

Goldsmith

The Pyrenees Heritage Preservation Magazine

Feature Supplement of the Goldsmith Gazette

June 2015 No 132

Lake Goldsmith Steam Preservation Association Inc

Registration No:- A0032895

Next Rally No 106 at

1234 Lake Goldsmith-Carngham Road Lake Goldsmith Vic.



William Adams



GOLDSMITH SPRING RALLY

Pyrenees Steam Pageant

Friday October 30 2015

Sat Oct 31 & Sun Nov 1 2015

**Great Southern Steam Trek
Ballarat -Beaufort - Lake Goldsmith**

**International Truck Tractor & Farm
Rally**



This 1932 Ford Sedan and C1956 Ford Customline and Fordson Tractor below were at the 105th Rally



This locally produced Wishart (and 2 others at the rally) lighting plant combined the Ford and Lighting Plant themes by using a Ford Prefect piston and conrod. The Roseberry powered 32Volt lighting Plant ran a family farm near Wangaratta and is still in the same family.

The 105th Autumn Rally featuring Fords and Lighting Plants provided a pleasant glow and spread of Fordson Tractors and Fords Cars and trucks on the arena and around the Rally Grounds.

The Steam and Internal combustion machinery was on show in force and the sheds and compounds displayed an enormous range of Heritage machinery.

In spite of predictions the autumn weather stayed cool and dry and the large turnout of visitors were spread over the rally ground and all sheds were well patronised.

The committee and members thank all those visitors and exhibitors who added to the variety of displays and made the rally a success. Hopefully we will see you again at the 106th Rally in the spring.

The next Rally will be a special event. In addition to the Steam displays and sheds, the featured theme for the Rally is International Trucks, Tractors and anything else from the enormous variety of farm, domestic, industrial and military equipment produced over its long life around the world and in Australia at Geelong.

This Rally will see the first **GOLDSMITH PYRENEES HISTORIC VEHICLE ROAD RUN**. Sentinel Steam Wagons and International trucks and Tractors will head up this Road run, and all forms of Heritage and red plate vehicles will be welcome on the run which will on Friday the 30th of October 2015. The Sentinel owners are arranging to have the largest convoy of Sentinel Wagons outside of the UK. They will be starting in Ballarat and will be travelling the 30/40KM to the Goods Shed marshalling area in Beaufort where they will regroup and join the other entrants to travel the 15KM to the Rally Grounds at Lake Goldsmith.

The yards at the Goods Shed have a large parking area for trailers and floats for vehicles that are trucked in. The Clubs onsite Museum has good facilities and meals are available at nearby Hotels and take away or dine in restaurants.

These facilities are ideal for entrants who will be involved over the 3 days or those who will just be on the Road Run

If your club would like to be involved in this event, or if you have a vehicle that you would like to include in this event contact:-

Ron Harris on:- 0418 514 990 or scss@vic.australis.com.au Ed.

Find us on the net at:- www.lakegoldsmithsteamrally.org.au

Or contact us by email info@lakegoldsmithsteamrally.org.au

Or write to: The Secretary:- P.O. Box 21 Beaufort 3373

Or contact the editor:- goldsmithgazet@optusnet.com.au

To register for this “cost & obligation free” bi-monthly e-magazine “Goldsmith”

just email:- goldsmithgazet@optusnet.com.au or ph 0425 744 052

Mission Statement

To foster, nurture, encourage and demonstrate technical, agricultural and life skills associated with the Industrial Era.

To provide a quality environment where these skills may be used to educate and entertain members and visitors.

To run two weekend rallies each year, and be available at convenient time for other interested groups or individuals.

To conserve and develop a heritage collection.

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There was a ceremony in the Boiler House

when a brass plaque was unveiled to commemorate the donation of the Harrison Mill Engine by Coleraine family of Keith and May Brown. This engine is now the centrepiece of the clubs collection in the Boiler house. Neil Wright has recorded the moment, and some background in the following story.

Harrison Engine Unveiling

The Lake Goldsmith Steam Rally is home to the largest assembly of working steam engines in Australia. Nowhere is this more typically exemplified than within the Society’s collection housed in the Founder’s Building Boiler House. From the steam rally’s early times, a unique collection of stationary (and some portable) steam engines has steadily accumulated in the Society’s main storage building.

With completion of the world-class Founder's Building in 2000, that collection has taken a new form as "the Society's Boiler house display" a vast & impressive working presentation of these engines

A unique part of that display and arguably the 'flagship,' has been around from the mid 1970's. It was not until re- installation in the Founder's Building that restoration could be seriously undertaken.

Donated from the collection of the late Keith Brown (TK) of Coleraine, the large horizontal engine is the only known remnant example of the Ballarat based Albert Foundry. The engine had been originally supplied to a Korweinguboorra Gold mine circa 1885 and when salvaged for preservation; had formerly powered the Kingston Chaff Mill near Creswick.

The writer has been an ardent admirer of this remarkable engine, recalling the attempts over past years to bring the Harrison engine into motion once more.

The engine had been placed on elevated concrete columns in the former "main shed" where a 'restless' flywheel' had created headaches, warp repositioning itself sideways requiring sideways creeping recesses to be cut out of the roof bearer directly over the 'wheel. With its relocation to the Founder's building, a flywheel pit became possible along with a meticulously bricked engine base and outrigger column. The crew at the boiler house are to be congratulated for a superb outcome, doing justice to this outstanding example of a Ballarat foundry's craft work .

John Norris has played a major role in this ambitious project and in November 2014 championed the idea to officially unveil the engine. A design for a commemorative plaque acknowledging Keith Brown's generosity and a plate fondly bearing the sentimental title of May (honouring Keith's wife) were required.

With CAD capabilities, member Ben Wright came up with a suitable design, patterned & cast at the Hasco Foundry in Ballarat North.

The Sunday Boiler house tour of the 105th rally came to a conclusion with the unveiling of the plaques. Trevor Oliver in his 'oratorial' praised the work of the boiler house team and reflected on the amusing incidence of the late Les Buckwell, nudging his "noggin" on the engine's elevated crankshaft; when it was formerly situated in the Main Building. .

Mary Joyce in effect a niece (as she likes to be known) of the Late TK Brown and a long time follower of the Lake Goldsmith movement; officiated in the unveiling. (right)

Mary has been actively involved, in the 'background' of the rally for many years and took pleasure in recognising the legacy of Keith's foresight to secure the engine for present & future generations to witness in operation.

Neil Wright

Left : Unveiling ceremony.

Bob Craddock, 2nd from left, Mary Joyce and John Norris surrounded by rally patrons .

Plaque honouring Keith's wife May and below the commemorative plaque.



THE HARRISON ENGINE

The Harrison Mill engine is an impressive piece of 19th century engineering, and a reminder of the days when steam was king in an era when machinery had to work in harsh conditions and look good while it did it. The modern expression of Form & Function, cannot capture the majestic image created by tons of cast iron slowly rotating under the pressure of steam produced in a wood-fired boiler.

The engine is 15 Nominal HP & has a 12" bore and 32" stroke, and the flywheel is 14'8" is Diameter.

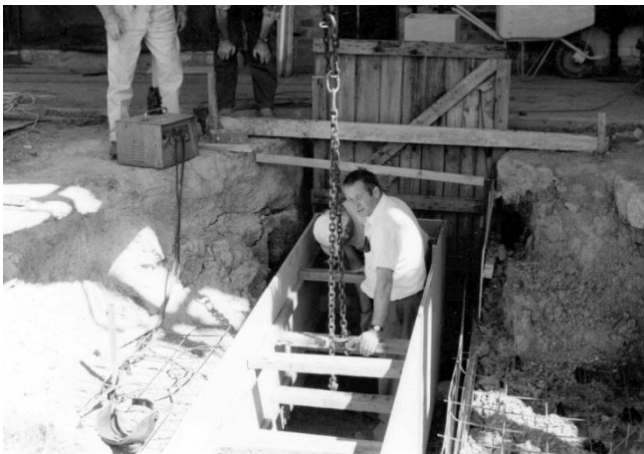
John Norris, Ron Spooner and Bob Kirby led the team that restored this engine to operational status in 2000. It is operated by the team of volunteers in the Boiler House and its appearance is a credit to all involved. It and many other steam engines can be seen running during Rallies.

