Riley Restorer

A magazine for Riley restoration enthusiasts in Australia March 2022

No Web address yet

An amazing collection of Rileys encountered during a recent visit to Victoria

Editorial

Our first AGM and monthly meeting took place on Feb19th. During the AGM we agreed to apply for incorporation. The MOU was accepted . On the day there were 24 members of whom 12 are mechanical engineers. Clarity about the clubs purpose crystalized further. Our existence is all about networking to help complete our restorations. If advice is sought or a part is needed there are 24 enthusiasts with experience and skills to offer advice and maybe the bit that you need.

Thank you to Cliff Goodman for the article about the air cleaner conversion. It makes sense to remove the old stone guard wire mesh and fit a replaceable paper filter. Thankyou also to Mel Carey for the article on his current project, an Imp special.

Articles and pictures of your projects are always welcome and if submitted they will definitely be published in the Riley Restorer magazine.

We are expecting incorporation advice from the Office of Fair Trading prior to the next meeting.

The Editor appreciates receiving articles by the 21st of the month

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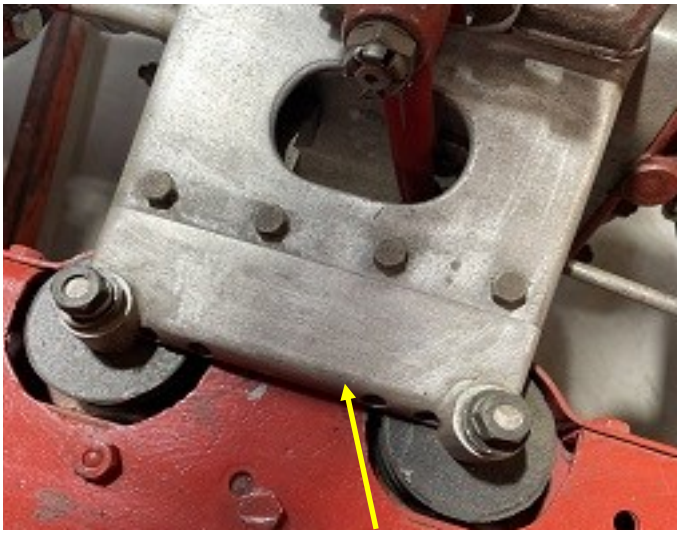
The plan was to pick up Paul Baee in Sydney and travel down to Melbourne. For me the purpose of the trip was to pick up a '49 Riley roadster to patch and reframe, drop off some timber frame pieces for an RMB and pick up SV gearbox bits that had been machined 20 years ago. Paul had Silver Streak heads to pick up in Canberra, Falcon bits to pick up in Melbourne and he wanted to look at a fairly original Adelphi in order to copy the carpet and side pieces for the boot of his Silver Streak. As far as I am aware the gearbox gears are the only ones left in captivity. The journey proper began from Paul Baee's home. We stopped by in Canberra to pick up some not so good and some good heads for his silver streak on Wednesday morning. They provided some ballast for the cruiser. Somewhere before Seymour we turned left and went east and then south to Dandenong and arrived at Kurt and Sue Shultz home late. Being something of a tease Kurt made me wait for the following day to look at the gearbox parts but I forgive him.

Next day was consumed with looking at his Side Valve Riley. Of particular interest to me was the locations of the components and construction of the linkages that were all missing on mine. I haven't counted the number of photographs taken but there may be about 200 of them. I now have a detailed picture of where the bits are located. The other point of interest was the repair to his gearbox.



