

BRISBANE VALLEY FLYER

DECEMBER - 2015

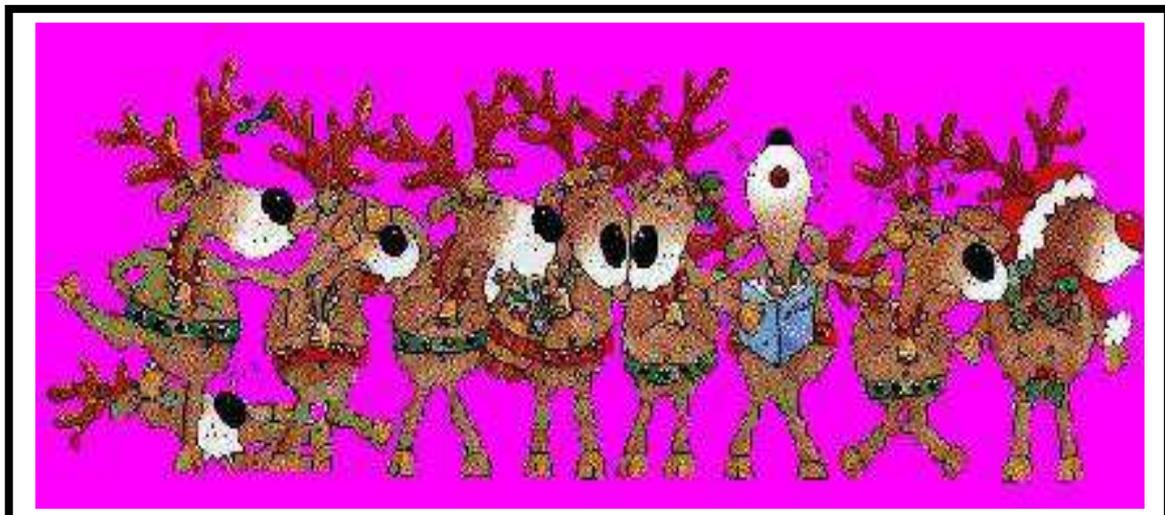
**BRISBANE
VALLEY**



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**SPORT
AVIATION
CLUB INC**

Watts Bridge Memorial Airfield, Cressbrook-Caboonbah Road, Toogoolawah, Q'ld 4313.



**MERRY CHRISTMAS AND A
HAPPY NEW YEAR**

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Flying the Classics – the Spitfire (in this case a Mark 1X LF)

You don't sleep much the night before your first flight in a Spitfire: the thrill is always at the forefront of your mind!

The Merlin always starts easily if primed correctly. Looking out over the nose as the prop slowly turned on the starter motor, the propeller blades look huge. As the prop cranks, a watched for an over-prime signalled by flames along the exhausts must be kept. If this happened, the starter must be kept cranking. Over-priming will cause anxious moments watching a horrible amount of fire dancing about the cowlings until she fires up. Then, in an instant, the flames are blown away. When running, the Merlin settles to an easy idle, reminiscent of a 1960's V12 Formula one race car. At a low idle, the clatter of the propeller reduction gearbox can be heard - always a thrill.



The Spitfire – a design excelling in streamlining

The aircraft has no steerable tailwheel and turns require full rudder and differential braking. The brakes are air operated, and are unheard with the engine running. However, if used on the ground with the engine off, a loud hissing is heard which sounds like mad Green Mambas. The brakes are also controlled by a little bicycle-type lever on the control column spade grip. It sounds strange, but it works quite well. Brakes, flaps and radiator shutters are powered by compressed air. A small compressor, driven by the camshaft at the rear of the left-hand cylinder bank pressurizes the system. The parking brake is applied by squeezing the lever then applying a little catch at the rear of the spade grip, locking the lever in place. Nice and easy.

After a gentle run-up (caution – too much throttle on the ground, and the aircraft can go over on her nose) including a check of the Left and Right mags, cycle the propeller pitch whilst maintaining at least 1800 RPM. For the DVA's (drill of vital actions or pre-take-off checks) the aircraft is actually

quite simple as there are not a lot of systems to check. However, it is important to have the pitch set to full fine, the radiator cowls fully open, and the rudder trim set to fully nose right! Line up on the runway centreline and tilt your head sideways with the canopy open to see past the long nose.



