
The Sport Flyer

The Official Newsletter of the Georgia Sport Flyers Association, Inc.

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No, this is not Etowah Bend

Our Next Meeting is Feb 14th at Etowah Bend at 11am

T'is The Season; Beware of Icing & Carburetor Ice

From the GSFA Safety Officer

Static (Budman's Comments): I know that the fuel "summer blend" for the summer driving season and fuel shortage/EPA restrictions on ethanol were lifted a while ago. However, I encourage you all to test your fuel for ethanol before fueling your aircraft. Recently it seems, I have had a series of minor encounters with what I suspect to be "carburetor ice". Yea, you know the symptoms: a reduction of rpm at a routine power setting and a rough operating engine. With all of the ethanol laden fuel out there and these wintery conditions, knowing that ethanol readily absorbs moisture concerns me, especially because we do not know how it will affect carb ice (all engines/carburetors) or breather line icing (4 cycle engine) scenario's. Something to think about...I have resubmitted the July article forwarded by Mule & written by Lewis LeGrand as a reminder. See it elsewhere in this newsletter; read on.

As I understand it (old School), carburetor icing is caused by the Bernoulli principle - the venturi effect. A partially closed throttle causes an increase in velocity and a corresponding temperature & pressure drop. The latent heat of fuel evaporation, combined with moisture in the air (or fuel) and "bingo" carburetor ice...bummer...read on.

Enroute Weather: (Credit given to the FAA website: www.faa.gov)

Weather conditions vary considerably in cold climates. In the more remote sections of the world weather reporting stations are generally few and far between and reliance must be placed on pilot reports. However, don't be lured into adverse weather by a good pilot report. Winter weather is often very changeable; one pilot may give a good report and five or ten minutes later VFR may not be possible.

Remember, mountain flying and bad weather don't mix. Set yourself some limits and stick to them.

Snow showers and Whiteouts - Snow showers are, of course, quite prevalent in colder climates. When penetration is made of a snow shower, the pilot may suddenly find himself without visibility and in IFR conditions. Snow showers will often start with light snow and build. Another hazard which has claimed as its victims some very competent pilots is the "whiteout." This condition is one where within the pilot's visibility range there are no contrasting ground features. Obviously the smaller the visibility range the more chance there is of a

whiteout; however, whiteout can occur in good visibility conditions. A whiteout condition calls for an immediate shift to instrument flight. The pilot should be prepared for this both from the standpoint of training and aircraft equipment.

Carburetor Ice - Three categories of carburetor ice are:

- Impact ice formed by impact of moist air at temperatures between 15-32°F on airscoops, throttle plates, heat valves, etc. Usually forms when visible moisture such as rain, snow, sleet or clouds are present. Most rapid accumulation can be anticipated at 25°F.
- Fuel ice forms at and downstream from the point that fuel is introduced when the moisture content of the air freezes as a result of the cooling caused by vaporization. It generally occurs between 40-80°F, but may occur at even higher temperatures. It can occur whenever the relative humidity is more than 50%.
- Throttle ice is formed at or near a partly closed throttle valve. The water vapor in the induction air condenses and freezes due to the venturi effect cooling as the air passes the throttle valve. Since the temperature drop is usually around 5°F, the best temperatures for forming throttle ice would be 32-37°F although a combination of fuel and throttle ice could occur at higher ambient temperatures.

In general, carburetor ice will form in temperatures between 32-50°F when the relative humidity is 50% or more. If visible moisture is present, it will form at temperatures between 15-32°F. A carburetor air temperature (CAT) gauge is extremely helpful to keep the temperatures within the carburetor in the proper range. Partial carburetor heat is not recommended if a CAT gauge is not installed. Partial throttle (cruise or letdown) is the most critical time for carburetor ice. It is recommended that carburetor heat be applied before reducing power and that partial power be used during letdown to prevent icing and overcooling the engine.

