

TECHNICAL BULLETIN

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ELECTRICAL MODIFICATION, LED STROBE

1. PLANNING INFORMATION

A. Aircraft Affected:

MD900 helicopters, serial numbers 900-000008 thru 900-000139.

B. Assembly/Components Affected By This Bulletin:

900E3720013-105, Lighting Control Edge Light Panel

C. Reason:

Upgraded LED Strobe and Position lights are available.

D. Description:

Procedures in this Bulletin give owners and operators information to modify existing rotorcraft for installation of an updated Led Strobe/Position Light.

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 19 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 Field Service Department or MDHI Spare Sales Department.

REPLACEMENT PARTS/SUPPLIES				
Item No	Nomenclature	Part No.	Qty.	Source
KIT	The following parts are included in this KIT.	TBK900-040	A/R	MDHI
1	• Lighting Control Edge Light Panel	900E3720013-105	1	MDHI
2	• Contact, 16GA, 20-24AWG	1662-202-1631	4	MDHI
3	• Upper & Lower Anti Collision Light	369D24142-1	2	MDHI
4	• Upper & Lower AFT Position Light, White	900E3753320-101	4	MDHI
5	• LH Position Light, Red	900E3753321-101	1	MDHI
6	• RH Position Light, Green	900E3753322-101	1	MDHI
7	• Adapter Kit, Anti-Collision Light	369D24142-3	2	MDHI
8	• Contact, Pin	M39029/58-363	12	MDHI
9	• Contact, Socket	M39029/56-351	9	MDHI
10	• Contact, Socket, Module	M39029/22-192	9	MDHI
11	• Terminal Lug, Ring, Red	MS25036-102	2	MDHI
12	• Switch, Toggle, Sealed	MS27407-1	1	MDHI
13	• Wire, Single Conductor, 20GA	M22759/43-20-9	AR	MDHI
14	• Plug, Button, Nylon	MHS5884-0437	2	MDHI
15	• Plug, Sealing, Size 22, Black	MS27488-22-1	1	MDHI
16	• Plug, Sealing, Size 20, Red	MS27488-20-1	10	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

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O. Electrical Load Data:

N/A

P. Other Publications Affected:

CSP-900RMM-2 Rotorcraft Maintenance Manual - Servicing and Maintenance

CSP-900RMM-3 Rotorcraft Maintenance Manual - Instruments-Electrical-Avionics

CSP-900IPL-4 Illustrated Parts List

Q. Reference Publications:

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

CSP-SPM Standard Practice Manual

CSP-900RMM-3 Rotorcraft Maintenance Manual - Instruments-Electrical-Avionics

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2. ACCOMPLISHMENT INSTRUCTIONS

A. Preparation

- (1). Ground aircraft. (Ref CSP-SPM, Section 20-60-00).

B. Modification

- (1). Modification of Electrical/Lighting Control Panel
 (Cockpit-Center Console)

NOTE: Effective Unit 8-124

- (a). Disassemble A602 Electrical/Lighting Control Panel.
 - 1). Remove Lighting Control Panel A602 from Aircraft.
 - 2). Remove Lighting Control Edge Light Plate from Panel Assembly.

NOTE: Save mounting hardware and Control Knobs for reuse.

NOTE: Protect wires for reuse.

- 3). Disconnect wires from S6-2 and S6-3.
- 4). Remove Strobe Light Switch.
- (b). Re-Assemble A602 Electrical/Lighting Control Panel.
 - 1). Install New Strobe Light Switch (12) in position S6.
 - 2). Install new wire segments as follows. Use 2EA Contact Pin (8), 2EA Terminal Lug Ring Red (11), and A/R Wire Single Conductor, 20GA (13).

WIRE ID	FROM	TERM	TO	TERM
L20D20 EMI 3	J2	R	S6	6
L20E20 EMI 3	J1	B	S6	5

- 3). Re-Terminate wires disconnected during disassembly.

