

# *THE NEW FEEL IN SUSPENSION*

The famous Citroen selects Newton Hydraulic Suspension Control as one of many special features to provide—

superb road holding and stability

perfect cornering

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# Floating Power

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Volume Three Number Two

April Nineteen Hundred and Seventy Eight

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It is with a certain feeling of inadequacy, that I take over the editing of "Floating Power", not surprising when one considers the high standard set by Reg and Ginny Winstone, who in conjunction with John Dodson's excellent artwork, conceived and produced all the previous editions of your club magazine. Fortunately though, I can still rely on Reg for his historical articles, and John for his artistic inspiration, without whom my job would be of nightmare proportions.

Incidentally our thanks go on record to John who has just retired as Club Chairman after his two years in office, and welcome Tony Hodgekiss who was duly elected by your committee to stand as the new Chairman.

As you can imagine, producing 'Floating Power' is not without its problems, hence the occasional non-appearance of promised information or the non-arrival of the magazine at its expected time. We your committee apologise and hope in future to sort out these problems before they can affect you.

On a brighter note, you will find in this issue the first in a series of technical articles on special Citroen tools, and their application, plus the introduction of a technical question and answer page. Later in the year we will be publishing detailed descriptions of jobs well within the range of the average enthusiast, to keep his or her Traction in tip-top condition. If any members have a particular job they would like to see detailed please drop me a line. I would also like to hear from members with news of their own cars restoration projects photos overseas news etc etc, in fact any information relating to Tractions and Vintage Citroens.

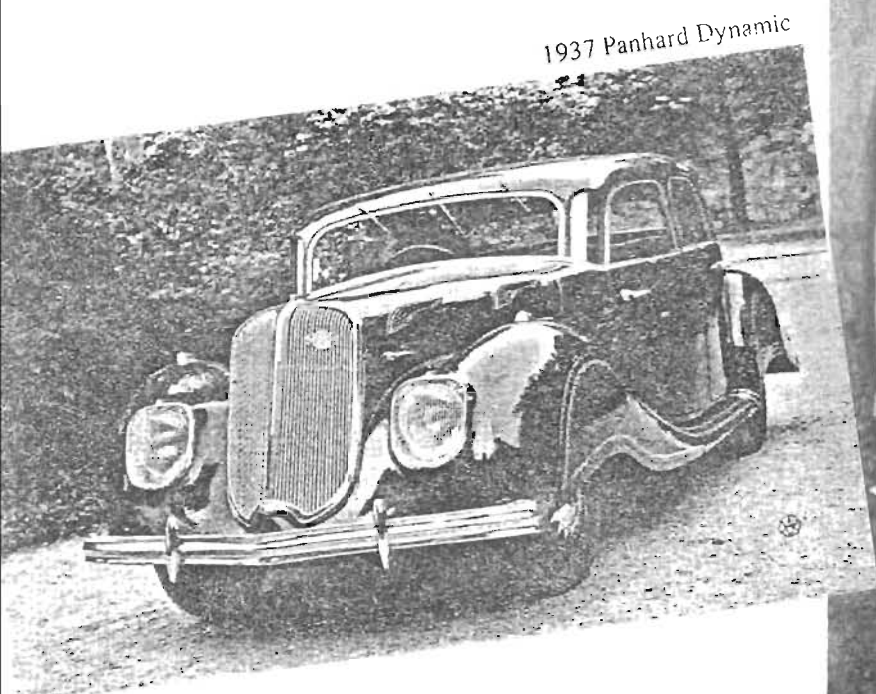
This year on May 6/7th we are holding our first annual rally, hopefully the first of many. Its success will of course depend on you our members. We have chosen a site near Rye in East Sussex, which is a picturesque area full of historical interest. A group of Dutch, Belgium and French tractionists, who are doing a round tour of all four countries, have promised us a visit as they will be in England that weekend. (And not on March 6/7th as previously published.) We hoped by being relatively near to Dover, we could encourage our European friends to participate. The rally is being held on a first class camp site, within stumbling distance of the local pub. A visit to Rye is planned for Saturday afternoon, with a noggin and natter Saturday evening. A treasure hunt Sunday morning and general get together Sunday afternoon combined with 'Concours' for Slough and Paris built cars, with separate prizes for both our British and European competitors . . .

Don't forget, if your Traction is off the road or even non existent don't let that deter you from joining us and making it a weekend to remember. See you there. O.K. G.B.



P.S. Note new date for the 4th I.C.C.C.R. organised by Traction Universelle at Chartres, September 15, 16, 17th. Further details June F.P.

## THE WIMILLE SPECIAL A MID-ENGINE Citroën

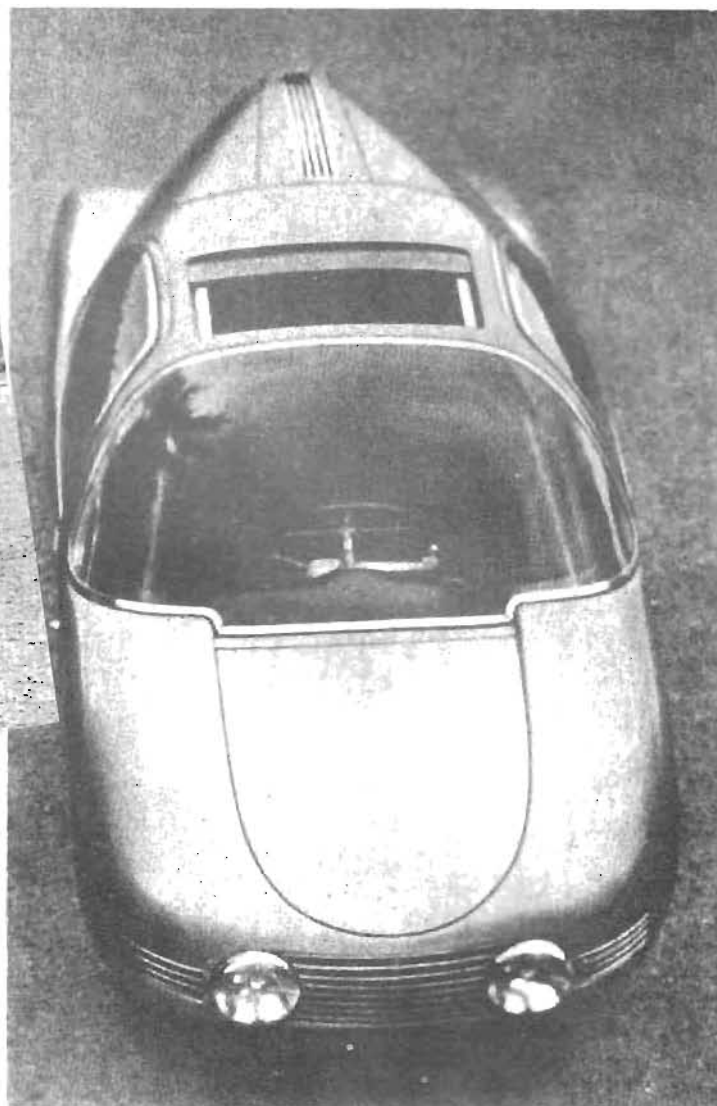


1943 – the War, at its height, had long since brought an end to European domestic car manufacture, the utilitarian and the military abounded everywhere, harsh necessity dictated all sorts of compromises in everyday life. The lucky few who were authorised to use the roads of France were obliged to do so with the aid of the incongruous wood-,gas-,coke-burning contraptions we featured in a recent issue. And yet it was in this hostile and austere climate that one of the most radical automobile designs ever to be translated into metal was conceived. It was the brainchild of Jean-Pierre Wimille.

