2023 CSPA Safety Management System | Système de gestion de la sécurité 2023

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Tandem AIM Reports | Les rapports AID tandem

Accident / Incident/Malfunction	Trend	Age	# of Jumps	Container	Main Canopy	y Main Canopy Size	Cause	Proposed Corrective Action From AIM Report	CSPA Recommendations	Action Initiated by:
Accident	Canopy	30	0	Micro Sigma	Sigma	340	After freefail ended, which went well, and the signal from the instructor, passenger grabbed their harness with 2 hands like he was taught in training. Passenger held the harness so tight that he suffered a fractured wrist. Passenger never mentioned anything about his wrist after the jump but was on his way home that he noticed the swelling and wentto the hospital.	As taught during the tandem training, it is not necessary to hold the harness with all one's strength. The aim being just to give space to the instructor and to prevent the passenger during opening so they are not surprised by the opening. It was mentioned th the passenger to just put his hands on his chest and that would have been sufficent.	Preparing the student will make a great difference in how successful the jungs is. A well conducted practice will help the student understand the program, eliminate confusion, increase the student's confidence in the equipment and you (the tandem master) all of which will keep the experience an enjoyable one. The following tips will ensure that the practice is effective: • Clearly explain what will happen. • Practice with realism. • Repetition of skills results in instinctive performance of skills. • Obtain feedback from your student. This will let you know if further explanation is needed, and whether they are actually learning. • Practice until perfect, and remember: • What is performed on the ground will almost certainly be performed in the air." (Sigma Tandem Manual Chapter 1: preparation)	Tandem Instructor; DZSO; DZO
Accident	Landing	28	2	UPT Micro Sigma	Icuras TX2	330	The sling used to hold passengers legs together has an adjuster on it that allows the instructor to pull the gassengers kees higher up and saw that the knees were bent. The dorbught the passengers feest kees higher up and saw that the knees were bent. The transmission of the ground so TI could ty to scoop passengers legs up. Ti couldrn't in that instant and then tried to land with standing up to support passenger despite dragging her knees on the grass as they came to a stop. TI did land standing up and then lifted passenger up to bring her down on her back side. (Tandem instructor) According to the videographer, passenger has no mobility in her legs. It appeared that upon landing the strap that was supposed to hold the passengers legs up. Working as intended. The passengers legs were low and dragged behind her on the ground bending her legs back from the knees down. It was a normal range of motion for an average person but for her caused pain. The tandem passenger did not express to manifest or her instructors that there was any pain in her ankle. She did express to manifest or her instructor that her knees were suptile that dort equire gravy. A follow up arvay is schedulated to take place mid June. The 2020 has spoken to the Tandem Passenger every other day since and she has been unconcerned with the injury and states everything seems to be healing well. (Manifest)	An evaluation of the leg harnessing that is used for assisting with person's of disability was considered and potential modifications will be considered for thure use. Tandem Passeneger has jumped at DZ previously and had the same instructor as her previous jumps. There is no concern or findings that would indicate Tandem instructors actions were not appropriate to the circumstances presented.	Preparing the student will make a great difference in how successful the jump is. A well conducted practice will help the student understand the program, eliminate confusion, increase the student's confidence in the equipment and you (the tandem master) all of which will keep the experience an enjoyable one. The following tips will ensure that the practice is effective: - Clearly explain what will happen. - Practice with realism. - Repetition of skills results in instinctive performance of skills. - Obtain feedback from your student. This will let you know if further explanation is needed, and whether they are actually learning. - Practice until perfect, and remember: - What is performed on the ground will almost certainly be performed in the air." (Sigma Tandem Manual Chapter 1: preparation)	Tandem Instructor; D2SO; D2O; Rigger (for leg harmess)
Accident	Landing	65	0	Sigma	Sigma	365	Passenger could not lift legs for landing. Multiple practice landings were attempted with no success. Variable winds on landing resulted in loss of flare power in the canopy (sinking air). Hard landing in pue graved bow without legs up. Suspected sprained right ankle due to hyper extension. Sent passenger to emergency.	We (DZ) needs to use a system that would assist the passenger to lift their legs on landing. Passenger did not lift her leg or could not lift her leg. On the ground at practice time she was able to lift her legs. The adjusting of the harness needs to be addressed also.	Advise passengers of potential hazards from not fully lifting legs before landing, in advance of skydive. Have passenger demonstrate prior to jump and ensure proper technique, if unable to demonstrate the ability to itil tiggs do not take on jump. Technique should also be practiced under canopy prior to 1500 feet. Review the manufacturers recommendations for external factors that can alter fight cycle and/or fare performance including, but not limited to, winds, passenger weight, outside temperature changes, terrain, and altitude.	Tandem Instructor; DZSO; DZO; Rigger (for leg harness)
Accident	Landing	30	0	Sigma	TX2	330	Passenger is parapaligic. Majority of the jump went without incident, entered plane, exited and freefail. On langing the passengers right leg fell on the leg of the Instructor and fractured his femur. Landing was soft.	Parapaligic passengers are very fragile so they should jump with experienced instructors. With 11000 tandems, instructor is one of the most experienced and the conditions were perfect. With parapaligic passengers we (D2) do an exit around the legs so thay they can lift the handle themselves. The instructor confirmed that he was going to be able to do it but unfortunetly he was unable to do so under canopy. The instructor landed with the passengers legs as best he could but one leg sipped. Passenger contacted DZ several days later to let them know he fractured his femur.	¹ Preparing the student will make a great difference in how successful the jump is . A well conducted practice will help the student understand the program, eliminate confusion, increase the student's confidence in the equipment and you (the tandem master) all of which will keep the experience an enjoyable one. The following tips will ensure that the practice is effective: • Clearly explain what will happen. • Practice with realism. • Repetition of skills results in instinctive performance of skills. • Obtain feedback from your student. This will let you know if further explanation is needed, and whether they are actually learning. • Practice until perfect, and remember: • What is performed on the ground will almost certainly be performed in the air." (Sigma Tandem Manual Chapter 1: preparation)	Tandem Instructor; DZSO; DZO; Rigger (for leg harness)

Accident	Landing	80	0	Strong	SET	366	Exit was normal. Parachute flight consisted of practise landing of lifting legs (feet and knees) twice. Landing approach was good with commands for landing to lift legs up to slide on bottoms for silding landing issued about 50 feet above ground. Passenger: lifted legs initially and lowered them right before touch down causing sudden stopping causing Instructor to pivot forward onto passenger. Instructor supported their weight as best as possible by trying to puil their body up and away as passenger was pulling instructor on top and rolled to the right to relieve any weight or pressure on the passenger. Instructor detached from passenger as quickly as possible and removed passenger from harness without moving passenger. Alerted DZO (on site) of incident who took over the situation. Tandem instructor Arrived at injured parties location. Removed show and assessed injury. Initial assessment concluded that the injury appeared to be a dislocated ankle. Injured party was assisted to vehicle, driven to their own vehicle. Injured party opted to drive with family members and have a medical assessment done 020 Final approach: TI instructed passenger inful gis before flare was initiated (righ timing). Passenger: lifted legs - they were up - util just bofer landing when	Debriefed with TI completed. Just reiterated landing techniques and training.	Advise passengers of potential hazards from not fully lifting legs before landing, in advance of skydive. Have passenger demonstrate prior to jump and ensure proper technique, if unable to demonstrate the sallity to lift lege do not take on jump. Technique should also be practiced under canopy prior to 1500 feet.	Tandem Instructor; DZSO; DZO
							passenger dropped them. Legs went behind. TI did great jub of flaring great (timing and finishing was great) and maintained a soft landing, keeping their head off the group for the TI doing a stand up landing TI Examiner (witness)			
Accident	Landing	55	2065	Micro Sigma	Icuras TX2	360	No impact or injury to trandem passenger. Second tandem of the day, Jump was uneventful. On landing instructor rolled ankle badly. Passenger was 82 years old. He (passenger) was uninjured. Instructor current with 80 tandems completed this season. However, instructor was a guest for a special event at D2 where incident occured. Although instruc- has done well over 100 tandems at this D2 (including 78 in 2022) this was only the second here since August 2022. The altitude difference, dry, hard ground and different canopy model they are accustomed to were contributing factors Tandem instructor Landing did not appear to be unusual, however when instructor went to stand up, the pressure applied immediately indicated a concern with his ankle. He did walk off the field on his own. An Ice compressed was applied and he elavated his foct. The next day his ankle appeared swollen and Drusied. He went to get Xrays which indicated no break or unusal concern. It was determined to be a bad sprain. He did not contine to skydive for the duration the weekend Manifest	Review of landing procedures as well as importance of being situational aware when jumping at a different location.	Reference to Sigma Tandem Manual Chapter 1: preparation; specific focus on sections "Terrain Assessment" & Altitude" "When jumping at locations above sea level, the higher ground elevation will make the flare less effective. Familiarize yourself with the different canopy characteristics by selecting lighter students to jump with."	Tandem Instructor; DZSO; DZO
Accident	Landing	38	975	Sigma	Sigma	340	Passenger did not lift legs for landing instructor tried to assist with their legs and jammed instructors ankle on landing.	Instructor did best he could under situation. Recommend more then on practice to take note of passengers reaction but can not guess right every time. Shows good character of Instructor trying all he can at time.	Advise passengers of potential hazards from not fully lifting legs before landing, in advance of skydive. Have passenger demonstrate prior to jump and ensure proper technique, if unable to demonstrate the ability to lift legs do not take on jump. Technique should also be practiced under canopy prior to 1500 feet. Reference Sigma Tandem Manual Chapter 4 "Canopy Landing"	Tandem Instructor; DZSO; DZO
Accident	Landing	25	0	Sigma	Sigma	340	Passenger was very analous about the jump, english was not their first language. Passenger was grabbing instructors arms in freefall when instructor pulled parachute and discussed landing passenger could not lift his legs. Attempted to instruct passenger how to help lift legs by grabbing and pulling up their own legs from their pants. Passenger did not understand learly. Instructor attempted to reexplain multiple times up until final. Passenger grabbed one leg and dropped legs very early and toppled over on landing with instructor and passenger hurt their ankle.	Recommended to aim for small hill in the corner of the D2 /f passenger is weake skilled with leg lifting. Another tip is to flare a bit higher in a two staged flare for more of a drop rather than a slide.	Preparing the student will make a great difference in how successful the jump is. A well conducted practice will help the student understand the program, eliminate confusion, increase the student's confidence in the equipment and you (the tandem master) all of which will keep the experience an enjoyable one. The following tips will ensure that the practice is effective: • Clearly explain what will happen. • Practice with realism. • Repetition of skills results in instinctive performance of skills. • Obtain feedback from your student. This will let you know if further explanation is needed, and whether they are actually learning. • Practice until perfect, and remember: • What is performed on the ground will almost certainly be performed in the air." (Sigma Tandem Manual Chapter 1: preparation)	Tandem Instructor; DZSO; DZO
Accident	Landing	0	0	Strong	SET	400	Tandem exit at 10000 feet deployed at \$000 feet. Practice landings above 3000 feet. Passenger was performing well, lifting legs and practice flaring. On landing passenger dropped her left leg. Ankle looks dislocated. Ambulance called to take to hospital.	Training was sufficent, practice training up high under canopy went well. Passenger simply dropped her foot at the wrong time.	Advise passengers of potential hazards from not fully lifting legs before landing, in advance of skydive. Have passenger demonstrate prior to jump and ensure proper technique, if unable to demonstrate the ability to lift legs do not take on jump. Technique should also be practiced under canopy prior to 1500 feet.	Tandem Instructor; DZSO; DZO
Accident	Landing	18	0	Sigma	Icuras	330	Uneventfull freefall. At about 1000 feet, turbulance started when instructor stearted their landing pattern. At about 30 feet, the turbulance hit again and they dropped about 1-2 meters. The passenger was refered to medical aid with lumbar sprain. The instructor injured their leg.	When winds are out of the south land in the landing area past the trees on the other side of the road.	Review the manufacturers recommendations for external factors that can alter flight cycle and/or flare performance including, but not limited to, winds, passenger weight, outside temperature changes, terrain, and altitude.	Tandem Instructor; DZSO; DZO
Accident	Landing	15	0	Sigma	Sigma	340	Instructor twisted knee on a tandem landing.	Instructor should lift legs more.	"A good slide requires a good flare to almost zero rate of descent. The Tandem instructor sits back in his harness (thus pulling the student back as well) and is prepared to take the landing on his feet, but continues to sit back after initial ground contact to a slide on their but with the student literally sitting in his lap. It is important that the Tandem instructor sit back on landing so the student with not have a tendency to lean forward at touchdown (which can cause the Tandem instructor to roll over ont of touchdown (which can cause the Tandem instructor to roll over top of the student.)" - Sigma Tandem Manual Chapter 4: Canopy/Landings)	Tandem Instructor; DZSO; DZO

