

WHAM

NEWS VIEWS AND REVIEWS



Official Publication of the Wichita Historical Aircraft Modelers, SAM 56,
and the Kansas Sunflower Squadron, FAC Squadron #23

Issue JE-69
Date: 7/04/07

**NOTE: Don't use flying field until Notified!
Owner plans to hay field in July.**

Funfly tentively moved to July 21-22

The Cox 1/2 A Texaco engine — Bill Schmidt

I have sat on the sidelines for sometime watching and reading all the brickbats and dissention over the Cox reed valve engine used in the 1/2A Texaco event. This has been going on for years. People either want to get rid of the things because they are fussy and their results with them have been very frustrating, or they seek constant rules changes to alleviate what they perceive to be the problem. I remember quite well back in the early 80's when many time grand champion Bruce Norman, (remember him) refused to have anything to do with them because they were so aggravating. He was not alone either then or now. Let's talk about this a little bit and look at some facts.

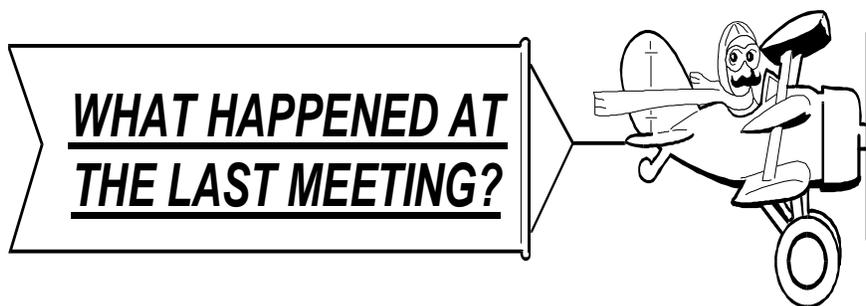
I am the person responsible for the factory produced 1/2A Texaco engine first brought out by Cox in 1988. The engine came about as a result of conversations with the then Cox owner, Bill Seltzer, at the Toledo shows. It took two years of push and shove as he initially laughed at the idea. I said, "come up with a special box and use selected existing parts of perhaps a different color combination, and let marketing take it from there". One day the phone rang and Bill said "let's do it"! He put Larry Renger in charge of liaison with me to make sure an optimum product would be developed. The first ten engines sent to me were the large 10 cc tanks with a .055 carburetor throat, std. low compression head and no colors. The rules change to use the 5 cc tank was still in the future. I enlisted the help of fellow club member, the late Dean Zongker, to help me sort things out. We flew these engines in a 300 sq. in. nimbus that could handle the Kansas wind extremely well. We would fly the power portion of the flight only, and spin down rapidly to conserve battery after the engine ran dry. This went on for a couple of weeks until both of our wives began to raise heck about the exercise, and being gone all the time. Looking back we should have told them we were engaged in a money making secret project. Anyway, the first thing we learned was that an .055 carb did not work well. You were always chasing the needle valve trying to get a steady run. I called Larry every day or two and kept him posted on the results.

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I suggested that we go to the stock .0625 carb throat and things worked out fine at that point on. The design was frozen at that time and Cox started producing the engine. I had nothing to do with the large fin special glow head that came out with these engines, and feel that they addressed a problem that didn't exist. I did however, strongly suggest to Bill Seltzer that the fuel tank or some part of the engine be anodized a brilliant purple color. This was due to my knowledge and exposure to the 1950 O&R .60 with the purple head and its effect on people. These engines were beautiful and much sought after by collectors. I was overruled and the Texaco engine came out as you know them today. I however, was not to be dissuaded, and had 10 tanks and crankcases anodized purple by the folks who did Cox's color anodizing for them. I flew one to victory and also grand champion at Seguin, TX in 1987. I still have them as a memento of this experience.

Now to the purpose of this treatise. The primary reason that people have so much trouble with the Cox reed valve engine is because they are ignorant of what they are dealing with in the physics of its operation.

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May 19, 2007 Meeting Minutes

ATTENDEES:

George & Mary Kay Avila, Jack & Eleanor Phelps, Jim & Marty O'Reilly, Ed & Char Salguero, Tom & Debbie Derber, Bill & Marilyn Schmidt, Earl & Jane Griffith, Les DeWitt, Jeff Englert, Larry Bishop, Terry Trisler, Ed Ross, Bill Lindsay and Mary Schrock, a head count of 21.

President Ed Ross called the meeting to order.

The previous meeting minutes were approved as published.

Jim O'Reilly presented the treasurer's report. The club is carrying a larger treasury balance now that the bulk of the newsletter is presented online. He also reported that the club's 2007 AMA insurance policy and stipend has been sent to the flying field's landowner.

OLD BUSINESS:

Jack Phelps reported that the flying alert system is in place and working well. It consists of four members who parlay the call to fly in the event of good weather.

The difficulty encountered in arranging for a picnic to be held at the July meeting has resulted in a date change to July 21st. The meeting will be as usual at the Cortez restaurant.

