

**Spence: Santa's gifts
for GA leaders, P. 11**

**Flying at
the mall, P. 10**

**Eclipse fliers
at United, P. 20**

**What's up at
Taylorcraft, P. 16**

**NASCAR on
pit road, P. 12**

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Jamail Larkins: Mr. Ambassador, P. 33

Want to help? It's simple, P. 40

Be like Jamail: 5 tips to get you started, P. 35

Reading, writing and riveting, P. 36

FBO fuels dreams of flight, P. 38

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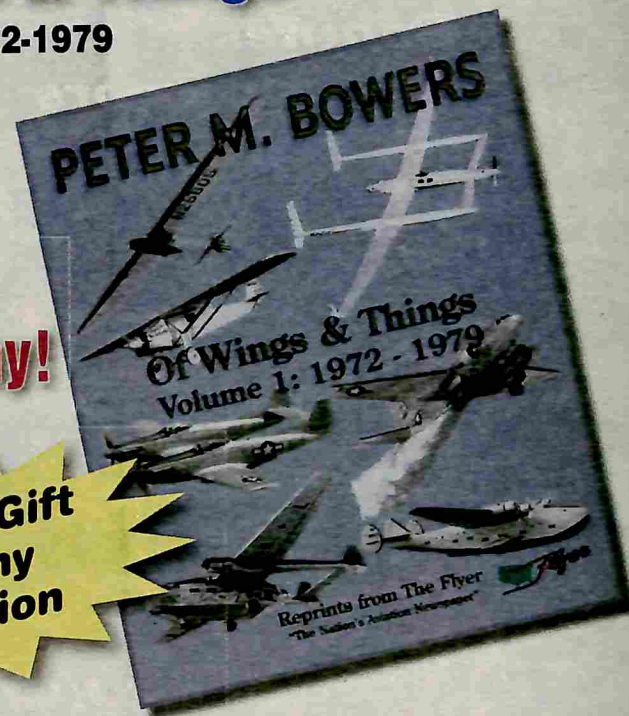


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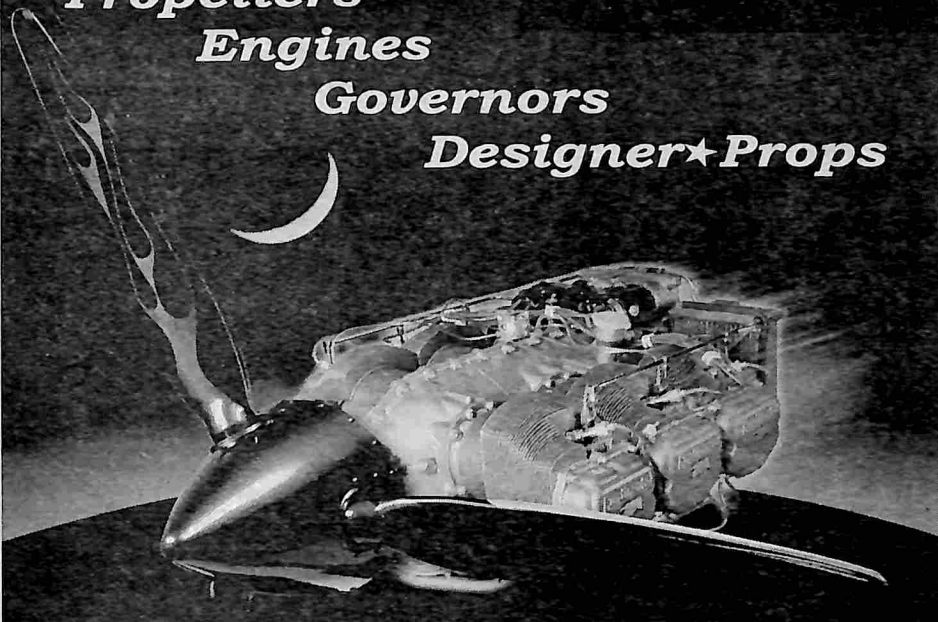
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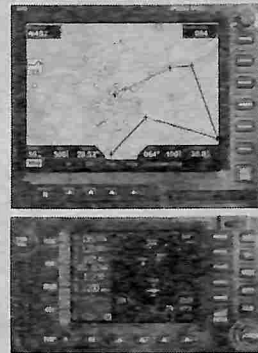
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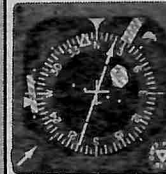


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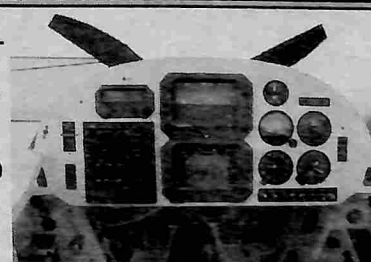
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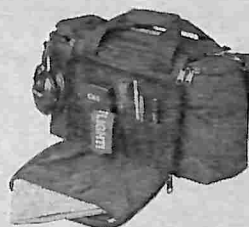
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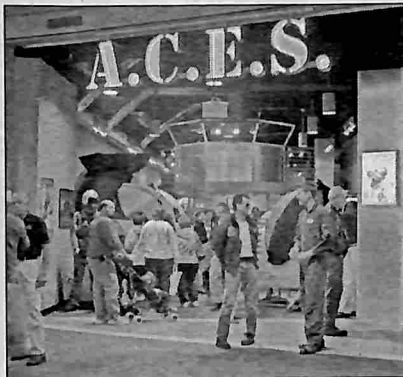
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Contents



Page 10



Page 16



Page 36

DEPARTMENTS

6	Takeoff
11	Capital Comments
14	Touch & Go
14	Letters to the Editor
19	Ask Paul
20	Visser's Voice
21	Classifieds
31	Calendar
43	The Doctor is In
47	Accident Reports
48	On the market
49	Crossword Puzzle
50	Classic Bowers

On the cover

Mr. Ambassador | Jamail Larkins, 20, travels the country inspiring dreams of flight.

Photo courtesy Jamail Larkins

News & Features

Heavy hitters Former Cessna president joins Javelin's executive team	8
The best use? Minnesota airport comes under fire	9
Forget shopping! Red Tail Project's P-51 newest thing at the mall	10
Santa's list What will movers and shakers find under their trees this year?	11
Deal breaker NASCAR looks elsewhere as Washington town says no	12
A good combination Can planes and a park co-exist?	15
A bumpy start Ups and downs at Taylorcraft	16
Ask Paul Read the fine print in your logbook	19
Visser's Voice Agreeing on the best oil temperature	20
Fly the friendly skies Eclipse partners with United Airlines for training	20
What's up doc? Does your AME have the right stuff?	43
The perfect present Toy shop specializes in gifts of flight	45
My first log book Chronicle those special adventures for this generation — and the next	45

Growing The Next Generation

Mr. Ambassador Jamail Larkins travels the country, spreading the good news about aviation	33
Reading, writing and riveting Seattle girls build a plane as part of their schoolwork	36
A gift of flight Helping the next generation take off	37
The bottom line FBO fuels dreams of flight	38
Scientific evidence Survey finds what really inspires kids	40
Destination Aviation Summer camps help kids take off	41

CLARIFICATIONS

Plans call for the Javelin jet to be certified in 2007. AvTechGroup.com.

TAKEOFF

Fowl play

Forget breaking eggs to make an omelet. When you're trying to break the sound barrier, you can — accidentally — wipe out an entire flock of chickens.

That's what happened May 18, 1953, when Jacqueline Cochran, flying an F-86 Sabrejet out of Edwards Air Force Base, became the first woman to break the sound barrier. She did it by taking the jet to 45,000 feet and diving toward the earth. Actually she did it twice. The first time she executed the maneuver she was told the sonic boom had not been heard, so she went up a second time and produced the boom.

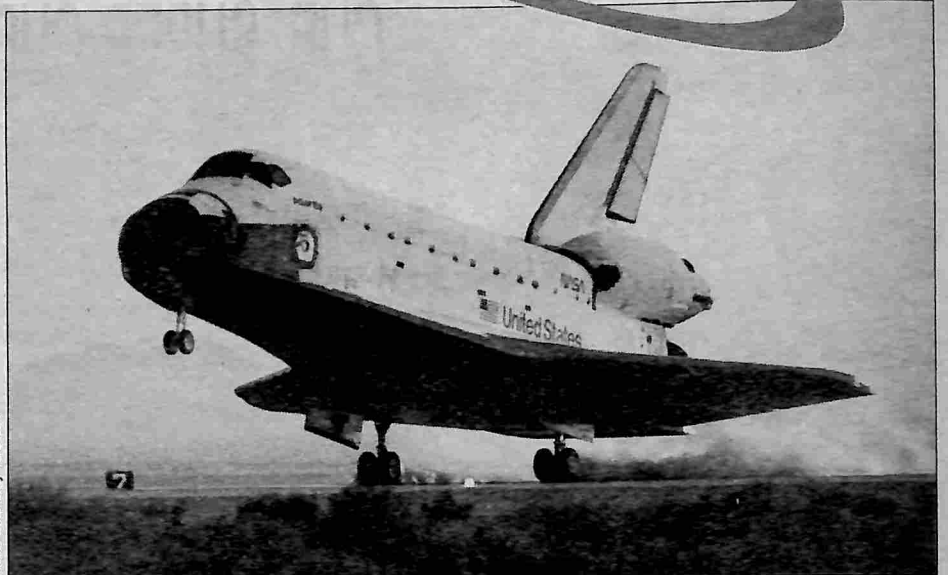
A local chicken rancher complained that his stock was so frightened by the noise that the chickens crammed into



a corner, where several smothered to death.

When she heard about the fowl fatalities, Cochran allegedly told the rancher "Produce the dead chickens and I'll pay for them."

Photo courtesy NAASA



ALL FOR IT: Should space exploration continue? Absolutely, a majority of Americans said in a recent survey.

Are this season's shows really that bad?

A Covallis, Ore., man got more than he bargained for when his parents gave him a flat-screen Toshiba television. He knew the set came with a built-in VCR, DVD and CD player, but what he didn't know was that the TV was sending out a signal identical to that of an Emergency Locator Transmitter.



The 121.5 MHz signal was picked up by an orbiting search-and-rescue satellite, which alerted the Air Force Rescue Coordination Center at Langley Air Force Base in Virginia. While 90% of these alerts are false alarms, each one is checked out.

Chris van Rossman found that out when members of the Air Force and local law enforcement showed up at his apartment. At first the officials couldn't figure out where the signal was coming from since van Rossman didn't have an ELT. Then one of them figured out that when van Rossman turned off the television to answer the door, the signal stopped.

The wannabe ELT was rendered in-op by unplugging it. Van Rossman was told he'd better leave the TV off or else he could be fined \$10,000 for emitting a false distress signal.

To infinity and beyond

How do Americans feel about space travel?

A new study on space exploration found that 69% support the space program, according to Dittmar Associates, which interviewed 1,000 people across the country.

Some highlights of the study:

- About 65% approve of returning to the moon, but just 18% support sending humans to Mars.
- International participation and cost-sharing were ranked #1 as Americans' choice for funding continued space exploration — with certain conditions;
- We understand and appreciate the benefits of the space program, including the impact of space-based technology on our daily lives;
- And most Americans believe that much more can be done to promote NASA and its goals.

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ADVERTISER INDEX



Adlog (Aerotech Publications)	39	B&S Aircraft Parts & Accessories	46	Eastland Aero	49	Long Island Airport	34	Schweiss Bi-Fold Doors	39
Aero Crafters	24	Baumann Floats LLC	25	Exec Air-Montana	49	Mandan AP Authority	49	Selkirk Aviation	24
Aero Northwest	46	Blades Aviation	26	E-Z Heat, Inc.	46	Maule Air, Inc.	23	SerVair West, Inc.	49
Aero Ski Mfg Co Inc	31	Blaine Municipal Airport	49	F. Atlee Dodge Aircraft Services	23	Micro Aerodynamics	8	Shell Lubricants	52
Aerox Aviation Oxygen, Inc.	47	Brackett Aero Filters Inc	26	First National Bank of Clinton	38	Mid-Way Regional Airport	49	Sherman Municipal Airport	49
Air Plains Services	22	Brown Aviation	27	Fliteline Services Inc	49	Miracle Steel Structures, Inc.	43	Sky Ox Limited	26
Aircraft & Marine Assurance	29	Bruce's Custom Covers	46	Fremont Aviation	49	Monarch Premium Caps by Hartwig	20	Snohomish Flying Service	49
Aircraft Spruce & Specialty Co.	46	Cardinal Electronics	8	Gainesville Municipal Airport	49	Montana Float Co. Inc.	25	Southfield Fuel Inc.	49
Aircraft Tool Supply Co	42	Castrol Aviator	12	General Aviation Modifications Inc	3	Mountain High E & S Company	47,48	Spartanburg	49
Airframes, Inc	25	Cee Bailey's Aircraft Plastics	26	General Aviation News	12	Mtn View Aviation	22	Spencer Distributors	27
Airpac Inc	48	Chief Aircraft	3	Genuine Aircraft Hardware Inc	46	Nevada Aircraft Engines LLC	3	Spinner Man	46
Airtex Products, Inc.	35	CJ Spray	26	Gibson Aviation	35	Niagara Air Parts	13	Sporty's Pilot Shop	11,47
Airtug	48	Colemill Enterprises/Pelco	8	Gift of Wings	34	Northwest Aviation Conference	32	Star West Aviation	49
American Propeller	3	Colorado Door Fabricators	28	Graham Services	27,46	Ocean City Municipal Airport	49	Stene Aviation, Inc.	22
AOPA	44	Computer Sciences Corporation	8	Grant County Regional Airport	49	Oilamatic, Inc.	46	Steve's Aircraft	26
AOPA Membership Marketing	51	Coos Aviation	49	Hammerhead Signs	41	Oregon Aero, Inc	19	Stick And Rudder Restorations	26
Applewood, Inc.	48	Corrosion Technologies Corp.	40	Harper Aircraft Inc	25	P2, Inc	37	Tail-Dragger Dragger	48
Arn-Air	46	Crest Airpark	49	Hartwig Fuel Cell Repair	37	PCAvionics	41	Tana Wire Markers	46
Auburn Management Group	49	Crystal Airways	41	Headsets, Inc.	26	PM Research	42	The Heli-Mart Group	25
Avemco Insurance Company	48	Cub Crafters	23	Herber Aircraft Service	2	Port of Grays Harbor	49	Tiffin Aire Inc.	29
Aviation Insurance Resources	48	D & D Aircraft Supply	43	Holley Mountain Airpark	30	Precise Flight, Inc.	9	Transwestern Aviation	49
Aviation Supplies & Academics (ASA)	8	Dakota Airframe Inc	24	Hooker Custom Harness	46	Premier Aircraft	49	Ultimate Buildings	28
Avipro	25	Dawley Aviation	25	Independence Flyers	49	Premium Aircraft Parts	2	Univair Aircraft Corporation	7,46
Avionics Shop, The	27	DC Thermal	46	Judith Mountain	10	Promotional Productions Inc (PPI)	41	Universal Steel Structures	28
		Decatur Municipal Airport	49	Kelso Flight Service	49	R & M Steel	19	VG STOL	26
		Design Logic Inc	29	King Schools	29	Regal Aviation Insurance	47	Warren Gregoire & Associates LLC	9
		Desser Tire & Rubber Co.	26	Knots 2U	46	RMD Aircraft Inc.	25	Wentworth Aircraft	40
		Devine Air	4	Kosola & Associates	20	Rocky Mountain Propellers	38	Western Skyways, Inc.	4
		Di Blasi of North America	48	KS Avionics, Inc.	27	Rudy Aircraft Instruments, Inc.	29	Women Fly	42
		Dube Air, LLC	29	Leather Jacket Factory	28	Safety Ltd.	26	XP Modifications	23
		Eagle Fuel Cells	15	Lebannon Aviation Inc	49	Safety Research Corp of America, LLC	46	Zeltronics	26
		Eagle Span Steel Structures	27	Living With Your Plane	15	Sandpiper Air	49	Zephyr Aircraft Engines	46

Regional Ad Section starts on page 26a

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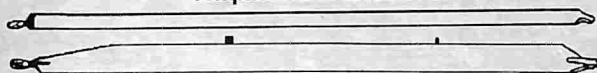


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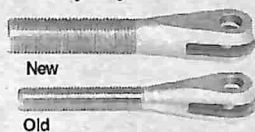
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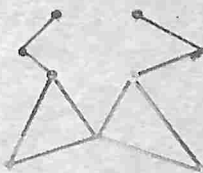


J-3 Front**.....U85547-002.....\$433.00	PA-18 Front**.....U89497-002.....\$395.00
J-3 Rear**.....U85548-002.....\$433.00	PA-18 Rear**.....U89498-002.....\$395.00
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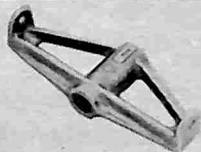
J-3 (Continental)U71163-000.....\$452.69
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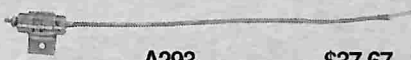
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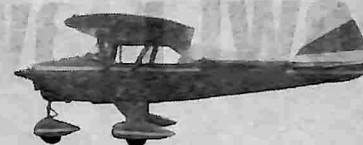


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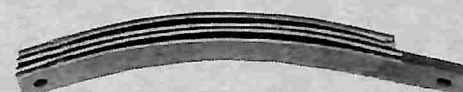


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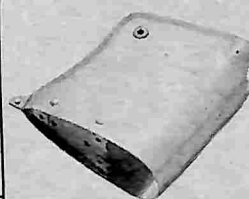


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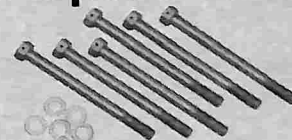
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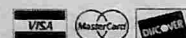
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Retired Cessna president joins Javelin management team

Another coup for Aviation Technology Group, the Colorado company that's bringing the Javelin jet to market: Charlie Johnson, former president and COO of Cessna, just joined the company as executive vice president of operations. Just two weeks ago, Horst Bergmann, former president and CEO of Jeppesen, also joined the company's executive management team.

The jet, which will be targeted to both the civilian and military markets, is expected to be certified in 2007.

AvTechGroup.com.

Meanwhile, another very light jet hopeful, Safire Aircraft, saw most of its office equipment and shop tool inventory auctioned off late last month. The sale was forced by the owner of Safire's former headquarters in Opa Locka, Fla., in

an effort to recover some \$60,000 in unpaid rent.

It was reported that Safire's CEO, Camilo Salomon, was present and was able to withhold the company's computers from the sale. Salomon told several bidders that he is still talking with prospective investors in hopes of restarting the Safire project.

SafireAircraft.com.

The Pennsylvania legislature has passed the Flying While Impaired Bill, which makes flying while drunk a misdemeanor, punishable by a \$5,000 fine and possibly some jail time.

The bill, which awaits Gov. Edward Rendell's signature, was in response to the arrest of John V. Salamone last January after he took a four-hour joy ride while drunk.

Salamone, who was charged with reckless endangerment

and risking a catastrophe, was sentenced to six to 23 months in county prison.

A quick reminder: The 101st anniversary celebration of powered flight is set for Dec. 17 at the Wright Brothers National Memorial at Kitty Hawk, N.C.

The FAA has certified the Garmin G1000 in Mooney's Ovation and Bravo aircraft. An STC was awarded to Garmin in November. Mooney has incorporated the approval into its Type Certificate.

