THE NEWSLETTER OF SAM 26, THE CENTRAL COAST CHAPTER OF THE SOCIETY OF ANTIQUE MODELERS. **MID AUGUST 2011 #257**

THE COASTAL FLYER

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NEXT CHAPTER MEETING will be at Jim Bierbauer's on August 17, @ 7 PM.

THE SCHMIDT RANCH July event which was cancelled will not be re-scheduled this year.

ENGINE RUNNING SESSIONS were beginning to exhibit a bit of malaise at once per month at the home base flying field. But interest has perked up lately as several new and different engines have shown up. Let's hope it lasts for a while before fading back into the doldrums. Have you ever noticed how a group of guys can stand and stare at a running engine until the tank runs dry? Oddly enough, I've never yet seen that happen while an electric motor runs until the battery is exhausted.

AN ELF TWIN started it all when Dick Fischer brought out an Arne Hende reproduction. It's a simultaneous firing opposed twin of .19 CI displacement. It was brand new engine and one of the cylinders was a little tight at the top, but it began loosening up with a couple runs and would probably break in just fine. It purred nicely and about the only problem it gave was an extremely sensitive needle valve adjustment.

A DELONG 30 also drew some interest, as none of us had ever run one. It was a surprisingly strong runner, that's often overlooked on the competition scene, especially on the RC side. Jim Bierbauer has a special ship in mind for it. It ran just under 10,000 RPM on gas'n oil.

AN ELF SINGLE was next. Non- engine collector Dick Fischer was so happy with the Elf Twin that he followed up by picking up the single on E Bay. It wasn't advertised as new and un-run, but we decided that it must not have been run much if ever. It was another Arne Hende built engine, but this one had problems, and took three Saturday running sessions to get results. The first problem was that the cylinder liner had been installed completely rotated out of position, partially masking off all three sets of ports. After fixing that, Dick discovered the next problem at the next running session.

The timer arm and castings limit the spark advance range. The timing was so far off that at full advance it still fired well after top dead center. The "cam" is a small wire loop that triggers the points and it was built into the wrong position. Dick was able to re-bend and rearrange the wire to move it into the normal range. It ran with reasonable power (for an Elf) after that but vibrated badly on a couple of balanced propellers. Later, Dick wrote:

"I took the cylinder off to see if the crank had counterweights. It does, but it's not built like the original and the counterweights look small and inadequate. Also, the rather tall piston is a single piece of cast iron or steel and the big end of the rod has a bolted-on rod cap. I'd say there is no way to fix the vibration short of making a new crankshaft, rod and piston. This is definitely more of a collector's display engine. Or maybe I could run it on a 12" prop." Dick

AN ARDEN 19 was run later. Arden's in both sizes (09 and 19) are just about the "snappiest", springiest engines you'll ever come across. That is, they pop over so crisply when you prop them that they seem really eager to run. This one was mine (Editor's), and here's why they seem so enthusiastic:

First the piston and cylinder are very round and they stay round because of basic engine design. It has 360° porting with four bypasses arranged evenly around the circumference. That means the four exhausts are also evenly spaced. The one piece all steel cylinder is screwed into the case. There is no distortion from one sided bypasses and exhaust being squeezed inside a non-symmetrical case of a different metal having a different rate of thermal expansion.

And my memory may be fuzzy, but I believe Arden wristpins are a ball and socket type similar to the small Cox'es. A conventional wrist pin can offer a small chance for distortion, compared to an assembly that is perfectly round. And the head screws in with no bolt down machine screws to distort anything. All this contributes to complete roundness of the piston/cylinder combination.

Many, possibly most Ardens have ball bearing crankshaft mounting. Also the engine sports a roller cam follower, which is so smooth that you don't feel any "bump" or timer friction as you turn the engine over slowly. This one ran about 11,400 RPM on alky FAI fuel and a Rev Up 8-5. The timer was at 34° advance, and would probably have accepted more advance without complaining.

