

**The****Safety****Wire****September 2014**

# **SAFETY STAND DOWN**

**I am asking all ALEA members to conduct a safety stand down this fall.**

Why? In the past, law enforcement aviation has seen a spike in accidents in the autumn. There has not been an obvious common thread to these accidents, just that there are more of them during this time of year. Please, take the time to set up some kind of safety stand down in your unit sometime over the coming month. The best option would be to get everybody in one room for a meeting. Bring in maintenance personnel, flight crews, managers, line personnel, etc. You might consider inviting neighboring public safety, ENG or other operators in your area. If you cannot manage that, do not give up on it. You can have some members call in or use an online meeting website. Have two meetings with different sides of your shift rotation. Have individual crews do it on each shift with guidance from the safety officer.

Whatever it takes, make an opportunity to sit down, pause for a bit and look at the safety environment around you. Some topics to consider related to hazards in the autumn are:

1. **Changes at home:** Kids starting school can have an effect on our personal schedules, in turn creating fatigue, stress, etc.
2. **Weather:** Seasonal changes such as temperature, snow, winds, and fog, as well as related changes in aircraft configuration (doors, winter cowlings, heaters, etc.).
3. **Budget:** Many of us are stretching our budgets until funding from the new fiscal year becomes available. Once the funds are in, there may be an increased pace in maintenance or training.



4. **Holidays:** The number of holidays in the fall can cause changes in schedule, workload, fatigue, and stress.
5. **Illness:** Seasonal weather changes sometimes bring increases in illness and the use of medications that have a negative effect on our work performance.
6. **Bird Strikes:** Seasonal migration of birds can increase the risk of an in-flight strike.

If you need help finding material, planning the format or anything else in setting up your safety stand down, please contact me 24/7.



Arguing with a pilot is like wrestling with a pig in the mud.  
After a while you begin to think the pig likes it.

*~ Posted on a bulletin board at General Dynamics*



## ***Practical SMS***

### **Blind Spots**

#### Part 2

Last month, we looked at the 'blind spot' phenomena and offered some tips on how to identify them. No safety initiative is worthwhile unless possible solutions are given in addition to identifying the problem.

#### **Schedule Compression (*reducing time without reducing number of required tasks*)**

When looking at the situations throughout our day that are rushed because we do not have enough time, the thought of adding anything to it seems counterintuitive. However, a simple checklist can make sure important items do not slowly slip into a blind spot over time. Done right, a checklist can actually help speed things up. Often, we waste time trying to remember if we did everything, or repeating tasks because we don't remember if we did them. Other times, we use our precious time on things that have very low risk and forget about high-risk items because we are randomly picking them.

In addition to the traditional checklists we use in the cockpit, consider: daily or mission briefing checklists (into which a flight risk assessment tool, or FRAT, can be incorporated), daily preflight checklists for the pilot *and* TFO, and low altitude checklists (to be completed before

the crew decides they need to descend below a certain altitude for a mission). Checklists should be completed as a crew whenever possible.

*Note to the safety officer: these checklists also give you a tool to better track how well safety management is working.*

### **Insufficient Training**

When training is mentioned, money usually is the first thing that comes to mind. There is no denying that it is a constant fight for all of us. That being said:

Having an opportunity to train with someone from outside of your agency at least once a year is one of the most important things you can do for safety at your agency. Having a trainer other than the unit instructors is an opportunity to assess what important items may have slipped into blind spots and eliminate them. Most of these instructors train people from many organizations and it offers them very wide perspective, which improves the health of your agency's perspective through training.

ALEA offers a ton of training for members, usually at very low cost, or for free. The six regional safety seminars are free and offer three days of training. Two days are classroom and one day is committed to roundtable discussions. Additionally, there are online presentations, training videos and sample manuals on the website. Use these items to augment the training at your agency. Look out for some new, exciting online offerings that will be available soon.

