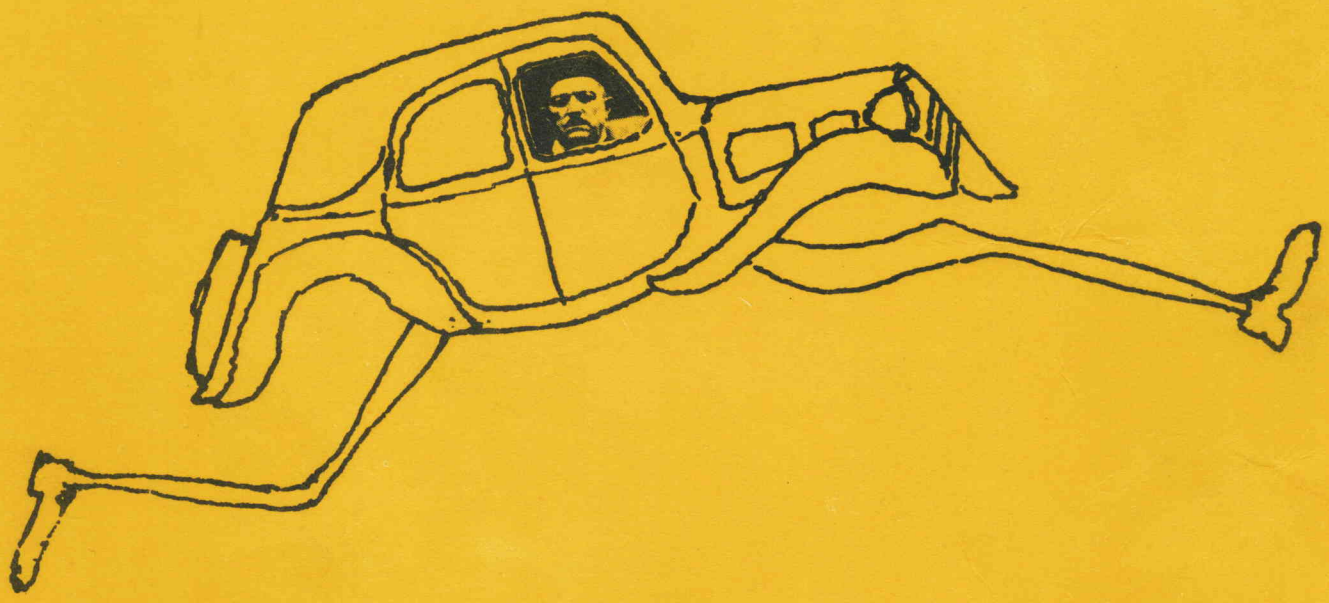
Front Drive December 1979/January 1980 Volume 3 Number 5



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# FRONT DRIVE

The magazine of the Citroën Classic Owners Club of Australia

December 1979/
January 1980
Volume 3 Number5


**Coming Events:**
Wed. 5th December, End of year meeting, Blackburn, and break-up at the Navins.
Sunday 9th December, CCOCA Concours, Berwick.
Sunday 20th Jan. Garage Prowl.
6th Feb. General Meeting, Blackburn.
For more detail, consult Club Calendar inside.

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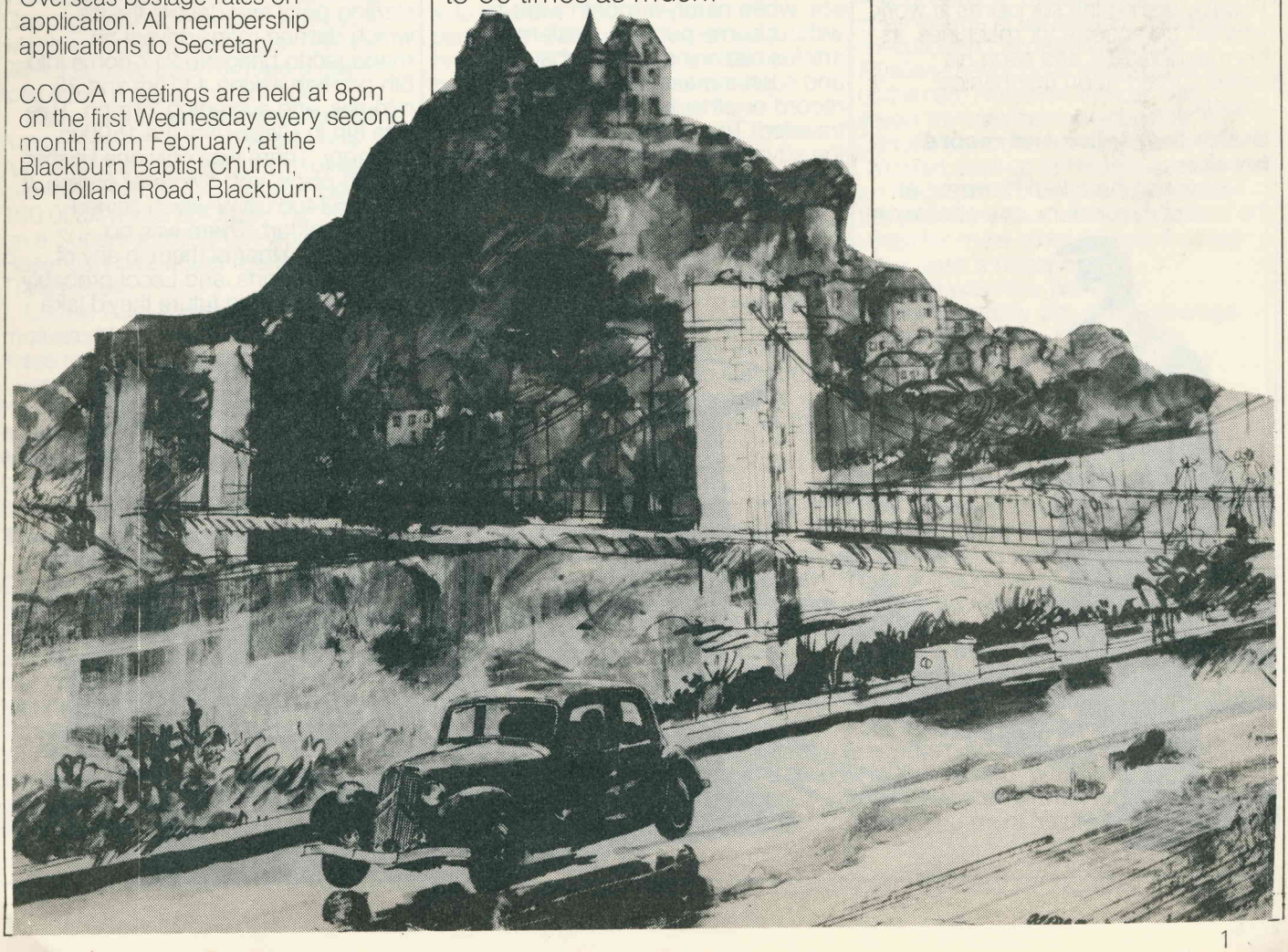
CCOCA membership:
Joining fee (new members) $5.00
Annual Subscriptions:
Full member, $15.00
Associate member, $10.
Joint membership available to spouses of full members, no cost.
Overseas postage rates on application. All membership applications to Secretary.

CCOCA meetings are held at 8pm on the first Wednesday every second month from February, at the Blackburn Baptist Church, 19 Holland Road, Blackburn.

How CCOCA goes next year will depend very much on the calibre of its committee, which will definitely have some new faces. Start arm twisting now (and don't forget to give your own arm a hefty yank).

You will have noticed some publication date hiccups recently. Copious planning, crossed digits, and burnt offerings should ensure punctual delivery this time. I cannot always guarantee this. Publication of a magazine of this quality relies entirely on the generosity of Veevers Printing, Prahran, and Pemara Press, Clayton (artwork and typesetting), who both bend over backwards to squeeze *Front Drive*'s production into their busy schedules. The unpredictability of workloads can mean the difference between a production time of days or weeks. I believe this is a small price to pay for a magazine which, commercially would cost 20 to 30 times as much.



# FRANCOIS LECOT

**Lone driver François Lecot travelled further than from Earth to the Moon in one year: 400,000km in a year, driving a Light Fifteen Citroën is still unsurpassed.**

*(Reprinted from L'Automobiliste)*

To drive, single handed and without relief, day in, day out, over 600 miles a day for a year, is a feat worthy of a superman. But François Lecot, with his walrus moustache and inevitable beret was the very picture of an average suburbanite, complete with chain-store shirt or roll-neck pullover according to the weather. Not only was he over fifty but he weighed only 11 stone and stood 5'3" high.

Remember however that this 'motorist' survived the holocaust of the First World War, and emerged a man of iron, the likes of which are no longer seen. He had already given proof of his exceptional endurance in several record breaking runs, so this was nothing new for him. When Marcel E. Gaucher wrote Lecot's memoirs in 'Mes 400,000km' he said, 'a former jockey, one time seafarer. He's fifty, but he's tough and dynamic'. He was born on March 5th, 1878 at Nantau in the Ain district, and from the age of ten travelled the country with his elder sister. He did well to pass his school leaving exams, since in those days most youngsters of his age were already at work. His first job was in a silk factory at Lyons. Possibly seeing the silk looms at work whetted his appetite for machines, as his main interests and soon his career turned upon mechanical objects.

