

TEE ONE TOPICS

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PHOENIX

Those of you who have followed the latest adventures of Harry Potter on DVD or at the theatre will be aware of the unique mythical bird reportedly with gorgeous plumage, which lived for five to six hundred years in the Arabian Desert and terminated itself by immolation on a fire started by the sun and fanned by the bird's wings. Surely Rolls-Royce had a hand in this bit of design? At any rate the important outcome was that the bird rose from the ashes of its own body to begin another cycle. I have of letters, cards and emails about the future of the Tee One particularly the *Topics* after our treasurer 'officially' disbanded you received AUD 20 as a 'subscription'. Many of you on me and to those who didn't I Well to complete the Phoenix well and most gratified at the so many have offered.



For those that just came in, it venting a little history without upsetting those who seem to be Most if not all of my Australian the Rolls-Royce Owners' Club other of our State Branches. In Territory which for the benefit equates very closely to the United States District of Columbia, a small group of members, myself included felt that our passion for tearing our beloved cars to pieces was inimical to the interests of the balance of members. There was also seriously expressed concern that our activities could invite claims on the Club in the event of one of our participants being injured during our sessions.

And so we quietly withdrew and pursued our interests separate from the local members' activities. We even, early readers will recall, issued a disclaimer disassociating ourselves from the Club lest some canny lawyer tried to make such a connection for his own advantage. Any practical separation was entirely voluntary. The rest of the local members were always very welcome to attend our 'self help groups' as were any members of the Club. And it was gratifying that so many of our New South Wales members turned up for our events as did a few from Victoria and a couple from Queensland.

This seemed to sit comfortably with the prevailing sensitivities until one of our group in a gesture of unbridled principle declared that I should not carry the expense of putting out the

had dozens and dozens anxiously enquiring Group and more erstwhile interim us. Moreover, most of refund of your forwarded the money to say have a drink on me. analogy we are alive and heart warming support

may be worth while pointing fingers or intent on getting upset. readers are members of of Australia in one or the Australian Capital of our alien readers

Topics. He struck a levy on the spot and called for a volunteer 'tin rattler' (probably an Australian expression similar to pass the hat around or kick in a coin). Our consequent 'interim treasurer' willingly volunteered and set about getting us organised or more appropriately 'me' organised. A bank account was opened, money was garnered including cheques and money



We have recently talked about engine mounts on Shadows and later cars particularly the front one. This is the worst I have ever seen. The mount in a very nice example of the car was merely a resting point for the engine as there was no connection between the rubber and the mounting plates. The plate to the left is the device that stops the engine from eating the radiator core and should normally have a strip of rubber across its front. The owner had had an experienced mechanic check the mount and was told it was OK!. Had the car stopped suddenly the fan would have carved itself and the header tank up 'big time' as is the modern vernacular.

orders mouldering in my bottom drawer and I happily prepared to send in the printer's and postmaster's bill. Further our volunteer agreed to actually despatch the *Topics* and sorted out the recipients' mailing list .

This was the genesis of subsequent ructions as quite a number of my recipients had not even asked for the '*Topics*' . I had simply sent it to them as a perceived enthusiast. Lest my critics seize on this, of the 3000 odd copies I have despatched only one recipient actually called me very apologetically to say he simply wasn't interested in the mechanical side

of the cars and please save my money and effort and cease and desist etc. He is a very old friend and I appreciated his candour and practical gesture. The rest of you I had thought just threw the thing in the rubbish bin but it seems after the latest initiative by our 'interim treasurer' this is certainly not so and for that I thank you.

The end of story was that I reverted to my original arrangements, managed to cobble an address list together and got the show back on the road.

And so the monies I have received, I will squander on immoral pursuits and liquor but at the same time stand the bill for the *Topics* with much pleasure. Producing these writings has proved conclusively to me that there are many owners and enthusiasts out there who genuinely want to work on their cars, no matter how complicated, and appreciate any information they can get to do so.

End of sound off!