WIRE ID	FROM	TERM	TO	TERM
L5A20 EMI 3	J2	ZE	S6	3
L9C20 EMI 3	J1	X	S6	2

- 4). Re-Assemble A602 Panel and install Lighting Control Edge Light Panel (1).
 Re-install previously removed Control Knobs.
- (2). Modification of Electrical/Lighting Control Panel
 (Cockpit-Center Console)

NOTE: Effective Unit 125-139

- (a). Disassemble A602 Electrical/Lighting Control Panel
 - 1). Remove Lighting Control Panel A602 from Aircraft.
 - 2). Remove Lighting Control Edge Light Plate from Panel Assembly.

NOTE: Save mounting hardware and Control Knobs for reuse.

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(b). Re-Assemble A602 Electrical/Lighting Control Panel

- 1). Re-Identify existing wire segments. (Ref. CSP-SPM Section 20-60-00).

WIRE ID	FROM	TERM	TO	TERM
Was:L221C20 EMI 3	J1	B	S6	5
Is:L20E20 EMI 3	J1	B	S6	5
Was:L221D20 EMI 3	J2	R	S6	6
Is:L20D20 EMI 3	J2	R	S6	6

- 2). Re-Assemble A602 Panel and install Lighting Control Edge Light Panel (1).
Re-install previously removed Control Knobs.

(3). Cabin Wire Harness Modification/Strobe Light Power Supply Removal

NOTE: Aircraft With Supplemental Fuel System (900EG336000) Installed, Locate And Remove Relocated Strobe Light Power Supply And Attaching Hardware Per This Modification.

NOTE: Effective Unit 8-139

(a). Strobe Light Power Supply Removal

- 1). Remove Strobe Light Power Supply (A309), Mounting Brackets and Ground Strap.
- 2). Cap and stow connectors P357, P358 and P359. (Ref. CSP-SPM, Section 20-60-00).
- 3). Touch up any exposed metal surfaces. (Ref. CSP-SPM, Section 20-30-00 and 20-40-00) Finish 11LA.

(b). Wire Harness Modification

- 1). Locate connector W124 P116 in the center console and de-pin the following wire segment: W124 P116-ZE, Wire ID: L5B20 EMI 3, cap and stow. (Ref. CSP-SPM, Section 20-60-00).
- 2). Locate and disconnect W133 P309 connector (Notar Fan Frame).
- 3). Locate W124 J309 and de-pin 3/C shielded wire from positions A, B, C, J, K and L, with shield terminations, cap and stow. (Ref. CSP-SPM, Section 20-60-00).
- 4). Locate GS306-A and de-pin wire L7A20N (W124). Cap and stow. (Ref. CSP-SPM, Section 20-60-00).

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- (c). Installation of new wire segments (Ref. Interconnect) use Wire, Single Conductor, 20GA (13).

NOTE: Lengths are reference for cut and code operations only.

WIRE ID	FROM	TERM	LUG	TO	TERM	LUG	LENGTH
L20C20 EMI 3	P116	R	(9)	TB302-2	K	(10)	300in
L5B20 EMI 3	P116	ZE	(9)	TB302-2	G	(10)	300in
L20F20N EMI 3	P129	B	(9)	GS102	L	(10)	70in
L5C20N EMI 3	J309	J	(9)	TB302-2	H	(10)	100in
L19B20N EMI 3	J309	K	(9)	GS306	A	(10)	60in
L20B20 EMI 3	J309	L	(9)	TB302-2	M	(10)	60in
L23B20 EMI 3	J309	C	(9)	TB302-2	L	(10)	60in
L22B20N EMI 3	J309	B	(9)	GS304	K	(10)	60in
L5E20 EMI 3	J309	A	(9)	TB302-2	J	(10)	60in

- 1). Fabricate and rout wire segments with existing harnesses. (Ref. CSP-SPM, Section 20-60-00).
 - 2). Mark wire segments, including EMI categories. (Ref. CSP-SPM, Section 20-60-00).
 - 3). Terminate Contact, Socket (9). (Ref. CSP-SPM, Section 20-60-00).
 - 4). Terminate Contact, Socket, Module (10). (Ref. CSP-SPM, Section 20-60-00).
 - 5). Reconnect W133 P309. (Ref. CSP-SPM, Section 20-60-00).
- (4). Removal Of White Strobe Light Option And Associated Wiring-Cockpit/Cabin
- (a). Removal

NOTE: Effective Unit 8-124 with White Strobe Light Option installed.