Jeff Englert reported that the church indoor flying site is gone. The church has turned the space into additional sanctuary space. Terry Trisler stated that the indoor boys were looking into other sites, and having discussions with various churches for the use of their gyms.

NEW BUSINESS:

Today's Flying contest results published elsewhere in this newsletter.

SHOW AND TELL:

Bill Schmidt brought 2 boxes of wood and various supply odds and ends from the estate of the late Bob Arnett. Club members were free to pick and choose any and all of the stuff they wanted. Bill had for show, a 27" Telco Co2 powered Interstate Cadet model in blue and white of his classic American Light plane series.

Earl Griffith displayed a std. size Jimmie Allen Bluebird in yellow and blue. Earl also showed a completed dime scale of the Martin MO-1 carrier aircraft. George Avila had a box of plans to give to those who wanted them.

The Cox ½ A Texaco engine — Bill Schmidt

I strongly suggest that you take a clean tank back plate by itself, and attach a 6 inch length of fuel line to the fuel line attach nib. Now screw a std. needle valve into the back plate to the fully closed position. Open the needle valve 1 turn out and suck on the 6 inch fuel line with your mouth. This exercise will give you a vivid idea of just exactly what is happening inside this engine when it is running. That's an infinitesimal rate of flow that is going through this engine in its normal operation. In fact, one wonders how it functions at all. By the way, the ¾ to 1-1/2 turns open is where you want to be for a good performing ½ A Texaco engine. If yours requires a greater opening than this after break-in, then you need to switch piston/cyl, back plate or orally check the reed valve for a perfect one way check valve operation. It must check very positively when you blow on the reed retention area and it must flow air very freely when you suck on it. Suck and blow very rapidly to observe this action. Say, 7300 times a minute! The reed must not squeal when you blow it shut! Replace it if it does. The mylar reed must be perfectly flat as viewed in reflective light. So much for the understanding as well as the prerequisites for what it is that you are trying to do.

Now we come to the good, (arcane) part of this exercise. What do you think small particles of dirt in the fuel do when they encounter the needle valve with its extremely small rate of flow capability. That's right! It gives you fits and makes you cuss and throw your transmitter on the ground! Settle down and listen up because there is a cure for this problem. Strain your fuel 2 or 3 times through a coffee filter and funnel into a ½ or 1 pint **liquor** bottle!!! Okay now, I know there are people out there who have issues with that, and won't have, or tolerate a liquor bottle in their house. I have some fellow club members who feel this way. I don't know exactly what to tell you as an alternate because nothing else works as well. You don't even have to go into a liquor store to obtain one. I go to the nearest public park and select from the ones I find there. Don't use the cheap plastic ones because they are milky and exhibit poor optical quality. Some guy used to throw a really nice Gordon's ½ pint gin bottle into my front yard at night several times a week! This was really appreciated, and saved me a lot of trouble obtaining good fuel bottles. The bottle must be clear glass and narrow, not round, for good viewing in the sunlight. Wash it out and check the fit of your favorite hypodermic needle before you go any further. The same size bottles vary widely in their neck I.D. Precision manufacturing I guess. One liquor store owner asked me to please leave after I came in with a dial caliper to measure the necks on the ½ pint bottles. When you discover the best bottle remove the labels by soaking in hot water. Get it very clean and use lacquer thinner if need be to remove the last vestiges of the labels. After filtering your fuel as above hold the bottle up to the sunlight and look for tendrils and flotsam swimming around in suspension.

You will be in for a surprise at how much there is in the fuel. It is hard to get it perfectly clean at times. What you do is get it as clean as you can, and then let it set (settle) for a day or two. I have never understood where it comes from, but in a weeks time if you shake the bottle, hair like tendrils and other particles will be disturbed and rise up in the fuel when held up to the sunlight for viewing. This debris seems to thrive and actually grow in the fuel. What I do is strain the fuel a few days before an outing and do not disturb it in transport to the flying field. Keep the bottle upright in some manner in your flight box or elsewhere. If you really have to win the event that day, then just find a way to visit your competition and shake up their fuel cans! I can't imagine anyone flying 1/2A Texaco with fuel from a can, and you won't either after you do what I have suggested. I do not use castor oil fuel and only 12 to 15% synthetic as well as about 7-8% nitro to keep the fires lit. You will not varnish up if there is no castor present. Do not break in an engine with this formula, use standard fuel for this. Be advised that this formula can also wipe out a main bearing in rainy conditions, but will give you the longest engine runs you can get legally under normal conditions. You must use after run oil after flying with this fuel. I strongly suggest using only Shaler Rislone brand engine oil additive obtained at an auto supply store. Be sure and work it well into the main bearing right behind the prop drive washer. Propeller? I swear by the Cox gray 8-4 plastic even though it is cast with the blades 178/182 degrees from each other. Didn't know that? Just put the prop on its side on a flat surface, and then flip it over on its other side and notice the difference in the two heights. Run it on your engine one way and then turn it 180 degrees and see if it is smoother. Put it on the way it runs the smoothest. You should get 7300 rpm on a standard day. A stellar engine is one that turns over 7300 with a nv opening of ¾ -1 turn open. If while you are testing engines, you find you have a nv opening in excess of 2-2-1/2 turns then stop. You are wasting your time with that engine. Old, used Babe Bees are plentiful and are your best bet for a good runner. Believe it or not, the early Babe Bee with the single bypass port, and somewhat narrow exhausts with no sub piston induction is capable of some really good performance. These are the engines found at the bottom of the barrel. Keep your glow head tight and go get 'em.

