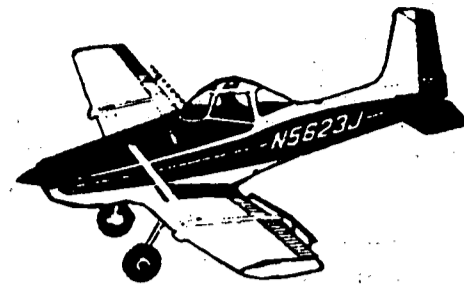


80900 RWZ274
HAROLDI VAVRA
ND AERONAUTICS COMM
BOX U
BISMARCK ND 58505

BULK RATE
U.S. POSTAGE
PAID
PERMIT NO. 120
WAHPETON, N.D. 58075

RELATIVE WIND

The Official Publication Of
The North Dakota Aviation
Association And Carrying The
Official News Of The North
Dakota Aeronautics Commission.



Vol. 2 - No. 6

February 1981

Wahpeton, ND 58075

Legislative resolution urging FAA to retain its Bismarck field office

Senators LeRoy Erickson, DeLamere, (Sargent and Dickey Counties) and I.E. "Esky" Solberg, Bismarck introduced Senate Concurrent Resolution No. 4017 in the N.D. Legislature, which urges the Federal Aviation Administration to maintain its Bismarck airport field office.

The Resolution in several "Whereas" paragraphs points out that officials of the FAA Denver Regional Office are considering closing the FAA's airport field office in Bismarck and that many airport construction projects are built with a large percentage of federal funds and that local airports seek grants from the FAA to construct airport improvements. The Resolution further notes that North Dakota engineers seek assistance from the Bismarck FAA office in drawing specifications for proposed projects and consult with the Bismarck office during construction to ensure projects

meet federal requirements.

The resolution concludes that the location of the FAA airport field office in Bismarck reduces delays in getting decisions compared with communicating with the Denver regional office and that shifting to Denver regional office would greatly increase travel and project costs which would offset any savings in closing the Bismarck office.

Resolution No. 4017 resolves that the Forty-seventh Legislative Assembly of North Dakota urges the FAA to maintain its airport field office in Bismarck and directs the Secretary of State to send official copies of the Resolution to the Administrator of the FAA, Washington, D.C. and to the Director of the FAA Rocky Mountain Region, Denver and to the Chief of the FAA Airport Division, Rocky Mountain Region and to each member of the North Dakota congressional delegation.

Airport Officials Urges Congressional Delegation to Intervene

Airport Managers from Bismarck, Devils Lake, Dickinson, Fargo, Grand Forks, Jamestown, Minot and Williston met in Bismarck on January 12th and adopted a resolution strongly supporting the retention of the Bismarck FAA Airport Field office. The

Airport officials requested that the Aeronautics Commission prepare a joint letter to be signed by all eight major airport managers and the Director of the State Aeronautics Commission and sent to the North Dakota Congressional delegation urging them to do everything within their power to prevent the closure of the

Continued on Page 2

FAA Rocky Mountain Region reorganizes airport division

In a special Newsletter edition, the FAA Rocky Mountain Region, Airports Division, announced a reorganization of its airports division, which became effective December 28th. The Airports Division is now organized into two branches known as (1) Planning/Programming Branch and (2) Safety/Standards Branch. Heading up the Airports division is Walter Barbo, Chief with Tel. (303) 837-3855.

The Planning and Programming Branch is headed by Edward Tatum, Chief with Tel. (303) 837-4397. Also in this main branch are Joyce Watson and Marilyn Wood.

North Section

A North Section of the Planning and Programming Branch will handle North and South Dakota and Montana and has the following personnel:

Roy Cunningham, chief; David Gabbert, K. Wasmundt, Ken Whitney, H. Handke (All with Tel (303) 837-5343) and David Wingfield with Tel. (303) 837-3395.

The reorganization has assigned principal points of contact with the airports division, which are persons expected to be completely knowledgeable of airport system programs. For the North Section (North Dakota, South Dakota and Montana), the person know as point of contact for North Dakota & South Dakota is Ken Whitney with Tel. (303) 837-5343 and for Montana, Dave Gabbert with the same telephone number.

Functions

Functions of Planning/Programming Branch

- *Prepare National Airport System Plan (NASP).
- *Administer Planning Grant Program (PGP).
- *Environmental Activities.

- *Prepares a 3-year CIP.
- *Prepare schedule of current year ADAP.
- *Administer ADAP (Airport-Aid Program) to tentative allocation stage.
- *Funds control and grant reviews.
- *Airspace reviews.
- *Advisory on airport planning and programming.

Functions of Safety And Standards Branch

- *Airport Certification and Safety Programs.
- *Safety and Compliance activities.
- *Airports data program.
- *Administer ADAP (Airport-Aid Program) from tentative allocation state to financial completion.
- *Support division efforts in preparation of CIP and schedule of current year ADAP.
- *Federal real and surplus personal property program.
- *Advisory on safety and standards.

Bill Moore with Tel—(303) 837-3061 is in charge of Airport Certification for North and South Dakota and Montana.

The North Section - Safety and Standards Branch has the following personnel: David Rask, Bismarck Airport Field Office (701)-255-4011, Ext. 385; H. Blum, Bismarck Airport Field Office (701)-255-4011, Ext. 385; Milt Heupel, Bismarck Airport Field Office (701)-255-4011, Ext. 385; Charles Engdahl, Helena Field Office (406)-449-5271; H. Whelen, Helena Field Office (406)-449-5271; John Dolan, Denver Region (303)-837-3061; Bill Moore, Denver Region (303)-837-3061; V. Jenkins, Denver Region (303)-837-3061.

The North Section handles North Dakota, Montana and South Dakota.

Resolution urging FAA to establish statewide system for aviation weather briefing

Senators LeRoy Erickson, Delamere (Sargent & Dickey Counties) and I.E. Solberg, Bismarck introduced Senate Concurrent Resolution No. 4015 in the N.D. Legislature, which urges the Federal Aviation Administration to establish a statewide, toll-free zenith telephone system in North Dakota, which would permit any pilot or aircraft owner to call the FAA flight service stations in North for aviation weather briefings.

The resolution says that North Dakota has 100 publicly and 450 privately owned airports where aircraft are based at which the owners and pilots are in need of current enroute and destination aviation weather information before beginning a flight and that there are 1,620 general aviation aircraft and helicopters located in 53 counties and in eight regions in North Dakota.

The resolution says that during the past five years, North Dakota has had 29 fatalities of pilots and passengers in general aviation aircraft accidents of which 17 fatalities were directly associated with adverse aviation weather conditions. The resolution states that many of the accidents associated with weather could have been prevented if the pilot had ready access to real-time aviation weather before beginning a flight.

The resolution concludes that loss of lives and aircraft and property loss in North Dakota could be substantially reduced, if aviation weather were made readily available to all general aviation aircraft owners and pilots in North Dakota.

The resolution urges the director of the Rocky Mountain Region of the FAA, Denver to install a statewide, toll-free zenith telephone system in North Dakota, which would permit any pilot or aircraft owner to call the FAA flight service stations in the state for aviation weather briefings at no cost to the pilot.

Resolution No. 4015 has passed the State Senate and has been messaged over to the House of Representatives for its consideration.

Watch for Annual Meeting news

The next few editions of Relative Wind will carry coverage of the January NDAA Annual Meeting.

Field office

Bismarck FAA airport field office.

