



# Safety Beacon



Official Safety Newsletter Of The Civil Air Patrol

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## BEACON NEWSLETTER TEAM

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## SAFETY BRIEF

### Ramp Operations



*On the ramp, the key to safety is vigilance and awareness.*

**W**hen the door of the FBO opens and you step onto the flight line, you're entering a world filled with spinning propellers and moving vehicles. It's an exciting place, but one where the penalties for carelessness or complacency can be very harsh.

#### The Facts

Over the ten-year period that ended in 2008, 350 aircraft accidents occurred in the ramp area. While only a small percentage of these accidents proved fatal, over 80% caused substantial damage to other aircraft and property on the ground. In 18% of the accidents, death or serious injury resulted from people walking into moving propellers. 62% of all ramp accidents occurred during taxi: Most involved collisions with other aircraft or buildings. Ultimately, however, the most common accident causes were carelessness and/or a lack of awareness.

#### Hazards

Hazards on the ramp can come from many directions, and in unexpected places. Even straightforward tasks like preflighting a high-

wing airplane presents multiple opportunities to trip and fall, or inadvertently walk into sharp surfaces (wing trailing edges, pitot tubes, etc.). Here are a few pointers to help you anticipate danger and manage the risks.

**Get the big picture:** Know how traffic flows around the taxi and tiedown areas, and always keep a lookout for aircraft in motion. That goes double at unfamiliar airports. On arrival, if you're not sure where to park, radio the FBO and ask. Then, after shutdown, be especially careful walking in the ramp area. There may be more traffic than you're used to, and it may come from unexpected directions.

**Don't rely on your ears:** Ramp noise is a major factor that can mask danger. The sounds of aircraft in the pattern, jets idling on the ramp, and noisy fuel trucks can be distracting, and can keep you from hearing someone yell "clear!" or other warnings of impending danger. Ear protection can help prevent hearing loss, but it can also block critical warnings.

**Look out below (and above):** On the ramp, tripping hazards abound. Fuel hoses, ground wires, tiedowns, chocks, and other items can send you sprawling—and the consequences can be much worse than a skinned knee.. That said, don't fixate on the ground. In everyday life, most of us don't expect to encounter many hazards at eye level and above, so it's all too easy to walk straight into aircraft wing or tail surfaces when not paying attention.

**Don't be a litterbug:** Foreign object debris (FOD) is anything on the ramp that could damage aircraft, propellers, or jet engines. Eating, drinking, and smoking on the ramp are distractions, and often result in leftover wrappers or cups that can be sucked into engines, or blown around by jet or prop blast. Leave all trash in the FBO before entering the ramp area. Smoking should never be allowed on

the ramp, not only because of FOD, but because of open flame around fuel. Keep an eye out for rocks, stray tools, and sharp metal objects (e.g., nails, screws) that can damage aircraft or tires. If you see something, pick it up and throw it away.

**Be careful in the car:** If you're allowed to drive on the ramp, remember that road rules do not necessarily apply. On taxiways, drive along the centerline to remain visible and clear of parked aircraft. Always drive slowly, and stop and look before pulling out from around buildings and other blind spots. If you have visitors or passengers that are going to be driving on the ramp, brief them ahead of time so they know where to go, and to familiarize them with pavement markings.

*"... Aircraft ALWAYS have the right-of-way over vehicles when maneuvering on non-movement areas. Aircraft also have the right-of-way on the movement areas, except when the Airport Traffic Control Tower (ATCT) has specifically instructed an aircraft to hold or give way to vehicle(s) on a runway or taxiway."*

- FAA Advisory Circular 150/5210-20

### Preflight and Propellers

Preflight distractions can impact safety both on the ramp and during your upcoming flight. Unless you're giving a flight lesson, conduct the preflight without discussion or interruption: You can explain things to passengers after you're finished.

Avoid walking under or through the prop rotation area (even a stationary propeller can cause painful scrapes or bruises if walked into), and stay clear except when checking the blades, spinner, and air inlets. With piston aircraft, **do not rotate the prop by hand unless you are prepared for the engine to start.**

A hot magneto can lie dormant until it is too late. As a general rule, treat all propellers as though the engine magnetos are HOT. Approach a propeller only after you've ensured the ignition is OFF and the keys are in your pocket.

**H**ot magnetos happen when the P-lead breaks and the magneto becomes ungrounded. This can cause an engine to start just from having the propeller pulled through. To check for a hot magneto you should:

1. Just prior to shutdown, reduce power to idle
2. Slowly move the key through the Left, Right, and then OFF positions. The RPM should drop at each magneto position and stop in the OFF position
3. After the engine has shut down, pull the mixture to idle-cutoff.

If the engine continues to run in the OFF position, shut the engine down with the mixture and mark the aircraft as having a hot magneto.



