



TORQUETUBE

**Newsletter of Riley Motor Club Qld, Australia Inc.
November 2017**

www.rileyqld.org.au



FOLLOW THAT CAR

To the 2018 National Rally at Caloundra

7-11 May 2018

Editorial

One of things commented on in the article about rebuilding Albert's diff was the advice provided by an experienced restorer of Rileys. I appreciate that and believe it is a long held value of Riley clubs world wide; that is providing advice, a helping hand, passing on un needed parts and lending tools. The opposite is that spirit that laughs at others efforts and scoffs at new ideas and innovative improvements made to the original components.

Thank you to the contributors to this months edition of Torquetube.

In particular thank you Di Phillips for your article about Victor and also Robert and Dulce Spiers for their description of the October outing.

Below: My new collection of Riley bits



The editor appreciates receiving articles by the 21st of the Month

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October outing to Colin and Shona's homestead at Marburg



A panoramic view of Colin and Shona's property near Marburg

The day for our run to Marburg was cold and wet. As arranged, a number of us met at Di Phillips' home in Ipswich where we enjoyed a delicious morning tea and were taken down to the back shed and shown 'Victor', the single seat racing car built by her late husband Ross. Made up from the parts of several Rileys, and featuring a Pathfinder motor with a super-charger. A number of members expressed a hope that one day the car would be road registered. Dianne also raced, and showed us the Formula V that she competed in.



Above: Di's Formula V

Di's house and garden is a tourist attraction in itself and a wonderful morning was had by all. Brian and Lyn (with their friend Ann) arrived and raised the Riley flag in his RMF.

Next stop was Marburg:

We met our hosts Colin and Shona at the antique shop. We all had a great lunch at the lo-

cal pub before heading out to see his new purchase - a 1951 RMB.

Below: The local showing happy faces



A very straight car featuring its original q-plates, Colin told us he had been looking for a 2.5 litre Riley to buy for a number of months, considering one in Mackay and then one in Tasmania. Then one day his wife told him that she had seen what appeared to be a Riley for sale in the next town,, and the deal was done.



After a tour of the farm we set off to tour a nearby Victorian mansion, Woodlands of Marburg. Complete with its own grotto and graveyard, the interior of the home (totalling 5 stories from widows walk to cellar) boasted a great deal of rare Australian red cedar finishings. All in all, a very pleasant day

Dulce and Robert Spiers

Letters to the Editor

October gear box story

Many thanks for the October Torquetube, Phil.

I enjoyed the read as usual, and especially the gearbox rebuild story. The brass bushes in the gearbox? The old gearbox in the NSW spares shed was probably mine.

Many, many years ago I had it professionally rebuilt in Sydney. The company involved later went broke and closed, but that's another story.

At the time of the rebuild apparently needle rollers were unavailable, so without asking, the experts used plain bushes. I duly reinstalled it and it worked, so all was good for a while. But back then I used to rally the Riley, and putting 160 hp through it in a mountain rally caused some interesting burning smells....

Still, it was working when I took it out many years ago, and replaced it with a John Needham close ratio converted Riley gearbox. Surprisingly, the Needham box broke too a year after, causing another round of skinned knuckles...

But Needham fixed it and, touch wood, it still works. I am grateful, being over finding joy in removing Riley gearboxes that seem to get heavier each time...

Best regards,
Phil Soden

I have never seen bushes on a lay shaft before. To me the tolerances were too close and the combined binding through heat and expansion cooked the front bush and the front thrust bearing. It must have been noisy.

Editor

Strangely, my recollection of the gearbox with bushes was that it wasn't too noisy, although that is a relative statement to the amount of noise the rest of the old Riley generated. I only found out what they had done when our then spares expert, Jim Andriesse, mentioned he had received a call from the 'gearbox experts'

asking about new needle rollers and finding at the time they were unavailable. It makes us realise how well we are looked after today by our Riley Clubs.

Phil Soden

Hi, Philip,

After reading your account of gear box repair it reminded me of a class I went to about 40 years ago. The instructor said to never use grease on needle rollers in the layshaft, apparently under some conditions the grease goes solid and tends to bind, petroleum jelly is apparently the right stuff to use as it melts straight away. I don't reckon it would make much difference in Rileys as clearances would be much greater. I just thought I would mention this as a matter of interest.

