

AWB 27-4 Issue 1 - Cessna 172, 180 and 185 Primary Flight Control Yoke Inspection

Cessna 172, 180 and 185 Primary Flight Control Yoke Inspection

AWB 27-4 Issue 1, 5 December 2003

Effectivity

Cessna Aircraft Company and Reims Aviation (Cessna) 172, 180, and 185 series aircraft as listed in the current revision of Cessna Service Bulletin SEB01-3.

Purpose

To alert operators and maintainers to the potential failure of the welded steel tube yoke assembly, which can result in loss of primary pitch control of the aircraft, and to strongly recommend compliance with Cessna Service Bulletin SEB01-3. This SB describes an inspection procedure to detect corrosion, and determine the serviceability of a yoke that has suffered corrosion pitting.

Background

CASA and the FAA have received defect reports describing extensive internal corrosion initiated by moisture collecting inside the lower section of the welded tubular structure. Some control yokes have suffered structural failure due to corrosion in this zone.

The design of the control yoke in the nominated aircraft did not have any provision to drain moisture from the lower section of the yoke. This allowed moisture to collect inside the vertical tube of the assembly, and initiate corrosion. In some cases the corrosion caused a significant reduction of wall thickness of the yoke, and resulted in failure of the lower elevator control lug.

Cessna Aircraft Company has issued instructions for an insitu inspection of the control yoke, which requires an ultrasonic inspection of the lower section of the yoke assembly. . Yokes that are corroded beyond the limits prescribed in SEB01-3 should be replaced.

In addition to this, CASA has received a defect report describing internal corrosion deposits outside the nominated area indicated in the Cessna SB, being significantly higher up the vertical tube of the yoke than the shaded area shown in Figure 1 of SEB01-3.

Recommendation

CASA strongly recommends operators and maintainers carry out the requirements of the current revision of Cessna Service Bulletin SEB01-3, extending the zone of the inspection to match the extent of surface corrosion detected, and incorporate the annual inspection requirements of SEB01-3 into the aircraft maintenance program.

Enquiries

Enquiries with regard to the content of Airworthiness Bulletins should be made via the direct link e-mail address included on the Airworthiness Bulletin web site, AirworthinessBulletin@casa.gov.au.

Or in writing to: Airworthiness Standards Branch

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