Salt Lake City Department of Airports

GENERAL AVIATION NEWS

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AERONAUTICAL DECISION MAKING (ADM)

From the FAASafety.gov website

The Issue… Pilots make decisions with such high frequency that most of them can be considered "routine" or "procedural." However, when two or more choices present themselves and when the outcome of choosing either option cannot be fully predicted, the pilot is then faced with a risk. Ineffective risk management or poor aeronautical decision-making can be associated with almost every type of fatal general aviation accident.

In 2007 a Cessna 150 on cross-country crashed into a mountainside, killing the pilot. He had been told by a mechanic that the plane's alternator needed replacing and a new part would arrive in two days but he didn't want to wait. He had the mechanic reinstall the faulty alternator and took off into dark, mountainous terrain under IMC conditions.

In 2011, a Eurocopter on an EMS mission crashed following a loss of engine power as a result of fuel exhaustion. The pilot, likely distracted by his cell phone, failed to properly initiate emergency procedures . All onboard were killed.

Lastly, in July 2011, a Mooney M-20F struck an automobile parking lot and skidded into a building. The pilot, his wife, and two children were killed in the mishap. The VFR only rated pilot, with than three months of flying experience, flew into IMC conditions despite receiving several weather warnings.

What do these three mishaps have in common? In each, a series of poor or poorly executed decisions led to the destruction of property and the tragic loss of lives.

Finding a Solution… ADM provides a systematic approach to the mental processes used by pilots to consistently determine the best course of action in response to a given set of circumstances.

The three major categories of ADM are pre-flight, in-flight, and post-flight and each has its unique set of concerns.

Understand that effective risk management takes a great deal of introspection, patience and practice. Just a few of the key factors to identify while working through the process are the ability to:

- note that a change has (or hasn't) occurred;
- identify your own biases;
- be honest with yourself and your ability;
- set (and adhere to) personal minimums;
- resist external pressures (like saving time/money/face);
- prepare (and use) a plan B;
- and then continuously evaluate the outcome.

For more, visit FAA Safety website http://go.usa.gov/ZXtV .

UAOA SPRING CONFERENCE

The Utah Airport Operators Association (UAOA) 2014 fall conference is scheduled for March 12 – 14 at the Lexington Hotel in St. George, Utah.

Airport owners and operators, government agencies, aviation contractors, aviation associations, fixed base operators, and individual pilots attend the conferences to promote aviation and airports in Utah.

Aviation enthusiasts and supporters are welcome to register and attend. For more information visit http://uaoa.org .

PLANES (USUALLY) PERFORM BETTER IN COLD WX

By Santo Silvestro in ezinearticles.com

Cold weather (WX) flying has its challenges and downsides. Namely, it's cold. And you have to be more diligent about pre-flight inspection, prep, and de-icing. But many pilots love winter flying, not only for its unique beauty, but because their planes seem to perform better than in warmer temperatures. Here's a (simplified) explanation.

First, to clarify: Aircraft may perform better in cold weather, but that doesn't necessarily mean safer. The potential for icing and its affect on lift and handling is a dangerous threat in freezing temperatures. But icing aside, cold air can help a plane take off and fly more efficiently.

So why do planes perform better in cold weather? Simply, colder air is denser than warmer air, which contributes to engine performance and air lift.

But why?...A plane's performance, including takeoff distance, rate of climb, and engine power, is greatly affected by the density of the air, also known as the density altitude.

Generally, both turbine and internal combustion/reciprocating piston engines run more efficiently in cold air because colder air allows the engine to use a greater mass of air/fuel mixture in the same intake volume. That translates into more power.

In propeller-driven planes, the prop is biting into denser air, and thrusting a greater mass of air backwards, which means more thrust and power.

More power allows a plane to accelerate more quickly on takeoff. That extra power increases the rate of climb, reduces take off roll, gives the wings more lift, and allows the plane to take off at a lower ground speed.

So, it's not actually that airplanes fly better in cold air; it's that their engines produce more power when they take off in cold air. Again, when the air is colder, and thus denser, a greater mass of air is able to get into the engine's cylinders with each stroke, and that equals more power and more power also means more fuel.

Keep in mind that, while engines produce more power in cold air, fuel consumption increases along with power. Scientifically, air contracts when it is cold and denser. This means that the air your plane is taking in during combustion has more oxygen in it. When there's more oxygen, the engine compensates by using more fuel.

