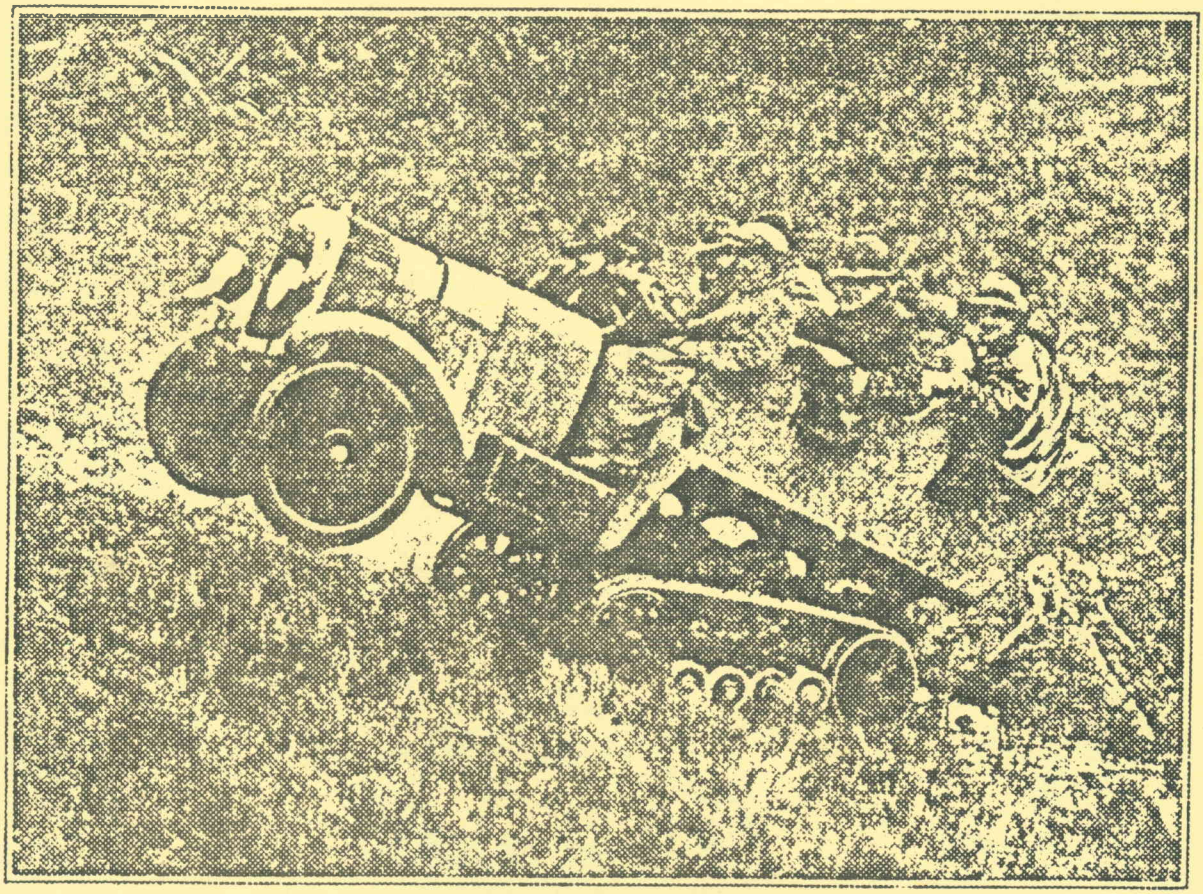
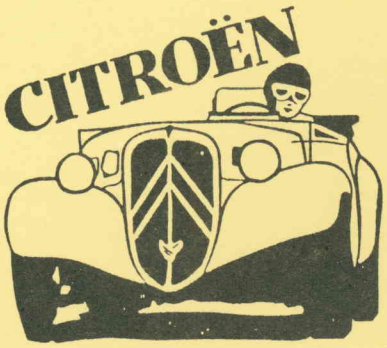
FRONT DRIVE



Half Tracks in Australia

FRONT DRIVE Volume 11 No. 1 May/June 1987.
Registered by Australia Post Pub. No. VBH 2127.

Windcheater & T shirt designs

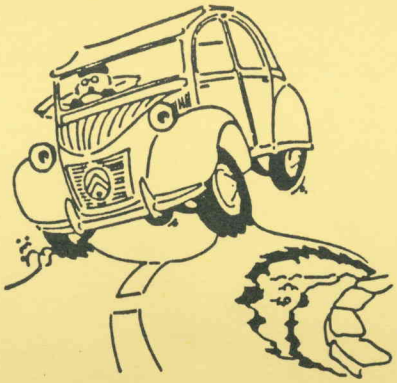


ROADSTER

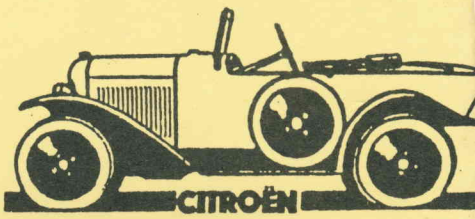
AVAILABLE ONLY TO
2 CYLINDER OWNERS
& ONLY GREEN ON
YELLOW COLOURS.

CLUB BADGE
3 SIZES:
SMALL (BREAST POCKET)
MEDIUM, LARGE

COUPE



2CV



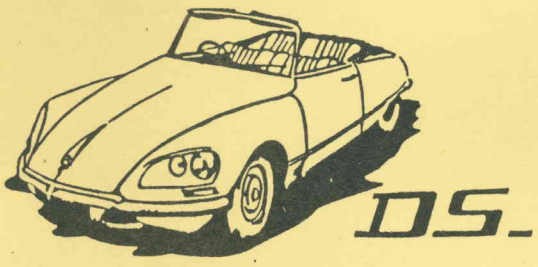
5CV
BREAST POCKET
SIZE ONLY

LIGHT 15

ANNIVERSARY

SCROLL
BREAST POCKET
SIZE ONLY

BIG 6



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CHEVRON BADGE

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FRONT DRIVE
The magazine of the Citroen Classic Owners Club of Australia

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In this issue, we provide a bit, in fact almost all, of the Australian information about that remarkable group of Citroen vehicles, the half-tracks or Kegresses. Yes, even a few of them came to Australia. And some observations on the early Citroen organisation here.

Almost all you ever need to know about your car's storage battery, and how to remove the old paint and crud from your car body.

Quite a bit on recent activities and some important coming activities. And planned efforts to make the regular club General Meetings and Open Nights more interesting - in fact irresistable. Do come along!

Bill Graham, Peter Simmenauer, Peter Hore.

COMING RALLIES

May 21, Thursday	General Meeting, Nunawading.
June 5-8, Friday-Monday	Austraction, Beechworth.
June 18, Thursday	Open Night, Nunawading.
July 11, Saturday	Arabian Nights Mystery Dinner.
July 16, Thursday	General Meeting/Photo Contest, Nunawading.
August 2, Sunday	Workshop, details to be announced.
August 20, Thursday	Open Night/Armchair Rally, Nunawading.
September 4-6	ICCCR, Germany.

CCOCA MEMBERSHIP:

Annual subscription: Full member $27.50, Associate member $15.00
Joint membership is available to spouse of full member, no cost.
Overseas postage rate: Additional $7.00
Meetings are held as follows: Thursday January 22, 1987, then the third Thursday of each month following. The meeting location is the Willis Room at the Nunawading Civic Centre, Maroondah Highway, east of Springvale Road, at 8 pm.

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Half Tracks in Australia

In Geelong thirty years ago was this Citroen that had crossed the Sahara. Clive Birtles (brother of Francis) is seen in the front of the trailer. In the front seat is Major Curtis, now chief of Preston Motors. The vehicle was tested at Anglesea before the Great Ocean Road was completed.

October 15, 1954—Australian Motor Manual 39

Most would accept that Citroen is a marque notable for putting before the public, vehicles which are typically very advanced, often unusual and without exception, practical machines which often exploit niches not provided for by other manufacturers of the time. Among the unusual vehicles to leave the works of Andre Citroen, probably none were stranger than the Citroen-Kegresse auto-chenilles - literally "self-propelled caterpillars". In practice, they were "half-tracks", not "full-tracks", based on standard Citroen car chassis of various horsepowers and retaining steerable front wheels.

