



THE MAGAZINE OF THE
LAGONDA CLUB

Number 153

Summer 1992



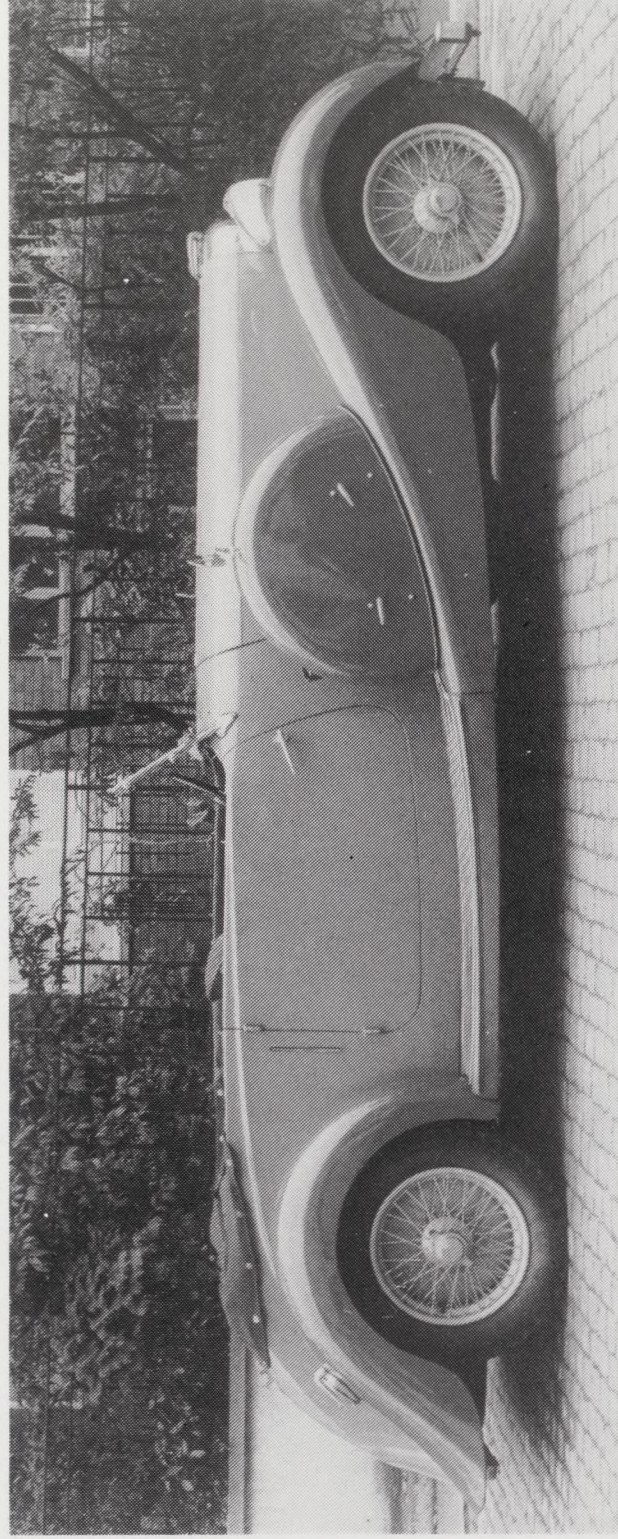
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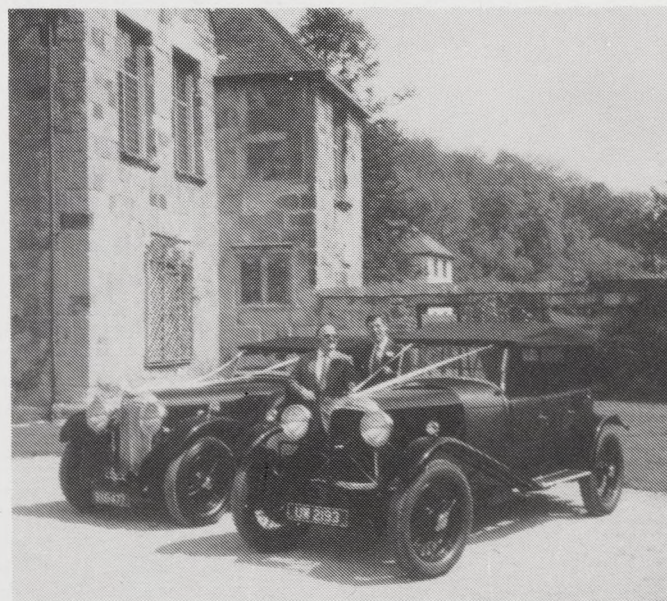
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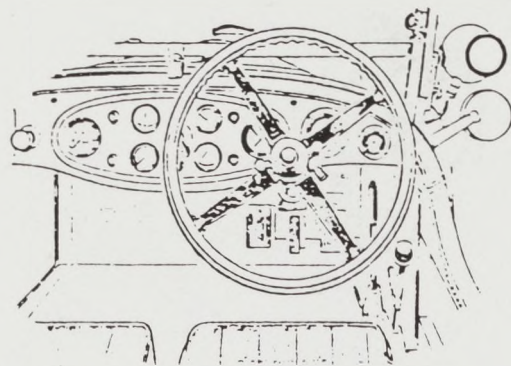
FRONT COVER

The 3½ Litre of Bryan Hyett and the 2 Litre of Mike Heins provided the wedding cars for Adam Painter and Julie on 2nd May.



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From the Driving Seat



Just for a change, nearly (but not quite) all of the articles in this edition of "The Lagonda" look back to the pre-war period. I hasten to point out that this does not herald any major change in Editorial policy, but all too often the accounts of recent events have to take priority and the historical articles get pushed to one side. We do try to maintain a careful balance between the present and the past, the competitive and the social, the technical and the more light-hearted. The magazine has always tried to achieve this, but if you re-read some of the very early issues you will find two forms of contribution we never seem to be offered today, cartoons and poems.

Some years ago we featured a regular series of cartoons from G W Allan, I believe he moved to Australia and resigned from the Club, but do we have any other budding Brockbank among us now?

The poems varied from the lyrical to the hilariously funny, but since Arnold Davey completed his series of Lagonda Clerihews we have had nothing at all, except one which I shall save until the next edition. If that doesn't encourage a flood of poems then I shall have to start reprinting some of the earlier offerings to encourage you all!

In the constant search for rare or exotic materials for the magazine I regularly visit the excellent library at the National Motor Museum – that's my excuse for my visits anyway. The article taken from "The Automobile Engineer", which appears elsewhere in the magazine, was found in this way and, although it has nothing at

all to do with Lagondas, I found the following little gem:

"The author has yet to hear, however, of any convincing arguments to the effect that (a) front wheel drive presents any important theoretical or practical advantages over rear wheel drive, or (b) lends itself to any real improvement in the general efficiency and convenience of an automobile."

This appeared in a paper entitled "The Possibilities of the Unorthodox", presented by Maurice Platt in February 1932 at a meeting of the Institution of Automobile Engineers. Didn't he go on to become the Editor of "The Autocar"?

K.P.P.





Jottings from the Chair

When last I wrote, the general election was upon us, and I was being gloomy about any economic revival. Well, now the summer is here, with warmer motoring and French trips, and the election seems years ago, but it is hard to feel that spendthrift days are here again for all that.

Our family vintage motoring calendar has been upset this year by badly timed holidays, and we missed both VSCC Silverstone meetings, but shall be aiming to attend the Silverstone Festival of Motoring in late July. In May Jeff Leeks organised a combined visit with the Aston Club to the HMS Victory at Portsmouth Naval Dockyard. He asked us to take the 3 litre saloon, as the event was charity orientated and he wanted to maximise the variety of cars. The day was a freak hot one, and not really saloon car weather, but the reception on the Victory was magnificent. Commander Mike Jones, of the Naval Museum Trust, and his wife Pat arranged a splendid buffet lunch in Hardy's cabin on the vessel itself, and this was followed by a full tour of the fascinating ship.

Since then we have been preoccupied with a major French tour to the Dordogne region, which totalled around 1,500 miles over a 12 day holiday. As time goes on, I find that my anxiety before such adventures increases with my years and with the distance involved, the latter being more logical than the former. This was the farthest we had motored on the Continent in a vintage car, and accordingly I spent the previous two weekends going over the car, lubricating, cleaning, and tightening everything I

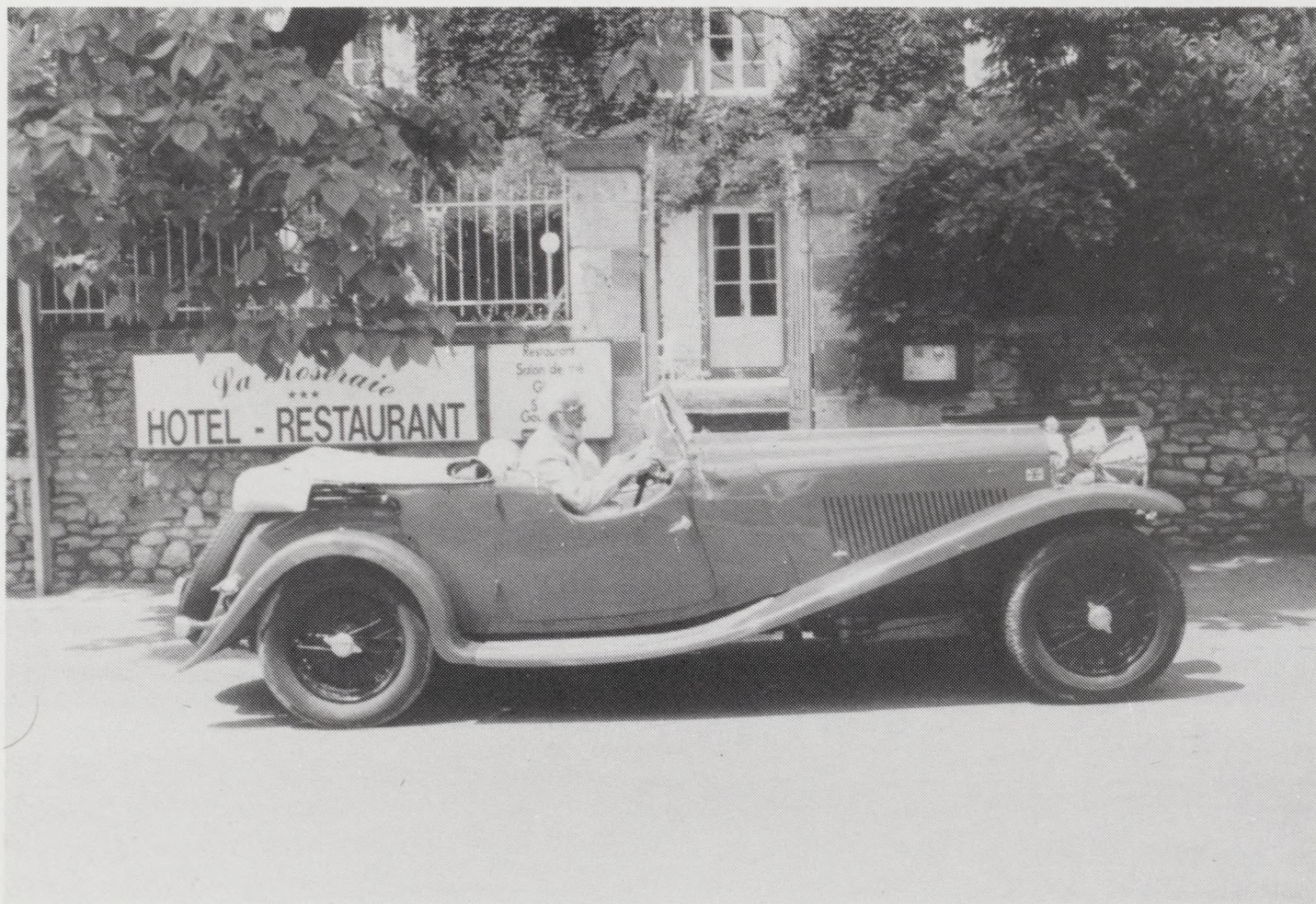
encountered. Superstitious I know, but better for the peace of mind. Cleaning is itself a very good means of spotting potential problems. John Batt taught me how to mix oil and paraffin as a cleaning liquid for the chassis and running gear, and this soon makes you notice anything loose like shock absorber mountings and chassis bolts.

In the event, nothing significant needed attention, and the two litre ran without missing a beat from start to finish, as did the other three Lagondas with us. Such a long run is extremely interesting in tuning terms, as it enables you to experiment with slightly different settings on the carbs, mag timing, clutch stop and so forth, from one day to another. The only major event which befell us was Falling into a French Ditch (see photo!) Our cottage in the Dordogne was at the top of a long unmade hill with a dangerous overhang at one point. I rather overdid the avoidance tactics, and steered into the ditch on the other side instead: fortunately the neighbouring farmer had both a sense of humour and a large tractor, which saved our day.

Also in the party were Jeff and Hilary Leeks (2L), John and Sue Walker (2L) and Douglas and Elizabeth Brown (M45). The astonishing thing was how similar was the performance of the Leeks two litre with its temporary 14/60 engine, to the theoretical power of the two blown cars. We found a similar thing two years ago with the North's high chassis car against the Batt's and our own blown cars. John Walker said Jeff should sell the blown engine and keep the money. Lagondas themselves presumably came to the same



Rural diversions with GT and French tractor (J. Walker sees fair play).



Douglas Brown in fine style in his M45.

conclusion by 1932, but in 1930 superchargers probably seemed just as fashionable as turbos have become since the 70's.

One thing which I always find it difficult to realise is how short was the development time of these old cars. Each model was only in production for two or three years and in preproduction development for a matter of months, maybe weeks. Since then owners have over the years refined them in many ways: consider the work that has gone into boosting the performance of ERA's in the decades since the war.

