

THE SENTINEL



OFFICIAL SAFETY NEWSLETTER OF CIVIL AIR PATROL

CAP Safety Down Day

To help us start the new fiscal year in the right direction, Maj Gen Courter is reminding every commander to have a CAP Safety Down Day sometime during the month of October. CAPR 62-1 allows commanders pick the day to maximize flexibility and attendance.

You, the members of Civil Air Patrol, should be congratulated for all your efforts in reducing Civil Air Patrol accidents this year.

So, why have a Safety Day? There are several reasons. As busy as we've been lately with Hurricane disaster relief, we need to take the time to:

- Pause and look at how we conduct business.
- Determine what our attitude is toward risk?
- Does the unit exhibit a healthy organizational culture?
- Does the unit train effectively while including safety?
- Do members interact effectively?

Review past problem areas (trends) – You remember the old adage: “Those that ignore the lessons of history are doomed to repeat them in the future.”

Learn how to manage risk – Formally for CAP activities and informally in our personal lives.

Conduct a pre-emptive strike on future mishaps – This is an opportunity for us to be proactive in mishap prevention, rather than reactive.

A PowerPoint presentation can be found on the CAP website at: <http://level2.cap.gov/index.cfm?nodeID=5182> Click on Presentations, then click on October Safety Down Day.

The information presented that day should cover the full spectrum of CAP activities; seniors to cadets, aviation, driving, ground teams, etc. Tailoring the presentations to the season, as well as local risks and activities is highly encouraged.

Start preparing now for your Safety Down Day and your unit members will get more from a well prepared presentation. Let's cut the mishaps in half this year!

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Schools Open!

As the school-year starts anew, lets all take a moment to remember to take care in our daily school routine and to be aware of rapidly changing situations that could place us in "Harms Way".

For those of us who are drivers, lets remember to use "extra care" and to watch for students walking and crossing streets. We must also be aware of reduced speeds in school zones.

As we move into the Fall flying season we need to remember that not only can the weather change rapidly, but that we also need to watch out for Migratory Birds. We must remember to check with Flight Service for current

NOTAMS's before every flight, not only because it's a good practice to do so, but because its also an Election Year and TFR's (Temporary Flight Restrictions) can rapidly pop up at any time.

Thank You for supporting your Safety Newsletter! Until next month... Lets be Careful out there!

Corey Stohlquist, Captain
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This article is paraphrased from the Sep 08 *Illinois Wing Safety Pins*. The entire *Safety Pins* may be viewed at <http://ilcap.org/safety/Safety.htm>

Stalls Awareness

It never ceases to amaze me concerning the general ignorance, and sometimes an outright FEAR of stalls I encounter when giving form 5 check rides. Let me start out by making two very important points. One, stalls are your friend. Everything interesting about each aircraft's flying characteristics and the feedback you get from the aircraft are found around stall speed. All air speeds higher than stall speed are simply a function of how much power you have available, how much fuel you want to buy, and the structural limits of the aircraft. Two, there are three stages to every stall; imminent, incipient and full. When we intentionally stall an aircraft we setup, stall, and then recover. It is the stall itself that we will focus on here.

Every stall setup that can be performed (power on, power off, accelerated, left climbing turn, left gliding turn, with/without flaps, ad.

nauseum.) will go through all three phases IF the PIC allows the continued development of the stall. Now let us look at each of the three stages.

The imminence of a stall occurs when we approach the critical angle of attack. Notice that I did NOT say that our airspeed was low OR our pitch attitude was high. Remember the litany that we all learned before we soloed "Any aircraft can be stalled at any airspeed and any attitude." NEVER, NEVER, NEVER forget this. It is true that our setup usually includes high pitch attitude and lower airspeeds BUT, this is NOT the CAUSE of the stall, they are contributing factors only. I will not go into accelerated stalls at this time because that is another article for later. The fact that we are approaching the critical angle of attach is what causes the stall warning horn to start blaring. The next time you preflight your 172/182, look at the angle of the metal

tab on the left outboard side (where the strut attached to the wing). Then the stall warning sounds, the angle of attack has caused the relative wind to come under the tab and push it upward. Contact is made and the horn sounds (usually about a week before the insipient stage and another week before the full stall). Voila. Now what?

