SAFETY MANAGEMENT SYSTEM (SMS)

Occurrence and Risk Mitigation Reporting

AIM Analysis as of May 2026

Canadian Sport Parachuting Association
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DISCLAIMER

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1 - TANDEM

1.1. Accident

1.2. Incident

2026T-01

- **Category:** Deployment
- **Passenger Age:** N/A
- **# of tandem skydives (instructor):** 10375
- **Container:** UPT Sigma
- **Main Canopy:** Icarus TX2
- **Details:** Solo Tandem Recert Jump: Jumper deployed drogue at 4500 feet which opened immediately. The TX2 main parachute took a little over 2000 feet to open finally deploying main parachute and then the reserve opened immediately afterwards. Witnesses on the ground observed the parachutist in freefall without the drogue for most of the jump, followed by deployment and then almost instantaneous opening of the reserve. Parachutist found themselves in a situation with two open parachutes, one which appeared to be trying to encircle the other. The jumper cut the main parachute away and landed under the reserve without incident. Once on the ground, it was determined that the AAD had fired.
- **DZSO Recommendations:**
    - Human Factors
        - The instructor reported having intentionally deviated from the applicable tandem standards by deciding to pull the drogue lower during the solo refresher jump in order to spend as little time as possible in freefall, in the cool early-season temperatures. The instructor was doing a refresher jump after 6 months on the ground. This factor definitely played a major role in the instructor's judgment ability. During freefall, while checking handles, the instructor spent more time looking for the RSL, which made them lose awareness of altitude. The instructor then believes they deployed the drogue followed immediately by executing the main parachute handle.
        - At the instructors' request, and in order to reduce time spent in cold conditions, the jump was made at 9,000'. This factor played a role in this incident because the instructor reported that they expected more freefall time given the habit of jumping at 13,000'.
    - Recommendations
        - Procedure review with UPT examiner - Personal review of procedures with emphasis on the following points: discipline around exits and drogue deployment; emergency procedures in terminal freefall; altitude awareness and decision-making under pressure
        - Evaluation jump with examiner as passenger
    - Other
        - Although the dominant factor in this incident was the deviation from standards and procedures, it was noted that the normal tandem refresh altitude is at least 10,500'. Consequently, the procedure has been standardized. Any other measures may be taken once data is received by Vigil."
- **SMS Analyst Recommendations:** CSPA supports the root cause analysis and recommendations of the DZSO as provided.
- **Action by:** Tandem Instructors; DZSO; DZOs

1.3. Malfunction

2 – STUDENT

2.1. Accident

2026S-03

- **Category:** Landing
- **Student Type:** PFF
- **Age:** 31
- **# of skydives:** 2
- **Container:** UPT Vector SE
- **Main Canopy:** PD Navigator 260
- **Details:** Student was on complete normal landing, flare was called at correct altitude. Student did not complete PLF instead dug heals in, fell forward on knees coming to a stop on all fours. Student indicated their ankle hurt and was helped back to the dropzone where they were assessed by an off duty medic. Medic applied ice and advised visiting a doctor, which the student did. Student report into the dropzone the following day that her foot was broken.
- **DZSO Recommendations:** Students are encouraged to follow proper PLF technique as taught and reviewed throughout the PFF course.
- **SMS Analyst Recommendations:** Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.17.5). Students should be taught, review, and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.
- **Action by:** Jumpers; Coaches; Instructors; DSZO