A typical Spitfire cockpit

Opening the throttle, the aircraft accelerates very quickly, even at only +6 to +8 pounds/Sq. inch of boost, which is just over half throttle. War Emergency boost would go to about +18 boost. The rudder gives good directional control and the elevator is powerful

due to the slipstream over the tail. A tiny forward press on the stick lifts the tail just off the ground, and the propeller spinner is easily held on the horizon. A little of the top of the spinner is visible from the cockpit and this is easily held on the horizon during the takeoff. Maintaining this attitude, as the aircraft accelerates through about 87 knots she will lift very smoothly off the ground. Now raise the

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undercarriage by moving the U/C lever down and out of the gate and holding it for a short pause to ensure the hydraulic system is pressurised. (When the lever is in the gate, either up or down, the system is at idle and is not pressurised by the engine driven pump). This is a bit tricky at first but easily mastered. Small metal hoops are visible, located 2/3 of the way up the U/C legs. These engage in locking pins which have an angled end, and are rotated by small cables and chains attached to the gear selector quadrant. The pins rotate so the angled face of the locking pins is presented to the travelling gear in the correct sense. They are then pushed back by the cycling U/C legs, snapping back into place, to lock the gear. Raising the U/C provides the first taste of infamous British aircraft ergonomics! The U/C selector lever is on the right side of the cockpit, so a change of hand on the stick is required. If the throttle friction nut has not been tightened on the DVAs, the throttle will instantly close to idle, at a critical stage of the early Climbout.

Accelerating further, coolant radiators must be set to automatic, and the cockpit canopy is closed and locked. By now the pilot will notice a rapidly growing pressure on the left leg as the full right rudder needed for the take-off is too much for the faster flight. A few turns of the highly-g geared small rudder trim wheel sorts that out. This rudder pedal pressure builds up rapidly and needs to be quickly relieved with the trim adjustment.

Now a pilot can really see how this marvellous aeroplane really flies. A wartime Spitfire pilot, Pete Brothers, once said that the Spitfire seems to read its pilot's mind, and turn and do things without the pilot seeming to actually do it with the stick. After flying the aircraft most agree with him. Just "think of turning," and this aircraft does it.

In spite of its weight, power and performance, the Spitfire has no vices; it really is very pleasant and easy to fly. The controls are so light and powerful that it feels as though your hand is hardly moving on the stick if you throw the aircraft around. I am quite convinced that is why the Spit was so good in combat, as you can fly it to the limits all day without your arm getting tired. Even at speed, you can hold it in a max rate turn on the light buffet, with a gentle two-fingered pull in the stick. This is one reason the Spitfire was considered effortless to fly. The "broken" stick (only the top part moves for roll control) also works well, as your arm is not moving all over the cockpit.



The IX LF model has clipped wing tips.

The Spitfire stall has very gentle characteristics with no wing drop tendency. A light buffet appears in the stick as the stall approaches giving plenty of warning, and enabling accurate holding of a turn on the buffet (i.e. max rate turn). The aircraft really does feel like a willing participant in the air and it is easy to understand how pilots grew to love it so much.

In flight it is quite a sight to look out over the long, elegant nose. Also to turn and look around the horizon without any obstacle except the canopy frame is superb. Looking around and above is easy, however, the downward view is poor, as the pilot sits almost directly above the broad elliptical wing.

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The last challenge is to get the aircraft back onto the ground and getting it stopped in one piece. The usual procedure is to set up on downwind with the downwind checks – Brakes - brake pressure is checked on the gauge, reduce speed to below 140 knots, and lower the U/C. Confirm mixture is set on “Auto Rich” and switch the fuel booster pump on. Set prop pitch to full fine, open the radiator cowls and open the cockpit canopy. The base leg is uneventful and at the turn onto final, the U/C down indicator is re checked and the throttle is briefly closed to ensure the "U/C Up" warning hooter is silent. This is always fun, as with the canopy open and the throttle closed, the backfiring exhaust stubs sound like 12-gauge shotguns going off in front of the cockpit. Now flaps are lowered. The Spitfire has only two flap settings, UP or DOWN, and DOWN is 64 degrees. With the split flaps lowering, the aircraft pitches noticeably nose-down, improving the pilot's visibility ahead and making speed control on finals relatively easy.

Next, a quick check of air pressure to ensure that the flap system is not leaking. As mentioned, the flaps are also operated off the air pressure system, and they are held in the open position against aerodynamic load by air pressure. Thus, if air pressure is lost because of a leak in the flap system, the stored air pressure in the compressed air tanks will rapidly leak, and can easily exceed the small engine driven air compressor's ability to restore it. In this situation, eventually the flaps blow back and retracting which also means no air pressure to operate the brakes on landing.

