WOODLAND/DAVIS AEROMODELERS

Nov. Newsletter 2021

Prez Sez: Afternoon everyone, Not much going on this month with early rains building season has started early.

We had a field work party to take down the awnings for the winter. We also got most of the chairs picked up and put away that could be out for the winter. Fortunately we got all that done just before our atmospheric river set in.

We're into nomination season for club officers. We have all four officers up and it looks like two board positions this year. If you or someone you know has an interest in being part of the club management please feel free to nominate them at a club meeting between now and the end of the year. If you have questions on what a position entails please let me know and I can shed some light on that as well.

We have the next club meeting at the field on November 13th at 10am. As discussed above we will have nominations open again. We will also be talking about the next club work party that will be at the field on Nov 20th. That is assuming that the weather cooperates with us. Remember gentlemen that points are in affect again this year and we are running out of opportunities to earn those points. So please

The November General meeting will be held at the Club Field 10AM, Saturday Nov. 13th. Watch the WDA web page for any changes. wdarc.org
Flying is closed during the meeting.

come out and support the efforts we have going on. At the meeting we will set priorities for the work party this month. So if you have projects to propose that you would like to see done the meeting is the place to bring that up.

We are starting to look at the contest calendar again for next year especially at the spring events that are not too far off. One item we are looking at is an event in the spring. This would be a combination Open House/Swap Meet at the field. The broad strokes is having the field Saturday and Sunday to all AMA members in the area that might be interested in flying at the field. Along with this would be a Swap Meet on Saturday only similar to what Randy put together last year. This is an effort to get the word out about the club and the field and maybe recruit some new members that may be in the area. If you are interested in helping out with that please let me know.

Please everyone continue to be considerate of others around you and their 6ft personal space. We all have different feelings and comfort levels when it comes to Covid.

As a reminder to everyone please pack out what you pack in. We do not have trash service at the field. So please take anything with you that you brought including crashed aircraft and the associated components.

As always if anyone has questions or concerns please let me know.

I look forward to seeing you all around the field, Forrest

Greetings, I am a former member of the club (over 40 years ago) and haven't flown in years. I have a couple of planes, one R/C and one C/L that I was going to dispose of, but I thought I would reach out to you all first. Both are balsa, the R/C was a kit resembling a 172 Cessna that I flew often, the other is a self designed low wing C/L that was a "hot" performer (read handful). I have engines for both, plus a half dozen other vintage engines that I acquired over the years, all very old.

I would like them to go to someone, maybe a kid, that would like to repair and use them. Contact me via email at:
hcabplanalp@gmail.com or by phone or text at 530-574-7176.

Thank you for your attention to this,
Hans Abplanalp

WDA Board Members Meeting

October 7, 2021

ZOOM meeting

Board Members present: John Eaton, Mike O'Kane, Jeff Lovitt, Chris Dillinger
Meeting was conducted via ZOOM on 10-7-21
Meeting called to order, insufficient members attending the meeting to have a quorum.
Discussion
Membership is at 98
John is checking with the Library to see if we can continue to hold meetings at the Leake room, info pending.
Discussion regarding the status of the house, progress being made towards the Club taking title to the home. Current status is to leave the house as part of the estate until matters with the estate are settled.
Meeting adjourned

General Members Meeting
October 16th, 2021
Meeting location Burgdorph Henson Field

Board Members present: Forest Barton, John Eaton, Mike O'Kane, Chris Dellinger, and Dan Winters.
Meeting called to order by Forrest Barton. Members present constitute a quorum
Meeting minutes reviewed, motion for approval, 2nd, and received a majority vote to pass.
4 General members are present.
Recognition of guests and new members, none present

