

# Continuing Airworthiness Notice 51-003



## MBB-BK117 and Kawasaki BK117 Vertical Fin Spar – Inspection for Cracks

14 September 2022

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Issued by the Civil Aviation Authority of New Zealand in the interests of aviation safety. A Continuing Airworthiness Notice (CAN) is intended to alert, educate, and make recommendations to the aviation community. A CAN contains information and guidance about an airworthiness concern that does not meet the criteria for an Airworthiness Directive (AD). The inspections and practices described in this CAN must still be carried out in accordance with the applicable NZCAR Parts 21, 43 and 91.

CAN numbering is by ATA Chapter followed by a sequential number for the next CAN in that ATA Chapter.

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### Applicability:

All MBB-BK117 series and Kawasaki BK117 series helicopters.

### Purpose:

This Continuing Airworthiness Notice (CAN) is issued to advise operators and maintainers of a defect report received by the CAA which identified a crack in a vertical fin spar on a MBB-BK117 helicopter.

For the location of the crack found refer to the photos in this CAN.

### Background:

The defect report states: *During the 50hr inspection, the tail boom vertical fin rear cowling was removed for inspection of the vertical fin spar. A crack was found propagating from the second to top lightening hole outwards toward the 11 o'clock position facing forward to a nearby rivet hole. Once the tail rotor actuator was removed and the spar cleaned for a closer inspection it was discovered that the crack also had propagated from the lightening hole downward toward the 5 o'clock position into the radius of the spar edge.*

DCA/MBB117/38 applicable to MBB-BK117 series helicopters (LBA AD D-1997-144R4 refers) and DCA/BK117/19 applicable to Kawasaki BK117 series helicopters (JCAB TCD-4605B-2006 refers) as applicable, mandate regular scheduled inspections of the vertical fin spar in accordance with the aircraft maintenance manual.

The CAA understands that the operator was carrying out the required inspections at a shortened repetitive interval of 50 hours TIS (to align with other scheduled maintenance inspections), meaning that the crack had grown from being undetectable, to that shown in the photos below over a period of 50 hours.

The subject aircraft tail boom is reported to have accumulated 16270 hours TTIS.

### Recommendation:

Maintainers are advised to familiarise themselves with the inspection requirements of the vertical fin spar, ensuring that the area to be inspected is clean, and that appropriate lighting and inspection aids are used during the inspection. Engineers should pay particular attention to the area around the fin spar lightening holes which appear to be an initiation point for cracks.

Maintenance providers who find cracks, should complete a CAA005D and submit the completed form to the CAA at [CA005@caa.govt.nz](mailto:CA005@caa.govt.nz) or report findings via the online reporting system available at <https://occurrences.caa.govt.nz/ProdUI/>

Photo 1: Location of crack found in vertical fin spar.



Photo 2: Location of cracks found in vertical fin spar with actuator removed.

