

Safety Recommendation Number:	IRLD2015002
AAIU Event Reference:	IRL00913090
AAIU Report Number:	2015-001
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Safety Recommendation Status:	Not accepted, closed

Safety Recommendation:

It is recommended that Textron Aviation should consider amending the maintenance schedule for the Beechcraft Duchess 76 aircraft, to include specific inspections of the shock absorber lower attachment point, including the bushings, shock absorber pin and flathead pin, similar to those inspections recommended by the Federal Aviation Administration (FAA) in their Special Airworthiness Information Bulletin number CE-01-31.

Response:

Beechcraft (Textron Aviation) advised the AAIU by letter dated 6 August 2015 as follows:

"At this time Beechcraft does not concur with SR IRLD2015002. Inspection for the shock absorber is located in Model 76 Maintenance Manual, Section 5-20-00, at 100 hour inspection. The items of concern are shown in Section 32-10-00 of the Maintenance Manual. (See Below) Beechcraft has no plans for amending the manual for additional information.

32-10-00, Page 4. MAIN LANDING GEAR DISASSEMBLY (Figure 2)

This section states to remove shock absorber. pins, washers, flat head pins, bolts, shims, and connector. Clean all parts with PD680 solvent. Inspect the castings/or cracks, pitting, nicks. distortion and wear. Replace all damaged or worn parts. Replace all cotter pins. Assemble after inspection.

5-20-00. page 12, Scheduled Maintenance Checks

LANDING GEAR STRUT - Inspect the shock strut and components/or condition, attachment. Proper inflation, and leakage.

The AAIU responded to Beechcraft (Textron Aviation) on 4 Sept 2015:

"The First Maintenance Manual section referred to in Beechcraft's response relates to Main Landing gear disassembly (32-10-00), which is not the section that would be used during a normal inspection. The next section referred to is 5-20-00, which is most likely what would be used. However, this section is not particularly detailed.

The AAIU's Safety Recommendation was developed from the following analysis contained in AAIU Report No. 2015-001 (Section 2.4): "The FAA issued a related Special Airworthiness Information Bulletin in July 2001 (CE-01-31). This Bulletin recommended detailed inspection instructions for checking the lower attachment points on the main landing gear shock absorber gears fitted to Beechcraft 76 aircraft. Specific instructions included the inspection of the bushings fitted to the lower lugs of

the shock absorbers for excessive wear, how to ensure the integrity of the flathead pins and how to check the security of the shock absorber pin.

In the case of EI-BUN, the failure of the flathead pins was due to the installation of incorrect specification bushings and not due to excessively worn bushings of the correct specification. Nevertheless, the Investigation considers that the detailed inspections recommended by the FAA would identify failures or impending failures of the flathead pins and could reduce the possibility of similar landing gear failures on Beechcraft 76 aircraft. Because the FAA's Bulletin was issued in 2001, there is a possibility that, similar to the Operator of EI-BUN, not all operators of the aircraft type are aware of its existence. To ensure that all operators of the Beechcraft 76 aircraft are aware of, and regularly conduct the FAA recommended inspections, a Safety Recommendation is made to the Manufacturer to amend the maintenance schedule for the Beechcraft 76 aircraft to include inspections similar to those recommended by the FAA [in their Special Airworthiness Information Bulletin, CE-01-31]".

The FAA published its Bulletin due to "service difficulty reports of broken clevis [flathead] pins, missing connecting [shock absorber] pins and/or severely worn bushings at the lower attachment point of the MLG [Main Landing Gear] shock absorber. Severe wear in the self-lubricated bushings in the shock absorber can create excess friction between the connecting pin and the bushings, which may cause the pin to turn and break the clevis pin that retains it. In one instance, a broken clevis pin allowed the connecting pin to work loose and fall out. This caused the fork portion of the MLG to fold up, which jammed the tire, resulting in the aircraft pulling off the runway where it sustained wing and propeller damage".

The AAIU's Safety Recommendation is considered to be reasonable and it is felt that if it was implemented, further similar events could be prevented. As such, the AAIU requests that Beechcraft take further consideration of this matter."

AAIU Comment:

The AAIU made several requests to Beechcraft (Textron Aviation) to reconsider their decision, the first of which is included in the Response section above. However, Beechcraft's original decision remains unchanged. The AAIU considers the status of this Safety Recommendation to be one of "Not Accepted,Closed"