



The Safety Beacon is for informational purposes. Unit safety officers are encouraged to use the articles in the Beacon as topics for their monthly safety briefings and discussions. Members may also go to LMS, read the Beacon, and take a quiz to receive credit for monthly safety education.

November 2019

## ***The NEW CAP Safety Program is Here!***

Following a lot of hard work from a lot of people, and tremendous support from the CAP Command Team, the new publications which make up the foundation of the new CAP Safety Program are in place. On 30 September 2019, the new regulations, a new pamphlet, and new risk assessment forms went into effect and showed up online on the [gocivilairpatrol.com](http://gocivilairpatrol.com) website. They are accompanied by some new tools and educational materials designed to make it easier for commanders, safety officers, and all members to effectively employ risk management in all our missions, activities, and daily lives.

In this Beacon we'll highlight some important parts of the new program with a quick overview of each new regulation and some of the new website features. Share this info with your units as part of their monthly safety education so *everyone* is aware of the changes. Each month we'll do our best to provide more help with "how" to put the new safety program elements to work for you, as well as tips on how to make sure risk management is a part of everything you do.

## ***The Beacon is Back!***

The Safety Beacon Newsletter has been on a hiatus for a few months as we focused all our efforts on delivering the new CAP Safety Program. The Beacon is back, and we hope to return to the once-a-month publication schedule.

The new CAPR 160-1 describes the Beacon as the "primary means of communicating program updates, trends, and other items of interest with commanders, SEs, and all CAP members." We will rely on it to get updates and important information out to everyone involved in CAP Safety. We consider it part of every safety officer's duties to read, understand and share the information included in the Beacon.

It is also a big part of YOUR safety communication. Let us know if you think we need to "get the word out" about something important, or you'd like to share an important safety message with your fellow members.

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# CAPR 160-1

## Civil Air Patrol Safety Program

### What is a Safety Management System?

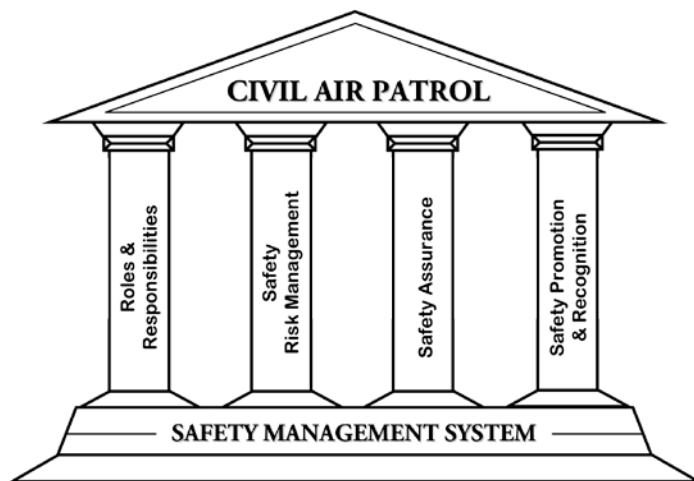
The new CAP Safety Program is structured as a Safety Management System (SMS). The SMS structure is used by airlines, the FAA, the health care industry, and many other service providers. Put very simply, an SMS is an organized way of ensuring risk management is used throughout the organization, in everything we do. Civil Air Patrol's SMS, like most others, is organized around four pillars. Those pillars include:

- **Roles and Responsibilities** ... this is where we explain everyone's role in the program and the training and qualifications needed for various safety positions.

- **Safety Risk Management** ... this is where we set out the processes and procedures for using risk management in all our activities, ensuring we take a hard look at the hazards and risks we face and come up with plans to control those risks.

- **Safety Assurance** ... these are the processes we use to make sure our risk controls and safety initiatives are actually working the way we intended.

- **Safety Promotion and Recognition** ... this is where we talk about safety education, the need to be familiar with risk management, and the importance of having safety information flow to every level of the organization.



### Chapters 2-5 ...

#### A Chapter for Each Pillar

To make it easier to follow, the chapters of the new CAPR 160-1 are organized like the four pillars of the SMS, with chapters 2-5 covering the four pillars. Take time to review each chapter. Hopefully you'll notice some clearer guidance on what is expected in the safety program ... better organized and easier to find.

