

# Oklahoma Aviator



Vol 18, No 10

Your window to Oklahoma Aviation...Past, Present, Future

October 2000

## Intrepid Aviator Flies Weedhopper to Oshkosh

by Steve Mock

It's late December, 1999, and everybody's in their hidey-holes, waiting for Y2K to arrive. My buddy, EAAer Ken Ruff calls. "You wanta do what? Fly our ultralights to Oshkosh next year!?! Whatever it is you been drinkin', I want some of it! Yeah, I know we're not getting any younger,

sure hate to drive to a fly-in.

I shared our dream with my brother, John Mock, and my two sisters Carolyn Bova and Marcie Farthing. In previous years, all of them and their families have joined the OSH-express. John, his wife Lois, Marcie, Carolyn and her husband Ron all volunteered for ground crew. Marcie's hus-

From the outset, we decided to fly to OSH and trailer home, as we didn't relish the prospect of flying back to Tulsa, bucking headwinds all the way in our light birds.

John, Lois, and Marcie arrived in Tulsa Friday evening in the motor home, pulling a box-trailer with Jim's Beaver aboard. Saturday morning it

and my Weedhopper has the 47-hp Rotax 503. Our machines proved very compatible, speed-wise. It didn't take long, though, to realize that we had a poor communication setup. We thought we heard the ground crew in the motor home once or twice, then nothing. Jim and I could talk OK, but all we got from Ken was B-R-R-R-R whenever he'd hit the transmit button. Two of us carried GPS receivers, and they said we were on course for Ft. Scott, Kansas, a 145 mile leg.

We suddenly heard Ken loud and clear, "I'm on the ground!" A quick 180 and sure enough, he was down in a pasture of waist-high grass, but the trusty Tierra tail-dragger did not nose over. Jim and I circled, trying to raise the ground folks, while Ken attempted a re-start. Nothing doing. (We later learned that his points had closed up.) So Jim and I headed 15 miles east to the Vinita, OK airport. Once on the ground we used a cell-phone to locate John & Company, who were already in Joplin, MO, some 60 miles ahead of us! They got lost a time or two turning back, but eventually we were reunited and we found Ken and his wounded Tierra.

We fiddled and cranked and did everything we could think of to trouble-shoot his engine, but it was a no-go situation. Time to tear down and take 'er home on the trailer. What a disappointment - this whole trip had been Ken's idea initially, and now he was grounded. The best-laid plans... Ken and Ann would spend the night at home and push their pickup to catch up with us the following day in Missouri. Our gaggle was now a full day behind schedule.

We spent the night at the Vinita airport, and agreed that the future legs of the flight would be much shorter and more closely follow major highways, due to our inability to communicate by radio (the batteries in my VHF had totally crashed by this point). Next day, Monday, July 24, Jim and I flew the 82 miles to Ft. Scott, KS. Then a 45-mile leg to Harrisonville, MO, followed by a 61 mile hop to Carroll County Airport, MO. At this point, Ken and Ann reappeared, and we set out for Macon, MO, 59 miles away, where we stayed the night.

Next morning, Tuesday, July 25, Jim and I could see from the air that we were definitely in farm country - I never saw and smelled so much corn in all my life! We refueled at Mt. Pleasant, IA, after 98 miles, then struck out for Davenport, a 67-mile leg which took us across the mighty Mississippi twice.

Jim's handheld still worked somewhat - Davenport Unicom cleared our "ultralight flight" to land. On the ground and awaiting the arrival of the ground crew, we visited the Unicom folks and were told that the Davenport Airport Authority had banned all ultralights from the field, and we'd better leave before the airport manager returned from lunch. Why the heck had she cleared us to land, knowing we were ultralights?

The manager showed up in a matter of minutes and was very nice, but insisted that we refuel and depart WIKI-WIKI, due to the ultralight ban. In pleasant conversation I asked him if the Davenport Airport Authority had ever accepted FAA funds for their facility. Yes, they had. And were they

*continued on p. 6.*



*Steve Mock and his souped-up Rotax-powered "Hyper-Hopper."*

and it's something I'd like to do, too (I guess, sorta, maybe, wouldn't I?). Oh-kayyyy," I reply.

We talked again, a few weeks later, and agreed it'd be a neat thing to do - probably take a couple days of hard flying to cover the 700 plus miles from Tulsa to OSH. Heck, we've got 14 hours of sunlight that time of year and prevailing south winds - we can do this! Then we talked it up with some of our flying buds and, before I knew it, we were committed. Mouth, what have you let yourself in for? It's time to start planning our adventure to Airventure 2000. Besides, I

band Jim signed on as aircrew, with a plan to fly his Beaver ultralight.

To provide good communications, Ken and I bought hand-held VHF transceivers. Jim already had one, as did John, who had his mounted in the motor home. Little did we know how inadequate the rubber-duddy type antennas would prove to be. Wanting to maximize air-time, we planned flights of 75 to 145 miles, with three fuel stops on both days-- Sunday and Monday prior to the opening of AirVenture. Ken's wife Ann would drive their pickup, pulling a trailer for the ride home.

was off to 'Hopper Hill, our ultralight strip 25 miles south of Tulsa, where we assembled the Beaver. Jim arrived by commercial flight that afternoon, and Carolyn and Ron drove in to round out the crews. "Let's sack out early, guys, 'cause we've gotta get up at 4:00 a.m. for a dawn take-off." Right! Bedtime happened about 2:00 a.m., up at 4:00 a.m., and we were ready to launch by 6:30 a.m. However, a 300' ceiling and 1 mile visibility kept us on the ground until about 11:15.

Ken's Tierra flies with a 35-hp Rotax 377 engine, Jim's Beaver uses a 40-horse Rotax,



## From Mike...



One of the fun things about publishing an aviation newspaper is being able to tell "war stories." My Cub story published over the last couple of issues got a good reception from some of you, so here's another story.

Back in the early 80s, I became a dealer for the Quickie series of homebuilt aircraft. Having a long history with composites, I was drawn to the efficiency, ease of construction, and unconventional beauty of canard airplanes. I had always thought the 18-hp Onan-powered single-place Quickie was a cute toy, but when the two-place VW-powered Quickie Two appeared on the scene, I knew it was the airplane for me. At Oshkosh in 1981, I talked to Tom Jewett and Gene Sheehan, owners of the company, and made arrangements for a dealership in exchange for helping Tom build his intended nonstop-round-the-world airplane called "Big Bird" (a whole 'nother story for another time).

Over the next six months or so, I built a Q2 and began selling kits. The Q2 was, and still is, a remarkable airplane, achieving highly respectable performance on a small engine while carrying two souls in comfort. However, in retrospect, the design had a few problems, which were mostly left to the builders to discover. Besides being a handful during landing rollout, the most serious problem was the infamous pitch-down tendency when flying in rain. The presence of water (or even an accumulation of bugs) on the leading edge of the canard was enough to cause the airflow to separate and destroy some of the lift. If one flew into a shower, the nose would pitch down sharply, requiring

promptly-applied backpressure to compensate. Of course, if one were going in and out of the showers, a high degree of vigilance was required.

Tom and Gene recognized the problem and, to their credit, came up with a new canard design which was advertised to solve the pitch problems. However, by that time, several of the dealers had become very disenchanted with Quickie, including me. Concerned that the claims for improved performance of the new canard might be exaggerated, we petitioned Quickie to allow one of us to flight test the factory Q200 (by that time the VW engine had been upgraded to a Continental O-200) and make our own judgment. Quickie agreed and I was elected to do the flight tests.

On the appointed day, I caught a flight to Mojave, California, the legendary dry-desert Mecca of unusual flying machines, situated adjacent to Edwards AFB, where god-like test pilots struggle in Olympian contest with the elements of Earth, Air, and Fire (but, in Mojave, not with Water!). I always have a special sense of history every time I go there.

After arrival, Gene Sheehan and I mapped out a sequence of tests designed to see if contamination of the canard leading edges would trip the boundary layer and cause pitch problems. We experimented with various ways of doing so, including mixtures of Elmer's Glue and sawdust "glopped" onto the top surface of the canard leading edge as much as 1/8" thick. Not one of our tests caused the boundary layer to trip and I was impressed.

For the final series of tests, we applied several thicknesses of masking tape spanwise at about the 5% chord position. Early that morning, I took off for the test flight. Everything seemed the same as for the previous tests: no pitch problems.

I had planned a specific series of tests and, as the airplane climbed to about 10,000 feet north of Mojave, in the 100+-mile visibility I could easily see Edwards AFB seemingly directly below. "Oh, man," I thought, "This is so cool! I mean, here I am, in the very same air where the Space

Shuttle lands! Here I am, in the very same air where Chuck Yeager broke the sound barrier in the Bell X-1! Here I am, a test pilot, doing the same thing of 'Chuck did! This is just too cool for words!"

So, amid the envisioned glow of kinship between "me and Chuck," I eagerly began the test series, which was to include various airspeeds, bank/turn conditions, power settings, etc. I was busily taking and recording data, when I first noticed a slight left-wing heaviness in the airplane. Looking out at the canard I saw that the leading edge of the masking tape had begun to lift in a couple of places about an inch long. "Dang," I thought, "I hope this doesn't affect my test results! Oh, well, I'll just continue the tests." Now, at this point, it had not really dawned on me what was happening: in effect the leading edge of the tape was being forced by the airflow to stand vertical, becoming a very effective spoiler.

As I continued the tests, the wing heaviness seemed to increase. When I looked out at the canard, there were two areas each about two inches long where the tape was standing vertical. The two areas were about two feet apart along the span of the canard. Suddenly it occurred to me that one likely scenario was that the two areas would further grow and coalesce, spoiling the lift of perhaps a third of the canard span. I didn't know whether there would be enough aileron authority to counteract the asymmetric lift. Beads of sweat broke out on my forehead and this realization suddenly struck home: **FLIGHT TESTING CAN BE DANGEROUS!! I COULD WIND UP DEAD!!**

I had the sudden urge not to be in this hallowed air any longer. Very intently, I wanted the gulf of distance between me and Mojave Airport to be magically gone. However, by that time, I was perhaps fifty miles away at 10,000 ft. Since the Q200 would not fare well in any off-airport landing, there was only one way toward safety: I had to fly the airplane home. Abandoning the test series, I turned south toward Mojave and once again caught the full vista of Edwards AFB. But this time, I did not

feel that heroic kinship with all the aviation pioneers that have sanctified those environs. Instead, the old familiar metallic taste of fear was in my mouth and stomach: it was up to me. As I recall, the radio was not working, so I could not even call anyone.

Descending toward Mojave Airport, I carefully watched the offending tape out the side of the canopy. It was so close!-- if I could have just reached out and pulled it off the canard, all troubles would be resolved, but, alas, with the forward-hinged canopy, there was no chance. I considered various alternatives: I could dive the airplane and try to tear off the tape-- no, that might make it worse. I could slow the airplane down and try to reduce the aerodynamic forces on the tape-- yeah, yeah, that's a good idea! But not too slow-- might run out of aileron. I slowed the airplane to maybe 120 indicated, as slow as I dared. By that time, the spoiled sections of tape had each increased to about a foot in length, with about a foot between them. I was holding about half the available aileron travel to keep the wings level.

