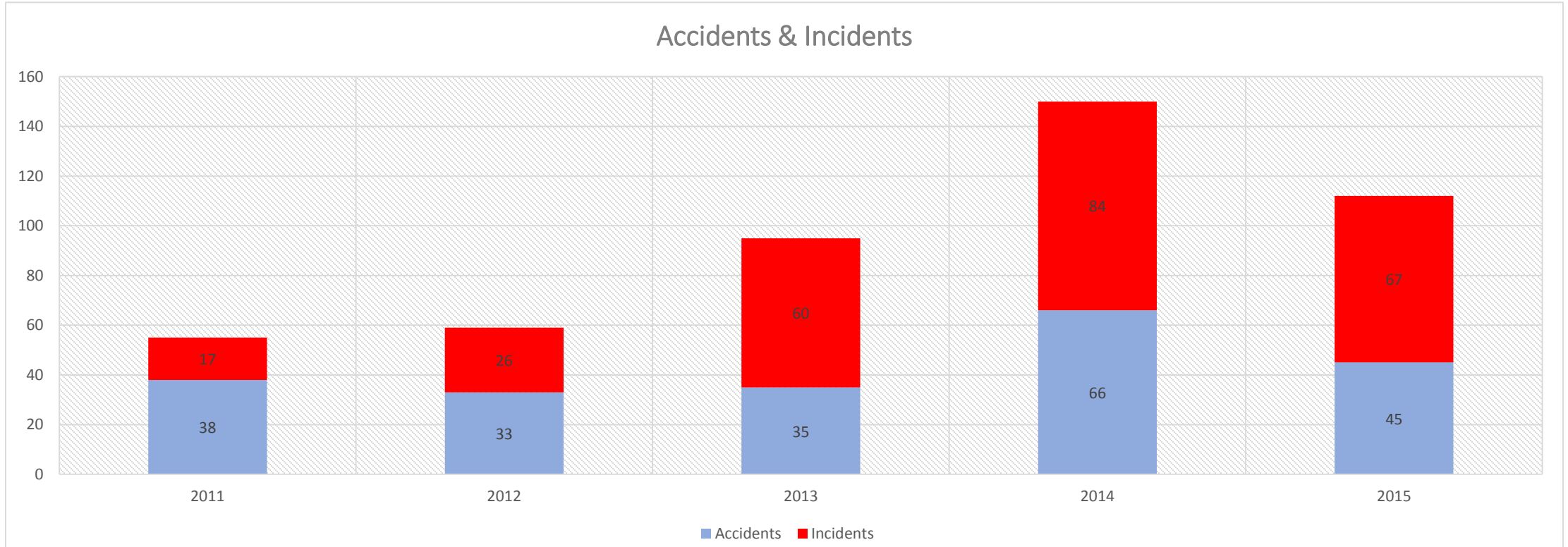
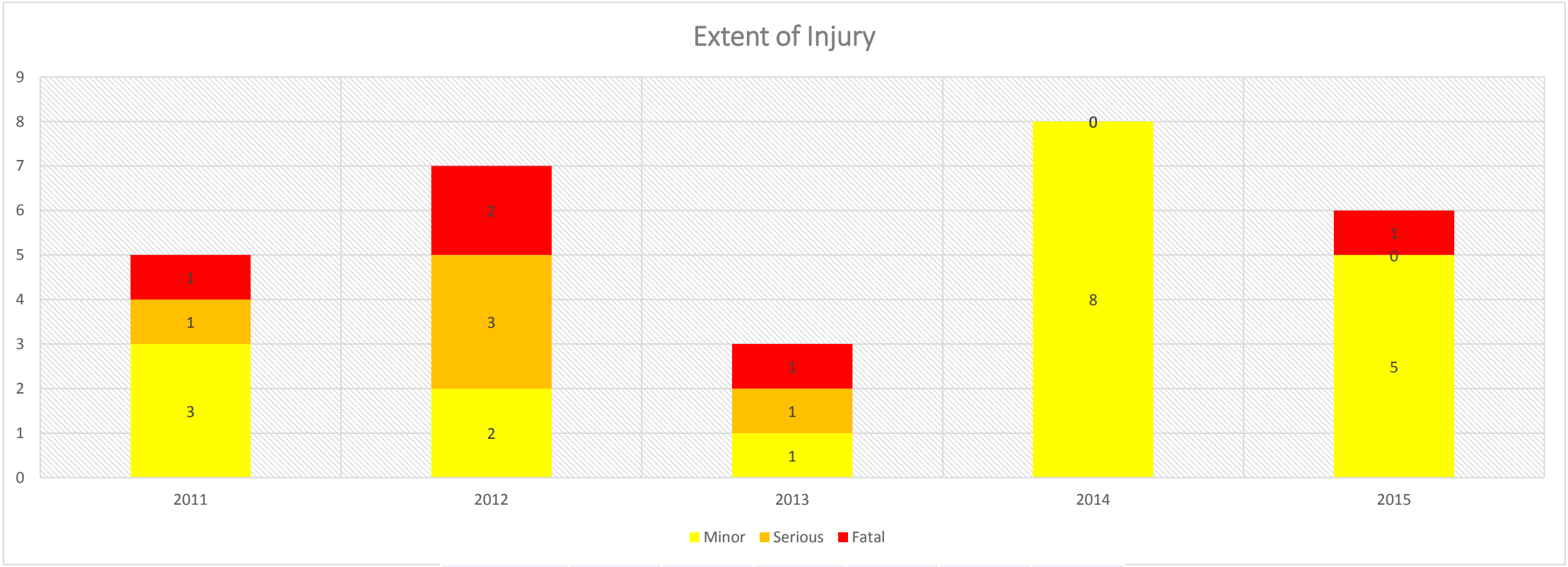
REVIEW OF ACCIDENTS & INCIDENTS

01/05/2011 – 30/09/2015



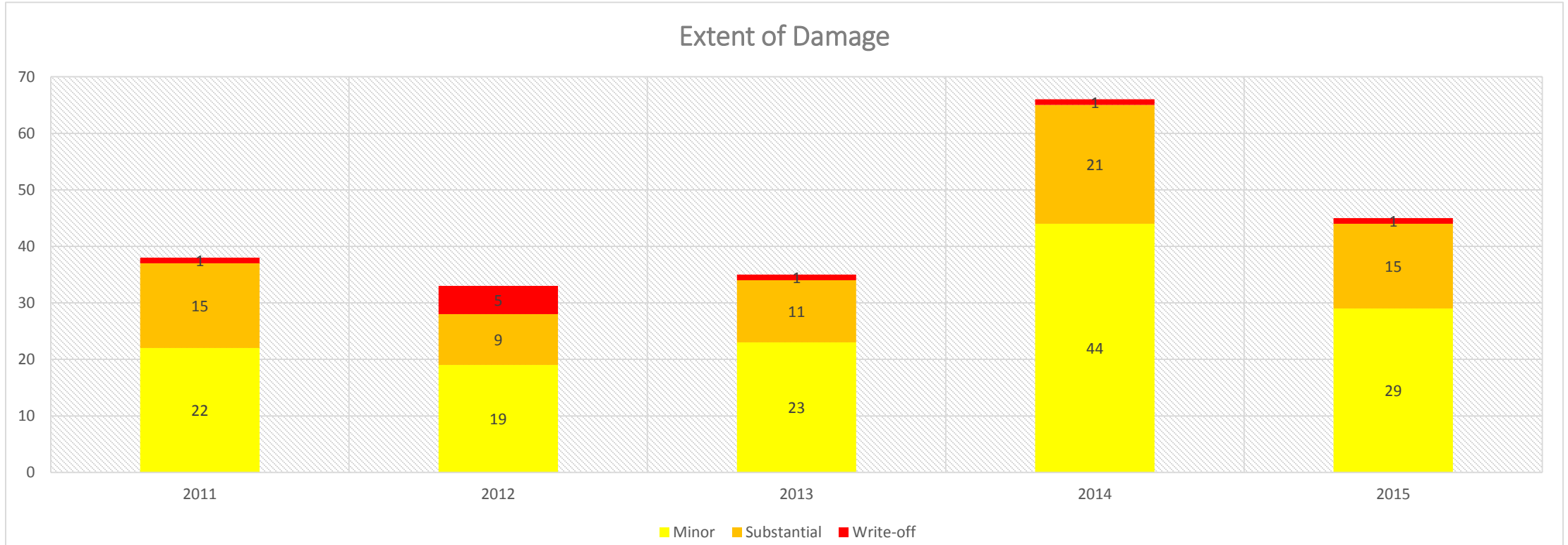
	2011	2012	2013	2014	2015	Grand Total
Accidents	38	33	35	66	45	**217**
Incidents	17	26	60	84	67	**254**