But in running mine I did have a problem for which I mostly blame myself. The prop slipped a bit after I tightened it, so I tightened it some more. The fragile (sleeve type) prop screw broke. Repro prop screws are available from Woody Bartelt, but I elected to make a new one from materials on hand. I made a different type, more like the ones on a McCoy 60 or Atwood 60. It uses a flat prop washer eliminating Ardens odd little streamlined prop washer.

But in measuring for the new screw, I found the original problem, which was that the stock screw is too long for many props and the prop had slipped because the screw was bottoming out against the crank. So my heavy handed tightening had snapped it in two. If you plan on running an Arden with a prop hub thickness of about 3/8" or less, I'd recommend shortening that prop screw to prevent a similar problem. You could try to find a suitable washer to put behind the Arden prop washer, but you're unlikely to find one with OD and ID measurements that fit well and look right.

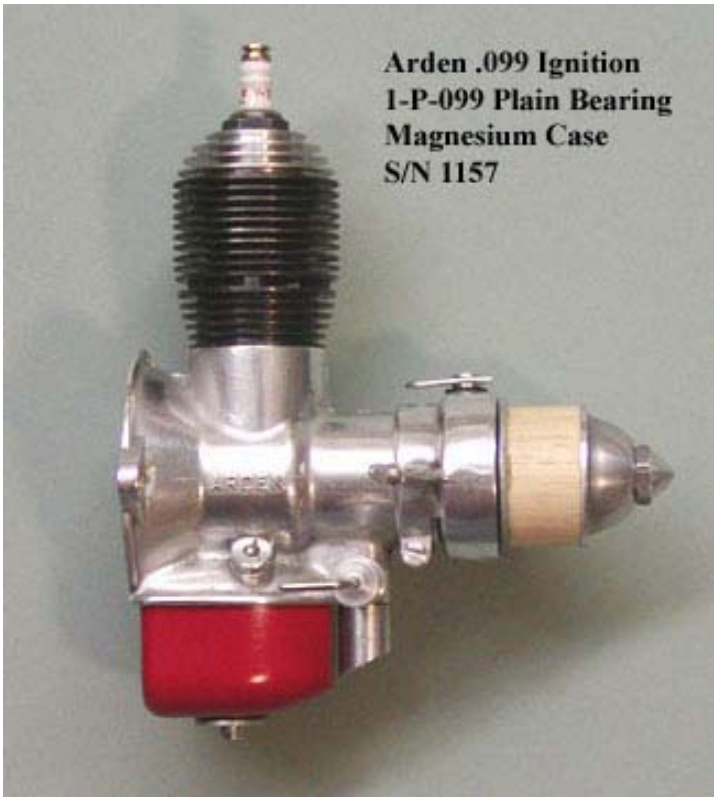
I checked out an Arden .09 and found that its' prop screw could also be too long for many thin prop hubs.

MORE ELF. Dick Fischer forwarded more information on the reason for the vibration in the Elf single. Here's Dick:

"Trying to understand why the repro Elf vibrated so badly, I missed the elephant in the room the first time around. While leafing thought the Elf book last night I happened to notice mention of an ALUMINUM piston. That seemed hard to believe since it has no rings, but there are several references to the aluminum piston, including Calkin's search for a low expansion alloy that wouldn't seize up in the steel liner as the engine got hot.

So I took the repro back apart and checked the piston with a magnet just to be certain. Guess what. Magnetic aluminum? The repro piston appears to have the same dimensions as the original, so that means the piston is 3X the weight. Fat chance of getting that to balance." - - Dick

Running a lapped aluminum piston usually gives problems, but it must have worked out on the Elves at their modest running speeds. The repro twin probably has iron pistons also, but vibration is tamed because the opposed cylinders fire simultaneously. In summary, if you ever plan on actually flying an Elf single, avoid the repro's and get an original. That vibration was enough to shake an airframe apart.

