BAAI

BUREAU OF AIR ACCIDENT INVESTIGATION

This investigation has been conducted in accordance with *Annex 13 to the ICAO Convention on International Civil Aviation*, *EU Regulation No 996/2010* and *The Civil Aviation (Investigation of Air Accidents and Incidents) Regulation; Legal Notice 16 of 2013*.

Under these Regulations, the sole objective of the investigation of an accident or incident is the prevention of accidents and incidents in the future. It is not the purpose of this investigation to assign fault or blame and the reporting process should not be used to determine liability.

BUREAU OF AIR ACCIDENT INVESTIGATION

Basic Report

Classification: Accident

OCCURRENCE FILING INFORMATION

- File Number 10022022
- Responsible entity BAAI
- Occurrence status Accident (nose-wheel detached from the aircraft on landing)

WHEN

- Date 10th February 2022
- Local time 1420 LT
- UTC 1320 UTC

STATE OF OCCURRENCE: MALTA

- Location RWY 23, Luqa Airport, Malta.
- Latitude N3551415
- Longitude E01428574

SEVERITY

- Highest damage to aircraft Nose-wheel failure after landing
- Injury total Nil
- Third Party Damage Nil

INJURY

- Fatalities Nil
- Serious Nil
- Minor Nil
- None ^^^

REPORTS

- Investigation entity BAAI
- Investigation type *Annex 13 investigation*
- Investigation delegated Nil
- Final report date This report will be the final report
- List of organizations/entities/people informed:

    1. Pilot of aircraft involved in the accident
    2. European Flight Academy
    3. Transport Malta CAD
    4. Hon. Minister Ian Borg
    5. Permanent Secretary of MTIP Mr Johan Galea
    6. ……
    7. ……

AIRCRAFT DESCRIPTION

- Registration 9H-LQA
- State of Registry Malta
- Flight Number Falcon 5E
- Manufacturer Tecnam
- Model P92 Echo JS
- Year built N/A
- Serial Number N/A
- Aircraft category Single Engine Category ''A''

- Propulsion type — Propeller Driven Aircraft
- Engine manufacturer — ROTAX 912 ULS
- Number of engines — One
- Maximum takeoff mass — 535Kgs
- Maximum landing mass — 535Kgs

AIRCRAFT OPERATOR

- Operator — European Pilot Academy
- State of operator — Malta
- State of registration — Malta
- Type of operation — Instruction/Private

ITINERARY

- Last departure — Malta
- Planned destination — Malta
- Actual landing airport — Luqa Airport, Malta
- Flight phase of occurrence — Landing

NARRATIVE

- ***Narrative language: English***

A Tecnam P92 **Echo** JS light aircraft, **9H-LQA**, crashed on the RWY at Luqa Airport during landing. The aircraft took off without incident from RWY 23 for a local flight and subsequently requested ATC clearance to join the RWY 23 circuit for landing. ATC cleared the aircraft to execute the approach and landing as requested.

A stable approach was followed by a 3-point touchdown which resulted in the aircraft bouncing off the RWY and subsequently making a hard landing with the nose gear touching the RWY surface first. Although the debris found on the RWY indicate that the nose wheel assembly was damaged during the second touchdown, the aircraft was able to maintain (approximately) the runway centreline until the nose-wheel separated from the aircraft (Fig. 1). Examination of the airplane by the BAAI Chief Investigator revealed substantial damage to the nose-wheel assembly and the propeller and minor damage to the front underside of the aircraft (Fig. 1 & 2). No Injuries or damage to third party property was noted.

Weather conditions at the airport were good, with visibility reported to be 10,km or more while wind was light and variable.

Fig 1 Nose-wheel assembly


Fig. 2 Damage to the propellers and underside of the aircraft

PROBABLE CAUSE

- ***Narrative language: English***

Video surveillance of the occurrence indicates that the aircraft approached the runway at the appropriate angle and aimed for the correct touchdown zone on the runway. A close examination of the video surveillance footage reveals that the probable cause of the accident, was that the flare was too low and too shallow leading to a hard and flat landing. The hard impact with the RWY resulted in a series of bounces which damaged the nose-wheel rendering the aircraft's nose-wheel unusable (*see appendix 1 for correct flare procedure*). After the first impact, the aircraft continued down RWY 23 for approximately 220 meters and *(more or less*) maintaining the centreline until the nose-wheel detached (*Sheared off*) from the aircraft causing the aircraft to skid to the right on the underside of the fuselage and the propeller to come in contact with the RWY.

Fig. 3 Showing touchdown point and aircraft final position on RWY 23

Fig. 4 Front view of the aircraft

The pilot left the aircraft after correctly completing the ''Securing of Aircraft and Evacuation Procedure after an Accident''.

RECOMMENDATIONS

- ***Narrative language: English***

Nil

Approved by:

Capt. Frank Zammit
Chief Investigator
Investigations Unit

Appendix 1

The FAA's Airplane Flying Handbook definition of a Flare; *A slow, smooth transition from a normal approach attitude to a landing attitude, gradually rounding out the flightpath to one that is parallel with, and within a very few inches of, the runway*.