

SUN 'N FUN '78



(Photo by Bill Ehlen)

Sun 'N Fun exhibit area and campground. Show plane parking is just to the left of this view. The Piper plant is at the top left.

By Jack Cox

(Photos By The Author Unless Otherwise Credited)

OF THE FLY-INS I cover during the course of each year, Sun 'N Fun is different in one respect. When I get back to the office in Wisconsin, the first thing the rest of the staff want is a weather report . . . and **then** they ask about the airplanes.

Visit Wisconsin in January sometime and you'll understand why!

Well, everything is relative, as they say. The first three days at Lakeland were sunny and pleasant, the temperature in the low 80s on Wednesday. That night, however, a cold front roared through, dropping the daytime highs into the 50s for the rest of the week. Some stiff winds on Thursday and Friday lowered the chill factor to a point that a warm coat was a must. It remained sunny throughout the period nevertheless and wasn't bad at all on Saturday and Sunday after the winds died down.

Now, remember, the foregoing is from the vantage point of one only lately removed from a Wisconsin staggering under some 50 inches of snow since Thanksgiving

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day . . . from a Milwaukee that had not seen a day above freezing for almost a month. During the day we would meet Floridians at the airport complaining about the "cold." That evening we would go back to the motel, switch on the TV, watch scenes of wintery devastation as the worst blizzard in anyone's memory plastered home country . . . and thank our lucky stars we were here instead of there!! It was easy to spot the Yankees on the field the next day . . . we were the ones with the wide smiles.

End of weather report.

When the Headquarters crew flew in on Sunday afternoon, Sun 'N Fun was already off and running. We counted 54 showplanes on the line as we taxied in. I recall thinking that a lot of people must have had the same idea we did - slip in early between weather systems and avoid being caught by the ubiquitous stalled front at the Georgia/Florida border. While still in the pattern we also noticed that the campground was nearly full and that a

lot of white Florida sand had been exposed since last year's fly-in.

Once on the ground, the effort expended by the weekend work parties held during 1977 was even more evident. Full grown palm trees had been transplanted, flower beds had been made, new aircraft parking areas had been graded and seeded, a shower house had been built in the original campground and a new camping area had been opened up. Further, the existing auto parking lot had been enlarged and a new one cleared. A lot of new fencing had been installed and permanent flag poles erected so as to fly the banners of Florida EAA Chapters as well as the state flag and Old Glory. The first stages of clearing of additional palmetto tangle had been accomplished by Rocky Sawyer and his hardy crew of volunteers . . . and during a "jungle tour" later in the week we learned this would include a new, more convenient entrance road, possibly open for use next year.

It may be of some value to others of you who are planning or are in the process of developing fly-in sites to know that the Florida Chapters have formed a fly-in corporation to manage Sun 'N Fun and that the land is leased from the local governmental body on the same basis as for all other airport lessees. This way the money and effort poured out to develop the fly-in site can't suddenly be taken away at the whim of some local politician. From the beginning Sun 'N Fun has been a local EAA effort to develop an EAA Fly-In. The Floridians have maintained their independence from local government, civic organizations, etc. so that now that they have a successful operation, they owe no one a slice of the pie. This is the way the national EAA organization was developed and is the way all local and regional fly-ins should go.

As we've stated before, Sun 'N Fun is patterned very closely after Oshkosh. Many of the chairmen work at Oshkosh each summer in the same areas for which they are responsible back home in January. The public address system, the Interview Circle and a portion of the air show announcing, for instance, are manned by the same team - Roscoe Morton and Willie Ropp. Sun 'N Fun **sounds** exactly like Oshkosh.

The schedule of each day's activities is also much the same - designated fly-by periods for aircraft of different speeds that go on throughout the day until air show time at 3:00 p.m. and a forum and workshop schedule extending from 10:00 a.m. to 3:00 p.m. There are, of course, a number of happenings peculiar only to Sun 'N Fun. For one, the day's formal activities end promptly at 5:00 p.m.

- and I do mean promptly. When the air show ends, the place is like a small town that rolls up its streets at sundown and goes home to relax. Everyone (except the campers, of course) seems ready to head off for his motel and an early dinner. This may well be due to the fact that Lakeland has a number of truly excellent restaurants . . . with very reasonable prices. One rather remarkable establishment located near the airport is such a favorite of Sun 'N Funners that if you wait until, say, 7:30 or so you will get a reservation number in the 250 to 300 range. And that's any night of the week.

Then there are the evening corn roasts - for those who stay at the airport until 6:30 or so. It's still growing season in south Florida, if you wonder where they get the corn.

A Sun 'N Fun feature that particularly impressed me was a daily schedule of guided tours of the flightline for non-EAA members. Volunteers took groups of ten to twenty "civilians" in tow, walked them up and down the rows of homebuilts, antiques and classics, stopping to identify and relate some anecdote concerning nearly every airplane. It was a long walk down to the Warbird area, but most of the groups still had enough enthusiasm to ask to be taken to see the Canadian Warplane Heritage's B-25, Tom Holman's Thunderbolt and the usual braces of Mustangs, T-6s, etc. The tours were extremely effective public relations tools and undoubtedly were a factor in the recruiting of 135 new EAA members over the duration of the fly-in. I eavesdropped on the tour guides a couple of times and it seemed to me they were getting a kick out of their jobs. They certainly were giving sport aviation a shining new image among the public who came out to see what Sun 'N Fun was all about.

GATHERING OF EAGLES, ETC.

Three events of note were held in conjunction with the fly-in this year: the Gathering of Eagles at the local Armory - in which pilots who flew before 1936 were honored; the Ground Loop Party and Style Show put on by the women of EAA (also held at the Armory) and the Awards Party program held at the fabulous new Lakeland Civic Center on Saturday night. Each event was well attended and added a bit of sparkle to the nightlife of the week.

Piper plant tours were also popular again this year, keeping shuttle busses on the go between the fly-in site and the sprawling facility where Piper cranks out the Navajo.



Leonard McGinty of Thonotosassa, Florida, Sun 'N Fun General Chairman.



Lyle Flagg of Brandon, Florida, Sun 'N Fun General Chairman.



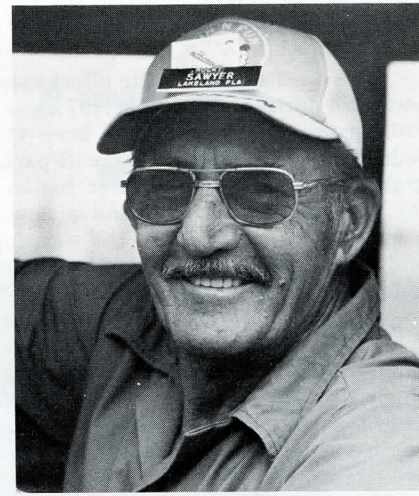
Gordon Knapp of Tampa, Sun 'N Fun General Chairman.



