June 2008

Hangar Talk

News from Experimental Aircraft Association Chapter 211, serving airplane builders, restorers, pilots, and airplane lovers in western Michigan



AA Chapter

MEETING FRIDAY JUNE 6TH THE LATEST FROM

GRAND RAPIDS TECHNOLOGY

The EAA Chapter 211 meeting will be Friday, June 6th at the clubhouse at the Grand Haven Municipal Airport. For the program the folks at Grand Rapids Technology will show us the latest in electronic goodies for your panel.

Flyout

There will be a flyout to Mackinac Island for Saturday, June 7 with a rain date of June 14. Prez Paul Overbeek is coordinating the event. Plan to discuss the specifics for the flight at the meeting.

July Meeting will be July 11

The July meeting will be pushed back to July 11 since the usual meeting date is Independence Day. Watch your local fireworks on July 4th, come to the meeting July 11th.

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The Chapter Awards Picnic will be on Saturday, August 9th. Mark the date on your calendar

RV-9 First Flight

John Gills RV-9 made its first flight! Congratulations John!

John reports "The airplane flies and handles great. The first flight very smooth and it flew hands off. I had to adjust the fuel mixture and program the efis for the manifold preassure and the tachometer for the second flight.



The flight testing is going well with no other squacks."



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Prez Sez

Do not have a lot of news this month, just a few reminders. The June 7th fly-in to Mackinaw Island has generated some interest, so weather permitting, we will discuss at the next meeting who, what ,when, and where.



The only first flight I am aware of is John Gill's RV. Are there any others? At the last board meeting we cleaned up Carl's Park. It didn't need much thanks to the attention it got last year.

The program for June will be Grand Rapids Technology. It should be an interesting time to see the latest products they have.

Cheers,

Paul Overbeek President - EAA 211

Editors Notebook

Reading the minutes makes me wish I could have made it to the May meeting, the Sopwith Camel project sounds very interesting.



I did some work travel this month that included some aviation interest. I had meetings at Rolls Royce (formerly Allison) aircraft engines in Indianapolis. During a break in the meeting I got to tour a museum that is being set up in the Rolls training center that features engines from the history of Allison and Rolls Royce. This was a "preview", the museum will not be open to the public until later this year. The collection starts with the WW1 Liberty Engine, which was made using master patterns from Allison machine shop and goes through the Allison piston engines and Allison turboprop engines. One notable engine on display was the powerplant from the "Pogo" vertical take off plane which had two turbines driving a pair of counter-rotating propellers through a complicated gearbox. The prop pitch range was very different for vertical takeoff and horizontal cruise. After the vertical takeoff, as the plane was pitching over to horizontal flight the pilot had to throttle back and "shift gears" to put the props into the proper pitch range for flight. The reverse was done during the pitch up prior to vertical landing. Another interesting engine was a prototype powerplant for a long range navy plane that had four turbines driving one propeller. The idea was that all four turbines were used for takeoff then one or more could be shut down during cruise. They also had a prototype for a mostly ceramic automobile engine from the 1980's. That was interesting to me since at that time I was working down the road at Cummins on a ceramic diesel truck engine and the Allison work was seen as a rival to our work. I did not have a camera along for the meeting, I will have to bring one on a future trip to Rolls.

On the trip I drove past the museum at Grissom, but both times I was too late for the museum to be open.

George

The Sign is Back on the Clubhouse







Planes on Display at Grissom









Chapter 211 Minutes of May2, 2008

The Pledge of Allegiance, led president Paul Overbeek opened the meeting at 7:30. The minutes were reviewed and Dan Bauman moved to accept, second by John Panning, past. The treasures report given and Tom Brownlee moved to accept, second by Bill Scheltema, past. We had three visitors in addition to our speaker. One of the visitors said he didn't count because he had been here before.

A get well and encouragement card for Glenn Holt was passed around, so that it could be signed by members. The chapter sign, made by Paul Dannenberg, was installed before the meeting by the officers and Tom K.



John Gill made the first official flight on his new RV on Sunday. He talked about his pastor coming to the hanger and blessing the plane. He said it flies great, only very minor adjustments.

Ken Dannenburg reported of 252 accidents, 3 of which were at Sun and Fun. He told of a member of a jump team that got his cords tangled around the jump step and was unable to get free or back in the plane, so they had to land. They landed on the grass and he slid on his back pack. A little shook up, but no injuries.

Jack Brewer reported about doing his flight instructor review on the computer rather than the old paper forms. He talked of some difficulties and possible 'glitches' with the system. Mention of a new Wings program was made and that the Wings of Mercy meeting was May 31, and on August 23 it would be here.

The club picnic will be on August 9. A trip to Mackinac Island was discussed and several were interested. The plan is to go on June 7 with the 14 being an alternate date in case of delays due to weather. A time to meet there and other details will come at the next club

meeting.

Paul Overbeek said his auto pilot was working

Congratulations Bill on Grand Champ Award

Bill Scheltema showed his award for Grand Champ at Sun & Fun. He



showed a computer printout of his flight, noting that it kept close records of altitude, headings, speed, etc. Bill then told about the judging and how he asked them if he could present his plane to them. He had prepared a picture book of his photos, and related items. This was used to take the judges step by step though the process he used to build and prepare the plane. Emphasis of details, especially safety item such as the fire extinguisher was given.

