

# BRISBANE VALLEY FLYER

SEPTEMBER 2011

NEWSLETTER OF THE QUEENSLAND ULTRALIGHT ASSOCIATION

Watts Bridge Memorial Airfield, Silverleaves Road via Toogoolawah, Qld

[www.qua.org.au](http://www.qua.org.au)  
[www.wattsbridge.com.au](http://www.wattsbridge.com.au)

*Mike & Priscilla Smith's new Jabiru J230*



## Mike and Priscilla Smith's Jabiru story (told by Mike)

In 2007, we travelled to the Jabiru factory at Bundaberg to pick up the kit in two large boxes, the fuselage and a number of components in one box, and the wings and remaining components in the second box. All parts necessary for the basic plane come with the kit except for paint and upholstery.



The first job was to get the main undercarriage on and run the control cables from the cockpit to the rear. Over a period of time, the control stick, seat belt mounts and cabin strengtheners were fitted. Then, however, I went through a long period of lack of motivation. Having another plane to fly doesn't help you to put in the hard yards. When the old plane was sold, a couple of mates stirred me into action and helped me get the nose wheel and engine mount on. This is a milestone stage, because weights can be added to the engine mount so the plane then sits on all wheels and starts looking like the real thing.



We then worked on building the flaps, ailerons and winglets onto the wings and in November 2010 the whole aircraft was loaded onto the trailer and taken to the painters. After painting it was off to the upholsterers to have the inside carpeted and the seats made and upholstered in leather. A very different looking aircraft was then brought back home for the airbrush artist to do the tail motif and pin striping, copied from Priscilla's original design (one she had been working on this for quite a while). During this period, and particularly during the cold weather, we had been building the instrument panel, deciding that old style instruments best suited an old dog like me. Priscilla carefully drew up the layout on graph paper and had the metal panel laser cut to match her drawings. We then laminated silver ash veneer to the metal panel and fitted instruments.

A separate lower panel was moulded to accommodate the switches and circuit breakers and Priscilla covered the whole lot in leather to match the seats.



Finally it was time to load 19-7756 onto the trailer once more for its journey to Watts Bridge airfield for assembly, weighing and inspection. Richard and Glenda Faint very kindly let me use their hangar for this purpose.



When all this was done it was time to flush the fuel system and check the fuel flow. There was some consternation as Richard and I tried to find the slot in which to insert the coins to make the engine run, but we finally worked it out and away it went. Ahh, the sound of an aeroplane engine ticking over for the first time is something really special! A number of high speed taxi runs were carried out that afternoon, ready for the big day when our new Jabiru J230 would make its first flight.



The moment of truth arrived at 8.27am on August 2011. Our new baby took to the sky. One hour of successful test flying was conducted. After that, we had coffee at the clubhouse with Richard and Glenda, our two aircraft waiting patiently out front.



Next morning was a foggy wait for flying operations to begin, but, by the end of the day, 7.5 hours had been clocked up on the hour meter. This was a good start to the 25 hours solo period that is required. A few tweaks and adjustments are still to be made, and after the ten hour check the wheel pants and fairings will go on to give the aircraft its finished look.

## Air and military show – Kiwi style!

A group of QUA people recently travelled across the Ditch to the Land of the Long White Cloud to catch one of the most amazing flying and military shows ever staged. The group from Watts included Peter Freeman, Ron Dunn, John Innes, Bill Finlen, Bruce Clarke, their spouses/partners. Peter, Julie, Bruce and Mary travelled together while all the others travelled independently. Some did other touring in NZ during their stay in the country. They all spent varying amounts of time together, staying at different accommodation venues. The airshow took place at Omasa aerodrome, which is on the SW outskirts of Blenheim at the top of the South Island. The NZ Air Force base of Woodbourne is also on the outskirts of Blenheim and no doubt this base was used as an additional staging post for the display. The show featured many vintage types as well as replicas. Peter Freeman says that he had never seen such a great show before. The WW1 & WW2 military displays, both static and the re-enacted, were real eye openers. So much effort was put in by all the participants.









A joy flight in the Consolidated Catalina was a highlight for Peter and some QUA friends. Others took a flight in the DC3.



## Temora 2012 ??

Every Easter, the Flying Tigers head south to NatFly in an armada of Drifters and other assorted aircraft. When they get there, they all park in the same cul-de-sac, set up their tents and party for the duration of the event. The Tigers seem to have a very collegiate atmosphere. Everyone helps the other and they all appear to have a great time. The question is: why don't we do the same? Why don't we get a group together, plan it down to the last detail, then fly down to Temora for Natfly 2012? We could all chip in for the cost of a ground vehicle to make the journey with us and take some of the camping gear. This would enable extra people to travel in the two-seaters. It's just an idea. Let me know what you think. Is anyone interested?

## One Saturday at Boonah – the Tigers weren't home but the gliding was in full swing

If there's one thing to know about glider pilots, it's that they've always got plenty of time for a good chat. That afternoon at Boonah I met a member of a syndicate which owns and operates an ASK21 self-launching sailplane. The very impressive ASK21 is powered by a 56hp fuel injected Wankel rotary motor that is tucked away in the rear fuselage. The drive unit can be retracted (or brought back out again) in just a few seconds. When the assembly is out of sight, one would never know it was there, because the clam shell doors completely conceal it, propeller and all. The fuel tank is just in front of the doors



and is filled from the top (see photo left).

