

EAA Mount Rainier Chapter 326 Newsletter

Thun Field - November 2006

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Meeting Notice

**Tuesday, November 14th, 7 PM
CAP Building, Thun Field**

Program: Thun Field Developments. Bruce Thun & Mike Esher

Refreshments: Mike Salmon

From the Secretary

October 10th, 2006
EAA Chapter 326 meeting
Gordy called the group together.

The program tonight was about the Barracuda by Richard Siers. This is a unique design 2-place wood cross country aircraft. Designed by Richard's father many years ago, it still is a great performer. The plane uses an IO-540 for power and has retract gear. It cruises around 200mph. The wood structure is very strong with an indefinite service life if kept dry and protected. Richard and his wife are selling plans to build the Barracuda.

ECI has a new program that will give some discounts to EAA members and give a kick back to the Chapter for each engine purchase. Check with EAA national.

Treasurer report: \$1271.52 Checking - \$2280.49 Savings

2007-2008 Chapter Officers nominated & elected.

President: Jeff Liebman
Vice President: Robert Bara
Secretary / Webmaster: Andy Karmy
Treasurer: Norm Pauk
Young Eagles: TBD
Flight Advisors: Marv Scott & Jim Triggs
Newsletter: John Brick

A group had a great trip to Reno last month. If anyone has an interest in going next year make sure and talk to Marv about it. Gordy told of his car adventure along the way! Andy Karmy

First Flight

N99TT RV-7

Jim Triggs

My RV-7 is #176, an early kit ordered right after the RV-7 was introduced. With minimal building skills, I labored over five and a half years and 4,311 hours of work until its final inspection

by Charlie Cotton in July. This airplane was completed only because of the help of my friends and fellow RV builders.

The first flight actually started about one year prior to the execution of the actual flight. I began the planning and preparation for the flight with profiles and emergency procedures to be implemented during that first flight. I had the test program and plan completed six to eight months prior to the flight. Since my formal training at the USAF Flight Test School (Short Course) not to be confused with the "real" Flight Test School for engineers and test pilots, I have never been able to complete a full flight test. During the short course we were able to only perform parts of the total testing of an aircraft. My RV-7 would be my opportunity to complete a full aircraft flight test. I have documented about 15 hours of testing and will complete the remaining 55 hours of testing over the next year.

After my inspection, I waited and prepared another two days for my first flight. This time allowed me to carefully double and triple check my airplane, test plan and procedures. I calculated the alt/speed decisions from the Olympia Airport diagram. First 70 feet alt. @ 70K straight ahead or right crossing runway. 70 feet to 250 ft immediate left turn to crossing runway. 250 to 400 ft airport grass perimeter. 400 ft to 600 ft left crossing runway or 180 to takeoff runway. Above 600 ft was a choice of either two runways. The day prior to my flight I performed a hands on execution of all emergency procedures probably 10 to 12 times for proficiency and complete manipulation of the controls without visual reference. By the end of the day, I was tired of practicing and just wanted to fly. Because I planned to fly the next evening, I had nothing to do during the day but practice some more.

The following is a snapshot of my first flight and how I flew it. Please do not accept my techniques or procedures as the way your test flight should be flown. Only because of my experience, background, and preparation was this an acceptable profile for me.

The flight was slightly delayed as I waited for the wind to diminish or swing more to the runway heading. A fifteen knot crosswind blew as Randy Iverson helped with all the final checks and Earl Gruer stood by on the handheld radio. I wanted to start the engine and perform the takeoff with minimal ground idling of the engine. The primary objective of this first flight was to determine the safe flying characteristics of the airplane and begin the break-in of the engine. I decided the wind was within my personal take-off envelope and after pushing the aircraft near the taxiway, received confirmation from the tower that I had the entire airport to myself and was cleared for all turns and all runways until safely above the airport. I started the engine, observed all instruments in the green, completed the Before Take-Off Checklist and started the takeoff with 1800 RPM. I performed a rolling Mag check and observed 45ks which should provide the proper inlet cooling for the final take-off power setting. Advancing to take-off power the aircraft accelerated

