

# FRONT DRIVE

AUSTRALIA'S NATIONAL MAGAZINE FOR CITROËN OWNERS AND ENTHUSIASTS

**AUGUST/  
SEPTEMBER 1997  
VOL 21 ISSUE 3**

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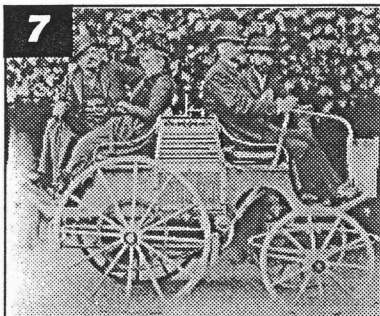
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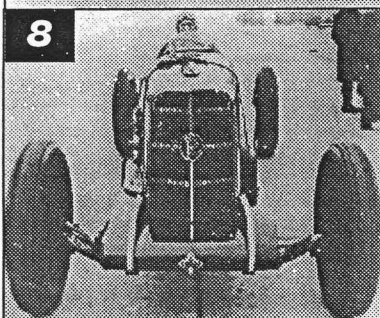
## **PANHARD SPECIAL EDITION**

# FRONT DRIVE

Published by  
The Citroën Classic Owners Club of Australia Inc.



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### NOTE NEW POSTAL ADDRESS

#### CITROEN CLASSIC OWNERS CLUB OF AUSTRALIA INC.

The Club's and Front Drive's postal address is  
P.O. Box 52, Deepdene Delivery Centre,  
Victoria, 3103.

Our e-mail address is [ttp@tmx.com.au](mailto:ttp@tmx.com.au)

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Annual Membership \$30  
Overseas Postage Add \$9

#### CCOCA MEETINGS

Every fourth Wednesday of the month, except  
December.

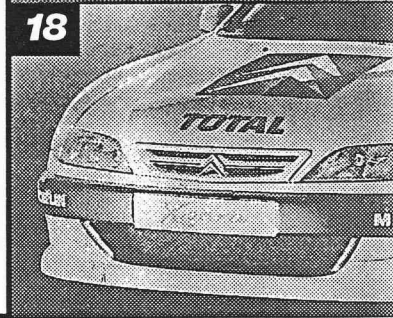
Venue:- Canterbury Sports Ground Pavilion,  
cnr. Chatham and Guilford Roads,  
Canterbury, Victoria. Melways Ref 46 F10,



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### HONOURARY LIFE MEMBERS

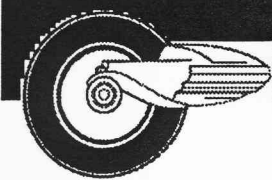
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# from the desk

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"What is that thing on the cover?", I hear you ask. I know it is not a Citroën, it actually has nothing to do with Citroën at all. But its younger siblings do. It is a Panhard Dynamic Type 140 for this photograph and, a good deal of the other Panhard material in this issue I must thank Bruce Dickie. For members who are unaware Citroën became involved financially with the Panhard company in the late-1950s and were responsible for its final closure in 1967. I must admit that with this issue I have simply satisfied my personal interest the marque and if you lot do not like all this non-Citroën stuff...well you can all take a flying leap.

Of course this is not the first time 'Front Drive' has featured something other than a Citroën on the cover. Bill Graham has noted in a letter to the Editor it is not the first time articles about non-Citroën vehicles have appeared between its covers either.

Check the a-tractions pages for full details of our ski weekend.

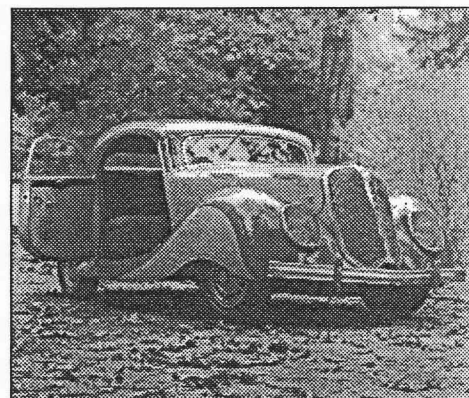
I realise that this has been a little slow in coming, but these things do take time and the Committee would like to thank Peter Sandow for both developing the idea and bringing it to fruition. You also have a separate flyer with details and booking form for 1998's Easter Rally in Western Australia. It really looks like being a great trip and whilst I did not attend the last WA Event, I am assured by those who did that the Western Australians run a great event and are very enthusiastic. You have lots of time to consider how you will get there. I shall probably fly [due to certain time restrictions] and I know others are thinking about taking their cars one way on the Indian Pacific and driving back. CCOCA will organise a group if there is sufficient interest.

Lots of stuff on past events, for the benefit of those who missed them as well.

Finally, a 'hope everything goes well' to Nathan Wade in Queensland. For those who are unaware, Nathan is currently in hospital, recuperating from not insignificant surgery on his legs. Something about his feet flopping when he walks...Hmmm?

Keep Citroëning,

Leigh F Miles - Editor.



## prez sez

It's been a very busy time since I last wrote this column. The Club has been very active with gratifying good attendances from members (I know how hard it is sometimes when it's cold and wet outside to drag yourself out to a meeting or an event)

The Bastille dinner in Melbourne this year was held at Café de France again. A large group of revellers enjoyed the very French atmosphere - even if the singing voice of the piano accordionist was not quite up to scratch. Page 6 has all the details.

The Sydney dinner was also a great success (page 6) and we were all pleased to see the Men From Ateco there, having a good time.

The day run to the Marong Hotel was a lot of fun with a large contingent of tractions etc heading off to destination untried. John Couche in his blue Traction went missing on the way, but when I arrived at Marong I was informed he was heading off to Bendigo Page 17 has full details.

August saw a very successful club meeting at Auto Nursery in Bayswater,

Victoria. Apart from the tractions, a very nice black DS21 under restoration, the main reason we were there was to have a look at the Lomax Guy is assembling. Quite an impressive job. Auto Nursery is a newly appointed agent for Lomax in Australia, and this is the first of hopefully many more Lomaxes to come to Australia.

Guy was not quite sure of the final sale price, but it made me think twice about yet another rearrangement of my garaging (which by now resembles Dr. Who's Tardis in carrying capacity)

Guy also demonstrated the sphere regassing system he uses to regas spheres on the car. Very impressive and quite reasonable too. This can be done on all hydraulic Citroëns, including new models.

Last weekend we all enjoyed a very pleasant run up to Avenel to lunch with the Citroën Car Club of Victoria. Around 45 people enjoyed a special lunch at a local Hotel which is owned by a Citroën Mehari owner. Everyone had a great day, only dampened a little by the sad news of the death of the Princess of Wales that day.

We have some great events coming up in the Club this year.

The Annual Concours (see ad on page 5) is coming up, and this year it is at the fabulous Werribee Park Mansion in Victoria. In fact the cars will be displayed in the National Rose Garden when it is at its peak. A brilliant setting. BBQ facilities are available, with plenty of things for kids to do with the zoo being there as well as the magnificent mansion of course. We do need helpers on the day as well as judges. So please consider lending a hand. It is not that difficult or time consuming and makes a great day better.

Of course before that we have the skiing weekend and the Wangaratta weekend.

The year finishes off with a Christmas party at Rob Roy Hill Climb in Victoria.

Lastly on page 24 there is an ad for people interested in making their cars available for films/ television etc. We get constant requests and the Club would like to build a register of those people interested. Don't let the fact that your car looks a bit shabby put you off. They more often than not want cars to look their age.

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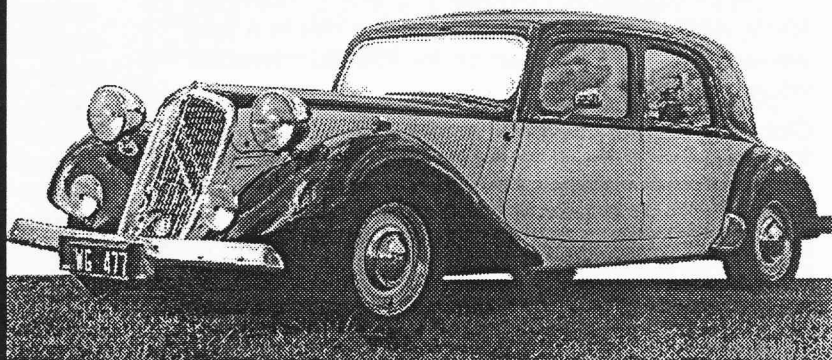
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# a-tractions

## VICTORIAN ACTIVITIES. AUGUST

### SUNDAY 31st

Joint Day Run with CCCV to Avenel. Avenel is 16km north of Seymour and the pub is owned by a Citroen enthusiast and Mehari owner. Lunch is at the pub. Bring your petanque set for a round after lunch. Fixed price lunch is \$25. Be certain to confirm your attendance with Leigh Miles by 24 August. Departure point is the Ford Factory at Campbellfield at 10am. Melway's ref. 180, E12.

## SEPTEMBER

### SEPTEMBER 19, 20 & 21ST

28th Annual Spring Rally - Wangaratta. September 19, 20 and 21st. The Veteran, Vintage and Classic Vehicle Club of Wangaratta Inc. have invited CCOCA to their 28th Annual Spring Rally. The Rally Fee is \$60.50 [adults] and \$41 [children up to 12] including Friday evening supper, lunch on Saturday at All Saints Winery, three course dinner on Saturday night and a spit roast lunch on Sunday. Event Registration commences at 2.00pm on Friday afternoon. Club Member's Rod Greschke and Barbi Osborn were going on and on about the Event over Austraction and it certainly sounds like a great country weekend.

Further information can be obtained from Leigh Miles or you can book direct with VV&CVC of Wangaratta Inc. Registrations close 1 September and it is recommended that you arrange your accommodation early.

### WEDNESDAY 24th

General Meeting - Canterbury Sports Ground.

## OCT

### OCTOBER 4th & 5th

Mountain Weekend. October 3, 4 and 5. Members in NSW, ACT and SA please remember this is a long weekend for you, so read on for special interstate information.

Club member Peter Sandow has made full arrangements for a weekend on Mt Hotham, staying at the Peninsula Ski Club. Previous advice was for just an overnight stay on the mountain, but the 'snow bunnies' won out and this has now turned into a full-on weekend away.

We will meet on Friday evening in the car park of the Fountain Gate Civic Centre, just off the Prince's Highway with a view to being on the road at 6pm. We will re-group at Mel and Colleen Carey's in Bairnsdale [10 Omeo Highway] at around 9:30pm to prepare for climbing the mountain. This means that we will get to the Peninsula about midnight.

The Peninsula Ski Club is beautifully appointed and all bedrooms are serviced with en suite bathrooms. The Lodge boasts a fully equipped gourmet kitchen, spa and sauna facilities are available and it commands panoramic views of the Dargo Valley.

Saturday is all yours to ski, toboggan, enjoy the views or just sit by the fire and chat.

Under cover parking can be arranged, although this will cost extra. Lift tickets are about \$50 per person, per day and access to the mountain is \$36 per car.

Dinner on Saturday will be at Swindler's Licensed Restaurant, where two courses will set you back around \$20 plus refreshments.

Sunday morning will give you a chance to take in some more skiing, before heading back down to Bairnsdale. There we will gather for an early dinner at Lake of China Restaurant.

Details: Accommodation will cost \$45 per person, per night. It is suggested that you bring your food for breakfast and you may wish to do the same for lunch, although coffee, tea and condiments are there. You will also need to bring your own linen and towels. Alcohol is very expensive on the mountain, and so you may also wish to bring that with you. Chains will be compulsory on this trip and as some of our cars have tyre sizes that are not standard they will have to be pre-booked with the chain hirers in Omeo.

Bookings are essential for this event and must be in writing, and include payment of the accommodation fee of \$90 per person. Your cheque should be payable to Peninsula Ski Club and be posted to Peter Fitzgerald, 297 Moray St., South Melbourne. 3205 to reach him no later than Friday, September 19. Be sure to state the size of your tyres for the booking of chains. Bookings cannot be accepted after this date and the \$90 is not refundable should you not attend after booking.

Peter Fitzgerald has offered to use the Xantia as a 'pack horse' and take luggage and skis for other people, so we can fit more people in each car and help keep down the overall costs. Should you wish to only drive as far as Bairnsdale and then 'car pool', you can leave your car at Mel and Colleen's for the weekend. Peter Sandow will also arrange group pricing for ski hire and possibly a reduced price for lift tickets.

**Interstate Details:** If you are joining this weekend from NSW or ACT, Peter Fitzgerald will provide you with full details of meeting points and the suggested route will be via Albury and Bright. For members from SA [or indeed anywhere else], we can arrange accommodation in Melbourne on the Thursday and/or Monday nights with club members. Mention this to Peter F when you book, or 'phone your favourite Melbourne member direct.



**SUNDAY 12th**

Puffing Billy Olde Time Festival. Sunday, October 12th. This is a bi-annual event and whilst CCOCA has never entered and a Club, members who have been recommend it as a great day out. Whilst exhibition vehicles are restricted to those manufactured before 1 January, 1972, anybody can participate. Exhibitors receive a Festival Badge and a Family Transport Ticket, allowing unlimited free transport [two adults and one child, under 17] between all exhibition sites on Puffing Billy trains and busses, admission to the Puffing Billy Steam Museum and workshop inspections as well as the other historic displays at Menzies Creek. Exhibitors pay \$35. Standard transport tickets are \$17.50 [adults], \$12.50 [child 4 - 15], \$50.00 [family]. Bookings close September 5.

**SUNDAY OCTOBER 19th**

Combined CCOCA and CCCV Concours d'Elegance - full details on this page.

**WEDNESDAY OCTOBER 22nd**

General Meeting - Canterbury Sports Ground.