The half-track units replaced the powered rear wheels to permit much greater traction in conditions where load-bearing and adhesion were poor - mud, sand, snow and ice. The Kegresse tracks were "supple" and made of vulcanised rubber and canvas. They permitted much greater speed than the hard metal tracks such as used on military tanks and Caterpillar tractors, though some Kegresse tracks did have steel reinforcement.

The track system was developed by Adolphe Kegresse, a French mechanical engineer who was born in 1879, the year after Citroen's birth. After completing his studies, Kegresse went to Russia and by age 25, he had become technical director of the garages of Tsar Nicholas II. Here Kegresse tried many prototype tracked vehicles, no doubt prompted in his efforts by road conditions of the time. He returned to France after the revolution of 1917 and refined his inventions in collaboration with Jacques Hinstin.

Soon afterwards, Andre Citroen purchased the rights to exploit the auto-chenille patents. The first Citroen auto-chenilles made their appearance in France in the winter of 1920-1921. The vehicles went on to have wide application, and are perhaps best known for their essential roles in early land crossings of Africa and Asia.

The 1920s and 1930s were times of "opening-up" lands newly available to the Europeans, and such lands typically had poor or non-existant roads. Obviously, such times and situations favoured the light and very mobile auto-chenilles Citroen-Kegresse.

Australia was being "opened-up" at this time too, and not surprisingly, some Citroen half-tracks came here to take part in the process. What is a bit surprising, given the unusual nature of the vehicles, is how vague the records of them seem to be. Certainly, there is an excellent opportunity for enthusiastic club members to conduct further research and expand our knowledge of these fascinating Citroen vehicles.

Below is a brief resumé of what is known of Citroen-Kegresses in Australia at present. Much of the information is taken from the few copies of "The Citroen News" ("devoted to Citroen happenings in Australia") which are to hand.

The first issue of The Citroen News (1 (1) April 10 1924) reports the amazing exploits of a Mr. Curtis of Preston Motors in Melbourne (Citroen agents) and his Citroen-Kegresse as he travelled at about 20 mph in a somewhat all-embracing route from suburban Preston to the city centre, presumably for the benefit of the alerted reporters and the startled citizens. A photo of the event shows Mr. Curtis in the Citroen (labelled "The car that crossed the Sahara") as he was driving it straight up the flights of steps at the front of State Parliament House in Spring Street.

Having crossed all sorts of roadside obstacles, including a two-foot pine log in a nearby paddock, and having towed a loaded lorry and trailer of about 12 tons gross mass, the Kegresse was deemed capable of towing one's house away, there being nothing one could do in the face of such an improbable event except "save the women and children". Dogs were said to be "rendered dumb" at the sight of the car.

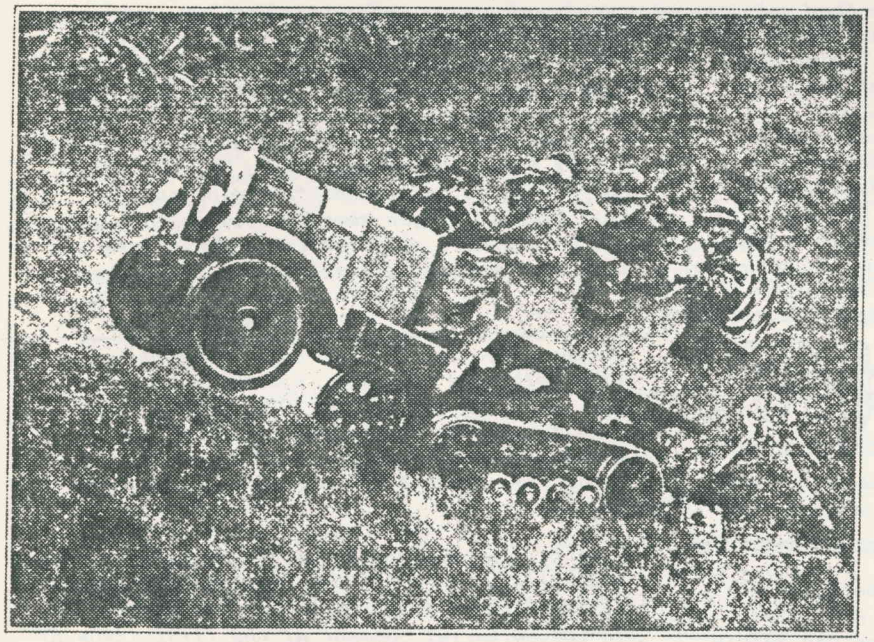
This first issue of The Citroen News also reports that two Citroen-Kegresse had been extensively tested in Sydney and then sent by ship to the East Kimberleys in NW Australia for use in a survey led by Dr. Clapp, the American geologist, in search of oil. The Citroens were thought to be "the only cars that could possibly attempt this long journey into virgin country". The vehicles were fully equipped for the excursion, even to the extent of carrying a "complete Wireless Receiving and Transmitting Set", powered by a generator driven from a grooved pulley on the driving shaft of one of the cars.

The next issue of the "News" (June 10 1924) reports the voyage of 10 men (count the hats - nine I think in the photo) in a Kegresse on a →4

A Remarkable Feat in Rain and Darkness. To Waldheim, Cradle Valley by Car

A CITROEN-KEGRESSE ACHIEVEMENT

Few of the party of four who left Launceston or the ten venturesome spirits who essayed the journey to Cradle Valley in a Citroen car, equipped with a Kegresse attachment, on Saturday last, realised the experiences in store for them, or it is safe to say that the number would have been smaller by at least one. However, the satisfactory issue to what must be considered a really remarkable achievement provided ample compensation for all the hardships and discomforts of the journey. To negotiate a track over which a bullock driver would require all his initiative and comprehensive vocabulary, and moreover to cover the major portion of the journey in inky darkness, speaks volumes for the high standard of emciency to which low-powered car production has been built up. The Kegresse attachment made it possible to negotiate obstacles and bogs which would have presented insurmountable difficulties to a car with ordinary equipment.



How on earth they ever negotiated the last few miles of the journey in the pitch dark, and with rain obscuring most of the rays thrown by defective head lights will for ever remain a mystery. But they did it, and thus registered the unique performance of being the second car to reach Waldheim. It may be mentioned that Mr Lade, who drove the Citroen-Kegresse, also drove a Baby Citroen, which completed the full journey some weeks ago. We did not go out to greet them, but left that luxury to our host and another visitor. In the meantime, we hurriedly utilised all the pegs round the enormous open fireplace for the purpose of drying our clothing. Quite a smart thing to do, so we thought.

The whole outfit appeared to have had a somewhat strenuous time. The body of the Kegresse had not been completed, and the absence of a hood of any description did not help matters. Many amusing incidents were detailed as the party sat down to a sumptuous repast, and very soon everybody was quite happy. Except the writer, who had contracted a most inconvenient cold. Naturally we demanded explanations why they were so late in arriving. It appeared that they had had a bit of trouble on the way as in negotiating one of the numerous creeks, water had interfered with the ignition, and the headlights failed to function properly. As a matter of fact, the real cause of the trouble seems to have been that the driver underestimated the difficulties of the track after having been over it when it was much drier, and so set out too late in the morning. Had he had a few hours more daylight no doubt he would have negotiated the outward trip as easily as the return journey.

At about 12.30 our party retired to rest, but some of friend Wiendolfer's "King Billy" mattresses are not suitable to angular folk.

