The Safety Beacon is for informational purposes. Simply reading the Beacon does not satisfy your monthly safety education requirements but unit safety officers are encouraged to use the articles in the Beacon as topics for their monthly safety briefings and discussions.

December 2016

What's New This Month?

- This edition of the Beacon has some how-to articles about changes in the Safety Information and Reporting System (SIRS), as well as some helpful information on pursuing your Safety Specialty Track ratings.

- Risk Management is a big focus area again this month. There's a short piece about what can go wrong if you don't concentrate on ALL the hazards you might see during a preflight. There's also a good technique for including some of the hazards you know about into your mental checklist so they aren't forgotten.

- We've got some information on a Safety Alert the NTSB put out regarding trim rigging so you can be on the lookout.

- There are some lessons learned from recently closed mishap reviews, and an article about how mishap reviews can be improved by asking simple questions like, "what went wrong *this* time?"

"We're on an AFAM for SANTA!!"

Santa Claus is preparing for his annual sojourn to every boy and girl in the world, and the Civil Air Patrol is helping.

Safety Officers from every CAP wing are helping Santa and his Elves with their Risk Management. Weather hazards, preflight of the sleigh, and proper rest and nutrition for the reindeer are all part of the planning process.

Airmen from CAP are also helping the North American Aerospace Defense Command (NORAD) as part of the Total Force effort to track Santa as he makes his rounds on Christmas Eve. You can listen in thanks to CAP Communication Officers and the Santa Track HF portion of the CAP National Traffic Net!

Updates begin at 7:00 pm EST on Dec 24th. Check out NORAD's Christmas Website for links to more information, or go direct to this site to listen!

Happy Holidays, from CAP Safety!!

Winter Driving!

Snow Storms and Travel

I saw a report on the news a couple days ago that said there was snow on the ground in more than forty states, including Hawaii. Winter storms combined with the busy holiday travel season means that all of our members could be affected.

The National Highway Traffic Safety Administration (NHTSA) offers an extremely thorough lesson in preparing for winter driving. Check it out HERE. In reality, preparing for winter driving is just one more example of Everyday Risk Management. Think about the hazards, think about the risks they present, and determine what YOU can do to reduce those risks to an acceptable level. Be prepared, and maybe you can keep this from happening to you.

What Went Wrong?

"The plan worked last year!"

George Vogt, CAP/SE

I recently reviewed the summary of a mishap that had come to my office to be closed out. Like most mishaps, this one had an overview of the mishap, a short review by a mishap officer, and comments from the commanders in the chain. The comments were similar to what I see in numerous mishap reviews, and they showed a little misunderstanding of why we do mishap reviews.

In this case, the cadets of a squadron were gathered at the local airport to take part in an Honor Flight ceremony, honoring some deserving World War II veterans; a great cause. The cadets had to walk about a half mile to the airport terminal from where they parked. It was at dusk. The sidewalk was a bit uneven, and curving, and only wide enough to allow a single-file line. The formation of cadets was following behind a single senior member (other senior members were delayed) who didn't realize he was leading the cadets at a faster-than-usual pace. The cadets were attempting to stay in step, on the narrow, uneven curving sidewalk. One cadet stumbled and suffered a minor injury.

The mishap review noted that the cadets could/should have been put in Route Step March or At Ease March, and perhaps given the command to "follow the curve of the road" (see CAPP 60-20, para 3.21.). Prior to the "march" the leader of the group should have reviewed the hazards and risks with the Cadets or with other senior members to determine how to best mitigate the risks.

One comment troubled me, and I saw it from several different people. The assertion was that this event took place each of the last four years, at the same airport, with no injuries so the plan *must* be a good one. But what was different about *THIS* year? What part of the plan broke down on *THIS* occasion? Is there something we can learn from *THIS* mishap?

Every mishap is reviewed because every mishap has unique circumstances (Dim light? Too fast paced? No review of hazards? Route step?). In this case, the review isn't over and the risk management isn't complete, until that 4-year old plan is updated to include a pre-activity hazard assessment, a pre-activity risk safety briefing, discussion of the pace of the march, and the possibility of "Marching Other than at Attention." Lessons learned.