**NOV****SATURDAY 8th**

Joint Event with Veteran Car Club. Saturday, November 8th. Well, not quite a joint event, we have offered to provide a coffee and biscuits stop for the VVC in Bacchus Marsh. However, we will arrange an event for CCOCA to run in conjunction, so keep the date free. Full details next magazine

**SUNDAY 16th**

All French Car Day in conjunction with the CCCV and the Renault and Peugeot Car Clubs will be held at the Wilson Reserve in Brighton Victoria. CCOCA has been involved in planning this event so mark it in the diary, pack a picnic lunch and we will see you on the 16th.

**NOVEMBER 21, 22 & 23rd**

The Festival of St Arnaud is a celebration of the only Australian town named after a Frenchman - he was a Marshall in the army of Napoleon III. CCOCA has been invited to participate in this celebration of Frenchness. The event will include a Rally of Veteran and Vintage Cars and the presence of classic French cars will enhance the 'French connection'. The whole thing starts with a cavalcade of cars as part of the Street Pageant on the Friday evening at 6:00pm. Further details in the next issue of 'Front Drive'.

**SUNDAY 30th**

Rob Roy Historic Hillclimb Historic meeting featuring Citroën. This will also serve as a picnic Christmas Party for CCOCA - full details next magazine

1997

# Citroën Concours d'Elegance

Sunday 19th October

Werribee Park  
Mansion  
Victoria

This year's event is to be held at the National Trust property - Werribee Park Mansion, and the cars will be displayed in the National Rose Garden. October will see the roses at their best, and this spectacular photo opportunity should not be missed.

Special arrangements have been made for class winning vehicles to be displayed in front of the Mansion.

Entry fee is \$7 per car which includes ONE FREE BONUS Adult pass to tour the Mansion (normally \$8).

All vehicles must be in position by 10.30 am and judging will commence at 11 am.

Trade displays will be a feature of this year's event and Citroën Australia will be showing the very latest releases.

On the preceding Saturday [18th] we will arrange an inexpensive dinner. Please indicate your interest in attending by ringing Leigh Miles [03] 9888 7506 by October 14.





# BASTILLE NIGHT DINNER

It was a dark and stormy night...no that is not how this is supposed to start. However it was cold, no it was very cold. That did not stop avid Citroënists from coming to celebrate the Anniversary of the French Revolution at Cafe de France. This year we felt rather more secure in taking the Citroëns on this outing – past years have been fraught with certain concerns about vandalism and dropping bombs in places other than the Champs Elysee.

Well, not quite everybody was able to be with us. Jack and Kari Hawke had planned on being there, but the dreaded 'flu caught them and they were stranded in Leopold. We did have other regional visitors grace us with their presence – Rob and Libby Little and Mel and Colleen Carey joined our noisy throng. From Melbourne President [I shoot people] Fitzgerald, Sue Bryant, Sue Coleman, Robin and Sue Smith, Jay Leibowitz, Bruce Dickie, Mark Beran, Adam Shiels,

Iain Mather and Steve Bartlett, Peter's non-Citroen friends John and Louise also joined us again this year.

I did not notice it happen, it has happened before, but before I knew it the restaurant was empty – something to do with the hour and the noise. I was not able to pin point who was the source of the noise, but somebody assured it came from our table! My goodness, some people can be so thoughtless when they out.

We will be doing it all again next year and maybe then we will find out who cannot control their voice.

Leigh Miles.

# SYDNEY ANNUAL DINNER

This year's dinner attracted another good turnout – in fact the same amount of people as the previous year. We where to have around a 40%increase in numbers but I think Melbourne passed on the dreaded 'flu and there were a number of last minute cancellations

Guests of the Club for the evening where

Citroën Australia General Manager, Miles Williams and his partner and Apart from the obvious discussions as to where Citroën intend to go in Australia (up of course) there was much discussion on the validity of school science projects as the kids expected the parents to do the majority of the work for them. The night gave the guys from Citroën a look at some of the rowdy gang that have far too much fun at things like the Austraction Rally etc etc.

It was great that you could come and we do appreciate the support Ateco has given CCOCA this year.

Many thanks to Alain for organising a great night with superb food again. It was great to catch up with some of our members in Sydney. And it was great to see a number of country NSW members coming as well. Mel and Colleen brought the Big Six up from Bairnsdale. I took the cheats way out and flew.

Looking forward to catching up with you soon.

PS: Thank you Miles for telling me about the Henri Cartier Bresson exhibition in Paddington. I went on Sunday and it was fantastic and I spent far far too much.

Peter Fitzgerald

## The ride



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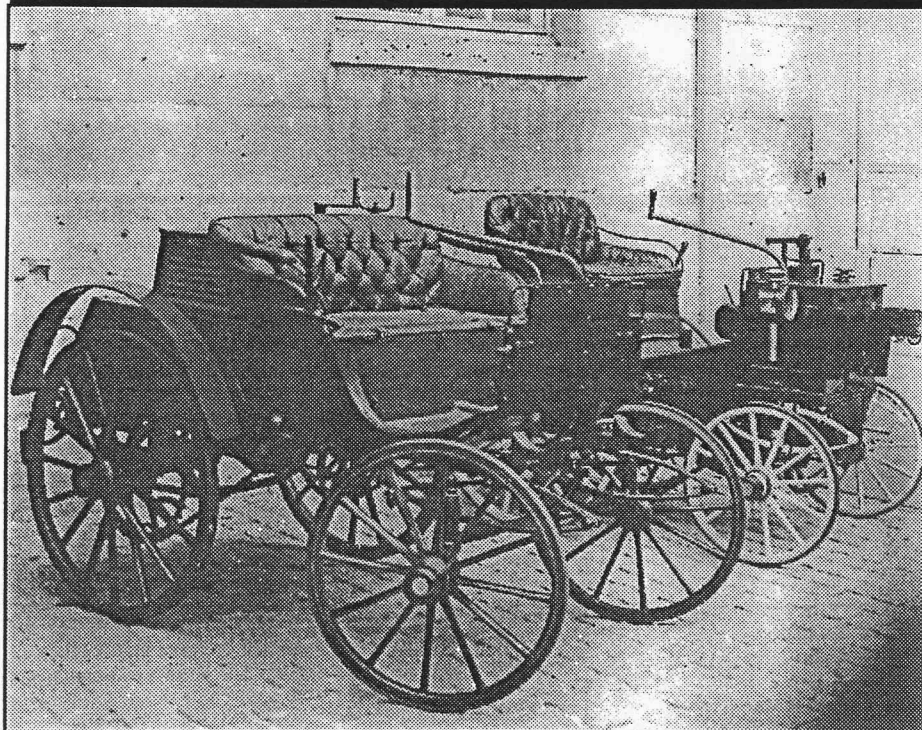
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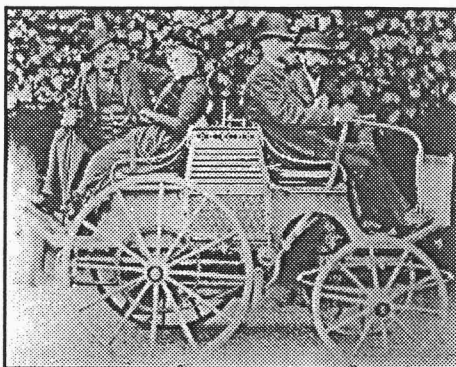


# Limelight to TWILIGHT



The Panhard et Levassor works lay in the south-western corner of Paris on Avenue d'Ivry – a scattered group of buildings, old, dirty and to all appearances, disorganised. There, in 1954 some 5,500 workers produced 65 cars every working day. Panhard et Levassor boasted a glorious past, being the oldest make of car in the world in continuous manufacture. Well, continuous until Citroën closed them down in 1967. Mercedes-Benz claim to have invented the motor car and to have built the first car and the history of Panhard et Levassor and Mercedes are intricately linked. Daimler was an engine man, Panhard made wood working machinery. Panhard might never have ventured in automobile manufacture had the Daimler engine been unavailable and the Daimler Motoren Gesellschaft may not have become so serious about motor cars if not for the influence of Levassor on Gottlieb Daimler and Wilhelm Maybach. If there could have been no Panhard car without Daimler, there certainly would not have been one without Levassor.

Emile Levassor was born in 1843 and met Panhard as a student at the Ecole



*Two 1891 cars – the mid-engined prototype and the front-engined production version.*

*The 1890 Panhard with Emile Levassor at the tiller. Paul Panhard and Madame Levassor are in the back.*

Centrale in Paris. Following graduation, they separated – Panhard to work for a wheel company, where he married the boss's daughter and Levassor to work in the machine shops of John Cockerill in Belgium. After five years in Belgium, Levassor returned to France in 1869. Panhard had in 1867 become a partner in the wood work machinery business of

Paul Perin, who had invented the band saw. By 1871 Perin and Panhard had outgrown their premises and Panhard was looking for a new site. He called on Levassor to equip and run the new factory at Ivry.

Perin died in 1886 and the company became Panhard et Levassor; within four years Levassor was driving a car of his own design and construction. However, the business' first foray into the automotive world was via a contract to manufacture Deutz petrol engines in France. Daimler was the chief engineer at Deutz and after romancing the widow of Daimler's French representative [another old school chum, Edouard Sarazin], Levassor visited Daimler for the first time in 1888. Here he saw all the existing applications of the Daimler engine – a horseless carriage, a motorboat and a tram. In 1889 M. Sarazin was formally appointed as exclusive distributor for Daimler engines in France. Subsequently Panhard et Levassor were contracted to manufacture engines under Daimler's patents. M. Levassor received a 20% royalty – 12% of which went to Daimler. Levassor seems to have the principal negotiator for both parties! In 1890 Levassor married Louise Sarazin and he found himself in control of the French rights to the Daimler engine and the engineering head of the only licensee.

The first Panhard car appeared in February 1890, although it was not until the following year the its first significant outing occurred – a journey from the Paris works to Versailles. By July of that year Levassor had received ten orders, and he proceeded to redesign the car. The early prototypes had the engine centrally mounted and Levassor moved the engine to the front in pursuit of diminished road shock and vibration to the power train. Six cars were delivered that year. Panhard patiently allowed Levassor to divert much of the profits from the machinery business into the motorcar development programme and by 1898 the motorcar business had become more important than machinery manufacture.

Levassor took out his first patent in August 1891, which concerned improvements in the ignition system. He discarded Daimler's belt drive, replacing it with a gearbox and clutch. Thus, Levassor is credited with developing the *systeme Panhard* – arranging a car with its radiator, engine, clutch,





gearbox, driveshaft and final drive to the rear axle in an orderly line down the centre of the chassis. From then until at least 40 years later [70 in the USA and Japan], that logic was never seriously challenged.

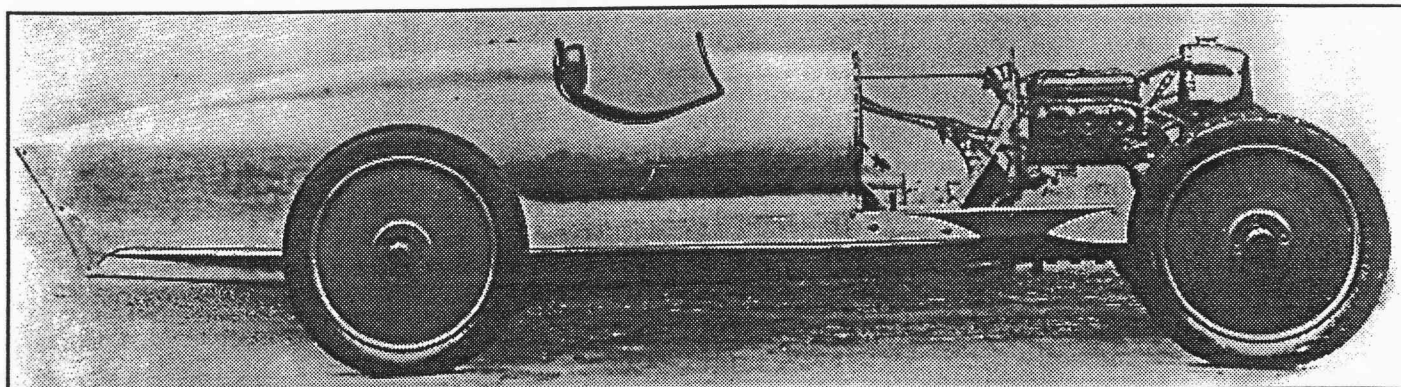
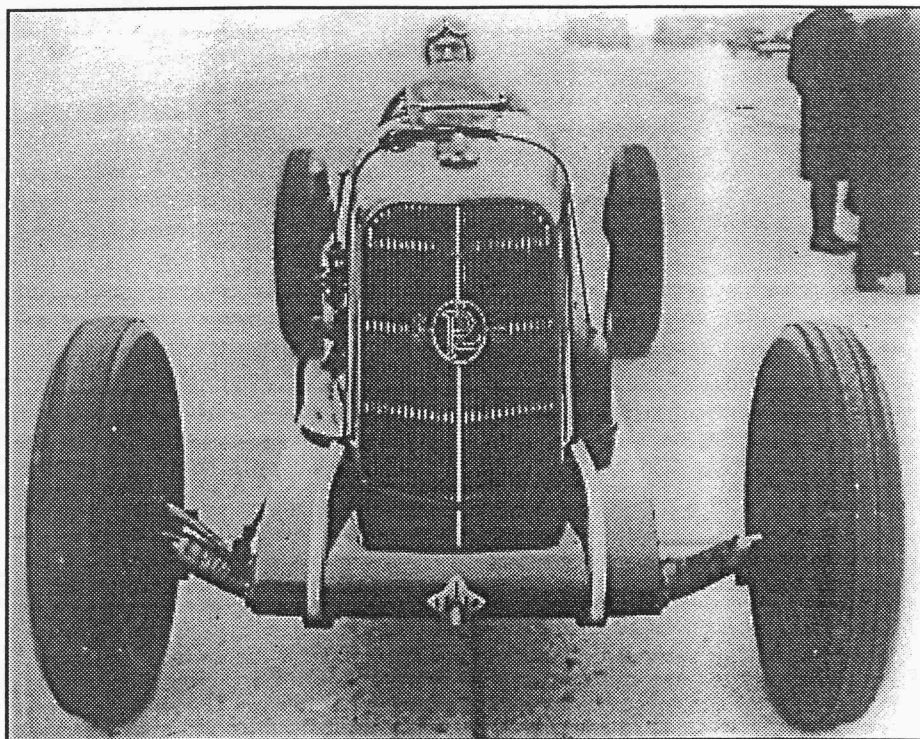
Levassor died as the result of injuries received in a motor car accident in 1897 and Panhard died in 1908. The running of the business passed into the hands of Panhard's son, Hippolyte, and his nephew, Paul. Paul, as a ten year-old had ridden with Levassor in the first test drive in 1890, and served as President from 1916 until the completion of the Citroën take-over, in 1965. The engineering side of the business was in the hands of Commandant Arthur Krebs, a military engineer of strong will and firm opinions.