But the opposite is also true … Generally, as temperature increases, a plane's power and performance decreases. As air heats up, it expands and becomes less dense, or thinner, just like air at higher altitudes.

So on a hot summer day, a plane's engine is taking in air that is less dense, with less oxygen. That produces less lift, and the plane has to travel faster and farther to take off and fly, like it is at a higher altitude. The up side is, because the air is "expanded," you'll use less fuel to get up.

On cold, dry days, not only does colder, denser air help a plane's engine perform better, but less convective heating means less turbulence.

Convective heating is the currents or thermals created when the heat from large bodies of land radiate heat into the cooler air, creating bumps, known as turbulence.

With less convective activity, there is much less chance of thunderstorms, so if winds are low, then flights are usually much smoother. Also, lower humidity improves visibility.

Another benefit of winter flying: less air traffic. That means less stress, and greater enjoyment of flying.

Winter flying… properly prepare for it, then enjoy!

BEFORE YOU TAKEOFF IN WINTER

The key to minimizing icing risks before or during flight is proper planning and preparation. When possible, hangar your aircraft indoors during the winter to protect it from frost and frozen precipitation.

Before flying, know the weather at your FBO, enroute and destination airports. If the weather looks adverse and freezing could take place, report to the airport earlier than usual and speak to the FBO regarding its de-icing and anti-icing capabilities, as well as your requirements. Also have a copy of and review the Original Equipment Manufacturer Aircraft (OEM) deicing recommendations.

If airborne icing is likely, have alternate plans in mind, such as altitudes and re-routes and alternate airports/routes to work around weather.

GA HANGAR SPACE HEATERS

Temporary hangar heat may be provided by electric heaters only when tenants are physically present in the hangar. Open flame (propane, gasoline, kerosene type, etc.) heaters are prohibited at all times in general aviation hangars at Salt Lake City Department of Airports (SLCDA) airports.

Authorized electric heaters must not be left operating unattended in hangars even for short periods.

Contact Matt Jensen, SLCDA Property Management Specialist, (801) 575-2957 or Steve Jackson, SLCDA General Aviation Manager (801) 575-2401 for additional information.

HELPFUL POINTS OF CONTACT

For General Aviation operations, facilities maintenance, aviation newsletter, airfield, and SLC Title 16 questions contact: Steve Jackson, SLCDA General Aviation Manager, (801) 647-5532 or e-mail at steve.jackson@slcgov.com .

For hangar lease and repair questions: Matt Jensen, Airport Property Specialist at (801) 575-2957 or e-mail him at matthew.jensen@slcgov.com .

For aviation security questions call: Connie Proctor at (801) 575-2401.

For gate access problems call: Airport Control Center at (801) 575-2401.

For emergencies call: at SLCIA, (801) 575-2911
at TVY or U42, 911 then (801) 575-2911

For other GA information call the GA Hotline: (801) 575-2443 .

SLCDA GA NEWS ELECTRONIC OPTION

If you would like to receive the Salt Lake City Department of Airports' monthly general aviation newsletter by e-mail, send a request including your current e-mail address to: steve.jackson@slcgov.com .

UPCOMING EVENTS AND NEWS

Leading Edge Aviation (LEA) at South Valley Regional Airport **(U42)**, West Jordan, UT and at Logan – Cache Airport **(LGU)** hosts multiple events each month including breakfast fly-ins, dinners, and classes.

LEA is conducting Private Pilot and Instrument Pilot ground schools at their South Valley Regional and Logan locations. These ground schools are a great way to get started in aviation or simply become refreshed and stay abreast of current requirements and procedures.

For more information about Leading Edge events, visit: www.leaviation.com .

EAA 23, the Utah Chapter of the **Experimental Aircraft Association** will hold its monthly chapter meeting at 7:00 p.m. on Friday, February 14, 2014 in the Civil Air Patrol (CAP) building 640 North 2360 West at Salt Lake City International Airport (SLC).

Contact Shawn_Crosgrove@msn.com at (801) 568-2571, or visit the EAA website at http://www.eaa23.org/ for more information.

FEBRUARY FAA PILOT SEMINARS

Upcoming activity and seminar information is available at: www.faasafety.gov under the "Activities, Courses & Seminars" tab or contact Rick Stednitz, FAA Safety Program Manager at (801) 257-5073.

Fly smart - fly safe this winter!