

# The Gliding Federation of Australia Inc

## Occurrence Summaries

01/01/2014 to 31/12/2014

Region(s): All

Club:



Christopher Thorpe  
Executive Manager, Operations  
The Gliding Federation of Australia Inc.

31-Dec-2014



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

**General Statistics**

Date From: 01/01/2014

Date to: 31/12/2014

<b>Damage</b>	<b>VSA SAGA</b>		<b>NSWG. WAG GQ</b>		<b>Total</b>	
Nil	28	13	21	6	16	84
Substantial	3	6	3	3	6	21
Minor	12	6	13	4	9	44
Write-off					1	1
<b>Total</b>	<b>43</b>	<b>25</b>	<b>37</b>	<b>13</b>	<b>32</b>	<b>150</b>
<b>Injury</b>	<b>VSA SAGA</b>		<b>NSWG. WAG GQ</b>		<b>Total</b>	
Nil	41	25	35	12	29	142
Minor	2		2	1	3	8
<b>Total</b>	<b>43</b>	<b>25</b>	<b>37</b>	<b>13</b>	<b>32</b>	<b>150</b>

<b>Phases</b>	<b>VSA SAGA</b>		<b>NSWG. WAG GQ</b>		<b>Total</b>	
Ground Ops	3	1	2			6
Outlanding	3	4	6	1	6	20
Landing	17	13	12	6	16	64
In-Flight	7	6	8	6	5	32
Launch	12	1	9		5	27
Thermalling	1					1
<b>Type of Flight</b>	<b>VSA SAGA</b>		<b>NSWG. WAG GQ</b>		<b>Total</b>	
Ground Ops	2	1	2			5
Competition	4	3	6	3	3	19
Local	21	11	14	3	19	68
Cross-Country	10	6	9	4	8	37
Training/Coaching	6	4	5	3	2	20
AEF			1			1
<b>Total</b>	<b>43</b>	<b>25</b>	<b>37</b>	<b>13</b>	<b>32</b>	<b>150</b>

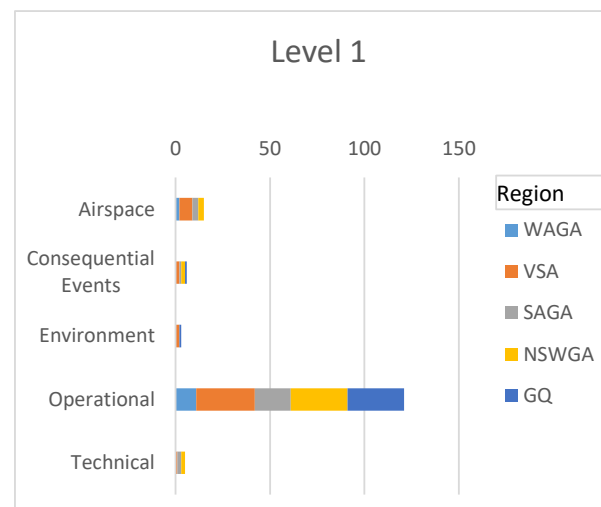


**The Gliding Federation of Australia Inc**  
**SOAR Accident and Incident Occurrences**  
**Classification Level 1**

Date From: 01/01/2014

Date to: 31/12/2014

Level 1	VAG	VSA	SAGA	ISWG	GQ	Total
Airspace	2	7	3	3		15
Consequential Events		2	1	2	1	6
Environment		2			1	3
Operational	11	31	19	30	30	121
Technical		1	2	2		5
<b>Total</b>	<b>13</b>	<b>43</b>	<b>25</b>	<b>37</b>	<b>32</b>	<b>150</b>





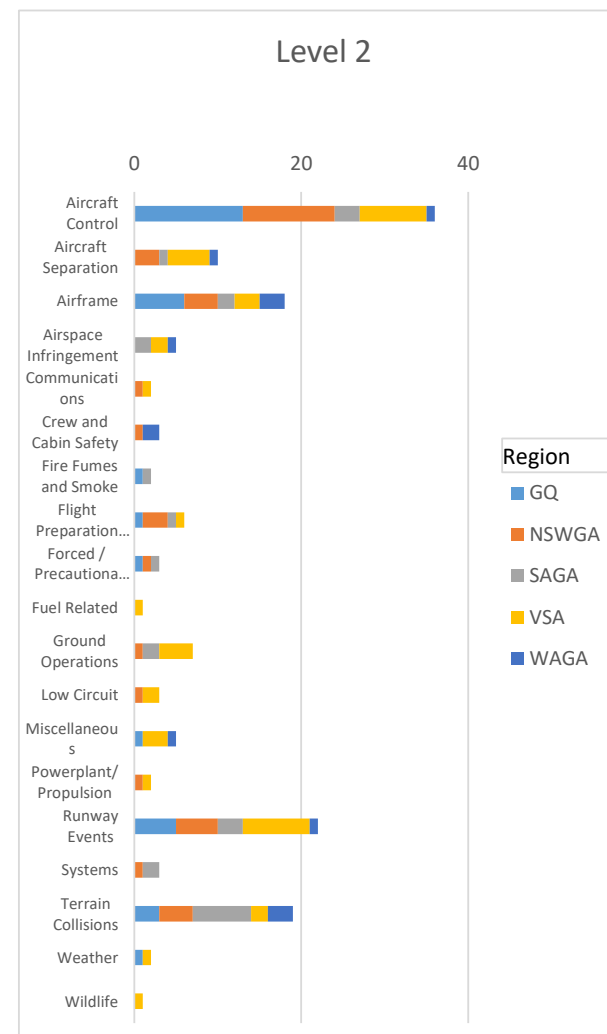
**The Gliding Federation of Australia Inc  
SOAR Accident and Incident Occurrences**

**Classification Level 2**

Date From: 01/01/2014

Date to: 31/12/2014

Level 2	GQ	NSWGA	SAGA	VSA	WAGA	Total
Aircraft Control	13	11	3	8	1	36
Aircraft Separation		3	1	5	1	10
Airframe	6	4	2	3	3	18
Airspace Infringement			2	2	1	5
Communications		1		1		2
Crew and Cabin Safety		1			2	3
Fire Fumes and Smoke	1		1			2
Flight Preparation/Navigation	1	3	1	1		6
Forced / Precautionary landing	1	1	1			3
Fuel Related				1		1
Ground Operations		1	2	4		7
Low Circuit		1		2		3
Miscellaneous	1			3	1	5
Powerplant/Propulsion		1		1		2
Runway Events	5	5	3	8	1	22
Systems		1	2			3
Terrain Collisions	3	4	7	2	3	19
Weather	1			1		2
Wildlife				1		1
<b>Total</b>	<b>32</b>	<b>37</b>	<b>25</b>	<b>43</b>	<b>13</b>	<b>150</b>





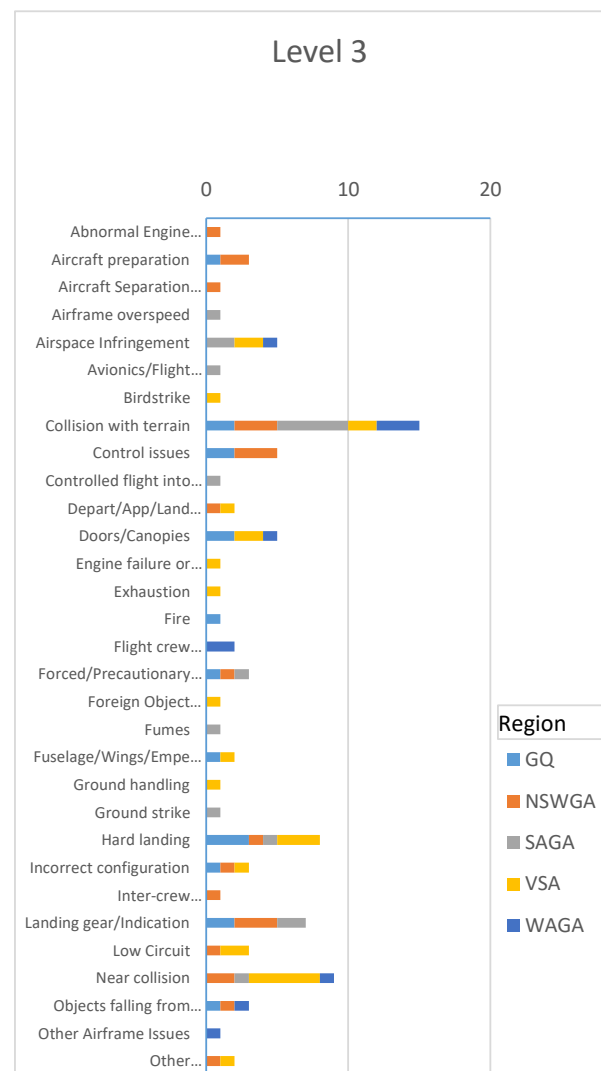
**The Gliding Federation of Australia Inc**  
**SOAR Accident and Incident Occurrences**

**Classification Level 3**

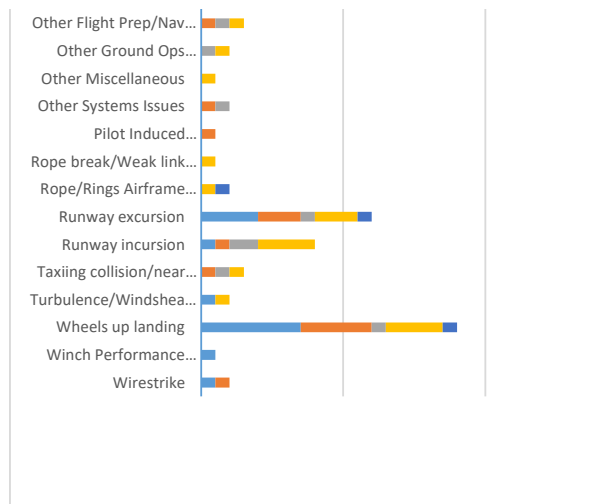
Date From: 01/01/2014

Date to: 31/12/2014

Level 3	GQ	NSWGA	SAGA	VSA	WAGA	Total
Abnormal Engine Indications			1			1
Aircraft preparation	1	2				3
Aircraft Separation Issues		1				1
Airframe overspeed			1			1
Airspace Infringement			2	2	1	5
Avionics/Flight instruments			1			1
Birdstrike				1		1
Collision with terrain	2	3	5	2	3	15
Control issues	2	3				5
Controlled flight into terrain			1			1
Depart/App/Land wrong runway		1		1		2
Doors/Canopies	2			2	1	5
Engine failure or malfunction				1		1
Exhaustion				1		1
Fire	1					1
Flight crew incapacitation					2	2
Forced/Precautionary Landing	1	1	1			3
Foreign Object Damage/Debris				1		1
Fumes			1			1
Fuselage/Wings/Empennage	1			1		2
Ground handling				1		1
Ground strike			1			1
Hard landing	3	1	1	3		8
Incorrect configuration	1	1		1		3



Inter-crew communications		1				1
Landing gear/Indication	2	3	2			7
Low Circuit		1		2		3
Near collision		2	1	5	1	9
Objects falling from aircraft	1	1			1	3
Other Airframe Issues					1	1
Other Communications Issues		1		1		2
Other Flight Prep/Nav Issues		1	1	1		3
Other Ground Ops Issues			1	1		2
Other Miscellaneous				1		1
Other Systems Issues		1	1			2
Pilot Induced Oscillations		1				1
Rope break/Weak link failure				1		1
Rope/Rings Airframe Strike				1	1	2
Runway excursion	4	3	1	3	1	12
Runway incursion	1	1	2	4		8
Taxiing collision/near collision		1	1	1		3
Turbulence/Windshear/Microburst	1			1		2





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### Accident and Incident Summaries

Date	4-Jan-2014	Region	VSA		SOAR Report Nbr	S-0315	
Level 1	Environment		Level 2	Weather		Level 3	Turbulence/Windshear /Microburst
A/C Model 1		Bergfalke II-55			A/C Model 2		SZD-50-3 Puchacz
Injury	Nil	Damage	Substantial	Phase	Ground Ops	PIC Age	

The Bergfalke was blown over by a gust/thermal while on the flight line unattended. The right wing fell across the left wing of a Puchacz glider awaiting launch, causing minor damage to the wing skin. The Bergfalke showed signs of poor glue adhesion and is beyond economical repair. This accident serves as a reminder to not leave gliders unattended on the flight line. In this case, the accident may have been prophetic due to the glue failure.



Date	5-Jan-2014	Region	SAGA		SOAR Report Nbr	S-0311	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain
A/C Model 1		Pik 20B			A/C Model 2		
Injury	Nil	Damage	Substantial	Phase	Outlanding	PIC Age	55
During final glide in strong and gusty wind conditions (30 to 40 knots) the pilot realised he was not going to land on the aerodrome and elected to land in a paddock outside the aerodrome boundary. Approach control							



## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*

was difficult due to wind speed and lack of airbrakes (just landing flaps) and the pilot struggled to get the aircraft out of ground effect. The aircraft struck the ground main wheel and port wing first, then impacted the nose before coming to rest facing the direction of travel. Aircraft suffered broken canopy and fractured tail boom.



Date	5-Jan-2014	Region	VSA		SOAR Report Nbr		S-0312	
Level 1	Operational		Level 2	Runway Events		Level 3	Runway excursion	
A/C Model 1		AS-K 13			A/C Model 2			
Injury	Minor	Damage	Minor	Phase	Landing		PIC Age	70
<p>Returning from local ridge on a training flight, the glider lost height rapidly and was successfully out-landed in local paddock. The glider was retrieved by aerotow and ferried back to the home airfield. The pilot released from tow at a low height for the strong crosswind conditions and conducted a low circuit. During the landing roll the port wingtip contacted grass and, in combination with the crosswind from the right, a ground loop ensued. During the ground loop the aircraft became airborne and dropped heavily to the ground while travelling backwards. The pilot suffered a back injury and was hospitalised for a short period. Contributing factors include a high workload, long duty time for command pilot, and long grass outside the 12m width runway.</p>								





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### Accident and Incident Summaries



*Conditions pre launch looking north.*

Date	7-Jan-2014	Region	NSWGA	SOAR Report Nbr	S-0313
Level 1	Operational	Level 2	Runway Events	Level 3	Depart/App/Land wrong runway
A/C Model 1	Piper PA-31-350			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
<p>Several gliders were returning to the airfield following cross-country flights and landing on the most into wind Runway. The PA31 "Bank Run" aircraft also approaching the airfield elected to land on and intersecting runway and hold short of the operational runway to avoid landing gliders, one of which passed in front of the stationary PA31. The runway on which the 'Bank' plane had landed had a total length of 815 meters and had the pilot of the PA31 not been able to stop his aircraft prior to the runway intersection an accident was highly probable. This near miss was resolved constructively with Chief Pilot and the GFA Regional Safety Manager. Glider pilots were subsequently briefed on potential risks and the need for vigilance and correct communications to aid alerted see and avoid. A site visit by Chief Pilot was most useful in reaching mutual understanding of issues, constraints and the effectiveness of operational safety practices.</p>					



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### Accident and Incident Summaries



Date	9-Jan-2014	Region	SAGA	SOAR Report Nbr	S-0316
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	LS-10			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	56
Circuit flown in nil wind condition by and experienced and foreign trained pilot. On base leg flap position 2 was selected and airspeed maintained on the yellow triangle (not 1.5Vs). On finals airbrake was initially applied but later retracted as the aircraft's speed was dropping. The pilot did not lower the nose to regain speed and the aircraft stalled on short final. The undercarriage collapsed and the left wing was damaged. This incident highlights the importance of maintaining 'safe speed near the ground' and monitoring the ASI periodically during the circuit and on final approach.					



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### *Accident and Incident Summaries*



Date	9-Jan-2014	Region	WAGA	SOAR Report Nbr	S-0324
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Standard Cirrus			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	54
On 9 January 2014 a visiting pilot from the UK inadvertently penetrated an active parachuting Danger Zone at around 2000 ft AGL during the WA State Championships. The pilot advised that at the time of this infringement he was at low level and trying to stay airborne, and he failed to pay sufficient attention to navigation.					

Date	10-Jan-2014	Region	WAGA	SOAR Report Nbr	S-0320
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	LS8-18			A/C Model 2	Nimbus 3/24.5
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	66
On 10 January 2014 at 1245, a Nimbus and LS8 competing in the West Australian State Championships were thermalling to the right in the same general area, with the Nimbus slightly below the LS8. The Nimbus straightened briefly to centre in the core of the thermal and the LS8 turned inside the Nimbus. The pilot of Nimbus only had a brief time to observe the LS8 once his turn was more established. The LS8 was unable to turn left out of the turn without colliding with Nimbus. The pilot of LS8 initiated a sharp right hand pull up, stalling the aircraft and creating a brief spin from which he quickly recovered. The spin took the LS8 to a 180 degree opposite heading, clearing Nimbus. Both pilots agree this was as close as it could get without being a collision. The thermals at the time were generally bubbly and disorganised, with some stronger, intermittent cores that could be centred and climbed to above 4000ft. Most gliders were moving in and out of the lift bubbles with search patterns involving constant recentering. The Nimbus pilot did not know the LS8 was					





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behind him would not reasonably have been expected to see an LS8 following close behind. The Nimbus pilot would also not have expected another glider to pass inside his turn.

Date	11-Jan-2014	Region		WAGA	SOAR Report Nbr		S-0326	
Level 1	Operational		Level 2	Crew and Cabin Safety			Level 3	Flight crew incapacitation
A/C Model 1		Astir CS 77			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Landing		PIC Age	48
<p>On this very hot day the 48 year old West Australian pilot flying an Astir CS lost consciousness at 2,000ft AGL and recovered a short while later at 400ft AGL close to the aerodrome. Clearly disorientated, the pilot flew a modified circuit and landed heavily, resulting in substantial damage to the aircraft but no injury to himself. The pilot was taken to hospital where he was found to be suffering the effects of dehydration and was rehydrated intravenously. The pilot advised he had earlier drunk an isotonic drink and 2 litres of water, and he drank a further half a litre of water during the accident flight. Dehydration results from the loss of water and important electrolytes from the body, including potassium, sodium, chloride, and many other minerals that are often overlooked. Plain water is not quickly absorbed by the body and if you drink too much water, it ends up diluting the concentration of the blood and the electrolytes in the system. For this reason, drinking water alone during a sustained effort can paradoxically be a health risk. Commercially available sports drinks like Gatorade, Powerade or Staminade can maintain your electrolyte balance. Be aware that many natural fruit drinks have relatively high concentrations of carbohydrates that require water for digestion.</p>								
<p><b>NOTE:</b> Following another inflight loss of consciousness episode on 6 December 2014 while flying with an instructor, the pilot underwent comprehensive medical tests that diagnosed vasovagal syncope (refer Report S-0453).</p>								

Date	11-Jan-2014	Region	GQ		SOAR Report Nbr		S-0359	
Level 1	Operational		Level 2	Airframe		Level 3	Fuselage/Wings/Empe nnage	
A/C Model 1		ASW 15			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	32
Shortly after releasing from aerotow, the pilot heard a noise that was attributed to loose tape on the fuselage hatch and was not particularly concerned. After a while the aileron controls began to feel heavy but the pilot remained unconcerned until after a couple of hours local flying, when the controls became heavier and required two hands on the stick. The pilot returned to the airfield and landed safely, although with some difficulty. Subsequent inspection of the aircraft revealed the right-wing aileron gap tape had peeled off the wing for almost all of its length and was deflected upwards 90 degrees to the airflow, thereby reducing the flow of air over the aileron and making it less effective. This incident highlights the importance of using good quality gap seals and properly preparing the surface to ensure maximum adhesion.								



## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*



Date	11-Jan-2014	Region	GQ	SOAR Report Nbr	S-0318
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## The Gliding Federation of Australia Inc

### Accident and Incident Summaries

Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	59
While conducting a training flight at 5000ft above the airfield the student said they could not move the control column to the left, the instructor took over and found that he also could not move the control column to the left. The glider turned right to line up with the airstrip and airbrakes were deployed for a straight in approach. A successful landing was completed. After landing the controls were again checked and became free to move in all directions. Further inspection did not identify a problem with either the aileron circuit or gap tapes.					

Date	11-Jan-2014	Region	SAGA	SOAR Report Nbr	S-0325
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Astir CS			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Outlanding
				PIC Age	30
During a cross country flight the pilot got low and elected to land on the Stuart highway. The glider's right wing impacted a temporary road works sign and did substantial damage. This was the pilot's first outlanding and the road was the safest option. Contributing factors include stress brought on by inexperience and lack of currency, and possible cognitive tunnelling.					



Date	16-Jan-2014	Region	WAGA	SOAR Report Nbr	S-0375
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	ASW 17/19 m			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
				PIC Age	64
Glider ground looped in heavy stubble during an outlanding while competing in the WA State Championships.					



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### Accident and Incident Summaries

Date	16-Jan-2014	Region	VSA	SOAR Report Nbr	S-0339
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	LS 3a			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	61
Pilot left decision to 'break off' the flight too late after release and flew a modified circuit while still full of water. Late decision to dump water and lower the undercarriage led to glider stalling onto the ground during the flare resulting in a heavy landing and damage to the fuselage.					

Date	18-Jan-2014	Region	GQ	SOAR Report Nbr	S-0327
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Nimbus 2C			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	52
Following a 4 hour cross country flight, the pilot entered circuit on crosswind leg and flew a normal circuit. The final approach was flown by crabbing into a left crosswind. The aircraft flared normally and landed left wing low and with right rudder to counter the crosswind. On rolling wings level the left wing tip was caught by 2ft-long grass on the landing strip and swung the aircraft approx. 120 degrees. This incident highlights the importance of maintaining grass runways by regular mowing.					

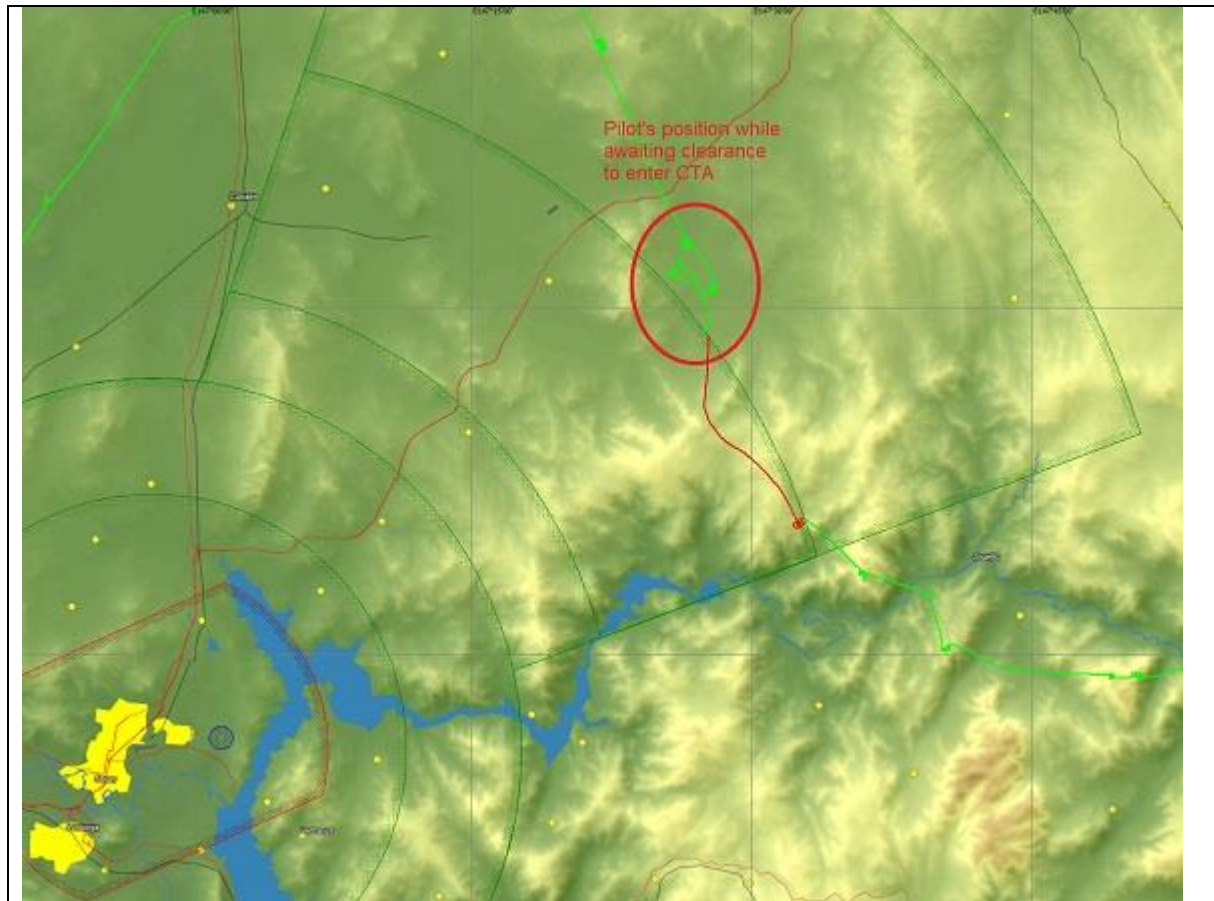
Date	21-Jan-2014	Region	VSA	SOAR Report Nbr	S-0355
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	Ventus 2ct			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	60
The glider was reported by ATC as entering controlled airspace without clearance. The pilot provided a statement that he did not actually violate airspace and only entered the CTA with clearance. The error he made was to misreport his position to ATC, advising he was in a position inside the CTA when he was in fact outside the CTA. The error occurred because he misread his navigation instrument and did not cross-reference his map. The pilot's statement was confirmed by verifying his position at the time to his GPS flight log.					