Duffy Thompson, left, and Lyle Flag, Sun 'N Fun General Chairmen.



Sun 'N Fun Convention Chairman Billy Henderson of Lakeland, Florida.



Rocky Sawyer of Lakeland, Sun 'N Fun General Chairman.

THE SHOWPLANES

As in previous years, Sun 'N Fun '78 had an excellent turnout of Classics. Red Smith's beautiful red and white Stinson 108 repeated as Grand Champion this year, but the competition was stiff. Following the new judging format for Classics instituted by the EAA's Antique-Classic Division, these 20 to 30 year old ATCed types are now divided into two groups, standard (or "restored") and custom Classics. Standards are aircraft restored to near factory original configuration, paint schemes, markings, etc. Custom Classics are pretty well what the name implies - customized aircraft. This usually means bigger engines, CS props, modern instrument panels, fancy interiors, electronics galore, polyurethane paint, etc. This is **really** a popular category - for a number of reasons, but mainly because one can build up an airplane that is useful in today's ATC system **and** one that can be taken to fly-ins and exhibited as a showplane . . . all this at less than the price of a new Cessna 152. In some instances the Custom Classic fits a niche not filled by the factories. Big engined Swifts are a perfect example. No U. S. manufacturer builds a high performance two-place airplane - so, individuals have crammed 210 h.p. Continentals in their Swifts and with the electronic goodies and full cosmetic treatment, end up with a really unique airplane - fast, aerobatic and eligible for trophies.

The Antique turn-out at Sun 'N Fun was about as varied as I have seen at a single fly-in. How is this for some historical name dropping? - Waco CSO, CTO, UPF-7; Travel Air 2000 and 4000; Command Aire; Ryan STM and PT-22; KR-21; OX-5 Bird; Fleet 9; Lockheed 10 and 12; Howard DGA-15; Staggerwing; Cessna Airmaster (2) and Bobcat; Aeronca C-3 and, count 'em, four DC-3s. In

addition there were the usual Fairchild's, Stearmans, Bellancas, pre-war Luscombes, Pipers, Aeroncas, Taylorcrafts, etc. Something for almost every interest.

Of particular note was Ernie Moser's newly restored Waco CTO. This is the plane in which Johnny Livingston won the 1929 Transcontinental Derby and which was in the EAA Museum collection until last year. Ernie has put the famous old Waco back in show condition, will display it at shows around the country and will eventually return it to the Museum.

Another rare bird was Morton Lester's Howard DGA-15 . . . "15", not "15P." This is a civilian 15 built just before World War II. The 15Ps were built for the military and are a little heavier than the much sought after civilian models. Restored by Morton, an EAA Air Museum Trustee, and his cousin, Pete Covington of Martinsville, Virginia, the DGA has been beautifully and faithfully restored to an original configuration and paint scheme.

Bob Allen of Fayetteville, North Carolina had his Lockheed 12A at Sun 'N Fun, to the immense pleasure of those of us who admire those lovely, advanced-for-their-time transports. This one has been authentically restored on the outside and has had a custom interior installed the equal - or better - than any of the cabin class birds currently being cranked out in Wichita . . . or across the field at Piper's Navajo plant. The Lockheed was restored in this manner because it must serve two purposes - it replaces a modern twin as an executive transport for Bob's business enterprises and it satisfies his urge to own and preserve some of the great aircraft of years past. He also owns an equally nice Spartan Executive.

The antique Grand Champion was Dean Tilton's Travel Air 2000 - which is described elsewhere in this article.

CLASSIC AWARDS

Grand Champion — Red Smith of Lakeland, Florida for his Stinson 108-3, N963C

Best Classic, Restored (Up to 100 H.P.) — John Wright and Bill McKinny of Greenville, South Carolina for their Mooney Mite, N346M

Best Classic, Restored (101 to 165 H.P.) — Ernie Sykes and Jim Powis of Brampton, Ontario, Canada for their Aeronca Sedan, C-FAKT

Best Classic, Restored (Over 165 H.P.) — Hale E. Andrew of Berkley Spring, West Virginia for his Ryan Navion, N5437K

Best Classic, Custom (Up to 100 H.P.) — Duncan Fitzgerald of Selma, North Carolina for his Cessna 120, N160F

Best Classic, Custom (101 to 165 H.P.) — Ray Fritz of Vero Beach, Florida for his Piper TriPacer N78RF

Best Classic, Custom (Over 165 H.P.) — Don Mendelson of Daytona Beach, Florida for his Globe Swift, N78010

Classic, Best of Type — John Wright of Springfield, Illinois for his Ercoupe, N2279H

Classic, Best of Type — J. M. Jones of Clarkston, Georgia for his Swift, NC3824K

Classic, Ladies' Choice — F. Swanson of Gainesville, Florida for his Stinson Voyager, N4219C

ANTIQUE AWARDS

Grand Champion Antique — Dean Tilton of Lakeland, Florida for his Travel Air 2000, NC6117

Antique Champion - Golden Age — Ernie Moser of St. Augustine, Florida for his Waco CTO, NC7527

Antique Champion - Silver Age — Dick Durst of Orlando, Florida for his Fleet 9, NC66V

Antique Champion - Platinum Age — Bob Allen of Fayetteville, North Carolina for his Lockheed 12A, NC25628

Antique Champion - WW II Era — Jim Kramer of Palm Beach, Florida for his Cessna T-50, NC69072

Best Antique Biplane — Bud Clark of Lakeland, Florida for his Waco UPF-7, NC39737

Best Antique Monoplane — W. W. Hawkins of Camden, South Carolina for his Piper J-3, N98644

Best Antique Open Cockpit — Walter Hill of Miami, Florida for his Ryan STM, N17349

Best Antique Cabin — Morton Lester and Pete Covington of Martinsville, Virginia for their Howard DGA-15, N5432N

Ladies' Choice Antique — Danny Araldi of Lakeland, Florida for his Aeronca C-3, N17449

Meritorious Awards — Don Henry of St. Augustine, Florida for his Stampe SV-4, N666DH; Bill Freeman of Stone Mountain, Georgia for his Beech G-17S Staggerwing; John Dekle of Thomasville, Georgia for his Travel Air 4000, NC4952

Warbird interest was centered on the first P-47N to be seen on the fly-in circuit in recent times. Registered to the Confederate Air Force, the Thunderbolt was restored by its sponsor, Tom Holman of Vero Beach, Florida, and is in his possession. It was flown at Sun 'N Fun by Braniff Captain Hall Bond of Irving, Texas. Purchased in Nicaragua in the late 1960s, Tom spent 18 months restoring it, only to have the R-2800 quit on the test flight. It was rebuilt and flew again — this time successfully — on July 4, 1976. It has appeared at a number of Confederate Air Force shows but this was its first EAA fly-in.

