

The

Safety

Wire

**April 2017**





**Where is the aircraft?** The latest ALEA safety survey showed that








79% of respondents had some sort of Emergency Response Plan (ERP) in place at their agency in case of an aircraft accident. This is very encouraging news. We all hope that there will never be a need for an ERP. However, time and time again we see that if there is an accident, the absence of an ERP makes a bad situation exponentially worse. Any faith that our parent agencies will somehow figure out how to properly handle an aircraft incident is, unfortunately, misguided.

Fortunately, there is a sample ERP on the ALEA website's 'Safety First' page. Under 'Safety Program Manager Presentations' there is also a PowerPoint presentation on ERP design. Just look for the link at the bottom of the [alea.org](http://alea.org) homepage.



Here is a checklist of items you want to address in your ERP:

1. Simple, clear 'triggers' to initiate ERP.  Number of minutes overdue, ELT activation, notification from crew, etc. Usually initiated by a dispatcher or communications center.
2. Means of locating aircraft.  Access to flight tracking, ATC contact info, etc. How will you find a missing aircraft?
3. Investigation responsibilities.  Who will investigate if federal authorities do not? Who is trained for it? Do you have an incident investigation kit?
4. Instructions on searching for missing aircraft.  Who will search for the aircraft right after it goes down or goes missing? Do they know how to conduct a missing aircraft search? Include

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|--|---|---|
| 5. Instructions for securing an aircraft accident scene. |    | <p>numbers for agencies who can assist.<br/>         Setting inner and outer perimeters.<br/>         Who has access to the aircraft?<br/>         HAZMAT and scene security concerns.</p>  |
| 6. Complete contact list.                                |    | <p>All aviation unit members, federal or state investigation authorities, air traffic control, fire/EMS, surrounding aviation units, etc.</p>   |
| 7. Family contact info.                                  |    | <p>An aircraft accident will be big news. Get to the family before the news does. Do not forget about kids. Have extended family/friend contact info available to help assist the crewmembers' families.</p>  |
| 8. Aircraft recovery plan.                               |    | <p>How will you recover it from a wooded area, swamp or water? Have options and phone numbers in place.</p>   |
| 9. Media instructions.                                   |   | <p>When can you talk to the media? What can you say? What should the public affairs officer say?</p>  |
| 10. Post-incident plan.                                  |  | <p>Will you cease operations for a period of time? Who will cover during that period? What critical incident mental health resources are available?</p>   |
| 11. Checklists.  |  | <p>Have 1-2 page checklists for everyone with tasks to complete in your ERP. Include phone numbers and critical information on the list. Examples include: Communications Center, Patrol/Watch Commander or Supervisor, Unit Commander, Safety Officer, Director of Maintenance, etc.</p> |

For all of these items, plan for the most inconvenient circumstances. Plan for a missing aircraft at 2:00 in the morning, on a Sunday...on Christmas. The goal is to know that the aircrew is in need of help, find them, and get help to them within the Golden Hour. Once you develop a plan, you must test it with a live training scenario or you will have unpleasant surprises if the plan is ever needed. Public Safety Aviation Accreditation Commission Standard 03.02.04 has a more comprehensive list of items to include in a complete ERP.

*“Aviation in itself is not inherently dangerous.  
But to an even greater degree than the sea,  
It is terribly unforgiving of any carelessness,  
Incapacity or neglect.”*

*~ Capt. A.G. Lamplugh  
British Aviation Insurance*

## **Practical SMS**



In the safety survey this year, we asked again what SMS components were in place. Only 50% of the respondents indicated that they had a safety committee. The safety committee is a critical component of a modern safety program. As a safety officer, it is typically not your duty to set policy or run the training program. However, the safety manager is powerless to address safety concerns effectively without the ability to address safety issues through training and/or policy and procedure changes. In the safety committee, safety can connect with those responsible for training and policy.

Additionally, no matter how experienced the safety officer is, one person will never have all the insight to find answers to every safety

question addressed through the program. The safety committee should have members that represent all aspects of the operation. Through this collective effort, the safety program can tap into the resources needed to create effective risk controls.

To put your safety committee together, set a date and invite the boss, training manager, director of maintenance or maintenance contractor representative, your lead TFO and any other defined position within the unit. It may be everyone in your unit, and that is just fine. Meet at least once a quarter. Bring all of the safety issues to the



committee and ask for input. Review all active risk controls and discuss the performance of those controls.

If you are looking to improve your safety program, the [ALEA SMS Installation guide](#) addresses each of these items.

