



SPEED'S NEWS



MEETING, Monday, November 8, 1980, Sanborn Aviation, 7:30 PM
President: Gerald Laundry - 647-0259
Vice President: Sandy LeMire - 429-6422
Secretary/Treasurer: Rosemary Frank - 451-8187
Designees: Roger Westerberg - 458-0708
Al Amsden - 484-4058

THANKS: WYLANDS: For letting us have the time of our lives in your hangar on Saturday, November first. We ate, we drank, we sang, we talked and we ate some more. For those of you who weren't there - - you should have been. For those of you who were - - wasn't that a swell party? Let's see if we can't get the hangar again next year.
THANKS: WYLANDS:

The HOLMAN HOBBO's aren't doing too well. The COLT has been down for some time now and on Sunday ELVIRA came down, too. Literally. DARRYL LE MIRE & NORM SCHWEITZ had a bit of a scare. They were flying around Northport and low and behold - out blew a spark plug. Literally blew right out of the engine and was no where to be found. They managed to land on three cylinders and thankfully both men and Elvira are fine. Nice landing, DARRYL.

Everyone has been cordially invited to suggest a book for the chapter to purchase for the library that will benefit our members. PAT RILEY suggested we buy "Kill Devil Hill" by Harry Combs - (he was a Lear jet big wig.) It is a fascinating book covering the Wright Brothers and their attempts to build a plane that would fly. He goes into depth on the development of flying and the density altitude problems the Wright Brothers first experienced. (The local newsmedia said of the Wright Brothers - 'these guys are real NUTS:'.) The book sells for \$16.95 at The Pilot Shop. We will take a vote at the meeting.

ROGER WESTERBERG had occasion to go to Two Harbors, Minnesota, and see ART ANTHONY's recently modified and completed STOLPS STARLIT. ART had not even had an opportunity to fly it yet but he told ROGER it would fly at 150 mph and it would be windier than a BREEZY. Now what could be windier than a BREEZY:.

AL AMSDEN has been keeping himself busy tearing apart and rebuilding a wing he hopes to hang on a CESSNA 140.

Enclosed herewith is the first in a series of three very important articles JIM OLSON is sharing with Chapter 54 members. Read this very important article and never forget:

"Icing belongs on a cake - -
Not in the air!"

A Mountain Flying Seminar and A Survival Seminar



Friday - Nov. 14, 1980 A Mountain Flying Seminar

St. Paul Civic Center, St. Paul, Minnesota
7:30 PM to 9:30 PM, Conference/Meeting Rooms C-1 and C-2

Speaker: Mr. Sparky Imeson From Jackson Hole, Wyoming

Mr. Imeson for the last ten years has been a fixed base, air taxi operator out of Jackson Hole, Wyoming. He is an accident prevention councilor and pilot examiner for the FAA.

Subject areas: Mountain waves, icing, spins, visual illusions, wind shear and turbulence, physiology, and density altitude.

Saturday - Nov 15, 1980 A Survival Seminar

St. Paul Civic Center, St. Paul, Minnesota
8:30 AM to 5:30 PM, Conference/Meeting Rooms C-1 and C-2

Speaker(s): Mr. R. Skip Stoffel and Staff
Emergency Response Institute
Tacoma, Washington
Washington State Div. of Aeronautics

Areas of discussion: Orientation to emergency preparedness and aviation survival.
Emergency landing techniques and procedures.
Priorities in the emergency environment.
Mental considerations and factors.
Physiological complications.
Air search and rescue.
Mini sessions on skill development.

NO FEES, NO PRE-REGISTRATION OR REGISTRATION REQUIRED

Transportation: For pilots flying into the Downtown St. Paul Airport, free transportation will be provided by Mn/DOT to the Civic Center and/or local downtown lodging between the hours of 1:00 PM to 7:00 PM on Friday. Transportation will leave the St. Paul Terminal Building every half hour or as required. For information, call 296-8061 or visit room 222, St. Paul Terminal.

Lodging: For those desiring assistance or information in obtaining hotel or motel reservations, call 612-296-8061.

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FEDERAL AVIATION ADMINISTRATION



Icing Ain't Nice...

Icing is for cakes, not airplanes!

When pilots talk about inflight airframe icing, they almost always concede there's little chance of escaping serious consequences if icing is severe.

According to the National Transportation Safety Board, ice has certainly earned its place in the accident records. In 1976, (the latest NTSB statistics available) icing conditions, propeller ice, airframe ice and windshield ice were all cited as causes or factors in 63 accidents, 19 of which were fatal.

Actually, these statistics don't tell the whole story. The pilot in icing-related accidents generally made a combination of poor decisions, and an ice-coated airplane was just one of several factors that were stacked against him.

In flight structural icing does present real problems to flying airplanes; drag increases, stall speed increases, air foil efficiency decreases and propeller efficiency decreases. Vision is obscured by ice-covered windshields and antennas become inefficient or break off.

The coming of icy weather doesn't mean that an airplane should be locked away for the winter, even if it isn't equipped with fancy anti-icing devices. But it is important that the plane be equipped with a pilot who exercises sound judgment.