faster than expected and made the first acceleration check at 400 ft by 10ks. The climb speed was 120 ks for engine cooling. A sailplane rope break technique utilizing an off set to the runway was used in case of engine failure. Passing each altitude point, I switched my landing precedence until safely at 800 ft. I then completed a quick stabilization check. To my surprise the airplane was flying absolutely hands off. A quick look at the ailerons and flaps showed a perfect flare. I was so pleased the aircraft was flying without trim because I hate rigging airplanes. A quick call to Earl and all the engine data was transmitted followed by another call to tower to thank them for their help and giving them their airport back. The next 1+ 40 min was flown for the engine break-in with full power and optimum temps and pressures (engine stopped burning oil and temps dropped at four hours). The airplane demonstrated excellent stability and balanced controls (aircraft never required any type of trim). Ready to land, I cooled the engine 50 degrees per min. and performed a climbing pitchout to slow for flap extension without a power reduction. Because the crosswind was very controllable on take-off, I elected to land on the runway with the crosswind and of course, the RV didn't even notice the wind.

Engine - Superior XP-360 assembled by me at the factory under supervision at the engine building school

Propeller - Hartzell Blended Prop

IFR Panel - PS Engineering Audio Panel
SL30 Garmin Nav/Com
EFIS Blue Mountain
Electric Tru Trak ADI (back-up)
Tru Trak Autopilot with altitude hold
AFS 2500 engine monitor
AFS angle of attack system

First Flight

RV-9 N9XE
Earl Gruer

First Flight of N9XE otherwise known as deBur'd

It dawned hot and clear on August 31, 2006, three days after Charlie Cotton had given me the airworthiness certificate. Jim Triggs flew his new RV 7 over to Shelton Sanderson. About noon deBur'd was ready, all that could be checked had been. Jim and I had discussed many times who would fly N9XE first and I finally decided it would be best all around for him to do it. I wanted the best pilot with the most experience. And I wanted the first hours to be dedicated to the engine break-in with as few distractions from the actual flying as possible.

Jim took off just before noon. His goal was to maintain a load on the engine for the entire flight, which lasted a little over two hours. So he started the engine, taxied quickly, breaking in the brakes on the taxi, and took off immediately. Then it was basically pretty boring. I was on the ground with a hand held while he circled overhead near the airport. Absolutely no problems. Cylinder head temperatures were fairly even and never went over 390 degrees. Flew as hoped, straight. No adjustments

to the flight controls have been needed. It was hot and really bumpy at the altitude of 2500 to 3000 feet (where the power curve was best for break-in) so he had to endure. Once I lost communication for a few minutes and thought we had a radio problem. But he could hear me, because when I asked him a question, could hear him click. Turned out in the turbulence, the headset wire had become unplugged which he soon discovered. The landing was beautiful, long on the runway to minimize taxi time. Thanks, Jim for your help in assuring a well broken in engine. Oil burn was minimal. Still is.

After the inspection where nothing was found to be leaking and waiting a few hours to let the air temperature cool off, it was my turn. My goal was to emulate Jim's flight. His advice to me was to watch carefully how the plane floated, since all my RV time had been in RV 6's. I was delighted with how precise the RV airplanes are. It is like driving a Porsche! So I flew the same circles near the airport at 2500 to 3000 feet with 75% power. No maneuvers in the first 15 hours. Just droning along breaking in the engine. What was really nice was that as soon as it was determined that all was going well with the flight and temperatures were OK, Jim and Linda Lee flew up in his RV 7 and got on my wing and Linda Lee was able to get some pretty good photographs of my first flight. I stayed up a little over an hour. Made a pass over the airport and got into the pattern and found that Jim was right, the RV 9 really floats. I was too high so did a go around and extended my pattern out some and it worked fine. Yep, I had the RV grin. Still do.