Brian Jackson



Elsbeth – The Riley Falcon (page 19 last paragraph)

The press demonstrators for the Briggs bodied Falcon were registered late August/early September 1936 and Falcon III (Briggs body) was introduced for the 1937 season, which for the Riley company means late '36. The season year was different from the calendar year and I believe the reason was the motor show. If your car has a Midland Motor Bodies Falcon body that makes it a 22T car.

At the moment my Falcon is a bit hard to see but that will change, and at some point I would welcome the opportunity to view yours.

Regards
Matthew French

Welcome to our new members

Welcome to **Ian Handy** who was a member years ago and has just re-joined the club. Ian has nearly completed the restoration of his 1951 RMB. We hope to see and hear more about his car.

Welcome also to **Colin Galley** who has a number of pre and post war cars. I wonder whether his garage is near enough for us to enjoy a club run to his collection?

And welcome to **Carl Harries** who has purchased a RMA based Riley Roadster Special. We look forward to hearing more about his car as well.

Last month we welcomed **Peter Dreghorn** into the club and the editor asked him if he would write something about his newly acquired car. He writes, 'I am about to make 45 years at the same company. I started as an apprentice fitter and turner and now am a mechanical design draftsman.

My friend of over 43 years bought a 1950 RMB in 1974 and drove it with his father until the rego ran out with the aim of restoring it. Some work was done, then he got his license and that was the end of the restoration. I had admired the Riley in his shed for many years. He has now entrusted it to me as long as I restore it.

It was moved from the shed to a 40ft container for storage after the shed usage changed. Over the last couple of weeks I have visited and collected window and dash timers from his linen closet and one front and back seat from his mothers loft.

Below: Peter steering the car out of his friend's property



Last Saturday the Riley was removed from the container and brought home. Machinery was removed from the front of the container to access the Riley. Then it was removed with a back hoe as per the photos.

Peter Dreghorn

(It appears that Peter has a little work ahead of him– Editor)



November Riley Motor Club events

Tuesday morning 7th Riley Boys at Alan Hill's. Restorers activities, friendship and technical advice. BYO lunch and drinks. Tea and Coffee provided.

Thursday 9th 8 PM Monthly General Meeting of the Riley Motor Club, Samford Showgrounds.

Attendees, please consider donating something Christmassy for a Christmas Hamper to be raffled at our Christmas lunch (see page 7).

Sunday 12th October. Monthly Club Run to Wheels of the Century Automotive Show, QLD Redcliffe Showgrounds, Scarborough Road, Redcliffe.

Meet at Nudgee Service Station between 8:00 to 8:30. From there we will proceed to the Redcliffe Showgrounds. The Wheels of the Century Automotive Show is being held on Sunday 12th November 2017. Open to all historical vehicles, bikes, vintage, veteran, hot rods, vans, utes, trucks, buses, muscle, sports

and classic cars. Day features show n shine, stalls, catering on site, rock n roll band and a range of trophies on offer with 11 auto categories and Top Bike, Peoples Choice and Best Represented Club. Gates open 7.30am for exhibitors and trade stall setup. Public admission 9am - 2pm. Entry fee \$10 includes driver, trade stalls \$50 per site, general admission adults \$5 and children under 12 free. Please text or call Robert Spiers on 0434 196991 if you are coming so we can let the organisers know.

Tuesday morning 14th and 21st: Riley Boys at Alan Hill's. Restorers activities, friendship and technical advice. BYO lunch and drinks. Tea and Coffee provided.

No Breakfast run in November

Tuesday morning 28th Riley Boys at Alan Hill's. Restorers activities, friendship and technical advice. BYO lunch and drinks. Tea and Coffee provided.

Other Events During November

Sunday 5th: Fernvale Car and Bike Show, QLD 1483 Brisbane Valley Highway, Fernvale 10:00 AM - 2:00 PM. \$5 per vehicle with free public viewing. Catering on site and lots of prizes to be won. Information: call Lyn on 0409 618 858.

Sunday 5th: Rocklea Swap Meet Show n Shine, QLD at Rocklea Show Grounds, 1430 Ipswich Service Road, Rocklea. 6:00 AM - 11:30 AM.

