999-5	1	HHI
Washer	HS1554	10	HHI
Washer	HS1555	10	HHI
Washer	AN 960C 10	100	Commercial
Washer	AN 960C 10L	100	Commercial
Screw	NAS603-56	10	Commercial
Screw	NAS603-64	10	Commercial
(Current Configuration) Main Rotor Balance Kit, consisting of the following:	369D29999-7	1	HHI
Washer	369D29934	10	HHI
Washer	369D29935	10	HHI
Washer	AN960C8	100	Commercial
Washer	AN960C8L	100	Commercial
Screw	NAS602-64P	10	Commercial
Screw	NAS602-72P	10	Commercial
Screw	NAS602-76P	10	Commercial

When ordering, specify Early Configuration Kit Part No. 369D29999-5 for Model 500D Helicopter Serial No. 0003D thru 0259D; specify Current Configuration Kit Part No. 369D29999-7 for Model 500D Helicopter Serial No. 0260D and subsequent.

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2. FIELD BALANCING PROCEDURE

- (1). Remove main rotor blades. (Refer to Section 7 of HMI-Vol. 1.)
- (2). Remove main rotor dampers. (Refer to Section 7 of Basic HMI-Vol. 1.)
- (3). Hook up Phazor. Refer to Chadwick-Helmuth Operation and Service Instruction HandBook No. 4313 for Helicopter Main Rotor and Tail Rotor Assemblies.
- (4). Run engine at 103 percent of N2.
- (5). Record IPS reading and direction (see Figure 1).
- (6). Plot IPS reading and direction on balance chart (see Figure 1).
- (7). Analyze chart for weight location and amount requirements.
- (8). Install weights as follows (see Figure 2):
- (9). Engage head of screw, inside lead-lag bolt, with Phillips screwdriver, then loosen locknut with 1/4-inch wrench.
- (10). Hold screw in place with screwdriver while adding or removing flat washers as required, then reinstall locknut.
- (11). Repeat steps (4). through (11). until reading is 0.15 IPS, or less.
- (12). After balance has been established satisfactorily, torque MS21042L08 locknuts to 20 to 35 inch-pounds or MS21042L3 locknuts to 30 to 60 inch-pounds as applicable. Coat screw threads, nuts and washers with PR-1436-G sealant. (To prevent imbalance, do not use excessive amount of sealant.)

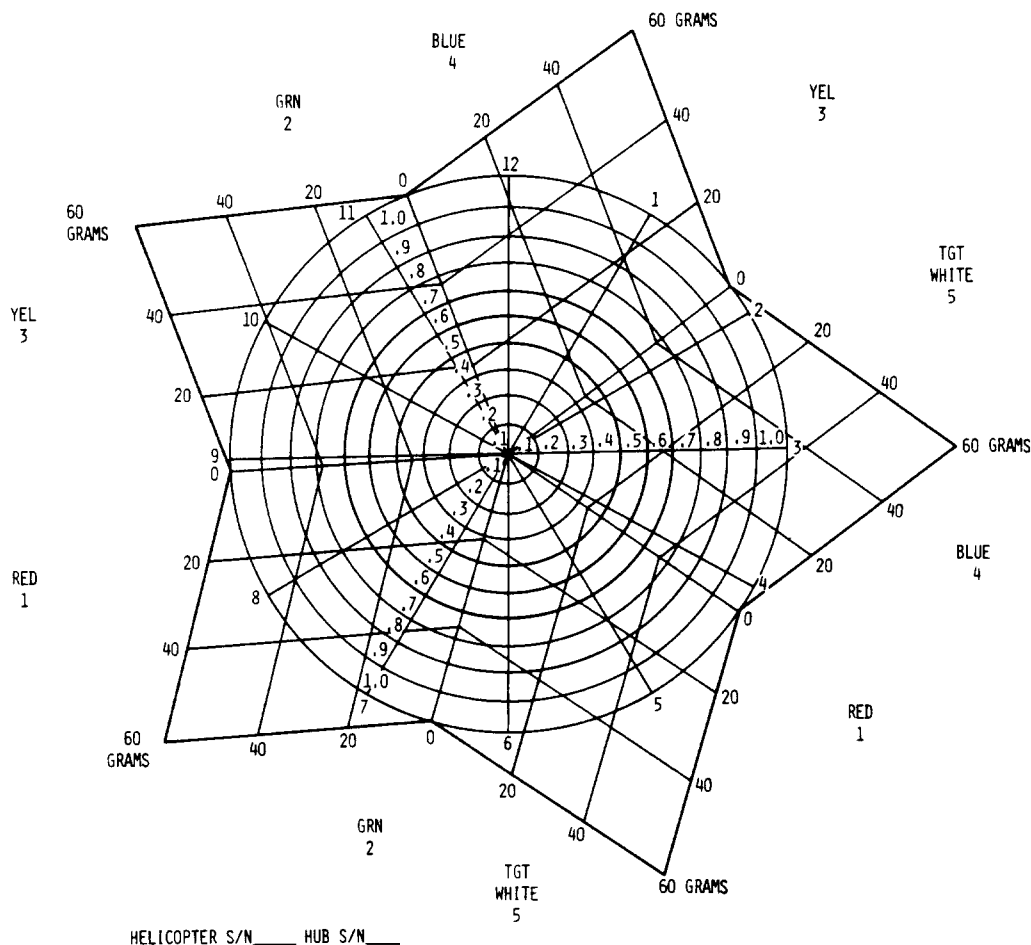
NOTE: Intermixing of PN 369D21400-503 and M50452 main rotor blade damper assemblies in a ship set is not permitted. All dampers in ship set must be of same type and part number.

- (13). Reinstall main rotor blades per Section 7 of Basic HMI-Vol. 1.
- (14). Proceed with blade phasing per Section 7 of Basic HMI-Vol. 1.
- (15). Proceed with blade tracking per Section 7 of Basic HMI-Vol. 1.

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RUN NO.	IPS	CLOCK ANGLE	BALANCE WEIGHT AND LOCATION				
			(1) RED	(2) GREEN	(3) YELLOW	(4) BLUE	(5) WHITE
INITIAL							

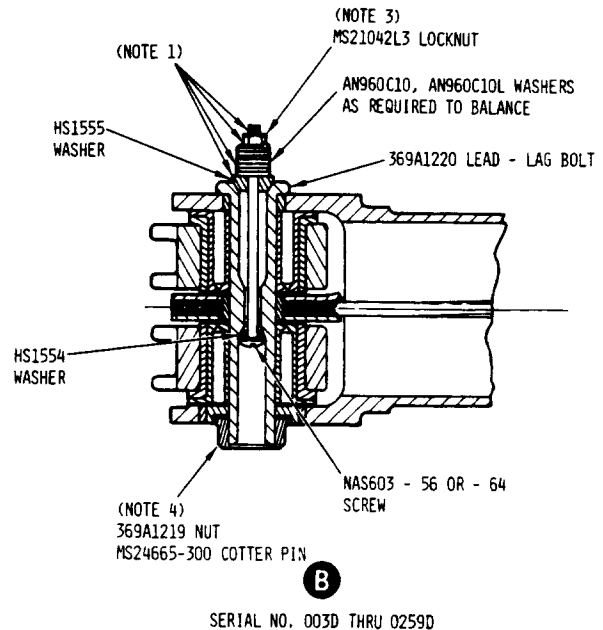
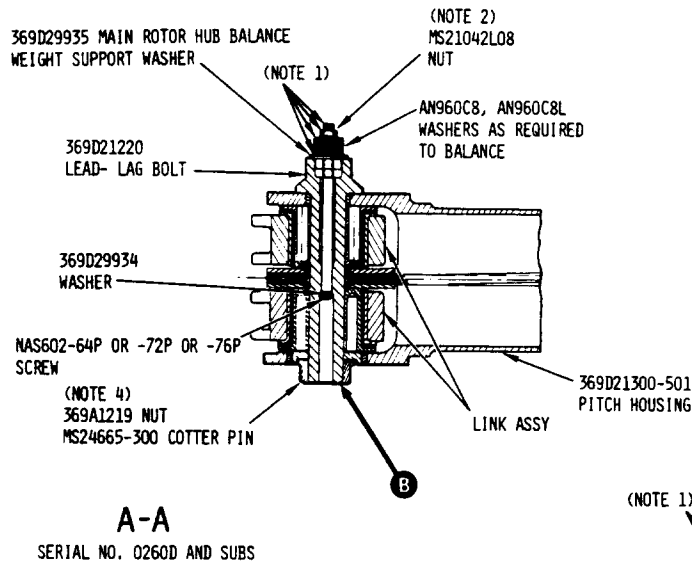
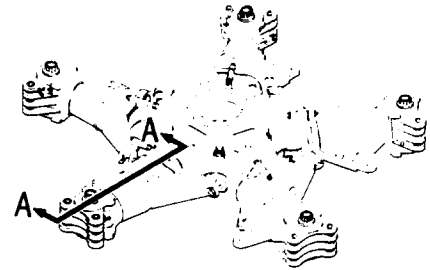
ADN892-1

Figure 1. Main Rotor Hub Balancing Chart

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NOTES:

1. COAT SCREW THREADS, NUTS AND WASHERS WITH PR-1436-G, CLASS B-2 SEALANT.
2. TORQUE MS21042L08 LOCKNUT TO 20 TO 35 INCH-POUNDS.
3. TORQUE MS21042L3 LOCKNUT TO 30 TO 60 INCH-POUNDS.
4. DO NOT REMOVE OR DISTURB TORQUE ON 369A1219 NUT.

ADN892-2

Figure 2. Main Rotor Hub Balancing

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RELOCATION OF AUTO REIGNITION CONTROLS AND MODIFICATION OF SYSTEM FOR FULL-TIME OPERATION

1. PLANNING INFORMATION

A. Models Affected:

500D Model 369D Helicopters, Serial No. 0003D through 0949D, 0956D, 0965D, 0977D and 0989D, equipped with PN 369H90118-513 Automatic Engine Reignition Kit.

B. Preface:

The information given in this Service Information Notice lists procedures for relocating the auto reignition controls on the instrument panel and necessary rewiring, to provide full-time operation of the system. The FAA has determined that accomplishment of HHI Service Information Notice DN-100 is an action which provides an equivalent level of safety and satisfies the requirement of Airworthiness Directive (AD) 80-24-04. The authority for this action is granted in paragraph c of the subject AD..

C. Time of Compliance:

At owners/operators discretion.

D. FAA Approval:

The resultant alteration to the affected helicopters by the procedure in this Notice has been shown to comply with Federal Aviation Regulations and is FAA approved.

E. Weight and Balance Data:

Weight and balance not affected

F. Reference:

369D Pilot's Flight Manual, Publication No. CSP-D-1, Reissued 11 May 1981 FAA
Airworthiness Directive 80-24-04

G. Materials:

MATERIAL	
Nomenclature	Source
Aluminum alloy sheet, 2024-T3, QQ-A-250/5, Temp T3.	
Primer, catalyzed epoxy, HMS-15-1082	1-1Y-10, Advanced Coatings & Chemicals Company, 2213 North Tyler Avenue, So. Elmonte, CA 91733
	U-1201, Sterling Lacquer Mfg. Co., Sunbrite Mfg. Co., 3150 Brannon Avenue, St. Louis, MO 63139

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MATERIAL (Cont.)	
Nomenclature	Source
Paint acrylic lacquer, HMS-15-1083, Color No. 37038 per FED-STD-595.	Advanced Coatings & Chemicals Company
	Sterling Lacquer Mfg. Co., Sunbrite Mfg. Co.
Scotch Cal Brand Film, 3650	Airmark Company (General Marketing Co.), 211 North Victory, Burbank, CA 91502
	Hesik Company, Inc., 385 Clinton St., Costa Mesa, CA 92626
	Rose Name Plate, 4169 Olympic Blvd., Los Angeles, CA 90063
Switch - 882GK15, Cutler Hammer (or equivalent)	

2. PROCEDURE

- (1). Set BATTERY, EXT PWR switch to OFF.
- (2). Disconnect wires from auto reignition switches as follows:
 - (a). Remove wire no. J501A20 from circuit breaker (CB106-2) and switch (S11-1) and discard wire.
 - (b). Disconnect wire no. J501AE20, J502E20, J501B20, J502A20 and J502D20 at switch (S11).
 - (c). Remove ARM switch (S11) from instrument panel.
 - (d). Remove wire no. J503D20 and J503EE20 from terminal board (TB502-13A and 13C).
 - (e). Remove wire no. J505A20N and J508A20N from stud (E2).
 - (f). Remove wire no. J507AA20 from terminal board (TB502-13E).
 - (g). Remove wire no. E559AC22 from splice (MS25181-1).
- (3). Remove relays (K304 and K104) and switch (XDS9) from ship. Remove all wires from relays and switch and retain relays and switch for reuse.
- (4). Fabricate cover, as required, for hole vacated by switch (see Figure 1).
- (5). Install cover on instrument panel (see Figure 1).
- (6). Install plug button on instrument panel (see Figure 1).

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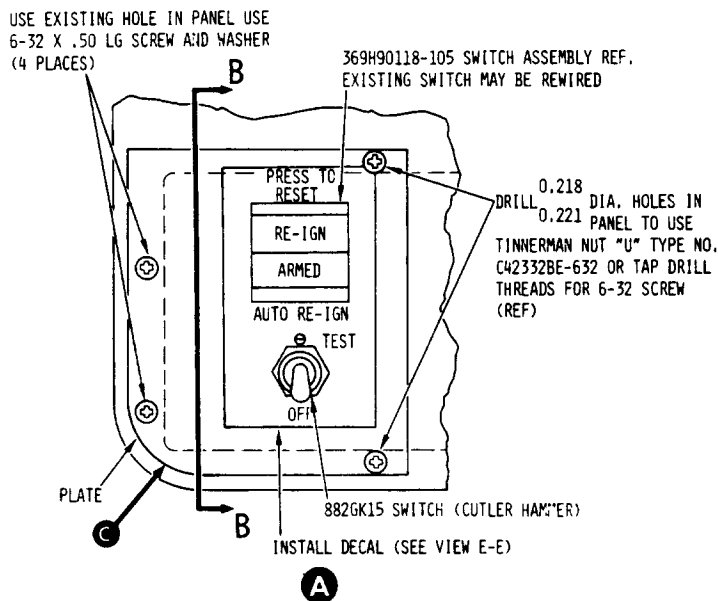
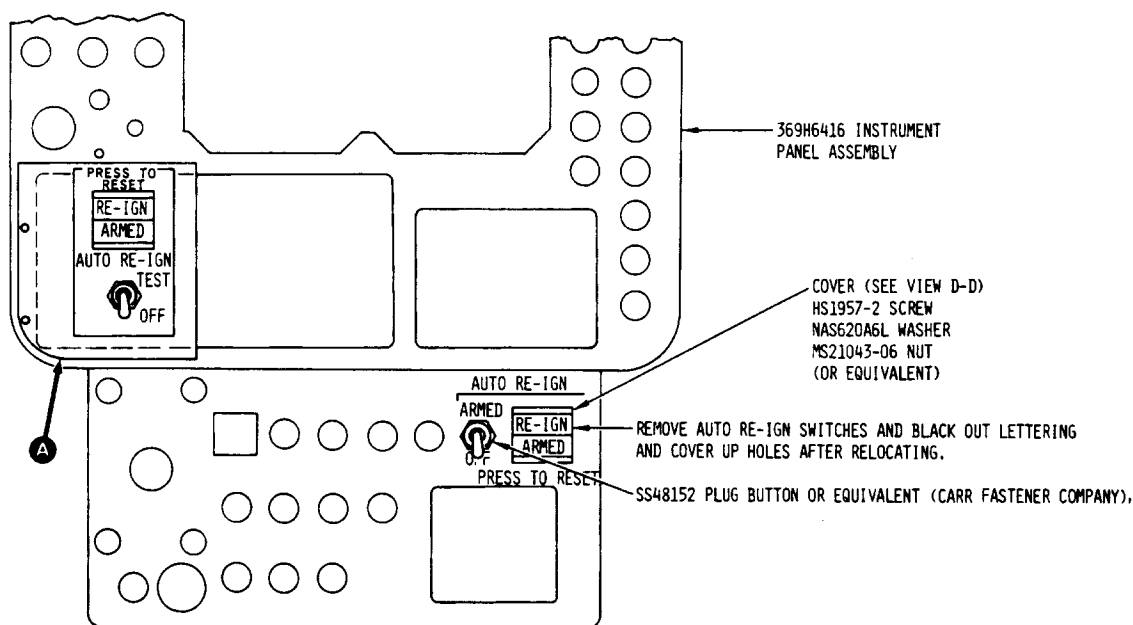
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- (7). Paint out lettering at previous auto reignition switch location with acrylic lacquer.
- (8). Fabricate plate, as required:
 - (a). Make plate from 0.062 inch thick aluminum alloy sheet as shown in Figure 1.
 - (b). Apply one coat HMS-15-1082 primer and dry for 1 to 2 hours.
 - (c). Apply topcoat of HMS-15-1083 acrylic lacquer and air dry 4 hours minimum.
- (9). Install plate and auto reignition switches (XDS9) (retained above) and (S11) (PN 882GK15, Cutler Hammer or equivalent) at new location on instrument panel (see Figure 1).
- (10). Fabricate and install decal on instrument panel (see Figure 1).
- (11). Revise wiring as follows (see Figure 2):
 - (a). Install diode at circuit breaker (CB101),
 - (b). Install diodes (CR3 and CR4) on switch (S11).
 - (c). Install transorb (CR5) on relay (K104).
 - (d). Rewire switches (S11 and XDS9) and relays (K104 and K304) as shown.
 - (e). Reinstall relays (K104 and K304) in original position.
- (12). Perform check of modified auto reignition system per instructions in 369D Pilot's Flight Manual, Publication No. CSP-D-1, dated 11 May 1981.
- (13). Record compliance with this Service Information Notice in Compliance Record of helicopter Log Book.

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Figure 1. Relocation of Auto Reignition Controls (Sheet 1 of 2)

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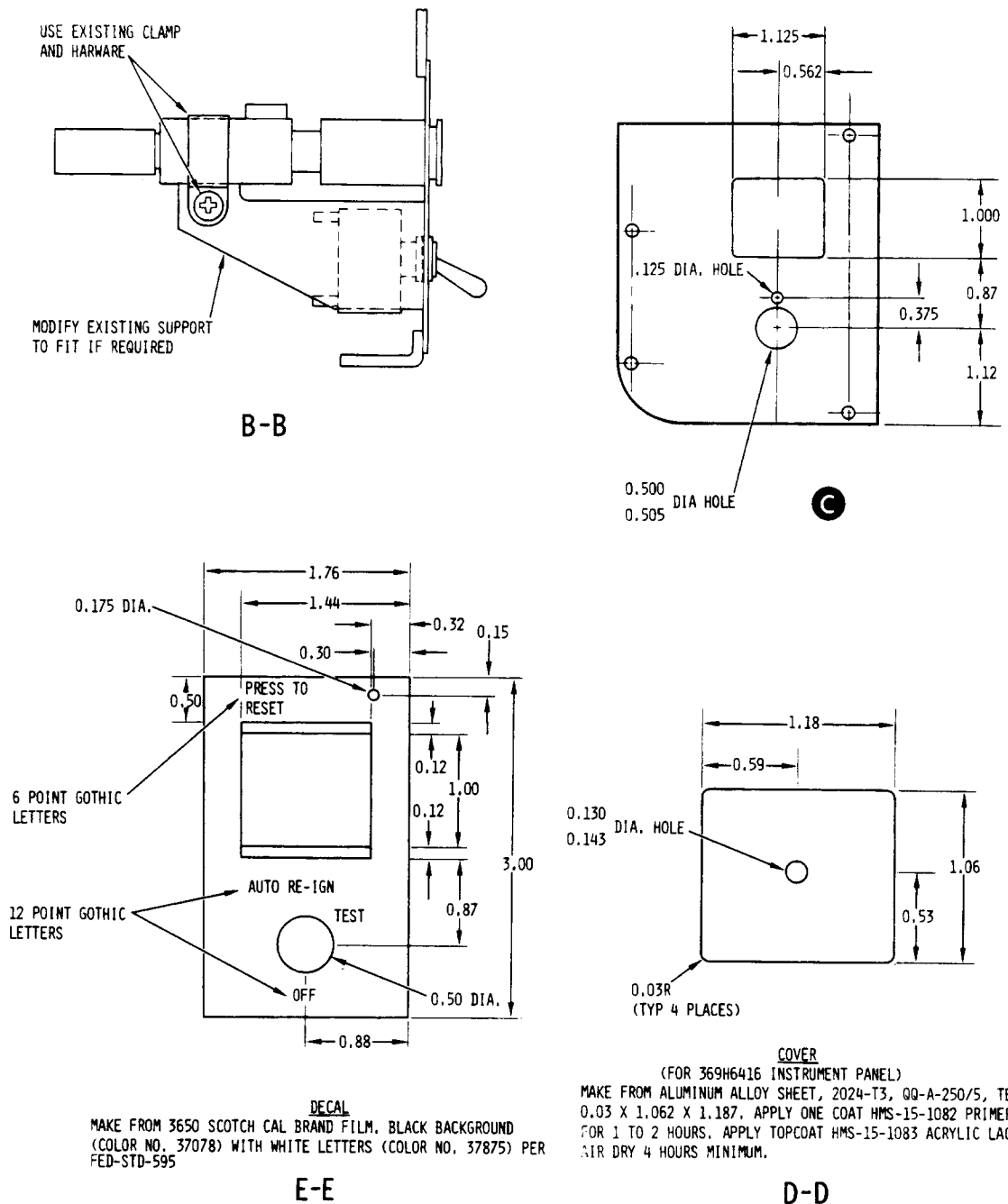
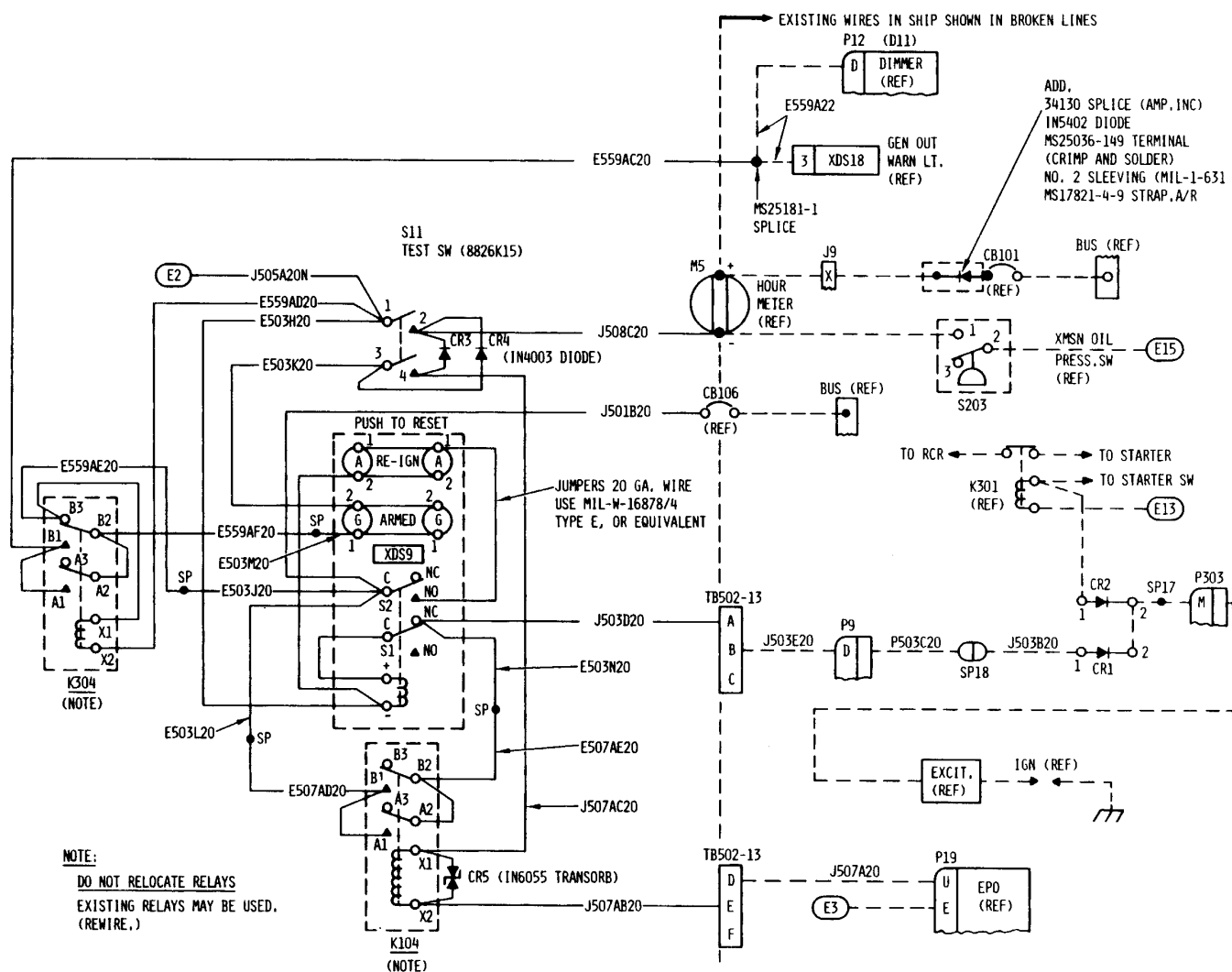


Figure 1. Relocation of Auto Reignition Controls (Sheet 2 of 2)

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Figure 2. Wiring Diagram

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INSTALLATION OF PN 369H4237-21 RESISTOR BOARD ASSEMBLY FOR EASIER, MORE ACCURATE ADJUSTMENT OF TOT INDICATOR

1. PLANNING INFORMATION

A. Models Affected:

500D Model 369D Helicopter Serial No. 0003D thru 1049D

B. Preface:

The information given in this Service Information Notice lists a procedure for installing a new PN 369H4237-21 resistor board assembly (TB9) which incorporates a multiple turn thermocouple lead resistor (R4), as replacement for the existing PN 369H4237 resistor board with an adjustable type resistor. The new multiple turn resistor allows for easier, more accurate adjustment of the TOT indicator.

It is to be noted that the new PN 369H4327-21 resistor board assembly (TB9) is installed on production 500D helicopter Serial No. 1050D and subsequent.

C. Time of Compliance:

At owners and operators discretion

D. Reference:

500D Model 369D Basic HMI-Vol I, Issued 15 September 1976; Revision No. 15 May 1981

E. Weight and Balance Data:

Weight and balance not affected

F. FAA Approval:

The resultant alteration described by the Installation Procedure in this Notice has been shown to comply with applicable Federal Aviation Regulations and is FAA Approved.

G. Parts/Supplies:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Resistor board assembly (TB9)	369H4237-21	1	HHI

2. INSTALLATION PROCEDURE

NOTE: Resistor board assembly (TB9) and thermocouple lead resistor (R4) are mounted on terminals of TOT indicator.

- (1). Check that all electrical power is OFF.
- (2). Remove left instrument panel fairing. (Refer to Section 17 of HMI- Vol I.)

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- (3). Disconnect thermocouple leads from terminal board TB9 on TOT indicator. (Refer to Section 17 of HMI-Vol I.)
- (4). Remove existing terminal board (TB9) from TOT indicator; remove TOT indicator from instrument panel.
- (5). Connect TOT thermocouple leads to new PN 369H4237-21 terminal board assembly (TB9).
- (6). Calibrate TOT indicating system, per Section 17 of HMI-Vol I.
- (7). Reinstall TOT indicator on instrument panel.
- (8). Connect new terminal board assembly (TB9) to TOT indicator terminal lugs.
- (9). Reinstall left instrument panel fairing.

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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.

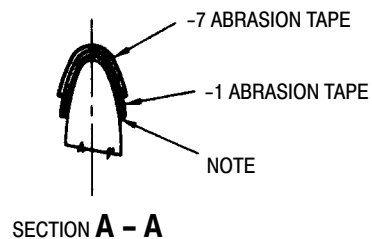
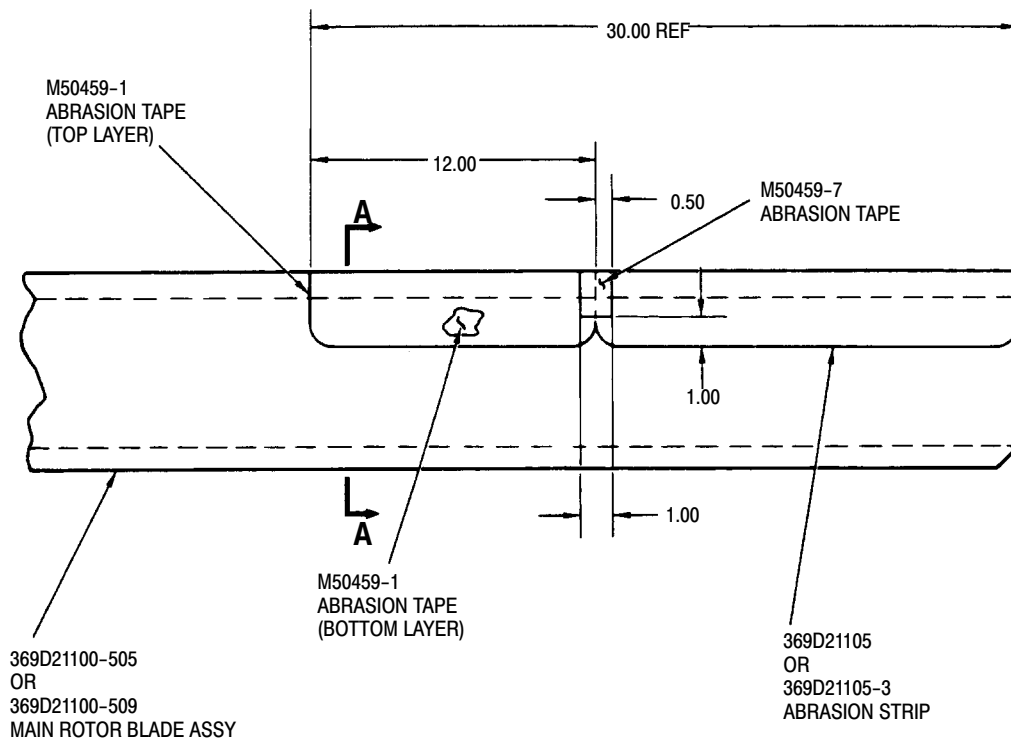
- (1). Carefully remove M50459-7 overlap tape; remove M50459-1 upper tape by carefully peeling off tape so as not to affect bonding of bottom -1 tape and surface of blade skin.
- (2). Wipe surface of -1 bottom tape with TT-N-95 solvent to remove any adhesive, taking care not to allow solvent to touch 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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NOTE:
 ABRASION TAPE MUST BE ALIGNED
 AT TOP SURFACE OF BLADE.

88-532B

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

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REWORK OF PN 369A9905–BASIC AND PN 369A9905–3 GROUND HANDLING WHEEL ASSEMBLIES TO ACCOMMODATE INSTALLATION OF NEW PN 369D26107 LANDING GEAR SKID FITTINGS

1. PLANNING INFORMATION

A. Models Affected:

All 500D Model 369D Series Helicopters

All PN 369A9905–Basic (Aluminum) and PN 369A9905–3 (Steel) Ground Handling Wheel Assemblies

B. Preface:

Field experience has shown that the PN 369A6107 landing gear skid fitting for the ground handling wheel assemblies can be bent in service. A new PN 369D26107 attach fitting has been designed with a larger and stronger attach pin to preclude bending or breaking under load. This new improved attach fitting is installed on production Model 500D helicopter Serial No. 1210 and subsequent, and may be installed on earlier helicopters as replacement, when required, for existing sets of PN 369A6107 skid fittings.

New ground handling wheel assemblies are available to accommodate the larger attach pin on the new PN 369D26107 skid fittings. The information given in this Service Information Notice provides instructions for reworking existing ground handling wheel assemblies to the new PN 369A9905–501 (aluminum) or PN 369A9905–503 (steel) configuration, by enlarging the attach pin holes in the wheel base to accept the larger diameter pin of the new skid fittings.

It is to be noted that the new or reworked ground handling wheel assemblies (–501 and –503 configurations) are NOT to be used if early PN 369A6107 skid fittings are installed on the landing gear skids, since the smaller attach pins will bend under load in the larger size attach pin holes.

C. Time of Compliance:

At owner's and operator's discretion.

D. Reference:

500D Basic HMI – Volume I, Issued 15 January 1982; Revision No. 1, 15 March 1982

E. Weight and Balance Data:

Weight and balance not affected

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F. Parts/Supplies:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
*Bushing		2	Field Fabricate
*Required only for rework of PN 369A9905–Basic (aluminum) Ground Handling Wheel Assemblies to new PN 369A9905–501 configuration. Field fabricate per specifications, Figure 2.			

G. Materials:

MATERIAL	
Nomenclature	Source
Primer, wet zinc chromate primer TT–P–1757	Commercial

H. Tools and Equipment:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Drill motor, portable	
Drill bit – 0.380 inch diameter (#3/8)	
Drill bit – 0.4219 inch diameter (#29/64)	
Ream bit – 0.4376/0.4405 inch diameter	

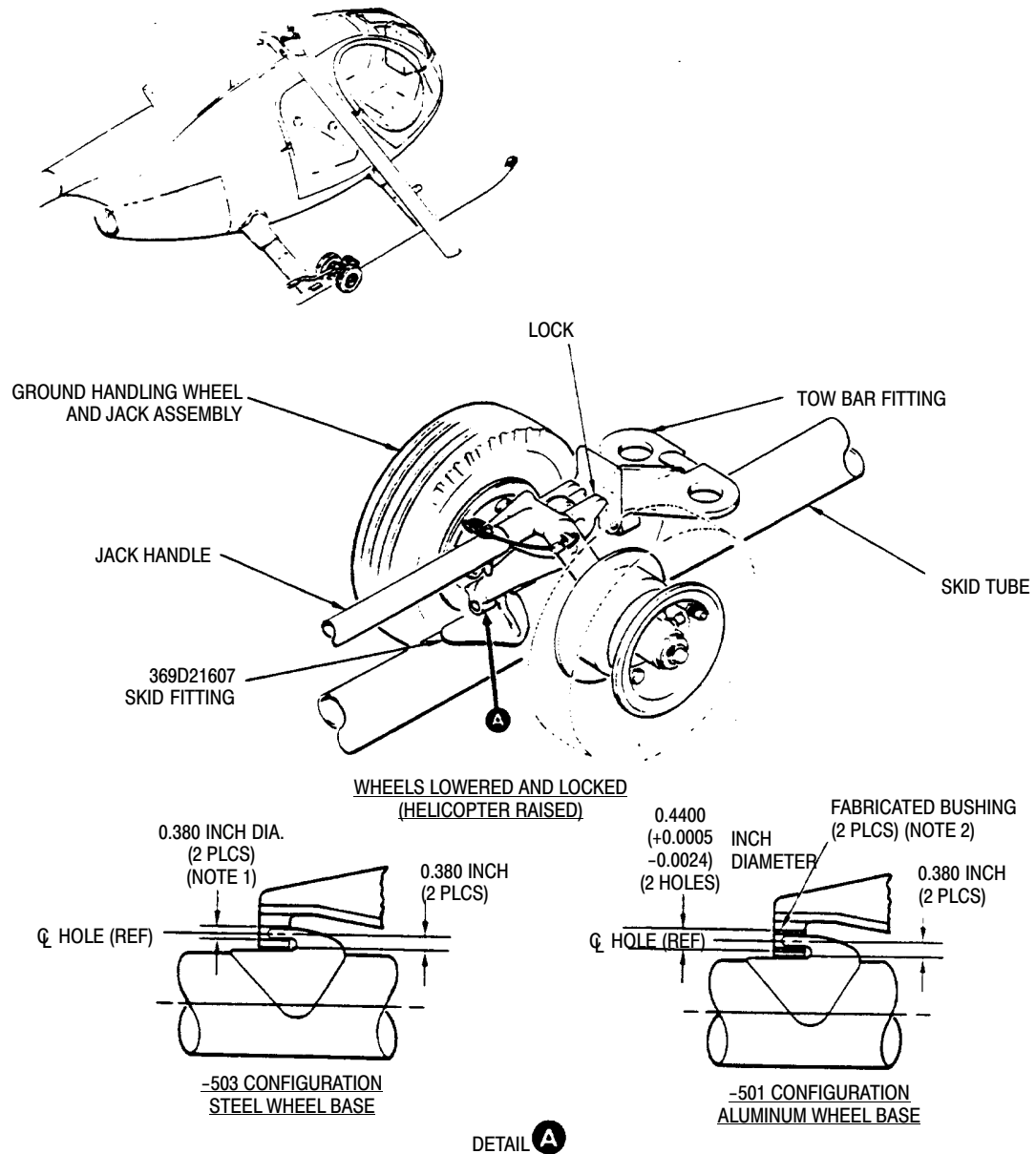
2. REWORK PROCEDURE

- (1). For aluminum PN 369A9905–Basic Ground Handling Wheel Assemblies only: (see Detail A, –501 configuration)
 - (a). Drill and enlarge attach pin holes in wheel base, two places, to 0.4219 inch diameter.
 - (b). Field fabricate bushings per Figure 2. Ream holes in wheel base to obtain a fit of $-0.0024/+0.0005$ inch between hole and bushing.
 - (c). Re-identify ground handling wheel assemblies as 369A9905–501 configuration.
- (2). For steel PN 369A9905–3 ground handling wheel assemblies only: (See Detail A –503 configuration)
 - (a). Drill and enlarge existing attach pin holes in wheel base to 0.380 inch diameter; coat reworked area with wet zinc chromate primer.
 - (b). Re-identify ground handling wheel assemblies as 369A9905–503 configuration.
- (3). Check for proper installation of PN 369D21607 attach fitting pins in enlarged attach holes in reworked wheel base.

NOTE: DO NOT use PN 369A9905–501 or –503 ground handling wheel assemblies, if early PN 369A6107 skid attach fittings are installed on landing gear skids. (See Preface, Page 1.)

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NOTES:

1. COAT REWORK AREA WITH WET ZINC CHROMATE PRIMER.
2. INSTALL FABRICATED BUSHING WITH WET ZINC CHROMATE PRIMER.

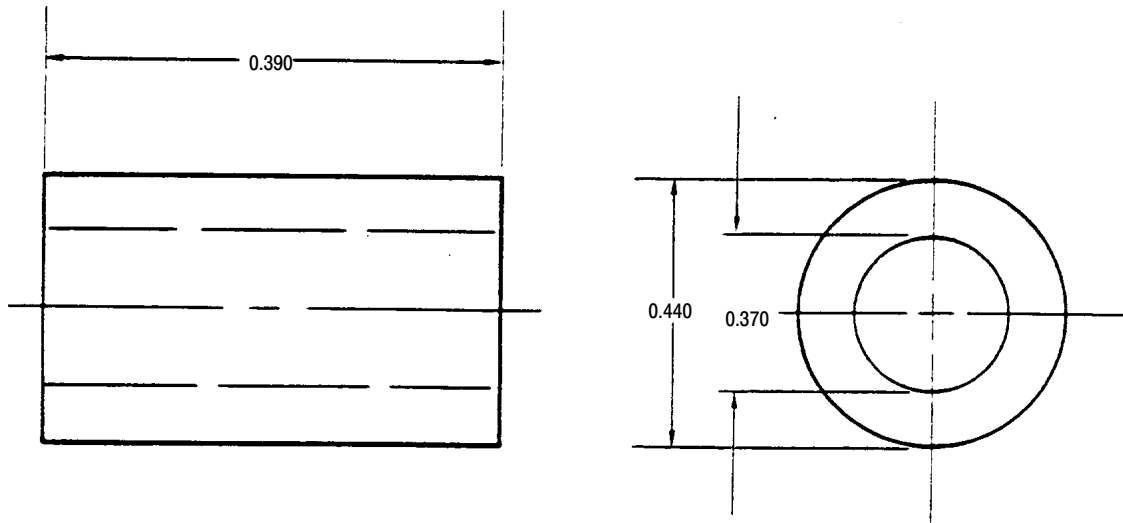
DETAIL **A**

88-551B

Figure 1. Rework of PN 369A9905 and 369A9905-3 Ground Handling Wheel Assemblies

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**NOTES:**

1. MATERIAL 4130 STEEL PER MIL-S-6758 OR EQUIV.
2. FINISH: CAD PLATE PER QQ-P-416 TYPE II CLASS 3
IF CAD PLATING FACILITY IS NOT AVAILABLE,
PAINT ALL SURFACES WITH WET ZINC CHROMATE PRIMER
TO PREVENT CORROSION.
3. ALL DIMENSIONS IN INCHES.

88-567

Figure 2. Field Fabrication of Bushing for Aluminum Wheel Assemblies

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INSTALLATION AND REPLACEMENT OF PROTECTIVE SLEEVE (SPEEDI-SLEEVE PN 084956) ON TAIL ROTOR TRANSMISSION OUTPUT GEARSHAFT

1. PLANNING INFORMATION

A. Models Affected:

All 500D Model 369D Series Helicopters.

B. Preface:

Information given in this Service Information Notice provides procedures for installing and replacing a protective sleeve (Speedi-Sleeve PN 084956) on the, output gearshaft of 369A5400 series tail rotor transmissions. The protective sleeve will prevent gearshaft wear caused by the gearshaft rubbing against the output gearshaft cover oil seal lip. It can also be used to repair minor gearshaft wear caused by the seal rubbing against the shaft.

The information given in this Notice is to be considered as part of the HMI and will be incorporated at the next scheduled revision of the below referenced handbooks.

C. Time of Compliance:

At owners/operators discretion.

D. Reference:

500D Model 369D COM (CSP-D-5), Reissued 15 September 1981.

500D Model 369D HMI Volume I (CSP-D-2), Reissued 15 January 1982; Revision No. 3, 15 August 1982.

Maintenance Manual and Illustrated Parts List for Four Bladed Tail Rotor Assembly (CSP-088), Issued 15 September 1981.

E. Weight and Balance:

Weight and balance not affected.

F. FAA Approval:

The resultant alteration to the affected helicopters described, by the installation procedure of this Notice has been shown to comply with the applicable Federal Aviation Regulations and is FAA Approved.

G. Parts/Supplies:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Speedi-Sleeve	084956	1	HHI

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H. Materials:

MATERIAL	
Nomenclature	Source
Solvent, dry cleaning PD-680	Commercial
Plastic Steel Devcon A	Devcon Corp. Danvers, MA 01923
Lockwire CRES safety wire	Commercial
Petroleum jelly VV-P-236	Commercial

I. Tools and Equipment:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Heat gun or blow dryer	Commercial
Pipe/tubing, 1-inch ID, 8–10 inches length	Commercial

2. PROCEDURE

- (1). Remove tail rotor and pitch control assembly (Section 8, Basic HMI Vol 1 or CSP-088).
- (2). Drain lubricant from tail rotor transmission (Section 2, Basic HMI Vol 1 or CSP-088).
- (3). Remove safety wire, three bolts and washers attaching output gearshaft cover to housing; remove cover and clamp-up shim. Retain all hardware except safety Wire for use at reassembly.
- (4). Using heat gun or blow dryer, heat output housing bore to $275^{\circ} \pm 25^{\circ}\text{F}$ ($135^{\circ} \pm 12^{\circ}\text{C}$); remove gearshaft and backlash shim. Retain backlash shim for use at reassembly.
- (5). Install Speedi-Sleeve as follows: (See Figure 1.)

NOTE: If shaft has been grooved from rubbing against lip of output gearshaft cover seal, and depth of groove exceeds 0.005 inch, shaft must be replaced. (Refer to Part III or VIII, 369D COM.) If groove does not exceed 0.005 inch depth it may be repaired with Devcon A.



Do not allow any contaminants to enter shaft bearings. Dust and other contaminants can damage or shorten the service life of the bearings.

- (a). Set gearshaft on end, roller bearings down, on hard, clean, level surface. Wipe away dust particles and foreign material from gearshaft using a clean, lint free cloth, dampened by solvent.

NOTE: If shaft has been grooved by seal lip and groove does not exceed 0.005 inch depth, fill groove with Devcon A.

- (b). Apply light coat of plastic steel to shaft area to be covered by sleeve.

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- (c). While Devcon A is wet, put sleeve on shaft, flange down, and press or tap in place using 1-inch tube or pipe bottomed on flange of sleeve. The unflanged end of sleeve must be even with outboard end of 0.9100 - 0.9108-inch diameter seal journal. Tap end of pipe with hammer or mallet as necessary to correctly position sleeve on shaft. Wipe any excess Devcon A from shaft using a clean, lint free cloth.
- (d). Clip flange of sleeve to notch line and peel from shaft.

(6). Replace installed sleeve, if damaged or grooved, as follows and as shown in Figure 1.

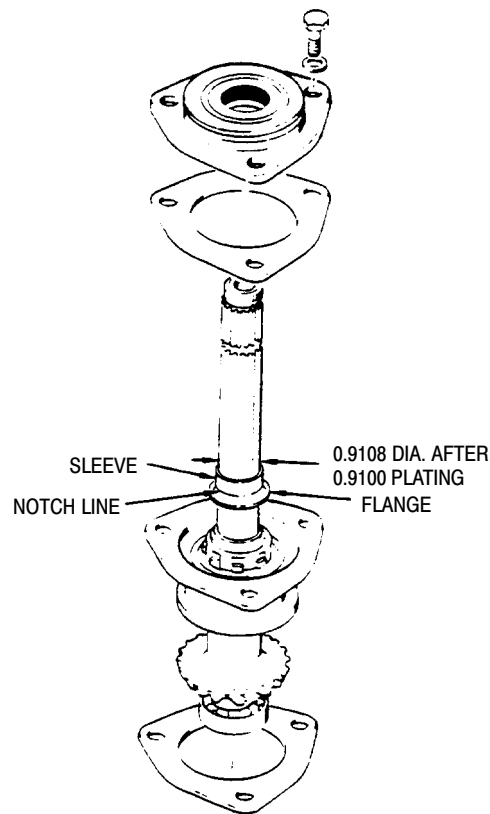


Use care not to cut into or damage gearshaft when removing damaged sleeve from gearshaft. Do not allow filings or other contaminants to enter shaft bearings.

- (a). Use file or other suitable instrument to cut through edge of sleeve; carefully pry cut edge away from shaft.
 - (b). Grasp raised edge with pliers and peel damaged sleeve off shaft..
 - (c). Remove any Devcon residue from shaft using dry cleaning solvent; dry shaft with clean, lint free cloth.
 - (d). Install replacement sleeve on shaft per paragraph (5).
- (7). Reassemble tail rotor transmission.
- (a). Apply heavy coating of petroleum jelly to roller bearings on end of gearshaft.
- NOTE:** If backlash shim removed at disassembly is not reused, complete reassembly per Section 6, Part III or VIII, 369D COM.
- (b). Install backlash shim removed at disassembly, and gearshaft in housing. Heat output housing bore using heat gun or blow dryer until gearshaft bearing retainer assembly fits easily into housing.
 - (c). Install clamp-up shim removed at disassembly and output gearshaft cover assembly (Section 6, Part III or VIII, 369D COM).
- (8). Install tail rotor and pitch control assembly (Section 8, HMI Vol 1 or CSP-088).
- (9). Fill tail rotor transmission with approved lubricant (Section 2, HMI Vol 1).
- (10). Record compliance with this Notice in Compliance Record of Helicopter Log Book.

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NOTES:

REPAIRABLE

DAMAGED SHAFT

1. FILL GROOVED AREA AND BOND SLEEVE TO SHAFT WITH DEVCON A.
2. CLIP FLANGE AND PEEL FLANGE OFF SHAFT AT NOTCH LINE.

UNDAMAGED SHAFT

1. BOND SLEEVE TO SHAFT WITH DEVCON A.
2. CLIP FLANGE AND PEEL FLANGE OFF SHAFT AT NOTCH LINE.

SLEEVE REPLACEMENT

1. CUT EDGE OF DAMAGED SLEEVE WITH FILE AND PEEL BACK.
2. PEEL SLEEVE FROM SHAFT.
3. CLEAN WITH PD-680; DRY WITH CLEAN, LINT FREE CLOTH.
4. PRESS SLEEVE ONTO SHAFT USING DEVCON A.
5. CLIP FLANGE AND PEEL FLANGE OFF SHAFT AT NOTCH LINE.

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Figure 1. Speedi-Sleeve (PN 084956) Installation/Replacement

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INSTALLATION AND REPLACEMENT OF PROTECTIVE SLEEVE (SPEEDI-SLEEVE PN 084956) ON TAIL ROTOR TRANSMISSION OUTPUT GEARSHAFT

1. PLANNING INFORMATION

A. Models Affected:

All 500E Model 369E Series Helicopters.

B. Preface:

Information given in this Service Information Notice provides procedures for installing and replacing a protective sleeve (Speedi-Sleeve PN 084956) on the, output gearshaft of 369A5400 series tail rotor transmissions. The protective sleeve will prevent gearshaft wear caused by the gearshaft rubbing against the output gearshaft cover oil seal lip. It can also be used to repair minor gearshaft wear caused by the seal rubbing against the shaft.

The information given in this Notice is to be considered as part of the HMI a will be incorporated at the next scheduled revision of the below referenced handbooks.

C. Time of Compliance:

At owners/operators discretion.

D. FAA Approval:

The resultant alteration to the affected helicopters described. by the installation procedure of this Notice has been shown to comply with the applicable Federal Aviation Regulations and is FAA Approved.

E. Weight and Balance:

Weight and balance not affected.

F. Reference:

500E Model 369E COM (CSP-E-5), Issued 15 December 1982.

500E Model 369E HMI Volume I (CSP-E-2), Issued 15 December 1982.

Maintenance Manual and Illustrated Parts List for Four Bladed Tail Rotor Assembly (CSP-088), Issued 15 September 1981.

G. Parts/Supplies:

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Speedi-Sleeve	084956	1	HHI

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H. Materials:

MATERIAL	
Nomenclature	Source
Solvent, dry cleaning PD-680	Commercial
Plastic Steel Devcon A	Devcon Corp. Danvers, MA 01923
Lockwire CRES safety wire	Commercial
Petroleum jelly VV-P-236	Commercial

I. Tools and Equipment:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Heat gun or blow dryer	Commercial
Pipe/tubing, 1-inch ID, 8–10 inches length	Commercial

2. PROCEDURE

- (1). Remove tail rotor and pitch control assembly (Section 8, HMI Vol 1 or CSP-088).
- (2). Drain lubricant from tail rotor transmission (Section 2, HMI Vol 1 or CSP-088).
- (3). Remove safety wire, three bolts and washers attaching output gearshaft cover to housing; remove cover and clamp-up shim. Retain all hardware except safety Wire for use at reassembly.
- (4). Using heat gun or blow dryer, heat output housing bore to $275^{\circ} \pm 25^{\circ}\text{F}$ ($135^{\circ} \pm 12^{\circ}\text{C}$); remove gearshaft and backlash shim. Retain backlash shim for use at reassembly.
- (5). Install Speedi-Sleeve as follows: (See Figure 1.)

NOTE: If shaft has been grooved from rubbing against lip of output gearshaft cover seal, and depth of groove exceeds 0.005 inch, shaft must be replaced. (Refer to Part III or VIII, 369D COM.) If groove does not exceed 0.005 inch depth it may be repaired with Devcon A.



Do not allow any contaminants to enter shaft bearings. Dust and other contaminants can damage or shorten the service life of the bearings.

- (a). Set gearshaft on end, roller bearings down, on hard, clean, level surface. Wipe away dust particles and foreign material from gearshaft using a clean, lint free cloth, dampened by solvent.

NOTE: If shaft has been grooved by seal lip and groove does not exceed 0.005 inch depth, fill groove with Devcon A.

- (b). Apply light coat of plastic steel to shaft area to be covered by sleeve.

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- (c). While Devcon A is wet, put sleeve on shaft, flange down, and press or tap in place using 1-inch tube or pipe bottomed on flange of sleeve. The unflanged end of sleeve must be even with outboard end of 0.9100 - 0.9108-inch diameter seal journal. Tap end of pipe with hammer or mallet as necessary to correctly position sleeve on shaft. Wipe any excess Devcon A from shaft using a clean, lint free cloth.
- (d). Clip flange of sleeve to notch line and peel from shaft.

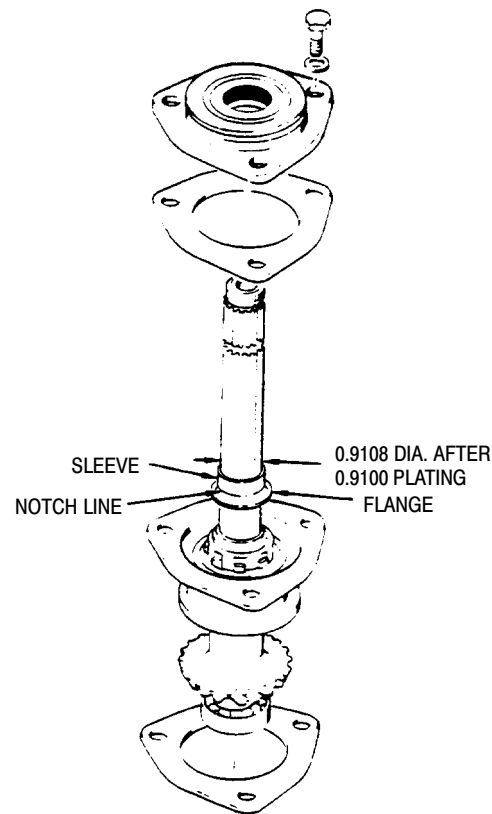
- (6). Replace installed sleeve, if damaged or grooved, as follows and as shown in Figure 1.



Use care not to cut into or damage gearshaft when removing damaged sleeve from gearshaft. Do not allow filings or other contaminants to enter shaft bearings.

- (a). Use file or other suitable instrument to cut through edge of sleeve; carefully pry cut edge away from shaft.
 - (b). Grasp raised edge with pliers and peel damaged sleeve off shaft..
 - (c). Remove any Devcon residue from shaft using dry cleaning solvent; dry shaft with clean, lint free cloth.
 - (d). Install replacement sleeve on shaft per paragraph (5).
- (7). Reassemble tail rotor transmission.
 - (a). Apply heavy coating of petroleum jelly to roller bearings on end of gearshaft.
- NOTE:** If backlash shim removed at disassembly is not reused, complete reassembly per Section 6, Part III or VIII, 369E COM.
- (b). Install backlash shim removed at disassembly, and gearshaft in housing. Heat output housing bore using heat gun or blow dryer until gearshaft bearing retainer assembly fits easily into housing.
 - (c). Install clamp-up shim removed at disassembly and output gearshaft cover assembly (Section 6, Part III or VIII, 369E COM).
- (8). Install tail rotor and pitch control assembly (Section 8, HMI Vol 1 or CSP-088).
 - (9). Fill tail rotor transmission with approved lubricant (Section 2, HMI Vol 1).
 - (10). Record compliance with this Notice in Compliance Record of Helicopter Log Book.

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NOTES:

REPAIRABLE

DAMAGED SHAFT

1. FILL GROOVED AREA AND BOND SLEEVE TO SHAFT WITH DEVCON A.
2. CLIP FLANGE AND PEEL FLANGE OFF SHAFT AT NOTCH LINE.

UNDAMAGED SHAFT

1. BOND SLEEVE TO SHAFT WITH DEVCON A.
2. CLIP FLANGE AND PEEL FLANGE OFF SHAFT AT NOTCH LINE.

SLEEVE REPLACEMENT

1. CUT EDGE OF DAMAGED SLEEVE WITH FILE AND PEEL BACK.
2. PEEL SLEEVE FROM SHAFT.
3. CLEAN WITH PD-680; DRY WITH CLEAN, LINT FREE CLOTH.
4. PRESS SLEEVE ONTO SHAFT USING DEVCON A.
5. CLIP FLANGE AND PEEL FLANGE OFF SHAFT AT NOTCH LINE.

88-586A

Figure 1. Speedi-Sleeve (PN 084956) Installation/Replacement

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FUEL SYSTEM VAPOR VENT LINE CHECK VALVE INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected :

Model 369FF serial number FF001 thru FF137.

B. Assembly/Components Affected By This Notice:

Fuel System Installation 369A8100.

C. Reason:

Owner/Operators may desire to install a check valve in the fuel system vapor vent line on their aircraft to reduce the possibility of delayed starts.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to the installation of the Fuel System Vapor Vent Line Check Valve option.

E. Time of Compliance

Customer option, at the discretion of the owner/operator.

F. Classification:

Compliance with this Bulletin is a minor alteration.

G. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

H. Interchangeability:

None

I. Disposition of Parts Removed

N/A

J. Points of Contact

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

K. Warranty Policy:

N/A

L. Tooling:

N/A

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M. Material/Part Availability:

Contact MDHI Part Sales Dept. (Ref. Parts Request Form at the end of this Bulletin).

CHECK VALVE INSTALLATION REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Check Valve	859T-4TB	1	MDHI or Circle Seal Controls, Inc., 2301 Wardlow Rd, Corona, CA (909) 270-6200
Packing	MS29512-04	1	MDHI
Nut	AN924-4	1	MDHI

N. Weight and Balance:

+0.3 lbs (0.14 kg) at FS 125.78, RBL 12.13, WL19.00

O. Electrical Load Data:

N/A

P. Other Publications Affected:

Basic HMI CSP-HMI-2 and Illustrated Parts Catalog CSP-IPC-4 .

2. ACCOMPLISHMENT INSTRUCTIONS

WARNING

Avoid fuel vapor ignition and fire. Use only nonsparking tools and explosion proof work lights. Attach helicopter to an approved electrical ground. Switch OFF all electrical power. Disconnect external power and battery before opening fuel system. Ensure work area is adequately ventilated.

(Ref. Figure 1)

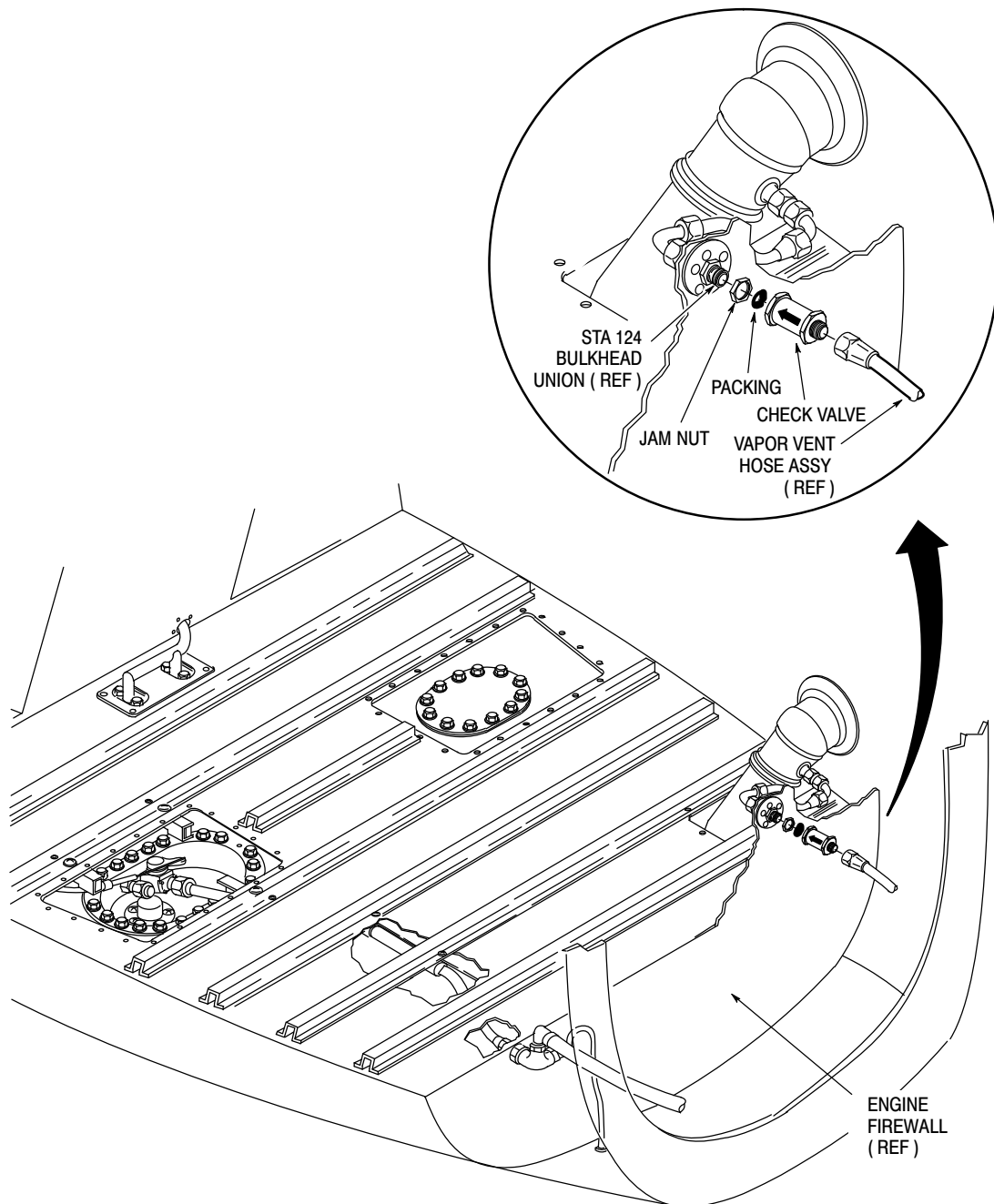
- (1). Open engine access doors.
- (2). Disconnect vapor vent hose assembly from Sta 124 bulkhead union.
- (3). Thread AN924-4 jam nut on bulkhead union
- (4). Install MS29512-04 packing on bulkhead union.
- (5). Thread 859T-4TB check valve on bulkhead union with arrow on check valve pointing toward union. Torque AN924-4 jam nut to **135-150 in lb (15.61-17.33 N•m)**.
- (6). Connect vapor vent hose assembly to check valve. Torque hose assembly nut to **135-150 in lb (15.61-17.33 N•m)**
- (7). Close engine access doors.

Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

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Figure 1. Check Valve Installation

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FUEL SYSTEM VAPOR VENT LINE CHECK VALVE INSTALLATION

**PARTS REQUEST FORM: PLEASE FILL IN THE FOLLOWING INFORMATION
AND RETURN TO MDHI FOR PARTS/SUPPLIES REQUIRED FOR COMPLIANCE.
THIS FORM MAY BE FAXED TO MDHI PART SALES DEPARTMENT AT (602)
891-3952.**

Aircraft Ser. No.:

Aircraft Total Time:

Date:

Parts Required:

Part Ser. No. (if required):

Ship to:

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ALLISON 250-C30 ENGINE INSTALLATION SURGE FIX MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

369F/FF Helicopters serial number 0001-0133, 0600-0602, 0700-0702.

B. Assembly/Components Affected By This Notice:

Allison 250-C30 Engine P/N: 369D28640, Aft Section Assembly-Fuselage Structure P/N: 369D23000, Engine Build Up Assembly 250-C30 P/N: 369D28602, Engine Installation 250-C30 P/N: 369DSK400, Electrical Modification for C30 Engine.

C. Reason:

Some 369F/FF helicopters have experienced engine compressor surges. Complying with this Bulletin will reduce possibility of continued engine surges. Helicopter serial number 0134 thru 0599 have the intent of this Bulletin completed before delivery.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to installing an improved Allison 250-C30 engine. Modifications to the engine include a new accumulator for the compressor bleed valve PC air line, an increase in the flow area of the compressor inducer bleed port, modifications to the flow areas of the turbine nozzles, and removal of the T1 thermal switch. These engine modifications do not affect limitations, performance charts, or procedures.

The airframe modifications include a larger inducer bleed overboard outlet port, and removal of the T1 switch airframe provisions. An improved 369D28524-9 bleed assembly is available, but not required for this modification.

Electrical modifications remove/disconnect the components and wiring for the N₂ overspeed, bleed solenoid, N₂ overspeed test, and relocate the utility power switch/breaker to the utility panel.

E. Time of Compliance:

Customer option, at owner/operator's discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Twenty (20) man-hours

H. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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I. Material/Part Availability:

Contact MDHI Part Sales Dept.

Table 1. REPLACEMENT PARTS/SUPPLIES

Nomenclature	Part No.	Qty.	Source
Modified 250-C30 Engine		(Ref. Table 5)	MDHI
Electrical Modification S/N 001 Thru S/N 075	369D28560-513	(Ref. Table 2)	MDHI
Electrical Modification S/N 076 Thru S/N 133	369D28560-511	(Ref. Table 3)	MDHI
Airframe Modification Kit	369DSK400-901	(Ref. Table 4)	MDHI

Table 2. -513 ELECTRICAL MODIFICATION PARTS S/N 001 Thru 075

Nomenclature	Part No.	Qty.	Source
Plug Button	SS50705	2	MDHI or Commercial
Blank	369D26451-7	1	MDHI
Switch/breaker, Utility (CB117)	MS24509A7.5	1	MDHI or Commercial
Stow Caps	HS5077-4003	12	MDHI or Commercial
Decal, UTIL/LTR	369D28560-25	1	MDHI

Table 3. -511 ELECTRICAL MODIFICATION PARTS S/N 076 Thru 133

Nomenclature	Part No.	Qty.	Source
Plug Button	SS50705	2	MDHI or Commercial
Blank	369D26451-7	1	MDHI
Switch/breaker, Utility (CB117)	MS24509A7.5	1	MDHI or Commercial
Black Background Decal Material	Scotchcal Brand Film	3 sq in (8 sq cm)	3M Co., St. Paul, MN.
Stow Caps	HS5077-4003	18	MDHI or Commercial
Decal, UTIL/LTR	369D28560-25	1	MDHI

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Table 4. AIRFRAME MODIFICATION PARTS			
Nomenclature	Part No.	Qty.	Source
Doubler	369DSK400-163	1	MDHI or field fabricate (Ref. Figure 5)
Doubler (1)	369DSK400-165	1	MDHI or field fabricate (Ref. Figure 5)
Plug Button (2)	HS4248C40	1	MDHI or Commercial
Isopropyl Alcohol (2)		AR	Commercial
Sealant (2)	Pro Seal 700, Type 1	2 oz (56.7 g)	Coast Pro Seal. Compton, CA
Cover Assembly	369D23000-35	1	MDHI
Rivet	MS20740AD3-2	8	MDHI or Commercial
Rivet (1)	MS20615-3M3	6	MDHI or Commercial
Rivet	MS20615-4M3 or MS20615-4M4	9	MDHI or Commercial
Primer, Epoxy	MIL-P-23377, T1, C3 (RM015930)	1 oz (28 g)	MDHI or Commercial
Top Coat Paint To Match Aircraft		AR	Commercial
Silastic, RTV	732 (RM002212)	1	MDHI or Commercial
Clamp	48H	2	MDHI or Wittek Manufacturing Co. Chicago, IL
Hose Assembly	DOU1167-0001	1	MDHI or Flexfab Corp. Hastings, MI

Table 5. ENGINE BUILD-UP ASSEMBLY PARTS			
Nomenclature	Part No.	Qty.	Source
Allison 250-C30	23062052 (4)	1	Allison Engine Company Indianapolis, Indiana
Tube Assembly	369A8010-731	1	MDHI
Bleed Assembly (Optional) (3)	369D28524-9	1	MDHI

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Table 5. ENGINE BUILD-UP ASSEMBLY PARTS (Cont.)

Nomenclature	Part No.	Qty.	Source
Clamp (3)	MS21919WCH2	1	MDHI or Commercial
Clamp (3)	MS21919WCH8	1	MDHI or Commercial
Bracket (3)	AN743C12	1	MDHI or Commercial
Screw (3)	NAS1096-3-6	1	MDHI or Commercial
Nut (3)	MS21043-3	1	MDHI or Commercial
Washer (3)	AN960C10L or NAS1149C0332R	2	MDHI or Commercial

NOTES:

- (1) Required for doubler replacement method.
- (2) Required for plug button method.
- (3) Required for optional engine bleed air improvement upgrade only. Not required for surge fix.
- (4) Or alternate 250-C30 Engine modified in accordance with Rolls-Royce Allison Commercial Engine Bulletin (CEB) 72-3213.

J. Disposition of Parts Removed:

Return engine to Allison Engine Company. Scrap all other parts.

K. Warranty Policy:

N/A

L. Weight and Balance:

N/A

M. Other Publications Affected:

Handbook of Maintenance Instruction (CSP-HMI-2) and Illustrated Parts Catalogs (CSP-IPC-4).

2. ACCOMPLISHMENT INSTRUCTIONS

A. Structural Modification:

(Ref. Figure 1)

- (1). Remove engine (Ref. CSP-HMI-2).
- (2). Remove T1 temperature sensor from bottom of engine inlet plenum (Ref. CSP-HMI-2).

NOTE: There are two acceptable methods to cover the hole in the plenum wall. The existing doubler with holes may be removed, and a new doubler without holes installed. An alternate is to leave the existing doubler in place and install a plug button in the hole.

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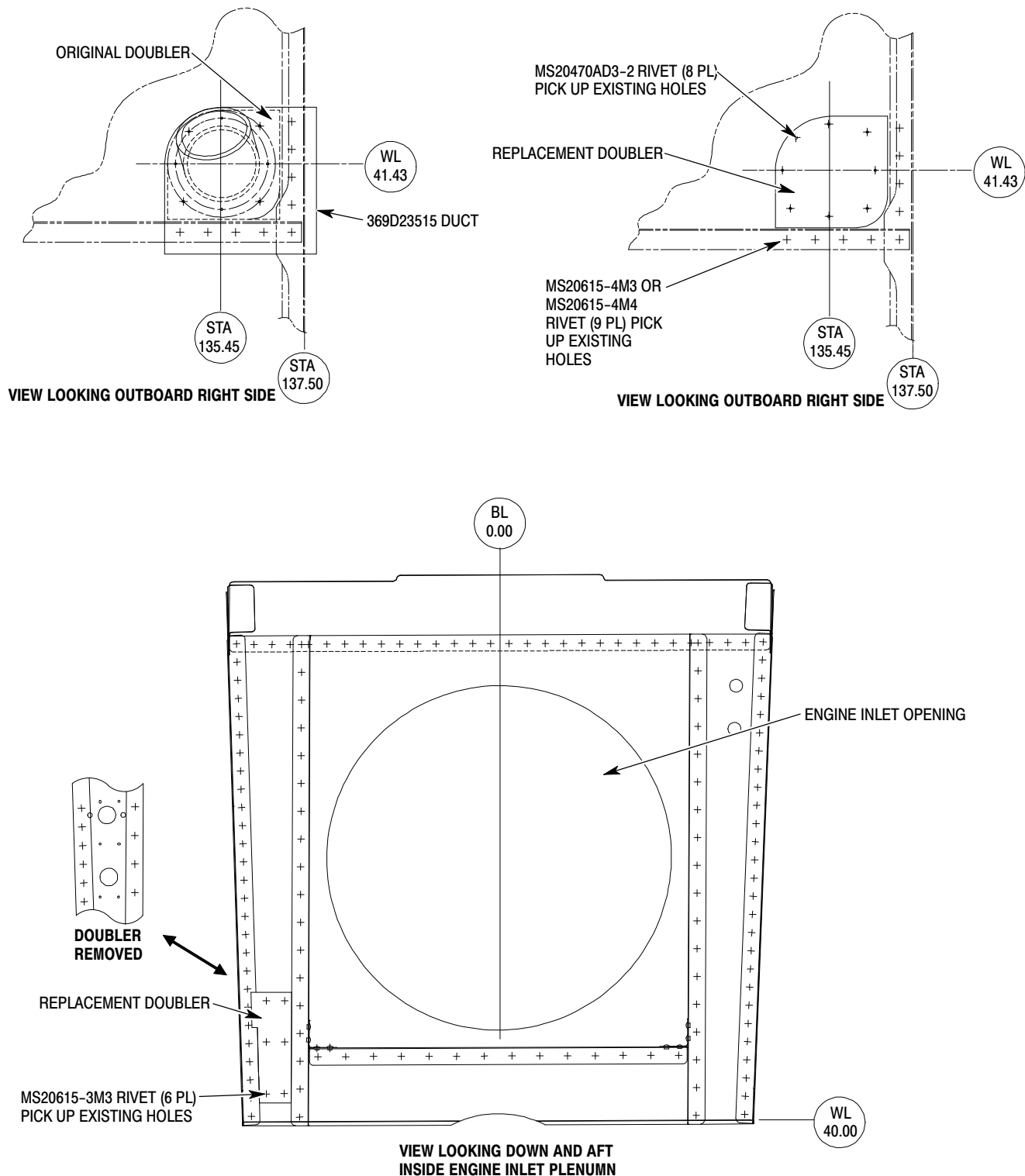
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- (3). Doubler replacement method:
 - (a). Remove existing T1 doubler from plenum wall.
 - 1). Remove six (6) MS20615-3M rivets with a number forty (40) drill bit.
 - 2). Remove doubler and discard.
 - (b). Remove all sealant residue and clean area.
 - (c). Install replacement T1 doubler 369DSK400-163.
 - 1). Align replacement doubler over holes in plenum wall and pick up existing rivet holes.
 - 2). Drill rivet holes with a number forty (40) drill bit and deburr.
 - 3). Install replacement doubler with MS20615-3M3 rivets. Install rivets wet with MIL-P-23377, T1, C3 primer.
 - 4). Seal all open gaps and crevices with Silastic RTV 732.
- (4). Alternate plug button installation method:
 - (a). Remove all residue and clean area.
 - (b). Install HS4248C40 plug button:
 - 1). Install plug button with head on plenum (forward) side of plenum wall.
 - 2). Bend all tabs outboard, flush with plenum wall.
 - 3). Wipe with isopropyl alcohol or equivalent and air dry fifteen minutes
 - 4). Seal plug button with a 0.125 in (3.1 mm) bead of Pro Seal 700.
 - 5). Cure seal in accordance with manufacturer's instructions.
- (5). Touch up white paint (Ref. CSP-HMI-2).
- (6). Remove 369D23515 duct.
 - (a). Remove eight (8) MS20470AD3 with a number forty (40) drill bit.
 - (b). Remove nine (9) MS20615-4M rivets with a number thirty (30) drill bit.
 - (c). Remove duct and discard.
 - (d). Fill nine (9) unused holes with MS20615-4M3 or MS20615-4M4 rivets. Install rivets wet with MIL-P-23377, T1, C3 primer.
 - (e). Align replacement 369DSK400-165 doubler with over holes in aircraft skin and pick up existing rivet holes.
 - (f). Drill rivet holes with number forty (40) drill bit and deburr.
 - (g). Install replacement doubler with MS20470AD3-2 rivets. Install rivets wet with primer MIL-P-23377, T1, C3 primer.
 - (h). Seal all open gaps and crevices with Silastic RTV 732.
 - (i). Touch up white paint on inside of engine compartment (Ref. CSP-HMI-2).

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Figure 1. Structural Modifications

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- (j). Touch up exterior paint to match aircraft.
- (7). Paint 369D23000-35 oil filter access cover assembly to match aircraft.