2.2. Incident

2.3. Malfunction

2026S-01

- **Category:** Canopy
- **Student Type:** IAD
- **Age:** 27
- **# of skydives:** 3
- **Container:** Javelin
- **Main Canopy:** PD Navigator
- **Details:** Student completed the FJC the morning of the 9th. They went for 2 IAD jumps with the same coach. On the 3rd IAD jump the student was dispatched successfully and was under a functioning open canopy. The brake toggles were stowed on opening, and the student was flying straight. They unstowed the toggles and continued to fly straight, then performed emergency procedures. Student landed safely on the reserve canopy under the instruction of our GCI. On the ground when approached and questioned, student said "That was my mistake, I undid the knots". The toggles were finger trapped and stitched as per PD, the finger traps were still in tack on the ground, so we believe the students "knots" were the student detaching the toggles, however they remained in the keepers keeping the brakes stowed. Upon further inspection both of the toggles from the main canopy were around the students wrists. The main parachute was repacked by the head rigger. The rig was returned after previous jump 2 with brake lines unstowed. Rigger untangled the brake lines with no issues and repacked the parachute. It is believed that at some point after the pack job, the student altered the gear. We believe that the student undid the toggles after the gear was packed and ready, as the toggles can be accessed once the rig is packed. Student said that they undid the knots because they were catching on the lines while the student was collecting the parachute after the 2nd jump. The student was told in the FJC not to touch the gear without an instructor. This student was a danger and they will not be permitted to jump at our drop zone again.
- **DZSO Recommendations:** The root cause of this issue was a student who did not follow instruction and made very bad decisions. We believe they may have been trying to experience a cut away. The student is banned from returning. In the future we will make sure that students understand not to touch their gear without the supervision of an instructor.
- **SMS Analyst Recommendations:** Jumper should perform and review procedures of full gear checks prior to boarding the aircraft (CSPA PIM2A-2009; Section 3.7.1 Safety Check). Have equipment inspected by a rigger for serviceability. Reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIM2B; Section 6.1.1 Canopy Malfunctions Review). Additionally, review of CSPA PIM2B; Section 6.3.1 Factors Affecting Human Performance, will assist in recognizing possible performance inhibiting factors.
- **Action by:** Jumpers; Coaches; Instructors; DSZO; Riggers; Packers

2026S-02

- **Category:** Canopy
- **Student Type:** IAD
- **Age:** 20
- **# of skydives:** 6
- **Container:** Sidewinder
- **Main Canopy:** Solo 210
- **Details:** Student exited aircraft, parachute deployed, got sent into a left turn. Student didn't like to canopy and did their emergency procedures.
- **DZSO Recommendations:** On exit the jumper experienced uncontrolled spiraling turn. Emergency procedures performed. Unconfirmed cause. Possible tension knot. both toggles still stowed. Packers briefed on proper line management during packing.
- **SMS Analyst Recommendations:** "Have equipment inspected by a rigger for serviceability. Educate packers on regular gear checks, including but not limited to, checking the condition of lines when packing parachutes. Ensure Standard Operating Procedure (SOP) in place for packers and/or riggers to report any equipment concerns. Reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIM2B; Section 6.1.1 Canopy Malfunctions Review)."
- **Action by:** Jumpers; Coaches; Instructors; DSZO; Riggers; Packers

3 – EXPERIENCED

3.1. Accident

2026E-01

- **Category:** Landing
- **Discipline:** Formation Skydiving
- **Age:** 38
- **# of skydives:** 1084
- **Container:** Wings
- **Main Canopy:** Precision Nitron 135
- **Details:** Jumper was landing their main parachute in an alternate landing area. The jump, canopy flight, and pattern were all normal without issues. As the jumper was landing and "surfing" the grass their right foot caught a hole in the landing area. As the jumper was still travelling forward with some speed it caused their ankle (tibiotalar joint) to dislocate laterally and fracture their fibula. As the jumper rolled onto their left side to ask for assistance from another jumper on the landing area, the ankle popped back into forward facing alignment. Surgery was required. Ambulance was called and jumper was transported to local hospital.
- **DZSO Recommendations:** Landing area is checked regularly by DZSO for holes and repair is done as needed. The holes are common in the alternate landing area due to regular animal activity.
- **SMS Analyst Recommendations:** Assess, flag, and/or repair potential obstacles and hazard areas in landing area, such as uneven ground, animal holes, drainage, and so forth to minimize potential injury.
- **Action by:** Jumper; Coaches; Instructors; DZSO