The Rebels Car Club Inc are holding their 2nd annual Rocklea Swap Meet. Stall holder entry from 5am, sites \$10. General entry from 6am, show n shine entry \$5, lookers \$3. All car related items welcome - street machines, hot rods, drag racers, classic, vintage, veteran, tools, accessories plus trade stalls. And we mean classic not plastic. Catering and bar on site.

Presentation for top judged cars at 11am. Enquiries Barney 0431 601 798. ASRF Sanction# TC247-01-2017.

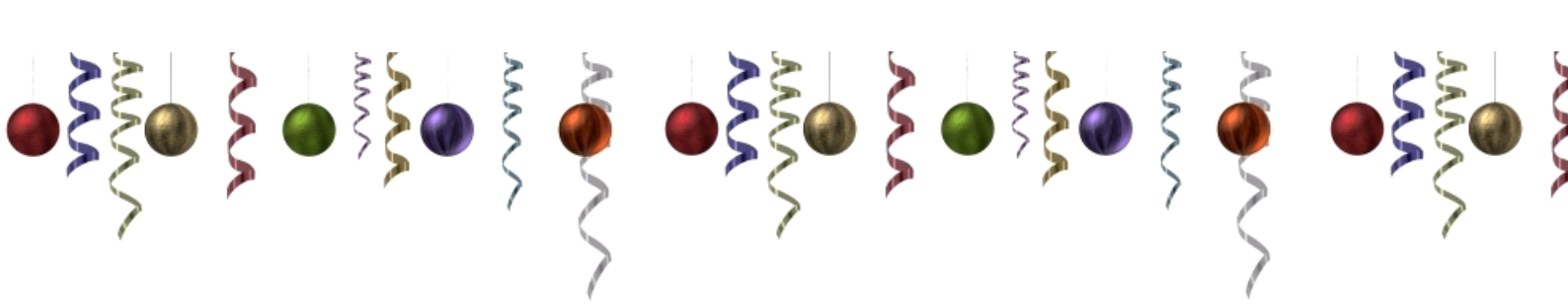
Sunday 12th: Classic and Muscle Car Club of

Ipswich Swap Meet, QLD at Northern Suburbs Leagues Club, Peligan Street, North Ipswich 6:00 AM - 2:00 PM.

Free entry to classic car display drivers. All cars on display will be entered into the President's Choice Award. Stalls entry from 5am, sites \$5. Public entry from 6am, lookers \$2, children under 12 free. Trade sites welcome. Stall holder enquiries Glenn (07) 3288 8459.

Friday 24th to Sunday 26th: Rollingstone Rocks, QLD: Rollingstone Beach Front Resort, Hencamp Creek Road, Rollingstone. 9:00 AM - 1:00 PM.

Hot rods, cool cars and bikes welcome. A weekend full of great music from local bands, food, drink and NQ'S hottest Pool party. Dress up in your best 50's and 60's gear to be in the chance to win a great prize. Show n shine and super park cruise on Saturday. Trade stalls and vendors welcome. Bookings online or ring the Office 07 4770 7277 Camping from Friday 10.30am - Sunday 4pm included in camp fees.



Riley Christmas Lunch

3th December 2017 at 12.30pm

at Queensland Riley Clubhouse

38 Showgrounds Drive, Highvale (Samford)

This year our Christmas Lunch will again be held in our Clubhouse and will be preceded by a gymkhana onsite. We are hoping for a high participation rate in the Gymkhana by Members. Should be a lot of fun and there may be a trophy for the best performance! It promises to be a wonderful day enjoyed by our Riley family and friends.

10 am start – morning tea & gymkhana, followed by lunch

Please join us for a sumptuous Christmas Lunch to celebrate another wonderful year of Rileys & camaraderie.

Cost \$20 pp + BYO drinks

Please ring Wendy Lonie 0417 857 075 re attendance prior to Monday 20th November.

R.S.V.P. necessary.

Will you still be driving your Riley in 2040?



This story title appeared on page 11 of the Oct/Nov edition of, 'The Riley Gazette' and it seemed to be an important issue to discuss a little further. It took only a few moments to google, 'ban of petrol and diesel cars' to bring up a string of articles on the subject. France will ban the production of petrol powered cars by 2040 to meet its Paris climate accord target. Volvo will end its production of vehicles powered solely by internal combustion engines by 2025, that is well within the reader's lifetime. Norway has set a target of only allowing the sales of 100% electric or hybrid cars by 2025. The Netherlands have set a cut out date for 2025, while the UK is considering a 2040 cut out date. Bloomberg has predicted that electric vehicles will make up 54% of worldwide vehicle sales by 2040 reducing the world oil consumption by 8 million barrels a day and only increasing electricity consumption by 5%. More telling about international change that is coming is that Xin Guobin, China's deputy transport minister has said that the Chinese government is already formulating a timetable to terminate the production of petroleum powered vehicles. This can only mean significant changes in the automotive industry and possibly the supply of fuel in the next few decades.