The P-47N was the last production version of the legendary Jug, built expressly for use in the Pacific where long range was a prime requirement. It could carry up to 1266 gallons of fuel, giving an ultimate range of 2350 miles. This allowed the N to escort B-29s to Japan from bases on Saipan. It is easily identified by its clipped wing tips and its long, blunt-nosed dorsal fin. Quite a machine.

WARBIRD AWARDS

Grand Champion Warbird — Tom Holman of Vero Beach, Florida for Republic P-47N, N47TB

Best Primary Trainer — Frank Mock of Tampa, Florida for his Fairchild PT-19, N58109

Best Advanced Trainer — E. Bennett of Chestertown, Maryland for his T-6, N6FD

Best Fighter — North American P-51, N6344T (Owner did not register)

Best Multi-Engine — Dennis Bradley of Mississauga, Ontario, Canada for B-25, HD372

Best Special Class — Martin Caiden of Titusville, Florida for his Junkers Ju. 52, N52JU

Ladies' Choice Warbird — E. Bennett for T-6, N6FD

Owner's Craftsmanship Award — Bruno Allewa of Plant City, Florida for D. H. Chipmunk, N65237

Meritorious Award — Ben Demonstranti of Juno, Florida for North American T-28, N9867C

Two of the homebuilt award winners are dealt with elsewhere and Mike Melville's VariViggen was featured in our March issue, so we will limit our comments here to the statement that a good cross section of today's crop

of homebuilts was on hand — from the revitalized Birdman to five VariEzes (three flying, two static).

HOMEBUILT AWARDS

Grand Champion Homebuilt — Noel Summer of Pompano Beach, Florida for his Pitts Special, N8NS

Runner-Up — Mike and Sally Melville of Frankton, Indiana for their VariViggen, N27MS

Best Low Wing — Ross Whitney of Lambeth, Ontario, Canada for his Pazmany PL-2, C-GQNW

Best High Wing — Dick Alexander of Lakeland, Florida for his Spencer Aircar, N133SA

Best Biplane — Barry Halstead of Atlanta, Georgia for his Starduster Too, N333Q

Best Interior — E. K. Morice of Delray Beach, Florida for his Anderson Kingfisher, N2EK

Best Exterior — Jim Trice of Miami for his Pitts, N40X

Best Homebuilt With Non-Certified Engine — Neal Nicholson of Miami for his Sonerai II, N68676

Best Original Design — Mike Melfa of Miami for his VCA-1, N70MM

Best Rotorcraft — Ken Hoak of Tampa, Florida for TR-1, N26112

Best Ultralight — Birdman Aircraft of Daytona Beach for Birdman N102BA

Ladies' Choice Homebuilt — E. A. Argence of River Ridge, Louisiana for Argence I, N99EA

Additional awards presented during Sun 'N Fun '78 were:

Aeronca - Longest Distance Flown — Ernie Sykes and Jim Powis of Brampton, Ontario for their Aeronca Sedan, C-FAKT

Aeronca - Oldest — Danny Araldi of Lakeland, Florida for his Aeronca C-3, N17449

Aeronca - Most Authentic Restoration — Archie Young of Reddington Beach, Florida for his 7AC

Ryan - Best Military — Walter Hill of Miami for his STM, N17349

Ryan - Best Military PT — Lee Floy for his PT-22, N53430

Ryan - Best Civilian PT — Sam Green of St. Petersburg for his PT-22, N56048

Ryan - Farthest Traveled — Clay McCutcheon of Ft. Walton Beach, Florida for N62130

Best BD-4 (Sponsor: Val Bernhardt and Lloyd Brekke) — Mike Schlick of Miami for BD-4, N440BD

Most Unique Man and Machine (Sponsor: EAA Chapter 133) — Dick and Grant Newland of Miami for Steen Skybolt, N24GN

Jack Brown Memorial Award For Best Amphibian — Dick Alexander of Lakeland, Florida for Spencer Aircar, N133SA

Wayne Thomas Memorial Award For Best Aircraft In Military Configuration — Dick Foote of Willimantic, Connecticut for his Grumman Wildcat, N11FE

FEATURES

● One of the most interesting technical innovations at Sun 'N Fun was the first use we've seen of the so-called "fluidic autopilot" on a homebuilt aircraft. Don Hewes (EAA 32101), 12 Meadow Dr., Newport News, Virginia 23606 has built and installed a wing leveler on his 150 hp BD-4 that utilizes the electro-fluidic rate sensor developed by NASA engineer Doug Garner. It consists of the tiny rate sensor mounted under the instrument panel and a trim tab mounted above the trailing edge of the left wing tip (see photo), driven by a Heathkit high-torque RC model airplane servo. The fluidic "autopilot" senses yaw rate, sends an electrical signal out to the servo which, in turn, drives the 3/4" x 12" tab (pivoted at the quarter chord). This action is sufficient to keep the wings

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NOEL SUMMER'S GRAND CHAMPION PITTS



Noel B. Summer (EAA 15506), 600 S.E. 9th Ave., Pompano Beach, FL 33060.

COVER STORY

VAL BERNHARDT AND his Homebuilt Judging Team had an easy job picking their Sun 'N Fun Grand Champion — Noel Summer's single aileron Pitts. For certain there were other exceptional aircraft vying for the top spot — Mike Melville's VariViggen, which was runner-up; Ross Whitney's PL-2; E. K. Morice's Kingfisher (see January *SPORT AVIATION*) and several others — but the Pitts was about as close to a perfect airplane as we will ever see.

Objectively, a Pitts, particularly one set up for aerobatics (as is Noel's), is a simple airplane. It has no interior upholstery, a basic instrument panel and few systems. In short, with relatively few parts to construct and finish, a determined builder can take his time and strive for absolute perfection . . . and still get in the air in a reasonable length of time. Noel spent 7 years doing just that.

N8NS is a Pitts S-1 (the early "flat wing", two aileron version) powered by a 180 h.p. Lycoming O-360 A4A. Empty weight is 840 pounds. Cruise is 125 mph and stall occurs at 55 mph. It is covered with cotton and 31 coats of . . . you better believe(!) . . . hand-rubbed Randolph butyrate dope. Christen inverted fuel and oil systems are fitted, the engine has an oil filter, there is no smoke system and a Pitts factory canopy has been installed. Those are — in no particular order — the salient features of the airplane. Otherwise, it is pretty much an off-the-plans Pitts. Again, it wasn't **what** the little bird was but, rather, **how** it was done that left us goggle-eyed. Little things . . . like the different color coats that were carefully taped and **butted** up to each other instead of the usual (and easier) overlapping.

