

# FRONT DRIVE

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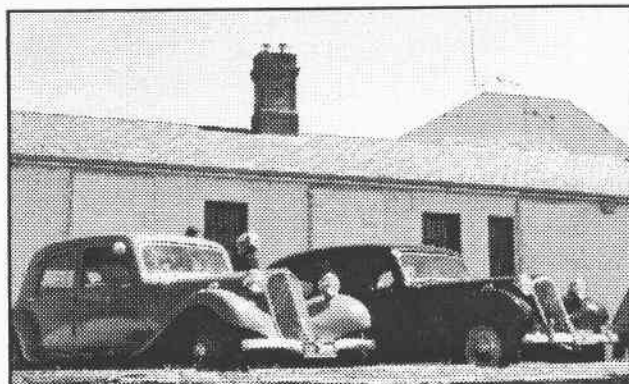
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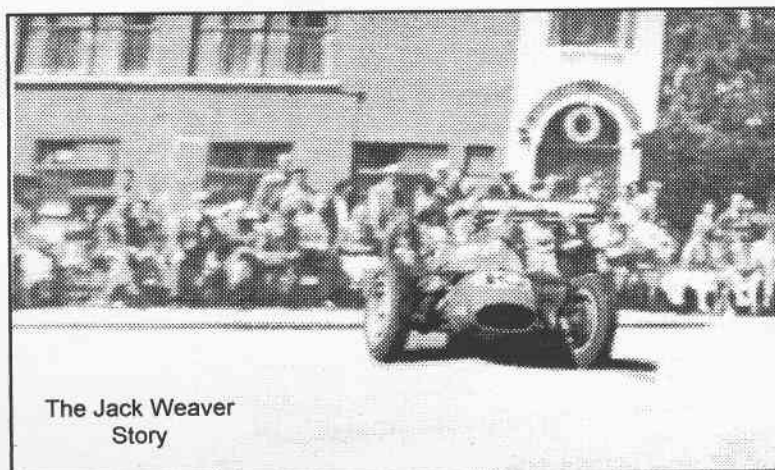
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## POSTAL ADDRESS

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# DRIVE

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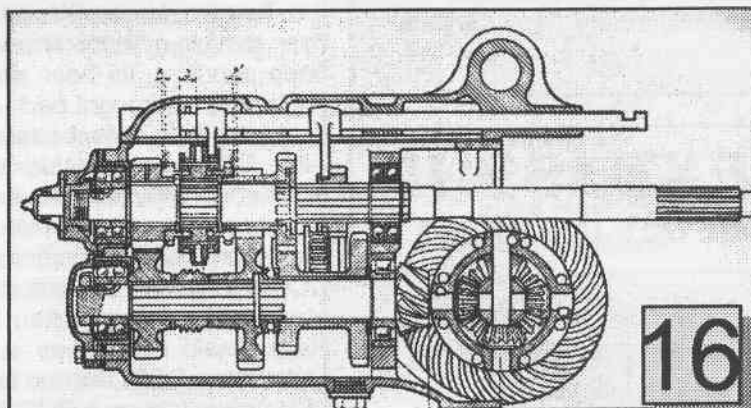
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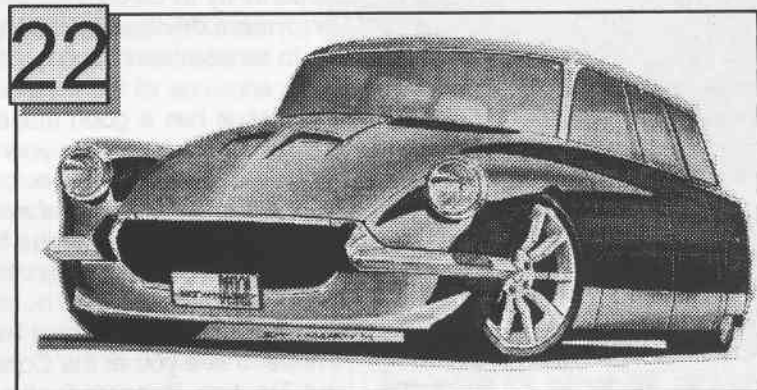
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### CCOCA MEMBERSHIP

Annual Membership \$30  
Overseas Postage Add \$9  
CCOCA memberships are due on the 25th of March, each year and run until the following March.

### CLUB MEETINGS

Every fourth Wednesday of the month, except December, at 8pm  
Venue:- Canterbury Sports Ground Pavilion, cnr Chatham and Guildford Roads, Canterbury, Victoria.  
Melways Ref 46 F10.

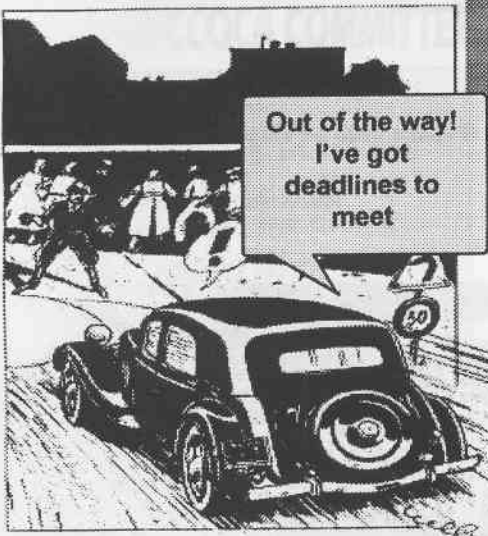
### LIFE MEMBERS

NANCE CLARK	1984
JACK WEAVER	1991

## a-tractions inside back page



# EDITORIAL VIEW



Out of the way!  
I've got  
deadlines to  
meet

I'm amazed at the support and contribution to Front Drive from our members. I hear complaints from other club Editors that they find it difficult to fill their pages. Since the last issue of Front Drive an offer has come from CCOCA stalwart Roger Brundle offering assistance. I've had David Gries, Bill Graham, Bernie and Clare Hadaway turn up on the doorstep with articles in hand. I'm now in the situation of having to hold off two feature articles for the next issue.

## EDITORIAL DEADLINES

December/January 15/12/99

## NEXT ISSUE

DUE OUT JANUARY 28

### CV or no CV

#### That is the Question

By Bernie Hadaway

Another technical article based on Bernie's personal experiences of keeping his Traction on the road in the ever dwindling availability of original parts.

Bernie's ability to write a technical article with his appealing sense of humour results in easy and enjoyable reading.

### The WORKS of ANDRE CITROEN

Submitted by David Gries, this article comes from "THE AUTOMOBILE ENGINEER" magazine of February 1934 when Andre had rebuilt the Javel factory resulting in his financial downfall.

By reading Louis & Andre in this issue of Front Drive, you become aware of the motivation from Andre Citroen to build a bigger and better factory than Renault. "The Works of Andre Citroen give a concise review of the plant in 1934 not long after its opening.

### CITROEN and the REDEX RALLY

On a personal note, I've been busy in the garage in recent weeks sorting out the Traction for its Classic & Historic permit test. New shockers, change over master cylinder and sorting out the wiring and lighting system have been priorities. It's been some time since I last had that grime under my fingernails. It brought back memories of tinkering with Tractions in my early twenties. Over recent years my garage projects have been with MGs and Alfas. When you consider that a Traction first hit the bitumen in 1934, you realise how advanced the car was for its era.

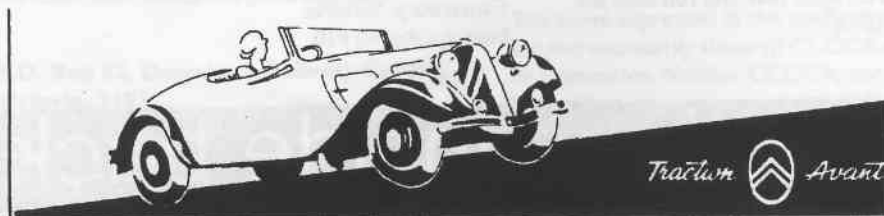
Like many of our members, I've taken out membership to our sister club, CCCV. I figure if I'm going to have my Traction on CH plates, then I'll be able to use it more often by attending both CCOCA and CCCV events. Having said this, I was surprised to see a 2CV following us down the highway on CCOCA's run to Castlemaine and Daylesford in September. The 2CV was in fact on a CCCV run organised on the same day. On returning to the working week, I phoned CCCV Editor Tom Grucza to see if there was an opportunity to co-ordinate a calendar that complimented and enhanced the enjoyment driving one's Citroen. The end result is that there will possibly be up to six combined club events for us to attend with CCCV.

This issue has a good mix of articles and I hope it keeps you reading until the next issue arrives in your letterbox in late January.

Technical features have come to the forefront due to some excellent contributions on that infamous second gear, clutches and carburettors. Some good history with the final instalments of Louis & Andre and of course the marvellous Jack Weaver story competes the last issue of Front Drive for 1999.

I hope to see you at the Concours and the Christmas picnic at Rob Roy with our Traction. Regards for the festive season and safe motoring for 2000.

*Leon Sims - Editor*



# PREZ SEZ

I missed the last monthly meeting and the run to Peter Fitzgerald's property at Daylesford ( which I hear was really well supported ) due to Helen and myself finally managing to visit Europe for our four weeks' holiday.

It was my first overseas trip and we made the most of our four weeks and then some. Half of our time was spent in France (as you do if you collect Citroens) the rest of the time in Germany, Switzerland and Italy. We spent two days with Alan and Shirley Brown and their daughters Emma and Marie at St. Cecile. When I die I would like to live in the same heaven as Alan and Shirley do every day. They have a great lifestyle, and Alan manages to spend his spare time enjoying his passion for Citroens. The barn is a real eye-opener, which is stacked full of save able cars and parts. Alan always has cars for sale either here or in France, and I can personally vouch for his integrity with our purchase of Helen's 2CV dolly.

On our first morning in Paris we came across a Traction parked in the middle of a main road and certainly saw plenty of 2CV's, particularly in rural France where they seem to survive in reasonable numbers. Of course they are very well suited to the narrow village roads and laneways and the design parameters make such a lot of sense. We drove a Xantia diesel Turbo throughout France. From our experience this model is simply fantastic - very economical, fast and comfortable, and certainly opened my eyes to the joys of a diesel engine.

We also came across a car yard selling classic cars - a convertible DS, several ID and DS sedans and wagons. Three 2 CV's and lots of other French and European models. All of them were expensive by Australian standards, so it appears that Citroens are more highly valued in Europe than here in Australia.

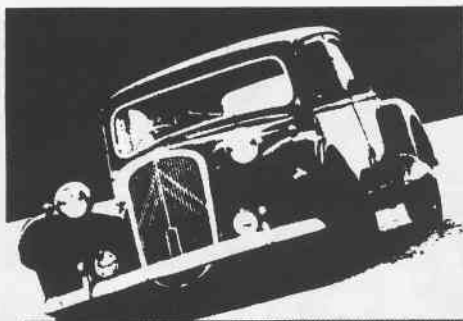
The other amazing thing I found in Paris in a model shop, was an original Citroen model tin car valued at 5000 francs !!!!!. Apparently similar models have sold for higher prices recently in Europe, but I decided I would leave it there for someone more wealthy than me.

Soon after our return home we attended the economy run to Peter and Maria Boyle's country retreat in Heathcote. A small gathering by recent standards, but we all had a great time and vowed to return again next year if possible. Finally, there are several other interesting events to attend before the end of the year. The Concours - 7th November - preceded by a Cheap Eats dinner on 6th November - are very important dates not to be missed, and I look forward to catching up with as many members as I can before the end of the year.

Finally, I also want to alert the members to the decision taken by committee to increase the membership subscription cost of CCOCA from next year to \$ 35-00 from the current \$30-00. This cost has remained fixed since the early 80's and I believe will still remain good value at \$35-00.

Your committee expects further improvements to services and benefits in the coming years to justify the increase.

*Ted Cross*



## Thank you to our contributors for October / November

Steve Bartlett  
Citroen Australia  
Cliff Bisch  
Mel Carey  
Ted Cross  
Doug  
Bill Graham  
Bernie Hadaway  
Ralph Hibble  
Gwyndaf Jones  
Mike Neil  
Peter Simmenauer  
Jack Weaver  
The Internet  
& the Ed

## ACKNOWLEDGEMENT

Many thanks to Max Lewis for his donation of a book to the club library.

It is a new Dutch publication with many excellent and interesting photos. Titled "DE TRACTION" by Rob en Wouter Jansen.





# Past Events

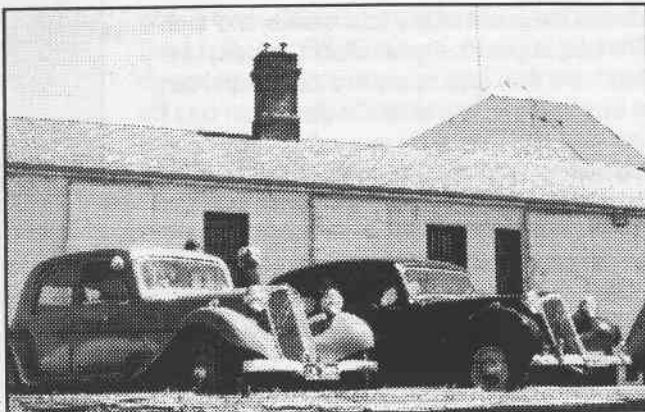
## Castlemaine – Daylesford Run September 26



My Dad, the editor, had made requests for a report on CCOCA's Castlemaine-Daylesford run. With no takers, I suggested

that seeing that I was there I would report on the day. We arrived at the starting point on the city side of the Westgate bridge to be greeted by only one Big 15 (just my size of car – well almost). I decided I needed to stretch my legs and before I jumped out of the Foulcan wagon (the Murphy-mobile), other Tractions arrived. All in all, there must have been about 50 humans at the end of the run, and some of them smelled really good. We arrived at the Castlemaine gaol along the freeways with a stop at Malmsbury. My Dad and I waited outside while the others toured through the gaol. Mum said it was

great, but Dad said my feet were too big to go inside. Always the spoil sport! Finally we reached Daylesford, and none too soon for me I can tell you. Mum and Dad said that I knew Peter



Fitzgerald from a long time ago, but I didn't remember. He seemed awfully loud and unfamiliar to me, but the less said about that is probably the better! (Humph!!!! I insist that it's not my fault

I reckon he's a really scary bloke!) Anyway... we all had a very nice picnic, I got to sleep in the shade for a while, and some of the humans kept trying to kill a small white ball by throwing some big metal ones at it....I'm not sure what a petanque is, but it there were quite a few people trying to get rid of it. Had a good sniff round some fair sized brown dogs that mooded at me, a lick of the barbie, and then it was time for some interesting talk about how to de-stick the clutch of Mum and Dad's traction. (worked too!) All too soon it was time to head back down the highway for home. (Shame about that last sausage...we were all glad to smell the green, green grass of home). Gee we had a good day.

Thanks to Peter for his hospitality, and I promise I'll try to be nice to him next time we get together.

By Murphy Sims HH&HH  
(For the poor unfortunate uninitiated that's Huge Hairy & Handsome Hound)

## Economy Trial October 17

Due to family commitments, the Sims clan couldn't make it to the economy trial, so a quick call to Ted C for a telephone report resulted in the following details.

