



## Notification of a Proposal to issue an Airworthiness Directive

**PAD No.:** 22-162

**Issued:** 01 December 2022

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

**Design Approval Holder's Name:**

LEONARDO S.p.A.

**Type/Model designation(s):**

AB212 and AB412 helicopters

**Effective Date:** [TBD - standard: 14 days after AD issue date]

**TCDS Number(s):** EASA.R.114

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 63 – Main Rotor Drive – Main Transmission Support Case – Inspection / Replacement

**Manufacturer(s):**

AgustaWestland S.p.A., formerly Agusta S.p.A., Agusta un'azienda di Finmeccanica S.p.A., Costruzioni Aeronautiche Giovanni Agusta

**Applicability:**

AB212, AB412 and AB412EP helicopters, all serial numbers (s/n).

**Definitions:**

For the purpose of this AD, the following definitions apply:

**Groups:**

- Group 1: AB412 helicopters up to s/n 25669 inclusive.
- Group 2: AB412 helicopters, s/n 25801 and higher; and AB412EP helicopters, all s/n.
- Group 3: AB212 helicopters, all s/n.
- Group 4: Group 1 helicopters with a main transmission installed that has accumulated 6 000 total hours' time in service (TIS) or more.
- Group 5: Group 1 helicopters with a main transmission installed that has accumulated less than 6 000 total hours' TIS.



- Group 6: Group 2 and 3 helicopters with a main transmission installed that has accumulated 5 000 total hours' TIS or more.
- Group 7: Group 2 and 3 helicopters with a main transmission installed that has accumulated less than 5 000 total hours' TIS.

**The CR&O:** Bell Textron Inc. (BTI) Component Repair and Overhaul Manual (CR&O) BHT-412-CR&O Chapter 63, paragraph 63-57, steps 3-6 (Group 1 and Group 2), or step 1 (Group 4 and Group 5); or BTI CR&O BHT-212-CR&O Chapter 63, paragraph 63-49, steps 8-11 (Group 3), or step 4 (Group 4 and Group 5), as applicable, depending on helicopter model and Group. For the repairs as required in this AD, refer to BTI CR&O BHT-412-CR&O Chapter 63, paragraph 63-58, steps 6-8 or BTI CR&O BHT-212-CR&O Chapter 63, paragraph 63-50, steps 11-13.

#### Reason:

Occurrences have been reported of finding cracks on the lateral mounts of the main transmission support case. Such cracking is usually caused by excessive corrosion of the surface under the washer and originates from a washer attachment screw threaded hole. Cracking can occur at the upper or lower surfaces of the lateral mount.

This condition, if not detected and corrected, could lead to loss of load carrying capabilities of the main transmission, possibly resulting in loss of control of the helicopter.

To address this potential unsafe condition, BTI published the CR&O to provide inspection instructions.

For the reason described above, this AD requires repetitive visual inspections and fluorescent penetrant inspection (FPI) of the main transmission support case and, depending on findings, replacement.

#### Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

#### Inspection(s):

- (1) Within the compliance time and, thereafter, at intervals as specified in Table 1 of this AD, accomplish a visual inspection of the main transmission support case in accordance with the instructions of the CR&O.

Table 1 – Initial and Repetitive Visual Inspections (see Note 1 of this AD)

Helicopter	Compliance Time (after the effective date of this AD)	Interval
Group 1	Within 3 100 hours TIS	3 100 hours TIS
Group 2	Within 2 500 hours TIS	2 500 hours TIS
Group 3	Within 3 000 hours TIS	3 000 hours TIS

Note 1: The hours TIS as specified in Table 1 and Table 2 of this AD are those accumulated by the main transmission.



- (2) Within the compliance time and, thereafter, at intervals as specified in Table 2 of this AD, accomplish a FPI of the main transmission support case in accordance with the instructions of the CR&O.

Table 2 – Initial and Repetitive FPI (see Note 1 of this AD)

Helicopter	Compliance Time	Interval
Group 4	Before exceeding 300 hours TIS after the effective date of this AD	6 000 hours TIS
Group 5	Before exceeding 6 300 total hours TIS	6 000 hours TIS
Group 6	Before exceeding 300 hours TIS after the effective date of this AD	5 000 hours TIS
Group 7	Before exceeding 5 300 total hours TIS	5 000 hours TIS

**Corrective Action(s):**

- (3) For Group 1, Group 2 and Group 3 helicopters: If, during any inspection as required by paragraph (1) of this AD, any corrosion, pitting, thread damage or mechanical damage is found on any inspected component which is outside the acceptable limits defined in the CR&O, before next flight, replace that component in accordance with the instructions of the CR&O.
- (4) For Group 1, Group 2 and Group 3 helicopters: If, during any inspection as required by paragraph (1) of this AD, any corrosion, pitting, thread damage or mechanical damage is found on any inspected component which is within the acceptable limits defined in the CR&O, before next flight, repair or replace that component in accordance with the instructions of the CR&O.
- (5) For Group 4, Group 5, Group 6 and Group 7 helicopters: If, during any inspection as required by paragraph (2) of this AD, any crack is found on the main transmission support case, before next flight, replace the main transmission support case in accordance with the instructions of the CR&O.

**Terminating Action:**

- (6) None.

**Ref. Publications:**

Bell Textron Inc. CR&O BHT-412-CR&O Revision 12 dated 27 February 2020, or Revision 13 dated 12 January 2021.

Bell Textron Inc. CR&O BHT-212-CR&O Revision 12 dated 15 June 2020, or Revision 13 dated 12 January 2021.

**Remarks:**

1. This Proposed AD will be closed for consultation on 15 December 2022.



2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
4. For any question concerning the technical content of the requirements in this PAD, please contact: Leonardo S.p.A. Helicopters, Customer Support & Services, Product Support Engineering, E-mail: [absereng.aw@leonardocompany.com](mailto:absereng.aw@leonardocompany.com).

