



Propwash

April 2022

From the President



Greetings Members

It was unfortunately a bit of a wait for the first meeting of the year but it was certainly one that provided a lot of outcomes and future works. You would of all received the minutes and hopefully have read them and are up to date.

Since the meeting Ian Clapp organized a dinner at the Dardanup Tavern with around a dozen people, members and partners, attending. If you haven't attended the Tavern there then I strongly recommend it. There is actually a whole menu entirely dedicated to varying schnitzels, of course there other menus as well, and they are BIG serves. do yourself a favour. Drop in when hungry. Thank you Ian.

The Pavilion roof is scheduled to be removed, and replaced, weather dependent on Good Friday 15th April. As that date gets closer and weather conditions forecasted, reminders will be sent. I, we, would like as many members as possible to attend so as this can be done quickly. Carrying out these types of projects within clubs helps camaraderie and fosters a sense of achievement.

Also post the meeting the septic tank has been emptied and the ladies toilet glued down. The latter a big thank you to Jeff Tonkin and his expertise. I have also seen the new mower and it looks a bargain and will be a great asset to the club and those that help out when the mowing needs doing.

The ANZAC day flyin and BBQ breakfast will be on 25th April so bring your warbirds and reflect. There will also be some visitors around that weekend so please make them feel welcome as I know you will. On the 28/29 May IMAC have requested the field for a competition. There will be more of these types of requests come through as the facility upgrades take hold and continue to improve. This is a win for you members and the club.

The next meeting will be the AGM to be held on 5 June, yes as I am back for this hence early June. I would encourage all members to consider if they would take up a role and if so to put in a nomination.

On a final note I would like to re-iterate the editor's request for content from members. Ron does an amazing job with this newsletter but it must be hard each time to come up with content that he thinks may be interesting to you. It doesn't have to be much, it could be a couple of photos of a build that is going on, or even a hack that could help others. So if you do have something please don't be shy, you will not be judged, and send it to ronwaller@bigpond.com

Here's to seeing you all soon at the field.

Regards

Bill

Bill's getting ready for the Anzac Day flying.



From the Editor



The old saying “time waits for no one” becomes more relevant every day, Christmas been and gone, Easter almost here and for those of you still working it will soon be time to be honest with the Tax Man.

The past few months has not been good weather for flying with persistent strong wind buffeting the field every Sunday and this has deterred many members from even attending the field so numbers have been down.

With all this wind I’m worried about the caravan in my garden.

I didn’t have one there yesterday.

We should now be able to look forward to some more settled weather as we get into the cooler months so it is time to dust off those models and get out and enjoy a bit of flying.

Everyone knows that Troy loves a garage sale or an auction so I reversed the roll and put his skills to work with the underlay matting removed from the runway which had been rolled up and lying in the field since early last year, we had a look and took some photos which Troy put up on several buy/sell web pages.

“**BINGO**” as a result all 6 rolls were sold within a week and a credit made to the club account of \$300, it does prove that he has what it takes to become an auctioneer.

The meeting conducted on the 13th March was well attended and a variety of issues were discussed. Members had a chance to become involved with the discussions and share in making some decision on the future of the club moving forward.

The minutes reflected some healthy discussion which in the end will direct the club towards improvements that will benefit all members and visitors to the facility into the future.

A few key dates for activities at the field were set.

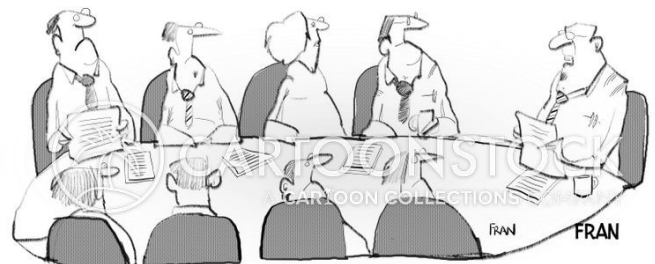
- Saturday 26th March proposed night flying session.
- Friday 15th April a busy bee to replace the roof on the pits.
- Anzac Day breakfast and War Bird flyin Monday 25th April.
- Saturday 28th Sunday 29th May IMAC competition
- **Annual General Meeting Sunday 5th June 2022**

Just like to remind members that June is the month of the AGM, this is were we elect a new committee for the ensuring year. This is a great opportunity for members to nominate for a committee position and become involved in the running of the club over the next 12 months.