**Stable lad, sailor and record breaker**

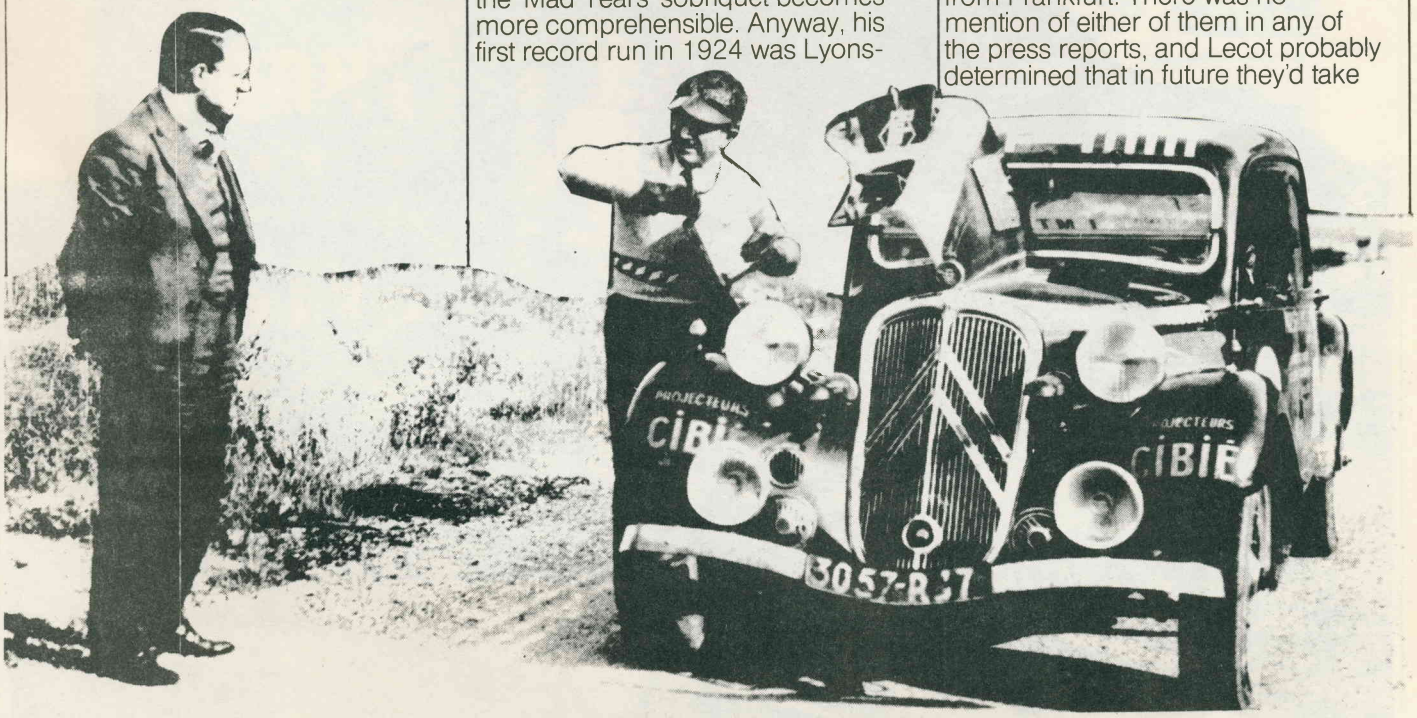
Our young hero had however, at the turn of the century, one obsession in common with another pair of motoring celebrities, Ettore Bugatti and Frédéric Loiseau. He relinquished engineering, and thanks to his low weight and small stature got a job in some stables at Mâcon. He stayed there until he was eighteen, and then, despite his 5'3" height enrolled in the First Marine Regiment at Cherbourg, from where he set sail for Tonkin in about 1896. We lose sight of him during his seafaring days, which it appears were uneventful in any case. 1919 saw a return to his first love, coming first in a Bugatti at Mont Ventoux hill climb.

In the twenties he married, and obtained a Citroën repair agency, whilst his wife opened a restaurant at Rochetaillée-sur-Saône, which was soon to be renowned for its cuisine. Interestingly enough it was there that Henri Malartre opened his world famed French Motor Museum over ten years ago.

It could have been that horse racing fired Lecot's taste for competition, or gave him the outlook to compensate for his lack of inches. Either way it was in 1924 that he started his record attempts. This was the start of the great record breaking era, when hardly a month went by without some publicity, posters or articles blazoning the fact that such and such a make had broken some record or other for time or distance travelled. They were golden days for the advertising agents of the motoring world as new posters kept appearing. Customers were quite bemused, and the 'Mad Years' sobriquet becomes more comprehensible. Anyway, his first record run in 1924 was Lyons-Maçon-Dijon and return. Either this sated his appetite or his garage occupied him fully, for it was not until five years later that he got the itch again. He then started his seven year run at the wheel, collecting a full house of records.

1929 saw him driving 285 miles daily from Lyons to the Galibier and back via the Col du Lautaret for fifteen days. In 1930 he tried to improve on this in a little 7hp Rosengart, on the Lyons-Bourg-Dijon run; getting the hang of it he relentlessly drove five hundred and more miles every day. 50, then 60, then 70 days rolled by, with the idea of covering 100,000km not in 100, but in 110 days running time. In the event it took him 110 to cover a distance that now takes most motrotists two years or more to achieve. As it was not officially observed, some doubts were cast on his feat, and disbelievers alleged that 'he left Lyons, spent the night at a farm 30 miles down the road, and garaged the car whilst an identical car with a driver made up to look like Lecot did the rest of the journey. In the morning, Lecot then again set off.' These malicious innuendoes didn't prevent him from completing his run, but he decided that in future he would be officially observed by the A.C.F.

The 1932 Monte Carlo Rally saw him as a first time entrant, still in a 7hp Rosengart. In common with half the other competitors he chose Umea, 2,350 miles from Monaco, as starting point and despite the ice which ditched many drivers he managed to bring No.217 home into 8th position, taking 111hrs and 22 minutes, and averaging 21mph. This was 8th in Class Two, the 1500cc category. There was only one finisher, in 20th place, with a smaller engine. It was a 584cc DKW which started from Frankfurt. There was no mention of either of them in any of the press reports, and Lecot probably determined that in future they'd take



notice of him; thanks to Citroën we shall see how this happened.

As soon as the rally was over, the thought of our 'famous endurance driver', as a newspaper tagged him in 1936, turned to a second 100,000km run, on which he duly embarked on March 7th 1932. This time he decided to cover the mileage on the run from Lyons to Paris and back. To silence the doubting Thomases, the run was officially observed. But Lecot was still not satisfied with his years work, so being an old jockey, he went for his 'treble', and from December 10th to 24th, he travelled the 'Paves du Nord' circuit. Remember that this meant covering, single handed, nearly 5,000 miles in fifteen days! There are many modern cars with youngsters under thirty at the wheel who would be pushed to equal this, much less in winter and on the cobbled Northern roads of 33 years ago.

With the 'Flemish Paves' trips under his belt, his thoughts next turned to another 'treble' for 1933, two of which would be in winter. The first was from Brittany to the Touraine, January 8th to 22nd during the course of which he covered 5500 miles in the fifteen days, a daily stint of 375 miles. This wasn't so hard as the northern paves, but the roads in those days weren't up to todays standards, and then, as now, fog and ice prevailed. Francois Lecot, then 45 (nowadays an old man who'd have trouble getting a job), had a brief rest and then took the wheel once more on a Guyenne-Gascogne-Angoumois-Charent run which lasted from February 12th to 26th. He covered 470 miles a day to total 6330 miles in the 15 days.

He used a Rosengart for all these runs, as for his Lyons-Paris-Lyons run when he managed, by averaging over 625 miles a day, to pack the 100,000km into 98 days! This time on a Supertraction (front-wheel-drive) Rosengart built under licence from Tracta-Adler.

Lucien Rosengart was not motivated by altruism in financing these trips, because according to Lecot, when he had finished the third, he wanted him to do a tour of all his agents. He'd even gone to the extent of preparing a poster publicising it, but Lecot, doubtless wanting to rest, turned it down.

**The Monte Carlo Rally by coach**

As a result, he turned to André Citroën, who had followed his exploits with great interest. For Lucien Rosengart was a friend of Citroën's, and the latter used often, either with his children or a friend such as Manheim, to wait in the Place de la Concorde to watch Lecot arrive, and to chat with him. Lecot, no longer sponsored by Rosengart, wanted to compete in the 1934 Monte Carlo Rally, so when Citroën suggested he

should do it in a coach with ten passenger, he jumped at the chance.

He set off to survey the route with Maurice Penaud, whom he'd met previously at Gregoires, and who later became chief mechanic on the first Sahara crossing, the Black Journey, and also of the China group on the Yellow Crossing. They started from Warsaw, and despite the mild weather at the end of 1933 the reconnaissance was to prove of value. A few days before the 13th Rally, the weather changed and turned the roads of Europe into seas of mud; luckily it cleared on the first day of the rally and stayed fine.

Lecot was accustomed to difficulties, so in their absence set off merrily from Warsaw; besides Poland was liked since they broadcast in French 'long news items which were much appreciated' recounting the progress of the Rally. And of course, Lecot's 4.5 litre Citroën coach was fitted with a radio so he could keep informed. Lecot covered an uneventful 1635 miles in No. 144 and was classified as a finisher in 98th place with 768 points. He should have had 50 more, but lost these because he changed his starting point. In fact he didn't start from Warsaw at all but from Lwow, from where three competitors started, whilst three others, who lost marks, chose Warsaw. Lecot stopped just before the finish so that he could clean the coach and his passengers could change into suits. The crowds were agreeably surprised to see this sparkling coach decant its ten immaculate crew members who looked as though they had just come from the next town! Consequently No. 144 won the Special Prize for the Concours de Confort.

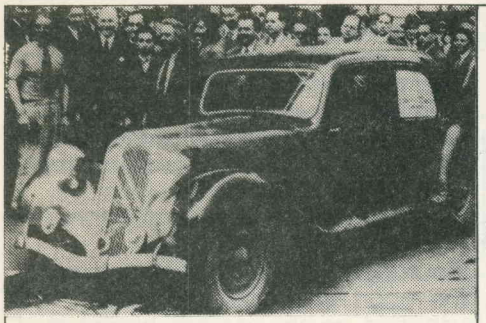
**Testing the prototype FWD Citroën**

André Citroën, generous as always, held a champagne reception in his Champs Elysees showrooms for Lecot and his ten companions in clelbration of their successful rally. During this, André took François aside and said 'I'm going to market a front wheel drive car, and I know you are familiar with them. Would you like to join the firm for a period to test it? You'll have Penaud with you and a car to test and evaluate. All your expenses in Paris will be paid, and you can plan a test programme. I can guarantee you won't find time on your hands!'

