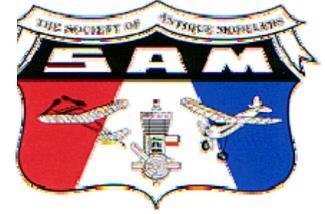




THE NEWSLETTER OF SAM 26, THE CENTRAL
COAST CHAPTER OF THE SOCIETY OF
ANTIQUe MODELERS. JUNE 09 #236



HARDY ROBINSON-PRESIDENT
1456 W. TRIMERA AVE.
SANTA MARIA, CA 93458
805-739-0329

JIM BIERBAUER-SEC/TREASURER
519 W. TAYLOR ST. #381
SANTA MARIA, CA 93454
805-928-0918

BOB ANGEL-EDITOR
1001 PATTERSON RD.
SANTA MARIA, CA 93455
805-937-5145

NEXT CHAPTER MEETING will be at Jim Bierbauer's on June.17. The Battle of Bunker Hill was being fought on that day in 1775, but we'll pass on staging a re-enactment.

LAST MONTH Dick Fischer commented on statistical Mean Time Between Failures (MTBF) and the unlikelyhood of two near identical failures in a row. He first had an erratic engine run on his Flamingo. He later found a broken servo mount which made his ignition **microswitch** erratic. Shortly after that, another ship (his Bomber) quit running during a contest flyoff no less. The servo switch mount screws had loosened, making the **microswitch** erratic.

After the above report, his McCoy again began running erratically, further defying the odds. This time, threads on the plastic adjustable servo link had loosened enough over time so that it rotated under vibration just enough to shorten itself, causing an erratic **microswitch**. Since it didn't happen during a flyoff, we won't declare demonic possession of microswitches just yet.

LOTS OF AA BATTERIES for a cheap price were promised in an internet display passed along by Steve Remington. A fellow demonstrated opening up one of those square 6 volt lantern batteries sold at Wal-Mart, K mart etc., for supposedly 5 bucks or so. Inside were 32 AA cells in plain unmarked wrappers.

ENELOOP BATTERIES: Sanyo is marketing new Nickel Metal Hydride batteries called Eneloop's. I'm not sure what that name means, but the advertising hype claims 2,000 MAH capacity (for AA size) and a capability to retain 85% of full charge for a year. I bought a "kit" of these things at COSTCO, consisting of 8 AA cells, 2 AAA's, plus a handy little charger and some cover "sleeves" to use the AA's as C or D cells. The price was a reasonable 20 bucks for the package. So far, I'm not sure they live up to their specs, but I'll be using and testing them further in my camera, which holds 4 AA's and which eats up batteries quickly. They do not have solder tabs, so this particular combo might not be best for a flight pack

The batteries were supposedly charged and ready to go, but the first four took over two hours on their charger right out of the pack, while full charge is supposedly about 7 hours. Since I'm sure they weren't nearly a year old, that doesn't equate to 85% of full charge out of the package. I charged and cycled the second four twice and came up well short of 2,000 MAH. But we'll see what happens after some use and a few more cycles.

OFF THE SUBJECT: Personal boats have been accurately described as "A hole in the ocean, into which money is poured." The local paper ran an article describing favorite boat names. Following the above theme, the boat name that caught my eye was "What College Fund?"

Dick Fischer sends the note below after getting his McCoy under control (at least for the moment). Dick has long used other engines such as Orwicks, Andersons, or Cunninghams because he felt they were more reliable than the McCoy's. But he's finally joined the crowd, so watch out world!

Bob,

I've been mulling my McCoy reliability problems and think I have a little better insight after having tried to run one for a while. Maybe we're both right about the merits of the McCoy. Here are my thoughts:

1. There is no question that the McCoy is the most powerful commonly available 60-sized ignition engine. By far.
2. My concern has always been with reliability. That is, whether the engine could perform to its full potential flight after flight.
3. The engine itself is very solidly built and there is no reason why it can't run consistently time after time. On a test stand, it's a great engine.
4. Nearly all of the problems that I've had operating the engine are airframe related, rather than with the engine itself. I've had problems with tank mounting, servo mounting, switch operation, landing gear mounting, wire integrity, etc.
5. Note that all the airframe problems I've had seem to have cropped up on a highly reliable and well tested airframe, but only since installing the McCoy. And they have all been vibration related.
6. Based on these observations, I think to have a reliable McCoy powered airplane it is necessary to build the airplane from the ground up with a much higher standard of vibration resistance. Heavier mounting, solid front end construction, locking provision on all fasteners, and exceptional wiring practices are all in order. Another design consideration would be maintainability. My Bomber is built for lightness, but I didn't worry about maintainability because my prior experience had been "put it in neatly and forget it". A good McCoy airplane needs to have excellent access to all ignition components for regular inspection, troubleshooting and maintenance.