Meanwhile, Mooney continues growing, opening a sales office in Wichita, which new CEO Gretchen Jahn calls the "center of the universe" for aviation.

Mooney.com, Garmin.com.

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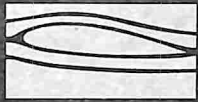
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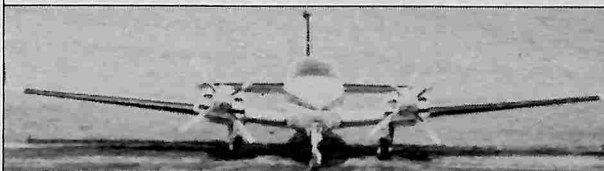
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Minnesota pilots upset over plans to close Crystal Airport

By **MEG GODLEWSKI**
General Aviation News

What is the best utilization of land? If an airport is operating in the red, should it close? How many operations are "enough" to justify keeping an airport open?

These are the questions swirling around Crystal Airport (MIC) in Minneapolis-St. Paul in the wake of plans to redevelop the land. In late October, the Northwest Corridor Partnership said it will pursue closing the airport to redevelop it into homes, businesses and factories.

MIC, owned by the Metropolitan Airport Commission (MAC), is one of six reliever airports in the Twin Cities. Supporters of its closure note the proceeds from its sale could be used to make improvements at the other reliever airports. However, state law would have to be amended to allow the sale, because MAC is not allowed to decrease runway capacity without the approval of the state legislature. The FAA would also have to approve the closure.

The airport's closure is part of a long-range plan for the city of Crystal. The city's comprehensive plan, which goes through the year 2020, indicates the property is "underutilized," according to Patrick Peters, the city's community development director.

Built decades ago far from urban population areas, the airport now sits on some 430 acres and is penned in by homes, shopping centers, light manufacturing and warehousing.

The airport has a tower and four runways, three paved and one turf. The longest runway measures 3,266 feet. The number of annual operations has fallen far below numbers set in 1964, suggesting the airport has outlived its usefulness.

"The number of operations at Crystal have decreased in recent years," concedes Patrick Hogan, MAC's director of public affairs.

There were 98,612 operations in 2003, down from 124,640 in 1964, he reported. "But you have to remember that numbers in GA overall have decreased in the years since Sept. 11," he said. "A lot of that has to do with the economy too."

Crystal is a casualty of the terrorist attacks, said Gary Schmidt, director of reliever airports in the Twin Cities. "Because of the airport's proximity to the metropolitan area, it was shut down for an extended period of time," he said. "As a result, three flight schools closed down. The decline in the number of annual operations at the airport has a lot to do with the loss of those businesses. Prior to the attacks, we had done 170,000 operations annually."

Another argument for closure is the

"The FAA is not inclined to support the closure of any airports at this point in time."

— Gary Schmidt, Twin Cities' director of reliever airports

public's perception that the airport is dangerous. The airport is surrounded by single family residential neighborhoods, and according to the information supplied by Peters, the city believes the airport represents a "significant risk to life, property and aviation safety."

"To be fair to the city of Crystal, about 15 or 20 years ago, there were a number of accidents where airplanes crashed into neighborhoods near the airport," said Schmidt. "Most of the accidents were caused by pilot error."

Economics is also fueling the push for closure. Some of that pressure is coming from major airlines, including Northwest, which claims it is unfair for the reliever airports to be subsidized by

fees collected at Minneapolis-St. Paul International Airport (MSP). All six reliever fields are subsidized by these fees. The idea is that GA traffic uses the reliever fields so that larger, commercial operations can run more smoothly at MSP.

But the airlines argue that it doesn't make sense for cash-strapped airlines to pay for someone else's operation, especially when the need for a particular airport is questioned.

Crystal is not self-sustaining, operating at a \$400,000 annual deficit, according to Schmidt. "On one hand, it might make sense to close the airport, but then you would have to spend the money to make significant improvements to the other relievers to absorb the extra traffic."

There are 263 aircraft and five businesses based at Crystal. "Our remaining relievers probably can't absorb that much activity without significant improvements to them," he noted.

Even if MAC decided to close Crystal, the final decision would be the FAA's. Grant assurances have been signed with the FAA, requiring the airport to remain open unless all the money could be paid back. Schmidt was not sure how much grant money the airport would have to pay back.

"The FAA is not inclined to support the closure of any airports at this point in time," Schmidt said.

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Forget shopping!

The newest attraction at the mall is the Tuskegee Airmen's P-51 Mustang

By **MEG GODLEWSKI**
General Aviation News

The closest most people get to a P-51 Mustang is looking at a picture. Unless, of course, you get your hands on an "aircraft" that's a computer simulation of the ones flown by the Tuskegee Airmen, the first black pilots in the American military. The simulator is part of the A.C.E.S. Flight Simulation attraction at the Mall of America in Bloomington, Minn.

In addition to letting people live out their fighter pilot fantasies, the simulators provide the opportunity to educate people about The Red Tail Project, an organization created to tell the story of the Tuskegee Airmen, who flew Mustangs with red tails in World War II.

"We hear admiration from World War II B-17 veterans who thank the Tuskegee Airmen for flying escort for them," notes Red Tail Project Coordinator Stan Ross. "We also heard from a man who claimed to be a P-51 pilot during World War II who said there were no black pilots because he would have heard about it and he did not. That tells us we still have a lot of work to do."

The Red Tail Project shares retail space with the simulators. This allows the group to sell books, caps, and other memorabilia. Proceeds are used to restore a real P-51 that was badly damaged in a crash in May, as well as further the group's community outreach education efforts.

"So far we have raised about \$125,000 of the \$2 million we need,"

said Ross. The group is looking for corporate sponsors to help it reach its goal.

"The best part of this is when we get the guys who were the real Tuskegee Airmen out and they meet the public," he said. "Those are the best days."

RedTail.org.



THE REAL DEAL: Larry Brown, a Tuskegee Airman, and Brad Long, the son of a Tuskegee Airman, try their hand at the Red Tail simulator

Photo courtesy Red Tail Project



PART ENTERTAINMENT, PART EDUCATION: Wanna-be fighter pilots try their luck at the Red Tail Project's P-51 simulator at the Mall of America.

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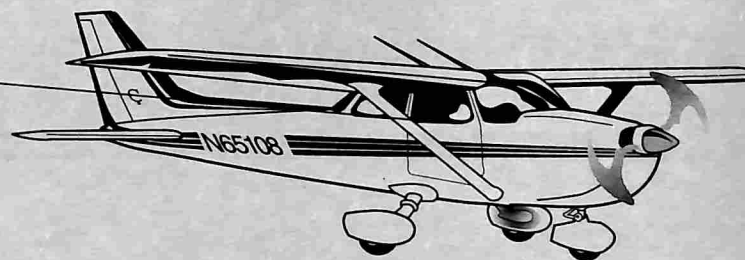
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He's making a list...checking it twice

► *What is Santa bringing to folks in Washington?*

By CHARLES SPENCE

WASHINGTON, D.C. — Santa always has a special bag of goodies that he brings to the busy aviation folk here in the nation's capital. Information about the contents of this year's bag, like every other secret in this city, was leaked to the press. Fortunately, Santa considers *General Aviation News* a top news source, so the leaked information came to me. Like every other reporter here, I refuse to reveal the source of my information other than to say it was not "Deep Throat," who leaked information about the Watergate break-in that brought the downfall of President Nixon.



CAPITAL COMMENTS

I have from a reliable source the following people will wake up Christmas day to find these items under their tree:

- The entire staff of the General Aviation Manufacturers Association (GAMA): A new recorded message for their telephone answering machines — "If you are our new president, leave a message who you are and I'll call you back."
- Ed Bolen, the former president of GAMA and now president of the National Business Aviation Association (NBAA): A pencil with an extra large eraser to keep a record of staff changes up to date.
- Marion Blakey, FAA administrator: A recording of the popular tune by Jerome Kern, "They Didn't Believe Me" with new lyrics — "And when I tell them no user fees there will be, they didn't believe me, they didn't believe me."
- Transportation Security Administration chief Rear Admiral David M. Stone: A white hat so his image can begin to change more to what it really is — one of the good guys.

"For the security people who insist on TFRs whenever the President leaves the White House: A scale model of the city of Washington with a remote-controlled Toyota whose trunk explodes if it is guided onto certain streets."

- For the security people who insist on TFRs whenever the President leaves the White House: A scale model of the city of Washington with a remote-controlled Toyota whose trunk explodes if it is guided onto certain streets. Batteries included.
- Phil Boyer, president of the Aircraft Owners and Pilots Association (AOPA): A notebook computer that displays

Power Point presentations with only rosy hues as the association shows a membership gain while the pilot population declined by more than 6,000 between 2002 and 2003.

- Jim Coyne, president of the National Aviation Transportation Association (NATA): A suit with each sleeve and pant leg of different lengths that he can wear when trying to explain

to regulators that on demand is different from scheduled and "one size does not fit all."

• This writer of Capital Comments: Two lumps of coal in the Christmas stocking for not mentioning in the most recent column two other fine communications persons who have left their positions: Cliff Stroud, who is gone from NATA, and Cassandra Bosco, who departed NBAA earlier this year. As with the other wordsmiths mentioned two weeks ago, these talented professionals know the difference between publicity and public relations, something not always recognized by many persons in this community known as The Puzzle Palace on the Potomac.

Charles Spence is GAN's Washington, D.C., correspondent

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PORK TO THE RESCUE

Pork is great in barbecue, but generally undesirable in Congressional budgets. Fortunately for NASA's scramjet project, members of Congress from Tennessee, where the X-43A scramjet testbed was built, have thrown some pork into the hypersonic research recipe: \$25 million worth. NASA had intended to scrap its hypersonic research after the second X-43A test, conducted in November at a phenomenal speed of Mach 10. The new funds will be used to continue work on the proposed X-43C follow-on, which is larger than the X-43A and burns hydrocarbon fuel instead of gaseous hydrogen, for much longer range.



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NASCAR puts brakes on new track

Arlington, Wash., politicians won't pony up millions, so NASCAR looks elsewhere

By **MEG GODLEWSKI**
General Aviation News

Pilots at Arlington Municipal Airport (AWO) in Arlington, Wash., no longer have to worry about a NASCAR track being built near the field. On Nov. 22 International Speedway Corp. and the politicians of Snohomish County put the brakes on negotiations.

The ISC wanted the community to put up \$250 million

for construction of the track. The politicians said no.

The ISC, which is still looking for a location in the Pacific Northwest, is reportedly considering property near the Bremerton International Airport (PWT), approximately 50 nautical miles southwest of Arlington.

"The ISC has shown interest in our area in general terms," confirmed Tim Thomson, chief operations officer for the Port of Bremerton. "They are looking at property that is near the airport but does not belong to the Port of Bremerton."

Thomson said he was not aware of any opposition to the track in the Bremerton area.

"We've all been watching what has been happening in Snohomish County for the last 18 months," he said, adding that the port's emphasis is on increasing utilization of the airport, which, in theory, could happen if a track is built.

"We're interested in a recreational venue like this as long as there is compatible use with the airport," he stressed.

Chief among objections to the Arlington location was the creation of TFRs over the track on race days. Because the proposed track site was within a few miles of the airport, the airport would have to close when the track was in operation.

TFRs are nothing new to pilots at the Bremerton Airport. Since Sept. 11, pilots have had to contend with restricted airspace over the Navy's mothballed fleet in the Port of Bremerton and the submarine base at Bangor.

ISC officials note that part of the criteria for choosing where a track will be built is whether a community welcomes the track. They also note that tracks bring a lot of money into a community, starting with jobs during construction, to an inflow of cash on race days.



Jean Batten, 1934

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Open door policy: FSS and towers are open to pilots

Should Flight Service Stations and Air Traffic Control towers be open to pilots?

Yes, say FAA officials. But it took some doing to get that admission, as doors slammed shut after the Sept. 11 terrorist attacks.

Under the current Code Yellow threat alert, FSS are still open for walk-

in briefings — unless there is a specific threat to that facility.

Pilots also should be allowed access to ATC facilities. That includes tours and Operation Raincheck programs, but access is dependent upon the availability of FAA personnel to conduct a tour. Operation Raincheck is an FAA educational program designed to

familiarize pilots with the ATC system.

According to an FAA spokesman, it is up to each facility to determine the level of security required and individual policies when it comes to visitors. If someone looks suspicious, that person will probably not be let in, he said. Other facilities require visitors to supply their names in advance. In the case of control

towers, it is up to the controllers union to determine if they want to allow visitors.

"Security has been a convenient excuse for slamming shut the door at some ATC facilities," said Andy Cebula, AOPA's senior vice president of government and technical affairs, "but we now know that it's been just that — an excuse in most cases.

Are you ready?

Four new FAA rules take effect soon

Compliance with at least four important FAA mandates falls due during the first four months of 2005. One of them is particularly important to pilots flying over water or wilderness.

After Jan. 1, all airplanes on long over-water flights or flying over designated — mostly wilderness — land areas will have to be equipped with at least one emergency locator transmitter (ELT) operating on the 406 MHz frequency. This mandate is part of an international agreement and applies worldwide.

As everyone who flies above 29,000 feet should know, domestic reduced vertical separation minimum (DRVSM) compliance goes into effect Jan. 20. This means that all aircraft flying between FL290 and FL410 must be DRVSM certified. The rule applies to flight in the United States, southern Canada, Mexico, the Caribbean and South America. For detailed information: FAA.gov/ats/ato/rvsm_documentation.htm.

March 29 is the deadline for all U.S.-registered turbine airplanes built prior to March 29, 2002, to be equipped with a Class-B Terrain Avoidance Warning System (TAWS). The rule only applies to aircraft with six or more seats, but that's nearly all GA turboprops and jets.

Repair stations must have new, FAA-approved training programs in effect by April 6, under FAR 145.163. Revised training regulations actually went into effect Jan. 31, 2004, but the no-getting-around-it compliance deadline comes up on April 6.

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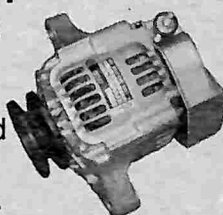
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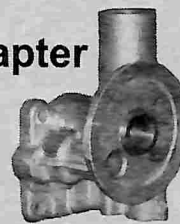


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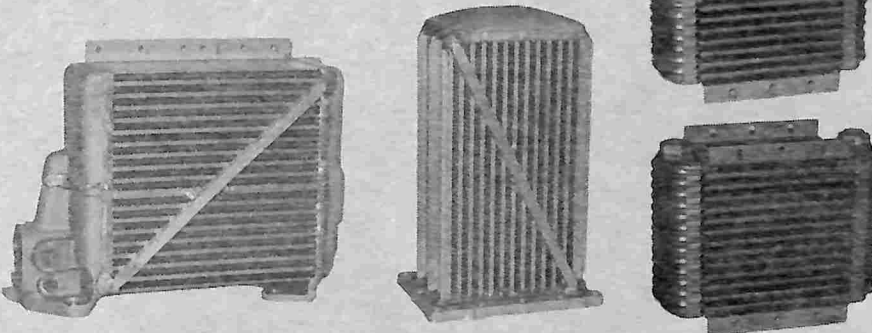
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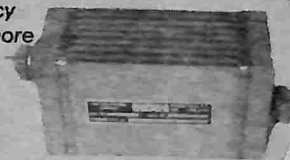
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Growing the next generation

By MEG GODLEWSKI

"Ready? Here we go!"

The 15-year-old girl sitting next to me tentatively put her left hand on the yoke and her right hand on the throttle. With my hand over hers she pushed the throttle forward. Our mighty Cessna 172 began to roll down the runway. She craned her neck, still a little short to see over the cowling despite the cushions I had provided.

"I'm on the controls with you," I said. "A little more right rudder... that's it."

The Cessna lifted into the air.

"You're flying!" I shouted.

The girl beamed.

There's something wonderful about taking someone up on that first small airplane flight. Especially when that someone is thinking about being a pilot. So many people talk about wanting to learn to fly, but few take the steps necessary to fulfill the dream. For the instructor there is just something special about facilitating that endeavor. It is an awesome responsibility and a privilege. When you teach someone how to fly you are helping that person acquire a life-altering skill. It's like teaching someone how to swim, how to ride a bike or how to read.

In the last 10 years organizations have formed to encourage more people to get involved in aviation. One of those is the Be A Pilot program. All you have to do is print out the gift certificate from the Be A Pilot website (BeAPilot.com) and show up at a participating FBO with the correct amount of cash (just \$49). The site gets a lot of hits around the holidays and after April 15 because many adults begin their flight training after getting their tax refunds.

Some wannabe pilots find really creative ways to get into the cockpit. I recently met a young woman who, before she had the money necessary to complete a private pilot program, visited several FBOs in the area and did introductory flights with as many of them as she could.

"I didn't have the money for lessons, but I wanted to fly," she explained sheepishly. "So I did it 20 minutes at a time!"

I wish I had thought of that.

The teenagers who take part in Be A Pilot or other introductory flight programs offered by FBOs usually come in with their parents. Often the flight is a gift. Sometimes the parents arrange the flight because the kid spends a lot of time playing a flight simulator video game. "We want him to try the real thing," one dad told me.

Some of these kids are content to fly computers. Others have dreams of becoming astronauts or airline pilots. I like helping these kids get all the information they can on their chosen vocations. Some of them are 14 or 15 and do not like the idea of having to put off their flight training until they are of legal age to solo. I applaud this and tell them about Rat

(short for Ramp Rat), one of my friends who started flying lessons before she was old enough to drive. Rat paid for her lessons by working part-time at Aiken Aviation in Aiken, Minn. She started an aircraft washing and polishing service and swapped web page development for flying time. Rat once lamented to me that she had to "wait for her birthdays to catch up" so she could be of legal age to solo and take check rides. Now she has a degree in Air Traffic Control from one of the larger aviation universities, a commercial pilot's license and is working for the Transportation Security Administration while simultaneously applying to graduate school, officer's candidate school and studying for her CFI and A&P licenses. As I write this, her 23rd birthday is still a few weeks away.

I'm all for getting kids into aviation, but I caution the aviation industry not to ignore the people over 18 who want to fly. Many of these folks are finally at a point in their lives when they can afford to spend the money and have the time to invest to become a pilot. Most of them have dreamed about flying their whole lives. Some of them come with a few hours in their logbooks from decades past. Getting these folks back into the sky is like reuniting long-lost friends. I have found that the students returning to aviation are the most dedicated. They KNOW what they are missing.

Often they are also in the market for an airplane that they intend to use as personal transportation.

One of the best ways for pilots to nurture the next generation of aviators is to take part in the EAA's Young Eagles program. Pilots from local EAA chapters volunteer their time to give rides to kids. I am envious of the pilots who get to participate in these programs on a regular basis. I just got a packet from the Young Eagles event I was involved in in September. In the packet was a letter from the organization suggesting that we fly at least 10 Young Eagles a year. I wonder if they realize they just threw the Gauntlet of Challenge down before someone raised on the legend of Prince Valiant?

Meg Godlewski is one of four people who regularly contribute to this column.



TOUCH & GO

WHO ARE THEY TRYING TO KID?

Just wanted to add my two cents to your latest Letters to Editor about Bush vs. Kerry and the state of GA. Neither of the two will have a significant effect on GA. We need to focus our attention on those members who supposedly support us in Congress. They will by far impact us more than any president who happens to be in office now or in the future.

I recently read an article in another publication about an affordable airplane, the Liberty XL2 starting out at \$139,900, and almost fell out of my chair with the word affordable!