WHEN YOU CAN'T GET THE BOOT OPEN

I currently have a low mileage dear old Spur that needs some tender LC in the hope that it will find a loving home in the near environs.. In the interim, our good friend Steve Crocker thrust the header tank of his venerable Shadow into my hands with a plea that I bring it back to its former glory. The detail of this will follow later but in the meantime, suffice to say I had Steve's tank and a couple of spares bifurcated and sand blasted awaiting a decision on which base was to go with which top. In addition my mate of eons delivered another early Shadow with incontinent cooling bits and that involved a further bifurcation. These all sat a'rattlin' on the back floor of Peter's Lexus until prior to one journey he demanded they be removed for no other reason than peace. Chastened I flung the offending bits into the dear old Spur, shut the boot lid and was off. Some few days later I decided that procrastination was not going to work and I determined to finish at least one of the jobs. To the boot I went, pressed and NOTHING! No amount of persuasion, sudden lunges, key positions or leaning on the boot would unlock the entombed bits.



No t'is not Excalibur but the way into a boot that is jammed shut. The same locking mechanism is used on all the shadows and SZ cars to the end of production!

Prepared to bore a 1" hole through the back of the lid behind the number plate or utilise an axe I rang the ever-helpful Alan Gardiner at Bentley Sydney and explained the problem. With the utmost tact he quietly pointed out that the solution lay through the floor of the boot. Simply remove the spare wheel carrier (unbolt the lowering thing) pull the spare wheel out and lying sedately on the carrier reach up through the inflating hole in the boot floor with a 7/16" AF spanner, fumble around under the lock and remove the two bolts holding the lock bar to the rear panel of the boot.

Suitably chastened and embarrassed I then pulled off the lower part of the lock and the cover on the underside of the boot lid concealing all manner of frights including the operating link. I was sure this must have broken but there was also the electromagnets and things that go click in the back when you turn the key – hopefully they hadn't decided to test my intelligence (always a



This was the welcome sight I got when the last bolt was undone. This technique I think would work on the very much later cars as they fiddled with the spare wheel stowage.

worrying time)! The problem was disappointingly simple, some cretin at some stage had managed to let a 7/16" nut loose in the boot lid innards and with mad cornering and doughnuts etc it had worked its way to the centre and dropped down into the lowest part of the lock mechanism and jammed it solid! An olive picker fixed that!

Putting it all back together there remained the adjustment of the lock. As you will know this system was basically the same from the beginning of the Shadow. The lid closes on a rubber seal and needs only be

held in place against would-be thieves. The tightness of the 'hold' is adjusted by moving the latch bit on the lower boot sill down until the profile of the lid matches the body. The finished job should allow you to 'close' the boot NOT slam it. To slam a boot as our man George Shores pointed out invites the bottom of the lid to strike the bottom – chipping the paint.



SHADOW ACCUMULATOR OVERHAUL

Most people of reasonable intelligence would, on discovering that the accumulators were in need of repair take their car to a suitable operator. Or they might remove the whole assemblies and go to a number of people who do this kind of work and fit the repaired product. Twenty five years ago this seemed all too complicated and at considerable expense I had produced a spanner than would open the accumulators together with a jig to hold them while they were spannered. It remained for me to replace diaphragms and valves, overhaul the control valves, fit the lot and bleed the system. As well as the spanner I needed a jig to hold the accumulators and a supply of nitrogen to re-charge them. The latter also committed me to a high pressure regulator which looked just like those gadgets you see on the top of oxygen and acetylene cylinders at your local welder's establishment.

The last bit of equipment was a strong vice on an even stronger bench. These muthas' are tight. I remember carrying out the undoing bit on a set of accumulators at my old matrimonial address and after using a 3/4" break bar with a five foot steel extension and two 170K helpers, I found next day that my residence had actually changed its post code! Warwick Grigg my faithful adviser resident in the Southern part of the Capital spent a King's ransom and qualified for the engineering version of the Oscar in getting his accumulators apart. One day he will tell the story!



