TORQUETUBE

Newsletter of Riley Motor Club Qld Inc. October 2016

www.rileyqld.org.au

Rileys at Woodford, most of them on rout to the Kilcoy Classic:
From the left is the Wyllie-Wheeler's RMB, the Lonie's Sports Special, Ian Henderson, Chris Reynold's RMD, the Hill's RMB and Trevor Taylor on the far right.

Editor: Philip Wyllie
philip.w.wyllie @gmail.com
07 54999826

Next Meeting:
Thursday, 13th October 2016.
Queensland Riley Car Clubhouse, Samford Showgrounds
7.30 PM for an 8 PM start

DISCLAIMER: *The Riley Motor Club Qld Inc. accepts no responsibility for the results of contributor's advice, nor does it endorse any services/ goods/ products offered by advertisers. Opinions expressed in this Newsletter are not necessarily those of the Club, its Officers, or its Editor*

Editorial

This edition of Torquetube is dedicated to a Riley special, named 'Stirling' and a special Riley restored with 21st Century equipment. Not all of the pictures submitted about these cars could be fitted into this month's Torquetube. Thank you to Ken Lonie and Robin Hull for the stories about your cars. The Queensland Club is very fortunate to have the engineering ability and experience of people like Ken and Robin and much has been learned from my visits to their sheds.

Thank you also to Ray Burrows for the pictorial story on the All British Day.
Albert fitted with windows

Apologies to recipients of the mailed version of Torquetube as the postal limit is 20 pages to the size envelope available for a $1 stamp. To recipients of the e-mailed version, happy reading, you have the bonus of a few extra articles!

SPARE PARTS

PARTS ARE AVAILABLE FOR PURCHASE EVERY TUESDAY AT THE CLUBHOUSE: 38 SHOWGROUNDS DRIVE, HIGHVALE, AND 4520 PHONE: IAN H 0407 129640
. BRIAN J: 0417 625099

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

Contents

Minutes of Riley Club Qld. Inc. General Meeting
Held on 8 September 2016
Queensland Riley Club Shed
38 Showgrounds Drive, Highvale 4520, Samford Show Grounds.

1. The President Ken Lonie declared the meeting open at 2020hrs with 14 members in attendance

2. **Attendance:**
As per the attendance book.

3. **Apologies:**
Del Thomson, Di Phillips, Rod Longden, Matthew French, Brian and Lyn Jackson, Mark Baldock, Ray and Bev Burrows, Dorothy Cameron and Philip Wyllie

4. Minutes:
Minutes of the General Meeting held on 11 August 2016 were circulated and moved for adoption as a true and correct record by Ken Lonie and seconded by Robin Hull.
Carried.

Business Arising: There was no business arising from the minutes which is not covered elsewhere.

5. Secretary's Report and Correspondence:
As Mark was not in attendance, the Secretaries report was limited to the receipt of incoming mail.

Club Magazines from
- Blue Diamond
- Riley Gazette.

Correspondence from: Nil

Membership Form Received from: Nil

Outwards: Nil
Moved by Ken Lonie that the inwards correspondence be received and the outwards correspondence endorsed. Seconded by Matthew Schooneveldt,

Carried.

6. Treasurer's Report:
Linden presented the following report:

Treasurer's Report for August 2016:

		BOQ	Bendigo	
			General	IF Loan
Balance as per Bank Statement, 1 August 2016		**$165.02CR**	**$7334.79CR**	**$521.75CR**
Income				
Raffle proceeds			100.00	
Transfer of closing balance – BOQ ‡			165.02	
Interest	**$**		5.59	0.40
		0.00	270.61	0.40
Previously unbanked cash			1.00	
			271.61	
Expenditure				
Closing balance – transferred to Bendigo ‡	$	165.02		

Treasurer's Report for August 2016:

Club Insurance – Arthur J Gallagher ‡		866.80	
Shed expenses – R. Longden ‡			126.65
	165.02	866.80	126.65
Balance as per Bank Statement, 31 August 2016	**$0.00CR (CLOSED)**	**$6739.60CR**	**$395.50CR**
Consolidated balance		**$7135.10CR**	

‡ EFT/BPay

(Presented at OGM 8 September 2016)

Note re Bendigo Community Bank Accounts:

Two accounts are operational: -

Riley Motor Club Qld Inc BSB 633000 A/c No. 156635229

Riley Motor Club Qld Inc. Council Loan Account BSB 633000 A/c No. 156635728

The latter account is for the shed project and servicing the IF Loan only.

Note re Advance Memberships:

To 30 August, $8380.00 has been advanced by Members.

Accounts for payment

There were no additional accounts presented for payment

Linden moved the adoption of the financial report and payment of accounts seconded by Ian Henderson.

Carried.

7. Report from Club Captain:
Sheila Hill presented a report on recent and proposed club runs.

- The shed run to Maleny was well attended and enjoyed by all.
- The club run for September is attendance at the Kilcoy Car show on 24th September. Attendees are asked to assemble in Woodford at 8.30 am for departure shortly thereafter.
- All British day is being held on 18th September at Tennyson and a number of members are attending.
- Other runs proposed for the remainder of the year are:
- October – A visit to the Amberley Aviation Museum
- November – A visit to Old Petrie Town on their Steam Day
- December – Christmas Breakup Party at the Clubhouse on 18 December. Keep this date free.

