

# TEE-ONE TOPICS

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## ETHICS AND PRACTICALITY

For some years I have been hearing of individuals not only in the Australian Club but its seems in a number of our sister Clubs, who apparently advise any owner who will listen that they must have their car serviced by a fully trained (preferably Factory trained) mechanic. Only today I received the following lament from a correspondent in another Club relating his experiences:-

*It appears to me that there are two classes of member, those who think that their cars give them something of a Grand Status, and scorn derisively at anyone who dares to even contemplate doing anything more than the most basic maintenance of their cars and those, of whom I am one, who doesn't think twice about getting grease under my fingernails and will attempt all maintenance and repairs within my capabilities simply because we can. I fully admit to having an aversion to paying horrendous sums of money to so called experts for work that I am capable of doing myself. I would most likely be a lot more conscientious as well.*

*I didn't purchase my car to uplift my status in life nor to make myself appear to be something else other than just "Me" I just love the cars because of the shape, style, mechanical wizardry and fascination of the beauty of them. I also feel that we don't actually "Own" our cars, we merely hope that by lavishing care and respect on them, we can pass them on so that they can be enjoyed by another generation. I have had many many vehicles of all shapes. sizes and makes in my lifetime and I have found that they all drip oil on the garage floor at one time or another.*



One of two Piper window switches fitted to a 1967 2 door Silver Shadow coupe. These are still available from the Factory no doubt as old stock rather than a hoped-for concern to ensure that such items are indeed available.

I unfortunately experienced a corollary of this situation some years ago when George Shores, an

avid do-it-yourselfer, owner, and born mover and shaker, set up a group to help owners in Canberra service and maintain their cars. Apparently we had exponents of the 'use only qualified mechanics' requirement here but I had never knowingly met one. I wish I had because with the demise of the agents in our city owners were on their own unless they chose to drive a couple of hundred miles to Sydney, dump their vehicle and return later for collection. Apart from time, the expense would seem to be somewhat of a deterrent.

George's efforts bore much fruit and for the record he set up the concept of 'self help groups' which attracted a lot of interest and support, not only in Canberra but in Sydney and Melbourne.

These notes have been compiled over the past 5 years to provide some record of like minded individuals' experiences and with their uploading onto the World Wide Web the information is available to all. The latter concept is, I believe, essential since the majority of Rolls-Royce and Bentley cars are NOT owned by members of Clubs and if whatever information we can garner can be made available to them, hopefully more cars will be saved from the wreckers' hammers. As to the band of 'experts' that the exclusive patrons would have us patronise they are fast dwindling. And, the dealerships while helpful have had to take on the new generation of cars which consumes most of their resources.

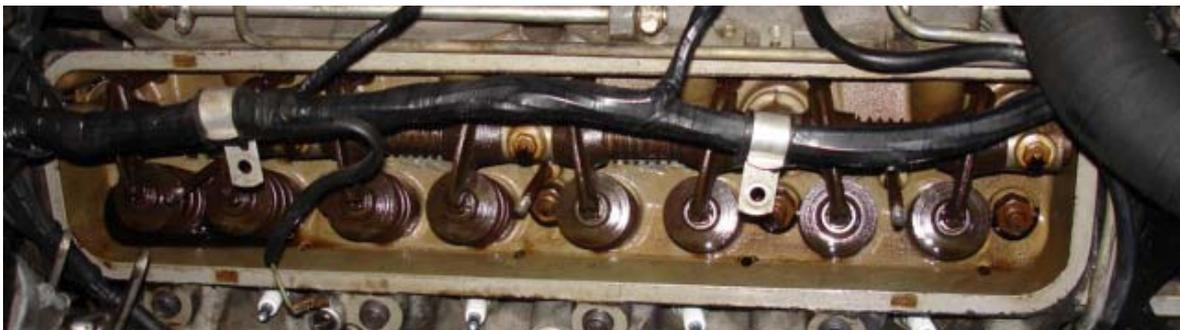
On a global basis Bentley Motors have carried us all with the provision of spare parts but this is bound to wane as it did with the old Company and pre-war cars. It is a sad fact that owners of post World War II cars still think they have a modern vehicle and that spares should be available ad infinitum. Aberrations do occur, only this week our Sydney supporters obtained ex stock a window switch for a 1967 car! But two weeks before I was unable to obtain principal radiator hoses for a middle aged Silver Spirit! Fortunately the after market industry is growing particularly here and certainly overseas. But the supply of experts is not being maintained. The Factory Trained icons of yesteryear in this country who are still available to repair your car can be counted on a few fingers of one hand.

