

TEE-ONE TOPICS

Number 34 April, 2004

CREWE CHANGE

Warwick Grigg

Some time ago several Canberra based T1 enthusiasts gathered to assist with preparations for the removal of the engine and transmission from a Silver Spirit (the car concerned was a totally burnt out wreck and a compelling advertisement for taking all feasible precautions to prevent vehicle fires). Parked side by side at the location were another Silver Spirit and a Porsche 924 driven by several of the helpers. Not that long ago, no reasonable person would have made any connection between products deriving from Crewe and those from Stuttgart and nearby. However, that has changed.

The 924 was often looked down upon as not being a real Porsche because it was built largely from existing VW-Audi components: Audi engine and transmission, VW suspension and much else. However, the mid 70's designed 924 is not alone in utilising major VW-Audi components. I read a recent article in a well-respected British new car magazine which advised that the new Bentley Continental utilises a W12 engine designed and built for the VW Phaeton and the Audi A8, and shares transmission and suspension components with VW/Audi products. Also, that the

Continental body shell is fabricated in Germany and then shipped to Crewe for assembly.



It seems that there are some in the Rolls-Royce and Bentley movement who have been depressed (or even distressed) by the separation of the marques. Such people have regularly voiced the view that because the new Phantom (and future models) have no connection to the heritage of Crewe, that such models are not true Rolls-Royces.

However, if it is true that both the new Phantom and the new Continental are finished in the United Kingdom from bodies, engines and transmissions etc designed and built in Germany, then essentially the same form of vehicle construction is now occurring at both Crewe and Goodwood. I realise that models other than the Continental are produced at Crewe, but that is not the

point: the point is that (as I understand) Goodwood type activities are also now occurring at Crewe. One has to question the nexus with the heritage of Rolls-Royce and Bentley cars previously built at Crewe. Is that heritage something now of the past only? Which is not to deny that fine cars are now being built at Crewe (and Goodwood). The same magazine mentioned above contained an article on the fabulous new Porsche Carrera GT (my reason for buying the magazine). Both the new Continental and the new Carrera seem genuinely capable of attaining 200mph (322km/hr). The Carrera has been compared with the new Ferrari Enzo (the Enzo is a little faster).

But I consider the Enzo, like the new Continental, to be ugly cars (I do have proven credentials in aesthetic appreciation) whereas the Carrera is a stunningly elegant and sensual sportscar (even if it does cost three times the price of the new Continental at UK pounds 330,000). Some Bentley Continentals, unlike their successor, were supremely elegant cars. Surely the 1960 S2 Continental 2 Door by H J Mulliner is one of the most elegant Bentleys (and cars) ever made.



CRASH TEST



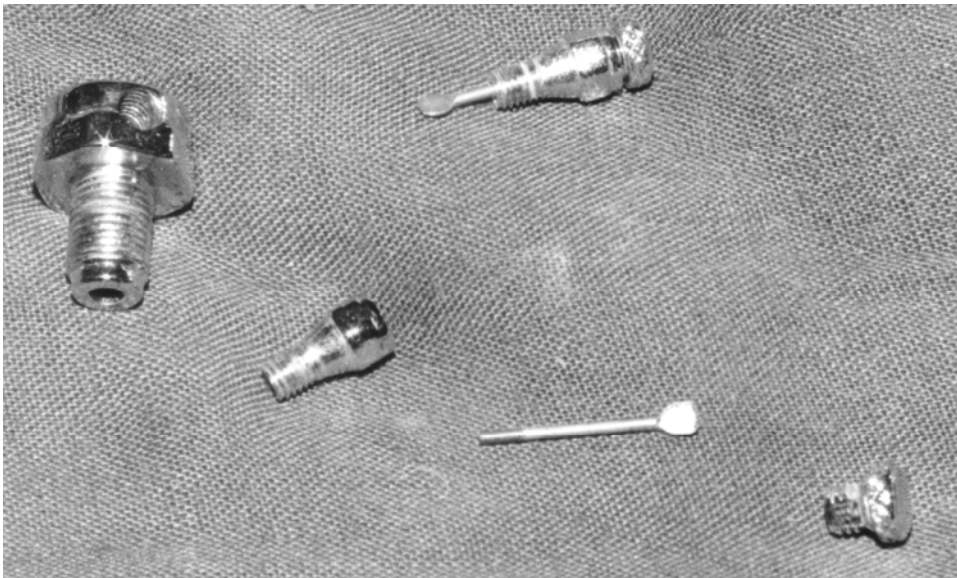
I found this picture in the bottom drawer and realised that I had published it in Praeclarvm many many years ago. At that time it seemed to be a novel practice for entrepreneurs to buy a new Rolls-Royce and raffle it for some apparently worthwhile cause. The Factory eventually stopped the practice as it obviously did nothing for the car's image. This stricture however was too late for the above car which I think was a 1972 model or thereabouts. Some gentleman won the car and generously gave it to his daughter. She in turn was heading for Cooma during the wee hours of the morning and apparently was turning a nice clip of speed. The road in those days was relatively narrow. The night was also dark and there was a light fog.