Accident	Other	40	0 Si	igma II	Sigma	340	Passenger did his first jump with instructor. The jump was good from beginning to end. Passenger accomplained of severe pressure to the back of his head. Passenger asked if he was congested before the jump and he said no. The pain increased and according to the passenger was unbearable. 911 was called and passenger transported by ambulance. The paramedics took passengers vital signs and all were normal. Passenger went to hospital. Result was the passenger had perforated eardrums.	Never jump if conjested.	The student should be in good health, with no heart conditions or any other debilitating aliment.	Tandem Instructor; Manifest; DZSO; DZO
Incident	Freefall	23	0 Si	igma	Sigma	340	Instructor deployed his drogue during the exit phase of skydive. The drogue passed under tandem pair and contacted the passenger. The passenger received a mark to her throat as the drogue inflated.	The instructor has been advised to allow a better presentation to the wind with his passenger. Fly the exit and deploy the drogue once stable position into the wind. Reviewed several videos of the seated exit and the instructor has practised the exit routine after this incident.	"Ensure stability prior to deployment: Proper student training will assist in achieving stable body positions prior to drogue deployment as will a powerful exit from the tandem instructor. DO NOT USE THE DROGUE TO GAIN STABILITY: Be stable or gain stability before the drogue is deployed. Deploying the drogue while unstable should only be performed to avoid reaching tandem terminal speed. Drogue deployment: - Locate drogue handle and grasp firmly. - Pull drogue from pouch and throw aggressively to your side at full arm extension. - Release immediately once forward of the line of your shoulders. - Watch drogue inflate over your right shoulder (you may or may not feel the drogue inflate)" - (Sigma Tandem Manual Chapter 3: Freefail/Drogue Fail)	Tandem Instructor; DZSO; DZO
Incident	Freefall	0	0 S	igma	Icarus	330	The instructor launched the drogue correctly, but it knotted before it could fully inflate. The instructor remained stable in fredail, the drogue appeared at full length, it was only around 8000 that the instructor noticed the lack of material. The instructor pulled the reserve handle, the drogue then slipped into the lines of the reserve parachute and wapped around the lines. If be believed this caused a tension knot and caused the canopy to start rotating. The instructor pulled the toggle to slow down the rotation by approximately half. Th duo continued to spin until they got hung up in trees, which slowed their descent before hitting the ground. Both are taken to hospital with little to no injuries.	We do not know what caused the drogue to knot, but ensure that the drogue is released upward to prevent knotting.	Reference to Sigma Tandem Manual Section 3: Instructor Techniques, Chapter 3 - Freefail & Drogue-Fail", Additional reference to Sigma Tandem Manual Section 4: Malinucitors & Remegiencies, Chapter 1 - Reserve Procedures with a focus on "Un-inflated drogue". Have equipment Inspected by a rigger for serviceability.	Tandem Instructor; Rigger; DZSO; DZO
Incident	Landing	39	0 Si	igma	Sigma	340	The wind was from the south west and created turbulance. Resulting in a firm landing. The passenger was ok but said that they had a sore tailbone.	Confirmed with instructor the DZ turbulancent areas but also sometimes winds and conditions change quickly.	Advise passengers of potential hazards from not fully lifting legs before landing, in advance of skydive. Have passenger demonstrate prior to jump and ensure proper technique, if wable to demonstrate the ability to lift legs on to take on jump. Technique should also be practiced under canopy prior to 1500 feet. Review the manufacturers recommendations for external factors that can alter fight cycle and/or flare performance including, burnot limited to, winds, passenger weight, outside temperature changes, terrain, and altitude.	Tandem Instructor; DZSO; DZO
Malfunction	Deployment	54	0	Aicro Sigma	Icuras TX2	330	Severe line twists on opening, Would not clear despite efforts. Executed EPs and landed safely with customer on the LZ	Dispite review of video normal activation of parachute resulted in spinning line twists. Review with packer packing techniques. Spoke with tandem instructor regarding body positions at deployment.	"Attempt to kick out of the line twist, instructing the student to assist if necessary, if unsuccessful, perform emergency procedures by pulling the cutaway handle, ensuing full release of the main risers, physically assisting if necessary, immediately pull the reserve handle." (Sigma Tandem Manual Chapter 3: Deployment Problems)	Tandem Instructors; Packers; Riggers; Equipment Owner; DZSO; DZO

Student AIM Reports | Les rapports AID étudiant

Accident /	Trend	Age	# of	Container	Main	Main	Cause	Proposed Corrective Action From AIM Report	CSPA Recommendations	Action Initiated by:
Incident/Malfunction			Jumps		Canopy	Canopy				
	r		1	I		Size	1			
Accident	Exit	21	14	Skyworld Specialties	Solo	270	At 7500 jumper exited the door of the plane. He climber onto the strut and when he let go, his left elbow struck the step of the plane. Pain immediately started as jumper entered freefall. Jumper landed safely on the ground under canopy.	Student briefed on climbing all the way out to the grip tape to ensure a safe release and not dropping arms out too far to the side.	Student and Instructor to review and physically rehearse climb out and exit procedures (JM Reference Manual, Appendix: Dispatching Techniques for Specific Aircrafts).	SSI; PFFI; JM; GCI; Student; DZSO; DZO;
Accident	Landing	50	1	Conquest	Solo	270	IAD first jump student exhibited slow reactions to radio commands throughout canopy ride. Slow reaction to flare command caused a haard landing, which the student took on his tail bone. Hard landing caused lower back muscle spasms and a sprained ankle.	The SSIs were briefed to emphasize the importance of proper reaction time from GCI commands. Also the timing on the flare command. Member was briefed on the landing procedure in reference to flare altitude, not looking down, and finishing the flare.	Review educational material on Landing Techniques (CSPA PIMZA-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 . Student to review and practice flare technique on the ground prior to skydive, including but not limited to, the guidance from Ground Control Instructor (GCI) to students in the landing of their canopies, through use of a recognized method of signaling. GCI should ensure accurate coaching and currency reviewing the Ground Control Instructor Reference Manual; Communication Rules.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;
Accident	Landing	51	1	Conquest	Solo	270	IAD Student was dispatched and had a normal first jump exit and opening. Student responded normally to GCI commands. Student has a normal flare and landing, but then fell over and reached out with his right arm and injured it. Upon examination at the local emergency room it was confirmed then he had broken his humarus.	The student, when he was flaring, had his arm on both sides of his body. He was briefed to keep his arms in towards center of his body at his groin to do a proper flare landing to prevent the fracture.	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.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;
Accident	Landing	32	1	Sunpath	Javelin Solo	270	Student was doing their first IAD jump. All going well until final. At about 25 feet jumper preformed a right 30 degree turn. His parachute dropped suddenly about 10 feet. Jumper was told to flare but he hesitated. He was looking down. He lifted his legs and landed on his buttocks very hard. Jumper turned on his own in flight without being told too by GCI. Jumper didn't flare when he was told too. Jumper injured his lower back. He was immobalized and splinted in place. The ambulance was called & jumper taken to local hospital.	Student fixated on the target and failed to respond to instructions from the GCI. No flare prior to landing. SSI & JMs will stress the importance to all jumpers to follow GCI instructions and watch the horizon on landing.	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 . Student to review and practice flare technique on the ground prior to skydive, including but not limited to, the guidance from Ground Control Instructor (GCI) to students in the landing of their canopies, through use of a recognized method of signaling. GCI should ensure accurate coaching and currency reviewing the Ground Control Instructor Reference Manual; Communication Rules.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;

