

SKYWRITINGS

February 2009

EAA CHAPTER 439 CENTRAL U.P. of MICHIGAN
www.eaa439.org The Yoopers!



- The Spirit of 439—
 Bruce Rutter CFI Saga
- What'd They Say??
- Inspect Your ELT

The President Speaks!

Tom Sullivan

toms1@chartermi.net

I thought the Christmas Party was well attended and seemed to be a success. When parking becomes an issue, we obviously are getting a nice turnout. For those that missed it, my renewable energy projects were a bigger hit than the Lancair. But the Lancair progress was pretty limited (thanks to the recent shoulder surgery).

We had a short meeting relating to the Ford Airport Day that was productive. We will take a pass on the B-17, and schedule our 2009 event in September again. A lot of ideas were floated and our committee will get back to work. Without the ability to provide a true “air show” we are looking at a lot of attractions that will meet the EAA guidelines and still draw the public. I think the simulator ideas have the most promise for the mid to older age kids. Obviously we’ll continue the Young Eagle flights, and will consider orientation flights for others. A good assembly of old military static display aircraft is planned as well.

I was reviewing the “Chapters E-gram” a few days ago and discovered links to EAA’s site for “From the Newsletters” section, which gleans some of the best newsletter submissions and places them on the national site for others to read and learn. Our very own Dave Vandenburg had one of the featured articles, his last Tech Column article about brakes. Congratulations Dave, it’s nice to see you recognized for your great work.

We lost a member this past month, Wes Hendrickson. I can’t imagine anyone that didn’t like Wes. He was such a friendly guy, always seemed to have the time to say hi and talk with you about recent developments. Reviewing the many pictures chronicling his life, it was pretty evident Wes enjoyed life. My prayers go out to his wife and family. He will surely be missed by all of us.

We discussed at the Christmas Party about having our next meeting. It was decided we would meet at Aaron’s place for the February meeting. Hope to see everyone there.

Tom Sullivan

The Next Meeting

Is at Aaron Gustafson’s
Map on page 7

For info contact Aaron at Ph 906.774.0683

Saturday February 7 9 CST / 10 EST

The Spirit of 439 ...

Bruce Rutter and The Journey to CFI

Interview by Aaron Gustafson

I had finally started taking flying lessons, a dream I'd had for some time, when I was hit by a drunk driver and had my neck and back broken. Then I spent 3 ½ years in the hospital, learned how to walk for the second time, and now was ready to get back to the business of flying. I had to fight hard to get a third class medical.

I finally got that medical and resumed my training for private pilot. I started flying in April of '02 and that's when Brooks left here. I had to quit flying or buy a plane. So I bought a plane in Oct '02 started flying again in Nov of '02 with Les Brown. I received my private pilot certificate in June of '03.

Shortly after that I thought, an instrument rating would be good. An instrument rating seems especially good to have if you fly around this area of the country. And since you have to have an instrument rating with 500 hours to fly for Northwoods Airlifeline, which I wanted to do, it seemed a natural next step. It took me until July of '07 to get my instrument rating.

I had talked to the examiner and asked, "What would it take to get a Commercial license?" He said it was a matter of "flying a high performance plane for 10 hours with an instructor and doing commercial maneuvers". I took the written test for that and Aug 20th, a month later, I took the oral and checkride for the commercial and passed.

At that point Chad Kubick said, "We could use another instructor". I started reading what that was all about and I actually became a mentor through AOPA. I would work with student pilots or private pilots, not instructing, but helping them and mentoring them. That was a lot of fun so I thought, well, it can't be too bad to become a flight instructor. Let me tell you, that's the farthest thing from the truth. It was tough. First, you have to learn the fundamentals of instruction and take a written test for that and that's probably the easiest test. You also have to have spin training in order to become a CFI. You get to do a lot of things with the plane in spin training. You flip the airplane upside down and twist it and spin it. The instructor acted like the student, putting us in one of these unusual attitudes and I'd act like the instructor getting us out.