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## Accident and Incident Summaries



Date	27-Jan-2014	Region	SAGA	SOAR Report Nbr	S-0340
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Other Flight Prep/Nav Issues
A/C Model 1	Kestrel			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	44

The 43 year old pilot was identified as suffering the effects of heat stress a few hours after a long cross-country flight in hot conditions. Another pilot who was a Registered Nurse identified he was suffering with Hyponatremia from over-hydration, resulting in hypotension and minor hypovolemia brought on by a loss of electrolytes that had been flushed from his system through drinking too much plain water prior to and during the flight. The pilot recovered after drinking a sports drink that included moderate sugars and electrolytes, and a medical check-up the following day showed he was suffering no ill-effects. Dehydration results from the loss of water and important electrolytes from the body, including potassium, sodium, chloride, and many other minerals that are often overlooked. Plain water is not quickly absorbed by the body and if you drink too much water, it ends up diluting the concentration of the blood and the electrolytes in the system. For this reason, drinking water alone during a sustained effort can paradoxically be a health risk. Commercially available sports drinks like Gatorade, Powerade or Staminade can maintain your electrolyte balance. Be aware that many natural fruit drinks have relatively high concentrations of carbohydrates that require water for digestion.

Date	1-Feb-2014	Region	VSA	SOAR Report Nbr	S-0341
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## Accident and Incident Summaries

Level 1	Operational	Level 2	Aircraft Control		Level 3	Incorrect configuration	
A/C Model 1		Astir CS 77			A/C Model 2		AMERICAN CHAMPION AIRCRAFT CORP 8GCBC
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age    65
A delay during a competition launch led the pilot to disembark the aircraft. Upon re-entering the glider he forgot to complete his pre-take-off checks due to outside pressure to launch and took off with the airbrakes unlocked. A slow climb and rudder waggle from the tug alerted the pilot to the problem and the airbrakes were closed without further incident.							

Date	1-Feb-2014	Region	SAGA	SOAR Report Nbr		S-0331	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing
A/C Model 1		Pilatus B4-PC11			A/C Model 2		
Injury	Nil	Damage	Nil	Phase	Landing		PIC Age 71
This aircraft has the airbrake and undercarriage levers in close proximity. Without looking and identifying the airbrake control, the undercarriage lever was misused for airbrake control and the aircraft was landed wheel up. A direction change and later ground loop was initiated to avoid overshooting into the boundary fence due to a long float. The pilot had flown for almost two hours on a hot day at low altitude and was dehydrated and tired, potentially leading him to not identify that braking was ineffectual.							

Date	1-Feb-2014	Region	SAGA	SOAR Report Nbr	S-0334			
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	In-Flight		PIC Age	77
On 1 February 2014, a pilot on a cross-country out of Gawler SA inadvertently entered Edinburgh Controlled Terminal Airspace. The infringement was identified by the pilot's Official Observer. The infringement occurred despite the pilot carrying appropriate maps and GPS navigation device and may have been caused by inattention.								

Date	2-Feb-2014	Region	VSA	SOAR Report Nbr		S-0333	
Level 1	Operational		Level 2	Ground Operations		Level 3	Other Ground Ops Issues
A/C Model 1		Piper PA-25-235/A1			A/C Model 2		LS 3
Injury	Minor	Damage	Nil	Phase	Launch		PIC Age 60
The tug had stopped for an extended period in front of a glider alongside the operational runway. A ground crew person walked 30m to the tug and retrieved rope, and then walked back toward the glider past the tug's wing. When the ground crewman was almost in front of the glider, the tug accelerated across the runway in a manoeuvre to "lay the rope". The rope caught the ground crewman around one leg, melted his trouser leg and blistered his hand. The glider pilot awaiting lauch <i>"appeared unaware or disconnected from the incident although it occurred right in front of (them)."</i> Attempts by other observers to stop the tug were unsuccessful and the incident ended when the tug reached the extremity of the manoeuvre and turned back. Potential casual factors include a breakdown in situational awareness by the tug pilot, ground crewman and the glider pilot. Rope runners should ensure they hold the rope in a manner that allows it to be pulled away from them safely rather than wrap around their body (or catch their fingers in the rings). Tug pilots should exercise care while manoeuvring when the rope is in the hands of a rope runner.							

Date	5-Feb-2014	Region	VSA	SOAR Report Nbr	S-0332
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Level 1	Operational	Level 2	Ground Operations	Level 3	Taxiing collision/near collision
A/C Model 1	Bellanca Scout			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
PIC Age					65
<p>Manoeuvring to park beside to another tug near the competition launch grid, and avoid a car towing a glider to the grid, pilot was unsighted with a gable marker and taxied over it lengthwise, fortunately without making contact. The tug pilot only became aware of the position of the marker after stopping, having turned over it through 120 degrees to park next to another tug. Nobody attempted to stop the pilot approaching the obstacle which passed beneath propeller and fuselage, and fortunately pilot turned before rear fuselage contacted it. One bystander later congratulated pilot on his taxiing skill, not realising event was not intended. Flush markers used previously had been replaced by gables at CASA insistence to the aerodrome operator (local council), and CASA denied a request to move markers out to fence to widen area for greater room to manoeuvre.</p>					

Date	6-Feb-2014	Region	VSA	SOAR Report Nbr	S-0345
Level 1	Operational	Level 2	Ground Operations	Level 3	Foreign Object Damage/Debris
A/C Model 1	Bellanca Scout			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
PIC Age					65
<p>Tug collided with a wing walker dolly left on the edge of the runway following a competition launch. The glider pilot had no dedicated ground crew and, as he was carrying water ballast, he left removal of the wing walker to just prior to launch. A launch assistant removed it and placed it on grass beside runway, where it was overlooked. Eventually, a tow plane ran over the wing walker but was not damaged. This has occurred due to a breakdown in the orderly sequence of pre flight preparations by the glider pilot by not having such fittings taken to his car by a crew person. The competition Safety Officer made all pilots aware of the serious consequences of leaving equipment on or next to runways.</p>					

Date	7-Feb-2014	Region	SAGA	SOAR Report Nbr	S-0337
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	LS 3 TOP			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
PIC Age					56
<p>After a 3 hour cross country flight, a normal circuit and landing was executed. Crosswind from the left held the right wing down towards the end of roll and the aircraft rotated 90 degrees at which time the wing impacted an above-ground runway light. No damage to aircraft but runway light was broken.</p>					


Date	7-Feb-2014	Region	VSA	SOAR Report Nbr	S-0338
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	Discus 2B			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Ground Ops
PIC Age					71
<p>Following a competition flight a very experienced pilot towed his glider across the operational runway while another glider was on final approach. Pilot was not monitoring the CTAF, and fatigue may have led to diminished situational awareness.</p>					

Date	8-Feb-2014	Region	NSWGA	SOAR Report Nbr	S-0335
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Piper PA-25-235			A/C Model 2	DG-303 Elan Acro



## The Gliding Federation of Australia Inc

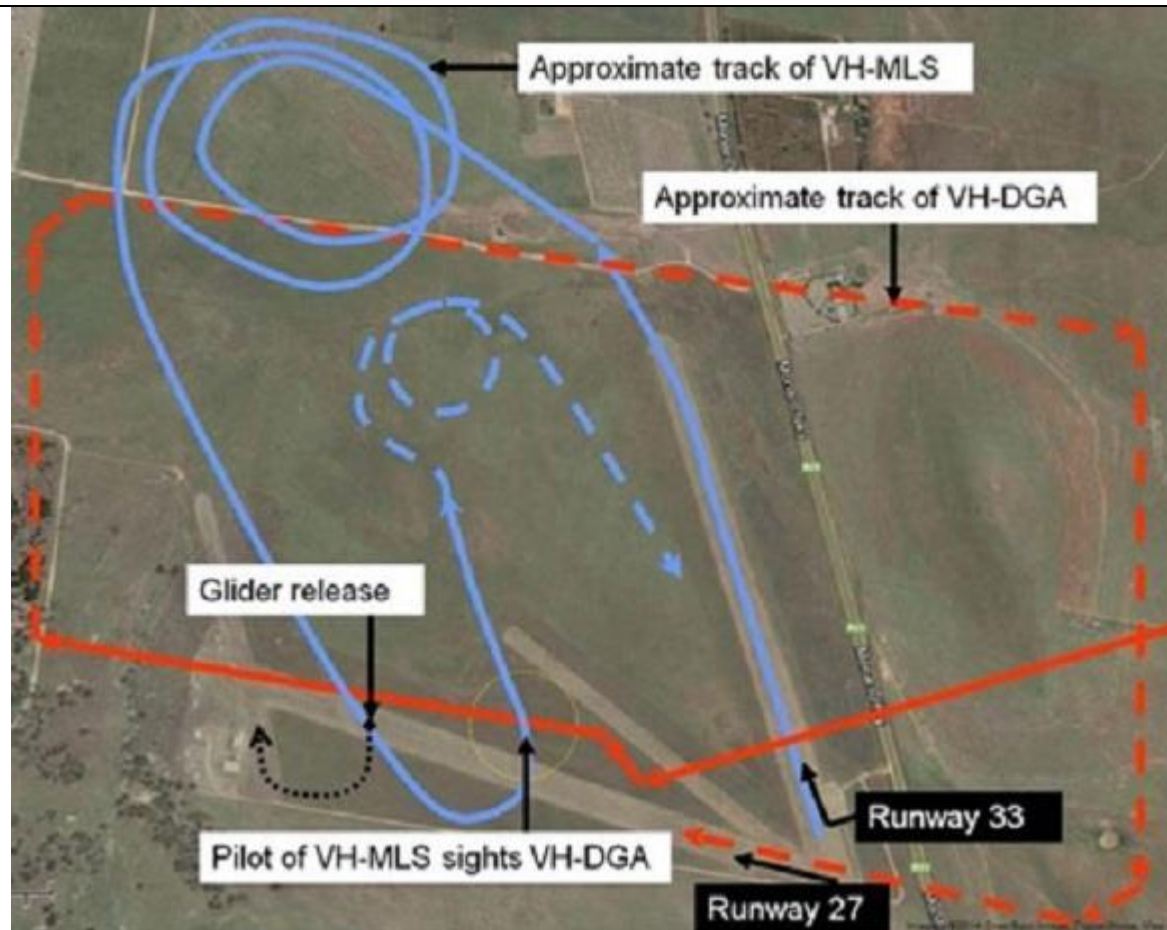
### *Accident and Incident Summaries*

Injury	Nil	Damage	Nil	Phase	Launch	PIC Age	56
<b>ATSB Investigation – What Happened</b> <p>On 8 February 2014, at about 1500 Eastern Daylight-savings Time, the pilot of an AMS-flight DG-303 glider, registered VH- DGA (DGA), broadcast on the local gliding club radio frequency that he would return to land at Bunyan aeroplane landing area (ALA), New South Wales, following a local flight of about 90 minutes duration. The glider was about 5 NM east of the aerodrome and on descent from 10,000 ft above mean sea level (AMSL). About 10 minutes later, the pilot of a Piper PA-25, registered VH-MLS (MLS), broadcast a lining up and rolling call and took off from runway 33 at Bunyan to launch a glider from overhead the aerodrome. At about 1515, when at about 4,000 ft AMSL, in anticipation of the glider pilot releasing the tow cable, the pilot of MLS turned to look behind the aircraft. He confirmed that the glider had released successfully and, in accordance with standard operating procedures, he then commenced a descending turn to the left. The pilot of DGA sighted MLS release the glider and commence the turn. The two aircraft were at about the same altitude and he then observed MLS with the wings level, he assumed the aircraft would then track straight ahead. He commenced a right turn to increase separation between them, and to track towards the joining point for a right downwind for runway 27. He reported that he assumed the pilot of MLS had sighted DGA at that time, and that he did not see MLS again until it was on downwind. As the pilot of MLS rolled the aircraft's wings level from the turn, he saw DGA as a white flash passing about 30 ft below him, and reported that he could see the rivets on the glider's airbrakes. About 25 seconds later, the pilot of DGA broadcast joining downwind for runway 27 and the pilot of MLS responded that he had the glider visual. After landing, the pilot of MLS alerted the pilot of DGA to the incident that had occurred.</p>							
							



## The Gliding Federation of Australia Inc

### Accident and Incident Summaries



#### Pilot comments: VH-MLS

The pilot of MLS provided the following comments:

- It was important for glider pilots to understand that the glider tow pilot has limited visibility and a high concentration on the task.

#### Pilot comments: VH-DGA

The pilot of DGA provided the following comments:

- He did not broadcast an inbound call because he was conducting a local flight and was only about 5 NM from the aerodrome with the aerodrome in sight.
- If he had broadcast an inbound call, or communicated directly with the pilot of MLS when he sighted the aircraft, it may have alerted the pilot of MLS to the position of the glider and assisted in maintaining separation between the two aircraft.
- At the same time as he initiated the right turn, the pilot of MLS would probably have been looking to his left prior to commencing a left turn. If he had perceived that MLS was continuing to turn left, he would have maintained heading rather than turning right.

**GFA NSW Regional Manager**

#### Operations comments

The NSW Regional Manager Operations provided the following comments:

- Due to proximity to terrain and associated turbulence, Bunyan (ALA) did not have fixed, prescribed circuit directions.
- Circuits may be flown in either direction, however the gliding club recommended that pilots of the glider tow aircraft descend away from the circuit direction currently in use.

#### Safety action

As a result of this occurrence, the gliding club has advised the ATSB that they are taking the following safety actions:



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## Accident and Incident Summaries

- *Fitment of FLARMS* - The gliding club is proposing the fitment of FLARMS to all club aircraft. This is an electronic device which selectively alerts pilots of potential collisions between aircraft. It is tailored for the specific needs of small aircraft such as gliders.
- *Pilot communications briefing* - All gliding club pilots will be reminded of the standard procedures with regard to radio communications at a pilots' briefing night.

### Safety message

This incident highlights the importance of communication and the limitations of unalerted see-and-avoid principles. Issues associated with unalerted see-and-avoid have been detailed in the ATSB's research report Limitations of the See-and-Avoid Principle. The report highlights that unalerted see-and-avoid relies entirely on the pilot's ability to sight other aircraft. Broadcasting on the CTAF is known as radio-alerted see-and-avoid, and assists by supporting a pilot's visual lookout for traffic. An alerted traffic search is more likely to be successful as knowing where to look greatly increases the chances of sighting traffic. The report is available at [www.atsb.gov.au/publications/2009/see-and-avoid.aspx](http://www.atsb.gov.au/publications/2009/see-and-avoid.aspx).

Date	8-Feb-2014	Region	SAGA		SOAR Report Nbr		S-0336	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Controlled flight into terrain	
A/C Model 1		Astir CS 77			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Landing		PIC Age	33
Returning to the home airfield after a 4 hour, 300km cross country flight the pilot decided to local fly to obtain his 5 hour duration. Local weather conditions deteriorated, with light showers, squalls and downdrafts in the area. The pilot elected to land ahead of a squall but varying wind conditions saw him change runways, whereupon he crowded his circuit and set himself up for an overshoot. A side-slip with full airbrake was employed to lose height but the pilot perceived he would collide with the runway perimeter fence and he attempted a turn onto another runway at too low a height. The right wingtip struck the ground and the aircraft impacted nose down and sideways. The Club's Training Panel considered dehydration, desire to get home, poor circuit judgement and fatigue to be causal factors.								

Date	8-Feb-2014	Region	GQ		SOAR Report Nbr		S-0350	
Level 1	Environment		Level 2	Weather		Level 3	Turbulence/Windshear /Microburst	
A/C Model 1		Piper PA-25-235			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Landing		PIC Age	59
During landing roll the tow plane was hit by a gust which lifted the (port) upwind wing into the air. The aircraft became airborne and rolled rapidly to the right with the right wing close to the ground. The pilot applied full power and the aircraft climbed away.								

Date	16-Feb-2014	Region	NSWGA		SOAR Report Nbr		S-0342	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Incorrect configuration	
A/C Model 1		Piper PA-25-235			A/C Model 2		SZD-50-3 Puchacz	
Injury	Nil	Damage	Nil	Phase	Launch	PIC Age		58
The tow pilot had completed three launches and noted the runway was damp from overnight rain. Because of damp ground, runway upslope and conditions the towing combination was clearing far fence by about 200ft for normal launches. On the fourth launch the tow pilot accelerated under full power as normal and felt glider leave ground. Despite full power the towplane was not accelerating as fast as previously, prompting the pilot to check that power settings, carburettor heat and switches were correct. With no obvious problem with the tow plane and the aircraft not getting airborne by midway down the runway, the								





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tow pilot elected to abort launch while a safe length of runway remained available. The tow pilot released the glider and the towplane rolled to a stop. The glider landed safely ahead in the middle of the runway. The glider instructor noted the student handled the aborted launch well. The launch crew advised that the glider's airbrakes extended fully just after the glider became airborne, and remained open during the landing. Neither the Instructor or student were aware of the airbrakes coming open. While the student completed his pre take-off checks, it appears the airbrakes were closed but not locked. The tow pilot's discipline of having a go/no-go point on the runway was vindicated.

Date	16-Feb-2014	Region	VSA	SOAR Report Nbr	S-0346
Level 1	Operational	Level 2	Ground Operations	Level 3	Ground handling
A/C Model 1	Twin Astir			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	58
Launch commenced while tail dolly was still fitted to glider. A radio call to the pilots resulted in the launch being aborted. Leading up to this incident was the decision to fit the tail dolly so as to move the glider further back along the runway while the pilots were on board to improve the take-off distance for the low powered tug. As the pilots had already completed their pre-boarding checks, no additional check was undertaken by them and the launch crew failed to remove the dolly.					

Date	23-Feb-2014	Region	VSA	SOAR Report Nbr	S-0347
Level 1	Operational	Level 2	Runway Events	Level 3	Depart/App/Land wrong runway
A/C Model 1	Piper PA-25-235			A/C Model 2	Janus B
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	70
Aerotow launch was stopped when a glider was observed landing across the operational runway on a hangar flight. The crosswind landing was contrary to documented aerodrome procedures designed to mitigate against this type of risk. Contributing factors include missed radio calls from landing gliders and inexperienced launch crew.					

Date	25-Feb-2014	Region	NSWGA	SOAR Report Nbr	S-0349
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	JS1 B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	60
Aircraft landed with the undercarriage retracted. The pilot stated that while on final he received a call from another pilot that distracted him and he failed to lower the undercarriage. Circuit and landing are high workload environments and pilots are encouraged to reduce their workload by configuring the aircraft for landing at an early stage. GFA training is to lower the undercarriage once the decision to land has been made and the undercarriage should be down during the downwind leg.					

Date	28-Feb-2014	Region	NSWGA	SOAR Report Nbr	S-0354
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	ASW 20B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	60
Pilot was conducting a second familiarisation flight in the glider to explore its handling characteristics, including stalls, steep turns and incipient spin recovery. The pilot then elected to undertake a 'short field' landing using full landing flap. The pilot completed a normal circuit but he flew the approach at a speed too low for the conditions and landed heavily, pushing the undercarriage into the fuselage. The pilot stated that					



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### Accident and Incident Summaries

he flew an approach speed recommended in the aircraft handbook for that flap configuration and did not allow for wind. The pilot also advised he believed using airbrake in conjunction with full landing flap was undesirable. GFA requires pilots to adhere to the 'safe speed near the ground' rule, which is a minimum of 1.5Vs plus half wind speed. This speed may be slightly higher than quoted in the flight manual but not significantly so. Also, use of airbrakes in conjunction with flaps is quite safe. Causal factors include inexperience on type, inadequate speed control during final approach and possible low level turbulence.

Date	2-Mar-2014	Region	VSA	SOAR Report Nbr	S-0352
Level 1	Environment	Level 2	Wildlife	Level 3	Birdstrike
A/C Model 1	LS8-t			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Thermalling
				PIC Age	65

While thermalling on a cross-country flight about 38kms from home, the pilot heard a loud bang accompanied by the airframe shuddering and immediately knew something had collided with his aircraft. There were no Flarm indications and the pilot had not sighted another glider. After determining his aircraft was controllable, the pilot elected to return to his home airfield. The aircraft landed without further incident. Subsequent inspection of the airframe revealed signs of a bird strike 5 metres outboard of the left wing. The aircraft was undamaged.



Date	8-Mar-2014	Region	GQ	SOAR Report Nbr	S-0362
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	LS 7			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
				PIC Age	44



## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*

Pilot outlanded with the undercarriage retracted. Causal factors include: misjudged altitude as the pilot was more familiar with metric instruments whereas the glider was fitted with an altimeter calibrated in feet; the pilot completed pre-landing checks at which time he lowered the undercarriage and then attempted to thermal away; conditions of weak lift and the aircraft being at a higher altitude than initially thought led to the pilot to change landing paddock; and another pre-landing check was undertaken and the undercarriage was retracted.

Date	8-Mar-2014	Region	NSWGA	SOAR Report Nbr	S-0353
Level 1	Operational	Level 2	Aircraft Control	Level 3	Pilot Induced Oscillations
A/C Model 1	ASW 20B			A/C Model 2	
Injury	Minor	Damage	Substantial	Phase	Landing
				PIC Age	66
Pilot ballooned landing and flew the aircraft into the ground. Belly of cockpit damaged and fuselage broken. Pilot admitted to hospital for x-ray that disclosed L1 vertebrae was fractured and pushing on the spinal cord. Witnesses observed the glider low in circuit and then touch down at high speed. Potential causal factors include inexperience on type, high workload, stress, incorrect landing technique, and over controlling glider in pitch during flare and hold off prior to ground impact.					





## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*



Date	9-Mar-2014	Region	VSA	SOAR Report Nbr	S-0356
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## Accident and Incident Summaries

Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1				A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Ground Ops
					PIC Age
<p>A two-seat sailplane overshot the landing area and rolled to a stop half-way down the right-hand runway near the cross-strip. A vehicle was dispatched along the left-hand runway perimeter track to retrieve the glider. Just as a winch launch commenced on the left-hand runway, the vehicle driver was abeam the glider being retrieved and drove across the moving wires to retrieve the glider. The Launch was abandoned and no damage or injury occurred. The vehicle driver was not monitoring the CTAF and did not follow established procedures, which required retrieve vehicles not to cross the operational runway but use the perimeter track closest to the aircraft. This incident highlights the importance of adhering to established protocols, and serves as a reminder that retrieve drivers must maintain proper situational awareness and use radio for alerted see-and-avoid.</p>					

Date	11-Mar-2014	Region	SAGA	SOAR Report Nbr	S-0361
Level 1	Operational	Level 2	Ground Operations	Level 3	Other Ground Ops Issues
A/C Model 1		Discus b		A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
					PIC Age
					65
<p>While attempting to engage the water dump valve to assist rigging the wings, the command pilot inadvertently activated the canopy release instead of the water dump. The rear canopy hinge was damaged. Contributing factors include similar shaped knobs and the pilot using feel for the knob as he was looking at the wing connection.</p>					

Date	16-Mar-2014	Region	NSWGA	SOAR Report Nbr	S-0357
Level 1	Operational	Level 2	Communications	Level 3	Other Communications Issues
A/C Model 1		IMC A-9A Callair		A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
					PIC Age
<p>Tug and Glider combination were lined up for take-off awaiting ATC airways clearance. ATC instructed the tug to hold position as a flying club aircraft was cleared for a touch and go on main runway. The tug pilot misunderstood the ATC call and commenced roll. The glider pilots realised no take-off clearance had been issued and released immediately. The tug aborted the take off before becoming airborne.</p>					

Date	19-Mar-2014	Region	NSWGA	SOAR Report Nbr	S-0358
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1		LS 6-b		A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
					PIC Age
					78
<p>Pilot forgot to lower the undercarriage for landing and did not complete his pre-landing checks.</p>					

Date	21-Mar-2014	Region	GQ	SOAR Report Nbr	S-0383
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1		IS-28B2		A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
					PIC Age
					67
<p>After returning to the airfield into a strong headwind, the pilot did not complete his pre-landing checks and landed with the wheel retracted. Causal factors include low experience and high workload in strong wind conditions.</p>					



# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Date	21-Mar-2014	Region	GQ	SOAR Report Nbr	S-0385
Level 1	Operational	Level 2	Aircraft Control	Level 3	Incorrect configuration
A/C Model 1	IS-28B2			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	81
Aircraft launched with the wheel retracted after being landed wheel-up the previous flight. NOTE: The IS28 has semi-retractable landing gear.					

Date	22-Mar-2014	Region	WAGA	SOAR Report Nbr	S-0360
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	62
When lined-up on final approach the Puchacz canopy opened fully. The student pilot closed the canopy while the Instructor flew the approach. The aircraft landed safely. Investigation into why the canopy opened was inconclusive, as the locking mechanism was found to be in good working order. The instructor believes the canopy may not have been properly locked at take-off. GFA AN170 notes that a partially locked, worn or incorrectly rigged latch system will increase the chance of the canopy opening in flight under some flight conditions.					

Date	5-Apr-2014	Region	GQ	SOAR Report Nbr	S-0364
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	SZD-51-1 Junior			A/C Model 2	FK9
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	
A glider was launched by winch while a powered aircraft was on final approach. The person who was acting as wing runner was new to the club and, although had previous gliding experience, was not being supervised and did not undertake an 'airspace clear for launch' check. The pilot in command of the glider did not confirm the airspace was clear and authorised the launch to proceed. The duty pilot in the operations van did not properly monitor the base station radio prior the launch. This incident highlights the importance of launch crew being properly trained and situationally aware, and for pilots to ensure airspace is clear before launching.					

Date	6-Apr-2014	Region	VSA	SOAR Report Nbr	S-0363
Level 1	Operational	Level 2	Airframe	Level 3	Fuselage/Wings/Empe nnage
A/C Model 1	ASW 20B			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	46
RH Flap became disconnected from controls approx 45 minutes into the flight. Aircraft was flown back to airfield and landed without incident. Inspection showed L'Hotellier safety pin not engaged. Investigation revealed the L'Hotellier was functioning correctly, leading to the conclusion that it was not properly connected at time of rigging. A dual inspection of control attachments was not completed.					

Date	14-Apr-2014	Region	SAGA	SOAR Report Nbr	S-0366
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	SF 25C Falke			A/C Model 2	Cessna
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	71



# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

While on the crosswind leg of the circuit during a training flight in a motor glider, the pilots heard a Cessna call downwind and another powered aircraft called inbound from the East. The motor glider called entering downwind and identified as a glider, although the motor was still idling while engine cooldown procedures were being followed. The Cessna on downwind was sighted ahead of the motor glider and the inbound aircraft was sighted by the motor glider pilots when on late downwind. At this time the student pilot in the motor glider realised that separation from the Cessna was reducing, and extended downwind. The Instructor in the motor glider broadcast that the glider was landing grass left and informed the Cessna pilot that the Cessna would be number one for landing. The Cessna pilot, who was on a commercial check flight, became nervous of the relative position of his aircraft and the glider and decided to go around. The motor glider landed engine-off without further incident.

Date	16-Apr-2014	Region	NSWGA	SOAR Report Nbr	S-0369
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	Discus 2c			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	60
On downwind the pilot conducted FUST checks and extended and locked the landing gear. A normal circuit and approach were conducted. Airbrakes were used on final approach and no landing gear warning was triggered. A smooth touchdown occurred, but soon after the main landing gear collapsed and the aircraft slid for a short distance on its belly. Investigation by an Airworthiness Inspector indicated a likely cause of this incident was the u/c indentation becoming worn allowing the handle to slip out.					

Date	16-Apr-2014	Region	SAGA	SOAR Report Nbr	S-0370
Level 1	Operational	Level 2	Fire Fumes and Smoke	Level 3	Fumes
A/C Model 1	SF 25C Falke			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	20
The carbon monoxide monitor 'activated'. Initial investigation suggested water contamination may have been a factor but, after cleaning, the monitor again activated. Further investigation revealed the port exhaust clamp had become unseated, allowing exhaust to enter through a number of points in the firewall. The exhaust clamp was re-seated, all exhaust nuts tightened, and sealant replaced where controls pass through the firewall into the cockpit. The CO monitor renewal date has been entered in the Maintenance Release. The inspector noted that water contamination would not cause the monitor to activate.					

Date	19-Apr-2014	Region	WAGA	SOAR Report Nbr	S-0367
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	PW-6U			A/C Model 2	DG-800A
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	63
During landing the pilot of PW6 glider lost directional control and collided with a glider being towed to the launch point outside the aerodrome gable markers. Both gliders suffered substantial damage in the collision. Contributing factors include tail wind component, high speed approach, and inadequate use of wheel brake and airbrakes. It is important for pilots to maintain directional control when landing nose-wheel gliders, as these gliders usually cannot be steered with rudder once elevator control is lost.					

Date	19-Apr-2014	Region	NSWGA	SOAR Report Nbr	S-0368
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues
A/C Model 1	Discus 2c			A/C Model 2	



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## Accident and Incident Summaries

Injury	Nil	Damage	Minor	Phase	Outlanding	PIC Age	60
Pilot outlanded on a dirt road running between 2 paddocks within a property. A few star pickets from an old fence line located off the road passed 3-4m from the glider's wingtip. An aerotow retrieve was undertaken. During the launch the pilot aborted the take-off due to heavy dust. Minor scratches occurred to the underside of one wing caused from the dirt road surface during the rejected take-off (fortunately the glider did not collide with a star picket). A subsequent launch resulted in the towing combination returning home close to last light. The glider pilot acknowledged this was a risky pursuit and that a road retrieve was preferable.							

Date	23-Apr-2014	Region	NSWGA	SOAR Report Nbr	S-0376		
Level 1	Operational		Level 2	Airframe		Level 3	Landing gear/Indication
A/C Model 1		Discus 2c			A/C Model 2		
Injury	Nil	Damage	Minor	Phase	Outlanding	PIC Age	60
During an outlanding into a large grass paddock, and following a normal touchdown and landing roll, the undercarriage partially retracted and the aircraft quickly came to rest. Subsequent inspection revealed a likely cause of this incident was that the undercarriage DOWNLOCK mechanism and the landing gear over-centring mechanism needed attention.							

Date	26-Apr-2014	Region	GQ		SOAR Report Nbr		S-0373	
Level 1	Operational		Level 2	Miscellaneous		Level 3	Winch Performance Issue	
A/C Model 1		Astir CS			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	52
Winch launch progressively slowed, resulting in the pilot releasing at low height. Unable to land ahead safely, the pilot successfully landed in a paddock parallel to the runway. It is suspected the winch drum brake was engaged during the launch.								

Date	27-Apr-2014	Region	GQ	SOAR Report Nbr	S-0371		
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain
A/C Model 1		Blanik L13			A/C Model 2		
Injury	Nil	Damage	Substantial	Phase	Landing	PIC Age	16
A low-hours pilot winch launched into a light headwind but at a height of about 450ft the cable broke. The pilot chose to modify the circuit instead of landing ahead but flew too far downwind and had to modify his base turn to fly directly towards the airstrip. The aircraft cleared tall pine trees on approach but the pilot allowed the airspeed to decay. Recognising his low airspeed, the pilot lowered the nose of the glider. The glider's approach path was towards a hangar and shed. In attempting to land between these obstacles, the glider's left wing struck the hangar door outrigger post resulting in the glider swinging through 180 degrees. The aircraft was substantially damaged but the pilot was uninjured. It is unclear whether the glider's airbrakes were deployed during the circuit. Causal factors include inexperience, high workload, and impaired judgement.							

Date	27-Apr-2014	Region	VSA		SOAR Report Nbr		S-0372	
Level 1	Operational		Level 2	Miscellaneous		Level 3	Other Miscellaneous	
A/C Model 1		PW-6U			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	73





## The Gliding Federation of Australia Inc

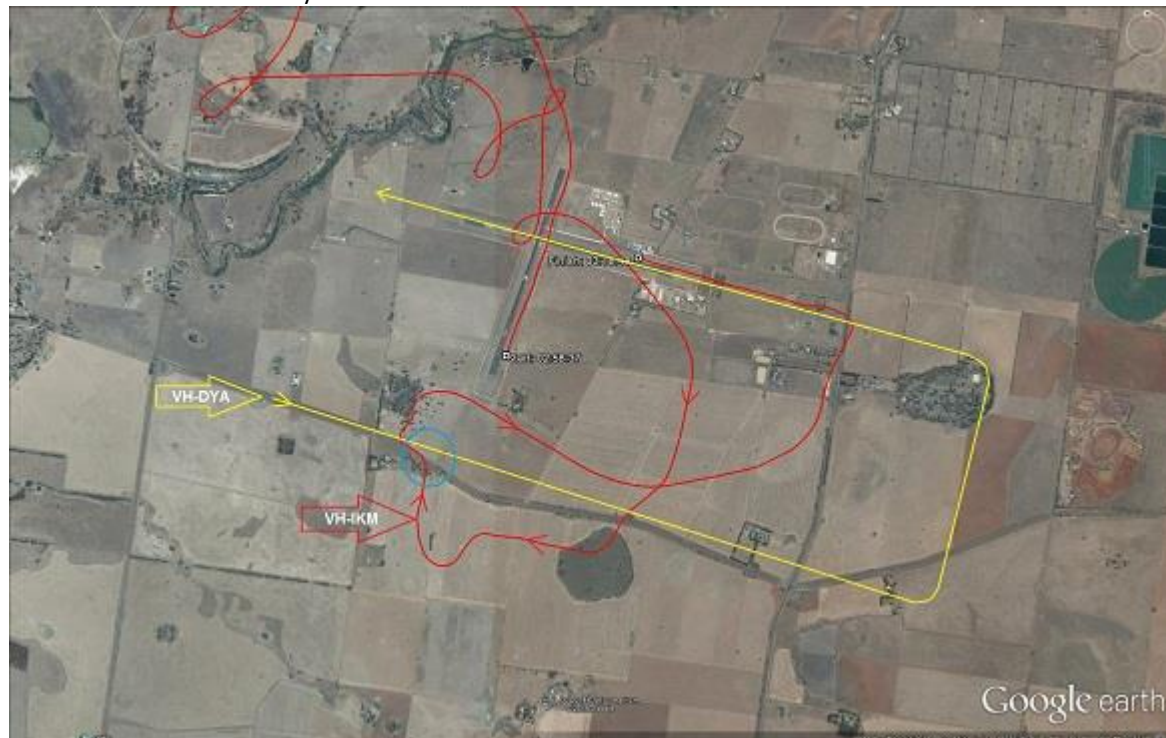
### Accident and Incident Summaries

This airfield has chains embedded flush with the ground at each end which has a 'fixed' hook on which the wires from a two-drum winch can be anchored when not in use. During a winch launch the 'live' wire snagged under the hook positioned in front of the winch. The winch driver realised what had happened and kept the power on just long enough to allow the glider to achieve sufficient height for a circuit, at which time the launch was terminated. The 'fixed' hook was removed and replaced with a removable one to prevent a recurrence. The crew of the glider were unaware of what caused the low launch until after landing.

Date	17-May-2014	Region	VSA	SOAR Report Nbr	S-0377
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	SZD-48-1 Jantar Standard 2			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	46
A Jantar Std 2 glider was cruising at 2,500 ft near Bacchus Marsh, when a single engine aircraft passed in close proximity. No communication could be established with the powered aircraft.					

Date	17-May-2014	Region	VSA	SOAR Report Nbr	S-0378
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Twin Astir			A/C Model 2	BEECH A23-24 Musketeer
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	70

The glider pilots had been flying in the downwind area of the circuit chasing lift. The pilots elected to fly upwind in the downwind leg and, during a turn towards the runway mid downwind the glider pilots sighted the Beech Musketeer 200 metres to the left on an intercepting course. The glider pilot banked left to avoid a collision, at which time the Musketeer pilot saw the glider. Normal radio calls were made but the glider radio's low volume setting may have led to the glider pilots not hearing the Musketeer pilot. Low lighting due to overcast conditions may have contributed to a degraded 'see and avoid'. This near miss highlights the dangers of gliders operating in the vicinity of the live side of the circuit and the need to keep radio volumes at a level that can be readily heard to facilitate alerted see and avoid.





# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Date	17-May-2014	Region	VSA	SOAR Report Nbr	S-0380
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Twin Astir			A/C Model 2	Piper PA-39 Twin Comanche
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	71

A Twin Astir glider on final approach about 400 metres short of the runway and at between 200 and 250ft AGL was overtaken from below by a Twin Comanche aircraft. The glider pilot had not sighted the Twin Comanche during his base leg as the Twin Comanche was flying a long straight-in approach at low level and was not visible due to ground features. The Twin Comanche passed about 50ft below the glider, which was descending on a half airbrake approach. Both aircraft proceeded to execute normal landings. The pilot of the Twin Comanche sighted the glider but elected to continue to overtake. He conceded the situation was a near-miss but felt the separation was marginally adequate. The Rules for Prevention of Collision detailed in CARs 162 (6) & (7), viz.:

(6) When two or more heavier-than-air aircraft are approaching an aerodrome for the purpose of landing, aircraft at the greater height shall give way to aircraft at the lesser height, but the latter shall not take advantage of this rule to cut-in in front of another that is on final approach to land, or overtake that aircraft.

(7) Notwithstanding anything contained in subregulation (6), power-driven heavier-than-air aircraft shall give way to gliders.



Date	18-May-2014	Region	VSA	SOAR Report Nbr	S-0384
Level 1	Airspace	Level 2	Airspace Infringement	Level 3	Airspace Infringement
A/C Model 1	LS 4-a			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	75

During flight in weak wave conditions, the pilot inadvertently entered Class C airspace due to misinterpreting the location of the airspace boundary. Pilot did not consult appropriate charts despite these being available in the glider.



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### Accident and Incident Summaries

Date	18-May-2014	Region	VSA	SOAR Report Nbr	S-0381
Level 1	Operational	Level 2	Fuel Related	Level 3	Exhaustion
A/C Model 1	Piper PA 25 Pawnee			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	76

#### GFA FIELD INVESTIGATION - FACTUAL INFORMATION

At about 1526 Eastern Standard Time on 18 May 2014, while conducting glider towing operations, the pilot of a Piper PA25 Pawnee aircraft took off from Bacchus Marsh, Victoria with a glider in tow. At 1529 and at a height of about 2,081ft AMSL (Aerodrome elevation is 520ft AMSL), the Pawnee engine momentarily lost power causing the pilot to lower the nose and increase the throttle. During this manoeuvre the tow rope went slack and the glider pilot, perceiving a drop in the towing airspeed, released the tow. The Pawnee pilot noted the engine responded to throttle command and, being well positioned, he entered the downwind leg for a circuit onto runway 27. According to the GPS log taken from the aircraft, the pilot turned onto base leg at around 1530:28. Sixteen seconds later, at 1530:44 and at a height of about 700ft AGL and about 1600m from the runway, the engine surged and stopped. The pilot immediately turned toward the airfield and commenced a glide approach. The pilot, who was also an experienced glider pilot, initially perceived he had sufficient height to land on the airfield. While passing through 800ft AMSL the aircraft was subject to turbulence and a higher 'sink' rate, and an off-field landing was now inevitable. The most suitable landing area was bounded by trees, which the pilot assessed he was likely to fly into, so he lowered the nose to increase airspeed. The pilot pulled-up over the trees, whereupon the aircraft stalled and landed heavily into a paddock adjacent to the airfield boundary. The aircraft touched down on a northerly heading on the right-hand undercarriage which collapsed, causing the aircraft to slew to the right and coming to rest on an east south-east heading, almost in the direction of travel. The pilot turned off the switches and exited the aircraft uninjured.





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### *Accident and Incident Summaries*



#### **Pilot Information**

At the time of the accident the command pilot held a current medical and BFR. On the day of the accident, the pilot conducted six glider tows without incident.

#### **Aircraft information**

The aircraft was maintained by a CASA authorised workshop. The Maintenance Release (MR) was issued on 2 April 2014 and the aircraft was due for its next inspection on 2 April 2015 or at 4,432.9 hours (1,346.0 off the Air Switch). The MR records the aircraft had 64.3 hours to run prior to the first flight on the day of the accident. After the accident, the Air Switch recorded 1,284.9 hours leaving 62 hours' time to run.

#### **Meteorology**

The weather at the time of the accident was good visual meteorological conditions (VMC). The wind was from 330o (NNW) at 15 knots. Glider pilots reported turbulent conditions close to the ground and in the lee of trees on the approach to runway 27.

#### **Flight data recorder**

The aircraft carried a GPS based traffic and collision-warning system (FLARM) which was capable of logging the flight path and altitude. Club members downloaded a trace recording the last three flights of the aircraft. The GPS track data has been determined to be reliable and is consistent with witness observations.

#### **ANALYSIS**

##### **Flight**

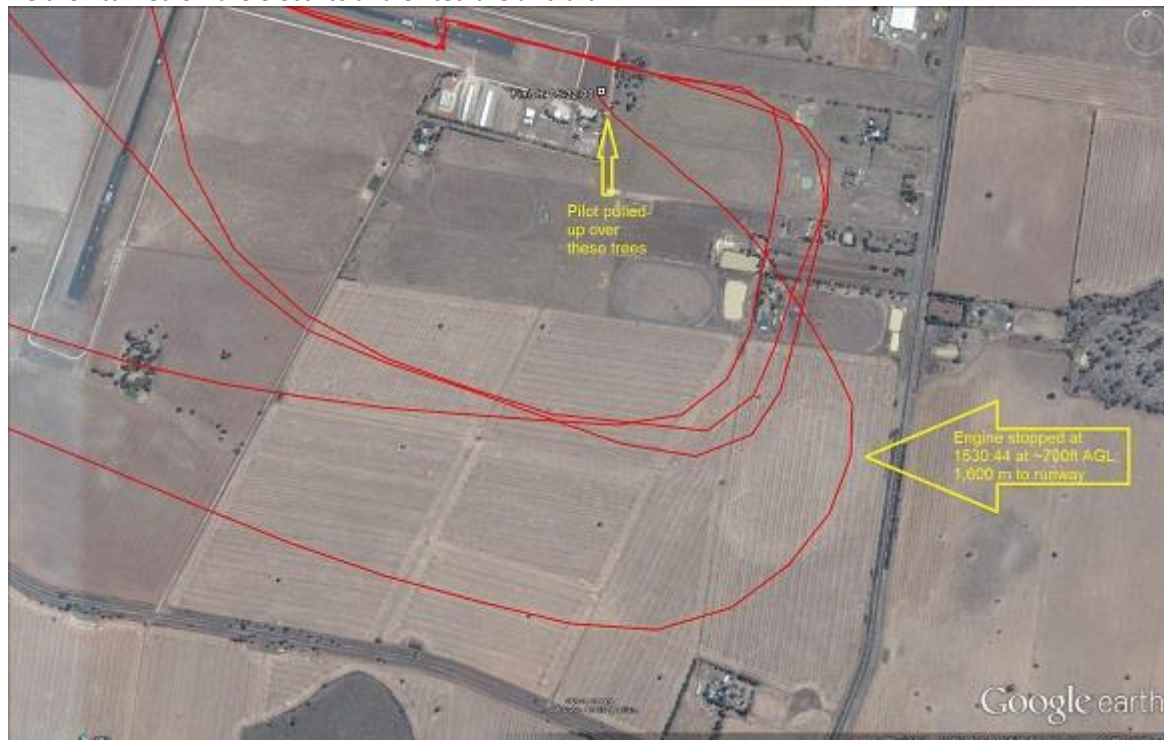
The aircraft commenced its final flight at 1526 towing a Schempp-Hirth Janus B glider on a solo recreational flight. The glider pilot stated that the "Tow was proceeding normally until about 1500' above ground when the speed appeared to drop off and the tow rope went slack. I released immediately turning to the right and completed a normal circuit." The Pawnee pilot stated that "at 1800ft AGL (The flight logger trace indicates actual height to be about 1,500ft AGL.) I noticed a minor surge in power. Because I normally fly with my hand on the throttle I thought I may have retarded it when I flew through some turbulence. I recall lowering



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the nose of the tug and opening the throttle. During this manoeuvre the glider released.” The Pawnee pilot stated that the aircraft responded to throttle inputs and, as he was well positioned, he entered the downwind leg of his circuit. The pilot stated that after turning onto base leg at about 800ft AGL the engine surged and he immediately headed toward the airfield. He estimated the aircraft was about 1,000 metres from the airfield perimeter fence and within reach. “After about three seconds the engine stopped, at which time I gave a mayday call. I initially thought that I had sufficient height to glide onto the airfield but as I passed through about 250ft AGL I experienced turbulence and an increased rate of sink and realised that I would not make it to the airfield and I manoeuvred to land in the paddock just short of the airfield perimeter. I gave another mayday call.” As the pilot approached the paddock he perceived a collision with trees was likely. The pilot stated that he “lowered the nose to gain some speed and manoeuvred so as to pick a gap in the tree line. As I approached the tree line I pulled up over them, the aircraft stalled and impacted the ground heavily. The right hand undercarriage collapsed and the aircraft came to a halt within short distance.” After the aircraft came to rest the pilot noticed the ‘low fuel’ warning light was illuminated. He then turned off the electrics and exited the aircraft.



#### **Pilot**

Fatigue and stress were evaluated as potential factors in degrading the pilot’s performance. During an interview with the pilot he revealed that he had been awake most of the previous night watching football on the television and had only two hours sleep in the preceding 30 hours. It was also determined that he was still experiencing some stress from a recent legal matter that went against him. He stated that “I recall seeing the low fuel light illuminated after the aircraft came to rest but I do not recall seeing it illuminated in flight. Because the accuracy of the fuel gauges are unreliable, I did not pay attention to them. I remember checking the time card maintained for fuelling purposes prior to my first tow and recall I had about 0.4 hours remaining to a refuel. I was therefore expecting to see the low fuel light flash, which would have been my trigger to refuel the aircraft in sufficient time before fuel starvation.” There may also have been the added pressure of the gliding clubs having to cease flying operations for the day if he did not fly the tow plane. The pilot advised that he was not rostered to fly the Pawnee on the day of the accident flight and had attended the airfield merely to meet up with fellow gliding club members. However, during the afternoon the rostered tow pilots ceased flying as the conditions were challenging their skill levels. As the pilot of the



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### *Accident and Incident Summaries*

accident flight had over 50 years flying experience and the conditions were not beyond his skill level, he agreed to fly the Pawnee so that gliding operations could be continued.

#### **Aircraft**

Examination of the aircraft post-accident revealed no anomalies with the flight controls. The aircraft had impacted the ground heavily on its right undercarriage, which collapsed and caused damage to the RH wing leading edge. The two-blade propeller struck the ground but it was evident it was not turning at the moment of impact, as only one blade was damaged. When the master switch was turned on the 'low fuel' light illuminated, and when the fuel tanks were dipped it was determined they were empty.

