
Safety in the event of a Failed or Released Propeller Blade

BACKGROUND

There have been several accidents which serve to illustrate the safety threat posed by a failed or released propeller blade. Some examples are listed below. No certification standards currently address this safety threat.

Hydro-Quebec, Convair CV-580, 2009

"After separating from the engine, the left propeller blades entered the fuselage and damaged an unoccupied seat."

PenAir Flight 3296, Saab 2000, 2019

"This caused the port-side (left) propeller to shatter, sending debris and large pieces of the propeller blade into the fuselage. One of the blades was found inside the cabin."

Airlink, Jetstream 41, January 2022

"After a bird strike the propeller blade entered the cabin."

POSITION

IFALPA believes that aircraft design requirements should minimize the hazards in the event that a propeller blade fails or is released by a hub failure. The possible impact of a failed or released blade with the aircraft should not result in a cabin penetration and any imbalance created must not preclude a safe continuation of the flight. The protection of the occupants and the safety of the aircraft structure and vital systems should be ensured by design.