Riley Restorer

A magazine for Riley restoration enthusiasts in Australasia Inc **March 2025** **www.riley-restorer.com**

Editorial

My explanation for such a late March edition of the Riley Restorer magazine is finishing the restoration of Humphry, an RMB and then deserting my post to attend the National Rally.

The next magazine will be published this month with some pictures and stories about Rileys failing to proceed, repairs to Rileys on roadsides and some exciting adventures in a Riley 9. Edward, the Riley 9 made it all the way to Busselton, participated in the events and came all the way home without misadventure apart from the loss of a tail light lens.

In this edition spark plugs for your 12/4 by Matthew French, 'Bessie'—the Ultra 9 four seat tourer by Mel Carey, traps for would be restorers, SV gearbox mods, blowing up RM top radiator hoses and maybe the last story about Humphry.

Next edition contains stories Riley restoration stories from the end of the planet. Information:

www.riley-restorer.com

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

position	Name	Email	Telephone
President	Matthew French	mgwfrench@ bigpond.com	0418 373 104
Treasurer	Matthew French	mgwfrench@ bigpond.com	0488 500 821
Secretary	Philip Wyllie	philip.w.wyllie @gmail.com	0477 386 880
Web coordinator	Marshall Holmes	marshall.holmes @outlook.com.au	0477 377 109

Spare parts

Our new spare parts may be purchased by contacting the secretary who will do his best to dispatch them on the same day . Ask about our second hand parts and there are also exchange parts available

Contents

Spark plugs for 12/4s and RMAs by Matthew French

Above: The electrode in this ½" reach plug is clearly in the thread well. This is less than ideal for flame propagation.

I am convinced that the information published about the correct sparkplugs for the 12/4 and RMA/E engines is incorrect. It continues to be a mystery why the information has not been corrected. The heads are quite clearly designed and manufactured for ¾" reach plugs, not ½".

Above: Another view of the ½inch plug. You can see that the distance the spark must travel to ignite the fuel is excessive

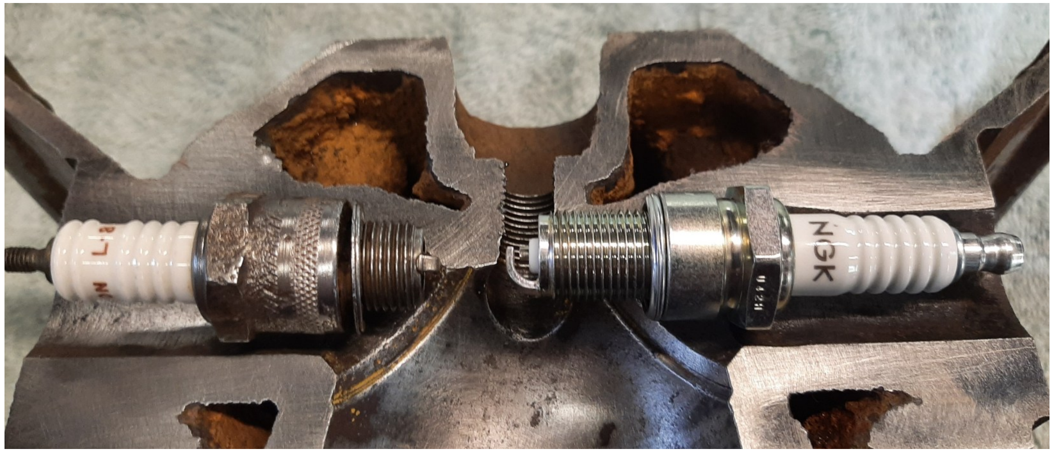
Adjacent: The ¾ inch plug showing that the electrode does not extend into the combustion chamber to foul with the piston.

The ¾" plugs with protruding electrode are out in the combustion chamber for better flame front facilitation.

Personally, I use NGK BP6ES in everything Riley Nine, 12/4 and RMs and have done so for thousands of miles with no issues.

