

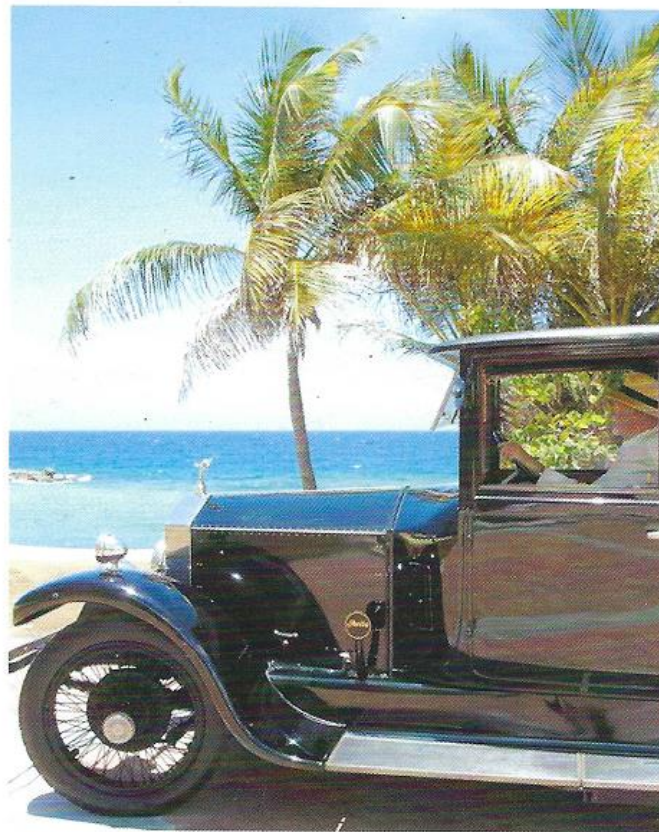
# Twenty

**Newsletter**

**Number 18**

**RREC**

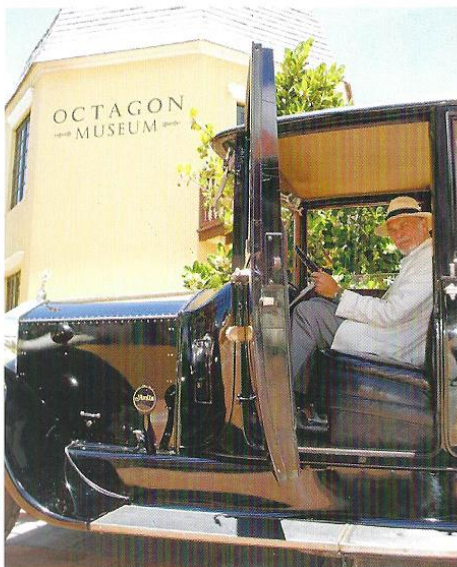
**November 2007**



### **Va va voom with a view**

Lucky Nic and Birte Møller live in Curaçao in the Netherlands Antilles (Dutch Caribbean). They own "Black Swan", GUK 24, a 1926 enclosed limousine landaulette by Hooper. See pages 2, 3.





Nic writes: "[we have] our family resort, Avila Beach Hotel, where incidentally we have hosted what we call Silver Ghost Winter Flings with attendance from all over the world including many from the UK. Regarding a 20hp winter fling in Curaçao, we would love to work with you on such a plan. The best connection is via Amsterdam where we have daily direct flights to Willemstad, Curaçao."

According to the original Hooper build sheets, GUK 44 was fitted with a set of Lucas *silver-plated* lamps and a silver-plated windscreen frame. It also had two polished mahogany "companions" - the lady's was fitted with a card case, note book and 8-day watch. The gent's was fitted with a cigar lighter.



Nic says: "All the hand tools came with the car except for two small spanners which John Fasal kindly found for me. Everything is there as originally delivered except for the small clock or watch attached to the lady's companion. Too much of a temptation for someone, I guess!"

Thanks to Nic and Hans-Hagen Advertising for supplying the photographs.



## THE TWENTY NEWSLETTER

No. 18

November 2007

The Twenty Newsletter is published for members of the 20hp Register of the Rolls-Royce Enthusiasts' Club. Any opinion expressed and advice offered in this newsletter is not necessarily that of the RREC or its officials and no responsibility can be accepted for the results of following contributors' advice.

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Cover Photographs – Ann Watkins in GYK 30 at Champ de Bataille, plus:

**Nic Möller writes from Curaçao:** In April 1926 G B Lambert of Park Avenue, New York, visited London and on the 21<sup>st</sup> placed an order at RR Motors for a 20hp chassis. By the 23<sup>rd</sup>, he was at Hooper & Co (Coachbuilders) in St James's Street where he placed an order for an enclosed limousine landaulette. Mr Lambert's detailed instructions as to how his landaulette should be equipped filled a page and a half. The chassis number was GUK 44 with body number 6565. The guarantee was issued on 1<sup>st</sup> October and Mr Lambert's new landaulette left London for New York by Cunard's S S Caronia on 7<sup>th</sup> October 1926.

Surely Mr Lambert must have enjoyed his chauffeur-driven landaulette for a number of years. The RR service records show a new owner in September 1941, Sidney Mellon of New York City. As so often happened during the war years records were lost, and the whereabouts of the cars were unknown from 1941 to 1951. In 1951 GUK 44 was acquired by William Pettit III of Louisa VA. Mr Pettit recalls that his uncle had seen the car parked on the street in Arlington VA and a deal was struck with the owner. The price was \$435.

It is remarkable that the Pettit family kept the little RR for 47 years until it was put up for auction in April 1998. As GUK 44 was acquired in such a delightful original condition, only very careful restorations were carried out. The engine was completely overhauled and the necessary mechanical items of the chassis were attended to. As the roof was leaking, two hides of the proper enamelled black leather (as described in the Hooper build sheet) were obtained from London. The interior woodwork of dark brown mahogany with inlay No. 3 was re-polished. The original trim of West of England cloth No. 1340 was still serviceable, as was the trimming of the roof and quarters with cloth No. 1442 (pleated, not buttoned!).



### Editorial and Readers Letters

Thanks again to the many people who have sent information and photographs. Please carry on sending technical tips, car histories, ephemera, and any other items you think might be of interest. Rough notes or polished articles – all are welcome! No input, no output. The next Newsletter is planned for May 2008.

Occasionally I have been asked by prospective purchasers to comment on cars for sale. This is difficult because different people require a 20hp for different purposes, for example for regular long-distance touring, occasional local trips, to restore, or to add to a collection and maintain in pristine museum conditions. Each 20hp is a unique work of art: if a particular example is wanted by several people, there will be lively bidding and the price could be high. If only one person is interested, the price might be low or it will remain unsold. Regarding restoration and repair, some people prefer to keep the historic patina wherever possible, and use repaired original or second hand components. This is an approach advocated by the Automobile magazine. Other people prefer to restore to factory-new condition, perhaps using some re-manufactured parts if necessary, à la Michael Forrest, for example. It seems that cars in good condition which are ready for touring, command relatively high prices and sell quickly. Cars in concours condition, but which might be less suitable for touring, command slightly higher prices, but often take much longer to find a buyer. Once you have homed in on a 20hp to buy, it is generally agreed that you should carry out a thorough technical assessment prior to purchase, and it is usually best to employ the services of an expert (amateur or professional), known by you to be trustworthy.

There seems to be a slight Australian emphasis to this edition of the Newsletter. I make no apologies for that; Australians are always keen to share their 20hp enthusiasms with the rest of the world. Good on yer!

I must mention a few members who have been on long rallies or tours recently. Andrew Sington's 2006 rally to Jerusalem is described on page 17. At Kelmarsh, Graham and Mary Moore won the Harvey Bailey Trophy for Enthusiasm, and they certainly earned it, see page 15. During May 2007 they went on the Scottish Section Weekend, then caught the ferry from Edinburgh to Zeebrugge and drove down to Louviers in Normandy for the 20hp holiday, before returning home in the Wirral. A total of 1,550 miles, and that was just one of their trips this year.

The Euro Rally was held at Bad Saarow which is east of Berlin near the Polish border. Three 20hps took part, one from the North Wales (David and Jane Else), one from Germany (Michael, Katrin and Niklas Brechmann), and Fred and Joy Kilpatrick from Guernsey.