Bill Schmidt

June Fun Fly Results

June 9 2007

Those showing at the flying field Bill Schmidt, Jeff Englert, Jack Phelps, Tom Derber, George Avila, Ed Salguero, Jim Lehrman and son, Jim O'Reilly and Earl Griffin.

These following recorded on my pad. Bill was flying an 020 Playboy but must have been testing for next weekend at KC.,as no times were recorded for him. Jack Phelps

WHAM Flying results as recorded.

Flyer	Model	1st flight	2nd flight	3rd flight
1/2A Texaco RC				
Bill Schmidt	Alert	15:00 (900)		
Jack Phelps	Playboy	8:41 (521)	13:48 (828)	
Ed Salguero	Sailplane	8:03 (483)	6:21 (381)	
Jeff Englert	Playboy	10:11 (611)	8:43 (523)	

Small Rubber SAM & FAC Combined

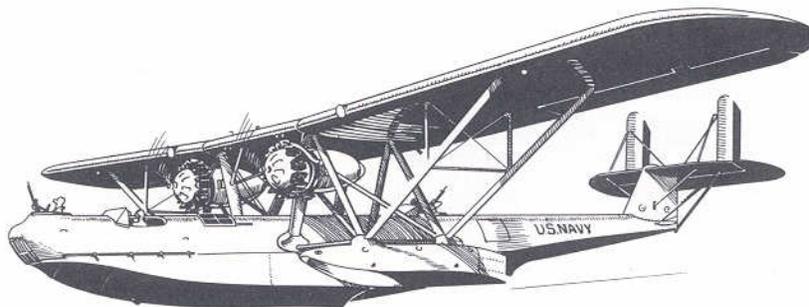
Tom Derber	Gollywock	1:24 (84)	1:40 (100)	2:00 (120)
Bill Schmidt	Flemish Defiant	:35 (35)		
Jack Phelps	Gollywock	1:12 (72)	1:28 (88)	1:51 (111)
Ed Salguero	Jabberwock	1:02 (62)	1:13 (73)	:52 (52) (landed in tree)

SAM FF .020-O/T Replica

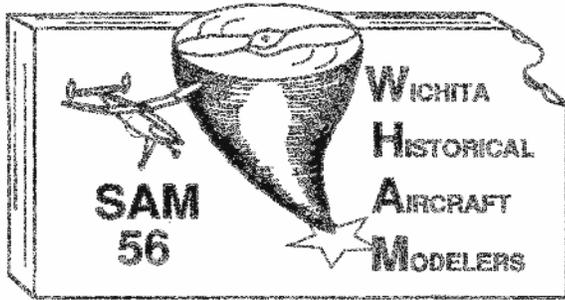
Jeff Englert	Strato Streak	:40 (40)	:44 (44)	:44 (44)
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NFFS 1/4A NOS.

Jim Learman	Spacer	102 sec.	72 sec.	56 sec.
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MARTIN P3M-1 Large U.S. Navy patrol bomber. It was produced fitted with amphibious gear.



FLYING ACES



**Sunflower Squadron
Wichita, KS**

Date: 7/04/07 ISSUE JE-69

→ The next SAM 56 Dinner Meeting will be at:

Cortez Mexican Restaurant 344 W. 29th St.

Saturday, July 21, 2007

Social Hour @ 6:00 PM, Dinner @ 7:00 PM.

Upcoming Events:

July 21-22,

**Meeting, fly SAM 1/2A Scale R/C, FAC Golden Age Civil Scale, FAC WWII
Mass Launch, SAM .020 Replica**

Jul 30-Aug 3,

AMA FF Nationals, Muncie, IN

August 11-12,

**fly FAC Old Time Gas Replica, SAM LER R/C, FAC and SAM Small Rubber Com-
bined, WHAM Post 1940 Civilian**

→ **Membership Information:**

Open to all interested AMA members, founded to encourage and promote the model airplane building hobby.

Member dues \$20 annually, Subscription only; \$12 annually, \$18 foreign.

Send checks to Jim O'Reilly, 4760 Battin, Wichita, KS 67220.

All memberships and subscription renewals are due January 1st of the new year.

Club Officers:

President:

Ed Ross, 682-9692

Vice-President:

Bill Lindsay, 689-8491

Treasurer:

Jim O'Reilly, 744-0856

Secretary:

Bill Schmidt, 744-0378