



DATE: July 6, 2021
AD #: 2021-15-51

Emergency Airworthiness Directive (AD) 2021-15-51 is sent to owners and operators of Bell Textron Inc. (type certificate previously held by Bell Helicopter Textron Inc.) (Bell) Model 204B, 205A, 205A-1, 205B, and 212 helicopters.

Background

This emergency AD was prompted by a Bell Model 212 helicopter fatal accident in which an outboard main rotor hub strap pin (pin), part number (P/N) 204-012-104-005 with a serial number (S/N) prefix "FNFS", sheared off during flight, which resulted in the main rotor blade and the main rotor head detaching from the helicopter. The pin had accumulated only 20 total hours time-in-service (TIS). An inspection of a different Model 212 helicopter revealed that another pin installed, and made by the same manufacturer with the same S/N prefix, was deformed; this pin had accumulated only 29 total hours TIS. Failure of the pin could result in the main rotor blade detaching from the helicopter and subsequent loss of control of the helicopter.

Transport Canada, which is the aviation authority for Canada, has issued Canadian Emergency AD CF-2021-23, dated July 5, 2021 (Emergency AD CF-2021-23), to correct an unsafe condition for the following Bell helicopters:

- Model 204B helicopters, S/Ns 2001 through 2070 and 2196 through 2199;
- Model 205A-1 helicopters, S/Ns 30001 through 30065, 30067 through 30165, 30167 through 30187, 30189 through 30296, and 30298 through 30332;
- Model 205B helicopters, S/Ns 30066, 30166, 30188, and 30297; and
- Model 212 helicopters, S/Ns 30501 through 30999, 31101 through 31311, 32101 through 32142, and 35001 through 35103.

Transport Canada advises that during an investigation of a Bell Model 212 fatal accident in Canada, it was discovered that a pin P/N 204-012-104-005 with an S/N prefix "FNFS", sheared off during flight, leading to detachment of the main rotor blade and the main rotor head. The pin had accumulated only 20 hours of service, and inspection of another Canadian Bell Model 212 helicopter found a pin of the same P/N, made by the same manufacturer, with the same S/N prefix "FNFS", to be deformed after only approximately 29 hours in service. According to Transport Canada, failure of a main rotor hub strap pin will result in detachment of the main rotor blade and loss of control of the helicopter.

Transport Canada also advises that, although the defective pins were only reported on Bell Model 212 helicopters, pins of the same P/N can also be installed on Bell Model 204B, 205A-1, and 205B helicopters. While the cause of failure has not been determined, as a precautionary measure and to address the risk of detachment of main rotor hub strap pins in flight, Bell has issued Alert Service Bulletins to require replacing all pins with P/N 204-012-104-005 that have S/N prefix "FNFS".

Accordingly, Emergency AD CF-2021-23 mandates replacement of affected pins. Transport Canada considers its emergency AD an interim action and states that further AD action may follow.

Related Service Information

The FAA reviewed the following Bell Alert Service Bulletins (ASBs), each dated July 5, 2021:

- ASB 204B-21-74 for Bell Model 204B helicopters, S/Ns 2001 through 2070 and 2196 through 2199;
- ASB 205-21-117 for Bell Model 205A and 205A-1 helicopters, S/Ns 30001 through 30065, 30067 through 30165, 30167 through 30187, 30189 through 30296, and 30298 through 30332;
- ASB 205B-21-71 for Bell Model 205B helicopters, S/Ns 30066, 30166, 30188 and 30297; and
- ASB 212-21-165 for Bell Model 212 helicopters, S/Ns 30501 through 30999, 31101 through 31311, 32101 through 32142, and 35001 through 35103.

The ASBs specify removing all P/N 204-012-104-005 pins with an S/N prefix “FNFS” before further flight. The ASBs also specify that, although the investigation is still in progress, removing these pins from service is required. The ASBs state that these pins may not have been manufactured in accordance with the engineering design requirements and may therefore shear as a result of this nonconformance.

FAA’s Determination

The FAA is issuing this emergency AD after evaluating all the relevant information and determining that the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

AD Requirements

This emergency AD requires removing all P/N 204-012-104-005 pins with an S/N prefix “FNFS” before further flight. This emergency AD also prohibits installing this pin on any helicopter as of the effective date of this emergency AD.

Interim Action

The FAA considers this emergency AD to be an interim action. If final action is later identified, the FAA might consider further rulemaking.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This

regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Presentation of the Actual Emergency AD

The FAA is issuing this AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

2021-15-51 Bell Textron Inc. (Type Certificate Previously Held by Bell Helicopter Textron Inc.): Project Identifier AD-2021-00789-R.

(a) Effective Date

This emergency AD is effective upon receipt.

(b) Affected ADs

None.

(c) Applicability

This emergency AD applies to Bell Textron Inc. (type certificate previously held by Bell Helicopter Textron Inc.) Model 204B, 205A, 205A-1, 205B, and 212 helicopters, certificated in any category, with an outboard main rotor hub strap pin (pin) part number 204-012-104-005 with a serial number prefix "FNFS" installed.

(d) Subject

Joint Aircraft System Component (JASC) Code/Air Transport Association (ATA) of America Code: 6200, Main rotor system.

(e) Unsafe Condition

This emergency AD was prompted by a fatal accident in which a pin sheared off during flight, which resulted in the main rotor blade and the main rotor head detaching from the helicopter. The FAA is issuing this emergency AD to address this unsafe condition and prevent loss of control of the helicopter.

(f) Compliance

Comply with this emergency AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Before further flight, remove from service any pin that is identified in paragraph (c) of this emergency AD.

(2) As of the effective date of this emergency AD, do not install any pin that is identified in paragraph (c) of this AD on any helicopter.

(h) Special Flight Permits

Special flight permits are prohibited.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, DSCO Branch, FAA, has the authority to approve AMOCs for this emergency AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the DSCO Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-ASW-190-COS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For further information about this emergency AD, contact David Wilson, Aerospace Engineer, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5786; email david.wilson@faa.gov.

(2) For service information identified in this emergency AD, contact Bell Textron Inc., P.O. Box 482, Fort Worth, TX 76101; telephone 817-280-3391; fax 817-280-6466; or at <https://www.bellcustomer.com>. You may view service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

(3) The subject of this emergency AD is addressed in Transport Canada Emergency AD CF-2021-23, dated July 5, 2021.

Issued on July 6, 2021.

Compliance & Airworthiness Division,
Aircraft Certification Service.