Fred and Joy deserve a medal for their endeavours. They sailed from Guernsey down to St Malo and drove up to the first overnight stop near Caen in their Barker tourer (featured in Newsletter 15). The next night was spent in Riems, then another in Germany before reaching Bad Saarow at the end of the fourth day. They had not pre-booked accommodation en route so at each town they had to find a suitable hotel

with secure parking (thank goodness for Michelin Guides). And the weather was atrocious, as were the hundreds of miles of Autobahns. On top of all that, they had to deal with a puncture. However the rest of their rally was fault-free. Things got better in Bad Saarow; Fred told me the weather was beautiful, the rally was well organised and the company was excellent. He and Joy enjoyed themselves so much, they have already booked for next year's Euro Rally in St Moritz. After travelling back to Guernsey by a similar route, again on their own, Fred and Joy had covered well over 2000 miles. During the trip, Fred was testing his recently-fitted Laubtec battery charging control system (see page 10, and Newsletter 17).

### **Welcome to new 20hp owners**

David and Thea Cornish, Victoria, Australia GH68 1924 Martin & King 4 dr saloon (see p 6)

Terry Davis, Lincs GFN 48 1928 Park Ward Landaulette (see p 31)

Paul Haxell, Surrey GMJ 74 1927 Weymann saloon (photograph in Fasal, p 307)

Mrs S Leake, Derbyshire GPK 2 1924 Park Ward ¾ coupe

Mr and Mrs M Morton, Lancs GF 23 1923 Hooper tourer

M Pockrandt Habichtweg, Germany GEN 65 1929 Mulliners saloon

Brian and Wendy Fidler, Oxford GAJ 15 1927 Brewster brougham (see p16)

### **Forthcoming Events**

**Annual Rally**, 20-22 June 2008: we will have our usual impressive line up of cars and ever-popular lunch time social.

**Brittany**, 23 June-1 July 2008: this is fully booked with 26 cars. Please let me know if you wish to be added to the waiting list.

**North Wales Weekend**, 5-7 September 2008: see next page.

### Letters

From **Colin Hughes**, by e-mail:

...the 20 Newsletter - very interesting content. Your postcard at top of p2 [Newsletter 17] is a Ghost Hooper cabriolet - you can see the oil tank behind the spare wheel and the cantilever spring along the valance. Sorry.

*Oh dear! Maybe I should use low resolution photographs in future! - Ed.*

From **Peter D Price**, Woldingham, Surrey

Thank you for bringing to my notice the problem with some rotor arms, reported by Tony James. I have been struggling over the last couple of years to get my 20hp to tick over as smoothly as it used to.

I sent my rotor to Ristes who returned it within 24 hours (I bought it from them) correctly altered. My car now runs very smoothly and the tick over once again is slow and even. I have spent many hours trying to get the engine right but would never have thought the rotor was manufactured incorrectly. See photograph p. 31.

*Note: in the Register we have another Peter Price, who lives with his wife Jan in Sidmouth.*



### **20hp Weekend - three nights in North Wales, September 2008**

(Organised by David and Jane Else)

Plans are under way to have a 20hp Register Weekend in North Wales, the 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> September 2008. We have provisionally booked all 19 rooms at a lovely independently owned country house hotel (the Bron Eifion Hotel <http://www.broneifion.co.uk>) set in five acres of beautiful gardens near Criccieth. It is an area of outstanding natural beauty on the fringes of the Snowdonia National Park. We have been given a very favourable rate providing we occupy all the rooms for the three nights, Friday, Saturday and Sunday. No rooms are available for the Thursday night as the hotel is fully booked the previous week. Anyone wishing to stay on beyond Monday is offered a favourable rate for dinner, bed and breakfast. The rooms are deluxe, superior and standard but all, in our opinion, are of a very high standard with en-suite facilities. All have a bath with shower apart from two which have a shower only. The hotel has no lift. The majority of bedrooms are on the first floor.

The weekend is planned for you to enjoy the scenery of North Wales. You will be given detailed suggested routes for Saturday and Sunday but of course you are free to plan your own itinerary. No midday meals will be arranged. There are plenty of inns, hotels etc. in the area. On Sunday evening dinner will be preceded by canapés and sparkling wine, accompanied by a harpist.

For the three nights half-board, with two persons sharing, the total cost is expected to be £565 for a Standard room (twin or double), £635 for a Superior room (twin or super king) and £690 for a Deluxe super king room.

**This is for 20hp Register members only for the first month. Then it will be offered to all club members.**

If you're interested please let me know **as soon as possible** with your deposit of £200.00 per couple (refundable if cancelled, provided the room can be re-allocated) made payable to **"20hp Register, RREC"** and send it to David Else, 5 Copthorn Road, Upper Colwyn Bay, North Wales, LL28 5YP enclosing a stamped addressed envelope **or your email address** and I shall send you an application form.

From **David Cornish**, Australia

You might recall my wife Thea and I met you briefly at the mini lunch at the rally - when we discussed joining the register. From our surname you will appreciate that I am from Cornish stock - my grandfather and great grandfather were flour millers in Cornwall and my cousins still live there and also in west Devon. So each visit we spend time in those parts. The two mills still exist and are now residences. We always receive a great welcome from the existing owners. Last year we were in St. Austell (cousins) and then went on to see the Cornish beam engines just out of Redruth and also at Pendeen (the only one still steam driven), but this year only

ventured as far as Liskeard. My wife always insists on going to Kernow Mill - great shopping, although mostly for the tourist.

My first Bentley was an R-Type 1954 which I still have after 30 years or more (actually I have given the R-Type to my son, but he has nowhere to keep it. Dad still has it on the farm). My second was a T-Series - sold to update to a 1993 Brooklands. 1924 Saloon GH68 is my first excursion into RR! (See pages 13-15)

From **Brian Fidler**, Oxford

I have recently acquired GAJ 15 with body by Brewster, a 1927 20hp which has spent most of its life in the USA. It bears an uncanny resemblance to the one on the cover of May's Newsletter 17 (grey/yellow), the wings in particular, as well as the windscreen, being identical, see page 16.

My car was shipped out on SS Laconia on 23 April 1927, and bodied by Brewster as a "panel brougham" for Mrs A L Sylvester of the Plaza Hotel, New York. It was subsequently owned by J S Stewart of 500 Park Avenue, New York and later by E I Kearns of Hartford Connecticut - all of them "high-rent" addresses!

It then disappeared entirely in "collections" until it was repatriated into the UK on 13 August 1991 by K C Hart. It is unbelievably original. Every detail reflecting the RR build sheets (even down to individual instruments and "extras"). The upholstery, both front and back, is as fitted by Brewster 80 years ago, complete with speaking tube to the driver and enamelled silver door handles and window winders. My first tasks are to sort out the starting carburettor and magneto, together with clearing out the sludge traps in the crankshaft (there is no mechanical history with the car whatsoever, so better to be safe rather than sorry!). The colours are burgundy and black, with grey buttoned cord to the rear.

### **Technical Notes and Letters**

**What spark plugs?** Follow-up from Newsletter 17 by the Editor

Last March I fitted a set of NGK BP6ES long-reach plugs, using suitable adaptors, and monitored the performance of the car. As predicted in Newsletter 17, the major finding was that *on the open road* I could run with the mixture control 2 or 3 notches leaner with no popping from the engine. Leaner mixtures burn more slowly, so they require the ignition to be further advanced; I decided to re-set the distributor so the points open 5 degrees earlier than the mark on the flywheel. (It has been argued that we should do this anyway, Technical Manual 2, page 108.) With this setting, and the hand control fully advanced, there was no "knocking" even when the engine was deliberately laboured by accelerating from walking pace in top gear. I guess this is because the ignition timings were originally optimised for 1920s petrol which had an octane rating of about 55-60, compared with 90+ today. The Table below shows my measured petrol consumption on several long trips, before and after fitting the new plugs and adjusting the mixture and ignition timing. To get meaningful data, the tank was always filled to the brim and the odometer reading recorded at the same



time. Also I did not include intermittent periods of short local trips, so the "Miles" column actually shows somewhat less than the real mileage for each complete trip.

Checking the NGK BP6ES plugs after 3,900 miles of motoring since May 2007, they were of the desired beige colour, clean and with correct gaps. A quick wire brushing was all they needed.