#### **Fuelling Requirements**

The fuel gauges on the Pawnee are difficult to read with any accuracy. As the aircraft flies many short duration flights (glider tows are typically seven (7) minutes), the Club uses a method of recording refuelling times on a card, taking times off an engine hour meter connected to an air pressure sensor and switch (Air Switch). According to the card in the aircraft, the aircraft was due to refuel at 1284.1 'air switch' time. The 'air switch' was reading 1284.9 immediately after the aircraft came to rest. The Club Tug Master advised that under normal circumstances a Pawnee should provide over two hours towing from a start with both tanks full. He further stated "When the fuel tanks are filled, a note is made on a card clipped to the left door of the aircraft, where 1.5 Hrs. is added to the then current air switch time to signify when fuel should next be added. The decision to use 1.5 Hrs. rather than 2 Hrs. was to allow some flexibility whilst maintaining a reasonable safety margin. All pilots were made aware of this procedure when it was introduced." There is also a "low fuel" red warning light that initially flashes when fuel is low and stays on shortly after to alert the pilot to the fuel state.



#### **CONCLUSIONS**

1. The command pilot was appropriately qualified for the flight.



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2. The aircraft had a valid Maintenance Release and had been maintained in accordance with relevant requirements.
3. The aircraft was capable of normal operation up to the moment of impact.
4. The engine stopped due to fuel exhaustion.
5. The pilot did not adequately monitor the aircraft's fuel state nor notice the 'low fuel' warning light was illuminated.
6. It is probable that stress and fatigue degraded the pilot's attention and decision making.
7. Weather conditions were challenging, with low level turbulence possibly contributing to a destabilised approach.

### SAFETY RECOMMENDATIONS

1. The GFA to remind tow pilots of the importance of fuel management in accident prevention, citing the following references:
  - GFA Aerotow Manual (paragraph 9.1.7 Minimum fuel for tow) (<https://drive.google.com/file/d/0B775i9ACh45kY2ItQUJMY0E2RG8/edit?usp=sharing>);
  - ATSB Aviation Research and Analysis - AR-2011-112 Starved and exhausted: Fuel management aviation accidents (<http://www.atsb.gov.au/publications/2012/avoidable-5-ar-2011-112.aspx>); and
  - The Civil Aviation Safety Authority's (CASA) Civil Aviation Advisory Publication, CAAP 234-1 Guidelines for aircraft fuel requirements ([http://www.casa.gov.au/wcmswr/assets/main/download/caaps/ops/234\\_1.pdf](http://www.casa.gov.au/wcmswr/assets/main/download/caaps/ops/234_1.pdf)).
2. The GFA to remind members of the importance of fatigue and stress management in accident prevention, citing the following references:
  - GFA Human Factors Manual (<https://drive.google.com/file/d/0B775i9ACh45kZnV4aENxQWxoSnc/edit?usp=sharing>);
  - The Civil Aviation Safety Authority's (CASA) 'Fatigue Management Toolkit' ([http://casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC\\_90315](http://casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_90315)); and
  - 'Proof that fatigue kills' – a presentation by David Learmount, of Flight International, to an FRMS forum in Farnborough, U.K. ([https://www.eurocockpit.be/sites/default/files/Fatigue\\_Kills\\_Proof\\_D\\_Learmount\\_SP\\_09\\_0528.pdf](https://www.eurocockpit.be/sites/default/files/Fatigue_Kills_Proof_D_Learmount_SP_09_0528.pdf)).

Date	7-Jun-2014	Region	NSWGA	SOAR Report Nbr	S-0386
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Standard Libelle 201 B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	56
Pilot did not complete his pre-landing checks, possibly due to distraction on downwind leg when another glider called entering downwind. This was the pilot's second flight of the day. Potential causal factors include low currency in recent months, complacency after a successful first flight, and a "mid-afternoon" slump in mental alertness.					

Date	9-Jun-2014	Region	VSA	SOAR Report Nbr	S-0388
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Caproni A21S			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	74
Glider landed with the wheel retracted. Experienced pilot was distracted by passenger during the circuit and forgot to complete the pre-landing check.					

Date	28-Jun-2014	Region	GQ	SOAR Report Nbr	S-0387
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### Accident and Incident Summaries

Level 1	Consequential Events	Level 2	Forced / Precautionary landing	Level 3	Forced/Precautionary Landing
A/C Model 1	Grob Std Cirrus			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	51
Pilot terminated flight due to deteriorating weather conditions and approaching showers. During downwind the glider flew through heavy sink sufficient for the pilot to modify his circuit. A radio call was made to other traffic advising of the modified circuit and the glider landed safely 300m from the runway end.					

Date	28-Jun-2014	Region	NSWGA	SOAR Report Nbr	S-0392
Level 1	Consequential Events	Level 2	Forced / Precautionary landing	Level 3	Forced/Precautionary Landing
A/C Model 1	KA7			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	64
A rapid change to a tailwind during a site familiarisation winch launch resulted in a loss of speed during the climb. The non-flying PIC made a decision to release the cable at 300ft AGL for a straight-ahead landing. The second pilot lowered the nose and applied full airbrake. The PIC, perceiving a threat of running out of room, assumed control and initiated a sideslip to wash off height more quickly. The aircraft came safely to rest 30m before the winch.					

Date	12-Jul-2014	Region	SAGA	SOAR Report Nbr	S-0390
Level 1	Technical	Level 2	Systems	Level 3	Other Systems Issues
A/C Model 1	ASK-21			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	51
After the glider released at the top of the launch, the winch throttle jammed open. The rope was fully wound in and the 'trace' shackle broke when it was pulled through the guide pulleys.					

Date	12-Jul-2014	Region	NSWGA	SOAR Report Nbr	S-0389
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Dimona HK 36 R			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Launch
				PIC Age	69
Just after becoming airborne during a self-launch, the glider was struck by a strong crosswind gust from the right that lifted the starboard wing and tail. The pilot was unable to stabilise the glider, which slewed to the left as the port wing tip touched ground. The pilot immediately aborted the take-off and reduced the throttle, whereupon the glider settled and was taxied off the runway.					

Date	20-Jul-2014	Region	GQ	SOAR Report Nbr	S-0391
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Sheibe Motorfalke SF 25 C			A/C Model 2	
Injury	Nil	Damage	Write-off	Phase	Landing
				PIC Age	41
After touchdown in gusty and turbulent conditions, a strong crosswind gust struck the aircraft, causing it to veer to the left. The pilot attempted to correct by using full rudder and aileron but the aircraft rolled beyond the gable markers. The left wing hit trees lining the airfield perimeter, swinging the aircraft into the trees. The left wingtip was severed and the right wing and propeller were damaged. The engine was not running at the time of impact.					



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### Accident and Incident Summaries



Date	27-Jul-2014	Region	VSA	SOAR Report Nbr	S-0393
Level 1	Operational	Level 2	Communications	Level 3	Other Communications Issues
A/C Model 1	ASK13			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	61
A winch launch proceeded despite a 'Stop' call being made by a person other than the launch crew, who noticed a glider had turned onto final approach to the operational runway. It appears that the 'Stop' call was not heard by the launch crew, who were focused on getting the launch away before the glider on base leg turned onto final. The launch point was sufficiently displaced that there was no breakdown in separation between the landing glider and winch cable.					

Date	27-Jul-2014	Region	NSWGA	SOAR Report Nbr	S-0394
Level 1	Operational	Level 2	Crew and Cabin Safety	Level 3	Inter-crew communications
A/C Model 1	ASK21			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	59
During an Instructor Training flight involving two very experienced pilots, a breakdown in flight management led to neither pilot being in control of the aircraft for a short period. During the recovery from an aerobatic manoeuvre while the aircraft was in a nose-high attitude, the pilot flying handed control to the non-flying pilot without receiving an acknowledgement that the other pilot had control. The non-flying pilot did not hear control being handed to him and so did not take control. The aircraft eventually stalled, pitched down					



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into a steep dive, and then started to slowly recover to its trimmed attitude giving the impression that it was under control. Control was finally resumed when both pilots became concerned that the aircraft was low and not pulling out of the dive quickly enough. This incident highlights the importance of being clear about who is flying the glider at any time and that one should not let go of the controls until confirmation has been received that the other pilot has taken control.

Date	27-Jul-2014	Region	VSA	SOAR Report Nbr	S-0395
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	LS3A			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	48
The pilot did not complete a post-launch check and left the undercarriage down during the flight. A pre-landing check was completed that led to the pilot retracting the undercarriage and landing with the wheel up. While an undercarriage warning buzzer was fitted, it did not activate. This accident highlights the importance of checking the undercarriage lever to the placards.					

Date	1-Aug-2014	Region	GQ	SOAR Report Nbr	S-0397
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Blanik L13A1			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	71
Glider landed with the wheel retracted. NOTE: The Blanik has semi-retractable landing gear. Pilot did not configure the aircraft for landing nor complete a pre-landing check.					

Date	2-Aug-2014	Region	GQ	SOAR Report Nbr	S-0401
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Aircraft preparation
A/C Model 1	Blanik L13 A1			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	40
During the Daily Inspection it was found that the Blanik's wheel was in the retracted position (Note: the Blanik wheel only partly retracts). The reason for the wheel being retracted is unknown but it is thought the aircraft may have been landed with the wheel up.					

Date	3-Aug-2014	Region	SAGA	SOAR Report Nbr	S-0398
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	LS4			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	48
Undercarriage collapsed during landing on rough ground. Casual factor was out of specification gas strut that failed to maintain overcentre lock.					

Date	3-Aug-2014	Region	VSA	SOAR Report Nbr	S-0396
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	Duo Discus			A/C Model 2	Puchacz
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	66
Approaching the top of a winch launch the Puchacz Instructor noticed a Duo Discus to his right and heading into his path. The instructor immediately released from the cable and took avoiding action as the Duo Discus					



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## Accident and Incident Summaries

passed within 50 metres laterally and 20ft vertically of the Puchacz. The Duo Discus pilot stated that he was unaware his glider had drifted over the active runway and, although he heard a radio call he did not identify that a winch launch was about to commence. He attributed the incident to a lack of situational awareness; possibly due to relaxed vigilance (the last flight of the day), and he may not have paid sufficient attention to the radio as he was conversing with his copilot.

Date	3-Aug-2014	Region	VSA	SOAR Report Nbr	S-0400
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	Astir CS 77			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	70
The pilot of the incident flight was low on downwind, originally intending to turn onto an early base leg and land long as the operational runway was occupied by three gliders that had just landed. Just prior to him turning onto base leg, the pilot observed the grass right runway being cleared so he extended his downwind leg in order to land short on the cleared runway. This decision resulted in him flying a very low final turn. Potential causal factors include blocked runways, and desire to land back at the launch point. This incident highlights the dangers of pilots modifying their normal operating procedures, or abandoning accepted best practice, for no reason other than convenience.					

Date	3-Aug-2014	Region	VSA	SOAR Report Nbr	S-0399
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	17
A two-seat aircraft being flown solo was lined-up ready for take-off when the duty instructor opened the rear canopy to use the aircraft radio in order to alert others of a potential runway conflict. The Duty instructor did not adequately close the canopy, and it opened during the launch. The solo pilot abandoned the launch and landed ahead safely with no damage or injury. Potential casual factors include an unserviceable radio in the control van; a potential runway conflict; the inability of the PIC to verify the rear canopy was closed; and the instructor's inattention to the task. This incident highlights the importance of launch point hygiene and not to interfere with aircraft that has already been configured for launch.					

Date	16-Aug-2014	Region	VSA	SOAR Report Nbr	S-0402
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	ASK-21			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	20
Pilot conducted a low-level finish without holding a 'low-level finish' endorsement. Pilot was counselled by his CFI.					

Date	25-Aug-2014	Region	NSWGA	SOAR Report Nbr	S-0403
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Discus 2B			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	60
Following a 3-hour local soaring flight the pilot joined circuit for landing. On the downwind leg the pilot observed kangaroos midfield and elected to land short. The final approach was flown into the setting sun. During the landing flare the aircraft main wheel and lower fuselage impacted an electric fence on the aerodrome boundary, resulting in the aircraft landing heavily. Causal factors include reduced visibility due to					





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a setting sun, ground shadows leading to the pilot misidentifying the airfield boundary, and wildlife present on the runway.

Date	30-Aug-2014	Region	VSA	SOAR Report Nbr	S-0405
Level 1	Operational	Level 2	Miscellaneous	Level 3	Rope/Rings Airframe Strike
A/C Model 1	PW-6U			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Launch
				PIC Age	53
During an aerotow launch the pilot undertaking an Annual Flight Review allowed the rope develop slack while boxing the slipstream. Incorrect recovery technique led the checking Instructor to release the rope but it fell over the wing and the tow rings caused minor damage. The club had recently transitioned from winching to aerotow and, while the club's pilots were aerotow experienced, they lacked sufficient currency. The Club Training Panel is focusing on aerotow proficiency.					

Date	30-Aug-2014	Region	SAGA	SOAR Report Nbr	S-0406
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	48
During landing off a normal circuit on the crosswind runway, the pilot allowed the aircraft to cross the active runway at the end of roll. There was no conflict with other aircraft. The Club training panel identified that that poor energy management led to a high-speed float in ground effect.					

Date	6-Sep-2014	Region	VSA	SOAR Report Nbr	S-0418
Level 1	Airspace	Level 2	Aircraft Separation	Level 3	Near collision
A/C Model 1	DG-500 Elan Orion			A/C Model 2	Piper PA-25-235
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	58
Whilst engaged in aerotowing operations and at a height of 2,000ft AGL a DG505 sailplane appeared in close proximity to the towing combination with no opportunity for either pilots to take evasive action. The DG505 had moments earlier completed a "rolling on a point" exercise and was in cruise when the pilots heard the towplane and saw it in close proximity passing under the nose. The pilot in the Ventus glider under tow estimated the tow plane and glider came within 50ft. All aircraft were equipped with Flarm. The primary method for implementing 'see-and-avoid' is lookout, which involves seeing potential hazards and assessing information prior to reacting. The primary source of information is vision. Pilots must maintain a good lookout and adequately compensate for any aircraft blind spots. This means avoiding long periods at a constant heading and checking that the airspace is clear before turning. For further information, refer to OSB 02/14 'See-and-Avoid for Glider Pilots'.					

Date	9-Sep-2014	Region	NSWGA	SOAR Report Nbr	S-0444
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	H-36 Dimona			A/C Model 2	
Injury	Minor	Damage	Substantial	Phase	Ground Ops
				PIC Age	78
<b>What Happened</b> During maintenance of the motor glider and after replacing the fuel pump, the engineer/pilot moved the glider's fuselage outside the hangar to test-run the engine. The throttle was set to idle and the starter button was pressed with the engineer/pilot standing outside the cockpit. The engine immediately started and went to full power. The fuselage accelerated away with the engineer/pilot attempting to climb aboard.					



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Eventually the engineer/pilot abandoned his attempt to board the aircraft and the aircraft careered uncontrolled across the (inactive) runway and impacted the airfield boundary fence causing substantial damage. The engineer/pilot suffered minor abrasions and sought medical attention. It was most fortunate that there were no people or other aircraft in the motor glider's path.

#### Safety Advice

The engine of a motor glider must only be operated when the glider is rigged, and the pilot is occupying the control seat. Civil Aviation Regulation (CAR) 230 provides that a person must not start or permit an aircraft engine to be run unless the engine is started or run when the control seat is occupied by an approved person or by a person who may fly the aircraft. This may include a pilot qualified to fly, or maintenance personnel qualified to work on, that type of aircraft. In any case, the person starting the aircraft must have sufficient knowledge of the aircraft's controls and systems to ensure the starting or running does not endanger any person or damage the aircraft. Civil Aviation Order (CAO) 20.9(5) states: *"An aircraft engine shall not be started or operated: within 5 m (17 ft) of any sealed building; or within 8 m (25 ft) of other aircraft; or within 15 m (50 ft) of any exposed public area; or within 8 m (25 ft) of any unsealed building in the case of an aircraft with a maximum take-off weight not exceeding 5700 kg (12,566 lb)."*

Date	12-Sep-2014	Region	WAGA	SOAR Report Nbr		S-0412	
Level 1	Operational		Level 2	Miscellaneous		Level 3	Rope/Rings Airframe Strike
A/C Model 1		DG-1000S			A/C Model 2		Piper PA-25-235
Injury	Minor	Damage	Nil	Phase	In-Flight		PIC Age 72
While boxing the slipstream and during the transition into right-hand high tow position, the tow pilot made slight turn to left. This accelerated the glider resulting in the rope developing some slack as the glider was positioned behind the tug. Subsequent use of airbrake to control over-running the rope led to the weak link breaking and the rope draping over wing. The glider pilot released the rope, which then descended to ground. This incident highlights the importance of tow pilots flying straight during emergency procedures training, and for instructors to ensure the tow pilot is briefed prior to launch. Pilots should use the radio to advise the tow pilot prior to manoeuvring and if severe slack develops to release just before the rope becomes taught.							

Date	13-Sep-2014	Region	NSWGA		SOAR Report Nbr		S-0426	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Aircraft Separation Issues	
A/C Model 1		SF 25C Falke			A/C Model 2		Skyfox CA25N Gazelle	
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	64
On 13 September 2014 at 0940 an RA-Aus registered Gazelle on a solo training flight reported an airprox with a motor glider at around 700 ft AGL during departure from Temora aerodrome and just after completing a turn to crosswind. The motor glider was on the downwind leg and the pilot stated he had the Gazelle sighted at all times. The Gazelle pilot reported that he had heard broadcasts from an aircraft in the vicinity but the transmissions were unreadable. The motor glider radio was found to be faulty in both transmit and receive, although the glider pilot heard the Gazelle pilot's transmissions. The motor glider radio issues are being addressed. Temora aerodrome is registered and carriage of a working radio is mandatory when flying within its vicinity. This incident highlights the importance of communication and the limitations of unalerted see-and-avoid principles. Unalerted see-and-avoid relies entirely on the pilot's ability to sight other aircraft. Broadcasting on the CTAF is known as radio-alerted see-and-avoid, and assists by supporting a pilot's visual lookout for traffic. An alerted traffic search is more likely to be successful as knowing where to look greatly increases the chances of sighting traffic.								



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Date	14-Sep-2014	Region	GQ	SOAR Report Nbr	S-0404
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	SZD-36A Cobra 15			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	58
<p>The glider's undercarriage collapsed on landing. Investigation revealed that the cable connected to the undercarriage actuating lever broke due to unidentified wear.</p>					

Date	14-Sep-2014	Region	VSA	SOAR Report Nbr	S-0415
Level 1	Technical	Level 2	Powerplant/Propulsion	Level 3	Engine failure or malfunction
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	IMC A-9A Callair
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	50
<p>During take off the tug suffered partial engine failure resulting in very low climb out. The tow pilot turned back over the airstrip and, at about 400ft AGL, initiated a wave-off. The command pilot in the glider immediately released from tow. Both aircraft landed back on the airfield safely. Subsequent investigation revealed the loss in power was due to fouled spark plugs.</p>					

Date	14-Sep-2014	Region	NSWGA	SOAR Report Nbr	S-0427
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	SF 25C Falke			A/C Model 2	Jabiru J170
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	75
<p>At approximately 1025 EST on Sunday 14 September 2014 a Falke SF-25c entered runway 36 at Temora at the mid-point and broadcast a rolling call for runway 36 Temora and then departed to the north. At the time there was a Jabiru on final for runway 36, about 400m short of the threshold, and an RV-6 waiting at the threshold taxiway for the Jabiru to land. Both these were in radio contact and neither heard any radio calls from the Falke, although the Glider pilot's radio calls were heard by the Gliding Club CFI who was in a position forward of the motor glider. The Jabiru pilot assessed that there was a greater risk of collision by</p>					



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going-around than by making a full-stop landing behind the Falke, which had become airborne before the Jabiru touched down some 400m behind it. The Falke pilot later advised that he had heard nothing on the radio and failed to see the Jabiru on final approach. The radio in the motor glider was found to be faulty. Contributing factors include the glider pilot's lack of currency, poor lookout and faulty radio installation.

Date	20-Sep-2014	Region	NSWGA	SOAR Report Nbr	S-0411
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Wirestrike
A/C Model 1	Piper PA-25-235			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	57

#### **GFA FIELD INVESTIGATION - FACTUAL INFORMATION**

At about 1640 Eastern Standard Time on 20 September 2014, while conducting a positioning flight between Camden NSW and Bunyan NSW, the pilot of a Piper PA25 Pawnee aircraft decided to conduct a precautionary inspection of a private airstrip at Michelago, NSW. While flying above runway 18/36 on a southerly heading, the aircraft struck power lines suspended some 20 to 30 metres above ground and about 300 metres south of the threshold of runway 18. The aircraft was substantially damaged but controllable, and the pilot was able to complete a low circuit and land back on the airstrip. The pilot contacted the Canberra Gliding Club to notify them of the accident and the property caretaker called emergency services. The ATSB was advised of the accident but declined to attend.



#### **Pilot Information**

At the time of the accident the command pilot held a CASA PPL(A) and PPL(H), held an Instrument rating and was endorsed for Glider Towing and to retrieve gliders from paddocks.

#### **Aircraft information**



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The aircraft was maintained by a CASA authorised workshop, Dent Aviation (NSW) Pty Ltd. The Maintenance Release (MR) was issued on 15 April 2014 and the aircraft was due for its next inspection on 15 April 2015 or at 9,388.42 hours. The MR records the aircraft had flown about 26 hours since 15 April 2014 and prior to the accident flight (Aircraft TTIS 9342.30 hours). There were no outstanding maintenance items on the MR prior to the accident. The aircraft was not fitted with wire cutters or deflectors.

#### **Meteorology**

The weather at the time of the accident was good visual meteorological conditions (VMC). The wind was from 180o at 5 knots at ground level.

#### **Flight data recorder**

The pilot was using a portable GPS unit for navigation that was lost during the accident. The aircraft was fitted with a GPS based traffic and collision-warning system (FLARM) that was capable of logging the flight path and altitude but the unit was not switched on for the flight.

#### **Airfield information**

The airfield at Michelago is a well-defined private airstrip with a windsock. The runway is 1,200 meters long and 20 meters wide, and aligned approximately 180/360 degrees. The surface is mown grass surrounded by white painted markers. There is a power pole situated immediately east of the runway near some water tanks and, from this pole, two power lines cross the runway to a power pole on a hill situated some 800 meters west of the airfield. The two power lines are each marked by three small flags immediately above the eastern perimeter road but there are no line markers over the runway itself.





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#### **ANALYSIS**

##### **Flight**

The pilot was ferrying the aircraft from Camden airport to Bunyan ALA with a refuelling stop at Goulburn Airport. The aircraft, which is owned by the Southern Cross Gliding Club, was to be used for glider towing at the Canberra Gliding Club's annual wave camp during the period 20 to 28 September 2014. When approaching the Michelago airstrip, which is situated about 20NM north of Bunyan, the pilot decided to conduct an impromptu straight-in and low-level run down the runway to conduct an inspection of the airfield to ascertain its suitability for him to retrieve gliders that may outland there during the coming week-long wave camp. During the course of the aircraft's run down runway 18 at a height estimated by the pilot to have been about 100ft, the aircraft struck and severed power lines crossing the runway about 300 metres from the runway threshold. The pilot did not immediately understand what had happened but knew he had hit something. He still had control of the aircraft but realised he did not have sufficient room to land straight-ahead and so flew a low-level right-hand circuit and landed on runway 18. It wasn't until he exited the aircraft that he realised the aircraft had hit wires.

##### **Pilot**

The pilot was medically fit and qualified to undertake the flight. Fatigue and stress were evaluated as potential factors but analysis was inconclusive. The pilot reported that he had been 'on duty' for six hours prior to the accident, with his duty period having commenced two hours after waking from a period of 8





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hours sleep. In the accident he suffered minor cuts from shattered Perspex but was otherwise in good health; although he was clearly shaken by the experience. The attending Police took a breath alcohol content reading and the pilot was found to have a zero BAC. The pilot held a Glider Towing Permit which included an outlanding retrieve approval. This approval allows the holder to launch gliders from unmarked paddocks and to land in such paddocks solely for the purpose of launching a glider, subject to the approval of the land-owner. As part of this approval, the pilot is trained in conducting precautionary search procedures, particularly in respect of assessment of suitability of paddocks by reference to size, slope, surface, stock and surroundings, with special attention given to SWER lines and their effect on selection of take-off and approach paths. In the case of this accident, the pilot commenced his precautionary search off a straight-in approach and at too low a height to avoid the obstacles encountered.