With clear daylight for the return journey we were able to appreciate the class of country over which the Citroen-Kegresse had to travel and its performance was a treat to witness. Leaving Waldheim, the first half-mile or so consisted of rough button-grass country, intersected at frequent intervals by deep and narrow streams. The Kegresse simply revelled in this type of work, and travelled over the softest looking patches without leaving any very pronounced depression. After this morass-infested country came some steep stony slopes, the grading in one or two places being about 1 in 2. The steepness was made light of by the splendid little engine, and this notwithstanding the fact that about ten passengers were on board. After manoeuvring about in some intricate-looking spots, we eventually arrived at the track, where Mr. Weindorfer has done a certain amount of forming in parts—but only in parts! Here, where the grass is absent from the surface, began our greatest difficulties. At times the track was so soft that even the caterpillar sank right down until the differential was scraping along the ground. Progress under the circumstances was necessarily slow, but on one occasion only was any assistance necessary, and then it was only a case of putting in a few stones over about three or four yards of bog. The Citroen-Kegresse performed some truly marvellous feats, and it is easy to understand how it was possible for the car to cross and re-cross the Sahara Desert. Short of climbing vertically, the car will do almost anything asked of it. It will run across the most treacherous ground so long as there is any grass on the surface; it will climb the most inaccessible-looking places; it will cross creeks high in flood, and do all manner of stunts. The front wheels often leave the ground entirely, and at first the passengers had a few anxious moments.

The remainder of the journey was a repetition of the outward run, but we got on much better going home, and were not bogged at all. Good progress was made after the first metal road was reached, and the Kegresse gave us a sample of rapid travelling by running along level stretches at a 25 miles an hour clip. Wilmot was reached at 7 o'clock, and a halt was made for tea. The petrol supply had diminished, and it was decided to replenish it, so a tin for each car was ordered. When our driver opened his tin he discovered that he had been supplied with kerosene, but by the time he was able to give warning the Citroen tank contained the contents of the other tin. They pumped that kerosene out again with a small kerosene hand pump while we had our tea. And so we left our friends from the coast and after an uneventful journey arrived in Launceston shortly before midnight.

TRACTION ARRIERE

two-day trip into mountains inland from Launceston in Tasmania. Despite this mammoth load (I can't help but think of one of those little donkeys, piled high and uncomplaining), the car seemed to perform in an exemplary fashion. Though not to detract from the fine effort of the Kegresse, it was noted that a "Baby Citroen" had completed the same journey a couple of weeks earlier. A short note also reported that wireless contact had been made with Dr.Clapp's oil exploration party at Hamilton's Well "in the bush at the back of Broome".

"The News" 3 (1) of February 10 1926 records the introduction of a new Citroen Kegresse 11.5 HP car to the notorious "black soil" country near Toowoomba in Queensland. In the early days, this fertile but treacherous soil bogged many conventional cars, but not so the Citroen. One of its first tasks was to pull out three bogged cars near Helidon.

The "Australian Motor Manual" (October 15 1954) shows a Kegresse some 30 years earlier at Geelong with a trailer in tow, having been on test at Anglesea before the Great Ocean Road was completed. It appears to be the same car which assaulted the parliamentary steps. Major Curtis, then chief of Preston Motors was at the wheel.

At least one Kegresse was used in the Australian snowfields, probably Mount Kosciusko, to haul skiers up the slopes in the days before they had ski-lifts. This activity was shown in a TV documentary, shown on ABC a few years ago. However, attempts to trace the film did not succeed at the time.

Preston Motors, who still trade in Melbourne, were approached by John Couche a year or two back to see what they could add to the Kegresse story. They had no idea that they had ever sold Citroens, and thought that any records would have disappeared when they cleaned out their archives during a recent shift. How often have you heard such tales of opportunities seemingly gone forever?

And surviving vehicles? Only one is known. It is incomplete and in the hands of Jim Reddiex in Queensland. Jim rescued it from sugar-cane country where it had been abandonned more or less where it had stopped. He thinks it may have been one of three which were tried in that State, perhaps being brought down from the black soil country, and then found unable to grip on the lush and slippery tropical growth found in the cane fields. Jim has a conventional car of the same general specifications as the half-track to provide some spares, and he hopes to restore his rarest of cars one day.

How many half-track Citroens came to Australia? Again, uncertainty. Counting up from the information available suggests that there were perhaps eight at least, but of course there could have been less (or more). More Citroen mysteries and another challenge to members to do some sleuthing. You could be sure of "stopping them in their tracks" if you were to roll up to a rally in a beautifully restored Citroen-Kegresse. Isn't that enough to inspire your researches?

Bill Graham.

We tend to think of ourselves as being in a geographic backwater down here in Australia (and in New Zealand too, I think we can safely assume). But this of course is a falsehood. We are often initiators of world class and are quick to adopt, even improve on, new technologies when they become available.

Following along this theme then, it is very interesting indeed to turn to the first issue of "The Citroen News", published in Australia on April 24 1924, no more than five years from the release in Europe of Andre Citroen's first car, the Type A in 1919.

By this date, the name of Citroen was already well established in Australia, with an active dealer network with substantial outlets and service facilities in capital cities, a happy and enthusiastic following of Citroen owners, organised rallies, participation and success in auto sport events, and the cars being driven by enthusiasts for the enjoyment and satisfaction in major expeditions around the country. These latter were often real tests of drivers and machines, given the great distances, the isolation from service facilities and the poor state of the roads. Thus it was becoming a common-place for Citroen cars to be driven from Melbourne to Perth, Fremantle to Sydney, and so on. By the end of 1925, a tiny Citroen 5 CV two-seater had become the first car to be driven round the continent of Australia (at a truly remarkable fuel consumption rate of 43.7 mpg average).

"The Citroen News" was published and edited by W.A. Crowle Ltd of Sydney, the factory appointed distributor for Citroen cars in Australasia. In the editorial comment of the first issue of "The News", it was pointed out that Crowles had been associated with the Citroen factory since its inception. The aspirations for the new journal (basically to provide communication, service and support to Citroen owners) is remarkably like what might be penned about the intentions of the Citroen Classic Owners Club of Australia and its journal, "Front Drive". That first editorial page of "The Citroen News" is reproduced here, and readers will no doubt be struck by a sense of Citroen continuity in Australia.

We expect to reproduce pieces from "The Citroen News" from time to time. To date, we have copies of issues as follows:

Volume 1 Nos. 1-4
Volume 2 Nos. 4,5
Volume 3 No. 1

Please let us know if you can lend or get good copies of further historical material. It helps you and your fellow members to enjoy their hobby.

Ed.

The CITROEN NEWS

DEVOTED TO CITROEN HAPPENINGS IN AUSTRALIA

Published and Edited by W. A. CROWLE LTD.

Vol. 1. No. 1. April 10th, 1924.

CITROEN CO-OPERATION.

With the first edition of this little journal is behoves us to tell you just why it is being published.

We feel that there is a necessity for a medium through which Citroen owners, prospective owners and the Citroen organisation generally can obtain interesting and authentic news dealing with the car they own, are about to own or sell.

We also think this medium will bring closer relationship among owners, increasing goodwill towards each other and the Citroen organisations throughout Australasia.

It will be a means of distributing news of Citroen doings throughout the world, and will bring us in closer contact with the factory and its executives in that we will tell you all about them and of their doings from time to time.

Particularly this journal is written to help and interest the Citroen owner and will feature happenings of interest to the whole Australasian Citroen organisations.

We want "Citroen News" to breathe a spirit of enthusiasm, co-operation and service. We want Citroen owners throughout Australia to feel that it is their journal, and we want to hear from them of their exploits with their Citroens particularly in regard to any reliability, petrol consumption or other contests in which they have taken part, or any interesting journey undertaken, particularly where photographs have been obtained and can be supplied.

We want all owners of Citroen cars to think of themselves as part of a world-wide organisation of which we are all proud.

It has been our pleasure to be connected with the Citroen business since the inception of the factory. We are closely acquainted with Andre Citroen and his excellent staff of executives, and have been in close business contact for many years with the personnel of the various Australasian agencies, and we feel that there is just something different about the Citroen organisation.

Their sales efforts are based on a sound policy of service. Their enthusiasm for the product they are handling reflects the enthusiasm of the manufacturer, Andre Citroen himself, who is carrying out his ambition to manufacture and market the most efficient and economical car thus far produced, and to what extent he has succeeded is proved by the fact that you see them everywhere and he is now the largest motor car manufacturer in Europe.

I think the spirit of the Citroen organisation in Australia can be best and more ably defined by quoting from C. Henry's definition of what modern commerce should be.