Starting again from the Shell Westgate (popular spot & they are starting to recognise Citroens now) in very fine but windy conditions, a group of 2CVs, Tractions and moderns set out to test their Ks per litre.

The group meandered up through Tooberac to Heathcote where Peter & Maria Boyle played hosts at their holiday home.

Competitors then lazed under the shade of the spreading 100 year old tree to enjoy a BBQ and a few drinks before making their way back home.

Placings for the day were:

1st. Helen Cross	2CV Dolly	43 mpg
2nd. Bill Graham	2CV	41 mpg
3rd. Sue Bryant	Zsara	37 mph

Participants included:

Richard Bevan B15

Robin & Sue Smith L15  
Leigh & Annette Mason B15  
Max & Roz Lewis (now owners of a Traction cabriolet)  
Sue Bryant Zsara  
Robbie Stockfeld/Graham Bradshaw  
Les Vidler



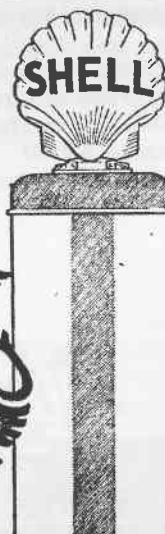
### Get that British spirit

For 46 years, more Shell has been bought by more motorists than any other brand of petrol. It's a good British habit.

In Australia alone, Shell is refining British petrol from British crude at the rate of 72,000,000 gallons a year.

The crude is brought to Australia in British tankers from British wells in British Borneo by Shell—a British company. Get that British spirit—always fill up at the Shell pump.

BUY BRITISH—BUY SHELL



always  
fill up at the  
**SHELL**  
pump



The Shell Company of Australia Ltd.  
(Inc. in Gt. Britain)

# The FRENCH CAR FESTIVAL

## WHERE

**Bennettswood  
Sports Ground  
Burwood H'way  
Burwood  
Melways 61-A5**



## WHEN

**Sunday  
14th November**  
The day will  
commence at 10am  
with  
trophy presentation  
scheduled for 3pm

Cars will be displayed regardless of Marque, in decades, eg 1950 – 1959. Food will be available, situated near the trade stands. This year's event is organised by the RENAULT car club of Victoria.



## SATURDAY 4TH DECEMBER OPENING WEEKEND OF CAREY MOTORS

*wetting the baby's head in Bairnsdale*

All right, hands up, whose cars get a regular holiday at Mel's to keep them running smoothly? And how many among us have been waiting a-a-ages for the new bigger, brighter, better Citroen Carey showroom? It is finally here!!! ... Well, there, actually - Bairnsdale of course.

Mel and Colleen's sparkling new factory and showroom will be formally opened on Saturday December 4<sup>th</sup>, 1999 in Forge Creek Road, Bairnsdale, after a Grand Parade of Citroens through the town. Be there for the Parade, and the Ribbon-cutting. There might even be some champagne-smashing and a cocktail party among the chevrons.

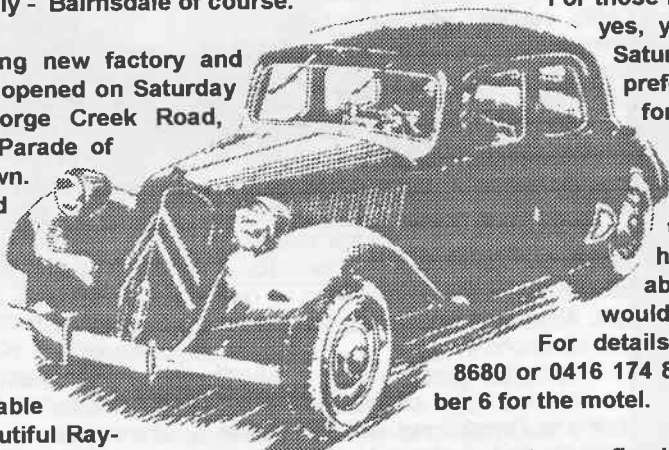
A block booking is available for club members at a beautiful Raymond Island motel (in the Lakes, near Paynesville) to make a touring weekend for those of us coming from outside Gippsland. We will check in Friday night (up to 11.30pm) have breakfast & lunch Saturday and a slap-up dinner on Saturday night. For two nights, two

breakfasts and lunch and dinner, it's only \$85 per person. If we book twenty, we have the place to ourselves. No race back on Sunday morning, though!

For those faster than a sparrow's flatulence, yes, you can come straight down on Saturday for the Ceremonies if you prefer - nothing serious will start before 12.30pm on Saturday afternoon.

But I strongly suggest you book for the motel with the rest of us, at least on Saturday night. As this place in Paynesville comes highly recommended (and reasonable) the full island experience would be a good pre-Christmas break.

For details ring Steve Bartlett on 03-9397 8680 or 0416 174 813. Bookings required by November 6 for the motel.



Archers, get your flaming arrows ready. Horsemen, prepare your swords. Ladies, sharpen your scissors. Gentlemen, start your engines...

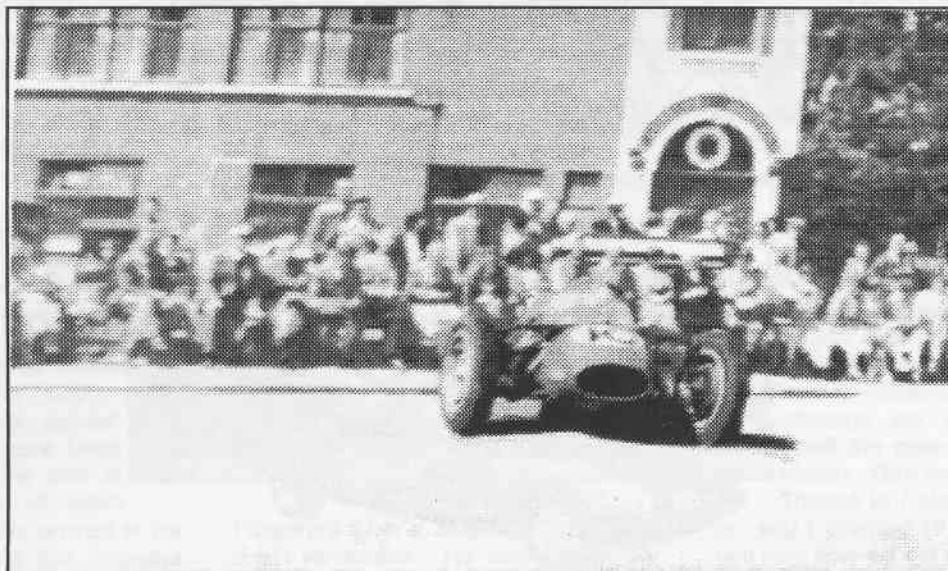
Carey Motors is ready to open its doors officially, and it's time for a BIG Citroen showing at the Ribbon-cutting!



# "the cars that Jack built"

## The Jack Weaver Story part 3

This, the last part of the Jack Weaver story, tells of the supercharged D-series, racing the Citroen GP car and the infamous Geelong Sprints episode.



While the 11D was still enjoying its heyday, I became involved in building up a dirt-track racing sedan for a gent, John Brockley. This involved several "new" approaches which stunned the experts, but which proved successful and are now accepted as the norm in this type of racing. A tubular space-frame was built up in which all members were in tension or compression. To this was attached a light weight body, welded so that it formed a single, quickly removable shell. The space-frame was supported on a fully independent suspension (front adapted from a Hillman Minx). This car raced very successfully here before being taken to Queensland. We are talking about 1972-3.

Next move for sports sedan racing was to start preparing a mid-engined Hillman Imp, as a school project. As the project approached completion, fitted with a pair of Dellorto carbs, I had also been experimenting with turbo-charging an ID sedan as my tow car for the racing vehicles. The Turbo ID went so well (top speed of 140 mph as confirmed in an earlier edition of Front Drive) that I decided to extend the "technique" to the Imp engine, which on the dynamometer gave 198 bhp from 900cc – very close to 400 bhp per ton for the car. The dynamometer resources used to enable this engine development were kindly, if unknowingly, made available by the Victorian Education Department through the facilities at the (then) Caulfield Technical Institute.

CAMS, Confederation of Australian Motor Sport stepped in at this point and said, "you can't swap the motor from behind to the front of the differential line and visa versa". Another project abandoned.

About now, I heard on the trans-Tasman grapevine that my former GP remains were mine. Basically all I had acquired were the body, chassis and suspension. Air transport proved cheaper than sea. It looked like a heap of junk when we collected it at Tullamarine. Rebuilding it took longer than the original design and construction. Again there were jousts with CAMS, this time because my rims were deemed too wide. After some research, I was able to convince them that mine were quite kosher.

We ran the car at a few circuits – Sandown, Winton, Calder and Mallala in South Australia. There were minor mishaps at such times – a track rod end breaking as I was coming out of the back straight at Mallala. Adapted from a Ford 10, a replacement had to be machined up over night. Also at Winton, we lost a couple of teeth off second gear.

Mainly, however, the resurrected GP car was run in hill climbs and sprints, winning at Templestowe with fastest time for the day and winning at Mt Tarrangower a week before at the fateful historic sprints at Geelong's Eastern Beach in October 1985. At the latter, I totally wrote myself off as well.

Near the end of the run at Geelong,

four spectators gave indications that they were about to walk onto the track. While selecting gears and power to maintain control and avoid disaster, I went through the hay bales at the end of the course (at about 120mph) only to be faced with an illegally parked Morris Mini in the run-off area. I had to make a decision (a quick one at that) between nudging the Mini or ploughing through more spectators. I chose the Mini although I suspect the spectators would have been more yielding and a bit more kinder to the GP car and me.

The two cars came off very badly, and I spent two months in hospital. My left leg suffered a total of eight breaks as the front LHS wheel of the GP car came round into the cockpit. It was while the GP car was in its racing prime that I came to the conclusion that my competition tow car (the turbo ID) while having the required power, was lacking the internal space needed to carry all the gear and family. I thought of a Citroen Safari wagon, but with a decent sized motor – 4.4 litres of alloy V8 for instance!!

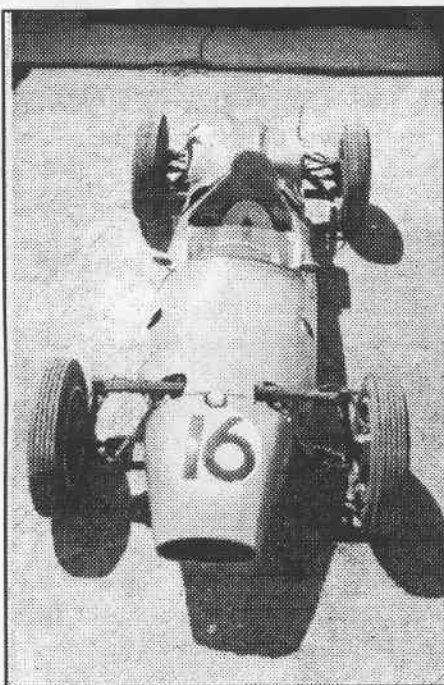
I obtained a complete ID21 Safari and proceeded to adapt the body and transmission to accept the Leyland P76 V8 that I had obtained. Adaptation involved firewall modifications to accept the motor, a completely fabricated alloy bell housing; making up a new auxiliaries drive along one V8 bank, the belts being tensioned by a set of adjustable pulley checks, permitting the water pump, alternator, fan





and hydraulic pump to be placed over the clutch bell housing; and the re-location of the disc callipers.

While these modifications were in progress I was being pestered by a gent who wanted to buy the turbo ID. Eventually I succumbed and sold it. Maybe a dreadful



mistake though selling did avoid me being regularly fined, since the ID didn't come into its own below about 140 – 150 kph. At such speeds, it was very comfortable to drive.

Soon, I was hearing that this gent was mucking about with my patient work on the turbo ID – reverting the carb jets

combination, and toyed with fitting it mid-engine to a Hillman Imp which had the shell cut "clam-wise" to facilitate power unit access. I got as far as fitting it in place, and dreamed of Dandenong Saturday night drags. However common sense prevailed. Since the Geelong, which certainly has effected my mobility, things haven't been entirely static, none the less.

A few years back, an automotive trade friend, Mick acquired a fibre-glass Dino Ferrari replica body. I was recruited to do the suspension and chassis design for it, the final product using a transverse-mounted mid-engined two litre Lancia Beta (twin OHC with 5 speed Box) is now nearing completion. I believe the chassis could have been considerably lighter but for the cautiousness of the certifying engineer – the old motto: "If it is going to be strong, it has got to be heavy". A headache at the time was accommodating the "free-hand" body which wasn't the same both sides!

Again the competition bug was nibbling and Mick and I started to prepare a pair of Hillman Imps for Group N racing (appendix J). Unfortunately, halfway through the project I suffered a heart attack. Possibly this was the indirect result of having our daily Imp shunted in the rear by an inattentive lady driver while stationary at a compulsory stop. My theory is that the impact dislodged some "crud" in the cardiac pipework. The combination of this illness with the dodgy left leg from the Geelong crash, seemed to make my chances of getting the full competition licence needed for circuit racing rather remote. Consequently, my Imp slowly nears completion, while Mick's has been

Those who thought that Jack got all his thrills and adventures on the race track are mistaken.

For example, one windy day in the summer of 1975-76, Jack was summoned home from his teaching job with the news that his workshop and house were alight. Starting in the workshop and fanned by a strong southerly wind, the fire generated great heat and so spread to his house nearby and scorched the fibre-glass windows of a duck house on the next property. The loss of the cars, bits and equipment was considerable.

Cars lost were an almost complete close-coupled (very short wheel-based) ID19 coupe – brutal looking, typical of the period, twitchy at speed and meant as personal transport – and a Hillman Imp. The intense heat melted an Imp engine into a puddle of aluminium, with only the steel parts recognisable. Some \$5000 worth of hand tools, a lathe and lots of spares were other losses. The wooden casting patterns for a DOHC racing 1300 motor were also consumed.

After taking two truck loads of debris to the tip, the bulky car bodies were buried in a trench beneath the present day Weaver chook house.

## JACK WEAVER at GEELONG

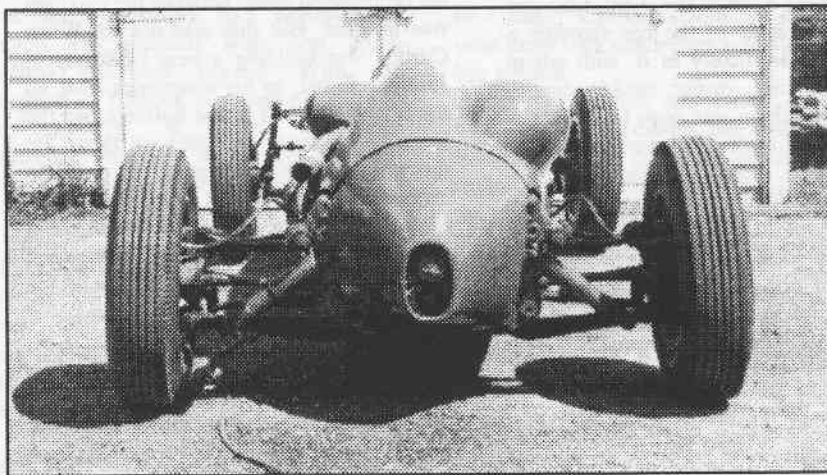
In the Jack Weaver Story he writes of his nasty experience at the Geelong sprints which puts him in good company with the late Bib Stillwell who also ran out track. What Jack didn't mention is that his times in the GP car and the 11D were not too shabby. Gary Grant's book, "the History of the Geelong Speed Trials 1956-1985" lists all competitor's times and the vehicle driven.

