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**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS
(ICA)
FOR THE
LS400 SEARCHLIGHT
ON THE
AIRBUS H135 (EC135) HELICOPTER**

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROPRIETARY TO LUMINATOR AND SHALL NOT BE USED OR REPRODUCED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN CONSENT.

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CHAPTER 1 INTRODUCTION

GENERAL

Scope

This document contains the Instructions for Continued Airworthiness in accordance with Order 8110.54A, 14 CFR §§ 27.1529, and 27 Appendix A that are applicable to the aircraft modification as described below.

Purpose

These instructions supplement the Maintenance Manuals as provided by Airbus for models H135 (EC135). These instructions should be included in the aircraft operator's approved maintenance program.

Arrangement

This document is arranged by numerical chapter numbers.

Distribution

A copy of this document and all revisions to this document is provided to the owner/operator of the rotorcraft with this installation, to the FAA as a part of the STC data package and the original is maintained by Luminator Aerospace.

Applicability

These Instructions for Continued Airworthiness are applicable to Airbus EC135 series models, sub-models include: EC135P1, EC135T1, EC135P2, EC135T2, EC135P2+, EC135T2+, EC135P3, and EC135T3 with the installation of Luminator Aerospace's LS400 P/N 0231674-101 L, LS400M P/N 0231729-101, or LS400T P/N 0231687-101 LED Par 46 light assemblies and returned to service under Supplemental Type Certificate # SR09919AT.

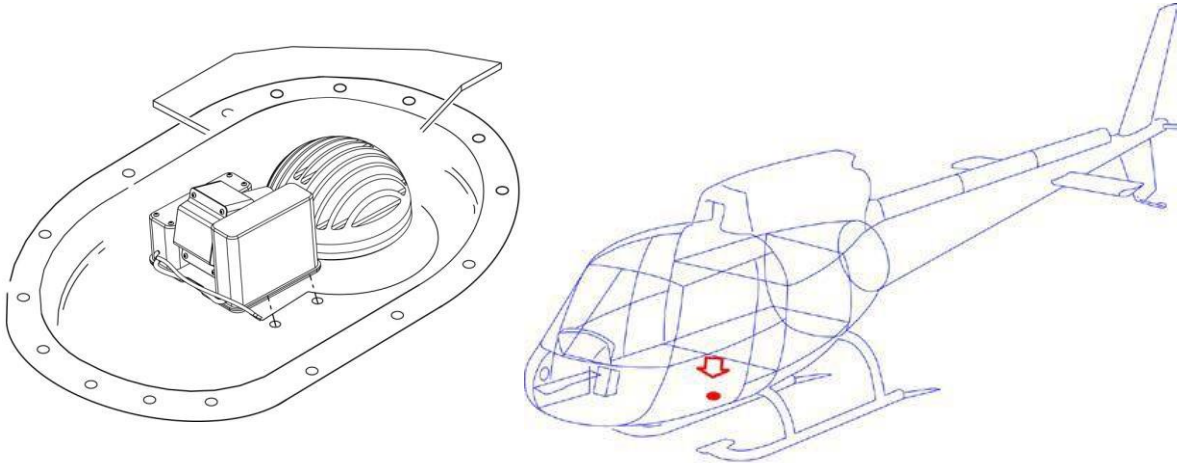
Revisions

Revisions to this report will be issued as complete documents. All pages will reflect the latest revision level. Changed material will be indicated by change bars in the right margin. Deleted material will be indicated by a change bar adjacent to a blank space. Luminator Aerospace will distribute new revisions to each registered STC holder as described above after acceptance by the FAA or an owner/operator may contact Luminator Aerospace at www.luminatoraerospace.com for contact information.

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Description

This modification replaces the incandescent Par 46 and Par 64 landing/searchlights with Par 46 LED light assemblies.



Placards and Markings

No placards/decals are modified by this installation.

Servicing Equipment

No special tools or equipment are required for the servicing procedures in this document.

Fastener Information

Fastener specifications are indicated in Chapter 5.

Special Tools

No special tools are required.

CHAPTER 2 MAINTENANCE INSPECTIONS

| Task Description | Interval |
|---|--|
| Perform a General Visual Inspection for general condition and operational check of system | Preflight |
| Perform a General Visual Inspection for general condition, proper operation, and correct installation | Annually and/or after 100 hours of operation |

Additional guidance for inspecting the general condition of the light assembly:

- (1) Damage and cleanliness.
- (2) Check that the mounting hardware is secured.
- (3) Check the wiring connectors for proper fit and security.

