



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.

May 2015

## Know Your Limits

George Vogt, CAP/SE

This month in the Beacon we are focusing on establishing our own personal limits. We have a couple excellent articles about how to set your own personal minimums as a pilot. We need to use the same approach in setting, and respecting, our own personal limits regardless of what we are doing.

In the Civil Air Patrol, we take the time to do a good hazard assessment and risk mitigation before our flights, our searches, our exercises, and our cadet activities. We look at the weather, we look at the terrain, we look at our equipment, and we look at our tasks.

We analyze how the heat can dehydrate us. We analyze how easy it is to slip on the ice, mud, or uneven terrain. We know that sharp tools can be a hazard on the ground and we know that low ceilings can be a hazard to flight. We follow strict procedures when operating on a flight-line. We follow our Risk Management checklists and we do our best to mitigate the risks for everyone involved.

But we have a tendency to look at these hazards and risks only in the context of the group, since most of our activities involve a team, a group, a squadron, or a unit. How many of us stop to assess our own personal limits? That part of risk mitigation is often over-looked when we are acting as a part of a group, but each and every one of us are responsible for honestly assessing our own strengths, weaknesses, and tendencies.

Personally, I have a tendency to get dehydrated easily, so I make sure I bring extra water. I hate to be labeled a quitter, so I have a tendency to press on with the task at hand even when I'm over-fatigued. That can lead to a mishap. I recognize those "weaknesses" and I'm alert to their warning signs. In the Air Force, aircrew members go through altitude chamber training. The primary purpose of that training is to help teach them to recognize their own personal symptoms of hypoxia (low oxygen levels in the blood). As that altitude chamber training points out, we're all a little bit different, we all have our own "symptoms," and we all have our own strengths and weaknesses. We must recognize our own tendencies, be alert for our own "symptoms," and mitigate the risks they bring.

Don't keep these tendencies or "symptoms" to yourself. Do you suffer from asthma? Do you carry an EpiPen? Are you recovering from a sprained ankle? Share these with your wingman so you can both be aware and you can help protect each other. Discuss them as a group during one of your monthly safety meetings so you can all help each other be stronger members of the team.

As a group, we do a pretty good job of assessing hazards, mitigating risks, and keeping our operations safe as a team. One of the biggest contributions you can make to the team is to know your own limits, and keep yourself safe, so you can continue to be an important part of the day's mission.

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# **Setting Your “Personal Minimums” as a Pilot**

By: George Perry  
AOPA Air Safety Institute

We hear the term “Personal Minimums” tossed around quite a bit in general aviation flying, but what does it really mean? What criteria should a pilot use to set personal minimums and how do we “enforce” them when push comes to shove?

Before we delve too far into that question, it’s important to set the stage with two other terms we hear frequently and really focus in on what each means. Currency and proficiency have similar definitions but they couldn’t be more different. Being current under the Federal Aviation Regulations means you can “legally” act as a pilot in command of an aircraft. Being proficient means you’re “fully competent.” Another way to say this is Current = Legal and Proficient = Safe. Assuming this is true there are circumstances where adverse conditions exist and being current is not enough to guarantee safety.

The FAA defines currency through the Federal Aviation Regulations (FAR’s); we all know that. But who defines proficient? The short answer is – Nobody. That responsibility falls largely on the shoulders of the Pilot in Command (PIC) and it’s usually a judgment call. Another consideration is that each person’s definition of proficient may be different, along with their inherent abilities, background, and experience. So in the absence of firm guidance, it’s up to pilot to determine whether or not to go flying and what conditions are acceptable to avoid a situation that exceeds their skill level or the aircraft’s abilities. Voilà - Personal Minimums are what we’ve come up with to help guide that decision making process.

That sounds great, but without much aviation experience, it’s hard for a pilot to set their own personal minimums because they just don’t have the requisite background to make an informed decision. That’s OK because it’s part of the learning process and flying should be a team sport. In this case, it makes sense to get a second opinion. Ask an experienced pilot or instructor to help with the Go/No-Go decision.

When pilots start to think about setting personal minimums they usually start with weather conditions. VFR / IFR qualifications come into play but an IFR ticket shouldn’t be thought of as a free pass. A pilot might be current and proficient to fly in low overcast and shoot approaches down to 200 ½. However personal minimums should also consider safety margins when things don’t go as planned. What if the engine were to quit in those conditions? The pilot would be “blind” until gliding down to 200 feet and at that altitude there’s little time to find a “soft” spot to land.