And so it came about, a few days later, that François Lecot and Maurice Penaud found themselves driving the new PV front drive Citroën on its first long trip, the 180 mile journey from Paris to Arnay le Duc in the Bourgogne, and back. Unfortunately, the report on the journey has vanished, so one can only hazard, in the light of what J.A. Gregoire says in his book *50 Ans d'Automobile* that the future 12hp Citroën suffered its share of troubles. Anyway, on the conclusion of this test, Citroën asked Lecot to take it on a non-stop run for 3,000 miles. He did just this, covering the distance in 77 hours at an average of 40mph through France and Belgium. If you work this out, he did a little over the calulated mileage, establishing the new car as a viable proposition and maintaining an exceptional speed for 1934, which even forty years later many drivers would be hard put to equal in the time.

Lecot and Penaud at the end of 1934 drove for the first time ever from Paris to Moscow and return under the control of the Automobile Club de France in the shape of Commissioner Delpeyroux as observer. It's worth remembering that at that period, and in fact since 1917, Russia was not viewed in a very kindly light by not only the capitalist, but even the socialist regimes of the rest of Europe. Speeches and champagne at yet another midnight reception in Citroën's Champs-Elysées showrooms marked the end of the run. However, the car was fifteen minutes behind schedule, so Citroën looked at his watch and said 'What's Lecot up to? He's a quarter of an hour late!' To Lecot and Penaud this journey was a mere interlude, whilst for most other drivers, it would have been a major feat.

Lecot was now planning something really big, a daily average of over 600 miles. He'd already confided in his friend Grancher at Lyons, 'I've been thinking about a 400,000 km marathon on the Monte Carlo/Paris route, with a few trips on the side, such as the Monte Carlo Rally, starting from the far north'. He had already discussed this with Citroën during the course of their conversations when he and Lecot met at the Place de la Concorde during his Rosengart period. On one of these occasions he said 'I'm pretty sure you'll manage 600 miles a day for a year soon', and continued, 'I only hope that it'll be in a Citroën, because you will then beat all the records held by my 'Petite Rosalie''. He then added 'When I think that there were ten drivers in the Rosalie team, you must be made of Citroën



steel to beat their records! When this endurance test is finished come and see me when you've got the time.'

But the Citroën development engineers were still having headaches with the new car, and in addition wanted to see how the cooling systems and drive shafts stood up to sand and tropical heat. As always, obsessed by Africa, Citroën sent Lecot, Penaud and de Nuret off towards Touggourt and Southern Tunisia in the 12. The Citroën agent at Biskra was flabbergasted when he saw the models and said 'You're surely not going to Touggourt in cars which drag their bellies on the ground?' Moreover, the trio had chosen the worst time of year, the tracks ruined by heavy rains. They managed to pick the best routes however, and despite the unfortunate conditions, Lecot was to say in his book of memoirs, 'Nevertheless, we got through unscathed.' When the little convoy of Citroëns reached Touggurt the military and town functionaries couldn't believe their eyes, since never before had passenger cars managed to get through under such conditions.

When he returned from the North African trip Lecot found everything at sixes and sevens, since it was now December 1934, and Citroën was in the throes of bankruptcy. As he journeyed home to Rochetaillée-sur-Saône. Lecot's dream of a 250,000 mile stint faded, as the new management treated him as another customer; unable to count on a car being provided nor of free spares, nor even a bonus if he succeeded.

**'Your exploit doesn't interest us**

So he approached other manufacturers, who in turn were disinclined to help. I'ts easy to understand why one of his keenest admirers, M. Leone, said to him one day, 'You must not let us down, Lecot. You *must* use a Citroën for the 400,000km journey. In any case you promised André Citroën you would, and moreover I shall talk to M.de Michaelis, the head of the Citroën agents association'. De Michaelis had the Neuilly agency and was on good terms with the Michelin brothers who were in complete control of the Citroën firm. When he had seen our non-stop driver, he said, 'We all know, Lecot, that you want to cover 400,000kms in a year! Well, provided that you use a Citroën, and get the suppliers of that firm to back you, we'll give you our support. But first there are two provisos before we can do that:

1. You must get factory permission to run the car as a Citroën officially.
2. Only use parts from original factory suppliers.

Provided that you do this, we'll be behind you.'

This was a great moral victory for Lecot who could also count on the support of Charles Faroux, the most influential motoring journalist of those days. But he wasn't home and dry yet as he still had to get agreement in principle from the new heads of the Societé André Citroën, and these people generally didn't want any connection reminding them of the old firm.

The peripatetic Lecot took his courage in both hands and asked his new supporters about this, and was advised to see M. Lamy, managing director of Citroën at the Boulevard Péreire. Lamy said straight away, 'Your exploit doesn't interest us. We are reorganising. We are extremely busy and see no need to do this. Perhaps later...' But Lecot was stubborn and wouldn't give up, possibly because Citroën himself had encouraged him. Finally after putting up many invalid objections, Lamy said, 'Seeing there's no way of changing your mind, I'll authorise it'.

This was a big step forward, since all the others had been uncooperative. Now the car could be officially called 'The Light Fifteen Citroën' and not some other name as previously used on such enterprises, when the car was never referred to by its maker's name. But that evening Lamy rang Lecot at his hotel and said, 'I forgot to ask you this morning about the tyres. Whose are you going to use?'

'Michelin of course,' replied Lecot, 'so long as they supply them on special terms'.

Lamy said that he would look into it. For once Michelin were open handed and supplied free tyres throughout, which made Lecot very happy.

But money had to be found to finance this incredible marathon, and it was to Citroën's suppliers that he looked for that. There were more than thirty — Solex carburettors, Scintilla starters and distributors, Marchal spark plugs, BHB pistons, Bollée rings, Brampton timing chains, Cibié lights, Ferodo clutch and brake linings, Fulmen batteries, Glaenzer-Spicer universal joints, Guiot petrol pump, Jaeger instruments, Lockheed brakes, Matériel Téléphonique radio, Repusseau shock absorbers, SKF bearings, Yvel bulbs, Curty gaskets, Speed cylinder heads, Aluminium Français, and finally the special wiring by Etablissements Souriau, while a team of 'Lion Noir' men cleaned the car every time it reached Paris. Of course all this equipment was specially made in heavy duty quality for the attempt.

The car itself was, apart from the above items, virtually standard, coming off the production line on June 8th. One modification was a 24 gallon petrol tank in place of the standard 10 gallon one, so that each leg could be run non-stop. The fuel used was *Super-carburant Pégase* supplied by the Compagnie Industriell des Pétroles (later taken over by the French Mobilgas firm). Filling stations used were at Belle Epine on the approach to Paris and at S. Laurent-du-Var near Monte Carlo. The special instrument panel was 'well-stocked' to use Lecot's phrase, since he added Jaeger rev-counter, oil and water temperature guages, oil and fuel pressure gauges, and an ammeter. This aroused much interest when he stopped, especially with the youngsters who saw the speedometer and exclaimed 'Look at that, it'll do 125mph!' Even with the help of its non-standard speedo the plucky Light Fifteen couln't think of it!

A pair of seasoned mechanics from Lecot's garage at Rochetaillée, Jean Coguerar and Marcel Coqueret were entrusted with the preparation and maintenance of the car.

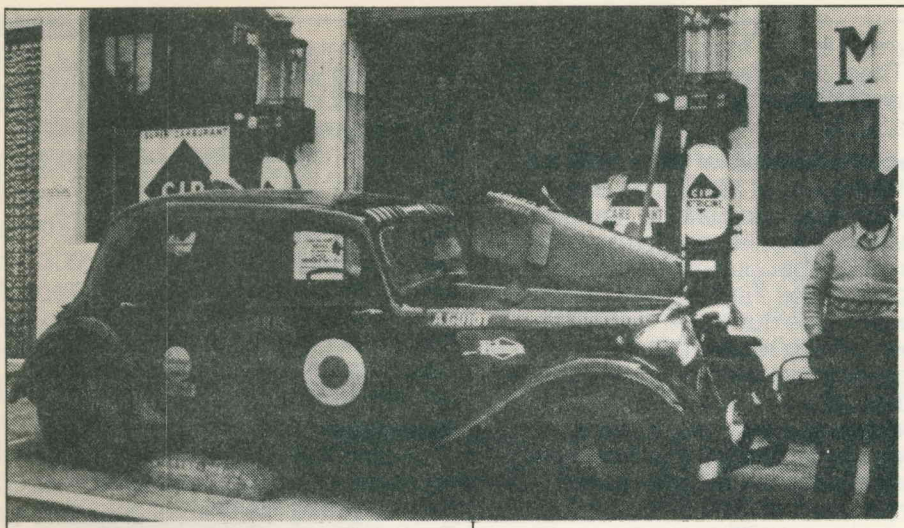
**The great day — July 22nd 1935**

In overall charge as technical manager of all the mechanical and administrative arrangements before and during the run was an engineer by the name of R. Brisset.

Finally everything was ready, Lecot took the wheel of his black Citroën, plastered with the names of his many sponsoring firms, and set off from the Place de la Concorde at 11 am on July 22nd, 1935.

Monsieur Lumet, an A.C.F. observer, a very strict man, accompanied him. His departure for a year long journey was a very subdued affair, only a few of his friends being present to wish him well, and he thought how different it would have been with André Citroën and his flair for nationwide publicity and hordes of reporters. He couldn't help saying to his observer, 'Perhaps it will be a little livelier in a year's time.'

