
SERVICE BULLETIN

N° **139-684**

DATE: November 10, 2021

REV. : B - April 4, 2023

TITLE

ATA 93 - TURRET FLIR UNIT REPLACEMENT

REVISION LOG

Rev. A is issued in order to update the accomplishment instruction to introduce the possibility to mark the TFU in accordance to drawing P/N 3G9350I02031.

Rev. B introduces the installation of a software identification label on the TFU in accordance with the vendor SB n°SB23103 in Annex A.

Furthermore, the drawing P/N 3G9350I02031 is updated from Rev. A to Rev. B.

Revision bars identify changes.

1. PLANNING INFORMATION

A. EFFECTIVITY

AW139 helicopters from S/N 41801 to S/N 41806.

B. COMPLIANCE

At Customer's option.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction on how to perform the replacement of the Turret FLIR Unit.

E. DESCRIPTION

This Service Bulletin gives instruction to replace the FLIR SS380 HDc TFU P/N 3G9350I01231 with the FLIR SS380 HDc TFU P/N 3G9350I02031.

Rev. B introduces the installation of a software identification label on the TFU in accordance with Vendor SB n° SB23103 in Annex A.

F. APPROVAL

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives. If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin twenty-four (24) MMH are deemed necessary.

MMH are based on hands-on time and can change with personnel and facilities available.

H. WEIGHT AND BALANCE

N.A.

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	-
DM02 39-B-93-55-00-00A-320A-K	Thermal imaging system - Operation test	-

Following Data Modules refer to CSPP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM03 CSPP-A-60-80-03-00A-691A-C	Aircraft Parts - Marking	-

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
FLIR	Forward Looking Infra-Red
HD	High Definition
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
N.A.	Not applicable
P/N	Part Number
S/N	Serial Number
TFU	Turret FLIR Unit

3) ANNEX

Annex A SB23103 Software label location

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3290008-317		FLIR SS380 HDc TFU	1	.	(1)	-
2	A016A004B1		Plate	1	.	(1)	-
3	4108240		Label	1	.		-

Refer also to IPD for the spares materials required to comply with the AMP DMs referenced in the accomplishment instructions.

2) CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this Service Bulletin:

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
4	Commercial	Isopropyl alcohol	AR	(2)	-

Refer also to AMDI for the consumable materials required to comply with the AMP DM referenced in the accomplishment instructions.

3) LOGISTIC MATRIX

N.A.

NOTE

(1) TFU P/N 3290008-317 and the plate P/N A016A004B1 might be also supplied as P/N 3G9350I02031.

(2) Item to be procured as local supply.

B. SPECIAL TOOLS

Refer also to ITEP for the special tools required to comply with the AMP DM referenced in the accomplishment instructions.

C. INDUSTRY SUPPORT INFORMATION

Configuration change.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.
- b) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords and plastic cable tiedown.

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. With reference to Figure 1 and Figure 2, gain access to the area affected by the installation and perform the TFU replacement as described in the following procedure:
 - 2.1 With reference to Figure 1, disconnect the connectors and remove the FLIR SS380 HDc TFU vendor control drawing P/N 3G9350I01231 from the helicopter. Retain hardware for later reuse.

NOTE

Perform the following steps 2.2 and 2.4 only if the FLIR TFU P/N 3G9350I02031 is supplied as the TFU P/N 3290008-317 and the plate P/N A016A004B1.

- 2.2 If not already present, install the label P/N 4108240 in accordance to Annex A.
 - 2.3 With reference to Figure 2, check the installation of vendor identification label.
 - 2.4 After the inspection, apply label P/N A016A004B1 and, in accordance with CSPP DM CSPP-A-60-80-03-00A-691A-C, mark P/N 3G9350I02031 and relative S/N on it.
 - 2.5 With reference to Figure 1, carefully lift the FLIR SS380 HDc TFU vendor control drawing P/N 3G9350I02031 until it is against the quick plate on its housing.
 - 2.6 With reference to Figure 1 and Figure 2, attach the FLIR SS380 HDc TFU vendor control drawing P/N 3G9350I02031 to the quick plate by means of existing hardware previously removed. Connect the connectors to the FLIR SS380 HDc TFU vendor control drawing.
3. In accordance with the applicable steps of AMP DM 39-B-93-55-00-00A-320A-K, perform

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the operations test of the FLIR STAR SAFIRE 380 HDc.