It holds 26 litres, which, believe it or not, is enough to take this plane 500km using a repetitive climb and soar technique. The aircraft has a very simple engine management system with dual engine controls in the front and back seats. The 56 horses provide impressive takeoff and climb performance with very low noise. The rotary runs without any vibration and is said to have the lowest fuel consumption of any self launching glider. I thought the most impressive parts of the ASK21 were its beautifully finished twin canopies, which opened effortlessly on gas



struts or springs (not sure which). The instrument panel for the front cockpit is actually attached to the front canopy (see photo above). The photo on the left shows a happy couple about to taxi out onto R22 for a pleasant jaunt over Boonah and surrounds. All things considered, I felt there was only one small problem with the ASK21 and that was the cost – about five times as much as that other little “motor glider” in the background.

## **The high and low cost of reducing risk**

About two months ago, Dick Smith was on the ABC promoting his latest book, the subject matter of which was the optimum human population for Australia. A colleague was heard to remark that Dick was always “big-noting” himself. Now, those of us who don’t suffer from the tall poppy syndrome realise that Dick Smith has no need to promote himself. He is simply and genuinely concerned about the common good; driven by a desire to inform others of what he sees as important to their welfare. He has an obvious love for truth and knows very well how dangerous ignorance can be, particularly in the aviation world.

When Dick was on the board of CASA he once made a very controversial remark. He said that increased safety comes at an increased cost and there eventually comes a point at which no one will pay the extra dollar. What Dick didn’t say, but no doubt was well aware of, is that some risk reduction strategies are more cost effective than others. For instance, in our kind of aviation, paying \$2500 for an emergency parachute (or even more for a BRS) on the very unlikely chance that you will ever have to vacate your aircraft in flight is an expensive strategy. On the other hand, making sure that your fuel line is in top order costs virtually nothing while providing huge potential benefits.

Fuel and spark are the life of all internal combustion engines. In aircraft, spark is duplicated but fuel delivery isn’t (even with two tanks and two carbies, there is a single common link). The most prevalent reason (probably) for aircraft failing to reach their destinations is engine failure and, (again probably), more often than not, this is due to a failure in the fuel delivery system. Unlike car drivers, aviators can’t pull over to the side of the road when the motor malfunctions, and unlike boaties, they can’t use the auxiliary. Lately, the newsletter has been devoting a lot of space to fuel systems and their various components. Even in this issue, there are two pages from a Web advertisement giving excellent information about sealing the insides of fuel tanks, an aircraft component often overlooked.

## **Mismatched fuel hose fittings**

There are some local aircraft, including at least one club aircraft that have 5/16” fuel line attached to ¼” fittings. Oversize hoses like this rely solely on their clamps to keep them in place and any potential for failure must be multiplied by the number of clamps in the system (i.e., at least twelve to fourteen times for a two carby motor, with one local Drifter having 24 clamped joints in its fuel line – no exaggeration). But the reliability of hose clamps is not the main point here. The main point is that it is no more expensive to use correctly fitting hose and have both the reliability of the clamp and the elasticity of the hose to keep it in place. A secondary point, by the way, is that oversized hose can create a choke point in the fuel line (if the tank outlet is the same size as the hose).

Of course, the larger the hose, the greater the potential rate of fuel delivery. Rotax, for instance, put 8mm (5/16”) inlets on the fuel pumps of their 912 motors, so they obviously envisage 5/16” fuel line for that particular motor. Note, though, that they use 6mm (1/4”) outlets on their 912 fuel pumps to match the 6mm inlets on their Bing carburettors.

Rotax 582s and 503s use Mikuni fuel pumps with ¼” (6mm) inlets, so obviously these motors are designed for that diameter hose. If 5/16” fuel hose is used on these motors, the only place to reduce the diameter to fit correctly onto the pump inlet without creating a choke point is at the in-line filter, but this would require a filter with a 5/16” inlet and a ¼” outlet. Do they exist? Perhaps a viable reduction could be achieved by forcing ¼” hose onto a 5/16” filter outlet.

To get a perspective on how important that extra 1/16” might be in terms of fuel delivery, a simple experiment was set up to test fuel flow through ¼” ID fuel hose. Two metres of Gates SAE30R7 hose were attached to a funnel with 350mm of head from the brim of the funnel to the end of the hose. Ten litres of mogas were then passed from one fuel container to another. The ten litres ran through the hose in exactly 6 minutes, twenty seconds, which equates to 95 litres per hour.

A Rotax 912UL has a peak fuel demand of 24 litres per hour. A Rotax 582 is about the same and a 503 is a bit less. Ninety-five litres per hour therefore provides a delivery rate of almost 400% of peak demand, and this is without a fuel pump! The inescapable conclusion is that putting 5/16” fuel hose on 1/4” fittings provides no real advantage for the considerably increased risk involved in mismatching the connections.

## Marine Grade! What does that mean? A very good question indeed!

For some reason, we seem to think that “marine grade” is better than automotive grade. I was talking to Mal McKenzie a while back and he made a point of telling me that he had gotten his SAE30R7 fuel hose from a “marine outlet”. Also, in the past, I have seen QUA members ferreting around in boat shops for parts that might be useful on their planes. I have often been there for the same reason myself. I used to think that “marine grade” was something special. Not anymore. I don’t even know if such a thing exists, actually.



