

Newport News Composite Squadron July 2010 Safety Briefing

1. National Safety Council (NSC) Safety Calendar
2. New Safety Briefing Procedures
3. June & July Safety Beacon

National Safety Council Calendar

July			
	National Fireworks Safety Month	Prevent Blindness America	http://www.preventblindness.org

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.

This 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*.



June 2010, Vol 1. No. 1

We Got the Car Home, but...! *Lessons learned from towing a disabled vehicle*

By Dean Roller, 1Lt, CAP (IN-002, Monroe County Composite Squadron)

Prior to a planned visit to see my son and his family, their car had broken down in a small town in Central Texas about four hours from their home in Wichita Falls. My son, Paul, is an Air Force technical training instructor at Sheppard Air Force Base. I tell this story with his permission.

Fortunately, Paul’s pickup truck was more than capable of towing the smaller car on a car dolly, which we located at a nearby U-haul outlet. After carefully loading the car onto the dolly and double-checking everything we headed home with the car nicely in tow.

Then it happened. About half-hour from home the trailer jerked the truck and swayed back and forth behind the truck. Thankfully, Paul didn’t panic. He let off the accelerator, slowed the truck down and pulled off on the shoulder. The hitch pin was missing and the draw bar was out of the receiver lying on the pavement. Fortunately, the safety chains had done their job and my son’s proper action in getting the situation under control resulted in only one minor scrape mark on the draw bar.

Lesson 1: Safety consciousness does not make you invulnerable.

In his job as a technical school instructor, Paul practices safety in the classroom every day. He teaches safety to young men and women learning to maintain Air Force equipment. Moreover, he was a former unit safety NCO. We had looked over everything after loading the car. So, how did this happen to someone who lives safety every day?

The first lesson we learned that day was that safety consciousness does not make one invulnerable.

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Lesson 2: If you haven't done something in a while, rethink it

Fortunately, almost every other vehicle on the road in Texas is a pickup with a towing package and after a passing motorist provided us with a replacement hitch and cotter pins, we re-hooked the trailer to the truck. Then the problem became apparent: the cotter pin that holds the hitch pin in place had been installed incorrectly for that type of hitch pin.

In a former job, Paul routinely towed equipment around the flightline. The Air Force uses hitch pins that have a hole in them and common practice is to push the cotter pin clear through to the largest part of the pin. So, for the cotter pin to come out of a hitch pin with a hole, it has to pass through two places where the pin comes together. The hitch pin that my son was using on this day was grooved and so pushing it clear through to the larger rounder portion of the pin caused it to bounce off during towing and the draw bar to come out of the receiver. As important as the proper installation of safety pins is, a broader application to safety in general is made.

The second lesson we learned that day was that if you have not done something in a while, rethink it.

Lesson 3: Watch how a person is doing something, not just that they are doing something.

I thought I was doing a good job in helping with the loading. I stood behind Paul and watched him install the cotter pin, but I never looked down and inspected how he installed it. There is no guarantee that I would have caught this, but it would have been one more attempt to prevent this incident.

The third lesson we learned that day is that when you are helping with an operation, check how things are done, not just that they are done.

Lesson 4: When you're tired, slow down.

After finishing the trip we had the car parked on the dolly in front of my son's house. We were safely home! Or, were we? We quickly undid the ratchet straps over the wheels and my son jumped in to back the car off the dolly. Then I noticed that we had not put down the ramps. While backing the car off the dolly without using the ramps would not have resulted in injury, there is a good chance some front end damage to the car could have occurred when it caught on the back end of the dolly before it dropped a foot or so to the pavement. After putting the ramps down, we were ready to safely back the car off the dolly. Or, were we?

Next the front wheels (front-wheel drive car) began spinning on the dolly. At first, we thought the dolly was slick as we had been driving through some rain. Then, we realized that we had not removed the additional set of safety chains wrapped around the frame, and added measure of safety if the ratchet straps over the tires failed. After removing the safety chains and this time safely backing the car off the dolly, we both realized we were going too fast for being as tired as we were.

The final lesson we learned that day is that when you are tired, you should slow down, as you are probably the most vulnerable to an incident or accident.

The story does have a happy ending. We did get the car safely home and a \$100 or so in parts fixed it good as new. And, we learned four important lessons to share from the experience: you are never too safety conscious to be invulnerable from an accident or incident, rethink operations you have not performed in a while, watch how a person does something, not just how they are doing it, and when you are tired, slow down. Be safe.

The Safety Newsletter Awards By the National HQ Safety Team

Congratulations again to Maj Robert Kelly and 2nd Lt Catherine French for their name submission of "The Safety Beacon." They will both receive \$100 gift cards to Vanguard for their contribution.

Cadet Injuries on the RISE! By the National Safety Team

As CAP starts into the busiest activity months of the year for cadets, already injuries are higher year over year compared to 2009. Most of the injuries are cadets falling into categories that may be completely avoidable.

Here are some of those categories:

- Pre-existing Conditions – Cadets not reporting pre-existing conditions or imposed limits of reasonable accommodations are not being enforced. As a result, pre-existing conditions are aggravated by participation in CAP activities.
- Horseplay – Cadets are goofing off, rough housing, giving no consideration for location, or CAP policy.
- CPFT – Cadet Physical Fitness Training – Not performing proper warm-ups or performing PT tasks incorrectly with no observation or enforcement of doing the exercise properly. As a result, there has been an acceleration of sprains and strains.
- Team Sports – Cadets are participating in team sports that are not appropriate. Tackle football, flag football on paved surfaces, or unsupervised baseball with no defined rules or safety equipment result in scrapes, abrasions, and broken bones.
- New Members – Participating in CAP activities as a guest without required safety education. It is a violation of CAP regulations for anyone to participate in CAP activities without proper documented safety education. There are processes that must be followed to ensure new member safety

occurs after the initial visits to a CAP squadron and a decision has been made to join the CAP team.