#### **Aircraft**

The aircraft was originally set-up for agricultural work but the hopper and spray gear had been removed many years ago. The aircraft does not have a wire cutter or deflector fitted. Examination of the aircraft post-accident revealed no anomalies with the flight controls. However, the aircraft had been significantly damaged. There was evidence of wire strike to the spinner, propeller, engine cowling (RHS and top), left wingtip leading edge, cockpit, rear fuselage, the leading edge of the vertical and horizontal (port) stabilisers, and rudder. The cable shattered the windscreen and travelled up the cockpit frame to remove the fibreglass roof. The wire then ran down the back of the fuselage, up the vertical stabiliser and then between the top of the vertical stabiliser and the bottom of the rudder horn. The top third of the rudder was torn off. A gaping hole was made in the port wing leading edge near the tip.

#### **Airfield**

The airfield is well-defined, with edge markers, a wind sock and a mown grass runway. It is visible as an airfield from some distance away. The airfield is not marked on charts, nor is it in ERSAs. The airfield also has a power line hazard that pilots would not expect to encounter that is well inside the airfield boundary; with one pole east of the airstrip and the next pole atop a hill 800 metres away to the west. This power line configuration makes it potentially hazardous to aviators and is particularly unusual. The absence of intermediate power poles makes searching for power lines during an aerial search much more difficult.



The airfield owner had to overcome a number of objections to the airfield development plan and the local Council initially declined to approve it. The owner appealed the Council's decision to the Land and Environment Court of New South Wales (No 10923 of 2010) and the development application was subsequently granted subject to various conditions, among which is the following:

- (Point 12) The electrical power line traversing the site east-west is either to be relocated or placed underground so as to not present a hazard to aircraft movements in accordance with any applicable legislative requirements. A plan showing the proposed relocation or placement of the power line underground is to be provided to Council prior to the commencement of construction. The cost of



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this work to be the responsibility of the applicant. Reason: To provide a measure of protection from the possibility of an accident involving aircraft and the electricity supply line. The owner has not complied with this requirement and the local council wrote to the landowners on 13 March 2012 suggesting they install runway unserviceability markers to deter unauthorised use of the airstrip. The landowners acknowledged receipt of the correspondence on 14 March 2012 but did not act on it.

### CONCLUSIONS

1. The command pilot was appropriately qualified and medically fit for the flight.
2. The command pilot holds a GFA "Paddock Retrieve" rating and is trained to search for power poles, insulator orientation and relationship to nearby structures, to detect power lines.
3. The aircraft had a valid Maintenance Release and had been maintained in accordance with relevant requirements.
4. The airfield had a power line traversing the runway about 300 metres in from the northern threshold.
5. The power line was an unusual configuration, with an 800m long span to a power pole atop a nearby hill. The lack of intermediate poles denied the pilot normal visual cues of power line danger.
6. The power lines were inadequately marked and were almost invisible to a pilot on approach.
7. The airfield operator did not comply with planning approvals that required the power line to be relocated or placed underground to provide protection from the possibility of an accident involving aircraft and the electricity supply line.
8. The aircraft struck power lines during a low-level precautionary inspection of a private airstrip.
9. The aircraft was capable of normal operation up until the time of impact with the wires.
10. The pilot's inspection of the area where low flying was planned was inadequate.

### SAFETY RECOMMENDATIONS

1. GFA to remind all pilots operating into an unfamiliar landing area to remain vigilant and ensure that all the necessary precautions are taken to reduce the risks. Precautionary searches should be conducted initially from a safe height, only working to low-level once risks have been identified.
2. GFA to remind tow pilots to ensure the owner of an airstrip or paddock has given permission to operate there and has been quizzed about power lines and other potential hazards.
3. GFA to recommend to all Gliding Clubs to fit passive wire-strike protection systems to tow planes, especially those used for paddock retrieves.

### REFERENCES

- CASA Website - Precautionary Search and Landing
- CASA CAAP 92-1 - Aircraft landing area guidelines.
- ATSB Document - Wire-strike Accidents in General Aviation

Date	21-Sep-2014	Region	GQ	SOAR Report Nbr	S-0408
Level 1	Operational	Level 2	Airframe	Level 3	Objects falling from aircraft
A/C Model 1	Blanik L13 A1			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	67
The command pilot was undertaking a private passenger flight. During the flight, the passenger attempted to open the clear view panel in the canopy to allow some ventilation. During the course of opening, the perspex track broke and the 'clear view' panel fell out. The panel was retrieved by a person on the ground.					

Date	21-Sep-2014	Region	GQ	SOAR Report Nbr	S-0407
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Nimbus 2			A/C Model 2	



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Injury	Nil	Damage	Nil	Phase	Outlanding	PIC Age	51
<p>Due to deteriorating weather conditions and unable to contact lift, the pilot made an early decision to conduct an outlanding. The pilot properly configured the aircraft for landing and flew a standard circuit of the selected paddock checking for hazards. The pilot identified a fence across the paddock and set-up the approach to land past the fence to an uphill landing. During late final the pilot observed power lines across his path but determined they were sufficiently high (about 100ft AGL) not to be a hazard and the glider passed under them during the landing. The aircraft touched down at flying speed and rebounded into the air. During that brief moment the aircraft became airborne the pilot inexplicably retracted the undercarriage and landed with the wheel up. The pilot could offer no explanation for retracting the undercarriage other than he must have become stressed during the late stages of the approach. Causal factors include high workload, stress, low visibility due to overcast conditions and light rain, and the power poles were wide-spaced making identification of the hazard more difficult.</p>							

Date	26-Sep-2014	Region	GQ		SOAR Report Nbr		S-0416	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		IS-28B2			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Landing	PIC Age	67	
On returning to the airfield from a local flight the glider flew through very strong sink and lost height rapidly. The pilot modified his plans and joined circuit on the base leg. The glider landed safely with the undercarriage retracted. The pilot became overloaded during the latter stages of the flight and forgot to complete his pre-landing checks. Landing mishaps usually occur due to poor workload management, so it is important to get some of the tasks, like lowering the undercarriage, out of the way early. Refer also OSB 01/14 'Circuit and Landing Advice'.								

Date	26-Sep-2014	Region	WAGA	SOAR Report Nbr	S-0532		
Level 1	Operational		Level 2	Airframe		Level 3	Other Airframe Issues
A/C Model 1		DG-500 Elan Orion			A/C Model 2		
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age    61
The pilots fitted a camera externally to the glider's fuselage without having the appropriate engineering orders. Attaching any objects to the external surfaces of a sailplane is fraught. Adding cameras to the airframe can have unintended consequences, such as increased stall speed or airframe flutter. In NSW in 2012 an ASK 21 experienced elevator flutter at 60 knots caused by turbulent airflow from a wing mounted camera. All installations to an airframe, whether cameras or otherwise, require formal engineering approval and may require a technical standing order.							

Date	27-Sep-2014	Region		NSWGA	SOAR Report Nbr	S-0417		
Level 1	Operational		Level 2	Flight Preparation/Navigation		Level 3	Other Flight Prep/Nav Issues	
A/C Model 1		Discus b			A/C Model 2		EMB-110P1	
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	58
GFA received a complaint from a local parachute operation that a glider on a cross-country flight within the Goulburn CTAF came close to the parachute plane. The pilot of the parachute plane could not contact the glider pilot on the CTAF. The glider pilot acknowledged he was on an incorrect frequency as did not have appropriate charts for the area. The glider pilot later spoke with the power pilot and the matter was resolved. This incident highlights the need for cross-country pilots to properly flight plan, to ensure they have maps and charts for the areas in which they will be flying, and that they monitor the appropriate frequency to aid in see-and-avoid.								



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Date	28-Sep-2014	Region	GQ	SOAR Report Nbr	S-0409
Level 1	Operational	Level 2	Fire Fumes and Smoke	Level 3	Fire
A/C Model 1	AMT-200			A/C Model 2	
Injury	Minor	Damage	Substantial	Phase	In-Flight
				PIC Age	67

#### **GFA FIELD INVESTIGATION - FACTUAL INFORMATION**

At 0822 Eastern Standard Time on 28 September 2014, the command pilot took-off from Proserpine (Whitsundays) airport on 315NM flight to Georgetown Airport, Qld. At approximately 0845 and while over Lake Proserpine at 4,000ft, the pilot smelt smoke in the cockpit. This smoke started to increase in intensity, at which point the pilot immediately turned back to Proserpine Airport with the intention of abandoning the flight. When flames appeared out the sides of the engine cowling the pilot switched off the engine. Thick smoke then entered the cockpit and the pilot decided to eject the canopy to clear the smoke. However, when the pilot activated the release, the canopy slid back and locked partially open and did not leave the airframe. With heat building in the cockpit the pilot elected to land in the lake to extinguish the fire. The pilot noticed a ski boat and fishing boat on the water and decided to land in close proximity. He flew a glide approach with the undercarriage retracted with the view to touch-down in front of the boats. When close to the water and with flames coming over the firewall and into the cockpit, the pilot pushed the stick forward and nosed the glider into the lake. The fire was extinguished and the pilot was able to exit the glider, which stayed afloat even though the cockpit was full of water. Fishermen rescued the pilot from the water and towed the glider to the beach.

#### **Pilot Information**

The pilot had completed a GFA Annual Flight Review during April 2014 and had accumulated 540 hours/419 flights on the accident type. In the preceding 12 month period he had only flown 7 hours/5 flights, all of which were flown in the preceding 90 days.

#### **Aircraft information**

The AMT 200 Super Ximango is a two place side by side powered sailplane of T tail configuration and constructed predominantly of glass fibre sandwich, although some carbon fibre is used in the wing main spars.



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Spoilers are fitted to the wing upper surfaces but flaps are not fitted. The two main landing gear legs are located in the underside of the wings, forward of the C of G and are fully retractable, but the steerable tailwheel is not retractable. Power is supplied by a Rotax 912 A2 four cylinder four stroke engine of 69 Kw @5,500 rpm located at the front of the fuselage. Cylinders 1 & 3 are on the right, 2 & 4 are on the left, with No. 1 cylinder closest to the propeller flange. Cylinder firing order is 1,4,2,3. The engine is cooled using a combination of liquid cooling for the cylinder heads and air cooling for the cylinder barrels. The liquid cooling radiator is located behind and below the engine on the right side and there is an oil cooler fitted on the left side, opposite the radiator. Both the radiator and oil cooler are supplied with air from NACA ducts set into the sides of the engine cowlings and the air is exhausted via a common duct located centrally below the engine firewall. Cooling air for the barrels enters via a round duct of approx. 100 mm in the front cowl below and to the right of the propeller, and is ducted to the cylinder barrels by a close fitting fiberglass baffle across the top of the crankcase. There is an adjustable cowl flap for temperature control. The engine is extremely closely cowled and, to help keep temperatures down, the four exhaust pipes are lagged with an insulating material. Coolant hoses that run close to the exhausts are covered with fireproof sleeving to protect them from excessive heat. Engine lubrication is via a "dry sump" system. Engine oil is stored in a tank mounted behind the engine near the No. 4 cylinder and is supplied via an oil cooler to an engine driven pump located at the front of the engine, directly below the gearbox. From the pump it passes through a filter to the engine components via galleries in the crankcase, and to the cylinder head valve gear via hollow pushrods. Unlike most dry sump systems there is no scavenge pump. Oil is collected in the crankcase and the scavenging process is achieved by utilising combustion blow-by gases to pressurise the crankcase and force the oil back to the tank. Crankcase pressure under normal running conditions is nominally 3 to 5 psi. A crankcase breather is not fitted; any excess pressure is passed to the oil tank along with the scavenged oil where the gases are separated and vented via a breather pipe on the oil tank. An adjustable pitch Hoffmann HO-V62R-1/170FA tractor propeller is fitted. Three positions are available: fine pitch for take-off; coarse





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pitch for cruise; and full feather for minimum drag when soaring with the engine stopped. The propeller is operated manually by the pilot via a handle in the cockpit that is connected by Bowden cable to an actuating lever and yoke that moves a swash plate at the rear of the propeller hub. The fuel system comprises two 45 litre tanks selectable via a three position valve in the cockpit, a gascolator, an engine driven pump located on the front right corner of the engine, and two naturally aspirated Bing constant depression type carburettors located at each rear upper corner of the engine. There is also an electrically driven boost pump located in the central fuselage area. Fuel supply and return hoses on the engine side of the firewall are all protected by fireproof sleeving. The gascolator is fitted with a metal filter bowl and is located on the engine side of the firewall on the lower right side. Carburettor heat is not fitted on this aircraft, although there is a heat exchanger built into the muffler to supply cabin heat. Air supply for the heat exchanger enters via a horizontal duct below the spinner.

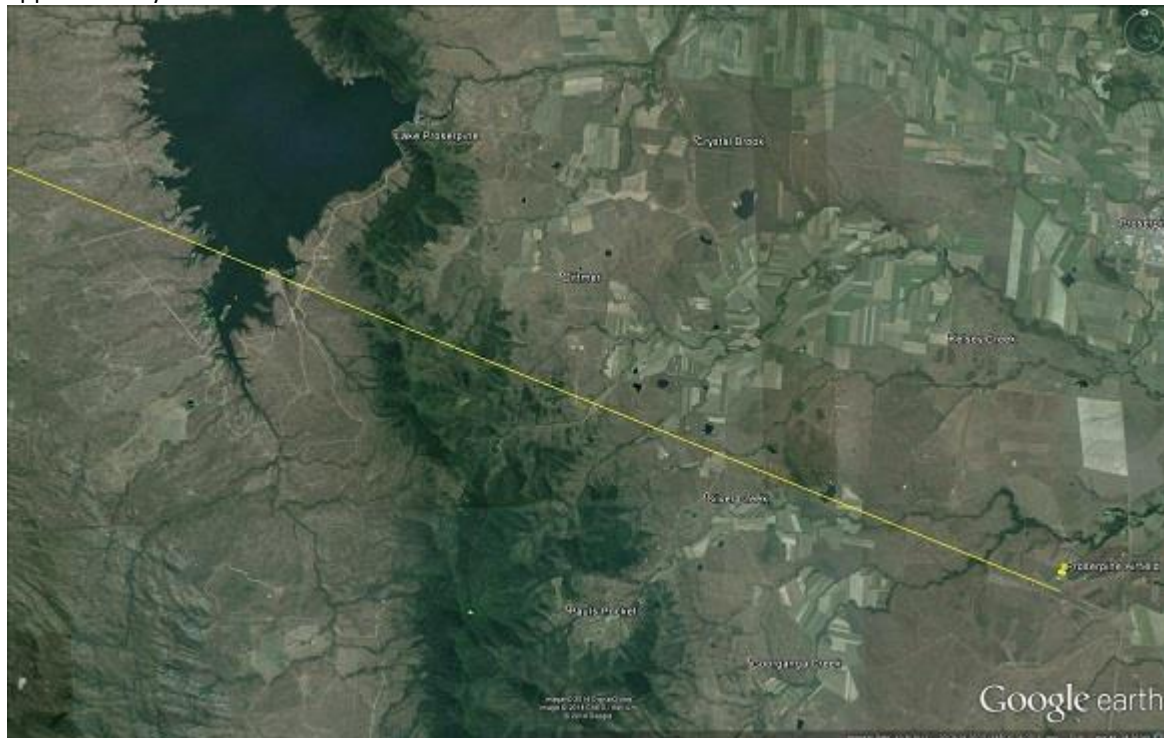
#### **Meteorology**

The weather at the time of the accident was good visual meteorological conditions (VMC) with an overcast sky. Cloud base was estimated to be 8,000ft and the wind was from the south-east between 5 and 10 knots.

#### **ANALYSIS**

##### **Flight**

The intended flight was from Proserpine (Whitsundays Airport) to Georgetown Airport to the North West and tracking directly over Lake Proserpine, Qld. On departure the aircraft climbed to 500 ft with the propeller in fine pitch, and the pilot then selected cruise pitch and continued a gentle cruise climb at approximately 80 knots.



At around 4,000ft and about 20 minutes into the flight, an unusual smell was noticed that was not initially considered a threat because the engine was operating normally; the smell being attributed to recently installed heat barrier lagging on the exhaust pipes. However the smell intensified and was soon accompanied by visible smoke from the cowling joints. With smoke building in the cockpit, the pilot operated the canopy ejection mechanism but the canopy merely retracted rearwards and jammed open. The pilot then shut down the engine that was still operating normally. Shutting down the engine had no appreciable effect on the fire, which by now had started to breach the cowling on the upper right rear where the oil tank inspection hatch is located. By this time the aircraft was crossing Lake Proserpine at about

4,000ft and because there was visible evidence of an engine fire the pilot elected to land in the lake (the pilot believed landing in one of the available cane fields was not an option due to the fire). The ignition and Master switches were turned off but the main fuel valve was not closed. Spoilers were deployed and the aircraft descended at around 80 knots. An attempt to feather the propeller was made but was unsuccessful as the fire had melted the alloy pitch operating lever at the left front of the engine, thereby rendering the pitch change mechanism inoperable and the propeller fixed in the coarse position. During the latter stages of the descent significant flames were being blown back across the canopy, mainly from the upper right side of the engine cowling and the canopy started to deform from the heat. The pilot was able to keep the flames away from himself by sideslipping the aircraft to port. Because of the failed pitch change mechanism the propeller continued to rotate by windmill effect, resulting in the oil pump and mechanical fuel pump continuing to operate up until the time of ditching in the lake. The pilot was able to exit the still burning aircraft without sustaining serious injury and extinguished the fire, but not before it had caused significant damage to the cockpit and instrument panel, which was totally consumed.

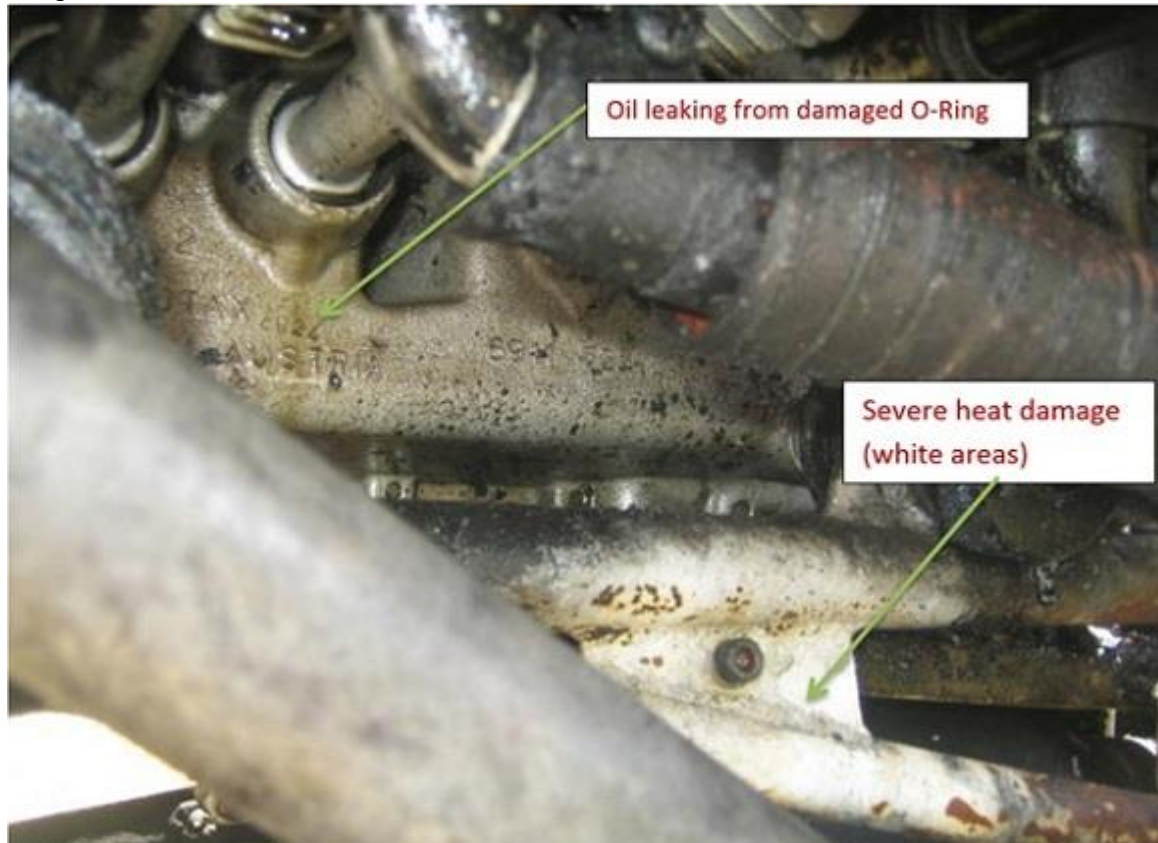
### **Engine**



Damage to the engine and its systems was extensive. The four coolant hoses exiting the cylinder heads terminate at a small steel header tank situated centrally above the crankcase and this area sustained the worst of the damage. The return pipe to the radiator is also connected to this header tank. All five of these hoses were badly burned, the worst being the No. 2 cylinder head hose, which was completely destroyed. Hoses from numbers 1, 3 & 4 cylinders were burned to ash at the ends connecting to the header tank but were still intact nearer to the cylinder heads. The header tank, although not melted, had been subject to extreme heat, especially on the rear left adjacent to the left carburettor. There was no evidence of coolant in any of the upper hoses or the tank. The ignition coil packs and wiring to the right of the tank were severely damaged, as was the battery that is located centrally on the upper firewall behind the engine. The four hoses beneath the engine supplying coolant to the heads fared better and still contained coolant. Fire sleeving had been applied to these hoses to shield them from radiant exhaust heat and this protected them;



although their condition suggested that they had not been exposed to severe flame. The front left engine mounting rubber was severely damaged by the fire but the remaining three were still in good condition, suggesting they had received only minimal exposure to flames. All fuel and oil line connections were checked for tightness and, although the fuel line threaded connections at the fuel pump, carburettors and firewall showed signs of some torque loss due to heat/flame exposure, all were deemed to have remained fuel and oil tight.



Despite severe exposure to heat and flame, especially visible on the fuel line fire sleeve where it crosses behind the gearbox, all the oil and fuel lines were intact and undamaged; the fire sleeving obviously performing its designed function. The remaining protective lagging was removed from each of the four exhaust pipes and the pipes examined for cracks or leaks but all were found to be in good condition. Likewise the muffler and all pipe joints were found to be sound. The lagging on numbers 2 & 4 pipes had been subject to flame, some of which had fallen away. The remainder was found to be very brittle and fell away when touched. The numbers 1 & 3 pipes had some lagging missing but was more intact and much less heat damaged. The oil pressure sensor, located at the front of the engine adjacent to the oil pump, was severely burned and was considered to be a potential oil leak source. However, upon removal and testing with compressed air to 80 psi the unit was found to have only the slightest air leak and was determined not to have contributed to the fire. The left carburettor had been involved in a very hot fire, with the fuel bowl melted and the air filter completely burned away. The rubber coupling between carburettor and intake manifold was also burned away. The safety retaining spring was still in place indicating that the carburettor had been properly located on the manifold prior to the fire. The float bowl retaining clip was also in its correct position, indicating that the float bowl was correctly installed. Although some of this fire impinged on the rear side of the coolant header tank and the upper left rear of the cowling the hottest area was below and to the rear of the carburettor. There was no fire at the right carburettor, although the right air filter was partially damaged. An examination of the electrical system, although badly burned with most of the insulation gone, revealed no sign of electrical fusion or overload. The spark plug attachments and ignition



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leads to cylinders 2 & 4 were almost completely burnt away but those to cylinders 1 & 3 were significantly less damaged. The entire lower surface of the crankcase, muffler and front end of the crankcase were coated with engine oil. A significant oil leak was identified where the No. 2 cylinder inlet pushrod tube enters the crankcase. The No 2 cylinder head was removed and revealed that about one-third of the pushrod tube sealing O-ring was missing. The oil return line was then removed from the base of the crankcase and the missing segment of the O-ring was found in the banjo bolt. Approximately 750 ml of engine oil and a small quantity of water was drained from the crankcase. Slightly less than one litre of oil was also drained from the oil tank. Given that the oil cooler and filter were still full it is estimated that around one litre of oil had been lost via the pushrod tube leak.

#### **Canopy**

The canopy is jettisoned by setting the red handles (on both sides of the canopy) to the "open" position and lifting up the canopy. The flight manual notes that at low speeds, near stalling speed, it is necessary to push canopy away from the aircraft using both hands. The canopy rotates up and back at the front on two struts when it is unlocked by the red handles. The struts are screwed to the fuselage and meant to break away if sufficient force occurs. The back of the canopy has a slide on which it slides back that is designed to allow the canopy to pivot at the rear and depart the aircraft without striking the tail in flight. The pilot advised that he had trouble opening the canopy and it is likely that it suffered sufficient heat deformation as to prevent it from breaking away in the airflow.