To prevent:

- Use carb heat ground check
- Use heat in the icing range
- Use heat on approach and descent

Warning signs:

- Loss of rpm (fixed pitch)
- Drop in manifold pressure (constant speed) rough running

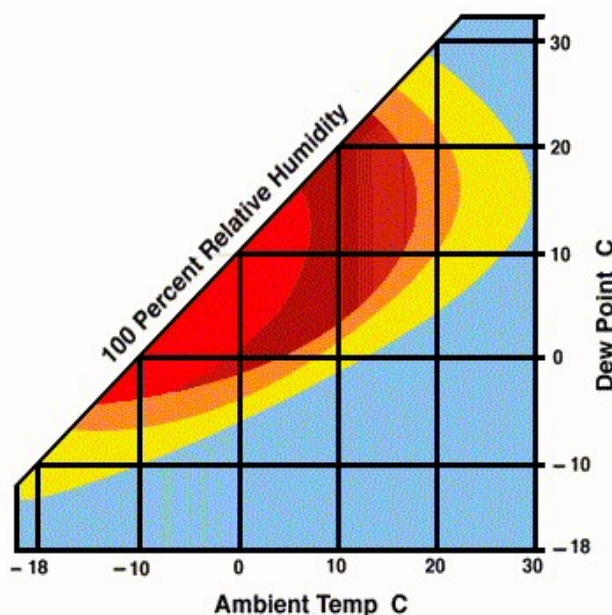
Pilot response:

- Apply full carb heat immediately (may run rough initially for short time while ice melts)

- The curves encompass conditions known to be favorable for carburetor icing. The severity of this problem varies with different types, but these curves are a guide for the typical light aircraft.

Caution - light icing over a prolonged period may become serious.

When you receive a weather briefing, note the temperature and dewpoint and consult this chart.



- Serious Icing - cruise or climb power
- Moderate Icing - Cruise power or serious icing - glide power
- Serious Icing - glide power
- Light Icing - glide or cruise power

Carbon Monoxide Poisoning - Don't count on symptoms of carbon monoxide to warn you: It's colorless, odorless, and taste - less although it is usually found with exhaust gases and fumes. If you smell fumes or feel any of the following symptoms, you should assume that carbon monoxide is present.

Feeling of sluggishness, warmth, and tightness across forehead followed by headache, throbbing, pressure at the temples and ringing in the ears. Severe headache, nausea, dizziness, and dimming of vision may follow. If any of the above conditions exist, take the following precautions:

- Shut off the cabin heater or any other opening to the engine compartment.
- Open a fresh air source immediately.
- Don't smoke.
- Use 100% oxygen if available.
- Land as soon as possible.
- Be sure the source of the contamination is corrected before further flight.

Spatial disorientation can also be expected any time the pilot continues VFR flight into adverse weather conditions. Flying low over an open body of water during low visibility and a ragged ceiling is another ideal situation for disorientation.

For Goodness sakes, be careful out there.

Michael “**Budman**” Prosser

From The Safety Officer - Ethanol information

Hey Guys: I wanted you to reconsider this important information that was previously provided By Ken Adams (Mule) and Lewis LeGrand.

-Budman-

To All,

I have forwarded to all an email I received from club member Lewis Legrand. I did some quick research and did confirm that in Georgia, counties which I have listed below are required by EPA to have a "Summer Blend" - "May 1 through Sept." as described in Lewis's email. From my further research this does not mean that ethanol is in the gasoline as there are several ways to achieve this "summer blend" but adding ethanol is an easier answer. This means to me at least that everyone should test their fuel before adding it to their aircraft. Measure an amount of fuel in a tube, add 10% water to the fuel, shake and mix the fuel water and let stand. The water will attract the ethanol and the volume should double. If this happens you have ethanol in the fuel.

The GA counties are listed directly below.

cheers,

mule

GA - Atlanta area counties include: Banks, Barrow, Bartow, Butts, Carroll, Chattooga, Cherokee, Clarke, Clayton, Cobb, Coweta, Dawson, DeKalb, Douglas, Fayette, Floyd, Forsyth, Fulton, Gordon, Gwinnett, Hall, Haralson, Heard, Henry, Jackson, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Newton, Oconee, Paulding, Pickens, Pike, Polk, Putnam, Rockdale, Spalding, Troup, Upson, and Walton.

Editors note: At this time virtually all fuel distributors in the Atlanta metro area have ethanol added.

Look at what has been parked on the ramp at Cherokee County Airport.





Funnies

Submitted by: Michael “Budman” Prosser

Why I Want To Be A Pilot

Reported to have been written by a 5th grade student at Jefferson School, Beaufort, SC. It was first published in the South Carolina News paper.

