FORM NO: M/003

A/C TYPE: EC155 B
A/C S/N: 6583
A/C REGN: 9M-SAS
TYPE OF CHECK:

AIRBUS HELICOPTERS

Airbus Helicopters Southeast Asia Pte Ltd
110 Seletar Aerospace View Singapore 797562
Company Registration No.: 197702516C

NO: M 9768
JOB NO.:
PAGE: OF:

DEFECT AND RECTIFICATION WORKSHEET/CERTIFICATE OF RELEASE TO SERVICE

ITEM NO.	REPORTED BY DATE	DEFECT/WORK REQUIRED	ACTION TAKEN	COMPONENT CHANGES S/N OFF	COMPONENT CHANGES S/N ON	BATCH/GIN NO. & ARC NO.	MAN HOURS	MECH/ DATE	LIC/ APP NO. DATE
1.	HUI TING	CARRY OUT ~~ANNUAL RADIO INSP~~ RADIO CHECK (100HRS/6MTHS) I.A.W. MAINTENANCE SCHEDULE REF. AHSA/AMS/EC155B/ISSUE 4 R1 ~~INCLUSIVE OF~~ ~~RADIO CHECK IS PART OF 100HRS/6MTHS~~	RADIO CHECK (100HRS/6MTHS) CARRIED OUT I.A.W. MAINTENANCE SCHEDULE REF. AHSA/AMS/EC155B/ISSUE 4 R1. 'SATLS'	-	-	-		dy 17/10/17	17/10/17
2.	HUI TING 13.10.17	COMPLY WITH ASB EC155-34A033 R1- MODIFICATION OF THE WIRING OF THE FLIGHT/GROUND LOGIC CONNECTOR 11 ALPHA) [REF EASA AD EN-2017-0201]	NOTED-ASB EC155-34A033 R0 HAS BEEN COMPLIED ON 03-08-17 WITH MOD 365A 084754-00 EMBODIED (REF. CRS #M9765)						17/10/17

CERTIFIES THAT THE WORK SPECIFIED EXCEPT AS OTHERWISE STATED WAS CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS AND IN RESPECT TO THAT WORK THE AIRCRAFT/AIRCRAFT COMPONENT IS CONSIDERED READY FOR RELEASE TO SERVICE:

- ☐ SAR-145 & SINGAPORE ANO
- ☐ EASA PART-145: EASA.145.0056
- ☐ CFR TITLE 14, PART 91
- ☑ MALAYSIA CIVIL AVIATION REGULATIONS
- ☐ MANUFACTURER'S PUBLICATIONS
- ☐ _____

AIRBUS HELICOPTERS

RADIO CHECK I (100 HOURS/ 6 MONTHS)

MS REF.: AHSA/AMS/EC155 B/ISSUE 4 R1
APPENDIX: RC-1

A/C TYPE: EC155 B A/C S/NO.: 6583 A/C REGN: 9M-SAS DATE: 13.10.17

NO.	DESCRIPTION	AMM REFERENCE	INTERVAL	MECHANIC SIGN/ DATE	LAE SIGN/ DATE
1	Check all audio, radio comm and NAV equipment for cleanliness, security and operational test.	Amm 23-00-00-211 Amm 34-00-00-211	100 H 6 M	17/10/17	171017
2	Check all headsets and microphones, units controllers instruments for correct function. Inspect for damage and cleanliness.	Amm 23-00-00-211 Amm 34-00-00-211	100 H 6 M	17/10/17	171017
3	Check all fuses and circuit breakers for obvious damage.	Amm 23-00-00-211 Amm 34-00-00-211	100 H 6 M	17/10/17	171017
4	Check all dial and panel lights for correct operation.	Amm 33-13-00-721	100 H 6 M	17/10/17	171017
5	Check all radio/NAV placards and markings for cleanliness and legibility.	Amm 23-00-00-211 Amm 34-00-00-211	100 H 6 M	17/10/17	171017
6	Check ELT Battery due date and replace if due. Expiry Date: JAN 19 Hrs	POINTER ELT MANUFACTURER'S MANUAL	100 H 6 M	17/10/17	171017
7	Check all audio, radio comm and NAV antennas for cleanliness and security. Insulators for cracks. Tensioning devices satisfactory.	Amm 23-00-00-211 Amm 34-00-00-211	100 H 6 M	17/10/17	171017
8	Check all audio, radio and NAV racks and interconnecting cables as visible for cleanliness, general condition and security.	Amm 23-00-00-211 Amm 34-00-00-211	100 H 6 M	17/10/17	171017