- Cadets Passing Out in Formations – This continues to be an issue because of improper nutrition and dehydration. Additionally, cadets continue to lock their knees and this is especially noted in newer members and guests that have not received proper safety education.

While CAP safety programs have been striving to focus on the positive, this is a large concern within our organization and attention by all members is needed. Please read review and demonstrate. Own the health and well-being of others.

Safety Newsletter Editor in Chief

Your Safety Team is looking for some special people with communications skills to help produce The Sentinel (The Safety Beacon) for distribution on a monthly basis.

The nature of the work would be to communicate through the written word, and, to collect and analyze facts that are newsworthy.

You need some experience writing for newspapers or newsletters; should have a basic familiarity with technology; and can use personal computers, desktop, or electronic publishing systems, scanners, and other electronic communications equipment.

Please contact us ASAP if you have some or most of the skills described at safety@capnhq.gov.

Name

E-Mail

Phone

Picture of the Month

Why good tires go flat. Brakes on, brakes off?



Why We Check Airplane Tire Pressure

Below is an article that was written in a different publication, but the emphasis is on the importance of maintenance, care, and inspection of tires before flight as well as all the links that result in an aircraft mishap.

The January CAP safety newsletter also highlighted pilot technique and tire awareness. As of today, there have been several mishaps attributed to aircraft tires, and only one was associated to tire integrity, of which the manufacturer could not be confirmed. The predominant tire failure cause was incorrect pilot technique. A close review of tires that CAP replaces on all of our aircraft revealed that we use a top tire, Condor, a Michelin company, that is rated at 120 mph and has a load rating of 1750lbs per tire. Attached is the advertisement that Condor provides to promote their tires, which shows tires that are impressive, top quality, nothing but the best, for the best.

NTSB: Neglected Tires Started Learjet's Fatal Accident Chain (Reprinted with permission of AvWeb)

"The operator of a chartered Learjet 60 failed to properly maintain its tires, starting a chain of events that ended with a deadly crash in Columbia, S.C., in September 2008. All four of the main gear tires were severely underinflated, which compromised their integrity. The first tire failed about 1.5 seconds after the airplane reached V-1, the maximum speed at which the takeoff could be safely aborted. The captain's decision to then attempt a high-speed rejected takeoff "went against standard operating procedures and training," the NTSB said. Making things worse, the tire failure damaged a sensor, which caused the jet's thrust reversers to return to the



stowed position. While the captain was trying to stop the airplane by commanding reverse thrust, forward thrust was being provided at near-takeoff power because the thrust reversers were stowed, contributing to the severity of the accident. "This entirely avoidable crash should reinforce to everyone in the aviation community that there are no small maintenance items because every time a plane takes off, lives are on the line," said NTSB Chairman Deborah Hersman.

After the airplane left the departure end of Runway 11, it struck airport lights, crashed through a perimeter fence, crossed a roadway, and came to rest on a berm. The captain, the first officer, and two passengers were killed; two other passengers were seriously injured. The Safety Board also found that neither the FAA nor Learjet adequately reviewed the airplane's design after a similar uncommanded forward thrust accident that occurred during a landing in Alabama in 2001. As a result of its investigation, the safety board made 14 recommendations to the FAA, suggesting changes in maintenance procedures, pilot training, and manufacturers' methods of safety analysis."

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, please be sure to submit your improvement idea through eServices under CAP Safety Suggestions.

Scott T Singletary	FL-423	May 2010	Due to the explosion of the Deep Horizon oil rig and the subsequent oil spill, members visiting Gulf Coast beaches should be on the lookout for "tar balls." These globules of oil are toxic and should be reported to the authorities. Avoid contact with skin.
James M Elliott	CO-072	May 2010	If meeting in a large room with multiple exits, check that the most likely exit doors are unlocked.
John C Wigginton III	LA-093	May 2010	I suggest you install back-up alarm reverse tail light bulbs on all vehicles. When vehicle is put in reverse, the back-up bulb produces light and a beeping sound to alert anyone in the area that the vehicle is backing up and to beware. These can be purchased at most auto part stores and are easily installed in place of the standard reverse light bulbs.
Thomas E Elam	IN-193	May 2010	Hanger rash is preventable! In over 40 years of flying I have managed to never ding an airplane against a hanger. That 40 years spans about 1,500 hanger operations, plenty to have at least come close to scraping a wingtip. Never even came close. With few exceptions, these aircraft movements were made with no help. There are two only "secrets" I can share. First, there is no reason to get in a hurry. Move slowly, and check your progress. For T-hangers, having 3 wheel reference lines from the aircraft resting spot out onto the hanger taxi area is essential. Outside the lines? Stop and assess! CAP should consider requiring reference lines and wheel stops for all hangers where CAP aircraft are kept.
David Pietrowicz	MA-022	May 2010	Units have hand sanitizer for members to use if they want.

