

# The Gliding Federation of Australia Inc

## Occurrence Summaries

01/01/2022 to 31/12/2022

Region(s): All

Club:



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The Gliding Federation of Australia Inc.

20-Jul-2023



**The Gliding Federation of Australia Inc**  
**SOAR Accident and Incident Occurrences**

**General Statistics**

Date From: 01/01/2022

Date to: 31/12/2022

<b>Damage</b>	<b>VSA WAGA</b>		<b>NSWG. SAGA GQ</b>		<b>Total</b>	
Nil	19	14	28	19	18	98
Write-off		1	1		1	3
Minor	5	8	14	6	3	36
Substantial	3	2	5		3	13
<b>Total</b>	<b>27</b>	<b>25</b>	<b>48</b>	<b>25</b>	<b>25</b>	<b>150</b>
<b>Injury</b>	<b>VSA WAGA</b>		<b>NSWG. SAGA GQ</b>		<b>Total</b>	
Nil	26	23	47	24	23	143
Minor	1	2		1	1	5
Fatal					1	1
Serious			1			1
<b>Total</b>	<b>27</b>	<b>25</b>	<b>48</b>	<b>25</b>	<b>25</b>	<b>150</b>
<b>Phases</b>	<b>VSA WAGA</b>		<b>NSWG. SAGA GQ</b>		<b>Total</b>	
Launch	11	7	12	5	7	42
Ground Ops	2	5	7	3		17
Landing	7	10	19	4	7	47
Thermalling			2	3	1	6
In-Flight	5	2	6	9	9	31
Outlanding	2	1	2		1	6
<b>Type of Flight</b>	<b>VSA WAGA</b>		<b>NSWG. SAGA GQ</b>		<b>Total</b>	
Local	13	9	25	9	12	68
Cross-Country	1	6	6	5	3	21
Ground Ops	2	7	6	1		16
Competition	4	1	3	1	1	10
Training/Coaching	6	1	7	8	7	29
AEF	1	1	1	1	2	6
<b>Total</b>	<b>27</b>	<b>25</b>	<b>48</b>	<b>25</b>	<b>25</b>	<b>150</b>

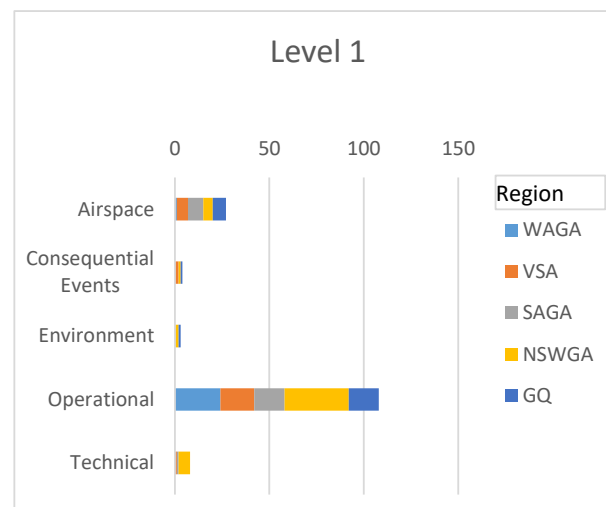


**The Gliding Federation of Australia Inc**  
**SOAR Accident and Incident Occurrences**  
**Classification Level 1**

Date From: 01/01/2022

Date to: 31/12/2022

Level 1	VAG	VSA	SAGA	ISWG	GQ	Total
Airspace	1	6	8	5	7	27
Consequential Events		2		1	1	4
Environment				2	1	3
Operational	24	18	16	34	16	108
Technical		1	1	6		8
<b>Total</b>	<b>25</b>	<b>27</b>	<b>25</b>	<b>48</b>	<b>25</b>	<b>150</b>





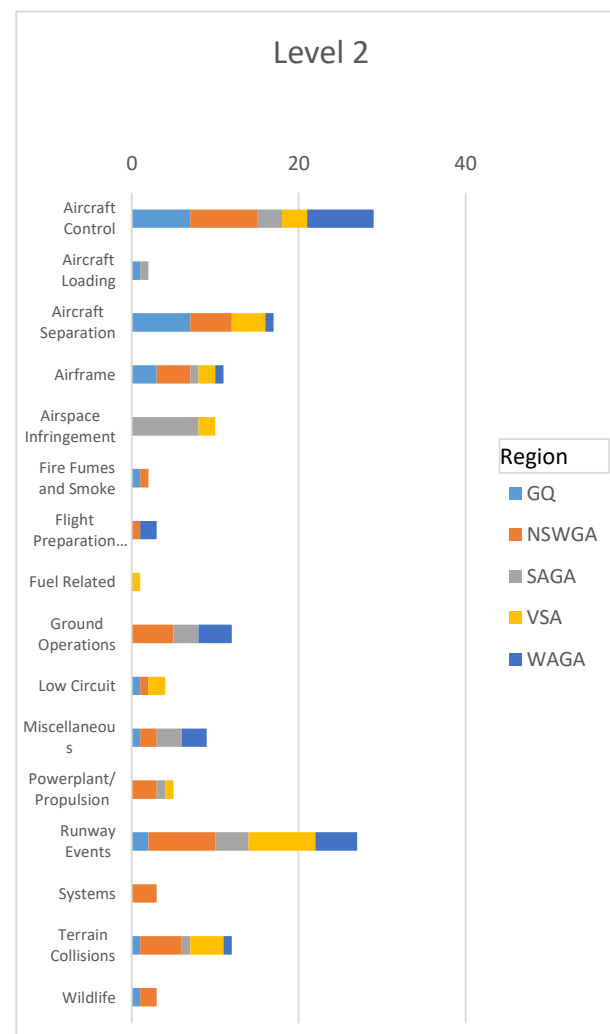
**The Gliding Federation of Australia Inc**  
**SOAR Accident and Incident Occurrences**

**Classification Level 2**

Date From: 01/01/2022

Date to: 31/12/2022

Level 2	GQ	NSWGA	SAGA	VSA	WAGA	Total
Aircraft Control	7	8	3	3	8	29
Aircraft Loading	1		1			2
Aircraft Separation	7	5		4	1	17
Airframe	3	4	1	2	1	11
Airspace Infringement				8	2	10
Fire Fumes and Smoke	1	1				2
Flight Preparation/Navigation		1			2	3
Fuel Related				1		1
Ground Operations		5	3		4	12
Low Circuit	1	1		2		4
Miscellaneous	1	2	3		3	9
Powerplant/Propulsion		3	1	1		5
Runway Events	2	8	4	8	5	27
Systems		3				3
Terrain Collisions	1	5	1	4	1	12
Wildlife	1	2				3
<b>Total</b>	<b>25</b>	<b>48</b>	<b>25</b>	<b>27</b>	<b>25</b>	<b>150</b>





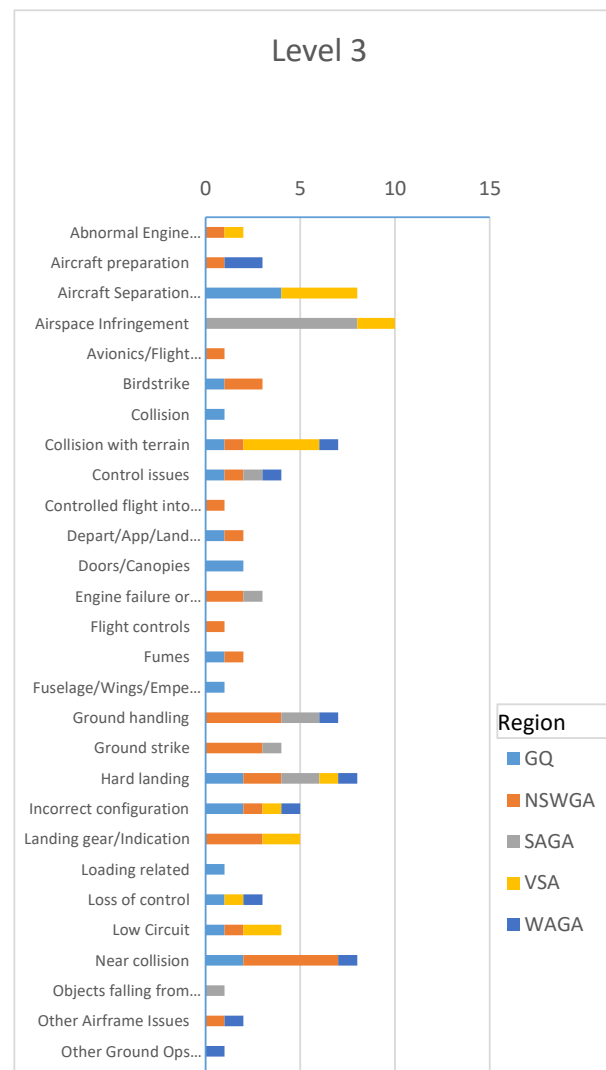
**The Gliding Federation of Australia Inc**  
**SOAR Accident and Incident Occurrences**

**Classification Level 3**

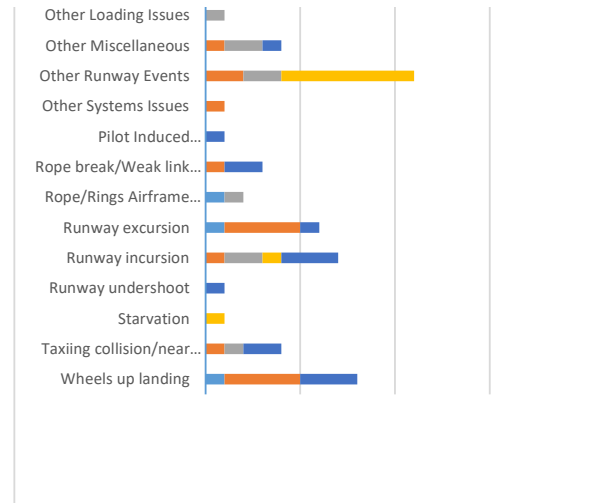
Date From: 01/01/2022

Date to: 31/12/2022

Level 3	GQ	NSWGA	SAGA	VSA	WAGA	Total
Abnormal Engine Indications			1	1		2
Aircraft preparation			1		2	3
Aircraft Separation Issues	4			4		8
Airspace Infringement				8	2	10
Avionics/Flight instruments			1			1
Birdstrike	1	2				3
Collision	1					1
Collision with terrain	1	1		4	1	7
Control issues	1	1	1		1	4
Controlled flight into terrain			1			1
Depart/App/Land wrong runway	1	1				2
Doors/Canopies	2					2
Engine failure or malfunction			2	1		3
Flight controls			1			1
Fumes	1	1				2
Fuselage/Wings/Empennage	1					1
Ground handling			4	2	1	7
Ground strike			3	1		4
Hard landing	2	2	2	1	1	8
Incorrect configuration	2	1		1	1	5
Landing gear/Indication			3	2		5
Loading related	1					1
Loss of control	1			1	1	3
Low Circuit	1	1		2		4



Near collision	2	5			1	8
Objects falling from aircraft			1			1
Other Airframe Issues		1			1	2
Other Ground Ops Issues					1	1
Other Loading Issues			1			1
Other Miscellaneous		1	2		1	4
Other Runway Events		2	2	7		11
Other Systems Issues		1				1
Pilot Induced Oscillations					1	1
Rope break/Weak link failure			1		2	3
Rope/Rings Airframe Strike	1		1			2
Runway excursion	1	4			1	6
Runway incursion		1	2	1	3	7
Runway undershoot					1	1
Starvation				1		1
Taxiing collision/near collision		1	1		2	4
Wheels up landing	1	4			3	8
<b>Total</b>	<b>25</b>	<b>48</b>	<b>25</b>	<b>27</b>	<b>25</b>	<b>150</b>





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Date	1-Jan-2022	Region	WAGA	SOAR Report Nbr	S-1980
Level 1	Operational	Level 2	Aircraft Control	Level 3	Incorrect configuration
A/C Model 1	SZD-48 Jantar Standard 2			A/C Model 2	Piper PA-25-180/S
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	46

### What Happened

During the aerotow launch the glider's airbrakes deployed. A radio call to the alert the glider pilot was made by the ground crew was not heard by the glider pilot. The tow pilot gave a wing waggle, following which the glider pilot closed and locked the airbrakes. The launch then proceeded normally.

### Analysis

The glider pilot advised that during the initial part of the launch he had to use quite coarse control movements to maintain position behind the tug. He noted that the glider crossed the runway end boundary fence significantly lower than usual and he felt the airframe buffeting. The pilot heard a radio transmission but did not understand what was said because the radio volume was set low. The pilot stated he "...observed the tug plane's tail wag, looked to the wings and observed the airbrakes were in the open position". The pilot stated he retracted airbrakes and the "...aircraft returned to normal behaviour immediately". The remainder of the flight was uneventful. The pilot's CFI conducted a debriefing and noted that the glider pilot was not very current, and his pre-take-off checks were conducted in a perfunctory manner.

### Safety Advice

A pre-flight checklist lists tasks that pilots must complete prior to take off. Its aim is to improve flight safety by ensuring that no important tasks are overlooked. Failure to properly conduct a pre-flight check using a checklist is a major contributing factor to aircraft accidents. It is very easy for pilots to become complacent when conducting routine checklists, but as this incident highlights, failure to conduct the pre-flight checks diligently and without distraction can lead to unsafe conditions. Another issue identified in this incident was the pilot's inability to hear the radio message because the volume was set too low. During the pre-flight check for instruments, the radio should not only be checked that it is turned on and on the correct frequency, but also check that the volume is set at an appropriate level and the squelch is appropriately adjusted.

Date	1-Jan-2022	Region	NSWGA	SOAR Report Nbr	S-1974
Level 1	Technical	Level 2	Powerplant/Propulsion	Level 3	Engine failure or malfunction
A/C Model 1	Arcus M			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	75

### What Happened

The self-launching sailplane had taken off from RWY 36 and was established in the climb with the engine at about 6000 RPM. At around 3,000ft QNH about 7 NMs from the aerodrome, the command pilot handed over control to the second pilot. Shortly thereafter, the command pilot observed the engine RPM drop to 3000 RPM (idle) and assumed the second pilot had throttled back. However, this was not the case and the engine soon stopped. The command pilot assumed control, turned back towards the aerodrome, and attempted to restart the engine, both with the starter and by increasing speed, to no avail. The command pilot then found he was unable to position the propeller to manually retract it. The command pilot made a broadcast on the CTAF advising of the engine failure and that he was returning to land on RWY 36. After joining a short base leg, the command pilot made a successful landing.

### Analysis

Investigation by an approved maintenance organisation found the engine failure was caused by the collapse of the big end bearing in the rear cylinder, pieces of which passed through engine. A possible cause of the collapse was a lack of lubrication, despite the engine being operated in accordance with the Aircraft Flight Manual and having computer-controlled fuel injection. The engine has only 47 hours of operation, and



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similar problems have been identified with low hours engines of the same type overseas. The aircraft operator is in discussion with the aircraft and engine manufacturers.

### Advice

Safe operation of any powered sailplane is dependent on the reliability of the aircraft's propulsion system. Unfortunately, the design standards do not require an acceptable level of reliability for sailplane engines so they should always be treated as unreliable. An engine failure after take-off is an obvious risk area, especially so until the aircraft is high enough to return to the airfield. Consideration should always be given to landing options during climb out. Suitable landing options (paddocks) should be assessed until the aircraft is in a position to return to the airfield. Planning beforehand is always better than trying to make a plan after the engine has malfunctioned.

Date	6-Jan-2022	Region	WAGA	SOAR Report Nbr	S-1982
Level 1	Operational	Level 2	Ground Operations	Level 3	Taxiing collision/near collision
A/C Model 1	Standard Cirrus			A/C Model 2	
Injury	Nil	Damage	Write-off	Phase	Ground Ops
				PIC Age	

### What Happened

While towing a glider with a vehicle in a crosswind, the tail swung around and the horizontal stabiliser struck the rear of the vehicle. The glider was substantially damaged.

### Analysis

The glider's tow out mechanism is one where the tail dolly is running on the ground, which requires a very low towing speed to avoid oscillations. Compounding matters, the tow vehicle has a high canopy on the back which reduces the driver's visibility. Investigation identified the driver of the tow vehicle was towing too fast for the conditions and for the type of towing gear fitted. The CFI noted that the pilot had previously been counselled for towing out too fast and causing the glider tail to swing about.

### Safety Advice

Tow out gear is convenient and saves someone having to get someone to walk the wingtip. However, towing with tow-out gear is the major cause of ground towing accidents. Indeed, there are very few accidents when towing with a wing runner. When towed by a vehicle, the proximity of the glider to the vehicle usually results in the glider suffering substantial damage when things go wrong, such as split elevators, split rudders, aileron damage, wiglet damage, etc. A general rule is to always tow at walking pace. This may take longer but it is less costly when a mishap occurs. If you are towing with your windows up with the radio on, you probably are not paying attention to what is going on outside. As with flying, situational awareness is equally important when moving a glider on the ground.

Date	10-Jan-2022	Region	WAGA	SOAR Report Nbr	S-1984
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	LS 8-18			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	69

### What Happened

While returning to the airfield with two other gliders, the pilot forgot to lower the undercarriage and landed with the wheel retracted. The aircraft suffered minor abrasive damage to the lower fuselage.

### Analysis

The incident occurred at the end of a difficult cross-country flight and involved a very experienced competitor and instructor. The pilot returned to the airfield with two other gliders and omitted to configure the aircraft for landing. During the circuit, the pilot failed to conduct the pre-landing checklist and did not have an undercarriage warning system fitted as backup. The pilot was debriefed by the CFI, who identified that high workload and stress levels consequent of a difficult day and flying in close proximity to two other





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## Accident and Incident Summaries

gliders were causal factors in this incident. The pilot is considering installing an undercarriage warning system to the aircraft.

### Safety Advice

For competition pilots the race to the finish is a high workload and dynamic situation. In such circumstances, pilots can reduce their workload by configuring the aircraft for landing at an early stage. During the finish, the undercarriage should be lowered as soon as the finish circle has been crossed and the glider slowed to circuit speed. It was not identified whether the pilots landed off a straight-in approach, but if they did the chances of identifying an error is significantly lower than when a normal circuit is flown. For further information, refer to OSB 01/14 'Circuit and Landing Advice'.

Date	11-Jan-2022	Region	SAGA	SOAR Report Nbr	S-1986
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Glasflugel 304			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Thermalling
				PIC Age	59

Date	13-Jan-2022	Region	NSWGA	SOAR Report Nbr	S-1990
Level 1	Technical	Level 2	Systems	Level 3	Avionics/Flight instruments
A/C Model 1	Pilatus B4-PC11			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	74

Date	15-Jan-2022	Region	SAGA	SOAR Report Nbr	S-1992
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	K8B			A/C Model 2	
Injury	Minor	Damage	Minor	Phase	Landing
				PIC Age	63

Date	16-Jan-2022	Region	GQ	SOAR Report Nbr	S-1989
Level 1	Operational	Level 2	Aircraft Control	Level 3	Incorrect configuration
A/C Model 1	Discus CS			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	70
<p>After a short local flight launched by Aerotow to about 1300ft AGL, the pilot was unable to find sufficient lift to maintain a soaring flight and landed to get a re-launch. The pilot reported that in his haste to get relaunched, he omitted to lock the airbrakes. Subsequently upon take off and while the glider was only a few feet from the ground, the airbrakes deployed uncommanded. The pilot stated: <i>"At the same time that I became aware the dive brakes had deployed, I received a radio call from the launch point to advise me of same. I closed and locked the brakes and the launch continued as normal to 2,000ft AGL where I released normally and continued the flight."</i> Safety is the top priority in aviation, so ensuring everything is operating correctly and properly before any flight is essential. Consequently, a pre-flight checklist is critical in guaranteeing that safety requirements are met before the aircraft takes off. Pre-flight checks should be conducted carefully and deliberately and should never be rushed.</p>					

Date	16-Jan-2022	Region	WAGA	SOAR Report Nbr	S-1994
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Level 1	Operational	Level 2	Runway Events	Level 3	Runway undershoot
A/C Model 1	PW-6U			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
<b>What Happened</b> The pilot flew too far downwind for the conditions and landed in a paddock.					
<b>Analysis</b> The pilot reported joining downwind behind a higher performance glider. The glider flew through sink and lost considerable height, causing the pilot to consider modifying his circuit and turning onto base early and ahead of the preceding glider. However, the glider then flew into an area of lift and the pilot, confident that he could continue with a full circuit, continued on downwind. The glider encountered further sink and the pilot realised he would not get back to the runway, even if he joined the base leg at that point. The pilot stated "...rather than risk stalling/spinning due to being too low and slow, I decided it would be safer to turn to a paddock I had picked out and maintain safe speed and set up a stable approach." The pilot landed downwind into the selected paddock safely with no damage or injury. The glider was retrieved by aerotow. The pilot was debriefed by his CFI, who counselled him about height judgement and 'becoming number one' by making a radio call and turning onto base early if dropping below a preceding glider. Several subsequent solo circuits were observed to be satisfactory.					
<b>Safety Advice</b> The pilot's decision to conduct an outlanding was appropriate in the circumstances, but this would have been unnecessary had the pilot modified the circuit when he first observed the position was becoming marginal. Once a need to modify the circuit has been identified, carry out the modification and then reassess the situation. For further information, refer to GPC Units 15 & 16.					

Date	16-Jan-2022	Region	NSWGA	SOAR Report Nbr	S-1991
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	Pilatus B4-PC11			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	17

Date	16-Jan-2022	Region	WAGA	SOAR Report Nbr	S-1995
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	DG-1000S			A/C Model 2	Piper PA-25-235
Injury	Nil	Damage	Nil	Phase	Ground Ops
				PIC Age	
<b>What Happened</b> The unsupervised pre-solo student pilot backtracked the operational runway towards the launch point and into the path of a landing tug and glider.					
<b>Analysis</b> The student pilot advised they had attended the morning briefing and then commenced towing the two-seat glider to the launch point. After entering the runway, the student observed a tug on late final, and immediately tracked left. Due to limited clearance between the wing of the glider under tow and a tug parked outside a hangar, the student stopped the vehicle with the glider still on the runway. The landing tug stopped about 100 metres short of the towing combination. The following glider landed on the other side of the runway. The student sounded the car horn to get attention and was then assisted with un-hitching and pushing the glider clear. The tug pilot advised making three radio broadcasts in circuit, but the student did not have a VHF radio in the vehicle. Following the incident, the CFI determined the landing tug and glider had sufficient runway available to land normally and stop before the obstruction. The CFI noted that this was not the first time a pre-solo pilot had been allowed to tow an aircraft without supervision, and a Bulletin was issued to all members setting down club specific guidelines, including monitoring the CTAF.					



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### Safety Advice

This incident highlights the importance of proper ground-handling training and supervision of student pilots and serves as a reminder that vehicle drivers must maintain proper situational awareness and use radio for alerted see-and-avoid. Gliders under tow are considered taxiing aircraft, and vehicle drivers should make the usual taxiing calls on the CTAF.

Date	17-Jan-2022	Region	NSWGA	SOAR Report Nbr	S-1988
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	LS 1-f			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	80

### What Happened

Near end of landing roll out, the port wingtip snagged grass causing the glider to veer to the left. Correction with right rudder induced a low-speed swing through approximately 90 degrees to the right. The glider remained on the runway throughout.

### Analysis

The aerodrome had experienced heavy summer rains causing rapid growth of grass and vegetation on the runways. Extensive runway mowing had been conducted on all runways, on rotation basis, with priority to the main operating runways. The runway on which the pilot landed had been mown within the previous 48 hours at the lowest setting, but the grass was still sufficiently high in places to catch a wingtip. The pilot is highly skilled and experienced on type, and was aware of the elevated risk if a wingtip was impeded by longer grass. Wind and weather were not a factor, the landed straight into wind, and late on ground roll, one wingtip was impeded, and his correction caused the glider to yaw in the opposite direction, with low energy. The glider was undamaged. Adjustments have been made to lower the slasher and more frequent mowing is being conducted to reduce to probability of occurrences. Briefings have emphasised these risks with any excursion from straight ahead on landing.

Date	29-Jan-2022	Region	NSWGA	SOAR Report Nbr	S-1997
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	Duo Discus			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	

Date	5-Feb-2022	Region	VSA	SOAR Report Nbr	S-2028
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	DG-500 M			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	69

A self-launching sailplane taxied on the bitumen runway with its wing passing under the wings of gliders awaiting launch on the glider runway. The pilot of the taxiing glider stated that a different path to the launch point was available to avoid passing close to other gliders, but they chose not to proceed down this path as it would have meant crossing the glider landing strip on soft ground and possibly caused a considerable delay to launching. The pilot rationalised that there were crew available to keep an eye on proceedings, although the pilot did not communicate with the crew. The command pilot was counselled on the risks of taxiing in close proximity to other aircraft.

Date	5-Feb-2022	Region	VSA	SOAR Report Nbr	S-1996
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Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	Discus b			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	70
<p>The pilot was competing in the Horsham Week competition and was one of the first group of gliders launched from RWY 35. After release, the pilot could not find lift and soon found himself at 1200ft AGL about 1km south (downwind) of the airstrip. The pilot was about to conduct a straight-in approach onto RWY 35 when the glider encountered a weak thermal. The pilot attempted to work the thermal, but this led to the glider drifting into the circuit area. At the time there were four tugs actively launching the remaining gliders. One of the tug pilots, upon joining base leg, spotted the glider in his path and radioed the glider pilot asking his intentions. The glider pilot stopped thermalling and conducted a straight-in approach and landing, while the tug pilot conducted a go-around. The Competition Safety Officer counselled the glider pilot and used this incident as the focus of his Safety presentation at briefing the following morning.</p>					

Date	6-Feb-2022	Region	GQ	SOAR Report Nbr	S-2057
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	DG-1000S			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	
<p><b>What Happened</b> As the glider and tug departed the active runway (RWY 09), an unidentified powered aircraft landing downwind on the reciprocal runway (RWY 27) passed about 200ft below the towing combination.</p> <p><b>Analysis</b> The wind was from ESE at 10-15 knots, and the active runway was RWY 09. The incoming powered aircraft had called inbound for the circuit, and the tow pilot advised glider flying operations were in progress on RWY 09. The pilot of the incoming aircraft advised their intention to join circuit for RWY 09. The glider launch crew checked that the airspace was clear for launch, and not sighting the incoming aircraft in the circuit the glider launch commenced. Shortly after the launch command was given and the towing combination accelerated to take-off, the incoming aircraft made a radio call advising they were on final approach for RWY 09. The glider launch crew looked in the direction of the approach but could not see the incoming aircraft. Shortly afterwards, as the glider/tug combination climbed through about 400 feet straight ahead on their departure on RWY 09, the glider launch crew observed the incoming aircraft at about 100-200 feet above aerodrome level on short final for RWY 27 as it passed beneath the towing combination that was crossing the aerodrome boundary fence. The incoming aircraft continued its approach to RWY 27 until about 50 feet above the ground, upon which its pilot conducted a go-around and then climbed away and left the circuit. The pilot of the powered aircraft did not respond to calls from the gliding operation and made no further broadcasts on the CTAF. It was noted that runway had recently been resurfaced, and there was a NOTAM in effect warning pilots that there were no line or threshold markings, nor runway numbers painted on the runways. The incoming aircraft was not observed in the circuit and its pilot most likely conducted a straight-in approach.</p> <p><b>Safety Advice</b> When entering the vicinity of a non-controlled aerodrome, pilots should ensure they familiarise themselves with the weather conditions they can expect. Wind conditions are particularly important because they will affect the runway to be used. Pilots must also assure themselves, by other means (e.g. NOTAMS), of the aerodrome's serviceability and other hazards which are usually indicated by markings adjacent to the wind indicator. When arriving at an aerodrome to land, the pilot will normally join the circuit on upwind, crosswind (midfield), or at or before mid-downwind. Landings and take-offs should be made on the active runway or the runway most closely aligned into wind. Pilots who choose to adopt a straight-in approach should only do so when it does not disrupt or conflict with the flow of circuit traffic. Regulation 91.395</p>					



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requires a pilot conducting a straight-in approach to give way to any other aircraft flying in the circuit pattern. Pilots should not commence a straight-in approach to a runway when the reciprocal runway is being used by aircraft already established in the circuit. For further information, refer to CASA Advisory Circular (AC) 91-10 'Operations in the Vicinity of Non-Controlled Aerodromes'

Date	6-Feb-2022	Region	VSA	SOAR Report Nbr	S-1998
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	DG-300 Elan			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	50
During the landing roll the undercarriage collapsed. The pilot stated that he lowered the undercarriage and visually observed the lever was in the 'down' position when conducting the pre-landing checklist. The pilot had recently converted to the glider and had been briefed on the workings of the undercarriage lever and the need to ensure it was properly locked. Subsequent investigation did not identify a problem with the undercarriage mechanism. The CFI noted that either the pilot did not properly lock the undercarriage down, or a foreign object had lodged in the mechanism that prevented it from fully locking.					