Letters have been sent to Senators Mark Andrews, and Quentin N. Burdick and to Congressman Byron Dorgan requesting their assistance in retaining the Bismarck FAA Airport Field Office, which were signed by all eight airport managers and by Harold G.

Vavra, director of the State Aeronautics Commission.

Special Study

Carl Bailey, FAA representative who was assigned last fall to make a management study of the Bismarck FAA Airports Field Office and its counterpart in Helena, Mont., is expected to make a report of his recommendations by the end of January to Walter Barbo, Chief of FAA Airports Division and to Arthur Varnado, Director of the Rocky Mountain Region of the FAA, Denver.

General Aviation Around The State

STEELE . . . the City Council has created a city airport authority at their January 5 meeting. An authority was needed to organize finances and construction possibilities as to creating a new airport. Members will be selected at the next city council meeting. The Council had also voted to close the existing airport due to landing approach dangers and generally poor airport conditions. Plans are for a new airport possibly in the fall of 1981.

HEBRON . . . negotiations with the REC for electrical service and purchasing of runway lights is underway. Bob Tibor, Chairman of the Airport Authority, is spearheading the improvements that the airport needs to become suitable for both day and nighttime use.

NAPOLEON . . . may be considering purchasing a beacon for their airport. Costs of airport beacons range from \$600 to \$1000. The estimated yearly electrical operating costs range from \$200 to \$400. The benefits of a beacon and airport activity should be considered to outweigh the high operating costs averaging approximately a dollar a day.

MANDAN . . . has a new paved entrance road and enlarged apron. Plans are for fencing the airport to keep cars off the runway and apron.

KINDRED . . . will be installing runway lights on their newly graded and realigned runway. They will be completing the paperwork for their project and requesting state grant money in the near future.

KENMARE . . . plans to enlarge and pave ramp area in 1981 if county paving crews are in the area. This type of paving work can be done more economically since a crew and asphalt plant will already be in the area. Timely planning to coincide with an area road job will save your airport money.

MOHALL . . . Airport Authority Chairman Marvin Thom has informed us that Mohall plans to get an NDB. They may get a transmitter similar to Rolla and Rugby so that there will be a common knowledgeable serviceman in the area to inspect these units.

BEULAH-HAZEN . . . a public hearing will be held to discuss approval of a joint airport master plan. The area needs an airport with more runway length to handle the larger aircraft transients due to the energy development in the area.

From Your Secretary

By Jack Daniels, NDAA Secretary

The last issue of Relative Wind covered some proposed changes in our bylaws that will broaden our membership, and provide for additional strength in our aviation community.

As the complications of the decade of the 80s moves forward to place issues of airport financing, regulations, certification and operation before our state's airport owners and operators, we have a clear cut need for unity among all those who are a part of the aviation community in North Dakota and the nation.

We must have the ways and means to take our story before the legislature, the public and the population at large if we are to survive in the next decade.

Our voice, which we feel is the most important one in the world, is just one of many that is being heard throughout the land.

There is a vast number of airport authority members and airport managers throughout the state that can lend us a hand in the movement of favorable legislation through the processes of our state legislative session.

We need them to participate with us now and in the future.

We must have a great deal of participation from all segments just to survive. With participation we may find ways to grow in a friendly environment.

We hope to have you airport managers and airport board members join NDAA soon. Do it today!!!

From Your President

By Bill Beeks, NDAA President

With the convention just ended, I would like to dedicate my last president's message to a man I have known for most of his tenure in public office. The first time I met Harold Vavra, his office was located near the top of the Capitol building. From there he moved to the old terminal building and then to the new general aviation terminal building at the Bismarck airport.

He has written aviation laws on both the state and national level. Most of our North Dakota law, rules, and regulations, concerning airports, and aviation are the result of his efforts. He also wrote FAR 137 in its present form.

During the past year he wrote a brief in rebuttal to the Friends of the Earth petitions for strong restrictions on all spraying. His work was used by several states, along with a cover letter, as their position on the FOE petitions. We didn't get rid of FOE, but we did make a gain.

He has also expended considerable effort on behalf of FAR 135 Operators in an attempt to keep the regulations reasonable for operators in our sparsely populated state.

He has also devoted a lot of his time through the years to maintain a viable airline system in the state.

Harold has done much for all of us in the way of workable rules, regulations and laws.

I feel that we owe Harold a big vote of THANKS from all aviation groups in the state for his untiring devotion to AVIATION.

I have been following in my father's footsteps as a lobbyist for the NDAA in the use of Harold and his expertise in working with our lawmakers in Bismarck. I still use him as a resource for information and advice on giving testimony.

I am happy to report, as lobbyist for the association, there have been no major bills affecting aviation introduced to our lawmakers, as of the date of this writing.

With deadline to be met this last president's letter from me is being written before the convention. For me it has been an exciting year working with an excellent board of directors.

The last three years, as a member of the board of directors of NDAA has been very exciting. I wish to thank everyone who has been responsible for making the last three years, as a director of the association, very rewarding and worthwhile.

Place your ads in Relative Wind

To place an ad in Relative Wind, contact Richard Estes at 701-642-1501 or write to him at Prairie West Publications, Box 832, Wahpeton, N.D. 58075.

N.D. AERONAUTICS COMMISSION

Director: Harold Vavra,
Bismarck, N.D.
Chairman: Nicholas F. Schuster, Fargo, N.D.
Vice-Chairman: Ward Whitman,
Robinson, N.D.
Secretary: Jack K. Daniels,
Williston, N.D.
Commissioners: Alfred C.
Pietsch, Minot, N.D.,
John D. Odegard, Grand
Forks, N.D.

ND AVIATION ASSN. OFFICERS

President: William Beeks,
Central Flying Service, Wash-
burn, ND.
Vice-President: Ron Ehlers,
Dickinson Air Service,
Dickinson, ND.
Treasurer: Larry Linrud, Tri-
State Aviation, Inc., Wah-
peton, ND.
Secretary: Fred Andersen,
Aviation Services, Inc., Minot,
ND.
Immed. Past President: Robert
Odegard, Odegard Aviation,
Inc., Kindred, ND.
Exec. Secretary: Jack Daniels,
Serv-Air Accessories, Inc.,
Williston, ND.
Delegate to National Agricul-
tural Aviation Assn.: Bob
Woods, Woods Flying Service,
Grand Forks, ND.

WANTED

Selective Student Projects For
Recovering And Refurbishing -
Also Engine Overhauls - Con-
tact: Dakota Aero Tech., Box
5534, Fargo, ND 58105 - (701)
237-5305

FOR SALE

Herman Nelson BT-400-40
gasoline heater with trailer.
Contact Curt Anderson 282-3338
or 282-2737, Fargo, ND.

RELATIVE WIND

Official magazine of the ND Aviation Association. Published monthly for its members and others in the ND Aviation industry; carrying the official news of the ND Aeronautics Commission.

CO-PUBLISHERS

North Dakota Aviation Association and Prairie West Publications.

EDITOR

Patricia J. Estes

EDITORIAL ADVISORS

Robert Odegard, Larry Linrud,
William Beeks, Ron Ehlers, Fred
Andersen and Jack Daniels.

ADVERTISING MANAGER

Richard K. Estes

PRODUCTION MANAGER

Diane M. Gira

ADDRESS ALL

CORRESPONDENCE TO:
Prairie West Publications
Box 832
Wahpeton, ND 58075

Publishing firm responsible
ONLY for accuracy of customer
approved proofread ads.

Any error in customer approved ad will NOT result in adjustment to the bill.

Errors in non-proofread ads will be adjusted by 10% off the NEXT ad run.