Robert A Hotchkiss Jr	DE-008	May 2010	I suggest all CAP vehicle should have an ANSI-rated reflective vest available as part of its standard equipment and mandatory wear for the operator of the vehicle if he has dismounted the vehicle in an active roadway.
Barbara M McGillem	IN-123	May 2010	Prevent heat-related illness. Dress for the heat, drink water, eat smaller meals, slow down, and take regular breaks. If you recognize that you, or your buddy, are showing signs of a heat-related illness, stop activity and find a cool place.
Robert L McGillem	IN-123	May 2010	It is important to prevent dehydration. Drink water even before signs of thirst appear and to continue to drink throughout the day.
Michael Malone	FL-243	May 2010	NEVER LOCK YOUR KNEES.
David T Brannon	MS-107	May 2010	Sometimes safety is a matter of perspective! On a recent local SAREX, I, a designated safety professional, took it upon myself to inform a GTL of another squadron that I did not feel that he had his van loaded properly, since the rear window was partially blocked. Later in the day, several of us were told to hop into the back of a pick-up truck for a short ride over to the local airfield. Upon arriving at the airfield, the same aforementioned GTL was quick to inform same safety officer that he did not feel that it was very safe for personnel to be riding in the back of a pick-up truck. And he was right! We all need to stop and think about safety in all we do. Sometimes, it helps to take a look at things from another perspective!
Denese Helgeland	WI-202	May 2010	I was thinking recently about "hanger rash." If units were to paint a wide stripe on the floor in front of a door (or even up a wall) that was red until the doors were open sufficiently, then the stripe is painted green, it might help pilots and ground crews visual check that the doors have been opened all the way. When they see red - stop do not move aircraft. When they see green - ok to move aircraft.
Tyler J Gay	FL-243	May 2010	Whenever you have a fire, make sure you have a fire extinguisher or fire blanket. <i>Editorial Note: 1) In the event you have an unexpected fire, it is good to have a fire extinguisher or fire blanket near by. 2) If you plan to make a fire (camp fire) it is good to have a fire extinguisher or fire blanket nearby as a precaution.</i>
Kevin James Berry	PA-190	May 2010	As the summer heats up, it is critical that pilots pay close attention to density altitude and take-off distance calculations during flight planning. There are several handy density altitude calculators online. Why not bookmark your favorite one, then use it while your are at your computer checking the weather, flight-planning and checking NOTAMS, TFRs and other factors that will affect your flight?

Safety Vests

Safety vests rules have changed. A policy change has been made and a copy of the revised CAPR 62-1 will be out in print for member comment soon. Please note that the requirements of CAPM39-1 have been superseded. Here are the requirements:



To be compliant with Federal Regulations, it is now required for CAP members to wear ANSI Class 2 or Class 3 safety vests or apparel if they are going to be or if there is a chance members may perform duties within the vicinity of federal-aid roadways. For the military style uniforms, only ANSI-approved vests are authorized. For the corporate uniform, members may wear ANSI-approved apparel such as insulated vests, jackets, winter coats, or rain gear, as an option.

For other activities that will not be in the vicinity of federal-aid roadways, all safety vests must have reflectivity applied to them. While safety vests do not have to meet the ANSI standard, again, reflectivity is required. For all apparel items other than safety vests, ANSI compliance must be met regardless of the activity.

This policy also requires the wear of the safety vest or safety apparel by all CAP members when performing ground functions. Examples include, but are not limited to: all ground functions of emergency services, road guards around formation movements of CAP members, performing volunteer activities near any location where motorized vehicles operate, including flight line support, and at night when walking during any ground activity, other than to and from personal vehicles at the beginning and ending of CAP functions.

The color of safety vests and apparel can be either orange or lime green. White/grey reflective striping is preferred and in wooded operations, orange vests or orange apparel with reflectivity is highly recommended as a U.S. standard color of human existence in hunting areas.

By October 1, 2012, all safety vests and apparel will be required to be ANSI compliant for all CAP activities.

Mishaps

The following are real-life events and mishaps based upon true stories. Names of members and other identifying information have been removed, and resemblances of these events that may have occurred in a CAP unit near you are coincidental. You have asked for this, so here it is. Please be positive and learn from each other. These are events you may not want to repeat.

VEHICLE

- Backing a trailer, the trailer was turned too sharp and impacted the side of the van.
 - *(All backing operations are recommended to be done with a guideperson.)*
- CAP van impacted the rear of POV at a red light.
 - *(Situational Awareness – Remove or stop distractions within the vehicle during all operations. A sterile cockpit approach may be required by all passengers during some traffic conditions.)*
- Mirror of CAP van impacted an orange construction barrel when merging from one lane to another.
 - *(Driving too fast, and not understanding the weight and driving radius of the vehicle may have prevailed. Slow down, no rush, and no speeding ever. Posted speed limits should be observed.)*
- Vandalism – Van parked appeared to have been damage by a pellet gun overnight.
 - *(Determine the feasibility of where vehicles are parked. Parking vehicles at private residences should be done with commander consent. It is recommended vehicles be parked at CAP facilities when possible.)*

AIRCRAFT

- Aircraft departed runway with towbar attached. Landed safety with CFR standing by. No damage, no injury, towbar removed on runway. No further event.
 - *(A final walkaround is recommended by the PIC after all occupants have entered the aircraft. A final check to ensure all doors and panel are closed, chocks removed, and towbars removed. Towbars should never be left connected to an aircraft when they are not in use. Remove towbars and lay them down or stow the towbar when not in use.)*
- Engine power unavailable on final, possible carb-ice issue.
 - *(Carb ice can be expected in normally aspirated engines anytime an aircraft is flown. Understanding and reviewing the cause of carb-ice is especially important in this time of the season where humidities rise and temperatures can be deceiving.)*
- Engine died on roll-out, possible carb-ice issue.
 - *(Same as above.)*
- Aircraft struck runway/taxiway light when cleared to taxi to grass tie-down. Tall-grass and limited visibility over the nose hid the obstacle. Aircraft moved to a different parking location.
 - *(Tall grass can hide obstacles. Tie down ropes, tires, lights, rocks, etc. Avoid taxi in tall grass and be aware of your location. When in doubt, stop, shut down, and look outside the aircraft. Turning to*

view may put you in harm's way. Overcome laziness and complacency.)