Our next two major events will be the Silverstone Historic Festival (ex Christie's meeting) on 25/26 July, and VSCC Prescott the week later. I thought the Christies do was only for poseurs at first, until we went last year. Now I know it is, but we thoroughly enjoyed the sheer social idleness of being at Silverstone for two whole days without worrying about the racing, and staying in a pub nearby to cut the tooting and froing. Jeff Leeks is a club organiser for Lagondas. Prescott on 1/2 August will hopefully be a chance to try the blown car against Maurice Leo's old times, although my little cabin blower will scarcely compare with Maurice's monster Powerplus of the Fifties.

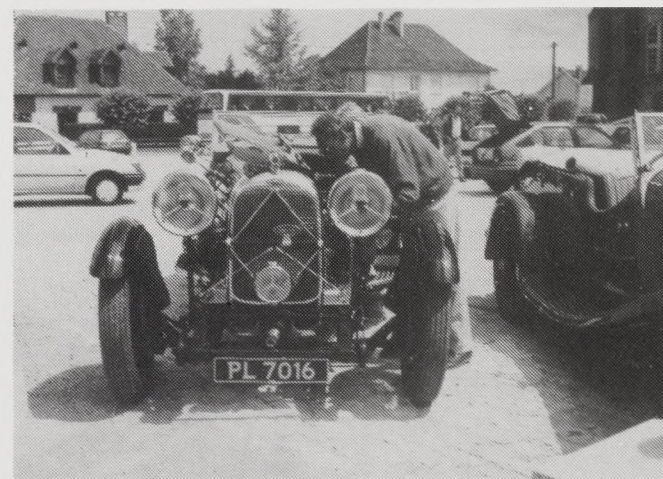
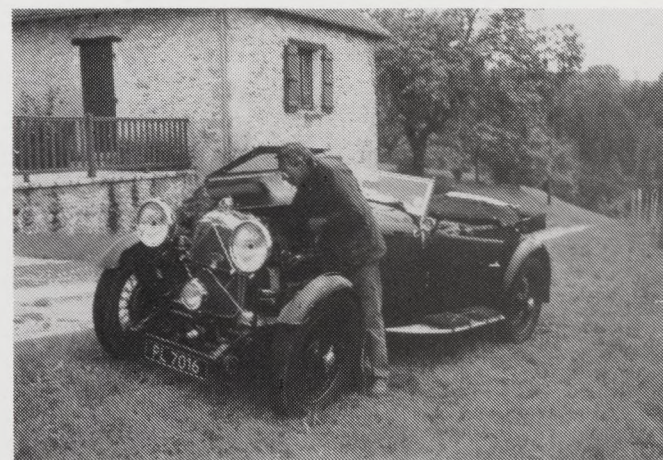
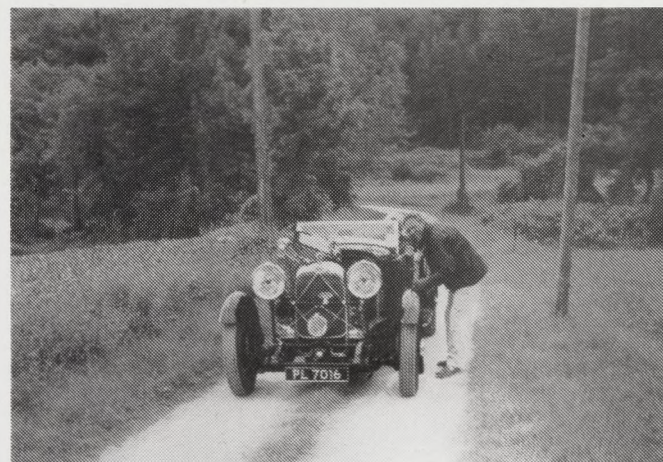
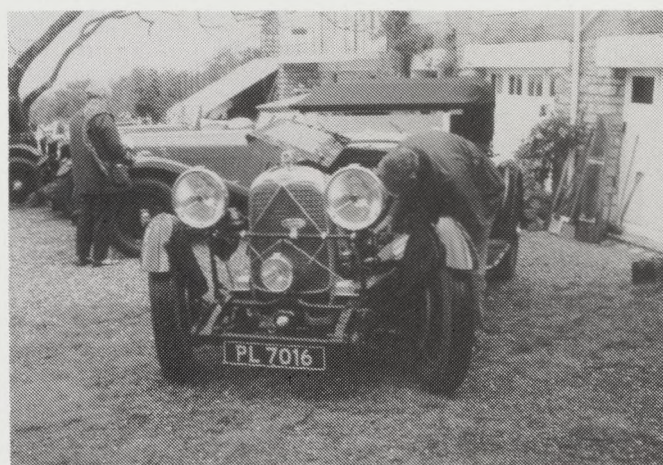
Hope to see you there, but if not, don't miss the Club Weekend on 19/20 September!

Technical Hint: On the French run, we found that two flats richer on the carb reduced running temperature by nearly 10 degrees C. It might not be your radiator after all!

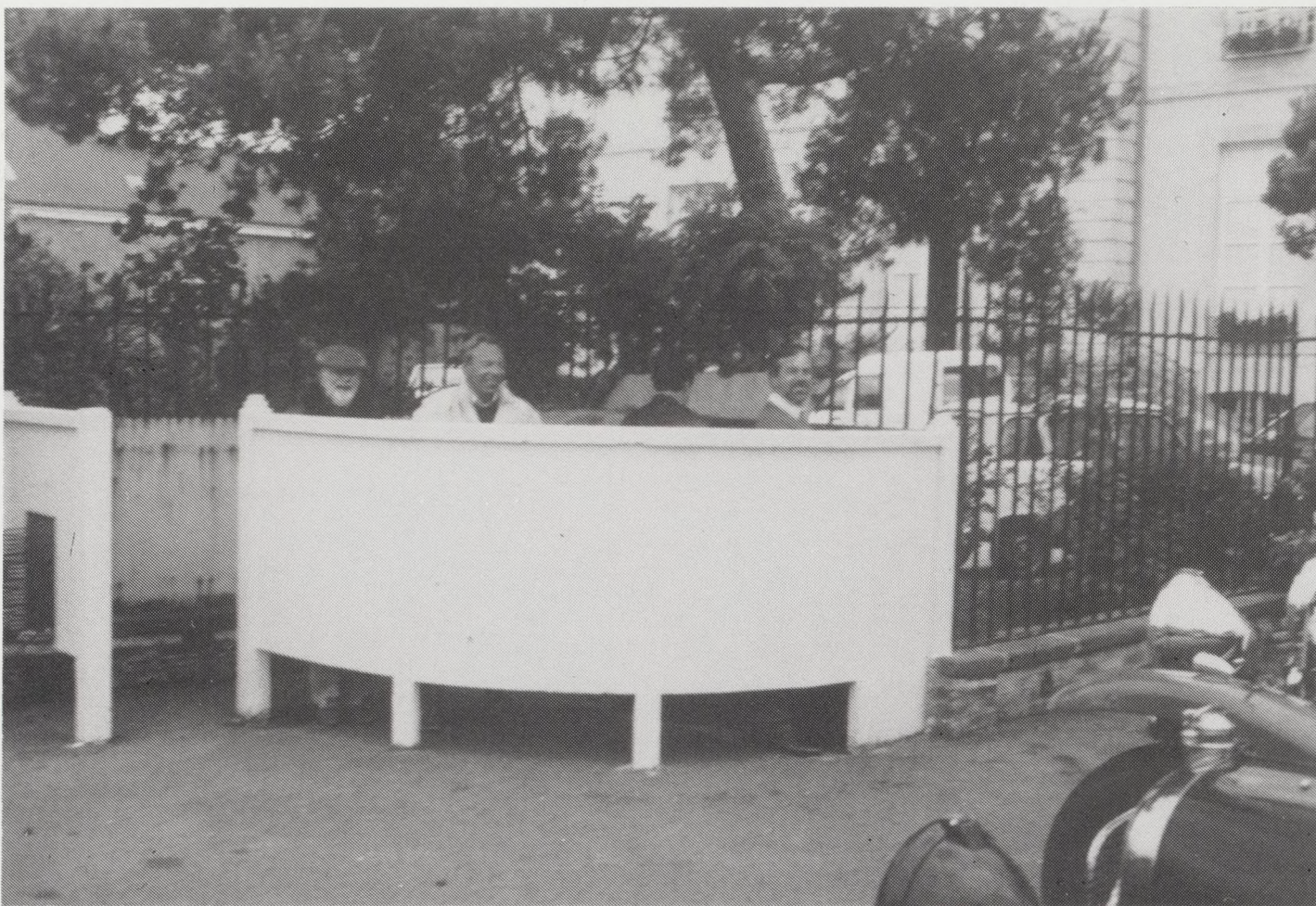
Also, a good way of doing a running check of brake adjustments, is to feel the brake drums after a run. Reflecting the work done at each wheel, they should be equally hot or warm as a pair on each axle, and I prefer to keep the fronts slightly cooler than the rears, to avoid the fronts coming on hardest. Adjust by half a turn each test, not more. If a drum is very hot every time, then it is binding whilst running, so back it off.

TTFN

JGO



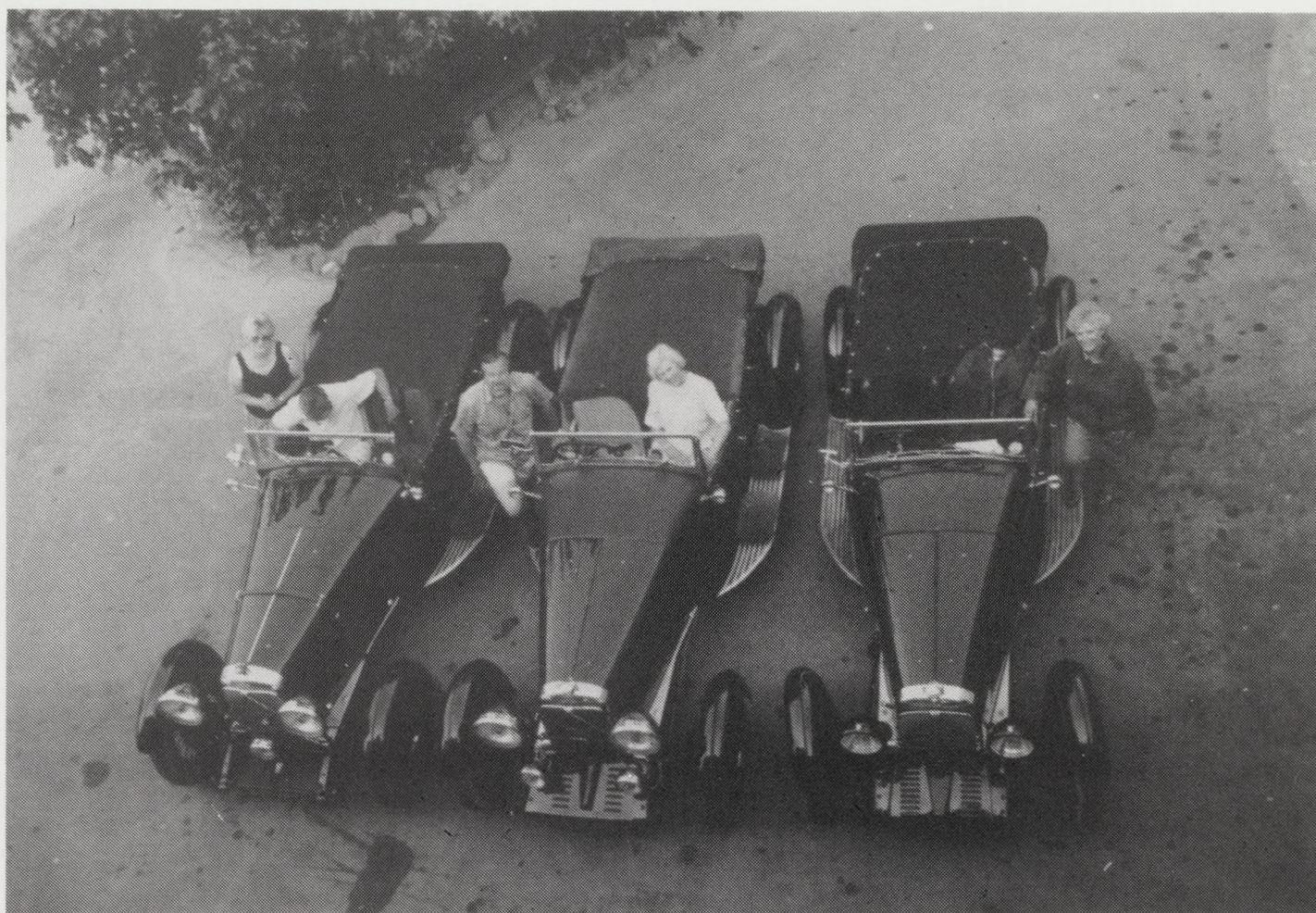
John Walker checks his blower oil:
very regularly!



