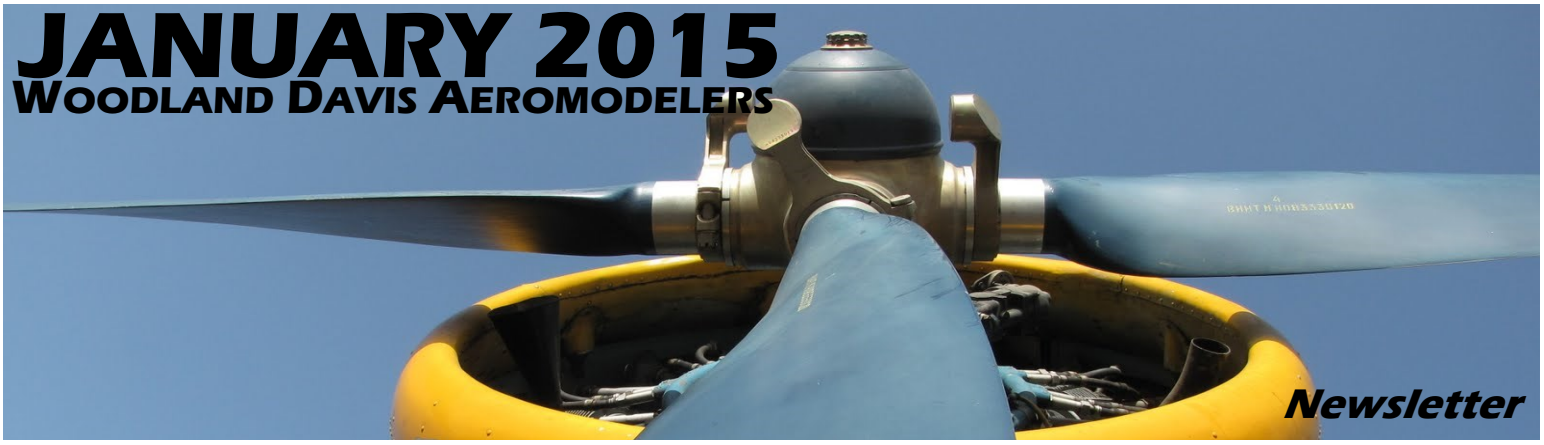
JANUARY 2015
WOODLAND DAVIS AEROMODELERS



Newsletter

FROM THE PRESIDENT

Chili and Chilly was a popular event this year. Weather was great, clear and low 50's, calm winds. The New Year's Eve portion was shy of flyers but there were some stalwarts at the field to celebrate the passing of the old and the start of the new. We tried to pry Forrest away from his fireplace to come fly his lighted Wanderer, but failed.

Forrest is showing his age, I guess. What might that mean for the rest of us?

Forrest did start the New Year with a new airplane, a ¼ scale Tiger Moth which flew very nicely. Jeff Lovitt shadowed him with his Nieuport. Many of our Bay Area members participated. Perhaps all we have to do is guarantee a Chili Feast to bring out the flyers? Many thanks to all the people who provided the food, it was great!

Mike O'Kane and Keith Young were flying in the helicopter area, Keith with his camera and screen equipped quadcopter and Mike with what is apparently a partially thought controlled helicopter. Judging from Mike's posture I think the thought control part may still be in the developmental stage.

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THIS MONTH

Special General Meeting Minutes December 8, 2014

Members present: X Ed Morgan, X John Eaton, X Jim MacDonald, X Mike O'Kane,
X Jeff Lovitt, Rich Geertson X Doug Barton _X _ Randy Sizemore X Chris Dellinger

Meeting called to order by John Eaton.
Last month's minutes reviewed, motion for approval, 2nd, and passed unanimously.

Recognition of guests and new members.

Officer reports:
President: Refer to News Letter

Vice President: Ed Morgan recapped the Board Minutes listed in the Board meeting minutes.

Treasurer: Jim MacDonald reported on Club account.
Secretary: None

Chair Reports:
Membership: Monte Pate commented the New Membership cards are ready to be picked up, renewal form is on the WEB site.

Safety: John Lett made comments relating to findings of the previous safety audit he performed.

Field Chair: Ken Rumsey is not present tonight.

News Letter: Glen Spaulding is not present tonight, if you have an article and desire it to be in the NEWS letter get hold of Glen.

Points Chair: Linda has sent Kerry all of the current info on the signup sheets.