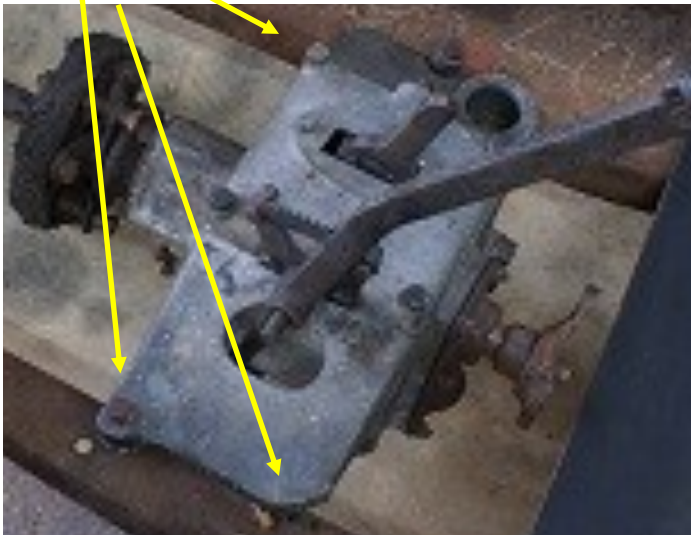
Above: The gearbox addition and mounting

Originally, they were bolted to the chassis as was the engine. There are three fixing bolts that locate the gearbox to the chassis. On his, the gearbox casing was broken on the side where there are two fixing points. On mine they are all broken. His solution is rather brilliant. First, the gearbox casing has been cut along the base (outside of the box itself). He has had another base made and the box and the base are overlapped and bolted together using four bolts on the top and three on the side. The meeting point is almost flawless and a hard act to follow but that will be my first goal.

Above: The cradle for the gearbox rubber mounts under the chassis

The fixing point on the other side of my gearbox will require a little more thought as there is a chassis brace that runs from one side of the chassis to the other just below the gearbox mounting. The first option is to relocate the brace but as yet I am unsure.

Below: Note the broken fixing points on my gearbox. The one at the front appears to be intact but it is not



At some point prior to his build, Paul Baee mounted his gearbox to a rubber base. Kurt Schultz has done the same and commissioned an engineer to make and fit a cradle as a base for the rubber mounts and drilled 4 fixing points above and 3 fixing points on the side of the cradles to fix them to the chassis. He has fitted these cradles to either side of the chassis. It is a great idea as it secures the box from vibrating against the chassis.

The gear box gears are loose parts in that came to me in a plastic box.

Above: The gearbox components

On the Thursday of my visit to Kurt's home he took Paul and me on a tour of three garages. The first was to look at a Riley that has an Adelphi body in fairly original condition.

Paul's intent was to copy the interior of the boot. There were five Rileys in the garage, all pre-war and all restored. They looked beautiful. While there my collection of Adelphi pictures were increased as photographs were taken of the dash and interior finishings on the Adelphi with the view to replicating them on the Blue Streak in my garage.

Above: The Adelphi dash and
Below: A door card

Following this visit we travelled a further distance to another garage. It was a big contrast to the first location. The first was pristine, open and with plenty of space to move around the cars. This was dusty, crammed with Rileys and piles of Riley parts on the floor. Kurt brought us to this garage so I could see a sedan version of a side valve. . It had sliding windows that originally stored at the rear on tracks and could be pushed forward to close in the rear window space and also the front window space. . It had side lights, a complete engine, the fuel tank was located above the engine on the scuttle similar to a Vintage Riley 9.

Above: Alan's SV. Notice the sliding glass windows. They slide on runners and come forward in three parts

The Watford instruments were all there. Interestingly the gearbox had been removed and disassembled and the gears were in a tin on the floor. It was the first gearbox that I had seen where the body was intact and not broken at the fixing points.

Below: Intact gearbox body. The gears are in the box top left

I marvelled over that for a while and refocused on the front axle which had also been removed from the Riley.

Above: The dash
Below: The engine compartment

Pictures were taken of the electrical components and the location of the carburettor and linkages. Another thing of interest is that the advance and retard rods passed from the end of the steering box through the sump to the magneto on the other side of the engine.

Below: A door card

The third location was in a shed on a goat farm. The body had largely been restored as a tourer. The body and guards were finished and all of the mechanical and electrical components were intact but sadly the restorer had passed away prior to restoring the mechanical and electrical components.