1917 Sopwith Camel rebuild by Tom Kozuro



When Tom was five his father gave him a model of a Sopwith Camel and a love affair was started. His dad was a dentist and did not build or fly. Another, pique of interest occurred about a decade latter. While at his girlfriends, she showed him the plane her dad was building in the garage. Her dad came home and there was this boy in the garage with his plane and tools. The long and short of it was that he showed Tom a lot about constructing a plane and took him flying. The flying stayed with him, but

he did not go on and marry the girl. He met Linda, several years later, in college.

The British planes of this era are much more complicated to build than the German planes. Tom's first piece of equipment was the clock, which was obtained by trading parts and pieces. As the story developed we found that is key method used to obtain parts. The clock was the most valuable piece of equipment on the plane. A pilot could be court marshaled if he did not remove the clock and carry it with him in case of a mishap and he had to leave the plane. The clock is on the lower right hand corner of the instrument panel. There was no mass production of gears, etc. needed for clocks so that each was made by hand and individually fit together.



Tom states that he is a stickler for details, so his plane must be a rebuild of a full size Camel using original methods and materials. This meant that the next and most important piece of equipment is the data plate, shown in the top center of the panel. The search leads to Guy Black of Suffolk England, who has a large stash of parts including a data plate. Guy agreed to talk to Tom only because Tom had a 1907 seven cylinder gnome omega engine. This was the first developed and also the first produced on a production line. Once he obtained the data plate then the plane he was to build was determined and he could now research the manufacture. date of build, unit it serviced, the pilot,

Of the 5,775 Camel's built by 12 different manufactures, Tom's had number 377 of Ruston Proctor, an English tractor company. They built a total of 1,500 Camel's. Tom's was finished on Dec. 12, 1917 and delivered to the 43rd squadron on Jan. 2 1918. Jan. 2 is Tom's birthday.

Mystery Aircraft



This months Mystery is from Cliff



Last months Mystery was Lee Pitchers Tailwind at Rockford. Standing by the Tailwind are Joe Sawicki and Dave Rydzewski. Thanks to Ron Fritz for this photo

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Most Camel's used a British made 130 horse engines; his had a 160 horse American made. The latter were used for night flying to shoot down airships. They flew at 20,000 feet and their Vickers machine guns would freeze, so they fitted them with battery operated heaters. The guns before 1918 had ribbed cases and those 1918 and latter were smooth cased. They were designed to be water cooled and used on the ground. The jackets were opened in the



front and slits were cut in the rear so that air would be forced through then and cool the barrel. The timing of the firing of the gun was mechanical and geared of the back of the engine.



Tom has a new in the crate 1917 Gnome type n engine that he obtained from a museum in Pa.

About half of the Camel's build crashed on their first flight. One would think it was a new inexperienced pilot, torque from the 330 pounds of rotating mass up front, or variations in CG, incidence, decelage, etc., but the real problem was the engine. They fly much

like a Cub. There is no carburetor and fuel from a low pressure tank is fed into the crankcase with oil. If the pressure falls then there is no fuel. Pressure in flight was from an 18 inch prop on a pump and at take off and landing a hand operated pump in the cockpit and therein is the major culprit. Without a carburetor there was no throttle and



engine speed was controlled with a kill switch mounted on the control stick. The pilot had the undaunting task of controlling the plane, pulsing the kill switch and pumping the pressure for the fuel at take off and landing.

Tom's Camel had a very neat innovation on the second magneto. It is missing on his control panel, but is in picture. There are four positions and the first allows all cylinders to fire on each revolution. The next they



fire every other and so on, thus being able to reliably control the speed in four ranges. To keep the plugs from

fouling out they designed a large center element with a small gap all around to the outer casing. Spark would occur between these two. Picture 79 shows Tom demonstrating this to Paul O. who latter indicated it was a somewhat shocking experience.







"To Boldly Go Where No Air Tour Has Gone Before" Michigan Air Tour 2008!

Tune up your tricorder, standby to beam up and prepare to explore new airports and new civilizations as the Michigan Air Tour continues its mission to promote aviation throughout Michigan.

This year's mission will be to explore airports that have not been on the Air Tour before. Previously they did

not meet our minimum runway length/construction, however the communities that these airports serve recognized the value they bring and have made investments to improve the airport facilities.

Leading our mission are the intrepid explorers **Chet and Patti Uncapher** of Ottawa Executive Airport (in the Zeeland System).

Also on Air Tour, you can:

Play poker

Participate in the Trivia Contest

Win door prizes

(there might be a bottle of Romulan Ale included

in the prizes)

Participate in 50/50 raffle

Make new friends

(except for maybe the Klingons and Romulans)

Play with the Tribbles.09/12/08 - 09/14/08

This year's air tour will begin in Hastings.

Friday: Hastings, Caro KCFS, Sparta 8D4 Saturday: Sparta, Oceana County CO4, Evart 9C8,

EAA Chapter 211 Calendar

June 6......Meeting

July 28-August 3..... Oshkosh August 9..... Picnic

September 5 Meeting

October 3......Meeting

November 7 Meeting

return to Sparta.

Sunday: Sparta to Andrews University C20.

Tour Directors: Chet & Patti Uncapher. 616-748-1013