DON'T MISS THE NORTH DAKOTA AVIATION ASSOCIATION ANNUAL CONVENTION

JANUARY 27, 28, 29, 1982
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NDAA to honor "Pappy Larson"   Pioneer of the Year

By JULIE STILLWELL

For as long as Duane Larson can remember, he'd wanted to fly. His
test in aviation has never been an idle one, however, and the North Dakota
Aviation Association will be honoring Larson with the North Dakota
Aviation Pioneer Award in recognition of his contributions to the state's aviation
history.

Larson's life has been thoroughly ent-
twined with aviation. Now at age 65, he
retired from flying two years ago, and
that due to health reasons rather than age.

The Fargo resident was born at Regent, N.D. His uncle Martin Schow of Stan-
ton, N.D., operated a flying school. A
1938 calendar advertising the business
hangs as a cherished relic among the
awards and photographs lining Lar-
son's family room.

"My uncle used to take me for airplane
trips when I was about eight years old," Larson recalled. He finds it dif-
ficult to explain why aviation came to be his greatest fascination, but aviation
eventually became his career.

Originally, Larson wanted to join the
Aviation Cadets, but cadets were re-
quired to have four years of college—
and Larson had not completed that re-
quirement.

Instead, he joined the Army Air Corps
in 1941, now known as the U.S. Air
Force. He passed the required exam
and earned the right to fly.

Larson started out in primary training at
Helena, Ariz., and took basic training at
Gunter Field in Montgomery, Ala. His
advanced training took place at Krag Air
Force Base near Selma, Ala.—
the same base where his son Tom
later trained.

After practice maneuvers at Rice,
Calif., Larson was ordered to
Plymouth, England. He served with the
Eight Air Force and completed 68
missions before returning home.

"I've been over Poland, Spain and most
of Europe; but I never set foot in any of
those countries," Larson commented.

After his four-year enlistment, Larson
operated his own airport at Mott, N.D.
Besides the normal activities required
in managing an airport, Larson and
some friends did harrowing exhibits
across the western part of the state.

"Once we did a 'How Not To Fly' act.
That was one of the few times I had a
crash. I bunted up the plane, but I walk-
ed away without a scratch," Larson
recalled with a chuckle.

Crop spraying with airplanes was the
most development in aviation at the
time, and Larson said he and his
associates "weren't the first, but
among the first" in North Dakota to use
planes for crop spraying.

Back in the early days of crop spraying,
planes were modified to do the spray-
ing.

"Today the planes are custom-made
and much safer," Larson noted.

Larson was also granted permission to
operate a "G.I. Flying School". He also
did occasional charter flying.

Larson was married to Esther Sunday
from Turtle Lake, N.D., at age 27, and
his wife flew with him often.

"We didn't have a car until I was 30," he
said. Their daughter was brought home
from the hospital via their airplane.

Larson began his 18-year career with the
Air National Guard in 1951 when he was
"young enough to be a little wild.
"An organization he formed a "big
morale-booster" was the fliers known as
the "Happy Hoogians."

The group of pilots forming the "Happy
Hoogians" was named for a comic-
strip "Happy Easter and the
Hoogians." The Hoogians were well-
known in the community for their flying
antics and Larson was given the
nickname "Pappy," as he was one of
the eldest Hoogians.

Before retiring in 1966, Larson attained
Colonel status, receiving the air medal
and four classtions, and the Distinguished
Flying Cross.

High blood pressure grounded Larson
for four years, and he operated a Dairy
farm near Eagle Bend, Minn. Four
years later, after Larson's health im-
proved, he was given the go-ahead to fly
again.

Larson returned to crop spraying and
worked for Arlin Kraft, Mapleton, and
the Schrader Brothers of Davenport,
N.D. He continued until 1966, when his
health forced him to retire once more.

Larson has flown several times since
retirement, but now as passenger in-
stead of pilot. He continues to enjoy
fishing as a recreation, and meets
regularly with retired Happy Hoogians
to share a breakfast and memories of
great flying days.