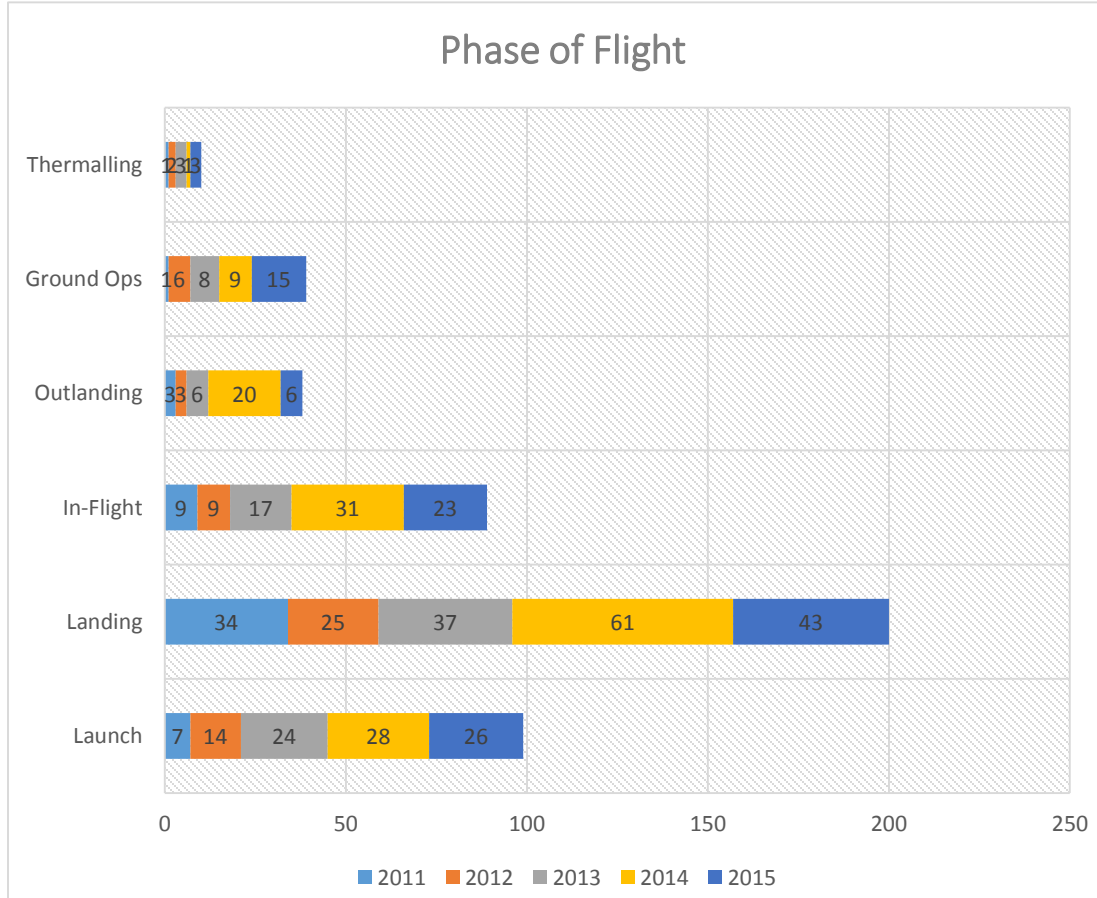
Extent of Injury	2011	2012	2013	2014	2015	Grand Total
Minor	3	2	1	8	5	**19**
Serious	1	3	1	0	0	**5**
Fatal	1	2	1	0	1	**5**

‘Whenever we talk about a pilot who has been killed in a flying accident, we should all keep one thing in mind. He called upon the sum of all his knowledge and made a judgment. He believed in it so strongly that he knowingly bet his life on it. That his judgment was faulty is a tragedy, not stupidity. Every instructor, supervisor, and contemporary who ever spoke to him had an opportunity to influence his judgment, so a little bit of all of us goes with every pilot we lose.’

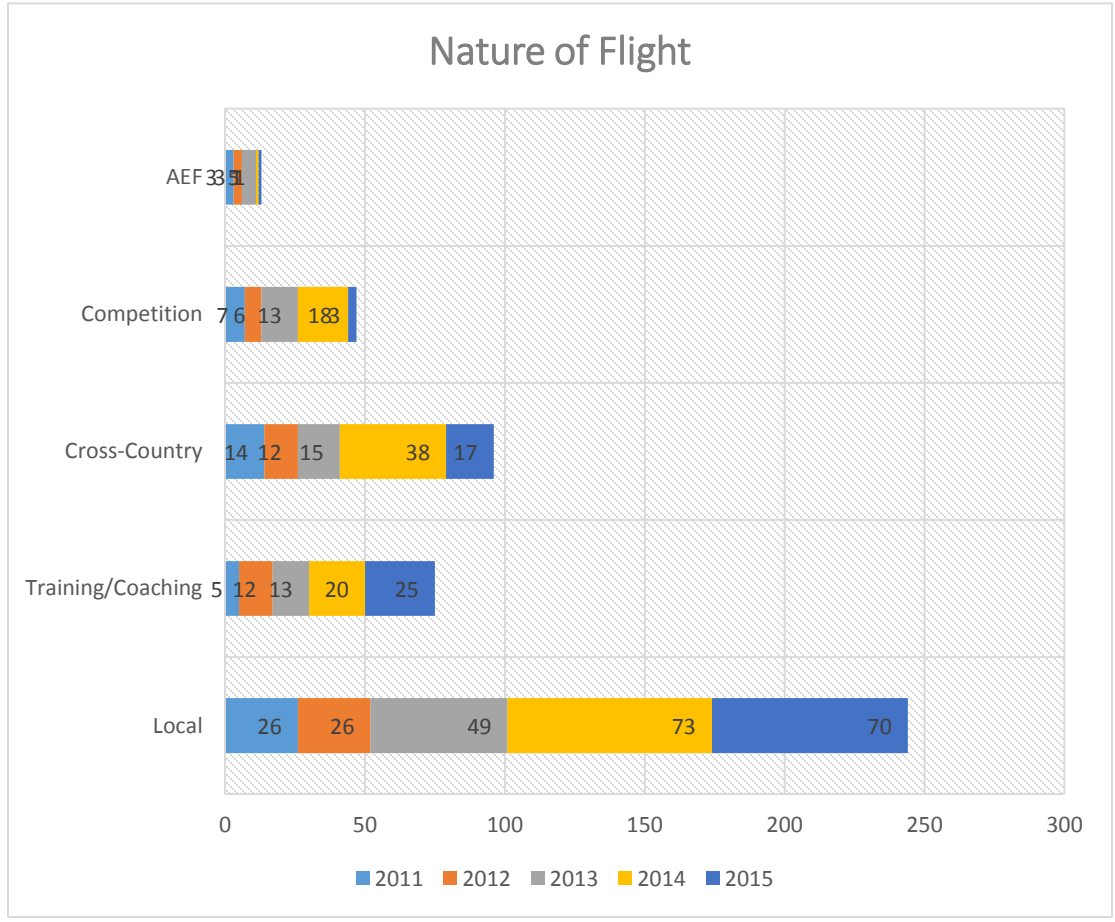
Anonymous



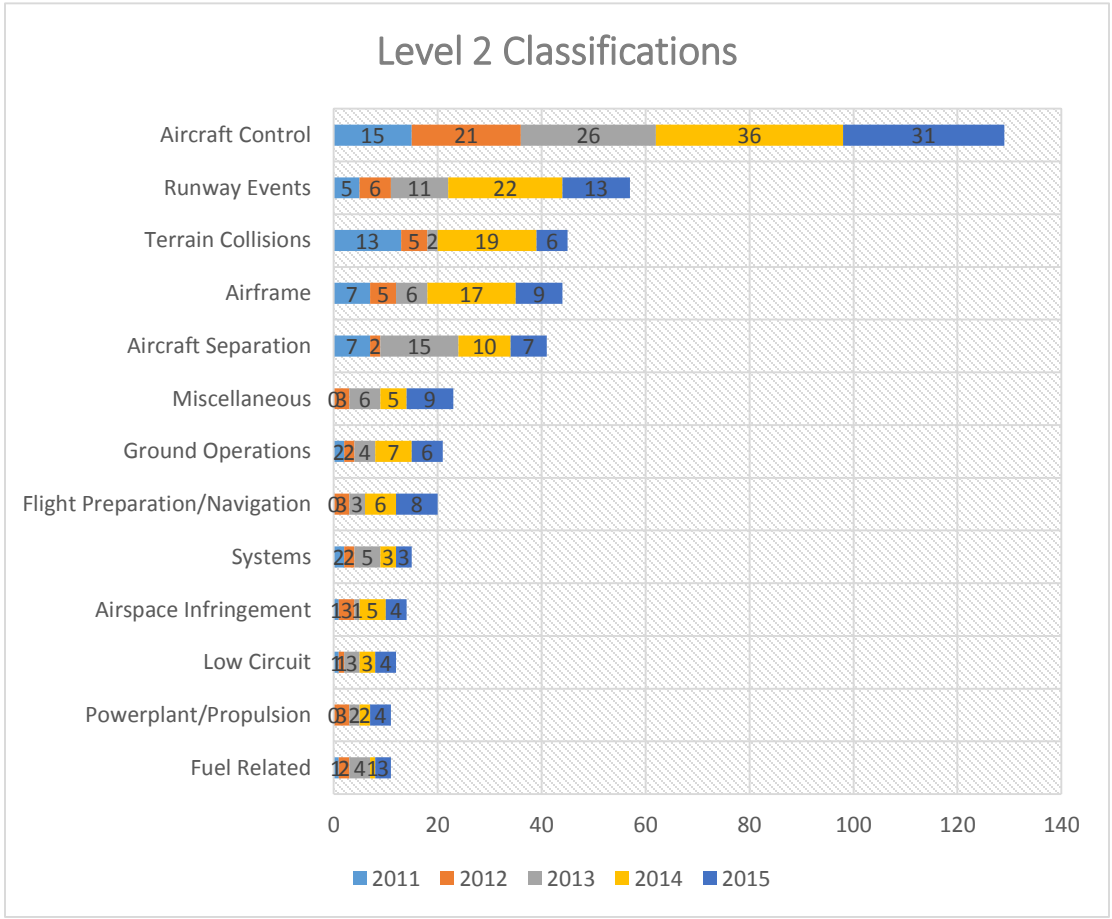
	2011	2012	2013	2014	2015	Grand Total
Minor	22	19	23	44	30	**138**
Substantial	15	9	11	21	17	**73**
Write-off	1	5	1	1	1	**9**



