

EUROCOPTER
DIRECTION TECHNIQUE SUPPORT
13725 MARGNANE CEDEX FRANCE

EMERGENCY **ALERT SERVICE BULLETIN**

COLIBRI	Number	VERSIONS	
EC120	24A012	Civil:	B

SUBJECT: **ELECTRICAL POWER**

EMERgency SWitch (EMER SW) wiring

REVISION No.	DATE OF APPROVAL	DATE OF ISSUE
Revision 0	On: April 22, 2010	2010.04.22

CAUTION

**THE INFORMATION AND INSTRUCTIONS
CONTAINED IN THIS ALERT SERVICE BULLETIN
ARE INTENDED FOR MAINTENANCE PERSONNEL
AND FLIGHT CREWS.**

1. PLANNING INFORMATION

1.A. EFFECTIVITY

1.A.1. Helicopters/installed equipment

Helicopters equipped with "EMER SW" switch with a Serial Number (S/N) listed below:

- S/N 1500,
- S/N between 1511 and 1630 (terminals included),
- S/N 1632, 1634 and 1636.

1.A.2. On non-installed equipment

Not applicable.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Modification of the "EMER SW" switch wiring.

This ALERT SERVICE BULLETIN will form the subject of an EASA Airworthiness Directive.

1.D. DESCRIPTION

As part of a test conducted at EUROCOPTER, the "smoke in the cockpit" procedure was applied. It was found that setting the "EMER SW" switch to "CUT-OFF" (low position) and the "GENE" pushbutton to "OFF" at the same time, caused the aircraft starter-generator to cut-in again.

The technical investigations conducted revealed that cross-wiring at the "EMER SW" switch caused the malfunction. In this configuration, the "smoke in the cockpit/cargo" procedure described in the flight manual does not isolate the equipment electrical power supply.

Consequently, EUROCOPTER renders the embodiment of the modification described in this ALERT SERVICE BULLETIN, mandatory.

1.E. COMPLIANCE

EUROCOPTER renders compliance with this ALERT SERVICE BULLETIN mandatory.

1.E.1. Compliance at the works

1.E.1.a. On helicopters

Not applicable.

1.E.1.b. On non-installed equipment

Not applicable.

1.E.2. Compliance in service: By the operator

1.E.2.a. On helicopters/installed equipment

- Comply with paragraph 2.B of this ALERT SERVICE BULLETIN within 15 flight hours, without exceeding 1 month, following receipt of this ALERT SERVICE BULLETIN, issued on the date indicated at the foot of the page.
- Before the next flight following receipt of this ALERT SERVICE BULLETIN, inform the flight crews of the content of this ALERT SERVICE BULLETIN and draw their attention to the instruction below:
Pending compliance with paragraph 2.B., in case of smoke in the cockpit with a source not identified, the flight crew must follow the appended procedure.

1.E.2.b. Non-installed equipment

Not applicable.

1.F. APPROVAL

1.F.1. Approval of modifications

The information or instructions related to FAM No. RFA 08090 approved on April 9, 2010 by EASA for civil version helicopters subject to an Airworthiness Certificate.

1.F.2. Approval of the Service Bulletin

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on April 22, 2010 under the authority of EASA Design Organisation Approval No. 21J.056 for civil version helicopters subject to an Airworthiness Certificate.

1.G. MANPOWER

1.G.1. Qualification

- 1 electrical engineering technician (Modification to the wiring as per § 2.B.2.).
- 1 pilot or 1 approved technician entitled to perform run-up.(Tests as per § 2.B.4.).

1.G.2. Time for the operations

- Approximately 30 minutes (Modification to the wiring as per § 2.B.2.).
- Approximately 30 minutes (Tests as per § 2.B.4.).

1.H. WEIGHT AND BALANCE

Not applicable.

1.I. EFFECT ON ELECTRICAL LOADS

Does not affect the helicopter electrical power breakdown.

1.J. SOFTWARE MODIFICATION EMBODIMENT RECORD

Not applicable.

1.K. REFERENCES

- Aircraft Maintenance Manual (AMM):
AMM: Task 24-00-00,3-1.

1.L. OTHER DOCUMENTS AFFECTED

The following documents will be issued subsequently:

- Wiring Diagrams Manual (WDM).

1.M. TOOLING AFFECTED

Not applicable.