Accident	Landing	56	2	Dolphin	Navigator	260	Students first jump had gone fairly well - he looked down and tumbled	Students should follow emergency procedures. Object fixation	Review educational material on Landing Techniques (CSPA	SSI; PFFI; JM; GCI;
							(on exit) but his two instructors helped him regain stabilty. Student flew a	may be a factor.	PIM2A-2009; Section 6.7) and Landing Problems and	Student; DZSO; DZO;
							pattern to land with radio directions from GCI and landed standing in the	,	Solutions (CSPA PIM2A-2009; Section 6.17.5). GCI should	
							landing area. Both radios were checked on the ground and were		ensure accurate coaching and currency reviewing the	
							functioning properly. PFFI reveiwed emergency landing procedures if the		Ground Control Instructor Reference Manual:	
							radios fail - follow the ground control arrow, land into the wind in any big		Communication Rules.	
							field - on the walk to the aircraft with Student and other PEEL PEEL turned			
							on the radios in the aircraft and confirmed that they were functioning			
							correctly. Student evited well and preformed his practice pulls correctly			
							confective. Student exited wer and preformed his practice purs confective,			
							signify lacking in altitude awareness. Student deployed his main			
							parachute at the plained attitude - 5500 feet. Student new a little on the			
							wind line from the holding area, but GCI had him get back to the correct			
							spot. Student was responding to radio directions - although slow. At 1000			
							feet AGL jumper turned downwind (south), GCI instructed him to turn			
							180 degrees left (back into the wind) and jumper did not respond. As GCI			
							continued to ask jumper to fly left turns for base, student continued to fly			
							downwind with no response. Student flew downwind of the landing area			
							by 1000 feet horizontally, turned base (east) far too late and impacted			
							the side of a dumpster behind a contracting company. One of the			
							experienced jumpers reached Student within 3 minutes and GCI called			
							911. Student has a fractured pelvis and internal injuries. PFFIs checked			
							the radios again and found them all to be on and functioning correctly.			
Incident	Canopy	38	14	lcon	Pilot	250	After opening, jumper was experiencing tunnel vision throughout the	After discussion with jumper, DZO felt there were many	Review of CSPA PIM2B; Section 6.3.1 Factors Affecting	SSI; PFFI; JM; GCI;
	.,						canopy flight. At approx. 1500 AGL jumper blacked out and landed off in	contributing factors to jumper experiencing tunnel vision. Lack	Human Performance, will assist in recognizing possible	Student; DZSO; DZO;
							the tree line North of DZ.	of currency (last jumped Sept 2022), minimum amount of	performance inhibiting factors. DZSOs should review	
								skydives (14th jumn) unfamiliar DZ (had jumned at this DZ	existing operating procedures and processes as it pertains	
								only twice before in 2022) had been intermittent fasting and	to recurrency tasks and responsibilities to mitigate risks	
								was the 16 hour mark lumper will be skydiving with a coach	to recurrency casio and responsionates to malgate risks.	
								on the next jump and he will have eaten		
Incident	Canony	49	1	Conquest	Solo	270	Student was doing well in the plane, he said he was a little pervous but he	lumper was dehydrated and harness was too tight. He carried	Review of CSPA PIM2B: Section 6.3.1 Factors Affecting	SSI: PEEI: IM: GCI:
inclucine	cunopy		1	conquest	5010	2.70	was able to tell IM step by step what he was doing on the jump. He said	out all drills correctly for a tree landing. IMs reminded to keen	Human Performance will assist in recognizing possible	Student: DZSO: DZO:
							his log was falling asleen but he stratched it out and didn't say anything	iumper hydrated and not over tighten the log straps	performance inhibiting factors D750s should review	5100011, 5250, 520,
							about it after that. His climb out was great and his exit wasn't had IM	Jumper nyurateu anu not over tighten the leg straps.	evisting operating procedures and processes as it pertains	
							lumper passed out under sapery and drifted into the trees. He same to		to instructor tasks and responsibilities to mitigate risks	
							jumper passed out under canopy and united into the trees. He came to		to instructor tasks and responsibilities to initigate risks.	
							just phot to entering the trees. He went into full hare and was suspended			
							just slightly above the ground. He suffered only minor scratches.			
Incident	Landing	23	3	Javelin	Sabre 2	230	"Student had problems hearing GCI but acted well on holding pattern on	Due to concerns with student not hearing the radio, a test	Review educational material on Landing Techniques (CSPA	SSI; PFFI; JM; GCI;
							final. Did not hear GCI clearly to any commands. Flared late and hit hard	jump was done with 2 ground radios and an experienced	PIM2A-2009; Section 6.7) and Landing Problems and	Student; DZSO; DZO;
							(feet first into PLF). Student was winded and had sore ankles but was	jumper. It was discovered that the volume of the GCIs voice	Solutions (CSPA PIM2A-2009; Section 6.17.5). Students	
							walking." - GCI (being supervised)	needed to be louder.	should be taught, review, and practice the Parachute	
							"Briefed/debriefed (student) DP system. Student followed the radio	SOP and communication has been provided to all GCIs that	Landing Fall (PLF) referencing SSI Reference Manual,	
							failure instructions given. Student was confident prior to jump." - JM	they are required to speak loudly as if they are talking to	Appendix - Skydiving Technical Knowledge PLF Landing .	
							"Radio checks seemed fine. Possible issues with speaking loud & clear (by	someone 20 feet away. It was also indicated that when a	Student to review and practice flare technique on the	
							GCI) over the radio" - GCI Supervisor	student turns on final the GCI needs to not leave "dead air"	ground prior to skydive, including but not limited to, the	
							Student was having trouble hearing the GCI even under parachute	before the command to flare. The SOP is "Relax	guidance from Ground Control Instructor (GCI) to students	
							however she was leaning into the chest mounted radio to hear	ReadyElare" this has been recommunicated to the GCIs	in the landing of their canopies, through use of a	
							commands as best she could and also trusted her judgement from		recognized method of signaling GCI should ensure	
							training. As a result, the GCI did not know she was having troubles		accurate coaching and currency reviewing the Ground	
							hearing him. When student was an her final, it was not at hit the DCO that		Control Instructor Deference Manual Communication	
							the CCI did and follow the and a compared COR for stud		Control instructor Reference Manual; Communication	
							the GCI did not follow the radio command SOP for students on final		kules.	
							approach. A discussion was had with the GCI and the supervising GCI			
			1				020			

Incident	Landing	37	1	Sidewinder	Manta	290	"Student did not flare or PLF on landing. She said it was really hard to flare. Minor knee pain from landing hard" - JM "Student parachute opened normally and canopy flight was uneventful. She listened to all radio commands throughout flight including a flare practice above 2000 feet. At the point of flare for landing instruction, student only partly flared resulting in a harder landing where she fell to her knees. Student commented that her knees were sore but proceeded off landing area on her own. Ice pack was provided and no further medical attention needed. Follow up on the next day student said she had a slight bruise but otherwise was okay." - GCI	Student was educated on the importance of her PLF training and completing a full flare at landing.	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 . Student to review and practice flare technique on the ground prior to skydive, including but not limited to, the guidance from Ground Control Instructor (GCI) to students in the landing of their canopies, through use of a recognized method of signaling, GCI should ensure accurate coaching and currency reviewing the Ground Control Instructor Reference Manual; Communication Rules.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;
Incident	Landing	49	1	Skyworld Specialties	Solo	270	Student was preforming an IAD jump with radio from 3500 feet. Weather was great. On final the student flared high way before GCI was going to call the flare. The landing was harder than normal. The student injured her left knee. She was given the option to go to the hospital but chose not to. No further incident.	Student was briefed on flying the proper pattern and obstacle avoidance	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 . Student to review and practice flare technique on the ground prior to skydive, including but not limited to, the guidance from Ground Control Instructor (GCI) to students in the landing of their canopies, through use of a recognized method of signaling. GCI should ensure accurate coaching and currency reviewing the Ground Control Instructor Reference Manual; Communication Rules.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;
Incident	Landing	64	9	Skyworld Specialties	Solo	270	On landing winds dropped to zero causing a fast landing, Jumpers left hand struck the ground jamming his ring finger, wedding ring cut (very small) finge. Iced finger, cleaned and dressed cut.	Ensure students finish their flare.	Review educational material on Landing Techniques (CSPA PIMZA-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIMZA-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 . Student to review and practice flare technique on the ground prior to skydive, including but not limited to, the guidance from Ground Control Instructor (GCI) to students in the landing of their canopies, through use of a recognized method of signaling. GCI should ensure accurate coaching and currency reviewing the Ground Control Instructor Reference Manual; Communication Rules.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;
Incident	Landing	38	4	Sidewinder	Manta	290	Student responded well to GCI commands but on final student allowed themselves to drift crosswind resulting in a fast slightly downwind landing. Student did not PLF. Student slid on landing dragging her left leg. GCI Canopy flight went well. Student was turning onto final, winds were still strong. Jumper was landing and slid on her left hnee. Bruising, but no blod. Some tenderness. No sign of break and was able to walk off field on their own. Put ice on the knee but did not skydive for remainder of the day Student Assessed student after skydive. She rested her leg and appeared fine by the end of the day. She proceeded to jump the following day and throughout the remaining Learn to Skydive course with no issue Manifest	Review of PLF procedures and landing approach in crosswinds.	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 . Student to review and practice flare technique on the ground prior to skydive, including but not limited to, the guidance from Ground Control Instructor (SCI) to students in the landing of their canopies, through use of a recognized method of signaling. GCI should ensure accurate coaching and currency reviewing the Ground Control Instructor Reference Manual; Communication Rules.	SSI; PFFI; JM; GCI; Student; DZSO; DZO;