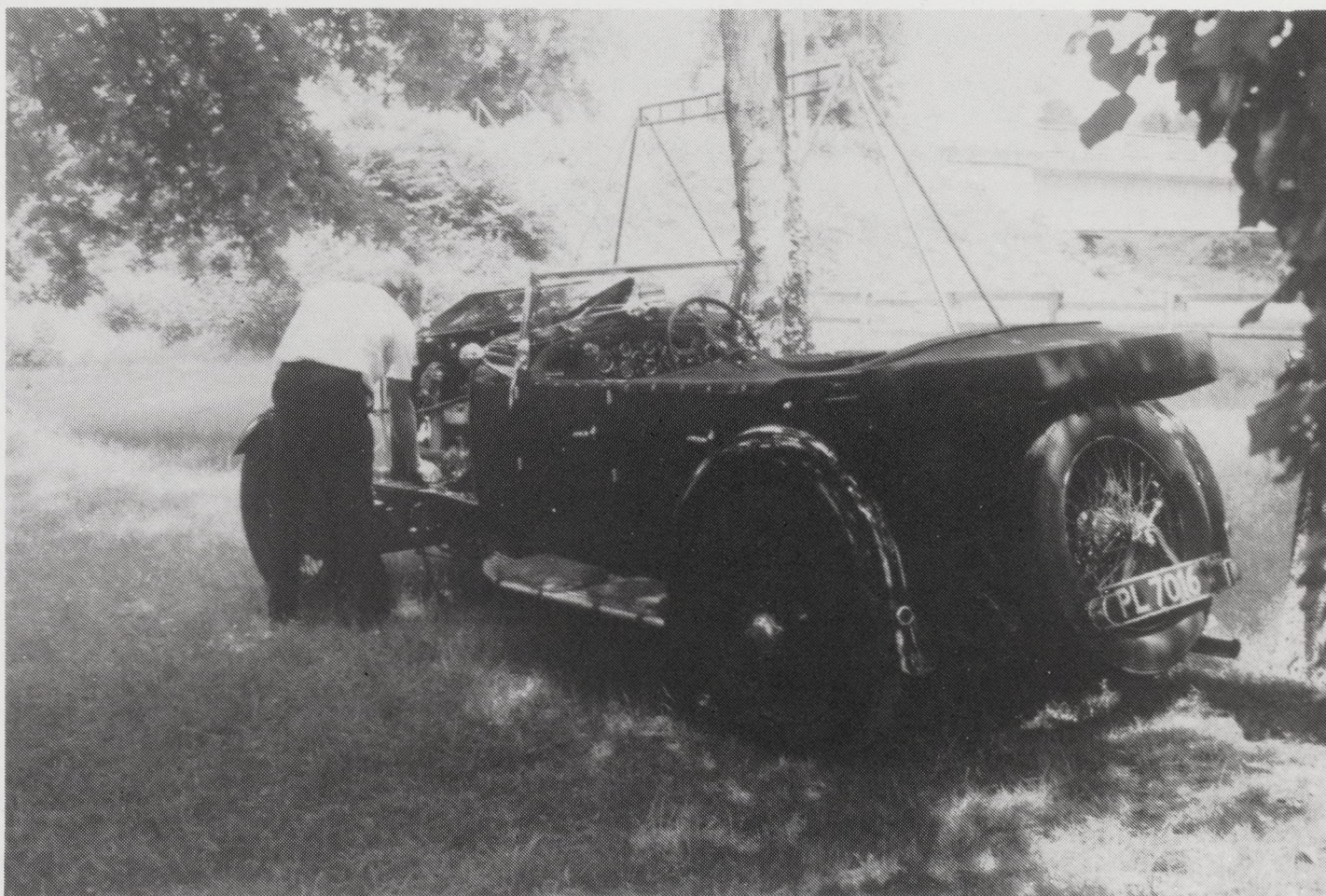
Drivers' first French comfort stop.



The cars waiting outside our perigord villa.



Celestial view of blown two litres.



John Walker – still checking his oil.

Quality production

Building the 4½ litre Lagonda Models

When building motor vehicles in small quantities to an ideal rather than a price, the degree of manufacturing efficiency attainable is not high if considered purely in terms of cost and operation times. The methods adopted are however, of interest, since problems arise that are not encountered in more mechanised schemes of production. There is, incidentally, a growing volume of opinion that even in the production of popularly priced vehicles, further improvements should be sought more in the direction of higher mechanical standards and a reduction of overheads and other charges on the industry, rather than in basic manufacturing costs, which are now very fully exploited indeed.

In the reorganisation of the Lagonda Company the objective has been the production of two types of 4½ litre chassis, namely, a six-cylinder and a twelve-cylinder model. The present output averages six complete cars per week. This is in addition to a considerable amount of aircraft work, much of which is undertaken by the associated company, Wyndham Hewitt Ltd. Amongst the most important changes in the works is the addition of a new wood mill, since Lagonda Motors Ltd., now build approximately 85 per cent of their own bodies, as well as bodies for Ford and Commer Utility vehicles. Including the body building sections, the total covered area is now roughly 3½ acres and the number of employees has risen to over 1,000.

In the two Lagonda models the chassis are almost identical, with the exception of the rear axle ratios, and the engines are of practically the same capacity within a few c.c. There is, however, a great difference in performance, due to the fact that the engine speed is nearly 40 per cent higher in the 12 cylinder model. Actually at 30 mph the six-cylinder engine runs at 1,210 rpm with a rear axle ratio of 3.58:

I, whereas at the same road speed the 12 cylinder engine runs at 2,000 rpm and the rear axle ratio is 4.73: I. Corresponding engine speeds at 100 miles per hour are 3,800 rpm and 5,200 rpm respectively, whilst the 12 cylinder V engine has a safe maximum speed of nearly 6,000 rpm. Both the torque at the road wheels and acceleration are therefore appreciably higher in the 12 cylinder model. To offset the higher engine speed, the 12-cylinder unit has of course been designed as a short stroke engine to reduce piston speeds and inertia loads. On the test bench the maximum power output of the V engine is 180 hp.

Illustrations and brief descriptions of this engine have previously appeared in *The Automobile Engineer**. Reference was also made to the ingenious system of independent torsion-bar front wheel suspension adopted on this chassis. No important changes have been made since these descriptions appeared, but by way of amplification it may be added that there is no change of track during wheel movement. The upper wishbone arm has a smaller effective radius than the lower member. Thus, since the normal loaded position of these arms is horizontal, any upward movement against the resistance of the torsion bar moves the outer end of the upper link on a smaller radius than the end of the lower link. While therefore there is a change of camber the track remains constant.

Torsion bar systems are practically frictionless and are therefore sensitive to minute variations of road surface such as the ripple produced by running over cobble stones or sets. For this reason the ordinary shock absorber is useless. Actually special shock absorbers built by Armstrong's Patents Co. Ltd. are fitted and are adjustable for resistance.

In connection with the engine, the chief interest naturally centres in the 12-cylinder model, which is installed in

about 70 per cent of the Lagonda chassis. In producing this engine, crankshafts, pistons and some minor components are bought complete, whilst connecting rods and other parts are machined by orthodox methods, which call for no special comment. Several points of interest may be noted however, in connection with the machining of cylinder blocks, camshaft bearing brackets, oil filter bodies, and some of the minor parts. Unusual methods are also to be noted in connection with the gear box used in conjunction with this power unit.

When machining the camshaft bearing bracket detached from the head, precautions must be taken to avoid distortion due to the lightness of the casting, whilst unorthodox methods are also necessary to ensure accuracy without elaborate jigging for small quantities. The chief difficulty naturally is in boring all the bearings accurately in line and in correct relationship to the joint face and locating bolt holes.

For this purpose, after finishing the joint face and drilling the bolt holes, the two outer diagonally placed holes are reamed for location and are held to the same size and centre distance as two similar holes in a dummy cast-iron bracket which is employed for setting-up the horizontal mill used for this work. With the cast-iron bracket located on the machine table, the boring bar is inserted in the machine and a collar having several different diameters ground accurately to size and fitting closely on the bar, is placed in position. The diameters on this collar differ by 0.002" and the machine table is adjusted until successive steps on the collar can be entered in the bearing holes in the cast-iron component. By this means the machine and boring bar are brought into the correct relative position to the location on the fixture.

Right and left-hand bearing brackets are then bored in the end bearings only with this setting, afterwards using the end holes as pilots for boring the intermediate bearings. A separate boring bar reduced in diameter in the centre is employed for the intermediate bearings and is coupled

to the machine spindle by a universal joint. Parts are put through in this way in batches of about 15 before disturbing the setting.

The unusual form of the tappets and tappet guide blocks is noteworthy. To ensure accuracy the tappet guide holes are all drilled separately in correct relationship to the machined faces on the sides of the bearing lugs, which form a location for the bronze guide blocks.

Another operation consists in cutting the oil grooves and facing the end bearing with a gang of cutters in two stages, the component being reversed end for end for the second cut. It may be noted that from the central oil-way in each bearing, a longitudinal groove leads a supply of oil to the tappets. The hardened steel camshaft runs direct in the aluminium bearings and oil is supplied by pressure feed from the front bearing to a transverse hole in the hollow shaft with radial holes to the intermediate bearings.

The cylinder block and cylinder heads for this engine are cast in Chromidium iron by the Midland Motor Cylinder Co. and are held to remarkably close limits with a negligible percentage of scrap considering the intricacy of the castings.

For machining the joint faces, a Kendall and Gent vertical milling machine is employed in conjunction with simple fixtures, the same machine being also utilised for the joint faces of the double sump. This machine is fitted with a dial indicator on the spindle head, working against a fixed stop to give a direct reading of the feed motion towards the table. Used in conjunction with the usual graduations on the feed hand wheel, this indicator is sufficiently accurate to enable finishing cuts to be taken without elaborate setting-up operations. On the aluminium sump castings the average stock removal is $\frac{1}{4}$ " from each face, and roughing and finishing cuts are taken at a surface cutting speed of approximately 500 ft per minute and a feed of $2\frac{1}{2}$ " per minute.

In connection with the sump, it may be noted that the lower sump casting fitted to this engine is of shallow form to assist in the low mounting of the engine, the

necessary oil capacity of 3 gallons, being obtained by extending the casting outwards on both sides. This has the additional advantage of providing a large cooling surface relative to the oil capacity. Separate pumps are employed for circulating oil to the main and big end bearings at high pressure and at a lower pressure to the camshaft rocker mechanism and other subsidiaries. The plunger pump for automatic chassis lubrication is also mounted on the upper flat surface of the lower sump.

Reverting to the cylinder block, an Archdale vertical drilling machine converted to a fine-boring machine is employed for rough boring and reaming the cylinders. A massive fixed head is bolted to the machine column to take the boring bar in a bearing which provides for both longitudinal and rotary movement as in fine-boring machine practice. Interchangeable cutter heads are used for roughing and finishing at a speed of approximately 100 rpm, with a reduced feed for the finishing operation. The time taken is three minutes per bore and the work is indexed from one bore to the next on a sliding base fixture. At this stage the bores are brought to within 0.005" of finished size, with a tolerance of 0.001" on the diameter. They are subsequently finished by honing in three stages, using Hutto equipment and finishing with 500 grit stones to a tolerance of 0.00025" for size, roundness and parallelism. It may be noted that Specialloid pistons are fitted with a clearance of 0.0035" and the piston ring pressure is 11lb per sq. in.

Some unusual points may be noted in connection with the operation of roughing and finishing the main bearings. A Pallas horizontal boring machine supplied by the Selson Machine Tool Co., Abbey House, Victoria Street, London S.W.1. is utilised for this purpose, in conjunction with a fixture which is self-contained and independent of the machine as far as the accuracy of the work is concerned. The chief point to be noted is the method of avoiding distortion when clamping the bearing caps in position for

boring. Four bolts are used on each cap and in the case of the intermediate and rear bearings, the two outer bolts are widely spaced and form an accurate location for the bearing cap so that very little pressure need be applied to the inner bolts when securing the cap for boring. Thus the metal is not unduly stressed adjacent to the bearing seats. On the front bearing, four bolts are also employed, two of them being fitted throughout the entire length for location purposes.

The fixture is provided with a wing-over pilot to give an intermediate support to the bar, which is arranged to carry both boring and facing cutters. Also to simplify the setting of the cutters, the machine spindle is run backwards for facing one side of the bearings. Close tolerances are held on the lengthwise dimensions and width over the faces. Actually the tolerance on the overall length is being reduced from 0.005" to 0.002" to assist in lining up the rear face of the sump with that of the cylinder block. This dimension is checked by means of a large 'Go' and 'Not Go' gap gauge. The water pump and dynamo bearing brackets are also bored on this machine.

Another special fixture used on a radial drilling machine is employed for holding the cylinder block at a compound angle for drilling an inclined transverse hole through the water jackets. This connects the two banks of cylinders, with the object of equalising the temperature on both sides of the engine.

In reorganising the machine shop, the plant has been grouped where possible to deal with the more important components. Several items of new plant have also been installed, including one of the latest model Wotan internal grinders (British agents Soag Machine Tools Ltd. 7 Juxon Street, London S.E.11), an improved type of Hüller 'Ultromat' tapper, and a battery of Index automatics.

The Ultromat tapping machine supplied by Leo C. Steinle Ltd., 93 Albert Embankment, London S.E.11, embodies certain improvements and is used for high speed tapping operations and on sub-contract aircraft work in light alloys, for

example tapping a 3/16" diameter hole in aluminium at a spindle speed of 2,000 rpm. An instructive point is the great improvement in the operation at this speed, effected by shortening the standard tap considerably. S.K.F. taps are employed and are cut down to approximately half the length, and ground to a conical end. Used with Swifts No. 6 cutting oil and a small addition of paraffin, clean threads are produced in this way, and trouble due to stripping on reversal has been eliminated.

In the Ultramat tapper, one of the improvements over earlier types is the use of a Bowden wire cable to connect the operating lever to the starting and reversing switch. This replaces the former electro-magnetic control, which though quite satisfactory was sometimes liable to over-heating in the solenoid coil if the operating handle was held down for long periods during continuous operation. An improved type of reversing switch with more robust contact faces has also been fitted and the general design of the machine has been cleaned up.

Floating fixtures

An interesting reversal of normal machine shop practice has proved very effective for certain highly accurate reaming operations where bronze bushed holes in levers, etc. are required to be dead square with the face of the work. Pilot bushes and the usual expedients were tried without success, and finally in place of the normal floating reamer holder which rarely has a parallel action, a reamer rigidly mounted so as to run true

in the machine spindle was employed in conjunction with a fixture floating on widely spaced balls. This proved a complete success, since the reamer can pull a comparatively large fixture into accurate alignment without side stress under these conditions.

A component which owing to the nature of the alloy gave trouble in drilling and tapping is the oil filter body. The metal is Alpax and difficulties in tapping were finally overcome by regrinding the flutes of the taps to give a cutting edge without rake radially across the centre. A mixture of Swift No. 6 cutting oil and paraffin is used as a lubricant.