Next, I needed a CFI who's been instructing more than 24 months and clocked over 200 hours with students. That was a problem. CFI's with both those requirements are hard to find around here. I decided to go to Green Bay and see what kind of program they had to offer down there. I contacted a fellow and his comment was, "we can probably get you finished up in 100 hours".

A hundred Hours!!! There was no way I could justify going down there for 100 hours and that was at \$50 /hour for him and \$187/ hour for a the plane. I called Madison and Waterford and a few different places and they all had their own little ways of how they wanted to do it and "we'll try maybe to fit you in" and so it was very frustrating.

I waited until Les Brown came back from Florida and I was able to work with him. I actually got signed off with Les and then I worked with Doug Richardson, who is a gold seal CFII. I actually flew with 4

No, we
don't
give you
notice

different CFI's.

In any event I was signed off and I called the Grand Rapids FSDO to set up an appointment.

I said, "I need to do an oral and check ride".

Their comment was, "Okay, be here tomorrow morning at 8:00".

So I said, "Well I don't know what the weather is down there tomorrow morning at 8:00. I'll have to check this and I don't think I can do this but let me check". Boy I got read the riot act, where "we say you come down here and you have to be here at this time".

I said, "Well, I don't think I'm going to be able to do that. First of all I have to bring two planes". I was going to use Chad's Cessna 150 which is approved for spins. (You have to have a plane you're approved to do these maneuvers in.) And I was going to use a high performance complex plane supplied by Dennis Whitehead. "I think I need a little more notice."

"No, we don't give you notice, you be here when you're told to be here."

I cancelled right then.

I called back later and asked if I could get several different dates. And it's like, "No, we tell you when to be here". To make a long story short, I became thoroughly frustrated trying to determine when I could actually get there. Then we had a safety seminar that a couple of FAA people came up here for. I talked to them and told them the problem I was running into. To make another long story short, a gal from the Grand Rapids FSDO called me soon afterwards. She was very very pleasant and she said, "I understand you're trying to do a check ride. I have a couple of options for you. It may be easier if you work with a designated examiner out of Traverse City. His name is Whit Balentine."

So I called him and we talked several times over the phone. The weather there was either bad, which was normal this time of year, or we couldn't get out of here. There was always some issue coming up and finally I got to a point back in December where I said, "I really really need to do an oral test because I don't know what a prop is anymore." Whit said that would be fine and to come on over. I drove over on Thursday and took my oral test on the 19th of December. That oral test was really interesting. Whit sat down and explained to me that "the failure rate for this test is 95%." He says, "Are you ready to begin"? And I don't remember anything he said after that.

...a little
emotion
here!

The test starts off with the fundamentals of instruction and when they ask you a question you explain the whole question. How are you going to teach; what are the four fundamentals of teaching; what are the rote, understanding, application, and correlation?

You explain everything, giving definitions and demonstrating on a blackboard and with model airplanes. Everything you can think of about the plane is asked and you explain it. Then the private pilot part of the test, which is going through all the charts and regulations and things like that and then you go into the commercial side of it. It's thorough and I don't care what anybody says, you're intimidated. We did three hours into it and he said, "We'll break for lunch. Do you have any questions"?

"Yeah, I said, How am I doing?"

And he says "you're doing fine, you really are."

Well, Whit's a nice guy anyway so I'm wondering is he just being a nice guy or does he really mean it. In any event, we broke for lunch. He had gone out the door to go to his car and I thought, "I'll go out and start my car and warm it up." It was really snowing out, a real blizzard. So I opened the door and Whit was talking to a gal out there and he says to her, "Yeah, those CFI oral tests are long and really hard and intimidating, but that guy in there is doing a really good job." Well, I closed the door quickly and went the other way. He left

and I went out to my car. When Whit came back he said, “Okay we’re going to begin again.” And I don’t remember anything he said after that.

We were done at 4:30. Whit had been doing a lot of writing and he asked if I’d noticed? I said, “Yeah”.

Then he says, do you have any questions?

I said, “Well, how’d I do?”

“Oh, you passed you did just fine.”

“Thank you!”

He says, “You made it in the 5%.”