Who are we trying to kid? I've been in aviation for 20 years and if that is affordable, then would someone explain to me how? Add up the payment, insurance, hangar, maintenance, fuel — I don't see that being affordable. Until this changes and someone can build a truly affordable airplane with at least Cessna 172 performance and capabilities at the affordable price of \$65,000, we are a long way from affordable to the masses. The above does not include the new Sport Pilot airplanes as they are in most cases too severely limited in their capabilities and thus not worth the price they want for them either!

General aviation needs a major price reduction for any kind of rebound of substance. Right now the only affordable aviation still lies with the homebuilt market.

David Staffeldt
via email

PLACING THE BLAME

Cork Biemond makes a good point about the unfairness of the Sport Pilot driver's license medical ruling excluding pilots who have previously been denied (Unelected bureaucrats pervert sport pilot) in the Oct 15 issue. He puts the blame on the wrong agency, however.

Remember that the FAA approved the rule as it was originally written a year before its final approval. It then had to be reviewed by DOT and OMB, who apparently amended it to include the denial exclusion.

I had the opportunity to listen to a number of forums by both FAA and EAA medical authorities at Oshkosh, and even to meet some FAA medical officials. I got the impression that the problems are not with FAA. They seem to be on our side in this matter, originally proposing that no medical requirement at all be included in the Sport Pilot regs.

If Mr. Biemond thinks that congressional representatives would be more sympathetic to our cause, he should read the letter that follows his, "They don't know, they don't care," by Dr. Nolde. That title pretty much sums up the attitude of Congress.

Hubert C. "Skip" Smith
State College, Pa.

SPORT PILOT: A DISASTER WAITING TO HAPPEN

I fear that I may be one of the few pilots in the country who does not warmly welcome the announcement of the new Sport Pilot ruling by the FAA. My concern is not with aircraft that fall in the lighter-than-air, weight-shift, gyroplanes and powered parachutes categories. Rather, my fear resides with the proposed Sport Pilot training requirements and the capability of the fixed-wing aircraft they would be enabled to fly. Let's first address the aspect of training.

Long before I became a pilot, someone much more intelligent than I determined that it would take a minimum of 40-50 hours to complete the training required to obtain a private pilot certificate. Whether Part 61 or Part 141, it was mandated that sufficient time be allocated to enhancing knowledge and developing the eye-hand coordination skills required to conduct safe

Can planes and parks share space?

By **MEG GODLEWSKI**
General Aviation News

Do you know someplace where an airport and a public park peacefully coexist? The Friends of Meigs Field would like you to share that information with the Chicago Park District.

The Friends of Meigs are smarting from an article that recently appeared in the Chicago Tribune in which Arnold

Randall, the department's director of planning and development, stated, "There are no parks where airstrips are a compatible use. Typically, park spaces are places you can go and escape from urban life and noises."

The comment was made during a brainstorming session to come up with options for uses for the former Meigs Field. Mayor Richard Daley and other city officials want to turn the land into a nature park.

The Friends of Meigs Field are proposing part of the land be turned back into an airport with a public park next to it. The proposal includes space for a visitor center and perhaps even an aviation museum.

Meigs Field was destroyed late at night on March 30, 2003, when workmen operating on the orders of Daley carved large Xs into the runway. At first Daley claimed the midnight destruction was done to protect the public from airborne terrorist

attacks launched from the airport. He later admitted there had not been any threats against the city. For several years Daley has wanted to close the airport.

The closure was done without notifying the FAA or the public, including the businesses and aircraft owners at the airport. The FAA has since fined the city for the unauthorized destruction.

FriendsOfMeigs.org.

LETTERS TO THE EDITOR

flight. Let's remember that flying deals in three dimensions, not two as in driving a car. There are no traffic signals and no stop signs in the air. VORs have the unique distinction of being both a useful navigational aid and a flying hazard as multiple aircraft converge on their signal. The Newberg VOR (UBG) near Newburg, Ore., is a perfect example.

Despite the fact that UBG's zone of confusion extends beyond 10 miles at 2,000 to 10,000 msl (presumably due to poor transmitting equipment), it serves as the navigation aid of choice for both IFR and VFR arrivals and departures for at least eight public airports in a 20-mile radius. I am amazed that we have not had multiple mid-air collisions over UBG, given the number of close calls I have been told of and have personally witnessed. It was this congestion around UBG that confirmed my strategy of "defensive flying." Much like the defensive driving that we all learned in high school driver's ed, defensive flying assumes there's someone out there who is bound

and determined (usually through ignorance and carelessness) to kill you. So, while most pilots fly alert, if you fly near UBG, being alert is not good enough - you have to assume that you're flying through MiG Alley where the enemy weapons are not missiles and guns, but other aircraft who are flying the wrong way, at the wrong altitude, without an operable transponder and in radio contact with no one.

The point is to raise the question of training safety. If we, as private, instrument and commercial pilots, with all of the training and hours we have, have to deal with dangerous situations like UBG, how much more dangerous will this and other geographic locations become when Sport Pilots with only 20-30 hours of flight training take to the skies?

Let's also consider the fixed-wing aircraft they will be flying. While Sport Pilots are limited to carrying only one passenger, I do not believe this limitation will have any impact on the resulting lack of safety. In my opinion, it's not the number of

passengers they will be carrying, but the performance of the aircraft they will be flying and the conditions in which those aircraft will be flown. With a straight and level flight performance up to 120 kts, these aircraft are essentially operating at the same performance levels of Cessna 172 and Piper Archer aircraft. If you have to have a private pilot certificate to fly these, why wouldn't it also be required to have a private pilot license to fly a SkyStar Kitfox that has the same performance?

How many times do aviation safety writers warn us of the importance of not "getting behind the aircraft?" I do not look forward to a Sport Pilot cruising around at 2,000-10,000 msl, with only 20-30 hours of training, more focused on viewing the terrain or impressing their passengers than they are obeying FAA flight rules and being responsible aviators. Crowding the skies with undertrained, fixed-wing pilots seems to be a disaster waiting to happen. I dare say that, unless the rules for Sport Pilot training

are markedly enhanced, the rate of aviation accidents, as a result of the introduction of fixed-wing Sport Pilots to the general aviation ranks, will climb astronomically. And, if this occurs, all GA pilots will be at risk, both physically and legislatively as the FAA would have to react to such negative statistics.

Let me be clear. I am in favor of everyone learning to fly and enjoying the benefits of general aviation. However, just as we are regularly chastised to improve our own personal aviation safety, we must be cognizant of the dangers inherent with the potential flood of undertrained, non-medically certified, fixed-wing pilots in comparable performance aircraft flooding the skies. Each month, we read about the latest NTSB crash findings, involving pilots with many hours of training and experience. The question is: How many more people will become fatal statistics as a result of this new GA dilemma?

Brian Sheets
Beaverton, Ore.

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What's up with Taylorcraft?

► *A bumpy start for new owner of the venerable design*

By MEG GODLEWSKI
General Aviation News

It has been more than two years since Harry Ingram bought the assets of the Taylorcraft Aviation Co. and set up a factory in LaGrange, Texas, with intentions of producing the tried and true F-22 design. When *General Aviation News* interviewed Ingram in May 2003, he predicted the first aircraft would be delivered by Aug. 15, 2003.

But, the plans of mice and men — and apparently aircraft manufacturers — often do not go according to schedule. When we interviewed Ingram in September 2004, he stated that no aircraft had been delivered yet and predicted it would be the end of October before deliveries began. When we spoke with him in October, he said December was a more likely timeframe.

"This is a new process for us," Ingram said. "We have these old drawings that we have to update with new materials, then the drawings have to be approved by the FAA."

He concedes he underestimated how long it would take to get the production line into operation.

"Getting the permits we needed took longer than we thought it would," he said in a telephone interview. "We purchased the company two-and-a-half years ago and applied for the permit to build the F-22 under Part 21 Subpart F 21.123 or production under Type Certificate only. That means the FAA has to inspect every aircraft we build. We also applied for Parts Manufacturing Authority so that we could build spare parts for all 23 models listed on the Type Certificate. It took until May 11 of this year to get the PMA. It took us two years to get the wing drawings into shape and prove to the FAA that we could do this correctly."

CHECKERED HISTORY

Taylorcraft began in the 1920s when C.G. and Gordon Taylor decided to build a small plane that didn't break the bank. The first design was the two-seat Chummy. Over the years production has started and stopped like a school bus along its route. Ingram is the sixth owner the company has had in the last 17 years. The last time the F-22 was mass produced was 11 years ago.

According to Ingram, the company is working with the FAA in order to get a production certificate so that they can mass produce aircraft. In the meantime, the company will build a few at a time under the Type Certificate.

That's perfectly legal, says Robert Robino, manager of the FAA's San

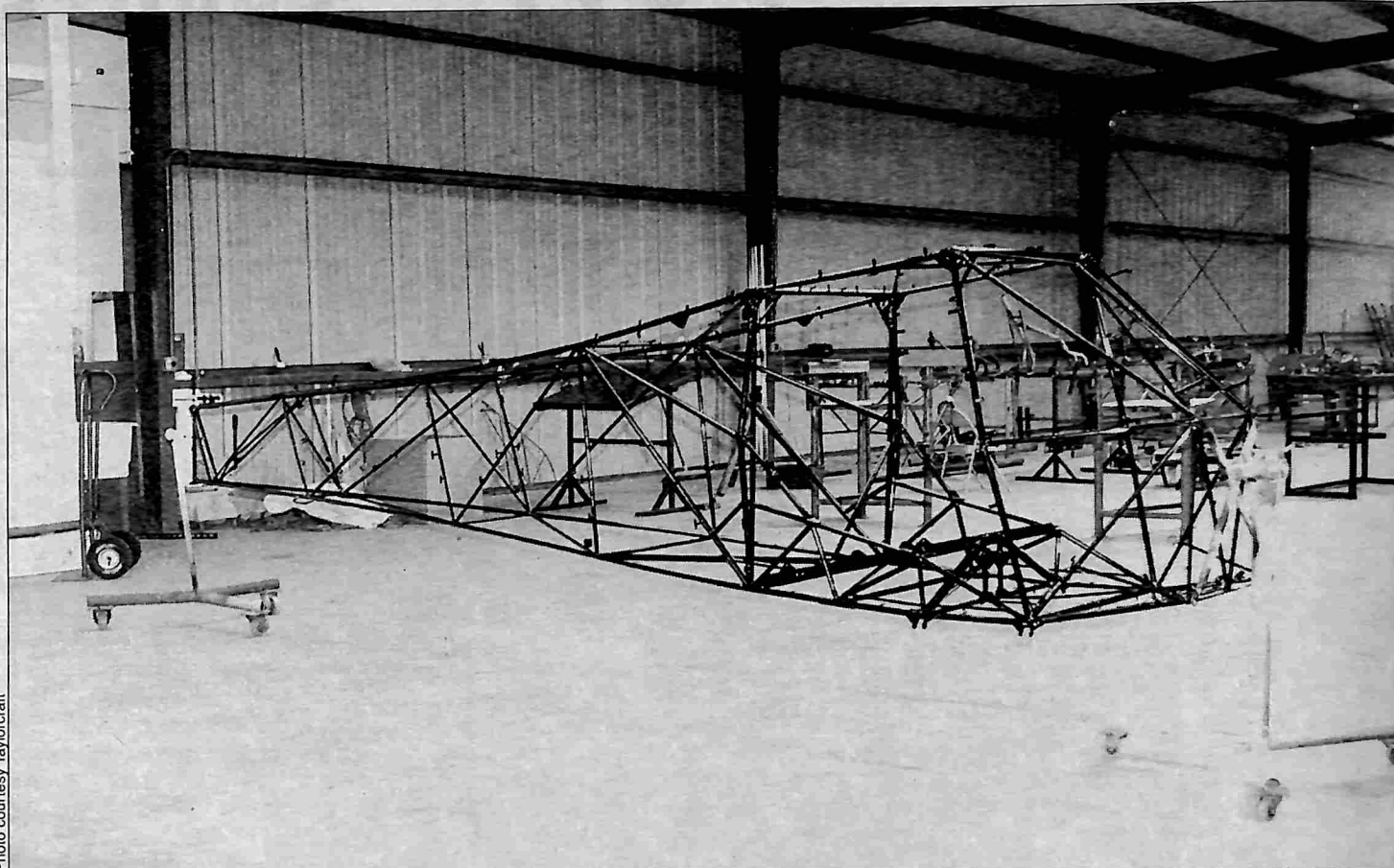


Photo courtesy Taylorcraft

AT THE FACTORY: When Harry Ingram bought the assets of the Taylorcraft Aviation Co., he loaded 12 semi-trucks with parts and equipment for a cross-country move from Georgetown, Del., to La Grange, Texas.

Antonio manufacturing and inspection district office, but it makes more work for his office.

"If the company holds the Type Certificate to an aircraft, which Taylorcraft does, then it has the right to produce that aircraft," Robino said. "But there is a tremendous amount of FAA involvement while producing under the TC because the FAA has to inspect the aircraft at regular intervals, such as when the frames are welded

production line going and you have to figure out where to put the tools in the factory," he says. "We have to make sure they have the capability to build this aircraft, such as do they have all the tools and fixtures and do they know how to use them. They are coming up to speed, but you need to understand it takes time. There's a lot of information out there on this aircraft, but it has traveled around from holder to holder. They are digging through boxes trying

"I don't think Harry understood the industry and how it works and how long it takes to build things and get FAA approval. Once that happens, I think the aircraft will move out pretty quick."

— Prospective Taylorcraft owner Lee Dautreuil, New Iberia, La.

together, then after they get covered and so forth."

Acquiring the production certificate involves a lot of paperwork to show the FAA that the design is sound and that the company has quality control measures in place, Robino says. The fact that Taylorcraft has been around in one form or another for so many years is both a blessing and a curse in this respect.

"Even when you buy a design that has been around a long time, you still have to take the time to get your

to find everything. They also need to write a quality control manual. When they produce a full aircraft, they will need to establish flight test procedures. They have to have a quality control system in place that covers everything from the raw materials coming into the factory to assembly to the end aircraft going out the door. The fact they have the PMA means they have an approved system in place. They can keep producing parts and use that system as they work incrementally toward production of a complete aircraft."

STARTS WITH PARTS

When the company opened its doors, Ingram's first priority was supplying existing Taylorcraft owners with parts. While most owners were pleased that someone was carrying on the line, there were also some growing pains.

General Aviation News received phone calls and emails from Taylorcraft owners who ordered replacement parts from Ingram's operation and said that the parts were old stock produced years ago and not airworthy. Others said they ordered parts and were promised delivery dates, but when the parts didn't arrive on time and they called to ask about them, Ingram allegedly gave them excuses or misled them about the factory's ability to make the parts.

Craig Helm says his problems with the factory began in October 2003 when he tried to get replacement fuel tanks for his aircraft. When he contacted the factory, Ingram told him replacement tanks would be ready in 10 days.

"Ten days came and went with no tanks," said the Graham, Texas resident. "So Steve Pierce, my mechanic, and I asked Harry if he could build us a tank to our specifications as an owner-produced part. He agreed and said we'd have the tank within a week. That week came and went."

Ingram blamed the delays on paperwork issues with the FAA, Helm said.

"He told us the tanks were done except for the FAA approval. Then Steve contacted someone at the factory, who let it slip that they were not even working on the fuel tanks and that nothing had been submitted to the FAA," he

(to Page 18)

Building a home for The Lost Squadron Museum

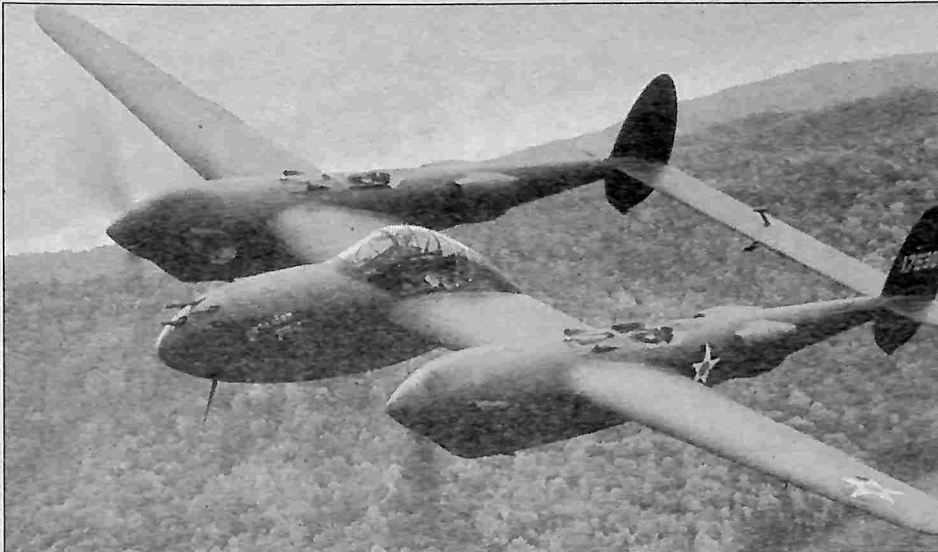


Photo courtesy The Lost Squadron

A NEW HOME: "Glacier Girl," one of the last airworthy P-38s, is the star attraction at The Lost Squadron Museum in Middlesboro, Ky. The museum is conducting a raffle to raise money for a new facility to house the historic aircraft.

The folks at The Lost Squadron Museum in Middlesboro, Ky., are stepping up their annual raffle by offering three prizes this year.

The museum is home to "Glacier Girl," one of the last airworthy P-38s. Located at Middlesboro-Bell County Airport (1A6), the museum is raising money to build a new facility.

This year the winner of the main raffle can choose either a 2005 Mazda Speed MX-5 Miata or a 2003 Harley Heritage Softail Springer. Tickets are \$100 each. The raffle will be held when all 500 tickets are sold.

The museum is simultaneously running a second raffle where the prize is a special edition Lost Squadron Winchester 94. The rifle, one

of only 151 produced, features intricate engraving. The rifles are individually numbered to correspond with the tail numbers of each of the P-38s' downed fliers. Tickets are \$25 each. That drawing also will take place when all tickets are sold.

TheLostSquadron.com.

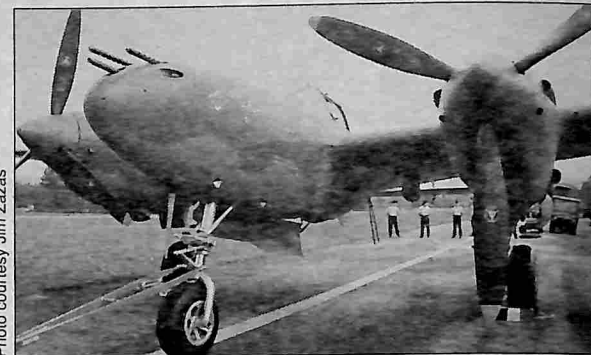


Photo courtesy Jim Zazas

New museum set to open at Illinois' Clow International Airport

By **MEG GODLEWSKI**
General Aviation News

A new museum will open its doors early next year at Clow International Airport (1C5) in Bolingbrook, Ill.

Dubbed The Illinois Aviation Museum, the facility is being created by volunteers and a lot of community support, including

the donation of a 6,000-square-foot hangar and \$158,000 for interior remodeling, said Kent Demuth, the museum's executive director.

"In October we held our first fundraiser," he said. "We expected about 100 people to show up. Instead, we had about 300 people and we raised about \$30,000."