Aiming to cross the threshold at around 85 knots the aircraft is surprisingly easily landed. A slight hold-off then a soft touch down on the main wheels, with the tail wheel about a foot off the ground. The view is still adequate over the nose in this attitude and directional control will remain good.

Now comes the only tricky part about flying the Spitfire. After lowering the tail to the ground, the pilot MUST be positive and quick with rudder inputs: with no steerable tail wheel and no slipstream over the rudder (the throttle is closed), it is imperative that the pilot be positive on the rudder to keep the aircraft straight. Its narrow track undercarriage will encourage swing which must be stopped quickly, or it could fast develop into a ground loop.

Braking to help directional control can be used, but with caution, as brake application depended on rudder pedal position. Obviously losing a brake, even at low speed, would be bad news as with no steerable tailwheel, and insufficient speed for rudder effectiveness, a pilot is absolutely powerless to stop a slow ground loop. However, even a slow ground loop would probably end up with the Spitfire on her nose and a very expensive propeller destroyed.

Taxiing back is straightforward, but the radiator temperatures must be watched as the landing flaps restrict airflow through the radiators. For this reason most pilots retract the flaps up immediately on clearing the runway. When parked and the throttle is backed to idle, a quick dead-cut mag check is done. Finally, the mixture control is moved to “idle cut-off” and the engine shuts down with a final pop and crackle.

No doubt some modern aircraft handle as well, if not better, than the Spitfire. But considering when it was designed, it's amazing beauty despite its lethal function, and the colossal history it nobly shoulders, it will always hold a special place in aviation. Long may those cherished examples in private ownership today continue to fly.

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Childers Airfield – a Fun Fly-In

Latitude:-25.267 Longitude:152.35

On Saturday 7th November Isis Flying Club held its inaugural Flying and Breakfast. It was a beautiful day contrary to the inaccurate forecast giving conditions that would have kept most aviators snug in bed for a weekend lie in. Despite the forecast aviators from Caboolture and further afield joined a large gathering for a breakfast fit for a hungry station hand.

This was my first visit to Childers Airfield and I found it impressive. It sports 1100 usable meters tucked conveniently a couple of hundred meters off the Bruce Highway about five K south of the township. The Isis Flying Club with the co-operation of the Bundaberg Council have been working hard over the past few years on improving the evenness of the runway after some damaging floods. Top dressing and crusher dust have made a very nice smooth grass runway that would be the envy of some sealed operators. Its beautiful wide open approaches will keep you in the circuit doing touch and go's for pure fun.

It was charming for each visitor to be greeted by a committee member wearing their club shirt that readily identified them. I was greeted by Ian and Brett and felt immediately welcome and at home. They both exuded a country feeling of friendliness and comradeship in a common interest.

A walk along the flight line saw all sorts of recreational flying machines from Ian's own kit built Lightwing Pocket Rocket, Brett's beautifully restored Drifter to a rare Auster and an immaculate XAir Hanuman along with lots (more) conventional RAA craft.



Wolfgang Klein's rare 1946, Auster J2



Ian's Lightwing Pocket Rocket



Brett's restored Drifter



A nicely presented Savannah

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A Tecnam Echo



An immaculate X-Air Hanuman



Part of the line-up at Childers

If you would like to experience the joy of aviation in a great social environment, don't miss the next Isis Flying Club meeting. It happens on their first Saturday of every month. Check their home page for further information. See <http://isisflyingclub.asn.au/>.

FLY-INS Looming

December 06	Gympie	Gympie Aero Club Breakfast Fly-In
December 12	Murgon	Burnett Flyers Monthly Breakfast Fly-In
December 19	Dunwich	Straddie Breakfast Fly in
December 25	Everywhere	Santa Annual Fly-In

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Mystery Aircraft (December Issue)

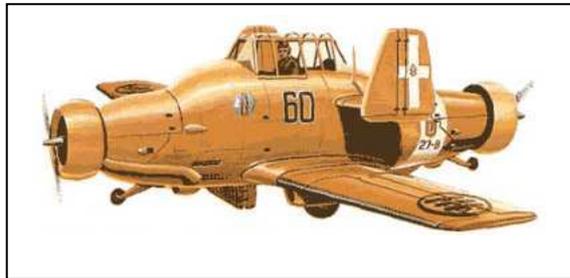
What's this?



