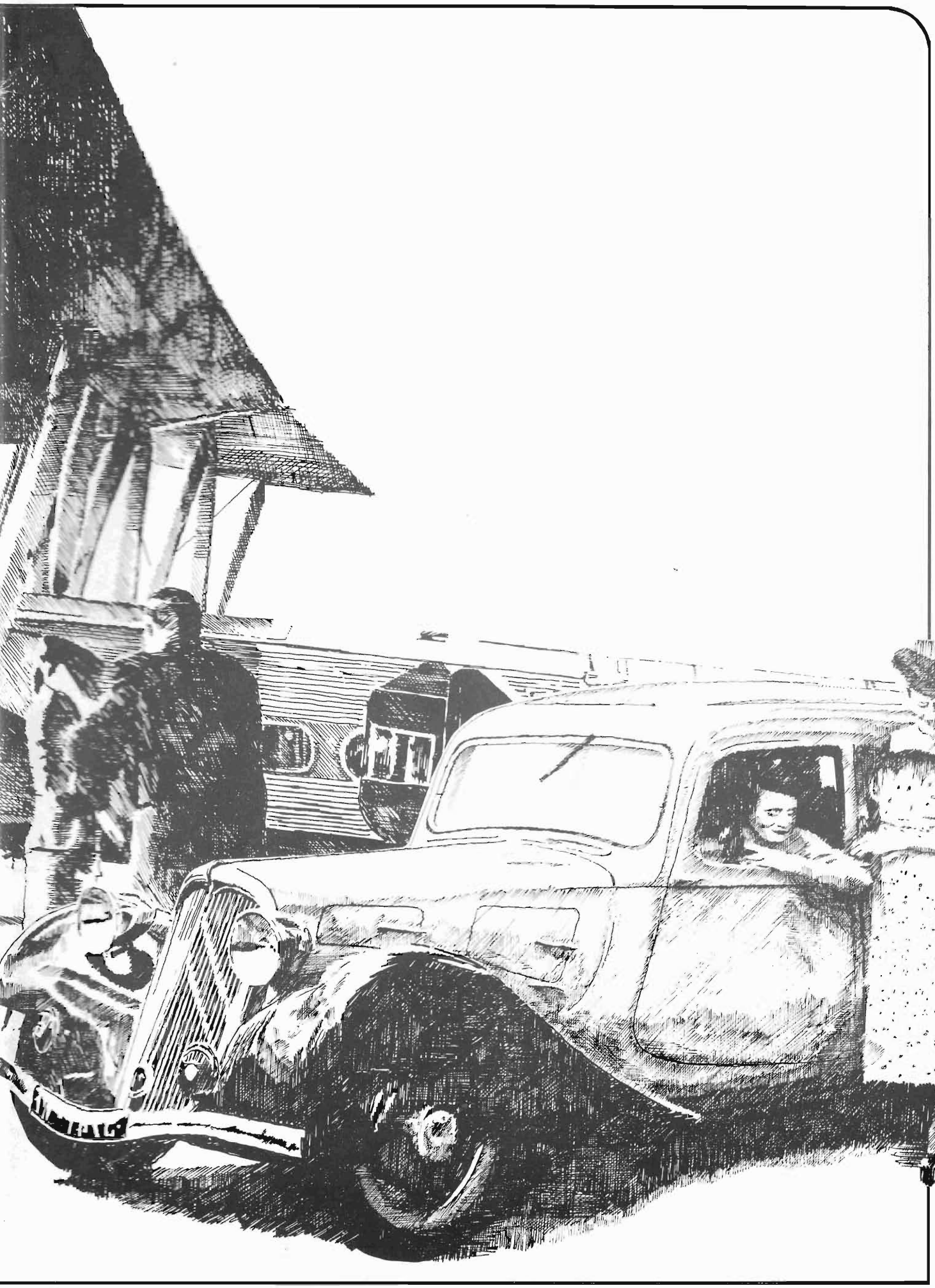


A CURE *for the* SHAKES?

Does your Traction shake rattle and roll after 30 mph. If so, one cause could be the tracking. As many members have found out, few garages or tyre suppliers are very keen to help, as they are not sure about dealing with old cars.

Now help is at hand. Bob Wade and myself have recently used a tool called Trakrite by SPQR Engineering Ltd, with in Bob's case dramatic results, in that vibration when braking was almost entirely eliminated. This is briefly what you do:

1. Find a flat concrete surface of about 2 car lengths, check tyre pressures, and drive the car backwards and forwards several times, without touching the steering wheel so as to centre the steering.

2. Place a length of wood in front of both wheels and place the Trakrite squarely against the wood (see photo).

3. Run car back about 12 inches and remove wood without disturbing the Trakrite, then drive over the device slowly, again without touching the steering wheel. The pointer by the side of the tool will then indicate toe-in or toe-out.

4. To adjust the track, slacken the trackrod securing bolts either end of the one to be adjusted and turn clockwise to increase toe-in, or anti-clockwise to toe-out.

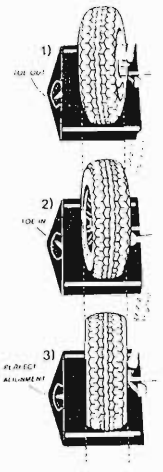
5. Carry out same procedure on the other wheel and repeat first wheel again.

It is hoped that the Club will purchase one or two of these machines in the near future for club members to hire. In our experience it's well worth the effort, and will save many members money in terms of wear and tear on tyres and other components.

RD/BW

TECHNICAL INFORMATION ON THE TRAKRITE WHEEL ALIGNMENT GAUGE

INCLUDING EXPLANATIONS WHY CAR MANUFACTURERS' ALIGNMENT SETTINGS ARE NOT REQUIRED WHEN USING THE SPQR TRAKRITE



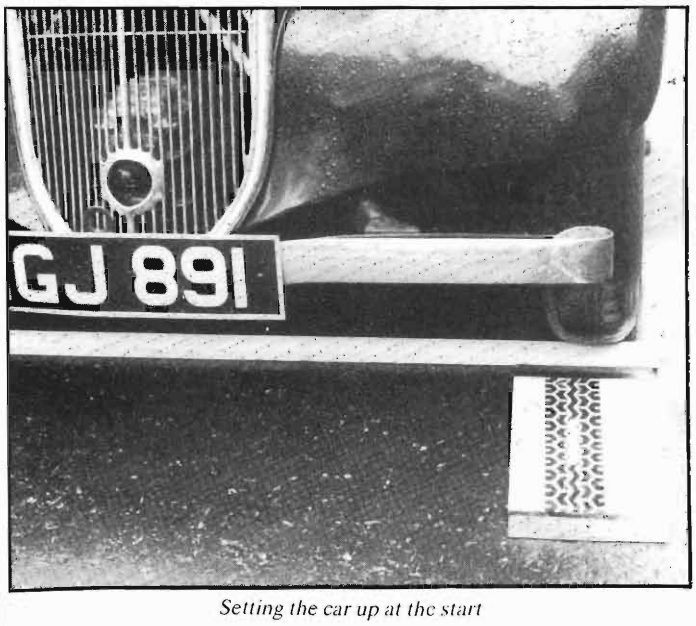
Steering geometry embraces all the dimensions which establish the layout and behaviour of the suspension and steering units. Any departure from these dimensions may result in unsatisfactory steering characteristics or the abnormal wear of tyres, suspension and steering unit components.

The steering geometry of a car is inherent in the particular design and will not normally vary; however, excessive wear, or after fitting new components, or accidental damage such as hitting the kerb, may disturb one or more of the original settings and necessitate rectification.

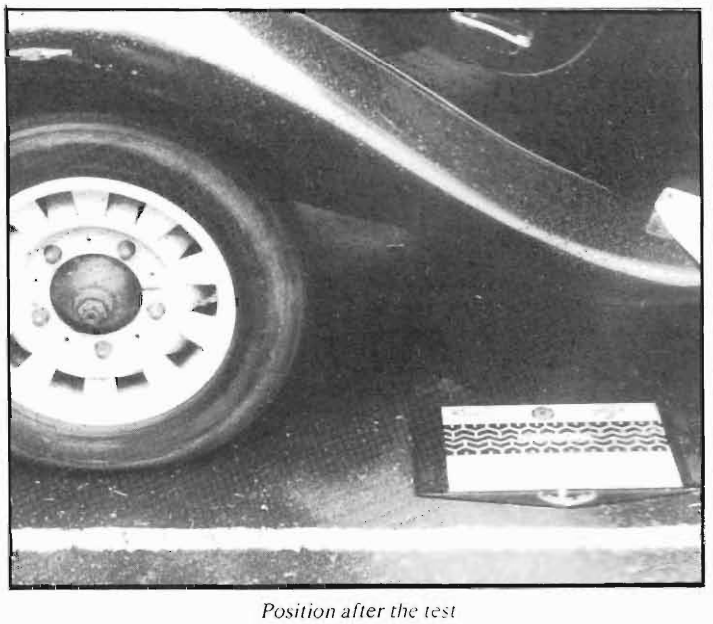
Toe-in and toe-out settings given by car manufacturers for practically all vehicles have one main point in common; it is to try to achieve perfect wheel alignment, which contributes to well balanced steering, and in turn eliminates all tyre drag and steering component stress when the vehicle is in motion; but the knowledge-able motor mechanic is well aware of the complexity of wheel alignment and that perfection is impossible unless certain vital factors are taken into account when assessing alignment. (1) Car wheel alignment varies according to the load carried, therefore it is obvious that car manufacturers' alignment settings can only be a compromise as they cannot assess in advance the varying loads a vehicle may be subjected to. (2) It is also essential that all front wheel checks are made while the vehicle is in motion, since practically all front wheel drive cars have a tendency while under drive to toe-out, but a rear wheel drive tends to toe-in. (3) Different types of tyres can also influence wheel alignment. Hence the skilled car mechanic appreciates that ideally the most accurate gauge is that which transmits its readings from the most crucial point where all variances that affect alignment converge, which is of course during the forward movement of the car and FROM WHERE THE TYRE IS IN CONTACT WITH THE ROAD. Standard cars that have been modified for rally or racing (raised or lowered suspension) can only obtain true wheel alignment by employing the Trakrite principle since it is the only accurate method that can compensate for the changed steering geometry characteristics.

The SPQR wheel alignment gauge fulfils all these vital requirements in that it is designed for a vehicle to drive over and off the gauge while carrying a normal load. Should there be any mis-alignment present this will be transmitted from the tyre to the top plate of the Trakrite, which moves on specially ground nylon rollers allowing friction free lateral movement. The top plate is geared to a pointer which registers on a dial. If no tyre drag is present the top plate and pointer will remain stationary, indicating perfect wheel alignment. Should tyre drag be present it will be indicated on the dial as either toe-in or toe-out. To obtain perfect wheel alignment simply adjust track rods until the pointer remains at zero. THIS APPLIES TO ALL VEHICLES, REGARDLESS OF TYPE OF TYRES FITTED.

Nearly all other wheel alignment gauges are of the Trammel or Optic type, the latter being the most common. These gauges take their readings from the tyre or wheel rim with the car empty and stationary. They are only capable of setting the front wheels to a pre-determined measure-ment previously referred to as a compromise one, see (1). They cannot indicate if the wheels are in true alignment, nor can they isolate each wheel, since they only give a single reading. As opposed to other gauges the SPQR Trakrite registers only factual readings which are projected from a natural and positive checking procedure, eliminating estimated calculations for track rod adjustments, and therefore the Trammel and Optic gauges, including similar wheel alignment equipment that is dependent on suggested, estimated alignment settings (as given in car manuals), cannot be used to check the accuracy of the Trakrite simply because of the totally different operational checking procedures, i.e. the dial on the Trakrite registers a true and factual reading of wheel alignment, whereas other gauges are governed by a calculated theory which is not consistently accurate — refer to (1) (2) and (3).



Setting the car up at the start



Position after the test

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Roger Dyer,
Hill Top,
Tuckey Grove,
Send Marsh,
Woking, Surrey.

Secretary
Kathy Hayes,
19, Winton Avenue,
Bounds Green, London N11.

Treasurer
David Shepherd,
23, Longford Road,
Bognor Regis, Sussex.

Social Secretary
Mike Wheals,
The Round House,
113, London Road,
Whitchurch,
Hampshire.

Club Spares
Peter Simper
Alec Bilney
215, Whitton Road,
Twickenham,
Middx TW2 7QZ
(orders by post only)

Standing Committee
Philippe Allison
Alec Bilney
John Gillard
Syd Griffiths
Kathy Hayes
Steve Hedinger
Tony Hodgekiss
Steve Reed
Graham Sage
David Shepherd
Peter Simper
Sam Wells

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Kent.