Jack's results were as follows:

1967	Citroen 11D	17.98
1982	J.W. Citroen Spl	14.80
1983	J.W. Citroen Spl	13.80
1985	J.W. Citroen Spl	13.08

These times when compared to other notable competitors show the Citroen Special in a very good light, for instance.

Lex Davison, an Australian Grand Prix winner and one of Australia's greats drove a Brabham Climax (12.89), Cooper Climax (13.44) and the Cooper-Irving (14.20) which was developed by Repco engineer Phil Irving.



back to standard for example. His ignorant efforts ruined a set of pistons by burning holes in the crowns, and blowing the oil filter off through locking down the relief valve.

I was so disgusted that I resolved to have nothing more to do with Citroens as every day cars, and I sold the uncompleted ID21 – V8 Safari project "as was". However I did retain the engine and 4-speed trans-axle

racing for several seasons. We still have hopes for mine!

In closing, my "messing about in motor cars" – perhaps a little like the eccentric Toad from "Wind in the willows" – has brought me a lot of pleasure, and a few hair raising moments. I owe debts to a number of people over the years, and in particular, I would mention the following people who formed my crew when I raced and rebuilt the 11D. Bernie Kelly, Heather



# RENAULT

## *a comparison*

The struggle between the two men began in 1919, when Citroen announced that he was putting on the market a popular model which would do for France what the T-Ford had done for America. Although Renault was sceptical, Citroen took his time, using modern advertising methods, building up the public 'image' of the car. His name was well enough known due to his shell production during the war, and he published his ideas in an album dealing with his wartime achievements; then in the last pages, he referred to the coming popular car, a vehicle produced with the 'same process as the one employed for making shells'. He would turn out a hundred vehicles a day as Ford did. Choosing the right moment, he brought on to the French market his new tool-steels, which he claimed could cut more quickly, and which he had used in his wartime shell programme. These would revolutionize the car industry too. In the spring of 1920, on a date carefully imprinted on the Parisian mind, he unveiled his Perseus in the Alda showrooms in the Champs Ely sees.

The crowds waiting for it were impressed by the lightness, the apparent fragility, of a vehicle which resembled the T-Ford or the Chevrolet 490. Even more impressive was the price, 7,950 Frs, half the cost of any other car. Like Ford, Citroen was attempting to reach wider layers of society; and price reduction, he knew from America, meant a bigger market, mass production and greater profits. He had originally wanted to sell it for 7,250 Frs, but his colleagues, who had put money into the project, were against such a low figure.

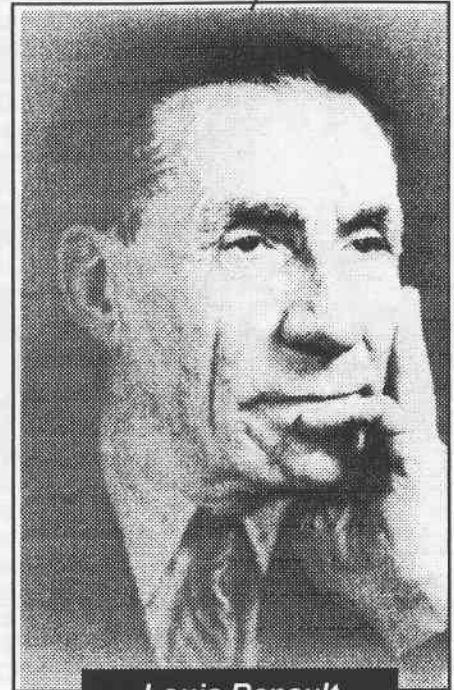
Here at last was the cheap French car, which could be compared with America's best, a 4-cylinder, 10 hp four-seater with a maximum speed of 50 mph. When one of the first Citroens sold to the public covered 180,000 miles before returning for servicing, its name was made: twenty-five thousand Frenchmen were prepared to buy it immediately. But unfortunately Citroen had overplayed his hand; he could not produce his cars quickly enough. Also, with the rising cost of living and devaluation, the price was too low. It soon had to be increased by nearly 50 per cent; but even at 12,500 Frs people bought it.

An ingenious sales device invented by Citroen was the individual letter to the

client, known in France as the *de prospection*

or 'forward-looking' letter. A filing system was formed containing the names of two categories of clients; those who might shortly change their car; and those who might buy a new one (an intention they had indicated by a visit to the local showroom). Each agent would draw up a list of these potential clients and send it to the Citroen firm at Javel. Here each name was filed, with details about the owner's present vehicle, if exchange was contemplated. Three letters were then sent out. The first, which thanked the potential client for visiting the local showroom, contained a description of the model considered suitable for him. Two weeks later, a second letter, emphasizing the exclusive qualities of the car, was dispatched. Finally, a week after this, the client received the third letter, informing him of the advantages and facilities for repair, exchange, and so on. The text of the letters was uniform and duplicated, but the ink and lettering were such that the client had the impression they were specially addressed to him. The agents were reminded not to forget any titles or letters after the name of the client, who was sent an illustration of the car showing a radiantly healthy family in it, with whom even the ugliest owner could identify himself. Everything was done to flatter the vanity of the French petit-bourgeois. If the sale was then made, the agent sent an 'erasure' letter to the factory, and the relevant card in the filing index was removed and destroyed. So successful was this method that all French manufacturers were soon following suit and sending out 1,500,000 of these letters annually. They were responsible, it was claimed, for 15 per cent of the sales.

Another publicity device employed by Citroen was the use of his scrap sheet-metal for small toy models of his cars. This too was so successful, particularly with children, that the manufacture of these toys was entrusted to a specialist firm. Other constructors again had to follow his lead, and by 1930 the sale of these models by one firm alone was eighty-five thousand. There was no question of profit here, only of publicity; models costing 25 Frs to make were sold to the public for 20 Frs. In every family, said Citroen, the first three words a child must learn were 'Papa, Maman and



**Louis Renault**

Citroen.

All this may give the impression that the propaganda tussle between the two men was unequal. But this was not so. When Citroen was building a new workshop at Javel he found, to his annoyance, that all the bricks supplied to the builders had the Renault 'Losange' imprinted on them. He did not know that Renault, in order to economize in the varied building projects of his expanding empire, had bought a brick factory that supplied the requirements of a large part of Paris. Citroen rang up the Renault works and requested that, if Renault had such a monopoly in the area, he should at least supply bricks without his trade-mark to another motor-car manufacturer. Renault replied that the trade-mark could not be obliterated without considerable expense; he would erase it if Citroen paid. He received no answer to this suggestion; and part of Javel is to this day built with Renault bricks.

Renault was delighted that Citroen overplayed his hand in the Champs Ely sees showrooms. Renault's own showroom on the Champs Ely sees was relatively modest; but Citroen, to make his appear more magnificent, filled the entire back wall with a mirror, so that his cars appeared multiplied as though in a huge hall. The

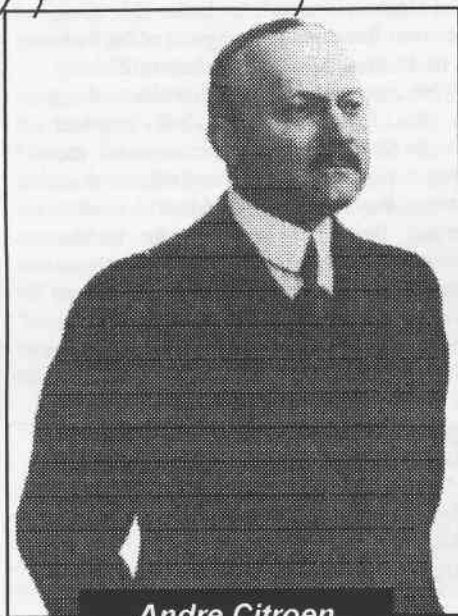
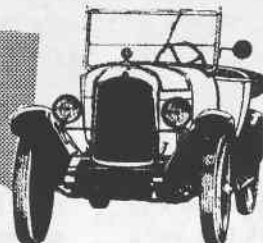


# CITROEN

## Andre

of personality

Traction Arrière



Andre Citroen

glass for such a large space was defective, and it distorted the image of the vehicles ludicrously. Renault often wandered past this showroom and had a quiet chuckle to himself.

In 1924, Citroën introduced his all-steel body with soldered elements, which even the Americans had hesitated to employ. His methods were now being watched all over Europe. With the exception of Charles Weiffenbach and the Englishman W. R. Morris, no other constructor thought he could succeed. (Weiffenbach was a Frenchman who tried to form a syndicate of French constructors to emulate Citroën; but they were too individualistic and were unable to work together. Morris also saw the future in terms of mass-production. 'Produce in mass, by the masses, for the masses,' he said a process he put into practice in, of all places, Oxford.)

Renault had been confident in 1918 that he had outdistanced all his competitors, the famous names, Panhard, Levassor, Mors, Peugeot. But that a man without any workshop experience, who had pushed himself into the limelight during the war by making shells, should oppose him in this way seemed an act of impertinence. What is more, in the space of one year Citroën's name had become better known in the world than his own and he had been in the business since 1898! But Renault had

always been a fighter, and he decided to meet Citroën on the newcomer's own ground. In the early thirties for example, Citroën became convinced that there was a big future in inter-city buses; the public would prefer comfortable cross-country buses to trains because they could see more of the countryside. He would select a good circuit, say Lyons-Marseilles, and announce that Citroën buses would run a regular service between the two cities. Renault was not slow to imitate. As soon as he saw a line was successful, he would open a similar service, generally in the same part of the country. If Citroën chose Lyons-Marseilles, Louis Renault would choose Marseilles Toulouse; if Citroën chose Nantes-Rouen, Renault would select Rennes-Orleans.

Another propaganda field in which they clashed was exploration. Citroën organized great expeditions across equatorial Africa, Asia and as far as China, in teams of caterpillar-tracked vehicles. The ease of communications in the new age of the aeroplane had caused Europeans to look outside their continent. New sections of the population were becoming educated and they could read about the unknown countries being opened up by machines. One no longer had to be a Marco Polo to go to Cathay; Citroën's team of mechanics went there with motor-cars which one could buy oneself.

Louis Renault was forced to follow with similar expeditions but wheeled, not tracked. He felt confident enough of his technical superiority to remain faithful to the wheel, which he contended would always be better for civilian purposes. His teams used six-wheelers to cross the sands of the desert; thus the struggle was not only between Renault and Citroën, but between caterpillar-tracks and wheels. Here Renault was right. In agriculture today a tractor with caterpillar tracks is seldom seen. Three Renault six-wheelers left Colomb-Bechar in Algeria on 24 January 1923 to link up its railway terminus with the Niger railway system, thus opening a regular route across the Sahara. Among the Renault team of six were the brothers Rene and Georges Estienne (sons of the Colonel Estienne of tank fame). It took them seven days to cover a distance of 1,500 miles. The speed of the crossing eliminated the water problem in places where no caravans had been able to travel before. This was followed by the lone

crossing of a small 6-hp Renault which provoked an immediate reply from Citroën with a 5-hp car. Renault then sent his cars to the Cape through the tropical forests of Central Africa, Citroën replied by sending cars through the South American jungle. In 1926 four Renaults left Beirut and crossed Persia for India. Later his vehicles crossed the Andes to Chile; while Citroën did his first trip through Alaska. Wherever there was a barren part of an unknown continent the issue was joined.

On one occasion the two men almost came to blows. Citroën had persuaded King Albert of the Belgians to accompany his expedition to Lake Chad an astute move because the King was one of the most popular foreigners in France. Citroën had installed a series of staging-points, caravanserais, where the travellers could rest; and a number of journalists were accompanying the expedition. But shortly before its departure, when the King of the Belgians had already left Brussels, French consular officials in North Africa reported that there was a danger of native riots; the local authorities could not be responsible for the royal safety. In these circumstances, Citroën had to cancel the project and apologize to the King. Later, he learnt from travellers who had been there at the time that there had been no riots or disturbances of any kind. Someone had invented the scare to stop the expedition. The Citroën family today still contend that Louis Renault was behind this. If so, he revealed an unfamiliar crafty side to his character.

François Lehideux, who was by now his uncle's closest associate, tells of how Renault retaliated against Citroën's publicity. He bought a plot of land opposite Citroën's works at Javel, on which he built nothing, but around which he erected palisades bearing in large letters the word RENAULT, and beneath it an arrow pointing south along the river with the words 'RENAULT-2 km TO BILLANCOURT'. Whenever Citroën looked out of his office window he saw this monstrosity; he wrote a sharp letter of complaint.

'You'd better go and calm him down,' said Renault to his nephew. It's a chance to get inside the place too, and see what he's up to.'

When François Lehideux called at Javel, Citroën took him to the window and





## Louis & Andre – a comparison of personalities

pointed. 'It's a provocation! Here, on my door step!' Whereupon Lehideux, a man of unruffled urbanity, drew Citroen's attention to another landmark they could see on the Paris skyline, the Eiffel Tower which Citroen had recently hired and plastered with his name, illuminated in electric-light bulbs. 'Isn't that a provocation too?' asked Lehideux. Citroen was a man of some humour and his anger turned to laughter. Louis Renault later removed the 'provocation'.

On another occasion, when Lehideux was lunching with Citroen, he thought he would make a joke and said, 'As my uncle is a great constructor and you are a great salesman, wouldn't it be better if you joined forces instead of being rivals Renault will make the vehicles, and Citroen will sell them.' Somewhat to his

'A kind of Gresham's Law comes into operation in competition of this kind, and the best elements, technical and administrative tend to gravitate to one or other of the big rivals. It gave Renault pleasure to realize that, thanks to his and Citroen's efforts and rivalry, the average price of the French automobile was now down to 400 Frs a pound a price that compared favourably with similar essential commodities, such as butter, meat, coffee and clothing. Shoes, for instance, cost nearly 2,000 Frs a pound; carpet-sweepers, just over 1,000 Frs a pound; men's suits, nearly 4,000 Frs a pound. It pleased him to regard automobiles like food, as essentials, and to think that America even though she had out-distanced them all produced five million private family cars a year, enough

of one model, Renault replied with a host of models. Here, he probably understood his countrymen's psychology better; for the French have always liked variety. They had grown accustomed to choosing between front and rear engines of between 2 to 26 hp, and a large selection of body styles. Just as ten years earlier the workers in the Renault factory had opposed standardization of production, so the French public opposed standardization of design. Renault's output of tourist models ranged from the famous 6-hp to the Reinastella 8-cylinder 40-hp with a maximum speed of 90 mph (the Presidential-Ambassadorial model). His cheap tourist models sold at about 20,000 Frs. The 6-hp model had been brought out by Renault to counter Citroen's 5 hp. It was a robust, economical tourer with a new technical device, a detachable cylinder-head which facilitated repairs. The final and decisive blow was given when Renault confronted his rival with the most modern assembly-line in Europe.