Never hand-prop an aircraft without appropriate training. Numerous deaths and serious injuries have resulted from hand-propping gone awry.

With turboprop aircraft, take the extra time to put on propeller guards (especially with free turbine engines). Even a light breeze can cause a propeller to spin, which may cause injury.

"The airplane started moving, and as he tried to grab the door handle the horizontal stabilator struck him, knocking him to the ground. The airplane continued to the west where it contacted the left wing of a Diamond DA40. The airplane continued westbound across the ramp where its left wing contacted a light pole, turning the airplane around 180 degrees. The airplane then traveled east, back across the ramp, where it contacted the tail of a Cessna 150E. The airplane came to rest after contacting the nose and left wing of a Grumman AA-1B."  
 - Narrative from an NTSB accident report.

### Jets and Helicopters

Never walk behind a running jet aircraft, no matter how small the engines look. At high power settings, exhaust from the engines on even the smallest jets can reach speeds near 200 mph (category five hurricanes are measured with wind speeds of 155 mph or higher!) Jets have also been known to suck in loose clothing, hats, and even unsuspecting humans from the front!



Helicopter rotor blades hang dangerously low when the aircraft is parked, and the tail rotor is often difficult to see. Just like jets and props,

rotor wash from a helicopter can kick up debris and blow hats and other objects across the ramp. Unless properly trained or under the supervision of the flight crew, never approach a running helicopter for any reason.

### Passenger Safety

Always stay with non-pilot passengers when they're on the ramp. Every year, there are accident cases where passengers are seriously or fatally injured by walking into a prop.

Remind passengers to stay clear of any aircraft with a running engine, or with its strobe or beacon lights on. In fact, it's a good idea to steer clear of aircraft anytime pilots are in the cockpit: There's a good chance that the engine will be starting soon. Once in the aircraft with the engine running, be sure that nobody leaves the aircraft without first shutting down the engine(s).

### Summary

Safety on the ramp is just as important as safety in the air. Remember these key points:

- Look out for FOD
- Drive slowly – yield to aircraft
- Treat all magnetos as hot
- Stay clear of running engines – front and back
- Look down, look up, and look out



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*“Accountability, transparency, fairness, professionalism”*

## Training Reform Symposium Yields Additional Syllabi

by RICH STOWELL on MAY 17, 2011

### Sporty's, SAFE Syllabi Now Available at No Charge

Just two weeks after the event in Atlanta, the Pilot Training Reform Symposium chaired by the Society of Aviation and Flight Educators ([SAFE](#)) has produced yet more positive results. On the heels of the recent announcement that Aviation Supplies & Academics ([ASA](#)) had made a number of its online training syllabi available at no charge, [Sporty's Academy](#) and SAFE announced that they too have made training syllabi available not only from the SAFE website, but from the Pilot Training Reform website as well.

With the approval of the authors, the SAFE Board of Directors recently voted in favor of making three syllabi available. Previously reserved for the members-only section of the SAFE Library, these syllabi can now be accessed by anyone from the “[Syllabi, Training Aids, Etc.](#)” menu tab on the SAFE site, and from the “[Symposium Output](#)” menu tab on the Pilot Training Reform site. The specific recommendation to which SAFE, Sporty's, and ASA have responded addresses a key issue identified during the symposium: “instructors teaching using the seat of their pants without the use of a syllabus or plan of action.”

The addition of syllabi from Sporty's and members of SAFE rounds out the range of online syllabi currently available to instructors and students at no charge, including: Sport Pilot, Recreational Pilot, Private Pilot (three from which to choose), Instrument Rating, Commercial Pilot, and Helicopter syllabi. Aviation organizations are encouraged to link to these free online syllabi as well.

Information generated since the pilot training reform symposium is posted to the training reform website as it becomes available, and a significant portion of the proceedings will soon be available for viewing on the Aero-News Network's Aero-TV.



# GET READY!

## NATIONAL SECURITY

Threats to national security come in many forms and can include explosions, biological threats, chemical threats, nuclear blasts, and radiological dispersion devices (RDDs). In the event of an attack, public health officials may not immediately be able to provide information on what you should do. Determining the exact illness, treatment, and danger will take time.

### Before

- Create an emergency communications plan.
- Establish a meeting place away from your home.
- Assemble an emergency supplies kit.
- Check on the school emergency plan of any school-age children in your family.
- Learn basic first aid techniques.