The engine did not always look so neat. Roger Spooner has provided some photo's of earlier days when his father was involved in its restoration, and constructing of the massive concrete base and bedframe that it is mounted on.

Neil Wright mentioned the mill engines earlier home in the lean-to that preceded the founders building. This picture (on the right) from Roger's

collection shows it on its lofty perch, where it reputedly held the roof up.

The picture on the left shows the start of construction of the new foundation and formwork for the Flywheel well being set in place with a mobile crane.



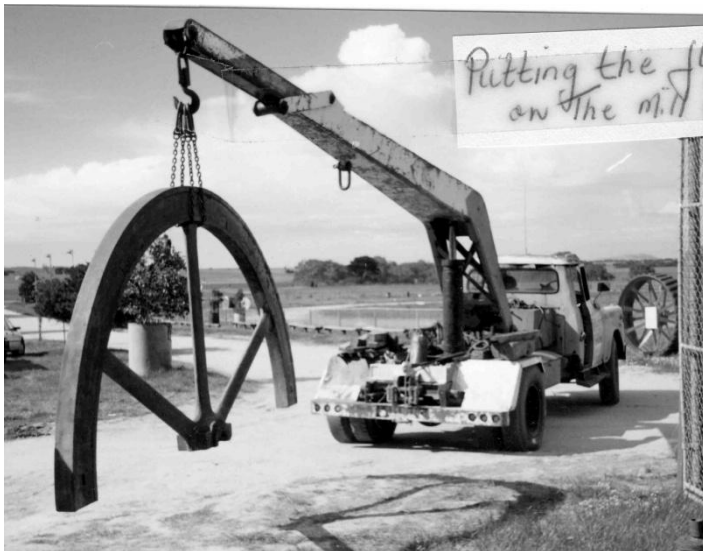
With the base concrete in place the next job was to fix the steel sub frame for the engine base. (below)

The picture on the right shows the outrigger bearing



frame in place while the hammer drill gets a workout preparing for the engine frame which can be seen on the left.



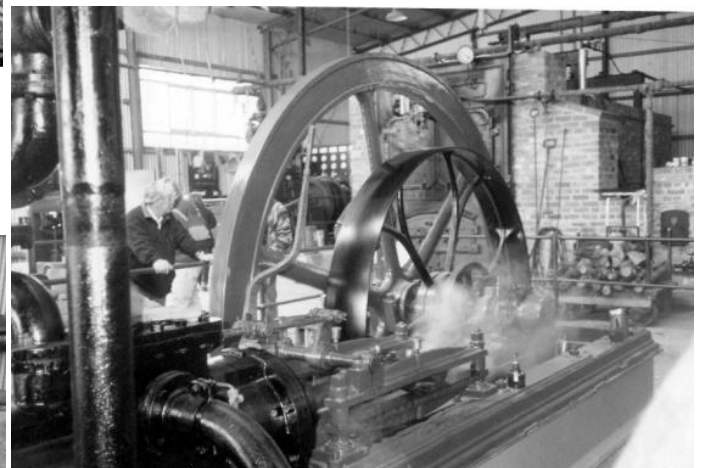


The mobile crane was used to move the engine parts into the shed and erect the engine. The flywheel hub is worth a look for those interested in 19th century engineering technology.

The crankshaft inside the hub has 4 flats machined at equal spaces around the shaft, and a tapered key seats on each flat and a matching flat machined in the hub. The tapers lock in a similar way to the more



common Gib-head key, and they also allow the centre of the flywheel to be radially offset slightly by selectively moving the taper wedges in or out. The picture on the right, taken with the engine running gives an idea, the gap is between the hub and shaft is an eye catcher.



John Norris checks the cylinder installation (left) as the engine takes shape with the boilers visible in the background above.

(below left) John Norris, Ron Spooner and Bob Kirby take a spell by another project, the clubs prized C1865 Tuxford Steeple Engine.



This is the clubs oldest heat engine and 1 of 2 known survivors worldwide. (see Goldsmith No 125 for the history of this engine.

www.lakegoldsmithsteamrally.org.au.
under the magazine tab).

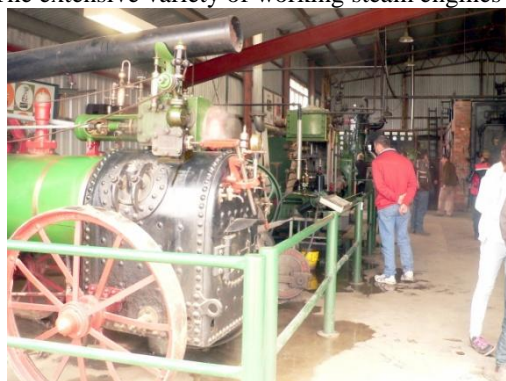
With the project complete, and the engine running it is difficult to see the hundreds of hours needed to make it possible.

There is a lot to see in the Boiler house, with portable and stationary steam engines and equipment on display. The Boiler House team of volunteers start a few days before the rallies to bring the boiler up to steam and bring each steam engine up to temperature and on line.

Next Page, Peter Nearmy inspects the new plaque commemorating the Brown family's donation and introducing "May" the Mill engine.



The extensive variety of working steam engines provides the visitors with an insight into bygone days.



Portable and stationary steam engines and a static display of steam control fittings provide a useful education exhibition for those involved heritage steam courses and preservation projects



The boilers to power the exhibits in the Boiler house are wood fired, and the Nearmy family, Peter and sons Dale and Tony from Talem Bend in South Australia load the rail mounted trolley to keep the fire burning.

The Mill engine and the boiler house are a credit to all those who have been involved. The hundreds of hours of voluntary work by so many people are easy to forget when their work is shrouded by concrete and paint.

Thanks to Roger Spooner's pictures, we get a reminder and an insight into the efforts of the members who brought the project to fruition.

Neil Wright's story on the unveiling of the plaque recognising the Brown family from Coleraine's recovery and donation of the Harrison engine, completes the circle on this project. Not to be forgotten are those who raised the funds and infrastructure essential for the project, volunteers who put in hundreds of hours of hard yakka, and the team of volunteers who run the boiler and machinery on rally days and answer the questions from the visitors. Thank you all.

If you have an interest in steam, and would like to join the team on Rally weekends you can contact John Norris on 03 5349 5566 or emailing him on pwb-norris@bigpond.com . It is a pleasant and much appreciated way to spend some time at the rally in a pristine environment.

Outside the Boiler House,

via the East door, enveloped in a cloud of its own making is a steam winch which once operated the stern positioning anchors on the clamshell grab steam dredge M K WEIR.



© This image of the M.K.WEIR from the State Dockyard Collection was provided courtesy of the Newcastle Region Library [Ref 145 000043.jpg]

The winch (next page) was rescued by Bob and Freda Craddock when the dredge was scrapped on the beach at Point Lillias near Geelong in Victoria. The M K WEIR was built by the New South Wales State Dockyards at Newcastle New South Wales C1956. Roger Spooner reports that at least 1 of the lifeboats has survived in Western Victoria.

The Bearing Box in front of the winch is the propeller thrust bearing from the Tugboat VICTOR. Visitors will be more familiar with the large 12' (3.6M) Diameter propeller and stern section on display at the Lake Goldsmith Rally Grounds, or circulating in the Grand Parade on a trailer.

Not so obvious is the Victors steering engine which was built in the UK by Donkin & Co in the boiler house near the Bellis &

Morcom vertical steam engine. The Victor was built in the UK in 1942.

The Winch from the M K WEIR (at the back) and the tug VICTOR propeller shaft thrust bearing.

