



State Commission on Aircraft Accidents Investigation
ACCIDENT 2023-0030
RESOLUTION
of 18th August 2023

Type and model of aircraft:	Aeroplane, Cessna C-182L Skylane
A/C registration marks:	D-EDYP
Date of occurrence:	25th June 2023
Place of occurrence:	EPJG (Jelenia Góra)

After analysing the investigation material, the State Commission on Aircraft Accidents Investigation (PKBWL) determined that:

1. The course of the occurrence was as follows:

On 25th June 2023, individual and tandem parachute jumps were performed from a Cessna C-182L aeroplane operating from the Jelenia Góra aerodrome (EPJG). In the third flight, the jumpers left the aircraft at 3000 m AGL¹ over Góra Szybowcowa in Jeżów Sudecki. The aeroplane pilot performed a descent to the north of the EPJG, entering the right circuit to RWY 28, following which he commenced a long and low approach. While configuring the aeroplane for landing, the pilot realised that the engine had stalled and did not respond to throttle movements. In order to extend his range in a gliding flight, the pilot retracted the flaps and continued the flight towards the aerodrome. At ca. 700 m before the runway threshold, the aeroplane caught on a tree with its left wing. It lost its forward speed and, making an uncontrolled $\frac{3}{4}$ horizontal turn, hit an earthen embankment flat and vertically at 13:15 hrs LMT². After that, it fell into a water reservoir, which was ca. 1 m deep, located within a water intake for the City of Jelenia Góra. The aeroplane's wings and tail protruded above the water surface, whereas the cabin was flooded and the engine was completely submerged (Fig. 1).

¹ AGL – Above Ground Level

² All time points provided in this Resolution are expressed as Local Mean Time (LMT). LMT on the day of the occurrence was LMT=UTC+2h, where UTC means is Universal Time Coordinated.



Fig. 1 The Cessna C-182L Skylane after the collision with the tree, embankment and water surface of the reservoir [source: the Police]

The pilot got out of the cabin on his own. Apart from grazes on his head, arm and back, the pilot did not sustain any other visible external injuries, although he complained about a strong pain in his spine. He was taken to hospital for diagnostic examination. Tests demonstrated that the pilot had not been under the influence of alcohol or narcotic drugs.

Emergency rescue services arrived on the scene of the accident, and a specialist crane was called to recover the wreckage.

The aeroplane's ELT³ activated during the occurrence, and the signal was received by the ARCC⁴ as well as airliners flying over the EPJG area.

The aeroplane was destroyed due to the collision with obstacles.

Prior to the PKBWL arrival, at the request of the commander of the law enforcement services on site, due to fears of possible contamination of the water intake with the aeroplane's operating fluids, the IIC⁵ permitted urgent recovery of the wreckage from the reservoir. The on-site inspection demonstrated that the fuel tank in the aeroplane's right wing was empty and without any fuel residues, while the fuel tank in the left wing contained a residual, hardly noticeable quantity of fuel. The fuel distributor switch in the cabin (the main valve) was set to the intake of fuel from the right-wing tank. The damage to the propeller indicated that the engine was not running during the occurrence.

Neither the premises of the water intake nor the water were contaminated.

³ ELT – Emergency Locator Transmitter

⁴ ARCC – Aeronautical Rescue Coordination Centre

⁵ IIC – Investigator-in-Charge

Late in the evening, the entire aeroplane was transported to the EPJG, where it was secured by the police.

The following day, the IIC repeated a detailed inspection, including levelling the aeroplane to cause any residual fuel to flow towards drain plugs/wing drainage holes. No fuel was found in the tanks. No fuel flowed out after unscrewing the drain plugs located on the underside of the wings. After releasing the drain valve on the fire wall of the engine compartment, no fuel flowed out at any of the fuel valve switch settings. The aeroplane's fuel system was not damaged, and both fuel tanks remained tight.

The following was established in the course of the investigation:

- 1) The accident aeroplane was piloted by a male aged 30 years, holder of a PPL(A)⁶ licence with a valid SEP(L)⁷ rating and a valid Class II aero-medical certificate without restrictions.
- 2) The pilot's flight experience included ca. 134 h airframe TT⁸ on 5 aeroplane types, including 1 flight as PIC⁹ on the C-182L, duration of 5 minutes, on circuit, performed 12 days prior to the occurrence. The pilot also held a night rating.
- 3) The pilot was neither trained nor experienced in performing flights with parachute jumpers.
- 4) The pilot said that after his arrival at the aerodrome on the day of the occurrence, he was given the aeroplane keys by the owner. The pilot then performed a pre-flight inspection and added car fuel to the aeroplane fuel tanks three times, i.e. before each flight. Each time, the pilot added 30 l of fuel.
- 5) The pilot said that according to his estimates, the aeroplane's tanks contained ca. 20 l of fuel during each pre-flight inspection. In view of the information provided in Point 4, it must be assumed that the pilot had a total of 110 l of fuel at his disposal.
- 6) The pilot noted down the aggregate flight time of 1 h 22 min, which corresponded to the theoretical consumption of 102.5 l of fuel (according to the Flight Manual, the fuel consumption in the Cessna C182L is 75 l / h).
- 7) The pilot was not rested before the flights – he spent the night preceding the day of the occurrence in a car driving from the Coast to Jelenia Góra.
- 8) The individual who purported to be the owner, and later on the user/lessee of the aeroplane, did not produce any documents to confirm that status. The individual ran a parachuting business at the EPJG, organising parachute jumps, including in tandem, from the Cessna C-182 L, D-EDYP.
- 9) The aeroplane had a Certificate of Registration issued by an LBA¹⁰ in 2011 to a third party, a Certificate of Airworthiness (unrestricted, issued by an LBA), a valid Airworthiness Review Certificate (issued by a German CAO¹¹), a Noise Certificate

