

# **Newport News Composite Squadron September 2010 Safety Briefing**

1. National Safety Council (NSC) Safety Calendar
2. New Safety Briefing Procedures
3. Ground Handling Video
4. August & September Safety Beacon

## National Safety Council Calendar

September			
	Campus Fire Safety Month	Campus Firewatch	<a href="http://www.campus-firewatch.com">http://www.campus-firewatch.com</a>
	National Alcohol & Drug Addiction Recovery Month	Public Information Department, National Council on Alcoholism & Drug Dependence	<a href="http://www.ncadd.org">http://www.ncadd.org</a>
	National Preparedness Month	U.S. Department of Homeland Security	<a href="http://www.ready.gov">http://www.ready.gov</a>
	Sports & Home Eye Safety Month	Prevent Blindness America	<a href="http://www.preventblindness.org">http://www.preventblindness.org</a>
9/19-9/25	National Farm Safety Week	National Education Center for Agricultural Safety	<a href="http://www.necasag.org">http://www.necasag.org</a>
9/20-9/26	National Child Passenger Safety Week	National Highway Traffic Safety Administration	<a href="http://www.nhtsa.dot.gov/childps/planner2009/">http://www.nhtsa.dot.gov/childps/planner2009/</a>

### **New Safety Briefing Procedures**

All CAP members must participate in a Monthly Safety Briefings in order to participate in CAP meetings, missions or activities. Members who do not complete the Monthly Safety Presentation will not be allowed to participate in CAP activities until such time as the course is complete.

Each CAP member must meet this requirement prior to attending unit meetings, participating in flight or vehicle operations, ES missions, wing-level activities, encampments, National Special Activities, or National Board and NEC Meetings.

It is a monthly requirement which expires at the end of the month following its completion (e.g. a briefing attended or completed on June 15, 2010 will carry currency through to July 31, 2010).

All members *should* attend an in-person or live safety briefing at least once per calendar quarter. Quarterly in-person or live safety briefings meet the requirement for the Monthly Safety Briefing in the month they are attended.

#### **Safety Briefing Online**

On the left side of eServices. You can see your Safety Briefing Training Record. This section allows members to complete your monthly safety briefings by viewing a PowerPoint/quiz provided by NHQ.

CAPR 62-1 - Due to the educational benefits gained from the interaction during face-to-face meetings, each member *must* attend at least one face-to-face meeting per *calendar quarter*.

Two new briefings available online – “Downed Power Lines” & “Hurricane Preparedness and Awareness”

## **Ground Handling Video**

Ground Handling Video is an annual requirement. Everyone who expects to be on or around the ramp/aircraft needs to review by 30 Sep 2010.



August 2010, Vol 1. No. 3

## **Safety at the Summer Conference**

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The national safety officer will be at CAP's summer national conference and available to meet the members of CAP. Safety will have two classes that are fun, encouraging, and ideal for all members of CAP and enhance knowledge and awareness. Here are the courses that will be offered with no enrollment fee:

### **SE01 Executive Safety Course**

Presenters: CAP/SE: Col Bob Diduch, CAP-USAF: Maj Chris Hamm, CAP NHQ/SE: Mr. Frank Jirik

This course is designed for Wing, Region, and National Staff and Commanders; however, the course is open to all CAP members. A joint presentation from CAP, CAP-USAF, and CAP NHQ, this course will educate CAP members on how to review a mishap report from a command level and give insight as to what is good and not so helpful within a mishap investigation after it has been completed. It encourages leaders to take a view of a mishap from an educational stand, educating and encouraging leaders to make corrective actions that bridge the gap of learning with CAP's members, and to create action requirements that will instill fresh new habits before being released back to CAP duty functions.

### **SE02 Introduction to Mishap Investigations**

Presenters: CAP-USAF: Maj Chris Hamm and CAP NHQ/SE: Mr. Frank Jirik

This course is designed to give CAP members in any position a fundamental idea of how to conduct a CAP mishap investigation. Focusing on who, what, when, where, how, and why, enables the investigator to ensure the factual account includes all the factual evidence. This course will explain principals of investigation from capturing statements of the participants and witnesses to preservation techniques of collecting evidence. It will cover the process of being designated as an investigator through assembling of data to preparing a final briefing. All CAP members are encouraged to take this course, particularly members that are active in a safety track, mission safety position, or currently serving as a safety officer. This is a good course for unit commanders to attend.

## **The Future of CAP Safety**

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It is very important to know that CAP's safety programs to create a positive learning environment and positive safety culture for all CAP members.

Under the leadership of the national safety officer, supported by his assistant safety officers and working with the professional input and support of the national headquarters safety department and CAP-USAF, the focus and goal of CAP's safety program is to be positive and educational. A safety program is one that predicts and mitigates risks as opposed to a reactive safety program.

With all safety activities to include mishap investigations, please remember the intention of the outcome is to create awareness and prevent future occurrence.

We are focusing on positive behaviors and coaching undesired behaviors back on track. Safety is a habit that only you can positively control.

## **Repeat Mishaps**

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Hangar rash, fainting, tailstrikes, heat injuries, and vehicle inspection are real concerns. These are the repetitive topics of conversation. The National Safety Team had given ideas for best practices, and now we are interested what you are doing to show action. This month, please focus on the mishaps of the year, primarily in these categories and brainstorm what you are going to do in your units to show action. Please submit your unit name, location, and practice. If you have had a mishap in one of these categories, please share what you did to change the process and how you chose to create positive behaviors. Please submit your information to the online safety suggestion tool. This month is about an action focus and accountability.

## **Mishaps**

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The following are based upon true stories. Resemblance of these events that may have occurred in a CAP unit near you are coincidental. You have asked for this, so here it is.