However, thankfully, I was by then in the pattern at Mojave. Praying for a minute's more good luck, I held my airspeed on base, turned final and negotiated a semi-landing from an airspeed that seemed like about Warp-9. Suddenly, it was all over and I was safe!! And just as suddenly, the realization occurred that the whole affair had been nothing-- no big deal, just another day's work for a test pilot. All over the airport and in the little town of Mojave, stunted like the desert around it, people were going about their own business-- eating sandwiches, tending babies, chatting-unaware of the drama playing out above their heads.

As I taxied off the runway, I wanted to key the mike and casually say something like, "Uh, Quickie Base, Test One here, we had a li'l ol' pesky problem out there, but we swatted it down like a fly." Fortunately, the lack of a radio prevented me doing so. Taxiing up to the Quickie hangar, I shut down the engine, sat in silence a moment or two and then stepped out of the airplane. Walking on rubber legs to greet Gene, I had a new perspective of good ol' Chuck!

## Cross-Country IFR Training to Fun Destinations Planned

by Mike Huffman

TULSA- A new concept for instrument flight training is being launched in the Tulsa area. Normally, in instrument training, most flights are conducted in the near vicinity of the home airport. In Tulsa, that generally translates into simulated instrument flight and instrument approaches to Tulsa International, Riverside, and Okmulgee airports and the associated airways.

Actual cross-country flying under an instrument flight plan is not generally emphasized. As a result, many students complete their instrument rating and then realize they are not comfortable planning and executing an actual instrument cross-country flight. Variables such as actual weather considerations, changes in clearances

enroute, proper communications with air traffic control, procedures for flight through special use airspace, etc., may not have been experienced by the student during training.

Ken Clark's and Larry Dodson's concept is to combine training with fun, by planning and making cross-country instrument flights to interesting destinations. Two or three students on each trip will share the cost of the airplane and instructor, with each student getting a share of the left seat time. Plus, each student will benefit from the experience even when he or she is not in the left seat. The trips will be made in Ken's turbocharged Cessna 210. Larry, a CFII, will fly right seat and provide the training.

Each trip will be planned in several legs to some destination chosen by the

group. If desired, a day or more layover can be planned to take advantage of skiing, fishing, or other fun activities before making the return trip.

The Oklahoma Aviator recently went along as "students" on one of these trips, to Durango, Colorado. The trip was set for a Monday, so to prepare, Barbara and I met with Larry and Ken on the previous Friday to plan it.

Over the weekend, I practiced skills not used for many years: reviewing IFR enroute charts, approach plates, and the Pilot's Operating Handbook for the 210.

At 7:00 AM Monday morning, we met Ken and Larry at Harvey Young airport, where Ken's 210 is hangared. Being rusty at instrument flight, I was a little apprehensive. However, Larry guided me through last minute weather briefings, fil-

ling the instrument flight plan, and preflighting the airplane.

Soon we were off for the first leg of the trip, to Amarillo. As expected, I was "behind the airplane" at first. But as the trip proceeded, it all started to come back. By the time we reached Albuquerque, I felt more comfortable with the airplane and the IFR procedures.

For me, there could have been no better destination than Durango, in the mystical, magical Rocky Mountains. The opportunity to breathe the clear mountain air and see the sky was a welcome tonic for my soul. Gee, I guess that what Ken and Larry had in mind!

For more information, contact Ken Clark at 918-438-7272 or Larry Dodson at 918-437-3315.



## Up With Downs



Earl Downs

## Modern Wonders

I don't know about you but, in my opinion, the autopilot should be included as one of the wonders of the world. As much as I like to master the sky with my "superior piloting skills," it is very nice to be able to engage the autopilot and just sit back and monitor my progress. I wrote about the trip Pat Smith and I took in his Bonanza to Sun-and-Fun earlier this year. Believe me, the autopilot pilot made the IFR part of that trip much more relaxed and much safer.

As good as they are, an autopilot that

has become a "HAL" can cause some problems. (HAL was the name of the computer in the book and movie 2001: A Space Odyssey. It took over the space ship and "terminated" the crew). Last week a pilot had to land his airplane while fighting with the autopilot for control of the plane. It was a reminder of how important it is to know which circuit breakers must be pulled to deactivate autoflight and electric trim systems. It also made me think of the origin of our modern autoflight systems. You may be surprised to know just how long autopilots have been around.

Once the aviation spark was ignited in 1903 it seems that a new criteria for progress was formed. In only four years of experimenting, the Wright Brothers solved the mystery of controlled flight. In our current world of computers and automatic flight it is hard to believe that the first autopilot flew only 11 years after the Wright's flight. The story of its inventor is one of daring and genius.

In 1910, Lawrence was only 13 years old but he had been bitten badly by the flying bug. He read everything about aviation he could get his hands on and begin the design and construction of his own man-carrying glider. After a few mediocre flights he procured an engine and set about trying to teach himself to fly. Talk about teenager problems! His father was a famous inventor of the day and that probably explains why he was allowed to experiment with his airplane.

But, after a few crashes, enough was enough and he was sent to a strict boarding school to "get him under control" and OUT of aviation.

The boarding school didn't work. While there, he made several balloon flights and continued his study of aviation. He graduated at age 19 and convinced his famous parents that aviation was his only future. He wanted nothing to do with college and planned to spend his time experimenting with airplanes. At a loss on how to stop their son from pursuing aviation, in 1913 they sent him to the best flying school available. Lawrence thought he was in heaven when they sent him to the Glenn Curtiss Flying School in Hammondsport, New York.

Glenn Curtiss was only 34 years old himself when the 20 year-old Lawrence showed up. Lawrence learned quickly and received pilot license number 11 on October 5, 1913. Lawrence learned to fly in a Curtiss flying boat at the same time the US navy was working with Curtiss to develop a more stable airplane. Lawrence convinced Curtiss that a plane could be stabilized with gyros and the young student was given the job of proving his theories. (It's interesting to note that true aerodynamic stability, as we know it today, was still several years away.) Over the next few months Lawrence, now nicknamed "Gyro," developed a primitive autopilot consisting of gyros, servos, and a wind-driven generator. His progress was good enough

that Curtiss provided "Gyro" with a C2 flying boat and sent him to France to enter an airplane safety competition. First prize was \$10,000.

The contest was held in Bezons, France, located on the Seine River northwest of Paris in June, 1914. Lawrence arrived in France a couple of months early and started working on the invention. He hired a French mechanic named Emile Cachen to help him and he learned enough of the French language to communicate. Emile turned out to be a brilliant mechanic and week after week they worked on the autopilot/airplane combination. Through luck of the draw, the Curtiss plane was the last of 57 entrants to demonstrate their "safe plane."

Lawrence's mother and father were on hand to watch their son in action. Lawrence and Emile roared off over the Seine River and engaged the autopilot. They flew past the judges sitting in the open cockpit with their hands raised. On the next pass, Emile walked out between the two wings while Lawrence sat in the cockpit with his hands in clear view. The third pass was with both Lawrence and Emile standing in the cockpit! However, the final pass delivered the "coup de grace." As the plane flew by the crowd, Emile walked out on the right wing holding a French flag while Lawrence walked out on the left wing holding the American flag. No one was in the cockpit!

The young man called "Gyro" was Lawrence Sperry. Curtiss won the prize and the name Sperry became synonymous with the gyro horizon, gyro compass, and autopilot. For a fascinating look at the life and times of Lawrence Sperry, I recommend the book, "Gyro," written by William Wyatt Davenport.

Any question? Email me at earldowns@hotmail.com



## A Guy Called "Shorty"

As an eager 17 year-old, I had already made up my mind to be an aviator. Having read "WE," by Lindy, I noted that he started as a flunky and had worked up to being the world's most admired flier. As a result, I biked five miles to the one and only airport in town and proceeded to make myself available as an aircraft flunky. What I got was a lot of floor-sweeping, washing, and polishing.

Finally, one aircraft owner named "Shorty" took advantage of my offer to do aircraft maintenance work. He took me under his wing to help him put together a basket-case Waco 10. I know Shorty had other names, but they are long forgotten. Other airport people thought he was a little strange and did not go out of their way to be helpful or friendly. Besides, who wanted to get mixed up with a moody old green-horn and his broken-down Waco?

Shorty was a hard rock miner and one of the best, working at all levels of the various copper mines that dotted the side of a mountain called the "Richest Hill On Earth." But flying was his real love and, although his experience had been limited to a few hours at a Ft. Worth, Texas training school during the waning days of WWI, he vowed to get back in the air someday. Stopped by

the depression of the twenties and early thirties, he had to wait until 1938 to pick up a very deteriorated OX-powered Waco 10. Shorty had used his 1929 Model A ford pickup to truck the Waco parts from a barn at Helmsville, Montana to what was then known as the Butte National Airport. As inside space was scarce, the FBO reluctantly allowed Shorty to use one corner of the FBO hangar, which provided enough room to work piecemeal on the Waco.

My job was to help, take orders, snap to, and not ask too many questions. I paid hard to get aircraft maintenance experience. My Scandinavian mentor had a very short fuse and even shorter appreciation of my humble efforts to be of assistance – but we needed each other and finally struck a mutual plateau of respect.

The work continued, off and on, for a period of three months. When the job was finally finished, we were both very proud of our handiwork. The wings were bright silver and the fuselage was robin's egg blue. It all looked very nice, except for one thing that wasn't noticed at first glance, but was readily apparent on a good look.

The problem was with the registration numbers, which were painted in black on the silver wings. In those days, registration numbers began with the letters NC, and were affixed to the bottom surface of the lower left wing and the top surface of the upper right. The numbers were required by the CARs to be placed just outboard of the fuselage, with the top facing the wing leading edge. Each letter was 20 inches high by 18 inches wide so they could be seen from great distances.

For some unknown reason, Shorty and I inadvertently put the numbers on backward and upside down, with "NC" at the wing tip and the top facing the trailing edge. Now to the layman, this is no big deal, but to airplane professionals of that time, it was a real goof. All the airport personnel came to look. It seemed as if people flew in from miles away, just to look at our numbers and have a good laugh.

Shorty, however, was not concerned. They were only numbers and, as he snorted, "day ain't got nuttin to do wit flying the damn plane"! The numbers stayed where they were and flight testing was started. Shorty flew the Waco without a check out, apparently relying on his WWI experience, and declared everything to be working fine. A number of other test flights were made successfully. Shorty was happy with his handiwork and more convinced than ever that his real calling was flying airplanes.

A few weeks later, Shorty sold his pick-up truck and, with all his worldly belongings tied in the front cockpit of the Waco, departed for parts unknown, backward NC numbers and all. I inquired about him many times in the ensuing years but nobody ever reported seeing him or the Waco again.

I guess minor details like backward numbers are of little concern to an aircraft owner who flies away without a pilot license in his pocket, in an airplane without a CAA Inspection or airworthiness certificate aboard.

Shorty was a mess of a guy, but I owe him; he gave me a start in a business that I have enjoyed for a lifetime.

