

EUROCOPTER CANADA LIMITED

SUBJECT: FLIR U8000 / U8500 SYSTEM INSTALLATION (P/N 120-901814)

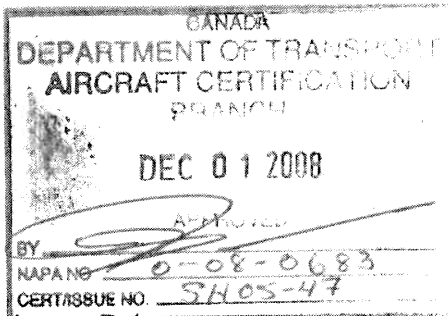
The FLIR U8000 / U8500 System Installation is designed to provide high quality thermal images. It is operated by an operator using a FLIR hand controller.

APPLICABILITY:

This Flight Manual Supplement shall be used when the FLIR U8000 / U8500 System is installed on the helicopter.

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IMPORTANT NOTE




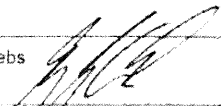
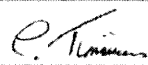
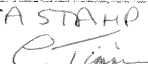

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THE INFORMATION AND DATA CONTAINED IN THIS DOCUMENT SUPERSEDE OR SUPPLEMENT THAT CONTAINED IN THE BASIC APPROVED FLIGHT MANUAL FOR THE EC 120 B HELICOPTER IN THOSE AREAS LISTED HEREIN. FOR LIMITATIONS, PROCEDURES AND PERFORMANCE NOT CONTAINED IN THIS DOCUMENT REFER TO THE APPROVED FLIGHT MANUAL AND OTHER APPLICABLE APPROVED FLIGHT MANUAL SUPPLEMENTS.

SECTIONS 2, 3, 4, AND 5 OF THIS DOCUMENT COMPRISE THE APPROVED FLIGHT MANUAL SUPPLEMENT. COMPLIANCE WITH SECTION 2, LIMITATIONS, IS MANDATORY.

SECTIONS 1 AND 6 ARE UNAPPROVED AND ARE PROVIDED FOR INFORMATION ONLY.

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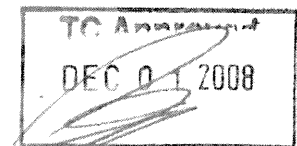
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1. GENERAL (unapproved)

The FLIR U8000 / U8500 System Installation is designed to provide high quality thermal images.

There are 2 variants to this installation: the FLIR U8000 System Installation, and the FLIR U8500 System Installation. The FLIR U8500 System Installation has a higher resolution in Infrared.

The gimbal mount assembly is secured to the cabin structure below the cabin floor. The gimbal mount assembly extends from the underside of the cabin through an opening in the lower fairing. The gimbal mount assembly is secured to the mount spacer (isolation collar) with a dovetail assembly for quick installation and removal. The infrared camera is attached to the mount spacer (isolation collar). Refer to Figure 1.

The Electronic Control unit is installed on the rear avionic shelf located in the rear baggage compartment. The FLIR monitor is mounted adjacent to the Instrument Panel and the FLIR hand controller is attached to the rear of the observer's seat.