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## Resources

Flight Safety Foundation report on pilot aborted approach behavior:

[https://flightsafety.org/wp-content/uploads/2017/03/Go-around-study\\_final.pdf](https://flightsafety.org/wp-content/uploads/2017/03/Go-around-study_final.pdf)

NTSB Helicopter Accident Investigation Course:

[https://ntsb.gov/Training\\_Center/Pages/AS103\\_2017.aspx](https://ntsb.gov/Training_Center/Pages/AS103_2017.aspx)

Article on possible connection between mobile phone usage and physical skill level:

<http://www.dailymail.co.uk/sport/rugbyunion/article-4149290/England-crack-mobile-phones.html>



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## ALEA Online Meetings

The schedule for upcoming ALEA online meetings is below. Meetings are conducted through an online conference call you can join using your computer or phone. They are open to any ALEA member. Contract maintenance providers to ALEA members are welcome on the maintenance meeting.



### **UAS:**

Wednesday, May 17, 2017

1:00 PM - 2:00 PM EDT (1700 UTC)

### **Safety Officers:**

Thursday, May 18, 2017

1:00 PM - 2:00 PM EDT (1700 UTC)

### **Maintenance:**

Wednesday, May 31, 2017

1:00 PM - 2:00 PM EDT (1700 UTC)

*“Not all readers are leaders,  
but all leaders are readers.”*

*~ Harry S Truman*

## **Reality Check...**

**Note:** The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in red where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

<b>Aircraft:</b>	<b>Pulse Vapor 55 - UAS</b>
<b>Injuries:</b>	<b>None</b>
<b>ATSB#:</b>	<b>AO-2016-128</b>

[http://www.atsb.gov.au/publications/investigation\\_reports/2016/aair/ao-2016-128/](http://www.atsb.gov.au/publications/investigation_reports/2016/aair/ao-2016-128/)

On 27 September 2016, a Pulse Aerospace Vapor 55 remotely piloted aircraft (RPA), was operating a test flight. According to telemetry data recorded on the remotely piloted aircraft system's ground control station (GCS), at about 0910 Eastern Standard Time, the RPA lifted off from its start position in front of the surf clubhouse. About 30 seconds later, when the RPA was at an altitude of about 36 ft, the flight mode entered 'manual' mode. The RPA then tracked according to manual inputs from the pilot for about 7 minutes, at which time (when at 124 ft altitude) the data-link signal was lost. Thirty seconds later, the RPA entered the 'home' flight mode, and commenced tracking to the programmed home position at an altitude of 154 ft. The last position of the RPA recorded by the GCS was about 165 m NNE of the start position, and about 4 km SE of Ballina/Byron Gateway Airport.

In the home flight mode, the RPA did not respond to the control inputs made by the pilot, and the pilot subsequently lost sight of the RPA. The RPA was not found despite an extensive search. The south-eastern point used to georeference the image on the ground control station map was selected to a northern hemisphere latitude, which resulted in incorrect waypoints and home position for the mission. The RPA data-link signal to the ground control station was lost, so it commenced tracking to the programmed home position, which was in the Coral Sea Islands about 1,200 km north of the start position.

Incorrect reference data can have potentially serious consequences in remotely piloted and manned aircraft. It is imperative that remotely piloted aircraft systems incorporate means of minimizing the opportunity for errors to occur and also for detecting and correcting errors that do occur.



**Aircraft:** Bell 206B  
**Injuries:** None  
**ATSB#:** AO-2016-159

[http://www.atsb.gov.au/publications/investigation\\_reports/2016/aair/ao-2016-159/](http://www.atsb.gov.au/publications/investigation_reports/2016/aair/ao-2016-159/)

On 21 November 2016, at about 0730 Eastern Daylight-saving Time, a Bell 206B helicopter, registered VH-CHO, took off from a property about 30 km south of Bathurst, New South Wales. The pilot was conducting an aerial inspection of the property, with the farm manager on board as a passenger. At about 75ft above ground level and an airspeed of about 40kt, the pilot and passenger heard and felt a bang.