CERTIFIES THAT THE WORK SPECIFIED EXCEPT AS OTHERWISE SPECIFIED WAS CARRIED OUT IN ACCORDANCE WITH MALAYSIAN CIVIL AVIATION REGULATIONS REQUIREMENTS AND IN RESPECT TO THAT WORK THE AIRCRAFT/ AIRCRAFT COMPONENT IS CONSIDERED READY FOR RELEASE TO SERVICE.

SIN 6583
CRS #MA768

Airworthiness Directive

AD No.: 2017-0201

Issued: 11 October 2017

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:
AIRBUS HELICOPTERS

Type/Model designation(s):
EC 155 helicopters

Effective Date: 25 October 2017
TCDS Number(s): EASA.R.105
Foreign AD: Not applicable
Supersedure: None

ATA 34 – Navigation – Flight / Ground Logic – Modification

Manufacturer(s):
Airbus Helicopters (formerly Eurocopter)

Applicability:
EC 155 B and EC 155 B1 helicopters, all serial numbers on which Airbus Helicopters modification 0722B51 has been embodied in production.

Reason:
Airbus Helicopters (AH) identified that both Attitude Heading and Reference Systems (hereafter referred as AHRS1 and AHRS2) installed on EC 155 helicopters use the same FLIGHT/GROUND signal in deviation from the approved design specification, which indicates that the AHRS1 and AHRS2 must be supplied by independent signals to ensure their redundancy. If both AHRS1 and AHRS2 receive in flight a wrong GROUND status, as a result of a single failure, this will generate, during helicopter manoeuvres, a consistent error in computation of the attitudes and vertical speed, and consequently provide incorrect indications on both primary displays to the flight crew.

This condition, if not corrected, could lead to erroneous attitude and vertical speed indications, resulting in increased workload for the flight crew when the upper modes of Automatic Flight Control System are not engaged, possibly leading to reduced control of the helicopter during flight in instrumental meteorological conditions.

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To address this potential unsafe condition, AH issued Alert Service Bulletin (ASB) EC155-34A033 to provide modification instructions to ensure independent FLIGHT/GROUND signal supply to each AHRS.

For the reasons described above, this AD requires a modification to the connection and/or wiring of connector 11 ALPHA.

Required Action(s) and Compliance Time(s):
Required as indicated, unless accomplished previously:

Modification:
Within 12 months after the effective date of this AD, determine the configuration of the helicopter and accomplish the action(s) as specified in Table 1 of this AD, as applicable, in accordance with the instructions of AH ASB EC155-34A033.

Configuration	Required Action(s)
Pre-mod 0731B89	Modify the connection to connector 11 ALPHA
Post-mod 0731B89	Modify the connection and the wiring to connector 11 ALPHA

Ref. Publications:
AH ASB EC155-34A033 original issue dated 19 July 2017.

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.

2. This AD was posted on 22 August 2017 as PAD 17-116 for consultation until 19 September 2017. No comments were received during the consultation period.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

4. For any question concerning the technical content of the requirements in this AD, please contact: Airbus Helicopters Technical Support Department, Aéroport de Marseille Provence 13725 Marignane Cedex, France, Telephone +33 (0)4 42 85 97 97, Fax +33 (0)4 42 85 99 66, web portal: https://keycopter.airbushelicopters.com> Technical Request Management.

An agency of the European Union

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SIN 6583
CRS #MA76B

AIRBUS HELICOPTERS

ASB No. EC155-34A033

Civil versions: B, B1

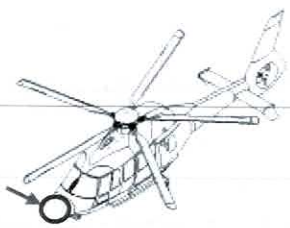
ALERT SERVICE BULLETIN

SUBJECT: NAVIGATION - Attitude and Heading Reference System (AHRS)

Modification of the wiring of the FLIGHT/GROUND logic (connector 11 ALPHA)

Corresponds to modifications 365A084754.00 and 365A084754.01

For the attention of

Revision No.	Date of issue
Revision 0	2017-07-19
Revision 1	2017-10-09

Summary:

The purpose of this ALERT SERVICE BULLETIN is to correct the connections of the FLIGHT/GROUND logic of the primary reference system (Attitude and Heading Reference System AHRS), the FCDS (Flight and Control Display System) and the SSCVFDR (Combined Voice and Flight Data Recording System) by modifying the connection and, as per configuration, by modifying the wiring of connector 11 ALPHA.