...was all they needed.					
Date	Trip	Miles	mpg	l/km	Average mpg (l/km)
June 04	Loire	914	<b>18.1</b>	0.156	<b>18.35 (0.154)</b>
May 05	London	381	<b>19.1</b>	0.148	
June 05	Loire	920	<b>18.6</b>	0.152	
June 06	Brittany	550	<b>18.3</b>	0.154	
June 06	Annual Rally	562	<b>19.3</b>	0.146	
Sept 06	Shropshire/London	873	<b>17.8</b>	0.159	
March 07	Jersey	389	<b>18.0</b>	0.157	
Fitted new plugs, weakened mixture and advanced ignition timing					
May 07	Normandy	811	<b>20.7</b>	0.136	<b>20.3 (0.139)</b>
June 07	London/Annual	740	<b>19.8</b>	0.143	
July 07	20hp weekend	368	<b>20.6</b>	0.137	
Aug 07	Devon	231	<b>20.9</b>	0.135	
Sept 07	Walton Hall	439	<b>20.0</b>	0.141	

So, it seems that mpg has improved by 10%. And the down side? Well, because the engine runs leaner on the open road, it does tend to stall whenever I come across a roundabout or red traffic light and have to stop. I need to remember to enrich the mixture by two or three notches and move the hand throttle two notches up (ie change to the "town setting".) But hey! Isn't that just what we are supposed to do? The INSTRUCTIONS, in the sections on mixture control and slow running, say: "with a well-warmed engine and normal touring conditions, it can be taken a few notches towards **Weak**" and "The best slow running will be obtained with the mixture control set two or three notches **Strong**". In 1925 Rolls-Royce published an internal Report on engine efficiency and petrol consumption in their New Phantom car. It is interesting to compare their conclusions (see page 27) with the observations, above.

Maybe we have become lazy, and extravagant with petrol, rather than take the trouble to use the correct long-reach plugs and adjust the mixture according to the driving conditions - as we are instructed to do! One final caveat: in the above data, there might be other factors to take into account, for example it could be argued that some of the observed improvement was due to my subconsciously driving more carefully (but I would deserve that for five months!). Also the car had an engine overhaul in August 2006, when cylinder liners and new pistons and big end bearings were fitted. However there is no evidence that this improved mpg - rather the opposite, if anything.

Footnote: Andrew Ayres wrote to say that he found long-reach NGK plugs BPR6ES were unsatisfactory because they oiled up, and he now uses Champion N12YC without adaptors. A useful website is <http://www.spark-plugs.co.uk/index.htm> which explains the code numbers of all Champion and NGK plugs. According to

this site the "R" in Andrew's NGK plug number indicates that it incorporates a resistor. The web site goes on to say that "R" plugs should only be used where specified, because they reduce the voltage and can increase HT "noise".

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### Lubrication

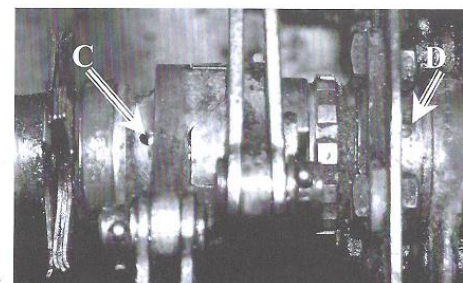
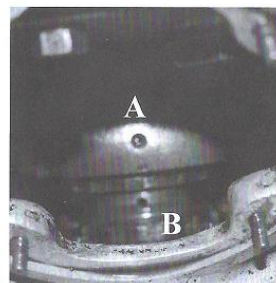
If all else fails - *read the Instructions*

Recently I've come across instances where problems arise if our cars are not maintained as per the "INSTRUCTIONS FOR THE CARE AND RUNNING OF THE 20HP ROLLS-ROYCE CAR". There are dozens of nipples to pump, holes to oil and linkages to lubricate, so maybe it's not surprising that some of them get forgotten. At the Hunt House technical seminars, Steve Lovatt always emphasises the importance of regular maintenance, and says you should carefully mark each service item against his comprehensive check list as you do it.

### **Clutch and brake servo shafts**

There are five important oiling holes under the front floorboards which are sometimes forgotten. Two are inside the clutch inspection cover. The first (A) is easy to see on the top of the clutch trunnion, and a few drops of oil every 2,000 miles are needed to lubricate the ball thrust bearings. The second hole (B), in the clutch shaft, is normally invisible, but you can expose it by rotating this shaft *with the clutch pedal depressed* and the gearbox in neutral. A few drops of oil here every 5,000 miles lubricate the ball race at the front of the clutch shaft. The third clutch oiling hole serves the bearings of the clutch withdrawing shaft. This hole, rather bizarrely, is exposed to the outside elements near the gearbox filler plug and there is a clear photograph of it in the INSTRUCTIONS. All these are obviously very important bearings to lubricate. With modern oils, less frequent lubrication might be okay, but even with low mileage cars, once-per-year is probably advisable, to keep the bearings in good order.

The fourth and fifth oiling holes (C, D) are on top of the brake servo shaft, and are also very important - this shaft must be able rotate freely in its bearings for the brake servo to operate efficiently. These two holes are exposed to everything flying around under the mahogany floor boards and tend to fill up with black crud, becoming quite invisible. They should be poked out and, according to the INSTRUCTIONS, treated to just a drop or two of oil *every 1000 miles*.





### Aerosol Grease

We are fortunate that chemists have developed greatly superior fluids since the 1920s, and I'm thinking about engine coolants, petrol, oils and greases, sealants etc – all of which make driving and maintenance so much easier today. Special aerosol greases have been designed for tough applications such as motorcycle chains, but they also work well on 20hps. Wynn's "Clear-lube" is applied via a long thin flexible nozzle to the exact point where it is needed, so there is little waste. Clear-lube squirts out the nozzle as a thin fluid which penetrates into every small crack. The aerosol propellant evaporates leaving a colourless tenacious sticky film of synthetic grease over the working parts. It sticks like the proverbial to a blanket and contains PTFE so is extremely water-resistant. Try it on the control linkages of your engine and brakes, the ball joints in shock absorber links and between the leaves of road springs etc. The aerosol makes it so easy to lubricate your road wheel splines!

### Engine Oil

By modern standards, old engines were built to very slack tolerances, so they need relatively thick oil and very regular maintenance. Pre-war Rolls-Royce cars have survived in great numbers, compared with many other makes, because every component was carefully designed for longevity, and skilfully manufactured and assembled using the best materials and quality control methods available at the time. Also, the cars were in general well maintained by their owners, and returned regularly to Rolls-Royce for servicing.

In pre-war engines, unburnt petrol gets into the oil. The petrol reduces oil viscosity and some of it oxidises to give particulate carbon (which is abrasive) plus acidic water (which is corrosive). Furthermore, the oil pump effectively delivers this black corrosive grinding paste directly on to the centre crankshaft bearing. This is why we are "instructed" to change the engine oil every 2,000 miles. In the past, Rolls-Royce engineers would carry out a regular "bottom de-coke" which involved dropping the sump to clean out the sludge and remove the hard deposits which collect inside the crankshaft by centrifugal force, and eventually can block the oil passage.

For decades now, experts have advocated fitting full flow oil filters to pre-war Rolls-Royce cars. In an early 1970s Bulletin, Cliff Robertson described how to fit a full-flow filter to a 20/25 (see Technical Manual 2, p84), and R A Lowe wrote further on this topic in Bulletin 139 (1983): "It seems to me that oil filtration should be seriously considered by owners". In 1990 (Bulletin 178 page 41) Will Fiennes discussed lubrication in pre-war engines, and advocated full-flow filters.

Using a full-flow filter with 20W50 multigrade oil, and changing both oil and filter at 6-monthly intervals (or more frequently) will:

- Maintain oil viscosity and operating pressure
- Minimise wear in all bearings (especially crankshaft) and gear teeth
- Eliminate deposits inside the crankshaft, vibration damper, rocker shaft, cam followers, oil galleries and sump
- Prevent internal corrosion due to acidic water (from oxidised petrol)

**NB:** Some experts recommend that, if you *don't* have a full flow filter, you should stick with monograde, or straight, oil. The reason is that multigrade oils contain detergents (dispersants) which very efficiently hold the individual particles of carbon in suspension, so the oil can actually become *more* abrasive. Better to let the carbon particles aggregate into clumps and settle out, in the sump and crankshaft! Further, it has been suggested that accumulated sludge can be stirred up if multigrade oil is added to an engine which has been run on straight oil for a long time. At worse this could lead to blocked oil ways. Therefore, **if a full flow filter is fitted to an engine which is already sludgy, the safe option might be to continue using straight oil** until the engine is internally cleaned and de-sludged. It will then be safe to switch to multigrade oil.