Matthew

(*Paul Baee uses longer than recommended spark plugs in his Silver streak for the same reason—What do you think about this view? Editor*)



Humphrys not quite final adjustments

The body was straight on the chassis and slightly back (1/4 inch) from the fixed points of the radiator and front mudguards. Slight movement of the body always seems to be the case because of packing adjustments and in this case my imperfect repairs to major components such as the tub. The body fixing bolts were released and the body was lifted. On this occasion a pair of car stands were situated either side of the 'A' pillar body mount and a flat steel bar was placed under the mount and supported on the stands. The same procedure was repeated on either side of the Riley. The 'B' pillars were supported by placing timber blocks under the sills and raising the body just sufficiently for the packing to be released. The tub was supported with a trolly jack. When the body was just above the chassis, the chassis was pushed back the required distance and the body lowered by reversing the raising procedure and setting the body on the same packing material on each mounting point. The doors opened and closed without binding, the mudguards were trial fitted, the bonnet centre fitted up to the grill and the bonnet side pieces fitted up to the grill and the rear bolt holes for the bonnet side pieces fitted over the drillings on the quarter panels.

When the mudguards were fitted and it was found that the passenger side mudguard bracket (the bracket fixed to the mudguard) was a 1/4 inch too high inside the guard itself. Packing under the bracket solved the issue and the guards were set on the stay - wing brackets (K.7.1)and found to be the same height. The rear part of the mudguards were screwed up into the quarter panels.

Below: a flush fitting mudguard

This necessitated drilling new holes as the original steel had rusted away and the area replaced with new steel. The running boards fitted squarely.

The grill and bonnet centrepiece were refitted. Some while ago a new valance (registration plate backing) was fabricated and this fitted squarely and at the correct distances on the nose piece from the front to the guards.

Below: The valance

The valance had no fixing holes so new holes were drilled for the fixings.

Above: The bonnet centre piece with the piping not quite fitted correctly yet.

The piping was fitted and where necessary the ends were hidden behind panels.

The bonnet brackets and hinges were removed for painting. Two of the hinges were bent through many years of use and these were straightened. Quartz halogen light

The bonnet brackets and hinges were removed for painting. Two of the hinges were bent through many years of use and these were straightened.

Above top picture: From the factory the bonnet centre was not folded correctly.

Middle picture: Notice the skewed hinge bracket

Bottom picture: Opposite side shows that the spot welder didn't fit the hinge in its correct position.

There is more detail on the next page for those who are considering how to align ill fitting bonnets

The ill fitting brackets has to be worked out by the restorer. Insights can be received from Mathew French whose contact details are at the front of this magazine.

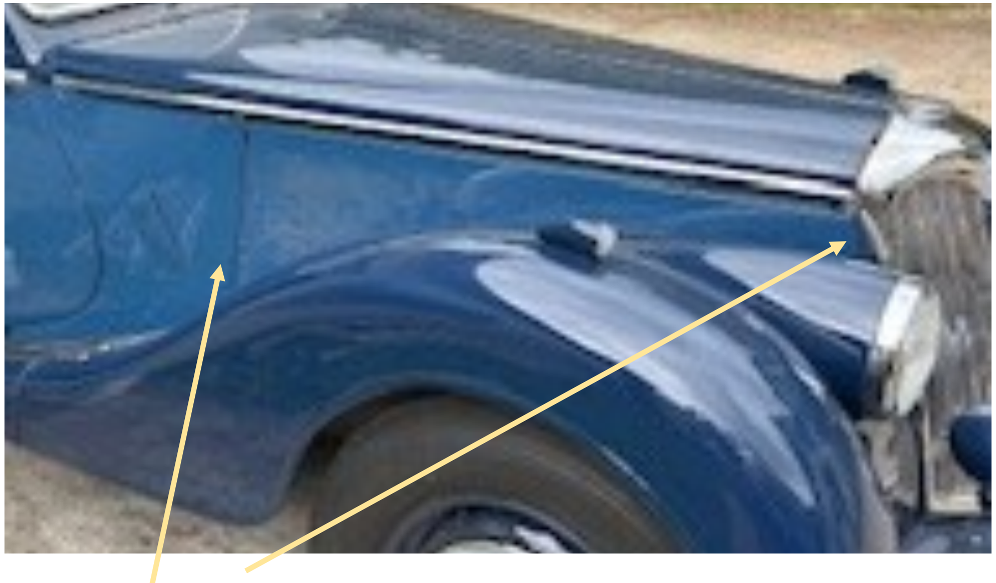
The side lights pods were fitted with new tell tales on their rubber pads. The headlamp pods were fitted with the beading. Quartz halogen light globes and reflectors were purchased. Humphry is an early Riley (1949) and the headlamps had no inner weather guard protection. Instead, there was simply the outside base with the headlamp adjusting bolts and springs. Later Rileys have dimples in the guards that allowed an inner protective pod to be fitted. Pods were secured from the second-hand parts container, modified to suit the guards, painted and fitted.