Time to be thinking about how you could assist if you need any details of what is involved with these positions feel free to discuss with a committee member.

Committee nomination forms will be circulated closer to the date.

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Today’s meeting is about meeting to plan a meeting to arrange a meeting about managing our meetings.

It is good to see a few new model grace the skies over SWARMS in recent times and I know there are a few more still on the building board to reach their maiden flight.

For those who have not as yet constructed a scratch built or a laser cut kit you don’t know what you are missing it is a very satisfying experience to see it in the air on completion. Have a go at it.

Did you know that the invention of the first telephone was a complete disaster it wasn’t until the arrival of the second telephone that it became successful.

And then came the “Mobile phone” no strings attached.

Ian Clapp has been through a few health issues recently but was out of hospital and back at the field on Sunday 6th March feeling a bit better.

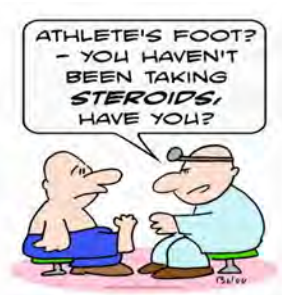


He shared his unpleasant experiences with the members as he sat around the pits enjoying being back out in the fresh air, he did not fly but did indulge in a special SWARMS pie for lunch.

This picture of the members relaxed group discussion is not an advertisement for Coca Cola it was the beverage of choice to be consumed with a pie.



We all wish Ian a speedy recovery and hope to see him back in the sky enjoying his flying in the not too distant future.



Something tells me that a roadrunner and a coyote were somehow involved.



It is good to see we have had six new members who have recently come on board and made the decision to join the club, welcome to you all. This has raised some concerns as each one has arrived with a strong desire to learn the art of the sport of RC flying with some planes and Spectrum radios which were all mode two.

The club training equipment is Futaba mode one system and is not compatible with the Spectrum system, for those who have not flown before the radio system has been changed from mode two to mode one thanks to Dennis.

A discussion at the recent meeting in relation to the club being able to accommodate both a mode one and mode two training facility for new members it was identified that there were two options available.

Option #1: The club obtain a mode two Futaba radio to use on the existing club buddy training system.

Option #2: The club obtain a mode one Spectrum radio to bind to the new members existing mode two radio linked to the buddy system.

Option #3: Which was not an option, the Instructor fly's mode two. (Ha, ha)

Both these options enabled the Instructor to fly mode one whilst the learner flew mode two.

Ian Humphryson indicated he had a Futaba radio that he would donate if it was compatible with our system which could solve the problem, thank you Ian.

One of our new members, Jeff Tonkin, has shown a real passion for model aeroplanes for sometime and he is yet to get airborne on the trainer.

A few years ago he saw this model Tiger Moth and fell in love with it and just had to acquire it so it has sat on the shelf ever since, however, he recently brought it to the field to have it set up ready for the maiden flight. There was a small defect identified with the rudder which has now been rectified so it is now closer to it's maiden flight.



More recently he was able to pickup this great deal also, a new assembled Classic sport high wing trainer fitted with a 46 OS nitro motor, coupled with his DX 6i Spectrum radio he is now ready to get serious about the sport. There will be a battle in the future to see who gets this up there first between Jeff and his son Ben both are keen members.



Ben has an Apprentice with the safe mode and I can see him in charge of this without too many hours on the club trainer. He has been flying the Boomerang and is building his confidence with ever flight, hopefully there will be many enjoyable hours in the sky over SWARMS for both of them as they progress through their training program.