Dick

Actually Dick's remarks are pertinent for all high revving engines. High frequency shakes things loose faster than those high amplitude slower engines on larger props that Dick is used to running. But though those big heavy all purpose Taipan 14" props I used to use on an O&R 60 really tamed down the shaking. Today I use a smaller prop and put up with the shaking.

Wait! Hold that thought about vibration frequency for a minute! Maybe the MTBF (Mean Time Between Failures) isn't based on running time at all. What if it's a function of how many total "shakes" an airframe has seen? With a higher revving engine, it would get there faster at more SPM (Shakes Per Minute). Yeah, that must be it.





WHO, WHAT, WHERE? What's the source of those photos on this and the previous page? They come from SAM Chapter #122 in the Slovak Republic, one of two chapters in that country. The photos were taken at a meet featuring the Tomboy design where they obviously had a very good turnout.

You'll notice several interesting things about the ships. First, check out the immaculate workmanship and the fact that almost all have the ship's name and date of origin prominently displayed. I wonder if that's a rule, or just an unwritten policy they've settled into. Either way it's a neat idea and does nothing to detract from appearances.

Second note the neat finish and covering job on that Kloud King. It looks extra pristine to me because of the stark contrast to my own beat up old Kloud King. I'd never have the nerve to display mine over there. Maybe it'll inspire me to do a recovering job - - - someday.

And that ignition installation on the O&R 60 above is a very practical addition with its RC controlled spark advance. It wouldn't be competition legal under US SAM rules, because it's a Hall effect unit but it would make a great fun fly ship. And that neat brass fuel tank is probably isolated from the engine vibration. On further thought I'm not sure I'd want to display any of my ships among such a sanitary looking field.

WING FAILURES: Someone (Steve Remington I believe) sent an internet video of the Boeing Company performing a destructive failure test on one of their new aircraft. They actually took a huge airliner, strapped it down and applied increasing lifting pressure to a wing tip with a heavy duty indoor crane. It broke catastrophically at just over 150% of its' designed failure point.

The point of mentioning this is that the failure occurred in the buckling mode in which the upper spar(s) collapsed. This is a reminder for our own wing construction. Lots of early model designers tried to put more beef into wings with more or stronger bottom spars. But today, it's fairly common knowledge that the upper spar(s) are the ones that need to be strongest. It's something to keep in mind during construction.

AND CAP STRIP CONSTRUCTION, was recently pointed out as one method of adding lots of torsional rigidity to a wing, making it less prone to flutter and self destruct.

TANDY WALKER used and passed along a construction idea he'd borrowed from Gene Walloch, the SAM Librarian. While building a Playboy Tandy added a thin sort of cap strip along the fuselage longerons, whose purpose was to prevent the covering from partially clinging to the vertical uprights.

The May 2009 issue of Model Aviation has a build article on an SE-5 by Gary Ritchie. Gary highly recommends using Titebond's Molding and Trimwood glue. It's thicker than traditional carpenters glue and set's up rapidly. It's available at Lowe's Home Center \$4.27 (not at Home Depot), and can be ordered through your local Ace Hardware Store as Franklin International 2403 Wood Molding glue. A Goggle search on-line also offers several mail order sources.

Product Features:

- Beige color, dries translucent • Storage Life ~ 12 Months
- Bonds most porous and semi-porous materials • Strong initial tack
- Extra thick formula helps fill small cracks and gaps • No-runs, no-drips
- Unaffected by finishes • Excellent sandability
- Easy cleanup with water • Nonflammable

Titebond® Molding & Trim Wood Glue

Titebond Molding & Trim Glue is the thickest, fastest-drying glue available for use with porous and semi-porous materials. It is ideal for finish trim, crown molding, baseboards, window casings and other applications requiring a professional-strength, no-run wood glue.

Titebond Molding & Trim provides a strong initial tack and fast speed of set, yet allows realignment of working pieces. It also develops a bond stronger than the wood itself, offers excellent sandability and is unaffected by finishes.



LET'S GET ALL SCIENTIFIC about clevis adjustment and try to do it in one shot instead of multiple tries. Why? Because many of those control clevises are hard to take off and put on easily without gouging the airplane. Not only that, it sounds much more impressive and high tech to anyone who might not realize you could do the same thing through trial and error.

