JANUARY, 1992

CHAPTER 27 NEWSLETTER

JANUARY, 1992 ISSUE

Meetings Held on the Second Sunday of the Month at Meriden-Markham Airport, Meriden, CT

RARE "BIRD"

Believe it or not, that is the correct name of this aircraft built by the Bird Aircraft Corporation in 1929. Standin front of the airplane is Pete O'Brien who restored the ship to its present superb shape. Powered by a 5-cylinder Kinner radial engine, Pete keeps it at the Stormville, NY Airport.

NEXT MEETING IS SUNDAY, JAN. 12

The January meeting of EAA Chapter 27 will be held at Meriden-Markham Airport on Sunday, Jan. 12, 1992. Time 10:00 A.M.

LEAST-ENTICING PHYSICAL THERAPY

In the New England Journal of Medicine, a doctor from Daly City, CA, describes a patient who flies upside down, strapped in an open-cockpit biplane, to get relief from lower-back pain.

Important side effect: The engine stalls after 10 seconds of upside-down flight.

HOME SIGNAL SIDETRACKS SEARCH

AUBURN, MA—A search for what was believed to be a downed plane turned up an electronic locating transmitter in a woman's home, but authorities continued the search for an overdue aircraft.

More than 50 Civil Air Patrol searchers from around the state, as well as local police and fire personnel and aircraft, searched more than four hours recently for the location of the electronic distress signal.

The search was called off about 10:30 p.m. when the active transmitter was found in the home of Rose Killam of Auburn.

The Federal Aviation Administration will investigate why the device was activated.

REMEMBER—IT'S JAN. 12 IN THE LOUNGE AT MMK AIRPORT—TIME: 10:00 A.M.

LETTER FROM THE PRESIDENT:

Hello Everyone!

Well, another year has come and gone. I hope you all had happy holidays.

As you know, we have a new slate of officers. Please bear with us and support us through our first few months.

I have received the calendars for those of you who requested them. The cost is $7.00 each and I will be ordering them in the future by request.

The month of December hasn't been the best as far as aviation fatalities are concerned in our state so please make sure you do an extensive pre-flight, and also make sure you tell someone where you're going and what time you will be returning or arriving.

At this month's meeting I will give a talk on metal structure and how to use it in fabricating brackets and other items.

Well, that's all for now. See you Sunday.

Jim

EAA CHAPTER 27 SECRETARY'S REPORT MINUTES OF DECEMBER'S MEETING

The meeting was called to order at 10:20 a.m.

We discussed the Christmas Party and how much fun the Chinese Grab Bag was.

TREASURER'S REPORT: Beginning balance was $341.33. The ending balance was $619.93.

EAA dues this year will be $15.00 to the local chapter and $35.00 to national. We all must belong to the national.

Members present decided we will only order EAA calendars for whoever orders them, so as not to have too many left over. The calendars will cost $7.00.

We will send the $45 insurance money to national. This insurance will cover us for a million dollars liability. The president has forms for people to sign if we offer orientation rides at one of our events. We also have forms of release for riding in experimental airplanes.

It was discussed that next year we should have more technical education on aircraft designs and components and construction. We do plan to have technical demonstrations, as before.

Jim Rowley reported on his trip to Ellis Tech School next to Danielson Airport, CT. They offer a number of services we can use, such as engine repairs, air frame repairs and avionics and paint. They have, in the past, done good work.

Steve Daniel gave a talk on using small radios such as hand held units. An amplifier can be used to boost antenna power.

Jim Rowley talked about Connecticut sales tax. He recommends that when we buy an airplane or parts for it, to send the sales tax in and keep track of the receipts. If you don't, you are responsible for the tax penalty and fines from the date of purchase. Some people were asked about purchases ten years ago. In Jim's case it was five years ago.

The meeting came to an end at 11:35 a.m.

Ed Schinitis

MESSAGE FROM SIRI-DEV S. KHALSA

Dear friends and fellow aviation enthusiasts:

I'm writing this as I have noticed many people are curious about my change in appearance, but are hesitant about asking. After being a Sikh for 17 years, I have decided it was no longer right for me. Therefore, I have stopped wearing the turban, trimmed my beard, and cut my hair (believe me, it was a lot longer than it is now). I am still a spiritual person, but do not affiliate with any religion at this time. I am also getting a divorce and am now living on my own. These are all good changes for me. What isn't good is that I will probably lose the house (with my workshop in the basement) through the course of 1992. If this does happen, I will be needing a place to move my Cozy project. If you have any ideas, I would love to hear from you. I currently live in Middletown and work in Waterford (next to New London), so places west of Meriden would probably be too far away. My new phone No. is 347-4071, and my current address is 96 Main St. Ext., Middletown, CT 06457.

SiriDev S. Khalsa

ENGINE KNOCKED OUT

The pilot and passenger were on a pleasure flight in an Aeronca model 11BC Chief when the engine began knocking and losing power. A forced landing was carried out with substantial damage to the aircraft but no injuries to the persons on board.

Examination of the failed engine, a Continental C85-12, revealed the following discrepancies:

- Exhaust valve guide measured 0.012" outside the limit.
- Exhause valve part #3921-TP failed at stem where excessive wear occurred from erosion.
- Log indicated engine accumulated approximately 600 hours during the past 13 years.

The engine failure was due primarily to fatigue failure of the #4 cylinder exhaust valve, which according to the report had weakened as a result of erosive wear. The contributing factors were evidence of extensive internal wear, which is typical of an engine that remained in service for a long period of time without proper care or frequent operation. An Aviation Safety Bulletin, TP 248 76/11, warns about the corrosion problems that an engine may encounter if not inhibited during prolonged periods out of service. A safety message for the A&P: Inspect the condition of the valves and check the compression of old or infrequently flown engines very carefully. A message for the pilots: Use the engine more often or lose it.