CHECK THE PRIME... THEN CHECK CESSNA.

You can finance a new Cessna at rates far below what you would expect. It's true. If you qualify, Cessna Finance Corporation (CFC) will finance the purchase of a 1981 piston-powered Cessna at annual percentage rates of 12½ to 16 percent. Your rate will depend on how much you borrow and the length of the loan.

If you've been waiting for interest rates to go down before buying an airplane, there's no reason to wait any longer.

In addition to getting bargain interest rates, qualified buyers can tailor aircraft financing to their needs. The charts at the bottom show how.*

If the size of the down payment is top priority, a plan with a low down payment may be selected.

If the size of the monthly payment is most important, a longer contract term may be selected.

The lowest interest rate is available by borrowing less and selecting a shorter-term contract.

For example, suppose you want to buy a

new Skyhawk II. The list price is \$37,810.

Assume you have decided to finance 70 percent of the list price for six years. Look for 70% on the left side of the chart. Now find 6 years on top. Look straight down from there to the line for 70%, and you'll see that the annual percentage rate is 14.5 percent.

Your Cessna Dealer can figure your monthly

payment for you, which in this case would be approximately \$552.37 for 72 months. The Amount Financed of \$26,467 plus the Finance Charge of \$13,303.64 make your Total Payments \$39,770.64. The Total Payments plus your Down Pay-

ment of \$11,343 will give you a total Deferred Payment Price of \$51,113.64.

All rates are expressed as annual percentage rates. Financing for aircraft for commercial use is limited to five years for single-engine and six years for multiengine.

NOTE: These rates may be changed by CFC without notice or may be limited in applicability where at variance with state or federal law.

There's no reason to wait any longer. For specific details of a purchase that fits your needs, give your Cessna Dealer a call today. He's listed in the Yellow Pages under Aircraft Dealers. Or call toll-free 800/835-2246 (in Kansas, 800/362-2421), and ask for Operator 600. Leave your name, address and phone number, and you'll be contacted by a Cessna Dealer.

| | SINGLE-ENGINE | | | | MULTIENGINE | | | | |
|----------|---------------|--------|--------|--------|-------------|--------|--------|--------|------|
| | 3-D RATES | | | | 3-D RATES | | | | |
| | 4 Yrs. | 5 Yrs. | 6 Yrs. | 7 Yrs. | 5 Yrs. | 6 Yrs. | 7 Yrs. | 8 Yrs. | |
| 85% List | 15.0 | 15.5 | 16.0 | | 85% List | 15.0 | 15.5 | 16.0 | |
| 80% List | 14.5 | 15.0 | 15.5 | 16.0 | 80% List | 14.5 | 15.0 | 15.5 | 16.0 |
| 75% List | 14.0 | 14.5 | 15.0 | 15.5 | 75% List | 14.0 | 14.5 | 15.0 | 15.5 |
| 70% List | 13.5 | 14.0 | 14.5 | 15.0 | 70% List | 13.5 | 14.0 | 14.5 | 15.0 |
| 65% List | 13.0 | 13.5 | 14.0 | 14.5 | 65% List | 13.0 | 13.5 | 14.0 | 14.5 |
| 60% List | 12.5 | 13.0 | 13.5 | 14.0 | 60% List | 12.5 | 13.0 | 13.5 | 14.0 |

*These charts not applicable in Alaska.

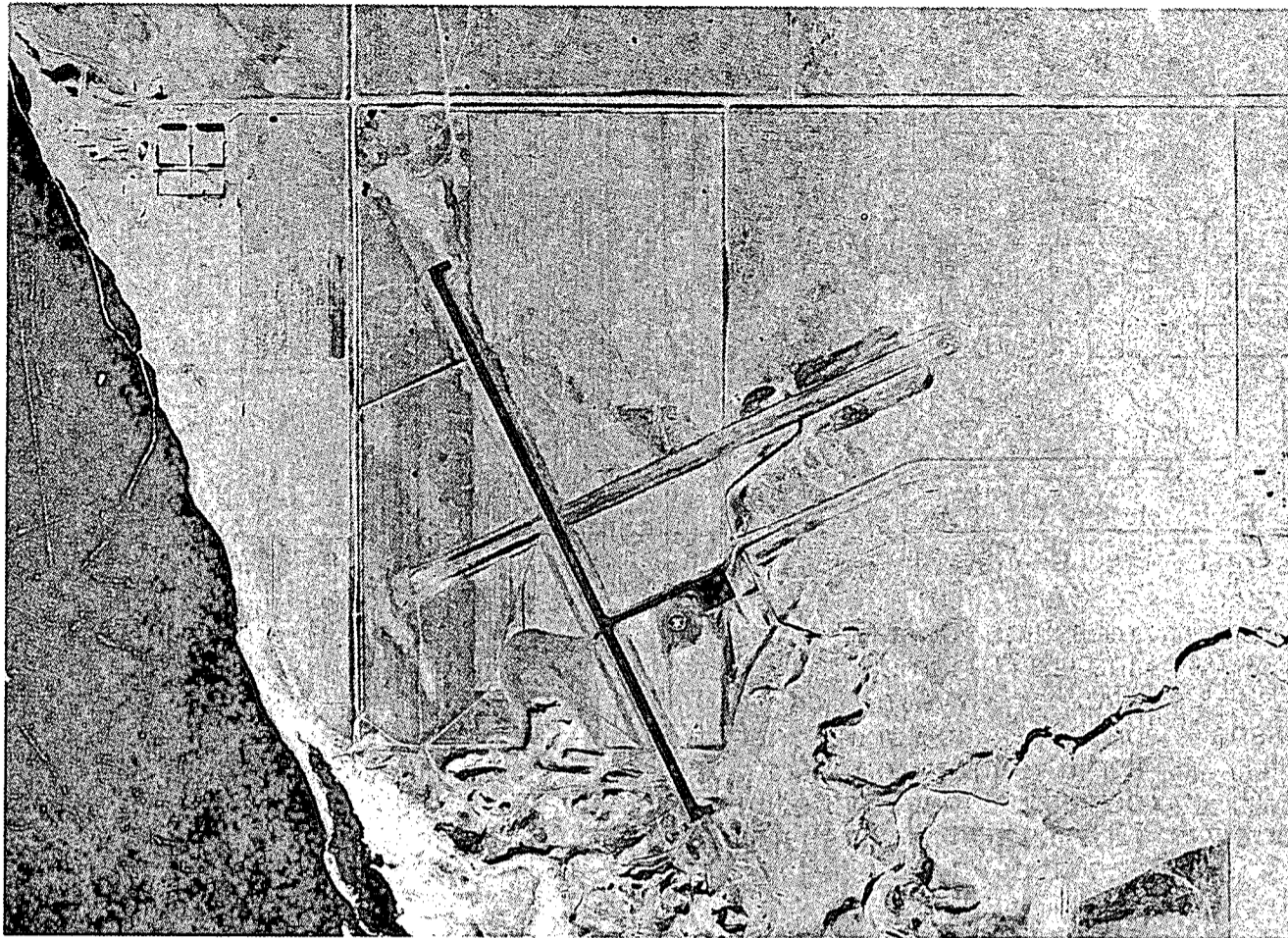
GET THE COMPETITIVE EDGE.

FLY CESSNA

The World's Number 1 Business Airline



Mystery Airport



Pilots test your knowledge as to which airport is pictured above. Note the body of water alongside the airport, it is not Lake Sakakawea. We will publish the answer in our next issue of Relative Wind. Last month's airport was the "International Peace Garden Airport" located north of Dunseith.