It was not a mega-buck project, either. New materials were used throughout and the engine was new, but what set this aircraft apart from all the rest was the result of just plain hard work.

Noel is a 727 captain for United Air Lines and has been flying out of Miami for the past 6 years. He flew out of NYC prior to that and started the Pitts at his Flem-

ington, New Jersey home. When he moved his family to Florida (Pompano Beach), the fuselage was hauled down in a boat trailer and the wings came in the moving van. The project was finished in his garage there in the Sunshine State.

This was Noel's first homebuilt project, so he sought the advice of experts so as to do the best job possible. Bill Oprende's Pitts had the best finish Noel could find, so he became the prime source of dope and fabric wisdom. Likewise, when it came time to rig the airplane, he again went looking for perfection. Word was the best flying flat wings were those of Chuck Porter and Bill Lancaster. He found these two Pitts had no incidence in the top or bottom wings and that almost all the dihedral was rigged out of the bottom wings. This made them more stable than when rigged according to the plans . . . so N8NS got the same treatment. The result was an airplane he had no qualms allowing his sons Neal and Noelan to fly last Thanksgiving day.

Noel is a native of Minerva, Ohio and soloed a J-3 at Canton McKinley airport to start his aviation career. He was later hired by Capitol Airlines as a DC-3 co-pilot and down through the years — with Capitol and United after the latter absorbed Capitol — has flown the DC-4, DC-6, Constellation, Caravelle and, today, the 727. He and his wife Mary Ellen have four children — Joel, 27; Neal, 24; Noelene, 23 and Noelan, 20.

I found that EAAers who know Noel were not at all surprised to learn his homebuilt had won the Sun 'N Fun Grand Champion award. IAC President Verne Jobst, who, incidentally, was hired by Capitol the same day as was Noel, told me being first was a Summer trait. He says that when United periodically quizzes its 727 captains on the systems and procedures of their aircraft, Noel usually racks up the highest score. IAC competition is tougher, however. In his very first Sportsman competition Noel "only" managed to finish second. Next time out he got things back in their usual order by finishing first.

You have heard it from me scores of times over the past 8 years, but you are going to have to read it again . . . the talent in EAA is nothing short of incredible. And it just keeps on turning up.

- JBC

(Photo by Golda Cox)



BEST ORIGINAL DESIGN award went to Mike Melfa (EAA 60015), 1601 N. W. 29th St., Miami, Florida for his rakish little VCA-1. All metal, it is powered by a Continental 0-200 and uses a standard Cessna 150 propeller. Cruise is 130 mph at 2500 rpm. Empty weight is 701 pounds and gross is 1015. The airfoil is a 17% GA(W)-1 - very obviously "different" when you sight down the wing. The cusp on the lower trailing edge is quite pronounced. Electric flaps are fitted, actuated by a Cessna flap motor and jackscrew.

The fuel system consists of 3 tanks - an 8 gallon tank in each wing from which fuel is fed by electric pumps to an 8 gallon fuselage tank . . . which, in turn, gravity feeds to the engine.

Mike says that despite its somewhat radical appearance, the VCA-1 is straightforward in construction and has no unusual aerodynamic features. He has found it to be very docile, its 70 square feet of wing hanging on until around 57 mph before it stalls. That was not how it started, however. The VCA-1 began life in 1972 as a very unusual variable camber aircraft. The wing for this ver-

sion was built and static tested but, unfortunately, it had some weak points that could not be corrected short of a complete redesign. Instead, Mike decided to install a conventional wing and retain the T-tail that had been a necessary part of the original configuration. The result is a nice flying little sport plane with lines that never fail to attract a crowd at every fuel stop.

The VCA-1 was initially flown in October of 1976 and had accumulated 61 hours as of the Sun 'N Fun fly-in.

Mike Melfa is a native of West Virginia. He left there in the late 30s to attend Don Luscombe's aviation mechanics school at Trenton, New Jersey. During World War II he instructed on Waco gliders and eventually transferred to the Air Force, from which he retired in 1960. Today, Mike has a transmission shop to keep him busy . . . when he isn't building airplanes or helping someone else with his or her project.

"What does VCA stand for?", we asked.

"It originally meant 'Variable Camber Airplane' but now I tell people it means 'Very Cute Airplane,'" Mike chuckled.

-JBC

level in reasonably smooth air. A second tab on the right tip will be added later to improve the system's ability to handle turbulence.

The fluidic rate sensor was made from drawings supplied by Doug Garner. Electronic components (mainly 2 thermistors) and the RC servo were obtained at local hobby shops **for less than fifty dollars**. Don has also built and installed an optical heading hold that is integrated into the wing leveler circuit. It is simply a photo cell mounted over the face of his DG (the vertical card or circular face type) that senses the difference between black and white and telegraphs this to the RC servo. He simply positions the photo cell over the white letter (N, E, S, W) or number of the course he wants to fly and the "autopilot" holds that heading. If the plane begins to drift off course, the white letter will begin to move out from under the photo cell, exposing the black space between letters/figures. This produces an electrical signal to the servo that will drive the trim tab in the right direc-

tion to turn the plane so the white letter will move back under the photo cell again. The whole system is so simple (virtually no moving parts), light (weighs just ounces) and so inexpensive that it has everyone who has seen it agog over its possibilities. Doug Garner was at Lakeland and his forum on the fluidic sensors was strictly standing room only. Very interested listeners included Steve Wittman, Ken Rand, John Dyke and Fred Weick. Steve wants to install a fluidic autopilot on his Tailwind and asked if it could be used with a tab on the rudder instead of the wing — it can, according to Doug Garner. Ken Rand wants one for his KR-2 and was trying to get Doug to build one for him. We later saw him taking Doug for a ride in the KR-2, so who knows? That's a most effective form of bribery, you know. Fred Weick is developing a new control system that will make flying simpler and safer and he is interested in the fluidic sensor as a gyro replacement. John Dyke was an interested observer be-

cause at Wright Field where he works, the sensors are already being tried out on RPVs.