By 11.30, the '15', registered 3057-R37, was at Belle Epine for its first fill-up, and within the hour had reached the Pyramid at Fontainebleu. The run could have ended at Sens, because a lorry got in the way, and Lecot dented his car. By 3pm Avallon was reached and by ten past five, Chalon-sur-Saône, Maçon coming up by 5.45. By 7pm he reached Rochetaillée, 325 miles in 8 hours, an average of over 40mph. Lecot told the mechanics how the car was running, and whilst they worked on it and straightened the bodywork, he and the observer kept



written notes of every incident, however small. As usual, Lecot had a light meal and then went to bed, so that he could take the road again at 3.30 in the morning. In fact, for over 365 days, he slept four hours a night, which gives you an idea of the physical stamina of this man who was then approaching 60. This, together with his simple if not frugal diet, enabled him to put up such formidable performance.

Lecot also possessed great powers of recuperation. When he felt tired he'd pull up at the side of the road and say to his passenger 'I'm going to sleep for three minutes.' When the time was up, off he went again.

The 'Superhuman Driver', as the 'Opinion' of Saigon called him, (his fame had spread far and wide), set off at 3.30am and by 4.40 was at St. Rambert d'Albon, where Védrines was killed in 1921, 5.15 saw him at Valence, and Montelimar at 6.10, where he was slowed by the many produce lorries on the road. Traffic jams already! Then, after a 5 minute halt for a black coffee in Orange at 6.45, Aix-en-Provence was reached by 8.10; Brignolles by 9.15 and Frejus at 10.05; Nice was left behind by 11.15 and another half hour saw him pull up for the first time outside the Casino at Monte Carlo. Officials of the Automobile were waiting to fix their badge, which was to stay on the car for the whole run. But he didn't dally in the Principality as within a quarter of an hour he had left and was soon filling up at St. Laurent-du-Var.

Despite a short rest after crossing the Esterel he got to Aix by 4. Pushing on, Lyons was reached by 8.15, whence he made a detour to bring his mileage up to 750 miles before stopping at Rochetaillée. Since 11 am the morning before at Paris, he had covered 1075 miles.

**Trouble on the run**

After a month's running, Brisset checked the car over thoroughly for the first time. Afterwards, he said, 'It's in fine shape, nothing amiss. We're very happy'. This was after the car had covered 36,136 km at its scheduled average speed.

But in fact, as Grégoire relates in his book, Lecot's 15 had been in grave trouble before he'd completed 100,000km. Brisset came to see him one day to tell him the car had already lost one of its front wheels on three separate occasions. Thus once in every 30,000km, the drive saw one of his wheels rolling down the road in front of him, and despite his courage, he was a little scared!

Brisset asked the young engineer if he could cure it. Lecot was very friendly with Grégoire, who modified the hubs to make them 'semi-floating'. He did this by replacing the exterior ball races on the stub axles by needle rollers. This cure the trouble for the ret rest of the run. Since Lecot was meant to be driving a strictly production run vehicle, he kept very quiet about it, but dedicated his book to Grégoire and thanked him for his 'excellent hubs.'

The first set of Michelin Stop 'S' tyres on the front lasted nearly 16,000 km, the second set 20,000, whilst the rear tyres averaged 24,000 kms. However, some of the Stop tyres did nearly 20,000 miles, and it is interesting that Lecot only suffered 6 punctures in all. One of them, which happened near Avallon, was rather unusual. Hearing a familiar 'toc-toc' noise from the left rear wheel, he concluded he had a faulty shock absorber. He telephone Repusseau to ask their service men to replace it at their next stop, but they thought he said Avignon, and accordingly headed off towards the ancient Papa city. Luckily, they met the '15' en route and gave the damper a clean bill of health, with the noise still present. Lecot then concluded that some fitter had left a valve inside the inner tube, and pressed on, doing another 2,000km before he changed the tyre. Imagine his surprise when he found that all that remained of the inner tube was a scrap the size of his fist, and that the remains had produced the noise. By October 21st, Lecot had got the first 100,000 km under his belt, despite an accident a few days earlier which could have been bad enough to call a holt to the whole affair.

**An entrant in the 16th Monte Carlo Rally**

Understandably, François Lecot was beginning to find his daily trip to and fro Paris to Monte Carlo boring, so to break the monotony he decided to take part in the Monte Carlo Rally, starting from Athens. Since this route had proved a particularly difficult one in previous years, his friends advised him to start from Valencia in Portugal since 'it never rains there'. Unfortunately they were wrong for once, as the only sun they saw was at Seville. Number 75 with its four man crew, including the inevitable ACF observer, clocked into Monte Carlo on time after a 3000km trip. They took 50th place amongst the 72 finishers of the 105 entries, though through ignorance of the rules, they lost a few points when 'one of the mechanics attempted to replenish the oil in the *parc ferme'*. Otherwise, they would have finished 44th. In consequence of competing, the car was out of use for two days which had to be deducted from the total of days during which the 400,000 kms were covered.

**Across Europe**

The rally whetted Lecot's appetite for travel, and soon after, he decided to take in the European capitals, adding as an afterthought that this would be good publicity for France and French industry. Evidently some of André Citroën's teachings had rubbed off onto Lecot! However he waited for fine weather before he started, and first came Berlin on June 7th 1936, followed by Amsterdam on the 11th, and Rome on the 14th. A trip to the Iberian peninsula took in Madrid and Barcelona by the 19th, and then eastwards to reach Vienna on the 24th. To enliven his journey to the city of waltzes he went via Germany and returned through Italy.

Lecot now had only a month to go, and so far had not suffered a bad accident. But in the middle of July near Montélimar, he had a very narrow escape. He was passing a truck when it suddenly turned across him. Lecot missed it, but when he swerved his rear wheel hit the kerb, bending the axle. At first it looked as though all thoughts of 400,000km had flown out the window, but Lecot was stubborn and refused to give up hopes when so near to his goal. A couple of hours repair work at the local Citroën agent put it back into shape enough to cover the remaining few thousand miles. In the course of the year he had suffered three or four scrapes himself but had seen on average three accidents a day, though some days he had seen as many as eight, some fatal.

Finally, after a last visit to Monte

Carlo and a triumphal reception there, he drew into Parison July 26th to complete his 400,000km. Although there was no official reception committee, he was feted by all the personalities of the motoring world, who realised what a tremendous test of endurance it had been for both car and man.

All the same, whether Lecot had many motoring supporters or not, there were still plenty of sturdy who were unable to understand either the human of the technical implications of his feat and who said as he went by 'look at that crazy idiot there'. There were many, both during and after the run, who believed it impossible. To cite one instance is the following item mentioned by the Lyonnais reporter Sap, 'One day at Beaune a gendarme on duty stopped Lecot to question him. It appears the day before he had passed a 20hp Y... belonging to an influential businessman who tried in vain to keep up with him. The other driver then asserted that Lecot's car was non-standard and had a six cylinder engine in it. He asked the gendarme to verify this. Lecot willingly acceded to his request.

The bewildered lawman then said, 'But Monsieur X... told me he was doing 70mph and couldn't keep up with you!'

'Then tell him to send his speedo to Marseilles for checking, since I come over giddy when I do more than fifty-five!' said Lecot.

The renowned endurance driver tells in his memoirs how some doubters, anxious to know if it was the same car that passed to and fro daily, marked it surreptitiously. Consequently Lecot found, to his delight, 'cabalistic signs in the grime on the body, marks on the glass, etc.,' nearly every day.

Lecot's endurance run spanned 370 days in all, from which must be deducted 5 days when the car was immobilised due to accidents or repairs and another two on the Monte Carlo Rally, as previously mentioned. Thus he covered his quarter million miles in exactly 363 days.

All that was done to the car in this period was:
13 engine tune-ups, about every 15,000 miles.
Two sets of cylinder liners and pistons replaced.
Overhaul of the driveline at 175,000 miles, and its complete renewal at 212,000 miles.
Finally, on stripping down the gearbox at 60,000 miles it showed no appreciable wear.

As G. Lumet, laboratory head and observer for most of the run, said in winding up the speeches at the ACF's reception for Lecot, 'To sum it up, a quarter of a million miles experience has clearly demonstrated the quality of Lecot's French car and is a triumph for the motor industry.'

There remains no better argument against the detractors of the Tractions.

**Lecot's opinion of the Light 15**

By the end of his run, no one was better place than Lecot to assess the qualities of the '15' and to dispel the rumours about it. For instance, many reports stated that he'd had quite a few mishaps during his marathon. The 'running repairs that Lecot received have been detailed in this article, although competitors, annoyed at a new rival model's appearance, alleged that they were design faults. In any case, Lecot emphasised in his memoirs that the engine was 100% in every respect, and one was the ease of overhaul with wet liners, of which only two wets were needed for the complete attempt. Fuel consumption over the 250,000 miles averaged 21.5mpg and oil was used at the rate of 4000mpg.

The Ferodo clutch linings were replaced every 37,000 miles, the clutch itself being overhauled once, at 175,000 miles. There were many insinuations about the durability of the drive shafts and their Glaenzer-Spicer universal joints, and as on previous occasions on July 22nd 1935, there were plenty of people advising Lecot to 'keep his eye on the UJ's'. And yet, he stated categorically that he had not the slightest bother with them. Admittedly his fitters kept a very close eye on them, but it was the earlier types formerly fitted that the detractors were thinking of.

The torsion bars as well had acquired a bad reputation, yet Lecot only broke three, one at 52,000 miles, one at 60,000 miles, and the third at 65,000 miles. Even when they broke, he only slowed down momentarily, and it didn't affect his average. Lecot strongly denied reports that there had been breakdowns as fallacious. The breakages in fact were due to lack of damping, as otherwise Lecot considered the suspension as both comfortable and tenacious. The original equipment make of shock absorbers was replaced at 125,000 miles by those of the Repusseau telescopic type, and one of their engineers was detailed to supervise their performance. It turned out that the expected life of 10,000 miles was trebled and even then they worked satisfactorily. They were only removed at Repusseau's request. The lines of the bodywork, which had been designed by Lefèvre, had already won universal acclaim.