Eastern Social Section
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Mulbarton, Norwich

Northern Social Section
John Howard,
4, Stainbeck Walk,
Leeds, Yorkshire.

West Midlands Social Section
Simon Saint,
Snigs End, Danes Green,
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Welsh Social Section
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ISSN 0265 0630

Floating Power

Volume Ten Number Two **May, Ninteen Hundred and Eighty Five**

I TAKE OVER the editorship of *Floating Power* with mixed feelings (the over-riding one being controlled hysteria!), and only hope that I can help to maintain high standards set by my illustrious predecessors. I will not, however, be alone in this task, as it is felt that collation of the magazine by a committee rather than an individual — as per the last two issues — has proved to be a successful formula, and will be continued for the time being. In this manner the pressure will not fall on just one person to produce and edit the magazine — nor indeed to take the stick when things go wrong!

We are still desperate, however, for news, views, letters and articles from members, particularly of a technical nature. If you are planning any maintenance or repairs to your Traction, then why not take notes (plus photos when practical) with particular emphasis on any problems you encountered and how you overcame them. Do you have any literature, technical or otherwise, which you think may be of interest to other members? If so, do send it to me right away, with the assurance that it will be handled with care and returned as quickly as possible. If you are not technically-minded then write a report about your car, its history, how and where you obtained it, what you've done or had done to it, and your general impressions of driving one of the world's foremost supercars. It doesn't have to be neat or a literary masterpiece (that's what editors are for!) — and don't forget to use the Classified Ads section; after all, it's free!

In this issue you will see from the list of forthcoming events that once the rally season gets under way, you're not going to have much time even to change your oil and plugs! Make a point to take your Traction to as many events as you can, and spread the word about the TOC. You'll be pleasantly surprised as to how popular a Traction becomes in a field of other mundane so-called classics! Turning to TOC events in particular, Mike Wheals would be grateful to anybody who is willing to lend a hand, particularly at Chichester in June. If you can help in any way at all, please contact Mike at the address given in the article about our summer rally. Mike is also still waiting to hear from members (especially those in the middle of nowhere) who are prepared to add their names to the Mutual Aid list. You don't have to be able to repair Tractions blindfold, nor have an Alladin's cave of spares and tools — merely the ability to provide sympathy and a cup of tea would be more than welcome. Just think how nice it would be to be dragged out of bed at two in the morning because Mike Wheals has boiled-up in his D-engined, fan-less Big 15 two miles from your doorstep in the middle of a thunderstorm!

Finally I must mention the excellent artwork on the cover of the last FP, and congratulate Sam Wells for the imaginative way he has depicted an early Traction in a Parisian setting. Sam has recently taken over the difficult task of design and artwork for the magazine, and I for one am looking forward to his next 'masterpiece'. Well worth framing I would have thought!

I'll leave you with this quote of the month: "The Citroen Traction does not break down — it merely fails to proceed".

Safe motoring (Traction-style, of course),

Bob Wade

Always well worth looking into, 'Supercar Classics' recently ran the article below. We reproduce it with their kind permission

X-Factor

Jan Norbye looks at the development of the world's first production radial tyre, the Michelin X, invented largely by a clerk with no formal technical training to trammel his talents

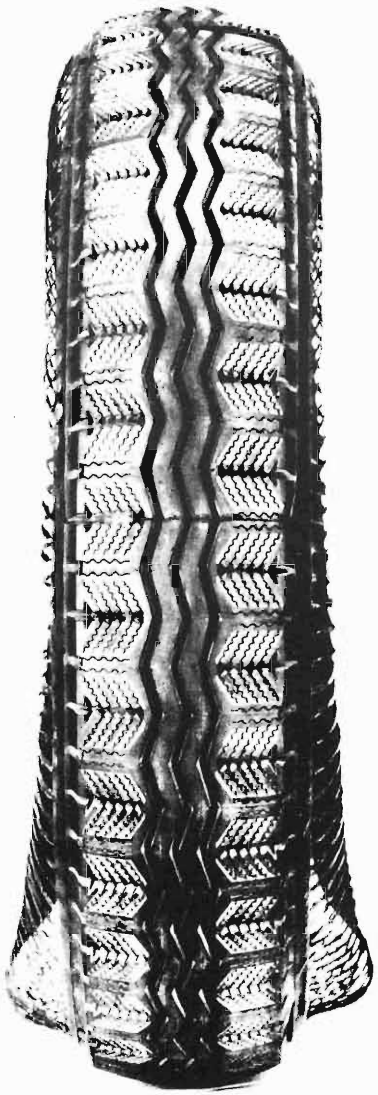
Remember those magnificent 2.8litre six-cylinder Citroens of the late '40s and early '50s? They had odd-looking ventilated steel wheels and fat, all-black tyres that always looked as though they needed air when the car was stationary. It said Michelin X on the sidewalls and when those cars cornered at speed, the expected tyre squeal was almost inaudible. They were the cars that made the reputation of the Michelin X. Actually, the tyres were first fitted as optional equipment on the 11CV Traction Avant (Light 15 in the UK) in the summer of 1949. Citroen had privileged ties with Michelin, to say the least. When Citroen fell into bankruptcy in 1934, the biggest creditor was Michelin, and the tyre makers from Clermont-Ferrand ended up owning and running Citroen until the Peugeot takeover in 1975.

No question for Citroen of standardising the X-tyre, though. For every X-tyre, Michelin made thousands of bias-ply tyres that had to be sold. Since the X-tyre could not be made on existing equipment but was built by new methods, the marketing had to go hand-in-hand with the industrial change at a rate dictated by Michelin.

Without Italian influence, however, the X-tyre might have remained a low-popularity option for years. But when the test engineers and chassis experts of Torino and Milano got their hands on the first X-tyres, they recognised it for what it was: a superior type of tyre that would in the long run replace conventional tyres altogether. And they did not hesitate to act on the conclusions from their testing. Lancia adopted the Michelin X 165-400 as standard for the Aurelia, which went into production in May, 1950. And when Alfa Romeo finally set up an assembly line at Portello and began building the 1900 in 1952, Michelin X-tyres were part of the standard specifications. Ferrari were recommending X-tyres to dealers and customers, though bound by contract to fit Pirelli at the factory. Word of the miraculous performance of the Michelin X spread like wildfire. Its roadholding, tread life, adhesion on wet roads, ride qualities, etc, became famous everywhere cars could go. Despite the premium price, Michelin could not immediately fill the demand. But in the next 20years, Michelin built up their capacity to the point where they were making 30million X-tyres a year.

All Michelin tyres are now steel-belted radials – whether for cars, trucks, buses, tractors, motorcycles or aircraft, and current annual capacity is about 45million.

The evolution of the X-tyre since 1950 and its many variations are well known. But the most fantastic part of the story is how it came into being. The man who wrought the change had never worked on tyres before. And the first radial test tyre had steel in the sidewalls and cotton for a belt.



To make sense out of the arrival of the X-tyre it must be seen against the backdrop of automobile engineering advancement in the 1930s. Front-wheel-drive, hydraulic four-wheel-brakes, independent front suspension, unit body construction and a host of lesser developments had been brought successfully into mass production. Tyres had advanced, too. Rims and treads had been widened, inflation pressures lowered and tread patterns gave better wet traction and ran quieter; ride comfort, handling and life expectancy were improved.

It was in 1930 that Michelin engineers began to study vehicle dynamics in a scientific manner. In the early 1920s, tyre experts had begun trying to measure the role of the tyre in steering, roadholding, suspension and ride comfort. The directional stability inside the tyre was also studied. Basically, a low cord angle (from the crown) gives high stability, while a high cord angle gives poor stability. Rolling-resistance tests were nothing new for Michelin, but under Pierre-Marcel Bourdon, who became the company's top technical man after the death of Marcel Michelin in 1943, the goals of such tests were more clearly defined. He ordered a new study aimed at finding out exactly how tyres absorb energy, which is lost as heat. He wanted the flow paths identified and the energy-loss quantified from each source in the tyre. Every imaginable way to find out where the heat was generated – and some unthinkable ones – were energetically explored.

To locate the heat and map its distribution was easy. But to measure how much heat was actually generated in the tread area, as opposed to the sidewall area, was a real problem. Impossible, perhaps? Not for long. Michelin had a bright individual named Marius Mignol on their technical staff, who naively suggested the obvious solution: 'Make a special test tyre without sidewalls,' something that no self-respecting tyre engineer would dare to propose for fear of being ridiculed by his colleagues. But Mignol was different.

Originally, Marius Mignol was a clerk in the export sales department of Michelin. He was wasting a lot of time, he found, con-

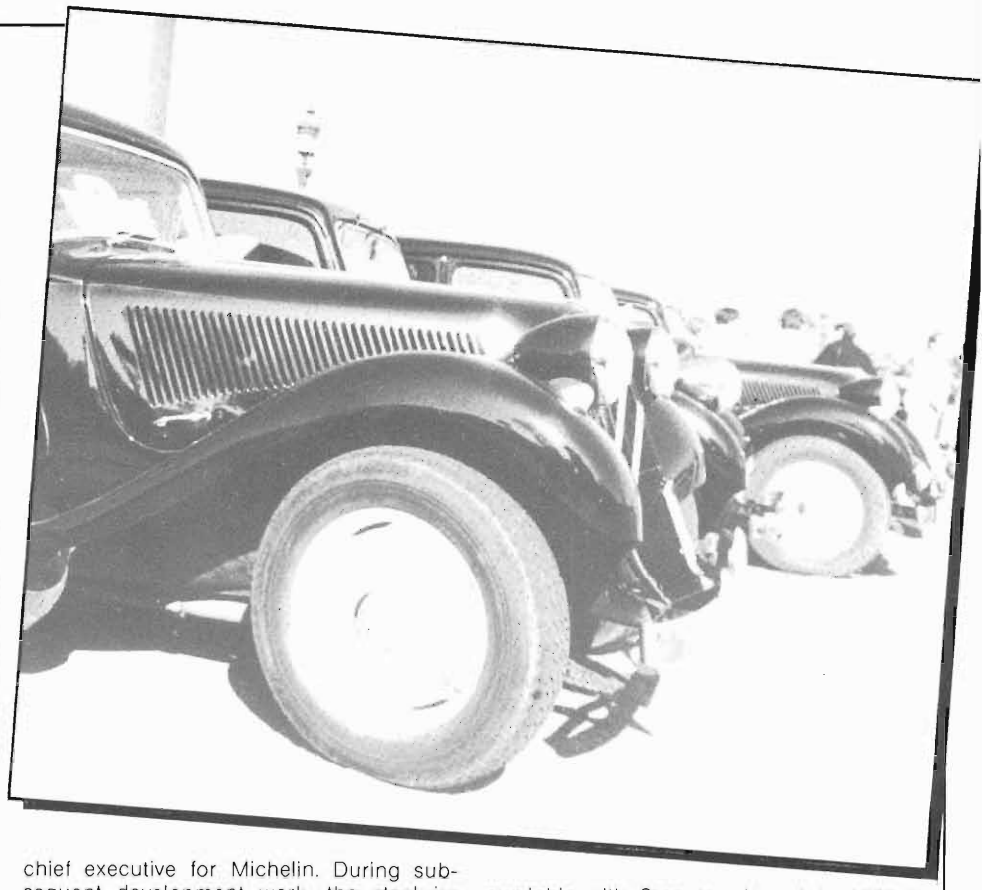
verting between francs and foreign currencies for invoices, freight bills, insurance and a lot of other money matters. To speed up these chores he made a table, but it did not prove all that useful since there were always more than two variable factors. Finally he came up with a slide-rule arrangement by which he could get his answers instantly with up to four variables.

When Edouard Michelin walked into the export sales office to discuss an urgent business matter he noticed Mignol's slide-rule – and became interested. When it was explained to him, he burst out: 'But this man is a genius – he should be working on the technical side!' With the kind of speed that is possible only where no red tape exists, Marius Mignol was transferred to the product experimental department. Having ventured to propose a tyre without sidewalls, Mignol now had to imagine how it could be done. Not being overburdened by years and years of tyre-engineering experience, and no doubt unaware of many aspects of tyre performance, he suggested simply drawing some wires straight from bead to bead (radially), in big loops so as to support the tread. To minimise the energy loss in flexing the wires, the lowest possible number of loops should be used. A test tyre was built with wires spaced at 16mm (about two-thirds of an inch) at the bead. The wires were embedded in a sheet of rubber so thin, as to offer no measurable internal friction.

