FRONT DRIVE

CENTENARY BIRTH OF ANDRÉ CITROËN

February/March 1978 Volume one Number three

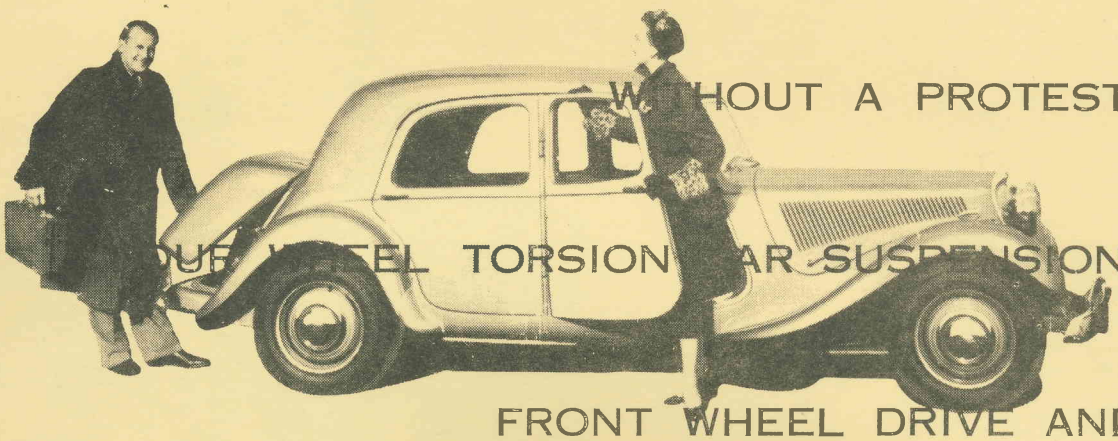
Registered for posting as a periodical – category B

COMFORT . . .

IN THE CITROEN LIGHT 15.

THIS LOW, WIDE FLAT FLOORED SEDAN

TAKES THE ROUGHEST ROADS



WITHOUT A PROTEST.

FOUR WHEEL TORSION BAR SUSPENSION,

FRONT WHEEL DRIVE AND

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FRONT DRIVE

Volume 1 Number 3 February/March 1978

This is the final edition produced by the Classic Register. However, Front Drive will continue, as the magazine of the new Citroën Classic Owners Club of Australia. This will be a club in its own right, free of the restriction experienced by the Register within the C.C.C.V.

The new club, and this magazine, as part of the club, are at an important stage. Our future success, while looking good, is by no means guaranteed. The degree of our success will depend on all members' enthusiastic contribution to and participation in all club activities, the numerical/financial strength of the club, members' use of resources available, and effective communication within the club.

The importance of publicising the club (not only to increase membership) is demonstrated by a recent sad example. Members have probably seen a dark blue big-boot Light 15 on the road. This car was recently involved in an accident, and not repaired, but sold to a 'wheeler and dealer' in Citroëns for wrecking. It was in fact an original English 11D, a very rare vehicle in Australia. When anything like this happens, or anyone has any old parts to get rid of, our club should be the first thing to come to mind. Greater knowledge of our club should prevent the squandering of such rarities.

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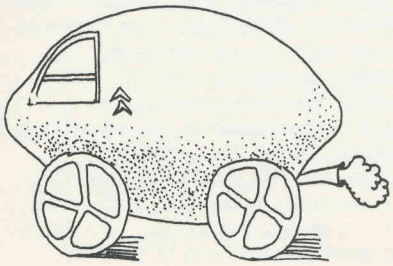
Dates to keep

1st February	Classic Register General Meeting: Trivia Night Blackburn Baptist, 19 Holland Rd. Blackburn
5th February	Centenary of Andre Citroen's birth.
1st March	Classic Register Annual General Meeting, Blackburn. Inaugural meeting Citroen Classic Owner's Club of Australia, Blackburn.
8th March	Annual General Meeting CCCV, Brighton.
14th March	Deadline next edition Front Drive
24th - 27th March	Beechworth
7th May	Technical Day - Preparation for Queens Birthday weekend
3rd - 5th June	Queens Birthday weekend rally - Barossa Valley, South Australia (See Correspondence).

Address for all correspondence to Front Drive: 26 Tyrrell Ave. Blackburn 3130.



Citron 2CV ??

André Citroën

by Mark Navin

As this month marks the 100th anniversary of the birth of Andre Citroen, it is an appropriate time to reflect on the man, his story, and the legacy he left. The passage of time has made it both easier to view him within that exciting era of post - World War I automobile history and harder because it becomes increasingly difficult to separate the man from the myths and legends that by virtue of their repetition over the years pass as fact.

Andre Citroen was born in Paris on 5th February, 1878. His father was a diamond merchant originally from Poland. Before moving to France to set up business, Andre's parents had lived and worked in Holland. Andre was the third of five children, and while little is recounted of his childhood, his father could not have played too great a part in Andre's career selection, as he died when Andre was only two. His early schooling showed great promise, as he graduated from his Lycee (high school) with the highest mark in all of France. These excellent results secured him a place in Engineering at the prestigious Ecole Polytecnique. Nothing is written of these days, but as he did not realise the early potential, it can be assumed that as a student he was enjoying the good things in life. The consequence was that he graduated 159th out of 200. This medoicre mark meant that while better placed classmates were securing challenging positions, Andre Citroen joined the army as an Engineer Officer. In all lives there are usually a number of crucial crossroads, and this was probably one for Andre. Had he secured a better pass, and from that a better position, he might never have gained the experience he did, which led him to the decision to manufacture automobiles.

It is probably not widely appreciated that Andre Citroen was alreadya successful businessman before he finally turned to the business of producing vehicles. His first success came from the manufacture of the double helical gear in metal, which more than twenty years later would be used symbolically as the 'double chevron' and become synonimous with Citroen automobiles. Legend would have it that while visiting relatives in Poland, he saw the gears in wooden form being used. If Andre had one talent greater than all the others, it was the ability to recognise the potential of a developed idea and further develop that idea to maximise the benefits from it. The helical gear pattern was not a new idea - in fact over 200 years old, however , it had never been successfully cut in metal except for one factory in Russia. Andre heard of this process and obtained the rights to use this in the cutting of metal gears. In 1904 along with two friends, one of whom was Jacques Hinstin who would figure prominently later at the automobile factory, Andre set up business. By 1913, as a result of good management, good production figures and shrewd commercialisation, Andre Citroen was part of a thriving business.

By 1913 also, Andre had already had a taste of automobile manufacture. The episode starting in 1909, till about 1913, apparently left little impression at the time, and he returned to the business of cutting gears. The Mors brothers, after many years of successfully designing, making, and racing their own vehicles were encountering difficulties in both competition, and the associated escalating costs, and in the drop off in the rate at which they were able to produce their cars. There was an easy solution to the first problem - withdraw from competition. The second was a little harder, so a decision was made to bring in a 'new broom'. Andre Citroen had established himself in the engineering world as a young man with potential, ideas, and sound production principles. Probably just as important, his older brother was married to the daughter of one of Mors directors. Whatever the reason, either talent or contacts, Andre was approached to take over the management of Mors. He agreed and, bringing in some of his staff as 'troubleshooters', proceeded to give the system the long overdue shakeup. One member of this team was Georges Haardt who would figure prominently in taking Citroens across the various continents in such expeditions as the Black, and White, and yellow 'Raids'. The results achieved by Andre both in production and marketing were startling. Production was lifted from 120 vehicles a year to 1200 a year. His job done, the factory saved, Andre returned to gear cutting.

Unfortunately, his return would be short lived, because by this time World War I had intruded on the lives of the people of Europe. Andre Citroen was recalled to active duty and joined his artillery unit at the front. Whilst on active duty, Andre was disturbed to learn that the enemy's supply of shells was vastly superior to that of the allied forces. In fact for every one shell fired by the allies, the enemy could reply with five of their own. Andre realised that the war would be one of supply as well as battles. He was also aware more than most of the possibility of producing small precision components in quantity whether they be gears or munitions. He produced a report outlining a plan to improve munitions production to undream-of quantities. With the help of some personal contacts, this report made its way into the right hads. On the basis of his reputation and convictions he was told to implement his ideas. His army discharge was quickly arranged, and with the backing of the government, finance was easily obtained. As an aside, Louis Renault was actively against the idea and one can only conclude that even at this early stage he recognised a rival.

With finance, government backing, Andre Citroen set about building a factory. The site chosen was 30 acres of ground on the Quai de Javel in Paris. In the short space of six months an entire factory complex was constructed. Before taking over, the production of shells was proceeding at the leisurely pace of 5,000 per day from a series of arsenals and small factories, none very organised or efficient. Within a short time, Quai de Javel and the factories under Andre were producing at the rate of 55,000 shells a day. All this effort and success was not unnoticed and Andre received the added tasks of reorganising and supplying the French war industry, and eventually the feeding of the civilian population, which he did by a system of ration cards. Throughout his life Andre would on a number of occasions be charged by the government of the day with the task of reorganising some aspect of industry, or serve as a representative at some conference. The terrible war was finally drawing to a close and this presented Andre with a dilemma. There would not be much of a market for munitions in peace-time, certainly not for the quantities his Javel factory was

capable of producing. Andre Citroen needed a product. He was of the opinion that it did not particularly matter what it was, as long as it was capable of mass-production, and there was a market for it.

