The sole objective of safety investigations is the prevention of future accidents and incidents.

The Commission does not apportion blame or liability. The investigation is independent and separate from any judicial and administrative proceedings.

Any use of the Resolution for any purpose other than the prevention of aviation accidents and incidents may lead to wrong conclusions and interpretations.

FINAL REPORT

of the State Commission on Aircraft Accidents Investigation

of 7-th October 2025

2024-0055

OCCURRENCE NUMBER

Socata TB-9 Tampico airplane, SP-TAI

19 July 2024, Bagicz (EPKG)

ADRM: Aerodrome

CTOL: Collision with obstacle(s) during take-off and landing

This Report was issued by the State Commission on Aircraft Accidents Investigation on the basis of information available on the date of its issue.

This Report presents the circumstances of the aviation occurrence concerned, as well as its causes, contributing factors and safety recommendations, if issued.

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1. History of the flight

On 19 July 2024 on the Bagicz (EPKG) aerodrome familiarization flights with a SocataTB-9 Tampico airplane were organized as part of DTO[1]. At the same time preparations for Sunrise Festival were taking place, an event that was supposed to start in the afternoon of the same day. In relation to the preparations, the event area had been fenced off with barriers placed near the southern edge of the airstrip.

After completing the first flight with three passengers on board, a pilot was supposed to complete another flight with two passengers. The passengers occupied their seats at the back of the cabin. After backtracking through the airstrip 25 threshold, the pilot turned 180° and the plane commence its takeoff. During the roll-on take-off at the speed of approximately 50 kt, the pilot lifted the front wheel and the airplane nose lifted up over the recommended angles for start and take off. The pilot made an attempt to decrease the nose lift angle, but the airplane did not react and a while later started losing direction towards the left. The airplane collided with the fence placed near the airstrip edge.

During the occurrence the pilot and passengers did not suffer any injuries and the airplane got damaged.

2. Relevant information

2.1. Pilot's information

The airplane's pilot, male, 28, held:

- CPL (A) airplane pilot license with SEP(L) and FI rating registered and within validity period;
- class 1 aero-medical certificate within validity period;
- general flight time – 977 h 32 min;
- type flight time – 54 h 18 min;
- flight time in 2024 – 433 h 32 min;
- completed flights on 12 airplane types.

2.2. Aircraft

4-seater light airplane, powered by the Lycoming O-320-D2A piston engine, 119 kW (160 KM) power, equipped with a constant pitch propeller, with tricycle landing gear.
Fuel – AVGAS
Empty/take-off mass: 656 kg/1060 kg
Fuel reserve: 150 l

Manufacture year – 1982

Serial and factory number – 203

[1] Declared training organization

Flight time since the beginning of service life (excluding flights on the occurrence day) – 4175 h[2]

The airplane was airworthy.

The airplane held all technical documents necessary to complete the flight during the validity period.

The latest service works were completed on 24–27 June 2024.

The airplane was covered by the OC and AC insurance. The pilot was not included in the insurance policy as the pilot of the insured airplane.

2.3. Airplane balancing

For calculations the passenger weight provided by them in their statements was taken into account:

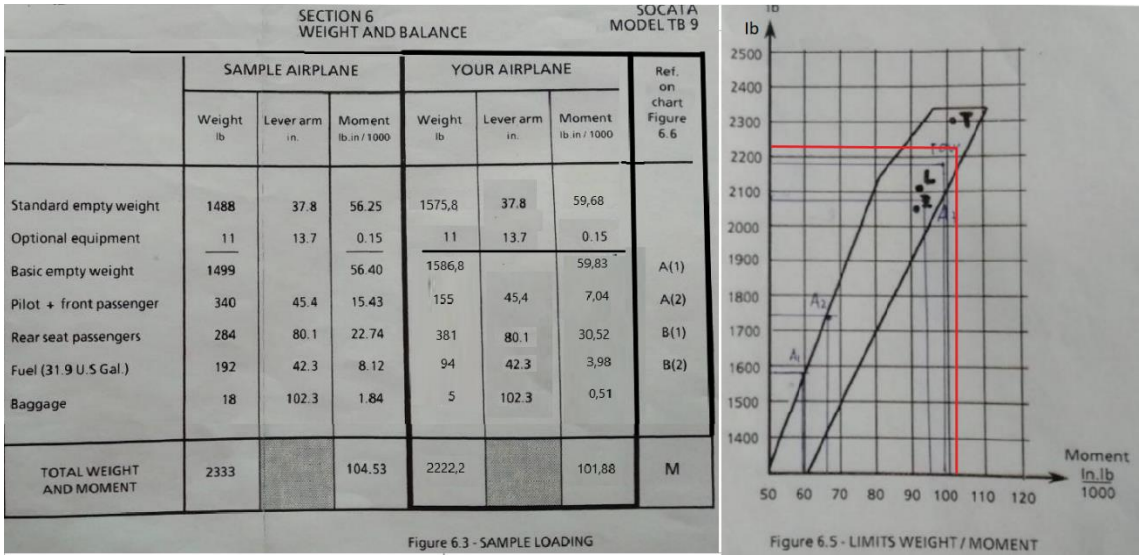
- male passenger – 95 kg;
- female passenger – 78 kg.