Despite certain difficulties of testing the tyre at speed, it was established that it ran with very low energy consumption and at very cool temperatures. Here, at last, was proof that the heat problem lay in the sidewalls and not in the tread area. It also gave an excellent ride. But what was the difficulty about high-speed tests? The tyre was completely lacking in directional stability. The radial wires correspond to a 90deg cord angle – at right angles to the tyre crown. No wonder it did not steer well. Mignol listened to his more knowledgeable co-workers explaining why the tyre did what it did. And remember, at this stage it was just a test tyre. Mignol had no thought of anything but how to enable a tyre to undergo tests at higher speed. 'So,' he reasoned, 'if the tyre lacks stability because the cord angle is too high, let's add some cord plies laid right on the crown line – but not so wide that they get into the sidewall area.' And that's how the under-tread stabiliser belt came into being.

The first belts were made of cotton, which gave the curiously inverse situation of having a radial tyre with steel sidewalls but a textile belt! And with this composition, the validity of Mignol's thinking was proven. It wasn't called the X-tyre at this stage. It was masquerading in reports as the CAM tyre, a nickname given to it by the test engineers. The initials stand for *cage a mouches*, which translates directly as fly-cage, an irreverent reference to the steel-wire hoops. But tests with the CAM-type tyre soon revealed much more than had been hoped. After analysis of the whole performance spectrum of the CAM test tyre, Bourdon and his experts recommended the development of a radial-tyre concept for future production.

Serious work on the radial tyre concept was approved in 1944 by Robert Puiseux, who took charge of Michelin in 1940. He was a distinguished military man with no higher education and no engineering experience – but he had married Edouard Michelin's daughter, Anne (his sister, Marguerite, was Mrs Jean Michelin). Despite his apparent lack of conventional qualifications, he proved to be an excellent chief executive for Michelin. During subsequent development work, the steelwire sidewall was replaced by radial-ply cotton cord, in combination with either cotton or steel belts.



A few words about steel may be in place here. Michelin had been testing steel inserts in railway tyres since 1929, and attempts to make tyre cord from flexible steel wire began in 1930. Edouard Michelin hired a steel specialist by the name of Driou from the *Ecole des Mines* to obtain his metallurgical know-how. The basic problem was lack of adhesion between steel and rubber. First they tried a cotton winding around each steel wire, and then they went to a metal powder coating that did the job.

The first metal-cord truck tyres were tested in 1934. It was found that two or four steel plies not only did the job of 16 to 20 fabric plies, but also that tread-wear resistance quadrupled, life expectancy going from 10,000 to 40,000miles. In 1938 Michelin went into production with the metallic truck tyre. And thus, at the time of building Mignol's CAM test tyre, Michelin had plenty of steel wire on hand. Even steel cord was readily available.

The first steel-belted radial test tyres had two belt plies, laid in opposite directions at a 20deg angle. Later, a third layer at two to three degrees was added. These test tyres shared the low-profile (an 0.80 aspect ratio was *low* profile at that time) with the Pilote tyre and also inherited the Stop tread from the Pilote tyre. These were important factors in the success of the X-tyre. The first Stop tread, created by Marcel Michelin on the theory that if water was a traction problem it should be wiped away from the footprint, appeared on the Super Comfort tyre in 1934. Among the main features of the Stop tread was an endless row of siped blocks, with the siping at a low angle to the crown. The elements were broken up in a chevron pattern with a centre separation, the chevron sets being divided transversely by rivet-profile grooves.

In 1935 the Stop tread spread to the Grand Tourisme tyre. Certain sizes of Confort passenger-car tyres also became available with Stop tread, and in 1936 it was extended to the Confort truck tyre. A revised Stop tread for the Pilote tyre was composed of two zig-zag ribs along the crown line, a series of unevenly-spaced blocks along the shoulders with rivet-profile grooves open to the sides, and transverse corrugated siping of the lateral blocks. The uneven spacing was adopted for noise control. It served to break up harmonic vibrations, which had become a problem. The solution had actually been known for some time, and Michelin had obtained a patent for a tyre tread pattern with variable distance between the cross-grooves as early as 1929.

With its very low cord angles (20 to 28deg), the Pilotre tyre was the ultimate in bias-ply construction, and it remains a milestone in tyre progress. It was the first low-profile tyre and could be mounted only on the special Pilote rim, notable for its low, wide flange. Recommended inflation pressures were as low as 15 to 21psi. Michelin also built a lightweight version of the Pilote wheel, with paddle ventilation holes and vanes giving an original appearance as well as practical advantages, such as less unsprung weight and better brake cooling.

At exactly 11am on June 4, 1946 a messenger from Michelin walked into the French Patent Office at 26-bis rue de Leningrad, Paris, and delivered a fat file of paperwork. It was a patent application covering the steel-belted radial tyre.

As soon as the exact configuration of the product had been settled, manufacturing studies got under way. Pilote production began early in 1948, but the tyres did not then carry the X-identification. They were called Pilote 165-400SP and Pilote 185-40SP. None was sold, but sizeable numbers were released to selected customers in France for large-scale field testing. As thorough and prudent as ever, Michelin still did not know what they were getting into when X-tyre production began in mid-1949. It turned out to be nothing less than a wholesale revolution of tyre-making around the world.

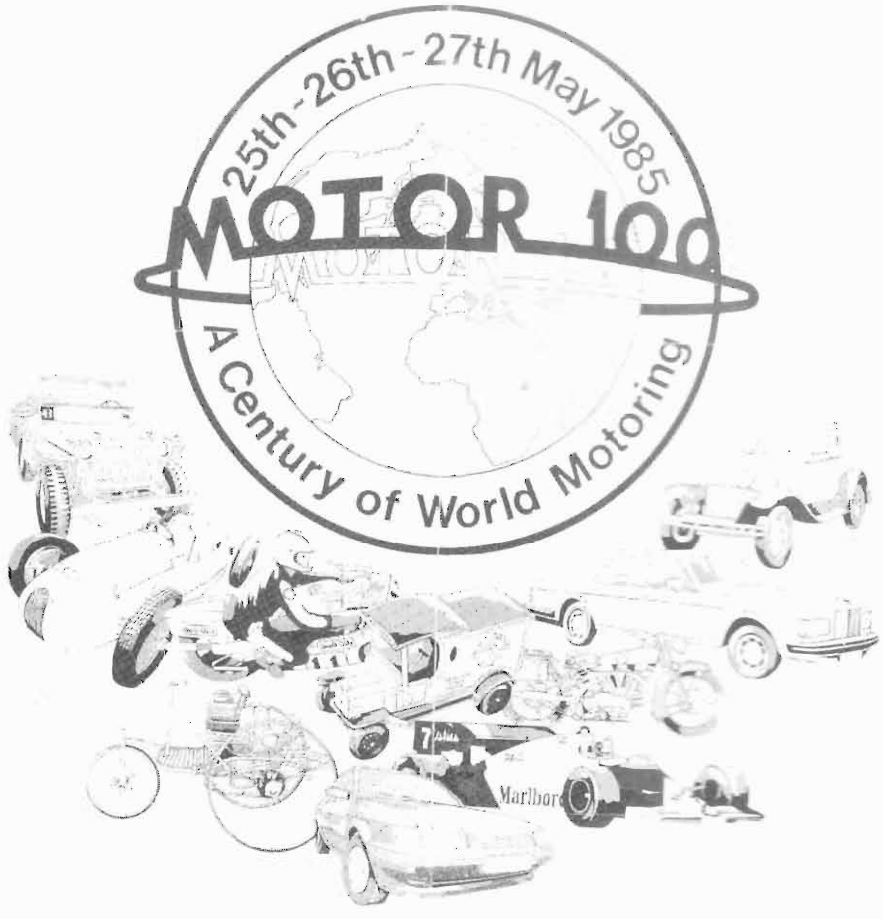
Two events too good to miss:
EXTRAVAGANZA at SILVERSTONE

LATER THIS MONTH, Silverstone will be the venue for an extravaganza comprising 7000 to 8000 motoring exhibits from all over the world. The inner area of the circuit will be given over to a unique series of theme displays of every period and type of motoring; in addition, over 150 marque clubs will be represented.

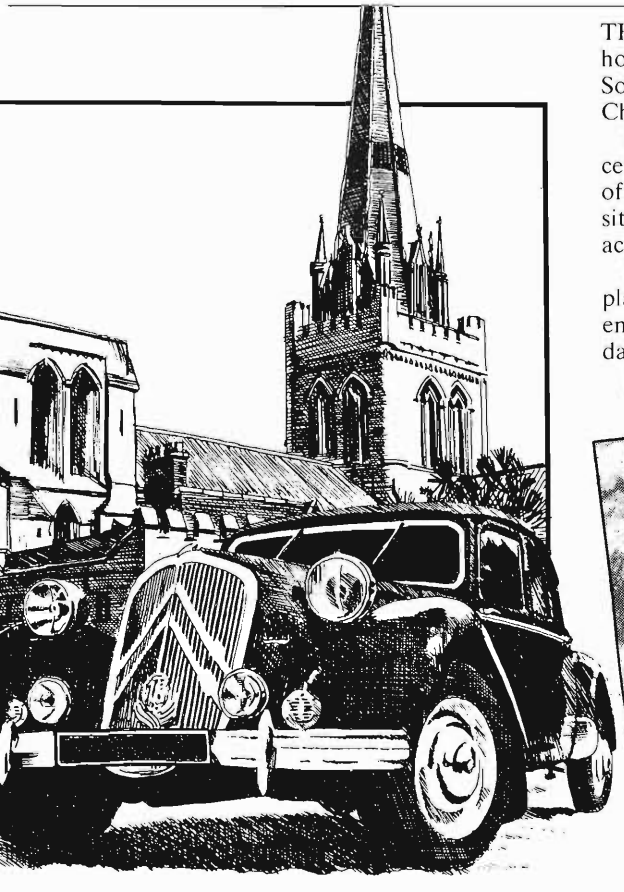
The TOC will be strongly represented with a display including one of the Paris-Moscow-Paris cars from last year, and a full range of cars from Roadster to Big 6. There will be displays depicting last year's events in the Club marquee, together with Club regalia which will be on sale.

Throughout the duration of the event, there will be a non-stop programme of track events. The parades will relive the highlights of motoring history and include Grand Prix cars, commercial vehicles, custom cars, motorcycles, sports cars, rally cars and the ultimate in road-going vehicles. And if you've really got money to spend, there's a classic vehicle auction.

Don't forget, too, that the Annual Dinner is being held close by — please contact Mike Wheals if you haven't made your reservation!



and a BUCOLIC WEEKEND in DEEPEST HANTS



THIS YEAR THE TOC will be holding the Annual Rally at the Southern Leisure Centre at Chichester.

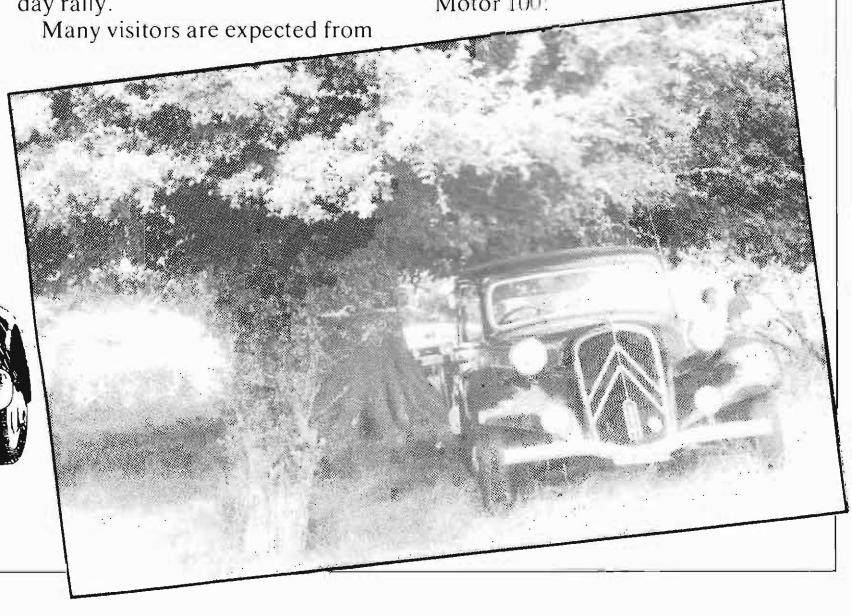
Situated only one mile from the centre of Chichester, the Centre offers a wide range of facilities on site, including most water-sport activities.