## VEHICLE

- Emergency response trailer toppled by high winds. Best Practice: Consider parking light equipment near a building, if possible, to protect from high winds and debris. If parking remotely, strap equipment to the ground, if necessary.
- A CAP pick-up truck blew a tire while pulling a trailer. Damage to the vehicle fender, \$2K. Further inspection required all tires on the vehicle to be replaced.

## AIRCRAFT

- Tail strike during landing.
- Aircraft impacted by a nearby private aircraft during tow operations.

## BODILY INJURY

- Heat exhaustion; fainted in formation. Best Practice: Increase rest periods. If a member appears to have a physical concern, remove the person from the activity. Treat appropriately with rest. Most of the nation has been in an elevated risk category for heat injury and establishing a firm rest-to-work ratio is important. Cadets at encampment should be visually confirmed to have fluids in their canteens and actually drinking. If a member just stands there when advised to hydrate, it is a command responsibility to ensure they are capable and aware of the direction given and that fluids are available. Ensure adequate rest facilities so members can use the restroom when needed. Heat and fainting continues to be a risk item.
- Pre-existing conditions. Due to the nature of personal confidentiality, specifics cannot be disclosed, but please refer to last month's newsletter on this topic.

Remember that rehydration and rest guidelines apply to everyone – not just cadets. Often though, we neglect rest recommendations, and we fail to add that heat charts also say they refer to acclimated individuals. Most members attending national or wing activities are not acclimated, and need more shade and periods of rest.

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### **Hear Our Thoughts, Hear Our Experiences** By Members of the Civil Air Patrol Nationwide

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Here are some of the words of wisdom often overlooked in our daily lives. Complacency can slide into our world in simple ways that we miss in the hustle and bustle of daily life. Thank you for your submissions. If you have a practice or safety awareness topic to share, the instructions are in the January 2010 "Sentinel" for your reference. Keep in mind these are ideas, not CAP policy.

Stephen D Ezell	OK-024	July 2010	When at home, especially if there are small children present, keep all flammable items, i.e., matches, cigarette lighters, etc., and chemical containers out of the reach and carefully secured at all times! Also, it is highly recommended that you do not under any circumstances attempt to burn brush or debris without obtaining clearance from your area's proper fire authority.
John A Schreckengost	PA-125	July 2010	When on a mission, be carefull of snakes when walking in high grass or brush. You could step on a snake and never see the snake.
Robert D Stiles	PA-125	July 2010	Well the sun is shining and the bees are back. So when your in the yard or woods watch your step! Some species will nest underground as well as in trees or high places. So take caution and don't stir them up and you won't get hurt..
Kevin James Berry	PA-190	July 2010	Carry a small bottle of hand sanitizer and use it to clean your hands prior to putting them to your face for any reason. This will help reduce the transmisson of disease, keeping you, and others whom you may infect, safer.
Irwin I Kleinman	IN-175	July 2010	When using corporate issued tie-downs check to see that any provided tie-downs are removed and properly stored.
Mark E Miller	MO-149	July 2010	Use of extension electrical cords can be a cause of many trip hazards in CAP. Always remember to run these cords in areas of no or little traffic. If this is unavoidable, place cord covers and/or markers to indicate a trip hazard area.
Stormy F Lamantia	PA-125	July 2010	Never stand close to a window while videotaping the lightning with your camera.
Steven D Mohan	CO-179	July 2010	Organize PT later in the day when it is cooler to prevent heat exhaustion
Woodrow W Shepherd	GA-043	July 2010	It is recommended glider trailers ought to have anti-sway bars mounted on trailer. It is also recommended that other CAP trailers ought to be evaluated to see if they should have anti-sway bars mounted on them, especially if they are going to be traveling any distance.

## A picture is worth a 1000 words!

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A little more to the left next time.

## Attachments

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- CAP Safety Alert – Tire Safety # 10-4 (Also available on the CAP Safety page, [www.capmembers.com](http://www.capmembers.com))
- FAA Special Air Worthiness Information Bulletin – CE-10-21

## Until Next Month

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Discover, report, stop, share, listen, and learn. The things we have read about in this issue already have happened, so you are not allowed to experience these for yourself. Remember to “Knock It Off” and slow down. For streaming dialogues on some subjects, remember CAP Safety is on Facebook and Twitter. Have a good month.





Alert# 10-04



## VEHICLE TIRE SAFETY

AFFECTED WINGS: ALL  
AFFECTED DUTY POSITIONS: ALL  
PUBLISHED: June 19, 2010  
EFFECTIVE: Immediately  
REFERENCES: CAPR 77-1

It is imperative that we increase awareness of vehicle maintenance items and general tire condition. With higher ambient temperatures, and with increased useage for summer activities, it is important that we keep our members safe with vehicles that are only in top performing condition.

It is mandatory that all vehicle tires be inspected prior to operation (CAPF 73) of any CAP vehicle to check for wear, condition, abnormailites, and pressure. Any condition found to be out of limits shall be corrected before operation of the vehicle.

Examples of tires that should be considered for replacement are: Uneven treadwear, cracking sidewalls (as pictured), damaged air valves, damaged or missing tread, and minimal tread (high mileage).



Tire replacements for CAP ground vehicles are coordinated and reimbursed by NHQ Logistics and can be reached at 1-877-227-9142, ext. 275. For after hours and on weekends refer to the following guidance in CAPR 77-1, paragraph 9. C 2).