WEB PAGE: Kerry reports the WEB page is current
Events Reports: Chili-N-Chilly on January First, rain or shine
Forrest Barton asked if members were interested in Indoor Electric Flying, he may have found a suitable facility, watch for more info to be provided.

Old Business: Fun Fly events and the 2015 Events Schedule. Forrest Barton is finalizing the schedules with other NorCal Clubs and will advise when completed.

New Business:
Dues and points proposal is written in the December 2014 News Letter. Motion was made to approve new dues and points structure, discussion as to why the need to increase the dues. Jim Macdonald provided accounting info that shows we need to increase to cover operating cost of maintenance and bills such as electricity, property rental, etc. Motion received a Second after discussion closed was passed unanimously, no opposing votes.

Officer election nominations was opened, no further nominations for the Officer positions. Nominations closed Board has one position open and Chris Dellinger was nominated. No further nomination, Board nominations Closed.

Nominations are for the Officers:

President, John Eaton
Vice President, Ed Morgan
Treasury, Jim MacDonald
Secretary, Mike O'Kane
Board: Chris Dellinger

Motion and second to elect officers and the board position, unanimous vote for the individuals for the positions previously listed.

Break:

Guest Speaker: None

Toilet Seat Award None

Show and Tell: Ed Morgan built the SR Batteries X-250 kit that was designed for a Speed 400, 10 cell NiCad pack with Brushed motor. Ed set the plane up with a 3S 1300 mahr pack and is using an8/4 APC prop and a 22-16 motor. Ed mentioned the system is drawing 210W with the above prop and motor. Over all weight is 24 oz. or about 105 watts per pound. Does not have a steerable nose wheel. Vertical performance is guaranteed. Saw it fly on 12/23, Ed was working out the surface control trim and throttle management, this model goes up very quickly.

Motion to adjourn meeting after the raffle. Articles donated by club members for the Christmas raffle.

Special Board Minutes December 8, 2014

Members present: X Ed Morgan, X John Eaton, X Jim MacDonald, X Mike O'Kane,
X Jeff Lovitt, _ Rich Geertson, X Randy Sizemore X Doug Barton, X Chris Dellinger

Meeting called to order by Ed Morgan

Meeting agenda as posted on the Club forum with any following additions.

Correction to November 2014 Special Board Meeting. Tom Burke was incorrectly listed as Tom Martin.

OLD Business:
Discussion to fill in the R/C shade structure gap. (pricing - John Eaton/Forrest Barton).
No pricing information available.

New permanent sign for west end of Road 29 at Road 102. (Jeff Lovitt/Doug Barton).

Jeff is working on locating upright posts that will not cover the text, when located he will put up the sign.

Status of possible low-water-crossing relocation. (Doug Barton)

No current activity: seems unlikely the County will approve an obstruction to a drainage system without significant study.

Doug offered to contact the property owner and share what he can learn from that meeting.

Board Member Field assignments suggested -- events, membership, toilets, snack shack, control line area, runway, irrigation, publicity. (Mike O'Kane)

Discussed the idea of assigning a Board member with responsibility with a portion of the Field infrastructure.

Proposed areas:
Runway
U-Control flying circles
Membership
Filed Chair
Irrigation
Snack Shack
Event Publicity, TV (cable/broadcast), Radio, NEWS paper.

Motion to adjourn.

WDA 2015 Events Calendar

Date	Event
Feb 27-Mar 1	*Norcal Pro Bro*
Apr 17-19	Float Fly #1 @ Lake Minden
Apr 25-26	*EF1 Pylon Race*
May 16-17	Thunder Over the Valley Jet Fly
June 27-28	*AMA Pattern Contest*
June 27-28	U/C Stunt Fest
July 18-19	Wings of Victory
July 19	U/C ARF Off
Aug 15	Old School Vintage R/C & Nat'l Model Aviation Day
Aug 22	Golden Age R/C and Oldtimers
Aug 22-23	U/C Goyet Memorial Stunt Classic
Sept 12-13	*Burgdorf Memorial Race*
Sept 19-20	U/C Meet n' Meat Stunt
Sept 24-26	Scale Heli Masters
Oct 2-3	Float Fly#2 @ Lake Minden
Nov 7	Toys for Tots
Jan 1	Chilly n' Chili Fun Fly & Pot Luck

Fuel Tank Technology for the 21st Century

By Richard Geertson

It's brilliant marketing when a company offers a product for a problem that doesn't exist, and then manages to convince us that if we don't use their new product, we too will be 'victims' of the dreaded problem!