Mystery Aircraft (Last Issue)

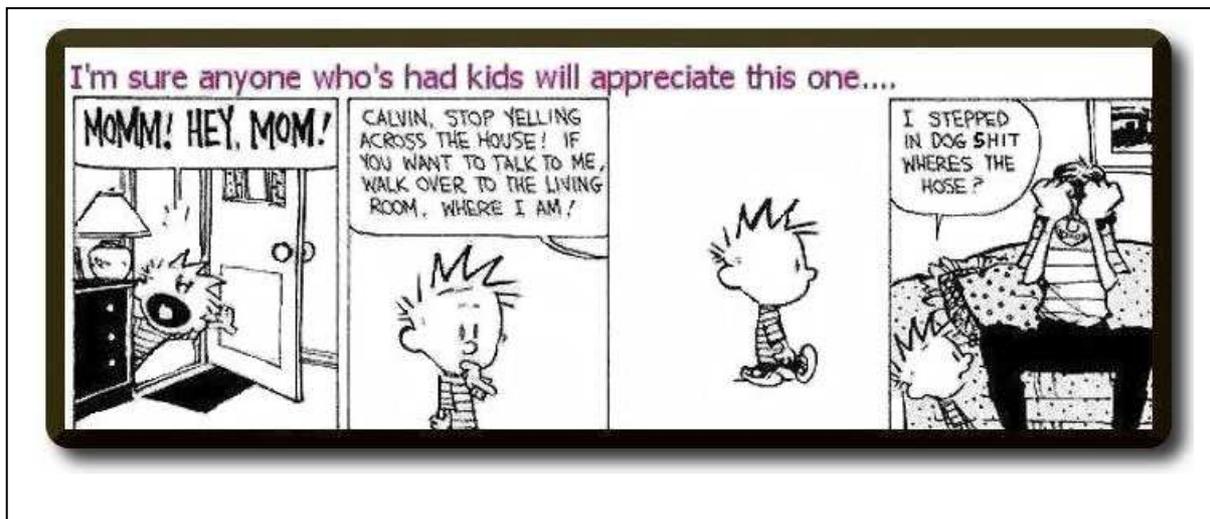
CAPRONI-MORONI C2 "SCUD" EXPERIMENTAL FIGHTER

When the tide of war turned against it, Fascist Italy turned with the tide. The C2, or "SCUD," was one direct result. The engineers of Aeronautico Piccolino Abagano Elari Quattori in Turin were charged with designing an aircraft of modern fighter type that could, should word come in mid-air of another change in Italian allegiance, instantly reverse course and become part of the now friendly force. Thus the unique two-engine configuration, central cockpit with swivel seat and dual controls facing fore and aft. Time for the SCUD (mean



"Scuderia con curso il travala," or "turncoat") to switch directions and sides was set a less than two minutes from a top speed of 265 mph by air force consultants. This performance criterion was never tested, much less met, since pilots refused to attempt it, except on the ground with an ambulance close by. One pilot did take the sole SCUD prototype aloft, but once airborne decided to visit his mother in Salerno and wrecked the craft crash-landing on a nearby beach. The SCUD was painted gold by artisans formerly employed in upkeep of the Sistine Chapel.

A remarkable feature of the plane, considering its fighter designation, was its total lack of armament. The designers successfully resisted all attempts to ruin its unbroken lines with ugly guns.



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Keeping up with the Play (Test yourself – how good are you, really?)

- 1. In error, a pilot flies a heading of 140° instead of the planned heading of 130°. After flying for 45 miles how far off track is he likely to be if all other factors are correct?**
 - A. 7.5 nm.
 - B. 10 nm.
 - C. 2.5 nm.
 - D. 12 nm.

- 2. When reading a TAF, a pilot notices the cloud base height is given as 800 feet. This height is (select from the following):**
 - A. Above ground level.
 - B. Above aerodrome level.
 - C. Above mean sea level.
 - D. Above ground level unless stated differently in the TAF text.

- 3. On a VNC chart, what ground distance does one (one) inch represent?**
 - A. 7.9 nm.
 - B. 21.2 nm.
 - C. 5.25 nm.
 - D. 6.86 nm.

- 4. Why do many large aeroplanes have anhedral built into their design?**
 - A. To reduce their inherent stability.
 - B. To allow easier servicing on the wings and engines.
 - C. To make them more stable laterally.
 - D. To reduce induced drag.