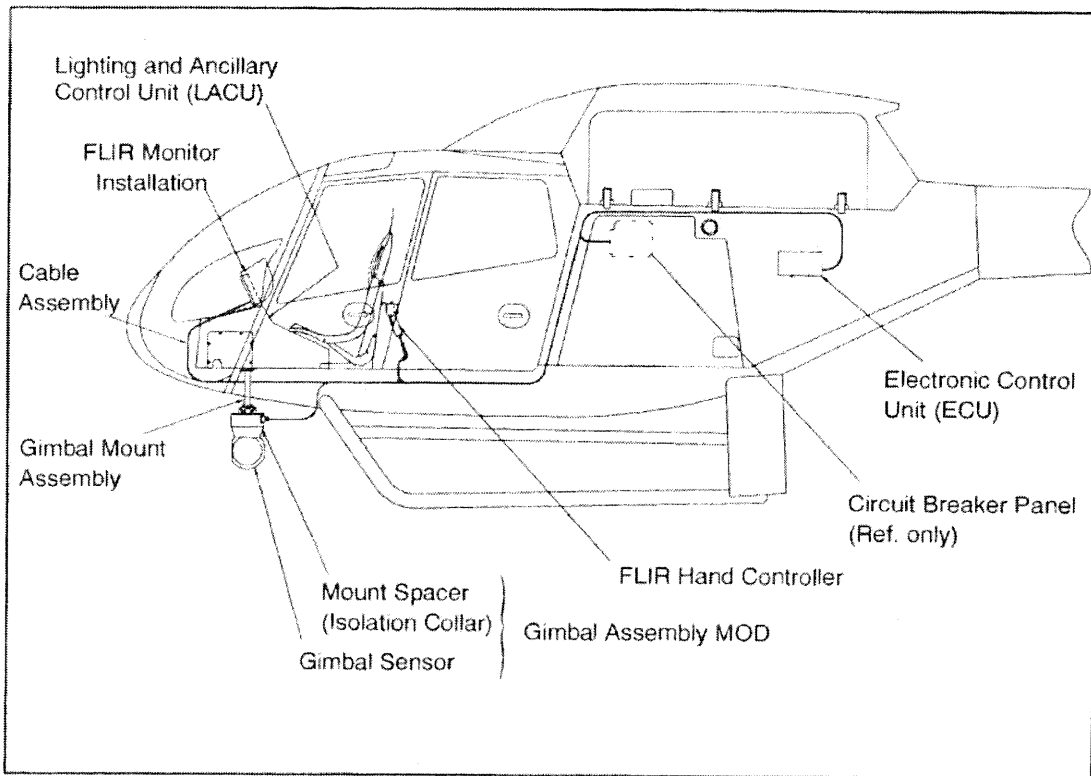


Figure 1 FLIR U8000 / U8500 System Installation

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2. **LIMITATIONS**

a. **Prohibited Configuration**

The installation of Dual Controls is prohibited when the monitor glareshield is installed.

The glareshield shall be installed for night operations.

b. **Minimum crew**

One pilot and one crew member are required for FLIR/Camera operations. The FLIR/Camera is controlled by any trained crew member excluding the pilot by means of a Hand Control Unit. The trained crew member also controls the Monitor and the FLIR Switch.

c. **Altitude Limitations**

Maximum altitude for FLIR/Camera operation 10,000 feet

d. **Temperature limitations**

OAT for FLIR/Camera operation -20° to +50° C

e. **Airspeed Limitations**

V_{NE} with the FLIR Gimbal installed is limited to 130 KIAS.

f. **Placards**

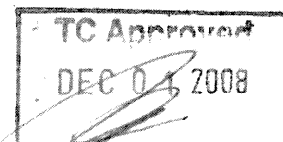
There is one placard associated with this installation.

1) Placard:

VNE IS LIMITED TO 130 KIAS
WITH FLIR GIMBAL INSTALLED

Location: Located on the Instrument Panel in clear view of pilot.

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3. EMERGENCY PROCEDURES

- **Generator Failure**

- FLIR Hand Controller Power Switch : Select OFF position
Monitor Push-Button : Press PWR switch to turn OFF

Refer to the Basic Aircraft Flight Manual for generator failure emergency procedures.

- **Monitor too bright**

- Monitor Controls : Press ▼ (Down arrow) button on Monitor to dim brightness

OR

- Monitor Controls : Press PWR switch to turn OFF

4. NORMAL PROCEDURES

a. Pre-Flight Check

The following checks are to be carried out prior to every flight requiring the use of the FLIR U8000 / U8500 System Installation.

CAUTION THE FLIR U8000 / U8500 SYSTEM CAN RUN ON EXTERNAL POWER OR BATTERY POWER. TO PREVENT POWER INTERRUPTION, SYSTEM SHALL BE POWERED OFF, ON THE FLIR HAND CONTROL, PRIOR TO ENGINE START.

- Electrical connections : Check for security
Dovetail Mount : Check for security
FLIR push-button on LACU : Press to power ON
FLIR Hand Controller Power Switch : Press to power OFF

CAUTION PRIOR TO TAKE OFF, ENSURE THAT THE CAMERA REMAINS STOWED BY SWITCHING THE POWER TO THE RES, OFF, OR STBY ON THE HAND CONTROL UNIT.

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4. **NORMAL PROCEDURES** (continued)

b. **Power Up**

NOTE A preflight systems operational check, if desired, should be done on EPU power. SHUT DOWN the system prior to switching from EPU to helicopter power.

Monitor Push-Button : Press power switch to turn ON
FLIR Hand Controller Power Switch : Select ON position

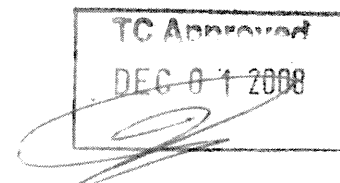
Refer to the Ultra 8000 or the Ultra 8500 Airborne Imaging System Operator's Manual for system operation procedures.

Refer to the Avalex AVM4120 Operation Manual for operation procedures for the monitor.

NOTE After switching the power to the ON or STBY position on the Hand Control Unit, the FLIR will take several minutes before an image can be seen on the monitor.

CAUTION THE MONITOR MAY BRIEFLY FLARE WHEN POWERED ON. THIS MAY TEMPORARILY IMPAIR THE OPERATOR'S NIGHT VISION.

