Newport News Composite Squadron

February 2011 Safety Briefing

8 Feb 2011

Overview

- Safety Education Reminders
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  - Planning for Hydroplaning
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  - Fatigue Manifestations
  - 2010 Safety Accomplishments/FY11 CAP Safety Goals
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  - Home Boiler Safety
  - Fire Prevention
  - Snow Shoveling

Safety Education Reminders

- Active members are required to complete safety education monthly and have it documented. Documentation required for participation in activities. SAREX safety briefings **don't** count (ORM based).
- Operational Risk Safety Briefings are mandatory. Documentation not required.
- All current members must complete, *Introduction to CAP Safety for New Members,* by 31 March 2011.
- Online Safety Education
  - Intro to CAP Safety Program for New Members, Downed Power Lines, Hurricane Preparedness and Awareness, Flooding, Winter Driving safety. Wind Chill Index
- Safety Alerts _ Online
- Safety Suggestions - Online
- Improvement/Hazard Reports - CAP Form 26 is being phased out
- CAP Form 78 - Online

Safety Culture

- *Our safety Culture is defined by how you act when no one is watching.*
- *Every member at Civil Air Patrol needs to be a Safety Leader!*

Planning for Hydroplaning

- Hydroplaning is a condition that can exist when an airplane is landed on a runway surface contaminated with standing water, slush, and/or wet snow. Hydroplaning can have serious adverse effects on ground controllability and braking efficiency and can render an airplane partially or totally uncontrollable anytime during the landing roll.
- When confronted with the possibility of hydroplaning, it is best to land on a grooved runway (if available). Touchdown speed should be as slow as is consistent with safety. After the nose wheel is lowered to the runway, moderate braking should be applied. If you don't notice deceleration and hydroplaning is suspected, the nose should be raised and use aerodynamic drag to slow to the point that the brakes do become effective.

Don't Fly While Sick or Medicating

- This accident involved two senior members flying a C-182R during an instrument proficiency flight in conjunction with a flight clinic earlier that day. The flight was briefed to be a one-hour, IFR sortie.
- During the climb, the bank increased and the aircraft descended into trees with no change in engine power. The aircraft was destroyed and both pilots were fatally injured.
- The PIC was routinely taking about 100 tablets of Tylenol #3 (acetaminophen and codeine) per month.
- Toxicological tests, after the accident, revealed that the PIC had a toxic level of morphine in his blood. It was concluded that the drug was probably taken in flight, apparently for emergency relief from a migraine headache.

Resist the temptation to fly when ill or while medicating

Fatigue Manifestations

- The Operators Guide to Human Factors in Aviation (OGHFA) is a project of the Flight Safety Foundation European Advisory Committee. OGHFA is an extensive summary of human factors information focused on further advancing commercial aviation safety.
- The Briefing Note (BN) "Fatigue Manifestations" explores some of the causes, manifestations and consequences of pilot fatigue. It also outlines the basics of fatigue management and discusses how fatigue management is important to flight safety during both long-range flight (LRF) and short-range flight (SRF).
- Read more about the Fatigue Manifestations on SKYbrary at: http://www.skybrary.aero/index.php/Fatigue_Manifestations_%28OGHFA_BN%29?utm_source=SKYbrary&utm_campaign=d88b3d04b8-SKYbrary_Highlight_26_10_2010&utm_medium=email

Safety Beacon

2010 Safety Accomplishments

- 50% reduction in powered aircraft accidents. The last reported NTSB rate for U.S. General Aviation (2008) was 7.11 per 100,000 flying hours, whereas CAP's rate for FY10 was 1.78
- 100% reduction in vehicle accidents (zero)
- 67% reduction in bodily injury accidents
- $500,000 reduction in repair costs
- ZERO fatalities

FY11 CAP Safety Goals

- Aircraft Accident/Incident Rates <1.78/<42.7 (rate/100,000 flying hours)
- Vehicle Accident/Incident Rates 0/<3.73 (rate/10,000 members)
- Bodily Injury Accident/Incident Rate <.59/<13.6 (rate/10,000 members)

Hear Our Thoughts

- A good idea for changing flats. Carry an 18" to 24" square board and place it under the jack when lifting the car. It helps to spread the load on soft, muddy or stone surfaces. Also carry a padded knee pad to kneel or sit on. Never place any part of your body under the vehicle. You may get trapped.
- To improve a safety mindset and capabilities there is a website that is recommended for viewing called the Safe America Foundation. www.safeamerica.org.
-

A Picture Is Worth a 1000 Words!

- Is this a gear up landing or a landing that resulting in a gear-up?
- Whether you have a fixed or retractable gear aircraft, the GUMPS check is always recommended. G-GAS U-Undercarriage M-Mixture P-Propeller S-Safety (Seat Belts, etc.)

2010 CPR Guideline Updates

- Adult, Child & Infant CPR step sequence for CPR trained "bystander" rescuers will change from “A-B-C” (Airway, Breathing, Chest compressions) to “C-A-B" (Chest Compressions, Airway, Breathing) for adults and pediatric patients (children and infants, excluding newborns).
- American CPR has implemented C.A.R.E. CPR™.
- C.A.R.E.™ stands for Compress, Airway, Rescue breathing, External defibrillation.
- C.A.R.E. CPR™ explains in easy-to-understand terms the most current 2010 CPR Guideline Updates.

