**FAA**
**Aviation Safety**

# EMERGENCY AIRWORTHINESS DIRECTIVE

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**DATE: May 16, 2019**
**AD #: 2019-10-51**

Emergency Airworthiness Directive (AD) 2019-10-51 is sent to owners and operators of Airbus Helicopters Deutschland GmbH (Airbus) Model MBB-BK 117 C-2 helicopters.

## Background

This emergency AD was prompted by reports of fatigue cracks in the fuselage frame, through the left-hand door frame webs and frame cap at station 4135. These cracks occurred on certain serial numbered helicopters with Supplemental Type Certificate (STC) SR00592DE installed. The cracks initiated under the doubler that reinforces the door frame where recessed medical wall fittings are attached. In one case, the crack under the doubler propagated through the inboard frame cap and onto the inboard web. This condition, if not corrected, could result in excessive vibration, an in-flight breakup, and subsequent loss of control of the helicopter. Although the exact cause of this unsafe condition is still being investigated, we have determined that the cracks are a result of the recessed medical wall rack installation.

## Relevant Service Information

We reviewed Air Methods Alert Service Bulletin ASB19-03, Revision IR, dated May 6, 2019 (ASB). The ASB requires removing the recessed medical wall rack and describes procedures for inspecting the door frame at the forward medical wall rack doubler for cracks. If cracks are discovered, the ASB specifies that the aircraft is grounded until repairs are made.

## FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of this same type design.

## AD Requirements

This emergency AD requires the following for certain serial-numbered helicopters:

- Before further flight, removing the recessed medical wall rack, inspecting the fuselage frame box beam structure for cracks and loose rivets, and making repairs if necessary or reinstalling the inboard web of the box beam and the cabin interior panels with the medical wall rack to remain removed.

- Within 10 hours time-in-service (TIS) after the required inspections, providing the inspection results, photographs of inspected areas, total helicopter hours TIS since installation of STC SR00592DE, and the helicopter serial number to the FAA.

This emergency AD also prohibits installing on any helicopter recessed medical wall assembly part number (P/N) 778-1400-001, wall mount fittings P/N 900-9959-001, aft medical wall

doubler P/N 900-9989, and medical wall long doubler P/N 900-6021 at stations 4135 and 4963.19 as part of STC SR00592DE.

**Differences between This Emergency AD and the Service Information**

This emergency AD requires the inspections before further flight, whereas the ASB specifies within 10 flight hours. This emergency AD requires a single inspection before further flight, whereas the ASB specifies repetitive inspections every 200 hours TIS following the initial inspection. This emergency AD does not require contacting Air Methods for disposition on the discovery of cracks, whereas the ASB does.

**Interim Action**

We consider this emergency AD interim action. The inspection reports that are required by this emergency AD will enable us to obtain better insight into the cause of the cracking and eventually to develop final action to address the unsafe condition. Once final action has been identified, we might consider further rulemaking. Also, we are currently considering requiring repetitive inspections of the frame. However, the planned compliance time for those inspections would allow enough time to provide notice and opportunity for prior public comment on the merits of the repetitive inspections.

**Costs of Compliance**

We estimate that this emergency AD affects 10 helicopters of U.S. registry. We estimate the following costs to comply with this emergency AD. Labor costs are estimated at $85 per work-hour. Removing the recessed medical wall rack takes about 0.25 work-hour, inspecting for cracks and loose rivets takes about 8 work-hours, and reporting the required information takes about 1 work-hour for an estimated cost of $786 per helicopter and $7,860 for the affected U.S. fleet. Thirty-three blind rivets at about $1.50 each are required to reinstall the inboard web if there are no cracks for a total cost of $50.00. Loose fitting/doubler rivets cost about $1.50 each. We have no way of estimating the cost to repair any cracked structure.

**Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

**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.

We are 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**

We are issuing this emergency AD under 49 U.S.C. Section 44701 according to the authority delegated to me by the Administrator.

**2019-10-51 Airbus Helicopters Deutschland GmbH**: Product Identifier 2019-SW-013-AD.

**(a) Effective Date**

This emergency AD is effective upon receipt.

**(b) Affected ADs**

None.

**(c) Applicability**

This emergency AD applies to Airbus Helicopters Deutschland GmbH Model MBB-BK 117 C-2 helicopters, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) of America Code: 5311, Fuselage main frame.

**(e) Unsafe Condition**

This emergency AD was prompted by reports of fatigue cracks in a fuselage frame. We are issuing this emergency AD to correct the unsafe condition on these helicopters.

**(f) Compliance**

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

**(g) Required Actions**

(1) For helicopters with serial numbers 9069, 9185, 9255, 9377, 9389, 9403, 9411, 9457, 9529, or 9637, before further flight:

(i) Remove the recessed medical wall rack in accordance with Part 1, paragraphs 4.1. through 4.3., of Air Methods Alert Service Bulletin ASB19-03, Revision IR, dated May 6, 2019 (ASB).

(ii) Inspect the fuselage frame box beam structure for cracks and loose rivets at station 4135 in accordance with Part 2, paragraphs 5.1 through 5.4., of the ASB, except you are not required to contact Air Methods for disposition if cracks are found. Instead, if there is a crack, repair using a method approved by the Manager, Denver ACO Branch, Compliance & Airworthiness Division, FAA, 26805 East 68th Ave., Room 214, Denver, CO 80249; telephone (303) 342-1081; email: 9-Denver-Aircraft-Cert@faa.gov. Replace any loose rivets.

(iii) If there are no cracks, reinstall the inboard web of the box beam and the cabin interior panels in accordance with Part 2, paragraphs 5.5. and 5.6. of the ASB. Do not reinstall the recessed medical wall rack.

(2) For helicopters with serial numbers 9069, 9185, 9255, 9377, 9389, 9403, 9411, 9457, 9529, or 9637, within 10 hours time-in-service (TIS) after the required inspections, provide the inspection results, photographs of inspected areas, total helicopter hours TIS since installation of Supplemental Type Certificate (STC) SR00592DE, and helicopter serial number to the attention of the person identified in paragraph (j)(1) of this emergency AD. This information is required even if there are no cracks.

(3) For all helicopters, after the effective date of this emergency AD, do not install on any helicopter recessed medical wall assembly part number (P/N) 778-1400-001, wall mount fittings P/N 900-9959-001, aft medical wall doubler P/N 900-9989, and medical wall long doubler P/N 900-6021 at stations 4135 and 4963.19 as part of STC SR00592DE.

**(h) Paperwork Reduction Act Burden Statement**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

**(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Denver ACO 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 14 CFR 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 certification office, send it to the attention of the person identified in paragraph (j)(1) of this emergency AD and notify the Denver ACO Branch of the request by email at: 9-Denver-Aircraft-Cert@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: Cynthia Bradley, Aviation Safety Engineer, Denver ACO Branch, Compliance & Airworthiness Division, FAA, 26805 East 68th Ave., Room 214, Denver, CO 80249; telephone (303) 342-1082; email cynthia.bradley@faa.gov.

(2) For copies of the service information referenced in this emergency AD, contact: Air Methods Corporation, 5500 South Quebec Street, Suite 300, Greenwood Village, CO 80111; telephone (303) 792-7557 or at http://www.unitedrotorcraft.com/. You may view this referenced

service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

Issued in Fort Worth, Texas, on May 16, 2019.

Lance T. Gant,
Director, Compliance & Airworthiness Division,
Aircraft Certification Service.