Quite separately the daily milk trucks were heading in opposite directions on the same road, recognised each other and stopped for a short chat adjacent to one and other. Meanwhile the Rolls-Royce in high flight was speeding towards Cooma and..... (too late she cried)...there

were the back and front of two large trucks. The brakes were applied and legend has it that one could easily trip over the tread laid on the asphalt as the vehicle was stopping. But it was not enough and the car rammed into the back of the truck at great speed. The truck's back axle apparently wore the grille and the tray having shaved every fitting and accessory off the top of the engine, neatly sliced the two 'A' pillars. The car stopped with the truck's tray end just one foot from the front seat passengers' faces. The above mess was the result. Thought to be the first Silver Shadow written off in the country it disappeared never to be heard of again. The occupants I seem to remember were uninjured although they probably took some persuading to get into another vehicle.



A SQUIRT IN THE EYE



This little chutney of bits may confound a few but not owners or devotees of the immediate post war chassis. It is the American designed windscreen washer jet mounted in the bulkhead and fed by an extraordinary vacuum operated pump. The main body to the extreme left was held by an assembly seen

below, and this cumbersome arrangement had to be swivelled to get the right fall of the jet on the windscreen. The top right assembly is the actual jet which screwed into the mail body.



Below that is the jet dismantled. The spade-like pin simply pushed into the screwed blocking plug at the right and the water escaped through a fine 'V' cut into the lip of the jet body. If as happens the jet blocked, the plug which was finger tight could be undone and allowed to hang out while the system was operated, hopefully washing out any blocking debris. Vertical adjustment

was made with a very small spanner on the jet body which had a tapered thread, designed to remain in the last position to which it was turned. The photo below is the assembly into which the main jet body screws and which has to be accessed from under the dash. The lower piece is a filter which with age clogs with salts in the water.



THIS CAR WON THE 1977 CONCOURS AS YOU SEE IT!



This almost new (at the time) 1977 Corniche Chassis # 19097 was photographed at Southport Queensland during the Federal Rally that year. The driver who is apparently no longer a member of the Club described how he was overtaking a lady in some sort of car towing one of those ubiquitous plywood caravans. He was reportedly exceeding 90 mph when he drew level with her and for some reason she decided this was the point at which she should turn right into a lay-by on the side of the road.

The car raked the Corniche as seen in the picture but the latter managed to remain upright on the road and when the driver looked back all he could see was the lady still driving turning into the lay-by towing the chassis of the caravan behind her. The body of the caravan plus the entire contents and the back axle were strewn to the four winds. I have no memory of the outcome of their face to face discussions but the Corniche arrived was duly scrubbed and polished and went on to be the outright winner of the Concours!!! The damage here is a bodybuilders delight as the door is skinned in aluminium which is not the easiest metal to work back to its original condition. And I do remember the colour, then a novel iridescent gold had to be done three times to get it right!



BATTLE OF WATERLOO (For the locals)

No the local branch has not cast the gauntlet, but two local entrepreneurs have invited enthusiastic owners of British and French cars to meet at Reconciliation Place King Edward Terrace, Parkes. This is between the Terrace and the Lake in front of Old Parliament House. The date will be Sunday 20 June 2004 between 10.00AM and 2.00PM. A few of us believe it would be a good opportunity to do a display of our cars' features which we refrained from at Wheels although I gather the function will be more along the style of a Terribly British Day. I also am hoping that local Club members will join us. More information next issue. We will be covered by full Public Liability Insurance.

WHEN YOUR SUPPORTS START GIVING AWAY



Okay I won't run a 'What is it Contest'. Next time you climb into your Mark VI or Silver Dawn fitted with a standard steel body, rip out the driver's seat pull up the floor panel and have a look for this bracket. It is one of a number of

points where the body is mounted to the chassis. The bracket sits on a vertical rubber silent bloc bush thereby allowing the chassis to do its unavoidable twisting routine without taking the body with it. Rolls-Royce were one of the few manufacturers to adopt this refinement, others choosing to bolt the body straight onto the chassis. The more observant of you will notice a crack running through the mounting hole. This is a direct result of the 'twist' exceeding the 'give' of the Silent bloc bush! The second photo is of the roof of my contemporary (to the Mark

VI) Armstrong Siddeley Whiteley which followed the latter practice. No amount of welding will cure this unless you resolve to drive on dead level roads!



But no coach built cars including Rolls-Royces were immune to this type of damage. Apart from body damage the big avoidance exercise involved the windscreen. The surround to this viewing apparatus is obviously a frame which is a dead cert to distort

with the rest of the body. If the glass inserted in it has very small clearance around its edges the best way to crack it is to go over a speed hump diagonally! Got the message!