RECOVER, first unload the angle of attack (move stick/wheel forward DUH). Remember that the cause of the stall was exceeding the critical angle of attack, NOT from having insufficient power. Additional power may or may not be needed for recovery! If your recovery is at a steep angle downward, reduce power. If your wings are not level, use aileron to level them. NOW return to straight and level flight. Always keep the ball centered in the inclinometer; this will keep you away from a spin (NO YAW, NO SPIN).

There are at least four (more by my estimate) generations of pilots that were taught to recover "at the first sign" of a stall (the definition of the imminent stage). Therefore, in their flying career they have NEVER actually stalled an airplane! In the late 60's, the FAA in their wisdom decided that it was NOT important for a private pilot to actually stall an aircraft. WRONG.

The insipient stage is the knife edge of the stall or, RECOVER IMMEDIATELY or you WILL full stall. As the stall develops from the stall horn to the insipient stage, there will be more signals sent to you from the aircraft. This will usually include a rumbling sound from the wings (you can also feel this in the stick/wheel). You may feel

buffeting and/or a push/pull motion forward and aft. Additional right rudder may be required to keep the ball centered. You should recognize all of these signals as your aircraft "talks" to you because it is telling you something important that you need to know!

The full stall stage is when the nose of the aircraft falls to a downward angle even though the stick/wheel are in an aft position (the boundary layer of air traveling over the upper part of the wing has separated and the forward center of gravity causes the nose to lower). Different aircraft send different signals and their controls react differently in the insipient and full stall stages. If you are one of the pilots who is not intimately familiar with the characteristics of insipient and full stalls in the aircraft you are flying, find yourself an experienced and qualified instructor to explore these regions of flight (few of today's flight instructors are adequately experienced or qualified in this). It is essential that we fully understand the signals that our aircraft send us and how our aircraft reacts to control inputs from the PIC, especially around the critical angle of attack. This is additional insurance that we will NOT be the victim of an unintentional stall.

Remember to fly in the middle of the air. The edges of the air can be identified by the appearance of trees, dirt, rocks, water and interstellar space. It is more difficult to fly there.

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Summary of Form 78 Accidents and Incidents Received for July 2008

Aircraft

Banner equipment dropped, placed dime sized dent on top of right wing
At preflight, noticed wrinkles and missing paint on tail cone
Engine failure at 1600 ft msl due to fuel exhaustion in right tank
Top fairing of tail hit lower right mid section of hangar roof
Engine running rough, precautionary landing
Right main wheel went into the grass and struck a corrugated drain pipe
Oil temp elevated, precautionary landing
Landed on main landing gear, aircraft nose gear strut dug into the ground and aircraft flipped upside down
Mechanic noted symptoms of a very hard landing
Struck the tail tiedown ring bending it
Hangar rash found on the right leading edge of the right horizontal stabilizer
Partial power loss, precautionary landing
Glider broke loose from tie down during a severe thunderstorm
Upon completion of a short field landing it was observed that the left main tire had gone flat

Vehicle

Van ran over taxiway light

Vehicle hit in right rear while attempting to avoid an unsafe condition
Van turned too sharply and contacted another CAP van

Bodily Injury

SM pinched finger in door
Cadet pedestrian seriously injured when struck by a non-CAP ATV; driver of ATV than struck power pole guy wire
Cadet fractured collarbone while running
Cadet tore ankle ligament – team sports
Cadet fractured tibia on obstacle course
Cadet fractured right hand while playing Frisbee
SM had spasm and difficulty breathing
Cadet hyper extended wrist while playing Frisbee
SM reached in her bag and was bitten by a poisonous spider
Cadet had allergic reaction to weeds and grasses
Cadet hit back of head on middle of top bunk
Cadet extremely dehydrated
Cadet fractured collarbone while playing volley ball
Cadet heard her knee “pop” and it began hurting
SM bitten on the upper rear thigh by dog
Cadet skinned knee during free time