Reason for last Revision:

The purpose of the revision of this ALERT SERVICE BULLETIN is to specify the configurations of helicopters concerned and to update information in the post installation verification procedure.

Compliance:

Airbus Helicopters makes compliance with this ALERT SERVICE BULLETIN mandatory.

1. PLANNING INFORMATION

1.A. EFFECTIVITY

1.A.1. Helicopters/installed equipment or parts

Helicopters POST MOD 0722B51 and PRE MOD 0731B89 (SSCVFDR upgraded following standard ED112), and PRE MOD 365A084754.00,

OR

Helicopters POST MOD 0722B51 and POST MOD 0731B89 (SSCVFDR upgraded following standard ED112), and PRE MOD 365A084754.00 and 365A084754.01.

NOTE

Refer to the Aircraft Individual Inspection Record (or RIC AMS) to identify the actual modification status of the aircraft.

1.A.2. Non-installed equipment or parts

Not applicable.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Revision 0:

During a flight test for repair, a difference was found in the attitude indications provided by AHRS and displayed on the pilot and copilot PFD (Primary Flight Display) and the standby horizon during rapid turn changes of the helicopter.
This difference of indication is due to a wiring anomaly in the FLIGHT/GROUND logic from the management card of FLIGHT/GROUND states, as the AHRS have a different dynamic according to the FLIGHT or GROUND state of the helicopter.
The analysis of this incident showed that the AHRS were receiving the same FLIGHT/GROUND signal of the same position sensor of the landing gear whereas each AHRS must receive information from a different source to avoid displaying erroneous attitudes and vertical speed on both PFD. This absence of segregation in the acquisition of the FLIGHT/GROUND information also affects the FCDS (Flight Control Display System) system which includes FCDM (Flight Control Display Module), SMD45 pilot screens, and for helicopters POST MOD 0731B89, the recorder L3-COM FA5001-ED112.
To correct the existing common mode in the acquisition of the FLIGHT/GROUND information used by the AHRS, the FCDS system and the recorder L3-COM FA5001-ED112, Airbus Helicopters developed the modifications:

- 365A084754.00 which consists in re-allocating the electronic card outputs by modifying the connection to connector 11 ALPHA (helicopters PRE and POST MOD 0731B89),
- 365A084754.01 which consists in modifying the wiring of connector 11 ALPHA (helicopters POST MOD 0731B89).

Revision 1:

The purpose of the revision of this ALERT SERVICE BULLETIN is to specify the configurations of helicopters concerned and to update information in the post installation verification procedure.

Revision 1 does not affect compliance with the previous revision of this ALERT SERVICE BULLETIN for POST MOD 0722B51 helicopters having applied successfully the procedure of previous revision.

Airbus Helicopters makes compliance with this ALERT SERVICE BULLETIN mandatory.

1.D. DESCRIPTION

This ALERT SERVICE BULLETIN consists in:

Helicopters POST MOD 0722B51 and PRE MOD 0731B89: (compliance with modification 365A084754.00)

- modifying the connection to connector 11 APLHA,
- performing the associated tests.

Helicopters POST MOD 0722B51 and POST MOD 0731B89: (compliance with modifications 365A084754.00 and 365A084754.01)

- modifying the connection to connector 11 APLHA,
- modifying the wiring to connector 11 APLHA,
- performing the associated tests.

1.E. COMPLIANCE

1.E.1. Compliance at H/C manufacturer level

Helicopters/installed equipment or parts:

Airbus Helicopters makes compliance with instructions in paragraph 3. of this ALERT SERVICE BULLETIN mandatory before the delivery of the helicopter.

Non-installed equipment or parts:

Not applicable.

1.E.2. Compliance in service

The work must be performed on the helicopter by the Operator.