We all applaud aspirations to reduce air pollution and take seriously the claim that humans influence climate and that we can improve air quality to ensure the health of the planet and its humans. But what does this mean for those who wish to continue driving their vintage vehicles? How will it impact the production and cost of fossil fuels? Will levies, taxes and registration costs skyrocket for those who drive petrol powered vehicles? Will governments increase pressure on owners of vintage and classic cars to take them off the road? Not having a crystal ball, I don't know the answers to these questions but a few considerations are worth considering that may extend the acceptance of the road use of our Rileys.

Maybe resistance to electrically powered cars will increase into the future over concerns about recharging and 'range anxiety' with many wondering how far an electric car can travel with variations in traffic, weather conditions and terrain. Who hasn't experienced the annoyance of a telephone running out of power while using it as a sat-nav to guide us to that unfamiliar address and how would electrical devices influence travel range? What about the cost of purchase of batteries and following the degradation of battery life, replacement costs and disposal cost of dead batteries far exceeding the cost of fuel? Perhaps the world is still a long way off affordable long-life batteries that are light enough to be fitted to a motor car.

A possible alternative to petrol power is converting your Riley to gas. In the September edition of R. Memoranda, a story was told on page 5-7 about the conversion of a RMB to Liquid petroleum gas (LPG). Neil Lacopy has fitted all of the LPG equipment under the bonnet, the gas bottle takes up about the same amount of space as the Drophead hood box in the boot and the filler point is set adjacent to the rear right jacking point of the car. When starting from cold, Neil selects petrol only and turns on the ignition. Once started a switch is turned to the no fuel position and the engine picks up and runs on gas as it would on petrol. He says that the car can be started on gas but the motor has to be turned over longer than the experienced Riley enthusiast would like before it starts. The car can also be started with the crank handle on gas. Neil writes that when running on gas, the engine runs quieter, smoother and revs more freely. The engine oil begins to discolour after 900 miles instead of 300 miles on petrol. Other advantages are cleaner emissions and half the fuel price. That may be sufficient to meet the requirements of the law after 2040. And if you run out of gas or can't find a gas station before the gas is due to run out the car can be switched back to petrol while the car is running. After 45,000 miles no further adjustment to the system has been required.



From one Riley enthusiast's perspective, in democratic countries the combined influence of vintage and veteran car enthusiasts is a powerful influence on government policy not to mention the huge contribution Riley enthusiasts make to the economy by their engagement of

mechanics, painters, parts suppliers and registration fees. Their influence has permitted the collection and use of Rileys to flourish in recent years. With the hope of not offending the readers of Torquetube, a comparison can be made with the tobacco industry. Although the production of tobacco has been banned in Australia, even after decades of knowledge about the health affects of smoking, cigarettes are still being sold in this country. In another article titled, 'The Carbon Footprint of a Riley' it has been suggested that the production of a new vehicle involves tons of pollution and this applies to hybrids and electrical cars as well as petroleum powered vehicles. It has been estimated that it would take more than a million miles of driving a Riley to compare with the production of one modern car.

Another point made quite eloquently in the Gazette is that apart from the unspecified timeline of the Chinese government, no other government has provided any detail on how the change to hybrid or electrical cars can be achieved in the time frames suggested. It could be argued that the announcements of governments may simply turn out to be aspirational goals and that real change may take another 50 years.

It is also worth considering the fact that Australia is dependent on long haul diesel trucks to supply food products and just about everything else that Australians want to our shops and supermarkets. Recently it was estimated that perishable foods travel an average of 1600 KM to be delivered to your local supermarket. With such a dependence on fossil fuels and no alternative within sight it is highly unlikely that petroleum fuels will skyrocket in price or be hard to find in the foreseeable future.

