



THE MAGAZINE OF THE LAGONDA CLUB

Number 77 Summer/Autumn 1972



THE LAGONDA CLUB

Patrons:

SIR DAVID BROWN
THE EARL HOWE, C.B.E.

President:

J. W. T. CROCKER

Vice-President:

P. A. DENSHAM

COMMITTEE 1972-73

Chairman:

J. D. ABSON

Treasurer:

Mrs. B. I. Wittridge,
626 Streetsbrook Road,
Solihull, Warwicks.

Competition Secretary:

J. A. BATT

Midland Secretary:

TO BE APPOINTED

Northern Secretary:

H. L. SCHOFIELD

Spares Registrar and Technical Adviser:

IVAN FORSHAW

415 Ringwood Road, Parkstone, Dorset
Telephone: Parkstone 3149

A. BROWN	D. S. JOHNSON
A. DAVEY (<i>Registrar</i>)	G. T. PREECE
R. C. DAVY	D. WESTALL
MRS. A. E. HEWITT	

Secretary:

MRS. V. E. MAY

68 Savill Road, Lindfield,
Haywards Heath, Sussex

Editor:

A. W. MAY

Border Secretary:

I. G. MACDONALD

Scottish Secretary:

J. MCKELLAR-CAIRNS

Australian Representative:

E. J. WHITEHEAD

23 Pibrac Avenue, Warrawee, N.S.W.

U.S.A. Representative:

R. T. CRANE

10 Crestwood Trail, Lake Mohawk, Sparta,
New Jersey 07871. U.S.A.



MAGAZINE

Issue No. 77

Summer/Autumn 1972

PUBLISHED QUARTERLY

Editor: A. W. MAY

Editorial Committee:

ARNOLD DAVEY J. G. ODY J. W. T. CROCKER

CONTENTS

Notes, News and Announcements	..	2
Northern Notes	3
The Lagonda Tri-Car	4
YY 1354—A Car Reborn	6
Some Threads on your Lagonda	8
The Mille-Miglia 1927	11
Mechanical Contrasts	14
Finnere Observations	16
Border Rally 1972	19
Silverstone Snatches	20
Scenes in the Silverstone Paddock	21
Hull and East Riding Members Notes	22
Southern Social Meeting	23
Non-destructive testing as applied to racing machinery, ancient and modern	25
Letters to the Editor	29

Contributions do not necessarily represent the views of the Committee nor of the Editor, and expressed opinions are personal to contributors.

FRONT COVER: A very fine 1914 11.1 h.p. now believed to be in the U.S.A.

NOTES, NEWS AND ANNOUNCEMENTS

Many apologies are offered for the late appearance of the SUMMER magazine, combined as it is with the AUTUMN issue. Promises of "copy" were made to the Editor, few of which materialised in time for the Summer issue to appear in any reasonable size. Further chasing-up of contributors eventually produced sufficient material for this present issue. But the warning signs are there to be seen. Unless people are prepared to make a contributing effort, no matter how small, then the Magazine will not be able to maintain its present standard. Don't wait to be asked. If you can write something interesting about Lagondas, events, general "vintage" matters, racing, reminiscences, technical topics, day dreams or whatever, then sit down and do it . . . please!

* * * *

MAURICE LEO was married to Pamela Bowen-Evans in a quiet ceremony at Amersham earlier this year. Bob Davy sent us a photograph of the happy couple which appears on this page taken at the reception at the Crown Inn at Penn. Our warmest congratulations go to Maurice and Pamela.

* * * *

Congratulations are in order too for the setting of a new record by JOHN GODDARD of the Bentley Drivers Club. On 6th May 65-year-old "Jumbo" drove his turbo-charged 3/8-litre Bentley at the incredible speed of 158.2 m.p.h. during the Ghent Speed Weekend. This set a new record for the flying kilometre. The old mark has stood since 1959 when the late Forrest Lycett recorded 141.131 m.p.h. over the same distance.

* * * *

Bearing in mind that only seven or eight SQUIRE sports cars were built by Adrian Squire back in the mid-thirties, it is an occasion to see two specimens for sale in the motoring press recently. Powered by a twin-cam supercharged 1½-litre

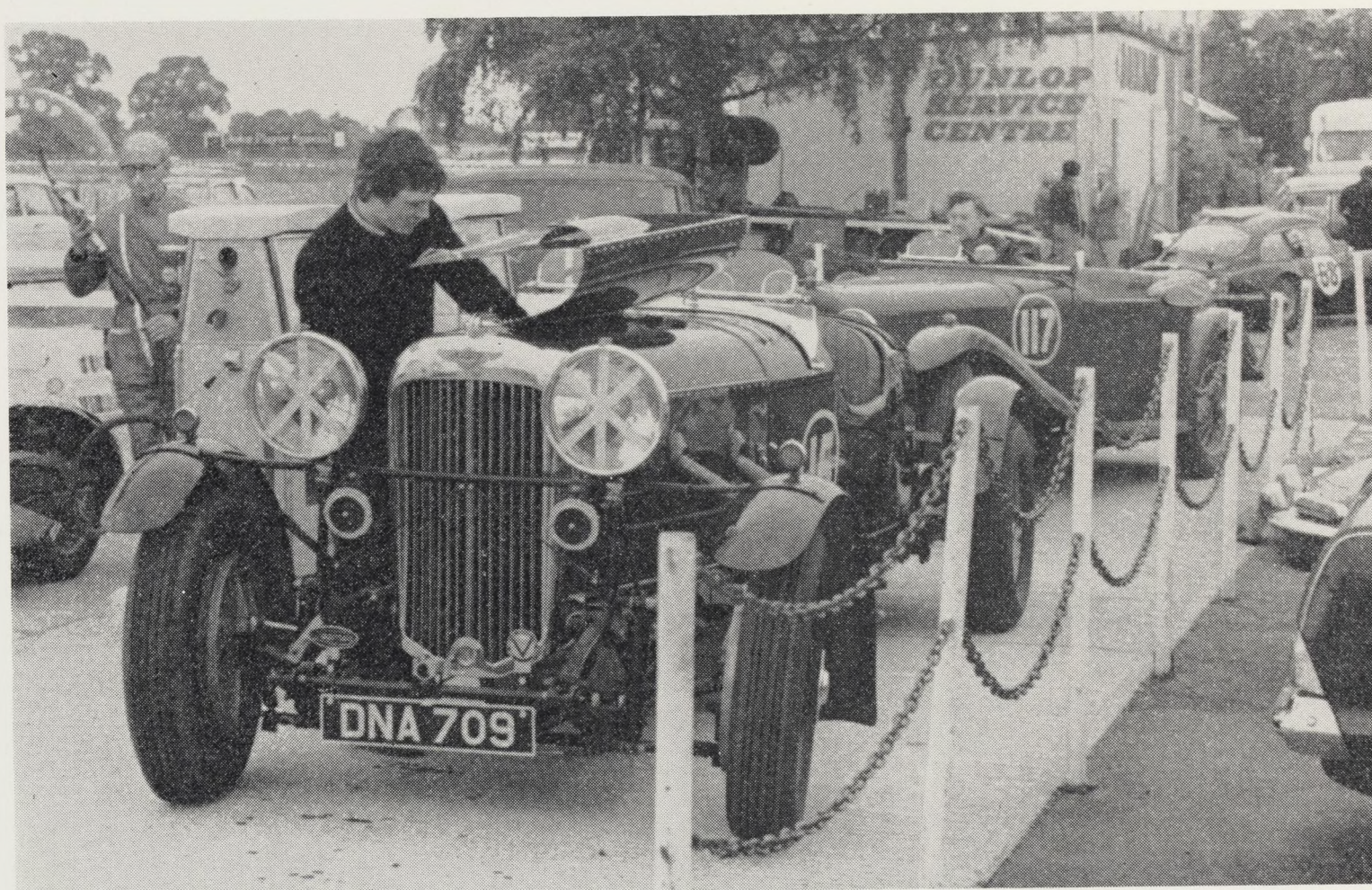
Anzani engine the Squire was built to perfectionist standards which contributed to the then high purchase price of £950 *without* bodywork for the short chassis model and £975 for the long chassis. Nearly as much as an M.45! The Squire were originally sold with a guaranteed maximum speed of 100 m.p.h. Let us hope these two representative examples of Adrian Squire's super sports cars remain in this country.

* * * *

The NATIONAL MOTOR MUSEUM was opened in July by H.R.H. The Duke of Kent. Lord Montagu first opened his original small motor museum in the early fifties and now the new £750,000 complex of buildings on the Beaulieu estate is one of the finest in Europe, if not the world, with 105 exhibits covering the whole spectrum of the history of motoring to the present day. The Library, too, has been rehoused to give it the space it needs to house an amazing collection of motoring books, papers and records. The venture has the Club's good wishes for the future and deserves the support of all members when they are in the Hampshire area.

* * * *





B.D.C. Silverstone—Nigel Hall with his new 4½-litre.

Photo: John Davenport.

NORTHERN NOTES

from Herb Schofield

Northern Dinner 24th March, 1972

Held in very untypical weather conditions with a temperature during the day of around 70°, and of the seventy people who attended a number actually came in old cars. Brian Minshull in his splendid M.45 saloon; Alan Ogden in his trusty M.45 tourer; new member Ian Close in his 3-litre; Herb Schofield in his LG.6 Drophead; Roy Paterson in his 4½ special, and V.S.C.C. members Jack McEwan and Guy Smith in Riley Sprite and 328 B.M.W.

Support for this meeting continues to grow and some members travel vast distances to be with us. I must therefore mention Geoff Squire from Glasgow and "Quack" Young, friends and family from all over Britain. Quack himself came all the way from Paignton, Devon.

People started arriving some hours before the

dinner was due to start to enjoy a few quarts of beer beforehand. It is truly amazing how many members are unrecognisable at major functions of this kind—all nicely polished up in their polished old wedding suits complete with turn-ups and baggy trousers. John Beardow sported his still very presentable de-mob suit, a type which very well might come back in fashion soon. One or two members smelt of moth balls, and Nigel Hall had actually cleaned his teeth. Ted and David Townsley looked very handsome in full evening dress—unfortunately the waiters were dressed likewise and a lot of people were confused. Small wonder therefore that Ted was seen on occasions to be carrying drink trays around the place! Bob Alexander (I'm only here for the awards) had obviously put a great deal of weight on over winter and appeared to be having difficulty in keeping inside his suit. Brave indeed was Mr. Richard Weir who was wearing a red velvet suit and some pre-war glasses.

Speeches followed the Dinner itself, starting with Alan Brown, who had his words written on a piece of toilet paper—presumably in order to get a cheap laugh. His speech seemed as blurred as

ever, and he made an attempt to crack an incredibly foul joke before being persuaded to sit down. The Northern Secretary on the other hand delivered a superbly witty speech (guess who's writing this) which everyone enjoyed.

Dancing followed with the usual Foxtrots, Old Time, etc., to please the older members, who all seem to live in the Hull area. Various games were played including a contest to find the male member with the most attractive leg; this was won surprisingly by David Hine—it looked more like a piano leg with hairs on, to me. Attempts to have a contest for the female with the most attractive bust didn't seem to get very far, mainly I suppose because the ladies weren't too enthusiastic about it.

The Northern Secretary spent most of his time in the bar generously buying drinks and paid only occasional visits to the ballroom. He was shocked on one occasion to find Brian Minshull with a girl mounted on his back. Now Minshull's reputation is international, stretching as it does back to Cairo in the Second World War, but apparently it was only another game, and not a demonstration.

At midnight a hush fell over the assembled company as the lights dimmed and a shadow stepped into the middle of the floor followed by a roll from the drums, lights flashing, and, suddenly—could this be Herb's special treat?—no, only bloody Alan Brown dropping his trousers again!

Dancing finished at 1.00 a.m. with the last waltz and Auld Lang Syne which is some sort of Scottish custom in which you hold hands and charge forward towards Ted Townsley's tummy. Suddenly, it was all over and another Northern Dinner had passed. Those who were going home burst out into the night, leaving the rest of us to a night's rest, or a night's fun depending on who you came with!

The morning after

This was a sorry sight in the breakfast room. Geoff Squire was reading his paper upside down (the paper I mean, not Geoff). Alastair Barker was enthusiastically pumping ketchup onto his cornflakes, Peter Chapman seemed to be very, very tired, and Alan Brown looked grey and appeared to be requesting help and relief from above which was not forthcoming.

Is it all worthwhile? Evidently it must be, because next year we will probably have more people. I hope so.

How do you like your Driving Tests in the North? Serious, or as we have them at present with the accent on fun? If you would like to see a serious Driving Test Meeting in the North please drop a line to the Northern Secretary.

Stop Press

Oulton Park, 17th June, 1972. 1st prize in the Concours d'Elegance and 2nd prize Concours d'Etat won by Lagonda Club member David Royal and 1932 3-litre. Well done, and the first time a Lagonda has won the most important V.S.C.C. Concours since 1963.

And Finally

If you run over a rabbit in the road, don't just leave it there. Do as economy-minded Dennis Roberts did one dark evening—take it home and eat it. But be careful, as somebody pointed out at the time to Dennis, rabbits are not usually coloured black and don't have long tails.

A true story, apparently, which is said to have actually happened!