### Chapter 1 ... Program Overview: **Make it a Meeting Discussion Topic!**

So, what's a good starting point? I suggest that every member read chapter 1 ... it's only 5 pages. Then go to your unit meeting and spend your Safety Education time discussing Chapter 1. Talk about the National Commander's vision for Safety Risk Management. Discuss the portion on safety culture and talk about how you can help in each of the areas that make up a strong safety culture. How does your unit measure up and how can you improve? Make a list of a few positive changes you can make to help support each of the pillars. If any tough questions arise, make sure you let us know!

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# CAPR 160-2

## Safety Reporting and Review

### What, when, and how to report and review mishaps

Every mishap, hazard or near-miss we see reveals a risk we weren't aware of or a risk that we are not adequately controlling. One of the most basic ways of preventing future mishaps is by asking "why did that mishap happen, and what can I do to prevent that situation from happening again?" whenever a mishap occurs. This regulation gives clear guidance on how we will look at each and every mishap to determine "what went wrong" and how we can put risk controls in place to help prevent those mishap situations from occurring.

### Reporting

Reporting is the first step. Read about what events and mishaps need to be reported, and how to report them. One big highlight is paragraph 5.5. We all agree that it is very important to report near-midair collisions, aircraft mechanical breakdowns that force us to alter our missions, and other safety related aviation events. However, some members were hesitant to report those events because they weren't "really" mishaps, and they didn't want to be "suspended" for reporting them. This new regulation makes it clear that those events must be reported, but they are now called "Aircraft Non-Mishap Reportable Events" and do NOT result in a suspension of flying privileges. We also made it clear in a change to paragraph 8.2. of CAPR 70-1 that these "events" are NOT considered mishaps when it comes to suspensions. Read over paragraph 5.5. in CAPR 160-2. Go ahead and report these events using the mishap reporting section of SIRS, but they won't be treated as "mishaps" under CAPR 70-1's definition. Questions?

### Mishap Reviews

The old CAPR 62-2 wasn't very clear on how (or when) to do mishap reviews. The bottom line in the new CAPR 160-2 is that we want someone to look at every mishap that occurs and ask WHY it occurred so we can take action to prevent that same situation. This has been an on-going weak area ... members have historically done a good job of telling WHAT happened and what was done to care for the injured member or the damaged piece of equipment, but we didn't look at WHY the mishap occurred; the things that led up to it.

This new regulation walks the safety officer and the review officer through the process of asking "why" so we can get the information we need, then recording that information in a good mishap review. Even if you're not a safety officer it would be good to read about mishap reviews, so you understand how important it is to help gather information following every mishap. Safety officers and commanders? You have some specific duties so you should be very familiar with this regulation.

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# Tools and Training

*The regulations tell you what you must do;*  
*The webpages tell you how!*

We are working hard to give everyone the tools and training needed to perform all the tasks and responsibilities outlined in the new safety regulations. A lot of tools are now available on the [Safety pages of gocivilairpatrol.com](#). We'll continue to improve them and add more content. Let us know what you'd like to see! Here's what we have so far:

**Risk Assessments and RA Worksheets** This is the page where you'll find the new CAP Risk Assessment Worksheets. CAPF 160, CAPF 160S, and CAPF 160HL are discussed in CAPR 160-1. This is where you will find them and learn to use them. So far, the members who have used the new forms find them straight-forward and user-friendly with much better instructions than the forms that were used in the past. There is also a totally new Intermediate Risk Management course that explains the importance of a good risk assessment and walk you through the process.

**Safety Officers:** Review this training and review the forms, then lead your squadron through a quick risk assessment of your weekly meetings. It would be a great way to get everyone involved in identifying some of the hazards and risks you may take for granted.

**Mishap Reviews** Here's all the information you need to complete the quality mishap review that CAPR 160-2 is asking for. There is a mishap review course that gives you the background on why mishap reviews are so important and walks you through the process. This page also has some valuable tools that will help you ask WHY the mishap happened. There are guides, checklists, and templates for asking questions, taking notes and writing reviews.

**Mishap Review Checklists** WE HAVE CHECKLISTS! I'll admit it. If you haven't done a lot of mishap reviews, you might need help with what to look for and what questions to ask. Check out the webpage and you'll see some 5M checklists for some of the more common types of mishaps we see, with suggested questions you can ask to get a good feel of what led up to the mishap and where we might enhance our risk controls so we can avoid similar situations. These are set up as fillable MS Word documents with built-in spaces for typing and saving your answers.