3.2. Incident

2026E-06

- **Category:** Freefall
- **Discipline:** Vertical Formation Skydiving
- **Age:** 49
- **# of skydives:** 715
- **Container:** Wings
- **Main Canopy:** PD Sabre 135
- **Details:** During a freefly jump - the first jump of the year, jumper apparently lost altitude awareness due to a combination of factors. First jump of the year, new altimeter, the freefly season begins with a new group.
- **DZSO Recommendations:** Ensure you are thoroughly familiar with the equipment you are using for your jump (altimeter) have a better understanding of the people you are jumping with and remain more aware of altitude
- **SMS Analyst Recommendations:**
    - "Altitude Awareness is our #1 survival skill. ""The minimum altitudes (AGL) at which the main parachute must be activated are:
        - 4500’ for all Tandem jumps
        - 3000’ for all students, Solo & A CoP holders
        - 2500’ for B, C, and D CoP holders" (CSPA PIM1; Basic Safety Rules - General, Section 2.5).
- Review of PIM2A - Section 5.5 Altimeter Use, as well as Section 5.18 ""Break Off and Tracking. In addition, anticipatory skills can be improved if you learn and practice skydiving skills in the sequence in which they occur, and mentally and physically rehearse the skydive and your emergency procedures, therefore a focused review for the jumper on Section 2 Preparation: Mental and Physical (CSPA PIM2A-2009) will be of great benefit."
- **Action by:** Jumper; Coaches; Instructors; DZSO

3.3. Malfunction

2026E-01

- **Category:** Deployment
- **Discipline:** Formation Skydiving
- **Age:** 37
- **# of skydives:** 3200
- **Container:** Mirage G4.1
- **Main Canopy:** Fluid Wings Airwolf 2 79
- **Details:** Second jump of the day, the first went well. Retake a jump with a student, everything goes smoothly. The student opens at 5500 feet successfully. Then jumper separates to open at 4500 feet. Very violent opening followed by a backflip, leading the jumper to believe broken lines. Cutaway then reserve opening after stabilization without incident. All equipment was recovered. Inspection of the main canopy revealed no problems. The whole set up was jumped six times the next day without issue.
- **DZSO Recommendations:** First time since jumping this equipment that such a violent incident occured. The feeling is that it was just a random unlucky moment.
- **SMS Analyst Recommendations:** Reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIM2B; Section 6.1.1 Canopy Malfunctions Review). Review of equipment specific packing procedures should be completed and consult with a Rigger if necessary.
- **Action by:** Jumpers; Riggers; Packers; DZSO

2026E-03

- **Category:** Canopy
- **Discipline:** Hop n Pop
- **Age:** 44
- **# of skydives:** 171
- **Container:** Mirage G4.1
- **Main Canopy:** PD Sabre 2 190
- **Details:** Diving exit, canopy opened properly and passed function checks at 4000’. Played under canopy (Front riser dives and turns) until 3000’. Turned back towards DZ with an aggressive hook turn. Line twists started immediately and turned into a diving turn. Cut away at around 2000’-1900’. Flew the reserve canopy back and landed without incident in the main landing area of the DZ
- **DZSO Recommendations:** Recommendation was to ensure smooth control inputs and to stop the initial turn prior to commencing a turn in the opposing direction. Also discussed the minimum cutaway altitude and when to stop canopy manoeuvres.
- **SMS Analyst Recommendations:** "Coordinated turns can be a lot of fun and can significantly increase the speed of your turn. The caution comes with turning in the opposite direction abruptly. If you gain too much momentum in one direction (e.g. multiple coordinated turns in a series), then suddenly turn in the opposite direction, the lines can become slack due to the abrupt direction change and the canopy trying to change direction. Once this happens the suspended weight and the canopy are traveling in different directions, and now there is a potential to induce line twists." CSPA Sport Canopy Endorsements; Section 5 Coordinated Turns. Jumper should also review the CSPA Sport Canopy Endorsement; Section 3 Front Riser Turns.
- **Action by:** Jumpers; Coaches; Instructors; DSZO

2026E-04

- **Category:** Deployment
- **Discipline:** Formation Skydiving
- **Age:** 29
- **# of skydives:** 49
- **Container:** Sunpath
- **Main Canopy:** PD Navigator 240
- **Details:** After a successful freefall jumper deployed pilot chute at 3500' opening sequence smooth, right 3 cells were not inflated. After two toggle flares and rear riser flare, jumper executed emergency procedures. Jumper located handles and followed EP training. Landed safely under reserve, handles and all gar recovered.
- **DZSO Recommendations:** Equipment was inspected and no evidence to cause the malfunction was discovered. Actions by jumper were concluded to be appropriate.