To achieve perspective it is necessary to look at the state of the automobile industry in the pre- and early post-war period. Henry Ford in America was a force in terms of mass produced vehicles. However in Europe, this concept had not been used, and vehicles tended to craftsman built, hand-made, with individual styling to be used as expensive playthings for the rich. It is possible that Andre's Mors experience now played a part in his thinking. It is no secret that he was also an admirer of Ford (he reportedly kept a photo of Henry on his desk). Like Ford. Andre did not accept the premise that the automobile was the sole right of the rich, but believed that the automobile produced in large quantities at reasonable prices could be used to mobilise the middle classes. Having arrived at that decision, Andre turned his considerable expertise to the business of producing automobiles. One of his first actions was to revisit America to study the production techniques used there. Andre Citroen was unusual in the world of vehicle manufacturers. Unlike Ford, Renault, and others, the automobile was not a love affair that had begun by building and driving one's own design in youth, and continuing with the production and sale of that design or its developments. Andre Citroen was a businessman, and the automobile represented a potential untapped market awaiting exploitation. With one notable exception, andre did not play a major role in the design of any of the vehicles to bear his name. His interest was in the production and selling of the product – how to produce it, how to create a amarket, and how to sell to that market. The original proposal was a vehicle of the luxurious class with a large capacity engine. With that in mind, a number of prototypes were built. While these were being built and tested, another section of the factory was involved in the examination of vehicles from the future opposition.

Anumber of other possible models were proposed and eventually the larger vehicle was discarded in favour of a smaller four cylinder car designed by Jules Salomon, who Andre had met during his war service in the army.

On the 4th June 1919, the first Citroen vehicle rolled out of the gates of the Quai de Javel, and into history. The vehicle was called, originally enough, the 'Type A'. The type A itself did not set the world talking as later models such as the Traction Avant and DS would, but in its own quiet way it was a revolution. The vehicle was cheap, robust, and most importantly, complete. Until then, a would-be owner bought a rolling chassis and had a custom body fitted, then purchased such extras as electrics, spare wheel, electric starter, and so on. The Type A came with all those items as standard and it was still a cheap car. Andre knew that volume reduced unit cost and so would be able to include such 'options' at very little extra cost. The Ttype A became a success, and after a proposed production of 100 a day, in four years was being produced at a rate of 300 a day.

It is not the purpose of this article to dwell too much on the vehicles, but a brief resume is desirable. The Type A was joined by the B2 in 1921, which it eventually replaced. In 1922 the boat-tailed Type C was introduced. It is a common misconception, but a type C is not a 'Cloverleaf'. The Cloverleaf was but a revision in style of the Type C. The B2 and Type C continued in production concurrently, with the B2 undergoing a number of upgradings, and in the process being called B10, B12, and B14. The type A was the first mass-produced European car. The B12 however was the first European car to have an 'all-steel' body as opposed to a wooden framed car. Each new model saw at least one technical innovation – steel body, four wheel brakes, servo-assisted brakes,etc. The 'A.C.' series began in 1928, the initials standing obviously enough for the man himself. The series was available in both four and six cylinder models, and,as the 'A' was quickly dropped, the vehicles became known as the C4 or C6. In 1932 a new series was released called the 8A, 10A, and 15A. These were to become known as Rosalies because of the speed and distance records they would set at Montlhery. And finally, in 1934, the Traction Avant was released, at the time claimed to be 'five years ahead of its time'.

Much has been made of the flair side of Andre Citroens life. His gambling, his financial risks, his sense of the dramatic and adventure. Certainly it was those traits which led to his downfall, but it is just as certain that it was those characteristics that helped establish Citroen as a trailblazer in the production and quality of automobiles. Andre Citroen would not accept a conventional wisdom or outmoded system if a radical solution could be found. Any increased cost in applying the solution could be offset by production in volume. It is the philosophy that still pervades the company today.

Andre differed also from the other vehicle manufacturers as he did not believe the work was finished when the car had been produced. For Andre, this was only the start, the product had to be advertised, a dealer network established and maintained, and an organisation for after-sales service. It is this aspect that makes him unique, because it is largely as a result of his thinking and approach (and success) that other manufacturers had to follow in his path.

The value of advertising was not lost on Andre, and it is accredited to him the statement that the first words a child should learn should be 'Mummy, Daddy, ...and Citroen'. One wonders in what order. Andre never lost an opportunity to publicise his name - throughout France the mystical word, 'Citroen' would appear in newspapers, billboards, and road signs - 'Donated by Citroen'. The first person to use sky-writing was Andre, and he only desisted from the practice when the French government threatened to charge rental on the sky! He rented the Eiffel Tower and for many years the name Citroen was displayed for all to see. Charles Lindbergh in his Atlantic solo crossing used this to home in on Paris for the final stage of his flight. The type of newspaper advertising was also a departure from the normal practice. Instead of using the specialist publications, Andre would take out page ads in daily newspapers. The ads were designed to be realistic representations of the vehicle accompanied by informative, logical scripts. The technique was so successful that in the Thirties, most French dailies published monthly on the last page a section called 'The Citroen', which described in detail the cars and activities of the firm, naturally extensively illustrated. Included also in this massive publicity campaign was the publication of sales brochures, again lavishly illustrated with detailed accurate information.

For any other manufacturer this would have been sufficient-production of a vehicle and advertising resulting in steadily increasing sales. Andre's personality was such that he needed forward movement, to be organising, improving. If the public was becoming better educated on Citroens as a result of the advertising, then it logically followed the sales distributors had to be even better informed. Andre therefore set up a school for salesmen, educating them in the latest techniques in selling and organisation. Sales campaigns were organised so that people, even in the farthest areas from Paris could be kept informed of the developments at Quai de Javel.

And still that was not enough. Andre also realised the value of a satisfied customer. Satisfied customers return, and usually bring their friends, so Andre created after sales service. The sales network had an efficiently operating supply system for spare parts. Repair manuals, laying out the best method of reconditioning or replacing a part in a logical sequence of operations were prepared. A set fee of repair was published so that costs were standardised throughout the network ensuring the customer of fair service. Naturally spare parts catalogues showing a complete breakdown of the vehicle to its last nut and bolt were also published. Finally Andre Citroen would arrange the organisation to include andexchange service for reconditioned parts.

Its very easy to dismiss these events as relatively commonplace, as they are today, but these ideas only became accepted and used because other motor manufacturers had no choice but to follow suit. It is interesting to note that practically all current motor manufacturers are using and applying principles initiated by Andre Citroen and used in Quai de Javel since 1919.

On the 3rd July 1935, after several months of illness, Andre Citroen died, a ruined man. In fifteen years he had created a whole new approach to the automobile and shown the way for other manufacturers to follow.

Happy birthday Andre Citroen – and thankyou.

Following on from our brief look at rust last issue, Roger Brundle takes a closer look at

The Body Beautiful

Probably the job that presents the biggest headaches to the serious Traction restorer is the hull and associated bodywork. Owning an example of a marque that was one of the first to use monocoque construction is a good talking point down the pub with owners of lesser automobiles, but in the workshop knee deep in rust flakes it is a pain in the rear wings.

There are few short cuts in preparing a Traction so that it will still look good years later, and a lot of tedious hours and not a few dollars have to be spent to ensure this. It is therefore a good idea that the body selected for refinishing is suffering from as few of the problems that afflict them as possible. Unless it is one of the 77 coupes known to exist! Almost anything can be reclaimed of course, but the current value of Tractions precludes all but the fanatics from spending the necessary time and money. So a few hours of preliminary investigation may be well spent.

The real problems are rusting (structural and cosmetic), accident damage, (current or prior) and structural failure.

RUST

There is no Traction in existence that is not suffering from the dreaded tin-worm to a greater or lesser degree. The cars were assembled before dipping of body shells to coat internal surfaces became fashionable and consequently all the hidden surfaces that could not be reached with a spray gun didn't get any paint. Traction hulls therefore rust from the inside out, which is somewhat annoying in that you only get to see the rust in the terminal stages of decay.

Rusting that affects the structural integrity of the hull occurs in the front footwells and bottom of the inner and outersills, and bulkhead, where the lower cradle mounting bolts run inside the hull, the inner rear guards, and the boot floor.

Cosmetic rust can occur virtually anywhere, but worst spots are the bottoms of doors, around the small boot hinges, rear extremities of front wings, battery box, the big boot skirt panel, and parcel shelf panel(if rear window seal has leaked).

