

# **Newport News Composite Squadron**

## **April 2010 Safety Briefing**

1. National Safety Council (NSC) Safety Calendar
2. Aviation Safety
  - Sentinel – Threat and Error management in General Aviation
  - Sentinel – I received a Call
3. Driving Safety
  - National Distracted Driver Month
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  - Injury Prevention Month
  - Youth Sports Safety Month
  - National Safe Digging Month
  - Medication Safety Week
  - National Window Safety Week
5. Risk Management
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6. April Sentinel

## National Safety Council Calendar

April			
	Alcohol Awareness Month	Public Information Department, National Council on Alcoholism & Drug Dependence	<a href="http://www.ncadd.org">http://www.ncadd.org</a>
	Injury Prevention Month	American Academy of Orthopedic Surgeons	<a href="http://www.aaos.org">http://www.aaos.org</a>
	National Sexual Assault Awareness & Prevention Month	National Sexual Violence Resource Center	<a href="http://www.nsvrc.org">http://www.nsvrc.org</a>
	National Youth Sports Safety Month	National Youth Safety Foundation	<a href="http://www.nyssf.org">http://www.nyssf.org</a>
	National Distracted Driver Month	National Safety Council and FocusDriven	<a href="http://www.nsc.org">http://www.nsc.org</a>
	National Safe Digging Month	Common Ground Alliance	<a href="http://www.call811.com/">http://www.call811.com/</a>
1-7	Medication Safety Week	Women's Heart Foundation	<a href="http://www.womensheart.org">http://www.womensheart.org</a>
7	World Health Day	World Health Organization	<a href="http://www.who.int">http://www.who.int</a>
4-10	National Window Safety Week	National Safety Council	<a href="http://www.nsc.org">http://www.nsc.org</a>

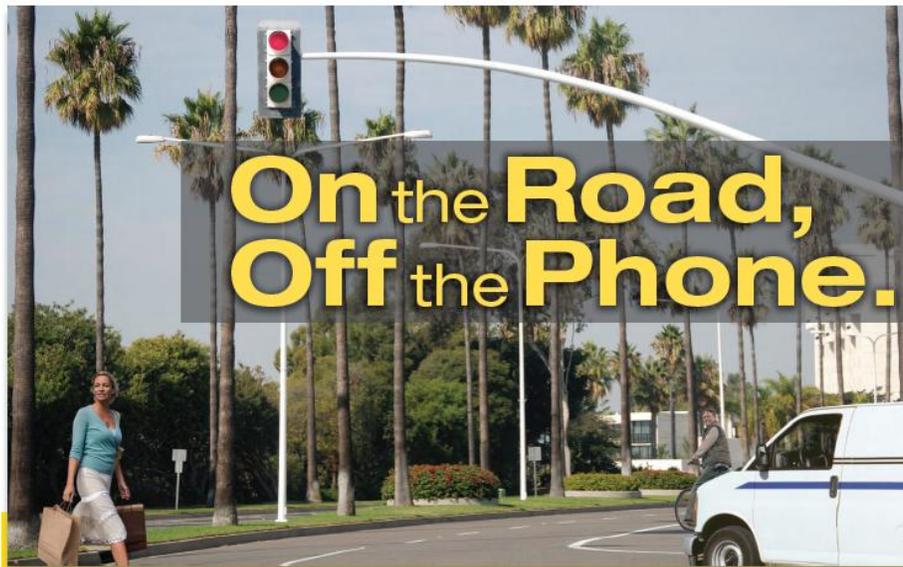
# Aviation Safety

Sentinel – Threat and Error management in General Aviation

Sentinel – I received a Call

# Driving Safety

National Distracted Driver Month



APRIL  
NATIONAL  
DISTRACTED  
DRIVING  
AWARENESS  
MONTH



[distracteddriving.nsc.org](http://distracteddriving.nsc.org)



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# Bodily Injury

Sentinel – Safety Vests

Injury Prevention Month

Warm up

Use hand rails

Youth Sports Safety Month

Mouth guards

Eye protection

National Safe Digging Month

811 is a federally mandated number to help prevent diggers from unintentionally hitting underground utility lines, which can result in injuries, property damage and inconvenient outages

Medication Safety Week

Label medication containers

Turn lights on when taking medications

National Window Safety Week

# Window Safety Tips



Preventing falls out of windows is as important as learning how to use one in an emergency. Unattended children run the greatest risk of falls and injuries, so the best first step is to watch your children as they play. Nothing can substitute for careful supervision.