Still no flight control adjustments. Low oil burn. Couldn't ask for better. A few minor electrical changes is all. Am working on the wheel pants right now, and the airplane has about 55 hours on it, been flying nearly every day and enjoying the dry fall weather. If all goes well and weather permits, will be going on the first cross country to New Mexico with Linda Lee and Jim and Andy Karmy in Jim's plane. Time to get in the air was 3 years and 9 months. The two slowest parts were the paint and the electrical. What would I do different? I would NOT paint with clear coat. That is not for the home amateur painter!

Engine: Aero Sport Power O-320 160 HP
Prop: Sensenich, fixed-pitch aluminum.
Autopilot: 2-axis Trutrak.
Dynon D-10A EFIS
Monroy TCAS (collision avoidance)

I've Been Everywhere

By Andy Karmy

After 90 days of no rain, longest dry spell the Northwest has seen in many years, our fingers were crossed for the fall trip to the Reno Air races... The weather held out until... yes you guessed the day BEFORE we were to leave. The plan was to leave Thursday night to head out to Redmond. Drew and I launched from Auburn after School got out. As we crossed Thun we called out in the blind on 122.75 to see if any of the group was "UP". Sure enough reports started coming in from Marv & Dennis, Kevin & Mark, and Mike & Justin. They were ahead of us already past Eatonville and heading around the clouds south

east bound. Now we were about 40 miles behind at this point. Time to punch it! We caught up with the 182's first somewhere near Mt Adams and caught up with the Mooney as we crossed the Columbia River.

It was fun coming in as a group to Redmond. The radio was fairly quiet and out of nowhere the poor tower controller was calling us to report here, report there, and sounding more flustered as each plane called up from about the same distance and direction. This would be a theme on the return trip also. Once everyone was tied down at Butler Aviation we grabbed the crew van and headed for the motel.

The next morning we awoke to Rain! Hey I thought this was the east side and it would be clear sailing. Oh well... we took our time getting ready, breakfast as a group, crew van back to the airport, and prepare to go. The weather south looked sort of Ok, and it was nice to the North, so off we departed. We made it about 40 miles until our first 180 as the clouds forced us towards the ground somewhere near Sunriver. Everyone decided that was enough of that so we headed back north and climbed up between and eventually on top of the clouds while regaining our south course towards Lakeview. The trip was the typical aftermath of a cold front passing with large cumulus that forced us as high as 13,500 to out climb them. As we approached Lakeview the weather seemed to be clearing up a bit as we got to Goose lake. Now here's where it doesn't pay to have the fast airplane. The group nominated Drew and I as the scout. The famous words of the trip came from Marv over the radio "it looks better down low, you go check it out" So down we go. One RV9A with a Mooney on our tail. 13,500 11,000 9,000 7,000 3,000 2,000 over the lake now 1,500 1,000 south end of the lake now 900 800 700 600 500 is that snow? 400 can you see anything ahead? Ok Kevin we are doing a 180, RV going left, Mooney going right.

Quick call to Marv, down low is a no go. "Ok, I'll stay here at 13,500" did we just get suckered? Oh well, a quick climb back up to altitude to head over the building storm. This time it took 14,800 to clear the clouds for Drew and I. By Alturas the weather was clearing a bit and you could see under the clouds with a much improved ceiling. We decided to head down as we passed Amdee AFB and needed a quick stop for the facilities... problem was there were none when we landed at a desolate strip of asphalt in the middle of nowhere. The rest of the group headed on towards Reno, pit stop complete we took off for Reno, and as we joined approach control we were sequenced in behind a Mooney (Yep we caught up with them again).

The weather was nice and clear with 18-29kts at 90deg from the right. The wind made for some interesting landings as we heard over and over during the weekend. I think the arrival was the subject of many stories and much bragging. When taxiing up to the ramp we saw the rest of the group getting tied down, but the ramp guy said, oh no, Experimental planes have a special parking area. So we followed him to nice on the ramp parking behind the hangers. The rest of the GA planes were dumped on the taxiway next to the golf course! ☺ It was neat to compare our fuel burns when we arrived as the RV9 burned almost exactly half the fuel of the Mooney for the same trip from Redmond to Reno!