### During

- Remain calm and be patient. Follow the advice of local emergency officials.
- If local officials ask you to evacuate, do so immediately. Wear long-sleeved shirts, long pants, and sturdy shoes. Take your emergency supplies kit, take your pets, lock your home, avoid blocked roads, and stay away from downed power lines.
- If local officials ask you to "shelter in place," remain inside your home or office; close and lock all windows and doors; turn off all fans and ventilation systems; close the fireplace damper; get your emergency supplies kit; and turn on the radio. Go to an interior room without windows that's above ground level. Be prepared to use duct tape and plastic sheeting to seal all cracks around the door and any vents. Ideally, choose a room with a hard-wired telephone.
- If you are in your car when local officials ask you to shelter in place and you are unable to get to a building quickly, pull over to the side of the road. If it is sunny outside, pick a shady spot. Turn off the engine and close the windows and vents. If possible, seal the vents with duct tape. Listen to the radio for updates and stay where you are until local officials say it is safe to get back on the road.
- Listen to local radio or television for updates.
- Practice good hygiene to avoid spreading germs.



### After

- If the disaster happens near you, check for injuries. Give first aid and get help for seriously injured people.
- If the disaster occurs near your home when you are there, check for damage using a flashlight. Do not light matches or candles or turn on electrical switches. Check for fires, fire hazards, and other household hazards.
- If you smell gas or hear a hissing sound, open the windows, get everyone outside, and turn off the main gas valve.
- Shut off any damaged utilities.
- Confine or secure your pets.
- Check on your neighbors who may need assistance.
- Call your emergency contact and then do not use the phone again unless in an emergency.

# Grilling Safety

**There's nothing like outdoor grilling. It's one of the most popular ways to cook food. But, a grill placed too close to anything that can burn is a fire hazard. They can be very hot, causing burn injuries. Follow these simple tips and you will be on the way to safe grilling.**

## SAFETY TIPS

- »»» Propane and charcoal BBQ grills should only be used outdoors.
- »»» The grill should be placed well away from the home, deck railings and out from under eaves and overhanging branches.
- »»» Keep children and pets away from the grill area.
- »»» Keep your grill clean by removing grease or fat buildup from the grills and in trays below the grill.
- »»» Never leave your grill unattended.

## CHARCOAL GRILLS

- »»» There are several ways to get the charcoal ready to use. Charcoal chimney starters allow you to start the charcoal using newspaper as a fuel.
- »»» If you use a starter fluid, use only charcoal starter fluid. Never add charcoal fluid or any other flammable liquids to the fire.
- »»» Keep charcoal fluid out of the reach of children and away from heat sources.
- »»» There are also electric charcoal starters, which do not use fire. Be sure to use an extension cord for outdoor use.
- »»» When you are finished grilling, let the coals completely cool before disposing in a metal container.

## PROPANE GRILLS

Check the gas tank hose for leaks before using it for the first time each year. Apply a light soap and water solution to the hose. A propane leak will release bubbles. If your grill has a gas leak, by smell or the soapy bubble test, and there is no flame, turn off the gas tank and grill. If the leak stops, get the grill serviced by a professional before using it again. If the leak does not stop, call the fire department. **If you smell gas while cooking, immediately get away from the grill and call the fire department.** Do not move the grill.

## FACTS

- ! In 2004–2008 fire departments responded to an average of 7,700 home fires involving grills, hibachis or barbecues, including 4,500 outside fires and 3,200 structure fires.
- ! July was the peak month for grill fires in 2004–2008.
- ! More than half of home grill structure fires begin on either a courtyard terrace or patio, or an exterior balcony or open porch.



Your Source for SAFETY Information

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[www.nfpa.org/education](http://www.nfpa.org/education)

# FAA Safety Team | Safer Skies Through Education

## **New FAA Safety Briefing issue available**

Notice Number: NOTC2945

### *New issue of FAA Safety Briefing magazine provides airmen a guide to the NAS*

The May/June 2011 issue of *FAA Safety Briefing* is now available online and explores how developments in the National Airspace System (NAS) affect and benefit GA pilots. The issue highlights some of the changes and challenges of flying in today's NAS, and provides tips pilots can use to meet those challenges safely and efficiently.

Feature articles highlight changes to the NOTAM system, how controllers are working with pilots to improve communication, and what goes into the establishment of a Temporary Flight Restriction (TFR). The issue also explores the transformation of the NAS with NextGen technology. To learn more, download the May/June issue of *FAA Safety Briefing* at [www.faa.gov/news/safety\\_briefing/](http://www.faa.gov/news/safety_briefing/).

## **News Release**

### **For Immediate Release**

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## **Training Reform Symposium Yields First Dividend**

### **ASA Makes PDFs of Its Syllabi Available for Free**

Santa Paula, CA—The Pilot Training Reform Symposium chaired by the Society of Aviation and Flight Educators (SAFE) has produced the first tangible dividend. Responding to a recommendation proposed by the Aviation Educators breakout group, Aviation Supplies & Academics (ASA) announced that it is now offering the PDF versions of its syllabi for download from ASA's website at no charge. The PDFs include two Private Pilot syllabi and one syllabus each for Instrument, Commercial, and Helicopter.