Above: The dash with steering, gearstick and hand brake assembly

As you can see from the photos the Riley has been sitting for some time in its current location. The visit was really valuable as parts that were not noticed in the previous visit to Alan's Riley were encountered on Lyn's Riley.

The body style is exactly what I want to achieve and the visit turned out to be something really special.

Above: The body side and
Below the tub

There are many pictures not published but these show the frame.

Andy Camp's RMB

Some months ago Andy contacted me and asked if I would make some timber bits for his RMB. Specifically he wanted the sills, the top windscreen rail in its three pieces and the cant rails. The suggestion was made to him that if he needed those parts he probably needed 'A' pillars, the rear window surround, and the knee blocks as well. I even suggested that he use a pin or a garage pick to determine the health of the rear window surround by pushing t through the headlining at the base of the surround. Little did I know that the Riley had been busy. He had completely disassembled the Riley and taken the parts to three different states during his working career. Now retired and settled in Blackburn, Victoria the garage has been set up and the mandatory tools purchased to do the timber work. Noticed was a band saw, thicknesser and a bench saw. Many of the Riley bits were sitting in his garage waiting for him prepare them and assemble the body. It seemed to me to be a great hobby for a mobile person and ultimately a prized hobby for a person's retirement.

In response to the email from Andy, I said that I would be in Melbourne to pursue other Riley projects around about February and the timing worked well for Andy. When the navigation devise indicated that we had arrived in Andy's street, straight away the tell tale signs of a Riley enthusiast was apparent.

Sitting in the driveway was a Riley Elf, wheels off and brake parts laying on the brickwork next the front end.

The value of doing the restoration yourself is the journey. Andy told me that the RM had a history. The previous custodian had put a battery in the boot and connected it to a battery charger. He must have vacated the area and perhaps the charger was on overnight? In any case the battery caught fire and burnt the boot out. Maybe Andy purchased the remains at a good price? During employment in another state the boot lip had been replaced by an artisan and the outcome looked very good. Despite the fire the tub looked straight and what I could see of the other bits they were all in good condition.

when I suggested that I would love to keep track as his restoration progressed. There was no intention to put any pressure on the custodian's restorative efforts. The first Riley restored in my garage took 7 years to complete. The 'A' pillars were cut out with a hand saw and shaped with a spokeshave. It took a year to work out all of the timber shapes as they had either disintegrated or in the case of the 'A' pillars rotted out in the middle. The experience however was not only memorable but became the platform for many other Riley restorations.

Below: The scuttle appears to be living under the carport outside the garage.

Above: The crusty surface is sawdust . Currently timber shaping and framing is being undertaken

The chassis was yet to be touched and the timber and body parts were yet to be prepared for assembly. Maybe I spoke a little hastily

Another comment worth making is that many restorations have been completed out of single garages in suburban locations. And even in a series of single garages as the owner has moved from one home to another.

The Imp Special story (so far) by Mel Carey

I have always been interested in motor cars, and over the years owned many and various marques. The first being a “T” model Ford and the most exotic being a Bentley, but never a Riley!

I remember peering into Ron Brownrigg’s workshop as a young apprentice every day when on the way back and forth from work to the railway station in Blackburn Victoria. Mr. Brownrigg always had exciting looking old cars in his workshop, Eagles, Falcons and perhaps a Kestrel? There was always a racing car or two up the back.

As the years past I became heavily involved in the service and restoration of a marque that has often been mistaken by the masses as a Riley. I was always anxious to point out that the only part that was Riley was the copied torsion bar front suspension. So, my knowledge of Rileys was very limited. I was, However, very aware of Percy Riley’s innovative designs, particularly the twin camshafts high up in the block in the 1 ½ and 2 ½. Rileys. These Rileys of the 1950s had perforated roofs with a vinyl type covering and timber framed bodies. They were very interesting.

[My only experience of restoring a timber framed car was a TF which drove me to despair, and I vowed to never own another!]