As to the Mark VI mounts these (some now 58 years old) will have perished, gone as hard as a brick or slid down and let the body ride on the chassis. This, if it has happened is probably why the bloody door won't close/line up/sits proud of the body!!!



WHAT IS ODD ABOUT THIS PICTURE ?



Of course being the bright readers that you all are you would have noticed that very Holden looking radiator cap. Egads sir – is there no end to it! Relax colonel it is quite kosher. I suppose this example, a Silver Cloud as I remember it is an illustration of the hand built nature of the car. For reasons I cannot think of, the builders having installed air conditioning in the car at the Factory realised that the cooling system would need to run a Hell of a lot hotter than the standard chariot. Normally this would involve wacking in a higher rated steam valve in the top of the radiator capped by that nice little round plate and a caution label neatly fitted under the retaining screws! But the steam valves in the store room were only rated at 10lb or 15lb at the most and probably a higher figure was required to cope with the higher temperature.

So it was much easier given the few cars produced at that time with air conditioning to fit a conventional filler neck and an off the shelf cap of whatever rating you required. There, I have answered my own question – I think.

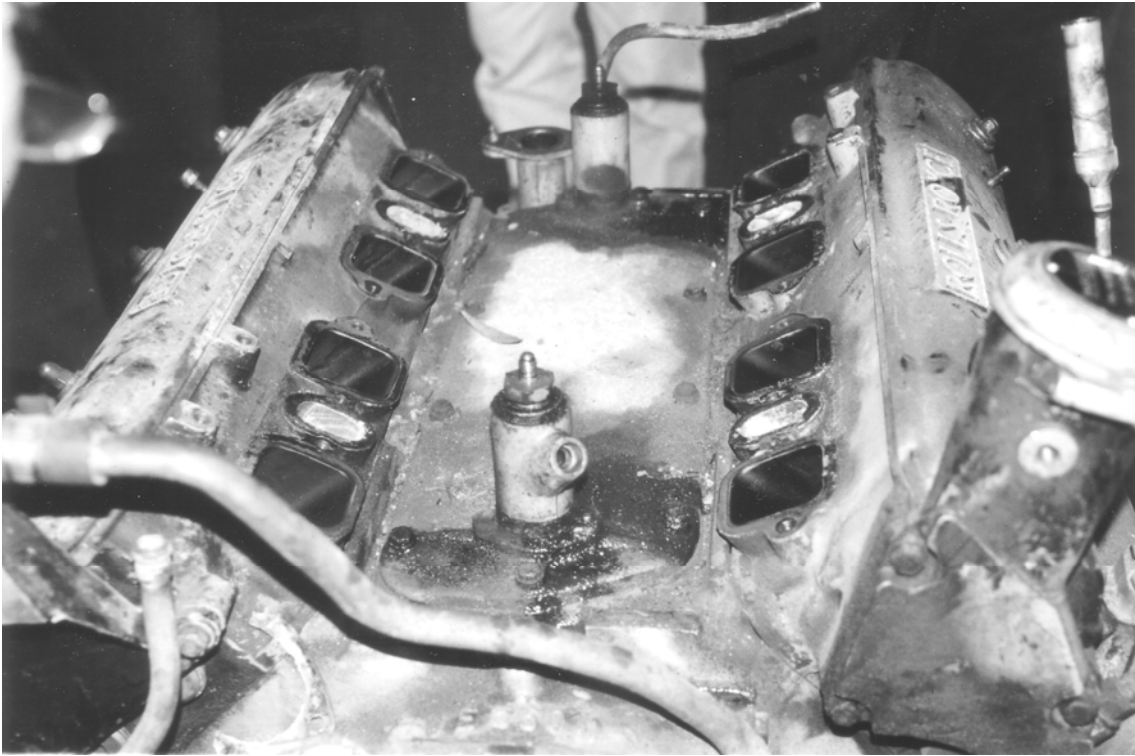
These fittings were standard on the Continental models which presumably ran hotter anyway.