There was a vigorous debate about this in Bulletin 222 (May/June 1997). Don Weber from Texas quoted research from Mobil Oil Laboratories which proves that new engines (with oil filters) suffer *much* less wear with multigrade detergent oil, compared with straight oil. This is not contentious. However the Mobil work goes on to say that putting detergent oil into a sludged-up engine does not dislodge the sludge, and there is no danger of blocked oilways. But in the same Bulletin, Ken Lea vehemently disagrees with this, saying that he has spent 25 years directly in the engine industry working on engines of many types, and knows that detergent oils can break large lumps of carbon compounds from a mass of oily carbon-based deposits. The lumps can enter an oilway, block off the oil and cause catastrophic failure of the bearing. Ken says: "This is well known in service circles".

Of course, experts will have somewhat varying opinions about exactly how to lubricate a pre-war car, but they do seem to agree that the most important thing is to change the oil frequently (every 6 months or 2,000 miles preferably); by comparison the quality (ie price) of the oil is less important. Also you should use relatively viscous oil – either straight 40 or a multigrade such as 20W50, or 15W40. Multigrade oil should only be used in conjunction with a full flow filter, especially if you do a high yearly mileage. There have been numerous good articles on pre-war engine lubrication in the Bulletin; most can be read as reprints in the five Technical Manuals, available from the Hunt House shop. These articles should help you to make up your own mind.

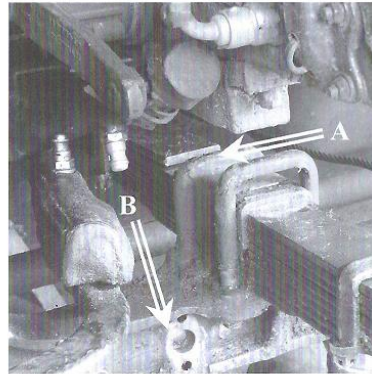
Ironically, one problem is that our car engines were built so strongly that they are able to tolerate many years of outrageous abuse. There are many reports on how they just carry on working, after a fashion, until gears and bearings within the engine gradually become worn away, sometimes beyond economical repair. Darrel Butcher in the USA recently wrote of his restoration of a 1935 20/25: "*That car had a big-end purr as we drove across the US to California so we took care to keep the engine loading away from the conditions that encouraged the knock. When torn down #4 was running bearing shell against crankshaft journal, yet the crankshaft journals were well within original tolerances. Very strong! The main bearings were very worn, with the wear largest in the middle and reducing towards the two ends of the*



engine. We had the crank main journals hard chromed and reground back to original dimensions." (rrbew website)

Surely our cars deserve proper lubrication, and it behoves us to look after them for at least another 80 years!

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#### **20hp/20/25 and 25/30 Spring Removal**

Contributed by Andrew Sington

Some years ago I wrote a brief article regarding the importance of spring lubrication and how to clean them properly. Well-lubricated springs give a far better ride than dry ones. A 'house-keeping' operation of relevance to 20hp owners: the springs MUST be kept well oiled BETWEEN the leaves and any attention is better than none, and will reward you with a hugely improved ride.

During my mammoth trip to Jerusalem last year, I had the misfortune to hit a pot-hole in Serbia. Upon closer investigation a few weeks ago, I saw it had resulted in the failure of the main leaf on the front off-side spring. The way the springs work can result in a twisting motion and fractures result when certain stresses are input. I was experiencing unusual steering characteristics, specifically wandering on corners (not the result of intoxication), so I had to check the geometry at the front end. This is not rocket science – you just need a metal 'tape' measure. The build records give all the specifications of the springs and the heights above road surface etc. One particularly relevant measurement is recorded as Buffer to axle. One side was decidedly closer than the other – ergo SOMETHING was wrong!

Gaiters had to be removed - a messy job - but once off the problem was obvious. The main leaf had fractured just to the rear of the U-bolts (see A, illustration this page). With driving, a gap of around 1" had developed, thus the whole geometry of the front end was seriously out-of-alignment. Removal of the spring was next on the agenda. Talk to a mate if you need, but primary school physics is all that is needed.

Secure the chassis on a good quality axle stand and remove the road wheel. Preferably raise the chassis about 6". Now disconnect the shock absorber drop activating arm at the axle end, push it out of the way and remove the small ball joint on the axle, ie 2 small nuts and bolts (see B). This is important, otherwise you can't get at 2 of the nuts on the U-bolts.

Put a hydraulic jack under the axle and raise it until the chassis is about to come off the axle stand. Now remove the 4 x U-bolt nuts under the axle and spring. These are castellated and can be pretty difficult to shift. A bit of WD40 and a wire brush will reveal the split pins. Once off, let the axle drop SLOWLY and it should come

away from the spring at the U-bolts. A sharp slap with a 3lb hammer should do the job – but make sure the axle can be lifted as you will need to do that on reassembly! Look out for spacers - in my case there were none, but this is not always so. IF you have them, note CAREFULLY how they come off so that you return them the same way.

You now have to remove the aluminium cover over the rear pinion – 3 x small nuts and it just drops away, and then the pinions at each end of the spring need to come out. The pinions are again held by a single castellated nut and once off, the 3lb hammer comes into its own! You may need to use a punch to push it right through. That's the easy bit – the spring is pretty heavy so be careful when you pull it out. The front end can be tapped out in a downwards direction if it doesn't drop under its own weight, and then slide out.

This is as far as I have got - I now need to have the spring rebuilt. Tony James (that 'font of all knowledge') has given me a contact, so we will see what happens and hopefully report in the next issue.

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#### **Twenty Projects**

**P Craig Hannum**, Origen USA, writes:

"(at the Annual Rally) I spent about an hour with Tony James and he was very helpful advising me on my rebuild of GMJ 1. It's been a complete restoration and the main purpose of my visit was to garner information. Of course, seeing all the attending 20s was a real help. I'm getting close to finishing the chassis [see page 15] and this winter will be directed to its Park Ward landaulette body. Much of the wood has been replaced so hopefully re-attachment to the chassis, assembly, paint and upholstery will get it back on the road. It has seen some hard times."

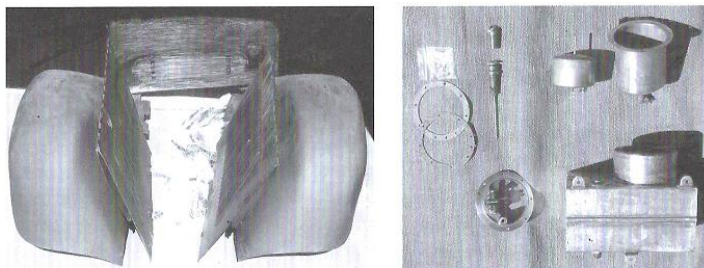
**David J Cornish**, Benalla, Victoria, writes about "A Barn find in Australia"

"As an active member and leader of the Scout Movement for over 50 years I became interested in the presentation Rolls-Royce 20hp given to Gen. Baden Powell in 1929 to mark the 21st birthday of the Boy Scouts. I am indebted to Ben Grew for his interest and for taking my wife and I for a ride in the car GVO 40. I was quite impressed, and when told in October last year that a 20hp was available in Canberra, I followed up the lead. It turned out to be a 1924 Saloon GH68 which was off test March 1924 and fitted with a Windovers cabriolet body. However this was immediately removed on instructions of the Australian agent, and a Barker tourer body fitted. It was shipped to Australia in June 1924. In 1937 it was rebodied by Martin & King in Melbourne. Many Twenties, as well as Silver Ghosts and Phantoms, were rebodied in this country in the 1930s due to the originals being outdated, or more often simply falling apart as a result of our mainly gravel corrugated roads in that era. The car was 95% complete, missing only (as far as I can see) magneto and rear shocks BUT it had not been moved for over 30 years. During that time rats and mice had demolished most of the inside and so it was a complete restoration project. The owner (of over 40 years) was very gracious saying



he "just wanted it to go to a good home - where it would be got running again and cherished", so when he even agreed to deliver it to our farm some 350 miles from Canberra, a deal was done. Delivery was on 4th January 2007, whereupon dismantling commenced, starting on engine and ancillaries. With such an operation there is always good news and bad news. First, the radiator tested OK, and the shutters are perfect. Second, the water jacket sideplates are both cracked and will need to be replaced, and the block also has a large crack - both caused by the car being left out in the open on a frosty night without protection. The experts are at present considering the pros and cons of a repair. In the meantime we are in the process of making a new battery box, new instrument board and replacing some of the wooden body frame. I was able to pick up a magneto on e-Bay recently.

So the project continues with much cleaning of accumulated dirt and grease. I have to thank many RROC (Australia) Club friends who have assisted me, as I am not a



Wings, bonnet and Autovac stripped and renovated ready for painting

mechanic, particularly Bob Clarke (Wagga), David Davis (Sydney) & Noel Baker (Kilmore).