B. Engine Build-up:

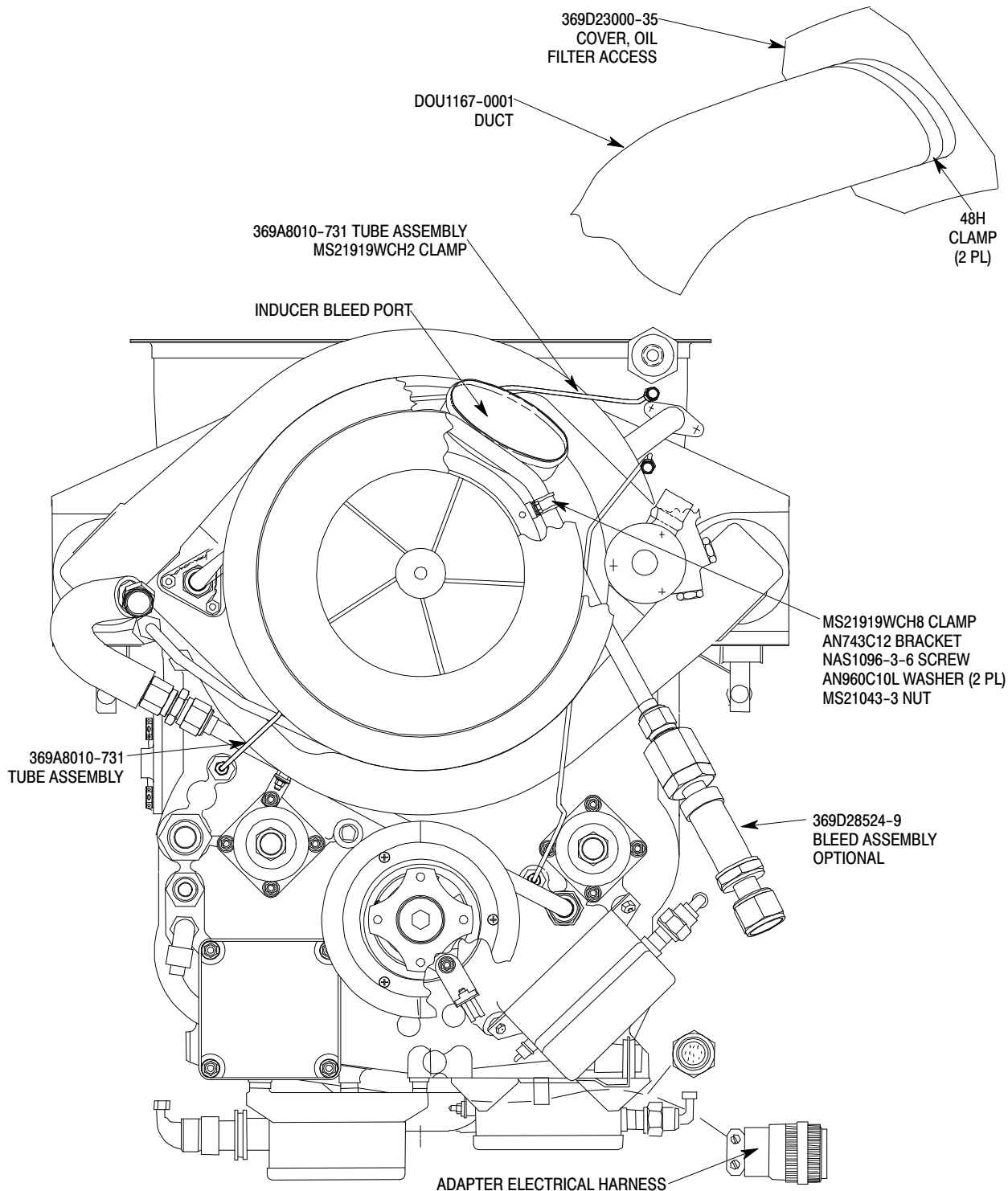
(Ref. Figure 2)

- (1). Build up engine in accordance with CSP-HMI-2, with the following exceptions.
 - (a). If installing 369D28524-9 improved bleed assembly, install.
 - 1). Install MS21919WCH8 clamp, AN743C12 bracket, NAS1096-3-6 screw, AN960C10L washers, and MS21043-3 nut.
 - 2). Install 369A8010-731 tube assembly and MS21919WCH2 clamp. Attach clamp at existing clamp point with existing hardware.

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Figure 2. Engine Build-up

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C. Electrical Modification -513 Aircraft S/N 001 Thru 075:

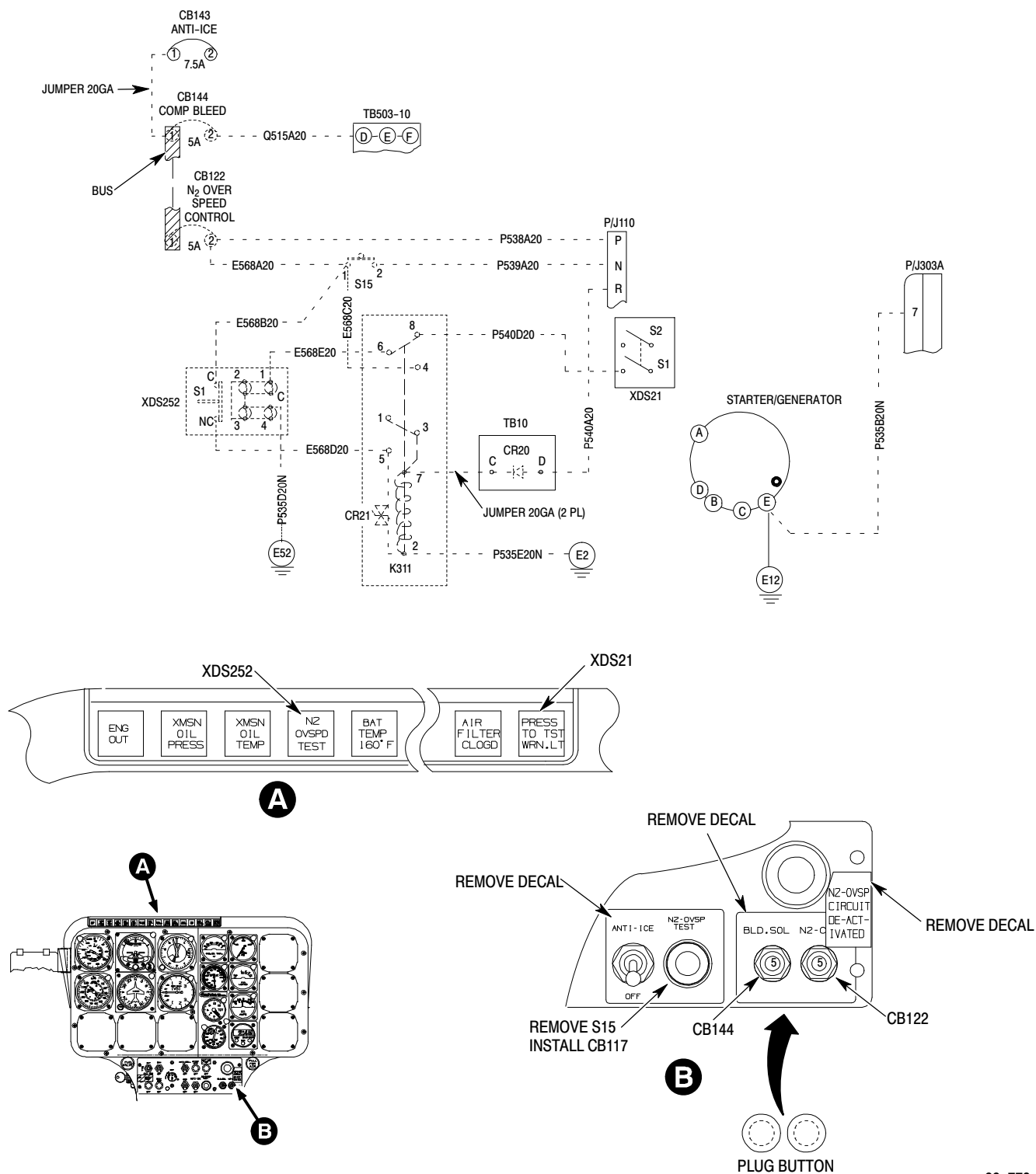
(Ref. Figure 3)

- (1). Remove 20GA jumper from CB143-1 and CB144-1 and discard.
- (2). Remove wire number Q515A20 from CB144-2 and cap and stow.
- (3). Remove wire number P538A20 from CB122-2 and cap and stow.
- (4). Remove wire number E568A20 from CB122-2 and S15-1 and discard.
- (5). Remove wire number E568B20 from S15-1 and XDS252-C and cap and stow.
- (6). Remove wire number E568C20 from S15-1 and K311-4 and cap and stow.
- (7). Remove wire number P539A20 from S15-2 and cap and stow.
- (8). Remove CB144 (Compressor Bleed) and CB122 (N₂ Overspeed) and discard.
- (9). Remove S15 (N₂ Overspeed Test) and discard.
- (10). Remove M50465 (N₂-OVSP CIRCUIT DE-ACTIVATED) decal from switch panel and discard.
- (11). Remove decals for CB144, CB122, and S15 from switch panel and discard.
- (12). Install plug buttons in removed circuit breaker locations and paint to match panel.
- (13). Install Utility Switch/Breaker (CB117) into hole from removal of S15.
- (14). Install 369D28560-25 (UTIL/LTR) decal above CB117.
- (15). Remove utility power wires M501A20 and P506AF16 from CB208 in circuit breaker panel and connect to CB117 in switch panel.
- (16). Remove the 369D28560-25 (UTIL/LTR) decal from circuit breaker panel above CB208 and uncover "RADALT" on panel.
- (17). Remove wire number E568E20 from XDS252-1 and K311-6 and cap and stow.
- (18). Remove wire number E568D20 from XDS252-NC and K311-5 and cap and stow.
- (19). Remove wire number P535D20N from XDS252-4 and E52 and cap and stow.
- (20). Remove XDS252 (Switch/Light N₂ Overspeed) and discard.
- (21). Fill hole from removed XDS252 with a 369D26451-7 blank.
- (22). Remove wire number P540D20 from K311-8 and XDS21 and cap and stow.
- (23). Remove wire number P535E20N from K311-2 and E2 and cap and stow.
- (24). Remove 20GA jumper from K311-7 and TB10-C and discard.
- (25). Remove K311 (Overspeed Relay) and discard.
- (26). Remove wire number P540A20 from TB10-D and cap and stow.
- (27). Remove diode from TB10-C and TB10-D and discard.

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Figure 3. Electrical Modification -513 Aircraft S/N 001 Thru 075

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(28). Remove wire number P535B20N from starter/generator terminal E and cap and stow.

D. Electrical Modification -511 Aircraft S/N 076 Thru 133:

(Ref. Figure 4)

- (1). Remove wire number P538A22 from CB122 and cap and stow.
- (2). Remove wire number H1165AA22 from CB144 and cap and stow.
- (3). Remove CB144 (Compressor Bleed) and CB122 (N₂ Overspeed) and discard.
- (4). Remove wire number OVSP001A22 from S15-1 and cap and stow.
- (5). Remove wire number OVSP002A22 from S15-2 and cap and stow.
- (6). Remove S15 (N₂ Overspeed Test) and discard.
- (7). Remove M50465 (N2-OVSP CIRCUIT DE-ACTIVATED) decal from switch panel and discard.
- (8). Cover switch and circuit breaker panel legend for CB144 and CB122 with black background decal material.
- (9). Install plug buttons in removed circuit breaker locations and paint to match panel.
- (10). Install Utility Switch/Breaker (CB117) into hole from removal of S15.
- (11). Install 369D28560-25 (UTIL/LTR) decal above CB117.
- (12). Remove utility power wires M501A20 and P506AF16 from CB208 in circuit breaker panel and connect to CB117 in switch panel.
- (13). Remove the 369D28560-25 (UTIL/LTR) decal from circuit breaker panel above CB208 and uncover "RADALT" on panel.
- (14). Remove wire number OVSP003A22 from XDS252-C (switch circuit) and cap and stow.
- (15). Remove wire number OVSP005A22 from XDS252-1 and cap and stow.
- (16). Remove wire number OVSP006A22 from XDS252-C (light circuit) and cap and stow.
- (17). Remove wire number OVSP007A22 from XDS252-NC and cap and stow.
- (18). Remove XDS252 (Switch/Light N₂ Overspeed) and discard.
- (19). Fill hole from removed XDS252 with a 369D26451-7 blank.
- (20). Remove wire number OVSP004A22 from K311-4 and cap and stow.
- (21). Remove wire number OVSP005A22 from K311-6 and cap and stow.
- (22). Remove wire number OVSP008A22 from K311-3 and cap and stow.
- (23). Remove wire number OVSP009A22 from K311-7 and cap and stow.
- (24). Remove wire number OVSP007A22 from K311-5 and cap and stow.
- (25). Remove wire number OVSP010A22N from K311-2 and cap and stow.
- (26). Remove wire number OVSP011A22 from K311-8 and cap and stow.

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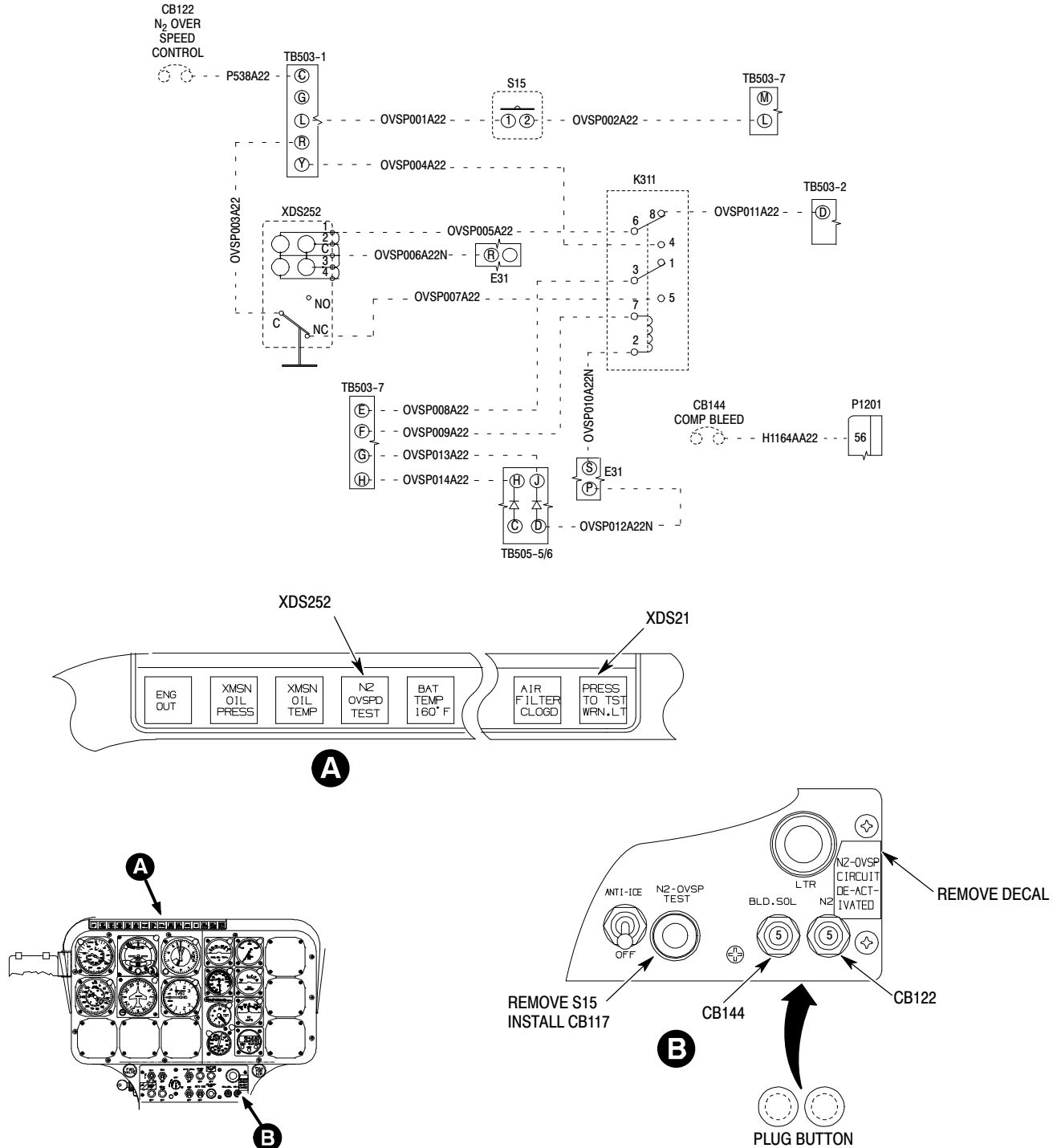
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- (27). Remove K311 (Overspeed Relay) and discard.
- (28). Remove wire number OVSP012A22N from TB505-5/6D and cap and stow.
- (29). Remove wire number OVSP013A22 from TB505-5/6J and cap and stow.
- (30). Remove wire number OVSP014A22 from TB505-5/6H and cap and stow.

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Figure 4. Electrical Modification -511 Aircraft S/N 076 Thru 133

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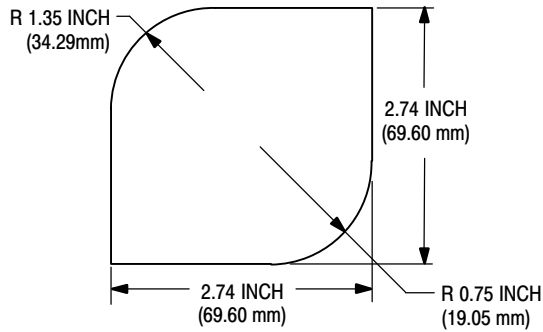
E. Engine Installation:

- (1). Install engine (Ref. CSP-HMI-2).
- (2). Connect DOU1167-0001 hose assembly to engine inducer bleed port with 48H clamp. Tighten clamp.
- (3). Connect DOU1167-0001 hose assembly to 369D23000-35 cover assembly, oil filter access with 48H clamp. Tighten clamp.
- (4). Install oil filter access cover (Ref. CSP-HMI-2).
- (5). Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

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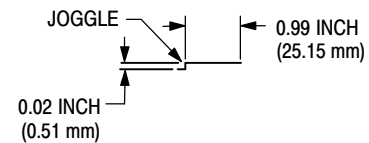
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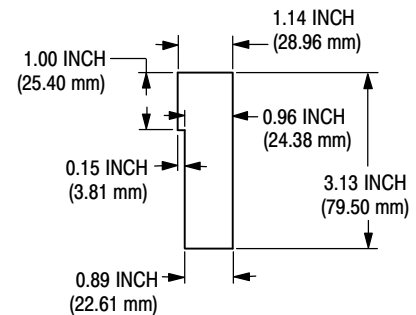


1. MAKE FROM 0.020 INCH (0.51 mm) X 3.00 INCH (76.2 mm) X 3.00 INCH (76.2 mm) 2024-T3 AL ALY SHT, 00-A-250/4.
2. CHEMICAL TREAT PER MIL-C-5541, CLASS 1A.
3. APPLY MIL-P-23377, TYPE 1, CLASS C, EPOXY PRIMER.
4. APPLY HMS15-1100, TYPE 2 EPOXY ENAMEL TO MATCH SURROUNDING AREA AFTER INSTALLATION.

369DSK400-165 DOUBLER



1. MAKE FROM 0.020 INCH (0.51mm) X 3.00 INCH (76.2 mm) x 3.00 INCH (76.2 mm) 301 CRES SHT, COND 1/2 HARD, 00-5-799.
2. PASSAVITAION TREATMENT PER QQ-P-35.
3. APPLY MIL-P-23377, TYPE 1, EPOXY PRIMER.
4. APPLY HMS15-1100, TYPE 2 EPOXY ENAMEL TO MATCH SURROUNDING AREA AFTER INSTALLATION.



369DSK400-163 DOUBLER

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Figure 5. Field Fabrication of Doublers

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COOLING SCOOP MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

MDHI helicopters, model 369FF, serial numbers 0001 thru 0180, 0600 thru 0602 and 0700 thru 0710.

This change is implemented on new production MDHI model 369FF helicopters, serial number 0181 and subsequent.

B. Assembly/Components Affected By This Notice:

Cooling Scoop Assembly (369DSK157-3)
Bracket (369DSK400-71 or -159)
Generator Cooling Duct Assembly (369D28002)
Clamps (48H)

C. Reason:

MDHI has developed a modification to the 369FF cooling scoop installation that removes the 369DSK157-3 cooling scoop from the right-hand engine bay door. A 600N8661-1 generator cooling scoop is mounted to the left side of the fuselage. The modification simplifies engine bay door operation and decreases possible cooling duct and engine bay door damage.

D. Description:

Procedures in this Bulletin give owners and operators information to remove the cooling scoop from the engine bay door and install the generator cooling scoop on the helicopter fuselage.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

10.0 man-hours

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

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J. Material/Part Availability:

Contact the MDHI Customer Service Department for prices, orders and availability.

NOTE: Ref. CSP-HMI-2, Section 91-00-00, Table 1, for consumable materials data.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Cooling Scoop Modification Kit	TBK369F-005	1	MDHI
• Generator Cooling Duct	600N8660-1	1	MDHI
• Generator Cooling Scoop	600N8661-1	1	MDHI
• Hose	FLX100124013206	1	MDHI
• Bracket	AN743-12	1	Commercial
• Clamp	MS21919WDF12	1	Commercial
• Clamp	MS21919WDG48	1	Commercial
• Nut	MS21042-3	2	Commercial
• Rivet	MS20470AD3	24	Commercial
• Screw	NAS603-8P	2	Commercial
• Washer	NAS1149D0332K	4	Commercial
Clamp	48H	2	Reuse existing clamps
Primer	MIL-P-85582, T1, C2 (CM318) MIL-P-23377, T1, C (CM323)	AR	Commercial or MDHI
Sealing Compound (fuel resistant)	MIL-S-8802 (CM425), Pro-Seal 890	AR	Commercial or MDHI
Structural Adhesive	Hysol EA9394	AR	Commercial or MDHI

K. Warranty Policy:

N/A

L. Disposition of Parts Removed:

Scrap

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

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P. Other Publications Affected:

CSP-HMI-2, Basic Handbook of Maintenance Instructions - Servicing and Maintenance
CSP-IPC-4, Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:
List applicable manuals, service bulletins and letters, and technical bulletins here.

2. ACCOMPLISHMENT INSTRUCTIONS**A. Preparation**

(Ref. Figure 1)

- (1). Open the engine access doors (Ref. CSP-HMI-2, Section 52-40-00).
- (2). Remove the right-hand engine access door (Ref. CSP-HMI-2, Section 52-40-00).
- (3). Loosen the clamps on the hose.
- (4). Remove the hose from the starter-generator.
- (5). Remove the generator cooling duct assembly from the bracket.
- (6). Remove the clamps from hose.
- (7). Keep two (2) clamps for installation of new hose.

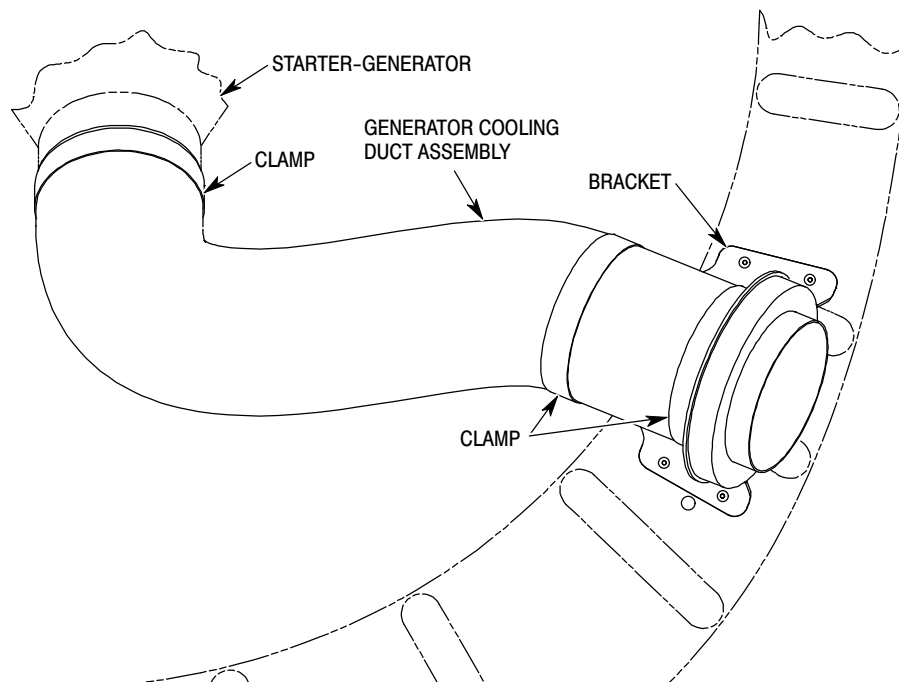


Figure 1. Generator Cooling Duct Assembly

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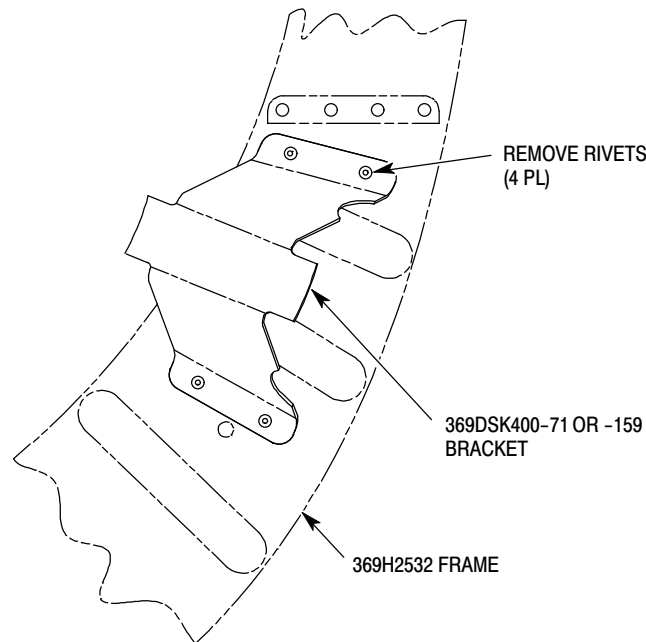
(8). Remove 369DSK400-71 or -159 Bracket

(Ref. Figure 2)

- (a). Remove the four (4) rivets that attach the bracket to the Sta. 137.5 aft ring and remove the bracket.
- (b). Clean and deburr the rivet holes in the Sta. 137.5 aft ring.
- (c). Apply corrosion protection to the rivet holes (Ref. CSP-HMI-2, Section 20-40-00).

NOTE: If the holes are oversized, install MS20470AD4 rivets.

- (d). Wet install MS20470AD3 rivets in the rivet holes with primer (CM318 or CM323).
- (e). Apply primer (CM318 or CM323), and touch up top coat as required (Ref. CSP-HMI-2, Section 20-30-00).



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Figure 2. Bracket Removal

B. Modification

(1). Remove 369DSK157-3 Scoop Assembly

- (a). Remove the fifteen (15) rivets that attach the cooling scoop to the right-hand engine access door.
- (b). Remove the cooling scoop from the right-hand engine access door.
- (c). Clean and deburr the rivet holes in right-hand engine access door.

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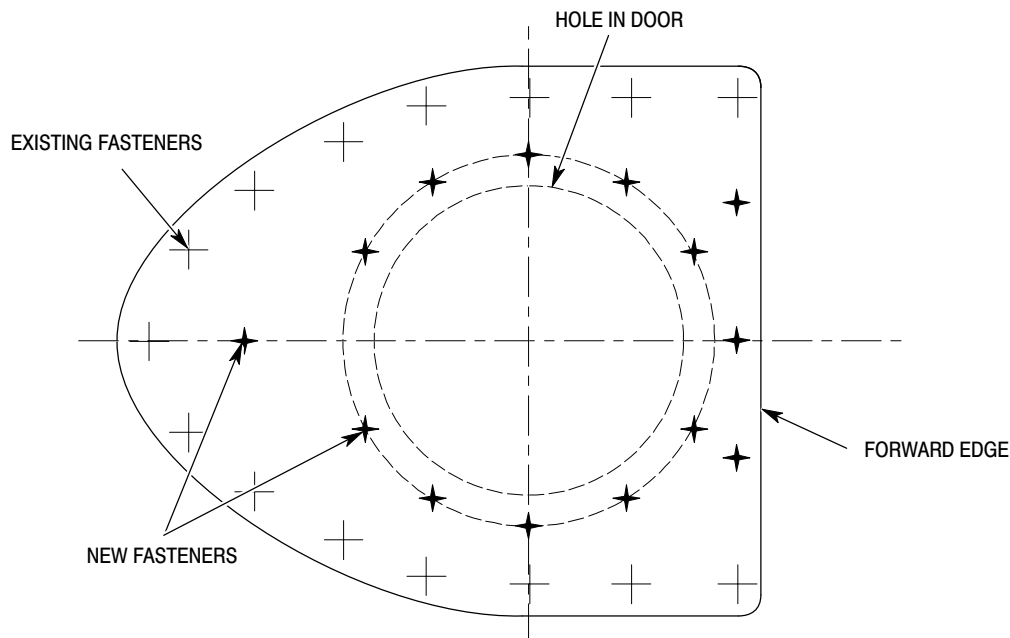
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(2). Fabricate Repair Doubler

(Ref. Figure 3)

- (a). Use the cooling scoop as a pattern and fabricate a repair doubler from 0.040 inch (1.016 mm) thick Al Aly sheet (Ref. QQ-A-250/5).
- (b). Trace the cooling scoop mounting flange perimeter with a straight line at the forward edge of the cooling scoop to make the repair doubler.
- (c). Put the repair doubler on the right-hand engine access door and transfer the existing rivet holes onto the repair doubler.
- (d). Mark new rivet hole locations along the forward edge of the doubler and around the 2.50 inch (63.5 mm) hole in the right-hand engine access door.
- (e). Put the new rivet holes $2D + 0.030$ inches (0.76 mm) from the edge of the doubler and the hole in the right-hand engine access door. Space the holes $4D$ to $6D$ apart.
- (f). Mark one new rivet hole on the aft part of the repair doubler between the existing rivet hole and the new rivet hole.
- (g). Drill all rivet holes for MS20470AD3 rivets.
- (h). Clean and deburr the rivet holes in the right-hand engine access door and the repair doubler.



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Figure 3. Repair Doubler

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- (3). Install Right-Hand Engine Access Door Repair Doubler
 - (a). Apply corrosion protection to the repair doubler and any bare metal on the right-hand engine access door (Ref. CSP-HMI-2, Section 20-40-00).
 - (b). Apply structural adhesive (EA9394) to the faying surfaces of the repair doubler and the right-hand engine access door.
 - (c). Attach the repair doubler to the right-hand engine access door at all rivet locations with MS20470AD3 rivets.
 - (d). Wet install the rivets with primer (CM318 or CM323).
 - (e). Fillet seal (CM425) around the edge of the repair doubler.
 - (f). Apply primer (CM318 or CM323) to the top of the repair doubler and restore external paint as required (Ref. CSP-HMI-2, Section 20-30-00).
- (4). Prepare 600N8660-1 Generator Cooling Duct
 - (a). Mark the perimeter of the generator cooling duct mounting flange with new rivet locations.
 - (b). Put the new rivets 2D + 0.030 inches (0.76 mm) from the edge of the flange. Space rivets as shown in Figure 4.
 - (c). Drill the rivet holes in the generator cooling duct for MS20470AD3 rivets.
 - (d). Clean and deburr the rivet holes in the generator cooling duct.
 - (e). Put the generator cooling duct against the 369H2500-9 fuselage skin and position it to the location and dimensions shown in Figure 4.
 - (f). Transfer the rivet holes in the generator cooling duct onto the fuselage skin.
 - (g). Drill the rivet holes in the fuselage skin for MS20470AD3 rivets.
 - (h). Clean and deburr the rivet holes in the fuselage skin.
 - (i). Temporarily attach the the generator cooling duct to the fuselage skin.
 - (j). Use the generator cooling duct as a pattern and trace the interior of the generator cooling duct opening onto the fuselage skin.
 - (k). Remove the generator cooling duct and cut out the opening in the fuselage skin as shown in Figure 4.
 - (l). Clean and deburr the cooling duct opening in the fuselage skin.

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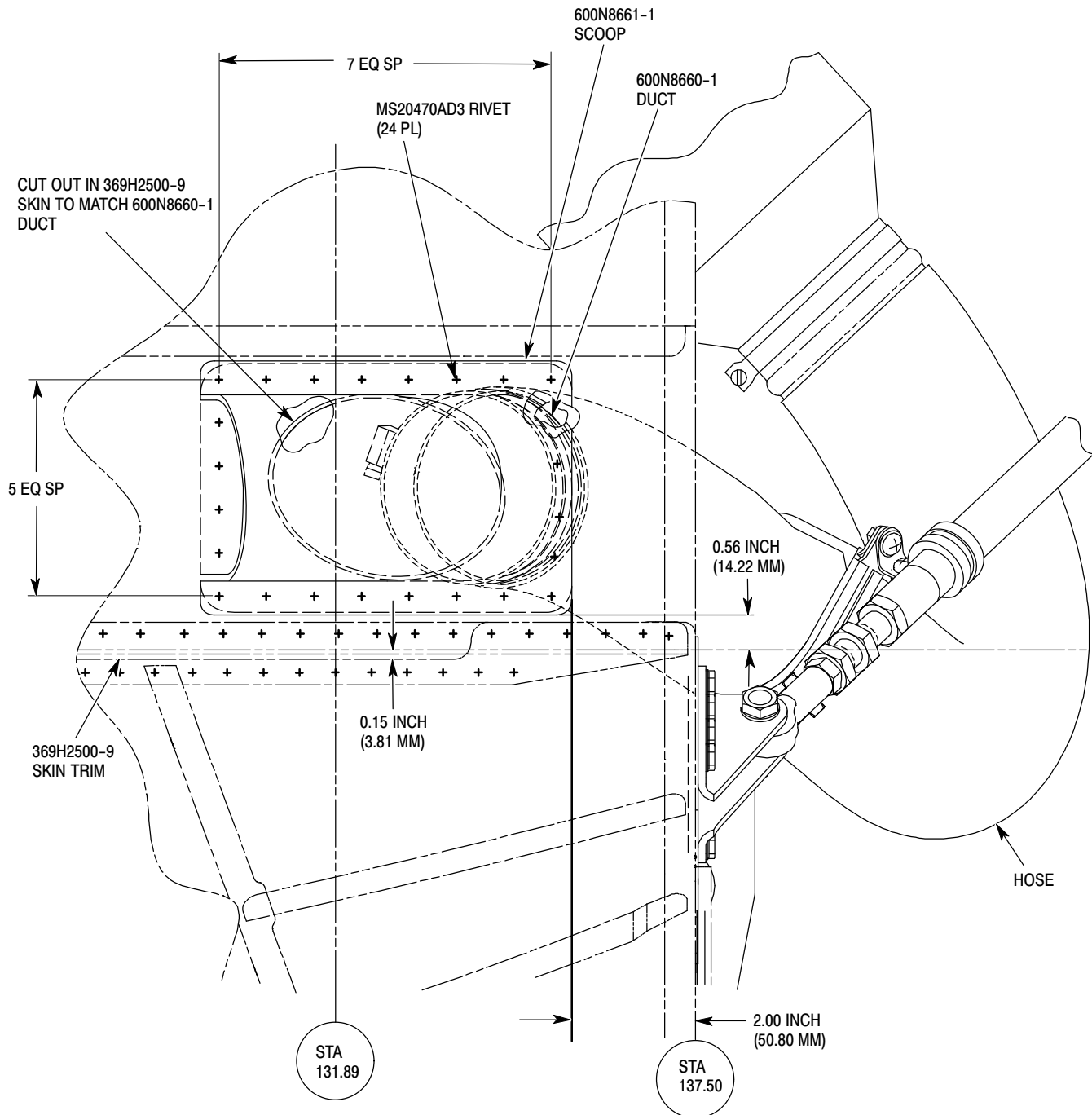
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- (5). Prepare 600N8661-1 Generator Cooling Scoop
 - (a). Use the generator cooling duct as a pattern and mark new rivet locations on the generator cooling scoop mounting flange.
 - (b). Align the parts as shown in Figure 4.
 - (c). Drill the rivet holes in the generator cooling scoop for MS20470AD3 rivets.
 - (d). Clean and deburr the rivet holes in the generator cooling scoop.
- (6). Install Generator Cooling Duct and Generator Cooling Scoop
 - (a). Apply corrosion protection to bare metal on fuselage skin and generator cooling duct. (Ref. CSP-HMI-2, Section 20-40-00).
 - (b). Apply primer (CM318 or CM323) to the fuselage skin and restore external paint as required (Ref. CSP-HMI-2, Section 20-30-00).
 - (c). Apply sealing compound (CM425) to the faying surfaces of the generator cooling duct and generator cooling scoop.
 - (d). Attach the generator cooling duct and generator cooling scoop to the fuselage skin at all rivet locations with MS20470AD3 rivets.
 - (e). Wet install the rivets with primer (CM318 or CM323).
 - (f). Apply primer (CM318 or CM323) to the generator cooling scoop and paint exterior as required (Ref. CSP-HMI-2, Section 20-30-00).

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Figure 4. Generator Cooling Scoop and Duct Installation

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(7). Install FLX100124013206 Hose and Clamps

- (a). Put a clamp on each end of the hose.
- (b). Put the hose through the mount assembly as shown in Figure 5.

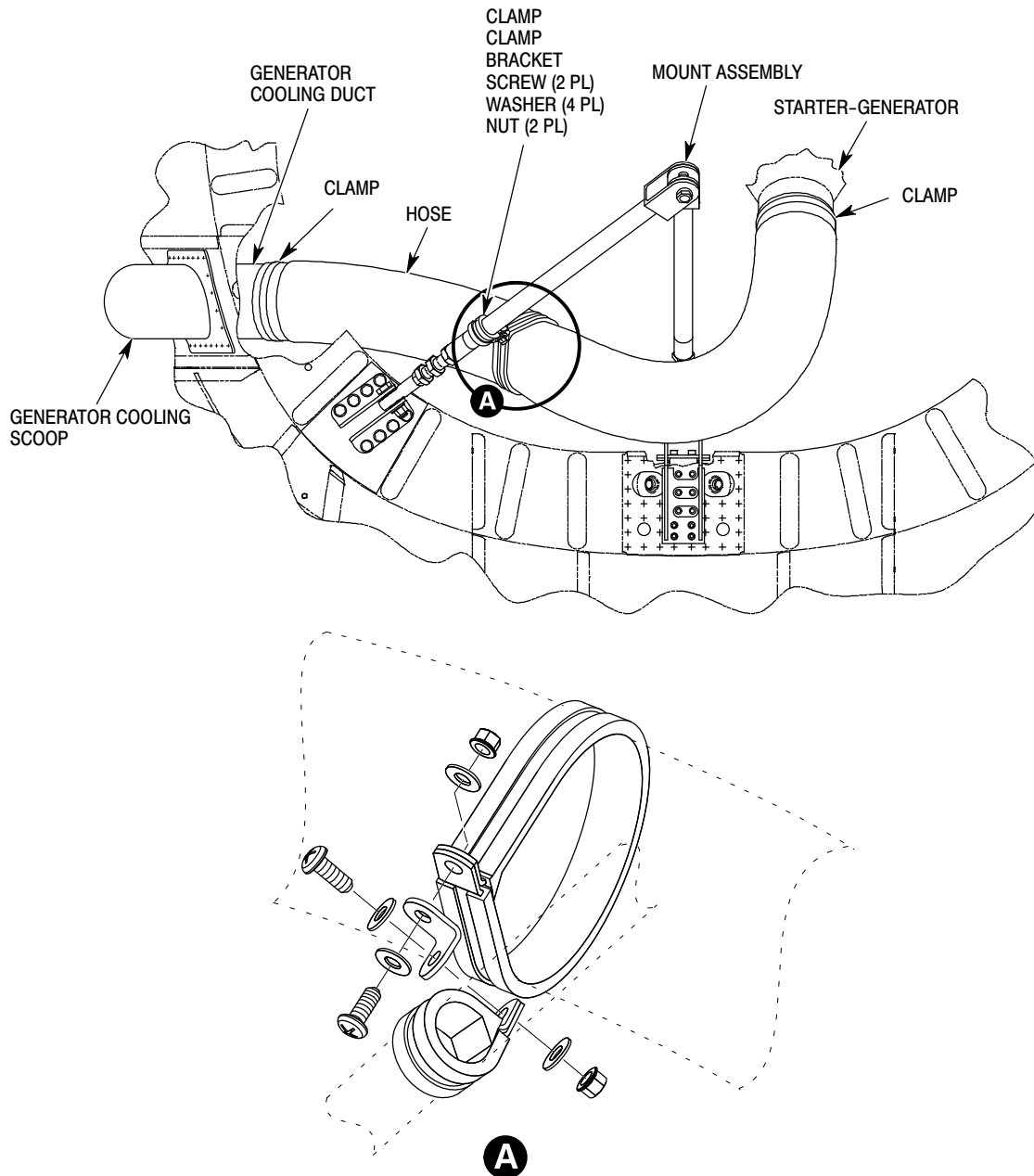


Figure 5. Hose and Clamp Installation

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- (c). Put the hose on the starter generator and attach it to the starter generator with the clamp.
- (d). Put the hose on the generator cooling duct and attach it to the generator cooling duct with the clamp.
- (e). Put the small clamp on the mount assembly strut and position it as shown in Figure 5.
- (f). Put the large clamp on the hose and position it as shown in Figure 5.
- (g). Attach the clamps to the bracket with two (2) screws, four (4) washers and two (2) nuts as shown in Figure 5.

C. Job Close-Up

- (1). Install the modified right-hand engine access door (Ref. CSP-HMI-2, Section 52-40-00).
- (2). Close the engine access doors (Ref. CSP-HMI-2, Section 52-40-00).

D. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record section of the Rotorcraft Log Book.
- (2). Complete Bulletin Completed Record form (attached) and FAX or e-mail to MHDI Field Service Department.

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Bulletin Completed Record COOLING SCOOP MODIFICATION

MD Helicopters, Inc.
Field Service Department
4555 E. McDowell Road
Mesa, AZ 85215-9734

800-388-3378 Phone (U.S. and Canada)
480-346-6387 Phone (International)
480-346-6813 Fax

FAX this form to MDHI (480) 346-6813 or E-mail to ServiceEngineering@mdhelicopters.com

Dear MDHI Employee:

This is to tell you that this Technical Bulletin has been completed as follows:

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

(Signature)

(Print Name)

(Title)

Comments: _____

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SLANT CONSOLE INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected:

MD Helicopters, Inc. (MDHI) Model 369E Helicopters, serial number 0384E and sub

MDHI Model 369F/FF Helicopters, serial number 0076FF and sub

MDHI Model 500N Helicopters, serial number LN-001 and sub

MDHI Model 600N Helicopters, serial number RN-003 and sub

NOTE: Basic installation instructions for Model 369E, serial numbers 0384E and Sub, Model 369F/FF, serial numbers 0076FF and Sub, Model 500N, serial numbers LN-001 and Sub and Model 600N, serial numbers RN-003 and Sub are based on a common production design started at these serial numbers. All model serial numbers prior to those listed above and helicopters that may be modified from the production configuration can use the information in this Technical Bulletin to assist in adapting the slant console to their specific helicopter configuration.

B. Assembly/Components Affected By This Notice:

P/N 369D24683-501 and P/N 369D24683-503

C. Reason:

An optional slant console is available for installation.

D. Description:

Procedures in this Bulletin give owners and operators information to modify existing rotorcraft for installation of a slant console. The slant console is available as shown in the table below. (Reference Replacement Parts/Supplies Table).

Model	Kit Type / Kit Number
369E, 369FF, 500N, 600N	Slant Console (LED) / TBK-369D24683-501
369E, 369FF, 500N, 600N	Slant Console (Non-LED) / TBK-369D24683-503

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Compliance with this bulletin will be approximately eighteen (18) man-hours.

H. Interchangeability:

None.

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I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

J. Material/Part Availability:

Contact MDHI Spare Parts Sales Department for parts availability.
Telephone: 1-800-388-3378 Option 2 or 480-346-6540. DATAFAX: 480-346-6821.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Slant Console Installation (LED) Slant Console Installation (Non-LED)	TBK-369D24683-501 or TBK-369D24683-503	1	MDHI
• Slant Console Assembly	369D24682-501	1	
• Left-Hand Closeout	369D24657-25	1	
• Right-Hand Closeout	369D24657-26	1	
• Doubler	369D24683-1	2	
• Circuit Breaker Overlay Panel (LED)	369D24657-5 (use on -501 slant console)	AR	
• Circuit Breaker Overlay Panel (Non-LED)	369D24657-7 (use on -503 slant console)	AR	
• Rivet, Solid, Countersunk 100 Degree, Precision Head	MS20426AD3-3	20	
• Rivet, Solid, Countersunk 100 Degree, Precision Head	MS20426AD3-4	16	
• Rivet, Solid Universal Head	MS20470AD3-3	12	
• Washer, Flat, Reduced Outside Diameter	NAS620A6L	4	
• Screw, Machine – Pan Head, Structural, Cross-Recessed	MS27039-0806	10	
• Screw, Machine – Pan Head, Brass	MS35214-40 (-503 slant console only)	7	
• Screw, Pan Head, Brass	NAS601-7P	4	
• Washer, Flat	NAS1149FN832P	10	
• Nutplate, Self-Locking	MS21075L08	10	
• Rivet, Solid Universal Head	MS20470AD3-4	27	

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K. Warranty Policy:

N/A

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-HMI-2, Basic Handbook of Maintenance Instructions – Servicing and Maintenance

CSP-HMI-3, Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2, Basic Handbook of Maintenance Instructions – Servicing and Maintenance

CSP-HMI-3, Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

- (1). Ground rotorcraft.
- (2). Make sure all switches are OFF.
- (3). Disconnect external power.
- (4). Disconnect Battery (Ref. CSP-HMI-3, Section 96-05-00).

B. Remove Components and Modify “T” Instrument Panel

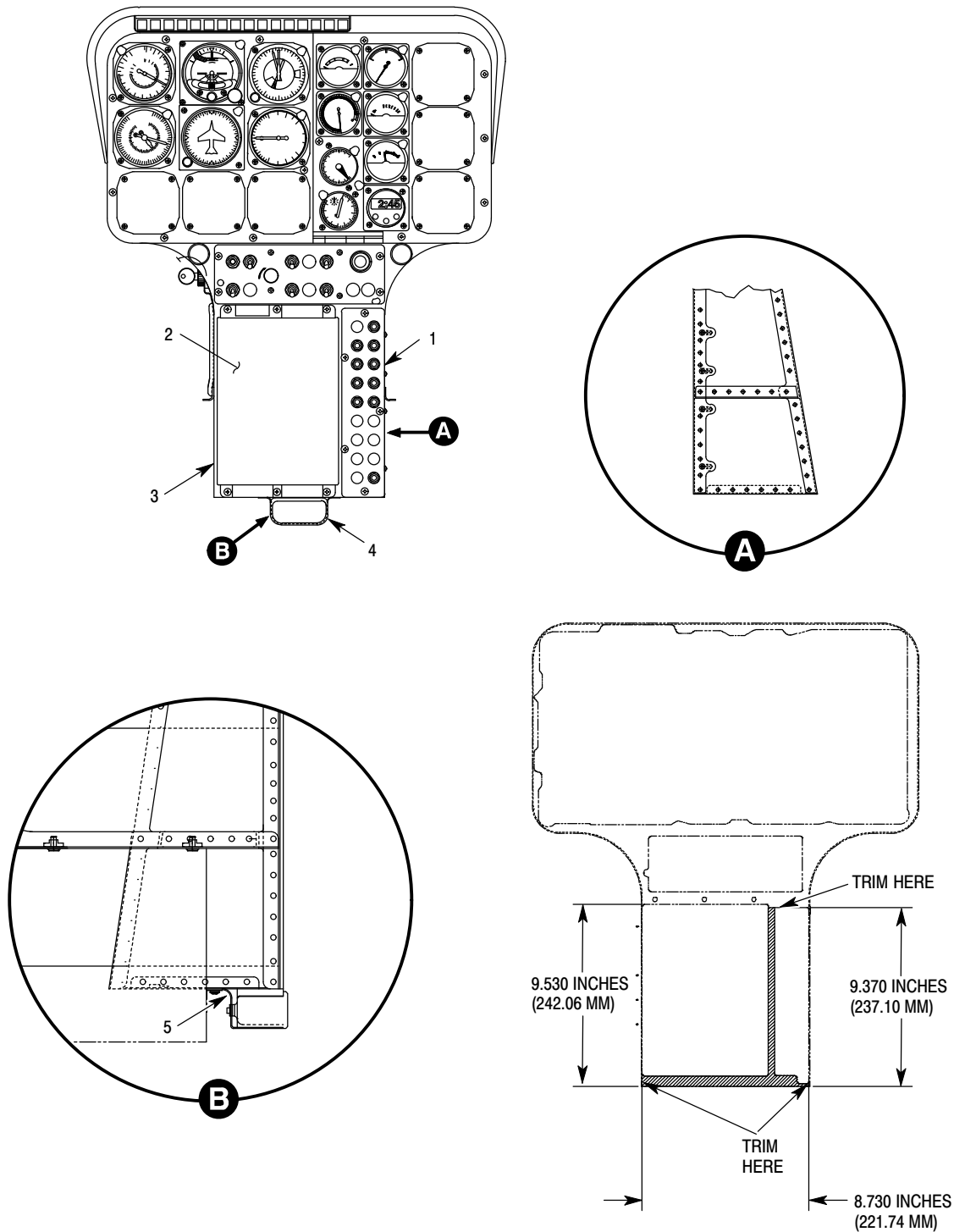
(Ref. Figure 1)

- (1). If necessary, remove panel (2) and attaching hardware from “T” instrument panel.
- (2). Remove box assembly (3) and attaching hardware from “T” instrument panel.
- (3). Remove circuit breaker panel assembly (1) from “T” instrument panel (Ref. CSP-HMI-3, Section 96-30-00).
- (4). Remove circuit breakers from circuit breaker panel assembly (1) (Ref. CSP-HMI-3, Section 96-30-00).
- (5). Remove bottom pan and attaching hardware from “T” instrument panel with ash tray (4) and angle (5) attached.
- (6). Remove support (6) and attaching hardware from instrument support assembly lower panel.
- (7). Remove two clips (7) and attaching hardware from instrument support assembly lower panel.
- (8). Trim the cross hatched area and trim the lower section of the instrument panel structure to the dimensions shown in Figure 1.
- (9). Touch up finish (Ref. CSP-HMI-2, Section 20-30-00).

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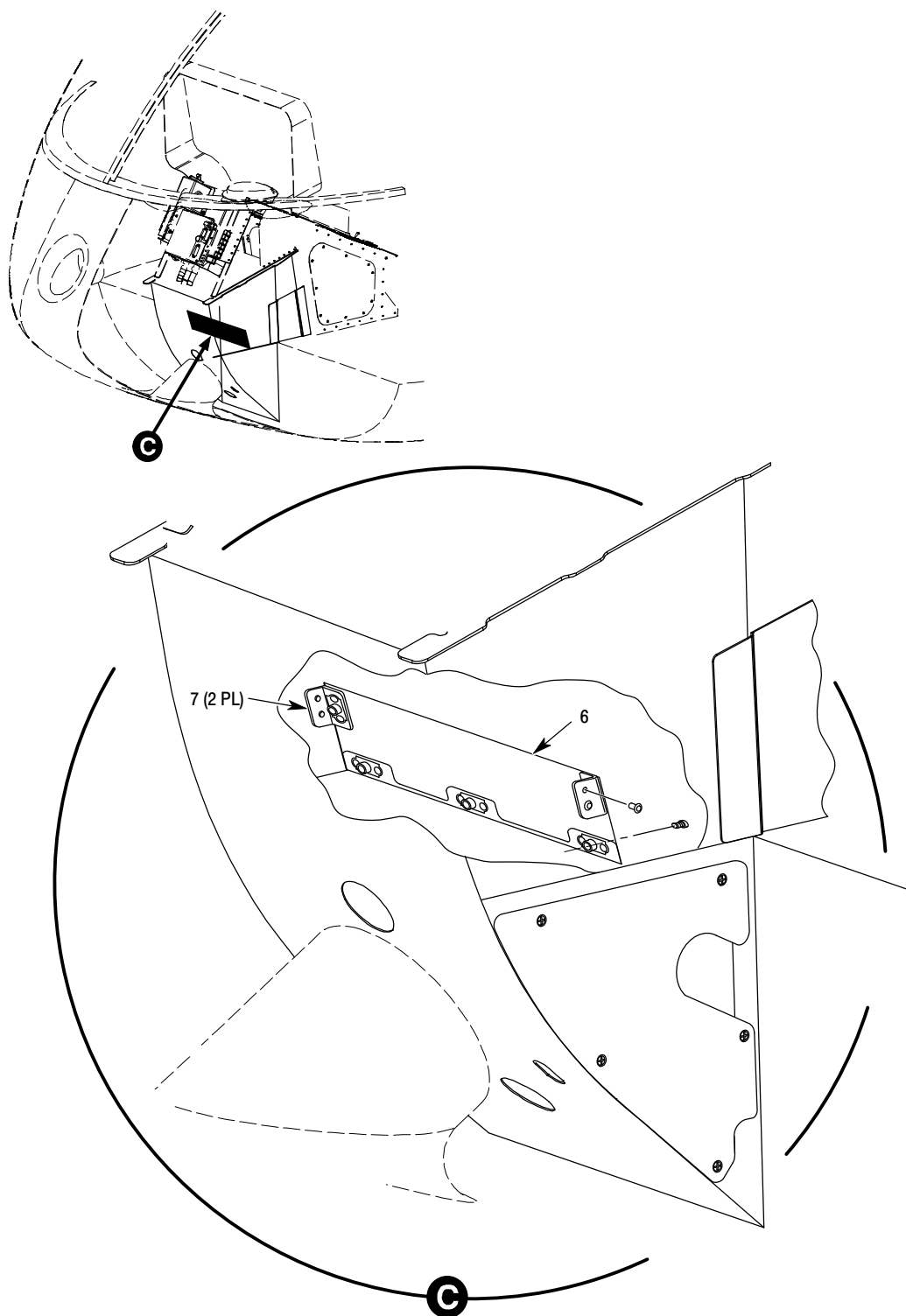


97-001

Figure 1. Typical "T" Instrument Panel and Support Assembly (Sheet 1 of 2)

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97-002

Figure 1. Typical "T" Instrument Panel and Support Assembly (Sheet 2 of 2)

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C. Slant Console Installation

- (1). If necessary, remove pilot compartment carpeting.
- (2). Remove left and right pilot compartment floor access doors (ref. CSP-HMI-2, Section 52-50-00).
- (3). Lay out and mark locations of nut plate (1) holes on bottom of slant console to dimensions shown in Figure 2.
- (4). Drill nut plate holes on bottom of slant console.
- (5). Clean and deburr holes.
- (6). Match drill doublers (3) to nut plate holes drilled in bottom of slant console.
- (7). Drill doublers for nut plate rivet (2) holes.
- (8). Clean and deburr holes.

NOTE: Temporarily align the slant console with existing holes in “T” instrument panel. Make sure the slant console is fully forward.

- (9). Match drill the floor to the nut plate holes in the bottom of the slant console.
- (10). Clean and deburr holes.
- (11). Install nut plates on doublers with rivets. (Ref. Figure 3).
- (12). Install screws (3) and washers (4) through the bottom of the slant instrument panel (1) into nut plates (2) on doubler under floor. Do not tighten screws.
- (13). Install screws (5) and washers (6) on right-hand side of slant console. Do not tighten screws.
- (14). Move cyclic flight controls to control limits in all directions.
- (15). Make sure there is a minimum 0.060 inch (1.524 mm) clearance between the aft edge of the slant console and the torque tube assembly during cyclic flight control movement.
- (16). If necessary, trim aft edge of slant console to get minimum clearance.
- (17). Match drill slant console (1) to existing holes in the “T” instrument panel. (Ref. Figure 3).
- (18). Remove slant console (1).
- (19). Clean and deburr holes.
- (20). Align slant console (1) with holes in “T” instrument panel and holes in floor.
- (21). Put screws (3) and washers (4) through bottom of slant console and floor.
- (22). Put doublers under floor and align nut plates (2) with holes in floor.
- (23). Install screws (3) and washers (4) in nut plates (2) on doublers. Tighten screws.
- (24). Install screws (5) and washers (6) on right-hand side of slant console. Tighten screws.
- (25). Install rivets (7) on right-hand side of slant console.

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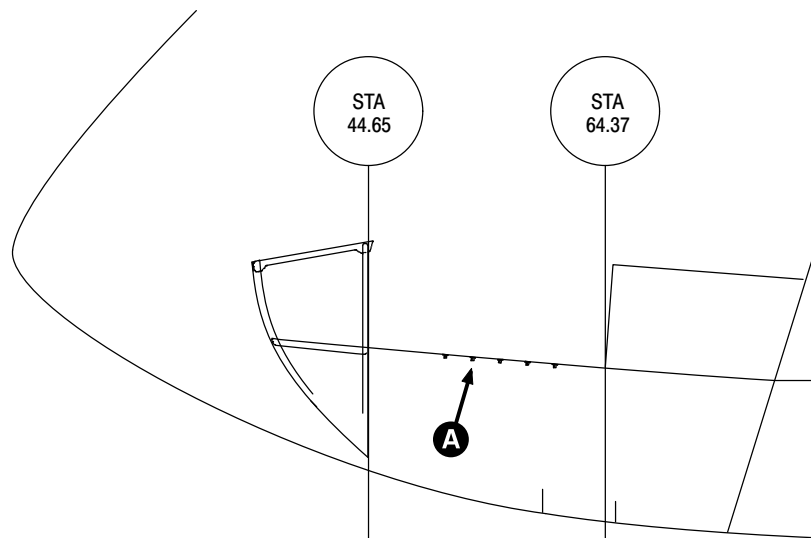
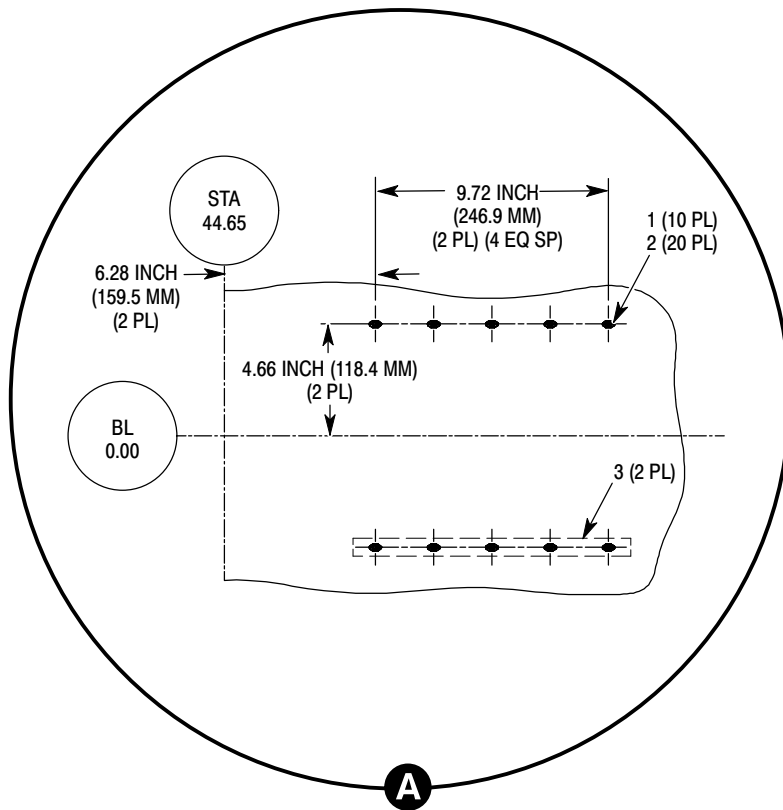
TECHNICAL BULLETIN

- (26). Install rivets (7) and (8) on left-hand side of slant console.
- (27). Align right-hand closeout (9) on right-hand side of slant console.
- (28). Match drill the right-hand closeout (9) with the existing holes on the slant console and “T” instrument panel.
- (29). Clean and deburr holes.
- (30). Install right-hand closeout (9) on right-hand side of slant console and “T” instrument panel with rivets (7).
- (31). Align left-hand closeout (10) on left-hand side of slant console.
- (32). Match drill the left-hand closeout (10) with the existing holes on the slant console and “T” instrument panel.
- (33). Clean and deburr holes.
- (34). Install left-hand closeout (10) on left-hand side of slant console with rivets (7) and (8).
- (35). Install circuit breaker panel overlay (11) (LED or Non-LED) with screws (12) on top of slant console.
- (36). Install circuit breakers in applicable locations on the circuit breaker panel (Ref. CSP-HMI-3, Section 96-30-00).
- (37). Touch up finish all exposed hardware (Ref. CSP-HMI-2, Section 20-30-00).

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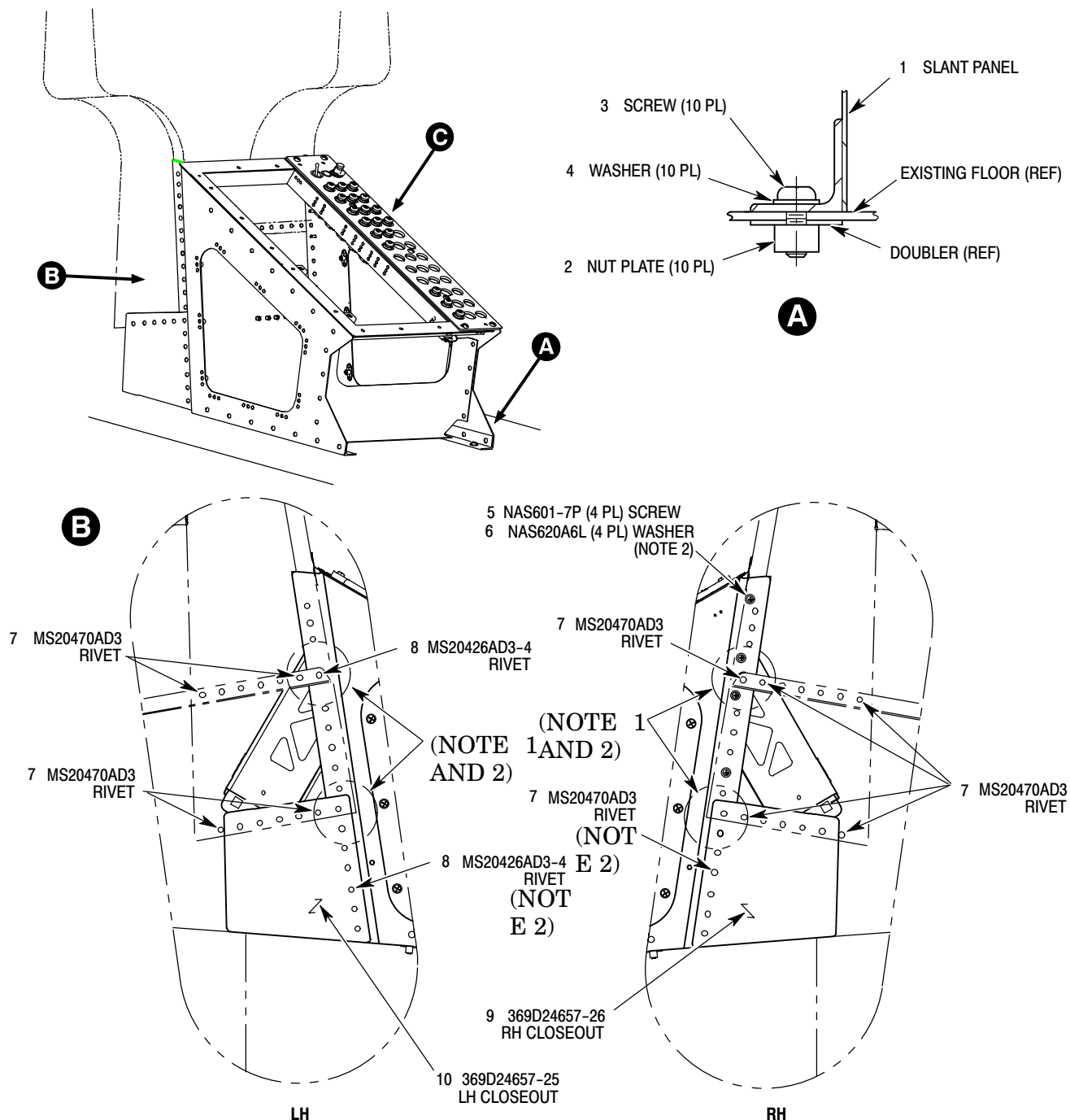
97-003

Figure 2. Nut Plate and Doubler Installation

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NOTES:

1. PERMISSIBLE TO REPLACE MS20470AD3 AND MS20426AD3 RIVETS WITH MS20470AD4 AND MS20426AD4 RIVETS IN THIS LOCATION.
2. MATCH DRILL EXISTING HOLES IN THE "T" PANEL OR FLOOR TO INSTALL SLANT PANEL ASSEMBLY.

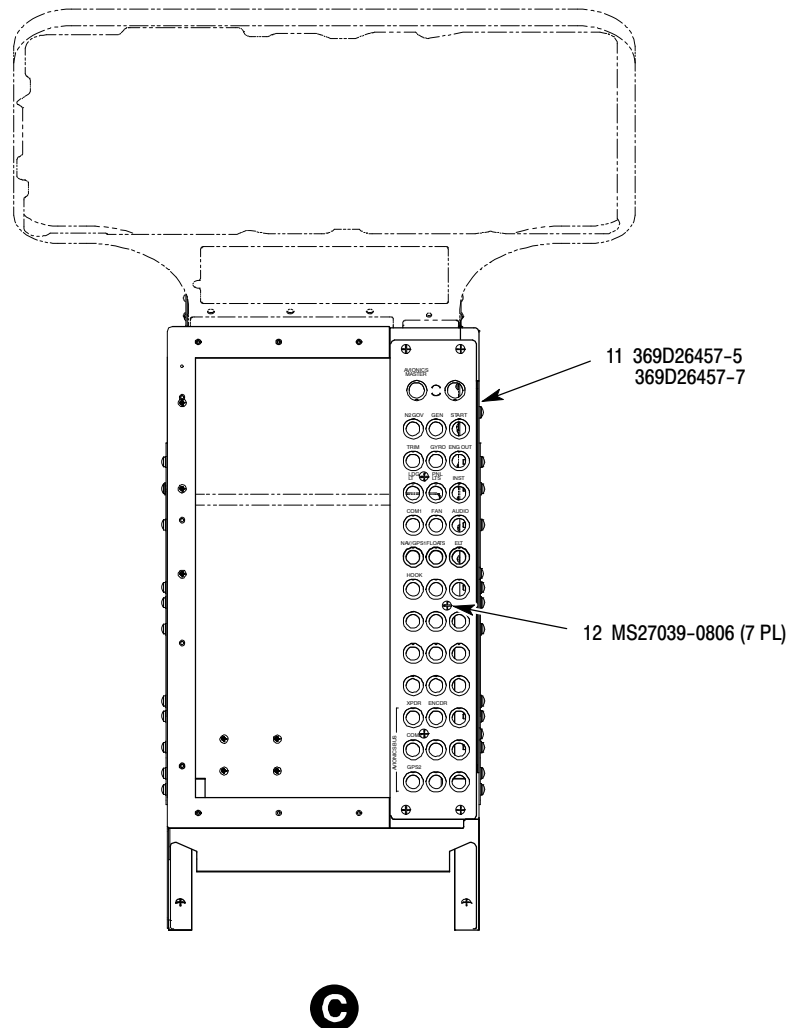
88_845

Figure 3. Slant Console Installation (Sheet 1 of 2)

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88_846

Figure 3. Slant Console Installation (Sheet 2 of 2)

D. Job Close-Up

- (1). Clean area of debris and tools.
- (2). Install left and right pilot compartment floor access doors (Ref. CSP-HMI-2, Section 52-50-00).
- (3). Connect Battery (ref. CSP-HMI-3, Section 96-05-00).

E. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record section of the Rotorcraft Log Book.
- (2). Complete Bulletin Completed Record form (attached) and FAX or e-mail to MDHI Field Service Department.

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Bulletin Completed Record

Slant Console Installation

MD Helicopters, Inc.
Field Service Department
4555 E. McDowell Road
Mesa, AZ 85215-9734

800-388-3378 Phone (U.S. and Canada)
480-346-6387 Phone (International)
480-346-6813 Fax

FAX this form to MDHI (480) 346-6813 or E-mail to ServiceEngineering@mdhelicopters.com

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

(Signature)

(Print Name)

(Title)

Comments: _____



TB369E-005
TB500N-005

TB369F-008
TB600N-010

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Parts Request Form: Please fill in the following information and return to MDHI for parts/supplies required for compliance. This form may be faxed to MDHI Warranty and Repair Department at 480-891-3952.

Aircraft Serial No.:

Aircraft Total Time:

Date:

Parts Required:

Part Serial No. (if required):

Ship to:

DATE: 15 MAY 2013
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DATE: 19 JUNE 2020

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INCREASE OF MAXIMUM TAKEOFF GROSS WEIGHT TO 3350 LB

1. PLANNING INFORMATION

A. Aircraft Affected:

MDHI Model 369FF Helicopters, serial numbers 00001FF and subsequent.

B. Assembly/Components Affected By This Notice:

369D26536 V_{NE} Card Assembly

C. Reason:

To authorize owners and operators to operate 369FF rotorcraft at an increased maximum takeoff gross weight of 3350 lbs.

D. Description:

Procedures in this Bulletin give owners and operators instructions to install an additional V_{NE} card and applicable Rotorcraft Flight Manual Supplement.

E. Time of Compliance:

Customer-purchased option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Compliance with this bulletin will be approximately 0.5 man-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

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J. Material/Part Availability:

Contact MDHI Spare Sales for parts availability at:

<https://www.mdhelicopters.com/contact.html>

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
369FF Kit	369FFKIT003350	1	MDHI
• RFM Supplement (SN Specific)	CSP-FF-S2	1	MDHI
• V _{NE} Card	369D26536-15	1	MDHI

K. Warranty Policy:

Standard warranty policy applies.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-FF-1, Rotorcraft Flight Manual

CSP-FF-2, Rotorcraft Flight Manual

CSP-HMI-2, Basic Handbook of Maintenance Instructions - Weight and Balance

CSP-IPC-4, Illustrated Parts Catalog

CSP-RLB, Rotorcraft Log Book

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-FF-1, Rotorcraft Flight Manual

CSP-FF-2, Rotorcraft Flight Manual

CSP-HMI-2, Basic Handbook of Maintenance Instructions

CSP-IPC-4, Illustrated Parts Catalog

CSP-RLB, Rotorcraft Log Book

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2. ACCOMPLISHMENT INSTRUCTIONS

A. New VNE Card Installation

- (1). Install 3350 LB V_{NE} Card (PN 369D26536-15). (Ref. CSP-HMI-2, 25-40-00, Figure 202)

B. Compliance Record

- (1). Record compliance to this Service Bulletin in the Compliance Record Log (ref. CSP-RLB-L8) of the Rotorcraft Log Book CSP-RLB.
- (2). Show compliance with this Service Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your MDHI Field Service Representative.

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TB369F-015 Bulletin Completed Record

INCREASE OF MAXIMUM TAKEOFF GROSS WEIGHT TO 3350 LB

MD Helicopters, Inc.
 Field Service
 4555 East McDowell Road
 Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-480-346-6300 (International)
 Website: <https://www.mdhelicopters.com/contact.html>
 Or contact your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete: _____

(Signature)

(Print Name)

(Title)

Comments: _____

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* Supersedes Technical Bulletin TB369E-007, TB369F-010 and TB500N-007 dated 25 October 2013. Revised to add Garmin G500H upgrade authorization letter and instructions.

GARMIN G500H AND AVIONICS SUITE

1. PLANNING INFORMATION

A. Aircraft Affected:

MDHI helicopters, Inc. (MDHI) Model 369E, serial numbers 0384E and Sub

MDHI Model 369FF, serial numbers 0076FF and Sub

MDHI Model 500N, serial number LN001 and Sub

NOTE: Basic installation instructions for Model 369E, serial numbers 0384E and Sub, Model 369FF, serial numbers 0076FF and Sub, and Model 500N, serial number LN001 and Sub are based on a common wire harness production design started at these serial numbers. All model serial numbers prior to those listed above and helicopters that may be modified from the production configuration will use the configuration information in this Technical Bulletin and the interconnect figures and detailed installation instructions provided in the referenced Modification Instructions to assist in adapting the approved Garmin G500H and Avionics Suite to their specific helicopter configuration.

Deviations or changes from the Technical Bulletin or Modification Instructions may require FAA approval. It is the responsibility of the operator/installer to comply with all regulatory requirements (this includes the use of MDHI proprietary part numbered parts). Costs of development engineering or FAA approvals to support deviations are not included in the MDHI kit pricing.

B. Assembly/Components Affected By This Notice:

Instruments and avionics

C. Reason:

This Garmin G500H and Avionics Suite Technical Bulletin and MOD MD5001200001 gives owners of the MD helicopter models defined above, the required instructions and information necessary to upgrade their helicopters navigation and communications capabilities as provided by the Garmin G500H and Avionics Suite configuration offered by MD Helicopters, Inc., MDHI Authorized Service Centers, and the Garmin dealer network.

D. Description:

Procedures in this Technical Bulletin and MOD MD5001200001 give owners and operators information to modify existing rotorcraft for installation of a Garmin G500H and Avionics Suite. Modification kits are available as shown in the tables below. (Reference G500H and Avionics Suite Configuration Table and Replacement Parts/Supplies Tables).

To purchase any of the kits listed in this bulletin, the owner/installer must complete and sign the Garmin G500H upgrade authorization letter (attached) and return it to MDHI for approval.

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Table 1. G500H and Avionics Suite Configuration

PARTS/SUPPLIES			
Required	Nomenclature	Part No.	Quantity
Yes	GDU 620 Primary Flight Display (PFD)/ Multi-Function Display (MFD)	010-00482-50	1
Yes	GDC 74H Air Data Computer (ADC)	010-00336-11	1
Yes	GTP 59 Outside Air Temperature (OAT) Probe	011-00978-00	1
Yes	GRS 77H Attitude and Heading Reference System (AHRS)	010-00295-20	1
Yes	GMU 44 Magnetometer	010-00296-10	1
Yes	GNS 430W #1 COM/NAV/GPS	010-00412-01	1
No	GNC 420W #2 COM/GPS	010-00410-01	1
No	GMA 347 Audio Panel	011-00812-00	1
No	GTX 330 Mode S Transponder	010-00230-00	1
Yes	GCF-328 Cooling Fan	013-00067-01	1

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Not Applicable.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

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J. Material/Part Availability:

Contact MDHI Spare Parts Sales Department for parts availability.
Telephone: 1-800-388-3378 Option 2 or 480-346-6540. DATAFAX: 480-346-6821.

Table 2. LH G500H Standard Avionics Equipment with Slant Console

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	LH G500H Standard Avionics Equipment with Slant Console	TBK-369D294973-503	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• Slant Instrument Panel, G500H Standard Avionics Installation	369D24657-503	1	MDHI
	• Onboard Equipment, G500H Standard Avionics Installation	369D24651-503	1	MDHI
	• LH G500H Standard Avionics Electrical	369D24649-503	1	MDHI
	• Antenna, Standard Installation	369D24652-501	1	MDHI

Table 3. RH G500H Standard Avionics Equipment with Slant Console

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	RH G500H Standard Avionics Equipment with Slant Console	TBK-369D294973-504	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• Slant Instrument Panel, G500H Standard Avionics Installation	369D24657-503	1	MDHI
	• Onboard Equipment, G500H Standard Avionics Installation	369D24651-503	1	MDHI
	• RH G500H Standard Avionics Electrical	369D24649-504	1	MDHI
	• Antenna, Standard Installation	369D24652-501	1	MDHI

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Table 4. LH G500H Standard Avionics Equipment with “T” Panel

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	LH G500H Standard Avionics Equipment with “T” Panel	TBK-369D294973-505	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• Onboard Equipment, G500H Standard Avionics Installation	369D24651-503	1	MDHI
	• LH G500H Standard Avionics Electrical, “T” Panel	369D24649-505	1	MDHI
	• Antenna, Standard Installation	369D24652-501	1	MDHI

Table 5. RH G500H Standard Avionics Equipment G500H with “T” Panel

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	RH G500H Standard Avionics Equipment with “T” Panel	TBK-369D294973-506	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• Onboard Equipment, G500H Standard Avionics Installation	369D24651-503	1	MDHI
	• RH G500H Standard Avionics Electrical, “T” Panel	369D24649-506	1	MDHI
	• Antenna, Standard Installation	369D24652-501	1	MDHI

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Table 6. LH Standard Avionics Equipment G500H with Slant Console, Provisions Only

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	LH Standard Avionics Equipment G500H with Slant Console, Provisions Only	TBK-369D294973-509	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• G500H Onboard Equipment, Standard Avionics Installation	369D24651-505	1	MDHI
	• LH G500H Standard Avionics Electrical, Slant Panel, Provisions Only	369D24649-509	1	MDHI
	• Slant Instrument Panel, G500H Standard Avionics Installation	369D24657-503	1	MDHI

Table 7. RH Standard Avionics Equipment G500H with Slant Console, Provisions Only

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	RH Standard Avionics Equipment G500H with Slant Console, Provisions Only	TBK-369D294973-510	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• G500H Onboard Equipment, Standard Avionics Installation	369D24651-505	1	MDHI
	• RH G500H Standard Avionics Electrical, Slant Panel, Provisions Only	369D24649-510	1	MDHI
	• Slant Instrument Panel, G500H Standard Avionics Installation	369D24657-503	1	MDHI

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Table 8. LH Standard Avionics Equipment “T” Panel, Provisions Only

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	LH Standard Avionics Equipment “T” Panel, Provisions Only	TBK-369D294973-507	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• G500H Onboard Equipment, Standard Avionics Installation	369D24651-505	1	MDHI
	• LH G500H Standard Avionics Electrical, “T” Panel, Provisions	369D24649-507	1	MDHI

Table 9. RH Standard Avionics Equipment “T” Panel, Provisions Only

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	RH Standard Avionics Equipment “T” Panel, Provisions Only	TBK-369D294973-508	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• G500H Onboard Equipment, Standard Avionics Installation	369D24651-505	1	MDHI
	• RH G500H Standard Avionics Electrical, “T” Panel, Provisions Only	369D24649-508	1	MDHI

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Table 10. Onboard Equipment, G500H Standard Avionics Installation with Slant Console, Provisions Only

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	Onboard Equipment, G500H Standard Avionics Installation with Slant Console, Provisions Only	TBK-G500H-BSC/Slant	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• G500H Onboard Equipment, Standard Avionics Installation	369D24651-505	1	MDHI
	• Slant Instrument Panel, G500H Standard Avionics Installation	369D24657-503	1	MDHI

Table 11. Onboard Equipment, G500H Standard Avionics Installation “T” Panel, Provisions Only

PARTS/SUPPLIES				
ITEM NO.	Nomenclature	Part No.	Qty.	Source
KIT	Onboard Equipment, G500H Standard Avionics Installation “T” Panel, Provisions Only	TBK-G500H-BSC	1	MDHI
	• Modification Instructions for G500H and Avionics Suite Installation	MOD MD5001200001	1	MDHI
	• G500H Onboard Equipment, Standard Avionics Installation	369D24651-505	1	MDHI

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K. Warranty Policy:

N/A

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

Refer to MOD MD5001200001.