Helicopters/installed equipment or parts:

Airbus Helicopters makes compliance with this ALERT SERVICE BULLETIN mandatory.

For the helicopters POST MOD 0722B51 and PRE MOD 0731B89, comply with paragraph 3. (except for 3.B.2.b.), within 12 months as from receipt of this ALERT SERVICE BULLETIN, published at the date mentioned in page footer.

For the helicopters POST MOD 0722B51 and POST MOD 0731B89, comply with paragraph 3. (except for 3.B.2.a.), within 12 months as from receipt of this ALERT SERVICE BULLETIN, published at the date mentioned in page footer.

Non-installed equipment or parts:

Not applicable.

1.F. APPROVAL

Approval of modifications:

The information or instructions relating to modifications 365A084754.00 and 365A084754.01 which were approved on July 17, 2017 under the authority of EASA Design Organization Approval No. 21J.700 for helicopters of civil versions subject to an Airworthiness Certificate.

Approval of this document:

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on July 18, 2017 under the authority of EASA Design Organization Approval No. 21J.700 for helicopters of civil versions subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 1 was approved on October 06, 2017 under the authority of EASA Design Organization Approval No. 21J.700 for helicopters of civil versions subject to an Airworthiness Certificate.

1.G. MANPOWER

For compliance with this ALERT SERVICE BULLETIN, Airbus Helicopters recommends the following personnel qualifications:

Qualifications: 1 Electrical Technician.
1 Avionics Technician.

Time for the operations is indicated for reference, for a standard configuration.

Time for the operations: 2 hours approximately for Electrical Technician for compliance with modification 365A084754.00.
2 hours approximately for Electrical Technician for compliance with modification 365A084754.01.
3 hours approximately for Avionics Technician (with jacking of the helicopter).

The estimated helicopter downtime is approximately 1 day.

1.H. WEIGHT AND BALANCE

Not applicable.

1.I. POWER CONSUMPTION

Not applicable.

1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.

1.K. REFERENCES

The following documents are necessary for compliance with this ALERT SERVICE BULLETIN:

- AMM: 07.10.00.581: Lifting the Helicopter on Jacks
- AMM: 24.00.00.911: General Safety Instructions - Electrical Power
- AMM: 24.00.00.481: Power Supply - Electrical Power Systems
- AMM: 34.00.00.911: General Safety Instructions - Navigation System
- AMM: 34.23.00.721: Functional Tests - Primary Reference System

- MTC: 20.07.01.201: Handling of helicopters in a hangar and in a prepared area
- MTC: 20.07.02.201: Helicopter parked in a repair shop
- MTC: 20.07.03.406: Instructions applicable when working on an aircraft electrical circuit and power generating systems - Technical instructions
- MTC: 20.07.03.408: Appearance checks on an aircraft after an inspection or repair
- MTC: 20.80.20.101: Contact Insertion and Extraction Method and Tools
- MTC: 20.80.20.441: Installation of electrical cable bundles and optical fibres

1.L. OTHER AFFECTED PUBLICATIONS

The modifications will be incorporated in:
- Wiring Diagram Manual (WDM),
- Special Index Modification (SIM).

These documents will be updated during a future revision.

1.M. PART INTERCHANGEABILITY OR MIXABILITY

Not applicable.

2. EQUIPMENT OR PARTS INFORMATION

2.A. EQUIPMENT OR PARTS: PRICE - AVAILABILITY - PROCUREMENT

For any information concerning modification kits and/or components or for assistance, contact the Sales and Customer Relations Department.

Airbus Helicopters
Etablissement de Marignane
Direction Ventes et Relations Client
13725 MARIGNANE CEDEX
FRANCE

NOTE 1

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

NOTE 2

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

2.B. LOGISTIC INFORMATION

Not applicable.

2.C. EQUIPMENT OR PARTS REQUIRED PER HELICOPTER/COMPONENT

Components to be ordered for one helicopter POST MOD 0731B89:

Designation	Qty	New P/N	Item	Former P/N	Instruction
Extension	2	E0541-10	1	/	/
Cap	1	E0737B0816	2	/	/

NOTE 3

The components listed in the table above concern the modification of the wiring of connector 11ALPHA (modification 365A084754.01). These components are not necessary for helicopters PRE MOD 0731B89.