1.N. INTERCHANGEABILITY OR MIXABILITY OF PARTS

Not applicable.

2. ACCOMPLISHMENT INSTRUCTIONS

2.A. GENERAL

- Read and comply with the general instructions concerning the electrical power supply as per AMM Task 24-00-00,3-1.

2.B. OPERATIONAL PROCEDURE

2.B.1. Preliminary steps

- Remove the instrument panel vizor (a).

2.B.2. Wiring modification (Figures 1 and 2)

- Using tool (zz), reconnect "EMER SW" (3PA) switch wires in compliance with Figure 2:
 - . Wire marked "2431-0016" to terminal "3PA-1A".
 - . Wire marked "2431-0003" to terminal "3PA-2A".

2.B.3. Final steps

- Install the instrument panel vizor (a).

2.B.4. Tests

To validate correct operation of the "EMER SW" switch, the following tests must be performed:

- Set the helicopter into the following configuration:
 - . [AVIONIC] (if installed) ON
 - . [BAT/EPU] ON
 - . [EMER SW] ON
 - . Start-up the helicopter
 - . [GENE] ON
- Perform the following tests:
 - . [EMER SW]: OFF
Check that the equipment items are no longer energized, except: the engine, NR / NTL instrument and emergency lights (utility lights).
 - . [BAT/EPU]: OFF
Check that the equipment items are no longer energized, except: the engine, NR / NTL instrument and emergency lights (utility lights).
 - . [GENE]: OFF
Check that the equipment items are no longer energized, except: the engine, NR / NTL instrument and emergency lights (utility lights).
 - . [EMER SW]: ON
Check that the equipment items are no longer energized, except: the engine, NR / NTL instrument and emergency lights (utility lights).

- . [BAT/EPU]: ON
Check that all equipment items are energized.
- . [BAT/EPU]: OFF
- . [GENE]: ON
Check that all equipment items are energized.
- Stop the engine and rotors.
- Replace snapwire (b) (Figure 1) with snapwire (1).

2.C. IDENTIFICATION

- Record compliance with this ALERT SERVICE BULLETIN in the helicopter documents.

2.D. OPERATING AND MAINTENANCE INSTRUCTIONS

2.D.1. Operating instructions

Not applicable.

2.D.2. Scheduled maintenance instructions

Not applicable.

2.D.3. Unscheduled maintenance instructions

Pending update of WDM 24-30-01-002, refer to the wiring diagram of Figure 2, when performing a maintenance operation on the "EMER SW" switch.

The wiring modification will be incorporated in WDM 24-30-01-002 as part of a future revision.

