THE AVIATOR

The Official Newsletter of Brauer's Aviators
AMA Club Charter # 1612 – www.brauersaviators.org

April meeting Thursday April 13th at 7PM
At the Tonawanda Moose Lodge

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APRIL MEETING AT THE MOOSE!

It's our annual "Show 'n tell" meeting. Bring your newest creation or clean up an oldie and show it off to the club. 75 Washington St. North Tonawanda NY 14120

2023 MEMBERSHIP RENEWAL & AMA DUES

Please remember that your membership dues for 2023 are now overdue. So far, 26 of the 2022 members have not yet renewed. Payment for 2023 dues can be sent to Al Herrington 6505 Amy Ln. Lockport, Ny 14094. Dues are to remain the same at $50/year.
Please also make sure to have your AMA membership remain current!

WELCOME TO OUR NEW MOWING COMPANY

The club would like to welcome our new lawn service O'Regans LLC. We would also like to thank Jim for his many years of service keeping our runway mowed.

SPRING PRE FLIGHT CONSIDERATIONS

The old saying "an ounce of Prevention is worth a pound of Cure" Like many club members I've been flying during the winter when the weather permits. I generally fly 1 plane that I keep handy is the event the opportunity presents itself. Now that it's officially spring it's time to check out my other planes before flying them again. Honestly I've learned the hard way to carefully check every feature on every plane before its first spring flight.

The following preflight is a mixture of my experience and that of Park Pilot.

This Pre-flight preparation has 3 critical areas for verification of performance; Transmitter, Batteries, and Airplane features.

Batteries:

Is it safe to assume that you left all of your batteries in storage mode—meaning somewhere between fully charged and fully discharged. If you left them fully charged or discharged, be prepared for poor results. This could result in reduced flying time or sudden loss of power. Depending on where you're flying your dead stick landing could involve a long walk or a tree landing.

Put each pack on the charger for a couple of charge/discharge cycles to wake them up and see how they compare with my notes from last year. Don't use a parallel charging board for these initial cycles. You want to see each individual pack by itself.

If you find a couple of packs that are "sort of" okay, but not what they used to be, designate them for less demanding applications or short flights close to the field. If there is a pack with a dead cell or one that's lagging behind the others, don't trust it. Voltages might look good, but it's how it holds under load that tells the story. There isn't a plane that's worth loosing because of a weak battery.

Transmitters and Receivers;

Check your transmitter packs. Some use rechargeable packs and others use alkaline. I automatically replace the alkaline batteries before the first flight of the season. Cycle your rechargeable packs and see how they measure up. **Never take a chance on a questionable transmitter pack! You do not want to try and track you plane because you lost radio control.**

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Radio check: examine each airplane's radio. Ensure that nothing has changed, I don't know why, but sometimes the receiver will lose he bind. Now is a good time to verify that the radio is controlling the plane you want it to. Before checking your flight controls PLEASE remove the propeller, that way you and your plane will be safe. Check that nothing has been accidentally reversed and the expo is on the right switch and is working in the manner you intended. If you haven't set up a throttle-kill switch for each aircraft, do it now. Always perform pre-flight range check on aircraft before flight.

I found this condition while performing a pre-flight my Apprentice. Apparently during my winter storage the elevator suffered some contact with a hard object. There didn't appear to have any damage until I cycled the elevator a couple of times. This could have been an in-flight disaster!

Place the aircraft on your bench or floor then stand back and look at it. This is something we might fail to do, but it's a critical step.

Look at the total picture. Does anything jump out at you? Does it look square? Does one wing sit lower than the other? Is the landing gear bent? Does anything just look "off?" How does it look overall? Make a note of anything you notice so that you remember to check specifics. Carefully look for any cracks in a foam fuselage. If you shake the plane is there anything loose or any rattles? If it does further investigation is needed.

Control surfaces: Look at the hinges and check each one's security. Give them a gentle tug to feel if they're loose. Inspect each hinge, whether it's a taped hinge, a pinned hinge, or CA hinge type. If there is a crack, replace it. If a taped hinge is coming loose, replace it; if it's a CA type hinge re-glue it.

Control linkages: Look at each one! Clevises come in various forms. Some are nylon, some are metal, and others use Z-bends or L-bends and keepers. Metal clevises are often secured with snap tabs. Be sure that they are still there and secure. If your clevises use rubber keepers, check to see if they are still firm and not dry rotted. A thin slice of fuel tube works well as a replacement.