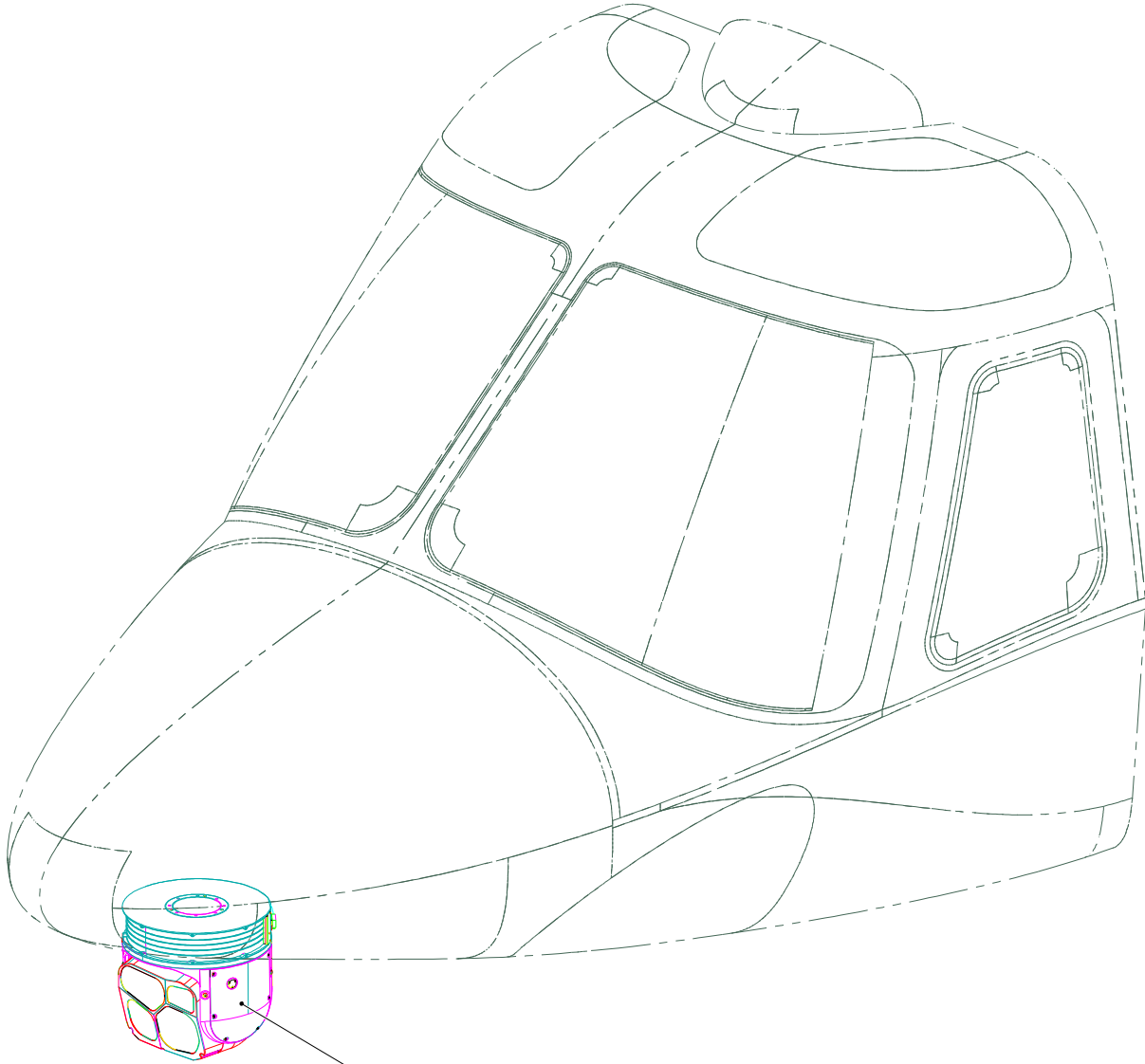
4. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
5. Gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

As an alternative, send the attached compliance form to the following mail box:

engineering.support.lhd@leonardo.com

and (for North, Central and South America) also to:

AWPC.Engineering.Support@leonardocompany.us



REMOVE:
3G9350101231 FLIR SS380 HDC TFU VENDOR CONTROL DRAWING
INSTALL:
3G9350102031 FLIR SS380 HDC TFU VENDOR CONTROL DRAWING
(USE EXISTING HARDWARE)

Figure 1

DESCRIPTION: The FLIR 55380 HDc TFW provides gyroscopically stabilised images in the visible and infrared spectrum and is designed for use on an airborne platform. The TFW protectively houses a day/light TV camera, a Thermal imager camera, a laser pointer, an Inertial Measurement Unit and an automatic video tracker board.