- Hail damage to aircraft secured on open ramp. Navigation light damaged, small dents along wing, fuselage, and ailerons.
 - *(Consideration for parking location should be a part of this season. If possible, park inside. If possible, use aircraft covers. If possible move the aircraft to another airfield. A best practice is to have a qualified pilot or mechanic available to care for the aircraft where storms are predicted and be responsible for the handling and placement and protection of the aircraft when possible.)*
- Birdstrike, small dent in the elevator leading edge.
 - *(B-I-R-D ... this is our fellow aviators high season also. Use all resources available to consider navigation routes and brief emergency procedures, particularly for operations at lower level.)*
- Aircraft wing-tip contact portable toilet off of a grass landing area.
 - *(Use of a ground guide is suggested when available. Operations near obstacles should be avoided. Situational awareness is important.)*

BODILY INJURY

- Cadet gathering firewood had a branch strike him in the eye. Eye scratched.
 - *(Wearing protective eyewear that can be worn during all activities in the woods is recommended. Clear lenses for night and the color of your choice during the day.)*
- Cadet jumping over fence slipped and pitched forward hyperextending elbow. Surgery required to repair injury.
 - *(Judgment – Just don't do it.)*
- Cadet finger cut by a paperclip connected to a paper airplane while launching the aircraft connected to a rubber band.
 - *(This one penetrated the finger of the cadet. It was suggested that the proper procedure was not followed.)*
- Cadet had an asthma attack.
 - *(Conditions of asthma work on trigger and it is important for all pre-existing medical conditions to be disclosed to ensure exposure to "triggers" can be minimized or removed.)*

FAA Procedures Awareness – Pilot Deviation

While returning from a flight, a CAP aircraft was asked if they had another aircraft in sight and they confirmed "CAP 9XXX, Roger." When the aircraft was advised to maintain visual separation, the pilot confirmed, "Roger!" The aircraft that was in sight then descended toward the CAP aircraft and inevitably resulted in a "near-miss" that caused ATC to pull and review the tapes. As a result of the

CAP aircraft not stating its call-sign "CAP 9XXX" with the visual separate acknowledgement "Roger" it was written up as a Pilot Deviation of the FARs.

There are always two sides to the story and skipping to the end of the story, the pilot deviation was closed as a non-violation, but the FAA Aviation Safety Inspector advised CAP that ATC is working hard to ensure all aircrews, airlines included, give a proper readback and acknowledgment of all instructions that includes the aircraft call-sign. This is an FAA focus item. Please be advised that ATC is expecting pilots to include their call-sign on all readbacks and as our commitment to the FAA, this should be included in all aircrew briefings as a familiarization topic. Thank you.

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.



The high value tire tough enough for flight schools.

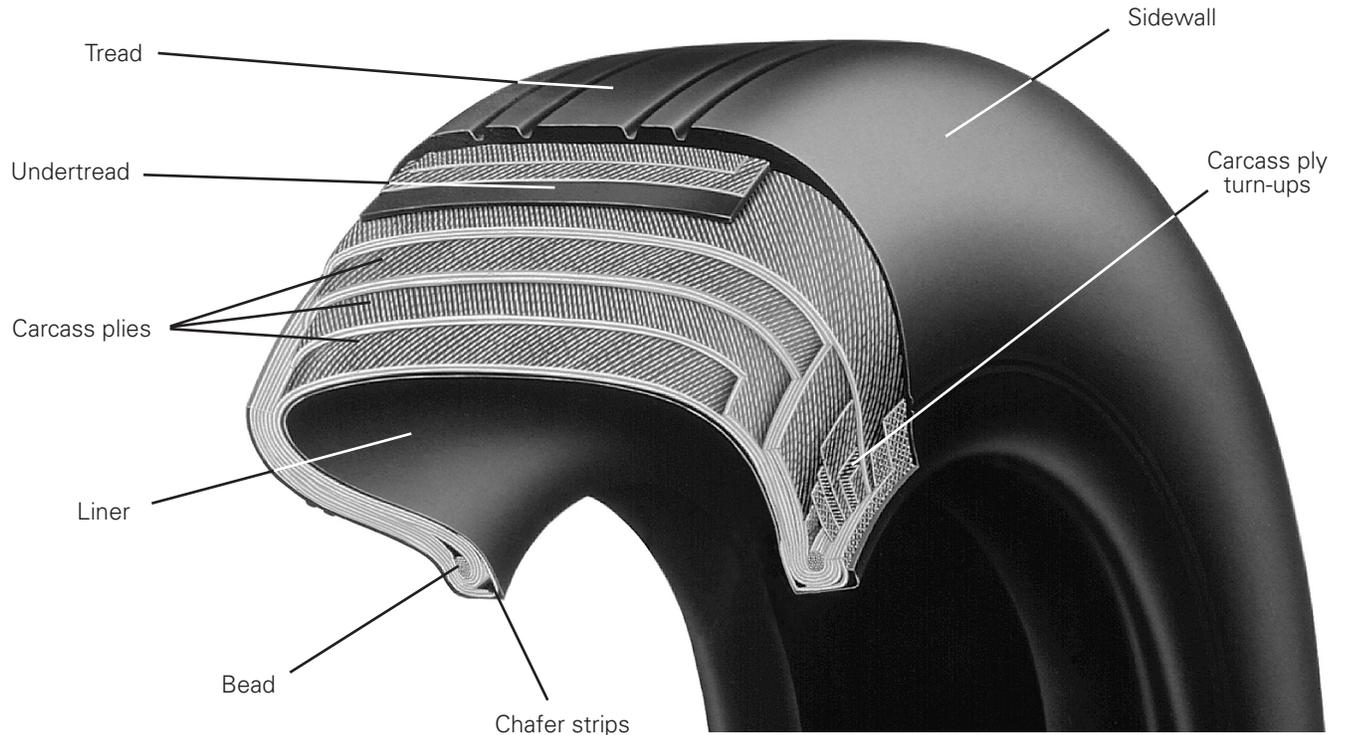


Condor aircraft tires offer outstanding durability at a very competitive price. They are specifically designed to meet the two major requirements of most flight schools: extended tire life in a student pilot environment and a very economical price. Condor offers this and more. For the tires that deliver the quality, reliability and high value many leading flight schools depend on, contact your Condor dealer today.