For this he acquired the lie Seguin in the Seine opposite the Billancourt works, and built a bridge connecting it with the factory. Six hundred and fifty thousand cubic yards of embankment were erected to raise the level of the island sixteen feet, as protection against a repetition of the 1910 flooding. A 35,000-hp electrical works was built to run a new coach-work assembly-line in a hangar several hundred yards long and five floors high. This private source of power ran the ironworks, forging-press, smelting-works, the workshops for pressing, gearing, machine finishing, the sawmills and paint-drying rooms. Billancourt with its thirty-two thousand workers operating fifteen thousand machines was now the greatest industrial concentration in France, covering an area of two hundred and fifty acres, as big as the town of Chartres.

In the building of the huge bridge connecting the island with Billancourt, Renault took a commercial risk. Legally, the Seine was a 'public highway', and Government permission was required to build a private bridge across it. Francois Lehideux was sent to negotiate with the Minister of Works, who said that if Renault built the bridge, he did so at his own peril; six months later he might be told to dismantle it. Most industrialists would have been daunted by the millions involved in such a venture. But Renault gave orders for its construction. He considered that his firm would always be working in one way or another for the Government, and he could invoke 'reasons



1933 – The front of the Citroen factory after its reconstruction.

surprise, he says, Citroen did not appear at all amused by this even, sometimes, outpaced production.' When in 1934 Citroen produced his front-wheel drive<sup>1</sup> which obviated the transmission-shaft, Renault admired his daring but he did not imitate it. Although Renault out-distanced all his competitors in truck and lorry construction, with 50 per cent of French production, he lagged behind Citroen in private cars; he produced forty-five thousand a year to Citroen's sixty-one thousand. Citroen stated blandly: 'In a few years people will no longer be saying "motor-car" but "Citroen".'

if placed head to tail to stretch from Moscow to the Chinese frontier. He and a few men like him had done all this in their lifetime. Now, without the motor-car, modern society would come to a standstill.

Most Frenchmen thought that Citroen would win the struggle, between the two rivals, that he was the real French Ford. Every year at the Salon de l'Automobile they waited to see what new model or 'stunt' he would spring on the public. But they had reckoned without the pugnacity of the Saumurois peasant. Confronted with Citroen's talent for mass production



# Louis & Andre – a comparison of personalities

of state'. The assumption proved correct. When rearmament began shortly after this, he received large Government orders, most of which he handled on the new site. It had cost him very little to buy, on account of its lack of communication with the mainland, but it is today one of the most valuable sites in Paris.

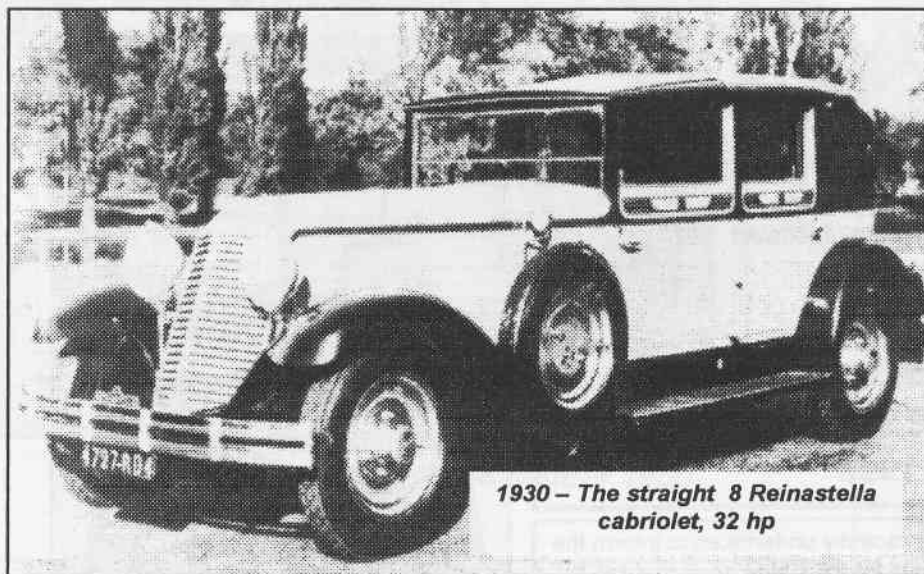
In 1931, when the new factory on the island was nearly complete, Renault did the unheard-of thing of inviting Andre Citroen to inspect it; and Citroen did the unheard-of thing of accepting the invitation. M. Reiner, Citroen's biographer, says that when Citroen arrived that morning Louis Renault, wishing to show off the extent of his domains, said grandly, 'We shall have to use a car to see it all in a morning.' Irritated by the insinuations of this, Citroen proposed at first that they

was to show him the lie Seguin that morning. He ruined himself after, by trying to do in three months what had taken me thirty years.' Whether these figures are true or not, Citroen undoubtedly tried to expand his works at Javel in a very short time. Had there been no 1930 world crisis, he might have succeeded; but here the gambler over-reached himself. Always heavily in debt, he could not face his creditor's sudden demand for payment. The old saying still applied: 'Citroen never realizes that the debit side of a firm can be greater than the credit side.' One of the reasons for his fall was his commercial self-confidence and the fact that, thanks to his ingenious propaganda, the public had become mesmerized by him. He was always ahead of his time. For example, he envisaged the front-wheel drive (which is

sold over eighty thousand vehicles a year. Citroen, as usual optimistic, assured him that this could easily be achieved. In fact, he sold only seventy thousand. Adhering strictly to the letter of the law, Michelin sent in his bill without the 10 per cent discount. This process continued for several years, Citroen ever confident that he would soon be able to pay the balance. He never reached the eighty thousand annual sale, thereby incurring large debts, so that when the economic crisis of the thirties struck him he became insolvent and Michelin, his chief creditor, bought his firm for very little. It is still run today by Michelin. Completely bankrupt, Citroen first approached Flandin, the Finance Minister, for help. But the world economic crisis had struck France a little later than the other European countries, and there could be no question of a Government subsidy. Flandin suggested that he should approach one of the other big automobile firms, Renault, Peugeot, Berliet. Today, the Citroen family claim that Flandin deliberately refused governmental help because he was a friend of Renault. This seems unlikely because, when Renault was approached about taking over Citroen's bankrupt firm, he said, 'That I could never do to Andre Citroen. If I did, people would say that I wanted to destroy him.'

On the contrary, he gave instructions to his sales department that Citroen was not to be embarrassed by Renault salesmanship. 'This is not the moment to take advantage of him,' he told Francois Lehideux. 'Let him sell if he can.' The rival firms of Peugeot and Michelin were less squeamish. The former immediately took a page in the newspaper for an advertisement showing their firm in a flourishing state, with spick-and-span mechanics welcoming clients smilingly at the door. This was contrasted, also in the advertisement, with the illustration of a broken-down, dirty, dilapidated garage, dustbins bulging at the entry; beneath it the motto, 'Buy your car from a going concern not a derelict one! This incident annoyed Louis Renault, who took the unusual course of ringing up Peugeot and criticizing his 'bad taste'. Andre Citroen never recovered from his bankruptcy, and died prematurely on 30 July 1935. Thus Renault's methods were again vindicated. The peasant mentality of this man who never borrowed a sou weathered the financial hurricanes that struck Europe as if they were squalls of rain. His greatest rival was gone, and he stood even firmer on the soil of France, towering over the others.

This was something for which they never forgave him.



1930 – The straight 8 Reinastella cabriolet, 32 hp

should go on foot. But this proved too much of an undertaking, and he finally consented to be driven around in one of Renault's 80-hp Reinastellas. He was evidently impressed, and afterwards accepted Louis Renault's invitation to lunch at Maxims (not the sort of place Renault usually frequented).

M. Reiner says that Louis Renault, who was tongue-tied at first, soon warmed up, twisting his napkin excitedly as he talked and jabbing the tablecloth with his fork to make his points. He showed off all his practical, workshop knowledge, which he knew Citroen did not possess, saying to the Polytechnician, 'Of course, I know you've been to a good school and have all sorts of academic qualifications. Four years after, when Citroen went bankrupt, Renault was reputed to have said to a friend, 'The only dirty trick I ever did to Andre Citroen

only today being developed with such astonishing results). He leaked' the information that he had something extraordinary to offer before he had constructed more than a few experimental models. Meanwhile, the car which had made his name, the famous 7-hp, was piling up in the stock-rooms because the public naturally refused to buy whilst there was a possibility of getting something even better. Louis Renault would never have allowed such a situation to develop; he would have exhausted his old stock first.

Another, less comprehensible, reason for Citroen's collapse was connected with Michelin, the tyre manufacturers, a firm of shrewd Auvergnat peasants who lived in watertight seclusion and economy, putting aside every sou. Michelin suggested that Citroen should have a 10 per cent discount on all tyres bought from him, if Citroen



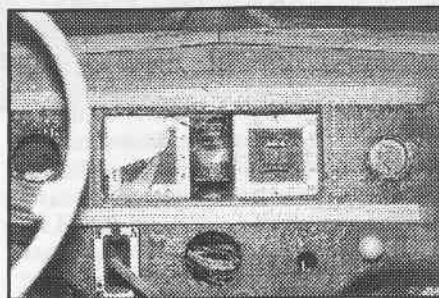
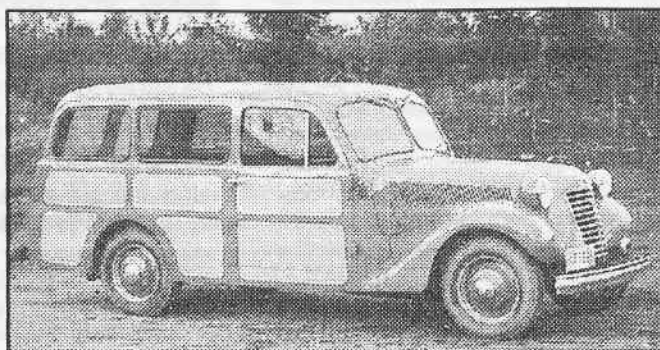
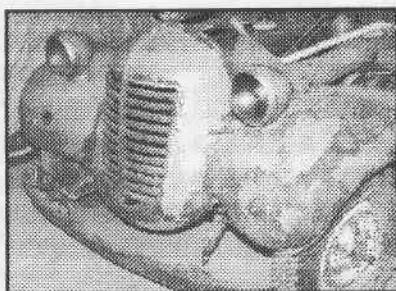
# The LYNX

In post-war Finland there was a shortage of drivable cars and importing of new cars was extremely difficult. Pre-war cars were in various states of disrepair due to their requirements during the war. Due to this it was especially difficult to locate suitable vans for the commercial needs of small business. This one off commercial van or station wagon was designed by Paavo Lammer of Finland, body work by Olavi Rannikko and painted by Kauko Vainikainen. The upholstery was by Erkki Nummela, who with the others worked for Autokoritehdas K. Nummela Co. in Turku, Finland.

The car was ordered by a Mr. Pentti Aaltio, who owned an auto and spare parts dealership in the town. The company was called Auran Auto Company.

The Lynx or as it was known in Finland, the Ilves was based on Citroen Traction components including the engine (no. AD-08290) and gearbox, radiator, steering, front suspension and foot controls.

The front guards and bonnet are 15CV.



## CCOCA CITROEN OWNERSHIP SURVEY SEPTEMBER 1999

A survey of CCOCA members and their cars was recently undertaken to inform the committee in their consideration of future directions for the Club.

Extracts from the survey include:

No. of subscribers surveyed:	158 + 18 "lapsed" (Still hoping!)
No. of "Joint" members:	104
Total membership:	280
No. cars reported owned:	358
Being: Traction (all models)	155      43%
Rear wheel drive:	20      6%
2CV (incl. Ami, Visa):	56      16%
D (all models):	72      20%
GS	14      4%
CX	19      5%
All other Citroens	22      6% (SM, BX, AX, XM, Xantia)

Membership and ownership of Traction, 2CV and D models by location was, as expected, highest in Melbourne, followed by Victorian country and New South Wales, these comprising about 75% of all cars reported owned.

Interesting? The Committee and all members would like to know what you think - for publication in *Front Drive* or not, as you wish.

Let's hear from you.  
Peter Simmenauer

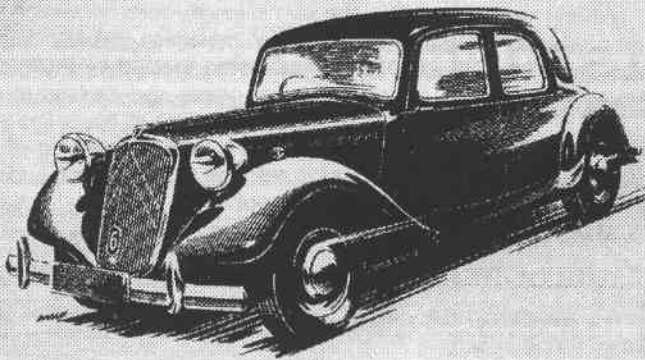
No. owners reporting ownership of	No. of cars:
Non Citroen	9
1 Citroen	74
2 Citroens	35
3 Citroens	17
4 Citroens	11
5 or more	24





# CITROEN

## advertising in australia



### ANOTHER WIN TO CITROEN FRONT-WHEEL DRIVE!

On 3/10 at Bathurst, P. Danman, driving a Citroen 23.6, only private entry, won the 25 miles Closed Car Race. In torrential rain, off 1 min. 30 sec. from five scratch cars of a famous sporting name. Front-wheel Drive showed its superior speed when cornering by early lapping the field, and went on to win without effort. The circuit was closed later as too dangerous. Citroen Front-wheel Drive demonstrates again its ability to hold the road and handle under perfect control at all speeds under any conditions. Ring FJ 5136—test it out for yourself!

Distributors for Victoria, New South Wales and Tasmania  
**COMMONWEALTH MOTORS PTY. LTD.**  
111-125 BECKETT STREET, MELBOURNE Phone: FJ 5136

*Australian Motor Sports – November 1950*

### Another outright win to CITROEN FRONT WHEEL DRIVE!



*Australian Motor Sport  
September 1950*



## CITROEN

### FRONT WHEEL DRIVE

known all over the world  
**IS STILL THE BEST BUY!**

*Australian Motor Sports  
December 1951*

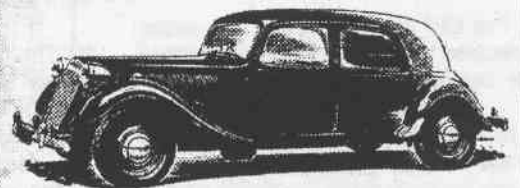
**Go  
any-  
where,  
any  
time**

Front-wheel Drive, amazing safety feature "pull" . . . gives absolute control on any surface. Citroen Front-wheel Drive is still the most distinctive and advanced car of today. See it now!