So Riley enthusiasts can rest easy with the thought that magnificent motoring may be possible for a considerable period into the future. Another reality is that this Riley enthusiast will be nudging 90 years old by 2040 and perhaps the medical and transport authorities may not let him keep his licence anyway.

A reader of, 'The Gazette'

Queensland National

Rileys

In

Caloundra.

7th – 11th May 2018



Have you locked in the above dates in your 2018 calendar? and hopefully organised your other holidays around this event. The National Rileys, hosted by Queensland is definitely the event not to be missed in 2018! Any queries please contact Wendy Lonie Mob: 0417857075 or kenlonie@bigpond.com

Victor – A Riley racing special

Ross did not enjoy his public servant role as much as he enjoyed restoring Rileys and building Riley specials, particularly the racing kind. So, when he neared retirement age a conversation was raised and it was agreed that Ross would retire early and I would continue in my role as manager in a retirement home. That suited both of us as Ross became a house husband and I continued with my career. So, on any given day Ross would do the housework; cooking, cleaning and even the ironing and after that he would go down to the back shed and work on one of his projects. Ross even developed a way of managing those less pleasant housework tasks such as the ironing by cracking open a beer while pushing the iron about. And it should be said that he became quite a good cook.

Victor was built from several left-over bits and pieces from Rileys that had either been cannibalised to keep other cars on the road or had been damaged. Many of them came from the second hand spare parts kept by the Queensland Riley Club. The build began in February 2004. During the build, Ross also worked on a Kestrel, so he had a variety of tasks that made an enjoyable life style for him in his golden years. The chassis for Victor was adapted from a RMB and I am not sure where it came from. In the picture below readers can see that holes were cut into the chassis at regular intervals to lighten the car with the hope of achieving higher speeds and greater nimbleness on the race

track. Bars were welded onto the chassis to produce the shape of a racing car and to provide protection to the driver in case of mishap. These were all bent and welded by a professional. But much of the paint stripping was done by me and I also contributed to painting the welded sections and the chassis to seal and rust proof Victor's frame.



Above: Drilled chassis with roll bars

It was to be a single seated racing car and I liked the final look of the build. The one stipulation that I made was that the seat had to be fitted with runners so that it could be adjusted forwards so that I could drive it. The only problem was that even though the seat could be moved close enough to the controls for me to drive it, I couldn't see over the bonnet!

To further lighten the car holes were drilled in every part of the running gear, brake drums and frame. Doubtless this was a benefit

to the overall handling and speed of the car, but it was still quite heavy. So, Ross reported that the car was a handful to drive and after a race he was always hot and exhausted.

Below: The cockpit



The engine that was finally built for Victor came from several Pathfinders. Brian Jackson partnered with Ross in the build and together the parts were cleaned and gaps checked. The best of the second-hand pistons, con-rods, valves and cams were chosen and assembled into the block while Brian lived at Narangba. Towards the end of the build Brian and Lynn moved to Marcoola and Brian and Ian Henderson completed the engine build for Ross.

Below: Engine being installed



Ross fitted a RMB gearbox to the engine and these were mated with a Holden rear end. At the front end the kingpins were fitted upside down to lower the car and later Ken Nelson of Mini Automotive fame helped to fit a super-charger. The other major innovation was fitting a booster to the brakes to assist in slowing the car before cornering on the race track.

Below: Super charged engine installed



Dave Moss, a friend and specialist body builder manufactured the body parts. Because Ross liked the look of riveted panels Victor's body was put together with lots of big rivets. In the picture you can see the carefully spaced rivets along the various body panels. The body was carefully fixed to the chassis making a robust car. The finished car has a modified grill, painted green with a polished metal body.

Blow: finished product





Above: Di displaying Victor to those who attended the October Riley Outing

The car was finished in August 2007 and was ready for the race track. Victor was raced at Stant-horpe, Queensland Raceway at Ipswich, and Morgan Park at Warwick. To facilitate transport to the race tracks a special car



Above: Ross and Victor

Di Phillips

Differential Rebuild

Regular readers of Torquetube may recall that Albert had been parked in Coronation Drive and gone under the Brisbane flood of 1974. Some time later he was purchased by David Schoch and relocated to his back yard in Wynnum. He was then sold to Ross McOmish and transported to South Australia. After that he was acquired by me and the car returned to Queensland and was delivered to Maleny in August 2014. Just short of three years ago the differential drain plug was removed from Albert. At the time a comment was made that what came out of the diff was Brisbane River water and that it was probably the only time that flood water from Queensland had gone down to South Australia and then returned to Queensland. Although, I didn't taste the water, it was free of any oil contamination.