Changes to Online Safety Education

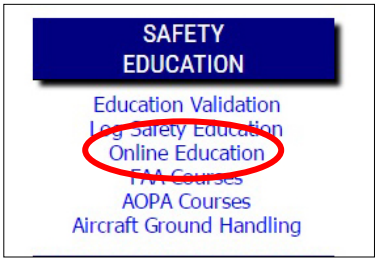
George Vogt, CAP/SE

I'd like to give you a look at a few small changes we've made to the Safety Education section in eServices. It should make it easier for our members to access On-line Safety Education, while allowing us to keep it better updated.

In the past, all the on-line safety education was located on SIRS. SIRS is maintained and updated by the IT staff here at NHQ, and their plate is full so we weren't able to perform as many updates as we might have liked based on the justifiable racking and stacking of corporate IT priorities. However, they were nice enough to carve out some time to make some changes so the safety education now resides on LMS and can be updated by the Safety Team and our friends in Professional Development.

The changes should be seamless to our member customers.

To access your on-line monthly safety education options, or other safety education courses, you can still access it from SIRS by clicking on the "Online Education" link. Same as always.



This link will now take you to the LMS page, where you will see two categories of safety education. "Monthly Education" will be the courses you're used to seeing for monthly safety education credit. "Other Courses" includes links to Safety Specialty Track Courses, AOPA Courses, FAA courses, and How-To guides for using SIRS … those courses also count for monthly safety education.

Where do I find a list of the courses I took? Just like before, you can go to the eServices homepage. Click on your name in the upper right corner, and select "General Info." That takes you to the "My Account" page. Look at the left menu bar and click on "Safety Education" and you'll see a list of every safety course you've ever taken.

If you want a print out of all your past Safety Education courses, your safety officer or commander can go to SIRS and click on "Reports," then select the "Safety Briefings Training Report" from the dropdown menu.

What happened to the "How To" Courses for the Command Track? Some of you, enrolled in the Command Specialty Track, are required to take the "How to File a Mishap" courses. Those were down for a short time while we made some updates, but they are back on-line and tested. Go to "On-line Education" like I explained above, and look under "Safety: Other Courses" and you'll find the updated briefings and quizzes.

Does Reading the Beacon count for monthly safety education? YES!!!

Keep an eye out under the "Safety: Monthly Education" heading in LMS (get there from the "Online Education" link). Within a couple days of each new edition of the Beacon Newsletter, you will be able to click on a link to the "Current Beacon Newsletter." It will take you to the Beacon module where you will find a copy of the most recent Beacon Newsletter, and a quiz on that edition that will give you credit for your monthly safety education.

If you aren't able to make it to an in-person safety briefing, the Beacon is the next best thing since you'll be getting up to date information on mishaps, seasonal topics, safety program updates, and regular refreshers on the Risk Management philosophy.

Keep your suggestions coming and we will continue to improve the tools that go along with advances in the safety program.

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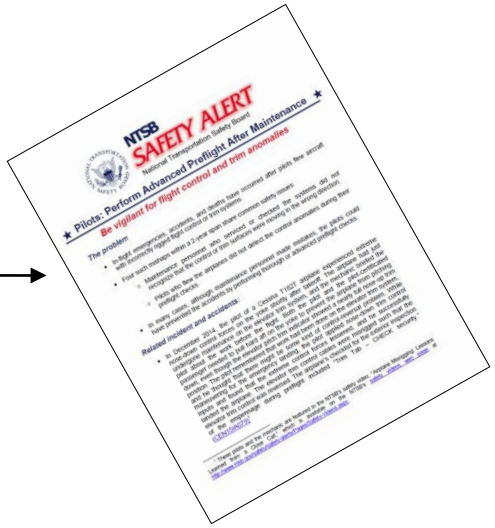
Are You "Trimmed for Takeoff?

George Vogt, CAP/SE

From time to time, the National Transportation Safety Board (NTSB) puts out a *SAFETY ALERT* about a topic or trend that concerns them.