Extensive structural rust must be cut back to good metal and new sections welded in. This is difficult around the lower cradle mounting bolts so these areas can be plated with 18-gauge sheet steel lap - welded over the old panels. If extensive welding is necessary in the floor/lower bulkhead/ inner sill areas, ensure that the front torsion bar anchor cross members are in position, otherwise the inevitable distortion could make it necessary to use a rather large hammer to persuade them back into place. Also iff floor replacement is necessary, ensure that the crossmember under the front seats is in good condition and is securely welded to the floor front and rear and to the inner sills at either end. This crossmember plays a large part in maintaining torsional rigidity of the hull. Examples with non-existent front floors, cross member and inner sills have the rigidity of soggy pasta. It is interesting to note that the Slough built cars suffer more from sill rusting due to the bloody great holes cut in the door pillars to allow the trafficators to feebly flap. Fabricating and welding on new outer sills, although possible, is not really practical due to the fact that you can't get at the inside and they are a complicated shape. If there are pinholes only, remove the paint so that the extent can be seen, then prod all suspicious patches with a sharp instrument until the panel resembles gruyere cheese. With a suitable round nosed punch, carefully punch the metal surrounding the hole until it is below the panel surface. Then fill with your favourite filler. This procedure can also be used on the bottom of the door skins as welding in bits here will distort the door panels. However, unless the inside of the doors and sills are treated with an effective rust-inhibitor it will soon occur again. It will anyway, but at a later date.

If your small boot floor is really bad news, it is worth chasing around trying to find a wrecked car with a good boot as they are surprisingly easy to remove and replace, being spot welded only around the edge flanges.

Welding patches into mudguards is probably best left to a professional body man due to the complex shapes and distortion problems.

ACCIDENT DAMAGE

As the youngest Traction is now over 20 years old, the chances that it has had a major bingle are quite high. If this happened early in its life it was probably well repaired, but as the cars value dropped, so probably did the quality of accident repair. If you have been driving your car, any major misalignment should have shown up as poor fit of panels, curious handling, and odd tyre wear, but if you have bought a non-runner, then it may not be so obvious. In this case it is worthwhile checking the fit of the doors and boot, and sighting along the hull from various angles. The hull could be set up level on a level floor, and the various dimensions as shown in the workshop manual and diagonals checked by means of plum-bob, chalk and string. If the hull is seriously misaligned, it will mean an expensive visit to your friendly panel-beater, unless you are handy with a porta-power, and it may mean that it would be better to hunt around for a better example. Cars with badly wrinkled wings should be viewed with caution as good wings are becoming scarce and repairs can be expensive. Previous use of plastic filler in large quantities is an indication of something seriously amiss, and can be detected by running a magnet over suspect panels.

STRUCTURAL FAILURE

Although the hulls must have been quite strong and rigid when first assembled due to the fully stressed bodywork, they inevitably loosen in time, and this process is accelerated by the ravages of rust. A lot of the strength of the hull is provided by the front floor, sills and crossmembers. Unfortunately these are also areas prone to rusting and loss of strength here leads to increased flexing of the hull, which can result in cracks appearing at highly stressed points. Places to examine are the lower corners of the door apertures, top and bottom of the door pillars and where the rear seat pan meets the inner rear wings.

The longer wheelbase Tractions seem to suffer more and have a habit of becoming banana shaped and cracking around the base of the screen pillars. It's worth checking all these points before indulging in a full refinishing program.

After the rust, cracks, dents, and nesting sparrows have been dealt with, the next step is to decide whether the existing paint has sufficient adhesion to the metal to support the new finish. Sand through the old finish and primer to the bare metal and feather edge a small area to check whether the thin edge will crumble or break away. If it doesn't then it is safe to go ahead with refinishing over the existing paint. If it does break away, which usually happens, then cancel all social engagements for the next three months, as the old paint will have to be removed. There are three methods of paint removal: sanding, chemical stripping, and sand blasting.

SANDING

Use a disc sander with a number 24 grit open cut disc, followed by a number 50 grit to remove number 24 scratches. Nooks and crannies can be sanded by hand with P120 dry rub open-coat paper. When using a disc sander always wear goggles as paint chips can do nasty things to unprotected eyes. One problem with disc sanding Tractions is that the hulls are filled in a number of areas with lead, and the disc tends to cut into the lead deeply leaving ripples and waves in the surface. The leaded areas are a ring around the roof panel insert and the vertical joins running down from the scuttle.

CHEMICAL PAINT REMOVER

Probably the best method, but is incredibly messy. Use the paint remover recommended by the paint manufacturer whose paint you intend using, such as Dulux rapid stripper for Dulon. These strippers work best if the paint surface is roughly scoured or sanded before application of the stripper as this allows the solvent to penetrate. Otherwise only one coat will be removed at a time. When the paint has bubbled, most can be removed with a wide flat scraper together with a selection of screwdrivers or similar for crevices. Always wear gloves and goggles when using chemical paint removers as they act also as effective skin removers.

They have the advantage that they do not damage the metal surface as heavy-handed sanding or sandblasting can do, and are probably quicker than sanding. After use the metal surface should be cleaned up with the recommended neutralising agent.

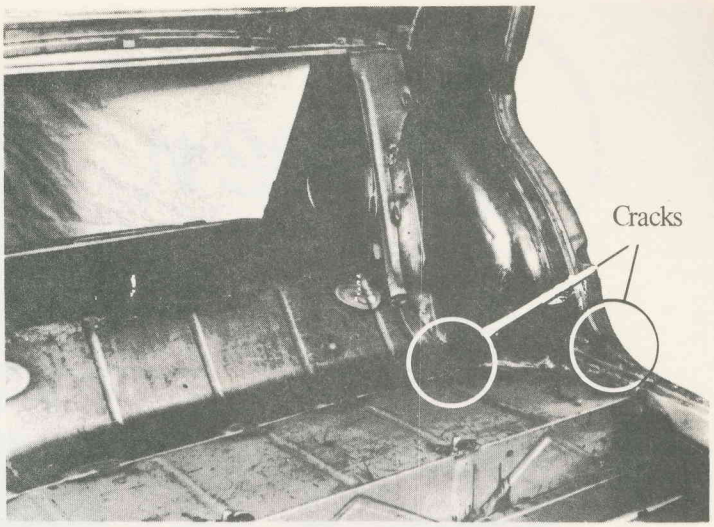
SAND BLASTING

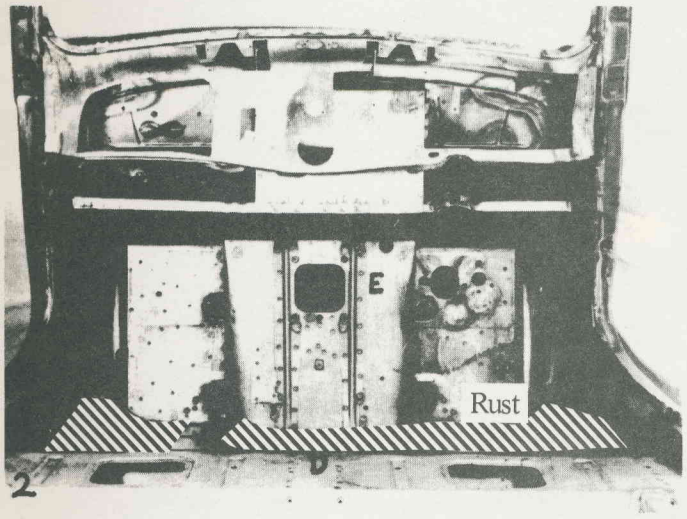
Although sand blasting is a very effective method of removing paint and rust, it must be used with a fair degree of caution. Unless the operator is skilled and experienced in sandblasting car panels, they can easily be damaged beyond economical repair. This is due to the metal stretching when hit too hard for too long in one spot. Worst affected are panels with low-crown (near flat) such as door skins, roof and bonnet panels. High-crown panels, e.g., front and rear wings, are not so easily stretched, due to the amount of curvature in them. I have a set of 11CL doors with gently undulating panels as a result of entrusting them to a company not experienced in this sort of work. Sand blasting, however, is fine for those more more substantial parts such as bumper and wing brackets, although it must be remembered that paint and rust will only be removed from where the sand can reach. Newly sand-blasted parts must be protected with paint almost immediately, as the bare metal starts to rust very quickly. Sandblasting provides an ideal 'key' for paint.

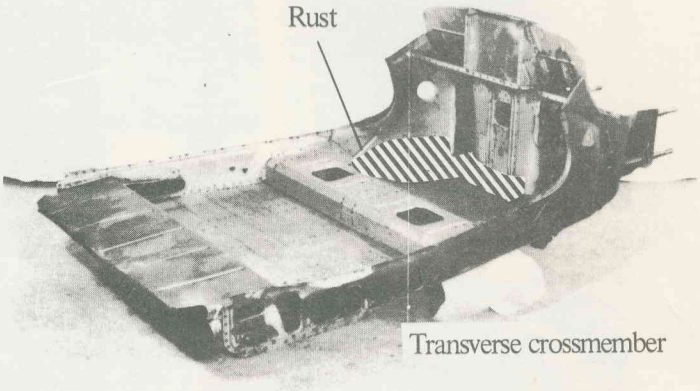
To be continued next issue.