- 1.** Windows provide a secondary means of escape from a burning home. Determine your family's emergency escape plan and practice it. Remember that children may have to rely on a window to escape in a fire. Help them learn to safely use a window under these circumstances.
- 2.** When performing spring repairs, take care to make sure that your windows are not painted or nailed shut. You must be able to open them to escape in an emergency.
- 3.** Keep your windows closed and locked when children are around. When opening windows for ventilation, open windows that a child cannot reach.
- 4.** Set and enforce rules about keeping children's play away from windows or patio doors. Falling through the glass can be fatal or cause serious injury.
- 5.** Keep furniture — or anything children can climb — away from windows. Children may use such objects as a climbing aid.
- 6.** If you have young children in your home and are considering installing window guards or window fall prevention devices, be aware that the window guards you install must have a release mechanism so that they can be opened for escape in a fire emergency. Consult your local fire department or building code official to determine proper window guard placement.
- 7.** Some homes may have window guards, security bars, grilles or grates already covering their windows. Those windows are useless in an emergency if the devices on them do not have a functioning release mechanism. Time is critical when escaping a fire.
- 8.** Do not install window unit air conditioners in windows that may be needed for escape or rescue in an emergency. The air conditioning unit could block or impede escape through the window. Always be sure that you have at least one window in each sleeping and living area that meets escape and rescue requirements.
- 9.** The degree of injury sustained from a window fall can be affected by the surface on which the victim falls. Shrubs and soft edging like wood chips or grass beneath windows may lessen the impact if a fall does occur.

# Risk Management

Polish Air Crash

<http://finance.yahoo.com/news/Polish-air-crash-puts-apf-3441875340.html?x=0&.v=1>

David Crary and Adam Geller, AP National Writers, On Tuesday April 13, 2010, 8:11 am EDT

Quoted from AP story on Yahoo.

“Even up against tough weather and tight schedules, pilots are supposed to have the last word on when, where and how to land their aircraft. But aviation veterans, trying to make sense of the fog-shrouded crash that killed Poland's president, say pressures on pilots to keep VIP passengers on schedule can sometimes override safety considerations.

However, the pilot of the government plane had been warned of dense fog at the destination airport in Smolensk and was advised by traffic controllers to land elsewhere, even though that would have delayed observances of a World War II massacre.

Usually, that kind of pressure -- known in the industry as "pilot pushing" -- is subtle, rather than overt, Casey said. Pilots may feel their job is at risk if they rebuff an employer, he said.

John Prater, president of the Air Line Pilots Association, testified that some regional airlines pressure pilots to fly even when they have not had enough sleep.

While pressure on pilots is often subtle, investigators have pointed to it as a contributing factor in several air crashes over the years.

In its investigation of the March 2001 crash of a chartered jet at the Aspen, Colo., airport, the National Transportation Safety Board found the pilot had been under intense pressure. The flight was pushing up against the destination airport's closing time, and the customer who paid for the charter arrived late for departure from Los Angeles.

When the pilot explained he might be forced to divert to another airport, the customer was "irate" and had his assistant call the charter company to say the pilot should "keep his comments to himself."

Then, minutes before landing at Aspen -- at a time so late that the curfew would make a second attempt impossible -- one of the passengers stepped forward and joined the crew, buckling himself into the cockpit's jump seat.

"The presence of this passenger in the cockpit, especially if it were the charter customer, most likely further heightened the pressure on the flight crew to land" at Aspen, the NTSB found. After that crash, charter company Avjet Corp. changed its procedures to ban customers from the cockpit jump seat.

In the August 2001 crash that killed singer Aaliyah on the Caribbean island of Abaco, investigators found that the plane was packed with luggage and passengers exceeding the craft's weight limit. Airport employees said that baggage handlers and the pilot protested before takeoff, but the passengers demanded they be allowed to bring all the items.

External pressure on pilot was also cited as one of many factors that may have contributed to the April 1996 crash in Croatia that killed Secretary of Commerce Ron Brown and 34 others aboard an Air Force plane. Investigators found that the crew had improperly planned the route.