Date	6-Feb-2022	Region	SAGA	SOAR Report Nbr	S-2010
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Mosquito			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	59
<b>What Happened</b> The pilot reported violating Class C airspace by about 1.7 kms laterally and 3,800ft vertically.					
<b>Analysis</b> Review of the aircraft flight logger trace file revealed the pilot traversed through Class C airspace at up to 8,300 ft and 1.7km from the boundary in an area where the Class C lower limit is 4500f (refer image below). On that day gliders had access to D206 up to 10,000 ft (east of the black line), however the pilot flew to the west of this airspace for some of the time, on a north westerly track. After some distance the pilot reached the 8500ft CTA LL step (as shown north of the cyan line). The breach occurred because the pilot failed to track far enough to the north (withing D206) before heading out to the northwest and thus entered controlled airspace. The pilot was counselled and undertook refresher training with the Club's Airspace officer					





## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*



#### **Safety Advice**

Violations of controlled airspace can be avoided by remaining situationally aware. Situational awareness is having an accurate understanding of what is happening around you and what is likely to happen in the near future. By being aware of what is happening around you and understanding how information, events and your own behaviour will affect your own goals, you have situational awareness. Having situational awareness doesn't happen by accident, it is a cognitive skill. You need to build and maintain situational awareness to ensure that you can stay ahead of a situation and avoid being caught off guard or unprepared. To build a mental model of the environment, it is necessary to gather sufficient and useful data by using our senses of vision, hearing and touch to scan the environment. We must direct our attention to the most important aspects of our surroundings and then compare what we sense with the experiences and knowledge in our memory. It is an active process and requires significant discipline, as well as knowing what to look for, when to look for it and why. For further information, refer to

<https://skybrary.aero/articles/situational-awareness>.



# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

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Date	8-Feb-2022	Region	SAGA	SOAR Report Nbr	S-2000
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Speed Astir II		A/C Model 2		
Injury	Nil	Damage	Nil	Phase	In-Flight
		PIC Age	62		

### What Happened

The pilot reported entering Class C airspace during final glide.

### Analysis

Investigation revealed the pilot traversed through Class C airspace about 2.7km laterally and 2300 feet vertically (See image below). The area to the west of the pink line was released to 6500ft, and east of the pink line and south of the cyan line is class C LL 4500ft.



The CFI reported that the pilot participated in a comprehensive briefing from the Club's Airspace officer and now has a much better understanding of the airspace and the CTA steps around the aerodrome.

### Safety Advice

There are a number of ways to avoid controlled terminal airspace or restricted airspace. Thorough pre-flight planning is the best defence against airspace infringements. Before you head out flying, make sure you have the current charts and have familiarised yourself with the local area. You should do this even if you know the area well, because things may have changed. Check for any temporary restrictions to airspace by logging into NAIPS and checking NOTAMS. In the air, always know your position relevant to the controlled or restricted airspace steps. Using an electronic flight bag with a moving map will help you keep a track on where you are in relation to CTA. A low-cost ADS-B unit can help you be more visible to other aircraft in the area that are equipped with ADS-B IN.

Date	8-Feb-2022	Region	VSA	SOAR Report Nbr	S-2001
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# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	Twin Astir			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
<p>The undercarriage retracted during a smooth landing on a grass runway. Investigation confirmed the undercarriage had been lowered, as the undercarriage lever was found to be in the locked position. The Twin Astir undercarriage is a complicated mechanism, which involves a pushrod system for raising and lowering the wheel, and a Bowden cable that actuates a locking lever at the undercarriage cage. It is possible, when lowering the undercarriage slowly or letting it slam down, that the locking pin does not sit flush on the stop, which then prevents the locking lever from properly engaging the pin. Dirt and small, stones on the stop can similarly prevent the locking lever from properly engaging the pin. Because the locking lever is actuated by a cable mechanism, stretch in the cable allows the handle to be locked in the detent even when the wheel is not physically locked down. In this situation, as soon as the aircraft weight is on the wheel it folds up and deforms the rotation mechanism at the handle. This is a known issue with the Twins Astir model with retractable undercarriage, and most Clubs have wired the undercarriage down.</p>					

Date	9-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2009
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	DG-500 Elan Orion			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
<p>The undercarriage retracted upon landing on grass runway. Investigation revealed no defect with the undercarriage system. The low-hours pilot suspects he did not raise the undercarriage after release from aerotow, and that he inadvertently retracted the undercarriage when preparing to land. When the airbrakes were opened on the final approach the undercarriage warning sounded, but the pilot did not associate the noise with the undercarriage. The pilot reported that he had mainly flown the ASK-21, which has a fixed undercarriage, in the preceding 12 months and his lack of familiarity flying gliders with a retractable undercarriage contributed to this event.</p>					

Date	10-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2005
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	DG-500 Elan Orion			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
<p>Whilst towing the glider from the airfield back to the hanger, a gust of wind picked-up one of the wings. The wing dropping to the ground collided with a 300mm high light which marked out the taxi way. The aileron suffered minor damage.</p>					

Date	10-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-1999
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	DG-500 Elan Orion			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
<p><b>What Happened</b> During a training flight the student pilot landed with the undercarriage retracted, a configuration that was not identified by the instructor.</p> <p><b>Analysis</b> The student was landing at an unfamiliar airfield and was conducting a braked decent from height. The pilot lowered the undercarriage during descent but then raised the undercarriage when conducting the pre-landing checklist. The instructor did not recognise the student had retracted the undercarriage, and the</p>					





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### Accident and Incident Summaries

aircraft landed on its belly suffering minor gelcoat abrasions. The instructor noted that the undercarriage position placard was obscured and that he was unfamiliar with the aircraft. The lack of consistency between gliders in the direction of landing gear activation was identified by the CFI as a casual factor, which can be a trap for instructors who are changing between glider types.

#### Safety Advice

This incident highlights the problem of using "checklists" as "to do lists". Rather than checking that the gear was in the correct position during the pre-landing checklist, the student used the list as a prompt to action. OSB 01/14 'Circuit & Landing Advice' confirms that the pre-landing checklist is a 'check' and not an 'action' list. The undercarriage check should verify the undercarriage lever is matched to the lowered position on the placard.

Date	12-Feb-2022	Region	VSA	SOAR Report Nbr	S-2002
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	PA25			A/C Model 2	Cessna
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	52
Under investigation. Shortly after an aerotow Launch commenced a Cessna left the taxiway and entered the operational runway. The aerotow was being conducted from the grass verge and continued without further incident.					

Date	16-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2003
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	Piper PA-25-235			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	
Under investigation. During the landing roll the tow plane was struck by a thermal and the pilot was unable to prevent a ground loop. The aircraft suffered damage to both wingtips and the undercarriage.					

Date	19-Feb-2022	Region	GQ	SOAR Report Nbr	S-2030
Level 1	Operational	Level 2	Aircraft Control	Level 3	Incorrect configuration
A/C Model 1	IS-30			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	51
Under investigation. The pilot turned onto final high and deployed full airbrake to intersect the approach path to the aiming point. Identifying that an undershoot was starting to develop, the pilot partially retracted the airbrakes but the glider continued to undershoot. The pilot stated <i>"instead of retracting the airbrakes some more I inexplicably pulled them out fully, believing that I had fully retracted them. I was aware that the undershoot had become serious enough that I would not have reached the runway, but because I believed the airbrakes were already fully retracted I attributed the situation to severe sink"</i> . Persons at the launch point observed the glider undershooting with full airbrakes deployed and alerted the pilot by radio. The pilot closed the airbrakes, just cleared the boundary fence and landed safely on the runway.					

Date	19-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2004
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	
Under investigation. While retrieving the glider by vehicle, the port wing struck a gable marker resulting in minor damage to the port aileron.					



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Date	20-Feb-2022	Region	VSA	SOAR Report Nbr	S-2007
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Nimbus-3DM			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	75
<p>The pilot was competing in the 2021 Australian Multiclass Nationals flying in Open class and was flying a 370km closed circuit task. On the first leg the pilot flew well to the East of track and infringed the Western edge of Albury Class C Airspace for about 10kms. The pilot was penalised 1000 points for 'exceeding the horizontal limits of Competition Area by &gt; 1000 metres'. The pilot reported that the airspace file supplied by the competition organisers had been set up to give "airspace" warnings and his navigation system provided warnings. However, the warnings were ignored as the pilot mistakenly believed he was in Class E airspace. When flying near airspace boundaries pilots must ensure they use sensible tolerances to airspace. Pilots should always navigate using CASA approved data and charts. Airspace files provided by competition organisers or downloadable from the internet are unapproved and should not be relied upon.</p>					

Date	20-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2006
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	Standard Libelle 201 B			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	52
<p>Under investigation. While landing downwind, the glider overshot the runway and was substantially damaged when it ground looped.</p>					

Date	20-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2008
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	LS 6-b			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	57
<p><b>What Happened</b></p> <p>While landing on RWY 33 into a 30-degree crosswind of 15 knots from the left and during the hold-off, a gust caused the glider to move to the right. The pilot corrected with left rudder but was unable to prevent the port wing from striking the ground as the glider touched down. The port wingtip caught in long grass and the glider conducted a ground loop to the left. The glider was undamaged.</p> <p><b>Analysis</b></p> <p>The aerodrome had experienced heavy summer rains and rapid growth of grass and vegetation on the runways. Extensive runway mowing had been conducted on all runways, on rotation basis, with priority to the main operating runways 09/27 and 05/33. The 'hangar' runway 34/16 and the short runway 12/30 were mown but as a lower priority. Runway 33/15 was mown two days prior to the accident and was in good condition. During the morning briefing, the duty instructor emphasised NE-NW winds were expected, and that there was an increased risk of ground loops if any glider dropped a wing, particularly with any cross slope. The Duty Instructor witnessed the incident and observed the glider approach with a low airbrake setting and float down the runway before being struck by a wind gust. The Duty Instructor observed the glider 'bob' up and then a few seconds later it touched down. As the glider decelerated the Duty Instructor observed the left-wing touch down on the high side of the runway and the glider gently yawed left about 90 degrees at low speed, on a wide arc. The Duty Instructor attended the glider and checked the ground track and found with no evidence of a skidding event. The glider was inspected and was undamaged. The pilot had low experience and only a few launches on type. It was noted that he had landed with positive flap and good airspeed and was floating with little airbrake. The combination of a left-hand crosswind and left to right slope may have contributed to the pilot landing with a crab angle, and his use of rudder may have accentuated a wing drop. The glider's ground track confirmed it was well into the shortest mown section of the runway. The pilot was later briefed on flying in gustier crosswind conditions, to reduce the amount of</p>					



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float with smooth application of more airbrake during the holdoff, and to dissipate energy faster and therefore minimise any tendency to drift sideways.

Date	22-Feb-2022	Region	VSA	SOAR Report Nbr	S-2025
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	Piper PA-28-181			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
<p>It was reported that an instructor from the local GA flight training school overflow gliders and associated persons at the launch point below 50ft. The tow pilot contacted the instructor by radio and was informed that the overfly was a training exercise in precautionary search and inspection procedures. Although the minimum height rules do not apply when training emergency procedures, Regulation 91.055 of CASR provides that a person must not operate an aircraft to create a hazard to another aircraft, a person or property. The matter was reported to the ATSB.</p>					

Date	26-Feb-2022	Region	VSA	SOAR Report Nbr	S-2011
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	Janus B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
<p><b>What Happened</b> An experienced pilot with low recency mishandled the flare and conducted a series of pilot induced oscillations. The airframe was not damaged but the nosewheel tyre split and deflated.</p> <p><b>Analysis</b> The pilot flying conducted a standard circuit and was landing down the middle of RWY 09. The pilot's CFI observed the approach and landing, and noted that glider's airspeed appeared to be lower than normal. As the glider approached the aerodrome boundary fence, the glider was observed to pitch down, presumably to maintain speed, and crossed the boundary fence at about 50ft above aerodrome level. The pilot had not assumed the flare position when the glider touched down on the nosewheel. Followed by the mainwheel and tailwheel. The glider bounced back into the air and the sequence was repeated twice more, whereupon on the third touchdown the glider had lost sufficient energy to remain on the ground. The glider was inspected on the field and removed to the hangar for further inspection. The nosewheel tyre was significantly damaged and needed replacing, but there was no structural damage to the nosewheel assembly or glider. The pilot was debriefed and advised that he believed he still had height to complete the round-out and flare and was surprised when the nosewheel hit the ground. The pilot had flown eleven flights in the past 12 months, but only had four flights in a two-seat sailplane in the preceding 90 days of which he only conducted two landings. The pilot acknowledged that his age (78) and low recency were likely contributing factors. The pilot agreed to have a check flight if he has not flown in the preceding four weeks.</p>					

Date	27-Feb-2022	Region	NSWGA	SOAR Report Nbr	S-2014
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	ASK 21			A/C Model 2	SZD-48-1 Jantar Standard 2
Injury	Nil	Damage	Nil	Phase	Landing
<p>Under investigation. Two gliders entered the circuit joining area from opposing directions at the same time and passed within 200 metres at similar heights.</p>					

Date	5-Mar-2022	Region	SAGA	SOAR Report Nbr	S-2017
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Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	Grob G 109			A/C Model 2	Ultra-light
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	52
<p>A motor glider entered and backtracked the operational runway while another aircraft was established on final approach. The aircraft on approach conducted a go-around. The motor glider pilot advised that he was following a Jabiru. The pilot stated the "Jabiru stopped at Bravo, waited about 1minute, made a radio call and then backtracked on runway 19. I taxied to Bravo, waited about 30 seconds, throughout which time no aircraft were visible in the circuit. I made a radio call, and then backtracked on runway 19. An unidentified aircraft on early final then made a radio call, declaring a go-around." It is thought the pilot of the other aircraft was conducting a straight-in approach. When conducting a straight-in approach, the aircraft must be established on final approach at not less than 3 NM from the landing runway threshold (regulation 91.395). Pilots should announce their intention to conduct a straight-in approach with their inbound broadcast, and a further broadcast of intentions should also be made when not less than 3 NM from the runway threshold. The aircraft's external lights (where fitted) should be illuminated and remain on until the aircraft has landed and is clear of all runways.</p>					

Date	7-Mar-2022	Region	VSA	SOAR Report Nbr	S-2013
Level 1	Operational	Level 2	Aircraft Control	Level 3	Incorrect configuration
A/C Model 1	JS1-B			A/C Model 2	Callair
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	76
<p>While on a competition launch during Horsham Week Gliding Competition the airbrakes opened unintentionally at about 500 feet. The tug pilot noticed the decrease in the rate of climb and gave the GFA rudder waggle signal. The airbrakes were then closed, and the handle put in the locked position. The pilot reported that airbrakes are kept open during the initial stages of the launch to enhance aileron control. He advised that when he closed the airbrakes they must not have locked, and this was possibly because he was seated too far back and did not have sufficient arm reach. The pilot was reminded that the first component of the pre-take-off check is CONTROL ACCESS, which includes ensuring the seat is properly secured and positioned to allow for comfortable access to all flight controls, panel switches/knobs and the tow release.</p>					

Date	9-Mar-2022	Region	GQ	SOAR Report Nbr	S-2018
Level 1	Environment	Level 2	Wildlife	Level 3	Birdstrike
A/C Model 1	Cessna 150G			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	61
<p>The tow pilot was conducting a warm-up flight in the tow plane before commencing towing operations. Shortly after the tow plane became airborne, a flock of ducks also took flight and flew across the aircraft's flightpath. The aircraft impacted the flock, and after determining that the engine and aircraft operations were normal, the pilot conducted an uneventful low-level circuit and landed back on the operational runway. Inspection of the runway near the point of collision identified two dead ducks on the runway. The aircraft was not damaged. The pilot reported that recent excessive rain and flooding at the aerodrome has resulted in significant ponding areas on either side of the runway, which the local ducks are using as a source of food. The aerodrome is usually dry and doesn't suffer from this ponding issue, so this event is an abnormality consequent of the rare excessive rain event.</p>					



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Date	12-Mar-2022	Region	GQ	SOAR Report Nbr	S-2019
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	S/H Discus BT			A/C Model 2	
Injury	Minor	Damage	Minor	Phase	Outlanding
				PIC Age	53
Under investigation. On the return leg of a cross-country flight and about 15kms from the home airfield, the pilot found themselves low. The decision to break-of the flight was left very late, and when the engine failed to start during the downwind leg into a paddock, the pilot found themselves too low to properly align with the paddock direction. The final turn into wind across the side boundary fence was low and slow, and the glider stalled wings level from about 10ft just inside the boundary fence, and struck the ground heavily while drifting to the right. The aircraft suffered superficial damage, and the pilot suffered minor whiplash. The pilot stated the "possibility of making home no doubt influenced the poor judgement" and "in the final minutes of the flight I failed to divert all my attention to the landing." The pilot also mentioned that, upon reflection, they were "not in a suitable frame of mind to fly this day due significant background stress from work- and business-related matters."					

Date	14-Mar-2022	Region	SAGA	SOAR Report Nbr	S-2020
Level 1	Operational	Level 2	Aircraft Loading	Level 3	Other Loading Issues
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	N/A
				PIC Age	60
<b>What Happened</b> The command pilot failed to identify cockpit ballast was fitted and flew the aircraft in a loading configuration higher than they had calculated. Fortunately, the cockpit load was still within the safe flight envelope.					
<b>Analysis</b> The command pilot noted that they became distracted by a faulty wing ballast dump valve during the daily inspection. The pilot stated <i>"having had the rhythm and routine of my inspection disrupted by the dump valve issue, I should have at that point have restarted my daily inspection of the (aircraft) from the beginning but failed to do so. Consequently, I failed to lift up the front cockpit cushions and check for any ballast weights"</i> . At the conclusion of the daily inspection and as per the aircraft's loading charts, additional ballast weights were placed in the tail fin for the flight crew loading. The pilot noted that during the pre-boarding					





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checks, they checked the tail fin ballast to ensure it was secure, but again failed to lift failure to check loading before flight the front cockpit cushions and check for any ballast weights. The pilot stated: *"having just daily inspected the aircraft, I broke with routine and assumed it was empty. It was only after the flight that it was discovered to my embarrassment, that there were ballast weights in the front cockpit."*

### Safety Advice

Part of the pre-boarding checklist is 'Ballast'. This check is to make sure that the glider will be flown within the placarded weight limits. It should never be flown with the pilot(s) below the minimum placarded cockpit weight as the glider can become almost uncontrollable. Check if there are any ballast weights already installed, and if they are sufficient, or indeed necessary. The check should also include water ballast; is the glider carrying any, how much, is it in the wings and/or the tail, and is the CG within limits? Is the glider within other loading limitations? An additional check would include 'is there an engine fitted?' - and for turbos, the slightly more crucial 'is there fuel in the tank' (and exactly how much)?

Date	16-Mar-2022	Region	NSWGA	SOAR Report Nbr	S-2185
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Discus b			A/C Model 2	LS 8-18
Injury	Nil	Damage	Nil	Phase	Thermalling
				PIC Age	60
On the second last day of the 2022 Australian National Championships, a pilot entered a thermal that was occupied by other gliders at high speed and positioned themselves between two gliders with significantly less than the regulated 200ft separation. The pilot was counselled and the incident was used to raise awareness of the dangers of high-speed thermal entry at the following day's safety briefing.					

Date	19-Mar-2022	Region	GQ	SOAR Report Nbr	S-2021
Level 1	Operational	Level 2	Runway Events	Level 3	Depart/App/Land wrong runway
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	18

### What Happened

On 19 Mar 22, following the completion of Pilot Experience (PEX) flying at the AAFC Gliding Training School (GTS) Warwick, a GTS staff member undertook a solo Staff Continuation Training (SCT) flight in DG1000S glider. Following an aerotow launch the Pilot in Command (PIC) was unsuccessful in locating a viable thermal and commenced a return to the Warwick airfield. The glider did not have enough energy (height and speed) to execute a landing on the duty runway (RWY 09L or 09R). The PIC declared an emergency and conducted a landing onto RWY 27R.

### Analysis

A glider rejoin and circuit is dictated by the glider's total energy state (potential and kinetic – height and speed) and executed by conserving a margin of excess energy until landing is assured, at which point the air brake (aka dive brakes) is used to sacrifice lift and increase drag in order to control the touch down point. As part of energy management, glider pilots are taught to be flexible in how they conduct their circuit rejoin.

Options being:

- Normal circuit
- Modified circuit or opposite direction circuit
- Landing on the opposite runway
- Out-field landing if the airfield cannot be made

To execute a nominally "ideal" glider circuit, pilots will cross a rejoin position approximately 1000 m abeam the upwind threshold at 1000 ft AAL and a speed in the vicinity of 60kts. At Warwick this equates to approximately 2500 ft indicated. A circuit pattern is then flown with the pilot using cockpit-to-runway angles to determine the base turn point. Final approach is normally joined at between 400 ft and 600 ft AGL and air

brake deployed as required to achieve the desired touch down point. On the last flight of the day pilots usually land on the grass area close to the AAFC hangar, in order to expedite aircraft retrieval and hanging. This is called a “hangar flight”. Gliders usually use serviceable grass areas either side of the bitumen runway to take-off and land, in Warwick’s case RWY 09R, RWY 09L (hangar), and RWY 27R. Final approach is normally joined at between 400 ft and 600 ft AGL and air brake deployed as required to achieve the desired touch down point. On the last flight of the day pilots usually land on the grass area close to the AAFC hangar, in order to expedite aircraft retrieval and hanging. This is called a “hangar flight”. Gliders usually use serviceable grass areas either side of the bitumen runway to take-off and land, in Warwick’s case RWY 09R, RWY 09L (hangar), and RWY 27R.

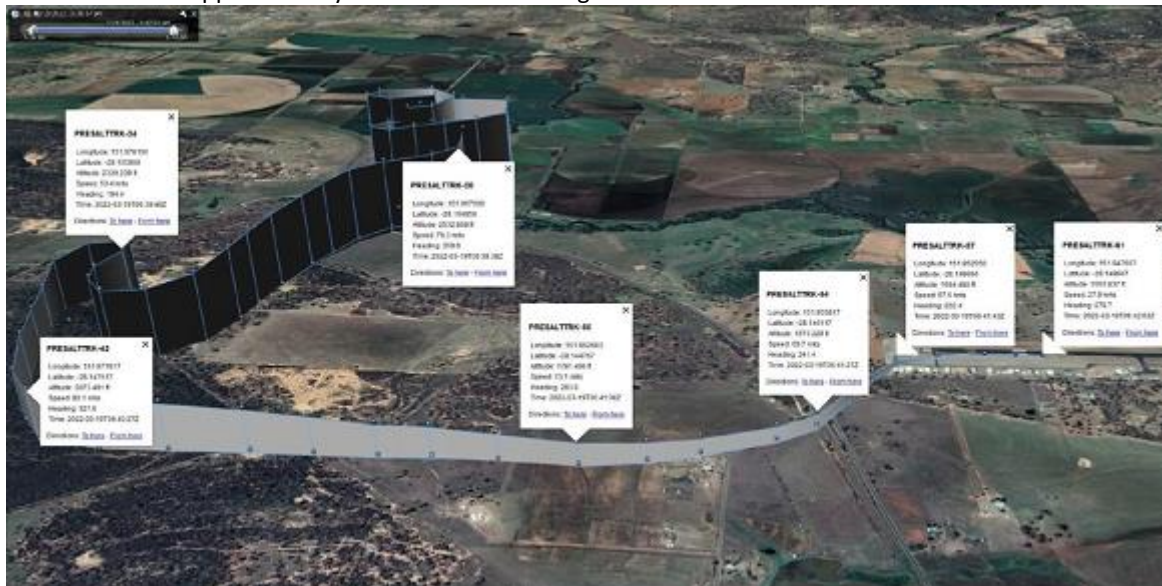


### Flight data

The following flight analysis has been compiled from SeeYou animation combined with interview accounts. In the attached images, the trace colour spectrum varies from dark blue (above 3700 ft indicated) to red (below 1700 ft indicated).

- At 16:28 local, VH-NDQ took off from Warwick airfield on a Staff Continuation Training (SCT) sortie. The tug took the glider to the south east of the airfield before proceeding to the north, releasing to the east north east of the airfield at an altitude of 3800 ft (2300 ft AGL).
- After release the glider flew south, towards an area approximately 2.5 km to the south east of the airfield, where the PIC had noticed signs of thermal activity during the tow. Approaching this area the PIC conducted S-turns in search of thermals (data match to PIC interview).
- At an altitude of 3500 ft indicated (2038 ft AGL) the vario reduced from -3 kts towards zero, suggesting a possible thermal. The PIC conducted a series of turns, did not find a thermal, and decided to return to base. The glider exited the final orbit at approximately 2500 ft indicated (1000 ft AGL) on a northerly heading.
- 16:39 local (approx). Whilst tracking to the north and at an altitude of 2300 ft indicated (739 ft AGL) the PIC commenced a right turn.
- After completing a right turn through 180°, a left turn was conducted and the aircraft rolled out heading north north west, at an altitude of 2240 ft indicated (550 ft AGL).
- This heading was maintained for approximately 25 seconds before the aircraft commenced a turn on to a downwind heading. *Note: The PIC reported that on joining downwind the “picture did not look right” and after assessing the wind conditions decided to land on runway 27. An outfield landing was considered but landing on 27 was considered the best option.*

- At 16:41:27 and an altitude of 1700 ft indicated (230 ft Above Airfield Level (AAL)) the PIC commenced a turn towards the airfield 1250 m away. Tracking shows the initial turn was quite gentle.
- Approximately 20 seconds into the turn the rate of turn increased and the aircraft tracked for the threshold of runway 27.
- Approaching the airfield boundary the PIC traded speed to maintain height, decelerating from 60 kts to 50 kts with little altitude loss. At 16:41:43 the aircraft passed along the eastern side of the eastern most hangar, "George's" hangar, at an altitude of 43 ft AAL and at a reducing airspeed. This hangar is an approximately 15 – 20 ft tall and bordered to the east by trees, the highest being approximately 60 ft. Witness statements support the height and speed of the aircraft passing the tree line.
- The PIC conducted a low altitude turn through approximately 50° and touched down on RWY 27R, just beyond the runway 27 taxiway, moving at a slight diagonal across the grass. The aircraft came to a halt approximately abeam the AAFC hangar.