- 1). Locate and remove the White Strobe Light Switch located in the Center Console.
- 2). Locate and remove the White Strobe Power Supply and attaching hardware located on the right hand Plow Beam.
- 3). Locate, cap and stow connectors P357A, P358A and P359A. (Ref. CSP-SPM, Section 20-60-00).
- 4). Locate, cap and stow the following wire segments. (Ref. CSP-SPM, Section 20-60-00).

WIRE ID	FROM	TERM	TO	TERM
L201B20N EMI 3	GS304	H	LT SWITCH	COM
L201A20 EMI 3	LT SWITCH	ON	P358A	B
L200B20 EMI 3	W123 or P377	ZM	P358A	A
L202A20 White EMI 4	W124 or J309	Z	P359A	A
L203A20 Blue EMI 4	W124 or J309	ZC	P359A	C

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WIRE ID	FROM	TERM	TO	TERM
L208D20 EMI 4	W124 or J309	SHIELD	CASE	
L204A20 EMI 4	W125 or J315	T	P359A	B
L205A20 White EMI 4	W125 or J315	G	P357A	A
L206A20 Blue EMI 4	W125 or J315	H	P357A	C
L207A20 Orange EMI 4	W125 or J315	M	P357A	B
L210D20 EMI 4	W125 or J315	SHIELD	CASE	
L209D20 EMI 4	W125 or J315	SHIELD	CASE	

5). Install Sealing Plugs in the following connector cavities.

CONNECTOR	TERM	SEALING PLUG
GS304	H	(15)
J309	Z, ZC	(16) 2EA
J315	T, G, H, M	(16) 4EA
P377	ZM	(16)

(b). Removal

NOTE: Effective Unit 125-139 with White Strobe Light Option installed.

- 1). Locate and remove the White Strobe Light Switch located in the Center Console.
- 2). Locate and remove the White Strobe Power Supply and attaching hardware located on the right hand Plow Beam.
- 3). Locate, cap and stow connectors P357A, P358A and P359A. (Ref. CSP-SPM, Section 20-60-00).
- 4). Locate, cap and stow the following wire segments. (Ref. CSP-SPM, Section 20-60-00).

WIRE ID	FROM	TERM	TO	TERM
L22A20N EMI 3	GS304	H	P358A	B
L221E20 EMI 3	W124 or P116	R	P358A	A
L221B20 EMI 3	W125 or P379	K	W125 P129	B
L222A20 White EMI 4	W124 or J309	Z	P359A	A
L233A20 Blue EMI 4	W124 or J309	ZC	P359A	C
L228D20 EMI 4	W124 or J309	SHIELD	CASE	
L224A20 EMI 4	W125 or J315	T	P359A	B
L225A20 White EMI 4	W125 or J315	G	P357A	A
L226A20 Blue EMI 4	W125 or J315	H	P357A	C

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WIRE ID	FROM	TERM	TO	TERM
L227A20 Orange EMI 4	W125 or J315	M	P357A	B
L231A20 EMI 4	W125 or J315	SHIELD	CASE	
L229D20 EMI 4	W125 or J315	SHIELD	CASE	

5). Install Sealing Plugs in the following connector cavities.

CONNECTOR	TERM	SEALING PLUG
GS304	H	(15)
J309	Z, ZC	(16) 2EA
J315	T, G, H, M	(16) 4EA
P379	K	(16)

(5). Tailboom/Empennage Wire Harness Modifications/Navigation Light Replacements

NOTE: Effective Unit 8-139.