This little adventure began when I was working out the programming for throttle-elevator mix (last issue) and applying it to a ship. Recall that when you do this on the Futaba 6EX, the throttle initially moves the elevators evenly in both directions, so it's necessary to re-trim the elevators down by half the total change to get back to the initial glide position. I suppose on a more sophisticated transmitter you could probably program the up and down mix separately, but not on the 6EX unless I missed something.

You could just make the adjustment using the transmitter trim controls and leave it at that, but that would leave something asymmetrical. Or you could keep guessing and trying, but either method disturbs me as much as it would TV detective Adrian Monk.

I have these seldom used tools lying around, so I decided to actually measure things using gadgetry and arithmetic to get it right without multiple connects and disconnects of the control horn. So the first thing was to use the Great Planes surface deflection gauge to record the initial elevator setting for normal glide.

I'd already programmed the throttle control as master and the elevator as slave with 15% mixing. So when I switched everything on and moved the transmitters throttle lever to its center position, the elevators were in glide position as established during previous flights. After recording that deflection on the gauge, I moved the throttle lever down to the engine off position (which raises the elevators) and took that reading. The idea was to then adjust the clevis to move the elevators back down to their glide position at throttle off.

SO HERE WE GO with the arithmetic: The elevator measured 3-5/8" (or 3.625") from the control horn center to the aft end where the deflection measurements were taken. The control horn measured 1-1/16" (or 1.0625") from the hinge centerline to the clevis hole being used. The clevis uses a 2-56 thread, so each full turn equals 1/56", or .0178571".

The deflection gauge can be set for inches or metric, but it takes a couple of minutes to remove and reverse the scale. Mine happened to be set for centimeters rather than the coarser 1/16" increments, so I just left it on centimeters. The difference in the two elevator deflection readings was 6mm, which is half the total "slave" travel and the amount I wanted to move the elevator via clevis adjustment.

THE DIGITAL CALIPER caught my eye at this point. Why go through a conversion process with a calculator when it can be done quickly and easily with a digital caliper. I just turned the caliper on, switched it to metric and rolled it open to read 6mm. Then a push of the button switched that reading to .236 inches. There's probably a calculator made that would do the same thing automatically but I don't have one. I'll file that caliper conversion trick in the back of the head somewhere for future reference.

The 3.625" elevator length was divided by the 1.0625" horn length, giving us a multiplier of 3.41. We want the elevator to move down .236", so we divided that by the 3.41 ratio to get .0692" needed at the control horn pivot. Then we divided that by the .0178571" per turn of the clevis, yielding a nominal 4 turns.

When I later flew the ship to check things out, it turned out that the 15% trial mix was an improvement but still too conservative. So I went to 25% mix and had the privilege of repeating the entire above process. After all the fancy arithmetic, it still turns out that the basic mix needed to allow the climb out at neutral elevator setting is pure guesswork. Now I suppose one could cure that by adding an elevator stick position indicator which would show up on the transmitters' screen. I'm not sure they haven't already thought of that on one of those \$2500 dollar transmitters. But I've never even held one of those for fear of dropping it.



Here's the Great Planes deflection gauge in use. That spring arm and black pad on top has a twin on the bottom. This allows you to quickly clip it onto a control surface for measurement.

SNIPPETS FROM THE INTERNET:

IF YOU MUST FLY A DIESEL: Hank (Free Flight) Sperzel says Lava soap will get rid of the diesel smell from your hands and Oxi-Clean™ will take the smell out of your clothes.

SANDPAPER IS SANDPAPER. It's all the same. Right? Wrong! I recently bought some Norton sandpaper at Wal-Mart advertised as "Cuts 3X faster, Lasts 3X longer." It lives up to the advertisement. What a difference from the stuff I was using! I encourage you to try it. No, I don't work for Norton. Grant Carson

And Bob Slater added: 3M makes a similar product. It's called Sandblaster. I'm still using a piece on my sanding block after a year.

NICAD EXPLOSION: From the late Don Blackburn: I had a scary experience day before yesterday. Bench running a sparker and no spark. So as I have done dozens of times, touched the plus clip of my booster batteries to the minus to see if I had any juice left in my three cell, D size NiCad booster. The instant I touched it, a terrific explosion which knocked me off my feet and lacerated the inside of my thumb in two places... Pain got so bad, I went to the ER. They X-rayed it and I had a small fracture in the first joint. Anyone hear of this phenomenon before?

Battery Guru Red Scholefield answered Don: 3 D cells in series. Discharged to the point where one cell reverses, hydrogen generated within the cell, pack shorted, internal tabs heat up due to high current and provide ignition source for the hydrogen. BOOM!