VH-NDQ return to Warwick airfield flight path overview (courtesy GFA flight trace analysis).

### Evolution of the flight

The activity was a Passenger Experience flight (PEX) weekend, with:

- three gliders
- six glider instructors
- two tugs
- two tug pilots
- approximately four Operations staff

Recently implemented changes meant that there were no senior cadets available to assist during the activity. Instructors normally have support staff (senior cadets) who are very involved during flying activities, conducting background jobs that enable the instructors to concentrate on the flying aspects. On this occasion there were no supporting cadets and Instructors were conducting tasks they would not normally do, such as fetching water for the cadets. This led to some animosity towards Operations staff as the instructors felt they were not getting the assistance they expected. Instructors rotated the Duty Instructor position throughout the day, depending on who was flying. No Solo Student Instructor had been nominated for the activity as there was no expectation of student solos.





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The PIC arrived to prepare the PEX activity in the morning (paperwork, parachutes etc.) The PIC did not attend morning brief as they were not expecting to fly (this advice did not occur until after the last PEX flight). Due to a breakdown in communications, instructor staff arrived at Warwick at approximately 0650 and prepared aircraft for launch, believing the activity would commence at 0730. Operations staff and cadets arrived at approximately 0900. A decision was made to conduct SCT recurrence during the wait time; however, staff were instructed not to launch before the activity OIC arrived. Instructors did complete recency flights that morning after the arrival of the activity OIC. At 0900 (i.e. separate to the instructor group) the PIC arrived at the airfield along with other Operations staff, followed shortly after by cadets undergoing PEX. Instructors had already briefed for the activity at some time between 0730 and 0800. Operations were conducted off RWY 09 throughout the day due to south easterly wind of about 12- 14 kts. Gliders had been positioned at the south western end of the airfield in order to utilise RWY 09R grass. After completion of the PEX sorties, the instructors began packing up and preparing the gliders for "hangar flights". At approximately 1600 the operations staff arrived at the glider launch point and at that time it was communicated that one of the hangar flights was allocated one to the PIC. The flight was authorised by the Duty Instructor. There was a short wait as the allocated glider had just landed from the previous sortie. The PIC received no flight briefing or discussion of flight objectives. The PIC held off flying to hydrate, attend to personal needs, and attend to aircraft ballast. The Dispatcher assisted in preparing the glider for launch. The PIC conducted pre-boarding checks. The time from preparing the glider to launch was not unusual (about 15 mins); however, the PIC recalls making repeated "nudge" radio calls to obtain a launch. No abnormalities were observed in the glider and tow plane combination launch at 16283. During the tow to altitude the PIC thought they felt a thermal. The PIC returned to that vicinity after release from the tug. However, they were unable to find a thermal and began return to the airfield. The PIC recalled:

- Joining downwind that the "picture" did not look right
- Assessing wind and confirming tailwind within limits
- The sun was not going to impact visibility in the approach
- Being aware of the aircraft position being beyond the power lines (Investigator note: these power lines run east-west approximately 300 m north of Warwick airfield at or below tree height and on the aircrafts direct track to runway 27).
- Considering an out-landing but deciding RWY 27 was the best option
- Declaring an "emergency landing RWY 27"
- "Bee-lining" for the threshold of 27

Witnesses recall hearing the pilot make an emergency transmission on the CTAF: words to the effect of "[Glider] making emergency landing runway 27". A witness observing from RWY 09R saw a glider skimming through the trees near a hangar, moving left to right, low and slow. The witness believed the aircraft was going to crash. The witness recalls that after clearing the trees the glider commenced a gentle turn at less than a wingspan off the ground, stating that the glider could not turn any steeper without the wingtip striking the ground, and observing the aircraft touching down on RWY 27R at a slight angle to the runway direction. The remainder of the roll-out was uneventful. The PIC recalled feeling pushed to go flying, and reflected they should have declined. The PIC reported being tired after helping PEX flights during the day. A witness recalled that later, during the instructors' post-activity debrief, that there is no identified point in the GTS Operations Manual at which a solo glider pilot ceases to be a student. Generally, the CFI will decide if a Solo Student Instructor is required. The GFA manual of standards states *"The duty instructor is the person authorised to take complete charge of a gliding operation on any given day and must hold a level 2 instructor rating or higher. The duty instructor is effectively the CFI's delegate for the day and has responsibility for the safe and efficient conduct of all aspects of the operation."* This statement has been reworded in GTS Operations Manual to: *"The Duty Instructor is an instructor delegated responsibility by the CFI to act on their behalf, in accordance with Reference K, to oversee flying operations on any given day. When assigned, the Duty Instructor is responsible carrying out CFI duties identified in this manual. The CFI remains accountable for the actions of the Duty Instructor."* Vagaries in AAFC and GTS documentation contributed to a situation where the Duty Instructor did not feel they had the authority to prevent the flight proceeding.



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### What has been done as a result of the occurrence

- The CFI GTS Warwick proposed the following action: The pilot will return to dual flying status with an emphasis on evaluation of circuit joining options, situational awareness, the need for a break off point in the flight, and general thought processes regarding the progress of the flight. Following completion of sufficient dual flights that two of GTS Warwick Level 3 instructors are satisfied with the above, the Pilot will then return to daily check status with ongoing daily checks of the above.
- Cadets Branch – Air Force concluded there were systemic organisational issues adversely affecting the airworthiness of GTS FLT Warwick. On 12 May 22, the Director General of Cadets issued Directive 02/2022 ordering the cessation of flying operations at GTS FLT Warwick, effective 16 May 22, until the issues could be satisfactorily remediated. Remediation remains a work in progress.
- The GTS Executive commissioned a Remediation plan and appointed a temporary Flight Commander and subsequent selection of a permanent Flight Commander. New key personnel appointments have been actioned (eg CFI, DCFI, UASO).

### Findings

The PIC was required to land the glider on the opposite direction runway due to an extreme low altitude state preventing landing on the duty runway. Contributing factors were:

- GTS operating instructions and procedures did not show a clear chain of command during gliding activities.
- Lack of AAFC GTS policy regarding glider pilot recency and suitability for solo flight, other than guidance provided by GFA.
- Absence of a Solo supervising Instructor to monitor the solo aircraft and therefore provide guidance to the PIC in recovering the aircraft.
- Decision to allow the PIC to proceed on a solo flight.
- Diminished situational awareness and errors in decision making, in that the PIC: did not maintain awareness of aircraft position and altitude in relation to Warwick airfield; continued turns in an attempt to catch a thermal, below an optimum altitude for a return to Warwick airfield; flew to the north and positioned for downwind RWY 09 rather than conduct a modified circuit or out-land; commenced a turn away from the airfield below 1000 ft AAL (contrary to training); and did not appreciate the extreme low altitude state until established on a downwind heading.
- PIC lack of recency.
- PIC preparedness for the flight: the PIC was not expecting to fly and therefore had not attended the morning brief; the PIC reported being tired after helping PEX flights during the day; and the PIC was not briefed on the objective of the flight.

### Recommendations

- AAFC aviation safety department implement a safety campaign regarding generative safety culture.
- GTS review current AAFC gliding operational instructions and procedures for compliance against the latest GFA Manual of Standard Procedures, Volume 2, Operations.
- AAFC review operational instructions and procedures to clarify OIC responsibility during flying activities.
- GTS review operational instructions and procedures regarding risk management systems for post-solo operations.
- GTS develop recency requirements criteria that provide a higher safety margin than that provided by GFA guidance alone.

Date	19-Mar-2022	Region	GQ	SOAR Report Nbr	S-2022
Level 1	Operational	Level 2	Aircraft Loading	Level 3	Loading related
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	61
Synopsis of AAFC Investigation Brief					



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#### Executive Summary

On 19 March 2022 during a series of Air Experience Flights (AEFs), the glider was flown in an unapproved configuration (i.e. without the tail battery or 5.5kg of ballast weight installed) for 3 hours and 47 minutes. The glider had returned to the Club from routine maintenance undertaken at an Approved Maintenance Organisation (AMO) the day prior to the flight. It was rigged on the airfield (not at the hangar) on the following morning by two Club members who subsequently conducted the daily inspections and signed the Daily Inspection Record. The aircraft subsequently flew 8 sorties with several instructors and student combinations without incident. On the following morning during the daily inspection, it was identified that the tail battery was not installed. A replacement battery was installed, and the aircraft returned to service. An independent control check, which requires two consecutive independent signatures on the Daily Inspection Record after the controls have been disconnected and reconnected, was not completed.

#### Analysis

Following routine maintenance, the glider was delivered in its trailer to the aerodrome by a representative of the AMO on 18 March 2022. In preparation for the approved Pilot Experience activity (AEFs) on 19 March 2022, two pilots elected to tow the trailer to the operational runway (RWY 09) and rig the aircraft in situ. The two pilots who conducted the rigging then conducted separate daily inspections. A mandatory evaluation flight was then carried out by one of the two pilots who had previously conducted the rigging and inspection of the aircraft. On completion of the mandatory evaluation flight, no adverse flight characteristics were identified, and the Maintenance Release was completed. Across all the remaining eight flights, which were operated by five instructors, covering AEF, solo and instructor currency flights, no combination of student/instructor approached the forward CG limit. During the Daily Inspection on 20 March 2022, a pilot who had flown the aircraft on the previous day, identified that the tail battery was not installed following a failed the voltage test of the fin battery. A spare battery was located and fitted allowing for the aircraft to be deemed serviceable and returned to operations. The Daily Inspection Record 'GFA Form 1' was not signed off with two consecutive independent signatures as required after controls were disconnected and reconnected. A phone call was placed to the AMO to locate the missing fin battery, which identified that the fin battery was with the AMO.

#### Duplicate Inspection

GFA MOSP3 outlines the requirement for an independent duplicate check of an aircraft that has been reassembled and includes the need for the person undertaking the duplicate inspection to annotate the Daily Inspection record to this effect, such as by writing "*duplicate inspection rigging/controls*" alongside their signature. The need to remain vigilant and diligent is also highlighted in this section. The Sailplane Maintenance Release and Daily Inspection Record also highlights the requirement for two consecutive independent signatures following the disconnection and reconnection of flight controls, although it does not include the requirement to need to annotate the Daily Inspection record to this effect. The signed Maintenance Release on the incident aircraft did not include a note to reflect that a duplicate inspection of rigging/controls was conducted prior to the aircraft flying without the fin battery installed. Furthermore, following the installation of the fin battery, the requirement to have two consecutive independent signatures on the Daily Inspection Records was again not completed.

#### Fin Battery

The Flight Manual provides an exemption for the aircraft to be flown without the fin battery, but it either requires a ballast weight of 5.5kg to be installed in the battery box located in the fin, or it may be removed for an extremely light pilot flying solo as it reduced the minimum front cockpit load by 16KGs. In the case of this glider, the ballast weight was not installed in lieu of the fin battery, and no pilots who flew the aircraft solo that day met the requirement to be considered an extremely light pilot. The Flight Manual also provides the direction to either install the battery or the ballast weight in the battery box of the fin while rigging the stabiliser.

#### Battery Checking

The battery voltage check is the critical control in ensuring that the fin battery is installed. The Daily Inspection Schedule in the Maintenance Release and Daily Inspection Record (GFA Form 1) carried in the aircraft makes reference to observing specific items shown in the Flight Manual. The schedule includes



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guidance to check Battery(s) installation and the instruments & radio. All pilots who were interviewed were unaware of the requirement to check battery voltages > 12 V during the pre-take-off checks. However, during the investigation several daily inspections being conducted were observed, and those few pilots directly referring to the 'Daily Inspection Schedule' in the Maintenance Release stated that it provided a useful prompt in conducting a deliberate inspection.

### Safety Advice

Daily inspections are a crucial part of flight operations and are required prior to the first flight of the day. A properly performed daily inspection by a trained person follows a standard procedure and permits detection of conditions that render an aircraft un-airworthy. However, complacency and a lack of understanding of the standard procedure may prevent it from being totally effective among less experienced pilots. A daily inspection must be carried out using approved maintenance data (e.g the Aircraft Flight Manual or GFA Daily Inspection Schedule) and recorded in the Maintenance Release prior to the first flight of each day. Many factors influence the outcome of a daily inspection, such as level of training, weather, time pressures, stress, and fatigue. Awareness of their presence and actions to mitigate their effects are paramount to properly completing the procedure. A daily inspection may appear to be a simple task, but it is more than glancing at a checklist and wiggling flight controls. These inspections require an understanding of normal and abnormal conditions. For the flight, it is the start of the aeronautical decision-making process. If unsure of what a checklist item refers to or whether the item is airworthy or not, enlist the help of a Maintenance Authority Holder or instructor for assistance.

Date	21-Mar-2022	Region	VSA	SOAR Report Nbr	S-2024
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	Twin Astir			A/C Model 2	Piper PA-28-181
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	66

### What Happened

The pilot of a Piper Archer from a local Flying School backtracked the runway about one hundred meters beyond the end of the permanently displaced threshold and commenced its take-off roll while the runway ahead was occupied by two gliders and a tow plane.

### Analysis

Gliding operations were being conducted at this uncertified aerodrome from within the runway strip approximately 60 meters behind (downwind of) the displaced threshold in accordance with local procedures. The ERSA entry for this aerodrome advises:

*c. Gliders and tugs operate from the grass on side of RWY short of the displaced threshold. Other ACFT must not make low/shallow approaches and must land beyond the displaced threshold.*

*d. All powered ACFT take-offs shall commence from the displaced threshold unless operationally required.*

The aerodrome operations manual states:

*6.13. Take-off (All aircraft other than gliders and tugs). When gliding operations are in progress, aircraft using the runway should commence their take-off run from the displaced threshold. If this distance is operationally unacceptable, the pilot should:*

- Backtrack to a position abeam the front of the glider launch queue, usually alongside the tug aircraft, and then commence the take-off roll once upwind of this position. A radio call should be made stating intentions when backtracking; or*
- Backtrack to use the full runway length. This must be co-ordinated with Gliding Operations prior to start up. Contact can be made in person or using the radio. The gliding clubs will move all gliders and tugs outside of the gable markers.*

*In all circumstance, take-off must not commence while the runway is occupied by a glider, tug, vehicle or person ahead of the commencement of the aircraft's take-off roll.*

When the runway strip is occupied by a tug aircraft or glider, the runway is deemed to be occupied. Aircraft using the runway may, however, commence their take-off run from a position ahead of a stationary glider or tug aircraft (Refer Chapter 3 of the CASA Visual Flight Rules Guide and AIP ENR 5.5-2, paragraph 1.2.4).



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The pilot of the Piper Archer did not comply with these rules.

### Safety Advice

Taking off behind other aircraft and persons is potentially dangerous, as a loss of control during the take-off roll could result in a collision with the other aircraft or associated personnel. Regulation CASR 91.375 requires, among other things, that *"When operating on the manoeuvring area, or in the vicinity of a non-controlled aerodrome you must: keep a lookout for other aircraft to avoid a collision; (and) ensure that your aircraft does not endanger other aircraft."* CASR 91.410 requires a pilot to only take off or land if it can be done so safely considering all the circumstances, including the prevailing weather conditions. 'Considering all the circumstances' should include consideration of the risk posed to persons on the ground (refer [CASR Part 91 Plain English Guide, Version 2.0](#)).

Date	21-Mar-2022	Region	SAGA		SOAR Report Nbr		S-2023	
Level 1	Technical		Level 2	Powerplant/Propulsion		Level 3	Engine failure or malfunction	
A/C Model 1		Piper PA-25-235/A1			A/C Model 2		Grob G 103 Twin II	
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	68
Immediately after taking off and at about 50ft AGL during the transition to climb, the tug engine briefly surged and regained power a couple of times. The tug pilot was not confident the engine would maintain power, and with the option available to land straight ahead on the runway, the pilot lowered the nose and waggled the tug's wings to signal to the glider pilot to release. The instructor in the glider assumed control from the student who was flying, and immediately released from tow. Both aircraft landed safely on the runway, with the glider stopping about 150 metres behind, and to the right of, the tug. The tug was being flown on its eleventh tow for the day and the engine had operated normally. The tow pilot reported the fuel gauge showed about one-third of a tank of fuel remaining, and the pilot confirmed the tanks held 50 litres of fuels by dipping. The tow pilot stated <i>"GFA training in maintaining continuous awareness of launch failure options was helpful to me as a tug pilot. I was aware that I had sufficient room to land ahead, but was probably just short of entering a 'non-maneuvring area'. Further straight ahead, beyond the boundary fence &amp; public road is a known suitable paddock. During previous landings, I had been practicing 'wheeler' landings, which may have been helpful in allowing me to touch down promptly without bouncing."</i> The aircraft was removed from service. and a subsequent inspection could find no fault with the fuel or engine. The LAME suspects carburettor icing may have been the cause of the engine surging.								

Date	23-Mar-2022	Region	VSA		SOAR Report Nbr		S-2026	
Level 1	Operational		Level 2	Runway Events		Level 3	Other Runway Events	
A/C Model 1		Twin Astir			A/C Model 2		Piper PA 28-181	
Injury	Nil	Damage	Nil	Phase	Ground Ops		PIC Age	66
<b>What Happened</b> An aerotow launch was waiting for the runway to be cleared while the pilot of a Piper Archer from a local Flying School backtracked the runway. The pilot of the Piper Archer taxied beyond the end of the permanently displaced threshold and commenced its take-off roll while the runway ahead was occupied by the tow plane and glider.								
<b>Analysis</b> Gliding operations were being conducted at this uncertified aerodrome from within the runway strip approximately 60 meters behind (downwind of) the displaced threshold in accordance with local procedures. The ERSA entry for this aerodrome advises: <i>c. Gliders and tugs operate from the grass on side of RWY short of the displaced threshold. Other ACFT must not make low/shallow approaches and must land beyond the displaced threshold.</i> <i>d. All powered ACFT take-offs shall commence from the displaced threshold unless operationally required.</i> The aerodrome operations manual states:								





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6.13. Take-off (All aircraft other than gliders and tugs). When gliding operations are in progress, aircraft using the runway should commence their take-off run from the displaced threshold. If this distance is operationally unacceptable, the pilot should:

- Backtrack to a position abeam the front of the glider launch queue, usually alongside the tug aircraft, and then commence the take-off roll once upwind of this position. A radio call should be made stating intentions when backtracking; or
- Backtrack to use the full runway length. This must be co-ordinated with Gliding Operations prior to start up. Contact can be made in person or using the radio. The gliding clubs will move all gliders and tugs outside of the gable markers.

In all circumstance, take-off must not commence while the runway is occupied by a glider, tug, vehicle or person ahead of the commencement of the aircraft's take-off roll.

When the runway strip is occupied by a tug aircraft or glider, the runway is deemed to be occupied. Aircraft using the runway may, however, commence their take-off run from a position ahead of a stationary glider or tug aircraft (Refer Chapter 3 of the CASA Visual Flight Rules Guide and AIP ENR 5.5-2, paragraph 1.2.4).

The tow pilot made a radio call to the pilot of the Piper Archer reminding them of the Rules, but the pilot of the Piper Archer did not comply.

#### Safety Advice

Taking off behind other aircraft and persons is potentially dangerous, as a loss of control during the take-off roll could result in a collision with the other aircraft or associated personnel. Regulation CASR 91.375 requires, among other things, that "When operating on the manoeuvring area, or in the vicinity of a non-controlled aerodrome you must: keep a lookout for other aircraft to avoid a collision; (and) ensure that your aircraft does not endanger other aircraft." CASR 91.410 requires a pilot to only take off or land if it can be done so safely considering all the circumstances, including the prevailing weather conditions. 'Considering all the circumstances' should include consideration of the risk posed to persons on the ground (refer [CASR Part 91 Plain English Guide, Version 2.0](#)).

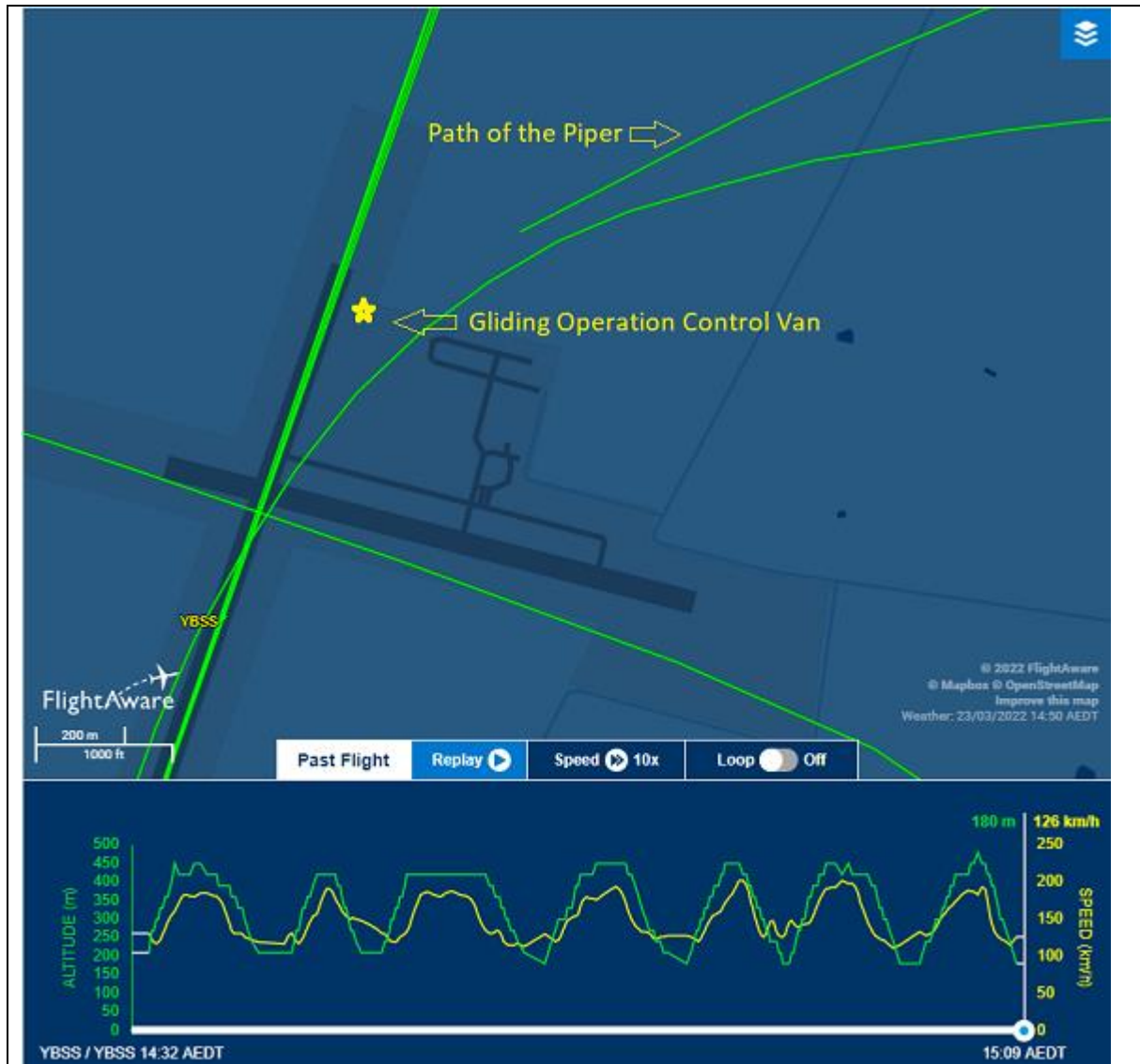
Date	23-Mar-2022	Region	VSA	SOAR Report Nbr	S-2027
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	Piper PA28-161			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	66

A Piper Warrior from a local flying school passed about 40ft above the gliding operation control van, having crossed the left-hand boundary of the operational runway at about 45 degrees to the centreline in a practice glide approach. The Piper continued on this path and conducted a very low turn of about 45 degrees to align with the runway centreline before touching down. The aerodrome operator has previously reminded the operator of the flying school to cease overflying persons and vehicles within 150 metres, but the operator has chosen not to comply. Previous incidents (including video evidence) have been reported to CASA, and this incident was reported to the ATSB.



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Date	3-Apr-2022	Region	GQ	SOAR Report Nbr	S-2029
Level 1	Operational	Level 2	Miscellaneous	Level 3	Rope/Rings Airframe Strike
A/C Model 1	Blanik L-13 A1			A/C Model 2	Piper PA-25-235
Injury	Nil	Damage	Minor	Phase	In-Flight
				PIC Age	56
Under investigation. During aerotow the glider was towed to within a few hundred feet of cloud base. At the top of climb the tow pilot made a number of radio calls asking the glider pilot to release to no avail. The tow pilot then commenced a descent, which resulted in a bow in the tow rope. The instructor in the glider observed the rope looping back towards the glider and assumed control. The instructor then released the tow rope and banked to the right. During this manoeuvre the rope got caught in the aileron cut-out near the wingtip and stayed in that position throughout the subsequent flight and landing. The aircraft suffered minor damage and was removed from service pending repair.					



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### *Accident and Incident Summaries*

Date	3-Apr-2022	Region	WAGA	SOAR Report Nbr	S-2039
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Piper PA-25-235			A/C Model 2	Astir CS
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	62

#### **What Happened**

A tow plane and glider nearly collided head-on in the circuit.

#### **Analysis**

It was not a busy day for the club and in this case, it was the last flight of the day with only the tug and glider airborne. Operations had been conducted on RWY 16 (left-hand circuit direction), but as the wind was changing the duty instructor informed the low hours glider pilot to land on RWY 34 (right-hand circuit direction) after release. Unfortunately, this information was not passed onto the tow pilot, who positioned land on RWY 16. The two aircraft joined their respective downwind legs from the same side of the runway, which placed them head-on to each other. The tow pilot advised that his descent back to the circuit took him downwind to RWY 16 where at this point, he saw the glider coming towards him. The tug's FLARM activated, and the tow pilot turned to the right to avoid the glider. The glider pilot advised that he released from tow and turned right, which placed the glider into wind in a good position for the downwind leg for RWY 34. The flight was shorter than planned as the aircraft was in sink. The glider pilot advised that he never saw the tug, nor does he recall his FLARM activating. The glider pilot did not make a downwind call but made a call on base leg.