Some interesting facts: the car has had 10 previous owners, however 3 of them account for 67 years. In 1937 the car could not be registered with the original headlights, so a pair of P100s was fitted. When I received the car, I was presented with two boxes containing the original lights, still with the car after 70 years. A decision has been made to keep the 1937 body, so as to keep this piece of Australian motoring history intact. The project continues as time permits."

**Martin Bennett**, provided the pictures of David's car, writing: *"Many Twenties, as well as Silver Ghosts and Phantom Is, were rebodied in Australia in the 1930s due to the original coachwork becoming outdated or simply falling apart in the colonial conditions, while the Rolls-Royce chassis remained perfectly sound. GH68's saloon coachwork is the work of the most prolific of Australian coachbuilders, Martin & King of Malvern (a Melbourne suburb). The body dates from 1937. Many of these 1930s rebodied cars end up rebodied again as restorers opt for more glamorous replica tourers and the like, but David is restoring GH68 with this piece of Australian motoring history intact."*

#### Projects in Hand



P Craig Hannum's GMJ 1, 1926 Park Ward landaulette under restoration in Craig's tidy workshop



David and Thea Cornish's GH68, 1924 20hp, now with Martin & King body.

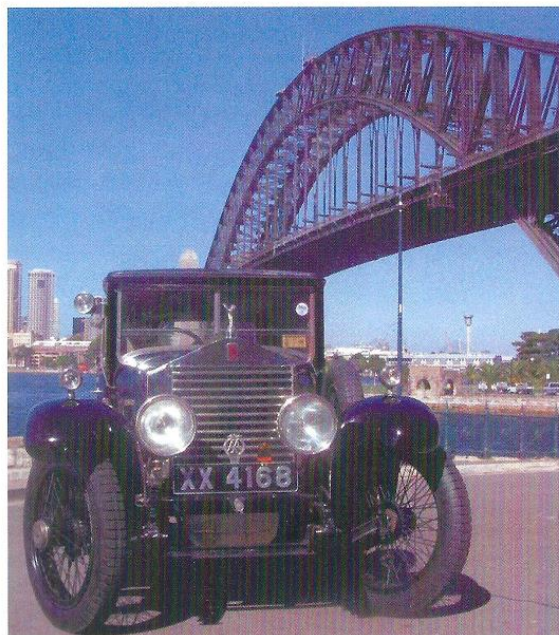
Photographs courtesy of Martin Bennett







**Brian and Wendy Fidler** who live in Oxford have just bought this 1927 Brewster landaulette, GAJ 15 (letter page 7). They also own a wonderful 1919 Silver Ghost which has a Hooper body on an Alpine Eagle chassis, 25AE, all original.



**C David Wales** from Gloucestershire owns GDK 22 which is a 1924 Hooper Doctors coupe. He writes:

"In 2004 my wife and I did the Australian part of the centennial rally and I thought you might be interested to have a photo of XX 4168 under Sydney Harbour Bridge. She was the only 20hp to complete the whole trip from Brisbane to Melbourne, although others did join along the way. We lost the starter motor (clutch failure) almost immediately but in the Australian climate starting with the handle was easy. We had few other problems."

# **Congratulate the Winners at the 2007 Annual Rally and Concours**

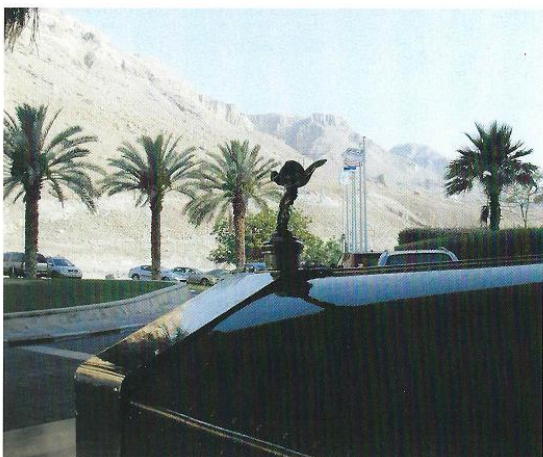
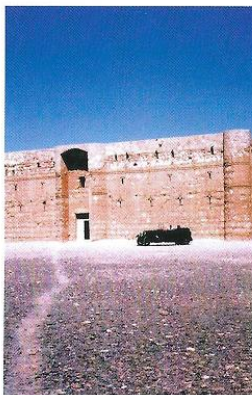


- A) **Graham and Mary Moore** (GWL 16) receiving the Harvey Bailey Trophy for Enthusiasm, see page 4 (Thanks to Colin Hughes for supplying this photograph)
- B) **John Eastwood** (GXL 66) with the Class 5 Touring Trophy
- C) **Peter Vacher** (GSK 15) won Class 5 First and Trophy, and also Class 5 Elegance
- D) **John and Vicky White** (GFN 71) proudly hold Michael Forrest Trophy (Pre-War Conservation Class)
- E) **Andrew Sington** GOK 65 won the Hugh Keller Trophy (20hp with the highest mileage during the past year), see page 17
- F) **Graham Dutch** (GTM 14) won the Spirit of Ecstasy Trophy (Etat Pre-War)





## Just Deserts



Top: Denis and Jill Wilson's GUY 17 (Horsfield tourer) in the Gobi Desert. Photographs supplied by Chris Mower and Glen Grindrod.

Middle: Jean-Pierre and Alexandra Müller's GKM 22 (Barker cabriolet) in Jordan.

Bottom left: Andrew and Sally Sington's GOK 65 (Thrupp & Maberly tourer) by the Dead Sea.

## Just Deserts

**Jean-Pierre and Alexandra Müller** live in Switzerland and love rallying (this year, Jean-Pierre completed the Peking to Paris Motor Challenge in his Bentley 4.5 Le Mans tourer). He wrote to me about the difficulties of driving a 20hp in a mixed-car rally:

"...Owning also a 20hp for more than 20 years I joined a Mozart Tour around Austria this June [2006] with the 20/Ghost Club, a rather demanding journey all around the country and over several passes on the South Alps, amongst others the Grosser Glockner. The passes in Austria are quite a bit longer and steeper, up to 14%, than the Swiss ones, but no car had any kind of difficulties, neither the museum quality Ghosts, nor our one and only Twenty, GKM 22. The Ghosts are all quicker than the Twenty, specially climbing, but have to be very careful downhill, with their weight and 2-wheel brakes, a fact that allowed me with good brakes on 4 wheels to catch up to some extent the time lost.

This is the difficulty with the Twenties - any rally or tour which is not solely for 20hp or Ghosts is, by far, too demanding. The legs are calculated for an average speed not of the Twentys with their, sorry to say it, lack of horsepower. Not so long ago I was optimistic enough to take part in the London to Lisbon Rally. When all other participants had 6 hour legs, we took at least 9 hours. Very frustrating to arrive when everybody else is at the bar or dinner table! The only consolation was that we never had anything to fix. The solution to rally participation was that I now own three different types of Bentleys, and unfortunately the Twenty leaves the garage less frequently. ...What a pity - such nice cars they are, sweet running and utterly reliable, but mainly usable when you travel alone. Mind you, I also did, some years ago, a Jordan rally with the RREC.

All other cars were shipped to Aqaba in Jordan, but we on the other hand drove from Switzerland to Athens and sailed with a Ferry from Pireus to Haifa. From there, by road down the whole of Israel, through the Negev Desert, crossing the border for Aqaba to meet the rest of the group. Then the trip through the country where Laurence of Arabia fought, camping in the Wadi Rum with its magnificent sun set, the magical town of Petra, looking like Moses, over the Golan Heights into the Jordan Valley - all this was a terrific experience. After the city of Amman we enjoyed a black tie reception by the Jordan Government in the ruins of the Roman City of Jerash. Whereas all other cars left then for loading on the ship in Aqaba, we drove again into Israel after a swim in the dead sea, checked in vain whether we could walk on the Lake Genezareth, visited Jerusalem and drove back to Haifa for the Ferry, again to Athens and back home over the Alps."