### THE OKLAHOMA AVIATOR

Published monthly at  
P.O.Box 100  
Cookson, OK 74427  
(918)527-0429

#### Founders

Joe Cunningham and Mary Kelly

#### Editors/Publishers

Michael and Barbara Huffman

#### Advertising Sales

Michael Huffman

The Oklahoma Aviator is published monthly. All rights reserved. Bulk Mail postage is paid at Stone Mountain, Georgia. Subscription price of \$15.00 per year may be sent along with other remittances and correspondence to:

#### The Oklahoma Aviator

P.O.Box 100  
Cookson, OK 74427

email:  
ok\_aviator@mindspring.com



# Steve Mock's Ultimate Ultralight Adventure, cont'd

*continued from p. 1.*

not aware that no form of aviation activity could be excluded by FAA mandate, that being the case? Yes, they were, but it would take a lawsuit to enforce the mandate, and the Authority has lawyers with a lot of time on their hands we were told. We were happy to get tanked and get going.

On takeoff, Jim couldn't get more than 5,000 rpm out of his Rotax 447- the customary 6,400 just wasn't there. Circling low, he landed, taxied back, took off again, and climbed on up to meet me, as his engine had suddenly cleared and was functioning normally. On the way to Dixon, IL, 62 miles away and crossing the big river one more time, his engine dropped back to 5,000 rpm, which is a good cruising speed but not good for takeoff when fully loaded with fuel. At Dixon we fiddled, poked, and tweaked his Rotax to no avail- 5,000 was the best

it would do. (We later learned that his points had closed up, too.) He chose not to fly heavily-loaded in an unsafe condition and elected to teardown and trailer the rest of the way. BUMMER! OK, Steve, it's solo time - no biggie, let's do it!

Ken and Ann headed out with a can of mogas for Portage, IA, 120 miles due north of Dixon, and I blasted off with a nice 10-15 mph tailwind at six o'clock. Powering up the GPS a time or two to check my course against the sectional, I was pleased to see a ground speed of 71-72 mph at 5,200 rpm. I arrived Portage an hour before Ken and Ann appeared.

After refueling, it was decision time. I was 55 miles SW of Oshkosh, it was then 7:30 p.m., and sundown was scheduled to arrive at 8:30 p.m. Spend the night here and fly in tomorrow morning with the sky full of arriving aircraft, or go for it now? Oh, agony, sweat, whine

- ARGHHH, go for it (no guts, no glory!).

Off the ground at 7:37, steering by sectional with a check on the GPS every 20 minutes or so. Man, that sun was really going down- behind a cloudbank, too, so twilight would arrive early. Visibility was going fast, but by sticking my knee out into the slipstream, I could see the Magellan's display in the flashes of my Illusion Aircraft strobe.

Arriving at Ripon, the convergence point for all arriving aircraft, I let down to 300' AGL, the ultralight max pattern altitude, and scanned like crazy, looking for 100,000 big airplanes doing what I was doing. Didn't see a one, and that still amazes me! In the gloom ahead I could see Lake Winnebago, and had no trouble finding and following Waupon Road to the ultralight strip, per EAA website instructions. No traffic there, either. Safe on the ground at 8:32 p.m., after 758 miles and 16.9 hours tach-time!

The Weedhopper is, of course, the first ultralight designed from the ground up as an ultralight, back in the late 70's. She's a 2-axis machine - dihedral plus a swept leading edge (chord is 8' at the boom and 4' at the tip) automatically providing all the roll imaginable. 90-degree banks are well within the Weedhopper's flight regime. You just gotta be careful with crosswind takeoffs and landings. Over 30 years later, the Weedhopper design is still the simplest, strongest, and safest ultralight in the air, in my view, and is the most protective of its pilot, in the event of incident.

My A&P son, Doug, and I built this bird (we call it the Hyper-Hopper) four years ago, my sixth Weedhopper since '81. Starting with a ratty, rotted, and rusted pile of C-model Weedhopper bones, we added new sails, the Rotax 503 engine, a Prince P-tip prop, and a BRS ballistic parachute. Along the way, we made several structural and weight-and-balance modifications to handle the ex-

tra weight and power of the big Rotax engine.

Performance: I burn 2.6 gph at 5,000-5,200 rpm slow cruise (45-50 mph). Takeoff roll has been measured at 60 feet in calm winds, though I've done zero-roll takeoffs in 15 mph winds in this bird. Stall speed is 15 mph or less. Top speed is close to 64 mph, and she'll turn 180 degrees in two plane-lengths, using 90 degrees bank and full-up elevator. Just a big ol' pussycat 'til you drop the hammer; then it's "Sit down, shut up, and hang on!" The Hyper-Hopper is by far the most fun airplane I've ever been aboard, even mo'betta than a flight I caught in a D-model Mustang a hundred years ago! Performing like this, I don't want any other airplane - EVER!

The airplane got a great reception at AirVenture. As I flew in the daily ultralight parade, favorable comments were heard on the appearance of such an "oldy-but-goody" and on its distinctly un-Weedhopper-like performance. All too soon, Saturday arrived and it was time to tear down, load into the trailer, and depart for Tulsa. Wings off, we towed the fuselage through the campground, roughly a mile and a half distance. Everyone we passed had a light-hearted comment to make - stock reply became "Battery died and we're pull-starting it," or "Ten miles an hour faster and I think we can get it off the ground," or "Time to replace the hamster." Much fun!

This was my third trip to OSH and first by air. What a spectacle! Everyone who has ever seen an airplane needs to attend Airventure once before you die; and if you own an aircraft, you've gotta fly it there at least one time - you'll not forget it for the rest of your life. Thanks, again, to brother John and the gals - a good ground crew makes a world of difference. To Ken and Jim, who reluctantly relinquished aircrew status and assumed the ground crew role. It's obvious - the best airplane won!! Hey, let's do it again next year.



Steve says, "I really, really love my airplane!"

## Gundy's Airport Under New Ownership

OWASSO- Mallie Norton and Phillip Hart, owners of Gundy's Airport, recently announced that the airport has been sold to Roger and Meri Wieden. The Wiedens have lived for fourteen years in one of the homes surrounding the airport. A true aviation family, they own and fly a Cessna Skyhawk XP, a Pitts S1S, a Piper PA-12 Super Cruiser, and a Breezy.

Roger comes by his aviation background honestly. His father was Roy Wieden, a well-known airport operator, FAA GADO employee, and author of aviation books. Roger was born on the airport in Gage, OK during the time when his father was managing the airport. As Roger tells it, their home was frequently visited at odd

hours of the day and night by fly-in guests and once by some folks who had crashed on the runway.

Concerning the purchase of the airport, Roger said, "We have all known for some time that, after many years of successful operation, Phil and Mallie wanted to sell the airport. One night I was telling Meri I'd like to make sure it falls into aviation-friendly hands. To my surprise, she said, 'Why don't we buy it?' I was dumfounded! I keep telling her she'd better think before speaking-her mouth is going to get her in trouble!"

Not to be outdone, Meri laughingly retorted, "When the hangar is full, what do he do: buys an airport!"

Gundy's Airport was started in

1948 by Harold Gundermann, a long-time Tulsa pilot, American Airlines employee, and flight instructor. Mr. Gundermann and his wife raised their family on the airport. Following Mr. Gundermann's death, Mallie and Phil purchased the airport from the family in the late 70s and have continued to operate it since. In the intervening years, it has been transformed from a sleepy country airport to one of the most popular airpark communities in Oklahoma.

The Wiedens want to assure everybody that Gundy's Airport will continue to have the same homey, airpark flavor that Phil and Mallie have fostered. For more information, contact Roger or Meri at 918-272-1523.



Roger Wieden, daughter, and friend in the Breezy.



## THE HANGAR DOOR EXPERTS!

Introducing the new Hydro-Tilt door system from Superior Structures. This innovative door system is the cleanest, most versatile door system you will ever own.

The 100% hydraulic lift system allows for gentle quiet operation. The one-piece door design and quality construction provides a simple and safe door system, which will give you years of trouble free service.

- COMPLETE DOOR KITS
- INSTALLATION AVAILABLE
- ONE-YEAR WARRANTY



**SUPERIOR STRUCTURES, LLC**

8305 S. Elwood, Hangar B-103, Tulsa OK 74132  
918-760-6771 \* FAX: 918-299-6689

## How Many Should We Build ? How Big Should We Build Them ? You Tell Us!

We have the land and the airport just minutes from downtown Tulsa. We need your help in determining our building needs for the immediate future. Drop us a note or call and tell us your needs. What size plane? What size hangar? What are your service requirements from your chosen airport?

Name \_\_\_\_\_ Company or personal \_\_\_\_\_  
Type of Aircraft \_\_\_\_\_ Want to build to own \_\_\_\_\_  
Want someone else to build for you to lease \_\_\_\_\_  
Address \_\_\_\_\_ Phone \_\_\_\_\_

ALL INFORMATION TOTALLY CONFIDENTIAL  
MAIL TO POGUE AIRPORT, PO BOX 338, SAND SPRINGS, OK. 74063  
OR CALL KEN AT (918)246-2504. DO IT TODAY-- WE'RE READY TO BUILD!

LAND LEASE PRICES LOWERED TO 10 CENTS PER SQ. FOOT THIS YEAR  
STRICT BUILDING REQUIREMENTS\*  
CALL (918) 246-2605 OR 246-2504  
\*WE ARE DEDICATED TO STAYING A BEAUTIFUL AIRPORT



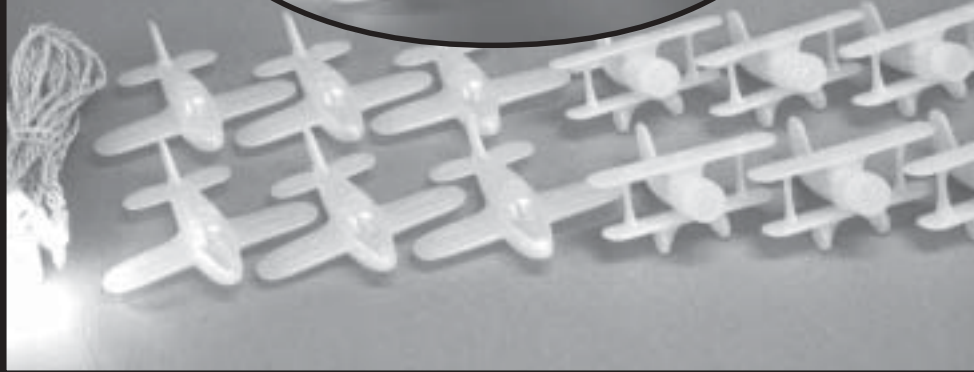
5,800 foot runway  
NEW Courtesy Car  
DUAT DTN Weather  
Jet A. - 100 LL  
Volume Discounts  
Full Length Dual Taxiways

*"The Airport with a City Behind It"*

## THE SQUADRON

An Atlanta-area EAA member designed this set of decorative airplane lights. We liked them so much we are making them available for sale. The set includes six low wing airplanes, six biplanes, and a string of bulbs. The airplanes are pearl white and lights are white (with four colored bulbs). The price is \$19 a set plus \$4 S&H. Allow 3-week delivery. Use them in place of Christmas lights, for hangar dances, for fly-ins-- any aviation celebration!