Wimille, a works driver for Bugatti amongst others before the War, enjoyed the sort of popular adulation accorded over here to Stirling Moss – a dashing virtuoso, whose name was on everyone's lips at some time or another. He was, too, an accomplished engineer, and it was in this capacity that, in the hope of better days to come, the J.P.W. illustrated here took shape on his drawing board. He started with a completely clean sheet, questioning every fundamental of motor car design up till then and providing new, and surprisingly prophetic, solutions.

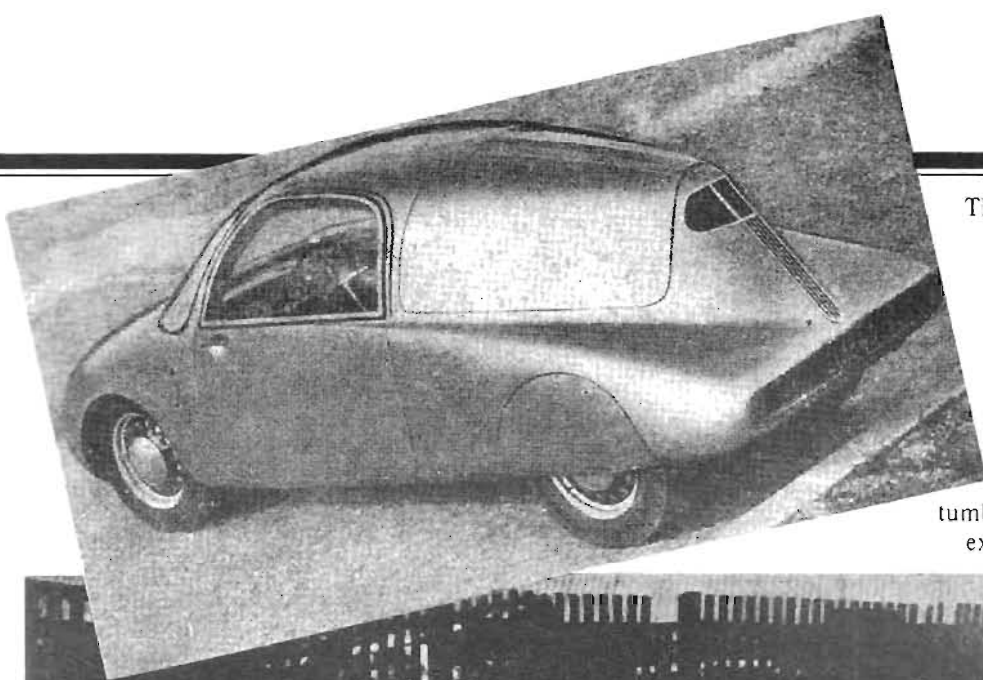
The J.P.W. was to be constructed around a chassis of 6" dia. steel tube, with torsion bar independent suspension all round, powered by a 1500 cc. V-6, seat three abreast and be sheathed in an all-enveloping streamlined ovoid body with an enormous panoramic windscreen. The driver was to sit centrally. The latter three features, though avant-garde, were not unprecedented and reflected the way in which Panhard design philosophy had been, and was to, progress. The hideously ugly 'Dynamic' of 1937, illustrated here, had central steering, airflow-type streamlining and hints of the 'Panoramic' solution to the problem of interrupted forward visibility.

What was a new departure, however, was the choice of engine location – for this was the first touring car in the



modern mid-engined idiom, with the engine at the rear but ahead of the rear wheels and transmission. The prototype was built in 1946 by the small S.E.T.A.M. factory at Courbevoie, and since finances did not permit development of the new engine, an 11 'Performance' Citroën engine was used, mated to a Cotal electro-magnetic gearbox, with the radiator at the front. With the low polar movement of inertia that this engine configuration automatically confers, the prototype's handling exceeded all expectations, and the smoothness of the body (Jaray inspired?), devoid of all excrescences (even the door handles are recessed) ensure a healthy 150 km/h top speed from the 54 b.h.p. Traction unit. It is odd that a machine of such apparently splendid forward visibility, its windscreen reaching up into the roof and low, falling bonnet, should be impossible to see out of backwards! It will be noticed that the steering wheel seems to be of Bugatti provenance.

The car was so impressive, in fact, that Maurice Dollfus, head of Ford France, agreed to finance its development with a view to production, and it was accordingly redesigned to accept maximum number of Ford components, including a Vedette flathead V-8. It was shown at the 1948 Paris Salon, and enthusiastically received, but the pipe-dream was not to last – the partners were too incompatible, the car represented the opposite way of



The 1946 J.P.W. prototype

Note the considerable tumble-home of the doors and extremely smooth contours

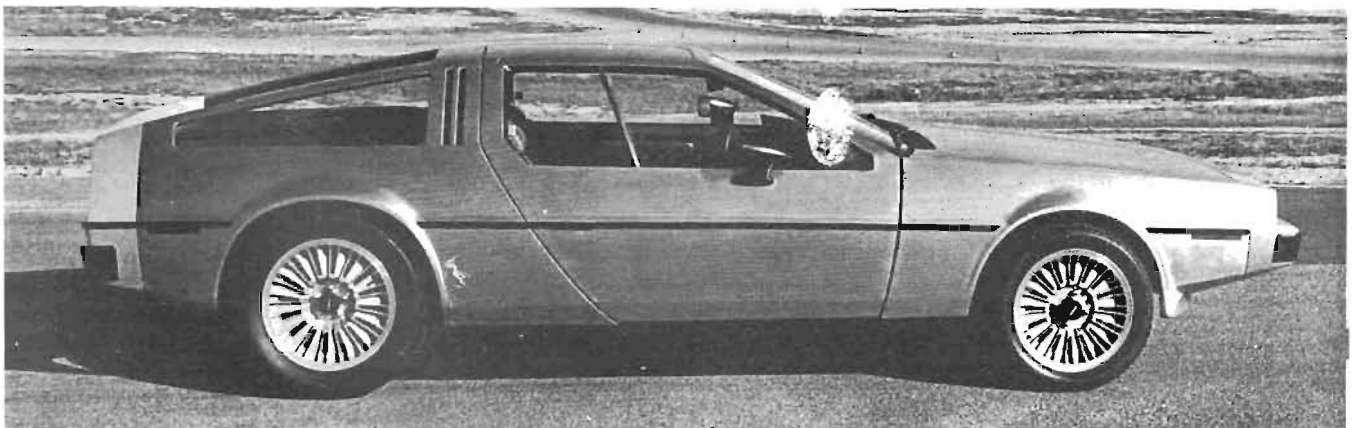


thinking to the cheap, conventional, mass-production orientated American firm. They withdrew. Wimille, convinced of the validity of his formula, continued to pursue the idea and to try to find backers, but, at the age of 41, while driving his Gordini in the Argentine Grand Prix of 1949, he was fatally injured, and the project died with him.