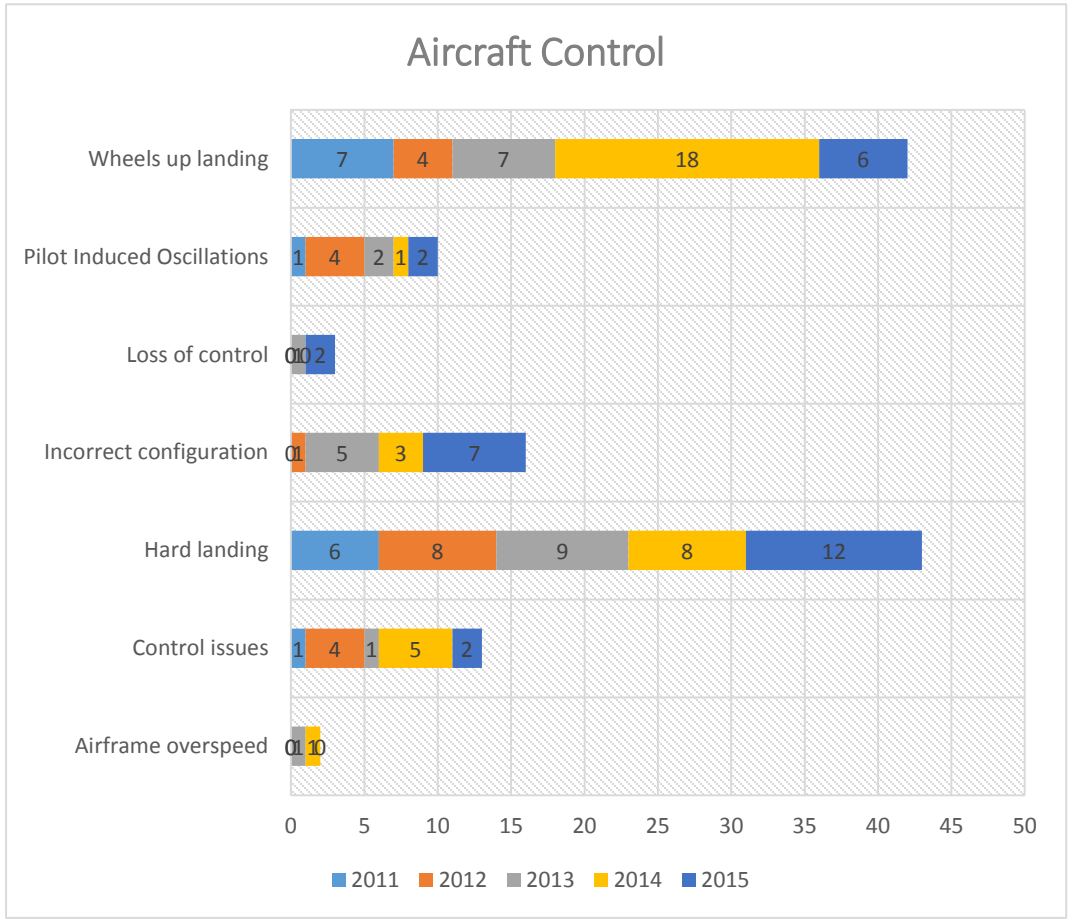
Phase of Flight	2011	2012	2013	2014	2015	Grand Total
Launch	7	14	24	28	26	**99**
Landing	34	25	37	61	43	**200**
In-Flight	9	9	17	31	23	**89**
Outlanding	3	3	6	20	6	**38**
Ground Ops	1	6	8	9	15	**39**
Thermalling	1	2	3	1	3	**10**
Grand Total	**55**	**59**	**95**	**150**	**116**	**475**



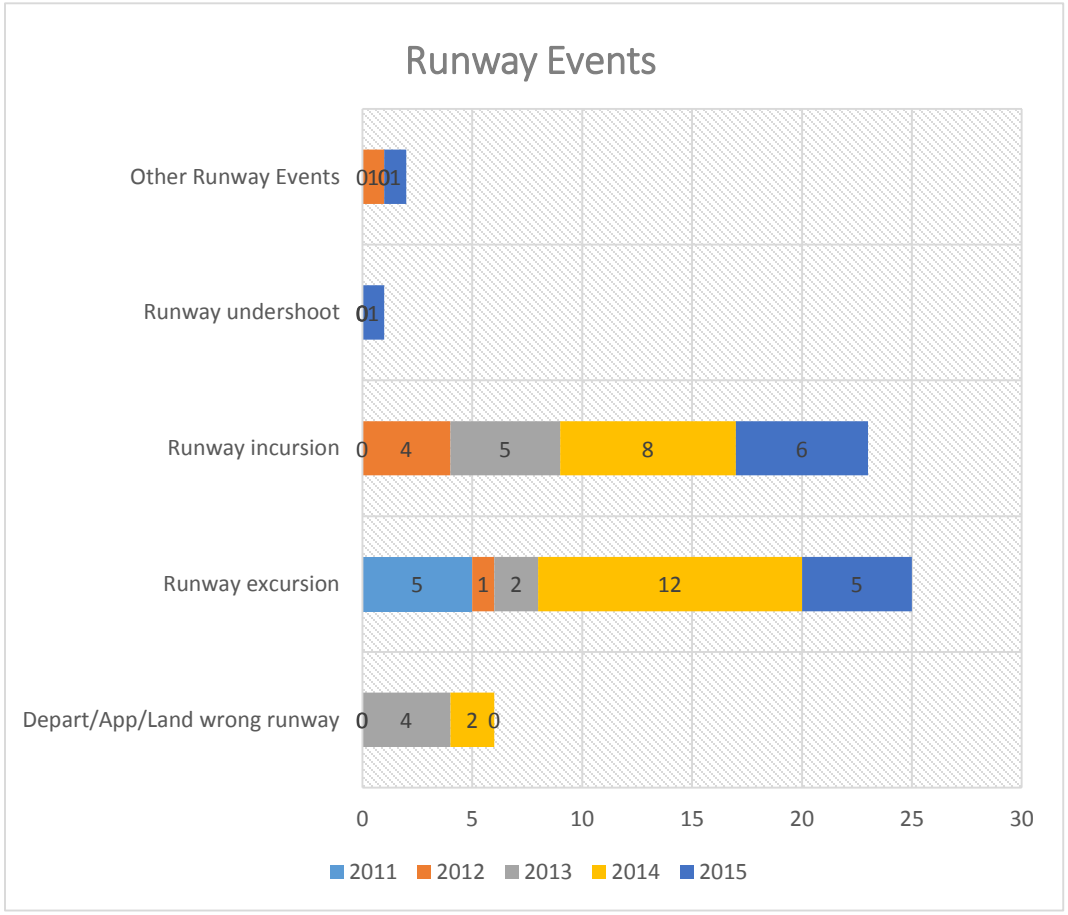
Nature of Flight	2011	2012	2013	2014	2015	Grand Total
Local	26	26	49	73	70	**244**
Training/Coaching	5	12	13	20	25	**75**
Cross-Country	14	12	15	38	17	**96**
Competition	7	6	13	18	3	**47**
AEF	3	3	5	1	1	**13**
Grand Total	**55**	**59**	**95**	**150**	**116**	**475**