In August the village of Bolingbrook bought the 75-acre airport, which is about 30 miles from Chicago, from Joe DePaulo with the intent of keeping the airport in operation. "That's kind of backwards from how it usually goes," says DePaulo, who is now the airport manager and chairman of the museum.

The focus of the museum is hands-on

education for kids. Included in those activities is the restoration of aircraft, such as a 1940s-era Luscombe and a Navy T-33, under the watchful eye of adult volunteers.

630-854-5506. A website, IllinoisAeroMuseum.com, is under development.

(Taylorcraft from Page 16)

said. "We were told the fuel tanks were a low priority."

Helm kept calling Ingram to find out the status of the replacement tanks.

"Harry told me they had some problems with the FAA, but that he would have a tank built by Friday," he said. "This call was made on Tuesday. I told Harry I would call on Friday and see how things were coming. When I called on Friday, Harry said the tank was not complete, but that the sheet metal had been cut and all that was lacking was to weld it together. We agreed again that this tank would be identical to the existing F21B tanks without the tabs.

A few days later he called to say the new tank was ready. I hired a driver to make the five-hour trip to LaGrange to pick up the tank. Instead of a new tank, I got a used tank with the tabs cut off. You could see where it had been drilled out of the wing of another F-22."

Frustrated, Helm posted his experiences on the Internet on the Taylorcraft Foundation Discussion Forum, on a message board titled "problems dealing with Harry Ingram and the factory".

"I knew there had to be other aircraft owners out there that were having similar problems and I didn't want them wasting their time or money too," said Helm.

"We had a fuel tank issue," Ingram concedes. "We had to redesign it. That



Photo courtesy Taylorcraft

NEW PROCESS, OLD DESIGN: The new owner of Taylorcraft has come under fire for underestimating how long it would take to get the venerable design back into production.

took six months longer than I thought it would."

Ingram notes that he did not charge Helm for the replacement tank.

"It's not about the money," said Helm. "I just wish he had been up front with us from the beginning because then we could have approached the problem from a different angle. Instead he strung me along for three or four months."

Ingram is understandably defensive about the criticism he's received, noting that he has worked with customers to try to solve their problems.

Some of the comments on the

web board were irrational rants and personal attacks on Ingram and others, by people hiding behind screen names. The posts became so abusive that the board administrator had an email trace done to find the guilty parties. Moderators then pulled the negative comments and the administrator of the site established a policy forbidding the posting of any negative comments about Taylorcraft or dealings with the factory.

That decision worries some former posters. GAN received an email from one man who expressed concern that other people would not be able to do

due diligence before they put down \$60,000 for a new airplane.

The San Antonio Better Business Bureau has not received any complaints about the Taylorcraft Co.

WILD ABOUT HARRY

Ingram does have his fans. Anyone who can produce a new aircraft that sells for \$60,000 is going to be popular with pilots. GAN heard from several people who are pulling for Ingram and looking forward to getting parts from the factory or have had a chance to visit the facility and are planning to buy one of the new Taylorcrafts.

"I'm going to give him the benefit of the doubt," stated Lee Dautreuil from New Iberia, La. "I would like to see the business do well. Right now I feel comfortable, we will see in another month or two what is happening. I don't think Harry understood the industry and how it works and how long it takes to build things and get FAA approval. Once that happens, I think the aircraft will move out pretty quick. This will be easier than someone starting out with a new design because the airplane has a proven record of 70 years."

Ingram said he's looking forward to manufacturing TaylorSports, which are aircraft that fall into the new Light Sport Aircraft category.

"We're ready to do it," he said. "We have seven of them sold already."

Taylorcraft.com, or
VB.Taylorcraft.org.

The fine print: Your logbook has many of the answers you need

BY PAUL MCBRIDE

Q I own a 1968 Cherokee 140 with a 160 hp O-320-D2A engine that was installed prior to my purchase of the aircraft. According to the logbook endorsement and the tach installed in the aircraft, the redline on the engine was reduced when the new engine was hung. The new redline is 2,550 instead of 2,700.



ASK PAUL

did the redline need to be decreased with the upgraded horsepower engine? 2. Two years ago I replaced all four cylinders. I found a shop that had four serviceable cylinders that he rebuilt using my old pistons and intake valves while replacing the exhaust valves and rings. The other miscellaneous parts I am unsure about. When I got the overhauled cylinders from the engine shop, the owner told me he didn't know why the redline was reduced in the beginning, but the new cylinders should take care of bringing it back to 2,700. Is this true?

I have owned the airplane for about eight years and the reason this is coming up now is because I need to purchase a new tach and I need to know where to have the limitations marked. On the tach issue, do you have a preference between the standard mechanical tach and the digital units?

Rick Rhine
Tempe, Ariz.

A Rick, I'll take a stab at this one, but I'm going to approach it from a common sense perspective, which will get you started on the journey toward an "official" answer.

I have a feeling that the engine originally installed in

your 1968 Cherokee was a Lycoming O-320-E2A, which was rated at 140 hp@2,450 rpm in the PA-28 140. However, this same engine was also rated at 150 hp@2,700 rpm and was installed in the PA-28 150. Both of these engines have the same compression ratio of 7.00:1 and the hp is determined by the rpm of the engine.

You stated that the present engine is a Lycoming O-320-D2A. This engine is rated at 160 hp@2,700 rpm and has a compression ratio of 8.50:1. I think you'll find that the Cherokee 140/150 series were not certified for a 160 hp engine and therefore the engine currently installed in your aircraft could have been installed either under an FAA STC or a one-time field approval on an FAA Form 337. Since the tach was redlined at 2,550 rpm, my guess is that this would be about 148 hp and would stay within the original hp range on the Type Certificate and not require any further engineering data for a field approval. I'd suggest you do a close review of your logbook to learn how and by whom the engine conversion was accomplished.

In response to your second question, I can only ask a question in order to answer your question. Why did the shop owner think you could again use the 2,700 rpm rating if he used your old pistons, which I assume were 8.50:1 compression ratio? If you know the

part number of the pistons he installed, that will make it easy to learn what compression ratio they are. Just as an aside, the part number for the 7.00:1 compression ratio piston is probably p/n 75413 and the high compression p/n 75089. If the high compression pistons were installed with the serviceable cylinders, then you should continue using the 2,550 rpm, which makes his comment untrue.

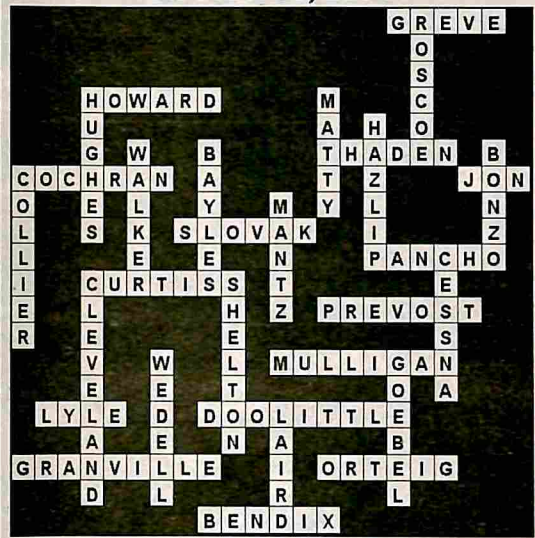
Finally, with regard to the tachometer question, I can't see any reason why the continued use of a mechanical tach wouldn't be OK. It is important to know, though, that they do require calibration. I'd even consider doing that to a new one right out of the box before you install it.

Rick, this was a great question and I'm certain there are many similar situations out there today. The main point that can be learned from this situation is the importance of reviewing the logbook to learn as many details about your aircraft as possible. This information becomes extremely valuable when you encounter an experience such as this. I guess you could say it falls into the category of "read the fine print."

Paul McBride, recognized worldwide as an expert on engines, retired after almost 40 years with Lycoming.

Send your questions to: AskPaul@GeneralAviationNews.com.

Solution to the puzzle printed on Nov. 26, 2004



FAA tests solar-powered lights at NJ airport

Solar-powered taxiway lights are coming to Cross Keys Airport (17N) in Gloucester County, N.J.

The airport is being used as a testbed by the FAA's Airport Safety

Technology Section. These are the same taxiway lights that are being used in the Middle East to guide U.S. fighter jets and cargo aircraft.

The installation began Dec. 1. Over

the next nine months, technicians will check the lights for visibility, durability and effectiveness.

AirportTech.tc.FAA.gov.

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The heat is on: Our experts agree on the best oil temperature

BY BEN VISSER

A few issues back, my good friend Paul McBride was asked what was the best oil temperature for an aircraft engine (Just what is normal? Oct. 15 issue). Since then, I have received a few questions about the same subject, but from the lubricant perspective.



VISSER'S VOICE

Although I hate to admit it in public, Paul was right. The best oil temperature for most opposed, certified aircraft engines is about 180°F under normal cruise conditions. (Higher oil temperatures can be expected during climb-out.)

This is based on several pieces of data. First, the oil throughout the engine is at various instantaneous temperatures. Usually the hottest oil

in the engine is the oil coming off the underside of the piston.

We have determined that on most non-turbocharged engines, this instantaneous oil temperature is usually about 50° hotter than the temperature of the oil going into the engine. If we add the 50° to an engine oil temperature of only 160°, we see that the oil never gets over the 212° mark, which is the boiling point of water. By running at 180° during cruise, the oil should be hot enough to boil off the normal condensation in a one-hour flight.

On the high end, the maximum preferred oil temperature is around 200°. This guideline is based on data that show the instantaneous temperature of the oil coming off the pistons for many turbocharged piston engines is about 75° above the temperature of the oil going into the engine. This means that if you are running an oil temperature of 240° during cruise, the oil is actually reaching 315° at some point in the engine. This is OK

for a short time during climb-out, but if your engine operates for extended periods at this temperature, it can lead to coking and an increased level of deposits in your engine.

Remember that these are just guidelines and there are some exceptions. For example, if you have an aircraft that does not have a CHT or EGT gauge, the oil temperature is the only temperature indication that you have. Say that your engine oil temperature normally runs at 160° under cruise conditions on an 80° day. If it suddenly starts to run at 180° under the same conditions with no other change being made to the aircraft, this could be an indication of one or more cylinders running too hot or some other problem. You should check to make sure that your oil temperature is not only at the proper level, but also that it is consistent under the same conditions.

A final point is one that Paul also noted, and that is oil temperature gauge calibration. Many of the air-

planes flying today have gauges that have not been checked in 20 or 30 years. In addition, many of the gauges just have a green band from around 100° to 240°. I would recommend that you remove your oil temp sensor and place it in a container of oil or water. Place the container on a hot plate with a good referenced thermometer in the liquid to check the temperature. Now heat the container up to 180°. When the temperature in the container stabilizes, check the gauge. I also recommend that you paint a small mark on the face of your gauge so that you can easily see where your oil temp is relative to your 180° mark. Now you can start worrying with confidence about how to get your oil temp up to 180° in the winter and/or down to 180° in the summer.

Ben Visser is an aviation fuels and lubricants expert who spent 33 years with Shell Oil. He has been a private pilot since 1985. You can contact him at Visser@GeneralAviationNews.com.

Eclipse flies United

By THOMAS F. NORTON
General Aviation News

Eclipse Aviation has formed a strategic relationship with United Airlines to provide training.

The idea is to provide "a level of professional training normally available only to airline pilots," according to Eclipse CEO Vern Raburn. Originally, Eclipse had intended to develop its

own training program, but concluded that United could "translate airline style training into a program appropriate for Eclipse 500 customers," Raburn said.

The training will take place at United's Flight Training Center in Denver, where full motion simulators will be adapted to a curriculum developed by Eclipse and the airline. It is a multi-phase curriculum, starting with an assessment of each pilot's skills. It

includes self-paced, computer-based training material already being issued to Eclipse customers on CDs. Pilots will end up with a type rating.

Cost of the training is included in the price of the jet. There is an additional charge of \$995 for an obligatory upset course in an L-39 jet trainer. Recurrent training will cost \$2,995.

Meanwhile, American International Group, Inc. (AIG) has agreed to underwrite hull and liability insurance for the Eclipse 500.

Successful completion of the type rating and training program is



a prerequisite to getting insurance, according to William Lovett, AIG's vice president.

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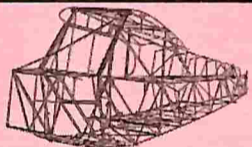
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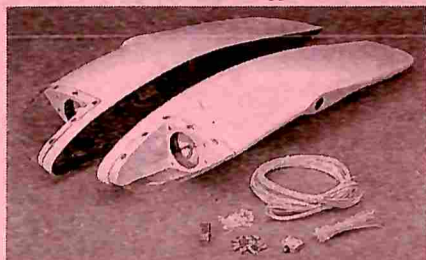
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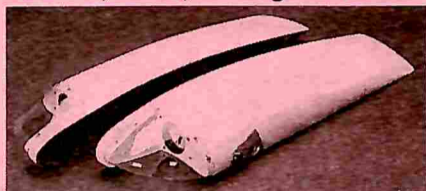
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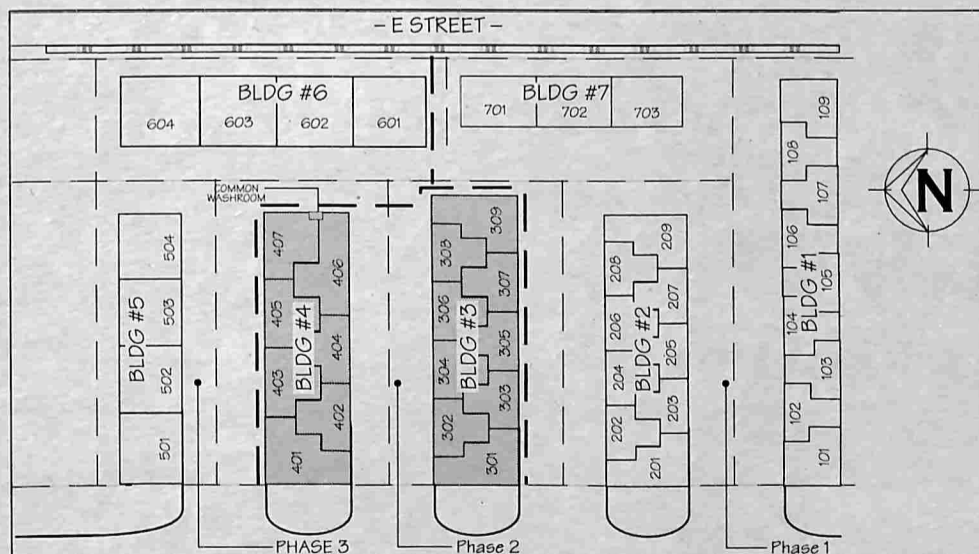


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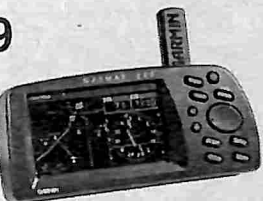
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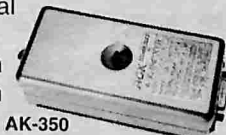


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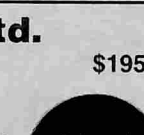
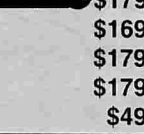
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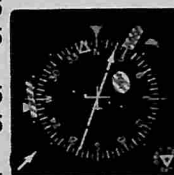
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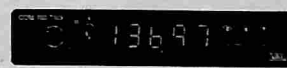
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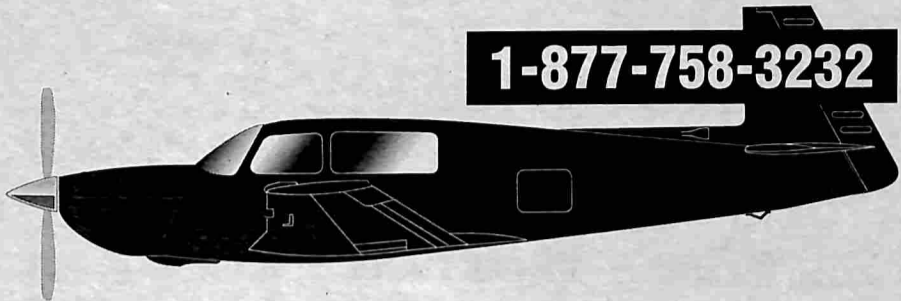
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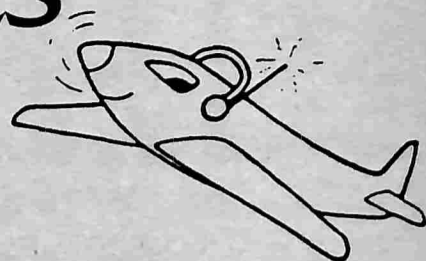
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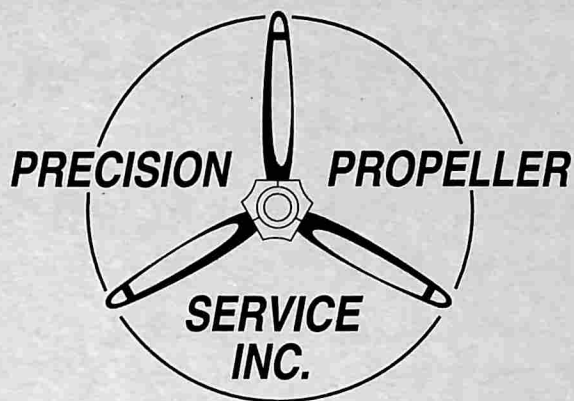
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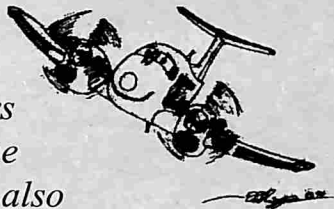
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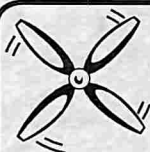
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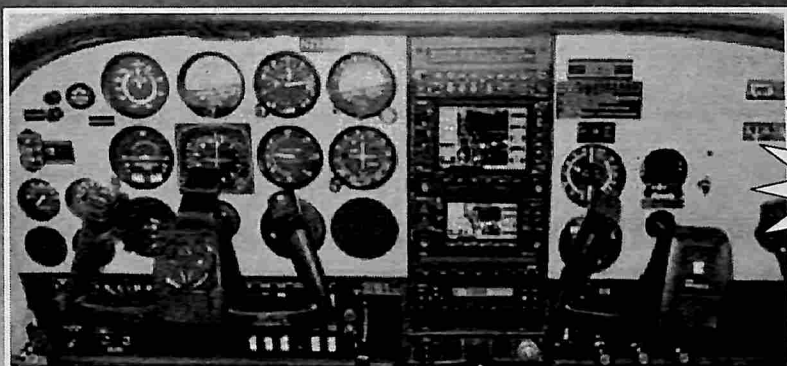
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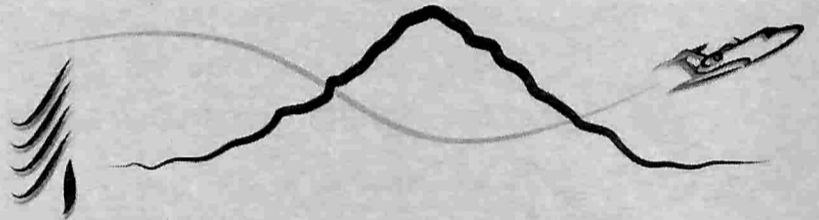
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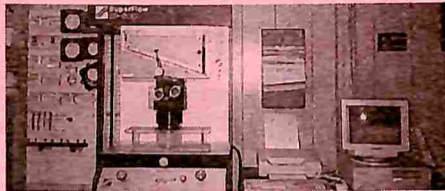
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Nov. 3-5, 2005, Tampa, FL. AOPA Expo 2005 http://www.aopa.org/expo