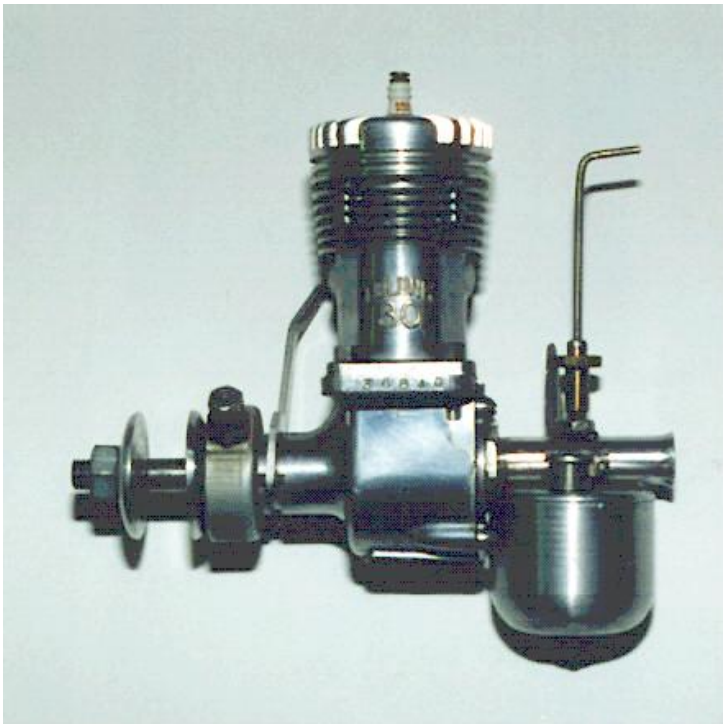


Tandy Walker did a nice restoration job on this Arden. The originals never had a shiny case that pretty and I'd guess that some maintenance might be required to keep it that way, as they tend to turn dark with age.

This one is an ignition version of which most came with a black tank. The later glow versions usually sported a red one as shown. So the factory may have supplied this one as seen, or it could be a replacement tank

Incidentally, I spent some moments trying to unscrew that little round knurled tank filler plug right above the middle of the tank. I finally remembered that it just lifts out and has a restraint to keep from getting lost.

Both color Arden tanks are bakelite and accept either gas or glow fuel.



And here's a Delong 30, which features rear disc rotary induction, similar to Hornet, McCoy, Dooling, etc. Although it's not quite in the same performance class, it's still a good strong running, nice handling engine.

The high mounting lugs are well above the crankshaft centerline and sometimes call for a different motor mount placement in an aircraft.

That aluminum tank is ready to accept either gasoline or alcohol based fuels.

36 TH ANNUAL JOHN POND COMMEMORATIVE

OLDE TYME RC CONTEST

Sponsored by SAM 26, the Central coast Chapter
Taft California, October 29&30, 2011

SATURDAY: Class A ignition	SUNDAY: Class A glow
Class B glow	Class B ignition
Class C ignition	Class C glow
Texaco	Antique combined
Electric Texaco	1/2A Texaco
Ohlsson Sideport	1/2A Scale
O/T Glider	Brown Jr. LER
Speed 400	Electric LMR

AWARDS: Every entrant will receive a commemorative plaque with space for add-on sticker awards through third place for each event. Also, the John Pond perpetual Sweepstakes trophy is based on all events flown, and the Perpetual Texaco trophy will go to the high time in Texaco.
ENTRY FEES are a mere $8 per event, with a $38 maximum if paid on initial entry.
RULES: SAM and AMA rules for 2009 will be followed with reasonable regularity.
SCHEDULE: Registration opens 8:00 A.M. both days. Pilot briefing 9 A.M. Saturday, 8:30 Sunday, with flying immediately after. Last takeoff 4 P.M. Sat., 3 P.M. Sun.
BANQUET: Saturday 7 P.M. at the Ranch House, 200 Kern St. near the Caprice motel. Order off the menu. Saturday's awards will be presented.
CHECK with the C.D. mid week before the contest regarding the event. No problems are anticipated, but it's always a good idea before traveling. And remember if there are weather problems where you live, Taft sits in a unique little weather zone of its own. Over the years we've never lost more than 2 or 3 flying hours to wind, rain etc. on any weekend.
CAMPING on field is fine, but there are no hookups (bummer, huh?).