The picture© at the right of the M K Weir was taken at Macquarie Warf in Hobart Tasmania and is reproduced with the permission of the Craike



Collection at the Maritime Museum Tasmania. The rim of the winch drum can be seen with what appear to be the marine equivalent of fairleads. There appear to be 2 lower rope guides which line up with the rope capstans and cable drums.

Roger Spooner has supplied the following photos of the VICTOR taken when it was expected to survive.



Above left and right, the S.T. VICTOR is moored at Geelong hoping for a new life in preservation that never came. Below the Victor is beached at Appleton dock in Melbourne for scrapping

The propeller was eventually dragged from the ooze of the harbour and acquired by Bob Craddock and the late Don Larcombe and transported to the Lake Goldsmith rally grounds where it has been a familiar sight for many years. The photos (next page) show it keel up on a trailer used to move it on parade





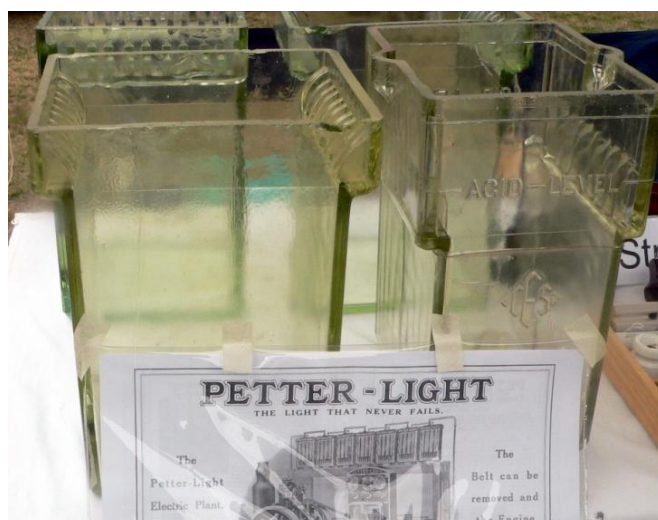
Below the propeller made a proud sight when it arrived in the boiler house. Ron Spooner looks much happier at the display than Bob Craddock when it was dragged from the ooze of Appleton dock.



The above 3 photos are from Rogers collection. On the left the Babcock Boiler before the roof went up. The centre picture shows the front extension of the boiler house, and the Founders Building under construction. On the right some timber boat hull bows are steamed.

The Naming Ceremony was a highlight of the 106th rally, It also offered an opportunity to highlight the work done to bring the Boiler house to the excellent steam display that we see today.

The theme for the 106th rally was all things Ford and lighting plants,
let's start with the lights!

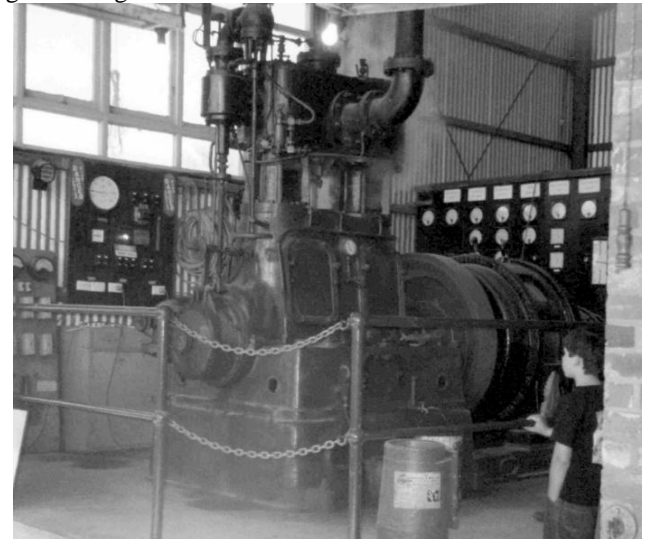


A fine array of lights and lamps, and some rare glass lead acid battery cases above and an array of electric glass and porcelain insulators above on the Deniliquin Collectors stand.

The Kerosene lamps on Don Wilson's stand are a reminder of the outdoor roadside safety lighting of yesteryear. (Below)



This Delco aircooled lighting plant seemed miniscule when compared with the tank cooled N Ronaldson Tippet plant, although the water cooled Stern?? was a neat alternative. On the following page the miniscule air cooled special lighting plant seems dwarfed when compared to the 175 HP Thompson compound steam powered generator in the boiler house. This generator is working but has a ferocious appetite for steam. This engine was built in 1923 at Castlemaine, near Bendigo in Victoria and first worked at the Wangaratta Woollen Mills, and later at the Maryborough Knitting Mill who donated it to the association in 1976.



Many other lighting plants at the rally grounds were described in the April Goldsmith (No 131)

A variety of Fords were at the Rally.

The earliest was a 1911 Brass Radiator Model T car and a TT covered truck as can be seen on the next page.



This Model TT Truck is a spectacular insight into 1920's transport and the genuine survivor Model A Pickup is an original issue in the USA. The 1911 Model T below was the oldest Ford at the Rally, and the GT is a reminder of early muscle cars produced in Australia and the great Bathurst Mount Panorama races in New South Wales.



Aussie Ute's from the 50's and 60's and (next page) a Fairlane 500 from the days when petrol was cheap below.



Fordson Tractors were well represented.

This immaculately turned out Henry Ford and Son model fitted with a Ferguson plough was a rare sight. Its companion, an early Fordson Detroit Model on the next page fitted with a mid-mount Athens twin disc plough was just as well presented. Both tractors still use the trembler coil ignition powered by the flywheel generator. (see inset below right)



The yellow lead from the flywheel generator and the timing leads from the front end of the camshaft connect to the black box with the 4 coils and the spark plug leads.

Below the Ferguson plough gets a workout surrounded by a full track and half track Fordson Major on the arena.





The Quadrangle hosts some Fordsons between Parades Below left is “Kerosene Powered Major, and on the right is a Diesel Super Major. Looking rather crowded out the Fordson major in the lower photo shifts some water via the belt pulley.





Two Austin's at a Ford Rally. Roger Spooner's Austin on the left is carrying a Lincoln Welder powered by a Side Valve Ford V8. On the right Lance Whitehouse uses this one as a Fordson transporter. It has brought many Fordsons to the Rallies over the years, and rumour has it 6 to this..

Thanks to all who exhibited lighting plants and Fords at this Rally. It all made for a good show.

The Heart and Soul of a Goldsmith Rally is Steam, and there was plenty to go around



A pair of Ballarat made Cowley Road Rollers circulate on the Parade Ground.



Scienceworks magnificent ploughing engine and the Scobie family Foden join the parade. Below the Ruston Proctor “Lincoln Lady” is led by the Burrell Road Locomotive “Vasey Lady”. Both are sporting Australian and New Zealand Flags.



The threshing demonstration is powered by a Scobie family Traction Engine While President Trevor Oliver gives a running commentary, and steam powers the hand loaded hay bailer.





The Smiths Fowler makes an impressive sight (and Sound) powering their Emu Creek Saw Mill.



John Franc's Averling & Porter roller prepares the shed floor for the Science Works ploughing engine while our secretary, Graeme Milton makes an express firewood delivery for Peter Jackman to fire it up.

Fun time with a Fowler Marshall



Start up time for the Fowler Marshall. Brendan Roberts Chamberlain is lined up for a belt start.



The belt gets a high temperature work out, and wakes an engine that had slept for 20 or so years.