Two such Safety Alerts were released in March 2015 and dealt with the issue of flight control rigging, and the possibility of aircraft returning from maintenance with flight controls or trim systems rigged incorrectly. One was directed at mechanics, and one was directed at pilots and aircrews, advising how they can be alert to the possibility, and how to prevent a mishap due to mis-rigged flight controls. Click on image to read the Safety Alert. →


NTSB
SAFETY ALERT
National Transportation Safety Board
Pilots: Perform Advanced Preflight After Maintenance
Be vigilant for flight control and trim anomalies

Luckily it doesn't happen often, but there have been cases of flight-control related mishaps in commercial and general aviation. And, as you might imagine, if something affects general aviation it can also affect us in CAP. It's important to note that CAP has NOT had any mishaps due to aircraft trim systems being rigged improperly. However, we have had a couple of unrelated cases in the last year of aircraft coming out of maintenance with the elevator trim rigged incorrectly. Excellent reactions and decisions by our CAP pilots in each case resulted in safe recovery and no damage.

In one case, a C-182 was coming out of a 100 hour inspection during which the trim was worked on. The pilot got airborne but when he leveled off and accelerated he quickly noticed that the trim was working "backwards." When the pilot attempted to trim nose-down, the aircraft trimmed nose-up. When the pilot attempted to trim nose-down, the aircraft trimmed nose-up. He quickly determined what the problem was. He trimmed the aircraft near neutral and recovered uneventfully. It was determined that the trim tab connections were reversed, and the condition was corrected by certified A&P mechanics.

In another case, the trim direction was correct, but the trim tab was rigged with a noticeable nose-up bias. The difference was not very obvious during take-off but became more noticeable as speed increased. The pilot was able to adjust the trim and land uneventfully with slightly stronger than normal yoke pressures. The aircraft was grounded and the trim tab was re-rigged to meet manufacturer's specifications.

The NTSB Safety Alert really emphasizes the need for pilots to do a very thorough preflight whenever the aircraft has been in maintenance, with increased focus on any of the components that were repaired or serviced. It is incumbent on the pilot to make sure the trim tabs are moving in the proper direction and appear to be set correctly if the trim has been serviced. Pilots should personally verify the correct movement of all flight controls prior to every flight.

Mistakes can happen. As pilots, we should take the time to preflight our aircraft as if our lives depend upon it; because they do. We can also prepare ourselves by studying the symptoms of every system malfunction to make sure we know what to do if the unthinkable occurs. Would you be ready?

Here is a link to a video, produced by the NTSB. It involves two young pilots who experienced a similar trim reversal in a general aviation aircraft. NTSB Trim Misrigging Video Put yourself in this pilot's shoes.

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“I didn’t see it.”

George Vogt, CAP/SE

Orange cones or markers like the one in the picture to the right are relatively common around airports. FBOs will use them to mark areas where ground vehicles, fuel trucks, and other equipment shouldn’t go (like next to an airplane). They are prominent, very visible, and serve as a warning to everyone on the ramp.

So, you may ask, how could a pilot taxi into one of these cones? In this case, the cone was setting right in front of the aircraft when the pilot and his passenger walked out to where the aircraft was parked. They went about their preflight, climbed in the aircraft, started it up, and taxied forward. There was a loud noise as the propeller hit the cone.

The pilot later commented that he couldn’t see the cone while seated in the pilot’s seat. By then, it was far too late.

An FBO employee heard the loud noise and looked outside the front door of the FBO facility. Part of the cone was lying right in front of the building. Luckily no one was near the projectile when it landed. As he looked up he saw the aircraft taxi away and take off without stopping.

You’re probably saying this couldn’t happen to you. Well, it can if you aren’t making an affirmative effort to look around, identify hazards, and do everything you can do to reduce risks. Was that cone there yesterday? Was it there the day before? That doesn’t matter.

Every day, and every mission, are different. We all need to be aware that habit patterns and past experiences can cause us to see things that aren’t there and miss things that are there. We should all be aware that our own experience can be a hazard. As you approach the airplane, look around it for ladders, cones, oil cans, tie-downs, chocks, or anything else you may need to clear from the area. Look at your taxi route to make sure it’s clear of vehicles, people, or anything else that might be in the way. Look for construction. Look for bird activity. Look at the wind sock. Get a feel for everything around you. Make it a habit to execute every pre-flight as if it was the first time.

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IMPORTANT NOTE: EVERY prop strike requires that the engine be shutdown and inspected by a qualified A&P mechanic. You should NEVER assume there wasn’t any damage to the prop or the engine. If you hit something with your airplane (yes it can happen to you), shut it down and have it inspected!