COMMERCE.

I come no more in grey disguise
With grasping hands and greedy eyes,
Living on larceny and lise.
No longer do my mighty host
Of ministers and servants boast
Of giving least and getting most.
But now, with eyes greed cannot blind,
With open hands and willing mind,
I live in Service to mankind
And hold him first among the rest
Who bears this motto on his breast:—
"He profits most who serveth best."

It is our hope that this edition will be the first of a bi-monthly issue of the "Citroen News," and that we will continue thus and improve it as years go by, and we certainly look forward to the support of Citroen owners in supplying us with information and descriptions of the doings from time to time and any helpful hints on the care and maintenance of Citroen cars which they think would be of assistance to their fellow owners.

The Citroen agent handles Citroen products because they are the best he knows.

The Citroen owner purchased his car after deliberation on comparative values until the points for buying outweighed the points against buying. After that point buyers and sellers have a common interest in working conjointly for the same end. To make the car which has treated them all so well more widely known and valued for the real merit it possesses.

An article with a reputation is the best sort of proof that it has made good.

Citroen May Build in England.

LONDON, Nov. 16 (by mail).

At a gathering this week of British dealers in Citroen cars, at which Andre Citroen was present, it was plainly hinted that preliminary action is being taken with a view to securing a plant in England to make this car for the British market, and so save the 33 per cent. import duty.

Citroen stated that 3,000 of his cars have been sold in England during 1923, and that if he had the facilities he could make and sell 6,000 in this country in 1924.

Citroen pointed out that the cost of production in France is steadily increasing—wages in particular—and that all French makers except himself had been compelled to increase their prices in their home market.

A service depot at Hammersmith, London, originally built for the Ford Motor Co., has been taken over recently by Citroen. It is said to be the largest of its kind in England.

CITROEN PERFORMANCE.

An interesting experiment was recently carried out at Rheims, a Citroen Car with Kegresse drive going down the steps to the famous Pommery wine cellars.

With all lamps lit, the Car safely descended the 200 steps, the gradient being 42%, or, roughly, one in two, and, turning at the bottom, re-ascended the steps with equal ease.

I doubt if many of us would be able to say that we had descended into the Pommery cellars and ascended with equal ease.

CITROEN PROGRESS.

The output of the Citroen Works during 1923 increased to such an extent that the Citroen Factory had to turn round and purchase the large Clement Bayard Factory in Paris, making the Citroen Factory the largest Motor Car Factory in Europe.

AOMC DOINGS

It's a love of old cars for Peter and his Citroen

PETER Simmenauer, of Canterbury, never quite grew out of his love of old cars.

Today, he is still tinkering under the bonnet of his 1954 "Big 15" Citroen.

Still in its original condition and boasting authentic parts, Peter's pride and joy is put to everyday use.

He says his hobby is ideal for the family. Not just because it keeps him home on the weekends, but because the family shares the benefits.

Through the Citroen Classic Owners' Club of Australia Peter and his family have met some interesting people at rallies and competitions.

He plans to exhibit his car in the Association of Motoring Club's European Motoring Show at the end of the month.

Peter said it was only the second European show held by the Association of Motoring Cubs (AOMC).

He said the association's first show, held last year, included mostly Citroens and BMWs.

With a little more interest this year he said other European cars, such as Renaults, Peugeots and Mercedes may exhibit.

The exhibition will include old and new vehicles, commercial vehicles and motorcycles. Trophies will be awarded in various classes.

The show will be held on Sunday, March 29 and Peter is working to fix a troublesome gearbox in time to exhibit.

He said Citroens were ideal for hobby motorists to work on, as they were not to complicated.

He says being a member of the classic car owners club has helped him to learn about cars, and save money.

The club helps its members with parts, mechanical information and even organises social and competition events.

Most members do their own mechanical work, swapping and sharing hints.

"You have to do your own work," Peter said.

"Otherwise you are in for more than the average person can afford."

Peter explained that old cars were separated into three categories, veteran, historic and classic.

"The Citroen is classed as a classic, because it was such an innovative design," he said.

Peter said it was one of the first cars to combine front-wheel drive, hydraulic brakes and mono-construction (without a chassis).

The European Motoring Show will be held in the members carpark at the Flemington Racecourse on Sunday, March 29.

For further information phone 762 8841 or 376 8585.

MR Peter Simmenauer with his 1954 Citroen.

ASSOCIATION OF MOTORING CLUBS...report

DISPLAY NUMBER PLATES

Investigations into the use of replica number plates with apparent approval by the Government have revealed that this was considered to be a special case because of the value of the number plates involved (ie VIC 1). The Government has indicated that other display or replica plates used on vehicles would not be countenanced. Further details in the January Newsletter.

RED PLATE SCHEME -- SPEAKER JOHN MIDDLEHURST RTA.

Mr Middlehusrt detailed some of the background to the introduction and early operation of the Red Plate Scheme. He emphasised that this is a permit for limited use of a vehicle - not a form of registration. This is especially relevent as the permit is not transferrable on the sale of the vehicle.

The Red Plate scheme is offered to bona fide clubs who make application to the RTA for approval to operate the scheme. One requirement of the RTA is that the club make an annual vehicle safety check of all vehicles owned by members of that club. It is considered that this check should cover all

aspects of the vehicle and should take into consideration peculiarities of the marque. It was considered as essential that the Club keep records of the safety checks having been done, and that the owner be given some form of record of having successfully completed the check as being beneficial but not compulsory.
It has been of concern to member clubs that there was an element of liability on behalf of the person or persons making the check in the event of an accident. Mr Middlehurst pointed out that the level of liability incurred in the event of an accident would be dependent on it being proved that the tester had been negligent in the execution of the check. As there had been no cases of this ever having occured, he considered the level of risk as very slight.
Any RTA authorised club can conduct an event for Red Plate Vehicles as long as it is gazetted as such. Vehicles are eligible to attend as long as they have had a current safety check, whether it has been made by the club holding the event or by the club of which the owner is a member. There are reciprocal rights for vehicles that are of interstate origon operated under that state's own permit system.
The AOMC has received requests from members clubs about the possibility of a standard check list and a form of vehicle identification. This matter is now in the hands of the Executive.

HISTORICAL REGISTER

Any club member who has any information on the history of the AOMC over the last ten years is invited to forward this to the Executive. History of the American Motoring Show is also required and this should be addressed to Graham Bradshaw.

RACV REPLY TO THE LEGISLATION CHANGES.

The RACV have sent a detailed reply to the proposed annual roadworthy checks. They have presented a strong case against such a proposal and list the AOMC amongst its supporters in its stand. More details can be obtained from your delegate who has a copy of the reply.

AOMC REGALIA

AOMC lapel badges and 10th anniversary badges, cloth badges and limited numbers of Motoring Shows grille and lapel badges are available from Robbie Couche, AOMC , G.P.O. Box 2374 Y , Melbourne 3001.

RED PLATES 2/7ths PROPOSAL

A positive response has been had so far from the RTA on the changes to the Red Plate Scheme as proposed at the November Delegates meeting. Further details on the progress of this proposal will be available as soon as they come to hand.

[The gist of this "2/7 Proposal" is that the Victorian Red Plate Permit costs about 2/7 of the annual cost of normal registration. Hence, it could be argued that a Red Plate car should be able to be driven two days each week - presumably not just to irregular notified official rallies. I understand that the two days should be Saturday/Sunday. Certainly a step in the right direction if it comes off, but still short of one reg. and one set of plates spread over several cars, only one of which is to be driven at one time, which is what the Swiss scheme is. That should be our eventual goal].

CHANGES TO THE MOTOR TRADERS ACT.

Representatives of the AOMC attended a meeting at the YACC to discuss the proposed changes to the Motor Traders Act. These changes included the restriction on a trader to sell unregistered vehicles to a member of the public. It was suggested that the AOMC make representation to the Ministry of Consumer Affairs regarding the protection of the right of hobby vehicle collectors to purchase such vehicles. It is also proposed that there be a "cooling off" period brought into the standard purchase agreement. This is still subject to negotiation between the Government and interested parties.