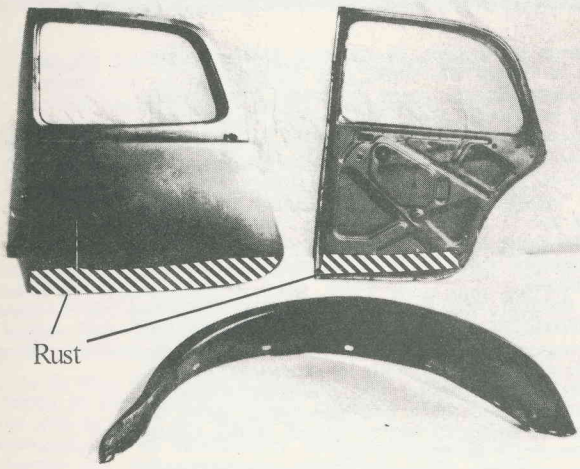
The Body Beautiful .....

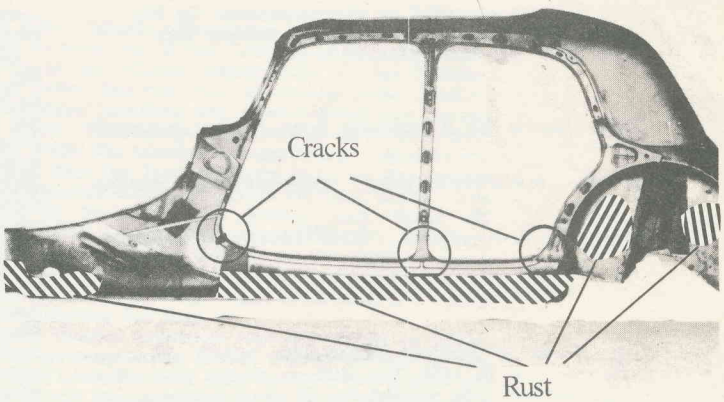
showing most common locations of rust and cracks.
These photographs originally appeared in *Floating Power,* showing components for a Light 15, as they arrived in Slough for assembly.

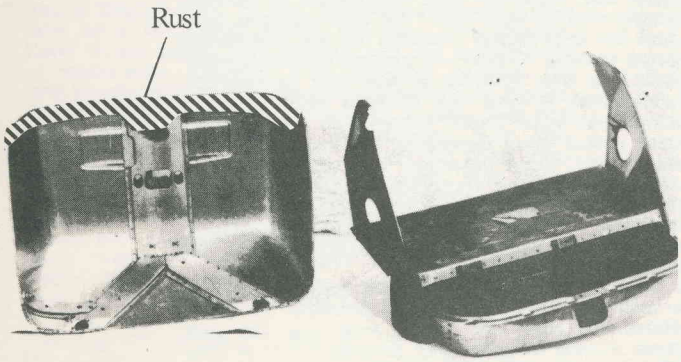


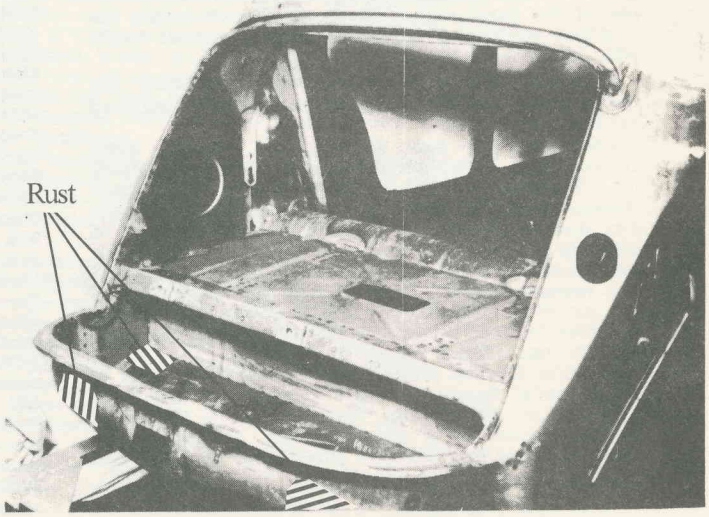








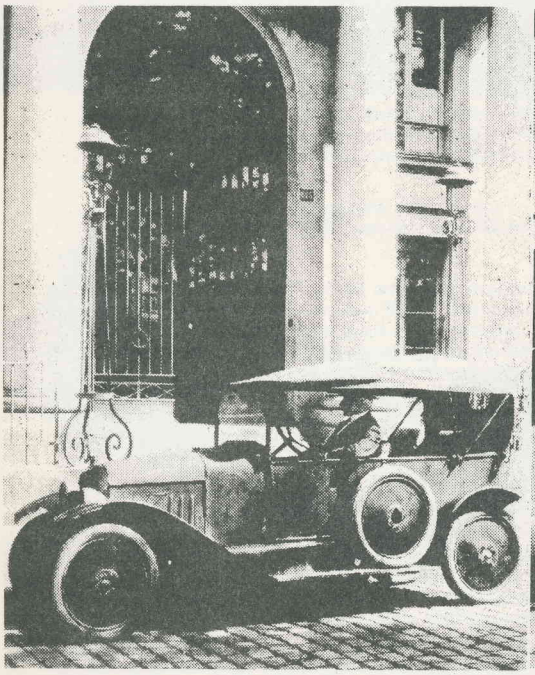


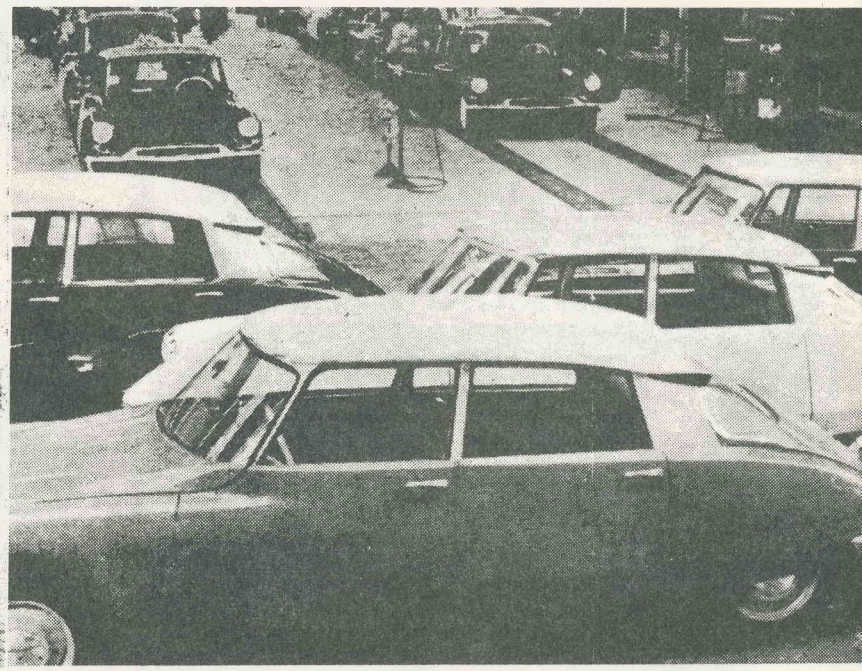


Citroen: OUT OF FINANCIAL RUIN, SUCCESS

By WAYNE ALLEN

DS and ID 19 Citroens roll off the production line at one of the modern factories in France.





When Andre Citroen started in the car business in 1919, he was regarded as inconsequential by his rivals. Within two years he was making this Type A at the rate of 10,000 a year.

The path of Citroen has been paved with extravagant gestures, huge losses — and brilliant designs.

AN era in France's automobile history came to an end in 1934. The intense rivalry and competition that existed for 15 years between two French industrial giants—Andre Citroen and Louis Renault—finished spectacularly. Citroen overplayed his hand and built an empire on credit. He gambled everything on a last, great, personal battle with Renault—and lost!

Although both firms scored victories during the hectic years, the wily, business-like Renault suffered far less than Citroen.

There was the time in 1930, for example, when Citroen paid 25 million francs for Chrysler's patents on "Floating Power" flexible engine mountings. Renault heard of this a few months before Citroen was due to release the innovation and managed to come up with a system that gave the same result without infringing the American patent. Renault's design was released before Citroen's, stole the limelight and left his rival holding a 25 million franc loss. Citroen had been led into spending a colossal amount of money only to find himself beaten to the punch.