(a). Wire Harness Modification

- 1). Locate and disconnect W134 P310.
- 2). De-pin and remove wires at W134 P310 H, J, K, L, T and shield termination.
- 3). De-pin wires at W134 SP1 and SP2 leading to right position light (DS302).
- 4). De-pin wires at W134 SP3 and SP4 leading to left position light (DS303).

NOTE: If White Strobe Lights installed, de-pin and remove the following wires:
 W134 P310 Y, X and shield termination.
 W145 P317 T, G, H, M and shield terminations.
 Install (16) in each vacated connector cavity.

(b). Navigation Light Removal

- 1). Remove DS302 (Right hand position light) and DS303 (Left hand position light).
- 2). Remove DS304 (Upper AFT position light) and DS306 (Upper anti-collision light).
- 3). Locate and disconnect A677 J1 (mates with W133 P313).
- 4). Disassemble and de-pin connector-save for reuse.
- 5). Remove DS305 (Lower anti-collision light) and DS307 (Lower AFT position light).

(c). Install New Navigation Lighting

- 1). Right position light, green (6). (DS302)
- 2). Left position light, red (5). (DS303)
- 3). Upper & lower AFT position light, white (4). (DS304, DS307)
- 4). Upper & lower anti-collision light (3) and (7). (DS306, DS305)

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WARNING

**Do Not Cut Vendor Furnished Wires.
Loop And Stow If Required.**

- (d). Terminate Wires At W134 P310 And A677 J1 Per Figure 1.
 - 1). Route wire from navigation lights to termination points. (Ref CSP-SPM, Section 20-60-00).
 - 2). Terminate navigation wires.
 - 3). Dress wires to prevent chaffing.

(6). Electrical Load Center (A620) Modifications

- (a). Removal And Re-Identification Of Existing Lighting Circuit Breakers.

NOTE: Effective Unit 8-124-White Strobe Option Installed

- 1). Locate CB22 and CB53 on the electrical load center (A620).
- 2). Remove 5A circuit breaker at position CB53 and discard.
- 3). Cap and stow the following wires. (Ref CSP-SPM, Section 20-60-00).
- 4). Install Plug, Button, Nylon (14) in CB53 position.
- 5). Install Plug, Sealing, Size 20, Red (16) in position J3-ZM.

WIRE ID	FROM	TERM	TO	TERM
L200A20 EMI 3	BAT BUS	3	CB53	1
JUMPER, 20AWG	CB53	2	W620 J3	ZM

- 6). At position CB53 cover any nomenclature present. Finish DA. (Ref. CSP-SPM, Section 20-30-00).
- 7). At position CB22 cover any nomenclature present. Finish DA. (Ref. CSP-SPM, Section 20-30-00). Re-identify CB22 as "STROBE" (Ref. CSP-SPM, Section 20-60-00).

- (b). Removal And Re-Identification Of Existing Lighting Circuit Breakers.

NOTE: Effective Unit 125-139-White Strobe Option Installed

- 1). Locate CB22 and CB24 on the electrical load center (A620).
- 2). Remove 7.5A circuit breaker at position CB24 and discard
- 3). Cap and stow the following wires. (Ref CSP-SPM, Section 20-60-00).
- 4). Install Plug, Button, Nylon (14) in CB24 position.
- 5). Install Plug, Sealing, Size 20, Red (16) in position J5-K.

WIRE ID	FROM	TERM	TO	TERM
L220A20 EMI 3	BAT BUS	3	CB24	1
L221A20 EMI 3	CB24	2	W620 J5	K

- 6). At position CB24 cover any nomenclature present. Finish DA. (Ref. CSP-SPM, Section 20-30-00).
- 7). At position CB22 cover any nomenclature present. Finish DA. (Ref. CSP-SPM, Section 20-30-00). Re-identify CB22 as "STROBE" (Ref. CSP-SPM, Section 20-60-00).