Cold Weather Ahead — Be Prepared

ENGINE BLANKETS/PROP COVERS

Save Engine Heat for Easy Starts. Insulated with Dacron 808 Hollofill. Custom-fitted Velcro-closures will not scratch. Singles: 2-place \$109.50, others \$119.50. Twins: light \$179.50, Cabin \$199.50. Prop Covers: 2-blade \$39.50, 3-blade \$54.50. Stuff sack included.

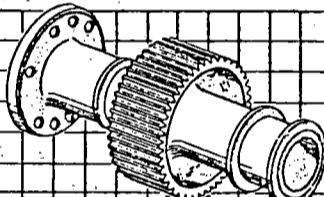
DELTA S. ENTERPRISES,
DEPT. R
(605) 334-9310
1701 S. Williams, Sioux Falls, SD 57105

LIFT STRUT FORK A.D. PROBLEMS?

WE SPECIALIZE IN MAGNAFLUX
ZYGLO AND CYLINDER REWORK

SAFETY BELTS, FILTERS & SPARK PLUGS
at discount prices.

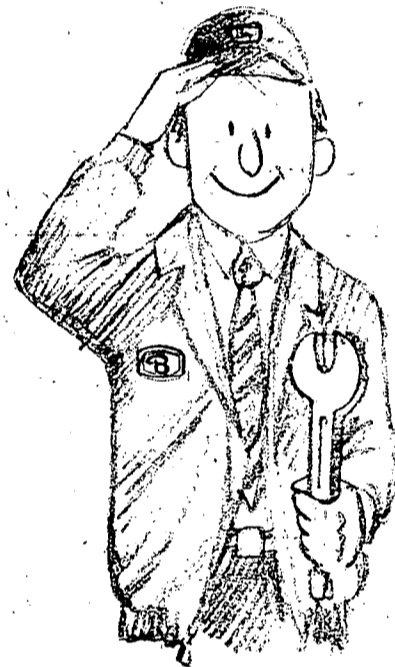
DAKOTA AERO TECH, Inc.



AIRFRAME POWERPLANT • ACCESORIES
AND MANY OTHER SPECIALIZED SERVICES

Hector Field - Box 5534 State University Station - Fargo, ND 58105
Dial (701) 237-5305 - FAA Repair Station No. D04-10

We understand
the business
aircraft
service needs.



Elliott Beechcraft is one of the largest fixed based operations in the region. We built our company to meet the needs of the corporate pilot and business executive pilot. We understand that your investment in a plane is a very serious business investment and it cannot make you money when it's down.

When you bring your airplane to Elliott, you can assume that it will be fixed once and fixed right. That the work will be done on time and on estimate. That's just the way Elliott Beechcraft does business.

With over \$250,000 worth of parts inventory, the latest equipment for your plane and technicians with the finest training, it all combines to provide you with the most reliable service at a reasonable rate.

We understand why you bought your airplane.

Because time is money!

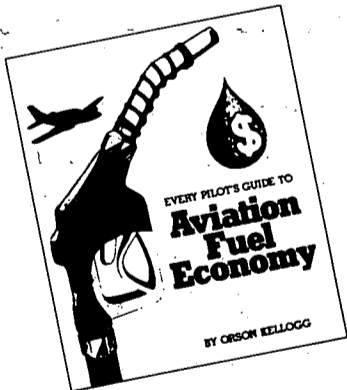


Authorized Beechcraft
Sales and Service
Flying Cloud Airport
Minneapolis
13801 Pioneer Trail
(612) 944-1200
MN Wats (800) 862-6090

February 1981

FOR EVERY PILOT

WANT TO SAVE FUEL?



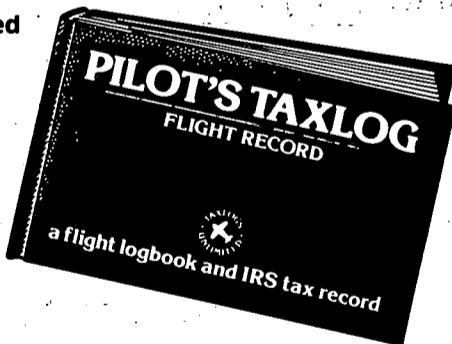
Advice on flying further on less fuel, setting power for maximum economy, leaning, using EGT gauges & digital fuel computers, and much more. 64 pages, soft cover, \$4.95 + tax.

Clearly designed
log pages -
dual purpose
book -
created by a
private pilot
& CPA.

Easy reading -
Written in
plain language -
specific, practical
solutions.

These 2 books are a
must for every pilot
whether you own,
lease or rent.

SAVE ON TAXES?



This revised book includes 34 kinds of forms, with instructions and examples on their use — all designed to help you to save taxes. Save on all possible aviation tax deductions. 128 pages, hard bound, \$9.95 + tax.

ALL ORDERS ARE PREPAID

SEND \$4.95 + 15c tax for each copy of
"Aviation Fuel Economy"
and \$9.95 + 30c tax for each copy of
"Pilots Tax Log"

To: PRAIRIE WEST PUBLICATIONS
Box 832,
Wahpeton, N.D. 58075

(Allow 4-6 weeks for delivery)

Winterwising and weatherwising

With the first blush of winter behind us and no reports of anyone hurting themselves or bending any metal, North Dakotans, as pilots, can congratulate themselves on the premise that "perhaps we are getting a little smarter."

This is the time of the year that a wary eye must be cast on the weather. Newcomers and old pilots better remind themselves that these are the months that a neverending succession of lows, seems like one every 3 days, march out of Wyoming and either sneak across S.D. or stagnate, causing low ceilings and associated fog for North Dakota.

During the day, ceilings may lift, but with temperature and dewpoint so close together, evenings have trapped many an unwary pilot, when evening temperatures drop as they inevitably do and fog forms. This coupled with early darkness, which must also be taken into account as something to add to winter flying tribulations. Don't forget that with early darkness, there is also the factor of very little twilight so allow plenty of time to make that landing at a unlighted field.

In the winter, time seems to evaporate, not only do aircraft engines need to be heated, many times they refuse to start. Allow an extra margin of time to play it safe. While heating that engine, make sure that not only are the cylinders heated, heat the accessory case and also make sure that the crankcase vent line is open and does not have condensation freezing it closed, as water vapors are being driven from the crankcase, as the engine is being heated. Assuming that it is dripping and is partly obstructed while heating, further engine operation in taxing and take-off could seal it over completely, which would then create a high-internal crankcase pressure, which is reflected in an abnormal high oil pressure. This internal pressure can build up to the point that it will blow out crankshaft seals or if you are lucky, the pressure can relieve itself by blowing out the oil dipstick. If this happens, no sweat, as then the pressure drops down and the possibility of the engine oil being driven overboard, as is the case, when a crankshaft seal ruptures. Needless to say that an engine does not run long with an oil starvation.

While that engine is heating, inspect your aircraft for frost, snow or slush on the wings and empennage, some could have drifted inside the tail cone or propspinner in this country. Don't be suckered into thinking that it will burn off after you are airborne. What happens is that your airplane can, and often does, lift off in ground effect to several feet above terra-firma, but then no amount of further application of back-pressure of the yoke-wheelstick or power application seems to provide the desired results. Drag is of course

building up from zero at the start of the take-off run to a terrific amount and you will settle back down on the runway, providing that it was long in the first place, otherwise it may be in a completely hostile environment.

