



*Welcome to "Winter Operations"
Brought to by the
FAA Safety Team (FAASTeam)
Jeff Wasileski/Jim Leavitt*

*Ross Buckland
© 2005*



Winter Operations

The FAA Safety Team (FAASTeam) Albany, NY FSDO



Promoting Aviation Safety Through Education and Cooperative Efforts

FAA Safety Program

FAASafety.gov

FAA Home | Event Search | Registration | Login | Safety Library | SPANS Home

Register for Aviation Safety Information

016104



A careful inspection may reveal
an accumulation of snow



THE AIRCRAFT

The first step is to review the aircraft's pilot operating handbook (POH) or flight manual.

THE AIRCRAFT

- Each aircraft's operating manual lists those things that owners need to be aware of.
- For example, the type of oil, the viscosity of the oil and grease is specified.

THE AIRCRAFT

- Along with the dangers of flying with frost and snow on the aircraft, the manual may talk about the care of the aircraft's battery and electrical system

THE AIRCRAFT STARTING YOUR ENGINE

- Recommended cold weather starting techniques need to be reviewed and practiced.
- More than one pilot has learned on a cold winter morning, weak batteries don't work well in the cold.

ICE

- Ice can lock or jam your flight controls.
- If the aircraft has been exposed to ice or snow, make sure the flight controls have not frozen or been jammed.

ICE

- The same applies if you de-ice your aircraft or move the aircraft in or out of a warm hanger if the aircraft has been covered with snow, ice, or frost.

ICE

- Be aware of the danger any time you have a chance of liquid water and a below freezing aircraft coming into contact

RESOURCES

- Another valuable winter resource is the person who maintains your aircraft.
- Your FAA certificated mechanic is an excellent source of winter data.

RESOURCES

- However, it does pay to ask if he or she has ever lived or worked in cold country.
- Clearly, someone who has spent his or her whole career in Miami may not be the most knowledgeable about flight operations in Maine.

HEATING

- It is important that the heating system be inspected for proper operation before it's used.
- Unless you are flying a turbojet aircraft that uses bleed air from the engine for heating,

HEATING

- You probably have either the old exhaust heater shroud on the muffler system or one of the fuel-burning, self-contained heaters.

HEATING

- Each has unique risks.
- If your heater is the shroud type system and if the exhaust pipe the shroud goes around has any holes in it, deadly carbon monoxide and other exhaust gases may enter your cabin area.

HEATING

- More than one pilot has died from carbon monoxide related incapacitation.
- Many more have been able to recognize their own deterioration and shut off the cabin heater, open a window, and land safely.

HEATING

- Regardless of the type of heating system aboard your aircraft.
- The key to its safe operation is your knowledge of how it functions.
- Ensuring that it is safe to operate.

PREFLIGHT

- An interesting preflight item that can be very difficult to check is water in the fuel system.
- Although water in a fuel line can freeze at altitude and block fuel flow, a more insidious problem is water freezing in a fuel tank.

PREFLIGHT

- Think of the amount of water possible in your tank. In the winter, you now have a large ice cube in your tank.
- Since it is frozen solid, any fuel in the tank will check clear of water.

PREFLIGHT

- Then when you fly into an area above freezing, your flying ice cube melts, and you have water in your fuel.

PREFLIGHT

- Engines don't like water.
- They don't run too well on H₂O, either.
- So, if your aircraft has been out in the weather, check it carefully.

THE PILOT

- The proper care of your aircraft is important.
- No one argues with the role the aircraft plays in flight.
- However, the aircraft, being a machine, is fairly predictable.

THE PILOT

- Put the right stuff in it, make the proper adjustments, and it will fly.
- The same is not true of the pilot.

THE PILOT

- The problem is the pilot.
- Bad decision making and failure to properly control the aircraft are important risk factors for aircraft.

Weather



WEATHER BRIEFS

More than one accident has been caused by pilots who have run their aircraft off a snow-covered runway or hit a snow bank or flew into a snowy whiteout and lost control.

The need for good weather briefs during the winter season is very important to help pilots avoid making bad weather related decisions.

WINTER FLYING CAN ADVERSLEY AFFECT FLIGHT OPERATIONS

- Fast moving fronts
- Strong and gusty winds
- Blowing and drifting snow
- Icing Conditions

WEATHER AND YOU

- One of the facts of winter life is the lack of daylight. Cold, long, dark nights,
- Add the possibility of blowing snow

WEATHER AND YOU

- Dreaded whiteouts are all good reasons to be qualified and current for the intended flight.



WEATHER AND YOU

- Add in the risk of cold and hypothermia to anyone forced down in the snow and you can begin to see the many dangers winter poses for the unprepared.

WEATHER AND YOU

- So you don't have to have an accident to be cold and miserable, you can find yourself in that situation after a safe flight-if you have not done your homework and a little prior planning.

WEATHER AND YOU

- That includes landing safely at a remote airfield and finding the FBO closed and the fuel pumps locked and no one within miles to help you.

How many fatal accidents have resulted because a pilot attempted to land in weather conditions that exceeded their ability?

The sad reality, in most of those accidents, is that within a few minutes flying time better weather was available or during a short time in a holding pattern the weather would have improved

***REMEMBER.....
Please be careful out there!***



QUESTIONS?