"The error added 15 minutes to the planned flight time and may have caused the crew to rush the approach," the Department of Defense said in a briefing on its investigation of the crash."

# THE SENTINEL



OFFICIAL SAFETY NEWSLETTER OF CIVIL AIR PATROL

## Safety – A View from a Mom By a CAP Member and Parent of a Cadet

In CAP, most of us have families that are concerned about us when we are on a mission or are participating in other CAP functions. Here are some comments from a long-time member of CAP and a mother of a CAP cadet with her concerns about CAP and recommendations to us in educating the families of our members. She goes on to write about what parents need to know to encourage a child as a cadet in CAP. In her words, here is her story:

“First and foremost, prove to me that CAP is capable of keeping my child safe. When my child is participating in an activity for the first time, tell me what my child will be doing, so that I am comfortable. When my child is going away for the first time, tell me that it is normal to be worried and put me at ease. I will be thinking and wondering what my child is doing at all times. If you have to call me or my home for any reason, the caller should identify himself and immediately say that my child is fine and then proceed with the conversation. If I am dropping my child off at an activity and he or she doesn't want to stay, have a second or third year cadet or young senior member find out the reason for the change of mind. If that fails, don't force the issue.

“If my child needs my consent for any activity, tell me why. If the activities involve risk, such as orientation flights, shooting weapons, or rappelling, tell me how you plan to keep him or her safe. Tell me about the instructors, the pilots, and their training, so I will feel at ease.

“Tell me about all the things CAP does to ensure that my child is safe in a CAP vehicle or aircraft. Tell me how the CAP drivers and pilots are trained and screened.

“Tell me about the training facilities and the training personnel. Tell me about the qualifications of the senior escorts at all the activities. If my child has special needs, tell me how CAP will meet them. For example, who will make sure that my child takes medications when they are needed or as they are prescribed?

“Tell me about the mandatory safety briefings at every CAP activity. Tell me how you make safety a priority.



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"In closing, the parent should encourage a child to attend as many meetings and other activities as possible. Encourage a child to do what is required to move up in rank. When a child is promoted, show him or her you are extremely proud. During the time as a cadet, your child will need equipment to participate in different activities; make sure they have what is needed. Someday your cadet might come to you and ask you to join CAP. Please don't hesitate to join, you will get closer to your child in many ways. You will never be sorry for joining an organization that gives your family the opportunity to do things and learn together. Don't forget CAP teaches your child about the military, aerospace, and safety. Stress the need for safety at CAP events, at home, and in everyday life. Don't forget the saying, 'I would rather be safe than sorry.'"

The National Safety Team would like to thank the mom who wrote this. Keep in mind, she might be the officer sitting next to you.

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### **Sentinel Name Change** By the National HQ Safety Team

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Here's an update. There were 108 name change submissions, but we are on track to recognize the winner in the May issue.

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### **Threat and Error Management in GA** By Maj Alan Matson, Stan/Eval Officer, CFII, MN Wing

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With the admirable safety record of commercial aviation, it makes sense for general aviation (GA) pilots to learn the methods that are used by the airlines, and then borrow as many of those methods as can be applied to the GA flight deck.

Threat and Error Management (TEM) is a concept that the airlines have been employing for several years. It has been described as "defensive driving" for pilots, because when defensively driving an automobile, methods are employed to defend against an undesirable event.

TEM involves the practice of recognizing *threats* and *errors* that would reduce the margin of safety, and then taking appropriate measures to eliminate or reduce the potential for a negative outcome. If any of these threats or errors go unrecognized, or are managed ineffectively, then the aircraft could end up in an *undesired aircraft state*, a condition that increases the risk.

If the aircraft were to end up in an undesired state, there usually is the opportunity to respond in order to mitigate the additional risk to which we have become exposed. Taking inappropriate action or failing to respond at this point (an error) could cause the aircraft to end up in an *undesired end-state* (a crew caused incident or accident). Taking appropriate action would reduce the risk level, allowing for a desirable outcome.