Since you have a little time before your aircraft is ready to be started, how about throwing a snowmobile suit, some over-shoes, if you are not already wearing some, also mittens and a good cap and for good measure, a blanket of some sort in the baggage compartment of your aircraft. Supposing you were to land short of a runway and had to walk one mile in a 35-40 knot wind with a chill factor of -40, do you think you could make it in your oxfords, no headgear or good mittens, odds are that you couldn't, especially in a N.D. wind.

Now that you have heated that engine properly, treat it as in other mild weather, start, don't overprime, if at all. Frosted plugs are the result of trying to make a start without any heat or insufficient heat. What happens is that the engine may or may not fire several times on each cylinder and then stop, because of moisture condensation inside the cylinder and on the plug, shorting it out, preventing it from firing. In severe cases, additional heat may not dry the plugs and they will have to be removed for drying.

Assuming that you succeeded in a successful start and become airborne, besides fighting ice crystals on your windshield and side windows, resulting in severely reduced visibility, compounded by the low angle of the sun, because of short days, you will also be plagued by carburetor ice and if flying in snow, beware of snow compacting in the induction system in some types of aircraft, if the ram air control is in the open position.

As you are about to land at your destination and if it is one of our many smaller fields, you suddenly remember you should have phoned ahead to check the field condition. It would have only cost 75 cents and could save you thousands in bent aircraft and injured people, in the event of a mishap. Remember, just because snow had been cleared yesterday, does not guarantee that overnight, severe drifting made finger drifts across the runway, which as a rule are rather firm and can remove landing gear, both fixed and retractable, in a most awesome manner. Another thing, don't assume because you can see grass sticking out of the snow, that it is only 2-3 inches deep, maybe nobody made that last cutting in the fall and the grass is 16 inches tall. This condition will also remove gear fast and it has happened at Border Airport. Conversely, don't assume that just because you can see what appears to be bare ground on $\frac{3}{4}$ of the runway, that it is safe. What happens is that adjacent summer fallowed fields can and will drift dirt over the runway,

covering 2 & 3 ft. snowbanks with a perfect trap for the unwary.

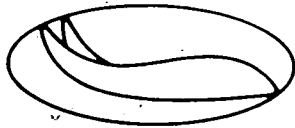
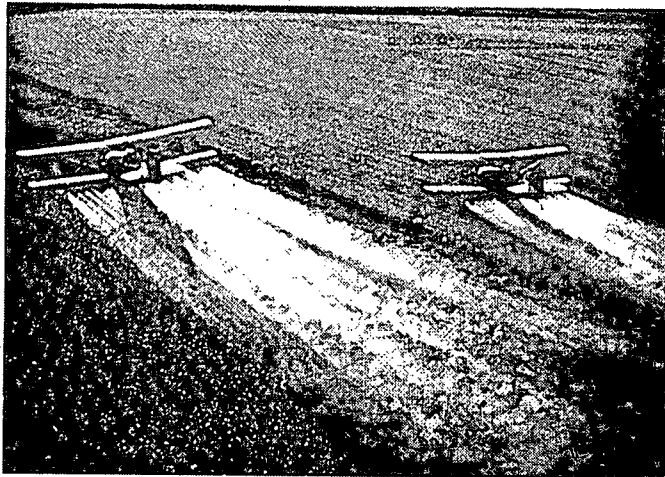
Be very cautious about making a landing in the royal gorge type of snow removal jobs that are often made at some airports. This comes about by the street foreman of City X, who is responsible for clearing the snow from the airport after all the streets and alleys are open, telling Joe to go out to the airport and plow out the runway, completely forgetting that Joe only came to work this fall. Of course, Joe has only plowed streets and alleys and he proceeds in the same fashion, making some of the deepest damn canyons that only clear your wing tips by scant feet. Imagine what can happen if you have some tricky crosswinds.

If you have purchased your first aircraft this past summer, don't forget to install the

winterization kit and block off your oil cooler if necessary. Check with a knowledgeable mechanic on what is best. On the landing approach in cold weather, avoid severe and abrupt throttle changes, use the progressive reduction method to allow pistons to cool down. Finned cylinders can cool down quickly while a piston that has a concentrated mass needs more time, the fast cooling of the cylinder wall will reduce the diameter and cause piston scuffing, since the piston reduces size more slowly, so it is claimed.

On the ground at your destination, don't forget to plan on heat for your engine if you are staying any length of time. For shorter durations, that blanket we talked about for survival, will conserve heat, if stuffed in the bug-eye cooling vents, better still, is one of the new plastic custom designed engine covers being sold. Now have a good trip home.

Get Broad Coverage . . .



AVIATION UNDERWRITING SPECIALISTS

YOUR BROAD COVERAGE AVIATION INSURANCE SPECIALISTS — WITH COLLECTIVELY OVER 65 YEARS OF EXPERIENCE IN AVIATION INSURANCE.

THAT'S WHY 4 YEARS AGO OUR NAME BECAME WHAT WE REALLY ARE —

AVIATION UNDERWRITING SPECIALISTS

For FBO's —

— FULL LINE COVERAGE

- AIRCRAFT LIABILITY
- PREMISES LIABILITY
- HANGAR KEEPERS LIABILITY
- HULL COVERAGE
- PRODUCTS LIABILITY
- CARGO LIABILITY

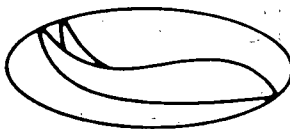
— AND MORE —

For AG Operators:

- AIRCRAFT LIABILITY
- CHEMICAL DRIFT LIABILITY
- CROP TREATMENT DAMAGE
- FARMER/OWNER/GROWER COVERAGE
- SPRAYING CITIES AND TOWNS COVERAGE
- HULL COVERAGE

ASK AUS

800-325-8079



AVIATION UNDERWRITING SPECIALISTS

8301 Maryland Ave. · St. Louis, Mo. 63105

Weighing benefits against risks

Reprinted from the USDA Farmline Report

Most farmers probably agree that some regulations on farm chemicals are needed to protect health and the environment, but many are upset by the increasing restrictions on the pesticides they depend on to protect their crops.

USDA economist Ted Eichers estimates that 225 to 250 million acres — or around two-thirds — of American cropland were treated with pesticides annually. Other USDA scientists have figured that 25 to 30 percent of

the nation's total crop production — or nearly all our exportable supply — would be lost without synthetic pesticides.

Even if production and prices could somehow be maintained without the chemicals, consumers might have to say goodbye to the unblemished fruits and vegetables they have come to expect.

For all they accomplish, pesticides are relatively inexpensive, accounting for only 3 percent of farmers' total production expenditures. Accord-

ing to Eichers, "Pesticide prices have increased less than the prices of any other farm inputs since 1970."

As important as pesticides are to farmers, it's not surprising that many take a dim view of increasing regulation, even though they're well aware of the potential hazards of farm chemicals.

Minimizing Measures

In fact, farmers were among the first to recognize the economics and environmental advantages of alternatives to routine pesticide applications.

Many producers minimize pesticide use by monitoring pest populations and carefully timing chemical applications. Integrated pest management (IPM), which includes biological and other natural pest control techniques, is being used with increasing frequency and success on many crops.

However, even IPM strategies may call for application of synthetic pesticides. And, while farmers' demand for pesticides has shown signs of leveling off from the rapid growth of the 1960s, pesticides will remain a necessary part of large-scale commercial agriculture for the foreseeable future, Eichers says.

As long as pesticides are used, the debate over how to balance the benefits and risks is likely to go on, and farmers will probably continue to face new regulatory actions.

How will this affect their production, pocketbooks, and health? That depends, Eichers says. Judging from the past, some pesticide regulations increase farmers' costs and reduce yields, but not all are to their detriment.