ATTEND ANNUAL MEETING

It's not too late to attend the NDAA annual convention at the
Holiday Inn in Dickinson from Jan. 27 to 29.
You can register when you arrive.
Room space is limited though at the Holiday Inn and other
motels in Dickinson. Call ahead and make reservations to be
on the safe side.

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1982 NDAA ANNUAL MEETING PROGRAM
Jan. 27-29, 1982 Holiday Inn Dickinson, N.D.

(Make your room reservations early... space is limited)

Wednesday, Jan. 27
12:00 Luncheon
Board of Directors
Members Requested to attend
4:00 Registration
6:30 Pooleside Social Hour
Snacks and Beverages – Dinner on your own

Thursday, Jan. 28
7:30 Buffet Breakfast
9:00 First Business Session
Committee Appointments
Approval of Minutes
Treasurer's Report
President's Report
10:30 Coffee Break
11:00 Future of National Agricultural Aviation Association
State Membership
NDAA Past President
Dick Reade, Hayti, MO
12:00 Luncheon Buffet
Dr. B.J. Cox,
NALCO Chemical Company
Precision Aerial Application and Drift Control

Economics of the 80's
Predictions Planning Panel
Bob Wooster-Federal Reserve
Harold Vavra - NDAC
Other Speakers To Be Announced

7:00 Annual Banquet
Awards Presentation
Pioneer Award
Leadership Award
Past Presidents
Guest Speaker
Lawrence Burian, President
National Air Transportation Assoc.

NOTE NO DANCE THURSDAY NIGHT

Friday, Jan. 29
9:00 Breakfast on your own
Public Relations Open Forum... Complain Report & Handling
Harold Vavra Report
10:00 Coffee Break
10:30 Safety Report FAR 135 Review
George MacArthur, Chief Flight Standard Div., Region FAA
Mike Bierenger, FSDO, Fargo
Lee Mills, Chief, FSDO, Fargo
Dave Voxland, FSDO, Fargo
12:00 Luncheon
Speaker: Jack Daniels
1:30 Final Business Session
Convention Report
Committee Report
Election of Officers

Adjourn
Also attending
Farrell Higbee, editor - World of Agriculture Magazine
Don Holmes, NDAA Past President and Mike Clark, NDAA Treasurer.

ND Aviation Association Annual Convention

"Get-there-it-is"
The setting is a Friday afternoon, about 1980 hours, at a southern California airport. The aircraft is a single-engine, four place late model with lots of "goody's" in it for IFR operation.
The pilot, well-qualified in the plane, had worked all week and was looking forward to a weekend in Mexico. The pilot, with passengers aboard, taxied to the ramp area after a quick and brief preflight inspection. On a quick engine run-up, he noticed the engine would hardly run on one magneto. Naturally, this did not make him happy, but he did not take the time to have a mechanic check it. Why?
1. Plans were made.
2. He had to arrive before dark at his destination because the airport was not lighted.
3. He had waited three weeks to make this trip to relax in the Mexican atmosphere. The aircraft was cleared for takeoff. TWO MINUTES LATER the pilot and passengers were dead!!!
The next time you get, "get-there-it-is" ask yourself, "Do I really have to go?" "Is it worth it?" If in doubt, don't!