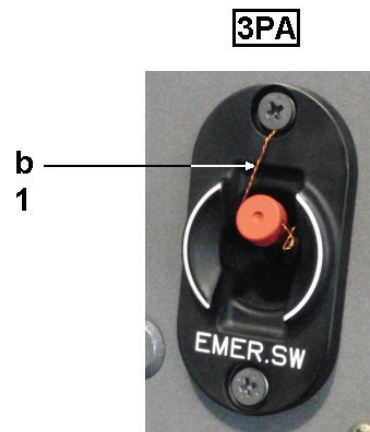
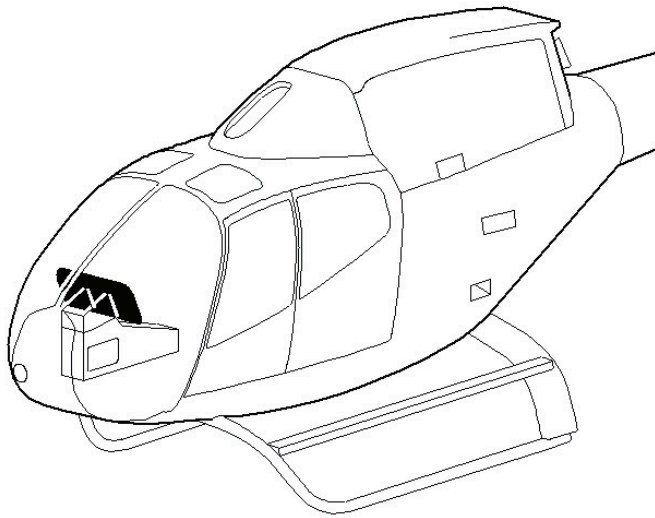
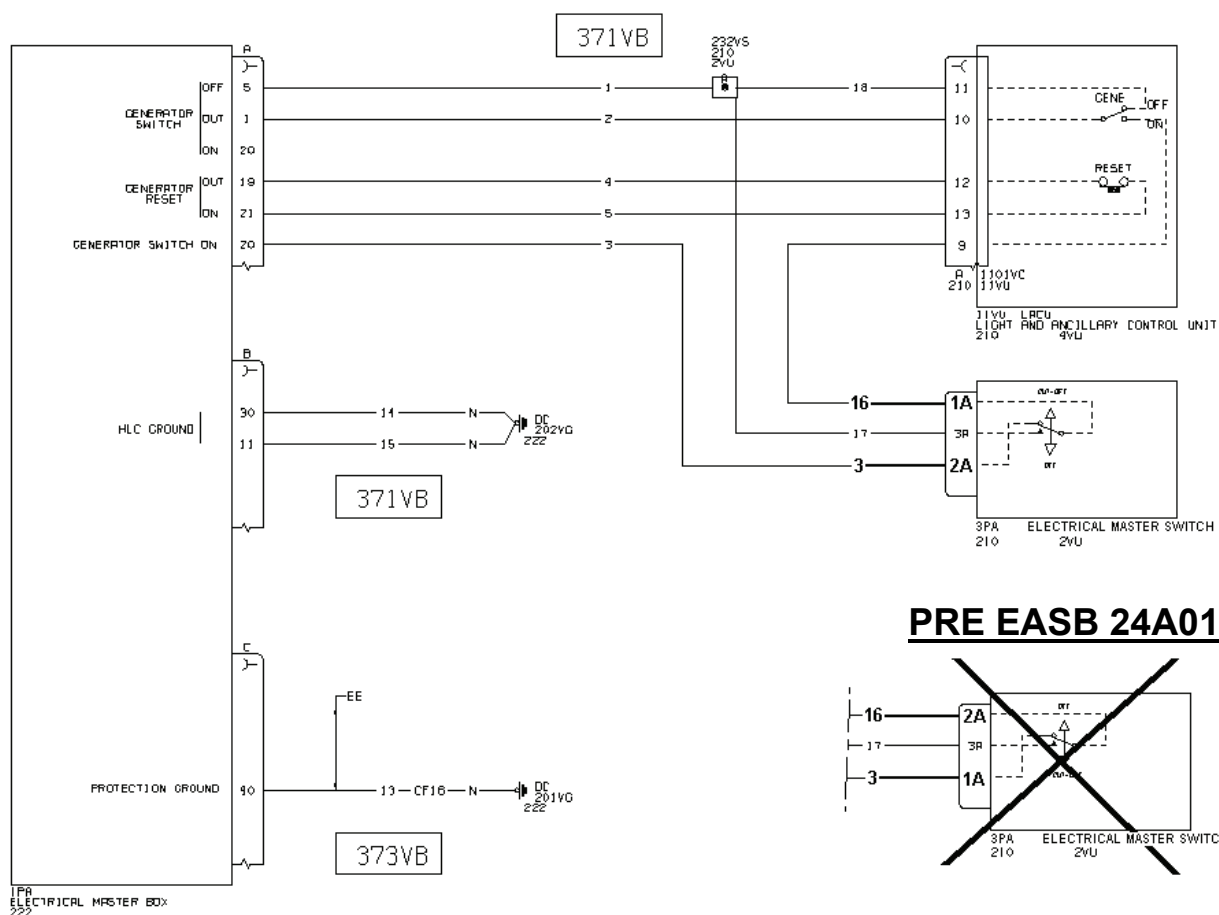


Figure 1 - "EMER SW" Switch

POST EASB 24A012



NOTE :UNLESS OTHERWISE SPECIFIED PREFIX ALL WIRE IDENTIFICATION WITH ATA 2431
UNLESS OTHERWISE SPECIFIED ALL WIRES ARE CF24 GAUGE AND SHIELDING CONTINUITY WIRES ARE CF22 GAUGE
UNLESS OTHERWISE SPECIFIED ALL ROUTES ARE MP

Figure 2 - "EMER SW" Switch Wiring

3. MATERIAL INFORMATION

3.A. MATERIAL: PRICE AND AVAILABILITY

3.A.1. Cost

Not applicable.