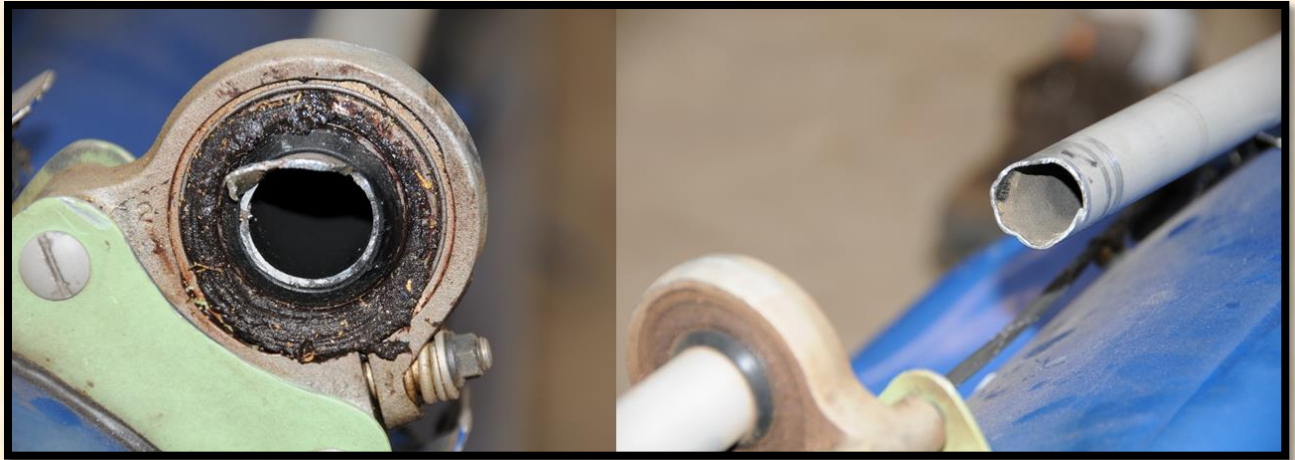
The pilot initially decided to land as soon as possible in order to check the helicopter to determine the cause of the bang, and started to slow it down. As the airspeed decreased, the helicopter started to yaw rapidly to the right and the pilot, unable to arrest the rotation with left anti-torque pedal, realized they had lost tail rotor authority. The pilot immediately rolled the throttle to the ground idle detent and as the helicopter stopped yawing, lowered the collective. The pilot saw that the rotor rpm had dropped to about 80 per cent and prepared for a hard landing. The pilot cushioned the landing by pulling back on the cyclic, but the helicopter landed heavily.



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The pilot and passenger sustained minor injuries and the helicopter was substantially damaged.

The helicopter had serial number 714, and was fitted with a long tail rotor driveshaft. The manufacturer required the single long driveshaft to be replaced with a segmented shaft in serial numbers 1252 and above. The tail rotor bearings were 'on condition' items, that is, were required to be replaced if worn on inspection. The driveshaft was inspected every 1,200 hours and was in good condition apart from the fracture after the accident. On 18 August 2016, the No. 1 and No. 3 tail rotor driveshaft bearings and tail rotor gearbox were replaced. On 29 September 2016, the No. 1 tail rotor bearing and bearing hanger were replaced. Post-accident inspection did not reveal any abnormalities.



**Aircraft:**

**Cessna 208B**

**Injuries:**

**None**

**ATSB#:**

**AO-2016-149**

<http://www.atsb.gov.au/media/5772366/ao-2016-149-final.pdf>

After take-off at an altitude of about 500ft above ground level (AGL), the instructor noted the climb speed reducing while the trainee continued to maintain the nose attitude for best angle of climb. At the same time, the instructor heard the engine lose power and a thin film of fuel partially obscured the windscreen. As the airspeed reduced to 60kt, the instructor took control. They identified an area to the left of the aircraft as the most suitable for a forced landing and began a left turn towards that clear area at the target glide speed of 85kt. As the aircraft turned, they assessed that sufficient height remained to continue the turn back towards Darwin Airport. At the completion of the turn, they selected 30 degrees of flaps to provide a short climb, which allowed the aircraft to clear two hangars and an area of trees.

After clearing the hangars and trees, the instructor observed taxiway A in line with the aircraft and elected to land on the taxiway. The aircraft landed without further incident.

A post-incident examination of the engine found the number eight fuel nozzle locking plate missing. This allowed the fuel transfer tube to migrate out of the number eight fuel nozzle adaptor. There was no damage to the locking plate mounts.

The fuel nozzles had been replaced 86 flight hours prior to the incident, while the aircraft underwent maintenance in the United States, prior to importation into Australia. All other required hardware was found to be correctly installed, including the number eight fuel transfer tube locking plate fasteners. The lack of damage to the locking plate mounts, along with the locking plate being entirely missing, and the fasteners being found installed indicates the locking plate probably did not fail. The locking plate was probably not reinstalled when the fuel transfer tubes and nozzles were installed after replacement.



*There are no new ways to crash an aircraft...*

*...but there are new ways to keep them from crashing.*

Safe hunting,

**Bryan 'MuGu' Smith**

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