AMERICAN MOTORING SHOW

The AOMC Events Committee reported a very successful show with up to 500 cars of exceptional standard being presented. Thanks were given to the various members who contributed their time to the organisation and running of the Show especially to the members of the Chevrolet Car Club who assisted on the gate. Badges are still available for those who missed out.
Delegates are advised of the Events Committee Meeting to be held on the 27th April, at which the Committee for the 1988 shows will be formed.

LICENCE ENDORSMENTS

Members were warned to check their licences when renewal is due to ensure that endorsments for heavy vehicles and the like were carried forward. Failure to have the endorsments shown could incur heavy penalties and the onus is on the holder to ensure this is done.

CHANGES TO THE ASSOCIATIONNS INCORPORATIONS ACT

The changes that were reported to have been made at the November Delegates Meeting have been investigated and appear to have been confined to corrections of spelling and other grammatical and administrative errors. They appear to have made no difference to the intent or nature of the Act and have no bearing on the rights or responsibilities of those covered by the Act.

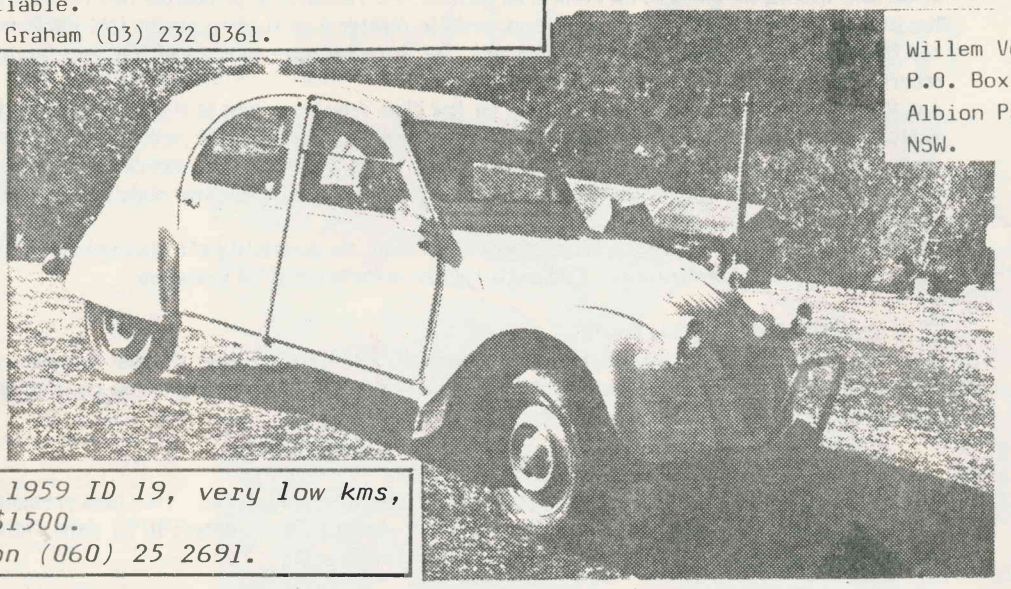
DATES TO REMEMBER

EUROPEAN MOTORING SHOW 29th March
EVENTS COMMITTEE MEETING 27th April
DELEGATES MEETING 25th May
COMMERCIAL VEHICLES RALLY 18th October

CLASSIFIEDS

Surplus to my needs: Four brand-new Goodyear Super Cushion 4-ply tubeless tyres, 5.60x15 as on Volkswagen. Would like to replace them with four (or five) Michelin X, 135x380s. Situation negotiable.
Bill Graham (03) 232 0361.

Wanted for an experiment: A couple of Traction cardans with passable yokes but can have "knackered" splines.
Bill Graham (03) 232 0361.



For sale: 1959 ID 19, very low kms, NSW reg, $1500.
Leigh Mason (060) 25 2691.

Willem Voorwinden
P.O. Box 66
Albion Park 2527
NSW.

Ready for Raid '88? Unfortunately, I'm a bit too old to participate, otherwise I would. Therefore, I'm offering my 2 CV for sale - another reason is that I'm trying to complete restoration of a Big 15.

The 2 CV is completely rebuilt from bare chassis (reinforced). New brake lines and petrol lines, silicon fluid, new engine parts: crankshaft complete, cylinders, pistons, rings, 425 cc. King pins and bushes, new petrol pump, expansion chamber and muffler.

Has done 300 miles since assembly. Front seats OS rear seat frame only. New tyres, speedo cable, clutch plate facings, laminated windscreen, large perspex rear screen. Spare set of suspension cylinders available.

I would be prepared to finance a deal on the basis of $3000 cash and the balance in 12 monthly installments interest free of $125 - Total $4500 plus registration.

SCUTTLEBUTT

Perhaps you have been trying to rustle up the readies to make a bid for Frank Arnstein's excellent Light 15 (YF 877) advertised in last Front Drive? Forget it! The car has already found a new and appreciative owner in Robyn Couche. It would be hard to imagine a more appropriate purchaser. Well done Rob, and commiserations to Frank.

CCOCA member Alan Thomas recently journeyed to Spain to see his brother who has lived there for many years. Much of Alan's time was spent in the vicinity of the old southern city of Seville, known of course for giving its name to a kind of orange. Alan, ever the true enthusiast for the double chevrons, was not particularly looking for oranges, but he was keen to see any local "citrons".

It seems that Alan wasn't so successful in terms of "Citroen Exotica", but he was intrigued by the rather casual approach to motoring which he saw. Obviously, parking space is at a premium in parts of the city (and of course that problem is by no means limited to Seville) and Alan was intrigued to find cars parked in all sorts of strange places - right up to corners, across pedestrian crossings, double-parked, and at odd angles to the curb. One pedestrian appeared to be going straight down the middle of the road, perhaps feeling safer there! The most conventional parking appears to be that of the 2CV just visible to the right. To avoid offending errant CCOCA members, we will say nothing about the "abandonned" Renault Four!

A GS Break left parked outside a bar was the best example that Alan saw of "touch parking" or "parking by ear" - not a straight panel to be seen and all unnecessary adornments knocked off! Not surprisingly, the GS had at least one car space left either side of it.

Outside the cathedral, Alan spied the now-familiar red-and-white Citroen colours on a Landrover, set up as a wreck recovery vehicle. One might imagine the driver was having a well-earned siesta, or perhaps he was inside, seeking divine intervention in the form of a petrol strike or a national campaign to outlaw illegally parked vehicles!

SEVILLE, SPAIN: DIDN"T NOTICE THE ORANGES BUT SAW A FEW "CITRONS"!

It must be admitted that CCOCA members, while unquestionably devotees of the double chevron, are in some cases swayed by the charms of other lesser marques as well. One member recently sold his Kermit-green Deux Chevaux, and in a fit of self-induced automotive deprivation, soothed his jangled nerves by purchasing a stately (leisurely?) Lanchester with pre-selector gearbox, fluid flywheel and other goodies of a more or less Brittanic kind. But even if he hadn't taken this step towards motoring bliss, he should have been able to find some solace in the clutches of his other loves - his two (!) Amphicars, rusty 2CV van, Daimler Sovereign, Mitsubishi L300 van, his wife's Renault 16, or even in recollections of his past "conquests" (not Daimler Conquests) such as the Alfa Romeo Spyder and the 2CV belonging once to the club's printer. He was even talking about an Amilcar! We don't know about Russell's religious leanings but his automotive leanings are definitely catholic, even one might say, "roamin' catholic"!

W.G.

AUTO ELECTRICALS

BATTERIES

As we have noted already, the battery is really the heart of the electrical system of the vehicle; it must supply electricity to operate the various electrical devices at all times when the dynamo is not generating; that is, when the car is stationary, at starting or running slowly. The function of the battery, therefore, is to store electricity which will be immediately available when required.