Threats can be described as issues, anticipated or unanticipated, that adds to the complexity of the flight and, therefore, reduces the safety margin unless properly managed. Airports that have construction projects underway

certainly add to the complexity of maneuvering on the ground, but if you know about the issue before you begin a flight, you can make plans to manage the associated risk. Anticipated threats should always be reviewed and/or briefed in advance of the flight, and decisions made as to how you will deal with them.

Some threats are unanticipated, and can occur suddenly. An oil pressure warning light that comes on during a flight creates a threat that must be promptly recognized, and the associated threat must be managed properly in order to prevent increased risk. The oil warning light creates the undesired aircraft state, and demands proper threat management to create a desirable outcome.



Figure 1: The NOTAM issued for this runway construction project was not accurate, and no signs or lights were in place to warn approaching aircraft. This was an unanticipated threat that created an undesired aircraft end-state (see the C-130 at left).

Errors are issues caused by the pilot (or crew). If you forget to check NOTAMS and take a trip to an airport that is closed, you will certainly have a reduction in the safety of your flight. If the nearest alternate airport is 45 minutes away and you only have 30 minutes of fuel in the tanks (please tell me you *never* land with less than one hour of fuel remaining), you have created an error that will reduce your safety margin to near zero. In the example of the oil warning light, failing to notice the warning would certainly increase your risk, and would be considered an error. Not responding to the oil warning light properly (see your POH) also would be an error and would create additional risk.

Whether you are facing a threat or error (and sometimes it could be several of each), you must properly identify the issues concerned, and then manage those issues by taking appropriate steps. Since the number of potential

threats and errors is large, we must develop the ability to recognize these issues, and effectively manage them in order to maximize the safety margin.

Crew Resource Management (CRM) is the last line of defense against threats and errors. This means effectively using all available resources to ensure the successful outcome of the flight. For GA pilots, this may be better referred to as SRM (Single-Pilot Resource Management).

Ed. Note: For CAP pilots, Crew Resource Management (CRM) remains the battle cry; the pilot, observer, and scanner (or any combination of crew members) must work together as a team.

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## **I Received A Call!** By CAP National Safety Team

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Have you ever been in a conversation with your fellow members or at a CAP meeting and someone said, "I received a call," then proceeded to expand on a mishap or just dumb luck story. Listen to this: I received a call and this is what was said. "The pilots were trying to start the engine when they noticed smoke. At that time, the pilots panicked and jumped out of the aircraft and ran, leaving the aircraft." What should they have done? Attached this month is the POH for a typical CAP aircraft for your review.

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## **Mishaps** By Members of the Civil Air Patrol Nationwide

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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 likely coincidence. 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.

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### Vehicle

- CAP passenger van and POV collision

### Bodily Injury

- Cadet playing a sport had hand stepped on
- Member injury, during cadet activity that required jumping, ankle injury
- Member injury, fell three feet on obstacle course, twisted ankle
- Member aggravated pre-existing knee injury

## Aircraft

- Aircraft loss of airspeed, pitot system found impacted with mud dauber debris.
- Prop strike, identified from a previous flight
- Rudder damage, aircraft struck by utility trailer
- Aircraft flat tire after landing
- Aircraft ground handling, crew pushed aileron into hangar door assembly
- Aircraft ground handling, pilot pulling aircraft out of the hangar impacted leading edge of wing with aircraft door
- Aircraft ground handling, crew pushed aircraft into parked auto damaging aircraft elevator

Here is a common thread to the incidents that have not been published because they are under review:

Vehicle Damage – Backing up. This seems to continue to be the highest risk area when operating CAP vehicles. Keep the focus.

What is the best practice? Use a spotter for all movement activities in reverse. Do not back up in traffic and park “out” in parking lots to facilitate driving forward when leaving from a parked location. If you drop off a member and then proceed to back up and strike an object, you will be asked why you didn’t ask the member to spot you. If you strike a fixed object with a moving vehicle, you will be found causal in the mishap.

Bodily Injury – Cadets injured during “team-building” events.

What is the best practice? ORM must be accomplished on the activity and the location. Commanders must approve the activities being performed and location “site surveys” should be completed to look for hidden risks. Walk through the area where the activity will be conducted.

Aircraft Events - Flat tires.