Send checks to:  
The Oklahoma Aviator, PO Box 100, Cookson, OK 74427



## Airshow Oklahoma a Success Despite Fire and Rain

MUSKOGEE- Despite a triple-whammy from fire and rain, AirShow Oklahoma! 2000 in Muskogee played to what may have been a record first-day crowd. The weekend air show, on September 22nd and 23rd, was held at Muskogee's Davis Field.

Devastating grass and timber fires that led to a statewide ban on all outside fires caused the first major headache for air show officials. "We were told at the last minute that we could not have any pyrotechnics to accompany the acts and that food vendors could not have cooking fires in their tents out on the ramp, even though the vendors were well away from any grass", said air show director Don Van Alstine. "We were able to get approval for the cooking fires by working closely with government officials and meeting all their requirements, so we were able to feed the crowds. However, we were unable to get approval for the pyrotechnics", Van Alstine stated.

Wildfires that led to the burning ban caused another major hitch for the air show. Major Joe B. Hicks, who was to have coordinated the huge Guardians of Freedom military finale at the show, called to say that he and most of the planned acts could not be there. Hicks explained that the military, including most available helicopters, were still out helping battle fires across the state". Nevertheless, the military finale proceeded with what craft and equipment were available. "I think the crowd understood that it was beyond our control", Van Alstine remarked.

Fire in a vendor tent at the show caused a minor inconvenience, but had air show officials reaching for the aspirin as they explained to numerous news reporters that air show vendor fires were in compliance with burn ban rules. The air show was halted for about 15 minutes while on-site fire units extinguished the fire and refilled water tanks in the fire trucks. No injuries were reported to the show's Incident Command Post.

"Although the propane fire in the vendor tent was kind of spectacular, it was really no big deal because we were prepared for it", said Incident Command spokesman Don Foster. He explained that Muskogee's emergency responders and air show representatives had met beforehand and agreed on procedures to follow in just such an incident. A command post, under the command of Muskogee Fire Marshal Bruce

Moore, was established at Davis Field to coordinate emergency communications and response. "All responders were reading from the same sheet of music on this one, just as planned", Foster quipped.

Moore, acting subsequently in his role as fire marshal, investigated the cause of the tent fire. He reported that the blaze was an accident caused by a spare propane tank that vented during cooking. Moore said the wind blew the vented gas into a cooker, and it exploded, setting fire to the venting tank. The burning tank set fire to the tent, which in turn burned through a hose on the tank in use, causing that tank to ignite, too. Police quickly moved the crowd to a safe distance and the fire was extinguished, but the tent was destroyed.

Rain that had been absent for nearly two months brought the last of the headaches for air show personnel. Drizzling rain and a low ceiling forced cancellation of most of the air show acts on Sunday.

"We assembled as many air show trustees as we could early Sunday morning and decided to open the field to free admission all day. Those who held unused advance tickets were urged to hold onto the tickets and they would be honored at next year's show", said Dr. Marlene Smith. Smith chairs the trustees of the AirShow Oklahoma! Foundation, Inc., a non-profit group that stages the benefit air show and oversees distribution of proceeds. The student scholarship fund at Muskogee's Bacone College was again the major beneficiary of this year's air show.

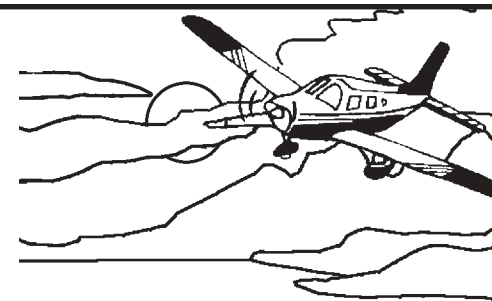
While it is still too early to tell whether income from this year's show will be adequate to meet expenses, show officials expressed optimism that the air show wouldn't end up in the red.

Meantime, air show trustees are continuing to look ahead to next year's show. They are seeking a new major backer and additional volunteers. It appears as if Bacone College, the show's primary backer the last two years, is moving in a different direction and will not be interested in participating in next year's 12th annual show, according to Van Alstine.

Dr. Smith noted that the air show has a major financial impact on the city of Muskogee. She said that trustees are exploring several possibilities to assure continuance of a major air show there.

## GRASSROOTS AVIATION MAINTENANCE

Fred Barrs A&P/IA Pilot  
Terkiller Airpark 918-457-3539





# Technical Innovation Is the Key at Gen

by Mike Huffman

ADA- Once in awhile, an aviation organization appears which performs truly innovative, ground-breaking development work. One such company is General Aviation Modifications, Inc (GAMI), which we recently visited at the Ada Municipal Airport. We were met by Tim Roehl, GAMI's president, who treated us to lunch at Bob's Barbecue (a favorite \$100 hamburger

destination) and then gave us the GAMI grand tour.

GAMI was started about six years ago by Roehl and George Braly, a prominent Ada attorney, long-time pilot, flight instructor, and aerospace engineer. In that short time, the company has developed an impressive array of products and technologies for aircraft engines-- mostly big-bore Continentals used in Bonanzas and other similar high-end singles. The first such product was GAMIjector® fuel injectors. The success of that product is allowing the company to develop other STC'd engine products, including:

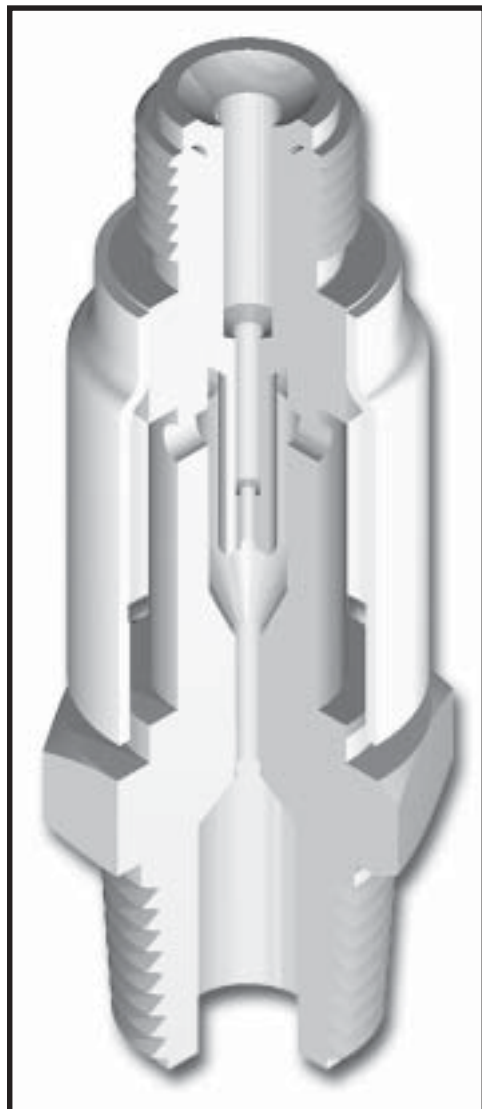
\*The LIQUIDAIR™ improved aerodynamic engine cooling baffles for S-model and later Bonanzas.

\*The SUPPLENATOR™, a self-exciting, supplementary alternator currently in development. The unit is driven from an accessory case pad. It includes an electronic load management unit which automatically detects the condition of the various electrical system loads and apportions its output to the most critical loads for maintaining IFR flight.

\*The innovative PRISM™ electronic ignition system currently in development.

GAMI recently spawned another subsidiary company, Tornado Alley Turbo, Inc., which manufactures turbocharging systems, installs them in customer airplanes, and performs other engine- and airframe-related work. The two companies support one another in their various activities.

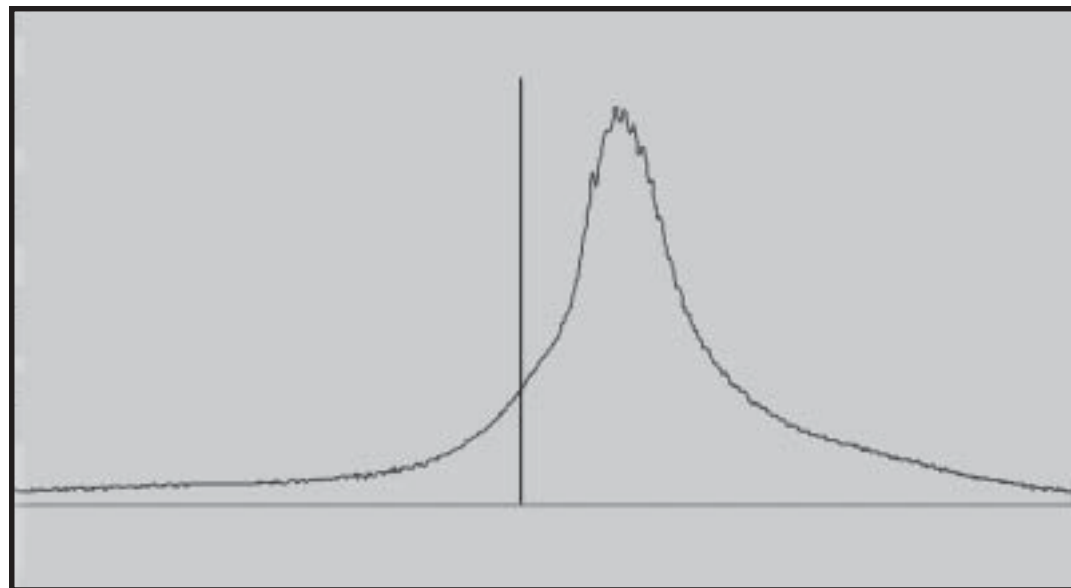
A centerpiece of GAMI's technological repertoire is their newly-commissioned high-tech engine test cell, dedicated to the memory of Carl Goulet, former vice-president of engineering at Continental Mo-



GAMIjector® cutaway. The secret is in the small metering orifice near the top.



GAMI's super-precision flowbench, where GAMIjectors® are calibrated to one one-hundredth of a gallon per hour!



Two cylinder pressure curves, each showing a single power stroke, as obtained using GAMIjectors®, while the curve to the right shows the effects of detonation. Note that cylinder stress on the cylinders, hold down studs, etc. The vertical line represents the approx

tors, who worked closely with GAMI in the development of GAMIjectors® and other products.

## GAMIjectors®

GAMIjectors® allow engines to be run significantly leaner with significantly lower cylinder head temperatures (CHTs) than standard factory-supplied injectors. To understand how they work, consider the old standard leaning procedure most of us learned: slowly and progressively lean the mixture until the exhaust gas temperature (EGT) reaches a peak, then richen the mixture 25-75 degrees lower than the peak. This is called "operating on the rich side of the peak.."

In the conventional wisdom, there is a commandment seemingly handed down from the Almighty: "Thou shalt not operate on the lean side of the peak, lest thy engine run rough, thy valves heads be rent from their stems, and thy cylinders be subjected to the fires of Hell!"

Actually, for carbureted engines, the conventional procedure reflects about the best possible compromise in achieving relatively good fuel economy and simultaneously avoiding engine damage. Carburetors and induction systems introduce unpredictable variations in fuel/air ratio from cylinder-to-cylinder. Thus, as the mixture is leaned, each cylinder reaches its optimum fuel/air ratio at a different mixture control position. At some point, the leanest cylinder will begin to misfire and the engine will run rough, even though other cylinders may still be on the rich side of the EGT peak.