Nov. 19, 2005, Hammonton, NJ. EAA 1376 Pancake Breakfast. Every Third Saturday. 8-11. (N81). 609-567-2086 jfw205@msn.com

Dec. 17, 2005, Hammonton, NJ. EAA 1376 Pancake Breakfast. Every Third Saturday. 8-11. (N81). 609-567-2086 jfw205@msn.com

April 4-10, 2006, Lakeland, FL. 32nd Annual Sun 'n Fun EAA Fly-In. Lakeland Linder Regional Airport (LAL). 863-644-2431 www.sun-n-fun.org

Sept. 16-17, 2006, Petersburg, VA. 10th Annual Virginia State EAA Fly-In at Dinwiddie County Airport (PTB). 703-590-9112. vaeaa.org

April 17-23, 2007, Lakeland, FL. 33rd Annual Sun 'n Fun EAA Fly-In. Lakeland Linder Regional Airport (LAL). 863-644-2431 www.sun-n-fun.org

April 8-15, 2008, Lakeland, FL. 34th Annual Sun 'n Fun EAA Fly-In. Lakeland Linder Regional Airport (LAL). 863-644-2431 www.sun-n-fun.org

NORTH CENTRAL

Dec. 13, 2004, Oshkosh, WI. EAA AirVenture Museum, Christmas in the Air 920-426-4818 airventuremuseum.org

Dec. 17, 2004, Oshkosh, WI. EAA AirVenture Museum, Wright Brothers Memorial Lecture 920-426-4818 airventuremuseum.org

Dec. 26-30, 2004, Oshkosh, WI. EAA AirVenture Museum, Kids' Days 920-426-4818 airventuremuseum.org

Jan. 15, 2005, Grand Rapids, MN. EAA Ski-Plane Fly-In. Hours 11-3 at Civil Air Patrol bldg. 218-244-5658 onceacop@yahoo.com

Jan. 20-22, 2005, Lansing, MI. Great Lakes International Aviation Conference. www.greatlakesaviationconference.com

Feb. 4-5, 2005, Ames, IA. Midwest Regional Aircraft Maintenance Symposium and Trade Show 319-295-5221 pjconn@rockwellcollins.com

July 26-Aug. 1, 2005, Oshkosh, WI. EAA AirVenture Oshkosh, Wittman Regional Airport (OSH). 920-426-4800. fly-in.org

July 25-31, 2006, Oshkosh, WI. EAA AirVenture

Oshkosh, Wittman Regional Airport (OSH). 920-426-4800. fly-in.org

July 24-30, 2007, Oshkosh, WI. EAA AirVenture Oshkosh, Wittman Regional Airport (OSH). 920-426-4800. fly-in.org

July 29-Aug. 4, 2008, Oshkosh, WI. EAA AirVenture Oshkosh, Wittman Regional Airport (OSH). 920-426-4800. fly-in.org

SOUTH CENTRAL

March 10-12, 2005, Dallas, TX. 16th Annual International Women in Aviation Conference. 937-839-4647 http://www.wia.org

April 28-30, 2005, Dallas, TX. Gaylord Opryland Resort & Convention Center. AEA's 49th Annual Trade Show. 816-373-6565 tracy@aea.net

April 28-30, 2005, Grapevine, TX. Aircraft Electronics Association (AEA) Annual International Convention and Trade Show at Gaylord Opryland Texas Resort. 816-373-6565 aea.net

May 14-15, 2005, Hondo, TX. EAA Southwest Regional Fly-In/The Big Country Fly-In 830-997-8802 http://www.swrfi.org

Oct. 7-9, 2005, Evergreen, AL. EAA Southeast Regional Fly-In. (GZH). 334-578-1707. serfi.org

Nov. 15-17, 2005, New Orleans, LA. NBAA 58th Annual Meeting and Convention. 202-783-9000 nbaa.org

Oct. 6-8, 2006, Evergreen, AL. EAA Southeast Regional Fly-In. (GZH). 334-578-1707. serfi.org

WEST

Dec. 26-27, 2004, Seattle, WA. Blackbird Tip-to-Tail Tours 206-764-5720 www.museumofflight.org ehopkins@museumofflight.org

Dec. 26-30, 2004, Seattle, WA. Winter Break Blast-Off Family Fun Workshop 206-764-5720 www.museumofflight.org ehopkins@museumofflight.org

Jan. 5-9, 2005, Hollister, CA. Hugh's Vintage Aircraft Museum Display from 10a.m. to 4p.m. 831-636-9165

Jan. 8, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

Jan. 8, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

Jan. 8, 2005, Rialto, CA. Vintage and Antique Aircraft Display, 11 a.m.-2 p.m.

Feb. 2-6, 2005, Hollister, CA. Hugh's Vintage Aircraft Museum Display from 10a.m. to 4p.m. 831-636-9165

Feb. 5, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

Feb. 6-8, 2005, Anaheim, CA. HAI's HELI-EXPO 703-683-4646 http://www.heliexpo.com/ Marilyn.Mckinnis@rotor.com

Feb. 7, 2005, Anaheim, CA. Helicopter Association International's (HAI) "Salute to Excellence" awards. 703-683-4646 www.rotor.com/salute lindsey.hey@rotor.com

Feb. 9-11, 2005, San Diego, CA. World Research Group Aviation Security Summit & Expo. 800-647-7600

Feb. 12, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

Feb. 26-27, 2005, Puyallup, WA. Northwest Aviation Conference at Western Washington Fairgrounds. 866-922-7469 Washington-Aviation.org

March 2-6, 2005, Hollister, CA. Hugh's Vintage Aircraft Museum Display from 10a.m. to 4p.m. 831-636-9165

March 2, 2005, Prescott, AZ. 2005 Industry/Career Expo at Embry Riddle Aeronautical University. 386-226-7018

March 3-5, 2005, Butte, MT. Montana Aviation Conference. 406-444-2506

March 5, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

March 8-10, 2005, Las Vegas, NV. Aviation Industry Week. 800-827-8009 www.aviationindustryweek.com

March 10-12, 2005, Boise, ID. 2005 Idaho Aviation Festival. Boise Centre on the Grove. 208-288-0290 www.itd.idaho.gov/aero/AviationFestival

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April 2, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

April 2, 2005, Riverside, CA. 13th Annual Riverside

Municipal Airport Airshow 2005. 951-682-1771

April 6-10, 2005, Hollister, CA. Hugh's Vintage Aircraft Museum Display from 10a.m. to 4p.m. 831-636-9165

April 9, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

May 4-8, 2005, Hollister, CA. Hugh's Vintage Aircraft Museum Display from 10a.m. to 4p.m. 831-636-9165

May 7, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

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May 14, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

May 21-22, 2005, Albany, OR. Fly2Fun - Aviation Tourism Expo next to the Albany Airport (S12). 503-381-0997 www.fly2fun.org

June 1-5, 2005, Hollister, CA. Hugh's Vintage Aircraft Museum Display from 10a.m. to 4p.m. 831-636-9165

June 4, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

June 11, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

June 25-26, 2005, Watkins, CO. 27th Annual Rocky Mountain EAA Regional Fly-In. Vance Brand Airport (2V2). 303-442-5002 rmrfi.org

July 2, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

July 9, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

Aug. 6, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

Aug. 13, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

Sept. 3, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

Sept. 10, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

Sept. 15-18, 2005, Reno, NV. National Championship Air Races and Air Show at Reno's Stead Airport. http://www.airrace.org

Sept. 23-25, 2005, Astoria, OR. Astoria Regional Airport Fly-In and Coast Guard Open House. 503-861-1214

Oct. 1, 2005, Mariposa, CA. Mariposa-Yosemite Airport Historical Aircraft Day 209-966-2143 mpa-airport@mariposacounty.org

Oct. 6-9, 2005, Maricopa, AZ. 33rd Annual Copperstate Regional EAA Fly-In at the Phoenix Regional Grande Valley Airport (A39). 520-400-8887. http://www.copperstate.org

Oct. 8, 2005, Paso Robles, CA. Antique and Classic Display Day. Paso Robles Airport (PRB). 805-237-3877 www.pasoairport.com

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CANADA

June 23-25, 2006, Oshawa, ON. Canadian Aviation Expo. 866-309-9537 www.canadianaviationexpo.com

INTERNATIONAL

Feb. 9-13, 2005, Bangalore, India. AERO INDIA 2005 aeroindia.gov.in office@indoasiahotels.com

March 15-20, 2005, Victoria, Australia. Australian International Airshow 011 61 3 5282 0502 tsmith@airshow.net.au

April 18-19, 2005, Amsterdam, The Netherlands. World Regional Airports Congress. www.regionalairportsworld.com

April 21-24, 2005, Friedrichshafen, Germany. Aero Friedrichshafen. 609-987-1202 www.hfusa.com

June 13-19, 2005, Paris, France. Paris Air Show 2005.

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GROWING THE NEXT GENERATION

In the years following Lindbergh's flight across the Atlantic, everyone wanted to be a pilot. Aviators of the day were the role models of generations. They starred in newsreels and movies. Whole towns flocked to airports when the barnstormers came to town. Then came World War II. The generation that grew up watching Lindbergh and Earhart fostered the dreams of another generation. Aviation was still glamorous, exciting and adventurous. After the war, it was thought that everyone would have an airplane, but alas, it was not to be.

Nowadays, when people think about flying, often their first thought is of the professional pilots who drive the heavy metal — or worse, the terrorists who used airliners to kill thousands of our citizens.

Still others continue to harbor dreams of flight, but feel it is out of their reach, or they say they just don't have the time or money to pursue that goal now.

So how do we, the grass roots of aviation, ensure that our community continues to grow? Reaching the youngest among us and sharing the sheer joy of flight is a great start.

In this issue, we examine efforts — both organized and individual — to pass on the love of flight. We hope these stories will inspire you, as well, to nurture the next generation of pilots.



Photos courtesy Jamail Larkins

► *How do you inspire kids to dreams of flight? Just ask Jamail Larkins, a 20-year-old college student who is fast becoming aviation's premiere ambassador*

By **JANICE WOOD**
General Aviation News

The questions come rapid-fire: "Can you land on a cloud?" "Can you really fly any time you want?" "How much money can I make as a pilot?" "How old are you?" "Are you married?"

And even though Jamail Larkins, an Embry-Riddle Aeronautical University student who travels around the country talking to school kids about the wonders of flight, faces these questions several times a week, there's always a stumper in each session.

"There's always one that catches me off guard," admits the 20-year-old college junior who has logged 690 flight hours (and counting). "The questions are thought-provoking as well. One person asked why aviation hasn't become a means of transportation for the everyday person. Others talk about the next generation of aircraft and bring up ideas that I don't think the industry has even thought of yet."

Larkins, national spokesman for the EAA's Young Eagles program since 2002, spends a lot of time in classrooms — whether it's at Embry-Riddle, where he maintains a 3.8 GPA, or in

Spare time

Jamail Larkins is also one of the youngest air show performers in the country. He flies a Christen Eagle II, named the Embry-Riddle Eagle, which has a maximum speed of 210 mph and is stressed to 7 positive Gs and 5 negative Gs. He performs his 10-minute routine at airshows around the country.



WAVING TO THE CROWD: Jamail Larkins taxis in his Christen Eagle after performing his aerobatic routine in an air show.

elementary, middle and high schools around the country, where he gives 30-minute presentations designed to encourage young people to pursue their passion for flight. Dubbed the "Dream Launch Tour," just the spring portion of the tour took him to 43 schools in 18 cities. He reached 16,000 students and another 39 million — yes, that's million — through the media. He's caught the attention of a lot of other people as well, including David Letterman, who had Larkins on his show May 19, the editors at Parade magazine, which featured him in its Oct. 31 issue, and, oh yes, the FAA. He's just signed a contract with the FAA to serve as an ambassador for the agency's aviation and space education efforts.

"I will work with the FAA promoting career opportunities within the aviation and aerospace industries," he says. "The FAA is committed to promoting aviation and aerospace opportunities to

America's youth, and this position was created to help achieve that goal."

While Larkins signed the deal with

the FAA just a day before AOPA Expo opened, an official ceremony is still in the works. During her comments

on the first morning of Expo, FAA Administrator Marion Blakey told the SRO crowd, "Jamail is an outspoken

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The inside scoop

How does he do it?

How does a 20-year-old barnstorm across the United States spreading the good news about aviation? With a lot of help. The SR20 he flies is owned by Cirrus Design Corp., but leased to his company, Larkins Enterprises, a web-based aviation and advertising business.

Shell Aviation and Eastern Aviation Fuels fill his tanks during the tour. Other sponsors include Careers in Aviation, AirShares Elite, Delta Airlines, Cirrus, Cox Communications, Caring Institute, Jeppesen and Michelin.



AVIATION'S AMBASSADOR: Just 20, Jamail Larkins travels the country speaking to school kids about the wonders of flight.

advocate for careers in aviation. This young man is a go-getter."

Pretty heady stuff for one so young, but Larkins has always been ahead of his time.

Born in Augusta, Ga., he had a passion for flight at a young age, but no way to pursue it — at first. "I was always interested in aviation, but I had no clue how to get involved in it," he recalls. "Nobody in my family flew and none of our friends flew."

He spent a lot of time at the computer with Microsoft Flight Simulator and checking out online resources. One day, he got a message about the Young Eagles program.

He took his first Young Eagles flight June 29, 1996, at Daniel Field (DNL) when he was 12, with Wyman Fox, a pilot who was to become his mentor. Just two years later, he went to Canada, where he became one of the youngest Americans to solo a powered aircraft. On Jan. 31, 2000, the day after his 16th

birthday, he soloed in the United States in a Cirrus SR20.

It is in an SR20 that he travels on his Dream Launch Tour, spreading the word to youngsters who, like him, may have dreams of flight, but no idea how to achieve them.

"If someone had come to my school and told me about all the programs that are available, it would have been great," he muses. "If I can help someone else open that door, then that's great. This has given me more experiences than I ever expected to have."

He realizes that not everyone he speaks to will become a pilot. "But if I talk to 200,000 people and 5% are interested, that's success," he says, noting that there are always one or two students who are "extremely gung ho" after the presentation. That success

Get in the game

5 TIPS ON HOW YOU TOO CAN BE AN AMBASSADOR

What advice does Jamail Larkins have for others who want to be ambassadors for aviation?

1. Young Eagles is a great program, but remember it's just an introduction. "It's up to the Young Eagle and the pilot to ensure it becomes long term," he says. If you, as a pilot, find a Young Eagle you feel is deserving, Larkins encourages you to develop a mentoring relationship with the youngster. He recalls that as a young boy, whenever his mentor, Wyman Fox, would go flying and he had an empty seat, he'd offer it to Larkins. That meant a lot to a boy who was washing airplanes — and taking on any other odd job around the airport — to get a few hours in the sky.
2. Realize that Young Eagles, while a great program, isn't the only one. "There are a lot of different programs out there you can support," Larkins says. And, of course, it doesn't have to be an organized effort — and it doesn't have to be kids. Take a nephew or niece flying, a neighbor, a kid from church, anyone who expresses an interest. "The biggest motivator is allowing the person to have that experience first hand," Larkins says.
3. Worried about liability? It's a real concern these days and the biggest reason pilots shy away from introductory flights, Larkins reports. "What happens if, God forbid, there's an accident? There's even been a few sexual harassment lawsuits, brought about when an adult is fastening a Young Eagles' seat-belt. Even if you don't want to fly, you can help," he says. "Spread the word and let people know about the opportunities in aviation for a career and a hobby."
4. Keep talking. Not all ambassador work is done at the airport. If you get a chance to talk to a civic group, a church group or in the local schools, go for it. "Show them that they don't have to have a career in aviation to pursue their passion in it," he says.
5. Point people to the Internet to find programs, including scholarship programs to help them pay for flight training. Larkins also is spokesman for another program called Careers in Aviation (CareersInAviation.org), which has a list of available scholarships.

"reenergizes" the young pilot to keep spreading the word.

And so he keeps traveling, this week to schools in Dallas and Houston. And as he does, he's prepared for those hard questions, like the one from the student who asked: "Can you fly high enough to see God?"

"I haven't been able to reach that high — yet," the young man answers.

Want to know more?
JamailLarkins.com,
ERAU.edu/DreamLaunch,
CareersInAviation.org,
Young Eagles.org.

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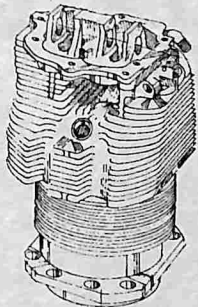


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Reading, writing and RIVETING

► *Students at Seattle Girls School learn math and science with a hands-on building project*

By MEG GODLEWSKI
General Aviation News

It's hard to study something when you just don't see how you will use it in your everyday life. Teachers — and parents — hear this all the time.

"The most commonly repeated phrase you hear from middle school students is 'when am I ever gonna use this stuff?' That's a question we never want to hear at Seattle Girls School," says Marja Brandon, head of the private school, which uses aviation and aerospace to help its eighth grade class make practical use of lessons learned in math, science and language arts.

Emphasis at the school, which was established in 2001 for girls in the fifth through eighth grades, is on fostering critical thinking skills, community involvement and a healthy self-esteem. Classes are small, usually no more than 40 girls per grade.

Each grade has a different year-long theme, such as biodiversity, machines or aviation. The themes offer multi-faceted ways for the girls to apply what they are learning.

"If you want to make the information stick, you have to give them a way to make a connection," Brandon says. "You don't want a concept to come out of left field, be learned, then go back into left field. In our school we show how the subjects talk to each other, so to speak. For example, one group of students might be focused on a math problem and have to communicate about it through the written word, which leads us into a



ATTENTION TO DETAIL: Dakota Adams carefully shapes the cowl of the aircraft.



Photos courtesy Seattle Girls School

TEAMWORK: Sarah Greiner and Camille Brown carry the wing to the assembly point.

unit on technical writing."

Brandon, who was exposed to aviation by her father, who was a pilot, spends a lot of time working with the aviation community to develop partnerships to improve and enhance the curriculum. "Not that it is difficult to do in an aviation rich area like Seattle," she notes. "The community is very supportive."

Exploration began the first day of school. By late September, the girls were at Wings Aloft, an FBO at Boeing Field, where they had a chance to fly in small planes.

"Most of the girls have been in a big plane like an airliner, but not in a small one, which is a totally different experience," says Brandon. "In a large plane you are very much insulated. The feeling of flying in a smaller plane is much more of a three-dimensional experience. We tell them they are going to fly, but we don't force them to get into the airplanes. We tell them 'ultimately it will be your decision.' We had one kid who said 'no way!' but after we got her to the airport, she went and liked it so much she wanted to go twice. It was a real discovery process."

The school even has a small wind tunnel that students use to apply lessons from algebra and geometry to explore aerodynamics.

Aircraft construction is also part of the curriculum. This year students are building a single-seat wood frame Mini Max that was donated to the school.

"This is a full-sized airplane, not a model," Brandon stresses. "We don't put an engine on it because of insurance



TAIL-MAKING TRIO: Dakota Adams, Katie McCormick and Lou Zucker check their work as they line up the horizontal stabilizer and rudder assembly.

and liability issues, but other than that, it is a full-sized airplane. For me the idea of building a plane is fascinating and the kids love it. Building the airplane is a very natural time to use math and science."