François Lecot had many interesting comments to make in his memoirs both about the car and the Citroën firm. 'Even without the startling events which befell the firm, the delightful front wheel drive Citroën would have had a tremendous impact throughout the world.' Further, he went on to say 'I've driven lots of cars in my life, and only two makes have ever astonished me with their road holding. These have been Bugatti and the front drive Citroën'. Finally he concluded that 'the minor disappointments with this car have been due solely to those firms and people who put self-interest before their loyalty to the maker,' and also that without André Citroën's great determination the front wheel drive car would never have left the factory'.

**A sad end**

Unlike today's champions, Lecot made no money from his unexcelled feats of driving. He sold his hotel at Rochetaillée-sur-Saône in 1943, and the post-war inflation ruined him.

By the time he was 70 he had to deliver milk on a push-bike in order to make ends meet. Towards the end of 1955, when he was working in a factory canteen at Lyons, he suffered a stroke which left him paralysed. A subscription from the motoring community enabled him to enter the old people's home at Mont d'Or in Abigny-Colllonges.

It was there he died in August 1959, aged 81, far from home and forgotten by the world.

## Members' Cars

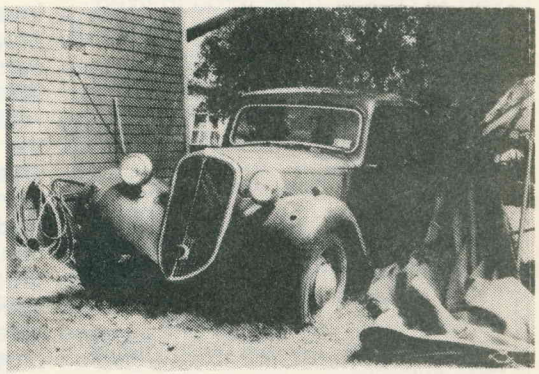
1951 Light Fifteen, TW-682
Rex and Margaret Gercovich

At the Gercovich residence reside two English Light Fifteens — cars Rex says he doesn't like — with a grin on his face. But, after all, it is Margaret who likes them and owns and drives the one mobile Cit. Margaret has always liked the sleek lines and good looks of the Cit, whilst Rex has had a yen for a 'sloper'. She was introduced to the classic lines of Citroën by her cousin; who has owned a Family 9, Big Six, and at least two Light Fifteens — as far as Margaret can remember.

'TW682' has been Margaret's transport for at least the last two years. Just recently, though, it has been absent from the road. Margaret was constantly being embarassed by comments from people who knew Rex to be a spray painter by trade — 'You're not still driving around in that! Why doesn't he paint it for you?"

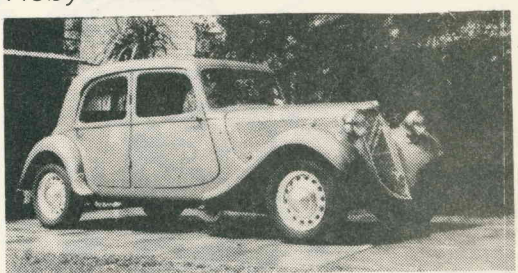
Well, he's done it, at long last, the old girl's been given a new paint job with rather a special type of paint. It was still drying when we saw the car — but it positively glowed. You could have sworn that the car was fresh out of the factory. The paint was Dulux Acran Metallic Grey — a two part acrylic-urethane paint (commonly used for painting aircraft and trucks). They say that the paint will last longer that the car. More technical information about the paint follows this article.

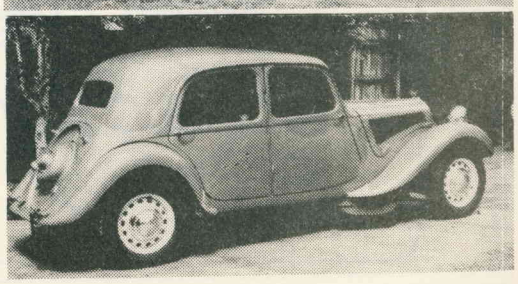
The car is fitted with such desirous goodies as a still working sun-roof (eat your heart out, David Giddings), easy-clean wheels, intact grille wings and your favourite suspicious noise in the vicinity of the gearbox. Apart from its newly completed outside paint job, it has been treated to an engine rebuild which Rex estimated cost $300. The engine has also been repainted (All this by a man who says he doesn't like them?)



The other Cit has an uncertain future — it is a 1953 Light Fifteen. It's not in anywhere near as good condition as TW, but it is reasonably complete. Rex has planned to restore it and have a matched pair, but alternatively he has muttered about selling it as well. Let's hope that the bug to restore it bites, and we see it on the road as well.

*Robyn Couche*





### DULUX ACRAN ACRYLIC/URETHANE ENAMEL

Acran is a two-pack aliphatic isocyanate modified acrylic which becomes an acrylic urethane through reaction. It is so exceptionally stable it just does not break down like conventional spraying enamels.

This sounds great, until you realise that the stuff is about $80 for 4 litres,it may only be used by specialised spray shops suitably equipped with exhausted booths and air-masks, it cannot be used over nitrocellulose or acrylic lacquers unless there is a barrier coat of 3D primer surfacer, and it must only be used where facilities are available to prevent the inhalation of the overspray mist (Rex is still suffering). (Coughing up and passing blood, to hospitalisation are by no means uncommon if correct and thorough precautions are not taken — Ed.)

Acran does have a faster drying time than conventional enamels — dust-free in 10 minutes to hard dry in 16 hours — these are air drying times. A spray-gun set up can be used as for normal enamels, air pressure required is 60psi. Protective equipment must be used, including goggles, gloves, and the correct airline respirator. It is recommended that Acran be ovenbaked — 30 minutes at 80°C, or 40 mins and 60°C.

Acran has excellent resistance to all forms of water, including seawater, nitric acid, potash, carbon tetrachloride, Lactic acid, glycerine, ethyl acetate, white spirit, and a host of other chemicals.

Although a permanent finish with excellent resistance properties, it seems to be out of reach of the backyard spray painter, It would require a professional shop to give your car this paint treatment.

## Of Double Yokes, Cardans and Spiders

Roger Brundle

**This article was prompted by the imminent arrival of the first set of reconditioned driveshafts imported by CCOCA from Europe. It is not intended to replace the information given in the factory workshop manual, but rather to supplement it...**

The success of the introduction of volume-produced front wheel drive cars during the twenties and thirties was dependent to a large extent on the availability of efficient and reliable and efficient means of transmitting the drive to the front wheels.

The problem of driving through a wheel which is also steered and sprung has exercised the minds of engineers over many years. One can, of course, drive through fixed front wheels and steer the rears — a solution used for most fork lift trucks, but hardly suitable for even moderate speeds, and in any case, why not turn the drivers seat around and drive the other way? The advantages of front wheel drive (FWD) in terms of stability, traction and space utilisation have long been recognised by the more enlightened manufacturers, and the development of reliable front driveshaft designs has been vital to their success.

What is the problem? A typical driveshaft assembly in a FWD car fitted with independently suspended wheels (such as the Traction) consists three shafts — the gearbox output shaft, which is fixed relative to the hull, but free to rotate, the stub axle in the wheelhub which moves relative to the hull and also rotates, and finally the shaft that joins the first two together via universal joints.

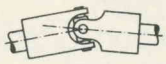


FIG.1. SINGLE HOOKES JOINT

As the wheel moves up and down over bumps and/or is steered away from the straight ahead position, these three shafts take up various angles to each other.

The most common means of transmitting power between two shafts that run at an angle is to use a 'Hookes' universal joint (Figure 1). This is the type that is almost invariably fitted to both ends of the prop-shaft of front engine/rear drive cars, and consists of two yokes at 90° coupled by a cross.

One unfortunate characteristic of the Hookes joint is that, as it runs at an angle, the output speed increases and decreases during each revolution, even though the input speed may be constant. The greater the angle, the higher the speed variation. Two such joints are able to be used in a conventional prop-shaft (Figure 2) as this shaft system only runs at angles in one plane (vertical) with the input and output members substantially parallel. By correct phasing of the two joints, the speed variations can be arranged to be self cancelling.

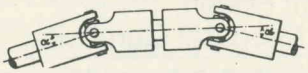


FIGURE 2. THREE SHAFT SYSTEM USING TWO HOOKES JOINTS

In a FWD driveshaft, however, the output shaft (the stub axle) moves in two planes — vertically during suspension movement, and horizontally about the steering axis during steering. If single Hookes joints are used, then the speed variations during rotation would give unacceptable vibration and kickback through the steering during cornering under power.
Despite this drawback, the early 2CV used such a system due to its simplicity, lower cost, and minimal power.

The solution to the problem is to use an outer universal joint that does not produce speed variations during rotation — a *constant velocity* joint. Many types of CV joints have been designed, and the Traction was fitted with most of them during the prototype and early production stage.

The design eventually adopted uses two Hookes joints back to back with a centralising spigot ball and cup as the outer CV joint and a single Hookes joint at the gearbox (inner) end.
A sliding splined coupling at the inner end accommodates changes in driveshaft length during suspension movement.

*"All good joints come to an end" — Griffith farmer.*

And so do Traction driveshafts, usually deteriorating until finally crying 'enough!'.

Problems encountered include:
1. Shearing of hub keys — rendering car immobile.
2. Excessive wear of universal joint cross bearings causing vibrations, snatching and clonking on lock. If allowed to continue, this can lead to breakage of the universal joint yokes with dramatic consequences, i.e. the car is immobile again.
3. Wear of splines causing noise, snatch and vibration.