Actually, Citroen himself was to blame for many of his financial fiascoes. He saw himself not only as a producer of automobiles, but also as a giant-size Bugatti—leader of a self-contained, unified empire that employed the ultimate production methods and thousands of contented employees. He achieved this aim, to a point, but it was more than partially responsible for his downfall. His other fetish—publicity—also hastened his decline. He not only built cars but never tired of telling the world that he did.

Like Renault, Citroen made frequent trips across the Atlantic to Detroit. The former went to learn all he could from the Americans, the latter to dream. It has been said that if the two men had returned from Detroit with an electric soldering iron apiece, Renault would have immediately set about finding the most useful place for it at his Billancourt factory, while Citroen would hang his in the foyer of his Javel plant where it would be most likely to impress the endless stream of visitors.

Although Citroen came to be known as the "French Ford", his genius lay in a different sphere. The actual automobile was not Citroen's concern—he left that to his engineers and designers while he attempted to gain perfection in manufacturing and publicity. Once he spent a fantastic sum for a few minutes of glory in which his name was spelt out in letters of fire above the Eiffel Tower for all Paris to see.

Somewhat strangely (considering the industrial war being waged) the two men remained on amiable terms towards each other. After Citroen's death Renault confided in a friend that "Citroen had had some fine ideas and had certainly kept the people at Billancourt awake and on their toes." He also said that only once had he deliberately resorted to an underhand manoeuvre against "Citron"—a pun on Citroen, meaning lemon. He was referring to the time he had induced his rival to visit the Renault establishment. Billancourt was much bigger than Javel, but this fact interested rather than impressed the visitor. Renault had more men, more machines and produced more cars than he, but he reconciled himself with the thought that he had the better factory. Compared with the relatively modern plant at Javel, this was a shambles, growing wide and loose like a vine, with not much artistic planning behind it.

But Renault was leading him on, playing cat and mouse with Citroen's imaginative emotions. He casually announced that they would look over the new factory at Seguin Island. They crossed a bridge over the Seine and were confronted with a spectacle that brought Citroen's empire crumbling. He was visibly shaken by what lay before them. The cresent-shaped island lying adjacent to Billancourt had been transformed from a park where lovers wooed, into a tower-

ing, bustling mass of steel and glass—a complete factory that was artistic perfection in Citroen's eyes.

He had fallen into a carefully baited trap by Renault, for having seen Seguin Island he could never be at ease until he surpassed it. Like a man possessed he formed his plans for a new Javel.

The trouble was (as Renault had known it would be) that Citroen could not recognise the fact that it had taken Renault 30 years to finance, and 15 years to build the Seguin Island factory. He only knew that it stood mocking him. In one of the most incredible reincarnations of all time Jarvel was stripped, levelled, rebuilt and back in business within three months!

Citroen was tired, but happy. Everyone who was anyone came to look, admire and congratulate him on his masterpiece—although the more intelligent of them knew that he had dreamt once too often and so sealed his fate.

Citroen had started out with virtually nothing and culminated his career by spending millions upon millions of francs—all obtained on credit!

His brilliance, though partly misdirected, was responsible for some of the finest cars ever built. The way in which he ruled his industrial kingdom was often a source of annoyance to Renault, for there were many top technicians and designers who left Ballincourt to live and work at Javel—even though they were better paid by Renault.

Citroen accomplished far more than other French automobile manufacturers thought he would when he began producing cars in 1919. They gave him two years in the business, at most. But within two years Citroen was firmly entrenched. His Type-A four-seater reached an annual production rate of 10,000 units in that time, clearly showing that Citroen's addiction to Detroit's production methods paid off. He was able to claim the honor of being the first French manufacturer to successfully mass-produce vehicles, whereas his contemporaries struggled along handcrafting many of the components and assembly routines.

In 1921 the B2 was introduced. Like the Type-A, it had an engine rated at 10 Cv (approximately equivalent to English RAC rating). This was followed a year later by a two-seater model, the first 5 Cv Citroen. Later in the same year Citroen had his initial taste of world-wide publicity. Five Citroens became the first automobiles to cross the infamous Sahara Desert. The vehicles were basically touring models that had been especially modified for the gruelling task. Aluminium was used extensively throughout their construction and they embodied two-speed rear axles which, in conjunction with their three-speed gearboxes, gave a choice of six forward ratios. The rear wheels were dispensed with, their place being taken by large "pulleys" that were used to drive caterpillar tracks. The 2000 mile Sahara crossing took about 22 days, the average fuel consumption being in the vicinity of 11 mpg.

During 1923 production reached 150 cars per day, a figure that was increased to 250 the following year. It was in October, 1924, that eight Citroen tracked-vehicles set out on a 17,500 mile trans-Africa journey. The magnitude of the task was such that it took eight months to complete, and was even then considered an astonishing feat.

The B12 (10 Cv) came into existence in 1925 and immediately set new standards for European manufacturers to aim at. Its one-piece, all-steel body represented all that was modern in production methods. Cold pressing of the body panels, electric welding and spray painting all helped Citroen increase production. Wooden framework was entirely dispensed with, Citroen claiming that the new vehicle had greater rigidity, more comfort and was easier to repair when damaged. The B12 was also the first Citroen to have brakes on all four wheels.

Throughout the years the double chevron trade mark which symbolised Citroen became known the world over. The double chevron incidentally stemmed from Citroen's early association with gear manufacturing—particularly with double helical gears (on which the teeth resemble the chevron shape).

By 1926 there were additional Citroen factories at Slough (Great Britain), Milan (Italy), Brussels (Belgium) and Cologne (Germany). And in that year Citroen became one of the first automobile manufacturers to adopt cellulose laquer paint for his vehicles. A small point, but one that materially aided production. Nineteen hundred and twenty-seven saw output rising again (2000 special taxi models alone were produced), while the number of employees topped 31,000.

At this time the French motor industry was second only to America, and it is significant that Citroen was building 36 percent of all French cars. Some 400 vehicles rolled off the assembly lines daily, one particularly popular model being the C6—powered by a six cylinder engine. This unit was advanced for its day and featured a compression ratio of 6 to 1—quite high considering the year.

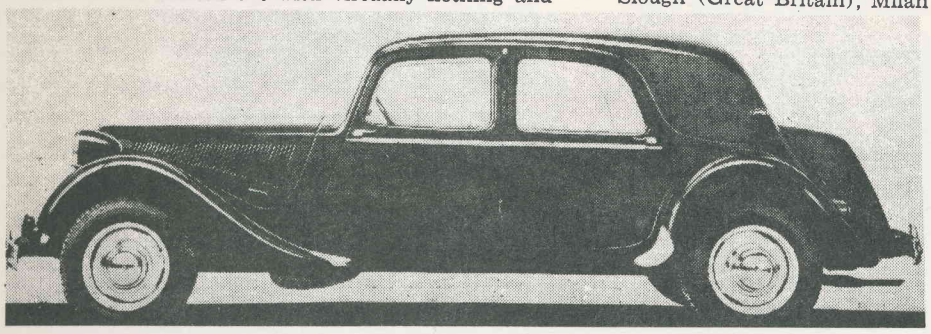
A flexible engine mounting was introduced in 1930—with the accompanying loss of money. It was at this stage that Louis Renault fully realised the seriousness of the threat to his company. He took decisive steps to protect his security and position.

France's roads were well served by Citroen coaches, but it wasn't long before Renault was also moving into this field. If Citroen had a bus-stop on one side of the road, Renault would place his on the opposite side. When the cost of travelling in a Citroen was reduced, Renault cut his fares likewise. Little by little the blue buses of Renault whittled away at the brown Citroen coaches' livelihood.

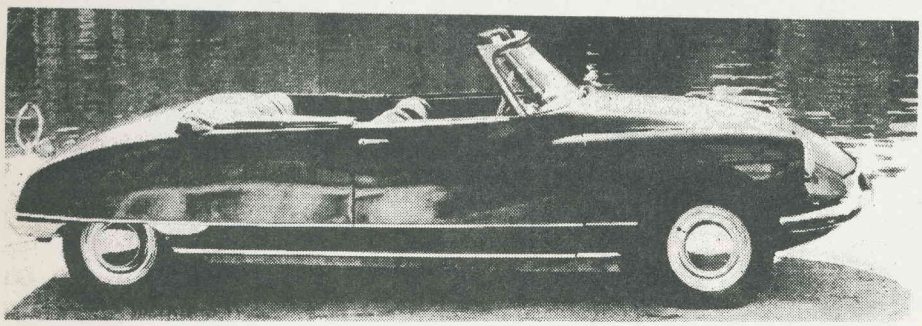
Citroen retaliated. Ten tracked-vehicles became the first automobiles to complete a trans-Asiatic journey. Although this event took almost one year from beginning to end, it gave Citroen sales a sorely needed boost.