Message from the National Safety Officer

- During the winter, we enter some of the harshest weather-related months for many of our members in the U.S. I want everyone to make sure that they are taking every possible precaution when it comes to cold weather safety. Hazards such as snow, ice, extreme cold and rain are only part of the potential dangers.
- For home owners, boiler safety is extremely important as is keeping a good supply of candles, fresh batteries, flash lights, and fresh drinking water.
- Lastly, lets not forget vehicle safety and ensuring that your automobiles have good all weather tires, its fluids are all fresh and filled, and that you have stored a travel emergency kit which includes flares and a first aid kit.

Its Not a Rental

- Treat the aircraft as if you had to pay the bills
- How about during the walk around – ever see a pilot slam the ailerons up and down making sure that the aileron stop is stronger than they are.
- How do you taxi? On the brake check, do you slam on the breaks such that the four point harnesses are tested or do you gently exert pressure to make sure that the aircraft slows safely?
- After landing, do you gently apply the brakes to help slow the aircraft or is it another test of the shoulder harnesses? With attention to the winds, do you use your elevator to do aerodynamic breaking to slow the aircraft or do you just let the nose strut and shimmy damper absorb all the punishment.

Home Boiler Safety

- Boilers are equipped with numerous safeguards to minimize hazards, so it is important to make sure they are working properly. One of these safeties is the low-water cutoff, which cuts off the boiler's power or ignition source when water drops to an unsafe level.
- Another safety function (especially in fuel-fired boilers) is the flame safeguard, which makes sure that the boiler's pilot light is on before opening the main fuel valve. It also ensures that the fuel valves close when the pilot light goes out.
- Ideally, combustion efficiency analysis is performed during the height of the heating season, when the boiler is running at fully rated capacity.

Fire Prevention

- All heaters need space. Keep all things that can burn (paper, matches, bedding, furniture, clothing, carpets and rugs) at least three feet away from heating equipment.
- Never leave a fire in the fireplace unattended and use a glass or metal fire screen to keep fire and embers in the fireplace.
- Never use a cooking range or oven to heat your home.
- Turn off portable space heaters every time you leave the room or go to sleep.
- Have wood and coal stoves, fireplaces and chimneys inspected annually by a professional and cleaned if necessary.
- If you must use a space heater, place it on a level, hard and nonflammable surface (such as ceramic tile floor), not on rugs or carpets or near bedding or drapes. Plug power cords directly into outlets and never into an extension cord.

Snow Shoveling Safety Tips

- Snow shoveling is no different than any other physical activity. For your own safety, ask your doctor if he feels snow shoveling is safe for you.
- Before starting to shovel, be sure you have warmed up properly. Try using the same type of stretching you do before your regular exercise routine.
- Start slowly, work at a steady pace and take frequent breaks. Shoveling snow rapidly for long periods at a time will compromise your safety.
- When you are shoveling snow be sure to remain hydrated. Dehydration can cause dizziness and fainting as well as more serious health issues.
- If it is cold outside, wear multiple layers for insulation, and so that you can shed layers if you become overheated. Be sure to cover your extremities to guard against frostbite.

Until Next Month

- 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 BY EXAMPLE

January 2011, Vol 2. No. 1

Safety Culture By Lt Col Al Matson, MN Wing DOV

A Safety Culture is dependent on how members of an organization perceive safety and how that safety is valued in that organization. Much of this perception is formed by observing the behavior of others in the organization. There has to be a strong, well-demonstrated, safety commitment from company leaders, who will then influence the behavior of others. At Civil Air Patrol, we have a very strong safety commitment from our organizational leaders. This can be seen in the number of safety programs either in place or under development at Civil Air Patrol. Also, other leaders can influence behavior. These leaders are those that influence others through both word and deed. They induce others to emulate them because they are perceived to have the answers. While the pilot in a cockpit is the designated leader, Mission Observers and Mission Scanners can also exhibit leadership when they influence behavior in a positive manner. All of us influence others at times, so we have to ensure that we make the right decisions and take appropriate actions that contribute to safety. Otherwise, our Safety Culture slowly weakens.

A Safety Culture is made up of a number of components:
Commitment is necessary from all levels of the organization, not just top management.
Involvement is demonstrated when members of the organization take part in safety discussions and volunteer information about hazards. When was the last time you filed a safety report?

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Responsibility is recognizing that we are all a part of this process. There is no "opt-out."
Open Communications is critical to a Safety Culture, and is strengthened by ensuring that an organization has a non-punitive, fair, and just safety management system. Civil Air Patrol believes strongly in these principles.
Observing & Reporting hazards are necessary for the organization. No IG inspector or safety program can uncover every hazard. Many methods are available for reporting hazards and unsafe acts at Civil Air Patrol. Please use them.
Training must take place that addresses the recognized hazards.

Takeaway thoughts:

- *Our Safety Culture is defined by how you act when no one is watching.*
- *Every member at Civil Air Patrol needs to be a Safety Leader!*

Planning for Hydroplaning FAA Safety Team | Safer Skies Through Education

Notice Number: NOTC2669

Approach and Landing
Safety Tip
December 2010

Hydroplaning is a condition that can exist when an airplane is landed on a runway surface contaminated with standing water, slush, and/or wet snow. Hydroplaning can have serious adverse effects on ground controllability and braking efficiency and can render an airplane partially or totally uncontrollable anytime during the landing roll.