Officer reports
President: Forest Barton
V.P. not present
Secretary: Mike O'Kane; Comments regarding the Helicopter Scale Masters, Turf around memorial plaque is complete.
Treasury: Monthly income/expenses was a $453.00 gain
Membership: 101 membership cards have been issued.
Membership renewal is ongoing, John can accept PayPal utilizing Friends and relative's method. PayPal address is WDA2100@yahoo.com. Note: Membership work points will be applicable for the 2022 renewal.
Safety Chair: Interim Safety Chair is Mike O'Kane
Food events being considered need to be in line with County requirements. All C02 extinguisher in the RC Pit area have been inverted and shaken to prevent caking of the extinguishing agent, all pressures are nominal.
Field Chair: Please consider reaching out to Art if you want to assist with mowing and upkeep of the equipment. There is currently no water available from Yolo County
News Letter: Rich Geertson is always looking for any article you care to see published pleases send to Rich's attention and mention the article is for inclusion in the NEWS Letter. Share your past or current build with the Club. Articles contributed for publication in the NEWS letter are the opinion of the contributor.
Points Chair: The point tally is current as of this meeting.
WEB Page: Kerry has the WEB current.

Old Business
Woodland Christian after-school STEM program. Item closed and will be reopened when the school has a working plan.
This project has been postponed indefinitely due to Covid-19 issues.

New Business
Event scheduling, contact Forrest Barton with the event and date request.
Nominations were opened.
Motion for Mike O'Kane as Secretary, 2nd made, nomination approved
Jeff Lovitt previously motioned and approved for the Presidents position.
Motion previously approved for Forrest Barton as the Vice President.
Motion previously approved for John Eaton as the treasurer.

Donations
If you would like to donate an item to the Club please contact Mike O'Kane, Keith Young or any Board Officer or Board member for approval. Please do not drop off any items until the Board has approved the donation. The Club will issue a Tax deductible Donation Letter for eligible donations.

Events
Forrest received 2 notifications for 2022 event, Helicopter Scale Masters and the Fred Burgdorph Memorial race. Events are being planned but continue to require Board approval. Item open. Current events are tentative and yet to be Board approval. Helicopter Scale Masters – May 12-14th (Field would be closed Thurs. Fri. Sat.), and Fred Burgdorph Memorial race May19 – 21. (Field would be closed Thurs. Fri. Sat.) Concerns regarding consecutive

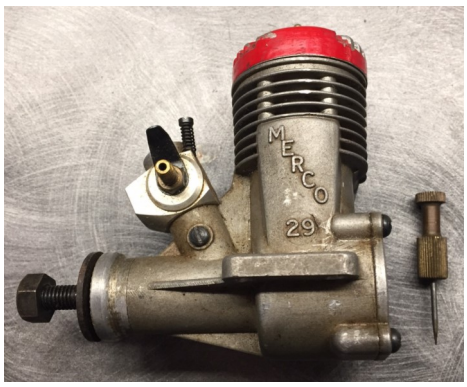
weekend events and Field availability for membership is being discussed.
Open House event was discussed with a swap meet on the Saturday, all AMA members welcome to fly and sell throughout the weekend, all campers welcome, and no hookups. Date yet to be determined

Work party October 23 @ 0900. Plan is to remove the shade tarps for the winter weather
Club sign repair/paint on the levy road is in progress Open Item.

Monthly Work parties have been re-established and will be held the Saturday following the General Club meeting. No additional work party schedules are anticipated for the remainder of 2021. The field is typically closed during work parties.
Items that need to be worked. Petro mat repair, this is ongoing with good momentum on the repairs. Repair and paint roof of the conex containers, paint Snack shack roof, relocate shelfs from small conex container to the container near the Snack Shack. Shelves are removed and sitting alongside the Snack Shack container.
Next Board meeting is scheduled for Thursday November 11th at 7pm via ZOOM.
Next General Membership meeting is November 13th, 10:00a at the Field.
Final word for access to the Leake room has not been received, if the room becomes available the Club meetings will resume on the 2nd Monday of the month at 7pm. If we can get the Library room the Board meeting would be on Monday November 8th at 6pm followed by the General meeting at 7pm. Check the WEB page for current location.

Meeting adjourned.

