



Safety recommendation no. 548

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Safety deficit	<p>On 4 August 2018 at 16:10, an historic Junkers Ju 52/3m g4e commercial aircraft, registered as HB-HOT and operated by Ju-Air from Locarno airport, took off on a flight to Dübendorf military airfield. The plane collided approximately vertically with the terrain at 16:56 about 1.2 km south-west of Piz Segna. All 20 people on board the plane were killed in the accident. The plane was destroyed.</p> <p>Considerable corrosion damage was found on the wreck of the HB-HOT on the spars, hinges and fittings of the wings and in the area of the cabin floor plate. Two of the three engines were equipped with newly manufactured cam disks which had defects. Given the same year of construction and similar operating mode and operating hours, it is expected that the sister aircraft, HB-HOP and HB-HOS, have similar defects.</p>
Safety recommendation	<p>The Federal Office of Civil Aviation (FOCA), in cooperation with the flight operator, should take appropriate measures to ensure that the sister aircraft, HB-HOP and HB-HOS, are inspected for corrosion damage and defects in system components.</p>
Addressees	BAZL Bundesamt für Zivilluftfahrt; BAZL Bundesamt für Zivilluftfahrt
Stage of the implementation	<p>In a letter dated 28 March 2019, the Federal Office of Civil Aviation (FOCA) announced that it supported the safety recommendation. It has withdrawn the certificate of airworthiness for the two aircraft, HB-HOS and HB-HOP, until further notice. On the basis of the findings of the accident investigation and the Ageing Aircraft Programme, the FOCA has already placed requirements on Ju-Air regarding engineering support, the establishment of an inspection programme and the operation and maintenance of the aircraft. The relevant inspections and the resulting findings must be carried out and rectified before a permit to fly is issued.</p> <p>In the meantime, several audits and an inspection of Ju-Air by the FOCA have resulted in Ju-Air not being allowed to continue its operations under Part 145 due to serious and systemic deficiencies. With the suspension of the Part 145 certificate, Ju-Air had to stop all work on its aircraft with immediate effect.</p> <p>The FOCA will determine how to proceed, including on the basis of the results of the pending Part 145 inspections.</p> <p>In the FOCA's view, there are growing indications that the use of historic aircraft or aircraft without a type certificate (TC) holder entails increased risks. On the one hand, the aircraft's fuselage, wing structures and systems were not designed for indefinite use and should therefore only continue to be operated in compliance with an ageing aircraft programme. On the other hand, aircraft without a TC holder lack an essential function for maintenance of airworthiness.</p>

The FOCA is currently examining whether to implement measures to ensure flight safety in the absence of a TC holder. The following points are being considered as safety measures. However, depending on further findings, this list may be expanded:

- Banning the carriage of passengers or limiting their number
- Introducing measures to increase the risk perception of potential passengers
- Restricting flyovers of populated areas or critical infrastructure
- Requiring maintenance to be carried out in an approved maintenance organisation similar to Part 145
- Introducing a continuous maintenance management system based on CAMO
- Integrating a safety management system for maintenance
- Developing and implementing the necessary engineering competencies
- Integrating a quality inspection system for manufacturing activities
- Introducing an ageing aircraft programme

**Investigation report concerning
the safety recommendation**

Final report
Schlussbericht
Rapport final
Rapporto finale