Another item of interest in the machine shop is the arrangement of a Hey tooth rounding machine for producing chamfers at two different angles in one operation on first speed gears. The machine employed is of the standard type supplied by The Hey Engineering Co. Ltd., Lythalls Lane, Foleshill, Coventry, but since the gear teeth are helical to facilitate engagement, the angle of the chamfers is varied on the leading and rear corners of the teeth. This is effected very simply by means of a special cam on the rear end of the work spindle, the groove in the cylindrical cam being made with a fast and slow rise to suit the respective angles.

(This fascinating report is a slightly edited version of an article published in "The Automobile Engineer", August 1938 and will be concluded in the next magazine.)

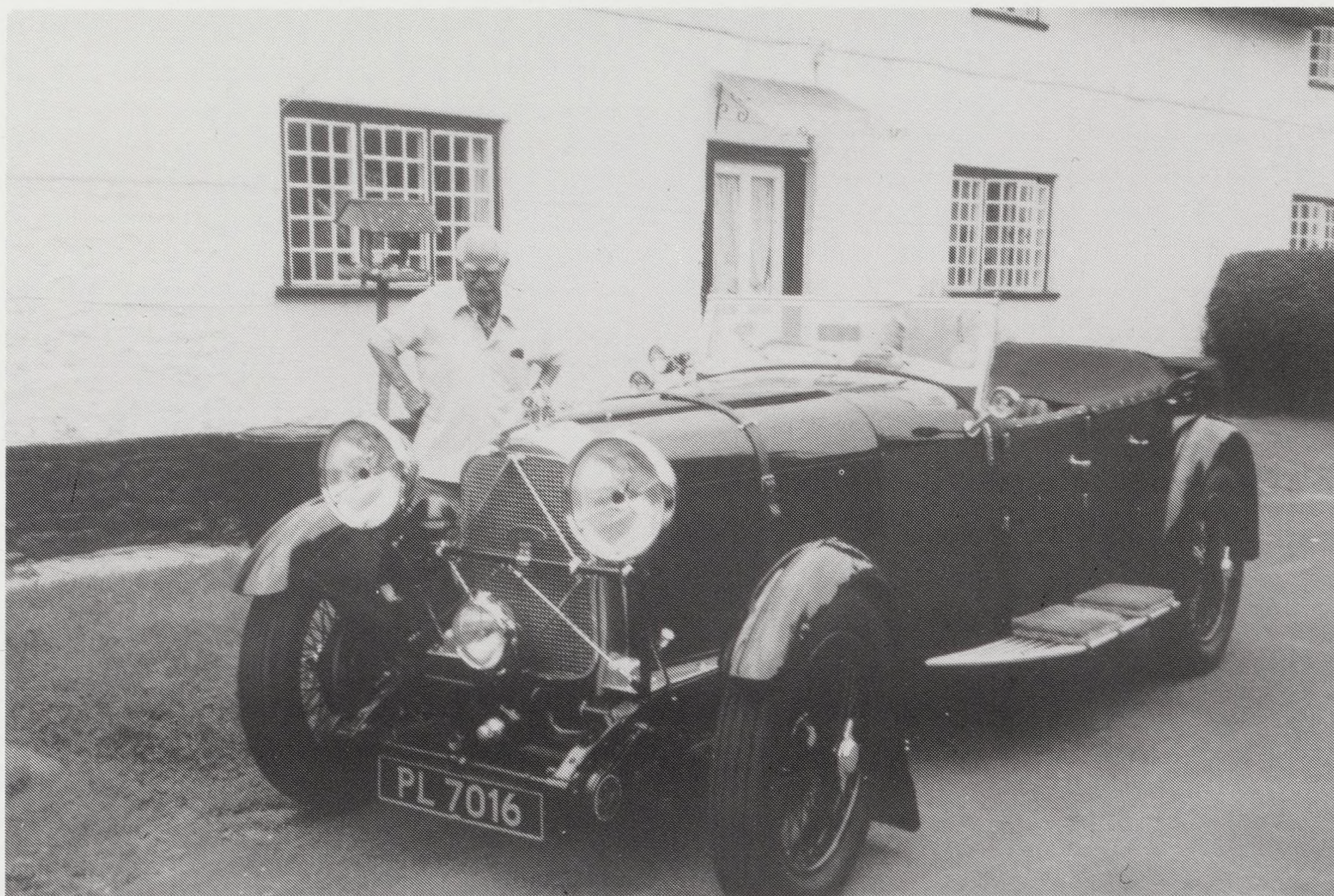
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Major Rycroft, reunited with "his" car after 53 years.

PL 7016

In 1989 I came across an article in an old scrapbook lent to me by Alec Downie. It featured a firm by the name of Cuthbert & Houghton of Guildford who specialised in tuning and improving the performance of sportscars. They both had experience of racing at Brooklands, and had made alterations to the standard 2 Ltr Supercharged Lagonda by the addition of an oversize Powerplus supercharger and a competition type gearbox with a special close ratio. The picture of the Lagonda used was at the bottom of the article, and its number plate PL7016, and was the Lagonda I have owned for the last twenty years. At the time, for some unknown reason, I failed to follow the article any further, but in 1991 I decided to borrow the scrapbook again and photocopy the article which I thought had probably come out of an old car magazine of its time.

I decided to make use of the facilities at Beaulieu Library, to see if it was possible to trace the magazine the article had come from. During the search, my wife came across a picture of a Lagonda being raced at a 1932 Easter Brooklands meeting by W. A. Cuthbert. There was no visual proof that this might be our car, apart from a strong personal feeling that it might be. We then decided to have a look at Bill Boddy's history of Brooklands and there was Mr Cuthbert driving his Lagonda into 2nd place in the Norfolk Mountain Race Brooklands Easter meeting in 1932, 3rd in the Brooklands Whit Monday second Sprint Handicap 1932.

We wrote to Arnold Davy to let him know of our findings, and he managed to establish, by comparing the type face, that the article could have come from the motoring section of the 'Country Life'.

The next stop was a visit to the Reading Room of the British Museum. After much difficulty and much red tape, we managed to track down the article in the February 1932 edition of the *Country Life* which had been written by Maynard Greville, the motoring correspondent, and got the page on microfilm.

By this time, we were both getting very interested in Mr W. A. Cuthbert and got into contact with the Surrey Local Studies Library to get more information of the firm of Cuthbert & Houghton, and perhaps come up with some addresses, or a lead to his family. A very helpful gentleman by the name of John Jannoway promised to help us, but said that it may take some weeks before he could come up with any information.

Now, in May of this year, I had taken part in the Norwich Union Rally with the Lagonda. In August I received a letter from a Major Jack Rycroft, whose niece had also taken part in the rally, and knowing her uncle's interest in cars, had sent him the Norwich Union programme which featured a photograph of my car, PL 7016. He immediately recognised the number plate and the distinctive radiator cap (you may recall the item in the *Lagonda* magazine's Spring edition, 'not available in the spares scheme').

The Major's letter revealed some interesting information on the car. The Major, who is now eighty years of age, had purchased the car from Mike Hawthorn's father in 1935. The car was then fitted with a No. 12 Powerplus, and in Jack's words "reputed to be the fastest supercharged 2 Litre in existence". There was an emblem of a leaping jaguar on each side of the scuttle with the words 'Powerplus Supercharger' that had been presented by George Eyston. Jack had raced the car at Brooklands in the 1937 JCC Meeting and had competed in the 1936 Pool Speed Trials. The car was affectionately known as 'Tigger' because of the peculiar sound the blower made when ticking over.

My son and I drove to Milton where 'Tigger' and the Major had a most enjoyable reunion. Jack kindly lent me

some marvellous photos of himself racing the car at Brooklands. I was very fortunate to trace a number from the back of the photos and managed to track down the original negative from a firm called Quadrant Picture Library in Surrey. The rest of the photos we had copied with extremely good results.

John Jannoway from the Surrey Local Studies Library now came back to us with confirmation that Cuthbert & Houghton had a garage at 92 High Street, Guildford from 1931 to the outbreak of war, and gave me the last known address of W. A. Cuthbert at Compton near Guildford. So, on a sunny afternoon, we set off in the 2 Litre to find the address in Compton, bearing in mind that it was in 1952 he had last been known to have been living there. We found the house, but it looked deserted. The neighbours all appeared to be out. As it was lunchtime, we decided to visit Losely Park which was a few miles further on. We enjoyed a very good Ploughmans lunch and then decided to go over the house which was open to the public. Mr Cuthbert was still on my mind, so by sheer chance I decided to ask the lady on the entrance door if she knew of the Cuthbert family who had lived at Compton. She looked rather surprised, and then owned up to being an old girlfriend of Tinka Patterson, who was the stepson of W. A. Cuthbert. She also informed us that W. A. Cuthbert had died in 1978, but we should get in touch with a Mrs Nash who had worked for the Cuthbert family.

We also got into a conversation with a Mr Fred Gooch who had a senior position on the Losely Estate for forty years. He also happened to know Mrs Nash and her husband, who had worked on the estate for many years. By the same evening, Mr Gooch had managed to get in touch with Mrs Nash, and she had given him the address of W. A. Cuthbert's daughter, a Mrs Joanna Cennell, who I immediately contacted. She couldn't remember all the cars that he had owned, but knew that he had owned a Lagonda and had raced a Riley called the 'Cuthbert Special'.

Mrs Cennell kindly invited my wife and

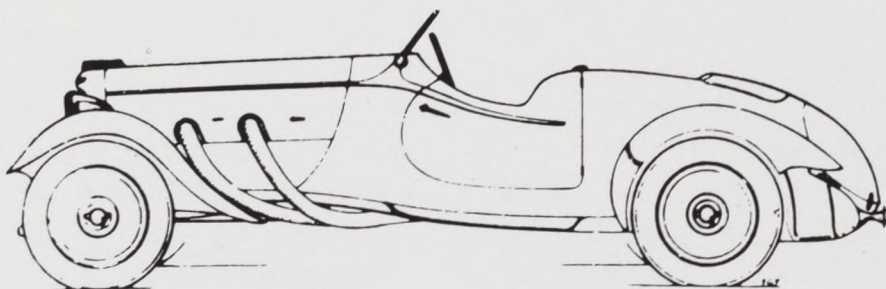
I over to her house at Chiddingfold. Her lounge walls were covered in pictures of her father and his racing cars and, to my delight, there was a picture of PL 7016 stripped out and racing round the Brooklands circuit in 1932, with its famous radiator cap, and the leaping Jaguar on the scuttle – conclusive proof of the car's racing history.

Mrs Cennell was as pleased as we were, and was very interested to see her father's car in its present condition. Her mother had also raced cars, and both of her parents had retained their interest in driving fast cars until quite late in life. Mike Hawthorne had been amongst her circle of friends, which was interesting as Jack Rycroft had bought the car from Mike Hawthorne's father.

During our research on the car's history, I have met some very helpful and charming people and have had a fascinating insight into my car's past. I would like to give grateful thanks to:

- Mrs Joanna Cennell, W. A. Cuthbert's daughter.
- Major Jack Rycroft, for getting into contact with me and to his niece for sending him the copy of the Norwich Union Rally programme.
- Mr John Jannoway, Surrey Local Studies Library
- Mr Fred Gooch, Losely Estate (By the way, Mr Gooch heads a committee for a two day Classic Car and Disabled Motoring Show at Losely Park. It will be held on August 15/16th 1992. Last year's show had some very interesting cars and are shown under a large marquee.
- Alec Downie for the loan of his scrapbook, which was where it all started.
- Mr Delvalle, who also contacted us and who had owned the car in 1962.

(continued on page 24)