#### **Pilot**

The pilot was medically fit and qualified to undertake the flight but had only flown five flights for 7 hours in the last 12 months, all of which were undertaken in the accident aircraft in the previous 90 days following the aircraft's return to service. Upon determining the aircraft was on fire, the pilot conducted the emergency checklist from memory. The emergency checklist for an engine fire is as follows:

- Fuel selector valve - shut off.
  - Throttle - full power.
  - Magneto switch - turn off (after engine stops).
  - Master and alternator switches - turn off.
  - Air vents - closed
  - Lateral canopy windows – open
- The pilot recalled turning off the Master and alternator switches but the fuel selector valve was not shut. The pilot attempted to eject the canopy but it locked open. The pilot made a conscious decision to ditch the aircraft into Lake Proserpine in order to extinguish the flames. As recommended in the aircraft flight manual when landing on water, the pilot left the undercarriage retracted and attempted, unsuccessfully, to feather the propeller. The pilot suffered minor injury and smoke inhalation and was hospitalised for a short period.

#### **Aircraft**

The aircraft struck the water in a nose down attitude with the wheels retracted and the propeller windmilling. It suffered significant fire and water damage but stayed upright and afloat after coming to rest. The aircraft was maintained under the GFA system of maintenance. The Maintenance Release could not be located following the accident and may have been destroyed in the fire or was lost either when the canopy was opened or during the ditching sequence. Review of the aircraft logbook showed that, prior to the accident flight, it had a Total Time in Service (TTIS) of 992 hours for 812 landings and a total of 785.83 engine hours. The most recent Inspection for the issue of a maintenance release was performed and signed out on 16 August 2013 by a GFA Airworthiness Inspector. Due to low compression issues with the engine, issue of the Maintenance Release was to be deferred until after the cylinder heads had been overhauled. This work was duly completed by another GFA Airworthiness Inspector on 14 April 2014, at which time the Maintenance Release was to be issued.



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#### **FINDINGS**

Investigation indicates the fire started near the front left of the engine, fuelled from the oil and mist leaking from the No. 2 cylinder inlet pushrod tube. The oil was most likely ignited by the adjacent hot exhaust pipe. Flames and heat were sucked upward and diagonally across the top of the engine, exiting initially via the gaps in the cowling around the oil tank inspection hatch and where the cowling attaches to firewall. Initially this fire was not severe but it intensified once the rubber components ignited. The pitch change relay lever was melted away at its outer end where it would have been in a direct path of the fire as it swept up past the front of the No. 2 cylinder. The failure of this lever prevented the pilot feathering the propeller, which resulted in the continuing rotation of the engine. This led to a continual flow of oil mist and petrol to the fire via crankcase pressurisation and the mechanical fuel pump. The cause of the oil leak was determined to be the incorrect assembly of the No. 2 cylinder head. During the process of aligning the pushrod tubes and the crankcase, the inlet side O-ring slipped out of position on the pushrod tube and was sheared off between the end of the pushrod tube and the crankcase aperture, thereby resulting in about one-third of the pushrod tube diameter remaining unsealed. The aircraft had flown on four occasions since the cylinder head installation but during this time no oil leaks or loss had been detected. The operator advised that he always removed the engine cowls when performing his Daily Inspection and that no evidence of oil leakage had been detected, nor was there any evidence of oil on the floor of the hangar where the aircraft was parked. Oil level in the tank was checked at each Daily Inspection and no oil usage/loss was seen. It is unclear why the oil leak did not become evident until after four flights, as the potential for the leak existed from the moment the O-ring was damaged on assembly.





### CONCLUSIONS

1. The pilot was certified and qualified for the flight.
2. Records indicate that the aircraft was certified, equipped, and maintained in accordance with existing regulations and approved procedures.
3. O-ring failure the No. 2 cylinder inlet pushrod tube likely occurred as a result of inadequate engine maintenance procedures during re-assembly.
4. The fire started as a consequence of escaping oil at the damaged O-ring contacting the hot exhaust.
5. The pilot did not fully complete the emergency checklist and did not close the fuel selector valve, thereby allowing petrol to feed the fire when fuel lines were compromised.
6. Fire damage rendered the pitch change mechanism inoperable, thereby preventing the propeller from feathering.
7. The windmilling propeller resulted in the oil pump and mechanical fuel pump continuing to operate.
8. The pilot was unable to extinguish the fire.
9. The pilot elected to land in a lake to extinguish the fire rather than risk setting fire to a paddock.

### GFA COMMENT

There are both Airworthiness and Operational lessons to learn from this potentially fatal accident. The cause was a clearly identified maintenance error. This incident highlights:

- The importance of maintenance personnel ensuring faults such as this do not result, especially in circumstances where a fault cannot be seen once assembled. This was an avoidable defect but it is understandable how the error could occur. Working in a poorly lighted hangar and assembling a complex component with an inexperienced assistant may have contributed. The maintenance engineer was a very experienced and qualified GFA member. More care was required to avoid the fault and engineers must identify potential problems and compensate.
- The burning coolant hoses contributed significantly to the fire, which reduced the time in which to land and increased the fire risk to the occupant. They were of a standard design and GFA will consider recommending the use of fire resistant hose or fire sleeving on similar gliders (mandatory action is not considered necessary as the occurrence rate is very low).



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- Had the engine been shut down on first noticing smoke it is likely the propeller would have feathered and the pumping of oil and fuel reduced. This may also have reduced the flow of coolant that was feeding the fire and reducing its intensity.
- In this case the failure to close the fuel valve is not believed to have added significantly to the fire but in other cases this could have been a fatal error. More training and practice on emergency procedures will be implemented.
- Fire sleeving on fuel and oil hoses was effective and prevented release of fuel and oil from hoses so protected.
- The pilot elected early to conduct a precautionary landing and the decision to land in a lake to extinguish the fire was appropriate. While the pilot omitted to shut off the fuel selector valve, his decision making was otherwise sensible and appropriate. He remained calm and in control even though flames were around him, and was able to use his skills to keep the flames away from him by sideslipping.

The investigation of the failure was conducted by a highly experienced Aeronautical and Mechanical Engineer and retired Senior Technical Officer with GFA. The report has been reviewed by the GFA Airworthiness Department and recommendations for airworthiness made as given above.

Date	30-Sep-2014	Region	GQ		SOAR Report Nbr	S-0413	
Level 1	Operational		Level 2	Airframe		Level 3	Doors/Canopies
A/C Model 1		AMT-200 S			A/C Model 2		
Injury	Nil	Damage	Minor	Phase	Launch	PIC Age	63
During the launch of this motor glider the canopy opened and detached from the aircraft. The pilot successfully aborted the take-off. The pilot advised that he omitted to lock the canopy during his pre take-off checks.							

Date	3-Oct-2014	Region	NSWGA		SOAR Report Nbr	S-0420	
Level 1	Airspace		Level 2	Aircraft Separation		Level 3	Near collision
A/C Model 1		ASH 25 M			A/C Model 2		Piper PA-30 Twin Comanche
Injury	Nil	Damage	Nil	Phase	In-Flight	PIC Age	76

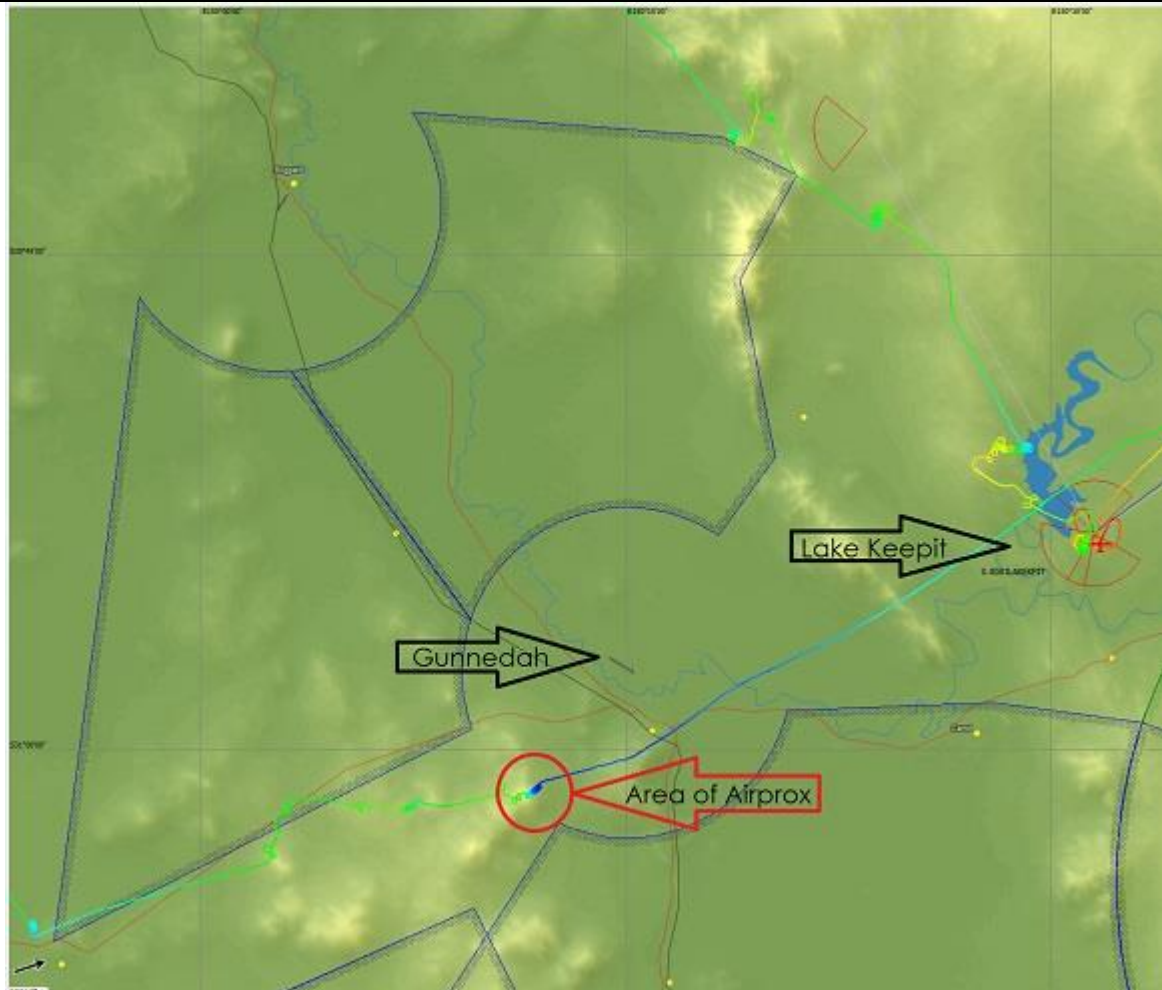
#### GFA FIELD INVESTIGATION - WHAT HAPPENED

On 3 October 2014 a Twin Comanche aircraft being flown by a pilot under the supervision of an instructor and accompanied by a passenger was conducting instrument approaches into Gunnedah aerodrome, including a missed approach exercise. The hood was not being used. At about 15:15 and after a missed approach, they climbed to 2,000ft and turned right, which took them to the location of the circling glider at about 4,000ft. The Twin Comanche pilot, who was monitoring the Gunnedah CTAF 127.4 MHz, stated his aircraft came within 20 metres of a sailplane. The Twin Comanche crew had not observed the glider circling until the near miss occurred. The Twin Comanche pilot was unable to contact the sailplane on the Gunnedah CTAF but did so on the Lake Keepit CTAF of 122.7 MHz. The ASH-25 powered sailplane involved in this incident was conducting a 160NM cross-country gliding flight (engine off) from Lake Keepit NSW to Narrabri NSW to Mullaly NSW and then returning to Lake Keepit. The flight log of the sailplane shows that at 15:00 it was at 4,000ft AMSL about 5NM South West of Gunnedah Airfield, NSW. At 15:15 it had descended to 3,600ft approximately 3NM from Gunnedah aerodrome, where it commenced to thermal in order to gain height for the return trip to Lake Keepit, approximately 20NM away. By 15:21 the sailplane had climbed to 6,700ft in the same location. From this altitude the glider tracked direct to Lake Keepit. The glider pilots said that the first time they observed the Twin Comanche was when it was on approach to Gunnedah aerodrome whilst they were at 6,000 feet. The sailplane pilots was on the Lake Keepit CTAF 122.7 MHz and listening out on the area frequency of 127.1 MHz. The sailplane pilot believed that, given his heights, he was not likely to be in conflict with Gunnedah aerodrome operations and therefore was not monitoring the Gunnedah CTAF.



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#### **GFA COMMENT**

When operating outside controlled airspace, it is the pilot's responsibility to maintain separation with other aircraft. For this, it is important that pilots utilise both alerted and unalerted see-and-avoid principles. Pilots should never assume that an absence of traffic broadcasts means an absence of traffic.

Unalerted see-and-avoid relies entirely on the ability of the pilot to sight other aircraft. A traffic search in the absence of traffic information is less likely to be successful than a search where traffic information has been provided because knowing where to look greatly increases the chance of sighting the traffic.

This incident highlights the importance of broadcasting radio calls to alert pilots and assist in see-and-avoid practices. It also serves as a reminder to keep a good lookout for other aircraft, particularly around non-controlled aerodromes.

#### **SAFETY ACTIONS**

1. The Chief Flying Instructor of the Gliding Club met with his counterpart at the flight training school in Tamworth and all parties have a better understanding of each other's operations.
2. The Gliding Club has reinforced to their members the importance of being on the correct frequencies to facilitate alerted-see-and-avoid.

#### **REFERENCES**

- Civil Aviation Advisory Publication 166-1(3) – Operations in the vicinity of non-controlled aerodromes.



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- Civil Aviation Advisory Publication 166-2(1) – Pilots' responsibility for collision avoidance in the vicinity of non-controlled aerodromes using 'see-and-avoid'.
- Limitations of the see-and-avoid principle (1991).
- A pilot's guide to staying safe in the vicinity of non-towered aerodromes (AR-2008-004(2)).

Date	4-Oct-2014	Region	SAGA		SOAR Report Nbr		S-0419	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Airframe overspeed	
A/C Model 1		ASW 27-18			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	In-Flight		PIC Age	47
At about 1400 ACST, during the test flight following completion of the annual inspection, the glider was subjected to gust loads during a high-speed run that resulted in delamination of the port wing leading edge. The pilot advised that during a run near Vne (137 knots), the glider flew through turbulent air. The Glider's Type Certificate notes that the maximum rough airspeed (Vra) is 116 knots. Investigation revealed a latent manufacturing defect may also have contributed. Pilots undertaking test flights after maintenance must ensure the aircraft is flown within the manufacturer's specifications, and that Vra should not be exceeded unless in smooth air.								

Date	6-Oct-2014	Region	NSWGA	SOAR Report Nbr	S-0414			
Level 1	Technical		Level 2	Powerplant/Propulsion		Level 3	Abnormal Engine Indications	
A/C Model 1		H-36 Dimona			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age	59
<p>During the latter part of the take-off run and then into early climb of this training flight the pilot in command noticed that normal power was not being developed and that the climb rate, although positive, was compromised. The command pilot took control and, after assessing options, made a left-hand turn to remain within the airfield boundary and over landable terrain. The command pilot continued the turn onto an oblique crosswind and late downwind join, and completed an uneventful landing. After landing the command pilot identified the propeller had been in cruise pitch instead of fine pitch required for take-off. Causal Factors include inadequate confirmation of appropriate prop pitch setting during pre landing checks; failure to carry out static run up check during pre take-off checks due expediency; and acceptance of rough centre section of runway for take-off run that led to handling issues (PIO) distracted from engine monitoring. The command pilot noted that recent club exercises on simulated engine failure after take-off proved invaluable in this situation.</p>								

Date	17-Oct-2014	Region	GQ	SOAR Report Nbr		S-0421	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Wirestrike
A/C Model 1		ASW 20			A/C Model 2		
Injury	Minor	Damage	Substantial	Phase	Outlanding	PIC Age	39
<b>GFA FIELD INVESTIGATION - FACTUAL INFORMATION</b>							
At about 1604 Eastern Standard Time on 17 October 2014, while on the final leg of a 416Km cross-country racing task, the aircraft experienced a high rate of descent necessitating the pilot to abandon the flight and conduct an outlanding. As the pilot approached the selected landing paddock it became obvious that the surface was unsuitable for landing. During low level manoeuvres to land in another paddock further ahead, the aircraft flew into power lines and cartwheeled to the ground. The pilot suffered minor abrasions and the aircraft was substantially damaged. The broken power line ignited a small grass fire that was extinguished by emergency services.							
<b>Flight data recorder</b>							



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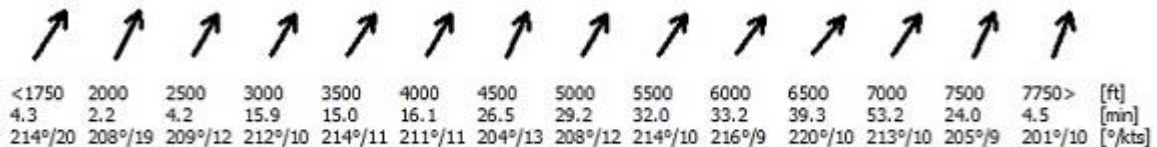
### Accident and Incident Summaries

The pilot carried an LxNav Nano3 flight recorder with an integrated 56-channel GPS receiver and antenna. A valid log was downloaded from the device for analysis.

#### Meteorology

The weather at the time of the accident was good visual meteorological conditions (VMC), with blue skies and strong climbs to 8,400ft AMSL. The wind was from 214o at 20 knots at ground level.

##### Wind



*Wind profile with height. Taken from GPS flight recorder.*

#### ANALYSIS

##### Flight

The accident flight was on the final day of the 34th Australian Club and Sports Class National Gliding Championships. Going into this flight, the pilot was leading the Club Class after eight competition days. The final day's task was an Assigned Area Task with a 3.5 hour task time, comprising three cylinders – two of 30km radius and one of 20km radius. Task length varied between 296km and 545km, subject to where the pilot flew within the assigned areas. Weather conditions were fine and a peak temperature of 29.5o C was recorded at the Goondiwindi Airport during the mid-afternoon. The pilot launched at 11:09 and went through the start line at 12:20. The pilot flew 126km down the first leg at 101kph to a position south of Mungindi, turning northwards at 13:43 at 4,200ft AMSL. The pilot was working a height band of between 4,400ft and 8,000ft, with a low point of 3,600ft. The pilot experienced similar conditions along the second leg and worked the same height bands. At 14:41 the pilot turned the second turnpoint at 4,100ft well inside the assigned area, and headed East towards the final turnpoint. During the second leg he had covered 126km at a speed of nearly 130kph. Conditions on the third leg were not as good as earlier and the pilot found himself working to below 3,000ft on at least three occasions. The climbs were not strong and the speed for this leg was down to 90kph after a further 110km, which prompted the pilot to turn for home as soon as he entered the assigned area, with a further 40kms back to the airport. During the final run home the pilot did not find any significant climbs but believed he had sufficient height to successfully glide home. However, when about 15kms from the finish line (18kms from the airport) the aircraft was down to 2,500ft AGL. The aircraft continued to fly through descending air and approximately 6kms from the finish line the aircraft was at 800ft AGL, at which time the pilot flew through some reduced sink. The pilot slowed the aircraft down and gained about 200ft as a result but after one and a half turns elected to continue the flight towards a paddock about 3-4 kms in the distance.





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*The paddock in which the pilot intended to land is circled.*

The pilot arrived at his intended landing paddock at about 400ft AGL but realised the paddock was unsuitable. The pilot spotted an alternative small paddock some two kilometres further that he thought he would be able to reach but the glider continued to fly through descending air. The pilot flew the aircraft to very low level and initiated a pull-up over trees in order to land off a straight-in approach in the alternative paddock. After clearing the trees and while positioning for a landing, the glider's starboard wing struck a power line that the pilot had not sighted and the glider cartwheeled into the paddock tail first.



*Close-up of the Power pole showing broken line.*

#### **Pilot**

The pilot was medically fit and qualified to undertake the flight. Fatigue and stress were evaluated as potential factors but analysis was inconclusive. While the pilot had been airborne that day for just over five hours, he did not believe he was fatigued. Notwithstanding, both cross-country soaring and competition flying are stressors, where high workload and the pressure to win can lead to impaired decision making and



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reduced situational awareness. The pilot may have been susceptible to fixation and cognitive tunnelling in these circumstances.

#### **Aircraft**

The aircraft struck the power line with the right wing, midway between the fuselage and the airbrakes. This resulted in the aircraft turning through 180 degrees and impacting the ground tail-first, and then the fuselage taking an impact. This accident geometry led to the pilot suffering only minor injury.



#### **CONCLUSIONS**

1. The command pilot was appropriately qualified and medically fit for the flight.
2. The aircraft had a valid Maintenance Release and had been maintained in accordance with relevant requirements.
3. The command pilot was operating in a high workload environment, and towards the end of the flight adopted a high risk flight profile that eroded safety margins.
4. The aircraft struck power lines during an outlanding into an alternative paddock.
5. The profile of the aircraft flight path during the last few minutes made identification of the power lines difficult.
6. The aircraft was capable of normal operation up until the time of impact with the wires.

#### **GFA COMMENT**

A common reason for outlanding accidents is the pilot not accepting soon enough that an outlanding is likely, and not prioritising the available height to allow them to fly to a good safe area. Pressing on with the flight in the hope that that all will be well is fraught with danger. 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 landing can be accomplished. In power flying this is called a 'precautionary search' and is commenced from no lower than 500ft AGL, although in gliding one must obviously start a lot higher. Guidance on conducting precautionary searches for outlanding can be found on page 78 of the GFA Basic Gliding Knowledge book. When flying cross-country it is important that pilots plan and think ahead so that they are always in a position to make a safe landing. At low levels a pilot's priority will change from searching for lift to finding a suitable area in which to land. This requires good flight management and discipline because flying at low level is unsafe:



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- there are more obstacles to avoid, many of which are hard to see until it is too late (e.g. power lines and birds);
- pilots have a higher workload because there are more hazards to negotiate in the environment;
- there may be turbulence and wind shear that pilots do not encounter at higher levels; and
- there is very little time to recover control of the aircraft if something goes wrong (e.g. consider a low level spin).

For competition pilots the race to the finish is a high workload and dynamic situation. In such circumstances, being near the ground at a height where it is not possible to assess and check an available landing paddock is a high risk situation that must be avoided. Human factors including decision biases, goal fixation and cognitive tunnelling in competition may lead to pilots eroding safety margins more than in normal non-competition flying. Being aware of the dangers of continuing into marginal circumstances, setting boundaries, having a sound knowledge of rules and procedures, disciplined adherence to minima and performance requirements, prioritisation of options, and planning to deal with potential situations will act as defences against unsafe conditions.

### SAFETY RECOMMENDATIONS

#### Chief Flying Instructor

1. All competition pilots should reconnoitre a 10 km circle around the aerodrome so as to be aware of suitable landing fields and obstacle should a competition finish not result in enough energy to make the airfield.
2. All Competition Directors should aim to have the desired final glide offer the safest arrival possible, this include moving the Soak sector in AAT's far enough away to avoid a wide convergence angle over unsuitable terrain.
3. GFA should consider removing all zero height competition finishes unless the final glide track is over suitable outlanding fields on the inbound track within a 10km radius of the airfield

#### Competition Safety Officer

- The sports committee investigate whether mandatory finish heights at competitions would reduce the risk of marginal final glides. International competition rules allow this.

### GFA RESPONSE

The Safety recommendations have been referred to the GFA Sports Department for consideration. The Sports Department is already considering the setting of a minimum finish height at competitions and is looking to implement an education program focussing on human factors and risk management for competition pilots.