JL products, maker of the RotoFlow fuel tanks, have managed to come up with one such product that does indeed SOLVE a long-time problem (whether you knew it existed or not)!

Over the past three years or so as my old conventional fuel tanks have worn out, I've been replacing them with RotoFlow tanks. HOW (you may ask) can a fuel tank 'wear out?' Well, there are several factors that impact the performance and reliability of a conventional fuel tank, be it a DuBro, Sullivan, Kraft or Great Planes. The longevity of a tank is also dependent on the fuel type – Gasoline tends to be harder on tanks than Glow Fuel.

The least common failure is a ruptured tank or an actual leak in the tank housing itself. IF and when this happens, it is usually the result of a severe impact/crash, BUT I have seen tanks begin to leak – usually on the seams – just from prolonged use/vibration.

A far more common failure is the rubber stopper. These eventually harden, taking on the shape of the opening, and lose their ability to completely seal the tank.

The nylon Neck Cap and internal Washer, which capture and squeeze the rubber stopper, are also prone to eventual failure as they too become deformed due to constant pressure and contact with fuel. As they are tightened; along with the rubber stopper; they become more deformed. The risk of stripping out the screw threads in the internal Washer is also a risk.

While a leaky fuel tank probably won't result in a dead engine, it will certainly do a number on the interior of the fuselage! And have you ever seen what gasoline does to foam?

My big concern is this: unless your tank is readily accessible and clearly visible, you truly have no idea what condition its inner workings are in. No matter how meticulously you assemble a convention tank, it WILL fail eventually... it is not a matter of IF, but WHEN.

In a Gas fuel tank, one of the most common and hazardous failures is what I call a "stiffy:" This happens when the Pick-Up tubing becomes stiff; no longer flexible and able to move all about the tank with the weight of the clunk. When the pick-up tube develops a stiffy, it is essentially frozen in one position – usually at the bottom of the tank (airplane sitting upright). This problem can go unnoticed for many flights, and even through the flying seasons, depending upon your style of flying. The tank fuels up as it always has; fuel exits the overflow when the tank is full; and the engine runs just fine... that is until the aircraft gets low on fuel and assumes an attitude that induces negative Gs in the tank. When that happens, fuel is not pooling at the bottom of the tank (where the clunk is permanently positioned) and the engine can be starved for fuel and quit. IF the airplane is at full throttle, demanding maximum fuel uptake, OR if held inverted for an extended period, this problem will manifest itself in an intermittent or dead engine! This can happen at the most inopportune time, and the risk to your aircraft is dependent on the aircraft type and its proximity to the ground and the runway.

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I know a very experienced modeler and 3D pilot who purchased a giant 3D plane. It was totally ready to fly with ALL the best (and most expensive) equipment. He had seen the plane flown many times; it was a "known" commodity – or so he thought... After taking ownership, he fueled it up and put it up in the sky for a thorough 3D shake-down. Everything was going perfectly until he had burned most of the fuel in the tank and was doing a low, slow, upright Harrier. With about 5 feet of altitude, the engine suddenly QUIT! No warning! The 35 pound plane pancaked onto the ground, breaking the fuselage in half and causing extensive damage to the entire airframe. The cause? The previous owner had always stored the plane inverted in his garage. The gas tank pick-up line had developed a "stiffy," but this was with the clunk positioned at the TOP of the tank. Thus, as the fuel level got lower and lower and the splashing from vibration no longer reached the clunk, the engine quit unexpectedly as the airplane was flown in an upright, high alpha attitude.

Now, if it's a Cub or some other lightly loaded and forgiving airframe, a dead stick landing may not ruin your whole day... But what IF it's a 30 pound warbird you spent 2 years building? In the example of a giant IMAC plane, the gas tank is usually VERY accessible and visible, so routine maintenance is not a daunting task, allowing the owner/pilot to inspect and replace tank components as necessary. But a scale bird?? Probably not so much. In many cases, the fuel tank is buried deep within the fuselage and access is minimal if not impossible without major disassembly. HOW many of us are diligent enough to remove and inspect and/or replace the fuel tank at least every flying season, if not more frequently?