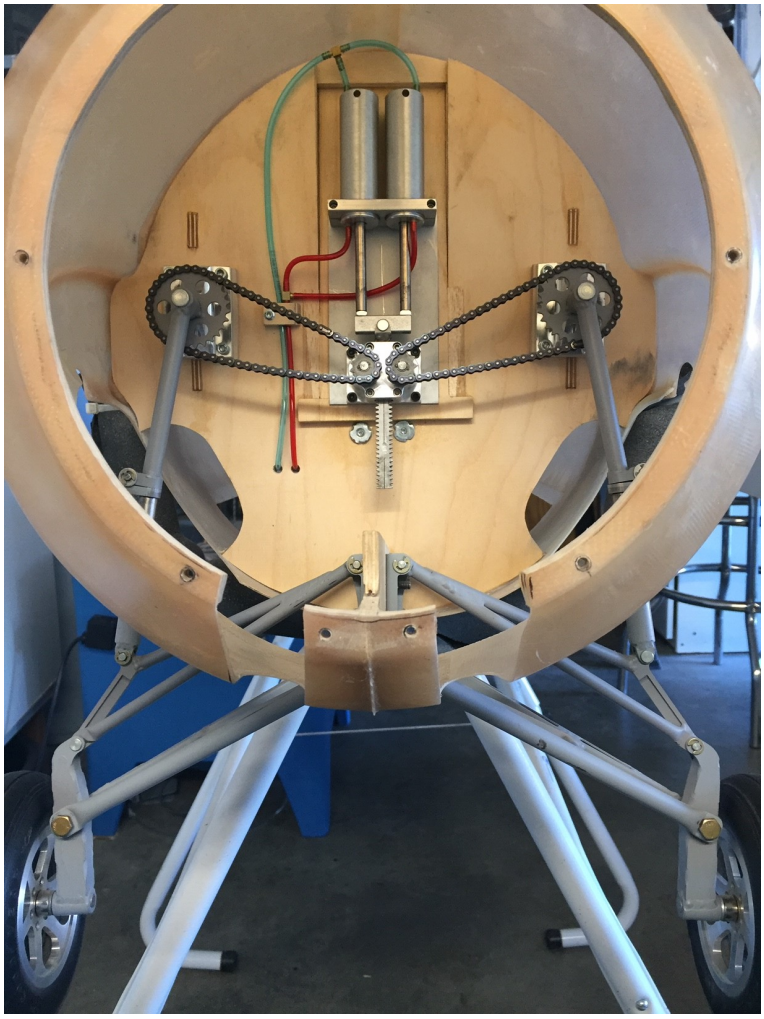
Another Merco make-over...