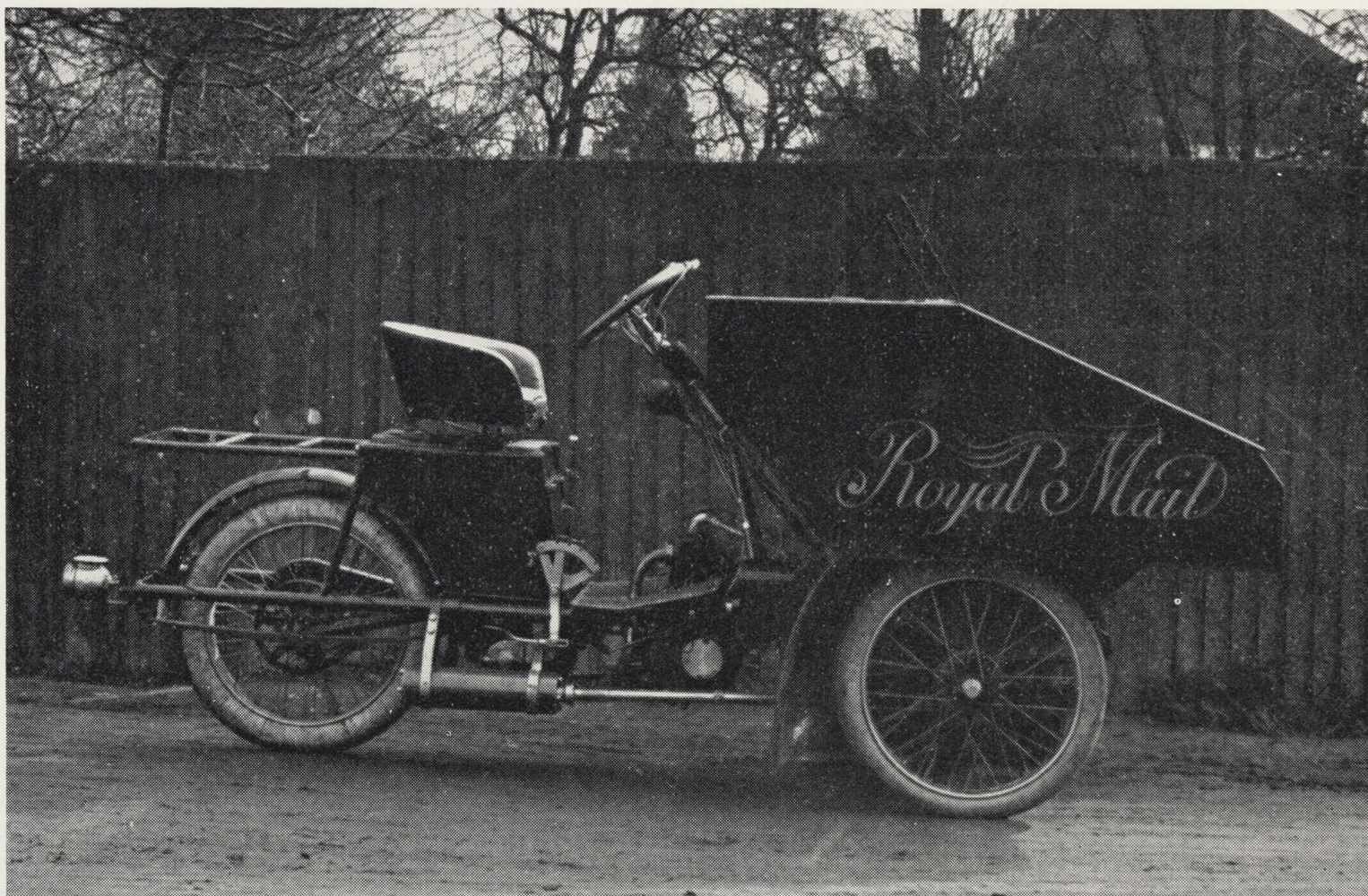
THE LAGONDA TRI-CAR

THE EVOLUTION OF THE TRICAR, OR TANDEM motor tricycle for two persons, is being watched with considerable interest by that large class of would-be motorists who cannot afford, store, or maintain a small car. Tricars may be divided roughly into three classes:

- (1) Those which retain the original form of a motor bicycle with forecar attachment;
- (2) Genuine motor tricycles, planned and built as such;
- (3) Three-wheeled cars planned and built more-or-less on car lines.

The Lagonda tricar belongs to class 2, and is the most advanced specimen of its type. Its designer, Mr. Wilbur Gunn, has always been a strong advocate of high-powered machines, and was the first to produce a properly designed tandem motor tricycle fitted with his 5 h.p. air-cooled engine and an efficient two-speed gear of the Panhard type. Later the power was increased to 6 h.p., and I find that these machines enjoyed a high reputation among their owners for hill-climbing, speed and reliability.

The subject of these notes is a new model, with the 6 h.p. cylinder duplicated so as to give 12 h.p., and the entire frame sprung like a car. As I had found the 3½ h.p. tricars of last season hopelessly underpowered for winter roads, I placed the first



The twin-cylinder Tri-car converted for the Post Office.

order for this new model, and put it through its paces at the end of last week. Nobody had previously dreamt of more than 6 h.p. for an air-cooled tricar, and most of the heavier models at the Stanley Show had water-cooled engines of 4 to 5 h.p. Naturally, therefore, it was the general opinion that I was going in for a monstrosity quite unfit for sane motoring on English roads. Since Christmas, however, I have been watching the behaviour of a 9 h.p. twin cylinder Lagonda with the earlier unsprung frame, built for a doctor who works a very hilly district, and I knew that I had made a good choice.

Before I describe its initial performances, it will be as well to enumerate the main features of this "motor-cyclist's Mercedes", as it has been called. The frame is very simple, consisting of two main tubes of exceeding heavy gauge securely braced at the vital points by cross tubes. All the joints are brazed, there being no bolted clips, and the entire frame is by no means heavy to lift with one hand. The four-leaf springs are placed underneath the main tubes, and the back wheel is carried on a patent cradle, which is hinged to the frame at a point directly beneath the change

speed lever. This permits the wheel to rise and fall easily, but absolutely prevents side roll, and the tension of the driving chain is not affected to an appreciable extent. The gear box provides three speeds, and is of the Mercedes type, giving a direct drive on the top gear. It is of ample strength and works very smoothly. Being placed midway between the engine and driving wheel, the forward chain is of good length, and therefore does not get excessive wear. Both chains are adjustable separately. The engine has two cylinders of 90 mm bore \times 96 mm stroke; the inlet valves are automatic with flat seatings, and the gudgeon pins are secured without the usual screws, which are so apt to fall out and do serious damage. The cylinders are cast in one piece, with an unusually large number of ribs which provide efficient radiation without the aid of a fan. A leather-lined clutch of large diameter, free from any thrust, is controlled by a pedal, and two other pedals work the front and rear band brakes. These pedals, together with the change speed lever on the driver's right, constitute an arrangement familiar to car drivers, who are, therefore, at home on this machine; conversely,

the man who learns to drive it will find that he can manage a car. In addition, there is a Bowden exhaust lifter at the left handle to facilitate starting by pushing the machine with the lowest gear in when it is not convenient to use the starting handle. With the latter the engine will start with a single upward pull, and the driver then takes his seat, releases the clutch, puts in the lowest gear, and starts like a car. A spark advance, and the throttle and air levers are at the top of the oil tank below the handlebar, a thumb switch being close to the right hand. No governor is needed, as I find that the engine will run as slowly as required, even with clutch released, by simply retarding the spark, and this provides all the control needed under ordinary circumstances. The upper half of the tank under the rear seat holds about four gallons of petrol, the lower portion providing ample space for coils and accumulators; but I am shortly expecting a new type of high tension magneto from Paris, made to fire a twin cylinder at an angle of 45° . Panels will be fitted on the insides of the front wheels, also an under apron, to keep off the splash, and the upper half of the rear chain will be cased. The forebody shown in my photograph is only temporary, my own having a much longer foot, and I shall have a driving seat without a back to facilitate mounting and dismounting. Wheel steering is quite unnecessary on a tricar of moderate weight, and neither so comfortable nor responsive as a handlebar. Its only *raison d'être* is where the steering has to be geared down considerably. Owing to the correct setting out and the long wheel base I find the steering perfectly steady at any speed, and I can turn in the width of a main road at the second speed. The tyres are $26 \times 2\frac{1}{2}$, of light car strength, and the back one being furnished with the Imperial steel studded rubber tread, which I much prefer to leather. When the winter is over I propose to use a plain tyre, and carry a Parsons non-skid for emergencies.

Considering that the engine was absolutely new, the preliminary trials last week-end were most satisfactory. On the level the engine ran with perfect smoothness and almost noiselessly with the throttle nearly shut, the pace being controllable within a very wide range by means of the spark regulation. This is a notable advantage of a powerful engine that one can run it over light most of the time, thus economising in every way, while the reserve power is always on hand when

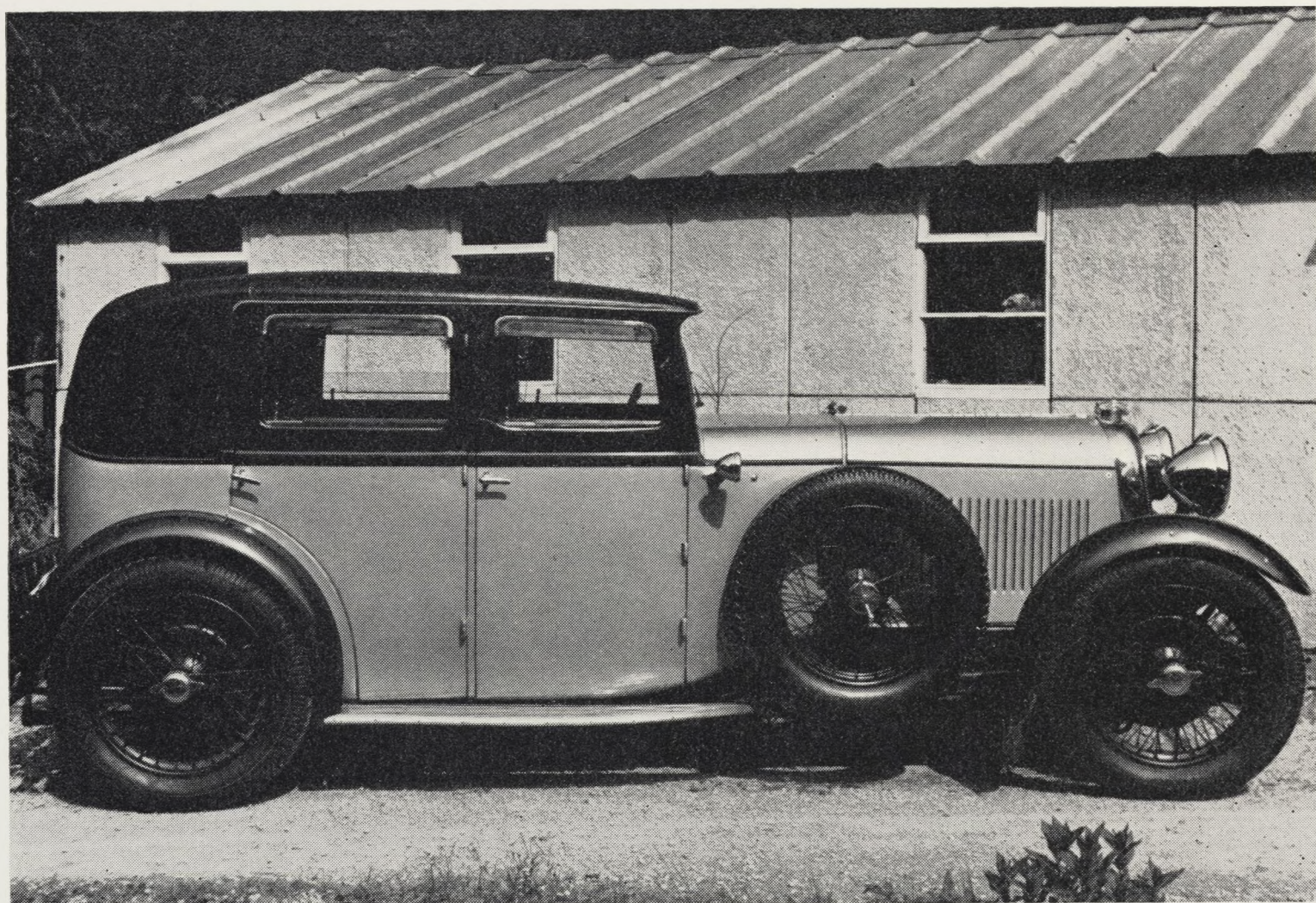
required by merely opening the throttle. Gradients up to 1 in 10 were taken on the top gear ($4\frac{1}{2}$ to 1) with full load, and it climbed the steepest portion of Batchworth Hill, Rickmansworth, on the second speed ($6\frac{1}{2}$ to 1) at sixteen miles an hour. The third speed is ($1\frac{1}{2}$ to 1). This hill is steeper than either Westerham or Woodcock Hill, near Elstree. It has an awkward double turn and a loose, stony surface, the gradient in the middle being nearly 1 in 6. Sunrising Hill is about the same gradient, but is much longer, and I shall take an early opportunity of trying it. The price of this tricar is 100 guineas, and it is made throughout, including engine and gear, at the works in Thorpe Road, Staines.

BASIL CRUMP.

Reprinted with acknowledgments from *The Field*, 11th February, 1905.

YY 1354—A Car Reborn

THIS STORY'S ORIGIN GOES BACK ABOUT THREE years when a friend was trying to locate a 16 h.p. Sunbeam engine, and heard of one for sale at a garage in Borth. On being shown into the owner's store shed, the Lagonda was noticed among many other old cars. Failing to come to an agreeable price on the car but purchasing the Sunbeam engine the Lagonda was forgotten until I mentioned that I would like to buy a restorable classic car. Came a trip to Borth last October (1971) and we found the store shed empty except for an Austin Chummy, tons of spares, and to my relief the Lagonda. It transpired that the garage owner had bought the car in 1952; he rebuilt the engine and re-covered the fabric roof and then due to pressure of work the car was laid up. After purchase the car was taken home on a trailer and work commenced the first week in November. Firstly, a general inspection and clean up revealed that the car was in sound condition apart from one rear door which was a bit rotten. Two new tyres were fitted to the rear wheels and three new tyres lay on the back seat amongst the starter motor, distributor, petrol and oil pipes, and other odds and ends. As I intended to use the car for daily use when finished I did not intend to remove the body, so all the chrome was stripped and sent to the platers, front



The restored 2-litre saloon.

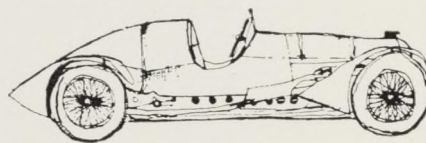
seats to the upholsterers, and the wheels shot-blasted and stoved. The starter motor proved to be useless and a new one was made up. All exposed chassis was stripped and painted, king pins adjusted, front brakes relined, new brake cables purchased, broken windscreen surround and glass renewed. The inflatable rubber seat cushions were all perished so I made new ones from foam rubber. The only two items missing were the exhaust downpipe and the mounting plate and strap for the distributor. These were made up and then with the help of a professional bodybasher set about the bodywork. The rotten rear door I reskinned in aluminium, and all the pitted bodywork was sanded down and filled. The car was then taken to the paint shop where it stayed for about ten weeks as we could only work there on Sundays. We used Rolls Royce Shell Grey and Pearl Black paint and this proved to be a very nice colour scheme. When the car came home, things started to happen fast. Chrome plated parts were fitted, along with new number plates, seats, running boards (on which I had fitted new aluminium strips) new high tension

cables, aluminium chassis plates, batteries, and in addition the car was almost completely rewired. A trip to the testing station for M.O.T. and S.U. for a carburetter rebuild just about completed the job. I must say I enjoyed every moment spent in the garage and it may be of interest to more seasoned enthusiasts that this is my second attempt at restoring a car, my first being a 1935 Austin Ruby. The only other car I own at present is a 1935 Standard Avon Special. This is a 16 h.p. Waymaker close-coupled saloon, —a lovely-looking car.

P.S.

If anyone in the Club has a 16/80 6 cylinder engine which they would like to sell or exchange for my 2-litre I would be interested to hear from them.