**Mishap Review Template** Have you ever wondered how to format your mishap review or what it should include? Once you have all the information you need for your mishap review, the webpage gives you an easy-to-use fillable MS Word template for your mishap reviews. Just fill in the blanks, save it, and upload it as an attachment in the mishap in SIRS. Hopefully this will make it easier for you, while ensuring we get all the information, we need to fully analyze the causes of our mishaps.

**New Instructions in SIRS** For safety officers and commanders working with mishaps in SIRS who are used to seeing the same thing over and over ... please slow down and take a fresh look. There are some specific instructions for what information we'd like to see in each section. Take the time to make sure you're answering the right questions.

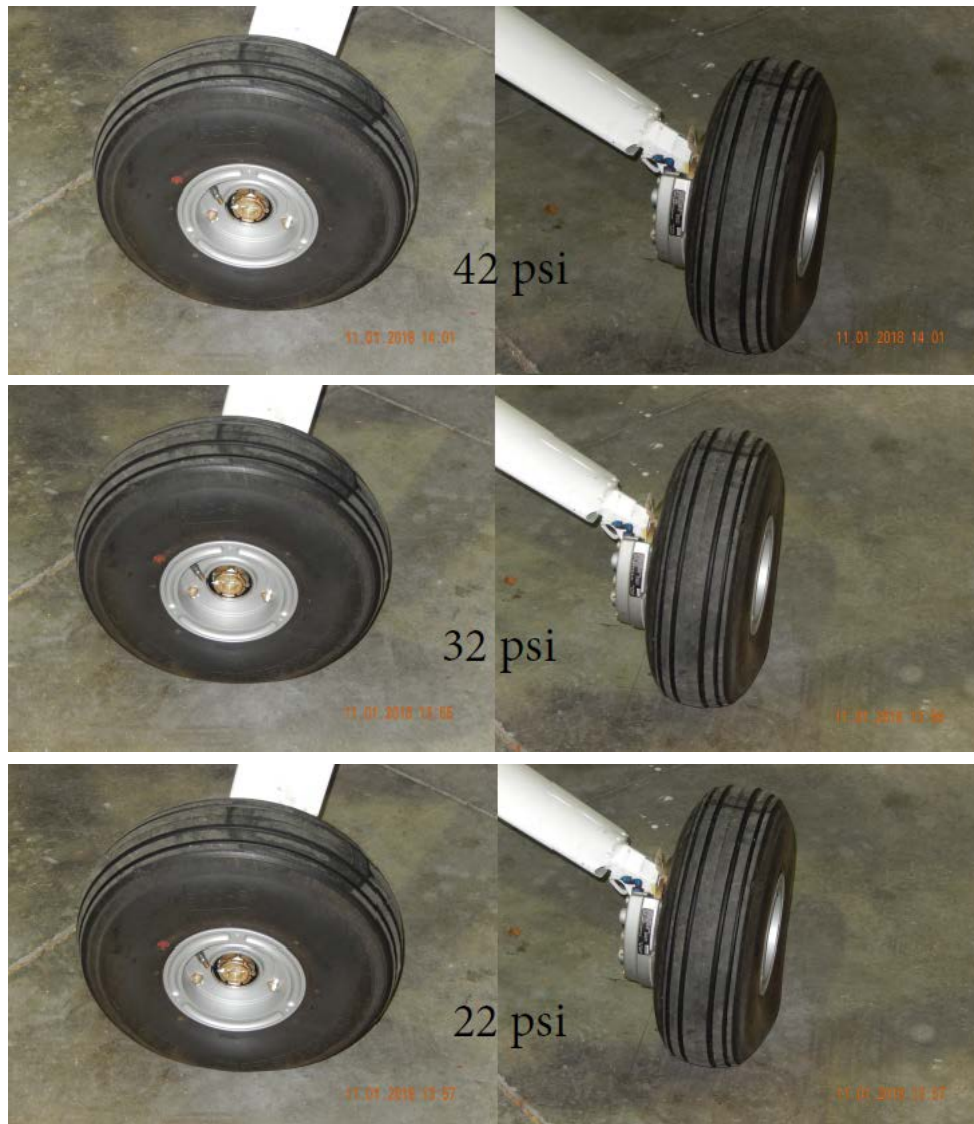
**IMPORTANT!!!** Very important note here for commanders, safety officers and review officers... become *very* familiar with this mishap review page and begin using the mishap review checklists and review templates to “get to the bottom” of every mishap. The new tools were available on line on 1 October. **If we see that there is information missing, and the new tools have not been used, we will begin to send mishaps back to the wing or region commander, asking them to send it back to the review officer for more information. Let us know if you need help!**