When confronted with the possibility of hydroplaning, it is best to land on a grooved runway (if available). Touchdown speed should be as slow as is consistent with safety. After the nose wheel is lowered to the runway, moderate braking should be applied. If you don't notice deceleration and hydroplaning is suspected, the nose should be raised and use aerodynamic drag to slow to the point that the brakes do become effective.

Do you want to know more? The Airplane Flying Handbook and other FAA manuals are available here.

*This notice is being sent to you because you selected "**General Information**" in your preferences on FAASafety.gov. If you wish to adjust your selections, log into https://www.faasafety.gov/Users/pub/preferences.aspx where you can update your preferences.*

The new WINGS–Pilot Proficiency Program is great! Check it out now!

Don't Fly While Sick or Medicating by Gary K. Woodsmall – Sep 00 – CAP Sentinel

THIS IS A REPRINTED ARTICLE FROM THE SEP 2000 CAP SAFETY NEWSLETTER

NTSB Final Report – Middleborough, MA: The National Transportation Safety Board (NTSB) recently released the final report on the Middleborough, MA aircraft accident that occurred on 25 May 98. This accident involved two senior members flying a C-182R during an instrument proficiency flight in conjunction with a flight clinic earlier that day. The flight was briefed to be a one-hour, IFR sortie. However, after approximately 30 minutes the IFR clearance was cancelled. About 15 minutes later, the aircraft was observed

flying a low approach to a private airport followed by a climbing right turn. During the climb, the bank increased and the aircraft descended into trees with no change in engine power. The aircraft was destroyed and both pilots were fatally injured.

The investigation revealed no mechanical failure or malfunction. The pilot in command (PIC) had been treated for migraine headaches since 1988 by his personal physician. The PIC was routinely taking about 100 tablets of Tylenol #3 (acetaminophen and codeine) per month. The pilot's personal physician had later changed the prescription to a barbiturate named Fiorinal (butalbital, aspirin and caffeine). A review of past applications for medical certificates revealed that under question 18a, "Medical History, Frequent or severe headaches", the pilot had checked the NO block. In addition, question 19, "Visits to Health Professionals Within Last 3 Years", showed only visits to the Aviation Medical Examiner (AME). The visits to the doctor who prescribed the Fiorinal were not listed.

Toxicological tests, after the accident, revealed that the PIC had a toxic level of morphine in his blood. By examining the rate at which the morphine was metabolized, one can conclude that the drug was probably taken in flight, apparently for emergency relief from a migraine headache. The source of the morphine is unknown, as neither of the pilot's physicians had prescribed it.

According to the FAA Guide for Aviation Medical Examiners, a history or presence of migraine headaches, migraine equivalent, cluster headaches, chronic tension headache or conversion headaches would preclude the issuance of a medical certificate. The reason for this policy is that these types of headaches can be so painful as to be acutely incapacitating. Additionally, these types of headaches often require medications for relief that can greatly diminish a pilot's ability to control an aircraft. Impairment due to ingested morphine was definitely a factor in this pilot's failure to maintain control of the aircraft during a VFR go-around. For more details on this accident, you can read the report in its entirety at - http://www.ntsb.gov/aviation/NYC/lnarr_98A113.htm.

Drugs Found In General Aviation: I recently had the privilege to hear a presentation by Dr. Dennis Canfield, Manager of the Toxicology and Accident Research Laboratory, which is part of the FAA's Civil Aeromedical Institute (CAMI). CAMI studies the factors that influence human performance in the aviation environment, finds ways to understand them, and communicates that understanding to the aviation community. Dr. Canfield spoke on CAMI's capability to perform state-of-the-art toxicological tests and the recently published results of a study of drugs in fatal aircraft accidents. This study examined the positive drug rate based on the medical classification of the pilot, the type of pilot certificate held, and the type of operation being flown. The results were both surprising and alarming.

Under the cooperative efforts of the FAA and the NTSB, specimens from pilots who were fatally injured in aviation accidents were analyzed for drugs and alcohol as part of the investigation into the cause of the accident. Controlled dangerous substances were found in 8% of the pilots analyzed. Prescription drugs were found in 14%. Over-the-counter (OTC) drugs were most common at 18%. Alcohol was found in 7% of the pilots. As you might guess, all classes of medical certificates were represented; third-class holders were the most abusive and first-class holders were least represented. Approximately 54% of the pilots that tested positive held an Airline Transport Pilot certificate! Commercial Pilots represented 38%. Private Pilots came in at 6% and Student Pilots were least abusive at 1%. Additionally, pilots operating under part 91 accounted for approximately 90% of all the drug and alcohol fatalities studied.

The most commonly found impairing drugs during this study were OTC antihistamines followed by prescription antidepressants. Marijuana was the most frequently found illegal drug. A commonly held belief is that medicine cures all that ails. Some pilots feel that they can effectively operate an aircraft while taking OTC drugs. After all, if they were dangerous, they would be prescription-only drugs - right? Wrong! As we have seen in this study, many pilots self-medicate. Many of these pilots will get away with it, for a while. As long as the flight is normal, routine, and unchallenging, chances are the pilot will be successful. But, when the pilot becomes challenged by aircraft malfunctions, bad weather, or heavy workloads, chances are they will join the statistics of this study. OTC antihistamines such as Actifed, Benadryl, Contac, Dristan, Nyquil and Sinutab can all hide your cold and flu symptoms and make you more comfortable when you are at home in bed. But, while flying, you can expect sedation, dizziness, impaired coordination, blurred vision, and possibly a fatal aircraft accident! When a pilot is not feeling well and makes the decision to go ahead and fly, the odds against a successful flight go up. Throw in the different impairments from medication and you have a downright compromising situation. You not only compromise your life and the future of family members left behind, but also the lives of your passengers, other pilots in your vicinity, and people living their lives under your flight path.