Following removal from the chassis, the diff was set aside for some time as the body was

rebuilt. Another diff was then fitted into the restored chassis to enable easy moving of the car as it was being built. During that time Ken Lonie asked if he could borrow a diff to see how the Riley diff was assembled. After a while Albert's diff came back in its component pieces. That was probably an advantage to me but now the time had come for me to see how the Riley diff was assembled as well and to learn how to fit new bearings to the torquetube, pinion and crown and re-assemble the whole thing as a working component of the car.



First, the torque tube with diff housing was bolted down onto the mounting posts that had earlier been made for this task. This may not have been an essential first step but I didn't want the patient to roll around while surgery was being performed.



Above: Diff rebuild cradle

After looking at the workshop manual it was decided to make the tool for fitting the pinion into place. A galvanized pipe of approximately the same diameter was mounted on the mill and cut to fit into the pinion housing crown (25), then a plate was welded onto the end of the tube and an 8 inch rod welded into the centre of the plate. Another plate was drilled to take the diff bearing cap bolts (37) with a hole drilled through its centre to take the tool shaft and a 'T' piece was welded to its end to screw the pinion housing (25) into place. Four spacers of 1 1/2 inches in length were cut to fit onto the diff bearing cap bolts to hold the plate in position.



Above: Diff with pinion extractor

While in NSW earlier this year to return RMD parts that I had borrowed, Neil Patrick kindly gave me a diff that he had decided to discard. My bride, Doreen has harshly described me as a hoarder recently but readers of Torquetube know that these valuable Riley components are becoming increasingly rare and at least three other Riley enthusiasts have benefited from the hoard (stock pile) under my house. The wheels, brake drums, half shafts and torque tube stays were removed, then Albert's original diff housing taken off and Neil's torque tube with its diff was bolted onto the mounting posts. In the first instance, the propeller shaft (56) with its trunion bearing fell out of the torque tube. The front spring ring was levered off the shaft and the trunion bearing removed. The shaft was then cleaned and set aside with its spring rings.

Then the diff bearing cap bolts and bearing housings were marked for replacement and removed and then the diff with the bearing caps were placed on the bench (Fig H 7), the locking set screw (102) was removed and my new tool was used to screw the pinion with its pinion housing out of the diff. This was then placed on the bench for cleaning.



Above: Pinion on the bench and above and below the numbers represent the part numbers in the workshop manual

Disassembly was not too difficult except for the thrust bearing base. The pinion (2) was removed from its base (25) and the bearing (19) pushed off using a shop press. Using a C spanner the outer lock ring (22) was removed, the tab washer taken off and the lock ring (21) was removed. The outer base for the thrust bearing and race was then set aside and

the thrust bearing base was matched up with a ½ inch drive socket that fitted through the bearing base. This was placed in the shop press and my first attempt to press it out failed because the bearing base wanted to move unevenly with one side pressing into the housing. This was carefully pushed back into the housing and a second and third and fourth attempt to press the bearing base out evenly was carried out without success. Finally, it was decided to press the bearing base out a 16th of an inch at a time and to support the side that wanted to come out first with a series of small spacers under the bearing base so that the bearing base was pushed out evenly. Using this method, the bearing base was 'inched' out until it was within a ¼ inch from the end of the bearing cavity and then it exploded into fragments. Oh well, I wasn't going to use it again anyway. The pinion housing was then cleaned up, lubricated and the new thrust bearing base was very, very carefully pressed into place and the rest of the assembly was carried out without any further excitement. With the pinion assembled the muff coupling (40) was pushed on and locked into place with the grub screw (41) and spring ring (42). The propeller shaft was then put into the torque tube, pressed into the muff and using my new tool the pinion was replaced into the torque tube. The grub screw was then screwed into its place to hold it in place.

Below: Shop press working on the thrust bearing base and exploded thrust bearing base.