Incident	Landing	41	1	Aerodyne Icon	Sabre 2	210	Student responded well to GCI commands but only flared to less than 1/4	Review of PLF procedures and Flare techniques. GCIs assessing	Review educational material on Landing Techniques (CSPA	SSI; PFFI; JM; GCI;
							brakes. Did not PLF. Eyes were toward ground/not on horizon. Student	radio communications and delay in transmission, however	PIM2A-2009; Section 6.7) and Landing Problems and	Student; DZSO; DZO;
							felt there was a delay in the radio when viewing the landing video GCI	there was no indication that this was the case in other student	Solutions (CSPA PIM2A-2009; Section 6.17.5). Students	
							Landing pattern was going well until student did not initiate a full flare.	jumps that day. GCI will adjust flaring for student according to	should be taught, review, and practice the Parachute	
							She stood and walked off field on her own. Assessing her after about 30	response time practiced in flight above 2000 feet.	Landing Fall (PLF) referencing SSI Reference Manual,	
							minutes she had some slight swelling in her right ankle but was able to		Appendix - Skydiving Technical Knowledge PLF Landing .	
							walk on it. She proceeded to not jump for the remainder of the day. The		Student to review and practice flare technique on the	
							following day she had some slight swelling but reported she felt fine and		ground prior to skydive, including but not limited to, the	
							proceeded to jump two times that day and continued throughout the		guidance from Ground Control Instructor (GCI) to students	
							rest of the Learn to Skydive course Manifest		in the landing of their canopies, through use of a	
									recognized method of signaling. GCI should ensure	
									accurate coaching and currency reviewing the Ground	
									Control Instructor Reference Manual: Communication	
									Bules	
Malfunction	Canopy	24	11	Sidewinder	Manta	290	"Extreme pressure on left toggle - unable to turn left. Flaring didn't clear	Look at possibility of finger trapping the lines on student	Have equipment inspected by a rigger for serviceability.	Packers; Riggers; DZSO;
							the issue. Decision was made to cutaway. Landed safely downwind at LZ.	canopies as currently they are only knotted. Will have Rigger	Educate packers on regular gear checks, including but not	DZO;
							No injuries. Parachute recovered." - Jumper	inspect.	limited to, checking the condition of lines when packing	
							"Inspection of parachute afterwards indicates plausible toggle fire		parachutes. Ensure Standard Operating Procedure (SOP) in	
							causing tension knot on left toggle." - Witness		place for packers and/or riggers to report any equipment	
									concerns.	
Malfunction	Deployment	25	9	lcon	Solo	270	Exited plane after count with instructor and kicking leg front, back front,		Instructor & Student should review educational material	SSI; PFFI; JM; GCI;
							front. Jumper attempted to push hips forward and face the horizon.		on Exit Types (CSPA PIM 2A-2009; Section 4.7), and The	Student; DZSO; DZO;
							Failed to get proper arch. Jumper began to spin, attempted to correct		Arch (CSPA PIM2A-2009; Section 5.2. Additionally, review	
							while checking altimeter. Covered a few flips at 7000 feet and felt control		proper body position during deployment, (CSPA PIM2A-	
							was mostly lost due to poor positioning. At this point, jumper attempted		2009; Section 5.4 Activation). Additionally, reviewing	
							to throw hips forward turn to ground and pull main. When the main		malfunctions often will help jumpers deal with most	
							came out jumper flipped through risers and had his left arm wrapped and		situations that can occur at opening (PIM2B; Section 6.1.1	
							stuck in the left risers. Jumper released his left arm with his right arm.		Canopy Malfunctions Review).	
							Checked square (canopy), checked lines, both good. Jumper noticed his			
							risers were spun up with toggles not being useable. Attempted kickout			
			1				and hand seperation when it became clear it was not flyable. Jumper			
					1	1	looked, grabbed and nulled. Reserve came out after a few seconds			
							Normal opening heaed back to land and landed as normal.			
							Normal opening heaed back to land and landed as normal.			
							Normal opening heaed back to land and landed as normal.			

Experienced AIM Reports | Les rapports AID des parachutistes experience

Accident /	Trend	Age	# of Jumps	Container	Main Canopy	Main Canopy	Cause	Proposed Corrective Action From AIM Report	CSPA Recommendations	Action Initiated by:
Incident/Malfunction						Size				
Accident	Freefall	36	2500	Aerodyne Icon Nexgen	PD Sabre 3	170	On a 23 way in wingsuit, everything was normal. A separation of groups of three was done like practised at 5500' except for 4 parachutists who complained about opening at 3500. These 4 took the opportunity to continue having fun together before their separation and opening, they lost sight of each other, that's when two of these parachutists collided. Jumper 1 hit Jumper 2 (this AIM report for Jumper 2). Jumper 1 hit his head and his right arm in Jumper 2 side. Both lost consciousness. Jumper 2 managed to regain consciousness and opening his main canopy his Vigil (AAD) triggered the opening of his reserve almost at the same time. He ended up with two canopies. The reserve above him very well open and the main open completely that pulls towards the ground. He landed in trees, smashed branches and ended up on the ground. Jumper 2 was transported to hospital with fractured clavicle, punctured lung by a broken rib and a concussion.	During group jumps, whether belly, CRW, Freefly, wingsuit no one should continue to have fun together by forming a new small group of individuals in the same jump. Everyone without exception should focus on their separation and traffic to ensure a safe separation.	"Break-off procedures are THE most important component of the freefall portion of your skydive une is the part of your skydive where you remove yourself from the formation and assure you have the airspace to deploy your parachute safely, away from everyone else. Waving off at the correct/decided upon altitude, tracking away, scanning your airspace, waving off again to signal deployment, deploying your canopy at an altitude that is safe for you, and being ready for an emergency canopy avoidance manoeuvre (rear riser 90° turn) are all important components of a safe break-off Procedures)	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Freefall	34	2600	UPT V316-1	Squirrel Epicene	130	On a 23 way in wingsuit, everything was normal. A separation of groups of three was done like practised at 5500' except for 4 parachutists who complained about opening at 3500. These 4 took the opportunity to continue having fun together before their separation and opening, they lost sight of each other, that's when two of these parachutists collided. Jumper 1 (this AIM report for Jumper 1) hit Jumper 2. Jumper 1 hit his head and his right arm in Jumper 2 side. Both lost consclousness. Jumper 1 was the organizer of this formation flight (non CSPA). He was taken to hospital by ambulance. He has a fractured jaw, broken teeth, fractured humerus in four places and a concussion. He also had a kidney bleed which seemed to have resolved.	During group jumps, whether belly, CRW, Freefly, wingsuit no one should continue to have fun together by forming a new small group of individuals in the same jump. Everyone without exception should focus on their separation and traffic to ensure a safe separation.	"Break-off procedures are THE most important component of the freefall portion of your skydive. It is the part of your skydive where you remove yourself from the formation and assure you have the airspace to deploy your parachute safely, away from everyone else. Waving off at the correct/decided upon altitude, tracking away, scanning your airspace, waving off again to signal deployment, deploying your canopy at an altitude that is safe for you, and being ready for an emergency canopy avoidance manoeuvre (rear riser 90° turn) are all important components of a safe break-off procedure." (CSPA PIM 2B Section 5.5 Break Off Proredure.)	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Freefall	32	650	Icon	Safire 3	209	Jumper exited Skyvan at 12500 feet. In a TW angle. Direction of track uncertain. Changed direction above the group and angled down in an effort to catch the group. Jumper 2 was in a fast flat track moving in a different direction. Jumper 2s head collided with Jumper 1 knee knocking Jumper 2 unconscious. Jumper 1 fell watching Jumper 2 to see if he was conscious. Jumper 2 rolled onto his back falling until his AAD fired. Jumper 1 pulled around 4000 feet and watched Jumper 2 land. Jumper 1 landed in the field (not at designated LZ) with Jumper 2 Jand. Jumper 1 landed in the field and were transported back to DZ by Upon arriving back at the DZ it was noted that Jumper 1s left knee was swollen and sore. Ice pack was applied however he was able to move and walk freefly on his own. The following day, his knee was sore but he was walking on it. *A separate AIM report is being submitted by the Jumper 2	DZSO in collaboration with an analyst specialist, experts in movement skydiving (specifically tracking and angle flying) is assessing an action plan to enforce more safety measures to be put in place moving forward based on the findings of the root cause analysis. In the in turn, no groups will be conducting movement jumps without approval from DSO. A comprehensive progression guideline is anticipated for release in the 2024 season. A recommendation to the CSPA will be brought forward specific to reviewing CSPA implementation of regulations specific to this discpline.	CSPA to review recommendations pertaining to the safety in all aspects of Movement Skydiving (Specific to tracking and angle flying).	Jumper; Coaches; Instructors; DZSO; DZO; CSPA