This is an accumulator sphere opened. The half at the top right is the top half through which the brake fluid is pumped and the other half has the sharp edged charging hole that will smartly chop up your diaphragm. The hole also houses a steel ball a little spring to keep it in place and a circlip to keep the spring in place! The ring slips over the top half and screws onto the bottom half with the diaphragm jammed in between.

But first the decision to remove, charge or ignore the accumulators. Every month every post-Silver Cloud owner needs to come home from a nice drive, slip into the garage and turn the engine off. He then turns the ignition on but does not start the engine and slowly but steadily pumps the brakes until first one system light comes on then the other and notes the number of pumps. For a Shadow I (stet) the minimum should be say 20 pumps, for a II say 15 (the accumulators are smaller) and for a Spirit say 10. Any less and you need to do something other than count your money.

The drop in the number of pumps before the lights come on is the caused by the depletion of the nitrogen in the accumulators. It is unavoidable but it is fixable. Eventually the pressure of the fluid will force the diaphragm hard into the bottom of the sphere. Since there is little or no nitrogen to push back, until the diaphragm is forced into the charging hole which has nice sharp edges and chops a hole through the rubber letting any vestige of nitrogen escape back to the reservoir. As long as your engine keeps going you will have brakes but if it stalls – grab the Rosary – you will have nothing!

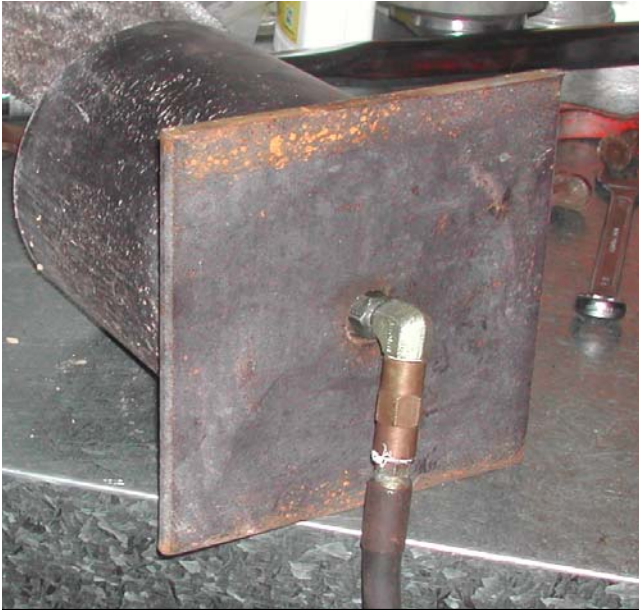
little or no nitrogen to push back, until the diaphragm is forced into the charging hole which has nice sharp edges and chops a hole through the rubber letting any vestige of nitrogen escape back



And here is the vulnerable diaphragm in this case a new one sitting on the lower half of the accumulator sphere. The nitrogen dispersal is no mystery, at 1000 psi it tends to find little interstices in the 'rubber' and escape. The problem was so bad at the beginning of the series that every diaphragm had to be tested for porosity before fitting.

The brighter among you will have asked by now whether or not the nitrogen can be replenished and the answer is yes! Shadow I's can be done in situ on later cars the units have to be removed. Citroen owners I find have been doing this for years including the units which they share with Spirits throwaways.

There is a good deal of scare stuff around these accumulators but handled sensibly there should be no cause for concern. I have been



Charging the sphere which is inside the pipe in case it blows up. The latter is about as likely as winning Lotto but my friend Warwick insisted!

asked what safeguard is there that the control valves won't seize and the accumulators simply explode. The Factory thought of this and in manufacturing the push rods for the hydraulic pumps they 'waisted' the lower part which is designed to crush at about 3000 psi!



The steel ball on the left goes in the seat inside the sphere and is held in place by a small spring and even smaller circlip. The plastic ball on the right is forced into the outer end of the charging valve and topped with the charging cap after charging.