With the summer months comes the fire season, this also comes with unwanted fires a lot are caused by arsonists. WA were lucky to have this large jet water bomber based in Busselton ready to respond to any out breaks in the region and it was called on to perform on numerous occasion throughout the fire season. It spent several days dropping water in the Bridge Town and Denmark fire areas. It proved to be a very effect combat aircraft. Both these planes look good in the air.





The smaller aircraft were also activated to assist.



The old saying "Where there's smoke there's fire" but when you have aerial support the smoke is reduced more rapidly.



Fuel price Rise, how has it impacted you ?

March 2021 - Not allowed travel more than 5k 
 March 2022 - Can't afford to travel more than 5k 

The price hike in fuel is hurting most people, however, a friend of mine told me the increase doesn't effect him because he only ever puts \$20 worth in every time he gets fuel.



I used to be able to fill my tank with \$150 of fuel. Now I can fit in \$200 worth ! Don't know why everyone is complaining.



mmm... that smells expensive, what are you wearing?
 Him: petrol



The construction of this "Large" scale model of a Vulcan is quiet impressive, it is the project of two brothers who have an interest in scale model aircraft. The project to date has been over two years of construction to get to this stage of the build.



I asked my wife when her birthday was, she said March 1st

So I started stomping around the kitchen and then asked her again.

A Locksmith had to go to court to give evidence. Apparently he was a key witness.

Teacher: Give me a sentence which includes the words: defence, defeat, detail.

Johnny : When the horse jumps over defence, de-feat go first and then detail.

Barber: What do you want?
Him: Just a plain cut.
Barber: Say no more.



Remember this face from the last edition of this news letter Dennis had just completed a laser cut kit and it was all ready for it's maiden flight scheduled for the following weekend.



However, there was just one more thing to do prior to the maiden flight and that was to secure the cowl, whilst doing this he found one of the holes to be miss aligned, that's not a problem I will just redrill it.



Simple task, but, when the drill went though the cowl into the fuselage there was a unusual noise and a flash back along the drill bit followed by a cloud of smoke resulting in immediate action to get the plane out of the model room onto the lawn.

Once positioned on the lawn there where three more clouds of smoke that were omitted from the inside of the fuselage and Dennis could do nothing but stand and watch the fire works display until the smoke density eased.

Did you guess it ?? The 4 cell battery was in the plane at the time of drilling and the drill bit pieced the first cell causing the original explosion which triggered the other three cells to do the same thing.

The end result when the smoke cleared the remains of the battery and speed controller now extracted from the fuselage.



The blackened remains of the front section of the fuselage after things had cooled down and an assessment was conducted as to the real extent of the damage after the incident.



A rebuild was in order and after several hours it was all complete ready for the delayed maiden flight the following weekend.

This proved to be very rewarding as it all ended successfully, the rebuilt model pictured before maiden.



With Anzac day fast approaching it's good to reflect on what worked way back in World War 1 and as a popular model the Sopwith Camel is still available today.

A classic 1/4-scale British icon of World War I. Viewed by many as the British airplane that best defined air combat during World War I, the Sopwith Camel is one of the best-known fighters to come out of the Great War.



First introduced at the end of 1916, it was a replacement for the Sopwith Pup, and about 5,500 Camels were produced. Perhaps the most famous Sopwith Camel pilot of all was Canadian Captain Arthur Roy Brown, who was credited with shooting down Manfred von Richthofen, the Red Baron. Controversy over this continues today and was one of the reasons some chose the Camel as a building project.

If you wanted a semi scale model with the strength and building ease of a sport flyer, if you've built a kit or two, you'll have little trouble with the construction of the Camel.

The Sopwith Camel is among the most significant and famous of all WWI aircraft. Camels downed 1,294 enemy aircraft, more than any other Allied fighter in WWI. The cowling over the two Vickers machine guns ahead of the cockpit created a distinctive "hump," making the name Camel a natural choice, although it was never an official military designation.