O. Electrical Load Data:

Refer to MOD MD5001200001.

P. Other Publications Affected:

CSP-HMI-3, Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2, Basic Handbook of Maintenance Instructions

CSP-HMI-3, Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

369E, 369FF and 500N Rotorcraft Flight Manuals

2. ACCOMPLISHMENT INSTRUCTIONS

Installer/owner completes and signs the Garmin G500H upgrade authorization letter (attached) and submits it with the kit purchase order or Fax's it to MDHI for kit purchase authorization.

Refer to MOD MD5001200001 for the accomplishment instructions of this technical bulletin.

3. MAKE A RECORD

- (1). Record compliance to this Technical Bulletin in the Compliance Record section of the Rotorcraft Log Book.
- (2). Complete Bulletin Completed Record form (attached) and FAX or e-mail to MDHI Field Service Department.

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Bulletin Completed Record

Garmin G500H and Avionics Suite

MD Helicopters, Inc.
Field Service Department
4555 E. McDowell Road
Mesa, AZ 85215-9734

800-388-3378 Phone (U.S. and Canada)
480-346-6387 Phone (International)
480-346-6813 Fax

FAX this form to MDHI (480) 346-6813 or E-mail to ServiceEngineering@mdhelicopters.com

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

(Signature)

(Print Name)

(Title)

Comments: _____

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Garmin G500H Upgrade Authorization

Return this completed and signed letter with Purchase Order for kit or FAX the completed and signed letter to MDHI Spares Sales at (480) 346-6821 for MDHI authorization.

This letter hereby authorizes _____ to install the Garmin G500H and Avionics Suite kit in accordance with TB369E-007, TB369F-010 or TB500N-007 (latest revision) on MD Helicopters, Inc. model _____, S/N _____, R/N _____ helicopter. The installer, owner of this helicopter acknowledges that the TB modification instructions are for the exclusive use on the referenced helicopter and cannot be used on any other helicopter without specific authorization from MD Helicopters, Inc. ("MDHI"). An authorization control listing with individual MDHI authorized helicopter serial numbers will be published on MDHI's website in the technical publication index.

INSTALLER / OWNER

(Print Name)

(Signature)

(Date)

MD HELICOPTERS, INC.

(Print Name)

(Signature)

(Date)

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* Supersedes Technical Bulletin TB369D-006, TB369E-008, TB369F-011, and TB500N-008, dated 23 January 2015. Revised to change the aircraft affected for the 369FF models and to add the 369D24518-21 tachometer indicator for Models 369D and 369E with a four-blade tail rotor.

MODIFICATION AND INSTALLATION OF A NEW ENGINE N₂ AND ROTOR TACHOMETER INDICATOR

1. PLANNING INFORMATION

A. Aircraft Affected:

MD Helicopters Inc. (MDHI) Model 369D, serial numbers (SNs) 0003D and subsequent MDHI Model 369E, SNs 0003E thru 0621E

MDHI Model 369FF, SNs 0001FF thru 0222FF, 0600FF thru 0602FF, and 0700FF thru 0711FF

MDHI Model 500N, SNs LN001 thru LN111

B. Assembly/Components Affected By This Notice:

369D24518-3/-5/-9/-11/-13/-15, Engine N₂ and Rotor Tachometer Indicator

C. Reason:

A new model engine N₂ and rotor (N_R) tachometer indicator, part numbers (PNs) 369D24518-17 or 369D24518-19 or 369D24518-21, has been introduced, but is not interchangeable with the old models. The 369D24518-17/-19/-21 indicators have added 28Vdc power and ground wires for N_R and N₂ functions. The old models of the indicator will not be procurable.

D. Description:

Procedures in this Bulletin give owners and operators information to modify and install the engine N₂ and rotor tachometer indicator, PNs 369D24518-17 or 369D24518-19 or 369D24518-21.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Compliance with this bulletin will be approximately eight (8) man-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

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J. Material/Part Availability:

Contact MDHI Spare Parts Sales Department for parts availability.
Telephone: 1-800-388-3378 Option 2 or 480-346-6540. DATAFAX: 480-346-6821.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Engine N ₂ and Rotor Tachometer Indicator *	369D24518-17	1	MDHI
Engine N ₂ and Rotor Tachometer Indicator +	369D24518-19	1	MDHI
Engine N ₂ and Rotor Tachometer Indicator ❖	369D24518-21	1	MDHI
Cable Marker Blank + * ❖	MHS4910-1002	1	MDHI
Connector Plug + * ❖	MS3126F14-15S	1	Commercial
Contact Socket + * ❖	M39029/22-191	6	Commercial
Electrical Contact * ❖	PCM20M-H2	3	Commercial
Lug, Red * ❖	MS21036-102	4	Commercial
Socket + * ❖	M39029/32-259	11	Commercial
Solder Sleeve + * ❖	M83519/2-7	2	Commercial
Solder Sleeve + * ❖	M83519/2-8	1	Commercial
Tie Strap + * ❖	MS3367-*-* (size as necessary)	AR	Commercial
Wire, 22 AWG, White + * ❖	MIL-W-22759/34-22-9	AR	Commercial

+ Order Kit 369D292440-501 for models 369FF or 500N.

* Order Kit 369D292440-503 for models 369D or 369E.

❖ Order Kit 369D292440-505 for models 369D or 369E with a four-blade tail rotor.

K. Warranty Policy:

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

Return defective tachometers to MDHI with an SOR if the tachometer failed within the warranty period.

M. Tooling:

N/A

N. Weight and Balance:

N/A

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O. Electrical Load Data:

0.28 Amp (0.14 Amp per Channel)

P. Other Publications Affected:

CSP-HMI-2, Basic Handbook of Maintenance Instructions - Servicing and Maintenance

CSP-HMI-3, Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-D-1, Model 369D (500D) Rotorcraft Flight Manual

CSP-E-1, Model 369E (500E) Rotorcraft Flight Manual

CSP-FF-1, Model 369FF (530FF) Rotorcraft Flight Manual

CSP-520N-1, Model 500N (520N) Rotorcraft Flight Manual

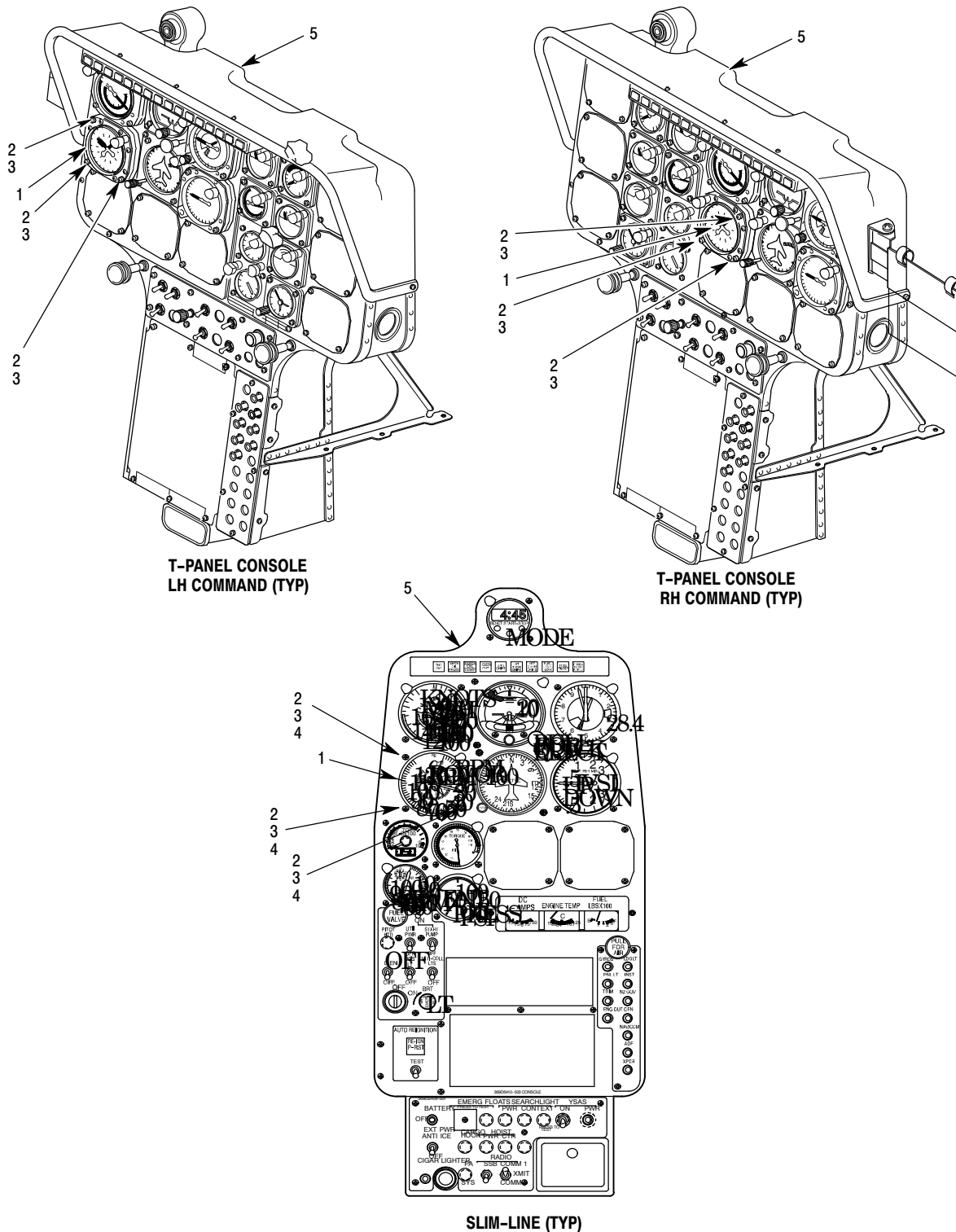
CSP-HMI-2, Basic Handbook of Maintenance Instructions - Servicing and Maintenance

CSP-HMI-3, Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

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TB50008-1

Figure 1. Removal and Installation of the Engine N₂ and Rotor Tachometer Indicator

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Legend (Ref. Figure 1)

- | | |
|--|---------------------|
| 1. N ₂ / N _R TACHOMETER (REF. IPC, 95-00-10, FIG. 1, AND 95-00-20, FIG. 2) | 3. WASHER |
| 2. SCREW | 4. NUT |
| | 5. INSTRUMENT PANEL |

2. ACCOMPLISHMENT INSTRUCTIONS

A. Removal

(Ref. Figure 1)



Make sure all electrical power is OFF during the removal and installation of the N₂ / N_R tachometer and the modification of the wiring harness.

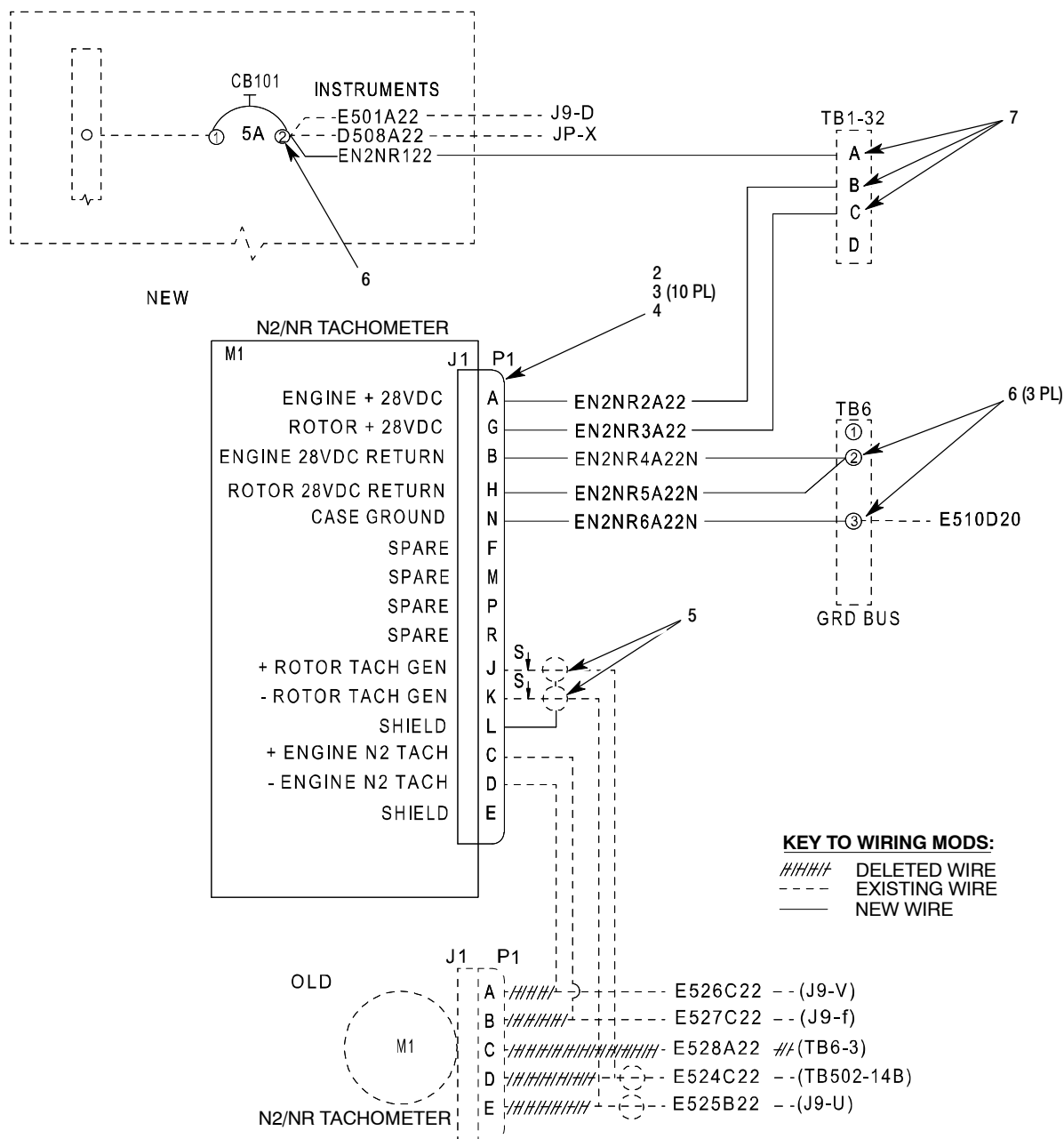
- (1). Set the BAT-OFF-EXT PWR (Master) Switch of the helicopter to OFF.
- (2). Remove the old N₂ / N_R tachometer (ref. CSP-HMI-3, Section 95-00-00, Instruments Removal / Installation):
 - (a). Disconnect the electrical connection.
 - (b). Remove screws (2), washers (3), nuts (4, slim-line panel only), and N₂ / N_R tachometer (1) from instrument panel (5).

B. General Instructions

- (1). Follow good shop practices and the instructions for Electrical Power Maintenance Practices (ref. CSP-HMI-3, Section 96-00-00) for the electrical modifications.

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Figure 2. Electrical Modifications for Model 369D, SNs 0003D thru 1149D and 1151D thru 1184D

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Legend (Ref. Figure 2)

- | | |
|---|-------------------------------|
| 1. N ₂ / N _R TACHOMETER | 5. SOLDER SLEEVE (M83519/2-7) |
| 2. CONNECTOR PLUG | 6. RED LUG |
| 3. SOCKET | 7. ELECTRICAL CONTACT |
| 4. CABLE MARKER BLANK | |

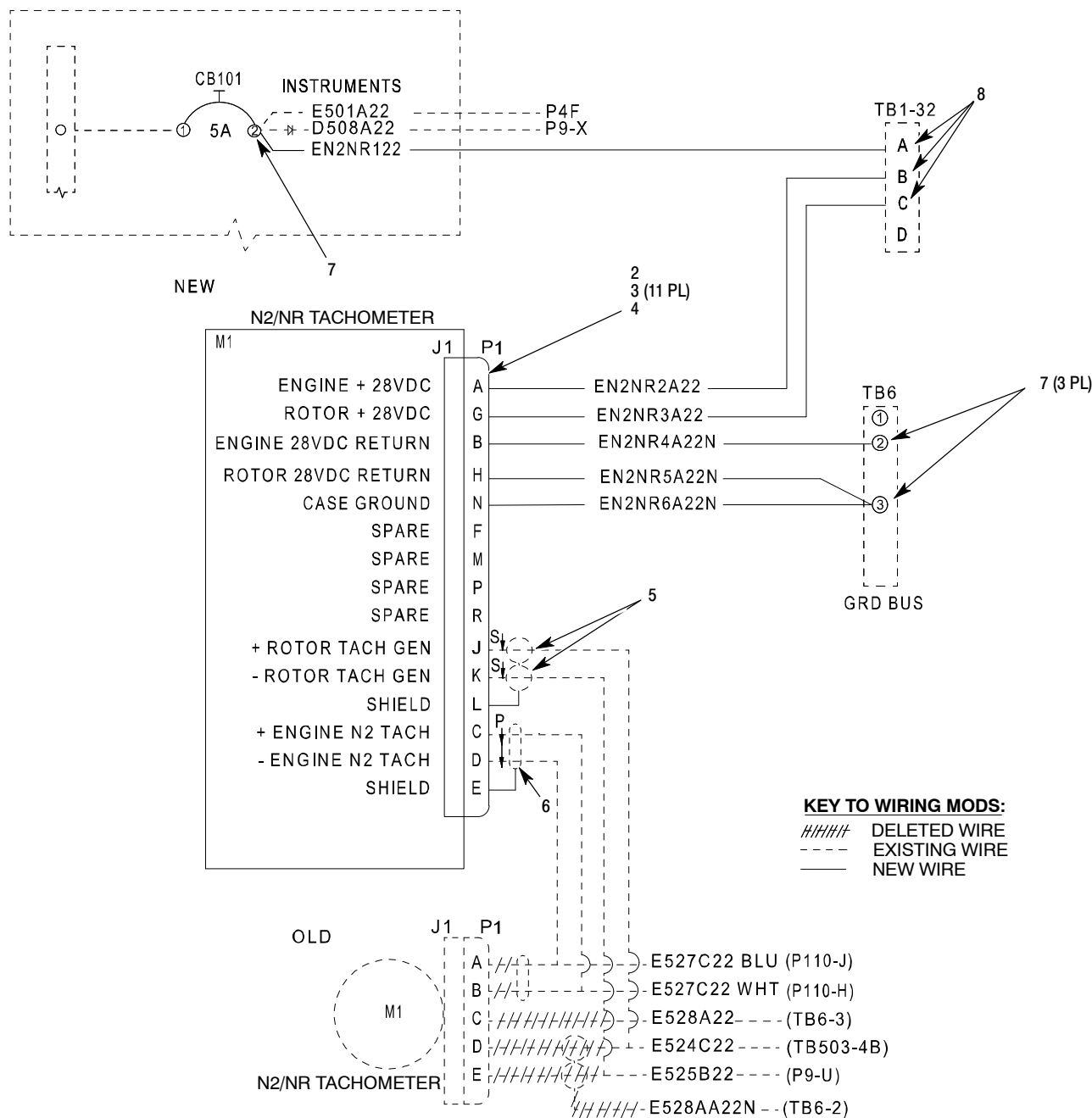
C. Modification for Model 369D, SNs 0003D thru 1149D and 1151D thru 1184D

(Ref. Figure 2)

- (1). Remove old N₂ / N_R tachometer connector from the wiring harness.
- (2). Remove Wire E528A22 from the wiring harness.
- (3). Remove old solder sleeves from wires E524C22 and E525B22.
- (4). Install new solder sleeves (5) on wires E524C22 and E525B22.
- (5). Route and install the new wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wires.
 - (b). Identify the new wires.
 - (c). Install red lugs (6) on wires EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N.
 - (d). Install electrical contacts (7) on wires EN2NR2A22 and EN2NR3A22.
- (6). Assemble the new N₂ / N_R tachometer connector:
 - (a). Install wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, EN2NR6A22N, E526C22, E527C22, E524C22, and E525B22 with sockets (3) in connector plug (2).
 - (b). Install cable marker blank (4) with tie straps:
 - 1). The cable marker blank cannot be more than **3 inch (76 mm)** from the connector.
 - 2). Identify the connector as M1 on cable marker blank (4).
- (7). Assemble Wire EN2NR122:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wire.
 - (b). Identify the new wire.
 - (c). Install red lug (6) on one end.
 - (d). Install electrical contact (7) on the other end.
- (8). Install Wire EN2NR122 between Circuit Breaker CB101 and Terminal Block TB1-32.
 - (a). If necessary, use a longer screw for the CB101 connection.

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Figure 3. Electrical Modifications for Model 369D, SNs 1150D, 1185D and Subsequent

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Legend (Ref. Figure 3)

- | | |
|---|-------------------------------|
| 1. N ₂ / N _R TACHOMETER | 5. SOLDER SLEEVE (M83519/2-7) |
| 2. CONNECTOR PLUG | 6. SOLDER SLEEVE (M83519/2-8) |
| 3. SOCKET | 7. RED LUG |
| 4. CABLE MARKER BLANK | 8. ELECTRICAL CONTACT |

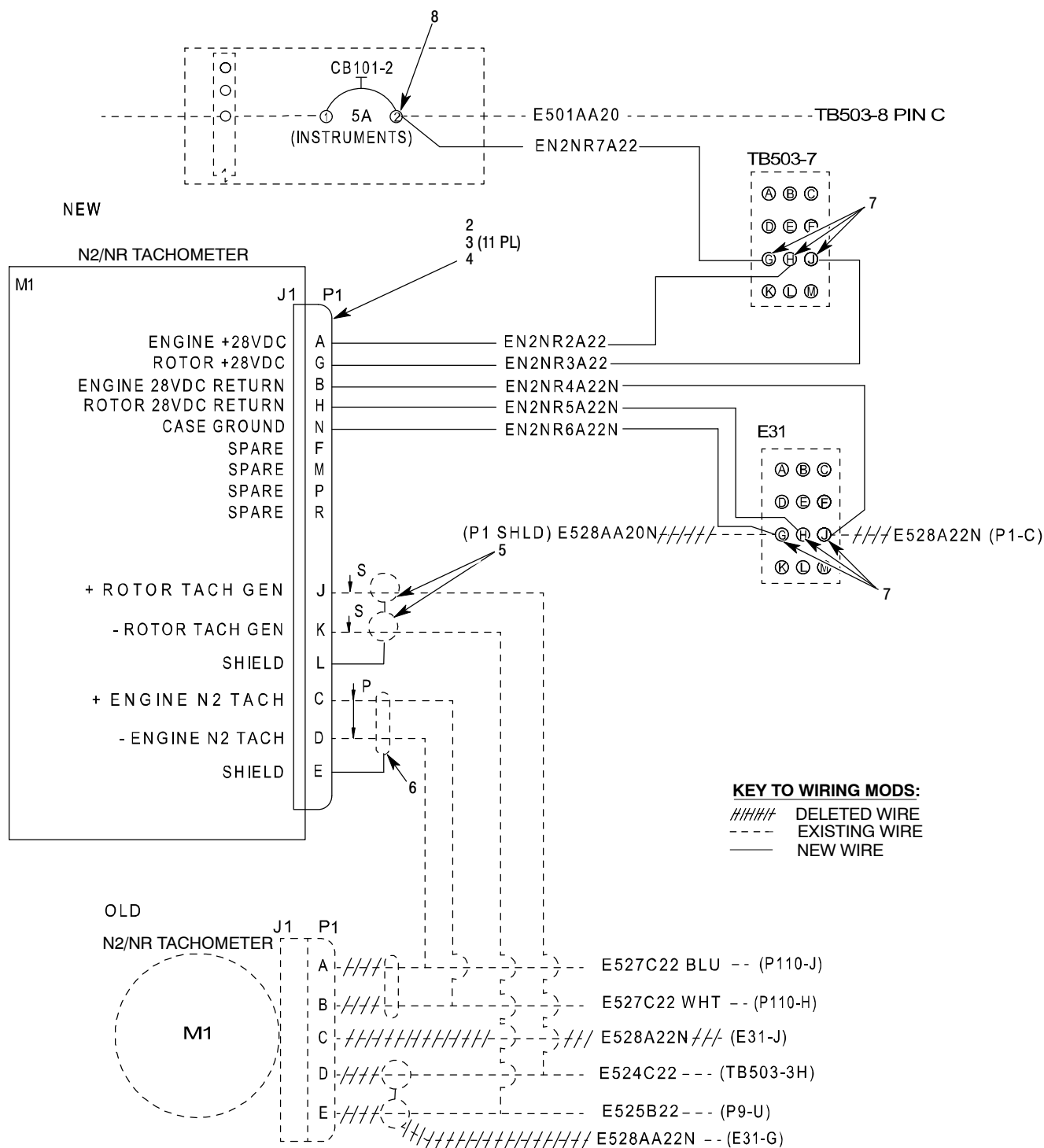
D. Modification for Model 369D, SNs 1150D, 1185D and Subsequent

(Ref. Figure 3)

- (1). Remove old N₂ / N_R tachometer connector from the wiring harness.
- (2). Remove wires E528A22 and E528AA22N from the wiring harness.
- (3). Remove old solder sleeves from wires E525B22, E524C22, E527C22 BLU, and E527C22 WHT.
- (4). Install new solder sleeves (5) on wires E524C22 and E525B22.
- (5). Install new solder sleeve (6) on wires E527C22 BLU and E527C22 WHT.
- (6). Route and install the new wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wires.
 - (b). Identify the new wires.
 - (c). Install red lugs (7) on wires EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N.
 - (d). Install electrical contacts (8) on wires EN2NR2A22 and EN2NR3A22.
- (7). Assemble the new N₂ / N_R tachometer connector:
 - (a). Follow the new routing for old wires .
 - (b). Install wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, EN2NR6A22N, E524C22, E525B22, E527C22 BLU, and E527C22 WHT, with sockets (3) in connector plug (2).
 - (c). Install cable marker blank (4) with tie straps:
 - 1). The cable marker blank cannot be more than **3 inch (76 mm)** from the connector.
 - 2). Identify the connector as M1 on cable marker blank (4).
- (8). Assemble Wire EN2NR122:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wire.
 - (b). Identify the new wire.
 - (c). Install red lug (7) on one end.
 - (d). Install electrical contact (8) on the other end.

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Figure 4. Electrical Modifications for Model 369E, SNs 0001E thru 0383E; and Model 369FF, SNs 0001FF thru 0075FF

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Legend (Ref. Figure 4)

- | | |
|---|-------------------------------|
| 1. N ₂ / N _R TACHOMETER | 5. SOLDER SLEEVE (M83519/2-7) |
| 2. CONNECTOR PLUG | 6. SOLDER SLEEVE (M83519/2-8) |
| 3. SOCKET | 7. CONTACT SOCKET |
| 4. CABLE MARKER BLANK | 8. RED LUG |

(9). Install Wire EN2NR122 between Circuit Breaker CB101 and Terminal Block TB1-32.

(a). If necessary, use a longer screw for the CB101 connection.

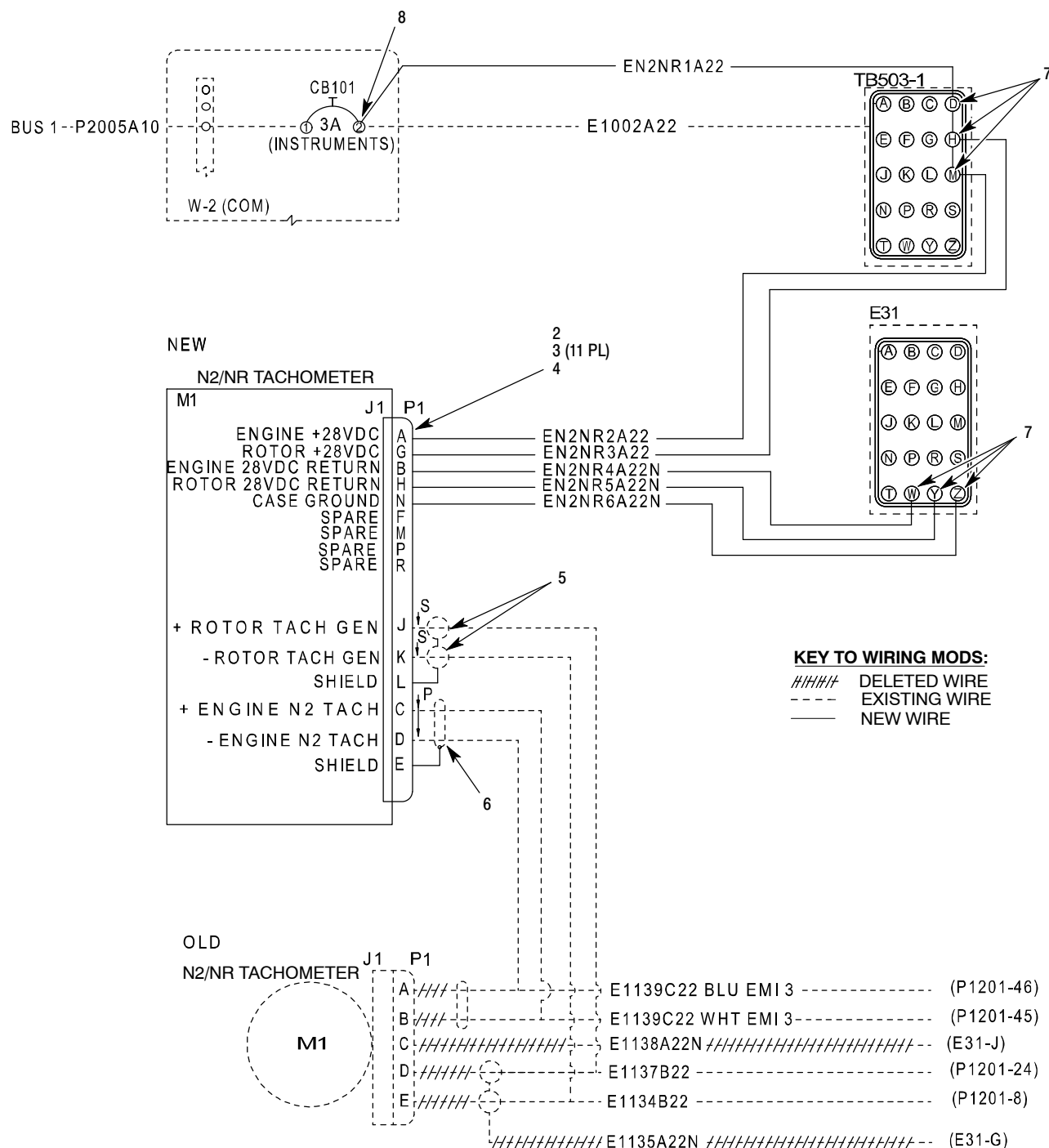
E. Modification for Model 369E, SNs 0001E thru 0383E; and Model 369FF, SNs 0001FF thru 0075FF

(Ref. Figure 4)

- (1). Remove old N₂ / N_R tachometer connector from the wiring harness.
- (2). Remove wires E528A22N and E528AA22N from the wiring harness.
- (3). Remove old solder sleeves from wires E524C22, E525B22, E527C22 BLU, and E527C22 WHT.
- (4). Install new solder sleeves (5) on wires E524C22 and E525B22.
- (5). Install new solder sleeve (6) on wires E527C22 BLU and E527C22 WHT.
- (6). Route and install new wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wires.
 - (b). Identify the new wires.
 - (c). Install contact sockets (7) on wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N.
- (7). Assemble the new N₂ / N_R tachometer connector:
 - (a). Install wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, EN2NR6A22N, E524C22, E525B22, E527C22 BLU, and E527C22 WHT with sockets (3) in connector plug (2).
 - (b). Install cable marker blank (4) with tie straps:
 - 1). The cable marker blank cannot be more than **3 inch (76 mm)** from the connector.
 - 2). Identify the connector as M1 on cable marker blank (4).
- (8). Assemble Wire EN2NR7A22:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wire.
 - (b). Identify the new wire.
 - (c). Install contact socket (7) on one end.

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Figure 5. Electrical Modifications for Model 369E, SNs 0384E thru 0621E; Model 369FF, SNs 0076FF thru 0222FF; and Model 500N, SNs LN001 thru LN111

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Legend (Ref. Figure 5)

- | | |
|---|-------------------------------|
| 1. N ₂ / N _R TACHOMETER | 5. SOLDER SLEEVE (M83519/2-7) |
| 2. CONNECTOR PLUG | 6. SOLDER SLEEVE (M83519/2-8) |
| 3. SOCKET | 7. CONTACT SOCKET |
| 4. CABLE MARKER BLANK | 8. RED LUG |

(d). Install red lug (8) on the other end.

(9). Install Wire EN2NR7A22 between Circuit Breaker CB101-2 and Terminal Block TB503-7.

F. Modification for Model 369E, SNs 0384E thru 0621E; Model 369FF, SNs 0076FF thru 0222FF; and Model 500N, SNs LN001 thru LN111

(Ref. Figure 5)

- (1). Remove old N₂ / N_R tachometer connector from the wiring harness.
- (2). Remove wires E1138A22N and E1135A22N from the wiring harness.
- (3). Remove old solder sleeves from wires E1139C22 BLU EMI 3, E1139C22 WHT EMI 3, E1137B22, and E1134B22.
- (4). Install new solder sleeves (5) on wires E1137B22 and E1134B22.
- (5). Install new solder sleeve (6) on wires E1139C22 BLU EMI 3 and E1139C22 WHT EMI 3.
- (6). Route and install new wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wires.
 - (b). Identify the new wires.
 - (c). Install contact sockets (7) on wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, and EN2NR6A22N.
- (7). Assemble the new N₂ / N_R tachometer connector:
 - (a). Install wires EN2NR2A22, EN2NR3A22, EN2NR4A22N, EN2NR5A22N, EN2NR6A22N, E1134B22, E1137B22, E1139C22 BLU EMI 3, and E1139C22 WHT EMI 3 with sockets (3) in connector plug (2).
 - (b). Install cable marker blank (4) with tie straps:
 - 1). The cable marker blank cannot be more than **3 inch (76 mm)** from the connector.
 - 2). Identify the connector as M1 on cable marker blank (4).
- (8). Assemble Wire EN2NR1A22:
 - (a). Use white 22 AWG wire, PN MIL-W-22759/34-22-9, for the new wire.

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- (b). Identify the new wire.
- (c). Install contact socket (7) on one end.
- (d). Install red lug (8) on the other end.
- (9). Install Wire EN2NR1A22 between Circuit Breaker CB101 and Terminal Block TB503-1.

G. Inspection

- (1). Do the Connector and Accessories Inspection (ref. CSP-HMI-3, Section 96-00-00, Electrical Power Inspection / Check).
- (2). Do the Wiring Harness Inspection (ref. CSP-HMI-3, Section 96-00-00, Electrical Power Inspection / Check).
- (3). Do a Continuity Test of each circuit (ref. CSP-HMI-3, Section 96-00-00, Electrical Power Inspection / Check).

H. Installation

(Ref. Figure 1)

- (1). Install new N₂ / N_R tachometer (ref. CSP-HMI-3, Section 95-00-00, Instruments Removal / Installation):
 - (a). Install N₂ / N_R tachometer (1) with screws (2), washers (3), and nuts (4, slim-line panel only) in the instrument panel.
 - (b). Connect the electrical connector.
- (2). Set the BAT-OFF-EXT PWR (Master) Switch of the helicopter to ON.
- (3). Do an engine run-up and flight test for N₂ / N_R tachometer (1) (ref. the applicable RFM).

I. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record section of the Rotorcraft Log Book.
- (2). Complete Bulletin Completed Record form (attached) and FAX or e-mail to MDHI Field Service Department.

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TB369D-006R1/TB369E-008R1/TB369F-011R1/- TB500N-008R1 Completed Record

Modification and Installation of the Engine N₂ and Rotor Tachometer Indicator

MD Helicopters, Inc.
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-480-346-6300 (International)
Website: <https://www.mdhelicopters.com/contact.html>
Or contact your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

(Signature)

(Print Name)

(Title)

Comments: _____

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BALLAST WEIGHT INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected:

All MD Helicopters, Inc. (MDHI) MD600N helicopters, RN003 and subsequent.

B. Assembly/Components Affected By This Notice:

Tailboom Assembly (P/N 600N3500-503, -505, -507, -509, -511, -513, -515, and -517)

C. Reason:

The installation of certain optional equipment may move the aircraft fwd CG out of range. This condition would require the installation of a permanent ballast. This Bulletin provides operators with the option to install ballast weights in the tailboom assembly of their helicopters.

D. Description:

Operators can add 10, 20 or 30 pounds of ballast weight to the tailboom of their helicopter. Procedures in this Bulletin provide owners and operators with information pertaining to fabricating and installing ballast weights in the tailboom assembly. The weights come in three different sizes and are used in various combinations to gain the desired amount of ballast. 10 pounds can be obtained by installing 2 ea. -3 and -5 plates. 20 pounds can be obtained by installing 4 -7 plates only. 30 pounds can be obtained by adding 2 ea. -3 and -5 plates along with 4 -7 plates. Actual weight of plates and hardware will be used to calculate weight and balance.

E. Time of Compliance

Customer option: shall be performed when the installation of optional equipment requires the installation of a permanent ballast.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA accepted.

G. Manpower:

10.0 man-hours.

H. Interchangeability:

None

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I. Material/Part Availability:

Contact commercial suppliers

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Plate	-3 Plate 4.50 x 5.00 x 0.250 inches	A/R	Field Fabricate Obtain lead from: MacMaster-Carr 9630 Norwalk Blvd. Santa Fe Springs, CA 90670-2932 (562)692-5911
Plate	-5 Plate 5.00 x 5.00 x 0.250 inches	A/R	Field Fabricate (see info above)
Plate	-7 Plate 17.80 x 2.88 x 0.250 inches	A/R	Field Fabricate (see info above)
Bolt	NAS6203-10	A/R	Commercially Available
Bolt	NAS6203-11	A/R	Commercially Available
Washer	NAS1149C0332R	A/R	Commercially Available
Washer	AN970-3	A/R	Commercially Available
Nut	MS21042L3	A/R	Commercially Available
Sealant	PR1422G (MIL-S-8802, Type II)	A/R	Commercially Available
Adhesive	EA9309.3 or EA9314 (HMS16-1068, CL 7)	A/R	Dexter Corporation or Commercially Available
Carbide Dagger Drill	0.1285 x 6.0	1	Industrial Tool and Supply Contact: R.J. 602-438-9323
Carbide Dagger Drill	0.191 x 3.0	1	Industrial Tool and Supply Contact: R.J. 602-438-9323
Inner Tube	650/700 x 10	1	Commercially Available
Scale	1 – 50 lbs.		Commercially Available

J. Warranty Policy:

N/A

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K. Tooling:

Contact commercial suppliers.

L. Weight and Balance:

Weight and balance will have to be revised per the amount of weights installed.

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Handbook of Maintenance Instructions (CSP-HMI-2).

2. ACCOMPLISHMENT INSTRUCTIONS

Refer to Figure 1 and the Handbook of Maintenance Instructions.

- (1). Remove rotating cone thruster per CSP-HMI-2, Section 53-40-30.
- (2). Remove stationary thruster cone per CSP-HMI-2, Section 53-40-30.
- (3). Remove Kevlar liner (P/N 500N3500-5).
- (4). Use heat to soften adhesive. Do not exceed 150 degrees F. Use a thin scraper blade to pry liner free from tailboom. Avoid scratching tailboom. Do not leave scraper between liner and tailboom and allow liner to cool as the Kevlar will set.
- (5). As required, cut 2 each -3, 2 each -5 and 4 each -7 plates from lead procured with a density of 0.4 pounds per cubic inch. A 12 inch x 36 inch, 1/4 inch thick is sufficient to make one set of 30 lb. ballast weights.
- (6). Take lead weights and insert them into channel. It will be necessary to shape them to fit the I.D. of the tailboom. Use a sheet metal roller to shape the lead to the correct radius to fit in the boom. If a roller is not available, a 1 pound dead weight mallet will work to shape the lead into the channel. Use care when shaping the lead to not damage the tailboom.
- (7). After the lead has been shaped to fit inside the tailboom, drill pilot holes in the lead with a #30 drill bit. Stack the mating plates together (both -3's, -5's and/or -7's) before drilling in order to get holes to align. Refer to Figure 1 for edge distances.
- (8). Hold lead plate in place and using pilot holes in plates as a guide, drill holes in tailboom with a 0.1285 inch composite drill bit. Use sheet metal clamps to hold lead in place. Continue process until all pilot holes have been drilled.
- (9). After all pilot holes have been drilled in tailboom, remove weights and drill to final dimension of 0.191 inch with composite drill bit. Drill final dimension of 0.191 inch in lead with a #11 drill bit.
- (10). Clean any debris from tailboom.
- (11). Weigh and record weight of plates and hardware to be installed.
- (12). Coat faying surfaces with a layer of sealant (MIL-S-8802, Type II) to create a barrier between the tailboom and the plates. Install lead weights with hardware and seal around the edges after installation to prevent moisture from entering between the plates and between the plates and the tailboom.

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- (13). Install each pair of -3 and -5 coated plates with 4 ea. NAS6203-11 bolts, 4 ea. NAS1149C0332R washers, 4 ea. AN970-3 washers (against lead) and 4 ea. MS21042L3 nuts. Install both pair of -7 coated plates with 4 ea. NAS6203-11 bolts (aft side of plate) and 4 ea. NAS6203-10 bolts (forward side of plate) along with 8 ea. NAS1149C0332R washers, 8 ea. AN970-3 washers (against lead) and 8 ea. MS21042L3 nuts. Torque hardware 12 - 15 inch pounds plus drag torque (maximum).
- (14). Reinstall liner. Skip bond a 1.00 x 1.00 inch area every 2.0 inches maximum with EA9309.3 adhesive. Hold inboard edge of liner with an inflated 650/700 x 10 inner tube. Outboard edge can be held in place using edge sheet metal clamps. Remove inner tube and clamps after 24 hours of cure time.

NOTE: If plates are ever removed, fill holes in the tailboom with PR1422G sealant.

- (15). Reinstall thruster cones per HMI.
- (16). Ballast weights installed at station 302.6. Operators will need to recalculate weight and balance using actual weight installed.
- (17). Record compliance to this Technical Bulletin in the helicopter Log Book. Revise weight and balance using actual weight installed.

3. DISPOSITION OF PARTS REMOVED

N/A

4. POINTS OF CONTACT

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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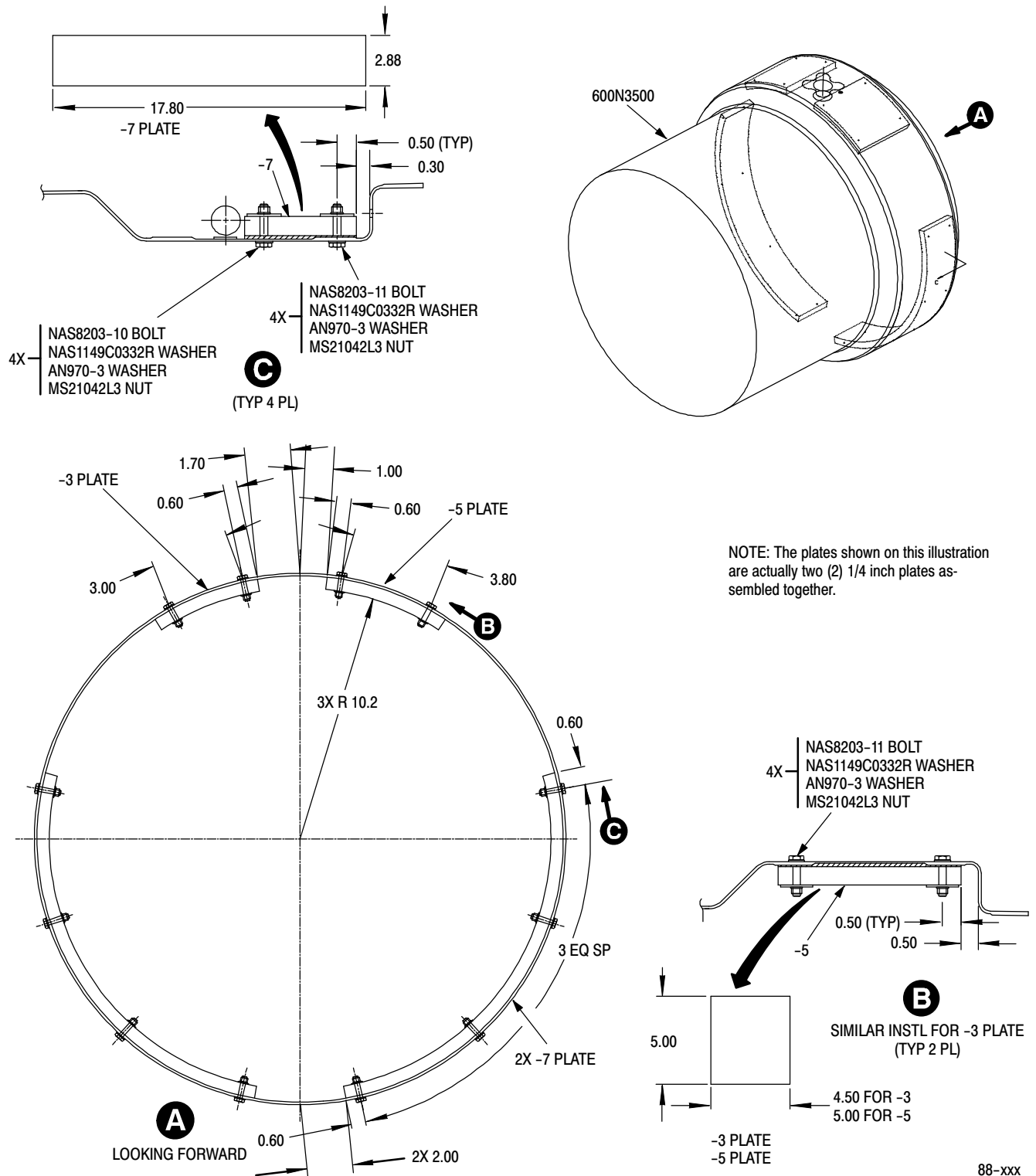


FIGURE 1. Tailboom Ballast Weight Fabrication and Installation.

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FUEL CELL BAFFLE MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

600N helicopters, serial number RN003 thru RN062.

B. Assembly/Components Affected By This Notice:

Fuel Cell (P/N 600N8101-5), Fuel Cell (P/N 600N8101-7)

C. Reason:

The height of the fuel cell baffle is not sufficient to keep the low fuel sensor submerged during partial power, high-speed descent.

Complying with this Bulletin will reduce the possibility of early/false low fuel warnings during partial power, high-speed descent.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to modification of each fuel cell to extend the height of the baffle.

E. Time of Compliance

Customer option, at owner/operator's discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Twenty-four (24) man-hours.

H. Interchangeability:

None

I. Material/Part Availability:

The parts listed below are included in the MD600 Baffle Repair Kit, P/N 600NM8100-101. Contact MDHI Warranty/Repair Dept.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Baffle Mod Kit	320-2-51411-101	2	MDHI
*Cloth, 320 grit, 8.5 X 11 in., abrasive		1	MDHI
*Depressor, Tongue		10	MDHI

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
*Solvent (Acetone)		1 PT	MDHI
*Cement Kit	82C18 KIT	1	MDHI
*Fabric Extension (preformed) FT 229	320-2-51411-1	1	MDHI
**Dielectric Compound	DC-4	AR	Dow Corning Corporation 3901 S. Saginaw Road Midland, MI 48640

* Part of 320-2-51411-101 Baffle Mod Kit.

**Not part of Kit.

J. Warranty Policy:

MDHI Warranty Department will provide Baffle Repair Kits at no cost to the operator, provided that the kits are ordered prior to 31 December 2001.

K. Tooling:

N/A

L. Weight and Balance:

Add/Subtract	Weight (lbs.)	Arm (inches)	Moment (inch-pounds)
Add	0.5	86.447	43

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Basic Handbook of Maintenance Instructions (CSP-HMI-2), Illustrated Parts Catalog (CSP-IPC-4)

2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation Instructions

WARNING

Avoid fuel vapor ignition and fire. Use only nonsparking tools and explosion proof work lights. Attach helicopter to an approved electrical ground. Switch OFF all electrical power. Disconnect external power and battery before opening fuel system. Ensure work area is adequately ventilated.

CAUTION

Air in fuel system may cause power surges or flameout. Bleed off trapped air after opening system at any point between fuel tank and engine fuel nozzle

Prevent fuel system contamination. Install caps on the ends of hoses, tubes and fittings as parts are removed. Bag and identify small parts to prevent loss or damage.

- (1). Defuel helicopter (CSP-HMI-2, Section 12-00-00, Fuel System Draining). Drain remaining fuel from cell sump drain valve into a suitable container.

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- (2). Disconnect electrical power.
- (3). Remove aft left and aft right fuel cell access covers (CSP-HMI-2, Section 28-00-60, Fuel Cell Cover Removal).

B. Modification Instructions

WARNING

Prevent spontaneous combustion or explosion. Never use oxygen to purge or ventilate fuel tank or fuel system components. Fuel, either vapor or liquid, will violently react with an oxygen rich atmosphere

(Ref. Figure 1)

- (1). Remove cell suspension cords.
- (2). Thoroughly dry wipe interior of cell. Drying time may be accelerated by keeping cell at 80°F (27°C) and ventilating interior with dry, low pressure air.

NOTE: Before proceeding any further, a clamping tool the same length as the baffle extension may be fabricated and used in place of the tongue depressors provided in the kit.

- Clamping tool should go over but not extend below the lower edge of the extension when extension is in place.
- The clamping tool should clear the three locations on the baffle where the baffle support cord is tied to the baffle.
- Coat clamping tool with dielectric compound to prevent cement from sticking to it.

NOTE: Damp air, especially in combination with low temperatures, will cause water to condense on cement applications. Water inhibits patch adhesion.

- (3). Accomplish fuel cell baffle modification in temperatures ranging from 60 - 80°F (16 - 27°C) and in less than 50% humidity.

CAUTION

Never expose a dry cell to high temperatures and/or direct sunlight for long periods of time.

- (4). Thoroughly wash the baffle and the adjacent fuel tank walls with solvent to ensure oil and/or fuel is removed before beginning rework.
- (5). Using abrasive cloth, buff the faying surfaces of the fuel cell baffle, fuel cell wall and baffle extension.
- (6). Wash buffed area of fuel cell baffle and extension with solvent and allow to dry for a minimum of 20 minutes.

NOTE: One Cement Kit is enough to complete both fuel cells providing one person works each fuel cell at the same time. Pot life of cement is approximately 20 minutes.

- (7). Prepare cement according to manufacturer's instructions.

NOTE: Because of the tight work area, it may be easier to apply cement with fingers providing latex gloves are worn.

- (8). Apply a thin uniform coat of cement to buffed areas of fuel cell baffle and extension.

NOTE: Position extension in place while cement is still tacky.

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(9). Position extension in place and press firmly in contact areas.

(10). Work out any bubbles that may be trapped between fuel cell, baffle and extension.



Do not apply excessive clamping pressure to baffle extension. If excess pressure is applied, cement will squeeze out and a good bond will not be achieved.

(11). Apply previously fabricated clamping tool or tongue depressors with clamps to lightly hold extension in place.

(12). Allow reworked area to dry a minimum of six hours.

(13). Use solvent to clean any residue after cement has thoroughly dried.

(14). Install cell suspension cords (CSP-HMI-2, Section 28-00-60, Fuel Cell Installation).

C. Completion Instructions

(1). Install fuel cell access covers (CSP-HMI-2, Section 28-00-60, Fuel Cell Cover Installation).

(2). Refuel helicopter (CSP-HMI-2, Section 12-00-00, Fuel System Filling).

(3). Perform fuel system vacuum leak inspection (CSP-HMI-2, Section 28-00-60, Fuel System Vacuum Leak Inspection).

(4). Purge air out of helicopter engine fuel controls (Rolls-Royce Engine Operation and Maintenance Manual).

3. DISPOSITION OF PARTS REMOVED

N/A

4. COMPLIANCE RECORD

Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

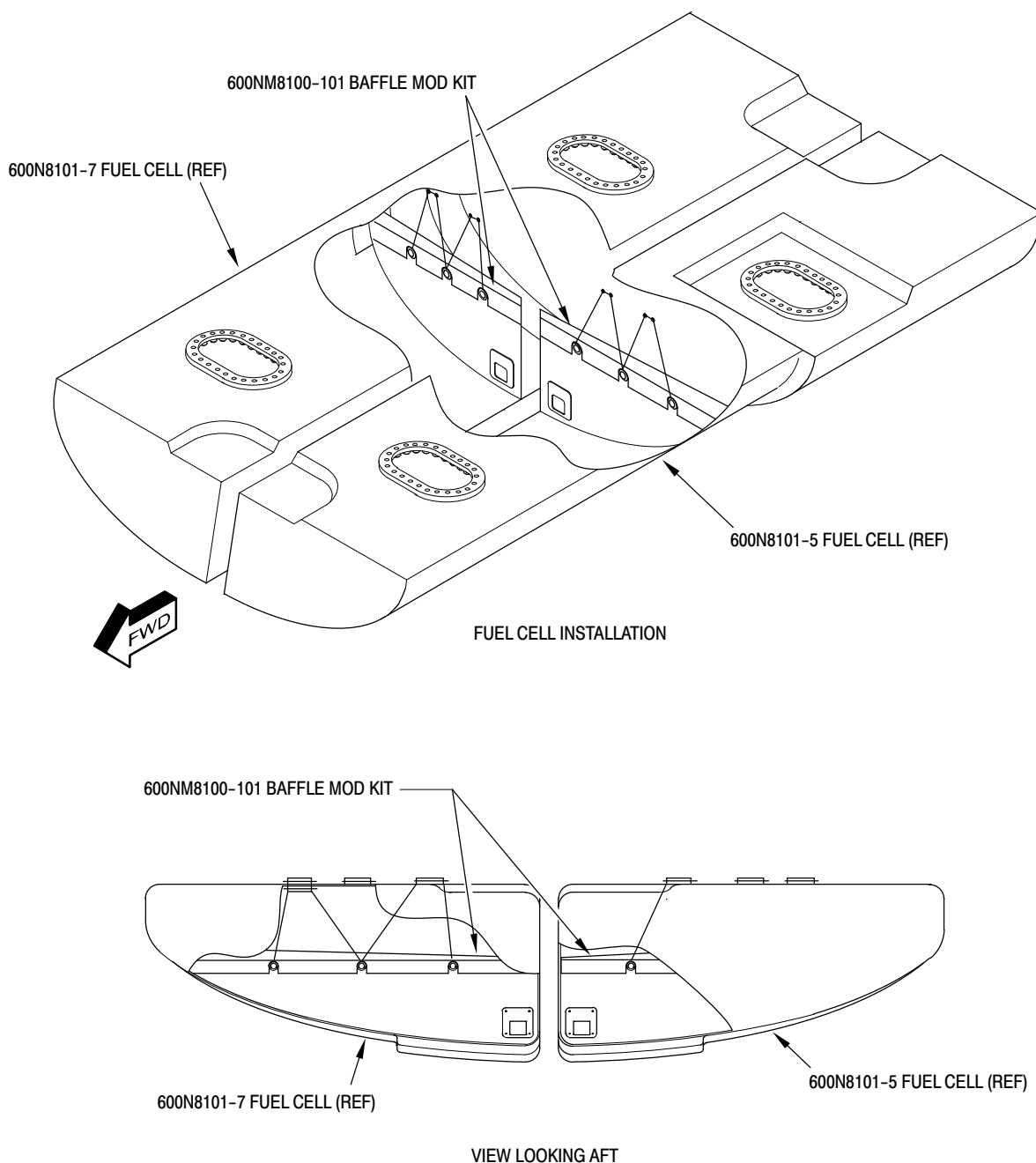
5. POINTS OF CONTACT

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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Figure 1. Fuel Cell Baffle Modification

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* Supersedes Technical Bulletin TB600N-006, dated 12 January 2004. Revised to reflect the new hole location in the horizontal stabilizer. Aircraft that are in compliance with TB600N-006 meet the intent of this revision.

600N YAW STABILITY AUGMENTATION SYSTEM (YSAS) INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected:

600N helicopters, Serial No. RN003 and subsequent that do not have the YSAS installed.

B. Assembly/Components Affected By This Notice:

Horizontal Stabilizer Assembly (P/N 500N3900-15), Fairing Installation (P/N 600N6070-25, -26), Lateral Actuator Assembly (P/N 369D27001-3), Console Assembly (P/N 369D24153-509, -511, -513, -515), Strake (P/N 600N2011-1).

C. Reason:

MDHI is offering the Yaw Stability Augmentation System (YSAS) installation, which will reduce pilot workload, improve the helicopter handling characteristics and increase passenger comfort.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to installation of the YSAS. This consists of removing the gurney flaps from the horizontal stabilizer and aft landing gear fairings, installation of a rate gyro and control box under the pilot's seat, installation of a YSAS actuator and switch, fin position indicator and circuit breaker on the console, replacement of the lateral cyclic trim actuator, removal of the strake from between the windshields, replacement of the controls support bracket assembly, vertical fin torque tubes, longitudinal link assembly and rig plates, and modification of the wiring.

E. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

F. Manpower:

Helicopter Serial No. RN003-RN099: 185 man-hours.

Helicopter Serial No. RN100-SUBS: 160 man-hours.

G. Time of Compliance:

Customer option, at owner/operator's discretion.

H. Interchangeability:

N/A

I. Material/Part Availability:

Installation of the YSAS requires steel parts which are installed in production for helicopter Serial No. RN100-SUBS. All parts and materials needed are included in the following YSAS Installation Modification Kits.

Helicopter Serial No. RN003-RN099 P/N 600N97300-907 (includes steel parts).

Helicopter Serial No. RN100-SUBS: P/N 600N97300-901.

Contact MDHI Parts Sales Department.

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Additional items and consumable materials required to perform the modification but not included in the Kits are listed below.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Chemical coating (MIL-C-5541)	Iridite 14-2 Al-Coat Alodine 1201 (or equivalent)	AR	Richardson Company Allied-Kelite Products Division 2400 E. Devon Ave Des Plaines, IL
Cleaner	Desoclean 45 (or equivalent)	AR	Crown Metro Inc P.O. Box 5857 Greenville, SC 29606 (864) 299-1331
Enamel, epoxy (MDM15-1100)		AR	Commercial
Primer (MIL-P-85852)		AR	Commercial
Adhesive, epoxy (MDM16-1068)	EA9330.3	AR	Dexter Adhesives & Coating Systems 2850 Willow Pass Rd P.O. Box 312 Bay Point, CA 94565-0031 (925) 458-8000 (800) 424-9300
Sealant (MIL-S-81733)	PR-1431 Type IV PR1436G Type II PR1436GB-2	AR	Stabond Corp. 14010-T S. Western Ave. Gardena, CA 90249 (310) 380-6168
Sealing Compound (fuel resistant) (MIL-S-8802)	Pro-Seal 890	AR	Product Research and Chemical Co. 5426 San Fernando Rd. Glendale, CA 91209
Resin, fiberglass	EA9313	AR	Dexter Adhesives & Coating Systems
Abrasive cloth, aluminum oxide (grade as noted) (P-C-451)		AR	Commercial
Grommet (NASM21266-1N)		AR	Commercial

J. Warranty Policy:

Standard spare parts warranty applies.

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K. Tooling:

TOOLS AND EQUIPMENT	
Nomenclature	Source
Heat Gun	
Drill Motors, Straight, 45 and 90 Degree	
Rivet Gun, Hand Squeeze	
#10 Rivnut Puller	
MH860 Crimping Tool – M22520/7-11 and 7-12 Turrets	
M22528/2-01 Crimping Tool – M22520/2-08 Turret	
Wire Strippers	
Multi-Meter	
Red & White, and Green & White Insert & Extractor	
90 Degree High Speed Grinder	
1 and 2 Inch Drum Sander	
Pencil Grinder	
Cutting Wheels	
600N Aircraft Lifting Fixture	
Test Box & Cables for Rigging 500N9701-13	MDHI
Rig Plate Locating Tool 600N9935-1	MDHI
600N Vertical Fin Trim Tab Bending Tool	MDHI
Compass Rose for Swing Flux Valve, as required	

L. Weight and Balance:

Weight and balance accomplished as part of the YSAS installation procedure.

M. Electrical Load Data:

Baseline electrical load is increased by 5A for standard operating conditions.

N. Other Publications Affected:

Basic Handbook of Maintenance Instructions (CSP-HMI-2),
Illustrated Parts Catalog (CSP-IPC-4)
Rotorcraft Flight Manual (CSP-600RFM-1)

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2. ACCOMPLISHMENT INSTRUCTIONS

NOTE:

- In the following procedures, refer to CSP-HMI-2 for detailed instructions.
- The instructions in this bulletin are for standard configuration helicopters. Depending on options installed, some items may be mounted in different locations. Deviations to be documented when signing off this Technical Bulletin.
- Depending on options installed, some items may need to be moved to accomplish this technical bulletin. Deviations to be documented when signing off this Technical Bulletin.

A. Helicopter Disassembly for Modification

- (1). Disconnect battery.
- (2). Remove vertical stabilizers (Ref. Sec. 53-50-30, Vertical Stabilizer Removal).
- (3). Remove access panels from horizontal stabilizer.
- (4). Remove horizontal stabilizer (Ref. Sec. 53-50-30, Horizontal Stabilizer Removal).
- (5). Remove control tube and bellcrank (Ref. Sec. 53-50-30, Horizontal/Vertical Stabilizer Control Tube and Bellcrank Removal).
- (6). Remove both vertical stabilizer torque tubes (Ref. Sec. 53-50-30, Vertical Stabilizer Torque Tube Removal).
- (7). Remove rotating thruster cone (Ref. Sec. 53-40-30, Rotating Thruster Cone Removal).
- (8). Remove stationary thruster cone (Ref. Sec. 53-40-30, Stationary Thruster Cone Removal).
- (9). Remove tailboom (Ref. Sec. 53-40-30, Tailboom Removal).
- (10). Remove fan inlet air screen (Ref. Sec. 53-30-30, Anti-Torque Fan Air Inlet Screen Replacement).
- (11). Remove Fan Hub Cover (Ref. Sec. 53-30-30, Fan Hub and Transmission Cover Fairing Replacement).
- (12). Remove interior trim in passenger/cargo compartment (Ref. Sec. 25-30-00, Interior Trim Replacement).
- (13). Remove cyclic stick controls cover (Ref. Sec. 25-30-00, Cyclic Stick Control Cover Replacement).
- (14). Remove R/H console fairing (Ref. Sec. 95-00-20, "T" Instrument Panel).

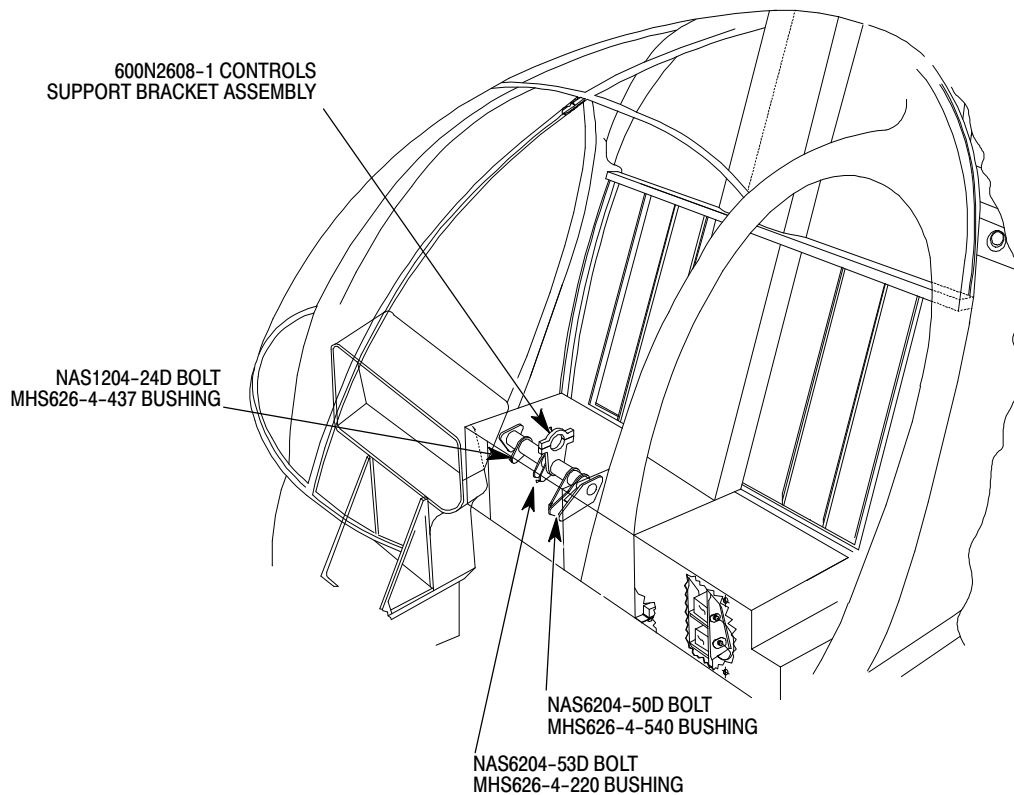
B. Replace Control Support Bracket Assembly (Modification Kit P/N 600N97300-907 Only)

- (1). Remove control support bracket assembly (Ref. Sec. 67-10-00, Control Support Bracket and Bellcrank Removal).
(Ref. Figure 1)
- (2). Install new control support bracket assembly (Ref. Sec. 67-10-00, Control Support Bracket and Bellcrank Installation), except as shown.

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Figure 1. Control Support Bracket Assembly Replacement (Modification Kit P/N 600N97300-907 Only)

C. Replace Longitudinal Link Assembly (Modification Kit P/N 600N97300-907 Only)

- (1). Remove longitudinal link assembly (Ref. Sec. 67-10-00, Link Assembly Removal).
- (2). Install new longitudinal link assembly (Ref. Sec. 67-10-00, Link Assembly Installation).

D. Horizontal Stabilizer Modification

(Ref. Figure 2)

- (1). Horizontal Stabilizer Gurney Flap Rework
 - (a). Mask off stabilizer on edge of the gurney flap.
 - (b). Tape a thin strip of stainless to the stabilizer for protection.
 - (c). Using a high-speed grinder, remove vertical legs of gurney flap.
 - (d). Carefully contour cut edge.

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- (e). Touch up with epoxy enamel to match.
- (2). If both grommets on R/H side of stabilizer are in use, install third grommet on R/H side of stabilizer as follows:
 - (a). Mark and drill 0.50 inch (12.7mm) grommet hole in bottom of stabilizer for wire harness exit.
 - (b). Install MS35489-11 grommet in hole.

(3). Rig Plate Location

NOTE: Because of the chance of damaging the horizontal stabilizer, removal of the existing rig plates is not recommended. The existing rig plates will no longer be used for rigging (Ref. CSP-HMI-2).

- (a). Locate rig plate on top right side of horizontal stabilizer 37.07 inches (94.15 cm) from center of stabilizer (BL 0.00), with aft end of rig plate against reworked gurney flap.
- (b). Mark stabilizer for rig plate aft rivet hole.
- (c). Using a #41 drill, drill rivet hole.
- (d). Cleco rig plate onto stabilizer.
- (e). Position rig plate with 0 (zero) line aligned with center of vertical stabilizer torque tube hole and mark stabilizer for rig plate forward rivet hole.
- (f). Remove rig plate and drill hole for forward rivet using a #41 drill.
- (g). Prime holes with primer.
- (h). Mix adhesive (CM409) according to manufacturer's instructions.
- (i). Apply a thin even coat of adhesive to stabilizer and install 500N3921-5 rig plate with MS20604AD3W1 rivets wet with primer.
- (j). Wipe off excess adhesive.
- (k). Touch up with primer and paint with epoxy enamel to match.

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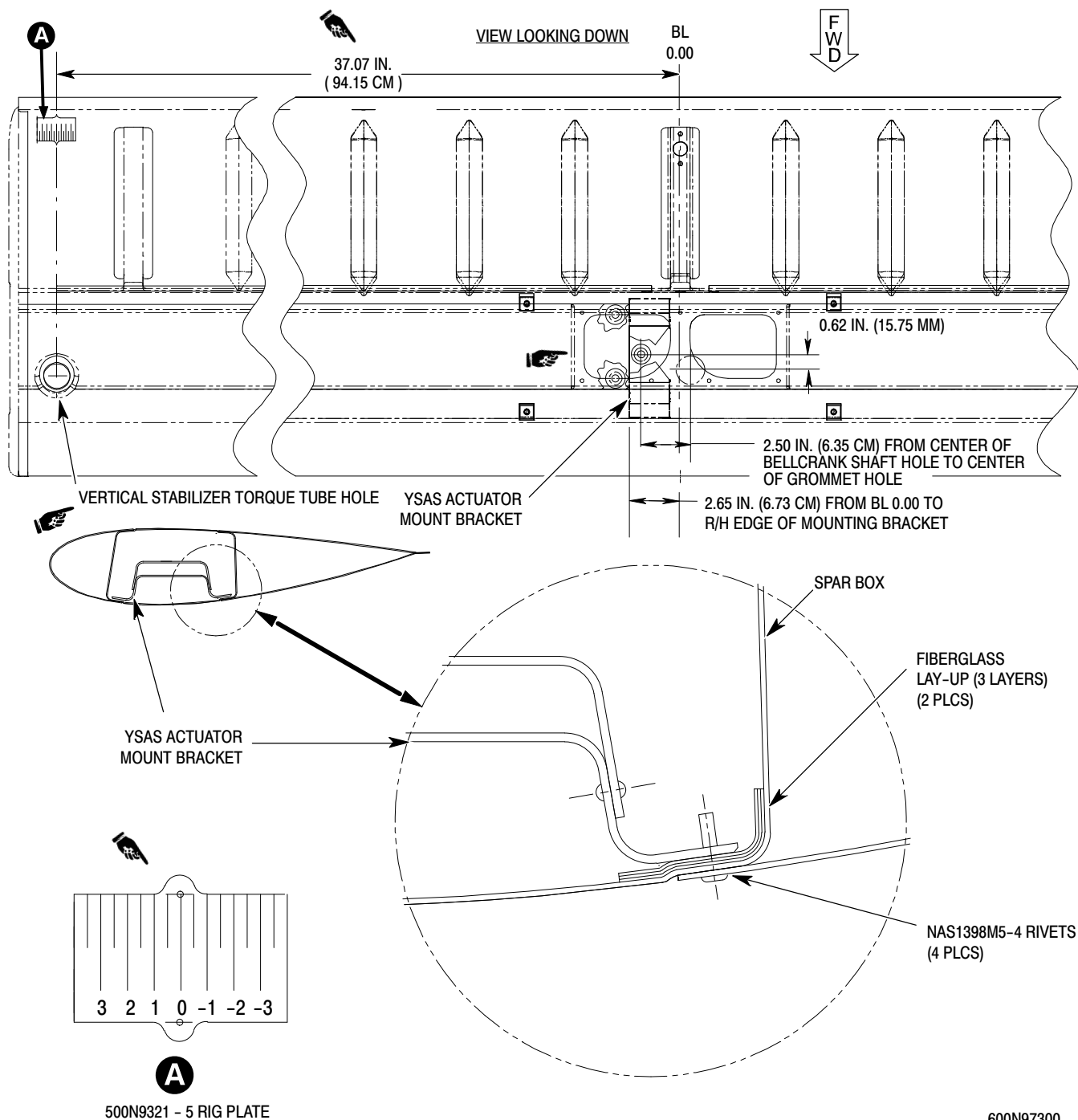


Figure 2. YSAS Actuator Mount Bracket Installation

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(4). Actuator Mounting Bracket Installation

(Ref. Figure 2)

NOTE: The YSAS Actuator is mounted inside the horizontal stabilizer spar box to the right hand side of butt line 0.00.

Mount bracket holes in stabilizer are existing and filled from the factory.

- (a). Locate mount bracket holes and remove filler.
- (b). Position mount bracket and drill four holes using a #21 drill.
- (c). Inside the horizontal stabilizer, measuring 3.00 inches (7.62 cm) to the right of B/L 0.00 and mark for fiberglass lay-up.
- (d). Cut six pieces of fiberglass cloth 2 X 3 inch (5.08 X 7.62 cm).
- (e). Mix fiberglass resin according to manufacturer's instructions.

NOTE: The actuator mount bracket is installed while the resin is wet.

- (f). Lay in three layers of glass cloth on each side of spar box and position the mount bracket in place.
- (g). From outside, open rivet hole through fiberglass with awl or scribe, or other suitable tool.
- (h). Secure mount bracket with clecoes.
- (i). Install four NAS1398M5-5 or NAS1919M05S05 rivets.
- (j). Wipe excess resin squeeze-out.
- (k). Allow resin to cure.

(5). Horizontal Stabilizer Buildup

- (a). Remove double rod end from L/H control tube and install single rod end from outboard end of removed R/H control tube.
- (b). Install control tube and bellcrank on left side (Ref. Sec. 53-50-30, Horizontal/Vertical Stabilizer Control Tube and Bellcrank Installation).

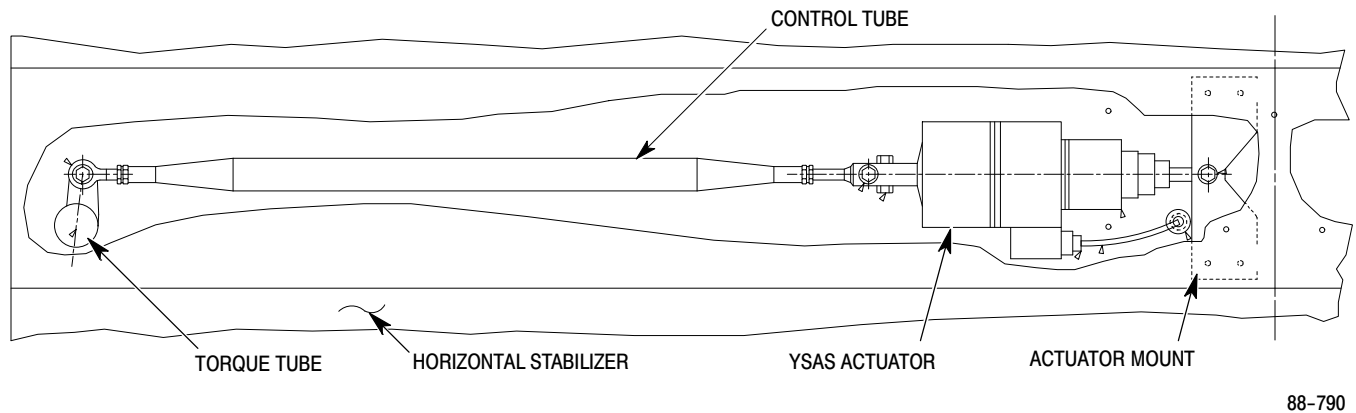
NOTE: In the following step, do not torque or safety wire the control tube jamnuts.

- (c). Assemble tube and actuator with two NAS6603-13 bolts, four AN960-10 (or NAS1149F0306P) washers and two MS21045L3 nuts. Torque nuts to **30 - 40 inch-pounds (3.39 - 4.52 Nm) plus drag torque.**
- (d). Install YSAS actuator with tube onto actuator mount using one MHS626-4-165 bushing, one NAS6204-13H bolt and one NAS1149D0416K washer, but do not do final torque on mounting hardware (Ref. Sec. 67-20-30, S.A.S. Actuator Installation) (Ref. Figure 3).
- (e). Install new bearing races on torque tube (Ref. Sec. 53-50-30, Vertical Stabilizer Torque Tube Bearing Race Replacement).
- (f). Install both vertical stabilizer torque tubes (Ref. Sec. 53-50-30, Vertical Stabilizer Torque Tube Installation).

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Figure 3. YSAS Actuator Installation

E. Rate Gyro, Control Box and Mount Bracket Installation

NOTE: In some instances, components mounted under the seat may have to be moved to a new location to facilitate installation of the rate gyro and control box.

- (1). Lay out hole pattern as shown (Ref. Figure 4).
- (2). Mark rivets to be removed for installation of top doublers.