If any of you are interested in the fluidic sensors, I refer you to Doug Garner's article "The Saga of the Plastic Autopilot" that appeared in the March 1974 issue of *SPORT AVIATION* . . . but only if you have back issues. That issue is sold out today. Chapters should be aware of a 20 minute 16mm color film on fluidic technology. It is available on a first come, first serve loan basis from: NASA Langley Research Center, Attention: Photographic Branch, Mail Stop 425, Hampton, Virginia 23665. Ask for film L-1228. It is a supplement to NASA Report TN D-8433 entitled "Experimental Design Studies and Flow Visualization of Proportional Laminar-flow Fluidic Amplifiers", available for \$4.00 from NTIS, Springfield, VA 22161.

Don Hewes also has an angle of attack indicator installed on his BD-4. Work/vacation schedules permitting, he will be at Oshkosh this summer — so look for his airplane. It is virtually a flying laboratory. Don, incidentally, is also a NASA engineer and was on the team that flight tested the VariEze last fall.

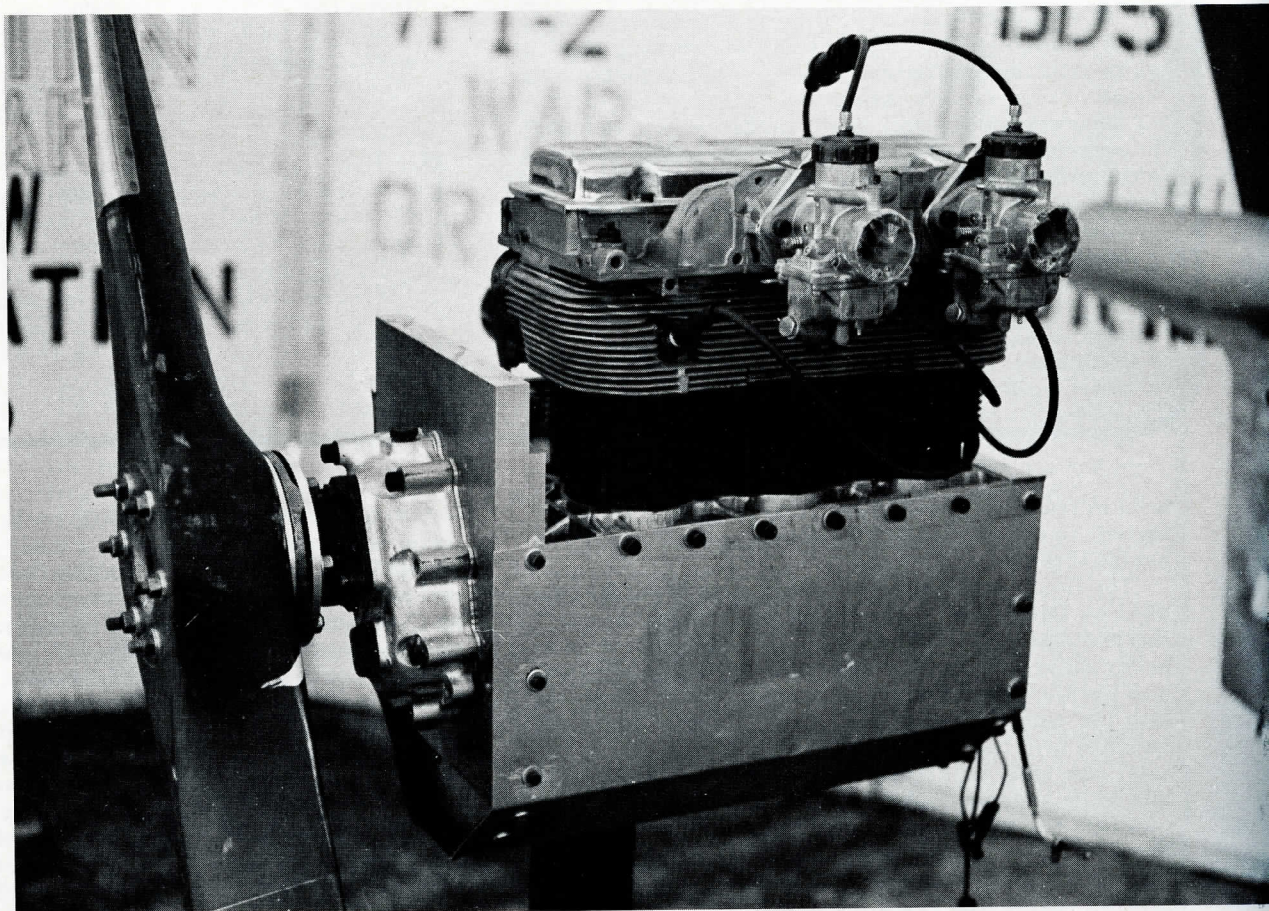
Doug Garner is also scheduled to be at Oshkosh again and will be giving a forum on all the fluidic goodies he has been cooking up.

● Ken Rand was showing pictures of the crash of the KR-3 amphibian prototype at Corona, California a few weeks earlier. The airplane's wing employed a GA(W)-1 airfoil and was found to have a vicious stall, often snapping in either direction at the break. One of Ken's em-

ployees, Jack Moel, was alone in the airplane at the time and on short final had the little bird violently drop a wing, hit the ground, cartwheel and finally end up inverted and nose down. The airframe was totaled, but Jack crawled out of the wreckage with nothing more than a scraped arm. Ken said that a new airframe is already under construction, incorporating a number of changes he and his partner, Stu Robinson, found desirable during testing prior to the accident. Perhaps the most important change will be to a Clark Y airfoil. He estimated the crash will set the KR-3 program back about a year and possibly a little longer.

EAAers should be sophisticated enough to realize that an accident such as that with the KR-3 prototype is a risk one must accept in the testing of **any** new aircraft and does not necessarily reflect on the airplane as it will ultimately evolve. Cessna, Beech and Piper have lost prototypes over the years and even the biggies of the aerospace industry with virtually unlimited engineering talent at their behest lose them also.

Ken started out from LA flying the KR-2 prototype to Florida — with Jack Moel driving with a trailer in tow (just in case, I suppose). He hoped to make it to Lakeland with just one stop at Kerrville, Texas . . . his KR-2 carries a maximum of 38 gallons of fuel, enough for 12 hours flight. He ran into the back side of a big low at El Paso, however, and after Jack caught up, the KR-2 was loaded on the trailer and they took 2 days fighting through snowstorms before breaking out in the clear in Louisiana. There the airplane was off-loaded at an airport and Ken flew on to Lakeland.



On display in the commercial tent, an in-line upright, geared, three cylinder engine . . . made by sawing a Corvair in half. Displayed by Daytona Airmotive of Ormond Beach, Florida.

On Tuesday Ken and Jack took off in the KR-2 and flew over to the Bahamas, spending the night in Freeport and returning Wednesday to the fly-in. Ken said the -2 created a sensation with the customs people. One agent called his wife, asking her to rush the kids out to see the "little airplane". Nothing quite so small had ever been seen in the islands, apparently.