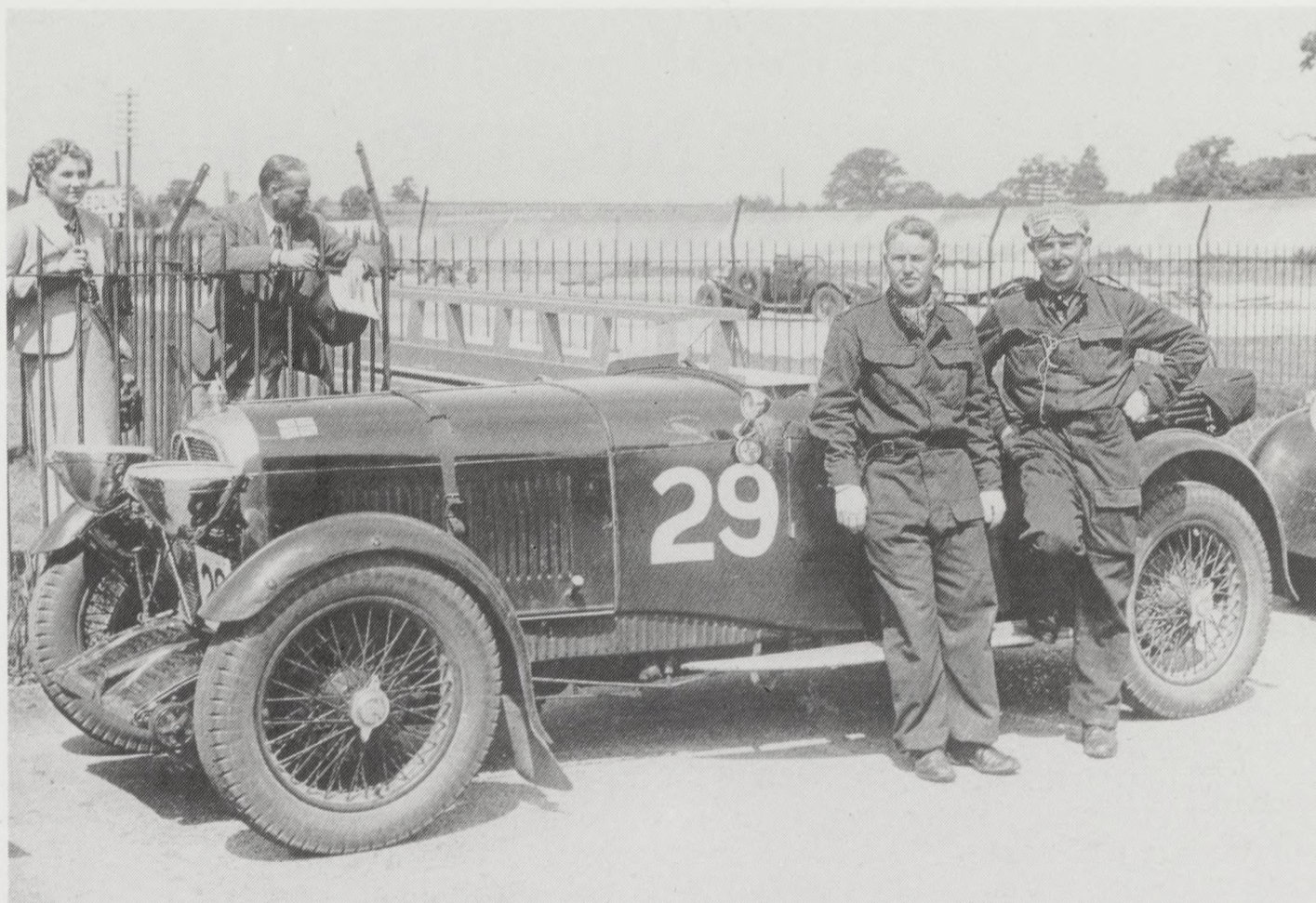
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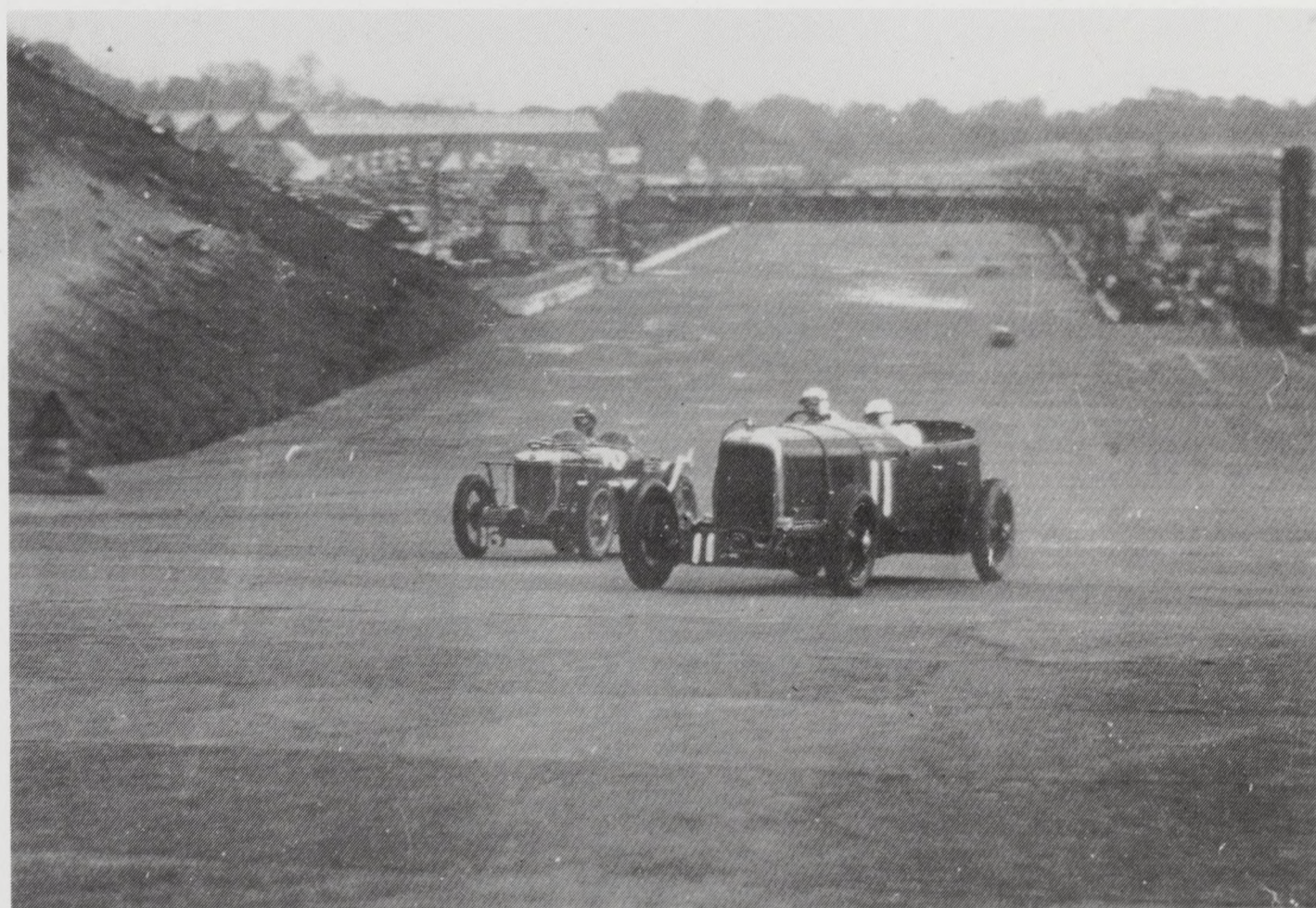
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W. A. Cuthbert with PL 7016, Brooklands, Whit Monday Second Sprint Handicap 1932.



Major Rycroft in Pl 7016, JCC Meeting, Brooklands 1937.

Ruminations on running a big end on an Hispano-Suiza

1 Modern petrol IS slow burning. This means that if the turbulence in the cylinder head is not as good as a modern high compression engine the mixture will still be burning as it passes into the exhaust manifold.

1a Provided the cylinder head is shaped, the turbulence is increased by increasing the compression ratio. If it is just a squashing cylinder with a flat piston and head the compression ratio does not make much difference.

1b It is suggested that LARGE BORE engine will suffer, principally from the length of the flame path. My H-S with 110 mm bore and a plug each side got hot at anything over 50 mph.

1c It is suggested that LONG STROKE engine will suffer because the piston runs away from the flame. My FIAT 519 (85 bore x 140 stroke) boiled at 40 mph. But it does have exhaust channels within the head casting.

1d It is possible that veterans run so slow that it does not matter.

2a What follows from slow burning is that the exhaust manifold gets very hot, and the engine runs hot. You will notice this when the water temperature rises when you turn the engine off. Typically if you blind down the motorway it will boil and possibly stall as you queue to get off at the junction. My H-S sometimes boiled when you left it in the garage after a fast trip.

2b A side effect of the exhaust heat is a generally higher under-bonnet temperature. This raises the temperature of the metal fuel flow parts. Because the modern petrol is VERY VOLATILE the petrol will boil causing vapour locks in the fuel feed. Typically you blind along and then stop for the lights, the engine stalls and won't restart without choke; or you get a petrol "stoppage" going up hill.

2c Any fuel feed part can cause this even if it is not on the exhaust side of the

engine. All copper pipes can be covered with electrician's plastic conduit. Slit it lengthways with scissors and clip it over. Where the exhaust is too close wrap the fuel parts or filter with aluminium kitchen foil. It works. If the carburettor is too hot, use a thick asbestos gasket and if necessary a bit of foil.

3 If you can run on modern petrol you will probably need to advance the spark a bit. You should also make sure you have thick exhaust manifold gaskets. Modern material is only 3/4 as good as asbestos and needs to be a lot thicker. The better quality material is better than asbestos but very difficult to form. Most exhaust gaskets are too thin and the copper does not help. I double them up on the H-S so that I have 5mm of the best.

3a If you are on pump fuel you will no longer need a hot-spot. This just reduces volumetric efficiency. Instant sports tuning is just getting rid of a hot-spot.

4 Petrol is a mixture of paraffins, naphthas and aromatics. Some of the paraffins are now removed for other uses, and to improve the octane rating. Low octane fuels have a tendency to knock and pre-ignite. Some members will not even remember pinking!

4a To make the fuel burn quicker a bit of paraffin does the trick. Add paraffin and the running temperature can drop as much as 15 degrees C. The power increases and the engine runs sweet. Back to the good old days with an instant cure.

But there are problems

5 What is paraffin? Not a silly question because you cannot buy it like you used to.

5a Paraffins are a chemical series with the formula $C_n.H_{2n+2}$. The bigger the C number the higher the boiling temperature. All have lousy octane ratings and are considered to be a poor motor fuel, despite being the major constituent. They need blending.

	Boiling Temp °C	Flash Point
Hexane C6.H14	69	
Heptane C7.H16	98	
Octane C8.H18	125	12
Nonane C9.H20	150	30
Decane C10.H22	173	45
Undecane C11.H24	195	63
Dodecane C12.H26	212	70
Tridecane C13.H28	225	75

6 Ricardo says that provided the boiling temperature is less than 200 degrees C, the fuel which does not burn but dribbles down the bore into the oil will evaporate away harmlessly. The heavier elements of the fuel will foul the oil and you will run a big end on the motor way. They used to change the oil every 1,000 miles and they did not have motorways then. I would advise care now.

7 Freely available paraffins are as follows:

Sold as Fuel

	Boiling Range	Flash Pt
(Petrol 2 Star Obs.	30 - 200	-40)
(Petrol 4 Star C4 to C9	30 - 200	-40)
Kerosene SG* C8 to C12	146 - 254	38
28 Second Heating Oil* C8 to C10	150 - 260	38
Odourless Kerosene*	190 - 260	68
Diesel (35 Sec) C6 to C20	180 - 360	70

* Sometimes sold as lamp oil

Sold as Solvents

Shell SBP2 C6 to C7	73 - 93	-21
Shell SBP5 C7	92 - 104	-9
Shell SBP3 C7 to C8	104 - 126	2
Shell SBP6 C8	139 - 156	26
Shell SBP11 C9	156 - 166	40
White Spirit 98 C8 to C10	155 - 195	40
White Spirit 115 C9 to C10	166 - 196	52

7a The C number represents the Carbon in the formula. Roughly speaking the boiling and flash points of any of the hydrocarbons with the same C number in a fuel are approximately the same. Proprietary fuels and solvent are predominantly paraffins but contain other substances. They are separated by distillation.

7b The old fashioned smell of paraffin was from the sulphur which is now removed. If you buy lamp paraffin now it

is probably Kerosene SG, Odourless Kerosene, or even 28 second heating oil. The latter I suspect may not give such a good light.

7c You are not allowed and would be ill advised to store anything which has a flash point below 21 degrees C and is rated as Highly Flammable. (Highly Flammable less than 21. Flammable 21 - 55).

7f Fuels can be bought through your local fuel dealer but you should be warned that they may just give you 28 second whatever you ask for. Shell solvents can be obtained from Alcohols Ltd., who will deliver 45 gallon drums. Tel. 0279 658464, Fax. 757613. Post Code CM23 2EW.

8a Preliminary tests indicate that in my cars 1 gallon to 10 gallons seems to be not quite enough, but a major improvement and a convenient measure, 2 gallons to 10 gallons is too much. I have tried SBP11 and it seems to be too good a fuel, and to have little effect. SBP6 seems more effective. I have not tried white spirit but it may be better and cheaper, I just chuck in a two gallon tin every time I fill the tank. On the Hispano the engine is running on light load most of the time and the plugs need cleaning often.

8b Paraffins are hygroscopic and collect water which rusts the bottom of the petrol tank. Keep your 45 gallon drum sealed. You can get a steel drum pump and a cap spanner.

8c Too much paraffin can cause detonation pitting round the top of the piston above the top ring. It is suggested that it also causes bore wear, but I doubt this to be significant if it is only used where needed.

9 The Customs and Excise have kindly allowed us to add paraffin to petrol in pre-1940 cars without worrying about the duty we have not paid. You will still be hung drawn and quartered if you put it in diesel, but they will no longer confiscate your car if it gives off that gentle aroma.

10 A note on journal bearings

The oil sort of squidges round the journal bearing. There is a clearance in

the journal so that the male and female diameters differ a bit to give a nice wedge shape. The oil is drawn round and where it is thinnest it is at the highest pressure supporting the load.

Squidging heats it up. As it heats up its viscosity decreases, and the thin bit gets thinner. The bearing only fails when the oil gets thin enough for the two metal parts to touch. Then there is a rapid temperature rise and the metal melts. If the oil is too thick it just gets hotter until it is thin enough.

Heat from the oil is dissipated to the metal parts of the motor which are always much cooler than the oil. It takes a lot to heat up an engine particularly a big one which is radiating a lot away all the time. After some time an equilibrium would be reached where the oil would be at one temperature and all the other bits at theirs and it would stay that way. On full throttle on the motorway this situation could be approached. On a normal road it never would. I would suggest that it would take about 30 minutes running or perhaps a little more to get near the equilibrium. I once ran the bearings in an old Cortina after about an hour of steady motorway 90 mph. It had taken that long for the oil to boil. I do not know the temperatures reached in an engine. After a race the aluminium parts always seem to be at about hot bathwater which is 55 degrees with the oil temperature gauge reading about 55 to 80 degrees. The maximum temperature must be much higher.

If there is paraffin in the oil it could vaporise away, or it could boil in the bearing when the temperature gets up to its boiling point. This would be at the thinnest part of the film in the journal.

I have just run a big end on the H-S on the motorway.

This must have been caused by paraffin pollution from using the wrong paraffin, but could have been exacerbated by the lack of end float on the bearing (.003"). this could have restricted the flow of oil through the big end and caused it to run at a much higher maximum temperature

because the oil just churned round and round without escaping. You need good run-in end clearances (.0005" +?) for motorway travel, so that the oil sluices through the bearings reducing its maximum temperature, but without losing pressure.