The little Imp special that this article is about came to me via my old mate Jack McDonald. Jack figured I would be just the boy to complete the project that he had started more than twenty years previously. I have almost no history about the car other than Jack’s memories and considering his activities in subsequent years it is no wonder that he is a little vague on this project. Jack bought the car sight unseen from an advertisement in a classic car magazine. The Advert. stated that the car was restored and in very drivable condition.

It arrived by transporter from the previous NSW owner in a going condition with some spare parts, but it quickly became apparent that it required some serious remedial work. The chassis was so weak that Jack immediately set to work on drawing the chassis to scale in order to fabricate a replacement. Although it was mechanically sound, the body was also falling apart so it was an easy matter to dismantle it. The only salvageable body parts were the four mudguards. Thank goodness, although the rears needed some work they are very distinctive. It has hydraulic braked front and rear axles with 19” wire wheels and a modified conventional tail shaft. The engine and gearbox are from a 1950s 1 ½ Riley. The steering box is from a Riley 9.

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As Jack was restoring old aircraft during that period he had his “metal basher” fabricate a nice aluminum body very similar to the original whilst he made the new chassis. The car was roughly assembled to check its dimension’s and then it got left behind for another project!

Above: The instruments fitted into the dashboard

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It came to me in this state with an array of bits and pieces in boxes. It was up to me to sort out the bits, including instruments from an Austin Healey Sprite, small chrome headlights, a TC fuel tank and mount plus other curious parts.

With cautious support from my wife, Colleen I have been able to get the fuel tank and spare wheel mounting sorted and have just completed fully welding the chassis which Jack had left tacked.

Above: The fuel tank completed and fitted

There are numerous parts missing but my immediate requirement is for the pedal gear and linkages as they are nowhere to be seen in any of the boxes.

I am encouraged to learn that close by in Queensland there are a dedicated band of Riley tinkerers who are only too keen to assist with our various projects. And with Phil’s recent efforts we now have an opportunity to move forward with our Riley restorations as part of the RRCA.

Below: The body refabricated and beginning to look like an Imp.

RM Air silencer conversion by Cliff Goodman

The following is a brief description about how to convert the standard air silencer fitted to the Riley RM series vehicles. It should be noted that I have found there to be at least two different sizes and so before attempting this work some initial sizing is recommended.

The first step is to carefully grind away the rolled edge that holds the inlet cap onto the main body as shown in the photo. The cap can then be removed along with the course braded wire element and inner retainer. This will expose the inner formed plate which is held in position by three small brazed points that can be carefully cut with a junior hacksaw and split with a screw driver.

Above: The joint after the grinding operation

Using a couple of screw drivers gently prise the inner plate away from the main body until you can get your fingers into the gap and then pull the inner plate and inner tube out. The inner tube is held by another plate towards the opposite end with a snug fit on the inner tube. Grind away the outer lip on the inner formed plate equally all round until the plate will enter the main body. Reduce the inner pipe length by 90mm being careful not to deform the pipe.

The joint levered apart with a screw driver

Above: The wire element and the inner retainer

To manufacture the cap clamping arrangement I used a section of purling left over for my shed build with a 3” long 1/4” UNC set screw and wing nut all brazed into position ensuring that the screw is central to the inner plate. What ever you use the critical measurement is to have thread between 85mm and 115mm from the top of the raised part of the inner plate.

Above: Cap fixing arrangement.

I wound 50mm wide masking tape around the main body of the air silencer close to the exposed flange and using the cap I marked out the corresponding ports positions and at the same width. I drilled a 6mm diameter hole in each port corner and then very carefully using an angle grinder with a very worn down slitting disc I connected each hole in the individual ports allowing the removal of the unwanted material. I then hand dressed the ports using a file to obtain the final shapes. The ports were then deburred and all of the filings removed.

With this style of cap the threaded section has to be removed and the base hand dressed flat. Picking the centre of this base drill a 7mm diameter hole [clearance for clamp screw]. Ensure free sliding fit over thread.