It’s important to think about personal minimums as more than just a “weather based” decision. There are lots of factors to consider. Cross winds, runway lengths, fuel reserves, night flying, aircraft performance, how much rest the pilot’s had, etc. All of these factors are important to ensure an acceptable level of safety.

Personal minimums are your minimums, tailored to your experience, strengths, and weaknesses as well as your level of proficiency. One way to formalize personal minimums and decisions around whether or not to go flying is to simply write them down. Create a personal “Standard Operating Procedures” for yourself or your group. If you are part of a group, flight school, or fly with partners, it makes a lot of sense to write down group specific personal minimums that everyone can agree to.

When written in black and white the decision process is more formal and will be more likely to be adhered to. Even if you own an aircraft outright, it makes sense to write down your basic Go/No-Go criteria so in the heat of the moment, you can reference thoughts made earlier without the pressures associated with Get-Home-Itis.

Once personal minimums are set, some requirements may remain on the list forever, while others may change or be eliminated as skills grow. Periodically review the criteria and make changes as you gain experience and comfort flying in varying conditions. Lastly, personal minimums aren't just for beginners. Every pilot regardless of experience, every flight club and every organization that flies airplanes, should have standard operating procedures that specify personal minimums. The best kind of accident is the one that was avoided. Set and use personal minimums because they are proven to help pilots make smart decisions before ever leaving the ground.

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### About the Author

George Perry is Senior Vice President of AOPA's Air Safety Institute. He has been active as a general aviation pilot since the age of 16, and recently culminated a 20+ year career in the Navy as an F-18E squadron commander. In addition to being an F-14 and F-18 instructor pilot, he has over 850 carrier-arrested landings, holds ATP, CFII, and MEI certificates, and has logged over 5000 flying hours. George is a friend of the Civil Air Patrol and we will be hearing his name more in the future.



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## More About Personal Minimums for Pilots

I'd like to call your attention to another great article about setting your own personal minimums as a pilot. This article was written by Susan Parson, editor of the FAA Safety Briefing magazine. In addition to her "daytime" job with the FAA, Captain Parson is a member of the Virginia Wing of the CAP, and is the lead volunteer member of the National Standardization/Evaluation team; a great contributor towards standardized flying operations throughout Civil Air Patrol. I have reprinted Capt Parson's article, "Your Safety Reserve: Developing Your Personal Minimums." It begins on the next page and includes a multipage checklist you can print and use when developing your "personal minimums."

Take a look at the rest of the magazine also. There are some great articles on weather fronts, crosswinds, thunderstorm avoidance, reading clouds, high density altitude, and a lot of other topics to get you ready for you summer flying. Here is a link to the March/April 2015 edition of the FAA Safety Briefing: [http://www.faa.gov/news/safety\\_briefing/2015/media/MarApr2015.pdf](http://www.faa.gov/news/safety_briefing/2015/media/MarApr2015.pdf)

# Your Safety Reserve

## Developing Your Personal Minimums

Susan Parson

In formal terms, personal minimums refer to an individual pilot's set of procedures, rules, criteria, and guidelines for deciding whether and under what conditions to operate (or continue operating) in the National Airspace System. While this definition is accurate, it tends to describe the product rather than explain the process. Also, the formal definition does not really convey one of the core concepts: personal minimums as a "safety buffer" between the demands of the situation and the extent of your skills.

I like to think of personal minimums as the human factors equivalent of reserve fuel, which is intended to provide a safety buffer between fuel required for normal flight and the fuel available. In the same way, personal minimums should be set so as to provide a solid safety buffer between the pilot skills and aircraft capability *required* for the specific flight you want to make, and the pilot skills and aircraft capability *available* to you through training, experience, currency, proficiency and, in the case of the airplane, performance characteristics. Just as in making fuel calculations, you shouldn't consider making a flight that requires use of skills at the "reserve" or worse, "unusable fuel" level of your pilot-skill and aircraft capability.

Here's one systematic approach to developing your own personal minimums.