*** Report on the 2018 Queensland conducted National Riley Rally** - Wendy Lonie presented a report on the work undertaken so far to allocate a location and date for the National Riley Rally to be held in 2018.

A location and date have been selected but will not be published in accordance with convention.

8. **Report from Torque Tube Editor:**
Members are encouraged to submit articles for the magazine on any topic. Future regular inclusions in the magazine will include a spare parts advertisement as seen in the past two magazines. Suggestions about other inclusions are also welcome and sure to be followed up.

The fact that no issues were raised by members about any of the past three magazines seems to indicate that content and distribution processes are working well. I am interested to hear whether the pictures are large enough to satisfy the aging eyesight of (some) readers. One recent article has been submitted to a local newspaper and a second article will be submitted to another newspaper prior to the monthly meeting with the hope that they will be published. If published, they will provide local advertisement and encourage interest in Rileys. My contact details have been provided to the newspapers as the Riley contact person but you may suggest an alternative contact person. In the next report I hope to provide a copy of a newspaper story.

Up to this date the editor has not been inundated with articles from members which means you will be hearing a lot more about Albert's progress.

9. Report on Riley Shed:
Bill White advised that the grant application has been made to Council and is progressing through the system. In other respects, the clubhouse is operating well.

10. **Report from Registrar:**

Di Phillips submitted the following report:

We should probably record the "tracking down" of the roadster for Gwyn Morris who is the UK Riley RMD Technical Advisor. The car in question belongs to a Malcolm Campbell and contact has been made between Gwyn and Malcolm, who was pleased to hear of the interest and welcomed sharing of this info to members. It's good when our register helps members establish a car's history. The ex Phillips 12/4 special has been sold to Les from Port Macquarie . There was another person interested in the car but a holding deposit had been paid. Les intends to join the Qld Riley Club. Another person from the Gold Coast purchased a red 2 1/2 during the same dealings.

11. **Report from Spare Parts:**
Ian Henderson presented a comprehensive report on sales during the month. There continues to be a steady demand for spares, both new and second-hand.

If anything, stocks require replenishment.

12. **Report from Website Co-coordinator:**

Linden Thomson advised that the website is up to date and fully functional and he will soon add more photos. The July Torque tube is now on line.

13. General Business:
Linden suggested offering a discount to entice non-financial members to re-join. The meeting agreed with Linden's proposal and he will now progress this non-financial member incentive drive.

Ken Lonnie advised that he had obtained legal advice on the sale of spare parts between states. To comply with the mutual dealing requirements of the Australian tax office, spare parts managers in each state need to be financial members of the state they are trading with, as well as their own state.

Ken undertook to progress this issue with other state clubs.

Ian Henderson raised the issue of paying off of the loan from council earlier than required. Both sides of the argument were discussed.

Ken Lonie tabled an email from Phil Wyllie detailing two partially disassembled RMBs for sale in Gympie. The information was passed to Ian Henderson to assess and advise if it was worth the club purchasing them.

14. Car Reports:

Trevor Taylor advised that work is progressing on his Woodie project and Ian Henderson is hoping to attend the All British Day as the first outing for his RMC.

15. **Next Meeting:**

Will commence at 8.00pm on Thursday 13 October, 2016.

Meeting closed:

Attendees were thanked for their attendance and the meeting closed at 10.20 PM

The building of a Riley Sports Special

With his father, John Payne intended to build one good RMB from the parts of two. Two cars were acquired, disassembled and placed under cover in the family garage and made ready for assembly but time passed, children arrived and the project never took off. So about 4 years ago the parts were offered for sale and Bill Short and I purchased them and offered the parts for sale through the Queensland Riley club. Many parts were purchased and I elected to take a rolling chassis, two tub sections, the equivalent of two engines minus the carburettors, gearboxes, distributor and enough panels to make up a car, but I wanted to build something special, so it wasn't going to be a traditional timber framed RM or even a modified RM like a Drophead or a Roadster.

Pictures: Ute loaded with parts **One of the John Payne cars**

The vision was to build a Riley Sports Special. It was to be a two door, long nosed, open cockpited vehicle; a bit like a pre-war racing car. In keeping with the sports theme the doors would be raked like the roadster, the bonnet elongated and side pieces louvered, the wheels would be spoked, the spare wheel would be set on the boot lid and the cockpit would be central with the front seat moved back as far as practical to achieve a smaller boot than the RMC. To achieve this outcome the plan was to push the front seat

Picture: The vision nearly complete

position back to the rear seat location, position the scuttle over the front seat location, manufacture an all steel elongated bonnet with side pieces, rake the front guards and make the rear of the car from two tub sections back to back to produce the rounded affect at the top of the rear section.