This conversion was originally designed around the Ryco A67 air filter for the Austin Healy Sprite. Unfortunately Ryco have discontinued this filter but I have found an alternative made by K&N number E-2230 which is a reusable type. I purchased one complete with a service kit on Ebay for $71.22 including postage.

Assemble the new air filter and cap onto the inner plate and tighten up the wing nut. Enter the assembly into the main body and lightly tap home until the cap comes into contact with the main body flange. Without disturbing the inner plates position remove the cap and filter.

Above: Inner plate and tube after remove

Attach the inner plate to the main body with three equally spaced braze tacks, Recheck that the positions are correct. Wire brush internal areas to remove all debris.

Measure the distance between the base of the thread and the underside of the cap when fitted. Manufacture a spacer or use a nut set at this height to stop any deforming of the cap by over tightening the wing nut. Ensure that all swarf, filings and debris has been removed from inside of the air cleaner before final assembly.

Above: The cap converted and
Below: the completed article

Paint stage of an RMA restoration

This Riley visited my garage a few years ago for a timber frame as the custodians were struggling with making and fitting the timber frame on their own. I was glad to accept the opportunity as I am always interested in developing skills for my own restorations. The making of the frame parts went well and the framing made a close approximation to the original construction. The doors fitted with a close gap and the body sat straight on the chassis. The perforated roof fitted up to the windscreen surround with a gap of 1/16th of an inch. The groove cut into the roof rail coincided with the windscreen top and the whole assembly seemed to fit together well. When finished, the custodians looked the body over and seemed happy with the outcomes so it was put on a trailer and returned to their garage. As far as I was aware the project was completed, I had some time out from my projects and we were both happy with the readiness for the Riley to be painted and fitted out with upholstery and hardware.

The custodian contacted me again about 7 months ago and asked if I would do a little more work on the car as they had work in another location and no time for work in the garage. When their garage was visited their proximity to the sea was quite apparent.

The Riley had not been sealed against oxidation. There was surface rust over the exposed areas.

So the first task was to seal the Riley and get a coat of paint on it.

The colour chosen was black. Nuffield would have approved. An etch primer was used to seal the skin. After that a high fill grey undercoat. Then a spray putty was used to fill in all of the small divots around the edges of the body where there was evidence of oxidation and tiny dings. Then the hard work of rubbing it back

with a block and 600 grade wet and dry. After that the paint was applied, blocked and painted and blocked until the surface was smooth.

Above: The spots where minor oxidation had eaten the metal surface were filled with pray putty

When the colour went on the Riley, the surface appeared straight but when blocked there were some shallow dips where the sand blaster had been a little heavy over the lead wiped areas and numerous tiny divots that needed to be addressed.

Above: The tub appeared to be straight when the top coat was first applied but when blocked shallow spots and tiny divots were revealed.

The solution of course was further painting and blocking until the surface was straight. We are not talking about anything but a few microns but particularly with black paint all the imperfections can be picked out so some effort needed to be put in to make the surface straight.

Above: The windscreen surround and the top of the quarter panel look straight.

The top coats went on quite well and after dry they will be the body will be blocked with 1200 wet and dry and polished.

Above: The tub. It is not perfect but it looks good.

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Doing Riley frames

About 10 years ago a search was made of local timber mills. As expected the industry has contracted. A few were still doing hard wood house frames and harvesting the timber from the Peachester area. But mostly they were milling Radiata Pine like the timber you can get from Bunnings. When asked if they knew anyone who was milling light (not heavy) hardwoods the answer was no. Eventually, one mill gave me the name of a person they said did specialty timbers. His name was Tony. After a few phone calls he telephoned me back and invited me to come to his home in Caboolture. His large backyard shed was stacked from the floor to the ceiling with exotic timbers. Recently a piece of 4X4 was purchased that closely resembled the facia timber in an Adelphi body. Tony only supplies to what he considers to be worthy projects and has several regular customers including one Riley enthusiast.