Unlike the earlier Sopwith Pup and Sopwith Triplane, which were docile to fly and well-liked by pilots, the Camel was unstable, requiring constant input from the pilot. The gyroscopic effects of its powerful rotary engine made it dangerous for novice pilots, and almost as many were killed in accidents as died in combat.

But its instability also contributed to it being agile and manoeuvrable, and once its tricky characteristics were mastered, the Camel was a superior fighting airplane.

The Camel entered operational service in July 1917 and remained a front-line fighter until the end of the war, with approximately 5,490 built.

This example, B6291, served with No. 10 Squadron of the Royal Naval Air Service.



Maximum speed: 185.10 Km/h

Maiden flight: 22 December 1916

Wingspan: 8.5 metres

Length: 5.71 metres

Passengers: 1

Introduced: June 2017

Retired: January 1920

A note left for the wife of a modeller who wanted to get into a bit of early flying:

Babe gone to the flying field for a fly, should be home in an hour.

If I am not back in the hour please read this note again.

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I told my wife to embrace her mistakes.

She hugged me.

The youngest and newest member of the club, Ben Tonkin, is progressing very well with his training programme having only been on the club trainer for a few flight he is pictured here with his own plane, an Apprentice, having just done a solo flight without the buddy cord.



As an instructor it is both pleasing and rewarding to see new personnel pick up the controls quickly and proceed back to the pits after each flight with a smile on their face, Keep up the good work Ben.



A Milestone event for one of our members recently when he reached the half century mark in his life. Hope your day was filled with big boxes and a lot of cheer.

Happy Birthday Troy



And the scones, fig jam and cream were very nice.

When I handed Dad his 50th Birthday Card, he turned to me with tears in his eyes and said.

“One would have been enough”

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Have you ever noticed that a Woman’s

“I’ll be ready in 5 minutes”

and a Man’s

“I’ll be home in 5 minutes”

Are exactly the same.

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I went for my COVID booster jab today, and the Nurse asked what arm I’d like it in.

I replied “yours”!

“OOCH”



I have just proved that you do not need to invest a lot of money into the hobby to enjoy it.

Christmas is a time of giving so I found a \$20 foam chuck glider whilst shopping around to give to my Grandson to give him an introduction into model planes.

Together we built it Christmas afternoon and went to the park for the maiden flight, the maiden was very successful the plane flew like a million dollar aircraft and I was so impressed that whilst it was flying around I could almost see this model being electrified and adapted to an RC operated model.

Having slept on the idea the next step was to revisit the store to check if they were still in stock and purchase another to commence putting my ideas into practice. The model was detailed with all the lines for the flying surfaces, elevator, ailerons and rudder, indented in the foam mould which made it easy to identify the size of these surfaces.



I cut off the ailerons and sanded the leading edge to a "V" shape and fitted hinges and secured them back onto the wing. Due to the small area of elevator section after cutting away the foam it was necessary to make new balsa surfaces and fit hinges and glued them to the tailplane.

As I was progressing through this modification process it dawned on me we would have to have a C/G measurement pre flight to ensure this was successful, concern was that due to all the components that were needed to be installed in the plane, ie: motor, speed controller, receiver and battery how would this work out.

I felt there was going to be a lot of trial and error due to the long nose and the swept back wings if this was all fitted and the C/G measured done after the build. Sitting thinking of what was the best way to approach this and then it became very obvious on how to get a very accurate C/G.

This plane flew perfectly on it's maiden so I removed all the modifications I had made back to the original plane and tested the C/G and it was located almost at the rear edge of the wing trailing edge. I felt if it originally flew so well there that it had to be correct and all I would now have to do is work on that mark with all the extra equipment fitted.



I then cut out a section of the solid fuselage and lined it with balsa to accommodate the speed controller, receiver and battery, however, this created a problem due to the amount of weight that was now positioned well forward of the C/G.