A full programme of events is planned which should provide varied entertainment for all over the three day rally.

Many visitors are expected from the continent, and the concours may well reach an even higher standard than last year, with strong competition especially from France and Holland.

Driving tests, a barbeque and disco will also be part of the entertainment, plus videos and displays of last year's events.

Let's see as many members as possible, even if you haven't had time to wipe off all the stains from Motor 100!



CLUB SPARES FOR SALE

Due to more bulk buying since taking over the club spares, I have reduced the price of many items. Unfortunately due to inflation some of the prices have had to be increased. An updated price list is therefore necessary.

May 1985. This list cancels all previous lists. Levy prices are applicable to participants only.

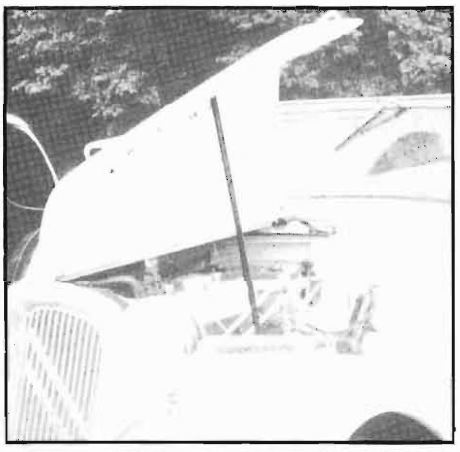
Pricing policy is simply to ensure the club does not make an actual loss. No profit is sought directly, as the purpose of the club is to keep old Tractions on the road. Occasionally an item comes to us so cheaply an opportunity cannot be missed to augment club funds and still offer excellent value to members.

Please use packing & postage as quoted (UK only): overseas please add 25% for sea mail. For O/A (on application) please state items needed and a SAE for price incl. Be generous, if you send too much for packing & postage a refund will be made.

PLEASE SEND ALL YOUR ORDERS TO PETER SIMPER, 215 WHITTON RD., TWICKENHAM, MIDDLESEX TW2 7QZ. Please mark envelope in left hand corner 'Spares'. (Open days are every second Sunday of the month 11am to 2pm at the above address). No orders will be taken over the phone; however I will be pleased to phone you on any query, making reverse charges, if you send a letter with your phone number and query.

The costs in the two columns may appear random but we have tried to round things off wherever possible, as we hope this will allow for minor fluctuations in purchasing costs without us having to alter the offered price by a few pence.

Items asterisked are not in stock at the time of compilation of this list in April 1985. The prices shown are therefore those for the last batch and should be used as a guide only. When new stock becomes available obviously the new prices will prevail.



We are constantly seeking new items and if you do not see what you want, ask anyway as it may be available. We also have some second-hand items, such as pistons and liners, which are perfectly serviceable and will certainly get you mobile again while you save for the major rebuild one day. If any member has recently obtained any part from a source locally, whether engine, transmission or body part, please let me know, giving as many details as possible. No matter what it is you can be sure that if you want it, someone else either does or soon will want it too. This is how the whole spares section was set up in the first place.

Similarly anyone who has overcome a problem by using an unusual part or abusing a normal part, not obviously intended for that purpose, should share that knowledge. A sort of Terry's Tips for Tractions.

N.B. Bleed Nipples, Ref: B11 unsuitable for new manufacture wheel cylinders (B2).

NEW LINES

K10 Nyloc nuts for cardans
K28 Stainless steel nut for down pipe
F35 Michelin tyres 165×400
F36 Inner tubes

BEARINGS & SEALS

Ref.		Normal Price	Levy Price	P&P if Reqd.
A1	Clutch Thrust, 7/11	9.20	8.00	0.60
A2	Front Wheel – Outer, 7/11	11.60	10.00	0.60
A3	Front Wheel – Inner, 7/11	5.20	4.50	0.60
A4	Rear Wheel – Lt 15, 7/11BL	6.40	5.50	0.60
A5	Rear Wheel – B15/5, 11B/15	7.60	6.60	0.60
A6	Dynamo Front, 7/11/15	3.50	3.00	0.40
A7	Waterpump, 7/11	3.50	3.00	0.40
A8	Bellhousing pulley front, 7/11	4.80	4.00	0.40
A9	Flywheel, 7/11/15	5.00	4.20	0.40
A10	U/J kit for inner cardan, 7/11	*15.30	*13.00	0.60
A11	Differential, 7/11	9.20	8.00	0.75
A12	Rearwheel oil seal (state model)	3.10	2.60	0.30
A13	Frontwheel oil seals (side)	7.70	6.50	0.40
A14	Gearbox oil seals (each)	3.80	3.25	0.30
A15	Thrust 15 CV	11.80	10.00	0.60

BRAKES

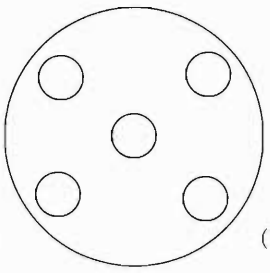
Ref.		Normal Price	Levy Price	P&P if Reqd.
B1	Master cyl. complete (7/11/15)	19.70	16.75	1.25
B2	Slave cyl. complete (1¼")	19.70	16.75	1.00
B2a	Slave cyl. complete (1")	18.10	15.75	1.00
B3	Slave cyl. state R or L (15)	20.60	17.50	1.00
B4	Master cyl. kit (inc. new piston)	10.00	8.70	0.35
B5	Master cyl. kit (rubbers only)	3.25	2.75	0.35
B6	Wheel cyl. kit (state 1" or 1¼")	3.40	3.00	0.35
B7	Front hose – Slough (7/11/15)	5.70	4.80	0.45
B8	Front hose – French (7/11/15)	7.25	6.50	0.45
B9	Rear hose – Slough (7/11/15)	5.10	4.40	0.40
B10	Rear hose – French (7/11/15)	6.20	5.40	0.40
B11	Bleed nipples (4)	2.50	2.20	0.20
B12	Short fixed rear pipe (French)	3.50	3.00	0.30
B13	Handbrake cable (state model)	18.00	15.75	1.50
B13a	Handbrake cable (state model) plastic collar	11.60	10.00	1.50
B14	Brake linings (state model)	21.85	19.00	1.80
B15	Brake shoes (exchange – state model)	*60.00	*50.00	O/A
B16	Fixed brake pipes (Slough – state model)	PRICE ON APPLIC.		
B17	Fixed pipes French	PRICE ON APPLIC.		
B18	12V Hydraulic switches	PRICE ON APPLIC.		
B19	Copper washers (state position) each	0.06	0.05	0.70
B20	Lockheed reservoir	11.50	10.00	0.35

GASKETS

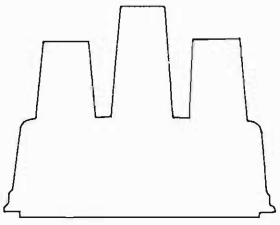
Ref.		Normal Price	Levy Price	P&P if Reqd.
C1	Head, 7	8.50	7.50	1.60
C2	Head, 11	7.00	6.00	1.60
C3	Manifold 7/11 (pair)	7.60	6.60	0.35
C4	Triangular manifold, 7/11	1.75	1.50	0.20
C5	Silencer	1.00	0.85	0.20
C6	Waterpump – large 7/11	2.60	2.25	0.20
C7	Waterpump – small 7/11	1.30	1.00	0.20
C8	Rocker cover, 7/11	1.50	1.30	0.50
C9	Timing cover, 7/11	1.70	1.45	0.50
C10	Solex gasket pack (32PB1C)	3.70	3.20	0.20
C11	Short sump set, 11CV	3.20	2.80	0.60
C12	Gearbox set	3.60	3.10	0.40
C13	Oil pump paper gasket	0.70	0.60	0.20
C14	Head set	*18.25	*15.50	1.60
C15	Six carb gaskets	*5.30	*4.50	0.20
C16	35F carb gaskets	*4.70	*4.00	0.20
C17	Hot spot (late type)	1.00	0.80	0.20
C18	Barrel gaskets (per 4)	*3.25	*7.80	0.20
C19	Paper sump set	1.50	1.30	0.50
C20	Six head set	35.00	30.00	1.60
C21	Six head	13.80	12.00	1.60

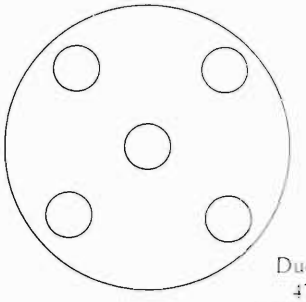
IGNITION & ELECTRICS

Ref.		Normal Price	Levy Price	P&P if Reqd.
D1	Spark plugs (4) H10	3.80	3.20	1.00
D2	Slough Distr. cap (Replaces 4003162)	*4.60	*4.00	0.45
D3	Slough points (Replaces 420196)	1.70	1.40	0.20
D4	Slough points (Replaces 423153)	1.70	1.40	0.20
D5	Slough points (Replaces 407050)	1.70	1.40	0.20
D6	Slough points (Replaces 400415)	1.70	1.40	0.20
D7	Slough rotor (Replaces 400052)	1.20	1.00	0.20

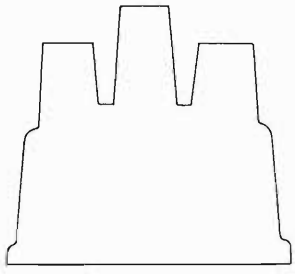


Type 63
(Fixed Bush)

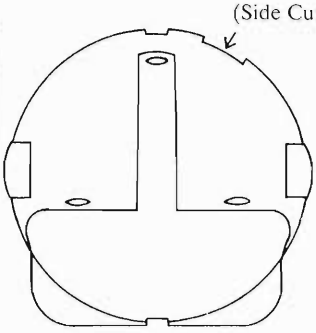




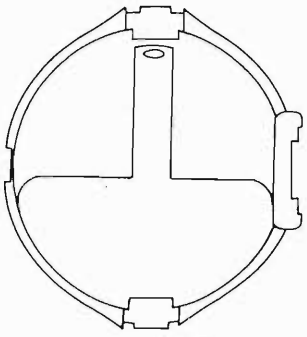
Ducellier
47430
(Spring Bush)



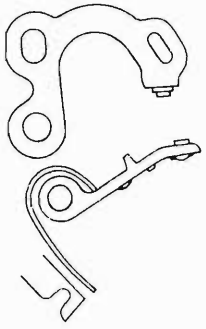
(Side Cut Out)



Lucas 418893

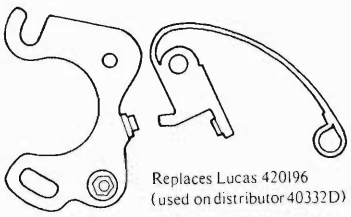


Lucas 422905

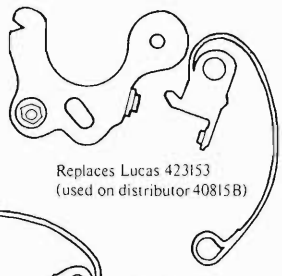


Sev. DM 21117A

DR 492



Replaces Lucas 420196
(used on distributor 40332D)

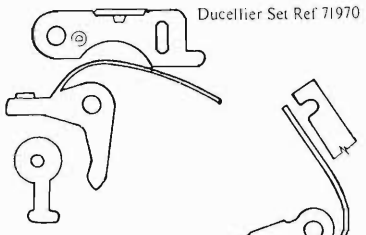


Replaces Lucas 423153
(used on distributor 40815B)

Replaces
Lucas 400052

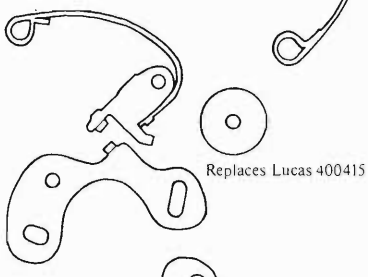
SEV 50040

11B



Ducellier Set Ref 71970

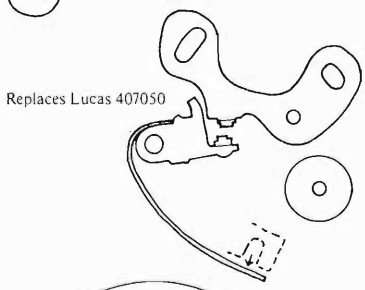
Ducellier 71129



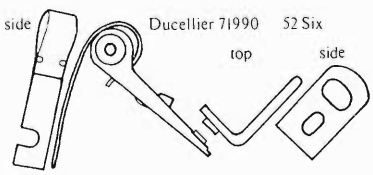
Replaces Lucas 400415

Ducellier 49440
21.5mm deep
(see rotor 905014)