Equipment or parts to be ordered separately for one helicopter POST MOD 0731B89:

Designation	Qty	New P/N	Item	Former P/N	Instruction
Wire, electrical	2 m	EN2267-010A002S	3	/	/

NOTE 4

The equipment or parts listed in the table above concern the modification of the wiring of connector 11ALPHA (modification 365A084754.01). The electrical wire (3) is not necessary for helicopters PRE MOD 0731B89.

Consumables to be ordered separately:

As per Work Cards and Tasks mentioned in this ALERT SERVICE BULLETIN.

The consumables can be ordered separately from the KLX AEROSPACE SOLUTIONS company.
Website: https://www.klxaerospace.com/klxaero/
Telephone: +1.305.925.2600
AOG: +1.305.471.8888

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.

3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

- Read and comply with instructions for handling helicopters in a hangar as per MTC Work Card 20.07.01.201.
- Read and comply with instructions for helicopters parked in a repair shop as per MTC Work Card 20.07.02.201.
- Read and comply with the technical instructions applicable when working on an aircraft electrical circuit and with ground power generating systems as per MTC Work Card 20.07.03.406.
- Read and comply with instructions on contact insertion and extraction method and tools as per MTC Work Card 20.80.20.101.
- Read and comply with instructions for installation of electrical cable bundles as per MTC Work Card 20.80.20.441.

3.B. WORK STEPS

CAUTION

BEFORE STARTING WORK ON THE ELECTRICAL SYSTEMS, READ TASK 24-00-00-911.

CAUTION

BEFORE STARTING WORK ON THE NAVIGATION INSTALLATIONS, READ TASK 34-00-00-911.

3.B.1. Preliminary steps

- Install suitable access means.
- Remove and/or open all cowlings, panels, doors and equipment as required for access to work zones.

3.B.2. Procedure (Figure 1)

3.B.2.a. Helicopters POST MOD 0722B51 and PRE MOD 0731B89

- Perform the modification of the connection to connector 11 ALPHA as per Figure 1.

3.B.2.b. Helicopters POST MOD 0722B51 and POST MOD 0731B89

- Perform the modification of the connection to connector 11 ALPHA as per Figure 1.
- Perform the modification of the wiring to connector 11 ALPHA as per Figure 2.

3.B.3. Final steps

- Carry out appearance checks on an aircraft after an inspection or repair as per MTC Work Card 20.07.03.408.
- Install and/or close all cowlings, panels, doors and all equipment removed and/or opened during preliminary steps (paragraph 3.B.1.).
- Remove the access means.

3.B.4. Tests

For helicopters:
- Perform the "tests following modification of FLIGHT/GROUND wiring on the rear landing gear struts" as per Appendix 4.A.
- Perform the operating tests of the primary reference system as per AMM Task 34.23.00.721.
- Reset helicopter into flight condition.

3.C. COMPLIANCE CONFIRMATION

Compliance with this document:

Record compliance with this ALERT SERVICE BULLETIN with the Revision number in the aircraft documents.

Tracking of modifications in the documentation:

Helicopters POST MOD 0722B51 and PRE MOD 0731B89:

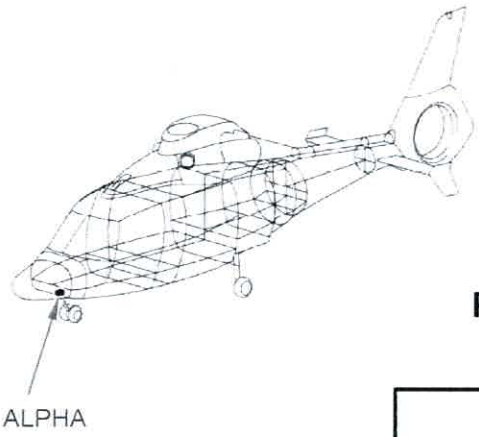
Record compliance with modification 365A084754.00 in the aircraft documents.