Accident	Freefall	59	256	Curve	Sabre 3	190	A 7W Angle track from the skyvan. Ill considered for jumper to do this jump as it was with more experienced skydivers operating above jumpers level. After exit jumper was contacted in the helmet by someone's knee rendering jumper unconscious. Fell to AAD deployment at 1500 Feet then landed on a functioning reserve in a filed still unconscious. Checked out at Hospital CT Scan and X-rays. All good possible concussion but no serious injury. A parachute opening low and off L2 was observed. A second jumper appeared to also be landing off with the first jumper. Two individuals were sent to pick up jumpers who landed off. From the L2 it was seen to have two jumpers who landed and appeared to be standing and walking off the farm field. Upon reaching the pick up vehicle it was explained what had occurred. When jumpers returned to D2, the designated first aid attendant did a full assessment of jumper and although found no immediate physical concerns, he did identify that a concussion was apparent as some details of the incident were not remembered by the jumper. It was then decided that the jumpers should proceed to the local area hospital for a full assessment. The jumpers duot the collision. In the days to follow the jumper runch about the incident or the collision. In the days to follow the jumper resported being a bit sore but other than that there were no significant changes to the jumper.	DZSO in collaboration with an analyst specialist, experts in movement skydiving (specifically tracking and angle frying) is assessing an action plan to enforce more safety measures to be put in place moving forward based on the findings of the root cause analysis. In the in turn, no groups will be conducting movement jumps without approval from DSO. A comprehensive progression guideline is anticipated for release in the 2024 season. A recommendation to the CSPA will be brought forward specific to reviewing CSPA implementation of regulations specific to this discpline.	CSPA to review recommendations pertaining to the safety in all aspects of Movement Skydiving (Specific to tracking and angle flying).	Jumper; Coaches; Instructors; DZSO; DZO; CSPA
Accident	Landing	37	815	Vector	Velo	96	"Due to large event.near the landing area, there were to be no turns over 90 degrees and jumper was making a regular landing approach. He was in approximately 1/4 brakes to stay tight to the landing area. Jumper made their turn onto final (closer to 110 degrees than 90 degrees) at about 200-225 feet, and released the brakes unintentionally causing an unexpected surge, which affected the flight cycle and speed. Jumper.grabbed their rear risers and tried to stab it out with the toggles. Recovering just enough to get under the canopy but had no flare power to completely slow the descent. Jumper hit the ground but first then rolled on to his right side. With more then 90 degree turn, on the low side, and the unintentional surge it left little time for recovery." Jumper "On landing he finished his final turn into the landing area at approximately 150 feetHe was in half brakes which reduced the flying capabilities of the parachute. Upon finishing the turn, jumper returned the parachute to full flight which then put the parachute to fare the parachute but due to the new flight cycle and approximately 15-20 mph with forward speedHe was immobilized by the first responders and paramedics were calledUpon the arrival of the air ambulance it was determined that the jumper was transported by ground ambulance to the helicopter left and the jumper was transported by ground ambulance to the helicopter left and the spital. " - D20 (witness) "Foliow up with jumper the vening of the accident he stated that he had been discharged from the hospital. He was stable" - Manifest	Discussion with the jumper regarding flight cycle and consequences of surging a canopy at lower altitudes including the impact on effective flaring. It was recommended that the jumper participate in a Canopy Course to ensure his understanding of canopy flight and user inputs especially when performing intentional low turns 90 degrees or more (swooping) Jumper also recognized his shortcomings and has planned to upsize his canopy to a 107 when he returns to jumping which is a positive approach to getting recurrent if he is out of the sport for an extended period of time due to his injury and the recovery process.	Intentional and unintentional low turns can result in serious injury or death. It is important to recognize your limitations, including but not limited to, currency, skill level, external inputs, and personal inputs. Review of CSPA PINZB; Section 6.3.1 Factors Affecting Human Performance, will assist in recognizing possible performance inhibiting factors. Review educational material on Landing Techniques (CSPA PINZA-2009; Section 6.7), Landing Pattern (CSPA PINZA-2009; Section 6.7), Landing Pattern (CSPA PINZA-2009; Section 6.9), and Landing Problems and Solutions (CSPA PINZA-2009; Section 6.17.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	47	25	Mirage	Parachute Systems	215	On landing braked a little too low and fell on left wrist resulting in a micro fracture	Be more responsive, drop and roll (PLF) and work on proper braking altitude	Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.17.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	54	0	Sunpath	Sabre 3	170	Jumper injured his hand during landing. Jumper flared at approximately 12' as he normally did. It was a near no wind landing. Jumper flared and still has speed that was not exhausted during the final flare procedure. The jumper tried to run the speed of the flare out and failed to keep speed with it forcing him to land face first to the ground. Jumper extended his hands out to break his fall. His right thumb was injured in the process.	Jumper left the DZ prior to the DZSO being able to speak to him. Jumping partner was to contact DZSO if there is an issue with injured jumper.	Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.17.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO

Accident	Landing	24	37	Vector	PD	200	Upon landing jumper put her feet on the ground badly resulting in a fibula	An unfortunate movement of the jumpers feet upon	Review educational material on Landing Techniques	Jumper; Coaches;
								ranang.	Problems and Solutions (CSPA PIM2A-2009; Section 6.17.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	instructors, 5250, 520
Accident	Landing	56	1420	Curve	X-Fire	138	Bimalleolar fracture (both Tib & Fib close to ankle): On final approach for landing (last 30 feet), jumper got distracted and on landing instead of having his feet flat to grass he touched a toe first on right side and that caused him to roll to the outside towards his ankle, tumbling to his finish.	Reviewed types of landings - Slide Standing; Two stage flare, etc. Reviewed not getting distracted when landing - Staying focused	Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7), Landing Pattern (CSPA PIM2A-2009; Section 6.9), and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.17.5). Review of CSPA PIM2B; Section 6.3.1 Factors Affecting Human Performance, will assist in recognizing possible performance inhibiting factors.Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PL FL anding.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	33	298	UPT	PD	143	Following a CRW jump which went without problem, during the landing the pilot had to increase the front risers in order to gain a little speed to give himself more power when landing as necessary with this type of sail. The pilot then slipped his feet on the ground, however his right foot got caught in a hole and stopped at that time which resulted in a fracture of the maleos.	Gaining speed for this type of sail is key in order to be able to aerize without impact and with optimal braking it was observed that the sole of the shoe used was torn off during landing, which leads us to believe that there was perhaps too much "flu" and largely contributed to the fracture of the foot. We therefore need a type of shoe more suitable for all phases of flight. Particularly during CRW flight but also during landing.	"Footwear should give adequate protection to the foot and ankle. Running shoes are good for this purpose. If you have weak ankles then high top running shoes or hiking boots may be a good investment. Footwear must not have any hooks or buckles that could snae, Proper footwear is a TSR (Technical Safety Recommendation §3.5), although you will see skydivers wearing sandals or bare feet, they do not really offer a great deal of protection especially on aircraft exits, landings, and obstacle landings." - PIM 28 - Section 3 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.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	53	915	Javelin	Pilot	150	Review of another jumpers video of the landing indicates he did not flare. He appears to realize he is going to land hard and reacts by lifting his legs to a crouch position. However his hands remain in full flight and never come down into any attempt to flare.	This accident was pilot induced and we need to have a chat and understanding why he didn't flare.	Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.1.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	27	580	Curve	Crossfire 2	139	Exit to opening was uneventful. Winds were light and variable. Low left turn which resulted in slight downwind landing. Skydiver was not fully back under nose of canopy when he impacted the ground with little to no flare. Skydiver impacted the ground very hard on both feet followed by climbing under canopy and landing a 2nd time as a PLF. Ambulance was called and skydiver has broken his left ankle.	Multiple factors to consider here, the jumper has around 600 jumps however did not jump for 7 months. It does not appear that he gained and weight during this time. 1. A perfect pattern style should be flown especially at the beginning of the season in order for the jumper to regain his sight picture for the approach. 2. The winds being light and variable and the temperature higher than the end of last season made him take a decision that he might have gotten away with while having a lower density alitude (cooler) and with a minimum of front winds. After turning, the jumper was landing in a downwind configuration. The conjunction of the difference of temperature and downwind landing made the canopy have a n unexpected behaviour for the pilot. The pilot should show more caution at the beginning of the season and make sure to study the winds and temperature, in order to take all the factors into consideration and having a better understanding of what behaviour of the parachute might be during all phases of flight under canopy. 3. Basic flight tests should be practiced again especially during the first ismo of the oracon	Review educational material on Landing Techniques (CSPA PIMZA-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIMZA-2009; Section 6.17.5). Additionally, jumper should review Downwind Landings in CSPA PIMZA-2009, Section 6.17.4 Hazards Near the Ground. Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO

Accident	Landing	24	262	Wings	Safire 2	144	Run off landing just before the pea bowl uneven ground rolled ankle and heard a crack. Jumper still stood up.	Jumper rolled his ankle on landing. Uneven ground & jumper was wearing low shoes with no ankle support. Jumper briefed on PLF & proper footwear.	Review educational material on Assessing Terrain (CSPA PIM2B; Section 6.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing. 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. "Footwear should give adequate protection to the foot and ankle. Running shoes are good for this purpose. If you have weak ankles then high top running shoes or hiking boots may be a good investment. Footwear must not have any hooks or buckles that could snag. Proper footwear is a TSR (Technical Safety Recommendation §3.5), although you will see kydivers wearing sandals or bare feet, they do not really offer a great deal of protection especially on aircraft exits, landings, and obstacle landings." - PIM 2B - Section 3	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	63	3816	Talon Classic Pro	Eiff Classic	281	On first load jumpers were surprised by the strength of winds aloft and took the sport further. Jumper was second out of the aircraft on first pass. 3 other jumpers exited on second pass. Jumper may have encountered some turbulence approaching the tuffet, possibly over-correcting with the left toggle. Foot seemed to get caught near the edge of the tuffet as his body continued left, breaking and dislocating ankle, Foot was obviously dislocated. 3 subsequent jumpers landed uneventfully. Taken by ambulance to hospital where jumper was sedated while they put the foot back in place and casted the ankle. Surgery followed two days later, a plate on the inside with screws, and screws in the outside of the ankle. Possibly a crew from front to back. Follow up to occur in 2 weeks.	0	"Through good wind assessment you will be able to select the ideal set-up point such that you make the turn onto final approach and then have to make minimal corrections to maintain your approach to the bowl" (CSPA PIM 2C - Precision Accuracy)	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	22	170	Wings	PD Sabre 2	150	On the first jump of the day jumper preformed a 4 person belly jump. The freefall was uneventful. When landing, the landing pattern was a right- hand pattern and jumper made his final turn to face into the wind with his front risers. His turn was much too low and impacted the ground violently. He quickly lost altitude after his turn, something he did not realize soon enough. Following the rapid loss of altitude, he did not use his control handles to brake his canopy. When first witness arrived, jumper stated that he wanted to use his rear risers to save himself. Jumper was not moved until paramedics arrived because he said he had back pain and couldn't move his feet. He also had an obvious fracture to his right tleg. Firefighters arrived quickly and then the ambulance. When moving him to the side, they noticed hemorrhage in his coccyx so he quickly was taken to hospital.	Before performing front riser maneuvers, skydivers should request and seek coaching from instructors or trainers who have experience with this type of turn. These turns are risky and these risks must be minimized as much as possible. The skydiver must be aware that front riser turns are high-risk maneuvers and that dangers are omnipresent.	Intentional and unintentional low turns can result in serious injury or death. It is important to recognize your limitations, including but not limited to, currency, skill level, external inputs, and personal inputs. Review of CSPA PIM2B; Section 6.3.1 Factors Affecting Human Performance, will assist in recognizing possible performance inhibiting factors. Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7), Landing Pattern (CSPA PIM2A-2009; Section 6.9), and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.17.5). Jumpers should review and practice the Praachute Landing Fall (PL) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	33	20	Sunpath	Navigator	240	Jumper experience a low wind landing. Jumper was landing in student landing area. Initiated landing was on the short grass and flare finishing in taller grass. Jumper did not or was unable to finish full flare. Jumper struck ground harder than usual and felt immediate discomfort to right ankle. First aid was done by placing ice on the right ankle. Jumper will monitor ankle and may or may not seek further medical care.	Jumper was educated on landing patterns and the importance of finishing flare; Focus on the landing position and possible PLF if required.	Review educational material on Landing Techniques (CSPA PIM2A-2009; Section 6.7), Landing Pattern (CSPA PIM2A-2009; Section 6.9), and Landing Problems and Solutions (CSPA PIM2A-2009; Section 6.7.5). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PLF Landing.	Jumper; Coaches; Instructors; DZSO; DZO
Accident	Landing	34	50	lcon	Pilot	210	Right shoulder dislocation; Jumper hit some thermals in landing pattern & overshot the landing area. Landed in canola field & was unable to run it out. Caught feet in canola & face planted.	Discussions were had about landing in canola and not trying to run it out yet to ball up, keep feet high until canopy forward speed is over.	Review educational material on Landing Techniques (CSPA PIMZA-2009; Section 6.7) and Landing Problems and Solutions (CSPA PIMZA-2009; Section 6.1.75). Jumpers should review and practice the Parachute Landing Fall (PLF) referencing SSI Reference Manual, Appendix - Skydiving Technical Knowledge PL Landing.	Jumper; Coaches; Instructors; DZSO; DZO

Accident	Landing	46	985	Javelin Odyssey OJ	Crossfire 3	109	Jumper just completed a coach jump with an individual who was	Do not perform high performance maneuvers low to	Intentional and unintentional low turns can result in	Jumper; Coaches;
	Ū						significantly larger than jumper. Jumper chose to wear a 9lbs weight belt in	the ground.	serious injury or death. It is important to recognize	Instructors; DZSO; DZO
							order to match fall rates more effectively. Jumper opened main parachute	-	your limitations, including but not limited to.	
							that they had recently purchased with approx. 25 jumps completed on it by		currency, skill level, external inputs, and personal	
							jumper. They removed and stowed the slider, loosened chest strap and		inputs, Review of CSPA PIM2B: Section 6.3.1 Factors	
							flew to holding area. Jumper had been practising more high performance		Affecting Human Performance, will assist in	
							landings on the last few jumps. They had been finding that they were		recognizing possible performance inhibiting factors	
							plaining out very high so they would double front riser inputs to continue		Review educational material on Landing Techniques	
							dive after the 190 degree turn. Jumper departed the holding area at 900		(CSRA RIM2A 2009: Section 6.7) Landing Pattern	
							fact and falt like they had arrived at their base lag a hit late. Iumpers does		(CSPA PINIZA-2005, Section 6.7), Landing Fattern	
							neet and feit like they had arrived at their base leg a bit late. Jumpers does		CSPA PIWIZA-2009, Section 6.9), and Landing	
							not recail at what altitude that they initiated the 180 degree turn to final		Problems and Solutions (CSPA PIWI2A-2009; Section	
							but they believe it was just less than 400 feet. When they came around to		6.17.5). Jumpers should review and practice the	
							final into the wind (very light <1kt) they continued to apply front riser		Parachute Landing Fall (PLF) referencing SSI	
							inputs believing they were still "high enough". Jumper realized in an instant		Reference Manual, Appendix - Skydiving Technical	
							that they were in trouble and much lower than they had thought. Jumper		Knowledge PLF Landing.	
							released the front risers and recalled thinking that they should stab flare			
							immediately. Jumper impacted soft grass with their knees first taking the			
							majority of the impact to their right knee and thigh. Jumper was told after			
							the fact that they bounced and was carried by the canopy another 75 feet			
							coming to a rest at the edge of a concrete turning pad. Jumper did not			
							loose consciousness at any point. Witnesses came immediately to aid			
							iumper After a period of time air ambulance arrived and sedated iumper			
							for the heliconter evacuation to trauma center. Jumper assassment of			
							Tor the helicopter evacuation to trauma center. Jumper assessment of			
							causative factors: Recent downsize to 109 canopy; weight beit 9ibs;			
							aggressive turn too low 180 degrees and <400 feet; loss of awareness of			
							actual altitude; loss of consideration for wind conditions and lack thereof			
							(<1kt to no wind); overconfidence from previous jump success; excitement			
							and distraction from a successful coaching jump. Reported injuries: right			
Accident	Landing	35	1950	Icon I3	XVL	94	6W track/angle jump. Exit. freefall & separation went according to jump	After review of the jumpers video footage it is seen that	"Use caution with rear riser landings, as the stall	Jumper: Coaches:
					-	-	plan. After removing the slider, jumper released their brakes before	the excess brake lines came unstowed and looped over	point is reached with little warning, and may stall	Instructors: Packers:
							identifying the excess break loop had wrapped around the right toggle	the steering toggle lumper did not see this even	unexpectedly." - lumper should review CSPA PIM 2A	Riggers: D7SO: D7O
							creating a knot. The canopy was fully inflated and was controllable with	though it was you apparent. When iumper unstawed	Soction 6 6 6 Poor Picor Elored Landing	1166613, 0230, 020
							berness & sizer inputs, lumper desided to prostice a rear sizer flare and	taggle it greated a knot in the brake line. Jumper	Device in a set of the	
							discovered they were able to reach the lines above the toggle ism. After	should have conducted proper EDs	with most situations that can assure at opening	
							discovered they were able to reach the lines above the toggle jam. After	should have conducted proper EPs	(DIA3D) Castian C.4.4 Can any Malfunctions Devices)	
							one practice jumper feit confident they could land on rears and still flair the		(PINI2B; Section 6.1.1 Canopy Malfunctions Review).	
							parachute with a limited flare. On final at around 450 feet jumper induced		Review of equipment specific packing procedures	
							a slight harness 90 degree to increase speed and prepared to initiate a rear		should be completed and consult with a Rigger if	
							riser flare and slide in. The location of jumpers landing was close to the tree		necessary.	
							line which may have created a wind sheer and jumper lost air or pressure in			
							the wing which caused the jumper to drop the last 15 feet. Jumper landed			
							hard on their butt and back, however they were able to get up and walk			
							away unassisted. After gathering gear and leaving the DZ (jumpers partner			
							drove) jumper was examined at local hospital and x-rays were taken. No			
							broken bones however the doctor believes jumper may have some muscle			
							soft tissue damage/tension and may have a damaged disc			
							son ussue damage/tension and may have a damaged dise.			
Accident	Landing	51	30	Skyworld Specialties	Solo	270	The parachutist turned onto final at a higher than normal altitude and was	Reviewed landing pattern and flare technique	Review educational material on Landing Techniques	Jumper; Coaches;
							carried past the pea gravel bowl. After passing the intended landing area	procedures. Put jumper back on radio to help self	(CSPA PIM2A-2009; Section 6.7), Landing Pattern	Instructors; DZSO; DZO
							the jumper flared applying his brakes too high causing him to land straight	confidence.	(CSPA PIM2A-2009; Section 6.9), and Landing	
							down. He came in from 30 feet straight down.		Problems and Solutions (CSPA PIM2A-2009; Section	
									6.17.5). Jumpers should review and practice the	
									Parachute Landing Fall (PLF) referencing SSI	
									Reference Manual, Appendix - Skydiving Technical	
									Knowledge PLF Landing.	
Incident	Canopy	30	282	Icon 4	Triathlon	175	Uneventful exit, freefall and opening. One successful attempt for CRW	CRW Instructor should have aborted the skydive due to	Jumpers should review CSPA PIM 2C Section 6:	Jumper; Coaches:
							dock. Attempted two more times for a second dock and got wrapped by the	jumpers aggressive and erratic canopy flying However	Canopy Relative Work with specific attention to	Instructors: DZSO: DZO
							canony below on the second attempt at 2600 feet. The immers second attempt at 2600 feet.	the Instructor did handle the given situation well	include a review of "Avoiding Wrans and	
							read but initiated a cain. The percent below the immer performed	and manufe the given stuation well	Entanglomonts	
							good but initiated a spin. The person below the jumper performed a		Entangiements	
							cutaway after the spin started. Once that happened jumper tried to			
							collapse and untangle the canopy wrapped around them. Jumpers main			
							canopy was flying stable and jumper did control checks at 1800 feet.			
							Jumpers canopy was flying good and was able to steer it while the other			
							canopy was still tangled on the risers at 1700 feet. Jumper did least			
							amounts of inputs and steered towards the DZ as that was the closest and			
							safest spot to land. Jumper landed safely with both canopies.			
						1				