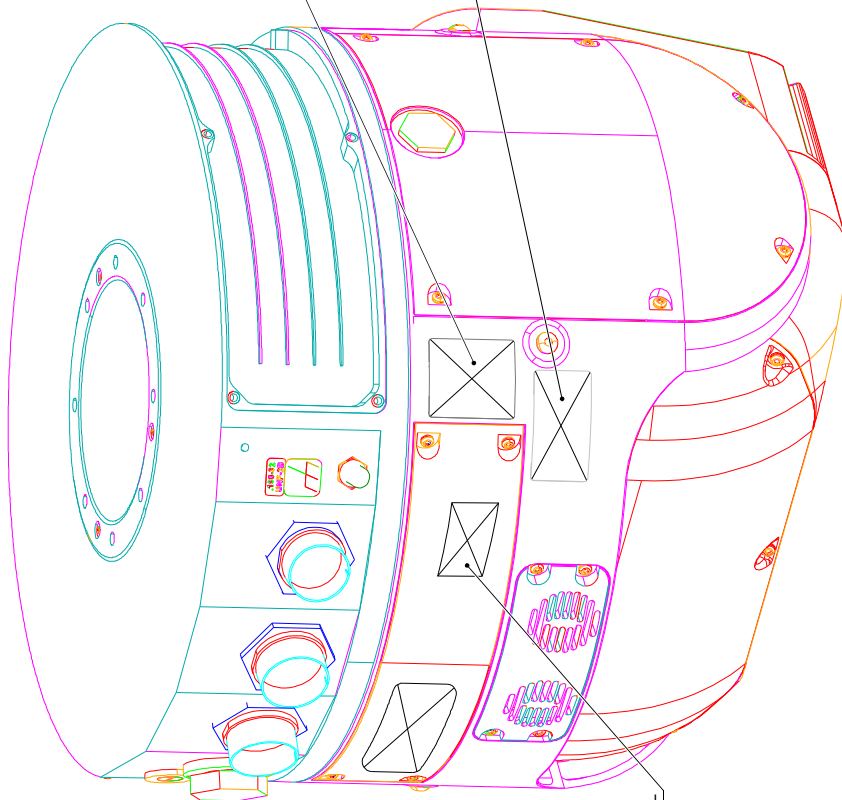
MANUFACTURER NAME: Flir System Inc. Wilsonville, OR
MANUFACTURER PN: 3290008-317

1. DURING THE INCOMING INSPECTION CHECK THE INSTALLATION OF THE TWO VENDOR IDENTIFICATION LABELS SHOWN BELOW:

MODEL: STAR SAFIRE 55380DC
 P/N (1P) 3290008-317
 SER (S) XXXXXXXXXX
 CAG (174) XXXXXX
 AS BUILT REVISION XX
 Complies with 21 CFR 1040.10 and 1040.110 and is certified in accordance with the requirements of the FAA pursuant to Letter of Con No. SC dated June 24 2007
 Flir System Inc. Wilsonville, OR

Software kit Version
 XXXXXXXX Rev. XX
 XXXXXXXX

2. AFTER INCOMING INSPECTION APPLY LABEL A016A004B1 AND MARK IT IAW NOTE 1.



APPLY:
 1. A016A004B1 IDENTIFICATION LABEL



1. MARK A016A004B1 IAW CSPP DM CSPP-A-60-80-03-A-691AC WITH AUGUSTWESTLAND P/N 3G8350102031 AND MANUFACTURER SERIAL NUMBER

Figure 2

ANNEX A

SERVICE BULLETIN N°SB23103
SOFTWARE LABEL LOCATION

		Teledyne FLIR, Wilsonville, OR Service Bulletin
No. SB23103	Release Date: March 22, 2023	Customer Service +1 (800) 868-0639 PDX.Customer.Service@flir.com

Subject: Boeing 380HDc systems – Software label location

Applicable Product(s): Star SAFIRE® 380HDc TFU PN 3290008-317

Time of Compliance: Next scheduled maintenance inspection.

General: Teledyne FLIR EO/IR systems have exterior identifying and warning labels. A design change was made to the 3290008-317 TFU requiring installation of the software label. This Service Bulletin is being issued to retrofit the delivered -317 TFU systems listed.

Affected Serial Numbers: PDX100352, PDX100389, PDX100406, PDX100419, PDX100426, PDX100465, PDX100466

Reference: Sample label

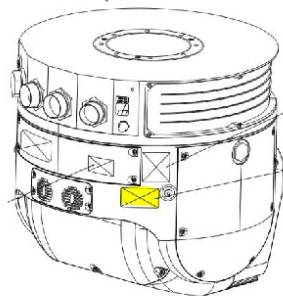


Material Required:

- Isopropyl alcohol to clean and dry the TFU surface before label application.
- Software revision label supplied by Teledyne FLIR.
- 4108240 LABEL - IDENTIFICATION, ANODIZED ALUMINUM 2 X 1.25

Correction Procedure: Inspect 3290008-317 TFUs for software label. If one is not installed, apply in the location shown shaded in yellow below.

The installer shall verify the software version (e.g. 2.11.1.2) printed on the label matches the software version installed on the TFU. The menu path to see the software version installed on the TFU is:
Main/Config/System Information/Version Summary



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		Teledyne FLIR, Wilsonville, OR Service Bulletin
No. SB23103	Release Date: March 22, 2023	Customer Service +1 (800) 868-0639 PDX.Customer.Service@flir.com

Marking of ECO Tag: N/A

Warranty Coverage: Standard system warranty applies.

Approval: This Service Bulletin contains no modification information that revises approved configuration.

Weight and Balance: The implementation of this Service Bulletin has no balance and mass effect on the 380HDc system.

Electrical Load Data: The implementation of this Service Bulletin has no effect on the electrical load of the 380HDc system.

Release: For immediate release.

Export Control Statement: This document does not contain export-controlled information.

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4105223 Rev D

PROPRIETARY—FLIR Systems, Inc.

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