The four servos were cut into the foam and hot glued in place and control rods connected.

Sanded the nose of the model flat and glued a ply engine mount in place fitted motor and extended the wires back into the speed controller. This also raised some concern with the installation of the motor contributing to the extra nose weight with it being located well forward of the C/G.

Getting the correct C/G on completion meant that the battery had to be positioned as far as possible to the rear of the model which meant it had to be located on top of the fuselage outside. This did improve the balance but I found it necessary to put some additional weight at the rear end of the fuselage to get the correct C/G.

I enjoyed the challenge of getting this \$20 chuck glider into the sky as a RC flying model, I am sure that everyone has a surplus of servos, motors, and receivers in their shed gathering dust which would give you the equipment required to do a similar cheap challenge.

Oh !! The maiden flight

First attempt was not very successful the model sat on it's tail and did a wing tip stall, however, with a few modification the second flight worked out well. It is not designed to be a fast fling model but with some tender loving care on the sticks it should provide a bit of docile flying for some time.



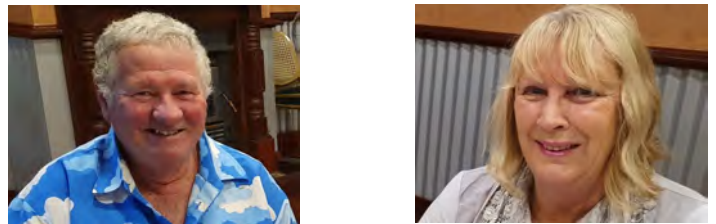
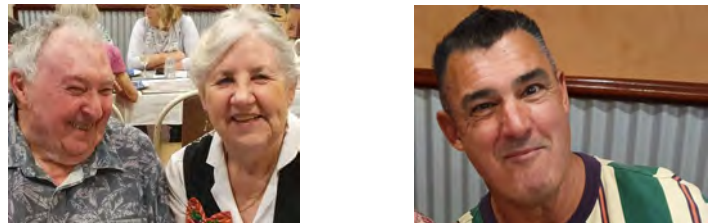
Peter Dustin's new Tiger 60 fitted with a DLE 20cc engine had it's maiden flight on Sunday 20th March and after a few starting and tuning issues performed well in the sky.



Are you sweating whilst putting petrol in your car, feeling sick when you pay for it. You might have contracted the : CAROWNERVIRUS.

The club held a social function on Friday 18th March in the form of a dinner held at the Dardanup Tavern. This was just a casual impromptu night out to enjoy a meal and to socialize a little over a cold one.

Those pictured here were in attendance and it turned out to be a very enjoyable evening with the group being the last to leave the dining area at the end of the evening.



At no stage during the evening did those in attendance see any of these photos taken, it is known as trick photography.

I must apologise I had my phone camera sitting on the table and forget to take any and these were from a previous dinner occasion you all attended, but this was in your favour you were all a bit younger then.

A Gentleman came in for a routine check-up at his doctor's office.

"Here", said the nurse, handing him a urine specimen container. "The bathroom is over there on your right – the doctor will be with you in a few minutes".

A few minutes later, the man came out of the bathroom with an empty container and a relieved look on his face.

"Thanks! But they had a toilet in there, so I didn't need this after all!"

Tips on how to tune a Nitro motor.

Here are some great tips to make you an expert engine tuner.

How to setup the needles so you can get your engine started:

Start by opening the high end needle about 4 turns from fully closed. This is just a starting point to ensure the high end needle valve isn't restricting fuel to the carb so you can adjust the low end needle setting.

The low end is easily set to a good starting point with the following procedure:

Close low end needle valve completely.

Install a clean piece of fuel tubing into carb fitting, make sure it is long enough for you to blow into it with your mouth.