- 5. Why does closing the throttle whilst in a steady cruise cause the aeroplane nose to yaw?**
 - A. Propeller pitch effect.
 - B. Propeller asymmetric blade effect.
 - C. Propeller torque effect.
 - D. Propeller slipstream effect.

ANSWERS: 1. A, 2. B, 3. D, 4. A, 5. D.

If you have any problems with these questions, call me(in the evenings) and let's discuss it! Ed.

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BRISBANE VALLEY SPORT AVIATION CLUB Inc.

MINUTES OF THE 7.11.2015 GENERAL MEETING

MEETING LOCATION:	Watts Bridge Memorial Airfield – BVSAC Clubrooms
MEETING DATE:	7 th November 2015
MEETING OPENED:	10:02AM
MEMBERS PRESENT:	15
APOLOGIES:	Glenda Faint, Ian Ratcliffe, Liz Cooke, Mary Clarke
VISITORS:	Brian Schollum
NEW MEMBERS:	Mark Purdie
MINUTES:	September 2015 meeting of the BVSAC Inc. Proposed: Richard Faint Seconded: Peter Ratcliffe. Acceptance motion carried. October 2015 meeting of the BVSAC Inc. Proposed: Danny Fowler Seconded: Peter Ratcliffe. Acceptance motion carried.
PRESIDENT'S REPORT:	Wayne Petty thanked Rob Knight for another great BVSAC Newsletter. He proceeded to outline his proposal for extending the clubrooms, to be discussed in general business.
SECRETARY'S REPORT:	Richard Faint detailed the inward and outward correspondence for the month. This included emails to members regarding flying events in the district, the club's Christmas Party, the Amberley Airspace report and the distribution of the newsletter. The club's WBMA land purchase assistance was finalized with the relevant paperwork completed. The total contribution was \$30,000.00
TREASURER'S REPORT:	Priscilla Smith provided a financial statement summary and advised that the BVSAC ING account balance is \$551.24 and that the BVSAC NAB account balance is \$1,932.49
WBMA REPORT:	Bruce Clarke advised that the purchase of the land is progressing well. He especially thanked BVSAC for the support shown by club members to the future of the airfield. Peter Freeman reported that the vettiver grass had been cut and the sewage treatment area tidied up. He noted that the mowing season is upon us, there is plenty to do on the airfield.
GENERAL BUSINESS:	Mal McKenzie advised that Bradfield has been sold and it may be unavailable for club activities such as the Poker Run. The secretary is to write a letter of thanks to the previous owner, Bob Morgan, thanking him for the use of Bradfield over the years. Mike Smith drew attention to the poor state of the BVSAC Hangar's tank and stand. A motion was moved by Mike Smith, seconded by Richard Faint "That money be approved to replace the tank and repair the stand as required." The motion was carried. Mike is to co-ordinate the work. Wayne Petty led discussion on extending the clubrooms on the northwestern side and adding a pergola beside the tanks. Wayne is prepared to undertake some of the work. The clubrooms would be extended by one "bay" by extending the roof line and concrete flooring. Wayne suggested the extra area could, at some