More publicity was forthcoming. A 15 Cv model travelled 85,000 miles on Montlhery racing circuit at an average speed of 65 mph. Next year (1933) an 8 Cv Citroen broke 106 world records for speed and distance at Montlhery. Among the records captured was one for 187,500 miles at an average speed of 58 mph! The car involved ran non-stop for 133 days!

But time—and credit—was running out for Andre Citroen. Although cancer of the stomach was responsible for his eventual death in 1935, he was finished as an automobile manufacturer some time before he died. One of his predominant assets had been his ability to raise incredible amounts of money on credit and by loans, but in the end this source of income was extinguished. A multitude of creditors drove him from



The 'Normale' was introduced in 1935, just a few months after the first model of the long lived series was introduced. The basic design remained unaltered for 21 years.

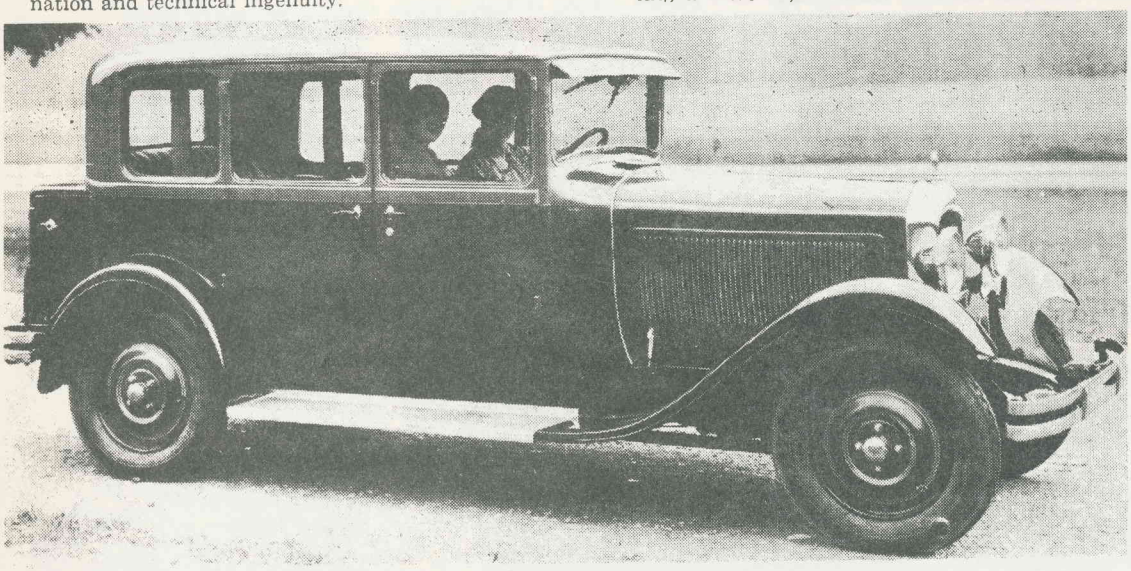


One of the latest versions of the Citroen is the expensive convertible, based on the DS19.

his factory at the worst possible time for both Citroen and them. Had they had a little more faith and patience with the master of Javel they would have shared fully in one of the greatest of automotive masterpieces—the 1934 "7". Thereafter only the company remained—mainly due to financial assistance from Michelin—though Citroen's spirit still pervaded the giant factories.

The "7" was far more than another Citroen gimmick, intended to stimulate sales. It was, in a word—revolutionary! Like the DS 19, which superseded the basic "7" design in 1955, the first front wheel drive Citroen was not "years ahead of its time." It was in the present, almost everything else was in the past! The original design incorporated only proven features, yet when they were all wrapped up in one parcel it presented a concept that typified Citroen's bold imagination and technical ingenuity.

the 2 Cv achieved fantastic popularity throughout France. Its bizarre, yet cheeky, character captured French hearts to such an extent that for many years it was the only car for which there was a waiting list in that country. Practically everyone—from peasants to debutantes—became 2 Cv-ites. Although motorists in other countries looked at the ungainly car with amused tollerance, it soon proved its practicability. Many expeditions covered vast and tortuous distances in France's "mechanical horse". Two of the best known journeys were the Canada-Tierra Del Feugo, and the Paris-Tokyo-Paris epics, made in 1954 and 1957 respectively. The former covered 32,000 miles and took two days less than a year to complete. Among the records established while en route was one for the highest point ever reached by a car (Mount Chacaltaya, 16,500 feet). The other sojourn entailed travelling a mere 62,500 miles in nine months!



In 1928 Citroen's C6 featured high compression for its day — 6 to 1. At this stage production was around the 400 vehicles a day mark.

By virtue of its unitary construction and front wheel drive layout, the "7" ushered in a new era of low-slung, yet thoroughly practical cars. Gone, for instance, were the old-fashioned running boards—they would have been part way up the doors. The front wheels were independently sprung by torsion bars and Lockheed hydraulic brakes were fitted at all four wheels. Exceptional interior roominess (for a car of its size) was assured by the sunken floor section. Overhead valves and removable (wet) cylinder liners were features of the engine.

This machine entirely justified all Citroen's past foibles, but it came too late to be a savior.

The "7's" popularity and acceptance was such that two additional models were soon introduced — the II CV "Normale" and the II AL (Light). A maximum speed of over 60 mph and fuel consumption approaching 30 mpg were claimed for the latter vehicle. Then came the 15-Six, powered by a six cylinder engine and capable of over 80 mph.

It took some time for production to get back into full swing after World War Two, yet in 1948 the jaunty little Citroen 2 Cv was shown to an astonished public. Grotesque in appearance, the vehicle had a willing 375 cc engine that gave between 55 and 70 mpg at 35 mph, while unique suspension enabled it to go-anywhere. Designed primarily for French farmers,

Towards the end of 1953 the 15-Six model was equipped with a new type of rear suspension-hydro-pneumatic. This gave birth to rumors that something unusual was under development at the Citroen plant. Rumors became reality in 1955 with the unveiling of the DS 19. The old-style Citroen relinquished its position in favor of the newcomer, despite the fact that it was still easily "in fashion". Once again cries of "years ahead of its time" echoed around the world, but the designers at Citroen weren't worried. They had successfully created the most complex, yet in many ways the most practical, vehicle ever built.

Since then nothing drastic has occurred at Citroen. The 2 Cv has blossomed into the delightful Ami-6, a completely restyled car with larger engine capacity and distinctive appearance. The 2 Cv remains, however. And, of course, the DS 19 has been joined by its less complex companion the ID 19. Station wagon and convertible versions have also been added to the range. However, these vehicles all owe their basis to those of 1955. Judging by present trends the DS and 2 Cv families may well outlive even the redoubtable "7's" career.

Although many people still regard the current DS-ID range as something from the future, it makes interesting thinking to attempt conjecturing what Citroen's next model change will bring. Let's see now —it should come in about 1976 . . .! #

[We reprint the above 1962 'Wheels' article (complete with inaccuracies) with the comment that it suffers a little from the journalistic 'angle', and from not having access to all the information more recently published on Andre Citroen and Citroen History — Ed.]

One of the fastest growing motor sports in Europe in the last five years has been 2CV Cross or Pop Cross as it was sometimes called. The event is a variation of motor cross in which 2CV saloons and their derivative the Dyane only are eligible for entry. The Sahara 4x4 is specifically excluded but any sized engined 2CV ranging from the 375cc to the latest 602cc can compete. The rules are simple but stringent; the competing vehicle must with the exception of strengthening on body and wheelarms be standard Citroen production items. Some body panel modifications are allowed with a roll cage and safety harness mandatory.

The event is held on a circuit between 700 to 1000 metres long and 10 - 12 metres wide with a rough gravel surface. The course is specifically designed with curves and gradients so that a maximum speed of no more than 70km (43mph) is obtainable. A race consists of 10 laps of the course and 15 laps for the various finals. There now exists separate country championships and last year an International 2CV Cross champion was crowned as a result of competitions held in several European countries. 2CV Cross has largely been dominated by the French drivers which may or may not be attributed to their on-the-road training using the streets of France.

As the following pictures show even the indomitable Deux Cheveux can be induced to perform acrobatics. It's a pity that 2CV's are in such short supply that an Australian equivalent cannot be organised. Using early 'D's' and called Crunch Cross?