Less Harmful Alternatives

For example, regulations have taken some of the broad-spectrum chemicals, such as DDT, off the market. This has encouraged the development of alternatives that are less likely to harm beneficial insects.

Cotton growers once killed bollworms and budworms with broad-spectrum insecticides exclusively, which also killed most predators and parasites that would have helped control the worms naturally.

Growers were thus locked into spraying at regular, short intervals to keep the worms from coming back in greater numbers. And, the insects were growing resistance, requiring still more pesticide.

Recently synthetic pyrethroid insecticides were developed, and EPA expedited

**Pass Your FAA
Written
With . . .
GUARANTEED
WEEKEND
COURSES**



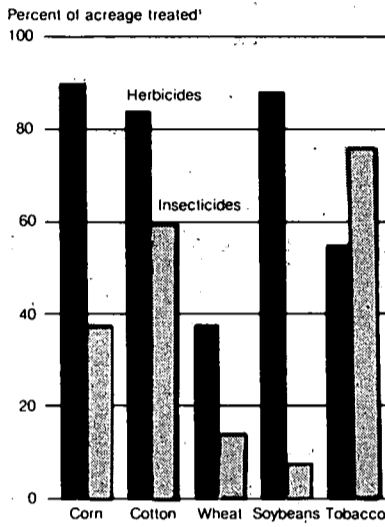
PRIVATE INSTRUMENT COMMERCIAL

| | | |
|------------|---------------|-----------|
| JAN. 24,25 | JAN. 17,18 | APRIL 4,5 |
| MARCH 7,8 | FEB 28, MAR 1 | |
| MAY 30,31 | MAY 2,3 | |

**Commercial & Instrument \$145
Private \$135**

Permanently Based At Minot Int'l Airport
PHONE 701/852-4092 • MINOT, ND

Pesticides Protect a Major Share of Field Crop Acreage



1976 CESSNA 182 II
1800 TT, 350SMOH, 2-KX-170B's, KMA 20 Audio Panel W/3 LMB, KR 86 ADF, KT 76A X-ponder, GS, EGT, Carb, Air Temp., LH Articulating Seat, T Windows, Quick Drain, Winter Kit, RH Hinged Window, LR Fuel, 200A Pilot, NDH, Aug. Annual, Green/White, Green Interior, N9886M
\$28,000.00

1981 - PIPER WARRIOR
Radio - ADF - Trasp. A Good Trainer.
\$34,000.00

1967 BELL 47G4A HELICOPTER
Has Sprayer With No Bar Kit - With New Type Tail Rotor. 550 SMOH, 600 HR's to 1200 HR. High Skids - Radio.
\$65,000.00

1979 CESSNA 172 II
900 TTSN 300 Nav/Com, 400 G.S., 300 ADF, 300 X-ponder, 400 MB, RH Hinged Window, Rear Seat Vents, Hobbs, Courtesy Lights, GSP, LR Tanks, NDH, Winter Kit, LH Articulating Seat. New Annual, Green/Tan/White, Green Int. N2487E NDH.
\$24,000.00

1968 PAWNEE 260
Flagger
\$15,500.00

1978 CESSNA 182RG II
1200 TT, SPOH, 720 Nav/Com, GS, 300 ADF, 300 X-ponder, 200 A/pilot, Post Lights, Courtesy Lights, Rear Seat Vents, Hobbs, RH Hinged Window, Winter Kit, Marker Beacons, Blue/White, Blue Interior, N7369X NDH
\$40,000.00

BELL 47G3B1 HELICOPTER
Zero Since 1200, Turbo Charger, Radio Like New!
\$139,000.00

1974 PIPER ARCHER
2300 TT, 300 SMOH, 2 Radios, AFD, X-Ponder.
CALL FOR PRICE

1976 CESSNA 172
400SMOH, 1500 TT, 2 Radios
CALL FOR SPECIAL PRICE

1979 PIPER TOMAHAWK
450 TT KX-170B, KT-78 X-ponder, Pilot Heat, Post Lights, ELT, Brown/White, Tan Interior, N2589C NDH
\$13,500.00

1980 PIPER ARCHER II
350 TT, like new.
\$39,500.00

1966 SKYLANE
1600 TT, Like New.
\$14,500.00

1970 PIPER NAVAJO B
2700 TT, 1350 SMOH, L&R, 2-KX-170B's, KR-85 ADF, KT-76 X-ponder, 190 DME, KNX 40 Radar, IIC A/pilot with Couplers, GS, C, Pilot Instruments, C, Pilot Brakes, Cabin Divider, Executive Tables L & R, Tilet & Bar, Oxygen, Tinted Windows, Floor Runner, Rull DEICE, Hot Windshield, Stobe, 8 Seats, Nov. Annual, Blue/Red/White, Red Interior, NDH N6647L
\$125,000.00

1978 AG CAT
450 HP, 250 HRS, B Model High Density Combo, 80 Gal. Fuel, 12 volt, Side Load, Nav Lights, APU, In Line Strainer, Pilot Cool Seat.
\$64,000.00

1974 BEECH BARON MODEL 58
1150 TT A & E, New Annual, Blue & Red On White, Original Paint, KX175, KX170, KR8580F, RNAV, Flight Director, Auto-pilot, RCA Scout II Digital Radar, New Boots, Slave Gyro, Alcohol Props & Windshield, Heater Recently Overhauled.
\$139,000.00

1977 PIPER WARRIOR II
176 TTSN, Exec Group, King 170B, X-ponder, No Damage History, Red & Gold Over White.
CALL FOR PRICE

1968 180AARROW MODEL 68
200 SMOH, 2100 TT, IFR
CALL FOR PRICE

NOW OPEN — HELICOPTER FLIGHT SCHOOL — Call Us For Information

JAMESTOWN AVIATION, INC.



PIPER PAWNEE BRAVE

Post Office Box 427
Jamestown, North Dakota 58401
Phone 701-252-2150

PARAQUAT; AVITROL; LEAFEX - 3

Complete Agricultural Chemical Distributor

Also
Marking Flags For Aerial Applicators

OSTLUND CHEMICAL CO.

P.O. Box 446 — 1330 - 40th St. N.W.
FARGO, NORTH DAKOTA 58107
Phone (701) — 282-7300



New for
Wheat and Barley...

Now just one product controls wild oats PLUS pigeongrass... new HOELON. Just spray it and forget it. No incorporation!
Great control of annual grasses without harming the crop.

HOELON: it does more.

"A RESTRICTED USE PESTICIDE"

their registration. They are somewhat more selective, so they spare many beneficial insects. Often, spraying can begin later in the season with them, and then cotton fields can be treated less frequently than with the older compounds.

With fewer applications, cotton pests are less likely to develop resistance. The self-defeating cycle of insecticide, resistance, more insecticide, more resistance is usually slowed.

Indeed, several of the broad-spectrum insecticides banned by government action — including DDT — were already losing value to farmers because pests were becoming resistant to them.

Minor Crops Left Behind

As regulations become more stringent, however, some farmers are left behind: the growers of minor crops.

Under the current Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), each combination of crop, pest, and pesticide must be appraised before it can be okayed.

"Chemical companies do not seek to register pesticides if the market potential is inadequate," Eichers says, "and most of the fruit, vegetable, livestock, and specialized crop uses are considered minor."

To help minor-crop producers secure registration of the pesticides they need, USDA and the state agricultural experiment stations maintain the interregional Research Project (IR-4). The project funds required research on the effectiveness and human tolerance of a pesticide.

