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Experimental Aircraft Association Chapter 33

A monthly publication of the Dr. Alexander M. Lippisch Chapter of the Experimental Aircraft Association, Cedar Rapids, Iowa.

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N26AJ Becomes an Airplane

By Armin Jacobs

I retired from operating "Jakes Amoco and Robo Car Wash" in 1992. Nine years later it was 2001 and I was 75 years old. My wife Betty and I had caught up on many of the things our business prevented us from doing; a family cruise to Alaska, Christmas with family near Cancun, a Panama Canal cruise, and autumn in the North East.

It was about this time that the airplane building bug was biting me every month as I read *Sport Aviation's*, "What our members are building or restoring". My wife Betty said "If you want to do it, go for it". She had said the same words fifteen years before when I said I would like to learn to fly.

On 10-26-01 I ordered the RV-9A tail kit from Vans. On 10-29-01 the tools were ordered from Cleveland Tool Company in Boone, IA.



It was time to clean out the basement! As an Amoco dealer for 32 years I had pickup loads of cancelled checks, promotional material for selling gas, tires, and accessories. We burned it all.

The first entry I made in my builders log for Vans serial # 90444 was a quote President John F. Kennedy make in the early 1960's "We chose to go to the Moon in this decade and to do the other things, not because they are easy but because they are hard." How prophetic that quote was.

The Robo Car Wash I built in 1968 was being torn down when my tail kit arrived from Vans. A fellow was doing it to salvage the aluminum, copper and iron. I made a deal with him. In exchange for some nice 2x6 timbers to build my H frame to use in making the empennage and wings I found him the key to the car wash coin box. The property had been sold and the new owners wanted the site leveled. The key was still hanging on the same nail I had used for years. The salvager got \$30.00 in quarters and I got the timbers.

On October 31, 2005 the FAA approved N26AJ and said I could proceed with the 25 hour flight test.

November 22 was the big day. I was honored to have EAA Chapter 33 member & Flight Advisor, Dave Lammers, make the first flight. Betty and I along with Chris Saunders, an airport mechanic stood on the ramp at MXO and watched Dave taxi to runway 33. Other airport personnel were inside monitoring 122.8. When Dave's run-up was complete we could see N26AJ begin its take off run on 33. What a beautiful sight to see it lift off and climb out. It is no longer a kit. It is now an airplane. All I could say at the time was WOW!

Upon landing Dave Lammers said, "It flies great". Dave had a page of notes from the flight. By the time we had gone over the data the winds had picked up from the west. I am still waiting for my first flight.

None of this would have been possible without help from my wife Betty who was always ready to help carry, lift, hold a bucking bar, or find space in our guest bedroom to store finished parts. Brian Ostwinkle, A & E at MXO who helped with riveting, engine installation, wiring and other technical details. Visits by Tom Olson. Storage Co who unloaded the big crates. Joe Oswald and crew who painted the exterior. Father Carl Manternach, Ron Buscher, and Chris Saunders who helped load and unload to and from the paint shop. Plus others who wanted to be "involved".

It has been four years and now is the time to have some fun flying N26AJ.

Read Back: Basic Aerobatics and The Basic Aerobatics Manual

By Jim Meade

Books ought to enlighten and they should also excite. Do you look at book titles when you visit a friend to see what excites them, to furtively scope out his or her interests and taste in reading? If you check out my bookcase, you'll find that once I thought of turning airplanes upside down and flinging them about the sky in exotic patterns. Well, I have flown a little aerobatics but have probably spent more hours reading about it than flying it. There it is; the confession that un.masks many critics. They write about things they don't do. So be it. Reading and flying are both funs. Let me tell you about a couple of books I have on aerobatics.