So hopefully (I have used that word ad nauseam) the proponents of using exclusive service people have moved on and bought other vehicles but for those of us still nurturing the remainder of the Crewe production population, we will do what work we can on our cars, try and interest the new generation of young mechanics in our mechanical anachronisms and help to develop a Library of Technical Information on the web to assist them with their task.



## **ROCKER COVER LEAKAGE - VEE EIGHT ENGINES**

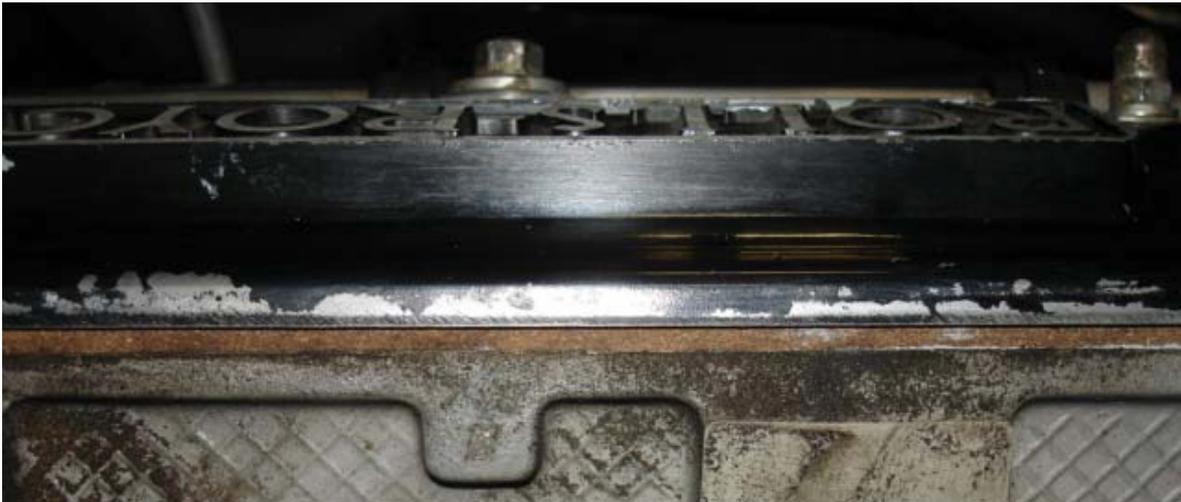
I grew up with in-line engines. Vee eights after the war were strictly only on American imports mainly from Ford and most if not all of them were of side valve construction. The Mark VI cars



had nicely recessed heads that contained all the oil that was pumped up there and leakages were seldom a problem. But tilt the area of interest over on its side and suddenly there was a problem with the lower portion of the gasket being almost permanently under oil when the engine was running. In the picture can be seen the four ¼” holes provided to drain the oil flung out by the rocker arms. These also explain why the engines are a swine to fill with oil after a change. As you will have found out it cannot be hurried as the filler pipe simply channels the oil into the head and not the crankcase.

Until relatively recently the method of sealing the rocker cover was with a cork gasket that very neatly fitted into a groove in the casting. But with heat and hot oil these gaskets shrink and allow oil to escape – usually at the rear end of the head where it oozes like black lava over the sides of the crankcase and transmission rotting the engine mounts and at speed liberally coating the underside of the car. Apart from the loss of oil it makes the car stink like an old farm truck! The first step in these situations is to tighten down the cover to further compress the old gasket. But do ensure that there is still gasket to be compressed. The picture below shows a newly fitted cork item which will allow for future tightening.