**CONDOR**
AIRCRAFT TIRES

Condor aircraft tires.

Typical bias-ply tire construction.



Condor features:

- Strong sidewalls for exceptional durability, even after frequent hard landings.
- Tough treads compounded for high abrasion resistance, low heat generation and extra long life.
- Smooth liners to help prevent tube chafing.
- Full FAA qualification based on thorough static and dynamic testing.
- Each production tire is subject to final inspection and a check for weight and balance.
- Limited warranty guarantees that each Condor tire is free from any manufacturing defects.
- Condor tires are available in a variety of sizes for light to medium general aviation aircraft.

Size	Ply Rating	Speed (MPH)	Description	Part Number	Avg. Wgt. (lbs.)	Pallet Order Qty.
5.00 x 5	4	120	Condor	072-308-0	5.5	54
5.00 x 5	6	120	Condor	072-312-0	5.5	54
5.00 x 5	10	120	Condor	072-311-0	5.8	54
6.00-6	4	120	Condor	072-315-0	8.9	42
6.00-6	6	120	Condor	072-314-0	8.9	42
6.00-6	8	120	Condor	072-317-0	8.9	42
6.50-8	6	120	Condor	072-363-0	12.7	30
6.50-8	8	120	Condor	072-364-0	12.7	30
6.50-10	6	120	Condor	078-367-0	16.0	20
6.50-10	8	120	Condor	078-345-0	16.0	20
6.50-10	10	120	Condor	078-356-0	16.0	20
7.00-6	6	120	Condor	072-313-0	10.9	30
7.00-6	8	120	Condor	072-306-0	10.9	30
8.00-6	6	120	Condor	072-371-0	12.3	20
8.00-6	8	120	Condor	072-374-0	12.3	20
8.50-10	8	120	Condor	072-376-0	23.2	20
8.50-10	10	120	Condor	072-379-0	23.2	20
15x6.00-6	6	120	Condor	072-449-0	7.2	45
29x11.00	10	160	Condor	078-446-1	32.2	10

All Condor tires are tube-type, and rated at either 120 MPH or 160 MPH (see above). Operator should confirm correct tire size with the original aircraft manufacturer. All specifications are subject to change without notice.



Place des Carmes, Bat A2
63040 Clermont-Ferrand
Cedex 9
France
Tel 33.4.73.32.76.36
Fax 33.4.73.32.76.44

One Parkway South
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Fax 6.12.4646.1949



July 2010, Vol 1. No. 2

We Care! A Note on Pre-Existing Conditions

The season of encampments and other activities are in full swing. Do you lose sleep in anticipation of going to an encampment? Are you ready to fly an airplane? Are you excited to be a part of an activity staff? Would you give anything in the world to ensure you could go?

Some may choose to give up everything to participate. Showing up sick, injured, in casts, on crutches, with sprained limbs, respiratory conditions, or sunburned. Pre-existing conditions are to be listed on activity applications, and they are often left blank. Pre-existing conditions may result in a more severe injury for the person.

All members of the Civil Air Patrol need to adopt an attitude of "We Care" that says we care for ourselves, and for those around us, enough to not attend an activity if we can not meet a certain level of physical preparedness.

Cadets, senior members, and parents must ensure physical conditions are disclosed. This allows command and activity staff to establish appropriate accommodations, or help make decisions with the member or member's parents, if participation in the activity is feasible.

If you knew that failure to disclose a pre-existing condition resulted in termination of an activity for you, would you disclose it? You must, as not disclosing a medical condition, acute or chronic, could be considered not being forthright. In some cases, you could be filling a position from which another person could have benefited.

Please complete applications with integrity and make good decisions. Share this information: think of others before yourself. This also applies to unit meetings where acute medical conditions or personal illness are not captured on a form. Communicate with your leadership. We Care!

Avoiding Tailstrikes By Lt Col Al Matson, Stan/Eval Officer, MN Wing

One of the recurring problems we see in flight operations is tail strikes resulting in bent or missing tail tie-down rings. This problem is not unique to Civil Air Patrol, but it is a problem that we can prevent if we understand how and when this type of damage is likely to occur.

Most often tail strikes occur during soft-field takeoff and landing practice, and typically this is done with a flight instructor aboard the aircraft. The tail strike occurs when the pilot holds the yoke too far aft, either during the takeoff roll (over-rotation) or during the landing flare (over-flaring). This can be solved by development of an understanding of what we are trying to accomplish during soft-field practice.

During takeoff or landing, we try to prevent the nose wheel from sinking into a soft surface. In most cases, all this requires is just enough aft pressure on the yoke to hold the nose wheel lightly on the surface, where it will skip over the soft material. Let's face it, if you were really taking off from a surface that required you to hold the nose wheel completely off the surface, you should not be conducting the takeoff in the first place!

Since instructors usually are aboard during tail strikes (as they are instructing the soft-field procedures), they are in a position to prevent strikes. The best way to do this is for instructors to place a hand in a position to block over-rotation or over-flaring. Instructors should do this every time these procedures are practiced. Guard the yoke!

Take the time to view the video put together by Lt. Col. Nick Modders and his team at the 130th Composite Squadron, MN Wing. They demonstrate how you can safely instruct pilots on the proper sight picture during soft-field practice.

Click here to view video:
http://www.youtube.com/watch?v=2qBc9_xUMBs

Not mentioned, but very important, is the need to chock the wheels while conducting the tail lowering exercise. Below, and on the next page, you will find a few images that are meant to supplement the video.

In the image at right, you can see that the yoke is being held back using the seatbelt. This is a good idea even with a pilot aboard; to make sure that the elevator does not strike the ground when the tail is lowered.



The red circles indicate the proper areas to push down on the tail. On the horizontal stabilizer, the area is where the rivets meet on the forward spar. As mentioned in the video, pushing on other areas could cause damage.



The image a right shows the angle that would be seen with the nose wheel just skipping the surface.