What is the best practice? Flat tires have been attributed to pilot technique, hard landings, and uncoordinated crosswind landings. As the flying season starts to pick up with improved weather, taking some time to refresh skills with a CAP instructor pilot is a good idea. Proficiency comes with routine practice and self-analysis.

These best practices are not all inclusive. If you have a best practice, please post it in the safety suggestion tool within ‘eServices.’ Thank you for sharing your experiences

## Safety Vests

Safety Vests are required to be worn when participating in ground activities and are to be orange in color in accordance with CAPR 39-1, Table 2-3, page 63. They may be plastic, mesh or cloth. While it is not detailed in the regulation that reflectivity should be a part of this safety vest, it is highly recommended that safety attire meet ANSI II or ANSI III reflectivity standards. This is required throughout industry and the military, and represents a best practice CAP should emulate.



ANSI, stands for American National Standards Institute and is a private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States, in part the standards for safety vests.

Pictured above right is an ANSI Class II Orange Vest. Regardless whether lime-green or orange is purchased (remember that CAPM 39-1 specifies orange), all ANSI vests will have strips of the contrasting color and reflective material for maximum visibility in low-light settings. Take a moment to recall that low-light settings are dawn, dusk, and foggy, cloudy, misty atmospheric conditions. In the wilderness and on the flight line, you want to stand out...as realtors say "POP"...and avoid being run over or run into during operations.

## 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. As stated in February, 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 "Sentinel" for your reference. Keep in mind these are ideas, not CAP policy.

Dean M Klassy Sr	WI- 205	March 2010	Since there is no longer a SARSAT, I would suggest that all aircrews monitor 121.5 at all times. If we are not listening, who is? What happens if one of us goes down and no one is listening? It will be simple either on Comm 2 or on your DF unit. Over the years, I have heard many ELTs, I am sure like some of you. Of those two were real crashed aircraft. I would like to feel comfortable if I ever have a problem that someone is up there listening. Dean Klassy Lt Col CAP GLR-WI205
Scott T Singletary	FL- 423	March 2010	Take a minute to verify that the aircraft ignition switch is in the off position before attaching a tow-bar to the nose gear. In addition, make an effort to remain clear of the prop at all times. Treat the prop as though it could "come alive" at any moment.

Devlin C Hayley	NV-069	March 2010	Drink a lot of water for the coming summer.
Andrew J Thompson	PA-125	March 2010	While conducting PT, make sure that the flight is in a grassy safe area. Gravel or hard surfaces are a hazard for not only the exercises but a hazard to any flight member who would faint or otherwise be unable to stand.
Joseph W Thorn	CO-179	March 2010	Backing of vehicles. As a retired fire captain of 32 years, I have a lot of experience in this area. Most, if not all, fire departments have adopted two safety rules: First, the "Circle of Safety": The driver always walks completely around the vehicle to look for hazards and to check the distance from all fixed objects and other vehicles (also known as the "Sphere of Safety).” Look above the vehicle for wires and building overhangs, and below the vehicle for holes, pipes, rocks, etc). The driver always has a back up person. If this is absolutely not possible, the driver backs up with extreme care. 1LT Thorn, Safety Officer, Pueblo Composite Squadron, RMR-CO-179
Jordan B Ream	WA-049	March 2010	All squadrons have emergency evacuation plans for earthquake and fire and set meeting place.
Travis D Maxwell	WI-002	March 2010	Do not text while driving! ( <u>ed note: this is the <i>law</i> in many places</u> )
James L Mead	IN-126	March 2010	If you are assigned the task of training an individual or a group of individuals, do not get impatient if the group, or an individual, does not grasp the ability to perform the required duties as fast as you think they should. Think back at some of the items that you have learned over the years: How long did it take you to learn? Was your instructor patient with you? Did they encourage you to keep trying until you were proficient? If I am teaching someone to land a plane, and they are having trouble, I remind myself that at one time I could not land a plane. This same concept applies to all that we know and/or able to perform.
Devin M Mulvanny	WA-049	March 2010	Move all large movable objects away from the drilling area in the warehouse, cadets could run into or tip over the object and inflict or receive serious injury or death.
Aaron J LaMantia	PA-125	March 2010	Spring is approaching and with that in mind, so is severe weather. Severe weather risk assessment should be included in the planning and execution of any field training ops during this transition from winter to spring. At this time in our area (Northeast US), the problem is mass snow melt, which will cause flooding. Remember to keep this in mind when planning a camp site.
Michael W Gray	TN-173	March 2010	If storing vehicle first aid kits and other materials together in a large plastic-ware type container underneath a bench seat in on of our vehicles, secure this container to the vehicle floor with bungie straps in a criss-cross manner to the support anchors of the seat so that it does not become a "projectile with force" in an accident.
Kyle P Zobel	NC-048	March 2010	Safety is not just taping things down and erecting caution cones. It is the liberal application of common sense, and practice.
Collin Cooley	FL-116	March 2010	It is starting to get warm! Cadets and seniors need to be aware of dehydration. When outside, drink water!