It was Krebs who embraced Charles Y Knight's new sleeve valve engine in the first decade of the twentieth century and therefore freed Panhard from the royalty payments to Daimler in 1914. Panhard's early experience with the sleeve valve engine directly influenced other French car makers. Louis Dufresne worked as an engineer for Panhard when the company was developing its second generation engines. He left Panhard to work on a large car project with André Citroën in about 1917. Citroën abandoned this project – preferring to concentrate on small vehicles and sold the project to Gabriel Voison. The resulting Voison engine included a good many Panhard features. In 1927 Dufresne joined Peugeot and designed another sleeve valve engine for a maker who had ignored the Knight engine until then.

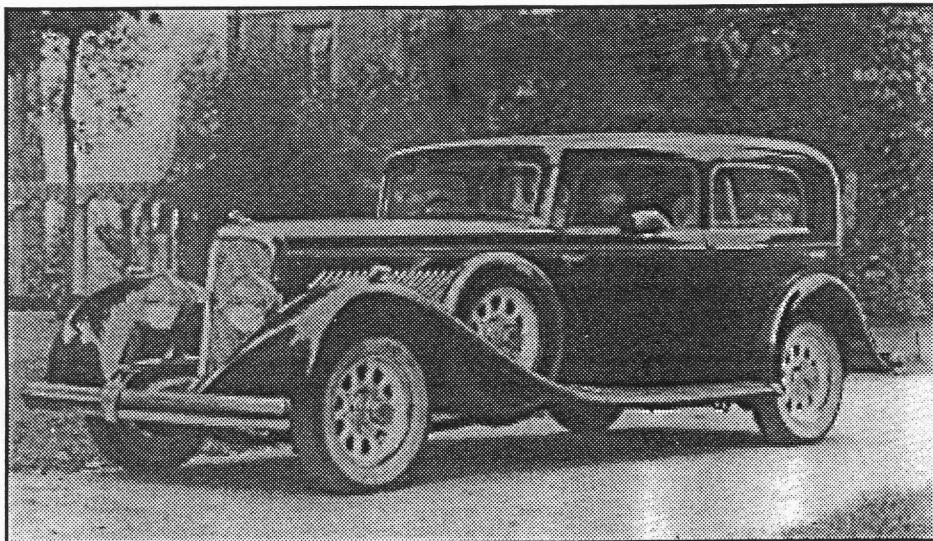
By 1919 the engineering side was in the hands of Eugene Gorju, who expanded the model range and set standards for a whole new generation of Panhard cars.

He wanted high quality and passenger comfort, even in the lowest priced models and his idea of a 10CV light car was not in the light car genre of Citroën, Peugeot or Renault. The 10CV Panhard, introduced in 1919 was massive, roomy and under-powered. Under Gorju's direction Paul Defly and Charles Schaeffer created six and eight-cylinder models with four main bearing crankshafts. The eight-cylinder cars had two two-barrel carburettors, the two barrels in each set to open in two stages. Defly and Schaeffer, incidentally, invented what has become known as the Panhard rod: the transverse bar placed behind the rear axle to control lateral axle movement relative to the frame. It was introduced as standard equipment in 1930.

As with many early motorcar companies road racing was an important component of the proof of the marque's reliability and provided new development opportunities. Whilst Panhard et Levassor had discontinued racing in 1907, in the mid-20s they became interested in the one hour land speed record. Paul Panhard believed if he could combine some racing activity with a demonstration of reliability he could justify the necessary financial commitment. The first of the Panhard record cars was a tall, thin machine whose appearance earned it the nickname 'Razor Blade'. In 1926 the 'Razor Blade', with 4.8litre engine, took the one hour record with a speed of 118mph. Panhard lost it again in a matter of months and Panhard did not regain it until 1932, with an average speed of 129mph. In 1934 the record



Above: The first Panhard record car - the Razor Blade of 1926. Top: The 300hp record car of 1934, designed by Louis Bionier.



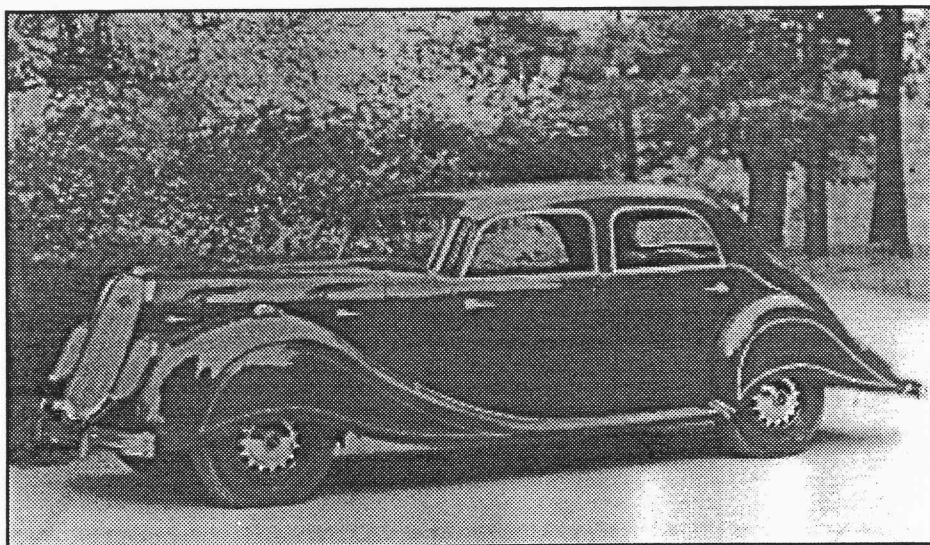
was re-captured at a speed of over 130mph. Louis Bonnier, who had joined Panhard in 1927 as an experimental engineer, built these record breaking cars. He also had a profound influence on Panhard production cars. Bonnier, a keen driver, was bothered by the thick A-pillars and resulting poor side vision in cars of the period. This led him to design a windscreen of 'integral vision'. Instead of one thick A-pillar, Bonnier used two thinner pillars, with separate curved corner windows. The design was introduced on the 1933 Panhard Panoramique.

In 1930 Pasquelin succeeded Gorju as technical director. He shared Gorju's belief in quality, but also demanded performance; which Panhard cars suddenly acquired after his appointment. He and Bonnier worked to produce some of the most outstanding combinations of engineering and styling that came out of the '30s. The car was called the Dynamic and it appeared in 1938. It was a crowning effort and the last of the classic Panhards. The Dynamic was a sort of dream car. It was full six-seater with central driving position, unit construction with front sub-frame, low centre of gravity, low drag

*Top: The 1933 Panoramique berline, featuring dual windscreen pillars.*

*Centre: The Dynamic berline of 1937.*

*Below: The Dyna of 1947, featuring front wheel drive, an air-cooled flat twin engine and an aluminium body.*





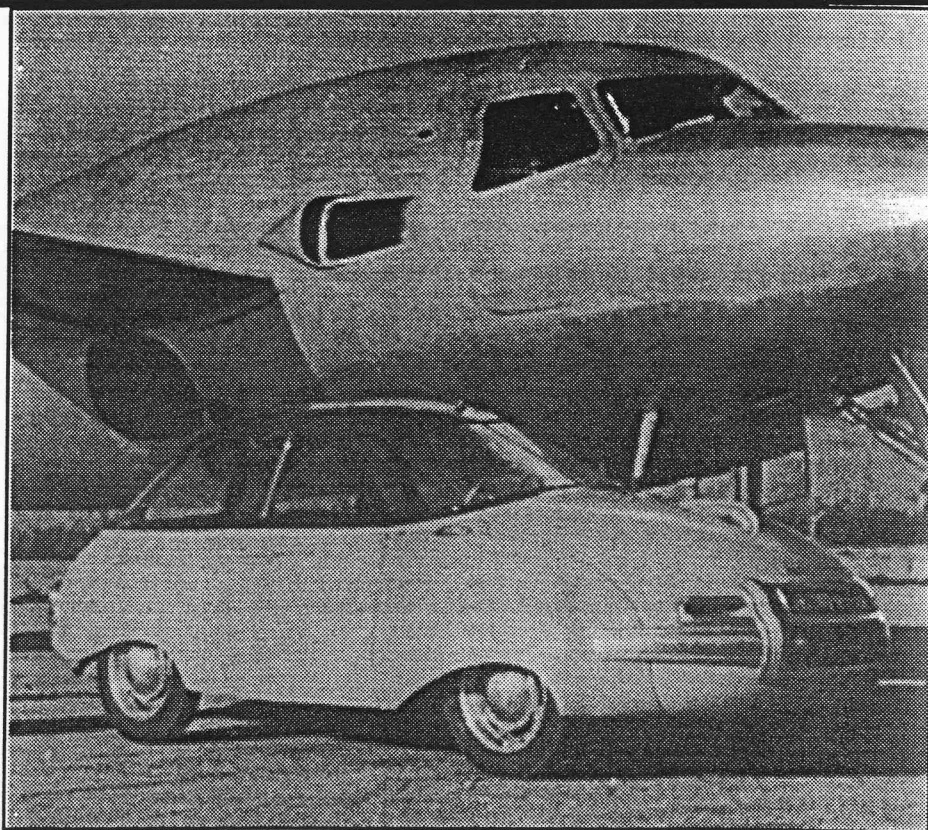
profile, independent front suspension, with torsion bars, dual hydraulic brakes, panoramic windscreen with dual A-pillars, four-speed constant mesh transmission with free wheel and helical teeth on all gears. The Dynamic had a choice of two six-cylinder engines; 16CV or 27CV. Despite the technical excellence the Dynamic failed to arrest the downward sales slide that had begun with the Depression. By 1938 the factory was working well below capacity and only 800 men were employed.

During the Second World War Paul Panhard worked to frame the Company's post-war policy. The large, expensive, luxurious Panhard was buried. Instead, Panhard would make a small, lively, inexpensive car. A suitable design came to his attention in 1944 – a prototype with a monocoque all-aluminium body built by Aluminium Francais to promote the use of light alloy. The engineering design was by Jean-Albert Gregoire.

The prototype car had a flat-twin air-cooled engine, front wheel drive, variable rate suspension and a dry weight of around 530kg. Panhard bought the French manufacturing rights and gave Bonnier the task of developing the design for production. The variable rate suspension was dropped, but otherwise the Gregoire concept was adopted in its entirety. The result was launched in 1948 as the Dyna Panhard. Gregoire sold the same design to WD Kendall in the United Kingdom, who never went beyond prototype stage, and LJ Hartnett, here. Hartnett was faithful to the Aluminium Francais prototype and was still experimenting as late as 1951, but failed to achieve production. The Panhard company sold a manufacturing license to Ernst Loof, who built a number of cars in Germany between 1950 and 1952. Mechanically, these cars were identical to the Dyna Panhard, but the bodies were all enveloping, with smoother lines than the French product.

Panhard's brave decision to put only one model into production, a model of highly unorthodox design, a character totally alien to Panhard's traditions seemed to pay off. Panhard prospered while such grand marques as Delage, Delahaye, Hotchkiss, Salmson and Talbot disappeared.

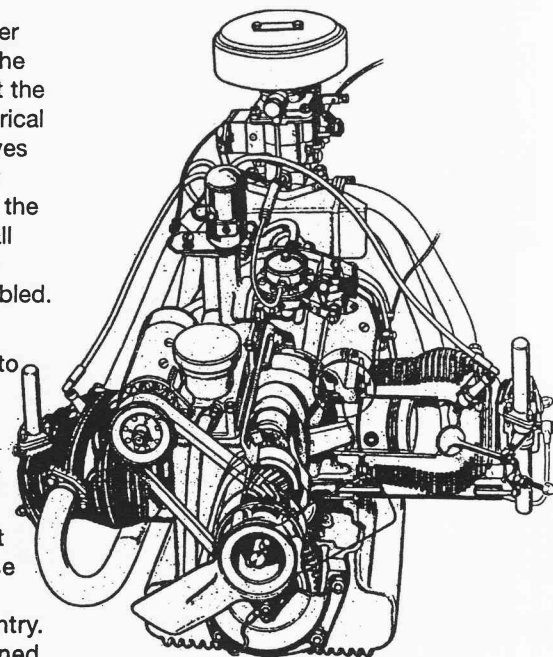
The Dyna engine of 610cc was designed for small size and low weight. Placed in the nose of the car, it gave a short bonnet and good weight distribution. The first cars produced 30hp. A single central camshaft was placed below the



*The Dynavia of 1948, which led to the development of the Dyna 54*

crankshaft, with pushrods and rocker arms to inclined overhead valves. The engine had no rocker arm shaft, but the rocker arms were carried on a spherical seat on the rocker cover studs. Valves were closed by torsion bars, to cut reciprocating weight and shortened the valve stems and therefore the overall width of the engine. In 20 years of development power output was doubled.