Aircraft construction is such a key part of the curriculum that when school officials were looking for more classroom space, one of the criteria was that there had to be room to hangar an airplane.

As the school year continues, the curriculum takes the girls farther and farther from Earth.

"Some of the girls develop an interest in aviation and aerospace as a result of the projects," says Brandon. "One of our graduates, Anna Wheeler, is a good example. She is part of the inaugural class of the new Seattle Aviation High School."

A "gift of flight" for the next generation

► *Programs from Young Eagles to NASA's Space Camp help kids take off*

By **THOMAS F. NORTON**
General Aviation News

If ever there was a "gift of flight," it is the Young Eagles program, which has introduced more than 1 million youngsters to flight.

The program's original goal of flying 1 million young people before the 100th anniversary of powered flight was reached in October 2003, when 15-year-old Andrew Grant of German Valley, Ill., was flown by Rick Ellis. Since then, the total has grown to an impressive 1,103,317 (as of Nov. 22).

One of many projects started by the Experimental Aircraft Association, the Young Eagles program brings volunteer pilots together with youngsters between the ages of 8 and 17, not only for an introductory flight, but to encourage a lifelong interest in aviation through summer camps, online projects and numerous events year-round, such as October's Make A Difference Day.

Young Eagles Executive Director Steve Buss proposed Make A Difference Day as an opportunity to organize as many Young Eagles rallies as possible around the country.

Since the first Young Eagles flights in 1992, they have taken place on every continent except Antarctica and in aircraft ranging from Cubs to business jets to blimps.

There have been numerous reports of young people who have been inspired to pursue aviation as a career or as recreation because of these flights. Many of them now are introducing aviation to younger Young Eagles.

"Every major university aviation program and all U.S. military academies have current students who were inspired by a Young Eagles flight," Buss states.

Last March, actor Harrison Ford

became chairman of the Young Eagles program, replacing Brig. Gen. Chuck Yeager, who had been chairman since 1994. Yeager now is the program's chairman emeritus, but continues to participate as one of the more than 35,000 volunteer pilots who have been involved since Young Eagles was founded.

While the Young Eagles program is not a competition among volunteers to see who can introduce the greatest number of youngsters to flight, recognition is given to those who achieve certain milestones, such as 10 in a single year, or 100 since starting. The grand champion is Jeanne MacPherson of Helena, Mont., who had flown 3,151 Young Eagles at last count.

One of the nation's most enthusiastic Young Eagles programs is the one run by the Tuskegee Airmen chapter in Chicago. Well, it used to be in Chicago, at Meigs Field. The destruction of Meigs by the city's mayor didn't stop the Tuskegee Airmen - a group that has dealt successfully with adversity since its beginnings during World War II.

When they were evicted from Meigs, they moved their operation to Gary Airport (GYG). Although known as Gary/Chicago, the airport actually is in Indiana, some 25 miles south of the Windy City, a long bus ride for the volunteer pilots and most of the youngsters they fly. They recruit students from a wide range of environments, from public and private schools, from neighborhoods rich and poor and in between, not only introducing them to aviation but to new friends and broader understanding. That, of course, is the most lasting achievement of the original Tuskegee Airmen.

While the volunteers are serious about what they do and how they do it, they have a lot of fun in the bargain. For one thing, like Young Eagles programs everywhere, the Chicago group is very much a family affair. Volunteers include wives - and husbands - of the pilots and there tends to be a picnic atmosphere after the

(to Page 39)



STAR POWER: Young Eagles Chairman Harrison Ford conducts a pre-flight with two Young Eagles. Ford took over as chairman of the program earlier this year.

Photo courtesy EAA

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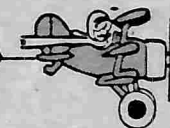
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The bottom line: FBO fuels dreams of flight

By MEG GODLEWSKI
General Aviation News

There's more to Janesville Jet Center at South Wisconsin Regional Airport (JVL) than meets the eye.

In addition to taking care of pilots and aircraft owners, it nurtures future generations of aviators through the Wisconsin Aviation Academy, a not-for-profit organization that provides ground school, flying lessons and aviation enrichment for underprivileged youth. Proceeds from the FBO pay for the academy's programs.

The academy is an after-school, weekend and summer program founded by Tom and Barbara Morgan. Tom, who is executive director of the academy, has been a pilot since 1989. Aspiring to a career in aviation, he became an instructor to build his hours.

"My first regular flying job was doing aerial surveys," he recalls. "I did this for awhile and realized I really missed teaching people to fly. So I decided to get a master's degree in teaching because I figured CFIs work the most in the summer and teachers usually have that time off."

In his second teaching career, he began working with at-risk youth.

"Being a pilot really helped because aviation is the ultimate carrot," he says. "I'd say to these kids, 'if you have perfect attendance or near perfect attendance next quarter, I'll take you for an airplane ride.' It was a great motivator."

One summer he was involved in a six-week aviation program for underprivileged kids. Inspired, he and his wife decided to explore the idea of doing a year-round program. They leased and eventually bought a building at JVL to run an FBO that supports the academy, which held its first ground school in 2001.

"For our first class we had six kids who were seniors in high school," Morgan says. "Of those six, three are now juniors in college."

Although the Morgans started the academy with their own money, they soon got some help from the community.

"We were helped out by an any-



Photo courtesy Wisconsin Aviation Academy

READY FOR TAKEOFF: On flying days at the Wisconsin Aviation Academy, there is no shortage of kids who want to go for a ride. The kids earn time in airplanes through good grades and participation in academy events.

mous donor who contributed \$500,000 over a three-year period," said Morgan. "We also started an air show called Southern Wisconsin Air Fest. The fundraiser, which is in June, actually benefits several non-profits in the area in addition to the academy. Last year the Air Force Thunderbirds were the headliners."

GETTING IN

Students must apply to the program, which is open to middle school and high school students in the Beloit area. Students must have at least a 2.5 grade point average in a 4.0 system. "We try to raise that to at least 3.0 when they are enrolled in the program," Morgan notes.

There are 22 students in the program now.

"Approximately 50% of those kids come from a low-income family or they are minority or female," says Morgan. "The program is designed that way. We have lots of kids who apply who have the grades, but their parents have the money to buy flying lessons. The other kids will never get near an airplane without something like this. The days of going down to

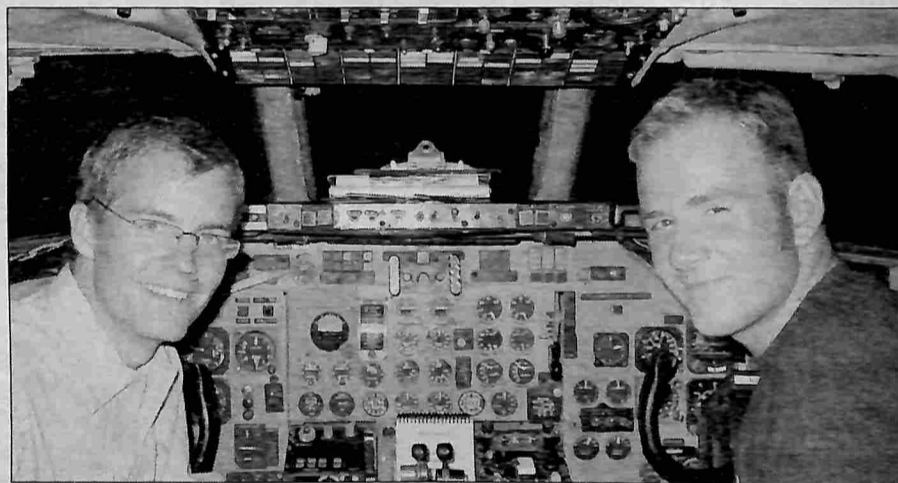
the airport and washing airplanes in order to buy flying time are over. Most aircraft owners are too concerned about the perception of risk to do that these days, so getting into an airplane is really hard for these low-income kids, even if they are very motivated."

FUN AT THE AIRPORT

The grade level of the student

determines the activities. For eighth and ninth graders, the emphasis is on exposing them to different facets of aviation. The students have the opportunity to visit the airport fire station, a control tower, an Air National Guard facility and the maintenance operation of a regional air carrier.

At the end of the year they take an overnight trip to the Experimental Aircraft Association's Air Academy in



TAKING CONTROL: Trevor Johann (left), line manager at the Janesville Jet Center, and Jared Armstrong, who will return to the Wisconsin Aviation Academy in January as a CFI, both participated in the academy as cadets.

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GOVERNORS



UP CLOSE: One of the goals of the Wisconsin Aviation Academy is to get kids near airplanes. Some dream of becoming professional pilots and going to college aviation programs. Others are there just for the experience of flying in a small plane, playing in a full-size flight simulator or venturing onto an airport ramp

Oshkosh and spend the night at the lodge.

"It's more than getting them excited about aviation, there is incentive too," says Morgan. "If they attend the field trips and have passing grades in school, they can submit a postcard to 'buy themselves' a flight."

High school students attend a private pilot ground school on weekends and fly more frequently in either a Cessna 150 or Piper Archer. Two of the local high schools allow the students to get credit for taking the private pilot exam.

The academy, which has one full-time and four part-time instructors, relies on the help of volunteers.

"Phil Owens, one of our volunteers, donates about 1,500 hours a year," Morgan says. "He is building an aircraft and he will get the kids around the airplane and let them help him build it. You have to understand that some of these kids don't even know how to use a metric ruler at first, then he works with them. He is invaluable."

There are rules of conduct in the program. Professionalism is stressed. Morgan does not tolerate what he calls "mall talk."

"The discipline that goes into every flight is obvious," he says. "There is strict adherence to the checklist. The 16-year-olds do a lot of planning, such as for the cross-county flights. We don't

look at how many of these kids go to college to be pilots though. We look at the planning, discipline and communication skills they develop. Those three things are important no matter what you do in life."

Some of the kids, he notes, do pursue careers in aviation. In January one of the academy alumni will return as a flight instructor.

Another alum, 19-year-old Trevor Johann, is the line manager at the FBO. Johann, who entered the academy at the age of 17, will take his private pilot checkride in a few weeks. He plans to continue training all the way through the commercial ticket.

"One of the good things about the

academy is that they had us come in one night a week for a general study session where we brought in our regular school work," he says. "They helped us with that, too, and it helped me raise my grades."

He credits the academy with helping him develop the discipline he needed to become a responsible adult. At the business he does everything from ordering fuel to parking aircraft.

"Last summer when President Bush came to visit, I was the guy who parked Air Force One," he recalls. "That was pretty cool."

608-373-0904 or
WisconsinAviationAcademy.org.

(Gift of Flight from Page 37)

flying, according to Ken Rapier, chief pilot for the Chicago organization.

Typically, six pilots fly about 35 youngsters at these gatherings, then sit down for soft drinks, coffee and home-baked cakes and cookies while waiting for the bus back to Chicago, Rapier says. A Piper Tri-Pacer has been donated for their Young Eagles flights by Bill Hencken, and the Chicago Department of Aviation has supported the program enthusiastically.

Not all volunteers are pilots. Many volunteer to help find young people to fly, and more pilots to fly them. Some work flightline safety, others coordinate the various group activities.

"There are many opportunities to help young people experience aviation," Buss says. "Many Young Eagles events are scheduled around

the world each week and assistance is always welcome."

PROGRAMS ABOUND

It should be said that Young Eagles isn't the only program dedicated to attracting youngsters to flying. Far from it. The Scouts have Aviation Exploring, for example.

The Soaring Society of America likes to point out that one can solo a glider at the age of 14, and sponsors many youth programs "to help you venture into the sky on silent wings," as their officials say. There is the Civil Air Patrol which, for more than half a century, has run an outstanding cadet program.

The National Business Aviation Association has its AvKids program for schools, the Academy of Model Aeronautics its model aircraft clubs and nationwide contests. NASA's

Space Camp, while emphasizing math and science, is built around the excitement of flight.

The FAA runs week-long Aviation Career Education camps for high school students. Even 4-H, which you may associate only with livestock, has its aerospace program - think of the Flying Farmers.

Finally, there are the Junior ROTC programs in many high schools. These are run by the Navy, Army and Air Force, all of which have aviation components, and the Air Force Academy runs a separate liaison program for students interested in an education there.

All in all, the "gift of flight" is out there for any child or teenager exposed to it.

Young Eagles, and all of the other programs taking aviation to kids, are doing a first-rate job of creating that exposure.

Want more?

- Young Eagles: YoungEagles.org
- Be A Pilot: BeAPilot.com
- Soaring Society of America: SSA.org, click on youth and scholarships
- Aviation Exploring: Learning-For-Life.org/Exploring/Aviation
- Civil Air Patrol: CAP.gov
- NBAA AvKids: Avkids.com
- NASA Space Camp: SpaceCamp.com
- Aviation Career Education Camps: FAA.gov/education/ACEcamp.htm
- 4-H aerospace programs: 4-h.org or Google search for state programs
- Junior ROTC: JROTC.org

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What does it take to grow the next generation?

► *The answer is simple — and vitally important*

By **R. KURT BARNHART**
For *General Aviation News*

What gets kids interested in flying? As a professor of aerospace technology at Indiana State University (ISU), a four-year program with degrees in professional pilot technology and aviation administration, I was obviously interested in this question. So I recently concluded a research project with a colleague, Professor Troy Allen, aimed at finding out why some of our students choose careers in aviation. We were initially interested in improving our marketing efforts, but what we found has implications for the aviation community at large, something we felt we must share.

It isn't a stretch to say that aviation needs all the interested folks we can get. We may not have a current personnel shortage, but the future potential does exist. On another note, one has only to look at airport closures and noise complaints (and their associated legislative initiatives) to know that aviation is under siege. The more people we can positively influence the better.

On college campuses, the aviation major tends to be unique in that the vast majority of students know what they want to study and already have their career goals laid out beforehand



Photo courtesy Kurt Barnhart

INTERESTING RESEARCH: *When college professor Kurt Barnhart asked students what influenced them to study aviation, the answers were a little surprising in their simplicity.*

— a rarity among college students. We were interested as to what sparked this focus.

We realize that a certain amount of this drive to be a pilot has its origins in personality, but to what extent? How could we best influence those who already had the personality in place to pursue aviation?

We fashioned a brief questionnaire, which asked students how their initial interest in aviation was peaked. What were the influences or events that led to the decision to become an aviation

professional? We were uncertain if the majority of students could point to a single event so we asked them to rate 16 items, on a scale from one to seven, according to the amount of influence they felt each had on their career decision. A one was "not-at-all" and a seven was "extremely."

So what was the No. 1 item? A flight in an aircraft. No. 2? A visit to an airport. That simple. That important.

Other influencing factors, in order of importance:

- A movie
- Other family member
- An aviation professional
- Attendance at an airshow
- Parents
- A friend
- Attendance at an educational event
- A visit to a military base
- Other advertisements
- A college faculty member
- Other
- University marketing information
- Teacher or high school guidance counselor

Notice that the top factors are the easiest to coordinate. Most of us can take care of the first two for any young person. As a former airplane owner, I cannot count the times I've gone flying by myself wishing I had a flying partner. What a perfect excuse!

The data now are in and there is no other more influential single activity

"There is no other more influential single activity you can undertake in the life of a future aviation professional than to take a young person to the airport and go flying! What's holding you back?"

you can undertake in the life of a future aviation professional than to take a young person to the airport and go flying! What's holding you back? Let's impact the future of aviation now.

Dr. Kurt Barnhart holds a commercial pilot's certificate with single/multiengine land, single engine sea and glider privileges, and an instrument rating. He also is a CFI, as well as an A&P. He is an assistant professor of aerospace technology at Indiana State University.

Reaching the masses in TV land

Growing the pilot ranks doesn't mean just concentrating on youngsters. In fact, one of the most successful programs, Be A Pilot, targets people who are ready — and able — to start their flight training today.

The non-profit organization, funded by the industry, runs ads on select television stations, such as Discovery Channel and Discovery Wings, target-

ing an audience hungry for adventure. This year's advertising campaign has generated more than 22,800 prospects, already beating last year's total of 22,600.

The advertising campaign, which touts a \$49 introductory flight, kicked off with a commercial designed to rekindle Baby Boomers' dreams. Called "Ever Dream You Could Fly?," the com-

mercial begins with a dream scene of a child admiring a World War II AT-6, then transitions to a modern Lancair in flight. A pilot seals the message by saying "You can do it. I did!"

Nearly 200,000 people had registered with Be A Pilot by the end of 2003. The organization expects to hit 250,000 by the end of 2005. When officials did a search of more than 66,000 prospects

against the FAA pilot registry, it found nearly 5,000 matches, including 3,296 student pilots, 1,363 private pilots, 222 commercial pilots and 40 ATPs.

"The base of everything we want to achieve in aviation begins with student starts," said Be A Pilot Chairman Jack Olcott.

BeAPilot.com.

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Summertime... and the living is easy at Destination: Aviation



Photos by J. Douglas Hinton

DESTINATION: AVIATION: Barbara Walters-Phillips created the curriculum for the popular summer camps on the Sun 'n Fun grounds. She recently had to write an advanced curriculum, since children enjoy the camps so much they are returning year after year.

By J. DOUGLAS HINTON
For General Aviation News

If you had to describe Barbara Walters-Phillips in one word, that word would be “enthusiastic.”

Walters-Phillips joined the aviation world at a tender age, flying often with her private pilot father on weekends in Pennsylvania. She was hooked.

But then came high school and college, where she worked as a lifeguard on weekends before going into teaching in Maryland. That necessitated a time-out from flying. But it wasn't long before an offer came to attend a weekend workshop for teachers on how to integrate aviation into the classroom. Who should be there but Scott Crossfield, the test pilot who flew even faster than Chuck Yeager. This shot of adrenaline in the late 1980s caused Walters-Phillips to develop a program for middle school girls she named “Aviation Invasion,” aided by an Eleanor Roosevelt grant from the American Association

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of University Women. It was a huge success.

Moving to Florida, she continued teaching aviation classes during the summer at Showalter Flying Service in Orlando. Eventually she was approached by the folks at Sun 'n Fun in Lakeland who were interested in a summer camp to interest youth in aviation careers. Walters-Phillips was a natural for the job and took it on three and a half years ago. Destination: Aviation was born.

When I caught up with Walters-Phillips, she was at — what else — an airshow at Orlando Executive Airport, hosting some aviation-minded kids from out of town. I wanted to know more about the summer camps.

GAN: Why don't you describe for us what these summer camps are all about?

Walters-Phillips: Well, it's just one facet of various programs Sun 'n Fun runs year-round, but this program is specifically focused on getting young people interested in an aviation career. We offer three week-long camps in June and one in July for students, grades five through nine. Classes start at nine in the morning through four in the afternoon with an hour off for lunch.

GAN: And what are they taught?

Walters-Phillips: What makes an airplane fly, various components of the machine and what they're for, and VFR navigation using sectional charts. We also have a random drawing on Monday to see which students get which plastic models to build on their

"You can't believe what a rush it is to get an email or phone call from a former student telling me they've started flying lessons."

Barbara Walters-Phillips,
creator of Destination-
Aviation

own time during the week. They have to turn them in by Friday. It could be anything from the Wright Flyer to the Space Shuttle. They also have to do some research on the significance of the aircraft they're building.

We also have guest speakers address the class, people like airport managers, flight instructors, airline and corporate pilots and so on. It's stressed that cockpit jobs aren't the only careers available in aviation as long as people just like to be around airplanes.