About 400 applications for IR-4 aid come in annually, project officials estimate. For instance, garlic growers in California and Oregon got IR-4 help in clearing bromacil, an effective weedkiller.

Limited Aid Funds

But for every group of growers that receives assistance, one group is turned away because of the project's financial limits. For these farmers, the consequences of regulation can be continued crop losses to pests.

For pesticide manufacturers, too, regulation has become increasingly expensive, and these rising costs affect farmers directly and indirectly.

Between the periods of 1967-70 and 1977-78, leading chemical manufacturers reported nearly a fourfold increase in pesticide research and development costs. If this keeps up, pesticide prices may start outpacing other farm production cost rises, Eichers says.

At the same time, the selection of pesticides available to farmers seems to be shrinking. The number of new pesticide products registered annually dropped 80 percent between 1967-70 and 1977-78, from ten a year to two a year. Although registrations are again increasing, some minor pests, even on major crops, may not be controllable.

While these trends are very disturbing to many in agriculture, pesticide regulations can also affect farmers in another — and more positive —

way unrelated to production economics.

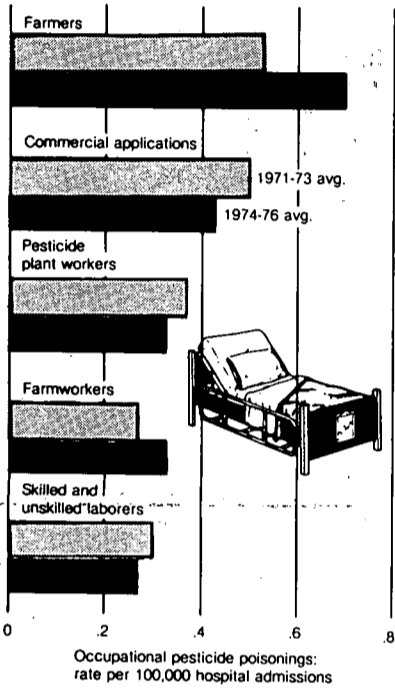
Pesticide Poisoning

Eichers estimates that private applicators — mainly farmers and farm workers — spread about 70 percent of all agricultural pesticides used in the U.S.; only 30 percent are spread by contractors.

Thus, except for chemical plant workers, farmers suffer greater exposure to pesticides than almost any other occupational group. Regulations have often been designed to help protect farmers — and their families from pesticide poisoning.

From 1971 through 1976, EPA monitored pesticide poisonings that led to hospitalization — and found that farmers had the highest average rate of any occupational group studied. Even pesticide plant workers accounted for fewer hospital admissions than farmers.

Pesticide Poisonings: Farmers Widen Their Lead



Source: National Study of Hospitalized Pesticide Poisonings, 1974-76, July 1980, EPA.

As a result of the occupational hazards, a new classifying system for pesticides was created: restricted and nonrestricted use. Since late 1978, farmers and others who wish to apply restricted-use pesticides have had to be certified.

Through USDA's extension service, each state trains applicators through workshops or home study courses. The certification program teaches the importance of following directions on pesticide labels, using protective clothing and equipment, and recognizing and treating acute pesticide poisoning.

Long-Range Dangers

Even with these precautions, EPA officials stress that pesticides may still pose a threat to health. Subacute symptoms — headaches, blurred vision, respiratory problems — may be hard to pinpoint.

And, for some pesticides, little is known about the long-range effects of exposure — such possible consequences as tumors, sterility, and birth defects. Federal regulations now require animal studies of chronic effects before a pesticide can be registered.

In addition, information is still being collected on pesticides that are already

registered. Certain triggers — including evidence of major long-term damage — can cause a chemical to be restricted, temporarily suspended, or permanently banned.

In all registration cases, benefits are measured against risks in determining which use patterns are retained.

The registration process is necessarily slow and costly. And, because of continuing pressures to safeguard human health and the environment, it's likely to stay that way.

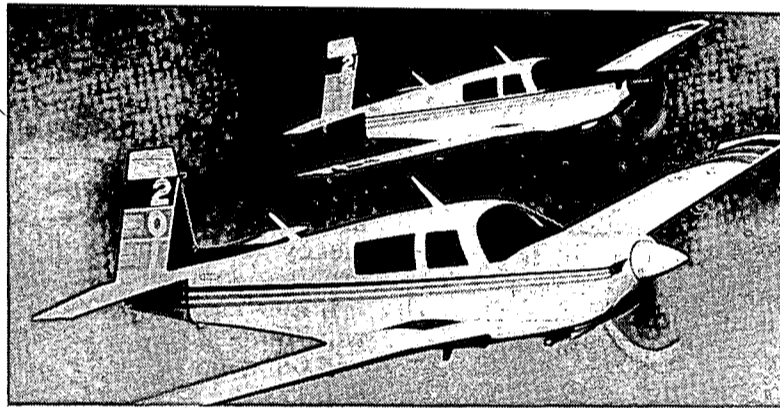
For farmers, this means a good deal of inconvenience, probably rising costs, and possibly future crop loss. However, it should also mean a safer occupation.

Many contend the tradeoff is justified. But many others continue to argue that more consideration must be given to farmers' costs and production in weighing the benefits and risks of pesticides.



MOONEY AIRCRAFT

Our 35th year of Sales & Service



Willmar Air Service Inc.

Municipal Airport — Willmar, MN 56201

Bruce Jaeger, Pres.

612-235-4844 or After Hours 612-235-7985

GOOD SELECTION ON NEW AND USED MOONEYS
CALL FOR DEMO TODAY!

Want To SELL Or BUY Something?

Use A "RELATIVE WIND" Classified Ad. Pre-Paid only \$15.00 minimum or .75 per word (\$10.00 min. or .50 for NDAA members)

Fill in the blanks and mail your check To:
Prairie West Publications, Box 832,
Wahpeton, ND 58075

| | | | | |
|-------------|-------------|-------------|-------------|-------------|
| | | | | 15.00/10.00 |
| 15.75/10.50 | 16.50/11.00 | 17.25/11.50 | 18.00/12.00 | 18.75/12.50 |
| 19.50/13.00 | 20.25/13.50 | 21.00/14.00 | 21.75/14.50 | 22.50/15.00 |
| 23.25/15.50 | 24.00/16.00 | 24.75/16.50 | 25.50/17.00 | 26.25/17.50 |

Check One:

- FOR SALE
- JOB OPPORTUNITY
- FOR RENT/LEASE
- WANTED TO BUY
- POSITION WANTED

Winter flying tips

Radios — Should not be tuned prior to starting. Radios should be turned on after the aircraft electrical power is stabilized, be allowed to warm-up for a few minutes and then be tuned to the desired frequency.

Removal of Ice, Snow and Frost — A common winter accident is trying to take off with frost on the wing surface. It is recommended that all frost, snow and ice be removed before attempting flight. It is best to place the aircraft in a heated hangar. If so, make sure the water does not run into the control surface hinges or crevices and freeze when the aircraft is taken outside. Don't count on the snow blowing off on the takeoff roll. There is often frost adhering to the wing surface below the snow. Alcohol or one of the ice removal compounds can be used. Caution should be used if an aircraft is taken from a heated hangar and allowed to sit outside for an extended length of time when it is snowing. The falling snow may melt on contact with the aircraft surfaces and then refreeze. It may look like freshly fallen snow but it usually will now blow away when the aircraft takes off.