11BL



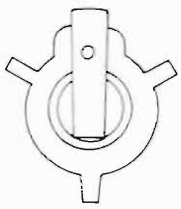
Replaces Lucas 407050



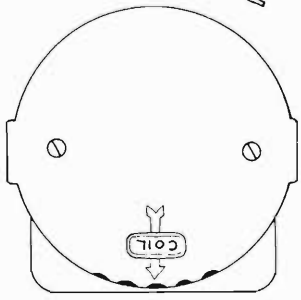
side

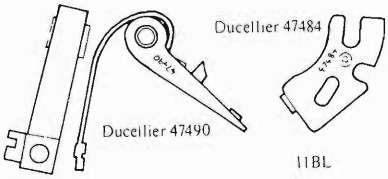
Ducellier 71990 52 Six

top side



D..cellier 49423

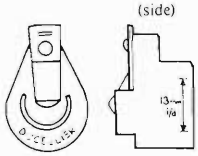




Ducellier 47484

Ducellier 47490

11BL



(side)

Ducellier 42065

Rotor Ducellier 905014
as rotor 49440
except 16 mm deep

D8	12v starter solenoid (bulkhead)	4.50	3.75	1.25
D9	12v starter brushes (post-war)	4.10	3.45	0.35
D10	12v starter brushes (pre-war)	1.50	1.25	0.35
D11	6v 3 pin headlamp bulbs	3.00	2.50	0.35
D12	Ducelier points 71990	2.65	2.25	0.20
D13	Ducelier points 71133	2.35	2.00	0.20
D14	Ducelier points 71129	2.35	2.00	0.20
D15	Ducelier points 71970	4.45	3.75	0.20
D16	Ducelier points 42065	2.65	2.25	0.20
D17	Ducelier rotor 49440	2.65	2.25	0.20
D18	Ducelier rotor 49423	2.65	2.25	0.20
D19	Ducelier rotor 905014	2.65	2.25	0.20
D20	Ducelier regulator 82597/11CV	21.20	18.00	0.75
D21	Ducelier regulator 83087/15CV	21.20	18.00	0.75
D22	Ducelier coil 3918	12.00	10.00	1.50
D23	12v regulator late	12.50	11.00	
D24	7" Slough headlamp glass and reflector (Wipac)	7.65	6.50	0.45
D25	Lucas sidelight – single filament	*20.00	*17.00	0.45
	– double filament	*21.20	*18.00	0.45
D26	Indicator lens AXO (state red, white or orange)	2.60	2.20	0.20
D27	HT cable, red & black (price per foot)	0.35	0.30	0.35
D28	SEV points DM21117A	3.85	3.25	0.20
D29	Ducel cap 47430	6.00	5.00	0.45
D30	SEV cap 8385	6.00	5.00	0.45
D31	SEV cap 8631	6.00	5.00	0.45
D32	6v condenser (sketch)	1.80	1.50	0.30
D33	12v condenser (sketch)	1.50	1.25	0.30
D34	12v Six starter bush and pinion	8.20	6.80	0.75
D35	Lucas cap 409564	4.80	4.00	0.45
D36	Lucas cap 409635	4.80	4.00	0.45
D37	12v dynamo brushes	1.20	0.95	0.35
D38	12v solenoid (end starter)	7.00	5.80	1.25
D39	12v solenoid (top)	4.40	3.70	0.60
D40	12v headlight bulb (state type)	2.00	1.65	0.85
D41	12v sidelight bulbs	0.55	0.45	0.20
D42	12v stop/tail	0.65	0.55	0.20
D43	12v stop or trafficator	0.60	0.50	0.20
D44	6v Festoon (state stop or rear)	0.85	0.70	0.20
D45	6v Festoon (indic. switch) or 3 watt bulb	0.55	0.45	0.20
D46	6v Bayonet 21w indicators	0.85	0.70	0.20
D47	12v Dynamo contact	2.60	2.20	0.45
D48	12v Distributor	32.35	27.50	O/A
D48a	Distributor drive dog	2.95	2.50	0.35
D48b	Pin			
D49	Lucas sidelight base rubber	0.35	0.30	0.20
D50	Lucas headlight catch spring	0.50	0.40	0.20
D51	H/T washers for coil	0.04	0.03	0.20
D52	H/T push connectors	0.12	0.10	0.20
D53	Complete wiring loom (state year and model)	73.55	62.50	O/A
D54	French indicator base	10.20	8.50	0.60
D55	French rear light cover	5.50	4.75	0.60
D56	Battery lead	2.00	1.75	0.45
D57	Junction box (not original) six contact	3.55	3.00	0.45
D58	12v sealed beam headlights	5.90	5.00	0.60
D59	12v contacts for sealed beams	2.40	2.00	0.35
D60	Angled suppressor plug caps	0.50	0.40	0.35
D61	Straight plug caps	0.35	0.30	0.35
D62	Rubber fingers for distrib. caps with top push fit H/Ts	0.85	0.70	0.20
D63	6v flasher relays	6.50	5.50	0.35
D64	Pre-52 French rear lights	14.50	13.00	.60
D65	6v Ducellier Bendix	*	*	
D66	12v coil	*	*	
D67	Pillar parking lights each	5.10	4.45	
D68	Ducellier starter brushes	3.35	2.90	
D69	Ducellier dynamo brushes	*	*	

Ref.		Normal Price	Levy Price	P&P if Reqd.
ENGINE & CLUTCH				
E1	Rebuilt clutch (exchange only)	*52.00	*45.00	O/A
E2	Clutch friction plate (exchange only)	*41.00	*35.00	O/A
E3	Clutch return spring	1.45	1.20	
E4	Valve springs 11/15	16.50	14.00	1.00
E5	Valve springs 7 and pre-war	24.70	21.00	1.00
E6	Valves, 7/11/11D	36.00	30.00	1.50
E8	Valves 15 six	56.50	48.00	1.50
E9	Valve guides, 7/11 (unreamed)	12.00	10.00	1.00
E10	Timing chain, 7/11	16.40	8.50	1.50
E11	Pistons and liners, 11/15 (set 4)	111.80	95.00	O/A
E12	Piston rings, 11/15	24.00	20.00	0.70
E13	Solex 32 PB carb (exch. only)	*48.00	*40.00	O/A
E14	Solex 32 jet kits		O/A	0.35
E16	Waterpump kit (new spindle) (late type – no gland nut)			
E17	Rocker shaft	21.80	18.50	1.00
E18	Oilpump spring	0.95	0.80	0.20
E19	Fanbelt, 7/11	3.40	3.05	0.60
E20	Fanbelt, 15	5.30	4.50	0.60
E21	Valve seals (each)	0.30	0.25	0.20
E22	11D shells (Std, +.25, +.5, +.75, +1mm)	7.20	6.00	0.60
E23	Core plugs (state 25, 30, 31mm)	0.65	0.55	0.35
E24	Oilpump gears (pair)	*21.80	*18.50	0.90
E25	Mains and big end tab washers	1.80	1.50	0.35
E26	Waterpump bush (late type)	3.00	2.60	0.20
E27	D crank plugs	*2.90	*2.40	0.35

Ref.		Normal Price	Levy Price	P&P if Reqd.
RUBBERS				
F1	Steering rack (pair)	9.20	8.00	0.35
F1a	Rack pin mounts (pair)	0.80	0.60	0.20
F2	Ball joints (one side)	3.65	3.15	0.35
F4	Windscreen surround (prices per foot)	0.85	0.70	0.45
F5	Windscreen glass mounting (price per foot)	0.30	0.25	0.35
F6	Windscreen draught rubber (price per foot)	0.40	0.35	0.45
F7	Big Boot bottom	11.55	9.80	0.65
F8	12 clips for Big Boot rubber	5.45	4.60	0.35
F9	Door surround (4 doors)	7.50	6.50	0.65
F10	Chevron pedal rubber	*3.85	*3.25	0.35
F11	French indicators, number plate	*5.65	*4.70	0.35
F12	Handles, headlamps, etc.	*5.65	*4.70	0.35
F13	Shock absorber mountings (1 end)	0.70	0.60	0.35
F14	Rear mudflaps (pair)	20.70	18.00	1.50
F15	Heater tube rubbers (pair)	12.50	11.00	0.65
F16	Front mudflaps (pair)	13.80	12.00	1.50
F17	Filler pipe rubber (Big Boot)	3.20	2.75	0.35
F18	Filler pipe rubber (Small Boot)	2.90	2.50	0.35
F19	Gearbox mounting bush	6.00	5.20	0.35
F20	Big Boot top	4.60	4.00	0.65
F21	Commerciale top rubber (per ft.)	*0.55	*0.45	0.35
F22	Greasenipple/autobleed caps (4)	*0.45	*0.38	0.20
F23	Windscreen drain tube	0.70	0.60	0.35
F24	French windscreen knob rubber cover	1.50	1.25	0.20
F25	Rear bumper (Small Boot) rubbers per pair	10.00	8.65	0.35
F26	Slough wiper pegs (pair)	0.60	0.50	0.20
F27	Small Boot surround (per ft.)	0.40	0.35	0.35
F28	Bonnet grommets	0.17	0.14	0.35
F29	Scuttle vent rubbers	7.15	6.20	0.45
F30	Triangular door rubbers	1.45	1.25	0.20
F31	Window channel base rubber (each)	1.25	1.10	0.45
F32	Lucas sidelight base rubbers	*0.50	*0.45	0.20
F33	Wiper grommets	*0.25	*0.20	0.20
F34	Drive shaft rubbers & protector (each)	9.00	8.00	1.00
F34a	Drive shaft rubbers only	3.45	3.00	0.45
F35	Michelin tyres 165x400	40.00	36.00	O/A
F36	Inner tubes	6.30	5.70	O/A
F37	French indicator (rubber base)	1.60	1.35	0.20
F38	French rear light, post war (rubber base)	1.70	1.50	0.20

EXHAUST

Ref.		Normal Price	Levy Price	P&P if Reqd.
G1	Mild steel silencer	28.75	25.00	O/A
G2	Stainless steel silencer			
G3	Mild steel downpipe (state model)	15.00	12.50	O/A
G4	Stainless steel downpipe (state model)			
G5	Suspension straps (pair)	0.30	0.25	0.35
G6	Stainless steel thru pipe (state model)			
G7	Mild steel thru pipe (state model)	10.00	8.00	O/A
G8	Six down pipe	60.50	55.00	O/A

DRIVE, STEERING & SUSPENSION

Ref.		Normal Price	Levy Price	P&P if Reqd.
H1	Balljoints pair (top and bottom)	*82.35	*70.00	O/A
H2	Track rod end kit	28.75	25.00	1.00
H3	Rack inner pin and nylon nut	16.10	14.00	0.65
H4	Balljoint adjusters (does away with shims) each	7.75	6.70	0.65
H5	Exchange driveshaft (state model and side)	75.00	65.00	O/A
H6	Exchange inner cardan	*21.50	*18.50	O/A
H7	Crown wheel, pinion	225.00	195.00	O/A
H8	2nd and 3rd gear and synchro	230.00	200.00	O/A
H9	Gear bushes	*24.00	*20.00	0.65
H10	Diff. thrust washers (state 3.5, 3.75, 4.00, 4.5 mm)	1.50	1.25	0.45
H11	Exchange wishbone (state side)	35.00	30.00	O/A
H12	Wishbone shims (various each)	0.06	0.05	0.20