Symptoms of fatigue

The biggest danger of fatigue is that an individual may not recognize its effects. In most situations the symptoms of fatigue are more readily recognized by an observer.
There are several symptoms that you should be familiar with:
1. General irritability, often characterized by a short temper.
2. Low morale and possible loss of motivation, or mild depression.
3. Short-term memory lapses, such as forgetting something you have just been told (radio frequency changes, ATC clearance, etc.)
4. Making simple mistakes, such as tuning in the wrong frequency, missing a navigation chart, or having difficulty with simple calculations.
5. Tying and accuracy loss.
6. A tendency to accept a wider margin of error than normal, such as not realizing your normal effort to stay exactly on course in altitude. What causes fatigue?
There are many causes of fatigue — such as loss of sleep, poor nutrition, noise, boredom, etc.
Disruption of your normal sleeping and eating patterns can upset your "metabolic clock" and induce fatigue. This is a well-documented fact among pilots who frequently cross time zones. Visual problems and fatigue go hand-in-hand. Eye strain caused by sun glare, variations in light intensity between cockpit and the outside, and an empty visual field contribute to fatigue.
Noise is a major factor in causing pilot fatigue. This is most likely due to the need for pilots to pay strict attention to radio signals, especially during instrument flight. There is a psychological strain in listening.
Vibration in the frequency range of 18-1000 cycles-per-second has a noticeable fatigue-producing effect. A pilot should make every attempt to reduce vibrations and avoid contact with vibrating surfaces.
Wide variations in temperature and humidity are known causes of fatigue. Usually, the air inside the cockpit is drier than what you are normally used to. Many aircraft heating systems require constant adjustment to keep the cockpit comfortable.
Boredom is another major cause of fatigue. One hour of boredom can consume as much fatigue as can cause the inability to react quickly to an emergency situation.
Pilots cannot afford to ignore the symptoms of fatigue, and its many causes, because failure to recognize them may cause an aircraft accident.
Members will be looking at the economic future of the aviation business when the North Dakota Aviation Association holds its annual meeting January 27-28 in Dickinson. Changes in the industry will be discussed and election of officers will be held, according to Jack Daniel, Williston, NDAA executive secretary.

Speakers for the event include Lawrence Burcan, president of the National Air Transportation Association, Washington; Bob Wooster, a federal reserve board member for the Minneapolis branch; and Dr. B.J. Cox, Naico Chemical Company, Illinois.

Dr. Cox has been conducting fly-over across the nation analyzing spray patterns with a technique developed at Minnesota State University, Mankato, expected to provide a look at efficiencies and factors related to doing the best job possible as an aerial sprayer.

A highlight of the annual meeting will be the presentation of special awards to Diane (Pappy) Larson of Fargo, who opens a flyover from Bismarck Municipal Airport.

Rolls said that the helicopters are in addition to a fleet of fixed wing aircraft used at the Williston, NDAA executive secretary.

Included in the expanded fleet is a 1981 year Bell Model 206-L Jet Ranger which carries six passengers and has a top speed of 180 knots (106MPH) and a range of about 800 miles. A 1979 Bell Model 214B-1 also serves its fleet service.

Northern Air Inc., a commercial charter service, has been flown for passengers in Fargo with Doyle Nordby as director of flight operations.

The Federal Aviation Administration, has certified the company to conduct air-taxi and helicopter operations within the United States. Its headquarters are at 608 Avenue S, Fargo, N.D., 58102. Nordby will be the pilot for the charter plane service and Roger J. Johnson will be in charge of the helicopter operations.

Company equipment includes an executive passenger Concor Quiges pro-jet and a 5-place Bell helicopter, the latter to be used primarily in the energy industry of western North Dakota and the Williston Basin.

The business will be conducted in cooperation with Executive Aviation, Inc. at Hector Airport, Fargo.

Big Sky bases

Big Sky Airline has been taken over by the company and has been modernized. The Big Sky Airline, located at 5200 West Avenue, is equipped with the latest equipment and is ready to fly.

The Big Sky Airline also offers a special price for passengers flying to the Williston area. The special price will be $595 and includes a return flight.

State aviation business briefs

Executive Air Taxi Corp., Bismarck, announced the acquisition of two Bell turbine-powered helicopters for commercial air charter operations by a new company, NDAA.

NDAA has been formed by Dennis Rolls in 1972 and is a native of Corona, South Dakota.

Open air service

Northern Air Inc., a commercial charter service, has been flown for passengers in Fargo with Doyle Nordby as director of flight operations.

The Federal Aviation Administration has certified the company to conduct air-taxi and helicopter operations within the United States. Its headquarters are at 608 Avenue S, Fargo, N.D., 58102. Nordby will be the pilot for the charter plane service and Roger J. Johnson will be in charge of the helicopter operations.

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To attend NDAA

The National Agricultural Aviation Association will be represented at the NDAA convention, Jan. 27-29 at the Holiday Inn in Dickinson.

Dick Reade, NDAA past president, will speak at 11 a.m. Thursday. Attending and available to speak or field questions will be Ferrell Bigbee, publisher, of the WAA newsletter, and John Waples, OSLUND CHEMICAL CO.