A cab ride got us to downtown and the Circus Circus for our lodging. The next two days were the Reno races which are great fun if you have never been. We saw lots of cool planes, neat Jets, Loud engines, great flying. If you've never been, you need to go. If you have been, then it's still a fun trip for the flying adventure along the way.

John and Pat made it flying IFR direct (I suspect with much less drama) and landed over a Carson City to avoid some of the direct crosswind that we found at RNO. Gordy also joined up with us driving by car this year as he had some avionics problems with his plane at the last second.

Monday was clear and nice in Reno as we headed back out to the airport for the return trip. This time the weather was much better and we flew northbound in the clear past Lakeview and on towards Redmond. About 50 miles south of Redmond we hit the clouds and started a descent with a little rain, but still had great visibility and much clear air. As we passed over Summer Lake in southern Oregon the RV9A turned over the 500 hour mark. Not bad for a plane that's not even 3 years old yet! Kevin gave the encouraging news that most failures happen after 500 hours!

We landed for lunch in Redmond as the weather had not yet cleared in the Seattle area. After lunch we headed north again as a group. Climbing above the clouds at about 11,000 ft we flew north towards Mt Hood. As we neared Hood, just the top of the mountain was visible through the clouds with a big clear hole on the east face of the mountain. The wind was pulling the clouds apart as they crested the top and blew down the face. Neat to watch... until we hit the big updraft. From 11,500 to 13,800 it sucked us up and up. The nose was pointed down, and I had picked up 20kts while climbing 2,000ft! Very cool... then of course we hit the other side of it and started going down down down. I think we lost most all of the gain before we flew out of the downdraft near the Columbia river.

The weather was breaking up nicely as we passed Mt St Helens and we slipped under a scattered layer near Eatonville and headed for home. We had a great trip and Drew enjoyed his first trip to the Reno Air Races.

Finally in the words of the Johnny Cash song...

"I've been everywhere, man
Crossed the deserts bare, man
I've breathed the mountain air, man
Travel...I've had my share, man
I've been everywhere"

It's a big country – You need a fast Airplane!

Annual Membership Dues for 2007

\$15. Make checks payable to EAA Chapter 326.

Mail to:

EAA Chapter 326
C/O Norman Pauk
12012 SE 260 PL
Kent, WA 98030

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Chapter 326 Staff

| | | | |
|--------------------------|------------------------|---------------------|----------------------------|
| President | Gordy Klawitter | 253-582-4971 | cell 279-7460 |
| Vice President | Lance Newman | 425-413-1764 | |
| Secretary | Andy Karmy | 253-333-6695 | |
| Treasurer | Norman Pauk | 253-630-6396 | |
| Newsletter Editor | John Brick | 253-846-2617 | jebrick@comcast.net |
| Photographer | Dave Maroon | 253-537-4250 | |
| Webmaster | Andy Karmy | 253-333-6695 | |

| | | |
|---------------------------------|-------------------------|---------------------|
| Young Eagles Coordinator | Darren Dexheimer | 253-845-1190 |
| Technical Counselor | Harold Smith | 253-752-5480 |
| Technical Counselor | Charlie Cotton | 360-893-6719 |
| Chapter Flight Advisor | Terry O'Brien | 206-244-3619 |
| Chapter Flight Advisor | Bob Fay | 253-847-0657 |
| Program Coordinator | John Brick | 253-846-2617 |
| Communications Director | Bob Fay | 253-847-0657 |
| Biographer | Arlene Dougherty | 253-638-0988 |

Chapter 326 Website <http://www.eaa326.org>

EAA Mount Rainier Chapter 326
C/O John Brick
8304 242nd St. E.
Graham, WA 98338