Blowing Snow — If an aircraft is parked in an area of blowing snow, special attention should be given to openings in the aircraft where snow can enter, freeze solid, and obstruct operation. These openings should be free of snow and ice before flight. Some of these areas are as follows:

1. Pitot Tubes
2. Heater intakes
3. Carburetor intakes
4. Antitorque and elevator controls
5. Main wheel and tail wheel wells, where snow can freeze around elevator and rudder controls.

Fuel Vents — Fuel tank vents should be checked before each flight. A vent plugged by ice or snow can cause engine stoppage, collapse of the tank, and possibly very expensive damage.

Taxiing — A pilot should keep in mind that braking action on ice or snow is generally poor. Short turns and quick stops should be avoided. Do not taxi through small snow drifts or snow banks along the edge of the runway. Often there is solid ice under the snow. If you are operating on skis, avoid sharp turns, as this puts torque on the landing gear in excess of that for which it was designed. Also for ski operation make sure safety cables and shock cords on the front of the skis are carefully inspected. If these cables or shock cords should break on takeoff, the nose of the ski can fall down to a near vertical position which seriously affects the aerodynamics efficiency of the aircraft and creates a landing hazard.

If it is necessary to taxi down wind with either wheels or skis and the wind is strong, get help or don't go. Remember when you are operating on skis, you have no brakes and no traction in a crosswind. On a hard packed or icy surface the aircraft will slide sideways in a crosswind and directional control is minimal particularly during taxiing and landing roll when the control surfaces are ineffective.

TAKEOFF

Takeoffs in cold weather offer some distinct advantages, but they also offer some special problems. A few points to remember are as follows:

1. Do not overboost supercharged engines. This is easy to do because at very low density altitude, the engine "thinks" it is operating as much as 8,000 feet below sea level in certain situations. Care should be exercised in operating normally aspirated engines. Power output increases at about 1% for each ten degrees of temperature below that of standard air. At -40°F an engine will develop 10% more than rated power even though RPM and MP limits are not exceeded.

2. If the temperature rises, do not expect the same performance from your aircraft, as when it was operated at the lower density altitudes of cold weather.

3. Use carburetor heat as required. In some cases, it is

necessary to use heat to vaporize the fuel. Gasoline does not vaporize readily at very cold temperatures. Do not use carburetor heat in such a manner that it raises the mixture temperature barely to freezing or just a little below. In such cases, it may be inducing carburetor icing. An accurate mixture temperature gauge is a good investment for cold weather operation. It may be best to use carburetor heat on takeoff in very cold weather in extreme cases.

If your aircraft is equipped with a heated pitot tube, turn it on prior to takeoff. It is wise to anticipate the loss of an airspeed indicator or most any other instrument during a cold weather takeoff — especially if the cabin section has not been preheated.

Climb Out — During climb out, keep a close watch on heat temperature gauges. Due to restrictions (baffles) to cooling air flow installed for cold weather operation and the possibility of extreme temperature inversions, it is possible to overheat the engine at normal climb speeds. If the head temperatures nears the critical stage, increase the airspeed or open the cowl flaps or both.

Carbon Monoxide Poisoning — Don't count on symptoms of carbon monoxide to warn you. It's colorless, odorless, and tasteless 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:

1. Shut off the cabin heater or any other opening to the engine compartment.
2. Open a fresh air source immediately.
3. Don't smoke.
4. Use 100% oxygen if available.
5. Land as soon as possible.
6. 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.

LETDOWN

Engine Operation — During letdown there may be a problem of keeping the engine warm enough for high power operation if needed. It may be desirable to use more power than normal, which may require extension of landing gear of flaps to keep the airspeed within limits. Carburetor heat may also be necessary to help vaporize fuel and enrichen the mixture.

Blowing Snow and Ice Fog — Blowing snow can be a hazard on landing, and a close check should be maintained through-

out the flight as to the weather at destination. If the weather pattern indicates rising winds, then blowing snow may be expected which may necessitate an alternate course of action.

Ice fog is a condition opposite to blowing snow and can be expected in calm conditions about -30 F and below. It is found close to populated areas, since a necessary element in its formation is hydrocarbon nuclei such as found in automobile exhaust gas or the gas from smoke stacks.

Both of the above conditions can form very rapidly and are only a few feet thick (usually no more than 50 feet) and may be associated with clear enroute weather. A careful check of the forecast, weather, and cautious preflight planning for alternate courses of action should always be accomplished.

Landing — A landing surface can be very treacherous in cold weather operations. In addition, caution is advised regarding other hazards such as snow banks on the sides of the runways and poorly marked runways. Advance information about the current conditions of the runway surface should be obtained. If it is not readily available, take the time to circle the field before landing to look for drifts or other obstacles. Be aware that tracks in the snow on a runway do not insure safe landing conditions. Often snowmobiles will use runway areas and give a pilot the illusion that aircraft have used the airport and the snow is not deep.

Portable electronic devices

On December 24, 1980, the VOR system on a Boeing 727 failed. The crew said they could hear a loud buzz, but otherwise the equipment was unuseable. Investigation revealed that a passenger was operating an electronic poker game which was interfering with the VOR navigational signal.

Since electronic devices of all kinds are becoming more and more popular, it seems appropriate to point out that FAR 91.19 prohibits an operator from allowing the use of electronic devices under IFR unless the operator or pilot has determined the device will not cause interference with the navigation or communications system of the aircraft.

Pilots should be aware of the hazards of navigation in the airspace system under IFR with equipment that could be inoperative or inaccurate due to interference by electronic devices. Keep in mind that Air Carrier and Commercial operators are subject to more demanding requirements than mentioned in this article. If you have questions about your particular situation, consult FAR 91.19 or contact the Fargo Flight Standards District Office (formerly, the GADO).

February 1981

A & P IN 1 YEAR!

Unique Practical Training

BECAUSE

Our FAA Approved A&P School is combined with our FAA Approved Repair Station.

— Approved For Veterans —

Classes Starting In
January - March - June - September
Write Or Call:

**Dakota
Aero Tech, Inc.**

P. O. Box 5534, S.U.S.
Fargo, ND 58105 - 701-237-5305

Deck Flying Service

Gulfstream American
AG-CAT

Sales - Service - Parts

FOR SALE:

1979 G-164B 450.

100TT&E, 80 Gal. Fuel, Direct Drive Starter, 24V, Nav Lights, Solid Systems Control, Bottom Loading System, T.E. Spray System (41 Nozzles), Cool Seat & Ext. Plug, Auto Flagger, Compro Smoker, N8272K
\$78,000.00

1979 G-164B 450

FTO or Pick Up At Factory, 80 Gal. Direct Drive Starter, 24 V, Nav Lights, Solid Systems Control, Bottom Loading System, Will Have Superboom Installed, Cool Seat & Ext. Plug.

CALL FOR SPECIAL PRICE QUOTE AND SPECIAL INTEREST RATE FOR QUALIFIED BUYERS!

1969 G-164A - R-1340.

3850 TTAF, 750 SMOH, 350 STOH, Ext. Wing, 80 Gal. Fuel, D.D. Starter, 24 Volt, Nav Lights, External Plug, Heavy Gear, Combination Solids & New S.S. Trailing Edge Spray System (57 nozzles with shutoffs), New Battery, Tail Fabric & Tips, Bottom Loading New Fiberglass Hopper with Twin Trombone Vents, Flagger, Excellent maintenance history, 12-18-79 Annual.
\$44,000.00

Call Toll Free:

N.D. 1-800-732-4292

Other 1-800-437-5319

Deck Flying Service

Ron Deck

Box 675

Hillsboro, N.D. 58045

Off: 436-5880-Res. 436-5921