Set up a local training day with other agencies in your area. Usually, the offer of a free lunch will ensure good attendance. Ask those you invite if they have anyone at their unit who would like to make a presentation. These events not only bring good training information, but the opportunity to see how others in the industry conduct daily business allows everyone to examine their own operation from another perspective, which sheds light on the dreaded blind spots.

### **Safety Management Focus**

Safety management that is focused on regulating rules and disciplining those who deviate from them cannot manage blind spots. Utilize a safety management system. An SMS is designed specifically to seek out these demons hiding in the shadows. Employee participation in hazard reporting and a system of hazard analysis (remember the 5 Why's?) are two critical cures for blind spots. Without doing formal hazard analysis (root cause analysis), the system



will still have blind spots, even if there is good hazard reporting. Assumptions will be made about the causes of reported safety issues, which are often inaccurate or incomplete. The safety program will operate based on these assumptions, leaving the true causes in the dark. This leads to a dangerous false sense of security.

Remember, safety management is about people. The rules, regulations and safety structure can only deal with things that have been identified, defined and regulated. When it comes to seeking out unidentified problems, understanding the complexities of the issue, how they fit into the context of daily operations...only people can complete these tasks, not books. Additionally, we can only do these tasks in an environment that allows for, and encourages, problem-solving.



### Overall Perspective

Someone once suggested that I take new TFOs in training to spend a day with a couple other agencies as part of their training. It was brilliant. I made it part of the program that they go to three other agencies for a day, just to see how others do business. Each time we went, I learned a lot along with the TFO. They always found it very helpful. I think we should all do this, regularly. I have never visited a law enforcement aviation unit that was not willing to have an ALEA member stop by and look around.

On the flip side, it is always eye opening to have someone visit your unit and look at how you do business. Make it an opportunity to have an outside audit. Again, the offer of lunch is usually sufficient payment. Ask someone you know nearby, or another operator at the airport, to stop by for a while and just look at how you are set up and how you operate. Ask if they will just write down some things they see. You may be surprised at what turns up on that piece of paper. It will be surprising because it will likely contain stuff that is sitting squarely in your blind spots. This process will require more than a touch of humility. Sometimes, it is tough to step back and look at your own, sacred operation in a truly objective manner. If we can swallow our pride long enough to take in this view, however, safety is guaranteed to benefit from the otherwise uncomfortable process.

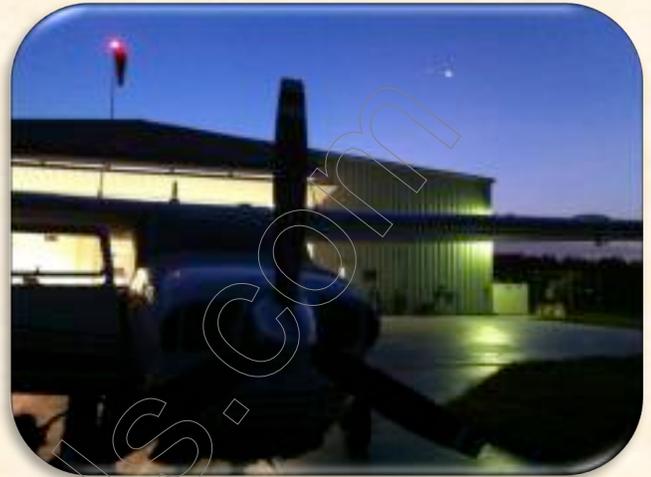
Just do what must be done.  
This may not be happiness, but it is greatness.