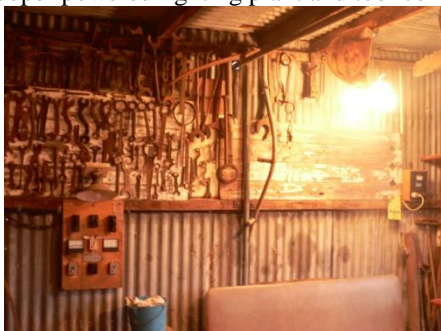
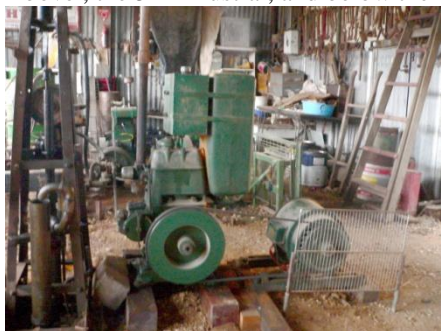
Brett Morrison fits a new “Egg Carton” glow plug. The Fowler Marshall soon burned off the excess oil and it ran for a few hours with a clear exhaust. Brett parked his Field Marshall alongside for a photo shot, and gave visitors a chance to watch the flywheels rotating in opposite directions. At the end of the day Sam Newman’s daughter Leyla drained the water jacket. If anyone has a spare crank handle dogged hub for the Fowler Marshall flywheel please let the editor know, there is a home waiting for it. Ph. 0425 744 052. The crank handle and flywheel are OK, it is just the bit in between that is missing!

A Lighting Plant in action

Not far away Graeme Cliffords “Oil Shed” (shed 59) had his early 5HP Austral No 827 from 1912 running like clockwork (picture below). This engine was returned to the makers (Ronaldson Bros & Tippet) for an upgrade to magneto ignition. It worked in Deans Marsh and Bacchus- Marsh before Graeme acquired it about 20 years ago as a basket of parts. The front section of Graeme’s shed has a collection of early hand tools and stationary engines and is powered by a Cooper 32V Lighting system.

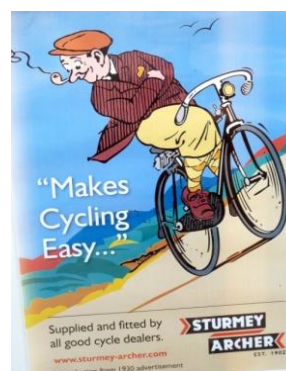


Above , the 5HP Austral, and below the Cooper powered lighting plant and tool collection.

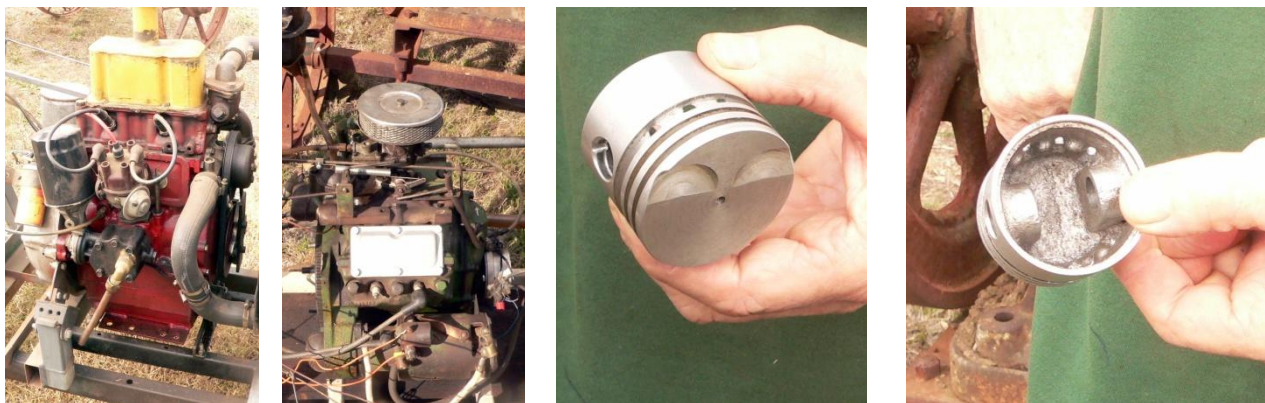


Around the grounds

Below this Bohlens Tractor from the Deniliquin in New South Wales is a popular tractor at Rallies, and the McCormack Deering gives an idea of what we might see at the November 2015 Rally. The Sturme Archer advert seen at the Williams family Shed (43A) add some variety to an already diverse rally.



Always popular, miniature Steam Traction Engines. These 2 Case 65's in different scales and the contractor's road plant make a colourful site as they tour around the Rally Grounds.



Warwick Bryce showed his "One of a kind" 2 cylinder Holden engine which has a semi-fabricated crankshaft and runs like a dream. The V4 is a John Deere starter motor previously used on the large twin cylinder diesel tractors. The engine was used to warm the engine jacket water and then start the engine. One piston was badly seized and Warwick made a new one from scratch, casting and all. The piston shown is a trial to check casting, tooling and machining. It runs like a new one.

A THANKYOU TO THE VOLUNTEERS

Not to be forgotten at the rally are the ladies who run the office, the club room coffee shop and the Hogan's cottage Country Kitchen.

The office (on the right) is open on both rally days. Ann Sullivan and the team look after the day to day behind the scenes affairs that are essential to keep the organisation running. Without their effort life would be a lot more difficult. They are always looking for help, anyone who has some time to spare it can be put to good use and will be appreciated by all.

The Coffee Shop (on the left and below right) in the Club Rooms is open to all, and it is a good place to take the weight off your



legs for a while and pass the time of day. The Shop is run by Kathy Oliver and Joy Phillips and a team of volunteers. This shop raises funds for the club and the volunteers help for short periods to spread the load, and meet a lot of people while they are at it. If you can help, ring Joy on 0412 251 885 or Kathy on 0409 430 451. Thanks to all who have helped this good cause.

Hogans Cottage

Hogan's Cottage dates from around 1869 when Michael Hogan left Ireland and arrived at Stockyard Hill near Lake Goldsmith. The cottage was donated by Robert and Marion Kirkpatrick.



Some rooms are set up with period furniture decorations, which make the building a Rally exhibit in its own rite. The Cottage also houses a Country Kitchen that is operated by Judy Keays and her team of helpers.



Delicious fresh Scones with jam and cream are the heart of the Devonshire Teas that have been made by Judy and her friends as long as I can remember in the glow of those now rare incandescent globes.

Step inside and you travel back in time until you reach the back room where the fresh aroma scones is as new as tomorrow, and walk back outside to the sights and sounds of the action at the rally.

Hogan's Cottage is an important fund raiser for the club, and the scones will raise your spirits too.



There seemed to be things happening everywhere this rally, the first day it was hard to get more than 100 metres from where I started, and the second day wasn't a lot better. Many of the photographs (the good ones) that have been used in this edition and others before it, were supplied by Eva from her Goldsmith Rally Collection. If there is an image that you would like a copy of, you can ring Eva on 0409 858 336. Eva and Graham have been regular attenders of our Rallies for many years.

Eva's photos are all high density images and enlarge well.

That pretty much brings me us to the end of the 106th Rally Run Down, so now it is time for other tales.

The AUSTRAL SHED (Shed 28) reaches an important milestone

‘Concept established’ in July 1974 and completed for the 25th rally of April 25-27 1975, (the first 3 day steam rally) the structure occupying site 28 at the steam rally grounds has cause for celebration, having reached its 40th anniversary .



Neil had installed his Ronaldson Tippet Austral Kerosene Oil engine (left) and a Jelbart portable in the first section. A four horsepower Sundial engine was allocated a block, but plans changed to accommodate Hugh’s CH Type Diesel engine, taking its place

A direct coupled Ronaldson & Tippet No 2 lighting plant (D type petrol engine) was also to be included, later substituted with a Ronaldson & Tippet Type RD Diesel lighting plant.

In August 1978, things moved up a notch or two, with Neil’s acquisition of a Tangye Vertical Archer class steam engine. Along with a Tangye Soho horizontal of Chris Wilson and Hugh’s Donkin steam tail-rod air compressor, establishment of the steam section commenced with a 30 ft. The addition had also been planned to house an 18 hp George boiler, which arrived a few months later in 1979. The further and not long after, an Orr & Sembower vertical steam engine was added to the stationary steam engine manifest. Steam was raised for the first time in October 1980, later to breathe life back into the Waller 11 horsepower engine ex Hightett gasworks.