Remember, if an illness is serious enough to require medication, it is serious enough to prevent you from flying. If a label warns of side effects, do not fly until twice the recommended dosing interval has passed. So, if the label says "take every 4-6 hours" then wait at least 12 hours to fly. When in doubt, seek advice from your Aviation Medical Examiner.

Resist the temptation to fly when ill or while medicating.

Fatigue Manifestations compliments of SKYbrary

The Operators Guide to Human Factors in Aviation (OGHFA) is a project of the Flight Safety Foundation European Advisory Committee. OGHFA is an extensive summary of human factors information focused on further advancing commercial aviation safety.

The Briefing Note (BN) "Fatigue Manifestations" explores some of the causes, manifestations and consequences of pilot fatigue. It also outlines the basics of fatigue management and discusses how fatigue management is important to flight safety during both long-range flight (LRF) and short-range flight (SRF).

Read more about the Fatigue Manifestations on SKYbrary at: http://www.skybrary.aero/index.php/Fatigue_Manifestations_%28OGHFA_BN%29?utm_source=SKYbrary&utm_campaign=d88b3d04b8-SKYbrary_Highlight_26_10_2010&utm_medium=email

Safety Day Change

Just another reminder. There has been a policy change that will require an annual SAFETY DAY to be held during the months of January, February, or March, in lieu of the old policy requirement to hold one in October. The policy implementation date for this will begin in January, February, and March of 2012.

Safety Officer College

The dates have been locked in for the first CAP Safety Officer College at Kirtland AFB:

June 6-10, 2011 Travel dates June 5th and 11th.

More information will be coming on eligibility, the selection process, and course content.

As a preview, it will be full of education on mishap investigations, photography, human factors, crash lab work, safety philosophy, risk mitigation, and regulatory learning.

Safety Accomplishments for 2010

The National Headquarter safety staff working in conjunction with the National Safety Team (NST), were able to accomplish a great deal in 2010. Here are some highlights:

- Established the National Safety Team
- Civil Air Patrol has achieved the following successes in safety for FY10
    - 50% reduction in powered aircraft accidents. The last reported NTSB rate for U.S. General Aviation (2008) was 7.11 per 100,000 flying hours, whereas CAP's rate for FY10 was 1.78
    - 100% reduction in vehicle accidents (zero)
    - 67% reduction in bodily injury accidents
    - $500,000 reduction in repair costs
    - ZERO fatalities
- Improved safety technology, education, and accessibility
    - Numerous online and classroom training courses added to CAP's safety education program
    - Added computer based safety education technology, safety education tracking program, and hazard reporting system
    - Safety Officer College slated for FY11 at Kirtland AFB
- Safety Alert process in place
- Safety Regulations
    - Updated safety apparel policy to meet DOT standards
    - Updated NTSB reporting requirements to comply with 49 CFR Part 830
    - Improved safety education and risk briefing policy
    - Updated introductory safety education requirements
    - Approved cadet safety officers for addition at all levels
    - Expanded mishap definitions to promote close-call reports
- Safety marketing and awareness
    - Addition of safety advertising in the Volunteer magazine
    - Re-invented newsletter format and content, "The Safety Beacon"

SUMMARY

CAP's safety awareness and program management has significantly improved with the addition of NHQ safety staff working in conjunction with the National Safety Team (NST). The NST is comprised of the National Safety Officer and volunteer assistants assigned as subject matter experts for flight and ground safety. Region and Wing Commanders are moving away from a punitive safety program towards a behavior based safety program which has shown significant improvement in using safety mishaps as an educational opportunity to raise awareness and prevent risk exposure.

CAP GOALS for Safety Performance for FY11

i. Aircraft Accident/Incident Rates <1.78/<42.7
(rate per 100,000 flying hours)

ii. Vehicle Accident/Incident Rates 0/<3.73
(rate per 10,000 members)

iii. Bodily Injury Accident/Incident Rate <.59/<13.6
(rate per 10,1000 members)

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

Words of wisdom can often be 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. 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. Thank you for your submissions.

Robert K Kelly Jr	AK-015	December 2010	Ground bound vehicles should always be parked such that your first move is forward. That is, if you cannot park in a pull through spot, back in. If you have two or more people with you, utilize one as a spotter. Also, before moving the vehicle for the first time, walk around the vehicle checking for obstacles and obstructions, and checking the condition of the vehicle such as tires, lights, bumpers, etc.
Irwin I Kleinman	IN-175	December 2010	A good idea for changing flats. Carry an 18" to 24" square board and place it under the jack when lifting the car. It helps to spread the load on soft, muddy or stone surfaces. Also carry a padded knee pad to kneel or sit on. Never place any part of your body under the vehicle. You may get trapped.
Randall L Porterfield	GA-506	December 2010	In the winter, always keep blankets in the car in case of a mechanical breakdown or an accident. In either case, the possibility of death by very cold temperatures can suddenly become very real! Randy Porterfield, Ga.
Darrin G Stewart	MS-048	December 2010	Make sure you discharge static electricity before pumping gas by touching bare metal on vehicle.

