



AIB BULLETIN

NCAT/2014/06-003

Accident Investigation Bureau

Report on the Incident involving a Tampico Club TB-9 Aircraft with nationality and registration marks 5N-CBB owned operated by Nigeria College of Aviation Technology (NCAT) Zaria which occurred at Zaria Aerodrome, Kaduna State, Nigeria On 18th June, 2014.



This report was produced by Accident Investigation Bureau, Murtala Muhammad International Airport, Ikeja; Lagos. The report is based upon the investigation carried out by Accident Investigation Bureau, in accordance with, Nigerian Civil Aviation Act 2006 and Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2019.



INCIDENT

Aircraft type:	Tampico Club TB9
Nationality and registration marks:	5N-CBB
Number and type of engine:	1 Lycoming 0-320-D2A Piston Engine
Year of manufacture:	1998
Registered owner:	Nigerian College of Aviation Technology (NCAT), Zaria
Operator:	NCAT, Zaria
Manufacturer:	DAHER SOCATA
Serial number:	1846
Date and Time of incident:	18th June, 2014 at 14:26 h Local Time
Location:	Zaria Aerodrome, Kaduna State, Nigeria. Coordinates, 11 ⁰⁰ 7'52.41"N, 41 ⁰⁰ 8'34"E at an elevation of 655 m
Type of flight:	Training
Aircraft information:	The aircraft was manufactured by DAHER SOCATA, France in 1998 and is certified for a minimum crew of single pilot operation. The aircraft had accumulated 3720.6 Airframe hours when the incident occurred.
Persons on board:	Crew – 1 Passenger – None
Injuries:	Crew – None Passenger – None
Nature of damage:	The right wing skin at the root end was damaged, rivets on the affected right wing were shifted, dents on the right wing flap, and two approach lights were also damaged.
Pilot licence:	Student Pilot Licence (SPL)



Pilot age:	24 years
Flying experience:	66:00hrs
Type of fuel used:	Avgas

SYNOPSIS

Accident Investigation Bureau (AIB) was notified by Nigerian College of Aviation Technology (NCAT) Zaria of the serious incident involving a TB9 (trainer) aircraft, with registration 5N-CBB belonging to the College, which occurred at Zaria Aerodrome on 18th June, 2014. Investigators were dispatched to the incident site the following day.

At 1337hrs 5N-CBB, took-off on runway 24 for a cross country flight to Kaduna with a Student pilot (SP) onboard.

On the return leg to Zaria, the SP decided to practice short field landing on runway 24. At 1426hrs, the aircraft landed on the grass about 50ft before the threshold of runway 24.

Thereafter, the SP taxied the aircraft to the apron and parked, but the incident was not reported to the relevant authorities. The aircraft was slightly damaged. The incident occurred in day time.

Two Safety Recommendations were made.



HISTORY OF THE FLIGHT

On 18th June, 2014 a TB-9 trainer aircraft with registration 5N-CBB, owned and operated by Nigerian College of Aviation Technology (NCAT) Zaria, with a Student Pilot (SP) onboard, departed Zaria to Kaduna as a second solo flight.

Prior to the incident flight, the SP and the Flight Instructor (FI) went on a dual cross country to Kaduna. Upon successful completion of the exercise, the FI approved the SP for a solo cross country.

At 1337hrs 5N-CBB, took-off to Kaduna on runway 24 and the flight was uneventful.

During its final approach at Zaria aerodrome, 5N-CBB was cleared to land runway 24. At 1426hrs, the SP landed the aircraft on the grass about 50ft before the threshold of runway 24.

According to the SP, he intended to practice a short-field landing.

After landing on the grass, the aircraft was taxied to the apron and parked. The incident was not reported to the relevant authorities. The aircraft was slightly damaged. The incident occurred in day time.

DAMAGE TO AIRCRAFT

The damage to the aircraft was noticed by the maintenance engineer during pre-flight inspections the next day. The nature of the damage sustained by the aircraft were dent on the right wing skin at the root end, cuts on the right main landing gear, rivets on the affected right wing were shifted and dents on the right wing flap.



Figure 1: Dent on the right wing skin at the root end.

OTHER DAMAGE

Two approach lights were damaged.



Figure 2: Damaged approach lights



ANALYSIS

Prior to the incident flight, the SP and the FI were on a dual cross country assessment flight to Kaduna International airport. Upon successful completion of the exercise, the FI approved the SP for a second solo cross country. The approval to go on a second solo flight is an indication that the SP meets the minimum requirements set for any SP to demonstrate before he/she is cleared for a second solo flight in accordance with NCAT Flying School Procedures Manual (FSPM).

The aircraft was maintained in accordance with NCAT's approved maintenance program. There was no evidence of any defect or malfunction in the aircraft that could have contributed to the incident. The reported wind was calm therefore, neither technical nor wind was a factor to the incident.

The SP was practicing a short-field landing. However, for a short field landing, the pilot must have precise, positive control of the rate of descent and airspeed to produce an approach that clears any obstacle, resulting in little or no floating during the round out and also permit the aircraft to stop within the shortest possible distance. The procedure generally involves the use of full flaps and requires that the final approach started from an altitude of at least 500 ft higher than the touchdown elevation, with the appropriate speed. After extending full flaps, the pilot should simultaneously adjust the power and the pitch attitude to establish and maintain the proper descent angle and airspeed. A coordinated combination of both pitch and power adjustments is required.

During the post incident interview, the SP was unable to explain the circumstances that led to the aircraft landing 50ft before the threshold of runway 24. This incident indicates poor judgment and lack of aircraft handling techniques.



FINDINGS

The investigation revealed the following:

1. The aircraft had a valid certificate of airworthiness (C of A).
2. The SP had a valid licence and medical.
3. Prior to the incident flight, the SP and the FI went on a dual cross country flight to Kaduna.
4. The SP intended to practice a short-field landing.
5. The aircraft landed on the grass 50ft before the threshold of runway 24.
6. The SP taxied and parked the aircraft at the apron without reporting the incident to the relevant authorities.



SAFETY RECOMMENDATIONS

Safety Recommendation 2020-029

Nigerian College of Aviation Technology should include into its Flying School Procedure Manual requirement for mandatory occurrence reporting by student pilot.

Safety Recommendation 2020-030

Nigerian College of Aviation Technology should include into its Flying School Procedure Manual that any unplanned exercise/maneuver that the Student Pilot wishes to practice should be discussed with the Flight Instructor.