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Relative Wind: 11.0 February 1982
Economy issue facing NDAA

By Janelle Cole

The biggest issue facing members of the North Dakota Aviation Association is the economy and this makes unity among state aviation groups more important than ever, says the group's president.

Ron Ehlers of Dickinson, who will leave office after the Aviation Association's annual convention in Dickinson later this month, said that the meeting's agenda reflects the economic situation and its effect on aviators.

While the state association is made up of people from all phases of aviation, the large percentage of the membership is aerial applicators and the economy's effect on them is a good example of problems faced by the industry, Ehlers feels.

"You talk about just the applicators and look at who he affects," he said, citing higher fuel, parts and labor prices that have to be passed on to the farmer who wants crop spraying done.

The ultimate question, he said, is "how much is a grower willing to spend on an acre?"

He estimates that there are six to 10 members of the association who have nothing to do with spraying. Otherwise, "the whole aviation family in North Dakota is dependent on agriculture," he said.

That's why he feels strongly about the need for continued unity.

"What we don't need is a split organization," he said. "There's still profit in unity."

This has been demonstrated in the past when issues have arisen and through a united effort by the group, "we've been able to do some good," he said.

Two important components in the association's effectiveness are the lobbyist, Bill Books of Washburn, and the official "complaints" channels to the board of directors.

"Bill has done a fantastic job for us," Ehlers said. "Unity works there. But with a break in that, if you're going to have two organizations in the state with a common problem, you're probably going to have two lobbyists - one representing 20 members and another representing 10 members."

The Aviation Association, working together with the state Aeronautics Commission, has been able to successfully lobby not only the state legislature but other agencies, such as the Federal Aviation Administration.

This agency was persuaded to leave the Dickinson FAA flight service station open full time, partly because of the pressure from the association and the commission.

On another issue, Ehlers said that the association's members are lobbying for the proposed MANDAN power line, which would run through the Red River Valley area, to follow section lines.

Ehlers is less pleased with the success of the Aviation Association's official complaints network.

That effort, headed by Vice President Larry Luatof of Wahpeton, is designed so that members' concerns will reach the attention of the executive board, who can then take action. The problem is that few members use this channel.

"How can a board do something if nobody gives them something to do?" Ehlers said. "It's an ongoing problem."

At the same time, he admits that he didn't use to take advantage of the system either.

"I used to sit out in the audience and have all kinds of opinions," he said. "I'm no different than anybody else. Now I'm on the other side of the fence."

He pointed out that while the association board is made up primarily of younger people, older members are still very valuable to the group.

"We need the talents, and brains of the older members. They have been through tough times." Ehlers, who last August said his interest in Dickinson Air Service, a fixed-base operation, said the move doesn't really change his outlook on the aviation industry in general or his view of other fixed-base operators in particular.

"Getting out of a fixed-base operation - it has happened to a lot of us," he said. "Some very good friends of mine are still fixed-base operators. I can sympathize with them. I know what they're going through."

Ehlers flies for Rocky Mountain Geophysical now, a seismic exploration company.

He said energy development business kept him and some other area operators aloft during the 1988 drought, when agricultural business had dropped to just about nil.

"What kept the business going was air taxi, through the energy we have put out there," he said.

Topics to be covered by Cox

The following topics will be covered by Dr. J.J. Cox, NALCO Chemicals, Ill, when he speaks at the Thursday noon, Jan. 28 NDAA convention at the Holiday Inn in Bismarck.

Retiring NDSS President Ron Ehlers. (Photo by Janelle Cole)

His outline is as below:

Operation efficiency, post control and yield is the name of my business.

Drift - what is it and how do I control it?

Precision Spraying - is essential

Efficiency of aircraft compared with ground rigs

Score Card: Deposition and Coverage - the real application goals; Canopy Penetration - an essential requirement for insect and disease control; Swath Width - important to know for precision spraying; Patterns: Evenness - to avoid skips and double coverage; Droplet Sizes and Evaporation - very important to control.