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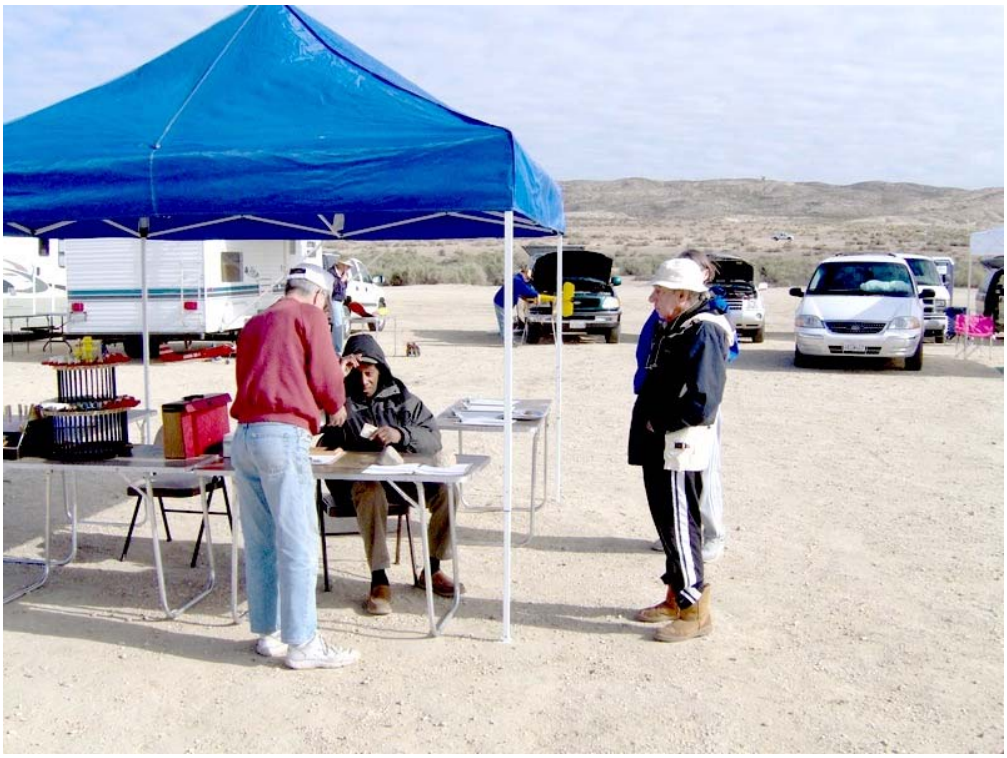
A SHORT LOOK BACK IN HISTORY: Here we were in **2008** at the Pond Commemorative.



Dick Fischer signs in with Registrar Hardy Robinson, while the late Dick Griswold monitors the situation.

Don Bishop can be seen in the background charging his yellow Bomber.