The brackets for the bumperettes were bent perhaps as a result of touch parking by someone other than his custodian and these were straightened using a shop press. When this was done, the bumperettes and over riders fitted neatly and they sat squarely in front of the valance (see the picture on the previous page). The driving lights have a different thread on their fixing stud and this was cleaned with a wire wheel and the thread smeared with valve grinding paste. The nut was run up and down on the thread until the fixing nut ran freely on the stud. The driving light washers and brackets were painted in the dark blue of the guards.

The chrome strips were fitted into position on the running boards with fixing bolts with rectangular bases that fit into the chrome sides of the chrome strips. These were painted to protect them from corrosion. The hub caps were cleaned and painted in the dark blue of the body. Mushroom headed screws were used to fix the running boards to the sills.

The interesting part came next. The bonnet hinges and brackets had been twisted with use. On close examination it appeared that the factory worker who spot welded the brackets located them at a slight angle to the one opposite to it and the two opposite brackets were not parallel. That accounted for the twisting of the hinges and hinge brackets. Every time a bonnet side was opened it created stress on the brackets and hinges. Great care was taken by Matthew to straighten the brackets so they were horizontal and parallel with the one opposite to it. The hinges were laid over the template on page S.22.2 of the workshop manual section S and bent to the shape of the pictured hinge. The bonnet sides were fitted in their positions and then adjusted to their best fit up to the windscreen surround and the radiator grill.

Interestingly the side pieces for the bonnet lined up with the original factory drillings on the quarter panels and the driver's side panel front fixing point lined up almost perfectly with the drilling in the radiator side piece. The passenger



Above: The bonnet side pieces fitted almost exactly in place as they were fitted in the factory

side panel lined up over the drillings on the quarter panel and was about ¼ inch further out but adjacent to the drilling in the radiator side piece.

The bonnet chrome strips fitted perfectly but unfortunately the folded connections between the rear bonnet catches and the front catches could not be found. I clearly remember painting them but up to this moment they are still missing. Others were found, in fact sets were found and guess what? They were all different lengths.

One of these sets that appeared to be the correct length were painted and fitted. The hooks were not found either and others painted and fitted in their place. After a workshop clean up during the following weekend the original folded connections were found. Two of the bonnet 'U' bolts were slightly short and when the nuts were turned on the threads they broke. Bolts of the same size were trimmed and welded to the 'U' bolt base, painted and fitted. The bonnets fitted quite well.

.It was a different story with the rubber boots for the pedals. The 1949 RMB has fingers and bolt opening in the floor panel. There is only one boot bracket and that fits on top of the rubber boots. A hole punch was used to make the openings for the bolts. The boots were even on the bracket. The assembly was fitted into the floor but the top of the boots did not want to fit over the top of the pedal arm. One of the gaiters tore getting it on. With great difficulty spring washers and nuts were fitted to the bolts under the floor. It was difficult because the master cylinder, the high pressure hose and the clutch rods prevented fingers and spanners reaching the threaded ends of the bolts. Ratchet extensions and sockets were almost impossible to line up so the fitting of the boots took some time. What was the result of all this effort? The boots prevented the clutch pedal from being pushed far enough forward to free the clutch plate.

After releasing the nuts and taking the assembly out of the Riley another set of boots were fitted further forward. They were fitted as far forward as they could be fitted on the bracket and the fixing procedure was repeated again. This time Matthew was asked to operate the clutch pedal and engage first gear. He reported that it was very difficult and excessive pressure was required to push the pedal forward against the rubber gaiter to engage a gear without crunching gears. The assembly was removed and both sets of boots found a new home in the workshop bin. This time the bolts were fitted from under the floor. Nuts were used to fix them in position. A flat rubber sheet was cut with two slits; one for the brake pedal and the other for the clutch pedal. Holes were punched into the rubber and the brackets were fitted over the bolts and it was fixed using further nuts. The rubber pads that fitted onto the pedal discs were too tight. When they were purchased, Max Robe (VRMC) suggested that if they were turned inside out, fitted onto the pedal disk, the rubber sides of the pad would fold over the disks and they would fit tightly and so they did.