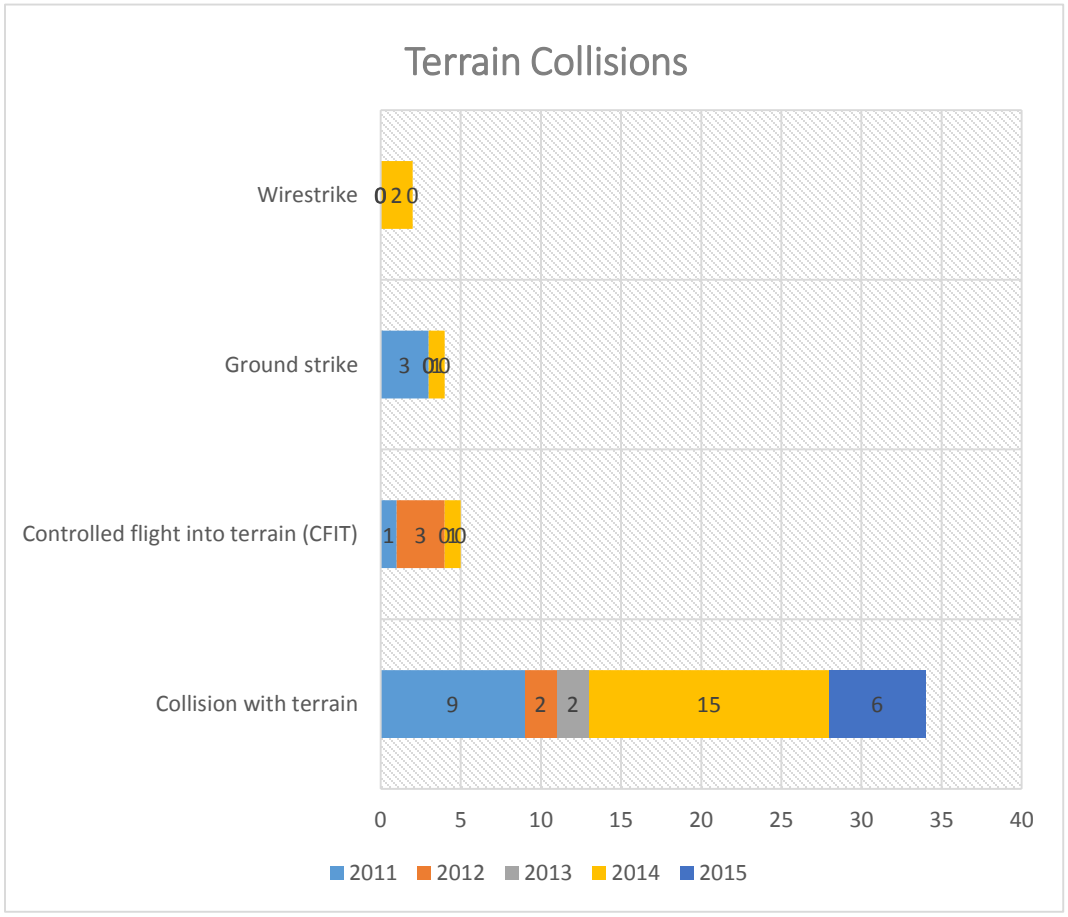
	2011	2012	2013	2014	2015	Grand Total
Aircraft Control	15	21	26	36	31	**129**
Runway Events	5	6	11	22	13	**57**
Terrain Collisions	13	5	2	19	6	**45**
Airframe	7	5	6	17	9	**44**
Aircraft Separation	7	2	15	10	7	**41**
Miscellaneous	0	3	6	5	9	**23**
Ground Operations	2	2	4	7	6	**21**
Flight Preparation/Navigation	0	3	3	6	8	**20**
Systems	2	2	5	3	3	**15**
Airspace Infringement	1	3	1	5	4	**14**
Low Circuit	1	1	3	3	4	**12**
Fuel Related	1	2	4	1	3	**11**
Powerplant/Propulsion	0	3	2	2	4	**11**
Weather	1	0	4	2	1	**8**
Crew and Cabin Safety	0	0	1	3	2	**6**
Wildlife	0	0	1	1	3	**5**
Communications	0	0	0	3	1	**4**
Fire Fumes and Smoke	0	1	0	2	1	**4**
Forced / Precautionary landing	0	0	0	3	0	**3**
Aircraft Loading	0	0	1	0	1	**2**
Grand Total	**55**	**59**	**95**	**150**	**116**	**475**



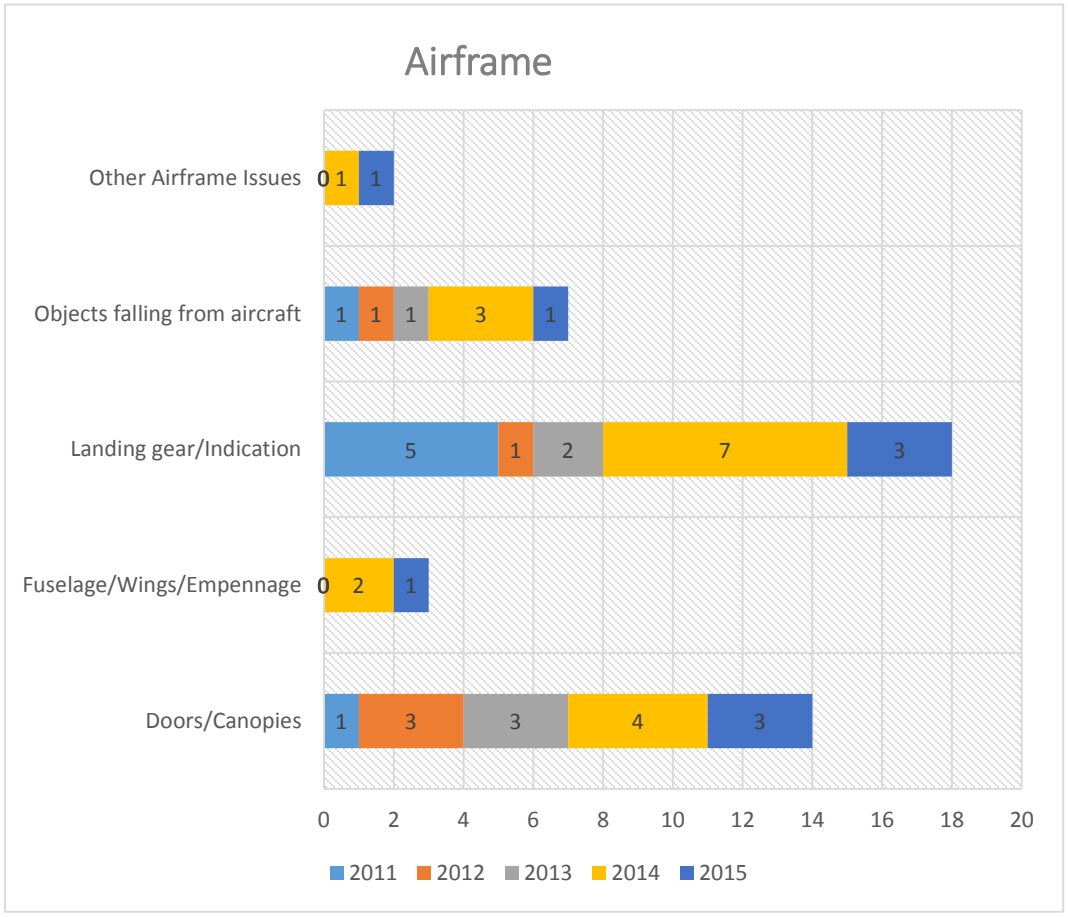
- Exceeding Vra/Vne - test flight/aerobatics;
- Flutter caused by external camera;
- Control column fouled (Release knob/Camera);
- Jammed aileron from loose bolt after maintenance;
- Tug upset (x2);
- Failure to maintain stable approach;
- Failure to maintain safe speed near the ground;
- Misjudged round-out/flare;
- Mishandling controls (airbrakes/flaps) during flare;
- Mishandling airbrakes/elevator during bounced / ballooned landing;
- Turbulence/wind gradient near the ground;
- Failure to configure the aircraft for landing;
- Not completing pre-landing checks;
- Landing with asymmetric ballast;
- Late recovery from sideslip (x2).



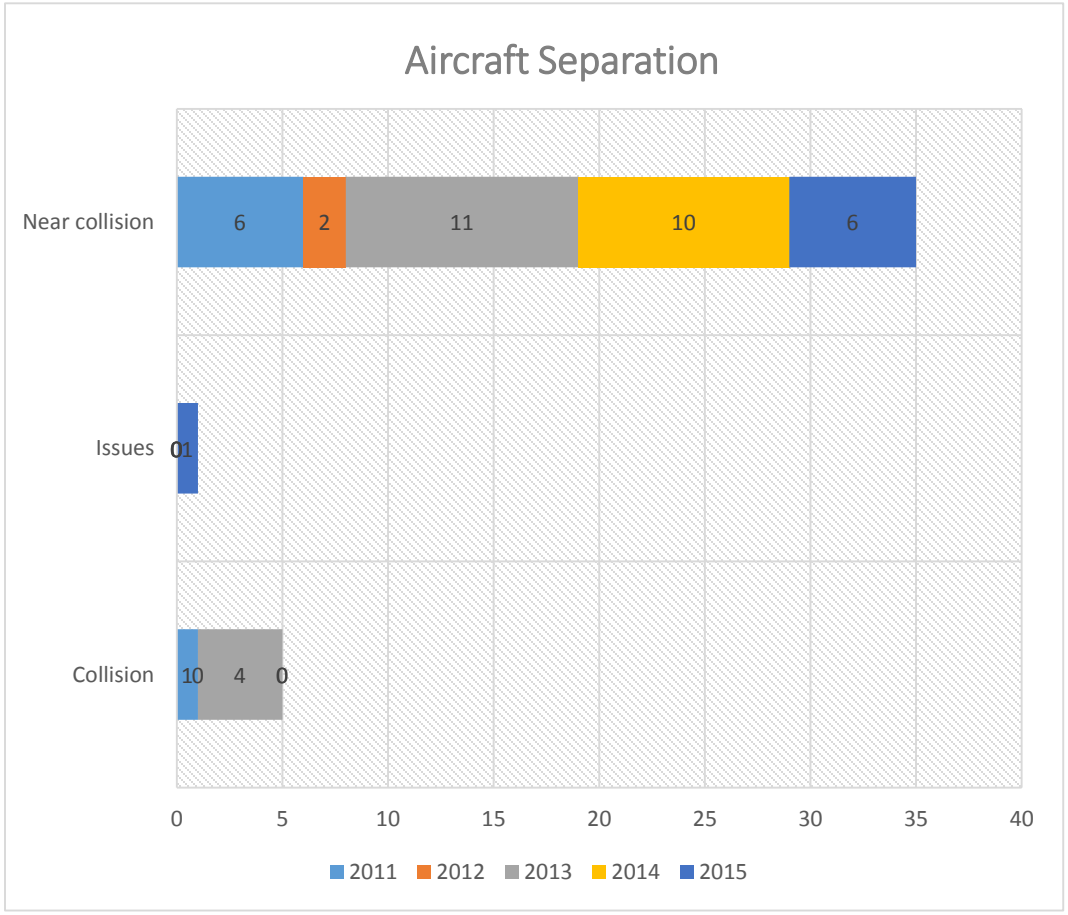
- Landing on an occupied runway, entering and backtracking while launching in progress, entering the runway with aircraft on final approach, occupying a runway while getting ready to launch, taxying across runway in use while aircraft on finals, and driving a vehicle across operational runway when an aircraft is on finals.
- Failure to maintain directional control: Landing in long grass, exceeding crosswind component, aerotowing from the belly release, dropping a wing during launch, landing with asymmetric ballast; landing long and hot, and starting the engine without a pilot on board.
- Landing into traffic (competitions), across operational runway, on intersecting runway, and on a closed runway.