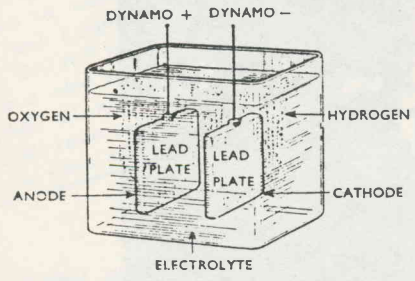
Primary and Secondary Cells

There are two main types of cells, known as primary and secondary types. The difference between the two will be well known to those having owned a battery-operated radio set in which the high-tension supply is provided by a large dry battery and the low-tension supply by a "wet" battery or accumulator as it is more often called. When the latter is discharged, it is taken to an electrical service station to be charged; that is, to have a further supply of electrical energy stored in it. In the case of the dry H.T. battery, however, once it becomes discharged it is discarded as being of no further use, and a new one must be bought.

The Primary Cell, manufactured in several forms, generates electricity by conversion from chemical energy; that is, a chemical reaction takes place in the cell resulting in an electro-motive force at the terminals. When the chemical reaction is completed, however, the cell has destroyed itself and can be put to no further use. The dry cell is best used where the requirement is for low, intermittent current—such as in electric flash-lamps, house bells, and so on—but is of little use in the motor vehicle installation.

The Secondary Cell, on the other hand, is reversible in its action. This simply means that the chemical change which occurs inside the cell when delivering current can be reversed by applying a direct current to the cell terminals. Thus there is no necessity to discard the battery when it is discharged—by passing electricity into the battery the active materials are restored to their original state, when the battery is said to be charged.

The secondary cell is a convenient means of storing electricity by converting electrical energy to chemical energy, and likewise of producing electricity by converting chemical energy to electrical energy. As in any system of storage, of course, if more is taken out than is replaced, the store will eventually become empty. On the car, electrical energy



A simple electric cell can be made by immersing two plain lead plates in a solution of one part of sulphuric acid in 10 parts of water.

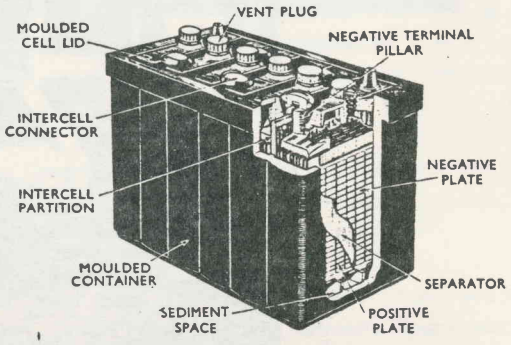
is replaced in the battery by means of the dynamo, the output of which is arranged to be sufficiently high to keep the battery in a good state of charge under normal conditions.

Various kinds of secondary cells have been produced, but those used almost universally on motor cars are of the lead-acid variety, this name being used because the essential constituents are lead and dilute sulphuric acid. In the simplest form, two lead plates are placed in a solution of dilute sulphuric acid and a current is passed through from one plate to the other for some time, after which the positive plate (or anode) will acquire a surface of dark brown peroxide of lead, but the other (the negative plate or cathode) will remain as plain metallic lead. If the charging current is now stopped, and the terminals of the cell connected to, say, a lamp, then current will flow from the positive to the negative terminal through the external circuit until the chemical change is completely reversed and both plates are again plain metallic lead.

The Lead-acid Battery

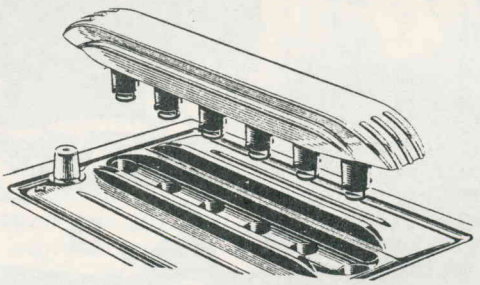
The lead-acid battery as constructed for practical use takes the form of a moulded container, of either ebonite or some composition material having high acid-proof and insulating properties and great mechanical strength, divided into a number of compartments or cells, six for a 12-volt battery or three for a 6-volt unit.

In each cell are two groups of plates, one group being positive and the other negative, the two groups being interleaved as it were in one another. The number of plates in each group depends upon the storage capacity for which



Typical 12-volt battery, showing internal construction.

the battery is designed, of which more will be said later. Separators interposed between the plates prevent adjacent plates from touching, and each group of plates is connected to a terminal pillar. Moulded lids, either individually for each cell or of one-piece pattern covering the entire top, are sealed to the container with a bituminous compound to make an acid-tight unit.

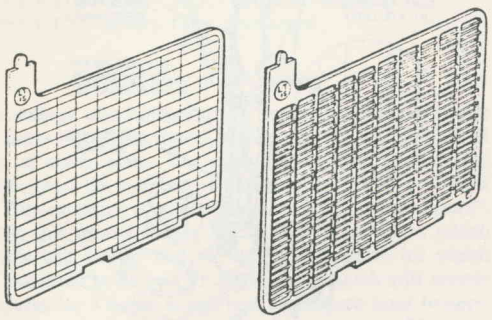


A battery having the vent plugs carried in the moulded cover.

Cells are connected in series; that is, the negative terminal pillar of one cell is linked by means of a solid lead intercell connector to the positive terminal pillar of the next cell. A vent plug in the lid of each cell gives access for filling with acid, while small holes in the plug allow the escape of gases generated as a result of the chemical changes taking place in the cell. At the same time, the vent plugs are designed to prevent acid spray from finding its way on to the top of the battery. In one design, the vent plugs are all carried in a moulded cover, and are taper fitting into the holes in the cell lids. Instead of unscrewing each vent plug, as is the usual necessity, lifting the moulded cover gives immediate access to all the cells. The cover is also designed to return any acid spray to the cells.

The Plates

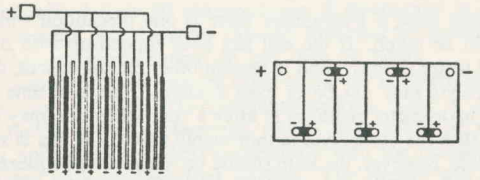
The plates are not made of lead sheet as in the simple form of cell previously described. Instead, an antimonial-lead-alloy grid forms the skeleton of the plate, which is then filled with a special preparation of lead oxide paste, the design of the grid being such that the active material is held firmly in position. After a process known as forming, this paste is converted to a special spongy form of lead on the negative plate, while the positive plate is filled with a



Pasted and unpasted grids.

paste of lead peroxide. There is no need to discuss here the various ingenious processes used by manufacturers to produce these results; it will be sufficient to say that, by using plates which are comparatively porous, the effective surface is largely increased, and thus a given size of plate is capable of storing a greater amount of energy.

The storage capacity of a cell, as already indicated, depends upon the effective surface area of adjacent plates. As a considerable capacity is needed for such purposes as starting the engine, very large plates indeed would be necessary if there were only one positive and one negative plate in each cell. Hence the reason for dividing the large



The internal connections of a 9-plate cell (left) and the external connections of a 12-volt battery.

plate into a number of smaller ones is a purely practical one, to enable the battery to be manufactured in a size convenient for installation in the car.

Each cell thus has a number of positive plates and a number of negative plates sandwiched together so that each positive surface is faced by a negative one. At one time there was an equal number of each kind of plate, and thus one positive surface was left unused. In present-day designs, an additional negative plate is incorporated, so avoiding the waste of positive surface.

The Separators

If there were to be direct contact between a negative and a positive plate inside the cell, the result would be much the same as a direct short-circuit outside the cell, and the cell itself would be ruined. To avoid this, a sheet of some non-conducting but porous material, arranged to interfere as little as possible with the chemical action between the plates, is interposed between each negative and positive surface. Such sheets are known as separators, and much of the development work of recent years has been devoted to the provision of highly porous separator materials of improved mechanical strength, which will allow free circulation of the electrolyte (as the acid solution is more often called).

Various materials have been used, among them being special types of wood, porous rubber, ebonite and glass wool. In some current types, both a porous rubber separator and a specially impregnated sheet of glass wool are interposed between the plates. The glass wool sheet, highly porous, armours the positive plate and thus assists in retaining the active material in position on the plate.

Some batteries are provided with a separator guard which takes the form of a strip of perforated material laid across the top edges of the separators in each cell. Its purpose is to protect the separators from damage due to careless use of a battery filler, and also to help in reduction of electrolyte splashing.

