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EMERGENCY ALERT SERVICE BULLETIN

SUBJECT: TIME LIMITS - MAINTENANCE CHECKS - Upper fin

Inspection of the spar and attachment screws of the upper fin $\ensuremath{\mathsf{ATA:}}\xspace$ 55



| HELICOPTER(S) CONCERNED | NUMBER | Version(s) | |
|----------------------------|----------|---------------------|------------------------|
| | | Civil | Military |
| AS350 | 05.00.90 | В3 | / |
| AS355 | 05.00.76 | E, F, F1, F2, N, NP | / |
| AS550 | 05.00.66 | / | C3 |
| AS555 | 05.00.56 | | AF, AN, AP, SN, UF, UN |

| Revision No. | Date of issue |
|--------------|---------------|
| Revision 0 | 2017-06-27 |

Summary:

This ALERT SERVICE BULLETIN consists in:

- cleaning the spar of the upper fin,

- checking the condition of the spar of the upper fin,

- checking the condition of the upper fin attachment screws.

Compliance:

Airbus Helicopters renders compliance with this ALERT SERVICE BULLETIN mandatory.



1. PLANNING INFORMATION

1.A. EFFECTIVITY

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

- For AS355 and AS555 helicopters: all helicopters are concerned by this ALERT SERVICE BULLETIN.

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- For AS350 and AS550 helicopters: only versions B3 and C3 PRE MOD 073148 are concerned by this ALERT SERVICE BULLETIN.

<u>NOTE 1</u>

Modification 073148 consists in reducing the length of the fin's angle bracket in order to reduce the dynamic loads applied to the rotor.

<u>NOTE 2</u>

Modification 073148 can be embodied through Service Bulletins AS350 No. 55.00.14 and AS550 No. 55.00.08.

<u>NOTE 3</u>

Refer to the aircraft individual inspection log book (MOD record) to identify the actual configuration of the helicopter.

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

Not applicable.

1.B. ASSOCIATED REQUIREMENTS

Not applicable.

1.C. REASON

Airbus Helicopters has been informed of a partial fracture of the spar of the upper fin which occurred during a flight at low speed. The pilot felt vibrations in the flight controls and landed in accordance with the instructions given in the Flight Manual. This incident did not affect the safety of the helicopter, its occupants or persons on the ground.

Inspections revealed a crack in the spar of the upper fin and the fracture of the two front attachment screws of the fin.

As damage to this connection could, over time, lead to the loss of the fin, Airbus Helicopters introduces several checks of the upper fin.

Airbus Helicopters renders compliance with this ALERT SERVICE BULLETIN mandatory.



1.D. DESCRIPTION

This ALERT SERVICE BULLETIN consists in:

- cleaning the spar of the upper fin,
- checking the condition of the spar of the upper fin,
- checking the condition of the upper fin attachment screws.

1.E. COMPLIANCE

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

Not applicable.

1.E.2. Compliance in service

The work on the helicopter is to be performed by the operator. The visual inspection (paragraph 3.B.2.) can be carried out by a pilot with the appropriate training and certification.

Helicopters/installed equipment or parts:

- For helicopters with a TSN less than or equal to 605 flying hours:
- . carry out a visual check as per <u>paragraphs 3.B.1, 3.B.2 and 3.B.3</u> when reaching 660 flying hours following receipt of this ALERT SERVICE BULLETIN, issued on the date indicated at the bottom of the page,
- Then,
- . every 55 flying hours, comply with <u>paragraphs 3.B.1 and 3.B.2.</u> Then,
- . every 660 flying hours, comply with paragraphs 3.B.1. and 3.B.3.
- For helicopters whose TSN is strictly greater than 605 flying hours:
 - . carry out a visual check as per <u>paragraphs 3.B.1.</u> and 3.B.2 within **55 flying hours** following receipt of this ALERT SERVICE BULLETIN, issued on the date indicated at the bottom of the page, Then,
 - . every 55 flying hours, comply with <u>paragraphs 3.B.1.</u> and 3.B.2. Then,
 - . Within 165 flying hours following receipt of this ALERT SERVICE BULLETIN, issued on the date indicated at the bottom of the page, comply with <u>paragraphs 3.B.1 and 3.B.3.</u> Then,
 - . every 660 flying hours, comply with paragraphs 3.B.1. and 3.B.3.