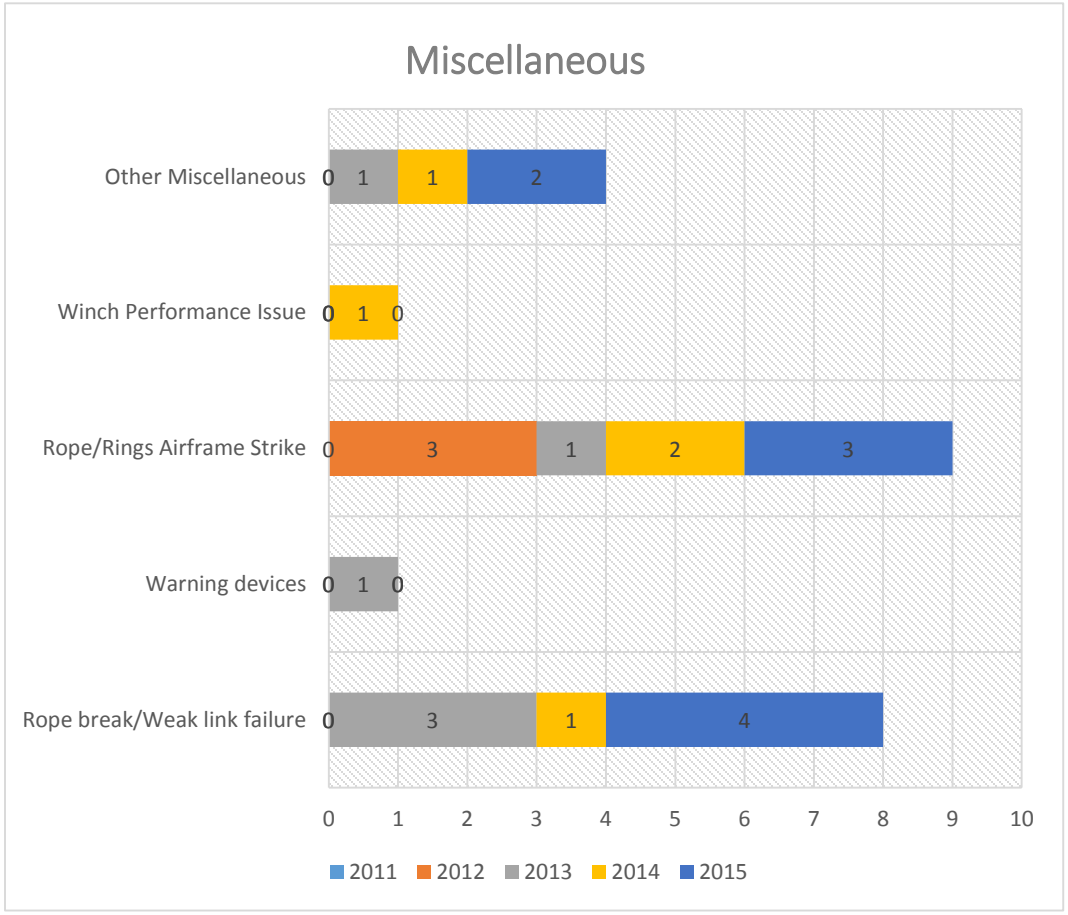
- Colliding with embankments, fences, obstacles, holes, drains, irrigation pipes (often hidden by long grass) during outlanding;
- Collision with aerodrome lighting and markers;
- Low level stall/spin events;
- Collision with trees;
- Wingtip striking ground while glider in turn.



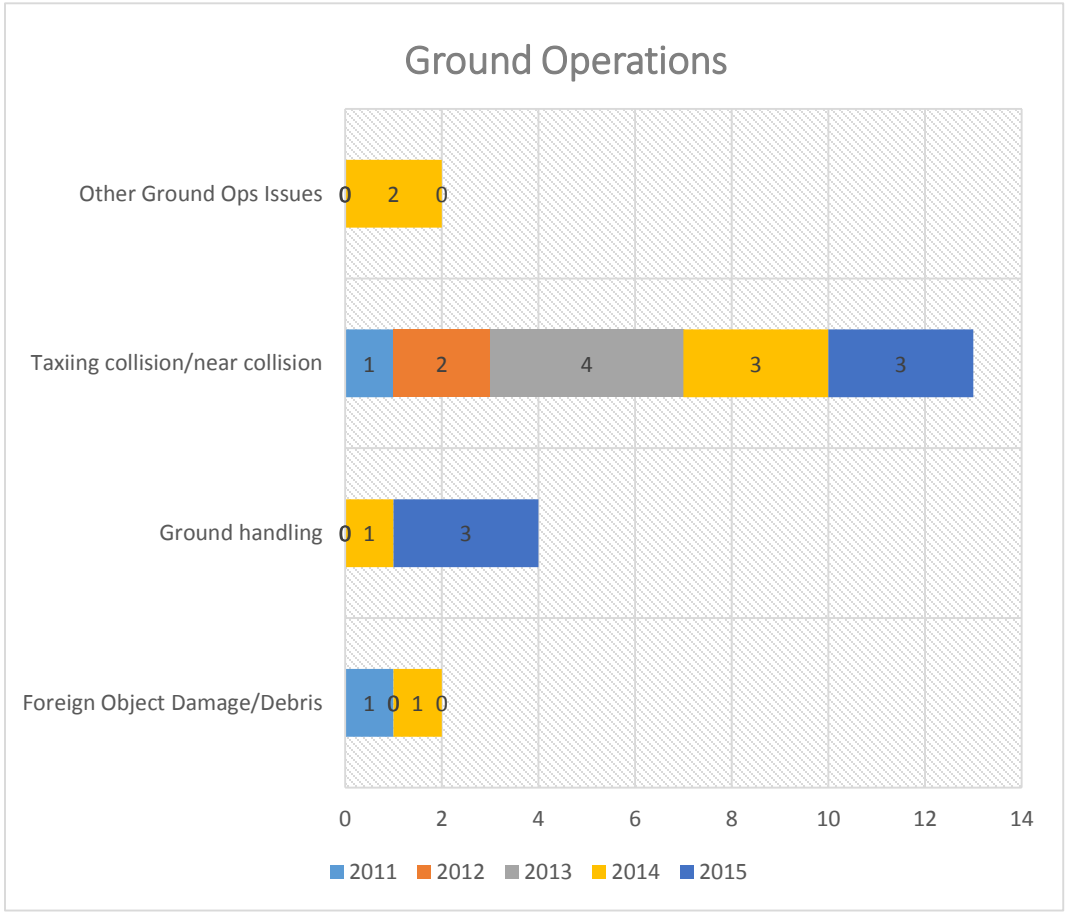
- Unapproved airframe installations (cameras);
- Loss of canopy (x2), clear view panel, tail trim ballast door (x3) and exhaust pipe (tug);
- Landing gear failures due to:
  - Fouled bungee cord, landing on rough terrain, weak over centre locking (LS gliders), mechanical issues, maintenance issues, and not properly locked.
- Canopy not locked or properly secured due to:
  - inattention to checks, distraction, outside interference, worn locking mechanism, unfamiliarity with type, and glue failure due to age.



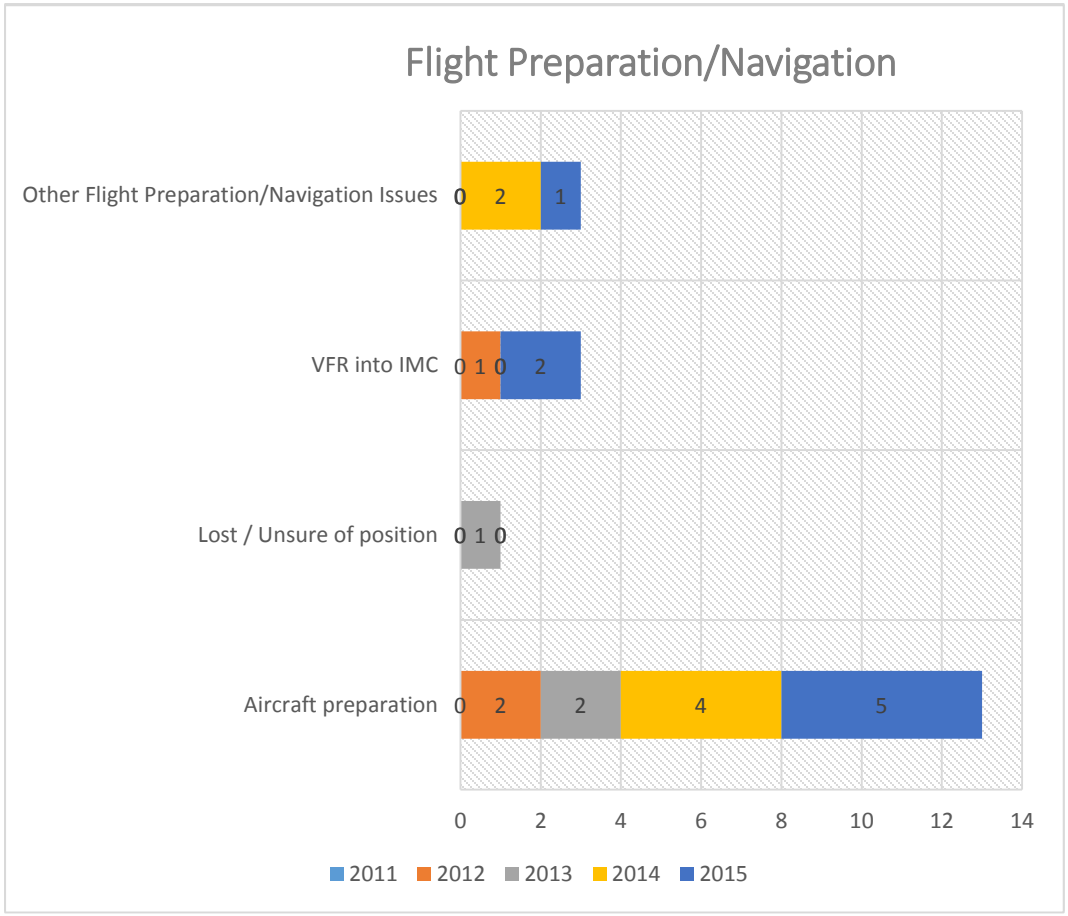
- Glider landed on reciprocal heading to an aerotow launch in progress, thermalling in the circuit, mid-field join conflicted with glider on downwind, upwind/crosswind join flown between glider and tug, disregard for the Rules for Prevention of Collision for giving way and overtaking (tug/Power), ridge flying, single pilot IFR into class G, poor energy management joining thermal, poor thermalling etiquette, unauthorised entry into controlled airspace and flying upwind in the downwind leg.
- Thermal entry and pull-up into glider, glider launched into landing aircraft, collision while thermalling in converging thermals, collision between two gliders entering a thermal, glider landed on tug,