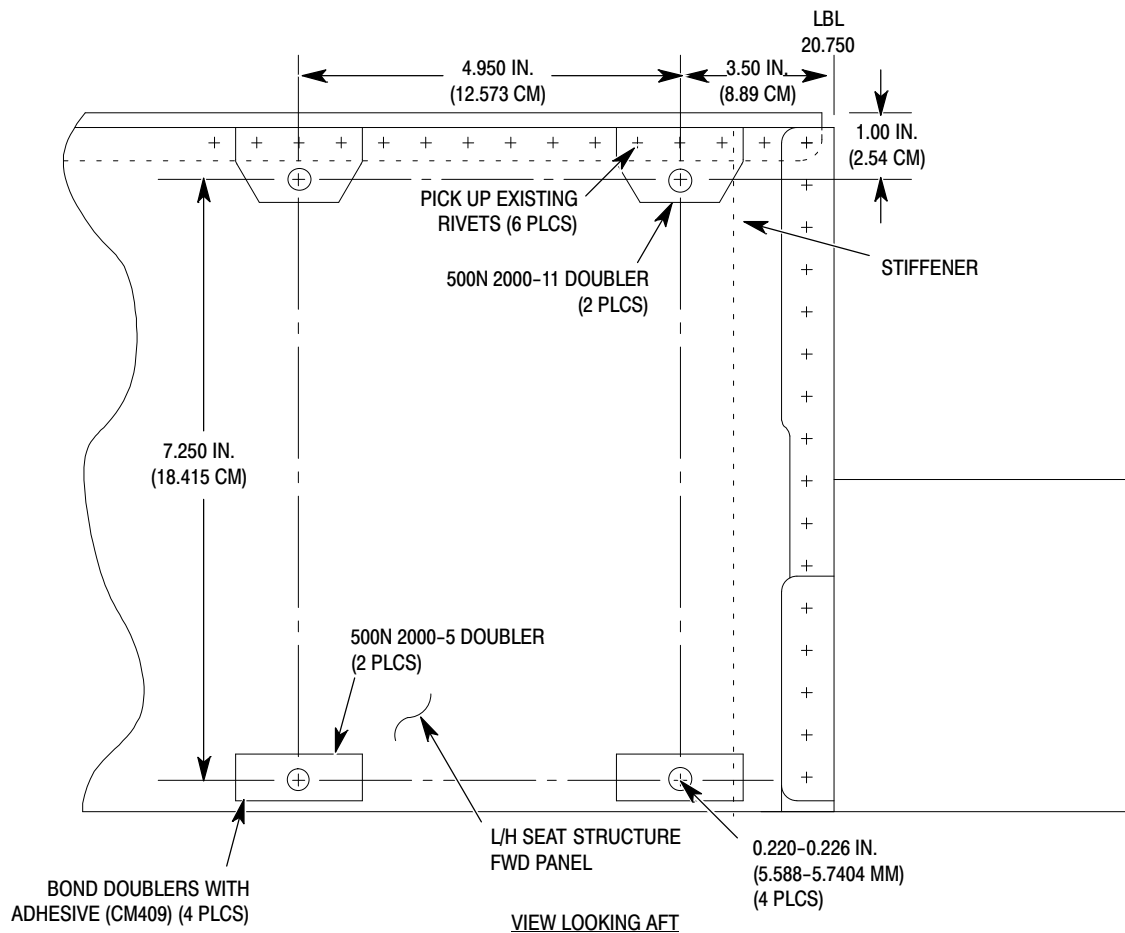
NOTE: Before drilling any holes in seat structure, ensure there are no components that need to be moved. Use caution to avoid drilling through stiffener on back side of seat structure.

- (3). Using a 0.220-0.226 inch (5.588-5.7912 mm) drill, drill four holes marked in seat structure.
- (4). Drill out previously marked rivets.
- (5). Deburr and treat with chemical coating.
- (6). Locate and secure top doublers in place.
- (7). Using a hole finder, locate and drill rivet holes in top doublers.
- (8). Using adhesive, bond bottom doublers to seat structure; remove excess sealant squeeze-out.
- (9). Using adhesive, bond top doublers to seat structure and rivet in place using MS20470AD rivets; remove excess sealant squeeze-out.

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Figure 4. Rate Gyro and Control Box Mount Location

- (10). Touch up rework area with primer and finish with epoxy enamel to match.
- (11). Install rivnuts in mounting bracket (Ref. Figure 5).
- (12). Fit check bracket. If holes in bracket do not align with holes in doublers, proceed as follows:
 - (a). Trim above two upper attach holes, 1.5 minimum edge distance is acceptable. Blend trim tangent to aft flange.
 - (b). Touch up rework area with primer and finish with epoxy enamel to match.
- (13). Bond prep mating surfaces between rate gyro and mounting bracket, control box and mounting bracket, and seat structure and mounting bracket.
- (14). Install rate gyro on top plate of mounting bracket with four NAS1351-3-10 screws and four NAS620-10 washers.
- (15). Install control box on bottom plate of mounting bracket with four NAS1351-3-10 screws and four NAS1149F0363P washers.

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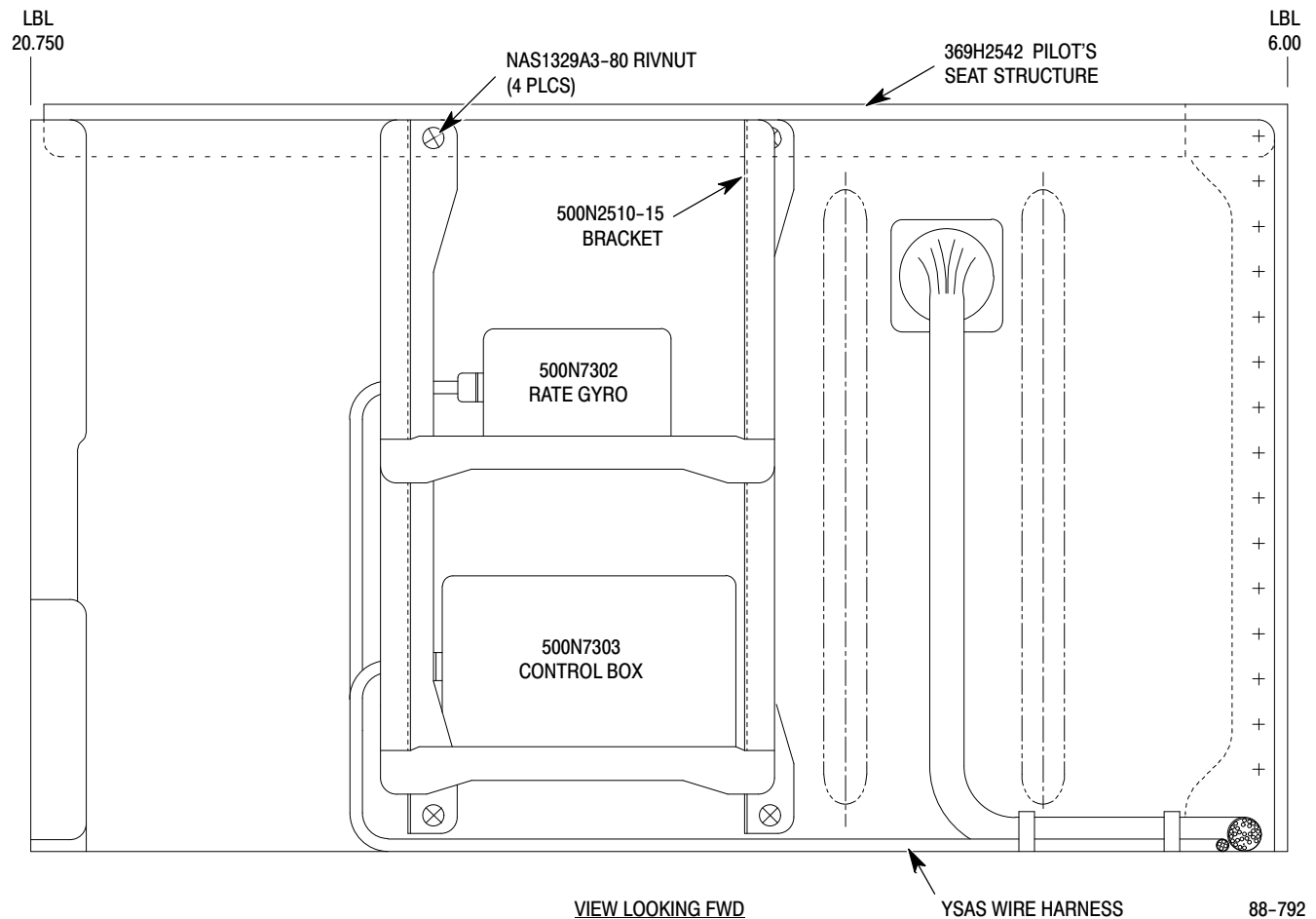


Figure 5. Rate Gyro and Control Box Installation

NOTE: Do not over-torque screws, rivnut keyway may be stripped.

- (16). Slide complete assembly into place and install four NAS603-10P screws with four NAS1149D0332K washers from front side of seat structure.
- (17). Check rate gyro to mounting bracket, control box to mounting bracket, and seat structure to mounting bracket for Class R electrical bond.

F. YSAS Fin Position Indicator Installation

(Ref. Figure 6)

NOTE: When installing the YSAS fin position indicator, some existing components may need to be relocated.

- (1). Remove existing switch panel, save hardware.
- (2). Remove edgelit panel and discard.
- (3). Disconnect and remove cigar lighter, cap and stow wires using MHS5077-4003 thermo-fit sleeves.

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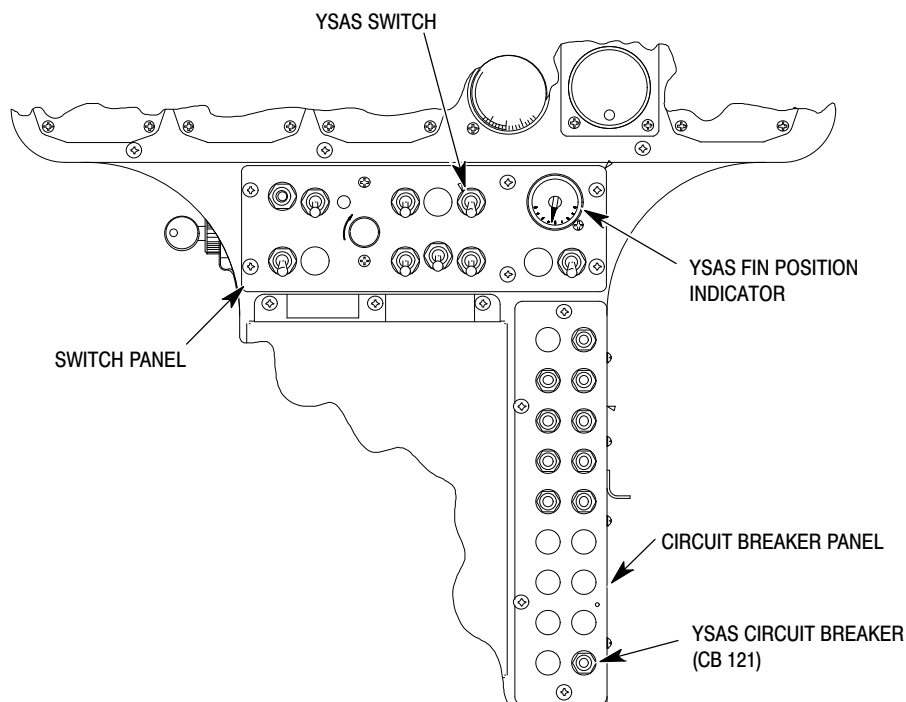
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- (4). Remove all existing electrical components from sheet metal detail and save for reinstallation. Discard sheet metal detail.

NOTE: Nutplates may need to be transferred from removed sheet metal detail to supplied switch panel.

- (5). Transfer previously removed components to supplied switch panel
- (6). Install YSAS fin position indicator mount bracket.
- (7). Install YSAS switch in empty hole to the left of the indicator hole.
- (8). Install YSAS fin position indicator in the hole with countersunk screw.
- (9). Install switch panel using previously removed hardware.
- (10). Install pan-head screw to hold indicator clamp.
- (11). Install supplied edgelit panel.
- (12). Locate circuit breaker and switch panel.
- (13). Remove edgelight panel.
- (14). Locate an empty circuit breaker hole and remove plug.
- (15). Install circuit breaker in hole (Ref. CSP-HMI-3, Sec. 96-30-00, Circuit Breaker and Switch Replacement).



600N97300

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Figure 6. YSAS Switch, Circuit Breaker and Fin Position Indicator Installation

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NOTE: On installations where the avionics circuit breakers or bus bars have not been installed, it is permissible to attach the bus feeder wire directly to the line side of CB121 or it's related bus bar.

(16). Connect circuit breaker to bus bar.

(17). Install supplied edgelit panel.

G. Wire Harness Routing and Terminations

(Ref. Figure 7 and Figure 8)

NOTE:

- Wires come in ready-made harnesses and have terminal pins crimped on one end. Route un-pinned wire ends through aircraft.
- When cutting wires to length, always allow for two re-terminations.
- When securing backshell, wire outer protective sleeving should be secured in backshell.
- Install sealing plugs in all unused connector cavities and secure backshell.

(1). Wire Harness Routing in Horizontal Stabilizer

(a). Temporarily mount horizontal stabilizer on tailboom.

(b). Route wires through grommet in stabilizer (Ref. Figure 8, View A).

NOTE: Connector backshell should be installed facing up to minimize service loop.

(c). Cut wires protruding from stabilizer to allow for two re-terminations.

(d). Crimp supplied terminal ends to wires.

(e). Terminate shields with solder sleeves provided.

(f). Pin wires into connector P514 and secure backshell.

(2). Wire Harness Routing in Tailboom

(a). Remove hardware securing 600N3500-15 doubler to tailboom below R/H stabilizer mount bracket.

(b). Remove any remaining sealant from around hole.

(c). From inside the aft end of tailboom, route supplied wire harness.

1). Feed wires from inside tailboom, upper R/H side, through hole in shield. Enlarge hole in shield as required. Install NASM21266-1N grommet, using epoxy adhesive, as required.

2). Feed wires down to bottom of tailboom.

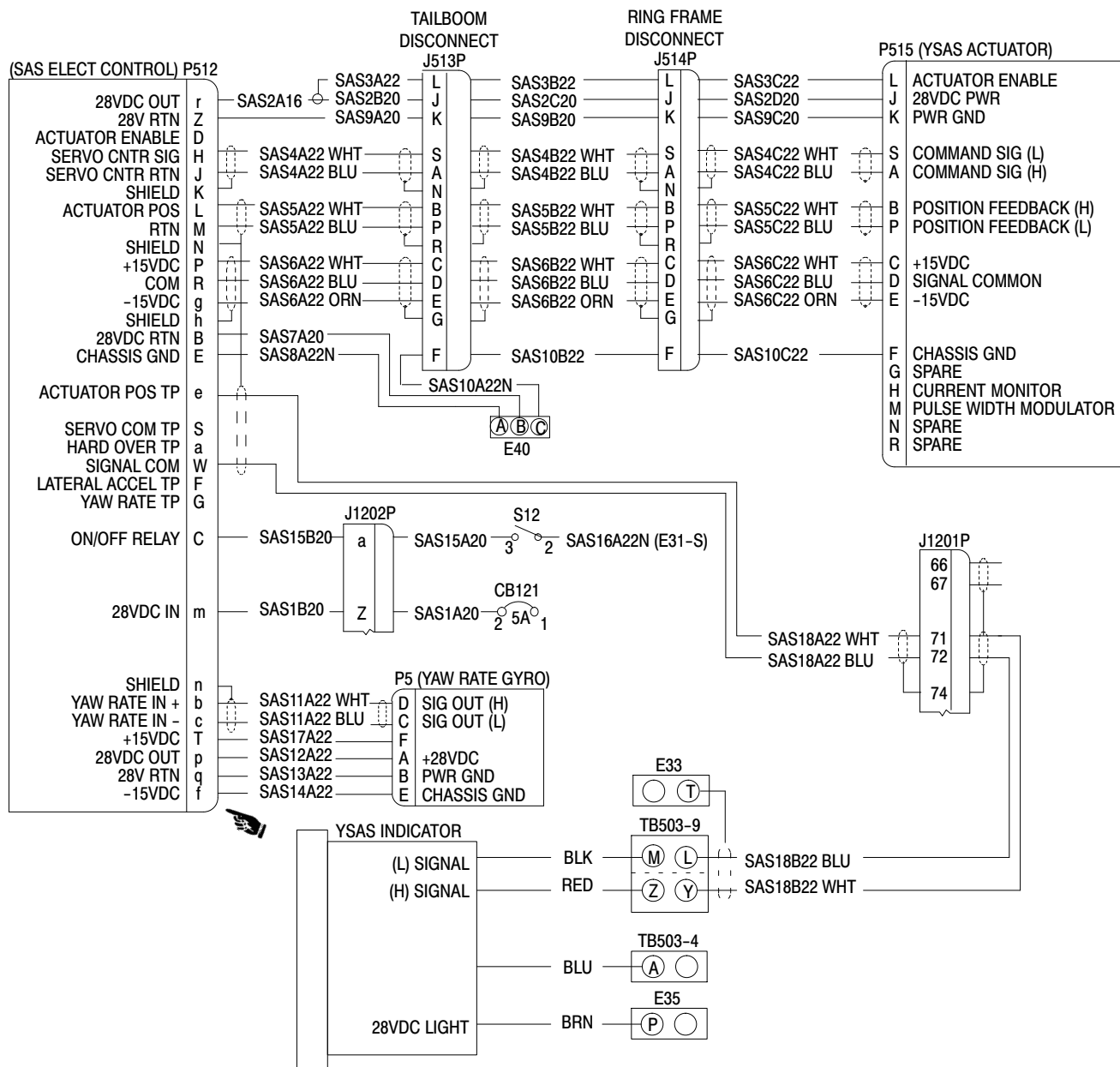
3). Route wires from behind shield and forward through R/H conduit in bottom of tailboom (Ref. Figure 8, View A).

4). After wire protrudes from forward end of conduit, route down through R/H grommet in bottom of tailboom.

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**NOTE:**

IF TERMINAL BLOCKS FOR YSAS INDICATOR ARE FULL FROM PRIOR INSTALLATIONS, ALTERNATE LOCATIONS MAY BE REQUIRED.

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Figure 7. YSAS Interconnect Data

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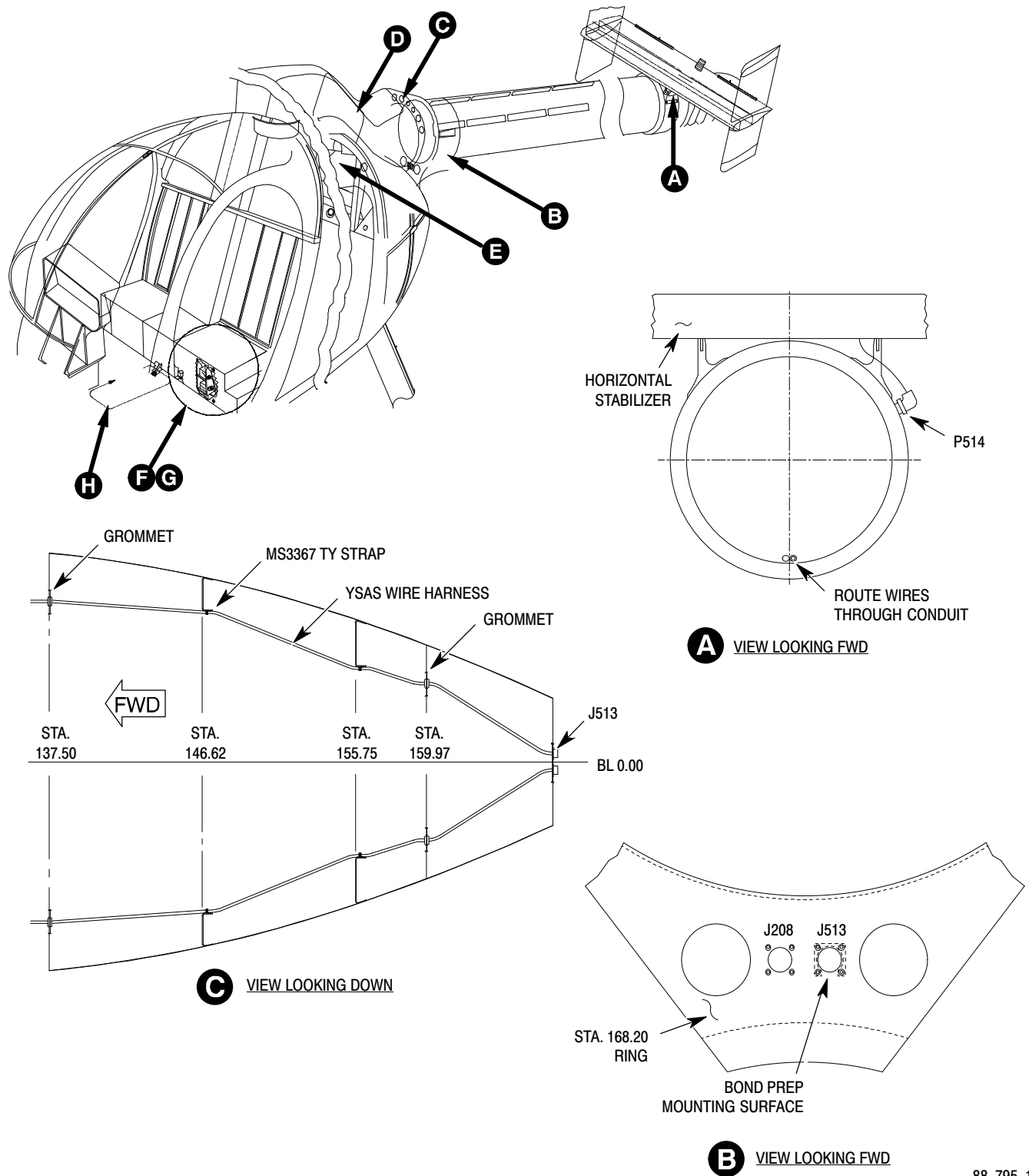
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- (d). Mount J514 connector to tailboom with one M85049-14-A mounting plate, four NAS600-6P screws, and four NAS1149DN416K washers.
 - (e). Seal around connector with sealant.
 - (f). Pull excess wire slack forward.
 - (g). After wire are routed, cut wires so only enough wire protrudes from forward tailboom grommet for two re-terminations.
 - (h). Crimp supplied terminal ends to wires and pin wires into P513 connector and secure backshell.
 - (i). Terminate shields with hardware provided.
- (3). Wire Harness Routing in Instrument Panel
- (a). Route wires between P1201 and TB503-9 (Ref. Figure 7).
 - (b). Pin wires into connector and TB 503-9.
 - (c). Route wires between TB503-9, TB503-4, E31 and YSAS indicator.
 - (d). Pin wires into TB 503-9, TB503-4, and E35.
 - (e). Route and connect wires between P1202, and S12 and CB121.
 - (f). Connect wires to P1202, S12 and CB121.
 - (g). Route and connect wire from S12 to E31.
 - (h). Ty-rap wires to existing harness.
 - (i). Mount E40 to stiffener on 369A2542-33 panel (Ref. Figure 8, View F).
 - 1). Drill mount hole in convenient position.
 - 2). Bond prep hole (Ref. CSP-HMI-3, Sec. 96-00-00, Maintenance of Electrical Bonding Connections).
 - 3). Mount E40 to stiffener.
 - 4). Route wires and cut to length, plus two re-terminations.
 - 5). Crimp terminal ends to wires and pin into E40.
- (4). Wire Harness Routing in Fuselage
- (a). Route wires from P512 to J1201 and J1202 (Ref. Figure 8, View H).
 - (b). Terminate shields as shown (Ref. Figure 7).
 - (c). Pin wires into P512, J1201 and J1202.
 - (d). Ty-rap wires to existing harness.

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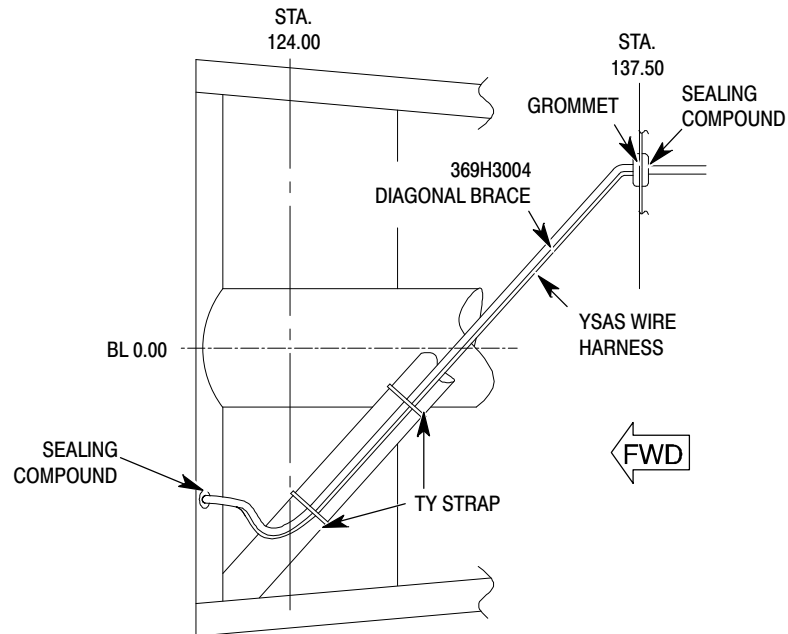
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Figure 8. YSAS Wire Harness Installation (Sheet 1 of 3)

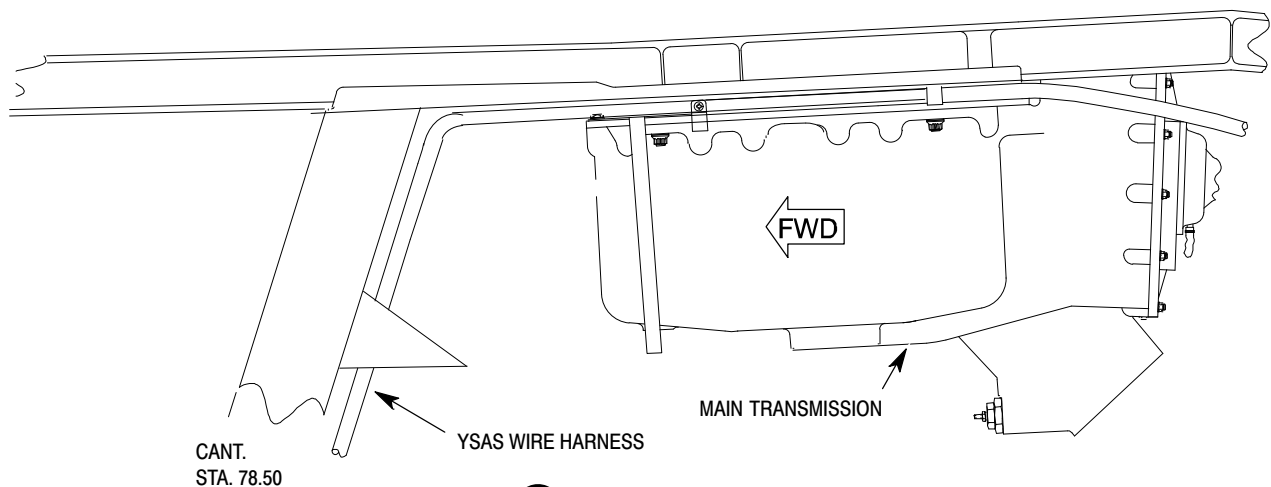
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D VIEW LOOKING DOWN



E VIEW LOOKING INBOARD

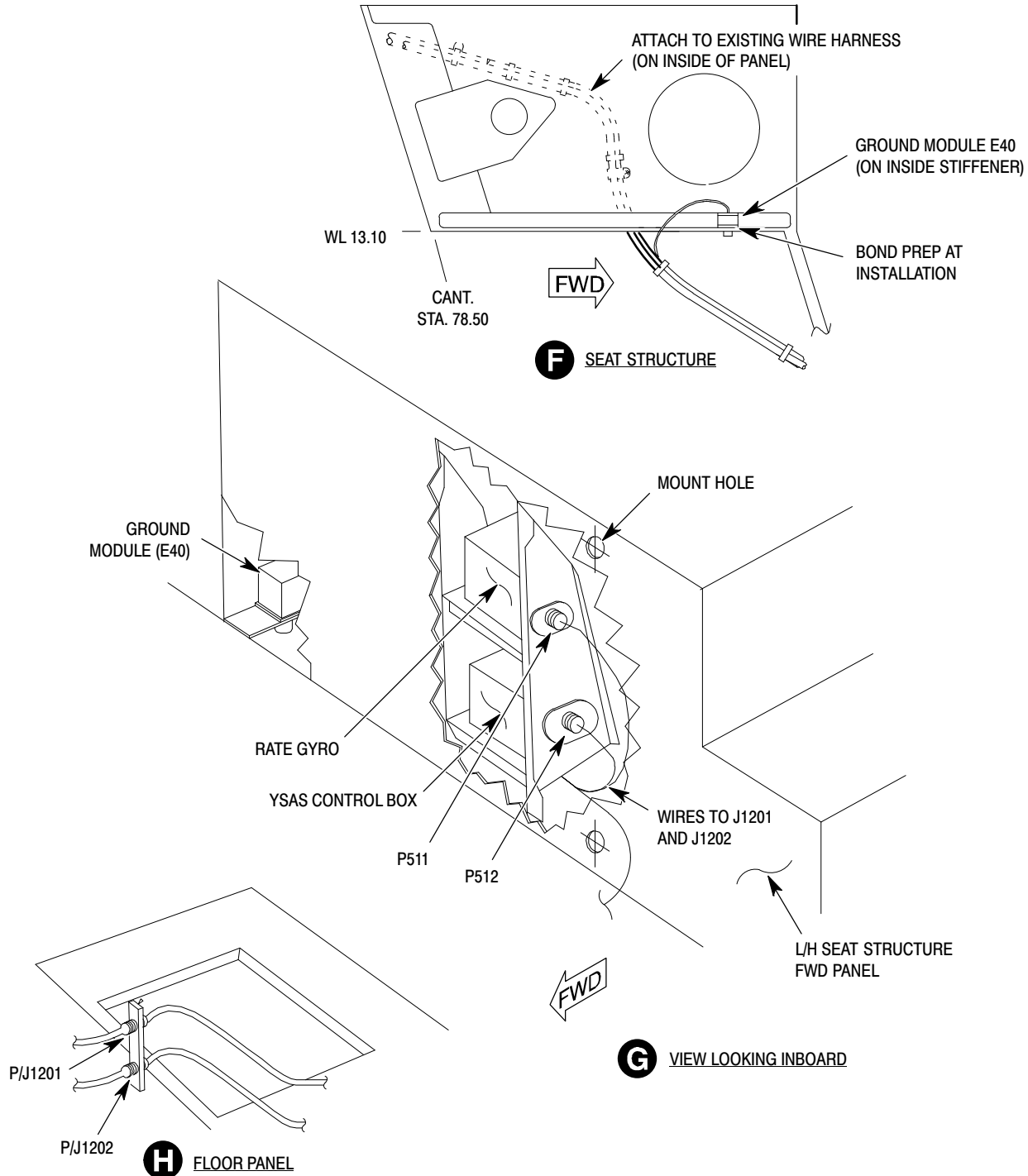
88-795-2

Figure 8. YSAS Wire Harness Installation (Sheet 2 of 3)

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Figure 8. YSAS Wire Harness Installation (Sheet 3 of 3)

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- (e). Pin wires into P512 connector (Ref. Figure 8, View G).
- (f). Route and connect wire between P512 and P511.
- (g). Apply protective sleeving to wires that are routed aft to tailboom connection.
- (h). Rout wires through left-hand footwell, under seat structure (Ref. Figure 8, View F).
- (i). Rout wires up Sta. 78.50 canted bulkhead and along left-hand roof beam. Attach wires to existing wires (Ref. Figure 8, View E).
- (j). Rout wires through Sta. 124.00 (Ref. Figure 8, View D), seal around wires at Sta. 124.00.

NOTE: In the following step, access must be gained thru the fan inlet area.

- (k). Tie-wrap wires to cross brace that run diagonally from Sta. 124.00 to Sta. 137.50 and seal with sealing compound, where shown (Ref. Figure 8, View D).
- (l). Snake a fish-line thru the grommets in the Sta. 137.50 and 159.97 frames.
- (m). Attach wires to fish-line and route wires through grommet at Sta. 137.50 and 159.97 as shown and tie-strap at Sta. 146.62 (Ref. Figure 8, View C).
- (n). Bond prep bottom-right electrical connector hole in Sta. 168.20 ring (Ref. CSP-HMI-3, Sec. 96-00-00, Maintenance of Electrical Bonding Connections).
- (o). Cut wires to length, plus two re-terminations.
- (p). Crimp supplied terminal ends to wires.
- (q). Pin wires into J513 connector.
- (r). Terminate shields with hardware provided.
- (s). Install sealing plugs in all unused connector cavities.
- (t). Secure backshell.
- (u). Mount J513 connector to tailboom attachment ring with one M85049-14-A mounting plate, four NAS600-6P screws, and four NAS1149DN416K washers (Ref. Figure 8, View B).

H. Lateral Cyclic Trim Actuator Assembly Replacement

When installing the YSAS in the 600N helicopter, the lateral cyclic trim actuator assembly must be replaced with a 369A7170-19 lateral cyclic trim actuator assembly with new hardware (Ref. CSP-HMI-2, Sec. 67-10-00, Cyclic Trim Actuator Replacement).

I. Strake Removal

The strake mounted between the windshields is not required once the YSAS is installed in the aircraft.

The removal of the strake can be accomplished at owner/operator's convenience. If immediate removal is preferred, perform the following procedure:

- (1). The following procedure is for removal of the vertical leg of the strake and is the preferred method:

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- (a). Mask off windshield on both sides of the strake.
 - (b). Tape a thin strip of stainless to the windshield for protection.
 - (c). Using a high-speed grinder, remove vertical leg of strake.
 - (d). Carefully contour cut edge.
 - (e). Touch up with epoxy enamel to match.
- (2). The following is an alternate procedure for removal of the strake:
- (a). Disconnect compass at wire splice and remove compass and heat duct trim (Ref. CSP-HMI-2, Sec. 25-40-00).
 - (b). Remove screws, washers and nuts securing strake to windshield.
 - (c). Using a soft wooden or plastic chisel, slide chisel between strake and windshield retainer, and pop strake free from windshield.
 - (d). Scrape sealant residue from windshield retainer.
 - (e). Reinstall windshield mounting hardware.
 - (f). Touch up with paint epoxy enamel to match.

J. Aft Landing Gear Fairing Gurney Flap Removal



Do not try to remove gurney flap by removing rivets and debonding from landing gear fairings, fairings may be damaged.

- (1). Using a die grinder with a cutting wheel, carefully remove vertical plane of gurney flaps.
- (2). Break all sharp edges.
- (3). Treat bare metal with chemical coating and prime with primer.
- (4). Finish with epoxy enamel to match fairings.

K. Helicopter Initial Reassembly

- (1). Reinstall cyclic stick controls cover (Ref. Sec. 25-30-00, Cyclic Stick Control Cover Replacement).
- (2). Reinstall interior trim in passenger/cargo compartment (Ref. Sec. 25-30-00, Interior Trim Replacement).
- (3). Reinstall console fairings (Ref. Sec. 95-00-20, "T" Instrument Panel).
- (4). Reinstall Fan Hub Cover (Ref. Sec. 53-30-30, Fan Hub and Transmission Cover Fairing Replacement).
- (5). Reinstall fan inlet air screen (Ref. Sec. 53-30-30, Anti-Torque Fan Air Inlet Screen Replacement).
- (6). Reinstall tailboom (Ref. Sec. 53-40-30, Tailboom Installation).
- (7). Reinstall stationary thruster cone (Ref. Sec. 53-40-30, Stationary Thruster Cone Installation).

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- (8). Reinstall rotating thruster cone (Ref. Sec. 53-40-30, Rotating Thruster Cone Installation).
- (9). Reinstall control tube and bellcrank (Ref. Sec. 53-50-30, Horizontal/Vertical Stabilizer Control Tube and Bellcrank Installation).
- (10). Reinstall horizontal stabilizers (Ref. Sec. 53-50-30, Horizontal Stabilizer Installation).
- (11). Reinstall vertical stabilizers with NAS6204-36 bolts, AN960-416 washers and MS21042L4 nuts (Ref. Sec. 53-50-30, Vertical Stabilizer Installation).

L. YSAS Rigging Instructions

NOTE: YSAS fin position indicator is disabled when YSAS ground test box is installed.

- (1). Connect power supply.
- (2). With power supply OFF, turn S.A.S. switch on the instrument panel to the OFF position.
- (3). Install the Yaw S.A.S Test Box (ST1013) to the computer located and mounted on the co-pilot's seat structure forward bulkhead, the test box is now in series with the computer and actuator.
- (4). Using the aircraft power supply or an external power source, activate S.A.S. switch.
- (5). Adjust actuator to the fully extended position using the Yaw S.A.S. test box.
- (6). Turn aircraft power OFF, actuator should remain in fully extended position.

NOTE: With jamnuts loosened, control tubes can be adjusted similar to a turnbuckle.

- (7). Adjust tip of the right vertical stabilizer to $-1.75^{\circ} \pm 0.25^{\circ}$.
- (8). After adjustments, finger-tighten control tube jamnuts.

NOTE: In the following procedure, use care to not disturb control tube adjustment.

- (9). Remove mounting hardware and slide control tube/actuator out far enough to torque and safety the jamnuts.
- (10). Slide control tube/actuator back in and attach (Ref. Sec. 67-20-30, SAS Actuator Installation).
- (11). With pedals set to full right position, adjust tip of the left vertical stabilizer trailing edge to 12° .
- (12). After adjustments, finger-tighten control tube jamnuts.

NOTE: In the following procedure, use care to not disturb control tube adjustment.

- (13). Remove mounting hardware and slide control tube out far enough to torque and safety the jamnuts.
- (14). Slide control tube back in and attach (Ref. Sec. 53-50-30, Horizontal/Vertical Stabilizer Control Tube and Bellcrank Installation).
- (15). Adjust vertical stabilizer trim tabs to nominal settings:

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(a). L/H set to 15 degrees right.

(b). R/H set to 0 degrees.

M. Helicopter Final Reassembly

(1). Reinstall access panels from horizontal stabilizer.

(2). Perform and record helicopter weight and balance (Ref. Sec. 08-10-00, Helicopter Weighing).

NOTE: Refer to the current Airworthiness Limitation Section of the Maintenance Manual for any changes to life limited parts.

N. Post Modification Check

(1). Check directional potentiometer (Ref. Sec. 76-47-00, Directional Potentiometer Installation).

3. DISPOSITION OF PARTS REMOVED

The 369D27001-3 Actuator Motor may be returned to MDHI Warranty Dept. for credit. The core charge value of \$500.00 will be applied to the customer account in the form of a spares credit.

4. COMPLIANCE RECORD

Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book. Refer to CSP-HMI-2, Section 04-00-00, Airworthiness Limitations Schedule for service life of the YSAS components.

5. POINTS OF CONTACT:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

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* Supersedes TB600N-009, dated 02 June 2010. Revised to clarify PVC tubing specification.

MODIFICATION OF ENGINE CONTROL CABLE

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 600N Helicopters equipped with P/N 600N7714-1 or 600N7714-3 engine control cables.

B. Assembly/Components Affected By This Bulletin:

Engine Control Cable (P/N 600N7714-1, 600N7714-3).

C. Reason:

The bulkhead swivel on P/N 600N7714-1 or -3 engine control cables allows cable bending loads to be reacted by the sliding inner part of the cable. This can cause increased wear and binding at the engine throttle bellcrank end of the cable.

D. Description:

Procedures in this Bulletin give owners and operators information to replace the cable bulkhead swivel with rigid doubler plates. This modification rigidly mounts the engine control cable to the cable bracket so cable bending loads are reacted by the cable bracket.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA approved.

G. Manpower:

Compliance with this bulletin will be approximately 3.0 man-hours.

H. Interchangeability:

None

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

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J. Material/Part Availability:

Contact MDHI Parts Sales Department.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Doubler	600N7720-1	1	MDHI
Doubler	600N7720-3	1	MDHI
Cotter Pin	MS24665-151	1	Commercial
Lockwire	MS20995C32	AR	Commercial
PVC Tubing, 0.106 inch (2.692 mm) I.D., 0.016 inch (0.406 mm) Wall Thickness	MIL-I-631, Type F, Form U, Grade A, Class I, AWG Size 10	AR	Commercial

K. Warranty Policy:

N/A

L. Disposition of Parts Removed:

Scrap removed parts.

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-HMI-2, Basic Handbook of Maintenance Instructions - Servicing and Maintenance

CSP-IPC-4, Illustrated Parts Catalog

2. ACCOMPLISHMENT INSTRUCTIONS

(Ref. Figure 1)

A. Preparation

- (1). Remove center seat cover to access engine control cable at engine throttle bellcrank end (Ref. CSP-HMI-2, Chapter 67-10-00).
- (2). Count the number of visible threads on inner cable below jam nut (7) and record the result.
- (3). If installed, remove lockwire from jam nuts (8 and 16).

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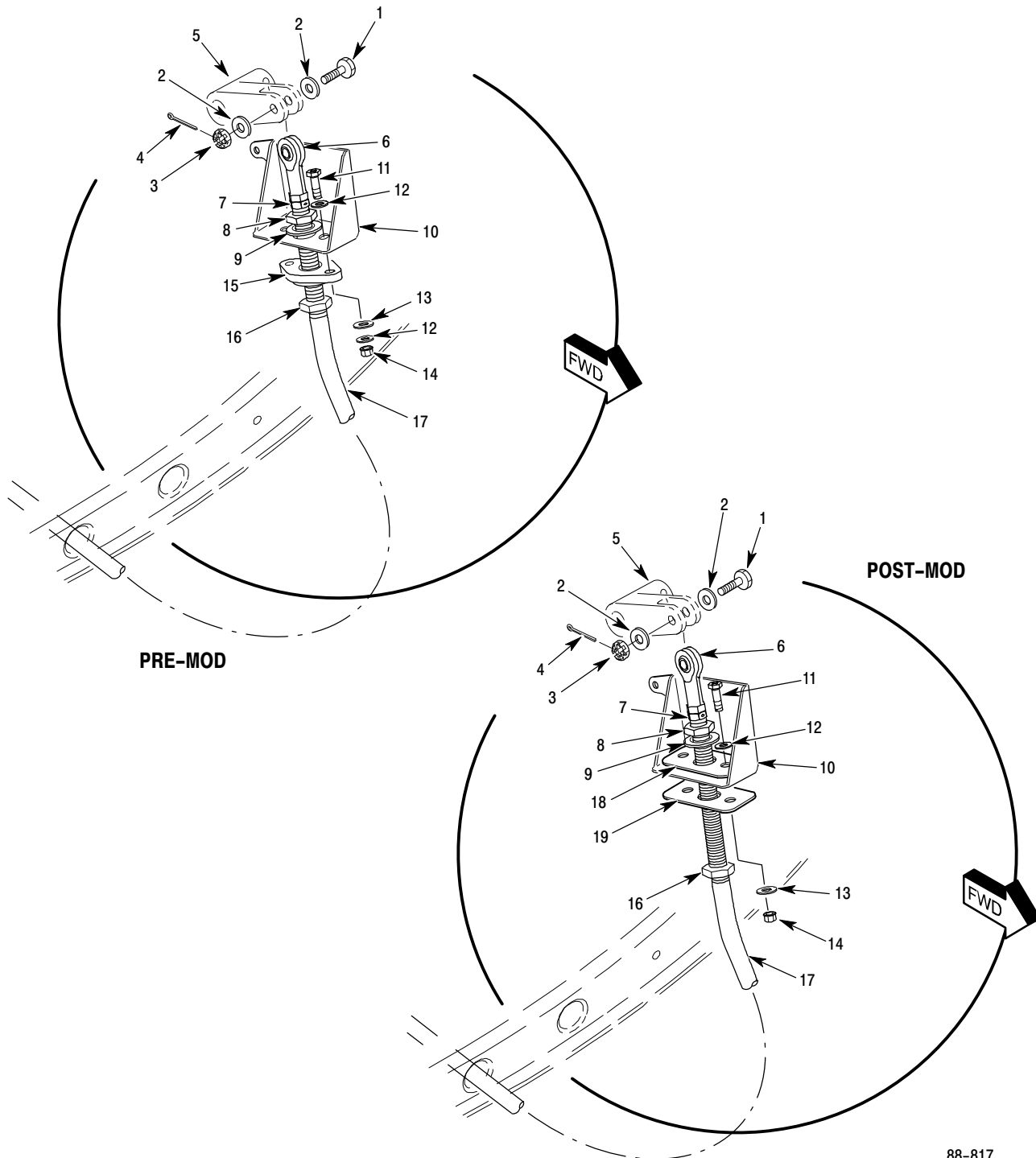
B. Modification

- (1). Remove cotter pin (4), nut (3), bolt (1) and flat washers (2) from engine throttle bellcrank (5).
- (2). Disconnect rod end bearing (6) from engine throttle bellcrank (5).
- (3). Loosen jam nut (7) and remove rod end bearing (6) and jam nut from engine control cable (17).
- (4). Loosen jam nut (8) and jam nut (16).
- (5). Remove nuts (14), flat washers (12), flat washers (13) and screws (11) that attach cable bulkhead swivel (15) to bracket (10).
- (6). Discard two flat washers (12). Keep remaining two flat washers (12).
- (7). Remove jam nut (8) and flat washer (9) from end of engine control cable (17).
- (8). Pull engine control cable (17) out of bracket (10).
- (9). Remove cable bulkhead swivel (15) from engine control cable (17).
- (10). Discard cable bulkhead swivel (15).
- (11). Keep jam nut (16) on engine control cable (17).
- (12). Put doubler (19) on engine control cable (17).
- (13). Put engine control cable (17) back in bracket (10).
- (14). Put doubler (18) on engine control cable (17).
- (15). Install flat washer (9) and jam nut (8) on engine control cable (17). Do not tighten jam nut.
- (16). Install screws (11), flat washers (12), flat washers (13) and nuts (14) through doubler (18), bracket (10) and doubler (19).
- (17). Torque nuts (14) to **12 - 15 inch pounds (1.35 - 1.69 Nm)**.
- (18). Install jam nut (7) and rod end bearing (6) on engine control cable (17).
- (19). Adjust jam nut (7) and rod end bearing (6) until the inner cable visible thread count recorded in Step 2.A.(2). occurs.
- (20). Torque jam nut (7) to **40 inch pounds (4.52 Nm)**.
- (21). Connect rod end bearing (6) to engine throttle bellcrank (5) with bolt (1), washers (2) and nut (3).
- (22). Torque nut (3) to **30 - 40 inch pounds (3.39 - 4.52 Nm)**.
- (23). Install new cotter pin (4).
- (24). Rig engine control cable (Ref. CSP-HMI-2, Chapter 76-47-00).

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Figure 1.

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Legend (Ref. Figure 1)

- | | |
|------------------------------|------------------------------|
| 1. BOLT | 11. SCREW |
| 2. FLAT WASHER | 12. FLAT WASHER (AN960KD10L) |
| 3. CASTELLENATED NUT | 13. FLAT WASHER (NAS629-10L) |
| 4. COTTER PIN | 14. NUT |
| 5. ENGINE THROTTLE BELLCRANK | 15. CABLE BULKHEAD SWIVEL |
| 6. ROD END BEARING | 16. JAM NUT |
| 7. JAM NUT | 17. ENGINE CONTROL CABLE |
| 8. JAM NUT | 18. DOUBLER (600N7720-1) |
| 9. FLAT WASHER | 19. DOUBLER (600N7720-3) |
| 10. BRACKET | |

C. Job Close-up

- (1). Make sure engine control cable rigging is complete (Ref. CSP-HMI-2, Chapter 76-47-00).
- (2). Install safety wire between jam nut (16) and jam nut (8) with MS20995C32 lockwire.
- (3). Insulate bracket (10) with a 1 inch length of PVC tubing where lockwire contacts bracket.
- (4). Install center seat cover (Ref. CSP-HMI-2, Chapter 67-10-00).

D. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record section of the helicopter Log Book.
- (2). Complete Bulletin Completed Record form (attached) and FAX or e-mail to MHDI Field Service Department.

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Bulletin Completed Record

TB600N-009, Modification of Engine Control Cable

MD Helicopters, Inc.
 Field Service Department
 4555 E. McDowell Road
 Mesa, AZ 85215-9734

800-388-3378 Phone (U.S. and Canada)
 480-346-6387 Phone (International)
 480-346-6813 Fax
 ServiceEngineering@mdhelicopters.com

FAX or E-mail this form to MDHI

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____	Helicopter Total Time: _____ Compliance Date: _____
Phone: _____	Location: _____
E-mail: _____	

This bulletin is complete: _____

(Signature)

(Print Name)

(Title)

Comments: _____

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* Supersedes Technical Bulletin TB600-007R2, dated 05 October 2006. Revised to continue the “special pricing” of TB600-007R2 and remove the deadline date. This credit covers the cost for parts and labor associated with TB600-007R3. Aircraft that are in compliance with TB600-007R1 and TB600-007R2 meet the intent of this revision.

Completion of this bulletin eliminates the requirements of SB600N-039, or latest revision.

FUSELAGE AFT SECTION AND TAILBOOM MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 600N Helicopters, serial number RN003 thru RN066 and RN068.

B. Assembly/Components Affected By This Bulletin:

Tailboom Attach Fitting (P/N 500N3422-BSC, -3), Longerons (P/N 500N3120-3, -4),
Tailboom Assembly (P/N 600N3500-503, -505, -507, -509).

C. Reason:

Analysis of the lower tailboom attach fittings and the upper longerons indicate that cracks may occur.

Failure to comply with this Bulletin may result in loss of tailboom and control of the helicopter.

D. Description:

Procedures in this Bulletin provide owners and operators with information pertaining to modification of the fuselage aft section (in accordance with MDHI Modification Drawing 600N3100) to strengthen tailboom attach fittings and upper longerons. A high level of sheet metal expertise and experience is required to perform this modification.

E. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

F. Manpower: Approximately 300 man-hours are required to complete this Bulletin when accomplished in conjunction with a major or annual inspection. Man-hours are based on “hands-on” time and may vary based on personnel and facilities available.

G. Time of Compliance

Customer option, at owner/operator’s discretion.

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H. Tooling:

Contact MDHI for tooling availability.

Contact Fatigue Technology, Inc. for instructions on use of tooling.

TOOLS AND EQUIPMENT		
Nomenclature		Source
4-0-N Sized Tooling:		MDHI
<u>PART NUMBER</u>	<u>DESCRIPTION</u>	
CBG-4-0-N-1	Combination Gage	or
CBM-4-0-N-1-30-V1	Mandrel	Fatigue Technology Inc. 401 Andover Park East Seattle, WA 98188 (206) 246-2010 sales@fatiguetech.com
CBR-4-0-N-1-.1280	Gage Finish Reamer	
CBSD-4-0-N-1	Starting Drill	
CBSR-4-0-N-1	Starting Reamer	
MEN-14A-0401F	Nosecap Assembly	
CBMG-4-0-N	Mandrel Check Fixture	
LB-20	2305-003 Puller Assembly	
FT-20	2677-001 FT-20 Pump Assembly	
4-2-N Sized Tooling:		MDHI
<u>PART NUMBER</u>	<u>DESCRIPTION</u>	
CBG-4-2-N-1	Combination Gage	or
CBM-4-2-N-1-30-V1	Mandrel	Fatigue Technology Inc. 401 Andover Park East Seattle, WA 98188 (206) 246-2010 sales@fatiguetech.com
CBR-4-2-N-1-.1590	Gage Finish Reamer	
CBSD-4-2-N-1	Starting Drill	
CBSR-4-2-N-1	Starting Reamer	
MEN-14A-0423F	Nosecap Assembly	
CBMG-4-2-N	Mandrel Check Fixture	
LB-20	2305-003 Puller Assembly	
FT-20	2677-001 FT-20 Pump Assembly	
Nutplate Retainer Installation Tooling:		MDHI
<u>MODEL</u>	<u>PART NO./DESCRIPTION</u>	
FTSD-6-0-3-C	1017-639 Starting Drill	or
FTSR-6-0-3-C	1018-921 Reamer	Fatigue Technology Inc. 401 Andover Park East Seattle, WA 98188 (206) 246-2010 sales@fatiguetech.com
FTN-6-0-3	5192-035 FYCX Nosecap	
FTG-6-0-3	2072-859 Combination Gage	
FTGM-6-0-3	2843-318 Mandrel Check Gage	
FTM-6-0-3-8	5200-053 Mandrel FTCX	
LB-20	2305-003 Puller Assembly	
FT-20	2677-001 FT-20 Pump Assembly	
600N3510-1-DJ1	Drill Fixture	MDHI

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I. Material/Part Availability:

Owners/operators who comply with this Bulletin are eligible for special pricing for parts, labor credit and technical assistance. Contact MDHI Parts Sales Dept. for price and parts availability.

Parts marked with an asterisk (*) are included in Kit, P/N TBK007. Contact MDHI Parts Sales Dept. or Warranty and Repair Dept., as applicable. Other parts/supplies may be purchased locally from commercial sources.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
*Clip	500N3427-7	6	MDHI
*Clip	500N3427-9	2	MDHI
*Angle	500N3120-9	1	MDHI
*Angle	500N3120-10	1	MDHI
*Longeron	600N3120-1	1	MDHI
*Longeron	600N3120-2	1	MDHI
*Angle	600N3121-1	1	MDHI
*Angle	600N3121-2	1	MDHI
*Spacer	600N3122-3	2	MDHI
*Angle	600N3123-1	1	MDHI
*Angle	600N3123-2	1	MDHI
*Angle	600N3124-1	1	MDHI
*Angle	600N3124-2	1	MDHI
*Fitting	600N3130-3	2	MDHI
*Strut	600N3130-5	1	MDHI
*Fitting	600N3422-1	4	MDHI
*Bracket	500N3429-9	1	MDHI
*Bracket	500N3429-10	1	MDHI
*Doubler	500N3127-21	1	MDHI
Rivet	MS20470AD3-1	6	Commercial
Rivet	MS20470AD4-28	6	Commercial

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Rivet	MS20470AD4-3	10	Commercial
Rivet	MS20470AD3-3	200	Commercial
Rivet	MS20470AD3-4	200	Commercial
Rivet	MS20470AD4-4	100	Commercial
Rivet	MS20615-5M3	20	Commercial
Rivet	MS20615-5M7	20	Commercial
Rivet	MS20615-5M6	12	Commercial
Rivet	MS20615-4M3	4	Commercial
Rivet	MS20615-4M4	48	Commercial
Rivet	MS20615-4M5	128	Commercial
Rivet	MS20426AD3-7	8	Commercial
Rivet	MS20426AD4-3	18	Commercial
Rivet	NAS1919B04S02	58	Commercial
Rivet	NAS1919B05S02	4	Commercial
Rivet	NAS1919B04S03	120	Commercial
Rivet	NAS1919B04S04	120	Commercial
Rivet	NAS1921B04S02	25	Commercial
Rivet	NAS1921B04S03	25	Commercial
Rivet	MS20426A4-1	8	Commercial
Rivet	MS20427M5-4	8	Commercial
Rivet	NAS1097AD3-5	36	Commercial
Rivet	NAS1720KE4L2A	76	Commercial
Rivet	NAS1738B4-6	20	Commercial
*Pin Rivet	MHS5605-5-5	16	MDHI
*Pin Rivet	MHS5603-5-3	3	MDHI
*Pin Rivet	MHS5603-5-7	7	MDHI

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
*Collar	MHS5583-5	4	MDHI
*Collar	MHS5582-5	22	MDHI
Bolt	NAS6603-16	1	Commercial
Washer	NAS1149F0363P	1	Commercial
Spacer	NAS43DD3-45	1	Commercial
Clamp	AN742-12	1	Commercial
Nutplate	MS21075L3	4	Commercial
Ty-wrap	MS3367-2-0	4	Commercial
*Retainer, Nutplate	FTR-771-603-.280-S	4	Fatigue Technology, Inc.
Nutplate	NAS1794C6-1	4	Commercial
*Bolt	MHS5482-6H18	4	MDHI
Washer	NAS1587-6C	2	Commercial
*Sleeve	CBS-4-0-N-16F	12	Fatigue Technology, Inc.
*Sleeve	CBS-4-2-N-16F	12	Fatigue Technology, Inc.
*Sleeve	FTS-6-0-3-8	4	Fatigue Technology, Inc.
Rivet	MS20605R3W2 or NAS9302B-2 or CR3212-4	8	Commercial
*ID Plate	MHS4951-1	1	MDHI
Chemical Coating (MIL-C-5541)	Iridite 14-2 Al-Coat Alodine 1201	AR	Commercial
Primer (MIL-P-23377, TI, CC or TII)		AR	Commercial
Sealing Compound (Fuel Resistant)	Pro-Seal 890	AR	Product Research and Chemical Co. 5426 San Fernando Rd Glendale, CA 91209

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
Adhesive, Epoxy (MDM 16-1068, C1)	EA9330.3	AR	Dexter Adhesive & Coating Systems 2850 Willow Pass Rd P.O. Box 312 Bay Point, CA 94565-0031 (925) 458-8000 (800) 424-9300
Adhesive, Epoxy (MDM 16-1068, C7)	EA9309.3	AR	Dexter Adhesive & Coating Systems 2850 Willow Pass Rd P.O. Box 312 Bay Point, CA 94565-0031 (925) 458-8000 (800) 424-9300
Epoxy, Clear	Epibond1217	AR	Vantico, Inc. 4917 Dawn Avenue East Lansing MI 48823 (800) 367-8793

J. Weight and Balance:

MODIFICATION	WEIGHT Pounds (kg)	LONGITUDINAL ARM Inches (cm)	LATERAL ARM Inches (cm)
Fuselage Aft Section Modification	4.25 (1.93)	165.5 (420.37)	0 (0)

K. Warranty Policy:

Standard warranty applies.

L. Interchangeability:

None

M. Electrical Load Data:

N/A

N. Other Publications Affected:

Basic Handbook of Maintenance Instructions, Servicing and Maintenance (CSP-HMI-2).
 Illustrated Parts Catalog (CSP-IPC-4).

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O. Points of Contact

For further assistance:

Field Service Department
Telephone 1-800-388-3378 or (480) 346-6387.
DATAFAX: (480) 346-6813.

Spare Parts Sales Department
Telephone 1-800-388-3378 or (480) 346-6377.
DATAFAX: (480) 346-6821.

2. ACCOMPLISHMENT INSTRUCTIONS



A high level of sheet metal expertise and experience is required to perform this modification.

A. Preparation

- (1). Remove fan air inlet screen (Ref. CSP-HMI-2, Section 53-30-30, Fan Air Inlet Screen Removal).
- (2). Remove engine plenum access cover (Ref. CSP-HMI-2, Section 53-30-30, Engine Plenum Access Cover Removal).
- (3). Remove fan hub fairing and transmission cover (Ref. CSP-HMI-2, Section 53-30-30, Fan Hub Fairing and Transmission Cover Removal).
- (4). Remove fan inter-connect drive shaft (Ref. CSP-HMI-2, Section 63-15-30, Fan Inter-Connect Drive Shaft Removal)
- (5). Remove anti-torque fan liner (Ref. CSP-HMI-2, Section 64-25-30, Anti-Torque Fan Liner (Felt Metal Seal) Removal).

(Ref. Figure 1)

- (6). Remove fairings



Do not exceed 160° F (71° C) when heating fairings.

- (a). Apply heat and use a wedge to separate upper fairing (P/N 500N3200-3 and fairing assembly (P/N 500N3200-33) from forward lower end of fairing (P/N 500N3125-3).
- (b). If necessary, apply heat to adhesive bonding fairing (P/N 500N3125-73) and fairing (P/N 500N3125-3) to ring (P/N 500N3125-35) and fan support. Remove fairing (P/N 500N3125-35) and ring. Remove leg fairings (P/N 500N3432-3, -11).
- (c). Remove rivets attaching upper fairing (P/N 500N3200-3) to longerons and fan support frame.
- (d). Soften adhesive by applying heat and remove upper fairing (P/N 500N3200-3).

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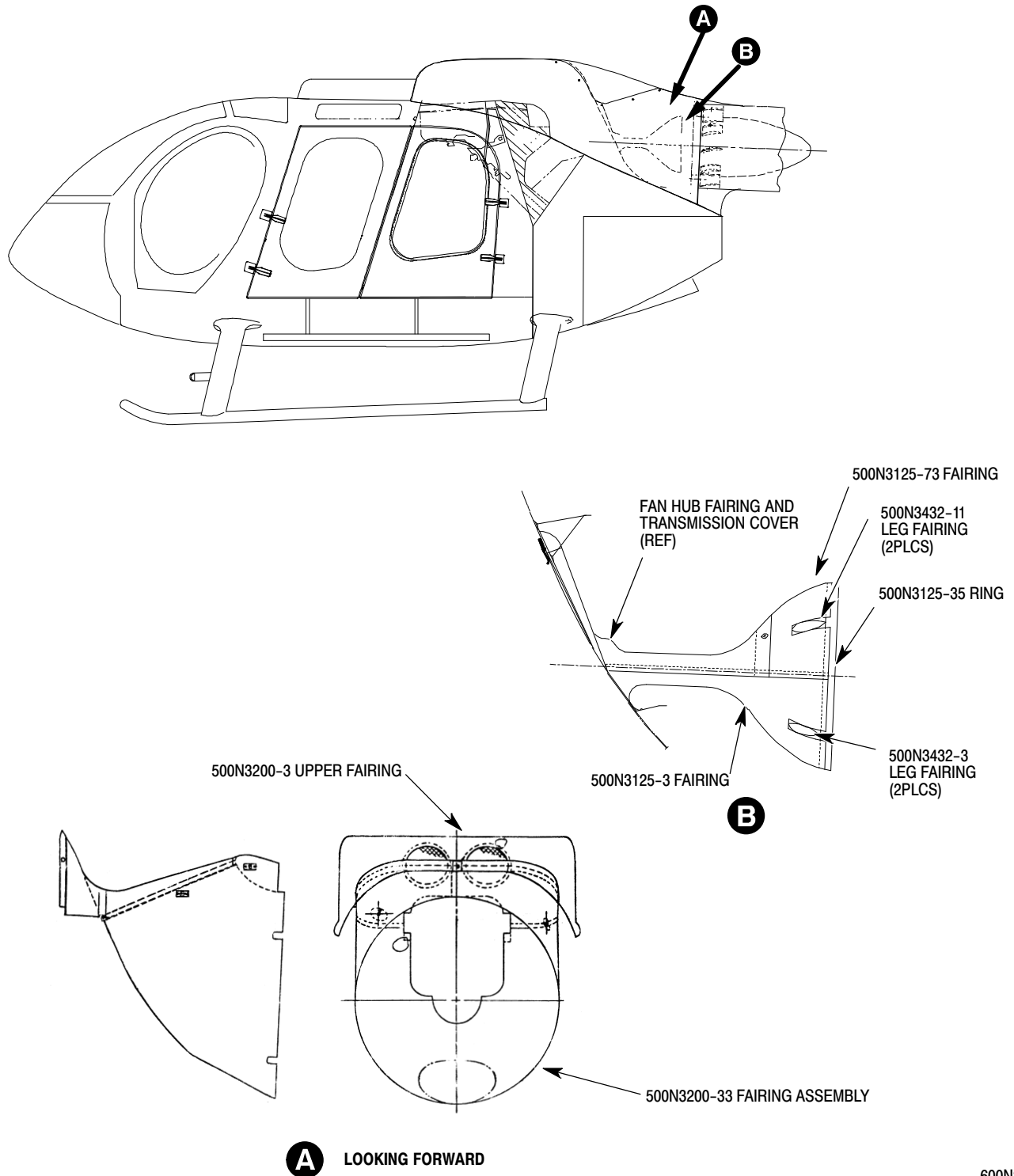
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- (e). Remove fairing assembly (P/N 500N3200-33).
 - 1). Remove rivets attaching fairing assembly to fan support frame.
 - 2). Apply heat to bottom of forward lower edge of fairing assembly) and peel fairing away from flange.
 - 3). Apply heat to sides of fairing assembly and peel fairing away from stringers.
 - 4). Apply heat to top of aft lower edge of fairing assembly and separate from fan support frame using skin wedge.
 - 5). Remove and discard rivets, pins, collars, two fittings (P/N 500N3130-3) and tube (P/N 500N3130-7). (Ref. Figure 2, View C-C).
 - 6). Remove fairing assembly from helicopter. (Ref. Figure 1.)

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Figure 1. Location of Fairings

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(Ref. Figure 2)

(7). Remove outer skin.

NOTE: Use standard sheet metal practices.

Inspect all retained parts and aft ring frame for cracks. Contact MDHI Field Service Dept. if any cracks are found.

- (a). Remove rivets and remove and retain outer ring frame upper skin (P/N 500N3426-3).
- (b). Remove rivets and remove and retain LH and RH upper cover (P/N 500N3426-13/-15).
- (c). Remove rivets and remove and retain LH angle (P/N 500N3426-11).
- (d). Remove rivets and remove and retain LH and RH strap (P/N 600N3000-7/-8).
- (e). Remove rivets and remove and retain LH and RH outer ring frame lower skin (P/N 500N3426-5/-6).
- (f). Remove rivets and remove and retain LH and RH outer aft fuselage skin (P/N 500N3127-3/-4).

B. Modification

(Ref. Figure 2)

- (1). Remove and retain four nutplates from back of outboard facing flange of aft ring frame (Ref. Details D and E).
- (2). Remove upper and lower tailboom attach fittings.
 - (a). Remove rivets and remove and discard LH upper fitting (P/N 500N3422-3) and RH upper fitting (P/N 500N3422), LH bracket (P/N 500N3429-7), RH bracket (P/N 500N3429-6), nutplates, and clip (added by Service Bulletin SB600-036). Remove and retain LH bracket, (P/N 500N3428-5) and RH bracket, (P/N 500N3428-6). (Ref. Detail D.)
 - (b). Remove rivets and remove discard LH lower fitting (P/N 500N3422), RH lower fitting (P/N 500N3422-3) and nutplates. Remove and retain LH angle (P/N 500N3424-9, RH angle (P/N 500N3424-12, LH angle 500N3424-7), and RH angle (P/N 500N3424-8). (Ref. Detail E.)
- (3). If necessary, tag and de-pin wires from J208 and J513 (Ref. CSP-HMI-3, Section 96-00-00, Electrical Connectors).
- (4). Remove and retain hardware, clamp and guide tube (P/N 500N3210-1). (Ref. View B-B.)
- (5). Remove longerons and associated parts.
 - (a). Remove rivets and remove and discard LH doubler (P/N 600N3000-15, LH angle (P/N 500N3120-7), RH angle (P/N 500N3120-8), and spacers (LH and RH) (P/N 500N3120-35). (Ref. View B-B.)
 - (b). Remove rivets and remove and discard angles (P/N 500N3120-9, -10) and longerons (P/N 500N3120-3, -4). (Ref. View A-A.)

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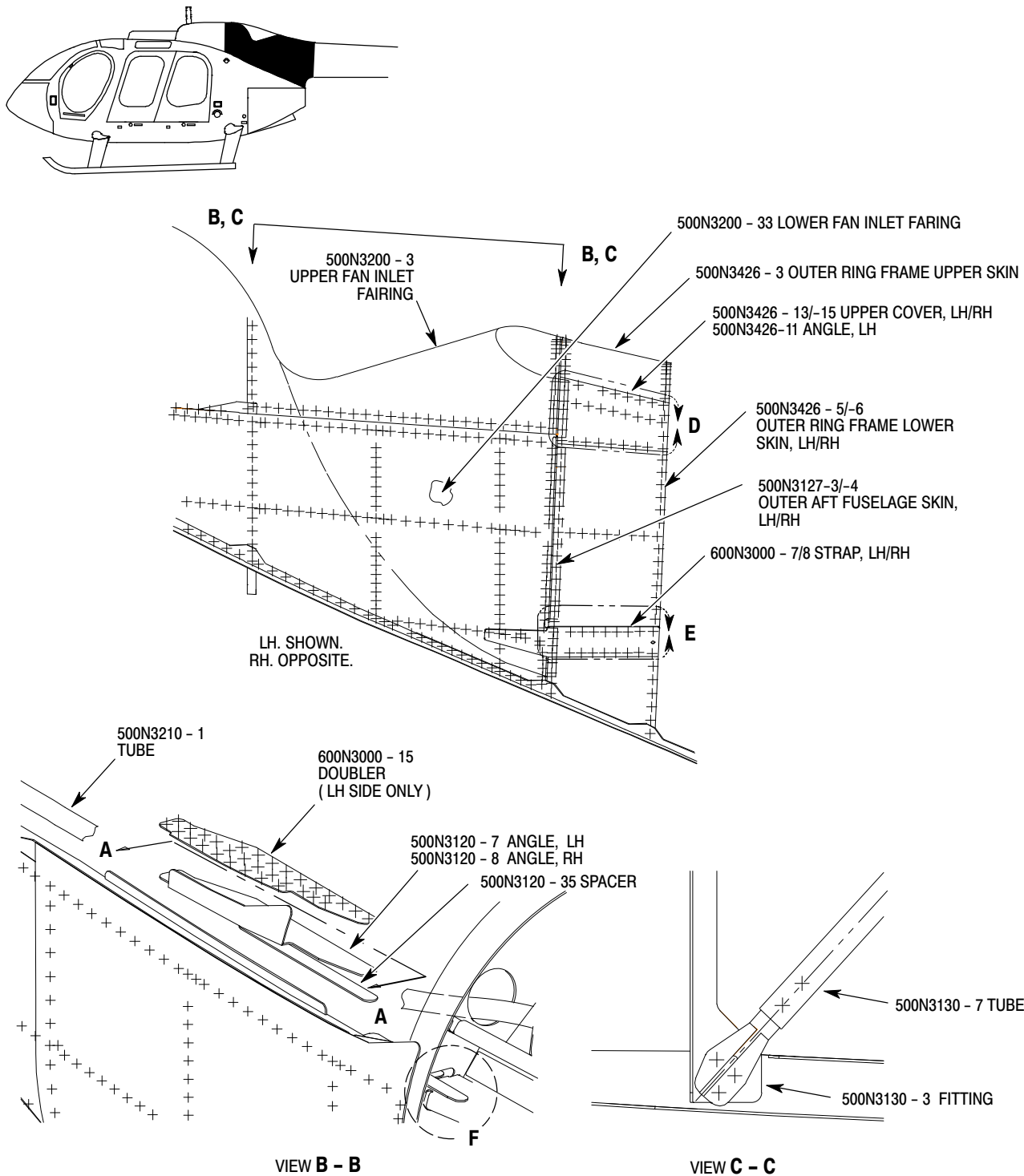
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- (6). Rework fan support.
 - (a). Trim both sides of fan support as shown. (Ref. Detail F.)
 - (b). Apply chemical coating to reworked areas per manufacturer's instructions.
 - (c). Apply primer to reworked areas per manufacturer's instructions.
- (7). Install new longerons (P/N 600N3120-1/-2) and angles (P/N 500N3120-9/-10).
 - (a). Position new longerons on airframe. (Ref. View A-A.)
 - (b). Temporarily install LH and RH outer aft fuselage skins (P/N 500N3127-3/-4) and match drill attach holes in longerons.
 - (c). Match drill nutplate attach holes in longerons.
 - (d). Remove LH and RH outer aft fuselage skins.

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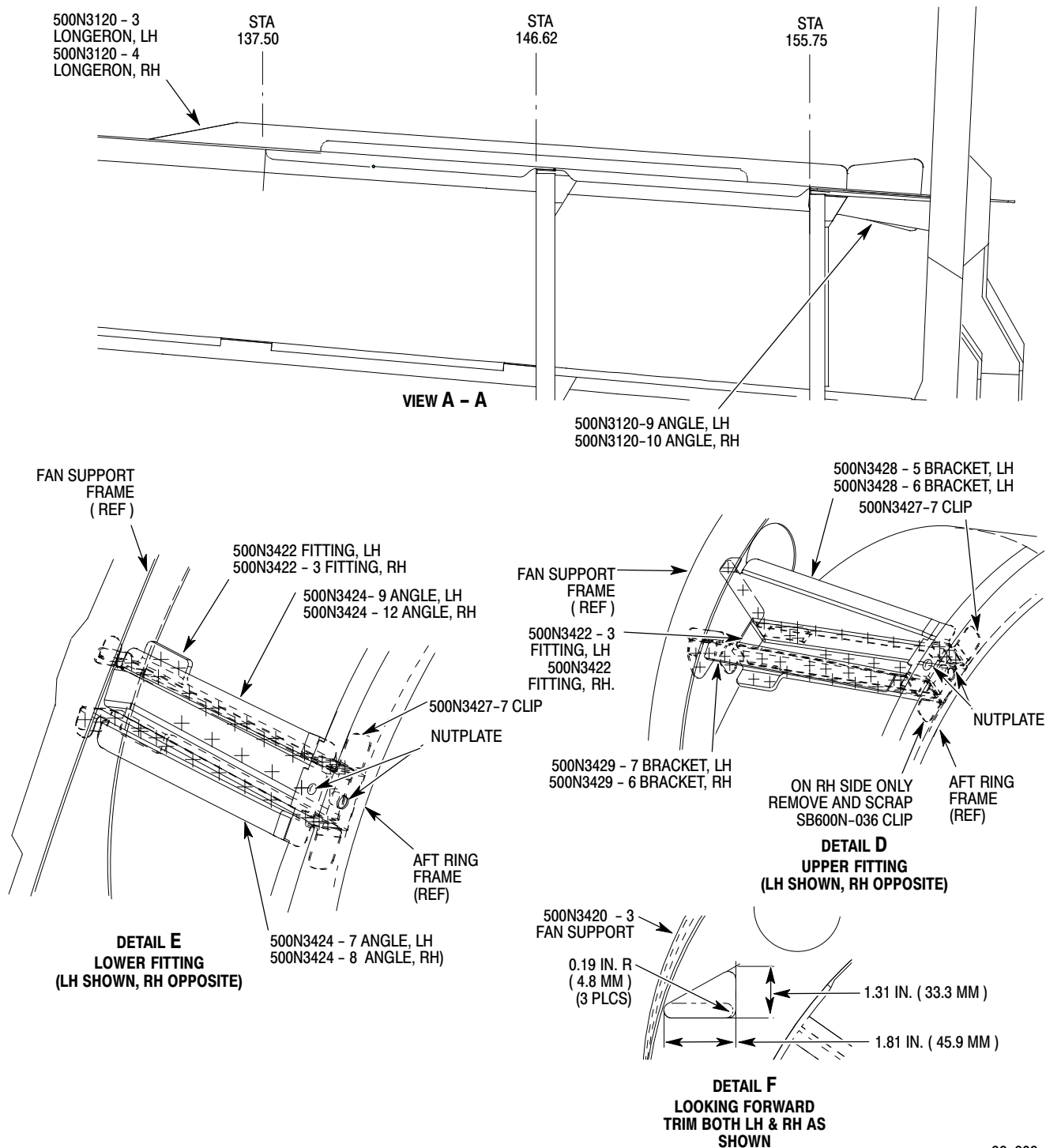
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Figure 2. Fuselage Aft Section Parts Removal and Modification (Sheet 1 of 2)

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Figure 2. Fuselage Aft Section Parts Removal and Modification (Sheet 2 of 2)

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(Ref. Figure 3)

(8). Position upper tailboom attach fittings. (Ref. View J-J.)

- (a). Touch countersink and double flush install two MS20426A4-1 rivets in holes adjacent to each upper tailboom attach hole in aft ring frame.
- (b). Position new brackets (P/N 500N3429-9/-10), new fittings (P/N 600N3422-1) and retained brackets (P/N 500N3428-5/-6) between aft ring frame and fan support frame.
- (c). Position two upper clips (P/N 500N3427-7) and two lower clips (P/N 500N3427-9) and clamp into place.
- (d). Mark location for all rivet holes on brackets, fittings and clips.
- (e). Remove brackets, fitting and clips.



Ensure that minimum edge distance is maintained for all rivet holes.

- (f). Drill rivet holes in new fitting using drill press.
- (g). Deburr holes and remove all debris.
- (h). Temporarily install clips, brackets and fittings with clecos.
- (i). Match drill tailboom attach bolt hole in aft end of each fitting. (Ref. View L-L.)
- (j). Remove brackets, fitting and clips.
- (k). Deburr holes and remove all debris from fittings.
- (l). Install clips, brackets and fittings with rivets, as shown. (Ref. View J-J.)



Check fit clearance between rivet tails and nutplate retainer before final installation. Buck rivets again, if needed, to provide clearance for nutplate retainer.

- (m). Install nutplate (P/N MS21075L3) in fitting with rivets, as shown.
- (9). Position lower tailboom attach fittings. (Ref. View K-K.)
- (a). Touch countersink and double flush install two MS20426A4-1 rivets in holes adjacent to each upper tailboom attach hole in aft ring frame.
 - (b). Position new fittings (P/N 600N3422-1) and retained angles (P/N 500N3424-7/-8/-9/-12) between aft ring frame and fan support frame.
 - (c). Position two upper clips (P/N 500N3427-7) and two lower clips (P/N 500N3427-7) and clamp into place.
 - (d). Mark location for all rivet holes on brackets, fittings and clips.
 - (e). Remove brackets, fitting and clips.