At commencement, the panels were placed in a molasses tank for several weeks to dissolve any rust. While this was happening, the chassis was stripped, cleaned and painted with a POR 15 chassis paint. It is an incredibly hardy paint that was impossible to wash off my hands but once on the chassis the durability of the paint should last for years but thankfully wear off the skin in only a few weeks. Once dry the chassis was rebuilt. To accommodate a planned modern 5 speed gearbox the trunnion housing was relocated on the other side of the central cross member but apart from that no other modification was made to the chassis.

Picture: Trunnion moved

Running gear

The running gear was considerably modified. This was to accommodate a set of 16 inch wire wheels acquired from Healy Spares of Melbourne. They are the same as XK 120 Jaguar spoked wheels. Bolt on Jag XK 120 hubs were redrilled to suit the Riley stud pattern and were bolted directly onto the half shafts so that the original rear brake mechanisms could be retained while the knock on wheels could be fitted. At the front end the Jag XK 150 knock on hubs were machined to fit tapered roller bearings. This allowed the possibility of fitting disc brakes but the Jag discs were so large

Pictures: Jag wheels with discs

that they fouled with the steering rod ends. This issue was remedied by the use of rear end Mazda 3 discs that fitted neatly into the space. This necessitated the use of Mazda callipers and brackets were manufactured to accommodate them. The Jag knock on spoked wheels were then fitted.

Drive train

The drive train turned out to be quite interesting. The engine was rebuilt using Jack Warr's prototype mains bearing saddles and JP pistons fitted into a standard Riley block. The head had previously been machined to take unleaded petrol with hardened valve inserts. Because I could, con-rods similar to the Pathfinder design were commissioned and an engineer at Yandina produced several sets. Most were sold to recuperate costs but one set

Picture: Engine bay

was fitted to the special. These conrods take readily available Mitsubishi diesel shells. The block was then assembled in the standard manner with no issues with the crank or cam shafts or bearings. The engine was then fitted with the Chinese copy of the Peugeot distributor and energised with a small barrelled alternator that fitted comfortably into the engine bay.

Picture: The gearbox

The Nuffield gearbox was replaced with a Toyota Supra box. To accommodate the Japanese gearbox an adaptor plate was made to fit a Pathfinder bell housing supplied by Jack Warr. To achieve this an aluminium plate was welded to the machined base of the bell housing and this was machined again and holes were drilled to coincide with the engine studs. The gear box was then mounted to the engine using a Riley pressure plate and thrust bearing. A Toyota Landcruiser clutch plate was used to suit the Supra gearbox spline. During this whole process much attention was paid to keeping the drive train aligned. This set up necessitated the relocation of the gearbox mount. Another tab was then welded to the bell housing to receive a three bolt hole starter motor.With the longer gear box the distance between the torque tube and gear box was reduced by about 250 mm so the torque tube was shortened by 150 mm and the trunnion was re mounted on the rear of the central cross member. The propeller shaft was shortened by 100 mm and balanced. The final alteration that was required was the extension of the gear lever to accommodate the seating position. This was accomplished by using a water pipe to extend the lever 600 mm further back into the cockpit. A bar was slotted to rotate the mechanism so that it would remain rigid while the gear lever was pushed sideways to change gear across the gate from 1st and 2nd gear to 3rd and 4th gear and to 5th and reverse gears.

Some inclusions

A brake booster was fitted into the space created between the scuttle and engine and to make the steering lighter an electric power steering box was fitted into the same space. The steering column was then lengthened to suit the relocation of the driving position. The spare wire wheel was located into a recess on the boot.

The body

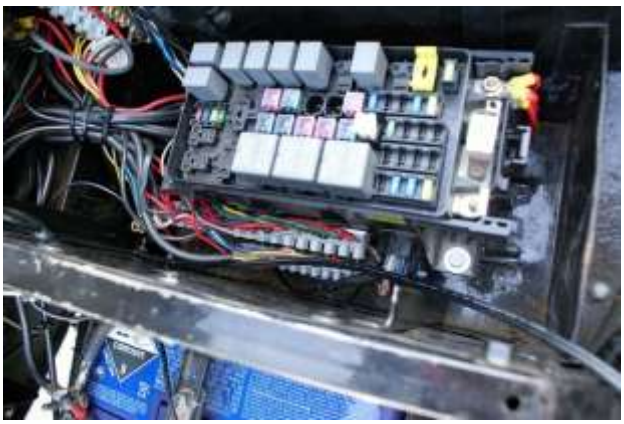
After disassembling the body the two tubs were set back to back to look at how they could be joined to make the ovaled shape for the rear of the car. The top of one of the tubs was separated from its base and the top section above the boot was welded to the complete tub making the ovaled section that was desired. The drivers and front passenger seat were then relocated to the rear location to make the car a two seater. The door pillars were then cut short, the top hinge housing relocated and then it was set as far back as possible without fouling with the rear guards. They were then braced and welded into place. The re-location of the door pillars and fitting of the doors dictated where the scuttle and A pillar door posts would be located. This settled, a rolling machine was purchased to create the curves required. Using 1 by 2 inch steel tube the windscreen surround, scuttle and door strengtheners, seat fasteners and tub supports were created in steel.Taking the scuttle back required narrowing the side panels and utilising panel steel to fill the spaces created by the narrower shape. A bubble shape was created in the driver's side panel to accommodate the inlet manifold. The front and rear mudguards were then cut back to produce a more sporty profile and the edges rolled around heavy gauge wire. There are no side windows and the doors were scalloped down to continue the racy shape. Vents were then cut into the front side panels and the bonnet and side panels elongated to fit the new longer bonnet.