The one remaining car is at the museum at Rochetaille, and the second prototype; no-one knows what

happend to the Citroen-engined car. The fact remains that time has proved the rightness of Wimille's original concept – since the late sixties, mid-engines have become the norm for the modern sports car.

As a footnote, it is odd that we have had to wait exactly thirty years for another road-going mid-Citroen-engined prototype- the DeLorean DMC-12, CX – powered, but destined, too, to have its Citroen innards replaced by those of American manufacture.



1977 DeLorean prototype

# TOOLS OF THE TRADE

Throughout the coming year we shall be publishing drawings and specifications, plus instructions for the use of the various Citroen tools necessary for overhauling the front hubs drive shafts and suspension on Lt 15's and Big 15's. If after reading the preceding statement you have a sudden feeling of 'deja vu' consult Vol I No 1 (thats if you have it).

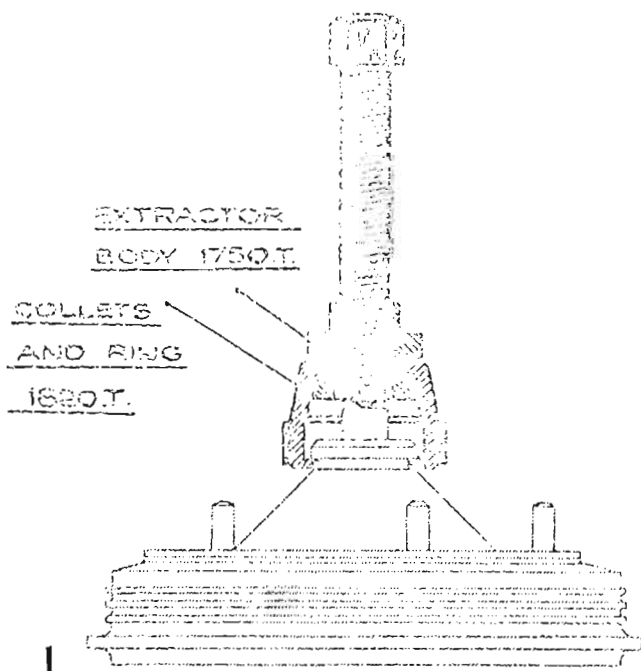
It is hoped that the technical drawings will enable members to have their own tools manufactured. Incidentally any quotes received for such work would be of great interest to your editor, perhaps we could arrange for a batch to be produced if there were sufficient interest.

## PART I FRONT BRAKE DRUM PULLER

I am sure some of you may feel removal of a front brake drum too simple an operation to waste space on, but one must start somewhere, and I can still remember my first uneducated fumbblings. The front brake puller is such a simple tool, needing little explanation, its use being self evident (see diagram fig 1). Basically the operation is as follows:

1. Remove hub cap.
2. Remove split pin from castle nut on stub axle, (split pin size 3mm x 50 mm) at this stage it is a good idea to scribe a line at the end of the stub axle following the path of the drilling of the split pin, as this will facilitate easy location of the hole when retightening the nut on reassembly.
3. Real test of strength now! Undo the castle nut (nut size 38mm or 1/2 AF). Remember, when viewed from the driving seat, left hand thread on the right hand side, and visa-versa.