By the third fitting they went on easily. Thank you Max.

Bessie" Peter & Beryl Larcombes Riley 9 Roadster

"Bessie" is a 1933 Downing bodied "ULTRA 9" four seat tourer. These bodies were built by Jack Downing in Queensland, apparently copied from the original factory prototype (and that's another story!).

Peter and Beryls car was purchased in 2011 in a completely dismantled state from Colin Dennis in December 2011

The restoration has been completed to a very high standard as is the norm for this talented pair, and as the pictures show the car as purchased had been dismantled and the parts had been dismantled as well!

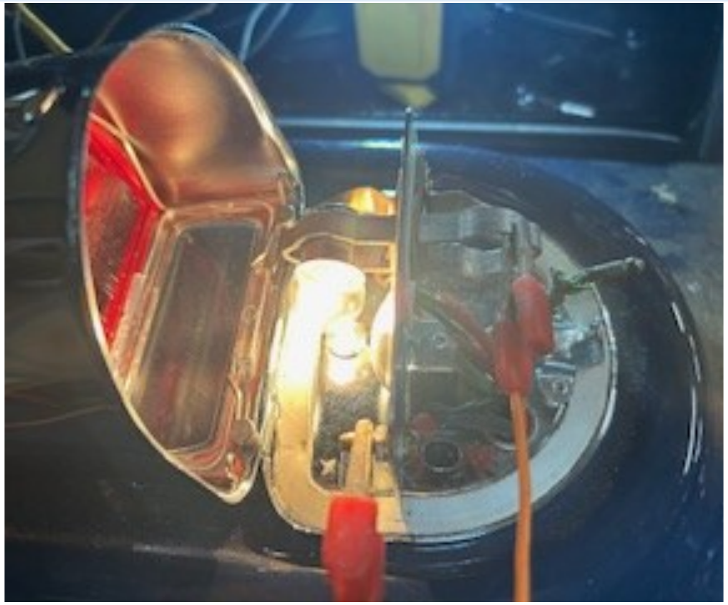
Peter relates some anecdotal stories as part of Bessie's history. 'It was November 2011 that we left our home in Bairnsdale at 5.30am with trailer attached to pick up Bessie near Warrnambool. The car was in a completely dismantled state so required pieces to be tied together before proceeding. Several stops were made on the journey home to check all was still secure, the last check was at Stratford before the last leg of the journey home.

To our horror on arrival at 12.30am we realised that the rear body section was missing! I jumped into the Prius feeling anxious that the panel would be smashed by passing traffic. I drove all the way back to Stratford but there was no sign of the missing panel. Then on the return journey to home I drove slowly and saw a glimmer of red in a paddock. I heaved a sigh of relief that the side painted red was facing the road and the lights of the Prius picked up the colour. The other side of the panel was black so it would not have been visible from the road in the dark.

In June 2012 I received a parcel from Robyn Reynolds, the wife of Darcy who purchased Bessie in 1980. Darcy and his son had totally dismantled the car and sold it in that state. In this parcel were the instruments and a booklet of photographs taken on the day of purchase in 1980. Robyn had cleaned out Darcy's desk after he passed away and was anxious to pass the parts on to the new owner so she contacted the Club.

I was so thrilled to receive the original instruments. Later in 2012 Beryl and I were in Sydney so we visited Robyn to show our appreciation. She told me to go down to the shed to see if there was anything else belonging to the car. I found the windscreen wiper motor and the horn! How lucky I was and what a wonderful person Robyn is to realise these were precious to Bessie's restoration. Just goes to show you that there are still wonderful people around'.

Double isolating 'D' light earth and live wires.



Above: The An earth wire has been introduced to the divider between the stop and tail light

This little article is written to alert restorers that remedial action may be required on some imported components and unfortunately it is the first of a series of articles about imported components for RMs that may save you from some head scratching.