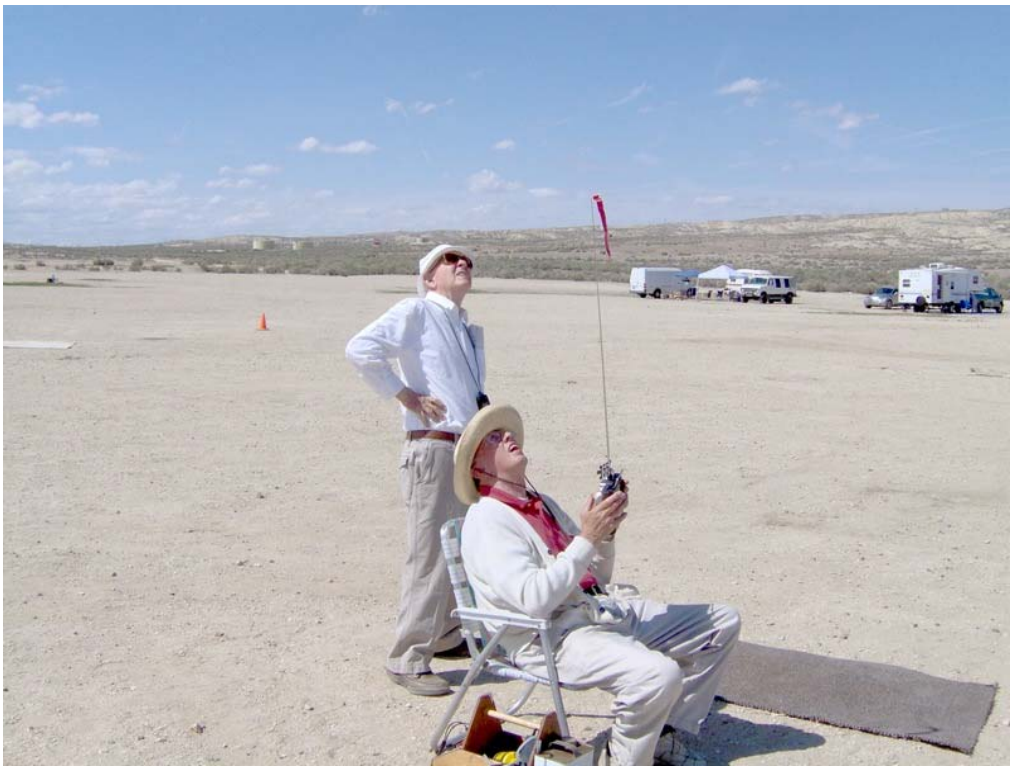
The view is looking at the hills North of the Taft flying field.

You can almost feel the tension as Bob Meyering's flight is timed by Bob Holman in the red hat.

Ed Hamler in the white shirt and hat didn't want to lose sight of his ship by turning around for the photo.

In the background at the very right, Don Bishop preps his Bomber with Steve Remington as timer

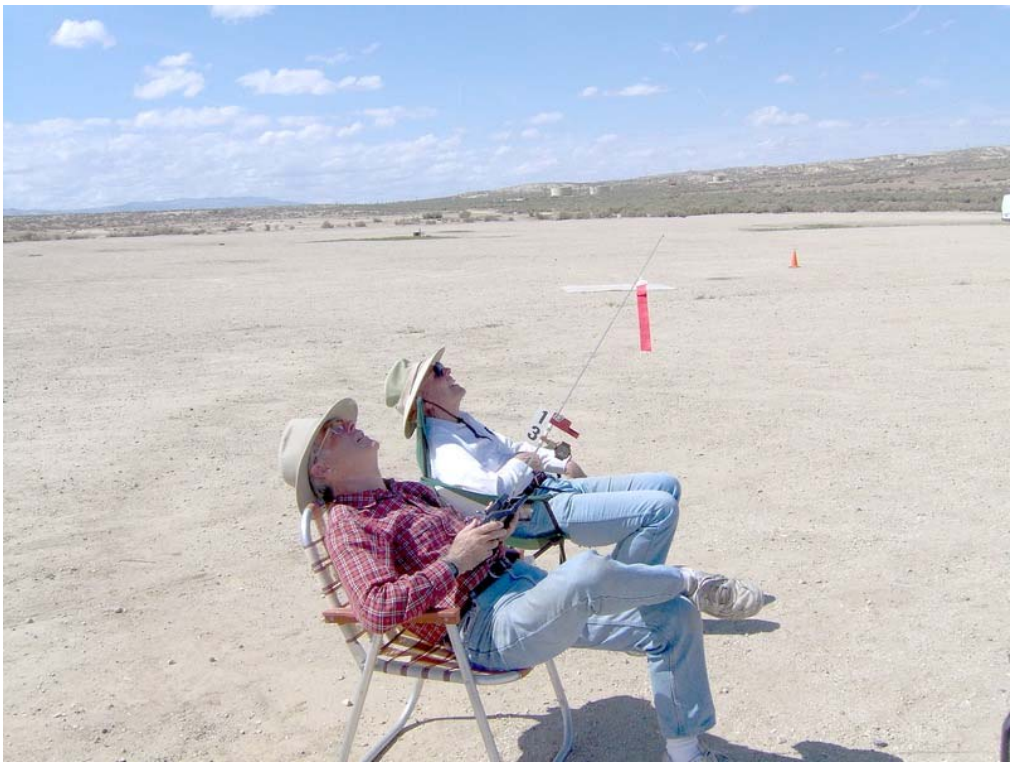
We’re still at the 08 Pond event at Taft.