Brian K Flynn	NC-048	December 2010	I realized the other day that I practice ORM when my son eats. Recognize which foods represent a high choking hazard and teach children to be careful when eating them and why. You do not want to scare them, but if you can teach them to chew a hotdog or an apple carefully and pay attention to the food when they eat, it will benefit them in many ways, reducing the hazard of choking being just one.
Scott T Singletary	FL-423	December 2010	It is a good idea to carry the proper survival gear for the environment you are working in.
John C Wigginton III	LA-093	December 2010	To improve a safety mindset and capabilities there is a website that is recommended for viewing called the Safe America Foundation. www.safeamerica.org. (Please also review http://www.capmembers.com/safety/resource_links.cfm for other outside websites supported by CAP).
Vincent M Corey	AL-126	December 2010	Fire Safety (Safety Beacon Team editorial addition: Test your smoke alarms monthly and make sure that your house is protected by an adequate number of working alarms. .Smoke alarms should be located inside each bedroom, outside each sleeping area, and on every level of your home. . Share your fire escape plan, including the location of your outside meeting place, with your overnight guests. Everyone should know at least two ways out of each room in your home. . Keep halls, stairs, and doorways properly illuminated and free of clutter and other objects that could hinder an escape during a fire emergency. . Check to make sure your stairs, halls and entries are properly illuminated. Use nightlights in hallways and bathrooms. . Consider having older guests or those with mobility issues sleep on the ground floor of the house.)
James A Buist II	IN-069	December 2010	Dress for the Weather: Not just what it is now, but what it may be in the near (24-72 hour) future. You never know when you may get stranded in a ground vehicle or after an unplanned, off-airport aircraft landing. Hat, gloves, boots, and coat are a must this time of year.

A Picture Is Worth a 1000 Words!

Is this a gear up landing or a landing that resulting in a gear-up?

Whether you have a fixed or retractable gear aircraft, the GUMPS check is always recommended. G-GAS U-Undercarriage M-Mixture P-Propeller S-Safety (Seat Belts, etc.)

Until Next Month

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. Happy New Year to you and your families.

FEBRUARY 2011

2010 CPR Guideline Updates

Beacon Newsletter Team

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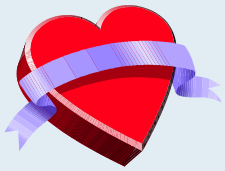
Maj Manuel Ceja

Capt Carolyn Fillgrove



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By Gloria Bartlett,
www.safety.com

Adult, Child & Infant CPR step sequence for CPR trained "bystander" rescuers will change from "A-B-C" (Airway, Breathing, Chest compressions) to "C-A-B" (Chest compressions, Airway, Breathing) for adults and pediatric patients (children and infants, excluding newborns).
American CPR has implemented C.A.R.E. CPR™ as shown below - easier to learn & remember!
Defibrillation and use of AEDs remains a vital part of the lifesaving sequence.
Also applies to Advanced/ Healthcare CPR.

Bystander / One rescuer Adult, Child & Infant CPR will no longer include the step to "Look, Listen and Feel"
Also applies to Advanced/ Healthcare CPR.
A compression rate of 100+ per minute.
Also applies to Advanced/ Healthcare CPR.

Adult chest compression depth: push down on the adult breastbone at least 2 inches (5 cm).
Also applies to Advanced/ Healthcare CPR *"Don't Stress... Compress!"*™
All trained rescuers should provide chest compressions for victims of cardiac arrest. In addition, if the trained rescuer is able to perform rescue breaths, compressions and breaths should be provided in a ratio of 30 compressions to 2 breaths, averaging 100+ compressions per minute.
But... If a trained rescuer cannot perform the rescue breaths, or a bystander is not trained in CPR, the bystander should provide compression-only CPR for the adult victim who suddenly collapses, with 100+ rapid and firm compressions in the center of the chest.
Whenever available, follow the directions of the EMS/911 dispatcher.
As always, a rescuer should relinquish care to any better prepared or trained rescuer, while remaining to assist and assure quality of care.

C.A.R.E. CPR™ explains in easy-to-understand terms the most current 2010 CPR Guideline Updates.

C.A.R.E.™ stands for Compress, Airway, Rescue breathing, External defibrillation. American CPR training is way ahead of other national safety organizations in including these updated guidelines in both our instruction and our class materials.

In the updated C.A.R.E. CPR™ sequence, chest compressions come first, and rescue breathing is only slightly delayed for trained bystanders. While most instructors will continue to teach full CPR, including the rescue breaths which help supply oxygen to the blood, "Compression-Only" CPR will be covered as well, to address the participants' right to know the most current information.

Message From The National Safety OFFICER

Col Robert Diduch, CAP

"All members should put their best foot forward and not only think safe but be safe"

Welcome to the new look for the Civil Air Patrol's monthly Safety Newsletter. In the coming months you will see more changes in the way we ensure that our members receive safety news tips, items and changes in policy. This new look is the first step.

During the winter, we enter some of the harshest weather-related months for many of our members in the U.S. I want everyone to make sure that they are taking every possible precaution when it comes to cold weather safety. Hazards such as snow, ice, extreme cold and rain are only part of the potential dangers.

For home owners, boiler safety is extremely important as is keeping a good supply of candles, fresh batteries, flash lights, and fresh drinking water.

Lastly, lets not forget vehicle safety and ensuring that your automobiles have good all weather tires, its fluids are all fresh and filled, and that you have stored a travel emergency kit which includes flares and a first aid kit.

