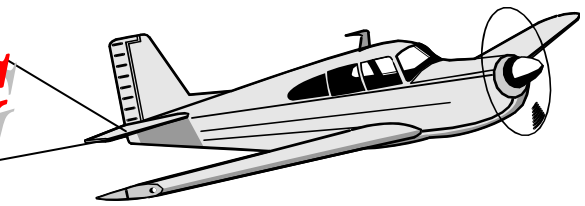
SKYWRITING



March 2010

November Flight Time www.flyingcc.org

Aircraft	Hrs	Last Annual
N5303L	2	July 2009
N80213	5.8	August 2009
N6231F	5.2	May 2009
N8114F	5.1	July 2009
N2516V	0.0	September 2009

Surcharge: $.00/gal

Local ASOS Numbers

Moline	309-799-7096
Davenport	563-388-2154
Clinton	563-243-8934
Muscatine	563-263-0902

Total Hours: 18.1 **(Down from 22.7 in October)** **Dues Paying Members: 55**

Spring Plane Wash: Saturday, May 2, 2010

Members

The club needs new members!! If you know of someone that is interested in flying please remember that the club is now offering incentives to members that refer new members.

Carb Ice Vs. Carb Heat

A topic we tend to dismiss in hot weather is carburetor icing. Humid air is plentiful in the summer, and temperatures inside the carburetor can drop 30 to 40 degrees. Summer or early fall are not the times to forget "carb ice." No matter how many hours we have logged, that "carb ice" gremlin can sneak up and catch us by surprise. Engine runup on the ground is by far a better place to discover it than during flight. But many times it is during flight that carb ice rears its ugly head. And when it happens it may have progressed to the point where the only way is down; that is, an immediate landing with little or no available engine power. But first, let's review this ever-present problem, look at means of detection, and share some timely methods for staying ahead of engine icing problems. .

There is always some degree of moisture (humidity) in the air that flows into and through an aircraft engine for every unit of fuel burned. A carburetor provides the explosive air/fuel mixture to each cylinder in the engine, where your power is generated.

As air is drawn into the small throat of a carburetor, the venturi effect accelerates the air and cools it. It cools even further when mixed with vaporized fuel. When this moist air reaches the freezing level of 32°F, the ice particles that begin to form deposit themselves on the throttle plate. The carburetor can then become choked up by this ice to the point that the engine receives less air than is required for full power. The once-explosive air/fuel mixture becomes so rich from excess fuel that the engine ceases to fire.

Basically: Whenever the cooling effect of the air flowing through the carburetor is sufficient to bring the temperature of the carburetor throat down to 32¼F or colder AND there is sufficient moisture in the air.

Specifically:

If the outside air temperature (OAT) is between about 20¼F and 30¼F with visible moisture or high humidity If the relative humidity of the outside air is high, even in a cloudless sky, with an OAT as low at 15¼F and as high as 100¼F In the spring and fall, especially just after a rain In other words, carbureted engines are susceptible to icing almost anytime.

There are two opportunities to detect the subtle indication of developing carb ice. The subtlety is a gradual, small drop in RPM on a fixed-pitch prop aircraft, even though the pilot did not retard the throttle. On a constant-speed prop aircraft, carb ice is manifested by a gradual, small drop in manifold pressure (MP) while in flight.

If detected early and dealt with correctly you can easily prevent an untimely engine stoppage.

During Pre-flight Engine Run-up

On the ground during engine run-up, ice is easy to identify positively and remove. On a Cessna, for example, at 1,700 rpm the carburetor heat control is pulled out fully to the hottest position. Because air entering the carburetor after application of carb heat is warm (from the engine compartment) and less dense, you will notice an rpm decrease of 100 to 300 rpm, and the rpm

should remain low until the carburetor heat control is pushed all the way back in. However, if the 100 to 200 rpm decrease is noted but slowly begins to increase so that when the carb heat control is pushed back in the rpm reads more than the original 1,700 rpm, you had carb ice.

If it happened on the ground, it can happen again during takeoff. While lined up on the centerline, just before takeoff, I heartily recommend another carburetor heat check.

In Flight At Constant Cruise Throttle Setting

An often asked student question during their ground school training is, "If the engine fails in flight because of carb ice, why not just apply carburetor heat to melt the ice?" That is a reasonable question, but let's look at why that action is more than likely too late to help.

Carburetor heat is obtained essentially from within the engine compartment (rather than directly from the intake air filter on the front of the aircraft). If the engine has cooled sufficiently because of an excessively rich air/fuel mixture, there may not be sufficient hot air in the engine compartment to melt the accumulation of carb ice even with the carb heat control to full "hot." That is the point when the engine will cease developing enough power to keep your airborne.

It is of the utmost importance to keep a sharp eye on engine performance at all times. At the slightest hint of deteriorating power (from decreasing rpm or MP) use carburetor heat for at east eight to 10 seconds or for however long the aircraft's manual recommends.

Annual Stock Holders Meeting

This year's annual stock holder's meeting was held at the Civil Air Patrol building. The meeting was productive and the board would like to thank everyone for showing up to support your club. Tim Leinbach and Dennis English were elected to the board. Thanks to Tim and Dennis for volunteering again this year.

From Your Board of Directors & Staff

Gene Fildes, President **Mark Conner, Director**
Joe Gallagher, Treasurer **Gary Hardy, Director**
Dennis English, Secretary **Tim Leinbach, Alt.**

Webmaster & Newsletter – Scott Latham

Plane Captains

N5103L - Mike Smith N80213 – Richard Husson
N6231F – Dick Kvach N8114F – Tim Leinbach
N2516V – Scott Latham

Flight Instructors

Gene Fildes CFII **Richard Hebbel CFII**
Tim Leinbach CFII **Jerry Lowry CFII**
Ben Sorgen CFII