(See page 2)

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**CAPR 77-1, para 9. C 2). (Regulation Date: 1 SEP 2003)**

- 2) Emergency repair procedures
  - a) Emergency is defined as a repair needed while away from home station.
  - b) Telephone emergency to NHQ CAP/LGT for approval. Include the following:
    - Vehicle ID number
    - Problem with vehicle
    - Repair estimate
    - Caller's name
    - Method to contact caller
  - c) Fax or mail the vehicle reimbursement request and estimate or invoice for repairs to NHQ CAP/LGT within 24 hours.
  - d) After emergency repair is completed, mail paid original invoice to NHQ CAP/LGT within 10-working days.
  - e) If an emergency occurs on a weekend or after normal working hours, call NHQ CAP/LGT and leave a message on the answering machine. When leaving a message, follow the procedures listed in paragraph 9.c.2)b). If the estimated repairs exceed \$500, notify NHQ CAP/LGT the next working day for approval prior to repair. If the estimated repairs are less than \$500, proceed with repairs and comply with paragraph 9.c.2)c).

**CAPR 77-1 ATTACHMENT 5 1 SEPTEMBER 2003 Attachment 5. Tire Safety-Everything Rides On It**

Edited from the U.S. Department of Transportation National Highway Traffic Safety Administration (NHTSA) DOT HS 809 361

**TIRE SAFETY Everything Rides On It**

Studies of tire safety show that maintaining proper tire pressure, observing tire and vehicle load limits (not carrying more weight in your vehicle than your tires or vehicle can safely handle), avoiding road hazards, and inspecting tires for cuts, slashes, and other irregularities are the most important things you can do to avoid tire failure, such as tread separation or blowout and flat tires. These actions, along with other care and maintenance activities, can also:

- Improve vehicle handling
- Help protect you and others from avoidable break-downs and accidents
- Improve fuel economy
- Increase the life of your tires.

**TIRE PRESSURE**

Tires should be inflated in accord with the vehicle manufacturer's recommendations. These can be found in the owner's manual or on a placard, which is often located in the glove compartment or on the driver's doorjamb. Motorists should not rely on visual tire inspections to determine whether a tire is properly inflated but should use a tire pressure gauge to do so.

**Finding Your Vehicle's Recommended Tire Pressure and Load Limits**

Tire information placards and vehicle certification labels contain information on tires and load limits. These labels indicate the vehicle manufacturer's information including:

- Recommended tire size
- Recommended tire inflation pressure
- Vehicle capacity weight (VCW –the maximum occupant and cargo weight vehicle is designed to carry)
- Front and rear gross axle weight ratings (GAWR – the maximum weight the axle systems are designed to carry).

Both placards and certification labels are permanently attached to the vehicle door edge, doorpost, glove-box door, or inside of the trunk lid. You can also find the recommended tire pressure and load limit for your vehicle in the vehicle owner's manual. Manufacturers of passenger vehicles and light trucks determine this number based on the vehicle's design load limit, that is, the greatest amount of weight a vehicle can safely carry and the vehicle's tire size. The proper tire pressure for your vehicle is referred to as the "recommended cold inflation pressure." (As you will read below, it is difficult to obtain the recommended tire pressure if your tires are not cold.)

Because tires are designed to be used on more than one type of vehicle, tire manufacturers list the “maximum permissible inflation pressure” on the tire sidewall. This number is the greatest amount of air pressure that should *ever be put in the tire under normal driving conditions*. Remember, however, that the vehicle manufacturer, not the tire manufacturer, determines the correct tire pressure for the tires on your vehicle. The recommended tire inflation pressure that vehicle manufacturers provide reflects the proper psi when a tire is cold. The term cold does not relate to the outside temperature. Rather, a cold tire is one that has not been driven on for at least three hours. When you drive, your tires get warmer, causing the air pressure within them to increase. Therefore, to get an accurate tire pressure reading, you must measure tire pressure when the tires are cold or compensate for the extra pressure in warm tires.

#### Steps for Maintaining Proper Tire Pressure

**Step 1:** Locate the recommended tire pressure on the vehicle’s tire information placard, certification label, or in the owner’s manual.

**Step 2:** Record the tire pressure of all tires.

**Step 3:** If the tire pressure is too high in any of the tires, slowly release air by gently pressing on the tire valve stem with the edge of your tire gauge until you get to the correct pressure.

**Step 4:** If the tire pressure is too low, note the difference between the measured tire pressure and the correct tire pressure. These “missing” pounds of pressure are what you will need to add.

**Step 5:** At a service station, add the missing pounds of air pressure to each tire that is underinflated. **CAPR 77-1 Step 6:**

Check all the tires to make sure they have the same air pressure (except in cases in which the front and rear tires are supposed to have different amounts of pressure).

If you have been driving your vehicle and think that a tire is underinflated, fill it to the recommended cold inflation pressure indicated on your vehicle’s tire information placard or certification label. While your tire may still be slightly underinflated due to the extra pounds of pressure in the warm tire, it is safer to drive with air pressure that is slightly lower than the vehicle manufacturer’s recommended cold inflation pressure than to drive with a significantly underinflated tire. Since this is a temporary fix, don’t forget to recheck and adjust the tire’s pressure when you can obtain a cold reading.

#### Checking Tire Pressure

Only 49 percent of gas stations that are equipped with air pumps provide tire pressure gauges, which are critical to determining if the correct amount of air has been delivered to tires. However, for a nominal price, motorists can purchase a tire pressure gauge. Because tires may naturally lose air over time, it is important to check your tire pressure at least once a month. For convenience, purchase a tire pressure gauge to keep in your vehicle. Gauges can be purchased at tire dealerships, auto supply stores, and other retail outlets. Remember, the tire inflation number that vehicle manufacturers provide reflects the proper pounds per square inch (psi) when a tire is cold. To get an accurate tire pressure reading, measure tire pressure when the car has been unused for at least three hours. A radial tire can lose much of its air pressure and still appear to be fully inflated. Operating a vehicle with substantially under-inflated tires can result in a tire failure, such as instances of tire separation and blowouts, with the potential for a loss of control of the vehicle. Under-inflated tires also shorten tire life and increase fuel consumption.