The FAA really likes to stress that, why, I don’t know.”

Next came the check ride. January 6th was the date. Whit explained again about the 95% failure rate, and “if you don’t enter the maneuvers in the proper way or maintain things within the tolerances, I have fail you, no exception.” So I said “Okay, let’s get this failure out of the way.” Whit said, “Here’s our pre-flight and here’s what we’re going to do.” And I don’t remember anything he said after that.

We got outside the delta airspace in Traverse City and for a solid hour and 10 minutes, it was nothing but maneuver after maneuver. Every commercial maneuver every private pilot maneuver: maneuver after maneuver. As we returned Whit said, “Can you do a short field landing doing this, that and the other thing?” I did the landing and he says, “That was too easy, now we gotta do it over a 50 foot obstacle. And I want the tires right here on this part of the runway no exceptions if you want to pass this.” Well, no pressure there. Then of course he says, “What’s your speed going to be?”

How I did it in my head so quickly I don’t know, but he says, “That’s exactly right.” I came down and put it right where it was and did every thing I needed to do. Whit said, “Ahh that was too easy.” He kind of chuckled. We went around, and he says, “Just do a regular landing. No, No, do one under the power curve. I want a soft field landing under the power curve.” I did that and he says, “That’s all I need to see.” We taxied back and Whit said, “Any questions?”

“Well, how did I do?”

“You did fine, you passed.”

Hey, give me a little emotion here!

It’s been such a huge relief. My hat goes off to any CFI for it is truly an accomplishment. I’m glad it’s done.

[A Pilot Song](#) (river landing) sung by Garrison Keillor

Once on the site click on LISTEN

In the Editors Words -

Aaron Gustafson

agustafson@chartermi.net

If you missed the party at Tom’s, you missed a good time with lots of great food. There was much interest in Tom’s wind generator project so I thought that at the next meeting at my house (February 7th) in addition to the Kolb MK 3, I would display and demonstrate some of the tools and equipment that I have built. Among them will be an engine preheater, engine dehydrator, sand blast cabinet and working 3 phase power converter. There will be coffee, snacks and full lunch served.

What'd They Say ???

By Bill Landry

Okay, so say you are flying along on a nice cool winters day going to KXXX Airport for a \$100 hamburger. You are on flight following or maybe on an IFR plan. You get near the airport and before ATC hands you off, they say "N56978, Tapley Mu (or could be Tapley Bowm) for the runway is a 31, taxiway is a 25." You look at your copilot and say "HUH? "

Do you know what they are talking about and what the numbers mean? It is a report of the braking action you may expect when you hit the binders after touchdown.

Back in the early days, someone realized that some sort of control on the slipperiness of the runway for take off and landing was needed, especially as most airports were grass. The airport manager would drive out onto the runway and do a skid test. If he thought he skidded to far, he would close the airport. As this wasn't all that reliable, someone decided that a better method was needed.

Back in 1946, SAS was using DC 4 aircraft in Scandinavia at an airport with a runway length of 1200 meters or about 4000 feet (my meter to feet calculation might be a little off). Oh, and the runway had steep slopes at each end to make things more interesting. The airport manager of the time, after a few accidents decided to do something about it, so he loaded a big truck with sand got up to 30km/h or about 19 MPH (calculations again) and hit the brakes, locking up the wheels. He then recorded time and or distance to a full stop. After developing a rather lengthy formula, he found someone to test it in one of the aforementioned planes, and lo and behold, he was right.

As time wore on, and other airports started using this method, it was discovered that a heavily loaded truck takes a tremendous toll on breaks and tires. So, over a period of time in the 50's, another airport manager decided on another method and introduced the Tapley meter to his northern European friends. This is an accelerometer installed in a car, which is accelerated and then, at a selected speed, the brakes are applied. With the car in a skid, the reading is recorded. As another method, something called a skiddometer (I didn't make this up) was invented to measure and record maximum friction instead of skidding friction. I could go on about the loaded 3 wheeled cart, and a measuring wheel pulled behind a Volvo, but by now you are yawning, so on to the meaning of the numbers.