### EXTRACTING HUB.

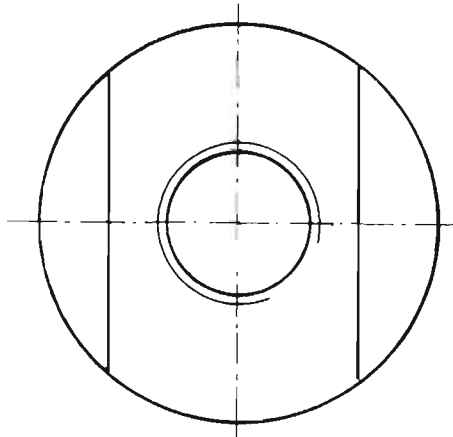
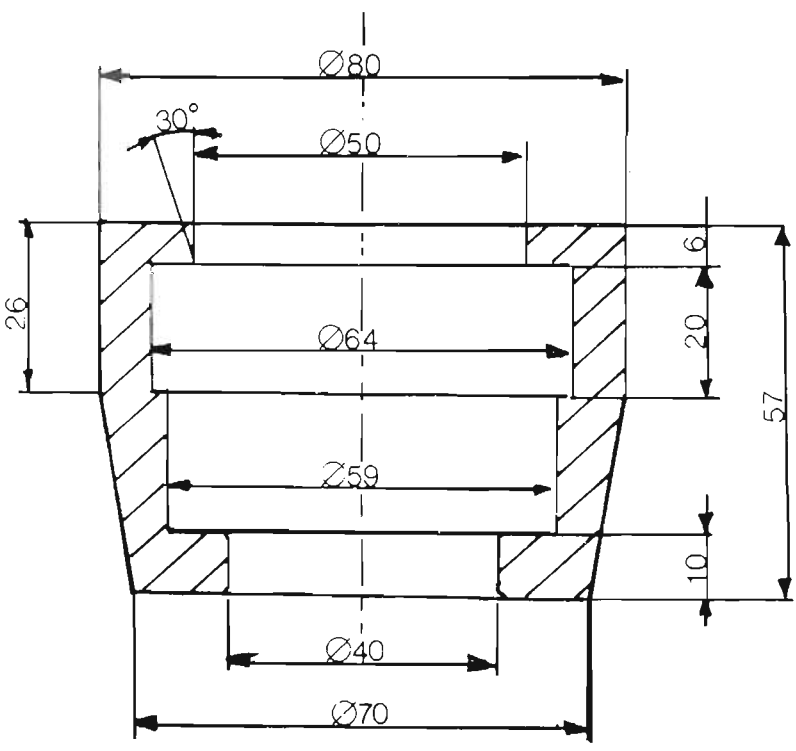
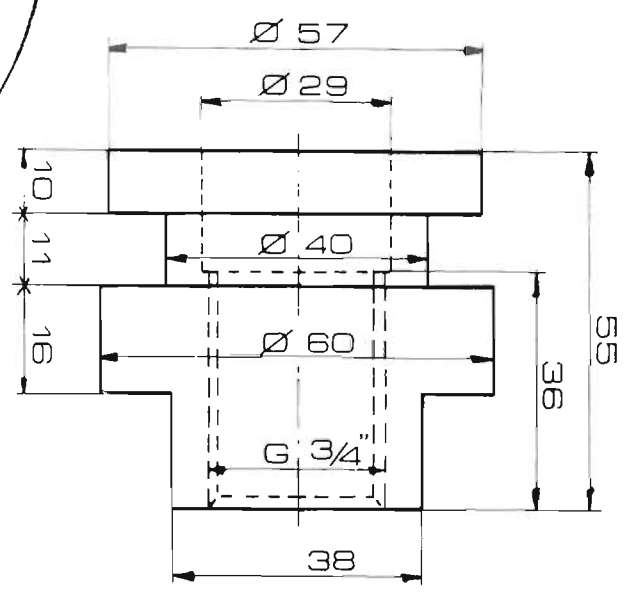
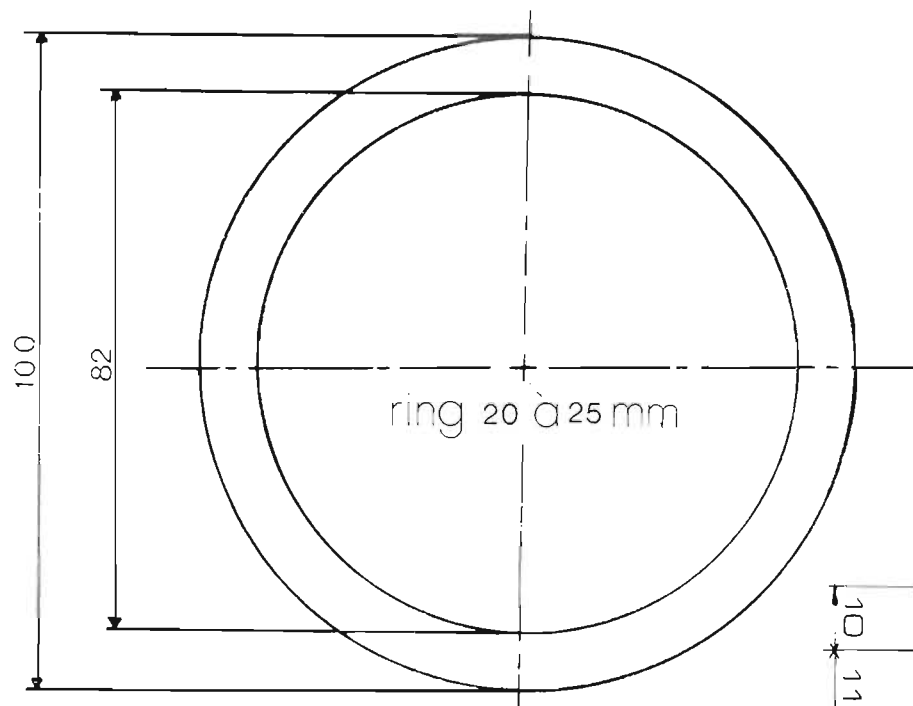
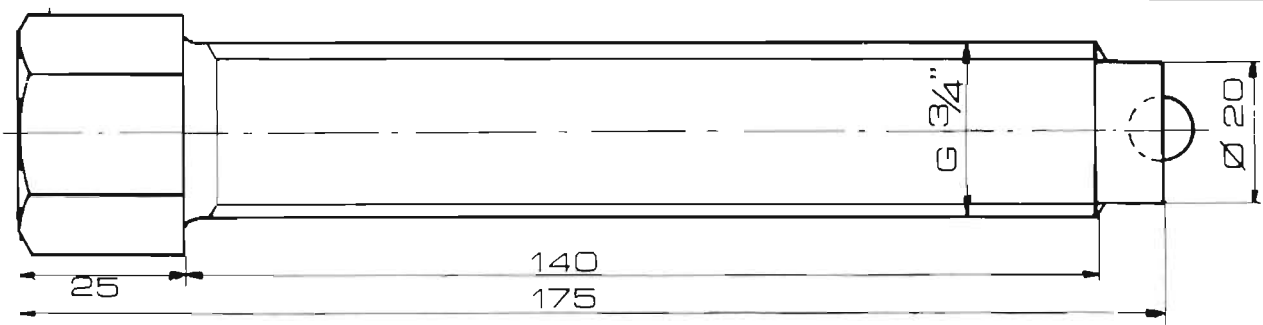


4. Loosen wheel nuts.
5. Place front axle on stand, leaving wheels free on the ground.
6. Remove road wheel, those of you with English rims can leave the wheel on the hub, as this will give better leverage to remove the hub should it prove stubborn. If you have French type rims, you will find it impossible to fit the hub puller unless the rim is removed first, as the bar for the centre bolt of the hub cap gets in the way, and looking at the old French rim I have rusting at the bottom of my garden I don't think you could, even if the bar wasn't there, as the opening is too small.
7. Place the extractor on the hub (as in Fig 1 and Fig 2) screw in the long bolt with a suitable spanner, and hey presto! the hub is drawn off the stub axle, take great care not to lose the Woodruff key from the shaft.

Replacement is the reverse of dismantling, but do take care that the key and keyway are not damaged, and are relocated correctly. Also check the shaft for damage to the taper as severe scoring indicates need for replacement. Remember when tightening the castle nut that it requires 216 ft lbs on a torque wrench. Attention to cleanliness of the parts being reassembled cannot be emphasised enough.

*Next issue.* Tools for outer wheel bearing removal.



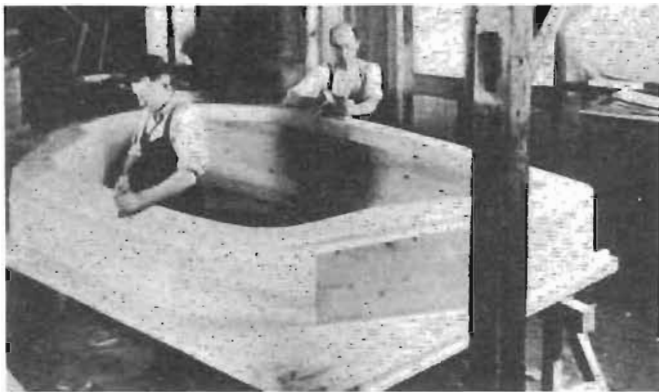






Citroens London Showroom, with the graceful Light 12 sports four seater in the foreground. Circa 1933.