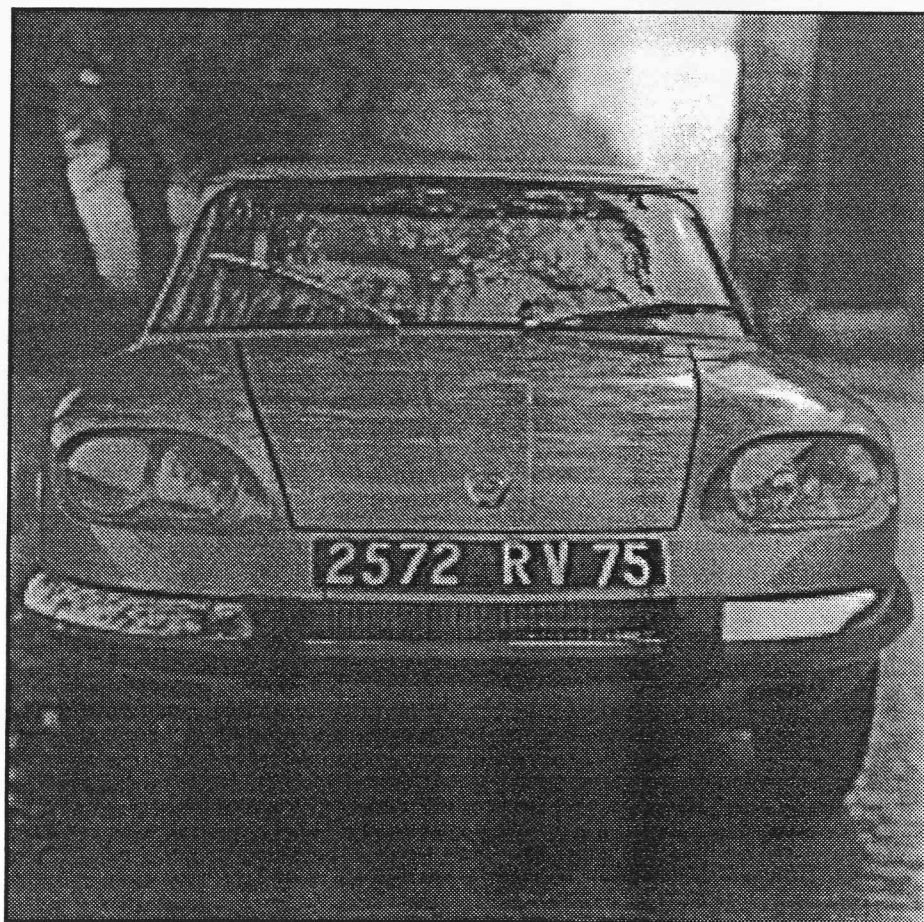
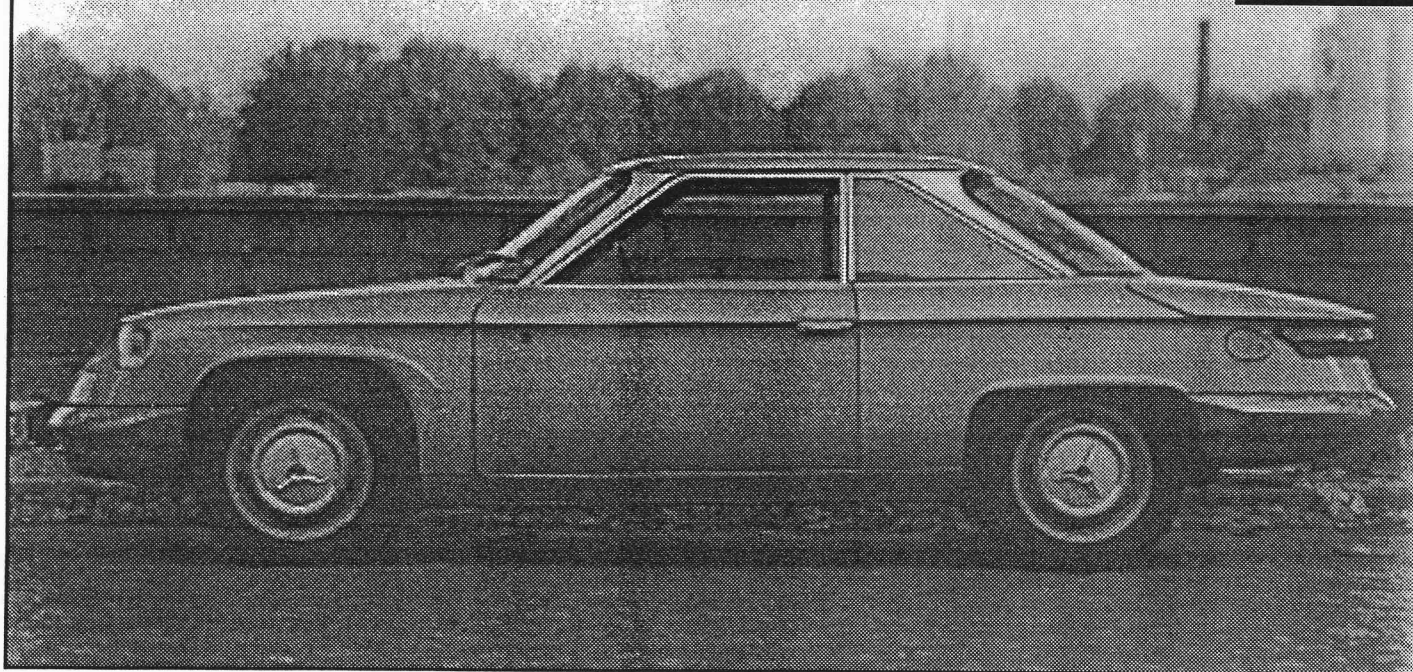
In 1949 when AP Tranie became technical director he tied Bonnier into a new project – the Dynavia. This was in exercise to explore the lower limits of engine size and fuel consumption whilst retaining practical speed and acceleration. Inspiration for the body came from jet aircraft design whilst making extensive use of light alloy. The drive train was predominately standard componentry. The Dynavia weighed 850kg, attained 140kph and cruised at 100kph whilst running at 42 miles per gallon [6.7V/100km]. This exercise led directly to the design and production of the Dyna 54. Launched in 1954 it was designed by Tranie and Bonnier. The body was developed in collaboration with the *Institut Aerotechnique de Saint-Cyr* and *Laboratories Eiffel* in Paris. It was constructed of Duralinox and weighed only 100kg. The whole car weighed 650kg, could seat six and had a top speed of 136kph. The power unit, complete with drive train and transmission weighed



250kg and an engine displacement of 851cc. 5,964 examples were made in 1953, 13,585 in 1954 and 19,289 in 1955. In 1955 Duralinox was abandoned in favour of steel and the car began to gain weight. The peak year was 1958 when 34,784 Panhards were turned out, in addition to many 2CV vans, for by this time Citroën had taken an interest in the group.

In 1959 the Dyna was redesignated the PL-17 and most of the changes were merely styling modifications. In 1963





Panhard sprang another surprise on the world, the sleek, well proportioned 24 CT. Its 848cc engine was tuned to produce 50hp and in 1964 the 24 BT followed, with 60hp. The new models failed to catch on in the face of increasing competition. The cars were not inexpensive, nor did they offer the customer speed, road-holding or operating economy that could not be matched by other manufacturers.

Even the faithful deserted the marque. The Dyna had ineffective brakes, a weak clutch and a slow column gearchange. So did the 24 series. Sales went down again and in 1965 the Citroën take-over was complete.

**This article was prepared from Automobile Quarterly, Autumn 1967, kindly loaned by Bruce Dickie.**





# PANHARD'S DELIGHTFUL

# Dyna



*Nice to look at, nice to drive and designed with all the cunning of JA Gregoire, the little Dyna is a charming Frenchman.*

It is one of the tragedies of the automobile business that unconventional cars do not sell better than they do. The French Dyna Panhard is typical.

It is sufficiently strange and expensive enough to discourage serious scrutiny by all but the car enthusiast who reads magazines such as 'Wheels'.

The closer you look at the Dyna, the more you see that its great beauty is in its simplicity. It is, you feel on reflection, the kind of car from which the whole world of motor manufacturers should borrow. But they probably never will. Conventional design has taken the low road, it seems, and the separation of

such vitals as engine and differential by a propeller shaft is a permanent feature of family cars. [How things have changed since 1959. Ed.]

It is now too late, says the conventionalists, to start moving basic components every which-way – it costs too much, cuts down margins, destroys the economy of a legion of small suppliers [and a hatfull of mammoth ones, too] who have been making axle-differential casings for 30 years and, by heaven, are going to keep on making them.

Even so, the Dyna is a monument to good sense. It demonstrates, again, that front wheel drive is a superior method of

propulsion; that you do not need a V8 engine weighing a quarter of a ton to get you from A to Z at 140kph when a light two-cylinder unit of, say, 850cc will do; that a car body interior was meant to be filled with people, not skewered by tailshaft tunnels and filled with bulging automatic transmission humps and bristling with wrap-around screen overhangs.

In short, the Dyna gets back to the cannons of good thinking design that have been ignored in the horsepower and height races.

The Dyna, thought out mostly by distinguished French engineer, JA Gregoire, is ample [4.6 metres long, 1.6 metres wide]

*Above: Looking a little as though it has been blown up with a bicycle pump the Dyna has very good aerodynamic qualities that contribute to its 140kph top speed.*

*Opposite page: An enormous amount of luggage can be piled into the Dyna's boot. Access to this compartment can be had from inside the car, too.*



with four doors, space for four or five passengers and an impressive number of suitcases. Externally the body is bulbous and rounded, like a Borgward that has been blown-up with a bicycle pump. But, it is very practical. Its rounded corners make it easier to ooze into parking spaces – none of that horrible waiting for the end of your bumper to crunch a neighbour's – and aerodynamically most efficient.

At the rear is a boot of incredible proportions, accessible as well from inside the car merely by tilting the rear seat squab forward. Boot-lovers can give this one full marks.

Inside the Dyna is furnished with a fine Gallic disdain for subtlety in colours, and a wealth of that creamy French plastic that seems to find its way into every piece of French machinery – Citroëns, Simcas, Renaults all contain it.

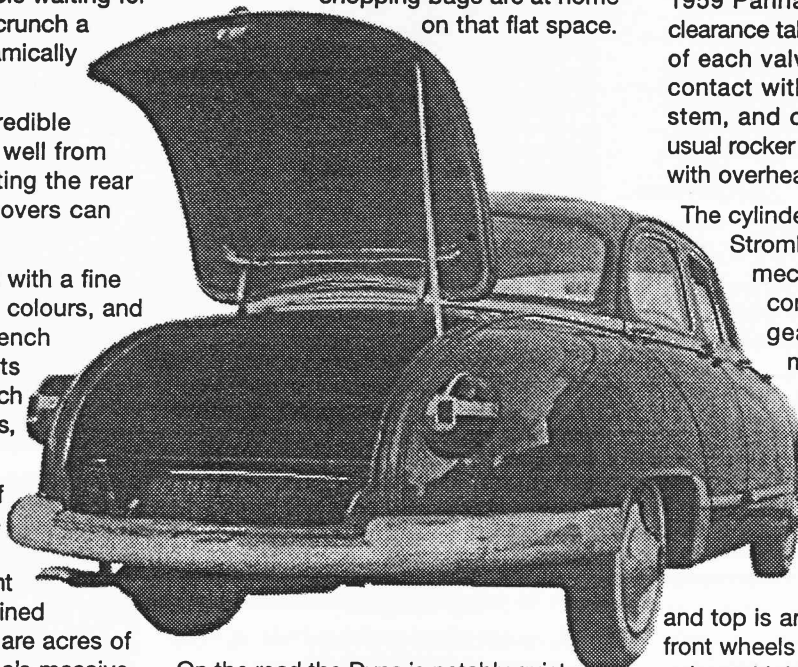
After personal experience of this stuff, I can say with some authority, it attracts dirt like a five-year-old boy. No amount of cleaning will remove ingrained grime. The pity is that there are acres of this composition on the Dyna's massive steering column shell.

This is nothing like any shell you have ever seen before. It is about 500mm long, and contains every knob, lever, button and instrument with which the lucky owner is to become familiar.

Through the single diametric spoke steering wheel the driver sees the speedometer arc mounted on top of the shell. On the left is the gearchange – stubby, a little difficult to handle at first – on the right the turn indicator lever, with a sprinkling of minor controls on each side. The starter-ignition lock is under the wheel, almost out of sight, and requires some wrist contortion to operate smoothly. Under the padded control panel rim are a glovebox and an ash tray, also provision for the radio.

From behind the wheel visibility is good, but not sensational. The driving position is relaxing enough, except for the height of the wheel. A high wheel can give tired arms on a long trip, but in our brief impressions drive we did not have time to test the result in the Dyna.

The most pleasing difference though, is the absence of any obstructions on the floor, front and rear. In the front, you may put feet forward against the angled scuttle, lightly braced against braking effects, and feel exceptionally secure. Of course, such things as women's handbags and shopping bags are at home on that flat space.



On the road the Dyna is notably quiet, almost ghostly, and for the reason you must look at the very special plumbing under the bonnet.

Even before you lift the bonnet you know you are not going to find any radiator. The only opening in the Dyna's blunt snout is a rounded air intake surrounding a chromium spotlight boss built into the front bumper.

When you lift the bonnet, with it come headlights, front guards [one piece with the bonnet] exposing the engine completely.

Covering the wheels are the real mudguards and between these the extraordinary power unit that has helped the Panhard win more than 900 competition victories. This is a twin-cylinder, horizontally opposed, air-cooled, four stroke ohv unit of 850cc [bore 85mm, stroke 75mm], developing 45bhp. Air-cooling comes via an impeller housed right up front in an aluminium casing. Air is ducted from here through more aluminium casing over the finned one-piece cylinder heads and barrels.

Connecting rods use Panhard patent frictionless roller bearing big ends. At the other end, the overhead valves are operated by pushrods and rockers with hydraulic constant lash mechanism and torsion bar return springs. One feature new to the engine in the 1959 Panhard is the hydraulic valve clearance take-up. In this way, the rocker of each valve is held in permanent contact with the push rod and valve stem, and completely eliminates the usual rocker and tappet noises associated with overhead layouts.

The cylinders are fed by a Zenith Stromberg carburettor supplied by mechanical fuel pump. Ignition comes from a spiral bevel gear-driven distributor mounted close to the carburettor.