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CAUTION: For these next steps put on polarized sunglasses or weldergoggles to prevent eye damage when looking into the light.

Proper Operation Procedure to be performed, first in the steady mode, and second in the strobe mode.

- (1) Put on polarized sunglasses or welder goggles to prevent eye damage when looking into the lights.
- (2) Turn the lights on.
- (3) Examine the individual LED lights. If any of the LEDs fail the light assembly shall be removed and sent to Luminator Aerospace for repair or replacement.

Cleaning

Any debris or atmospheric deposits accumulated on the surface of the lights should be removed using a UV Wax to ensure ongoing optical clarity. It should be polished with a quality lamb's wool sheet that is suitable also for deeper polishing.

Caution: Under no circumstance should any petroleum-based product be used to clean lights.

Circuit/Wiring Protection

Each LS400 features a Negative Temperature Coefficient (NTC) circuit that limits internal temperatures by attenuating operating current (with corresponding reduction of brightness) when internal temperatures reach a certain threshold. This proprietary circuitry is intended for protecting the light itself, and associated aircraft wiring, from a thermal runaway condition. The operation of strobes without airflow is recommended to be limited in order to avoid heat build-up. This NTC circuitry feature enables the life of LEDs and electronic components to be tripled and thereby provide an even greater margin of safety for continued airworthiness due to the dramatic enhancement of electronics reliability.

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CHAPTER 3 AIRWORTHINESS LIMITATIONS

Airworthiness Limitations

The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

There are no Airworthiness Limitations.

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CHAPTER 4 TROUBLE SHOOTING

Continuity Checks

To determine cause of problem, troubleshoot wiring for continuity in accordance with wiring diagrams located in ICD-0231674 (LS-400), ICD-0231729-101 (LS-400M) or ICD-0231687 (LS-400T). Inspect connectors for bent, pushed-back or damaged pins. If problem persists, perform system component check as described below.

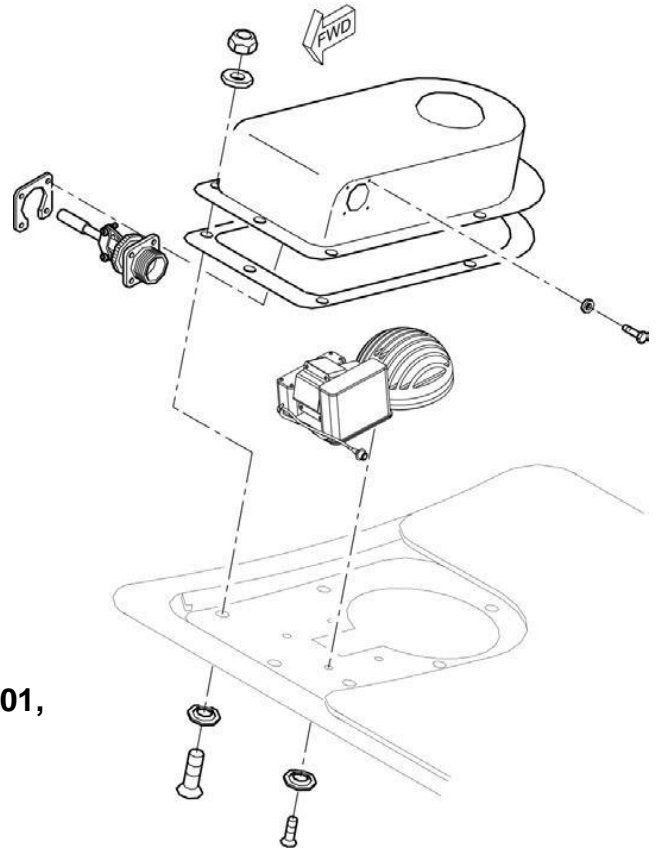
Systems Component Checks

If the problem remains after conducting a continuity check, continue troubleshooting light in accordance with AMM 33-43-20, 5-1 Functional Test – Search and Landing Light.

Faulty items are identified through observation and/or performance.

Repair is accomplished through the removal and replacement of faulty items. Verification of repair is accomplished through observation and performing a system checkout IAW AMM 33-43-04.