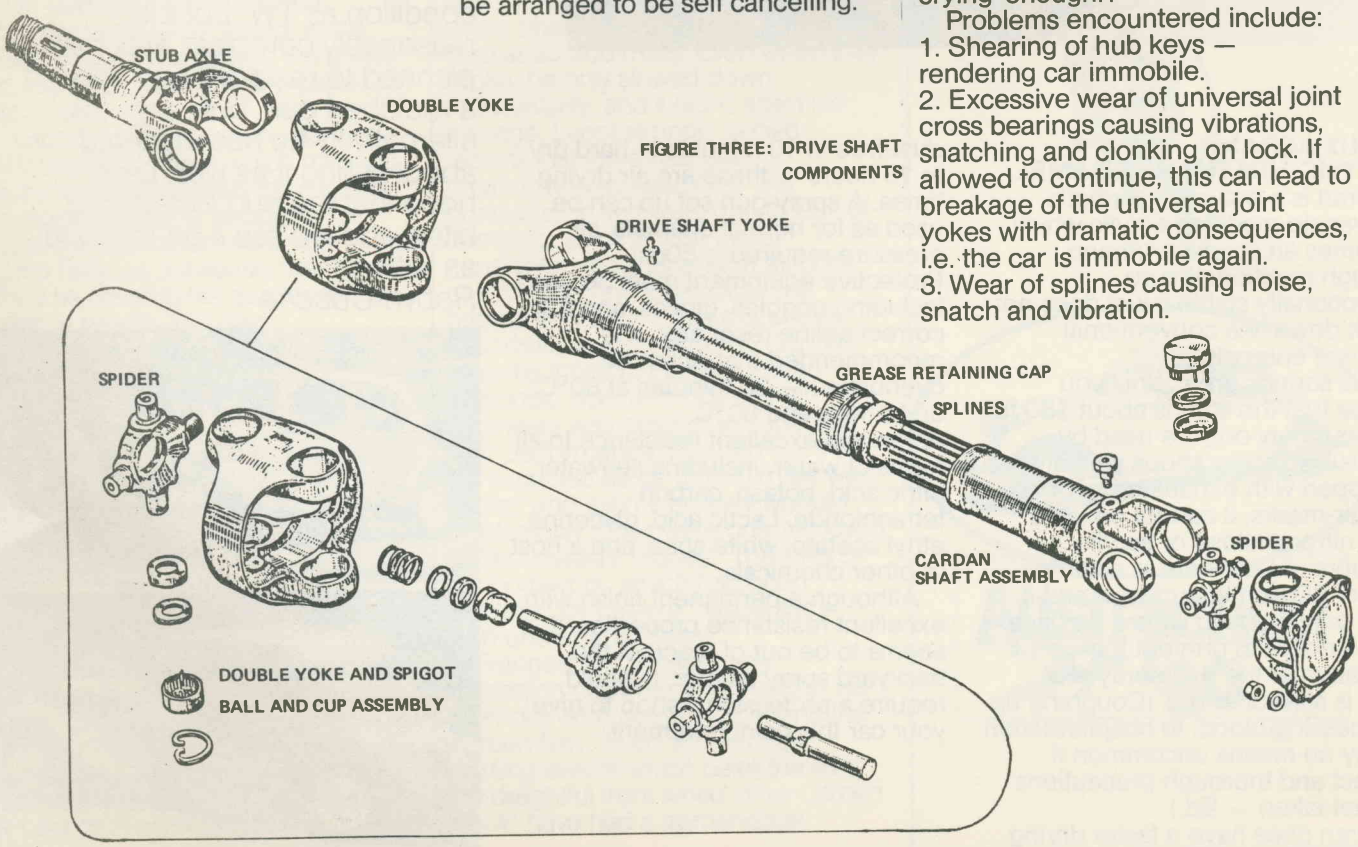



FIGURE THREE: DRIVE SHAFT COMPONENTS

**Replacing Drive Shafts**

The first point to be made regarding replacement is that it is impossible without the use of an number of special tools, namely:
**38 mm or 1½" AF socket,**
**Hub puller,**
**Outer wheel bearing extractor (if bearing tight on shaft),**
**Inner ring nut spanner,**
**Lower ball joint extractor.**

Second point is that it helps to read the workshop manual before getting your hands dirty.

**Removal:**

1. Slacken hub nut (38mm/1½" socket) —**Remember** RH side —LH thread; LH side — RH thread!
2. Jack car under lower link arm and just slacken 4 inner universal coupling bolts (14mm).
3. Remove road wheel.
4. Remove brake drum using puller.
5. Unscrew outer ball race slotted ring nut (using proper tool if available or by drifting with square ended bar) after removing small lock tab.
6. Withdraw outer ball race with extractor if necessary. Have seen somewhere that an extractor can be improvised from 2 large exhaust clamps, but jury-rigged tools should be used with care as the pulling lip on the bearing is rather fragile. Remove distance piece and as much of the grease inside the hub as possible to reveal the inner ring nut.
7. Turn back the locking tabs of the inner ring nut and assemble inner ring nut spanner on the stub axle. Next step is to firmly prevent the drive shaft from turning as the inner ring nut can be reluctant to budge. If the special tool (1830T) is available, fine; if it isn't, then select first gear and have a helper prevent the gear-box mainshaft from turning using an adjustable spanner on the starter dog. Again, unless the wrong side shaft has been fitted at some time, RH shafts have LH threads and vice versa, for the inner ring nut.
8. Separate swivel hub assembly from lower link arm by removing lower ball joint using extractor.
9. Separate steering arm from tie rod end.
10. Unscrew sheet metal grease retaining cap from spline coupling and disengage driveshaft/swivel hub assembly from cardan shaft by swinging it outwards.
11. While a helper supports the swivel hub assembly, carefully drift the drive shaft inwards through the inner wheel bearing with a copper hammer.
12. Prise out inner oil seal and drift the inner wheel bearing outwards through the hub bore.
13. Remove cardan shaft assembly from gearbox flange.

**Assembly:**

Examine replacement driveshafts and check that stub axle tapers are not scored, that stub axle keyways are not chipped or enlarged, that the slines are reasonable and threads are OK. Determine which shaft is for which side of vehicle and check the fit of the stub axle taper in the mating taper of the relevant brake drum hub. This step, although time consuming, is essential if sheared keys are to be avoided in future.

Lightly blue the stub axle with engineers blue and fit into hub. The key need not be fitted but locate the stub axle as it would be if the key was present. Tighten hub nut, then unscrew and check that outer face of the hub protrudes by a small amount from the shoulder of the small diameter of the stub axle taper. (If it doesn't, find another hub that does!)

Remove hub carefully so as not to disturb the blue markings on the bore. There should be continuous contact over bands at both ends of the bore. If not, then lightly lap the tapers together using fine grinding paste and repeat the bluing procedure until the hub is well seated. After lapping, clean both tapers with meths until wiping with a Kleenex produces no dirtying of the tissue.

Reassembly is basically a reversal of the dismantling procedure, but a few points should be noted.

1. The cardan shaft/gearbox flange bolts have a habit of working loose. When assembling, clean the threads thoroughly with a degreasing solvent and apply Loctite, Grade 242 before tightening.
2. Fit new inner and outer oil seals and wheel bearings. You don't want to go through all this again for the sake of a few dollars.
3. Pack wheel bearings and oil seal recesses with a multi-purpose lithium-based grease such as BP Energrease L2. The bore of the hub between wheel bearings should not be packed with grease, but should have a moderate coating only.
4. Do not use a locking washer under the inner ring nut — just tighten as much as possible.
5. When engaging splines of driveshaft into cardan shaft, coat the splines liberally with a grease containing molybdenum disulphide (such as BP energrease LMS 210) To ensure constant velocity it is essential that one axis of spiders in the outer universal should line up with one axis of the spider in the inner universal joint.
6. Always fit new keys between stub axle and hub. These are a fairly common general engineering item and can be obtained at most engineering supply houses. Try to but keys wider that required, then reduce width by filing until the key is a snug fit in both stub axle and hub.
7. Tighten hub nuts to 216 lb-ft and fit new split pins.

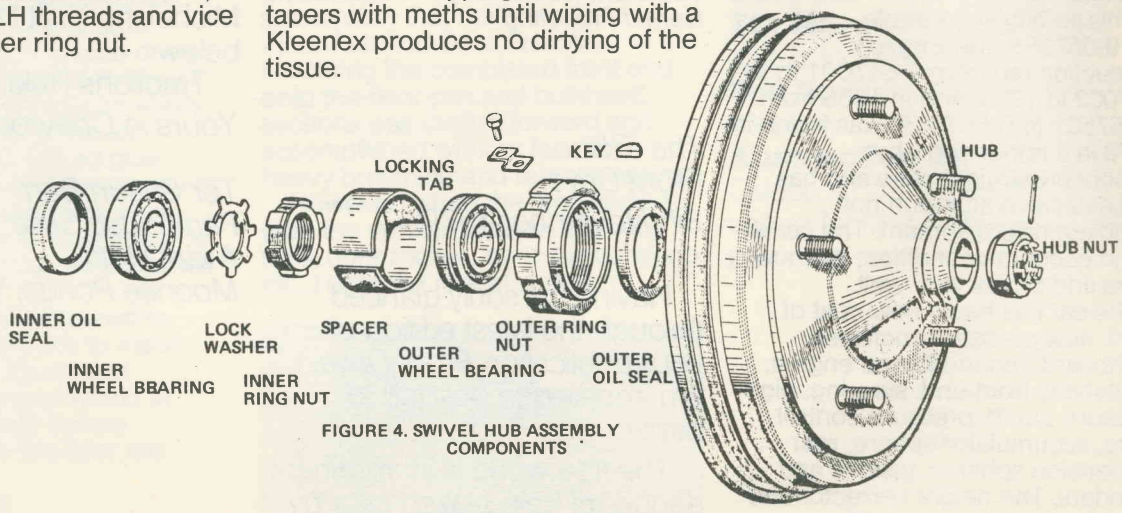
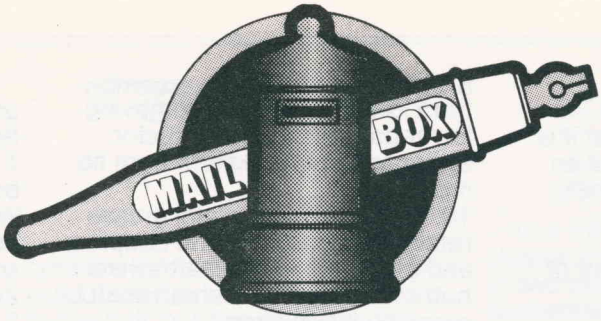