Attention was then focused on the crown wheel. Like everything in the world of Rileys a tool or something has to be made to execute an operation and in this case an angle iron frame was made to hold the crown wheel in the shop press while the bearings were removed. My first attempt to shift the bearings using the shop press failed because the steel under the bearings bent. With that a trip was made to Trevor Jakeman's workshop to purchase some heavier steel. He sold me some Grade 400 Biceroy. I had never even heard of this steel alloy previously but Trevor assured me that it would not bend. It didn't. Armed with this material and with the use of a bearing separator the bearings were easily separated and the bearings removed from their housings.



Above: holding frame, separator and bisero

The new bearings were then pressed into the housings and then pressed onto the crown wheel and the crown wheel was fitted back into its place inside the diff housing. At this stage the fingers on either side of the crown housing were removed and the fingers straightened.



Above: The pinion reassembled with the muff coupling

The crown wheel was then reassembled into the diff housing and the saddles replaced into their original positions. Then the bolts were loosely threaded through the saddles and into the diff housing so that they held the diff in place. A measurement was then made between the crown and the pinion teeth. The gap was too wide so the saddles were removed and the crown wheel was moved closer to the pinion by one thread on the crown wheel housing. The gap was still too wide so the procedure was repeated until the crown wheel teeth closed in to the pinion teeth to something like 4 thou. The clamping bolts were then tightened and the space between the pinion and crown teeth was again checked and at one point 4.5 thou was achieved. Measurements were made at regular intervals between the teeth of the crown and pinion as the crown wheel was turned and a range of gaps between 4.5 and 11 thou were discovered. All of the measurements were recorded using a texta pen on the crown wheel. The clamping bolts and the saddles were again loosened and the crown wheel was wound to the right in the threaded housing for the distance of one space between the locking fingers. This procedure was done on both sides of the crown wheel so that the bearings remained at their original distance from each other. This done the clamping bolts were again wound in and tightened to 60 ft pounds. The backlash gaps between the teeth of the pinion and the crown wheel were again checked and

the range of gaps around the crown wheel ranged from 4 thou to 6 thou. To me that was an outstanding outcome.

Below: crown wheel fitted



The locking fingers were then refitted to both sides of the saddles and the fingers pressed into the locking teeth.

Another comment worth making at this point is that prior to and during the fitting of the crown wheel an expert in all things Riley was telephoned and the process confirmed and the steps taken checked so that the desired outcome was achieved. The fact is that there are some Riley people whose engineering and mechanical experience is quite deep. This makes them worth their weight in gold. With such people available to provide advice it is possible for quite untrained people like me to do the work ourselves making the maintenance and driving of Rileys a real pleasure.

The rest of the process was simple. A gasket was made for the banjo and it was fitted to the diff housing and then the diff which had grown considerably in weight was released from the holding brackets and carefully lifted down to the floor. Albert was then jacked up and the diff that had been fitted during Albert's rebuilding was detached from the trunnion housing, the leaf springs and shock absorbers detached from the chassis and the brake rod released from the central connecting point and the whole thing rolled out on its road wheels. Now, anyone who has visited my garage knows that the driveway is quite steep and a runaway diff could easily be achieved so the diff was lowered onto a trolley and a rope was tied to it and

Below: The workshop at the bottom of the garage ramp

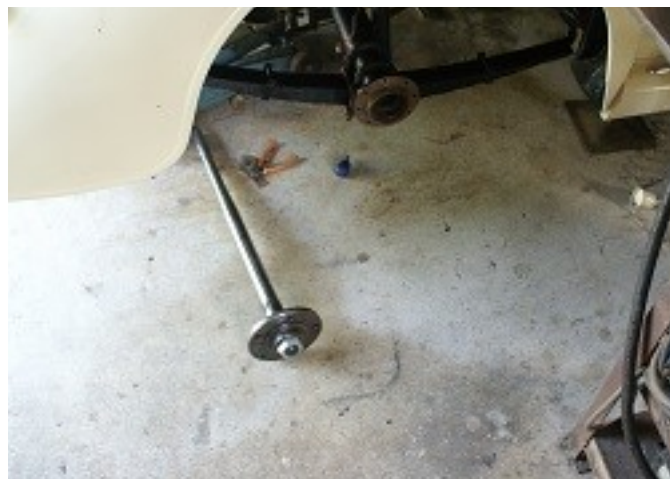


After that, the brake drums and backing plates and brake rods were removed and the new diff was reassembled with stays, leaf springs and brake rod. The rebuilt diff was then fitted into Albert. After that the brake backing plate and shoes and brake rods were taken off and the half shafts, bearings and seals pressed off. Next day, the new seals and bearings were pressed into place and the nuts were tightened using the tube spanner.