- **SMS Analyst Recommendations:** Have equipment inspected by a rigger for serviceability. Reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIM2B; Section 6.1.1 Canopy Malfunctions Review).
- **Action by:** Jumpers; Riggers; Packers; DZSO

2026E-05

- **Category:** Deployment
- **Discipline:** Formation Skydiving
- **Age:** 32
- **# of skydives:** 22
- **Container:** Icon
- **Main Canopy:** Aerodyne 270
- **Details:** Jumper did some front loops stopping at 5500' for pull at 4000'. Pull was normal but jumper kept falling and went to reserve opening just below 3000'. Witness said bag(main) was hanging below jumper on landing. Possible RSL hang up - Single Action system reserve deployment.
- **DZSO Recommendations:** Jumper followed emergency procedures. Malfunction is being investigated by rigger.
- **SMS Analyst Recommendations:** Have equipment inspected by a rigger for serviceability. Reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIM2B; Section 6.1.1 Canopy Malfunctions Review).
- **Action by:** Jumpers; Riggers; Packers; DZSO

2026E-07

- **Category:** Deployment
- **Discipline:** Wingsuit
- **Age:** 47
- **# of skydives:** 1500
- **Container:** Sunpath
- **Main Canopy:** PD Horizon 150
- **Details:** Main opened stable in complete line twists. Jumper was pinned with their head back. Fought line twists while monitoring altitude, at 2000' performed cutaway. Jumper accessed winds and decided landing in an alternate landing area was safest. Found open field and landed safely
- **DZSO Recommendations:** None
- **SMS Analyst Recommendations:** Jumper should review proper body position during wingsuit deployment with a CSPA Coach 3 (Wingsuit). Additionally, reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIM2B; Section 6.1.1 Canopy Malfunctions Review). Review of equipment specific packing procedures as per the manufacturer should be completed and consult with a Rigger if necessary.
- **Action by:** Jumpers; Coaches; Instructors; DSZO; Riggers; Packers

4 – Equipment

2026EQ-01

- **Container:** Sunpath Javelin
- **Main Canopy:** Sabre 3 120
- **Details:** During an equipment inspection, two problems were found:
    - 1. Incorrect routing of the spare cable. The cable did not pass through the RSL guide rings on the spare flap. Note: Equipment does not have an active RSL, and it is used in crew mode.
    - 2. Incorrect assembly of main wing soft links (soft links with rings)
- **DZSO Recommendations:** Rigger contacted Sunpath to confirm if this was a compliant way to route the cable and they confirmed that it was not. With or without RSL, it must pass through the guide rings.
- **SMS Analyst Recommendations:** When performing gear inspections or working on any piece of equipment, always consult the manufacturer's manual to ensure all recommended procedures, specifications, and requirements are fully met.
- **Action by:** Jumpers; Riggers; Packers

2026EQ-02

- **Container:** Wings

- **Main Canopy:** Sabre 2 170
- **Details:** A gear check was performed by the jumper (rigger) on a new skydiver prior to boarding the plane which included an inspection of the reserve pin and surrounding area. Everything looked fine and they went on the aircraft. Jumpers on the aircraft exited and everyone landed without incident in the designated landing area. The jumper (rigger) was bothered by the way the reserve looked when they performed a pin check and went to take a look at the Wings manual and a closer look at the jumpers rig when they were on the ground. The jumper (rigger) determined that the closing flaps were in the incorrect order, specifically the bottom flap was closed first, followed by the top flap, then the pin was inserted. The manual (Page 22 of the current manual on the website) states that the top flap is closed prior to the bottom flap. The jumper (rigger) informed the rigger that packed the reserve in question. That rigger checked the manual and confirmed the findings. The rigger was already planning to do some work on that rig and said they would fix the flap order. They were done jumping for the day so it was left at that. At the time of writing this report the owner of the rig informed that the issue was indeed corrected by the rigger who packed it.
- **DZSO Recommendations:** N/A
- **SMS Analyst Recommendations:** When performing gear inspections or working on any piece of equipment, always consult the manufacturer's manual to ensure all recommended procedures, specifications, and requirements are fully met.

5 - Aircraft