TRIM

Ref.		Normal Price	Levy Price	P&P if Reqd.
J1	¼" bead PVC wing piping (per ft)	0.12	0.10	O/A
J2	Flexible window conduit (per ft)	0.60	0.50	O/A
J3	Bonnet tape – double bead ⅞" (per ft)	0.50	0.40	O/A
J4	Window support channel	3.00	2.50	1.20
J5	Dash selector springs (pair)	4.15	3.50	0.20
J6	Bonnet stay springs (pair)	1.15	1.00	0.20
J7	Slough interior door handle	2.40	2.00	0.35
J8	Slough interior winder	2.40	2.00	0.35
J9	Slough interior escutcheon	1.15	1.00	0.35
J10	Citroën boot badge	*19.45	*16.50	0.65
J11	French transfer – Miofiltre	1.20	1.00	0.20
J12	French transfer – Vokes	1.20	1.00	0.20
J13	French transfer – Lockheed	1.20	1.00	0.20
J14	Chrome bonnet end trim (pair)	5.30	4.60	0.35
J14a	Chrome bonnet end trim support each	5.30	4.60	0.35
J15	Door panel clips (10)	*0.95	*0.80	0.35
J16	PVC fuel line (price per foot)	0.30	0.25	O/A
J17	French Big Boot handle	11.20	9.50	0.60
J18	Bonnet strip 7/11	13.80	12.00	O/A
J19	Bonnet strip, 15	17.00	14.50	O/A
J20	Key barrel sets (3) French cars	7.00	6.00	0.60
J21	Locking curly handles with escutcheon (no locks)	14.15	13.00	0.60
J22	Small Boot handles (French) each	16.60	14.50	1.00
J23	Locking Big Boot petrol cap	6.90	5.75	0.60
J24	Furflex draught excl. (red, fawn) Furflex (grey) (price per foot)	0.85	0.75	O/A
J25	Slough exterior locking handle	6.60	6.00	0.60
J26	Slough ext. non-locking handle	6.00	5.65	0.60
J27	Non-locking curly handle (no escutcheon)	11.50	10.00	0.60
J28	Polished early-type Radwar kick plates – Front (each) – Rear (each)	24.00 18.00	20.00 15.00	O/A O/A
J29	Pre-war bonnet flap springs (pair)	3.60	3.00	0.35
J30	Pre-war bonnet handle coil springs (each)	1.10	0.90	0.35
J31	Chromed brass Slough headlamp rim clips	3.25	2.75	0.20
J32	Light 15 chromed grille crest	*10.60	*9.00	0.60
J33	Big 15 chromed grille crest	*10.60	*9.00	0.60
J34	Postwar bonnet handles chromed (pair)	*11.80	*10.00	0.60
J35	Door ext. escutcheons	3.10	2.70	0.35
J36	French hub cap spinnings	5.20	4.50	1.00
J37	French chromed hub caps	8.50	7.45	0.75
J38	French hub cap bolts (chromed)	1.90	1.60	0.35
J39	Pilot hub cap bolts (chromed)	1.90	*1.60	0.35
J40	Grill surround clips	*	*	
J41	Seat cloth kit for French car	75.00	63.00	O/A
J42	Grey headlining cloth per yard	10.20	8.87	O/A
J43	Metal door – rubber receiving plate	1.95	1.65	0.35
J44	Aluminium grill surrounds (pair)	13.00	11.50	O/A
J45	French overrider	8.50	7.45	O/A
J46	French bumper	PRICE ON APPLIC.		
J47	Aluminium door kick-strip (set)	12.00	10.40	O/A
J48	Aluminium door-trim (set)	11.40	9.80	O/A
J49	Wing ends (pair)	37.00	32.00	O/A
J50	Headlamp plastic tops (each)	4.30	3.75	0.35
J51	Petrol caps	*3.55	*2.00	0.60
J52	12 bonnet handles each	5.20	4.50	0.60

MISCELLANEOUS

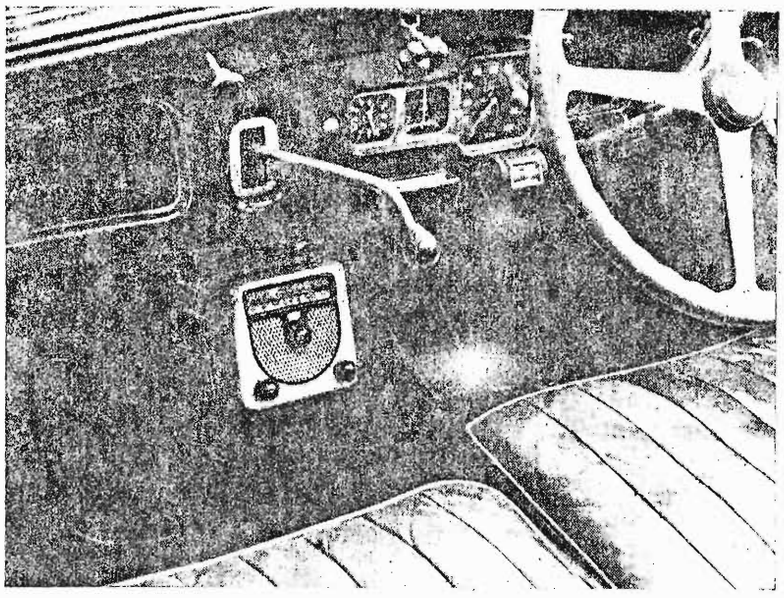
Ref.		Normal Price	Levy Price	P&P if Reqd.
K1	Radiator Hose, 7/11	6.90	6.00	1.25
K2	Hose clips, 7/11 (pair)	0.85	0.70	0.35
K3	A/C pump repair kits	4.00	3.50	0.35
K4	Speedo cable, 7/11	*13.00	*11.00	0.75
K5	Slough wiper arms (each)	*5.40	*4.50	0.45
K6	Slough wiper blades 8" (each)	2.60	2.20	0.35
K7	SEV wiper arms (each)	*10.60	*9.00	0.45
K8	SEV wiper blades (each)	2.80	2.35	0.35
K9	Shock absorber (state model and position)	18.60	13.00	O/A
K10	8 Nyloc nuts for cardens (state 8 or 10 mm)	0.80	0.60	0.35
K11	Heater hose mount on radiator	15.35	13.35	1.25
K12	Front bumper horns (pair)	27.60	24.00	1.25
K13	Front inner bearing tab washer	0.40	0.35	0.20
K14	Woodruff key-front hub	0.55	0.45	0.20
K15	Door hinge pins (each)	*	*	
K16	Clutch pedal spring (LHD models)	1.60	1.35	0.35
K17	Distributor spring	*1.10	*0.90	0.35
K18	Clutch cable spring	1.20	1.00	0.35
K19	Starter cable (Slough)	3.00	2.50	0.35
K20	Air filter (various, state type)	*	*	0.60
K21	Tool boxes (Small Boot Slough)	*	*	
K22	Door mounting rear view mirrors	8.80	7.90	0.75
K23	Petrol hose jubilee (each)	0.22	0.18	0.20
K24	Small Boot valances	28.00	25.00	O/A
K25	Big Boot valances	43.70	38.00	O/A
K26	Floor pans (2m × 1m)	*34.00	*30.00	O/A
K27	Outer sills (pair)	PRICE ON APPLIC.		
K28	Stainless steel nut for downpipe each	1.50	1.30	0.20

Our parents would have called it a wireless - in 1948 'The Motor' tested this hi-tech bakelite marvel...

RADIO ROAD TEST

THE PYE NO6M

IN keeping with the policy of providing up-to-date information on all aspects of motoring, "The Motor" carries out practical tests on current models of car radio. The reports are written with the idea of giving a useful guide to the capabilities of the set under test from the average radio user's point of view; they do not deal with radio technicalities.



The Pye receiver fitted beneath the parcel tray on a Citroen Light Fifteen, showing the three control knobs and the long tuning scale.

WHEN the Pye car radio was first announced its low price of 12 guineas plus purchase tax came as something of a surprise. Because of this some critics were inclined to doubt the quality of the product, but all agreed that since the set bore the very reputable name of Pye it must be much better than they were inclined to think. In view of this it was with considerable interest that one of these receivers was installed on a staff car some time ago for a prolonged test.

A striking feature of this set has been its complete reliability. Never once, in the many months that it has been under test, has it failed to operate, and it has been bereft of such troubles as vibrator and condenser failures which sometimes attack these highly concentrated receivers. Reproduction is sharp and clear, but might be improved by the addition of more marked bass response. Against this, of course, can be set the fact that this characteristic assists listening at high road speeds and therefore it all really boils down to personal preference. However, the inclusion of some form of tone control would, no doubt, be an advantage, provided this could be incorporated without additional expense. As performance is satisfactory, this small point is the only criticism that can be made about the set.

Easy Fitting

Installation presents little difficulty, particularly if the car has a parcel tray beneath the instrument panel, as this is about the best position for fitting. Controls are simple. The central one is a combined on/off switch and volume control, the one on the left is for tuning, while the third changes the waveband with a push-pull action. The long tuning scale across the top of the set facilitates tuning and is calibrated in metres with the principal B.B.C. stations indicated. With regard to ignition suppression, it is interesting to note that, so far as the Citroen is concerned, this is below average in that the only suppressor needed is on the distributor.

During a test run down to Brighton it was found that the set was clearly audible at speeds up to 50 m.p.h. In conditions of average reception it is possible to appreciate programmes, either musical or spoken, right up to the extreme cruising speed of the car, although this particular vehicle, having no air-silencer on its carburetters, makes more noise than standard.

Good Performance

Pausing for a while on the Madeira Drive at Brighton, a bag of about a dozen medium-wave stations was received at about 2 p.m. on a cloudy weekday. Of these at least eight were coming in at good strength and clear enough for comfortable listening. The remainder were somewhat obscured by slight vibrator mush. In addition three further stations, including the Light programme, could be heard with adequate volume and clarity on the long waves, Luxembourg being particularly good. Later on the car was taken to Hampstead Heath and under cover of darkness a total of 30 stations were received at good strength on the medium waveband and five on the long waves.

Neat Appearance

From the appearance angle the set is not unattractive. The exterior of the front is finished in cream which contrasts with the brown of the bakelite knobs and the fret material. When the set was first handled it was feared that tuning might tend to wander owing to the lightness of the control, but it proved that this doubt was unfounded. Road shocks and bumps appeared to have no effect on tuning settings, which remained unchanged once set.

To sum up, this compact and inexpensive set represents good value for money and is capable of providing entertainment practically whenever required with the minimum of "technical trouble at the receiver."

RADIO ROAD TEST—DATA

MAKE: Pye. **MODEL:** NO6M.

MANUFACTURERS: Pye Ltd., Radio Works, Cambridge.

CAR FITTED: Citroen Light Fifteen (12-v. equipment).

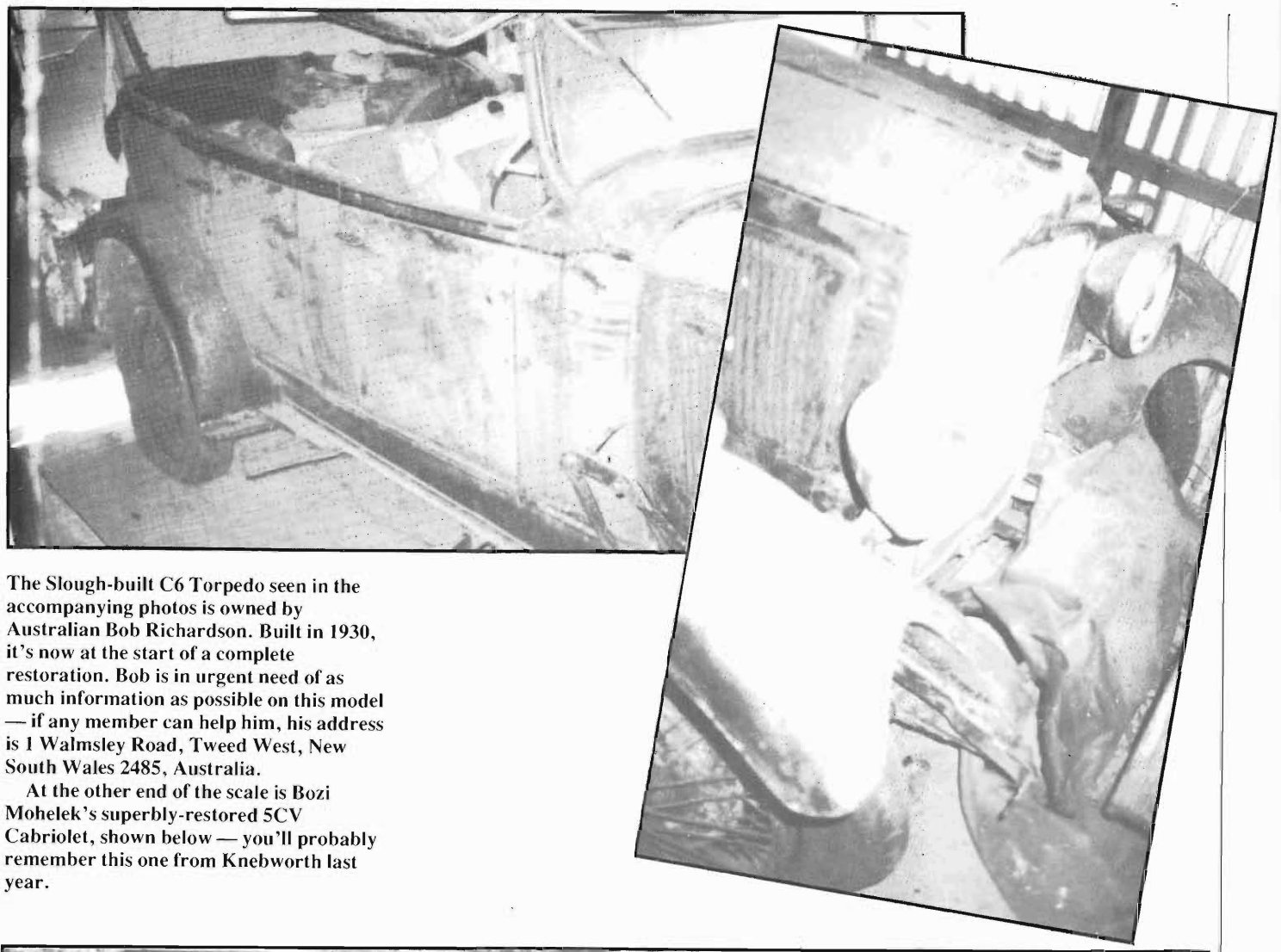
RECEIVER DATA:

Dimensions: 5 $^{13}/_{16}$ ins. by 5 $^{13}/_{16}$ ins. by 6$\frac{1}{2}$ ins. deep.
Method of Fitting: By means of bracket supplied to underneath of parcel shelf or other suitable position.
Battery Consumption: 6 v. 5.5 amps., 12 v. 2.6 amps.
Average amount of suppression required. Coil, dynamo and distributor. (See report.)
Size and Type of Speaker: 5 ins. permanent magnet moving coil.
Controls and Dial Visibility: Combined "on-off" switch and volume control, tuning control and wave-change switch, illuminated tuning scale.
Method of Control: Direct.
Wave Bands: (M.W.) 200-500 metres. (L.W.) 1,000-2,000 metres.
Brief Spec.: 4-valve superhet with A.V.C. and permeability tuned circuits.
Price: 12 guineas. Plus P.T. £2 13s. 11d. **Extras:** Aerial £1 10s. Installation charge according to car fitted.

TEST DATA:

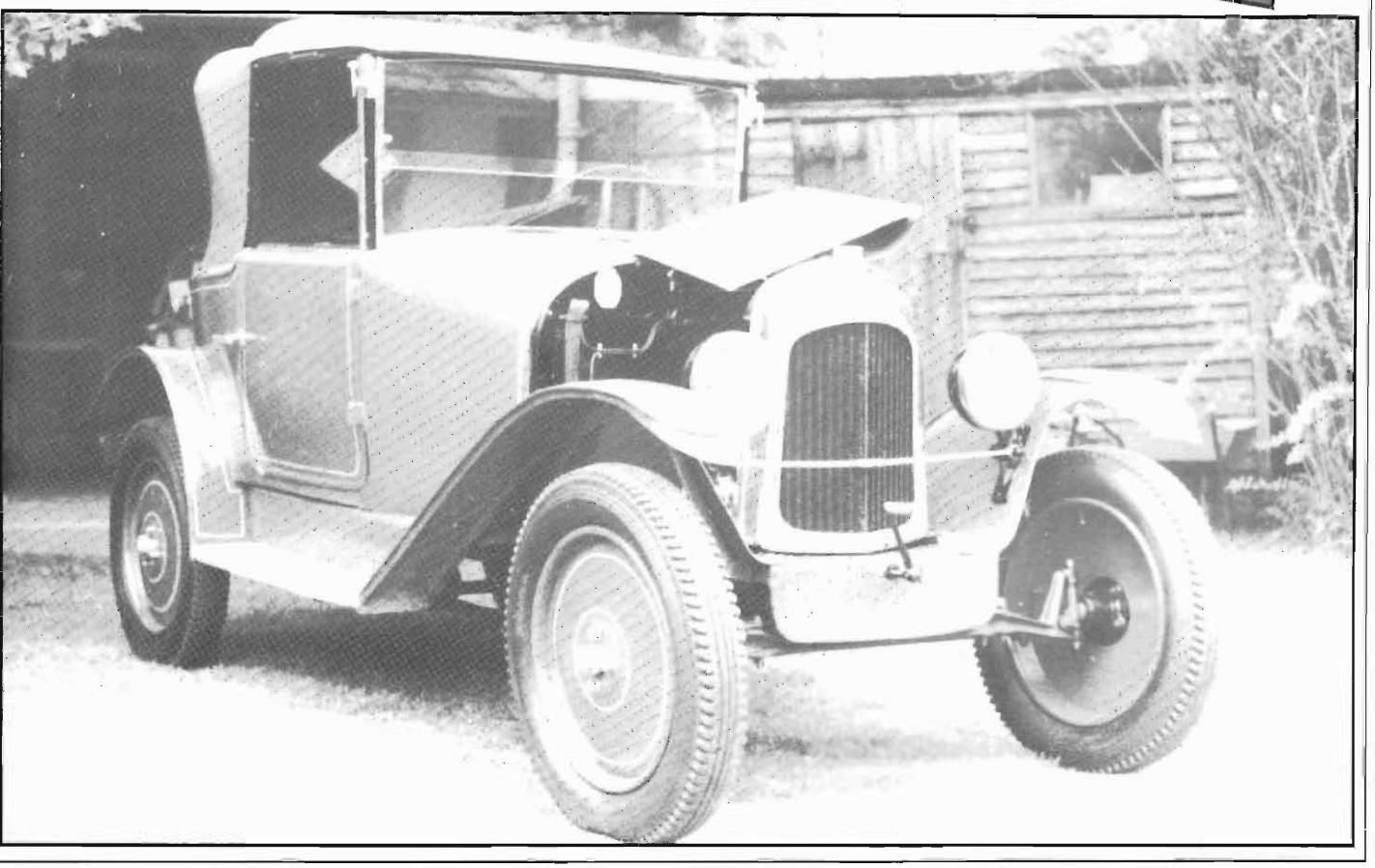
Type of Aerial Used for Test: Telescopic on side of scuttle.
No. of Stations: (Good conditions) 5 (L.W.); 30 (M.W.)
(Average variable conditions) 4 (L.W.); 21 (M.W.)
Selectivity: Good. **Quality:** Good.
Interference in Traffic, etc.: Slight crackle from overhead electric cables.

TRACTION ARRIERE



The Slough-built C6 Torpedo seen in the accompanying photos is owned by Australian Bob Richardson. Built in 1930, it's now at the start of a complete restoration. Bob is in urgent need of as much information as possible on this model — if any member can help him, his address is 1 Walmsley Road, Tweed West, New South Wales 2485, Australia.

At the other end of the scale is Bozi Mohelek's superbly-restored 5CV Cabriolet, shown below — you'll probably remember this one from Knebworth last year.



CLUB NEWS

YOUR COMMITTEE

You will now be aware that Bernie Shaw has stood down as chairman of the Club after three years of porridge. I am sure we would all like to thank him for the excellent way he has steered the club over this time.

I have agreed to step into Bernie's boots (not literally I hope) from April.

However I will not be preparing any more articles for Traction Arriere, so we need a member to take on this role, preferably someone who has a rear-wheel drive car, but above all a person who likes browsing into the archives of the Club, as we have very few club members who give much news about their cars.

It is hoped that you have noticed a marked improvement in the publication of the mag in recent months. Since Nick Hall gave up the editorship having almost singlehandedly written previous editions, we have formed a working mag committee who get together once every six weeks or so to collate the information, articles, news etc from various members, and with new committee member Sam Wells put together the magazine you're now reading.

Bob Wade has taken over as editor and you will, I'm sure, be hearing more from him in due course; we have however decided to keep the mag meetings going.

This does not mean you will recieve a scheduled magazine such as you buy in the shops, but hopefully it will be reasonably on time. After all, we are only members preparing this in our own time.

You may now be yawning, and thinking let's have Bernie back, but the whole point of this message is, it's your club and your magazine, so if you don't like what you read not only tell us but write something of interest yourself, otherwise you will get what we give you!

So please get pen to paper and tell us your technical tips, details of your cars, photos old or new, etc.

Roger Dyer

ERRATA

Perhaps it wasn't surprising that there were some hiccups in the Membership List included in the last issue of FP. Our apologies to member number 277, **C Gonzalez-Elias,** Arapiles 17, 6°F, Madrid 15, Spain — he got left out altogether. And member number 437, **Mr D O Aisher** and member number 275, **Mr S D Fothergill** both had their names misspelt. Please let us know if you find any other mistakes, so that we can amend the next printing of the list.

ACT OF GOD?

Dennis Ryland writes to say that the **Elf Provincient Rit** tour of Holland, organised by Will de Hek and Peter Wilders of the Traction Avant Nederland, had to be cancelled since many roads were closed owing to the impending visit by the Pope.

Undaunted, however, Will and Peter have rescheduled the event for May 2nd — 9th next year. Apparently, Dennis was the only TOC member to enter (though it was at very short notice!) — let's hope the advance warning will bring more TOC participants next year. More details as soon as we hear of them.

GERMAN TRACTIONS

We have received a letter from Immo Mikloweit of Citroen Automobil AG in Köln asking for any information on German-produced pre-war Tractions. He states that it is still a relatively little-known fact that Citroens were manufactured in Köln between 1927 and 1935. He would be grateful to hear from any member who has any material — photos, articles, brochures or press cuttings etc — relating to this, as it appears that very little official material survived into postwar days. If any member would like to get in touch, Herr Mikloweit's address is Weismantelweg 8, 5 000 Köln 91, West Germany.

MUTUAL AID SCHEME

Mutual Aid members so far are listed below. Bold numbers before names refer to position on map.

(1) C E Gartland
13 King George Road, Minehead, Somerset.
Tel. 0643 4292.

(2) Ian Ness
106 Manor House Road,
Newcastle-upon-Tyne.
Tel. home 0632 812559 daytime 0632 329279.

(3) Dennis Ryland
Woodholme, Fritkwood, Brownshill,
Stroud, Glos.
Tel. 0453 883935.

(4) Steve Hedinger
50 Redford Road, Windsor, Berks.
Tel. 07535 52963.

(5) Mike Wheals
The Roundhouse, London Road,
Whitchurch, Hants.
Tel. 025682 3136.

(6) Louie Burke
2 Coote Cottages, Damerham,
Fordingbridge, Rockborne.
Tel. 072-53 361.

(7) Phil Allison
9 Kingfisher Drive, Yateley,
Camberley, Surrey.
Tel. 0252 878362.

(8) Tom Evans
West Cottage, Rectory Lane,
Mulbarton, Norwich.
Tel. 0508 78140

(9) Alan Jones
44 Waterford Lane, Lymington, Hants.
Tel. 0590 76365.

(10) Simon Saint
Snigs End, Danes Green, Claines,
Worcester
Tel. 0905 54961.

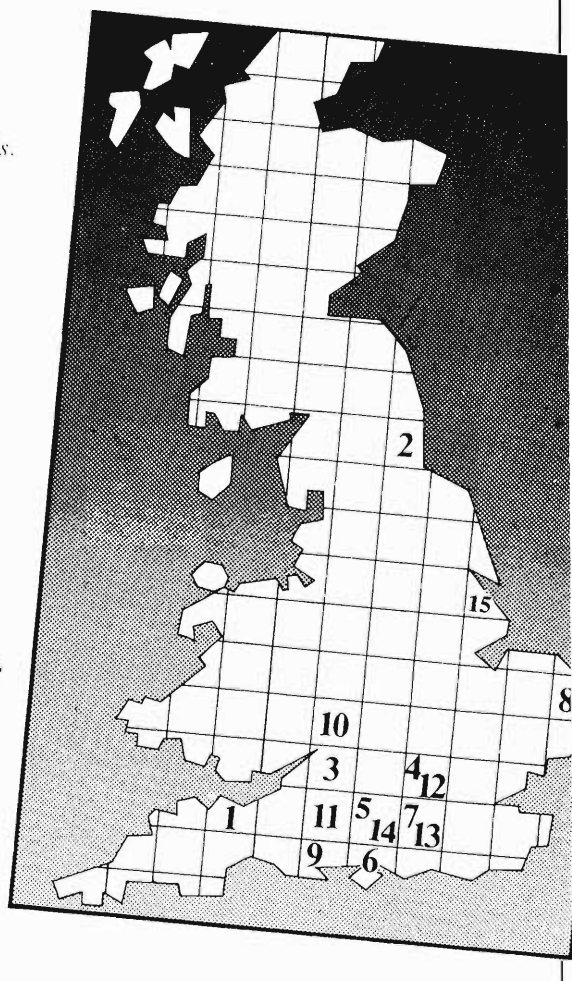
(11) Derek Fisher
59 Prior Park Road, Bath.
Tel. 0225 29533.