In January this year, I bought a new Tohatsu 9.8hp outboard motor for my Hartley launch. I bought it from an authorised Tohatsu dealer, Neptune Marine at Slacks Creek. It came with a fuel tank and fuel line which I assumed were authentic Tohatsu accessories. (On the 22<sup>nd</sup> August, I phoned the manager who confirmed that this was indeed the case.) I remember commenting to the dealer on the new fuel line fittings. The previous double-prong style have been replaced with co-axials, and there are also new screw-less clamps that can be tightened with only a pair of multigrips (photo left).

At the beginning of this month, I was on the Broadwater in my old boat having trouble with the motor. It wouldn’t idle. Then I discovered some fuel dissolving the carpet on the cockpit floor. The fuel tank fitting had been slowly leaking fuel onto and down the side of the fuel tank. Upon

further examination, I discovered that, when it had been tightened, the point of the hose clamp had bitten into the hose, which had eventually split beyond the barb of the fitting. When I got home, I removed the hose from the fitting. To my surprise, I discovered that I could easily split the hose further open with my thumbs (photo below). There was absolutely no reinforcing in that fuel hose. The hose reminded me of the type of tube that is put on car radiator overflows.

I have since replaced my boat’s fuel line with SAE30R7 automotive rated fuel hose (photo above). I sent Tohatsu Australia an email about the issue but got no reply. The only response from the manager of Neptune was that I should drive all the way to Slacks Creek to show him the hose (otherwise he had better things to do than check his stock). I am now in the process of submitting a REPCON (confidential report) to the ATSB, but am not sure how much effect that will have.

The moral of this story is that just because it comes from a marine supplier, even an authorised dealer, don’t assume that it’s any good. This bodgie fuel hose could easily prove lethal in both aircraft and boats, albeit for slightly different reasons.



## Tom Ball (ex-RAAF?) warns us about the dangers of static electricity

Thank you, Arthur, for the August newsletter which, as always, is a great read! I note the advice to store and carry pre-mixed fuel in the dark plastic containers and, while this is good for preserving the fuel and keeping weight down, I feel obliged to point out that there are some very serious risks associated with handling fuel to/from plastic (non-metal) containers. Due to the lack of electrical conductivity, static electricity can build up in the fuel from slopping around, etc, which is not removed when the container is placed on the ground or against metal. This can cause spontaneous ignition when the lid is removed and/or the fuel is being transferred. This featured often in the RAAF safety advisories, and there are records of people being seriously burnt. This is the same reason that fuel hoses are earthed before and during use. Best (though heaviest) container is still the old metal jerry-can. Regards, Tom

## Continuing with fuel systems – this informative ad on tank sealing is from the Web:

### GOLD STANDARD TANK SEALER INFORMATION AND INSTRUCTIONS

Gold Standard Fuel Tank Sealer is a superior, single component, ready-to-use sealer specifically formulated for coating the inside of new or repairable steel, aluminum & fiberglass tanks. Widely recommended & easy-to-use, this single coat application cures into a tough fuel impervious seal and prevents the return of rust, corrosion and clogged carburetors. And yet amazingly, this rock hard interior seal remains flexible enough to withstand vibration as well as the repeated expansion & contraction of the tank! Other sealers on the market are little more than paint or adhesive-type coatings which have poor sealing abilities especially when exposed to today's fuels. Gold Standard is unique in that it will penetrate and galvanize itself to the tank walls forming a moisture proof barrier.



Use Gold Standard in conjunction with **KBS AquaKlean** (a water-based, heavy-duty, cleaner/degreaser) and **KBS RustBlast** (a powerful rust remover/phosphoric acid metal etch) to obtain a permanently sealed, rust-free fuel tank. KBS prep products are formulated with a unique Oxygen-Block Technology which reduces the occurrence of flash rust by over 80% and extends rust-free storage times by leaving a temporary protective coating in addition to a zinc phosphate film to aid in superior adhesion.

ALWAYS WEAR PROTECTIVE GLOVES AND SAFETY GLASSES. ALWAYS WORK IN A WELL-VENTILATED AREA. Please heed all warnings and caution notices.

**FOR BEST RESULTS, PLEASE BE PATIENT DURING EACH STEP OF THE PROCEDURE. DO NOT RUSH!**

#### IMPORTANCE OF TANK PREPARATION

To achieve expert results, please take the time to carefully read and understand the following directions before you begin your tank sealing project. Ideal Tank Sealer application temperatures are 55° - 82°F (13° - 28°C). Gold Standard Tank Sealer is a moisture-cured urethane therefore use only in moderate to dry atmospheric conditions. Avoid sealing tank in rainy or humid conditions. If the Sealer cures too quickly, surface bubbling will occur as a direct result of gas entrapment beneath the top surface layer of the Sealer. **(NOTE: If you are sealing a Fiberglass Tank, please refer to additional instructions provided. Gold Standard Tank Sealer is not recommended for plastic tanks because of the many different types & varying levels of porosities available.)**

All tanks, whether old or new, have oils, residues and contaminants that require thorough removal before sealing. The KBS 3-Step System is a specific process formulated to ensure superior adhesion of the coating & its long-term performance. Sealing a tank without proper prep will cause any new coating to fail. If a tank was previously sealed, you **MUST** remove the old coating first then proceed using the KBS 3-Step System. Choose a paint stripper containing Methylene chloride for the most effective removal. Please refer to additional Tank Stripping instructions provided below.