And the problem with a stiffy... it just happens. Last month the pick-up line may have seemed acceptably flexible, and 30 days later, it's stiff as a board! NO WARNING! This is FAR more prevalent with GAS as, to date, there isn't a gas line offered that remains permanently flexible. Gasoline additives (like ethanol) and the various 2 stroke oils, can hasten the stiffening process. LEAVING GAS in the tank will speed up the stiffening process exponentially... and how many of us are positive that when we "empty" the gas tank, it is completely empty?

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There are potentially many weak links in our RC aircraft. Probably the most common failure is a switch or a battery, but engine reliability is almost as essential as maintaining radio contact. What is the weakest link in keeping an engine running? Consistent fuel delivery.

While our radio systems and aircraft electronics have improved exponentially, fuel tanks have remained un-changed for 30+ years! That is, until the introduction of the RotoFlow tank...

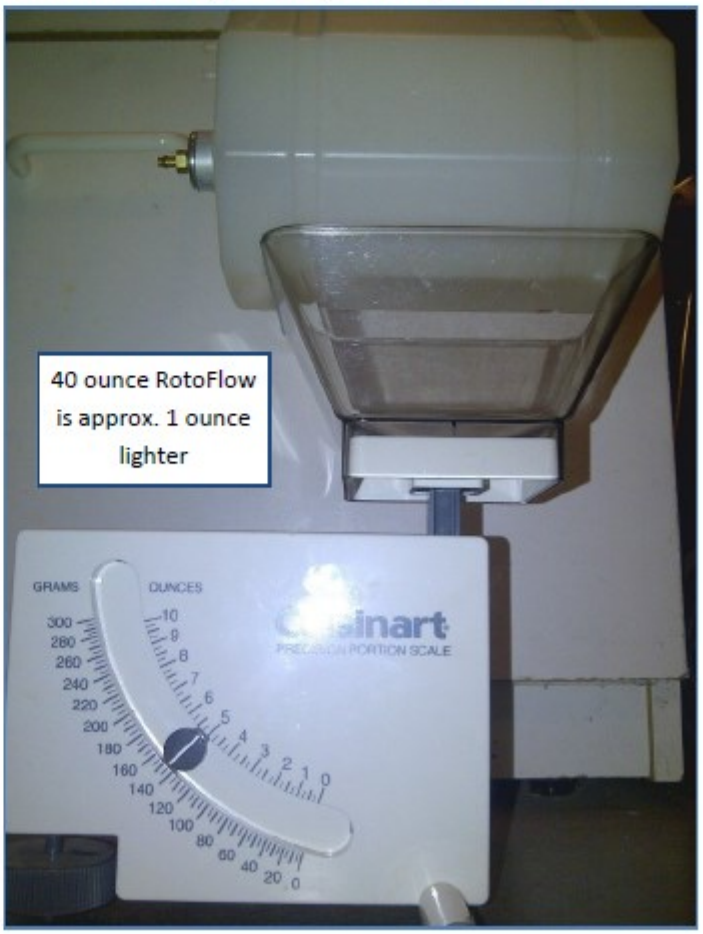
Many of you are aware of these tanks, but have probably avoided them due to the high initial cost. A ten ounce tank is $30; a 50 ounce tank is $50. Other tank sizes fall somewhere in between. No, these are NOT CHEAP. But how much time and money do you have invested in your airplane? And would a dead engine be merely a nuisance or a potential disaster? Is your fuel tank easily accessible or is major surgery required for access? Once you answer these questions, deciding to spend a few more dollars on a RotoFlow becomes a no-brainer.

The tanks come pre-built and ready to install. Their inner workings are 100% brass and impervious to all fuel types. There are no components to wear out. The tanks housings are of very robust construction and while the long-term (5+ yr) jury is still out, these tanks should last at least as long as your aircraft. As I say, I have nearly 3 years on one and to date, not a single issue... except reliable fuel delivery. Zero maintenance. Zero worries.

The way I see it, conventional tanks are 20th century technology; RotoFlow's are 21st.