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The CFI noted the following Contributing Factors:

- The tug pilot was unaware that the duty runway had changed (The Club will review its procedures to ensure all parties are notified of a runway change).
- The tug pilot did not expect to see the glider at that height at that point on his downwind leg.
- The circuit direction for RWY 34 is right-hand, and for RWY 16 it is left hand. This placed both downwind legs on the same side of the aerodrome.
- The glider pilot experienced sink from the point of release, which shortened the into wind leg.
- Both aircraft were descending at about the same rate.
- The Glider pilot did not make a downwind call.

#### **Safety Advice**

This incident highlights the risks when operating at aerodromes with non-standard circuit directions and the importance of good communication, both on the ground before flight and in the air. When communicating a change in runway, all relevant persons need to be informed by whatever means is appropriate. It is also strongly recommended that pilots of radio-equipped aircraft use the 'standard' traffic circuit and radio broadcast procedures at all non-controlled aerodromes. These procedures are outlined in sections 7 and 8 of CASA Advisory Circular (AC) 91-10 'Operations in the vicinity of non-controlled aerodromes'. In areas outside controlled airspace, and especially in the circuit, it is the pilot's responsibility to maintain separation with other aircraft. For this, it is important that pilots use both alerted and un-alerted see-and-avoid principles.



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Pilots should never assume that an absence of traffic broadcasts means an absence of traffic. The use of FLARM greatly enhances safety in non-controlled airspace, as demonstrated in this incident.

Date	9-Apr-2022	Region	VSA	SOAR Report Nbr	S-2034
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	HORNET STOL			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	68
<p>At this aerodrome gliding launches are conducted on the grass verge of a single runway strip and gliders and tow planes land on the either grass verge or the bitumen runway. Powered aircraft conduct their operations from the bitumen runway. While returning from an aerotow, the tow pilot observed the right-hand grass verge was occupied by a glider and, although the bitumen runway was clear, decided to land long on the left-hand grass verge ahead of the gliders staged for launching. The tow pilot overflew the gliders at low level (about 50ft) and touched down on the right-hand grass verge ahead of the gliders. The tow pilot advised that he preferred not to land on the bitumen as other pilots have experienced control issues when doing so. It was noted that the tow rope was not hanging behind the tow plane as it had been wound into the fuselage. The tow pilot was counselled on the potential risks of his action and reminded that overflying persons and vehicles within 150 metres is in breach of CASR 91.267(3)(h)(iii) Minimum height rules—other areas’.</p>					

Date	9-Apr-2022	Region	VSA	SOAR Report Nbr	S-2038
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	DG-500 M			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	69
<p><b>What Happened</b>  The pilot of a locally-based self-launching sailplane commenced its take-off roll while the runway ahead was occupied by gliders awaiting launch.</p> <p><b>Analysis</b>  Gliding operations were being conducted at this uncertified aerodrome from on the grass verge to the left of the bitumen runway within the runway strip approximately 60 meters behind (downwind of) the displaced threshold in accordance with local procedures. The ERSAs entry for this aerodrome advises:  <i>c. Gliders and tugs operate from the grass on side of RWY short of the displaced threshold. Other ACFT must not make low/shallow approaches and must land beyond the displaced threshold.</i>  <i>d. All powered ACFT take-offs shall commence from the displaced threshold unless operationally required.</i>  When the runway strip is occupied by a tug aircraft or glider, the runway is deemed to be occupied. Aircraft using the runway may, however, commence their take-off run from a position ahead of a stationary glider or tug aircraft (Refer Chapter 3 of the CASA Visual Flight Rules Guide and AIP ENR 5.5-2, paragraph 1.2.4).</p> <p><b>Safety Advice</b>  Taking off behind other aircraft and persons is potentially dangerous, as a loss of control during the take-off roll could result in a collision with the other aircraft or associated personnel. Regulation CASR 91.375 requires, among other things, that “When operating on the manoeuvring area, or in the vicinity of a non-controlled aerodrome you must: keep a lookout for other aircraft to avoid a collision; (and) ensure that your aircraft does not endanger other aircraft.” CASR 91.410 requires a pilot to only take off or land if it can be done so safely considering all the circumstances, including the prevailing weather conditions. ‘Considering all the circumstances’ should include consideration of the risk posed to persons on the ground (refer <a href="#">CASR Part 91 Plain English Guide, Version 2.0</a>).</p>					

Date	10-Apr-2022	Region	VSA	SOAR Report Nbr	S-2033
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# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	Piper PA-28-161		A/C Model 2		
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	

### What Happened

The pilot of a locally-based Piper Warrior II backtracked the operational runway beyond the end of the displaced threshold and commenced its take-off roll while the runway ahead was occupied by gliders awaiting launch.

### Analysis

Gliding operations were being conducted at this uncertified aerodrome from within the runway strip approximately 60 meters behind (downwind of) the displaced threshold in accordance with local procedures. The ERSA entry for this aerodrome advises:

*c. Gliders and tugs operate from the grass on side of RWY short of the displaced threshold. Other ACFT must not make low/shallow approaches and must land beyond the displaced threshold.*

*d. All powered ACFT take-offs shall commence from the displaced threshold unless operationally required.*

The aerodrome operations manual states:

*6.13. Take-off (All aircraft other than gliders and tugs). When gliding operations are in progress, aircraft using the runway should commence their take-off run from the displaced threshold. If this distance is operationally unacceptable, the pilot should:*

- Backtrack to a position abeam the front of the glider launch queue, usually alongside the tug aircraft, and then commence the take-off roll once upwind of this position. A radio call should be made stating intentions when backtracking; or*
- Backtrack to use the full runway length. This must be co-ordinated with Gliding Operations prior to start up. Contact can be made in person or using the radio. The gliding clubs will move all gliders and tugs outside of the gable markers.*

*In all circumstance, take-off must not commence while the runway is occupied by a glider, tug, vehicle or person ahead of the commencement of the aircraft's take-off roll.*

When the runway strip is occupied by a tug aircraft or glider, the runway is deemed to be occupied. Aircraft using the runway may, however, commence their take-off run from a position ahead of a stationary glider or tug aircraft (Refer Chapter 3 of the CASA Visual Flight Rules Guide and AIP ENR 5.5-2, paragraph 1.2.4).

The aerodrome Manager has written to the Registered Operator.

### Safety Advice

Taking off behind other aircraft and persons is potentially dangerous, as a loss of control during the take-off roll could result in a collision with the other aircraft or associated personnel. Regulation CASR 91.375 requires, among other things, that *"When operating on the manoeuvring area, or in the vicinity of a non-controlled aerodrome you must: keep a lookout for other aircraft to avoid a collision; (and) ensure that your aircraft does not endanger other aircraft."* CASR 91.410 requires a pilot to only take off or land if it can be done so safely considering all the circumstances, including the prevailing weather conditions. 'Considering all the circumstances' should include consideration of the risk posed to persons on the ground (refer [CASR Part 91 Plain English Guide, Version 2.0](#)).

Date	10-Apr-2022	Region	VSA	SOAR Report Nbr	S-2032
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	Cessna 150L		A/C Model 2		
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	

### What Happened

The pilot of a Cessna 150 operated by a local Flying School backtracked the operational runway beyond the end of the displaced threshold and commenced its take-off roll while the runway ahead was occupied by gliders awaiting launch.

### Analysis



# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Gliding operations were being conducted at this uncertified aerodrome from within the runway strip approximately 60 meters behind (downwind of) the displaced threshold in accordance with local procedures. The ERSA entry for this aerodrome advises:

*c. Gliders and tugs operate from the grass on side of RWY short of the displaced threshold. Other ACFT must not make low/shallow approaches and must land beyond the displaced threshold.*

*d. All powered ACFT take-offs shall commence from the displaced threshold unless operationally required.*

The aerodrome operations manual states:

*6.13. Take-off (All aircraft other than gliders and tugs). When gliding operations are in progress, aircraft using the runway should commence their take-off run from the displaced threshold. If this distance is operationally unacceptable, the pilot should:*

- *Backtrack to a position abeam the front of the glider launch queue, usually alongside the tug aircraft, and then commence the take-off roll once upwind of this position. A radio call should be made stating intentions when backtracking; or*
- *Backtrack to use the full runway length. This must be co-ordinated with Gliding Operations prior to start up. Contact can be made in person or using the radio. The gliding clubs will move all gliders and tugs outside of the gable markers.*

*In all circumstance, take-off must not commence while the runway is occupied by a glider, tug, vehicle or person ahead of the commencement of the aircraft's take-off roll.*

When the runway strip is occupied by a tug aircraft or glider, the runway is deemed to be occupied. Aircraft using the runway may, however, commence their take-off run from a position ahead of a stationary glider or tug aircraft (Refer Chapter 3 of the CASA Visual Flight Rules Guide and AIP ENR 5.5-2, paragraph 1.2.4).

The aerodrome Manager has written to the Registered Operator.

### Safety Advice

Taking off behind other aircraft and persons is potentially dangerous, as a loss of control during the take-off roll could result in a collision with the other aircraft or associated personnel. Regulation CASR 91.375 requires, among other things, that *"When operating on the manoeuvring area, or in the vicinity of a non-controlled aerodrome you must: keep a lookout for other aircraft to avoid a collision; (and) ensure that your aircraft does not endanger other aircraft."* CASR 91.410 requires a pilot to only take off or land if it can be done so safely considering all the circumstances, including the prevailing weather conditions. 'Considering all the circumstances' should include consideration of the risk posed to persons on the ground (refer [CASR Part 91 Plain English Guide, Version 2.0](#)).

Date	10-Apr-2022	Region	NSWGA		SOAR Report Nbr		S-2073	
Level 1	Technical		Level 2	Powerplant/Propulsion		Level 3	Abnormal Engine Indications	
A/C Model 1		Piper PA-25-235			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	
During an aerotow launch and around 100ft AGL, the tow pilot noted a reduction in power from the engine and a slow rate of climb. The engine sounded to be running rough and the glider pilot reported over the radio that a puff of smoke came from the exhaust. The tow pilot advised the glider pilot that he suspected a rough running engine. After selecting Carburettor Heat and checking the mixture was full rich, the glider pilot again reported observing another puff of smoke from the exhaust, and then the glider pilot disconnected from tow. The glider landed on the reciprocal runway without incident. The tow pilot climbed to a safe height and reported the rough running engine to glider operation, and then made an uneventful landing after the glider was on the ground and clear. Subsequent magneto checks were normal, and the aircraft was test flown without further incident. although some indication of carburettor ice was detected on								



## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*

one occasion. The flight was the first for the day and the outside air temperature at the time was about 14 degrees (C). Given the engine had not had time to fully heat, and the temperature was in the icing range, it is likely the engine suffered from carburettor icing.

Date	12-Apr-2022	Region	GQ	SOAR Report Nbr	S-2031
Level 1	Operational	Level 2	Fire Fumes and Smoke	Level 3	Fumes
A/C Model 1	HK 36 TTS			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	77

#### **What Happened**

Just after take-off a witness observed white smoke streaming from the glider and called emergency services. The command pilot reported the smell of oil coming from the air vent and decided to return to the aerodrome for an engine-off landing. After exiting the glider, the command pilot reported seeing oil on right-hand undercarriage leg below the oil reservoir overflow.



#### **Analysis**

The pilot reported that at about 1,200 ft, on climb to the East they noticed the smell of oil coming through the right air vent. A check all engine gauges showed the engine to be operating normally. The pilot slowly closed the throttle and performed the engine failure procedure while turning back towards the aerodrome. During this time the oil smell had stopped, and the circuit entry was normal. The pilot made the circuit radio calls and during mid downwind stopped the engine and turned off the master switch. The pilot completed a normal landing and rolled to a stop just before a taxiway. The pilot then turned the master switch back on, and then the fuel pumps. The engine started and instantly had oil pressure. The pilot taxied back to the parking area and switched off. Upon exiting the glider, the pilot observed oil on the right-hand undercarriage leg below the oil reservoir overflow. Shortly afterwards the emergency services arrived on scene but there was no emergency. The engine was inspected by an authorised maintenance organisation. The engine was test run and the oil and filter were replaced. A test flight established the engine was performing normally.





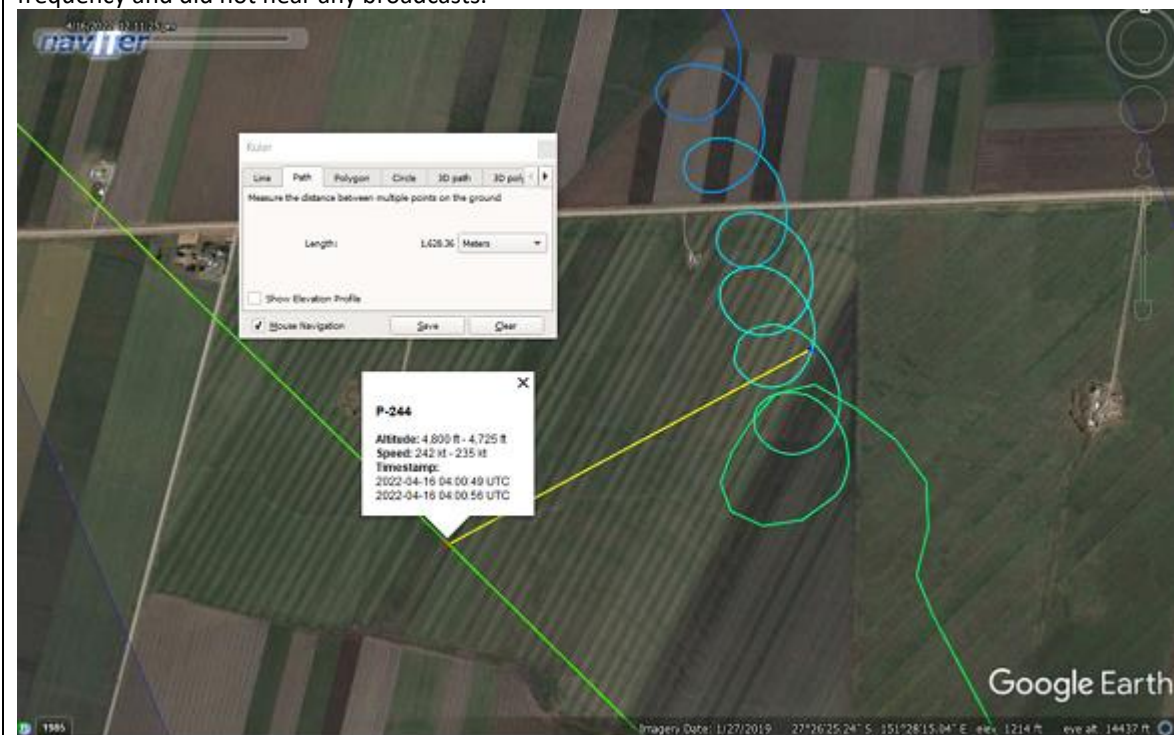
# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

and operating correctly throughout the range. The inspector found the engine had been overfilled with oil resulting in excess oil blowing out the breather vent.

Date	16-Apr-2022	Region	GQ	SOAR Report Nbr	S-2036
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	Discus B			A/C Model 2	Embraer ERJ 170-100 LR
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	55

Under investigation. During a cross-country flight and while thermalling near the known IFR route for Wellcamp airport, the glider pilot received a Alarm alert warning of a fast-moving target approaching the glider's position. The pilot observed that the target would pass with sufficient horizontal separation as to avoid a collision, although the distance was not known. The other aircraft was a small passenger jet enroute to Wellcamp airport. A post-flight review of the two flight traces identified the passenger jet passed about 1200 meters horizontally from the glider at the same height. The glider pilot was monitoring the glider safety frequency and did not hear any broadcasts.



Date	16-Apr-2022	Region	NSWGA	SOAR Report Nbr	S-2035
Level 1	Operational	Level 2	Aircraft Control	Level 3	Incorrect configuration
A/C Model 1	BLANIK L13A1			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	70

Under investigation. The two-seat glider was launched by winch for an Air Experience Flight with the tail dolly still attached. The aircraft's weight and balance remained within the envelope and a safe flight and landing ensued.



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## Accident and Incident Summaries



Date	17-Apr-2022	Region	SAGA	SOAR Report Nbr	S-2058
Level 1	Operational	Level 2	Miscellaneous	Level 3	Other Miscellaneous
A/C Model 1				A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
A pilot was flying in command while not being a financial member of their club. While the pilot was a current GFA member, the GFA constitution requires members to also be a member of an active affiliated club if they intend to exercise privileges of their pilot certificate. Under the Club's constitution the pilot was not a member unless they were financial. The pilot explained that non-payment of his club membership was an oversight and they made immediate payment of their past due account.					

Date	24-Apr-2022	Region	GQ	SOAR Report Nbr	S-2054
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	Duo Discus			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
Under investigation. Rear canopy came open during final approach.					

Date	25-Apr-2022	Region	NSWGA	SOAR Report Nbr	S-2046
Level 1	Operational	Level 2	Miscellaneous	Level 3	Other Miscellaneous
A/C Model 1	ASW 27-18 E			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
<b>What Happened</b>					



## The Gliding Federation of Australia Inc

### Accident and Incident Summaries

An Alexander Schleicher ASG 29 (ASW 27-18) fitted with a TOST E 22 release suffered an uncommanded release on hook up prior to launch. The TOST rings literally fell out of the closed release when the rope was rattled.

#### Analysis

The investigation revealed a fully functional release system and release. The release showed little wear, was in good condition and deemed serviceable. The sailplane had logged 388 launches. The TOST rings used in this case measured 4.66mm. New TOST rings measure 6.7-7.0 mm. It was also noted that the E 22 beak when fully closed was about 3mm short of the casing slot. This was confirmed to be normal as per the TOST design. Subsequent tests carried out on the release using the same worn rings with 4.66mm diameter showed that with only slight upward angle of the tow rope, the curve of the rings would slip under the closed beak. The following is an extract from correspondence received from TOST: *"The release E22 was designed and certified to be only operated with the connecting ring pair according to LN 65091. According to the aerospace norm LN 65091 the circular link (the small ring) needs to have a diameter of 7 mm (tolerance: +0,0 mm and -0,3mm). A diameter of 5,1 mm is way too far from any allowable tolerance. Please do not use connecting rings with a diameter of 5 mm with our releases, that's very dangerous."* Sailplanes fitted with a E 22 release, if not using rings meeting new or close to new dimensions, have an increased risk of an uncommanded release.

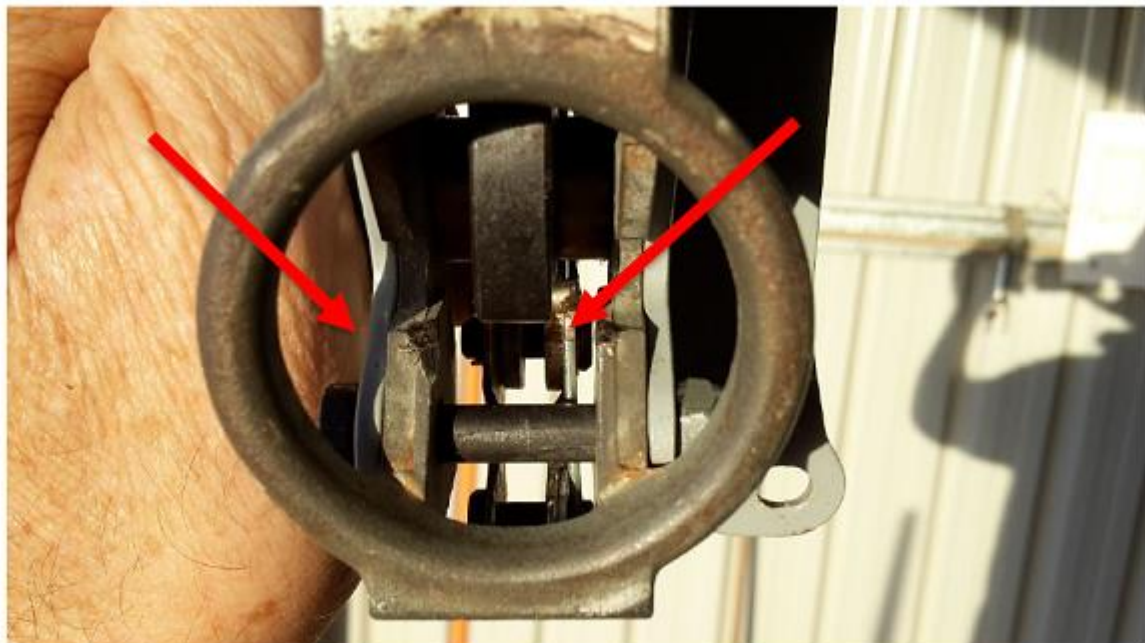


**Figure 1: TOST E 22 release. Beak when fully closed has 3mm gap**





**Figure 2: TOST E 22 release. Worn rings wedging under beak.**



**Figure 3: TOST E 22 release. Note the wear on the side plates.**

**Safety Advice**

The GFA currently have no standalone guidance material on the TOST E 22 release and permitted TOST ring wear tolerances. The GFA recommends following manufacturers guidelines. Following this incident, the GFA Airworthiness Department issued 'AIRWORTHINESS ALERT 2022-1 - TOST E22 Aerotow Release'.



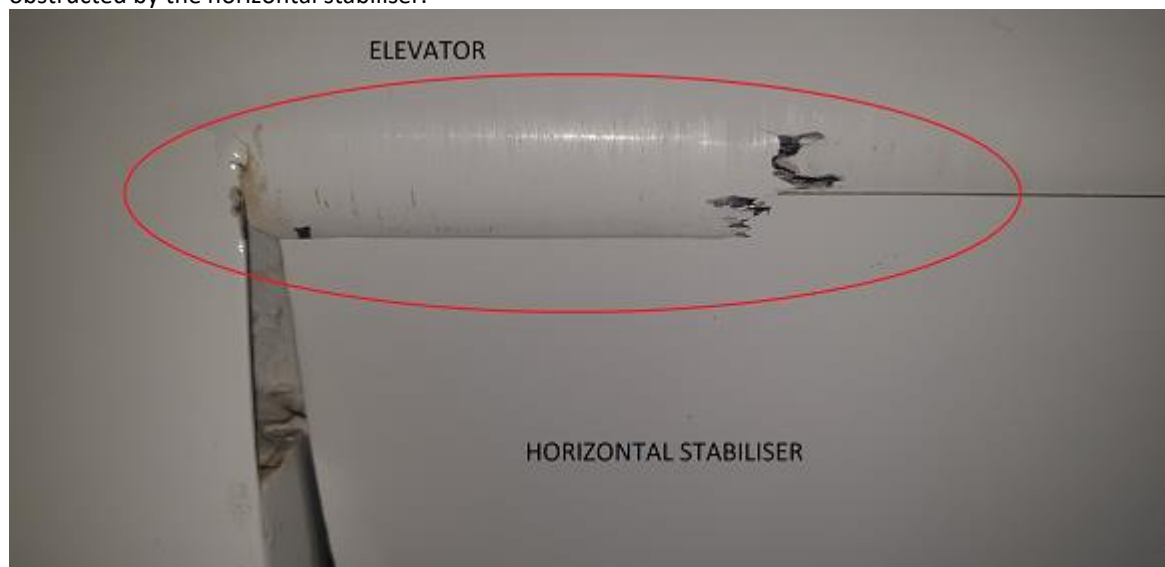
# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Date	29-Apr-2022	Region	NSWGA	SOAR Report Nbr	S-2041
Level 1	Operational	Level 2	Airframe	Level 3	Other Airframe Issues
A/C Model 1	Sparrow Hawk			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	63

### What Happened

Following a normal landing, the pilot held the control column fully back during the ground roll to keep the tailwheel on the ground. Due to recent runway repair work, the runway surface was rough and the pilot commented on the amount of bumping during rollout. When the pilot eventually eased the back pressure on the control column, it remained in the full back position and could not be moved. On exiting the glider, the pilot found the elevators had jammed because the last 25 mm of elevator had popped out of its housing and obstructed by the horizontal stabiliser.



### Analysis

Subsequent inspection at an Approved Maintenance Organisation found the elevator had moved beyond the control stop and the elevator leading edge seam had got caught on the bottom edge of the horizontal stabiliser. The control stops were undamaged and in its usual position. After the repair and when tested on the ground, full back stick brought the elevator to its nominated deflection with several mm of further travel required to "catch" the lip on the elevator leading edge against the trailing edge of the stabiliser. Given the problem could not be replicated, it is highly likely that the pilot's aft stick position coupled with a rough runway surface caused the elevator to flex to an excess deflection. The designer/maker recommends avoiding "excessive control forces. The aircraft designer is aware of this incident.

Date	30-Apr-2022	Region	SAGA	SOAR Report Nbr	S-2040
Level 1	Operational	Level 2	Ground Operations	Level 3	Taxiing collision/near collision
A/C Model 1	Grob G 109			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	48

### What Happened

While taxiing to the hangar, the left wingtip of the Touring Motor Glider struck a hangar outrigger post and suffered minor damage.

### Analysis

The pilot had an uneventful flight of 1.4 hours and landed on RWY 19 into a westerly crosswind. The runway was quickly vacated, and the pilot held while another aircraft landed behind. When the runway was clear,



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### Accident and Incident Summaries

the pilot entered and backtracked the runway for the taxiway towards the hangars. The pilot reported that as the aircraft got close to the first hangars, he judged that the port wingtip was close to the hanger door outrigger post, so he reduced power, but the wingtip contacted the outrigger post at low speed before he could apply the brakes. The pilot stated *"taxying a 15 metre wingspan aircraft (the aircraft has a 17.4 metre wingspan) between these hangars is a tight fit and wind gusts can affect the steering when passing hangars. I was well aware of that and have practiced for it. I wasn't overly concerned this time as the wind conditions were favourable and didn't have any adverse effect. Looking back at the incident, I think I didn't pick up the presence of the outrigger post when estimating my distance to the hangar on the port side, and I must have overestimated the distance to the tree on the starboard side."* The pilot notified the local traffic that the aircraft was stuck on the taxiway, and then with the assistance of the Duty Instructor the aircraft was removed to the hangar.



#### Safety Advice

This incident highlights the importance of aircraft operators conducting a thorough risk assessment where ground movement is confined, particularly movements involving narrow taxiways. Effective risk assessments ensure that hazards are clearly identified and well understood, and that the associated risks are appropriately managed. To manage clearance in congested areas, pilots should, where possible, seek marshalling or wing walking assistance. Airport authorities should consider removing obstacles such as trees and bushes to accommodate larger span aircraft.