#### **Maximum Permissible Inflation Pressure**

This number is the greatest amount of air pressure that should ever be put in the tire under normal driving conditions.

#### **Tire Size**

To maintain tire safety, purchase new tires that are the same size as the vehicle’s original tires or another size recommended by the manufacturer.

Look at the tire information placard, the owner’s manual, or the sidewall of the tire you are replacing to find this information. If you have any doubt about the correct size to choose, consult with the tire dealer.

#### **Maximum Load Rating**

This number indicates the maximum load in kilograms and pounds that can be carried by the tire.

#### **Tire Tread**

"It is vitally important that motorists monitor tread depth to guard against tire failure and replace unsafe tires. Checking tires is a crucial element in regular vehicle maintenance," said Dr. Jeffrey W. Runge, NHTSA's Administrator.

Like tires that are under-inflated, bald tires also pose risks to motorists. A tire with insufficient tread can cause a driver to lose traction, especially under wet conditions. In addition, bald tires are more prone to damage caused by road debris.

The tire tread provides the gripping action and traction that prevent your vehicle from slipping or sliding, especially when the road is wet or icy. In general, tires are not safe and should be replaced when the tread is worn down to 1/16 of an inch. Tires have built-in treadwear indicators that let you know when it is time to replace your tires. These indicators are raised sections spaced intermittently in the bottom of the tread grooves. When they appear “even” with the outside of the tread, it is time to replace your tires. Another method for checking tread depth is to place a penny in the tread with Lincoln’s head upside down and facing you. If you can see the top of Lincoln’s head, you are ready for new tires.

#### **Tire Balance and Wheel Alignment**

To avoid vibration or shaking of the vehicle when a tire rotates, the tire must be properly balanced. This balance is achieved by positioning weights on the wheel to counterbalance heavy spots on the wheel-and-tire assembly. A wheel alignment adjusts the angles of the wheels so that they are positioned correctly relative to the vehicle’s frame. This adjustment maximizes the life of your tires and prevents your car from veering to the right or left when driving on a straight, level road. These adjustments require special equipment and should be performed by a qualified technician.

**Tire Safety Checklist.**

Check tire pressure regularly (at least once a month), including the spare.

Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma.

Remove bits of glass and other foreign objects wedged in the tread.

Make sure your tire valves have valve caps.

Check tire pressure before going on a long trip.

Do not overload your vehicle. Check the tire information placard or owner's manual for the maximum recommended load for the vehicle.

If you are towing a trailer, remember that some of the weight of the loaded trailer is transferred to the towing vehicle.

**Protection against avoidable breakdowns and crashes.**

Improved vehicle handling. Better fuel economy. Increased tire life. Just a few of the reasons to take five minutes every month to check your tires. Simply use the handy checklist below, and see the reverse side for more information on tire safety. Safety Checklist Check tire pressure regularly (at least once a month), including the spare. Inspect tires for uneven wear patterns on the tread, cracks, foreign objects, or other signs of wear or trauma. Remove bits of glass and other foreign objects wedged in the tread. Make sure your tire valves have valve caps. Check tire pressure before going on a long trip. Do not overload your vehicle. Check the tire information placard or owner's manual for the maximum recommended load for the vehicle. If you are towing a trailer, remember that some of the weight of the loaded trailer is transferred to the towing vehicle.

**Safety Tips**

Slow down if you have to go over a pothole or other object in the road. Do not run over curbs, and try not to strike the curb when parking. Remember to check your tires once a month! There's Safety In Numbers You can find the numbers for recommended tire pressure and vehicle load limit on the tire information placard and in the vehicle owner's manual. Tire placards are permanent labels attached to the vehicle door edge, doorpost, glove-box door, or inside of the trunk lid. Once you've located this information, use it to check your tire pressure and to make sure your vehicle is not overloaded.

Please advise the National Safety Team with any questions or concerns at [safety@capnhq.gov](mailto:safety@capnhq.gov). Report ALL Incidents using the online Mishap Notification (Form 78).



**SAIB:** CE-10-21

**SUBJ:** Propellers/Propulsers; Propeller Overspeed in Piston Engine Aircraft

**Date:** March 17, 2010

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*This is information only. Recommendations aren't mandatory.*

## **Introduction**

This Special Airworthiness Information Bulletin (SAIB) alerts operators, pilots, and aircraft manufacturers of concerns for an optimum response to a propeller overspeed in piston engine aircraft with variable pitch propellers.

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Aviation Regulations (14 CFR) part 39.

## **Background**

Recently, a single-engine aircraft experienced a propeller overspeed during cruise flight at 7,000 ft. altitude. The pilot reported that the application of throttle resulted in a propeller overspeed with no appreciable thrust. The pilot attempted to glide to a nearby airport and established the “best glide” speed of 110 knots (as published in the Pilot’s Operating Handbook). The pilot was unable to reach the airport and was forced to conduct an off field landing.

It was determined that the propeller experienced a failure that caused the blade pitch change mechanism to move to the low pitch stop position. This caused the propeller to operate as a fixed pitch propeller such that it changes RPM with changes in power and airspeed. The low pitch setting allows for maximum power during take off but can result in a propeller overspeed at a higher airspeed.

A performance evaluation of the flight condition was performed for the particular aircraft model involved in this incident. This evaluation indicated that an airspeed lower than the best glide speed would have resulted in increased thrust and enabled the pilot to maintain level flight.

There are numerous variables in aircraft, engines, and propellers, which affect aircraft performance. For some aircraft models, the published best glide speed may not be low enough to generate adequate thrust for a given propeller installation in this situation (propeller blades at low pitch stop position).