P. HAWTHORNE



Some Threads on your Lagonda

DURING THE THIRTY-SEVEN YEARS WHICH HAVE elapsed since I first owned and drove a Lagonda I have often thought what a number and diversity of different screw threads can be found on these cars. As might be expected, the thread used in any particular case was chosen with care from those available and is usually what a careful (and expensively trained and oriented) engineer would choose today for the job if he were not bound by some directive from above to use only threads from a particular system, all Unified, for instance, or all Metric, or, indeed all American. In the later twenties and the early and middle thirties, when most of the Lagonda cars now surviving were built, British engineering practice depended for screwed and bolted components and structures on the Whitworth and British Standard Fine threads. It was not until the late twenties that BSF threads were commonly applied outside special applications in high class work. Wilbur Gunn's contribution to the helicology, or screwlore, of the Lagonda was the introduction of the American National Fine (ANF) where these gave advantages over the BSF series. These advantages stem from the fact that for any given nominal diameter of screw or bolt the ANF series has a finer thread, that is, more threads per inch length, than the BSF. For example, the 5/16" ANF bolt has 24 threads per inch (t.p.i.), and the 5/16" BSF has 22: the 5/16" Whitworth (BSW) bolt has only 18 t.p.i. Fine threads are more suitable, for reasons which need not be given here, for use on hard and dense materials, and, where components are secured by split cotters and castellated nuts, a fine thread enables tensile loads to be applied more accurately. A good example of the use of an ANF thread is at the top of the swivel pins of the 2- and 3-litre cars. There great accuracy of adjustment is required, and the pins are made of a high tensile steel. The Lagonda specification was Flather's UBAS, but nowadays it is preferable to use En 24 or En 26 suitably heat treated. The advantage given by the ANF $\frac{1}{2}$ " diameter thread over the BSF is 20%, since the ANF pitch is

20 t.p.i., and the BSF is 16 t.p.i., which is a great help in pre-loading the thrust race which supports the weight of the car. Other uses of ANF threads are on the high-tensile cylinder head studs on the 2-litre, and the sump bolts and studs and the head studs of the 16/80. An interesting sidelight on the hybrid nature of the 16/80 engine is that although American threads are used, coarse (ANC) and fine (ANF) as appropriate, the bolt heads and nuts are of the English spanner size corresponding to the BSF nut of the same nominal diameter: that is to say, the 5/16" ANF bolts have heads to fit a $\frac{1}{4}$ " Whitworth spanner, now sometimes marked 5/16" BSF.

I do not propose to give a full list of the various places where different threads will be found on Lagondas, but only to indicate where the various sorts of thread may be found. The traditional craft of the coach-builder had not in pre-war days abandoned the use of Whitworth (BSW) threads. There is sense in this, since, with the coarser thread one is less likely to overtighten the nut and squash wooden parts beyond their elastic limit. Soft metals such as aluminium and coarse-grained metals such as cast-iron thread better with a coarser thread; Whitworth and ANC threads will usually only be found on Lagondas in these metals.

Most engine, chassis and transmission parts have BSF threads, with some exceptions, as noted above, on the 2-litre, 3-litre and 16/80 cars. Cars with Girling or hydraulic brakes (LG.45, LG.6, V.12) will have some ANF threads on the proprietary components. The M.45 has very nicely made clevis pins with threaded ends; these may be conveniently replaced by 5/16" BSF Unbrako stripper bolts, or if the clevis holes are worn, by stepped Unbrako $\frac{3}{8}$ " bolts with 5/16" BSF ends. Before leaving the subject of the threads used on mechanical details of the cars it is as well to mention the British Standard Cycle (BSCy) series of threads. These are fine threads, both left and right hand, covering a range from 16 SWG (0.064") to 1 $\frac{5}{8}$ ". In the commonly used sizes from 7/32" diameter to $\frac{3}{4}$ " the pitch is 26 t.p.i., and from 7/16" to $\frac{3}{4}$ " diameter a 20 t.p.i. series is also available. Apart from the spokes of wire wheels these threads are not found on Lagondas, but sometimes may be conveniently used in making a replacement part or reclaiming a worn one. Nos. 7 and 8 SWG spokes are threaded normally with BSCy 32 t.p.i. threads. Bolt-on goodies sometimes use these threads.

The threads used on electrical equipment must now be described. Generally speaking, electrical and ignition equipment of European origin will have metric threads corresponding to the *Système International*, but occasionally threads belonging to the Swiss *Thury* metric series or to one of the French series are found. It should never be assumed that threads on French, Swiss or German equipment are of the international series, although the Germans are the least likely to depart from it. When it comes to dealing with British electrical and ignition equipment the position seems to be, and may well actually be, chaotic. In theory Smiths and Lucas (including Rotax) prefer to use British Association (BA) threads. These start at 0 BA, with a diameter of 6 mm and a pitch of 1 mm, and get smaller as the numbers rise: thus the unlucky 13 BA is 1.2 mm in diameter and 0.25 mm pitch. The even numbers from 0 to 8 are those commonly used by Smiths, who follow general instrument practice in avoiding the odd numbers where possible. Joseph Lucas, on the other hand, seem to prefer the odd numbers, although they will use any thread that comes to hand if it fits in with their design principles. Lucas equipment will be found with BA, Metric, BSF and Whitworth threads: I have not yet identified any American or Russian threads. The square threads on Bendix and co-axial starter drives have been developed more or less empirically for their duties.

All Lagondas contain a good deal of high-class pipe work, and this has a helicity all of its own. On account of the early development of the public supply of water and gas in the United Kingdom a single system of pipe threads was developed. The fact that only one system and not more came into being is probably due to the Parliamentary control exercised from the first over the two industries. Pipe threads were known for many years as gas threads and this name for them spread wherever they were used. Few engineers, even in England, use the new-fangled term British Standard Pipe Threads (BSP), and in Germany the name *gaz* was used until recently and may still be used. It is perhaps fortunate for us that Wilbur Gunn did not insist on having the American equivalent of gas threads used on his cars—this is American National Street Pipe Threads (Fine and Coarse). The original Lagonda petrol lines are made in copper tube with all the couplers in $\frac{1}{4}$ " gas. The Kigass line is in capillary tube with $\frac{1}{4}$ " \times 26 t.p.i. fittings. Grease nipples and

Stauffer lubricators have $\frac{1}{8}$ " gas stalks. Note that on some 4½-litre cars the nipples themselves have a BSCy $\frac{1}{2}$ " thread which fits into a $\frac{1}{8}$ " gas reducing nipple which goes into the part to be lubricated. The gas system of threads was not found to be sufficiently versatile for many small tube applications owing to the large intervals between adjacent sizes. Of the systems which were developed for the automobile and machine tool industries the most successful and the most likely to be found on Lagonda cars is that of Enots Ltd., formerly Benton & Stone Ltd., of Aston Brook Street, Birmingham 6. This commends itself to car and accessory makers because solderless fittings are available, whereas the fittings in the BSP small diameters require to be silver soldered to make a high quality job. With the increase in standardisation two more threads have been introduced to small tube work. These are the Unified Fine (UNF) and the National Pipe Taper Fuel and Oil (NPTF) *Dryseal* threads. The NPTF *Dryseal* will interchange with the thread known as BRIGGS, but is held to a closer tolerance. These later threads are mentioned in case they are found on a car which has been equipped with a new petrol line or with modern accessories containing pipe-work.

The following threads which have been found on Lagonda cars are listed because they may be unfamiliar. Knock-on hubs (Rudge Whitworth), 2¼" diameter \times 8 t.p.i. Spare wheel retaining wing-nuts, 7/16 \times 14, BSW. Tube nut at bottom of 4½-litre steering box, 1.0410" dia. \times 14 t.p.i. = $\frac{3}{4}$ " BSP. Radiator necks: 3-litre and high chassis 2-litre, 1.8820" \times 14 t.p.i. = 1½" BSP. 3-litre, 3" \times 20 t.p.i. (also some petrol tank caps). 4½-litre and some blown 2-litre, 2⅜" \times 16 t.p.i.

Finally a word about thread form. In the preceding paragraphs threads have been described in terms of the nominal diameter of a bolt or male thread and the number of turns of thread per inch or other unit of length. For the sake of simplicity the thread angle has so far not been considered: this is the angle between two flanks, measured in an axial plane. The British Standard Threads, i.e. Whitworth, Fine and Pipe, all have an angle of 55°. British Standard Cycle has an angle of 60°. British Association has an angle of 47°30'. American National Fine and Coarse, Unified Fine and Coarse, National Pipe Taper Fuel & Oil and Enots threads have an angle of 60°. All metric threads have an angle of 60°

except those related to the American Acme of 29° angle (e.g. Bosch co-axial starters). It is an interesting fact that a 55° thread on a pipe is gas-and-liquid-tight without being tapered, whereas a 60° thread is not. Hence one may assume that running joints in pipework will not be possible if metrication is insisted on in pipe threads. There is no parallel series in common use corresponding to NPTF *Dryseal*, unless we admit Briggs and some of the well-casing threads, which are hardly appropriate to use on a motor car. So far there are no BSP taper sump or gearbox plugs as original fitting on Lagondas. *O si sic omnes*: try getting a British Leyland sump plug out when someone else has put it in.

References:

Molesworth, Handbook.

Enots Ltd., Catalogue, publication no. TF864 (R666).

Several Lagonda cars.

ANDRÉ KENNY

Lagonda

Lagonda, Lagonda, I still hear you calling
Me back to the time that was spent,
With roofs corrugated
And walls ventilated,
In order to take home the rent.
As we built the Lagonda
They starved in the Rhondda
And we wondered what Friday would bring,
But her bonnet yards long,
Came in first at Le Mans,
And she finished up fit for a king.

Lathes, mills, grinders and drills,
Tended by Jacks and tended by Jills,
Carving and cutting the metal away
For hour after hour and day after day.

Panel beaters on the bash,
Moulding marvels for the cash,
Shining bonnets, glossy wings,
Full of curves and sweeps and things.

Chippies in their bandsaw hell,
Slicing fingers, ash as well,
Dashboards of mahogany
Help to feed their progeny.

Upholsterers with hand-picked hides
Cutting, sewing, seats and sides,
Filling each with Dunlopillo,
Fit for any 'weeping willow'.

Saloons and coupés, tourers, de villes,
Glossy Rapides, the fastest on wheels,
Biscuit and black, and scarlet and cream,
Painted and polished until they're supreme.

Draughtsmen at their drawing boards,
Designing cars for dukes and lords,
And wondering what a duke would like,
As they travel home by bike.

F. E. CHASEMORE

The Jarrot Engine and Accessory Co.

With our extensive experience of vintage engines and components, we rebuild them to the highest standards and undertake small machining jobs, one-offs, batches of valves, etc. Club members are always welcome to discuss their mechanical problems.

1A VICTORY ROAD,
LONDON, SW19
Tel: 01-542 6516

**COPY FOR THE 'WINTER'
ISSUE OF THE MAGAZINE
should be in the Editor's hands
by NOVEMBER 25th please**



Photo: Unifoto, Padova.

The Mille-Miglia 1972

THE FIRST MILLE MIGLIA WAS STARTED IN 1927 and continued through to 1957. It ended after twenty-three events, when the Marquis de Portago lost a wheel of his Ferrari near the end of the race and went off the road killing himself, his co-driver and a number of spectators.

The original course was Brescia-Ravenna-Rome-Bologna-Brescia.

All through the years it has been a race which has attracted many, many drivers and spectators. Fans always took their holidays early and went to Brescia to see the start.

A few years ago Fina Petrol Co. sponsored a rally over a course which was similar to the old one, but reducing mileage down to 850 instead of 1,000 and starting at Padova to Brescia-Rome and back. This was a rally for Vintage and Historic Cars, and was a great success. Another Rally was held the next year, also giving Fina a

lot of publicity.

We applied to enter the Third event and were accepted, when news came that the free petrol allowance was to be cut from 300 litres to 200 litres and instead of returning all the entry fee to all people who completed the course, that too was cut by half. The Italian Fuzz were worried about the number of cars entered so the British entries were reduced to twenty chosen by draw. With typical Wittridge luck we were informed that our entry had been rejected. Now we began to get worried, as no Lagonda had been entered. Then a week before the "off" we had a quick 'phone call from Angela Cherritt to ask if we were still interested as someone had dropped out.

Only one problem remained apart from the general quick check on all things that move, and an even quicker clean up and booking the ferry, was, would the powers that be accept me as a co-driver, knowing I cannot hold a driving licence for at least another three years; so my job was navigating. We left Solihull Tuesday evening, 11th April, heading for Southampton. On the way the Lagonda slipped out of top gear once or twice —tried to pretend it didn't happen. Pressed on and

arrived at Southampton ready for 10 p.m., and met up with Whitehouse and Harben 3/4½ Bentley. Together we travelled through France to Geneva, still jumping out of top gear and suffering pouring rain from beginning to end of journey. There was a night stop at Geneva on Wednesday 12th.

Thursday 13th, saw us on our way through Mont Blanc and into Italy, reaching Padova about 4 p.m. Then day of rest. We did have a whip-round and bought a gift for Angela Cherritt who had worked hard organizing the rally. We also met the rest of the British entrants (see list).

On Friday 14th, we moved to the centre of Padova for a meal, and start of the Rally. At the centre crowds were milling round. I stayed in the Lagonda plotting the route on maps which had been doled out. The meal was practically uneatable and we didn't even have wine to wash it down, as we wanted to keep awake.

We should have left about 20.32 hrs. according to our instructions but due to over-exuberance of officials we left about 12.15 p.m. The oldest cars left first, up to 1950's Ferraris-Cisitalias which left last.

We drove through crowds of Italians out of Padova and the roads were signposted by crowds.

It was dark about 9 p.m. and we reached Brescia about 11 p.m. A restart was staged to keep the Brescia crowds happy but we were still having top gear jump.

Piacenza came up about 1 a.m. on Saturday, and now it was pitch black. Luckily Dad had fixed a small torpedo side light to plug into the dash-board. This was a life-saver for reading maps—without it who knows where we would be by now!

We took it easy for the first stage and went a lot of the way in company with a Frazer Nash/B.M.W. and Riley. There wasn't much to see at night, just lights, but occasionally we would pass a Balilla Fiat or some other slower car. At this point the keenness of Italians on motoring was brought home to me. Where in England would crowds stay up until 2 a.m. just to see a few cars go past? Yet the Italians were in every town waving at Italians and British alike with no sign of fatigue. In a way they were reassuring because they ensured we were on the right route!

After Piacenza it began to rain so we stopped and put up the hood. This was better because it meant that my maps and notes would not blow around. In front the Nash B.M.W. and Riley stopped to put up their hoods.

After the control point we shot off into the town on the route which we thought was the right one, only to meet a Ferrari coming the other way, followed by various other competitors. Apart from the cars the streets were deserted, but we found a Nash that seemed to know its way about fairly well and we got clear of the town.

At Poggibonsi we were a bit naughty going through early but up in the Radicofani Pass about dawn the fuel pumps began to race which meant that we had almost run out of petrol. Luckily it was mostly downhill in that area, so we coasted downhill and switched the engine on to go up hills. At that time I was slightly *non compos mentis* but remembered the Nash/B.M.W., and Riley going past followed by a 17/50 Alfa. Then Dad realized that the fuel pumps were racing at times to make up for an intermittent power supply from the ignition circuit which let things run dry now and again.