However, fuel metering in injected engines is more precise, which should provide the opportunity for improved leaning procedures. By consulting with various experts, doing their own research, and collecting two years

worth of inflight engine data, GAMI found that one of the characteristics of fuel-injected big-bore six-cylinder Continentals is that the two aft cylinders run consistently lean, the two forward cylinders run consistently rich, and the middle cylinders are somewhere in between. These characteristics were found to be inherent in the design of the induction manifold and the fuel injection system and are predictable from engine to engine.

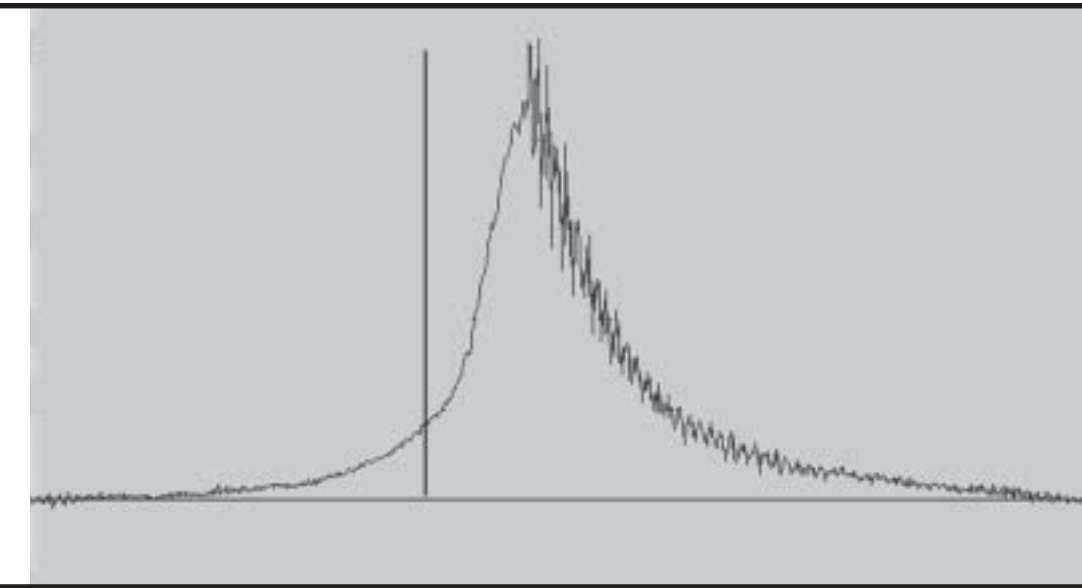
Thus, the idea for GAMIjectors® was born. In short, each GAMIjector® is very carefully calibrated and adjusted to allow a precisely-calculated flowrate. GAMIjectors® are sold in sets, with a pair of matched injectors for the aft, middle, and forward cylinders. The calibrated flowrate for each pair compensates for the engine's inherent mixture imbalance-- aft cylinders receive the most fuel and forward cylinders the least.



GAMI technicians man the sophisticated Na



# General Aviation Modifications, Inc (GAMI)



ing the GAMI cylinder pressure sensor.. The curve to the left shows normal commander pressures with detonation are significantly higher, with attendant increased approximate position of top dead center (TDC).

And, as part of the purchase price, GAMI will further fine-tune the injectors to match the characteristics of the particular engine on which they are installed. To accomplish the tweaking, the aircraft owner performs a set of flight tests to gather EGT data for a GAMI-designed data form and sends the completed form and the injectors back to GAMI. Using the data, GAMI personnel perform minor adjustments to the injector flowrates.

In an engine equipped with *GAMIjectors®*, as the mixture is leaned, all six cylinders reach EGT peak much closer to the same fuel flow. (Note that the actual peak temperatures may still be different cylinder-to-cylinder, but the peaks occur closer together as the mixture is leaned.)

With *GAMIjectors®*, an engine can be routinely run on the lean side of the EGT peak without roughness and, surprisingly, cylinder head

temperatures for a given power output are as much as 45 degrees cooler (not hotter as the conventional wisdom would suggest)!

## Engine Test Facility and PRISM™ Ignition

We saw the effect of running on the lean side of the peak demonstrated during an actual engine run in GAMI's remarkable high-tech engine test facility, which consists of two engine test cells and a NASA-style control room containing instrumentation consoles, data gathering equipment, and operator controls. A *GAMIjector®*-equipped Continental IO-470N occupies one of the test cells and is fitted with an impressive array of test equipment and instrumentation, including:

- \*Real-time torque and top dead center (TDC) sensors which allow instantaneous rpm and power calculations to be made.

- \*Combustion pressure sensors in each cylinder which allow plotting of cylinder pressures during each power stroke.

- \*A prototype version of GAMI's PRISM™ electronic ignition, which allows real-time control, analysis, and adjustment of ignition timing to compensate for changes in fuel burning characteristics, detonation, etc.

- \*The ability to switch from a normally-aspirated configuration to a supercharged configuration from inside the control room.

- \*The ability to switch between any one of three alternative fuels from inside the control room.

- \*Independent, operator-adjustable cooling for each of the six cylinders, which allow individual CHTs to be controlled within 4-6C.

- \*Fiber optic data communications to the control room, at data rates of 40,000 readings per second.

- \*Sophisticated software written by GAMI personnel which ana-

lyzes the data streams, summarizes it in a wide variety of user-friendly operator displays, and provides automatic control of some test cell functions.

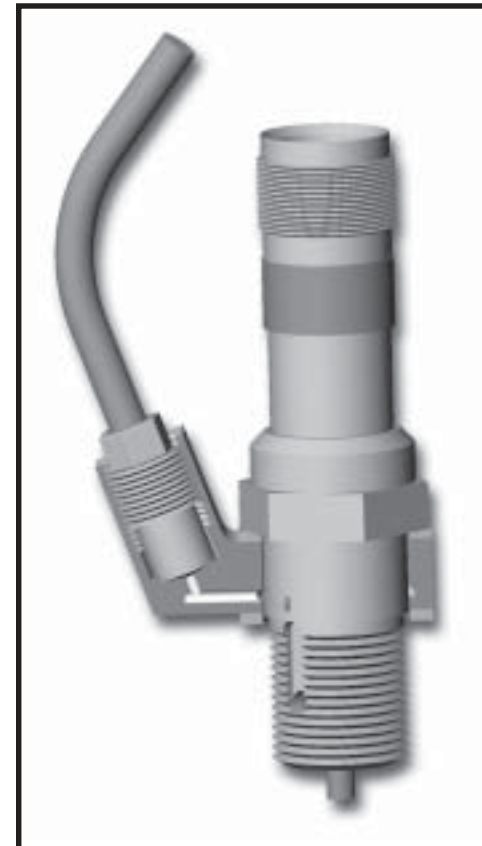
During a test run, engine parameters such as horsepower, torque, fuel consumption, and brake mean effective pressure are calculated using two different methods and displayed to the operator. Real-time graphs show the build up and decay of cylinder pressure during each power stroke. The optimum pressure curve should be smooth, with peak cylinder pressure of approximately 1000 psi at about 18-22 degrees after top dead center (ATDC). For normal operating circumstances, a spark timing of about 20 degrees before top dead center (BTDC) is required to achieve the optimum pressure curve.

At the flick of a switch, the GAMI operator switched the IO-470 from 100LL fuel to 87-octane autogas. Immediately, pressure spikes and ringing appeared on the cylinder pressure graph, indicating that severe detonation was taking place (although we could hear no change in the engine sound). However, within a second or two, software in the electronic ignition system had detected the detonation and had further retarded the spark to compensate, at which point the pressure curve smoothed again.

GAMI believes the key to their electronic ignition system lies in its simplicity. Unlike Continental's FADEC system, which is designed using multiple redundant automotive-type sensors, the GAMI PRISM™ system requires only a top dead center (TDC) transducer and two special spark plugs equipped with cylinder pressure transducers. Also, since all communications are via fiber optics, the system should be highly immune to electronic interference, a major certification requirement.

Regarding fuel types, GAMI is experimenting with a fuel which is identical to 100LL, but with the lead removed. They feel this is a more reasonable across-the-board replacement for 100LL than, say, auto fuel or the much-discussed 82UL, simply because production facilities already exist and compatibility problems with fuel system components and rubber parts will not be an issue. Their PRISM™ electronic ignition system would automatically compensate for such a change.

If all this were not cool enough, GAMI's test cell can be fully operated from their website (with the proper access privileges, of course). During Sun-n-Fun 2000, GAMI was able to demonstrate the benefits of their technology to

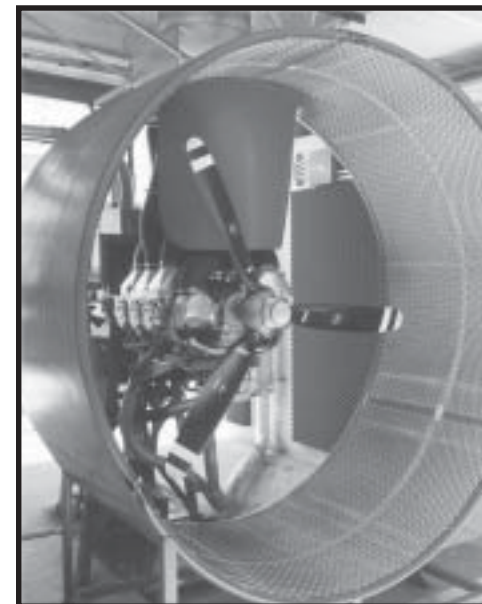


The heart of GAMI's electronic ignition: a fiber-optic cylinder pressure sensor incorporated into a special spark plug. Two such plugs will be used with the delivered system.

booth visitors by performing actual engine test runs remotely.

The GAMI organization takes a scientific, data-oriented approach to all their activities, even those which do not directly relate to product development. Example: as an owner of a pristine Beech T-34, GAMI is taking a leading role in the T-34 wing spar AD controversy. In typical GAMI fashion, they installed strain gauges on the wing of their airplane and set about getting hard data to characterize inflight wing stresses.

For more information, go to the GAMI website at [www.gami.com](http://www.gami.com)



GAMI's IO-470N mounted in the test cell. Note the individual computer-controlled cooling shroud for each cylinder.



NASA-style engine facility control consoles.





# ASK THE DOCTOR

BY DR. GUY BALDWIN

Senior Aviation Medical Examiner  
ATP, CFII-MEI



Two subjects come to mind in writing for the Oklahoma Aviator this month. The first is the good news for airmen with Type II diabetes mellitus. Type II diabetes is the form of the disease where patients can maintain their blood sugar control with diet or oral medications, whereas Type I diabetes requires injections of insulin.

Up until recently, Type II diabetics who applied for an FAA medical certificate were required to show three months of good blood sugar control according to hemoglobin A1C test results and to take a treadmill EKG stress test. The treadmill EKG test is somewhat exhausting and costs about \$400 to perform. The good news is that the FAA no longer requires the stress test.

Another change is in the limit applied for the hemoglobin A1C test,

which was previously set at a value of 6.5. The FAA now allows you to approach 8.0 on the A1C, indicating more allowable sugar in the blood. I believe their idea is that it is much safer for you to be on the "sweet side" than for your blood sugar to be too low, which may result in hypoglycemia or low sugar reaction.