Open carb to 1/5 open from closed position

Blow into fuel tubing while slowly opening up the low end needle valve. Stop turning low needle valve when you first feel air blowing into carb from your mouth or hear the sound of air blowing into carb. The flow should be restrictive and very small.

We only want a small amount of fuel to flow (air to flow) at 1/5 throttle opening. This low end needle setting will get your engine running and may require further adjustment. This is just a ball park setting.

Now close high end needle valve and open carb to full throttle. Blow in fuel tubing and simultaneously open high end needle until you have FREE FLOW of air into carb. You should not experience as much resistance to air pressure as you did on the low end. Your needle valve should be open between 2-5 turns (it all depends on the carb folks).



This procedure guarantees you don't have a blocked carb or closed needle settings for low and high. This will get you in the ballpark which then will require you to fine tune your low end and high end for best performance--highly recommend the pinch test .

Pinch test procedure:

First start engine this way:

Prime engine by opening up throttle to full and blocking exhaust with finger. With blocked exhaust, rotate engine until fuel just enters the carb-watch fuel line to see fuel displacing the air in the fuel line.

Remember the following rules about needles:

1. Low end needle affects the mixture below 1/2 throttle for most engines. Use it to adjust the idle and the transition from idle to full throttle.
2. High end needle affects mixture above 1/2 throttle. Adjust it so engine is running 300-400 rpm shy of max lean rpm at wide open throttle.

Reduce throttle from full to about 1/5 throttle opening. Apply glow ignitor and rotate engine (hopefully w/ starter) counter clockwise (for 99% of all engines out there) until engine starts. When engine starts, move throttle to 1/2 throttle and then remove glow driver.

If engine won't start, try more throttle until it does. If engine will only start above 1/2 throttle, it means your initial low end needle setting was too lean. Richen it about an 1/8th of a turn until the engine starts at a low throttle (1/5 throttle) setting.

If engine will not advance to 1/2 throttle w/ glow driver is on then leave at 1/5 throttle with glow driver until engine is warmed up-about 2 minutes should do the trick.

Advance throttle again to 1/2 throttle slowly. If engine dies then your low end needle is probably too lean. Richen by 1/10 increments.

Once you can get your engine running at 1/2 throttle then its time to remove the glow driver/ignitor. With ignitor removed, advance throttle to full throttle. Chances are your engine will be too rich and may even quit. If so, briefly pinch and release fuel line as you advance to full throttle to verify the mixture is too rich.

If it is too rich, then in small increments lean it out until it will run at full throttle without quitting. This does not mean the high end mixture needle is set. This is just a starting point to ensure your engine is running at wide open throttle (WOT) so you can make the proper adjustments.

With engine running at full throttle, slowly and carefully lean the high end needle valve until the engine is spinning at its max rpm. This can easily be determined by sound alone-no tach needed. This is where engine is producing most power but the mixture setting will cause the engine to run too hot and overheat. So, as a safety feature, always richen the mixture about 300 rpm shy of max lean rpm. Verify this by briefly pinching and releasing the fuel line to the carb. If the pinch test causes the engine to speed up and back down, then you have correctly set your high end needle setting. If engine doesn't speed up much or dies then you are still to lean and need to richen the mixture slightly until it passes the pinch test.

You are almost there. With high end needle setting set about 300 rpm rich of max lean rpm, recheck idle and transition. Let engine idle for 30-60 seconds and then snap throttle to WOT. If engine hesitates in the transition, fine tune mixture so that the transition is snappy and idle is reliable. I personally like a lean idle mixture so I can idle for long periods without fuel pooling up in the crankcase which causes stumbles when transitioning to full throttle. You can also use the pinch test when the engine is idling. Pinch and hold fuel line with engine at a fast idle. Engine should speed up and die about 4 seconds. If it takes longer, your low end needle is too rich, if it takes less time or if your engine dies instantly, you are to lean and need to richen your low end needle.