Robert J Bottger	NE-088	March 2010	In light of the frequency of accidents while backing or maneuvering vehicles, I suggest that the requirements for a CAP driver' license be modified to include a short check ride. This would insure that members operating CAP vehicles are familiar with the characteristics and limitations of the vehicle being driven, and help to avoid accidents.
Robert K Kelly Jr	AK-015	March 2010	There are two things that can greatly reduce backing accidents. The first and most obvious is do not back, park such that backing is not required. The second is, that when backing, do it slowly, very slowly; slower than you can walk.
Joseph R Schreckengost	PA-125	March 2010	Now, that the snow is melting in our area, make sure you and your gear are ready for wet and muddy conditions. For example: extra socks, waterproofed boots, etc. (mostly foot protection since they will get the most of it). Without properly maintained feet, you cannot "participate actively in unit activities" and missions.
Ryan J Vechinski	WI-183	March 2010	When driving on multi-laned highways, always be sure to drive in the right-most lane, unless passing another vehicle, allowing merging traffic to enter the highway, or exiting the highway on the left. Also, avoid passing vehicles on the right. This will encourage efficient flow of traffic. Although not an official law in all states, it is the courteous and safe thing to do.
Barbara M McGillem	IN-123	March 2010	Change the batteries in your smoke alarms at least once a year. If you have not done so, change them now and then each March with the time change.
Shawn A Bhatti	WI-008	March 2010	Do a warm up before physical training, or encourage members to warm up before attending the meeting.
Kenneth J Windyka	MA-015	March 2010	When using the LTronics Lpers during missions, consider using a magnetic mount antenna on the vehicle and connecting the unit to that antenna. This reduces the number of times that personnel have to exit the vehicle to check for a signal. This is especially important for mitigating risk exposure during nighttime missions or during inclement weather. Thanks for your efforts!
Patricia A Kidd-Jordan	IN-123	March 2010	Indiana Tornado Plan - to survive know the difference between a tornado WATCH and a WARNING WATCH, where conditions are favorable for tornadoes to develop. WARNING is when tornado has been sighted. Seek shelter immediately! A basement is safest, preferably under a sturdy table or workbench. If you do not have a basement, go to a small interior room-like a closet or bathroom-with no windows. Keep as many walls as possible between you and the outdoors. Get out of vehicles and manufactured homes. If no other shelter is available, lie down outside and cover the back of your head and neck with your hands. Be alert for possible flooding.

## A picture is worth a 1000 words!

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The engine is running and the aircraft is in the run-up area preparing for departure; what do you think happened next?



## Until Next Month

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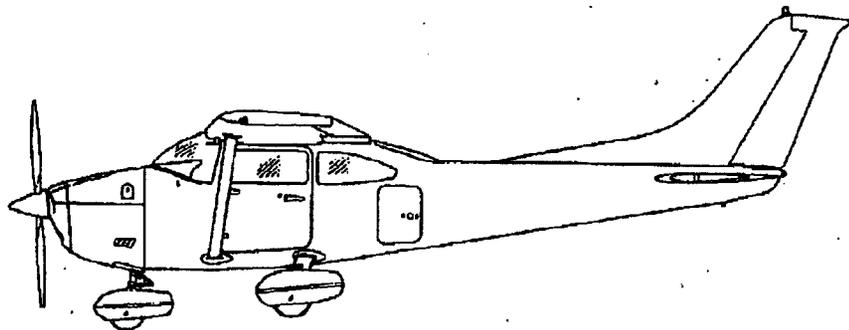
Discover, report, stop, share, listen, and learn. The things we have read about in this issue already have happened, so you are not allowed to experience these for yourself. Remember to “Knock It Off” and slow down. For streaming dialogues on some subjects, remember CAP Safety is on Facebook and Twitter.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



*This Manual  
Superceded  
by A Normal  
copy on 1/21/97*



# Pilot's Operating Handbook and FAA Approved Airplane Flight Manual



Cessna Aircraft Company

1985 Model 182R

Serial No. 18268477

Registration No. N9974E

THIS DOCUMENT MUST BE  
CARRIED IN THE AIRPLANE  
AT ALL TIMES.