Picture: The body completed

Picture: The front part of the body

Wiring Harness

A relay box was sourced from a Kia Carnival as the basis of the wiring set up. This would mean that all of the wiring under the dash switches would have minimal amps to the relay box so the full power to lights, starter motor, horn, ignition and so on would be switched from the relay. Many hours were spent with a multimeter discovering the functions of each of the circuits. The wiring was made up from 7 core electrical cable that is often utilised for trailers. A plastic spiral was used to encase the multiple 7 core cables to make the harness.



Picture: The relay unit

Tools required for the build included a mill, a lathe, spot welder, as well as other machines including a metal tube roller, bead roller (jenny) and sheet metal folder.

The car has now been named, 'Stirling' and is road registered. The car has become something of a tourist attraction in the Maleny area and there are many who say that he should remain as he is and not be painted – a ratrod apparently. However he is booked in for final panel adjustments and a paint job in November. He will be painted in a two tone royal blue and silver/ grey. This will leave all of the chroming to be done and the seats and interior to be upholstered. The dashboard and surrounds will be timbered in Tasmanian Oak. The build has given me enormous pleasure but has also enhanced the mental, social and physical aspects of my retired life. We now have three Rileys and an Austin 10 Roadster which ensures there is always something to be done.

Ken Lonie

The story of RMB 61S8904

The car was purchased on 12 July 2002. It had previously been owned by a person who lived in Currumbin and he had purchased the car from a vendor in Adelaide. It was last registered in 1978 and no work had been done on the car except for re-metalling the big-end bearings. As you could imagine the car was in a deplorable condition. Despite the dry environment of Adelaide, the timbers were either rotten or missing altogether, the body had sagged and a previous passenger may have opened the door while the car was travelling at speed. The hinges were bent, one was broken, the timber work broken and the door was damaged. Thankfully, however, the body panels, guards, running boards, boot lid and bonnet were in reasonable condition.

Even without these serious issues this 1951 RMB was going to be totally disassembled, completely re-timbered and the mechanicals including differential, gearbox and motor rebuilt to original condition. To do this the project was going to start with the chassis, populate it with the running gear and mechanicals and then rebuild the body on the restored chassis. The vision included the removal of all the inherent access points to moisture, re-invent the roof, modernize the electrics, improve the comfort levels of the interior and provide safety measures that would bring the car into the 21st century. The following description of the tasks undertaken and the subsequent changes to improve on the restoration describe the current condition and appearance of the car.

Picture: The car stripped

First, the chassis was cleaned and painted with POR 15 paint. This is a paint that hardens like stone and is impossible to wash off your hands. The chassis was then filled with fisholine so that the internal surfaces were protected. After that the shackle rubbers were replaced with polly-urethane which was turned to the size of the original rubber shackles. The torsion bar rubbers, front end bushes and any worn parts were also replaced. The outer and centres of the wheel rims were split and modern Nissan Navara outers welded to the Riley centres. This allows replacement tyres to be accessed anywhere in Australia. The 1951 chassis already has brackets for telescopic shock absorbers so these were fitted. The chassis was then assembled with new or restored components.

Picture: Painted and re-populated chassis

The mechanicals were now the focus of attention. The differential was stripped down and new bearings fitted but always had the intention to change to a higher ratio diff and fitted hydrolics and ended up fitting a Nissan Skyline diff and this was fitted to original Riley backing plates but with a hydrolic wheel cylinder. Under the bonnet there is a tandem master with twin reservoirs with a brake booster. It has an open tail shaft and is fitted to a standard Riley box. The gear box was stripped down and a new lay shaft and other worn parts replaced with new. The engine was then machined to 20 thou oversized bores, the mains were left as they were and the big ends that had been re-metalled fell apart so these were replaced with slippers and later the mains were replaced with Jack Warr's all metal slipper saddles. Inherent errors in machining meant that a fair bit of work needed to be conducted to make them right, but since then new saddles have been manufactured by bolting two blocks of steel together and machining them so the ID would taker slipper shells and the OD left partially unfinished until the tunnels are measured and then the new slipper saddles will be finished and fitted, possibly prior to the Philip Island National Rally. Engineering completed, JP pistons were fitted, the engine rebuilt and then attention was

Pictures above: The Gear box stripped, Mains saddles made.

Picture right: Extractors made and fitted

focused on building stainless steel extractors. To do this a single flat piece of steel was bored in the locations of the exhaust outlets and water ports. After that stainless steel tubes that had been made with bends were welded to the base plate and another plate was welded onto the tubes to connect the extractors to the exhaust system. All running gear was then fitted to the chassis and the engine was mounted into its place with the new extractor set and exhaust system attached.