We belted off and just before Radicofani passed the Nash/B.M.W. and Riley. By now the sun was up, but we couldn't find control and a peasant helped us out and we were out of Radicofani at about 8.30 a.m. A Hyper Leaf which had had a lot of trouble shot past going very well indeed, but on the second stage we saw it at control point minus cylinder head. Viterbo was soon past and we came into Rome about lunch time. I was dead on my feet and when we got to the hotel I was shaking like a leaf, but I had a lager and lay on the bed and slept for two hours.

We tried to see Rome on foot but we seemed to be stuck right in some remote suburb with no Coliseum or Gothic Arches. So we returned to the car, and did a few minor repairs on the Lagonda which had been locked up in a huge paddock. We found a pair of pliers which would wedge in the gate to keep it in top (these held in fact until Paris when they slipped out and even a tyre lever was unable to keep top gear engaged).

Fiats gave a dinner that night at which Dad disgraced himself by going out and collapsing in the coach. I stuck it out through three pasta courses (one green) and numerous glasses of Italian wine.

Up early next morning and once again the excited crowds showed us the way out of the city. The first stretch was mountainous (the Lagonda was fairly hard pushed to keep up with an Alvis 12/50 ducksback). This was the Appenines. There were frequent very heavy thunderstorms and, of course, our wiper motor burnt out. We

stopped feeling sorry for ourselves when we saw the Alvis with no wipers, tiny windscreen, no hood and two absolutely drenched occupants!

We overtook a little red Fiat Balilla (there were three in the rally) but the driver of this had a black leather jacket and we referred to him as the Black Baron. About a mile further on we overtook what we thought was him again and from this we concluded he had a helicopter waiting at vantage points to pick him up and drop him further up the field!

After Rome the next control was Spoleto and after a lot of trouble finding a garage, we got signed up and left.

At Bologna a picnic lunch was to be provided but it was raining so we had the meal in a workshop/cum garage with a table in it. Then Dad saw the Italians nipping off early to get to Padova first, so we knocked back our wine and took off after them.

We were cruising at 85-90 back to Padova and we overtook an Alfa, who tried to keep up but couldn't hold us on the open road. Then in the next large town Forli, the Alfa shot past us, whilst we were at traffic lights on red. We got round him again, but in Padova the 17/50 came past again on the wrong side of the road. So Dad backed off and finished fourth behind a 50's Cisti, a V8 Fiat (of the same era) and the Alfa. We were the first British car home and felt we had upheld the name of Lagonda!

Hordes of Italian children swarmed around asking for autographs and taking masses of pictures.

Then we drove back to the hotel after the presentation of plaques, had a fairly reasonable meal and went to bed.

On Monday morning we awoke late and fixed various things on the Lagonda and gave it a wash. Changed out of working clothes and left about 12.00 mid-day.

The first stage of the journey home was a fairly fast tour through Italy with an unhurried meal at a wonderful restaurant. We took a look at the mag, which had all but packed up. The fibre cam follower was badly worn, so we araldited the end of a small screw-driver and cut and filed to shape. This has worked well ever since.

We came to Turin (where we had already spent two holidays) and found an hotel—nothing approaching the Ritz as we were running out of money too by this time!

Up early next morning with 650 miles to cover

in 12 hours. The boat we had booked was to leave at 11 p.m. so we had to be there by 10 p.m.

We shot up to the top of the Susa Pass only to find it blocked by an avalanche, so we had to go back down again and up another pass ten miles further south. This pass was not blocked, but already an hour had been wasted and we were in a hurry. The Alps went on for miles and our speed was kept right down by the corners and gradients that we had to get round and made doubly difficult by the length and size of the Lagonda. We finally got on to the Autoroute at Lyon and we began to make up time.

The Lagonda however was spluttering and banging on acceleration and we realized that a head gasket had blown. Once we reached about 70 or 80 the car seemed O.K. so that didn't really affect us.

We reached Paris and had just got onto the Autoroute towards Le-Havre hoping that we might get to the boat in time after all, when the pliers which we had wedged in the gate came out and there was no way to keep the car in top. We had to come all the way from Paris in 3rd, dropping speed to 60 m.p.h. cruising.

At Rouen we got lost but managed to find the road to Le-Havre at about 10 p.m.

Then it began to rain so we drove the last ten miles to Le-Havre with me putting my head out of the side and warning Dad if anything solid was in our path!

At about 10.30 p.m. we got to Le-Havre and dashed through the streets searching frantically for the Thorensen ferries sign. Some French dockers gave us instructions with much waving of hands, and we drove up the ramp into the boat with almost five minutes to spare to 11 p.m.

We then went upstairs and were half-way through a cool glass of beer when the public address system came on—"would Mr. Wittridge please go to the car deck". I went with Dad and we found the French Fuzz waiting for us in the form of a Gendarme and a sleepy-looking interpreter. They were upset by the fact that we had driven right through all the customs and checkpoints and had not even shown anyone our passports or tickets!

In point of fact we had not seen anyone to show anything to, but after apologies, we were allowed to stay on the ship and finish our pint.

Here endeth the most exciting event of my life, which I may add, made me a day late returning to school.

DONALD WITTRIDGE

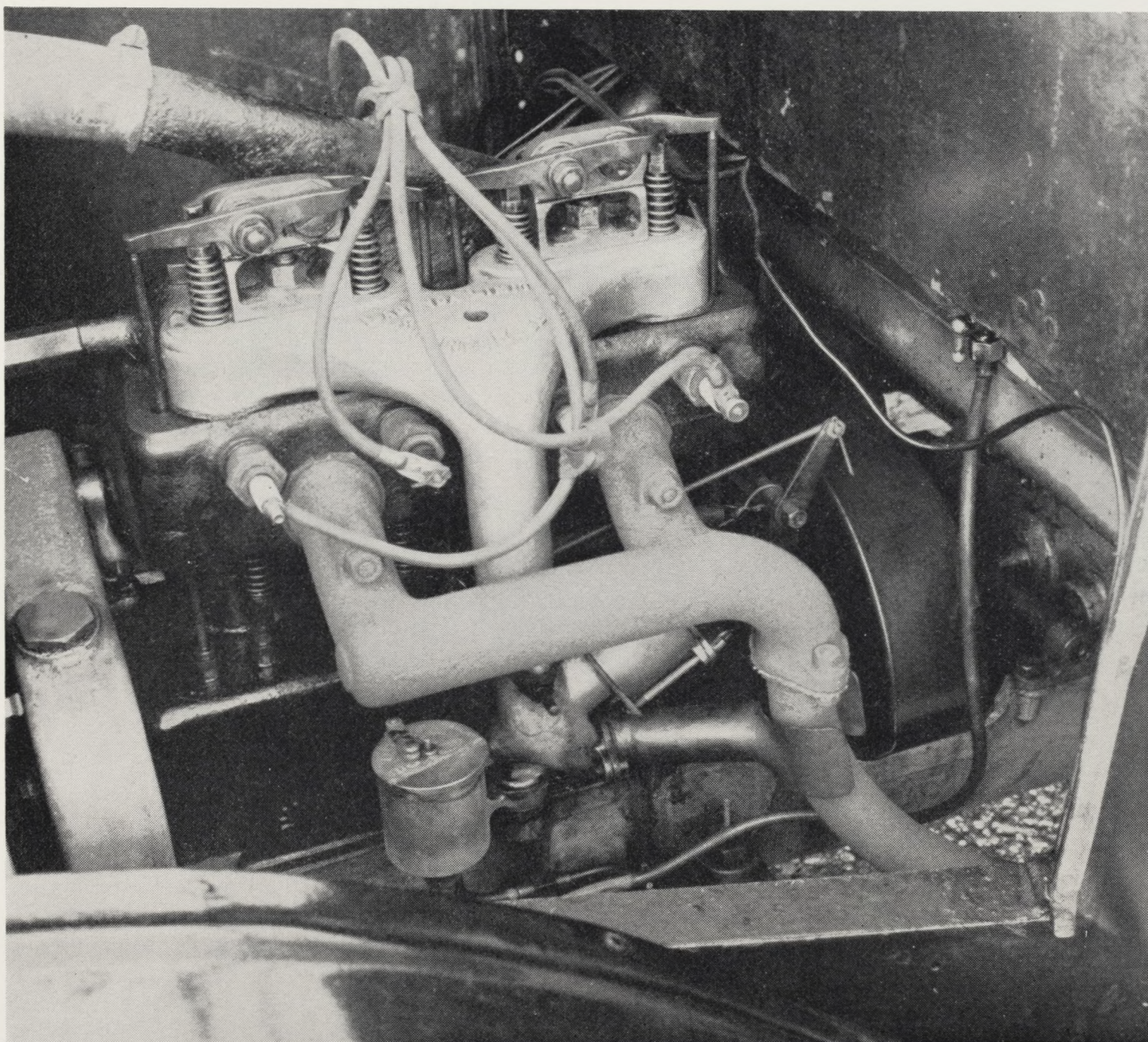
Mechanical Contrasts

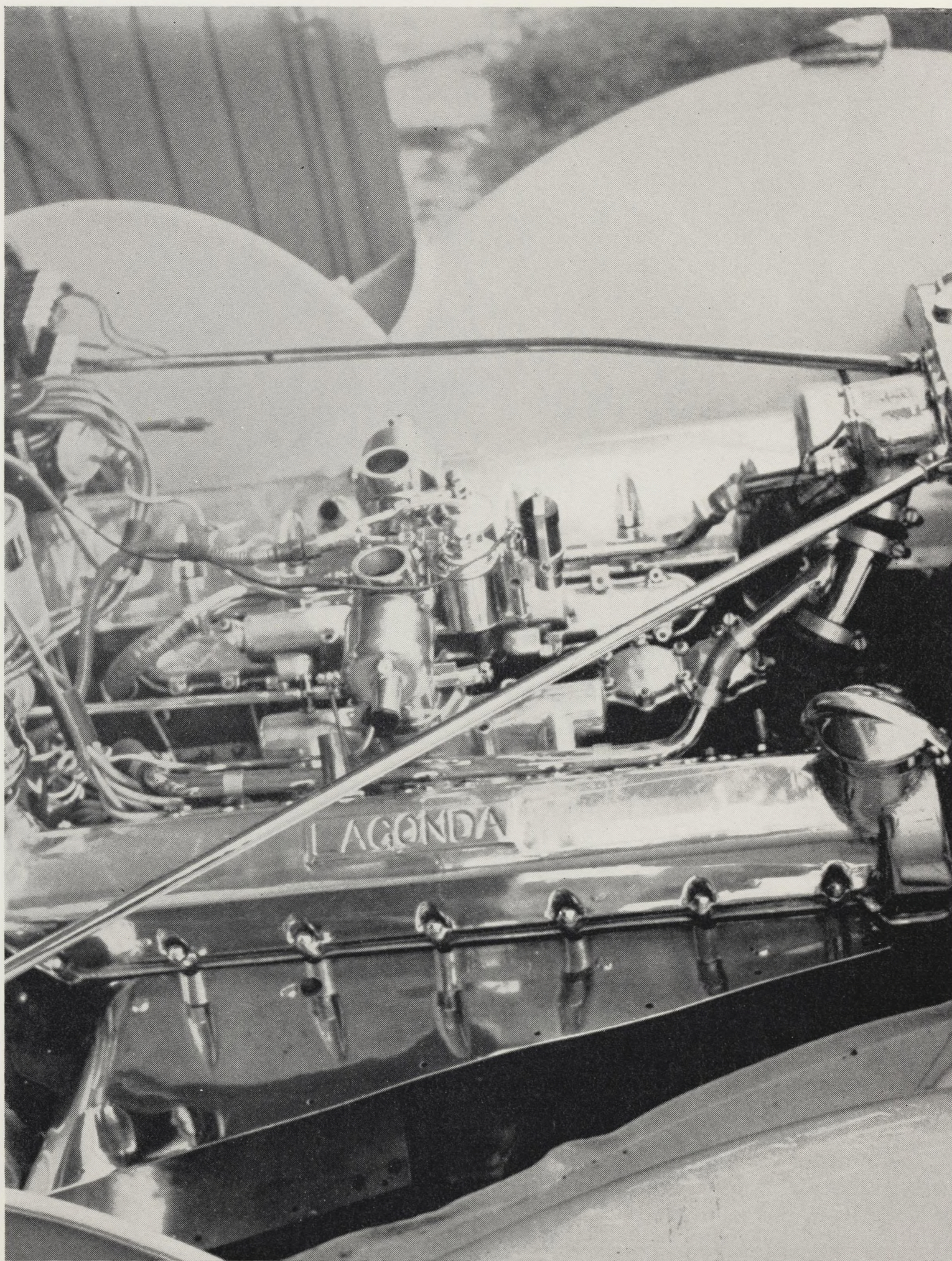
A MERE TWENTY-FOUR YEARS SEPARATES THESE Lagonda engines. The 11.1 h.p. unit powers 'Giralda' owned by Charles Elphinstone. Its four cylinders develop 1,099 c.c. with a bore and stroke of 67×78 mm, with overhead inlet valves and side exhausts. The engine, flywheel and clutch rest in an aluminium casting with a three speed and reverse gearbox bolted on to the back. A simple and reliable engine but with some novel

features that were ahead of its time.

Compared with the smaller engine, the 12 cylinder vee formation unit created by W. O. Bentley in 1937 is a vastly complicated technical exercise. A single chain-driven camshaft to each bank of cylinders producing an output of 175 b.h.p. at 5,500 r.p.m. with a short stroke resulted in a very smooth and flexible unit. Only 200 approximately of these fine engines were produced before production ceased at the outbreak of war in 1939. A great pity that production was not resumed in 1945 and one can only reflect on what might have been.

A.W.M.





Finmere Observations

PREPARING FOR FINMERE MEANT DIGGING THE LG.6 out of the hay barn (it had to be moved out anyway to make room for the 1972 hay crop).

A quick wash down (by the wife) fill up with petrol, oil and water, then dash down to Finmere in convoy with Les Buckton in V.12 and Carl Nolten in LG.45.

On arrival the LG.6 had developed a misfire at low revs, and a plug change did not improve things, so we signed on and collected our numbers.

The first three tests were completed in the morning, two runs in each test.

During the lunch break the times for the morning tests were on view and on looking at these I had quite good times, which made me determined to really have a go in the afternoon. The three afternoon tests were completed without any penalties. All manoeuvres involved in the tests are ones that might crop up in every day driving. The first and fourth test in my opinion were the most exacting.

This is the second year I have been to Finmere, the first year I only managed second best Lagonda.

LG.6 Competitor's Comments on Finmere

I should like to congratulate Eastick and Anne Shoosmith on their times—a valiant effort.

For myself I enjoyed the day out with my family with the added spice of being near the top instead of the bottom, which is usually the case, the friendly attitude of competitors and spectators alike, nobody bothered about the daft things that we do, and I believe that this is the one day in the year that we can all let our hair down.