The Factory developed a beautifully made neoprene rubber gasket that is flexible almost unbreakable, never goes hard and seals perfectly. To complement these gaskets, special washers under the hold down nuts have been developed with bonded neoprene rubber faces and spacer tubes are supplied to slip over the mounting studs that prevent you from over tightening the nuts and cracking the cover – an ever-present hazard!



The drawback to the fitment of the new gaskets is their cost which is considerable but for those with later fuel injected cars that were born with cork gaskets, you should consider the amount of work to uncover the rocker covers with the attendant labour costs to fit new cork gaskets as opposed to a one of fitment of the new parts and never having to disturb them again.

Should you decide to continue with cork gaskets, Robert Chapman in Melbourne has again come to the rescue with aftermarket items.



## **ON PART NUMBERS AND ADVICE**

Richard Treacy our ex-pat in Switzerland and guru on all matters Rolls-Royce tells me that referrals to Tee One Topics are often made on overseas web sites and forums which always amuses me when

I remember the opprobrium that they attracted in our home-grown Club for many years, being regarded as they were, much along the lines of underground papers produced by Resistance Forces in Europe during WW2! Even now I understand that now Tee one Topics has been moved out of the Technical Library into the general 'Library' to sit with accounts of painting and tripping and amusing descriptions of the more conspicuous parts of our cars. That is probably a wise move as it removes any mistaken status that Topics may acquire in the technical field.

Anyway, water under the bridge, as I am regularly counselled; the contents of these pages are accounts not advice. You read what is there and if it works for you well and good. George Shores who, until he fled North to defend the South against the Cane Toad invasion, used to preface his accounts with words to the effect 'My way of doing it'. Being lazy I used to periodically insert a rider to the effect that the contents had nothing to do with the Club nor did the activities of the self help group which helped itself to the title of these notes. That promptly brought a lambaste that we were indulging in break away activities and to ensure that that was understood the non-existent group were immediately denied any sort of insurance in the event of a mishap. On reflection (looking in the water going under the bridge) this probably flowed from the sentiments I referred to on the first page of this issue as an effort to stomp out this 'not quite proper' tenor of the notes being as they did, encouraging to do-it-yourselfers!

Part numbers you will notice I seldom quote since they are frequently upgraded to newer series and also because I am too lazy to note them down.

There is also the question of suppliers. The legal fraternity are ever ready to turn a quick quid from the unsuspecting adviser should he recommend Joe Blogs patent oil stopper and some recipient of that advice blows up his engine/gearbox/transmission/differential. If there are references in these pages to suppliers or their products they are usually statement of fact. 'Superchargers for the Phantom II are now available from Super Cheap at Tuggeranong' is a statement of fact not a recommendation. If anyone fits one of these however and offers me an account it will be clearly seen as an account not a rallying cry to fit all examples of the model on these shores with such a mechanical urger!

Now time to get off the bridge!