John Howell

The following letter was sent to the Vintage Motor Cycle Club (among others, we understand) from HM Customs and Excise earlier this year:

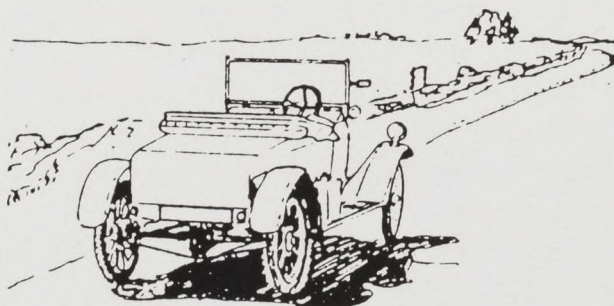
I am writing to advise you that as a result of representations received by the Commissioners of Customs and Excise regarding the unsuitability of modern petrols for use in certain pre-war road vehicles that it has been decided appropriate to issue a General Licence to mix rebated heavy oil (kerosene) with unrebated light oil (4 star petrol) within the fuel tanks of road vehicles manufactured prior to 1940 for use as fuel only in these vehicles. It is not permissible to mix the oils in bulk or for re-sale or for any other purpose.

I must point out that the licence may be revoked if it is in any way abused and it is therefore in the interests of all those who have genuine need for the mixed fuel to exercise some degree of 'self-policing'. Any breach of the strict terms of the licence would constitute an offence. I trust your members may find this helpful.

Yours faithfully

TI, Wright, Revenue Duties Division A.

(Reprinted from "Bugantics", with kind permission).



Lagonda Weekend, Studley Priory, Oxford, Saturday/Sunday 19th/20th September 1992

As the major Club event of the year, the Lagonda Weekend is planned to be a very relaxing social and informal family event, including a visit to a National Trust property and official Club Dinner on the Saturday, followed by a Club Meeting and Concours on the Sunday.

Saturday 19th September

- Members, families and cars meet from 11.30 am onwards at Studley Priory, Horton-cum-Studley, Oxford.
- Picnic, or bar snacks available.
- Depart, 2.00 pm for National Trust property.
- Club Dinner, 7.00 pm for 7.30 pm at Studley Priory (smart clothes) - £22.50 exclusive of wine. Please make a special effort to attend this major official function. Bookings, with cheque payable to the Lagonda Club, to Jeff or Hilary Leeks by 5th September

Sunday 20th September

- Arrival and social gathering at your leisure.
- Club Meeting commencing promptly at 11.30 am. The formal corporate business of the Lagonda Club Ltd. AGM is being separated off into another meeting later in the year. However the traditional presentation and discussion of Club activities will be retained at the Lagonda Weekend.
- 12.30 pm onwards, social gathering. Bar snacks or pre-booked lunches available or bring your own picnic.

- 12.30 pm - 2.00 pm. Judging of cars for Concours, including members most desirable car award.
- 3 pm Concours winners photographs
- Departure at your pace and time.

Club spares will be on display only. Club regalia will be available for purchase. Members are encouraged to bring their surplus spares for sale or exchange. Commercial traders can pre-book space at £50 for the weekend.

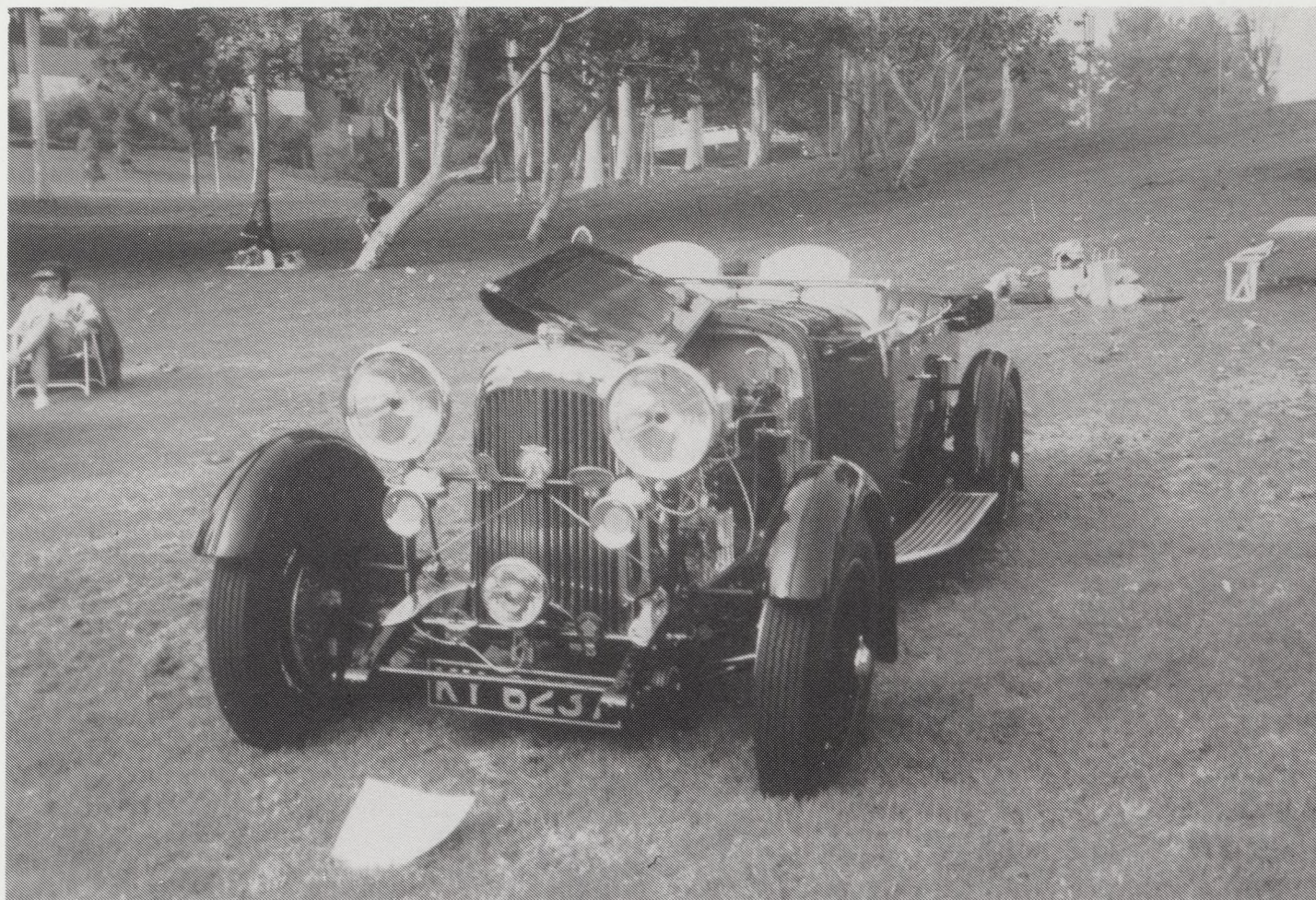
Accommodation is available at Studley Priory on Friday and Saturday night at a special price of £110 inclusive of VAT per person including formal Friday evening dinner, the Club Dinner on the Saturday and breakfast on Saturday/Sunday mornings. Book direct on **086735 203** mentioning the Lagonda Club. Standard rates apply for Saturday night only accommodation.

Alternative local bed and breakfast accommodation in guest, farm or private houses is available, contact Jeff or Hilary for list.

Volunteers to help with the car parking and other duties will be welcome. Please spare an hour of your time over the weekend.

The Lagonda Club Committee looks forward to seeing all the Club's members, families and their cars at Studley Priory.

Any further details can be obtained from Jeff or Hilary Leeks on **0494 563188** – please leave a message on the answerphone if they are not available.




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Competition Round-Up

I have been asked if I will take on the task of writing the quarterly competition round-up, which of course was previously written by Dick Sage. He and I had many private battles in the past with our respective two litre Lagondas in races, rallies, sprints and hill-climbs, going back in time over some twenty years. It will be difficult to follow in his footsteps with these surveys, but I will do my best.

Through the good offices of Neil Murray, Competition Secretary of the VSCC, I have arranged to receive copies of the results of all their events and I can pick out details of the Lagonda entries. This scheme was started by Dick. However, I have not yet received my copies and therefore this first round-up is not as complete as I would like. I hope to include a much more comprehensive report next time. Apologies to any member whom I have inadvertently failed to mention.

VSCC Annual Trophies

Congratulations to member Roger Firth who has been awarded the Marc Birkigt Trophy and was runner-up for the Edwardian Cup, although not with a Lagonda!

11th/12th January – VSCC Measham Night Rally

The Measham, starting at Hereford, was affected by very severe weather with six-foot snowdrifts over parts of the route. The organisers were forced to hurriedly re-plan some of the sections, and then further re-plan again due to floods and mud. John Harris gained a creditable second class award in his very fast LG45, ably navigated by A.P. Costigan.

1st February – VSCC Brooklands Driving Tests

Chairman, Jeff Ody, obtained a third class award with the 1925 Amilcar.

14th March – VSCC Herefordshire Trial

Roger Firth (again) gained a second class award, this time in his 1930 Riley.

5th April – Lagonda Club Exeter Driving Tests

This new event was superbly organised by Robin Michelmore, assisted by John Organ, as a joint Lagonda Club/Rapier Register competition. It was a fine venue and saw a good entry of Lagondas but not a Rapier in sight! Overall victory went to Colin Bugler in the LG45 special. The event is fully covered by Colin's excellent article elsewhere in this issue. The event also saw my son Jonathan competing in the two-litre for the first time. I am ashamed to say that he beat me!

7th June – Lagonda Club Hants/Dorset Rally

The rally was blessed with fine weather and an excellent entry. It started at "The Wise Man", which is the venue for the popular first Thursday evening Dorset pub meet, located in West Stafford, near Dorchester. A full report by Steve Lawrence, who was competing in the oldest car known to the club, will appear later. The full results, in finishing order, were:-

1st – Peter Mimpriss
1934 M45 Tourer KY6507

Joint 2nd – Roy Taylor
1933 3 Litre Tourer APF632

Phil Erhardt
1934 M45 Drophead AXX790

Joint 4th – Tim Sage
1928 2 Litre Team Car PK9775

Martin Holloway
1931 3 Litre Tourer MV4034

Joint 6th – Rupert Sage
1927 14/60 Saloon TV5922

Joe Harding
1938 V12 Saloon HPG672

Witt Wittridge
1934 M45 Tourer AXO773

Peter Dobson
1950 2.6 Drophead Coupé LLB74

Andrew Gregg
1933 M45 Tourer BPJ168

Steve Lawrence
1913 11.1 Two-seater BK2371

It would assist me a great deal in the future if members could let me know the details of any competitive event in which they have taken part - genuine competitions please - not village bun fights! Write to: Greystones, Lower Kingsbury, Milborne Port, SHERBORNE, Dorset, DT9 5ED Tel: 0963 250353.

Alan Elliott

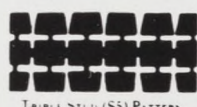
PL7016
(Continued from page 16)

Since I started writing this article, Arnold Davy has come back to me and established that the picture of W. A. Cuthbert at Brooklands was the Whit Monday Event 1932, the race being the Nottingham Senior Mountain race, in which he was unplaced, having spun and fractured an oil pipe. He continued, but the broken pipe sprayed oil onto the exhaust, so he was pursued by a smoke screen. The photo was taken in this race, but before the spin.

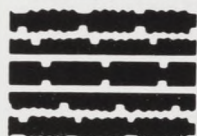
John Walker



Veteran, Vintage, Classic & Contemporary



TRIPLE STUD (S5) PATTERN



F4 PATTERN



B5 PATTERN



D2 103 PATTERN



R53 PATTERN

Crossply: Dunlop, Lee, Bedford, Fulda, Firestone, Universal/Lester, Ceat, Avon, Denman, Olympic, Fort, Pirelli, Mabor.

Beaded Edge: Dunlop, Bedford, Firestone, Universal, Durandal. Wheel rims also available.

Bibendum: Michelin, Durandal, Firestone.

Straight sided: Dunlop, Universal/Lester.

Racing: Dunlop CR65, CR70, R1, R5, R6, 5-stud.

Low profile: 55/60/70% profile Dunlop, Michelin and Pirelli performance range.

Motorcycle: Dunlop, Avon, Cheng Shin, Universal/Lester.

Whitewall: USA wide Whitewall in many makes.

Whitewall trims: Sets to fit 10, 12-17 inch tyres.



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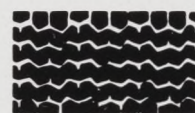
CHEVRON PATTERN



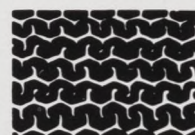
5 STUD PATTERN



R5 PATTERN



R6 PATTERN



CR65 PATTERN



Rupert Sage in the 1927 14/60 saloon.

Exeter Driving Test Meeting – 5th April 1992

Regionalisation has started well down in the South West. A Pub Meet last Autumn at Chudleigh set the scene and Robin Michelmores and John Organ of the Rapier Register put their heads together and decided to organise a Driving Test Meeting. Robin found an ideal venue on the edge of Exeter – a Driver Training Course which is on the site of the Devon County Show Ground. This provided a variety of road junctions, mini and full roundabouts which Robin and John used to devise ten excellent tests of driving skill and judgement. To comply with R.A.C. regulations only a few of these tests were timed which reduced strain on cars and drivers.