**In May 2006, the 80<sup>th</sup> birthday year of his 20hp, Andrew Sington** participated in a London-to-Jerusalem rally organised by a charity, the Jewish National Fund. The route passed through France, Switzerland, Lichtenstein, Germany, Austria, Hungary, Serbia, Macedonia, Greece and Turkey. The car was then air-freighted from the Asian side of the Bosphorous to Tel Aviv. Andrew's full account of the trip can be read on the RREC website. Here are some extracts:



*"I have always kept a log-book of all petrol oil and water fills etc, and after a few days I noticed that the mpg was between 18 and 20, as compared to less than 16 in the UK. It was suggested that this may be due to the long runs; I am doubtful of this as I do long runs in the UK. I suspect it is more to do with the engine running at much higher temperatures. To date we have been running at between 80°C and 85°C; this was to climb to well over 100°C later in the journey. The car ran beautifully all the way from The Dead Sea to Arad, an incredible drive from 1300ft BELOW sea level to 650ft ABOVE sea level. What a relief! Mind you, I should have relied more on the genius of Sir Henry Royce.*

*Overall, the car covered 3740 miles at 19.75mpg, used 9.5 pints of oil and a similar quantity of water. I put plenty of air in the tyres and replaced NO PARTS AT ALL. What an accomplishment for an 80-year old vintage 20hp Rolls-Royce!"*

\*\*\*\*

#### **How to improve the 20hp charging system:** follow-up to article in Newsletter 17

Several members have investigated the modern charging system described by Ralf Storandt in Newsletter 17. To recap, Ralf uses a Laubtec regulator to continuously adjust the output of the dynamo (up to a maximum of 20amperes) to keep the battery at its proper state of full charge.

Fred Kilpatrick, who regularly goes on long tours, fitted a Laubtec regulator before embarking on the Euro Rally (see page 4), and told me how pleased he is with it. He doesn't need to worry about whether and when to flick the charge switch "on" and the battery is always fully charged. Comforting thought when you are 1,000 miles from home! Fred set his unit to 15A maximum. Even then, once when he went for a short run, inadvertently starting with a "low" battery, he found that the dynamo became worryingly hot.

David Else has spent some time investigating the options and collecting information from other interested people. The regulator has two trimmer screws; one adjusts the voltage (as supplied it is set at 14V), and the other adjusts the maximum dynamo current, within the range 10A to 40A. The part number of this regulator is 12V PBR 10-40A, and it costs €95 plus post etc. Janet Stocking bought a regulator but her electrician was unable to make it work. He fitted a mechanical regulator which is working fine. Brian Le Page bought a Laubtec regulator, but found it was of a different type from that shown in Newsletter 17. He has modified the wiring circuit, to make it work successfully (Brian has written a detailed report, see below). David feels that 20A is too high a load for the uncooled 20hp dynamo to sustain safely. There was some debate about what the maximum charging current should be; it should probably be in the range 10-15A. If you want further information on any of the above, please contact David Else: [elsedavid@talk21.com](mailto:elsedavid@talk21.com)

For the time being, David has decided not to fit a Laubtec regulator to his car, partly because he rarely does a lot of night driving. Like me, he uses a voltmeter to tell him when to charge the battery: viz when the voltage drops below 12 – switch on; when the voltage rises above 14 – switch off! This method protects the battery and

greatly prolongs its life, because it never becomes unduly discharged, and never suffers long periods of overcharging; however you do have to remember to glance at the voltmeter at regular intervals. I live down in the wilds of Cornwall and often have a long drive home in the dark after a trip or rally, so I use bright LED (light-emitting diode) bulbs in the two front side lights, four tail lights, three brake lights and the flashing indicators. LEDs are similar to fluorescent bulbs in being much more efficient than conventional tungsten filament bulbs. For a given light output they reduce the electric current by a factor of 5 or 10. Thus the nominal total power, with all lights blazing (including two 36 watt tungsten headlamp bulbs, the instrument panel lights, and of course the ignition system), is not much more than 100 watts. It seems the old dynamo can cope with this indefinitely.

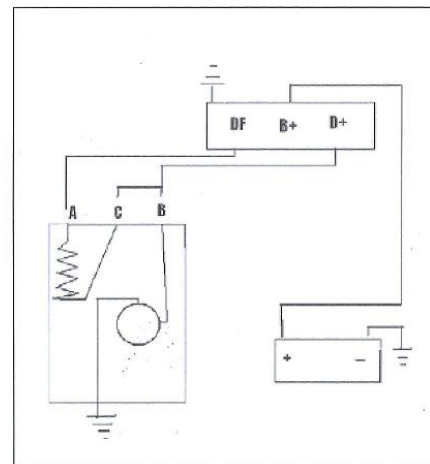
#### **Letter from Brian le Page to David Else:**

"Thanks for the material you previously sent re Laubtec regulator. Just to update you, I installed the regulator as per notes/diagram in 20 Newsletter and it would not work. However I did manage to work it out, the problem being that the field circuit on this regulator regulates field circuit to earth and the diagram shown in the magazine and also the way most British regulators operate is D+ to field with fixed field earth. This has meant internal modifications to dynamo. I have enclosed instructions and diagram in case you are going to try it out:

First remove dynamo and note original wiring connections to terminals marked A, B, & C.

A wire goes to earth via cut out box [this wire will be disconnected on new system]

B is D+ output to battery + [this will need re-directing to terminal D+ on new regulator].



C this cable is the switched positive from I&C position on dash switch panel which manually switches the charging system in and out with a fixed output [this cable will need to be removed from switch position on dash and connected to terminal marked DF, on new regulator, the other end of this cable will need to be moved from connector C on Dynamo to its new position on terminal A. the reason for this will be explained. later].

**Internal modifications to the dynamo:** first remove the thinner 3rd brush as this will no longer be needed.



The internal connections to terminals A, B & C will be as follows:

**A** This cable currently goes to the base of the negative brush plate; remove it from brush plate and also remove the field coil cable currently connected to the base of the 3rd brush plate. Now extend these cables to a suitable position; I used the now obsolete 3rd brush cable mounting point which is insulated and mount them together to make the required connection. Also a short link wire will need to go between the negative brush plate and one of the end plate securing screws as the brush plate is insulated.

**B** This cable stays where it is on the dynamo positive [D+] brush plate.

**C** This internal cable is the other end of the field coils which will stay where it is but a short link wire will need to go externally between terminals B & C [D+ to DF].

Points to note: the regulator needs to be mounted on a good earth point with good heat sink ability; I have used the aluminium bulk head.

The only other connection not mentioned is the B+ connection which can be connected on the back of the fuse box or amp meter.

One other point to mention is that the field circuit of this regulator regulates the field to ground which is opposite to the way most British dynamo/regulator systems operate as they normally use a fixed ground and regulate D+ to Df being the reason for the internal modifications to dynamo.”

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#### **Tyres, and the Federation of British Historical Car Clubs**, by the Editor

The FBHVC exists to uphold the freedom to use old vehicles on the road. It represents the interests of owners to politicians and administrators etc both in the UK and (through membership of Fédération Internationale des Véhicules Anciens) in Europe. The FBHVC is a very professional body and is supported financially by the RREC as one of 400 subscriber organisations. Also the FBHVC holds its annual conference at the Hunt House, and a friend of mine who used to be Chairman of the Stag Owners Club says that this visit to the Hunt House was a highlight of his classic car year. The FBHVC web site ([www.fbhvc.co.uk](http://www.fbhvc.co.uk)) is a goldmine of useful information about using, looking after, and regulations concerning vintage and classic cars. You can read and download their bi-monthly Newsletter from their web site. In the UK we are indeed fortunate that government regulations have special provisions to enable us to use our vintage cars more-or-less how and where we want. The FBHVC plays a crucial role in maintaining this situation. They actively contribute to the process of drafting new regulations that concern owners of vintage cars: recent examples include paint solvents, light bulbs, and road charging; next year, owners of classic (pre-mid-1970s) cars with large engines will *not* be charged £25 to enter London. And importantly, the EC will be abolishing all restrictions on the use of imperial units for our beloved BSF screws, nuts and bolts!

The following topic is of particular interest to 20hp owners: extracts of various articles on using and storing tyres, and the potential dangers in using very old tyres, which appeared in recent FBHVC Newsletters:

#### **December 2003**

“The Daily Telegraph recently carried a piece in the 'Honest John' column suggesting that tyre age was to become a testable item in the MoT test. We immediately contacted the Vehicle Standards and Engineering Division at the Department for Transport and were advised that although most tyres already carry dates of manufacture in their side-walls, there are no plans to implement regulations to check such dates at the annual MoT test. DfT would, of course, change their mind if tyre failure due to age became a significant cause of accidents.

The British Rubber Manufacturers Association suggests that if a tyre is six years old and remains unused it should not be put into service. It also suggests that in ideal conditions tyres may have a life expectancy of 10 years. Clearly, if DfT did decide to implement tyre date testing, there would be considerable implications for owners of older vehicles and we would certainly be making appropriate representations.