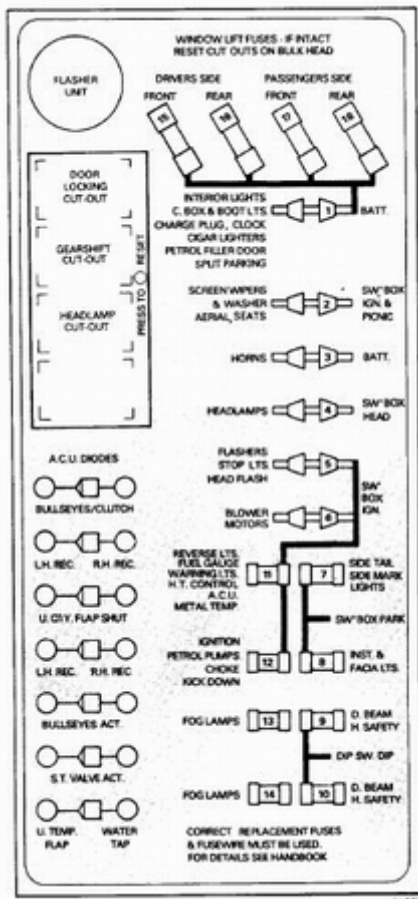
The fixture to undo the spheres. The clamp is to hold the 'spanner' in place. There were two methods of sealing the charging valve involving the shape of the projection. One was sealed with an 'O' ring and the other with a plastic ball which was crushed into the charging hole when the cap was screwed on. Practice has been to use the ball on both to ensure a seal.

DIODES

Since Ken Saunders introduced some of us into the mysteries of the electrical bits of the Shadows a number of us have been going around innocently asking whether owners have checked their diodes recently. This has certainly given a new approach to the subject of "Hows she going mate?"

For those that have not been initiated into this secret business a diode is what we crude mechanical folk would call a non-return valve except in lieu of fuel, water, gas etc we are

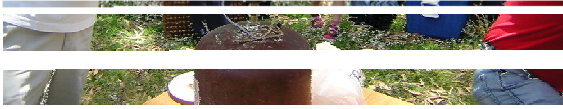
dealing with electricity. In my perfect world I would have one wire going from source to thing that needs power and that would be it. So much easier, if it doesn't work look for THE broken wire! Unfortunately this would somewhat hinder the design boys with their fancy routines of slowly switching off cabin lights variable speed motors, timers, pretty gauges and a host of gadgets that many of us seem to gloat over. Moreover, my approach would require so much wire that we would need double wheels at the back of the car to carry the load! And so we have a host of bits inserted in wiring schemes to do all sorts of jobs. One of these is the diode. Why would electricity want to run the other way? Well normally under my scheme it would but when you connect other bits to the system, 'stray' bits of current wander down wires when they shouldn't. Unfortunately the bits at the end of these wires don't appreciate the difference between serious 'I am going to make you spin electricity' and stray currents that turn up at their terminals.



In the Silver Shadow the air conditioning system has actuator motors, function switches, blowers and a lot of wire to connect them all together so the chances of a bit of stray electricity wandering down the wrong wire are fairly great and that is why the Factory installed diodes in this area. Now when you get a blast of hot air in your face on a boiling day when you clearly dialled cold air, you can remark

authoritively 'Must have a faulty diode' and turn the whole system off till you get home and fix it.

Note that we are dealing only with the Shadow I (stet). All owners by now have found the fuse box down under the dash next to the handbrake. If all is well there should be a metal plate beneath it that can be slid out to let you gaze earnestly at the layout to impress lookers on. A picture of the plate appears above and lo at the left bottom corner are seven A.C.U. (air conditioning unit) diodes. Notice the 'arrow like' symbol between each terminal. This gives the direction the current flows. Replacement diodes which have a tiny arrow on them must be installed in the same direction. David Gore who understands these things recently offered advice on one of the website forums 'Suitable diodes are type 1N4004 [1A 400V] or 1N5404 [3A 400V] - I prefer the 3A diodes as there is almost no difference in price [around AUD0.20/0.35 each]. Both are readily available from Jaycar and Dick Smith Electronics. So get yourself a fist full of diodes from Dick or Jay, disconnect the battery, spread a clean towel on the floor, drop the fuze box and start replacing.



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