Date	1-May-2022	Region	WAGA	SOAR Report Nbr	S-2043
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Aircraft preparation





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## Accident and Incident Summaries

A/C Model 1		DG-500 Elan Orion			A/C Model 2		Piper Aircraft PA-25 260 Pawnee	
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	73
<b>What Happened</b>								
During an aerotow launch the tow pilot noticed that the combination was not climbing normally. After checking the tow plane, and at approximately 2,000 ft AGL, the tow pilot gave a ‘rudder waggle’ signal to alert the glider pilot to the poor climb rate. When the glider pilot did not respond to the signal, the tow pilot check is rear-view mirror and observed sunlight reflecting off the open [aluminium] dive brake panels. The tow pilot then called the glider pilot on the CTAF frequency and informed the pilot the glider’s airbrakes were open, and after several seconds of inaction the tow pilot made another call. The glider pilot then closed and locked the airbrakes and replied to the tow pilot over the radio. The launch and release proceeded normally thereafter.								
<b>Analysis</b>								
The glider pilot had conducted nine flights since the beginning of 2022, four of which were in his own glider (Hornet), and three of were private passenger flights in the club’s Puchacz. The pilot had not flown the DG505 since September 2021. The CFI spoke to the pilot about the occurrence and it was determined that the pilot did not correctly lock the dive brake prior to the launch. It was not determined why the glider pilot did not notice the wing waggle or hear the intial radio calls. The pilot stated they had cycled through opening and closing the airbrakes during the pr-take-off checks, and when challenged by the launch crew the pilot stated they “ <i>touched the dive brake handle to ensure it was fully forward and checked the handle was flush with the cockpit wall and said ‘dive brakes locked and away’</i> ”. The pilot noted that unfamiliarity on type may have contributed: “ <i>the airbrake handle on the DG 505 is apparently in the ‘locked position’ the handle is flush with the wall of the cockpit when the brakes are not locked</i> ”, whereas on “ <i>other gliders I fly the airbrake handle is not flush with the cockpit wall until it is locked away.</i> ” The glider pilot agreed to attend additional training with one of the club’s Level 3 instructors before flying the DG505 again. The CFI wrote an article for the club’s monthly newsletter, reminding pilots to physically check that the dive brakes are properly locked when performing the pre-take-off checks.								
<b>Safety Advice</b>								
Unfamiliarity with type is most likely to cause problems during high workload situations. It is therefore importance that pilots understand that ‘new’ gliders take time to get to know. Sometimes differences can be minor, and familiarity comes easily. However, even simple processes, like locking the airbrakes, can be different between types. It is therefore important that pilots take the time to know and fully understand the function and location of all the controls and systems.								

Date	1-May-2022	Region	WAGA	SOAR Report Nbr	S-2044			
Level 1	Operational		Level 2	Aircraft Control		Level 3	Hard landing	
A/C Model 1		DG-500 Elan Orion			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Landing		PIC Age	73
<p>The pilot was conducting a local private passenger flight, and had returned to the circuit after a flight of about 2 hours duration. During the final approach the pilot flared early, and the glider stalled onto the runway from about 1 metre. The tailwheel struck the runway first and just ahead of the mainwheel. The landing was observed by the Duty Instructor and several other pilots, who described the landing as being "heavy". The duty instructor, who is also Airworthiness inspector, noted that the glider ran out of energy while the main wheel was approximately one metre above the ground but it did not sustain any damage. The pilot believed they had too much airbrake applied after the flare, but the duty instructor was of the view that the round-out was started too high. The CFI has briefed one of the club's Level 3 instructors, who has agreed to spend some time with the pilot to assist with improving their landing technique and other aspects of their flying. It was noted by the CFI that while the pilot was current, they had only a few flights on type and had not flown this aircraft for several months.</p>								



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Date	8-May-2022	Region	NSWGA	SOAR Report Nbr	S-2052
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	Piper PA-25-235			A/C Model 2	Piper PA-30 Twin Commanche
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	46
Under investigation. A glider launch commenced while an aircraft was on short final. Upon broadcasting a "rolling" message on the CTAF, the tow pilot received a radio call from the pilot of a Piper Twin Commanche advising he was on short final. The tow pilot aborted the launch and the pilot of the Piper Twin Commanche conducted a go-around.					

Date	8-May-2022	Region	SAGA	SOAR Report Nbr	S-2045
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	DG-500 Elan Orion			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Launch
				PIC Age	71

### What Happened

During the initial ground roll of an aerotow launch being flown by the student pilot, the starboard wing dropped to the ground. The flight crew heard a noticeable 'bang' as the wingtip struck the edge of a taxiway. The student then experienced problems controlling the aircraft, so the instructor assumed control. The flight continued with no further issues, but after landing the instructor noticed damage to, and excessive movement in, the winglet. The glider was grounded pending a detailed structural inspection.



### Analysis

At this regional aerodrome it is usual for gliders to launch from the right-hand side of runway 31 on the 4m wide bitumen edge of the main unsealed runway. During launch the glider's right wing overhangs the edge of the runway, and the take-off path crosses a taxiway to the north of RWY 05/23. The CFI reported that the soil around the bitumen moves due to changing moisture content, and at the time of this incident the soil was about a 20 to 30mm below the level of the bitumen. When the wing dropped to the ground, the wingtip wheel holder struck the edge of the bitumen and compressed against the wheel, and the shock caused the





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## Accident and Incident Summaries

wingtip to flex that damaged the wingtip retaining pin. The bent retaining pin prevented the wing tip extension from easily being removed, but upon inspection it was revealed that the alignment pins and stub spar were undamaged. The level change along the edge of the runway and taxiways is a known issue, and the airfield maintenance team are constantly filling the areas and rolling the surface to keep the level change as small as possible. The CFI stated: *"The key learning from this issue is the damage to the wingtip extension, was not obvious at first glance. The fact the force of the impact was sufficient to bend the wingtip wheel mounting frame indicated that further investigation was needed before returning the aircraft to the flight line."*

### Safety Advice

A damaged wingtip security mechanism can lead to the winglet dislodging in flight, as SOAR report S-1600 attests. On 15 November 2019 at about 2000ft AGL, the wingtip securing mechanism of a Lak 17 sailplane failed, allowing the winglet to move forward and dislodge from the alignment pins. The winglet twisted in the airflow causing the aircraft to enter a spin that was not recoverable. The pilot only just managed to escape by parachute. Any significant wingtip strike during launch in an aircraft with detachable winglets should be treated seriously and whenever possible the flight should be abandoned. The aircraft should be thoroughly inspected by an approved inspector before being returned to service.

Date	8-May-2022	Region	NSWGA	SOAR Report Nbr	S-2047
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	FK Lightplanes FK9 Mk IV ELA	A/C Model 2	Pawnee		
Injury	Nil	Damage	Nil	Phase	Ground Ops
				PIC Age	

### What Happened

A powered aircraft entered the runway and took off while the runway was occupied by a glider and tug preparing to launch.

### Analysis

Operations at this regional aerodrome have been limited to a single runway (runway 05/23) for several months while runway 18/36 is reconstructed. The reconstruction has also closed the cross runway 09/27. Runway 05/23 is an asphalt surface 30 metres wide and 2040 metres long. When conditions are suitable, glider operations from taxiway B on runway 05/23 are common practice given that taxiway B is midway along the runway. Operating in this manner minimises the duration of runway occupation with the glider next to launch able to prepare outside of the runway strip, and the tow plane is able to land short and, where no aircraft are wishing to use the runway, roll through to conduct the next launch with minimal delay and impact on other users. Taxiway B has clear visibility to both the 05 and 23 thresholds and vice versa. On the day of the incident, and prior to the powered aircraft entering the runway, the glider ground crew made an entering runway call on the CTAF for an imminent glider launch. The glider was then pushed from the holding point at the runway strip edge onto runway 23 at taxiway B (mid runway taxiway). As the glider was turned and aligned on the runway centreline a powered aircraft called on the CTAF that it was also entering runway 23. The glider ground crew called the powered aircraft and confirmed that the glider was on the runway and would be launching in approximately 2 minutes. The powered aircraft was visible at the runway threshold from the glider launch point. The powered aircraft acknowledged and responded that it would be "out of the way". As the ground crew removed the glider tail dolly and prepared the aerotow rope, the powered aircraft took off and overflew the glider/tug combination by an estimated 100-150 feet. During the subsequent investigation, the pilot of the powered aircraft stated that he knew the gliders were operating from about the mid length of runway 23. He advised that after broadcasting he was entering the operational runway from the threshold, about 1,000 metres behind the glider operation), he received a radio call from the gliding operation advising they would be taking off in about three minutes. The pilot of the powered aircraft could see the tug and glider, but due to the distance he believed they were positioned outside the runway and that he could take-off and be out of the way without interfering with the glider launch. As his aircraft is a taildragger the pilot did not see the gliding combination over the nose until he was airborne, at which point he judged the safest course was to continue the take-off. The pilot of the powered aircraft was



# The Gliding Federation of Australia Inc

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surprised to see the glider was on the runway and not the grass. The gliding CFI advised that the position of the gliding operation was agreed by the aerodrome operations panel and local operators are aware. However, consideration will be given to including an entry in ERS or issuing a NOTAM for the period the runway works are in progress.

### Safety Advice

This incident highlights the hazard of non-standard operations, i.e. gliders operating from mid runway and at some distance from the threshold, and the critical importance of communications, especially what you say and how you say it. For further information on good communication, refer to the fourth booklet in the revised 'Safety behaviours: human factors for pilots' kit available from the CASA website:

<https://www.casa.gov.au/sites/default/files/2021-06/safety-behaviours-human-factor-for-pilots-4-communication.pdf>

**NOTE:** When the runway strip is occupied by a glider tug or glider, the runway is deemed to be occupied. Aircraft using the runway may, however, commence their take-off run from a position ahead of a stationary glider or tug aircraft (Chapter 3 of the CASA Visual Flight Rules Guide and AIP ENR 5.5-2, paragraph 1.2.4 refer). Also, Pilots must comply with CASR 91.055 – '(Aircraft not to be operated in manner that creates a hazard'.

Date	21-May-2022	Region	NSWGA	SOAR Report Nbr	S-2050
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	Astir CS			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	77
Following a winch launch to about 1600ft AGL, the pilot retracted the undercarriage and flew towards a nearby ridge. After several minutes ridge soaring, the pilot returned to the circuit. While configuring the aircraft for landing the pilot found the undercarriage handle was jammed and could not be moved despite several attempts. The pilot made a radio call informing the ground crew of the problem and conducted a safe landing with the undercarriage retracted. The aircraft suffered only minor abrasions to the bottom of the fuselage. Inspection identified the rear edge of the mudguard (which is part of the undercarriage system) had latched onto a lapped joint in the wheel bay liner. This is a known issue with this type and is usually the result of the pilot raising the undercarriage with excessive force. The proposed solution is to add about 10mm to the leading edge of the aft section of liner to ensure the overlap is always maintained.					

Date	21-May-2022	Region	SAGA	SOAR Report Nbr	S-2051
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	75

Date	22-May-2022	Region	SAGA	SOAR Report Nbr	S-2048
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	ASK 21			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	70
<b>What Happened</b> The elderly pilot, who had been driving the winch all day, decided the fly the glider back to the hangar at the end of flying operations. During final approach the pilot increased airspeed to 80 knots and flew along the length of the runway at between 10 to 15 feet. Towards the end of the strip run and while the glider was still flying at 70 knots, the plot opened the airbrakes slightly. While the pilot was prepared for a change in pitch,					



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the glider immediately dropped, and the mainwheel struck the runway at speed. The glider rebounded, touched down again and the pilot held the glider in the flare attitude. The glider then touched down heavily and rolled to a stop within about 70 meters. The glider was withdrawn from service pending a "hard landing" inspection.

### Analysis

The CFI found that mishandled recovery from the initial bounce led to pilot-induced oscillations, with around 4-5 touchdowns occurring. The Club's Instructors' Panel observed that the pilot's skill set is gradually declining with age, and that the pilot was well behind the action during the bounced landing. The pilot has accepted this observation and will participate in some remedial training and more frequent check flights. It is unlikely the pilot will attempt another ground-effect run.

### Safety Advice

As we grow older our body has a tendency to "slow down" in reaction time, and our cognitive abilities also decline with aging of brain cells and their billions of complex interconnections. Every day we perform hundreds of cognitive tasks but are mostly unaware of the effort involved. Cognitive deficiencies are insidious, have a substantial negative impact on performance and are hardest to identify when the pilot is performing routine activities. One reason symptoms go unnoticed is that with practice and routine, the brain adjusts to mild to moderate cognitive impairment. In other words, normal activities can mask the severity of the deficiency. However, if the pilot's routine is interrupted by an urgent or stressful situation, then the extent of cognitive impairment may become more evident. It is well known that flight experience can compensate to some degree for age-related declines in cognitive function and that overlearned complex tasks such as piloting are less susceptible to age-related deterioration than abilities to perform in novel situations. Notwithstanding, recency of experience can have a dramatic effect on overall airmanship, regardless of age. It is known that older pilots who have long breaks between flying take longer to regain their proficiency. Older pilots should fly regularly and participate more frequently in recurrent training (e.g., flight reviews). However, when physical deterioration outstrips piloting skills - it's time to quit!

Date	23-May-2022	Region	SAGA	SOAR Report Nbr	S-2049
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Grob 103			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	73
Under investigation. The flight instructor became focussed on a training exercise and lost situational awareness, resulting in the glider laterally infringing military airspace.					

Date	29-May-2022	Region	NSWGA	SOAR Report Nbr	S-2053
Level 1	Operational	Level 2	Runway Events	Level 3	Depart/App/Land wrong runway
A/C Model 1	DG-300 Club Elan			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	

Date	11-Jun-2022	Region	SAGA	SOAR Report Nbr	S-2056
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	Grob G 103 Twin II			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	



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Date	12-Jun-2022	Region	GQ	SOAR Report Nbr	S-2055
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	

### What Happened

During the final approach the student mishandled the flare and recovery, and the instructor was too late in taking over and could not prevent the left wing from contacting the ground heavily and then impacting a runway light. The glider's port wingtip was substantially damaged.

### Analysis

The pre-solo student was undertaking the first of four planned pre-solo assessment flights. The student performed well during the launch and brief soaring flight and flew a normal circuit. The student established the glider on a stabilised final approach using a half-airbrake setting. In response to overshooting the aiming point the student opened the air brakes further, which resulted in a high rate of descent. The student over rotated into the flare and the glider ballooned. The student corrected by closing the airbrakes and pitching forward on the stick, and then opened the airbrakes again. The instructor called taking over but this was not heard by the student who remained on the controls. The instructor found the controls were difficult to move and could not prevent the left wing striking the ground heavily and then colliding with a runway light. The student had not flown for two months and the instructor, with hindsight, recognised that they should have given the student more time to refamiliarise themselves before introducing the pressure of an assessment flight.

### Safety Advice

The most common instructing accident is 'instructor failed to take-over in time'. These accidents usually involve the trainee responding in an unforeseen way or failing to respond at all (e.g. not rounding out). Given that the overall idea is to let the trainee do as much as possible within their level of skill the instructor should never wait until the last moment - which can rapidly become 'too late' - before responding to a situation that is going awry. This is particularly true of any manoeuvres close to the ground. Instructors also need to guard themselves against unexpected reactions during the critical stages of flight by adopting a defensive posture, i.e. having their hands and feet ready to take control.

Date	23-Jun-2022	Region	NSWGA	SOAR Report Nbr	S-2059
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	HK 36 R			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	73

### What Happened

While a motor glider was on final approach to RWY 36, the Duty Instructor observed two persons walking down the middle of the runway towards the launch point. The Duty Instructor made a radio call to inform the motor glider pilot of the runway incursion and suggested he land on RWY 35. The motor glider pilot diverted onto runway 35 and landed without further incident.

### Analysis

The motor glider pilot was flying a glider approach and not under power. The pedestrians were a visiting level 2 instructor and former club member, and an ab-initio student. The instructor had landed earlier after a very brief solo flight and decided to walk back to the launch point after leaving the aircraft at the hanger complex. The Duty Instructor noted the pedestrians when difficult to see in the late afternoon lighting conditions as their clothing blended into the surrounding grass and trees. The motor glider pilot stated that he did not see the pedestrians during the approach for the same reasons, and that he may not have seen them at all had the Duty instructor not made the radio call. The motor glider pilot stated the pedestrians were directly in his approach path and he very easily could have hit them. The visiting instructor admitted he was not paying attention and did not consider the dangers of walking down the middle of an active runway,



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nor the issue of visibility late in the afternoon. The ab-initio student stated he was unaware of the approaching motor glider, that he was following the lead of the instructor, and had not thought of the dangers of walking in the middle of an active runway. The pedestrians were counselled and all personnel on the airfield were reminded of the dangers of being on an active runway, and of the expectation that all personnel returning to the launch point must use the adjacent dirt road.

### Safety Advice

A runway incursion happens when an aircraft comes close to collision with another aircraft, vehicle, or person within the take-off and landing area. In most cases, runway incursions happen due to human errors. In this case, the pedestrians' lack of situational awareness and failure to recognise the risks of walking down the middle of an operational runway were the key causal factors. Situational awareness is the understanding of your environment, which involves information processing and sound decision-making. No one has perfect situational awareness, but it is vital that one thinks ahead, and monitors, detects and recognises those factors that pose a risk. Above all, avoid complacency.

Date	23-Jun-2022	Region	NSWGA	SOAR Report Nbr	S-2061
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Aircraft preparation
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	65

Date	25-Jun-2022	Region	SAGA	SOAR Report Nbr	S-2060
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	Grob G 103 Twin II			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	

Date	10-Jul-2022	Region	NSWGA	SOAR Report Nbr	S-2065
Level 1	Environment	Level 2	Wildlife	Level 3	Birdstrike
A/C Model 1	ASK 21 Mi			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Launch
				PIC Age	84
At about 500 ft on climb out, the pilot of the glider under tow observed an eagle fly straight towards the tug. The tug pilot saw the bird approaching and made a sharp left turn. The bird passed the tug but was caught in the slipstream. The glider pilot reported <i>"an uncontrolled rotating ball of feathers came straight at the glider hitting the port wing about five feet out from the fuselage. I requested a right turn back towards the airfield and released for a straight in landing on RWY 03"</i> . After landing a maintenance inspector examined the port wing and found the bird had struck the top of the leading edge and slid over the wing leaving scratches and slight residue, but there was no structural damage, and the aircraft was returned to service.					

Date	14-Jul-2022	Region	NSWGA	SOAR Report Nbr	S-2075
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	DG-1000s			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	
Under investigation. Following the last flight of the day, the glider was attached to a vehicle to be towed back to the hangar. During the tow the ground crew observed the mainwheel tyre to be flat. The glider was detached from the vehicle and the glider fuselage dolly was retrieved from the hangar. After lifting the glider					





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onto the fuselage dolly, the glider was reattached to the vehicle and the tow continued. The ground crew then observed the glider sliding out of the dolly and the tow again stopped. The Duty Instructor assessed that the tow could continue, but as towing resumed the glider slipped further out of the dolly. The fuselage dolly rotated upwards 90 degrees and the glider's fuselage struck the steel frame of the dolly causing minor damage. The glider was disconnected from the car and the fuselage repositioned. The glider was tied down for the night and the following morning it was derigged and placed in the trailer.

Date	14-Jul-2022	Region	NSWGA	SOAR Report Nbr	S-2074
Level 1	Environment	Level 2	Wildlife	Level 3	Birdstrike
A/C Model 1	Piper PA-25-235			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
During take-off with glider in tow, a small bird was struck by the tow plane's propeller. The aircraft was operating normally, so the pilot continued with the launch. Upon landing the aircraft was checked and was found to be undamaged.					

Date	24-Jul-2022	Region	WAGA	SOAR Report Nbr	S-2079
Level 1	Operational	Level 2	Aircraft Control	Level 3	Pilot Induced Oscillations
A/C Model 1	Astir CS			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	46

#### What Happened

An experienced pilot with low currency mishandled the landing and the glider conducted a series of pilot induced oscillations during landing. The aircraft was not damaged.

#### Analysis

The pilot had not flown for several months and had decided to conduct three flights in a single-seat aircraft to regain currency. The first two flights were uneventful, but on the third flight the pilot had difficulty achieving a stable descent and adjusted the airbrakes and nose attitude several times. The pilot allowed the aircraft to touch down at speed, which resulted in the glider rebounding back into the air. The pilot retracted the airbrakes and lifted the nose attitude in an attempt to reduce the energy for landing, but the glider rebounded for a second time. The glider bounced two more times as the pilot attempted to correct the aircraft's reaction with an over-correction in the opposite direction (pilot induced oscillation) before coming to rest. The glider was inspected for damage but none was found. The pilot reported the incident to the Duty Instructor and identified that errors in judgment had been made in relation to trim, stabilised descent, and actions after the first bounce. The pilot attributed these errors to overload caused by undertaking 3 circuits in quick succession that was exacerbated by low levels of recent flight experience.

#### Safety Advice

Pilot induced oscillations occur when the pilot over pitches the nose down in response to a bounced landing. When landing at higher speeds, pitch sensitivity is greater, so any misuse of the controls is amplified. To correct from a bounced landing, select and hold a steady level attitude and retract the airbrakes. A second attempt at the landing can then be made, usually without further problems.

Date	30-Jul-2022	Region	GQ	SOAR Report Nbr	S-2072
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Arcus T			A/C Model 2	DG Flugzeugbau DG-1000
Injury	Nil	Damage	Nil	Phase	Thermalling
				PIC Age	17



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Under investigation. A glider joined 1000ft below another glider established in the left-hand thermal. The lower glider outclimbed the other glider, which was on a training flight. The second pilot in the lower glider took control to avoid a collision with the training glider.

Date	7-Aug-2022	Region	GQ	SOAR Report Nbr	S-2068			
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		Discus CS			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	20
Under investigation. The pilot reported having difficulty locking the undercariage down and landed with the wheeel retracted.								

Date	9-Aug-2022	Region	NSWGA		SOAR Report Nbr		S-2066	
Level 1	Operational		Level 2	Airframe		Level 3	Landing gear/Indication	
A/C Model 1		LS 7-WL			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	51
On return to the circuit after a post-maintenance assessment flight, the pilot was unable to lock the undercarriage down, and it retracted during landing. Subsequent discussion with a Maintenance Engineer revealed the undercarriage overcentre had been adjusted to make the locking more positive, but this meant more force is required to lock the undercarriage down.								

Date	9-Aug-2022	Region	VSA	SOAR Report Nbr	S-2067		
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events		
A/C Model 1	Pawnee PA28-260			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Ground Ops	PIC Age	70
<b>What Happened:</b> While taxiing the Pawnee to the glider launch point approximately 25 metres away, the front LHS main wheel ran into a 75 mm deep depression in the ground. After moving a further 2 metres, the pilot heard a dull thud originating from the main suspension area and the aircraft lurched to the left. Neither the wing nor the prop struck the ground. The engine was immediately shut down and the pilot embarked to inspect the aircraft. There were no injuries or damage, however it was evident that a bungee suspension strap had failed rendering the aircraft unserviceable. The aircraft was removed from the movement area.							
<b>Analysis:</b> The depression in the ground was located between the glider take off strip and the bitumen of the main runway 27. Below is an image of the area taken a few days later.							



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The pilot noted that the movement area where the incident occurred has been a problem for many months and the grass verge needs maintenance. There are several ruts and depressions in the take-off area. The bungees on the aircraft were changed in July. However, inspection revealed fluid from the strut had leaked onto the bungee and had degraded the rubber. The combination of the damaged bungee and shock from falling into the depression in the ground caused the bungee to break. The strut and bungee cable have been replaced, and a report was made to the aerodrome operator.

Date	20-Aug-2022	Region	GQ	SOAR Report Nbr	S-2069
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	Duo Discus			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	59
Under investigation. During aerotow the pilot noticed the canopy was ajar and saw the student 'fiddling' with the canopy opening lever. The pilot could not secure the canopy and held it shut with her hand. The launch was abandoned and the pilot conducted a safe landing without using the airbrakes.					

Date	21-Aug-2022	Region	WAGA	SOAR Report Nbr	S-2070
Level 1	Operational	Level 2	Miscellaneous	Level 3	Rope break/Weak link failure
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	DG-500 Elan Orion
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	68
During a dual tow endorsement exercise and at about 250ft AGL, the rope weak link connecting the two tow ropes to the tug failed. Both gliders under tow landed safely. During the prelaunch check the link was inspected and appeared to be in serviceable condition. However, it was evident after the event that the weak link had degraded over time. For guidance on weak links, refer to Operations Advice Notice (OAN) 01/03 - Weak Links – Selection, Application, Safety and Testing of Glider Weak Links.					



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Date	21-Aug-2022	Region	NSWGA	SOAR Report Nbr	S-2216
Level 1	Operational	Level 2	Fire Fumes and Smoke	Level 3	Fumes
A/C Model 1	TST-10M Atlas			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	59

#### **What Happened**

The pilot was testing engine performance and planned to conduct a long power-on climb to 6000ft and then an engine restart at about 4000ft. The climb was uneventful, and the engine shut down and retraction was normal. When at 4000ft and about 5NMs from the aerodrome the pilot extended the engine successfully but was unable to restart the engine, and then found the engine would not retract. The pilot flew towards the aerodrome, and during the decent he heard popping noises from behind the cockpit, which convinced him to expedite the landing. The pilot conducted a safe landing with the engine extended, and when he exited the glider observed smoke and fumes coming from the battery box in the engine bay. The pilot donned a pair of leather riggers gloves and, using a screwdriver, removed the Lithium-Ion Phosphate battery from the aircraft and placed it on the ground about 30 metres away. The pilot reported the battery was quite hot, and the case was deformed.





Picture: Smouldering battery after removal from aircraft.

### Analysis

Subsequent investigation revealed that the voltage regulator had failed, and the engine was providing an unregulated 20 Volt charge to the battery 12 Volt lithium battery. It is possible battery type contributed to the regulator failure. The lithium battery was not an approved type for use in sailplanes. The pilot provided the following additional information:

*"I was aware that Lithium type batteries are generally not approved for use in gliders. The aircraft was an Experimental SLG designed to be operated at a max TO mass of 322 KG. The starting battery was mounted in an aluminium cradle in the engine bay aft of the CG. The previous owner had twice broken the rear fuselage of the aircraft in ground incidents. These repairs had added weight to the rear of the aircraft and even a small reduction in battery weight was helpful in keeping the pilot weight range usable. I decided to try a lightweight battery and a motorcycle lithium starting battery was the best fit. In hindsight I should have considered the risks much more closely."*

### Safety Advice

Lithium-ion battery cells can sometimes overheat, leading to a process called thermal runaway, which can cause the sudden release of the contents of the battery as a flaming jet, heavy smoke, or unburned hydrocarbons. In some cases, the battery can even explode or rocket. As in this case, overcharging may create excessive heat inside the battery cell. Therefore, it is important to always use a charger designed for these batteries and not chargers designed for Lead-acid type batteries. The GFA recommends the use of conventional lead acid battery technology for aircraft systems which have in flight charging systems.





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Date	3-Sep-2022	Region	SAGA	SOAR Report Nbr	S-2076
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	ASK-21			A/C Model 2	DG-1000s
Injury	Nil	Damage	Nil	Phase	Launch
					PIC Age 67
Under investigation. The winch launch crew gave the "Take-up slack" signal to launch a glider on a training flight when another glider was on short final. Fortunately, the winch driver was aware of the landing glider and reported this to the launch point. Launch commands were being given on the UHF, contrary to GFA recommendations.					

