

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.

> 9H-VLT runway excursion at Malta International Airport 4th February 2021

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1. General Information.

Location: Malta International Airport	Accident Number: BAAI/SIR-003-2021
Date & Time:	Registration:
4 th February 2021,	9H-VLT
Aircraft:	Aircraft Damage:
Tecnam P2000 JF	Unknown
Defining Event:	Injuries:
Runway excursion during take-off from RWY23	No injuries Reported

2. Synopsis

2.1Tecnam P2002JF registration 9H-VLT was on a dual training flight on the morning of 4th February 2021. During the flight, a number of circuits were flown by the student pilot. The aircraft was then taxied to Apron 3, where the flight instructor disembarked to allow the student pilot to continue solo flying training.

2.2The student pilot taxied the aircraft to RWY 23 via TWY R and initiated the take-off from the intersection. The take-off was aborted late in manoeuvre and, during deceleration, the aircraft veered off the runway to the left on the grass.

2.3The Bureau of Air Accident Investigation (BAAI) received notification of the incident from the operator of the aircraft on 5th February 2021

3. Factual Information

Aircraft and Owner/Operator Information

Aircraft Make: Tecnam

Model/Series: P2002JF Sierra

Aircraft Owner: Falcon Alliance

Registration: 9H-VLT

Aircraft Category: Single engine Airplane

Year of Manufacture: 2004

Landing Gear Type: Tricycle

Seats: 2

ELT: Not installed. A portable PLB was on board.



Fig. 1: Overview of the aircraft dimensions

Meteorological Information

Conditions at Accident Site: Visual conditions clear Condition of Light: Day Lowest Cloud Condition: N/A Lowest Ceiling: N/A Wind Speed/Gusts: 9 – 10 kts Forecast/Actual: Measured Wind Direction: Approximately 202.5 degrees (SSW) Forecast/Actual: Reported Altimeter Setting: N/A Temperature/Dew Point: N/A Precipitation and Obscuration: None

Airport Information

Airport: Malta International Airport Geographical coordinates: N 35°51'/E 014°28' Airport Elevation: 297ft (Threshold Runway 05) Runway Used: RWY 23 Runway Heading: 232° Runway Surface Type: Asphalt Runway conditions: Dry Runway Length/Width: 2377m/45m

On-Site Evidence

3.1 The BAAI was not called onsite following the incident and therefore no on-site information could be provided. A separate inquiry into the accident site management was launched and the findings are disclosed in a separate confidential report.

4. Inquiry

4.1 This investigation is reporting the findings based on two interviews that were held: one with the student pilot and the other with the school instructor.

Following interviews, the subsequent chain of events could be put together:

- The student has just under 30 hours of flying experience. On the day the student performed a number of touch and go-s with his instructor, following which he was cleared for a solo flight. The aircraft was aligned with RWY 23 and ready for takeoff.
- 2. Full power was applied but during the take-off run the student felt the stick shake and abnormal vibrations.
- 3. As soon as the nosewheel lifted off the ground the student decided to abort the flight.
- 4. The student applied brake and right rudder but felt that the rudder was not effective. The aircraft still suffered a runway excursion to the left of the runway.
- 5. The pilot recounted that he attempted to hold the stick back to protect the propeller.

4.2 On the other hand, the instructor had no visual of the accident but realized that something must have gone wrong once he saw the fire engines proceeding to the take-off RWY. The instructor got in touch with the student pilot through his mobile phone and inquired if the aircraft had suffered any damage. Despite the fact that the student-pilot did not inspect the aircraft, and was not qualified to assess aircraft damage, the student pilot replied that the aircraft suffered no damage.

4.3During the interview the instructor commented that the aircraft requires a full right rudder to counter the effect of the slipstream, but the student may have used the ailerons instead. The instructor was questioned if the student was ready to go solo, with the instructor confirming that the student was ready to go solo and that the pilot "ticked all the boxes".

4.4 This investigation has determined that causal factor leading to the accident is inadequate flying technique to control the aircraft due to lack of experience and flight preparation. No aircraft mechanical malfunction was reported in the aftermath of the accident and therefore this investigation concludes that the runway excursion is a result of the pilot losing control of the aircraft during take-off.

4.3 During the two interviews it emerged there was a serious lack of awareness on procedure for securing an aircraft following an accident, both from the student and the instructor. In this case the student remained in the aircraft and the engine was left running all along. Even though the instructor managed to get in touch with the student pilot shortly after the incident, this was a missed opportunity to safely secure the aircraft and prevent possible further consequences.

Note: Weather is not considered to have contributed to the accident – Surface wind 200/10 Visibility more than 10 Kilometers.

5.0 Recommendations

5.1 The following recommendations are being made:

To flying schools:

Recommendation 1

Due to a number of occurrences in which pilots demonstrated difficulty in following the correct emergency procedure after an accident, it is becoming evident that student pilots are lacking training on safety and emergency aspects. Before being released for the first solo flight, it is suggested that a student pilot should be able to demonstrate that he or she can safely carry out the emergency procedures such as securing and vacating an aircraft following an accident and how to deal with other accidents. For clarification, the procedure for vacating an aircraft is listed below.

Procedure for securing and vacating an aircraft after an accident

- Stop the Aircraft and put parking brake "ON".
- Switch off the engine.
- Switch off fuel shutoff Valve.
- Switch off electrics by switching off the master switch.
- Check that all passengers have left the aircraft.
- Leave the aircraft preferably in the up-wind direction.

Recommendation 2

To ensure that student pilots are suitably briefed on procedures and best practices following the occurrence of an accident or incident, including those relating to moving the aircraft.

During the interview it was noted that it was challenging to keep a fluent conversation in English with the student pilot. This may have serious consequences in communication between pilot and ATC particularly in high workload or stress situations.

To the Civil Aviation Authority:

Recommendation 3

• To ensure that the students have an adequate level of spoken English and able to make use of the right ATC terminology. Despite that the student had the required certification,

there was an evident difficulty to communicate. The CAA is encouraged to ensure that the required standard is reached.

ABBREVIATIONS

Air Navigation Service Provider ANSP -ATC Air Traffic Control -Air Traffic Control Officer ATCO -BAAI Bureau of Air Accident Investigation -Rescue and Fire Fighting Service RFFS -RWY Runway -Taxiway TWY -