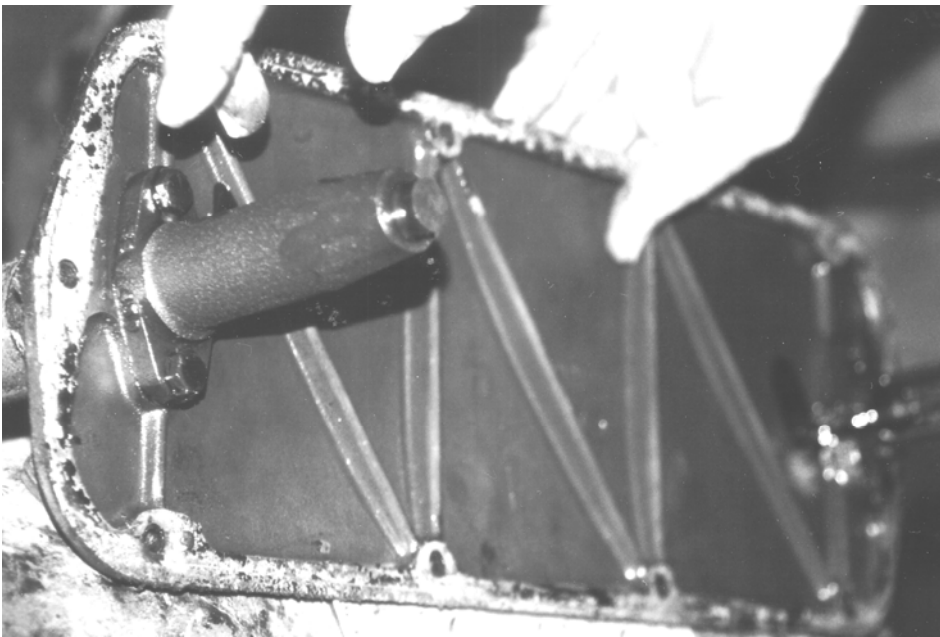
After the wedding, he laid down the following rules: "I'll be home when I want, if I want and at what time I want-and I don't expect any hassle from you. I expect a great dinner to be on the table unless I tell you that I won't be home for dinner. I'll go hunting, fishing, boozing and card-playing when I want with my old buddies and don't you give me a hard time about it. Those are my rules. Any comments?" His new bride said, "No, that's fine with me. Just understand that there will be sex here at seven o'clock every night... whether you're here or not."



WHERE ARE THE PUMPS?



I am often asked by owners and spectators alike ‘Where are the Pumps’. And here they are sitting in the valley of the engine normally surrounded by the intake manifold and all its attendant bits. The units sit immediately over the camshaft which has extra cams on it to work the plungers that work the pumps. They are fed by gravity into a surrounding body which is sealed by nothing else but a couple of ‘O’ rings. The inlet can be seen gaping on the pump at the front of the picture.



By releasing a circlip on the top of the pump and undoing the pipe screwed to its top – the outlet, the outer body can be prised off and the ‘O’ rings replaced should they choose to leak.

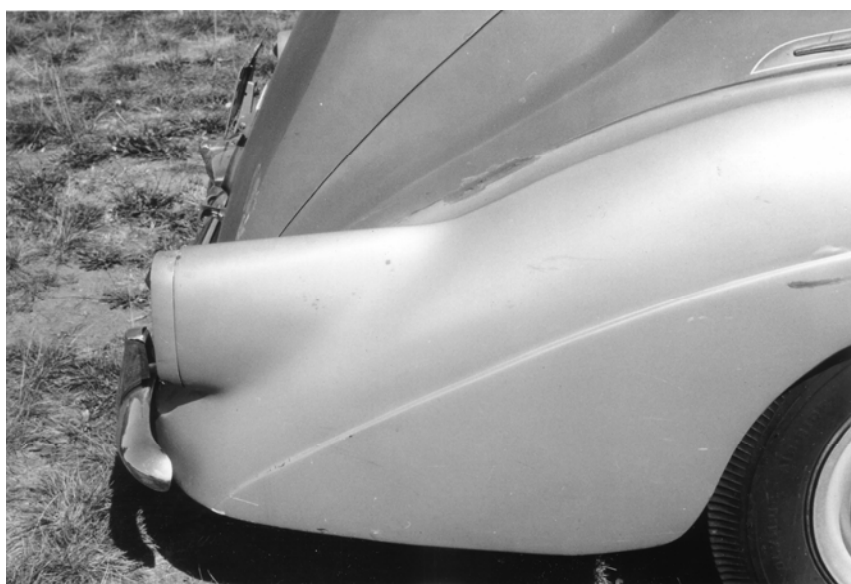
Originally the outlets were joined to the accumulators down the side of the engine with flexible pipes the object being to separate the unavoidable clicking of the pump from the main body of the engine. The idea was great but unfortunately the technology of the day did not match the aspirations of the designers. There were some spectacular failures of these flexible pipes with seemingly gallons

of brake fluid being unloaded on the indoor/outdoor carpet so popular in the States when these very impressive cars wafted up the carriage sweep and drew into the porte cochère.

A further problem ensued with the plungers on the cam shaft. The lower picture shows the underside of the valley cover with the plunger protruding from the plunger body. The body was quite enclosed and enjoyed as do most Rolls-Royce enclosed mechanical spaces, the accumulation of gunk. So much so that the plunger often didn't and pressure did not ensue, lights came on and..... well out came an open version of the plunger housing and all was well with the world once more.