#### STEP #1 - AQUAKLEAN - CLEANING

- 1) Drain fuel from tank. Proper fuel tank sealing also requires that the tank be removed from the vehicle. Remove any fittings such as floats, sending units and filters.
- 2) Seal all openings with duct tape or cork-like stoppers.
- 3) Using a 1:1 dilution ratio, mix AquaKlean with hot water and pour mixture into tank. Let tank soak but always rotate it at intervals to ensure AquaKlean covers all surfaces. (NOTE: Heavy gum and varnish build-up may require extended soaking times up to 24 hours or more and/or the use of a pressure washer. Placing some nuts & bolts or loose chains inside the tank, along with frequent shaking and rotation, will help knock away loose rust and contaminants.)
- 4) Empty tank and repeat as often as necessary ... remember the cleaner the tank, the stronger the adhesion of the Tank Sealer.
- 5) After a thorough cleaning, rinse generously with water until the solution runs clear. Drain tank and let dry.

**FOR BEST RESULTS, PLEASE BE PATIENT DURING EACH STEP OF THE PROCEDURE. DO NOT RUSH!**

#### STEP #2 - RUSTBLAST - SURFACE PREP / RUST REMOVAL

- 1) Pour entire amount of full strength RustBlast into a dry tank. Do not dilute. Continually roll tank around to ensure all interior surfaces are kept wet. Repeat rolling and tipping tank every 5 minutes for a minimum of 30 minutes to 1 hour. RustBlast is an acid metal etch that will neutralize existing rust & also create an anchor pattern ideal for Sealer adhesion.
- 2) Important: **Do not allow RustBlast to dry on surface.** This avoids too heavy of a zinc phosphate buildup which can adversely affect the sealing process. After sufficient wet contact, drain & capture RustBlast in a bucket/container. Repeat process as needed. Once thoroughly etched, drain and rinse tank thoroughly several times with water. (NOTE: It is not necessary to remove every last bit of rust before sealing. Gold Standard Tank Sealer is very capable of bonding to & permanently sealing any remaining rust or corrosion.)
- 3) **IMPORTANT:** After rinsing, allow tank to **dry completely** before proceeding. Drying is best accomplished by introducing forced air into the tank by using a shop vac, blow dryer, or fan. A white powdery residue may appear after drying. This is the zinc phosphate coating advantageous for Sealer adhesion. (NOTE: Drying is a critical step. If the tank is not completely dry, the Sealer will not adhere properly.)
- 4) After a good cleaning & prep and depending on the condition of the tank, any existing pinholes could become larger and/or some new holes may appear in your tank. If these holes are indeed larger than a head of a pin, now is the time to repair them with NuMetal Epoxy Putty. (See more info below.)

**IMPORTANT: ALLOW TANK TO COOL TO ROOM TEMPERATURE BEFORE PROCEEDING. DO NOT ATTEMPT TO SEAL WHILE TANK IS IN DIRECT SUNLIGHT!**

#### STEP #3 - GOLD STANDARD TANK SEALER - SEALING TANK

- 1) It is recommended to seal your tank within 10 days of cleaning & prepping it. When ready, open Sealer and stir can thoroughly. Touch bottom & lift when stirring to raise & disperse any settled silver pigment. **DO NOT WHIP OR SHAKE** can as this will introduce air, create bubbles in the Sealer and adversely affect the sealing process.

2) Carefully pour entire contents of can into tank and slowly rotate and roll tank until **all sides are evenly coated**. **Patiently** work with sealer for up to 30 minutes. Please note that our Tank Sealer is formulated for use as a single thin coat application so make sure you take the time to thoroughly coat the entire tank well paying particular attention to leaky weld seams & pinholes for optimal coverage & seal.

3) **IMPORTANT:** After a thorough coating, patiently **DRAIN ALL EXCESS SEALER** from tank for at least 30 minutes or more before placing it down for full cure to eliminate the occurrence of pooling & puddles. If the design of the tank makes complete draining difficult, rotate the tank frequently into different positions during this time to help minimize excess accumulation in any single area. Foaming & bubbling are signs of excessive Sealer accumulation and gas entrapment due to ineffective drainage. In some cases, this may cause the Sealer to not adhere properly and eventually break loose. Be aware that if this situation should occur, the only recourse is to strip the tank and repeat the process.

4) Immediately use any left-over Sealer for exterior painting and patching to reinforce repair of pinholes & weld seams. (see further patching info below)

5) Immediately remove any excess Sealer from threads and fuel lines before curing. Cured Sealer cannot be removed by any solvent. When job is complete, place drained Sealer in can with lid off and let harden. Drained Sealer cannot be saved & re-used as it has been exposed to atmospheric conditions and will cure & harden in the can. (**WARNING:** Do not put lid on can before curing is complete as pressure may build within can and pop lid. Dispose of any hardened Sealer properly in accordance with federal, state, and local regulations.)

