

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: JUN 1 1981

Forwarded to:

Honorable J. Lynn Helms
Administrator
Federal Aviation Administration
Washington, D.C. 20591

SAFETY RECOMMENDATION(S)

A-82-51

On March 27, 1981, a deHavilland DH-114 airplane, operated by Puerto Rico International Airlines (PRINAIR), was on a regularly scheduled flight when a passenger seated next to a window was struck by a piece of a bolt that had pierced the window from outside the airplane. The passenger was not injured and did not advise the crew of this occurrence until after the flight had landed at its intended destination. Investigation of this incident by the National Transportation Safety Board disclosed that the broken bolt was part of a propeller blade inner clamp bolt, Part Number A282, that had separated from the No. 2 propeller's blade clamp assembly. PRINAIR had been experiencing numerous failures of the A282 bolt on its DH-114 airplanes for some time and had previously alerted the Federal Aviation Administration (FAA) and the manufacturer, Hartzell Propeller, Inc., of the problem. The FAA issued Airworthiness Directive 77-14-07 as an interim solution, which required that the propeller blades and clamps be inspected every 32 flight hours on applicable DH-114 airplanes.

Since the PRINAIR incident of March 27, 1981, Hartzell has changed the manufacturing process of the A282 bolt and has issued Bulletin No. 130, dated October 23, 1981, which instructs that all old A282 bolts installed on applicable propellers of reciprocating engines be removed and replaced with the new bolts when any of the propellers are returned to an FAA authorized propeller repair facility for service or overhaul. PRINAIR has complied with this bulletin for its DH-114's and has noted a significant improvement with the new A282 bolts.

A review of FAA Service Difficulty Reports processed over the past 5 years has revealed that although the majority of A282 bolt failures had occurred on PRINAIR DH-114 airplanes, there have been a number of A282 bolt failures on other types of aircraft which use the applicable Hartzell propellers. Since the A282 bolt failures have been associated mainly with PRINAIR DH-114 airplanes, operators of other applicable aircraft types may not be aware of the A282 bolt problems or the Hartzell bulletin. Therefore, to provide further dissemination of this information to all concerned operators, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Include in the next monthly issue of the General Aviation Airworthiness Alert (Advisory Circular 43-16) information concerning failure of the Hartzell propeller A282 inner clamp bolts and the availability of a new bolt as a replacement. (Class II, Priority Action) (A-82-51)

BURNETT, Chairman, GOLDMAN, Vice Chairman, McADAMS and BURSLEY, Members, concurred in this recommendation.


By: Jim Burnett
Chairman