Behind the motor is a four-speed synchromesh gearbox, built integrally with the differential behind it.

Third gear is a direct drive, and top is an overdrive. Drive is to the front wheels through constant speed universal joints and half shafts.

Sliding spline sleeves make these driving shafts 'elastic'.

Hot air ducted from the engine is used to advantage, as it is in the Volkswagen design, in a highly efficient heating system.

While your eye is roving over the engine-room you note at the same time the well-exposed front suspension.

This comprises two transverse leaf springs that form upper and lower links with the 'elastic' axles between. The wheels are located by obliquely mounted control arms to which are attached inclined telescopic shockers. All in all, an independent layout with great rigidity and a necessary lack of unsprung parts. With the weight of engine-gearbox-differential directly over it, the Dyna's front suspension has to be good, or the results would be too awful to think about.

At the rear, suspension is semi-independent, with a vee-shaped de Dion tube connected to the car's flat floor frame by a central pivot mounting. At the ends of



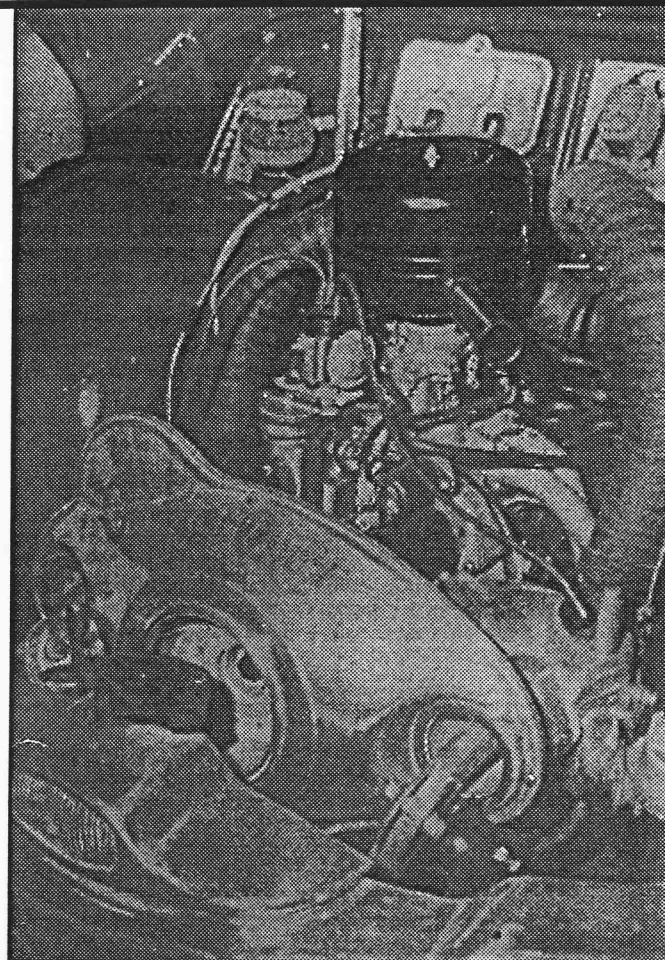
the tube are trailing arms, suspended on longitudinal torsion bars, with telescopic shock absorbers.

On the question of weight the Dyna tips the scales at just over 15 3/4 cwt – an astonishingly low total for a car of its dimensions. The two biggest factors that make this possible are the lightweight alloy engine-gearbox-differential unit, and the Dyna's twist proof all-steel flat floor chassis – a Panhard patent. The reinforced floor has massive box section side members with tubular cross members like young drainpipes. The engine unit is mounted on a triangulated tubular structure built as an extension [and therefore easily repairable] to the floor that ends at the scuttle.

On the road the Dyna gives the novice some unconventional sensations. There is none of the normal feeling of contained power that the sound and faint vibration of a big six-cylinder conveys. All is quiet. The man with the untuned ear might guess that under the bonnet beats a king sized sewing machine. The tuned ear, on the other hand imagines a whisper-quiet motor-cycle engine – and he would be dead right. The amusing point here is that plenty of motor-cycles have cubic capacities 150cc larger than the Dyna Panhard!

Finding your way through the gate of the Dyna's gear change is not easy for the first few times, but with practice you improve. The synchromesh felt to me to be an agreeable constant pressure mechanism, and changing down from top to third to second was a completely silent process. Top gear, of course, cannot be engaged, or should not be, until a road speed of 55kph-plus is reached. Even at that speed there is no real response to throttle opening. Top is a ratio designed to cruise the Dyna at speeds around 110kph all day with truly fantastic economy. Frenchmen drive Panhards unmercifully on their faster roads and still get 40mpg. The makers claim a maximum of 48mpg.

The Dyna's rack and pinion steering is direct and accurate. Like all front wheel drive cars, it is inclined to be heavy. Even when you are pedalling hard on sharply radiused bends it needs no real physical effort to control it with one hand. Maybe I do not know my strength: women perhaps might tire more easily. In any



*Lurking under the bonnet and pile of accessories is the Dyna's horizontally opposed, twin-cylinder engine. It has a capacity of only 850cc, but develops a rather startling 45bhp. It is air cooled, of course.*

**Reprinted from  
Wheels magazine  
August 1959.**

event, front wheel drive makes up for any steering heaviness by giving the Dyna admirable cornering stability. Stand the car on the edges of the tyres, but it still claws its way through the brutal bends.

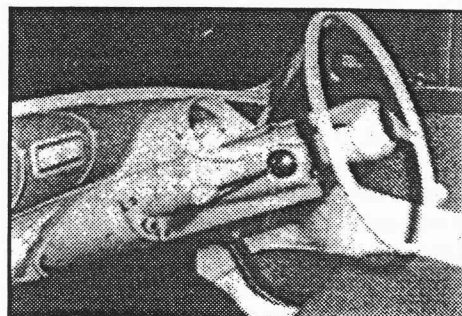
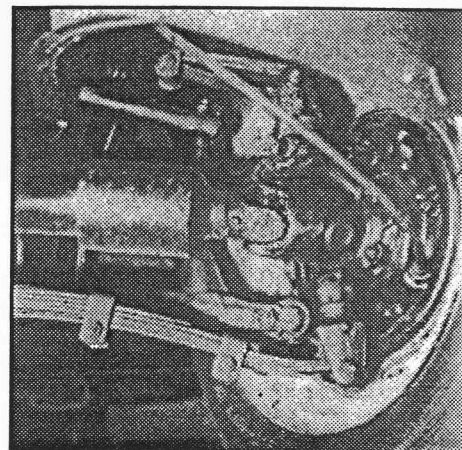
If you need brakes in a hurry the Panhard has them – enough to stop a tram, without noticeable nose-diving.

I have not mentioned acceleration performance because under 'impression' conditions with what was a new there was no opportunity to extend the Dyna through the gears with flat throttle. [ I don't understand this sentence either - Ed] My feeling, though, is that the car would not be particularly impressive against a stopwatch. Its great virtues are concentrated at the other end of the scale – high speeds [up to 140kph], long distances with a maximum of comfort on rough stuff and exceptional economy.

And the price? Just £1,349, including tax.

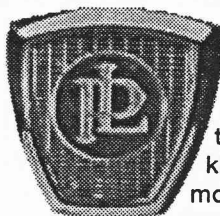
*Unconventional in a number of ways, the Dyna Panhard has upper and lower transverse leaf springs and front wheel drive through swing axles and constant speed universals.*

*Gathered on the steering column nacelle, which according to the author is doomed to get dirty, are all the controls. Gearshift controls four-speed 'box that has over-drive top.*





# THE FAST FINAL FLING



A twin cylinder 850cc French coupé the price of an E-type Jaguar? Let's face it, that was never the kind of agonising motoring choice to prompt sleepless nights, even among committed Francophiles. On British roads this little Panhard 24 coupé was a rare sighting and in France it was very much 'the connoisseur's choice' which is a '60s motoring euphemism for overpriced.

Right from the beginning the 24 was heading for trouble and with Citroën holding the purse strings it died predictably young; plans for a bigger-engined version came to nothing and the Panhard name disappeared with the still-pretty, still fresh CT in 1967.

Yet overpriced and underpowered as it was, the 24 and its long wheelbase siblings had much to offer. Principally, beautiful looks: a taut, elegant two door coupé shape with lots of glass area, slinky cowed lamps predating those of the DS and surprisingly generous interior comfort. The Panhard was a fine high-speed cruiser in which even the hardest driver would find it difficult to drop below 30mpg, and its front drive handling qualities were recognised as excellent. No doubt about it, as a diversion for the indulgent and technically minded the 24 had strong appeal. It still does.

To really understand the 24 you have to go back to 1946 and the introduction of the Dyna saloon that, after Panhard's lumbering pre-war offerings such as the bizarre Dynamique [with its central driving position], was a totally new direction.

The new car took its engineering inspiration from the Gregoire, a progressive front drive, all-aluminium family saloon from the fertile mind of CV joint pioneer Jean Albert Gregoire. Panhard got wind of the project at the end of the war and, realising it was more advanced than its own light car ideas, shamelessly copied it. Actually that is not quite fair: the Dyna that was shown at the first post-war Paris salon was much changed in detail.

Built around a steel platform, the Dyna was alloy-bodied and weighed just 1332lb, despite being more than 12ft long and having a claimed six-seater capacity. Under the rounded nose was an air-cooled 650cc flat-twin with cageless roller-bearing big-ends, shrunk-in liners, non-detachable cylinder heads [no head gasket problems] and inclined valves operated by torsion-bar valve springs, no less, for bounce-free high revs. It managed 70mph and, with front-wheel drive and a transverse leaf spring front suspension, had excellent handling. The French loved it.

They got a taster of the next generation Dyna at the 1948 Paris Show in the form of the Dyna via, an eye-popping, teardrop shaped saloon that could manage 80mph on the same tiny 650cc engine thanks to

its slippery shape and mostly alloy construction.

The actual production Dyna (the Dyna 54) was watered down for public consumption and launched in August 1953. Even in production form it was by far the most advanced family car around. It was a real lightweight, weighing in at just 1456lbs, thanks to extensive use of aluminium in the body, doors, floorpan and brightwork: the whole chassis weighed just 202lbs. The 'twin' had grown to 840cc and packed 40bhp by then, and was mounted on a patented subframe that could be removed from the body in 30 minutes just by undoing six bolts. An open V-section tubular axle with triple torsion bar springing gave ample suspension movement for a good ride and high grip. The brakes were mounted on the ends of the stub axles with the drums outside the wheels, exposed to the cooling air.

The handling was brilliant, the comfort superb, the economy outstanding and despite the small engine the Dyna had performance equal to cars enjoying twice the capacity.

There was just one snag. Somebody had misjudged how expensive it would be to build, and Panhard lumbered with a FFr 2 million tooling investment could not sell enough of the pricey Dynas to get a quick enough return on its money. Citroën pounced and bought a 25 per cent stake in the ailing firm in 1955, and the first nail was in the Panhard coffin.





Later Dynas were steel-bodied and when the Dyna became the PL17 in 1959 aesthetic purity went out of the window in favour of sales-grabbing chrome, though the car still looked unlike anything else

The coupés came along in 1963, initially as the C [50bhp] or the CT [60bhp from a twin-choke Tigre engine] based on a shorter wheelbase version of the PL17 chassis.

Styling of the 24 was by Louis Bonnier, a long time Panhard man who had headed the styling department since the '30s: he designed the Dynamique, Dyna and Dyna 54. An enthusiastic aerodynamicist [he filmed birds and fish for inspiration] he shaped the 24 in the wind tunnel and created a spare, elegant car that looked like nothing else on the road. In the mid '80s Toyota openly copied the generous greenhouse of the 24 for its Celica coupé, and paid homage to the car in the sales literature of the time

Inside the 24 had lots of clever detail. Its dashboard – in Tigre form at least – was stylish and well thought-out with hooded instruments and everything but an oil pressure gauge to keep the driver informed. Heating and ventilation were truly excellent, controlled by a rotating wheel on the dash, and there were conduits in the body structure leading to the rear window for demisting. The generous front seats were multi-adjustable with three-way height settings as well as the usual fore-and-aft slides and adjustable back rests.

A quick-release mechanism allowed either front seat to slide forward to allow access to the cramped rear seats, then locking back into its original setting – advanced

stuff in the early '60s. The boot was big, and its size could be further increased by folding down the rear seat.

When the PL17 died in 1964 a longer wheel-base version of the 24 was introduced. The B used the standard 50bhp engine, the BT the Tigre-tuned flat-twin. Unlike the C/CT, the B was a genuine four-seater but in looks the pair were difficult to tell apart unless viewed from the side. From July 1965 to July 1966 there was a Ba, with the lower-powered engine and cheapened specification [no fancy heating system, fewer instruments, and no multi-adjustable seats]. In 1965 Tigre engined cars gained disc brakes, replacing those pretty outboard drums.

Feast though it was for techno-brains, the British motoring press had trouble seeing the point: "It's more a car for individuals who might well be a little dissatisfied with performance which does not match his aspirations" said the rational voice of Motor in June 1964, although all admitted that the Tigre flat-twin did a fine job of pulling the car at 95mph and reported that "above 3000rpm it feels smoother than many four-cylinder units".

Zero to 60mph in a depressing 32 secs meant that the CT would have had trouble frightening Hillman Minxes, although the excellent fuel consumption meant a touring range of 600 miles. Ride, handling and comfort were all praised, but at £1400 the car was an expensive French perversion: back home – without the burden of UK import duty – it was a more sensible proposition, pitched on a par with sheep-in-wolves-clothing GTs from Simca and Renault.