Jim Bierbauer casually sunbathes his tonsils as the late Jose Tellez times for him.

Jim won Texaco with his OS four stroke powered Dallaire.

This view looks Northwest toward the city of Taft.



Dick Fischer won the Brown Jr. LER event flying his new pink Flamingo. Bob Angel times.

Before 2.4GHz, Dick chose channel 13 as probably being less crowded. He soon found several other non-superstitious people had the same idea.

DIESELS: This issue just sort of fell into an engine theme, so we'll continue with some diesel information mostly gleaned from a series of posts on SAM Talk a while back.

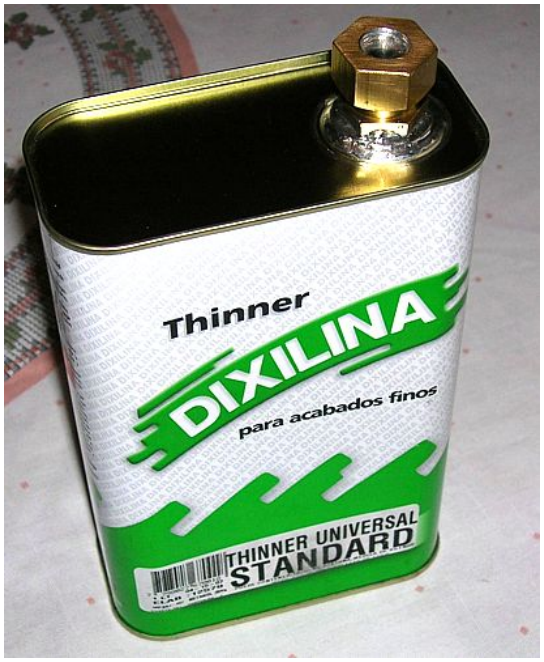
Diesel guys know most of this, so it's for the casual diesel user such as me, who has only bench run a few of the little stinkers. The ether used in diesel fuel is almost impossible to keep in the can. I have an outside fuel storage area consisting of plastic storage boxes half buried in the ground to help maintain even temperature. Despite keeping can lids tight, I smell a whiff of ether every time I open the container lid where the diesel fuel is stored.

Diesels are often hard to start for beginners. You not only need general diesel familiarity, but also familiarity with the peculiarities of each engine. Very often, just adding some ether to the fuel mix will bring instant success. Unless you're an FAI team racer, diesel mixes are like sort of like soup in that the precise amount of ingredients isn't critical.

Government regulations have made ether very hard to obtain. However there are spray cans of starting fluids on the market for big diesel engines that contain mostly ether. Jack Hiner, a seasoned diesel man mixes his own fuel and wrote this message:

"I use John Deere starting fluid reported to be 80% ether. I guess the other 20% is propellant and upper cylinder lube? I turn the can upside down and spray out the propellant. Then put the can in the freezer to slow down the ether molecules. Next take outside and punch two holes with an awl in the top around the rim 180 degrees apart. One hole as a breather the other to pour out the ether. Pour in a container for mixing. You will get about 8 ounces. Best to have the lube and kerosene handy so you can mix right away. Much less volatile that way. For ignition improver I use a product from Dr. Diesel, also known as Eric Clutton. He lives in Tennessee and sells PAW diesels and some CS replica diesels. I see him at the Toledo R/C Trade Show in April and get fuel, fuel line and ignition improver there. Sometimes he shows up at the Muncie SAM Champs." Jack

