Registration No: 1/2017

FINAL REPORT ON THE EXPERT INVESTIGATION OF AN ACCIDENT

of a parachuting accident

Operator: Slovak National Aeroclub (SNA), member of the PK (Parachutist Club) SNA Aeroclub

Organizer of the parachute operation: Aeroclub Dubnica nad Váhom

Accident site, date and time: Slávnica airport 1 May 2017 11:13 UTC

1. Information about the parachutist:

Citizen of the Slovak Republic, aged 41.

2. Injury type and extent, damage incurred:

Injury type and extent: left tibia fracture.

Damage incurred: no damage to the parachute and other mechanisms.

3. Qualifications and experience:

License validity*: until 27 January 2019

Number of jumps: 457

Acquired license: "C"

Instructor license: Instructor

Other data: holder of a valid "Main Parachute Packer" license.

4. Information about the parachute, task and altitude:

Parachute type and serial No: -

Package with harness: WINGS W18 serial No: 11806

Main parachute: SONIC 190 serial No: SC190141007VDF packed for the jump on: 1 May 2017

Reserve parachute: DECELERATOR 180 serial No: 0436 packed on: 20 September 2016, valid until: 20 September 2017

AAD device: VIGIL II serial No: 43747

Task number and altitude: Task No 9 , TITLE VII, Regulation V-PARA-2, 1500 m AGL

5. Control shift:

Parachute-drop guide: Individual drop

Harnessing supervisor: Individual

Type of aircraft: PILATUS PC-6, OM-FAA

* If the parachutist does not hold a parachutist license, the medical check termination date shall be stated.

6. Weather conditions:

Wind direction and speed: from the direction 40°– 60°, 5–6 m/s.

Cloud type, amount and height: Cavok

7. Description and specification of the landing/impact site:

Field area approximately 500 m to the north of the airport.

8. Jump and accident description:

On 1 May 2017 a parachute operation was organized at the Aeroclub Dubnica nad Váhom – airport Slávnica in which Slovak parachutists participated. Parachutists were dropped from a PC-6 at an altitude of 1,500 and 4,000 metres above the ground. The above-stated parachutist performed a jump in the 8th parachute dropping flight at an altitude of 1,500 metres above the ground. It was his second drop on that day. After about a 7-second-long free fall, at an altitude of approximately 1,200 metres above the ground, he pulled out and threw his pilot chute in order to open the main parachute. Then the main parachute was supposed to open and gradually break the free fall. However, that did not happen, and the parachutist continued falling. Then he checked the pilot chute again to see if it was still not in its position. After discovering that the pilot chute was no longer in its position and the main parachute had not started opening, he performed a breakaway (he pulled the breakaway release) and, at an altitude of approximately 700 metres above the ground, he opened his reserve parachute which opened immediately and was fully functional. The parachutist continued flying with the fully functional reserve parachute, dragging the pilot chute of the main parachute, which subsequently opened the pack of the main parachute, and the canopy of the main parachute gradually filled. Even though the main parachute was not connected to the harness, it did not immediately fly away from the harness until the parachutist disconnected the reserve static line located on the left side of the harness, releasing the left free end of the main parachute. In the meantime, the right free end of the main parachute wrapped around the parachutist's right leg, preventing the canopy of the main parachute from flying away. Even though the parachutist tried to unwind the free end of the main parachute from his right leg, he did not succeed. The partially filled canopy of the main parachute which was connected to the parachutist's leg caused partial deformation and subsequent rotation of the canopy of the reserve parachute. The above-stated parachute configuration resulted in acceleration of his speed of falling. At an accelerated speed of falling, the parachutist fell on a field area approximately 500 m to the north of the airport.

9. Additional information:

9.1 Parachute mechanism:

a) No facts were discovered during a visual inspection of the harness which would have an impact on the incorrect opening of the main parachute. Similarly, no damage or facts were discovered during inspection of the pilot chute, the skirt or the opening pin used to open the main parachute which could result in the failure to open the main parachute.

b) A Vigil II safety device was used on the parachute. The safety device was correctly installed and turned on in "PRO" mode. The pyrocartridge was not activated, as evidenced by the fact that, during the last 256 metres above the ground, the speed of falling was not higher than 35 m/s.

c) After an overall inspection of the parachute mechanism's documentation, we may state that the parachute technology in question was operated and maintained in accordance with current legislation, and no facts were found that could have affected the occurrence of the accident.

9.2 Organization and management of the parachuting operation:

The parachuting operation was organized by Aeroclub Dubnica. On the given day, the operation commenced with the signature of the jumps controller and the air traffic control manager in the Controlled Jump Log. No facts that could have affected the occurrence of the accident were found during inspection of the operation's management.

9.3 Statement of facts:

a) It was an experienced and active parachutist with a valid instructor license and a license for packing main parachutes. During the last two years he performed approximately 87 jumps, and in 2017 he performed 31 jumps.

b) During the jump in question the parachutist was not able to open his main parachute with a pilot chute used for opening the main parachute. Then he pulled out the breakaway release and opened a reserve parachute. The above-described procedure was performed correctly and in accordance with the procedures for handling such a parachutist situation.

* If the parachutist does not hold a parachutist license, the medical check termination date shall be stated.

c) The exact cause for why the main parachute pack did not open has not been found.

d) The reason why the right free end of the main canopy wrapped around his right leg was probably the fact that the left free end was held on the harness by the reserve static line and did not fly away simultaneously with the right one.

9.4 Actions of third parties:

When investigating the causes and the occurrence of the accident, no facts were found proving the cause or effect of any third party – parachutist – on the occurrence of the accident.

10. Cause of the accident:

10.1 Main cause of the parachuting accident:

At the time of the investigation the main cause of occurrence of the accident (failure to open the main parachute) was not found.

Probably it was the consensus of unfortunate coincidences.

10.2 Immediate cause of the parachuting accident:

Impact of the parachutist at an increased falling speed.

11. Safety recommendation:

- To analyse the accident with SNA parachuting staff as a part of periodic training.

In Žilina, 31 May 2017

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