## CITROEN

Distributors for Victoria, New South Wales and Tasmania  
**COMMONWEALTH MOTORS PTY. LTD.**  
111-125 BECKETT STREET, MELBOURNE FJ 5136



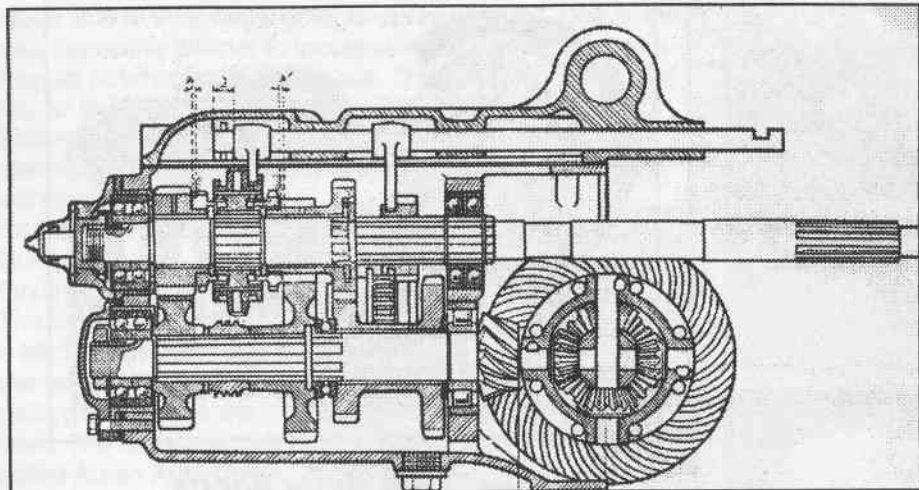
LIMITED NUMBER FOR EARLY DELIVERY

*Australian Motor Sports  
September 1951*



# What about that second gear

by Bernie Hadaway



**The "Traction Box"**

Many of us listen to those disconcerting noises from the 'traction box' and wonder about the two possible sources. We all know about the main culprit but what about that 2ND GEAR that suddenly decided to disintegrate with often disastrous results?



Well, I've had two events over the years and decided to have a closer look at this failure before rebuilding my changeover box.

The problem could have started a long time ago when there was all that confusion with the early tractions and swapping the overheating auto box for an improvised manual box.

Perhaps the communication between the

***We all know about the main culprit but what about that 2ND GEAR that suddenly decided to disintegrate with often disastrous results?***

hard-pressed designers in the drawing office and the blue collar lot in production was not quite up to scratch.

Anyway, there appears to be three design/manufacturing shortcomings that add up to a less than optimum arrangement for 2nd gear longevity:

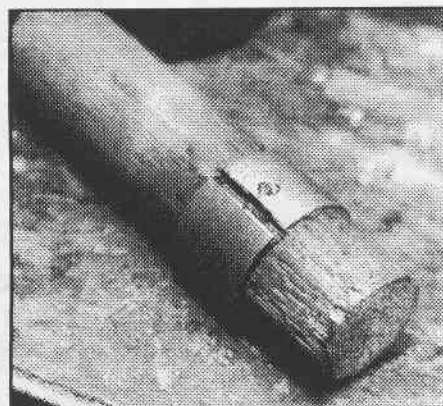
1. The main shaft 2nd gear journal is 0.09 mm. smaller than the adjacent spline which means that the bearing running clearance must be at least this amount from scratch.

2 The heavy press fit of the syncro cone locally closes the bore diameter of the gear by about .04 mm. (on the gear that I am using)

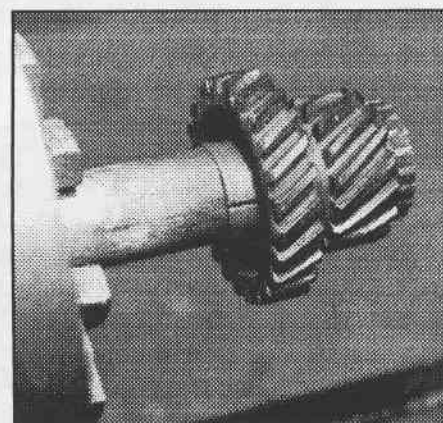
This does not help either when one has to fit the gear over the spline. When we manage to finally get the gear to its operational position it is a pretty wobbly fit even with the best of intentions.

3. The journal length does not exploit the opportunity for maximum stability of the 2nd and associated gear. I think that those blue collar lads years ago decided to reduce the shaft diameter at the spline run out and one wonders if the drawing office ever found out. The illustration in the manual suggests not.

All this makes a pretty unsatisfactory situation when things start to wear. The load applied in 1st and reverse operation aggravates an already unstable situation with high loads being applied at the end where a bearing should be - but ain't! (Inspection of worn gear bushes indicates this to be the areas of maximum wear).



***The improvised lapping tool***

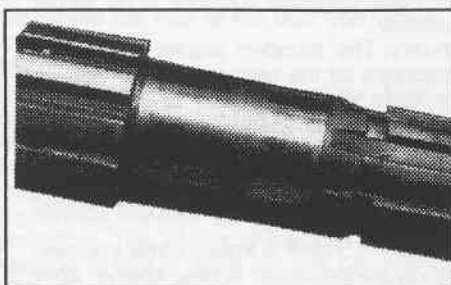


***The lapping tool in the lathe with second gear pinion***



I suspect the combinations of 1, 2 and 3 produce a condition when a worn bearing allows the 2nd gear teeth to ride high (out of mesh) adjacent to the maximum bush wear whilst still maintaining a satisfactory (in mesh) condition at the less worn bush (syncro end).

This would account for the mode of breakage that always occurs. A progressive tooth fatigue failure starting at the maximum wear end and running out progressively to surface before reaching the syncro end. Scrutiny of my worn 2nd gear tells the story. The heavy scuffing of the gear teeth where the breakages occur indicates poor involute action with high tooth flank contact - whilst the syncro end shows better contact with original surfaces still evi-

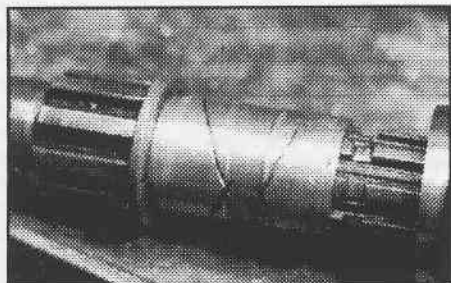


**Mainshaft showing reduction of journal at spline runout**

dent.

Eventually the stressed part of a tooth will get tired of all this and will drop off - hopefully to the bottom of the box. We could go on driving with the remaining syncro half doing a man-sized job for a while but more teeth will follow and noises should tell us that it's time to stop and have a look.

A possible fix-it idea was stimulated over a glass of red with Mel Carey when we realised that the IMPORTANT NOTE on page 52, para. 17 of the Repair Manual was not substantiated in fact. All bronze bushes removed from my 2nd gear pinions (I have a box full) are perfectly concentric, which suggests that the pinion bore is concentric with the gear teeth, pitch diameter. In contradiction to the Manual!



**The new phos. Bronze bush installed**

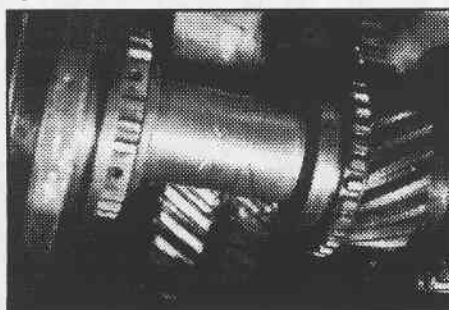
We considered fixing a full length bronze bush to the main shaft journal and running the bare pinion bore on the outer diameter of the bush. There are apparent advan-

tages. One can choose an appropriate diametrical running (I've used 0.05 mm) and also get the full length bearing. Also, the greater bearing surface improve load carrying capability.

There are a few requirements. The broached bore of the pinion will benefit from a smoother finish. This was rotary lapped in the lathe using an improvised lapping tool made from an old pinion bush, split, expanded and secured to a timber dowel. When loaded with a medium valve grinding paste it made short work of producing an accurate, excellent finish whilst fixing that closing down problem at the syncro end (No. 2). Very satisfactory.

The bore of the new bush was machined to be a reasonably tight fit over the splines with small low-angle chamfers provided on both bore ends.

Assembly of the bush on to the main shaft, was proceeded by a good cleaning of surfaces with a fine grit wet and dry paper (used dry). The bush was then tapped over the spline onto the journal, after first positioning the thrust washer NOTE: The washer must be positioned to accept the small anti-rotation key and pre-wetting with Loctite 680. Immediately float and wet the bush bore before it grabs (for good, we hope).



**The new bush in position on the mainshaft**

The chamfers are important in this process to assist with full fill of Loctite into the approximate 0.07 mm clearance which is just about right for this Loctite.

Oh, by the way, that thrust washer should be positioned to accept the small anti rotation key. The washer becomes a fixture and can't be budged.

After assembly, the four oil grooves can be filed to enter the central oil reservoir groove and that's the lot!

The box has been fully assembled but not yet installed - the original box always sounds better and the noises seem to subside as soon as one has a spare!!!

**Next issue of Front Drive will feature another technical article by Bernie Hadaway based on the modified restoration of drive shaft CVs**

*The following article comes from "The MOTOR" October 14, 1936. I'm amazed with what surfaces from my archives occasionally. This article related to the 30th Annual British Motor Show 1936*

## CITROEN . . . 106



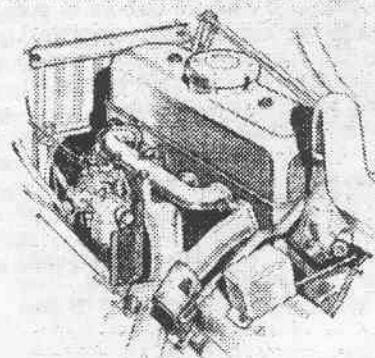
Front-drive and Rear-drive models, with Steel Coachwork, at Moderate Prices

WITH the single exception of the saloon, which sells at £285, all these cars are front-wheel driven and are independently sprung at the front.

The coachwork is all steel and there is no frame in the accepted sense, the body being extended forward of the scuttle in two horns, between which the engine is suspended and which, extended, form supports for the front-wheel drive and suspension. An unorthodox feature is the facia-board position of the gear lever, an arrangement which leaves the front compartment free from obstruction. The cars are notable for modern lines and plenty of interior space.

The smaller models shown are the 12 hp saloon, the 12 hp fixed-head coupe and the sports twelve saloon, which model is virtually the 12 hp chassis with the 15 hp engine installed. Both 12 hp and 15 hp engines are of the four-cylinder overhead-valve type. In the "Fifteen" range the f.w.d. seven-seater saloon, which has occasional seats, and the new model, the "Family Fifteen" saloon, rear-wheel driven, is worthy of attention by anyone requiring a large and roomy, yet moderately priced, straightforward vehicle.

Amongst the many refinements to be noted on these cars are the wooden facia board, the new type of wheel, and the "Twin-Trim" upholstery, which is available as an alternative style on all models. This method of trimming is a combination of cloth and leather, the cloth being used for the centre and the leather for the edges of both seat and squab, where most wear takes place. Citroën Cars, Ltd., Trading Estate, Slough, Buckinghamshire.





# CITROEN TRACTION AVANT

SPECIFICATION CHANGES OVER THE PRODUCTION LIFE OF THE MODEL



**The 11B and BL are introduced in 1937 as successors of the 11A and AL.**

From now on changes always concern both types. A 11B with serial number 118 000, engine number DL 01768 and type 4M PV B78 is presented for type approval which is granted on January 26th 1937. A 11BL with serial number 360 500, engine number DK 01335 and type M PV B78 is presented for type approval which is granted on February 4th 1937.

**The full Traction Avant 11B and 11BL production history:**

**1937:**

**January:** - February: Last 11AL (serial numbers 358 801 - 360 500) and 11A (serial numbers 116 600 - 118 000) are delivered.

**March:** One Commerciale prototype is built (with symmetrical doors and 6 stud wheels).

**June:** The (horn) grilles in the wings disappear. The horns are now mounted on the gearbox. On the cylinder head between the second and third sparkplug there is now "11" instead of "78x100".

**September:** The forged brake drums are replaced by cast ones, now with 5 studs. Wheels are the 5 stud stop wheels with hubcaps with a small edge as fitted to the 7.

**October:** The gear lever gate doesn't have a clear plastic cover anymore but is simply painted. The comodo is replaced by the famous 1 lever switch, also fitted to the 2cv, and is available in different colours to suit the different interiors (mainly convertible). The grille is now made from steel and is painted. For the 11B, the crank hole is enlarged from round to oval (11cm).

**November:** The clock is mounted inside the speedo.

**December:** New cast brakedrums for the 11BL (around serial number 375 000) and 11B (around serial number 125 150). Towards the end of 1937 the Familiale and Limousine rear doors are changed. They are now identical to those of the 11B Ber-

line. This gives the body more strength and is cheaper to produce.

**1938:**

Early this year a small number of cars is built without the Pilote wheels, serial numbers 386 001 - 387 600 for the 11BL and 127 301 - 127 500 for the 11B.

**January 17th:** The famous Michelin Pilote wheel is officially introduced. To accommodate these wheels, the wings are enlarged by 5 cm. Wheels are now 165x400 (185x400 for the Familiale and Limousine). To accommodate the larger wheels, the crown wheel and pinion are now 8x31.

**February:** The clutch gets a device which only enables changing gear when pressing the clutch. Externally this can be seen by the second selector shaft housing that is now visible on the front of the gearbox cover.

**June:** The right rear wing loses its light, now only one rear light fitted on the license-plate holder.

**April:** A new model is launched: the Commerciale. This is a Familiale with no strapontins (small seats between front and rear bench) and with a 2 part bootlid, the upper part containing the rear window. This makes it a car capable of carrying big loads. The interior is in simili which can be hosed down when necessary, the right front seat has a foldable back rest, and in the rear there is a small closeable opening for the disposing of animal urine. With the car is also a three piece floor for making a flat loading surface. A 11C with serial number 290 000 and engine number DB 04323 is presented for type approval which is granted on April 27th 1938.

This month, all long wheelbased cars (Familiale, Limousine and Commerciale) get the Pilote wheels as well, a few months later then the short wheelbased cars.

**November:** Just in time for the winter, all cars finally get some sort of heating device. A tube which transports air heated by the radiator to the driver's left foot, which can

be shut off.

**December:** The oil pump is replaced by a better one. For this year the wheels and hubcaps are red on the 11B and LWB cars and yellow on the 11BL. When the car is painted in an irise (metallic) colour, the wheels and hubcaps are the same colour as the car.

**1939:**

The Faux Cabriolet (Coupé) is no longer available.

**January:** The rounded gearlever surround is replaced by the rectangular one with roman digits. The ignition key is now fitted to the center of the dash as on the later cars. The chevrons on the grille are no longer flat with double edge, but look more full.

**February:** The cars get improved sound deadening.

**March 10th:** There is finally some improvement in performance. A new engine, aptly named Perfo is introduced. With a different carburettor (vertical instead of horizontal), different cylinder head with different valves and an increased compression the power is increased to 56 bhp @ 3800 rpm. The air filter is replaced by a tubular one. All of this gives the cars a top speed increased by 10 km/h without increased fuel consumption. The introduction of this new engine corresponds with number 428 601 on the BL and 143 001 on the B. The speedo is also altered and now reads up to 150 km/h.

**1940:**

The Cabriolet is no longer available but all other models are still produced. A series of 150 cars 11B is fitted with large Pulman seats and bench (no tubes over the front seats) similar to those fitted in the 15 Six.