Are Hazards Part of Your Mental Checklist?

Everyday Risk Management

George Vogt, CAP/SE

I've been fortunate enough to fly a variety of aircraft in my career, and my favorite by far was the F-16. It was intense, exciting, fun. The aircraft and the missions demanded your full attention, because if something was going to go wrong it would go wrong fast (Check out the next article on bird strikes … can you imagine that bird strike at 480 knots? I can tell you from experience, it is LOUD!).

Low-level flying was especially exciting, in part because of one of the biggest hazards you can think of; the ground. Alone in an airplane, checking your navigation, operating weapons systems, checking your wingman, scanning the sky, looking at radar, working radios, can all be very distracting when your biggest hazard is only a couple hundred feet below you, rising and falling as you fly down valleys and cross ridges. Alone with your tasks, and not wanting to miss a thing, we developed mental checklists, and often spoke them out loud. My biggest hazard? Rocks. So I incorporated "rocks" into my mental checklist, ensuring I looked outside and visually assessed my altitude between every other task:

Radar … rocks … wingman … rocks … check six … rocks … check course … rocks …

You get the idea. Before all your endeavors you can analyze your hazards and then put the avoidance of those hazards into your mental checklist.

It works in the air. It works when you're preparing to back up in a CAP van. It works when you're running an obstacle course. It even works when you're part of a ground search team … as you are walking the line scanning for clues, are you paying just as much attention to your path and the obstacles in your way?

November 2016 Mishap Closeouts

Col Robert Castle, CAP/SEA

Closed out in November:
Bodily Injury – 19, Aircraft – 4, Vehicle - 1

Here are a couple emphasis items from recent mishap close-outs:

Bodily Injuries

Injuries to members during physical fitness events (4) tied with the number of members fainting during various activities. Most PT-related mishaps involve falls or collisions while running resulting in scraped hands, knees and twisted ankles. Next most common is vomiting after strenuous exercise. It's impossible to come up with an easy fix to prevent these types of mishaps since there are so many variables involved. Personal fitness level, hydration and nutrition all have an effect on an individual's physiological state at a given time.

We can and should encourage proper rest, diet and fluid intake to keep ourselves in top form. The pressures of work, school, CAP and other outside activities can combine to prevent us from taking proper care of ourselves. There is also a very real phenomenon known as Exercise-induced Nausea that can come from extreme exertion or even OVER-hydrating right before exercise.

Knowing when to call "knock it off" is a learned judgement. Pushing yourself to complete a mile run when you haven't eaten all day, or ignoring the signs of a developing unsafe situation out of "mission-itis" are common denominators in many mishaps. We need to learn to recognize the warnings and stop the process *before* a mishap occurs.

Aircraft

A crew descending into their destination airport sustained a bird strike to the leading edge of the right wing. The pilot never saw the bird, and the observer saw it for a split second before impact, but too late to give warning. There were no injuries to the crew members.

The Aircraft Owners and Pilots Association has some good guidance on steps you can take to reduce the chances of a bird strike, pointing out that about 90% of all bird strikes take place at or near airports, usually while taking off or maneuvering for landing.

Bird Strike Avoidance

AOPA Offers an excerpt from a cooperative article by the Air Force "Bird Aircraft Strike Hazard (BASH) Team and the FAA's Aviation News, printed in 1996:

- **Avoid low altitude flight as much as feasible to reduce the risk of a strike.**
- **Strikes are most likely in August, September, and October - particularly in migratory flyways. These tend to be the larger birds. Keep a lookout, just as you would for other flying objects.**
- **Dawn and dusk are the times with the highest probability of a bird encounter.**
- **Turn on landing or recognition lights. This helps birds see oncoming aircraft.**
- **Plan to climb. Birds almost invariably dive away, but there are exceptions.**
- **Slow down. This will allow birds more time to get out of your way and will lessen the impact force if you do hit one.**
- **If a collision seems likely, duck below the glareshield to avoid being hit by the bird and flying plexiglass. Advise passengers to do the same. Protect your eyes and head.**
- **If a collision occurs, fly the aircraft first. Assess the damage and decide whether you can make it to an airport or you should make an off-airport landing. Declare an emergency - it doesn't cost anything. Even if no damage is visible, divert to the nearest airport and have a mechanic look at the airplane. There are likely to be some aerodynamic modifications that do not have FAA approval.**