~George Bernard Shaw

# ***SAFETY OFFICER MUTUAL AID***

ALEA Safety Officers and members interested in safety: we will have an online meeting next month. Please send me an email if you are not on the mailing list and would like to attend. [safety@alea.org](mailto:safety@alea.org)

Oct 9, 2014  
3:00pm EST (1900UTC)



## ***RESOURCES***

New IHST/USHST FRAT Safety Bulletin:

[http://www.ihst.org/portals/54/IHST\\_News/FRAT%20GRAT%20Bulletin2014.pdf](http://www.ihst.org/portals/54/IHST_News/FRAT%20GRAT%20Bulletin2014.pdf)

Great article on the misuse of a FRAT:

<http://airsafetygroup.com/is-the-frat-undermining-your-safety-initiatives/>

The ALEA FRAT (*designed in cooperation with IHST/EHEST*)

<http://www.alea.org/assets/cms/files/safety/ALEA%20FRAT%201.2.xls>

For those of you doing firefighting work with a bucket:

[http://oas.doi.gov/dts/library/TechBull/IATB\\_2014-03.pdf](http://oas.doi.gov/dts/library/TechBull/IATB_2014-03.pdf)

FAA Safety Briefing magazine:

[http://www.faa.gov/news/safety\\_briefing/](http://www.faa.gov/news/safety_briefing/)

Responsibility for a "fault of control of the operating conditions and forces" in an establishment can be assessed only against the center of management. This center is that individual or small group of individuals, who exert the directing will in that concern. In this center is the managerial skill which makes for success; while its lack leads to failure.

Upon this center of management rests the responsibility for initiating a program for accident prevention, and for the continuing case to make such a program effective.

~ **Heinrich W. Heinrich, 1936**

# TRAINING

Standards. Often, when speaking with flight instructors, there are certain maneuvers for which we tend to set specific criteria for initiating or aborting (go-around). Simulated engine failures and forced landings are at the top of this list. I am interested in hearing from flight instructors out there on what criteria they use. There are no right answers, but I think we could all benefit from a bit of outside perspective (see 'Blind Spots' story above). Please join me online to discuss this.

ALEA Safety Discussion Forum

<http://www.alea.org/forum/topic.aspx?i=4328>

## 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.

**Aircraft: Cessna 210**

**Injuries: 1 Uninjured**

**NTSB Identification: WPR13LA319**

[http://www.nts.gov/aviationquery/brief.aspx?ev\\_id=20130709X14212&key=1](http://www.nts.gov/aviationquery/brief.aspx?ev_id=20130709X14212&key=1)

A Cessna T210K sustained substantial damage when the left main landing gear collapsed while on landing roll. The private pilot, the sole occupant of the airplane, was not injured. The pilot reported that he had put the landing gear down, but the left main landing gear down-and-locked light did not indicate that it was safely locked. After several attempts to get the left main landing gear safely down and locked, the pilot landed the airplane, and the left main landing gear collapsed. The left horizontal stabilizer and elevator were bent and wrinkled.

In the presence of a Federal Aviation Administration inspector, the left main landing gear actuator assembly was disassembled. A broken gear tooth from the end to the piston assembly was found. This tooth was responsible for the final "down lock" of the left main gear. The assembly operated properly in the "up and locked" position, which the pilot verified occurred with each cycling of the landing gear. The failed tooth was not made available for further examination and the failure mode was not determined.



**Aircraft: Cessna 182E**  
**Injuries: 1 Fatal**  
**NTSB Identification: CEN14FA071**

[http://www.nts.gov/aviationquery/brief.aspx?ev\\_id=20131129X32256&key=1](http://www.nts.gov/aviationquery/brief.aspx?ev_id=20131129X32256&key=1)

The solo student pilot departed from an uncontrolled airport to rendezvous with an examiner for his private pilot practical test. Weather conditions at the departure airport were overcast clouds at 600 feet and 4 miles visibility. After takeoff, the airplane impacted terrain about 2 miles from the departure end of the runway, on the extended runway centerline. The debris field was consistent with a high speed impact at a flat pitch attitude. The student pilot most likely attempted to climb through the overcast clouds and lost control, then exited the clouds in a steep dive and was attempting to recover from the dive as the airplane impacted the ground.