LIGHTING VARIATIONS FOR THE POSTWAR STANDARD STEEL BODY



Many years ago, in a moment of exuberance I rushed out and bought an R Type Bentley with a damaged manual gearbox. Events at the time overwhelmed me and to my shame I did nothing to the car selling it some time later to an absolute perfectionist restorer. He could not wait to remove the tail light assemblies which must have been fitted by a very talented metal worker. The actual lights were pinched

from a Morris Major for those that can remember those funny little cars! At the front end a more conventional approach had been adopted. The overall problem was to provide some turn signalling other than those ridiculous trafficators. This was the Factory solution although they used a carefully cast mounting block behind the light and an almost flat lens glass. The ones used here are highly Mini Moke methinks.

And lastly the headlights. Nothing wrong here in fact they are very right. To start with the lights supplied with these cars were about as much use as a bucket of glow worms. They looked very





elegant and are now impossible to replace. There are I was horrified to note at the Centenary Rally, some of these cars getting around with original light fittings. The above conversion using a standard 7 inch sealed beam light and an old Holden inner frame not only protects the original item but gives a far superior light. If you want to improve on that look to flat front sealed beams or

semi sealed units with super dooper globes but watch the current draw and if necessary hide a relay somewhere for switching lest you burn up your beautiful light switch.



REFINISHING WOODWORK

(These writings appeared on the Club website in response to someone enquiring about failing veneers particularly on SZ cars.) Lest it be lost I include it here for reference. The author 'Steve' is unknown to me.)

Most of the veneered wooden trim fitted to vehicles since the 60's has been of very poor quality, Rolls-Royce & Bentley however have continued to use the finest backing materials and adhesives and this in my experience makes it the easiest to restore of any manufacturer. The only exception is the Camargue fascia where the veneers are bonded to aluminium, which causes particular difficulties during stripping. In answer to your question the lacquer used on your car was polyester and if memory serves correctly 1985 saw the introduction of an improved coating with a flex additive. This was better able to resist cracking and subsequent shelling. Prior to polyester, melamine materials were used but these would date back to the 1960's.

I would strongly suggest you do not sand the existing coatings. Apart from being time consuming the risk of breaking through the veneers is too high. The best method is to use a chemical paint remover however as the original coating is a flexible polyester and polyesters do not break down easily, go for a brand that has a reputation for being aggressive. If you plan on doing the entire wood set buy at least a 2.5 litre can.

Before you do anything make notes or take photographs showing the location and colour of the painted in areas on the ends of the waist rails etc. You should also try and obtain at this stage a small amount of brown cellulose paint matched to the instrument apertures.

Paint removers contain some pretty nasty chemicals so work in a well ventilated area and at the very least wear rubber gloves and use eye protection. Don't work in direct sunlight though as the stripper will dry out too quickly. To limit the amount of clearing up later lay down several thicknesses of a good quality paper, sufficient to do at least several pieces at a time. Tape up any joins and fold up the edges and corners to limit the flow of the paint remover. Upon completion the paper can be rolled up and placed in plastic bags.

Pour the paint remover over the pieces and leave it to react. Unless the wood has been refinished using a non-polyester material nothing will happen very quickly so don't expect instant results. It helps to keep the pieces wetted either by tipping on more paint remover or by scooping the excess off the paper and putting it back on the wood but don't scrape or otherwise disturb the coating. Eventually the polyester will fragment and take on, for want of a better description, a sugary appearance. At this stage scrape the coating away with a soft scraper, the spreaders used for polyester body fillers are ideal. Ideally the coating will lift away easily and the paint remover will not even have penetrated through to the veneer. Too soon and either the coating will remain intact or only small areas will lift away and then with some effort. If this is the case just pour on more paint remover and wait.

When the coating has been removed wash the pieces down with cellulose paint thinner to remove all traces of the paint remover. Any small fragments of lacquer can be picked off easily. Do this several times and do not be afraid to really wet the surface then leave everything to dry out.

As an alternative you can use a hot air gun and a scraper but be warned that fragments of polyester will fly off and eye protection is essential. There is also a very significant risk of scorching the surface with the resultant discolouration. In many thousands of pieces I have never encountered a problem using paint removers so I suggest sticking with this method. Try this with any Jaguar or Aston Martin wood trim from the same period however and the veneers will lift off, assuming this has not already happened.

At this stage the surface will be rough, slightly shiny and fairly dark in colour. After picking off any small fragments with a small craft knife begin sanding the surface. I wouldn't bother using glass paper as a conventional woodworker might but suggest instead using 3M pre-cut, or similar, abrasive paper, which you can buy from any supplier of vehicle, paints. European and American grading systems differ slightly and as I have no idea what system is used in Australia it would be a good idea to cross-reference the European grades I will quote. While you are at the paint supplier buy some spirit wipe, sometimes called pre cleaner. Painters use this to wipe down prior to spraying to remove any residual contaminants from fingerprints etc. A litre will be sufficient.