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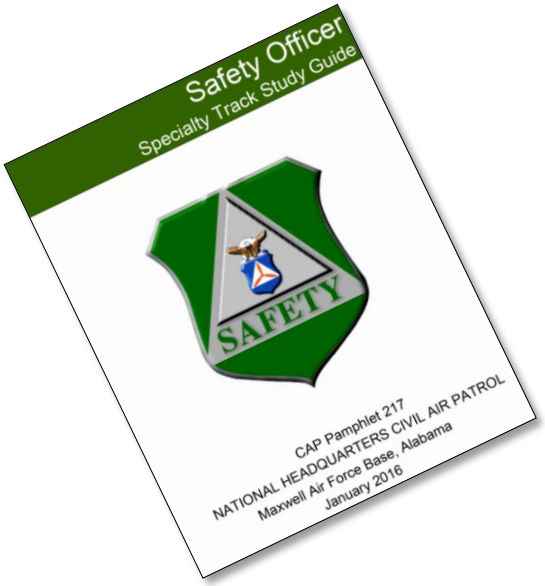
Safety Specialty Track Award Process

Col Robert Castle, CAP/SEA

"Ok, I want to earn my Master Rating in Safety, but I'm not sure how I do that…" Have you heard that comment or something similar before?

The requirements for technical training are spelled out in CAPR 50-17 CAP Senior Member Professional Development Program. Each area of expertise has its own pamphlet/study guide with specifics on knowledge and service requirements to achieve each level in the program.



CAPP 217 *Safety Officer Specialty Track Study Guide* was completely revised in January 2016 and was intended to refine the knowledge and service requirements for the Technician, Senior and Master ratings and clarify the approval process for the Master. What was omitted from 217 was any mention of the eServices Specialty Track Approval module….oops.

As you can imagine, or may have already experienced, having two separate approval processes - the paper approval process outlined in 217 and the online version in eServices - can cause a bit of confusion. Not only for the member, but also commanders and staff members from the unit level all the way to NHQ.

We're working to correct this problem but in the meantime, here are some things you can do to make the approval process easier.

In the eServices Specialty Track Module:

- The unit Professional Development Officer (PDO) enrolls the member in the Safety Specialty track

Completion of the Technician and Senior levels:

- When the member has completed all the requirements for the level, the appropriate checklist from 217 (Attachment 1 or 2) is submitted to the unit commander for approval.

- When the checklist is signed by the commander, the PDO then enters the approval request in the eServices Specialty Track module.

- The unit commander approves the level in eServices and the specialty track level is posted to the member's training record.

- The member is then eligible to wear the Leadership Award ribbon (or applicable device for the senior level).

Completion of the Master Level:

- When the member has completed all the requirements for the level, the unit PDO enters the approval request in the eServices Specialty Track module.

- The checklist from 217 (Attachment 3), along with required supporting documentation is submitted to the wing commander for approval.

- The wing commander forwards the package to CAP/SEA for review.

- CAP/SEA makes an approval recommendation to CAP/SE.

- CAP/SE approves via the eServices Specialty Track module.

- The specialty track level is posted to the member's training record and the member is eligible to wear the Silver Star device on the Leadership Award ribbon.

Some additional Notes:

It's important that any documentation required by CAPP 217 to show completion of knowledge or experience be included with the checklist when submitting for a specialty track level! It's hard to verify a member's qualifications without written documentation. Mishap plans or risk management forms you've prepared, appointment letters showing your participation as a safety officer at a unit or wing activity, outside employment in a business safety department are examples of required documents that will help the approval process.

You should provide copies of these documents to your specialty track mentor to make their task easier.

If the Specialty Track is disapproved, the Commander's email address will be included in the email so that you may contact them to discuss any concerns about their decision. All disapproved Specialty Tracks may be resubmitted at any time.

If you have questions about the CAP specialty track process, start with your unit PDO or commander. They're the best source of information on how to get started. Your group, wing and region directors of safety are another great resource.

We'll continue to improve the process and make it less of a burden to get those specialty track levels!

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