● Sun 'N Funnery were treated to some first class aerobatic demonstrations . . . and some unusual ones. Several members of the U. S. Aerobatic Team were there plus a number of new acts few had seen before. Henry Haigh had his new 200 hp Super Star down from the snows of Michigan for a thorough wringing out in order to determine whether he will take it or his highly modified Pitts to the World Contest in Czechoslovakia this summer. Derived from a Stephens Akro, the Super Star was quite impressive — very fast and with excellent vertical performance. I was surprised to learn his cleaned up Pitts marginally out-performs the Super Star — even in top speed. Nevertheless, if he can become as comfortable in the Super Star as in the Pitts he will take the former to Czechoslovakia because he believes he will fare better with the European judges who seem to favor monoplanes.

An unusual sight was a dual act by Dwight Cross in a Pitts and Dr. Butch Hargrove in a Ranger powered Chipmunk. At the far end of the runway, the larger Chipmunk appeared to have some sort of tiny UFO right off its wing tip, perfectly matching its every move. Dwight and Butch are from the Charlotte, North Carolina area and fly aerobatic routines at the big Carowinds amusement park near there during the summer months.

Bob Abernathy of Atlanta did a fine job in his very sharp T-34, battling high winds on the days he performed. Another pusher of the big iron was Jeff Michaels of Lexington, North Carolina. He did everything from a snap on take-off to flying a jumper to open the air show.

Veteran EAAers were made to feel right at home by the voice of none other than Big Nick Rezich on the PA, taking his turn announcing acts, and Duane Cole performing his famous dead stick routine in a borrowed De-cathlon.

There were many more — Tom Adams, Ron Cadby, Bill Lumley, Em Avery of Lakeland, Jim Holland, Bert Maples, Greer Parramore . . . and still others. I'm certain the flip-flop fans went away happy with Sun 'N Fun '78.

● Chris Heintz and Red Morris managed to sneak through the weather, flying down the prototype TRI-Z and a Zenith from Canada. In talking to them I learned they have big plans for this summer. If things can be worked out with the Canadian DOT, Red will attempt to fly a 180 hp TRI-Z non-stop across Canada from Vancouver to Halifax, Nova Scotia. The TRI-Z will be modified to carry 180 Imperial gallons of gasoline in 6 tanks — 90 gallons in the wings and 90 gallons in the fuselage. Normal gross is 1850 pounds but it will be lifting nearly 2700 pounds for this flight — heavy, but within the capability of the design in the hands of an experienced pilot such as Red (a retired Canadian fighter pilot). The question of the overload is what DOT is debating at the moment. The trans-Canada flight is set for July 1 and should take about 20 hours.

The prototype TRI-Z, incidentally, had over 300 hours as of Sun 'N Fun time — a lot of flying in one year. It will be back at Oshkosh this summer along with an aerobatic Zenith which will perform in the evening air shows.

Chris, you may be interested to learn, is currently involved in a program to certify a version of his Zenith in Canada.

● In a conversation with Ed Trent at his Aerosport booth, we learned a Scamp had been built in Cali, Columbia and is in use today as a **crop duster**! Further, it has

performed so successfully that 5 more had been ordered. It seems a particularly potent insecticide is being used — so much so that a small amount covers quite a bit of acreage. This allows the use of a small, very economical airplane like the Scamp. (In fact, a Bensen Gyrocopter is also being similarly used in another country.) Ed says the tri-gear Scamp is the most popular of the Aerosport designs . . . not even counting ag pilots.

CONCLUSION

Sun 'N Fun Fly-In Director Billy Henderson, the officers and directors of the Sun 'N Fun corporation and all the EAAers who worked throughout the year to prepare the site and served as chairmen and workers during the fly-in are to be commended for a truly excellent job. The already first class operation shows marked improvement every year and we are aware of even bigger and better things planned for next year. Sun 'N Fun '79 dates are January 22 through January 28, 1979 — plan to be a part of it next year.