Date	3-Sep-2022	Region	SAGA	SOAR Report Nbr	S-2077
Level 1	Operational	Level 2	Runway Events	Level 3	Other Runway Events
A/C Model 1	ASK-21			A/C Model 2	DG-1000s
Injury	Nil	Damage	Nil	Phase	Landing
					PIC Age 54
Under investigation. A glider landed short of the flight line. During the ground rollo the left wing contacted the ground causing the glider to turn towards a glider awaiting a launch. The landing glider came to rest within 10 metres of the other glider.					



Date	10-Sep-2022	Region	WAGA	SOAR Report Nbr	S-2078
Level 1	Operational	Level 2	Aircraft Control	Level 3	Loss of control
A/C Model 1	H 36 Dimona			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
					PIC Age 64
The touring motor glider pilot had flown to a remote aerodrome in company with another motor glider. The forecast winds were light from the Southwest, so the pilot planned to land on RWY 24. Upon arrival at the aerodrome the pilot joined circuit for RWY 24 midfield at about 1,000ft AGL to assess wind direction from the primary and secondary windsocks. Both windsocks were hanging limp, indicating little to no wind on the ground.					



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The pilot reported "A lefthand circuit was initiated and during the circuit whilst flying over the dried dark brown clay lakebed to the South of the airfield, some turbulence was felt. Turbulence was also felt on the base leg, but this reduced once over the green fields whilst turning onto finals." The approach was conducted with the engine idling and the propellor in fine pitch. The pilot stated the aircraft touched down mid runway and he noted the ground speed was very high. Due to the high speed, the pilot had difficulty maintaining directional control. The pilot reported "...Full main wheel brake was applied with full backstick to try and maintain control with the tail wheel. The aircraft veered to the right off the runway and the right undercarriage fibreglass wheel fairing contacted a white cone shaped fibreglass light marker." As the glider slowed, the pilot was able to steer the glider back onto the runway. While taxiing to the parking area at the end of RWY 24, the pilot observed the primary windsock was now indicating a strong East-North-Easterly wind, confirming the aircraft had landed downwind with a slight crosswind component. The secondary windsock was noted to be still hanging limp and may not have been serviceable. Discussion with other pilots revealed the lakes and surrounding terrain often generate a microclimate different to that in the surrounding areas. The aircraft was inspected by authorised inspector, who conformed the damage was isolated to the fibreglass wheel fairing.

Date	17-Sep-2022	Region	WAGA	SOAR Report Nbr	S-2080
Level 1	Operational	Level 2	Ground Operations	Level 3	Taxiing collision/near collision
A/C Model 1	hemp/schirth Ventus B			A/C Model 2	
Injury	Minor	Damage	Minor	Phase	Ground Ops
Under investigation. Rudder of aircraft was struck by reversing vehicle.					
				PIC Age	64



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Date	24-Sep-2022	Region	WAGA	SOAR Report Nbr	S-2083
Level 1	Operational	Level 2	Ground Operations	Level 3	Other Ground Ops Issues
A/C Model 1	Astir CS			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
				PIC Age	
<p>As the glider was being stowed following outlanding and derigging, the fuselage was pushed too far forward into the trailer which resulted in damage to the canopy. The pilot was conducting outlanding training into a local paddock. The pilot had flown with the CFI on an earlier flight where a successful outlanding was conducted. The pilot then embarked on a second outlanding in a single seat glider but misidentified the surface vegetation and landed in a crop. A trailer retrieve was conducted and, although a team of competent pilots went out, none were familiar with the trailer. The CFI advised that he had run a course on glider trailers the week prior using two different types but not this particular trailer. As a consequence of this incident, the CFI ran another course covering all trailers that are in common use at the club.</p>					

Date	25-Sep-2022	Region	GQ	SOAR Report Nbr	S-2081
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	Grob G103A Twin II Acro			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	64

### What Happened

A post-solo pilot had arranged with their instructor to fly from the rear seat of the club's Twin Astir and practice take-off and landing. As there was insufficient crew, the glider was launched by winch with the wing on the ground. At around 200ft AGL the pilot lowered the nose of the glider and released the cable. The pilot flying then conducted a low-level turn onto downwind, following which the turn steepened and continued until the runway heading had been achieved. The final turn was flown at very low height and less than 50 metres from trees on the side of the runway.

### Analysis

The CFI reported that they had arrived at the flight line to observe the instructor sitting in the front seat of the glider in the process of conducting a wing-down winch launch on RWY 12 into a south-westerly crosswind. After the aircraft landed, the CFI approached the instructor for an explanation of what had happened. The CFI was informed that the pilot flying had lowered the nose due to the airspeed being low and made the decision that there is a winch failure and released immediately. It was the instructor who directed the pilot to turn onto downwind, and then when the instructor realised the turn was low and flat, they took over. The instructor lowered the nose of the glider and performed a steep turn completing a 360 degree turn and then landed the aircraft safely. The CFI expressed concern that a launch would be conducted without a wingman, and that a landing straight ahead was not considered even though there was ample runway ahead. The CFI suspended the instructor's flying privileges for four weeks.

### Safety Advice

#### Wing down take-off

There is no provision in GFA winch operations for gliders to be launched wing-down. While wing down take-offs can be conducted using aerotow launch, albeit with some risk, acceleration under a winch launch happens much more quickly and exacerbates the risk. With the wing on the ground the resultant drag is likely to cause the glider to commence a ground loop that will become a cartwheel. Once this process has commenced it can be so rapid that safe recovery is impossible even if the release is activated immediately. The result of the cartwheel on winch launch will almost inevitably be the glider rolling toward inverted and impacting the ground. Always use a wing runner to hold the wings level, and if the wing drops to the ground release immediately.

#### Too Slow

For safety reasons there is no signal for "too slow". If the launch speed starts to fall off, reduce the angle of climb. If there is no response and the speed continues to fall toward minimum safe speed of 1.3Vs, treat it as



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a launch failure and release the cable. Adopt 'safe speed near the ground' before manoeuvring and land straight ahead whenever possible.

#### Launch failure when airborne

The definition of the launch failure is the inability to maintain the minimum winch speed on the launch during the climb, regardless of the reason. After a launch failure in flight you must maintain control of the aircraft and return it to a safe landing by performing the following actions:

Action 1. Regain and maintain the safe speed near the ground (1.5VS).

Action 2. Operate the cable release mechanism twice.

Action 3. Land ahead unless there is insufficient space to land safely.

Date	30-Sep-2022	Region	GQ	SOAR Report Nbr	S-2082
Level 1	Operational	Level 2	Aircraft Control	Level 3	Loss of control
A/C Model 1	Nimbus 3T			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	In-Flight
				PIC Age	66
Under investigation. The pilot reported that after climbing to just over 5,000 ft, he did a normal engine test run of the sustainer engine. After about 40 seconds the pilot conducted a standard shut-down procedure, but the engine did not retract. The pilot stated: <i>"I tried resetting switches with no success, then I tried reaching under the panel to move wires etc. with no joy. The next decision was whether to go direct to land however, I decided that stopping the prop would be a good idea while I still had height. I tried reducing the airspeed however the prop kept turning. I then brought the speed right back while flying straight and level. The prop was still turning even when a mild stall started. The stall was recovered without major speed build-up. About a minute after this at around 60 Kts, the Glider entered a shallow left spiral with rapidly increasing speed. Attempts with rudder and stick did not help. With some back stick the spiral developed into a spin. Full opposite rudder and stick forward had no effect to slow the spin. Several resets and repeats were tried with no effect to the spin. With the ground coming up fast the decision to bail was made. Pull both canopy handles, canopy flew off whacking my head on the way. As the hands went to the canopy handles the Glider started to invert leaving me hanging by the straps, evacuation was easy as I fell out as soon as the buckle was turned. Free fall was brief with the chute opening quickly after pulling the handle. Parachute ride was gentle, but quite a bit of effort was required to avoid landing in a dam. The Glider landed upside down about 300 metres upwind."</i>					

Date	3-Oct-2022	Region	NSWGA	SOAR Report Nbr	S-2088
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	LS8-18			A/C Model 2	JS1
Injury	Nil	Damage	Nil	Phase	Thermalling
				PIC Age	60
Under investigation. It was reported that, during a club competition, two gliders joining a thermal containing six other gliders passed close to each other.					

Date	7-Oct-2022	Region	WAGA	SOAR Report Nbr	S-2084
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	LS 8-18			A/C Model 2	DG-1000S
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	61
While moving the two-seat glider to the runway for launch, the ground crew had to manoeuvre around an unattended single-seat glider. During the positioning, the glider entered the operational runway while another glider was established on final approach. One of the ground crew identified the runway incursion and brought it to the attention of the crew manoeuvring the glider. The glider was pushed clear of the runway, but not before the landing pilot had adjusted their flight path to overfly the obstacle and land					





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further down the runway. The CFI reported that the club has well established procedures for moving gliders on the flight line, which are mentioned in each morning briefing. These procedures include using radios for launching and situational awareness purposes. In this case, the duty pilot did not have a radio with them, and the glider radio was off. The other procedure that was not followed was to maintain situational awareness by lookout before moving onto a movement area.

Date	7-Oct-2022	Region	WAGA	SOAR Report Nbr	S-2086
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Minor	Damage	Minor	Phase	Landing
				PIC Age	48
Just after touchdown the pilot flying felt the wheel grab and the undercarriage collapsed. Investigation did not identify any defect that would support a mechanical failure leading to retraction. The pilot advised that they only made a visual check of the undercarriage control position but did not physically check the mechanism was locked. The Aircraft Flight Manual provides the following information: <i>"The undercarriage is locked in the extended position by an overcentre locking arrangement and an additional safety catch in the cockpit. The handle is to be turned towards the cockpit wall, so that the locking catch will engage."</i> On the available evidence, it was considered most likely that the undercarriage was not correctly locked into the down position at landing.					

Date	7-Oct-2022	Region	WAGA	SOAR Report Nbr	S-2085
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	16
During a 5-day ab-Initio course the students were involved in supervised aircraft ground handling activities and had received a briefing on runway safety. On the day of the incident one of the students had moved to within 3 metres of the main runway to video record his son's solo landing. The landing pilot mishandled the flare and touched down on the mainwheel and nosewheel simultaneously, and the aircraft veered towards the person taking the video. The supervising instructor observed that the student taking the video appeared oblivious to the threat and yelled a warning. The student taking the video moved out of the way and was subsequently counselled. The improper positioning of a person on a runway or its protected area is classified as a runway incursion. When an incursion involves an active runway being used by arriving or departing aircraft, the potential for a collision hazard can exist. Persons operating airside are responsible for their own safety, and it is vital that individuals practice common sense, by being aware of what's going on around them, looking out for hazards and ensuring familiarity with the area in which they are working. Taking photographs while airside is particularly hazardous. Photographing approaching objects while looking through the small viewfinder of the camera is dangerous because the photographer will lose depth perception and situational awareness. Photographer's operating airside should always be accompanied by a safety person.					

Date	12-Oct-2022	Region	WAGA	SOAR Report Nbr	S-2090
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	LAK-12			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Ground Ops
				PIC Age	50
<b>What Happened</b> While towing the fully ballasted glider to the launch point at walking pace, the wing dolly struck an obstacle, causing the tail of the glider to turn towards the vehicle. The horizontal stabiliser struck the vehicle and was substantially damaged.					





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### Analysis

During the morning briefing the pilot received a phone call from work and had to excuse himself. The phone call lasted for some time, which delayed his preparation for flight. By the time the pilot was ready to tow out, most of the fleet was lined up and he did not want to be last. In his haste to get to the flight line, the pilot did not observe a small, forked branch from a tree was lying in the path of the wing dolly. The wing dolly struck the branch, which lodged in the spokes of the wing dolly wheel causing the wheel to stop turning. The moment arm from the long wing and short tow bar resulted in the glider's tail swinging towards the vehicle. The tail plane struck the rear of the vehicle and suffered substantial crush damage to the stabiliser and elevator, and the aluminium spar was bent. The main contributing factors in this incident was stress leading to the pilot's haste and a reduction in situational awareness.

### Safety Advice

When dealing with stressful situations, one tends to focus on a particular concern to the detriment of situational awareness. Situational awareness means looking at your surroundings and assessing risks. In this case, in the pilot's haste to avoid being last on the grid led a failure to ensure the glider was being towed clear of obstacles. Doing things at haste also risks forgetting or missing vital actions that could compromise the safety of the aircraft and its occupants.

Date	12-Oct-2022	Region	NSWGA	SOAR Report Nbr	S-2087
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Speed Astir II B			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	48
Shortly after touchdown the glider's port wingtip contacted high grass and proceeded to ground loop to the left. The pilot stated that he had recently conducted several wing-down crosswind landings in an ultralight aircraft, and this may have led him to subconsciously land with the port wing slightly low. The glider was undamaged. The CFI reported that there is some exuberant Patterson's Curse on the runway which stands above the pasture. In addition, the glider has a very low wing so is more at risk than most gliders. The glider was on an extended rollout to finish near the relevant hangar, and the event occurred at low speed during the rollout. It is common practice at this site for gliders to finish with an extended rollout for convenience, but the CFI noted that this does increase the risk of "taxiing" incidents and the matter will be discussed at the next instructors' panel meeting. The Club's summer mowing program is proceeding at best pace.					

Date	15-Oct-2022	Region	NSWGA	SOAR Report Nbr	S-2091
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	LS4			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	
Under investigation. The pilot landed heavily and the undercarriage retracted.					

Date	19-Oct-2022	Region	SAGA	SOAR Report Nbr	S-2089
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	72
<b>What Happened</b> While towing the glider back to the launch point after landing using a rigid bar off the tail dolly, the driver inadvertently allowed the left wing to enter crop alongside the taxiway. The drag of the wing through the crop yawed the glider towards the vehicle and caused the glider's tailwheel to slide from its retaining cradle on the towing bar. The tail of the glider dropped to the ground, resulting in the tailplane contacting the tow vehicle roof bars and damaging the tailplane.					



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#### Analysis

The Club share farms the land around the runways to obtain extra income. The edge of the crop is about 10 metres from the centre of the taxiway. However, in the area where this incident occurred the crop is a lot closer to the taxiway centreline. Compounding matters, the usual wheat and barley crops in past years, which do not grow high enough to normally be an obstacle, were replaced by beans that have grown to about 1.2 metres in height. Although the pilot was aware of this hazard, which had been discussed during the morning briefing in the context of emergency options around the field and places to land, the pilot did not pay sufficient attention to the position of the crop, and the glider's wing penetrated 3 metres into the crop before the yawing force became too much for the tow bar. Due to the forces needed to dislodge the tow bar and the damage to the tailplane, the aircraft was taken to the workshop and derigged to inspect for any damage. After careful examination, the only damage was to the underside of the tailplane, with scratches on the paintwork and damage to the zigzag tape. The glider was returned to service and the crop was slashed.

#### Safety Advice

The most frequent ground handling accident is a driver towing a glider into an obstacle. It is not difficult to understand why this occurs as the glider's long wings make detecting clearance from obstacles difficult, there are many blind spots from the driver's seat, and it requires frequent lookout towards both wings during the tow. As this occurrence highlights, it is vitally important to maintain situational awareness by constantly monitoring the glider's position and proximity to objects when towing on an airfield.

Date	30-Oct-2022	Region	GQ	SOAR Report Nbr	S-2188
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	BG 12A			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	70

Date	31-Oct-2022	Region	SAGA	SOAR Report Nbr	S-2092
Level 1	Operational	Level 2	Miscellaneous	Level 3	Other Miscellaneous
A/C Model 1	ASK 21			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	18
The CFI identified a club member had been flying gliders, including solo, up to two months after their GFA membership expired. GFA Operational Regulation 3.1.1 states: "An aircraft to which these Regulations apply must not be operated except by an individual who is a member of the GFA." Paragraph 8.1(a) of Civil Aviation Order 95.4 states that a relevant sailplane must not be operated except in accordance with the (Operations)					



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manual of the relevant sport aviation body. With Regulatory breaches, CASA expects GFA to deal with the matter and achieve a suitable outcome in the first instance. Where GFA is unable to achieve a suitable outcome, the matter must be referred to CASA. In this case the person immediately renewed their membership, which was backdated to the expiry date, and was counselled by the CFI. Members are solely responsible for ensuring their membership is current before flight, and the GFA membership system sends at least two email reminders in the month leading up to the expiry date.

Date	6-Nov-2022	Region	SAGA	SOAR Report Nbr		S-2093	
Level 1	Operational		Level 2	Airframe		Level 3	Objects falling from aircraft
A/C Model 1		G 102 Club Astir IIIb			A/C Model 2		
Injury	Nil	Damage	Minor	Phase	In-Flight		PIC Age    67
The pilot reported that while diving to gain speed to initiate a loop and at about 100 knots IAS, he heard a loud noise behind the cockpit. The aerobatic manoeuvre was abandoned, and the pilot returned to the circuit and landed. Upon exiting the glider, the pilot observed the hatch covering the control access hole behind the cockpit was missing and the pitot tube was bent and was presumed to have been hit by the hatch. The hatch was lost, so it was unclear why it let go in flight.							

Date	7-Nov-2022	Region	SAGA		SOAR Report Nbr		S-2099	
Level 1	Airspace		Level 2	Airspace Infringement		Level 3	Airspace Infringement	
A/C Model 1		Discus-2cT			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Thermalling		PIC Age	78
<b>What Happened</b>								
While thermalling to gain height before embarking on a cross country flight, the pilot allowed the glider to drift into restricted airspace. The pilot had launched into a thermal north of the airfield and drifted south due to northerly wind. While conscious of the glider’s proximity to the airspace boundary to the south of the airfield, the pilot became focussed on finding the core of the thermal and did not realise the glider had penetrated restricted airspace by 1NM. Upon reaching 6000 ft, the pilot proceeded on the planned Cross-Country flight and only identified the airspace breach upon reviewing the flight trace at the end of the flight. The pilot immediately reported the infraction.								
<b>Analysis</b>								
The aerodrome from which the pilot was operating is situated beneath Class C airspace (LL4500), and within and between several areas of restricted military airspace and Danger Areas. The Club has access to some restricted airspace by arrangement with the RAAF. The Club CFI advised that the pilot has a good understanding of Airspace and is normally very diligent not to infringe airspace. However, on this occasion the pilot lost situational awareness of the glider’s proximity to the restricted airspace while focused on finding the core of the thermal. As a result, it didn’t take long before the glider drifted across the boundary. The CFI noted that the boundary is not well defined by ground features, and an analysis of the Club’s database of airspace infringements has identified this boundary as being a common area for airspace infringements. The club has increased pilot awareness of the issue and runs regular airspace workshops that are well attended.								
<b>Safety Advice</b>								
To avoid airspace infringements pilots should apply Threat and Error Management in their flight planning and flying (e.g., identify the threats such as airspace, weather and equipment). Pilots must also consider the errors they are likely to make, such as in navigation, and address them early. Particular attention should be paid to vertical limits of controlled airspace, and pilots should plan to remain 200’ below the base of controlled airspace and/or 1nm from the edge whenever possible. An approved and up-to-date moving map display in the field of vision is useful, and ensure you carry a backup, whether a current paper chart with the route drawn on or a second moving map display. It is also important that pilots understand the role of								



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distraction before and during flight and how it can lead to inadvertent infringement of controlled airspace. Pilots should consciously recognise distractions including those from passengers, unfamiliar equipment or its malfunction, aircraft problems or weather as well as personal problems or stress. Pilots should ensure they positively shift attention from them back to flying, operating, and navigating the aircraft. If weather is becoming a factor, change your plans early and carefully. Importantly, look outside the cockpit with occasional confirmation checks on progress by viewing the moving map display or charts.

Date	9-Nov-2022	Region	GQ	SOAR Report Nbr	S-2095
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Collision
A/C Model 1	Astir CS			A/C Model 2	KP-2U Sova
Injury	Fatal	Damage	Write-off	Phase	In-Flight
				PIC Age	80

Under investigation. A powered aircraft listed with RAAus and an Astir CS glider were involved in a mid-air collision approximately 2NMs South-West of Gympie aerodrome at a height of about 2,500ft. Both aircraft spiralled to the ground and their pilots were fatally injured. The accident is being investigated by the Qld Police and Coroner.



Date	10-Nov-2022	Region	NSWGA	SOAR Report Nbr	S-2094
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	KR-03A Puchatek			A/C Model 2	Diamon DA40
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	83

During a winch launch on RWY 01 a powered aircraft flew across the end of the runway unannounced at the same height as the glider. The powered aircraft's track was obtained from FlightAware, which showed it approached the airfield from the Northeast at a speed of about 133 kts and passed the glider on launch at the same height but displaced about 200 metres. The airfield is marked on the AIP Charts with the gliding and winch symbol and has a designated CTAf. There is also an entry in the Airfields database in the Electronic Flight Bag apps advising of gliding operations, with cables up to 3,000ft. The CFI reported the launch crew were unaware of the presence of the powered aircraft when the launch commenced, and heard no radio calls despite making all operational launch broadcasts (i.e. the pre-launch broadcast, take-up slack





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and all out) on the CTAF. The CFI and GFA AAAO contacted the aircraft operator (Flying School), whose Head of Flying Operations apologised for the incidents and advised will raise awareness and use this as a learning opportunity.



Date	13-Nov-2022	Region	GQ	SOAR Report Nbr	S-2096
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	ASK 21 B			A/C Model 2	?
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	58
<p>The pilot was flying their first extended thermal flight since going solo. While tracking south-west towards the aerodrome at 6500 ft the pilot observed an object in his perihelical vision in the 8 o'clock position moving very fast at the same height. The pilot stated it took a couple of seconds to realise it was not a bird but a converging twin engine aircraft. The aircraft rapidly increased in size but passed behind the glider about 2 seconds later. The pilot does not recall how close the aircraft came to the glider and noted that the incident 'rattled' him given four days earlier there was a fatal mid-air collision at Gympie (refer SOAR report S-2095). The pilot reported he had been actively scanning due to the area through which he was flying as it is an active VFR traffic route, and had been listening out on radio for any calls.</p>					

Date	19-Nov-2022	Region	NSWGA	SOAR Report Nbr	S-2098
Level 1	Operational	Level 2	Miscellaneous	Level 3	Rope break/Weak link failure
A/C Model 1	Blanik L13			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Launch
				PIC Age	59
<p><b>What Happened</b>  During club activities and mixed-type winch launching, a club blarik was launched on a training flight with a weak-link of significantly lower strength than required. This resulted in a weak-link break at 200 feet. The student applied the correct launch failure recovery technique, and a safe straight ahead landing was made.</p> <p><b>Safety Advice</b>  A weak link is inserted into the winch cable or aerotow rope, normally at the glider end, to protect the glider against over-stressing during the launch and obviously, this must be matched to the glider's take-off weight. The specified maximum weak link strength is noted on the glider's limitations placard. Weak links are</p>					





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coloured for easy identification. Launch crew must ensure the weak link is the correct strength before launching, especially if the glider is particularly light or heavy.

Date	19-Nov-2022	Region	GQ	SOAR Report Nbr	S-2104
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Piper PA-25-235			A/C Model 2	DG-1000S
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	64

#### What Happened

A glider and tug combination on departure from the aerodrome and climbing out in a left-hand turn towards the north-west came within 800 metres horizontally and 200ft vertically of a recently solo and low hours pilot flying to the south-west upwind of the operational runway.

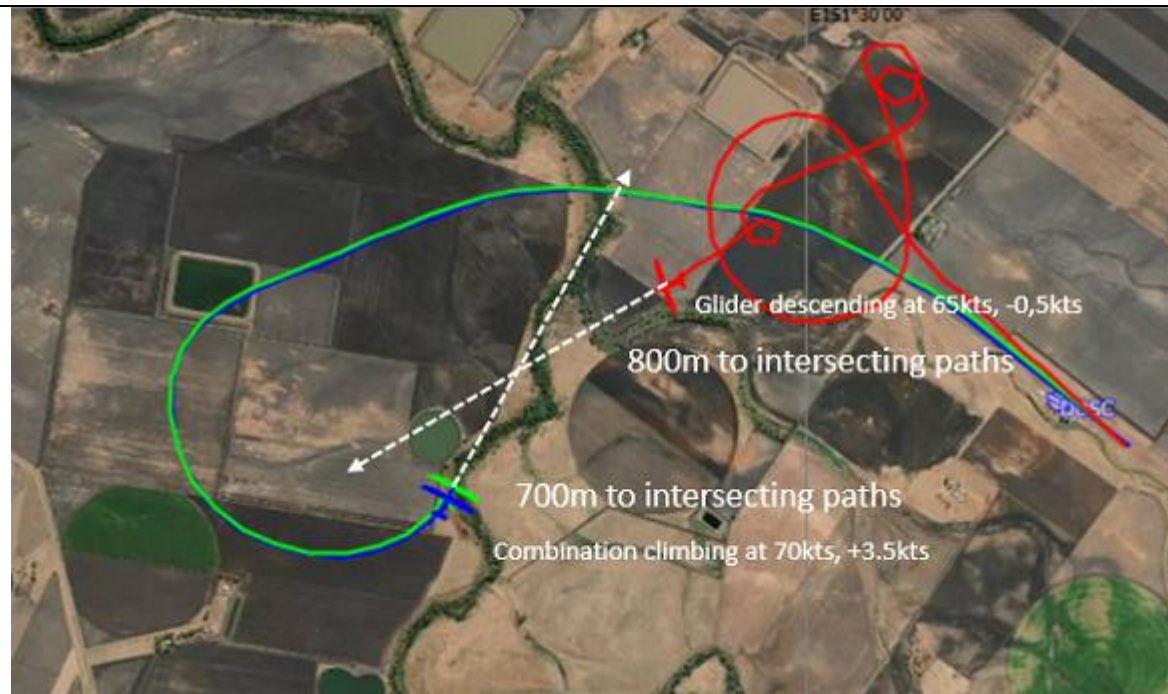
#### Analysis

This incident occurred on a busy day, with the club conducting training and aerobatics for aviation students from the Griffith University Soaring Society using three two-seat gliders and two tow planes. There was also some cross-country flying being conducted by experienced pilots. Just after midday, the recently solo pilot was launched by aerotow in the DG1000 for a local flight. Shortly afterwards, the Duo Discus was launched for an aerobatic flight, and the tow pilot was flying to the designated aerobatic area. The pilot of the tug towing the DG1000 positioned the combination over directly over the runway instead of upwind, and the glider pilot released at 2000ft in the general area where the aerobatic flights were being conducted. The pilot of the second tow plane TOWING THE Duo Discus reported that "There were lots of gliders in the air and there was a lot of cumulus cloud, so whilst visibility generally was good, gliders were hard to pick up against the very white sky. All aircraft have Flarms." The second tow pilot conducted a standard departure and while climbing through 2000ft towards the aerobatic area, the command pilot in the Duo Discus sighted the DG1000 flying directly towards the towing combination from about 30 degrees to the right. The tug pilot did not see the glider. The pilot of the Duo Discus immediately released and made a radio call "turn left, turn left, turn left". The tow pilot recognised the glider pilot's voice and at the same time saw the glider release in the mirror. The tow pilot immediately turned left and descended. The pilot of the DG1000 saw the two aircraft in front at this time and simultaneously the aircraft FLARM alerted. Neither the tug pilot nor the pilot of the Duo Discus recalled receiving a FLARM alert. All aircraft separated, but the solo pilot was unsure of what to do and appeared to have continued straight flight ahead.