As a further precaution against short circuits occurring internally due to active material shedding from the plates and forming a bridge across the bottom of the plates, a space is provided at the bottom of the case with moulded ribs on which the plate assembly rests, and into which such shedded material can fall.

Chemical Action of the Battery

During the process of charge and discharge, current flows through the electrolyte, and the water in it is electrolysed or split up into its two components, namely hydrogen and oxygen. While the cell is being discharged, the oxygen liberated appears at the spongy lead surface (that is, the negative plate) where it first causes the formation of lead oxide, which in turn is acted upon by the sulphuric acid to produce lead sulphate. This latter reaction also results in the formation of water, which is, as it were, a by-product left over when part of the acid has combined with the lead oxide.

At the positive plate, filled as you will remember with lead peroxide (not to be confused with the lead oxide which we have just been discussing) the liberated hydrogen reduces the lead peroxide to lead oxide by robbing it of part of its oxygen, with which it combines to form still more water. Also, of course, the lead oxide on this plate is again converted to lead sulphate by the action of the acid, so that a third addition of water occurs.

Thus when the cell is completely discharged, both positive and negative plate surfaces consist of lead sulphate on which the acid has no further action. Also, the acid itself has been considerably weakened by the formation of water during the various chemical reactions.

Now let us look at the charging process. Electrolysis of the water again occurs, but since the direction of current flow through the cell is reversed, hydrogen instead of oxygen now appears at the plate which originally consisted of spongy lead (that is, the negative plate). Here it reacts with the lead sulphate to form sulphuric acid, leaving the lead free by itself again. At the other plate the liberated oxygen, together with some of the water from the acid solution, combines with the lead sulphate to form lead peroxide and sulphuric acid again. Hence when the battery is fully charged, both positive and negative plates are restored to their original state and the electrolyte to its former strength.

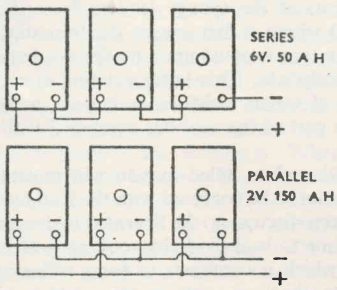
When this state of affairs is reached it will be clear that the electrolysed oxygen and hydrogen will no longer have any effect on the plates since there is no longer any lead sulphate on them. Continued application of the charging current therefore results in the gases escaping by bubbling up through the acid and passing through the holes in the vent plugs in the cell lids to the atmosphere, with the result that some of the water from the electrolyte is permanently lost. The electrolyte thus becomes stronger and is reduced in quantity, so that it is neither of the most desirable strength nor of sufficient depth to cover the plates completely. It must be emphasized that it is only water which is lost in this way, not acid. For this reason, pure water must be added from time to time to replace that lost by the electrolyte, and details of this "topping-up" operation will be found in the section dealing with battery maintenance on page 49.

Another lesson can be learned from what has been written about the chemical action inside the battery. When the battery is discharged the plates are coated with lead sulphate, which at the time of formation is comparatively soft and porous and is readily attacked by the oxygen and

hydrogen during recharging. If, however, the battery is left standing in a discharged condition for any length of time the sulphate hardens and becomes scarcely penetrable. Normal recharging then becomes almost impossible and considerable trouble is necessitated to bring the battery back to a useful condition. In extreme cases it may be quite impossible to do so and a new battery or new plates will be required. This trouble is known as sulphation and again further reference will be made in the maintenance details.

Battery Voltage

Although the number and size of the plates in each cell determines its storage capacity, the voltage of the cell is quite unaffected by these factors. A lead-acid cell in good condition and fully charged will produce a voltage across its terminals of about 2·5 volts. If the cell is put into use its voltage will fall fairly quickly to about 2·3 volts and then much more slowly to about 2·0 volts. Thereafter the drop is quite rapid and at 1·8–1·9 volts the cell may be regarded for practical purposes as discharged.



If cells are connected in series the effect is to add the several voltages, but to leave the capacity unaffected. On the other hand, cells connected in parallel have the voltage of a single cell but the current capacity of the several cells is added together just as it would be if all the plates were mounted together in one large cell.

These facts suggest a method of discovering the state of charge of the cell by measuring its terminal voltage. In practice, however, the voltage is not a safe guide, since the reading can be affected to some extent by temperature and also by the amount of rest which a cell has had before its voltage is measured. Thus a cell which is almost discharged may, if no current has been drawn from it for some hours, show a quite misleading voltage for a short time before relapsing to something representing its true state.

For these reasons, a safer guide to the state of charge or discharge is to be found in what is known as the specific gravity, or density, of the electrolyte in the cells.

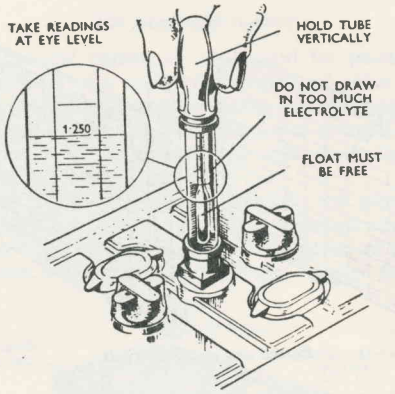
Measuring Specific Gravity

The specific gravity of the electrolyte, or indeed of any material, is the weight of that material compared with the same volume of chemically pure water. The specific gravity of the sulphuric acid used in the preparation of the electrolyte is 1·835; that is, the weight of say 1 pint of this acid would be 1·835 times that of a similar volume of pure water. The acid is mixed with water in such a proportion that when the battery is fully charged the specific gravity is between 1·270 and 1·290. We have already seen that as current is taken from the cells the chemical reaction results in the formation of more water and the acid becomes progressively diluted. Consequently the specific gravity of the electrolyte falls until, when the battery is for practical purposes completely discharged, it will have a specific gravity of only about 1·13.

Thus since the strength of the electrolyte varies with the state of charge, the specific gravity likewise varies with the state of charge, so providing a convenient method of ascertaining the condition of the battery at any time.

For the purpose of measuring the specific gravity of the electrolyte in the cells, an instrument known as a hydrometer is employed, which by a direct reading compares the weight of the acid solution with that of pure water. Hydrometers depend for their operation upon the fact that a float will stand higher in a heavy liquid than in a light one. Taking this fact to its extreme, an article which will float on the surface of one liquid may sink to the bottom of another. A solid piece of iron, for example, sinks to the bottom of water but will float on the top of mercury.

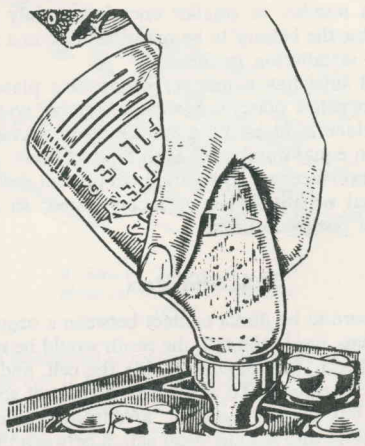
The most usual type of hydrometer is in the form of a syringe which contains a glass float. The latter is provided with a scale up its side so that the number on the actual surface indicates the specific gravity of the liquid. A rubber



A hydrometer or calibrated float is used to measure the density of the electrolyte. For convenience it is generally contained in a syringe with which a sample of the fluid can be drawn from the cell.

bulb at one end of the syringe and a length of rubber tubing at the other enables a sample of the electrolyte to be withdrawn from the cell into the glass body of the syringe. According to the strength of the electrolyte (that is, the state of charge of the battery) the float will assume a certain position, and the specific gravity is indicated by the reading on the scale on the float corresponding to the surface level of the liquid in the syringe.

When using a hydrometer there is one precaution which should be taken. If the cell has been topped-up with distilled water recently, and in certain other circumstances, the electrolyte may not be of even strength. The best time to take hydrometer readings is after a run, when one may be sure that the electrolyte is thoroughly mixed. If this is not possible, however, the bulb should be released and squeezed firmly several times with the rubber tube still submerged in the electrolyte. In this way currents of liquid can be



Topping-up with distilled water is an essential battery maintenance task. It can be simplified by the use of a battery filler which automatically stops the flow of water into the cell when the correct level has been reached.

squirted through the cells so as to stir the electrolyte and ensure uniform mixing.