Once low end needle is set, you will probably never have to adjust it again. However, your high end needle should be checked before every flight by doing the pinch test at WOT to verify the mixture is slightly rich. This 5 second test and adjustment, if necessary, will guarantee you a reliable engine that will last a long time. Our carbs do not adjust for changes in temperature, humidity, barometric pressure, etc... and a small change of 5 degrees in temp can cause a properly tuned carb to be out of tune and possibly too lean (or too rich depending on whether it gets hot or cold outside).



Dennis Milligan has completed another project build, with the construction of this twin Otter plane it is an ARF kit and is fitted with twin electric motors. It has had it's successful maiden test flight and the results were very pleasing, he is currently working on fitting counter clockwise props and reversing one motor and it will then be given another trial test flight with this configuration.



Specifications:

- Wingspan: 1840mm (72in.)
- Fuselage (Canadian vers.): 1335mm (52.56in.)
- Fuselage (Swiss&Nature Air vers.): 1395mm (54.92in.)
- Weight (ready to fly): 3.3kg - 3.5kg
- Electric motor: Boots 30 Motor (x 2)
- Battery: 3 cells - 11.1 V - 5000 mAh
- Radio req: 6 channels
(4 for 9g servo / 2 for standard servo)



Why didn't the flight attendant let me change my seat that time I sat next to a crying baby? They won't do it if the baby's yours.

WINTER CHORES: HOW TO CLEAN GLOW ENGINES THE EASY WAY



The tenacious crackling noises, signature fumes, and touch of ultimate realism of a glow engine can instantly give life to any RC model it graces. However, just like real engines, they can (and will) get very nasty if not properly serviced. Not only is it unsightly, but it may also affect the performance of your RC model.

You have probably tried (in vain) to remove the thick crusty layer of oil, the muck, and the lacquer off your glow engines – however, they just won't budge. Don't worry, here is a simple formula to rectify all your wasted efforts. In this blog, we will look at what works and what doesn't when it comes to cleaning out your glow engines.

What Doesn't Work

The Petrol Dip

This is perhaps the most common advice you'll get: simply dunk your glow engine into a bucket of petrol and wait 24 hours. While this may work on an automotive carburettor - a subcomponent of an IC engine - it definitely didn't work for us.

The Oven Cleaner

Another common piece of advice is to wipe down your engine with oven cleaner. While it did take away some stains, this method actually backfired on us as the sodium hydroxide in the oven cleaner reacted with the aluminium and left our engine in a dull grey tone - we also noticed some small pits and tarnishes throughout the engine.

The Sandblaster

Sandblasting is also touted as a great way to clean the surface of your glow engines; however, most people will not have access to a sandblasting gun and there are still much better options to employ.

What Actually Works

Safety Warning: *The method and chemicals discussed in this article are highly toxic and may cause serious injuries and even death if not used with caution. Make sure to do your cleaning outside in a well-ventilated area and keep the area closed off to any children or pets. Always keep your gloves and safety goggles when on-premise.*

The one secret ingredient that "actually" works when it comes to cleaning out your glow engine: Anti-freeze. That's right, your common engine coolant that is used for automotive. All you need for this method are the following:

- 1 x Automotive Antifreeze with Ethelene Glycol (Engine Coolant)
- 1 x Crock-Pot (Slow Cooker); it can never be used for food again
- 1 x Rubbing-Alcohol; preferably methanol or isopropyl
- 1 x Bucket

Preparing The Engine

To achieve a deep cleanse and remove the grease, oil, burnt carbon, and other contaminants thoroughly, you'll need to first disassemble your engine. Make sure to use the right tools when doing so, otherwise, you may damage your engine. For example, if you try to remove the cylinder-head machine screws with a flat-blade screwdriver that's too wide, it can break or damage the surrounding cooling fins. If you substitute a needle-nose plier for an open-end wrench or nut driver of the exact size needed to remove the carburettor's retainer nut, you'll end up with ugly, rounded corners.