The timber frame was constructed from Rose gum. No nails were utilised in the construction but stainless steel screws were used to fix the timber parts into position. A considerable number of the joins were further re-enforced with steel brackets and all the timber was painted with a single pack epoxy estapol to seal the timber against rot. Steel brackets were then set into the 'A' posts so that the door lock catches could be screwed into steel instead of timber. The Dashboard was constructed from solid walnut and many of the timbers for the doors were re-enforced with steel brackets and fixed to the timbers with stainless steel screws. I have no idea how long the individual tasks took. Each was tackled and I simply worked at them until all the body work was completed. Fitting the doors was the main challenge as one of the hinges needed to be remade and as readers will know fitting the parts is a challenge in any Riley.

Pictures above: Re-enforcing of the timbers, Door lock steels and Dashboard

The body was now structurally complete. All the bolt holes for fitting the chrome strips were welded up including door chrome strips and the running boards and front guards. The trafficator openings were also welded up and after that the roof was sealed with fibreglass and the roof gutter was formed using the same material.

Picture left: Fibre glassed roof

Picture right: bolt holes welded up

The wiring harness was made by using single electric wires encased in a split tube. There are 20 fuses and 5 relays for the headlights, horn, and fan and so on. This meant that there were only mili-amps under the dash. The battery was re-located under the passenger side rear seat and the original battery space taken up with fuses, relays and wiring connections. An alternator was fitted in place of the generator and the distributor replaced with a Ford Telstar electronic distributor with a common Bosch electronic unit. A spare electronic coil was placed near to the original position and this was fitted in case of a coil failure. A second electronic fuel pump was also set alongside the working fuel pump. There is also a reversing camera fitted as well as a hard wired GPS. Of course, the trafficators were replaced with indicators and the front indicator was located in the parking lamp pods while the parking light was incorporated into the headlight pod with the quarts halogen headlight globe.

Pictures: Relay box and secondary door lock

The car is painted in acrylic because it is easy to apply and two-pack can be hazardous to the painter's health. The roof and body is painted cream and the guards and running boards brown. One other safety feature that was fitted was a secondary lock to the suicide doors to prevent them from opening whilst the car was being driven. The restoration took four years, has been driven 50,000 miles since restoration and has performed well over long distances. The most recent big outing was to the Merimbula National Rally.

Robin Hull.

Windows 50

It never occurred to me that Albert's windows would be a topic worthy of an article, but some interesting learnings have arisen from getting the glass cut and modifying RMB winding mechanisms and making a rear window winding mechanism frame. In the first instance Neil Patrick's windows were used to make patterns and these were taken to a glassier. He said it would take a week to make the toughened glass windows and they would be available eight days ago. Apparently the factory had a machine breakdown. The revised date of delivery is now three days from today. Not many companies are doing this work and if a machine breaks down you wait in the que until the repair has been affected. In the meantime rubber has been purchased to fit between the glass and the window frame runner.

First the two metal brackets for the rear driver's side window were made from approximately the same gauge steel. It involved bending the edges at 90 degrees to increase their rigidity and then drilling holes for bolts and making the cut out for the winding mechanism and the winder housing. After that a RMB winding mechanism was compared with the passenger side mechanism that had come with the car. The RMB and in fact all RM winder mechanisms have a half circle gear with a diameter of 6 inches. At its centre a rigid bar extends to the runners and when the window handle is wound the half circle gear with its rigid bar raises or lowers the window. At the centre of the bar there is a rod with a slot for the end of the spring to pass through and be tensioned to the frame body. With the spring tensioned it is riveted to the winding gear at 90 degrees to the gear base. This rivet was drilled out which caused the bar to be pulled back on its centre axis by the spring. The arm was then pulled forward to be re-riveted along the straight edge of the half circle gear into a locating hole that already existed in the winding gear. The winding gear was clearly utilised for a number of applications including RMA, RMB and RMDs and possibly RMCs as well.

Picture of the rear window winder support

This arm was then cut off three inches from the gear and the bar shortened. The bar has a bolt at its end and from this a 'T' piece is connected with two rollers into which the window runner fits. This was examined and it was decided that just a little bit of cutting and shutting was required to utilise it for the RMD. First, one end of the T piece was cut off with the use of a thin cutting off wheel. This was then welded to the other end of the 'T' piece so that the runner was located at the same distance from the centre pivot point as the RMD passenger side window.

Picture of the modified winding mechanism

After that the body frame for the half circle gear was extended two inches and the second rod pivot point was welded to the end of the bracket. This was then attached to a second pivot point on the T piece that had previously been cut off and repositioned. Then the primary roller was relocated just above the primary pivot point of the 'T' piece. The pictures help explain the positions of the working parts.

Picture of the 'T' piece adjustment.

From the picture adjacent you can see where the adjustments are made so that the window travels correctly up and down in its tracks. One of the features of the rear window is that when wound up the window is pushed against the front winder track and at the top of the track there is a 45degree forward cut out and in the window there is a 45 degree backward cut out. This means that when the window is nearly wound up it comes forward and sits beside the front window so that there is a ½ inch overlap between the front and rear windows excluding 'some' of the rain but allowing the door to be opened without fouling on the rear window.