Things were happening. When Sloane & Wright first kicked off in ‘74, such ambitions were distant pipe dreams .

Left: Bob Davies (the late) delivers the 18HP underfired boiler in 1979. With a touch of irony, Bob had originally installed the same boiler at Eureka Dry Cleaners at Bakery Hill Ballarat back in 1944.



extension.
underfired George &
idea snowballed



Right: Knock of time at the Austral Shed, 2015. Time to “lower the doors” and head home. Pictured are Hugh Sloane (left) & Bill Dawe.

Around 1998 Hugh sold off his collection of engines, keeping only the Crossley JJ in place. This opened up space for Hugh to display his unique collection of diesel injection equipment. Member David Boyle has added interest to the shed for many years now, displaying his models of H V McKay products and other agricultural machinery. A later development has been a feature of unusual Australian made windmills.

Much water has flowed under the bridge since then - and conversely - *NOT* under the bridge. The Austral shed in 2011 (along with most of the rally site) took a brief dip in Mt Emu Creek floodwaters- in effect a baptism?? Steam & Oil engines are incredibly resilient with no permanent damage resulting to the Austral shed exhibits.

Hugh, Neil & their respective families have seen many major changes and have witnessed the growth of the Lake Goldsmith Steam Rally. The *Austral Shed* has played its part in eighty (80) steam rallies and will hopefully continue for some time yet. The many experiences, friendships, and happy memories formed during that time are priceless, along with the camaraderie enjoyed by (with all due respect) the Lake Goldsmith ‘inmates ‘

For the many that share with us the appreciation of all that we represent and enjoy at Lake Goldsmith: we can only strive for this privilege to continue for many years to come.

Neil Wright May 2015

Thanks Neil for that reminder of a shed that has seen 80 Rallies. These early sheds set a trend and made it possible for visitors from home and abroad to see machinery that had previously operated unseen by the public in the backrooms of farms and in factories.

Mains electricity eventually obsoleted these standalone plants, to the relief of many who had the daily chore of starting and operating them. Unfortunately many of the manufacturers of the machinery passed into history too, which gives these sheds added meaning as they preserve the entrepreneurial achievements of our forebears in the manufacture and use of machinery in an environment that gives our visitors some insight into day to day work life of past generations.

From time to time I hope that more stories of these time capsules of life before mains electricity come to life in future pages of Goldsmith. Ed.

Back to the Empire Air Training Scheme and a look at the:-

AIRSPEED OXFORD

In edition 128 (Sept 2014) of GOLDSMITH we had a story on the “Friends of the Anson” run by Allan Penhall at the Ballarat Airport. The Museum is on the grounds, and in a building once used to train Airmen at the No1 Wireless and Gunnery School. (WAGS) The airport was originally built by the RAAF to house the school which was established as part of the Empire Air Training Scheme to train aircrew for World War 2.

The story highlighted the part the Avro Anson played in training, and the work done by Alan to rebuild a complete “Annie” at Ballarat where it was once such a familiar sight in the skies there.

The other plane that shared the WAGS training at Ballarat was the twin engine Airspeed Oxford. In many ways this plane pictured on the right (©from the Mike Mirkovic collection) was similar to the Anson in that it used similar Armstrong Siddeley Cheetah engines. A big difference was the all timber glued frame, which prohibited it from service outside the Air Force, which in turn meant that they had a very poor survival rate, which in turn means that the only way to restore one is to build an airframe and wings from scratch, which is a daunting task. As fortune has it there is one team has such a project well under way.



This team is part of the B24 group at Werribee between Melbourne and Geelong in Victoria.

Many readers will be familiar with this group that is in the process of rebuilding a WW2 B24 bomber. These planes were a familiar sight at Tocumwal Airfield in New South Wales during the War, and many of their crew were trained at Ballarat WAGS in the Ansons and Airspeed Oxfords.

For anyone who has not visited this workshop Museum in Werribee, it is one to put at the top of your itinerary. It is a hive of activity, and the massive B24 is an impressive sight, inside and out. You can also see the Oxford take shape and inspect as the techniques used to build a plane out of timber, which is a work of art as well as an exercise in how to get the maximum strength out of the minimum material.

So much for the background, now we can move onto some history on the plane, although mention should be made of one of Airspeed Limited's founding directors, Nevil Shute Norway. The company Airspeed Limited was formed in 1931 building the Tern Glider. Nevil remained with the business side of the company until 1938 when he was engaged on Naval Weapon development, and later emigrated to Australia. In his spare starting in the 1920's he wrote books under his forenames, Nevil Shute. He is best known here for his book “On The Beach” which was made into a movie filmed in Victoria starring Ava Gardner.

In 1940 DE Havilland took a controlling interest in Airspeed, and in 1950 it was fully merged, at which time it was producing the twin radial 24 passenger Air Speed Ambassador (right).



The origins of the OXFORD lie in a mid-1930's RAF specification for a Bomber training plane that would simulate the characteristics of a service Bomber, and the Airspeed Envoy which had been manufactured by Airspeed Ltd. in the UK in 1934. In 1936, an 8 seat ENVOY was the second plane purchased by Reg Ansett for his then fledgling airline which operated out of Hamilton in Western Victoria. The picture on the previous page from the ©Hopton Collection (No 4302) was taken at Essendon Airport C1936.

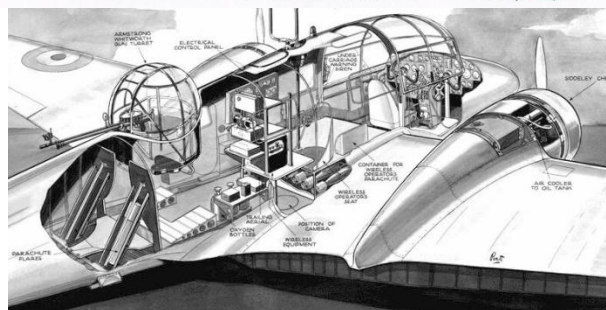
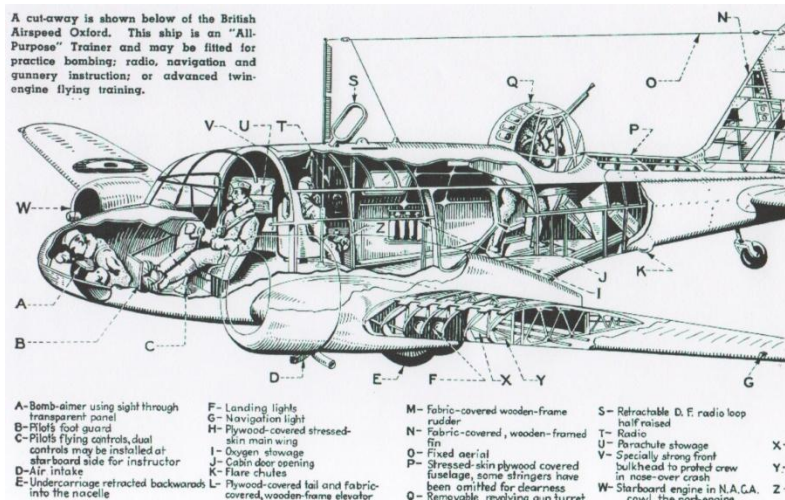


The result of the successfully modified Envoy was the Airspeed AS10 OXFORD which first flew in 1937. Over 8500 were built by the time wartime production ceased.

The RAAF received nearly 400 (265 Mk 1 & 127 Mk2) Oxfords from 1940 to 1944. They were fitted with Armstrong Siddeley Cheetah 10 7 Cylinder, radial, centrifugally supercharged engines which produced 375 HP and gave an airspeed of 190 MPH. They remained in RAAF service until 1949 and were mostly disposed of by 1953 for £5-10 shillings each, from the airbases, with their wings cut.

There is a lot of information available on the net. ADF-SERIALS have a lot of information on the Australian and New Zealand planes and the June 1936 Flight magazine features the ENVOY. The RAAF Museum Website has some local information and there are a lot of images and stories available elsewhere on the net, including a good rundown on Wikipedia.