This image shows the angle that would be seen when the tail ring is striking the ground. In this case, the nose wheel is more than one foot off of the ground. Way too much rotation going on here!



FAA Updates IMSAFE

Use the IMSAFE personal checklist to determine personal risks. (FAA-H-8083-9)

Illness	—	Do I have any symptoms?
Medication	—	Have I been taking prescription or over-the-counter drugs?
Stress	—	Am I under psychological pressure from the job? Do I have money, health, or family problems?
Alcohol	—	Have I been drinking within 8 hours? Within 24 hours?
Fatigue	—	Am I tired and not adequately rested?
Eating	—	Am I adequately nourished? ←

IMSAFE is familiar to pilots and most CAP aircrew members. It also applies to ground operations personnel. Please share this with all your members and have a good conversation about what this means. Nourishment, or lack of nourishment, is a hot topic of awareness. There are many hot topics this time of the year and this is a good checklist for everyone to use.

Mishaps

The following are based upon true stories. Resemblances 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.
- 15 passenger van turned sharply and scraped a safety column. Best Practice: It is recommended that new drivers should take the opportunity to drive with a more experienced driver without passengers. Demonstrate the turning radius and stopping distances.

AIRCRAFT

- Birdstrike.
- Rudder cable spring broken in-flight. Best Practice: Be aware of aircraft systems and understand the functionality of rudder centering springs. The aircraft is not broken; it will just require pilot input to center the rudder. Land as soon as practical.
- Engine shutter, carb ice issue. Engine died while on landing roll-out. Best Practice: Don't forget to use your GUMPS check and know that carb ice can form anytime. It does not need cold weather, it just needs humidity.

BODILY INJURY

- Heat exhaustion. Fainted in formation. Best Practice: Increase rest periods. If a member appears to have a physical concern, remove them 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. CAP is on an elevated alert due to heat and the possibility of heat-related mishaps.

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.

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.

Robert L McGillem	IN-123	June 2010	Care should be taken with the increase in outdoor activity in wooded and overgrown areas during the summer to prevent snake bites. Do not reach under rocks or logs. Do not step over logs. Step on the log, check the ground and then step over. Be alert and search the area ahead of you.
Joel Cosmano	AZ-112	June 2010	Food items such as an MRE and water are recommended to be put in the Aircraft when on missions. You never know if you will have to set down somewhere and how long you may be delayed.
Robert K Kelly Jr	AK-015	June 2010	A good quote for your safety bulletin board, which you should have, "Habits are safer than rules; you do not have to watch them. And you do not have to keep them either. They keep you." — Frank Crane
Devlin C Hayley	NV-069	June 2010	With summer coming, make sure to drink a lot of water.
Tony D Belto	MO-149	June 2010	NO phone call is worth a life. Let a passenger answer your cell phone or wait until you stop in a safe area to return the call.
Stephen L Kintner	TN-001	June 2010	REST- When you are overtired, exhausted, and sleep deprived, your reflexes slow down, situational awareness decreases, which open a pathway to an unnecessary mishap. (Note - All mishaps are preventable.)

George L Molitor	AZ-112	June 2010	In reference to aircraft tow bars: I have taught all of my students and pilots in our Squadron that if your hand is not on the tow bar, it will not be on the airplane. This is well received by all and greatly reduces the risk of startup with the bar still hooked to the wheel.
Thomas E Elam	IN-193	June 2010	Hanger Rash: It just occurred to me that the one thing that is missing from our checklists is aircraft movement between the finishing of the aircraft checklist and engine start, and after the aircraft is secured at the end of the flight. All of our checklists seem to assume that the aircraft is tied down on a ramp. I wonder if it would help to add checklist items between prepping the aircraft and engine start, and also after the "secure aircraft" section at the end. It seems to me that we go to a lot of trouble to check stuff, and then we do not check the things that seem to cause a lot of issues.
John Preston Slattery	NC-019	June 2010	In the 101 days of (hot) summer so far, when on encampment, or PT, the rule is to look ten paces ahead to where your feet are going to be. The same goes out on a trail; remember, what likes to sun itself on the "ROCKS." Snakes are out so "watch your hand placement." Hydrate!! Have fun!!
Kyle P Zobel	NC-048	June 2010	I would like to recommend that all squadrons perform a fire drill at least once annually as a part of a "Safety Down Day." This will allow all members to be aware of proper exit routes and emergency procedures. "I would rather practice a million times then to have a single incident due to ignorance."
Samuel L Hornbuckle	IN-001	June 2010	Ground guides are an excellent way of preventing vehicle mishaps while backing. Another use for ground guides is in areas where there are a lot of people, aircraft, or bivouac areas, or other areas where vehicles are not common to be in that can cause a possible mishap. Have the ground guide walk in front and to the left of the vehicle a few yards ahead while it is maneuvering through potentially hazardous areas ensuring the path is clear.
Kevin James Berry	PA-190	June 2010	Many members carry cell phones capable of receiving text messages. There are a variety of services available that will send users a text message whenever there is a severe weather alert issued for their area. Some charge a fee; others are offered free! I found a local TV station offering this type of service free through it weather services web site. An SMS alert service can enhance users situational awareness of potentially hazardous conditions that may affect them. This is especially important when away from home, or in a location where no weather radio or warning system is available.

A picture is worth a 1000 words!



Was it a 100 grit or a 200 grit
runway surface?



“INCOOMMINNNGGG!!!”

Attachments

- CAP Safety Alert – Heat Injuries # 10-3 (Also available on the CAP Safety page, www.capmembers.com)
- Hangar Rash Best Practice (Also available on the CAP Safety page, www.capmembers.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. Have a good month.





Alert# 10-03



HEAT INJURIES

As temperatures rise the exposure to the summer elements may result in related mishaps. It is imperative that we increase awareness of heat related injuries and their cause. We must keep our members safe and alert as they participate in all CAP activities.

