

## Airworthiness Directive

**AD No.:** 2022-0047

**Issued:** 17 March 2022

Note: This Airworthiness Directive (AD) 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.

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 or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

**Design Approval Holder's Name:**

BELL TEXTRON Inc.

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

212 and 412 helicopters

**Effective Date:** 24 March 2022

**TCDS Number(s):** EASA.IM.R.106

**Foreign AD:** None

**Supersedure:** This AD supersedes EASA AD 2022-0036 dated 07 March 2022.

### ATA 53 – Fuselage – Tailboom Attachment – Inspection / Replacement

**Manufacturer(s):**

Bell Textron Inc. (Bell), formerly Bell Helicopter Textron Inc., Bell Helicopters Inc.

**Applicability:**

212 helicopters, serial numbers (s/n) 30501 to 30999 inclusive, 31101 to 31311 inclusive, 32101 to 32142 inclusive and 35001 to 35103 inclusive; and

412 and 412EP helicopters, s/n 33001 to 33213 inclusive, 34001 to 34036 inclusive, 36001 to 36687 inclusive, 36689 to 36999 inclusive, 37002 to 37018 inclusive, 37021 to 37051 inclusive, 38001 and 39101 to 39103 inclusive.

**Definitions:**

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

**The ASB:** Bell Alert Service Bulletin (ASB) 212-21-166 Revision A or ASB 412-21-187 Revision A, as applicable.

**Serviceable bolt:** A tailboom attachment bolt, eligible for installation, that is new (never previously installed on a helicopter).

**Affected barrel nut:** Steel alloy barrel nuts having Part Number (P/N) NAS577B9A, P/N NAS577B8A or P/N NAS577B6A.

**Serviceable barrel nut:** Nickel alloy barrel nuts having P/N NAS577C9A, P/N NAS577C8A and P/N NAS577C6A.

**Reason:**

Reports have been received of cracked tailboom attachment barrel nuts. The root cause for cracking could not be conclusively determined, but corrosion damage, high time in service and hydrogen embrittlement may be contributing factors. In addition, two recent reports of in-flight upper left-hand (LH) tailboom attachment bolt fracture have been investigated. In both cases, the fracture has been attributed to fatigue and low torque.

This condition, if not detected and corrected, could lead to fracture of one or more tailboom attachment bolts, possibly resulting in failure of the tailboom attachment and subsequent loss of control of the helicopter.

To address this potential unsafe condition, Bell published the ASB, as defined in this AD, providing inspection and replacement instructions, and EASA issued AD 2022-0036 to require a one-time inspection and/or replacement of the tailboom attachment bolts, replacement of all affected barrel nuts, and recurrent torque checks with associated corrective actions.

Since that AD was issued, it was determined that the list of tailboom attachment bolt P/N in AD 2022-0036 was incomplete.

For the reason described above, this AD retains the requirements of EASA AD 2022-0036, which is superseded, and, by removing reference to specific tailboom attachment bolt P/N, requires action on any tailboom attachment bolt installed on the helicopter.

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

Required as indicated, unless accomplished previously:

Note: Replacement of the upper LH tailboom attachment bolt, inspection of the three remaining bolts, replacement of the four barrel nuts and a subsequent torque check of the four tailboom attachment bolts, accomplished as required by AD 2022-0036, are acceptable to comply with the requirements of this AD.

**Inspection / Replacement:**

- (1) Within the compliance time as specified in Table 1 of this AD, as applicable, replace the upper LH tailboom attachment bolt with a serviceable bolt, inspect the upper right-hand (RH), lower LH and lower RH tailboom attachment bolts for corrosion and damage and replace the barrel nuts of all four tailboom attachment bolts with serviceable barrel nuts in accordance with the instructions of Part I of the ASB.



Table 1 – Inspection / Replacement

Affected Part(s)	Compliance Time
Tailboom attachment bolts P/N NAS626-24, P/N NAS628-26 and P/N NAS629-24, and affected barrel nuts P/N NAS577B9A, P/N NAS577B8A and P/N NAS577B6A	Within 25 flight hours (FH) or 3 months, whichever occurs first after 14 March 2022 [the effective date of EASA AD 2022-0036]
Tailboom attachment bolts and barrel nuts having any other P/N, except serviceable barrel nuts	Within 25 FH or 3 months, whichever occurs first after the effective date of this AD

- (2) If, during the inspection as required by paragraph (1) of this AD, any corrosion or damage, as defined in the ASB, is found on a bolt or on its barrel nut, before next flight, replace that bolt with a serviceable part in accordance with the instructions of Part I of the ASB.

#### **Torque Checks:**

- (3) From the effective date of this AD, within 5 FH, but not before accumulating 1 FH, after each replacement of a tailboom attachment bolt or after tailboom installation, accomplish a torque check of the four tailboom attachment bolts in accordance with the instructions of Part II of the ASB.

#### **Corrective Action:**

- (4) If, during any torque check as required by paragraph (3) of this AD, incorrect torque value is measured on a bolt, repeat the torque check up to three times at intervals not exceeding 5 FH, but not before accumulating 1 FH after the previous torque check, to determine if the torque stabilizes.
- (5) If, after the torque checks as specified in paragraph (4) of this AD, any discrepancy is detected, as defined in the ASB, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Part II of the ASB.

#### **Credit:**

- (6) Actions accomplished on a helicopter before the effective date of this AD in accordance with the instructions of Bell ASB 212-21-166 or ASB 412-21-187 at original issue are acceptable to comply with the initial requirements of this AD for that helicopter.

#### **Ref. Publications:**

Bell Textron Inc. ASB 212-21-166 Revision A dated 23 February 2022.

Bell Textron Inc. ASB 412-21-187 Revision A dated 23 February 2022.

The use of later approved revisions of the above-mentioned documents 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, 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 AD 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.
5. For any question concerning the technical content of the requirements in this AD, please contact: Bell Textron Inc., Bell Product Support Engineering  
Tel.: +1-450-437-2862 or +1-800-363-8023  
E-mail: [productsupport@bellflight.com](mailto:productsupport@bellflight.com).