Ensure that minimum edge distance is maintained for all rivet holes.

- (f). Drill rivet holes in new fitting using drill press.

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- (g). Deburr holes and remove all debris.
- (h). Temporarily install clips, brackets and fittings with clecos.
- (i). Match drill tailboom attach bolt hole in aft end of each fitting. (Ref. View L-L.)
- (j). Remove brackets, fitting and clips.
- (k). Deburr holes and remove all debris from fittings.
- (l). Install clips, brackets and fittings with rivets, as shown. (Ref. View K-K.)



Check fit clearance between rivet tails and nutplate retainer before final installation. Buck rivets again, if needed, to provide clearance for nutplate retainer.

- (m). Install nutplate (P/N MS21075L3) in fitting with rivets, as shown.
- (10). Install angles and spacers.
 - (a). Layout rivet hole pattern on longerons and drill pilot holes using #40 drill bit. (Ref. View F-F.)
 - (b). Position aft section angles (P/N 600N3121-1/-2), spacers (P/N 600N3122-3), angles (P/N 600N3123-1/-2) and angles (P/N 600N3124-1/-2) in position on longeron as shown and clamp securely into place. (Ref. Section H-H.)

NOTE:

- Maintain 0.010-0.025 inch (0.254-0.635mm) gap between longeron and spacer (P/N 600N3122-3).
- Shim as required with 2024-T3 aluminum sheet to eliminate gap between spacers (P/N 600N3122-3) and brackets (P/N 500N3429-9/-10).
- Fabricate 0.063 inch (1.60 mm) shim for specific rivet location as shown. (Ref. View F-F.)
- (c). Transfer holes to all angles and spacers.
- (d). Drill and cleco rivet holes through angles and spacers. (Ref. View F-F.)
- (e). Remove angles and spacers and deburr rivet holes. Touch up with primer as needed.
- (f). Install longerons in airframe and install nutplates on longerons.
- (g). Match drill and temporarily install angles (P/N 500N3120-9/-10).
- (h). Install angles and spacers on longerons and attach with rivets, as shown. (Ref. View F-F.)
- (i). Permanently install LH and RH outer aft fuselage skins (P/N 500N3127-3/-4).



When cold-working the rivet holes, ensure holes do not get oversized. Ream to proper size as per Notes 1 and 2 of Figure 3.

- (j). Cold work 12 rivet holes (each side) using proper sized tooling.
- (k). Install 12 rivets (Ref. Sheet 2 of 5)
- (11). Using drill fixture 600N3510-1-DJ1, enlarge four tailboom attach holes in aft ring frame. (Ref. View L-L.)

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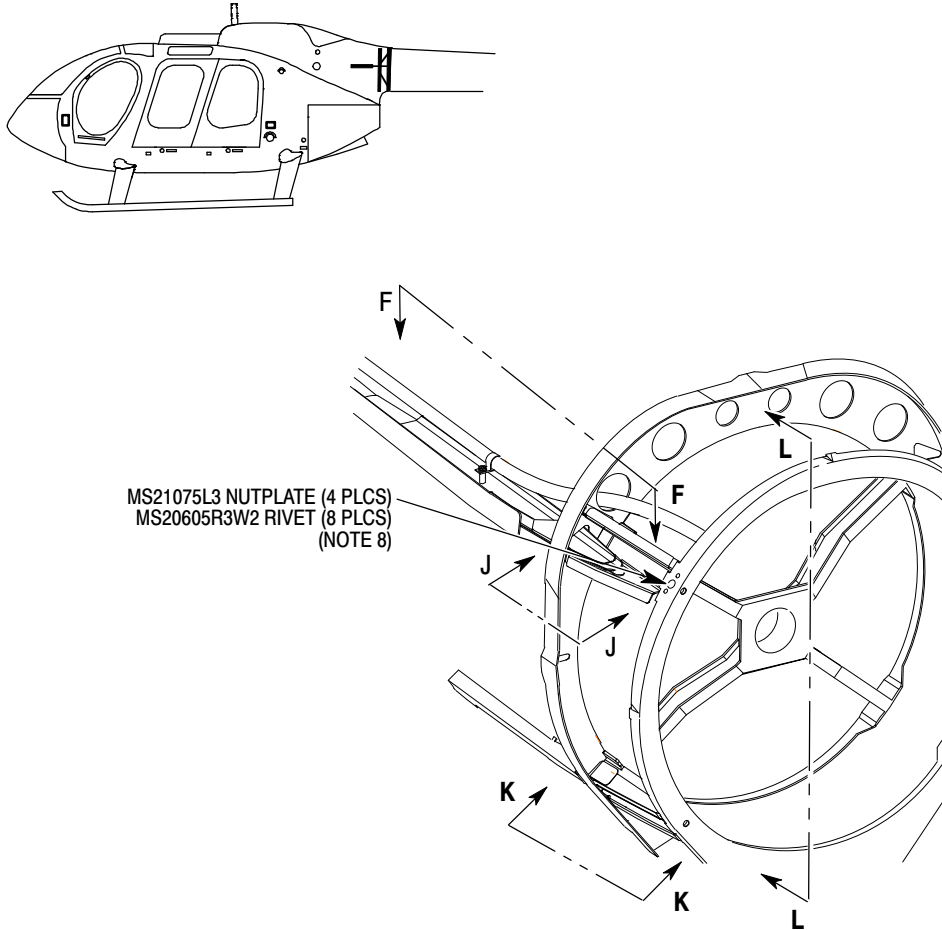
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- (a). Install one nutplate retainer (P/N FTR-771-603-.280-S) in hole in aft end of each fitting using nutplate retainer tooling per manufacturer's instructions. Ensure that flat side of nutplate retainer is facing toward fitting so that nutplate can be installed.
- (b). Install one nutplate (P/N NAS1794C6) in each retainer using clip supplied with retainer.
- (12). Reinstall four nutplates (P/N MS21075L3) with rivets (P/N MS20605R3W2) on back of outboard facing flange of aft ring frame. (Ref. Figure 3, Main View.)
- (13). Install guide tube, as follows. (Ref. Section G-G.)
 - (a). Place guide tube (P/N 500N3210-1) into position.
 - (b). Route tube (P/N 500N3000-51) with guide tube.
 - (c). Place clamp on guide tube and secure with one bolt, washer and spacer.
 - (d). Secure tube to guide tube with four ty-wraps, as shown.
- (14). If required, reconnect wires to connectors J208 and J513 (Ref. CSP-HMI-3, Section 96-00-00, Electrical Connectors).

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NOTES:

1. COLD WORK RIVET HOLES USING 4 - 0 - N SIZED TOOLING AND CBS-4-0-N SLEEVES. REAM TO 0.128 IN. (3.25 MM) AFTER COLD WORK.
2. COLD WORK RIVET HOLES USING 4 - 2 - N SIZED TOOLING AND CBS-4-2-N SLEEVES. REAM TO 0.159 IN. (4.04 MM) AFTER COLD WORK.
3. TRIM FITTING FOR RH. INSTALLATION AS REQUIRED TO CLEAR STRUCTURE. BLEND TRANSITIONS AND RADIUS ALL CORNERS. FINISH WITH CHEMICAL COATING AND PRIMER.
4. TRIM TO MAINTAIN 0.010 - 0.025 IN. (0.254 - 0.635 MM) GAP BETWEEN 600N3120 - 1 / -2 LONGERON AND 600N3122 - 3 SPACER (REF. VIEW N)
5. SHIM AS REQUIRED WITH 2024 - T3 AL SHEET TO ELIMINATE GAP BETWEEN 600N3122 SPACER AND 500N3429 BRACKET. FABRICATE SHIM TO SPAN FROM FORWARD PIN RIVETS AND AFT TO LAST RIVET ON 600N3122 SPACER. WIDTH TO MATCH SPACER.
6. FABRICATE 0.063 IN. (1.60 MM) SHIM FOR THIS RIVET LOCATION.
7. MATCH DRILL TO 600N3422 FITTING. INSTALL NUTPLATE RETAINER IN 600N3422 FITTING PER MANUFACTURERS INSTRUCTIONS PER DIMENSIONS SHOWN USING NUTPLATE RETAINER INSTALLATION TOOLING.
8. REMOVE AND RETAIN FOUR NUTPLATES. REINSTALL NUTPLATES WITH MS20605R3W2 RIVETS AFTER INSTALLATION OF TAILBOOM ATTACH BOLT NUTPLATES.
9. MHS5583-5 COLLARS MAY BE SUBSTITUTED FOR MHS5582-5 COLLARS IF THERE IS NO MISALIGNMENT AND SHORT THREAD PROTRUSION.

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Figure 3. Fuselage Aft Section Modification (Sheet 1 of 5)

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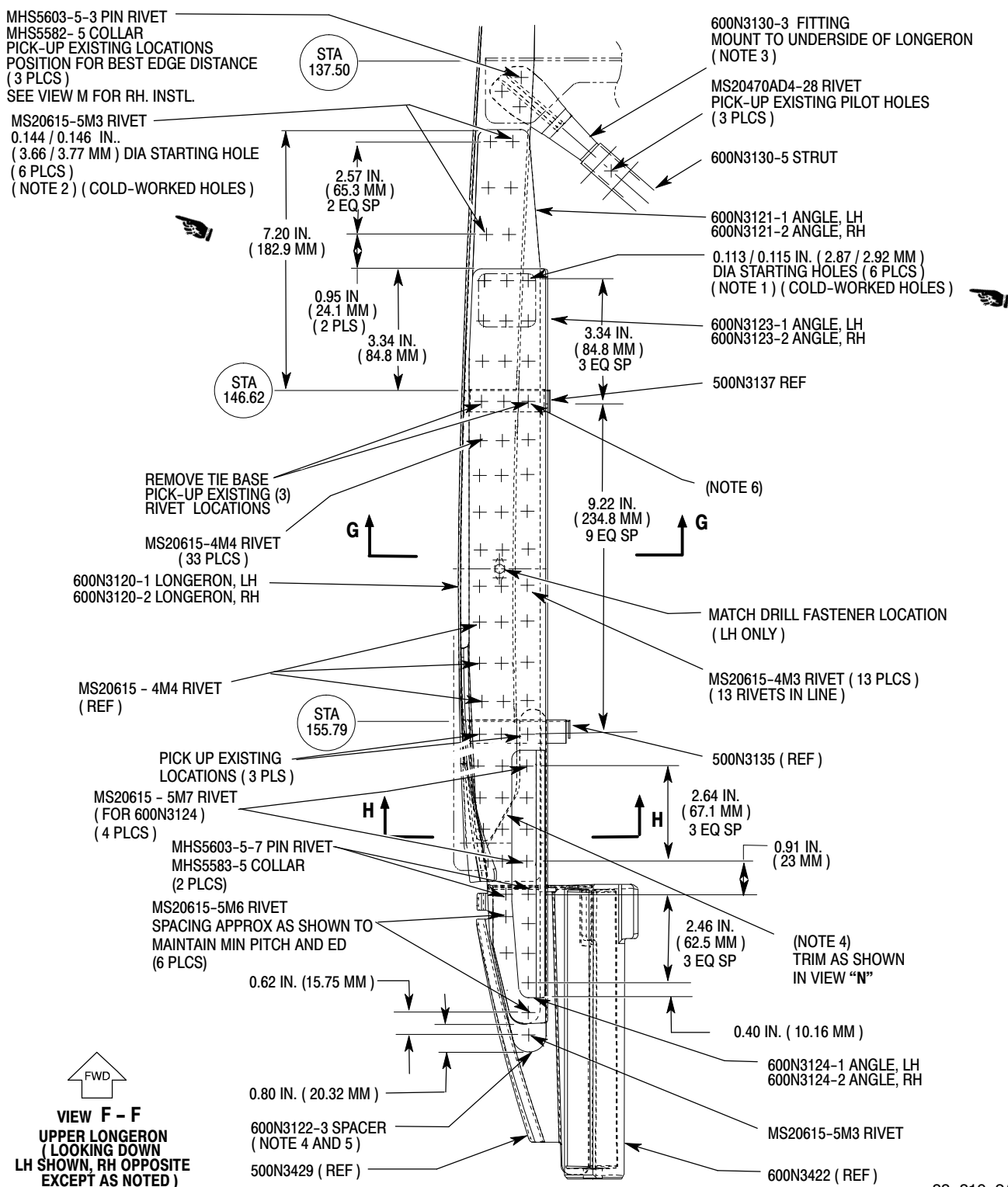
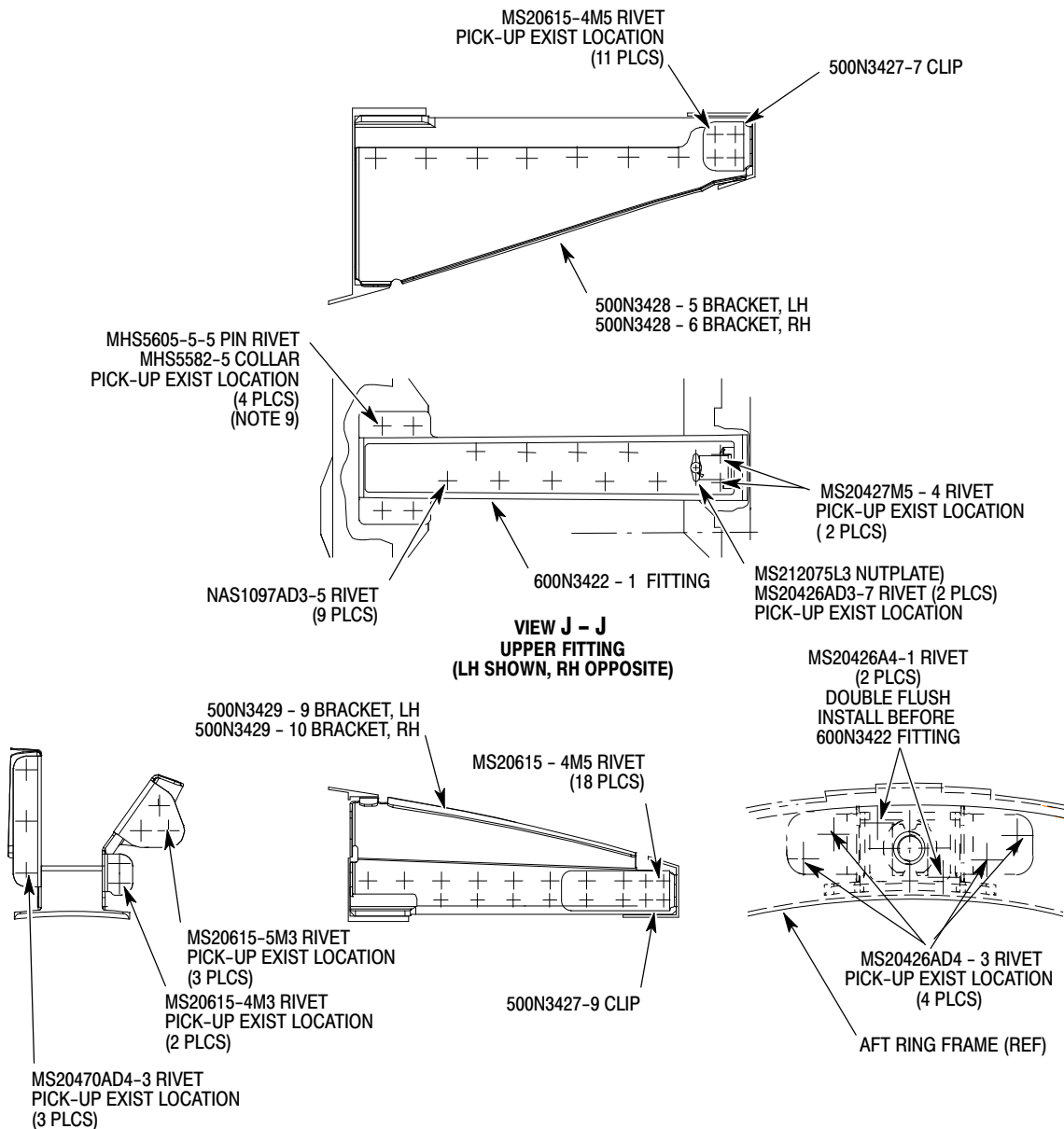


Figure 3. Fuselage Aft Section Modification (Sheet 2 of 5)

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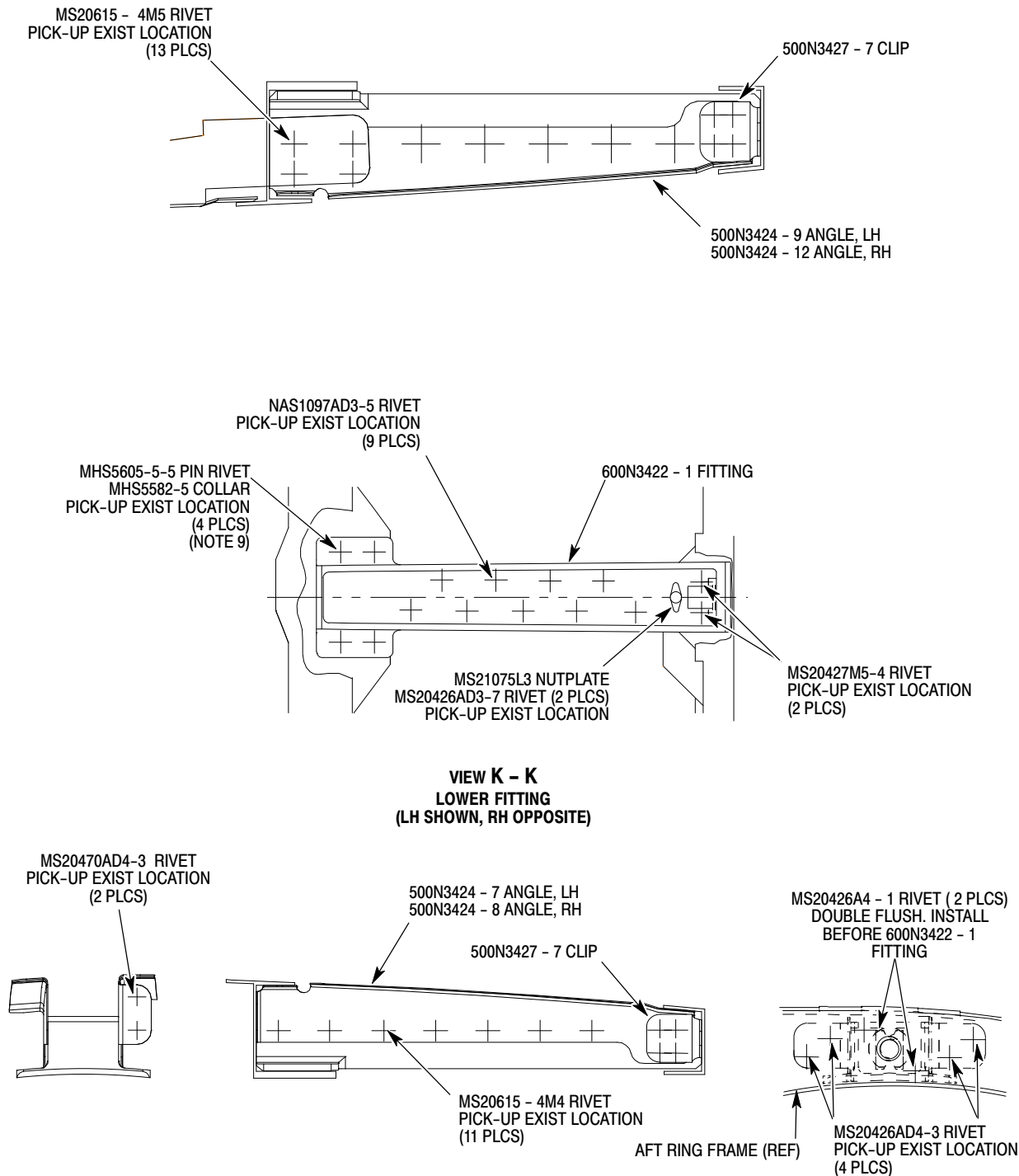
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Figure 3. Fuselage Aft Section Modification (Sheet 3 of 5)

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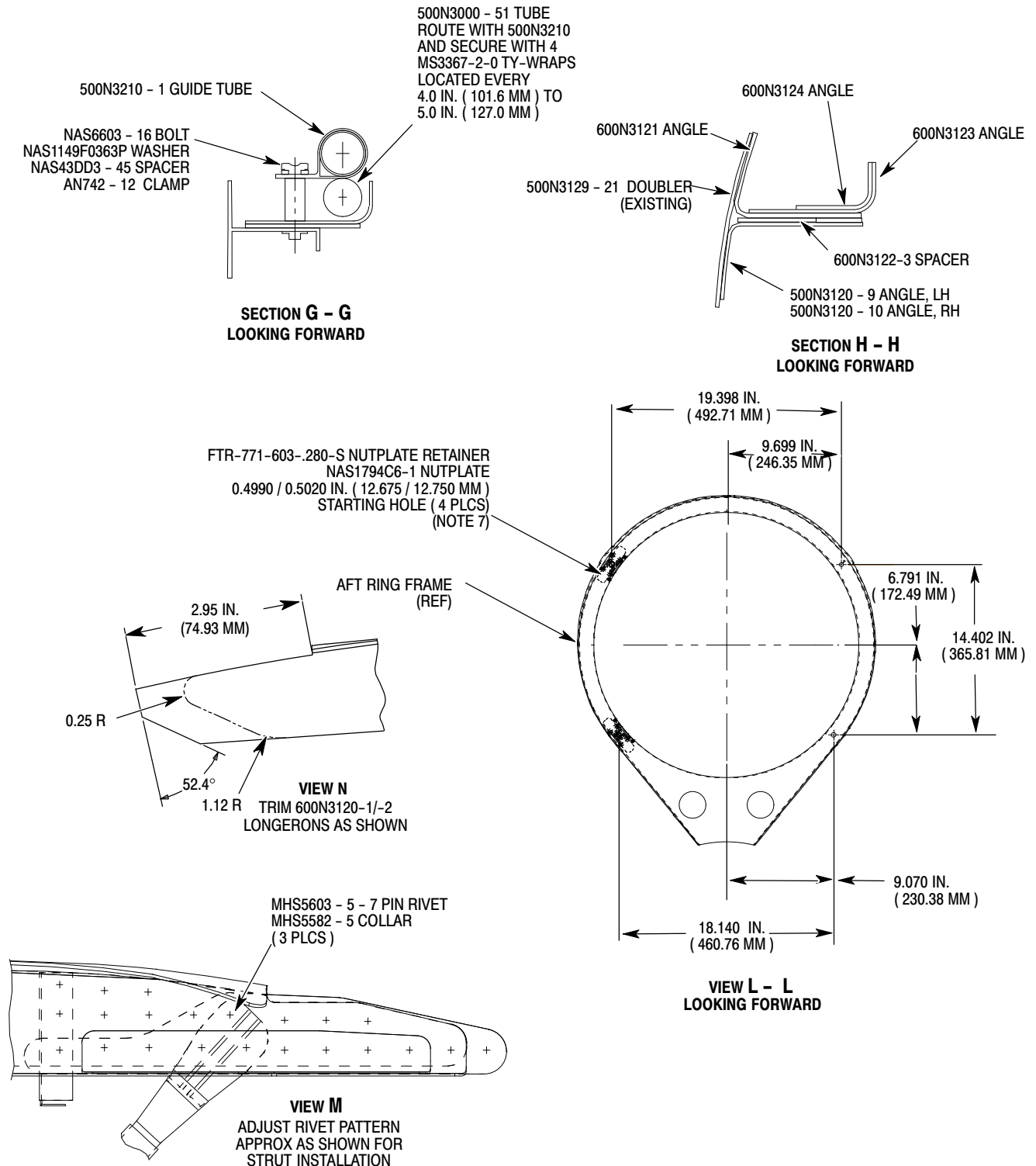
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Figure 3. Fuselage Aft Section Modification (Sheet 4 of 5)

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Figure 3. Fuselage Aft Section Modification (Sheet 5 of 5)

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(Ref. Figure 4)

(15). Install inspection hole.

- (a). Locate and drill one 0.50 inch (12.7mm) inspection hole (L137) in left side of fuselage.
- (b). Apply chemical coating and primer to inspection hole per manufacturer's instructions.
- (c). Install doubler with six MS20470AD3 rivets.

NOTE: Seal exterior sheet metal parts with sealing compound per manufacturer's instructions.

C. Completion

(1). Install outer skin.

- (a). Install LH angle (P/N 500N3426-11) on ring frame.
 - (b). Install LH and RH outer ring frame lower skin (P/N 500N3426-5/-6).
 - (c). Install LH and RH strap (P/N 600N3000-7/-8).
 - (d). Install LH and RH upper cover (P/N 500N3426-13/-15).
 - (e). Install upper outer ring frame skin (P/N 500N3426-3) using NAS1919B04S rivets.
- (2). Position fairing assembly (P/N 500N3200-33) in fuselage and bond bottom and sides to fuselage skin and stringers using epoxy adhesive (EA9309.3). (Ref. Figure 1.)
- (3). Install strut assembly. (Ref. Figure 3, View F-F.)
- (a). Temporarily assemble strut (P/N 600N3130-5 and two fittings (P/N 600N3130-3).
 - (b). Place strut assembly as shown and clamp into position.
 - (c). Back drill rivet holes in fitting (through longerons and strut).
 - (d). Remove strut and fittings and deburr rivet holes.
 - (e). Place fittings on strut and attach with rivets.
 - (f). Position strut assembly and attach with rivets, as shown.
- (4). Install anti-torque fan liner (Ref. CSP-HMI-2, Section 64-25-30, Anti-Torque Fan Liner (Felt Metal Seal) Installation).
- (5). Install fairings.
- (a). Attach fairing assembly (P/N 500N3200-33) to fan support frame using NAS1738B4-6 rivets .
 - (b). Position upper fairing (P/N 500N3200-3) on fuselage. (Ref. Figure 1.)
 - (c). Bond upper fairing and fairing assembly using epoxy adhesive (EA9309.3) per manufacturers instructions.
 - (d). Attach upper fairing (P/N 500N3200-3 to longerons and fan support frame using NAS1720KE4L2A rivets .

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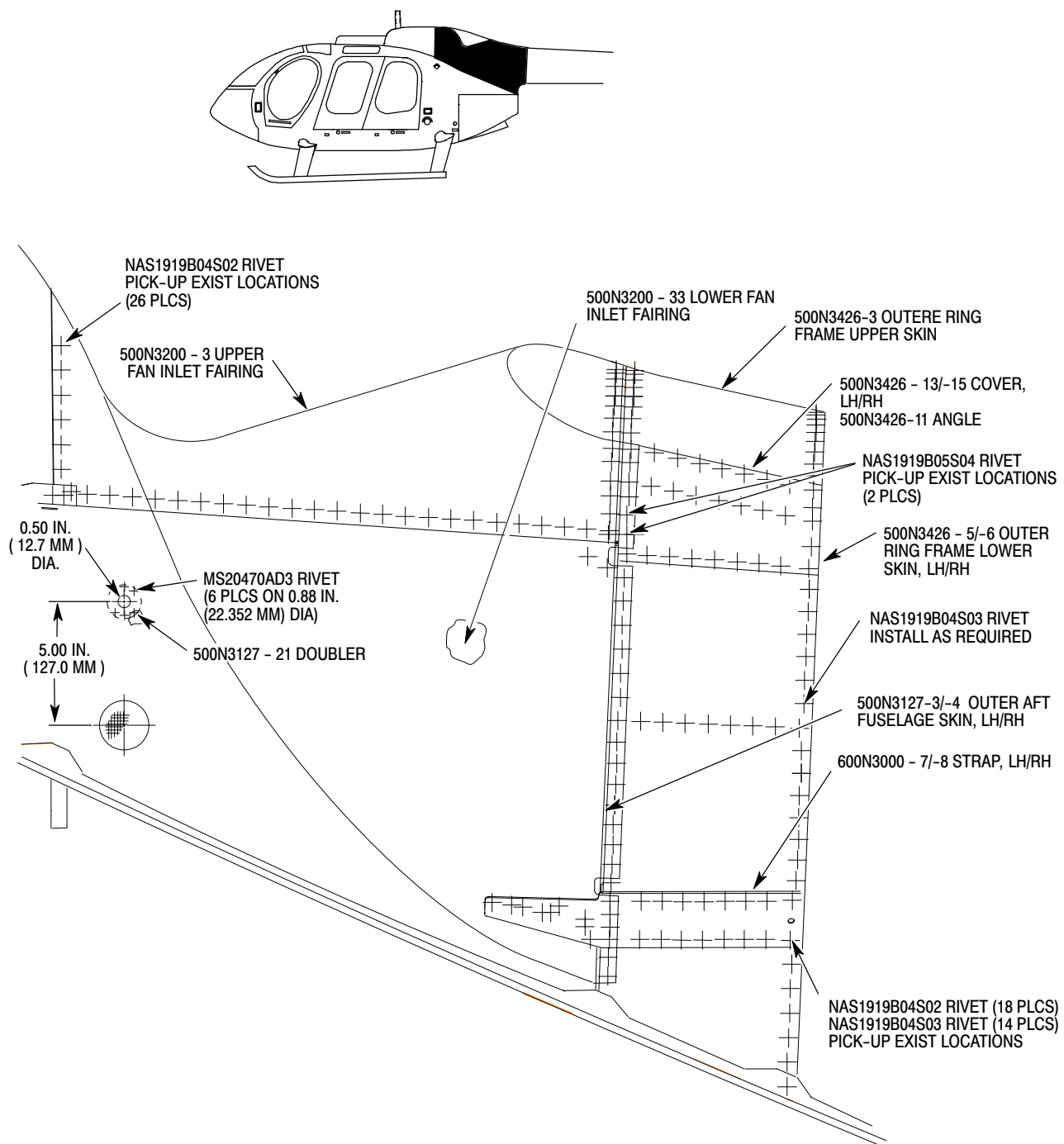
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- (e). If necessary, position ring (P/N 500N3125-35) and fairing (P/N 500N3125-3) at the fan support.
- (f). Bond ring, fairing and leg fairings (P/N 500N3432-3, -11) to fan support using epoxy adhesive (EA9330.3) per manufacturers instructions.
- (g). Bond forward lower end of fairing (P/N 500N3125-3) to upper fairing (P/N 500N3200-3) and fairing assembly (P/N 500N3200-33) using epoxy adhesive (EA9330.3) per manufacturers instructions.

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Figure 4. Fuselage Aft Section Rework and Installation of Parts

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(Ref. Figure 5)

(6). Modify tailboom assembly

NOTE: After completing the modification procedure below, the tailboom assembly cannot be installed on any helicopter serial RN003 thru RN068 that has not been modified by this Bulletin.

- (a). Using drill fixture 600N3510-1-DJ1, ream two tailboom attach holes to 0.378/0.386 inch (9.60/9.80 mm) and spotface to 0.750 inch (19.05 mm) diameter and 0.06 inch (1.5 mm) maximum depth.
- (b). Apply chemical coating to reworked holes in radius blocks per manufacturer's instructions.
- (c). Reidentify modified tailboom assembly. Pre and post modification part numbers are shown in Table 1).
 - 1). Carefully remove ID plate from tailboom assembly.
 - 2). Clean area where new ID plate will be installed with isopropyl alcohol or acetone.
 - 3). Peel backing off new ID plate and press plate on prepared surface. Roll ID plate with 1 inch (25.4 mm) cylindrical plastic roller.
 - 4). Edge seal ID plate with clear epoxy.

Table 1. Tailboom Assembly Reidentification

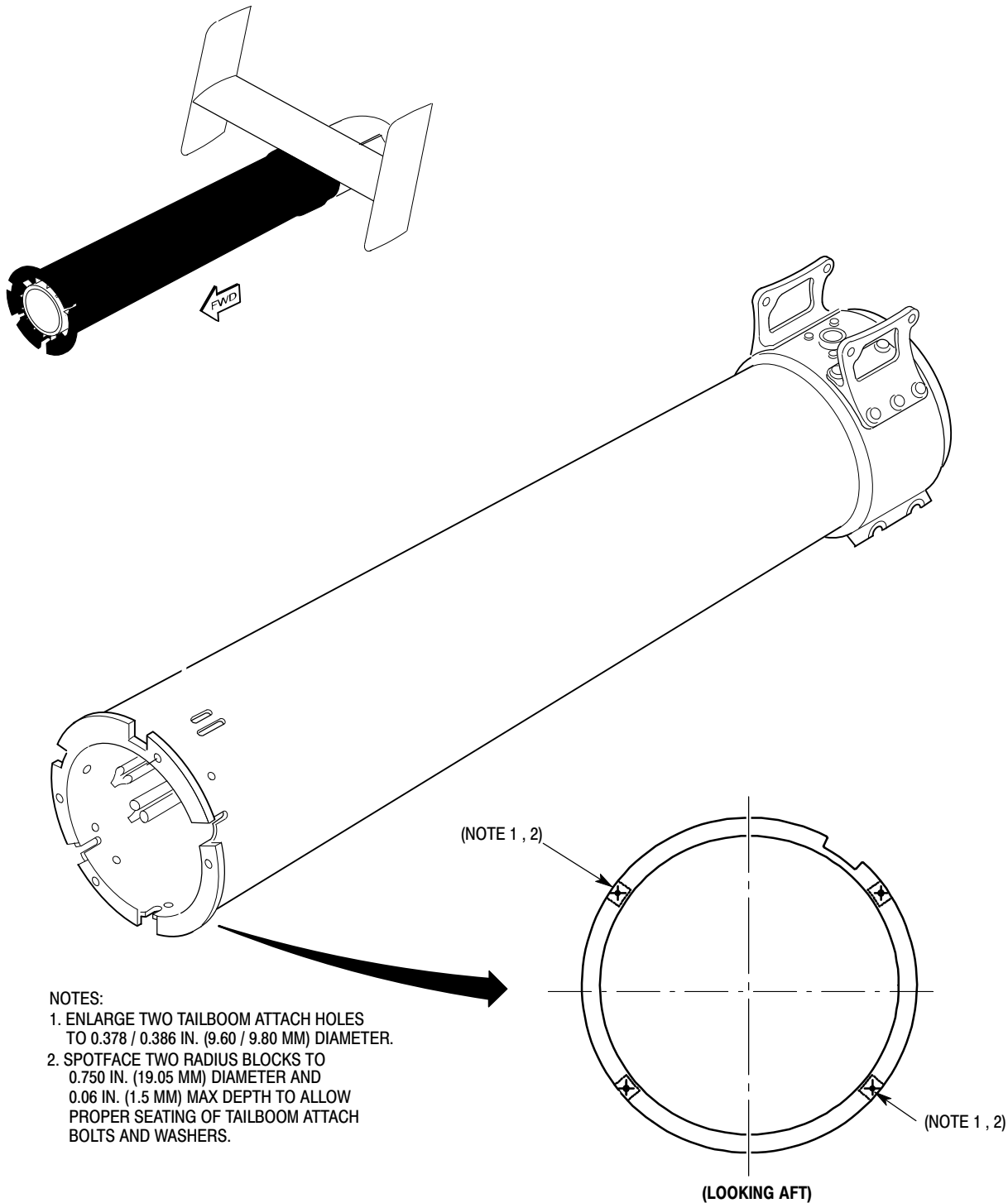
PRE MODIFICATION TAILBOOM P/N	POST MODIFICATION TAILBOOM P/N
600N3500-503	600N3500-513
600N3500-505	600N3500-515
600N3500-507	600N3500-517
600N3500-509	600N3500-511

- (7). Install fan inter-connect drive shaft (Ref. CSP-HMI-2, Section 63-15-30, Fan Inter-Connect Drive Shaft Installation).
- (8). Install fan hub fairing and transmission cover (Ref. CSP-HMI-2, Section 53-30-30, Fan Hub Fairing and Transmission Cover Installation).
- (9). Install engine plenum access cover (Ref. CSP-HMI-2, Section 53-30-30, Engine Plenum Access Cover Installation).
- (10). Install fan air inlet screen (Ref. CSP-HMI-2, Section 53-30-30, Fan Air Inlet Screen Installation)
- (11). Refer to Basic Handbook of Maintenance Instructions (CSP-HMI-2), Section 05-00-00 for recurring inspection requirements.

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Figure 5. Tailboom Assembly Rework

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3. IDENTIFICATION

Identify reworked tailboom assembly in accordance with the Accomplishment Instructions of the Bulletin.

4. DISPOSITION OF PARTS REMOVED

Scrap

5. COMPLIANCE RECORD

Record Compliance with this Technical Bulletin in the Compliance Record section of the helicopter Log Book.

Fax the Bulletin Incorporation Form to MDHI Field Service at DATAFAX: (480) 346-6813.

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FUSELAGE AFT SECTION AND TAILBOOM MODIFICATION

BULLETIN INCORPORATION FORM

Please fill in the information below, as applicable, and return to MDHI Field Service Dept. This form may be faxed to MDHI Field Service Department at **(480) 346-6813**.

FROM:	DATE:
Operator or Company Name:	
Name of Contact Person:	
Address:	
City, State, Country	
Telephone #:	
Fax #:	

HELICOPTER INFORMATION:	
Helicopter Serial Number:	
Helicopter Registration Number:	
Date of Compliance with this Bulletin:	

Comments/Information:

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VSCS TEST BOX

1. PLANNING INFORMATION

A. Aircraft Affected:

MD900 helicopters, serial number 900-000008 and subsequent rotorcraft.
600N helicopters with YSAS computer and all 500N helicopters.

B. Assembly/Components Affected By This Notice:

500N9701-13 stabilizer test box.

C. Reason:

Owner/Operators can make a VSCS test box to use on their helicopters.

D. Description:

Procedures in this bulletin give owners and operators data on how to make a VSCS test box to do an operational rigging check of the VSCS system on their helicopter.

E. Time of Compliance:

Optional, owner/operator selection.

F. Manpower:

8 man-hours.

G. Interchangeability:

None

H. Disposition of Parts Removed:

N/A

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or (480) 346-6387. DATAFAX: (480) 346-6813.

J. Material/Part Availability:

Talk to MDHI part sales. Most parts can be bought commercially.

Table 1: Parts and Supplies				
Item No.	Nomenclature	Part No.	Qty.	Source
1	Box	ANS-QQ-A-250/2 or MHS4870-8	1	MDHI or Commercial
2	Lid (Necessary for MHS4870 box)	ANS-QQ-A-250/2 or MHS4871-4	1	MDHI or Commercial
3	Banana Jack	01-1042-1-0212	8	Commercial
4	Switch (S1)	MS24523-21	1	Commercial

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Table 1: Parts and Supplies (Cont.)

Item No.	Nomenclature	Part No.	Qty.	Source
5	Switch (S2)	MS24523-22	1	Commercial
6	Banana Jack	01-1042-1-0210	1	Commercial
7	Electrical Connector (J2)	MS27656E17B35S	1	Commercial
8	Bushing (J2)	10-230935-183	1	Commercial
9	Screw (J2)	NAS600-6	4	Commercial
10	Washer (J2)	AN960KD4L or NAS1149DN416K (ALTN)	4	Commercial
11	Nut (J2)	MS21042-04	4	Commercial
12	Wire	M22759/34-22-9	AR	Commercial
13	Lug, Crimp (J2)	MS25036-101	7	Commercial
14	Seal Plug (J2, P2)	MS27488-22-1	77	Commercial
15	Electrical Contact, Socket (J2)	M39029/56-348	22	Commercial
16	Electrical Connector (J1)	D38999/20WH53PN	1	Commercial
17	Backshell (J1)	M85049/38S23W	1	Commercial
18	Bushing (J1, P1)	10-036565-203	2	Commercial
19	Seal Plug (J1, P1)	MS27488-20-1	48	Commercial
20	Electrical Contact, Pin (J1)	M39029/58-363	41	Commercial
21	Sleeving 0.5 in. (12.7 mm)	MHS5330-1531 or equivalent	AR	MDHI or Commercial
22	Electrical Connector (P2)	MS27467E17B35P	1	Commercial
23	Backshell (P2)	M85049/49-2-16W	1	Commercial
24	Bushing (P2)	MS3420-10	1	Commercial
25	Electrical Contact, Pin (P2)	M39029/58-360	33	Commercial
26	Electrical Connector (P1)	D38999/26WH53SN	1	Commercial
27	Backshell (P1)	M85049/38S23W	1	Commercial
28	Electrical Contact, Socket (P1)	M39029/56-351	41	Commercial

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Table 1: Parts and Supplies (Cont.)				
Item No.	Nomenclature	Part No.	Qty.	Source
29	Screw (Necessary for MHS4870 box)	NAS603-8P	4	Commercial
30	Washer (Necessary for MHS4870 box)	AN960KD8L or NAS1149DN816K	4	Commercial
31	Bracket (Necessary for MHS4870 box)	MHS4592-1D6-8 or equivalent	4	MDHI or Commercial
32	Rivet (Necessary for MHS4870 box)	MS2047AD4-4	8	Commercial
33	Electrical Contact, Pin	M39029/31-228	2	Commercial
34	Electrical Contact, Pin	M39029/31-240	22	Commercial
35	Electrical Connector (J1)	MS3120F20-39P	1	Commercial
36	Electrical Contact, Socket	M39023/32-247	2	Commercial
37	Electrical Contact, Socket	M39023/32-259	28	Commercial
38	Electrical Connector (P1)	MS3126F20-39S		Commercial
39	2C Cable	M27500-22SD2T23	AR	Commercial
40	Splice, Shield, Solder	M83519/2-3	8	Commercial
41	Electrical Connector (P2)	MS27467E17B35P	1	Commercial
42	3C Cable	M27500-22SD3T23	AR	Commercial

K. Warranty Policy:

N/A

L. Tooling:

N/A

M. Weight and Balance:

N/A

N. Electrical Load Data:

N/A

O. Other Publications Affected:

N/A.

TECHNICAL BULLETIN

2. ACCOMPLISHMENT INSTRUCTIONS

A. Assemble VSCS Test Box

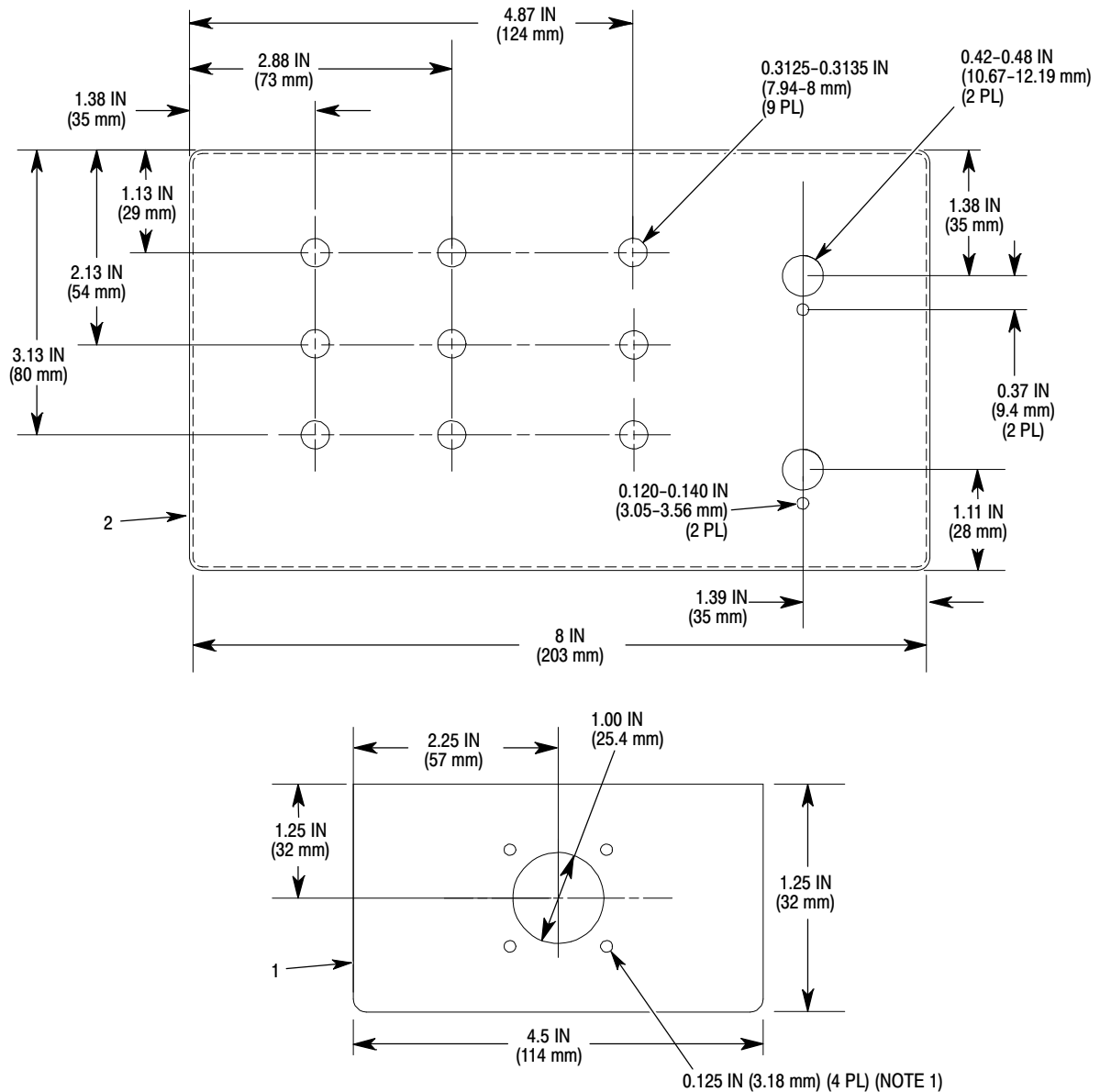
(Ref. Table 1, Figure 1 and 2)

- (1). Make box (1) and cover (2) to dimensions shown in Figure 1 or get from electrical supply company.
- (2). Put marks on the cover (2) to show position of holes for banana jacks (3) and (6), switches (4) and (5) and electrical connector (7).
- (3). Drill nine holes for banana jacks (3) and (6) with **0.3125-0.3135 in. (7.94-8 mm)** drill.
- (4). Drill two holes for switches (4) and (5) with **0.42-0.48 in. (10.67-12.19 mm)** drill.
- (5). Drill two tab holes for switches (4) and (5) with **0.120-0.140 in. (3.05-3.56 mm)** drill.
- (6). Drill hole for electrical connector (7) with **0.97-1.03 in. (24.7-26.2 mm)** drill or hole saw.
- (7). Put marks on the cover (2) to show position of holes for screws (9), use electrical connector (7) for hole locations.
- (8). Drill four holes for screws (9) with **0.125 in. (3.18 mm)** drill.
- (9). Deburr holes.
- (10). Install switches (4) and (5) in cover (2).
- (11). Install banana jacks (3) and (6) in cover (2).
- (12). Identify the banana jacks (3) and (6) and switches (4) and (5) on cover (2), use permanent ink.

NOTE: Make sure wires (12) are long enough to install electrical connector (7) in box (1) before you install cover (2).

- (13). Install wires (12) between switches (4) and (5), banana jacks (3) and (6), and electrical connector (7) (Ref. CSP-SPM, Section 20-60-00).
- (14). Install electrical connector (7), screws (9), washers (10) and nuts (11). Torque nuts.
- (15). Install cover (2) on box (1).

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TEST BOX DIMENSIONS

NOTES:

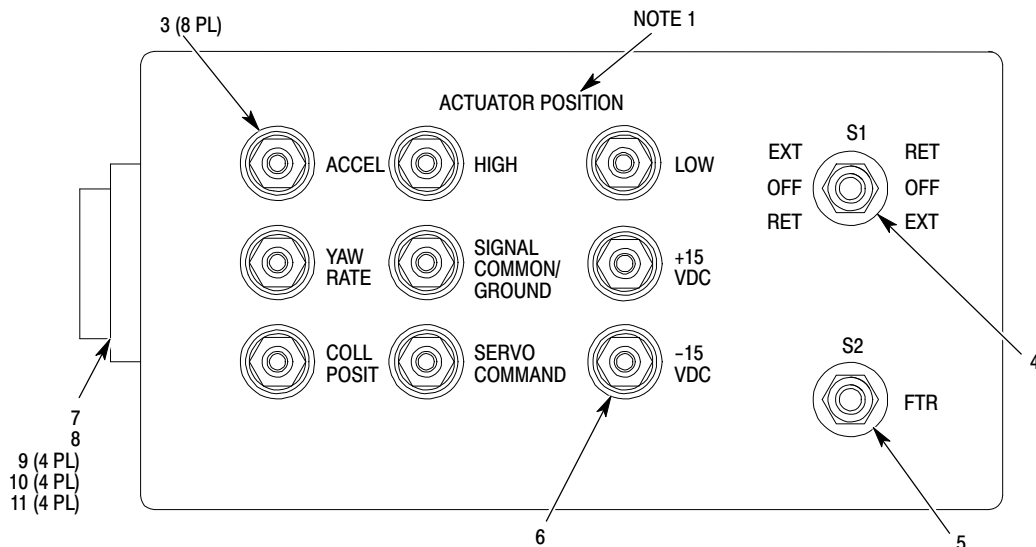
1. DRILL TO MATCH HOLES IN ELECTRICAL CONNECTOR.
2. MAKE BOX AND COVER FROM 0.040 IN (1.016 mm) ALUMINUM ALLOY OR EQUIVALENT. OR GET FROM ELECTRONIC SUPPLY COMPANY.

500N9701_G__

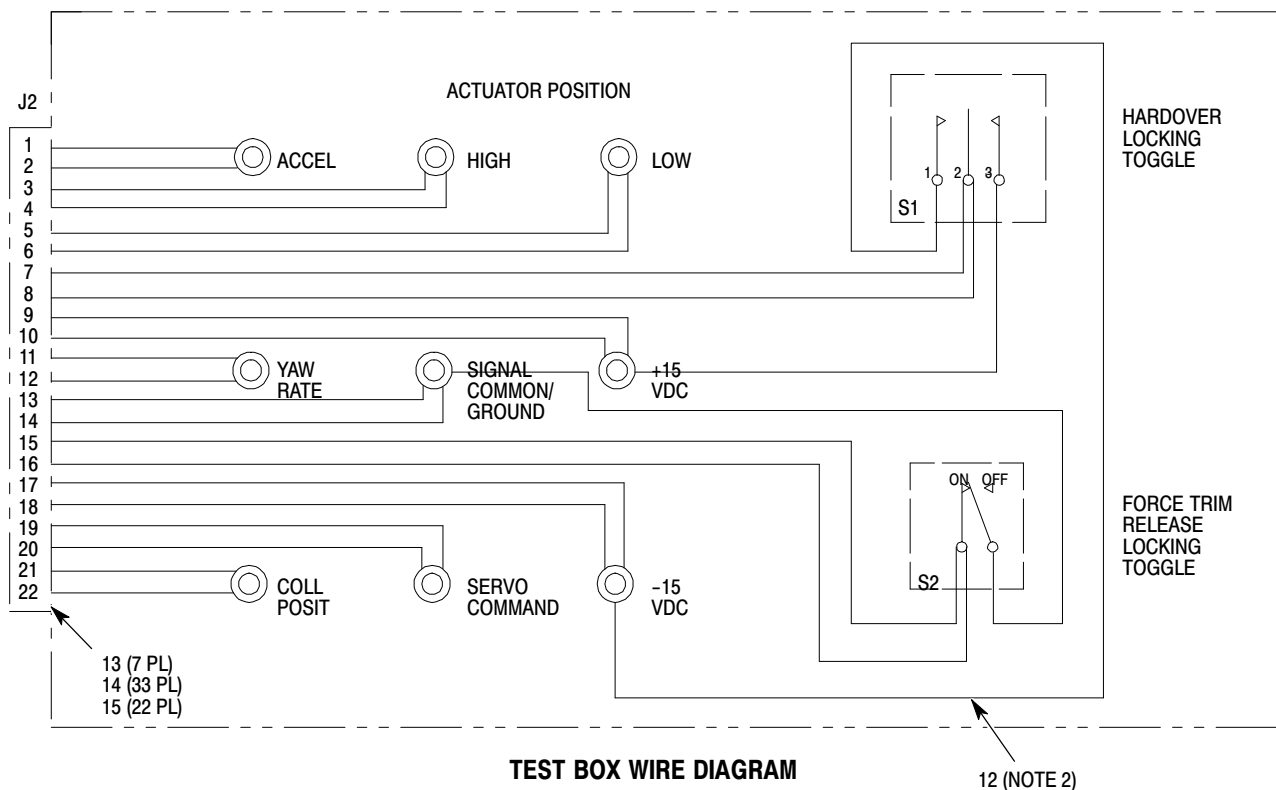
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Figure 1. VSCS Test Box

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ELECTRICAL COMPONENT INSTALLATION



TEST BOX WIRE DIAGRAM

NOTES:

1. IDENTIFY AS SHOWN, USE PERMANENT INK.
2. LENGTH AS NECESSARY.

500N9701_G__
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Figure 2. VSCS Test Box

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TB600N-008

TB500N-004

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B. Assemble 500N/600N Test Wire Harness

(Ref. Table 1 and Figure 3)

NOTE: Install sleeving (21) on wires (Ref. CSP-SPM, Section 20-60-00) as necessary.

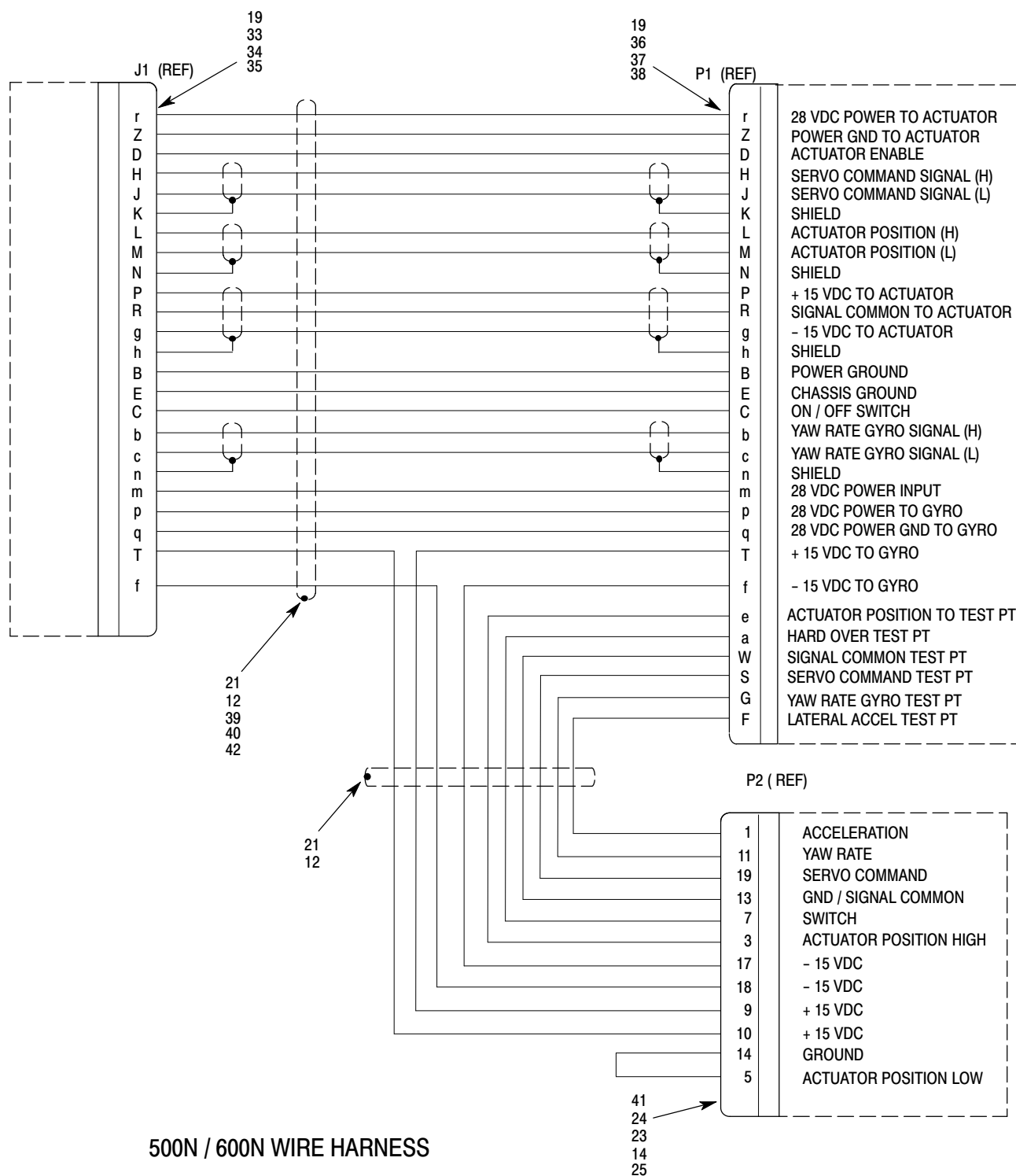
(1). Make MD500N/600N test wire harness as follows:

- (a). Make wires that connect J1 (32) and P1 (38).
 - 1). Cut wires to **14 in. (356 mm)**.
 - 2). Install electrical contact (34) on one end of wire (Ref. CSP-SPM, Section 20-60-00).
 - 3). Install electrical contact (37) on other end of wire (Ref. CSP-SPM, Section 20-60-00).
- (b). Put wire ends with electrical contact (34) in J1 (32) (Ref. CSP-SPM, Section 20-60-00).
- (c). Put wire ends with electrical contact (37) in P1 (38) (Ref. CSP-SPM, Section 20-60-00).
- (d). Break out the 10 wires for P2 (41) approximately **7 in. (178mm)** from P1 (38).

(2). Make wires that connect to P2 (41) as follows:

- (a). Cut wires to **7 ft. (2.134m)**.
 - 1). Install electrical contacts (34) and (36) on one end of wire (Ref. CSP-SPM, Section 20-60-00).
 - 2). Install electrical contact (25) on other end of wire (Ref. CSP-SPM, Section 20-60-00).
- (b). Put wire ends with electrical contact (34) in J1 (32) (Ref. CSP-SPM, Section 20-60-00).
- (c). Put wire ends with electrical contact (36) in P1 (38) (Ref. CSP-SPM, Section 20-60-00).
- (d). Put wire ends with electrical contact (25) in P2 (41) (Ref. CSP-SPM, Section 20-60-00).
- (e). Label wire harness (500N9701-7).

TECHNICAL BULLETIN



9b98-154

Figure 3. VSCS Test Harness 500N9701-7

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TB900-032

TB600N-008

TB500N-004

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C. Assemble MD 900 Test Wire Harness

(Ref. Table 1 and Figure 4 VSCS Test Box)

NOTE: Install sleeving (21) on wires (Ref. CSP-SPM, Section 20-60-00) as necessary.

(1). Make MD900 test wire harness as follows:

(a). Make wires that connect electrical connector J1 (16) and P1 (26).

1). Cut wires to **24 in. (610 mm)**.

2). Install electrical contact (20) on one end of wire (Ref. CSP-SPM, Section 20-60-00).

3). Install electrical contact (28) on other end of wire (Ref. CSP-SPM, Section 20-60-00).

(b). Put wire ends with electrical contact (20) in J1 (16) (Ref. CSP-SPM, Section 20-60-00).

(c). Put wire ends with electrical contact (28) in P1 (26) (Ref. CSP-SPM, Section 20-60-00).

(d). Make wires that connect J1 (16) and P2 (22).

1). Cut wires to **40 in. (1016 mm)**.

2). Install electrical contact (20) on one end of wire (Ref. CSP-SPM, Section 20-60-00).

3). Install electrical contact (25) on other end of wire (Ref. CSP-SPM, Section 20-60-00).

(e). Put wire ends with electrical contact (20) in J1 (16) (Ref. CSP-SPM, Section 20-60-00).

(f). Put wire ends with electrical contact (25) in P2 (22) (Ref. CSP-SPM, Section 20-60-00).

(g). Make wires that connect P1 (26) and P2 (22).

1). Cut wires to **40 in. (1016 mm)**.

2). Install electrical contact (28) on one end of wire (Ref. CSP-SPM, Section 20-60-00).

3). Install electrical contact (25) on other end of wire (Ref. CSP-SPM, Section 20-60-00).

(h). Put wire ends with electrical contact (28) in P1 (26) (Ref. CSP-SPM, Section 20-60-00).

(i). Put wire ends with electrical contact (25) in P2 (22) (Ref. CSP-SPM, Section 20-60-00).

(j). Label wire harness (500N9701-9)

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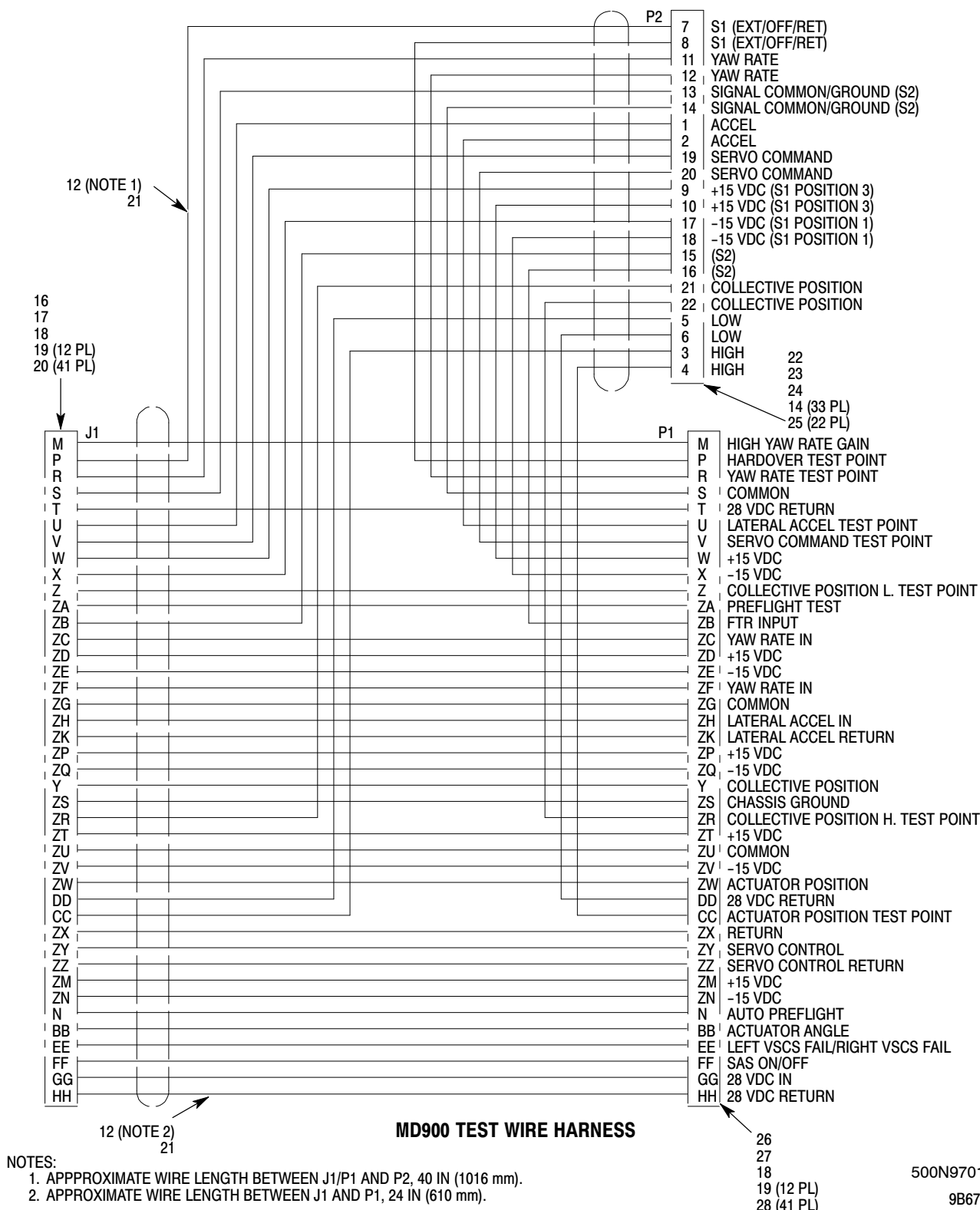


Figure 4. VSCS Test Harness 500N9701-9

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TB500N-004

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3. DISPOSITION OF PARTS REMOVED

N/A

4. MAKE A RECORD

N/A

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TB600N-008
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REPLACEMENT OF THE MD93 CLOCK / USB / CHRONOMETER

1. PLANNING INFORMATION

A. Aircraft Affected:

MD Helicopters (MDHI) helicopter Model 369E, Serial Numbers (SNs) E0301 thru E0625
Model 369F/FF, SNs 0001FF thru 0340FF
Model 600N, SNs RN0003 thru RN0083

B. Assembly/Components Affected By This Notice:

6420093-1 Mid-Continent MD93 Clock / USB / Chronometer
369D24460-101 / -103 Mid-Continent MD93 Wire Harness (W460)

C. Reason:

The 6420093-1 MD93 Clock is not available from the manufacturer, but can be replaced with a 6420093-4 CH93 Clock and 369D24460-105 wire harness or a -101/-103 wire harness modification.

D. Description:

Procedures in this Bulletin give owners and operators information to:

- (Option 1) Remove the 6420093-1 MD93 Clock and replace with a 6420093-4 CH93 Clock and modify the connection of the 369D24460-101 or -103 Wire Harness W460, or
- (Option 2) Remove the 6420093-1 MD93 Clock and 369D24460-101 or -103 wire harness and replace with a new 6420093-4 CH93 Clock and factory-made 369D24460-105 Wire Harness W460, or
- (Option 3) Remove the 6420093-1 MD93 Clock and 369D24460-101 or -103 wire harness and replace with a new 6420093-4 CH93 Clock and a locally made 369D24460-105 Wire Harness W460

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA-approved.

G. Labor Hours:

Compliance with this bulletin will be approximately one-half (0.5) to two (2) man-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona.
Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

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J. Material/Part Availability:

Contact MDHI Spare Sales for parts availability at:

<https://www.mdhelicopters.com/contact.html>

Ref. CSP-HMI-2, Section 91-00-00, Table 1, for the item numbers of the consumable materials in the Nomenclature column, and Table 2, for the manufacture/supplier numbers in the Source column.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
OPTION 1 —			
Mid Continent CH93 Clock / USB / Chronometer	6420093-4	1	MDHI
• Installation Connector Kit (included with clock)	9018178-1	1	CAGE Code 59742
Finish Lace Tape (As Required)	AA52081-C-3	AR	Commercial
Large Cable Marker	MHS4910-1002 or CM-SCE-1/2-4H9 or 556-26009	1	MDHI Commercial
OPTION 2 —			
Mid Continent CH93 Clock / USB / Chronometer	6420093-4	1	MDHI
• Installation Connector Kit (included with clock)	9018178-1	1	CAGE Code 59742
Mid-Continent CH93HP (MD93) Digital Clock / Chronometer / Dual USB Wire Harness (W460)	369D24460-105	1	MDHI
Washer	NAS1149DN832J	4	Commercial
Rivet	NAS1919B04-04	4	Commercial
Tie Base	TC814	4	Commercial
OPTION 3 —			
Mid Continent CH93 Clock / USB / Chronometer	6420093-4	1	MDHI
• Installation Connector Kit (included with clock)	9018178-1	1	CAGE Code 59742
Mid-Continent CH93HP (MD93) Digital Clock / Chronometer / Dual USB Wire Harness (W460)	369D24460-105	1	MDHI
• Finish Lace Tape — 20 feet (6.096 m)	AA52081-C-3	20 feet	Commercial

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REPLACEMENT PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
• Red Permanent Crimp Splice (Ref. Def. 295, Table 1)	M81824/1-1	2	Commercial
• Wire, 22 AWG — 140 inches (3.556 m)	M22759/43-22-9	140 inch	Commercial
• Contact (Ref. Table 1, Ref. Des. 905)	M39029/22-192	2	Commercial
• Small Cable Marker	MHS4910-1001 or CM-SCE-1/4-4H9 or 556-26008	2	MDHI Commercial
• Large Cable Marker	MHS4910-1002 or CM-SCE-1/2-4H9 or 556-26009	1	MDHI Commercial
Grommet	SL2	AR	Commercial
Twine (CM807, ref. CSP-HMI-2, 91-00-00, Table 1)	MIL-T-713	AR	Commercial
Washer	NAS1149DN832J	4	Commercial
Rivet	NAS1919B04-04	4	Commercial
Tie Base	TC814	4	Commercial
Cable Tie (CM703, ref. CSP-HMI-2, 91-00-00, Table 1)	MS3367-1-0	AR	Commercial

K. Warranty Policy:

Contact the MDHI Warranty Department for prices, orders, and availability.

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

Increased by 0.2 Amperes

P. Other Publications Affected:

CSP-HMI-3, Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics
CSP-IPC-4, Illustrated Parts Catalog

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Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-E-1, Rotorcraft Flight Manual
CSP-FF-1, Rotorcraft Flight Manual
CSP-600RFM-1, Rotorcraft Flight Manual
CSP-600RFM-2, Rotorcraft Flight Manual
CSP-HMI-3, Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionic
CSP-IPC-4, Illustrated Parts Catalog

2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

Power Off



Make sure that electrical power is removed from the rotorcraft. Power switches must be OFF, the battery must be disconnected, and the rotorcraft electrically grounded. Damage to components can occur.

NOTE: Ref. CSP-HMI-3, 98-20-00, Figure 18. Digital Clock Chronometer / Dual USB (369D24551) Interconnect Diagram

- (1). Make sure that all electrical power is **OFF**.
- (2). Open the LH slant panel side panel. (Ref. CSP-HMI-3, Section 95-00-30, 2.B. Side Panel Replacement Removal)

B. Remove the Digital Clock

(Ref. Figure 1)

- (1). Remove digital clock (1):
 - (a). Disconnect Electrical Connector **L24/002-P1** (2) from the back of digital clock (1).
 - (b). Remove screws (3), washers (4), and digital clock (1) from slant panel (5).

C. (Option 1) Modify a -101/-103 Wire Harness W460

- (1). Remove Electrical Connector **L24/002-P1** (2) from the wire harness.
- (2). Install installation connector kit 9018178-1 at Electrical Connector **L24/002-P1** (2) on the wire harness. (Ref. Table 1)
- (3). Remove the old large cable marker.
- (4). Identify the modified wire harness as 369D24460-105 with large cable marker.
- (5). Go to Procedure F.

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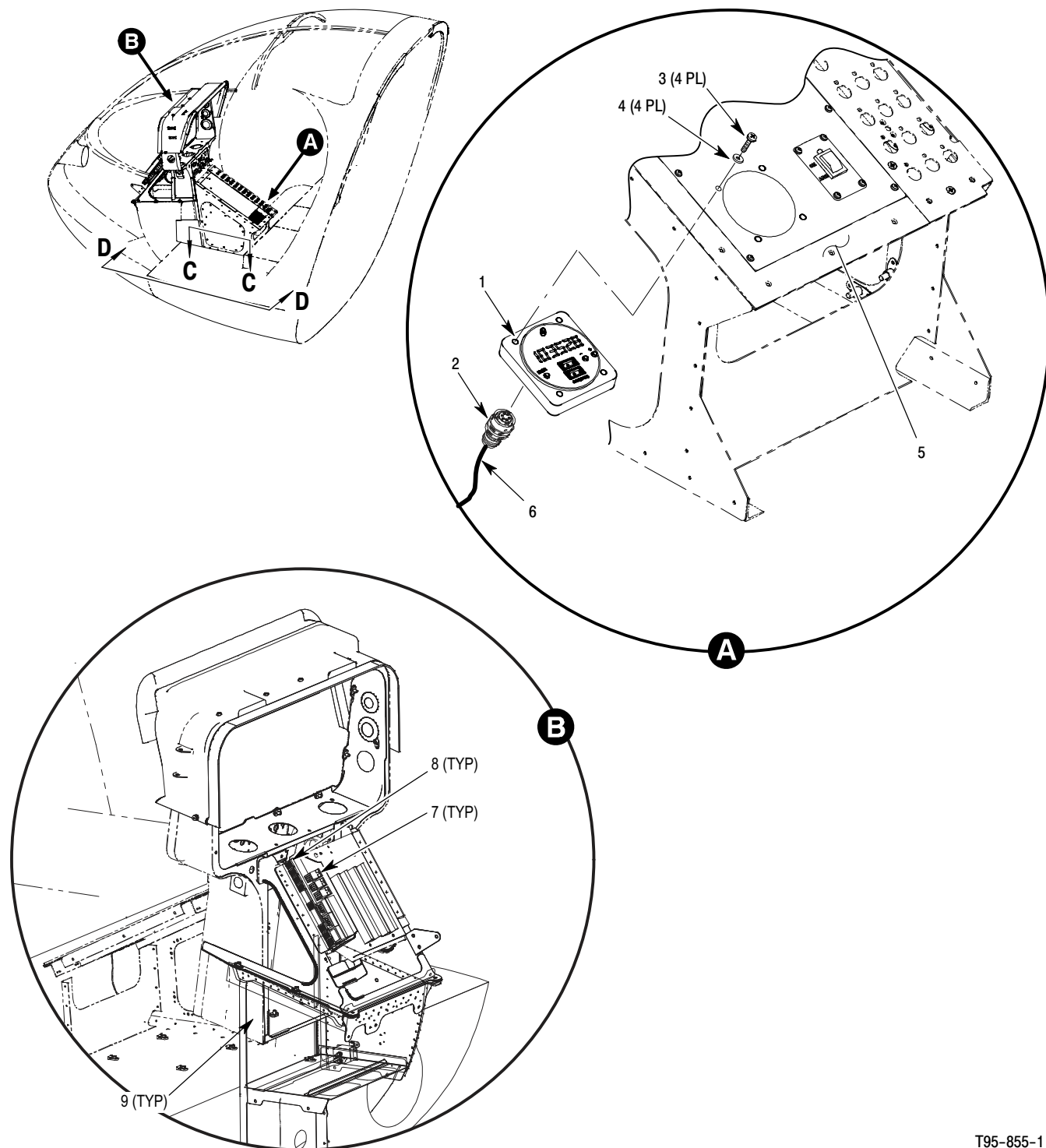


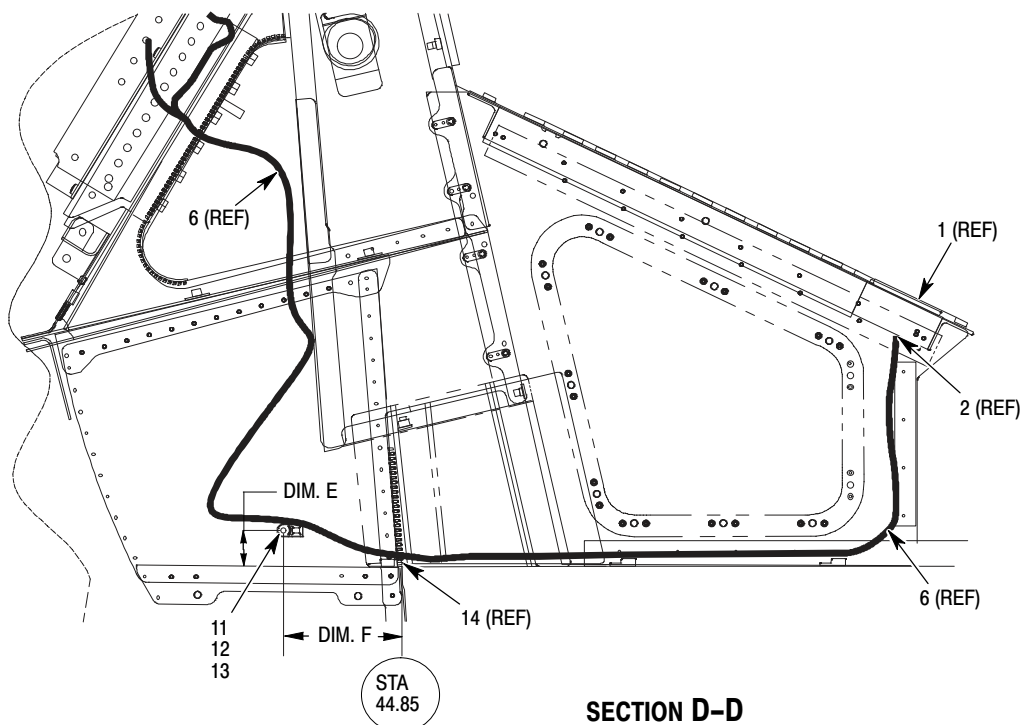
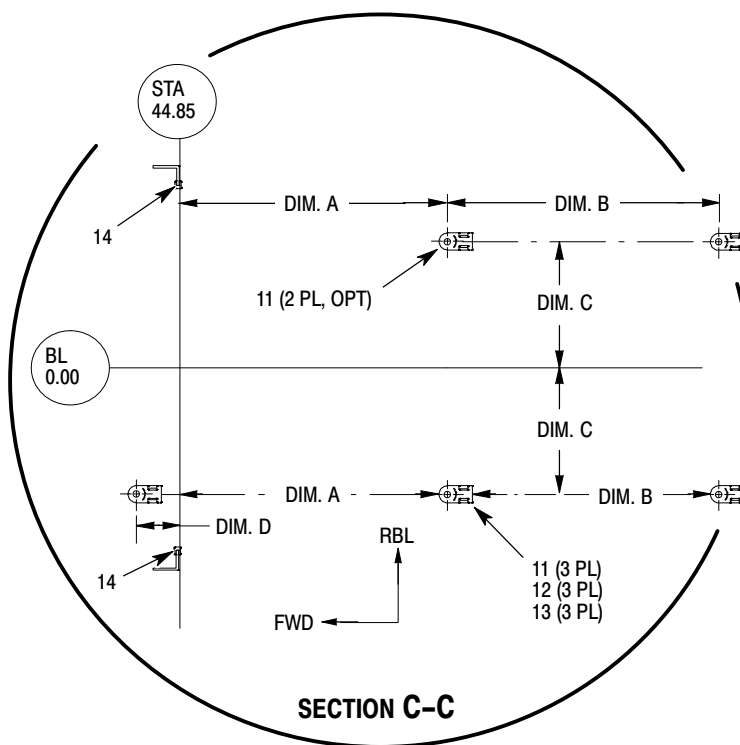
Figure 1. Installation of the Digital Clock (Sheet 1 of 2)

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T95-855-2

Figure 1. Installation of the Digital Clock (Sheet 2 of 2)

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Legend (Ref. Figure 1)

- | | |
|------------------------------------|-------------------------------------|
| 1. DIGITAL CLOCK | 8. TB503-3 TERMINAL BLOCK |
| 2. ELECTRICAL CONNECTOR L24/002-P1 | 9. ELECTRICAL CONNECTOR D24/001-P4B |
| 3. SCREW | 10. CABLE TIE |
| 4. WASHER | 11. TIE BASE |
| 5. SLANT PANEL | 12. WASHER |
| 6. WIRE HARNESS W460 | 13. RIVET |
| 7. E33 GROUND | 14. GROMMET |

DIMENSIONS (Ref. Figure 1)

DIMENSION A	6.00 INCHES (15.24 CM)	DIMENSION D	1.00 INCH (2.54 CM)
DIMENSION B	6.10 INCHES (15.49 CM)	DIMENSION E	1.00 INCH (2.54 CM)
DIMENSION C	2.80 INCHES (7.11 CM)	DIMENSION F	3.50 INCHES (8.89 CM)

Table 1. Wire List for a -105 Wire Harness W460

W460 Wire Number	Length, inch (cm)	Size	Type Code	From			To		
				Ref. Des.	Pin	Term. Code	Ref. Des.	Pin	Term. Code
WL369D24460-105									
CLK100A24N	--	24	ZZ	L24/002-P1	1	J00	L24/002-SP1	A	295
CLK100B24N	--	24	ZZ	L24/002-P1	3	J00	L24/002-SP1	A	295
CLK100C22N	60 (152.4)	22	SY	L24/002-SP1	B	295	E33	A	905
CLK200A22	60 (152.4)	22	SY	L24/002-P1	2	J00	D24/001-P4B	9	J00
CLK300A22	60 (152.4)	22	SY	L24/002-P1	8	J00	TB503-3	J	905

D. (Option 2) Replace Wire Harness with a New -105 Wire Harness W460

- (1). Remove -101 or -103 Wire Harness W460 (6):

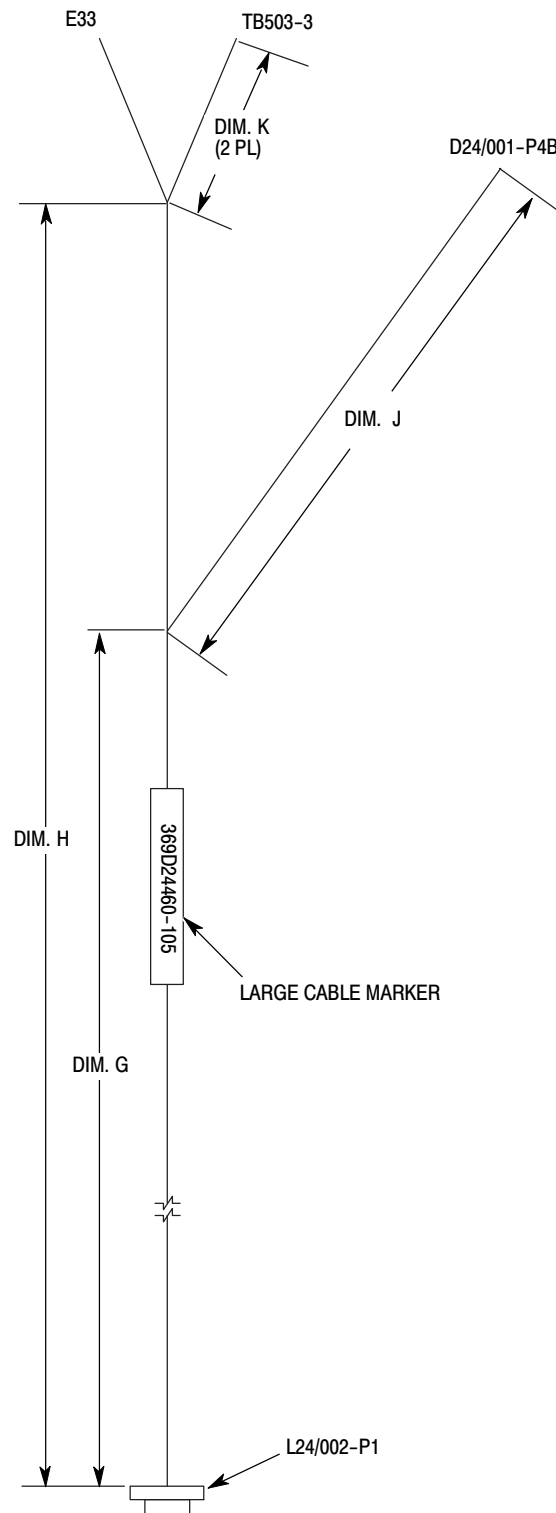
NOTE: Make sure to identify the locations of the E33, TB503-3, and D24/001-P48 connections.