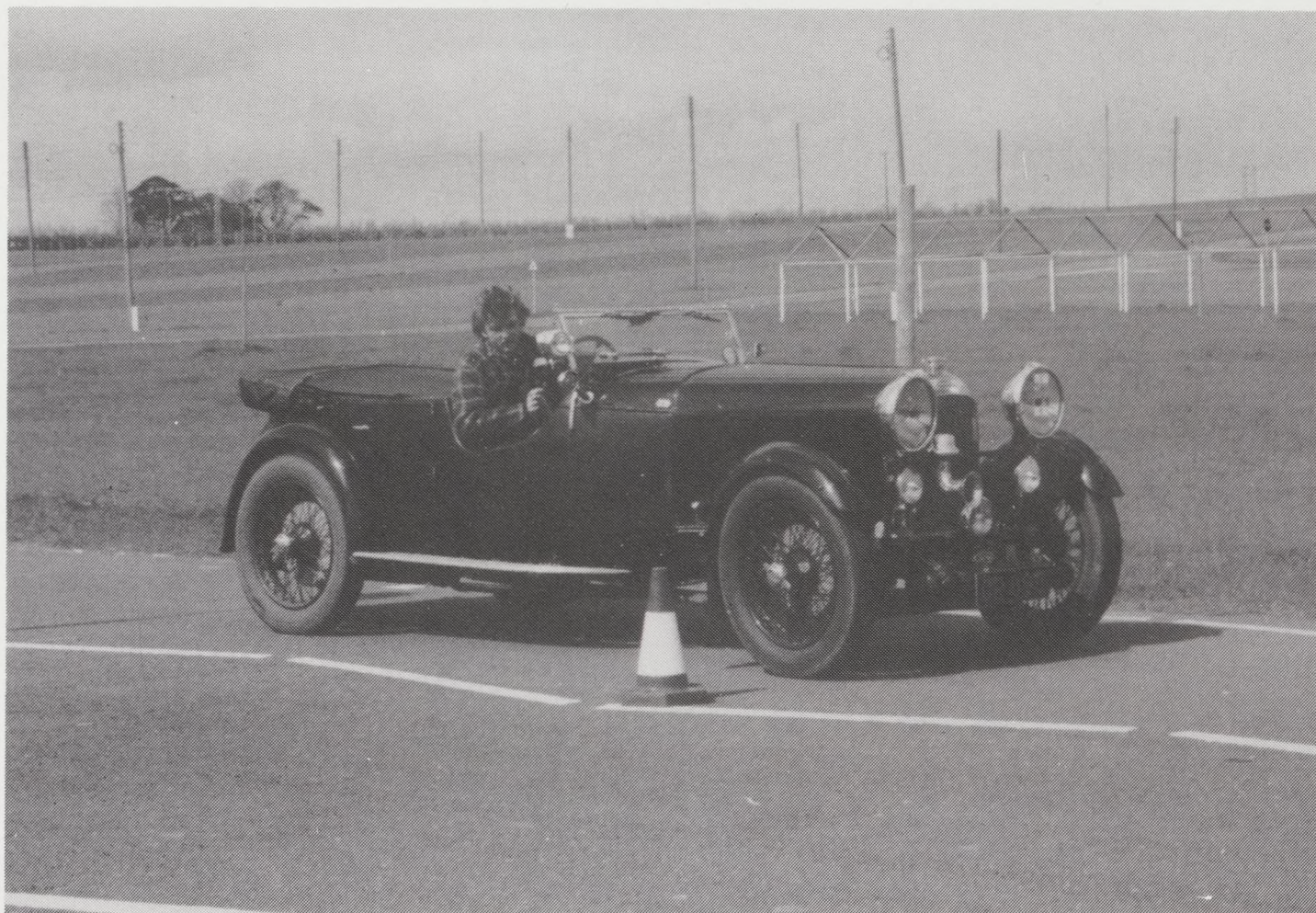
Despite advance publicity, entries were very slow and by the official closing date only 3 had been received. Robin and John worked very hard contacting local Lagonda Club, Rapier Register and also V.S.C.C. members. A few more entries resulted and the decision was made to go ahead. I persuaded my son Roland to join me in driving the LG 45 and I collected him from Winchester the previous

afternoon – he then drove the car for the first time from his home down to Honiton. Sunday morning was cold but sunny and we arrived at the meeting to find a steady stream of Lagondas arriving. The eventual total was eleven Lagondas (two of which were shared making thirteen entries) plus a chain-gang Nash.

Unfortunately no Rapiers came as they are very thin on the ground in the West Country but several Register members marshalled. No doubt the owners of the heavier Lagondas breathed a sigh of relief at the absence of Rapiers as this model is ideal for driving tests and would no doubt have put up an excellent performance.

Five tests were completed before lunch and the rest after. Included in the Driving Centre complex is a modern admin block with lecture theatre, kitchen and toilets. Those of us who brought sandwiches were able to consume them whilst watching a V.S.C.C. video from the 1965/66 seasons.

There was a good variety of cars – the earliest being Steve Lawrence's 11.1. This



Jonathan Elliott in Dad's 1930 2 litre.

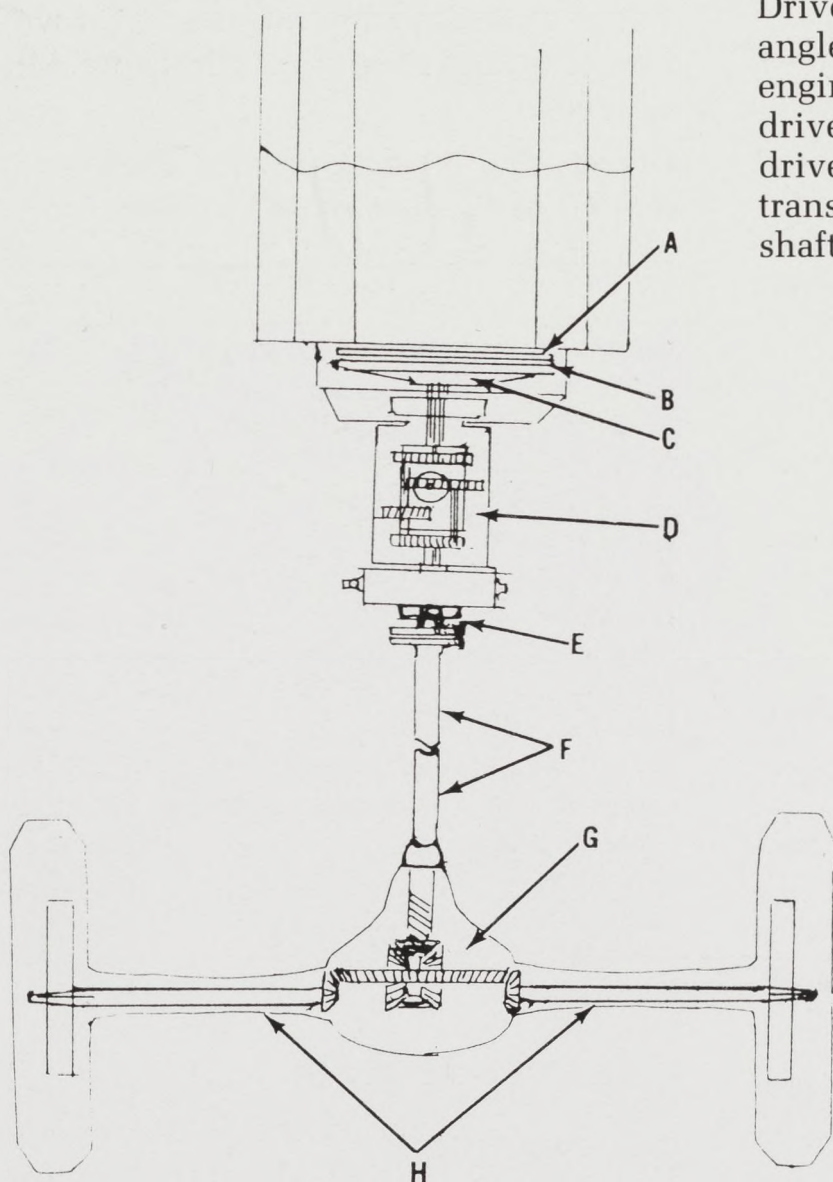
is not an ideal competition car but is a fascinating vehicle and very much part of Lagonda history. Unfortunately the magneto took exception to the proceedings after lunch and Steve had to retire. Moving forward through the models Dick Sage's 14/60 saloon was driven by son Rupert and his 2 litre team car replica by Time. They were encouraged by Pat Sage who arrived in the 14/60. Alan Elliott had entered his well-known 2 litre low chassis co-driven by his son Jon. Perhaps the biggest surprise was the presence of four 3 litres – a fine turnout for what is a fairly rare model. Perran Ziar came all the way from Penzance in his M45. Perran's car has been in the family for very many years and is a very interesting vehicle. The youngest Lagonda was my LG45.

It is difficult for a competitor to see much of what is going on but I certainly had the impression that everyone was enjoying themselves and the general feeling at the end of the meeting was that the day had been very successful and

should be repeated. Obviously more entries are required and whilst another car club will be invited to join us I certainly hope that there will be a bigger turnout from Club and Register members to show Robin and John the sort of appreciation they deserve for their hard work.

Results:			Penalty
Points			
1	Colin Bugler	LG45	154.75
2	Martin Holloway	3 litre	181.41
3	Jon Elliott	2 litre	201.67
4	Tim Sage	2 litre	212.51
5	Alan Elliott	2 litre	214.48
6	Perran Ziar	M45	215.57
7	Henrik Baungaard	3 litre	222.00
8	Guy Butcher	Frazer Nash	232.25
9	Roy Taylor	3 litre	233.64
10	Roland Bugler	LG45	239.05
11	Neale Edwards	3 litre	252.45
12	Doug Brown	M45	260.55
13	Rupert Sage	14/60 saloon	301.18
Retired: Steve Lawrence			11.1

Colin Bugler



Drives train transmits power at right angles, converting revolving power of engine to forward motion of car. Typical drive train includes **A** driving plate, **B** driven plate, **C** clutch assembly, **D** transmission, **E** universal joint, **F** drive shaft, **G** differential, **H** axle shafts.

It must be true, I read it in the papers

The picture above appears in an expensive and well produced American book on the restoration of antique and classic cars. Happily the book in question has been out of print for many years!

Does this perhaps give a clue to why so many American owners apparently take their pre-war cars to shows on trailers? It certainly goes to show that not all restoration books are up to the standards of Wheatley and Morgan.

I have collected a number of books on restoration from both sides of the Atlantic and, in my experience, the American ones

are far inferior to the standard expected over here. Even the one to which our Editor contributed a chapter (!) fails to reach normal British standards of clarity and comprehensiveness. The moral seems to be, as with our cars, buy British!

As I copied the picture I noticed another little gem at the bottom of the page . . . It shows a picture of a flywheel and the last sentence of the caption reads: "Ball bearing in centre of flywheel holds end of crankshaft". Really?

Aubrey St John Toadstrangler

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Northern: Third Tuesday, The Floating Light, Standedge, on A62 (VSCC meeting)
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North Wilts/Avon: Second Tuesday, The Shoe, North Wraxall, on A420 between Marshfield and Chippenham.

East Anglia: First Friday, The Royal Oak, Barrington, Nr Cambridge.

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They don't make 'em like that any more

My everyday car is fitted with electronic fuel injection and its under-bonnet area is scattered with mysterious boxes whose function I only dimly understand. It does have the pleasant result of starting extremely easily, not unconnected with the ignition system pushing a zillion volts through the plugs.

For reasons which have nothing to do with the car, the M45 was not started between last October and May this year, but when I did come to start it up, it fired on the first compression and I then bored all my colleagues with comparisons, unfavourable to modern cars, along the lines of "Where is the improvement after 58 years?" and so on. I imagine you have all done the same at times.

In the same week, Roger Stowers of the Aston Martin Lagonda factory sent me a copy of a V12 works service record card for 1938/9 which had come his way and by one of those coincidences that I have come to expect in Lagonda affairs by now, I realised that I knew the original first owners of the car. Some twenty years ago the wife was a County Councillor and I came to know her well when designing a bypass for her village, a scheme that she pushed through all the massed ranks of bureaucrats single-handed. So instead of just filing the record card in the archives under the car's chassis number, I got out the powerful magnifying glass and read as many of the entries as I could. They go some way towards answering the rhetorical question at the end of the second paragraph.

The V12 was a complicated car by the standards of its time and it was undeniably rushed into production far too early, with no time to sort out the bugs. The car we are looking at was a fairly early Santion I drophead, delivered on 29th July 1938, but even so it is a bit of a shock to discover that it was back at Staines for attention nine times in the second half of

1938 and eight more times in 1939 up to October (when the card ends). Mind you, most of the items for rectification were trivial. Lagonda were serious about honouring their guarantee and with rich customers being generally demanding, rather invited all this attention. But my friends lived north of St Albans and must have grown tired of the traipse down to Staines, if they did it themselves. More likely a man was sent to collect the car, or their man delivered it.

As I said, the car was delivered on Friday 29th July. On the following Wednesday it was back at Staines, having covered 458 miles, to have the radiator shutters adjusted and the oil filter changed. This would have been expected at around 500 miles in those days and it sounds as if there may have been some overheating for the shutters to need attention. Most V12s overheated when new; a side effect of all the friction in all those cylinders. At the end of August, the car was back at Staines for the 1,000 mile service, done at 729 miles. The clock was faulty and a number of body rattles were seen to. A fortnight later it was back for the tappets to be adjusted and for attention to the trafficators. While it was in, the exhaust system was tightened and the petrol gauge re-calibrated. Mileage now was 2536.

Two weeks later (1st October) the speedometer had to be attended to, as it had packed up and on the third of October a new bolt was fitted to the hood frame and the petrol filter was repaired. On the seventeenth of October more serious work was done. A new steering column was fitted and the stub axle bushes were modified in an attempt to eliminate squeaks from the front suspension. One gathers that the car had been run into, as temporary repairs at the back end were carried out, the car returning on the 20th for permanent repairs and also to have the

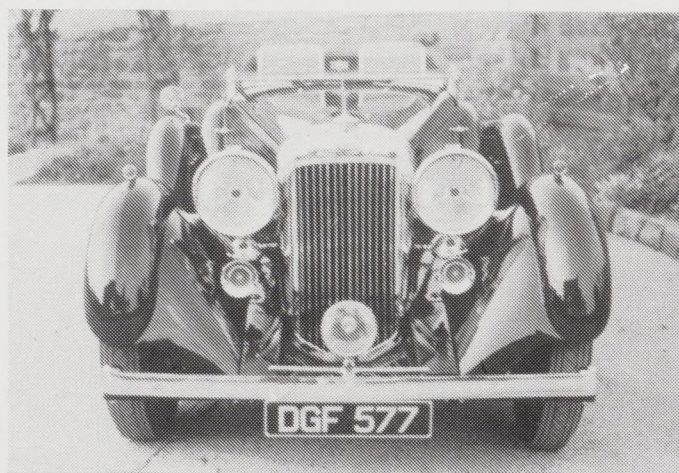
new steering column lowered. The engine reaction damper was cleaned at the same visit. The mileage had now increased to 4059. Eleven days went by and then the car once again appeared at the works, recorded mileage now 4546. At this visit the tappets were adjusted again, the plugs cleaned and reset, new HT leads were fitted (had the overheating cooked the originals?), new points were fitted to the nearside distributor, the charging rate was changed as winter was approaching and the ammeter changed. The engine damper was cleaned again and a rear bumper fitted, obviously to prevent damage in any future accidents. The rear seat was re-upholstered to a different pattern, an armrest was fitted to the nearside door and a new driver's door window handle fitted. Finally, the brakes were adjusted.