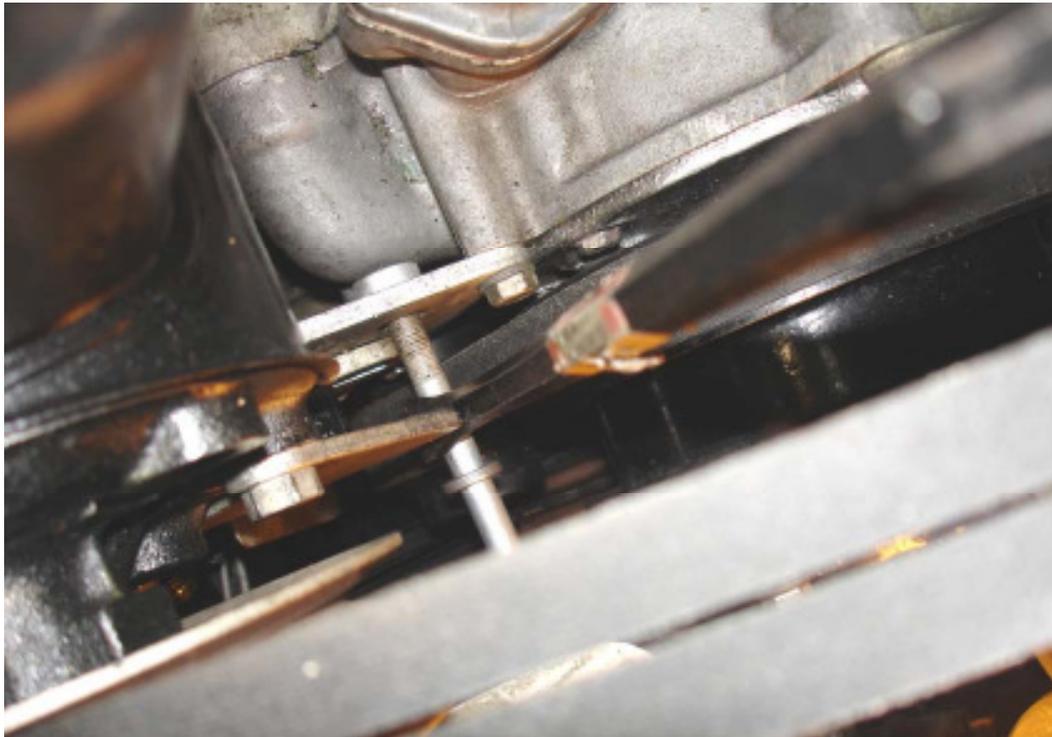


### **Phil Sproston**

A quite nice fellow and in fact a leading light in encouraging owners to get their nails filthy. But now he is in danger of physical bodily harm. You see the thing he is looking down is a laparoscope and it is a gadget I seriously covert. These are gadgets used by surgeons to see what you have had for breakfast. Actually

that's done by shoving a hose pipe down your neck, but if you happen to have a spare ovary floating around in the engine room, he makes a quick stab and pokes this gadget in and looks around. Phil is using it to inspect the inside of a Mark VI block I would guess which is about as accessible for viewing as your molar via your anus if you will permit that indelicacy. In days of yore when I had these cars I devised all sorts of lights with solder blobbed on ends of wires poked through various holes to see the results of my purging. But a laparoscope..... keep it locked up Phil!

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## **TIGHTENING THE AIRCONDITIONING DRIVE BELTS**

On most of the belt configurations for the vee eight engines the only means of tensioning these, the longest belts on the car and the ones that make the most noise if they are loose, is by moving the power steering pump. Later Spirits (about 1987 on) were provided with tensioning devices but earlier cars involved prying the pump away from the engine.

Archimedes was quoted as saying 'Give me a fulcrum and I will lever the World' Well he never had a Shadow or Spirit but if he did his quotation would be equally relevant on a slightly less grand scale. The usual trick for the local mechanic was to lever against the body of the pump which is really a quite thin steel pressed container which will dent very nicely in that situation.. All that can be done is to select an appropriate shaped lever and lever on solid surfaces. If the ancillaries allow it the above approach makes life a lot easier. Simply screw an appropriate size bolt into the vacant mounting hole and lever against that.

As to tension, I confess to listening to the motor department with the engine running and pulling the wheel over to full lock. This places the maximum load on the belts and if they are too loose they will slip under load and give forth a very obvious scream!

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### **CROWS FOOT SPANNERS**

Have you ever tried to remove the hot air induction pipes that feed the thermo coils on the automatic choke on a vee eight engine. This is the answer, a crows foot spanner. They come in a range of sizes are not expensive and save a lot of time. For those who have not graduated to a 1985 Spirit you will be envious of the high tension leads and their fitting. No more threading the rotten things through pipes etc.