**Step 1 – Review Weather Minimums.** The regulations define weather flight conditions for visual flight rules (VFR) and instrument flight rules (IFR) in terms of specific values for ceiling and visibility. IFR means a ceiling less than 1,000 feet AGL and/or visibility less than three miles. Low IFR (LIFR) is a sub-category of IFR. VFR means a ceiling greater than 3,000 feet AGL and visibility greater than five miles. Marginal VFR (MVFR) is a sub-category of VFR.

**Step 2 – Assess Your Experience and Comfort Level.** Think through your recent flying experiences and make a note of the lowest weather conditions that you have comfortably experienced in VFR and, if applicable, IFR flying in the last six to twelve months. This exercise helps establish your personal "comfort level" for VFR, MVFR, IFR, and LIFR weather conditions.

**Step 3 – Consider Other Conditions.** It is also a good idea to have personal minimums for wind, turbulence, and operating conditions that involve things like high density altitude, challenging terrain, or short runways. Record the most challenging conditions you have comfortably experienced in the last six to twelve months.

You can note these values for category and class, for specific make and model, or both.

**Step 4 – Assemble and Evaluate.** Next, combine these numbers to develop a set of baseline personal minimums.

**Step 5 – Adjust for Specific Conditions.** Any flight involves almost infinite combinations of pilot skill, experience, condition, and proficiency; aircraft equipment and performance; environmental conditions; and external influences. These factors can compress the baseline safety buffer, so you need a structured way to adjust for changing conditions. Consider developing a chart of adjustment factors based on changes in the PAVE checklist factors - Pilot, Aircraft, enVironment, and External Pressures.

When you have comfortably flown to your baseline personal minimums for several months, you can consider adjusting to lower values. Two important cautions:

- Never adjust personal minimums to a lower value for a specific flight. The time to consider changes is when you are not under any pressure to fly, and when you have the time and objectivity to think honestly about your skill, performance, and comfort level.
- Keep all other variables constant. If your goal is to lower your baseline personal minimums for visibility, don't try to lower the ceiling, wind, or other values at the same time.

**Step 6 – Stick to the Plan!** Once you have established baseline personal minimums, "all" you need to do next is stick to the plan. That task is a lot harder than it sounds, especially when the flight is for a trip that you really want to make, or when you are staring into the faces of disappointed passengers. Here's where personal minimums can be an especially valuable tool. Professional pilots live by the numbers, and so should you. Pre-established numbers can make it a lot easier to make a smart no-go or divert decision. In addition, a written set of personal minimums can also make it easier to explain tough decisions to passengers who are entrusting their lives to your aeronautical skill and judgment.

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**Step 4:** Assemble and evaluate baseline personal minimums.

| Baseline Personal Minimums |                          |      |     |            |
|----------------------------|--------------------------|------|-----|------------|
| Weather Condition          | VFR                      | MVFR | IFR | LIFR       |
| Ceiling                    | Day                      |      |     |            |
|                            | Night                    |      |     |            |
| Visibility                 | Day                      |      |     |            |
|                            | Night                    |      |     |            |
| Turbulence                 | SE                       | ME   |     | Make/Model |
|                            | Surface                  |      |     |            |
|                            | Wind Speed               |      |     |            |
|                            | Surface                  |      |     |            |
| Wind Gust                  |                          |      |     |            |
|                            | Crosswind Component      |      |     |            |
| Performance                | SE                       | ME   |     | Make/Model |
|                            | Shortest runway          |      |     |            |
|                            | Highest terrain          |      |     |            |
|                            | Highest density altitude |      |     |            |

**Step 5:** Adjust for specific conditions.

|                    | If you are facing:  | Adjust baseline personal minimums to: |
|--------------------|---|---------------------------------------|
| Pilot              | Illness, medication, stress, or fatigue; lack of currency (e.g., haven't flown for several weeks) | At least 500 feet to ceiling          |
| Aircraft           | An unfamiliar airplane, or an aircraft with unfamiliar avionics/ equipment:                       | At least 1/2 mile to visibility       |
| enVironment        | Airports and airspace with different terrain or unfamiliar characteristics                        | At least 500 ft to runway length      |
| External Pressures | "Must meet" deadlines, passenger pressures; etc.  | At least 5 knots from winds           |



# Federal Aviation Administration

## Developing Personal Minimums

Think of personal minimums as the human factors equivalent of reserve fuel. Personal minimums should provide a solid safety buffer between:

- Skills required for the specific flight, and
- Skills available to you through your training, experience, currency, and proficiency.