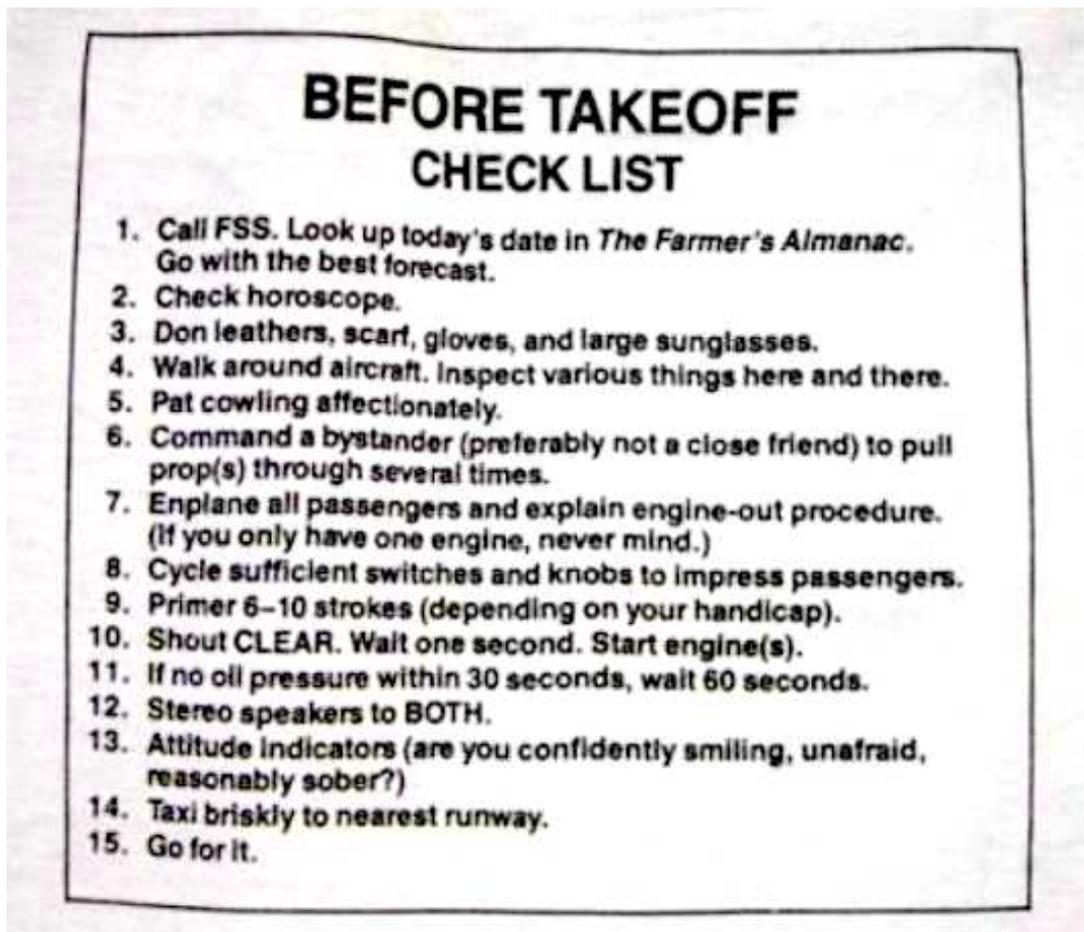
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point in the future, be used for catering at fly-ins and other club activities. Work would be conducted in stages as funds permit. Stage 1, roof extension and concrete flooring, would be approximately \$6,000.

Mal McKenzie mentioned that his neighbor is a draftsman and may be able to assist with the plans. The plans would be drawn for the entire project at completion. Wayne has been in contact with K&R Engineering, Gatton. It was noted that Watts Bridge and Somerset Council approvals will be required.

- CHRISTMAS PARTY:** The BVSAC Christmas Party is to be held 28th November in the clubrooms starting 10AM.
- NEXT MEETING:** The next meeting will be 06.02.2016 in the BVSAC Clubrooms Watts Bridge at 10:00AM
A BBQ lunch will follow the meeting.
- MEETING CLOSED:** There being no further business, the meeting was declared closed at 11:20AM
A BBQ lunch was held after the meeting.

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Aircraft for sale.

Skydart - \$5000



The hrs are 233, smooth 447 engine, 3 blade prop, instruments: ASI, ROC, ALT, COMP, HR METRE, RPM, EGT, CHT. Presently replacing fuel lines and giving it some well deserved TLC. ROC on a good day around 800 fpm. 654 total landings. An unprecedented panoramic view that even beats a Drifter without ruffling your hair and a very comfortable semi reclined seat which gives it a very enjoyable flying experience. Skins a bit daggy but serviceable. The fuel burn is 12 L/hr. at 5200 rpm and it cruises at around 65 knots.

Contact Bob Hyam. Tel: 5426 8983

Aircraft for sale

Rans-S-7S Courier. \$Below build cost.



A double winner at NATFLY 2011, this delightful aircraft is powered by a ROTAX 912US AIRMASTER which swings a CSU with a 3 bladed prop.

To date there are 280 hours on both engine and prop. It carries a Garmin SL40 VHFwith IC5 system., a Garmin GTX 327 transponder and altitude encoder,an d a Garmin GPS (colour)

It has STOL performance and cruises at around 90 knots at 25" Hg and 5050 RPM.

Contact Ken Edwards.
Mobile: 0438 178 869
Email: kenedwardsqld@gmail.com

Engine for sale:

ROTAX 912 UK, 80 hp. Installed in Lightwing GA-912 in 1995, now TTIS 936.6 hours. Still operating in the Lightwing, it runs perfectly and starts without effort. No smoke or excessive oil consumption. All logged maintenance records available.

Available in early January – take it away - \$5000.00.

Contact Rob Knight 0400 89 3632 or email – kni.rob@bigpond.com