THIS HANDBOOK INCLUDES THE MATERIAL REQUIRED TO  
BE FURNISHED TO THE PILOT BY CAR PART 3 AND CONSTI-  
TUTES THE FAA APPROVED AIRPLANE FLIGHT MANUAL.

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Cessna Aircraft Company  
Wichita, Kansas USA

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Original Issue - 20 August 1984

CESSNA  
MODEL 182R

SECTION  
EMERGENCY PROCEDURE

## SECTION 3 EMERGENCY PROCEDURE

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### AMPLIFIED PROCEDURES

Engine Failure . . . . .	3-
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Original Issue - 20 August 1984

If engine fails to start:

4. Throttle -- FULL OPEN.
5. Mixture -- IDLE CUT-OFF.
6. Cranking -- CONTINUE.
7. Fire Extinguisher -- OBTAIN (have ground attendants obtain if not installed).
8. Engine -- SECURE.
  - a. Master Switch -- OFF.
  - b. Ignition Switch -- OFF.
  - c. Fuel Selector Valve -- PUSH DOWN AND ROTATE TO OFF.
9. Fire -- EXTINGUISH using fire extinguisher, wool blanket, or dirt.
10. Fire Damage -- INSPECT, repair damage or replace damaged components or wiring before conducting another flight.

#### ENGINE FIRE IN FLIGHT

1. Mixture -- IDLE CUT-OFF.
2. Fuel Selector Valve -- PUSH DOWN AND ROTATE TO OFF.
3. Master Switch -- OFF.
4. Cabin Heat and Air -- OFF (except overhead vents).
5. Airspeed -- 100 KIAS (If fire is not extinguished, increase glide speed to find an airspeed which will provide an incombustible mixture).
6. Forced Landing -- EXECUTE (as described in Emergency Landing Without Engine Power).

#### ELECTRICAL FIRE IN FLIGHT

1. Master Switch -- OFF.
2. Vents/Cabin Air/Heat -- CLOSED.
3. Fire Extinguisher -- ACTIVATE (if available).

#### WARNING

After discharging an extinguisher within a closed cabin, ventilate the cabin.

4. Avionics Power Switch -- OFF.
5. All Other Switches (except ignition switch) -- OFF.

If fire appears out and electrical power is necessary for continuance of flight:

6. Master Switch -- ON.
7. Circuit Breakers -- CHECK for faulty circuit, do not reset.

8. Radio Switches -- OFF.
9. Avionics Power Switch -- ON.
10. Radio/Electrical Switches -- ON one at a time, with delay at each until short circuit is localized.
11. Vents/Cabin Air/Heat -- OPEN when it is ascertained that fire completely extinguished.

#### CABIN FIRE

1. Master Switch -- OFF.
2. Vents/Cabin Air/Heat -- CLOSED (to avoid drafts).
3. Fire Extinguisher -- ACTIVATE (if available).

#### WARNING

After discharging an extinguisher within a closed cabin, ventilate the cabin.

4. Land the airplane as soon as possible to inspect for damage.

#### WING FIRE

1. Pitot Heat Switch (if installed) -- OFF.
2. Navigation Light Switch -- OFF.
3. Strobe Light Switch (if installed) -- OFF.

#### NOTE

Perform a sideslip to keep the flames away from the fuel tank and cabin, and land as soon as possible using flaps only as required for final approach and touchdown.

#### ICING

##### INADVERTENT ICING ENCOUNTER

1. Turn pitot heat switch ON (if installed).
2. Turn back or change altitude to obtain an outside air temperature that is less conducive to icing.
3. Pull cabin heat control full out and rotate defroster control clockwise to obtain maximum defroster airflow.
4. Increase engine speed to minimize ice build-up on propeller blades.
5. Watch for signs of carburetor air filter ice and apply carburetor heat.