The LG.6 was bought in Sheffield about 5 years ago for £190 in a supposed running condition with an aluminium sports body partly finished held on with rivets, string, ropes and pounds of cement stopping (which we lost before we got to the end of the road) and no windscreen to protect us from a rad. cap held on with elastic.

The address was Carsike Mews and we were informed that it was quite capable of the journey to the Midlands (the exact words used were it goes like a bomb).

We went well prepared, spanners, battery, tow rope and string, etc. The first mishap was the accelerator dropped off, but not to be undaunted I tied a piece of string to the carburettor lever and through to the bulk head and a gap in the dash and started off. As you know or may not know Sheffield is in a bowl and whichever way out you have to climb a hill.

Well the rest is history, we just about got to the top and stopped at the back of an officer of the law directing traffic at a set of traffic lights in trouble. There was an almighty bang as the rad cap flew back on its elastic and everyone including the copper had a red bath! He immediately stopped all traffic and waved us into a garage conveniently placed on the other side of the road.

Fortunately for us, he did not pursue the matter, we left the car there all night and collected it next day on a lorry.

We have since been informed that the car was once owned by Bob Alexander, a well-known club competitor, and was in use every day as a long wheelbase saloon. He informed me that the engine had not been touched while in his possession, which also goes for me since I've had the car. My modifications have been shortened chassis 18 in., silencer expansion box, Koni shocks and fibreglass tail end.

M. TOMLIN

Finmere Figures by Duncan Westall

From an arithmetician's viewpoint the Finmere figures show several notable features.

Tomlin took significantly less time in his LG.6 than any other Lagonda, and was only beaten by the Bentley Mark VI specials of Eastick and Ann Shoosmith in their Mid West "A" team. The Mk. VI totals were 126.4 and 126.8 and 140.6. The LG.6 total was 131.6.

Thereafter the two 4½ Bentleys of Mountfort and Gregory were close at 132.2 and 136.6.

BDC Mid West "B" team completed times within seconds of each other at 142.6, 143.2 and 143.4. Had Bailey not lost 10 on a penalty in Test 1 he would have come fourth in the B.D.C., and indeed was fastest in two of the tests. Less than a second divided Bailey driving the R-type and Reypert driving the same car.

The next most successful competitor was Tann

in his 16/80 Lagonda returning 146.8, closely followed by Patterson in his 4½.

Thereafter a noticeable gap divided the first three Lagondas from the rest of the field, which was fairly closely spaced.

The 2-litre performances varied from Elliott's 161.4 through Woolard's 169.0 to Ridout's 171.4. The 4½-litre cars were widely differing in their results, but the two 2.6's of Harris and MacMurdy returned times close to a second of each other at 175.4 and 176.6 respectively.

In Test 1, going to and fro through corridors, Patterson in his 4½-litre came a close second to Tomlin, and at 36.6 was some ten seconds better than average.

Test 2, through the chicane and round the marker, showed Tomlin and Tann close together well ahead of the rest of the field.

The acceleration and braking test, number three, brought remarkably consistent results within a second of each other for most entrants.

In the first afternoon test number four (through chicane and round three markers and back to a garage) Saw, Patterson, Elliot and Woolard were

all close on the heels of Tomlin and Tann.

Test 5 (entailing garaging and reversing) grouped Saw, Patterson and Loch (all in 4½-litres) closely behind the leaders.

The final test, 6, which called for turning in a garage, brought both 2.6's (McMurdy and Harris) into the limelight, bettered only by the two leaders and Saw's 4½.

What makes Tann's 16/80 go through tests in so short a time, even those demanding manoeuvrability? It is a pity that Saw, in his 4½, found the ins and outs of test two hard-going. Elliott's consistently high performance is shown by his occupying fourth place, despite breaking a half-shaft and doing test 6 in another car.

It is interesting that all results lie within about 12% of the average, excepting only the first and last cars. Sixty per cent of the entries which comprise a complete cross-section of types, all ended up within 6% of each other and of the average for the whole field. Members competing represented less than 2% of the total club membership. Cars competing represented something like one out of every 30 registered.

COMBINED DRIVING TESTS AT FINMERE

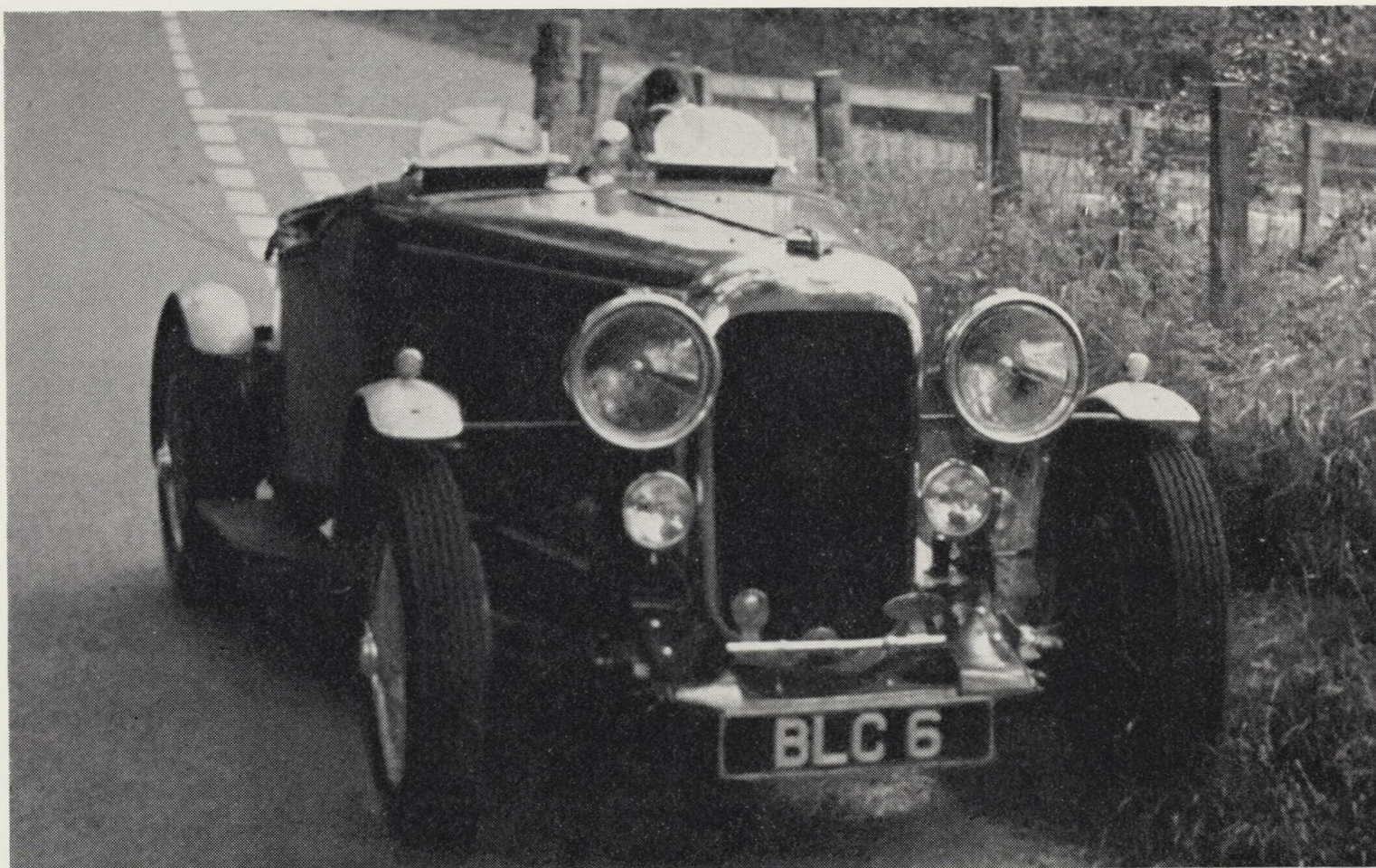
23rd July, 1972

PROVISIONAL RESULTS

1. INTER-CLUB CHALLENGE		BEST IN EACH TEST			
Ten Best Bentleys	1390.4	Test 1	DBC	LAG	
Ten Best Lagondas	1610.8	1	Eastick	33.4	Tomlin 36.2
2. LAGONDA TEAMS		2	Bailey	20.0	Tomlin 21.2
1. Team No. 1	487.2	3	Eastick	7.4	Tomlin 8.4
2. Team No. 2	512.4		Shoosmith		
3. Team No. 4	578.6	4	Reypert	24.0	Tomlin 24.2
3. BENTLEY REGIONAL TEAMS		5	Shoosmith	22.8	Tomlin 27.4
1. Mid-West "A"	393.8	6	Bailey	13.8	Tomlin 14.2
2. Mid-West "B"	429.2	LAGONDA CLASSES			
3. Mid-West "C"	436.0	I	1 Tann	16/80	146.8
4. Midland "B"	490.8		2 Elliott	2L	161.4
5. South-East "A"	519.8		3 Woolard	2L	169.0
		II	1 Tomlin	LG.6	131.6
			2 Paterson	4½	148.6
			3 Saw	MG.45R	163.8

INDIVIDUAL RESULTS

Position Overall	No.	Name	Club	Team	Car	Marks						Position	
						Test						Total	LAG BDC
						1	2	3	4	5	6		
1	59	Eastick	BDC	MWA	Mk VIS	33.4	20.2	7.4	25.8	24.8	14.8	126.4	1
2	58	Shoosmith, Mrs. A.	BDC	MWA	Mk VIS	33.8	22.2	7.4	26.6	22.8	14.0	126.8	2
3	22	Tomlin	LAG	4	LG.6	36.2	21.2	8.4	27.4	24.2	14.2	131.6	1
4	50	Mountford, B.	BDC	MWC	4½	34.0	22.0	9.0	28.0	24.8	14.4	132.2	3
5	67	Gregory	BDC	MWC	4½	33.8	20.8	8.0	33.0	25.6	15.4	136.6	4
6	57	Thomson	BDC	MWA	Mk VIS	37.0	26.4	8.0	27.4	27.0	14.8	140.6	5
7	55	Reypert	BDC	MWB	R. Type	41.0	26.6	8.6	24.0	26.6	15.8	142.6	6
8	56	Redden	BDC	MWB	Mk VIS	37.2	24.4	9.0	30.0	26.8	15.8	143.2	7
9	54	Bailey	BDC	MWB	R. Type	47.4	20.0	8.2	26.8	27.2	13.8	143.4	8
10	11	Tann	LAG	1	16/80	41.0	22.8	9.4	30.0	27.0	16.6	146.8	2
11	64	Wileyman	BDC	MB	3½	38.4	22.2	8.6	31.0	31.6	16.2	148.0	9
12	24	Paterson	LAG		4½	36.6	24.2	8.8	32.4	29.8	16.8	148.6	3
13	51	Hood	BDC	MA	3/4½	41.0	23.8	9.0	34.0	24.0	18.8	150.6	10
14	23	Elliott	LAG		2L	41.6	26.2	10.4	33.4	30.4	19.4	161.4	4
15	15	Saw	LAG	2	M.45R	43.4	33.2	9.4	31.6	30.4	15.8	163.8	5
15	62	Dymock- Maunsell	BDC	SEA	R. Type	50.0	24.2	8.6	33.0	30.8	17.2	163.8	11
17	65	Wetherett	BDC	MB	3	41.2	24.0	11.2	34.0	34.8	19.4	164.6	12
18	66	Mountfort, Mrs. C.	BDC	MWC	4½	44.2	29.0	8.8	36.0	32.2	17.0	167.2	13
19	13	Woollard	LAG	1	2L	46.8	27.0	11.0	33.6	31.6	19.0	169.0	6
20	19	Loch	LAG		M.45	46.6	26.4	9.8	35.2	34.0	18.8	170.8	7
21	61	Mummery	BDC	SEA	S2	36.0	38.2	8.4	37.0	34.0	17.6	171.2	14
22	12	Ridout	LAG	1	2L	45.6	28.4	9.8	35.8	32.6	19.2	171.4	8
23	16	Valentine	LAG	2	V.12	45.2	27.6	10.0	36.0	33.6	19.6	172.0	9
24	26	Harris	LAG		2.6	46.2	28.8	15.4	33.6	33.2	18.2	175.4	10
25	14	McMurdy	LAG	2	2.6	46.0	28.4	9.4	41.2	34.6	17.0	176.6	11
26	63	Tabbenor	BDC	MB	6½	38.4	30.2	9.6	38.2	31.8	30.0	178.2	15
27	60	Russ-Turner	BDC	SEA	4½	42.4	43.4	9.2	36.0	36.8	17.0	184.8	16
28	20	Buckton	LAG	4	V.12	47.0	43.2	10.0	41.0	39.8	19.8	200.8	12
29	52	Pattison	BDC	MA	4½	36.6	64.0	9.6	37.0	35.0	19.0	201.2	17
30	21	Nolten	LAG	4	LG.45	61.2	55.8	13.4	42.8	50.0	23.0	246.2	13
—	53	Harben	BDC	MA	4½	35.0	25.6	8.4	Retired				



John Broadbank's 1934 M.45R Tourer.

BORDER RALLY 1972

AFTER TWO OR THREE ATTEMPTS AT FIXING A DATE for this event the fixture card eventually decided upon the 8th July and this seemed fairly sensible until it became known that Herb Schofield's Brewer's Benefit had been postponed from 24th June to the same date. Inevitably this discouraged some of those who have been threatening to come up from further south. This was also the first year since its inaugural meeting in 1960 that not a single Rapier turned up—Jimmie Cairns tells me they were holding some sort of motoring Ceilidh in the North as well so we were reduced to an entry of eight. As usual we had excellent weather and some good sport so those who chose to go elsewhere on the day are cordially invited to come next year when it will be even better.

A highlight of the meeting was the arrival of Bernard and Aury Raine with their daughter. We were all glad to see Bernard looking so fit after his recent health problems and hope we shall see him competing next year. The winner of the

Border Rally now keeps the Raine Trophy for a year so it was all the more pleasant to see the donor at the Meeting.

To return to the event, the navigation involved was of a fairly simple nature and therefore perhaps needed to be watched so as not to fall into any pitfalls which were not intended!!! Dick Hore used to refer to them as the "Machinations of a diseased mind". However the health must be improving because nearly everybody completed the course accurately even if some travelled a few more miles than were strictly necessary.

Nobody got lost and it was not necessary to organise any search parties.

When the results were totted up and compared there was the most almighty problem to separate the first and second places and it was only after the most searching "debriefing" that it became apparent that Jack Baylan had deviated ever so slightly from the official route and the decision was given to Jack Piper, a thoroughly well deserved victory in his first club event. We will look forward to seeing a lot more of him in the future.

It was a pity that circumstances did not allow

some of our regular customers to attend. Elliot Elder and his enthusiastic Rapier supporters would certainly have added a few "revs" to the proceedings. Of course we missed the humour of the irrepressible Jimmie Cairns who I always remember telling me after one of the early Border Rallies that he went up a hill so steep that the instruments fell out of the dashboard—anybody who has seen his magnificently restored 16/80 will understand what a ludicrous picture this conjures up.