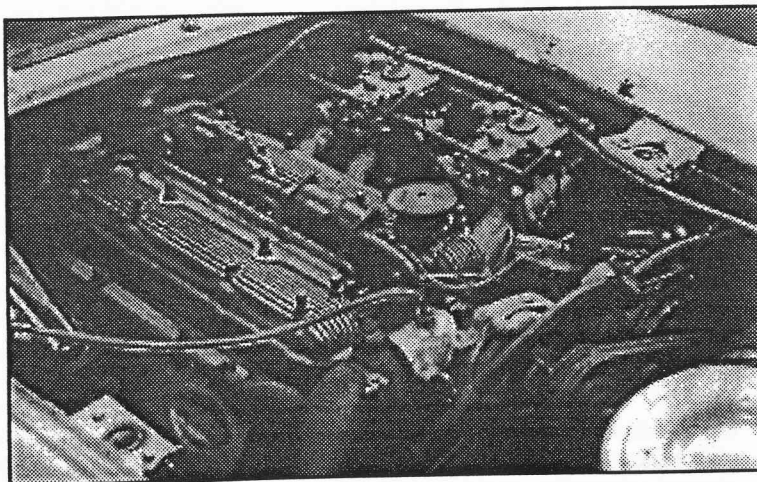
A spin in John Passfield's CT demonstrated just how right the 24 was in so many ways. Idling with a shamelessly rugged thrum, as the revs rise above 3000 the vibration becomes a feeling of smooth propulsion all the way round to a theoretical 7000rpm, when the CT would be registering almost 100mph. With its long-striding GT hat on the Panhard is fairly quiet, cruising happily at 80mph with little more than a rustle from the screen pillars. The ride is excellent, soaking up most bumps with hardly a shrug thanks to the generous wheel movement. The plushly upholstered seats help.

In traffic the car is much less pleasant. Agricultural-sounding and rough, the big twin has very little low speed torque making it feel plain slow in the cut and thrust of town work. Response to throttle command is slow yet the revs take their time to die down. Widely spaced ratios in an imprecise gearbox do not help either. The brake s (drums on this car) are strong, if a little grabby at times.

Stay out of town in the Panhard and enjoy it. Learn to use what little the engine has and there is fine agility. Kept on the boil, at 4000rpm or more, and there is endearing spirit here in the snappy over-run rasp, in the high geared steering, in the relative lack of roll and best of all in the way the CT will oversteer in the most undemanding way imaginable. Corner quickly power-off, or chicken out halfway through, and the CT will playfully drift its tail a foot or two, falling back into line once the front wheels are pulling again. For efficient progress, power-on neutrality is the best bet of course.

Although plans for higher-performance versions got quite near to production the 24 as it stood in the mid-60s never had a chance. Citroën dealers did not want to sell it [Citroën had full control of Panhard by 1965], it was expensive to produce and quality was never as good as it should have been. Citroën let it die of natural causes and sales slumped dramatically in the last year of the car's life, a laughable 1400 units in 1967.

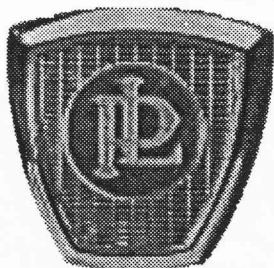
Uncompromised by Citroën – the name might have been used on a GS derivative or suffered a similar ignoble fate – at least the 24 died with its head held high.



As late as 1967, Citroën had plans for a bigger, faster 24 Coupe to fill the gap in the market for a big engined French sporting car.

It built a stretched CT with a front spoiler and flared sills, bolted to a shortened DS floorpan. The marriage was straight forward, as the rear track was identical on both cars and there was enough room in CT wheelarches to take DS wheel movement. The first prototype used a tweaked DS engine giving 124bhp but a second car used a new twin-cam 2-litre then being developed for the DS, producing 145bhp. With its five-speed box the top speed was over 120mph, at which speed the car, with its variable ratio steering, was said to be very safe and stable. The whole thing was put together in a few months and came quite close to production, especially as Chausson - which built the 24 body - was willing to do a very cheap deal on panelwork for the new car. The presses for the 24 body were still relatively new and little used, and Chausson needed the work. Sadly, Citroën pulled the plug and built the SM instead.

A less serious development was a Maserati-engined, 24CT-bodied car built inside Citroën in 1970 with SM suspension, power steering and brakes, using twin side radiators and with the spare wheel at the front, DS-style. It was never considered as anything more than a rolling test bed for high-powered front-wheel drive cars.



# A JOURNEY TO MARONG

It was a windy Easter Thursday and we were heading in the direction of away, or to be more precise Renmark. As we were later leaving than planned, we decided to take the Bendigo by-pass road. The cry was soon heard "What a pretty Hotel" and so the concept of lunch at the Marong Hotel was born.

The throng assembled in Tractions, D Series, Visa and Xantia, in Royal Parade on Sunday 27th July. A stray Volvo was also sighted, but as the occupants seemed friendly and were known to have a proper car, they were allowed to join the CCOCA outing. In all about 20 members and friends set out on the journey to Marong. George Tibbet came to see us off but decided against joining us for lunch.

We all followed President Pete, onto the Tullamarine Freeway and then up the Calder Highway towards Bendigo. Marong is about 16 kilometres west of Bendigo and as we were getting hungry we didn't stop along the way. Most of us arrived at the Marong Hotel, which as far as I could gather was the only substantial building in the town, at 12.30ish and invaded *en mass*. Our group had included John Couche at the start of the outing

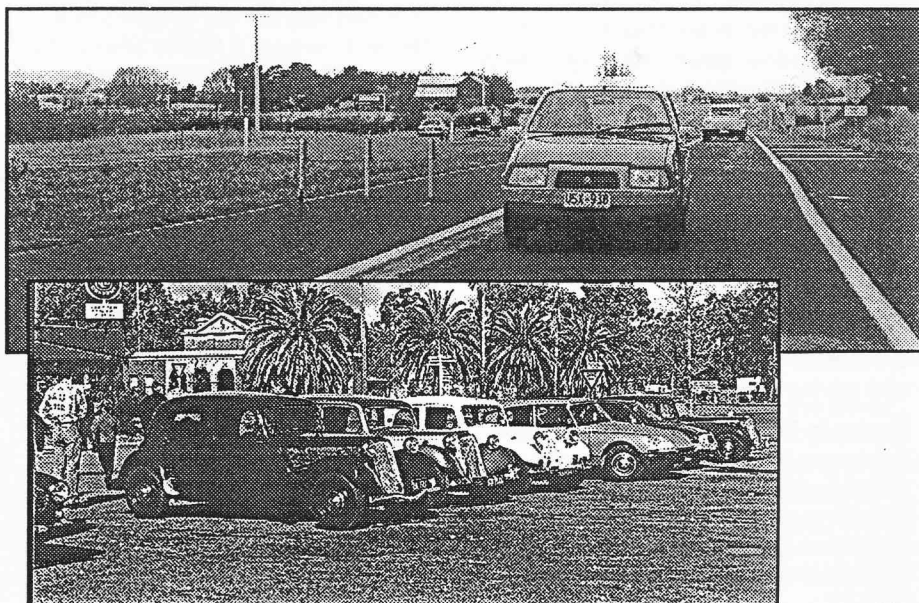
but he had another mission for the day so was unable to join us for lunch.

The table of starving men, comprising Bruce Dickie, Jay Liebowitz, and two non Citroënian friends Darren and Will, Iain Mather and Stephen Bartlett ordered first, a tactical advantage we were later to discover. Another group including Philip and Maree Rogers with Emily and friend in tow, Robin and Sue Smith, President Pete, Leigh Miles, Murray Little and myself stood over the fire, drinks in hand while contemplating our orders. Before we ordered mains the afore mentioned table of the starving were ordering dessert.

We with sweet teeth had decided the chocolate pudding would round the meal off nicely, only to discover that it was all gone! A lesson has been learnt - it doesn't pay to be slow in this car club. Fortunately, Bruce took pity on me and kindly shared 95% of his dessert. Chivalry isn't dead after all - thanks Bruce!

The food was good country pub fare and seemed to be enjoyed by all. Lunch finished at 3.30ish and the group all found their own way home, some via Castlemaine or Bendigo, others took a more direct route. We went home via Kyneton in search of a missing brother. The only missing thing we found was the two cylinder Visa's oil leak! A large dose of oil at the Kyneton garage was enough to get us safely home and the source of the leak is still under investigation.

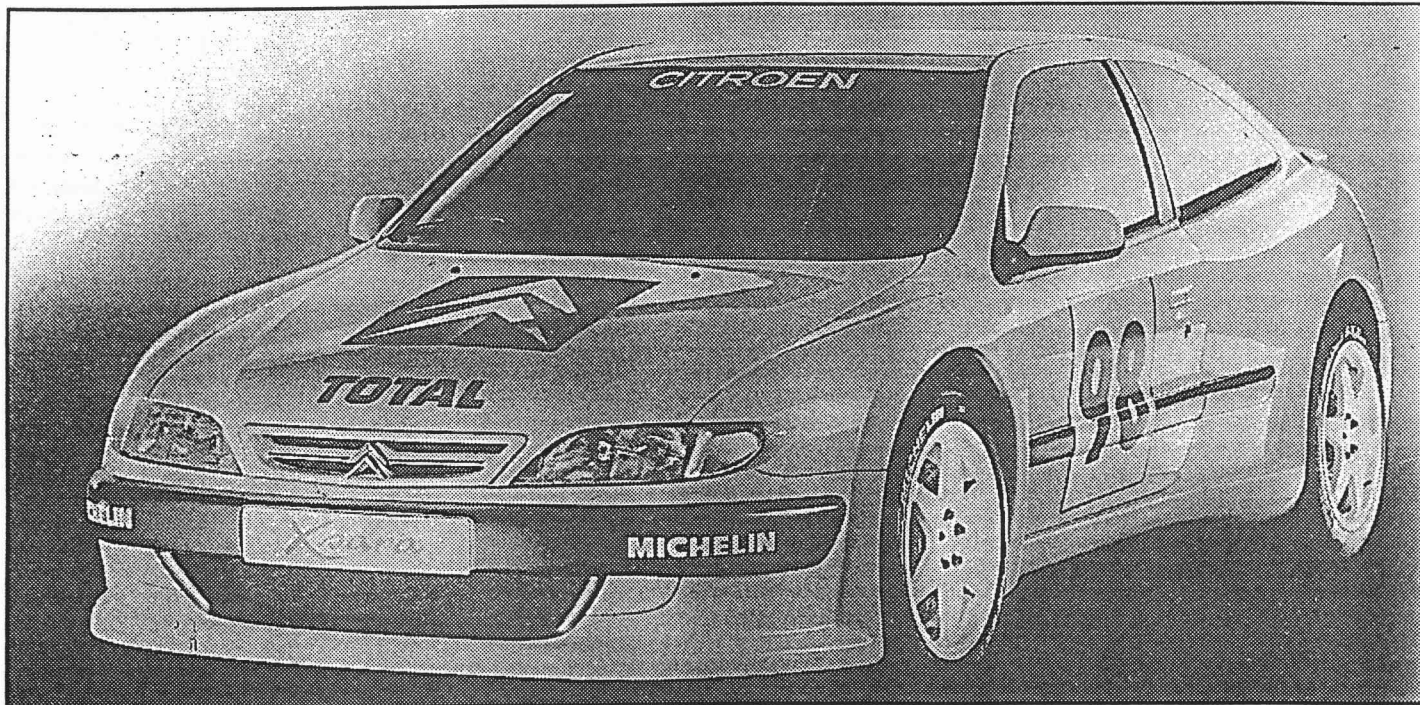
Sue Bryant.





# NEWS FROM CITROËN AUSTRALIA

## NEW XSARA BRINGS CITROËN FLAIR TO HATCHBACK CLASS



On the 10th of July 1997 Citroën unveiled first details of its new small-medium sized family car, the stylish Citroën Xsara (pronounced Zara), which will make its public debut at the Frankfurt Motor Show this September and its Australian debut at the Australian International Motor Show in October before going on sale here next June. Initial shipments will be of the five-door hatchback in two levels of trim with the three-door coupé available a few months later.

Xsara's plunging nose with prominent chromed chevrons as the grille's centre-piece declare the unique Citroën heritage. A completely new design, developed from notion to production in 196 weeks, Citroën's entry in the competitive small-medium hatchback class delivers superior credentials in safety, versatility, comfort and driving dynamics.

Buyers in Europe will be able to choose between seven different engines (five petrol and two-diesel). Ateco, importer of Citroën to Australia, is still finalising the Australian specification but a wide range of models will be available. The top of the

range VTS hot coupé with 120kW 2.0 litre 16 valve engine is on the list.

Based on today's prices, the Xsara range should open well below \$30,000 and will be intensely competitive.

Citroën Sport is developing a sports version of Xsara based on the VTS 2.0i 16V coupé. This new rally car will compete in the Group 1 Formula 2 Rallies around the world. The car will be available in build up kit form.

Xsara fuses unmistakable Citroën flair with higher levels of versatility and equipment than are generally provided in this class. Fluid of line, sleek, lithe and beautifully detailed, Xsara will complement Xantia and XM to be part of the most comprehensive list of new Citroëns yet offered in Australia.

Citroën, ever the innovator, has designed great practicality into Xsara. For example, as well as providing the biggest boot in





its class (with a two thirds/one third split backrest), Xsara features spacious bins in the front doors which can stow A4 documents, and there are further compartments within the armrests. Rear seat passengers, commonly overlooked in this class, have excellent legroom which is helped by hollowed-out backrests in the front seats. And when the rear seat is folded to maximise load carrying

capacity, recesses in the back of the front seats provide room for the rear headrests.

Front and rear seat belts are height adjustable and front belts have pyrotechnic pretensioners and grabbers. Driver and passenger airbags will be available. The headlights can be electrically adjusted for correct height, there is a driver's footrest and (more Citroën

innovation!) the interior mirror is adjustable for height as well as tilt.

Remote control central locking, power windows (one-touch for the driver's side), height adjustment for the driver's seat, audio controls mounted on the steering wheel, and a special facility for stowing the rear parcel shelf vertically along the back of the rear seat all represent further evidence of the clever detailing that forms the entire design of the Citroën Xsara.

Service intervals have been extended to 15,000km and a maintenance indicator on the dashboard shows the distance to be covered before the next service is due. Colour-coded caps and explicit symbols highlight the reservoirs that require monitoring

i.e. brakes, windscreen washers, etc. Citroën ownership had never been so easy.