Non-installed equipment or parts:

Not applicable.

1.F. APPROVAL

Approval of modifications:

Not applicable.





Approval of this document:

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on June 27, 2017 under the authority of EASA Design Organization Approval No. 21J.700 for civil version helicopters subject to an Airworthiness Certificate.

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on June 27, 2017 under the prerogatives of the recognition of design capability FRA21J-002-DGA for French Government helicopters.

The technical information contained in this ALERT SERVICE BULLETIN Revision 0 was approved on June 27, 2017 by the Airbus Helicopters Airworthiness Department for export military versions.

1.G. MANPOWER

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

Qualification: 1 Airframe Technician for compliance with paragraph 3. or 1 Pilot with the appropriate training and certification for compliance with paragraphs 3.B.1., 3.B.2. and 3.B.4.

The time for the operations is given for information purposes, for a standard configuration.

Time for the operations: (approximately) 1 hour for the 50-FH inspection.

1.H. WEIGHT AND BALANCE

Not applicable.

1.I. POWER CONSUMPTION

Not applicable.

1.J. SOFTWARE UPGRADES/UPDATES

Not applicable.





The documents required for compliance with this ALERT SERVICE BULLETIN are as follows:

Maintenance Manual (MET): Work Card: 33.41.00.501: Position Lights - Operation testing Work Card: 55.00.00.601: Stabilizer - Checking

Aircraft Maintenance Manual (AMM): Task: 33-41-00, 5-1a: Functional Tests - Position Lights PRE MOD 074280 Task: 33-41-00, 5-1b: Functional Tests - Position Lights POST MOD 074280 Task: 55-20-00, 6-3: Visual check of the spars of the upper and lower vertical stabilizers

Standard Practices Manual (MTC):
Work Card: 20.02.09.101: Crack detection - Crack detection through dye-penetrant inspection: General
Work Card: 20.02.09.601: Crack detection - Checking structural parts / components using the dye penetrant procedure
Work Card: 20.04.01.102: Cleaning - Use of cleaning products on individual parts and on aircraft
Work Card: 20.07.03.406: Technical instructions - Instructions applicable when working on an aircraft electrical circuit and power generating systems
Work Card: 20.07.03.408: Technical instructions - Appearance checks on an aircraft after an inspection or repair

1.L. OTHER AFFECTED PUBLICATIONS

Not applicable.

1.M. PART INTERCHANGEABILITY OR MIXABILITY

Not applicable.



2. EQUIPMENT OR PARTS INFORMATION

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

Not applicable.

2.B. LOGISTIC INFORMATION

Not applicable.

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

Consumables to be ordered separately:

As per Work Cards mentioned in this ALERT SERVICE BULLETIN.

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

2.D. EQUIPMENT OR PARTS TO BE RETURNED

Not applicable.



3. ACCOMPLISHMENT INSTRUCTIONS

3.A. GENERAL

Read and comply with the general principles applicable to crack detection by dye-penetrant inspection as per MTC Work Card 20.02.09.101.

3.B. WORK STEPS

3.B.1. Preliminary steps

- Disconnect all electrical power supplies as per MTC Work Card 20.07.03.406.
- Install access equipment.
- Remove the TGB fairing.

3.B.2. Visual inspection (Figure 1)

- Check the presence and correct condition of the two attachment screws (b) (<u>Detail B</u>, Figure 2) of the upper fin (no visible damage):
 - . If both screws are present and no damage is found, leave as is.
 - . Otherwise, **before resuming flights**, contact the Airbus Helicopters Customer Service Technical Support as per Note 1 to request a repair solution.