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4. NORMAL PROCEDURES (continued)

c. Operation

For information on the operation of the FLIR System, refer to the Ultra 8000 or the Ultra 8500 Airborne Imaging System Operator's Manual.

For information on the operation of the Monitor, refer to the Avalex AVM4120 Operation Manual.

The following FLIR Switch is located on the LACU and is used for troubleshooting and resetting the FLIR U8000 / U8500 System Installation.

(a) FLIR Push-Button - (refer to Figure 2)

- | | | |
|--------------------------|---|--|
| FLIR Push-Button on LACU | : | Press to power ON. Green Annunciator light illuminates once power is ON |
| FLIR Push-Button on LACU | : | Press to power OFF. Annunciator light goes off indicates that power is OFF |

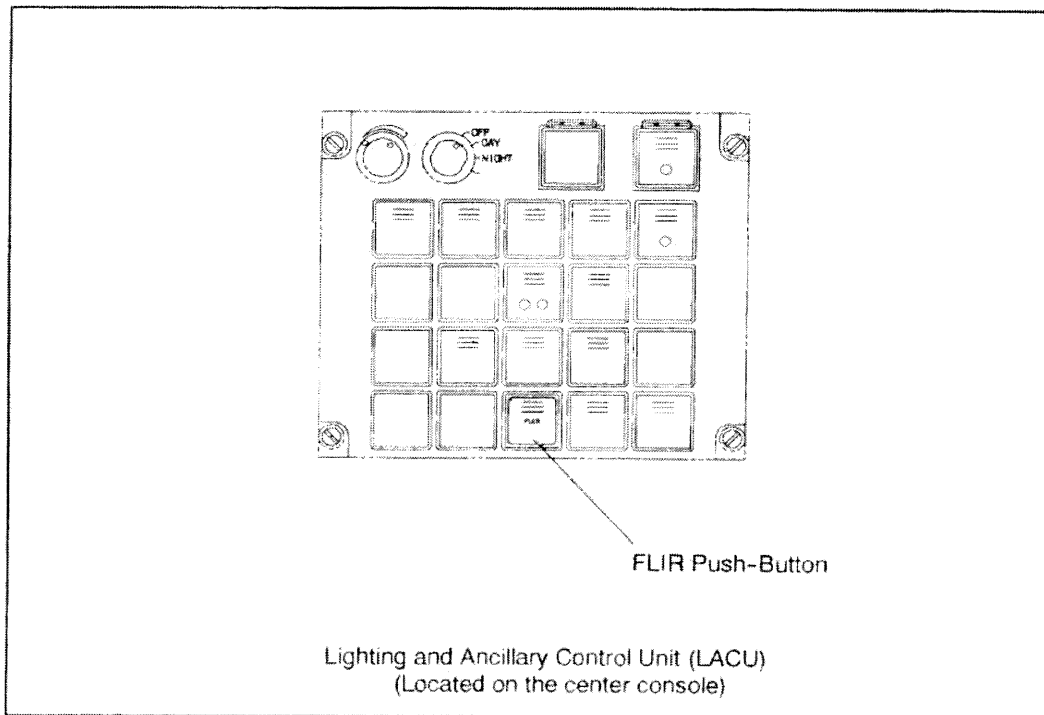
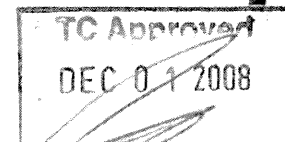


Figure 2 FLIR Push-Button

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4. NORMAL PROCEDURES (continued)

d. System Shutdown

Prior to landing, select STBY on the FLIR Hand Controller. This will stow the camera to protect the lens.

CAUTION TO PREVENT DAMAGE TO THE SYSTEM, THE FLIR U8000 / U8500 SYSTEM SHALL BE POWERED OFF PRIOR TO ENGINE SHUT DOWN.

FLIR Hand Controller Power Switch : Select OFF position

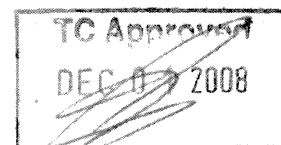
NOTE After switching the Hand Control Unit to the OFF position, it will take 30 seconds for the monitor to go blank.

Monitor Push-Button : Press power switch to turn OFF

5. PERFORMANCE DATA

Reduce Rate of Climb by 125 Feet per Minute.

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6. WEIGHT AND BALANCE (removable items) (unapproved)

Total changes to weight and balance resulting from this modification are covered in the applicable Instructions for Continued Airworthiness.

Items that are removed between routine operations:

A. <u>Removable Items</u>						
DESCRIPTION	WEIGHT		ARM		MOMENT	
	kg	lbs	m	in	kg m	lb in
Gimbal Assembly MOD	13.15	29.0	1.73	68.1	22.75	1974.9
FLIR Hand Controller	0.77	1.7	2.70	106.3	2.08	180.7

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