Another fun thing we do is show

the class how to construct tissue paper hot air balloons.

GAN: Do the students actually get to go flying?

Walters-Phillips: Absolutely! A flight instructor helps the students plan a three-leg cross-country flight using sectional charts and on Thursday they go flying. Depending on weather, it's usually from Lakeland to Lake Wales to Wachula and back to Lakeland. A landing is made at each airport so each student has a chance at the controls.

GAN: Who supplies the aircraft?

Walters-Phillips: Volunteers. Quite a few people from Leeward Air Ranch, retired airline pilots and such, donate their time and planes for free. And a local FBO donates the fuel.

GAN: So you'd rate Destination: Aviation a success?

Walters-Phillips: So much so we're getting return students. Obviously we can't offer them the same curriculum, so I've had to write an advanced program. We show them how to build Styrofoam gliders and plan longer cross country flights, usually to the Space Coast Airport at Titusville, where they visit the Valiant Air Command Museum, then to the Flying Tigers Warbird Restoration Museum at Kissimmee and back to Lakeland.

For advanced students, we also have a real hot air balloon brought over from Tampa. They get to unpack it, fill it, tether it and then go for a ride in it. That's a real winner.

But the most fun is graduation day, when the parents are invited to participate in what we call our Aerospace Olympiad. All the models the students built are displayed in a time line from the oldest to the newest. We have tissue paper balloon launches, Styrofoam glider competitions, sled kite flying and model rocket launches. It's very gratifying.

GAN: How many students attend these camps on average?

Walters-Phillips: Well, they're broken down by age groups with a maximum of 12 students per teacher. We have five teachers running classes concurrently. The cost is \$200 for the week, which is a bargain for what they're getting and they get to take

all their course materials home with them. Most of the students come from Polk County, where Lakeland is located, but we want to promote this program nationally, which we're doing via the Sun 'n Fun website, mailings, other media and word of mouth.

We've already had out-of-state students, but our giant leap forward should come this summer when the Tom Davis Center is dedicated (Davis is the ex-president of Piedmont Airlines). This will be a dormitory on the Sun 'n Fun grounds where students can stay all week with supervision and entertainment provided in the evening.

GAN: What else are you involved with?

Walters-Phillips: My regular job is learning specialist at a middle school in Orlando, where I work to integrate new teachers into the job. Then, I'm chairperson of the Teachers' Workshop during Sun 'n Fun, where I show teachers how to introduce aviation into their school curricula, aided by guest speakers from EAA, the Civil Air Patrol, NASA and others.

GAN: Obviously you're a pilot yourself.

Walters-Phillips: Oh yes, I got my private pilot's license in 1990 and have been flying Cessna 152s and 172s ever since.

GAN: Ever fly the Stearman? (Husband Pat Phillips is an aviation attorney and has served as air boss and airshow coordinator at Sun 'n Fun for many years. He also does airshows around the country in his Stearman).

Walters-Phillips: Only with Pat. It's a bit out of my league. But we've almost completed an eight-year rebuild on a J-3 Cub that we hope to take to Lock Haven next summer for the Piper "Sentimental Journey" trip. That's more my speed!

I'd just like to say one final thing. You can't believe what a rush it is to get an email or phone call from a former student telling me they've started flying lessons. So now we're working up a syllabus to introduce summer camps for elementary school students.

Want to know more? 407-909-5400, Ext. 255, or Sun-n-Fun.org.

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What's up doc? ▶ Your choice of doctor has an effect on your ability to stay airborne

BY GUY BALDWIN

How important is your choice of Aviation Medical Examiner?

Very important, it seems.

I recently received two e-mails from a newspaper requesting information about a doctor who had lost his medical license, but continued to do FAA medicals.

Apparently, the doctor lost his privileges at a couple of hospitals due to a head injury he received. He apparently lost some fine motor and sensory sensations to his hands and also had a personality change secondary to the injury to his head.



THE DOCTOR IS IN

According to the FAA doctors in Oklahoma City, medicals done by this gentleman are not valid. Even though it is not the fault of the pilots he examined, all airmen who had their medicals from this doctor — or any other doctor practicing without a valid license — should immediately go to another AME to get another exam done.

For the FAA to accept a medical done by a doctor who has a physical or mental impairment — and no license — opens up huge liability for the FAA.

Lesson learned? Check your AME's credentials before you begin your medical.

Another mistake that FAA doctors note is that pilots don't realize there are two types of AMEs. There are the regular ones who do second and third class physicals and then there are senior AMEs, like myself, who do all three (first, second and third). The big difference is some pilots requiring first

The FAA docs want to do what is best for pilots and get them back in the air as soon as possible.

class medicals (such as for the airlines) fill out additional parts of the required form and the medicals are slightly different.

For instance, if you are above the age of 35, you need an EKG. The AME must have the proper equipment to send the EKG to the FAA over phone lines as it does not accept hard copies

anymore. After age 40, EKGs are due annually to maintain a first class medical.

The problem is that some doctors who are not senior AMEs and not authorized to do first class medicals are conducting these exams. The FAA stance on this is that it will support the airman for fairness and scold the AME.

My experience with the FAA medical officials over the last 25 or more years has been the same — they do protect the airman. The FAA docs want to do what is best for pilots and get them back in the air as soon as possible.

Dr. Guy Baldwin is a family physician and Senior Aviation Medical Examiner in Tulsa, Okla. A member of the EAA Aeromedical Council, he has more than 4,000 hours. He owns a T-6 Harvard, a Cessna 210 and an Extra 300, which he flies in airshows and aerobatic contests.

'10 Most Wanted'

Want to set your own record? There are plenty to be broken

There are many aviation records still to be broken.

In fact, the National Aeronautic Association has a "10 Most Wanted" list of records, several of which go back to the 1930s.

The oldest, from May 1937, is for distance flown over a closed circuit — without landing, of course — by a piston powered seaplane. It is held by Mario Stoppani of Italy, who flew a CRDA CANT Z.506 3,231 miles. You'll need 3,263.44 miles to set a new record, says the NAA's Michael Pablo.

In November 1938, Mario Pezzi — another Italian — set an altitude record of 56,046 feet for piston landplanes, flying a Caproni Ca-161. You (or Bruce Bohannon) will have to reach 57,728 feet to top that 66-year-old record.

Beech Bonanzas hold two long-standing average speed records: around the world westbound (54.37 mph, including refueling stops) and speed over a 15/25 km straight course (a more respectable 220.46 mph).

Several of the most-wanted records involve aircraft not usually found in GA

hangars. For example, Bryan Allen set a duration record of eight hours, 50 minutes, 12 seconds in his Raven White Dwarf airship. Drury Wood and Dieter Thomas set another of those distance-without-landing records — 423 miles — but their class was VTOL aircraft. Theirs was a Dornier Do-31.

You might need a Harrier or one of those new F-35s to beat them. Obviously there's not much competition in this class.

Two records for jet aircraft, regardless of takeoff weight, are held by a Boeing

747-SP (average speed around the world over both Poles, 487.31 mph) and a Boeing B-52H (distance without landing, 12,532.28 miles). A third record, held by yet another Boeing — a 737-400 — is for distance without landing within the takeoff weights of 99,208 pounds and 132,277 pounds (3,891.18 miles).

Although these are Pablo's 10 most wanted, there are dozens of other records available to pilots with the time, money and willingness to pursue them.

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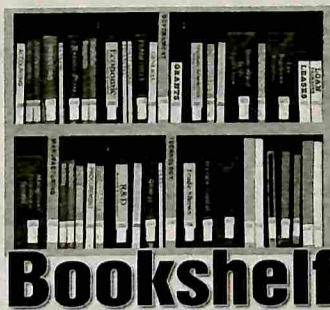
How one man beat the competition in the world's most turbulent industry

By **RON BOYDSTON**
General Aviation News

Can a hyperactive, teetotaling, non-flying entrepreneur, whose first business

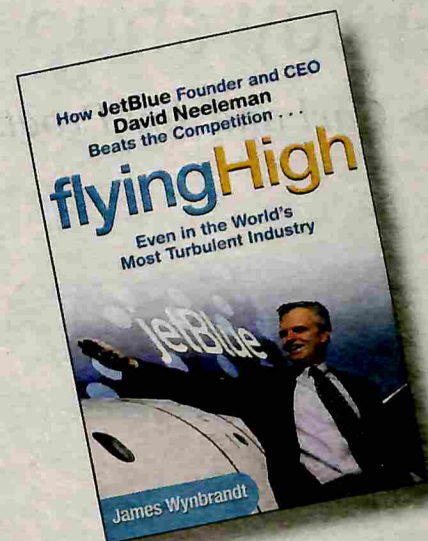
went bankrupt and who was fired by a top company, do anything significant in the airline business?

If your name is David Neeleman, the answer is a high-flying "yes," as told in the new book "Flying High, How JetBlue Founder and CEO David Neeleman Beats the Competition Even



in the World's Most Turbulent Industry," a fascinating look at one of the most impressive airline startups in history — JetBlue.

Raised in Utah as a third-generation Mormon, Neeleman was off and running as a businessman while still in college. When he was just a junior, the small travel company



that he founded had 20 employees and \$8 million in annual sales. But when the airline that he depended on for flights went out of business, so did Neeleman.

From there he went to work for another company, Morris Travel, and developed a charter operation that turned into a scheduled airline. By 1993 Morris Air had reached annual sales of \$250 million. The startup was subsequently bought by Southwest Airlines. Neeleman went to Southwest as part of the deal, but soon ran afoul of the Southwest way of doing business and was dismissed.

While he could not compete in the airline business for several years as part of the sale, he could plan, and during that time the concept for JetBlue was developed. On Feb. 11, 2000, JetBlue's first scheduled flight pushed back from its gate at JFK airport in New York, bound for Fort Lauderdale.

The new airline, with discount fares, new planes, live in-flight television, electronic ticketing and a focus on customer service, was an immediate success.

With a talent for marketing as well as for picking just the right people to work for him, Neeleman's story is worth reading as much for its business lessons as it is for its accounts of the rough-and-tumble airline industry.

Written by aviation and business reporter James Wynbrandt, who also writes occasionally for *General Aviation News*, the book is an absorbing account of how one man's vision became a reality that has made a major impact on the airline industry in the United States.

Flying High, published in hardback, runs 250 pages and is priced at \$24.95. Published by John Wiley & Sons, it is available in bookstores and online.

Wiley.com.

NOW IN PAPERBACK: "To Conquer the Air: The Wright Brothers and The Great Race for Flight" by James Tobin.

Tobin, who holds a Ph.D. in history, is a writer whose work has twice been nominated for the Pulitzer Prize in journalism. He traces the work of the Wrights and interweaves it with the efforts of others who were involved in the development of flying machines, including Samuel Pierpont Langley, Octave Chanute, Alexander Graham Bell and Glenn Curtiss.

The 366-page volume, priced at \$16, is published by Free Press, a division of Simon and Schuster.

Borders.com.

New e-Tools: Welcoming you to the adventure of a lifetime

Flying has changed dramatically since the days when a pilot would simply look up at the sky, make an assessment and say, "let's fly." Today, there are many more resources available to pilots to help them make a more intelligent go/no-go decision. Fortunately, the Web has made it vastly easier to "know before you go."

There are dozens of on-line sites, but the most comprehensive is AOPA's own — www.aopa.org — where pilots can browse the most up-to-date information regarding virtually any aspect of general aviation, from the latest safety course to what AOPA is doing in Washington, DC, to flight planning. While AOPA members can enjoy a large menu of unique services, a treasure trove of information is available free to anyone wanting to know more about the pleasure of heading skyward.

AOPA's newest web site — www.flighttraining.aopa.org — is designed specifically for those who want to live the dream of flight. There is a wealth of information related to learning to fly, from choosing a flight school to technical tips on a broad range of topics including detailed articles, interactive courses and videos, information about hands-on flying skills, topic briefs and frequently asked questions about flight training.

And if you're a flight instructor, the Tools for CFIs section will provide you with proven techniques for making you a more effective instructor in the air and on the ground.

The AOPA Flight Training web site also includes a Virtual Flight Bag to help new pilots plan their flights and improve aeronautical decision making. In addition, there are detailed weather graphics, airport diagrams, and the popular AOPA Real-Time Flight Planner. Powered by Jeppesen, the RTFP can quickly plan a VFR or IFR flight, with up-to-the-minute airspace restrictions and real-time weather. With the click of a mouse, one can easily file the plan electronically.

Many of the Flight Training site's pages are open to all visitors, but the best content is available only to AOPA members. If you haven't already joined, you can sign up for a free six-month membership and receive six issues of *Flight Training* magazine, the world's favorite magazine for students and CFIs.

Although heading skyward might appear complex, there is an abundance of "e-guidance" available that will keep you fully informed and fit for flight. Now you, too, can live that dream.

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A toy shop for all ages

► Carl and Joy Proetschel turn frustration into a business

By THOMAS F. NORTON
General Aviation News

Carl and Joy Proetschel didn't have much luck when they tried to find gifts for a young son whose third word was "airplane."

"We found things here and there, but it took a lot of looking and there just wasn't one good source," Joy said. "After a lot of frustration, Carl said, 'Why don't we do this?'"

That's how the Future Flyers Club got started. Three years later it almost certainly is the most comprehensive source of airplane-themed children's stuff anywhere, with close to 600 items listed in its online catalog at FutureFlyersClub.com.

Among the most popular items are the bomber and other aviator jackets, airplane T-shirts, caps, and flight suits. They have what must be the largest selection of pedal planes on the planet, "with free shipping," Joy emphasizes.

The aviation-themed toy selection

includes around 85 items, ranging from teddy bears and other plush animals to kites and model rockets. The die cast toy airplanes doubtless appeal to nostalgic adults as much as to their kids — maybe more.

There are books and videos, and a bedroom decor section that includes airplane beds, a charming airplane crib, airplane lamps, airplane wall art, and a wealth of other stuff.

Among this year's "hottest products for Christmas" — Joy was quoting Baby Talk magazine's

craft old and new. The Future Flyers Club is about "helping children with their dreams of flight without busting your wallet," Joy explained. With prices such as \$49.99 for the bomber jackets, \$48 for the blankets, and \$109.99 for a pedal airplane, it would seem that the club is living up to that goal.

While the emphasis is on children, the Future Flyers Club carries plenty of stuff for grownups, too.

Check out the warbird nose art panels in more than 50 designs, all carefully researched

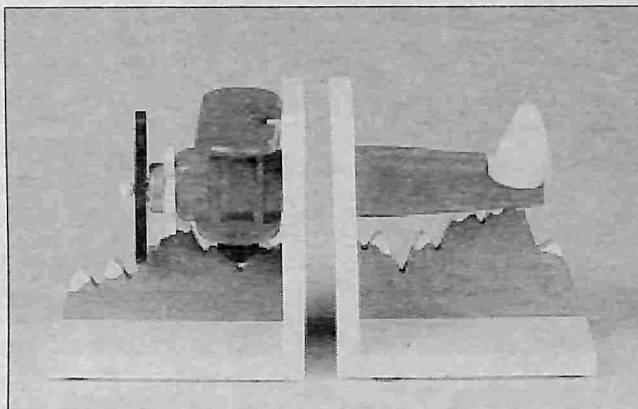


Photos courtesy Future Flyers Club

FLYING FASHION: The Future Flyers Club flight jacket (\$49.99) is modeled by Spencer Proetschel, who is busy watching — what else? — airplanes. Parents Carl and Joy say that Spencer's third word was "airplane."

comments — are 27 different blanket designs, depicting a range of planes from those seen at any GA airport to military air-

BOOKING IT: You've seen those movies where airplanes fly through hangars and barns, but here's one that flies through books. It arrives as a set of book-ends (\$24.50) that's just right for keeping a child's aviation books upright.



A CLASSIC: The American Classics blanket (\$48) is one of 27 aviation-themed blanket designs sold by The Future Flyers Club.

and authentic. Look over the 200 or more scale model airplanes, with more available for shoppers who can't find exactly what they want. "If you can't find the airplane you're looking for, call us," Joy says. "We can find just about any model you want."

There also is a Black Sheep Squadron collection honoring the men of the Marines' famous VMF 214 squadron.

There are about 20 different aviation signs, including retro airline advertisements — all authentic — World War II signs, and airport signs.

FutureFlyersClub.com
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'My First Log Book' — a gift for all ages

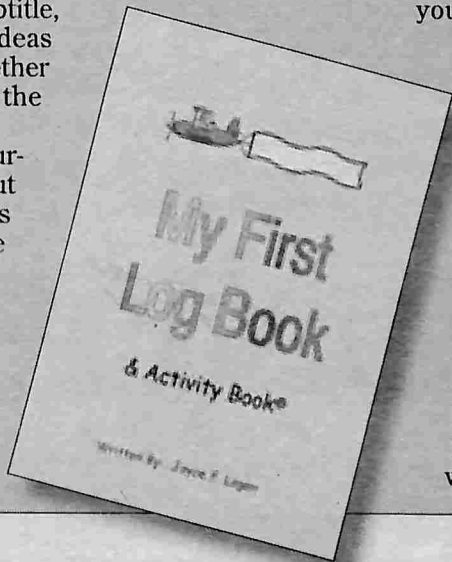
By THOMAS F. NORTON
General Aviation News

My First Log Book, with "...and Activity Book" as a too-easily-overlooked subtitle, is one of those great ideas for children who fly, whether via general aviation or the airlines.

Not only does it encourage children to write about their travels and the things they observe along the way, but it includes activities such as mazes and other postponements of the all-too-familiar "are we there yet?" question.

It almost certainly will make a wonder-

ful keepsake as a child grows older. Imagine that child sitting with his or her own children or grandchildren, poring over "My First Log Book" and sharing its adventures with younger generations.



The book's author, Joyce F. Logan, is a stay-at-home mother to her twins, Olivia Rose and Thomas Michael, who were born July

23, 2003. "The idea for this book came from a family friend, Dick Cutler, who suggested that I keep a log of the children's flying adventures," Logan explained. "My husband, Scott, is a private pilot. I thought it was such a great idea that I decided to create this log book and activity book for children."

The Logans live in Pipersville, Pa., a central Bucks County town founded by the family of William T. Piper of Cub fame. The delightful little book can be purchased directly from Logan, either by e-mail at AviationAdv@epix.net or by calling 610-294-3056. It costs \$14.99 and there is an additional (modest) shipping charge. Delivery takes about two weeks, so order soon to make sure the book is wrapped and under the tree for the holidays.



Photos courtesy Joyce Logan

HER INSPIRATION: Joyce Logan, author of "My First Log Book," with her twins, Olivia and Thomas. She created the book as a way to document her children's flying adventures.

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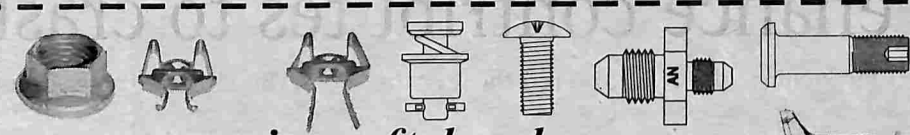
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ACCIDENT REPORTS

Improper maintenance contributes to crash that kills one

These December 2002 Accident Reports are provided by the National Transportation Safety Board. Published as an educational tool, they are intended to help pilots learn from the misfortunes of others.

Aircraft: Rockwell Commander 114.

Location: Hot Springs, Ark.

Injuries: 1 Fatal, 1 Serious.

Aircraft damage: Destroyed.