### Step 1 – Review Weather Minimums

### Step 2 – Assess Weather Experience and Personal Comfort Level

### Step 3 – Consider Winds and Performance

### Step 4 – Assemble Baseline Values

### Step 5 – Adjust for Specific Conditions

### Step 6 – Stick to the Plan!

FOLD

**Step 1:** Review definitions for VFR & IFR weather minimums.

| Category | Ceiling                |        | Visibility                  |
|----------|------------------------|--------|-----------------------------|
| VFR      | greater than 3,000 AGL | and    | greater than 5 miles        |
| MVFR     | 1,000 to 3,000 AGL     | and/or | 3 to 5 miles                |
| IFR      | 500 to 999 AGL         | and/or | 1 mile to less than 3 miles |
| LIFR     | below 500 AGL          | and/or | less than 1 mile            |

**Step 2(a):** Record certification, training, & recent experience.

| <b>CERTIFICATION LEVEL</b>                         |  |
|--|--|
| Certificate level (e.g., private, commercial, ATP) |  |
| Rating(s) (e.g., instrument, multiengine)          |  |
| Endorsements (e.g., complex, HP, high altitude)    |  |
| <b>TRAINING SUMMARY</b>                            |  |
| Flight review (e.g., certificate, rating, Wings)   |  |
| Instrument Proficiency Check                       |  |
| Time since checkout in airplane 1                  |  |
| Time since checkout in airplane 2                  |  |
| <b>EXPERIENCE</b>                                  |  |
| Total flying time                                  |  |
| Years of flying experience                         |  |
| <b>RECENT EXPERIENCE (last 12 months)</b>          |  |
| Hours  |  |
| Hours in this airplane (or identical model)        |  |
| Normal Landings                                    |  |
| Crosswind landings                                 |  |
| Night hours  |  |
| Night landings                                     |  |
| Hours flown in high density altitude               |  |
| Hours flown in mountainous terrain                 |  |
| IFR hours  |  |
| IMC hours (actual conditions)                      |  |
| Approaches (actual or simulated)                   |  |
| Time with specific GPS navigator                   |  |
| Time with specific autopilot                       |  |

**Step 2(b):** Enter values for weather experience/ "comfort level."

| Experience & "Comfort Level" Assessment<br>Combined VFR & IFR |       |      |     |      |
|---|-------|------|-----|------|
| Weather Condition   | VFR   | MVFR | IFR | LIFR |
| Ceiling   |       |      |     |      |
|   | Day   |      |     |      |
| Night   |       |      |     |      |
|   | Night |      |     |      |
| Visibility  | Day   |      |     |      |
|   | Night |      |     |      |

**Step 3(a):** Enter values for experience / comfort in turbulence.

| Experience & "Comfort Level" Assessment<br>Wind & Turbulence |    |    |             |
|--|----|----|-------------|
|  | SE | ME | Make/ Model |
| Turbulence   |    |    |             |
| Surface wind speed   |    |    |             |
| Surface wind gusts   |    |    |             |
| Crosswind component  |    |    |             |

**Step 3(b):** Enter values for performance.

| Experience & "Comfort Level" Assessment<br>Performance Factors |    |    |             |
|--|----|----|-------------|
|  | SE | ME | Make/ Model |
| Performance  |    |    |             |
| Shortest runway  |    |    |             |
| Highest terrain  |    |    |             |
| Highest density altitude                                       |    |    |             |

# First Aid Only?

## How to write-up those minor injuries so they tell a story

George Vogt, CAP/SE

It seems that each month, I try to give members a few tips on how they can improve the mishap reviews and initial mishap accounts when they report a mishap in the Mishap Management System. Hopefully this month I can give you a few examples that will help you out.

The sole purpose of reporting each and every mishap, is so we can make sure we are taking all the measures possible to prevent future mishaps. To do this, we need to look at what might have caused the mishap because our *mishap prevention efforts have to be focused on the cause(s) and not the mishap itself*. Sometimes it is a simple error on the part of the member. Sometimes the member was working in a hazardous environment. Sometimes our rules or procedures put the member in that risky situation. Those are the kind of causes we can address and hope to mitigate.