The moral of the story is not to wait for the government to impose tyre testing on everyone, but to make sure your own tyres are in good condition, never use undated second hand tyres and never try to drive through a tyre wobble.”

#### **May 2007**

“After a fatal accident, FBHVC says check your tyres! And by that, it doesn't just mean checking the tyre pressures and making sure there is enough tread, but making sure the side walls are in good condition and the tyres not unduly old. Her Majesty's Coroner for Manchester has written to FBHVC with details of an accident that took place last year in which the driver of an H-registered [ie 1970] MGB lost his life when a rear tyre burst on the M56. Evidence shows that the driver was a skilled mechanic and a careful and experienced driver who was not travelling particularly fast at the time. The car was described by police as being maintained in an excellent condition. The surviving passenger said that just before the accident the driver had commented that a ‘tyre wobble’ had developed and he was going to ‘drive through it’. The wobble went briefly, but then the tyre burst, causing the car to spin, clip a kerb and flip over. Subsequent investigation showed that - although hardly used - the tyre was 25 years old. It was one of a set of as-new tyres and wheels purchased at an autojumble the previous year for use for show purposes - at the time of the incident the car was on its way to a show at Oulton Park.”

#### **September 2007**

“... how were we certain that it was the age of the tyre that had caused the catastrophe, and not some other cause ... A large section of tread had parted company from the tyre. The police recovered this missing section of tread and matched it with the remains of the tyre ... it was noted that the pressures of the remaining three tyres were above manufacturer's recommendations ... The effect of



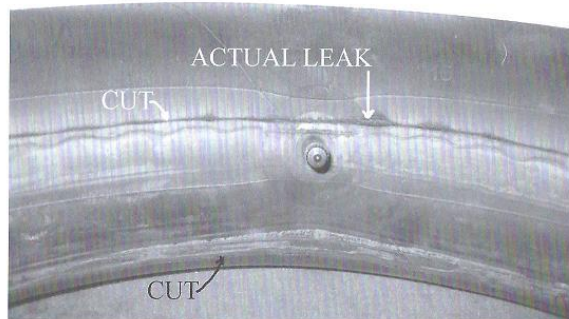
the burst tyre might have been exacerbated by the fact that the wheel spinner on this wheel was not fully tightened.

Car tyres are made from a synthetic styrene-butadiene rubber which is easy to manufacture and has a significantly lower cost than natural rubber, but it does have the disadvantage that it is more prone to oxidation. To counter this, tyre compounds contain anti-ageing additives as well as 'extender oils' that improve grip and elasticity. Unfortunately the chemicals that provide these properties are themselves harmful to human health and the amounts that may be used are strictly controlled at a level that provides a compromise between the need for the tyres to last a reasonable time and the requirement to minimise the health risk. The 'reasonable time' is around ten years, which in the context of tyres for vehicles that are in regular use is more than adequate. The oxidation means that the character of the compound is deteriorating from day one, but the effect is barely perceptible in the first few years if the tyre is looked after or stored properly.

If a tyre has been in regular use beyond that period there should not be a problem provided the tyre is kept at the correct pressure (to avoid risk of over heating). But if the tyre has been standing for months on end, the oxidation of the compound means a stiffening of the tyre walls so that when it is next used the unaccustomed flexing will cause heat to build up more rapidly than it would in a newer tyre or one that was used regularly. When the tyre warms to a critical level, the natural degradation of the compound increases rapidly, causing the long molecular chains that give the compound its flexible properties to shorten, and ultimately causing the tyre to start to break up. The tyre failure on the MG B was consistent with that picture."

#### Punctures – note from David Else

If you've had a puncture as a result of inner tube damage similar to the photograph please would you let me know? If possible please include the make of tyre, date of



manufacture (this is normally on the tyre in the form of a stamp ie 3306 means 33<sup>rd</sup> week in 2006), size of tyre, make of inner tube, size of inner tube and type of inner tube ie heavy duty etc. If you can take a photograph of the inner tube, partly inflated, showing the cuts, as in the photograph below this would help. Please send to David Else, 5 Copthorn Road, Upper Colwyn Bay, North Wales, LL28 5YP, or email: [elsedavid@talk21.com](mailto:elsedavid@talk21.com)

#### Spooky Book

## MOTOR WAYS AT HOME AND ABROAD

### CHAPTER I

#### ENGLAND FROM END TO END

One road leads to London,  
One road runs to Wales ;  
My road leads me seawards  
To the white dipping sails.

One road leads to the river,  
As it goes singing slow ;  
My road leads to shipping,  
Where bronzed sailors go.

JOHN MASEFIELD

TO road-faring Britons the lure of the farthest south is almost irresistible. In the chilly north we think of Devon and Cornwall as a land of soft air and gentle breezes, where cove and cliff and moorland look forth grandly over the boundless sea. Moreover, the pervasive atmosphere of romance that haunts the shire of the sea kings has a strong appeal, and famous gradients like Porlock, Lynton, Beggar's Roost, and Parracombe stir up a spirit of adventure.

The season of 'mists and mellow fruitfulness' had ended in a chilly autumn and the northerly end of England held snow on its mountain-tops. Thus we turned our backs gladly on wintry Criffel, gleaming white across the Solway. In front the purple Pennines

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*Motor Ways at Home and Abroad* by George D Abraham, published by Methuen, 1928



In the 1920s, there started a trend in publishing popular motoring books, brought about by the increasing affordability of cars. Some of these books are quite fascinating, for example *Motor Ways at Home and Abroad*, written by George D Abraham and published by Methuen in 1928. The author lived in Keswick and his main interests were walking and mountaineering, so the book concentrates on scenery rather than cars. There are 250 pages with 32 black and white photographs, all featuring his car in the foreground with a dramatic scenic backdrop. He used several cars over the course of his many voyages, one of which was a Rolls-Royce. However its registration number is not visible, so I asked Tom Clarke. Tom, of course, knew the book and immediately told me that it was a Phantom I, chassis 117MC, coachwork by Atcherley, and that the car is now in Australia, still with the Atcherley body.



ON COUNTESSURY HILL—LOOKING DOWN TO LYNNMOUTH



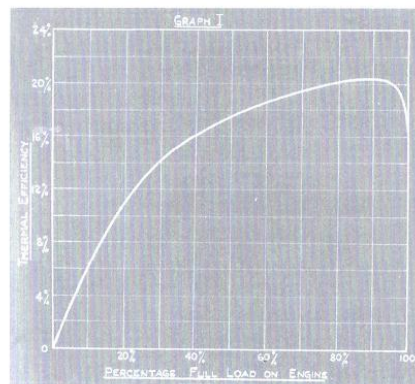
Photograph taken from GXL 39 in 2005

There is a lovely photograph of Abraham's car (he didn't use the Rolls-Royce Phantom-I on that particular trip) descending the coastal road down the high cliff into Lynmouth. The spooky thing is that in 2005 Linda took a photograph from our car, going down the same long hill. If you compare the two photographs, it is evident that she unwittingly took the photo not a gnat's whisker away from the exact spot where George Abraham parked his car, in the mid-1920s.

During the subsequent 80 years, the road has been widened somewhat and tarmac'd, but little else seems to have changed. No doubt that's why people still holiday in Cornwall and Devon!

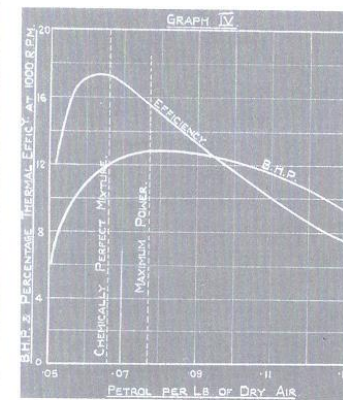
## New Phantom – Petrol Consumption Tests by E W Hives et al, November 1925

These graphs were published in an internal Rolls-Royce Experimental Report, dated 21 November 1925. More results, plus full details of how the tests were carried out, are described in the Report, which is reprinted in the book, *Fundamentals of Car Performance*, published by Rolls-Royce Heritage Trust in 2005. It is interesting to examine these graphs in conjunction with the discussion of long-nose spark plugs, pages 7, 8.



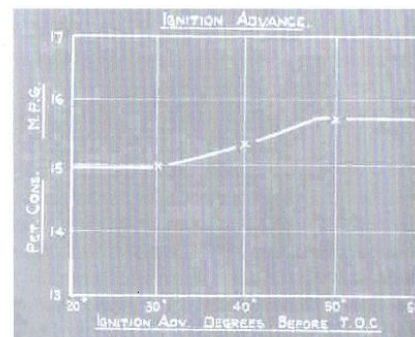
Graph I: Typical curve for efficiency four-stroke petrol engine

Engine efficiency increases as load on engine increases. Therefore use highest possible gear, and overdrive if fitted.