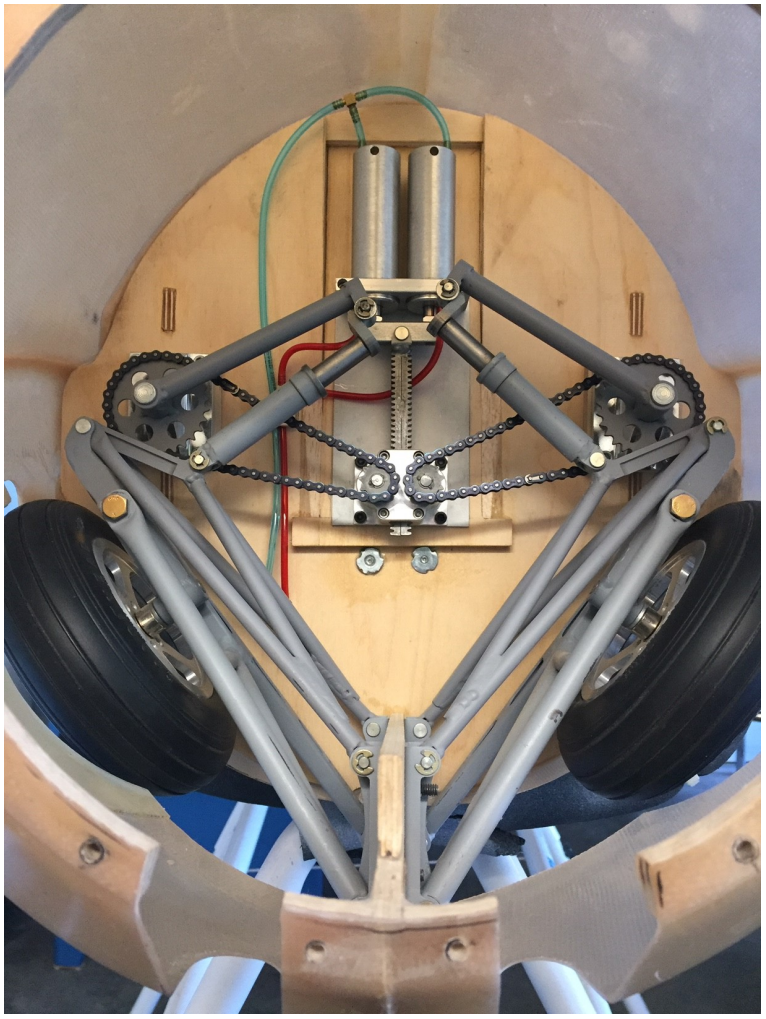


Engine restoration is my "hobby within my hobby" and this Merco .29RC was in dire need of a serious make-over. I have tried many things to restore the engine aluminum to 'as new' condition, but the ONLY thing that has worked for me is glass bead blasting. The process itself isn't difficult, but the PREP work can be quite tedious. EVERY ORIFICE where you do not want glass beads, must be covered/or filled. This requires complete disassembly of the engine; thoroughly cleaning in solvent, then hot soapy water; thorough drying, then meticulously taping everything that should not be exposed to glass beads. Very small holes are plugged with paper. Carburetors are completely disassembled and all parts individually cleaned and polished. Blasting is followed by vacuuming, then blowing out with compressed air.
I get much satisfaction from the finished product!
It's nice to see old engines looking young again :-) ***Rich Geertson***

Modeler's Corner

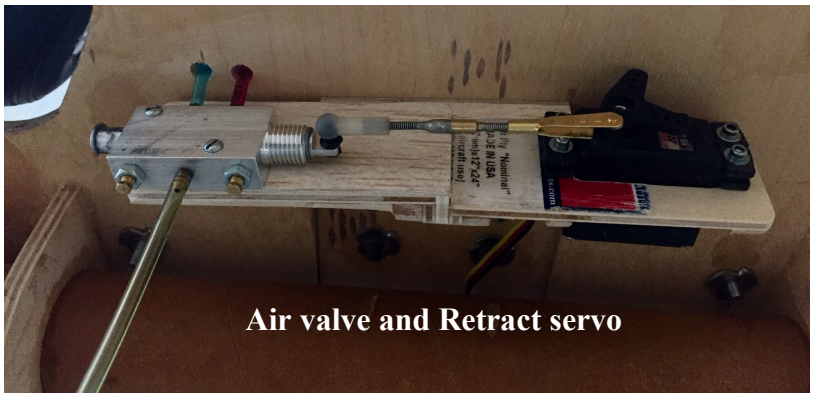
Some of you may know I have a Jerry Bates 1/5 scale Grumman Wildcat kit. I've had it for quite some, along with the scale retracts made by Robart. I won't repeat the long, sordid tale of my initial attempts to have the gear converted from air to electric operation… suffice it to say that after 9 months of waiting, I told Robart to return my gear. More time passed by… and I finally returned to the Wildcat build with the first order of business to get the scale retracts operating. I went ahead and installed the air components and after LOTS of fiddling, was able to get them to work.





The 'problem' with these gear is that they have many pivot points, all of which represent mechanical resistance (DRAG). However, adjusting and lubricating the pivot points did not resolve the excessive drag inherent in the gear design. After MANY hours of tinkering, operating, extending & retracting the gear manually, I concluded that there was an alignment issue related to how they mount in the fuselage.