6) Allow tank to air-dry naturally in a well-ventilated area. **IMPORTANT: DO NOT PLACE TANK IN DIRECT SUN OR NEAR DIRECT HEAT.** Heating the tank will NOT allow sealer to cure quicker and may in fact hinder adhesion. **Allow 96 hours for maximum cure** and before re-filling with fuel.

### EXTERIOR TANK PATCHING (IF NECESSARY)

Use [KBS BackBone Reinforcing Mesh](#) for exterior repair of pinholes or weld seams. Prior to patching, prep the outside and inside of the tank by using AquaKlean and RustBlast and allow all surfaces to **dry completely**. Begin by sealing the inside of the tank as outlined above. After sealing, immediately use any remaining Sealer to paint a thin layer on the exterior pinhole area(s). Using a suitably sized piece of BackBone Mesh, embed it directly into the wet Sealer and apply another thin coat of Sealer painting outward from the center. Let cure.

**For exterior patching of holes that are larger than pinholes**, use [KBS NuMetal Epoxy Putty](#). Clean & prep the inside and outside of the tank using AquaKlean & RustBlast as stated above. Let dry. Scuff up area to be patched with 320 grit sandpaper then follow NuMetal application instructions. (**NOTE:** Allow NuMetal to cure for 12 hours before proceeding with sealing the inside of the tank.) After sealing & draining the inside of the tank, immediately use any remaining Sealer to paint a thin coating on the exterior patched area for reinforced coverage.

### CLEAN UP

Use KBS #1 Thinner for immediate clean up. **IMPORTANT:** Gold Standard Tank Sealer must be cleaned up before it dries as it cannot be removed by any solvent once cured. Always wear protective gloves to avoid skin contact and temporary staining. If skin contact accidentally occurs, immediately remove with #1 Thinner or lacquer thinner followed by soap and water. If Gold Standard should stain your skin, only the course of time will remove it.

### STRIPPING (IF NECESSARY)

Use [KBS Strip](#) (or a paint stripper containing Methylene chloride) for the most effective removal of an old failed coating. Pour some [KBS Strip](#) into tank and carefully rotate tank to allow contact with all sides. It may take multiple applications of [KBS Strip](#) to finish the job completely. Old Sealer may come loose in big chunks or small pieces so use a long tweezers-type tool to help remove it from the tank. After stripping is complete, rinse tank generously with water and proceed with the KBS 3-Step System for Fuel Tank Preparation & Sealing. (**NOTE:** When stripping a Fiberglass Tank, surface contact with the stripping agent should be kept to a minimum to avoid the attack & weakening of the fiberglass resin.)

### FIBERGLASS TANKS

The procedure for sealing a Fiberglass Tank is the same except for a variance in **Step #2 - RustBlast**. For this type of tank, thoroughly wet the fiberglass surface for only 2 minutes using RustBlast. Drain and rinse well with water as directed. Because you are not prepping metal or dissolving rust, RustBlast may be saved and re-used for future use. RustBlast will, however, treat the fiberglass surface by giving it a more acidic pH level & by leaving a zinc phosphate coating ideal for Sealer adhesion.

Also, it is important to make sure that the tank is **completely dry inside** before sealing. Drying is best accomplished by introducing forced air into the tank by using a shop vac, blow dryer, or fan. (**NOTE:** Drying is a critical step for sealing fiberglass tanks. Fiberglass tends to hold moisture and if the tank is not dried completely, the Sealer will not adhere properly.)

**IMPORTANT:** It is also very critical to methodically coat the entire fiberglass tank completely & thoroughly with the Sealer. If any part of the fiberglass surface should accidentally be left exposed or unsealed, however, these unprotected areas will be very susceptible to deterioration by alcohol blended fuels and it is therefore *highly recommended that these fuels not be used in fiberglass tanks even after sealing*. After coating the tank, remember to drain well to avoid pooling and puddles.

**NOTE:** In the unlikely event that you would have any troubles with the KBS Tank Sealing Process, we have our [KBS Fix-It Guides Available HERE](#). It is always a great idea to familiarize yourself with these guide before you begin your project.

### QUESTIONS & TIPS

Q. *Does duct tape provide a sufficient seal to allow you to rotate, turn & invert the tank without the Sealer spilling all over the place?*  
A. Yes, duct tape or electrical tape works well. Also, a piece of cork or rubber will seal small tubes.

Q. *What's the best way to prevent the Sealer from getting on the screw threads?*  
A. Apply a small amount of oil (WD-40 or similar) to the threads, and if the Sealer dries on those threads, it will peel right off.

Q. *What's the best way to remove the Sealer from the fairly small "L" shaped protrusions on the underside of each side of the tank?*  
A. If you can't get to it from the inside, use pipe cleaners or cotton swabs to remove the Sealer from these tubes before it cures.

Q. *Any other tips, "tricks of the trade", suggestions, etc.?*  
A. Just remember to be sure the tank is completely dry before using the Sealer. Apply a thin film of oil wherever you don't want the Sealer to stick. Do not allow the Sealer to "puddle" in the tank. If the tank has baffles or a design which does not allow for complete draining of the excess Sealer, keep rotating the tank (every 10 min or so) as the Sealer cures to help prevent pooling & puddles.