- Disconnect the lead from E33 Ground (7).
 - Disconnect the lead from TB503-3 Terminal Block (8).
 - Disconnect Electrical Connector **D24/001-P4B** (9).
- (2). Install four tie bases (11) with washers (12) and rivets (13). (Ref. Figure 1, Sheet 2, View C-C)
- (3). Install -105 Wire Harness W460:
- Install grommets (14).
 - Connect Electrical Connector **D24/001-P4B** (9).
 - Connect the lead to TB503-3 Terminal Block (8).
 - Connect the lead to E33 Ground (7).
 - If tie bases (11) are installed, install Wire Harness W460 in the six tie bases (11) with twine (CM807).

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Figure 2. 369D24460-105 Wire Harness Schematic

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DIMENSIONS (Ref. Figure 2)

DIMENSION G	36.00 INCHES (91.44 CM)	DIMENSION J	24 INCHES (60.96 CM)
DIMENSION H	55.00 INCHES (139.70 CM)	DIMENSION K	6.75 INCHES (17.15 CM)

(4). Go to Procedure F.

E. (Option 3) Assemble a -105 Wire Harness W460

(Ref. Table 1 and Figure 2)

NOTE: Cut wires **3 inches (7.62 cm)** past the branch end for termination at the next higher assembly. The harness length can be **+3 inches (7.62 cm)** more than the drawing.

- (1). Terminate one end of the wire harness to the connector.
- (2). Temporarily install and route the wire harness to find the cut lengths.
- (3). Trim the wires for the best fit and include drip loops and slack.
- (4). Document the wire lengths.
- (5). Complete the termination of the wire harness connections.
- (6). Install the two small cable markers in the same place as on the old leads.
- (7). Install the large cable marker. (Ref. Figure 2)
- (8). Install four tie bases (11) with washers (12) and rivets (13). (Ref. View C-C and Figure 1, Sheet 2)
- (9). Install -105 Wire Harness W460 :
 - (a). Install grommets (14).
 - (b). Connect Electrical Connector **D24/001-P4B** (9).
 - (c). Connect the lead to TB503-3 Terminal Block (8).
 - (d). Connect the lead to E33 Ground (7).
 - (e). Install Wire Harness W460 in tie bases (11) with twine (CM807).
- (10). Go to Procedure F.

F. Install the Digital Clock

- (1). Install digital clock (2):
 - (a). Connect Electrical Connector **L24/002-P1** (1) to the back of digital clock (2).
 - (b). Install digital clock (2) in slant panel with washers (4) and screws (3).
- (2). Do an operational continuity check for the digital clock:
 - (a). Connect the battery.
 - (b). Set the master switch to EXT PWR position.
 - (c). Connect an external power source.

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- (d). If the digital clock does not work:
 - 1). Remove external power.
 - 2). Disconnect the battery.
 - 3). Do the applicable checks to find the problem.
- (e). If the digital clock works:
 - 1). Remove external power.
 - 2). If necessary, disconnect the battery.
 - 3). Replace twine with cable ties (10).

G. Job Close-Up

- (1). Do a FOD check.
- (2). Install the LH slant panel side panel. (Ref. CSP-HMI-3, 2.C. Section 95-00-30, Side Panel Replacement Installation)
- (3). As necessary, return power to the helicopter.

H. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log (ref. CSP-RLB-L8) of the Rotorcraft Log Book CSP-RLB.
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your MDHI Field Service Representative.



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TB600N-014

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Replacement of the MD93 Clock / USB / Chronometer

MD Helicopters, Inc.
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-480-346-6300 (International)
Website: <https://www.mdhelicopters.com/contact.html>
Or email or speak to your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____ _____
Phone: _____	_____
E-mail: _____	_____

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

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TB369F-017
TB600N-014



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SOFTWARE UPGRADE OF THE ENGINE CONTROL UNIT

1. PLANNING INFORMATION

A. Aircraft Affected:

MD Helicopters Model 600N, serial numbers (SN) RN003 thru RN084

B. Assembly/Components Affected By This Notice:

23089311 (CECO Part No. (PN) 115230-2A5-51) Engine Control Unit (ECU) (Preferred)
23088905 (CECO PN 115230-1A5-51) ECU (Alternate)
23080491 (CECO PN 115230-1A5-50) ECU

C. Reason:

Procedures in this bulletin give owners and operators information for a software upgrade for the engine control unit. Rolls-Royce Corporation has made a product improvement to the 23080491, 23088905, and 23089311 ECUs. The improvement includes software changes for better functionality and to eliminate nuisance faults.

D. Description:

This bulletin gives owners and operators information about Rolls-Royce Commercial Engine Bulletin (CEB) 73-6064 to do a software upgrade to the ECU.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this bulletin are FAA-approved.

G. Labor Hours:

Compliance with this bulletin will be approximately five (5) labor hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact Field Service at:
<https://www.mdhelicopters.com/contact.html>

J. Material/Part Availability:

Ref. Rolls-Royce CEB 73-6064.

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K. Warranty Policy:

Contact MD Helicopters Warranty for prices, orders, availability, and service at:
<https://www.mdhelicopters.com/contact.html>.

Standard warranty policy applies.

The hours in Labor Hours (ref. Paragraph G.) are an estimate, and are not reimbursable, unless specified in the Warranty Policy.

Labor allowance will not be given for this installation.

Additional discrepancies found over and above the specified warranty coverage is the responsibility of the customer.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-600RFM-1 Rotorcraft Flight Manual
CSP-600RFM-2 Rotorcraft Flight Manual – MD600N Glass Cockpit
CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions – Instruments / Electrical / Avionics
CSP-IPC-4 Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-600RFM-1 Rotorcraft Flight Manual
CSP-600RFM-2 Rotorcraft Flight Manual – MD600N Glass Cockpit
CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions – Instruments / Electrical / Avionics
CSP-IPC-4 Illustrated Parts Catalog
SB600N-050R1 Governor Electronic Control Unit (ECU) Replacement
Rolls-Royce CEB 73-6064 Engine, Fuel and Control – New ECU Software -C47M

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Removal and Installation

NOTE: The software installation will be the same for ECUs PN 23080491, 23088905, and 23089311. Ref. CSP-HMI-2, 76-47-00, 4. ECU (Electronic Control Unit) Replacement.

- (1). Do the instructions in CEB 73-6064.

B. Job Close-Up

- (1). Make sure that all tools, equipment, and loose objects are removed from the (work area).
- (2). Make sure that the work area is clean.
- (3). Install (removed) access doors / panels (ref. CSP-HMI-2, 06-00-00).

C. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log (ref. CSP-RLB-L8) of the Rotorcraft Log Book CSP-RLB.
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service and Operation Report (SOR) at <https://www.mymd.aero/dash-board>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.

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TB600N-018 Completion Record

Software Upgrade of the Engine Control Unit

MD Helicopters, LLC
 Field Service
 4555 East McDowell Road
 Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-480-346-6300 (International)
 Website: <https://www.mdhelicopters.com/contact.html>
 Or contact your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No.: _____
Address: _____ _____ _____	Helicopter Total Time: _____ Date Complete: _____
Phone: _____	Location: _____
E-mail: _____	

This bulletin is complete: _____

(Signature)

(Print Name)

(Title)

Comments: _____

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REPLACEMENT OF THE POSITION AND TAIL LIGHT ASSEMBLIES

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 500N Helicopter, Serial Numbers (SN) LN045 and Subs
Model 600N Helicopter, SN RN002 and Subs.

B. Assemblies and Components Affected By This Notice:

500N4002-5 Horizontal Stabilizer Wire Harness (W4002)
500N4012-3 (Red) Left-Hand (LH) Position and Tail Light Assembly (DS401)
500N4012-4 (Green) Right-Hand (RH) Position and Tail Light Assembly (DS400)
600N4263 Instrument and Electrical Equipment Installation
369D24263 Instrument and Electrical Equipment Installation Model 500 Helicopter

C. Reason:

The 500N4012-3 (red) and 500N4012-4 (green) incandescent light assemblies are no longer available, but can be replaced by 500N4012-5 (red) and 500N4012-6 (green) light-emitting diode (LED) light assemblies with a modification of the 500N4002-5 wire harness.

This bulletin describes the modification and installation of the new light assemblies.

D. Description:

Procedures in this Bulletin give owners and operators information to replace the obsolete light assemblies with 500N4012-5 and 500N4012-6 light assemblies.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA approved.

G. Labor Hours:

Compliance with this bulletin will be approximately 2.0 man-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at, Mesa, Arizona.
Phone: 1-800-388-3378 or 480-346-6300
Website: <https://www.mdhelicopters.com/contact.html>

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J. Material/Part Availability:

Contact Spare Sales for parts availability at:

<https://www.mdhelicopters.com/contact.html>

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
LH (Red) Position and Tail Light Assembly	500N4012-5	1	MD Helicopters
RH (Green) Position and Tail Light Assembly	500N4012-6	1	MD Helicopters
Splice	M81824/1-1	4	Commercial
Electrical Cap	MHS5077-4003	4	Commercial

K. Warranty Policy:

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

Changes from 1.8 Amperes per assembly to 0.25 Amperes per assembly. Decreases by 1.55 Amperes per assembly.

P. Other Publications Affected:

CSP-HMI-3 Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics
 CSP-IPC-4 Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions - Servicing and Maintenance
 CSP-HMI-3 Basic Handbook of Maintenance Instructions - Instruments / Electrical / Avionics
 CSP-IPC-4 Illustrated Parts Catalog

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

Power Off



- (1). Make sure all electrical power is **OFF** and disconnect battery.

NOTE: Replacement instructions of left and right horizontal tail position light is the same.

- (2). Remove screws (11) and washers (12) to remove LH and RH tip cover (13) from horizontal stabilizer (14).
- (3). Remove LH (red) and RH (green) position light assemblies (500N4012-3 and 500N4012-4).
 - (a). Remove screws (4) from retainer (3).
 - (b). Carefully remove retainer (3), forward position light lens (2), tail position light lens (5), and gaskets (1, 6).
 - (c). Remove screws (8, 19) and washers (18) from position light assembly (7).
 - (d). Carefully move position light assembly (7) from horizontal stabilizer (14) to access wires.

NOTE: Identify wires before removal of lamp wires to help with reinstallation.

- (e). Disconnect black ground wire (9) and red power wire (10) from position light assembly (7).
- (f). Disconnect tail light wires (17) from position light assembly (7).
- (g). Remove position light assembly (7) from helicopter.

B. Modification

- (1). Cap and stow tail light wires (17) on RH and LH side.
- (2). Install LH (red) and RH (green) position light assemblies (500N4012-5 and 500N4012-6).
 - (a). Carefully move position light assembly (7) close enough to reach wires in horizontal stabilizer (5).
 - (b). Install splice to connect black ground wire (15) to black ground wire (9).
 - (c). Install splice to connect white power wire (16) to red power wire (10).
 - (d). Route and correctly position the wires in the horizontal stabilizer (14).

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- (e). Put the base of the position light assembly (7) onto the mounting surface.
- (f). Install screws (8, 19) and washers (18) on position light assembly (7).
- (g). Carefully install retainer (3), forward position light lens (2), tail position light lens (5), and gaskets (1, 6).
- (h). Install screws (4) on retainer (3).

C. Job Close-Up

- (1). Examine the inside of horizontal stabilizer (14) for FOD and remove as necessary.
- (2). Do a wire harness inspection. (Ref. CSP-HMI-3, Chapter 96)
- (3). Install screws (11) and washers (12) to install LH and RH tip cover (13) on horizontal stabilizer (14).
- (4). Connect battery.
- (5). Do a check of the tail position lights.

D. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log (ref. CSP-RLB-L8) of the Rotorcraft Log Book CSP-RLB.
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.

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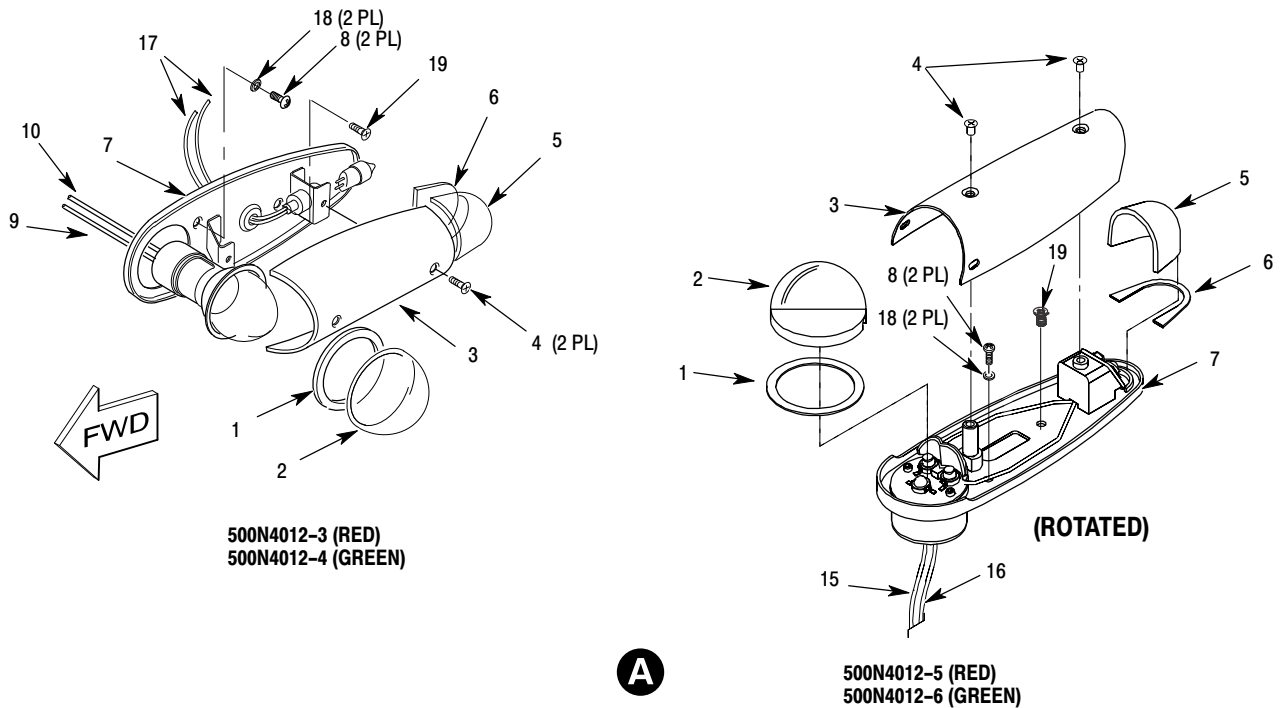


Figure 1. Replacement of Position and Tail Light Assemblies

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Legend (Ref. Figure 1)

1. GASKET
 2. FORWARD POSITION LIGHT LENS
 3. RETAINER
 4. SCREW
 5. TAIL POSITION LIGHT LENS
 6. GASKET
 7. POSITION LIGHT ASSEMBLY
 8. SCREW
 9. GROUND WIRE
 10. POWER WIRE
 11. SCREW
 12. WASHER
 13. TIP COVER
 14. HORIZONTAL STABILIZER
 15. GROUND WIRE
 16. POWER WIRE
 17. TAIL LIGHT WIRES
 18. WASHER
 19. SCREW
-

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Bulletin Completed Record

Replacement of Position and Tail Light Assemblies

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
Website: <https://www.mdhelicopters.com/contact.html>
Or contact your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete: _____

(Signature)

(Print Name)

(Title)

Comments: _____

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* Supersedes Technical Bulletin TB369E-006R1, TB369F-009R1, TB500N-006R1, and TB600N-011R1, dated 21 May 2015. Revised to replace with Whelen LED lights. Helicopters that are in compliance with the original issue of this technical bulletin can complete TB369E-010R1, TB369FF-016R1, TB500N-012R1, TB600N-016R1 to replace EMTEQ LED with Whelen LED lights.

LED ANTI-COLLISION (STROBE) AND POSITION LIGHT INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369E helicopters, serial numbers 0384 thru 0619,
Model 369FF helicopters, serial numbers 0076 thru 0189,
Model 500N helicopters, serial number LN001 thru LN109,
Model 600N helicopters, serial number RN003 thru RN081.

B. Assembly/Components Affected By This Notice:

Model 500 Helicopter Instrument and Electrical Equipment Installation, PN 369D24263
Model 600N Electrical Installation, PN 600N4263
Instrument and Electrical Equipment Installation, PN 369D24101
Electrical Equipment Console Assembly, PN 369D24153
RH Command Instrument and Electrical Equipment Installation, PN 369D24175
Anti-Collision Light Support Assembly, PN 369D23660-5
Anti-Collision Strobe Light Assembly, PN 369D24141
Anti-Collision Light Assembly, PN 369D24142
Landing Gear Skid Position Light, PN 369D24143
Rear Position Light, PN 369D24144

C. Reason:

Upgraded LED anti-collision (strobe) and position lights kits are available.

D. Description:

Procedures in this Bulletin give owners and operators information to install optional LED anti-collision (strobe) and position lights kits. Refer to Table 1 for LED anti-collision (strobe) and position lights kit applicability.

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Table 1. LED Anti-Collision (Strobe) And Position Lights Kits

Kit Number	Kit Type	Model
TBK-LED-A1	LED Anti-Collision (Strobe) Lights	369E, 369FF
TBK-LED-B1	LED Position Lights	369E, 369FF
TBK-LED-C1	LED Anti-Collision (Strobe) Lights	500N
TBK-LED-D1	LED Anti-Collision (Strobe) Lights	600N

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Manpower:

Manpower estimates for installing the LED anti-collision (strobe) and position lights kits are as follows:

- TBK-LED-A1 Estimated 2.5 man-hours
- TBK-LED-B1 Estimated 2.0 man-hours
- TBK-LED-C1 Estimated 3.0 man-hours
- TBK-LED-D1 Estimated 2.5 man-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, speak to the Field Service Department at telephone 1-800-388-3378 or 480-346-6300 or the website: <https://www.mdhelicopters.com/contact.html>.

J. Material/Part Availability:

Contact Spare Sales for parts availability at <https://www.mdhelicopters.com/contact.html>.

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Table 2. TBK-LED-A1, 369E/369FF Anti-Collision (Strobe) Lights Kit

TBK-LED-A1 PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
369E/369FF Anti-Collision (Strobe) Lights Kit	TBK-LED-A1	1	MD Helicopters
• Anti-Collision Light Assembly	01-0771080-01	2	MD Helicopters
• Gasket	369D24263-15	2	MD Helicopters
• Screw	MS24693-S27	6	MD Helicopters
• Aluminum Foil Tape, 0.75 Inch Wide	425 or 427	A/R	Commercial
• Cap, Heat Shrinkable	MHS5077-4001	2	MD Helicopters
• Sealant	RTV 732	A/R	Commercial
• Shrink Tubing	RNF 100 or MIL-I-23053	A/R	Commercial
• Decal, Switch Panel, Blank	369D24297-1	1	MD Helicopters
• Grommet	MS35489-11	1	MD Helicopters
• Decal, Circuit Breaker Panel	369D26455-27	1	MD Helicopters
• Wire, Single Conductor	M22759/43-22-9	A/R	Commercial
• Circuit Breaker, 5 AMP	MS3320-5	1	MD Helicopters
• Switch	MS35059-22	1	MD Helicopters
• Splice, Knife, AMP	320555	8	MD Helicopters
• Ring, Term, Red, #6 STUD	MS25036-102	4	MD Helicopters
• Ring, Term, Red, #8 STUD	MS25036-149	3	MD Helicopters
• Contact, Socket	M39029/56-348	2	MD Helicopters
• Contact, Pin	M39029/58-360	2	MD Helicopters
• Contact, Socket	M39029/32-259	3	MD Helicopters
• Contact, Socket	M39029/22-191	9	MD Helicopters
• Permanent Ink Marker	Sharpie 13601 or 32001	A/R	Commercial
• Primer	MIL-P-85582, T1, C2 MIL-P-23377, T1, C	A/R	Commercial
• Rivet, Solid, Countersunk	NAS1097AD4-3	10	MD Helicopters

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Table 3. TBK-LED-B1, 369E/369FF Position Lights Kit

TBK-LED-B1 PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
369E/369FF Position Lights Kit	TBK-LED-B1	1	MD Helicopters
• Rear Position Light	01-0771774V02	1	MD Helicopters
•• Screw	14-040216-160	2	MD Helicopters
• LH Position Light Assembly (Red)	369D24690A1	1	MD Helicopters
•• Landing Gear Skid Position Light, Left Hand (LH), (Red) (Component of 369D24690A1)	369D24143-1	1	MD Helicopters
•• Skid Tube Position Light Shell. L/H (Component of 369D24690A1)	369D24690-1	1	MD Helicopters
•• Gasket (Component of 369D24690A1)	369D24263-13	1	MD Helicopters
•• Screw (Component of 369D24690A1)	NAS601-16P	3	MD Helicopters
• RH Position Light Assembly (Green)	369D24690A2	1	MD Helicopters
•• Landing Gear Skid Position Light, Right Hand (RH), (Green) (Component of 369D24690A2)	369D24143-2	1	MD Helicopters
•• Skid Tube Position Light Shell. R/H (Component of 369D24690A2)	369D24690-2	1	MD Helicopters
•• Gasket (Component of 369D24690A1)	369D24263-13	1	MD Helicopters
•• Screw (Component of 369D24678A2)	NAS601-16P	3	MD Helicopters
• Bracket Assembly, Position Light Mounting, Horizontal Stabilizer	369D23662-27	1	MD Helicopters
• Rivet, Blind	NAS1919B04-04	4	MD Helicopters
• Rivet, Solid Universal Head	MS20470AD3-3-5	4	MD Helicopters

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TBK-LED-B1 PARTS/SUPPLIES (Cont.)			
Nomenclature	Part No.	Qty.	Source
• Sealant	PR-1221 or MIL-S-7502	A/R	Commercial
• Sealing Compound	PROSEAL 890 B-2	A/R	Commercial
• Primer	MIL-P-85582, T1, C2 MIL-P-23377, T1, C	A/R	Commercial
• Wire, Single Conductor	M22759/43-22-9	A/R	Commercial
• Shrink Tubing	RNF 100 or MIL-I-23053	A/R	Commercial
• Splice, Knife, AMP	320555	5	MD Helicopters
• Ring Term, Red, #8 STUD	MS25036-149	2	MD Helicopters
• Shrink Tubing, UV Resistant	GMT-321-3/8-0-FLT	AR	MD Helicopters
• Splice, Crimp, Environmental, Red	M81824/1-1	1	MD Helicopters
• Cap, Heat Shrinkable	MHS5077-4001	2	MD Helicopters

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Table 4. TBK-LED-C1, 500N Anti-Collision (Strobe) Lights Kit

TBK-LED-C1 PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
500N Anti-Collision Lights Kit	TBK-LED-C1	1	MD Helicopters
• Anti-Collision Light	01-0771080-01	3	MD Helicopters
• Gasket	369D24263-15	3	MD Helicopters
• Screw	MS24693-S27	8	MD Helicopters
• Cap, Heat Shrinkable	MHS5077-4001	3	MD Helicopters
• Aluminum Foil Tape, 0.75 Inch Wide	425 or 427	A/R	Commercial
• Screw	NAS601-5P	4	MD Helicopters
• Washer	NAS1149CN616R	4	MD Helicopters
• Shrink Tubing	RNF 100 or MIL-I-23053	A/R	Commercial
• Sealant	RTV 732	A/R	Commercial
• Decal, Switch Panel, Blank	369D24297-1	1	MD Helicopters
• Grommet	MS35489-11	2	MD Helicopters
• Decal, Circuit Breaker Panel	369D26455-27	1	MD Helicopters
• Wire, Single Conductor	M22759/43-22-9	A/R	Commercial
• Shrink Tubing	RNF 100 or MIL-I-23053	A/R	Commercial
• Circuit Breaker, 5 AMP	MS3320-5	1	MD Helicopters
• Switch	MS35059-22	1	MD Helicopters
• Splice, Knife, AMP	320555	12	MD Helicopters
• Ring Term, Red, #6 STUD	MS25036-102	4	MD Helicopters
• Ring Term, Red, #8 STUD	MS25036-149	3	MD Helicopters
• Contact, Socket	M39029/56-348	2	MD Helicopters
• Contact, Pin	M39029/58-360	2	MD Helicopters
• Contact, Socket	M39029/32-259	6	MD Helicopters
• Contact, Socket	M39029/22-191	12	MD Helicopters

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Table 5. TBK-LED-D1, 600N Anti-Collision Light

TBK-LED-D1 PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
600N Anti-Collision Lights Kit	TBK-LED-D1	1	MD Helicopters
• Anti-Collision Light	01-0771080-01	2	MD Helicopters
• Gasket	369D24263-15	2	MD Helicopters
• Screw	MS24693-S27	4	MD Helicopters
• Cap, Heat Shrinkable	MHS5077-4001	2	MD Helicopters
• Aluminum Foil Tape, 0.75 Inch Wide	425 or 427	A/R	Commercial
• Screw	NAS601-5P	4	MD Helicopters
• Washer	NAS1149CN616R	4	MD Helicopters
• Decal, Switch Panel, Blank	369D24297-1	1	MD Helicopters
• Grommet	MS35489-11	2	MD Helicopters
• Decal, Circuit Breaker Panel	369D26455-27	1	MD Helicopters
• Wire, Single Conductor	M22759/43-22-9	A/R	Commercial
• Shrink Tubing	RNF 100 or MIL-I-23053	A/R	Commercial
• Circuit Breaker, 5 AMP	MS3320-5	1	MD Helicopters
• Switch	MS35059-22	1	MD Helicopters
• Splice, Knife, AMP	320555	4	MD Helicopters
• Ring Term, Red, #6 STUD	MS25036-102	4	MD Helicopters
• Ring Term, Red, #8 STUD	MS25036-149	3	MD Helicopters
• Contact, Socket	M39029/56-348	2	MD Helicopters
• Contact, Pin	M39029/58-360	2	MD Helicopters
• Contact, Socket	M39029/32-259	6	MD Helicopters
• Contact, Socket	M39029/22-191	9	MD Helicopters

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K. Warranty Policy:

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

369E, FF, 500N: -3.0 lb at 44.65in longitudinal or weigh removed strobe power supply.

600N: -3.0 lb at 14.65in longitudinal or weigh removed strobe power supply.

O. Electrical Load Data:

TBK-LED-A1: WAS 2.8 amperes, IS 0.90 amperes

TBK-LED-B1: WAS 2.8 amperes, IS 0.96 amperes

TBK-LED-C1: WAS 3.5 amperes, IS 1.35 amperes

TBK-LED-D1: WAS 3.5 amperes, IS 0.90 amperes

P. Other Publications Affected:

CSP-HMI-3, Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-E-1 Rotorcraft Flight Manual

CSP-FF-1 Rotorcraft Flight Manual

CSP-520N-1 Rotorcraft Flight Manual

CSP-600N-1 Rotorcraft Flight Manual

CSP-HMI-2, Basic Handbook of Maintenance Instructions

CSP-HMI-3, Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics

CSP-IPC-4, Illustrated Parts Catalog

SB369E-108/SB369F-094, Aft Position and Anti-Collision Light Mounting Inspection,
Replacement and Repair

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

WARNING

High voltage is used in the strobe power supply to anti-collision (strobe) light circuits. Make sure the circuit is turned OFF for a minimum of 10 minutes to allow for voltage bleed-off before performing any maintenance.

- (1). Ground the aircraft.
- (2). Make sure all switches are OFF.
- (3). Disconnect external power if connected.
- (4). Disconnect Battery. (Ref. CSP-HMI-3, Section 96-05-00)

B. TBK-LED-A1 369E and 369FF Anti-Collision (Strobe) Light Kit Installation

(Ref. Figure 2)

NOTE: When wiring or connectors are disconnected, but not removed from the aircraft, use standard shop practices to cap and stow wiring and/or connectors. Make sure all wiring is properly retied and protected from chafing and other damage.

- (1). Remove strobe power supply and filter FL10 (if installed).
 - (a). Disconnect connectors P556 and P557 from the strobe power supply. Cap and stow connectors.
 - (b). Disconnect black wire from the strobe power supply to E8 at E8.
 - (c). Disconnect red wire from splice SP213-B or, if installed, from the load side of filter FL10.
 - (d). Disconnect wire L1003B22 from J1201-3 and the line side of filter FL10 or splice SP213-A. Cap and stow wire L1003B22.
 - (e). If installed, remove two screws, two washers, and filter FL10.
 - (f). Remove four screws, four washers, and the strobe power supply.
 - (g). Disconnect the wires at J208-C, -D, -E and -F. Cap and stow wires.
- (2). Remove circuit breaker switch CB115 and related wiring. (Ref. Figure 2)
 - (a). Disconnect wire L1003A22 from Terminal 2 of CB115 and P1201-3. Cap and stow both ends of wire L1003A22.
 - (b). Disconnect wire P20002A12 and the 20 AWG jumper wire from Terminal 1 of CB115 and Terminal 1 of CB118. Reconnect wire P20002A12 to Terminal 1 of CB118.
 - (c). If CB120 (pitot heater) is installed, disconnect and remove the bus bar from Terminal 1 of CB120 and reconnect the removed 20 AWG jumper wire to Terminal 1 of CB118 and Terminal 1 of CB120.
 - (d). If CB120 (pitot heater) is not installed, disconnect the other end of 20 AWG jumper wire from CB118 and discard jumper wire.
 - (e). Remove circuit breaker switch CB115 from switch/breaker panel.

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- (3). Remove the lower anti-collision (strobe) light (DS200). (Ref. Figure 2)
 - (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the four screws and four washers that attach the lower strobe light plate to the aircraft, then remove the lower strobe light and plate. Keep the screws and the washers.
 - (c). Get access to splices SP63, SP64, SP65 and SP211. Cut the blue, orange, and white wires at SP63-A, SP64-A, SP65-A, and the shield termination at SP211-A.
 - (d). Cap and stow SP65 and the shield termination at SP211-A.
 - (e). Remove the two self-locking nuts, the four flat washers, and the two screws that attach the anti-collision (strobe) light base to the lower strobe light plate. Remove and discard the gasket. Keep the lower strobe light plate, the screws, the washers, and the nuts.
- (4). Install the new double pole, double throw toggle switch S7, the new 5 amp circuit breaker CB210 and related wiring. (Ref. Figure 1 and Table 6)

NOTE: Route new wires along existing wiring routes, or in accordance with accepted shop practices, to determine proper wire length before they are cut.

- (a). Using M22759/43-22-9 wire, cut, terminate, and label new wires with the wire number as shown in Table 6 and Figure 8.
- (b). Route and install new wires in accordance with Table 6 and Figure 8.
- (c). Connect the four new wires to the new switch S7 as shown in Figure 8.
- (d). Install switch S7 in the switch panel assembly at the location shown in Figure 1. Secure switch S7 with the provided lock washer and nut.
- (e). If necessary, label switch panel assembly with the blank decal at switch S7 location as shown in Figure 1.
- (f). Connect the two new wires to the new 5A circuit breaker CB210 as shown in Figure 8.
- (g). Install the new 5A circuit breaker CB210 in the circuit breaker panel assembly at the location shown in Figure 1. Secure the circuit breaker with the provided seal and threaded bushing.
- (h). Identify the new 5A circuit breaker as “CB210” on the back of the circuit breaker panel assembly.
- (i). Label circuit breaker panel assembly with the “ACL” decal at the CB210 position as shown in Figure 1.

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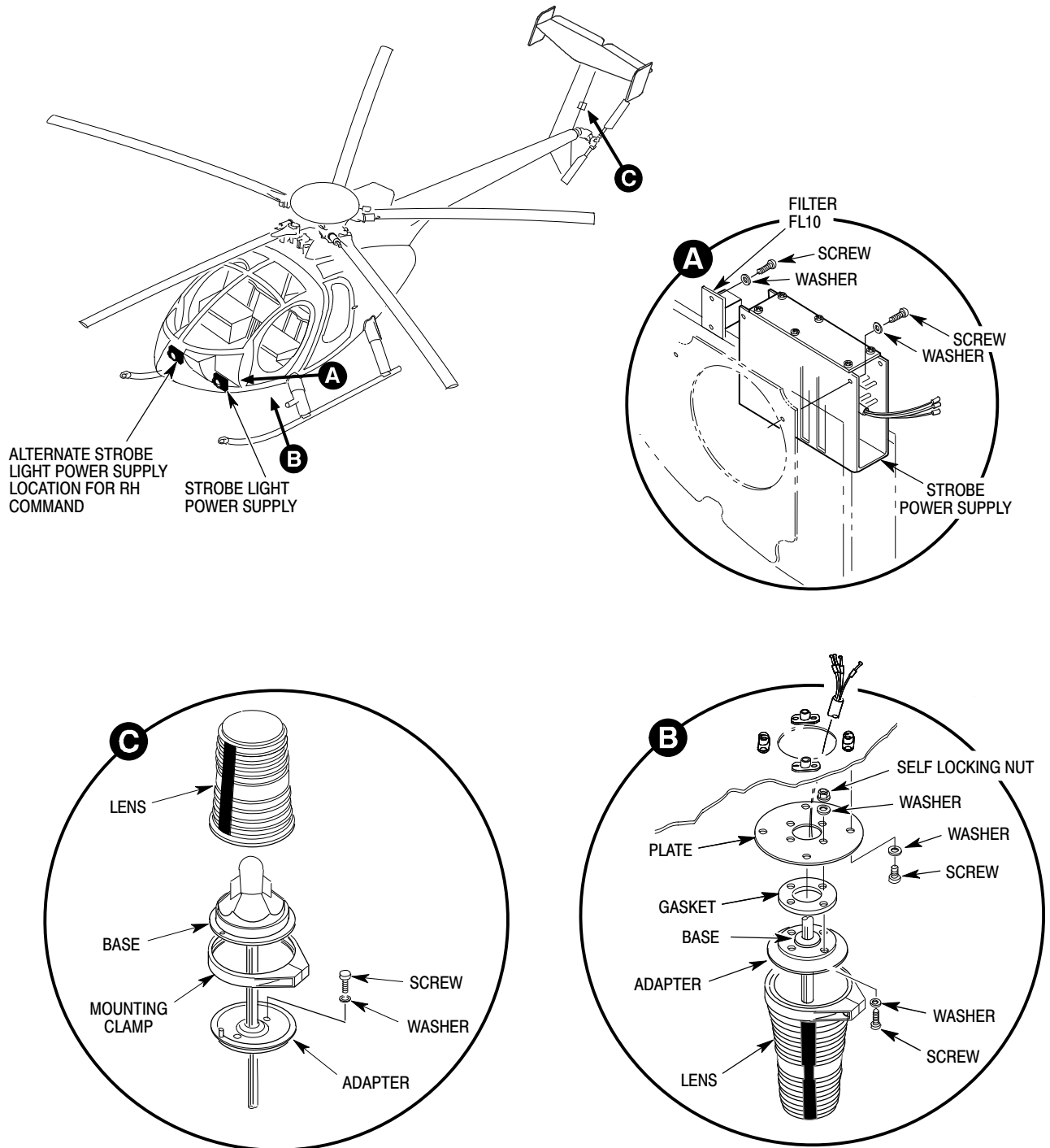
Table 6. New TBK-LED-A1 Fabricated Wires

Item No.	Wire Number	From	From Termination	To	To Termination
1	L149A22	S7-2	Ring Terminal MS25036-102	CB210-2	Ring Terminal MS25036-149
2	L150F22	S7-6	Ring Terminal MS25036-102	P1201-3	Socket Contact M39029/56-348
3	L151A22	S7-3	Ring Terminal MS25036-102	P1201-75	Socket Contact M39029/56-348
4	L150E22	J1201-3	Pin Contact M39029/58-360	TB200-10-A	Socket Contact M39029/22-191
5	L151B22	J1201-75	Pin Contact M39029/58-360	TB200-10-E	Socket Contact M39029/22-191
6	L150D22	TB200-10-D	Socket Contact M39029/22-191	SP65	Heat Shrinkable Cap MHS5077-4001
7	L153A22N	E18-N	Socket Contact M39029/22-191	SP64-A	AMP Knife Splice 320555
8	L151C22	TB200-10-H	Socket Contact M39029/22-191	SP63-A	AMP Knife Splice 320555
9	L150C22	TB200-10-C	Socket Contact M39029/22-191	J208-D	Socket Contact M39029/32-259
10	L154C22N	E18-P	Socket Contact M39029/22-191	J208-E	Socket Contact M39029/32-259
11	L151D22	TB200-10-G	Socket Contact M39029/22-191	J208-F	Socket Contact M39029/32-259
12	L150G22N	S7-5	Socket Contact M39029/22-191	E35-Z-E	Ring Terminal MS25036-102
13	Jumper	CB210-1	Ring Terminal MS25036-149	CB118-1	Ring Terminal MS25036-149

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Figure 2. Strobe Power Supply And Anti-collision Light Removal

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Do not touch the LED lens with either fingers or sharp objects. This could soil and/or damage the lens and effect the optical performance of the LEDs.

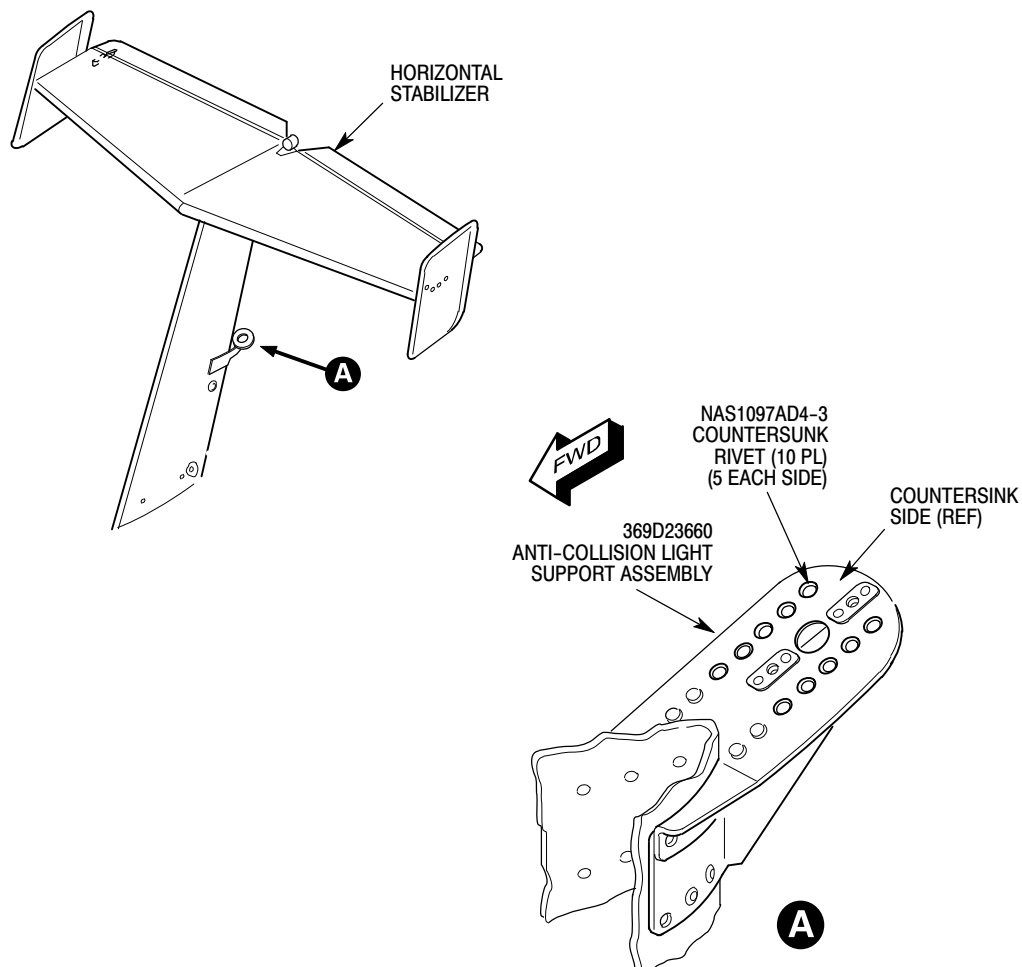
- (5). Install the lower anti-collision (strobe) light (DS200). (Ref. Figure 4)
 - (a). Install the new gasket and the adapter plate on the lower strobe light plate and secure with four screws, four washers, and four nuts.
 - (b). Install the anti-collision (strobe) light assembly on the adapter plate and secure with four screws and four washers.
 - (c). Install gasket, lens, and retainer on anti-collision (strobe) light assembly with four screws and four washers.
 - (d). Install, crimp, and label a knife splice on the two anti-collision (strobe) light assembly wires and the two wires at the mounting location. (Ref. Figure 8)
 - (e). Cut two-2 inch lengths of shrink tubing and install on the two anti-collision (strobe) light assembly wires.
 - (f). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the wires on the aircraft as shown in Figure 8. Apply heat and shrink tubing over the two connections.
 - (g). Carefully position the wiring and install the assembled anti-collision (strobe) light assembly to the fuselage and secure with four screws and four washers.
 - (h). Using aluminum foil tape, mask the lens of the lower anti-collision (strobe) light assembly as shown in Figure 4.
- (6). Remove the upper anti-collision (strobe) light (DS201). (Ref. Figure 2)
 - (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the two screws that secure the anti-collision (strobe) light base to the vertical stabilizer anti-collision light support assembly. Keep the two screws.
 - (c). Get access to splices SP60, SP61, SP62 and SP212. Cut the blue, orange, and white wires at SP60-A, SP61-A, SP62-A, and the shield termination at SP212-A, then remove the anti-collision (strobe) light.
 - (d). Cap and stow SP60 and the shield termination from SP212-A.
 - (e). Inspect anti-collision light support assembly for pulled through or sheared rivets (Ref. Figure 3).
 - (f). Make sure five rivets on each side of anti-collision support light assembly are countersunk and flush.
 - (g). If rivets show signs of pulling through the support assembly or shearing off, do Step 2.B.(7). If no rivets show signs of pulling through the support assembly or shearing off, go to Step 2.B.(8).
 - (h). Do an inspection of anti-collision support light assembly, PN 369D23660-5, for the installation of 10 MS20426AD3 rivets.
 - 1). If there are MS20426AD3 rivets installed, do Procedure 2.B.(7).

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- (7). If required, repair the vertical stabilizer anti-collision light support assembly (Ref. Figure 3).
 - (a). Remove 10 rivets from anti-collision light support assembly with a # 40 drill.
 - (b). Inspect rivet holes for cracks. If cracks are found, email or speak to Field Service.
 - (c). Enlarge rivet holes with a #30 drill.
 - (d). Deburr rivet holes.
 - (e). Apply corrosion protection to the rivet holes (Ref. CSP-HMI-2, Chapter 20-40-00).
 - (f). Wet install 10 NAS1097AD4-3 rivets in anti-collision light support assembly with primer.
 - (g). As necessary, do a touchup of the paint. (Ref. CSP-HMI-2, Section 20-30-00)
 - (h). Identify the anti-collision light support assembly as 369D23660-7 with a permanent ink marker.



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Figure 3. Anti-Collision Light Support And Rear Position Light Bracket Repairs

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Do not touch the LED lens with either fingers or sharp objects. This could soil and/or damage the lens and effect the optical performance of the LEDs.

- (8). Install new upper LED anti-collision light. (Ref. Figure 4)
 - (a). Install the gasket and the adaptor plate from anti-collision light kit on the vertical stabilizer anti-collision light support assembly and secure with two washers and two screws.
 - (b). Carefully remove the unwanted gasket to match the adapter plate profile.
 - (c). Install, crimp, and label a knife splice on the two anti-collision (strobe) light assembly wires.
 - (d). Cut two-2 inch lengths of shrink tubing and install on the two anti-collision (strobe) light assembly wires.
 - (e). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the new wires installed on the aircraft as shown in Figure 8. Apply heat and shrink tubing over the two connections.
 - (f). Align the holes and secure the anti-collision (strobe) light assembly to the adapter plate using four washers and four screws.

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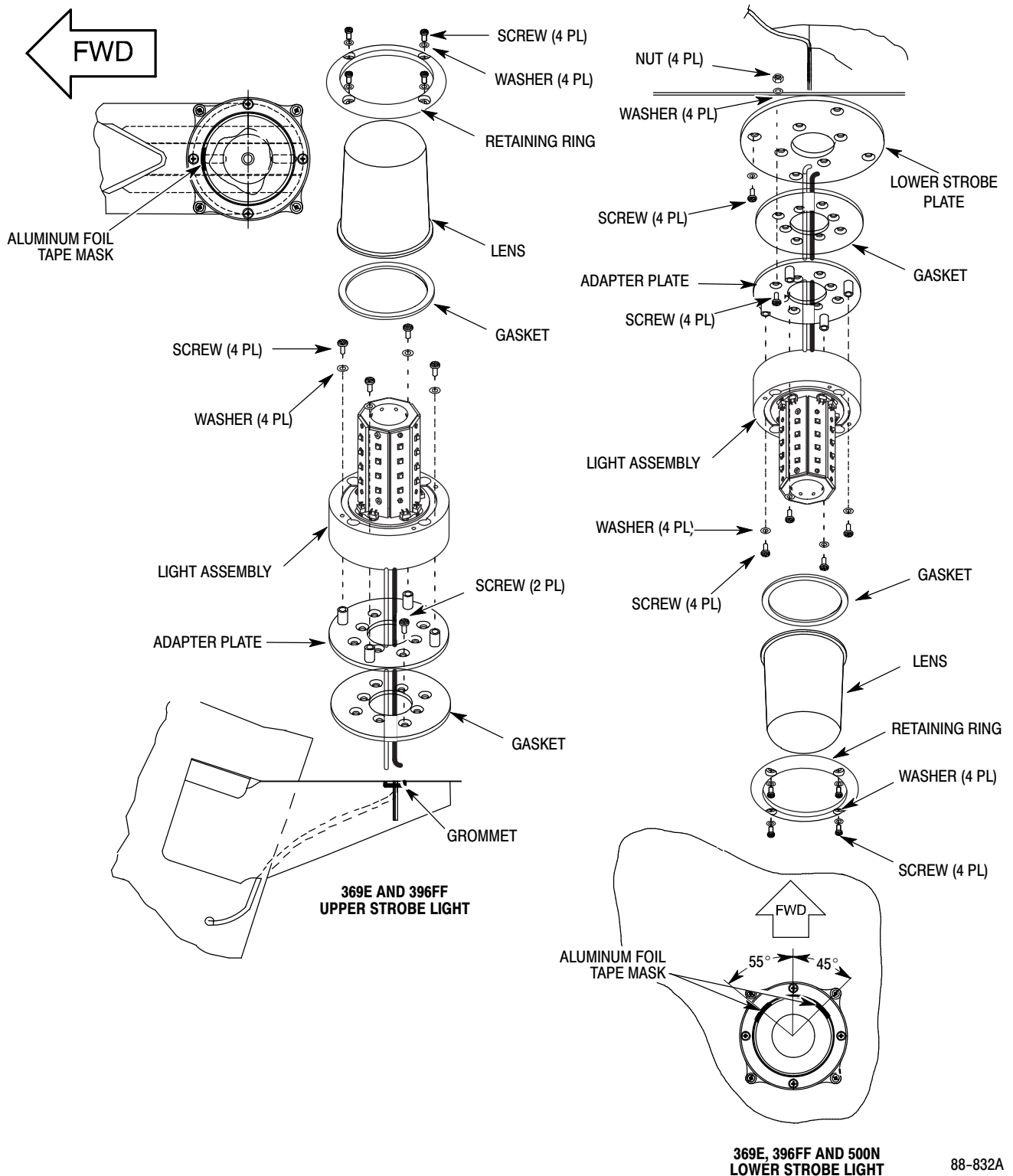


Figure 4. Upper and Lower LED Anti-Collision Strobe Light Installation

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C. TBK-LED-B1 369E and 369FF Position Light Kit Installation

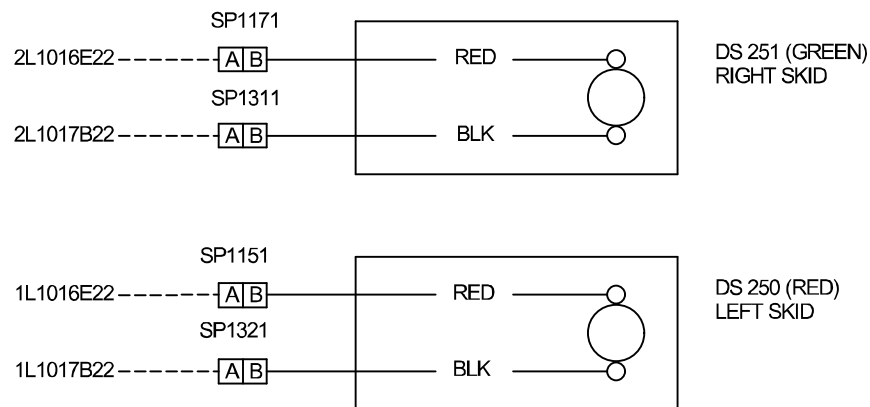
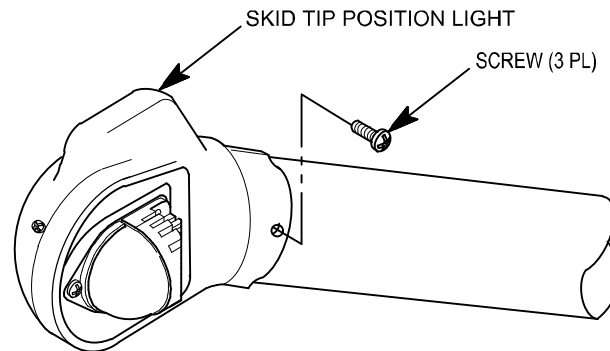
NOTE: When wiring or connectors are disconnected, but not removed from the aircraft, use standard shop practices to cap and stow wiring and/or connectors. Make sure all wiring is properly retied and protected from chafing and damage.

- (1). Remove the left and the right landing gear skid tip position light assemblies.
 - (a). Remove the three screws securing the complete left and right skid tip position light assemblies to the landing gear skid tips. Keep the screws.
 - (b). Remove the position light assemblies from the skid tips far enough to access the wire splices. Cut the wires at SP1171-A, SP1311-A, SP1151-A and SP1321-A, then remove the light assemblies.
 - (c). Remove any sealant residue from end of the skid tubes.
- (2). Install new right and left skid tip position light assemblies. (Ref. Figure 5)
 - (a). Install, crimp, and label a new knife splice on the two wires at the L/H and R/H skid tips as shown in Figure 5 and Figure 9.
 - (b). Install, crimp, and label a new knife splice on the two wires on each of the two new landing gear skid tip position lights and the wires at the mounting location as shown in Figure 5.
 - (c). Cut four-two inch lengths of shrink tubing and install on the two skid tip position lights wires.
 - (d). Connect the knife splices on the four skid tip position lights wires to the wires installed on the aircraft as shown in Figure 5 and Figure 9. Apply heat and shrink tubing over the four connections.
 - (e). Install the new L/H and R/H skid tip position light assemblies on skid tubes and secure with six screws.
 - (f). Apply sealant around the parameter of the end of both skid tubes at the new landing gear skid tip position lights.
 - (g). Clean any excess sealant from the skid tubes and the new L/H and R/H skid tip position light assemblies.

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Figure 5. Skid Tip Position Light Replacement

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- (3). Replace the rear position light and the horizontal stabilizer position light mounting bracket. (Ref. Figure 6)
 - (a). If installed, remove horizontal stabilizer (Ref. CSP-HMI-2, Section 53-50-10).
 - (b). Remove the ground wire from the grounding location if required.
 - (c). Pull the rear position light wires thru horizontal stabilizer.

NOTE: Keep the trailing edge of the horizontal stabilizer facing down while replacing the rear position light and the horizontal stabilizer position light mounting bracket.

- (d). Remove four forward rivets by drilling the rivet head only with a #30 drill.
- (e). Use a small drift to tap the remaining part of rivet into the horizontal stabilizer.
- (f). Remove three trailing edge rivets by drilling the rivet head only with a # 40 drill.
- (g). Use a small drift to tap the remaining part of rivet out of the horizontal stabilizer.
- (h). Remove one screw, two washers, one self-locking nut, and the rear position light and the horizontal stabilizer position light mounting bracket. Keep the screw, washers, and nut.
- (i). Inspect rivet holes for cracks or an oversized condition. If cracks are found or holes are oversized, email or speak to Field Service.
- (j). Insert Pro-Seal 890 B-2 sealing compound (approximately one eighth (1/8) ounce) into the open rivet holes in the horizontal stabilizer position light mounting bracket to contain rivet pieces. Shake the horizontal stabilizer until rivet pieces are secured in sealing compound.
- (k). Install the new horizontal stabilizer position light mounting bracket on the horizontal stabilizer.
- (l). Use Cleco fasteners to hold mounting bracket in the correct position.
- (m). Apply corrosion protection to the rivet holes. (Ref. CSP-HMI-2, Chapter 20-40-00)
- (n). Wet install eight rivets with primer.
- (o). Trim the four wires in the position light pigtail to a length of **2 inches (50.8 mm)**.
- (p). Cap and stow the yellow and white wires using MHS5077 or equivalent.

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- (q). Install the rear position light, into the horizontal stabilizer position light mounting bracket. (Ref. Figure 9)

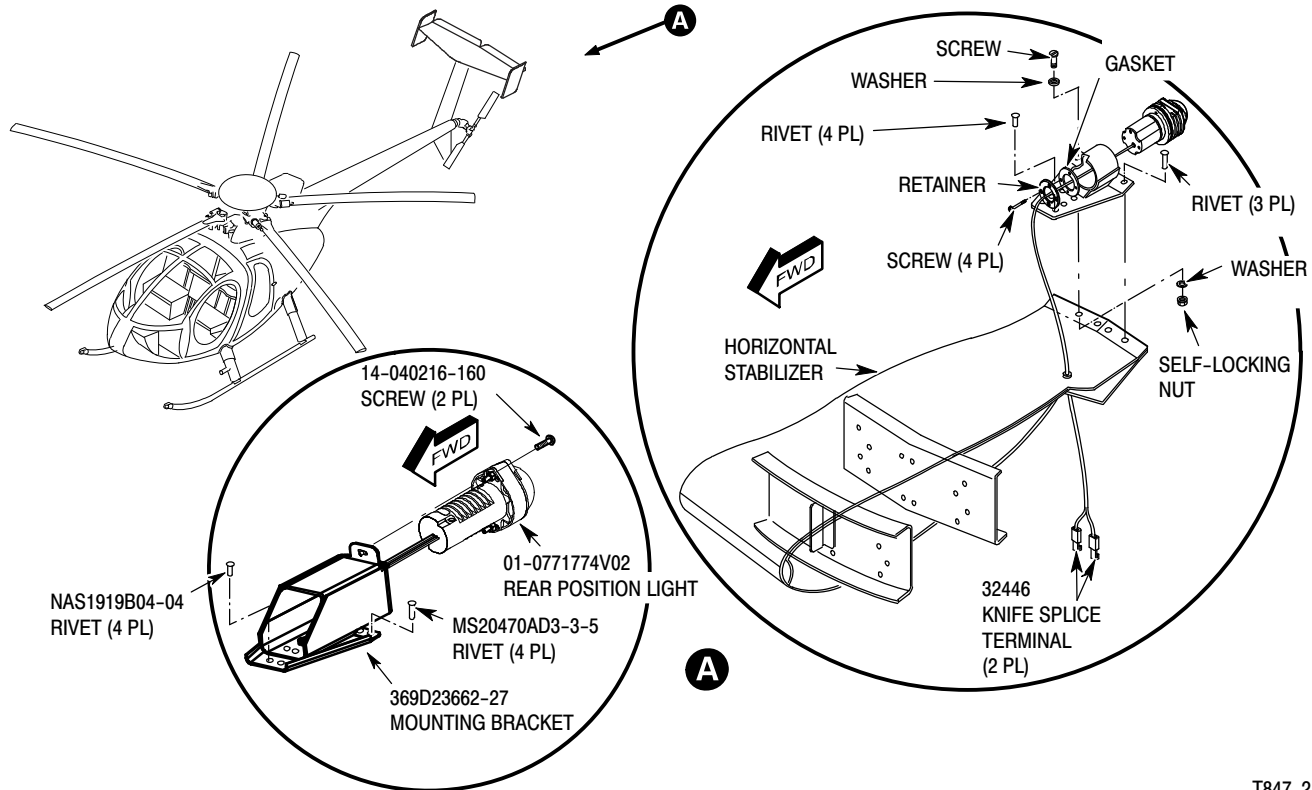


Make sure the rear position light drain passage is down. Failure to comply can cause damage to the rear position light.

- 1). Put the rear position light in its position in the mounting bracket.
 - 2). Install two screws in the aft position light.
 - 3). If necessary, install splices, PN M81824/1-1 to extend orange and black wires.
 - 4). Install RNF-100 over the wires within the horizontal stabilizer conduit. Make sure 1 inch (25.4 mm) of the tubing extends out past the ends of the conduit.
 - 5). Install approximately 3 inches (7.62 mm) of UV resistant heat shrinkable tubing between the light assembly and conduit entrance. Make sure it overlaps with the RNF-100.
 - 6). Route and correctly position wires in the horizontal stabilizer.
 - 7). Cut two pieces of shrink tubing to a length of **2 inches (50.8 mm)** each and install on the position light assembly orange and black wires.
 - 8). Install knife splice on the end of the orange extended wire to connect the rear position light wire to SP404 and terminate black wire to existing ground.
 - 9). Pull shrink tubing over knife splice terminals and apply heat to shrink tubing.
- (4). Reinstall horizontal stabilizer. (Ref. CSP-HMI-2, Section 53-50-10)

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Figure 6. Rear Position Light and Mounting Bracket Replacement

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D. TBK-LED-C1 500N Anti-Collision Light Kit Installation

NOTE: When wiring or connectors are disconnected, but not removed from the aircraft, use standard shop practices to cap and stow wiring and/or connectors. Make sure all wiring is properly retied and protected from chafing and damage.

- (1). Remove the strobe power supply and the filter FL10 (if installed). (Ref. Figure 2)
 - (a). Disconnect connectors P556, P557, and P558 from the strobe power supply. Cap and stow connectors.
 - (b). Disconnect black wire from the strobe power supply to E8 at E8.
 - (c). Disconnect the white wire from the load side of filter FL10 if installed, or the red wire from splice SP213-B.
 - (d). Disconnect wire L1003B22 from the line side of filter FL10 and J1201-3. Cap and stow both ends of wire L1003B22.
 - (e). If installed, remove two screws, two washers, and filter FL10.
 - (f). Remove four screws, four washers, and the strobe power supply.
 - (g). De-pin wires at J208-C, -D, -E and -F. Cap and stow wires.
- (2). Remove circuit breaker switch CB115 and related wiring. (Ref. Figure 2)
 - (a). Disconnect wire L1003A22 from Terminal 2 of CB115 and P1201-3. Cap and stow both ends of wire L1003A22.
 - (b). Disconnect wire P20002A12 and the 20 AWG jumper wire from Terminal 1 of CB115 and Terminal 1 of CB118. Reconnect wire P20002A12 to Terminal 1 of CB118.
 - (c). If CB120 (pitot heater) is installed, disconnect and remove the bus bar from Terminal 1 of CB120 and reconnect the removed 20 AWG jumper wire to Terminal 1 of CB118 and Terminal 1 of CB120.
 - (d). If CB120 (pitot heater) is not installed, disconnect the other end of 20 AWG jumper wire from CB118 and discard jumper wire.
 - (e). Remove circuit breaker switch CB115 from switch/breaker panel.
- (3). Remove the lower anti-collision (strobe) light (DS200). (Ref. Figure 2)
 - (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the four screw and four washers that attach the lower strobe light plate to the aircraft, then remove the lower strobe light and plate. Keep the screws and the washers.
 - (c). Get access to splices SP63, SP64, SP65 and SP211. Cut the blue, orange, and white wires at SP63-A, SP64-A, SP65-A, and the shield termination at SP211-A.
 - (d). Cap and stow SP65 and the shield termination at SP211-A.
 - (e). Remove the two self-locking nuts, the four flat washers, and the two screws that attach the anti-collision (strobe) light base to the lower strobe light plate. Remove and discard the gasket. Keep the lower strobe light plate, the screws, the washers, and the nuts.

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- (4). Install the new double pole, double throw toggle switch S9, the new 5 amp circuit breaker CB210 and related wiring. (Ref. Figure 2)

NOTE: Route new wires along existing wiring routes, or in accordance with accepted shop practices, to determine proper wire length before they are cut.

- (a). Using M22759/43-22-9 wire, cut, terminate, and label new wires with the wire number as shown in Table 7 and Figure 10.
- (b). Route and install new wires in accordance with Table 7 and Figure 10.
- (c). Connect the four new wires to the new switch S9 as shown in Figure 10.
- (d). Install switch S9 in the switch panel assembly at the location shown in Figure 1. Secure switch S9 with the provided lock washer and nut.
- (e). Label switch panel assembly with the blank decal at switch S9 location as shown in Figure 1.
- (f). Connect the two new wires to the new 5A circuit breaker CB210 as shown in Figure 10.
- (g). Install the new 5A circuit breaker CB210 in the circuit breaker panel assembly at the location shown in Figure 1. Secure the circuit breaker with the provided seal and threaded bushing.
- (h). Identify the new 5A circuit breaker as “CB210” on the back of the circuit breaker panel assembly.
- (i). Label circuit breaker panel assembly with the “ACL” decal at the CB210 position as shown in Figure 1.

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Table 7. New TBK-LED-C1 Fabricated Wires

Item No.	Wire Number	From	From Termination	To	To Termination
1	L150G22N	S9-5	Socket Contact M39029/22-191	E35-Z	Ring Terminal MS25036-102
2	L150F22	S9-6	Ring Terminal MS25036-102	P1201-3	Socket Contact M39029/56-348
3	L151A22	S9-3	Ring Terminal MS25036-102	P1201-75	Socket Contact M39029/56-348
4	L150E22	J1201-3	Pin Contact M39029/58-360	TB200-10-A	Socket Contact M39029/22-191
5	L151B22	J1201-75	Pin Contact M39029/58-360	TB200-10-E	Socket Contact M39029/22-191
6	2L150B22	TB200-10-B	Socket Contact M39029/22-191	J208-H	
7	2L151B22	TB200-10-F	Socket Contact M39029/22-191	J208-K	
8	2L154B22N	E18-R	Socket Contact M39029/22-191	J208-J	Socket Contact M39029/32-259
9	L150C22	TB200-10-C	Socket Contact M39029/22-191	J208-D	Socket Contact M39029/32-259
10	L154C22N	E18-P	Socket Contact M39029/22-191	J208-E	
11	L151D22	TB200-10-G	Socket Contact M39029/22-191	J208-F	Socket Contact M39029/32-259
12	L153A22N	E18-N		SP64-A	AMP Knife Splice 320555
13	L150D22	TB200-10-D		SP65	Heat Shrinkable Cap MHS5077-4001
14	L151C22	TB200-10-H		SP63-A	
15	Jumper	CB210-1	Ring Terminal MS25036-149	CB118-1	Ring Terminal MS25036-149

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- (5). Install the lower anti-collision (strobe) light (DS200). (Ref. Figure 3)
 - (a). Install the new gasket and the adapter plate on the lower strobe light plate and secure with four screws, eight washers, and four nuts.
 - (b). Install the anti-collision (strobe) light assembly on the adapter plate and secure with four screws and four washers (components of the anti-collision light adapter kit).
 - (c). Install, crimp, and label a knife splice on the three anti-collision (strobe) light assembly wires and the three wires at the mounting location.
 - (d). Cut two pieces of shrink tubing to a length of **2 inches (50.8 mm)** each and install on the two anti-collision (strobe) light assembly wires.
 - (e). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the knife splices on the aircraft wires as shown in Figure 10. Apply heat and shrink tubing over the two connections.
 - (f). Carefully position the wiring and install the assembled anti-collision (strobe) light assembly to the fuselage and secure with four screws and four washers.
 - (g). Using aluminum foil tape, mask the lens of the lower anti-collision (strobe) light assembly as shown in Figure 4.
- (6). Replace the upper tail anti-collision (strobe) light.
 - (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the two screws and two washers that attach the upper tail anti-collision (strobe) light to the horizontal stabilizer, then remove the upper tail anti-collision (strobe) light. Keep the screws and the washers.
 - (c). Get access to splices SP60, SP61, and SP62. Cut the white, black, and red wires at SP60-A, SP61-A, and SP62-A.
 - (d). Cap and stow SP60.
 - (e). Install, crimp, and label a knife splice on the two anti-collision (strobe) light assembly wires and the two wires at the mounting location. (Ref. Figure 10)
 - (f). Cut two pieces of shrink tubing to a length of **2 inches (50.8 mm)** each and install on the two anti-collision (strobe) light assembly wires.
 - (g). Install the gasket and the adaptor plate from anti-collision light kit on the horizontal stabilizer and secure with two washers and two screws.
 - (h). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the knife splices on the aircraft wires as shown in Figure 10. Apply heat and shrink tubing over the two connections.
 - (i). Carefully position the wiring and install the upper anti-collision (strobe) light on the adaptor plate and secure with four screws and four washers.

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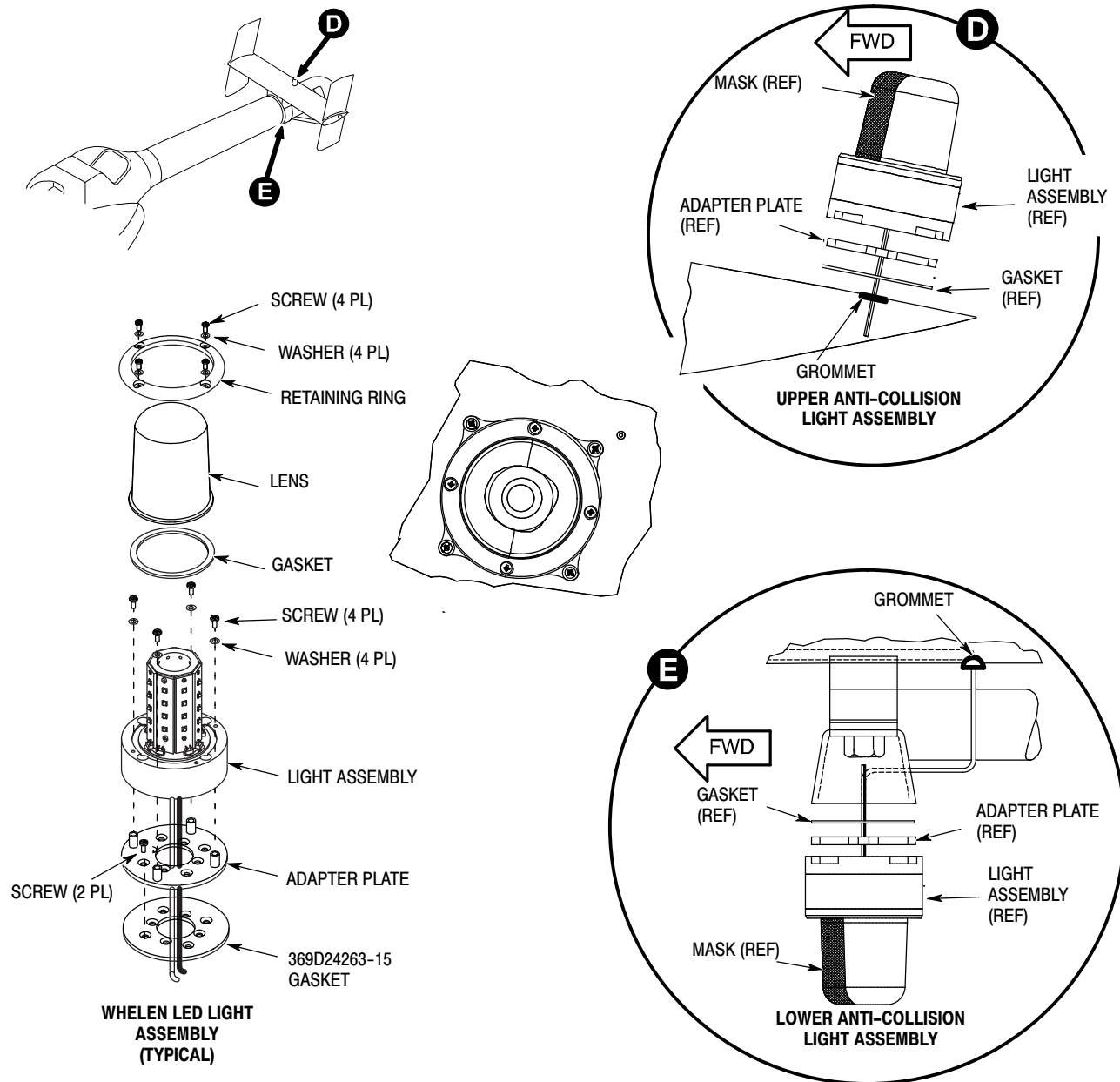
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- (7). Replace the lower tail anti-collision (strobe) light.
 - (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the two screws and two washers that attach the lower tail anti-collision (strobe) light to the mounting bracket, then remove the lower tail anti-collision (strobe) light. Keep the screws and the washers.
 - (c). Remove the grommet from the tail boom and get access to splices 2SP60, 2SP61, and 2SP62. Cut the white, black, and red wires at 2SP60-A, 2SP61-A, and 2SP62-A.
 - (d). Cap and stow 2SP60.
 - (e). Install, crimp, and label a knife splice on the two anti-collision (strobe) light assembly wires and the two wires at the mounting location. (Ref. Figure 10)
 - (f). Cut two pieces of shrink tubing to a length of **2 inches (50.8 mm)** each and install on the two anti-collision (strobe) light assembly wires.
 - (g). Install the gasket and the adaptor plate from anti-collision light kit on the mounting bracket and secure with two washers and two screws.
 - (h). Install a new grommet over the two anti-collision (strobe) light assembly wires.
 - (i). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the knife splices on the aircraft wires as shown in Figure 10. Apply heat and shrink tubing over the two connections. Secure the grommet in the tail boom.
 - (j). Carefully position the wiring and install the lower anti-collision (strobe) light on the adaptor plate and secure with four screws and four washers.

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Figure 7. Upper And Lower Tail Anti-collision Lights Installation

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E. TBK-LED-D1 600N Anti-Collision Light Kit Installation

NOTE: When wiring or connectors are disconnected, but not removed from the aircraft, use standard shop practices to cap and stow wiring and/or connectors. Make sure all wiring is properly retied and protected from chafing and damage.