(12) Lee Thomas
132 The Fairway, North Wembley,
Middlesex.
Tel. 01-904 0436.

(13) Roger Dyer
Hill Top, Tuckey Grove, Send Marsh,
Woking, Surrey.
Tel. 0483 223890.

(14) Bob Wade
29 Goodwood Close, Midhurst,
Sussex.
Tel. 073 081 3714.

(15) Roger Williams
37 Wood Lane, Beverley,
North Humberside HU17 8BS.
Tel. 0482 881220.



Events

May 25–27
Motor 100 and Annual Dinner
Motor 100 promises to be the biggest motoring pageant ever held, and covers all aspects of motoring since the early days a hundred years ago. Cars of all ages will be present from all over the world – including land speed record breakers, rally and racing cars, commercial and military vehicles. Virtually all car clubs and manufacturers will be represented. Admission £5 per person, car parking free. Venue: Silverstone Race Circuit.

The Annual Dinner is to be held at Oscar's Old Latin House, Market Hill, Buckingham. The menu includes six starters and seven main courses (venison, lobster, partridge etc), sweets, cheese and biscuits, coffee. All for £12.75 per head.

For those wishing to stay the night, there are two hotels recommended in Buckingham – The White Hart (0208 815151) and the Swan and Castle (0208 815222).

Camping has been arranged in the land adjoining the Lone Tree pub, 2½ miles out from Buckingham on the A421. There is a children's play area and good food. Charge is £1.50 per tent per night.

May 25–27
Enfield Pageant of Motoring
North London. Details – phone 073 454438.

June 2
Belgian Grand Prix, Spa.

June 2
12th Southern Historic Transport Show
Southchurch Park, Lifstan Way, Southend-on-Sea. Details – 38 Boyce View Drive, Benfleet, Essex.

June 8–9
Historic Sports Car Club International
Racing Weekend, Brands Hatch.

June 14–16
Citroen Car Club Annual Rally
Towcester.

June 15–16
Le Mans (Vingt-quatre Heures du Mans).

June 16
Motorcade 85
Braemore House, nr. Fordingbridge. Organised by Wessex Historic Preservation Club. Details – phone 072 56334.

June 23
Worthing Classic Car Run
Organised by Mercedes-Benz Club and Armstrong-Siddeley OC. Details from Colin Peck on 01-521 0893.
TOC Car Team required – details to Mike Wheals.

June 23
The Rotherham Vintage Vehicle Rally
Herringthorpe Playing Fields. Details from Dept of Amenities & Recreation, Grove Road, Rotherham, South Yorkshire.

June 28–30
7th TOC Annual Rally
Southern Leisure Centre, Chichester, West Sussex.

June 30
Wings and Wheels
Bath & West Showground. Details – Roger Alsop on 0749 4336 (after 6 pm).

July 6–7
Ardingly Historic Vehicles Spectacular
Ardingly Showground, nr. Haywards Heath. Details – phone Borough Green 883011.

July 7
French Grand Prix, Paul Ricard.

July 11–13
Guardian South of England Motor Show
Goodwood Motor Circuit.

July 21
1985 Festival of Yesteryear and National Classic Car Concours
Brands Hatch, Kent. Team of Club Tractions needed to compete in concourse. Details – Mike Wheals.

July 27–31
6th World Meeting of 2CV Friends
Cheltenham Racecourse.

VSCC EVENTS

There were so many events to cram in the last issue of FP that we just didn't have space to trailer this year's VSCC fixtures (kindly forwarded by Allan Sibley). Full details of the events below are available by sending an sae to the Secretary, Mr P M A Hull, VSCC, 121 Russell Road, Newbury, Berks RG14 5JX. Tel. Newbury (0635) 44411.

26 May Boulogne Bicycle Rally.

8/9 June Oulton Park Race Meeting.

15 June Light Car & Edwardian Rally.

6 July Silverstone Race Meeting.

7 July Shelsley Walsh Hill Climb.

3 August Prescott Hill Climb (practice).

4 August Prescott Hill Climb.

11 August Shuttleworth visit.

25 August Cadwell Park Race Meeting.

1 September Madresfield Driving Tests.

14 September Invitation Race at Castle Combe (BRSCC).

15 September Colerne Speed Trials.

22 September Light Car & Edwardian Rally.

12 October Welsh Driving Tests & Trial.

13 October Welsh Rally.

27 October Eastern Rally.

9 November Lakeland Trial.

7 December Oxfordshire Driving Tests.

Rates and conditions of advertising:

Private adverts (classified)
Members and non-members of T.O.C. buying or selling Citroen Cars or parts (pre 1957) – NO CHARGE.

Trade adverts – ¼ page – £25.00 per insertion.
Advertisers must supply 'camera-ready' artwork. Where this is not available, the T.O.C. will provide it, after agreement with the Editor, on format and cost.

Inserts (loose) – any size up to A4 £25.00 per issue plus handling charges, to be agreed with Editor. Artwork as above.

Terms of acceptance
Cash with order, all cheques and money orders will be cleared by the Club before the acceptance of any advert.

The Club reserves the right to refuse any advert which it considers unsuitable for publication.

All advertisements should be submitted to the Editor.

Books

A recent trip to France in our ageing but faithful 2CV brought the chance to pick up a current issue of the weekly **'La Vie de l'Auto'** (6.50F).

With all the style of a local free news-sheet, it nevertheless always has plenty of good reading crammed into its 24 pages and invariably, of course, plenty to do with Tractions. (I'm very fond of their masthead motto which translated literally says 'We like old cars for themselves and not for their venal value'). In the issue we purchased there were no less than fourteen Tractions for sale – though many were suspiciously cheap and described as 'for restoration': also a brace of C4s and C6s at rather higher prices. A curious 11 Normale breakdown truck was shown that had been spotted down in Toulouse: and it was announced that La Societe Ravensburger – 'the most important manufacturer of jigsaw puzzles in Europe' – has marketed a 1000 piece puzzle of a 15/6 Traction, curiously shown in a yucca-strewn desert (ideal for those confined to bed after the rigours of restoring their Traction?). Watch out for this one in your local French toy or model shop.

International subscriptions for 'La Vie de l'Auto' are handled by Worldif Ltd, Boite Postale 410, Luxembourg.

S.W.

Diary Dates

LONDON SECTION MEETINGS

Last Tuesday of each month: all Pub Meetings start at 8 p.m.

May 28th
The Ship Inn
Ship Lane
Mortlake SW14

June 25th
George Inn
77 Borough High Street
Borough SE1

July 30th
The Anchor
Bankside
Southwark SE1

August 27th
Jack Straws Castle
North End Way
Hampstead

WEST MIDLANDS SOCIAL SECTION MEETINGS

1st Wednesday of each month: at the Swan, Whittington, Worcester. 200 yards off Junction 7. M5.

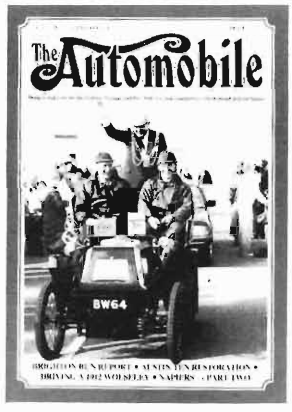
Please contact Simon Saint, 'Snigs End', Danes Green, Glaines, Worcester. Tel: 54961 for directions or further information.

NORTHERN SECTION MEETINGS

1st Tuesday of each month: 9.00 p.m. at the Shoulder of Mutton, Thwaites, Keighley.

3rd Saturday of each month: 12.00 a.m. at the Black Swan, Thornton Road, Bradford.

For further details and directions contact:–
John Howard.
Telephone: Bradford 309093



SPECIAL SUBSCRIPTION OFFER TO CLUB MEMBERS. 12 ISSUES OF 'THE AUTOMOBILE' FOR ONLY £15.00 POST FREE!

This is good news for pre-war vehicle enthusiasts who want to make sure of getting their copies of 'The Automobile' every month – *and* save money at the same time. If you take out a subscription before 31st May, 1985 you save £4 on the normal annual UK rate of £19. You even save £3 on the annual cost of buying the magazine through a newsagent (cover price is £1.50). Write to PPG Publishing Ltd., 5 Rectory Road, Beckenham, Kent, enclosing your cheque or PO for £15. (Offer applies to new UK subscribers only).

Tool Hire Service:
Front end tools for hire from the Club Shop. Deposit and hire charges as follows:

Front hub and outer bearing puller
Deposit: £25 Hire: £2.50
Top ball breaker
Deposit: £10 Hire: £1.00
Bottom ball breaker
Deposit: £20 Hire: £2.00
Inner bearing nut spanner
Deposit: £5 Hire: 50p

Hires are for nominal periods of 7 days, although earlier return is appreciated. Deposits are refundable only on SAFE return: any damage to tools will be deducted from deposits. You fetch and return please. Prior booking ensures availability.

Workshop Manual Loan Service
The Club has Light 15, Light 12 and Big 6 manuals for loan; please send details of your car, with name, address, work and home phone number together with a deposit cheque for £25 made payable to the TOC – this will be cashed but your deposit will be returned if the manual is sent back in a complete and good condition. Please also send a separate postal order for £2.50 for postage, made payable to A D Sibley. Enclose a SAE for return of your deposit. Manuals available from Allan Sibley, 174C St Anns Road, London N15 5RP.

CLUB SHOP PRICE LIST

Back Nos. of Floating Power (subject to availability).
1 copy *£2.00*
2–9 copies ..... *£1.50 each*
10 or more copies ..... *£1.25 each*

Posters
Les Tractions *£2.00*
Traction Avant *£1.25*

T-Shirts
'Amaze Your Friends – drive Traction Avant' (white, blue, yellow or red) ..... *£2.50 each*

Metal Car Badge
Blue/white – chrome finish ..... *£7.50 each*

Buttou Badges
2" diameter TOC logo on yellow and Floating Power emblem on white ..... *50p each*

Enamel Brooches
1½" long by ¾" Light Fifteen (sm. boot pre-war). Enamel with chrome finish dished wheels in three colours. Black (of course), Red and Green. ..... *£2.00 each*
Set of the three colours *£5.00*

Place your orders with the Club Shop (see page 2 for new arrangements).

All prices exclude post and packing. Cheques to be made payable to T.O.C.

SPARES SCHEME: When ordering spares please send remittance with order, using current spares list prices. Any extra will be invoiced at time of despatch of your order.

FOREIGN MEMBERS: Please note that an International Money Order is required with overseas orders, payable in Sterling for full amount after any bank charges have been deducted.

Classified

Please send copy for Classified to Sam Wells, 50a North Worple Way, London SW14 8PZ. If you include photograph(s), please send an SAE for their return.

For Sale
Offers required please for Light 15 parts, incl. front wings, bonnet, big boot, wooden dash (1954), wheels and much more. Telephone Lee Thomas 01-904-0436.

For Sale
Traction 11B, 1947, black. French car in excellent condition throughout. Any sensible offers considered. Phone Aldershot 333633.

For Sale
1954 Paris built 11 Normale (Big 15). Complete and totally original. Ideal for restoration. £1000. For details phone Lapworth 3185 (Midlands).

For Sale
Light 15 parts, British & French, too numerous to list, but incl. good 1954 1911cc engine & clutch. Would be interested in exchanging for Six parts incl. an engine. Aluminium rocker cover – exchange for Brooklands steering wheel. Wanted – Big 15 radiator, exchange for Lt 15 radiator; also wanted Big 15 (11B) front seats, covering not important. J D Cliffe, 14 Barrowden Road, Ketton, Stamford, Lincs. Phone 0780 720911.

For Sale or Swap
New windscreens & side glasses in original wrappings for Light 15. Wanted – brake linings, track rod ends, engine parts, valves & valve springs. Phone Mick Boulton 093928 254.

Wanted
Commerciale, prefer runner in need of restoration, but anything considered from box of bits to fully restored. Phone Mick Boulton 093928 254.

Wanted
Bluemels steering wheel – someone out there must have one they don't want! Steve Hedinger, Windsor 52963.

Wanted
Small boot Traction – anything considered. Phone Kevin Scully 01-878 5374 (home) or 01-637 1142 (work).

Wishbone Spindles Repaired
£30 per pair plus p&p. Contact Roger Williams, 37 Wood Lane, Beverley, North Humberside HU17 8BS. Tel. 0482 881220.

-BRACLES