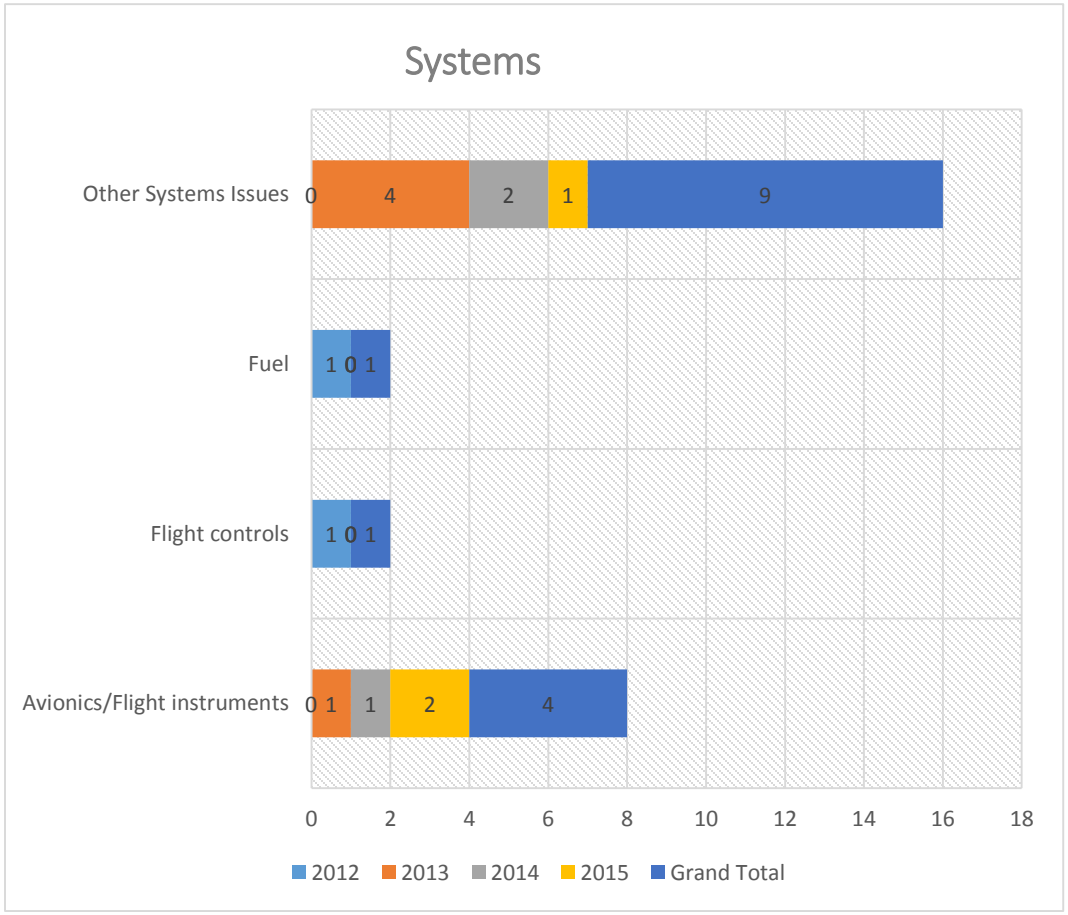
- Winch wire snagged ground anchor, premature release due to poor release maintenance, aerotow rope connected wrong way around and landing under unseen SWER line.
- Weak link break followed by rope wrapping over wing/undercarriage/fuselage or striking tailplane, or rings impacting wings.
- Undercarriage warning activated.
- Low strength weak-link used, aged/deteriorated rope weak link being used, using Tost rings on Schweitzer release and rope out of specification.



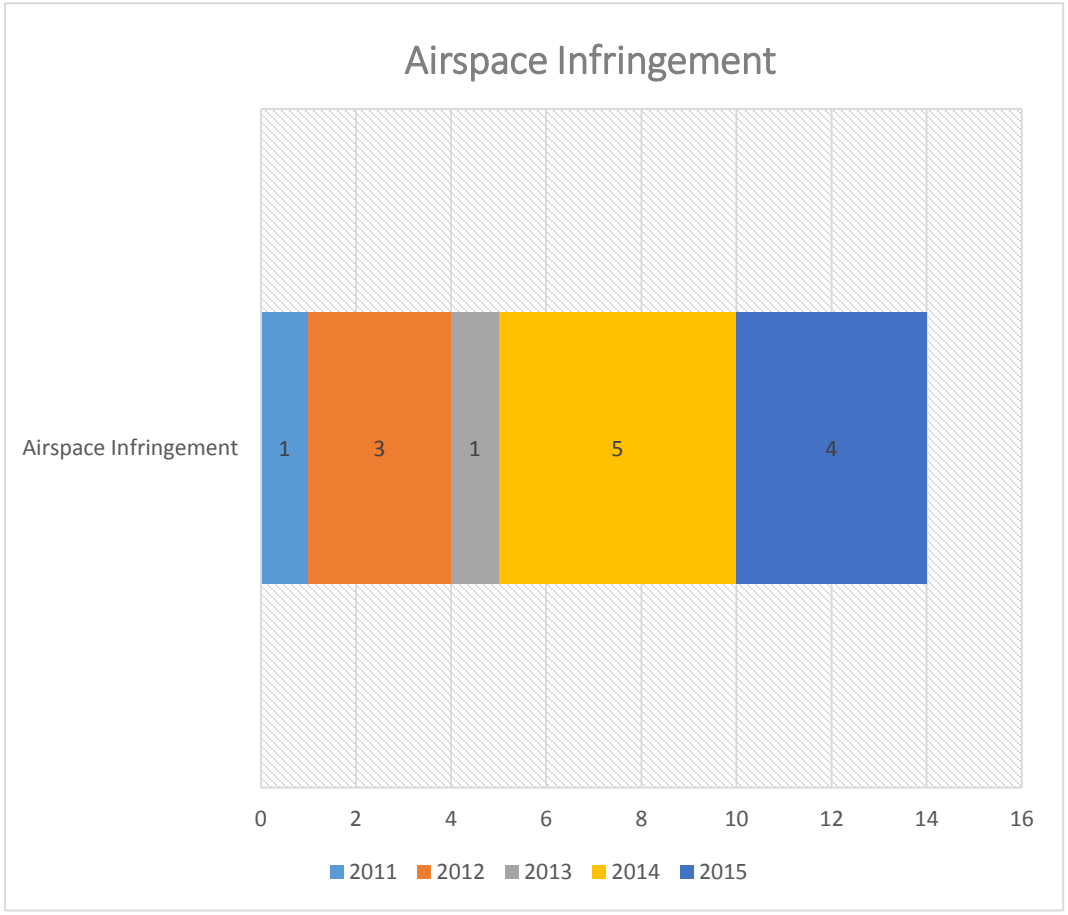
- Ground crewman injured by tow rope;
- Wing colliding with objects while being towed by vehicle using a rigid bar;
- Prop strike while taxying (motor glider);
- Near collision with gable marker while taxying (tug);
- Collision with windsock while taxying (motor glider);
- Wing of motor glider (tug) hit glider canopy while manoeuvring to hook-up;
- Nose-over and prop strike due to heavy braking (tug);
- Glider landed too close to another glider;
- Launched with tail dolly fitted;
- Towing glider too fast with vehicle;
- Collision with tow-out gear left on runway; and
- Picked-up wire laying in grass (motor glider).