What reportedly happened: The airplane was en route to Little Rock, Ark., at night on an instrument flight plan. Near Hot Springs the pilot radioed ATC to advise them he had lost engine power. He said he would try to reach the airport at Hot Springs. The pilot's last transmission indicated that he did not think he would make it and would most likely crash into a nearby lake. The aircraft crashed into a home on the lakefront roughly 6,000 feet from the runway.

The post-crash inspection revealed the engine ignition system's single-drive dual-magneto exhibited evidence of melted plastic on its four-lobe breaker cam. The cam itself was discolored and lacked lubrication. Internal damage to the magneto suggested the breaker cam's shaft had been forcibly pushed into the magneto. The magneto was removed and replaced during the last annual inspection. The airplane had flown approximately 148 hours since its annual inspection.

Probable cause: The loss of engine power due to the failure of the engine ignition system's single-drive dual-magneto, and the magneto's improper installation by unknown maintenance personnel. A contributing factor was the lack of suitable terrain for a forced landing.

Aircraft: Piper Seneca.

Location: Jeffersonville, Ind.

Injuries: None.

Aircraft damage: Minor.

What reportedly happened: In prepara-

tion for landing, the pilot lowered the landing gear using the gear handle in the cockpit. He noted all three landing gear position lights were illuminated, indicating the gear was in the down and locked position. As the aircraft touched down, the gear in-transit light illuminated and the landing gear warning horn sounded. The left side of the landing gear folded up. The aircraft skidded to a stop.

Investigators put the aircraft up on jacks and attempted to deploy the landing gear with the gear handle. The nose and right main wheel extended normally. The left wheel came down only part way, although the gear position indicator light indicated the gear was all the way down. Closer inspection revealed the left oleo strut assembly and the gear were corroded and the landing gear position switches were dirty. The linkage was disconnected and the left main landing gear moved freely.

Probable cause: The mechanical binding of the left main landing gear, which resulted in the gear not fully extending to the down-and-locked position. Factors were the oleo-strut linkage being corroded and the contamination of the gear position switches.

Aircraft: Cessna 172.

Location: Vici, Okla.

Injuries: None.

Aircraft damage: Substantial.

What reportedly happened: The non-instrument-rated private pilot was attempting a cross-country flight during a light snow shower. The pilot said when he took off visibility was between five and seven miles. During the flight, ice began to accumulate on the airframe. The pilot made an unscheduled landing at an airport to remove the ice. After partially removing the ice and checking the weather, the pilot continued his flight. The nearest weather reporting station indicated visibility was four miles and there was freezing rain

in the area. The aircraft was in cruise flight when it encountered the rain. Ice began to build up rapidly on the aircraft. The airspeed dropped from 115 mph to 80 mph and the pilot decided to divert to the nearest airport. He was unable to maintain airspeed or altitude in the ice-heavy aircraft. He landed in an open field short of the airport. The ground was uneven and the aircraft nosed over during the landing roll.

Probable cause: The pilot's continued flight into adverse weather conditions. A contributing factor was the lack of suitable terrain for the precautionary landing.

Aircraft: North American T-28B.

Location: Glenwood, Minn.

Injuries: 2 Fatal.

Aircraft damage: Destroyed.

What reportedly happened: The owner of the aircraft was a commercially rated pilot and had a Letter of Authorization to fly the aircraft in VFR conditions only. The letter prohibited aerobatic maneuvers and formation flying. The passenger also held a pilot's certificate. Several witnesses reported seeing the aircraft performing low-level steep turns. One witness estimated the wings of the aircraft were at 90° no more than 500 feet agl. One witness said it appeared the pilot was turning close to the ground and realized he was too low, so he pitched up the nose of the aircraft in an attempt to climb. There was not enough clearance between the ground and the wing tip and the aircraft cartwheeled in. The post-crash inspection did not find any mechanical problems.

Probable cause: Altitude/clearance not maintained by the pilot-in-command. The low altitude maneuvering by the pilot-in-command was a contributing factor.

Aircraft: Piper Dakota.

Location: Bryson, Texas.

Injuries: None.

Aircraft damage: Minor.

What reportedly happened: The pilot was attempting a cross-country flight at night in VFR conditions. The pilot did not fuel the aircraft prior to take off. The pilot reported that at the time of departure the airplane's left and right main fuel tanks and the right tip tank were half full. The left tip tank was empty. The pilot switched fuel tanks about every 20 to 30 minutes. Approximately eight nautical miles east of the destination, the engine lost power, and the pilot initiated a forced landing in a field. A passenger, who was seated in the right front seat, stated that after the engine lost power, the pilot "...tried the other three tanks for fuel and could not find any." There was no evidence of fuel found at the accident site. The passenger told investigators they had been airborne for approximately three-and-a-half hours.

Probable cause: The decision not to refuel the aircraft and inadequate planning, which resulted in a loss of engine power due to fuel exhaustion.

Aircraft: Piper Archer III.

Location: Greensburg, Ind.

Injuries: 1 Minor.

Aircraft damage: Substantial.

What reportedly happened: The pilot was attempting to take off from a slush-covered runway in a snowstorm. As the aircraft reached take off speed, it began to skid sideways toward the edge of the runway. The pilot tried to reduce speed to avoid a collision with ground objects, but found he had no directional control over the aircraft. The aircraft went through two fences before it finally stopped moving.

A post-accident examination revealed no mechanical defects.

Probable cause: Failure of the pilot to maintain directional control during the takeoff roll. Contributing factors included inadequate planning and the decision of the pilot to attempt to depart from the slush-covered runway, the slush covered runway itself, and the falling snow. GAN

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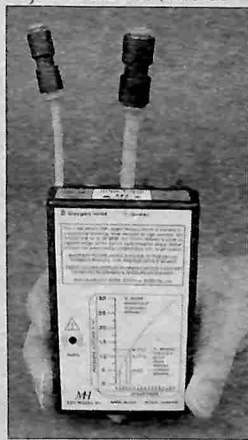
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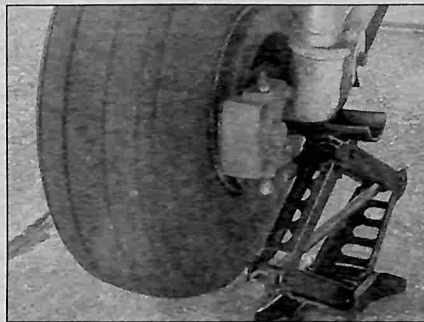
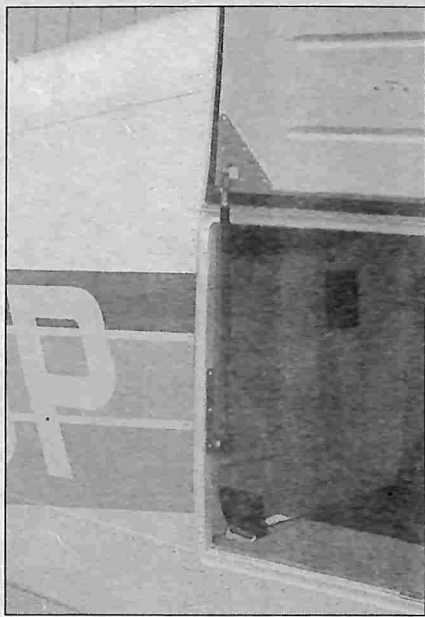
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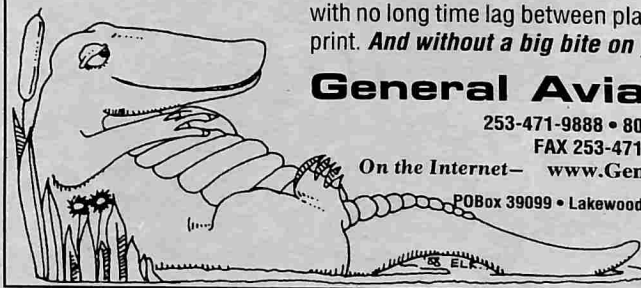
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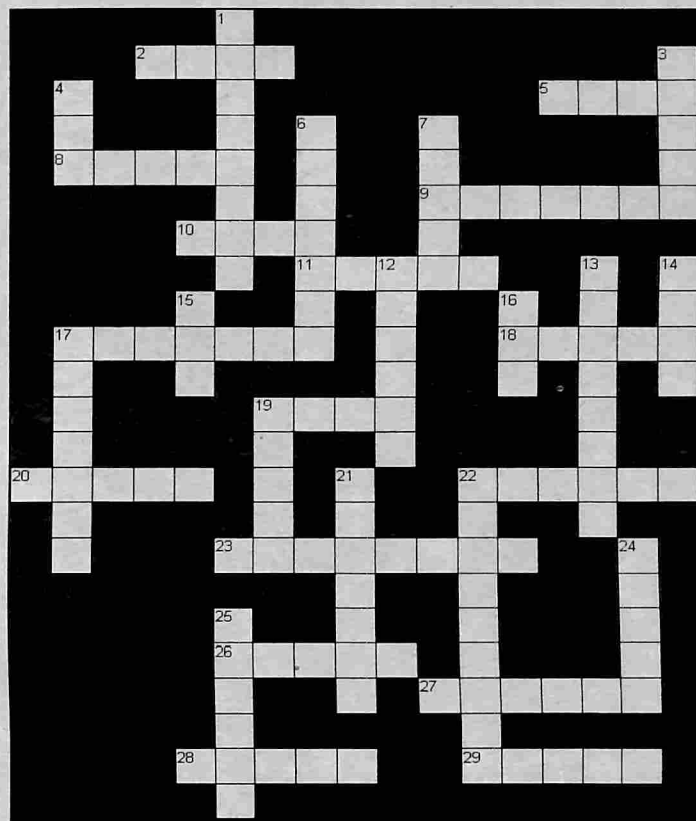
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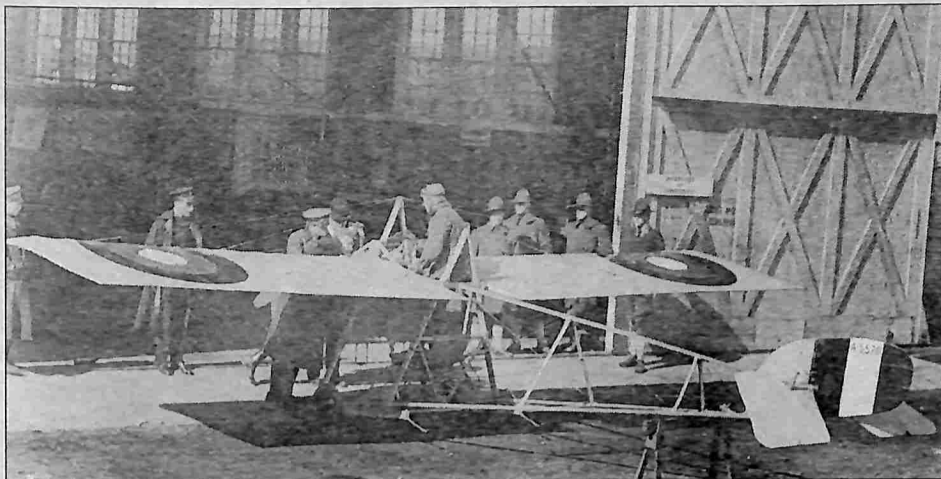
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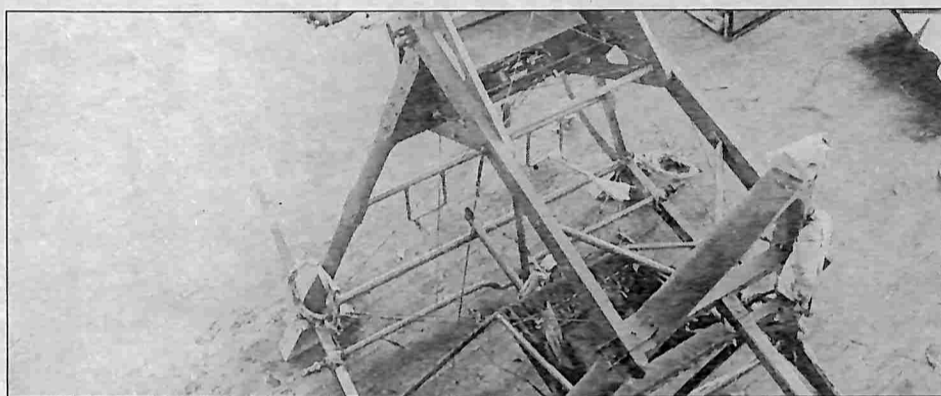
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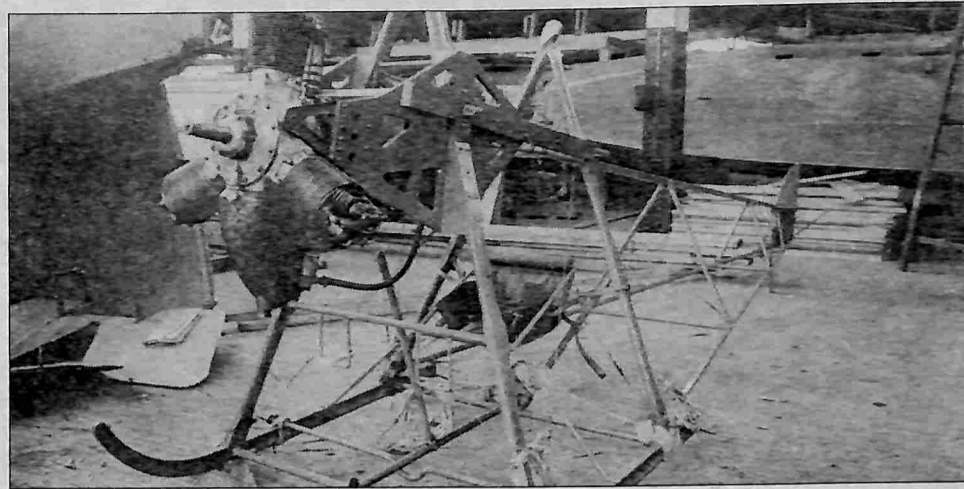
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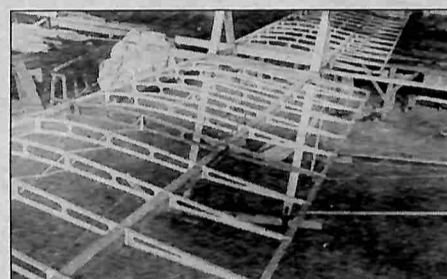
SIZING IT UP: The pilot of the SA-1, standing on his seat, gives a good idea of the small size of the SA-1 which, except for its relatively heavy 50-60 hp Lawrance engine, is similar in size and structure to many of today's ultralights.



INSIDE SCOOP: A closeup of the cockpit shows all the diagonal brace wires that made it easier for the pilot to get in and out through the top of the fuselage rather than the side. Note that the rear lower longerons are not a continuation of the forward portions, but attach to the rear A-frame above them.



THE BASICS: The three-longeron fuselage structure of the NAF SA-1. Note the two-piece construction of the lower longeron, with forward projections forming anti-nose-over skids. The three-cylinder Lawrance engine is mounted on two heavy plywood webs bolted to the forward A-frame. Note the curve in the middle of the axle (here without wheels) to clear the torque tube supporting the control stick.



WINGING IT: The wing-spars of the SA-1 were solid spruce, extensively routed for lightness. Note that the pulleys for the wing-warping cables to the rear spar are built into the top and bottom of the rear A-frame, or pylon.



ANOTHER VIEW: Looking into the "cockpit" of the SA-1. Note the splitting of upper longeron loads by diagonal tubes, the open bay for pilot access and the simple way of attaching parallel side beams to the angular A-frame.

SIMPLE STRUCTURE

The SA-1 was designed to be simple, almost to the point of being crude

BY PETER M. BOWERS

This is a classic Of Wings & Things from the 1980s. GAN will continue to run the late Mr. Bowers' column for the enjoyment of his readers.



OF WINGS
& THINGS

A major design objective of the Naval Aircraft Factory SA-1 of late 1918 was to have as simple a structure as possible. This was achieved, but almost to the point of being crude in some areas. The structure, particularly in the fuselage, has some features well worth considering for today's ultralights and the lower end of the "licensed" class.

The fuselage of the all wood SA-1 used three longerons, a heritage from the late Santos-Dumont "Demoiselle" designs and the forerunner of the famous Aeronca C-2 and C-3 models. The three longerons allow a rigid rear fuselage to support the tail, eliminating the bunch of wires used to stabilize the tails of the one and two-longe-

ron ultralights in use today. However, as used on the SA-1, the three-longeron arrangement had some notable disadvantages.

For one, the upper longeron was not continuous from the tailpost to the forward A-frame, or pylon. It ended at the upper crosspiece of the rear pylon. Putting the load of the upper longeron into the middle of a cross-piece like this would ordinarily be an engineering no-no, but in this case the load was split by two stout steel tubes and transferred into two separate side beams that connected the two pylons. However, this transfer wasn't the main function of the tubes. Again, unloading a force into the middle of a beam was not good engineering, but only the aerodynamic tail loads were in that upper longeron. The landing impact loads were taken by the two forward-mounted "tailskids" on the lower longerons.

There was another disadvantage to the three-longeron system as used on the SA-1. For rigidity, every bay had to be braced with crossed wires. This made it nearly impossible for the pilot to get to his seat from the side, which would seem to be the logi-

cal way. Instead, he went in through the top, forward of the rear pylon. Thanks to the diagonal steel tubes, the area between the rear pylon, the side beams, and a cross-tube installed farther forward was rigid without the need of crossed wires and provided enough clear space for the pilot's access.

In the 1924 light plane developed by J.S. Roche, which became the Aeronca C-2 of 1929, the basic three-longeron structure was supplemented by secondary low longerons in the cockpit area that made the structure rigid at the point without the need for crossed wires or diagonal tubes. Entrance could now be made easily from either side. Also, the upper longeron was now extended to the forward structure and both wing panels attached to it rather than to the two parallel side beams as on the SA-1, a good example of design evolution and improvement.

The landing gear of the SA-1 was extremely simple — a pair of non-brake wheels on a steel tube axle bound to the lower longerons with rubber cord that functioned both as fastener and shock absorber. The

wheels were too small and too far below the raised pilot's seat for him to hold on to them for braking. The Roche and the early C-2s also used the straight axle on the longerons but used larger diameter racing sulky wire wheels. The pilot, sitting lower down, could hold them to keep from rolling forward during engine idle or run up. Some pilots wore heavy gloves and grabbed the wheels for actual braking during rollout and taxiing. Later C-2s went to small diameter Goodyear airwheels that eliminated this convenience.

The wheels of the SA-1 were just outboard of the lower longerons, which made for a fairly narrow track gear with associated crosswind taxiing problems, a characteristic shared by many ultralights today, especially those with high-dihedral wings. The Roche and the early C-2s with narrow fuselages had even more of a problem to the point where the Roche added wing tip skids. Later C-2s and the early C-3s reduced the problem significantly by going to tripod landing gear struts that put the wheels well out from fuselage for better crosswind stability.



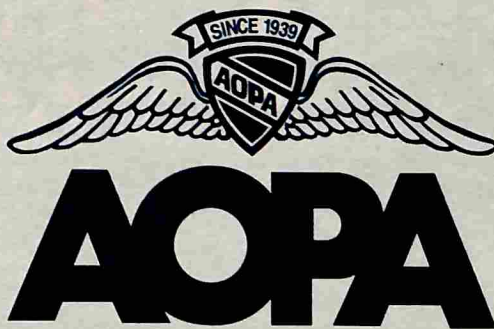
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