For pilot's calculations for balancing a lowered weight was adopted:

- male passenger – 80 kg;
- female passenger – 75 kg

Based on the passenger statements, the pilot did not ask them about their weight.

The airplane was balanced towards the back, but it was within the acceptable range (Fig. 1).



SECTION 6
WEIGHT AND BALANCE

SOCATA
MODEL TB 9

	SAMPLE AIRPLANE			YOUR AIRPLANE			Ref. on chart Figure 6.6
	Weight lb	Lever arm in.	Moment lb.in / 1000	Weight lb	Lever arm in.	Moment lb.in / 1000	
Standard empty weight	1488	37.8	56.25	1575,8	37.8	59,68	
Optional equipment	11	13.7	0.15	11	13.7	0.15	
Basic empty weight	1499		56.40	1586,8		59,83	A(1)
Pilot + front passenger	340	45.4	15.43	155	45,4	7,04	A(2)
Rear seat passengers	284	80.1	22.74	381	80.1	30,52	B(1)
Fuel (31.9 U.S Gal.)	192	42.3	8.12	94	42.3	3,98	B(2)
Baggage	18	102.3	1.84	5	102.3	0,51	
TOTAL WEIGHT AND MOMENT	2333		104.53	2222,2		101,88	M

Figure 6.3 - SAMPLE LOADING

Figure 6.5 - LIMITS WEIGHT / MOMENT

Fig. 1. Balancing table and chart.

2.4. Occurrence analysis

[2] According to hourmeter.

Videos recorded with phones by the passengers were used for analysis.

Upon asking the pilot if he should sit in the front of the airplane, the passenger was told that he can sit in the back. The passengers occupied their seats at the back of the cabin. Around 11:55 hrs[3] the pilot started taxiing for the second flight that was supposed to last 15 minutes. During taxiing the flaps were in landing position – large flaps (Fig. 2).

Fig. 2. Visible flaps deflected into the landing position [source: passenger]

After backtracking to 170 m away from the airstrip 25 threshold, the pilot turned 180° and the plane commence take off which initially went correctly. After travelling 220 m with the speed of approximately 50 kt, the airplane's nose lifted up more than the recommended value and simultaneously the back side of the airplane touched the airstrip and the stalling signal was emitted (Fig. 3).

[3] All times in the report according to LMT (UTC + 2 h)

Fig. 3. View of the lifted up hood and airspeed indicator [source: female passenger]

The pilot tried to correct the pitch angle, but as he stated the airplane did not react to releasing the control wheel. During the analysis of recordings made by the passengers it was determined that the airplane take-off was probably conducted with the flaps in landing position, however during the conversation, the pilot claimed that the flaps had been set to the takeoff position before takeoff. The PKBWL was unable to determine the position of the flaps during takeoff. The airplane being balanced towards the back in combination with the flaps being set in the landing position and the trim tab in neutral position (Fig. 4) might resulted in high moment lifting the nose of the airplane up.

Fig. 4. The figure shows the trimming tab position [source: male passenger]

The airplane started slightly loosing direction to the left which lasted for 10 s. A second before hitting the fence the pilot decreased the engine speed to the minimum.

The videos recorded by the passengers do not show the pilot trying to correct the roll-on direction, however during the conversation he claimed that he pushed the right rudder pedal as far as it would go, but the airplane did not respond.

After the 550 m of take-off roll the airplane collided with the fence placed at the southern airstrip edge. The occurrence sketch is presented in Fig. 5. During the inspection of the aircraft after the occurrence, damage to the left-side elevator attachment tab was found, among other things, but the PKBWL was unable to determine whether the damage occurred before the aircraft collision with the barriers at the edge of the runway.

Fig. 5. Sketch of the occurrence.

During the occurrence the pilot and passengers did not suffer any injuries, the fence got damaged and the airplane got seriously damaged (Fig. 6).

Fig. 6. The airplane after the occurrence [source: Internet]

3. Conclusions

3.1. Findings

1) The pilot held ratings necessary to make the flight.
2) The airplane was airworthy and held the necessary technical documents.
3) The airplane was covered by insurance.
4) The airplane was balanced towards the back, but it was within the acceptable range.
5) The airplane collided with the fence placed on the southern side of the airstrip.
6) During the occurrence nobody got injured.
7) The airplane got seriously damaged.

3.2. Causes and contributing factors

1) Consent to making flights from the airstrip with a fence placed on the southern side.
2) Having the passengers sit in the back which caused the airplane to be balanced towards the back.
3) Not using the checklist before take-off.

4. Safety recommendations

None

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