The last thing attempted was adapting a RMB window track to make two RMD rear window tracks and this was accomplished without too much trouble.The rear window and the tracks completed, the passenger side front window was examined and it was found that the small gear attached to the window winder handle had worn out. This is probably due to winding the window when the tracks had disintegrated so that the window didn't follow its correct travel and the extra force necessary to get the window up has caused excessive wear. This issue was easily resolved because the larger window was served by the same mechanism as was used in the RMB. In other words I simply utilised a RMB window winding mechanism.

Sorting the quarter windows turned out to be a bigger affair than hoped for. Brackets needed to be manufactured with threaded holes to receive small bolts to fasten the main window pillar to the angled window frame. They needed to be millimetre perfect and took three attempts and two days to manufacture. Another day was required to assemble the glass into the frame and secure the frame to the window pillar. When assembled the quarter window was fitted to the door with three screws and the pillar was screwed to the window frame timber so that the quarter window aligned with the door cavity in the car body.

Picture: The brackets

A 5 mm thick felt was then forced into the window pillar to provide the front track for the wind up window. The rear track was made by cutting off one side of a steel box tube and fitting a modern window track rubber into it. This was fitted onto the rear timber brace in the door and the glass was fitted into the tracks. The winding mechanism was then fitted onto the window and screwed into place. The window could then be wound up and down although at the moment it is a little tight. 3mm felt was then glued into the steel runners for the rear windows and the rear

window was pushed down into the cavity. The winding mechanism was then fitted to the window and secured to the timber frame with screws.

Picture: windows fitted pictured from the outside

Philip Wyllie

Timbers for Rileys

When Harold, the '48 RMB was restored in the 1980's the suggested timber of choice was Tassie Oak so he, that is Harold was entirely timbered from the forests of Tasmania (or maybe it was Victoria?). At that time I didn't know much about building Rileys and probably know even less today, age does weary the memory somewhat. But by the time George the '49 RMB became available in 2005 the idea of purism was past and it was decided that any durable lightweight hardwood would be sufficient. But then when Albert, the '50 RMD emerged some timber learnings had occurred and since I have nothing else to do but rattle on about Rileys I thought I would make a few comments about what the best timber is for your Riley in the 21st Century. But, please feel free to totally ignore this article and continue to use Tassie Oak or even import some English Ash if your pockets are deep enough.

Now it is important to understand that according to the timber experts the hardest timber has a value of 1, the greatest durability of timber is a 1 and best elasticity is a 1. So a hardness of 6 equates to a soft timber. For example, Radiata Pine (what you mostly get from Bunnings Hardware stores) equates to a hardness of 3.5 in Qld with a durability of 10 when exposed to weather and an elasticity of 10. Ironbark on the other hand is a hardwood. There are five local varieties and each has a durability and hardness of 1, that means that it is damn hard and is as durable as stone. I can attest to that as our veranda needed to be predrilled before being nailed to almost as hard bearers, but it bluntens tools quickly and is inflexible. Its elasticity depending on the variety is between 16 and 24. That means that is really inflexible, hard to work with and completely useless for Rileys; that actually may sound like some car owners that you may know, but any similarities with club members is entirely co-incidental.

Albert was timbered with a variety of timber types. Pomatia was used for the A and B frames, front window surround and rear quarter frames, inner and outer sill, the Header and Hood Header from Terminalia and the doors were framed with Oak, the Oak could have been from Tasmania or Victoria. But, it didn't matter what the timber was

so long as it was durable, lightweight and hard. *Pomatia* or *Pometia* also has an interesting scientific name and a big bunch of other local names depending on which country you live in. The same is not true about Terminalia as it only grows in New Guinea, but its full name is *Terminalia Brassii Excell.* Oak or *Eucalyptus regnans* has seven local names and represents three different species of large Australian trees.

Now comes the BIG BAD news for the Tassie Oak devotees. The durability above ground is only classed as a bare 3 with a life expectancy above ground of 7 to 15 years and in ground 0 to 5 years. Hardness is rated at 3. In a Riley that might be driven on wet days as well as dry days the life expectancy is about the same as English Ash; in a word it is short. That is why unrestored Riley's always have rotten timbers. That is also why it is important that Tassie Oak devotees paint their timber prior to utilising it with a moisture resistant paint or something more substantial like a two pack estapol. Readers of TT may recall an article about wooding Albert that suggests that there is a wide range of weather proofing products available that can be utilised on Rileys timbered with Oaks or their equivalent.

For those not so connected to English Ash or Tassie Oak Pomatia's common name is Taun. Its durability above ground is a class 2 with a life expectancy of 15 to 40 years and durability in ground of class 3 with a life expectancy of 5 to 15 years. It also has a hardness rating of 3 in the range of 0 to 6 so it can be worked with hand tools as easily as Tassie Oak. It is generally graded and utilised as outdoor furniture grade timber.