⁶ PPL(A) – Private Pilot Licence (Aeroplanes)

⁷ SEP(L) – Single Engine Piston (Land)

⁸ TT – Total Time

⁹ PIC – Pilot-in-Command

¹⁰ LBA – *Luftfahrt-Bundesamt*, German Federal Civil Aviation Authority

¹¹ CAO – Combined Airworthiness Organisation

(issued by an LBA), a valid aircraft radio station licence, a transponder, an ELT, and a valid third-party liability insurance.

- 10) The aeroplane had a logbook with CRS¹² stickers for 50/100 h maintenance work dated October 2021, and for 100 h maintenance work dated October 2022.
- 11) The aeroplane did not have an assigned Aircraft Flight Manual or any other technical documentation (except for the aforementioned CRSs and the weighing report) such as AMP¹³, maintenance history, AD¹⁴/SB/¹⁵LLP¹⁶ status, list of modifications, EASA 1¹⁷ forms for components, maintenance manuals for the engine, propeller, components, other.
- 12) The last airworthiness review entry in the aeroplane's logbook was dated May 2021.
- 13) The airframe log entries for the propulsion unit included only dates installed in the airframe for:
 - the Continental O-470-R engine in 1998 – i.e. 25 years ago, with TBO¹⁸ for that model being either 1700 h or 12 years;
 - the McCauley propeller in 2008, while the sticker on the propeller showed 2014 as the year of overhaul. The propeller's TBO is 2400 h or 72 months (6 years).
- 14) The aeroplane, registered in Germany, was not notified to the ULC¹⁹ for a permanent stay in Poland in accordance with Journal of Laws No. 94, item 916.
- 15) The parachute jump organiser did not hold an AOC²⁰ for his activity, neither did he produce any documents to evidence SPO²¹ qualifications and authorisations for parachute jumps (in accordance with SPO.GEN.005). What the organiser did produce was only his own valid PJ(D)²² with the TANDEM²³ rating. Despite the IIC's request, he did not provide any video footage from the camera on the accident flight.
- 16) Weather conditions on the day of the accident were good for flying and parachute jumping, and did not play any role in the cause or course of the occurrence.

2. Cause of the occurrence:

The immediate cause of the engine stall was fuel starvation.

The accident (the collision with obstacles on the ground) was caused by the pilot's unawareness of the engine stall in flight (the propeller was only

¹² CRS – Certificate of Release to Service

¹³ AMP – Aircraft Maintenance Programme

¹⁴ AD – Airworthiness Directive

¹⁵ SB – Service Bulletin

¹⁶ LLP – Life Limited Parts

¹⁷ EASA – European Union Aviation Safety Agency

¹⁸ TBO – Time Between Overhaul

¹⁹ ULC – *Urząd Lotnictwa Cywilnego*, Polish Civil Aviation Authority

²⁰ AOC – Air Operator Certificate

²¹ SPO – Specialised Operations

²² PJ(D) – Parachute Jumper License, Class (D)

²³ TANDEM – the rating to perform parachute jumps with a passenger

windmilling) and the incorrectly executed approach (too low, too flat) which prevented reaching the aerodrome in gliding flight.

3. Factors contributing to the aviation occurrence:

- 1) The pilot's inexperience in flying the Cessna C-182L;
- 2) The pilot's inexperience in flights combined with carrying parachute jumpers, including his ignorance of a good practice that suggests execution of the final at a height that guarantees reaching the landing site without engine support;
- 3) The pilot's exhaustion after a sleepless night preceding the day of the accident;
- 4) Chaotic organisation of flights for the purpose of parachute jumps.

4. PKBWL's decision

Acting pursuant to art. 135 item 6 of the Act of 3 July 2002 on the Aviation Law (as amended), the PKBWL has decided to discontinue further investigation into the occurrence concerned for the following reasons:

- 1) the jump organiser did not hold the Air Operator Certificate for commercial SPO operations, i.e. parachute jumps, including in tandem;
- 2) the aeroplane was operated under undocumented rules and in conflict with the rules on operating aircraft in specialised operations.

5. Steps taken

The Commission has notified the President of the Polish Civil Aviation Authority of a suspected violation of Article 211(10)(a) of the Aviation Law Act and has submitted this Resolution to the District Prosecutor's Office in Jelenia Góra.

Investigator-in-Charge

Chairman of the PKBWL

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(signature on original only)

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