Once again, the Swedes set things straight. As other European pilots were flying to Sweden and wondering what the heck these numbers meant, SAS decided to do a survey and get some opinions. They sent out over 3000 questionnaires about braking friction asking for thoughts on the new system. From the answers they got, it was found that a coefficient number of .40 (the long formula again), indicated no braking problems while a number of .25 or lower indicated severe problems. And that brings us to what the numbers mean.

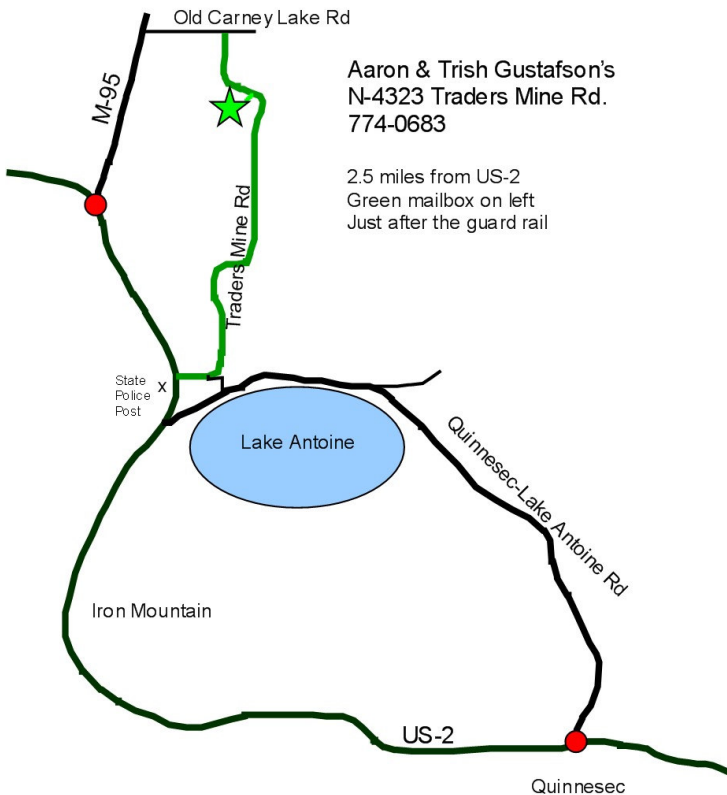
- .40 means GOOD
- .36 to .39 means MEDIUM to GOOD
- .30 to .35 means MEDIUM
- .26 to .29 means MEDIUM to POOR.
- .25 or below means POOR

So, now you have the meaning to those mysterious numbers. At present there are about 4 different manufacturers of the Tapley or Bowmonk meter, but the numbers all mean the same thing. My advice, when landing on a runway with "thin patchy ice covered by a thin layer of snow" use the brakes only as needed. I don't need to be called out on a cold winters day to pull you out of a snow drift.

"Keep the oily side down and the shiny side up when landing"

Map to Aaron's

FUTURE EVENTS



Feb 7

Inspect
Aaron Gustafson's
Kolb MK 3 project

March ?

Terry Glimm's
Escanaba

Schedule a meeting at your home
or hanger.

FOR SALE WANTED AIRCRAFT PARTS AIRCRAFT ULTRALIGHTS PROPS ENGINES

EAA 439 members place your ad here by sending it to agustafson@chartermi.net
Please include price and contact information in your ad

WANTED Rotax 582 Overhaul video Contact Aaron agustafson@chartermi.net

FOR SALE 1946 Luscombe 8A. 65 HP. Chromed C65. All metal. Hand held + Gel Cel Battery. Old GPS.
Light Sport eligible Asking \$20,000.
Contact Don Brackenbury Ph 906.786.3882 or d.brack@att.net

FOR SALE TRADE or PART OUT:

BD-4 four place high wing Project. Val Bernhardt's 464VB is a complete aircraft less engine and avionics. Includes extra parts, extra rear stabilator, full set of extra fiberglass wing tubs, new set of fiberglass wing tips. Some restoration done. \$4500 OBO
Contact Lloyd Ph 906 774 7379