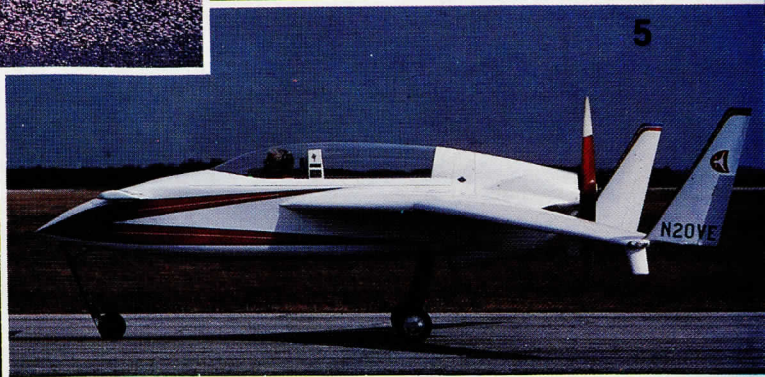
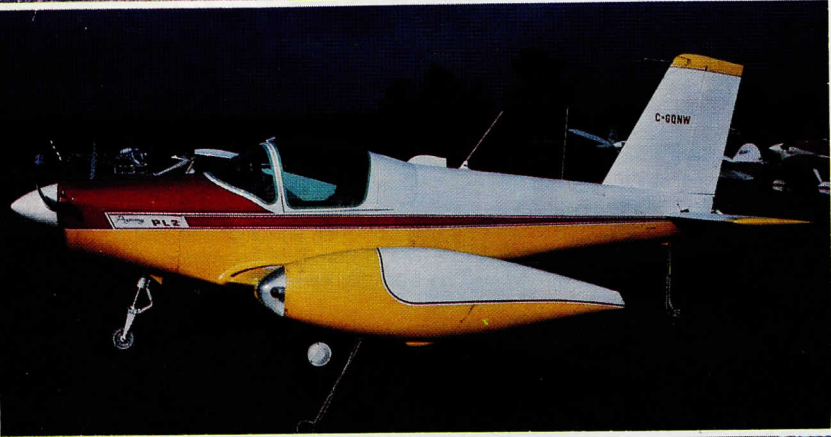
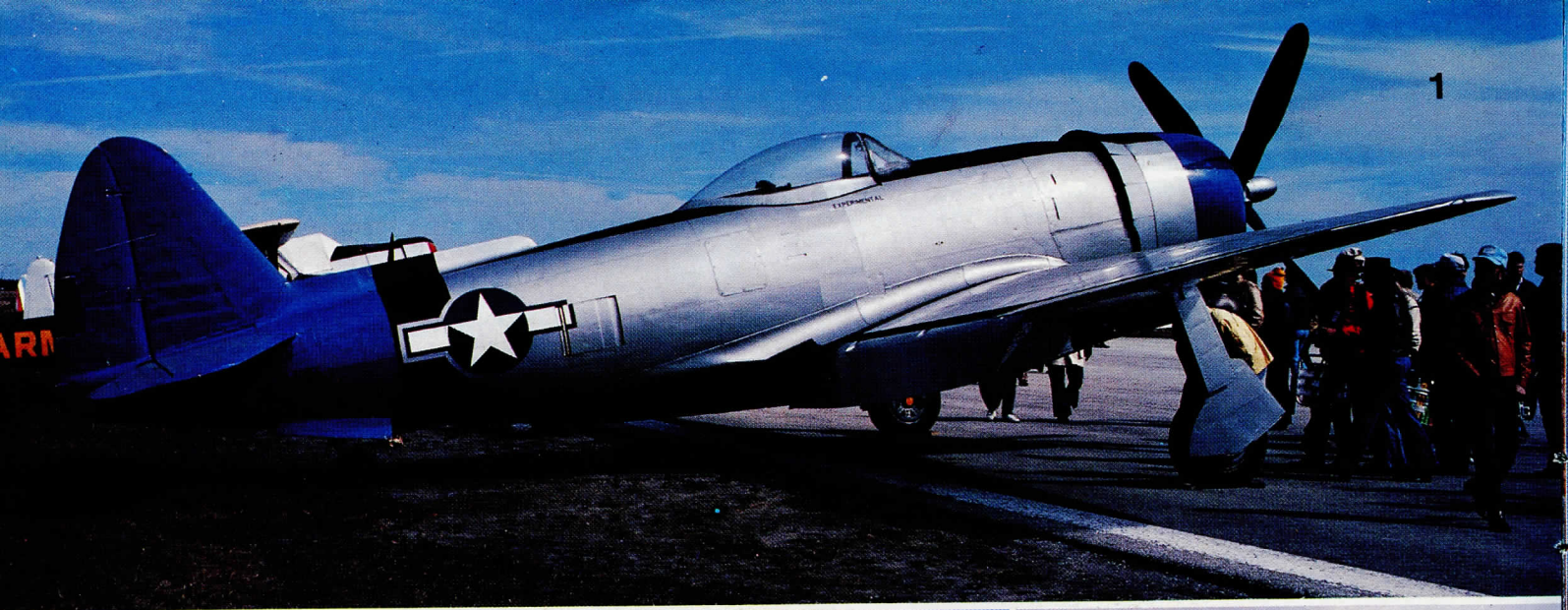
Audrey Poberezny, left, Bonnie Soucy and Bernice Scholler manned the Headquarters sales tent. In addition, President Paul Poberezny, Vice President Ray Scholler, Gene Chase, Bill Chomo, Vern Lichtenberg, Jack and Golda Cox represented EAA Headquarters during Sun 'N Fun '78.

1. Sun 'N Fun Warbird Grand Champion, a Republic P-47N owned by the Confederate Air Force and sponsored by Tom Holman of Vero Beach, Florida.
2. Henry Haigh's Super Star — possibly will be his mount in this summer's World Aerobatic Contest.
3. A 1929 OX-5 powered Bird restored by Harry Phillips and David Pearlman of Orlando, Florida.
4. Pazmany PL-2 by Ross Whitney of Lambeth, Ontario, Canada. 125 hp Lycoming.
5. One of five VariEzes at Sun 'N Fun — this one by John Murphy of Cape Canaveral, Florida.

(Photo by Golda Cox)

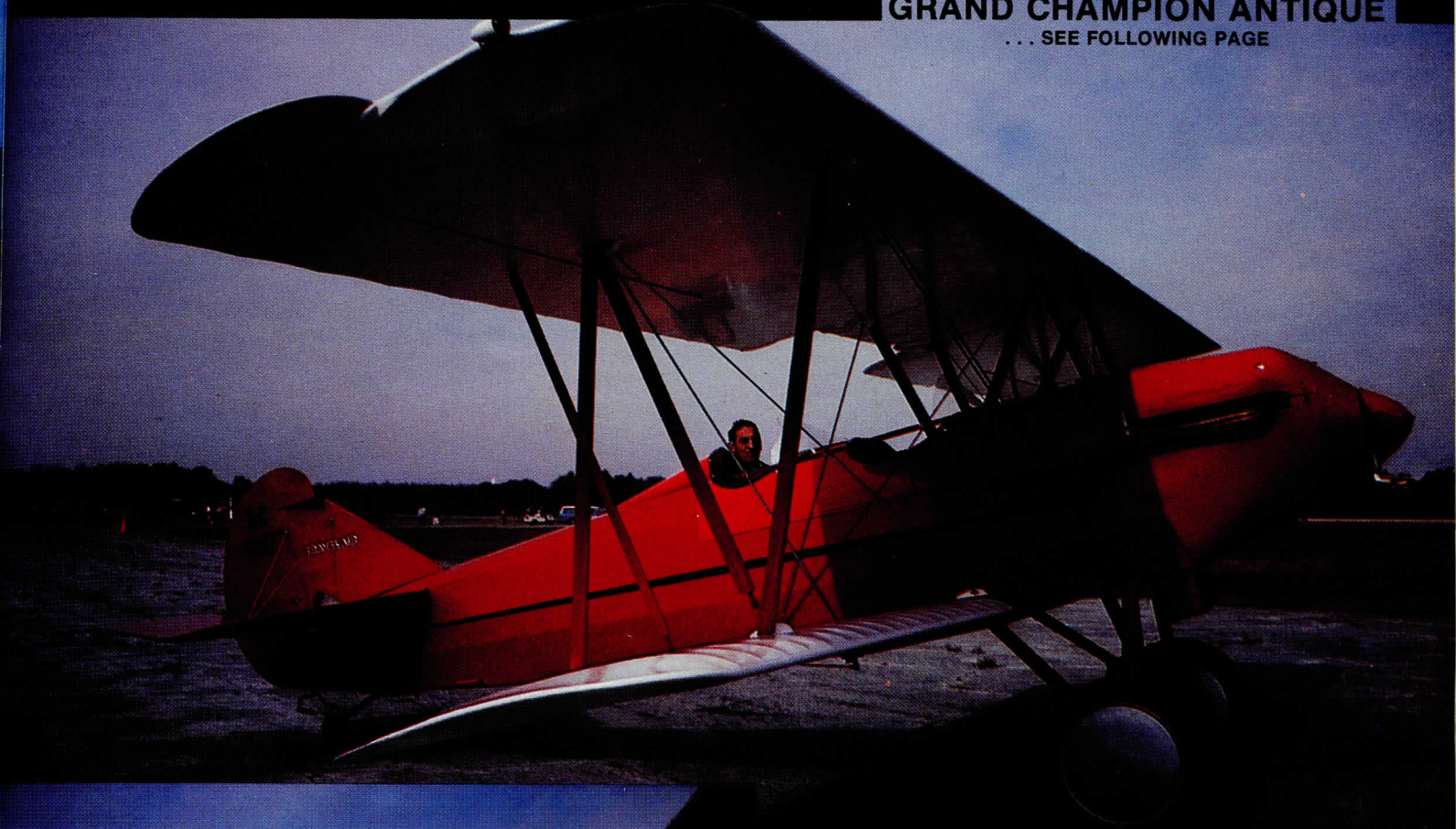
(Photo by Golda Cox)