To help simplify the process for minor injuries, the “First Aid / Matter of Record” mishap was created. This allows members to report minor scrapes, bruises, falls, and sprains without the wing commander having to assign a mishap review officer and direct a time-consuming mishap review. I look at each one of these. If I see there is enough information to help determine the cause, or determine that necessary precautions were taken, the mishap is closed out and it doesn’t need a second look.

With the summer months coming up, and activities increasing, I wanted to give you a couple tips on how to write up a minor injury so it tells the story and can be closed out quickly without getting sent back to you for more information.

As I write this it is May 11, 2015. So far this month, there have already been ten reports of minor bodily injuries. Eight involved cadets falling during PT and/or the CPFT. Out of those, there was only 1 (one) report that mentioned anything about what might have caused the fall. Four of the mishaps were from the shuttle run. The other four accounts didn’t even say what event was being performed! I’ll share some of those actual write-ups to make my point:

How are we to learn from this actual mishap summary? ... *“Cadet reported sore ankle to med staff”* That was the ENTIRE report.

Do we know the event, or anything else about the conditions or causes in this mishap summary? ... *“While conducting physical fitness activity for Cadet Physical Fitness Test the mishap cadet twisted their ankle. Cadet discontinued the activity and was feeling ok at the end of the meeting.”*

(continued)



How about this mishap...we know it was on asphalt, but we don't know what they were doing...  
*"Cadet fell during PT cut his hand and knee on the asphalt, outside of meeting building."*

So what am I looking for? Here is a great example. In one paragraph, this member of the Illinois Wing gave us as much information as most mishap reviews, and it only took a minute ... *"During the weekly meeting 05 MAY 2015, XXXX Cadets were participating in a Cadet Physical Fitness Test, including a "Shuttle Run." Prior to administration of the CPFT, Squadron Senior Staff conducted a brief ORM in which it was determined that the conditions on the PT surface were safe for Cadet use. This space had been used previously by Squadron personnel in the administration of these tests. Cones were placed at the extremes of the running space in order to prevent other Cadets from walking into the Shuttle Run lanes. Cadet twisted his ankle while completing the event, in spite of the controls put in place. Cadets parents were notified, and the Cadet sat out the rest of the CPFT. He complained of some pain to the affected area, but was able to leave under his own power."* Yours doesn't even need to be this detailed.

I recently read one short mishap summary, telling about a cadet who fell during a shuttle run performed on carpet while wearing only socks on their feet. While I wish they had used a better surface and proper shoes, at least it was an honest, forthright report that gives us information we can use in mishap prevention.

I've focused on CPFT in this article, but the message is the same no matter what the mishap might be. Don't just tell us what happened. Tell us the conditions that might have led up to the mishap, and what was done to mitigate the existing risks. Commanders and safety officers, if you don't see enough information on these mishaps, send them back to the unit and get it filled in so the system can accurately reflect what happened. Questions? Comments? Dialogue? Suggestions?

I welcome your thoughts at [Safety@capnhq.gov](mailto:Safety@capnhq.gov)

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Next page....

Take a look at the mishaps that closed out in March.  
Can you think of ways those write-ups could be improved?



# **March 2015 Mishap Closeouts**

Colonel Robert Castle  
Assistant Chief of Safety

Dear Readers,

MGen Vasquez published his safety policy for Civil Air Patrol this past February. His stated safety goal is pretty simple and direct, "Nobody gets hurt."

As you review the mishaps listed below, you'll see that we have room for improvement in meeting that goal. The majority of our bodily injury mishaps are related to physical activity. We expect to see strains, sprains, bumps and bruises, but some of these mishaps could have been prevented simply by doing a pre-event walk through to look for loose gravel, gopher holes and other type of hazards.

The shuttle run ranks high in the number of reported incidents. Be sure that the cadets are wearing appropriate footwear and that the test is conducted on a suitable surface. Bare feet on carpet may be great around the house, but not for doing the shuttle run! Are cadets warming up before the event? Take the time to have all the cadets practice a few turns to learn the technique that works best for them.

Our aircrews continue to do a great job of handling in-flight contingencies. Keep in mind that if a problem arises in-flight, take a conservative approach to dealing with the issue rather than pressing on to complete the mission at all costs.