### REFERENCES

- GFA Publication Basic Gliding Knowledge
- GFA Publication Human Factors for Gliding
- GFA Operational Safety Bulletin OSB 01/14 - Circuit and Landing advice
- CASA Website - Precautionary Search and Landing
- ATSB Document - Wire-strike Accidents in General Aviation

Date	17-Oct-2014	Region	GQ	SOAR Report Nbr	S-0422
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Blanik L13			A/C Model 2	
Injury	Minor	Damage	Substantial	Phase	Outlanding
				PIC Age	81
While flying between cloud streets, the aircraft flew through heavy sink and the pilot in command elected to return the 8NM to the airfield. The aircraft continued to lose height and the command pilot made a late decision to outland in a paddock about half a mile to the east. Losing height rapidly, the command pilot realised the glider would not reach the selected paddock and an alternative site was chosen. The alternate site was a levelled gravel pit with a 15ft high earth embankment along its eastern edge. The command pilot					





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decided to land from the east due to trees on the western approach but flew too wide a circuit for the conditions. During final approach the glider began to undershoot and it became apparent that the aircraft would not clear the 15ft embankment. The command pilot stalled the glider into the embankment causing significant damage to the glider and minor injury to the two occupants. The command pilot's CFI noted the alternative landing area was unsuitable but suitable landing areas were within reach. Poor situational awareness and stress resulted in impaired decision making processes. When landing in a strange paddock the pilot must ensure a proper survey is undertaken of the landing area so as to identify all hazards and ensure a safe landing can be accomplished. Guidance on conducting precautionary searches for outlanding can be found on page 78 of the GFA Basic Gliding Knowledge book. When flying cross-country it is important that pilots plan and think ahead so that they are always in a position to make a safe landing. At lower levels a pilot's priority will change from searching for lift to finding a suitable area in which to land. This requires good flight management and discipline.





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Date	1-Nov-2014	Region	GQ	SOAR Report Nbr	S-0425
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Discus a			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	53
<p>The pilot was experienced but had flown little in the past 12 months. While legally current, the pilot was out of practice. During a landing in turbulent conditions, a strong wind gust from the right lifted the starboard wing resulting in the port wing dropping into grass. The glider ground-looped to the left, turning through 135 degrees before coming to rest. The pilot was unhurt and the aircraft suffered minor damage. The pilot noted that while the take-off area had been mown, other areas of airfield had long grass about knee high. The Club's CFI noted that the airfield operator had not mown the grass due to fire restrictions but that large areas of the airfield were mowed and the bitumen runway was in serviceable condition. Causal factors include low recency, lack of situational awareness, unfavourable meteorological conditions and long grass adjacent to the selected landing area. This incident highlights the difference between currency and proficiency. Currency simply refers to being up to date or occurring within a recent period of time. Proficiency, by definition, means performing a given task to a required standard with a high degree of skill. Therefore, being current in a particular task does not necessarily imply proficiency at that task. This accident also highlights the hazards of operating on airfields that have not been adequately maintained.</p>					

Date	2-Nov-2014	Region	VSA	SOAR Report Nbr	S-0423
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Eurofox 2K			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	53
<p><b>GFA FIELD INVESTIGATION - FACTUAL INFORMATION</b></p> <p>On 2 November 2014, the pilot of a RA-Aus registered Eurofox 2K was conducting glider towing operations at the Bendigo Gliding Club's airfield at Raywood, Vic. The pilot commenced his third launch at 1110, towing a LS8 single-seat glider to about 1800ft AGL. Following the glider's release, the pilot joined circuit for a landing on runway 18. The pilot then conducted a normal stabilised approach and both wheels touched down at the pilot's selected point. The aircraft bounced slightly at touchdown coincident with a gust of wind from the right. The starboard wing of the aircraft lifted and the aircraft started to veer to the left towards the airfield boundary fence. The pilot could not correct the swing with control inputs and elected to conduct a go-around. He applied full power and the aircraft became airborne but the wheels impacted the wire fence. The drag of the fence pulled the aircraft to the ground and the aircraft came to rest on its nose facing north. The aircraft was substantially damaged and the pilot was uninjured.</p> <p><b>Pilot Information</b></p> <p>The command pilot was medically fit, was in current flying practice, and was endorsed for glider towing. He completed his Aircraft Flight Review on 30 August 2014. Most of his flying experience has been in sailplanes (345 hours), and he had 75 hours in ultralight aircraft of which 15 hours and 92 landings were in the Eurofox.</p> <p><b>Aircraft information</b></p> <p>The aircraft had a current maintenance release and the pilot confirmed the aircraft was airworthy up until the collision with the fence.</p>					





## The Gliding Federation of Australia Inc

### *Accident and Incident Summaries*



#### **Meteorology**

The weather at the time of the accident was good visual meteorological conditions (VMC). Weather observations from nearby Bendigo Airport were:

Time	Wind Direction	Wind Speed kts	Wind Gust kts
Sun 11:00 EDT	SSW	11	15
Sun 11:30 EDT	SW	12	21

The GPS based flight recorder log from the glider that was launched records the average wind to be from 213o at 16 knots at ground level during the launch phase. Witnesses noted the wind to be about 10 knots with strong gusts to 20 knots at the time of the accident.

#### **ANALYSIS**

##### **Flight**

During the final approach onto runway 18 the pilot established himself on an aiming point displaced about 500 metres from the runway threshold in order to overfly at a safe height gliders lined-up and awaiting launch. There were a number of gliders taxiing along the western edge of the runway during the landing, so the aircraft was aligned to the left of the runway centreline. The runway's length of 1,400 metres and width of 120 metres provided sufficient margin for a safe landing.



Witnesses observed the aircraft on a stabilised approach, crabbing slightly into wind to maintain runway heading. The aircraft was observed to touch down normally on both main wheels and bounce, at which time it was subjected to a wind gust from the right of around 20 knots. The wind lifted the starboard wing and the starboard wheel left the ground. The pilot applied right-hand aileron and rudder control but was unable to maintain the runway heading and the aircraft started to veer to the left towards the airfield boundary fence some 25 to 30 metres away. The pilot made a decision to conduct a go-around and opened the throttle fully. The aircraft continued to veer to the left and just as the aircraft became airborne the wheels struck the wire and picket fence. As the aircraft broke through the fence it was slowed and pulled towards the ground while rotating to the left. The left wheel broke off at impact, the right wingtip was damaged by contact with the ground, the composite propeller struck the ground and shattered, and the aircraft came to rest on its nose facing north. The pilot switched off the fuel and electrics and disembarked the aircraft without injury. The maximum crosswind component of the Eurofox aircraft is 15 knots. Calculations indicate that the gust loading may have been near the designed maximum, thereby making control difficult.

<b>Runway Heading (Magnetic)</b>	180°	180°	180°	180°
<b>Wind Direction (True)</b>	200°	210°	220°	230°
<b>Wind Speed (knots)</b>	20	20	20	20
<b>Crosswind Component</b>	7	10	13	15
<b>Head wind component</b>	19	17	15	13

Table 1. Wind Component Calculations

Another possible causal factor is torque effect. The propeller spins clockwise from the cockpit, so the effect of opening the throttle and commanding more power would be for the forces to act towards the left, thereby exacerbating the aircraft's turning to the left. Gyroscopic and asymmetric blade effects may have also contributed.



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#### **Gliding Operation**

The Glider pilots held a briefing during the morning and the first launches were scheduled for 1130. The pilots were asked to marshal their gliders at the launch point prior to launching commencing. A number of glider pilots sought to take advantage of an earlier start and were positioned at the launch point well ahead of schedule. These pilots convinced the tow pilot to commence towing operations before all the gliders had reached the launch point. The tow pilot agreed but when he came into land on the last tow the right-hand (western) side of the runway was occupied by a number of gliders taxiing to the launch point. As a consequence, the width of the operational runway was reduced by nearly one-third.

#### **Pilot**

The pilot was medically fit and qualified to undertake the flight. The pilot's aeronautical experience was predominantly flying aircraft with the right-hand on the control column and using the left-hand for auxiliary controls or throttle. The investigation considered the ergonomics of the pilot flying left-handed in the Eurofox, using his right-hand for throttle. The pilot did not recall this being a factor and advised that his employment as an earthmoving contractor requires him to regularly move between machines with conflicting control configurations. The different control configuration is not considered to have contributed to this incident. The pilot also advised that he felt under pressure before the launch as a number of pilots were looking for launches before the scheduled launch time and that he had limited support on the flight line.





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*Instrument panel showing control stick and centre throttle.*

#### CONCLUSIONS

1. The command pilot was appropriately qualified and medically fit for the flight.
2. The aircraft had a valid Maintenance Release and had been maintained in accordance with relevant requirements.
3. The aircraft encountered a strong crosswind gust on touchdown.
4. The crosswind gust, coupled with torque and asymmetric blade effects resulted in an uncontrollable runway excursion to the left and collision with terrain.
5. The aircraft was capable of normal operation up until the time of impact with the wires.

Date	2-Nov-2014	Region	VSA	SOAR Report Nbr	S-0424
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion
A/C Model 1	DG-400			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	55

Upon returning to the airfield after a 3 hour local soaring flight, the pilot noticed the runway was being used by several paragliders undertaking ground handling training. The pilot flew two circles directly overhead to alert the paragliders of his presence and then made a radio call advising joining downwind for RWY 18. While on the downwind leg the pilot noticed a white car enter the airfield that belonged to the Airfield Reporting Officer (ARO). The ARO organised for the runway to be vacated and the glider completed a normal landing. Investigation revealed the ARO had heard the glider pilot's circuit calls and drove down to the paragliding operation to have them clear the runway. It transpired the paragliding operation was not monitoring the CTAF as the Operator had left his VHF radio at home. The HGFA and airport operator were advised.



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Date	4-Nov-2014	Region	GQ		SOAR Report Nbr		S-0431	
Level 1	Operational		Level 2	Runway Events		Level 3	Runway excursion	
A/C Model 1		Discus 2B			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	55
The pilot intended to fly a 500km FAI task and had loaded 100 kilograms of water ballast. The aircraft was aerotowed to a height of 2,800ft AGL, with the pilot releasing in a thermal. The pilot made the decision to immediately fly through the start line with the intention of getting a climb on track. However, no further thermals were found and the decision was made to return to the airfield. The pilot did not dump the water ballast and experienced difficulty lowering the undercarriage. The pilot flew a high speed and cramped circuit, and during the turn from downwind onto final (there was no base leg) the wing dropped and the nose pitched down indicating a stalled condition. The pilot recovered to straight and level flight and flew the final approach at 80 knots with the intention of landing long. The aircraft touched down at high speed and the pilot deliberately ground-looped the aircraft to avoid parked gliders and the boundary fence. The aircraft suffered minor damage. Casual factors include stress and high workload leading to impaired decision making.								

Date	4-Nov-2014	Region	NSWGA		SOAR Report Nbr		S-0481	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		LS 7-WL			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Outlanding	PIC Age	51	
<p>The low hours pilot was flying in a coaching event that was inadequately organised and supervised. The pilot succumbed to peer pressure to fly cross-country when lacking currency and outlanding practice. During the flight an outlanding became inevitable. The pilot set up a circuit but experienced difficulty lowering the undercarriage. An approach was made into a stubble paddock and the glider touched down in the first third of the available length. The pilot then applied the wheel brake but was unable to stop the aircraft in the length of the paddock and initiated a ground loop to avoid the boundary fence. One wingtip impacted the ground resulting in severe damage but the pilot was unhurt. This incident highlights the importance of proper supervision and planning of events organised for low hours pilots. In this case the two instructors/coaches were supporting several pilots of varying ability from ab-initio to cross-country rated. Their workload was too high and they were unable to devote sufficient attention to the needs of the many pilots under their charge. Organisers must ensure there is a proper ratio of instructors/coaches to participants and that the tasks assigned match the skill levels of the participants.</p>								

Date	7-Nov-2014	Region	GQ		SOAR Report Nbr		S-0432	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Hard landing	
A/C Model 1		Discus 2B			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Landing	PIC Age	55	
Pilot returned from a four hour cross-country flight and commenced a long final approach with an 8 to 10 knot crosswind component. Following a stabilised approach and during the round out and flare, the aircraft flew through some moderate turbulence and ballooned. The glider then experienced a high rate of sink and impacted the ground heavily with the airbrakes still deployed. The aircraft was substantially damaged. Causal factors include fatigue, high workload, and inappropriate response to pitch during the flare and hold off.								

Date	8-Nov-2014	Region	SAGA	SOAR Report Nbr	S-0429
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Ground strike
A/C Model 1	Grob G 109			A/C Model 2	





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Injury	Nil	Damage	Substantial	Phase	Landing	PIC Age	45
The motor glider was flying the final approach with the engine idling as it was intended to do a 'touch and go'. The instructor took over during a mishandled approach and flare but was too late to prevent the aircraft landing heavily. The propeller struck the ground causing substantial damage.							

Date	9-Nov-2014	Region	NSWGA		SOAR Report Nbr		S-0428	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		LS 1-f			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	73
This experienced pilot advised that he failed to retract the undercarriage during his post-release check, and then retracted it during the pre-landing check. A visual inspection to confirm the undercarriage was in the down position was not made. 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	10-Nov-2014	Region	NSWGA		SOAR Report Nbr		S-0489	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		LAK 19			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Outlanding		PIC Age	67
The pilot had been airborne for 5.5 hours and had completed 202kms of a 220km task. Conditions deteriorated towards the end of the flight and the pilot elected to conduct an outlanding. The pilot landed in a paddock containing a mature crop, and during the flare a wing caught in the crop causing the glider to ground loop and turn through 180 degrees. The aircraft suffered minor damage and the pilot was uninjured. The pilot advised that despite flying a precautionary search of the paddock before landing, he mistook an unharvested crop for stubble.								

Date	13-Nov-2014	Region	NSWGA		SOAR Report Nbr		S-0436	
Level 1	Operational		Level 2	Flight Preparation/Navigation		Level 3	Aircraft preparation	
A/C Model 1		Piper PA-25-235/A2			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	65
During launch and at about 200'AGL the tow pilot noticed the right hand engine cowl was unlatched and raised about 10 cm. The tow pilot reduced power slightly and used the radio to advise traffic of the problem and that he would be returning to land on the cross runway. The tow pilot continued to climb to allow the glider pilot sufficient height to return to the aerodrome and the glider pilot released at 400ft AGL. A safe landing was completed by both the tow plane and glider. The tow pilot reported that at the start of the day's operations he had difficulty starting the engine due to a sticking throttle and a jammed mixture control. The tow pilot exited the aircraft and with assistance managed to remedy the problems. Another pre-flight inspection was undertaken, including a visual check of the cowling, but the pilot did not notice the right-hand cowl was unlocked. The tow pilot advised that while he was under pressure to get to the launch point, he was aware of the risks of rushing his checks, which is why he did a further 'walk around' inspection.								

Date	13-Nov-2014	Region	NSWGA	SOAR Report Nbr	S-0438
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Aircraft preparation
A/C Model 1	JS1 B		A/C Model 2		



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## Accident and Incident Summaries

Injury	Nil	Damage	Nil	Phase	Launch	PIC Age	74
Experienced pilot launched with the tail dolly still attached to the glider. The pilot was distracted by a news camera crew photographing launching gliders and omitted to complete the pre-boarding checks. It appears the launch crew were similarly distracted. During the launch the Duty pilot noticed the problem and advised the pilot by radio. The glider pilot instructed the tow pilot to complete a circuit and position the glider on final approach. A safe landing was completed. This incident highlights the importance of pilots performing their checks without interruption or distraction. Launch point discipline and hygiene is vital; distractions must be avoided and onlookers kept out of the way.							

Date	15-Nov-2014	Region	GQ		SOAR Report Nbr		S-0433	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Control issues	
A/C Model 1		ASK-21			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	50
During an Air Experience Flight the student stored a camera in a well that formed in the boot of the of the control column, thereby restricting forward elevator travel. Fortunately, the flight was completed without incident and the pilot did not report any control difficulty. This incident serves as a reminder to ensure passengers and students are fully briefed on where objects such as phones and cameras should be placed to avoid interfering with the controls or becoming loose objects in turbulence. Airworthiness Inspectors should also ensure control column boots are properly fitted to ensure objects cannot interfere with control movements.								

Date	15-Nov-2014	Region	WAGA		SOAR Report Nbr		S-0434	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		Nimbus 2			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing	PIC Age	54	
During a marginal final glide the aircraft flew through sink and undershot the runway, landing through crop resulting in minor damage. The pilot had recently acquired the aircraft and was somewhat overconfident in the glider's performance capability. In addition, the final glide computer that the pilot was monitoring had a zero finish height set. Potential causal factors include unfamiliarity with aircraft and systems, high workload, and optimism bias. Cross-country pilots must remain alert to the risks of undershooting and should not persist with marginal final glides into unlandable areas.								

Date	18-Nov-2014	Region	SAGA		SOAR Report Nbr		S-0435	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		LS 4			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Outlanding		PIC Age	77
The pilot was distracted by instrument problems just after release from tow and, while trouble-shooting, the aircraft continued to descend towards the ground. The pilot eventually recognised he was low and made a late decision to outland at too low a height to conduct a circuit. The pilot landed well into the paddock and, despite initiating a ground loop to avoid the boundary fence, the port wing collided with the fence causing damage to the leading edge. This incident highlights the dangers of not looking out and maintaining situational awareness. In this case a safer course of action would have been to land back on the airfield immediately post launch to remedy the issue on the ground.								

Date	19-Nov-2014	Region	NSWGA	SOAR Report Nbr	S-0446
Level 1	Operational	Level 2	Aircraft Control	Level 3	Control issues



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A/C Model 1		Pik 20B		A/C Model 2		IMCA A-9A Callair	
Injury	Nil	Damage	Nil	Phase	In-Flight	PIC Age	63
<p>During a cross-country flight the glider pilot experienced deteriorating conditions and landed at a regional airport several miles from the gliding club site. The pilot arranged for an aerotow retrieve and the tow plane was duly dispatched. The tow plane arrived with a short rope used for paddock retrieves and the glider pilot elected to take-off unassisted (i.e. wing down). The glider pilot found the initial acceleration to be slow and it took a while for the wings to come level. The glider then conducted a series of oscillations in pitch down the runway before becoming airborne. During the return flight the glider pilot continued to have difficulty staying in station and maintaining tension in the tow rope. The tow pilot had an uncomfortable time due to the glider's constant excursions during the tow. The glider pilot elected to release from tow at a higher height than required for the glide home to recover from the stresses of the tow and a normal landing ensued. Investigation determined that the short aerotow rope coupled with the glider's CG release may have amplified pilot control inputs. The glider pilot had limited recent experience after taking a break from flying and the tow pilot was inexperienced on type. The pitch sensitivity of the towing combination, the lack of familiarity, and lack of recency allowed the combination to get into a oscillation in pitch and speed which was very difficult to stop.</p>							

Date	20-Nov-2014	Region	NSWGA		SOAR Report Nbr		S-0437
Level 1	Operational	Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		ASW 20B		A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Outlanding	PIC Age	60
<p>During an outlanding and while on final approach, the pilot mistook the undercarriage lever for the airbrake handle. The aircraft landed well into the paddock with the wheel retracted. The pilot ground-looped the aircraft 90 degrees to avoid trees and the boundary fence, causing significant damage but no injury. The commercial pilot has limited gliding experience and did not identify the controls during the base leg.</p>							

Date	22-Nov-2014	Region	VSA		SOAR Report Nbr		S-0452
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	Minor	Phase	Outlanding	PIC Age	39
<p>A low experience solo pilot flying in a 20 knot and gusting wind realised he would not make the airfield after turning onto the base leg of his circuit. The pilot immediately angled towards the airfield but forward progress was retarded by the strong headwind. When at around 400ft AGL the pilot realised he would not make the airfield and he elected to land in a paddock. The pilot lowered the nose to maintain airspeed to his intended paddock then pulled up over the boundary fence, passed under unidentified power lines that were about 10 metres high and stalled heavily into the paddock with some drift on. The aircraft rebounded a couple of times before coming to rest. The aircraft suffered damage to the undercarriage/fuselage mounting points and the pilot was unhurt. Investigation revealed the pilot flew too far downwind for the conditions and did not maintain appropriate speeds for the conditions. When he pulled up over the boundary fence of the outlanding paddock the glider had very little energy and landed heavily. This accident highlights the importance of increasing speed during the downwind leg to allow for wind (1.5Vs plus ½ wind speed) and to re-trim as the glider approaches a position adjacent to the intended landing point. This has the benefit of simplifying the assessment of height (via the angle down to the landing area) by eliminating the complication of angular change due to the exchange of height for speed. This is particularly important from the position opposite the Aiming Point onwards, after which the options for adjusting the circuit are limited. The loss of height and time occasioned by this earlier increase in speed is small and is well worth the extra safety margin achieved (refer also to Operational Safety Bulletin OSB 01/14).</p>							



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Date	23-Nov-2014	Region	NSWGA	SOAR Report Nbr	S-0445		
Level 1	Operational		Level 2	Aircraft Control		Level 3	Control issues
A/C Model 1		Pik 20			A/C Model 2		IMCA A-9A Callair
Injury	Nil	Damage	Nil	Phase	Launch		PIC Age 75
<p>During launch the glider flew through turbulent air and the glider pilot had difficulty maintaining station and speed. The glider is not fitted with airbrakes and uses flaps to increase drag. It also has a CG tow release mounted in front of the undercarriage. At about 300ft AGL a large bow appeared in the tow rope and the glider pilot extended 15 degrees of flap to increase drag. The rope quickly became taut resulting in the glider accelerating and pitching nose up, and a large bow appeared in the rope. The glider pilot lost sight of the tug, which he believed was now below him, and saw the rope extend past the canopy to his left. The rope again became tight with a jolt and the glider pilot felt his aircraft kiting as if on a winch launch. At this stage the tail of the tug had been pulled up and the tow pilot found himself pointing at the ground in a 45 degree nose-down attitude. The tow pilot attempted to release the rope but moved the trim lever instead. The weak link broke just as the glider pilot was about to release. Both aircraft subsequently landed safely. Investigation by the Club CFI concluded that both the tow plane and glider were short-coupled, making them sensitive in pitch. The tow pilot lacked familiarity with the tow plane, having only 12 flights previously, and the glider pilot had not flown much in the prior 90 days and lacked currency. Causal factors include: turbulent conditions; a combination of the glider pilot's low currency and inadequate recognition of the need to remain line astern on tow, particularly when low to the ground; and the pitch sensitivity of both the tug and glider. This incident serves to highlight: 1. the importance of the weak link in the system; 2. the need to be familiar with the position of all controls and levers; and 3. for glider pilots to immediately release if they lose sight of the tug.</p>							



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Date	25-Nov-2014	Region	NSWGA	SOAR Report Nbr	S-0487
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	LAK 17A			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	60
<p>The pilot, on his first flight in this sailplane type, successfully completed a cross-country task and had returned to the airfield. While overflying at 2,000 ft the pilot commenced dumping water ballast and then proceeded to fly a circuit. The aircraft touched down normally while still trailing water and as it slowed the starboard wing dropped. The aircraft veered off the runway towards two parked gliders but the pilot was able to bring the aircraft to a stop short of the gliders by heavy braking. Inspection later revealed the starboard wing had not fully emptied and the aircraft had landed in an asymmetric water ballast condition. The pilot advised that the aircraft was correctly loaded at take-off and there were no handling problems. As it was his first flight in this type of glider he was unfamiliar with the rate of emptying and had not allowed sufficient time for the ballast to dump. On later flights he opened the water dump valves earlier and had no further problems.</p>					

Date	27-Nov-2014	Region	SAGA	SOAR Report Nbr	S-0439
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	LS 4-a			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	66
<p>Undercarriage collapsed on landing. This is a known issue with LS type gliders. To help prevent landing gear collapses, always follow the maintenance manual instructions at each annual inspection. Ensure there is adequate over-centre and that the gas strut is in good condition. A weak gas strut will allow the landing gear to collapse.</p>					

Date	28-Nov-2014	Region	SAGA	SOAR Report Nbr	S-0440
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	In-Flight
				PIC Age	70
<p>During a cross-country flight the pilot's navigational instrument ceased working due to a flat battery. The pilot incorrectly judged his position and inadvertently flew into controlled airspace without a clearance. This incident highlights the importance of carrying back-up navigational aids, such as maps and charts (Refer GFA Operational Regulations, paragraph 4.5.1).</p>					

Date	29-Nov-2014	Region	VSA	SOAR Report Nbr	S-0449
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	SF 25C Falke			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	56
<p>While undertaking a currency check on a motor glider the pilot under check flared too high resulting in a heavy landing. The port outrigger wheel snapped off and rebounded into the wing trailing edge causing minor damage. The Instructor noted that the pilot under check lacked currency. While the motor glider was established on a stable 'engine off' approach, the pilot under check flared slightly too high and unexpectedly allowed the aircraft to stall onto the ground. The Instructor noted in hindsight that he should have taken over but he was caught by surprise. Workload during landing is high and the instructor must be on the mental defensive to ensure the aircraft is configured and flown properly. The instructor must also be capable</p>					



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of taking over quickly where necessary. However, this is easier said than done and pilots under check can surprise even the most experienced instructor. If an instructor has any doubt as to the safety of the approach, they should take-over.