**1941:**

The war is now really showing in production. Tires cost much extra! Still all models are available and 1 11B Cabriolet is built to special order.

**1942:**

The 11B is no longer available although 1 Familiale is built to special order. Only 3 11BL Berlines are built in June before the production is stopped.

**1945:**

Most cars built this year are built using old stock. The cars are delivered without a spare wheel. Their appearance is identical to those from 1939 with the exception that the headlights are painted (even the front ring) as well as the bonnet handles, and the door panels are made using cardboard. No 11B production. Any Traction Avant can be easily identified as pre or post war. Pre war cars have a edge in the rear screen aperture. On post war cars this is no longer present without exception.

**1946:**

Only the 11BL production is running although one 11B is put together for the Paris Salon autoshow. In May the cars get the



# 11B and BL 1937 - 1957

Information sourced from the CATS CITROEN WEBSITE

louvered bonnet instead of the one with shutters after which the Pilote wheels are replaced by Michelin BM (Bonne Marche = Well Running) wheels which are fully closed. The bumpers get overriders and the doors get aluminium trim strips. The carburettor is modified and cars are now delivered with 5 wheels again. The knobs on the dashboard are now of the oval type with a letter engraved.

**1947:**

Only a small amount of changes. From January 14th onwards the rear view mirror is relocated from the top of the windscreen to the bottom. From March onwards the 11B is in production again. From August/September onwards the wings get wing tip protectors. The interior of the 11B is identical to that of 1939 but until October there is no clock.

**1948:**

All cars are now fitted with the grey striped cloth and the wing tip protectors are replaced by AXO ones with "waffle" like surface. The headlight rings are chromed, as well as the bonnet handles. The 11B gets a grille with a larger crank hole, like that on the 15 Six.

**1949:**

From now on cars can be delivered in primer, mostly for export but also for people who want another colour then the only colour in the catalogues; black. July: The speedo back plate with white digits on a black background is replaced by a beige backplate with black digits.

December: The small front seats with a tube above the back rest and the bench are replaced by the Pullman seats and bench which can also be found in the 15 Six although the cloth is the grey stripe and not the pluche as on the 15 Six.

**1950:**

From February onwards, the compression is raised to 6.5:1 and there is a manual ignition advance / retard mechanism on the dashboard. In May, the engines are fitted with the Solex 32 PBIC carburettors for better fuel consumption and equal performance. The air filter is replaced by a Vokes one (or Miofiltre on some cars). In August, some cars are fitted with a Zenith 32 carburettor with the same performance. Between March and May the production of the Michelin wheels is interrupted and cars are fitted with Belgium made Lambert Nivelle wheels which are easily recognisable with their 14 oval holes.

**1951:**

In January the dipstick is replaced by a more practical one. In the spring the black 3 spoke steering wheel is replaced by a black 2 spoke one.

**1952:**

The Traction Avant is modernised. Here are the changes:

April: The master cylinder is placed inside the left jambonneau. Only one flexible brakeline on the rear axle. The pedals are modified. No more bars on the dashboard. Lower part of the doors covered in simili and new headlining. Hubcaps painted light grey. Horizontal front license plate holder. On the 11BL these change appear from 594 000 onwards and on the 11B from 218 630 onwards.

May: 4 holes in the wheels. Indicators! Bare dashboard. On the 11BL these changes appear from 595 000 onwards and on the 11B from 220 400 onwards.

June: Windscreen wipers on the bottom of the windscreen.

New dashboard with integrated windscreen



surround. Plastic covered wiring. On the 11BL these changes appear from 597 900 onwards and on the 11B from 221 800 onwards.

July: The speedo back plate with black digits on a beige background is replaced by a grey backplate with white digits. Enlarged window surrounds (excluding the rear screen). On the 11BL this change appears from 598 500 onwards and on the 11B from 223 000 onwards.

On July the 15th the larger square bootlid appears on the 11BL, July 21st on the 11B. From July 23rd onwards both models are fitted with straight bumpers. Between August and December, 3 11BLs are fitted with the old, small boot.

**1953:**

In July the Familiale is reintroduced, being 8 places with its longer wheelbase and 3 strapotins between the front seats and the rear bench.

Differences from the normal 11B are: 3 spoke steering wheel to cope with the larger steering forces encountered on this long car. More upright driving position with the front seats moved further forward, rear parcel shelf is smaller which means the

rear bench is moved further back and a shorter rear seat cushion. This is done to compensate the room taken by the strapotins. 8x31 crownwheel pinion (instead of 9x31) to be able to pull better with high loads. 185x400 wheels and tyres like on the 15 Six. The engine performance on all cars is increased from 57 to 59 hp @ 4000 rpm.

**1954:**

The bootlid hinges, fuel filler lid and wiper arms are now chromed. The black steering wheel is replaced by a grey one, the light switch is now grey as well. In April the Commerciale reappears. This is basically the same car as the Familiale but the rear window opens with the bootlid in one piece. This one piece bootlid is also the large difference with the pre war Commerciale which had a two piece bootlid. There is also a removable flat floor provided giving an impressive loading surface, and doors and seats are covered in plastic which can be hosed off. For the Familiale there are 2 modifications available. One blanks of the strapotin tray to make it a Limousine.

The other is a separation wall with window for taxis and such. One Ambulance is build for demonstration purposes. 80 11Bs are modified for the French army.

**1955:**

A new engine, the 11D is introduced. This engine also powers the DS which is introduced this year as well. This engine can be identified by the inscription "11D" between the second and third sparkplug (previously: "11"). There is a side mounted oil filler neck and a new airfilter. Compression is raised to 6.8:1, the camshaft is modified as well as the rockers, pistons, conrods, crankshaft and the sump. This new engine which still is 1911cc, gives 60 hp @ 4000 rpm. It's not the power increase but rather the wide torque range of the engine that gives it its new refinement. The Familiale and Commerciale now have 12 inch drums at the rear, same as the 15 Six. Twin rear lights on all Traction Avants.

**1956:**

With the introduction of the DS, the Traction Avant is only left for those who don't dare to switch over to the more complicated DS, which is why later the ID will be introduced.

**1957:**

The last year of Traction Avant production. The last car, delivered July 25th is a 11 Familiale, sold to the same dealer that bought the first Familiale in 1934.

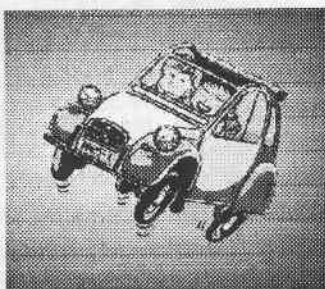


# Twin Pot Topics

## "Oh, come all ye faithful"

What's all this nonsense about cults and the 2CV that "The Street" would have us believe? It's about as well thought out as the National Footy Coach's views on Karma. On this subject, I have a confession to make, and a Big Thank You to say, to my local 2CV Temple for the support and counselling when all around was in Darkness. I came to the Faith via a GS/ A Pallas and flat twin motorbikes, although I had secretly known for some years the A-Series was my calling. But, I was too embarrassed and macho to come out sooner.

As a novice, I allowed my then low-mileage-1-previous-owner Dolly to be serviced on the cheap and merely used it for travelling from A to Z in the earthly plane. But, by listening to the Elders, I learned the virtue of Regular Servicing by the wise and skilled, of the need to anoint the kingpins and that pennies saved may cost pounds.



It came to pass that I experienced a second Coming - so to speak - and lavished gifts upon the Altar. A new roof, seat covers, tyres and a very special electronic ignition - after failing to drive on water.

Yet, it is clear only now that I didn't fully understand the spiritual journey. Slowly I slipped into my old ways, becoming a less than ardent member of the congregation and forsaking Dolly for the more modern 7-seater Turbo Diesel Monty that came into my partner's life.

Eventually, the repairs from reckless driving through fields, hedges and Postman Pat's van were completed. But it wasn't enough. Out of guilt and - and money - I lavished gifts of T-Cut and polish. That too, was a failure. For 40 days and 40 nights after the resurrection, I was tested each day. Punctures, intermittent electrical faults, the roof blew off, seized kingpins/wobbly kingpins and, most challenging of all, unreliable starting and unex-

plained cutting-out at the most inopportune moments.

As I started to lose my mind, I started to lose faith in the Elders. I called them false Profits and convinced myself that exorcism was the answer. I was so distraught and lost in the wilderness that I listened to the tempting voices of the Followers of Ford the Fester. They spake unto me 'Yea verily, mate. Try it out for free for it will always start and never let you down. You can trust us. It is surely a snip at 120 sovs.' And it was done.

I am ashamed to say that I eventually snapped and thrashed that sad, little Dolly with its own starting handle. About to commit it to eternal flames - and myself to a fraudulent insurance claim - a Higher Force intervened and I abandoned it on the steps of the Temple. As I ranted in tongues, the Wise Ones listened and soothed me with their sympathetic prayers.

The very next day they had cleaned the carburettor and removed that 'never known to fail' electronic ignition.

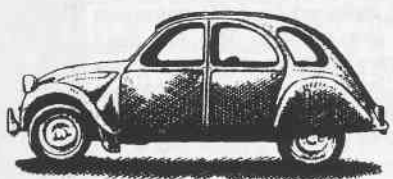
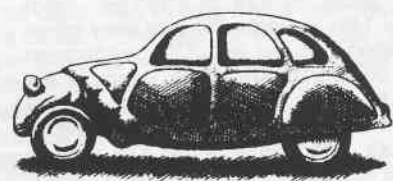
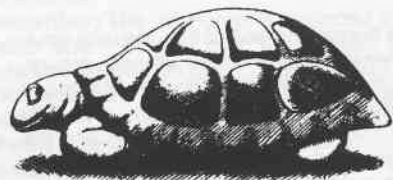
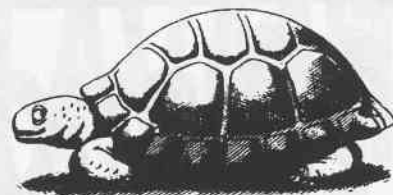
Angels sang, or was that the purr of the engine, and Dolly was reborn. Once more I could see "The Way", even driveshaft failure the next day could not diminish my joy. We are once more as one.

So, what happened to that work of Satan, the Festering Ford? It started first time for a week, then it got wet and hasn't run since, the handbrake seized on and it cost twice as much in fuel to run. I await its deliverance from me...

Seriously, you know who you are. The Doubter has now returned to the Way - and I thank you. I might even make it to one of the camping events this year.

From "The Hermit on the Hill" with thanks to 2CV GB News, No.234

Welcome back and peace be with you, may your 2-pots never again become 4. Bev Abbott (Ed of 2CV GB News).



## IT TAUGHT US all we know.

It's not all bad being a tortoise  
They do live to a very old age.

They suffer few mechanical  
breakdowns.

They have a very poor appetite  
for consuming petrol.

They're not, as we know, the  
swiftest of creatures.

But need we remind you of the  
story of the  
Tortoise and the hare?

RALPH HIBBLE  
34 years in Citroëns

Jolly nice 2cv repairs spares 'n service  
105 Clifford Street, Maddington  
West Australia 6109  
Phone 9459 1636 Fax 9459 2803



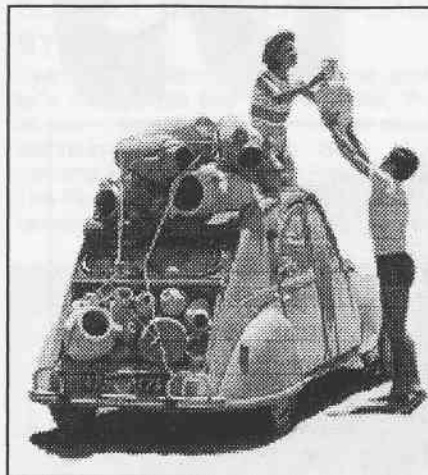
2CV SPECIALIST  
Service for D, GS & 2cv Citroëns





# The 2CV - A Series Register

by Ralph Hibble from the ACE Newsletter



The big news for 2cvers is that next year is the fourth Australian 2cv Raid. About 200 copies of the Raid Newsletter no 1. have been sent to clubs and prospective Raiders in many countries. Raiders leaving from Perth will have the unique opportunity to be able to Raid from Cape Leeuwin to Cape York. This trip will take us from the most Southwest to the most Northeast of our great country. We are planning a survey of the route from Perth to Cape Leeuwin and across to Kalgoorlie then back to Perth. We shall do this mid August leaving early Friday and returning Monday night. Other 2cvers are invited to join us on this camping trip which will include a stop at Wave Rock and other places of interest.

This little trip will give you a chance to

sharpen your camping skills and give you valuable experience of what to leave home. Remember the load limit on a 2cv is about 970 kg including passengers. The trip from Kalgoorlie to Uluru was done prior to Raid 96 in just two days. This was far too fast so the survey will allow us to plan the trip allowing a week from Perth via Cape Leeuwin to the Raid start at Alice Springs.

Andreas Belz and Anke Thomasky are returning to Perth from Germany to collect their 2cv that has been transported from Darwin to Perth. Last year they toured from Perth to Darwin. Fellow ACE member Todd Bracegirdle who works at the Tanami mine and lives in Darwin arranged the transport. No one was to know that main steel pipe line carrying the hydraulic pressure for the ram that raises the top deck of the transporter would fail, dropping the top deck complete with mini bus onto the top of the 2cv. Examination shows that the load squashed the roof to the level of the top of the B pillars and the wheels were pushed all the way up till the chassis was on the floor of the transporter. The chassis bent about 20mm only on the right side and the firewall also buckled on the right side. The front windscreen was broken from a load applied to the top of the windscreen frame. The driver's door popped open and was also squashed down about 50 mm. The car still drives though the steering is stiff. It is of course an insurance write off. The sticker affixed to the 2cv nearest one of the impact points reads "shit happens".

A really good 2cv Dolly recently sold for \$12,000 and two good 2cv red specials each sold for \$9,000. I have recently been made aware of a yellow 2cv and a blue 2cv, both of which have been in Perth for a number of years. This brings the number of A series Citroens in Perth to more than 80.