The Basic Aerobatic Manual by William K. Kershner, ISU Press, 103pp, 1991 is a well know primer on the subject that costs about \$23. I also have *Basic Aerobatics* by Szurovy and Goulian, Tab Books, 254 pp. 1994, for less than \$19

Kershner has taught aerobatics for many years and uses the Cessna Aerobat. His book is the more elementary of the two. He starts with an introduction, then talks about preparatory maneuvers like stalls. Next he reviews spins before going on to loops and rolls. He progresses to loop-roll combinations like the Cuban Eight and other maneuvers. After more variations and combinations of the loop and roll, such as the barrel roll and hesitation rolls, he concludes with recoveries from unusual attitudes.

This book has no photographs but has many sketches and drawings, all based obviously on the Aerobat.

The Szurovy-Goulian book is also called basic but it is far more extensive than Kershner. They follow a similar progression as Kershner, although they place the spin last among the introductory maneuvers. Then they include a number of chapters on advanced maneuvers, developing aerobatic sequences, and discuss various levels of aerobatic flight from recreational to performing in an airshow. To that end, they include information on buying aerobatic aircraft. Appendices include several course syllabi, a discussion of cost and lists of builders and organizations.

The *Basic Aerobatics* book has quite a number of photos, drawings and graphs. The photos that show different stages of the maneuver are in black and white and are not very crisp. They almost distract from what they are trying to show.

Both books stress that you should not try to self-teach aerobatics. The books are designed to be used in conjunction with a good, experienced instructor. You don't want to be looking in the index the first time you find yourself in an inverted flat spin.

I'm no expert on aerobatics and won't try to tell if either or both of these books are any good for that subject. They both appear to be complete in what they describe. They are consistent with my feeble introduction to rolls, loops, hammerheads and exotic stalls. From what I can tell, either or both should be a good introduction to aerobatic training. They are not and don't pretend to be detailed on unusual attitude or upset recovery.

If you want to read more about what happens in aerobatic flight, these books should do a good job. They'll also help you understand non-aerobatic maneuvers like stalls and wingover that you may already fly for practice. If you are thinking seriously about doing aerobatics, it may be well to wait and ask you instructor if he or she would care to recommend a text. Short of that, either of these books should be adequate at giving you a sense of what is happening as you slip the surly bonds of earth and dance the skies on laughter silvered wings. (Apologies to real poets).

Multi Engine Transition

By Jim Meade

On the 7th of November, Chuck Hall, retired Rockwell Collins chief pilot, endorsed me for commercial pilot multi-engine land with instrument privileges. Probably like many of you, the incentive to upgrade came by chance. I was hanging around the Iowa City airport when Ron Duffe asked me if I'd like to ride along to Grand Rapids, MI in the Cessna 401. I hand flew in IMC from the right seat, but couldn't log it because Ron isn't an MEI. Later, I got a chance to fly in the KingAir 90 to Lincoln, NE, and again couldn't log it. I found I like flying twins.

Too much time on my hands and expectations of a better corn crop than I ended up with were fertile grounds for dreaming of a multi-engine rating. A few inquiries revealed that Dave Pearson of Cardinal Leasing had a twin based in Monticello and gave ME transition training.

I met and flew with Dave on October 24th and then flew several more times concluding with a review on the 5th of November. Dave pronounced me ready and endorsed my log for the practical test. I was not quite as confident as he was.

Besides the typical pre-flight procedures, the transition checkride tests take-offs, landings, steep turns, power off and power on stalls, emergency descent and multi-engine maneuvers. Why they call them multi-engine maneuvers, I don't know, as you do them with one engine off and feathered or at zero thrust. For the instrument add-on, there are requirements to fly enroute and an approach under the hood.

The steep turns, emergency descent and stalls seemed easy to me. They were no more dramatic than you'd encounter in a single. A twin gets lift generated by propwash over the wing, so stall recovery is faster than with a single. Even flying with one engine under the hood out was not a big thing, other than it takes a lot of leg to hold the rudder into the good engine. Securing and restarting an engine in flight is challenging mainly because you use strong control forces to offset the adverse yaw created by asymmetrical power, plus you are reading a checklist and making doubly sure you are flipping the correct switch and moving the correct lever. You don't want to go from single engine to no-engine operation by a mistake in securing or restarting an engine.