When sanding it is essential to use a hard backing for the paper. If the backing has any give it will apply greater pressure on the edges and will have a tendency to wear through the veneer but even if this extreme is not reached any unevenness created will still have to be levelled out by the clear coat later. I suggest starting with P120 used very lightly just to skim over the surface and break the slight glaze it will have at this stage before switching to P180. Make sure the paper is kept tightly against the backing. The paper will clog initially so wire brush it frequently or change to a new piece. Electrically operated orbital sanders can be used but care must be taken to avoid damage to edges as they are usually supplied with a soft sponge backing. When working around the instrument openings use a piece of 1" dowel or similar to back up the paper. Be very careful when working on the edges of the cross banding on the waist rails and companion sets, this will already have been well sanded during production. There are techniques to repair it but the best solution is not to cause any damage in the first place. After blowing off any dust you will find the surface is smooth to the touch and free of any scratch marks. Final finishing with P240 will improve the finish still further. Ideally using a compressor and blowgun, remove all traces of dust.

To assess the colour of the finished veneer apply the spirit wipe to its surface using a pad. Water will achieve the same thing but will raise the grain necessitating further sanding. Spirit wipe dries out fairly quickly but you will have quite a few seconds to judge whether the colour is acceptable. Rolls-Royce generally used stains or paints to darken the appearance but the natural colour is often quite acceptable for the veneered areas. The top of the waist rails however will be solid mahogany on your car and this will appear very light after lacquering so you will probably feel the need to darken these, often quite considerably, as did the factory. Staining and painting is done in stages with individual areas being masked off one at a time to avoid affecting adjacent areas. The instrument openings and end sections are painted in using a brush, ideally an airbrush, using cellulose paint over the bare wood. Spirit wiping will also highlight any defects such as areas filled during the original production. These too need painting in and once again an airbrush is the best way to do this. As a book match is used if any area is painted in on one leaf of veneer every other leaf should be similarly touched in. This would mean eight touch in's across the early Spirit and Shadow dash or for a set or waist rails or a pair of picnic tables. After the touch in has dried re apply the spirit wipe and assess how good it looks. If you are not happy wash it off with thinner or lightly sand it before repeating the process. If you find areas that need filling, as is frequently the case, use a two part wood filler, which a specialist timber merchant should be able to supply in various colours. Mix it according to the directions, fill the defects and then sand them smooth. Finally paint them in.

Burr walnut naturally contains black so I would suggest using black to paint in any and all defects. Black will look 100% convincing if applied correctly and very little practice is actually required for small areas. Other veneers however do not have this advantage and some, like birds eye maple, are almost impossible to make convincing repairs over.

The ideal finish is flexible polyester for a variety of reasons but this is not really an option unless you can find a company to apply it for you. This gives the required thickness in one operation instead of requiring time spent building layers. Polyesters are used for finishing musical instruments like pianos and guitars and frequently used for decorative features in luxury yachts. You may get lucky finding such a specialist. There are a few excellent non-sand varieties that can give a very good finish almost to the standard of the original. The very finest finish however is only obtained using the varieties designed to be sanded and polished.

Polyurethane lacquer will give good results but it will take many coats and several sanding operations to build the required thickness to fill the grain and provide a flat surface for polishing, it can be brushed or sprayed. Avoid fast drying cellulose or acrylic lacquers as these will crack very quickly as they lack the necessary flexibility. They will also soften all the areas painted in which may streak if you brush over them. Two pack clear coats, particularly high solids varieties, used for painting cars are probably the next best alternative to polyester but there are very real health implications involved when spraying them. Any car paint shop can apply the lacquer for you and they may be willing to do this for a reasonable cost as they can easily combine small pieces with other work requiring clear coat spraying. Although they will probably not have any experience of wood finishing just tell them to apply three sets of coating with a light rub down with scotchbrite in between. You will then need to wet sand, using P600 or P800 wet or dry paper and a hard rubber block to level the surface. Take your time and wipe and dry the surface frequently to assess the progress. Polyester builds very well and rubbing through is never a problem but it is a very real danger with any other coating so take special care on edges. Now take the wood back to the paint shop and get them to apply another couple of sets of clear. You will then need to wet sand with P800 wet or dry paper to remove any "gun texture" and any residual sinkage into the grain. Follow up with P1200 and then polish using a suitable compound. Polyurethane requires longer drying times, more coats and more sanding

operations. Whatever material you use seal the back with a couple of coats. Although the factory never did this it does give a number of advantages.

The final task is to refit the hardware and this can take some time, a lot of care and a good craft knife. Masking certain areas prior to lacquering helps but to lift the masking tape you will still have to cut through the lacquer.

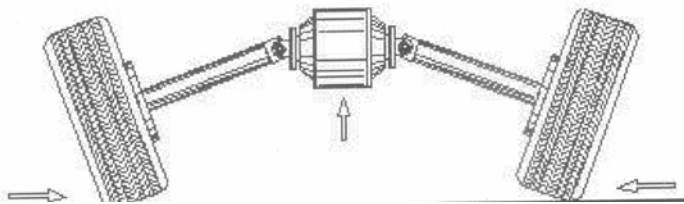
Although time consuming you will find this task extremely rewarding and the results will last for many years. I wish you every success.