## **Bing carburettor icing (episode 3)**

Last month we heard from two pilots who had experienced what they thought was carburettor icing in motors fitted with Bing slide carburettors. Of particular interest was Mike Smith's exciting account of his 2009 QUA Poker Run experience when his motor started vibrating over McCarron's Field. Mike knew his plane's carburettor was a Bing and he believed, probably quite rightly, that it was icing up that day. What Mike didn't realise, however, (and neither did I until Marty Hone wrote and pointed it out) is that the Bing carburettors on Jabiru motors are not the type 54 slide variety, but type 64 CV (constant velocity) ones. The throttle on this latter type of carby happens to be a butterfly valve. According to Marty, the slide that is positioned in front of the butterfly valve is there only to control the airflow when the throttle is opened suddenly on account of the fact that these carburettors (and the type 54 for that matter) do not have accelerator pumps. So, while Mike's story certainly kept us on the edges of our seats (and we thank him very much for it), it has no bearing on the Ralph Percy's original question of whether or not he should install carby heat in Deb's X-Air.

Ian Walker's account is certainly relevant, but his experience was a fleeting one that he thought might have been from the effects of turbulence until Kiwi (Andrew Dunning) confirmed that he had had the same symptoms at about the same moment. Overall, Mike Stratman's (CPS) observation that in motors fitted with Bing slide carburettors (that is, carburettors in which the slide is the throttle valve), engine failure from icing is virtually unknown so far seems quite valid. Remember also the American FAA approved text that states that "the variable venturi and pressure injection carburettors are relatively free from carburettor icing troubles." Remember too that in the US there are many more Bing slide carbies flying around in conditions much more conducive to icing than here in Australia. Certainly, as the owner of an aircraft fitted with Bing slide carburettors, I'm not too worried about ice (touch wood, I mean fibreglass).

## **Aviation Events**

Aug 26-27 Betoota, QLD, Betoota Races  
Aug 27-28 Tumut, NSW, Tumut Valley Fly-In  
Aug 27-28 Caboolture, QLD, Festival of Flight 2011 20th Anniversary  
Aug 27-28 Watts Bridge, QLD, AACQLD Aerobatic Mini Comp & Practice  
Aug 28 Deniliquin, NSW, Sunday Breakfast  
Sep 2-3 Birdsville, QLD, Birdsville Races  
Sep 3-4 Ingham, QLD, Ingham Wings & Wheels Airshow  
Sep 4 Wagga Wagga, NSW, Wagga City Aero Club monthly BBQ Lunch  
Sep 4 Deniliquin, NSW, Sunday Breakfast  
Sep 7-9 The Westin Bayshore, Vancouver, Oth, Future Travel Experience 2011  
Sep 7-9 Hyatt Regency Coolum, QLD, RAAA 2011 Convention  
Sep 9-10 Bedourie, QLD, Bedourie Races  
Sep 9-10 Bedourie, QLD, Bedourie Ute Muster  
Sep 9-11 Rockhampton, QLD, Spring Fly-In  
Sep 9-11 Rockhampton, QLD, Cessna 182 Autumn Fly-In  
Sep 10 Warwick, QLD, Wings Over Warwick  
Sep 10-11 Tocumwal, NSW, AAAA Chipmunk Rally  
Sep 10-11 Tocumwal, NSW, AAAA Chipmunk Fly-In  
Sep 10-11 Goondiwindi, QLD, Goondiwindi Fly in  
Sep 14-18 Reno Nevada, Oth, Reno National Air Races  
Sep 16-18 Narromine, NSW, SAAA National Convention  
Sep 16-19 Toowoomba, QLD, C200 Series Association Fly-In 6 - Toowoomba  
Sep 17 WALGETT, NSW, Trial Instructional Flights and BBQ  
Sep 17 Watts Bridge, QLD, Gathering of Eagles

## **Club name change**

Richard Faint emailed the newsletter last week to say: "For my two cents worth, Brisbane Valley Sports Aviation Club". Many thanks, Richard. I totally agree with you, and, by the way, regard your opinion as worth much more than two cents. Arthur.

## Gentleman Jim finally has the motor back in the Terrier

Hi Guys. The last run up proved my cruise mixtures were spot on – the idle as well as full power full rich mixtures were in a very healthy running range. So, I've decided to postpone the engine teardown and test the rest of the intake system, this being the flap box, air cleaner and carburettor heat system. The motive here is to make sure that none of the latest bolt-on pieces harm the performance and mixtures too much.

Also, I want to be certain that the carburettor heat system is very effective and not just there for pilot comfort. The TBI and flap box air cleaner system is right at the front of the cowl and exposed to cold incoming air with no chance of hot air around the engine mixing with it, so while that is great for overall performance, I suspect it is also the perfect way to make carburettor ice in the right meteorological conditions. Hence my desire to have a very effective and reliable carburettor heat system. I have attached some photos. Comments and suggestions are welcome. JG.



Editor: I ran into Jim the other day at Lynfield. He is doing his instructor's rating with Kev Walters and is about two thirds of his way through the course. It was a beautiful morning; not a cloud in the sky. They were using the Drifter. Jim was in very high spirits, but he did make the remark that young Kev is quite devilish when it comes to pretending to be an ab initio student.

Which brings me to the **quote of the month**: Kev Walters then made the remark that some people like flying aircraft, others like building them, some mostly like to talk about them, but others are quite happy just to be near them.