I had purchased a fiberglass fuselage for the Wildcat. It arrives with the gear bulkhead already installed. I finally realized that this bulkhead was NOT perpendicular to the fuselage centerline, which created not only a binding action, but also rendered the main gear out of alignment. The eccentric action of the gear themselves also exhibited a binding force which was amplified at the MID-POINT of gear extension. At the extremes - fully retracted or fully extended - everything lined up, but at the mid-point, there was much resistance. IN ADDITION, I found the small drive sprockets and driven sprockets were NOT in perfect alignment, again related to the way in which the bulkhead and gear drive mounts had been pre-installed. In a nutshell, the X, Y, and Z axis ALL required attention in order to get the gear operating in a semi-smooth manner! MUCH trial and error, not unlike my Grumman Bearcat gear.

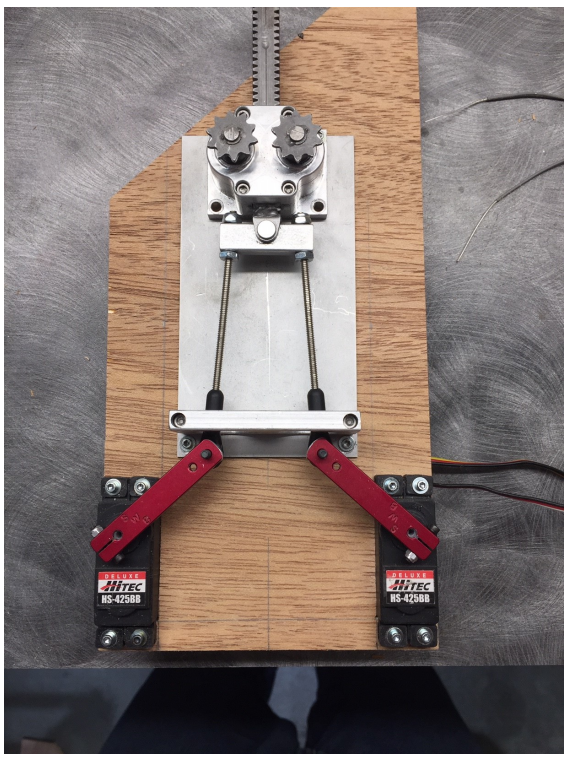


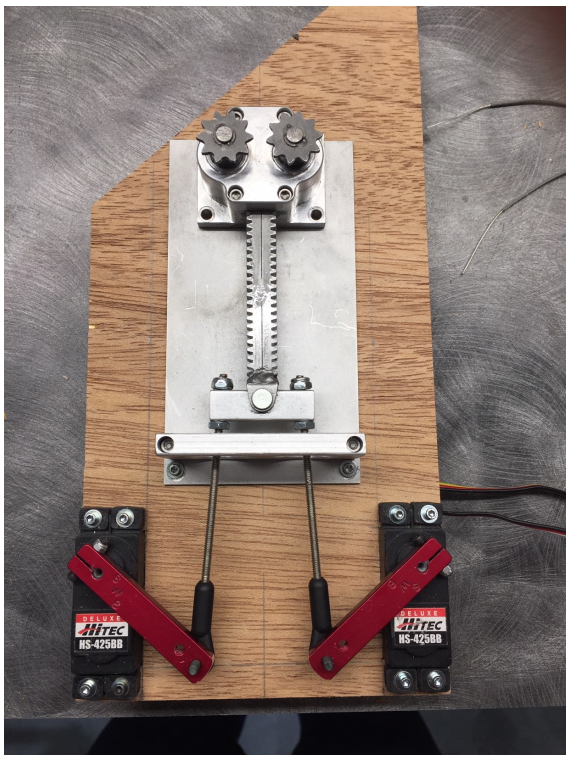
Air valve and Retract servo

When it comes to scale anything, I would never assume a "plug N play" expectation, but neither did I expect to spend so much time simply trying to get the gear to go up and down, smoothly. Oh well, it's all the problem-solving that keeps me interested in this great hobby!