RESULTS FOR SAM 21 RANCH ROMP 2009 by Jake Chichilitti, Contest Director

ELECTRIC SPEED 400 LMR

STEVE ROSELLE	22:34	1ST	DALLAIRE
VON WARNER	20:15	2ND	LANZO BOMBER
AL NICKERSON	19:26	3RD	DALLAIRE
EUT TILSON	13.39	4TH	SCORPION
BRIAN CHAN	8:04	5TH	SIMPLEX

ELECTRIC LMR

DAVID WARNER	3:32	1ST	STRATO STREAK
--------------	------	-----	---------------

CONCOURS

MIKE WARNER		1ST	DALLAIRE
-------------	--	-----	----------

A GLOW LER

MIKE WARNER	9:29	1ST	RC-1
DAVID WARNER	7:43	2ND	LANZO BOMBER

A TEXACO

MIKE WARNER	15:29	1ST	RC-1
DAVID WARNER	9:01	2ND	LANZO BOMBER

ANTIQUE COMBINED

DAVID WARNER	15:55	1ST	LANZO BOMBER
WAYNE CONNER	15:47	2ND	LANZO BOMBER
MIKE WARNER	14:25	3RD	RC-1
VON WARNER	6:37	4TH	SCRAM

B GLOW LER

DAVID WARNER	5:06	1ST	LANZO BOMBER
--------------	------	-----	--------------

TEXACO COMBINED

MONTY PATE	33:31:00	1ST	DALLAIRE
STAN LANE	30:40:00	2ND	ANDERSON
MIKE WARNER	5:56	3RD	RC-1
DAVID WARNER	3:31	4TH	LANZO BOMBER

C IGNITION LER

STAN LANE	15:21	1ST	ANDERSON
VON WARNER	3:07	2ND	SCRAM

OHLSON SIDEPORT

VON WARNER	4:22	1ST	SCRAM
------------	------	-----	-------

C GLOW LER

DAVE LEWIS	14:10	1ST	LANZO BOMBER
JAKE CHICHILITTI	10:26	2ND	DALLAIRE

O.T. GLIDER

DAVID WARNER	14:48	1ST	OLYMPIC
VON WARNER	13:05	2ND	SPIRIT
MIKE WARNER	6:36	3RD	WANDERER

SAM 26 Ed Note: We hear it was a bit windy, which meant that only the braver souls flew, keeping the number of flights lower than usual. Just 3 SAM 26 associates were there. Don Bishop and I (Angel) attempted to make it, but circumstances intervened.

1/2 A TEXACO

STAN LANE	21:29	1ST	ANDERSON
GARY LEOPOLD	19:27	2ND	RAMBLER
DAVID LEWIS	10:28	3RD	ALERT

BROWN JR. LER

STAN LANE	11:09	1ST	RC-1
GARY LEOPOLD	7:58	2ND	POLLY
VON WARNER	6:15	3RD	SCRAM
LOREN KRAMER	2:15	4TH	TRENTON TERROR

B IGNITION LER

WAYNE CONNER	16:00	1ST	AIRBORNE
STAN LANE	6:04	2ND	ANDERSON

FOX A COY

BOB COVOLO	12:30	1ST	LANZO BOMBER
------------	-------	-----	--------------

A IGNITION LER

GARY LEOPOLD	14:00	MAX	1ST	PLAYBOY JR.	THREE WAY TIE.
WAYNE CONNER	14:00	MAX	2ND	LANZO BOMBER	CARD DRAW FOR
DAVE LEWIS	14:00	MAX	3RD	PLAYBOY JR	WINNER

ELECTRIC TEXACO

ANDREW TICKLE	17:53	1ST	????
VON WARNER	16:16	2ND	SCRAM
DAVID WARNER	11:45	3RD	STRATO STREAK

100 + TEXACO

MONTY PATE	26:03:00	1ST	DALLAIRE
------------	----------	-----	----------

Ed note: Steve Roselle reports the special four strokes only event went unflown. That was probably a result of the relatively short notice for preparation, and the reduced overall number of flights.

As you can see the Warner family did quite well, with three generations flying. That's Grandfather Von, Dad David and Grandson Mike. Much of the time their stiffest competition was among themselves. Eut Tileston forwarded the Schmidt Ranch scene below.



THE FINAL WORD is: I'm completing this newsletter on Sunday before our local chapter meeting on Wednesday. It normally will arrive for the locals via post Tuesday, so nobody should forget to be there. Bring something for show and tell. Out of area postal guys will see it later and Email recipients should see it earlier. I say "should" because some day SAM Speaks Editor Roland Friestad will be away from his computer and I'll have to find another way to get the letter converted to PDF for fast transfer. Thank you Roland for your contribution.

Robert L. Angel
1001 Patterson Rd.
Santa Maria, Ca 93455