My second subject concerns eye exams. Prior to September, 1996, if your uncorrected distance vision was worse than 20/200 for either or both eyes, you had to have a vision waiver to get a medical. After September of 1996, as long as your eye sight is corrected to the FAA minimums, a waiver is not necessary. I still find people coming into the office with the waiver in force and, of course, it is no longer needed. If you have such a vision waiver, you may notify the FAA that you would like to have it removed. Be sure to give them your name, address and social security number. In some period of time, they will respond and remove the waiver.

If you have any questions regarding these two subjects or any others, feel free to contact us at the office.

Respectfully,  
Guy D. Baldwin, D.O.

## A First Thought

by Dave Wilkerson

*Editor's Note: Last month we printed Nan Gaylord's final Designated Pilot Examiner (DPE) column. We were happy to wish her well in her new endeavors, but sad that her charm, wit, and good humor will no longer be reflected here.*

*However, good luck smiled on us while at the Tulsa Regional Fly-In in Bartlesville last weekend. There Nan introduced us to Dave Wilkerson, a DPE who has written extensively for Flight Training magazine. One thing led to another and soon Dave had agreed to write a column for us.*

*We received this first one at the last minute, before we had a chance to get a photo. We thought you'd like to read it anyway.*

*Dave Wilkerson, welcome to the Oklahoma Aviator!*

Flying, I think, is like few endeavors. It takes toil and travail, tears and time, and its truths sometimes defy logic as we absorb what others have learned at so high a cost. Our knowledge seems complete only up to today, for tomorrow brings new goals, and we must learn and train for them. Only at another's word does each goal become reality, and to hear that word we must pass a checkride.

Checkride. The word alone is an exquisite stressor, and we wonder what it will be. The official term, "Practical Test" seems as antiseptic as a morgue, so we continue to use

"checkride," but find scant comfort in the difference. We must walk that valley, but not alone. Our flight instructor has gone before, and even when a different examiner officiates, a little booklet guides us. The Practical Test Standards set our tasks. To our instructor the PTS makes clear that we receive training in all knowledge areas, in the procedures, and in the maneuvers that the little book holds. The years have changed them. Them who? Instructors, or the PTS? The years have changed both.

Most maneuvers remain, with few changes from how we did them in the 1960s, the 1950s, the 1940s or even the 1930s. But our thinking has changed. An evolving aerial environment has added to the instructor's burden an unseen cockpit artistry that includes visual scanning, inflight collision avoidance, and runway incursion concerns. The little book has changed how we pilots transform from mundane groundlings after runup to aviators extraordinaire at takeoff by inserting reviews of airplane performance and emergency actions in between them. Time and experience has touched even how we talk when we exchange flight controls.

Is nothing sacred? Yes, oh, yes: human lives.

How can I say that at the close of a century whose technological advances make so clear life's uncertainty, and in a world the leaders of which clash with untold violence over power and meanings? In a century that has embraced our collective flying art as its own carrier of both dread and of hope, how can I say that? Because the lives involved are yours and mine. And our families. And our friends, and their friends, and on it goes. Those who never fly, over whose trusting heads we ply the skies with boundless joy and a freedom unseen throughout history, to those souls we bear responsibility. Thus, we have checkrides.

My name is Dave Wilkerson, and with your kind permission the Oklahoma Aviator will use my words, my ten years of pilot examining, my 30-plus years of cockpit involvement, and my lifelong study of aviation and aviators to be a catalyst for your mind. Hopefully, I will not preach - I have no authority to do so. Your questions might find answer here, or even better, you might find in these words your questions yet unformed. The publisher does not pay me to do this. My pay is each day that Oklahoma journalists must report on Oklahoma fire ants because we give them no airplane accidents. And your smile at bedtime, as you recall the matchless joy of your day's flight.

## Robert Ragozzino Stuck in Russia

*Editor's Note: we would like to share the following letter from Robert Ragozzino, who is attempting his open-cockpit biplane circumnavigation of the globe. At this writing, we have just learned that Robert left Japan several nights ago, headed for Shemya, but, because of adverse winds, had to divert to Petropovlask, Russia, landing without permission. We do not know how long he will be detained prior to being allowed to continue on. We will continue reporting on Robert and his amazing feat. This is not only American history-in-the-making, but Robert is one of our own - an Oklahoman. Please heed his request for additional funding, as the three-week delay in Japan, due to the Russian's disallowing his repeated requests to land in their country, has put a financial hardship on Stearman World Flight. Let's support this new world record for Robert - and for Oklahoma!*

"Sept. 21, 2000 7:19 GMT. The Stearman is currently standing by at the airport topped off with 350 gallons of avgas. All flight planning is complete. I am awaiting a

weather window with special requirements. This leg is particularly challenging for many reasons. It is 1350 nautical miles or 1500 statute miles. This is at the absolute maximum range of the aircraft leaving minimal reserve. In order to safely launch, there must be adequate tailwinds to reach Shemya with reserve fuel. At Shemya there are no reachable alternate airports except Attu. Attu is only 30 miles away in rugged terrain with hills and towers surrounding the airport. The airfield at Attu will likely have the same or possibly even worse weather on arrival.

Enroute, there are no landing options except the highly sensitive Russian Kuril Island chain and Petropovlask. The Kuril chain is not an option. We have repeatedly been denied permission into Petro. Using this as an emergency alternate could result in serious consequences. Once enroute and past Petro, there are no options but to proceed to Shemya/Attu.

If the winds are not as predicted it can mean ditching or arriving with no fuel reserve for an expected instrument approach.

For these reasons I am taking great care to select not just tailwinds but a weather pattern in general that will generate conditions that are exceedingly favorable and unlikely to vary.

The "go" decision will be made the previous night, but the decision to actually depart will be based on the most recent forecasts on the morning of departure. This is what has lead to what may seem to be false starts.

Currently, the wind forecast for tomorrow does not look favorable. I will continue to monitor weather updates from two different sources, Japan and Alaska. When the required conditions are favorable, the flight will be launched. Thank you for your email and continued interest and support. As of today, I have been traveling for 121 days. I am ready to get back in the saddle as soon as weather permits. As always, contributions are greatly appreciated as the extended stay in Japan is taking a financial toll. Mail to: Stearman World Flight, 1025 Parsons St., Norman, OK 73069. Sincerely, Robert Ragozzino





**Oklahoma  
Airport  
Operators  
Association**

**FLY  
OKLAHOMA**

*Serving the interests of the owners and operators  
of all airports in Oklahoma*

For information or application contact Debra Coughlan, Executive  
Director OAOA, P. O. Box 581838, Tulsa, OK 74158

Telephone 918.838.5018 Fax 918.838.5405

**EXPERIENCE TRUE TEXAS HOSPITALITY!**



**Gainesville, Texas**

Unicom 123.0 AWOS 118.375

100LL-	\$1.69 Weekdays		(Self-Service)
	\$1.64 Weekends		
Jet A-	\$1.50		

- Open 24 Hours- 7 Days/Week
- ATTendant on call after 5:00 PM
- Major Credit Cards Accepted
- Including Multi-Service & Award, CFA, Phillips Into-Plane & UAir Discounts
- DIN WX SatelliTe System
- 5 Mins to Outlet Mall
- 18 Hole Golf Course
- Conference Room
- Courtesy Cars (3)
- Pilot Lounge

940-668-4565 940-665-6884 Fax  
www.gainesville.tx.us/GVAirIndex.shtml  
email: airport@coke.net

**SPARKS AVIATION CENTER**

**TULSA INTERNATIONAL AIRPORT**

**HANGAR 23**

918-835-2048

Unicom 122.95  
24-Hour Service



Jet A

Courtesy Van  
Rental Cars  
Catering  
Restaurant  
Hangaring

New Home of



100LL

Autopilots  
Avionics  
Instruments  
Maintenance  
Interiors

Phone: 918-836-6418

FAX: 918-832-0136

Fly In and Enjoy....

**Beautiful Lake Texoma**

**Pelican's  
Landing**

Waterfront Restaurant

Casual dining and great food in a warm, nautical atmosphere with reasonable prices. Enjoy our deck overlooking the harbor or sit inside by the fire.

Serving Lunch and Dinner Tuesday through Friday and Breakfast, Lunch and Dinner Saturday and Sunday



Cedar Mills Marina  
Airport Identifier 3T8  
Gordonville, TX  
(903) 523-4222  
www.cedarmills.com

**Cedar Mills  
Marina & Resort**

A great get-away!

- Deluxe Cottages overlooking our well-groomed 3000-foot turf airstrip with tie downs
- Gift Shop & Boutique
- Nature Trail and Wild-flower Garden
- Award-winning Sailing School
- Striper Fishing Guides

**B-25 Carrier Takeoffs**

by Rev. Dr. Richard D. Prigmore

On April 18, 1942, sixteen twin-engine B-25 Mitchell bombers lumbered into the 25-knot wind from the deck of the U.S. aircraft carrier Hornet, moving at flank speed. Each of them reached the end of the deck, only 400 feet away, and leaped into space. Every one carried four 500 pound bombs and nearly 1200 gallons of fuel. The pilots yanked the gear, hovered precariously a hair's breadth above stall speed until the laboring Wright Cyclone engines pulled a few more knots airspeed. The rest of the story is a legend of heroes. General Jimmy Doolittle led his flight on the first retaliatory mission over the sacred land of Nippon. America was reenergized in a cohesive effort to win this unasked-for conflict.

How was it that the underpowered, land-based B-25 twin-engine bomber was chosen for this pivotal event in history? Well, the Joint Chiefs of Staff needed a rallying point for a startled America, who had been raped in their own backyard at Pearl Harbor. The Navy could put retaliatory aircraft near Japan, and the Army Air Corps had the airplane. Although inter-service rivalry was high, it was time for a family marriage.

Highly select B-25 volunteer crews were assembled at Elgin Field in the Florida panhandle to train for this unprecedented event. We're gonna WHAT?" was the unanimous response from the airmen at the first briefing. "You gotta be kidding."

They weren't. The Hornet "carrier deck" was marked off on the runway. Day after day the crews worked at developing the precise power adjustment, weight/balance ratio, armament load capability and mental attitudes, until, with one voice they affirmed. "We can do this."

I heard all of this from the man who trained the pilots at Elgin, Captain Henry L. Miller. The time was late 1945, three and-a-half years after the epic flight. The war was over, troops were being rotated home, and some of us remained as the occupation force. I was stationed at Iramagawa air base northwest of Tokyo. We had flown our B-25 into Japan a few days after the signing of the peace treaty aboard the battleship Missouri in Tokyo Bay. Before leaving our Kadena air base on Okinawa a few days earlier, we had stripped the guns and armament in preparation for the flight. It was a hectic time of transition and our regular pilot was rotated to the States for discharge. We "inherited" an unknown pilot who seemed to know the airplane well.

"I ought to," responded Captain Miller, when questioned about it. "I trained Doolittle's crews in 1942 to make carrier takeoffs, getting ready for the Tokyo raid."

"No kidding," "Feet" Schultz, our crew chief, responded with a tone of awe

and respect. "Will you show us how you did it?"