Once you have disassembled your engine (muffler, carburettor, glow plug, propeller nut, and washer) remove the rear cover and set aside the screws in a tin so you don't lose them. Take off the cylinder head and remove any o-rings and/or other gaskets - you are ready.

Cleaning Bath

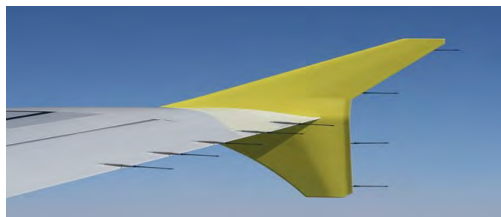
Rotate the engine so that the piston is in the lowest possible position in the piston combustion chamber and place all your parts into the crock-pot. Fill the pot with antifreeze and turn it on at the lowest heat setting. Securely place the lid over the pot and leave it overnight.

Final Touches

After a good nights' worth of soaking, turn off your crock-pot and transfer your engine parts into a bucket. Fill the bucket with warm water and rinse off any left-over chemicals. Drain and dry your parts and finally, give your parts a last wash in rubbing-alcohol to remove, and draw out any residual water from the engine case.

Reassemble your engine and you are good to go. As a rule of thumb, you only really need to clean out your engines once a year if you are a frequent flyer or basher. If you have recently just returned to the hobby and have left your engines sitting stale for quite some time, then we would also recommend doing a deep cleanse before firing them up.

What Are Those Metal Rods On The Aircraft Wing?



Ever wondered what those rods sticking out of the trailing edge of an airplane wing are? Some might think they are ariels or sensors, but actually, they are a lot simpler than that. These are called static wicks, and are fundamental to safe flying – here’s what you need to know.

What’s that thing on the wing?

If you’re a window gazer like most flying fans are, you might have noticed some little metal rods sticking out of the back of the wings of the plane. Depending on the plane type, there might be five, ten, or even more of them visible, so what are they for? These small structures are called static wicks, and perform an important task for the safety of flight. Also known as static dischargers, these small devices help to dissipate static charge that might be encountered during the course of the flight.

The most obvious source of such static electricity would be lightning. Modern aircraft are designed to cope with this, and the static wicks are one element that provides lightning protection for the plane. However, the plane itself can sometimes create a static charge, a result of flying through the atmosphere and ‘rubbing’ against it. This is particularly the case when flying through cloud or precipitation. This friction can cause static to build up, with the excess electrons often accumulating in the thinnest edges of the airframe, such as the ends of the ailerons and flaps.

The problem with this sort of build up of charge is that, if it is not equal across the airframe, it could cause a spark. Sparks near to the engine and fuel tanks is not a desirable situation, for obvious reasons. Added to this, excess static can sometimes cause interference with radios and other sensitive equipment onboard.

How static wicks work

If you look closely at the static wick, you’ll see it’s made from a cord-like structure riveted to the skin of the trailing edge. This ensures it makes metal contact with the aircraft surface. The device is made up of hundreds of cotton fibres which are impregnated with graphite, wrapped into a cylinder about the thickness of a soda straw.

Often, static wicks will be tapered towards the end, with a sharp carbon point at their tip. This gradient attracts the static charge, allowing electrons to flow off the aircraft and back into the atmosphere. This effectively discharges static from the aircraft, preventing interference with radio equipment and avoiding a build up of charge on the planes surface



These innocuous devices can also be fundamental in the rare event of a lightning strike. Occupants of the aircraft are protected from lighting as the aircraft’s surface conducts the electricity through its skin. The wicks allow these huge voltages to be safely discharged.

However, such an extreme event can sometimes lead to the static wicks becoming burned or melted. Thankfully, they are easy and cheap to replace, and ground crew will regularly inspect aircraft to ensure all the static wicks are in good shape.

Static wicks have been in use since the Second World War, and today are mandated by regulators like the FAA for all civil aircraft.



Catch you when we fly into the next edition in 2022. Happy Safe Flying, regards Ron.