The MK 1 Oxfords were fitted with a single .303 machine gun in an Armstrong Whitworth Turret behind the cabin. The Mk 2 did not have the turret and was not used for gunnery training. The cabin could be arranged for 2 pilots or for a single pilot and a bomb aimer laying prone in the nose, as can be seen in the cutaway drawings above and below.

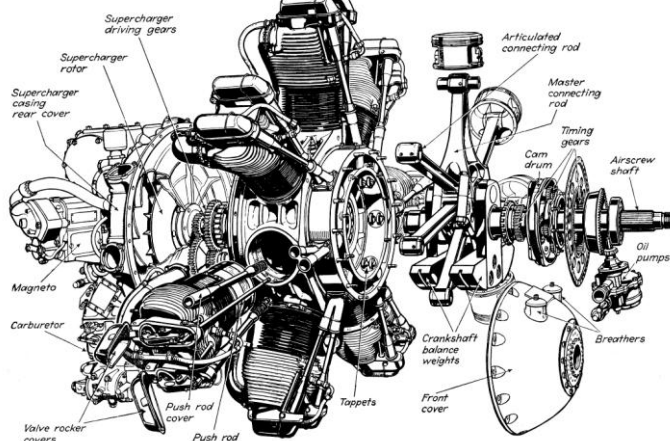


The Oxford project at B24 Liberator Memorial Australia is managed by two teams.

The engine team is restoring two Armstrong Siddeley Cheetah 10 engines to operating condition.



Cut-away view, below, re-drawn through courtesy of Aircraft Production, shows Armstrong-Siddeley Cheetah X engine, which is used on large scale by the British Empire training scheme. Rated at 375 bhp, this engine has been approved for runs of 1,400 hr. between overhaul and for 1,200 hr. in England.



The cutaway drawing left gives some idea of the major components of the Cheetah 10 engine and the photo on the right shows a near complete engine in the tubular mounting frame that attaches the engine to the wing and landing gear attachment brackets.

Rebuilding these engines is a major task. As these engines have been out of service since 1950 or earlier, and many have laid outside, or tucked away in the back of sheds where they can easily be damaged. parts are mixed and matched, and on occasions unused parts can be sourced from other collections around the country. The pristine appearance of an assembled engine gives no idea of the time and effort that have been spent by the people involved.

The upper picture on the right shows the valve timing gear. The centre right shows the valve rocker covers and the inlet tube from the supercharger housing, and the exhaust connecting stub.

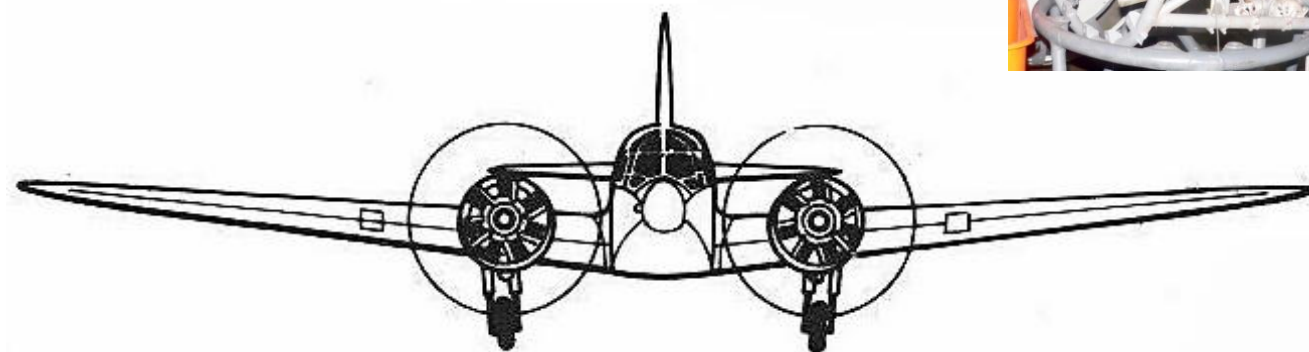
The lower right picture shows the tubular engine mounting frame, the engine fits on the left hand side.

The air frame and wings team

have a major project on their hands. Apart from the metal attachment brackets, the entire monocoque frame and wings are made of glued and tacked timber and plywood. To add to the complexity there are very few duplicated items or sections. Fortunately reduced scale drawings were available for most sections, which are sufficient to allow the missing sections to be interpolated and redrawn.

The central box section of the cantilever wing is the main frame that attaches to all the major elements of the plane. The air frame is attached over it, the wings are attached to the outer ends and the engines and landing wheels are attached to the front at each end. The leading and trailing wing edge sections are attached to the front and rear of the box.

The bomb bay, which holds 16 * 11 pound bombs is in the centre of the box, and the fuel tanks are between the landing wheel wells and the bomb bay. The mounting brackets and metal components, such as the landing wheel gear and engine mounts (see picture on the right) have been salvaged from derelict planes, and refurbished for use in the rebuild. The front view of the Oxford and the photo of the near complete central wing section below give an idea of how the major components are attached. The cabin section of the



central airframe slots over the centre of edges as shown in the photo, and the

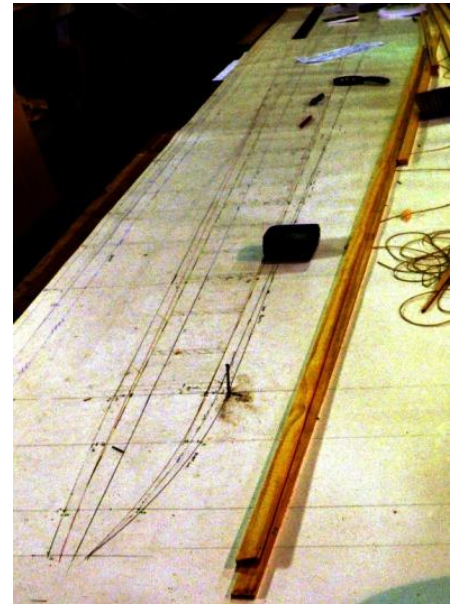
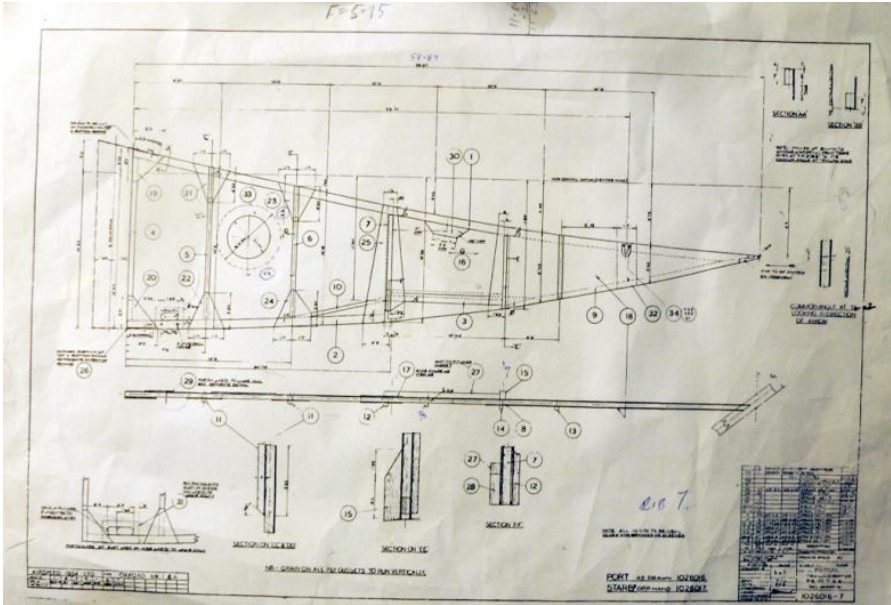


the wing in the gap between the curved leading wings cantilever from each end

Ribs are laid out on full size drawings on timber work benches. The joints are fitted, glued and gusseted with plywood and



tacked to ensure that surface contact is maintained while the glue cures.

