

Beech A60, Deice Boot Separation, ATA 6112

A repair station technician describes the following defect report. "A propeller came in for repairs, necessitating the installation of new deice boots on all three blades (*Hartzell; HC-F3YR-2UF*). The *aircraft* owner's mechanic later installed the propeller. One of the three boots came off (during engine operation), resulting in a dent on the aircraft fuselage after approximately seven hours of flying.

Questioning our mechanic, who installed the boots, revealed no deviations in procedures (which might have occurred) during installation. It was determined the glue used for the installation was within shelf life parameters.

Our facility visited the location of the aircraft and installed a new boot on the propeller. We observed that the adhesive adhered to the area of the blade where the boot came off did not separate from the blade. The thrown boot was not recovered and could not be inspected.

The boots on this propeller are long strap boots. The boot strap on this type of installation must be positioned within the spinner such that the centrifugal forces during operation do not push the strap through the gap between the spinner cut-out and the propeller blade. If the strap is improperly positioned during spinner installation, it is possible for the strap to come out of this gap, resulting in separation of the boot from the blade. When properly positioned, the strap remains contained within the spinner. Similarly, should the propeller be run up on the ground without the spinner installed, the boots can separate from the blade.

Since the two remaining boots were tightly attached, it is likely the boot strap was not positioned properly during the repairs. *(It would appear the supplied part's serial number is actually the Goodrich P/N: 4E1188-3. The FAA Service Difficulty Reporting System (SDRS) database returns two additional boot reports for this number, both on Piper PA31 aircraft. A couple of photos of that strap/spinner containment process might have earned you rights to demand lunch from me! Next time, just send a scanned copy of your report direct to my personal mail with attached jpeg photos: daniel.roller@faa.gov.)*

Part Total Time: 7.0 hours (approximately).