Operations involving high ambient temperatures and high humidity, direct physical contact with hot objects (i.e. aircraft or vehicles), or strenuous physical activities have a high potential for inducing heat stress and heat related injuries in people engaged in such operations.

AFFECTED WINGS: ALL
AFFECTED DUTY POSITIONS: ALL
PUBLISHED: June 17, 2010
EFFECTIVE: Immediately
REFERENCES: CAPR 62-2

CAUSAL FACTORS

- I. Age, weight, degree of physical fitness, degree of acclimatization, metabolism, medications and a variety of medical conditions such as asthma, emphysema may affect a person's sensitivity to heat and may adversely impair an individual's ability to deal with heat. However, even the type of clothing worn must be considered. Prior heat injury predisposes an individual to additional injury.
- II. It is difficult to predict just who will be affected and when, because individual susceptibility varies. In addition, environmental factors include more than the ambient air temperature. Radiant heat, air movement, conduction, and relative humidity all affect an individual's response to heat.

HEAT DISORDERS AND HEALTH EFFECTS

HEAT STROKE occurs when the body's system of temperature regulation fails and body temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict. Heat stroke is a medical emergency. The primary signs and symptoms of heat stroke are confusion; irrational behavior; loss of consciousness; convulsions; a lack of sweating

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(usually); hot, dry skin; and an abnormally high body temperature, e.g., a rectal temperature of 40.5°C (105°F).

If body temperature is too high, it may result in death. Individuals with heat stroke have high mortality, with rates ranging from 21 to 63 percent. The elevated metabolic temperatures caused by a combination of work load and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict.

If a person shows signs of possible heat stroke, professional medical treatment should be obtained immediately. The person should be placed in a shady area and the outer clothing should be removed. The person's skin should be wetted and air movement around the person should be increased to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible. The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment.

Regardless of the person's protests, no member suspected of being ill from heat stroke should be sent home or left unattended unless a physician has specifically approved such an order.

HEAT EXHAUSTION. The signs and symptoms of heat exhaustion are sweating, headache, nausea, vertigo, weakness, thirst, and giddiness. Fortunately, this condition responds readily to prompt treatment. Heat exhaustion should not be dismissed lightly, however, for several reasons. One is that the fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended; moreover, the victim may be injured when he or she faints. Also, the signs and symptoms seen in heat exhaustion are similar to those of heat stroke, a medical emergency.

Persons suffering from heat exhaustion should be removed from the hot environment and given fluid replacement. They should also be encouraged to get adequate rest.

HEAT CRAMPS are usually caused by performing hard physical labor in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused by both too much and too little salt. Cramps appear to be caused by the lack of water replenishment. Because sweat is a hypotonic solution ($\pm 0.3\%$ NaCl), excess salt can build up in the body if the water lost through sweating is not replaced. Thirst cannot be relied on as a guide to the need for water; instead, water must be taken every 15 to 20 minutes in hot environments.

Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. Recent studies have shown that drinking commercially available carbohydrate-electrolyte replacement liquids is effective in minimizing physiological disturbances during recovery.

HEAT COLLAPSE ("Fainting"). In heat collapse, the brain does not receive enough oxygen because blood pools in the extremities. As a result, the exposed individual may lose consciousness. This reaction is similar to that of heat exhaustion and does not affect the body's heat balance. However, the onset of heat collapse is rapid and unpredictable. To prevent heat collapse, the person should gradually become acclimated to the hot environment.

HEAT RASHES are the most common problem in hot work environments. Prickly heat is manifested as red papules and usually appears in areas where the clothing is restrictive. As sweating increases, these papules give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and heat rash papules may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

HEAT FATIGUE. A factor that predisposes an individual to heat fatigue is lack of acclimatization. The use of a program of acclimatization and training for tasks in hot environments is advisable. The signs and symptoms of heat fatigue include impaired performance of skilled sensorimotor, mental, or vigilance jobs. There is no treatment for heat fatigue except to remove the heat stress before a more serious heat-related condition develops.

CAP SAFETY ADVISORY

Heat injuries have the potential of affecting ground team members and flight crews. Hydration is essential and rest is a must. It is highly recommended that members affected by heat injuries follow the direction of the medical staff or health professionals. Rest, hydration, and limited duty to recover should be considered before releasing the affected member back to participation with CAP activities.

Use of the attached Heat Index chart is encouraged to be used in the decision making process of whether a CAP activity is a GO or NO-GO based on exposure risk.

Adjusting activity schedules is highly recommended to prevent unnecessary exposure to heat. Longer and more frequent break times are recommended as the Heat Index risk exposure increases with consideration for cancelling an activity as an option.

Heat Index

How to read the chart: Find the temperature on the left hand side, then move to the right until you find the column for the approximate relative humidity. That number will be the temperature that it will "feel" like. For example, a temperature of 95°F and relative humidity of 50% will "feel" like 107°. Add up to 15° if in the direct sun.