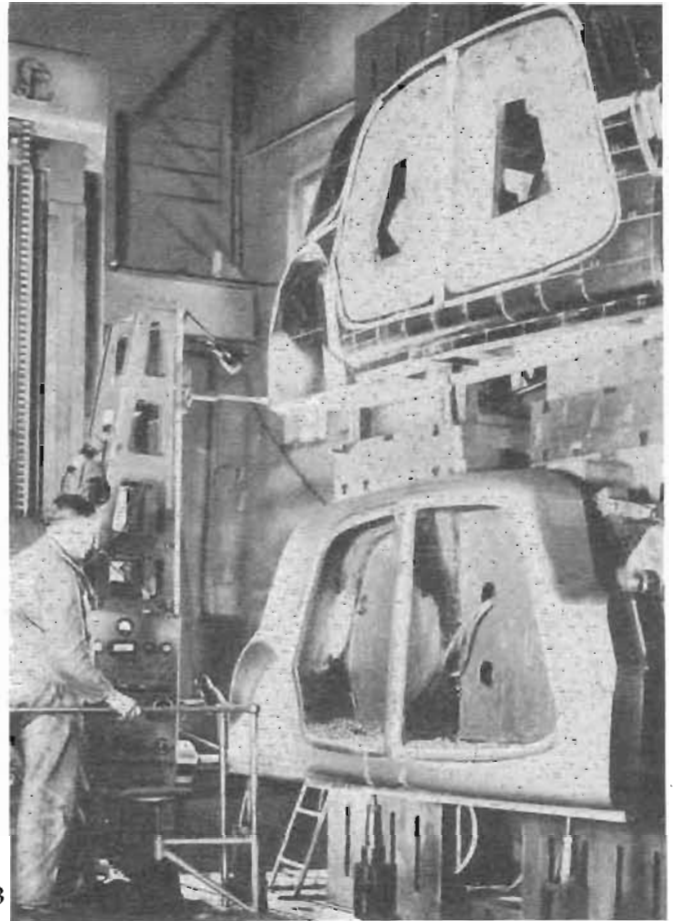


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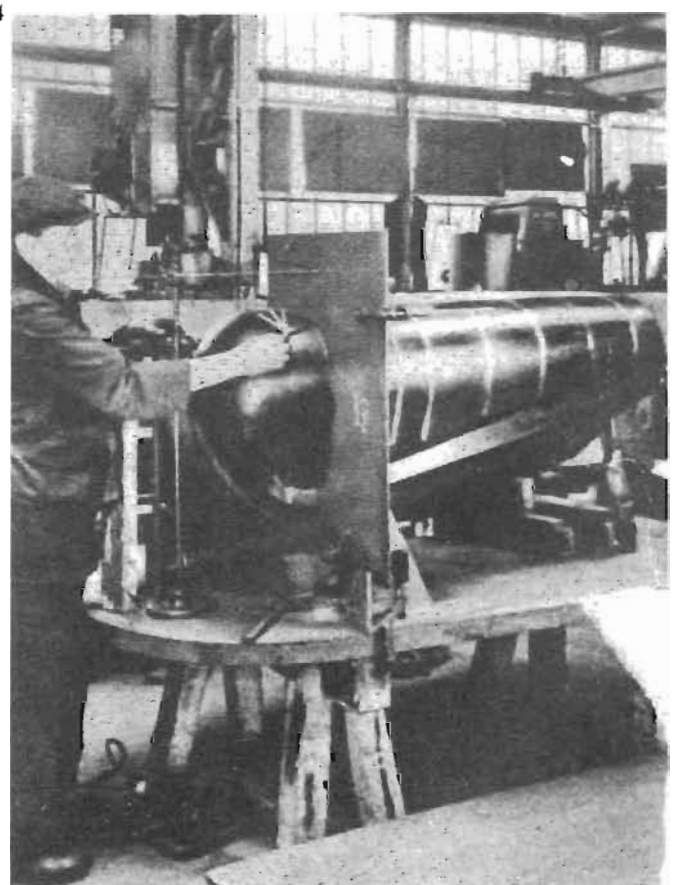


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## THE ORIGINAL BODY MOULDS



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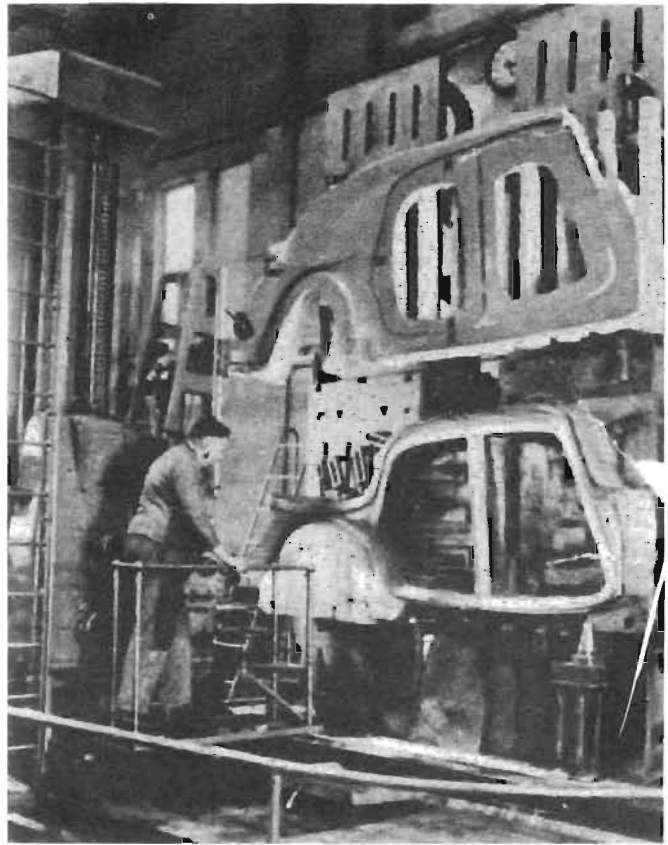
The photographs shown here have only ever been published once before, accompanying a technical article on press tools in the German 'Auto, Motor und Sport' in 1951. They illustrate the various stages in the manufacture of the wood and clay masters from which the steel male and female tools were made to stamp the body side pressings for the original Tractions.

As far as I can deduce, Fig. 1 is of the first stage, the construction of the wooden skeleton on which the clay will be rendered to the exact and finalised form of Fig. 2. But it isn't the right shape — the 'B' pillar, the door-post, is thick, and there are no proper door sills. The writing is in German. Were the tools actually constructed there?