Helicopters POST MOD 0722B51 and POST MOD 0731B89:

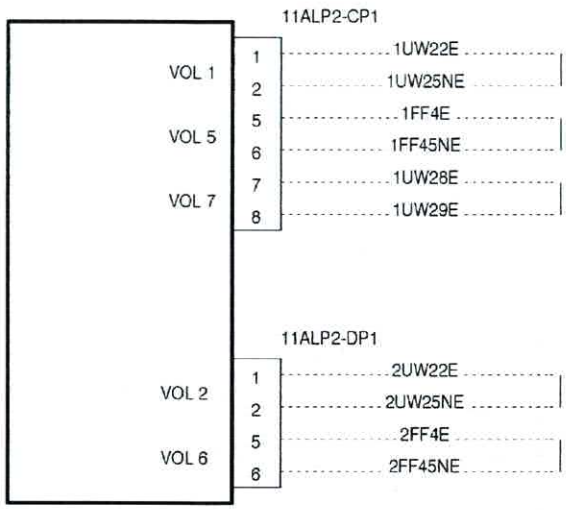
Record compliance with modifications 365A084754.00 and 365A084754.01 in the aircraft documents.

3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

Not applicable.



PRE MOD 365A084754.00



POST MOD 365A084754.00

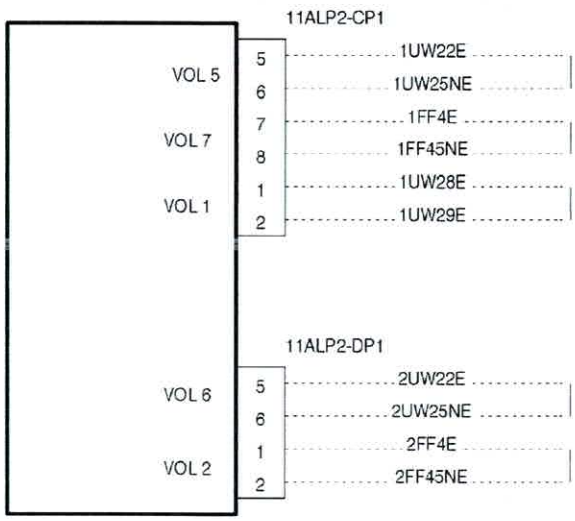
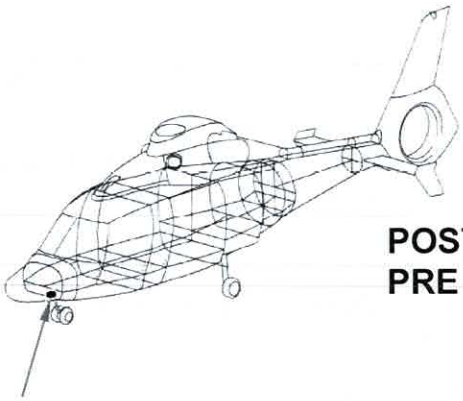
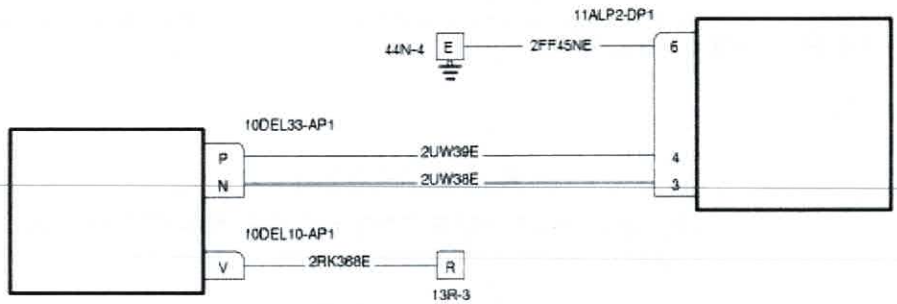