"We'll see," he hedged. "It's been a long time and we would have to have the right conditions."

A couple of months later the time was right. We had spent several weeks at Iramagawa "holding the peace," they told us. But mostly we took sightseeing flights in the B-25. Each time we took off we would climb to 13,000 feet and circle Fujiyama. It is, perhaps, the most beautiful mountain in the world. It rises from Suruga Bay in a smooth curve to the yawning crater at 12,388 feet. After circling the crater, we would go south to Osaka and Nagoya or north to Hokkaido. Once we flew over the atomic bomb site at Nagasaki. We were appalled at the devastation. Bare concrete roads radiated like a giant spider web from the former city center. Only an occasional concrete wall or pipe stuck up above the ground. It was so depressing that we didn't stay around long. I took a couple of pictures even though there was nothing much to shoot.

So, one November morning the wind was flowing out of the northwest a steady 35 knots. It was wet and cold, the temperature about 35 degrees. I don't remember where we were headed, but as we lined up on runway 32, the wind was almost on our nose. We stopped on the centerline and ran up the engines to check the mags. Everything was in the green.

"OK guys," came the captain's voice over the intercom, "buckle up. We are going to make a carrier takeoff. I'll show you what this 25 can do."

Of course, we didn't have the carrier's launch speed to assist us, but neither did we have bombs aboard nor extra fuel to weigh us down. We settled in, braced ourselves, and the pilot locked the brakes. He lowered the flaps 30 degrees and slowly moved the throttles to the stops. The huge beast shook and strained as the manifold pressure built. At 45 inches of mercury, he kicked the brakes loose. As she leaped forward, the captain hauled the wheel full back to lift the hose wheel off. A few seconds after it cleared, he dropped full flaps. Then he slammed the wheel full forward, slapping the nose wheel back onto the runway. A few seconds later, he hauled the wheel into his lap and, as the big bird leaped into the air, he jerked the gear. The cushioned air against the flaps, combined with the maximum power thrust carried us up about a 100 feet before we began to settle back to the runway. We were well below flying speed!

A million years and five seconds later the screaming engines hauled us past stall speed and we munched slowly over the end of the runway. I don't remember just when we thought to breathe again, but it was sometime before my heart settled down.

I don't think we got off in 300 feet - but it was close. I'll settle for longer runways and less adventure from here on. No more "carrier takeoffs" for me!

[Editor's note: For more from Dr. Prigmore, look for his book Joy of Living: Better and Better.]



# Calendar of Events

For a free listing of your event, email us at [ok\\_aviator.com](mailto:ok_aviator.com) or call 918-527-0430

## REGULAR MONTHLY EVENTS

**1st Thursday-** Oklahoma Pilots Association meeting and dinner, Wiley Post Airport, Oklahoma City, OK. Contact Helen Holbird- 405-942-6308

**1st Saturday-** Ponca City Aviation Boosters Club fly-in breakfast, rain or shine, 7:30-10:00AM, Ponca City Regional Airport, Ponca City, OK. Contact Don Nuzum- [nuzum@poncacity.net](mailto:nuzum@poncacity.net) or Bruce Eberle- 580-762-5735

**2nd Thursday-** Oklahoma Windriders meeting. For all balloon enthusiasts. 7:00 p.m. Metro Tech Aviation Career Center. Ron McKinney, President 405-685-8180

**2nd Saturday-** Debbie's Diner fly-in breakfast, R.L. Jones Airport, Jenks, OK

**3rd Saturday-** Green Country Ultralight Flyers Organization meeting. Call 918-632-6UFO for location and details, or call Bill Chilcoat at 918-827-6566 for additional information

**4th Saturday-** Keystone Aviators meeting and fly-out, 8:30AM, Pogue Airport, Sand Springs, OK, contact

Carl Cartwright at 918-865-7213

**4th Thursday-** Vintage Aircraft Association Chapter 10, 7:30PM, South Regional Library, 71st & Memorial, Tulsa, OK

## OCTOBER 2000

**5th-8th-** Powrachine Corporation Annual Fly-In, 800 Powrachine Way, Columbus, KS. Over 100 powered parachutes are expected to attend. 316-429-1397

**6th-8th-** Planes on the Prairie National Fly-In, Cessna 172-182 Club, Wiley Post Airport, Bethany, OK. Contact Debbie Jones, 405-495-8664 or 800-535-7533

**5th-8th-** 25th Annual International Cessna 120/140 Fly-In, Gainesville Municipal Airport (FLE), Gainesville, TX. Contact L. or M. Richey at 940-627-1883 or [mrichey@ntws.net](mailto:mrichey@ntws.net)

**7th-** Vance AFB Airshow, Enid OK, 9:00AM-5:00PM. Thunderbirds, Air Force parachuting team "Wings of Blue", other military air demonstrations including F-15 and airlift aircraft, static displays of modern and historic fighters, bombers, and airlift aircraft, Call 580-213-7476 for information

**7th-** Seventh Annual Fly-in Fish Fry, Tenkiller Airport, Cookson, OK. Grandpa Frank's Fabulous Fish & Hushpuppies. 11:00 AM until food is gone. Donations accepted. Sponsored by EAA Chapter #1040. 918-457-5122, 918-457-3100

**7th-** "Beyond 2000" Air Show, Texarkana Regional Airport, Texarkana TX/AR, 870-774-2171 or visit web site at [www.txkairport.com](http://www.txkairport.com)

**7th-** EXPO 2000 Private Plane Fly-In, MidAmerica Industrial Park Airport, Pryor, OK, 9:00AM-4:00PM, 918-476-6090 or 918-825-3500

**8th-** EAA Chapter 10 Annual Wingding, 1:00PM, Gundy's Airport, Owasso, OK

**12th-15th-** EAA Copperstate Flyin, Mesa, AZ 602-770-6420

**13th-** Tulsa Air & Space Center Annual Membership Meeting, 6:30PM, TASC Center, Tulsa International Airport. General Ed McFarland will be honored. Call 918-834-9900 for ticket information.

**14th-** Fourth Annual Fun Fly-In and Youth Air Expo, Ada Municipal Airport, sponsored by EAA Chapter 1005. Free food for fly-ins, free T-shirt for first 50 fly-ins. Contact Terry Hall at 580-436-8190

**14th-** Skiatook Pioneer Days Fly-In, 9:00AM-3:00PM, Skiatook Municipal Airport. Free food for fly-ins, arts and crafts show. Contact Larry White at 918-396-1274

**16th-** EAA Chapter 10 meeting, 7:30PM, Gundy's Airport, Owasso, OK

**20th-** "An Evening with Bob Hoover," IAC Chapter 10, 6:00PM, contact Guy Baldwin at 918-299-8485

**21st-** First Annual Airshow, Claremore Regional Airport, Claremore, OK. 10:00AM-4:00PM. Aerobatics, WWII static displays, visit by Bob Hoover, 918-343-0931

**20th-21st-** EAA Southwest Regional Fly In, Gainesville, TX, 915-676-8294

**28th-** 2nd Annual Stew Brew, Claremore Regional Airport, beginning at noon. Homemade stew, refreshments, and desserts. Come in costume, if you dare! Drive or flyin. Tom and Elaine Egbert, 198-341-6377 evenings

## NOVEMBER 2000


**11th-** 49th Annual World's Oldest Free Fly-In & Airshow, Fairview, OK, free breakfast to fly-ins 6-10AM, airshow 1:30PM, 580-227-3788

**20th-** EAA Chapter 10 meeting and Pie Auction, 7:30PM, Gundy's Airport, Owasso, OK

**25th-** EAA Chapter 10 Fly-In Breakfast, Gundy's Airport, Owasso, OK

## DECEMBER 2000

**2nd-** Propblast Chili Feed, Vinita Municipal Airport, Vinita, OK 918-256-5170

<p>FBO Hours: M-F 8:00-6:00 Sat 8:00-8:00 Tel: 918-343-0931 Fax: 918-343-1619</p> <p>Pilots Lounge, Conference Room, Rentals, Courtesy Car, DTN Weather</p>	<p>107</p>  <p>Rated #1 in Oklahoma by the FAA for 1999</p>	<p>100LL: \$2.20 Weekdays \$2.00 Weekends Jet A: \$2.05 Cash or Air BP Card</p> <p>Come Fly In for Hamburgers on the Weekends</p>
<p><b>ATTENTION: Unicom/CTAF has changed to: 122.70</b></p>		


For Lease, attractive flight school and air charter facility, Stillwater Regional Airport, located south of terminal, restrooms. Some furniture provided, up to 2,384 square feet available. No other non-university flight school presently operating on field. Many flight training advantages. 405-377-0823, Fax 405-372-2529.

## AVIATION MAINTENANCE

### A&P Training

**18 Month Program  
Begins Feb 1st!**

**Tuition only \$2004**  
(in-district)

 Autry Technology Center  
1201 W. Willow  
Enid, OK 73703

580-242-2750 • [www.autrytech.com](http://www.autrytech.com)

Garmin GPS, Pilot III, hand-held. One year-old, used only once. \$600.00. Owner manual included. Alan Jones (405)379-6839.



### OPEN T-HANGARS NOW AVAILABLE FOR RENT

Gundy's Airport  
3-1/2 mi E. of Hwy 169 on 76th St. N  
Owasso, OK 74055  
918-272-1523  
[www.randywieden.com/gundy](http://www.randywieden.com/gundy)

## HEM SAW

The saw that cuts straight.

Manufacturers of Industrial Bandsaws



Our 80"x80" Saw Cutting a Datsun Pickup in Half

HE&M Saw manufactures over 40 different models of metal cutting bandsaws: vertical, horizontal, plate, and double-column saws with capacities ranging from 12"x12" to 80"x80".

### HE&M, Inc is proud to support The Oklahoma Aviator

HE&M, Inc, PO Box 1148, Pryor, OK 74362  
Located in the Mid-America Industrial Park  
adjacent to the Pryor Airport  
[www.hemsaw.com](http://www.hemsaw.com) 888-729-7787

## Angel Flight, Inc.



*Volunteers flying people in  
need.*

To learn more about how you can  
help someone in need, contact  
Angel Flight.

[www.angelflight.com](http://www.angelflight.com)  
918-749-8992

## FOR SALE

Choice residential lots on the  
Tenkiller Airport.

Call 918-527-0429 for details.



# Classified Advertisements

To place a plain-text classified ad, mail us the text along with a check. Plain text ads with first line bold- \$0.35/word/month- \$15.00 min/month. For ads containing graphics, photos, or custom text formatting, email [ok\\_aviator@mindspring.com](mailto:ok_aviator@mindspring.com) or call 918-527-0429 for rates.

## FOR SALE:

### AA5B 1979 Grumman Tiger N4525Z

2094 TT, 50 SMOH, Century I & IIB autopilots with altitude hold, WX10 Stormscope, Electronics International OAT, CHT, & EMT, KMA24 Audio Panel, KNS 80 RNAV, K197 COM, Collins 251/350 NAV-COM, Collins transponder with Mode C, Sigtronics intercom, alternate vacuum, new upholstery, annual in May 2000, new tires, new brakes, new ELT battery, rebuilt starter, split cowl, new engine seals, AD of aft spinner and new canopy seals. Hangered. \$65,000. (918) 622-7073, 523-6914, or 496-2857.