Terminalia is similar to Radiator Pine in that it has a hardness of only about 3 but it has an amazing elasticity of 9 compared with Taun with an elasticity of 14 and Oak at 13. What this means for the writer is that hood timbers requiring hardness but greater elasticity are best made from timbers like Terminalia and body frames from timbers like Taun. Tassie Oak is not a species but a group of trees. The Oak you might buy may be Mountain Ash, Victorian Ash, Alpine Ash, Woolybut, Messmate Stringybark or Brown Top Stringybark. The most likely timber you might get that is sold as Tassie Oak is Mountain Ash (from Victoria) which is the worst performer of the Oak brand. So your Tassie Oak should always be protected by a weather resistant paint when used in Rileys otherwise after a few years (or less) you have wood rot.

In summary, weather resistant, elastic hardwood of any type is best used for Rileys. Definitely avoid Radiator Pine and Ironbark. But if you choose to use Tassie Oak protect it with a rubberised paint or use a weather resistant timber that has qualities of strength and flexibility. Sources for this article include, 'Wood in Australia' (the woodies Bible) by Keith R. Bootle and George Soady, a Timber guru with experience in New Guinea and Australia and who has a taste for weird timbers including Blood Wood from Africa. The book is available and can be purchased for the diminutive cost of around $90. It is a great read and well

worth acquiring for those who enjoy a spellbinding read prior to sleep. It is guaranteed as a sleep enhancer to the many but a spell binder for the few who can't or don't want to sleep.

A comparative table (1 high and 6 is low)

Timber type	hardness	Durability above ground	elasticity
Radiator Pine	3.5	10 (negligible)	10 (very low)
Tasmanian Oak	3	5 (low)	5
Permatia	3	2	3
Terminalia	3	3	1
Iron Bark	1	1	10 (very low)

Phil Wyllie

For Sale
1937 15/6 Kestrel. Restored to as near original as possible. Leather seats, Mechanics, framing, carpets and paintwork have all been professionally done. Has won numerous concours prizes with the NZ Riley Car Club and VCC. Sliding sunroof for hotter days. Always gets attention and is a lovely comfortable car to drive.
More information and photos available on request. $70,000au or near offer. Ph Brian 0064 7 829 7166 or email
brian-barb@actrix.co.nz

2016 EVENTS PROGRAM

October 13th Thursday Monthly meeting

16th Sunday – a Club run to Sirremet Winey, 850-938 Mt Cotton Road, Mount Cotton. Meet at 9.30 AM for morning tea at the winery café.

23rd Sunday - The Riley/ MG breakfast run. We will meet in Samford at 0800 to leave at 0815 to Tinchi Tamba UBD page 100 ref A16. Join in enroute or go direct. The site on the banks of the Pine River is one of our regular spots. Plenty of parking and it is BYO brekkie.
Any queries call Trevor on 0407 717 853.

November 6th Sunday Run to Old Petrie Town Live Steam Day

November 10th Thursday Monthly meeting

December 8th Thursday Monthly meeting

? Christmas Party

January 2017 Presidents Run

February ? AGM.

I wish to apologize to our two great Hostesses, Doreen and Wendy for not acknowledging them when they provided us with lovely morning tea and lunch on the recent around the houses run. Well done ladies !!!

Sheila Hill Club Captain

THE 2016 RILEY MOTOR CLUB QLD ELECTED COMMITTEE		
PRESIDENT:	Ken Lonie	0409 613 231 kenlonie@bigpond.com
VICE PRESIDENT:	Alan Hill	07 3289 1063 alshe@bigpond.com
SECRETARY:	Mark Baldock	07 5491 5409 norest1@bigpond.com
TREASURER:	Linden Thomson	07 3139 1524 lindenthomson@optusnet.com.au
CLUB CAPTAIN:	Sheila Hill	07 3289 1063 realsheila@bigpond.com
SPARE PARTS OFFICER:	Ian Henderson	07 5448 8317 ian.wil@hendoco.com
ASSISTANT SPARE PARTS OFFICER:	Brian Jackson	0417 625 099 brianjackson@iinet.com.au
REGISTRAR:	Di Phillips	0732813807 diannephillips1@optusnet.com.au
EDITOR:	Philip Wyllie	07 5499 9826 philip.w.wyllie@gmail.com.au
WEB COORDINATOR	Linden Thomson	07 3139 1524 lindenthomson@optusnet.com.au
SHED COORDINATOR	Bill White	07 3289 4282 thewhitehouse7@bigpond.com.au

Engine Rebuild

Readers may remember the story about George, a 1949 RMB whose engine suffered a catastrophic engine failure during the Merimbula National Rally. Instead of the diesel bearings that were used with Jack Warr's bearing saddles Toyota 6D15T,16 bearings were utilised for the re-build. They are wider than the diesel bearings and so the bearing surface should provide a longer life. When the engine came home from the engineer rebuilding was delayed so that the work could be displayed during the QLD Riley Club visit to Maleny. An issue was raised by Linden Thompson who said that the bearings needed a lineal groove, this was supported by Brian Jackson so the bearings were taken back to the engineer and for a further cost the lineal cuts were made and the bearings were returned. When fitted it was found that the double set of rear bearings were grooved on the wrong sides. Not wanting to go through the return procedure again the rear bearings were filed to produce the lineal groove between the bearings.

