



SERVICE BULLETIN

SB-42-022-2019 Rev. 1 Inspection of A-pillar at C42 A/B/E-Series with A-pillar passing through fuselage tube (C42A up to Serial No.: 1604-7449 C42B up to Serial No.: 1503-7383 C42E up to Serial No.: 1804-7529)

Date published: July 2019

Subject:

An aircraft with severe cracking of the main fuselage tube emanating from the upper cut-out for the A-pillar was also found to have suffered severe cracking of the A- pillar around its entire circumference. This was hidden within the outer sleeve positioned at the connection between the A- pillar and the upper surface of the main fuselage tube. The load path was maintained by the single small rivet used to locate the outer sleeve on the A- pillar. See Figures 1 & 2.

It is believed that the cracking was a result of excessive loads placed upon the A- pillar due to the near-failure of the main fuselage tube. One other similar historical case is known to have occurred abroad, on an aircraft known to have suffered landing gear damage.

However, it is also possible that the cracking may also be related to fatigue due to flexing of the A- pillar at this point. Therefore inspection on high-hours aircraft is recommended, as well as those which have suffered damage which could have applied excessive loads to the A- pillar.



Figure 1: A- pillar attachment to upper surface of main fuselage tube. Lower attachment bolt visible beneath main fuselage tube at aft end of bracket attached to nose leg.



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Figure 2: Failed A- pillar removed from outer sleeve part on right of picture. Circled holes show location of the rivet which was holding the parts together.

Applicability:

C42A & B model aircraft with the A- pillar passing through the main fuselage tube. Late C42B model aircraft have the A- pillar terminating above the main fuselage tube and are not affected by this service bulletin.

Deadline:

See required measures and LTA no.: LSG 19-002 (DAeC)

Impact on Airworthiness:

When such cracks spread, the structural function of the A- pillar endangered.

Classification:

Service Bulletin, MANDATORY. The necessary measures must be implemented as described to maintain the airworthiness of the light aircraft.



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Weight and Balance:

No effects

Electrical exposures:

No effects

Manual Supplement:

None

Required actions:

(a) Inspection

(1) For aircraft which have previously suffered damage which may affect the A- pillar, such as nose gear damage or any severe crash damage where excessive loads may have been applied to the A- pillar such as a wing-tip strike:

Immediately!

We recommend visually inspecting the inner surface of the A- pillar in the area where the bolt penetrates the connection to the top of the fuselage tube. The visual inspection must be carried out with an endoscope which can be inserted at the lower end (hole in hull boat behind nose wheel carrier) of the A- pillar. If the cable length of the camera is long enough (more than 1m), the roof can be removed and the endangering spot can be inspected from above. This check has been included in the IKARUS C42 Series Maintenance Manual (Edition VIII) and should be repeated every 300 operating hours after the initial check.

(2) For aircraft with no history of damage as described above in (1) and with more than 2000 airframe hours:

Within the next 10 (ten) operating hours, proceed as described above in (1).

(3) For aircraft with no history of damage as described above in (1) and less than 2000 airframe hours:

Next check at 2000 operating hours. After reaching the 2000 operating hours, proceed as described in (2).



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Notes:

- (a) If the A- pillar has previously been replaced, the period of operation or the reference to a previous defect shall apply from the date of replacement.
- (b) The person performing the inspection should be familiar with an endoscope for visual crack detection.
- (c) For aircraft with a parachute, the front lifeline above the A- pillar may need to be released prior to inspection.

When the inspection is finished, reconnect the rescue line!

If you have any questions or problems with this measure, please contact one of our authorized dealers, ISCs or ITBs.

(b) Documentation

Documentation of the special inspection in the operating records (log book).

If cracks are found during the inspection, the aircraft **must not be flown**. The A-pillar must be replaced before it is put back into operation.