Top right: The tube spanner was made from some galvanized pipe and worked well



The then new half shafts were bolted into the diff. The diff was then filled with oil and the road wheels were refitted. Albert now has a rebuilt engine, gearbox and diff so I am hoping for years of trouble free magnificent motoring.



Philip Wyllie

Air cleaner adaption

Maybe this might be an obvious conversion to many but there may be a few Riley tinkerers who would appreciate a few tips about converting the original Riley air cleaner to a modern paper filter. There is a very important reason for doing this as the English environment is not as dusty as the Australian environment and I have seen the outcomes when Rileys have been driven on original air cleaners with infrequent or no maintenance or no air cleaner at all. The farmers in Queensland call it *engine dusting*; it is when dusty air is sucked into farm vehicle engines and the pistons are scored and eventually seize. So recently, when doing the final bits to restoring Al-

bert, an air cleaner was thrown into a molasses bath for a month, washed in water and simple surgery performed to make the air cleaner perform it's function in keeping dust out of Albert's engine.

Below: Albert's air cleaner



First the fins were cut through using an angle grinder with a thin cut off blade adjacent to the wire gauze. The metal is pressed over a ridge just adjacent and this was carefully cut through using a thin cut off blade and peeled off the air cleaner. The cap on the end of the cleaner and the middle tube was then extracted and the interior cleaned out of residue molasses. The centres of the two ends of the air cleaner were drilled with a 3/8 drill bit and a threaded rod passed through the cleaner.

Below: End cut off and components laid out



Last the end cap that had been removed with the wire gauze was cleaned up and the felt pad and gauze thrown away. In its place a narrow filter was fitted and nuts threaded onto the

ends of the rod were screwed on to hold the paper filter in place.



Above and below: End product.



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For Sale

RMB 2 1/2 Litre Engine.

This was removed from a running vehicle to be replaced by a Pathfinder motor. I purchased it for a back-up motor for an RMC. It is running well and now this motor is surplus to our needs. It is a full motor and an ideal starting point for a restoration.

I would like to sell it to a club member before advertising it on the open market.

\$450

Bill Short

williamshort@iprimus.com.au

07 38867236

For Sale Continued

1951 Riley RMA in outstanding condition



I have owned the car since 1965, being the third owner, the first owner being the Riley dealer's wife. Reluctantly selling as little use when living on a small island.

I renewed any aged woodwork, put in new hood lining, leather upholstery and vinyl roof and re-painted in the late 1970s. Added an electric fuel pump in 2000s.

Excellent condition, genuine 176,000 miles. On 'club' plates. Numerous spare parts. \$19,500 neg.

Call Alan Early 07 4309 5448 / 0407 139 338.



Graham MacKay's Riley Drophead

After all these years, it has come to the time to part with my 2.5 Riley Drop-head. Make an offer.



Phone Graham MacKay on 0412 071 903

Taroom 1950 RMB.

This car appears to have been fully rebuilt a few years ago with some items yet to be completed. The majority of the woodwork has been replaced and the roof timber is still original but in good condition. The interior roof lining needs to be installed and is with the car including bows. The front seats have been recovered at some time. The rear seat is original and in a visually tired



With the exception of the tyres, this car seems to be roadworthy and could be purchased as a running res-

condition.

The interior requires finishing, including carpets and a general tidy up. A section of the boot floor is missing and the spare is visible upon opening the boot lid.



The exterior paint is just satisfactory, but serviceable and the hood is in basically sound condition but requires a good clean as it has been coated with some sort of lacquer in the past which could be removed.

The engine starts easily and sounds good and apparently it has been rebuilt, including a new exhaust. clutch, gearbox and differential seem good and there are no oil leaks evident. Apparently the wheel cylinders have been sleeved and the master cylinder rebuilt and linings replaced. The brakes work as well as they ever have.

toration to be completed over time with no real urgency. It could best be described as untidy, with a lot of potential, as most of the major restoration work has been completed.

The owner has valued this car realistically at \$12,000 and would accept an offer in this vicinity.

Please contact either Mark Baldock 07 5491 5409 or Ken Lonie 0409 613 231 for further information or to pursue the sale, both of whom have been liaising with the owner".