



EAA Chapter 231

Richmond, VA

www.231.eaachapter.org

Chapter Newsletter April 2014



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- Ron VanSickle
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- Dave Wilson
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In This Issue

This issue summarizes the March meeting at RIC.

The editor welcomes feedback and articles and information for use in future newsletters. Please let the editor know if you are having difficulty reading this newsletter.

Topics: April Meeting

Come participate in a review of Sun and Fun. If you were there and took photos, send the best ones to Dee. Whittington via email, Dropbox or DVD and he will merge them into a single, integrated presentation. In addition, look forward to viewing the EAA monthly video, a very popular part of our monthly meetings.

At the April meeting, be prepared for a 'mug' shot photograph which we plan to use in our member roster so we can all recognize each other. Also, we'll have a Member Info sheet on which you can list the homebuilding projects you have accomplished or are now working on as well as all special aircraft building skills you possess which you are willing to share with other members. Let us know if you have any specialized tools that you are willing to lend also.

President's Message

Reminder to all that 2014 chapter dues are now overdue. Please send \$20 to Doug Hanson if you have not yet paid. Thank you.

We also held a very active Executive Board meeting on March 22 and now have chapter programs mapped out for the rest of the year. Many good things are planned. Come and be a part of it all.

Visitors-New Members

Five visitors were present at this meeting. Unfortunately, we did not capture their names.

Next Meeting

Where: RIC Aviation Museum
When: April 11 2014
Time: 7:30P



March 2014 Monthly Meeting

Mar 14, 2014 7:30 PM @ Virginia Aviation Museum

Called to order by Brutus Russell at 7:32 PM

Treasurer's Report: None

Old Business:

Presented Chapter Life Member Certificate to Henry Martin

Presented EAA Technical Counselor certificate to Warwick Llewellyn

Presented EAA Chapter Leader certificate to Cliff Martin

Scissor Lift Project Update – Brutus Russell

Possible changes to field layout at Festival of Flight – Brutus Russell

New Business:

Members asked to think of good questions for future AME presentation

Announcements/Discussion:

Area Events Update by Tom Tyndall

Program:

Glass Panels – Part I, by Dave Wilson

Some good ideas were provided by the audience and have been incorporated into a revised presentation. Part 2 will be delivered probably in conjunction with a visit to the Sportsman project to see EFIS in action. Wilson will continue with a focus on the questions to ask before EFIS purchase.

EAA Monthly Chapter Video was shown with an interesting section on the Bearhawk.

Minutes prepared by Doug Hanson

News Flash!

I have been recording "The Aviators" recently on WCVW-HD on channel 524 with Verizon.
Dave Wilson

Tom's Maintenance Shop

Tom's Maintenance Tip: To remove rusted exhaust studs / nuts. Spray with AeroKroil or Hoppe's No. 9 Powder Solvent (found at gun shops.) Another suggestion I have heard of but never tried is a 50 / 50 mixture of automatic transmission oil and acetone.

On the Horizon

Virginia Regional "Festival of Flight"

Date: May 31 and June 1, 2014

Where: Suffolk Executive Airport

Time: 8A begins

Website: www.virginiaflyin.org



This article is provided by Tom Tyndall. Thanks Tom.

Proper Engine Propping

By Tony Markl - as printed in the Aeronca Aviator

There are thousands of aircraft that require hand propping routinely. The following ideas are only "One Man's Opinion", but are based on many years of experience in doing hand propping and teaching others to hand prop safely. If just one person avoids an injury or prevents a runaway airplane by reading this article, then my time will have been paid for and the whole general aviation community will have benefited.

As I see it, successful hand propping has to meet two criteria. First, last and always **SAFETY** has to exist throughout the entire starting process. Secondly, the engine has to start.

SAFETY in propping comes down to these three requirements.

- One – Successful communications during each start
- Two – Keeping the propper out of the prop arc
- Three – Preventing any airplane movement

SAFETY Part One – Successful Communications During Each Start

Terms defined here are those commonly used in propping. Strict usage of these words will prevent accidents and injuries.

Addressing the prop – to stand at such a distance from the prop that you are outside of the prop arc but not so far outside so as to lean toward it when laying hands on the prop.

Clear – this means to remove excess fuel from the carburetor.

Closed – the throttle is fully closed or at idle position

Contact – the mag switch is in the starting position (normally BOTH) The word "CONTACT" is chosen because

"off", "on", and "both" all have the "o" sound, are one syllable, and thereby sound similar. "CONTACT" is two syllables and sounds much different than "off". This was the word of choice in the days when all aviators did hand propping.

Cracked – a throttle position greater than idle, thought to be correct for that engine and temperature (normally less than ¼ inch open)

Helper – person in the cockpit who operates aircraft controls until the start is complete (a helper is not always available).