In concluding it would be appropriate to mention the excellent performance of John Broadbank who was able to resist the blandishments of Northern Secretary and make the long trip to the Border. Thanks John—hope you are even more successful next year.

IAIN MACDONALD

LAGONDA CLUB — RAPIER REGISTER BORDER RALLY—JULY 8th, 1972 RESULTS

	Total Pts.	Less Mlge. Pen- alty	Nett Pts.	Posi- tion
A. F. Adams	X	X	X	X
Jack Piper	70	2	68	1
J. Reisner	30	2	28	6
John Broadbank	70	5	65	3
Alan Didsbury	50	14	36	5
Turnbull				
Harrison	60	5	55	4
J. C. Boylan	70	4	66	2
Harold Golding	X	X	X	X

SILVERSTONE SNATCHES—APRIL 1972

SILVERSTONE IN APRIL CAN NOW BE RELIED UPON to be wet and usually reaches a peak on the race day. The Friday practice was dry by some strange quirk of the weatherman and this enabled some competitors to return very quick times. This was particularly true of the historic racing car troupe—250F Maseratis, Connaughts and the like. Fitt's Riley came to grief creating its own private oil gusher when its protesting engine blew apart at Copse Corner.

So to Saturday and overnight the weather conformed to normal by raining steadily. The days events started traditionally with the One Hour High Speed Trial run in blinding rain with seventeen very brave qualifiers. The first of the Handicap races saw Jon Abson's Rapier starting from scratch and fighting a battle with Gunn's MG Special and Clifford's V.8 Riley Special, both of whom seemed to be under-handicapped. Clifford (off 10 seconds) came first in 8 mins. 04.4 secs.; Gunn (off 40 seconds) in second place with 8 mins. 09.4 secs.; Abson third with 8 mins. 18.0 secs.

The fourth Handicap (still raining) found Llewellyn in the 8-litre Bentley moving smartly into the lead off a 10 sec. start and finishing first with a time of 7 mins. 24 secs. beating Stewart (Bentley) into second place (7 mins. 35.8 secs.); scratch-man Morris (ERA) 7 mins. 37.4 secs. and fastest lap came third, with Jon Abson a good fourth with 7 mins. 39 secs. Details of the other results are listed below. Despite the wet weather everyone seems to have enjoyed themselves.

**HAVE YOU ORDERED
YOUR XMAS CARDS?**

See current Newsletter.

Buy now while stocks last.

**GRAND XMAS FILM SHOW
AND SUPPER**

FRIDAY 8th DECEMBER

See Newsletter for details.

Scenes in the Silverstone Paddock



Group Captain Rexford-Welch and James Woollard, both past Competition Secretaries, discuss the prospects of the day's racing.

Photo: J. W. T. Crocker.



David Hine gropes in the engine room.

Photo: John Davenport.

HULL AND EAST RIDING MEMBERS NOTES

IN LONDON LAST JULY, ONE OF OUR CLAN NOTED that the number of vintage cars in West End traffic had dropped tremendously since his last visit in 1969. This time he saw only one; a sure unhappy indication that our old cars are now too valuable to be risked in the hurly-burly of current traffic, as numbers of dented modern cars seemed to testify. He rejoiced that not only was it a Lagonda he saw but it was an immaculate newly shod Lagonda. Moreover a quick reference to the ever-handly Register showed that it was not credited to anyone in the Club. London members please trace this car quickly and induce the driver to join us before he is seduced by the magic of a name into swopping it for a couple of other makes. It may be significant that the Lag. was being driven towards a regular *Motor Sport* advertiser who specialises in Rolls Royce and Bentley. A subsequent search in the Register revealed that KY 8027 was one of three Lagondas in the 1935 Monte Carlo Rally.

It is exciting to compete in the odd rally, race, trial, or other event to give your old car an airing, but the greatest and most civilised pleasure of vintage car ownership must surely be to enjoy a leisurely tour with the hood down and with glorious weather to boot. Quite a few of us envied John and Jean Beardow their holiday based on a country hotel (D. H. Coates and Good Food Guide recommended) and making good use of their M.45 tourer *The Angel*. And when certain young television personalities showed a particular interest in the car and called John "sir" . . . what could he do but take them for a ride?

A more regional venture earns multiple thanks for 'Ken's Second Evening Jaunt' (limited to twelve cars), Ken Pape having done all the necessities. It was a country-lane route with questions to be answered and it helped if you were a politician or a farmer—Bolshi elections? Red Polls! It finished with good food and good wine and the immediate announcement that Mary and Ian D-for-Driver North were the winners, neither happening to be farmers or politicians. There were two Lagondas at the finish, Johns

Beardow and Broadbank, the other cars being modern and including Triumph 2000, Citroen GS, Aston Martin DB4 (number plate SWU 1) and Jensen FF (SUM 1. As BDC friend John Wardell said, that number plate had to come to someone). Prizes were given by Ken and by the Broadbank-Rowntree Combo. The bottom crew were awarded duck decoy whistles—you should have heard them.

The bigger events have been supported too. The Hermes flag has been waved by *El Relicario* and various big-hearted mechanics and supporters. Here a welcome to young Ian Howcroft, and may he soon have his 1950 Monte Carlo LG6 saloon CKY 520 back on the road. He must have wished he was in it on the way back from Finnere when he and Roy Paterson were caught with their hood down by a freak storm. Sizeable chunks of ice hurtled down and for a stretch the M1 was literally white over. The car had been on the point of boiling for some miles. The thermometer showed a sudden dramatic fall and later the crew suffered a rude shock when they found that the paint on the radiator had peeled back in multitudinous curls to expose the pitted discoloured bare basic metal of the shell. Five weeks later R.P.'s two-seater was coming north up the M1 again, this time after the BDC Lagonda Race and on the wrong end of a 177 mile tow. Thanks Ken.

At short notice the Club gave three different dates for our nearest event, Sandtoft. Extra thanks to H. S. Schofield for organizing everything on a different date from usual, which caused mighty complications. We supported the event with competitors, marshalls, spectators, and the eventual winner, R.P. in Henry Coates' original special. Second was a 1922 11.9 h.p. coupe. The 4½ just managed to beat it, seriously. Its driver is welcome to our pub meet any time he cares to call at Skirlaugh on the last Tuesday, and he won't have to pay for his beer. A further item of interest was the experimental entry of Henry's latest creation, as yet not completely finished. Unfortunately for him it was not a repeat of the successful debut of his original special two-seater which on its initial appearance gained a class award. Next year, however, may well be different. 1973 may also find Rowland Hill not marshalling in a modern—son David can do that—but competing in his genuine M.45R. We might even see its previous owner in the 2-litre he has been patiently rebuilding. He has had the engine

running and is making good progress with full scale drawings of the bodywork after having made crafty sketches of all the twos at Finmere, and finding no two exactly alike. John Broadbank missed Sandtoft this year. As winner of a previous Border Rally he felt he should be up in Iain's country again, which brings us back to that confusion over dates.

We of Hermes close with the hope that next year's fixture list will appear much earlier than 8th June, that the time honoured events will revert to their time honoured dates, that for the Border Rally Iain will be given a summer date that will not clash with Oulton Park, Sandtoft, Prescott, Silvertstone, or anything else, and that there will be no mix-ups and no ill-feeling. And a Merry Christmas and a Happy New Year to all.

"HERMES"

Southern Social Meeting 20 August 1972

WELL, BRETHREN YOU MUST ALL HAVE PRAYED hard for after a dullish start in the morning Michelham Priory was bathed in sunshine for most of the Sunday afternoon and it was hot too! Leaving Brian Horwood to cope on his own with the members that we hoped would visit the Gun Inn at Gun Hill which is just south of Horam where they make the apple based Merrydown wines the main organizing contingent decided to arrive early at the Priory to arrange parking and erect signs before having lunch there. You know how it is, nothing ever quite proceeds on the planned path—we parked near ten more (yes, our Lags are undergoing restoration, Fred) in the outer car park. We checked with the paymaster at the gate house—yes, they were expecting the Club that afternoon—Where were they to park? Well they were going to rope off an area. Where? Oh the Commander would know. Thank you.

So we trundled en route to the tithe barn (for the toilets, Fred) by way of the gift shop where the good lady there vouched the information that when that "other club" visited they went in the "orchard". None the wiser because we couldn't

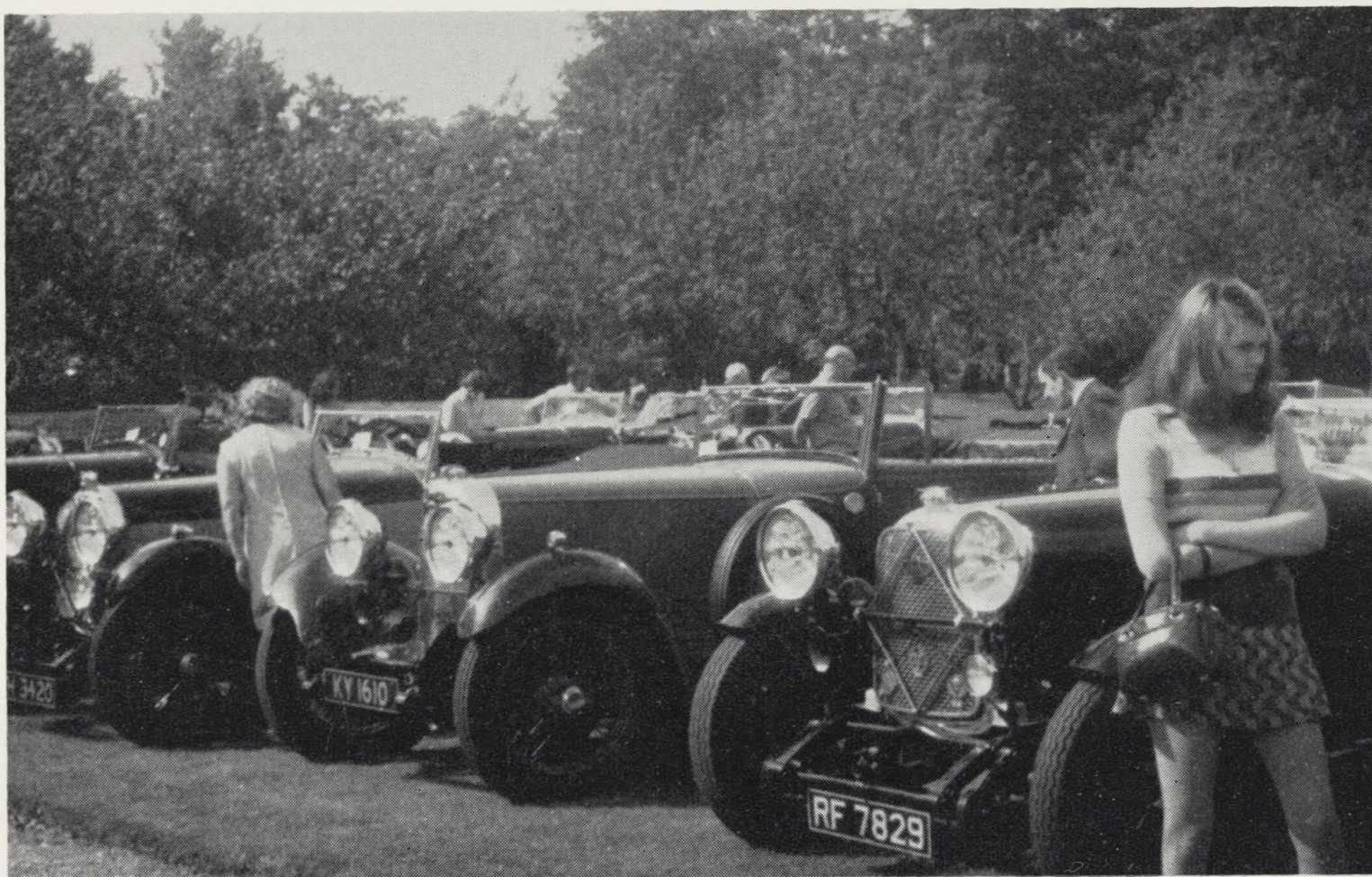
see an orchard, we moved with greater haste now to the barn!

The "Office" was occupied by a sweet young thing but no Commander so we bought a pot of ginger marmalade off her and went and booked lunch returning to put up our signs which said "Lagonda Check Point" and "Lagonda Car Park". We had assumed that we should be parking outside the gatehouse and displaying selected cars in front of the house—if any turned up.

By now it was 12.30—time for lunch—take about half an hour no more for sure. Well, what a meal, orange and tomato soup, various salads hot steak and kidney pudding and four vegetables plus potatoes was eaten by one of the more robust members of the party and all this was followed by the most delicious apple pie and cream that anyone remembers having in a restaurant. Cooked too on the premises in the bakery across the yard. All this was washed down by a very good pint of bitter and the organizer having realized that the time had marched on to 1.30 left in great haste without paying his bill! (O.K., Fred the old lady caught up with him at the end of the day and the whole lunch only came to 25/—yes, yes £1.25 if you must—including the beer; very reasonable indeed).

As the organizer was dodging the rubber necks in the grounds he saw someone waving their arms about like a windmill whom he ignored as he was unable to focus on who it was because of the sweat on his poloroids but on spotting a little black board with "Lagonda Club car park" and an arrow chalked on it he took a closer look in the direction that the arrow pointed and discovered that his human windmill was none other than Valerie May sweetly entertaining the Commander in the "orchard". Well that was one problem solved. And the orchard was inside the grounds by the gift shop. Jim McMurdy was spotted with his black 2.6 at the far end of it.

Valerie had doubted the mental reliability of someone who had a checkpoint with no one there to check. Well, Fred, (who expected any Club member to come by about 1 p.m. when the meeting started at 2 p.m.!) had kindly altered the original car park notice to point to the gate house. She mentioned too that a Lancia had asked where the pub meet was and was last seen going in that direction but never reappeared. Alright boys to your points! One at the check-



Some of the turn-out at the Priory.

Photo: Brian Stevens

point, one at the gatehouse to help the Paymaster collect the money, one at the car park to see that everybody motored between the two bits of white paper, missed trees and parked in a neat line.

Well the check point found a 3-litre or two munching a rather good picnic in the lower car park which included R. Last's very nicely restored 3-litre DHC. The local constabulary arrived to enquire about the old cars that were coming as he was told he would be needed to direct traffic—not to worry old chap we were only expecting half a dozen in dribs and drabs and most of those would be coming from—well er—another little meeting. (My God, Fred, nearly said “pub meet”—with sudden visions of everyone being “breathalyzed”). No need to waste your time old boy, but he stayed to see the old cars—only decent car he had had was an old TD MG, etc., etc. (Is there anyone, Fred, who hasn't had an old TD MG?)