New 'D' lights purchased from England were fitted with very loose hinge pins that were willing to fall out. That was not a big deal. The bottom section received a dob of glue and the pin was pushed into place. Later the wiring was fitted. There was no fitting for an earth so a hole was drilled in the plate that shields the tail light from the brake light. An electrical fitting was soldered to an earth wire and it was bolted to the shield. It was another easy fix. But later when the circuit was tested neither the tail nor the brake light worked. The wires were checked for conductivity and there was power to the taillight. All the power wires were checked for conductivity and all the earth wires were checked to ensure they were connected to the earth wire from the control box. It was then realised that both the live connections and the earth connections were double isolated from the body of the 'D' light as well as the globe fittings by a brown plastic and a white gauze material. I conjecture that the manufacture of the 'D' lights was outsourced from England and those who assembled them had no idea about the purpose of the isolating material so both the live wire fittings and the earth wire fittings were double isolated from the globes. The easiest solution was to drill holes into the earth fitting, make a BA thread in them and fit a BA bolt to connect the fittings to the earth fitting with another earth wire.   Both the taillight and the brake light then worked.

On a previous occasion the hinges for the driver's side windscreen were found to be not fit for purpose. The leaf that fitted to the windscreen was too long. It was cut to shorten it. The hinge was fitted back to front so the pin was removed and the hinge was fitted the other way around. This meant that the openings for the screws were now rebated on the wrong side but they worked.

The fitting for the winding mechanism on the driver's side windscreen was milled on the wrong side. Unfortunately nothing could be done about it so it was set aside and a second hand original was sourced from my pile of windscreen spare parts.

Other issues were found with new parts sourced from overseas but I think what is written is sufficient to alert readers to the thought that they may need to do further work on new parts sourced from overseas.

Below: The earth wires was then extended to the glob hold-

Several gutters have been fitted over past years. During the 1980s the aluminium was annealed with heat from an LPG torch. Current gutters offered through NSW spares have not required annealing as the metal has been soft. Screws rather than nails have been preferred. The drillings have been countersunk and the screws fitted to avoid lumps when the top leaf was bent over the base of the extrusion. Brass or stainless-steel screws have been preferred over zinc plated steel. A few years ago a counter sink with a drill bit fixed into it with a grub screw has been used. The counter sink head was reduced in a lathe to suit the size of the opening in the extrusion and the head of the screw. Currently brass countersunk 4 gauge 5/8th blade driven screws are being used. Stainless steel countersunk 3 gauge ¾ inch Phillips head are a possibility and these are readily available from stores that sell fixings for wooden boats. The screw depth drilling and counter sinking is done one at a time except for the first two drillings that were made an inch and three inches from the centre of the windscreen. When fitted with screws they gave a starting point to bending the extrusion around the edge of the vinyl roof. Other tools used were surgical scapple blades to trim the edge of the vinyl, sharp trimmer's scissors to cut away excess underfelt and two homemade tools, one for bending the extrusion up and down and the other to turn the extrusion so it fits flat against the vinyl.

Below: The counter sink tool with drill and screws

After making the first two drillings my bride held the extrusion in place while the drill was used to make the holes through the vinyl into the top windscreen timber. The screws were fitted and my bride retired from the garage to her gardening activities.

The extrusion was bent by hand along the edge of the passenger side windscreen rubber. Drillings were made at the centre and at the beginning of the corner, counter sunk and 4g brass screws were used to fix the extrusion to the edge of the vinyl. At the front passenger side corner, the extrusion needed to be compressed at the top, stretched at the bottom and flat against the curve of the vinyl. This was attempted by bending the aluminium partly around the corner and bending it flat against the vinyl. The bending has the effect of closing the top leaf of the gutter and this was countered by passing a piece of timber between the top and bottom parts of the extrusion forwards and backwards until the bottom part that forms the gutter takes its correct shape. The extrusion was then bent further around the corner. This had the effect of raising the top of the extrusion away from the vinyl. The tool for flattening the aluminium against the vinyl and bending it was alternated several times until the aluminium followed the shape of the vinyl around its edge. It was a matter of careful mini adjustments until the correct shape was acquired. Drillings and countersinking them was made in three places around the curve. It is a tedious process that takes a lot of time but with care and patience imperfections can be kept to a minimum.