A basic fuel mix often recommended for beginners is equal parts each of kerosene (the basic diesel fuel), plus ether, plus oil. This is just for reference, as the best plan is just to order pre-mixed from a fuel maker. But even then, added ether is often needed, either because the fuel maker skimped on the ether or some has escaped after you've had it for a while. I've not mixed diesel fuel, but I've had a small supply of ether on hand and had to add a little at times to get a diesel started. But I don't know why you couldn't just shoot a little spritz directly from the spray can into your fuel supply.



Here is Alfredo Herbon's solution to keeping ether contained. He solders brass fittings made for household natural gas lines onto a clean can.

I'm not sure from the photo just what the final seal fitting is, but a trip to the hardware store would probably solve the problem.

The fittings available in Alfredo's home country
Of Argentine might be a little different than what we have locally anyway.

DAVE HARDING posted this on SAM Talk during the diesel discussions:

"Here is one for you (us!) diesel guys. One of the things that annoy me using diesels for Texaco is having to increase the compression to start and warm up and then unscrewing to finding the warm setting. My MVVS 61 requires about three whole turns to start and incrementally backing off to the flight setting. It is easy to get lost and be half a turn off if you are anxious to launch.

Well, Bob Angel published a picture of a European MVVS Texaco model in his SAM 26 newsletter (from somewhere in Europe via Bob Slater!). In addition to all the usual tricks used by these keen diesel Texaco flyers is they paint one side of the compression screw (Tommy bar as we say in England) so you can't be half a turn out.

In the Euro SAM RC Champs the fuel allotment is about half the SAM US rule and these guys run their engines so close to the edge they run them for as much as half an hour, checking the temperature and rpm to get the stable run before stopping, fueling and launching.

My last year's Euro plan was to fly the Giant with the MVVS diesel and Tiziano Bortolai, one of the very competitive Texaco flyers, was to provide my fuel. He told me that because the field was at 2000 ft he wasn't sure the best blend so would provide two different mixes with differing quantities of ether. Shame we had to waive off but maybe some time in the future we can complete the plan. Ed and Mary Hamler are already organizing the Rhine river cruise to Budapest for the 2013 event!

BATTERY CHARGING ODDITY: My main fast charger is a Hobbico Ack-U-Cycle. I like it because you program in the number of cells in the circuit, rather than letting it figure that out for itself. This seems safer to me, especially in dealing with potentially hazardous lithium cells. But the downside is it's up to you to correctly inform it of the number of cells, or you're still in trouble. The charger had never had a hiccup of any kind until recently.

One of my three cell ni-cd ignition batteries showed low voltage on the ESV, as if one cell was expiring early. I put it on charge at a moderately high rate and it finished very quickly with a small handful of MAH pumped in. Another check on the ESV showed pretty much full voltage. That didn't seem right, so I re-started the charge at a lower rate and it cooked for quite a while, pumping in lots more little MAH's. What apparently happened was that when the weak cell came up to voltage rather quickly, the charger decided that was a peak event and stopped the charge.

Had I not have checked the voltage on the ESV, and re-set the charger the battery would have dropped voltage in use very quickly. In the case of an ignition battery it would have just been a pesky inconvenience followed by troubleshooting expedition. But if that happened with the receiver battery, things could get messy. I'll consider replacing that ignition battery sometime soon.

FOUR STROKE PROBLEM SOLVED: At last Saturdays' flying session, Jim Bierbauer's new or near new Magnum 52 four stroke engine was cranky and unreliable. It would start and run with a drifty needle valve setting and quit suddenly at any time. So we set about with the usual guessing games about fuel, fuel feed problems, cold plug etc. Four strokes often run cold, and a hot plug is a near necessity. Jim put the glow lighter on and off while the engine was running and there was no noticeable difference. That proved the plug was in the correct heat range.