Graph IV: Typical curves for an efficient four-stroke petrol engine

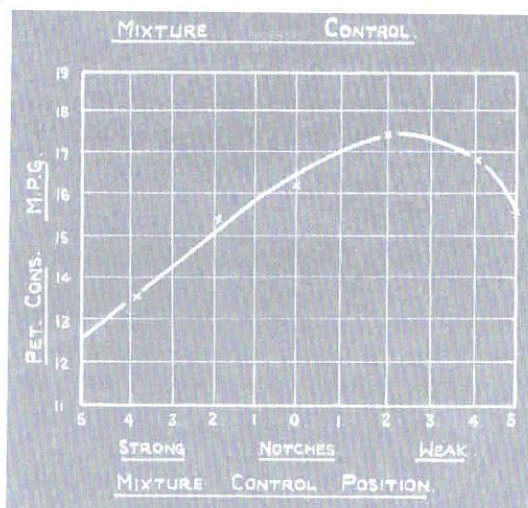
Optimum engine efficiency is obtained with a slightly weak mixture, but at the expense of a slight loss of BHP.



Petrol consumption is reduced if the ignition is advanced up to 50° before TDC (graph refers to tests carried out at 30mph).

**Note:** ignition is normally set 10° before TDC at idle, with the control fully advanced. At higher engine rpm, the ignition is further advanced by the centrifugal governor.





Petrol consumption is minimised (ie maximum MPG) if mixture is slightly weak.  
Graph refers to tests carried out at 30mph.

Other graphs in the Report show that significant improvements in mpg can be obtained by increasing the cooling water temperature from 75°C to 95°C, and by increasing tyre pressure from 25psi to 60psi. The maximum mpg is obtained at 17-18mph. Another graph shows when pinking and knocking starts to occur at high engine load, if the mixture is *too* weak.

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### The McQuays in Normandy

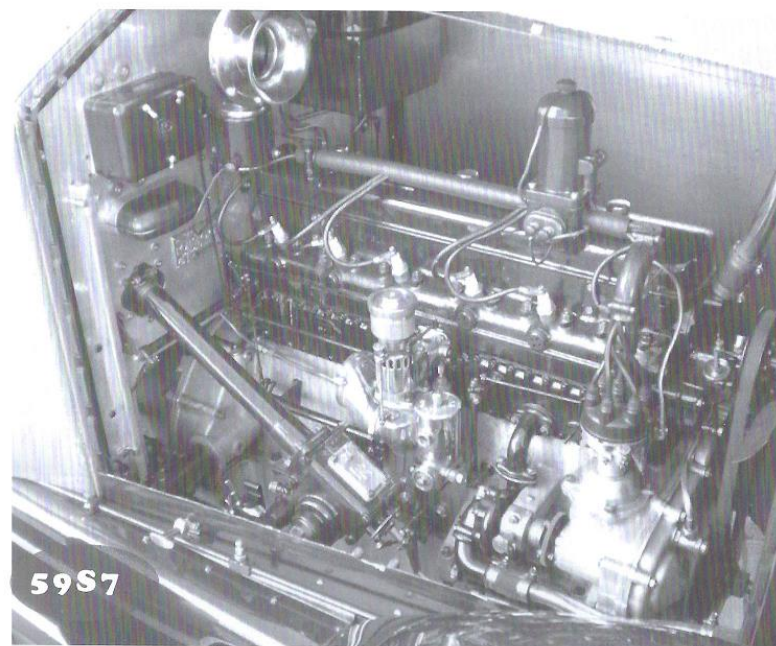
John and Carol McQuay from Victoria, Australia decided to visit Europe with their 20hp during the summer of 2007. Among their plans was to join the 20hp Register holiday in Louviers, Normandy. John e-mailed in November 2006:

*"... we have just returned from a 20Ghost club rally to the Snowy Mountains in the 20hp. We travelled approx 2000km over 8 days. The car went like a "sewing machine". There were 30 cars on the rally but unfortunately there were only two 20hps, the rest being Ghosts and Phantoms. I think the mountains may have been of concern to some owners. Both 20hps were 1923 cars; David Davis with his lovely tourer which was the first 20hp to come to Australia (see Newsletter 16, back cover - Ed) and our 59S7 which was the first bodied car to come to Australia. Our car is as it arrived in Australia in 1923 with a Barker barrel body. We found that we could travel with the bigger cars except on the hills! Nevertheless we travelled most of the trip at about 50mph with the hood down most of the way - much to the*

*pleasure of Carolyn. Tom, it is our intention to ship 59S7 to the UK next year and perhaps tour a little in France after the rally and then return to the UK in time for the annual RREC rally at Kelmarsh. We are looking forward to coming to Europe with great enthusiasm."*

Unfortunately things did not go quite according to plan. They were intending to come with another couple, but their friends had to pull out of the trip at a late stage. John and Carol thought it would be wise not to embark on a solo tour of Europe in an 84-year-old 20hp, so rather than ship their car to Europe they hired a car when they arrived - a difficult decision.

All worked out well, however. John and Carol enjoyed meeting fellow 20hp owners in Normandy, and with their outgoing personalities quickly became popular members of the party. In France, John managed to chauffeur several 20hps and notch up a few driving hours on the "wrong" side of the road. After Louviers, John and Carol travelled to Italy in their hire car before flying back to Australia.



(See also photographs on pages 30, 31)





These photographs show the "immaculateness" of John and Carol's old car, 59S7. In true Australian style, they have sent a picture of their barbecue equipment - very important!

### Twenty Ten Years On

Andrew Ayres from Surrey wrote with an update on the restoration of his 1927 20hp GHJ 24, originally a Barker brougham. In Bulletin 222 (1997) he described that the rusting chassis had been used as a trailer before his son found it abandoned on open land near Elstead Common, Surrey, in 1993. They managed to obtain the chassis for nothing. First of all he bought a second hand engine with gearbox (which had seen service in a Talbot 90) and gradually managed to buy all the other bits such as steering gear, radiator, dashboard etc etc. Andrew had to have the bulkhead (scuttle) made. The photograph below shows the state of affairs in 1997, by which time Andrew had run out of money!



Reproduced from Bulletin 222, May/June 1997, page 70

late Dr Robin Barnard, was manufactured by Terry Dann, a boatbuilder living in Farnscombe, Surrey. The bonnet is off an old 20hp, but the wings were made by John Conquer. The windscreen was manufactured by Chris Glover of Brasscraft, at enormous cost! I managed to get the car through its MOT without a windscreen and subsequently had it inspected, and registered with the Orkney number BS 9236. I share the car with one of my sons, Alexander, who found the chassis."



GHJ 24, restored by Andrew Ayres (in driver's seat) from a rusty chassis found in a field.



GAJ 81, Hooper tourer owned by Peter D Price



GFN 48, Park Ward landaulette, owned by Terry Davis



59S7, a 1923 Barker barrel-bodied tourer, owned by John and Carol McQuay from Victoria, Australia





Advertisement

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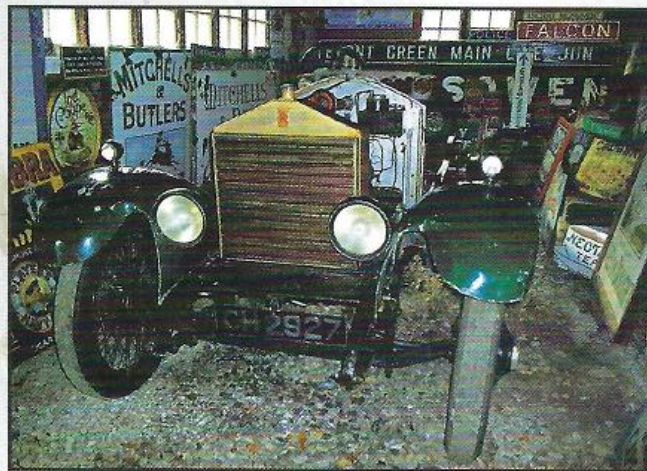
6th December 2007 at 12pm  
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Already entered for sale is the oldest recorded Rolls-Royce 20hp Chassis, shown here in the owners private museum. 'Goshawk 6GII' is an historically important chassis and can be expected to create quite a stir when it comes to market for the first time since being identified.

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