3.A.2. Availability

Not applicable.

3.B. INFORMATION CONCERNING INDUSTRIAL SUPPORT

Not applicable.

3.C. MATERIAL REQUIRED FOR EACH HELICOPTER/ENGINE/COMPONENT

3.C.1. Kits or components to be ordered for one helicopter or one assembly

Not applicable.

3.C.2. Products to be ordered separately

	Material P/N	Qty	Item	Key Word
*	23321	A/R	1	Snapwire

The products identified by an asterisk "*" or required for compliance with the Tasks and/or Work Cards listed in paragraph 1.K., can be ordered from:

INTERTURBINE,

Website: <http://www.itlogistics.de>

Phone: +49.41.91.809.300

AOG: +49.41.91.809.444

3.C.3. Tools

	Material P/N	Qty	Item	Key Word
	M81969-14-11	1	zz	Extraction tool

3.D. PROCUREMENT CONDITIONS

Order the required quantity (unless otherwise specified)

from

EUROCOPTER
Etablissement de Marignane
Direction Ventes et Relations Client
ECR
13725 MARIGNANE CEDEX
FRANCE

NOTE 1

*For ALERT SERVICE BULLETINS, order by:
Telex: HELICOP 410 969F.
Fax: +33 (0)4.42.85.99.96*

NOTE 2

On the purchase order, please specify the mode of transport, the destination and the serial numbers of the helicopters to be modified.

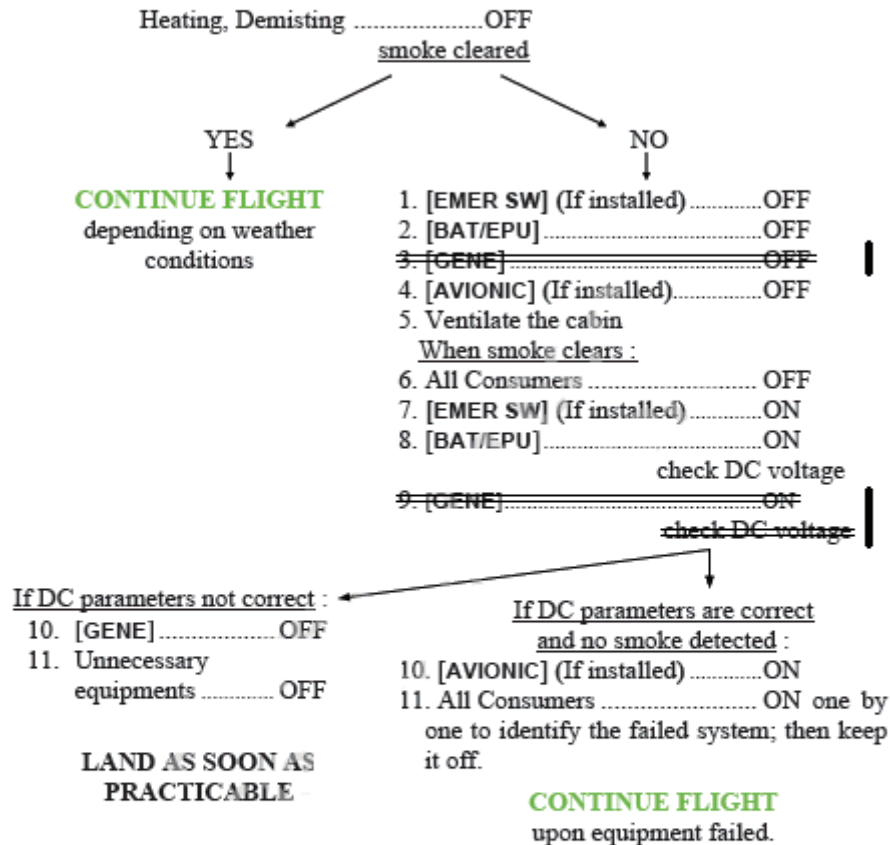
4. APPENDIX

The "Smoke in the cockpit/cargo - Source not identified" procedure is appended.



3.5 SMOKE IN THE COCKPIT/CARGO

3.5.1 SOURCE NOT IDENTIFIED



CAUTION

When battery and generator are off line the VEMD goes out and only the analog NR remains. Apply both screen failure procedure.
(§ VEMD SCREEN FAILURE - SECTION 3)