The car now ran with no attention until the end of December 1938, returning on the 29th to clean the plugs at 6585 miles, this operation being repeated on 4th January, when the distributors were also

adjusted and the valve clearances rectified. On the 12th January it was back again for a most mysterious operation, which appears in the service record simply as "0.001 to 0.002 $\frac{1}{2}$ ". This puzzled me for a time, but I think I have worked out what it was. V12s have dural connecting rods running directly on hardened crankpins with no bearing metal. Modern theory would suggest a running clearance of 2 $\frac{1}{4}$ "thou", but Lagonda fitters were proud of their skill and the engines were set up to give only one thou. clearance. This gave the high oil pressure that owners liked to see. The problem is that the co-efficient of expansion of dural is nearly twice that of steel, so that the clearances opened up as the engine warmed up. When winter came, the rods would shrink and on a very cold morning would grasp the crankpin so firmly that the starter motor, even Mr Bosch's specially powerful one, couldn't turn the engine. This condition would be even worse if the engine had originally been assembled on a very hot day, when

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temperatures in Lagonda's glass-roofed factory could easily reach 30° Centigrade. If you do a bit of maths you can see that an engine assembled at 30° C would seize solid at minus 12° C. Now that is pretty cold, but it means that the clearance would be down to half a thou. at 90° C and a quarter at minus 1.5° C. Note that the V12 we are talking about was sold in July and came back for this mysterious attention in its first January. I am pretty confident that the work done was to increase all the big end clearances to 2½ thou., so that it would start in cold weather.

Not that that was all they did at the January visit. All the valve guides were replaced by a modified pattern. The heads were decarbonised – sensible if they had to come off anyway, the fuel system was cleaned out, the brakes adjusted and topped up and the trafficators worked on. The elapsed mileage now was 7286. A fortnight later the offside cylinder head gasket blew and a man had to be sent to Deptford to rescue the car. The other gasket was checked and passed, but this mishap must have put the owner off and the car was sold, with the guarantee transferred to the new owner.

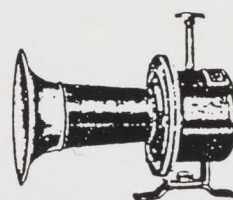
The second owner was either luckier or less fussy, for the car stayed away from the works, apart from two visits to repair accident damage in March and April 1939. In June it had new plugs at 11,450 miles and in July a man was sent out to sort out the recurring squeaks in the front suspension. In October 1939 the dynamo gave up at 14,190 miles and with the advent of war, the records cease.

I hasten to add that much of the work done and recorded was pretty trivial and naturally the first owner of such an expensive car would be extra particular. This first owner was used to expensive cars, mostly with replicas of the Parthenon on the front, although when younger he had had Napiers and Daimlers. His father had owned the first Rolls-Royce registered in Hertfordshire, but only kept it for a year. By the 'sixties the son was back to Bentleys.

There are among the LG and V12

records some even longer sagas, with engines and gearboxes replaced under guarantee, sometimes more than once. This doesn't necessarily mean that the component was a write-off; it was a convenience to the customer to replace it quickly so that he could have his car back. The part could then be repaired at Lagonda's leisure and installed in another car. You can see why the engine number appeared on the bulkhead ID plate and not on the engine. Standards were different then and everyone expected to regrind the valves every year. Even so, if my new V12 had to go back to the factory that often in its first year, I'd be pretty miffed.

Arnold Davey



Letters

Dear Colin,

As you know I do not comment on Club matters very much, unless of course it is of a kindly nature, that being the case, then I consider that I am also entitled to pull matters to pieces.

Regarding this suggested nonsense about the two A.G.Ms. Quite a considerable amount of time and water has run under the bridge since I last came across such a daft suggestion. If I remember correctly, a suggestion on a par with this was forthcoming from an official of the Transport and General Workers Union and from my experience they are all daft.

On a very serious note, why not consider the question of life membership, I see no reason why this should not be at a figure of, say, £250. This would be quite in order with me as I would then only owe the Club £175.

Kindest Regards

Roger Firth

Dear Mr Painter,

I call you such as I cannot recall having met you at any Lagonda meetings.

I should like to thank you for my copy of the Spring Lagonda Magazine, with the interesting articles, if that is the correct

word for them, about my husband. Clive Dalton kindly passed it on to me when I saw him last week.

May I please ask you if you would be kind enough to let me have Neale Edwards' address. I'd like to get in touch with him to thank him for remembering so many happy days, a pity they pass so fast. *(Done, with pleasure. K.P.P.)*

At times I quite miss taking apart and putting together parts of Lagonda engines.

My thanks once again.

Yours sincerely,

Leslie Kenny

Dear Ken,

Securicor delivered an unexpected parcel the other day – a Lagonda Club Trophy! It seems about time I put pen to paper. I was actually intending to reply to the recent comments about what happens to our cars in the winter, and continuous road taxing.

LBT 74, the Henry Coates Special, has been continuously taxed and used since its acquisition from John Batt in 1981, until its engine rebuild last summer. During that time it has had four or five major engine strips, new front axle, bodywork damage repair and a new cw & p. We have completed all the Meashams bar two, one ditched and one

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transmission failure, and won awards in all the others, including two wins, all thanks to a series of excellent navigators. Thereby the reason for the Night Trial Trophy, many thanks to the selection committee, including Dick Sage, God bless him, from us both.

We must apologise for missing the last two AGMs, each time we were enjoying touring to mid-France, courtesy of a town-twinning exercise, isn't a big Lagonda just the ideal tool for such an excursion?

I should also apologise for continued absence from the Northern Dinner, you may know that, for my sins, I now run the VSCC Derbyshire Trial on that weekend – can't suggest its any good for big Lagondas, although we would always welcome the occasional Rapier.

By the way, can the Chairman suggest the antidote for one who has habitually put valve caps in his mouth all his motoring life?

Yours sincerely

John Harris

Dear Mr. Editor,

It is only as we get older that we realise just how good we were at Staines and Loughborough.

Do you know that, in the Chertsey Lane service entrance to the service dept., we installed our own power generators, with two Mirrless R16s diesels and heat exchangers so that in event of bombed out power failure we had our power. We at that time owned Mirrless.

We also owned Petters from Yeovil, and half of Meadows, and a big share of Reavells and Bristol Shipbuilders, and Bryce Fuel Injection which gave rise to our diesels, and Wyndham Hewitt which took over the basis of the aero engine business.

We had a marvellous automatic lathe shop, making our own wheel nuts, and subcontract work for the LTPB making the steering parts for the London buses, and competitive? One job we did, our net return on the price was the bronze swarf which we sieved and sold.

But I must try to place on record the marvellous men who made it all possible. All our tooling was at first made in the toolroom bossed over by Vernon Tonge, I recall that he made an automatic cylinder block machining centre which drilled every hole in the LB6 block, and a sixway machine centre for the Bristol gearbox, and the automatic deep hole driller for the oilway along the crankcase. But memory dims. Then Charlie Denyer bossed the precision grinding shop producing vast volumes of pivot pins for the gill rings to limits plus and minus two tenths of thous. Bill Winkley foreman of the milling section who taught me all about gear tooth cutting, and Charley Robinson lathe section foreman. Charley insisted on making all his own tools, Bill Ellison head of the capstan and semi autos who could make Ward 3/s sing to half a thou., Freddy Ward, Reg Osman, shop super, Reg Ingham MD from Rolls Royce, above all Freddie Hawkins the Chief Planning Production engineer, where are you Freddie? Lionel Taylor must still be around, who was power behind the diesel injector production, Bert Amiss who assembled all gear boxes, Lil Pryke who was boss and driver of all leather work upholstery, Len Phillips chief Lagonda inspector, Len was badly hurt when the racing Talbot went into the crowd at Brooklands.

Ah, If only if only we had transistors in those days. What we could have done. To control the depth of automatic drilling the machine carriage stops were poor micro switches so that the drill depth varied and we broke taps when tapping the holes.

All car work stopped suddenly and we were chucked in the deep end, don't ever forget the war was only five years . . . some months ago the Chief Engineer of Ford said it would take three years to design and fit a new door lock . . .

At Staines with no previous experience we took up the design of the 6pdr antitank gun on a production line, sending over 300 to North Africa in 1940 where futile generals lost the lot, and we also hurriedly invented the 2" airfired rocket missile armed to Hurricanes from Kingston flown

from the factory direct to Cairo to stop Rommels Panzers and they did, and we followed that with a 5" rocket missile, (I've a picture of those fired from a merchant flat top ship in salvos of sixty), and the cooling rings for the Bristol Hercules, Pegasus, Centaurus, gearboxes for bombers, Lysander landing gears and wheels, bomber floors for Bombardier, most of the glycol tanks for the Spitfires, Hurricanes, Typhoons, Tempests and others all fabbed from hand beaten tungum metal. And all repaired or replaced during 1940 and the terrible days of bombing . . .

Then there was the occasion when the BBC sent a BBC man on a bombing raid to Berlin and relayed a commentary, (mad weren't we?) The wife of one of the flight leaders worked on a Herbert capstan lathe cutting the jack screws for the flaps, and Watney allowed the commentary to be broadcast over the Tannoy that night. I was there. That lovely lady worked harder than anybody I have seen; I don't know if the Squadron Leader came back but over 55,000 did not.

A little further along the machine section was a middle aged man who tapped the thread in the sprocket of the jack screws; he had a double tandem tap for the thread which was 1/2" eight threads to the inch and he ran the chuck at about 500 rpm ramming that tap in so fast that it would hurt if you checked it. The tap was over a foot long the chuck was automatic and he rammed the tap in so fast that once he actually put it through the palm of his hand . . .

Then RP Fraser took over the devilish Crocodile flame thrower which had a range of about 600 yards and was the only thing which actually stopped a Tiger tank, IF IF you got in range, IF.

The Tiger had an 88mm gun made in 1925 . . . in Russia . . . at a special secret gun park 300 miles southeast of Moscow, special permission of Stalin, and the Luftwaffe too . . .

And Ford want three years to make a door lock.

Best of wishes, will continue.

John D. Berridge



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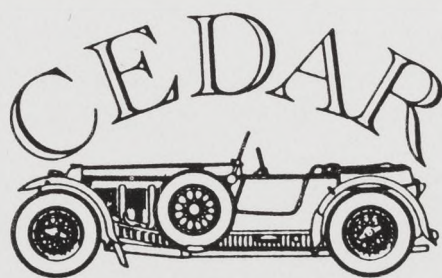
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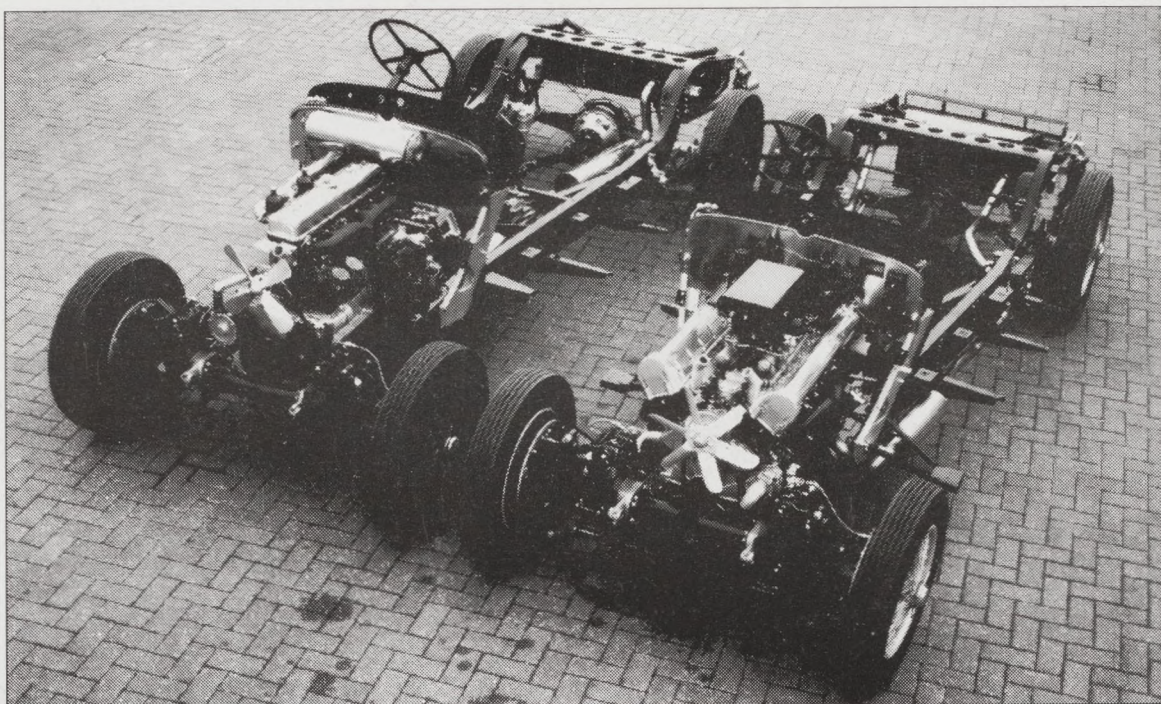
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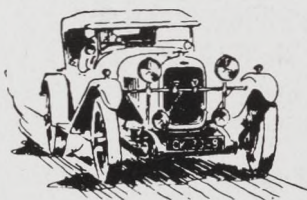
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