Above the doors much quicker progress was made and drillings with countersinks were made every 4 inches. If the drillings coincided with the metal tabs of the body, the aluminium extrusion was opened a bit wider and a drill of the same diameter as the screw was used to drill through the tab. Even then, two of the screws broke just below the head, one could be removed with needle nosed pliers but the other needed to be filed down to the level of the extrusion. The screwdriver slot in three other screws was destroyed and these were removed, discarded and replaced with new ones. About 80 screws were used altogether.

At the tub the extrusion was bent along the curve of the vinyl until the gutter reached the lowest point of the vinyl roof covering and was midway along the horizontal part. An old towel was used to protect the paint and the end of the extrusion was cut off, the end cleaned up and the extrusion drilled, the drillings countersunk and screws employed to fix the gutter into position. The extrusion that was fitted under the rear window was fitted in the same way. It was started with a predrilled openings for screws 1 inch and three inch from the end of the extrusion. The aluminium was then drilled, countersunk, and fixed from the drivers side and on the passenger side it was cut to match the end of the gutter that ran along the passenger side of the Riley.

The top leaf was turned down very gradually starting from the front of the Riley using a soft timber wedge that was concave at the business end. Two days was required to fit all three pieces of gutter into position, another day to turn the top leaf down and another day to seal the gutter against the vinyl and a day to mask the entire body and paint the aluminium extrusion.

A sealing paint was used first and then the darker blue of the body using a touch up pot that has a narrow spray. The gutters received two coats of top colour.

Above: An earlier version of the SV gearbox is on the left. The reverse gear is not interchangeable between the two boxes. The box on the right has an extended section for the reverse gear to fit into when not in use.

The truth that each Riley and each component of a Riley is bespoke becomes more and more evident as you go back into the history of manufacturing the parts to build Rileys. Each Riley SV gearbox was machined and assembled by hand. There are differences not only between models but also between components of the same model. The Outside Diameter (OD) of the layshaft is different from one box to another. The same is true of the gear shaft. The OD of particular gears can be different. One Riley enthusiast said to me that the sizing's depended on the day of the week. Monday's product was often different from Friday's product. And then there were differences between the product of one machinist to another machinist. The parts were made and assembled into cases and each one was slightly different from another box so the parts are not readily interchangeable. This makes the restoration of early Rileys even more challenging than later Rileys such as RMs.

In the case of George, the SV in my garage his gearbox was disassembled and it was found that it was an earlier gearbox and various shafts and gears fitted into it were for a later gearbox. The components in the gearbox case were a mixture of Mark 1 and Mark 2 parts. The bearing ODs were smaller than their openings. I had purchased a new set of close ratio gears. They were not correct for the casing. These were returned to the manufacturer and they were modified to suit the case but they did not fit and the bush in the reverse gear seemed not fit for purpose. It appeared to be parts from a different application.

When all the parts were returned to me the second time the the parts were not assembled into the box. I took them anyway. At home an attempt was made to trial fit the reverse gear. To do that, the bush was removed from the gear and another complete bush was machined and fitted. The gear was fitted onto its shaft but the gear did not fit into its cavity in the casing. The OD of the gear was only a few thou bigger than the recess that it was intended to fit into.. After some thought, it was decided to make a shaft with a lathe bit holder to open the cavity for the gear to fit. The size difference was very small, perhaps 2 thou of an inch.

Below: The gear fitted against the cavity that it ought to have fitted into

The original shaft was used as a template for making the cutting tool. The total length of the shaft made is 7 inches long. The end that fits into the housing in the middle of the box is a half inch in diameter and the cut made was 2 ½ inches long. This was to allow the shaft to be moved in and out of the opening in the box and the centre housing to cut the cavity for the reverse gear to recess into it. The drilling for the lathe bit was 15/16ths of an inch from the shoulder of the shaft. The remainder of the shaft was 4 ½ inches long and the diameter was 21/32nds of an inch. The drilling for the lathe bit was at 30 degrees through the shaft and another drilling was made and threaded to fit a grub screw. This was used to secure the lathe bit in its position. At the end a drilling was made through the shaft was for a bolt. A steel tube was made to fit over it and another short shaft was cut to fit into the other end of the tube. Both ends of the tube were drilled to receive a bolt. It made a makeshift universal joint so a drill could be used to machine the box. A full day was required to make the

Above: The shaft that was made to receive the lathe bit.