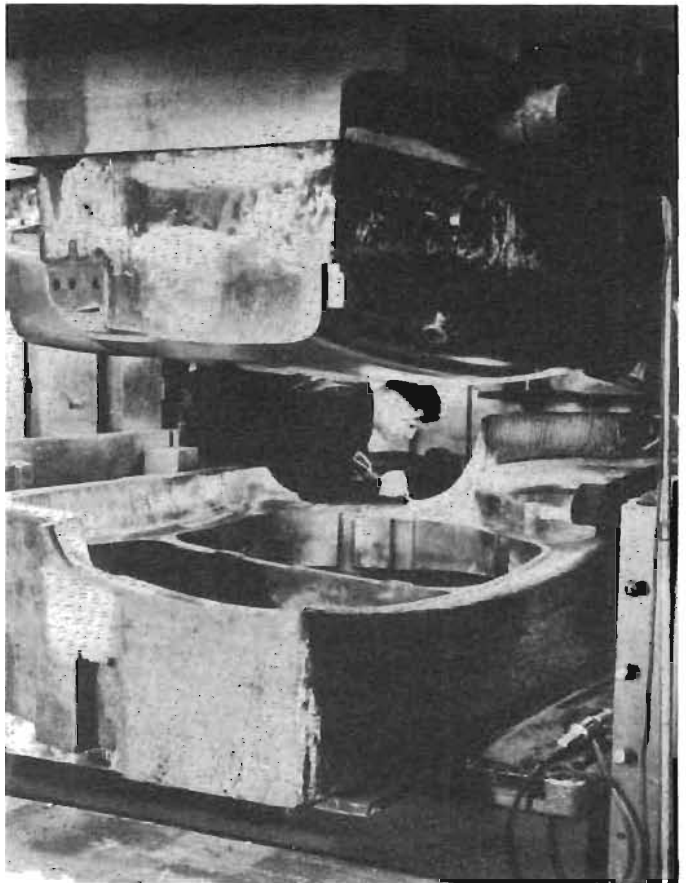
Fig. 3; the upper section, the perfected and checked clay model (Fig. 4 showing this verification in process on the wing master) being used as a guide for the massive machine tool reproducing its contours on the lower, the steel male press. The same machine is seen in use on a Big 15 body section in Fig. 5, whereas the end result seems to be undergoing some sort of final preparation in Fig. 6.

The male and female press jaws are seen in situ in 7, and Schuller press itself in the next illustration. In the foreground are both the flat sheets with which it is fed and two men lifting the raw, untrimmed end result. The last picture presumably shows both male and female press tools on the railway truck on which they travelled to Paris to be installed for production.

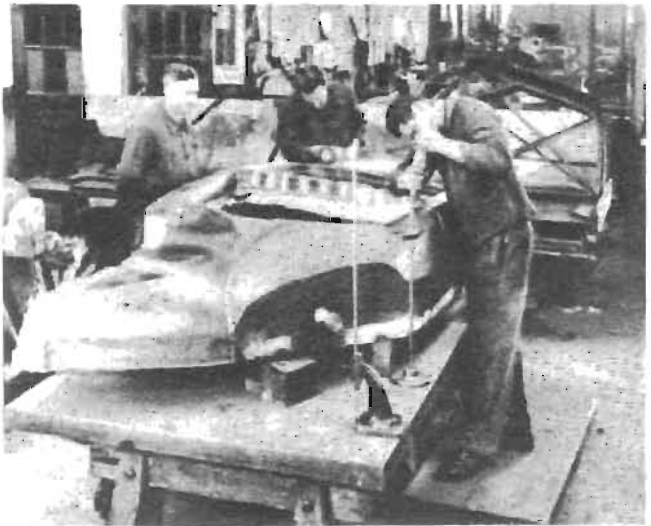
All the above is surmise; perhaps a member better versed in the processes of car body production can enlighten us?



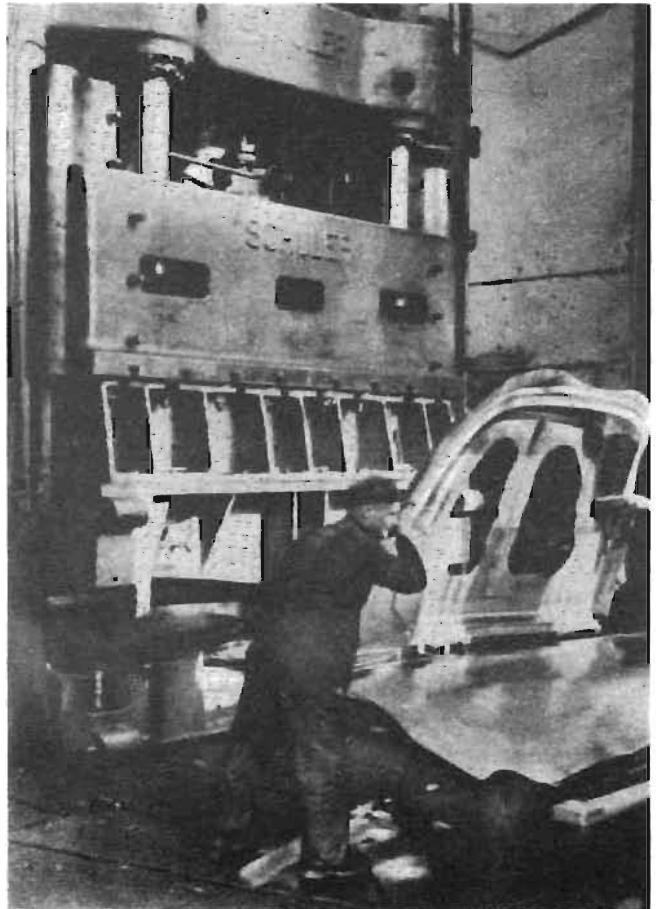
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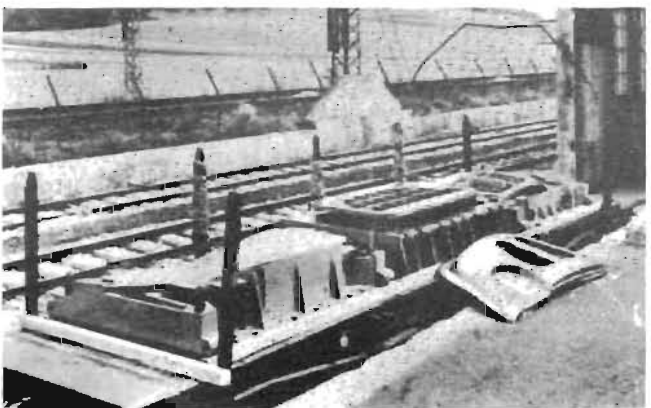
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# ARTHUR SHAFT.SF.I.B.S.T. T.O.C.ret.

Correspondence c/o The Editor

Dear Mr Arthur Shaft,

The present trouble with my Lt 15 is a peculiar clonk, which can be heard from the vicinity of the front off side wheel and suspension. At first it was put down to dampers, especially as the front near side one was found to be solid, but replacing this had no effect and so the off-side one was replaced, this too had no effect. The drive shafts had been renewed before I bought the car and the upper wishbones had new bushes. There appears to be no play in the wheel bearings, so what is it?

Worried, Epsom.