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### Safety Action

Following the flight, the CFI, who was also the pilot of the second tug, conducted a debriefing with all parties involved. The following causal factors were identified:

- Ability to spot aircraft was impaired by significant cloud.
- The solo pilot lacked experience operating in a complex and dynamic airspace.
- There was a general lack of understanding about where the aerobatic manoeuvres were being conducted.
- The Flarms in the Duo discus and Tow Plane may not have been serviceable.
- The collision beacon in the nose of the DG1000 was not turned on.

The club has since taken the following remedial action:

- A safety presentation emphasising lookout was presented to members.
- Procedure were implemented for coordinated operations during training programs, including supervision of early solo pilots in this environment.
- Formal procedures were established for the conduct of aerobatic flights to avoid conflict with gliders and transiting powered aircraft.
- The nose beacon in the DG1000 is required to be turned on in flight to increase visibility.
- All Flarms were checked for serviceability.

Date	21-Nov-2022	Region	NSWGA	SOAR Report Nbr	S-2097
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	Stemme S10-V			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Launch
				PIC Age	61
<b>What Happened</b>					
During take-off, the student pilot perceived that the aircraft was about to stall and applied a positive pitch nose down correction. This caused the propellor blades to impact the runway. The propellor tips were damaged and an inspection was required of the gearbox and engine components.					
<b>Analysis</b>					



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This incident occurred on the second take-off of a training sortie. Shortly after becoming airborne the student pilot perceived that the aircraft was about to stall and applied a positive pitch nose down correction. The glider was over pitched causing the propellor blades to impact the runway. The instructor reported that, despite guarding behind the stick with one hand, he did not react quickly enough to prevent this event. The pilot was being taught to take-off in the conventional manner by lowering the nose to get the tailwheel off the ground. This is contrary to the guidance in the Stemme flight manual that recommends the aircraft be held in a three-point attitude throughout the take-off. However, some experienced pilots prefer to take-off with the tail off the ground as the high angle of attack from a three-point attitude means that the aircraft tends to pitch and roll during the early part of the take-off until the speed increases sufficiently. Compounding matters, the fresh breeze with occasional gusts added to the student's workload. The instructor advised that, in terms of threat and error management,

- it may have been wiser to conduct this early student training in more benign conditions;
- they should have emphasised the need to be aware of propellor strikes; and
- they should have trained the student to take-off in accordance with the guidance in the Aircraft Flight Manual.

Date	25-Nov-2022	Region	NSWGA	SOAR Report Nbr	S-2100
Level 1	Technical	Level 2	Systems	Level 3	Flight controls
A/C Model 1	PW-5 "Smyk"			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	20

#### **What Happened**

During a local flight the pilot found the rudder pedals had become impeded by the static port in the nose, but they were able to remedy the problem by "wriggling the pedals" with their feet.

#### **Analysis**

Following the flight, the glider was inspected, and the issue was able to be replicated by extending the rudder pedals to the full extent of their travel. The pilot, who was tall, had also extended the rudder pedals to their full travel prior to the flight. It was determined that there was no 'stop' in the system to prevent the rudder pedals from extending beyond the rearmost locking position. When pushed beyond the rearmost locking detent, the pedal assembly could move sideways and foul against the static system. An approved maintenance engineer placed a jubilee clamp around the adjustment tube mechanism, which limited the forward travel and ensured the locking detent was properly engaged at the full forward position.



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Date	26-Nov-2022	Region	WAGA	SOAR Report Nbr	S-2105
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Nimbus-2C			A/C Model 2	N/A
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	74
<p>The pilot reported that after releasing from aerotow in a thermal, he raised the undercarriage and then noticed the ASI was not working correctly. The pilot continued the climb and then flew locally for about 25 minutes before joining circuit for landing. The pilot did not configure the aircraft for landing by lowering the undercarriage, and then failed to complete the pre-landing check list. The glider landed on a gravel runway with the undercarriage retracted. The pilot was uninjured, and the glider sustained only superficial scratching to the lower fuselage gelcoat.</p>					

Date	26-Nov-2022	Region	NSWGA	SOAR Report Nbr	S-2102
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	Astir CS			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	69
<p>Under investigation. The pilot reported having difficulty adjusting the radio frequency to make the circuit calls. Whilst distracted, they failed to monitor their height and had to conduct a low modified circuit.</p>					

Date	27-Nov-2022	Region	VSA	SOAR Report Nbr	S-2110
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain





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## Accident and Incident Summaries

A/C Model 1		EON Olympia Mk 2b		A/C Model 2		N/A	
Injury	Nil	Damage	Substantial	Phase	Outlanding	PIC Age	70
<b>What Happened</b> <p>The pilot released from tow at about 2000ft AGL and found strong sink. The pilot turned back towards the aerodrome but rapidly ran out of height. The pilot elected to make a straight-in approach to a paddock about 1 km from the aerodrome but on late finals observed a powerline ahead. The pilot turned right to land in another paddock, but the glider's wing hit the ground during the turn and the glider struck the ground while travelling sideways. The forward fuselage suffered substantial damage and the tailskid was torn off. The pilot was uninjured and was driven back to the aerodrome by the farmer.</p> <b>Analysis</b> <p>The elderly pilot had about 500 hours aeronautical experience, of which 300 hours and 150 flights were in sailplanes. He had not flown for more than 12 months and completed six flights with the CFI as part of his Flight Review in the week preceding the accident. On the accident flight the pilot was flying a vintage Olympia sailplane that he had owned for several years and recently sold. The pilot's experience on type was not provided. The pilot reported that after releasing from tow the glider encountered heavy sink and despite heading straight back to the aerodrome the glider did not fly into any lift. The pilot believed paddocks around the aerodrome were landable, so he continued to push on rather than select a closer paddock and conduct a circuit. On late final the pilot observed a powerline across the approach, and while manoeuvring at low level to land in another paddock the glider's wing struck the ground. The glider slewed sideways and landed heavily and was substantially damage. The pilot was uninjured. The reason for the high sink rate was not established, and the glider's airbrakes may have been extended for the flight.</p> <b>Safety Advice</b> <u>Outlanding</u> <p>Accidents during outlanding are often due to not having enough time to thoroughly inspect and choose a field and plan the landing. The trap is when you keep hoping that you will find a thermal so you delay making the decision to land. Unlike landing at the home airfield where the runway layout, ground features and hazards are usually well known, when landing in a strange paddock the pilot is faced with the unknown. Such a situation demands the pilot take additional precautions to ensure a proper survey is undertaken of the landing area so as to identify all hazards and ensure a safe approach and landing can be accomplished. Pilots must adhere to their training, which requires the conduct of a proper circuit of the landing area to review for suitability.</p> <u>Currency and aging</u> <p>It is well known that flight experience can compensate to some degree for age-related declines in cognitive function and that overlearned complex tasks such as piloting are less susceptible to age-related deterioration than abilities to perform in novel situations. Notwithstanding, recency of experience can have a dramatic effect on overall airmanship, regardless of age. It is known that older pilots who have long breaks between flying take longer to regain their proficiency. Older pilots should fly regularly and participate more frequently in recurrent training. Unfortunately in this case, the recent flight review was not sufficient to prevent this accident from happening.</p>							

Date	27-Nov-2022	Region	NSWGA		SOAR Report Nbr		S-2101
Level 1	Technical		Level 2	Powerplant/Propulsion		Level 3	Engine failure or malfunction
A/C Model 1		Piper PA-25-250		A/C Model 2		DG-1000S	
Injury	Nil	Damage	Nil	Phase	Launch	PIC Age	75
<p>Just prior to lift off during the take-off roll on the 12th launch of the day, the tug lost substantial power, and the tow pilot closed the throttle, released the glider, and landed straight ahead. Both aircraft stopped safely. The tow pilot reported the tug's configuration was normal; with mixture full rich, mags both on, left tank selected, fuel quantity 30%, electric fuel pumps on, cowl flap open. At the time of the power loss the fuel pressure indicated zero. The aircraft was subsequently inspected by a LAME, who identified that two electric</p>							





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fuel pumps to back up the engine-driven pump were unserviceable. Three new fuel pumps were fitted and the aircraft returned to service.

Date	29-Nov-2022	Region	VSA	SOAR Report Nbr	S-2103
Level 1	Operational	Level 2	Aircraft Control	Level 3	Loss of control
A/C Model 1	Piper PA-25-235/A1			A/C Model 2	LS 4.
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	25

### What Happened

During the third aerotow for the day and at approximately 50ft AGL, the tug commenced an uncommanded rapid roll to the right resulting in the tug turning sharply to the right. The tug pilot released the tow rope and initiated an unusual attitude recovery. The glider pilot simultaneously released the tow rope and landed straight ahead. The tow pilot flew a modified circuit and landed.



### Analysis

The launch was being conducted without the assistance of a wingtip runner, so the glider was taking off from a wing down position. The slack in the rope was taken up uneventfully and the combination became airborne. The tow pilot reported that shortly after becoming airborne and at a height of about 50ft, the tug "...went from straight and level to nearly 90 degrees within less than a second". The pilot attempted to reduce power but inadvertently pulled the mixture control. Observing the glider passing on the left, the tow pilot pulled the release, and then applied full power to climb away. The glider pilot also released from tow and landed heavily straight ahead. The tow pilot completed a modified circuit and landed safely. The tug was inspected by a LAME and no issues or defects were identified. The glider was undamaged. The trace from the tug's Flarm unit verified the pilot had sufficient airspeed at the time of the upset. The Club Tugmaster believes the occurrence was consistent with the tug having been caught by a thermal gust.

Date	2-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2106
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	DG-808 C			A/C Model 2	SZD-55-1
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	73



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Under investigation. Two gliders nearly collided in the circuit while landing on different runways. A DG 800 was on final approach to RWY 18 and a SZD 55 was in a left-hand circuit to RWY 09. The SZD 55 passed directly underneath the DG 800 with about 60 feet vertical separation. The pilot of the SZD 55 did not see the DG 800 and was unaware of the incident until debriefed afterwards. The pilot of the DG 800 observed the SZD 55 low on the left and passing underneath and had no time to take avoiding action. Analysis of the flight traces revealed that both gliders had passed in opposing directions about 1 minute earlier when the DG 800 was on base leg to RWY18 and the SZD 55 was positioning to join downwind to RWY 09 in left-hand turn. At that time the gliders passed within 130 metres horizontal separation and 151 feet vertical separation. Neither pilot could recall receiving a Flarm alert of the near collision. Both pilots heard each other's circuit calls, but the pilot of the SZD 55 was confused by the DG 800 pilot's circuit call due to the expectation they would be landing on the common runway being used for landing on the day. The pilot of the SZD 55 was undertaking their first flight in type.

Date	2-Dec-2022	Region	NSWGA		SOAR Report Nbr	S-2111	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Hard landing
A/C Model 1	LS 7-WL				A/C Model 2	N/A	
Injury	Nil	Damage	Substantial	Phase	Landing	PIC Age	65
Under investigation. The pilot left the decision to break off the flight too late and joined circuit on base leg. Upon turning final the pilot recognised the glider was in an overshoot position and deployed about half airbrake. Although there was a 15-knot headwind, the pilot did not allow for this and as the glider descended through the wind gradient the rate of descent increased. The pilot flared early to counter the high rate of descent but allowed the glider to stall when still about 2 metres above the ground. The glider dropped heavily onto its undercarriage, which collapsed. The pilot stated <i>"I recognise that I became a Landing Pilot at too low an altitude, became flustered and found myself having to rush through the process of landing. On Final I failed to coordinate the Airbrakes correctly and had inadequate airspeed for the conditions as I approached for round out, my airspeed should have been significantly higher for conditions on the day. After this experience I fully realise the importance of a correct landing circuit, which gives the pilot adequate time to set up and make any adjustments in a more relaxed fashion."</i>							

Date	3-Dec-2022	Region	WAGA		SOAR Report Nbr	S-2108	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain
A/C Model 1	Piper PA-25-235				A/C Model 2	N/A	
Injury	Nil	Damage	Nil	Phase	Ground Ops	PIC Age	82
<b>What Happened</b> After refuelling the tow plane and while taxiing back towards the hangar, the pilot made a sharp turn to avoid some gliders parked nearby and the aircraft collided with a gable runway marker.							



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#### **Analysis**

The tow pilot was current and had conducted 19 tows over the period of the day, which was not abnormal. At the time of the incident a 15-knot crosswind was blowing across the runway but was not considered a factor in the incident. The pilot had just refuelled the tow plane prior to putting it closer to the main hangar for the end of day. While taxiing back towards the hangar the tow pilot elected to take an abbreviated path that was shorter than the originally intended. This may have been a contributing factor, as the pilot became distracted by focusing on avoiding two gliders that were parked nearby. To avoid the gliders, the pilot elected to turn sharp into an area that he had not properly surveyed, and the presence of the gable marker was not noticed until the aircraft collided with it. The pilot immediately shut down the engine and disembarked to survey the scene. Fortunately, only the left undercarriage struck the marker and the aircraft did not suffer any damage other than a scratch on the undercarriage leg. The towplane was subsequently put in the main hangar, where it was inspected and cleared for flight. Following this incident, the Club Tugmaster reminded tow pilots about the increased risk involved when suddenly changing direction without prior planning.

#### **Safety Advice**

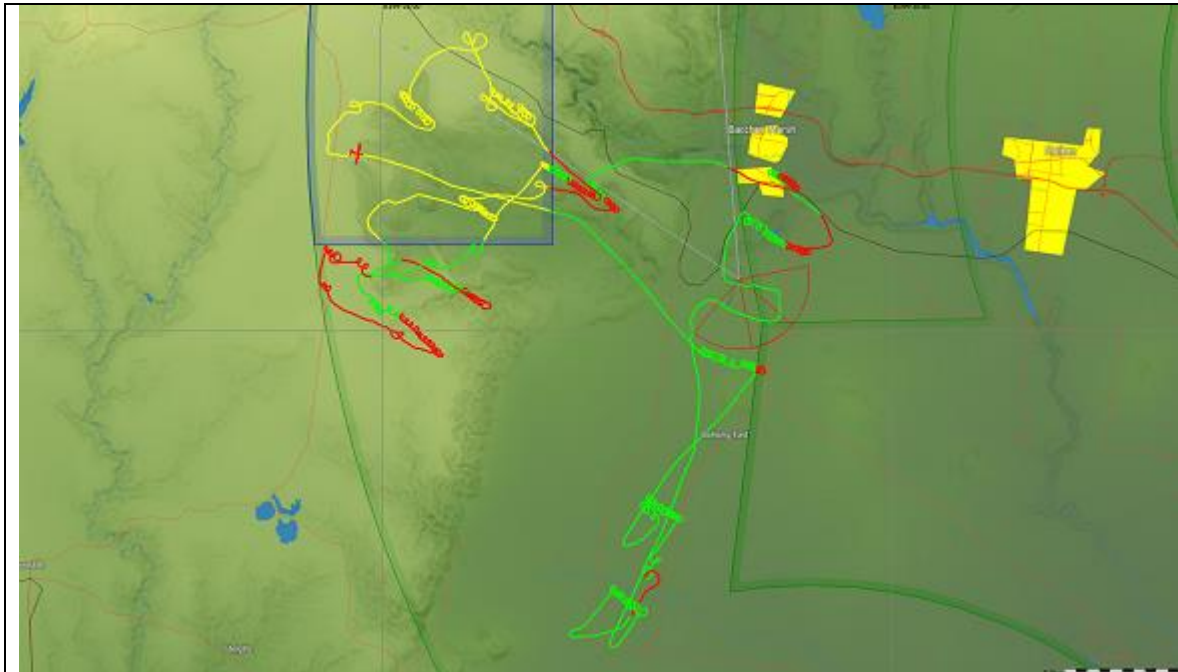
Care is always needed during ground manoeuvring, and the responsibility for aircraft safety when taxiing remains wholly with the pilot in command. Like any manoeuvre, taxiing requires planning and judgment. Pilots must use visual scanning and collision avoidance procedures - look around before taxiing and do not focus only on the area immediately ahead of the aircraft.

Date	4-Dec-2022		Region	VSA		SOAR Report Nbr		S-2112	
Level 1	Airspace			Level 2	Airspace Infringement		Level 3	Airspace Infringement	
A/C Model 1			SZD-48-1 Jantar Standard 2			A/C Model 2		N/A	
Injury	Nil		Damage	Nil	Phase	In-Flight		PIC Age	61
<b>What Happened</b>									
During a single flight of 2½ hours, the pilot entered Class C airspace without a clearance on seven occasions.									



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### Analysis

The experienced pilot was aware of the airspace restrictions, having operated at this site for over a decade. On this local flight he was navigating by memory, as he did not have a flight computer with airspace loaded nor did he carry any charts. The pilot was counselled by their CFI.

### Safety Advice

Pilots who enter a controlled airspace (excluding Class E) without the proper requirements such as an ATC clearance and a transponder (unless exempted), commit an airspace violation. Each infringement represents the potential for a "single catastrophic event" which, at its worst, carries with it the significant risk of loss of life. Pilots should never enter airspace without a clearance where required and should apply navigational tolerances to avoid infringing airspace. Pilots should always navigate using CASA approved data and charts. Airspace files provided by competition organisers or downloadable from the internet are unapproved and should not be relied upon.

Date	4-Dec-2022	Region	VSA		SOAR Report Nbr		S-2123	
Level 1	Operational		Level 2	Fuel Related		Level 3	Starvation	
A/C Model 1		Piper PA-25-235/A1			A/C Model 2		ASK 21	
Injury	Nil	Damage	Substantial	Phase	In-Flight		PIC Age	63
Under investigation. Near the top of an aerotow launch the tow plane lost power. The pilot released the glider and commenced the engine failure procedure without being able to restart the engine. The pilot believed that he had enough height to return to RWY 26 on the airfield with a dead engine and proceeded on that basis. The actual descent rate with a dead engine and a windmilling propeller was 1240fpm (from Flarm) and exceeded what the pilot had anticipated. The tug landed short of the airfield and rolled through a fence before coming to rest in the field before the end of the runway.								

Date	6-Dec-2022	Region		NSWGA	SOAR Report Nbr		S-2107
Level 1	Operational		Level 2	Ground Operations		Level 3	Taxiing collision/near collision
A/C Model 1		Piper PA-25-235			A/C Model 2		PIK-20D





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Injury	Nil	Damage	Substantial	Phase	Ground Ops	PIC Age	75
<p>Under investigation. Due to runway works being in progress, gliding operations were being conducted from a taxiway entering the RWY 23. Two gliders were parked behind the holding point on the 30-metre-wide taxiway awaiting to be pushed onto the runway for launch. One of the gliders still had the wing dolly fitted to the port wing. As the first pilot was ready for launch, the tow plane, which had been parked on the Southern side of the taxiway, entered the taxiway to commence a glider launch. As the tow pilot manoeuvred around the parked gliders, the towplane's propellor struck the port wingtip and wing dolly of the rear glider. The wing dolly was destroyed, and about 1 metre of the glider's port wingtip was removed.</p>							
<p><b>2: Accident sequence</b></p> <p>VH-GCK calls entering runway and prepares to be pushed onto runway by ground crew</p> <p>VH-GWK</p> <p>VH-PXI taxis forward to enter runway and tow VH-GCK</p>							





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Date	8-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2109
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Sparrow Hawk			A/C Model 2	
Injury	Serious	Damage	Write-off	Phase	Launch
				PIC Age	63
<p>Under investigation. During the initial stages of an aerotow launch, and shortly after the glider became airborne, witnesses observed the glider move into the high tow position and, when at a height of about 50ft AGL, the glider was observed to suddenly pitch up steeply to the right, and then the left wing and nose dropped. One witness observed the tow rope was still attached as the glider pitched down but believed the pilot must have activated the tow release because the tow plane climbed away while the glider departed controlled flight. As the glider's left wing dropped, the wingtip struck the ground followed by the fuselage striking the ground in a nose down attitude while pivoting around the wingtip. The glider was substantially damaged, and the pilot suffered serious injury. Police and emergency services attended, and the pilot was transported to hospital by ambulance. The pilot has no recollection of the launch or accident.</p>					





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### *Accident and Incident Summaries*



Date	10-Dec-2022	Region	SAGA	SOAR Report Nbr	S-2114
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Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	LS 8-18			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	In-Flight
PIC Age					
68					
Under investigation. The pilot reported infringing controlled airspace on several occasions during a local flight. on one occasion the sailplane was about 5700FT above the Class C lower limit, for approximately 24 minutes.					

Date	12-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2113
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	JS-MD 3 SN 3.MD065			A/C Model 2	N/A
Injury	Nil	Damage	Minor	Phase	Landing
PIC Age					
64					
<b>What Happened</b>					
During the landing roll the undercarriage collapsed.					
<b>Analysis</b>					
The pilot broke off the flight at about 6000ft and prepared the aircraft for landing by lowering and locking the undercarriage. Upon joining the downwind leg of the circuit, the pilot conducted their pre-landing checks and confirmed the undercarriage was down and locked. The glider landed off a stabilised approach normally, and about two seconds into the ground roll the undercarriage retracted. The glider slid on its fuselage for about 150 metres before coming to rest. The right undercarriage door had been torn off. The undercarriage locking mechanism of this type is complicated and links to a retractable tailwheel. The undercarriage locking mechanism is prone to letting go unexpectedly. An improved system has been developed by the manufacturer but hadn't been installed on this aircraft.					

Date	15-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2118
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Standard Cirrus			A/C Model 2	N/A
Injury	Nil	Damage	Minor	Phase	Landing
PIC Age					
24					
<b>What Happened</b>					
During a competition flight the pilot conducted a straight-in approach from the control point approximately 10km from the finish circle. The pilot omitted to configure the aircraft for landing by lowering the undercarriage and did not complete the pre-landing checklist before landing.					
<b>Analysis</b>					
The pilot stated that he had earlier recovered from two potential outlandings and he may have been fatigued. Additionally, the pilot did not carry sufficient drinking water for the flight and may have also been dehydrated. The pilot also noted the undercarriage lever on the aircraft being flown acted opposite to what he was accustomed. Discussion with the CFI highlighted the importance of maintaining appropriate consideration of human factors in relation to the effects of dehydration, appropriate inflight hydration, sustenance, urination, the cumulative effects of fatigue following multiple days of flying, including in hot conditions.					
<b>Safety Advice</b>					
Straight-in approaches are now commonly used to simplify the final approach under competition conditions. While they require more experience and energy management, they avoid complexity and exposure to collision risk. However, the chances of identifying an error while flying a normal, standard circuit is significantly higher than when on final glide for a straight-in approach. The absence of a base leg (particularly) but also of a downwind leg also reduces the opportunity to examine the landing area and final approach. Notwithstanding, none of this does more than add to workload and this procedure is, on balance, safer for experienced pilots. Despite this, landing mishaps still occur during a straight-in approach due to					



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poor workload management, so pilots must take care to ensure that the pre-landing checklist is carried out. For further information, refer to OSB 01/14 'Circuit and Landing

Date	16-Dec-2022	Region	GQ	SOAR Report Nbr	S-2120
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Discus CS			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	Landing
PIC Age					
53					
Under investigation. Following a normal touchdown and as the glider decelerated in the landing roll, the pilot manoeuvred to the left onto a clear area beside the main runway to clear the runway for following aircraft. While the glider was still travelling at about 20 knots but with diminished aileron control, the left wingtip contacted a large clump of mown grass that remained on the field, which caused the glider to rotate through 20 degrees as the aircraft came to a stop. The glider was not damaged.					

Date	17-Dec-2022	Region	GQ	SOAR Report Nbr	S-2115
Level 1	Operational	Level 2	Airframe	Level 3	Fuselage/Wings/Empe nnage
A/C Model 1	Piper PA-25-235			A/C Model 2	IS-28B2
Injury	Nil	Damage	Nil	Phase	Launch
PIC Age					
46					
During an aerotow launch and at approximately 800 – 900 feet, the tow pilot noticed the small fairing around the joint between the strut and the wing had come loose but was still attached. The tow pilot immediately waved the glider off, confirmed its release and made a left turn to join a long downwind for Runway 11, maintaining about 70 knots. The tow pilot heard the glider pilot make a downwind radio call and sighted it in the circuit to the left and below. The tow pilot made a radio call indicating his position in circuit and that he had an issue with the wing fairing and advised that he had the glider in sight and would remain number two to land. Both aircraft landed safely. Inspection revealed that the strut attachment fairing, which can be removed to facilitate inspection of the strut attachment, had merely come loose and there were no structural implications for the airframe. The fairing was reattached more securely.					

Date	17-Dec-2022	Region	GQ	SOAR Report Nbr	S-2116
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	Cessna 150G			A/C Model 2	GFB
Injury	Nil	Damage	Nil	Phase	Launch
PIC Age					
62					
Under investigation. As the glider/tow aircraft combination was passing about 1500 feet, the tow aircraft received a drastic load pulling the tail to the left. The tow pilot checked the rear vision mirror and noted the glider in a position well to the left of the tow aircraft. As the tow pilot watched, the glider commenced a correctional turn to the right but at such a speed that the tow pilot became alarmed and decided to release the tow rope from the tow aircraft.					

Date	17-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2119
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	LS 6-b			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	Landing
PIC Age					
65					
Under investigation. The pilot was landing off their third flight of the day and on their second flight in the sailplane involved in this incident. Owing to prolific grass growth on the airfield, the Northern portion of RWY 16 was unsuitable due to residual grass length so the club was operating with a displaced threshold and approximately 40% of the available runway length was in use. The pilot reported landing off a stable					





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approach with 10 deg of flap and with ambient wind of 178 deg and 8 knots. The glider touched down gently in high grass about 30 metres before the area of RWY 16 that had been cut to a lower level. The touchdown was gentle and straight, but the glider's left wingtip wheel either caught on the relatively long grass, or on a clump of cut grass on the runway. The glider turned rapidly to the left through 120 degrees and came to rest about 3 metres into the long grass and weeds on the Eastern edge of RWY 16. The pilot reported the deviation happened so quickly that *"I was simply along for the ride. I had no reactions quick enough to apply opposite rudder or move the stick forward to raise the tail."* Subsequent inspection revealed the glider to be undamaged.



Date	17-Dec-2022	Region	WAGA	SOAR Report Nbr	S-2121
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Aircraft preparation
A/C Model 1	SZD-48-1 Jantar Standard 2	A/C Model 2	N/A		
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	69

#### What Happened

During an aerotow launch, the glider pilot noticed a vibration at approximately 300 feet AGL and observed that the airbrakes were open. He promptly closed them and the flight continued.

#### Analysis

The pilot is very experienced and was carrying out his third flight for the season. At the time he thought he had an adequate time to conduct all his checks as the tug had just taken off. However, he did not realise that the second tug had started and was positioning in front ready for the tow, which caused him to rush through his checks to avoid holding up others awaiting to fly. Although he thought he had checked the airbrake, they were not locked. On review there did not seem to be a safety issue regarding the climb as the tug pilot did not notice any decrease in performance.