Shaft, drill shaft for the lathe bit and to cut the thread for the grub screw, make tube fitting and the short shaft that fitted into the drill.

Below: The shaft and lathe bit in position in the gearbox

When the gearbox casing was secured, the lathe bit was fitted into the shaft, the grub screw tightened, the universal joint fitted and the drill fitted onto the end of the drive shaft, it took four very shallow cuts and perhaps 15 minutes to open the recess for the reverse gear to fit into it.

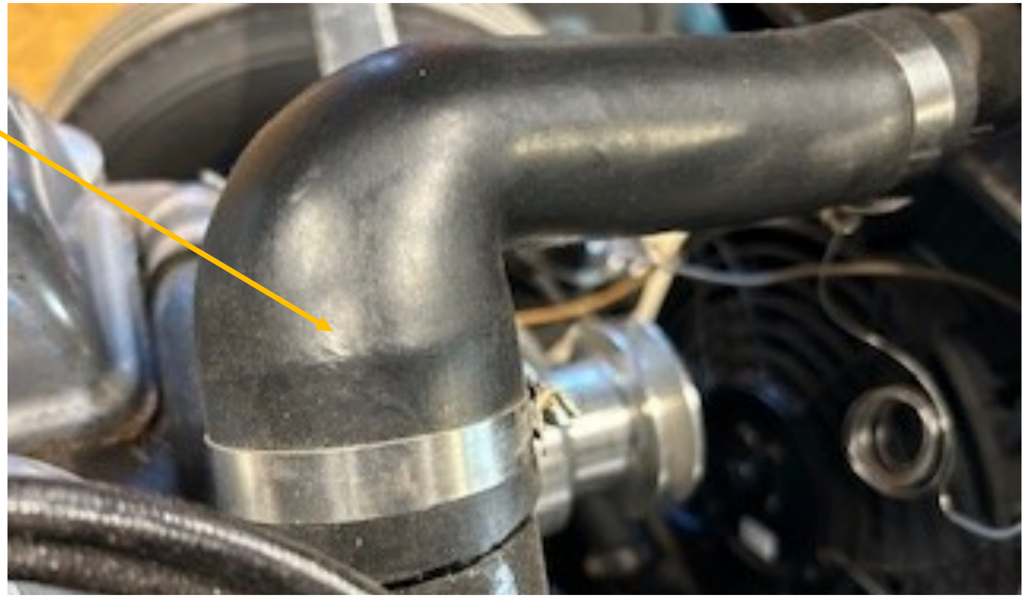
Above: The reverse gear sitting neatly in position in the gearbox recess and below the cut inside the reverse gear recess.

The clean up took another hour and then the box was ready to be assembled with the gears and shafts. From the time that the original box was taken to those who made the gears it took three years to get to this point. A mammoth event just to build one component of the SV.

Recently Bruce Dobney (Post war spare parts officer for the VRMC) sent a pair of newly made top radiator hoses and asked me for my opinion about their quality. I am not an engineer. Lots of people know more than me about all sorts of Riley things but I do like writing so my opinion is available for readers to see. The first thing that came to mind is simply leaving the hoses out in the weather and then try one on Albert, my drophead. But then the thought arose that they could be taken to a rubber component manufacturer to ask him what he thought. An English hose, an old Australian hose loaned to me by Keith Dunbar that has an external re-enforcing sock, a previous version of the top radiator hose from Victoria and the two new ones were taken to him.

He found cracks in the rubber of the earlier Victorian hose that we had previously noticed and a seam that was beginning to separate. The engineer, Jamie then surprised me. He took a cigarette lighter from his pocket and burnt the end of one of the new Victorian hoses. Immediately the rubber began to smoulder. It produced a particular smell and the burnt rubber disintegrated into black charcoal like particles. Some teaching followed. The smell and the crumbling of the rubber showed that it was nitrile rubber. He explained that nitrile was used extensively for applications that are oily such as bearing and the oil seals. He said that nitrile had an upper temperate tolerance of 90-95 degrees Celsius. Over that temperature this rubber compound will deteriorate and ultimately burst. The temperature in the top radiator hose can rise to 100 degrees C. when the engine is idling in traffic.