Figure 1



POST MOD 0731B89
PRE MOD 365A084754.01



POST MOD 0731B89
POST MOD 365A084754.01

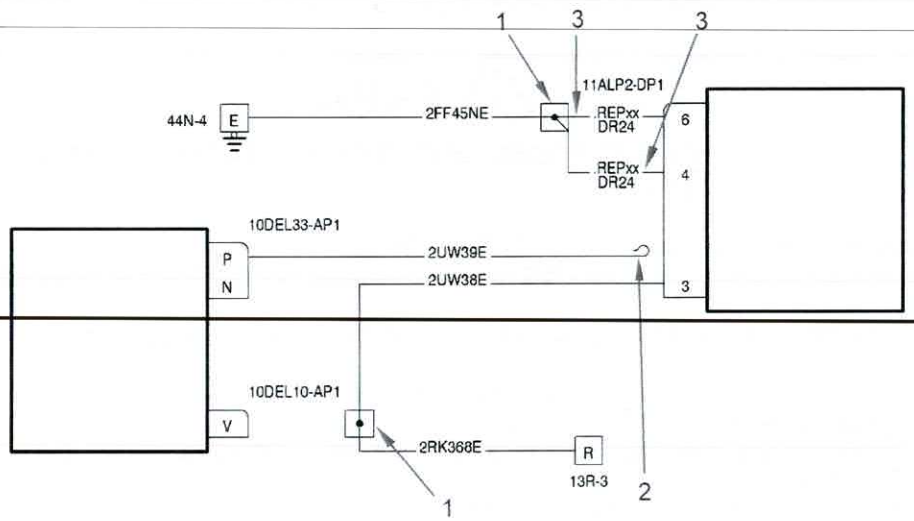


Figure 2

4. APPENDIX

4.A. TESTS FOLLOWING MODIFICATION OF THE FLIGHT/GROUND WIRING ON THE REAR LANDING GEAR STRUTS

Although this ALERT SERVICE BULLETIN has no impact on the AFCS function, a check of the AFCS flight/ground logics has been integrated to ensure non-regression of this modification in the AFCS behavior.

4.A.1. Preliminary steps

- Energize the helicopter using the electrical power bench as per Sub-task 24-00-00-481-002 of Task 24-00-00-481.
- Make sure that:
  . "**AP**" pushbutton on the APMS control unit shows an amber "**OFF**",
  . following equipment are energized and initialized : FCDM1, FCDM2, ADC1, ADC2, AHRS1, AHRS2, PFD1, PFD2, ICP1 and ICP2.

4.A.2. Procedure

CAUTION

DO NOT ACTIVATE THE CVFDR MAINTENANCE COMMAND.

CAUTION

FOR CHECKING THE CVFDR OPERATION, IT IS NECESSARY TO RESPECT THE RIPS DISCHARGE TIME OF 10 MINUTES.

CAUTION

DO NOT ENGAGE THE AUTOPILOT.

CAUTION

DO NOT PRESSURIZE THE HYDRAULIC POWER SYSTEM.

- Jack up helicopter as per Sub-task 07-10-00-581-001 of Task 07-10-00-581.
- Disconnect electrical connectors "**9G**" (RH landing gear) and "**10G**" (LH landing gear).

4.A.2.a. LH landing gear to FLIGHT position / RH landing gear to FLIGHT position

- On LH landing gear, make a shunt between "**D**" and "**E**" (fixed connector) in order to simulate the FLIGHT position.
- On RH landing gear, make a shunt between "**D**" and "**E**" (fixed connector) in order to simulate the FLIGHT position.
- Energize the helicopter electrical system.

Acquisition of FCDM information on SMD45

- Turn off then on the 4 screens.
- Make sure that the cockpit symbols are displayed ("**T**" must not be displayed).

Acquisition of AHRS information

- On the AHRS control box, set "**AHRS 1**" to "**OFF**" then to "**ON**".
- Make sure that AHRS 1 switches to alignment then displays the information after approx. 1 minute and 5 seconds on both copilot screens.

- On the AHRS control box, set "**AHRS 2**" to "**OFF**" then to "**ON**".
- Make sure that AHRS 2 switches to alignment then displays the information after approx. 1 minute and 5 seconds on both pilot screens.

Checking AFCS logics

- Press the VEMD "**SCROLL**" key twice to display the AFCS line on the lower screen of the VEMD.
- Make sure that the "**FLIGHT DETECT**" wording is displayed on the AFCS line of the VEMD.

Validation of the START/STOP logic: CVFDR L3 COM - ED112 (helicopters POST MOD 0731B89)

- Make sure that the CVFDR operates: the lights "**CVR**", "**FDR**" and "**HUMS**" must go off.
- Make sure that if one or the other of the 2 CVFDR circuit breakers is de-activated, the CVFDR remains active.

4.A.2.b. LH landing gear to GROUND position / RH landing gear to FLIGHT position

- De-energize the helicopter electrical system.
- On LH landing gear, remove the shunt between "**D**" and "**E**" (fixed connector) in order to simulate the GROUND position.
- Energize the helicopter electrical system.