Factors you must consider when you spray fertilizers and pesticides - Weather (Factors to be reckoned with); Temperature, Humidity, air Horizontal and Vertical Air Movements

Mechanical and Chemical (Applicator controlled) - Aircraft Type, Load, Boom Type, Boom Position, Nozzle Type, Nozzle Position, Nozzle Arrangement, Cures & Sprag Plate, Equipment Calibration, Altitude, Pressure, Aircraft Speed and Spray Solution Stabilizers.

Plan early session

NDAA members are invited to arrive for the meeting early and join the NDAA Board of Directors for a session with a panel on the sales and use tax as it applies to aircraft.

On hand will be Sen. Jack Ohn, Dickinson, to discuss various state legislation. Joining him for the sales and use tax discussion will be Walt Stock, State Tax Department, Dickinson, and Ben Meier of Jamestown Aviation.

The board convenes in the Holiday Inn at Dickinson, Jan. 27, Wednesday at noon for the luncheon and meeting.

The meeting is slated to start at 2 p.m. and the membership is urged to arrive early and join in the discussion.

Dr. Cox to speak to NDAA

Mr. Ron Ehlers, president NDAA Dickinson, N.D. 58601

Dear Mr. Ehlers:

I have been requested to speak at several state agricultural aviation association meetings on spray drift, deposition and coverage, and want to extend my offer to you should you desire such at any of your future meetings (presentation outline enclosed).

As you may know, I and my colleagues have been conducting fly-overs across the nation, analyzing spray patterns with a technique called a "Copper-Tracker" or "Photometric Test", which was developed at Michigan State University. The system analyzes spray patterns qualitatively for droplet size and also quantitatively for percent of spray reaching the target. Our statistics show aircraft not properly configured may lose 50% or more of the material they spray.

While it is important to get the spray distributed as evenly as possible in the target pattern, I also emphasize getting the greatest deposition, and thus, coverage in the target swath as possible. The Copper-Tracker technique is currently the only field test which will quantitatively measure deposition and give you immediate results.

Should you want me to speak at any of your meetings or help you conduct a fly-in, please let me know as far in advance as possible. I will be pleased to help in any way I may be of service.

Sincerely,

Dr. J.J. Cox

NALCO Chemical Company

40 Minnesota, Prospect Heights, IL 60070

Response: Can you be on hand for the NDAA annual meeting in January?

Answer from Dr. Cox: Yes, I can.

Advice to N.D. aerial sprayers: Attend NDAA convention and hear Dr. Cox speak at the Thursday noon, Jan. 28 luncheon at the Dickinson Holiday Inn.
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Safe winter flying reminders

Reprinted from FAA General Aviation News.

Nothing spoils a winter vacation or business trip in your own airplane as completely as a landing mishap at the final destination. You carry out a long, well-planned and well-executed flight in a thoroughly professional manner, impressing family and friends, only to wind up in some ridiculous position with your tail in the air and the ceiling where the floor ought to be. Even if no one is hurt, your pride is pricked and your wallet is bound to suffer.

Landing accidents tend to increase in the winter, especially in the north or in mountainous areas, whenever the temperature drops down below freezing. The chill factor in landings is something that many pilots ignore when planning winter flights, especially if the weather at their home airport is on the balmy side. If they encounter ice or snow on the runway or in the touchdown zone, they may find the airplane suddenly developing an apparent will of its own as to where this particular trip is going to end.

Putting a ton or more of airplane down on snow or ice, without losing directional control, is no simple matter, even in the absence of crosswind problems. To do it safely you have to develop a sensitive toe for breaking plus quick and accurate responses on all the flight controls - not merely the rudder. A light plane 'skittering' over glare ice is as much a challenge to control as any condition you are likely to find in general aviation flying. Meeting it successfully takes understanding, training, and recurrent practice. It does not come naturally.

During the five winter months of 1977 (November through March) there were 103 landing accidents on snow or icy conditions according to reports of the National Transportation Safety Board. The majority of these accidents were a direct result of the pilot's inability to maintain directional control of the airplane during the landing roll. Equipment failure was rarely involved, although it sometimes seemed so to the pilot. Typically the pilot found his airplane drifting off the centerline on roll-out and attempted to retain control with the use of brakes and rudder only.