The primary flight instructor stated the student pilot had a “go-go-go” type personality and led a fast-paced life. Further, the student pilot was concerned about getting his examination done before the airplane’s annual inspection. The flight instructor subsequently learned that the student pilot was under additional personal and business stressors. The student pilot’s decision to depart into poor weather conditions was most likely influenced by these life stressors, both self-imposed and external. The student pilot had 0.6 flight hours of simulated instrument training recorded in his logbook, as opposed to the Federal Aviation Administration requirement of 3 flight hours for the private pilot practical test.



**Aircraft: Bell UH-1H**  
**Injuries: 1 Fatal**  
**NTSB Identification: CEN13FA415**

[http://www.nts.gov/aviationquery/brief2.aspx?ev\\_id=20130716X92622&ntsbno=CEN13FA415&akey=1](http://www.nts.gov/aviationquery/brief2.aspx?ev_id=20130716X92622&ntsbno=CEN13FA415&akey=1)

A UH-1H helicopter was substantially damaged after a loss of control and ground impact. The pilot, the sole occupant, was fatally injured. The helicopter was [flying] a seismic survey operation. According to ground witnesses at the survey location, the pilot flew inbound to their location from the left seat, hoisting a basket load with a long line rope. The pilot overshot the intended drop site and the basket load impacted the ground, followed immediately by the 150 foot long line falling straight down onto the basket load. At about the same time, the helicopter entered into a right bank, followed by a left bank. The helicopter subsequently impacted the ground in a steep left bank. The pilot held a commercial pilot certificate with airplane single and multiengine land, airplane instrument, and rotorcraft-helicopter ratings. The pilot also held a mechanic airframe and power plant certificate. A review of the pilot's flight records indicated that he had logged over 5,000 hours total flight time, with over 1,800 hours in the make and model of the accident helicopter. The helicopter was operating about 700 pounds (lbs.) below performance limit capability for a 50 foot out of ground (OGE) hover as the pilot approached the survey location.

The helicopter mechanic stated that hydraulic leaks had been a long-term challenge with the accident helicopter and that most of the hydraulic lines had been replaced as the helicopter was rebuilt and brought up to certification standards. A hydraulic line had been replaced six days prior to the accident, due to a leak near the transmission filter. The mechanic, director of maintenance at home station, and accident pilot were aware of a slow, "weeping" hydraulic leak

in the aft belly of the fuselage, but did not foresee the leak causing a significant issue. Replacement components for the hydraulic system near the leak, to include hydraulic lines, fittings, and a check valve, had been requested from home station, and were expected to arrive within days of the accident. Information concerning a weeping hydraulic leak was not entered into the maintenance records.

On the day prior to the accident, the pilot told the mechanic that the cyclic appeared "notchy", as if it would "bump" a little during movement. The pilot thought the cyclic issue may have been associated with winds. The mechanic stated that he added one or two cups of hydraulic fluid to the reservoir within a day or two of the accident. On the morning of the accident, the mechanic noticed the check valve fitting was not tight. He tightened several fittings in the surrounding area, utilized Teflon tape in an attempt to help the check valve fittings 'grab' more effectively, and used rags to soak up hydraulic fluid in the aft belly of the main fuselage.

Personnel described the operating environment at the location as 'tense'. About three days prior to the accident, an owner terminated a contract pilot after the accident pilot informed the owner of this pilot's aggressive flying. Following the termination, the accident pilot informed the owner that survey personnel were dissatisfied with losing the other pilot and blamed the accident pilot for the termination. According to the owner and the mechanic, survey personnel had 'timed' how long the accident pilot was taking to perform long line operations. A survey supervisor had informed the owner that the accident pilot was taking "50% longer" than the terminated pilot in performing these operations. The owner stated that the accident pilot was very concerned with losing the survey contract and told him that the work environment felt hostile. The mechanic stated that he also felt pressure to ensure flights were completed. The director of maintenance stated that the accident pilot and mechanic were concerned that any "maintenance down time" on the helicopter would result in a contract penalty.

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

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

Safe hunting,

*Bryan 'MaGu' Smith*

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