FIGURE 4. SWIVEL HUB ASSEMBLY COMPONENTS




*Letter from Gerry Propsting*

As you know, the 6H was the first of the hydraulic-suspensioned Citroëns. During 1955, Commonwealth Motors imported six of them into Victoria, the first of them having the chassis number 9-557555. For those people new to Citroën, the car is not of the DS shape, but is a classic style Traction Avant 15CV 6-cyl. with the hydraulic suspension fitted to the rear end only. This new suspension system was on the DS to introduce new standards of comfort and roadholding. The front is still the well-proven torsion-bar system that Traction lovers know so well, however with the torsion bars lengthened to equalise flexibility, and the addition of an anti-roll bar to reduce sway. It is thus that the 6H combines a new level of comfort and ride with all that is traditionally Traction.

It seems that in total, only 757 6H vehicles were produces, 680 from Paris and only 77 from Slough. This makes the English variant a rare car indeed, as our recently intrepid club delegates to Europe reported that very few of the cars are known to have survived the ravages of time in the U.K. It seems that the Paris-built survival rate was not high either.

Quite probably no more than a dozen 6H's ever came to Australia and of these, 10 are known to survive today. Of these, at least 5 are in very good condition, although in various stages of restoration, and at least two are no more than rust buckets.

This particular example, no. 9-557555 (the English production ran from 9-547001 to 9-547002 in 1954, and in 1955 from 9-557501 to 9-557575) was found in 1970 in a rather sorry but reasonably straight state and has had extensive although not complete refurbishment. The car is not in concours condition, but now looks and drives very well.

The car has had a new coat of paint, new carpets, repolished dashboard, reconditioned engine, driveshafts front end, steering, high pressure pump, pressure control valve, accumulator sphere, rear suspension spheres, pistons and cylinders. The height corrector and gearbox were in remarkable condition and refitted as is. The friction plate and wheel bearings, although not replaced with new parts (none available) were replaced with parts of high quality. The original radiator was in very poor condition and luckily a replacement of good quality was found.

Many of the original fittings were in an excellent condition and have been left as is. Among these were the grille, hoodlining, generator and starter motor, and water pump. Some of the little goodies that usually don't survive are the crankhandle guide and the grille motif. Surprise, surprise, these still survive intact.

Much of the interior vinyl is almost as it was when it left the factory and was to be used again in the trimming. However the same cannot be said of the leather, as this is long overdue for replacement.

At the moment the car is on stands awaiting the reassembly of the brake system which is being extensively rebuilt.

Reluctantly, due to financial pressure (and I know I have to eat my words of a few *Front Drives* ago) the car is being offered for sale. It has registration until June 1980, and number plates CV-015 (15CV).

I would appreciate it falling into the hands of a true Citroën enthusiast who will pledge to return the car to its former glory. In order to achieve a quick sale and although worth much more, offers starting at $2000 are invited. The successful applicant must however agree to the above condition. This car must survive.

Yours enthusiastically,
*Gerald Propsting*

*The Editor,*
*Front Drive.*

*8th November 1979.*

*Sir!*

Having cursorily glanced through the latest edition of your publication *Front Drive,* I am impelled to put quill to paper.

The free world is in imminent danger of being taken over by a bunch of long haired Marxist malcontents hiding inside 2 horsepower biscuit tins. Dirk Shervo, indeed! Who is this whacker? That your magazine should stoop to devoting no less than 2½ pages to promoting their insidious cause is indicative of the extent of this cancerous growth. Resist, before it is too late!

Some time ago, I communicated with various responsible organisations such as the RSL, ASIO and Fred Niles, at the Festival of Light, warning them of this anarchist plot. However, I received no response, a similar situation to my recent entry of a B2 half-track in the Repco Round Australia Trial. Are they everywhere?

However, to the point of my letter. I read that 4 of these outback dunnies will be driven (Ho, ho) to foreign parts in 1981. As this will effectively remove eight of these misguided layabouts from God's Own Country, I am starting the '**Free Oz from the 2CV Fund**' to assist them on their frog-like way.

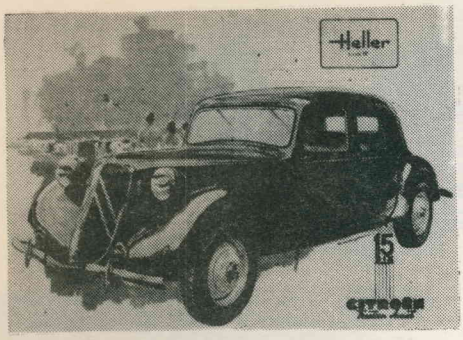
All donations may be forwarded to my Secretary, Michelene X, at the address below.

Tractions Rule, O.K.!

*Yours in Chevrons,*

*Tor Shaun Barr*
*Penthouse Suite,*
*Avant Hotel,*
*Moonee Ponds, Victoria.*

**Le Petit Citroën**
Robyn Couche




**Building the Heller Big Six — Part 1**

After making the mammoth decision to purchase the Heller Big Six, and recovering from the shock of having parted with all that hard-earned restoration money, I decided that it was about time that I tackled the beast.

Now, approximately 30 hours of labour later, I have completed the engine (less wiring) , the front end, floor, engine bay and door frames — about a quarter of the way through the instruction book. During this series of articles I will attempt to convey to you, the avid reader, some of the problems encountered in building this monster kit and some possible solutions to them.

The first thing you notice when you open the box is that it contains over 35 separate trees of parts each about 35 x 25cm. Most manufacturers try and group their parts roughly in order of use with only parts of a different colour or finish being on different trees. Not so with Heller it seems! By the time I was finishing the front end, I was using about half the treets and in no particular order.

**Lesson One:** You need a lot of space to build this model.

**Lesson Two:**
Forget the use of conventional plastic model polystyrene glues. This kit has so many minute and working parts that the possibility of clogging these with excess dobs of glue is not worth the chance. I found that the best type to use is liquid glue that you apply with a brush — TESTOR or similar. This glue dries in a fraction of the time of Britfix 77 and similar glues, and can be easily applied in as large or small an amount as required. Liquid glue does not have the nasty tendency to dissolve your model before your eyes either. A tube of 'Superglue' is also a must for several parts that will be described later.

**Lesson Three:** Be prepared to modify some of the parts to make them fit properly. I found that several items in no way would fit unless altered slightly before assembly. More on this later too.

**Building the Model**
*Engine and Gearbox:*

The first section of the car to be tackled according to the instruction leaflet is the engine and gearbox combination. No serious problems were encountered here, but several minor ones reared their ugly heads.

When you are about to place the water pump and generator pulleys on the model, I suggest the use of a small amount of superglue as possible to allow them to rotate. The belts supplied must be added in strict order of the instructions or they will not go onto the pulleys. I didn't use superglue on this part and subsequently the fan won't turn around.

Before glueing the intake and exhaust manifolds to the head, ensure that the surfaces are flat — they required quite a bit of sanding on my kit before the surfaces were flush. This practice should in fact take place with all parts before they are assembled, but some need it more than others.

No other real problems were encountered with the engine and gearbox other than the handmade wire clutch springs. These are tricky but not really difficult to make and add a really good touch of realism to the completed item.

*Front End:*

Completing the front end of the model is reasonably straightforward until the time comes to insert the lower suspension arm spline and setting up of the torsion bars.

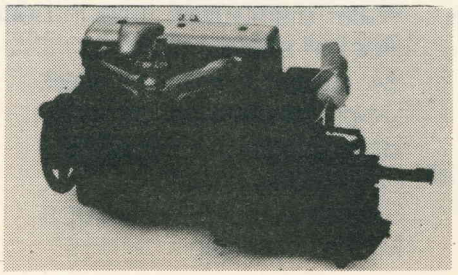
To start with, there is no way that the lower suspension arm spline will fit the model until you trim about 5mm off the length. It is simply too long! When this is done it works quite well.

Setting up the correct tension on the torsion bars is a nightmare! It took me about 2½ hours to get it right. If you follow the instructions to a 'T' you end up with one side of the car sprung solid as a rock and the other side like a jelly. I found it necessary to assemble, disassemble and reassemble the set up countless times, constantly altering the shape of the rear adjusting cams and the shape of the forward end dogs. The result however, is worth the trouble — torsion bar suspension that really works.

*Floor Pan and Door Frames:*
Mounting the completed front end onto the floor pan and bulkhead sections was straightforward and accomplished without too much heavy breathing and temper-raising.

However, when the time came to glue the vertical sides of the body (sills, door frames, boot surround etc.,) onto the model, a new problem arose. Due, apparently, to the size of the parts involved, a certain amount of warping has occurred in the mouldings. This is where your trusty tube of super glue comes in. To make the side panels fit properly, fairly high torsional stress is created by bending and stretching the plastic. I found that ordinary model glue simply wasn't strong enough. I also found that moderate amounts of plastic filler were required around the base of the boot to fill the gaps created by warping.

My next article will concentrate on the painting of what has been built so far, and the next stage of construction — the interior of the car.