I wish all of our members everywhere a safe and Happy New Year. I hope 2011 treats you and your families better than the year before. Be well and above all else remember ...**SAFETY FIRST!**

Col Robert Diduch

Folks,

As we transition into 2011, Civil Air Patrol is continuing its effort to improve its safety culture for all participating members.

To participate in <u>any</u> CAP activity, a member must be compliant in accordance with the current policy of CAP. This will take everyone's effort to bring awareness to the forefront. The current policy can be viewed at:

(http://www.capmembers.com/media/cms/2010_11_03_safety_education_and_ORS_0E855E8029EC2.pdf)

There are a multitude of options available for CAP members to ensure their monthly safety education compliance. Options include the following:

- ONLINE COMPUTER BASED SAFETY EDUCATION: Please sign-in to eServices. On the left side, in the lower area of the **"My Favorites"** column will be a section entitled **"Online Safety Education"**. Click on it; a number of safety course titles will appear; click on a title; and, begin a course. When the course has been successfully completed, please make sure to follow all of the directions to ensure course credit. The individual's safety education report will be displayed in the lower section of the page. This can be checked often to ensure compliance. This method will provide CAP members automatic accreditation for the courses that are completed. Safety education is once per month; do not take all the courses at once. Introduction to CAP Safety for New Members is a required course to be taken by all CAP members before 31 March 2010. It is a good course to start with!

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- SAFETY EDUCATION IN THE CLASSROOM – Safety Officers still have a requirement to provide safety education once per month. This is another great way to meet your safety education requirements. The Safety Officer will provide a pre-printed sign-in roster which will include: printing name; signature; and, CAP ID, to verify participation in safety education. The Safety Officer will make the appropriate entry into the safety education database for member accreditation. Members should check their records to ensure safety education accreditation has been entered.

- FAA or AOPA– FAA and AOPA both provide online and classroom safety education courses. On CAP's national safety education webpage there are tools to help find classroom courses for the FAA in your area by zip code and online education for AOPA. Once completed, provide one of the following to your commander or safety officer: certificate of completion; copy of your FAA Wings; or, AOPA training record. The commander or safety officer will validate and update your education records in CAP's database. Courses provided by the FAA or AOPA are all approved for documentation in CAP's safety education program.

- OTHER SAFETY EDUCATION – Participation in other safety education venues where certification can be documented and provided to your unit safety officer or commander for validation, MAY be accepted on a case-by-case basis. This education must be documentable and relevant to CAP's missions. It is always good practice to get these "other safety education" courses pre-approved just to ensure they will be accepted. Not all courses are acceptable.

If your safety education is not current, ensure compliance before participating in any CAP activity. An exception to this is that you can still come to your unit meeting with the intent of becoming current. However, sub-activities within the unit should not be permitted until you have met your currency requirements.

Please remember that safety briefings at an **SAREX** are based on **OPERATIONAL RISK MANAGEMENT** (ORM) and DO NOT qualify as safety education. Do not arrive at an activity with the expectation that you will be provided safety education. You may find that your will not be allowed to participate and may have to come back another day after your safety education currency requirements are met.

Safety is important and should be an integrated value of how we operated in our day-to day mission and being prepared, ahead of time, is the foundation for CAP's motto, "Semper Vigilans" - Always Vigilant.

As always, your cooperation is appreciated.

Col Robert Diduch

National Safety Officer

Its Not a Rental—By Maj. Philip J. Blank, CAWG DOV

As DOV, I get the opportunity to fly with lots of folks from around the Wing. It is a great opportunity for me as I am always learning new perspectives from pilots as well as some of the operational differences that we might encounter in our widespread geography. While our pilots always demonstrate a broad range of experiences, there is one item that is fairly consistent: We don't need to taxi more than about 50 feet and I can tell if the pilot is an airplane owner (or has been) or an airplane renter.

Now, before all of you grab your pens (or emails) to write me that you don't need to be an airplane owner to know how to operate an aircraft safely. You win…I agree. What I am talking about is how we treat the equipment that the CAP entrusts to us. When you own an airplane and have to face the punishing repair bills that are often encountered, it gives you a perspective that is hard to obtain elsewhere. Are there any amongst us who hasn't floored the pedal on the rental car when we might be reluctant to do it on the one that we own.

We are fortunate to be isolated from the repair bills that the CAP can easily face during aircraft maintenance. A new Cessna primer - $700 and that does not include installation; an engine overhaul – easily $25,000 and that does not include the labor to remove and replace – annual inspections??? I don't have access to the costs of our annual inspections but for my airplane, they have ranges from a head whopping $12,000 to a saints-be-praised $3,500. When facing bills like that, you really start to think about not only how to operate equipment safely (which we all do) but also, perhaps, how to operate it a bit more gently.

So how do you spot an aircraft owner from the operator? There are lots of ways. During the preflight, does the pilot let the elevator free fall to the stops when he/she takes the gust lock (or iron maiden) out? How about during the walk around – ever see a pilot slam the ailerons up and down making sure that the aileron stop is stronger than they are. And, don't forget – there is the hanging off the prop trick. One pilot actually put their entire body weight on the prop and pulled down to make sure that the blades were securely attached. I can hear the DOAM grinding his teeth now.