## **Sport Pilot Magazine (the good and the surprisingly not too bad this time!)**

I remember when writing a letter to the RAAus magazine was like consigning my thoughts to outer space. So I was very pleased to see a few get through almost unscathed in the latest issue. Not only that, this time neither I nor the other contributors were “de-identified”. Furthermore, Bob Dennis’ smiling face went nationwide as well, along with Peter Freeman’s photo of the Raglin fly-in! And there were stories from other ordinary guys like us from all over the country. I’m starting to think that the staff at Sport Pilot mean what they said in that first issue. They do want to produce an inclusive magazine that provides a forum for all points of view in the association. No doubt the magazine will continue to be inescapably commercial, but I can easily live with that if I feel I am getting a hearing when I need one. Well done, Sport Pilot!

## **Kreisha Ballantyne (sub-editor) responds on behalf of Sport Pilot**

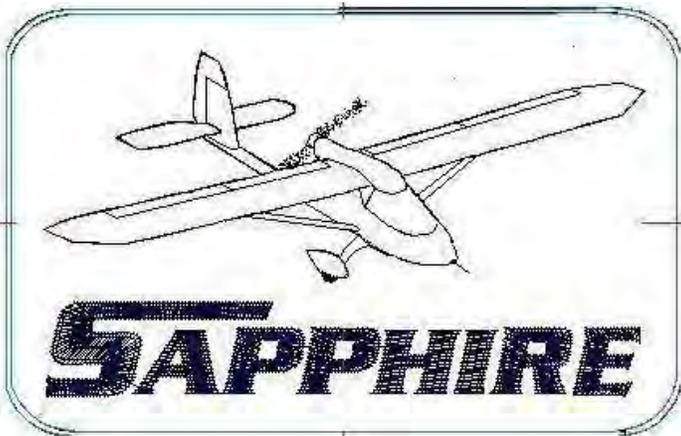
I appreciate all feedback and feel he [Brian Bigg, the Sport Pilot editor] hit the nail on the head [with this issue] in many regards. I, for one, am not ensconced in RAAus and have not been a member for long enough to have an agenda. I know so little of the intricate politics inside the organisation. It has been said that in the past members felt their views and voices were not being aired.

The Sport Pilot team is a commercial outfit. We were hired by RAAus to produce their magazine because we are not board members or board member's wives, and are thus politically neutral. However, we are still RAAus members, and, of course, also pilots with the usual passion/addiction for flight. Finally, we are experienced journalists, designers and ad men.

I can't stress enough to members that this is THEIR magazine. We are all ears when it comes to feedback.

Thanks again, Arthur, for your correspondence. Kreisha

## **Embroidery anyone?**



A friend of mine, Alex Irvine, runs a business called American Pacific Agencies. He supplies corporate clothing for Brisbane businesses. He designed this badge for me from a photo that I gave him. He then embroidered the design onto the pair of coveralls I use as a flying suit. I’m very happy with the result and Alex didn’t charge me a cent. He can do the same for you but he would probably charge a fee. After all, he’s a businessman.

Lyn Walters, Kevin’s far better half, told me the other day that she is starting out in this business too. She can do all types of embroidery and prints. She can also do digital profiling, the process Alex used to create the Sapphire design, whereby a computer program converts a digital photograph into an outline.

## **Need a place to stay out Toogoolawah way?**

Dear WBMA (and QUA). We are a new 5 Star accommodation facility currently under construction at Hazeldean in the Somerset Region. We are in the process of making our self known to local tourism businesses and other ventures that may be interested in knowing about our service. Please feel free to view our web site at [www.somersetretreat.com.au](http://www.somersetretreat.com.au) to get a feel for what we will be offering. If you think your members may be interested in the accommodation we will be offering and would like to access us via a link on your web site with an accompanying photo and description please let us know and we will be only too happy to provide you with our details. We will have an online booking facility available soon so reserving accommodation will be as easy as a few clicks. Please see here for our location: [35 Nerel Ct](#)

We would be happy to provide some brochures to display in your club house if you think your members would be interested to have something to take away with them when they visit. Kind regards, Roxane Paczensky, Somerset Retreat

**Meanwhile, at the Marburg Skyranger assembly plant, Mal's covered the rear fuselage**



**Scott Hendry's Ninja kit has arrived as well, and he's making rapid progress**



# **WATTS BRIDGE MEMORIAL AIRFIELD INC.**



## **Gathering of Eagles Saturday 17th September 2011**

**Open invitation to ALL Aviators.  
Fly in and enjoy the freedom of  
flight at picturesque  
Watts Bridge**



**Food and drink available all day**

**Avgas**

**No landing fees**



**All aircraft types welcome!**

### **CONTACT**

**John 0417 643 610 Ron 0428 747 737 [www.wattsbridge.com.au](http://www.wattsbridge.com.au)**

## New arrangement for Avgas at Watts



### WATTS BRIDGE MEMORIAL AIRFIELD – FUEL DEPOT

#### HOW TO USE YOUR VISA OR MASTERCARD

IF THE DISPLAY ON THE CARD READER AND/OR FUEL BOWSER IS BLANK:

- CHECK TO ENSURE THAT THE EMERGENCY STOP BUTTONS HAVE BEEN RELEASED (TWIST TO RELEASE).
- THESE ARE LOCATED ON THE YELLOW BOLLARDS AT EACH END IN FRONT OF THE FACILITY
- ENSURE SWITCH ON RHS OF BOWSER IS IN THE "OFF" POSITION.