The preparation for landing on snow with wheels is similar to landing on wet or muddy fields. Touchdown should be made at the lowest possible airspeed, with a nose-high attitude maintained by power as required. Braking effect may be nil and probably should be avoided altogether until the airplane slows down, since the surface is unpredictable and a sudden catching of the brakes on a bare patch of surface could throw too much pressure on the main wheel, or pull the plane to one side. Every effort should be made to avoid any contact with the centerline before touchdown.

Even at low speeds, braking action on slippery runways requires a very sensitive touch to avoid initiating a skid, and in some conditions any braking or nose-wheel steering, may be non-effective. Rudder action always gives some control, but whenever the wind (including the airflow component from the moving airplane) is more than nine knots, rudder should be used in conjunction with aileron and, elevator, when taxiing as well as rolling on the runway.

Controlling an airplane on an icy or snowy surface is much like handling a plane on water or on ice; the controls must be manipulated in such a manner as to prevent the wind from turning the plane around on its axis or causing a wing or the tail. In general the technique consists of raising the upward aileron, together with opposite rudder and back pressure on the wheel - whenever the wind component is in a forward quadrant. This prevents the thing from rising, the rudder is coordinated and the elevator depressed. Note that with the wind abeam, the controls are manipulated as they would be with a headwind component, since the forward motion of the airplane will produce this effect. The pilot must be alert to sudden wind shifts, and remember to adjust controls appropriately after turning onto or off a taxiway.

Apart from insufficient skill, the main type of pilot error involved with icy runway landings appears to be in preparation. Many of the winter accidents were due to the pilot's dearth of knowledge of landing conditions at his destination airport. Often the pilot had decided to save himself the expense of a telephone to an uncontrolled airport, expecting to be able to assess field conditions from the air. But no depth and consistency is not all that perceptible from the air, and if the UNICOM is unattended or non-existent, there is always psychology involved on the pilot to belittle the hazard and chance the landing. Some of the unpleasant surprises he is likely to encounter are:

- Too much snow.
- Hard crust.
- Locked wheels.
- Ice-covered strips.
- Downed runway.

Accidents of this kind are often not taken seriously because the injury rate is low, but the potential for injury is always there. And in any case they are the quickest way to spoil what starts out as the perfect holiday. The tendency to regard skidding on an ice as "avoidable" is a mistake.
Relative Wind

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February 1982
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Tri-Star Corporation
MIXTURE MONITOR

Get accurate and dependable engine
temperature readings with the new
advanced integrated circuit, mixture
monitor.

- A 1390 sweep meter face with
wide, easy to read 29" incre-
ment markings.
- Rapid response with amplified
input and rugged sensitive fast
band movement.
- No load length restrictions to af-
fect reading or calibrations.
- Self compensating for
temperature variations — virtu-
ally eliminating instrument er-
er.
- Never exceed markings for hot.
bo charger, inlet temperature and
movable reference pointer.

"Available At Your Local Shop", or

Tasco Aviation Supplies
246 Fillmore Ave. E., St. Paul, MN 55107

Red Wing

PREMISES LIABILITY
AIRCRAFT LIABILITY
CHEMICAL DRIFT LIABILITY
HULL LIABILITY
SPRAYING CITIES AND TOWNS

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New Carbyne 2EC Herbicide gives you greater yields at the least cost.

Carbyne now comes in a new 2-lb. formulation...Carbyne 2EC Herbicide. A greater concentration, so you use less.

Yet, Carbyne 2EC gets you up to 50% greater yields compared to later wild oat treatments. And it works without incorporation. With or without rain. Best of all, Carbyne 2EC is the least cost wild oat herbicide you can buy.

Get Carbyne 2EC for early control of wild oats, canarygrass and annual ryegrass* in wheat, barley, sugar beets, sunflowers and 7 other crops. See your ag chem supplier today.

Velocil Chemical Corporation
World Headquarters
341 East Ohio Street, Chicago, Illinois 60611

*Carbyne is a registered trademark of Velocil Chemical Corporation.

Before using any pesticide, please read the label.

Carbyne 2EC for use against annual (Italian) ryegrass is limited to California and Oregon.