When asked for Flooded Gum (Rosewood) he would say that he would get back to me when some was found. He harvests unwanted trees from paddocks in country Queensland, areas that are being cleared for housing and sometimes bush locations. On one occasion he provided Queensland Mountain Ash for 'A' pillars. The timber came as green 4X4 posts. It was very hard close grained timber and there was enough of it to make a dozen sets of door posts for Rileys. It was put on the top shelf of the timber rack for drying. On several other occasions Flooded Gum timbers came as 2 ½ inch slabs, 3X3, 1½ X12. All suitable for sills, cant rails, front window rails, rear window frames and so on.

Below left: a mixture of North Queensland Beech, Queensland Mountain Ash and Flooded Gum (Rosewood)

A few weeks ago 1 ½ inch slabs were picked up from his milling site that were going to make future sills. On average it dries at 1 inch per year. If stacked with cross timber to allow air flow this timber will be ready late next year. In the meantime there are slabs and other timbers that have been resting in the workshop for two, three and four years. The Flooded Gum that is purchased grows in mountain gullies and often has wet feet. It is light, flexible and rot resistant. That does not mean that it is not sealed when fitted to a Riley, though. Currently it is sealed with two coats of paint and marine varnish. The timber is sourced from a mountain area and the trees were dead from age but still standing. It will still sit for a period of time until the moisture content falls down to 18%. When assembled with stainless steel screws, bolts and bronze silicon nails, it should last for many years.

Above; slabs for sills in front and slabs for cant rails and roof rails behind.

When building in this timber door posts and rails need to be pre-drilled before nailing or screwing. Sometimes when a bit careless a 1 ½ mm drill bit will jam in the timber and break. But if careful a bronze silicon nail can be hammered into location for a lifetime. Large brass slotted screws are used on the base of 'A' pillars and they will break if the timber is not carefully predrilled and the screw tips dipped in grease.

But building Rileys is entertaining. Occasionally a Riley enthusiast will ask for some framing pieces and a break is taken from doing my own projects to help a fellow enthusiast get dusty from wood shavings.

Above: Patterns and sills.

This is one of my own projects. Mostly the timbers needed to be made from imagination as there was very little timber left in Albert. He had been sitting in the Brisbane River for a week and then lived next to a tidal creek at Wynnum for some years. The sills are basically 4X4 inch rails.

Above: The A pilar is re-enforced with steel and the sill is a piece of 4 X 4 inch timber.

They sills need to be of heavy timber otherwise when it rains and the hood is up the canvas will tighten and the doors will clamp shut. Two cars have been looked at that had ¾ inch sills on blocks to achieve a level platform on which to build the body. Interestingly the 'K' panels were not straight on either of them. Their bases were both on wedges of the same angle. The same mistakes were evident in both Rileys giving the impression that both cars were built by the same shop and both came away with the same errors.

The second picture is of the 'A' pillar and top and bottom windscreen rails on an RMB. The 'A' pillar is screwed into the horizontal sill timber through the 'K' panel and the knee block is screwed to the sill horizontal timber making the shape for the quarter panel skin. The other complex piece that needs to be accurately fitted is the top windscreen rail and the roof rail This affects the angle of the windscreen and its fit up to the cant rails and the rear to front roof rails. If this is not right the doors won't fit straight and the gaps will vary around the doors. Many people think that the rear window frame is complex, but it is not.

Above: The rear window and fillet assembly with the parcel shelf.

So long as the rear window fits into the cavity with a 1/16 inch gap around the glass, it will fit. The fillet timber is the builder's guide to get the frame central and sitting at the right height. If these are correct then all of the other timbers will fit as well.

Above: Another view of a top and bottom windscreen rail and the header rail on an RMD.

Have you noticed, yet that the frames are all about the same design? It is just that they vary from model to model and from the basic shape to the RMC and RMD.

Above: The rear quarter panel in a RMD. You can see the hood assembly piston on the right hand side. The 'B' pillar is re-enforced with a steel that comes down to the rear seat squab and across to the other side of the Riley

Jim Runciman's new ride. This is likely to distract him for a while