Reading the material for the oral gave me a healthy respect for the potential dangers of asymmetrical power, especially how it can get you into a spin if you're not careful. The readings and Pearson made it obvious you do not want to spin a twin. To familiarize the twin student with how an airplane feels when asymmetrical forces exceed your ability to control them, the practical test calls for a Vmc demonstration. The airplane is flown with the critical engine at zero thrust and the other engine at take-off power. The nose is pitched up slowly as increasing aileron is added to hold about a 5 degree bank into the good engine and rudder is used to counter the yaw. At a certain pitch, the rudder is at full deflection and the nose begins to move uncontrollably into the dead engine. Letting the airplane continue this may result in a spin. The corrective action is to reduce power on the good engine, lower the nose, reach a speed higher than Vmc and add power again.

My training took 10.6 hours. Dave would have signed me off earlier, but I asked for another flight and am glad I did. I felt more comfortable after the last practice. My biggest challenge was learning the instrument panel well enough to fly an ILS approach under the hood on one engine.

The plane Dave teaches in is his Piper Geronimo. Well, it's really half a Geronimo. A Geronimo is an Apache with some goodies added. Dave's plane has the 160hp O-320B's of the original, rather than the 180-hp upgrade. Both engines have vacuum pumps and generators. His avionics were new to me and I was a little slow to get comfortable with them.

Chuck Hall's oral and practical tests were thorough, objective and fair. Chuck had given me a CFI check ride in 2000, so I knew his style. The multi-engine practical test took 2.2 hours, which is longer than many transition rides, but we took some in-transit time to the Clinton ILS. I flew the check ride better than any of the practices. I was still not fully comfortable with the instruments and could have been better on the ILS approach, but met the test standards.

Flying even a small twin like the Geronimo feels a lot more complicated than a single, to me. Besides the issue of asymmetrical power if you lose an engine, there are more systems and the systems are more complicated. For example, there are three ways to get the main gear down (but only two ways to get them back up). With more fuel tanks and baggage compartments, weight and balance can't be taken for granted as it sometimes is in a simple single. In addition, you are likely operating in a more complex weather and ATC environment.

Earning my multi-engine transition ticket is was very satisfying. I hope I can figure out a way to get some twin time on someone else's dollar. The corn yield I had counted on was reduced by drought so it would be nice to find some paid twin time to cover the cost of training.



Last Meeting - Steve Determan's RV6A project

Steve Determan invited us all over to see his RV6A project. Steve has the wings and empennage done, and the fuselage in the jig. It was a great opportunity to see 'bones and guts of an airplane before it is closed up, riveted shut and painted smooth.



Steve talked about some of his building experiences and discusses some of the techniques he uses during construction. In the picture to the right you can see bulkhead and stringers coming together to what will be Steve's fuselage. You can also see the jig that was first used by Tom Olson on his RV6 and later on other member's RV projects. Many thanks to Steve for having us over and to his beautiful wife for providing us with many tasty treats.

New Officers

Also at the Nov meeting we held officers elections. There were two posts open; President and Vice President. After extensive deliberations and a little bit of good natured arm twisting, Randy Hartman agreed to run for President and Tom Caruthers agreed to run for VP. A vote was called for and by the slimmest of margins both candidates were unanimously elected. Congratulations to Randy & Tom and I am sure we can look forward to another exciting and fun year of chapter events.

Next meeting - Christmas Party

By Tim Busch

Our annual Christmas party is scheduled for December 10th at the Ced-Rel Supper Club, 11909 16th Ave SW, west of Cedar Rapids on Highway 30. The event begins at 7:30pm.

We need a headcount in advance of the event, so please drop me an email as soon as possible at t.busch@mebbs.com or a phone call at 319-373-3971 to RSVP.

The program for the evening is the traditional chapter gift exchange. Place your wrapped gift (\$10 or less, preferably aviation related) on the gift table and take a number. During the exchange, numbers will be drawn out of a hat. The person with that number will have the option of opening a new present or "stealing" one that has already been opened (a present can only be stolen twice). If a present is stolen, that person then can either open a new one or steal one from someone else. And so it goes until all the presents have been opened. It's always a fun time. The exchange is purely optional, so even if you don't want to participate, come and enjoy the show. Bring your spouse or significant other and have a nice night out with the chapter!