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# Aircraft Tire Pressures ... Think you can tell if your aircraft tires are properly inflated just by looking at them? **WRONG!**

We continue to see some cases of aircraft flat tires and inner tube failures that could be caused by chronic low tire pressures. Remember, pilots are required to check the pressure of the aircraft tires prior to the first flight of the day, using a tire gauge. However, some general aviation pilots seem to rely on “visually” checking the tires; saying that the pressure “looked good” before flight. The FAA will tell you that a visual check is no good. On the next page, check out a reprint of a previous article from the Beacon. I recommend this be a monthly safety education topic for every squadron with aircraft assigned!

Meanwhile, I was recently discussing this very issue with Capt Chuck Webster, the VTWG Director of Safety, and he sent me some very revealing pictures ... I’d say this is pretty good proof that pressures can’t be accurately assessed without a gauge. Thanks, Chuck!



Go to the next page for the REAL guidance on checking your tires!



# Aircraft Tire Pressure

George Vogt, CAP/SE

I've talked about the importance of aircraft tire pressure, but I continue to see some cases where low tire pressures may be a factor in some of our minor mishaps, and I see that not all our pilots fully understand the importance of the correct tire pressure. I want to take this opportunity to make a couple quick points, and provide a few helpful resources.

First of all, the POH requires the pilot to check the pressure in the tires. The preflight inspection in Chapter 4 has a step which directs, "Main Wheel Tire -- CHECK for proper inflation ..." Chapter 8 of the Cessna Information Manuals lists the prescribed air pressures. Our [NHQ-approved Aircraft Checklists](#) have the required tire pressures already added to that Preflight step.

The FAA says, "**Inflation Pressure Control**. Tire pressure should be checked **DAILY** using a calibrated gauge ..." (FAA added the bold face). That guidance can be found in [FAA Advisory Circular 20-97B](#). The FAA also says to follow the recommendations of the tire manufacturers, and there is manufacturer guidance posted on the FAA websites. How important is tire inflation? Michelin says that maintaining proper tire pressure is the "single most important action that you can do to prevent tire-related events." They also note that visual checks **don't work**. It is almost impossible to tell if a tire is 10% or even 20% low, yet manufacturers recommend that a tire be removed from service for inspection if more than 10% low.

Let's take a look at some of the specific guidance from those manufacturers:

Michelin offers a comprehensive lesson on tire care. [Michelin Tire Safety](#) Note on page 18: "Tires that leak to below 90% of nominal are no longer acceptable for service if the tire was operated and it must be removed."

Here is Goodyear's [Aircraft Tire Care Manual](#). Check out this table from Goodyear:

Cold Tire Service Pressure	Recommended Action
100 to 105 percent of loaded service pressure	None - normal cold tire operating range.
95 to less than 100 percent of loaded service pressure	Reinflate to specified service pressure.
90 to less than 95 percent of loaded service pressure	Inspect tire/wheel assembly for cause of pressure loss. Reinflate & record in log book. Remove tire/wheel assembly if pressure loss is greater than 5% and reoccurs within 24 hours.
80 to less than 90 percent of loaded service pressure	Remove tire/wheel assembly from aircraft (See NOTE below).
Less than 80 percent of loaded service pressure	Remove tire/wheel assembly and adjacent tire/wheel assembly from aircraft (See NOTE below).
0 percent	Remove tire/wheel assembly and adjacent tire/wheel assembly from aircraft. Scrap tire and mate if air loss occurred while rolling (See NOTE below).
<b>NOTE:</b> Any tire removed due to a pressure loss condition should be returned to an authorized repair facility or retreader, along with a description of the removal reason, to verify that the casing has not sustained internal damage and is acceptable for continued service.	

I am not an A&P. However, as a pilot, I want to know everything I can about my aircraft and systems. Do any wings out there have a good method of ensuring your members are following FAA and manufacturer guidance on tire inflation?

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