- (1). 600N Anti-Collision Light Replacement. (Ref. Figure 11)
 - (a). Find, disconnect and remove strobe power supply. Stow P556 and P557. Disconnect black wire to E8 and red wire to SP213-B. Cap and stow. (Ref. Figure 8)
 - (b). Find and de-pin wire L1003B22 from J1201-3 to SP213-A. Cap and stow both ends.
 - (c). Find and de-pin wires at J208-C, D, E, F, H, J, K. Cap and stow.
 - (d). Find and de-pin wires at lower tail strobe (DS202), SP63-B, SP64-B, SP65-B and E44. Cap and stow shield termination. Remove lower strobe light.
 - (e). Find and de-pin wires at upper tail strobe (DS201), SP66-B, SP67-B, SP68-B and shield termination. Cap and stow shield termination. Remove upper strobe light.
 - (f). Find and remove circuit breaker switch CB115 from instrument switch/breaker panel.
 - (g). Find and de-pin wire L1003A22 from CB115 to P1201-3. Cap and stow both ends.
 - (h). Install new switch, S9 with attached wiring in CB115 position on switch/breaker panel. Label panel with blank decal. (Ref. Figure 1)
 - (i). Install new 5A circuit breaker with attached wiring in center console circuit breaker panel. Label circuit breaker position "CB210" and "ACL". (Ref. Figure 1)
 - (j). Install new LED anti-collision lights in lower and upper positions. Terminate wires. Note wire colors for proper termination and operation. (Ref. Figure 8)
 - (k). Terminate new wire segments from S9 and CB210 to P1201 and from J1201 to TB200-10, E18 and J208. (Ref Figure 8)
- (2). Replace the upper tail anti-collision (strobe) light.
 - (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the two screws and two washers that attach the upper tail anti-collision (strobe) light to the horizontal stabilizer, then remove the upper tail anti-collision (strobe) light. Keep the screws and the washers.
 - (c). Get access to splices SP60, SP61, and SP62. Cut the white, black, and red wires at SP60-A, SP61-A, and SP62-A.
 - (d). Cap and stow SP60.
 - (e). Install, crimp, and label a knife splice on the two anti-collision (strobe) light assembly wires and the two wires at the mounting location. (Ref. Figure 10)
 - (f). Cut two 2-inch lengths of shrink tubing and install on the two anti-collision (strobe) light assembly wires.

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- (g). Install the gasket and the adaptor plate from anti-collision light kit on the horizontal stabilizer and secure with two washers and two screws.
 - (h). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the knife splices on the aircraft wires as shown in Figure 10. Apply heat and shrink tubing over the two connections.
 - (i). Carefully position the wiring and install the upper anti-collision (strobe) light on the adaptor plate and secure with four screws and four washers.
- (3). Replace the lower tail anti-collision (strobe) light.
- (a). Loosen the mounting clamp and remove the anti-collision (strobe) light lens.
 - (b). Remove the two screws and two washers that attach the lower tail anti-collision (strobe) light to the mounting bracket, then remove the lower tail anti-collision (strobe) light. Keep the screws and the washers.
 - (c). Remove the grommet from the tail boom and get access to splices 2SP60, 2SP61, and 2SP62. Cut the white, black, and red wires at 2SP60-A, 2SP61-A, and 2SP62-A.
 - (d). Cap and stow 2SP60.
 - (e). Install a new grommet over the two anti-collision (strobe) light assembly wires.
 - (f). Install, crimp, and label a knife splice on the two anti-collision (strobe) light assembly wires and the two wires at the mounting location. (Ref. Figure 10)
 - (g). Cut two 2-inch lengths of shrink tubing and install on the two anti-collision (strobe) light assembly wires.
 - (h). Install the gasket and the adaptor plate from anti-collision light kit on the mounting bracket and secure with two washers and two screws.
 - (i). Connect the knife splices on the two anti-collision (strobe) light assembly wires to the knife splices on the aircraft wires as shown in Figure 10. Apply heat and shrink tubing over the two connections. Secure the grommet in the tail boom.
 - (j). Carefully position the wiring and install the lower anti-collision (strobe) light on the adaptor plate and secure with four screws and four washers.

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Table 8. New TBK-LED-D1 Fabricated Wires

Item No.	Wire Number	From	From Termination	To	To Termination
1	L150G22N	S9-5	Socket Contact M39029/22-191	E35-Z	Ring Terminal MS25036-102
2	L150F22	S9-6	Ring Terminal MS25036-102	P1201-3	Socket Contact M39029/56-348
3	L151A22	S9-3	Ring Terminal MS25036-102	P1201-75	Socket Contact M39029/56-348
4	L150E22	J1201-3	Pin Contact M39029/58-360	TB200-10-A	Socket Contact M39029/22-191
5	L151B22	J1201-75	Pin Contact M39029/58-360	TB200-10-E	Socket Contact M39029/22-191
6	2L150B22	TB200-10-B	Socket Contact M39029/22-191	J208-H	
7	2L151B22	TB200-10-F	Socket Contact M39029/22-191	J208-K	
8	2L154B22N	E18-R	Socket Contact M39029/22-191	J208-J	Socket Contact M39029/32-259
9	L150C22	TB200-10-C	Socket Contact M39029/22-191	J208-D	Socket Contact M39029/32-259
10	L154C22N	E18-P	Socket Contact M39029/22-191	J208-E	
11	L151D22	TB200-10-G	Socket Contact M39029/22-191	J208-F	Socket Contact M39029/32-259
12	Jumper	CB210-1	Ring Terminal MS25036-149	CB118-1	Ring Terminal MS25036-149

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F. Job Close-Up

- (1). Do a FOD check. Use best shop practices.
- (2). Reconnect battery.
- (3). Perform an operations check of installed equipment.
- (4). Clean work area.

G. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log of the Rotorcraft Log Book. (Ref. CSP-RLB-L8)
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.

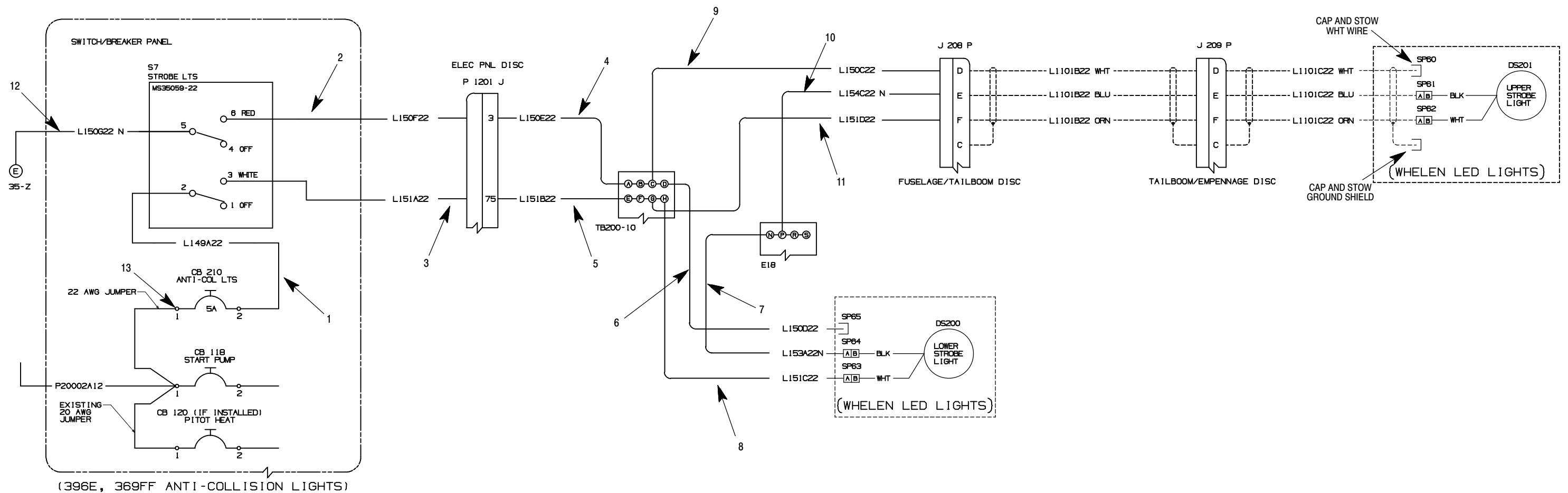


Figure 8. TBK-LED-A1 LED Anti-Collision (Strobe) Lights Wiring Diagram

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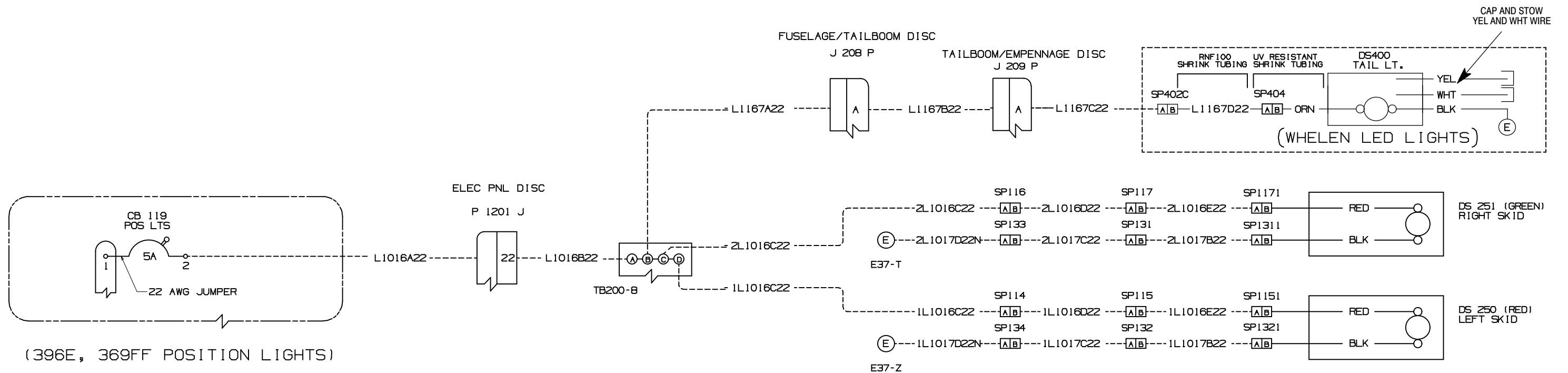


Figure 9. TBK-LED-B1 LED Position Lights Installation Wiring Diagram

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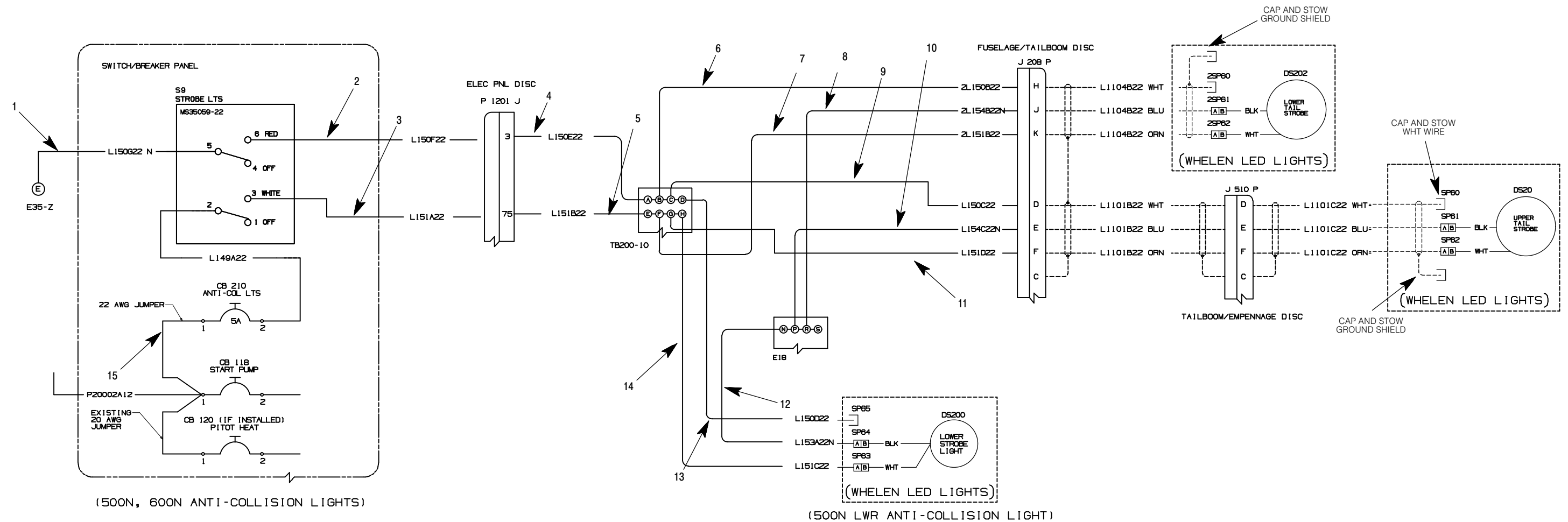
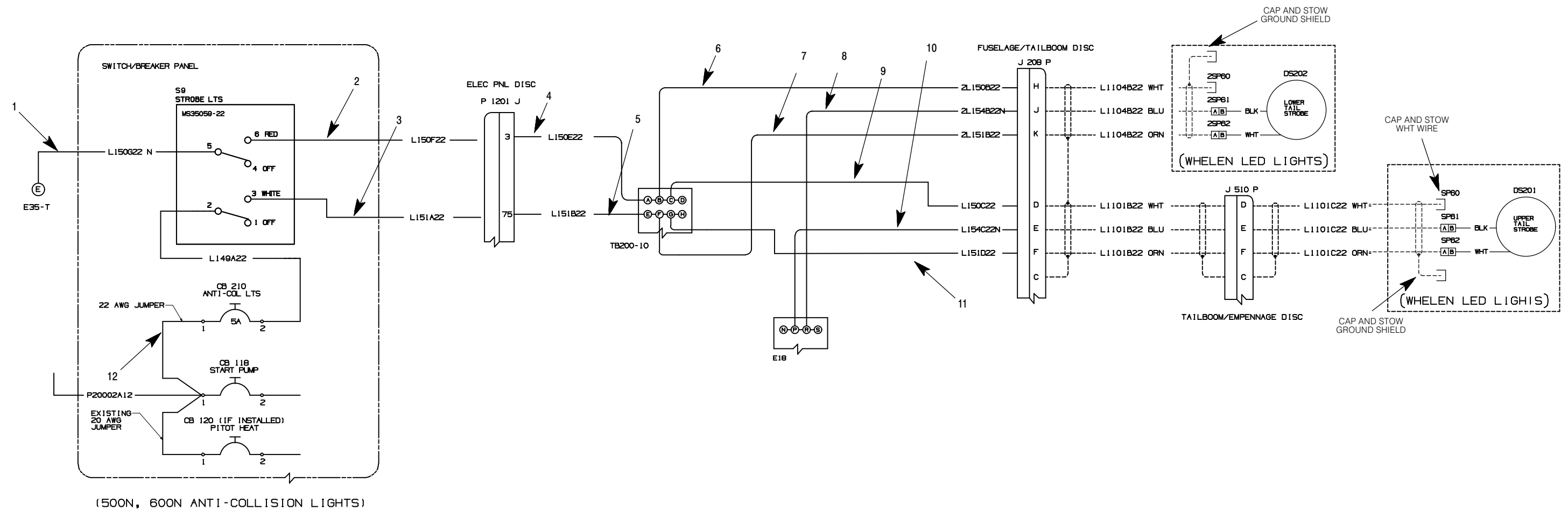


Figure 10. TBK-LED-C1 Anti-Collision (Strobe) Lights Wiring Diagram

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Figure 11. TBK-LED-D1 Anti-Collision (Strobe) Lights Wiring Diagram

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Bulletin Completed Record

LED Anti-Collision (Strobe) And Position Light Installation

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
Website: <https://www.mdhelicopters.com/contact.html>
Or email or speak to your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

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* Supersedes Technical Bulletin TB369E-010, TB369F-016, TB500N-012, and TB600N-016, dated 27 September 2022. Revised to replace PN 369D23662-23 with new Rear Position Light Bracket, PN 369D23662-27. There is no action required for helicopters that are in compliance with the original issue of this technical bulletin.

REPLACEMENT OF THE ANTI-COLLISION LIGHT AND REAR POSITION LIGHT

1. PLANNING INFORMATION

A. Aircraft Affected:

MD Helicopters Model 369E, serial numbers (SN) E0384 thru E0625
MD Helicopters Model 369F/FF, SN FF0076 thru FF0339
MD Helicopters Model 500N, SN LN0001 thru LN113
MD Helicopters Model 600N, SN RN0003 thru RN0083 and all spares inventory

B. Assembly/Components Affected By This Notice:

369D23657-13 Vertical Stabilizer Anti-Collision Light Mounting Support
369D23662-23 Horizontal Stabilizer Position Light Mounting Bracket Assembly (369E/369FF)
369D24452-23 Edge Lit Switch Panel (Glass Cockpit)
369D26454-57 Edge Lighted Switch Panel Assembly (Analog Cockpit)
369D24297-509, -511, -513, -515, LED Strobe and Position Light Installation Modification

C. Reason:

There have been field reports of cracking on the 369D23657-13 support bracket on the vertical stabilizer. EMTEQ anti-collision light assembly and position light assembly will be replaced with a Whelen anti-collision light assembly and position light assembly to significantly reduce the weight and cost.

D. Description:

Procedures in this Bulletin give owners and operators information to modify the W229 vertical stabilizer wire harness, to remove and replace the horizontal stabilizer position light mounting bracket, rear position light (369E/FF only), anti-collision light switch, and the upper/lower anti-collision lights.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA-approved.

G. Labor Hours:

Compliance with this bulletin will be approximately:

- Anti-Collision Lights (369E/FF) - Estimated 2.0 man-hours
- Rear Position Light (369E/FF) - Estimated 2.0 man-hours

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- Anti-Collision Lights (500N) - Estimated 3.0 man-hours
- Anti-Collision Lights (600N) - Estimated 2.0 man-hours

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department in Mesa, Arizona. Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

J. Material/Part Availability:

Contact MD Helicopter Spare Sales for parts availability at:
<https://www.mdhelicopters.com/contact.html>

Ref. CSP-HMI-2, Section 91-00-00, Table 1, for the item numbers of the consumable materials in the Nomenclature column, and Table 2, for the manufacture/supplier numbers in the Source column.

Table 1. REAR POSITION LIGHT REPLACEMENT PARTS/SUPPLIES (369E/FF)

Nomenclature (Termination Code)	Part No.	Qty.	Source
Rear Position Light	01-0771774V02	1	Whelen (CAGE 10402)
• Screw	14-040216-160	2	Whelen (CAGE 10402)
Bracket Assy, Mounting Position Light	369D23662-27	1	MD Helicopters
Deleted			
Deleted			
Cap, Heat Shrinkable	MHS5077-4001	2	Commercial
Rivet	MS20470AD3-3-5	4	Commercial
Rivet	NAS1919B04-04	4	Commercial
Wire, S/C, 22 AWG	MS22759/34-22-9	AR	Commercial
Splice, Crimp, Environmental, Red	M81824/1-1	2	Commercial
Splice, Knife	320555	2	Commercial
Shrink Tubing, UV Resistant	GMT-321-3/8-0-FLT	AR	Commercial
Shrink Tubing	RNF 100 or MIL-I-23053	AR	Commercial

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Table 2. ANTI-COLLISION LIGHT REPLACEMENT PARTS/SUPPLIES (369E/FF)			
Nomenclature (Termination Code)	Part No.	Qty.	Source
Anti-Collision Light Assembly	01-0771080-01	2	Whelen (CAGE 10402)
Gasket	369D24263-15	2	MD Helicopters
Screw	MS24693-S27	6	Commercial
Cap, Heat Shrinkable	MHS5077-4001	2	Commercial
Splice, Knife	320555	4	Commercial
Switch	MS35059-22	1	Commercial
Decal, Switch Panel, Blank	369D24297-1	1	MD Helicopters
Grommet	MS35489-11	1	Commercial
Shrink Tubing	RNF 100 or MIL-I-23053	AR	Commercial
Aluminum Foil Tape, 0.75 Inch Wide	425 or 427	AR	Commercial

Table 3. ANTI-COLLISION LIGHT REPLACEMENT PARTS/SUPPLIES (500N)			
Nomenclature (Termination Code)	Part No.	Qty.	Source
Anti-Collision Light Assembly	01-0771080-01	3	Whelen (CAGE 10402)
Gasket	369D24263-15	3	MD Helicopters
Screw	MS24693-S27	8	Commercial
Cap, Heat Shrinkable	MHS5077-4001	3	Commercial
Splice, Knife	320555	6	Commercial
Grommet	MS35489-11	2	Commercial
Switch	MS35059-22	1	Commercial
Decal, Switch Panel, Blank	369D24297-1	1	MD Helicopters
Shrink Tubing	RNF 100 or MIL-I-23053	AR	Commercial
Aluminum Foil Tape, 0.75 Inch Wide	425 or 427	AR	Commercial

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Table 4. ANTI-COLLISION LIGHT REPLACEMENT PARTS/SUPPLIES (600N)

Nomenclature (Termination Code)	Part No.	Qty.	Source
Anti-Collision Light Assembly	01-0771080-01	2	Whelen (CAGE 10402)
Gasket	369D24263-15	2	MD Helicopters
Screw	MS24693-S27	4	Commercial
Cap, Heat Shrinkable	MHS5077-4001	2	Commercial
Splice, Knife	320555	4	Commercial
Grommet	MS35489-11	2	Commercial
Switch	MS35059-22	1	Commercial
Decal, Switch Panel, Blank	369D24297-1	1	MD Helicopters
Shrink Tubing	RNF 100 or MIL-I-23053	AR	Commercial
Aluminum Foil Tape, 0.75 Inch Wide	425 or 427	AR	Commercial

K. Warranty Policy:

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

Anti-Collision Light: WAS 1.41 pounds (640 g), IS 0.65 pound (294.84 g)

Rear Position Light: WAS 0.66 pound (300 g) , IS 0.29 pound (131.54 g)

O. Electrical Load Data:

369E/FF Tail Position Light: WAS 0.44 amperes, IS 0.11 amperes

Anti-Collision Lights: No Change

P. Other Publications Affected:

CSP-HMI-2 Basic Handbook of Maintenance Instructions - Servicing and Maintenance

CSP-HMI-3 Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics

CSP-IPC-4 Illustrated Parts Catalog

CSP-COM-5 Component Overhaul Manual

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Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions - Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions - Instruments/Electrical/Avionics
CSP-IPC-4 Illustrated Parts Catalog
CSP-COM-5 Component Overhaul Manual
SB369E-108R1 / SB369F-094R1 Aft Position and Anti-Collision Light Mounting Inspection, Replacement and Repair
TB369E-006R1 / TB369F-009R1 / TB500N-006R1 / TB600N-011R1 LED Anti-Collision Strobe and Position Light Installation

2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

Power Off



- (1). Make sure all electrical power is **OFF** and disconnect battery.

B. Rear Position Light Modification (369E/FF)

(Ref. Figure 1)



Do not touch the LED lens with either fingers or sharp objects. This could soil and/or damage the lens and effect the optical performance of the LEDs.

- (1). Remove the horizontal stabilizer. (Ref. CSP-HMI-2, Chapter 53)
- (2). Remove rear position light (7).
 - (a). Remove screws (10).
 - (b). Remove retainer (9) and gasket (8).
 - (c). Disconnect splices (11).
- (3). Remove rear position light mounting bracket (1).
 - (a). Remove rivets (2, 3).
 - (b). If installed remove screw (4), washers (5), and nut (6).
 - (c). Make sure all rivet pieces are removed from inside the horizontal stabilizer.
 - (d). Apply corrosion protection to the rivet holes. (Ref. CSP-HMI-2, Chapter 20)
- (4). Deleted.

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- (5). Install rear position light mounting bracket (15) on horizontal stabilizer.
 - (a). Use Cleco fasteners to hold mounting bracket (15) in the correct position.
 - (b). Wet install rivets (16, 17).
- (6). Trim the four wires (18) in the position light pigtail to a length of **2 inches (50.8 mm)**.
- (7). Cap and stow the yellow and white wires using MHS5077 or equivalent.
- (8). Install rear position light (12).



Make sure the rear position light drain passage is down. Failure to comply can cause damage to the rear position light.

- (a). Put the rear position light (12) in its position in mounting bracket (15).
- (b). Install screws (13).
- (c). Install splices, PN M81824/1-1 (SP404 and SP405) and wire to extend the orange and black pigtail wires. (Ref. Figure 6)

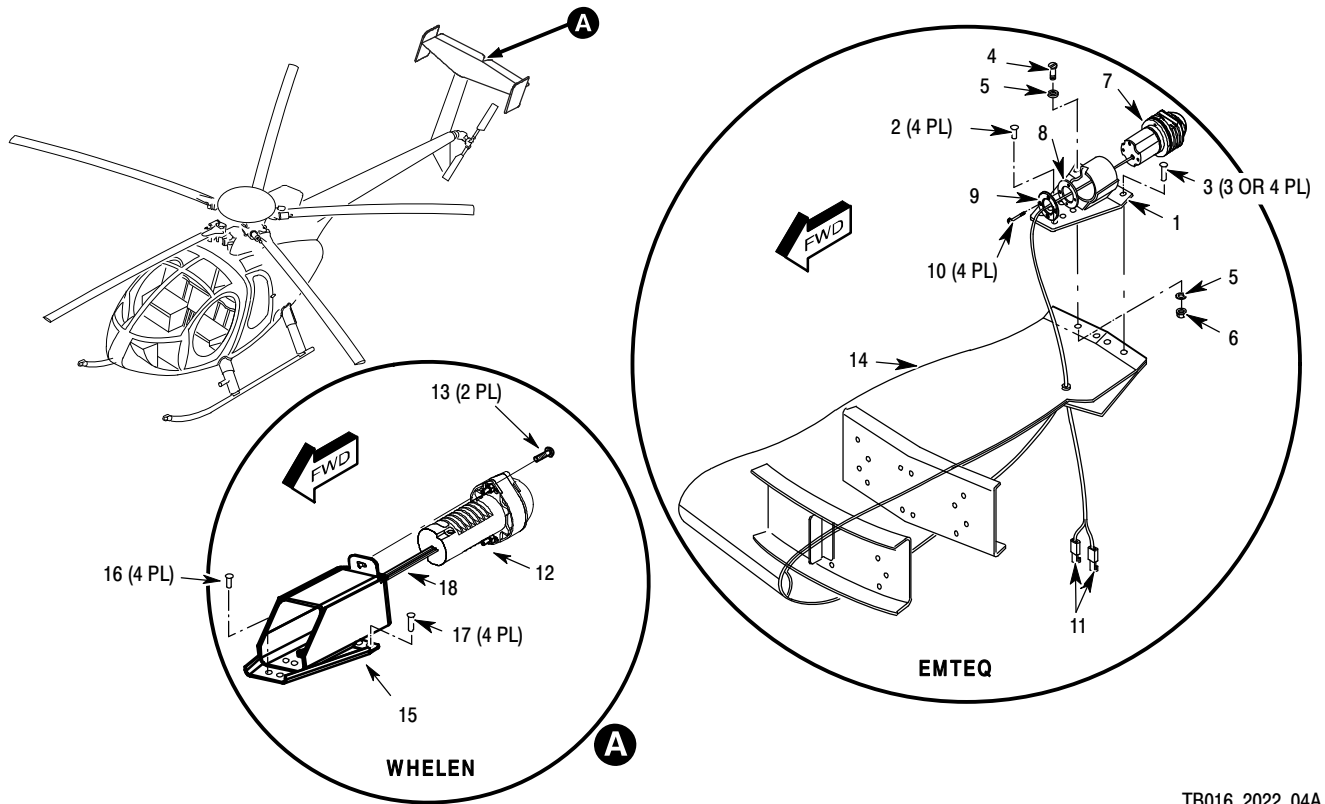
NOTE: Make sure the wires are long enough to pass through the horizontal stabilizer conduit.

- (d). Install RNF-100 over the wires within the horizontal stabilizer conduit. Make sure **1 inch (25.4 mm)** of the tubing extends out past the ends of the conduit.
- (e). Install approximately **3 inches (76.2 mm)** of UV resistant heat shrinkable tubing between the light assembly and conduit entrance. Make sure it overlaps with the RNF-100.
- (f). Route and correctly position wires in the horizontal stabilizer.
- (g). Install knife splices on the ends of the extended wires to connect the rear position light wires to SP402 and SP403. (Ref. Figure 6)
- (9). Install the horizontal stabilizer (14). (Ref. CSP-HMI-2, Chapter 53)

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1. MOUNTING BRACKET (EMTEQ)	11. SPLICE
2. FORWARD RIVET	12. POSITION LIGHT (WHELEN)
3. AFT RIVET	13. SCREW
4. SCREW	14. HORIZONTAL STABILIZER
5. WASHER	15. MOUNTING BRACKET (WHELEN)
6. NUT	16. FORWARD RIVET (NAS1919B04-04)
7. POSITION LIGHT (EMTEQ)	17. AFT RIVET (MS20470AD3-3-5)
8. GASKET	18. WIRES
9. RETAINER	19 DELETED
10. SCREW	

Figure 1. Replacement of Rear Position Light (369E/FF)

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C. Upper Anti-Collision Light Modification (369E/FF)

(Ref. Figure 2)



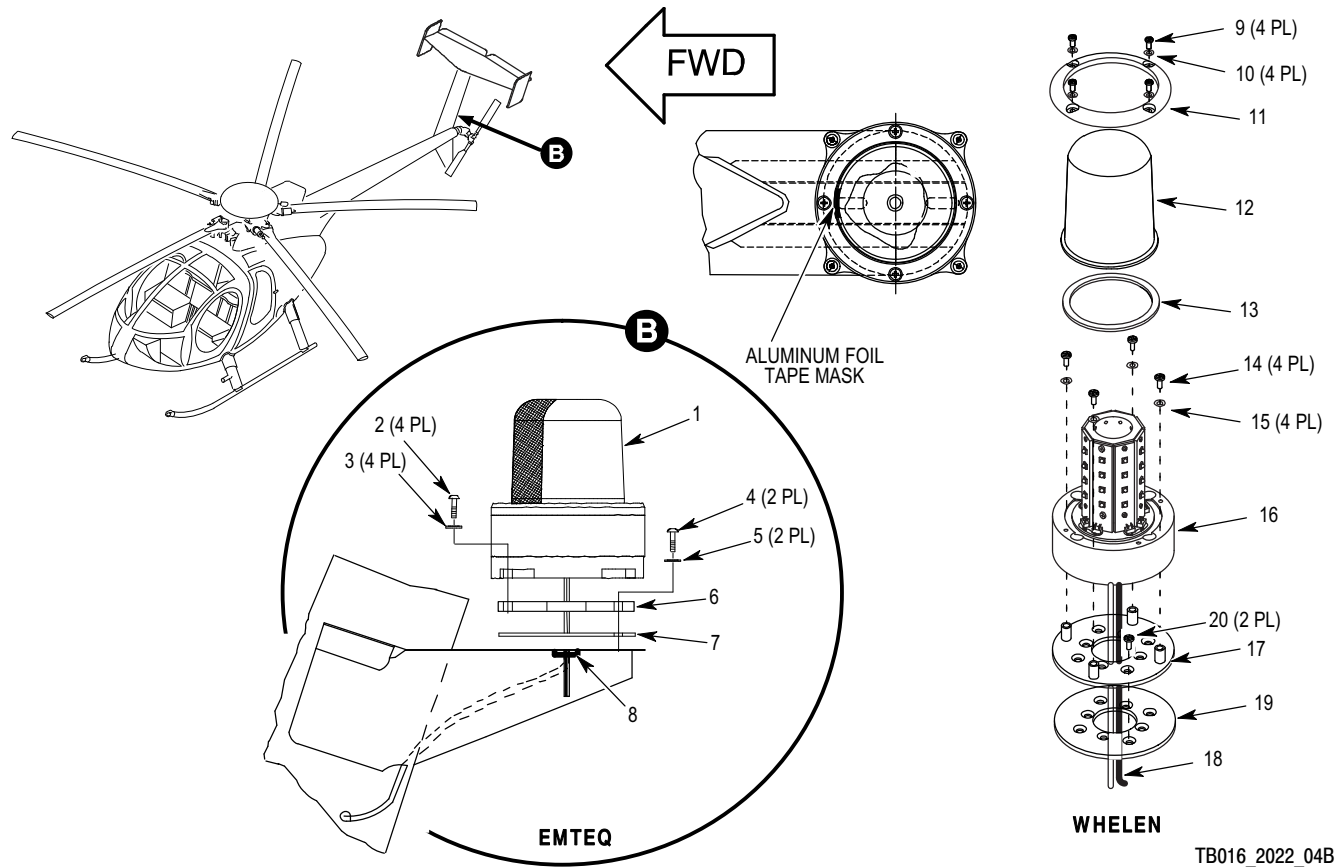
Do not touch the LED lens with either fingers or sharp objects. This could soil and/or damage the lens and effect the optical performance of the LEDs.

- (1). Remove upper anti-collision light (1).
 - (a). Remove screws (2) and washers (3).
 - (b). Disconnect splices SP60, SP61, and SP62. (Ref. Figure 6)
 - (c). Remove screws (4) and washers (5).
 - (d). Remove plate adapter (6) and gasket (7) from support bracket.
 - (e). Remove old grommet (8).
- (2). Examine support bracket and make sure there are no cracks or damage.
- (3). Cap and stow wire from SP60. (Ref. Figure 6)
- (4). Install upper anti-collision light (16).
 - (a). Install new grommet (8), PN MS35489-11.
 - (b). Install adapter plate (17) and gasket (19) with screws (20).
 - (c). Put upper anti-collision light (16) in its position.
 - (d). Pull wires (18) through adapter plate (17), gasket (19), and grommet (8).
 - (e). Cut two 2-inch lengths of shrink tubing and install on two wires (18).
 - (f). Install knife splices and connect splices SP61 and SP62. Apply heat and shrink tubing over the two connections. (Ref. Figure 6)
 - (g). Install screws (14) and washers (15).
 - (h). Install gasket (13), lens (12), and retainer (11) on anti-collision light (16).
 - (i). Install screws (9) and washers (10).
 - (j). Using aluminum foil tape, mask the lens of the anti-collision light as shown in Figure 2.

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1. UPPER ANTI-COLLISION LIGHT (EMTEQ)	11. RETAINER
2. SCREW	12. LENS
3. WASHER	13. GASKET
4. SCREW	14. SCREW
5. WASHER	15. WASHER
6. ADAPTER PLATE	16. UPPER ANTI-COLLISION LIGHT (WHELEN)
7. GASKET	17. ADAPTER PLATE
8. GROMMET	18. WIRES
9. SCREW	19. GASKET
10. WASHER	20. SCREW

Figure 2. Replacement of the Upper Anti-Collision Light (369E/FF)

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D. Lower Belly Anti-Collision Light Modification (369E/FF/500N)

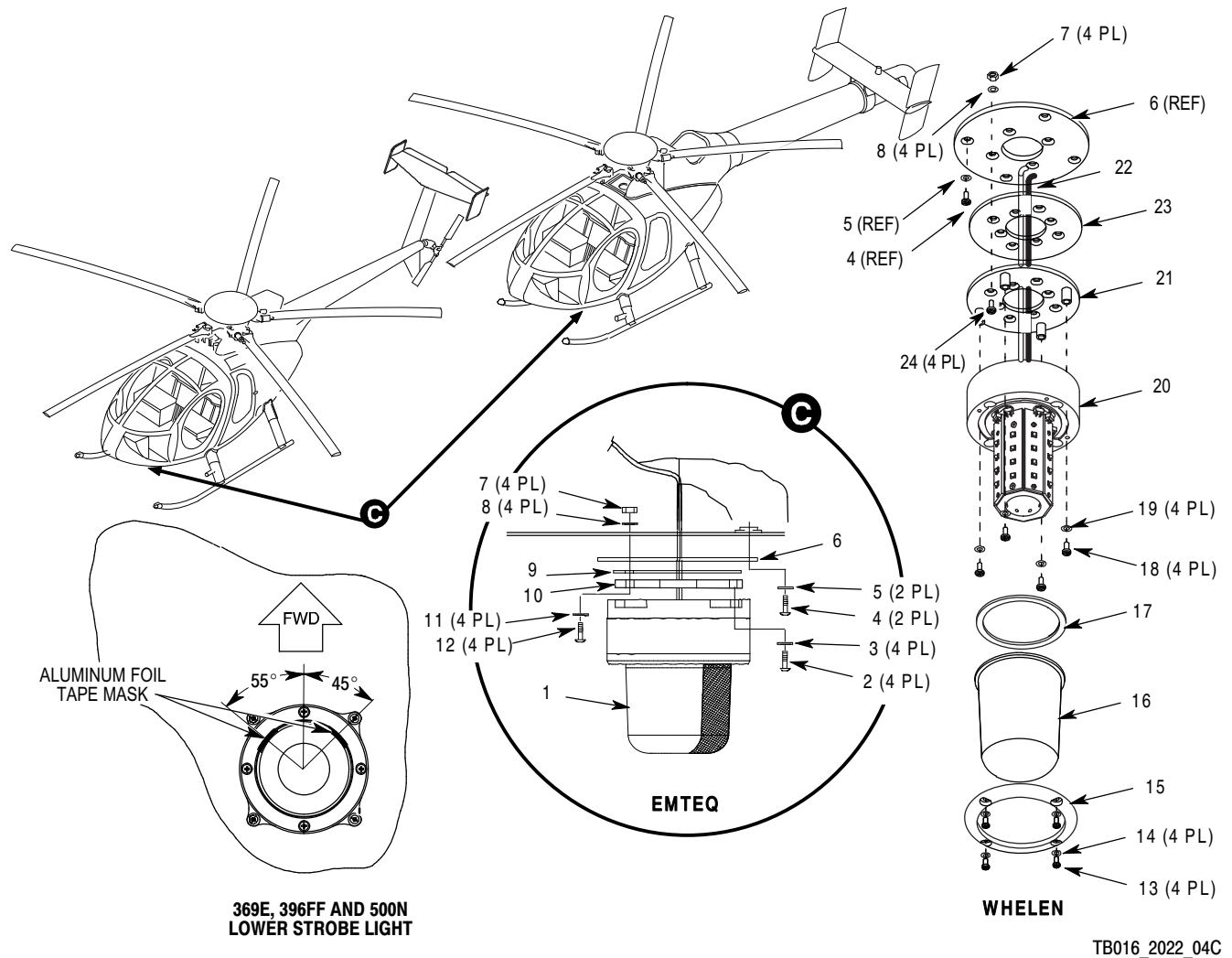
(Ref. Figure 3)

- (1). Remove lower anti-collision light (1).
 - (a). Remove screws (4) and washers (5).
 - (b). Carefully move lower anti-collision light (1) away from helicopter to access wires.
 - (c). Disconnect splices SP63, SP64, and SP65. (Ref. Figure 6)
 - (d). Remove screws (2) and washers (3) to remove lower anti-collision light (1) from plate adapter (6).
 - (e). Remove screws (12), washers (8, 11), and nut (7).
 - (f). Remove plate adapter (10) and gasket (9) from lower strobe plate (6).
- (2). Cap and stow wire from SP65. (Ref. Figure 6)
- (3). Install lower anti-collision light (20).
 - (a). Install adapter plate (21) and gasket (23) on lower strobe plate (6) with screws (24), washers (8), and nuts (7).
 - (b). Put lower anti-collision light (20) in its position on adapter plate (21).
 - (c). Pull wires (22) through adapter plate (21), gasket (23), and lower strobe plate (6).
 - (d). Install screws (18) and washers (19).
 - (e). Install gasket (17), lens (16), and retainer (15) on anti-collision light (20).
 - (f). Install screws (13) and washers (14).
 - (g). Cut two 2-inch lengths of shrink tubing and install on two wires (22).
 - (h). Install knife splices and connect splices SP63 and SP64. Apply heat and shrink tubing over two connections. (Ref. Figure 6)
 - (i). Put lower strobe plate (6), gasket (23), adapter plate (21), and lower anti-collision light (20) in its position on the helicopter.
 - (j). Install screws (4) and washers (5).
 - (k). Using aluminum foil tape, mask the lens of the anti-collision light as shown in Figure 3.

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1. LOWER BELLY ANTI-COLLISION LIGHT (EMTEQ)	13. SCREW
2. SCREW	14. WASHER
3. WASHER	15. RETAINER
4. SCREW	16. LENS
5. WASHER	17. GASKET
6. LOWER STROBE PLATE	18. SCREW
7. NUT	19. WASHER
8. WASHER	20. LOWER ANTI-COLLISION LIGHT (WHELEN)
9. GASKET	21. ADAPTER PLATE
10. ADAPTER PLATE ASSEMBLY	22. WIRES
11. WASHER	23. GASKET
12. SCREW	24. SCREW

Figure 3. Replacement of the Lower Belly Anti-Collision Light (369E/FF/500N)

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E. Upper and Lower Anti-Collision Light Modification (500N/600N)

(Ref. Figure 4)



Do not touch the LED lens with either fingers or sharp objects. This could soil and/or damage the lens and effect the optical performance of the LEDs.

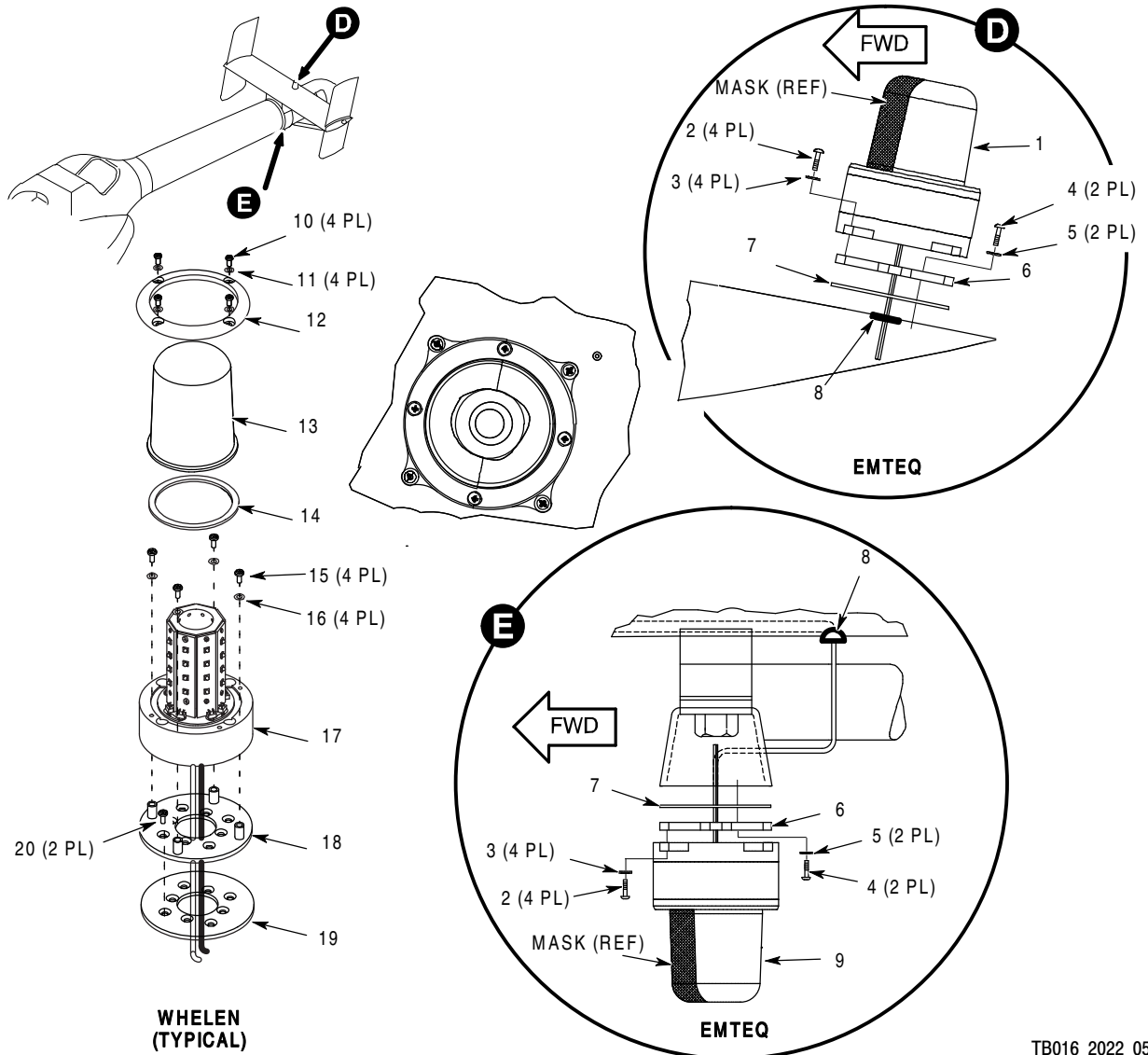
- (1). Remove upper anti-collision light (1).
 - (a). Remove screws (2) and washers (3).
 - (b). Disconnect splices SP60, SP61, SP62. (Ref. Figure 6)
 - (c). Remove screws (4) and washers (5).
 - (d). Remove plate adapter (6), gasket (7), and old grommet (8).
- (2). Remove lower anti-collision light (9).
 - (a). Remove screws (2) and washers (3).
 - (b). Disconnect splices, 2SP60, 2SP61, and 2SP62. (Ref. Figure 6)
 - (c). Remove screws (4) and washers (5).
 - (d). Remove plate adapter (6), gasket (7), old grommet (8).
- (3). Cap and stow wire for SP60 and 2SP60. (Ref. Figure 6)
- (4). Install upper anti-collision light (17).
 - (a). Install new grommet (8), PN MS35489-11.
 - (b). Install adapter plate (18) and gasket (19) with screws (20).
 - (c). Put anti-collision light (17) in its position on the adapter plate (18).
 - (d). Pull wires through adapter plate (18), gasket (19), and grommet (8).
 - (e). Cut two 2-inch lengths of shrink tubing and install on anti-collision light (17) wires.
 - (f). Install knife splices and connect splices SP61 and SP62. Apply heat and shrink tubing around two connections. (Ref. Figure 6)
 - (g). Install screws (15) and washers (16).
 - (h). Install gasket (14), lens (13), and retainer (12) on anti-collision light (17).
 - (i). Install screws (10) and washers (11).
 - (j). Using aluminum foil tape, mask the lens of the anti-collision light as shown in Figure 4.
- (5). Install lower anti-collision light (17).
 - (a). Install new grommet (8), PN MS35489-11.
 - (b). Install adapter plate (18) and gasket (19) with screws (20).
 - (c). Put anti-collision light (17) in its position on the adapter plate (18).
 - (d). Pull wires through adapter plate (18), gasket (19), and grommet (8).
 - (e). Cut two 2-inch lengths of shrink tubing and install on anti-collision light (17) wires.
 - (f). Install knife splices and connect splices 2SP61 and 2SP62. (Ref. Figure 6)

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- (g). Install screws (15) and washers (16).
- (h). Install gasket (14), lens (13), and retainer (12) on anti-collision light (17).
- (i). Install screws (10) and washers (11).
- (j). Using aluminum foil tape, mask the lens of the anti-collision light as shown in Figure 4.



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Figure 4. Replacement of the Upper and Lower Anti-Collision Light (500/600N)

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Legend (Ref. Figure 4)

1. UPPER ANTI-COLLISION LIGHT (EMTEQ)	11. WASHER
2. SCREW	12. RETAINER
3. WASHER	13. LENS
4. SCREW	14. GASKET
5. WASHER	15. SCREW
6. ADAPTER PLATE	16. WASHER
7. GASKET	17. ANTI-COLLISION LIGHT (WHELEN)
8. GROMMET	18. ADAPTER PLATE
9. LOWER ANTI-COLLISION LIGHT (EMTEQ)	19. GASKET
10. SCREW	20. SCREW

F. Anti-Collision Light Switch Modification

(Ref. Figure 5)

- (1). If necessary, remove edge lit panel.
- (2). Remove screws (1) and washers (2).
- (3). Carefully lift switch panel (3) to access wires.
- (4). Disconnect wires from back of anti-collision light switch (6).
- (5). Remove retaining nut (4) and lock washer (5).
- (6). Remove anti-collision light switch (6), PN MS27407-1.
- (7). Remove (RED/WHT) nomenclature from panel.
 - (a). If applicable, remove (RED/WHT) decal (7).
 - (b). If applicable, install a blank decal (8) over (RED/WHT) nomenclature.
- (8). Install anti-collision light switch (6), PN MS35059-22.
 - (a). Connect wires to the back of the anti-collision light switch (6). (Ref. Figure 6)

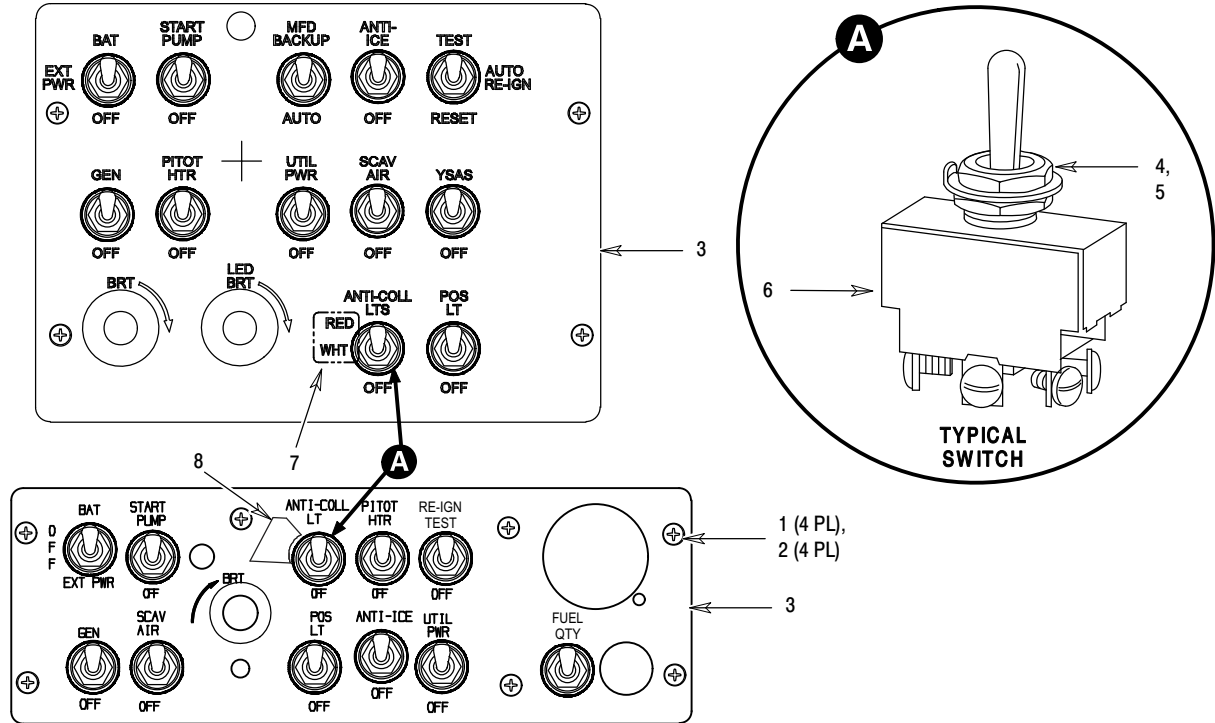
NOTE: Make sure washer with tang is in the correct position in back of the switch panel to prevent the switch from rotating.

- (b). Put anti-collision light switch (6) in its position through the back of the switch panel (2).
- (c). Install retaining nut (4) and lock washer (5).
- (d). Carefully lower switch panel (3) in its position.
- (e). Install screws (1) and washers (2).
- (f). If necessary, install edge lit panel.

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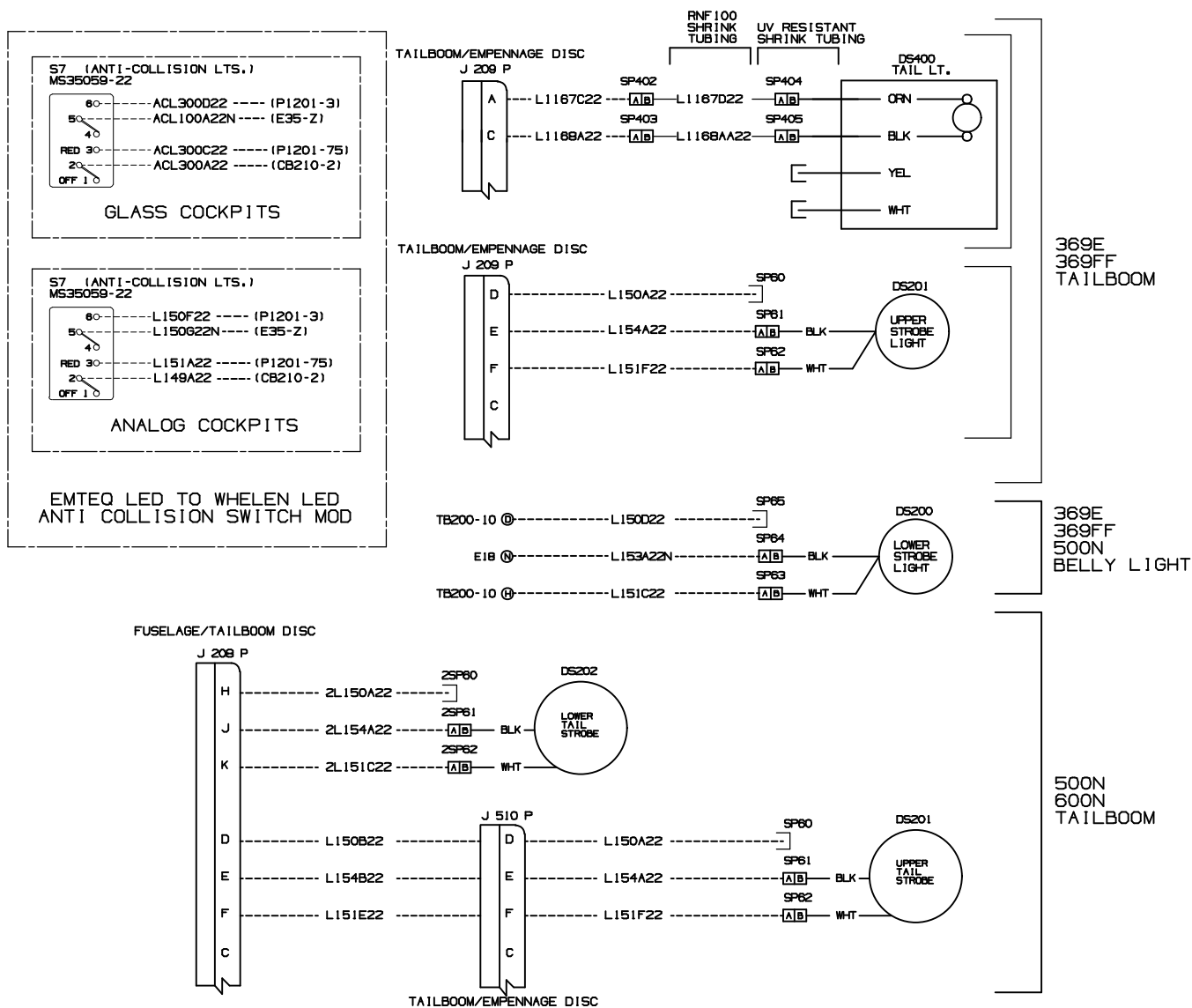
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1. SCREW	5. LOCK WASHER
2. WASHER	6. ANTI-COLLISION LIGHT SWITCH
3. SWITCH PANEL	7. RED WHITE NOMENCLATURE
4. RETAINING NUT	8. BLANK DECAL

Figure 5. Replacement of the Anti-Collision Light Switch

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Figure 6. Wire Diagram

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G. Job Close-Up

- (1). Do a FOD check.
- (2). Do the anti-collision light check. (Ref. CSP-HMI-3, Chapter 96)
- (3). If applicable, do the rear position light check. (Ref. CSP-HMI-3, Chapter 96)

H. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log (ref. CSP-RLB-L8) of the Rotorcraft Log Book CSP-RLB.
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.

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Bulletin Completed Record

Replacement of the Anti-Collision Light

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-480-346-6300 (International)
Website: <https://www.mdhelicopters.com/contact.html>
Or contact your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete: _____
(Signature)

(Print Name)

(Title)

Comments: _____



HN-203

DN-140

EN-28

FN-16

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TECHNICAL BULLETIN

SUBJECT: OIL TANK FILLER NOZZLE STRAINER ASSEMBLY - P/N 369D28318

MODELS AFFECTED: All Model 369H, 369HE, 369HM, 369HS, 369A (OH-6), 369D, 369E, 369F and 369FF helicopters that do not have strainer assembly (P/N 369D28318) installed.

TIME OF COMPLIANCE: This Service Information Notice shall be complied with at Owners/Operators discretion.

PREFACE: With the advent of plastic oil containers which have screw-off caps and plastic or aluminum seals on the filler neck, there have been cases of seal debris finding its way into the oil tank. Therefore, in keeping with its awareness of safe helicopter operation, McDonnell Douglas Helicopter Company has produced an oil strainer which can be easily installed into the filler neck of the oil tank.

REFERENCE PUBLICATIONS:

Basic HMI, CSP-H-2, Reissued 15 September 1981

Basic HMI, CSP-D-2, Reissued 15 January 1982; Revision 5, 15 June 1985.

Basic HMI, CSP-F-2, Issued 1 March 1984; Revision 1 15 August 1985.

PARTS LIST

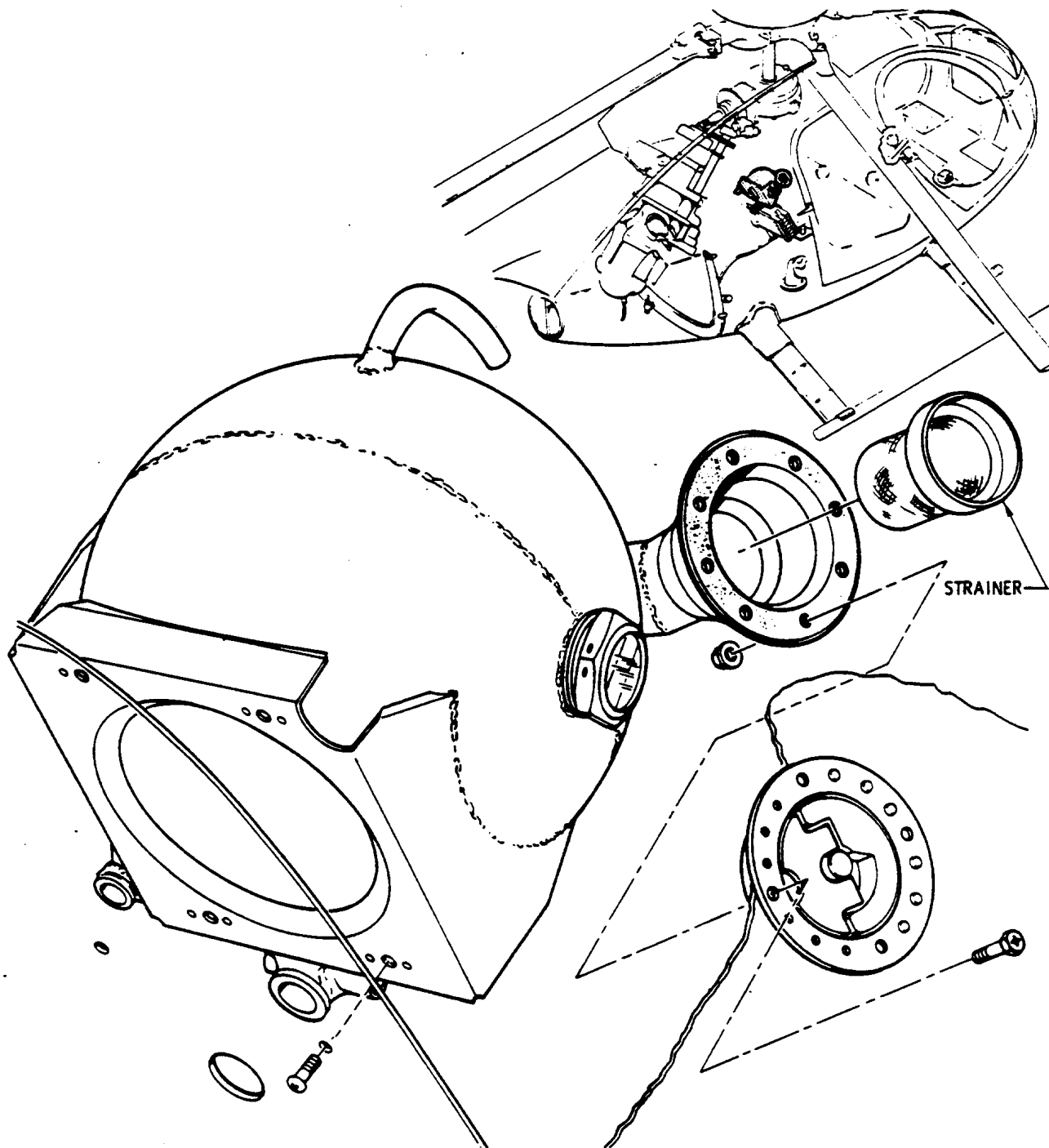
<u>Nomenclature</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Source</u>
Strainer Assembly, Oil Tank Filler Nozzle	369D28318	1	McDonnell Douglas Helicopter Company

PROCEDURE

- Remove oil tank assembly from helicopter (Vol. 1, Section 13, appropriate HMI).
- Insert oil strainer (P/N 369D28318) into filler neck of oil tank as shown in figure 1.
- Install oil tank assembly into helicopter (Vol. 1, Section 13, appropriate HMI)
- Record compliance to this Notice in helicopter Log Book.

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

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Figure 1. Oil Strainer Assembly (P/N 369D28318) Installation

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AUXILIARY FUEL TANK FLOOR MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369FF, serial numbers 0334 thru 0344.

B. Assembly/Components Affected By This Notice:

N/A

C. Reason:

To modify the floor for the installation of the CRFS auxiliary fuel provisions kit.

D. Description:

Procedures in this bulletin give owners and operators information to complete the auxiliary fuel tank floor modification.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Labor Hours:

(1). Compliance with this bulletin will be approximately 12 labor-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, speak to the Field Service Department at telephone 1-800-388-3378 or 480-346-6300 or the website: <https://www.mdhelicopters.com/contact/>.

J. Material/Part Availability:

Contact Spare Sales for parts availability at <https://www.mdhelicopters.com/contact/>.

Ref. CSP-HMI-2, Section 91-00-00, Table 1, for the item numbers of the consumable materials in the Nomenclature column.

Ref. CSP-HMI-2, Section 91-00-00, Table 2, for the manufacture/supplier numbers in the Source column.

Ref. CSP-HMI-2, Section 91-00-00, Table 1, for the item numbers of the consumable materials in the Nomenclature column, and Table 2, for the manufacture/supplier numbers in the Source column.

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AUX FUEL TANK FLOOR MOD PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Auxiliary Fuel Tank Floor Mod	369F98123-501	1	MD Helicopters (9D5S6)
• Cover Assembly	369F98123-1	1	MD Helicopters (9D5S6)
• Doubler Assembly	369F98123-19	1	MD Helicopters (9D5S6)
• Shim	369F98123-11	1	MD Helicopters (9D5S6)
• Shim	369F98123-25	1	MD Helicopters (9D5S6)
• Shim	369F98123-23	1	MD Helicopters (9D5S6)
• Shim	369F98123-27	1	MD Helicopters (9D5S6)
• Rivet, Solid, Countersunk	MS20426AD3	9	MD Helicopters (9D5S6)
• Washer, Flat	NAS1149C0332R	4	MD Helicopters (9D5S6)
• Nut, Self-Locking	MS21042L3	4	MD Helicopters (9D5S6)
• Rivet, Solid, Countersunk	MS20426AD4	14	MD Helicopters (9D5S6)
• Rivet, Solid, Countersunk	MS20426AD5	1	MD Helicopters (9D5S6)
• Rivet, Blind Flush Head	CR3212-4	9	MD Helicopters (9D5S6)

Consumable Materials			
Nomenclature	Part No.	Qty.	Source
Primer	MIL-PRF-85582	1	MD Helicopters (9D5S6)

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K. Warranty Policy:

Standard warranty policy applies.

L. Disposition of Parts Removed:

N/A

M. Tooling:

Ref. CSP-HMI-2, Section 91-00-00, for the item and manufacturer / supplier numbers.

TOOLS AND EQUIPMENT	
Nomenclature (Item)	Source (Manufacturer / Supplier)
Template Hole (369F98123-ATP2)	MD Helicopters (9D5S6)

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-IPC-4 Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-IPC-4 Illustrated Parts Catalog

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2. ACCOMPLISHMENT INSTRUCTIONS

A. General Information

WARNING

- **Avoid fuel vapor ignition and fire. Use only nonsparking tools and explosion proof work lights. Attach helicopter to an approved electrical ground. Switch OFF all electrical power. Disconnect external power and battery before opening fuel system. Make sure the work area is adequately ventilated.**
- **Make sure to remove all FOD from the helicopter. Use standard shop practices to collect and remove FOD. Failure to comply can cause injury or death.**

CAUTION

Prevent fuel system contamination. Install caps on the ends of hoses, tubes and fittings as parts are removed. Bag and identify small parts to prevent loss or damage.

Discard all removed cotter pins, self locking hardware, and packings.

Use generally accepted aviation mechanic processes and procedures while accomplishing this technical bulletin.

Unless otherwise specified, deburr and prime all newly exposed edges. Ref. the following:

- Chemical film treatment of aluminum alloys, MIL-DTL-5541, Class 1A
- Passivation of corrosion-resistant steels, AMS2700
- Priming, MIL-PRF-85582, Type I, Class C2

Unless otherwise specified, dimensions are in inches. The following are dimensional tolerances for this technical bulletin.

Dimensional Tolerances	
3 Decimals	± 0.010
2 Decimals	± 0.03
1 Decimal	± 0.1
Angular	$\pm 0^{\circ} 30'$

B. Preparation

- (1). Defuel helicopter. (Ref. CSP-HMI-2, 12-00-00)
- (2). Drain remaining fuel from cell sump drain into a suitable container.
- (3). Remove passenger mesh seat from the aft cabin. (Ref. CSP-HMI-2, 25-15-00)
- (4). Remove RH access panel from passenger/cargo compartment floor.
(Ref. CSP-HMI-2, 53-20-10)
- (5). If necessary, remove LH access panel from passenger/cargo compartment floor.
(Ref. CSP-HMI-2, 53-20-10)
- (6). If necessary, remove RH and LH fuel cell from passenger/cargo compartment floor.
(Ref. CSP-HMI-2, 28-00-30)

C. Floor Modification

- (1). Remove existing rivets. (Ref. Figure 1)

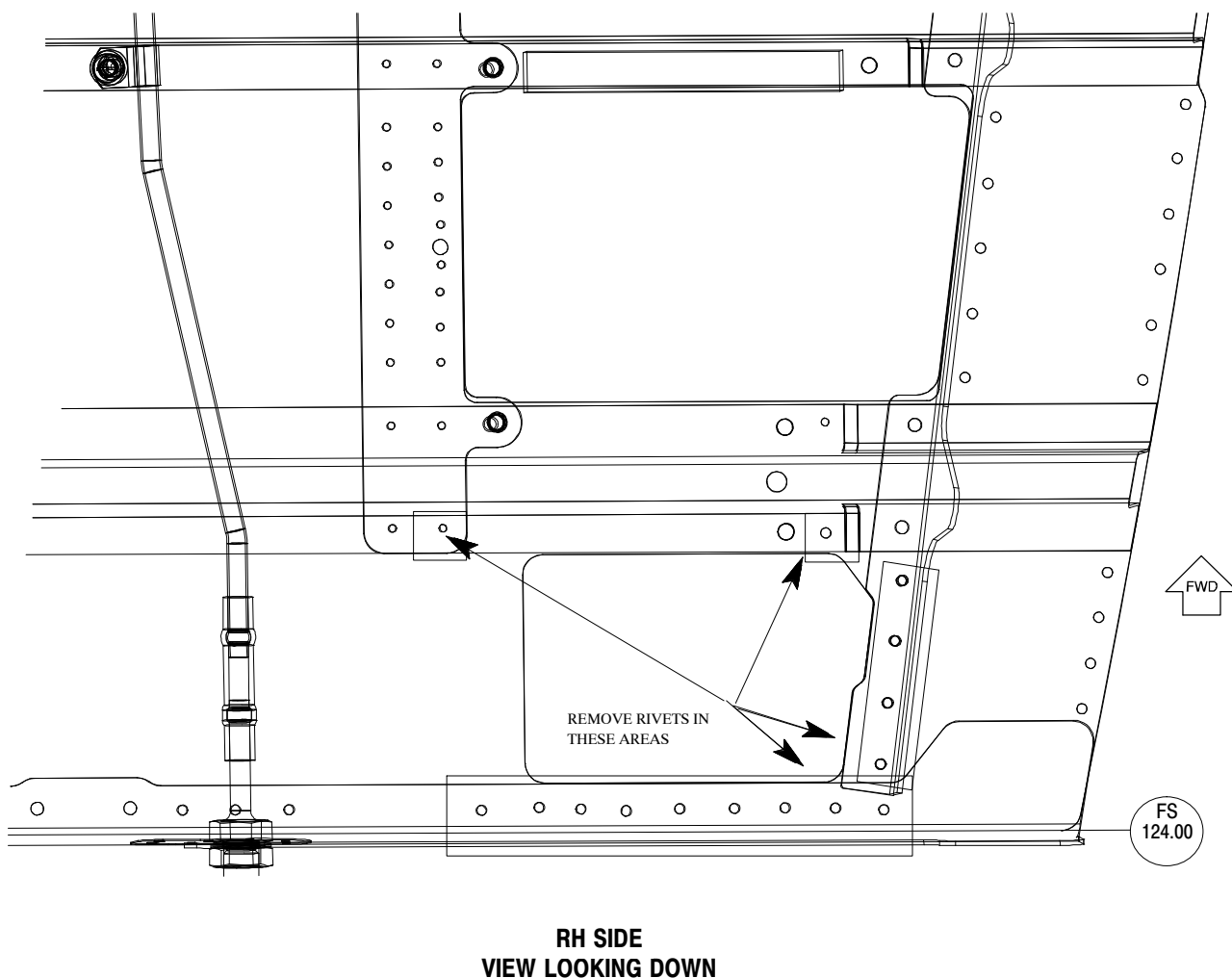


Figure 1. Existing Rivets

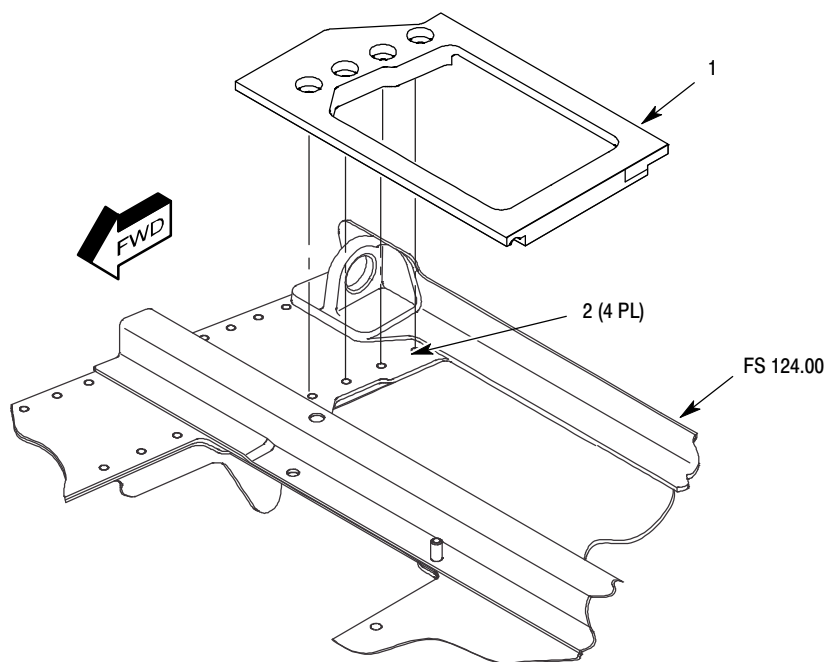
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- (2). Align template (1) over the existing rivet holes (2). (Ref. Figure 2)
- (3). Install the template (1) with a minimum of three Clecos or equivalent temporary fasteners.
- (4). Use a scribe or marker to mark the hole.



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1. TEMPLATE	2. EXISTING RIVET HOLES
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Figure 2. Cargo Floor Template

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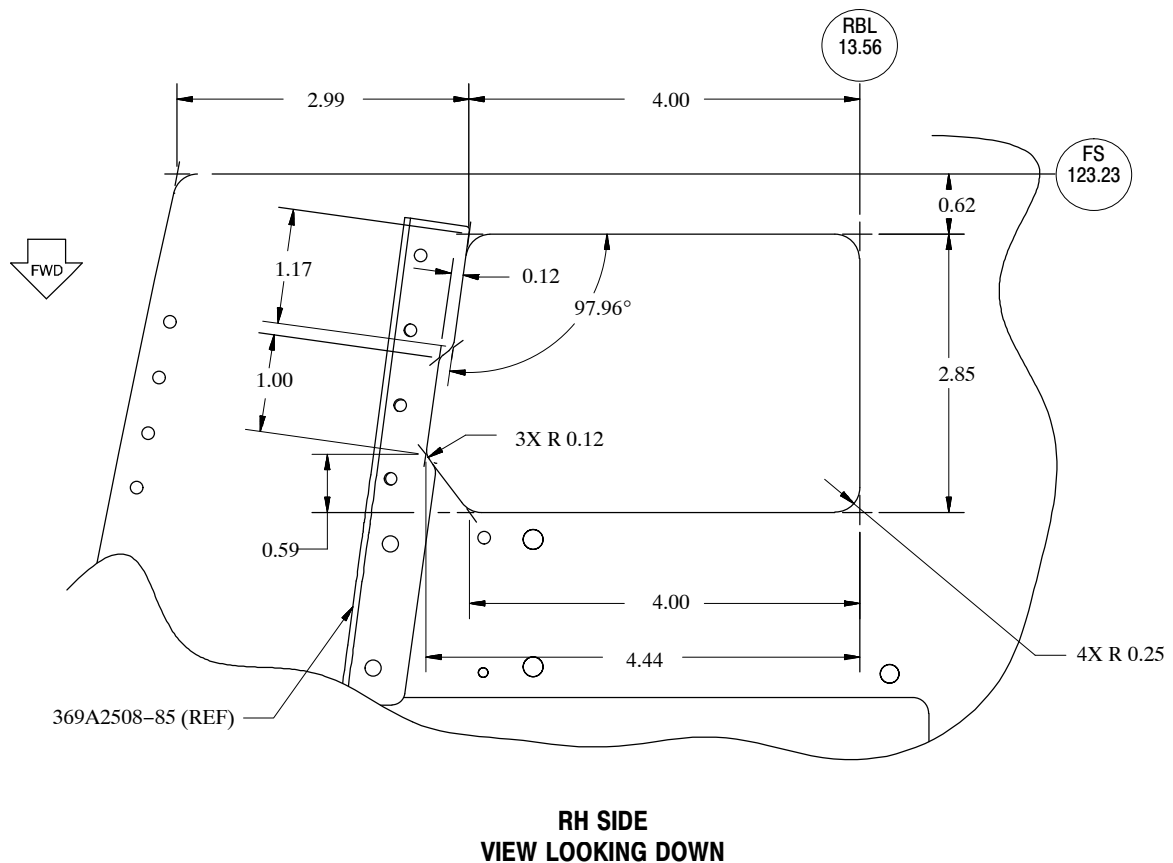
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Make the initial floor cuts approximate to the final dimensions and grind or file to final dimension. Failure to do so may result in too much material removal and damage to the cargo floor. (Ref. Figure 3)

NOTE: Take care not to hit the 369A2508-85 angle.

- (5). Use the marked hole to cut out the floor.
- (6). Remove the Clecos or equivalent temporary fasteners.
- (7). Remove the template (1).
- (8). Deburr and touch up exposed edges with primer. (Ref. 2.A. General Information)
- (9). Remove any FOD.
- (10). Do a QA inspection.



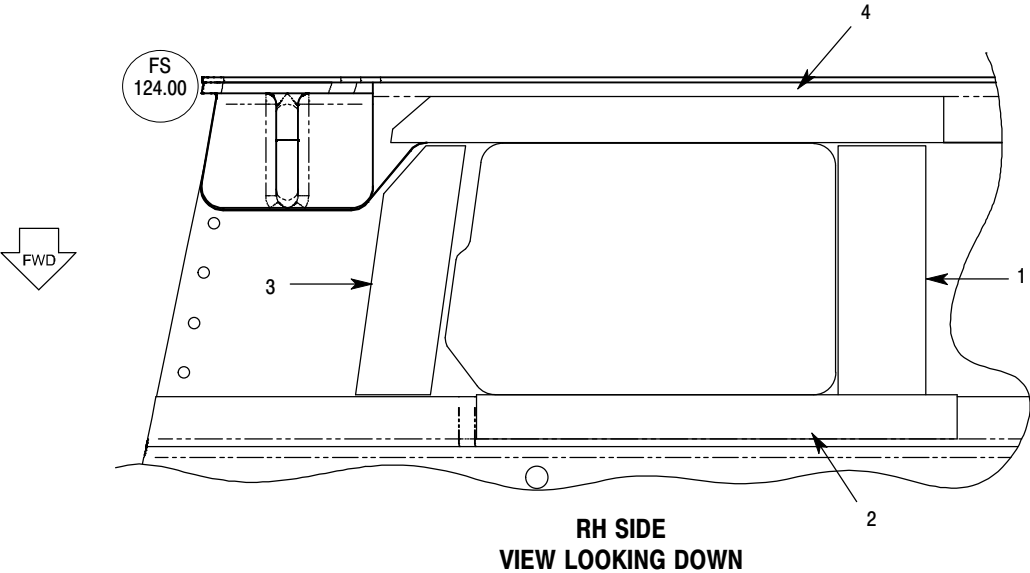
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Figure 3. Cargo Floor Cutout Final Dimensions

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- NOTE:** It is permitted to trim doubler minimum required to clear existing rivets. Must maintain 1.7 times the hole edge distance.
- (11). Match drill doubler (Figure 5, 1) to existing fastener locations (Figure 5).
- (12). Put shims (Figure 4; 1, 2, 3, 4) in their positions around the cutout.