## BARRETT AIRCRAFT MAINTENANCE, INC.

Gainesville Municipal Airport  
Gainesville, TX

Maintenance and Repairs on Recip & Turbine-Powered Aircraft

Pre-Buy Inspections, Annuals, Prop Balancing

Call 1-940-668-2009

**Be a better Pilot! Sharpen skills,** broaden aviation knowledge and break bad habits by training with Earl C. Downs, ATP, CFII, A&P. Antiques, classics, modern aircraft. Taildragger training in 1946 Champ. Flight reviews, ground training. EAA Flight Advisor. Thirty-eight years experience in flight and ground training.

**Be the best you can be!**  
Golden Age Aviation, Inc,  
Cushing, OK.

918-225-7374 (Home & Office)  
Email: [earldowns@hotmail.com](mailto:earldowns@hotmail.com)

## Kingfisher Municipal Airport

24-Hour Unattended  
Self-Service Fuel- 100LL/\$1.99  
Amex, VISA, Mastercard, Discover

Located 1 mile West of  
Kingfisher on Airport Rd

Tel: 405-375-3705  
Fax: 405-375-3630

## FOR SALE

### House and Hangar Ellis-Harvey Private Fly-In Community

2200 square foot executive home on 1.3 wooded acres, 3 bedroom 2 1/2 bath, country kitchen, 40' x 45' metal hangar. Backs up to 2400' private grass runway. Southern Logan county, twenty minutes to OKC, three miles from Guthrie Airport. Lots of wildlife, trees, & quiet country living.

Jim Upton, Coldwell Banker Agent  
405-282-0106 or 405-770-4164

**Cleveland Municipal Airport,** Cleveland, OK, currently has large hangar available for FBO. Please call 918-865-8075.

## FAA Medical Certificates John C. Jackson, D.O.



410 Cherokee, Wagoner, OK 74467  
Office: 918-485-5591  
FAX: 918-485-8455  
Wagoner Community Hospital:  
918-485-5514  
email: [formula@ionet.net](mailto:formula@ionet.net)



**FAA-Certified Repair, Overhaul,  
And Dynamic Balancing**  
Over 20 Years Experience  
Dynamic balancing half-price with  
overhaul or major repair.

**Remember!**  
If it shakes don't delay!  
Call Dr. Dan Today!

in Owasso, OK  
Phone# (918) 272-3567  
FAX# (918) 272-7664  
email: [PropDoc@aol.com](mailto:PropDoc@aol.com)

## T-HANGERS

New, insulated, lease or buy. Page Airpark, OKC (F29). 40' wide x 12' high doors, skylight. Financing available.

405-495-0812 or 405-354-7433

## HANGAR FOR SALE

Seminole Municipal Airport (H45) 60 x 50 engineered steel building with sliding folding doors- office with heat & air, restroom and closet. Contact Jim Goff, days 918-486-8411 or nights 918-279-1110

## Flight Instruction Chad Nail, CFII

Northeast Oklahoma Area

918-782-9696  
918-230-6245 (cell)

## ULTRALIGHT AVIATION

Tulsa, OK  
918-724-0821  
[randy@ultralightaviation.com](mailto:randy@ultralightaviation.com)  
[www.ultralightaviation.com](http://www.ultralightaviation.com)



## Stillwater Municipal Airport

Wash your own plane, your way, at Oklahoma's only covered commercial self-service aircraft wash.

**Fly in & use our new State of the Art Equipment**  
High pressure sprayer and bubble brush  
Will accommodate 52' span, 16' tail height

Bring your step stool, tow bar, and chamois.  
\$1.25 per cycle or \$3.50 per token- 3 cycles.  
Tokens avail at airport terminal or line service  
Open dawn- dusk, April- November  
Call 405-372-7888 - Unicom 122.7 - VOR 108.4  
Auto WX 135.725

## CLAREMORE AIRCRAFT SERVICE

Full-Service Aircraft Maintenance  
Claremore Regional Airport

Maintenance and Repairs on Recip and Turbine-Powered Aircraft

Full-Service Fixed-Gear Annuals  
\$440.00

Factory P16 Training  
Factory Socata Training  
Factory Cessna Training

Call 1-918-343-6174

## Special Offer Non-Complex Aircraft Annual Inspection- \$200.00

This price is available only on the first four inspections we perform in 2000. Inspections five and on will be \$400! You open-up, close-up, clean-up, etc. You provide hangar or pad for inspection. Other details may apply.  
Call 918-834-7215

## The Right Approach



Certified Repair Station QNAR051K  
Fort Smith Municipal Airport

NORTHWEST ARKANSAS AVIONICS, INC  
5404 AIRPORT BLVD.  
FORT SMITH, AR, 72903  
(501) 648-3001

## Speed Craft Interiors

Aircraft Upholstery  
Gundy's Airport  
Owasso, OK  
Call 918-272-9863  
John & Jane Fisher Owner/Opr.

Lloyd Stelljes

Steel Clear Span Buildings  
Construction Management



8501 Highway 271 South, Suite C  
Fort Smith, Arkansas 72908  
Phone 501-646-0747 FAX 501-649-3435  
Toll Free 888-572-3322  
(888-LSB-3322)

Mini Storage Buildings- Aircraft Hangars

## SMALL AIRCRAFT OWNERS PILOTS AND AMATEUR BUILDERS SHOP MANAGERS

For Airworthiness Certificates, CoFA for Export Certificates, Ferry Permits or Airworthiness Consultations, contact R.E. "Bob" Richardson, FAA Designated Airworthiness Representative. Phone (918) 455-6066. 1217 W. Vandever St., Broken Arrow, OK 74012

## FOR SALE HOUSE AND HANGAR TENKILLER AIRPARK

The former home of Joe Cunningham and Mary Kelly, located on a prime runway lot at the Tenkiller Airpark, is available for purchase.

Contact Cathy Turner at 918-456-7619 for details.

## FOR SALE AVGAS FOR \$1.90 A GALLON

(subject to change)

Available Self Service Only  
24 Hours a Day at  
GOLDSBY'S DAVID J. PERRY  
AIRPORT  
New Identifier 1K4 (Prev. OK-14)

Phillips, Master Card, VISA,  
Discover, Diners Club  
International, Carte Blanche, and  
American Express cards  
are accepted.

We also have open T-hangars  
for rent.  
Call Vergie @ 405-288-6675.



24 HOUR SELF SERVICE FUEL  
 100LL- \$1.95 JET A- \$1.90  
 (Subject to Change) AmEx, VISA, Discover, AvCard, and BP

**5000 FT. HARD SURFACE RUNWAY**  
**GENERAL AVIATION AIRPORT WITH**  
**FBO & PILOT'S LOUNGE**  
**AFFORDABLE HANGAR SPACE AVAILABLE**

**(918) 476-6090**

**MidAmerica Airport**

LOCATED IN MIDAMERICA INDUSTRIAL PARK • PRYOR CREEK, OK  
 Choice Industrial Sites

**SOUTHWEST AVIATION SPECIALTIES, LLC**

8803 Jack Bates Avenue  
 Riverside/Jones Airport (RVS)  
 FAA CRS #S30R818N

FlightSafety® Trained Mechanics and Pilots on Staff

- \*Precision Aircraft Maintenance
- \*Airframe and Exhaust Welding
- \*Aircraft Sales and Consulting
- \*Complete Airframe & Engine Repair
- \*Full Avionics Sales and Service
- \*All Major Brands Avionics Dealer
- \*Custom Metal Panel Work

Reasonable and competitive rates on all services

918-298-4044  
 24-Hour On Call Service

## Aircraft Financing

- Easy Application
- Generous Repayment Terms
- Competitive Rates
- No Points or Application Fees
- Fast Approvals



**First National Bank and Trust Co.**  
 Shawnee, OK

**1-800-227-8362**

Member FDIC  
 Visit our website at [www.fnshawnee.com](http://www.fnshawnee.com)

**C & L Custom Embroidery**

Your Airplane & N-Number  
 Custom Embroidered on a  
 High-Quality Polo Shirt  
 Choice of Color and Size

**\$35.00**

Tax, shipping, & handling incl

Order on the web at [www.CandLEmbroidery.com](http://www.CandLEmbroidery.com)- VISA/MC accepted



**AIG**

**AVIATION INSURANCE  
 GROUP, LTD.**  
 5506 North Rockwell  
 Bethany, OK 73008

**WHERE AVIATION IS NOT JUST A SIDELINE**  
 COMPETITIVE RATES - WORLDWIDE  
 AIRCRAFT - PRIVATE - COMMERCIAL  
 MEXICAN INSURANCE - MARINE - FBOs - AGRIBIZ

CALL TOLL FREE  
 1-800-654-4215 1-800-825-2828  
 405-495-4230

CALL AVIATION INSURANCE GROUP, LTD BEFORE RENEWING YOUR AIRCRAFT INSURANCE

**TIRED OF SKY HIGH  
 GAS PRICES?**

**DID YOU KNOW THAT**

**GAMIjectors**

**CAN CUT YOUR FUEL BILL BY 15%?**



**TOLL-FREE: 888-FLY-GAMI OR VISIT WWW.GAMI.COM**

**Tulsa International - TUL**

ELEVATION: 677'

RUNWAYS: 18L/36R- 10,000' Conc  
 8/26- 7695' Conc  
 18R/36L- 6101' Asph

RADIO: TWR- 118.7 GND- 121.9  
 Clnc Del- 134.05 ATIS- 124.9  
 ILS (18L)- 109.7 ILS (18R)- 111.1  
 ILS (36R)- 110.3

CONTACT: (918) 838-5000

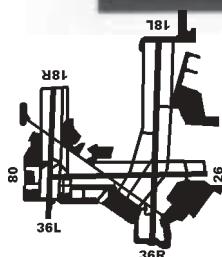
**Richard L. Jones, Jr. - RVS**

ELEVATION: 638'

RUNWAYS: 01L/19R- 5101' Asph  
 01R/19L- 4207' Asph  
 13/31- 2807' Asph

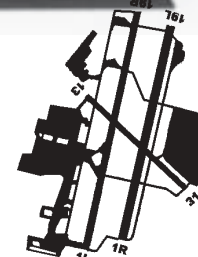
RADIO: TWR- 120.3/119.2  
 GND- 121.7  
 ATIS- 126.5  
 Unicom- 122.95

CONTACT: (918) 299-5886



**Come Fly with Us!**  
**Tulsa Airport Authority**

OOA Member



**ADI**

**After Dark Interiors**

Aircraft Interior Restoration

- \*Top Quality Work- 50 Years Combined Experience
- \*Satisfaction Guaranteed - Competitive Pricing
- \*Use Only FAA-Approved Materials
- \*Mobile Service in Northeastern Oklahoma

6557A E. 40th, Tulsa, OK 74145

918-665-3986

*Rogers County's new residential airpark is*



**"...Beyond the American Dream."**

HOMESITES WITH RUNWAY FRONTAGE, PLEASANT AREA, OOLOGAH SCHOOLS  
 See [members.aol.com/AvianCntry](http://members.aol.com/AvianCntry) then call Dirk DeRose at 918-637-1143