Then Don Bishop dug into his tools for the correct wrench to pull the valve cover. He and Jim found the intake valve had no clearance, so they loosened it and that fixed the problem. Once again we found a problem that seemed to have originated at the factory. This seems to have become more common lately, at least among our localized group. Factory manuals recommend rechecking clearance on four strokes, but that should only be needed after reasonable running time.

I MISS JOE WAGNER: Joe retired from writing the bi-monthly Engine Shop column for Model Aviation. Eric Henderson, the new columnist came aboard with the June 2011 edition. I don't know Erics' age, but he's obviously younger than Joe and most of us. So we can expect articles more in tune with modern back and forth type flying, including a move toward bigger engines. It's kind of a loss for us old timers, but a necessary move for the publication.

In his August 2011 column, Eric was discussing gasoline and methanol fuels, and states "I am unaware of any model engines that use both types because of the effect of different based fuels on components such as diaphragms, fuel lines and seals."

Obviously we need to get Eric out to a SAM meet for some indoctrination.

M.A. SUPPLEMENT: I was just critiquing above, but oddly enough, soon after writing that, some real complaints came across the internet, regarding the supplement that came with the last Model Aviation magazine. I'd just quickly scanned the supplement, and tossed it aside, but now it makes me curious to go back and read it. I just looked it up and the same new guy wrote the engine history article. It sounds like they should have let Joe Wagner review it before going to press. Here's one of the internet posts:

"Anyone else have some concerns re; the authenticity of most of the "history" presented?
Seems the contributor should have submitted his treatise to a model engine Historian! Along with all that is missing, what is glaring are the mis-speaks: "In the beginning there were working model engines such as the Atom & Arden .049 gas-ignition engines." News to me! Since neither of those two .099 (both by Ray Arden) existed in the "beginning". More like 1939 for the Mighty Atom (correct designation) and another 9 to 10 years for the Ardens; they came in .099 &.199 cu inch models. Both were later offered in glow plug versions when, Ray's revolutionary Glow Plug came on the scene. No it was not an invention of a mythical mister "Anderson" as our contributor would have us believe! Our author disregards the all the important contributions by pioneers in model engines." Of technical stuff he tells us of the requirement for "big batteries"? Two "AA" cells all that was needed for airborne electric, at least in my own free flight experience flying an Atom powered Strato Streak. Then he misleads us by insinuating the FOSTER. 99 was some sort of milestone or breakthrough development, for of all things; Free Flight! Having gotten to the area where he was heading at the git go he ends up using about 30% of the text area with a poor excuse partial photo of a 4 cyl. O.S. for which no data is given. Must have run out of "History! What planet did he say he was from? Hoping the M.A. Editor gets told of this aberration. Use to be Editors did some editing! Best regards; dd"

Well that was quite a blast. We'll have to cut the new guy some slack and hope the Editor at MA steers him into his more modern era of expertise. Incidentally, the RC history item also received criticism from a guy familiar with early RC. Here are his comments:

"I agree, the R/C history could (also) have used a bit more seasoning. No mention of gas tube receivers, escapements with quick blip throttle control, simple carrier only transmission to operate a relay or the single 27 mHz frequency we shared with citizens band that required a license, tuning of the receiver to the transmitter for each flight, introduction of semiconductors, Ni-Cds replacing primary batteries, etc. A lot of important history left out." RS

And Bob Bennet, the MECA bulletin Editor also weighed in as follows.

"Needless to say, the MECA people were appalled, both at the engine history and the r/c history as well. The MECA president interacted with the AMA and I think the effort is to be rewritten and published in Model Aviation." RB

THE FINAL WORD: This issue should reach the local guys just before the next meeting at Jims' house. If everything works out right, we'll have a participatory demonstration of how to warp some wash out in a wing that has been strongly built and covered. The attempt will be to use a hot air popcorn popper below and a heat gun above at the same time. Let's hope the wing is vented so we don't blow the covering loose with heat. Don't forget your other show and tell items.

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