Is the control horn still attached firmly to the control surface? Check the bolts or screws if that's how it's held in place. Some are glued directly to the surface and should be checked for security. If one is loose, remove it, clean up the surface, and re-glue it with the appropriate adhesive. Remember that not all glue is foam compatible.

Servos: Check each servo mount to ensure that it is still secure. Inspect the horns to see if they're secure. Check the gear train by running the servo. If there are rough spots or binding, replace the servo. Check the tightness of the screw that keeps the control arm on the servo. I can't be the only one that has found a loose connecting screw.

If the rubber grommets have dry rotted, replace them. Check the servo wire to see that it is still in good shape—not chafed or cracked—and is firmly plugged into the receiver. If you have servo extensions, ensure that they are secured with tape or shrink-wrap.

Receiver: Check to see that it's securely mounted and the antenna wires aren't cracked or rubbing against anything. If your receiver wires have small plastic extrusions at the base, use a piece of air line to reinforce and protect the wire. If your airplane uses a switch harness, check it for proper operation. If the switch feels odd, replace it.

Most of our park flyers employ BECs (battery eliminator circuits) and don't have switches, but check the wire from the ESC to the receiver for a solid connection.

Battery mount: How is your pack held in place? Do you have Velcro on a battery deck? Is it securely glued down? Do you have a Velcro One-Wrap strap? Inspect its operation and replace it if it's showing signs of wear or doesn't stick as it used to. It's possible that

the sticky side of the Velcro has aged and will no longer safely hold the battery in place. This is especially true if that is the only method of holding the battery in place. I know from experience that if the battery falls off the plane in flight that the CG will change and could dramatically affect the landing caricaturists. This is especially true with UMX that only use Velcro to hold the battery in place. Even if the UMX is in-expensive compared to Park Flyers, the loss is still painful and unnecessary. For about 50 cents replace any unquestionable Velcro on the battery and the airframe.

Is the battery deck securely glued in place? Chances are your battery is under some sort of hatch cover. Is it still operational? Check the magnets or latch to ensure that it still holds everything down.

Motor/ESC mounts: Is the motor firmly attached to the mount/firewall. Is the mount firmly attached? Reinforce any mounts that you find loose. Check for stress fractures near the mount and firewall.

Are the wires all secured so that they can't rub against anything? Check for sharp edges on the firewall that could chafe the wires where they pass through. Protect the wires with some sort of wrap.

Propellers/rotors: Look carefully at each propeller. Tip damage is usually easy to spot, but be sure to check near the root of the blade. Stress fractures often appear there and are hard to find. Sometimes slightly flexing the blade under a bright light will you help see them. Don't bend the propellers or blades so far that you break them! Never repair a propeller or rotor blade—replace it!

Are the propeller mounts secured? Whether it's a collet or propeller adapter, check that they are secure. If you motor has a propeller saver mount check that the rubber "O-Ring" is in good condition. Once again I wouldn't want to lose an airplane because a 25 cent "o-ring" failed.

Landing gear: Most landing gear damage is near the root of the leg where it bends and is bolted to a fuselage. That goes for all types of aircraft. Check for security and cracks. Inspect any setscrews holding the wheels on. Use thread locker on all of the screws. Make sure that the wheels rotate freely in both directions.

Wing attachment: Most of our airplanes use either rubber bands or screws to hold the wing on. Don't use old rubber bands! They will dry rot over time and wear out. The sun wears on them and degrades the compound. Start with all fresh rubber bands and use enough of them. I have seen wings fly off the plane in mid-flight. Nothing good comes from that.

If your wing is held on with nylon bolts, check the threads for signs that they've been cross-threaded or "stretched." Replace anything that's questionable. Check the mount points to see if they're still securely glued to the fuselage.

Wiring: Our aircraft have a lot of wires—look at all of them. Neatness really counts here and can save your aircraft. Ensure that nothing is chafing, kinked, pinched, or damaged. Check the condition of all of the connectors and replace them if necessary. Look for pitted contacts in connectors and replace them.

Covering/canopies: Look for cracks, holes, and the security of the covering or your canopy. Seal the edge of any loose edges. Any wrinkles or loose covering can be tightened with the appropriate heat gun or sealing iron.

Careful spring pre-flight verification takes about 15 minutes to complete. It's truly a good use of time that results in the airplane ready for its first flight. Knowing that your plane is AOK is a good feeling. Now we can focus on the pilot and the possibility of "rusty thumbs"

ALWSD

Always Land Wheel Side Down

Brian