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1. -11 SHIM	3. -23 SHIM
2. -25 SHIM	4. -27 SHIM

Figure 4. Shim Positions

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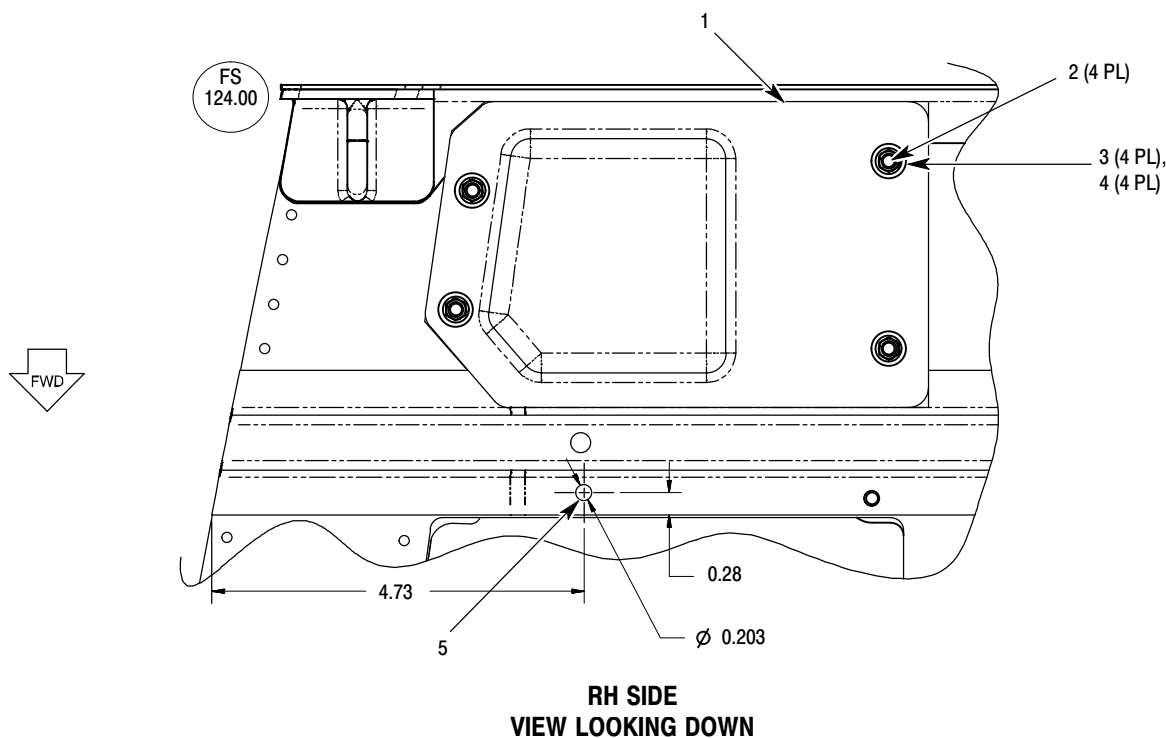
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- (21). Drill hole for new fuel tank grounding strap location (Figure 6; 5).
- (22). Deburr and touch up exposed edges with primer. (Ref. 2.A. General Information)
- (23). Remove any FOD.
- (24). Do a QA inspection.
- (25). Prepare mating surfaces for electrical bond. (Ref. CSP-HMI-2, 20-50-00)
- (26). Move fuel tank grounding strap, bolt, nut, and washers to this new location (Figure 6; 5).

NOTE: Trim 369A2508-87 pad as required to clear fasteners.

- (27). Do the electrical bond test (Class S). (Ref. CSP-HMI-2, 20-50-00)



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1. COVER	4. WASHER
2. DOUBLER STUD	5. NEW GROUNDING STRAP LOCATION
3. NUT	

Figure 6. Cover Installation

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D. Job Close-Up

- (1). Do a FOD check.
- (2). If necessary, install RH and LH fuel cell in passenger/cargo compartment floor.
(Ref. CSP-HMI-2, 28-00-30)
- (3). Refuel helicopter. (Ref. CSP-HMI-2, Chapter 12-00-00)
- (4). Make sure there are no leaks.
- (5). Align cover (Figure 6; 1) with doubler studs (Figure 6; 2).
- (6). Install cover (Figure 6; 1) with nuts (Figure 6; 3) and washers (Figure 6; 4).
- (7). Install RH access panel on passenger/cargo compartment floor.
(Ref. CSP-HMI-2, 53-20-10)
- (8). If necessary, install LH access panel on passenger/cargo compartment floor.
(Ref. CSP-HMI-2, 53-20-10)
- (9). Install passenger mesh seat in the aft cabin. (Ref. CSP-HMI-2, 25-15-00)

E. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log of the Rotorcraft Log Book CSP-RLB. (Ref. CSP-RLB-L8)
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.

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Bulletin Completed Record

CRFS Auxiliary Fuel Tank Floor Modification

MD Helicopters, LLC
 Field Service
 4555 East McDowell Road
 Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
 Website: <https://www.mdhelicopters.com/contact.html>
 Or email or speak to your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

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CRFS AUXILIARY FUEL PROVISIONS KIT INSTALLATION

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369FF, serial numbers 0334 and Subs.

B. Assembly/Components Affected By This Notice:

N/A

C. Reason:

To install provisions for the connection of a fuel transfer line from an auxiliary fuel system to the crash-resistant fuel system (CRFS) fuel tank.

D. Description:

Procedures in this Bulletin give owners and operators information to install the CRFS auxiliary fuel provisions kit.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Labor Hours:

(1). Compliance with this bulletin will be approximately TBD labor-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, speak to the Field Service Department at telephone 1-800-388-3378 or 480-346-6300 or the website: <https://www.mdhelicopters.com/contact/>.

J. Material/Part Availability:

Contact Spare Sales for parts availability at <https://www.mdhelicopters.com/contact/>.

Ref. CSP-HMI-2, Section 91-00-00, Table 1, for the item numbers of the consumable materials in the Nomenclature column.

Ref. CSP-HMI-2, Section 91-00-00, Table 2, for the manufacture/supplier numbers in the Source column.

Ref. CSP-HMI-2, Section 91-00-00, Table 1, for the item numbers of the consumable materials in the Nomenclature column, and Table 2, for the manufacture/supplier numbers in the Source column.

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CRFS AUX FUEL PROVISION KIT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
CRFS Aux Fuel Provisions Kit	369F98124-501	1	MD Helicopters (9D5S6)
• Frangible Valve, Auxiliary XFER	369F8108-1	1	MD Helicopters (9D5S6)
• Retaining Ring	M2742610140D or WS-168-S02	1	MD Helicopters (9D5S6) Commercially Available
• O-Ring	MS29513-128	1	MD Helicopters (9D5S6)
• Spring	SSR-0200-S17	1	MD Helicopters (9D5S6)
• Cap	AN929-8W	1	MD Helicopters (9D5S6)

Consumable Materials			
Nomenclature	Part No.	Qty.	Source
Grease	MIL-G-6032	1	MD Helicopters (9D5S6)

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K. Warranty Policy:

Standard warranty policy applies.

L. Disposition of Parts Removed:

N/A

M. Tooling:

Ref. CSP-HMI-2, Section 91-00-00, for the item and manufacturer / supplier numbers.

TOOLS AND EQUIPMENT	
Nomenclature (Item)	Source (Manufacturer / Supplier)
N/A	

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-IPC-4 Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-IPC-4 Illustrated Parts Catalog

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2. ACCOMPLISHMENT INSTRUCTIONS

A. General Information

WARNING

- **Avoid fuel vapor ignition and fire. Use only nonsparking tools and explosion proof work lights. Attach helicopter to an approved electrical ground. Switch OFF all electrical power. Disconnect external power and battery before opening fuel system. Make sure the work area is adequately ventilated.**
- **Make sure to remove all FOD from the helicopter. Use standard shop practices to collect and remove FOD. Failure to comply can cause injury or death.**

CAUTION

Prevent fuel system contamination. Install caps on the ends of hoses, tubes and fittings as parts are removed. Bag and identify small parts to prevent loss or damage.

Discard all removed cotter pins, self locking hardware, and packings.

Use generally accepted aviation mechanic processes and procedures while accomplishing this technical bulletin.

B. Preparation

- (1). Complete the auxiliary fuel tank floor modification. (Ref. TB369F-019)
- (2). Defuel helicopter. (Ref. CSP-HMI-2, 12-00-00)
- (3). Drain remaining fuel from cell sump drain into a suitable container.
- (4). Remove passenger seat from the aft cabin. (Ref. CSP-HMI-2, Chapter 25)
- (5). Remove RH access panel from passenger/cargo compartment floor. (Ref. CSP-HMI-2, 53-20-10)

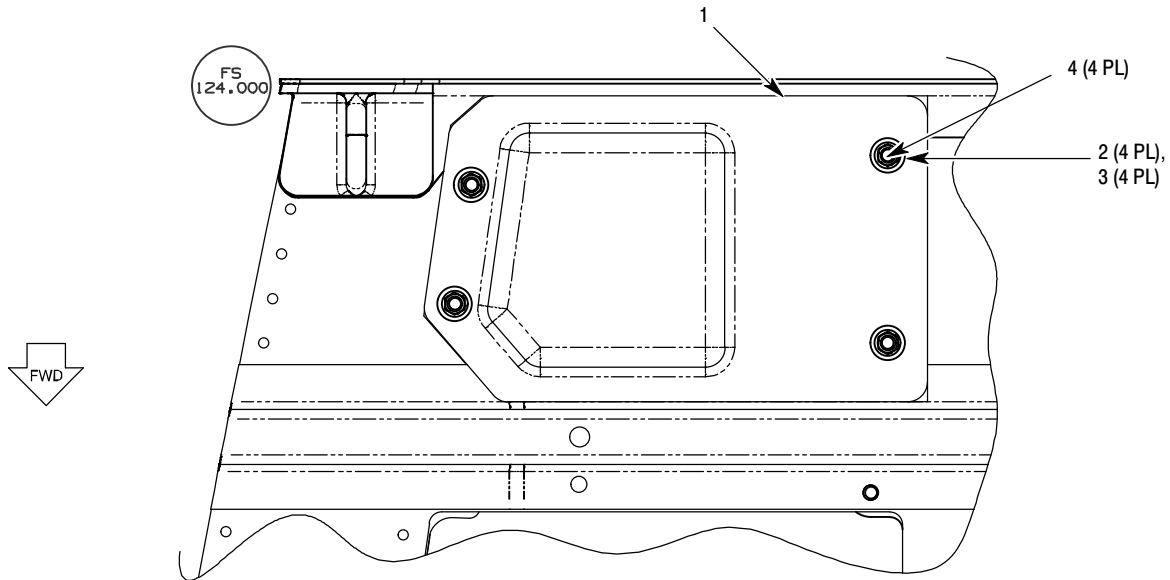
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C. CRFS Auxiliary Fuel Tank Provisions Installation

- (1). Remove nuts (Figure 1; 2) and washers (Figure 1; 3) to remove cover (Figure 1; 1).



**RH SIDE
VIEW LOOKING DOWN**

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1. COVER	3. WASHER
2. NUT	4. DOUBLER STUDS

Figure 1. Cover Installation

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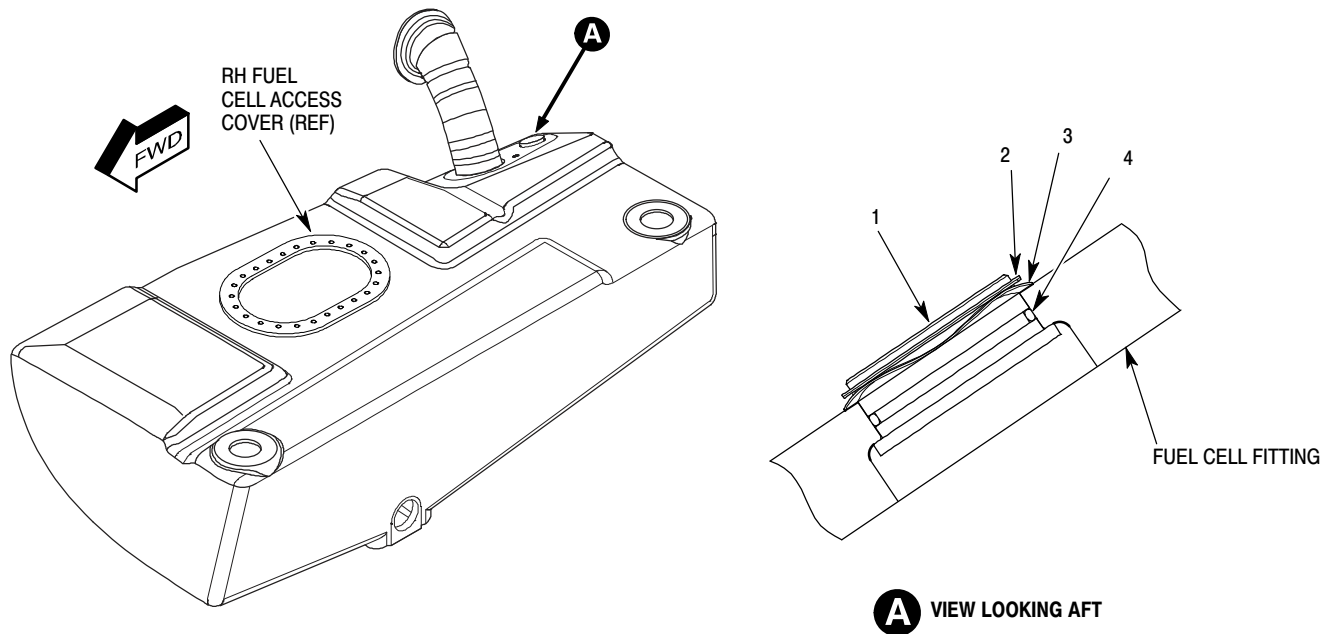
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- (2). Remove RH fuel cell access cover. (Ref. CSP-HMI-2, 28-00-30)

NOTE: The plug (Figure 2; 1) must be removed from the inside of the RH fuel cell.

- (3). Support bottom of plug (Figure 2; 1) through the RH fuel cell access cover opening to prevent it from falling into the fuel cell.
- (4). Remove and discard retaining ring (Figure 2; 2).
- (5). Remove and discard plug (Figure 2; 1), wave spring (Figure 2; 3), and O-ring (Figure 2; 4).



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1. PLUG	3. WAVE SPRING
2. RETAINING RING	4. O-RING

Figure 2. Plug Removal

- (6). Prepare frangible valve, retaining ring, and wave spring (Figure 3; 2, 4, 5) mating surfaces for electrical bonding. (Ref. CSP-HMI-2, 20-50-00)
- (7). If necessary, install cap (Figure 3; 1) on frangible valve (Figure 3; 2).
- (8). Lightly lubricate O-ring (Figure 3; 3) with grease (MIL-G-6032).
- (9). Install O-ring (Figure 3; 3) on frangible valve (Figure 3; 2).
- (10). Insert frangible valve (Figure 3; 2) from inside the fuel cell through the opening.

WARNING

Make sure the retaining ring (Figure 3; 4) is installed into the frangible valve groove completely before the wave spring (Figure 3; 5) is installed. If not installed correctly the frangible valve (Figure 3; 2) could become dislodged and leak fuel.

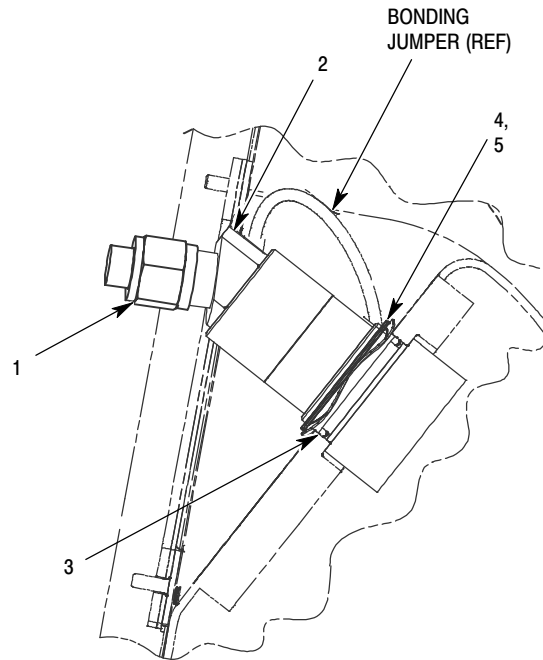
- (11). Install retaining ring (Figure 3; 4) on frangible valve (Figure 3; 2).

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- (12). Install wave spring (Figure 3; 5) on frangible valve (Figure 3; 2) by inserting the spring under the retaining ring (Figure 3; 4) and coiling it around until it is in it's correct position.
- (13). Do the electrical bond test (Class S) on frangible valve, retaining ring, and wave spring (Figure 3; 2, 4, 5). (Ref. CSP-HMI-2, 20-50-00)
- (14). Install RH fuel cell access cover. (Ref. CSP-HMI-2, 28-00-30)



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1. CAP	4. RETAINING RING
2. FRANGIBLE VALVE	5. WAVE SPRING
3. O-RING	

Figure 3. Frangible Valve Installation

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D. Job Close-Up

- (1). Do a FOD check.
- (2). Refuel helicopter. (Ref. CSP-HMI-2, Chapter 12-00-00)
- (3). Make sure there are no leaks.
- (4). Align cover (Figure 1; 1) with doubler studs (Figure 1; 4).
- (5). Install cover (Figure 1; 1) with nuts (Figure 1; 2) and washers (Figure 1; 3).
- (6). Install RH access panel on passenger/cargo compartment floor. (Ref. CSP-HMI-2, 53-20-10)
- (7). Install passenger seat in the aft cabin. (Ref. CSP-HMI-2, Chapter 25)

E. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log of the Rotorcraft Log Book CSP-RLB. (Ref. CSP-RLB-L8)
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.



HELICOPTERS™

TB369F-020

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Bulletin Completed Record

CRFS Auxiliary Fuel Provisions Kit Installation

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
Website: <https://www.mdhelicopters.com/contact/>
Or email or speak to your Field Service Representative.

Owner/– Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

DATE: 17 JULY 2023

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TECHNICAL BULLETIN

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FLOOR MODIFICATION FOR CARGO TIE-DOWN HOLES

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369E, Model 369FF, and Model 500N helicopters that have the crash resistant fuel system.

B. Assembly/Components Affected By This Notice:

369D298002- 501 Left- Hand (LH) Floor Modification

369D298002- 502 Right- Hand (RH) Floor Modification

C. Reason:

The cargo tie- down holes of the 369A2508 cargo floor were not included in the 369D298002 floor modification.

D. Description:

Procedures in this Bulletin give owners and operators information to remove the screws at Station (Sta.) 102.23 and Left and Right butt lines (LBL/RBL) 21.78, and Sta. 108.04 and LBL/RBL 21.14, at Waterline (WL) 13.44. The holes will be enlarged and touched up for the cargo tiedown pins. This modification will result in the installation of cargo tiedowns.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA approved.

G. Labor Hours:

Compliance with this bulletin will be approximately one labor- hour.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, speak to the Field Service Department at telephone 1- 800- 388- 3378 or 480- 346- 6300 or the website: <https://www.mdhelicopters.com/contact/>.

J. Material/Part Availability:

Ref. CSP- HMI- 2, Section 91- 00- 00, Table 1, for the item numbers of the consumable materials in the Nomenclature column, and Table 2, for the manufacture/supplier numbers in the Source column.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Epoxy primer	MIL- PRF- 85582, Type I, Class C2 (CM318) <u>Alternates:</u> FED- STD- 595, Type I, Class 2 (Green 34151 (CM304)) MIL- PRF- 23377, Type I, Class C1 or C2 (CM323) MIL- PRF- 23377, Type II, all classes (CM325)	AR	Commercial

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K. Warranty Policy:

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-IPC-4 Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions - Servicing and Maintenance

CSP-IPC-4 Illustrated Parts Catalog

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2. ACCOMPLISHMENT INSTRUCTIONS

(Ref. Figure 1)

A. General Information

Use generally accepted aviation mechanic processes and procedures to do this technical bulletin.
(Ref. FAA AC 43.13- 2B)

Unless otherwise specified, deburr and prime all newly exposed edges. Ref. these specifications:

- Chemical film treatment of aluminum alloys, MIL- DTL- 5541, Class 1A
- Passivation of corrosion- resistant steels, AMS2700
- Priming, MIL- PRF- 85582, Type I, Class C2

Unless otherwise specified, dimensions are in inches. These dimensional tolerances are for this technical bulletin:

Dimensional Tolerances	
3 Decimals	± 0.010
2 Decimals	± 0.03
1 Decimal	± 0.1
Angular	$\pm 0^{\circ} 30'$

B. Preparation

- (1). Remove the LH and RH cargo floor opening covers. (Ref. CSP- HMI- 2, Section 53- 20- 10)
- (2). Remove the screws, nuts, and washers at:
 - (a). Station 102.23 and LBL 21.78
 - (b). Station 108.04 and LBL 21.14
 - (c). Station 102.23 and RBL 21.78
 - (d). Station 108.04 and RBL 21.14

C. Modification

- (1). Increase the diameter of the holes to **0.180 to 0.200 inch (4.57 to 5.08 mm)**.
- (2). Remove debris from the work area.
- (3). Touchup the holes with epoxy primer (CM318).
- (4). Do a FOD check.
- (5). Install the LH and RH cargo floor opening covers. (Ref. CSP- HMI- 2, Section 53- 20- 10)

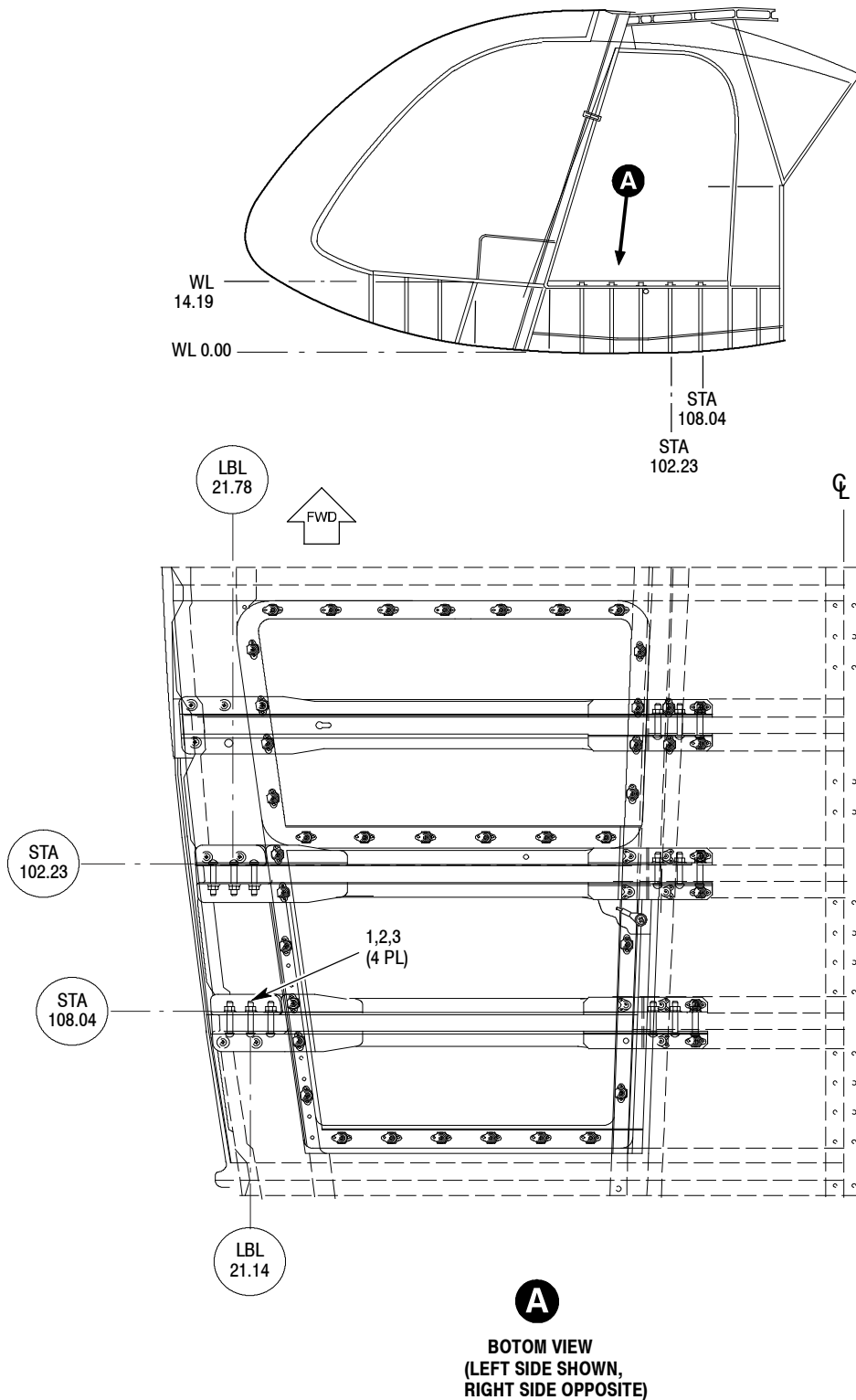
D. Job Close- Up

- (1). Close the doors.
- (2). Clean the work area.

E. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log of the Rotorcraft Log Book CSP- RLB. (Ref. CSP- RLB- L8)

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Figure 1. Station Diagram and Locations of Modification

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- (2). Show compliance with this Technical Bulletin by one of these methods:
- (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.

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TECHNICAL BULLETIN

Bulletin Completed Record

Floor Modification for the Cargo Tie-Down Holes

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
Website: <https://www.mdhelicopters.com/contact/>
Or email or speak to your Field Service Representative.

Owner/- Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

TECHNICAL BULLETIN

DATE: 22 AUGUST 2023

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GTX 33H TO GTX 345R MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369FF, serial numbers 0255 thru 0339

B. Assembly/Components Affected By This Notice:

369HW24446-1 GTX 33H Transponder
369HW24489-1 GTX 345R Transponder

C. Reason:

Garmin GTX 345R remote transponder supersedes the GTX 33H. The new transponder has native ADS-B and is less expensive.

D. Description:

Procedures in this Bulletin give owners and operators information to do modifications to install the GTX 345R.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Labor Hours:

Compliance with this bulletin will be approximately twenty-five (25) labor-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, speak to the Field Service Department at telephone 1-800-388-3378 or 480-346-6300 or the website: <https://www.mdhelicopters.com/contact/>.

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J. Material/Part Availability:

Contact Spare Sales for parts availability at <https://www.mdhelicopters.com/contact/>.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
GTX 345R MODIFICATION KIT	TBK-GTX-345R	1	MD Helicopters (9D5S6)
Garmin GTX 345R Transponder	369HW24489-1	1	MD Helicopters (9D5S6)
Mounting Rack	011-03762-10	1	MD Helicopters (9D5S6)
Backplate	011-02976-10	1	MD Helicopters (9D5S6)
Garmin GTX 345R Wire Harness	369D24738-105	1	MD Helicopters (9D5S6)
Countersunk Screw #10-32	MS24693-S273	6	MD Helicopters (9D5S6)
Nutplate #10-32	MS21059L3	6	MD Helicopters (9D5S6)
Countersunk Rivet #10-32	MS20426AD3-4	12	MD Helicopters (9D5S6)
GTX 345R Transponder Antenna Wire Harness	369D24740-101	1	MD Helicopters (9D5S6)

K. Warranty Policy:

Contact the MD Helicopters Warranty Department for prices, orders, and availability.

Standard warranty policy applies.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

This bulletin changes the helicopter weight and balance:

Weight and Balance				
Item	Weight, lb (kg)	STA (in)	BL (in)	WL (in)
GTX 33H Transponder	5.36	54.3	4.6	12.6
GTX 345R Transponder	5.35	51.4	3.8	13.9

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O. Electrical Load Data:

The total amps changed from 1.60 amperes for the GTX 33H to 0.65 amperes for the GTX 345R.

P. Other Publications Affected:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics
CSP-IPC-4 Illustrated Parts Catalog

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics
CSP-IPC-4 Illustrated Parts Catalog

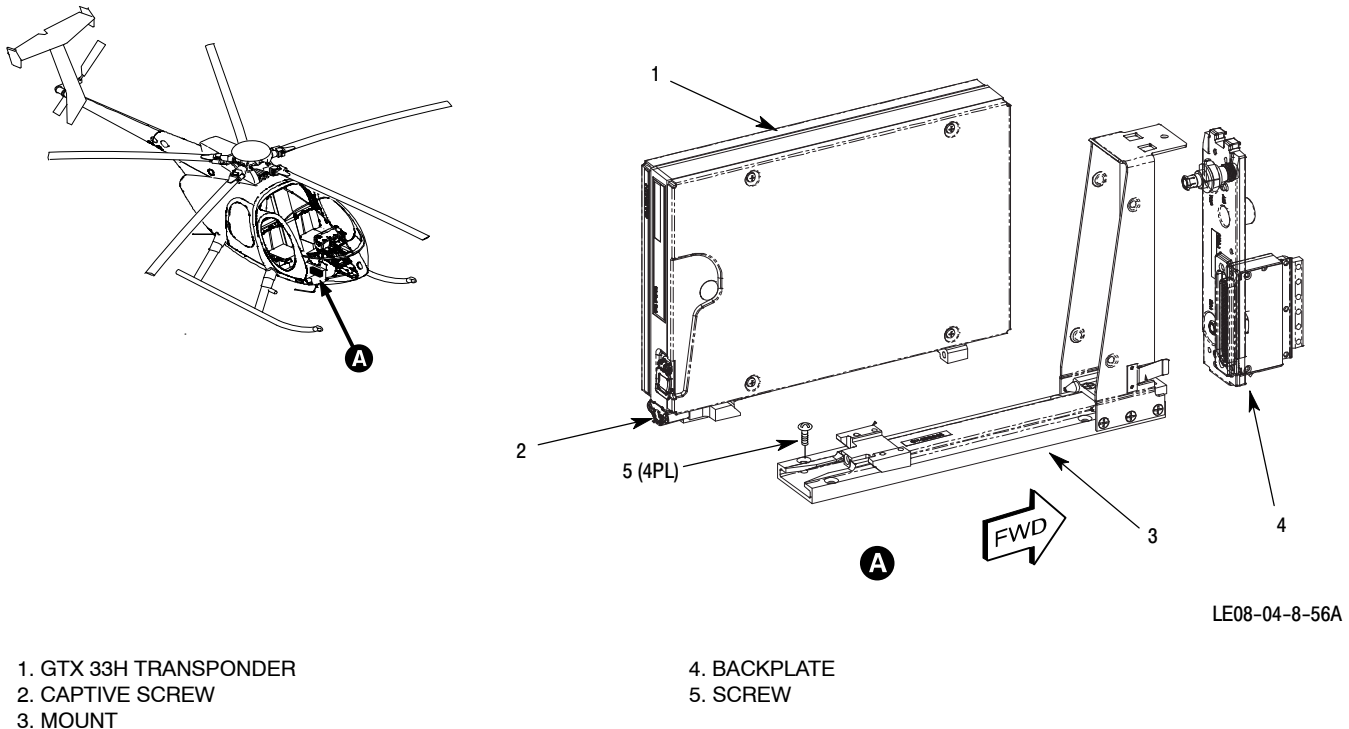
2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

- (1). Open RH footlocker.
- (2). Remove GTX 33H. (Ref. Figure 1)
 - (a). Loosen captive screw (2).
 - (b). Slide transponder (1) aft to disengage electrical connection from backplate (4).
 - (c). Remove transponder (1) from mount (3).
 - (d). Remove backplate (4) from mount (3).
 - (e). Remove screws (5) from mount (3).
 - (f). Remove mount (3) from helicopter.
- (3). Remove avionics shelf. (Ref. CSP-HMI-2, Chapter 53)

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TECHNICAL BULLETIN**Figure 1. Removal of the GTX 33H Transponder**

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B. Modification

(Ref. Figure 2)

- (1). Remove GTX 33H wire harness (W447), 369D24447-101/-103.
(Ref. CSP-HMI-3, Chapter 96 and 98)
- (2). Remove transponder antenna wire harness (W565), 369D34565-101/-103.
(Ref. CSP-HMI-3, Chapter 96 and 98)

NOTE:

- Route wire harness as shown in Figure 2.
 - Pick up existing tie bases where possible.
 - Route with existing harness where possible.
- (3). Install GTX 345R wire harness (W738), 369D24738-105.
(Ref. Table 1 and CSP-HMI-3, Chapter 96)

Table 1. Wire List for GTX 345R Wire Harness

W738 Wire Number	Length, inch (cm)	Size	Type Code	From			To		
				Ref. Des.	Pin	Term. Code	Ref. Des.	Pin	Term. Code
WL369D24738-105									
WHT	-	-	ZZ	L23/011-P1	1	J00	CONFIG MOD	-	-
XPDR711A24GRN	8 (20.32)	24	-	L23/011-P1	2	J00	L24/003	-	J00
ST	-	-	-	L23/011-P1	3	-	-	-	-
ST	-	-	-	L23/011-P1	4	-	-	-	-
XPDR706A24WHT	82 (208.28)	24	SJ	L23/011-P1	5	J00	TB400-7	A	904
XPDR706A24BLU	82 (208.28)	24	SJ	L23/011-P1	6	J00	TB400-7	E	904
ST	-	-	-	L23/011-P1	7	-	-	-	-
XPDR705A24WHT	82 (208.28)	24	SK	L23/011-P1	8	J00	TB400-3	N	904
XPDR704A24WHT	82 (208.28)	24	SK	L23/011-P1	9	J00	TB400-1	P	904
ST	-	-	-	L23/011-P1	10	-	-	-	-
ST	-	-	-	L23/011-P1	11	-	-	-	-
ST	-	-	-	L23/011-P1	12	-	-	-	-
ST	-	-	-	L23/011-P1	13	-	-	-	-
ST	-	-	-	L23/011-P1	14	-	-	-	-
ST	-	-	-	L23/011-P1	15	-	-	-	-
ST	-	-	-	L23/011-P1	16	-	-	-	-
ST	-	-	-	L23/011-P1	17	-	-	-	-
XPDR701A24WHT	82 (208.28)	24	SH	L23/011-P1	18	J00	TB400-7	N	904
XPDR100A22N	83 (210.82)	22	SY	L23/011-P1	20	J00	E33	P	904
XPDR200B22	6 (15.24)	22	SY	L23/011-P1	21	J00	L23/011-SP1	A	296
YEL	-	-	ZZ	L23/011-P1	22	J00	CONFIG MOD	-	-
BLK	-	-	ZZ	L23/011-P1	23	J00	CONFIG MOD	-	-
XPDR711A24WHT	8 (20.32)	24	-	L23/011-P1	24	J00	L24/003	2	J00
ST	-	-	-	L23/011-P1	25	-	-	-	-
ST	-	-	-	L23/011-P1	26	-	-	-	-
XPDR707A24WHT	82 (208.28)	24	SJ	L23/011-P1	27	J00	TB400-8	B	904
XPDR707A24BLU	82 (208.28)	24	SJ	L23/011-P1	28	J00	TB400-8	F	904
ST	-	-	-	L23/011-P1	29	-	-	-	-
XPDR705A24ORG	82 (208.28)	24	SK	L23/011-P1	30	J00	TB400-3	R	904

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Table 1. Wire List for GTX 345R Wire Harness (Cont.)

W738 Wire Number	Length, inch (cm)	Size	Type Code	From			To		
				Ref. Des.	Pin	Term. Code	Ref. Des.	Pin	Term. Code
XPDR704A24ORG	82 (208.28)	24	SK	L23/011-P1	31	J00	TB400-1	S	904
ST	-	-	-	L23/011-P1	32	-	-	-	-
ST	-	-	-	L23/011-P1	33	-	-	-	-
ST	-	-	-	L23/011-P1	34	-	-	-	-
ST	-	-	-	L23/011-P1	35	-	-	-	-
ST	-	-	-	L23/011-P1	36	-	-	-	-
XPDR700A24	82 (208.28)	24	SY	L23/011-P1	37	J00	TB400-4	Y	904
XPDR101C22N	6 (15.24)	22	SY	L23/011-P1	38	J00	L23/011-SP2	A	296
ST	-	-	-	L23/011-P1	39	-	-	-	-
XPDR101B22N	6 (15.24)	22	SY	L23/011-P1	41	J00	L23/011-SP2	A	296
XPDR200C22	6 (15.24)	22	SY	L23/011-P1	42	J00	L23/011-SP1	A	296
RED	-	-	ZZ	L23/011-P1	43	J00	CONFIG MOD	-	-
XPDR711A24RED	8 (20.32)	24	-	L23/011-P1	44	J00	L24/003	1	J00
XPDR711A24BLK	8 (20.32)	24	-	L23/011-P1	45	J00	L24/003	4	J00
XPDR400A24WHT	75 (190.5)	24	SJ	L23/011-P1	46	J00	D23/008-J00	7	J00
XPDR400A24BLU	75 (190.5)	24	SJ	L23/011-P1	47	J00	D23/008-J00	24	J00
XPDR708A24WHT	81 (205.74)	24	SJ	L23/011-P1	48	J00	TB401-5	B	904
XPDR708A24BLU	81 (205.74)	24	SJ	L23/011-P1	49	J00	TB401-5	F	904
ST	-	-	-	L23/011-P1	50	-	-	-	-
XPDR705A24BLU	82 (208.28)	24	SK	L23/011-P1	51	J00	TB400-3	T	904
XPDR704A24BLU	82 (208.28)	24	SK	L23/011-P1	52	J00	TB400-1	W	904
ST	-	-	-	L23/011-P1	53	-	-	-	-
ST	-	-	-	L23/011-P1	54	-	-	-	-
ST	-	-	-	L23/011-P1	55	-	-	-	-
ST	-	-	-	L23/011-P1	56	-	-	-	-
XPDR703A24	81 (205.74)	24	SY	L23/011-P1	57	J00	TB401-4	B	904
ST	-	-	-	L23/011-P1	58	-	-	-	-
ST	-	-	-	L23/011-P1	59	-	-	-	-
ST	-	-	-	L23/011-P1	60	-	-	-	-
ST	-	-	-	L23/011-P1	61	-	-	-	-
ST	-	-	-	L23/011-P1	62	-	-	-	-
XPDR710A24BLU	82 (208.28)	24	ETH	L23/011-P2	1	J00	TB400-6	P	904
XPDR710A24GRN	82 (208.28)	24	ETH	L23/011-P2	2	J00	TB400-6	W	904
ST	-	-	-	L23/011-P2	3	-	-	-	-
ST	-	-	-	L23/011-P2	4	-	-	-	-
ST	-	-	-	L23/011-P2	5	-	-	-	-
XPDR710A24WHT	82 (208.28)	24	ETH	L23/011-P2	6	J00	TB400-6	M	904
XPDR710A24ORG	82 (208.28)	24	ETH	L23/011-P2	7	J00	TB400-6	S	904
ST	-	-	-	L23/011-P2	8	-	-	-	-
ST	-	-	-	L23/011-P2	9	-	-	-	-
ST	-	-	-	L23/011-P2	10	-	-	-	-
ST	-	-	-	L23/011-P2	11	-	-	-	-
ST	-	-	-	L23/011-P2	12	-	-	-	-
ST	-	-	-	L23/011-P2	13	-	-	-	-
ST	-	-	-	L23/011-P2	14	-	-	-	-
ST	-	-	-	L23/011-P2	15	-	-	-	-
XPDR200A20	86 (218.44)	20	SY	L23/011-SP1	B	-	D24/001-P3B	4	J00
XPDR101A22N	83 (210.82)	22	SY	L23/011-SP2	B	-	E33	R	904

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Table 1. Wire List for GTX 345R Wire Harness (Cont.)

W738 Wire Number	Length, inch (cm)	Size	Type Code	From			To		
				Ref. Des.	Pin	Term. Code	Ref. Des.	Pin	Term. Code
XPDR600A24	6 (15.24)	24	SY	L23/011-P1	SH1	833	TB400-1	Z	904
XPDR601A24	6 (15.24)	24	SY	L23/011-P1	SH2	833	L23/011-P1	CASE	126
XPDR602A24	6 (15.24)	24	SY	L23/011-P1	SH3	833	TB400-3	Y	904
XPDR603A24	6 (15.24)	24	SY	L23/011-P1	SH4	833	L23/011-P1	CASE	126
XPDR604A24	6 (15.24)	24	SY	L23/011-P1	SH5	833	TB400-7	J	904
XPDR605A24	6 (15.24)	24	SY	L23/011-P1	SH6	833	L23/011-P1	CASE	126
XPDR606A24	6 (15.24)	24	SY	L23/011-P1	SH7	833	TB400-8	K	904
XPDR607A24	6 (15.24)	24	SY	L23/011-P1	SH8	833	L23/011-P1	CASE	126
XPDR608A24	6 (15.24)	24	SY	L23/011-P1	SH9	833	TB401-5	K	904
XPDR609A24	6 (15.24)	24	SY	L23/011-P1	SH10	833	L23/011-P1	CASE	126
XPDR610A24	6 (15.24)	24	SY	L23/011-P1	SH11	833	D23/008-J100	40	936
XPDR611A24	6 (15.24)	24	SY	L23/011-P1	SH12	832	L23/011-P1	CASE	126
XPDR612A24	6 (15.24)	24	SY	L23/011-P1	SH13	832	TB400-7	T	904
XPDR613A24	6 (15.24)	24	SY	L23/011-P2	SH14	834	L23/011-P2	CASE	126
XPDR614A24	6 (15.24)	24	SY	L23/011-P2	SH15	834	TB400-6	Z	904
XPDR615A24	6 (15.24)	24	SY	L23/011-P1	SH16	834	L23/011-P1	CASE	126
XPDR616A24	6 (15.24)	24	SY	L23/011-P1	SH17	833	L23/011-P1	CASE	126

- (4). Install GTX 345R transponder antenna wire harness (W740), 369D24740-101.
(Ref. Table 2 and CSP-HMI-3, Chapter 96)

Table 2. Wire List for GTX345R Antenna Wire Harness

W740 Wire Number	Length, inch (cm)	Size	Type Code	From			To		
				Ref. Des.	Pin	Term. Code	Ref. Des.	Pin	Term. Code
WL369D24740-101									
XPDR800A99	137 (347.98)	99	RG400	L23/011-XPDR	COAX	J00	A23/004-P1	COAX	J00

- (5). Install GTX 345R backplate, 011-02976-10, to wire harness W738 and W740.

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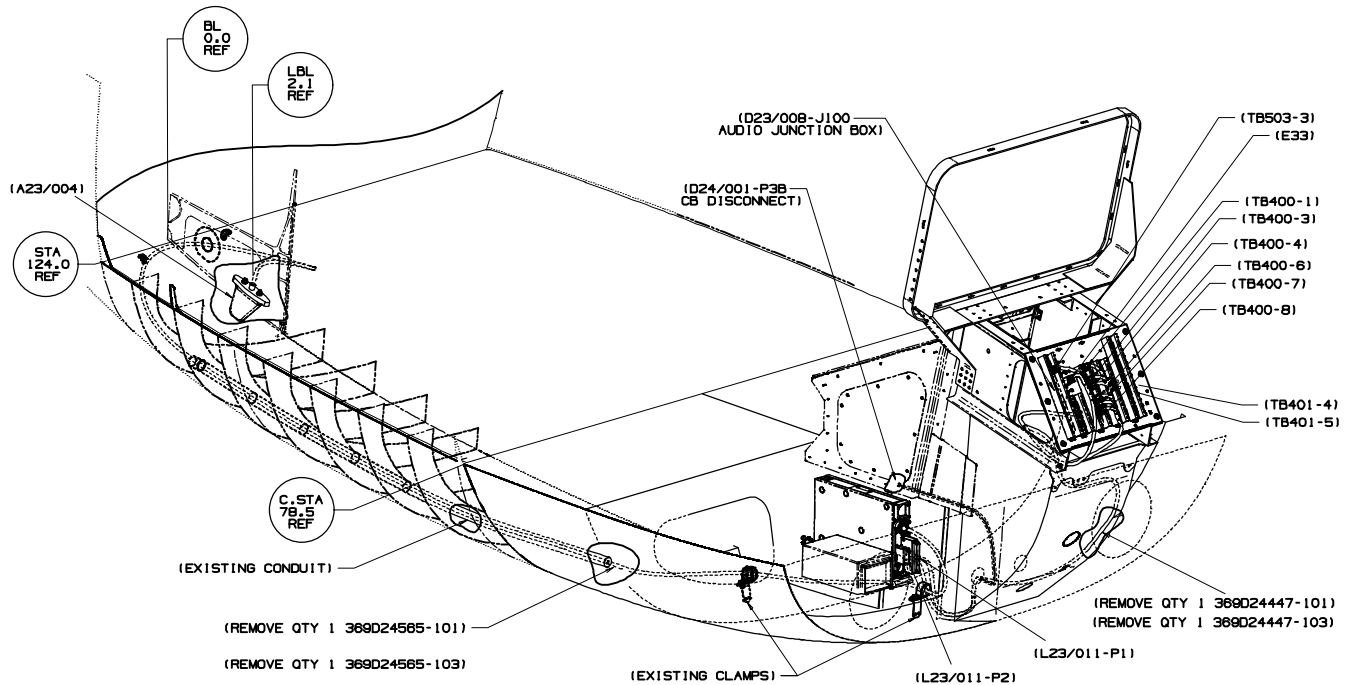


Figure 2. Wire Harness Location

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- (6). Remove and discard aft inboard GTX 33H nutplate (Figure 3, 1) and rivets (Figure 3, 3).
- (7). Prepare mounting rack (Figure 3, 6) surface for electrical bonding.
(Ref. CSP-HMI-2, Section 20-50-00)
- (8). Install GTX 345R nutplates (Figure 3, 2) with rivets (Figure 3, 4).

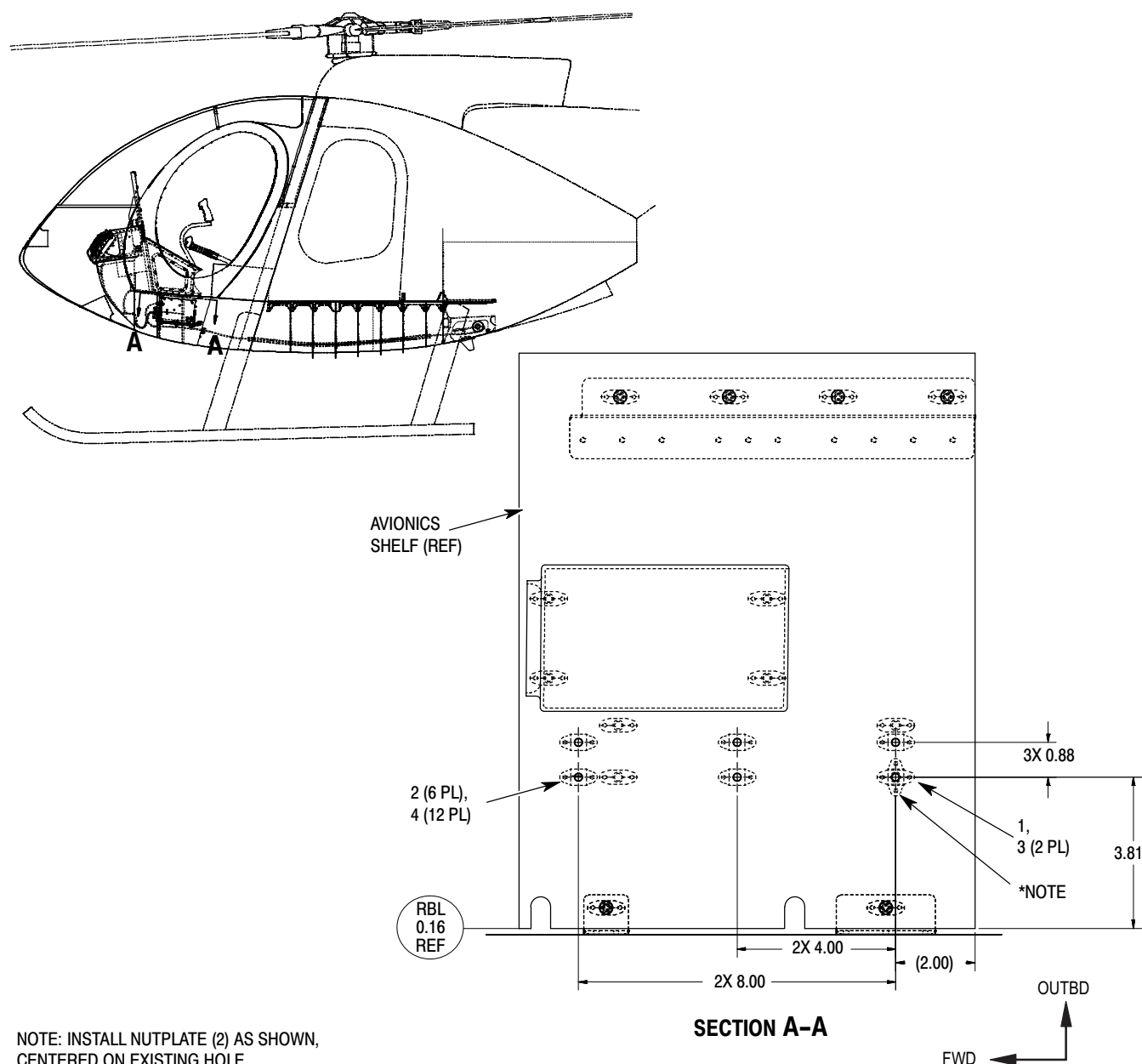
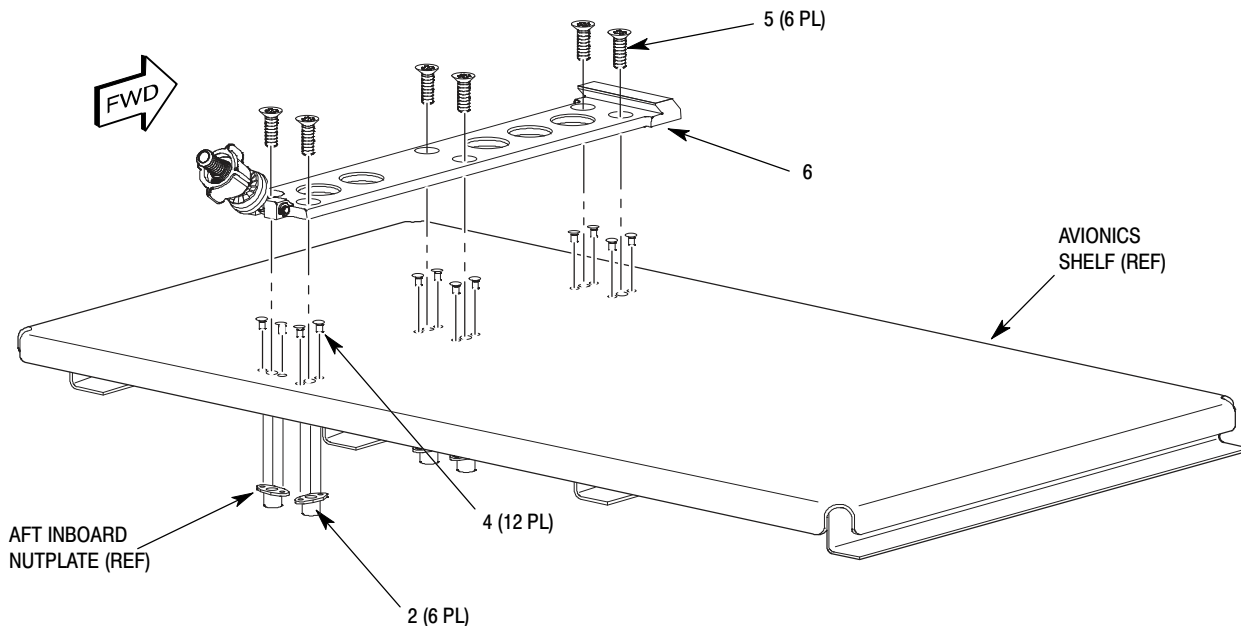


Figure 3. GTX 345R Modification (Sheet 1 of 2)

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- 1. GTX 33H NUTPLATE
- 2. GTX 345R NUTPLATE
- 3. RIVET

- 4. RIVET
- 5. SCREW
- 6. MOUNTING RACK

Figure 3. GTX 345R Modification (Sheet 2 of 2)

- (9). Install mounting rack (Figure 3, 6) with mounting screws (Figure 3, 5).
- (10). Install avionics shelf. (Ref. CSP-HMI-2, Chapter 53)
- (11). Do the electrical bond test (Class C) for the mounting rack (Figure 3, 6). (Ref. CSP-HMI-2, Section 20-50-00)

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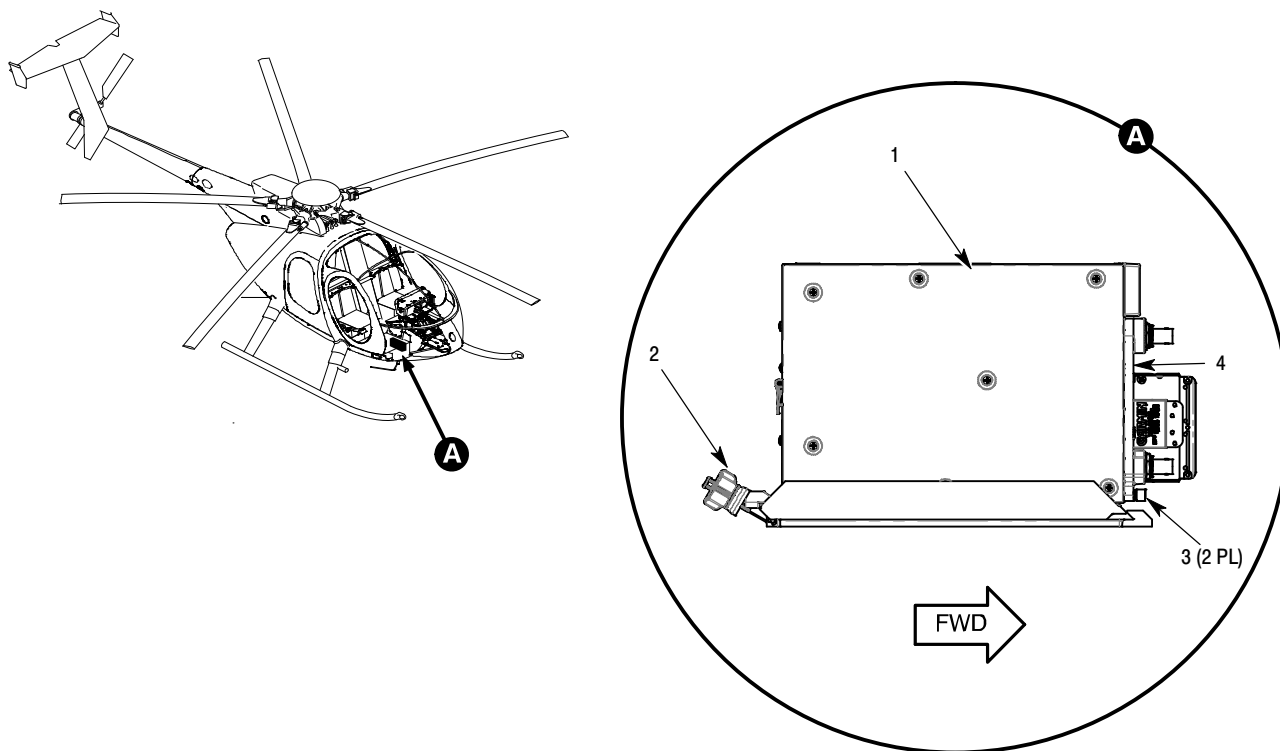
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C. GTX 345R Installation

(Ref. Figure 4)

- (1). Put backplate assembly (4) in its position on the transponder (1).
- (2). Tighten captive screws (3) to attach backplate assembly (4) to transponder (1).
- (3). Put transponder (1) in its position on the mounting rack.
- (4). Tighten mounting rack retaining knob (2).



LE08-04-8-56

1. GTX 345R TRANSPONDER
2. RETAINING KNOB

3. CAPTIVE SCREW
4. BACKPLATE ASSEMBLY

Figure 4. Installation of the GTX 345R Transponder

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D. Job Close-Up

- (1). Configure GTX 345R transponder.
(Email or speak to a Field Service Representative to configure the GTX 345R transponder.)
- (2). Do an operational check of the transponder.
(Ref. the GTX 345R Installation Manual Document 190-00734-20)
- (3). Complete GTX 345R transponder certification.
(Email or speak to a local authorized repair center to certify the GTX 345R transponder.)
- (4). Do a FOD check.

E. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log of the Rotorcraft Log Book CSP-RLB. (Ref. CSP-RLB-L8)
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.



HELICOPTERS™

TB369F-014

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Bulletin Completed Record GTX 33H TO GTX 345R MODIFICATION

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
Website: <https://www.mdhelicopters.com/contact/>
Or email or speak to your Field Service Representative.

Owner/– Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

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IGNITION ISOLATOR SWITCH MODIFICATION

1. PLANNING INFORMATION

A. Aircraft Affected:

Model 369E, serial numbers E0001 and Subs
Model 369FF, serial numbers FF0001 and Subs
Model 500N, serial numbers LN0001 and Subs

B. Assembly/Components Affected By This Notice:

369D292537-501/-503 Ignition Isolator Switch

C. Reason:

Customers have requested an engine bay based ignition cutoff toggle switch to allow for the ignition system to be disabled as required by Rolls Royce maintenance manual during fresh water rinses and washes of the engine.

D. Description:

Procedures in this Bulletin gives owners and operators information to modify existing rotorcraft to install 369D292537-501/-503 engine bay located ignition isolator switch.

E. Time of Compliance:

Customer option, at owner/operator discretion.

F. FAA Approval:

The technical design aspects of this Bulletin are FAA Approved.

G. Labor Hours:

Compliance with this bulletin will be approximately three (3) labor-hours.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, speak to the Field Service Department at telephone 1-800-388-3378 or 480-346-6300 or the website: <https://www.mdhelicopters.com/contact/>.

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J. Material/Part Availability:Contact Spare Sales for parts availability at <https://www.mdhelicopters.com/contact/>.

-501 REPLACEMENT PARTS/SUPPLIES (PRE-GENERIC)			
Nomenclature	Part No.	Qty.	Source
-501 IGNITION ISOLATION SWITCH MODIFICATION KIT	TBK-IGN-501	1	MD Helicopters (9D5S6)
Ignition Isolator Switch	369D292537-501	1	MD Helicopters (9D5S6)
Ignition Switch Doubler	369D292537-1	1	MD Helicopters (9D5S6)
Ignition Isolator Switch Decal	369D292537-3	1	MD Helicopters (9D5S6)
Switch Guard	MS25224-1	1	MD Helicopters (9D5S6)
Toggle Switch	ST5SP22T1S1	1	MD Helicopters (9D5S6)
Wire, 20 AWG	M22759/43-20-9	30 inches	MD Helicopters (9D5S6)
3/32 Panhead Rivet	MS20615-3M3	4	MD Helicopters (9D5S6)
Socket Contact	031-0560-161	1	MD Helicopters (9D5S6)

-503 REPLACEMENT PARTS/SUPPLIES (GENERIC)			
Nomenclature	Part No.	Qty.	Source
-503 IGNITION ISOLATION SWITCH MODIFICATION KIT	TBK-IGN-503	1	MD Helicopters (9D5S6)
Ignition Isolator Switch	369D292537-503	1	MD Helicopters (9D5S6)
Ignition Switch Doubler	369D292537-1	1	MD Helicopters (9D5S6)
Ignition Isolator Switch Decal	369D292537-3	1	MD Helicopters (9D5S6)
Switch Guard	MS25224-1	1	MD Helicopters (9D5S6)
Toggle Switch	ST5SP22T1S1	1	MD Helicopters (9D5S6)
Wire, 22 AWG	M22759/43-22-9	30 inches	MD Helicopters (9D5S6)
3/32 Panhead Rivet	MS20615-3M3	4	MD Helicopters (9D5S6)
Pin Contact	M39029/58-363	1	MD Helicopters (9D5S6)

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K. Warranty Policy:

Contact the MD Helicopters Warranty Department for prices, orders, and availability.

Standard warranty policy applies.

Labor allowance will not be given for this installation.

L. Disposition of Parts Removed:

N/A

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics
CSP-IPC-4 Illustrated Parts Catalog
CSP-E-1 Rotorcraft Flight Manual
CSP-E-2 Rotorcraft Flight Manual
CSP-FF-1 Rotorcraft Flight Manual
CSP-FF-2 Rotorcraft Flight Manual
CSP-520N-1 Rotorcraft Flight Manual

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

CSP-HMI-2 Basic Handbook of Maintenance Instructions – Servicing and Maintenance
CSP-HMI-3 Basic Handbook of Maintenance Instructions – Instruments/Electrical/Avionics
CSP-IPC-4 Illustrated Parts Catalog
CSP-E-1 Rotorcraft Flight Manual
CSP-E-2 Rotorcraft Flight Manual
CSP-FF-1 Rotorcraft Flight Manual
CSP-FF-2 Rotorcraft Flight Manual
CSP-520N-1 Rotorcraft Flight Manual

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2. ACCOMPLISHMENT INSTRUCTIONS

(Ref. Figure 1)

A. General Information

Use generally accepted aviation mechanic processes and procedures while accomplishing this technical bulletin. (Ref. FAA AC 43.13-2B)

Unless otherwise specified, deburr and prime all newly exposed edges. Ref. the following:

- Chemical film treatment of aluminum alloys, MIL-DTL-5541, Class 1A
- Passivation of corrosion-resistant steels, AMS2700
- Priming, MIL-PRF-85582, Type I, Class C2

Unless otherwise specified, dimensions are in inches. The following are dimensional tolerances for this technical bulletin.

Dimensional Tolerances	
3 Decimals	± 0.010
2 Decimals	± 0.03
1 Decimal	± 0.1
Angular	$\pm 0^{\circ} 30'$

Interconnecting wires over **6 inches (152 mm)** in length must be marked for identification. Wires must be marked at least on one side.

B. Modification

(Ref. Figure 1)

NOTE: Make sure the switch guard avoids the engine access doors and the rivet locations avoid the stiffening bead radius when locating the doubler in its position.

- (1). Put doubler (3) in its position on STA 137.50.



Make sure to retain keyway on doubler (3). Failure to comply can cause switch (1) to rotate.

- (2). Use the doubler (3) as a template to drill rivet holes and switch hole.
- (3). Deburr and prime all newly exposed edges.
- (4). Install doubler (3) with rivets (4).
- (5). Install toggle switch (1) and switch guard (2).
- (6). Install decal (5).

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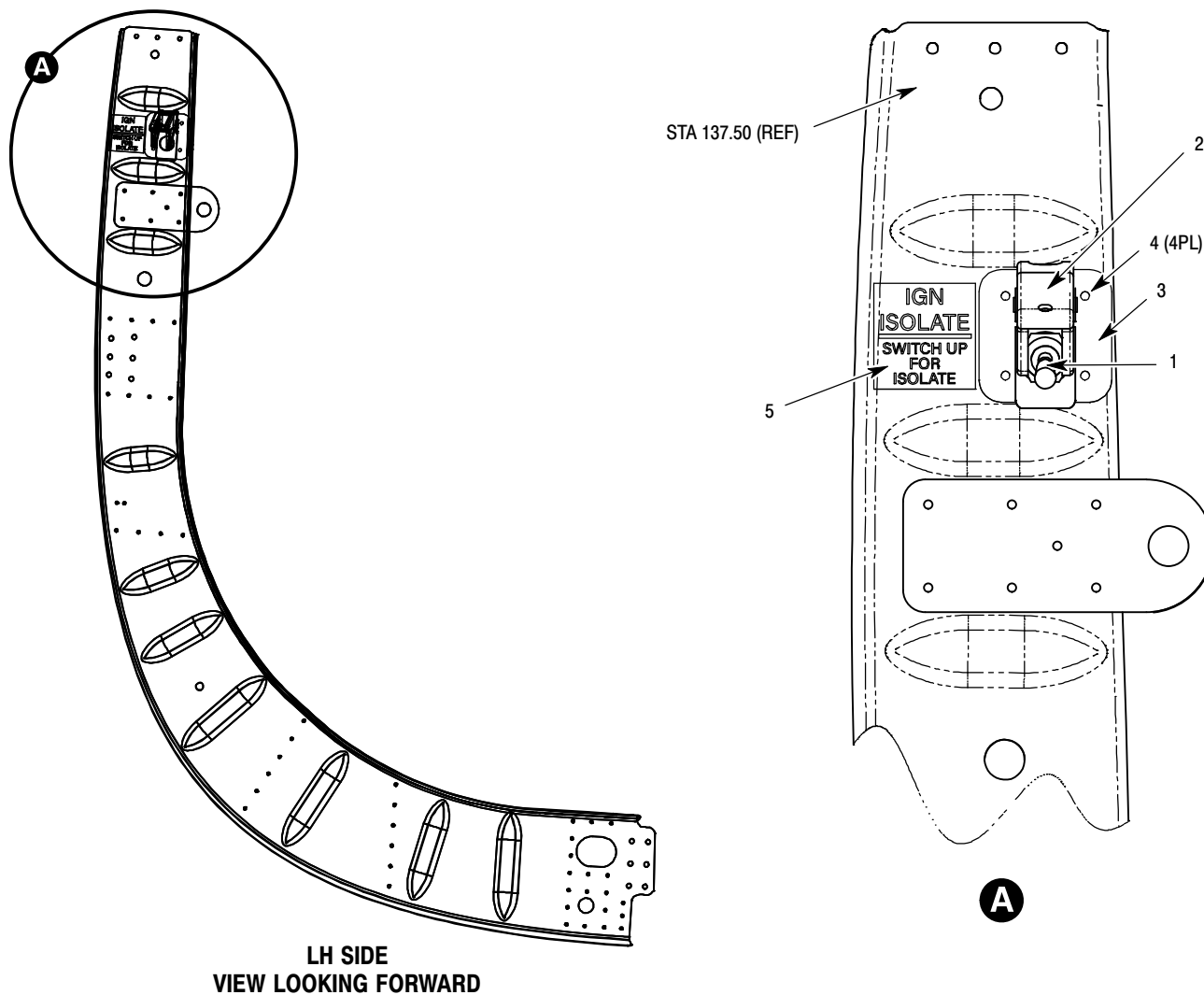


Figure 1. Ignition Isolator Switch Installation (Sheet 1 of 2)

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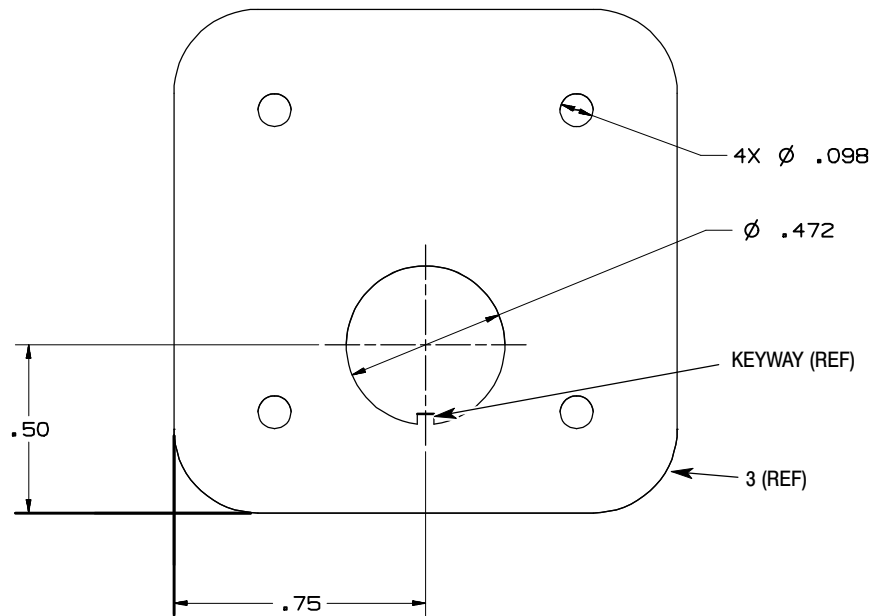


Figure 1. Ignition Isolator Switch Installation (Sheet 2 of 2)

- (7). Do the -501 wire modification for:
- 369E, Serial Numbers 1 thru 383
 - 369FF, Serial Numbers 1 thru 75
- (8). Do the -503 wire modification for:
- 369E, Serial Numbers 387 and Subs
 - 369FF, Serial Numbers 76 and Subs
 - 500N, Serial Numbers LN001 and Subs

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C. -501 Wire Modification

(Ref. Table 1 and Figure 2)

- (1). De-pin J303 Pin M.
- (2). Cut wire K502D20 as close as possible to contact.
- (3). Discard contact.
- (4). Reroute K502D20 to ignition isolator switch, S305.
- (5). Install K502D20 and K502DD20.

Table 1. Wire Data List for 369D292537-501

Wire Number	Size	Material	From			To		
			Ref. Des.	Pin	Termination	Ref. Des.	Pin	Termination
369D292537-501								
K502D20	20	M22759/43-20-9	SP17	A	32445	S305	1	Solder Termination
K502DD20	20	M22759/43-20-9	S305	2	Solder Termination	303-M	M	031-0560-161

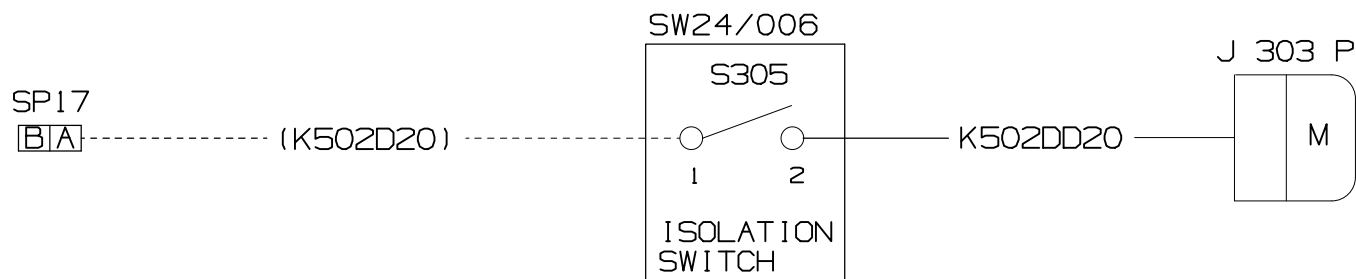


Figure 2. -501 Ignition Isolator Switch Wire Diagram

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D. -503 Wire Modification

(Ref. Table 2 and Figure 3)

- (1). De-pin J1301 Pin L.
- (2). Cut wire J1072B22 as close as possible to contact.
- (3). Discard contact.
- (4). Reroute J1072B22 to ignition isolator switch, S305.
- (5). Install J1072B22 and J1072BBB22.

Table 2. Wire Data List for 369D292537-503

Wire Number	Size	Material	From			To		
			Ref. Des.	Pin	Termination	Ref. Des.	Pin	Termination
369D292537-503								
J1072B22	22	M22759/43-22-9	TB200-7	S	M39029/22-191	S305	1	Solder Termination
J1072BBB22	22	M22759/43-22-9	S305	2	Solder Termination	1301-J	L	M39029/58-363

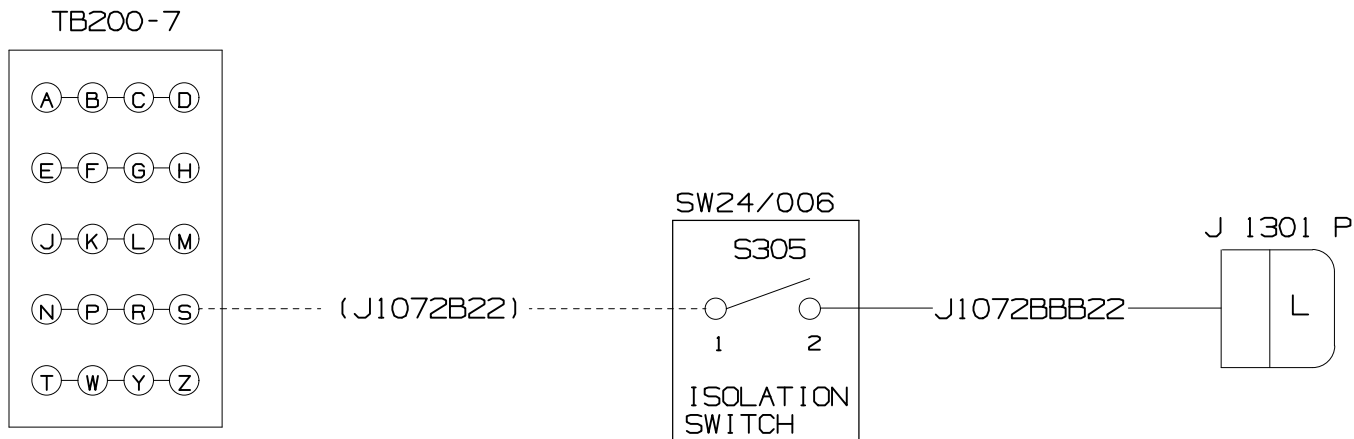


Figure 3. -503 Ignition Isolator Switch Wire Diagram

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E. Ignition Isolator Switch Initial Check

- (1). Lift ignition isolator switch guard.
- (2). Set switch up to **ISOLATE**.
- (3). Set power switch to **BATT**.
- (4). Set key switch to **ON**.
- (5). Hold **RE-IGN TEST** switch in the **TEST** or **GND** position.
(Ref. Applicable Rotorcraft Flight Manual)
- (6). Make sure there is no sound of the engine ignitor(s) firing.
- (7). Release the **RE-IGN TEST** switch.
- (8). Set ignition isolator switch down to **OFF**.
- (9). Lower switch guard.
- (10). Hold **RE-IGN TEST** switch in the **TEST** position.
- (11). Make sure there is the sound of the engine ignitor(s) firing.
- (12). Release the **RE-IGN TEST** switch.
- (13). Set key switch to **OFF**.
- (14). Set power switch to **OFF**.

F. Ignition Isolator Switch Operational Check

NOTE: The following check must be performed by authorized personnel.

- (1). Lift ignition isolator switch guard.
- (2). Set switch up to **ISOLATE**.
- (3). Set power switch to **BATT**.
- (4). Set key switch to **ON**.
- (5). Make sure **THROTTLE** is in the **CUTOFF** position.

WARNING

Make sure that the rotor and engine exhaust area are clear before starting aircraft. Injury or death to personnel can occur.

- (6). Press and hold **START** button and make sure there is no sound of the engine ignitor(s) firing.
- (7). Release **START** button.
- (8). Set ignition isolator switch down to **OFF**.
- (9). Lower switch guard.
- (10). Make sure **THROTTLE** is in the **CUTOFF** position.
- (11). Press and hold **START** button and make sure there is sound of the engine ignitor(s) firing.

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- (12). Release **START** button.
- (13). Set key switch to **OFF**.
- (14). Set power switch to **OFF**.

G. Job Close-Up

- (1). Do a FOD check.

H. Compliance Record

- (1). Record compliance to this Technical Bulletin in the Compliance Record Log of the Rotorcraft Log Book CSP-RLB. (Ref. CSP-RLB-L8)
- (2). Show compliance with this Technical Bulletin by one of these methods:
 - (a). Complete a Service Operation Report (SOR) at <https://www.mymd.aero/dashboard>.
 - (b). Put an entry in your <https://www.mymd.aero/> account.
 - (c). Mail a copy or e-mail a scanned copy of the Bulletin Completed Record to your Field Service Representative.



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Bulletin Completed Record IGNITION ISOLATOR SWITCH MODIFICATION

MD Helicopters, LLC
Field Service
4555 East McDowell Road
Mesa, AZ 85215-9734

Phone: 480-346-6300 or 1-800-388-3378
Website: <https://www.mdhelicopters.com/contact/>
Or email or speak to your Field Service Representative.

Owner/– Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____ _____	Helicopter Total Time: _____ Date: _____ Location: _____
Phone: _____	
E-mail: _____	

This bulletin is complete:

Signature: _____

Print Name: _____

Title: _____

Comments: _____

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