#### Safety Advice

Pilots must remain alert to the risks of rushing through checklists, as vital procedures can easily be missed. Checklists enhance flight safety and enable the pilot to confirm safety critical systems and controls are correctly and consistently configured for a phase of flight. Distractions, interruptions, and haste result in a



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disruption of the sequential flow of the checklist. One technique to counter distractions and interruptions is to repeat the entire checklist (starting from the beginning) during these situations. Unfortunately, if the pilot is in a hurry, this will likely not be done.

Date	17-Dec-2022	Region	VSA	SOAR Report Nbr	S-2124
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Aircraft Separation Issues
A/C Model 1	Twin Astir			A/C Model 2	Unidentified
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	65

### What Happened

A winch launch was abandoned just before the launch commands were given as a powered aircraft flew over the runway at a height where conflict was likely. No radio calls were heard from the aircraft, that had departed a nearby certified aerodrome.

### Analysis

A two-seat glider was about to be launched on a training flight when the launch crewman heard and then saw an aeroplane about to overfly the duty runway at a height that would likely conflict with the launch. The ground crewman immediately called "stop, stop, stop" to the member in the control van, who relayed the message to the winch driver. The launch did not proceed. Neither the ground nor flight crew heard a radio call from the aircraft to indicate a possible overfly of the glider field. The ground crewman made a broadcast to the aircraft overflying to the effect that it was overflying an active winch launching glider field but did not receive a response. The identity of the overflying aircraft could not be ascertained.

### Safety Advice

The potential for conflict with transiting aircraft overflying operational winch sites is real, and there have been several close calls over recent years. It will be obvious to all that it is essential for pilots preparing to launch to be aware of any airspace activities in their vicinity and the threat, if any, posed by the presence of other aircraft. Lookout is the principal method for implementing see-and-avoid. Effective lookout means seeing what is 'out there' and assessing the information that is received before making an appropriate decision. The primary tool of alerted see-and-avoid that is common across aviation is the radio. Radio allows for the communication of information to the pilot from the ground or from other aircraft. Radio is also useful for the wing runner, to aid in situational awareness or monitoring of gliders or aircraft that might affect the launch operation. A radio announcement prior to each and every launch is a standard operating procedure at all gliding sites and is expected by other operators. With winch launching operations, Gliding Australia now requires all launch commands, including the 'take-up slack' and 'all out' commands, be given on the CTAF or local aerodrome frequency. These additional calls improve situational awareness for pilots flying in the area and are known to have been responsible for reducing conflict with transiting powered traffic at, at least, two winch sites in Australia. In this case the above requirements for ensuring the airspace was clear for launch was clearly understood by duty crew on the day, and their alertness prevented a potential accident.

Date	18-Dec-2022	Region	WAGA	SOAR Report Nbr	S-2117
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	52

During landing, the glider touched down at speed and bounced approximately 2 feet into the air. The pilot corrected for the bounce and the glider then touched down in the correct two-point landing attitude. When the pilot applied the wheel brake, the glider pitched forward, and the forward fuselage briefly contacted the ground. The glider suffered some minor abrasions. It is thought the pilot did not hold the tail down during the application of the wheel brake, which exacerbated the pitching moment.



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Date	19-Dec-2022	Region	SAGA	SOAR Report Nbr	S-2122
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Discus b			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	In-Flight
PIC Age					
Under investigation. The pilot reported infringing controlled airspace.					

Date	22-Dec-2022	Region	WAGA	SOAR Report Nbr	S-2134
Level 1	Operational	Level 2	Miscellaneous	Level 3	Rope break/Weak link failure
A/C Model 1	Ventus-2b			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
PIC Age					
The aerotow rope broke within 5 metres of the take-off ground roll. Investigation revealed some unusual wear on the rope at the point of the break.					

Date	25-Dec-2022	Region	VSA	SOAR Report Nbr	S-2125
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	IS-28B2			A/C Model 2	N/A
Injury	Minor	Damage	Substantial	Phase	Launch
PIC Age					
Under investigation. The aerotow-rope broke during the early stage of the launch while the glider was about 15m above the ground. The pilot landed the glider straight ahead on the runway, but there was insufficient runway length available and the glider collided with the perimeter fence and came to rest about 12m outside the airfield boundary.					

Date	26-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2192
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Controlled flight into terrain
A/C Model 1	Discus-2b			A/C Model 2	N/A
Injury	Nil	Damage	Substantial	Phase	Outlanding
PIC Age					
Under investigation. During a cross-country flight the pilot flew across unlandable terrain in search of lift marked by clouds. When the pilot arrived under the clouds, he was unable to find lift, and the glider became too low to fly to suitable landing areas. While attempting to land on a highway, the glider undershot and crash through scrub. The glider was substantially damaged but the pilot was uninjured.					

Date	26-Dec-2022	Region	SAGA	SOAR Report Nbr	S-2126
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Discus B			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Thermalling
PIC Age					
<b>What Happened</b>					
The pilot reported that while local soaring, they inadvertently entered Class C airspace boundary and infringed the CTA by approximately 1700ft feet vertically on two occasions.					
<b>Analysis</b>					



# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

The pilot self-reported the infringement and submitted a trace to the club Airspace Officer. A review of the flight trace confirmed the incursion. The airspace around this aerodrome is complex and the local club has an agreement with the RAAF and AirServices for release of some airspace blocks upon application. The pilot inadvertently drifted into controlled airspace while thermalling in higher uncontrolled airspace close to the CTA boundary. The pilot advised that the breach occurred due to inattention to navigation. The pilot subsequently undertook some additional airspace training, and the club training panel members are confident that they will stay well outside controlled airspace in future.

### Safety Advice

Violations of controlled airspace can be avoided by remaining situationally aware, ensuring you have current airspace charts, and by thoroughly familiarising yourself with local airspace and other aeronautical issues. In flight a pilot should always know their position relevant to the controlled or restricted airspace steps. Using an electronic flight bag with a moving map will help you keep a track on where you are in relation to controlled airspace. Pilots should create a buffer of, say, 2 nm from the edge of controlled airspace and 200 feet above (or below).

Date	28-Dec-2022	Region	VSA		SOAR Report Nbr		S-2127	
Level 1	Technical		Level 2	Powerplant/Propulsion		Level 3	Abnormal Engine Indications	
A/C Model 1		Piper PA-25-235/A1			A/C Model 2		SZD-51-1 Junior	
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	66
Under investigation. Tow pilot launched with carby heat on, which caused the engine to run rough and resulted in the tow pilot waving off the glider under tow.								

Date	29-Dec-2022	Region	VSA		SOAR Report Nbr		S-2128	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		Standard-Cirrus-75-VTC			A/C Model 2		N/A	
Injury	Nil	Damage	Minor	Phase	Outlanding	PIC Age		50
Under investigation. The pilot did not lower the undercarriage during an outlanding and landed with the wheel refracted. Following touchdown, the glider's right wing struck a sprinkler head, causing the aircraft to slew to the right.								

Date	29-Dec-2022	Region	NSWGA	SOAR Report Nbr		S-2131		
Level 1	Technical		Level 2	Systems		Level 3	Other Systems Issues	
A/C Model 1		SZD-50-3 Puchacz			A/C Model 2		N/A	
Injury	Nil	Damage	Nil	Phase	Ground Ops		PIC Age	60
Under investigation. During retrieve of the glider after landing, the ground crew were unable to open the nose release in order to insert the eings of the tow rope. Subsequent inspection identified the release function was fouled by a metal valve cap, presumably from the front tyre. It is not known how the valve cap got into the release mechanism.								





## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*



Date	30-Dec-2022	Region	NSWGA	SOAR Report Nbr	S-2133
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# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Hornet			A/C Model 2	N/A
Injury	Nil	Damage	Nil	Phase	Outlanding
Under investigation. The pilot retracted the undercariage during the pre-landing checklist while conducting an outlanding.					

Date	30-Dec-2022	Region	VSA	SOAR Report Nbr	S-2129
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	N/A
Injury	Nil	Damage	Minor	Phase	Landing
Under investigation. During the landing roll the glider's right wingtip struck a runway light.					

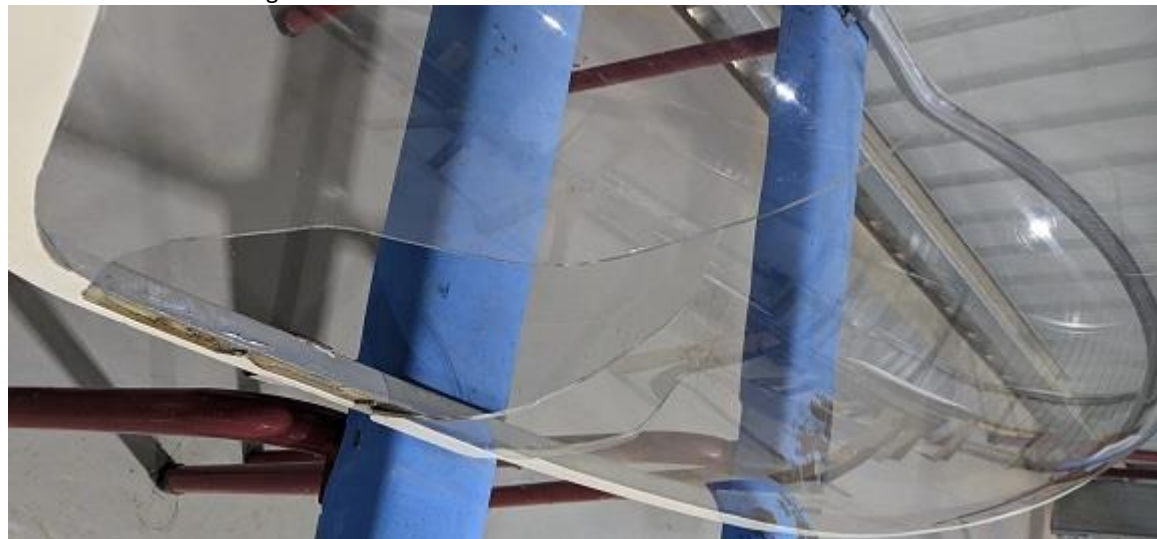
Date	30-Dec-2022	Region	WAGA	SOAR Report Nbr	S-2132
Level 1	Operational	Level 2	Miscellaneous	Level 3	Other Miscellaneous
A/C Model 1	Astir CS			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
PIC Age 48					

### What Happened

While exiting the glider the pilot slipped and put his hand through the canopy.

### Analysis

The pilot had just landed after a successful cross-country flight. After opening the canopy to alight the aircraft, the pilot placed his right hand on the cockpit fuselage and lifted his weight. His right hand slipped, and his right elbow impacted the rear right-hand side of the cockpit. The canopy Perspex cracked, and a part broke away. The pilot was uninjured. The CFI reported that the pilot had surgery on his back, which may have been a contributing factor.



Date	30-Dec-2022	Region	WAGA	SOAR Report Nbr	S-2130
Level 1	Operational	Level 2	Airframe	Level 3	Other Airframe Issues
A/C Model 1	LS 4			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
PIC Age 53					
<b>What Happened.</b>					



# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

On returning to the airfield the pilot conducted one loop in the LS4 glider that was not certified for aerobatics. The manoeuvre was observed by an instructor and the pilot was briefed on the incident on landing.

### Analysis

The pilot was current and certified to carry out a limited number of aerobatics including the loop. When returning from a cross country flight the pilot forgot he was flying the LS4 when he conducted the manoeuvre and took full responsibility for the error. The aircraft was inspected following the incident by authorised inspector and was found serviceable. The cockpit placards were correctly displayed indicating "No Aerobatics". Since this occurrence and to avoid this incident reoccurring, a bulletin has been issued by the club that has prohibited all aerobatics in club single-seat gliders.

### Safety Advice

The pilot must be aware of all the flight limitations on the type being flown. If unsure read the flight manual or if in the aircraft observe the placards.

Date	30-Dec-2022	Region	WAGA		SOAR Report Nbr	S-2135	
Level 1	Operational		Level 2	Runway Events		Level 3	Runway excursion
A/C Model 1		PIK-20 E			A/C Model 2		
Injury	Nil	Damage	Minor	Phase	Launch	PIC Age	80
Under investigation. Pilot self-launched without a wing runner in gusty conditions, lost control and veered off the side of the runway. The glider suffered minor damage to the undercarriage, lower fuselage and undercarriage doors.							

Date	31-Dec-2022	Region	VSA		SOAR Report Nbr	S-2136	
Level 1	Consequential Events		Level 2	Low Circuit		Level 3	Low Circuit
A/C Model 1		Twin Astir-LP			A/C Model 2		
Injury	Nil	Damage	Nil	Phase	In-Flight	PIC Age	78
Under investigation. At about 500ft AGL the tow pilot gave a signal that the airbrakes were open, but induced yaw and wing rolling that the glider pilot under training interpreted as a wave off. The glider pilot immediately released, which surprised the instructor, who expected the signal was to be given at circuit height. The instructor took over and conducted a low circuit back to the operational runway.							

Date	31-Dec-2022	Region	SAGA		SOAR Report Nbr	S-2137	
Level 1	Operational		Level 2	Miscellaneous		Level 3	Rope/Rings Airframe Strike
A/C Model 1		ASW27-18			A/C Model 2		
Injury	Nil	Damage	Nil	Phase	Launch	PIC Age	55

### What Happened

During an aerotow launch the tow pilot throttled back to reduce the climb rate. Coincident with the reduction in climb rate, the combination flew through a thermal causing the glider to rapidly out climb the tow plane. A large bow developed in the tow rope and it contacted the glider's wing. The glider pilot immediately released from tow, but the end of the tow rope and rings went over the wing and slid out towards the wingtip. The rope then became taut and dragged across the wing and fell clear.

### Analysis

This incident occurred during the first launch on the first practice day of the 2023 Sailplane Grand Prix. Prior to operations commencing the tow pilots were briefed on the specific areas where the gliders would be towed prior to the start. On this launch the tow pilot believed he would get to release height well before he reached the designated release area, so nearing the top of the launch the tow pilot reduced power. As soon



## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*

as he did this the tow plane and glider entered a thermal. The glider quickly gained altitude and a bow in the rope developed. As the rope touched the wing of the glider, the glider pilot released the tow rope. As soon as he did this the end of the rope went over the wing, and slid out towards the wing tip. Before the pilot had time to react the rope pulled tight and dragged across the outer wing. No damage occurred.

#### **Safety Advice**

In the event of a large bow in the rope occurring, there is always a danger that the rope may wrap around the wing and on re-tension result in damage to the wing or flight controls (flap or aileron).

If a significant bow in the rope occurs, the glider pilot should, if able, not try to fly it out but turn the glider away from the bow and release the rope just before the rope comes taut. Except in an emergency, a tow pilot should never reduce the power during a launch while the glider is still attached.

Date	31-Dec-2022	Region	GQ		SOAR Report Nbr	S-2152	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Aircraft Separation Issues
A/C Model 1		ASW 27-18			A/C Model 2		
Injury	Nil	Damage	Nil	Phase	In-Flight	PIC Age	41
Under investigation. The pilot was flying locally at about 4,000ft AMSL, when they began to head upwind to look for another thermal. The pilot then noticed a powered aircraft pass directly above the glider with less than 500ft separation. The glider pilot banked right and turned away, and then noted the powered aircraft had changed course and was tracking further north. The powered aircraft did not make any radio calls and could not be identified.							

Level 1	Level 2	Level 3	Definition
Airspace	Aircraft Separation	Collision	An aircraft collides with another aircraft either airborne or on the runway strip, or a vehicle or person on the runway strip.
Airspace	Aircraft Separation	Issues	Airspace - Aircraft separation occurrences not specifically covered elsewhere.
Airspace	Aircraft Separation	Near collision	An aircraft comes into such close proximity with another aircraft either airborne or on the runway strip, or a vehicle or person on the runway strip, where immediate evasive action was required or should have been taken. (a) En-route (b) Thermalling (c) Circuit
Airspace	Airspace Infringement	Airspace Infringement	Where there is an unauthorised entry of an aircraft into airspace for which a clearance is required.
Airspace	Other	Other Airspace Events	Airspace occurrences not specifically covered elsewhere.
Consequential Events	Ditching	Ditching	When an aircraft is forced to land on water.
Consequential Events	Diversion / Return	Diversion / Return	When an aircraft does not continue to its intended destination, but either returns to the departure aerodrome or lands at an alternative aerodrome.
Consequential Events	Emergency / Precautionary descent	Emergency / Precautionary descent	<b>Emergency descent</b> - Circumstances that require the flight crew to initiate an immediate high rate descent to ensure the continued safety of the aircraft and its occupants.
Consequential Events	Emergency evacuation	Emergency evacuation	When crew and/or passengers vacate an aircraft in situations other than normal and usually under the direction of the operational crew.
Consequential Events	Forced / Precautionary landing	Forced / Precautionary landing	<b>Forced landing</b> – Circumstances under which an aircraft can no longer sustain normal flight and must land regardless of the terrain. <b>Precautionary landing</b> - A landing made as a precaution when, in the judgement of flight crew, a hazard exists with continued flight.
Consequential Events	Low Circuit	Low Circuit	Any occasion where a pilot flies a Low Circuit that was potentially hazardous.
Consequential Events	Other	Other Consequential Events	Consequential events not specifically covered elsewhere.
Environment	Weather	Icing	Any icing issue that affects the performance of an aircraft.
Environment	Weather	Lightning strike	The aircraft is struck by lightning.
Environment	Weather	Other Weather Events	Weather occurrences not specifically covered elsewhere.
Environment	Weather	Turbulence/Windshear/Microburst	Aircraft performance and/or characteristics are affected by turbulence, windshear or a microburst.
Environment	Weather	Unforecast weather	Operations affected by weather conditions that were not forecast or not considered by the flight crew.
Environment	Wildlife	Animal strike	A collision between an aircraft and an animal.
Environment	Wildlife	Birdstrike	A collision between an aircraft and a bird.
Environment	Wildlife	Other Wildlife Events	Wildlife related occurrences not specifically covered elsewhere.
Operational	Aircraft Control	Airframe overspeed	The airspeed limit has been exceeded for the current aircraft configuration as published in the aircraft manual.
Operational	Aircraft Control	Control issues	The flight crew encounter minor aircraft control difficulties while airborne or on the ground.
Operational	Aircraft Control	Hard landing	Damage occurs during the landing.
Operational	Aircraft Control	Incorrect configuration	An aircraft system is incorrectly set for the current and/or intended phase of flight.
Operational	Aircraft Control	In-flight break-up	The aircraft sustained an airborne structural failure or damage to the airframe, to the extent that continued flight is no longer possible.
Operational	Aircraft Control	Loss of control	When control of the aircraft is lost or there are significant difficulties controlling the aircraft either airborne or on the ground.
Operational	Aircraft Control	Other Control Issues	Aircraft control occurrences not specifically covered elsewhere.
Operational	Aircraft Control	Pilot Induced Oscillations	Any PIO occurrence occasioning damage.
Operational	Aircraft Control	Stall warnings	Any cockpit warning or alert that indicates the aircraft is approaching an aerodynamic stall.
Operational	Aircraft Control	Wheels up landing	An aircraft contacts the intended landing area with the landing gear retracted.



Operational	Aircraft Loading	Loading related	The incorrect loading of an aircraft that has the potential to adversely affect any of the following: a) the aircraft's weight; b) the aircraft's balance; c) the aircraft's structural integrity; d) the aircraft's performance; e) the aircraft's flight characteristics.
Operational	Aircraft Loading	Other Loading Issues	Aircraft loading occurrences not specifically covered elsewhere.
Operational	Airframe	Doors/Canopies	When a door or canopy, or its component parts, has failed or exhibited damage.
Operational	Airframe	Furnishings & fittings	An internal aircraft furnishing or fitting, including its component parts, has failed or exhibited damage.
Operational	Airframe	Fuselage/Wings/Empennage	Damage to the fuselage, wings, or empennage not caused through collision or ground contact.
Operational	Airframe	Landing gear/Indication	When the landing gear or its component parts (including indications), has failed or exhibited damage.
Operational	Airframe	Objects falling from aircraft	Objects inadvertently falling from or detaching from an aircraft.
Operational	Airframe	Other Airframe Issues	Technical - Airframe occurrences not specifically covered elsewhere.
Operational	Airframe	Windows	A window or a component part has failed or exhibited damage.
Operational	Communications	Other Communications Issues	Communications occurrences not specifically covered elsewhere.
Operational	Communications	Transponder related	The incorrect setting of a code and/or usage of transponder equipment.
Operational	Crew and Cabin Safety	Cabin injuries	A cabin crew member or passenger has suffered an illness or injury.
Operational	Crew and Cabin Safety	Flight crew incapacitation	A Flight Crew member is restricted to nil or limited duties as a result of illness or injury.
Operational	Crew and Cabin Safety	Inter-crew communications	Relates specifically to a loss, or breakdown, of communication between flight crew or associated ground staff.
Operational	Crew and Cabin Safety	Other Crew and Cabin Safety Issues	Cabin safety occurrences not specifically covered elsewhere.
Operational	Crew and Cabin Safety	Passenger related	Where the actions of a passenger adversely or potentially affects the safety of the aircraft.
Operational	Crew and Cabin Safety	Unrestrained objects	When objects are not appropriately restrained for the aircraft operation or phase of flight.
Operational	Fire Fumes and Smoke	Fire	Any fire that has been detected and confirmed in relation to an aircraft operation.
Operational	Fire Fumes and Smoke	Fumes	When abnormal fumes or smells are reported on board the aircraft.
Operational	Fire Fumes and Smoke	Smoke	When smoke is reported to be emanating from: a) inside the aircraft; or b) an external component of the aircraft.
Operational	Flight Preparation/Navigation	Aircraft preparation	Errors or omissions during the planning and/or pre-flight phase that affect or may affect aircraft safety in relation to: a) the aircraft's weight; b) the aircraft's balance; c) the aircraft's structural integrity; d) the aircraft's performance; e) the aircraft's flight characteristics.
Operational	Flight Preparation/Navigation	Lost / Unsure of position	When flight crew are uncertain of the aircraft's position and/or request assistance from an external source.
Operational	Flight Preparation/Navigation	Other Flight Preparation/Navigation Issues	Navigation - Flight planning occurrences not specifically covered elsewhere.
Operational	Flight Preparation/Navigation	VFR into IMC	An aircraft operating under the Visual Flight Rules enters Instrument Meteorological Conditions.
Operational	Fuel Related	Contamination	When the presence of a foreign substance is found in fuel.
Operational	Fuel Related	Exhaustion	When the aircraft has become completely devoid of useable fuel.
Operational	Fuel Related	Leaking or Venting	Relates specifically to the unplanned loss of fuel from a fuel tank or fuel system.
Operational	Fuel Related	Low fuel	The aircraft's supply of fuel becoming so low (whether or not the result of a technical issue) that the safety of the aircraft is compromised.
Operational	Fuel Related	Other Fuel Related Issues	Fuel related occurrences not specifically covered elsewhere.

Operational	Fuel Related	Starvation	When the fuel supply to the engine(s) is interrupted, but there is still usable fuel on board the aircraft.
Operational	Ground Operations	Foreign Object Damage/Debris	Any loose objects on an aerodrome have caused, or have the potential to cause, damage to an aircraft.
Operational	Ground Operations	Ground handling	Any ground handling and aircraft servicing that caused, or has the potential to cause injury or damage to a stationary aircraft.
Operational	Ground Operations	Jet blast/Prop/Rotor wash	Any air disturbance from a ground-running aircraft propeller, rotor or jet engine that has caused, or has the potential to cause, injury or damage to property.
Operational	Ground Operations	Other Ground Ops Issues	Ground operation occurrences not specifically covered elsewhere.
Operational	Ground Operations	Taxiing collision/near collision	An aircraft collides, or has a near collision, with another aircraft, terrain, person or object on the ground or on water during taxi.
Operational	Miscellaneous	Missing aircraft	The aircraft is reported as missing.
Operational	Miscellaneous	Other Miscellaneous	Miscellaneous occurrences not specifically covered elsewhere in this manual.
Operational	Miscellaneous	Rope break/Weak link failure	Towplane separation incident necessitating a modified circuit.
Operational	Miscellaneous	Rope/Rings airframe strike	Airframe struck by launch cable or rings. Includes entanglement with rope.
Operational	Miscellaneous	Warning devices	Situations in which an aural or visual aircraft warning device activates to alert the flight crew to a situation requiring immediate or prompt corrective action.
Operational	Miscellaneous	Winch Performance Issue	Any incident caused by poor winch performance, such as power failure, or mechanical reasons.
Operational	Runway Events	Depart/App/Land wrong runway	An aircraft that: a) takes off b) lands, c) attempts to land from final approach d) operates in the circuit at, to or from an area other than that authorised or intended for landing or departure
Operational	Runway Events	Other Runway Events	Runway event occurrences not specifically covered elsewhere.
Operational	Runway Events	Runway excursion	An aircraft that veers off the side of the runway or overruns the runway threshold.
Operational	Runway Events	Runway incursion	The incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.
Operational	Runway Events	Runway undershoot	Any aircraft attempting a landing and touches down prior to the threshold.
Operational	Terrain Collisions	Collision with terrain	Any collision between an airborne aircraft and the ground, water or an object, where the flight crew were aware of the terrain prior to the collision.
Operational	Terrain Collisions	Controlled flight into terrain (CFIT)	When a serviceable aircraft, under flight crew control, is inadvertently flown into terrain, obstacles or water without either sufficient or timely awareness by the flight crew to prevent the collision.
Operational	Terrain Collisions	Ground strike	When part of the aircraft drags on, or strikes, the ground or water.
Operational	Terrain Collisions	Wirestrike	When an aircraft strikes a wire, such as a powerline, telephone wire, or guy wire, during normal operations.
Technical	Powerplant/Propulsion	Abnormal Engine Indications	A visual or cockpit warning that indicates an engine is malfunctioning or operating outside normal parameters.
Technical	Powerplant/Propulsion	Engine failure or malfunction	An engine malfunction that results in a total engine failure, a loss of engine power or is rough running.
Technical	Powerplant/Propulsion	Other Powerplant/Propulsion Issues	Powerplant / Propulsion occurrences not specifically covered elsewhere.
Technical	Powerplant/Propulsion	Propeller malfunction	The failure or malfunction of an aircraft propeller or its associated components.
Technical	Powerplant/Propulsion	Transmission & Gearboxes	The failure or malfunction of an aircraft transmission/gearbox and/or its associated components.

Technical	Systems	Avionics/Flight instruments	The partial or complete loss of normal functioning of the avionics system or its components.
Technical	Systems	Electrical	The partial or complete loss of normal functioning of the aircraft electrical system.
Technical	Systems	Flight controls	The partial or complete loss of normal functioning of a primary or secondary flight control system.
Technical	Systems	Fuel	The partial or complete loss of normal functioning of the fuel system.
Technical	Systems	Hydraulic	The partial or complete loss of the hydraulic system.
Technical	Systems	Other Systems Issues	Technical - Systems occurrences not specifically covered elsewhere.