CHAPTER 5 REMOVAL and RE-INSTALLATION



LS400 P/N 0231674-101, LS400T P/N 0231687-101,
LS400M P/N 0231729-101

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Removal

- (1) Pull and secure circuit breakers LDG LT PWR and LDG LT CONT.
- (2) Release and lower the forward access panel in accordance with AMM 52-40-00, 4-3. Leave the panel attached to the lanyards for ease of re-installation.
- (3) Disconnect the cannon plug attaching the light wire harness to the helicopter. (For light assemblies with a terminal block in place of a cannon plug see Wiring Harness Terminal Block removal on page 9)
- (4) From underneath the panel, remove 4 ea. screws and washers securing the light assembly to the panel.
- (5) Remove the light assembly.

Dust Cover Option (see illustration above)

- (1) Disconnect the cannon plug located at the top of the dust cover.
- (2) Remove 6 each screws, washers, and nuts that hold the cover to the panel.

NOTE: Some covers may be attached to the panel with 6 ea. screw and washers into threaded inserts located on the panel. If this is the case follow these instructions disregarding the nuts and corresponding washers and when reinstalling, align holes with threaded inserts.

- (3) Lift the cover slowly far enough to reach in and hold the light assembly connector and nutplate while removing the four (4) screws and washers located on the outside of the dust cover releasing the light assembly wire harness.
- (4) Place the dust cover and seal ring off to the side.

NOTE: Some light assembly installations may not have a seal ring.

- (5) From underneath the panel, remove 4 ea. screws and washers securing the light assembly to the panel.

CAUTION: Once the screws and washers are removed the light assembly is free from the panel.

- (6) Remove the light assembly.

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Re-Installation

- (1) Place the light assembly onto the forward bottom access panel aligning the fourholes in the panel with the threaded holes in the light assembly.
- (2) While holding the light assembly, align the 4 ea. screws and washers in the panel with the corresponding threaded holes in the light assembly, install thescrews and washers by hand tightening to ensuring proper alignment. Oncethe light assembly is secured on the panel with the proper alignment, torque screws as required.

NOTE: The nominal Torque for the light assembly is 22 IN-LBS.

- (3) Reconnect the light assembly wire harness cannon plug to the aircraft cannonpug.
- (4) Raise the forward access panel and attach in accordance with AMM 52-40-00,4-3.
- (5) Re-engage circuit breaker.
- (6) Perform functional check in accordance with AMM 33-43-20, 5-1.

Dust Cover Option

- (1) After re-installing light assembly to the panel, place the dust cover over thelight assembly, reach in and hold the light assembly connector and nutplateagainst the dust cover.
- (2) Align and insert the four (4) screws and washers into the holes from the outsideof the dust cover and tighten.
- (3) Place the dust cover and seal ring onto the panel aligning the holes with thepanel.

NOTE: Some dust covers may not have a seal ring.

- (10) Insert 6 ea. screws and washers into the holes from the bottom side of thepanel and install 6 ea. nuts and washers onto the screws.

NOTE: The nominal Torque for the cover is 5-8 IN-LBS.

- (11) Re-connect the cannon plug located at the top of the dust cover.
- (12) After the cover and canon plug are secured, raise the forward access panel andattach in accordance with AMM-52-40-00, 4-3.

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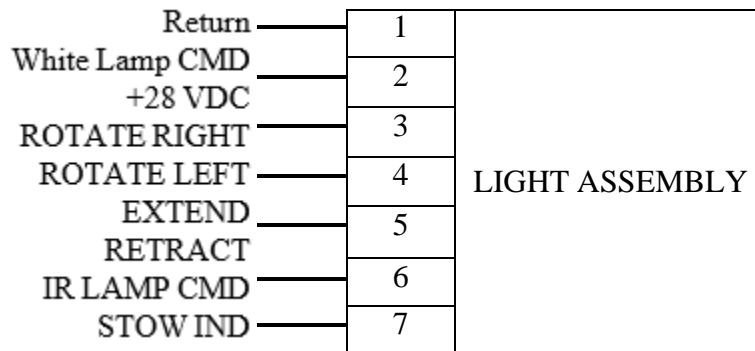
Wiring Harness Terminal Block

Removal

- (1) Disconnect each wire from the terminal block on the light assembly by loosening the screw that secures the wire to the terminal block until the wire pulls free. Take care not to remove the screw from the terminal block.

NOTE: When removing wire harness from the terminal block make note of where each wire by color is attached to the terminal block.

P/N 0231687-101 Terminal Block Example



Re-Installation

CAUTION: When connecting the wire harness to the light assembly terminal block ensure proper placement of the wires to the terminal block. Refer to aircraft wiring diagram to ensure proper placement.

- (1) Place a wire into its corresponding position on the terminal block and tighten the screw until the wire is firmly in place and cannot be pulled out. Do this for each of the nine wires.

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