



Fletcher FU-24 Main Landing Gear - Lower Torque Link Bolt Failures

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1. Applicability

Pacific Aerospace Limited / Fletcher FU-24 Main Landing Gear

2. Purpose

To notify operators and maintainers of continuing failures of the lower torque link bolts.

3. Background

Several FU-24 aircraft have been involved in landing accidents following the in-flight separation of a main undercarriage oleo strut and wheel assembly. This typically occurred shortly after take-off and is due to the failure of the torque link lower attachment bolt.

Bolt failures have been variously attributed to: wear of the bolt and bolt holes, corrosion and fretting of the bolt in the bushes, loss of nut torque, lack of lubrication, bush seizing on the bolt and turning in the leg lug and fatigue failure.

It appears that the most likely bolt failure mechanism is fatigue cracking originating from stress concentration points resulting from fretting damage due to lack of lubrication between the close-tolerance bushes and the bolt.

Difficulty in lubricating this bolt assembly can be due to declining clearance between the bolt and the close-tolerance bush, caused by inability of the grease to penetrate and flush-out dry grease and wear particulate and provide fresh lubricant in a harsh operating environment.

Some operators advise that they have initiated a 1000 flight hour retirement life for the lower attachment bolt and that an approved modification involving a larger diameter bolt and bush is also available.

5. Recommendation

It is recommended that particular attention be paid to the condition of these bolts at each Daily Inspection and during periodic maintenance using the continuing airworthiness instructions in the FU-24 Maintenance Manual.

Operators consider implementing initiatives to improve the reliability of the main undercarriage lower torque link bolts.

6. Enquiries

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

AirworthinessBulletin@casa.gov.au

Or in writing, to:

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