FOR SALE Weedhopper 40, Rotax 447, 7 hrs. TT, like new, electric start, full panel, w/ trailer. **REDUCED \$5000 OBO.**
Ph 906 346 3237 (reason for sale, Need hanger space)

Inspecting the ELT

We are all intimately familiar with the requirement for (and wisdom of) a through inspection of our aircraft and all its systems at least once a year. Those of us with certificated aircraft call this the “Annual Inspection” (among other, less printable things), while the amateur builders among us know this inspection as the “Annual Condition Inspection”. The inspections are really the same and are governed by Appendix D to 14 CFR Part 43 (the FARs) and require that we inspect (among other things) “all equipment for improper installation and operation”. This month I would like to discuss the procedures to properly inspect our Emergency Locator Transmitters, known as the “ELT”. Note however, these instructions apply to the “old” (or maybe “current” is a better word) type of ELT that transmits on 121.5 and 243.0 MHz. The next generation (406 MHz) units will have different inspection criteria which we will address in the near future.

The inspection of an ELT involves removing the unit from its mount, checking the mount, the antenna, and the transmitter for physical damage. It also means checking the control and antenna leads, evaluating battery condition, verifying automatic activation switch operation, and insuring adequate signal output strength. Let’s look at these in a little greater detail.

To begin, we need to disconnect the antenna and control wires (if applicable), release the clamps, and remove the unit from its mounting bracket. If the clamps are safety wired, we will need to cut or break this wire. While we are on the subject, if the clamps are safety wired, I recommend you resafety with brass or copper wire. We want the clamps to stay fastened but we may need to remove the ELT and carry it with us in the event of an off airport landing and it can be tough to break stainless steel safety wire without tools.

Once you have removed the ELT take a good look at the mount. Insure all mounting hardware is in good condition and is not corroded. If you find any discrepancies, replace the defective hardware. We want the ELT to remain firmly in place in the event of an off airport landing. Also inspect the wires and connectors that you just unhooked. Look for damaged or missing pins, damaged or abraded wires, and corrosion on the pins. Figure 1 shows a typical ELT and the coaxial cable and connector. Next, take the ELT to a clean, well lite workbench.



Figure 1

Once you have the transmitter in hand, do a through inspection of the case for physical damage. Examine the connectors for missing pins or corroded surfaces. If all is well, open the battery compartment and look for any corrosion or evidence of leaking batteries. How you treat the batteries depends on the type of battery installed.

If your unit has rechargeable batteries make sure they are fully charged and have the proper voltage. Consult your owners manual for the specifics here. If your unit uses “D” cells, I recommend you replace them every other year, even though they have not been used. The old batteries will still have over 90% of their usefull life and can be used in your kids “Boom Box” or a flashlight. If all is good and the batteries are servicable, reassemble the unit.

While we are discussing batteries, do not forget to check the replacement date of the battery in the control panel if your unit is so equipped. A lot of ELTs use a small 12 volt battery in the panel and these batteries should be replaced every four years.

We next need to check that the unit will activate itself in the event of a crash. The procedure to do this depends on the type of unit you have. Look at the label on the case to determine the TSO number under which the unit was built. TSO stands for Technical Standard Order and is the standard governing the construction of the unit. If your ELT was built under TSO -C91 it can be activated with a quick rap of your palm. If the unit was built under TSO-C91a, it can be activated by a rapid forward throwing motion coupled with a rapid reversal. You can use a wattmeter or the aircraft radio tuned to 121.5 MHz to verify that the unit has activated. Note however, since you are activating the unit and it will be transmitting a signal, this test should be done only in the first five minutes after the hour and the unit should remain on for no more than three audio sweeps. You should also have an antenna connected to protect the output transistors. If this test is satisfactory, we need to verify the power output of the transmitter.