*By Ralph Hibble from W.A.*

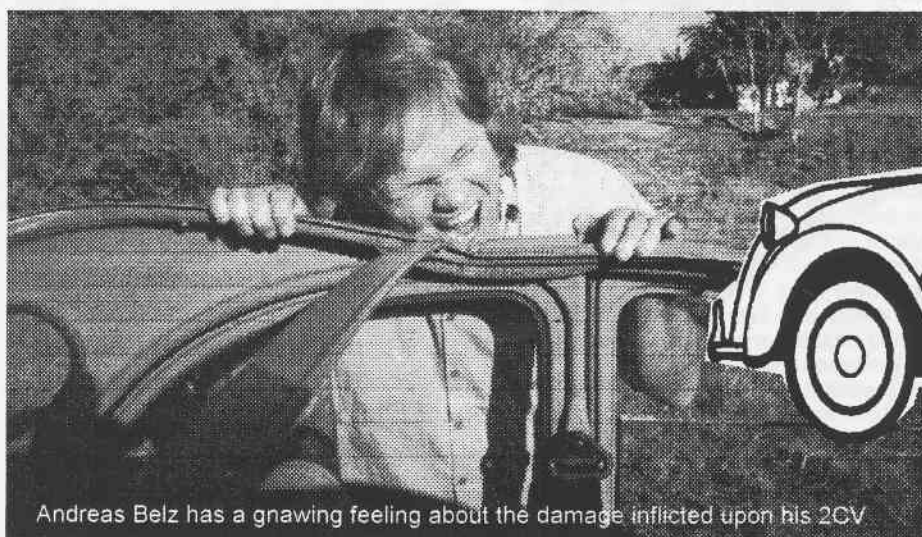
*Note - Since Ralph's note above, the rest of the Raid route through to Cape York has been surveyed by Bruce ("Mother Goose") Elsegood & Gus Robinson. — Ed.*

## STOLEN 2CV UPDATE

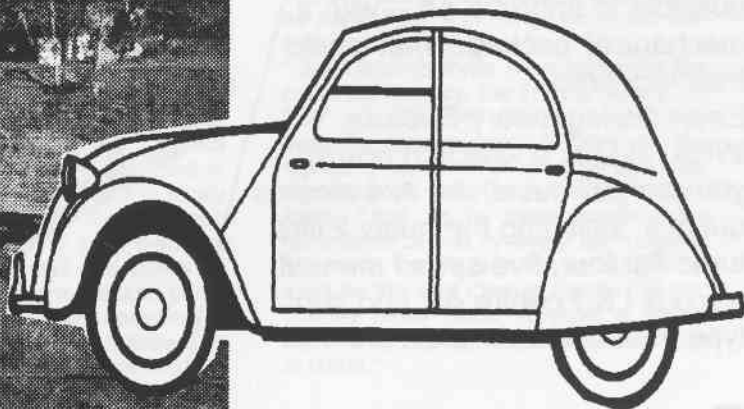


The photographs illustrate the damage inflicted upon Jost Hashoff's 2CV Van after being located on a native settlement near Uluru. Obviously stolen by Dingoes and fortunately found before dinner time.

Damage can be seen in the form of broken windows and headlights. It was reported in the June/July issue of Front Drive that Jost intends returning it to the road for the 4th Australian 2CV Raid in 2000.



Andreas Belz has a gnawing feeling about the damage inflicted upon his 2CV



The following text is from a Street Machine magazine and was sent to us by Mike Neil of Canberra. The DS would seem to be the most unlikely vehicle for extreme modification, or is it. You be the best judge.

# HOT DS

When launched in 1955, Citroen's revolutionary DS was the automotive equivalent of an invasion from Mars.

Against a backdrop of stodgy, unsophisticated family carriers from Detroit, the amazing French machine featured streamlined styling (sedan and wagon) that was generations beyond the cutting edge and wonderful technical innovations like front wheel drive and disc brakes – at the time, unheard of in mass – produced cars.

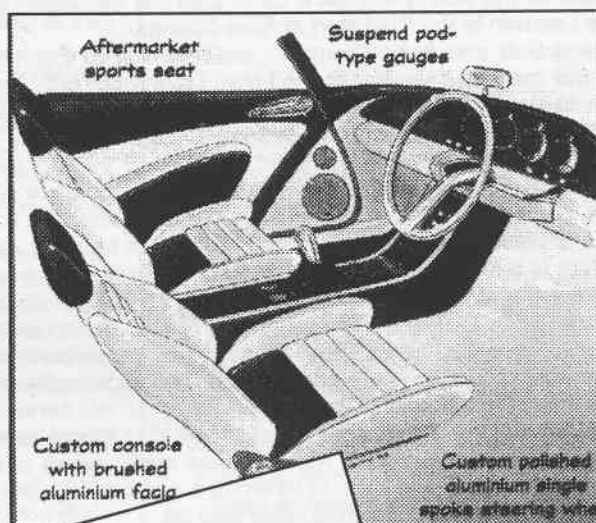
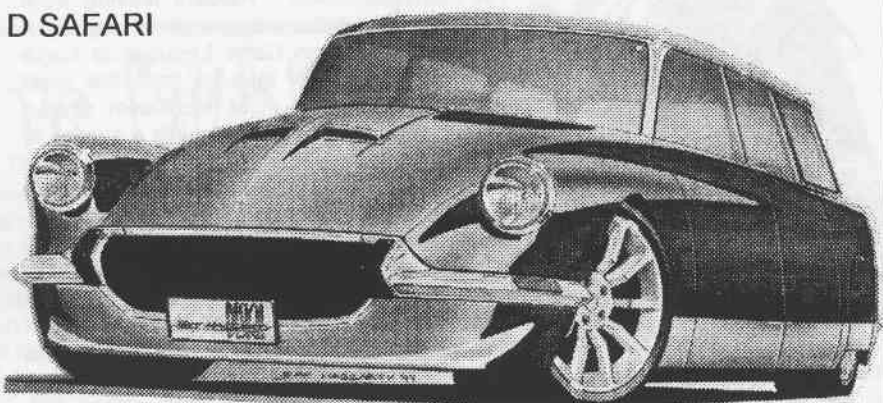
There was also a central hydraulic system to control hydro-pneumatic suspension, rack and pinion power system and power assisted brakes operated by a dimmer switch-style button on the floor. It could also carry six adults in seats that could be folded down to form a bed.

Despite all this innovation, Citroen forgot to give the thing some decent power – its puny 1.9 litre four ain't the stuff of street machine dreams.

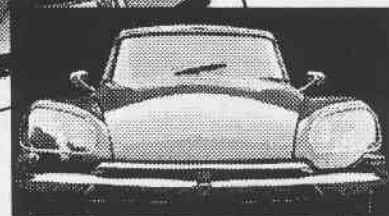
So we started thinking. Imagine combining all that gorgeous, flowing sheet-metal – which is damn near impossible to improve on – with a mechanical package that could truly kick arse.

Enter the legendary Subaru WRX. In fact, a wrecked one so you can pull out all the 4x4 innards out of it, including the gutsy 2 litre turbo flat four, five speed manual, viscous LSD centre diff and strut type front and rear ends.

D SAFARI



D SEDAN





# NEWS from CITROËN

## SECRET CITROËNS ROAM SYDNEY!

Sydney has become a French car spotter's delight with two new Citroëns, the all-new Picasso and the never-seen-before-in-Australia Citroën Saxo VTS roaming the streets.

The Picasso, star of Citroën's Sydney International Motor Show stand (15 - 24



October 1999) has been out on the streets of the city for some pre-show photography and video work. The Citroën Saxo, still in prototype form after its debut at the Frankfurt Motor Show last month, is the French car maker's baby car. It is in Sydney to star in a new television advertisement that will be seen across Europe early next year.

The Citroën Saxo in Australia is the top of the range VTS model. With its 1.6 litre 16 valve 87 kW engine in a small, three door body, it is regarded as the top small hot hatch in Europe. "We chose Australia and, in particular Sydney, because the city has the strong character, personality and excellent locations we needed for the advertisement," says Sotiris Pagonas, Creative Director at Fortune.

The story line of the advertisement sees a young woman so attached to her Citroën Saxo she knows what it is doing all the time and who is driving it when it



should be safely parked in a Sydney car park.

Although the new Citroën Saxo will still be in Sydney at the time of the Sydney Motor Show, it will not be on the Citroën stand at the Darling Harbour Exhibition Centre. Citroën Australia does not plan to add a Saxo-sized model to the range until the Citroën C3, the next generation small Citroën already seen in prototype mode

at European motor shows, is available in 2001. The Saxo, though, will be seen on the Streets of Sydney for at least another two weeks!

## LE NOUVEAU PICASSO EST ARRIVÉ EN AUSTRALIE!



The Citroën Picasso, one of the stars of the 1999 Sydney International Motor Show (15 - 24 October 1999) has arrived in Australia ready to demonstrate the shape of family cars for the new century.

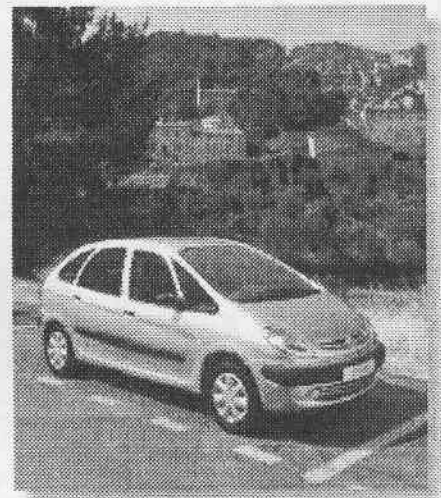
The Picasso is on display in Australia more than a month ahead of its European launch at the end of November and it is planned that it will go on sale in Australia next year.

The remarkable French car takes up the road space of a small five door hatch, such as the Citroën Xsara on which it is based. Yet, inside there is the space usually only found in large Australian wagons, with five generous adult sized seats and a huge boot that can be further extended by folding, or even removing, the rear seats one by one. All of this space is wrapped up in a stylish and unique "one box shape" that is as eye catching as it is functional.

"Even after months of seeing pictures and videos, it is still a thrill to see it in the metal for the first time," says Miles Williams, the General Manager for Citroën in Australia. "Two things that have really impressed me are the detail design that shows how well it has been thought out and designed for its purpose and the way it drives on the road."

Citroën has not just provided a large box with five seats. Details to make the Picasso a pleasure to live with include the design of the rear seats and their seat belts that means with the seats folded or removed, the floor is long, flat and totally free of obstruction, even though each seat has its own lap and sash belt. Not only are there picnic trays and tables for the rear passengers there are also pockets in each of the four doors designed to take two litre mineral water bottles and cans and cups. In addition there are two large hidden lockers built into the floor and lined with carpet, where valuables can be hidden or toys kept out of the way. The rear table not only has cup holders, it

even has clips to hold papers in place and coat hooks are every where. The rear hatch has two height settings for tall and short people and the dashboard has warning lights to enable the driver not only see if the rear doors are closed but to also check if the rear child safety locks are engaged. There is a large 'panic button' that locks all the doors and closes all the windows. Even the gear stick comes out of the dashboard, not the floor, to make for more space. Safety features abound, from ABS anti-lock brakes to front and side twin airbags as well as lap and sash seat belts and adjustable head rests for every seat. "Even with Citroën's unique reputation for building cars that offer supreme ride quality, road holding and handling, making a tall car like the Picasso drive like other Citroëns could be a challenge," explains Miles Williams. "So it was fascinating to get it out on the streets of Sydney for a



secret preview and see how it goes under our demanding conditions. And I have to report it's really impressive. Unlike some of our competitors, Citroën has managed to keep a soft pliant ride quality that absorbs the worst Sydney roads can dish out, but, at the same time, it is as stable as normal car and hangs on in the corners just as all Citroëns."

"Like Citroën's three nominations for the car of the Century, the Traction Avant, the 2CV and the DS, Citroën has thrown away the conventional rule book and designed a remarkable car that sets new standards in every area," says Mr Williams. "Just as its three predecessors have been copied by every car maker in the world, the Picasso will be the benchmark for the 21st Century Family Car and Sydney Motor Show provides a unique opportunity to see the real shape of things to come."





While preparing my 51' Light 15 for CH permit inspection I discovered that the clutch had frozen to the flywheel. Several CCOCA members offered advise. I happened to be on the Net searching for interesting information on Tractions when I stumbled upon a chat line for Tractions.

So I submitted the following comments and the response that followed is printed below.

**Unfortunately the clutch pressure plate has locked onto the flywheel due to water dripping from the water pump. Any ideas other than dismantling the gearbox from the motor? I look forward to a response to this letter.**

**Regards from Leon Sims**

Hello folks

Great to see another CCOCA member watching the list. Lots of good info from time to time. The stuck clutch seems to be something most Traction drivers suffer from once. I have had success using the starter motor technique described by Gwyndaf Jones however the clutch had not been stuck for long. I did not drive around to warm it up, just put the car in third (can't remember why exactly, but think that the old timer who taught me the technique said something about top gear being a bit kinder on the gearbox), put a foot on the brake, other foot on the clutch, took a deep breath and hit the starter button. A bit of a bang and all was well. Another time (I am a slow learner!) it was a case of lift the motor, split the gearbox/bell housing off, 30 seconds work with a screwdriver blade, and then put it all back together. About two and a half hours work for two people! I now have a cut down yoghurt container with an overflow pipe that goes in place under the water pump if the car is to be parked for a while, also a block of wood behind the clutch arm under the bonnet. I think keeping the water out in the first place is the best option.

Our 1951 Light 15 is having an enforced rest at present, brake problems in one front wheel. I'll get to it one day, too hot in summer and too many mosquitoes, and too busy doing other things in winter!

Other than that it needs a bit of front end work, and driveshafts.

Also a couple of new tyres, the Michelines I bought 20 years ago are looking a bit cracked. I have never had a flat tyre, in fact the back wheels have not

I had good luck on a completely different vehicle with the same problem by running it in neutral long enough to get the flywheel and clutch warmed up a couple of times and letting it cool in between. I blocked the clutch pedal with a piece of wood to the seat so it was completely against the floor as I ran it. After the second cycle I turned the engine off and put the vehicle in first gear and momentarily hit the starter button so that the starter turned the engine a fraction of a turn. On the second try a bang and the clutch freed up.

The whole procedure was quite gentle and the clutch now works perfectly. The only wear and tear concern would be the throwout bearing. If this is a concern with your particular vehicle you could not block the clutch and just push the pedal from time to time as it warms up. You then need to push it in

when you hit the starter.

Gwyndaf Jones

Hi from Australia,

Thought I would let all know that I have had success with releasing my stuck clutch. It's all due to this interaction on the Net. I was advised to allow the car to warm up first, which I did for about 20 mins. I then turned off the engine, engaged 1st gear and started the car. BANG, the clutch released without any damage. I expect to be driving my 51' Traction very soon after replacing the master cylinder, shockers and the usual plugs, points and oil.

Thanks to those with friendly advise.

Leon Sims.

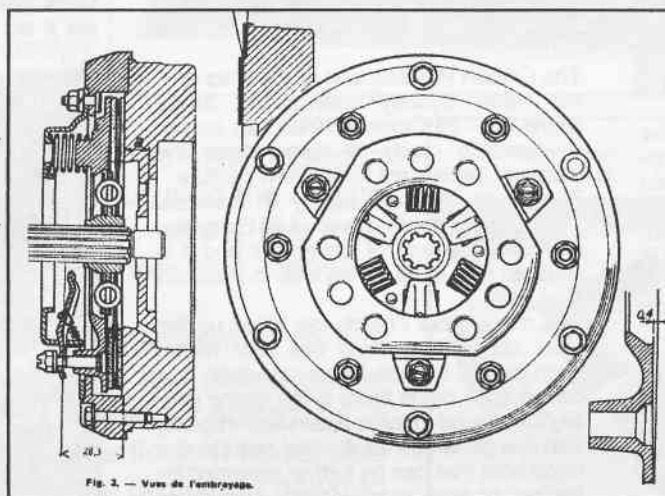


Fig. 2. — Vue de l'embrayage.

been off since getting the car going for a trip to Melbourne in late 1980. Some of the long term club members might remember our visit.

Good luck with the clutch, if I am honest I would recommend pulling the motor out, particularly if the car has not been used for a long while.

Regards Doug

If that much rust has occurred in the pressure plate, it seems that pulling out the gearbox would be the only wise way of handling the situation.