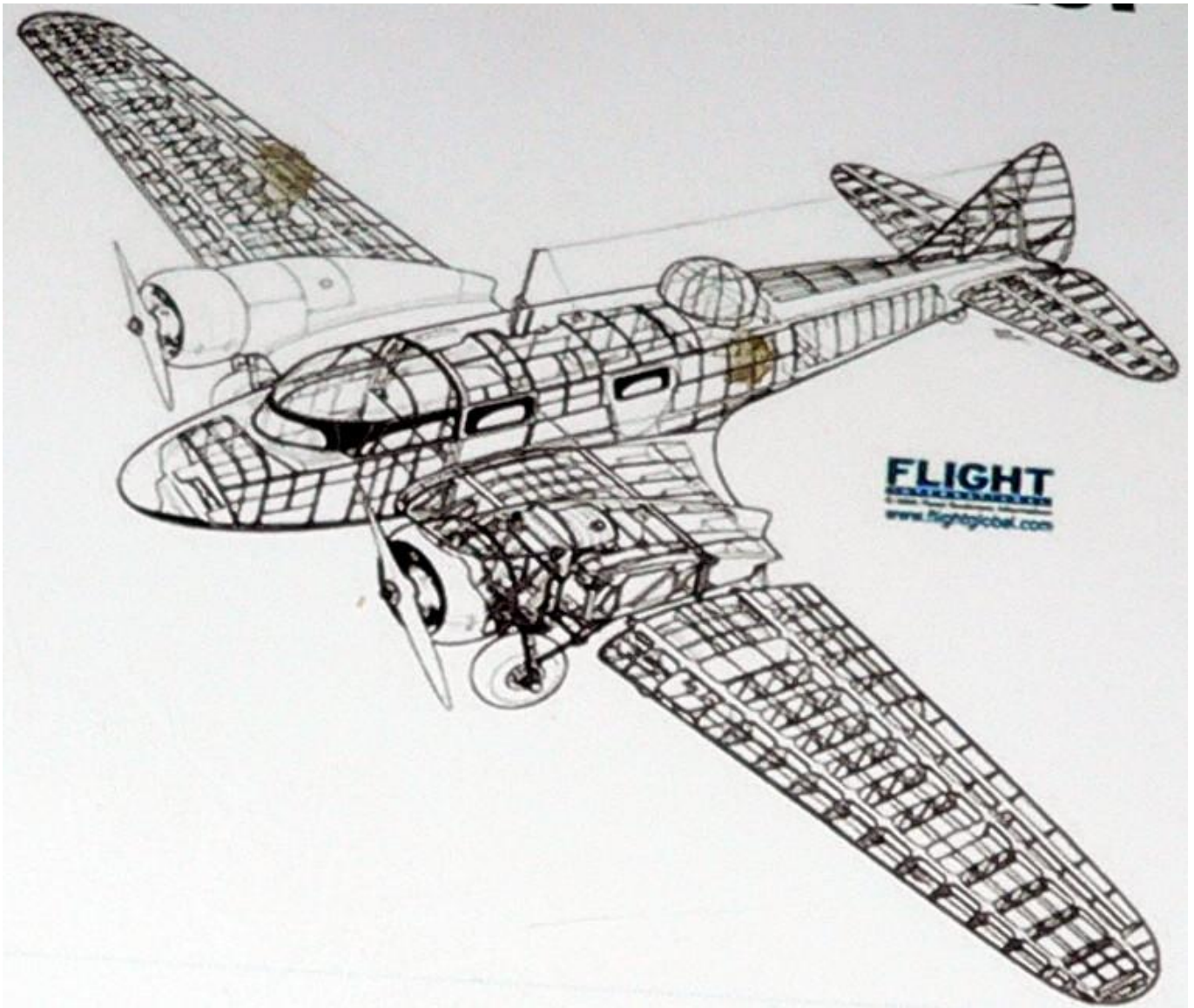


Fabrication of these timber ribs and frames requires a high degree of skill and patience, and when the part is complete the next one has to be laid out on the table and the process starts again working from the reduced size manufacturers drawing to the full size layout as seen above and on the previous page.



The framework assembly is coordinated by Ken Hindle. (left on lower right picture previous page) The current work is broken into 3 teams covering the cockpit floor, wings, and trailing edges.

The propeller (on the lower left on last page) was hand crafted by Doug Sinclair from laminates of different timbers glued and hand profiled to match a standard Oxford propeller. In my wildest dreams, if I could ever make something that looked like that I would send it to the pool room and give it the prime spot. This one sits under a bench, it seems like it was all just part of a day's work. The landing wheel struts can be seen on the centre picture previous page. Like everything else at B24 Memorial it looks like a new one, and hides the 60years it spent in a paddock in outback South Australia. The new plywood covered tailplane can be seen on the right.



This see through view of the timber frame and wing elements was taken from Flight Magazine. I wonder if the artist who prepared this drawing ever expected it to be used by a team of volunteers to recreate an Airspeed Oxford 60 years after they were grounded. This drawing gives a clear indication of the wing separation, and the thousands of tiny timber, and timber ply parts that are used in these aircraft.

The Oxford or OxBox as it seems to have been referred to by those who flew it will be restored to Mk 2 specifications (no turret) as a rolling static display.

Like the Consolidated B24 bomber, the Avro Anson and Airspeed Oxford trainers have a significant part in Australian and RAAF History. All up the Empire Air Training Schools trained over 170000 aircrew, with many going through the three schools in Australia, particularly the No 1 WAGS at Ballarat in Victoria.

This plane will fill a blank spot in our history, and give the families of those who trained in them a chance to associate with their training and service.

For anyone who has not been to the B24 Memorial Museum in Werribee it is worth a trip. There is a lot to see, and there are a lot of people to help with answers to questions, from making timber frames to WW2 airborne Radar.

The B24 Bomber is a massive exhibit and dominates the original WW2 hanger that houses the displays. There is also a large collection of photos and displays of instruments and equipment that was installed in these aircraft. They are open Tuesdays, Thursdays & Sundays, enjoy a day out .

Man & Machine

Before we leave B24, it was good to see Glenn Everitt and his team from Man and Machine in action.

Man and Machine has done a lot to help the cause of preserving our mechanical heritage in all of its forms. For those who have never caught up with the TV show Man & Machine it is time to mend you ways and take a look on Channel 74 (4ME) in Melbourne at 8.30PM Mondays and Thursdays.



Tony Maher from B24 takes Glen through the layout of the B24 Liberator cockpit under the watchful eye of his cameraman.

You will see all sorts of machinery, if it has a motor its fair game for this show. There are some fabulous collections around, and many of these are not normally open to the public, which adds some incentive to lay down the tools and spend half an hour in front of the screen.

In a day and age where it sometimes seems that interest in preserving our mechanical interests is taking a back seat, it is good to be reminded that the interest is alive and well and growing.

The central theme of the TV series is muscle cars and “Australian Made” but it is starting to cover a lot of new ground and promotes our common interests to the world at large. It certainly deserves our support.

Have a look at www.manandmachinetv.com.au and you can get an idea of what has been show so far.

ACTION AT THE GOODS SHED

On the Queen’s Birthday weekend the Beaufort Goods Shed was open for business. Ron & Linda Harris, Jamie Hutchings, Graeme Tomkins, Kevin Butler and Carol Hutchings who provided a projector, all of whom manned the goods shed.

A highlight of the weekend was a visit from the Ford Zephyr & Zodiac car club. Many will remember these cars from the time before the Ford Falcon was produced at Broadmeadows when the Mk 1,2, & 3 Ford Zephyrs were a common sight on the road. The mark 2 was a real stunner when it was introduced. The lowered floor dropped the roofline and gave the car a very racy look in its day, and it still looks good today, over 50 years later. These cars also had a good performance, and bring back memories of the days when one graced our drive.