There are a couple of methods of verifying the power output of your transmitter. If you have access to a wattmeter, insert it into the coaxial line to the antenna. Most ELTs should produce about 50 milliwatts of RF power. The power output should be listed in your owner's manual under "specifications". If you do not have access to a wattmeter, simply hold an inexpensive AM broadcast radio (tuning dial on any setting) about six inches from the antenna and activate the transmitter using the "on-off" or test switch. If the signal strength is sufficient you should hear the audio sweep on the AM radio. Do not use an aircraft or handheld radio for this test. The Aircraft Band radio is very sensitive and will probably hear a signal that is too weak for Search and Rescue to hear. Again, remember to do this test in the first five minutes of the hour and for a maximum of three audio sweeps.

Before we declare victory and move on, we need to take a close look at the antenna. Here again we need to remove the coax connector and inspect the both the male and female ends for damage, missing pins, and corrosion. Look at the antenna mounting hardware for damage and corrosion. Also examine the skin and doubler around the antenna mount. If you find any corrosion, it must be removed, and the cause determined. Sometimes the seal around the base of the antenna has deteriorated and is allowing moisture to become trapped between the antenna and the aircraft skin. Often we can clean up the corrosion, repaint, and apply a small bead of an approved silicon or RTV sealant around the base of the antenna. Be cautious though. Some types of RTV will attack aluminum so be sure to select a sealer that is compatible with the structure. If the stuff you have smells like vinegar, do not use it on your aircraft as it can damage aluminum.



Figure 2

If your unit passes all these tests, you can reinstall the ELT, do a final operational check (activate the unit from the panel), insure the switches are in the proper position (armed) and complete the paperwork. Most units will only fit in the mounting bracket in one position, but insure the arrow printed on the transmitter is pointing forward. Be sure to record the next required battery inspection date on a small tag attached to the transmitter and to record the inspection in your aircraft maintenance log book. Figure 2 is a photo of the mounted ELT showing the arrow and tag with the next required battery inspection date.

Now that wasn't hard, was it? You can now fly knowing your ELT is working properly, even though it is one piece of equipment you probably hope you never need to use. Till next month then, fly safe, stay warm and I will look forward to hearing about your current project at the next Chapter meeting.

EAA Chapter 439
P.O. Box 264
Quinnesec
MI 49876



Contributors to this issue of Skywriting's

Journey to CFI	Bruce Rutter
What'd they say??	Bill Landry
Cover photo	Unknown

EAA CHAPTER 439 OFFICERS:

Chairman of the Board: Whitey Jensen 517 Sagola Ave. Kingsford, MI 906-774-5550

President: Tom Sullivan P.O. Box 264 - Quinnesec, MI 49876 906-774-0098 toms1@chartermi.net

Executive Vice President: Jim Riverside W9390 Nocerini Rd. Iron Mountain, MI 49801 jriverside@charter.net

Vice President: Mike Youngs 1716 River Street Niagara, WI 54151 i2av8or@yahoo.com

Treasurer: Terry Glimn 972 14.5 Lane Bark River, MI 49807 906-466-5325 tnglimn@dsnet.us

Secretary/Web Editor: Mike Betti W9424 Peterson Drive Iron Mountain, MI 49801 906-779-1368 mbetti@hughes.net

Editors: Aaron & Trish Gustafson N4323 Traders Mine Road Iron Mountain MI 49801 906-774-0683 agustafson@chartermi.net

YE Coordinator: Scott Trask N4592 Bass Lake Road Iron Mountain, MI 49801 906-779-9157 strask@diisd.org

Membership Coordinator/Nominating Chairman: Bruce St.Onge embryeagle@gmail.com

Volunteer Chairman: Donna Sisk N2210 Patrick Place Lake Geneva, WI 53147 Cell 954-647-4396 Siskdk@aol.com

Technical Counselor: David VanDenburg 140 Station Road Gwinn, MI 49841 906-346-7576 WA8DOF@yahoo.com

Librarian: Bruce Flannery 6403 Russel 23.4 Lane Gladstone, MI 49837 906-428-2292 bflannery@chartermi.net

Dues are \$15.00 a year! From August 1st Please send them to our treasurer!

Website: www.eaa439.org