Brian Horwood came through the check, he had a fine response, about 12 cars at the pub meet and they were on the way over. We were pleased to welcome Graham Davis in an Alvis 12/50 from Hove and Walker of all things in a 16/80

all the way from Essex, both from the V.S.C.C. as well as Brian Savill with an immaculate 12/50 “Ducks Back” Alvis an A.D.C. member who popped over from Horam. By now it had reached 2.30 and our runner, Julie Weatherley was despatched (nay—shot!) with a note to her Father who was organizing the “orchard” for her to gather together members for the conducted tour which had been laid on with our own special guide.

The tour of the house started in some confusion as the guide couldn't be found. Eventually he was located and the tour started in the crypt like room just inside the entrance. We were taken back many centuries to the early days of the Priory through to the time of Henry VIII's dissolution when the priory as such, fell into disuse. Although like many of the priories of that size, it had sunk into decline during the 1400's records show that the roof of the dormitory had already fallen in by the end of that century.

Some time during the late 16th century an enterprising yeoman farmer who obviously deplored the waste of such excellent building material, built a three storey house using part of

the existing priory walls, which now houses the modern grand staircase.

We saw the inevitable secret staircase running up behind the main fire place, starting at the bottom of its modern counterpart.

We were then taken to the upper rooms finishing in the Abbots Room with its fine Norfolk reed matting for a more comprehensive description members should come to the Priory again (we can't forget the "commercials" can we Fred?)

And so they all came back by which time the checkpoint had been closed and we all repaired for a chat.

Who's that just come. A Rapier! And we were pleased to welcome Davey in an Abbot tourer of the Register. Then there was Hitch in a 3-litre—the first meeting I've been to for 15 years—with an attractive long-skirted companion followed by T. Neale in a cream 16/80 tourer and last but not least R. W. Clarke in an Alvis TA.21 from the A.O.C.—“Well I was on my way down from Goudhurst where I came upon this steam and petrol rally where I was asked to drive round the ring, had my picture taken and then came on here”.

The cars were all in a particularly good state of preservation and H. R. Burton's Polychromatic maroon 2.6 was particularly smart and the organizer can never remember seeing so many 3-litres all together. Even Tony Lock's dogs immaculate as ever looked highly polished!

Everyone jawed solidly for the rest of the afternoon, the sun shone. Tony May and the kids sketched, other peoples' kids stuffed ice creams, lemonade and anything else, some wandered in the extensive grounds, looked at the forge and the exhibition of paintings in the tithe barn or just sat down for a rest. At five the organizer escaped for much needed cups of tea and a couple of cakes to return to ease out the last of the members by 6 p.m. with threats of “they will pull up the chain and you won't be able to get out at all”. Not that it seemed to worry them. It was vouched a wonderful day by everyone with an excellent turnout of no less than 14 Lagondas including the Rapier and 4 Alvi. There were Fred, if your names wrong it's because the organizer can't read his notes, sorry).

1. McMurdy—Lagonda 2.6-litre drophead
2. King—Lagonda 2-litre LC Tr.
3. Last—Lagonda 3-litre DHC

4. Burton—Lagonda 2.6-litre drophead
5. Wodehouse—Lagonda 2-litre LC SC
6. Hilton—Lagonda 3-litre Tr
7. Horwood—Lagonda 2-litre ex S.C.
8. Sinden—Lagonda 3-litre
9. Lock—Lagonda M.45 Tr
10. Hewitt—Lagonda 3-litre Tr
11. Hitch—Lagonda 3-litre Tr
12. Neale—Lagonda 16/80 Tr
13. Davey—Rapier—Abbot Tr (Rapier Register)
14. Walker—Lagonda 16/80 Tr (V.S.C.C.)
15. Fitzpatrick—TG 2-litre Alvis (Lagonda Club)
16. Davies—Alvis 12/50 Tr (V.S.C.C.)
17. Savill—Alvis 12/50 Ducks Back (A.O.C.)
18. Clarke—Alvis TA 2-litre (A.O.C.)

Last but not least the organizer would like to thank Commander Harrison for making the special facilities at the Priory available to the Club, Brian Horwood for organizing the Pub meet, Terry Weatherley for doing the car park and shepherding the tour, Julie Weatherley for “running”, Mrs. Thyer for collecting the money, our Secretary for organizing the publicity and Arnold Davey for filling up his newsletter with reminders and road directions and Brian Stevens for the photographs of the meeting.

Does anyone want it repeated next year?

G. THYER

(Yes please! Ed.)

Non-destructive testing as applied to racing machinery, ancient and modern

TO START RIGHT IN WITH BASICS, NON-DESTRUCTIVE testing, or n.d.t. as it is more usually known in this jargon-laden age, is simply a method for examining a component for likely failures without actually breaking it. Applied to cars, this normally means crack detection. And why look for cracks anyway? Only because anything which is cracked is that way because it has been locally overstressed, and life being what it is, the crack usually leads to high local stress concentration

which means more local overstressing which means that the crack will progress until the component fails completely. Which may not be so clever if your neck happens to depend on that particular piece.

In the aircraft world, the safety factor normally applied in design is 1.5, which means that stress levels are fairly high. They have to be, or the aircraft is so heavy that it will not fly. It is just because stress levels are high that so much time and trouble is taken over the inspection and servicing of aircraft, and for the same reason, the n.d.t. techniques which have to be used really do have to be reliable and foolproof.

As racing cars are similarly built for lightness, one could reasonably expect that the stress levels would be fairly high, and that fatigue failures would not be unknown. Perhaps it is fortunate that in the case of vintage cars, the designers did not in general know quite so much about stressing, and used comparatively straightforward materials, so that the stress levels are certainly not as high as they are in modern racing machines—which is probably the reason that there is still a high percentage survival rate for vintage or historic cars, but why there will not be the same longevity for the current machinery. There is, however, a factor which can bedevil this state of affairs. It is fairly obvious that there has been an enormous advance in tyre technology over the past twenty years, as is evidenced by a good class amateur driver lapping a 250F Maserati faster than J. M. Fangio. This means that if one uses modern tyres on a vintage machine, it is subjected to higher stresses that it was when it was young, which could possibly find the weak spots in suspension and steering, to say nothing of the transmission.

The best and simplest form of n.d.t. is simply looking at a component under low magnification. A glass of $\times 2\frac{1}{2}$ or $\times 5$ is about the power required. A $\times 10$ will make almost anything look like the surface of the moon, and will simply frighten you, but the $\times 2\frac{1}{2}$ or $\times 5$ will usually reveal the small hairline cracks before they reach the catastrophic stage. Some cracks cannot be seen at all well with magnification, and for them, the methods in ascending order of cost are dye penetrant, magnetic ink, eddy current, ultrasonics, and radiography. There are drawbacks to all of these methods, and if you are fortunate, you may be able to employ two, but usually there is only one best method for a particular purpose, and this will pick itself.

Most people will have seen dye penetrant being used. The method is to clean off the component, remove the paint, degrease, and then apply the penetrant, which is a dye in a low surface tension solvent. After about 20 minutes the dye is cleaned off and the developer, chalk suspended in a volatile liquid, is sprayed or painted on. The presence of cracks is shown by the penetrant seeping from the crack and staining the chalk. This is all very fine in theory, but as you will get this same indication from surface porosity, the edge of a paint film, a deep scratch, or any other surface imperfection, the method is not foolproof. What is more to the point, should the crack be a very tight one, or should it be full of grease, corrosion products, or even old dye penetrant, you will not necessarily get an indication from a crack which may be there. I have had personal experience of all these latter phenomena, by the way. Dye penetrant is still a useful method if used with intelligence, however, and on the six-stud crinkly centred Lotus magnesium wheels, the best indication of cracking between the studs is shown when dye applied to the outside of the wheel appear on the inner surface, a thing which almost turned a VSCC Lotus driver prematurely grey.

Magnetic inks are an excellent method for engine components (provided of course that they are ferromagnetic). The component is put across the poles of an electro-magnet, the current switched on, and the component painted with a suspension of iron dust in paraffin. This may even be coloured red or yellow, but it is still iron dust, and a crack is shown by the dust adhering to the opposite poles formed by any discontinuity or crack. The proviso is that the field is at right angles to the crack for the best effect, but for gears, crankshafts, steel con-rods and similar components the method does enable you to cover a lot of ground fairly quickly and very reliably. It is not easily applied to big components, although this can be done, and I would hesitate to do a complete chassis with a portable set.

Eddy current testing is probably the best and most reliable method for finding surface cracks. It has the supreme advantages that it can be used on any metallic component, and it will enable a good operator to determine crack length and depth to within a few per cent error. The drawback is in the cost. The cheapest set to cope with, steels, light alloys, and stainless steels would cost about £170 and most sets are about £250, with one nearer to £1,000. The individual probes are

about £25, so that this is not the gear that you would normally buy for something to play with on a wet Saturday afternoon. As a surface crack detection method it is excellent, and if the circumstances are just right, you can even tell where a fatigue crack is going to develop, before it starts to be a crack, a piece of black magic which I was able to demonstrate to a well-known ERA driver on the aluminium bodywork of one of his other cars. The eddy current device generates a high frequency (normally about the 1MHZ mark) in a tiny coil around a small ferrite core which is applied to the work surface. This sets up an eddy current pattern in the component, which is then balanced out on a meter on the test set. Any discontinuity in the surface will upset the eddy current pattern, and will unbalance the meter. The test set can be adjusted as to read crack depths up to 2 mm (or .08 in. for the unmetricated) and is completely reliable provided that you have all the equipment and know how to use it.

Ultrasonics is one of the more mysterious looking methods of n.d.t., and I cannot see much use for it on racing cars, as not only is the equipment expensive (around £500 for a very average set, plus anything up to £20 per probe, of which you may require one for each job), but it really does require very considerable experience in setting up the equipment and, what is more, in interpreting the results as shown as a trace on a cathode ray tube. If the component to be examined is anything but a regular shape, fairly extensive experiment is required, and efficient use may demand the production of a dummy component with artificial faults if the method is to be foolproof. Basically, the method depends upon a beam of ultrasonic vibrations—usually from $\frac{3}{4}$ MHZ to 15MHZ—produced from a piezoelectric crystal and projected through the work in a known (?) direction. An echo is received back at the crystal from any face which the vibration encounters, and any crack will send back an echo which should not be there. If you can distinguish this from all the other echos, then you can say that you have a crack, even though you may not know exactly where it is if the component is at all complex in shape. For regularly shaped components where the position of the failure is known from past experience, ultrasonics is an excellent method. Otherwise, forget it.

Radiography is thought to be the answer to the maiden's prayer, as far as n.d.t. is concerned, by a number of people. The equipment is very expen-

sive indeed, and each film needs to be developed before you can see anything, so that it is not a quick method. Additionally, unless you know exactly where to look for cracks, so that you can align the beam exactly down the crack, you may well find no indication of an existing crack on the radiograph. One additional point—unless the crack is 5% of the way through the component, you will not see it even if you are correctly aligned, for the film cannot show a variation in density less than 5%. The one great virtue that radiography has is that it is excellent for such jobs as corrosion on the inside of tubes, for sorting out cracks and porosity in castings, and perhaps more than any other method, it does give you a permanent record.

Having been fairly discouraging about n.d.t. methods of crack detection, it is perhaps as well to examine the mechanics of failure in fatigue. Fatigue is very simply the failure of a component caused by the repeated application of a stress below the ultimate tensile strength of the material. For any material, you can draw what is called an S-N curve. Most materials will fail at about half their u.t.s. if you stress them enough times (this is a horrible generalisation which will have metallurgists in apoplectic fits). You can design most components so that they have infinite fatigue lives. The exception appears to be magnesium, for which the S-N curve does not level out, but keeps falling, which means that theoretically any magnesium component has a finite life, although practically this life may well be so long that one's heirs about the turn of the century will not have to worry. The whole point about fatigue is that providing stress levels are kept low, you have no worries. The drawback is that on even a properly designed component, a stress raiser such as a sharp corner, a surface scratch, a corrosion pit, or a piece of fretting or burning may prove to be too much, in that the stress is raised to such levels around the defect that it comes on to the rising part of the S-N curve, in which case the component will have a finite fatigue life, and can be confidently expected to fail. The initial stages of the failure will be slow, but as the crack raises the stress levels further up the S-N curve, the failure will accelerate. The component will normally fail in tension or shear, and the failure will show the characteristic crystalline appearance in the part which has the tension failure, and the very smooth halfmoon of the fatigued area. Microscopic examination of the fatigued area will show

the fatigue striations, and the appearance of these will enable a competent metallurgist to tell you a fair amount about the rate of failure. The crystalline part of the failure sometimes gives rise to the comment that the component has gone crystalline, or has crystallized. This is so much balderdash. With very few special exceptions, any metal will show this appearance on failure, and any metal is crystalline in structure throughout its life—you just don't normally see this structure until the metal is fractured. The great trick for avoiding fatigue failures is to avoid stress raisers, which means generous corner radii, good surface finish, avoidance of corrosion, and avoidance also of burning during grinding. There is one additional factor which can be unfortunate in fatigue life, and that is chromium plating. If you have any high tensile steel chromed, and here I would say any steel over about 35 tsi uts, unless you can guarantee that the component has a de-embrittle-ment heat treatment after plating, you are just asking for trouble. The hydrogen that is evolved in plating is absorbed by the surface layers in the steel, and the steel becomes very brittle, and liable to surface cracking, which is the first stage of fatigue. It is far better to cadmium coat, because the problem is far less severe, but even so it is no bad thing to see that the heat treatment is carried out.

So far, the emphasis in this article seems to be on small, or at least handleable components. As far as the larger components, such as the chassis, are concerned, there are few better ways of crack detection than painting with a hard gloss light grey paint, once you are sure that the chassis is uncracked to start with. This paint will rapidly show up any new cracks by either rust staining or oil staining. I suppose that this is really the down to earth version of the use of a brittle paint for determining stress levels in experimental components, the cracking in the brittle varnish showing the deflection or strain in the component and hence indicating stress levels.

For aluminium components, either anodizing or an etch prime followed by paint will keep the corrosion pitting away, and for magnesium components you should never, never, never polish them and leave bare metal. They **must** always be chromate treated and then finished in an epoxy or similar resin or stoving paint if you are to avoid corrosion pitting which will provide the stress raisers that cause premature failure.

Were I asked to lay out an n.d.t. schedule for a

complete vintage racing machine, the order would be something as follows. Engine—steel components by magnetic ink. Light alloy components, including possibly sump and head, dye penetrant, with possible eddy current testing in known danger areas. Gearbox and rear axle, same treatment. Front axle, magnetic ink. Brake back-plates and mechanism dye penetrant if light alloy. Steering components, magnetic ink. Chassis, eddy current testing around all welds and known danger points. Wheels, eddy current if light alloy. Visual and spoke twanging if steel spoked. Body-work—visual only. It is quite honestly difficult to lay down a sensible timetable on such examination. Some of the damage is done in competition, other damage is done by corrosion. Some vehicles are much more tightly stressed and/or hard driven than others. Certainly one ought to use a fairly heavy schedule during any major rebuild, if only to save one's self the annoyance of an almost immediate failure due to some previously cracked component. Again, if the car is involved in a shunt, it is certainly worth doing a very careful visual examination, followed by another visual examination a few weeks later to see if any cracks developed from overstressing not apparent at the time of the first examination.