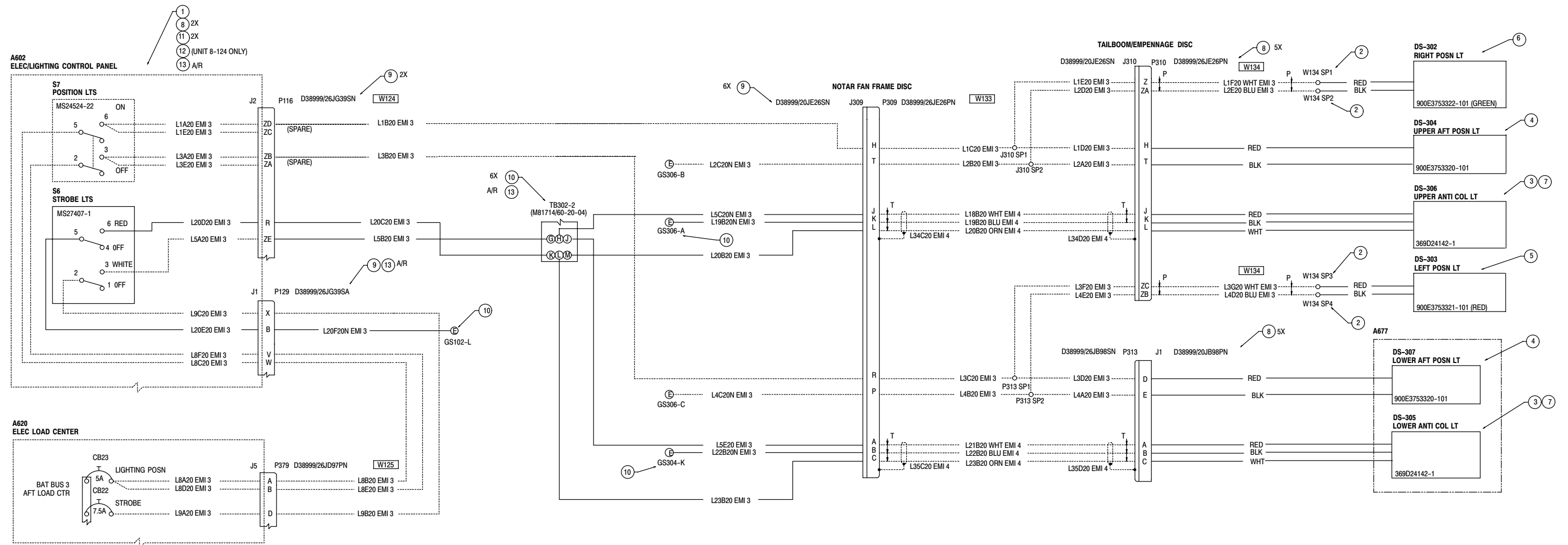
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(c). Re-Identification Of Existing Lighting Circuit Breakers.

NOTE: Effective Unit 125-139 White Strobe Provisions Installed

- 1). Locate CB22 and CB24 on the electrical load center (A620).
- 2). At position CB24 cover any nomenclature present. Finish DA. (Ref. CSP-SPM, Section 20-30-00).
- 3). At position CB22 cover any nomenclature present. Finish DA. (Ref. CSP-SPM, Section 20-30-00). Re-identify CB22 as "STROBE" (Ref. CSP-SPM, Section 20-60-00). Plug, Button, Nylon (14) in CB24 position. If not installed , inst
- 4). Verify, install Plug, Button, Nylon (14) in CB24 position.



NOTES:
 1. DASHED LINES INDICATE EXISTING WIRES OR EQUIPMENT.
 2. BOLD LINES INDICATE NEW WIRE SEGMENTS PER THIS MODIFICATION DRAWING.

Figure 1.

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C. Job Close-Up

- (1). Close access door or panel.
- (2). Clean work area and check for FOD.

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

ELECTRICAL MODIFICATION, LED STROBE

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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: _____
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