Acquisition of FCDM information on SMD45

- Turn off then on the 4 screens.
- Make sure that the cockpit symbols are displayed ("**T**" must not be displayed).

Checking AFCS logics

- Press the VEMD "**SCROLL**" key twice to display the AFCS line on the lower screen of the VEMD.
- Make sure that the "**GROUND FLIGHT**" wording is displayed on the AFCS line of the VEMD.

Validation of the START/STOP logic: CVFDR L3 COM - ED112 (helicopters POST MOD 0731B89)

- Make sure that the CVFDR operates: the lights "**CVR**", "**FDR**" and "**HUMS**" must go off.
- Make sure that if one or the other of the 2 CVFDR circuit breakers is de-activated, the CVFDR remains active.

4.A.2.c. LH landing gear to FLIGHT position / RH landing gear to GROUND position

- De-energize the helicopter electrical system.
- On LH landing gear, make a shunt between "**D**" and "**E**" (fixed connector) in order to simulate the FLIGHT position.
- On RH landing gear, make a shunt between "**D**" and "**F**" (fixed connector) in order to simulate the GROUND position.
- Energize the helicopter electrical system.

Acquisition of FCDM information on SMD45

- Turn off then on the 4 screens.
- Make sure that the cockpit symbols are displayed ("**T**" must not be displayed).

Checking AFCS logics

- Press the VEMD "**SCROLL**" key twice to display the AFCS line on the lower screen of the VEMD.
- Make sure that the "**FLIGHT GROUND**" wording is displayed on the AFCS line of the VEMD.

Validation of the START/STOP logic: CVFDR L3 COM - ED112 (helicopters POST MOD 0731B89)

- Make sure that the CVFDR operates: the lights "**CVR**", "**FDR**" and "**HUMS**" must go off.
- Make sure that if one or the other of the 2 circuit breakers of the CVFDR is de-activated, the CVFDR remains active.

4.A.2.d. LH landing gear to GROUND position / RH landing gear to GROUND position

NOTE

*Provide access to the MGB for this test phase in order to act on the lug "**16E**".*

- De-energize the helicopter electrical system.
- On LH landing gear, remove the shunt between "**D**" and "**E**" (fixed connector).
- On RH landing gear, remove the shunt between "**D**" and "**F**" (fixed connector).
- Connect electrical connectors "**9G**" (RH landing gear) and "**10G**" (LH landing gear).
- Jack down helicopter as per Sub-task 07-10-00-581-001 of Task 07-10-00-581.
- Energize the helicopter electrical system.

Acquisition of FCDM information on SMD45

- Turn off then on the 4 screens.
- Make sure that a "**T**" is displayed on the 4 screens for some seconds and then that the cockpit symbols are displayed (initialization phase longer than in flight).

Acquisition of AHRS information

- On the AHRS control box, set "**AHRS 1**" to "**OFF**" then to "**ON**".
- Make sure that AHRS 1 switches to alignment then displays the information after approx. 30 seconds on both copilot screens.

- On the AHRS control box, set "**AHRS 2**" to "**OFF**" then to "**ON**".
- Make sure that AHRS 2 switches to alignment then displays the information after approx. 30 seconds on both pilot screens.

Checking AFCS logics

- Press the VEMD "**SCROLL**" key twice to display the AFCS line on the lower screen of the VEMD.
- Make sure that the "**GROUND DETECT**" wording is displayed on the AFCS line of the VEMD.

Validation of the START/STOP logic: CVFDR L3 COM - ED112 (helicopters POST MOD 0731B89)

- On the MGB, disconnect the lug "**16E**" in order to simulate the MGB oil pressure.
- Wait for RIPS discharge (10 minutes).
- Make sure that the CVFDR operates: the lights "**CVR**", "**FDR**" and "**HUMS**" must go off.
- Make sure that if one or the other of the 2 CVFDR circuit breakers is de-activated, the CVFDR remains active.
- On the MGB, connect the lug "**16E**".
- Make sure that the CVFDR does not operate: the lights "**CVR**" and "**FDR**" are on.

4.A.3. Final steps

- De-energize the helicopter electrical system as per Sub-task 24-00-00-481-002 of Task 24-00-00-481.