SECTION 3  
EMERGENCY PROCEDURES

CESSNA  
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2. Brakes -- APPLY.
3. Wing Flaps -- RETRACT.
4. Mixture -- IDLE CUT-OFF.
5. Ignition Switch -- OFF.
6. Master Switch -- OFF.

ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF

1. Airspeed -- 75 KIAS (flaps UP).  
70 KIAS (flaps DOWN).
2. Mixture -- IDLE CUT-OFF.
3. Fuel Selector Valve -- PUSH DOWN AND ROTATE TO OFF.
4. Ignition Switch -- OFF.
5. Wing Flaps -- AS REQUIRED (FULL recommended).
6. Master Switch -- OFF.

ENGINE FAILURE DURING FLIGHT (RESTART PROCEDURES)

1. Airspeed -- 75 KIAS.
2. Carburetor Heat -- ON.
3. Fuel Selector Valve -- BOTH
4. Mixture -- RICH.
5. Ignition Switch -- BOTH (or START if propeller is stopped).
6. Primer -- IN and LOCKED.

FORCED LANDINGS

EMERGENCY LANDING WITHOUT ENGINE POWER

1. Seats, Seat Belts, Shoulder Harnesses -- SECURE.
2. Airspeed -- 75 KIAS (flaps UP).  
70 KIAS (flaps DOWN).
3. Mixture -- IDLE CUT-OFF.
4. Fuel Selector Valve -- PUSH DOWN AND ROTATE TO OFF.
5. Ignition Switch -- OFF.
6. Wing Flaps -- AS REQUIRED (FULL recommended).
7. Master Switch -- OFF.
8. Doors -- UNLATCH PRIOR TO TOUCHDOWN.
9. Touchdown -- SLIGHTLY TAIL LOW.
10. Brakes -- APPLY HEAVILY.

PRECAUTIONARY LANDING WITH ENGINE POWER

1. Seats, Seat Belts, Shoulder Harnesses -- SECURE.
2. Airspeed -- 75 KIAS.
3. Wing Flaps -- 20°.
4. Selected Field -- FLY OVER, noting terrain and obstructions, then

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SECTION  
EMERGENCY PROCEDURE

- retract flaps upon reaching a safe altitude and airspeed.
5. Electrical Switches -- OFF.
  6. Wing Flaps -- FULL (on final approach).
  7. Airspeed -- 70 KIAS.
  8. Avionics Power and Master Switches -- OFF.
  9. Doors -- UNLATCH PRIOR TO TOUCHDOWN.
  10. Touchdown -- SLIGHTLY TAIL LOW.
  11. Ignition Switch -- OFF.
  12. Brakes -- APPLY HEAVILY.

DITCHING

1. Radio -- TRANSMIT MAYDAY on 121.5 MHz, giving location and intentions and SQUAWK 7700 if transponder is installed.
2. Heavy Objects (in baggage area) -- SECURE OR JETTISON.
3. Seats, Seat Belts, Shoulder Harnesses -- SECURE.
4. Flaps -- 20° to FULL.
5. Power -- ESTABLISH 300 FT/MIN DESCENT at 65 KIAS.
6. Approach -- High Winds, Heavy Seas -- INTO THE WIND.  
Light Winds, Heavy Swells -- PARALLEL TO SWELLS.

NOTE

If no power is available, approach at 70 KIAS with flaps up or at 65 KIAS with 10° flaps.

7. Cabin Doors -- UNLATCH.
8. Touchdown -- LEVEL ATTITUDE AT ESTABLISHED DESCENT.
9. Feet -- CUSHION at touchdown with folded coat.
10. Airplane -- EVACUATE through cabin doors. If necessary, open windows and flood cabin to equalize pressure so doors can be opened.
11. Life Vests and Raft -- INFLATE.

FIRES

DURING START ON GROUND

1. Cranking -- CONTINUE, to get a start which would suck the flame and accumulated fuel through the carburetor and into the engine.

If engine starts:

2. Power -- 1700 RPM for a few minutes.
3. Engine -- SHUTDOWN and inspect for damage.