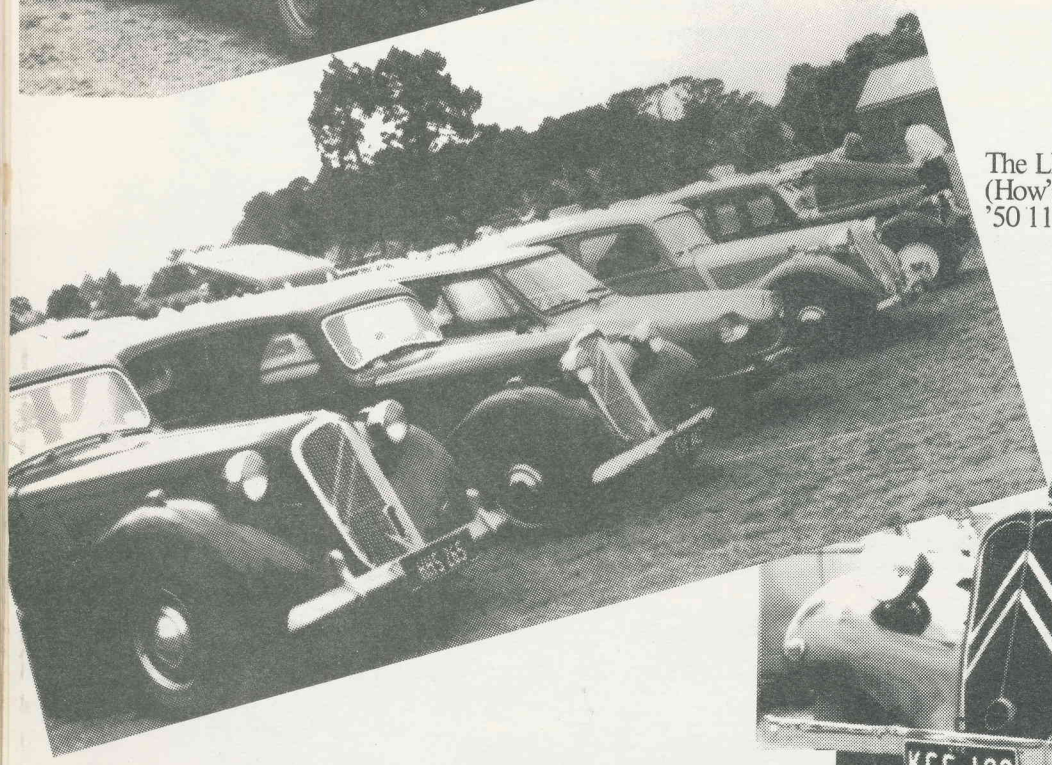
My thanks to Bernadette Piot of Citroen Slough Public Relations and 'Le Double Chevron' for supplying the photographs.

D. Cheveux

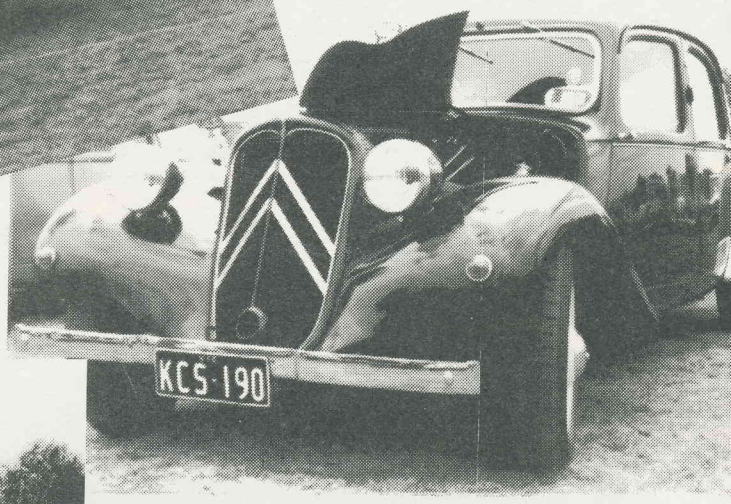
John Read's fine 1949 Slough Six.

CONCOURSE Dec. 11 1977.

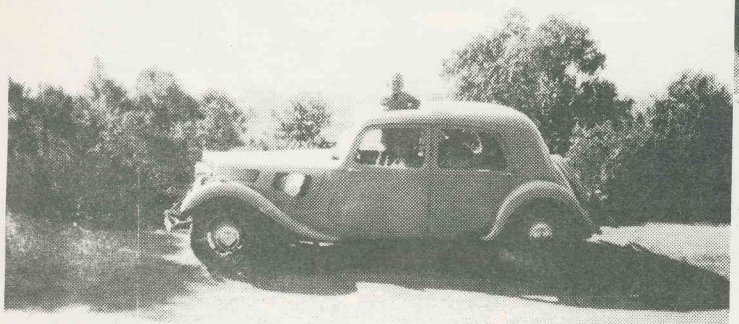
The Club's annual representation at the MG Concourse was a dismal performance. Particularly so in view of the 1976 display where we ran second to the host club in total number of vehicles from one club. To those who did show - thanks; to those that didn't - the '78 concourse is on the 10th December, so there's no excuse for not showing due to lack of warning.



The LINE-UP: '49 Six, '53 Light 15, '70 Ami (How'd that get there? - Tail wind?), '49 Six, '50 11BL, not shown '53 Big 15.

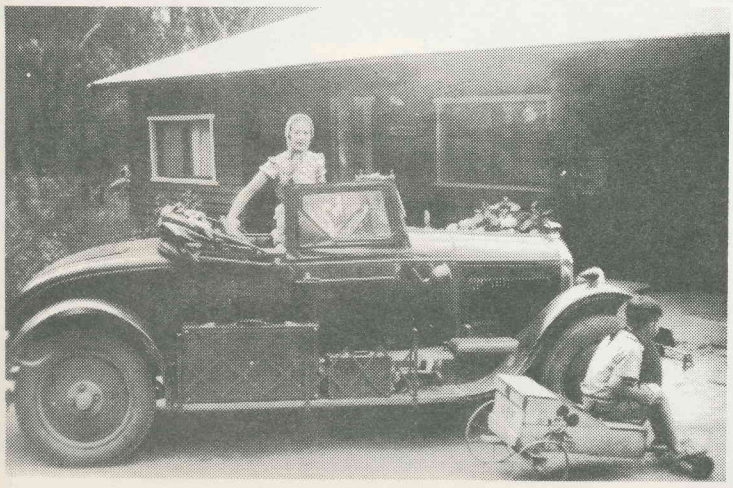


Oliver Moles' 1950 French 11BL



FROM THE ARCHIVES

Believed Slough L15, 1936 - lost from sight 1962 - any help on whereabouts from members?



Harry Marshall's B14 again, sans caravan, but no lighter for it. (Mickey Mouse 2CV prototype in foreground).

WANTED
OLD PHOTOS FOR THIS SECTION!!!

The Report of the Chairman

Over the past year the "Classic Register" has achieved a great deal, the membership which now stands at fifty-five, and with a good number of prospective new members interested in joining the new club things look to be on a good footing. However, it is important to say that the success of a club depends on the involvement of members.

The new club to be known as "Citroen Classic Owners Club of Australia" shall come into being from the 1st. of March. The A.G.M. for the C.C.C.V. Classic Register and the inaugural meeting of the C.C.O.C.A. will be held jointly on the same night on the 1st. of March. It is important you attend.

The National meeting this year to be held at Beechworth, will be one of the ways in which you can support your club as well as having a good time. Events such as these are part of what a car club is about and good attendance is a contributing factor to a successful event.

Last year the Classic Register initiated the highly successful Rally, to Swan Hill, an event which will be continued over the future years. This year the South Australian club are organising the rally, at the Barossa Valley, another event which will need your support.

Finally thanks must go to Mark Navin, Roger Brundle, Kym Harding and Kenn Gilbert for their enthusiastic work whilst on the Classic Register committee of 1977-78.

Safe Tractioning for '78

Andrew Rankine

[The Treasurer's Report will be presented after the end of the clubs' financial year.]

The Secretary's Report

The 1977 - 78 year saw another year of growth by the Classic Register. Membership losses from the previous year were 3 with 29 renewals. This year membership reached 55 including a number of interstate members, with inquiries regarding membership coming from as far afield as New Zealand.

A number of organised events were held, the most successful being the combined rally at Swan Hill with the South Australian Traction Avant Club. Other events included a technical day, a Citrun (in conjunction with the general car club) and the M.G. Concourse. December saw the instigation of regular meetings at Blackburn and the decision by Register members to form as a separate club.

This year saw also the introduction of 'Front Drive', a magazine produced solely for Australian Tracion owners. The quality of the magazine is such that I believe it can rate comparably with any other Citroen club magazine in the world, and is possibly the best car club magazine in Australia. A special thanks for this should go to Kym Harding and to the two patient, almost ever smiling printers Mike and Phil.

Links with European clubs continued to be strengthened. The Register successfully imported parts from both the Dutch and Swedish clubs with the help of the Spare Parts Fund. The coming year should see more parts imported at prices which will be within reasonable limits thus easing the cost of restoration work to the beloved Traction.

Finally my thanks to the chairman &the other members of the committee for their help and cooperation during the year.

Mark Navin.

The Report of the Spare Parts Officer

The Growth of the club this year has been paralleled by the growth in the parts function of the club. This is an area of increasing usefulness, and ideas are being thrown around which will mean greater advances in the next membership year.