The graph below shows thrust versus airspeed for a typical propeller model set at a 12-degree blade angle and maintaining 2,700 revolutions per minute (RPM). From the graph, note that at over 118 knots this propeller is incapable of generating a positive thrust and airspeed has to be lower than 95 knots to generate enough thrust to overcome the aircraft drag, i.e. maintain level flight. While different propeller models have different thrust characteristics and different aircraft have different drag characteristics, the concept remains the same – the lower the airspeed the more thrust there is available at a given RPM.

A review of pilot’s operating handbooks from several aircraft manufacturers showed they did not include emergency procedures for a propeller overspeed. In cases where overspeed procedures were published, the procedure said to simply reduce throttle. More appropriately, the procedures should

advise the pilot to control a propeller overspeed by throttle reduction and a reduction in airspeed as much as practical with an adequate margin above stall speed such that level flight can be maintained.

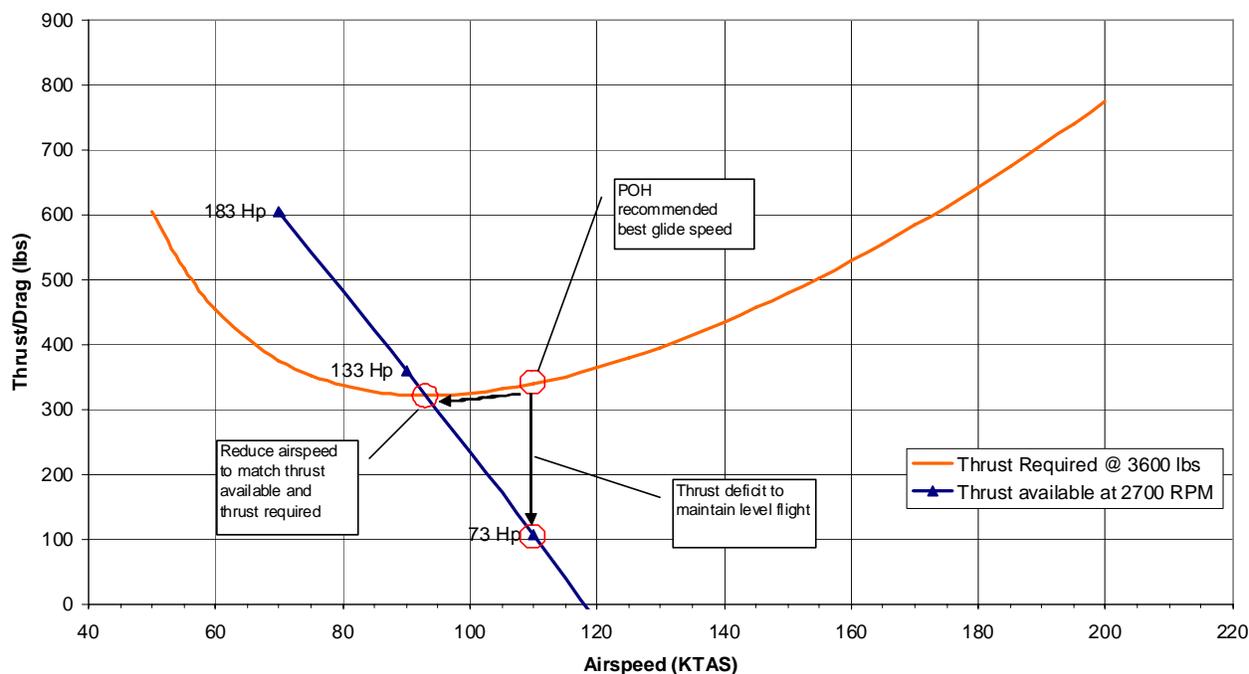
## Recommendations

### Pilots

The operators of aircraft with variable pitch propellers should be aware that in certain instances of propeller overspeed, the airspeed necessary to maintain level flight may be different than the speed associated with engine-out best glide speed. The appropriate emergency procedures should be followed to mitigate the emergency situation in the event of a propeller overspeed; however, pilots should be aware that some reduction in airspeed may result in the ability for continued safe flight and landing. The determination of an airspeed that is more suitable than engine-out best glide speed should only be conducted at a safe altitude when the pilot has time to determine an alternative course of action other than landing immediately.

#### Example of Propeller Operation on Low Pitch Stop Estimated Thrust/Drag vs. Airspeed

Gear & Flaps Up  
1000 ft., Standard Day  
Propeller on Low Pitch Stop of 12 Degrees



### For Further Information Contact

Timothy Smyth, Aerospace Engineer, 2300 East Devon Ave., DesPlaines, IL 60018; phone: (847) 294-7132; fax: (847) 294-7834; e-mail: timothy.smyth@faa.gov.



September 2010, Vol 1. No. 4

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**Line Up and WAIT!** A reminder provided by the FAA eff. Sept 30, 2010

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As most rated aviators have heard, the term "Position and Hold" is soon to be of the past. Here is an FAA Notice that was just released and is being provided to all members of CAP to ensure all crew functions are brought up to date on this topic. Compliments of the FAA:

**"Position and Hold" Soon To Be History!**

Notice Number: NOTC2485

**"Line Up and Wait" in Preparation for Takeoff**

You do it at the movie theater, the supermarket, as well as your favorite coffee shop on the way to work: You line up and wait. And, after September 30, 2010, you may also be asked to do it at your local towered airport.

Designed to help simplify and standardize air traffic control (ATC) phraseology, as well as to comply with International Civil Aviation Organization (ICAO) standards, U.S. controllers will use the term "line up and wait" in place of "position and hold" when instructing a pilot to taxi onto a departure runway and wait for takeoff clearance. Both current and future versions of the phrase are used when takeoff clearance cannot immediately be issued, either because of traffic or other reasons.