The specific recommendation to which ASA responded "addresses a specific problem...of instructors teaching using the seat of their pants without the use of a syllabus or plan of action." The recommendation also challenged industry to provide "standardized curriculum templates that instructors (14 CFR 61 as well as 141) can use." According to symposium chair Bob Wright, "We are delighted that ASA and others have taken the symposium's message to heart and are responding with prompt action."

Information generated since the symposium is posted to the training reform website as it becomes available, and a significant portion of the proceedings will soon be available for viewing through the Aero-News Network's Aero-TV.

*By Lt Col Bill Woody, SER/SE*

## Practicing Awareness

I had the opportunity to experience the Safety Culture while working as a technician for a big communications company. The work was totally indoors but the hazards were many. In short there were electrical, mechanical, ladder, burn, chemical, trip and cut hazards. The company believed in and strongly supported safety just as Civil Air Patrol does today. We had Safety Briefs in the morning before work, there were calls over the PA for Safety Breaks - always unplanned, we had quarterly Safety Meetings, a Safety Picnic every summer, and Safety for the Holidays that focused on all the hazards that Christmas lighting presented along with driving in winter weather among others.

What does this have to do with Civil Air Patrol? Well, I think, and I hope you agree, that the above activities were really practicing awareness! I found myself transporting safety awareness with me. I took it home, to the ball field, when I placed a ladder against my house, when I did electrical work, when I went fishing and especially when I was driving.

As we develop our Safety Culture – in our lives, in our families, and in our CAP units I know this awareness will grow in your life. Today while driving I thought “Am I driving in that guy’s blind spot?” I probably was! I adjusted my speed accordingly. Think about what you’re doing and the hazards that are present and what you can do to keep yourself and others safe. Practicing Awareness can make you very good at staying safe!

## Electronics and planes can be a dangerous mix

Electronic devices are banned during certain moments of a flight for good reason. Actor learned an embarrassing lesson in airline safety rules last Dec. when he was kicked off a plane for refusing repeated requests for him to turn off his Blackberry.

The incident received media attention because it involved a Hollywood celebrity, but plenty of lesser-known passengers **fail or simply choose not to follow instructions** to turn off electronic devices during flights.

But why is it such a big deal, and why are these rules so strictly enforced?

Duhamel's actions were particularly foolish, since the actor was using his Blackberry while the plane was on the runway.

This is a huge no-no, since cell phones, pagers and similar appliances must be turned off the moment an aircraft leaves the gate.



continued...

As far back as the 1960s, the [Federal Aviation Administration](#) found that these types of devices transmit and receive signals that can "interfere with aircraft communications and navigation equipment" and "could be potentially hazardous to aircraft communication and navigation equipment, if operated aboard aircraft."

Although no commercial jet crash has ever been officially blamed on cell phones, some theories point to them as the cause of at least two air disasters.

In 2000, a report by the Swiss government determined that pilot error was to blame for the crash of Crossair Flight 498, which killed all ten people on board. However, an [alternate investigation discovered](#) that the autopilot system malfunctioned at the same time a passenger received a text message – a finding that led many countries to outlaw the use of cell phones on flights.

Five years earlier, the crash of Ansett [New Zealand](#) Flight 703, in which four passengers died, forced investigators to look into whether the use of a cell phone played a part in the [failure of the plane's radar altimeter](#) shortly before impact.

While mobile phones can be potentially dangerous to planes, other portable electronic items that don't receive signals – such as [iPads](#), [iPods](#), laptops – are still forbidden from being used during specific moments of a flight - specifically takeoffs and landings.

The reasoning behind this may have more to do with airline protocol than with the devices themselves.

"It must be recognized that the potential for personal injury to passengers is a paramount consideration, as well as is the possibility of missing significant safety announcements during important phases of flight," [reads FAA advisory circular No. 91-21.1B](#).

In other words, it's important to have the passengers' complete attention during takeoffs and landings, which are considered the most potentially dangerous moments of a flight. Also, a personal injury lawsuit against an airline is a lot more effective if the accuser claims [to have been too distracted to hear the safety instructions](#) prior to the flight.

And while iPads, iPods, laptops and the like don't transmit signals, they do emit radio waves, which in theory can disrupt the plane's computing equipment. As the FAA explained, "this prohibition is in addition to lessening the possible interference that may arise during sterile cockpit operations (below 10,000 feet)."

Small or not, the possibility of an electronic device causing an unthinkable air disaster seems [enough to err on the side of caution](#). Not doing so would be too big a gamble.

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Discover, report, stop, share, listen, and learn. The things we have read about in this issue already have happened, so you are not allowed to experience these for yourself.

Remember to "Knock It Off" and slow down. For streaming dialogues on some subjects, remember CAP Safety is on Facebook and Twitter.

**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 that 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? Please send it to Lt Col Sharon Williams at [safetybeacon@capnhq.gov](mailto:safetybeacon@capnhq.gov).**

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