Neville Crichton, Governing Director of Citroën Australia, said "With its flowing good looks, Xsara will appeal to a wide cross section of motorists, including private and business users, each demanding style, refinement, practicality and comfort in a secure and safe vehicle".

## SELF ADAPTIVE TRANSMISSION OFFERS A PROGRAM FOR ALL DRIVING CONDITIONS

Three different operating programs are available with the Citroën XM Exclusive sedan's advanced new automatic transmission.

They are:

- A normal program with 6 self-adaptive shift patterns
- A sporting program with 2 self-adaptive shift patterns.
- A snow program, where tyre grip is a priority.

The transmission, on the one hand, provides a smooth flow for unhurried driving.

On the other, it switches to a more dynamic style when immediate performance response is required.

Its electronic control unit manages a total of 12 shift patterns.

In the Normal program, with the selector in position D, the unit constantly analyses driving style and vehicle load to select the most appropriate pattern.

When the Sporting pattern is selected, via a console-mounted press button, the intermediate ratios and high engine speeds are given preference to exploit the power curve and obtain the liveliest response.

Another console-mounted switch selects Snow program, with the transmission adapting to slippery road surfaces with poor tyre grip. A lock-up clutch is utilised to avoid sharp variations in the power

flow. In the snow program the XM takes off in third gear, unless the selector lever is in position 1 or 2. Also, the management control system prevents downshifting via the throttle kick-down device but can be overridden by actuating the brake pedal.

Additional features include provision for automatically locking a gear into place if the driver takes his foot off the accelerator pedal, downshifting when the brakes are applied and maintaining the engaged gear to maximise engine braking in downhill driving.

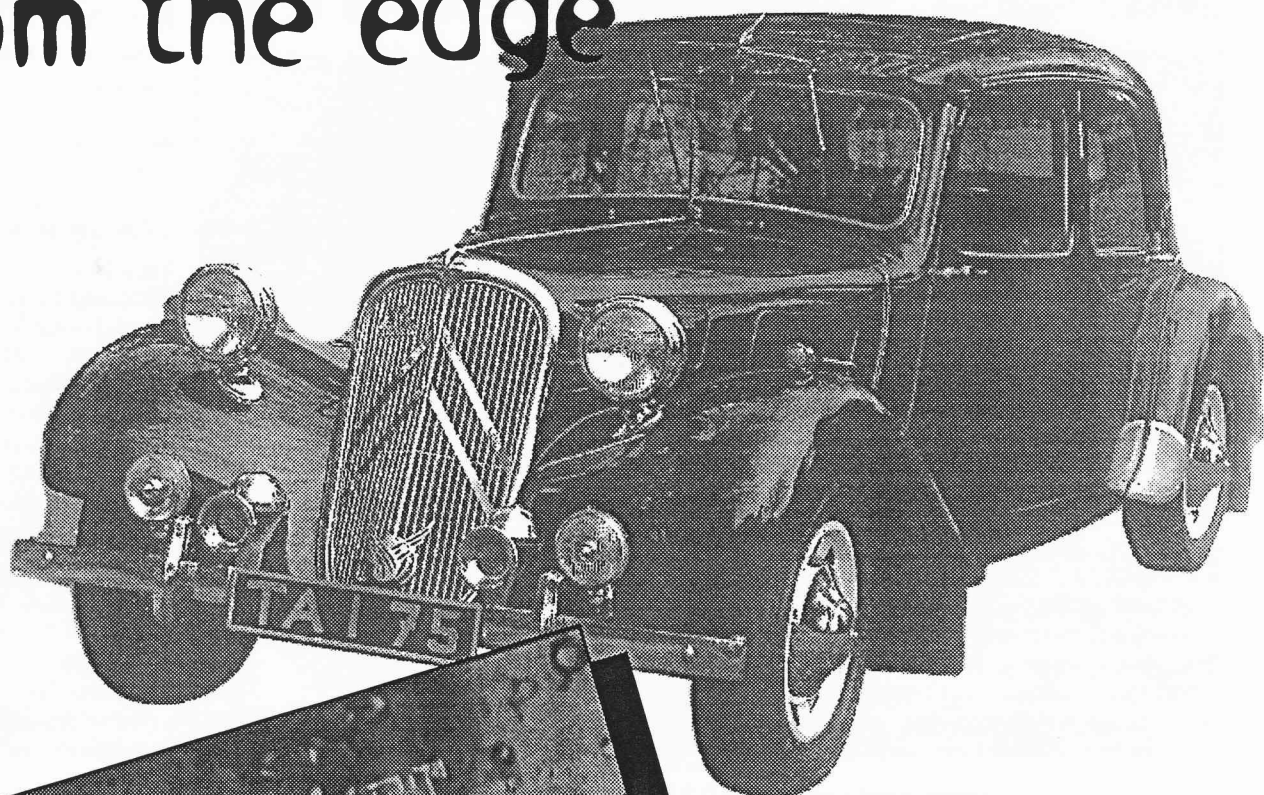
A dashboard display keeps the driver informed about the selector's positions and the transmission's operating program, via the appropriate ECO (Normal), SPT (Sporting) and ★(Snow) symbol.





# POSTCARDS

## from the edge

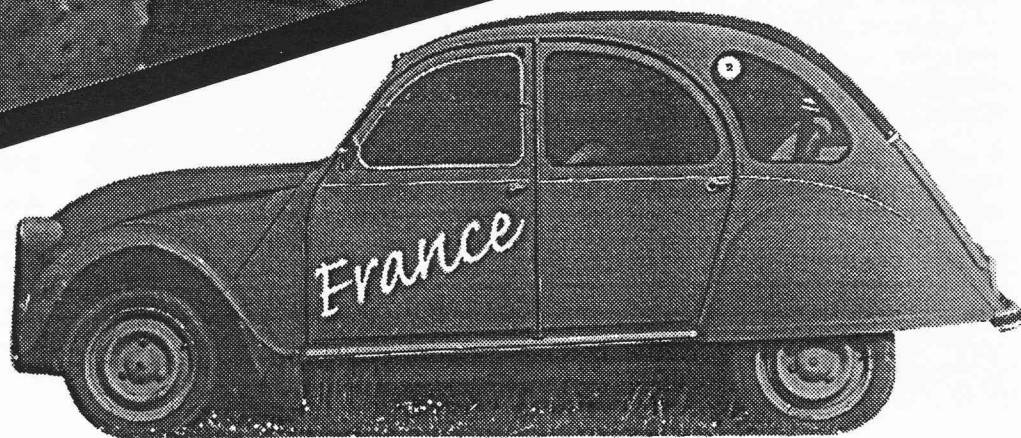


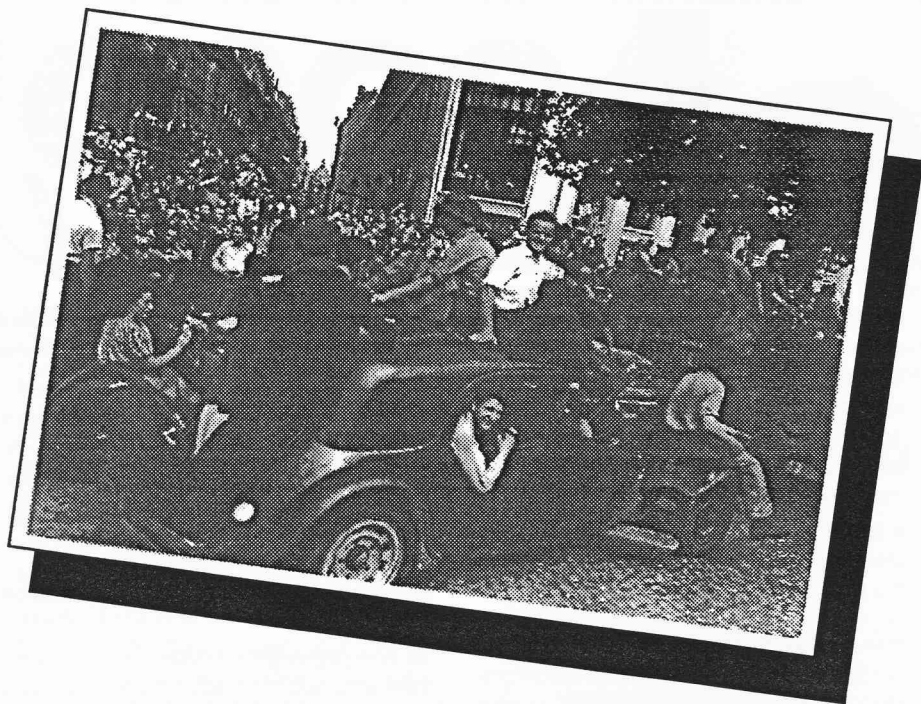
Here are four of the unusual postcards that have been found, or sent by or to club members.

Top this page: This Traction shaped was sent to President Pete by one of his clients from the Citroën Café in Paris.

Left: This was found in one of those racks of free cars in a pub by Leigh Miles...and yes the middle car is a 2CV

Below: Another shaped card in the form of a 2CV also sent by a client of President Petes on the same day as the Traction shaped card .





The card to the left is an interesting find. It was found in Paddington in Sydney when President Pete was at the Henri Cartier Bresson exhibition the day after the Sydney dinner. It was shot on the day Paris was liberated during WWII. The vehicle is obviously a traction, but has a big body, 2 side windows and what appears to be a split fold commercial style rear door. (this may not come out in print as it is a reasonably dark photo. Modifications to the front wings are visible including cut aways to accommodate a standing plate for (I assume) gunners. Probably making this a French resistance vehicle. Interesting stuff.

If any one receives interesting postcards or finds unusual ones let the editor know and we would love to publish them.

# READERS RIGHT

Dear Leigh,

Panhards and Hartnetts in CCOCA?

Some months back, writer John Reynolds [UK] approached me for help with an article he is preparing for a French journal "Automobilia". The subject is the Aluminium Francais - Gregoire [AFG] project for a lightweight car based on a design by Jean-Albert Gregoire.

A version of this AFG design saw commercial light of day as the Panhard Dyna in various guises. As well it led to failed projects to produce a car in the UK [Kendall] and in Australia [Hartnett]. It was in connection with the failed Hartnett project [only about 120 cars were produced] that John contacted me for assistance in tracking down information and in particular photographs to flesh out the Australian end of the AFG story. This has been an interesting and protracted process.

From time-to-time, CCOCA [and some other Citroën Clubs] feature articles on Panhard Dynas in their magazines in recognition of Citroën having absorbed Panhard and sold its cars for a brief period before Citroën shut Panhard down. However at least in CCOCA, any acknowledgment of Panhard has never extended further. Similarly, we have only made one prior reference to Hartnett cars in 'Front Drive', following Sir Laurence Hartnett's death in 1988.

Since there is that link between Citroën, Panhard and Hartnett; since the Dyna and

Hartnett are very interesting cars in a technical sense in having broad but clearly identifiable similarities to the Citroën 2CV; since the Hartnett car project was entirely an Australian initiative [though started with overseas materials]; and since CCOCA is a national club with quite catholic 'catchment' of interests and car types already, might I float the idea that we extend an invitation to the owners of the few surviving Hartnetts and Panhards [at least Dynas] in Australia to be at least aware of our club and perhaps join with us in club activities, perhaps on the basis of some form of club membership. I appreciate that any such latter move might require assessment within the limits of the CCOCA constitution.

I would be very interested to hear any feedback in these thoughts from other CCOCA members.

Bill Graham.

*Bill, I would certainly see some merit in increased contact with the owners of Panhards, both Dynas and later models made during Citroën's short-lived ownership [I will not say stewardship as that implies a degree of interest by the owners] of the marque.*

*There is a whisper around town that we may have an Activities Officer by the end of the year and I would certainly endorse the organising of an event in conjunction with Panhard. Editor.*

Mill House  
Campbell Town  
Tasmania, 7210

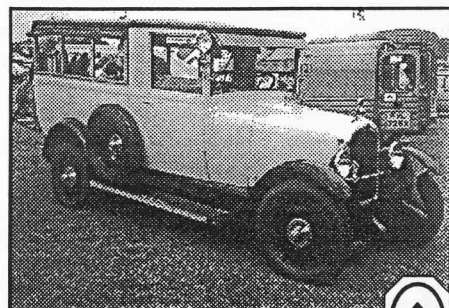
Dear Leigh,

I was recently in the UK for several weeks and was able to attend the Bromley Pageant of Motoring on June 30, which is one of the largest displays of classic cars in the world.

I enclose a photo of one of the impeccable cars on the CCC stand which appears to be a C4 model with a special body made for a boulanger [baker, to us non-polyglot lot. Ed.]. Note the bread in the back.

Members may be pleased to know that the green Normale, a photo of which appeared in 'Front Drive', Christmas 1995 page 18 seems to be still in daily use in London and was spotted just off the Charing Cross Road. Judging by the amount of time it was parked, the owner may have a special arrangement with the local Traffic Warden - not always the most friendly of people!

With best regards,  
Michael Jefferies.





# book *review*

## *Sixty years of the Citroën 2CV 1937-1997.*

John Reynolds, with forward by LJK Setright (1997).

Sutton Publishing Ltd, Phoenix Mill, Thrupp, Stroud, Gloucestershire, GL5 2BV. 176 pages. Approx \$60.

Many of our readers recognise with appreciation and pleasure the recent Citroën books by the British motoring writer, John Reynolds. Informative and very readable, the books I refer to are John's "André Citroën . The Man and the Motor Cars" and "Original Citroën DS: The Restorer's Guide", both published in 1996; the latter in conjunction with the Dutch DS guru, Jan de Lange.

The good news now is that he has added to that treasure trove with his long-awaited book on the 2CV. It is noteworthy that in this opus, John has scored the support and encouragement of the formidable LJK Setright, who freely admits to a Citroën passion; starting with the 5CV Cloverleaf which was his regular transport into the late '50s and extending into his love affair with the 5CV's logical, if belated, successor the Toute Petite Voiture or 2CV.