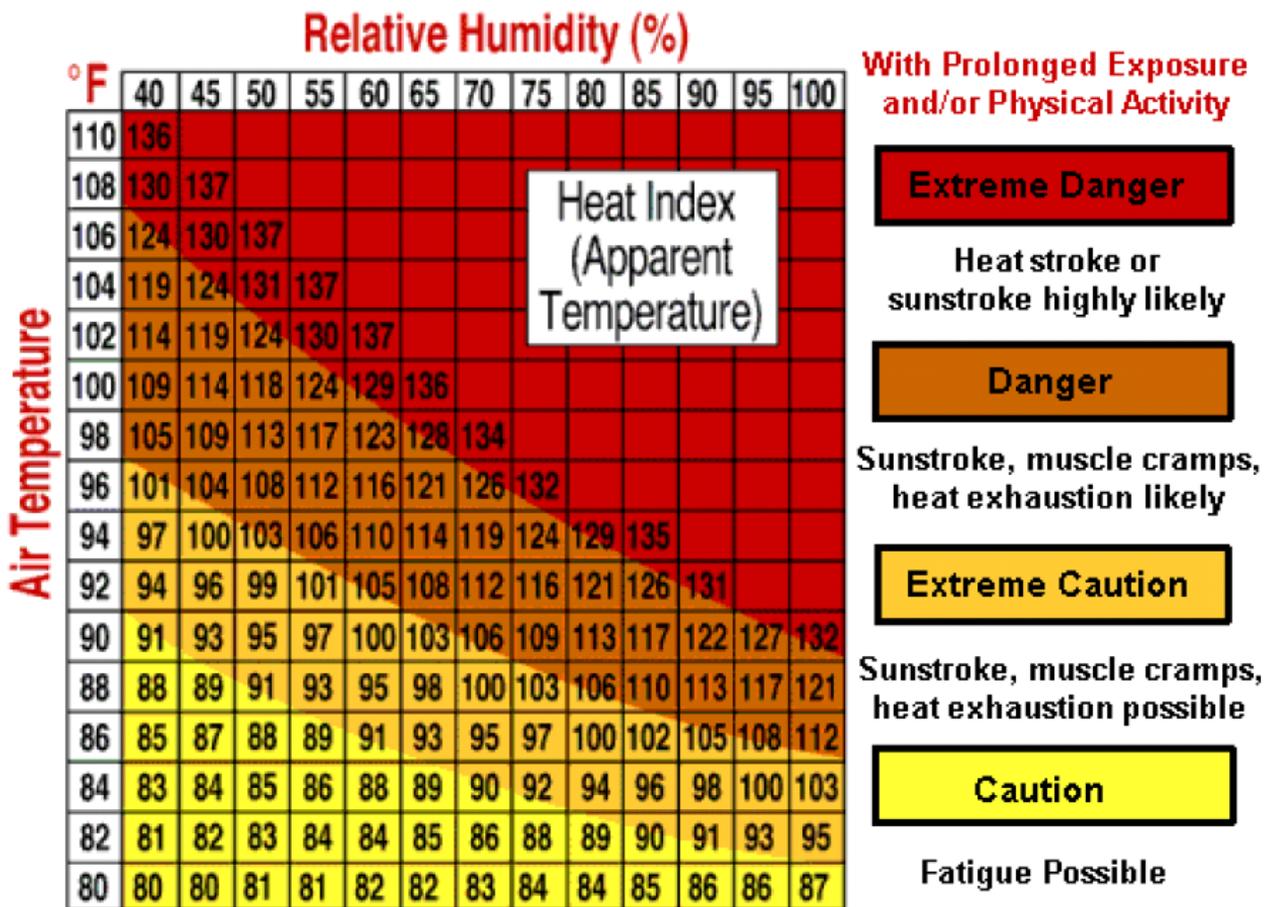
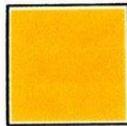


Chart source: National Oceanic and Atmospheric Administration (NOAA)

BEST PRACTICE

The Pee Chart

How dehydrated are you?



(Highly Dehydrated)

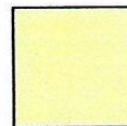
Go drink a large bottle of water immediately!!!



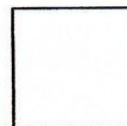
You are still seriously dehydrated. Drinking more now will make you feel a lot better.



Moderately dehydrated. You lose fluid on a regular basis throughout the day. Drink more water to get hydrated.



Almost there. Get some more water in your system to help flush all those toxins from your body. Stay hydrated and healthy!



Great job. Now don't let yourself get dehydrated. Drink at least 8-12 large glasses of water throughout the day.

***Caffeinated drinks dehydrate - limit your consumption.**

***Sport drinks can provide supplementary electrolytes, but
Water is the Key!**

Drink one sport drink for every three to four bottles of water. Don't wait to get thirsty. If you're thirsty, you're a quart low.



Safety Best Practice

PREVENTING HANGAR RASH

Lt. Col. Alan Matson, DOV, MN Wing

Hangar guide lines are one of the best ways to prevent damage to aircraft when moving them in or out of a hangar. As long as all obstacles (i.e. chairs, other aircraft) are moved out of the path of the aircraft during aircraft movement, we can avoid wing tip and tail surface strikes simply by ensuring that the aircraft tires are rolling over the lines during movement. Once an aircraft is lined up, simply watching one of the main wheels rolling over the line will ensure adequate clearance. *Safety Note: The line is a guide, but aircraft clearance is still a responsibility of the aircraft movement person(s).*

The perpendicular termination line that you see in figure 1 marks the spot where you must stop the nose wheel prior to operating bi-fold hangar doors. This mark is located 35 feet from the opening of the hangar door. Figure 2 shows a bi-fold door in operation, and you can clearly see that contact with the aircraft rudder would be made if the aircraft was pushed too close to the door. *Safety Note: Door should be full open, but a marking to demonstrate full open is a best practice.*

The rear chock shown in figure 3 is fixed to the floor to prevent movement. This is another great way to prevent tail surface damage. Chocks that aren't positioned properly could allow the tail to strike objects in the hangar. Even a few inches of misalignment of these chocks would allow the tail to move several feet to either side.

Finally, if your squadron has obstacles in the taxi path then you need to ensure that taxi lines (figure 4) are painted to provide nose wheel alignment. Without these lines pilots are simply guessing where the nose wheel should be, which is an invitation for aircraft damage.

Take a look at your squadron's hangar facility. Even if it is shared with other aircraft, markings can be applied to provide guidance. Some squadron's have even provided markings for the movement of other aircraft in their shared hangar. Be proactive and prevent needless and wasteful hangar rash damage to our aircraft.



Figure 1



Figure 2



Figure 3



Figure 4