Inside the cockpit is also an interesting place. Fortunately, most CAP pilots are very diligent about the use of the checklists. They are not always familiar, however, with the details of the normal procedures which are behind these checklist items. One of my favorite items to watch is the primer. Rather than gently pull the primer out and gently push it in, some pilots do the old yank and shove routine. It is almost as if there is a belief that if they push real hard and real fast, the fuel will get into the cylinders better. Actually, you want the fuel to atomize in the cylinders and a slow easy push in is not only easier on the primer seals but it will result in better starting. Then, there is the start itself. I love watching the engine go from cranking to 2000 RPM in the blink of an eye. Of course, if there is no oil pressure, it is probably a bit late. Make sure that you have proper throttle control and manage the RPM's on the start and watch the oil pressure.

How do you taxi? On the brake check, do you slam on the breaks such that the four point harnesses are tested or do you gently exert pressure to make sure that the aircraft slows safely? In a no-wind condition, do you taxi with full aft elevator to take pressure off the nose strut and shimmy damper or do you let the elevator stay in a full down position resulting in maximum stress on these parts. Rebuild a few of these guys and you will understand why it is important to treat the equipment gently.

The take off and climb are also indicative. Does the pilot follow the checklist? In many 182's, the normal climb is 23 inches or Full Throttle whichever is <u>less</u>. Few folks seem to remember the "whichever is less" part. Yes, there is a Maximum Climb Performance checklist but how many of our CAP operations really

"Inside the cockpit is also an interesting place. Fortunately, most CAP pilots are very diligent about the use of the checklists."

Continued...

call for that kind of climb performance.

During the cruise portion of your flight, think about your passengers comfort. Fly the airplane gently. There is no need to yank and bank the aircraft abruptly. I have flown with low time pilots that have been ever so gentle and high time pilots that fly like a bull in a china shop. Be gentle and smooth. It is easier on the gear…easier on the check pilot…;)…and will be a lot easier on your passengers. If you have Scanners who look a bit green around the edges after flying with you, you might want to re-assess your technique.

Landings are always interesting. After landing, do you gently apply the brakes to help slow the aircraft or is it another test of the shoulder harnesses? With attention to the winds, do you use your elevator to do aerodynamic breaking to slow the aircraft or do you just let the nose strut and shimmy damper-absorb all the punishment. If you get a lot of shimmy during your takeoff role, chances are someone is not being careful of their treatment of this critical piece of aircraft infrastructure

Long before the landing, I am pretty confident that I know if the pilot that I am flying with is a current or former owner or a renter. Both fly safely – that is a given. Without that, CAP cannot function. But, as we all reach to improve our skills as aviators, we have to be not just safe but have a professional approach to 'aviating'. This means that we need to shed the 'renter' mentality and replace it with the pride of the owner mentality. By doing so, our customers and passengers will be happier and over time, we may find that we will have a positive impact on the maintenance that is required to keep us all up in the air.

Home Boiler Safety

Whether powered by electricity or fuel, boilers can be a handy heating solution in both small and large facilities. But a little diligence is required for them to work at their peak function. Check out these three essential elements of a good boiler maintenance program.

Water Quality

"Water treatment is probably the most often neglected piece of the boiler operating puzzle," says Jim Roll, a contractor with American Mechanical Services in Colorado Springs, Colo. "People think as long as you put water in, you're good to go. But if water circulation systems go unattended, problems develop very rapidly."

It's important to remove as much oxygen as possible from the water in the boiler because oxygen will attack the metal tubing inside and shorten the life of the equipment, says Roll. Sodium sulfite is one commonly used oxygen scavenger. "The oxygen molecules attach to the sodium sulfite and it's rendered harmless," Roll says.

The water inside the boiler should also be sampled regularly and tested to ensure a proper balance of chemicals and the correct pH. The ideal pH for most boilers is 7, which is neutral. In certain systems, such as those used for hot water, once-a-month water sampling may be adequate, Roll says. However, the water quality in most boilers should be checked daily.

If you are uncertain about the amount or types of chemicals that should be in the boiler's water system, hire a water treatment company. Reputable water treatment companies can train employees on water quality testing, provide chemicals and return periodically for troubleshooting. Using a water treatment company also leaves less room for potentially expensive employee errors. "I find it's better when you outsource it and put all the liability to the contractor," says Terrence Rollins, CEM, CPM, CSDP and owner of RHC Global Energy Solutions.

"If you are uncertain about the amount or types of chemicals that should be in the boiler's water system, hire a water treatment company. "

Home heating boilers like this one above need constant maintenance to ensure that they operate in good working condition.

Safety Checks
Boilers are equipped with numerous safeguards to minimize hazards, so it is important to make sure they are working properly. One of these safeties is the low-water cutoff, which cuts off the boiler's power or ignition source when water drops to an unsafe level. "The flame or ignition source will shut down and prevent a catastrophe," Roll says. Most boilers have a manual valve on the water column, which allows the operator to simulate low-water conditions. If shutdown does not occur, then further inspection – and repairs – may be necessary. The low-water cutoff should be tested daily, though in larger facilities, it may need to be checked out once per shift.

Another safety function (especially in fuel-fired boilers) is the flame safeguard, which makes sure that the boiler's pilot light is on before opening the main fuel valve. It also ensures that the fuel valves close when the pilot light goes out. If this safeguard is not working properly, the boiler's combustion chamber can be flooded with raw fuel, Roll says. Operators can check the flame safeguard by simply observing the boiler as it cycles. In addition to these daily checks, all electrical circuitry and safeties on a boiler should be inspected and tested two to four times per year. "A good technician would check out the circuitry, sequencing, and make sure all electrical components are operating as they should," Roll says.