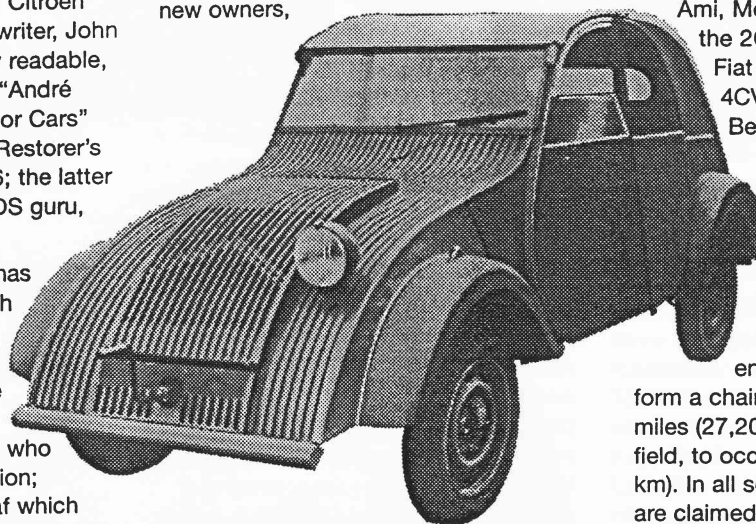
Starting with what he whimsically calls "The CV [cirriculum vitae] of the 2CV", John brings with him a projected British perspective in which he visualises visitors crossing the Channel in the '50s and encountering the, then so different, Continental cultures, marked by many things, but none more distinctive than the ubiquitous "multitude of strange little grey-painted cars, seemingly constructed entirely of tin-plate and canvas [which] whirled and wheezed about their work like a flock of asthmatic geese".

Much of the story of the 2CV (and indeed of all Citroës – at least until the mid 1970s)

is really inseparable from the biographies of certain powerful and gifted personalities, starting with André Citroën himself, who while he did not live to be involved with the TPV project nonetheless set the scene via his innovative philosophy and by his selection of key personnel.

It is here that the "Reynolds' technique" shines as he is not only introduces us to the principal actors on the 2CV stage (P-J Boulanger, Andre Lefebvre, Flaminio Bertoni and Walter Becchia), but skilfully conveys to us the feelings and considerations – personal, social, technical – which influenced the critical decisions.

Looming over the whole 2CV scene is the personality of Pierre-Jules Boulanger who came in to head-up Citroën under the new owners,



the Michelins, after the founder's death in 1935.

On taking the reigns of *Automobiles Citroën*, Boulanger did two things. Firstly, he revived the culture of technical excellence set-up by its founder and secondly, he set-up a plan for a series of vehicles for the next decade – a revamped Traction Avant, for the middle classes (the AX, never realised); a new, highly advanced, luxury car (the VGD to become the D-series); a new front wheel drive utility van (the TUB, ancestor of the successful H-van) and an economical "people's car" to service urban workers and "les paysans" (the TPV later the 2CV).

A touching photo in the book shows a clearly proud P-J Boulanger explaining

the 2CV to Government ministers at its full launch in 1949 – his first major achievement.

With its fluent text and some 157 black and white illustrations the book leads us through the conception, gestation, birth, growth, maturity and eventual expiration of the 2CV. The last example, a grey 2CV Charleston, labelled *Derniere 2CV*", is shown leaving the production line at Mangualde in Portugal at 1500 hours on 27 July, 1990.

As comprehensive asides, John covers, inter alia, publicity, adventures and exploration (over all of which hovered the then Director of Public Relations, Jacques Wolgensinger – credited, with his enthusiasm, for preventing a much earlier demise for the 2CV); the 2CV derivatives – Dyane, Ami, Mehari, vans, 4x4s, etc., etc.; and the 2CV's Continental competitors – Fiat 500, AFG/Panhard, Renault 4CV and Renault 4 and Volkswagen Beetle.

As well as revealing yearly production and sub-totals of each model and derivative produced, tables in the book show that all-up, almost seven million 2CVs and close relatives were produced in 42 years – enough, it can be calculated to form a chain, nose to tail almost 17,000 miles (27,200 km) long, and if parked in a field, to occupy 24 square miles (61 square km). In all some 30 variants and derivatives are claimed. I would have liked to see more of the obscure types illustrated eg Baby Brousse and FAF (Facile a Fabriquer – 'Easy to Build').

An essential book for the knowledgeable Citroënist and particularly, it strikes me, for the Anglophile Citroën initiate, who like so many, is taken by the "Ugly Duckling" pathology into the broader and wonderful world of Citrophilia. The volume is particularly enhanced for maximum visual impact on your coffee table by a handsome coloured dust jacket showing a burnt orange 1981 2CV in French village settings. You need nothing more to project yourself as "homme du monde".

By Bill Graham.

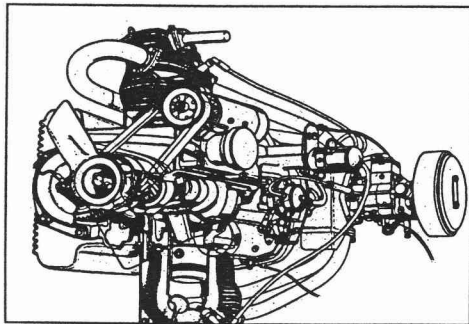


# CCOCA Classifieds

## CARS FOR SALE

**1974 D SPECIAL** This superb 1974 D Special has an excellent interior, is registered on original B&W plates, has no rust but has the patina of the original paint and has covered a genuine 84,200 miles, also the hydraulics have recently been overhauled. The car will also come with a roadworthy. If you are interested in giving this baby a good loving home contact Graham Barton on [03] 5989 6027

**VISA CLUB MK 1** Unique in Australia? No, there are two of them, but this is the only one on the road. Visa Club, Mark 1 [Wombat nose, the original and the best], geranium red with brown interior. In superb condition. Powerful 652cc motor gives meaning to 2-cylinder performance, with all the body-roll you have come to expect. Sun roof, alloy wheels, electronic ignition, jersey cloth upholstery in excellent condition, four-on-the-floor manual transmission. This excellent, rust-free, two owner car is reluctantly for sale - the sale will put a Light 15 back on the road, so take pity! \$10,000. Contact Leigh Miles, [03] 9888 7506 (AH).



**1976 CX 2200 SUPER** This vehicle is currently located in Tasmania, registered 'til 6/97. New tyres, front seat covers, battery. Brake pads, front and rear with only 12 months use. Slight accident damage - shattered [but intact] windscreen, panel damage to front RH guard and bonnet [head light OK]. Sun roof. Mechanically sound, regularly serviced. Front spheres may need re-gassing, otherwise suspension is good. Body is rust free, but original paint is fading. \$1,000 as is. This car must be sold by August. Contact Rob Wadley [02] 9490 5149 (BH), [02] 9555 1239 (AH), or fax [02] 9490 5005, E-mail robert@pelican.dbc.csiro.au or 1/37 Alfred St., Rozelle, NSW, 2039.

**1974 D SPECIAL** This car is used daily, yet retains a low mileage [67,000] for its age and is in good original condition. Comes complete with two new tyres and a RWC. Phone Jenette on [060] 20 8667 or 0411 113 337.

## CARS WANTED

**CITROËN DS 21** or similar in good condition. Call John Hamilton [0362] 503 230 (Tasmania).

**CITROËN ID/DS19** Green fluid. Must be good clean reliable car as no garage space for total restoration. Registered preferred. Up to \$3,000 for the right car. Contact Dean Hobson, 54 Ballarat Street, Yarraville, Victoria. Ph.[03] 9689 4173

### LIGHT 15/BIG 15/BIG6

Must be complete, body in good condition, prefer Running/reg. Phone Steve Muir [08] 9450 2874 or post details/photos to 4/22 Axford Street, Como 6152

## PARTS FOR SALE

**LIGHT 15** Grille in very good condition - ready to bolt on the car \$1,000. Initial contact is through Mel Carey, but they are not Mel's parts. [03] 5152 1040.

**SMALL BODY** Grille, 5 'New' Pilote wheels and other very desirable parts are available at negotiable prices. Initial contact is through Leigh Miles, but they are not Leigh's parts. [03] 9888 7506.

**4 ONLY** Michelin 165 x 400 tyres, including tubes [2 tyres are good for vehicle storage only]. Contact Barry Rogers on [060] 56 3994 (B/h) or [060] 59 1578 (A/h).

## PARTS WANTED

**VINTAGE CITROËN** parts and literature. Also headlight for 11BL [French Light 15]. Will swap Light 15 bits or buy. Neil Rankine [056] 721185.

**ID CON RODS** to suit late-model ID. Ring John Grieve on [03] 5823 1273 or Fax [03] 5823 2310.

**TO COMPLETE** my Slough-built Light 15 I need a bakelite rear-door ashtray. If you can help, contact Les Farrar. [08] 9319 1617 (B/h), [08] 9430 5274 (A/h) or Fax [08] 9319 1140.

## WANNA BE IN PICTURES?

CCOCA regularly has requests for vehicles to be used in films, commercials, promotions etc. Rather than giving out member's names ad hoc. The Club wishes to gather a list of members interested in supplying cars for these purposes.

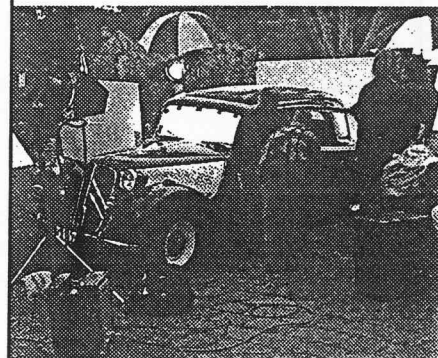
The producers more often than not require cars that look their age rather than full concours condition. Payment varies but is not insignificant. Plus you get a day on the set which can be great fun!

If you are interested please send a photo of your car/s including details on year of manufacture, model, country of manufacture, condition. R/hand or L/hand drive and colour to CCOCA at: P.O. Box 52, Deepdene Delivery Centre, Victoria, 3103.

Our intention is to compile a document to circulate to the appropriate organisations.

Just think your car could be making money instead of costing you money.

Remember they don't necessarily have to be old or even a Citroën.





# talkingtechnical

SPARE PARTS OFFICER - MEL CAREY

## NEW AND/OR INTERESTING RECENT ARRIVALS TO STOCK.

Just in and the last available. We have received from Holland what I believe is the last original style front wheel bearings, for Light 15. These are distinguished by the presence of the groove that allows them to be withdrawn from the hub with the correct tool. When this stock is sold CCOCA Spares will have to again supply bearings without the groove. The problem with these is, that if you need to remove the bearing from the hub your bearing is, in the vernacular, stuffed in the process. Result, CCOCA Spares gets to sell you another set of bearings! We really do have very limited stocks here and once these are gone..."that's all folks".

I have never before sighted rear mud flaps for Tractions, but the Dutch have done it again and we have stock of these rare items available now. They are made to the very same high quality as the front flaps that have been in stock for some time. So, I must admit they are not the cheapest rubber goods around but they are specially shaped to fit and will probably outlast your ownership of the car.

Recently I sourced for a New South Wales member a reproduction rear light for an 11BL - it mounts onto the base of the number plate holder and shines up onto the number plate. The originals appear to have been plastic and most appear to be in fairly poor condition. These lenses are glass with a steel backing

and while there is presently no stock available, more are on order. So, mail or fax your order using the order form with this issue's 'Front Drive'.

Having undertaken a significant amount of research into rubber parts, I am convinced that we can source simple parts here rather than continuing to import them from Europe. But, to do this properly I need to ensure that the grade of rubber is correct - the part's performance depends not only on its shape but its consistency and pliability. The risks associated with UV damage to parts must also be addressed. These factors mean that local sourcing is not as straight forward as it may at first appear. So, please be patient on this; they will appear. First cab off the rank is likely to be boot rubbers followed by vent rubbers. Watch this space.

Steering bits. Steering columns and racks are common across all the range of Tractions. Following a request for column bushes from WA, I have been able to source these for the first time. They are faithful reproductions of the original parts and are available to order.

Keep Tractioning, and watch this space for new items every issue.

Please 'phone anytime on either the mobile number during working hours or the after hours number. If you get the recorded message on the after hours number, please leave clear instructions or 'phone me back.

Most of our out-going calls for the Club are STD. If you have not left a full and complete message these calls can be both long and expensive. If you have left a complete message I can collate the information you need before I ring you back, otherwise we simply waste time and money.

To put it bluntly, if you do not leave a more complete message than 'Please ring me back', I may well not do so. If you are placing an order and have access to a fax, it is easier and cheaper to fax you with parts availability rather than ring.

So, in the words of Mitsubishi, 'Please consider'.



## SPARE PARTS FUND

The spare parts fund members receive a 10% discount on parts purchased through CCOCA spare parts with a new member fee of \$100.

This has been established to provide a short term cash injection that will give this Club the ability to purchase larger quantities of parts and therefore reducing the overall cost. This benefits all members plus is an additional bonus for Parts Fund members.

Calculate how much you spend on parts for your Citroëns per year, subtract 10% and see the savings. Remember, this membership is a one off fee...you are a member for the life of your membership.

### Current members are:

J. Couche	R. Little	P Boyle
M. Neil	A. Begelhole	M. Douglas
R. Brundle	D. Moore	R. Barton
B. Grant	L. Miles	G. Hooler
G. Propsting	B Rogers	J. Faine
A. Protos	A Scales	J.Hawke
W. Burkhardt	J. Grieve	B. Wade
F. Kidd	J. Smart	P. Bishop
D. Crossman	D. Hayward	R.Brooks
C. Bennet	W. Seidel	R. Koffijberg
P. Simmenauer	J. Cox	
G. Carson	J.P Jardel	
M. Carey	P. Rogers	



**CITROËN CLASSIC OWNERS  
CLUB OF AUSTRALIA INC.**

*Australia's National Citroën Car Club*