Jamie & Mark Hutchings laid a new gravel drive over the railway ballasted hardpack roadway that had survived since the goods yards was used to load trucks from the platform level Goods Shed. The new surface made walking much more comfortable underfoot.

This Mk 2 set of Graeme's half scale coach to emphasise the difference 100 years has made in the transport used to travel to Beaufort, and the goods shed. The horse was king on this side of the Goods shed when it was built around 1870.



This pair of Mk 3's look great and remind us of the days when family sedans could hit the TON at 100MPH. Graeme Tomkins International Bus. The weekend opening coincided with Pyrenees Arts Council annual exhibition at the Station and Shire building

There has been some more action on the track extensions to the east and west of the goods shed. Previously we have shown the track laying in progress, now on the next page the top pictures show the tracks ballasted to the railhead. This reduces the trip

hazard of the rails and allows the area to be used by broad-gauge rail or road vehicles. This tidies the area and gives the area an authentic rail appearance, especially when viewed from the platform.



This work has been coordinated by VicTrack as part of the State Government Community Use of Vacant Railway Buildings Program. In association with the Pyrenees Shire and a team of community minded Beaufort residents the project renovated the Station Buildings for the Pyrenees Arts Council and the Goods shed for a Heritage Precinct location for the Lake Goldsmith Steam Preservation Association. The project was opened on the 3rd of October 2014 by the Member for

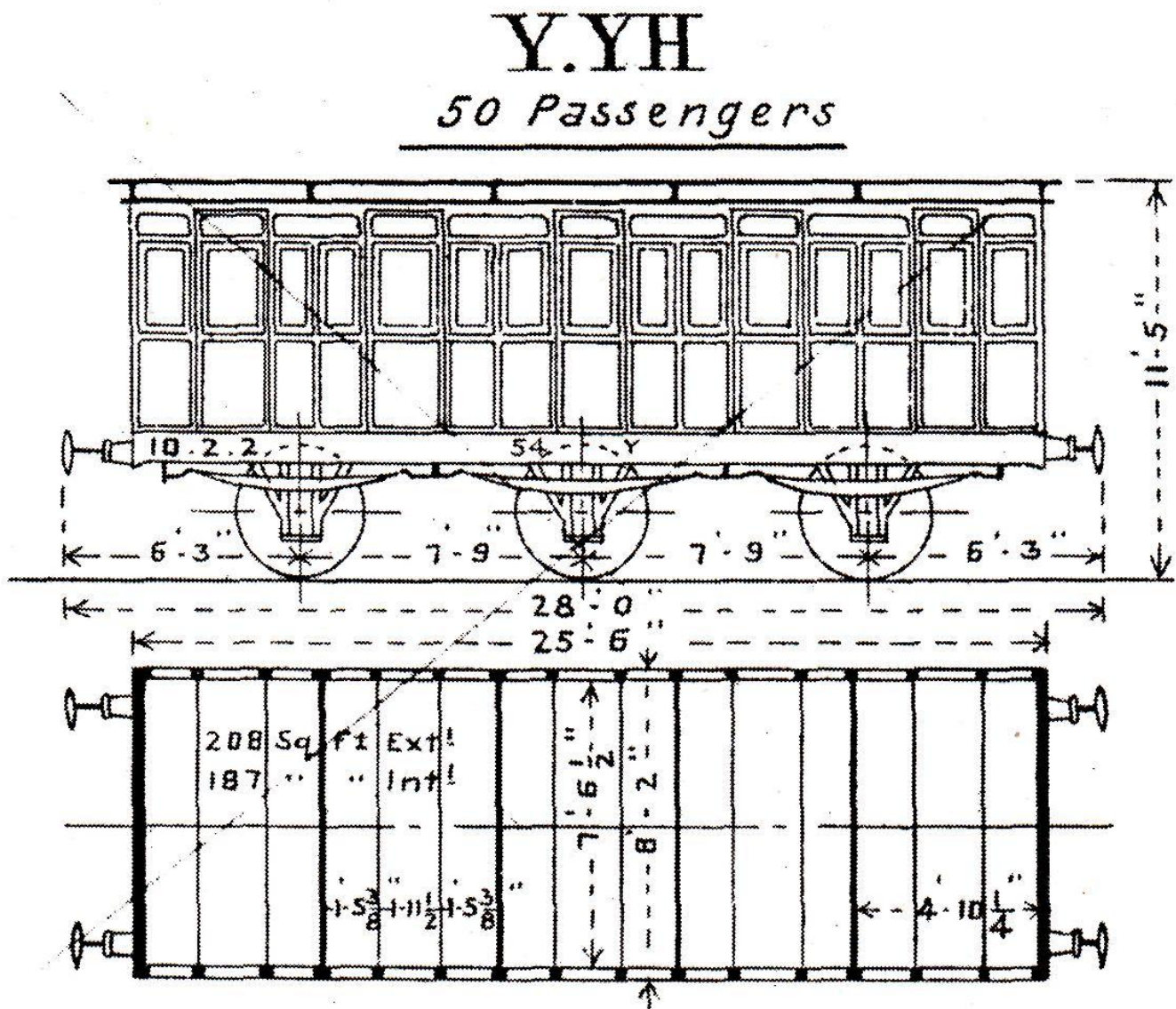


Western Victoria David O'Brien The Goods Shed has seen 3 formal events and it will be the focus of the Pyrenees Goldsmith Historic Road Run on Friday October 30. This Rally will highlight Steam Road Vehicles and include any Historic cars and trucks. More news next edition. The committee and members of Lake Goldsmith Steam Preservation Association would like to thank everyone who has been involved in this project, from those who initiated the idea to preserve this Beaufort Heritage Landmark, to the Shire, Vic Track and the State Government who made it possible. Thank You All.



BALLARAT RAILWAY CARRIAGE RESCUE

As many readers may have seen in the Ballarat Courier on June 22 (you can Google it) a rare railway carriage was recovered from a Ballarat backyard. As fortune had it, this 1884 timber carriage had been well set up on concrete blocks, and protected by an additional roof installed by its previous owners. The carriage had remained in service until the early 1930's when it's steel under frame was scrapped and the timber cabin sold. Rail Historian Fraser Brown, has again provided us with some background on this carriage which was recovered by Ron & Linda Harris and John Smyth until its future is decided. The carriage was 1 of 115 built for the Victorian Railways between 1877 and 1885. This second class carriage was built by the Tyne Foundry at Southbank in Melbourne in 1884 numbered 229B



. The carriage seated 50 passengers and was 25'6" long. In 1910 it was renumbered 203Y as part of a renumbering program. The Woods Hydraulic Brake was fitted in 1885 suggesting it was used in Melbourne suburban service at the time. The Woods Brakes were replaced by Westinghouse air brakes in 1889. The carriage was in service until 1933 when it was scrapped and the body sold.

The Tyne Foundry where the carriage was built was part of Johnson & Co. In addition to railway carriages and wagons, this company also built boilers and stationary engines and several bay steamers and ferries. As you will see in the following photos, (pages 29 & 32) the carriage has survived well.



The carriage was a neat fit on Ballarat Tilt Trays Twin Steer bogie drive tilt tray 2448 Benz.

A Field day at Heyfield

Peter Jackman and Dave Mickle sent in some pictures of their trip to Heyfield.



There seemed to be a lot of variety and the event was well attended. Thanks Dave & Peter.



On the way to a new future, Advanced Cranes and Ballarat Tilt Tray combine to remove the carriage from its Eureka St. home of nearly 80 years which is longer than its 49 year stint with Victorian Railways.



To end off this edition of Goldsmith, a last look at the Goods Shed on Queens Birthday Weekend. This 1951 Buick Sedan was first owned by Reg Ansett and has been continuously registered ever since. With only 60 000 miles on the clock this car is immaculate. The only renovation is a partial respray of some faded duco patches. Thanks to Ron & Linda Harris for displaying this car which was recently featured in Restored Car Magazine.

Thanks to all who have contributed photos and stories to this edition 132 of Goldsmith. Ed.