Reading this missive through, I am struck by the fact that it is (a) rather rambling, and (b) talks about the use of some fairly expensive equipment. I can only say that this does tend to be a fairly rambling subject, and that I would be happy to demonstrate some of the equipment to make things a little more concrete. As regards the expense, there are few things more expensive to me than my own neck. Perhaps that comes from having to sort out the failures and the accidents.

P. F. JOWITT, C.Eng., F.R.Ae.S., F.I.Prod.E., F.I.E.I., M.I.Mech.E. RAE, Farnborough.

(Reprinted from the *V.S.C.C. Bulletin* with thanks)

**Articles concerning
Lagondas or of a general
motoring nature are
urgently needed for the
Magazine. Please send your
contributions to the Editor**

LETTERS TO THE EDITOR

A new filter—"Novo"

FEATURED ON "TOMORROW'S WORLD" SEVERAL months ago, it is a revolution in engine oil filtration.

It is a by-pass filter fitted, externally, in the engine compartment. The oil is forced, under pressure, through $4\frac{1}{2}$ in. of a fibrous material and then fed back to the sump. This element extracts from the oil everything which is not oil based, down to 0.4 microns in size. A conventional filter will extract down to 40 microns.

The benefits therefore, must be obvious:

(i) after the initial change, the oil and the conventional filter element will last indefinitely. (Up to the present moment a test engine has run for the equivalent of 200,000 miles with virtually no deterioration of the oil.)

(ii) the engine is constantly lubricated with absolutely clean oil—no carbon, water or acid build up whatsoever.

(iii) no more oil changes—merely change the "Novo" element. The elements cost 95p and it takes less than a minute to replace.

(iv) an extension of engine life—minimum 50%—manufacturers quotation.

I fitted one to my D.B. 3-litre 1,200 miles ago and the oil is absolutely perfect. The element has not yet been changed. Immediately the oil becomes dirty, the element must be replaced, after which the oil is very quickly purified. The unit plus three elements sell at £12.35 (as advertised in *Exchange & Mart*). I have been in contact with the Agent and he will reduce the price for a bulk order.

H. TAYLOR (T.6)

Scottish Notes

NOT A GREAT DEAL GOING ON, TWO NEW CARS AND of course we hope members have turned up, Webster Simpson from Broughty Ferry with a 16/80 tourer, more or less one owner, the car is in very good nick, and also Alan Hodging from Glasgow with an 11.9 saloon, also in very good order.

Not many Scottish members attended the Border Rally, poor Iain doesn't seem to be able to satisfy us. He held it on a Saturday this year, may be by next year we will have run out of

excuses, sorry Iain. Talking about across the border, Leslie Thornton's brace of 2-litres were sold across the border, one of these cars is the Conrad Mann 2-litre which competed in the 1931 Monte Carlo and was front page in the Winter Magazine 1960 edition. Harry Simmons, the new owner, will we trust restore both of these cars to his usual high standard.

And we will all too soon be into our winter meetings not that we know yet where these are to be held, but keep watching this space.

Long may your water pump.

J. MCK. C.

A Plea for Help

Dear Sir—Thank you for your letter of 26th April '72. I am trying my best to go ahead with my plan of overland trip to London. It requires a good deal of correspondence and perseverance to make my crazy plan a success. If everything goes on well, with the goodwill of you all, I might be able to start sometime in February '73. I do not know how much Foreign Exchange grant I will get from our Government, as they are very very strict these days. If the grant is just sufficient to buy the petrol and lubricant en-route, I will take the risk to set off. I may beg for my food and shelter throughout the route. Would it be pos-



sible for you or Mr. May or any other Club member of ours to recommend and help me with some contact addresses who could be contacted for the necessary help, if required. I am also

writing to my friends in our country and abroad to help me with as many contact addresses as possible. Though the final route itinerary has not been made as yet, for which the Automobile Association of India has promised to help me, I think I will have to take up a sea voyage from Bombay touching some convenient Persian port as the entry through Pakistan is closed to Indian citizens at the moment. Then on I will move overland to London via Bulgaria, Yugoslavia and back via Czechoslovakia, Hungary and Rumania.

I do not expect any serious breakdown in my car unless I am most unfortunate. In that case I hope our kind friend Mr. Ivan Forshaw will render his big arm to help me. My earnest request to you to please have a word with him.

I am sending the picture of my Lady Love, 2-litre Lagonda 1926 with the trophies owned in the two Vintage Car Rallies this year. One was at Durgapur, organised by the A.A.E.I. Durgapur Branch held on the 16th January '72. The second one was the Bihar Rally held on the 26th March '72. In both the cases she was adjudged as the best maintained car to own the CEAT trophies.

H. BANNERJEE,
'TS' Flat A/S,
Riverside Road,
P.O. Burnpur,
Dt. Burdwan,
W. Bengal, India

M.45 Tourer

Dear Sir—I noticed in the No. 76 Spring issue, that Mr. Harry Wareham had twin acro screens as deflectors to attach to the main windscreen to his 4½-litre Lagonda. Can anyone tell me where I can get similar detachable side screens to fit my 1934 open four seater 4½-litre Lagonda? Incidentally how many members of the Club still have a similar 1934 car as from new in 1934, as I have, and use it regularly?

C. E. BOWDEN,
Norden House,
Corfe Castle,
Wareham,
Dorset.

Lagonda Illustrator

Dear Sir—As requested please find attached the

black and white photograph which appeared in the *Rugby Advertiser* a few weeks ago. The car looks very attractive and I consider myself very lucky to have found a beauty like this, after looking for a decent Vintage or PVT car for years. At the moment it is dismantled for a clutch overhaul but I believe that it will be on the road again in approx. 3 to 4 weeks time. (See back cover.)

During my leisure hours I occupy myself by painting pictures of interesting Vintage Cars. Please find two photographs of paintings completed by me last year. As a Lagonda owner I would now like to extend my collection of paintings in adding a few Lagondas. I would therefore be interested in meeting some fellow members in order to take some photographs and sketches of their cars which I could paint.

I am interested in the standard range up to 1935 and especially in a M.45R Le Mans Team Car.

B. W. ANDRAE,
99 Clifton Road,
Rugby, Warwicks.

DB Discourse

Dear Sir—Referring to the July Newsletter and to Arnold Davey's interesting discourse on the Lagonda History article in the magazine *Mayfair*.

I thought it might be germane to tidy up the loose end by mentioning that the DB 3-litre D/Hd shown in the magazine has been residing at the above address since 1965 and is in good health. "My attention was drawn" to the article by a connoisseur of "the body beautiful"; my own tastes inclining more towards croquet and Maltese lacemaking.

Incidentally the car was also used as a front cover photograph on the June 1967 issue of the Club Magazine complete with the late Kay Kendall in the driver's seat, at least I'm pretty certain it is my car, although I am open to correction as the registration number is not completely discernible.

R. READ,
Salisbury, Wilts.

Dear Sir—May I thank "Hermes" for his invitation to the Northern Meeting, but as we now all know the dates got crossed and as I was

at Curborough on the 25th the only Club member at this A.M.O.C. invitation event I did not think I could make both dates—but next year! Well shall see.

In the meantime may I ask that you be kind enough to extend your help and advice to any Northern post war owner, and not a few have written to me and try to get them to come down to Gaydon—Curborough, Finmere or any where else where the Club may meet or be invited as I find it hard to understand that they should say they are not looked upon as Lagonda owners, etc., etc. Had any of them been at the A.M.O.C. sprint they would have seen just how untrue this is.

No one could have been made more welcome by any club than I was with many of them taking photographs, asking questions and three asking to join the Lagonda Club, one looking for a 3-litre.

But tell me “Hermes”, or anyone else come to that, how do you get the post war owner, as in other one make clubs, to take part in these wonderful days out? I want 20 at the A.G.M. so as to get a good cross section for Concours. Just lets see how many do turn up.

J. M. MCMURDY,
London, S.E.

Spring Social, 7th May, 1972

Dear Sir—This year there were patches of blue sky behind white clouds for the Rendezvous at Hopcroft's Holt Hotel in the Cotswolds, where club members met to commence their Spring Social meeting.

Rain was confined to lunchtime.

One party of twelve cruised the Oxford Canal and the River Cherwell on the narrow-boat “Tyseley”. More than a dozen lunched at Hopcroft. Others picnicked. It seemed that all wine and dined well.

The blue skies and fluffy clouds returned to make an agreeable afternoon, culminating at the stately Weston Manor where some fifty members and their families sunk huge cream teas, admired the many splendid motor-cars, watched the graceful movements of gliders above or enjoyed the topiary of the sunken gardens below.

Several people came along on the spur of the moment: it was a pleasant gathering of sufficient size to promote plenty of social and automotive chat, and ended with everyone departing home-

ward in the lowering sun of a beautiful evening.

D. J. WESTALL
London, N.W.8.

The New Zealand International Rally

Dear Sir—Arnold Davey's mention of the New Zealand International Rally in the January News Letter (received today), prompts me to report our Lagonda participation in this memorable event; of a total entry in excess of 760 cars, three Lagondas—the ex-Tony Steward V.12 (featured on the front of magazine No. 74), L. J. Poolman's 1934 Rapier, and my 1938 LG.6 D.H.C. were all that I saw—J. Dyer's car not appearing.

My LG.6 had been very smokey so the motor was rebuilt in preparation, big ends remetalled and machined, bores honed, new rings, exhaust valves and guides and new timing chains brought oil consumption from 1 pint to 50 miles to nil.

The car was shipped each way on the drive-on—drive-off ferry “Marama” at a cost of A\$220.00 each way and arrived in perfect condition apart from many greasy finger marks!

Most of the twelve Rally starting points provided routes for the four categories—Sporting, Touring, Light Touring and Pioneering. As a Sporting entry starting from Auckland we had over 900 miles to do in five days over roads at times incredibly steep and rough—the shingle surfaces played havoc with my aluminium rear wings—at average speeds ranging from 36 to 25 m.p.h. Our overall loss of points was five minutes. This was my wife's first attempt at navigation in a major event, so she expects to improve on this!

Mechanical problems were the falling off of a wiper arm, fixed in three minutes and the failure of the attachment of the axle tubes to the spring hangers. This took three days to repair—fortunately after the conclusion of the Rally, in which our travelling companions included two 30/98's, a Brescia Bugatti, a Stutz, a 1924 Mercedes, a PB MG, a Speed 6 Bentley, and a 1939 HRG which finished with the highest overall marks.

The driving tests, being specifically designed around an Austin 7, didn't really suit the LG.6 although its braking capabilities were demonstrated when my wife acting as observer, was thrown against the laminated windscreen breaking it. The state of her head was even enquired about next day!

The culminating event was the 24-hour Le

Mans type Race, run in 13 teams around a 75-mile circuit of closed-off public roads. Each car was given an "Index of Performance" times—in my case 75 minutes!—compared with 15 and 20 minutes for Veterans so that the speed differential were frightening. My best lap was 7.19 with a 76 m.p.h. through the speed trap. The Hamish Moffat type 3S was clocked at 100 m.p.h.

The interest generated by the Rally was tremendous—crowds of school children and adults lined the roads, and attended the 24-hour event, so that vintage motoring will have a tremendous following.

At the conclusion of the Rally we spent a further week touring the South Island, with a further 1,000 incident-free miles.

The Lagonda was greatly admired throughout the Rally, and was a most comfortable and suitable (apart from the driving tests) mount, reasonably economical with petrol consumption up to 19 m.p.g. and adequate performance and handling characteristics for the mountain passes of New Zealand.

We will hope to see more Lagondas in the 1978 International Rally in Australia!

WES SOUTHGATE

Trafalgar, Australia.

Lagonda Interest in Poland

Dear Sir—I together with my friends are very interested of car-clubs in United Kingdom. We are students of the High Schools in Warsaw and we are collectings every things who have connection of car-clubs as: decols, badges, newspapers, emblems and others.

We should like to ask you to send us, some items to ours collections.

In change we are possibility send you most nicely of polish postage stamps or others hobby items.

It will be ours pleasure to correspond with member of yours club.

Thank you very much, for your kindness

ANDREW GANICZ

Warszwa 103, Poste Restante, Poland.

(The Club has sent Andrew a lapel badge and some Lagonda magazines. Ed.)

A Spares Register?

Dear Sir—During the past two years I have been rebuilding my second Lagonda, a High Chassis 2-litre. All this time I have been on the lookout

for spares and in general have been extremely lucky. As a result of this enterprise I have met a number of members of the Club who at one time or another have been in the same position of needing parts. Ivan Forshaw has often been able to help, as have other well-known members, but it is inevitably the case that in the future spares will become more and more difficult to obtain.

I propose therefore that this Club should take a leaf from the efforts of similar organisations and produce a true Spares Register, in the form of a catalogue, to be updated annually and quoting prices (or a range of prices) for available spares. Such a document could never be complete but even in its interim stages would provide a service for those members endeavouring to restore or maintain their valuable vehicles. The other advantage is that it should relieve some of the pressure on Ivan Forshaw who has been ill for considerable periods recently and would enable him to concentrate on the more amenable tasks facing him—rebuilding his own cars, cataloguing and pricing the spares he has available and providing the technical information of which he has such an enormous and valued store.

The task of compiling the catalogue could be carried out by anyone who was prepared to have a go, even at a distance. It could even be broken down so that several people compiled sections dealing with different models or groups of similar models, e.g., Pre-1927; 2-litre types with 16/80, 3 and 3½-litre; 4½-litre; V12; and Post-War.

Updating could be carried out by issuing standard forms with the newsletter once a year. Such a form I have already in draft.

The idea is not new, but I should like some idea of Club reaction if possible by means of a few letters to the address below. The proposal might then be put up for discussion at the A.G.M.—which regrettably I shall not be able to attend this year, being on the other side of the world at the time.

For myself, I should be happy to co-ordinate such an undertaking or at least a pilot project, but would prefer to content myself in detail with the group I know best, namely, the 2-litres, etc. Any takers for the other groups?

P.S. Let's worry about finance later!

DAVID LINGARD, R.N.

153, Church Road, Combe Down, Bath,
BA2 5JN.



B. W. Andrae's immaculate M.45 tourer. See "Letters to Editor."

Photo: Rugby Advertiser.

LAGONDA SERVICE



We have a large stock of useful spare parts for Lagonda cars still available. Although the demand for parts has diminished over the last few years and prices have increased considerably, we can still assist Lagonda owners with the majority of parts required for re-building and servicing the numerous pre-war Lagonda Models.

New parts are made up in small batches and consist of gaskets, valves and valve guides, pistons, cylinder liners, clutch and brake linings etc.

We also have a stock of used parts taken from dismantled cars. Often we supply Lagonda owners with cylinder heads, crankshafts, cylinder blocks and similar components which are very difficult to obtain when required.

Send your enquiries to:

MAURICE LEO LTD

Gregories Road Garage · Beaconsfield · Bucks · Tel: Beaconsfield 5538