Dear Worried,

Thank you for your most interesting letter, I would suggest you check the following:

- 1) Check front hubs, large castle nut, these might be loose on the tapers.
- 2) Check for drive shaft inner spline wear.
- 3) Check drive shaft spigot. This is the knuckle jointed pin pressed into the stub axle at one end and prop shaft at the other, passing through both outer universal assemblies and yoke couplings. It is impossible to see this pin from the outside, but a simple test of lifting the drive shaft between the outer U.J's and the inner slip will show any slackness between the two outer U.J's. Any movement between these two will mean the fitting of a new spigot as its function is to hold the U.J's in line to maintain a constant velocity on the drive shaft. Once this fails to operate, the U.J's drop out of line, the drive is no longer constant and knocking commences.
- 4) Dry inner couplings. Many people are unaware that this can be lubricated if neglected the grease channel can become blocked and wear will take place on the inner coupling.
- 5) Loose inner coupling flanges on drive shaft. These four bolts should be checked at regular intervals.
- 6) Loose inner coupling flanges on gear-box. In this case it will be necessary to disconnect and remove the drive shaft flanges to check the inner flange nut.
- 7) Gearbox suspension mounting. This is the double cone shaped rubber mounting in the centre of the cradle cross member on which the gearbox is suspended. I have known this rubber to perish or crack allowing the mounting bracket to contact the steel core inside the rubber. In early stages this condition produces a knock only when excess engine movement is provoked by heavy torque reaction, such as driving hard in low gears or labouring heavily in top. As the mounting deteriorates, the knocking increases until it becomes constant with practically every movement, including road vibration. Should this be the cause of your noise and requires replacing, the complete engine suspension should be checked over and adjusted. With the new gearbox mounting in

position (bolts firm) remove the square rear mounting case from inside the bulkhead. Slacken the lock nuts on both engine side suspension volute springs and adjust on these mountings until the rear mounting rubber square is true centre inside the bulk-head aperture. Then raise the square approx. 3mm by adjusting the volute spring mountings to increase engine height, tighten lock nuts etc. and replace rear mounting box which should now require loading against the spring tension.

Should none of the afore mentioned be faulty my final check would be on the planetary pinion end-float in the differential. You will need expert diagnosis for this one (consult gearbox specialist).

Re. your other problem I suggest you consult your G.P. who I am sure will pass you on to an appropriate specialist.

Yours A.S.

Dear Arthur,

I have a 1955 Lt 15, in good mechanical condition, and giving good performance; but uses oil at a rate which to my mind is excessive. Consumption being about one pint to every 350 miles. There is known evidence of oil burning, but after a run quite a lot of fumes may be observed coming from the oil filler cap. Does this mean that the engine is due of an overhaul or is it just one of those things on a Lt 15. I am contemplating a top end overhaul and fitting new rings in an attempt to cure this, your comments would be appreciated.

B.S., Pontefract

Dear Perplexed,

I would suggest that the heavy oil consumption is due to one of two things. Either excessive wear on the piston rings or wear on the valve guides. It may be that the valves had been previously fitted without the proper rubber seals, and if this was the case, particularly as far as the exhaust valves were concerned, it is possible to have very heavy oil consumption with no general loss of efficiency, as the oil is virtually blown out of the exhaust. I would suggest that one way to prove whether or not this oil is going down the valve guides is to blank off the oil feed at the back of the cylinder head and run the car for a few miles and see whether there is less smoking. If this is found to be the case the majority of your oil consumption would be due to leakage past the valve guides.

On the other hand you say there are a lot of fumes from the oil filler and this is certainly an indication of wear of the piston rings and it would most probably pay you to have the pistons out and fit new rings. Once an engine starts to blow excessive gas past the pistons it causes quite a considerable lack of lubrication on the cylinder bores and a particularly rapid build up of wear on the piston rings and the piston ring grooves.

Yours A.S.

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# Correspondence

Dear Traction Owners Club,

I know your club from *Classic Cars March 77*, I am the owner of a TA 7 C3 Cabriolet 1938, sold or built by Citroen Cars Ltd., Slough, Bucks.

The car came to Denmark in 1946. The car is in bad order but complete. I would like to get information about: numbers made, and history of the factory in Slough. I would also like to become a member of your club.

Yours Jens Anker Willumsen, Skuderlosevej 8,  
Braaby 4690, Haslev, Denmark.

Dear Graham and Tricia,

I was looking through some of our motor vehicle sensuses and guess what I found (wait for it) in 1955 we sold 18 Big Sixes and two of them were open tourers, in other words two roadsters (15CV) it sounds incredible but I have the figures, I will send them to you as soon as I can.

I would be interested to hear your report on the book *Traction Avant 1934-1957*, will you let me know what its like, (see classified Ed).

At the moment we are chasing 8 Big Sixes for parts or membership, depending on their condition, I will inform you of the outcome.

Happy Tractioning,

John Allen Jnr. Citroen Traction Avant S.Aust.

Discovered in a barn in Norfolk, 'Henriettea' a one owner Slough Lt 15 now being restored.

There's still hope for aspiring transaction owners as not all old Citroens lurk in remote corners of France!

More technical articles please in your otherwise excellent magazine.

Nick Gundry, Lincs.



Dear Editor,

As the last mystery car I submitted for the magazine drew no response, perhaps we will do better with this one, providing it will reproduce from the negative.

It was photographed outside an Antique shop in the Dreux-Evreux area of France, in 1975. The radiator led me to believe that it was a Citroen special, but closer inspection showed it to be a production model of some kind, the absence of badges left me in ignorance of the make. The car as you can see is a three wheeler, and sports front wheel drive. It also boasted a very large wood rimmed steering wheel and instruments that suggested a sporting background as they included a large tachometer. The engine is two cylinder in line, water cooled and driving a front mounted transmission. I would imagine that there is a bodywork panel missing below the radiator as the brackets can be seen to which it would be attached.

Maybe our readers can solve this one!!

Yours sincerely,

Graham Carr, Notts.

Dear Tricia,

I would like to join the Traction Owners Club, as I recently purchased a 1925 Citroen Cloverleaf and would be pleased to hear from any other members in the same predicament.

John Mathieson, 52 High Street,

Kircaldy JY1 1NB, Scotland.

(if anyone can help the above, please drop them a line. Ed)

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# Classified

Sales, Wants, Miscellaneous, Toys and Books.

## For Sale, models of Citroen Cars

### ELIGOR 1/43rd Scale metal

1938 Roadster open            1923 5CV "Byrrh"  
1938 Roadster closed        1938 Light 15  
1933 Rosalie Saloon           1938 Light Fifteen F.F.I.  
1923 5CV Van "Bebe Cadum" 1923 5CV 2 Seater  
1923 5CV "Beneductube"

Retail price £4.50

### HELLER 1/8 Scale Kit

15 CV (595mm long)        £36.99

This model only available to special order. Price adjusted as it is too big to post. Must be collected from club meetings or Stevenage.

### ELIGOR 1/43rd Scale

1934 500kg Van "Dubonnet", "Essolube", "Vache qui rite" "Nicolas", "Goodrich" and "Cinzano". - ALL £4.85

ALL MODELS ARE POST PAID AND PACKING FREE TO UK MEMBERS. WILL OVERSEAS MEMBERS PLEASE SEND APPROPRIATE SUM FOR POSTAGE. Cheques made payable to the Citroen Car Club, in sterling U.S. or Canadian dollars.

AVAILABLE FROM: Brian Seaton, 106 Marymead Drive, Stevenage, Herts SG2 8AF.