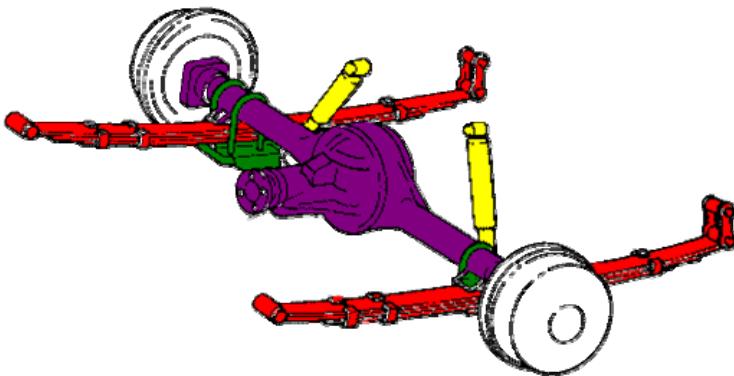
KEEPING YOUR END UP

Most drivers these days of either sex seem to be aware of their front end and I am talking about their car. The front wheels have to put up with being smashed into potholes banged against kerbs, violent steering changes and braking, mud and water and funny tyres. When you look at the cross section of metal that we rely on to avoid certain death it is clear that we are very trusting in our design and manufacture people.

But the rear end is something that just follows along and stops the boot dragging on the ground. Well that may be so with most conventional cars but with post Silver Cloud and sister Bentleys the rear end is probably almost as important as the front end to preserve our good health.



As you know the rear end of the Silver Shadow and indeed the Silver Spirit (read derivatives as well unless mentioned otherwise) employ self levelling. The spin merchants used to promote this feature of the car as being the ultimate refinement with the suspension adjusting as fuel is consumed and compensating for fat bums on one side of the car and skinny ones on t'other. The overall implication was that the car would remain level regardless of the weight and look beautiful, poised etc!!! But that was not the real story.

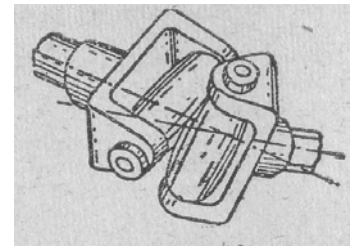


The Silver Shadow was the first Rolls-Royce produced with independent rear suspension and for those of you who have always wanted to know the difference there it is above! This contrasts with the solid beam axle to the left. This is a very simple and reliable design used by millions of cars but customers now like to be able to go around corners at 100 mph and these setups are not great in that situation.

So you can imagine that the driving axles on independently sprung cars are not about to bend as the wheels flog up and down and so universal joints are called for.



And here is one. These have been installed on cars (usually



the drive shaft that runs from the gearbox to the rear axle since before all my readers were born and even before I was born! Now there is a limit to the amount of 'bend' that the universal joint will tolerate. Without getting too technical there is also the

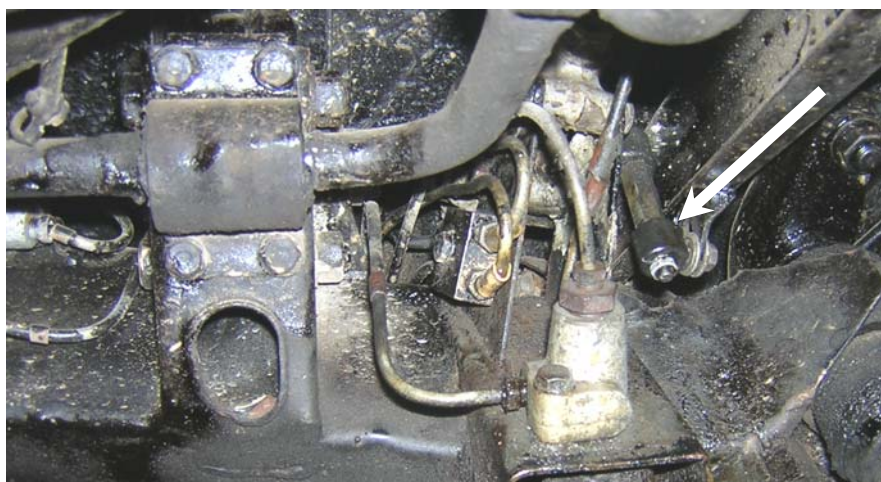
problem that a conventional universal joint does not transmit power evenly due to bits of it having to run fast and then slow to accommodate the 'bend'. This condition causes vibration and noise both of which as Henry Royce observed, lead to wear. The irregularity increases with increasing angularity of the joint. Normally, these effects can be tolerated for joint angles less than 16° at 540 rpm and 9° at 1000 rpm. The conventional joint is used at the outer end of the drive shafts on a Shadow. To limit the angles of operation the suspension is prevented from dropping too far by a retaining strap and from moving too far up by the bump stops. But there remains the problem of the length of the axle. The wheel is mounted on swinging arms which for our purposes moved up and down in a vertical plane. If you think about it when the wheel is either at full bump or full rebound the distance from the wheel centre to the differential is longer