- A. Swipe your Master or Visa credit card and follow instructions on the screen.  
**(DO NOT INPUT YOUR PIN NUMBER).**  
Screen will indicate the following.
- B. Enter pump no. 1.
- C. Enter Authorization amount (dollars only).
- D. When "take fuel" is displayed, turn switch on RHS of bowser to the "ON" position. The pump will start.

When refuelling is complete, turn switch on RHS of bowser to the "OFF" position to finalise the transaction.

#### Notes:

Bowser will shut down automatically after 3 minutes of non-supply of fuel.

The pump will also stop automatically once the maximum requested credit amount is reached.

The switch on the RHS of the bowser needs to be turned to the "OFF" position to finalise the transaction even if the pump has timed out or shut down because the requested credit limit has been reached.

A receipt can then be obtained by re-swiping your credit card. The receipt will be printed and automatically cut off. DO NOT pull.

DO NOT use the emergency stop button to stop the system under normal conditions.

- E. Wind up refuelling hose and earth cable back into cabinet and close shutter.  
Replace ladder if used and secure.

**THANK YOU FOR PURCHASING YOUR AVGAS  
FROM WATTS BRIDGE AIRFIELD.**

Don't miss Gympie Aero Club's Annual  
**FLY-IN . . DINE-OUT**



Breakfast at Hervey Bay (8 - 9.30 am)  
Lunch at Greenfields (12.30 pm)  
Sweets, Lucky Draws at Gympie (3.30 pm)

**Sunday 28 August 2011**

Enquiries and Bookings  
contact robert  
robertfraser11@bigpond.com  
0417 219 167

NOTE: For catering purposes please advise by  
Monday 22 August 2011

**The next QUA meeting is at 7.30pm on Monday  
5<sup>th</sup> September at the Archerfield Terminal  
Building followed by supper.**

**PRESIDENT:** Peter Ratcliffe 0418159429    **TREASURER:** Ian Ratcliffe 0418728238

**SECRETARY:** Mal McKenzie 07 33415348    Email: [mmc80789@bigpond.net.au](mailto:mmc80789@bigpond.net.au)

**NEWSLETTER EDITOR:** Arthur Marcel    Email: [a.marcel@optusnet.com.au](mailto:a.marcel@optusnet.com.au)

**QUA Inc TECHNICAL DIRECTOR:** George Perez 0423536380

# MINUTES OF AUGUST 6th 2011 GENERAL MEETING

MEETING OPENED	10.15 am
APOLOGIES	Liz Cook, David Ratcliffe, Ian Ratcliffe, Peter Ratcliffe and Scott Meredith
VISITORS	Priscilla Smith, Lynda Poulsen
MEMBERS PRESENT	Fourteen.
MINUTES OF JULY MEETING	No business arising. Motion to accept minutes as correct proposed and carried.
PRESIDENT'S REPORT	Oshkosh went well. Over 10,000 aircraft flew in during the week.
TREASURER'S REPORT	Opening Balance           \$ 11,616.79 Deposits                   \$    534.40 Withdrawals               \$    131.00 Closing Balance           \$ 12,020.19
SECRETARY'S REPORT	Some correspondence due to a revision of the solar grant application. Several new members including Liz Cook, Paul Poulsen and Paul Escott.
WBMA REPORT	Airfield is doing very well. No mowing recently due to recent frosts. Incident yesterday with a student pilot from Archerfield caught in bad weather over Moore. Help was given by Air-services and a helicopter to guide him to land at Watts Bridge successfully.
SOCIAL REPORT	Gathering of Eagles Fly In planned for September 17 <sup>th</sup> . Ron Dunne and John Innes are organizing the event. Same plan as the successful All In Fly In with the same caterers. QUA members are asked to sell drinks and help with aircraft marshalling. A suggestion was made for the aircraft marshals to be in contact via C/B radios. Sandy to organize the purchase of drinks for the fridge. All In Fly In is planned again for May 2012. Poker Run and the Christmas in July Dinner is planned for July 14 <sup>th</sup> 2012.
GENERAL BUSINESS	The Gold Coast club at Heck Field has been banned from using the runways. No one is allowed to fly in or depart due to a dispute with the Heck family. Bill Oates has a table suitable for aircraft construction. Talk with Bill about this. New Sport Pilot magazine is coming out earlier with more relevant articles. The QUA Inc name change needs to be decided. The new name needs to be chosen and voted on at the next Annual General Meeting. The QUA Inc gate sign application has been approved by the Somerset Shire Council using the existing name. It was recommended that the next QUA Inc Annual General Meeting to be held in October at Watts Bridge if the audit has been concluded. Topics to include the name change proposal and the replacement of the QUA Inc secretary. A suggestion was made that the new secretary be a person from Watts Bridge. Another suggestion was made that the QUA Inc organize a Post Office Box for incoming mail. Cost is estimated to be \$ 80.00 per annum.
THANKS	Thanks this month to Deb & Ralph Percy for organizing the BBQ.
NEXT QUA Inc MEETING	Monday 5th September at the Archerfield Terminal Building at 19.30 hours.
MEETING CLOSED	11.15 am.