The reason for thinking about leaving the hose out in the weath



Above: An early version of a top radiator hose. Notice the aging and cracking of the rubber

er was because the earlier version disintegrated on a Riley without actually being in use or even having water in the radiator. Jamie brought clarity to this issue by saying that nitrile rubber is ozone and weather resistant poor. He also said that although it has some moderate heat resistance it is less flexible than other rubbers so when a vehicle is in use the movement between the radiator and the thermostat housing is constant.

Jamie also said that natural rubber is a far better product for this application than Nitrile rubber. He said that a synthetic EDPN ethylene-propylene-diene monomer could be used to make hoses in automotive applications. Ethylene-propylene copolymers (EP(D)M) are a class of synthetic rubbers produced by copolymerizing ethylene and propylene, and optionally a diene, known as EPDM (ethylene-propylene-diene monomer) or EPM (ethylene-propylene monomer). These materials are widely used in various industries due to their excellent resistance to heat, ozone, and other environmental factors. The properties include elastic components making them suitable for applications requiring flexibility and resilience, resistance to heat, oxidation, ozone, and weathering. Amongst other uses they are employed to make engine components, insulation and hose applications. He also said that the Duro (measure of hardness) was about correct for top radiator hoses but the rubber used is not the correct one for the application.

Jamie invited me to conduct two experiments. The first one involved plugging both ends of a radiator hose and then fitting an air compressor fitting into one of the plugs. He suggested that the compressor be set at a high compression to see if the rubber would balloon and at what compression it would burst if at all. I do drive a Riley but I am not suicidal.

A plug was made for the smaller end of the radiator hose and a plug with a compressor fitting was made for the wider end.

I experimented first on the earlier top radiator hose purchased from VRMC. At 20 PSI the plug popped out so a socket was used to tighten the clamp further. Again the plug popped out and the same outcome occurred three further times. The clamp was tightened even further and at 25 PSI a split began to occur on the outer side of the bend in the hose and then the plug popped out.

The second experiment was conducted on the newer of the top radiator hoses. This time water was boiled and poured into the hose, the plug was pushed into position, the clamp tightened and the compressor was turned up to 20 PSI and the plug popped out again. This next time the hose with the plug was placed in a bench vice and the clamp tightened as hard as could be achieved and then the compressor was attached with no pressure from the hose and gradually the pressure was turned up to 20 PSI and the plug popped out again. Prior to the plug popping out the hose was squeezed, and it was hard with the internal pressure.

After that the hose was cut along the top and bottom, so it was in two halves. At the radiator end the top of the hose was 5.23 mm thick and the bottom side was 4.11 mm thick. At the bend the top of the hose was 3.74 mm thick and on the bottom side it was 6.22 mm thick.

At the thermostat end the top of the hose was 4.23 mm thick and the bottom side was 4.32 mm

thick.

When talking with Jamie previously he said the hose was extruded and in the process the operator of the extrusion machine bent the hose to make the right-angle bend. That is what made the outside bend thinner than at any other point in the hose.

I was not willing to take the experiment any further as the only safety equipment in my garage was goggles and leather gloves. But what may be concluded is the second batch of radiator hoses are better than the first batch because the one experimented on did not split as the earlier one did.

Above: The earlier hose split

The wall thickness was inconsistent on both the earlier and later hoses. The most vulnerable area was clearly the top of the right-angle bend in the hose at that point it was thinner than at any other point. There also appeared to be some indentations and creases on the inside of the bend. Although outside my expertise a better hose would ideally be consistent in thickness. It would be made from natural rubber or EDPM as these materials are not heat or atmosphere sensitive. What is unknown to me is that since the engine moves in relation to the radiator what flexibility is required to give the hose a long life?

Below: imperfections in the hose are readily seen

New Spare Parts

The NSW spare parts officer, Paul Baee originated the idea and put up the money for the moulds. 500 bonnet support rubbers and 500 hinge rubbers were made in the first batch. By the time that the next Riley Restorer magazine is published prices will be known and the parts will be available.

This is another joint project between the Riley Restorer club and the NSW club.