When I grow up I want to be a pilot because it's a fun job and easy to do. That's why there are so many pilots flying around these days.

Pilots don't need much school. They just have to learn to read numbers so they can read their instruments. I guess they should be able to read a road map too.

Pilots should be brave so they won't get scared if it's foggy and they can't see, or if a wing or motor falls off. Pilots have to have good eyes to see through the clouds and they can't be afraid of thunder or lightning, because they are much closer to it than we are.

The salary pilots make is another thing that I like. They make more money than they know what to do with. This is because most people think that flying a plane is dangerous, except pilots don't because they know how easy it is.

I hope I don't get airsick because I get carsick and if I get airsick, I can't be a pilot abnd then I would have to go to work. (Big Smile - Budman)

I heard this one when I worked as a Quality Control Representative while on job assignment a nuclear power plant.

“Arguing with a *pig is like wrestling with a pig in the mud. After a while you begin to realize that the pig likes it!!! “

(Feel free to substitute* FAA, Police, CFI, DAR, Quality Control, etc. says Budman; ha ha)

I've heard this one from Ben: “...Doing that is like putting lipstick on a pig”. (Hey Ben, I guess that the “pig thing” is pretty popular; it even came up in the Presidential election numerous times -Budman).

Technically Speaking

The Wind Dragon: It Can Bite On The Ground, As Well As In The Air

Wow, has it been windy lately! This windy weather can be very dangerous to us who fly light aircraft. Take a look at the wind speed Chart and notice the difference between wind speed in MPH and wind speed in Knots. The actual wind speed for increments in knots is higher (although the numbers in knots may be smaller), so don't let the numbers fool you! This can be very significant as wind speed increases, especially in crosswind conditions for takeoff and landings.

Pick an opportunity to practice some crosswind takeoff & landing practice or better yet, get some time with an instructor if needed. Here are a few simple rules during ground maneuvering:

- ❖ Know your personal limits.
- ❖ Taxi slowly (the stronger the wind/gust, the slower you go).
- ❖ Know your vehicle demonstrated crosswind component.
- ❖ Ground handling technique is as important as your takeoff & landing technique. You don't want to get blown over do you?
- ❖ Remember: It's better to be in the hanger (or tied down) and wishing that you were out there; than being out there, wishing that you were in the hanger (or tied down).

For Tri-gear aircraft:

For quartering headwind component – stick into the wind (use up aileron into the wind) and neutral elevator.

For quartering tailwind component – stick opposite the wind (use down aileron into the wind) and down elevator. Avoid sudden bursts of power or sharp braking action in this attitude. Be smooth, you don't want the aircraft to “lurch” or change attitude in high wind/gust conditions.

Use nose wheel steering and rudder for directional control.

For Conventional Gear (Taildraggers):

Use full aft stick to keep that tail firmly planted on terra firma; use rudder/tailwheel steering for directional control.

For quartering headwind component – stick into the wind (use up aileron into the wind).

For quartering tailwind component – stick opposite the wind (use down aileron into the wind). Avoid sudden bursts of power or sharp braking action

in this attitude. Be smooth, you don't want the aircraft to "lurch" or change attitude in high wind/gust conditions.

- ❖ **Be prepared to adjust control inputs when maneuvering; stay on those rudder pedals.**
- ❖ **Retreat to fly another day, is the better part of valor, if conditions are too hazardous to risk pilot or airplane.**

Knots x 1.15 = Miles Per Hour

Miles Per Hour x 0.889 = Knots

Wind speed	
MPH	KNOTS
1 - 2	1 - 2
3 - 8	3 - 7
9 -14	8 - 12
15 - 20	13 - 17
21 - 25	18 - 22
26 - 31	23 - 27
32 - 37	28 - 32
38 - 43	33 - 37
44 - 49	38 - 42
50 - 54	43 - 47

Budman

Merle's Poem

Hey guys and gals; **Merle King** wrote this cute little ditty for me and I thought that you all might enjoy it also.

"There once was a pilot named Mike
Who flew the occasional trike
But the sleek Hummelbird was what he preferred
Though he found them to be much alike."

Thanks Merle!
Budman

Your Flight Instructors:

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BFI-SP, DPE (770) 509-6753
Training Field - Cartersville (KVPC)

Kim Arrowood - BFI (706) 292-0525
Training Field - Cartersville (KVPC)