<u>NOTE 1</u>

Airbus Helicopters Customer Support contact data: Tel: +33 (0)4.42.85.97.89 Fax: + 33 (0)4.42.85.99.66 E-mail: <u>Airframe.Technical-Support@airbus.com</u> Keycopter: Technical Request Management (TechnicalSupport.Helicopters@airbus.com)

- Without removing the rear fairing, visually check that there are no cracks on the LH and RH sides of spar (a) (see (Figure 2):
 - . If in doubt, remove the rear fairing to perform a detailed inspection and carry out a dye-penetrant inspection as per MTC Work Card 20.02.09.601:
 - .. If there are no cracks, leave as is.
 - .. Otherwise, **before resuming flights**, contact the Airbus Helicopters Customer Service Technical Support as per Note 1 to request a repair solution.

- Perform the final steps as per paragraph 3.B.4.



3.B.3. Cleaning and condition check (Figures 2 and 3)

- Remove the rear fairing from the tail boom.
- Disconnect the cut-off connector of the tail position light.
- Clean spar (a) (Figure 2), Area Z (Detail A, Figure 2) and the heads of attachment screws (b) (Detail B, Figure 2) of the upper fin as per MTC Work Card 20.04.01.102.
- Visually check for cracks in spars (a) of the upper and lower fins (see example of crack as per <u>Figure 3</u>) as per MET Work Card 55.00.00.601 or AMM Task 55-20-00, 6-3:
 - . If in doubt, carry out a dye-penetrant inspection as per MTC Work Card 20.02.09.101:



PAY PARTICULAR ATTENTION TO THE 50 MM RADIUS, SEE AREA Z, <u>DETAIL A</u>.

- . If there are no cracks, leave as is.
- . Otherwise, **<u>before resuming flights</u>**, contact the Airbus Helicopters Customer Service Technical Support as per the Note.
- Check the integrity of the two thrust pad attachment screws (b) (Detail B, Figure 2):
- . If no damage is found, leave as is.
- . Otherwise, **before resuming flights**, contact the Airbus Helicopters Customer Service Technical Support as per Note 2.

<u>NOTE 2</u>

Airbus Helicopters Customer Support contact data: Fax: + 33 (0)4.42.85.99.66 E-mail: <u>Airframe.Technical-Support@airbus.com</u> Keycopter: Technical Request Management (TechnicalSupport.Helicopters@airbus.com)

- Connect the cut-off connector of the tail position light.
- Carry out a functional test as per MET Work Card 33.41.00.501 or AMM Task 33-41-00, 5-1.
- Install the rear fairing of the tail boom.
- Perform the final steps as per paragraph 3.B.4.



3.B.4. Final steps

- Install the TGB fairing.
- Remove the access equipment.
- Connect all electrical power supplies.
- Check the appearance of the helicopter as per MTC Work Card 20.07.03.408.

3.C. COMPLIANCE CONFIRMATION

Compliance with this document:

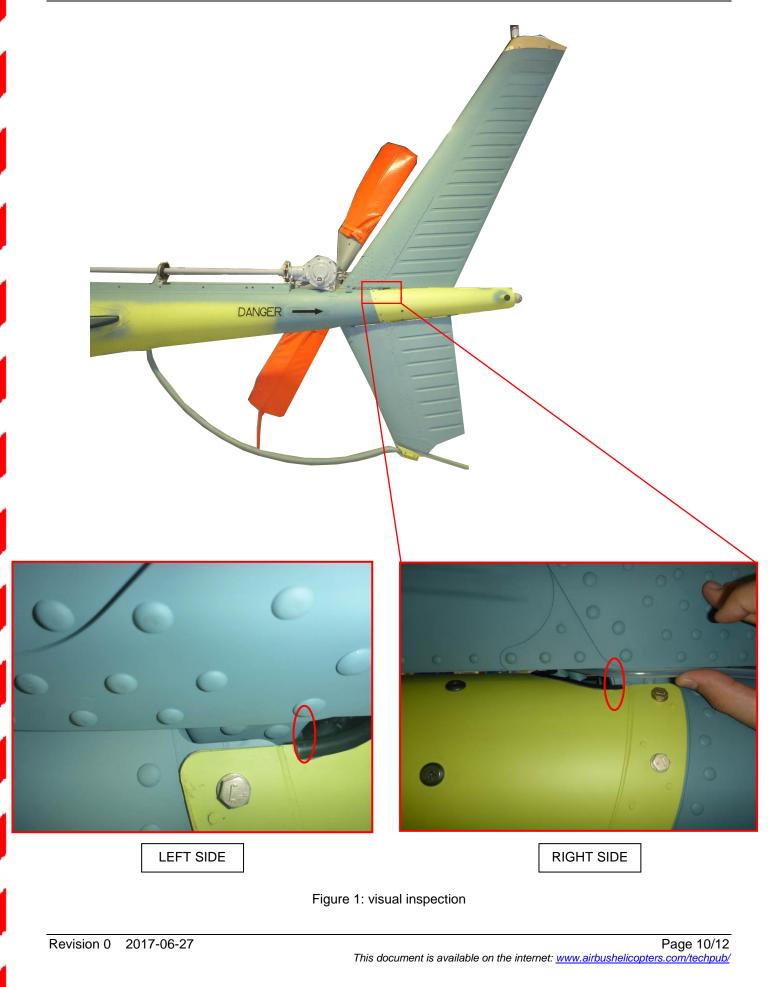
Record first compliance with this ALERT SERVICE BULLETIN, with the revision number, in the helicopter documents.

EASB

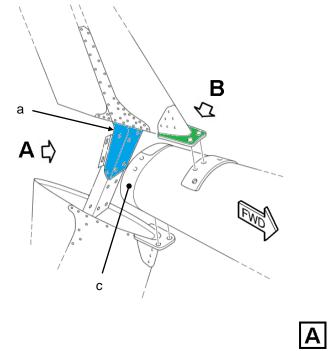
3.D. OPERATING AND MAINTENANCE INSTRUCTIONS

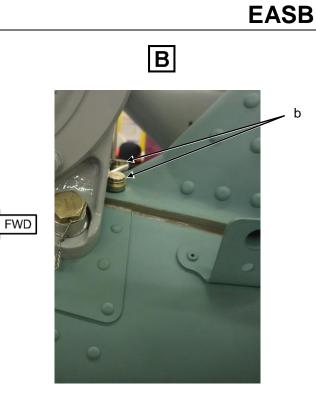
Not applicable.



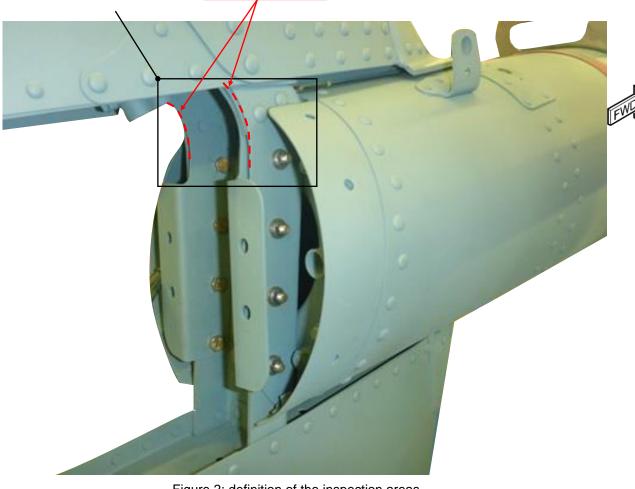








Area Z



50 mm radius

Figure 2: definition of the inspection areas





Figure 3: example of a crack in the spar of the upper fin

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