Long story, but I finally had the gear operating via air. With minimum 100 psi in the Air Tank, I could get 3 gear cycles, which should be sufficient for any flight. BUT… I still wasn't satisfied with the way in which the gear were operating.. NOT very scale. With the adjustable air valve, the gear would extend at a slower rate, but retracting into the fuselage was a combination of starting out slow, then barely moving, then WHAM!!!

Interestingly, when Robart finally declared that electric operation wasn't in the cards, they quite candidly told me they consider AIR operation of large scale gear to be the MOST reliable. Considering how many guys have problems with air leaks, etc., I found that disconcerting! I became OBSESSED with converting these gear to ELECTRIC operation, not only for more scale retract speed, but (to my way of thinking), greater reliability. My first iteration started with a bench mock-up with standard sport servos, just to see if I could achieve sufficient gear drive travel. This set up worked the gear drive mechanism smoothly, no problem. Just for grins, I attempted to operate just ONE landing gear leg without the weight of a wheel, using these standard sport servos… NO WAY! Both analog servos simply stalled. While this didn't surprise me, neither did it fill me with hope that these gear could be operated via servos. I bit the bullet and purchased two Hitec 7950 servos for the purpose of gear operation. These servos produce 402 inch ounces of torque at 6 volts.





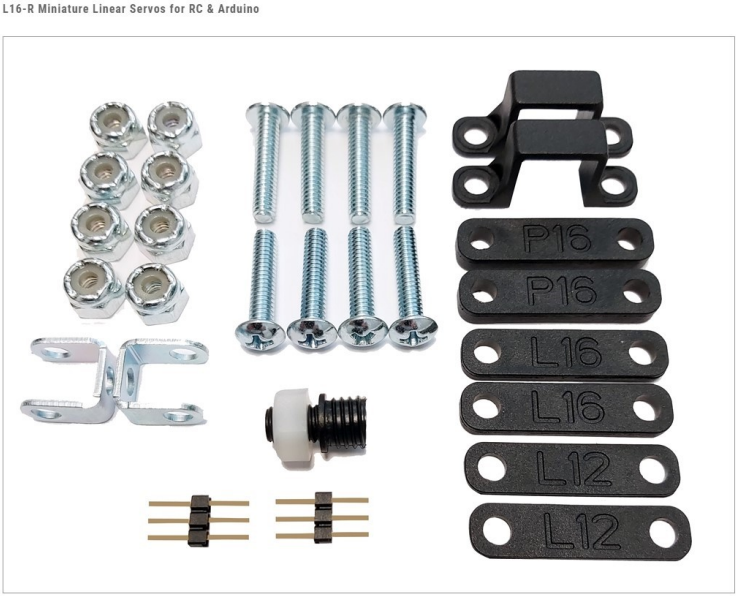
Who thinks this worked????

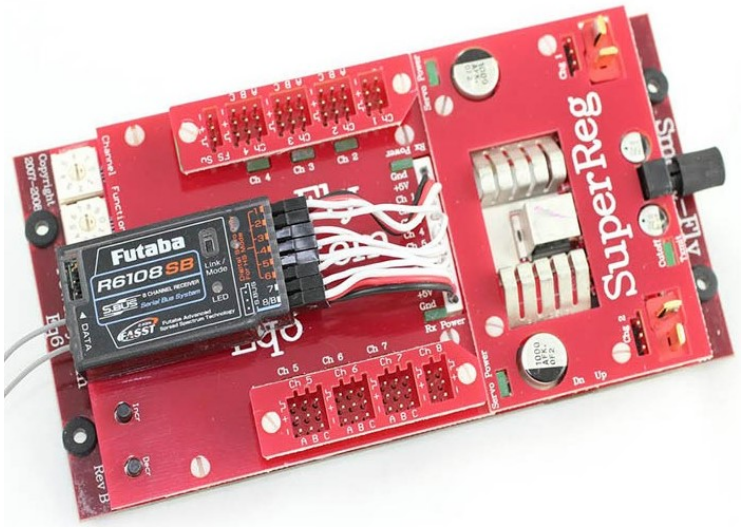
If you guessed YES…….