Previous conversations here have noted the extreme fragile nature of the box and any shocks large enough to break it free could easily destroy the box.

Even broken free, the performance of the clutch would be quite suspect. It only takes a hour or so to get it out.

Cliff Bisch

*Citroën*



# COCA Classifieds

Please note. By law advertisement cannot be accepted without one of the following: registration number, engine number or vehicle identification number.

## FOR SALE

### 51' 11BL

Complete car but dismantled. Fully rebuilt motor, gearbox, steering and front end. Front brake cylinders re-sleeved, flywheel machined & lightened. Excellent restoration project.

Original Reg. TS 590

Chassis No. 552610

Asking \$7000

Contact Sam Crisi 03 9439 4558

*This car has been owned by Sam since I first met him in the early 70s. It's a club car with a long history. It's sad to see Sam offering it for sale but Que Sera, may the car continue its COCA membership.*

## FOR SALE

### Citroen Vans all unregistered

Ex-Alan Brown

AK400, AK250, H Van

Acadiane (Dyane)

Mixte (4 seater)

Contact Ralph Hibble for further details 08 9459 1636

## WANTED

### WORKSHOP MANUAL

For Big 15 or Family 9

Contact Vern Isaacs

08 9377 7365 ah 08 9244 8222 bh

## WANTED

### CITROEN LIGHT 15

In reasonable condition, small boot.

Contact Vern Isaacs

08 9377 7365 ah 08 9244 8222 bh

## FOR SALE BIG 15

### Restoration project for sale.

Owned last 20 years. Sound body already painted BRG. Interior complete but needs restoration.

Engine and gearbox not touched but complete. Dismantled but complete.

Some chrome work undertaken.

Asking \$ 3,000-00 . Contact John

Cleverley Phone 03 9878 1357

## FOR SALE

### L15 1948?

Ex. Darwin ex Weipa 75', dismantled for total restoration, some body repairs done. Needs front floor etc. offered with spare parts.

Eng. No. AB15125 \$2,000.00 ONO.

Kevin McMichael

Ph. 0740921411

## FOR SALE

### 1953 BIG BOOT LIGHT 15

This very original one owner family vehicle is reluctantly & regretfully for sale. A rare family car still in daily use. Well maintained & never involved in an accident.

Reg. GCL 844

Best offer over \$12,000

Phone Iris Nicolades 03 9819 1635

## FOR SALE

### 1974 D SPECIAL

White, manual, Reg QDT 209 (NSW)

Body, mechanical & interior excellent.

One of the best Ds around. Sale due to provision of company car.

The D is available for viewing in Melb at end of Sept.

Price \$10,000 or best offer

Contact Chris (02) 9797 2900

0419 691172

Email: chris@alaea.asn.au

## FOR SALE 2CVs

### CITROEN 2CV 1956

Australian delivery, original low Kms, original features. Needs restoration or drive as is with some repairs. CH 0299

### CITROEN 2CV 1966

French delivery, RH drive. Has been registered in Victoria. Also in need of repairs. CV 240

Offers invited on both cars.

Contact Andrew Rankine 0419 576 206

## FOR SALE

1936 Traction Avant roadster

Impressive cream convertible with tan interior and dicky seat. Left hand drive

( ex Saigon ) Very good condition.

Priced to sell at \$ 28,500-00 or near offer.

Body no. 6081483

Engine no. AF 16485

(Ted Cross, the Prez has seen this car and is happy to discuss it with any prospective buyer- Ed )

## FOR SALE. 1982 CX 2400

### 5 speed. Limited edition

Excellent condition body and mechanically. Interior very good. Tan leather and tweed. Full service history available. Always garaged. Fitted with central locking, alloy wheels, dual aircon,

factory tow bar, louvre and other extras.

Reg No. CX 1982.

Price \$9,750. Negotiable

Ferdi Saliba. Ph. 9363 3950.

# double CHEVRON Chat

## Bill Graham reports on Citroen books

Writer John Reynolds reports that sales of his book "Citroen A to X: 75 years of Citroen in UK" has been below par due to poor distribution and less than expected support and publicity from Citroen UK Ltd. (boo, hiss). A reprint therefore seems unlikely. This book is profusely and beautifully illustrated with a very informative text in the "Reynolds style" (and of course it is in English) Better grab a copy while you can possibly through Technical Books in Melbourne. While visiting Technical Books recently I noticed that John Reynolds "Andre Citroen: the man and the motor cars" (hard cover \$60) is now available in soft cover at \$35 (less your 10% club discount). Might be just the thing for the less pecunious members (and who would admit to being anything else?) to shout him/herself for christmas. Cheers from Bill Graham

## FOR SALE

### New Twin Carby manifolds for Traction Avant

Cast from an original aftermarket manifold which utilises two standard carb's.

This manifold has been tried and proven to give excellent results.

Enables your engine to perform better, make use of the extra power or the extra fuel economy depending on your driving style.

\$450.00. fitting extra. Phone for a free quote.

Carey Mtrs. 03 5152 1040

## TRACTION RESTORATIONS AUSTRALASIA

4 cyl & 6 cyl Traction reconditioned engines and gearboxes

Short or Long engines, standard or modified.

Reconditioned ID engines & gearbox, Short or Long.

Reconditioned 4 & 6 cyl Traction Front Ends, complete.

Reconditioned 4 & 6 cyl Traction front Ends, Silentbloks only.

Reconditioned 4 & 6 cyl Traction & ID Water Pumps

Reconditioned brake master/wheel cyl's

Relined brake shoes

Part engine rebuilds, to customer requirements (Top or Bottom end)

Reconditioned Driveshafts, 4 & 6 cyl Traction with modern CV joints

All the above are offered on a changeover basis.

Carey Motors P/L

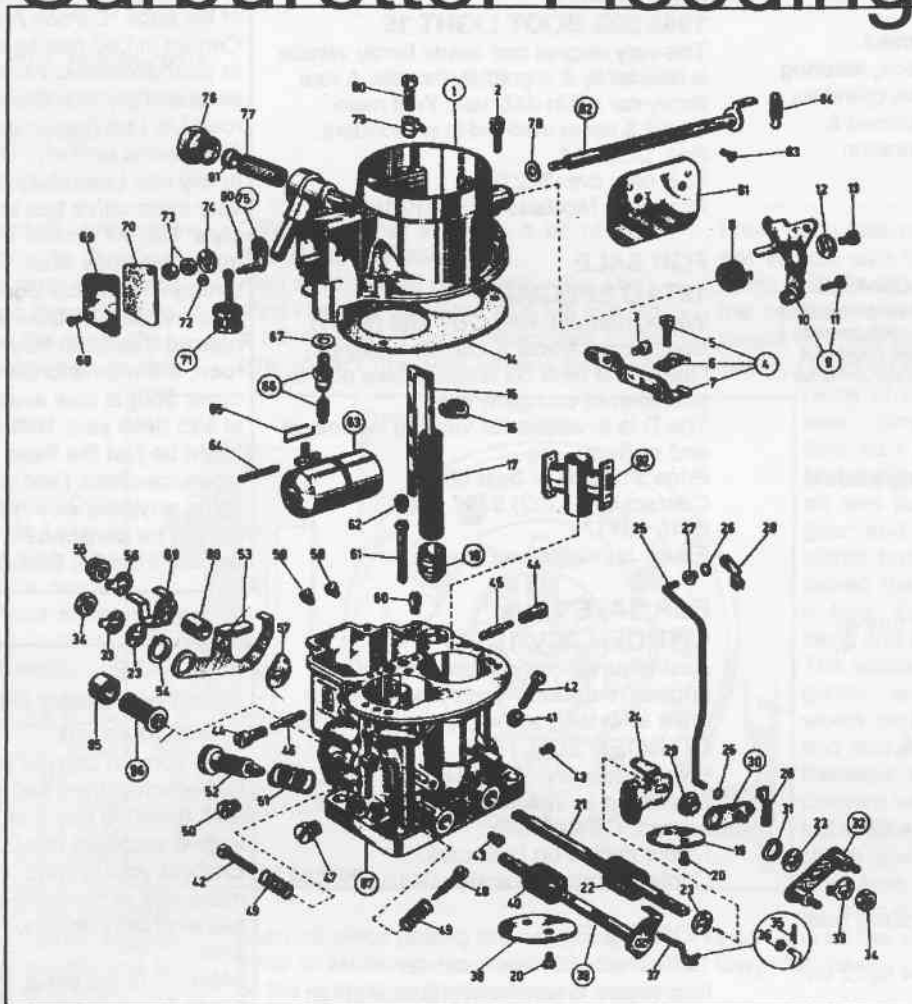
Phone Mel on [03] 5152 1040. Mob: 0412 526 126 or Fax [03]

5152 2615

[A/S]



## Carburettor Flooding



This describes the external escape or overflow of fuel from the carburettor, or fuel running into the barrel of the carburettor while the engine is running.

The causes are generally quite straightforward, first check the Float [in the bowl] is not punctured by removing it and shaking to see if there is fuel contained inside.

Examine the float to ensure it hasn't been collapsed by pressure caused by a backfire, make sure the float is the right way up. Where a float pivot lever is used, ensure that this swivels freely on its hinge pin and ensure also that the lever is the right way up.

Ensure that the hinge pin is correctly located in its grooves in the float chamber & it is held down by the appropriate

clip on carburettors so equipped.

Check the "Float Level" which is adjusted by bending the float lever, you need the manufactures spec's to do this but as a rule of thumb, when the carburettor top is inverted with the N&S fitted up, the Float should lay horizontal [or parallel with the top casting.

Determine that the needle & seat N&S valve are serviceable by removing the valve and attempting to suck air through it while holding the needle against its seat. Only a dead seal is acceptable. If any air at all can be drawn through the valve, clean it thoroughly & test again. A sticky valve can often be cured by soaking in methylated spirit, but if no improvement is noted, replace the valve.

A N&S washer made of red or black hard fibre material or aluminum should be present between the valve and casting it screws into. Washer thickness varies between 1 & 2.5 mm. Refit the N&S so that no fuel can pass down the threads around the washer, Teflon tape is the go here.

Another cause of flooding is excessive fuel pressure which can be too great for the design of the N&S, have a garage check the pressure. Some pumps are adjustable or the stroke can be adjusted by spacers on the mounting. Carburettor Rebuild Kits are now available through CCOCA Parts.

To be continued.





# A-TRACTIONS

**NOVEMBER 1999**

**SAT/SUN 13/14 BENDIGO SWAP MEET**

**SUNDAY 14th. ALL FRENCH DAY**

**FRI/SAT/SUN 19/20/21 St ARNAUD**

**FESTIVAL** This year the Festival takes on a French theme, hence the reason for the invitation to CCOCA. Further details to come in next Front Drive.

**SAT/SUN 20/21 GEELONG SPEED TRIAL**

Eastern Beach Geelong. Includes Concours de Elegance

Display space for car clubs

Contact Brian Latimore 5259 8483

**WEDNESDAY 24th. MONTHLY MEETING**

Canterbury Sports Ground, 8pm

**SUNDAY 28th. ROB ROY HILLCLIMB**

**XMAS PICNIC**

Clinton's Rd Christmas Hills. Annual club display.

**DECEMBER 1999**

**WEDNESDAY 15th. XMAS DRINKS**

Join the committee for Xmas drinks. Details will follow in next Front Drive.

**JANUARY 2000**

**WEDNESDAY 26th. MONTHLY MEETING**

Twilight BBQ at the President's home in Hawthorn. Further details next Front Drive.

**Don't Forget**

**APRIL EASTER 2000 — Citin 2000**

Jindabyne CCCNSW

**JUNE LONG WEEKEND AUSTRACTION**

*Citroën*



## CCOCA XMAS PICNIC at the Historic ROB ROY Hillclimb SUNDAY 28th NOVEMBER

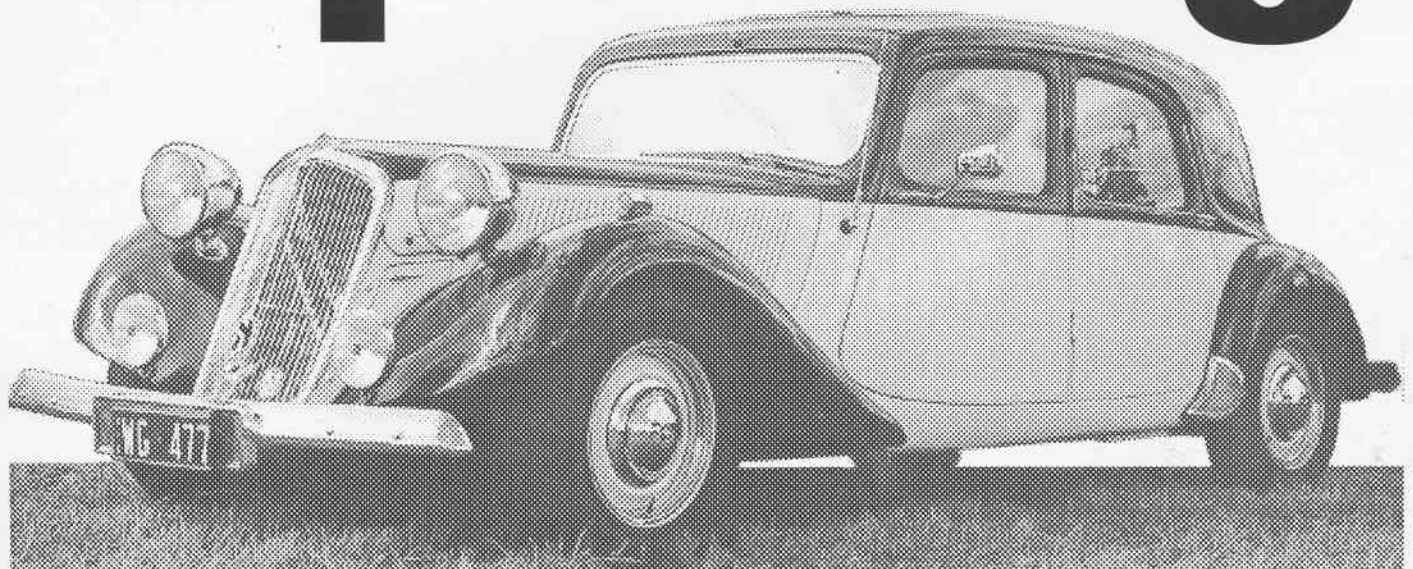
Come, join us for the picnic on the Hill while enjoying the competition between historic and classic racing cars vying for class honours in the climb to the top of the hill.

ROB ROY Hillclimb is set in beautiful surroundings and our location offers a full panoramic view of the days competition. The first runs for the day begin at 10.30 am

**Enquiries to  
Peter Fitzgerald 9696 0866**



# Carey Motors Grand Opening



**Sunday 5th December 1999**

Barinsdale will sing with the sounds of Citroëns - old and new - when they converge on Bairnsdale in Victoria to celebrate the opening of not just another Citroën dealer but that of Mel and Collen Carey's see inside this magazine for details of a great package deal to enjoy a great weekend in the Gippsland lakes

**Carey Motors**

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Phone 03 5152 1040 Fax 03 5152 2615  
email: [citroencarey@net-tech.com.au](mailto:citroencarey@net-tech.com.au)