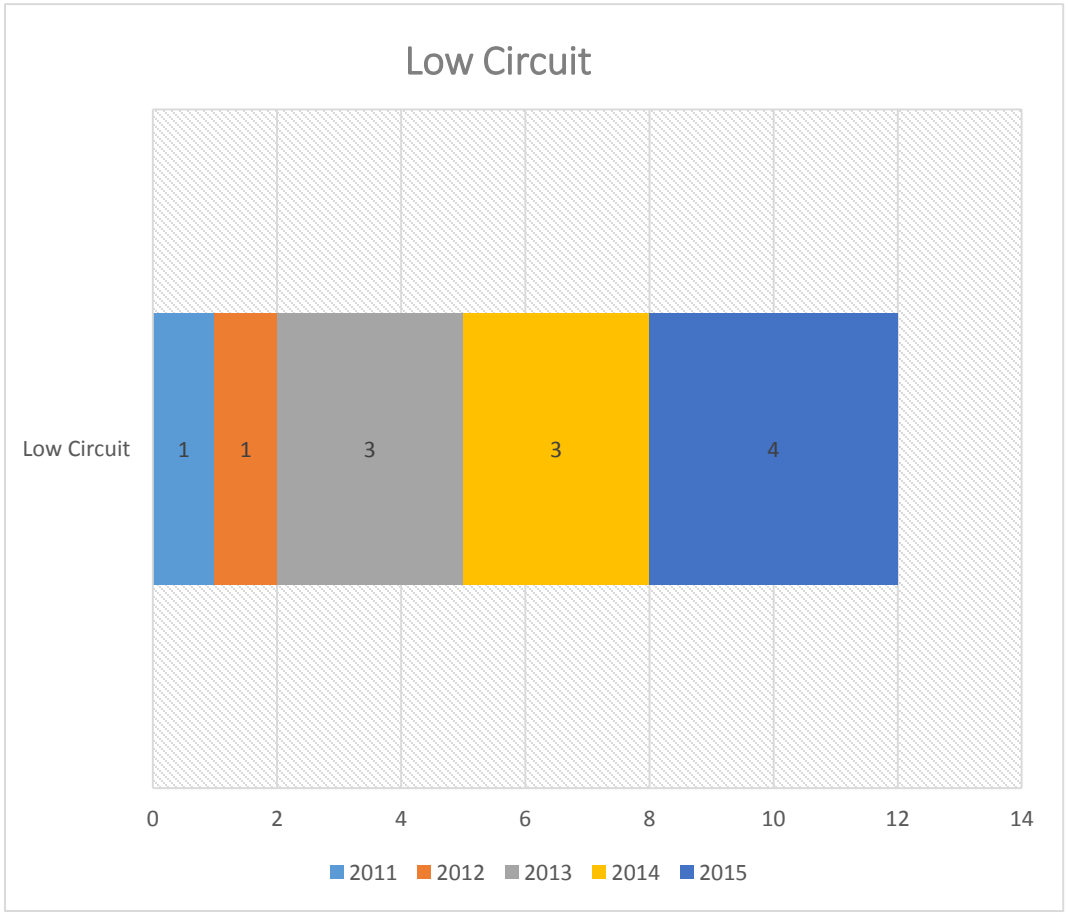
- Conducted aerobatics outside limitations of approval, pilot outlanded and did not have current contact list, pilot did not properly hydrate.
- Flight into cloud.
- Pilot got lost and did not carry charts or maps.
- Launch with tail dolly fitted, flown with wrong Maintenance Release (x2), , flown with expired Maintenance Release (x2), , flown with a major defect recorded in Maintenance Release (x3), oil dipstick not secured (motor glider), rigging and DI failed to detect aileron pushrod was not connected, engine cowl unlatched (tug) and canopy not locked prior to launch.



- Blocked pitot/static system (water/wasp x2);
- ASI plumbing disconnected during maintenance;
- Discoloured fuel sight glass (tug);
- Fatigued rod-end to rudder pedal;
- Worn tow rings;
- Broken release spring (x2);
- Broken wheel brake cable;
- Tailplane bolt not in safety;
- Tow plane's release cable too short;
- Aircraft operated beyond scheduled maintenance (tug); and
- Winch throttle jammed open.



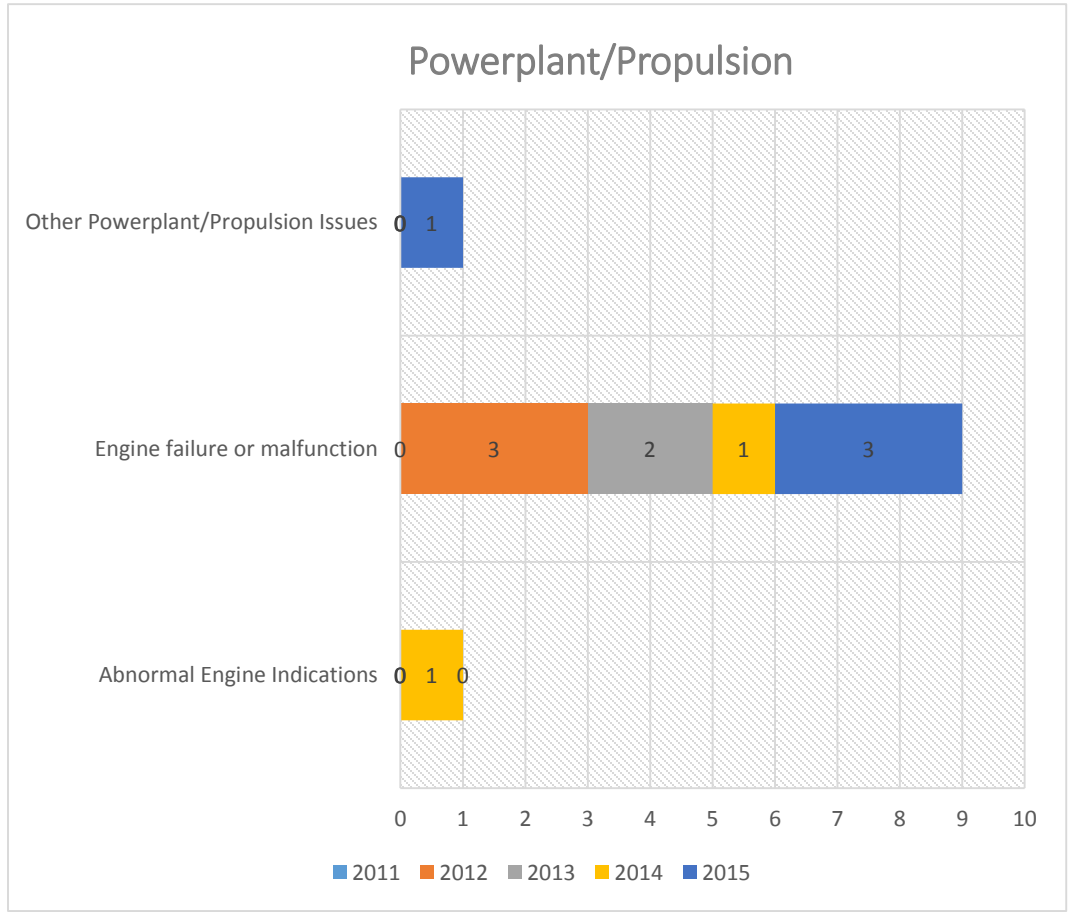
- Thermalling too close to the airspace boundary (x4);
- Did not read NOTAM (x3);
- Failure of navaid and no maps;
- Inattention to navigation (x5);



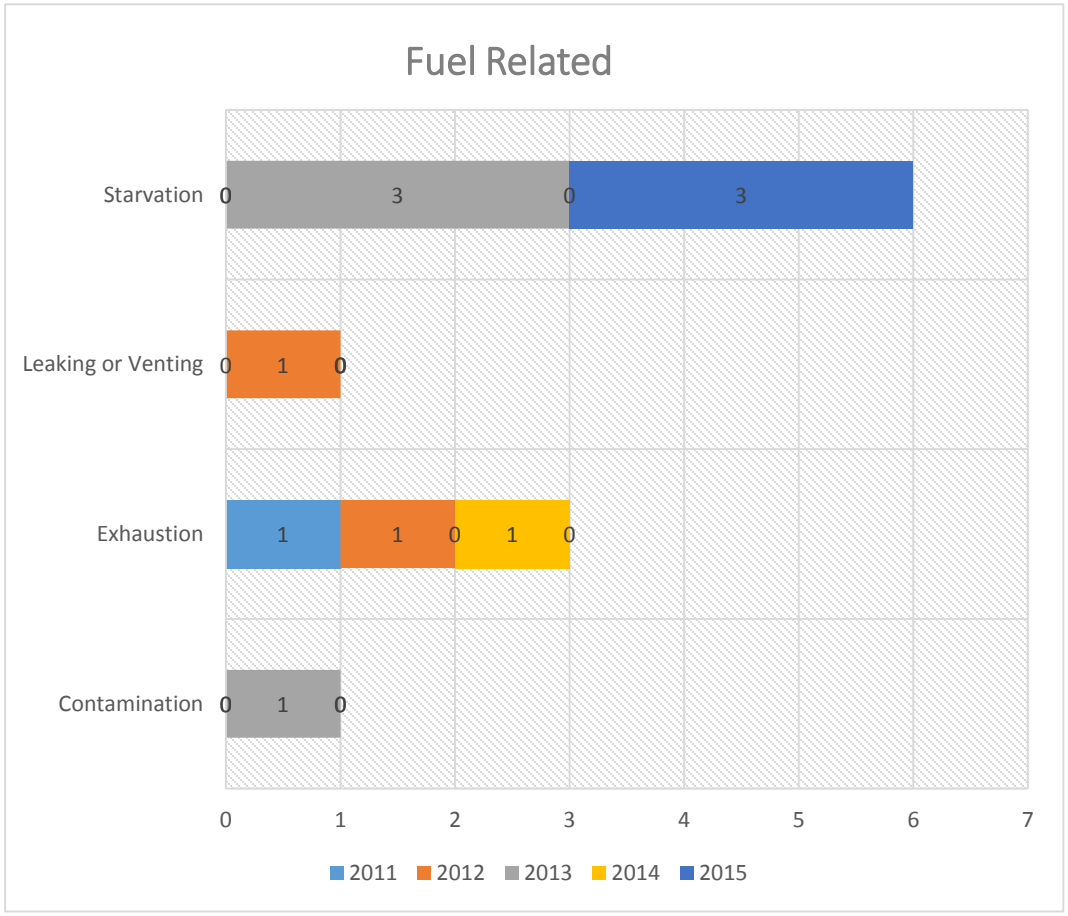
- 'Low-level finish' manoeuvre flown below the minimum safe height of 50ft;
- Sailplane touched down in paddock at speed before becoming airborne and landing on airfield;
- 'Pie-Cart-itis' (x2);
- 'Low-level finish' manoeuvre flown by unendorsed pilot (x2);
- Late decision to outland (x2);
- Site unfamiliarity; and
- Late decision to break-off the flight.