than when the axle is horizontal. Again the axle can't stretch so a sliding joint must be installed. For the inner end then the Factory uses a ball and trunnion joint which while much more complicated than a conventional universal joint is much less prone to the problems of vibration. Above all however the joint allows the axle to slip in and out of the trunnion to allow for the wheel swing and distance change. When you find your trunnions note the little filler plug at

the top. This is frequently overlooked and is the only way to insert heavy axle oil. The easiest way to do this is visit your local chemist, drug dealer or doctor and get a 150 mil plastic syringe without the needle! Fill it with oil, turn the joint so that the filler is 'up' and squirt the stuff in. All that having been said I hope I have got the message across that neither of these joints likes to be far off the horizontal and in my long winded way I have been trying to explain why it is so important to keep the car approximately horizontal with the aid of correctly set springs. The workshop manual has precise dimensions to assess whether the car is at the right height but a good rule of thumb is that you should be able to run your hand over the rear tyre with the back

of your hand just touching the bottom of the mudguard. This check is done with the car empty and the hydraulic systems exhausted. The latter guards against the possibility that some fool has



The four bolts securing one of the anti-roll bar mounts. The release and adjusting point for the height control valve is arrowed.

corrected a sagging bum by jacking the car up on the height control rams. If the car sinks noticeably when you do exhaust the hydraulics you will know. Another point while checking the height is to push the car back and forward a few feet to let the rear wheels track out. Despite all the foregoing the back wheels when lifted off the ground drop down and inwards somewhat. If you let the car down again and look

at the wheels from the rear they are not only pinched in but in the process have lifted the car somewhat. Moving the car quickly sorts that stance out.

In days of yore one carefully measured the lift required and using a formula which has been included in a previous edition, calculate the extra height the springs need to be reset to achieve the correct standing height. Nowadays there are aftermarket units available for a very reasonable price which can be popped in and which generally don't need any adjusting washers. Unlike the front suspension, changing the springs at the rear is not a life-threatening exercise. You will need a good garage jack not one of those piddling wheel changers, and a pair of heavy jack stands. If you are starting from scratch you are up for about \$500 so far. Make yourself



The filthy things on the left is the retaining strap which should be kept well greased

some proper wooden sill blocks and hoist the car into the air so that the bumper is at about nipple height if you get my drift! Sit the car sills on blocks and stands under the rear doors.

You then disconnect, taking note of all the bits, the lower end of the rear shock

absorbers, the height control arms from the suspension and tie the arms well away from the

suspension so that they don't get dragged down, the outer universal joints and tie the axels up high out of the way and the two anti-roll bar mounts . Pop the jack under one of the suspension arms and lift it slightly then release the bolt holding the suspension limiting strap to the rear seat pan. If I haven't forgotten anything, you can then gently lower the wheel which will drop down alarmingly until the spring comes loose. You can then lift out the unit threading it over the shock absorber shaft. Clean the seats and remove any packing washers before you put your new springs in. Check that the spring seats are not damaged pinched or twisted. Jack the wheel up replace the limiting strap and lower the car to the ground. Bounce it around and run the car back and forth then see if the height is right. You will probably find it is too high. No problem, a few bricks in the boot will correct that until it learns who calls the tune around there! Put it all back together, set the height controls low to let the springs settle and check it again in about a month for height.



SHEET METAL CONVERSION

Professionals pick up a bit of sheet metal and say 'x' gauge and you wonder how thick that is. Here is the answer

Gauge	Inch	Millimetres
6	0.192	4.88
7	0.176	4.47
8	0.160	4.06
9	0.144	3.65
10	0.128	3.25
11	0.118	2.94
12	0.104	2.64
13	0.092	2.34
14	0.080	2.03
15	0.072	1.83
16	0.064	1.63
17	0.056	1.42
18	0.048	1.22
19	0.040	1.02
20	0.036	0.91
21	0.032	0.81
22	0.028	0.71
23	0.024	0.61
24	0.022	0.55
25	0.020	0.51
26	0.018	0.46



WEB SITES YOU SHOULD HAVE ON YOUR COMPUTER

<http://www.rroc.org.au/>

Rolls-Royce Owners' Club of Australia

<http://web.rroc.org/>

Rolls-Royce Owners' Club of America

<http://www.swammelstein.nl/rolls.htm>

A Dutch private web site with an excellent forum

All the above sites have free forums where you are welcome to share your knowledge and ask your questions. Or write to me - Bill Coburn Post Office Box 827 FYSHWICK ACT 2609 Australia or tuppercharles@bigpond.com.

If undeliverable please return to Post Office Box 827 FYSHWICK 2609 ACT AUSTRALIA