## Club Calendar

Bryan Grant

**Wed. 5th December** General Meeting, and supper afterwards at the home of Mark and Anna Navin. Bring a plate of food. Wines and soft drinks supplied.

**Sunday 9th December**
CCOCA Concours in conjunction with MG Car Club. 10am Akoonah Park, Berwick (on Princes Highway past Berwick). Concours entry, $2.00, spectators $1.00/head (headless spectators free), $2.00 per family, in aid of Paraplegic and Quadriplegic Association of Victoria.

**Sunday 20th January 1980** Garage Prowl. A chance to see the collections of several of our keenest members.

**6th Feb.** General meeting
**7th March** Annual Dinner: details to follow.
**3rd April** Annual General Meeting.
**Austraction 80** to be held Queen's Birthday weekend, venue Northern Victoria — start planning now.

## Spares Report
John Couche

### Help!
The movement of spare parts over the last two months has been very slow, which in my mind points to one or all of the following points. Firstly the cold wintery days have kept everyone inside building their Heller Big Six Kits, and away from their full size kits; secondly, I am supplying totally the wrong type of parts (in which case I wish you would tell me what you want); thirdly, cars are so beautifully restored that nobody needs any parts, or, finally, no work is being done despite the weather and they are all falling apart around our ears.

The second of the above points seems to be the one best solved (proviiding the last point is not true). A couple of magazines ago allmembers were supplied with a blank order form to complete with their wants and needs — so far I have received only 18 of these back — several of which are repeat orders from the same member.

Please help me to help you and give me some idea of what to try and buy for our parts stock.

It has been suggested that we try and concentrate on one complete section of the cars at a time. So far, I have been concentrating on the 'Body Beautiful' by supplying body rubber mouldings, wing piping, window channel, pedal rubbers, door seals, bumper mounts, etc.

It is now time for a change, but what do you want? Steering parts, brake parts, engine parts, gearbox parts?

If you don't tell me what you want, all I can do is use my own ideas on parts that *I* would like and end up with parts that *you* don't want. So, again, please help me to help you...

### Crown Wheels and Pinions
'The most talked about event since the Traction' — that is how the ad in last *Front Drive* read to advertise the fact that **Brand New** crown wheels and pinions would be available in the middle of next year.

So far I have had three definite orders (myself and two other committee members) and one possible. Not much of the most talked about event of the century.

If you are still contemplating the expense, remember that this is a once only offer and will not be repeated in the foreseeable future. $450.00 may sound like a lot of money for a small amount of sculptured steel and you may be right — but remember you are going to spend several thousand dollars on restoring your Traction, all of which will be lost if you break a crown wheel and pinion. An immaculate Traction with no gearbox makes a very cumbersome paper weight!

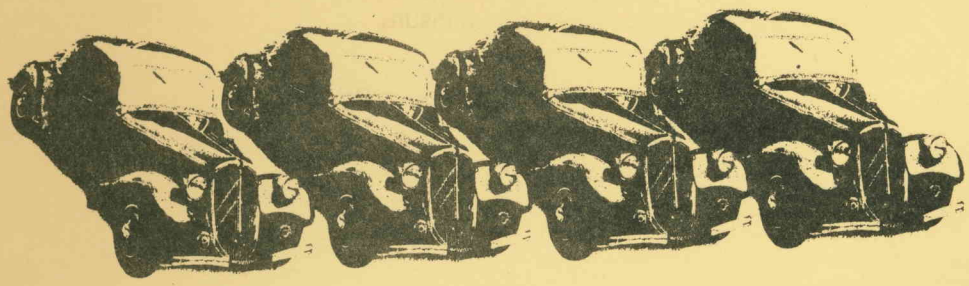
Get your order in **now** or you will be too late — its cheap insurance.

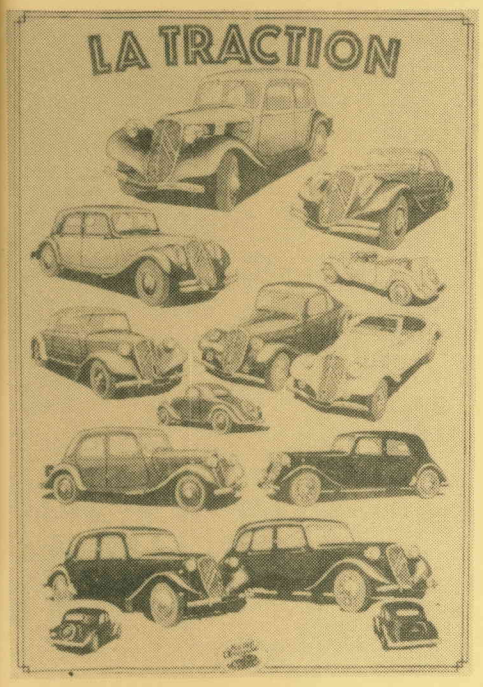
### New Stock
Since the last edition of *Front Drive* the club has taken delivery of a new type of windscreen rubber. The rubber is manufactured in South Australia and is an exact copy of the original wide frame rubber moulding as supplied by Citroën.

Enough rubber has been bought to fit ten cars only, so be quick — price $4.76 per length. Rubber for the narrow frame may be available at a later date.

### New parts currently in stock
Bumper irons $43.20 pr.
L15 Wheel bearings, inner $5.14 ea. outer 11.61 ea.
L15 wheel bearings, rear, $8.14 ea.
L15 Gearbox bearings $17.15, and $17.63 ea.
Tie rod ball sets, $43.43 set.
Upper and lwr. ball joint seals — leather, $3.45 ea. (next shipment will be dearer).
Big Six exhaust gaskets — 2-holes: 75 cents ea.
L15 head gaskets: $4.60 ea.
Clutch bearing springs 50¢.
L15 gearbox bushes $26.52 set of 4.
Gearbox locktabs, $3.36 pr.
Bonnet lacing, $4.00 length.
Changeover L15 clutch friction plate: $26.88 ea.
Big boot weather seal and clips, $15.32 set.
Steering rack boots $6.95 ea. (appr.)
Windscreen rubber, wide frame, $4.76 length.
Pedal rubbers, $7.95 ea.
L15 radiator hose, upper $5.14 ea., lower 5.67 ea.
Fuel filler neck rubbers, big boot, $2.57 ea.
Door and bonnet grommets, 48¢ ea.
Door seal rubber, $12.78 length.
Heating system rubbers, $11.92 set.

### New parts to be added to stock in near future
Gearbox coupling seals
Window channeling
Mudguard piping
Headlight, door and boot handle protecting rubbers
Water distribution tube in head
Rocker shafts L/B15
Big boot top weather seals
Door handle springs
Brake shoe pivot bushes
C/O brake shoes
Steering rack balls & cups
Master cylinder






**TOC Traction Posters — in full colour, magnificent posters** $Price $4.50 each plus $1.00 postage. From Mark Navin.

**Light 15 Owners Handbooks** (Reprints 1949 Edition) $2.00 plus $1.00 postge. Mark Navin.

**Front Silentblocs** for the very good price of about $25 per set of four. Previous Silentblocs were costing us $15.00 each. Ask Ray Hobbs what a difference good Silentblocs make.

**Light Fifteen Engine, rebuilt.** Ray Hobbs has this unit for sale. Price and details, contact Ray.

**COO-EE WHOOPEE BONZERS!!**
2CV Owner's Club, cloth badge, sticker, and T-shirts are now available — for more details, contact Mark Navin

## FOR SALE

**1950 Light Fifteen (Slough)** Good motor, clutch, gearbox, and drive shafts. Complete. Reluctant sale due to financial pressure. Best Offer. Steve Sarda 88 2394. (See members' cars in earlier *Front Drive*)

**BIG 6H**
See letters to editor — Gerry Propsting.

**1952 Big Six.** Maroon, Registered, $1500 ONO. Apply Doug Walton 8618638.

**For Tender: Family Nine**
Proceeds of sale go to Club. Body shell on wheels only, Rusty floor has been removed, rust in sills, usual cracks in body, but by no means past restoration. Stripped of body and interior parts. Belonged previously to Ray Hobbs. May be inspected at the Editor's home, 26 Tyrrell Avenue, Blacburn, 3130 — Tenders must be received by December 15th at this address.

**Big Six Parts Car (1951)**
Definitely past restoration. Sills and bottom completely rusted out, but some good panels. Reasonable to good upholstery, good grille and radiator. Engine dismantled, but no gearbox. Price?????? Make an offer. Mr. Hunter, Mentone 936514. (Editor has inspected this car).

**SPECIAL CITROEN TOOLS FOR HIRE BY MEMBERS**

**The club has for hire the following special tools for your Citroën. Tool hire rates are $2 per week, for a period of one week, with a deposit of $10.00.**
**To hire the tools, contact Rex Gercovich on (03) 874 3469.**

*Spanner for adj. upper swivel ball;*
*Extractor for steering ball pin;*
*Spanner for steering rack tube cap;*
*Extractor for upper swivel ball;*
*Apparatus for checking concentricity of brake drums and linings, front;*
*Same as above — rear;*
*Front outer wheel bearing extractor;*
*Front Hub extractor;*
*Spanner for outer ball-race retaining ring;*
*Extractor for lower swivel ball;*
*Vice for holding driveshaft couplings during dismantling and refitting.;*
*Stand for engine when removed.*

**Contact Times**
To ease the workload on the Spare Parts Committee, the following times have been set aside as the ONLY times that spare parts can be ordered or picked up, except in emergencies (which means the need to obtain a part to keep a registered and road-going car on the road following a break-down. Cars undergoing restoration do not qualify for emergency handouts.) To make this system work, your co-operation is requested.

**The order times are 5pm to 9pm weekdays and 10am to 9pm weekends.** John's phone number is listed in Front Drive.

**Pickup Times**
Parts may be picked up on the first and third Saturday of each month, except in emergencies.