One online blog about RotoFlows claimed that RotoFlows are heavier than conventional tanks. I took out my handy scale and compared a 40 ounce tank (with Sullivan aluminum stopper components) to a 40 ounce

DuBro 40 oz. tank weighs about 6 ounces



40 ounce RotoFlow is approx. 1 ounce lighter

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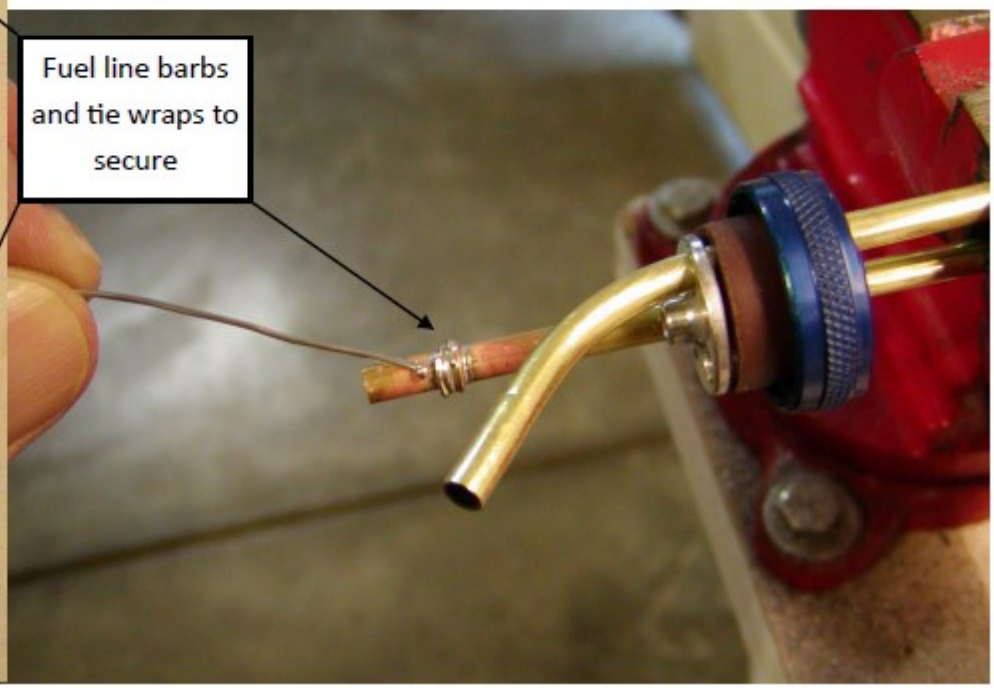
RotoFlow. The RotoFlow was lighter. So much for that argument... btw: weight of DuBro packaging was negligible

Yes, the initial cost is fairly steep, but compare this not only to the cost/risk of your aircraft, but lets assume you DO regularly maintain your standard tanks. And let us also assume you opt for one of the Aluminum tank cap sets currently offered by Sullivan and SWB. Add this to the initial cost of the tank. Then add the cost (and time) to replace internal fuel lines and rubber stoppers on a routine basis for a couple of years. Or, as some pilots do, perhaps you simply throw away the entire tank assembly annually and purchase a new one. Compared in that context, the difference in long-term costs is negligible. And what price, peace of mind..?

Now, consider your own limitations: Do you take the time to solder fuel line barbs over both ends of the fuel delivery tube? Do you then tie or wire wrap the fuel line so that it cannot slip off of the brass lines or the clunk? IF NOT, your engine/aircraft is AT RISK of a failure.

As you have surmised by now, I am sold on RotoFlow technology. Whether your aircraft investment is 20 hours and $300 dollars, or 500 hours and $5000 dollars, the $30 - $50 price tag to insure reliable fuel delivery is a minimal, but worthwhile investment in my book.



From The President

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The screen view on Keith Young's quadcopter.

On the 18th of January there will be an indoor flying session in Woodland at the indoor hockey rink located at Norcal Indoor Sports, 1460 Tanforan Avenue, from 9 to 11 am. 30 foot ceilings sound pretty good. Here is a link to a map: wda/20150118indoor/map.jpg

Two items are on my mind for club operations, both relating to courtesy to our neighbors. Please keep your speed down on the levee road so the minimum dust is generated, particularly in those areas near houses. At all times 35 mph is a good maximum speed to reduce the washboard effect on the road. Gradual acceleration and deceleration are also helpful. When flying, please as much as possible stay away from the northwest corner of our property.

The next meeting is at the County Fair Mall, January 12. 5:30 Board meeting, 6:30 general meeting. Bring something for show and tell!

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OPEN

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Next Meeting: Monday, Jan 12th, 6:30PM

Woodland Mall, off Gibson Rd. in Woodland / 3 rooms South of JC Penny

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