Corporate Vehicle Drivers – USE A SPOTTER WHEN BACKING!

'Nuff said?

See you next month!

**Bodily Injury - 39      Aircraft - 5      Vehicle - 4**

## **Bodily Injury**

- Cadet slipped while running during an exercise and hit left knee on pole.
  - Impact resulted in bruise. No further treatment required.
- Prospective cadet was walking through the door when the door caught his arm causing slight pain and redness.
  - Ice pack applied and no further treatment required.
- Cadet twisted her ankle during CPFT. *(editor's note: what event?)*
  - Cadet was seen by a doctor the next day who diagnosed a sprained ankle. No further treatment required.
- Visiting child fell and cut forehead from object protruding from wall.
  - First aid applied. No further treatment required.
- Cadet tripped and re-injured right knee at a cadet leadership weekend.
  - Pre-existing injury from non-CAP activity. First aid administered. No further treatment required.

- Cadet playing ultimate Frisbee during cadet activity twisted ankle.
  - First aid administered. No further treatment required.
- Senior Member slipped on ice and fell while tying down aircraft.
  - Member sustained small cuts and scrapes and pain in hips, back and shoulders. No medical treatment sought and no further treatment required.
- Cadet lost consciousness while in formation but was caught by another cadet and did not strike the ground.
  - Cadet was provided water and rest. No further treatment required.
- Prospective member struck in the face by a basketball after a PT test, resulting in a nose bleed.
  - First aid provided, no further treatment required.
- Cadet jammed right index finger while catching a football after PT.
  - Cadet advised to ice injury. No further treatment required.
- Senior Member sprained/twisted right knee during PT demonstration.
  - The member was leading jumping jacks and stepped into a previously unseen gopher hole which gave way resulting in the injury. In the member's own words, "I gave one heck of a briefing but, I didn't follow what I said."
- Cadet felt knee pop during the PT test. (*editor's note: what event?*)
  - Ice applied to the knee. No further treatment required.
- Cadet received tiny cut on finger from the sharp edge of the ribbon rack.
  - No treatment required.
- Cadet slipped on pavement during PT shuttle run and sustained minor scrapes.
  - First aid applied. No further treatment required.
- Cadet twisted an ankle while doing the shuttle run during CPFT.
  - Ice applied to ankle. No further treatment required.
- Cadet cut two fingers on rusty ladder while exiting historic bomb loading pit.
  - First aid provided, no further treatment required.
- While running around, twisted ankle.
  - Ice applied to ankle. No further treatment required.
- Cadet had asthma attack after walking up stairs.
  - Cadet allowed to rest and returned to activities without any additional problems. No further treatment required.
- While on a tour of an airport building under restoration, two cadets were joking/playing around with a long nail found at the site. One cadet sustained a small break in the skin on his right-hand knuckle.
  - Injured area was washed, but required no additional treatment.

- Cadet slipped while running shuttle run during regularly scheduled PT Testing.
  - No treatment required.
- Cadet slipped while performing shuttle run barefoot during PT and fell on left side.
  - Ice applied, no further treatment required.
- Cadet slipped and skinned wrist, elbow and hip while performing the shuttle run during PT.
  - First aid was applied and no further treatment required.
- Cadet was in formation on the way to closing ceremonies and was knocked over and fell to the ground.
  - Cadets started to run while in formation, however a faster cadet managed to knock the mishap cadet over resulting in minor scrapes to one knee and hand. First aid applied and no further treatment required.
- Cadet fell backward in a well-lit parking lot and broke fall with right wrist.
  - Ice was applied to wrist and parent elected to drive cadet to emergency room. X-ray revealed broken wrist.
- Cadet nauseous after PT.
  - Cadet provided fluids for dehydration. No further treatment required.
- Cadet difficulty breathing after PT.
  - Parent contacted and authorized allergy medication to be administered. Cadet provided fluids and no further treatment required.
- Cadet aggravated pre-existing ankle injury during drill.
  - Ice was applied to injury and OTC painkillers were administered (per CAPF 163). Cadet has been excused from further PT activities. A doctor's note excusing the cadet from physical activity was submitted at check-in.
- Cadet suffered a severe nose bleed during drill.
  - Several attempts to stop the bleeding were made and a determination was made to transport the cadet to the ER. Before the cadet could be loaded for transport, the bleeding stopped. Parents notified and no further treatment required.
- Cadet complained of knee pains while marching at a Drill and Ceremonies School.
  - The cadet has a pre-existing condition due to shattered knee cap replaced by a metal plate. A review of the cadet's medical forms revealed a checked box for "activity, mobility restrictions". When queried, the cadet mentioned that her doctor does not allow her to participate in drill and ceremonies type activities. Ice was applied for pain. The activity staff made the decision to not allow the cadet to participate in any further drill, but allowed the cadet to remain at the activity and sit in on classes.
- During physical fitness training, a cadet sprained her left Achilles tendon while doing jumping jacks.
  - First aid administered, no further treatment required.
- Cadet lost consciousness while standing in formation.
  - Cadet was given water and no further treatment required.

