Australian Government
Civil Aviation Safety Authority

AIRWORTHINESS BULLETIN

AWB 51-011 Issue 1 – 2 September 2016

EC130 Cracking of Fenestron Cone Link Structure

1. Effectivity

All EC130 B4 helicopters.

2. Purpose

The purpose of this AWB is to advise all operators that a crack may exist in the tail boom fenestron cone link area. Airbus helicopters are aware of these events and have developed a repair procedure for the tailboom.

3. Background

An operator of B4 rotorcraft has found three tail booms with cracking in the cone link area see figures below. Cracking appears to begin from the lower aft corner of the horizontal stabiliser cut out on the right hand side. These cracks were found whilst completing EASA emergency AD 2015-0033-E junction frame inspection.

Figure 1

Crack may be visible externally without use of tools, or disassembly. Crack has been found to be propagating beneath the external doubler.

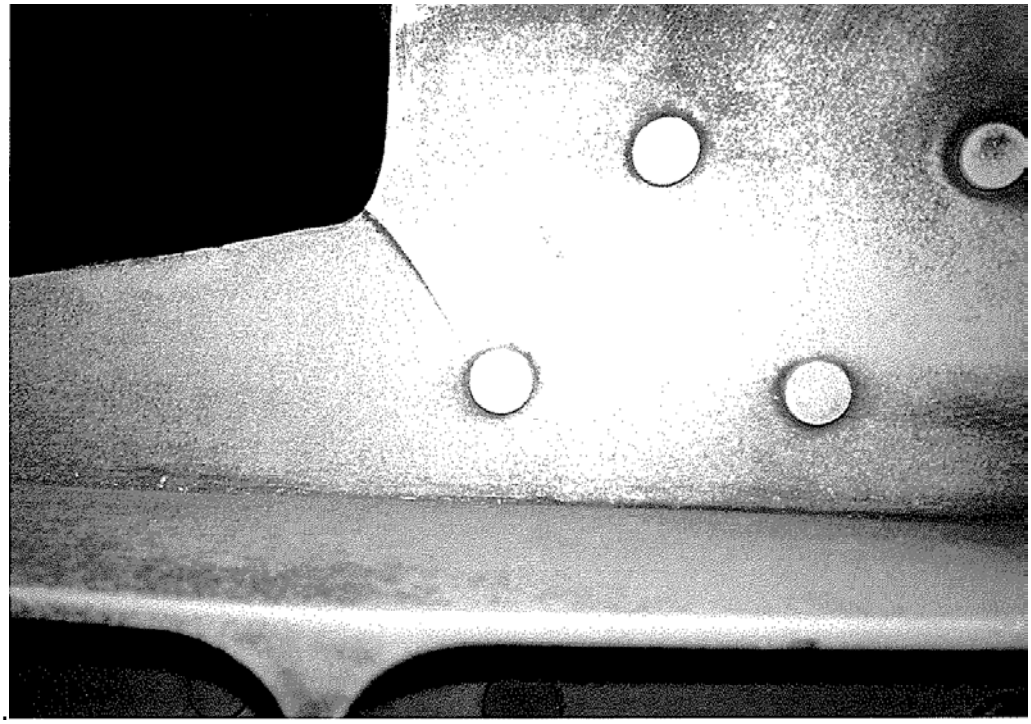

Figure 2

Cracks may be visible using a boroscope from the opposite side of the horizontal stabiliser cut out. Crack transits from the lower rear cut out radius downward to the rear typically through existing rivet holes and may continue behind the forging. The area to be inspected may need to be cleaned to allow detection of the crack.

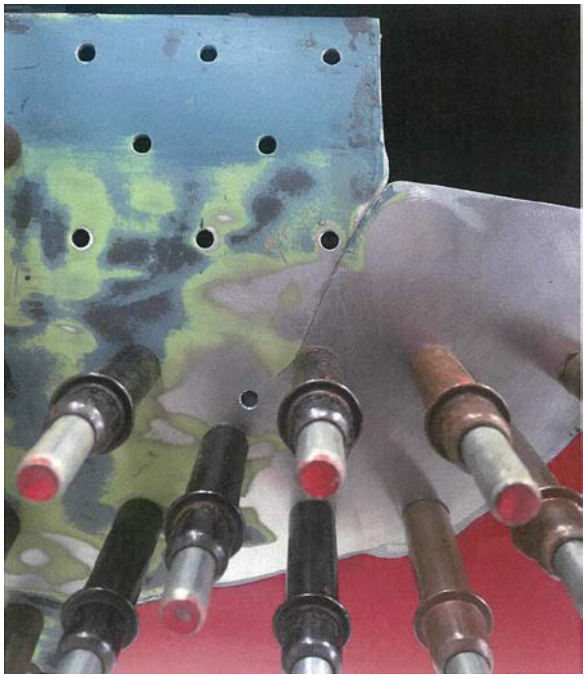

Figure 3

With the doubler removed cracks have been found at 60mm in length.

4. Recommendations

CASA strongly recommends a visual inspection of both sides of the structure forward of the cone link doubler exterior and also internally with the use of a borescope at the earliest opportunity. Access of the boroscope can be achieved through the horizontal stabiliser cut out from the opposite side.

5. Reporting

Report all defects via the casa SDR system.

6. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link email address:

AirworthinessBulletin@casa.gov.au

or in writing, to:

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Standards Division
Civil Aviation Safety Authority
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