EAA CHAPTER OFFICERS FOR 1992

President—Jim Rowley: 237-7179
Vice President—Stephen Daniel: 268-1738
Secretary—Ed Schinitis: 237-2869
Treasurer—Pat Manning: 274-5240
T. Consultant—Dennis Sullivan
Newsletter Editor—Herb Bullock: 272-8007

INCREASING SPARK PLUG LIFE

From the Central States Association Newsletter
Terry Schubert, Editor

Let's take a walk back to high school electronics and recall electron flow. The little guys that whirl around the nucleus of the atom have a negative charge and move from places of excess electrons to points of electron deficiency. In other words, current flows from negative to positive. Every time an electron jumps from a negtaive point to a positive point it reduces the mass of the negative point by at least one electron. If current moves from point A to point B then point A will shrink. Point B will probably stay the same or maybe increase a very little bit.

If we apply that bit of logic to a negative ground automobile spark plug we find that the spark will jump from the ground electrode to the center electrode. A close examination of a high time automotive spark plug from a breaker point ignition system, will show the ground electrode tip to be worn nearly to a point. The ground electrode has been transferring away one electron at a time.

Let's look at the ignition system in our four cylinder aircraft engines. The ignition source is a magneto which gets its electrical pressure (voltage) from a spinning magnet. Magnets, as you recall, have North and South poles. Every time a pole on the rotating magnet passes the coil a high voltage spark is induced. One spark will have a negative charge while the next one will have a positive charge. The polarity changes with every rotation of the magnet in the magneto. Likewise the direction of electron flow across the plug gap will vary from one plug to the next.

The spark is distributed to the spark plugs through high tension (high voltage) wires. The spark plugs are fired in a certain order. The four cylinder Lycoming fires both cylinders on one bank and then both cylinders of the other bank. The firing order is 1 - 3 - 2 - 4. The magneto is timed through gears that couple the crankshaft to the magneto. This means that the polarity of the electrical charge on the number 1 cylinder will always be the same. The number 3 cylinder fires next and will have the opposite charge. The number 2 cylinder fires next and will have the same charge as the number 1 and number 4 will have the same charge as number 3.

If number 1 is + (positive) then 3 will also be +. Numbers 2 and 4 will be – (negative). In this case plugs number 1 and 3 will have a shrinking ground electrode while plugs numbered 2 and 4 will have shrinking center electrodes. The center electrode will soon look football shaped and be rejected as worn out.

It would be nice if the electrode erosion was even so that plugs would lose metal from both electrodes instead of just one. If this could be achieved we would have nearly double the spark plug life, assuming you don't drop one as I have while cleaning them. EUREKA there is a way! It's called rotate your spark plugs.

Every 50 hours or so remove the right top front spark plug and swap it with the top back plug, the left top front plug is traded with the top back plug in that bank. Do the same with the bottom plugs. Keep the plugs with the same magneto to assure that you really are changing the firing polarity. In other words trade top #1 with top #3, top #2 with top #4, bottom #1 with bottom #3, and bottom #2 with bottom #4.

Your spark plugs will now lose material more evenly from all electrodes and you won't have to trash the plugs until all the electrodes are worn out. Your plug life, as determined by electrode wear, will approximately be doubled. If you are really into increasing spark plug life you should also trade plugs so that the longest harness wire plug gets interchanged with the shortest wire plug. It seems that the long harness wire will store capacitance energy that is not used during ignition. This causes after firing which will increase electrode wear. Electrode wear factors are more complicated than I thought. Now you can get all the life from your plugs.

DECEMBER ATTENDANCE REPORT

Jim Rowley	Don Whelan
Pat Manning	Stephen Daniel
Edward F. Schinitis	Michelle Hanlon
Frank Mlynick	Bill Fischer
Fran Uliano	Jim Simmons
Ed Morris	Herb Bullock

CALENDAR OF EVENTS

JAN. 11-12 — SOUTHINGTON, CT — Connecticut Lighter Than Air Society Safety Seminar (featuring Per Lindstrand). Contact Robert Zirpolo (203) 250-8441 or Rob Metz (203) 389-9272.

APRIL 5-11—LAKELAND, FL—EAA Annual Sun 'N Fun Fly-In.

JULY 31-AUG. 6—OSHKOSH, WI—EAA Oshkosh '92. For more information call (414) 426-4800.

FOR SALE

1982 FORD V6 GRANADA ENGINE—3.0 Liter, 232 cubic inch, aluminum head, 30,000 miles. $350—Charles Maxted, 272-4922.

AIR PROGRESS MAGAZINES—Also large assortment of antique and model aircraft magazines—1960's vintage, make offer—235-2169.

IT'S THAT TIME OF YEAR AGAIN!

DON'T FORGET YOUR DUES!

HERB BULLOCK
1315 Meadow Road
Cheshire, CT 06410

1992 EAA CHAPTER 27 MEMBERSHIP FORM

Please fill in the following form and mail with your dues to: **PAT MANNING, 340 PLATT ROAD, WATERTOWN, CT 06795-1731.** (Dues are $15.00 per year. Make checks out to Pat Manning).

Name .....City ..... Phone.....

Street .....State ..... Zip.....

Current EAA No. .....Pilot Rating Held .....

Do you own an aircraft? ..... Make and Model.....Registration No. .....

Do you have a project? ..... How much completed .....

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