The Parts Fund has been central to this years growth – I don't think that most members realise the value or potential of the fund, whether restoring, or for day to day running. Two areas growing rapidly are the supply of parts from overseas, especially Holland and Sweden, and the supply of Citroen related trivia – posters, models, brochures, T-shirts...

I will be handing over this year to someone better qualified in parts (so that I can devote more time to Front Drive and, I hope, restoring my Noddy-Fifteen), so I won't preempt his initiatives by laying down plans for the next year.

My thanks to the other members of the committee for their help in parts, particularly Mark Navin, who spends eight days a week working for the club, and is a walking encyclopaedia on all matters Citroen, and Roger Brundle, another encyclopaedia, on Citroen technical matters.

Kym Harding.

STOP PRESS !!!

Mufflers
We can now supply Lukey mufflers, complete with tail-pipe, for about $35-00. (Two in stock from mid-February) Contact spare parts officer.

Back issues
of Front Drive are available - contact secretary or spare parts officer.

Our new club already has an emblem (see left) – committee is looking into window stickers, metal badges, T-shirts. Perhaps official club drink should be CCOCA - Cola?

Correspondence

13 Perrott St.,
Elizabeth Park,
S.A. 5113.

C.C.C. Secretary,
Mr. Geoff Cranmer.

Dear Sir,

Our T.A. Club has put together a venue for the next Vic/S.A. Queen's Birthday long weekend (3-5 June). The details are submitted for your perusal so they can come before your meeting to gain possible acceptance.

Tentative bookings have been made and for this reason we ask for a reply at your earliest convenience.

It isn't much point boring you with details as to the decision to put the Barossa Valley before you, but it appears the most attractive venue and we have considered the distance your club will travel. We did rely also on a number of C.C.C. members at Swan Hill desirous of a Barossa Valley function.

Accommodation:

Three hotels: Barossa Hotel
Angaston Hotel
Wanera

These hotels are on the same side of the main street in Angaston and within two blocks. They are not four star, but extremely homely with large fires and cheap rates at $10 bed and breakfast.

Naturally the complication is having to use all three but we see no real problems. It is planned to use the Wanera for dinner and tea.

We may also be able to get some motel accommodation for those not happy with the hotels.

Agenda:

It is planned to start visits to Angaston sights Saturday morning. Now we realise C.C.C. members may be arriving up to Saturday afternoon/evening but there are others who may come Friday night. For this reason the sights selected are within easy walking distance and everyone with a map/timetable can join in as they wish.

Saturday afternoon a run to Nuriootpa to take in the sights and cellars during the return. Again very handy and the map/timetable will apply.

Saturday night is the selected night for a cellar function under the old Wanera – "straw on the floor, candles and cobwebs".

Sunday is planned as vineyard day with a short round tour of the valley to visit Chattertons winery in the morning and the Seppeltsfield winery for lunch. At Seppeltsfield a tour has been planned with chicken barbeque for lunch (approx. $7 per head) – all you can eat and drink.

We hope to have a short car/technical function then at Angaston oval late in the afternoon and a barbeque at the grounds pavillion which is a beautiful area.

Monday we have mapped out a quick scenic route for the return journey and T.A. Club will accompany C.C.C. back to Murray Bridge equipped with sandwiches etc. for an early farewell lunch there.

Dick Fewster and myself hope these arrangements are acceptable as when we started out things did not look too promising, the Rolls Royce club had booked every motel in the valley.

The oval function is the car get together, but we are basically looking at getting the people together. Hoping these basic details mett the C.C.C.'s approval.

Yours sincerely,
Michael Hose,
President,
T.A., Sth. Aust.

203 Salisbury Highway,
Salisbury-Downs, 5108
South Australia

Dear Mark,

To start the letter, I'd like to thank you for taking the time and effort for coming all the way to South Australia. I am sure our club has taken a great interest in your speech, and I am sure both clubs in future will be closer linked, and as a result both clubs will benefit from it.

How did the meeting go on Wednesday? If you have broken away, I hope you will remain good friends with the other club. I hope in future you will supply us with full details, so I can put it to the meeting, and awaiting results, and I will report direct to you.

Would you be so kind to advertise both my cars in your next magazine: My big 15, is for sale for $800.00 O.N.O. or to swap for a going 2CV, and my vintage one, I want $500 or swap for a 2CV in going condition, I am sure you could do the complete write-up on both cars, without me going into details, or I will swap a Renault 4.

At the same time, we are asking to buy a late model Citroen, four headlight model, will pay cash, as I told you, this is for my Father, and early in the new year, my brother wants a four headlight Citroen, also, he will pay cash.

Anyone coming over to Adelaide, and in need of mechanical repairs, with a Light-fifteen or B/6, you can give them my name and address, you could also publish this in your next magazine.

I am ending this letter, and hope to hear from you at your convenience.

Your friend,
Hughie Keeris
(Traction Avant, South Australia)

ORDERS are now being taken for Citroen Exacto windcheaters. Please state size and colour preference. Choice of two designs. Price approx $12. Contact the chairman, or spare parts officer.

OIL: Some Castrol GTX left at $3.50 per 5 litres. Contact Spare parts officer (877 4853).

FOR SALE – 1938 Reprints of sales brochures $2.00 – Kym Harding (03)877 4853

FOR SALE – Reprint of Spare Parts Catalogue (French Text) $15.00 – Kym Harding (03) 877 4853

WANTED – Information, literature on early Citroens and owners. – Mark Navin (03) 89 8576

WANTED – Member with friendly contacts for new or secondhand reasonably priced electric typewriters – Contact Secretary.

OIL retainers as previously advertised – only two sets left (four per set) at $14.

SPECIAL TRACTION TOOLS
The Classic Register Technical Officer has the following for hire (Phone 509 0441)
Prices are for the hire period of one week.
Spanner for adjusting brake shoe eccentrics 50c.
Tool for adjust. synchromesh,50c.
Valve spring compressor,$1.
Vernier gauges, $1.
Stub axle nut spanner,$1.
Steering ball pin extractor,$1.50.
Block for removing rear torsion bar,$1.50.
Front hub extractor,$2.
Upper ball joint extractor,$2.00.
Outer front wheel bearing extractor,$2.
Stub axle inner ring nut extractor,$2.
Upper swivel ball spanners,$2.
Extractor body for drive shaft spigot cup or ball joint,$2.
'A' frame for towing Light 15's.$2.
Lower ball joint extractor, $3.
Colletsfor ball pin extractor, $3.
Collets for spigot cup extractor,$3.
Chain block & tackle,$3.

DEPOSIT: One tool, $10; two +, $25.

Revenue from this source goes to enlarging our stock of special tools.

CLASSIFIEDS

FOR SALE

'53 ENGLISH Light 15, Just rereg., well restored, good engine, diff., gearbox, reco., shafts, Includes many spares off second car. Towbar, radio – $2500. Peter Macdonald, 578 7950.

'53 ENGLISH L15. Recent engine overhaul, rebuilt gearbox, Reg. till March. Needs front-end work. $600 or offer. Andrew Rankine, 489 7635.

ENGLISH 2CV. 1955 model recently restored, exc. mech. condition, reg., roadworthy, best offer.
and FRENCH 2CV, 1965 (RHD), Fully restored, excellent condition, RWC. $2000. – Both 2CV's interstate – contact Mark Navin for details.

FOR SALE – 1932 C4G complete but disassembled, some parts already reconditioned $500 or swap for going 2CV. Big 15, complete, not going, $800 or swap for 2CV – Hughie Keeris, 203 Salisbury Highway, Salisbury Downs, 5108

FOR SALE – '65 ID19 Registered with '63 ID19 for spares. Both cars $1250, also '62 Safari wrecking proposition $200, Mike Hose, 13 Perrott St., Elizabeth Park, S.A. 5113.

FOR SALE – Piston & Sleeve Set $150, Crown wheel and pinion (secondhand) $180, Engine and gasket set $15, Timing chain $10 – plus other parts from English 1953 L15. Apply Guy Siberry, Box 19 Bellerive, Hobart, Tas. 7018.

FOR SALE – For 2CV 1955 SA2 model –
NEW – 1 complete driveshaft, 4 universal joints to recondition driveshafts – Best Offer. Mark Navin (03) 89 8576

FOR SALE – Citroen Models – send S.A.E. for price list. EMMENNAY IMPORTS, 1 Alexander st., Box Hill 3128

FOR SALE – 1934 7C Unrestored complete, twin colours
1934 7C (6 wheel nut model) unrestored, complete.
1936 Rosengart Super Traction – very rare, good all round condition though stored for many years. See photo.
Please Note: These vehicles are in Europe so interested parties should contact the Secretary for details and photographs of the cars.

Rosengart Super Traction

WANTED Round-face speedo or face only - Walter Burkhardt.

WANTED – Hull inspection plate for French L15, Wings motif for grille crank hole . – Winston Francis, 6 Bowillia Ave., Hawthorn S.A. 5062 Ph (08)71 8717

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