### **WHAT IS THIS I SEE BEFORE ME?**

Jumped in this beautiful Spirit one morning started it, into reverse and nothing happened. The garage was dark and I am careless at leaving the selector where it fell so to speak so I looked and finally turned the parkers on then donned my glasses and there was no pointer. Much head shaking and looking, I decided the whole system had failed (don't ask me why) and simply held the ignition

key to start and moved the leaver up and down until the thing started. The missing pointer was the problem.



The cowling for the switchgear on the steering column is fairly straight forward but there are four screws on the underside, two hold the top half on and two the



lower. You only need to remove the top half. The cover with the PRNDIL on it is held on by two very small screws. Thread some cloth through the gaps so that should you drop a screw it can only drop onto the cloth and you can recover it. Remove the cover and the view will be as above. If you have to replace the globe this is where you need to get. Looking at the globe in the picture note the screw running swish ways underneath. This screw holds the pointer in place. Between the two washers under the screw is a piece of plastic. That is the remains of the pointer. First guess. Someone has needed to replace the globe and managed to break off the pointer! There is a slot in base of the pointer which allows adjustment of the clearance above the ratio plate. Don't make it too tight lest the pointer scratch the plate underneath. And do NOT over tighten the screw holding the pointer as you will break the pointer base.



### **WARNING – OIL PRESSURE GAUGE SENDER UNIT**



You are lying on the floor gazing in wonder at the one of the later attempts at replacement parts for the early Shadows and in this instance a Phantom VI. The sender unit is a nice brass base with a Bakelite-like insertion where all the gubbins goes. In this installation I have fitted 5 units each one has leaked but the latest one has not leaked but causes a display of oil pressure of about 66% of actual. Still its better than dripping oil in the Vice Regal Portico! Apparently I am not alone as my spares spies tell me. Here is an example of the real worry, the one that the perfect owners do not

wish to know and that is that the new people don't feel any particular compulsion to correct these manufacturing anomalies. And there is as I understand it no legal compulsion. As I have said before, it seems that we are on our own!



## SHRINKING CARPETS

A post-war car has not been made that doesn't have shrunken carpets. All those strategically placed press studs that never match up usually on the main floor. This is because the carpet is made of the very best wool which for reasons which quite escape me was not pre-shrunk. In this case I bet the boot was left open and the carpet got saturated. The gap by the way is 1 " the other side meeting the required margin. Nothing much can be done here other than a new carpet. One of Australia's wealthiest men and owner and lover of the marque was so taken with the carpet in his new Shadow many years ago asked that his Helicopter be similarly carpeted. Allegedly he was quoted at \$1000 per metre! Even he declined that innovation!.



## MANAGING YOUR ENGINE



Fuel injected cars require a lot of instructions about what they should be doing. These come from an Electronic Control Unit seen here in the picture bolted to the underdash on a 1987 Silver Spirit.. No big deal but you will notice the juxtaposition of the brake pedal and the large plug of the ECU. There have been cases where owners have flung their feet around there and manage to unplug the plug which causes the car to operate very strangely.



## NOT QUITE SURE

I had a large bottle of Balveney to offer as a prize for guessing the nature of this contraption. Unfortunately I drank the prize so the quest is off. Phil Sproston sent me the photo with no caption and no tempter Balveney. By now the brighter ones among you will recognise that the bit in the middle is the fuel tank from a 20/25. Fuel tanks of that era were made of pretty stout stuff and usually treated for rusting. Fuel however careful you be will still have water which being heavier than gasoline will sink to the bottom. With the car sitting in the sun on a hot day the water vaporises along with the fuel and eventually the inside gets a nice coating of rust.