Causal factors:

- high workload, optimism bias, task or goal fixation, cognitive tunnelling, spatial disorientation, fatigue, interruptions, inexperience, convenience, poor situational awareness and boisterous behaviour.



- Launched with propeller pitch set incorrectly (motor glider);
- Drive belt failure (powered sailplane);
- Unidentified mechanical issue (tug x2);
- Fouled spark plug (tug x2);
- Sudden loss of compression (powered sailplane);
- Faulty magneto (tug);
- Uncommanded feathering (motor glider);
- Broken mixture cable (tug);
- Distributor gear teeth on the magneto stripped (motor glider).



- Foreign object contamination (motor glider);
- Traces of water (motor glider);
- Obstruction between the fuel tank and electric fuel pump (motor glider);
- Bolt securing the fuel injectors had failed (powered sailplane);
- Poor monitoring the aircraft's fuel state (tug);
- 'Low fuel' warning light went unnoticed (tug);
- Fuel levels misread (tug x2);
- Fuel burn rate miscalculated (tug);
- Forgot to turn on fuel (motor glider);
- Forgot to change tanks (tug x2); and
- Fuel selector switch replaced with a faulty unit (motor glider).

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Operations

Operational Safety Bulletin

No. 01/14

Circuit and Landing Advice

Background

This Bulletin was initially issued in January 2007 as 'Landing Advice' OSB No 01/07 in response to a trend in 'heavy landing' accidents and was updated again in July 2011 for similar reasons. Disappointingly, landing accidents continue to occur at a regular rate and usually result in damage to the glider and occasionally injury to the pilot. Many landing accidents occur as a result of poor workload management or judgement in the circuit, hence the expanded scope of this bulletin. This bulletin supersedes OSB No 01/07 Revision 1.

Since the introduction of the online reporting system in 2011, we can now see with clarity that most accidents at airfields occur during the landing phase of flight.

The following accident[1] statistics are for a 12 month period (ending 31 March) for each of the last three years:

Accident Type	2012	2013	2014	Injuries	Fatal
CFIT[2] (landing phase)	4	3	0	2	3
Heavy Landing	11	3	13	2	0
PIO	4	3	2	1	0
Wheel-up event	10	4	11	0	0
Sub Total:	**29**	**13**	**26**	**5**	**3**
All other accidents:	26	10	16	12	2
Total:	**55**	**23**	**42**	**17**	**5**

It is recognised that landing accidents occur under a wide range of circumstances and many happen as a result of pressure brought on by other in-flight situations that result in a decline in pilot performance. As the landing is a critical flight phase requiring high performance, it is understandable that pilots under unusual pressure will sometimes not perform well at this time.

The following advice is provided to remind pilots and instructors of good circuit and landing techniques. Instructors are requested to give these techniques emphasis during annual flight reviews, as well as during training.

[1] Outlanding accidents are not included in the referenced data.
[2] Controlled Flight Into Terrain: colliding with obstacles on approach and stall/spin events.

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Operational Safety Bulletin

No. 02/14

See-and-Avoid for Glider Pilots

Introduction

'See-and-avoid' is the primary means of collision avoidance in aviation and, at one time, was the only means for avoiding collision. Today, 'see-and-avoid' is complemented by technological advancements, the most common of which in gliding is radio and Flarm.

Unalerted see-and-avoid

Unalerted see-and-avoid relies totally on the pilot's lookout for aircraft separation. It is commonplace in gliding where the potential horizontal and vertical closure rates between aircraft are slow enough for human reaction. Nevertheless, while gliders generally have unhindered visibility in most directions where conflict is likely, there are still many blind arcs impeding the pilot's vision. Also, where traffic densities are high, the ability of pilots to identify and process all the traffic is diminished and the risk of collision becomes higher.

Therefore, technology such as radio and Flarm assist visual acquisition by alerting the pilot to other traffic. However, in spite of its limitations, unalerted see-and-avoid is still the primary defence against mid-air collisions, and for aircraft without a radio it is the only defence. Good airmanship therefore dictates that pilots should be looking out and not solely rely on the radio or Flarm for traffic separation. It is also worth noting that gliders can be difficult to spot when not in straight and level flight.

Alerted see-and-avoid

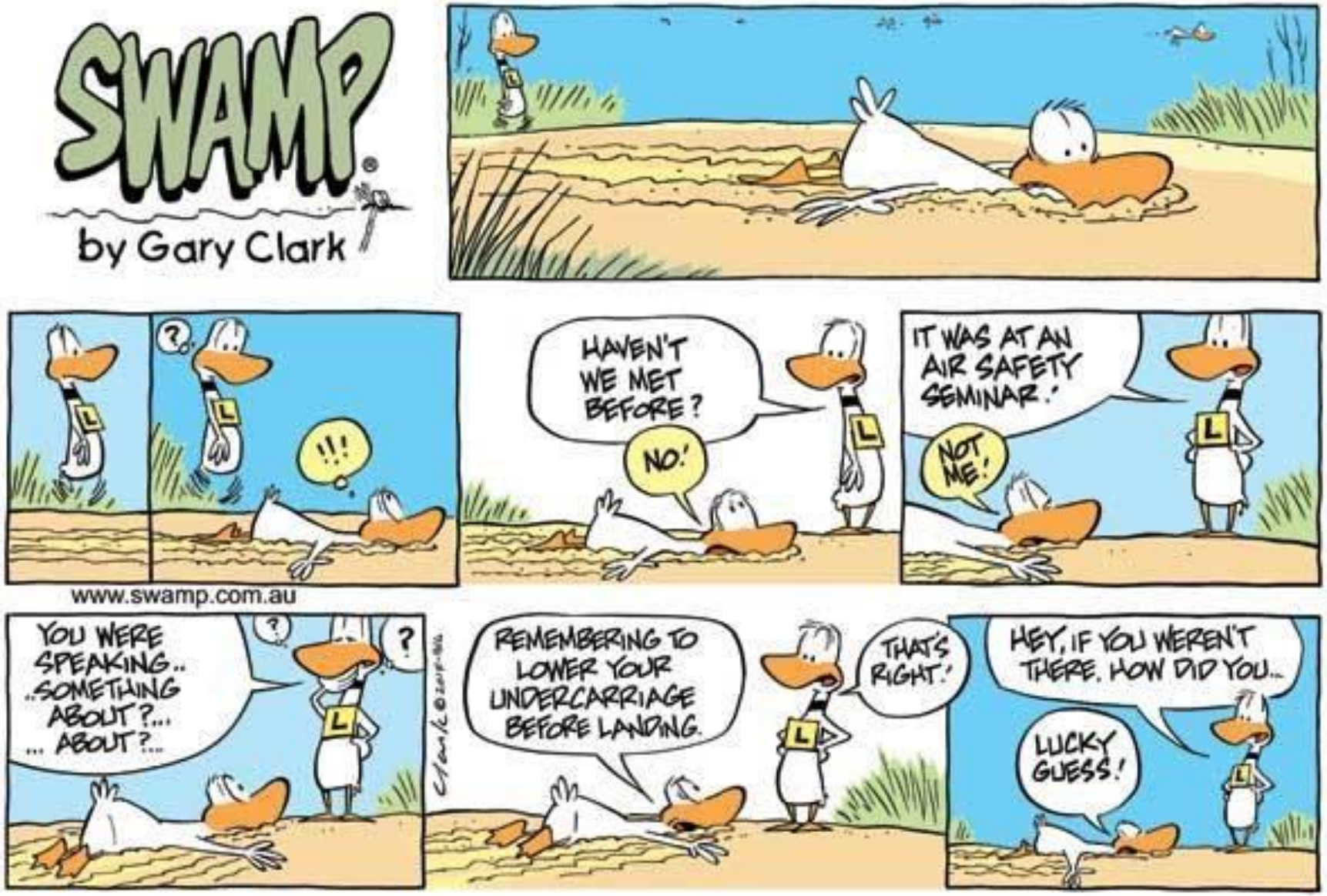
The primary tool of alerted see-and-avoid that is common across aviation is radio communication. A functioning radio enables pilots to communicate information to others that may be useful in building situational awareness.

Effective lookout

The primary method for implementing 'see-and-avoid' is lookout[1], which involves seeing potential hazards and assessing information prior to reacting. The primary source of information is vision. Whether it is aircraft attitude, position, physical hazards or other traffic, what a pilot sees is processed by the brain and used to build up situational awareness.

[1] Refer also to Operational Safety Bulletin OSB 02/12 - Lookout for Glider Pilots

Questions?



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