You would be WRONG!

Even with these monster Hitec digitals operating in tandem @ 6v, the 4-40 threaded rods would bend and the servos would stall. **WOW!** OK, there HAD to be a better way! **And there is…**

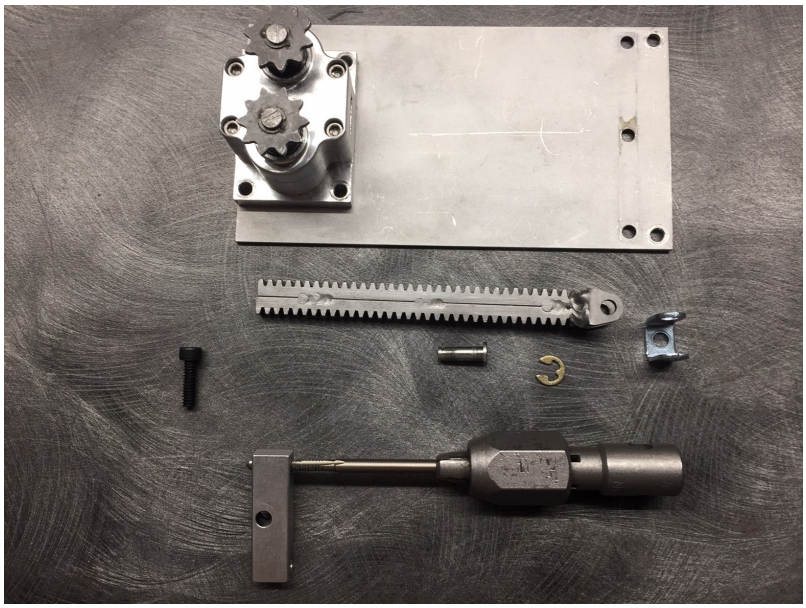
These linear actuators (servos) can be acquired in various sizes and gear ratios, will run on 6v or 12v, and operate just like an RC servo. Each comes with its own hardware pack and can be configured for either clevis or threaded output.





Because I needed 2 inches of travel and the highest torque, slowest operation, I chose the 50mm, 150:1 gear ratio units. The actuators use a standard servo plug and produce up to 45 pounds of force! Actuonix says that for Futaba operation, a Power Distribution unit (like a Smart Fly) is required due to the 2.7v Futaba signal output. My experience is that they work either way—plugged directly into the receiver, or to a Smart Fly. Per their recommendation I WILL use a Smart Fly to isolate my receiver as well as provide the full unregulated LiFE voltage to the servos.

I began the conversion to Actuonix linear actuators by removing the aluminum Air Cylinder clamping bracket from the Robart gear drive plate. I then tapped the drive bracket to accept larger 6-32 bolts. I was careful to only make modifications that would not render conversion back to Air operation, impossible... ***just in case!***



Upon trial fitting the linear servos in place of the air cylinders, I was slapped in the face with a bracing discovery: mounted in place of the air cylinders, fully extended, they were TOO LONG and would not fit in the space between the drive bracket and the fuselage! What to do? I devised a way of mounting the actuators to do what I needed them to do, in the space I have to use, using the provided hardware, by mounting them adjacent to the gear drive unit. By utilizing a horizontal drive bar - which is a solid 5/32" steel rod - the linear

actuators work in tandem to drive the gear unit. Since the Actuonix units work like a servo, their end points and sub trims can be independently adjusted to work in sync together. Placement of the actuators was critical as there is very



little room between the gear and bulkhead, when fully retracted. Lots of trial fitment was required to arrive at the ideal mounting spot, up/down, left/right. You may notice the steel rod flexing… YES, it does, owing to the tremendous force required to operate the gear. Thus far, the rod is holding up just fine and merely flexes without remaining bent. After dozens of cycles, the system seems to be performing without a single problem.