A knowledge of weather, especially frontal conditions, is essential in preflight planning. The possibility of icing conditions or pilot reports of actual ice should be taken into account in planning a flight. The VFR pilot should either find an alternate route or stay on the ground. The IFR pilot is more likely to encounter icing, so he should be particularly alert for conditions along a chosen route that may indicate an ice problem.

Generally associated with rain or clouds, inflight icing can occur throughout the year. Freezing temperatures, substantial moisture and an airplane are the primary ingredients. Icing occurs most frequently between 14°F and 32°F, but icing is possible down to -40°F.

Airframe ice (cousin of carburetor ice and an entirely different problem) comes in two basic forms. Rime ice is a milky, crystal-like formation that is usually very brittle. Clear ice is a tough, glassy concoction that adheres tenaciously to an aircraft's surfaces.

Contrary to some pilots' beliefs, ice can form on an airplane in clear air at freezing temperatures if there is a heavy concentration of moisture in it. The ice may not become readily visible or accumulate enough to significantly impair aircraft performance, but it could effectively block the inside of an unheated pitot tube, rendering it useless. Hence, a heated pitot tube is essential for cold-weather flying.

During flight, a pilot should be alert to avoid conditions that may be conducive to forming ice. The upwind slopes of mountains often contain high concentrations of moisture, so additional altitude may be warranted in the area, especially if it can be maintained above the freezing level.

Weather fronts should be avoided or crossed in the shortest possible time, not paralleled in the clouds. Warm fronts can be especially treacherous because rain falling into colder air below can coat an airplane with ice almost instantaneously.

Cumulus clouds, often covering a broad altitude range, frequently harbor severe icing conditions. The vertical updrafts and downdrafts associated with this type of formation aid in creating large droplets of water.

Stratus clouds, while usually covering a larger horizontal area than their cumulus kin, tend to have icing conditions concentrated in a narrow band of altitude. An altitude change may be all that is necessary to avoid or reduce structural icing. However, the pilot should remain alert because an altitude change could also worsen the situation.

Flight above or below the cloud deck is preferable to cruising in the center of one. If it becomes necessary to penetrate a cloud cover to get on top, the climb

should be made as expeditiously as possible.

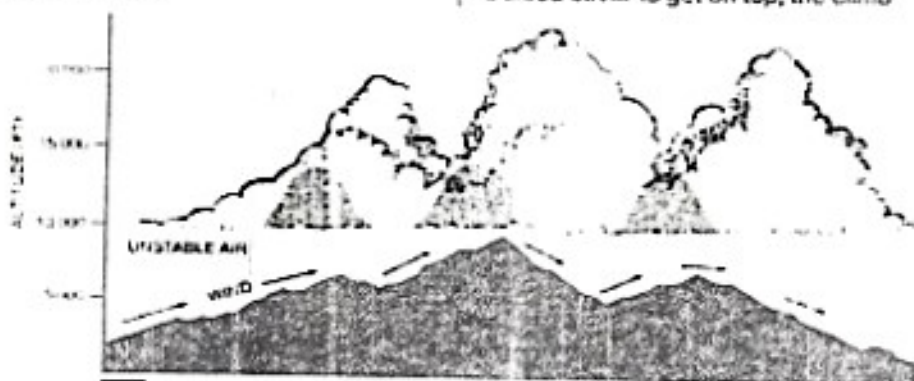
The first traces of ice should be a warning that calls for immediate action. Usually climbing to a higher altitude is the best solution to avoid further icing, unless the pilot is confident that above freezing temperatures are within reach at a lower altitude. A descent to a lower altitude or MEA (minimum enroute altitude) without leaving icing conditions could result in additional structural ice impairing the aircraft's ability to climb or maintain level flight. The pilot can also exercise his option of making a 180° turn; he should assume, however, that the airplane will probably pick up as much of the frozen stuff on the reverse course as it did on the inbound course.

Rules for avoiding ice are not steadfast. Avoidance of known and forecast icing conditions is one way to forestall confrontations with this phenomenon of nature.

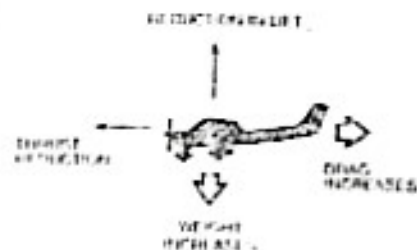
In any event, a plane carrying a load of ice is not the same plane that the pilot flew from the airport. The frozen load has added considerable weight to the airplane and, more important, it has disturbed the airfoil surfaces. Performance has been altered and the pilot should exercise considerable caution in handling his aircraft. The pilot should do whatever is necessary to fly the airplane and maintain control. That will probably include additional power, smooth operation of the controls and small altitude changes. Caution is especially critical during the approach and landing; the phases of flight most often associated with icing as a cause or factor in accidents. The ice will alter the aircraft's stall characteristics and additional awareness should be maintained during the approach and landing.

Icing is another of the realities of flying the weather that offers its challenges to the pilot. Of course, there is always the option of utilizing the best anti-icer/dicer available—the pilot's choice of flying or not flying.

It is truly, if not grammatically, correct to say... 'Ice ain't nice.'



SEVERE Icing REGION Mild Icing REGION Mountain Icing Regions



Effects of Structural Icing

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