Date	29-Nov-2014	Region	NSWGA	SOAR Report Nbr	S-0464
Level 1	Operational	Level 2	Ground Operations	Level 3	Taxiing collision/near collision
A/C Model 1	SZD-50-3 Puchacz			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Ground Ops
				PIC Age	67
While towing the glider to the launch point by rope with a person on the glider's wingtip, the starboard wing contacted a metal pole causing minor damage. When ground handling gliders, members need to pay particular attention to obstacle clearance. Keep a good look out and take things slowly.					

Date	30-Nov-2014	Region	GQ	SOAR Report Nbr	S-0442
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	Glasflugel 304C			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	16
The aircraft was landed with the undercarriage partially retracted and the gear doors were removed upon touch-down. The pilot experienced difficulty lowering the undercarriage and subsequent inspection revealed the undercarriage mechanism was most likely fouled by a bungee chord.					

Date	30-Nov-2014	Region	NSWGA	SOAR Report Nbr	S-0441
Level 1	Operational	Level 2	Airframe	Level 3	Landing gear/Indication
A/C Model 1	Piper PA25-235			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	65
As the tow plane crossed an intersecting runway just prior to becoming airborne, the pilot noticed a jolt. Upon releasing from tow at 1700ft, the glider pilot advised the tow pilot that the tow plane's port undercarriage leg was hanging down. The tow pilot completed two orbits of the aerodrome to assess his options and elected to land on an obstacle-free patch of land within the airfield and thereby minimising the risk of blocking the operational runway. The pilot made a full flap, minimum energy landing and then raised flap and pulled the mixture to idle cut-off once a smooth touchdown had occurred. The tow plane settled left wing low but a safety cable prevented the wing tip contacting the ground. The propeller stopped as the aeroplane commenced a slow 360 degree rotation to starboard. The pilot switched off the fuel and electrics and exited the aircraft. Subsequent investigation revealed the shock absorber attachment lug on the port undercarriage leg failed during take-off due to fatigue. In this case a crack developed that went undetected until fracture occurred. Fatigue is one of the primary contributors to structural failure in aging aircraft and the only available defence is better detection inspections during maintenance including the use of NDT.					



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Date	30-Nov-2014	Region	VSA	SOAR Report Nbr	S-0443
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Pik 20B			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	56
<p>The pilot forgot to retract the undercarriage after releasing from tow and proceeded to fly with the wheel down. Upon returning from the task and when joining the circuit, the pilot retracted the undercarriage and landed with the wheel up. This incident highlights the importance of conducting post-release checks and confirming the undercarriage handle position against the placard.</p>					

Date	30-Nov-2014	Region	WAGA	SOAR Report Nbr	S-0451
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	H-36 Dimona			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Landing
				PIC Age	60
<p>While landing in a gusty crosswind conditions, the pilot lost directional control. The motor glider left the runway and collided with a runway cone marker, resulting in a propeller strike and substantial damage. Pilots should be aware that engine-on landings in motor gliders have a high probability of a prop strike and serious damage occurring should the aircraft be mishandled.</p>					

Date	30-Nov-2014	Region	WAGA	SOAR Report Nbr	S-0469
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# The Gliding Federation of Australia Inc

## Accident and Incident Summaries

Level 1	Operational	Level 2	Airframe	Level 3	Objects falling from aircraft
A/C Model 1	DG-1000S			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	In-Flight
During pre-flight inspection the pilot removed the tail ballast blocks and noticed that the tape used to secure the ballast box cover was dirty and coming loose. The pilot secured the ballast cover with the old tape. The cover came off and was lost during the flight. The DG1000S flight manual requires the cover of the tail ballast box to be taped and checked before each flight. Tape used to secure the cover must be fit for purpose and should be replaced after each use.					PIC Age 39

Date	2-Dec-2014	Region	GQ	SOAR Report Nbr	S-0448
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	SZD-48-1 Jantar Standard 2			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
The aircraft landed in a rough paddock with the undercarriage retracted. After releasing from the tow for a cross-country flight the pilot elected to keep the undercarriage down until the first climb was encountered. The pilot then forgot about the undercarriage and embarked on a cross-country flight. Eventually conditions dictated an outlanding was necessary and the pilot selected what was thought to be a suitable paddock. The undercarriage was retracted as part of the pre-landing check and, despite the pilot periodically checking the lever to the placard, the fact that the undercarriage was retracted went unnoticed. The final approach was made with sufficient clearance over power lines but the pilot failed to arrest the rate of descent and landed heavily on the fuselage. The paddock surface was rougher than anticipated and the aircraft suffered minor damage. The pilot noted that he spent time selecting an appropriate paddock but did not pick the unsatisfactory surface condition from the air. The pilot also advised that he may have misused the airbrakes as he was not in recent practice using conventional airbrakes because he usually flew an aircraft with trailing edge airbrakes. Causal factors include high workload, omitting to complete a post-release check, not noticing the undercarriage was retracted, inexperience on type, and a mishandled flare.					PIC Age 51

Date	3-Dec-2014	Region	GQ	SOAR Report Nbr	S-0447
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	Astir CS Jeans			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
The aircraft was subjected to pilot induced oscillations during the pilot's first take-off in a single-seat glider. The pilot released from tow at about 300ft AGL and positioned for landing. During a downwind final approach the glider pilot did not maintain adequate airspeed and landed heavily. The wind direction had been variable and the pilot was launched into a 7 to 10 knot crosswind. The tow pilot had to use full control deflections to maintain directional control. As the combination became airborne it flew through a thermal and the glider commenced a series of oscillations in pitch, probably due to inappropriate and course control inputs by the pilot. When the glider pilot released he performed a 'tear drop' manoeuvre to land back on the runway but failed to maintain adequate speed control and landed heavily but without damage or injury. Gliding operations were suspended until the wind stabilised. This incident highlights the importance of conducting 'conversion flights' in benign conditions. Causal factors include inexperience on type and a high workload caused by adverse weather conditions and mishandling of the controls.					PIC Age 71

Date	4-Dec-2014	Region	GQ	SOAR Report Nbr	S-0479
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	Discus 2B			A/C Model 2	



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Injury	Nil	Damage	Minor	Phase	Landing	PIC Age	73
<p>This experienced pilot released from aerotow in a ballasted glider but did not contact lift. The pilot made a late decision to land and joined circuit at low height. In his haste to dump the water ballast, the pilot forgot to lower the undercarriage and landed with the wheel retracted. Landing mishaps commonly occur to pilots who lack the discipline to break off the flight at an early stage, and who become overloaded when close to the ground. Workload management can be eased by proper flight management which includes attending to pre-landing tasks, like lowering the undercarriage, early rather than later in the circuit. Refer also OSB 01/14 'Circuit and Landing Advice'.</p>							

Date	6-Dec-2014	Region		WAGA	SOAR Report Nbr		S-0453	
Level 1	Operational		Level 2	Crew and Cabin Safety		Level 3	Flight crew incapacitation	
A/C Model 1		DG-500 Elan Orion			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	60
<p>Just prior to setting off on a 200km cross country task at 5,000ft and after about 30 minutes of flight, the command pilot flying noted movement of the control column to the right was restricted. The command pilot, flying from the rear seat, asked the co-pilot if his leg was obstructing the controls but received no response. The command pilot then noticed both rudder pedals were immovable and asked the co-pilot to take his feet off the pedals. The co-pilot was unresponsive despite the command pilot speaking in raised tones and tapping the back of his head. After approximately 30 seconds the co-pilot regained consciousness and remained clear of the controls while an emergency descent was conducted. On the ground the co-pilot advised that he felt 'airsick' but had no recollection of losing consciousness nor the command pilot's attempts to arouse him. The command pilot noted that it was only by circumstance that the co-pilot was flying with him and not in the club's single-seater. This is the second time the co-pilot has lost consciousness in flight - on 11 January 2014 while flying a single-seater he recovered consciousness at very low level and the event was attributed to dehydration. The co-pilot's medical practitioner diagnosed vasovagal syncope and he is not flying pending medical clearance.</p>								

Date	6-Dec-2014	Region	VSA		SOAR Report Nbr		S-0450	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		Janus CM			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	60
After landing the glider pilot taxied clear of the runway to make room for a following aircraft on approach. During the course of taxiing, the port wing tip struck a raised runway light. Although runway lights are designed to be frangible, the glider's wing was substantially damaged. Pilots need to exercise care when taxiing to avoid known obstacles.								



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### *Accident and Incident Summaries*





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Date	6-Dec-2014	Region	NSWGA	SOAR Report Nbr	S-0461
Level 1	Technical	Level 2	Systems	Level 3	Other Systems Issues
A/C Model 1	ASW 28			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	28
At 300ft AGL during an aerotow launch the rope prematurely released from the tow plane. The glider pilot successfully completed a modified circuit and landed on an alternative runway with the rope still attached. Investigation revealed a spring had failed in the tow plane's release, allowing the rings to override the overcentre locking mechanism and fall free.					

Date	7-Dec-2014	Region	GQ	SOAR Report Nbr	S-0460
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	ASW 19B			A/C Model 2	





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## Accident and Incident Summaries

Injury	Nil	Damage	Minor	Phase	Landing	PIC Age	20
Following a competition flight the glider landed in strong wind conditions associated with a storm front. While moving the glider off the strip the wind blew the unlocked canopy open. The canopy was torn off causing minor damage to the fuselage but the canopy did not break. This incident highlights the importance of always locking the canopy before leaving it unattended.							

Date	8-Dec-2014	Region	VSA	SOAR Report Nbr	S-0505		
Level 1	Operational	Level 2	Runway Events	Level 3	Runway incursion		
A/C Model 1	Shemp-Hirth Arcus M			A/C Model 2	Beechcraft Travel Air		
Injury	Nil	Damage	Nil	Phase	Launch	PIC Age	42
The powered sailplane pilot had just given a radio call that she was lining up on the operational runway when a Beechcraft Travel Air entered and backtracked without making radio calls. The sailplane pilot applied braking and brought the glider to a halt. The pilot in the Beechcraft did not make any radio calls on CTAF and did not adapt to the situation but continued to back track and then take-off. It is essential that pilots be alert and look for other traffic and exchange traffic information when operating at or on a non-towered airport. This is of particular importance since other aircraft may not have communication capability or, in some cases, pilots may not communicate their presence or intentions when operating into or out of such airports. To achieve the greatest degree of safety, it is essential that all radio-equipped aircraft transmit/receive on the common traffic advisory frequency. Pilots are expected to taxi an airplane safely whether moving to or from a runway or otherwise moving about the airport, and it is important to remain extremely cautious and maintain situational awareness. For example, prior to brake release for taxi, minimise cockpit tasks, observe "sterile flight deck" procedures, and always practice a "heads up, eyes out" mode while taxiing.							

Date	9-Dec-2014	Region		NSWGA		SOAR Report Nbr		S-0454
Level 1	Operational		Level 2	Airframe			Level 3	Objects falling from aircraft
A/C Model 1		DG-1000S				A/C Model 2		
Injury	Nil	Damage	Nil	Phase	In-Flight		PIC Age	68
During flight the trim ballast cover was lost but the ballast blocks did not fall out. The DG1000S flight manual requires the cover of the tail ballast box to be taped and checked before each flight. The Trim Box cover for this particular aircraft was difficult to fit and pilots were reusing tape when dressing the perimeter of the Trim Box cover as per the flight manual. Pilots were also using a thinner tape than that specified. The Club CFI has introduced further training on the correct fitment and dressing of the trim box, and cautions pilots to use the supplied tool to gently test the security of fitment.								

Date	11-Dec-2014	Region	WAGA		SOAR Report Nbr		S-0470	
Level 1	Operational		Level 2	Aircraft Control		Level 3	Wheels up landing	
A/C Model 1		ASW 24			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	59
During a cross-country flight an outlanding became necessary. A tow plane was called and the pilot was successfully retrieved. On the return flight to the home airfield the pilot received a radio request to expedite his landing in order to conduct an Air Experience flight. The pilot quickly descended but failed to complete his pre-landing checks and the aircraft was landed with the undercarriage retracted. The pilot noted that during his circuit he was so preoccupied with the planning his AEF that he forgot to lower the undercarriage. Landing mishaps usually occur due to poor workload management, so it is important to get some of the tasks, like lowering the undercarriage, out of the way early. Refer also OSB 01/14 'Circuit and Landing Advice'.								



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## Accident and Incident Summaries

Date	12-Dec-2014	Region	NSWGA	SOAR Report Nbr	S-0462
Level 1	Consequential Events	Level 2	Low Circuit	Level 3	Low Circuit
A/C Model 1	ASW 28			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Outlanding
				PIC Age	23
<p>The aircraft was on a marginal final glide into a 30 knot headwind. As the pilot flew over last landable paddock prior to aerodrome, he determined that he would not make the aerodrome. At a height of about 100ft AGL the pilot executed a 180 degree turn downwind (60 knots ASI) to land in the paddock he had just over flown. The aircraft landed with a 30 knot tail wind under a SWER line. Potential causal factors include high workload and optimism bias. Cross-country pilots must remain alert to the risks of undershooting and should not persist with marginal final glides. At low levels in windy conditions, the likelihood of encountering heavy sink and turbulence is high.</p>					

Date	13-Dec-2014	Region	VSA	SOAR Report Nbr	S-0455
Level 1	Operational	Level 2	Terrain Collisions	Level 3	Collision with terrain
A/C Model 1	Standard Cirrus			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	46
<p>While outlanding in a canola stubble paddock the port side of the glider's fuselage aft of the main wheel made glancing contact with a small rock. The aircraft suffered superficial damage to the paintwork.</p>					

Date	13-Dec-2014	Region	VSA	SOAR Report Nbr	S-0458
Level 1	Operational	Level 2	Flight Preparation/Navigation	Level 3	Other Flight Prep/Nav Issues
A/C Model 1	ASW 20			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Outlanding
				PIC Age	77
<p>During a cross-country flight the pilot successfully completed an outlanding. An attempt to contact the Gliding Club immediately after landing was unsuccessful as the pilot was out of range of mobile coverage. The pilot moved to an area where coverage was available and, despite eight subsequent attempts to contact the club over the next four hours, he could still not raise anyone at the club. The pilot eventually phoned the local police and asked them to advise the club that he had safely landed so as to prevent search and rescue procedures being implemented. It appears the club telephone was not being monitored and the pilot had an outdated contact list. This incident highlights the importance of Clubs having an active SAR Watch mechanism in place and for pilots to organise and brief their own person responsible for initiating SAR action (refer also to MOSP 2, paragraph 8.1.18 - Search and Rescue (SAR) Action). A current list of several contact telephone numbers would also have assisted.</p>					

Date	14-Dec-2014	Region	SAGA	SOAR Report Nbr	S-0457
Level 1	Technical	Level 2	Systems	Level 3	Avionics/Flight instruments
A/C Model 1	ASK-21Mi			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	In-Flight
				PIC Age	65
<p>The glider was being flown on an evaluation flight following the initial inspection for the issue of a Certificate of Airworthiness. During the take-off the second pilot in the rear seat advised the command pilot that the rear ASI was not functioning. The command pilot noted that the front ASI appeared to be 'under-reading'. The evaluation flight was completed and inspection after landing revealed the ASI plumbing was disconnected from the instrument. Investigation revealed the experienced maintenance inspector had</p>					



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## Accident and Incident Summaries

disconnected the ASI plumbing to conduct a manometer test and failed to reconnect it. This oversight was not picked-up during a secondary inspection. The experienced command pilot acknowledged that he failed to conduct an instrument check as part of the Daily Inspection. This incident highlight the importance of diligently carrying out the required Independent Inspection following maintenance and, undertaking a check of the functioning of instruments during the Daily Inspection.

Date	14-Dec-2014	Region	VSA	SOAR Report Nbr	S-0456
Level 1	Operational	Level 2	Runway Events	Level 3	Runway excursion
A/C Model 1	Janus			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Landing
				PIC Age	66
During the landing roll on the grassed runway the glider passed through an area of taller grass. The starboard wing caught in the grass and the aircraft ground looped through 180 degrees. No damage occurred.					

Date	14-Dec-2014	Region	SAGA	SOAR Report Nbr	S-0473
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	ASW 20CL			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Landing
				PIC Age	53
After returning from a cross-country flight, this experienced pilot configured the aircraft for landing and employed full 'landing' flap. During final approach the pilot commenced the round-out too high. Despite fully closing the airbrakes, the aircraft's speed decayed resulting in a heavy landing. The starboard wing contacted the ground and suffered minor damage. The CFI advised the pilot was flying the final approach at a speed that was too slow for the conditions. The high round-out and subsequent loss of speed placed the aircraft in the back of the polar curve with a high rate of descent and loss of some aileron control, which caused the wing to drop and come into contact with the ground. Rounding out too high is usually because the pilot is unaware of the glider's height and any change in it. In this incident fatigue may have been a factor affecting the pilot's judgement.					

Date	20-Dec-2014	Region	GQ	SOAR Report Nbr	S-0459
Level 1	Operational	Level 2	Aircraft Control	Level 3	Hard landing
A/C Model 1	LAK 17A			A/C Model 2	
Injury	Nil	Damage	Substantial	Phase	Outlanding
				PIC Age	75
The pilot, who was competing in the NSW State Gliding Championships, had taped over both of his water ballast wing-tank vents so that water would not leak while one wing was on the ground on the grid. Just prior to launch the pilot forgot to remove one of the pieces of tape. During the course of the cross-country flight the pilot got low and an outlanding became inevitable. The pilot opened the water ballast dump valve but only one wing emptied. During the course of landing the pilot was unable to maintain wings-level and the wing containing ballast touched the ground at speed causing the aircraft to ground loop and suffer substantial damage. This accident highlights the importance of completing a thorough pre-boarding check immediately prior to flight. While most flight manuals suggest keeping the wings horizontal before take off to avoid uneven water distribution, some pilots temporarily put tape over the vents. If the pilot elects to do this, use tape of a colour that contrast with the glider surface and ensure it is removed before flight. Asymmetric water ballast is potentially dangerous and could lead to inadvertent spinning and difficulty recovering from spin. In an asymmetric wing loading condition, increased speed may be necessary to maintain control.					



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### Accident and Incident Summaries

Date	21-Dec-2014	Region	SAGA		SOAR Report Nbr		S-0466	
Level 1	Operational		Level 2	Terrain Collisions		Level 3	Collision with terrain	
A/C Model 1		ASW 27			A/C Model 2			
Injury	Nil	Damage	Substantial	Phase	Outlanding	PIC Age	48	
<p>The pilot was flying cross-country on a hot day with thermals going to 9,500ft. The pilot spent most of the flight below 6,000ft and eventually an outlanding became inevitable. The pilot identified a suitable paddock for a landing and noted there were multiple SWER lines in the area. During the downwind leg the pilot became distracted when he experienced difficulty lowering the undercarriage (the handle was obstructed by articles in the knee pocket of this trousers). While the undercarriage was eventually locked down toward the end of the downwind leg, the pilot missed the opportunity to conduct a survey of the paddock during this period. On base leg the pilot identified a SWER line across the approach and turned final with sufficient height to avoid it. The initial part of the landing was slightly uphill and the pilot needed to manoeuvre slightly to avoid some rocks. Just after the glider crested the slope the pilot noticed a contour bank about 100ft away. Despite braking heavily the glider impacted the contour bank, which was about 40cm high, at about 20 knots and rebounded into the air. The glider touched down heavily and came to rest about 15 metres from the contour bank. The aircraft suffered substantial damage. The pilot noted afterward that while he had been drinking water during the flight, the colour of his urine indicated he was dehydrated and that his reaction times may have been impaired as a consequence. The pilot also noted that he had to walk for 2.5 hours to find a road as the property was unoccupied. Causal factors include high workload, distraction, fatigue and dehydration. There are a number of lessons from this accident; 1. ensure clothing does not interfere with the controls; 2. put the undercarriage down before entering circuit to avoid unnecessary distraction when close to the ground; 3. make sure you drink plenty of fluid containing electrolytes during flight; and 4. ensure you have adequate water and food after outlanding in case you have a long walk.</p>								

Date	23-Dec-2014	Region		SAGA	SOAR Report Nbr		S-0463	
Level 1	Operational		Level 2	Ground Operations		Level 3	Taxiing collision/near collision	
A/C Model 1		Stemme S10-VT			A/C Model 2			
Injury	Nil	Damage	Minor	Phase	Landing		PIC Age	65
During a 'power on' landing the motor glider pilot felt pressured to vacate the runway for another aircraft on approach. The pilot turned off the runway a little earlier and at a higher speed than normal. A gust of wind lifted the port wing and the starboard wingtip contacted the ground. The pilot braked heavily to slow the aircraft, resulting in the aircraft pitching forward and the propeller striking the ground. Causal factors include high workload, turning onto the taxiway at too high a speed, unfamiliarity with aircraft type and delayed reaction due to misidentifying the wheel-brake lever.								

Date	27-Dec-2014	Region	SAGA		SOAR Report Nbr		S-0476	
Level 1	Consequential Events		Level 2	Forced / Precautionary landing		Level 3	Forced/Precautionary Landing	
A/C Model 1		Cherokee II			A/C Model 2			
Injury	Nil	Damage	Nil	Phase	Landing		PIC Age	60
While local flying the low experience pilot flew too far from the airfield for the conditions and outlanded while returning to the airfield. The pilot, who was not cross-country endorsed and was flying a low performance aircraft, flew through heavy sink and successfully completed a safe paddock landing with no damage or injury.								





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### *Accident and Incident Summaries*

Date	28-Dec-2014	Region	SAGA	SOAR Report Nbr	S-0474
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	39
While landing on an inactive runway, the low experience pilot misjudged the stopping distance and the glider crossed the active runway, fortunately without incident.					

Date	28-Dec-2014	Region	VSA	SOAR Report Nbr	S-0490
Level 1	Operational	Level 2	Aircraft Control	Level 3	Wheels up landing
A/C Model 1	DG-300 Elan			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Outlanding
				PIC Age	48
While flying back to the home airfield after a long cross-country flight, conditions became soft and the pilot elected to conduct an outlanding. The pilot left the decision to break-off the flight at low altitude and with insufficient height to complete a circuit of the paddock. A pre-landing check was not undertaken resulting in the aircraft landing with the wheel retracted. The aircraft suffered minor damage and the pilot was uninjured. Fatigue may have been a causal factor. This accident highlights the importance of pilots making the decision to break off the flight at sufficient height to configure the aircraft for landing and to complete a precautionary search of the outlanding paddock.					

Date	29-Dec-2014	Region	VSA	SOAR Report Nbr	S-0465
Level 1	Operational	Level 2	Miscellaneous	Level 3	Rope break/Weak link failure
A/C Model 1	ASK-21			A/C Model 2	
Injury	Nil	Damage	Nil	Phase	Launch
				PIC Age	65
Near the top of a winch launch, the swivel attaching the drogue chute broke. The cable was released from the glider and, due to very strong winds, the drogue chute drifted downwind over 1000 metres falling into a suburban street. Fortunately there was no damage to property or injury to persons. The drogue was returned to the club by a local resident.					

Date	31-Dec-2014	Region	VSA	SOAR Report Nbr	S-0467
Level 1	Operational	Level 2	Airframe	Level 3	Doors/Canopies
A/C Model 1	DG-100			A/C Model 2	
Injury	Nil	Damage	Minor	Phase	Launch
				PIC Age	64
During the aerotow take-off run the canopy opened. The pilot released from tow and landed straight ahead. This experienced pilot was distracted by a club member, who was showing some visitors the glider, and forgot to lock the canopy prior to launch. This incident highlights the consequences of distracting a pilot who is preparing for launch. Launch point discipline and hygiene is vital; distractions must be avoided and onlookers kept out of the way.					



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### *Accident and Incident Summaries*

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.