Why "line up and wait?" The phrase has actually been in use by a majority of ICAO contracting states for many years. It has proven useful with many non-native English speakers who can sometimes confuse "position and hold" with similar-sounding phrases like "position and roll," "position at hold," or "hold position." Misinterpretation of this instruction can have serious consequences. Using "line up and wait" helps avoid ambiguity and keeps the global aviation community accountable to the same standard.

Here's an example of the phrase in use: Tower: "Cessna 1234, Runway Three Four Left, line up and wait."

Pilot: "XYZ Tower, Cessna 1234, Runway Three Four Left, line up and wait."

At press time, this change was expected to take effect September 30, 2010. The specific date and additional details will be communicated via updates to the *Aeronautical Information Manual (AIM)* and *Pilot/Controller Glossary*, both located under the Air Traffic section of [www.faa.gov](http://www.faa.gov).

Other changes have also made their way into standard ATC lexicon. Effective June 30, 2010, air traffic controllers no longer use the term "taxi to" when authorizing an aircraft to taxi to an assigned takeoff runway. Now, controllers must issue explicit clearances to pilots crossing any runway (active/inactive or closed) along the taxi route. In addition, pilots crossing multiple runways must be past the first runway they are cleared to cross before controllers can issue the next runway-crossing clearance.

As you may recall, previous "taxi to" clearances authorized pilots to cross any runway along the assigned route.

One exception to the new rule is at airports where taxi routes between runway centerlines are fewer than 1,000 feet apart. In this case, multiple runway crossings may be issued if approved by the FAA Terminal Services Director of Operations.

The elimination of the "taxi to" phrase will apply only to departing aircraft. Arriving aircraft will still hear the phrase "taxi to" when instructed to taxi to the gate or ramp. However, controllers in these situations still will be required to issue specific crossing instructions for each runway encountered on the taxi route.

Remember, if you're unsure of any ATC instruction or clearance you've heard, contact ATC immediately. It's always better to check and be certain. And, remember to "line up and wait."

#### **For More Information:**

##### **Pilot/Controller Glossary**

[http://www.faa.gov/air\\_traffic/publications/atpubs/PCG/pcg.pdf](http://www.faa.gov/air_traffic/publications/atpubs/PCG/pcg.pdf)

##### **Aeronautical Information Manual (AIM)**

[http://www.faa.gov/air\\_traffic/publications/ATPubs/AIM/AIMbasic2-11-10.pdf](http://www.faa.gov/air_traffic/publications/ATPubs/AIM/AIMbasic2-11-10.pdf)

Aeronautical Information Publication (AIP)

[http://www.faa.gov/air\\_traffic/publications/atpubs/AIP/aip.pdf](http://www.faa.gov/air_traffic/publications/atpubs/AIP/aip.pdf)

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## **Back to School? Wearing a Back-pack?** By Lt Col Dennis Pearson, NCR/HSO, RN

Lastsummer at NESAs, the Medical Unit saw many cases of muscle strain to the neck, shoulders, back, and hips from improper carrying of packs, and carrying too much weight in the packs for long periods of time; most t cases involved carrying 24-hour gear. A couple of cases involved briefly carrying 24-hour and 72-hour gear to the field.

Many attendees also complained of numbness, weakness, and tingling in the arms and hands. This was caused by carrying more weight than they should have

been, and shoulder straps were narrow and not properly padded; narrow pack straps can reduce blood and lymph circulation, and compress nerves.

The most common cause seen was noted due to packs being carried only over one shoulder. Carrying a pack this way causes the spine to lean to the opposite side, stressing the middle of the back, ribs, lower back, and pull on neck muscles causing headaches and neck pain.

Pack weight is a major factor regarding comfort and injury. Other factors include: a person's size, conditioning, and design of the backpack. Weight of a backpack should not exceed the following limits:

1. For school, you should not carry more than 10-15% of your body weight.
2. For optimal comfort, and yet be able to carry required items for the field, only 25% of body weight should be carried.
3. Beginner hikers/rescuers should only carry 20% of their body weight.
4. Day packs without a frame should not exceed 20 pounds.
5. You can carry comfortably 30-35% of your body weight using a properly loaded frame pack.
6. Never carry more than 35% of your weight. Properly trained, equipped, and highly conditioned personnel can exceed these guidelines as required.

Use a pack with wide, padded shoulder straps, and a wide padded waist belt. Wear it with the shoulder straps over *both* shoulders. Adjust shoulder straps so the backpack is high on the back. The pack should not hang more than four inches below the waist line, pulling you down and backwards. The waist strap should be located at the top of the hip. You could consider buying a rolling back pack for school so you do not have to carry it as much.

Balance the load correctly. Arrange the pack so the center of gravity is high and close to your back. Pack items so they will not shift when carried. Use correct walking posture, and do not *lean* forward.

When you examine the *minimum* list of items for 24-hour gear, and 72-hour gear, consider how you can lighten those items further. Carry only those items that are needed. Hiking/climbing specialists can provide help in this area.

### **Packing an ALICE (All-Purpose Lightweight Individual Carrying Equipment) Pack**

The medium pack is preferred, since the large pack throws a person off balance easily. The large pack, with a normal capacity of 85-100 pounds, is not suitable for wear over rough terrain or steep slopes. In this case, use a mountain rucksack. The ALICE frame is designed for a person 70 inches tall; for a person shorter than 65 inches, the frame will be too big.

Begin loading gear by experimenting with item placement. Consider distance and elevation that the gear will be carried, until a well-proportioned packing structure is achieved. Place heavy and bulky items such as extra boots or mess kits on top of softer items such as clothes; surround them with items like socks. Ensure packing is tight. Use all space available. Tighten all gear straps and close all pockets to capacity. Loose straps can cause tears and poor weight distribution. This can make for a very uncomfortable experience.