Picture of the bearings

The next issue was the big end bolts. Previously a request had been made to Paul Baee to source more robust bolts than those available through the club. He did not disappoint. A picture of ARP Ford High performance V8 big end bolts were sent and a purchase was made over the internet to obtain a set providing sufficient for two Rileys. The big end bolt holes varied on my car so a 25/64th drill bit was run through the bolt holes making a snug fit for the Ford bolts. A spanner was then made to fit the oval heads on the bolts and when assembled the big end bolts were torqued to 45 foot pounds, that is 5 foot pounds under the packet recommendation and 10 foot pounds above the Riley bolt recommendation.

Picture of ARP bolt packet

The next issue was the middle bearing of the exhaust camshaft. When disassembling the engine that was used to replace George's engine it was found that the camshaft was seized onto the bearing and in order to get the camshaft out, the bearing was nocked forward using a

hammer and brass drift but when this failed the bearing retaining bolt was removed and using the brass drift the camshaft was knocked forward until it came out of the block. Interestingly the middle bearing came out with the camshaft. Unfortunately, the bearing was damaged around the retaining bolt hole so the bearing was flipped over, a new oil groove was milled and new oiling holes drilled into the bearing. The bearing was then replaced into its flip side position and a new retaining bolt locating hole was drilled into the bearing and the retaining bolt threaded into place.

Pictures of the bearing, milled oil groove and fitting tool.

Often times engine rebuilders who put Riley engines together don't bother with a rear seal. Originally I understand that a cork seal was used but I have never seen one. Some careful Riley people commission engineers to fit a modern American seal but I opted for a felt seal. In 1982 a 12 inch square of ¼ inch thick felt was purchased and on the few occasions that an engine rebuild has occurred a half inch section has been cut off and forced into the groove at the back of the crankshaft. This is sufficient for me, but I don't mind the occasional drip of oil on the garage floor.

Picture: Felt seal

The other minor addition to the engine was a timing mark to suit the Mitsubishi electronic distributer. This simply involved a piece of thin sheet steel cut a half an inch wide with holes drilled at either end to fit onto the centre retaining bolt and a side retaining bolt. The timing position is identified by a raised and flattened piece of the sheet steel.

Picture of timing mark.

Everything else was as per normal for building a Riley engine including rattling the engine about to shake out as much of the water gallery rubbish as could be cleaned out before the engine rebuild. Yes, the engine had been cleaned with all of the modern methods but there is always a significant amount of muck to clean out prior to starting a rebuild.

Philip Wyllie

A pictorial story of the All British day

The All British day was postponed a week due to wet weather and soggy ground. Fortunately news of the change spread quickly through the quick work of Ray Burrows and a number of Riley people made the effort to attend. It was great to see the good representation from the Riley Club. All of the photos are curtesy of Ray.

Pictured right: Pathfinders

From the left is Ray Burrow's 1954 car and Greg May's 1956 car. This may be the first time Greg's car has been seen publicly following the outstanding restoration of his '56 Pathfinder

Pictured left: Pre-and Post war Rileys

Trevor Taylor drove Chris Reynolds Drop head, Bill White was there with his RMB and Alan Hill graced the proceedings with his Riley Lynx. Readers will be aware that the story about the Lynx was in last month's TT.

Left to right:

Greg May's friend, Greg May, Ray Burrows, Trevor Taylor, Graham Mackay and Alan Hill. It looks like a lovely warm and sunny day and is that Trevor's Gazebo providing the shelter?

From Right to left:

Matthew Schnooveldt's Riley "9",

Mark Baldock's RMB

Ian Henderson's RMC

Mark McPhail's 1935 Riley "9" Special in good company

Kilcoy classic

It was a bright sunny morning. Upon arrival at Woodford Alan and Sheila were spotted standing in the main street park with Graham and Kate who have an MG. On this occasion they attended with their modern. Shortly afterwards Trevor Taylor was spotted with Chris Reynold's RMD. Then Ian Henderson arrived with his RMC and Stuart and Miriam Paton arrived with their RMB and Ken and Wendy Lonie arrived with their Sports Special. Six Rileys altogether assembled at Woodford and five drove in convoy to the Kilcoy Classic Car 'show and shine'.

Pictured at the Woodford Park are Karen, Wendy Lonie, Sheila Hill, Dorothy the dog, Doreen Wheeler and Graham Moore.

It was reported that about 40 cars were displayed at the Kilcoy Park. This was largely the result of the All British Car show being postponed till the day after the Kilcoy show and many favoured the Sunday outing at the British car exhibition.

It was a very enjoyable day for the Riley entrants, particularly because Trevor had the foresight to bring a Gazebo which provided shade for the Riley contingent. Of greater interest than many cars on show was the Lonie Sports Special and at any one time during the day there was a group of people gathered around it. The day went well and all of the Rileys returned home safely at the end of the day.

Pictured below is the cars moving off to Kilcoy led by Ian Henderson's RMC, Stuart and Miriam Paton's RMB, Trevor Taylor in Chris Reynold's RMD and Wendy and Ken Lonie in their Riley Sports Special. Yet to get off the mark is Alan and Sheila Hill in their RMB.