Combustion Efficiency
If you are maintaining a fuel-fired boiler, a periodic combustion efficiency analysis is needed to ensure a proper balance of air and fuel in the burner. This improves efficiency and ensures that building managers are "getting the biggest bang for their BTU buck," Roll says. This can be done by a reputable mechanical contractor – most have combustion efficiency experts on staff.

Many boiler operators have no idea how inefficiently their equipment is running until an analysis is performed. "Some are rated as having 10 to 15 percent excess air," Rollins says. "That's huge." Too much air will make the burner's flame go out, while too little air causes it to "run rich," leading to excess fumes, unburned fuel and reduced thermal efficiency.

Ideally, combustion efficiency analysis is performed during the height of the heating season, when the boiler is running at fully rated capacity. "It's best when you have a full load on the boiler and can run the boiler to all of its firing points," Rollins says. Another analysis can also be done just before the weather turns cold, to head off potential problems before they start.

Fire Prevention in the Winter Months

Fire prevention in the winter months According to the American Red Cross, fire is the biggest disaster threat to families. The threat increases as temperatures plunge to the dangerous lows the area is currently facing. Heating sources, such as space heaters, are the leading cause of winter fires. The American Red Cross urges family to use alternate heating sources with caution and to make a plan in case of a home fire. The American Red Cross suggests individuals take the following precautions:

All heaters need space. Keep all things that can burn (paper, matches, bedding, furniture, clothing, carpets and rugs) at least three feet away from heating equipment.

* Never leave a fire in the fireplace unattended and use a glass or metal fire screen to keep fire and embers in the fireplace.
* Never use a cooking range or oven to heat your home.
* Turn off portable space heaters every time you leave the room or go to sleep.
* Have wood and coal stoves, fireplaces and chimneys inspected annually by a professional and cleaned if necessary.
* If you must use a space heater, place it on a level, hard and nonflammable surface (such as ceramic tile floor), not on rugs or carpets or near bedding or drapes. Plug power cords directly into outlets and never into an extension cord.

The American Red Cross also states that every homeowner should install smoke alarms on every floor of a home and check them once a month by pressing the test button and replace batteries as necessary.

13 Snow Shoveling Safety Tips—www.associatedcontent.com

These snow shoveling safety tips will keep you from injuring yourself this winter. Snow can be quite heavy. It's easier than you think to injure yourself while shoveling snow.

1. Snow shoveling is no different than any other physical activity. For your own safety, ask your doctor if he feels snow shoveling is safe for you.

2. Shoveling snow can be a serious health safety risk if you have a history of heart related illness. High blood pressure and high cholesterol are risk factors as well.

3. Cigarette Smokers get short of breath quite easily. Shortness of breath will make your heart pump faster, increasing your risk of heart attack.

4. If you are a senior citizen or you are simply out of shape, it would be wise to hire someone to do your shoveling for you. Concern for your own safety is nothing to be ashamed of.

5. Before starting to shovel, be sure you have warmed up properly. Try using the same type of stretching you do before your regular exercise routine.

6. Start slowly, work at a steady pace and take frequent breaks. Shoveling snow rapidly for long periods at a time will compromise your safety.

7. When you are shoveling snow be sure to remain hydrated. Dehydration can cause dizziness and fainting as well as more serious health issues.

8. Choose a small shovel, so you are not lifting as much snow. Snow may appear light and fluffy, but it can get quite heavy when it starts to melt. A curved handle shovel is designed to take the strain off your back.

9. Plastic shovels weigh less than metal and snow is not as likely to stick to them. These factors add less weight to your load. Spray the blade with a lubricant to keep snow from sticking.

10. Stand with your feet apart slightly and bend your knees as you lift. Twisting your body while lifting can cause injury. Your feet should point in the direction you are lifting and throwing in.

11. If it is cold outside, wear multiple layers for insulation, and so that you can shed layers if you become overheated. Be sure to cover your extremities to guard against frostbite.

12. Avoid drinking caffeinated beverages and energy drinks. These can elevate your heart rate, increasing your risk for heart attack.

13. Shovel often as the snow falls. Heavy accumulated snow can turn to ice and cause a safety hazard for pedestrians. It can also be a real back-breaking proposition.

VISIT US ON THE WEB
WWW.GOCIVILAIRPATROL.COM

Until Next Month

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.

Happy New Year to you and your families.

SAFETY DAY CHANGE—MARK IT DOWN:

Just another reminder - There has been a policy change that will require an annual SAFETY DAY to be held during the months of January, February, or March, in lieu of the old policy requirement to hold one in October. The policy implementation date for this will begin in January, February, and March of 2012.

SUMMARY

CAP's safety awareness and program management has significantly improved with the addition of NHQ safety staff working in conjunction with the National Safety Team (NST). The NST is comprised of the National Safety Officer and volunteer assistants assigned as subject matter experts for flight and ground safety. Region and Wing Commanders are moving away from a punitive safety program towards a behavior based safety program which has shown significant improvement in using safety mishaps as an educational opportunity to raise awareness and prevent risk exposure.

Got a great safety article that you would like to see in a future Beacon Newsletter? Send it to Lt Col Sharon Williams at safetybeacon@capnhq.gov.

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Citizens Serving Communities
Above and Beyond