## For Sale 1938 Slough Built Citroen Light 12. R.H.D.

Very good mechanics, sound body, excellent interior for the year. Offers in excess of £1000 considered. Please write to Box No. 1, c/o Editors address. (This is not the Eds. car), Can be viewed in London.

**Carpets** For Light 15, £20 full set. Looped pile or cut pile. Check they have your colour fitst. Earlwood Motor Productions Ltd., 56 Norfolk Street, Liverpool L1 0BE, Telephone: 051 708 8881.

**Wanted** 1 pair of front wing side lights, 1 rear brake reflector unit, 1 number plate light unit, 1 yellow 6V headlamp bulb and 1 spare, also I have For Sale or possible exchange, 2 gearboxes in need of some reconditioning, gear linkage plus change box. Complete steering section. Dismantled engine/oil pump etc. 12V starter motor, dynamo, many bits and bobs, and many parts for an ID 19. Apply Harry Watts, 9 Falcon Close, Carterton, Oxfordshire.

The Citroen Car Club has for sale the book Citroen Traction Avant 1934-57, this is a collection of contemporary road tests. In the form of a large paperback. Price £3.15, inclusive of p & p, UK Members only, will overseas members please add extra to cover postage. Available from Brian Seaton, 106 Marymead Drive, Stevenage, Herts SG2 8AF. All cheques made payable to the C.C.C. in either sterling or U.S. or Canadian dollars.

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T.O.C. Do-it-yourself social section, or Motoring events which may be of interest throughout the year.

**April 29th/30th** Jubilee cavalcade of transport, Andover, Hampshire. Entry forms from Mike Birch, Two Chimneys, Upper Clatford, Hants.

**May 21st** Pageant of Motoring. Lingfield Racecourse, Surrey, (not to be missed as we normally have a good entry of cars at this event). Entry forms from the Secretary, Pageant of Motoring, Seven Springs, Cheshire Homes, Penbury Road, Tunbridge Wells, Kent.

**May 21st** Biggin Hill Air Fair, Veteran, Vintage, Steam, Aircraft, also Mike Carters Auto-Jumble-300 stalls. Biggin Hill Airport Kent.

**May 24th** Sandwell Historic Vehicle parade and transport show, Great Barr, West Bromwich, entry forms from Geoff Price, 23 Cartwright Gardens, Tivdile, West Midlands.

**May 27th** Harefield Hospital Carnival Rally. Autojumble details from the Secretary, 2 Church View, Church Hill, Harefield, Middlesex.

**May 28th** Enfield Pageant of motoring and collectors bazaar, May 28/29, details from Enfield and District Veteran Vehicles Soc., 19 Perowne Way, Puckeridge, Herts.

**June 10th/11th** Skelsley Walsh Hill climb, 1 mile north of the B4204, ten miles north west of Worcestershire.

**June 18th** Essex motoring extravaganza, Brentwood, Essex, organised by Essex Austin 7 club. Details from 49 Parklands, Rochford Essex.

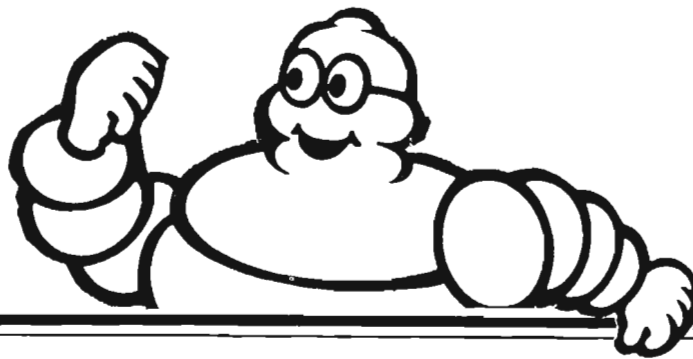
**June 18th** The 4th Rotherham Vintage vehicle rally, Clifton Park, Rotherham. Details from Recreation Offices, Wellgate, Rotherham, South Yorkshire.

**June 24th/25th** Doune (Scotland) on the A84, 8 miles north west of Sterling, Hill Climb and Superb Motor Museum.

**June 24th/25th** Grand auto-jumble and Flea Market. Warnham War Museum. A24 Main Horsham-Dorking Road.

We will be pleased to hear from our members who can add to our list for July and August.

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THE FIRST TRACTION OWNERS CLUB  
SPRING/SUMMER RALLY

MAY 6th/7th

The Cock Inn (Camping Site)

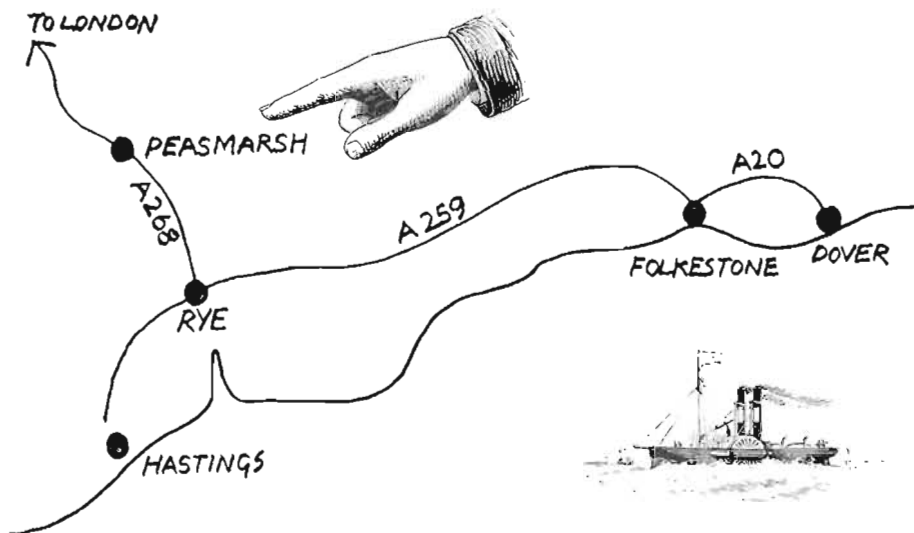
Peasmarsh, East Sussex (3 miles N.W. Rye on A268)

Full Camping Facilities. Village Shop. (Fresh baked bread)  
and lovely old Pub, all on the Site. (you may camp on 5th)

B & B Accomodation Lists from T.O.C. Sec. upon receipt of S.A.E.

Sat. 6th Convoy/Visit to Rye leave site 2pm.  
" " Noggin & Natter, Cock Inn.

Sun 7th Treasure Hunt/Picturesque Drive 10am start.  
" " Concours. (Separate Classes for Paris & Slough Cars.)



Eastern section line up at Scole Inn after being kicked out.

*Whilst every effort is made to ensure the accuracy of the information and advice given in the technical articles in this magazine and the replies to readers enquiries, neither the Citroen Car Club T.O.C. or the officers and members there of or the authors accept any liability whatsoever for such' information and advice.*