Just for grins, I weighed all the components necessary to operate the gear with air: 11.3 ounces total. The Actuonix linear servos and hardware came to 5 ounces total. I had already planned to use two batteries for redundancy, so no weight penalty for powering the gear. In addition to more scale, slow, smooth and steady retract operation, the conversion from Air to Electric resulted in a net LOSS of 6 ounces. I would also expect greater reliability. In my RC world, this conversion/experiment qualifies as a rousing SUCCESS! I am attempting to share this project with Robart in the hopes they may consider offering an electric option. It is my understanding they just moved their headquarters, and as such, are currently tied-up with all that entails.

When I purchased these gear several years ago, I paid $800…quite a sum of money for gear designed for ONE aircraft. An investment in these gear clearly demonstrates a commitment to building a Wildcat.

When revisiting the gear on their website recently, I was ***fairly shocked*** to see the price had skyrocketed to $1,800! Ordering the gear also comes with a time-frame of 6 month+ wait to receive them. Add air support, a scale tailwheel unit and a couple of Robart's scale wheels, and completing the under-carriage of a 1/5 scale Grumman Wildcat comes to the tidy sum of about $2,200!! Just a wild guess, but I don't imagine we'll see too many of these on future flight lines...

Rich Geertson

13th Annual

Jet Rally in the Valley

Nov 5-6-7

3 BIG DAYS

Delta Valley Modelers
&
Delta Flying Club

KINGDON AIR PARK

12145 DeVries Rd. in Lodi

Pilot Reg: $55
(includes Steak Dinner & Event Shirt)

Info: 209-464-5313
email: hiflyerjr@sbcglobal.net
web: deltamodelers.org

vendors welcome

9:00 am Friday, Saturday, Sunday

Public Welcome | Food Concession on Site

Overnight Camping (No Hook-ups)

WDA Officers and Board

President (530) 662-6324	Forrest Barton cbarton328@aol.com
Vice President (530 304-4780)	Jeff Lovitt jlovitt@sbcglobal.net
Treasurer (530) 681-5316	John Eaton johneaton@sbcglobal.net
Secretary (530) 796-4377	Mike O'Kane micharlokane@gmail.com

Board members:

Doug Barton	(530) 662-6469 controlinedoug@aol.com
Chris Dellinger	(707) 446-9647 cdellin@sbcglobal.net
Keith Young	(530) 848-3666 k_young52@yahoo.com
Danny Winters	(916) 342-0679 win51@comcast.net
OPEN Board position	

WDA website
www.wdarc.org

Woodland Davis Aeromodelers
42875 County Rd. 29
Davis, CA

WDA Cabinet

Membership John Eaton	(530) 681-5316	goldeneramodel.com
Safety Officer Jonathan Stemen	(916) 666-2868	Jon@radialaviation.com
Field Maintenance Art Williams		
Points Stein Buer	(916) 850-9457	steinbuer@gmail.com
Newsletter Editor Richard Geertson	(707) 693-9537	geertson@sbcglobal.net
Web Kerry Roberson	(661) 978-1992	flybaby1569@gmail.com
Club Advocacy Lou Fox	(530) 753-9331	loujfox@yahoo.com
SNACK SHACK Ben Ponzo	(916) 947-7468	bbponz@sbcglobal.net

Flight Instruction

Flight instructors:

⇒ John Eaton (530) 681-5316 johneaton@sbcglobal.net

⇒ Carlos Reyes (650) 243-8894 carsii@hotmail.com

Jet Turbine Instructors

⇒ **OPEN**

Multi-rotor Drones

⇒ Keith Young (530) 848-3666

Helicopter Instructor (Only):

⇒ **OPEN**

Next Club Meeting: Saturday Nov. 13th, 10AM AT THE FLYING FIELD

WOODLAND/DAVIS AEROMODELERS
C/O RICHARD GEERTSON
800 COLLIER DR.
DIXON, CA 95620