6. A number of exceptional Swifts were on display, including this one by Richard Keyt of Cocoa Beach, Florida.



GRAND CHAMPION ANTIQUE

... SEE FOLLOWING PAGE



DEAN TILTON
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DEAN TILTON'S GRAND CHAMPION TRAVEL AIR 2000

WHEN WE THINK of the late 20s, inevitably it is of Lindbergh and the Spirit of St. Louis. On a more mundane level, however, that was the time of the 3-place, open cockpit, OX-5 powered biplane. It was the heyday of the American Eagle, the Alexander Eaglerock, Swallow, KR-31, Command-Aire, Waco 10 and the Travel Air 2000.

The Waco 10 and the Travel Air 2000 were the Ford and Chevy of the lot and as long as two antiquers are left breathing, the relative merits of each will be argued with gusto . . . a stein or so, usually. They were built in the greatest number and survive today in the greatest number to stoke the fires of the antique airplane hobby. The most colorful comparison of the two I ever heard came from the late M. B. "Dusty" Huggins of Timmonsville, South Carolina. In the 30s and late 40s Dusty operated one of the nation's larger crop dusting outfits, following the growing season each year from Louisiana to Canada. At one time he managed a fleet of nearly 30 Waco dusters - mostly Model 10s with any sort of radial engine he could hang on them. Dusty loved the Wacos and, in fact, retained a couple of them until the day he died, just for old times sake . . . but readily (and I think with no little pride) admitted they were a handful on the ground. So much so, that he kept several Travel Airs on hand to check out new pilots before turning them loose in the Wacos. "Even then, 9 out of 10 would groundloop on their first landing in a Waco", Dusty would guffaw. His experience was that the Waco stood up better under the incredible day-to-day pounding they took in the dusting business, but that the Travel Airs were more pleasant, docile airplanes to fly.

Today one is fortunate indeed to lay hands on an example of **any** of the Roaring 20s OX-5 jobs. One so blessed is Dean Tilton of Lakeland, Florida. Three years ago he bought a basket case Travel Air 2000 from Joe Araldi and finished its complete restoration just in time to win the Grand Champion Antique trophy at Sun 'N Fun '78.

Dean's beautiful Travel Air, NC6117, Ser. No. 615, began life in Walter Beech's Wichita aeroplane works in 1928 . . . and for a great while appeared to have ended it as a part of Peter Bryn's personal cache of Travel Airs stashed away on his Dazey, North Dakota farm. A few years ago, however, Mr. Bryn began to sell off some of his treasures and Joe Araldi was shortly at his door, empty trailer at the ready.

For a variety of reasons, one of which was having more antique airplanes than time, Joe never got around to restoring the Travel Air and eventually sold it to Dean — minus an engine. Dean began work three years ago and flew the airplane for the first time on January 9 — 13 days before the start of Sun 'N Fun '78. But that's getting ahead of the story.

Dean found the airframe to be in reasonably good condition, requiring basically just a good clean-up, new fuselage formers and stringers, a little repair work on the wings and a cover job. The engine was a little more of a challenge. For a time, Dean dickered with Peter Bryn for a majored OX, but after finding it was going to take a lot more time than he cared to wait, looked elsewhere. As

often is the case, an OX-5 was eventually found right in his own backyard. Merle Jenkins sold him a dismantled Hot Water Eight that until lately had been used in the orange groves to stir up the air to prevent crop damaging frost.

Dean overhauled the engine, refinished the still air-worthy Fahlin propeller, covered the airframe with Grade A cotton and finished it with butyrate dope. The final color coats were International Orange for the fuselage and vertical tail and Insignia White for the wings and horizontal tail. A leaf-spring tail wheel rig was grafted onto the aft end of the fuselage to replace the original skid and N3N wheels with hydraulic brakes were fitted — the principal concessions to the realities of today's paved runway environment.

A number of antiquers had provided valuable advice and assistance along the way. An OX-5 overhaul manual was obtained from a friend in Maine, and Ernie and Lucy Webb of Charlotte, North Carolina, who own one of the first and still finest TA 2000 restorations, provided invaluable tips — like lining the headrest baggage compartment to avoid having the fabric damaged from within, etc. And, of course, local airplane nuts were always dropping by to lend a hand here or there, kibitzing or just drinking his coffee.

The final hang-up was a useable magneto. An ad in good ol' Trade-A-Plane ultimately provided the needed item and paved the way for an award winning first showing at Sun 'N Fun. The first trip around the patch was strictly unintentional. Dean had not flown a tail dragger in many, many years, so was doing a lot of taxiing to get the hang of it again — getting a little faster for a little longer each time until the inevitable happened: the lightly loaded Travel Air responded to a gust and launched into the breeze. Fortunately, Dusty Huggins' assessment of the type was correct, for Dean was able to get it around the pattern and back down on pavement again, safely even if not too artistically. By Sun 'N Fun time he had built up several hours flying time and was beginning to appreciate what a really great old flying machine he had. Winning the Grand Champion Antique trophy was a very sweet frosting on the cake.

Dean Tilton is a native of Sidney, Maine. He left there during World War II, joining the Air Force as an aviation cadet. He progressed through the Stearman and the AT-6 and was at a base in Waycross, Georgia preparing to transition into P-51s when the war ended. He and his classmates were probably the only persons in the world who greeted the news of victory with dismay . . . they never got to fly the Mustang.

After his discharge, Dean married and settled in Nebraska where he became a general contractor. After 12 years of battling Great Plains winters, he moved to Florida where he could ". . . operate his business on a year-round basis." He has continued to fly over the years and owns a Cessna Centurion, which his wife also flies.

The Centurion is one of the most popular lightplanes of our day . . . just as the Travel Air 2000 was in the late 20s. Owning one of each is what I call enjoying the best of two worlds.

-JBC