Because of baffles in the tank you can hardly get your arm in there and scrub it out. Some operators have tried putting abrasive materials in there and vigorously shake the stuff around. Sort of reverse lapidary I suppose. But then you have to get the stuff out. Modern science has now produced mixes that will not only clean the inside of the tank but also etch it and then coat it with a ceramic like coating that should outlast the car. For that material go to the POR15 people <http://www.ppc.au.com/> who if you have not seen their products, there is a surprise for you.

Phil has had excellent results with this product however it is clear that the tank has to be rotated to ensure that the material gets all over the inner surface. If this does not occur the finished product will fail. The rotator you see in the picture does the job. For external finish use PO15 another of their products and then you will find the tank will outlast the car!





## ESCAPING DOOR PANELS

This is not an uncommon sight. As hard as you may push the pin into the panel hole it pops out again. You should remove the panel and you will find that the pin hole is actually recessed so the pin can't get right into it. This is caused by an impatient fixer getting a hammer to the panel as a gentle persuader. The task is to pull the metal out around the hole so that it is flush with the rest of the panel. This all assumes that the pin has not been damaged nor bent out of shape.

Pulling the 'hole' out needs a little ingenuity. I use a simple slide hammer on it with a bent hook that can be threaded through the hole and then gently hammered out.. If you don't have a slide hammer make up a puller. Pass a long threaded bolt through the hole from the back of the panel place a largish piece of pipe over the bolt from the outside with a washer on top and tighten. Keep checking it to ensure that you do not pull it too far.

For those that have laboured with Mark VI cars where the hold-down plates were simply hammered into the plywood at the back of the door you will be pleased to learn that later cars have a better plate which is pop riveted to the board. If it has to be done again which is rare the outer trim must be peeled back to get to the head of the rivet.

A little trick I do is using a small painters brush put white paint around the holes where the pins go through. Then when you are trying to line up pin and hole in the dark you can see where you are aiming for.





## A LITTLE SLEUTHING

There will be no prizes for guessing that the bits above were together as at left when it was an early Shadow hydraulic accumulator. As you know these reside in a carefully designed area at the left hand rear side of the cylinder block. I have suggested to the Royal College of Surgeons that in testing immigrant doctors' overseas qualifications and skills that they demonstrate their techniques at removing these units. When the Factory developed the unique leaking steering rack for the Shadow II, repairable only by our man at Penshurst Power Steering in Sydney as far as I can gather, the designers moved the front or number one accumulator to the right hand side of the engine and excelled themselves by placing it immediately behind the upper suspension mount on the front sub frame.

When extraction of this little darling has been mastered brain surgery will be simple! In between these two events the French got nervous about these things travelling on their roads and insisted on reducing their volume. Which was achieved by lowering the curve on the charging side of the sphere. Looking at the picture of the assembled sphere the charging valve is at the top. One becomes very aware of these units when the lights start ablinkin' on the dashboard more often than they should. Because these spheres are huge by comparison with their later mineral oil sealed units they can lose a lot of nitrogen before the lights start blinking. But even then owners will keep driving until the warning light will come on momentarily whenever the brakes are applied. At this point you have no nitrogen in the sphere and the only thing that is holding the warning switch open is the output of the pump. If the engine should stall there will be no pump and no brakes. This has been the fate of the above accumulator. The 'rubber' diaphragm has imprinted itself on the bottom of the nitrogen exhausted half of the sphere and temporarily bonded itself to the metal – hence the colour! The top half contains the usual crap found in cars with dirty hydraulics.

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## **JUST A REMINDER**

For those that do not subscribe to Praeclarvm I recently highlighted the need to change the arrowed pipe connecting the coolant pump to the heater tap the latter seen at the bottom of the picture. According to the Factory this must be replaced every two years come what may as it is under considerable pressure. These fitting pertained from the Shadow II until later fuel injected Spirits when they changed to the electric actuated tap on the block which I understand they pinched from the Ferrari!

When changing this rubber pipe take the tap off and clean it well and ensure that the cable is lubricated and free to slide in the outer casing. The cable seen snaking off to the right is actually operated from the servo unit under the dashboard.

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