Wear the ALICE pack as you would any other backpack. Tighten wide shoulder straps by leaning forward and cinching them as you rise back into standing posture. Lastly, wear a sternum/chest strap. This strap prevents the shoulders from being pulled back. This is the proper way to gain perfect tightness and comfortable weight distribution. Tighten the pack as you walk. Consider placing extra padding under the shoulder and waist straps for loads greater than 70 pounds.

Do not allow the pack to extend far from your back because it is completely filled as this puts your body off balance, and you could fall backwards. Observe any discomfort or pulling sensation on the back. Readjust the pack as needed.

### **LBE (Load Bearing Equipment AKA Fighting Land Gear or Web Gear)**

The pistol belt should ride high on your hips, and not hang low. Field pack suspenders are attached to front of the belt, and to the butt pack. Adjust straps to lift up the butt pack. The butt pack is made to carry only about 13 pounds of gear. Attach first aid/compass pouches to the suspender straps. Attach canteen covers on each side of your belt. Place cargo storage pouches in front of the canteen covers for ease of access.

### **Internal Pack Frames**

Since the pack lies against the torso, during hot weather there is increased sweating, and increased chance to develop a heat rash. To stay drier, consider using an external frame pack.

Please follow the above guidelines for a more pleasant experience while carrying your 24-hour and 72-hour gear.

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## **The Way We ALWAYS Do It!**

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Being a part of the safety organization is never boring because the way 60,000 members find ways to deviate from safety. The content provides laughter, drama, concern, sorrow, anger, and a learning lesson. What is the common root cause behind all our "stuff?" The common reason behind the continuing safety mishap rates is the answer, "This is the way we have ALWAYS done it."

With improved reporting and electronic analysis, the trends are easily identifiable. We see the trends around mishaps and share those in newsletters, safety alerts, and educational conference calls, and we still do it.

Safety education and awareness are intended to create change. The safety department raises the risks to a new level and it is the responsibility of our members to take "action."

Action means "to do something"; "to put something in motion"; "to make a difference"; and to not lose sight of other task options to get to an end result.

Remember: be willing to look at your options and be accountable. Learn from each other; be educational; make a difference; and change behavior to be safe, not to just go with the flow.

## **An Alaska Commander Brings it Home for Us all!**

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The following note is an e-mail that was sent out to the members of the Birchwood Composite Squadron in Birchwood, Alaska, just outside of Anchorage. Captain Wes Erb elegantly writes,

*"Hello all,*

*As the daily drizzle continues, this summer will be remembered as the worst on record for lousy weather conditions. Tragically, it will certainly be recalled as one of the worst for aviation as well. With the addition of the news of yet another loss, legendary flyer John Graybill and wife Dolly from our Chugiak community, the enormity of the heartache these accidents have brought to the families of these military, commercial, and private pilots alike seems to unfold daily. While the investigations of these accidents will take months, it would not be unexpected to find that weather played a causal factor in a large majority of them.*

*Far better safety analysts than I have tried for years to make flying safer, employing every tool that can be thought of... mandatory safety briefs, risk management calculations, strict weather requirements, third-party dispatching (FROs), etc... all been employed to staunch the harsh accident rate in Alaska with varying success. It's a hard metric to pin down because when you fly safe, absolutely nothing happens except you arrive alive. But yet we still seem to have these constant reminders that weather in Alaska in particular is a cruel harvester of people, and ironically it seems to strike the seasoned, grizzled veterans far more so than the fledgling neophytes. The tired NTSB cliché of "Continued VFR Flight into inadvertent IMC conditions" rings hollow after hearing it so often in accident reports. This sad twist adds more suffering simply because it is largely preventable.*

*I wish I knew the right thing to say or the correct action to take to guarantee we will not ever have to deal with the loss of one of our own. Maybe Ernie Gann is right, that fate is the hunter and aviation has inherent risks regardless of the preparation put into it. What I do know is that in the end, the whole process mostly boils down to the pilot in command making the right call whether to continue, stop, or change a route of flight. Of the three, stopping or turning around is the most difficult. There is an old joke that you can teach a monkey to fly with enough gasoline and bananas; it is more accurate than you might expect. The true grit of real aviator is the steely ability to not fly or return to base and fight another*

*day far more so than press on into the teeth of the dragon.*

*I write this primarily to remind our Mission Pilots and Mission Observers alike of the awesome responsibility they shoulder each time they go out on a CAP mission. Regardless of the mission objective, the first and foremost responsibility of our crews is to each other, and to uphold the vow each pilot makes to his crew to return them safely no matter what. But, this doesn't only apply when you put on your CAP flight suit, even when you fly alone, your seats are filled with the hopes and dreams of your friends and family. A loss of one is as devastating to those left behind as if they were there, too. Years back, I started to imagine my daughter flying with me when I was alone and asking myself if I would do anything different if she were smiling back at me from the copilot seat. Do whatever it takes to remind yourself that life is precious and should be jealously guarded against the sometimes fickle hand of Fate.*

*"Fly Safe" isn't just a tagline, it needs to become a mantra for whenever you are lucky enough to fly. We can't change the world, but we can try to help ourselves in our own little community. Make a solemn promise to yourselves and your family to honor your personal minimums 100% of the time, always have a Plan B, and continue to preach the word to your fellow aviators. Let's redouble our efforts to ensure we never have to deal with this pain in our own little family. Thanks for your time and patience."*

## **Mishaps**

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The following are based upon true stories. Resemblance of these events that may have occurred in a CAP unit near you are coincidental.

### VEHICLE

- Van battery was dead and was being jump started when it unexpectedly started to rain. In order to avoid a shock hazard, the van was quickly pushed underneath an overhang. In the hurried effort, the driver's side door was left open and impacted the overhang's support column damaging the hinges on the door.