Off – the mag switch points to the " OFF " position

Propper – person at risk outside who actually swings the prop

Pulling the Prop – downward motion of the arms causing the prop to turn with intention of priming engine by sucking fuel into carburetor (mag switch off and no intention of starting engine)

Swinging the Prop – swinging motion with right leg, causing prop to turn with intention of starting (not the same as pulling)

Throttle Idle Lock – a device for preventing incorrect throttle position during start

SAFETY Part Two – Keeping the Propper out of the Prop Arc. The person outside is the one at risk. He should be proficient at propping unless instruction in propping is being given. In general, the owner should be the propper for the same reason.

For the same reason again, the propper is in command of the start no matter who is owner, pilot, etc. Don't let novices prop anyone! Have a fixed number of start attempts (three is my choice). If unsuccessful, turn mags OFF and take a break to analyze why the start is unsuccessful. Leave your ego at home and get another qualified propper if one is available.

Ways to Prevent Propper Injuries:

Do not lean into the prop; do not be in front of the airplane when the engine starts. Swing your right leg to your left side (Newton's Third Law will move your body to your right and out of the prop arc), use "propping" gloves (thick ones or the \$ 3 garden gloves that are orange and ribbed). Prop must be at 10 – 11 o'clock position (as seen by the Propper) for safe hand propping.

Don't hand prop electric start airplanes, especially nosewheel ones. Why? Electric start airplanes frequently have the prop mounted in a bad position for propping. If they have key type starting you would have to disconnect the starter or unwanted ignition or starter engagement may occur. Nosewheel airplane props are normally closer to the ground making a leg swing difficult and causing the propper to lean toward the prop.

Article continues on the next page.



Article continues;

Propping Procedure from the Front:

Propper satisfies himself that no persons or aircraft will pose a hazard and that ground underfoot is not slippery, that the Helper has been briefed and is competent to operate brakes and engine controls and has seat belt fastened.

Propper commands "Off and Closed, Brakes on ". Helper verifies that mags indicate Off and throttle is Closed, and brakes are on, then repeats the command " Off and Closed, Brakes on".

Propper now addresses the prop, standing close enough so he is not leaning toward it. He stands in front of the propblade that is at the 10 – 11 o'clock position and places both hands (interlocked) on the prop about 2/3 of the way out from the hub, with fingers **NOT** curled around the prop trailing edge. (The taller you are, the farther from center you stand).

Propper primes the engine by Pulling the Prop.(Some engines prefer using the primer but pulling blades has the advantage that you can measure the amount of fuel more closely). This priming is done with the arms only, but be sure to bring them all the way down to your leg in case the engine starts unexpectedly. This has happened to me (a defective magneto ground). Pull the number of blades thought to be correct (normally the pilot will know this) or prime by using primer as necessary. When Pulling the Prop for priming, a sucking sound should be heard. Fuel dripping from the carburetor indicates too much priming or carb problems.

Propper now commands "Cracked and Contact", and Helper repeats these commands, opens throttle to pre-briefed position, and selects mags to Both unless a different setting is required for starting. If engine will start at Idle the command will be " Closed and Contact".

Propper swings his right leg to his left side and high as is comfortable, the downswing will cause his hands to pull on prop, turn his body to his right, and unbalance him. He has to step to his right to avoid falling and is thereby outside of the prop arc. If he will be boarding the aircraft he keeps on walking around the left wing of the aircraft until he gets to the door. He does **NOT** walk in front of prop.

SAFETY –Part Three – Preventing Any Airplane Movement.

Ways to prevent aircraft movement – Chocks, tiedowns, parking brakes, tail tied, glider tow hitch, cockpit helper, throttle idle lock. Throttle idle lock on a tandem aircraft means a bungee chord from aft cabin structure to the front throttle holding it "closed". To hold the throttle "cracked" put a small shim (I use a clothespin) behind the throttle. On a side by side with push-pull throttle cut a short piece of tubing or hose that fits between your throttle and the full throttle stop. This may seem like a lot of trouble but it works.

I do many aircraft deliveries of non-electric aircraft. Most places at which I land don't have chocks or their chocks are tiny. Others have no tiedown ropes or really short ones. Folks may offer to prop me but I have no knowledge of their methods or currency. Have chocks and a rope of your own to tie the tail. Be wary of letting others prop you.

Safety, which is, was, and will be the most important part of hand propping has been covered in detail. A successful start was our other requirement. Most owner-propped engine starts are successful since they are familiar with the amount of priming needed. (My L-16 normally starts on the first or second swing).

Unsuccessful start. If pilot error is not involved (didn't turn the fuel or mags on?) then there are only two possibilities. Mixture is too rich or too lean. Generally too rich is the problem. Choose one of these possibilities and either prime more (excessive priming invites engine fires) or "clear" the engine.

Food for Thought – Every year someone sends his airplane into the sky alone and the media tells the world. When a famous person gets hurt from this or an empty airplane flies near a big city we all will be legislated into electric systems in the name of security. This threat is not far-fetched! **Please do your part and ask others to help.**