Presidential Words

By Tim Busch

As 2005 winds down, it's fun to look back at what we have accomplished and look forward to another year of aviation. Time is a very precious commodity these days and it is difficult to fit every activity we would like to do. Lately it seems like my employer has looked at the chapter meeting schedule before scheduling my work trips, causing me to miss a few meetings, but I know it's just a coincidence. I am glad the new officers can take over and run with their new offices.

This has been a big year at our house. I haven't been working on building airplanes lately as much as building pilots. If you remember, almost three years ago I started Iowa Flight Training at Vinton with an old Cessna 172. After lots of remodeling, she's a fine bird that has already been responsible for several new pilots in the Vinton area and at least one new airplane at the airport. This year the school really 'took off' when we expanded into Cedar Rapids at PS Air in April. Operating with four instructors and four airplanes, IFT is starting to turn out quite a few private and instrument pilots, but we're not finished growing yet. Keep an eye on our web page, www.iowaFlightTraining.com for our next announcement!

Early in November, I attended the annual Iowa Aviation Conference. Generally targeted toward airport operators, the conference is a great place to see how aviation is progressing in the state and to network with the movers and shakers of aviation in Iowa. This year's main speaker was Dr. Jerry Cockrell, who used humorous anecdotes to entertain and educate the audience. To keep interest in the two day event until the very end, the award presentation at the end included some very nice door prizes. I missed all the door prizes but was surprised to hear Tim McClung, the DOT's Aviation Office Marketing Manager announce yours truly as the winner of the Iowa "Outstanding Involvement in Aviation" award.

We really have a great EAA chapter. There is so much variety of knowledge, people, projects, and flying airplanes to learn from. If you haven't been very involved, jump in! It's a great bunch and you can only make it better. As my term as president winds down, I wish you all happy and safe flying, and I'm sure I will be seeing you more in the air and at the airport. Merry Christmas!

Editor's Rant

By David Koelzer

Well another year has gone by. Our Chapter has accomplished a lot this year. I believe more planes have been finished this year than any other that I can remember and there are also many still under construction. We flew dozens of Yong Eagles and hosted many fine lecturers and presenters. Sadly we lost two members, Dave Colbertson & Steve Redman, to an aircraft accident and we will miss them very much.

We have a lot to look forward to this next year. We have gained several new members, eager to fellowship with other aviation enthusiasts and maybe pick up a few construction pointers. Soon our new and returning Officers will get together to plan out another year for our Chapter. But of course our Chapter Officers can't do it all alone. We rely on the participation of all the Chapter members for ideas, locations and organizational help. So don't be shy, join in help out and have a great time. I hope to see you all at the next meeting.

Chapter 33 Calendar

Dec 10 7:30 Chapter Christmas Party & gift exchange, Ced-Rel Supper Club

Jan 28 11:30am Chili Fly-In, Hosted by: Aviation Museum's Board of Directors, Greenfield, Iowa Municipal Airport

Feb 3-4 15th Annual Midwest Aviation Maintenance Symposium and Trade Show, Sponsored by: Iowa Chapter of PAMA, Hotel at the Gateway Center Ames, Iowa

April 4-10 Sun 'n Fun Fly-In, The 32nd Annual Spring Celebration of Flight!

May 20-21 2006 Eastern Iowa Big Kids Toy Show, Fly-In Breakfast every morning, Young Eagle Flights, Hangar Dance Saturday night, Iowa City, Iowa Municipal Airport

June 10 Annual Open House, Vinton, Iowa Municipal Airport

June 10-11 Fly Iowa 2006, Spencer Iowa



Oops, Santa may be a little late
this year boys and girls

In The December 2005 Issue...

N26AJ Becomes an Airplane, Read Back-Basic Aerobatics, Multi Engine Transition



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