Lesson Learned: Haste makes waste. The driver's side door should have been closed. Compounding the error was the mistaken idea that a 12-volt system could provide a dangerous shock.

- While operating a CAP vehicle, tire tread separated from the tire. The resulting damage was to the rim and under-carriage of the vehicle. The vehicle spare was used and the vehicle continued to its final destination.

Lesson learned: A thorough vehicle inspection should have been done before departure. Mechanical failures still occur despite inspections, but something may have been seen and inspections prior to any movement can detect possible problems. The cost of tire replacements for all four tires was \$800.00. The cost of vehicle damage was \$2,500. The cost equaled the amount of money for 30 GPS handheld units for cadet programs.

#### AIRCRAFT

- Total aircraft hull loss remains under investigation. Attached is the updated national statistics slide for your review that includes total damage cost for Fiscal Year 2010, to date.

#### BODILY INJURY

- Cadet was participating in an evening cadet activity when she injured her ankle walking through a wooded area. Cadet stated she stepped on a tree root and rolled her ankle off the side. Medical review determined injury to be a sprain.

Lesson Learned: Leadership should not allow activities in unknown areas where risk potential is higher. Activities performed by CAP members should be limited to activities outlined in CAP regulations, manuals, and pamphlets. If a night activity is to occur, a safety walk should be done of the area during daylight hours to view risks and help determine if activity areas are appropriate.

- Cadet performing monthly Cadet Physical Fitness Test (CPFT) was removed from the activity after demonstrated physical difficulty. Cadet was transported to the hospital and it was determined that the cadet had suffered from heat exhaustion. Contributing factors included the cadet's own schedule of eating and lack of hydration that had not occurred before arriving for the unit meeting.

Lesson Learned: Safety has an ownership principle that only you can positively control. It is everyone's responsibility to eat a balanced diet and to ensure proper fluid intakes. Other contributing factors that could have mitigated this exposure were proper use of heat/humidity charts and recognition of appropriate work:rest ratios. Proper supervision of cadets to ensure hydration occurs before strenuous activities and also should be included as a part of CPFT checklists when administered.

## Hear Our Thoughts, Hear Our Experiences By Members of the Civil Air Patrol Nationwide

Here are some of the words of wisdom often overlooked in our daily lives. Complacency can slide into our world in simple ways that we miss in the hustle and bustle of daily life. Thank you for your submissions. If you have a practice or safety awareness topic to share, the instructions are in the January 2010 "Sentinel" for your reference. Keep in mind these are ideas, not CAP policy.

Barbara M McGillem	IN-123	August 2010	Be sure when taking medication to read all the information on the bottle so as not to make a mistake in how the material is taken. For example, some medication must be taken at a given time before eating, and some medication must be taken with food or milk.
Robert L McGillem	IN-123	August 2010	Always read the instructions that are on the fire extinguisher before operating an unfamiliar vehicle. To use the extinguisher, remember the acronym P A S S. P-ull the pin. A-im at the base of the fire. S-queeze the lever slowly. S-weep from side to side.
David R Simonson	NM-077	August 2010	Just because something is not in the regulation, does not mean its not important to do. Place the pitot covers on the pitot tube, chock the tires, fuel the airplane, ground the chassis when fueling or hangared, clean the windscreen, fill out the logbook, and return the keys. Just taking the little steps to keep the aircraft clean and ready for use. The simple things make the plane last longer and increases enjoyment of aviation. Do not make someone create a regulation to compel you to do what is right when it comes to taking care of the tools that we use. All the little things add up.
Michael Malone	FL-243	August 2010	In summer heat, always bring water to an event and on PT nights!
Joseph R Schreckengost	PA-125	August 2010	In hot months, it is important to mind the heat. Remember to take plenty of water on missions and hikes, take sufficient breaks, and avoid heat-related injuries.
Richard N Kear Sr	WA-039	August 2010	Proper and appropriate "closed toe" footwear is important for all personnel when participating in CAP activities. This also includes PT and after hours free time activities.

## A picture is worth a 1000 words!

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On the phone, “Hi honey, I’ll be home as soon as I ‘park’ the plane.”

## Congratulations!

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This year, WA Wing reports they removed 6 tasks from the 21 obstacle U.S. Army Confidence course on Ft. Lewis, WA during their cadet encampment. Cadets were given choices that allowed for recognition of personal limitations; they used spotters, and after 9 days in total reported no mishaps and no safety deviations. There were 71 basic cadets and 25 cadet staff members that successfully assaulted the course and ended up with nothing but teamwork and confidence. Nicely done!

## Until Next Month

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Discover, report, stop, share, listen, and learn. The things we have read about in this issue already have happened, so you are not allowed to experience these for yourself. Remember to “Knock It Off” and slow down. For streaming dialogues on some subjects, remember CAP Safety is on Facebook and Twitter. Have a good month.





# Safety of our Members

As of: 19 Aug 2010

## National Statistics

	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>
■ A/C Accidents <sup>1</sup>	2.84	3.57	2.34 ↓
■ A/C Incidents	79.55	82.13	51.43 ↓
■ A/C Repair Costs <sup>3</sup>	\$685k	\$785k	\$261k
■ Vehicle Accident Rate <sup>2</sup>	0	.18	0 ★
■ Vehicle Incidents	3.96	3.79	4.03 ↗
■ Bodily Inj. Accident Rate <sup>2</sup>	3.59	1.8	.60 ↓
■ Bodily Injury Incidents	6.79	9.2	14.5 ↗
■ Fatalities	2	1	0 ★



<sup>1</sup> National Aircraft Accident and Incident rates per/100,000 flying hours    <sup>2</sup> Rates calculated per/10,000 members

<sup>3</sup> Includes \$80K initial estimate for aircraft repair that may result in total hull loss .