Incident	Deployment	30	25	Sidewinder	Manta	290	At 5200 feet jumper tried a front flip, lost control & was spinning. Pulled after 2-3 seconds at 3500 feet. Hard opening of the canopy. Something hit nose and got nosebleed. Had line twists; removed it; toggles were entangled. Checked control; left toggle was torn & were already at 2500 feet. Decided to land with rear risers. Landed with wind; flared & rolled it. Injuries: Bruise right leg, bruise left shoulder, pain in tail bone, & nosebleed	Due to jumpers low jump numbers consideration must be given to perform Eps immediately if canopy control check shows problems rather than putting yourself into a difficult situation like landing on rear risers	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIM2A-2009; Section 3.3.1 Line Twists). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Incident	Deployment	34	210	Firebird	Nexus	166	Jumper opened on their belly stable. He got a hard opening. After he released the brakes, jumper realized that both control lines were broken. He preformed a flight check with his rear riser. Jumper landed with his rears. A little bit of a hard landing. He had a sore buttocks. He landed in the main LZ.	It would be better to do Emergency Procedures next time to make sure he has a good canopy landing.	"Use caution with rear riser landings, as the stall point is reached with little warning, and may stall unexpectedly." - Jumper should review CSPA PIM 2A Section 6.6.6 Rear Riser Flared Landing. 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.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Incident	Exit	70	5157	Wings	Sabre 2	170	No injury. Jumper was on the inside position on a C182. Tried to leave the plane with a 4 way when the left flap of jumpers container got caught on the handle of the door above jumper. Jumper was hung up for 30 seconds attached to the plane. Jumper was able to reposition themselves on the step and with the assistance of the pilot release themselves from the door handle. Assessed the damage to the jumpers gear with the help of the pilot. Left the plane doing a solo skydive. Jumper opened at 5000 feet and landed safely. Handle seems to be a snag hazard.	Wing camera video shows jumpers rig pushing up into the door and likely snagging the door handle as they attempted to exit with 3 others. The door handle hooked under the left side flap of the main container. The container was damaged. DZOs DZSOs and pilot discussed the door issue. Plans are being made to modify the door handle to minimize negate this risk. Jumper was advised they should have got back inside the aircraft and landed with the plane.	Jumper should review CSPA PIM 28 Section 4.9 "Learning Tight Exits" with a specific focus on the C- 182/C-206 "V" of the Strut (inside centre).	Jumper; Coaches; Instructors; DZSO; DZO; Pilots
Incident	Exit	53	722	Talon	Sabre 2	150	Clipped chin & left arm on exit, poised close to door 4W angle jump. Bruised chin & arm	Discussion with jumper regarding exit with larger groups from a Cessna aircraft. Reviewed importance of practicing dive out prior to jump in the mock up and at the plane.	Jumper should review CSPA PIM 2B Section 4.12 "In- Flight Technical Knowledge"	Jumper; Coaches; Instructors; DZSO; DZO
Incident	Exit	35	85	Wings	Spectra	210	Poised exit on 4 Way. Helmet hooked on door handle. As we exited the helmet caught and broke rear of helmet when it hooked.	The helmet hooked the same door handle involved in a previous AIM on a different incident. These incidents emphasize the need to have this handle "fixed" ASAP. The DZOs have maintenance scheduled for this week. In the meantime, we are prohibiting exits from the "crotch". All jumpers have/will be briefed on the issue.	Jumper should review CSPA PIM 28 Section 4.9 "Learning Tight Exits" with a specific focus on the C- 182/C-206 "V" of the Strut (inside centre).	Jumper; Coaches; Instructors; DZSO; DZO; Pilots
Incident	Freefall	34	33	Vector	Navigator	220	Jumper doing a C2 jump. Failed to respond to hand signals during jump. Jumper was not altitude aware during jump even though coach continued to signal jumper to check altimeter. Coach tracked at S000 feet. Jumper coach during track. Coach pulls at 3500 Feet. Video shows jumper stop track and deploy directly under coach well below 3500 feet. Jumper landed of ID2 and was recovered with no issues. Jumper landed in a farm field. Jumper was asked not to return to DZ.	Jumper does not make the effort to remain skilled at parachuting. It would be better to focus efforts in another activity.	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' B'reak 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.	Jumper; Coaches; Instructors; DZSO; DZO

Incident	Landing	28	18	Sidewinder	Sabre 2	210	"Before boarding I (jumper) had a tinted visor so at the airport I was trying to turn the backlight on the altimeter. I was also jumping a rig I hadn't jumped in awhile. During flight my altimeter started glitching at 2k and then got stuck on 3.6K. It turned off and then restarted at 0K despite being at 4k. Another skydiver (very experienced) gave me his wrist altimeter. I was a bi spooked by my altimeter not working & the backlight on the jumpers wasn't coming on. So already a little rattled. During freefall I pulled at 4.2K while in my holding area I was keeping an eye on the higher canopies I drifted into the downwind turned myself at 940 feet back around to continue the downwind pattern. As I was approaching base I was still high (730feet). I tried to crab to loose altitude & decided to cut across base along the tree line but the winds were higher & pushed me past the tree line. I couldn't get penetration back and landing into the trees. Lesson: I needed to consider the winds better. I should have turned in earlier at the higher altitude as the higher winds would have slowed me down on my base Jumper Jumper sustained no injuries. An indepth briefing with Jumper occured following the skydive and a plan was set in place the next day that consisted of ground training and review of canopy flight including VR training. Dissusions regarding penetration checks, setting up a pattern, and umper vand humer proven humen with how facilities	An indepth review of canopy skills including canopy flight in the landing pattern, penetration checks, landing in obstacles. Decsion Making processes is also important to review and utalize.	Review educational material on Harards Near the Ground (CSPA PIMZA-2009; Section 6.17.4) and Recreational Canopy Control Skills (CSPA PIMZB Section 6). Review of CSPA PIMZB; Section 6.3.1 Factors Affecting Human Performance, will assist in recognizing possible performance inhibiting factors.	Jumper; Coaches; Instructors; DZSO; DZO
							Candy ingit were reviewed. Joint was rely influe with rel decision making processes and where correction should have been made, including the decision to not exit the aircraft if feeling out of routine. It was disussed how she responded very well in an urgent situation as she found a safe clear path on when she recognized she would not make it to the LZ and was going to land into the trees. She prepared and initiated her flare exactly as trained for trees Coach 1			
Incident	Other	79	395	Mirage	Sabre 2	170	Jumper prepared their rig and everything was ready, AAD, Altimeter, helmet and checked rig fully and jumper waited for the call. Jumper received a phone call while waiting and got busy doing other things. Found themselves rushing when the plane was ready and got all their stuff together and rushed to plane. Jumper ended up doing up their chest and leg straps in the plane.	Management and Lead instructor had a long heart to heart with the jumper regarding rules for getting onto a plane, but also being prepared to get in the plane. Jumper was receptive and very open to feedback.	Review of CSPA PIM28; Section 6.3.1 Factors Affecting Human Performance, will assist in recognizing possible performance inhibiting factors. Jumper should perform and review procedures of full gear checks prior to boarding the aircraft (CSPA PIM2A-2009; Section 3.7.1 Safety Check)	Jumper; Coaches; Instructors; DZSO; DZO
Incident	Other	60	0	Icon	Pilot	230	After packing a reserve canopy, the individual hooked up the unpacked main to the harness and returned rig back into service. A few days later, it was brought to the individuals attention that they had improperly connected the 3 ring release. A picture showed that they had passed the loop of the 3 ring release around the small and middle ring.	Individual was educated on what to do and how to fix it.	Review of equipment and specific packing procedures should be completed consulting with a Rigger if necessary.	Packers; Riggers; DZSO; DZO
Incident	Other	43	72	КО2	Pilot	230	Jumper sat down in the back of the C182 with their back against small access door. Got up at 9000 feet to have someone do a pin check and another jumper noticed the reserve pilot chute had popped out. Senior jumper on plane secured my reserve & pilot chute and informed the pilot. All jumpers landed with the plane.	Jumper was informed to sit sideways in the 182 was not a good idea especially against cargo door as there are ribs and other snag points and door could open. Went over several situations for moving in aircraft more safely.	Jumper should review CSPA PIM 2A Section 4.2 "Seating and Movement"	Jumper; Coaches; Instructors; DZSO; DZO
Malfunction	Deployment	51	63	Javelin	Sabre 2	230	"Exit 10,300 feet dive out. Stable arch, turn left, turn right. Altitude awareness and stable throughout skydive. Pulled at 5500 feet, harder opening than usual. Reached for toggles and discovered the left toggle was broken. Went straight to EPs. Uneventful canopy flight under reserve. Landed safely back to drop zone." - Jumper "Jupon inspection of gear by ac CSPA Rigger "Jumper reported that the opening was unusually hard. The toggles were stowed and correctly in place. When the jumper unstowed the toggles is when he realized the left line was broken. Upon further inspection, the line broke at the cat's eye upon opening" - Rigger	Replacing the line set. Discussed with packers to be looking for potential wear in lines and SOP for reporting to DZSO. Discussed with skydiver that his actions and quick response was well done.	Jumper should review proper body position during deployment, (CSPA PIMZA-2009; Section 5.4 Activation). 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.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	61	66	Javelin	Sabre 2	230	"Skyvan 2W FS jump holding stable through freefall. Break off at 5500 feet after 5 second arch pitch, a slight hard opening occurred and looking at the canopy noticed the steering line broken on left side. 2500 did EPs and landed safely at L2." - Jumper "Rigger had replaced both steering lines a couple days prior to this jump. All lines were in trim according to manufacturer. On prior malfunction an inspection showed no cause for any other issues. The canopy on cut away has not been recovered to be able to further investigated the reason why the brand new line would have broke." - Rigger	This has been a very perplexing issue to understand the root cause. We have had a discussion with the jumper regarding body positioning and the correlation for hard openings. We also reviewed with our packer any areas of opportunity, however nothing in the analysis seems to indicate packing was a causation of the line breaking. In the event we retrieve the canopy, a further in-depth analysis by a rigger will be conducted.	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). 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.	Jumper, Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	25	99	Infinity	Aerodyne	210	Tension knot on right control	0	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.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO

Malfunction	Deployment	34	910	Curve 2.0 Mirage	Sabre 2 Airwolf H-1	96	Jumper deployed pilot chute at 4000 feet (Saddled in at 3200 feet). After finishing housekeeping the jumper went to unstow their brakes and the right toggle got stuck in the cats eye. After trying to release it and it not wanting to give, the jumper was coming up to their hard deck and decided to cutaway to be safe. Jumper was able to get back and fly their pattern and have a nice landing at the DZ. Jumper thad a tension knot on the left side during the opening sequence. Jumper tried to clear the slow speed malfunction. After trying to clear the malfunction, the jumper started into a high speed rotation and then cut away. Landed safely on land. No issues on landing.	Gear was inspected by a rigger who discovered toggle keeper had shrunk over time (type of line) brake lines were adjusted to spec. Jumper was told to keep an eye on lines and tension when packing and opening, housekeeping and releasing toggles. Jumper was fully debriefed on the incident and possible cause of tension knot.	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. 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.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	60	7000	Javelin	Stiletto	150	Line twists cutaway with no complications. Landing uneventful	Stop jumping stiletto	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIM2A-2009; Section 3.3.1 Line Twists). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	60	7000	Javelin	Stiletto	150	Line twists unable to kick out, cutaway. Landed safely under reserve	Body position	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIM2A-2009; Section 3.3.1 Line Twists). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	35	1980	Javelin	Solo	270	Malfunction, Cutaway no injuries. The incident took place during a student jump master course therefore jumper was an experienced jumper not a student. Upon investigation it was found to be a misrouted pilot chute. Bridal was wrapped around main closing loop between flaps #3 & #4 of the main compartment. When pilot chute was deployed by JM, it cinched the bridal around closing loop causing the pin to be lodged in place. During the JM inspection this would not be seen during a pin check.	The packer was debriefed by the chief rigger on the cause of this malfunction. The packer will undergo extra training & checks to prevent this from happening again.	Review of equipment and specific packing procedures should be completed consulting with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	51	918	Sunpath	Sabre 3	150	Jumper had a cut away at 4000 feet. On deployment the parachute deployed full and then spun up with severe line twists and inverted nose of parachute. Jumper tried to recover the twists and the situation got worse. Jumper preformed Eps. Jumper landed safely at the main landing area.	Upon inspection of the recovered canopy and a review of the video footage it was clear that the brakes were not set at the time of packing. Master rigger has had a formal meeting with the packers to review and confirm packing procedures.	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIM2A-2009; Section 3.3.1 Line Twists). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	50	872	Sunpath	Sabre 3	150	Jumper experienced a cut away due to line twists. Jumper deployed main canopy and on opening had severe line twists from riser to canopy. Jumper tried to clear twists and was unable. Jumper then carried out Eps. Jumper landed safely off main landing area on an adjacent farm field beside airport.	Jumper from the video was in a stable body position at deployment time. At this time the exact cause is unclear.	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIM2A-2009; Section 3.3.1 Line Twists). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	33	97	Vector	Navigator	220	Jumper performed a routine jump that he had performed several times on this rig. At pull altitude (3500 ft) jumper experienced a total malfunction as he could not locate the hacky. Jumper carried out normal 2 attempts and then performed Eps. Jumper landed safely at DZ with no issues. Talking with jumper he indicates that he was wearing a weight belt that loosened during his jump and may have gotten in his way as the running end was free stow loop.	A review of the gear (add ons) such as weight belts was done. Jumper was then manifested and performed another jump with gear and no issues. Jumper is confident that this was an isolated incident.	Jumper should review CSPA PIM 28 Section 3.8 "Using Weights"	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO

Malfunction	Deployment	28	145	Wings	Hurricane	170	Hop & Pop at 4500 feet, poised exit stable looking at plane. Delayed 10 seconds & pitched. Canopy started to snivel & left riser 3 inches below right riser, made sharp harness correction and right riser 1/2 inch to 1 inch below left riser (over corrected). Started line twists on beginning of snivel, faster after harness correction. Canopy dived immediately after harness input & spinning with belly to sky, aggressive spin & dive. Tried one small leg kick & no give to line twists. No clear visual on altitude, deployed EPs & pulled cutaway handle. Immediate separation & reserve opened right away with no line twists. Skyhook reserve boost installed). Preformed canopy control check to practise stall point. approx. 2500-3000 feet when reserved opened. Landed on DZ but far from original target. Trim was very different under reserve. Low/no wind landing, flared & almost stood up but fell over. No injuries sustained.	To be more careful on harness inputs on deployment.	Jumper should review proper body position during deployment, (CSPA PIMZA-2009; Section 5.4 Activation). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	43	780	Vector 3	Storm	150	Serious line twists diving	Better body position	Jumper should review proper body position during deployment, (CSPA PIM2A-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIM2A-2009; Section 3.3.1 Line Twists). 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 should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	35	997	Infinity	Fluidwings Airwolf	84	On Saturday September 9th, DZ flew the C182 for a ceiling check due to overcast conditions, with the aim of determining whether they could reach enough altitude for Hog & Pops. Our altitude took us to 3700 feet where we decided to proceed with Hog & Pops. June altitude took us to 3700 feet where we decided to proceed with Hog & Pops. June altitude took us to 3700 feet where before deploying main chute. While the main chute was deploying, jumper briefly glanced over their right shoulder to spot the previous jumper. This momentary action inadvertently caused some input into the harness resulting in main chute starting to spin up and develop line twists. Unfortunately these twists were uneven causing the canopy to spiral and descend rapidly. Efforts to kick out the twists and regain control of the canopy proved unsuccessful, as jumper found themselves spinning on their back. At around 2500 feet, jumper made the decision to execute their emergency procedures cutting away the main chute and deploying the reserve. The reserve was likely being automatically deployed by the RSL, although the jumper followed through with the EPs using cutaway and then reserve handles. The reserve canopy opened with two line twists but was flying straight. Jumper promptly kicked out and resolved the twists and safely landed within the landing area at the drop zone.	Jumper is aware of the need for symmetry during openings with a performance canopy.	Jumper should review proper body position during deployment, (CSPA PIMZA-2009; Section 5.4 Activation), Jumper should review Basic Correctable Situations (CSPA PIMZA-2009; Section 3.3.1 Line Twists). Additionally, reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIMZB; Section 6.1.1 Canopy Malfunctions Review). Review of equipment specific packing procedures should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	48	12000	UPT	PD	0	Emergency Procedures following line twists 330 degree jump run. 3500 feet released main parachute. It was never found. The winds were 20kts at 3500 feet.	0	Jumper should review proper body position during deployment, (CSPA PIMZA-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIMZA-2009; Section 3.3.1 Line Twists). Additionally, reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIMZB; Section 6.1.1 Canopy Malfunctions Review). Review of equipment specific packing procedures should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO
Malfunction	Deployment	43	81	Aerodyne Icon	Pilot	210	Jumper was doing a 3 Way belly with friends and upon deployment of main canopy jumper got serious line twists up high and the kept getting worse. Jumper was at 3500 feet and hard deck is 2000 feet but jumper knew they wouldn't be able to undo them so he cut away and went to reserve. Reserve deployed perfectly and landed safely on DZ landing area without injury.	Jumper stated that he was in a hurry to pack to get on the load with friends so this may have contributed to the malfunction. Jumper was told to be deliberate in packing and time to pack but also practice his jump. While the malfunction may or may not have been due to a fast pack, the bigger problem believed at this point is his jumping is to be prepared for his jump as other possibilities can go wrong when in a hurry.	Jumper should review proper body position during deployment, (CSPA PIMZA-2009; Section 5.4 Activation). Jumper should review Basic Correctable Situations (CSPA PIMZA-2009; Section 3.3.1 Line Twists). Additionally, reviewing malfunctions often will help jumpers deal with most situations that can occur at opening (PIMZB; Section 6.1.1 Canopy Malfunctions Review). Review of equipment specific packing procedures should be completed and consult with a Rigger if necessary.	Jumper; Coaches; Instructors; Packers; Riggers; DZSO; DZO

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	Malfunction	Deployment	35	235	Vector	Sabre 2	150	Jumper deployed pilot chute at 5500 feet. Upon open severe line twists	Jumper did everything right regarding Eps. Jumper was	Jumper should review proper body position during	Jumper; Coaches;
								with end cell closure. Jumper made a decision to carry out emergency	on wingsuit jump #4. Jumper had an irregular body	deployment, (CSPA PIM2A-2009; Section 5.4	Instructors; Packers;
								procedures. Reserve deployed and jumper made a safe landing back at the	position resulting in line twists resulting in a canopy	Activation). Jumper should review Basic Correctable	Riggers; DZSO; DZO
								main landing area.	dive/spin.	Situations (CSPA PIM2A-2009; Section 3.3.1 Line	
										Twists). 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 should be completed and	
										consult with a Rigger if necessary.	
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