- Cadet complained of stomach pains after PT.
  - Cadet was given fluids and no further treatment required.
- Cadet twisted ankle while walking on uneven terrain.
  - First aid administered, no further treatment required.
- Cadet slipped on gravel during PT relay race. Broke fall with hand. Minor bruising.
  - Checked by EMS (squadron member), no further treatment required.
- Cadet slipped and fell during PT relay race on loose gravel resulting in abrasions and cuts on right elbow.
  - First aid administered, no further treatment required.
- While running during PT (dodge ball) cadet slipped on loose gravel, fell and scraped left knee.
  - First aid administered, no further treatment required.
- Cadet stumbled while catching kickball and skinned knee.
  - First aid administered, no further treatment required.
- Cadet lost consciousness while formation.
  - Cadet was caught by a Senior Member before cadet fell. Cadet was provided water and time to recover. No further treatment required.
- Cadet twisted knee while running in park.
  - First aid administered, no further treatment required.

## **AIRCRAFT**

- Crew noticed negative discharge and voltage annunciator illuminated enroute at 9000 feet.
  - Aircrew re-cycled alternator master switch multiple times with no effect. Turned off non-essential electrical equipment and landed without incident. Alternator replaced and aircraft returned to service.
- Aircrew observed high temperatures on cylinder 3. Terminated sortie and returned to base safely.
  - Inspection showed head of cylinder was separating from body of cylinder. Overhauled cylinder installed. Aircraft returned to service
- After landing, discovered oil leak from prop governor. About 1qt of oil lost.
  - Loose pressure adjustment nut on prop governor resulted in oil leaking from prop governor. Prop governor serviced several times in recent history.
- Vacuum pump failed in flight. Landed safely.
  - Vacuum pump replaced.
- Annual inspection revealed bent tail tie down and cracked aft bulkhead. A survey of pilots found no information regarding date of tail strike nor crew onboard.
  - Unable to determine when damage occurred. Maintenance removed both elevators to access aft bulkhead, straightened lip on bulkhead, installed sheet metal patch on skin at tail tie down and installed new tie down ring. Aircraft returned to service.

## **VEHICLES**

- CAP van collided with parked POV while backing out of a parking space. No police report filed. No injuries.
    - No damage to the COV, but substantial damage was caused to the POV by the trailer hitch of the CAP van. A spotter was not used, nor was a walk around the van performed prior to backing.
  
  - CAP van struck a deer which rendered the vehicle un-drivable.
    - No injuries to CAP personnel, but substantial damage to the van.
  
  - CAP vehicle struck rear bumper of a POV at a busy intersection.
    - No injuries, but minor damage to both vehicles. Driver stated fatigue was a factor as they returned from a weekend activity. Distraction from multiple vehicles and pedestrians caused a loss of situational awareness and resulted in the collision.
  
  - COV backed into parked POV. Minimal damage to COV and POV.
    - No Injuries. Spotter not used although a second senior member was present in the COV.
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## **Thanks for reading the Beacon!**

We are always looking for people to contribute articles, checklists, stories, and accounts of their mishaps. Do you have briefing guides you use for your monthly safety briefings? Did the IG or CAP-USAF find something they really like about your safety program? Do you have any stories about how cadets are contributing to your safety program? Send us your ideas, your stories, your comments, your critiques. We want to make the Beacon better and better, so it is a useful tool to teach safety throughout Civil Air Patrol.

Thanks for contributing.

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