Hydrometer readings should be taken for each cell of the battery and the specific gravity of the electrolyte in each cell should be approximately the same. If one cell gives a

reading very different from the rest it is an indication that some fault has developed or possibly that acid has leaked from that particular cell and a proper examination by a service station is desirable. Sometimes the necessary correction may be made by adjustment of the specific gravity of the electrolyte, but it may be necessary to remove the plates from the cell for examination and renewal as required, and this is a task rather beyond the scope of the amateur. The hydrometer readings may be interpreted as follows:

1·270–1·290: battery fully charged.
About 1·210: battery about half discharged.
Below 1·130: battery fully discharged.

Capacity of the Battery

The voltage of a battery, then, depends, primarily, upon the number of cells in it and, secondarily, upon the state of charge of those cells. The capacity, on the other hand, depends upon the number of plates in each cell, and their size. This quantity is quoted in terms of "ampere-hours". Broadly, this means simply the number of amperes which a battery will deliver and the number of hours for which it will continue to do so. Thus a battery which will supply 10 amperes for 5 hours would be a 50-ampere-hour battery, as also would be one that supplies 2 amperes for 25 hours.

In practice a slight complication occurs, for it happens that the capacity of a battery depends to some extent on the rate at which it is discharged. Broadly, it is true that for very low rates of discharge there is practically no change in the capacity. Thus a battery which could give 1 ampere for 50 hours would probably also give 2 amperes for 25 hours, but it would almost certainly not give 10 amperes for 5 hours, and it could not maintain anything like 50 amperes for one hour, although all these various combinations are numerically equal to 50 ampere-hours. For that reason the capacity of a battery is always coupled with the discharge rate, as, for instance, "50 ampere-hours at the 10-hour rate", which means that this battery when fully charged will deliver 50 ampere-hours if discharged in 10 hours or more, but the same capacity must not be expected if the battery is discharged in less than 10 hours.

The capacity of the battery fitted to the car is determined by the car and electrical-equipment makers. One of the main factors which determines this is the ability of the starter and battery to deal successfully with the problems associated with cold-weather starting. The battery will be found to be of adequate capacity to deal with all normal requirements of the electrical system.

Battery Maintenance

Topping-up

We have already seen that during the chemical action which takes place inside the battery, some of the water is driven off, thus increasing the specific gravity of the electrolyte. Once every month, therefore—or more often in hot climates, or if long daily runs are made under warm conditions—the level of the electrolyte in the cells must be inspected. While doing this, never use a naked light, as a mixture of oxygen and hydrogen can be explosive.

With most makes of batteries, the correct level for the electrolyte is up to the top edges of the separators (which stand about ½ in. above the plates) or to the top of the separator guard when fitted, and this ensures that the plates are adequately covered. If the level is low, distilled water must be added through the holes in the cell lids until the correct level is reached.

Distilled water can be obtained from chemists and garages at small cost and, while in certain districts the normal domestic supply water may safely be used, in the majority of cases it contains impurities detrimental to the battery, and for this reason the use of distilled water is recommended on all occasions. Topping-up batteries at climatic temperatures below the freezing point of water should be done only when the cells are on charge and gassing freely, and then the water should be added in only small quantities at a time.

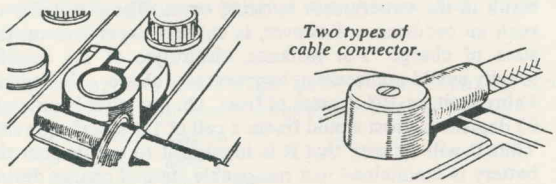
The volume of distilled water required for topping-up varies according to the size of cell, conditions under which the battery is being charged, and temperature.

On cars having the battery mounted on the bulkhead at the rear of the engine and an alligator-pattern bonnet fitted, visual inspection of the electrolyte level is almost an impossibility with the battery in position. A particularly useful accessory in these cases, and in fact for all batteries, is a device known as the Lucas Battery Filler, which automatically stops the flow of distilled water when the correct level is achieved. The action of resting the nozzle of the filler on the separators opens a valve and allows distilled water to flow into the cell. When the electrolyte rises level with the top edges of the separators, the flow ceases and the filler is then withdrawn.

It is almost equally important not to overfill. Too much electrolyte may lead to it being splashed out of the vent plugs and on to the top of the battery and the surrounding metal parts of the body, and this is extremely bad from the standpoint of corrosion.

Preventing Terminal Corrosion

It is important to keep the top of the battery clean and dry, as the presence of moisture, especially if it is slightly acid, will set up terminal corrosion as well as permitting current leakage between the cells. See that the vent plugs in the cell lids are screwed well home and examine the terminals, making sure that the connections are tight. If the cable connectors are corroded, scrape them clean and coat them with petroleum jelly or anti-corrosive grease.



Two types of cable connector.

Improved materials used in the manufacture of battery cable connectors have considerably reduced the prominence of terminal corrosion which at one time was a continual source of trouble. This is particularly true of the latest type having the cable diecast directly into the thimble-shaped lead connector, which is secured to the battery terminal post by means of a lead-plated self-tapping screw.

When fitting this type of connector to the terminal post, a few precautions must be taken. First, smear the terminal post and the inside of the tapered recess with petroleum jelly. Then push the connector by hand on to the post as far as it will go, and finally give it a light tap with the handle of a medium-sized screwdriver. Insert the self-tapping screw and screw home only sufficiently to maintain a tight joint. Fill the recess above the screw head with petroleum jelly. If the connector is fitted dry, if it is hammered on to the terminal post too tightly, or if the screw is screwed too far home, extreme difficulty may be experienced when next it is desired to remove the connector.

On some cars with connectors of this pattern, a small tapered peg fits into a hole provided on the negative connector. This peg has a cable attached, and forms the main feed from the battery to the electrical system. Again, care must be taken to see that this peg is securely, but not overtightly, fitted into the hole.

Repairing Cracked Cells

Although not a common cause of complaint, sometimes a small crack may appear on the top of a battery, allowing the escape of electrolyte or, rather, of the vapour. As a general rule it is advisable to return the battery to the makers for professional attention, but quite often a satisfactory repair can be made by first drying the top of the cell thoroughly and then melting together the edges of the crack by the application of a hot iron. Alternatively, the crack can be filed or scraped out to a V section, after which Chatterton's compound is melted into it. Care should be taken, so far as possible, to prevent the filings from falling through the crack into the cell.

These remarks apply only to the tops of the cells, as there is no satisfactory home method of repairing the moulded cases, although, as a get-you-home measure, no doubt a liberal coating of Chatterton's compound would prove satisfactory.

Some batteries are secured to the car by means of fixing bolts passing through holes in the case moulding at each end; excessive tightening of these bolts is sometimes a cause of cracked battery cases, and once again secure but not excessive tightening is called for. On the greater majority of cars, however, the battery is held in position by means of a strap or girdle, so that this potential cause of cracking has been eliminated.

Sulphation

If a battery is allowed to stand for some time in a discharged or even a partially discharged state the lead sulphate formed on the surface of the plates will harden and this will reduce the usefulness of the battery. Moreover, it will also increase the resistance inside the battery, and if any attempt is made to recharge at a high rate the result must be to heat the plates and possibly to buckle them. To cure this trouble the battery must be recharged very slowly, and it is probable that a single charge will not complete the cure. Therefore, after charging slowly the battery should be discharged also at a slow rate. This sequence should be repeated several times.

Batteries in Cold Weather

If a battery freezes up in cold weather it might easily result in the battery case bursting open. The possibility of such an occurrence, however, is entirely dependent on the state of charge. For instance, electrolyte of 1·3 specific gravity would not freeze at temperatures above – 76 degrees Fahrenheit, or 108 degrees of frost. On the other hand, only 23 degrees of frost would freeze a cell of 1·1 specific gravity. Thus it will be seen that it is important to ensure that the battery is maintained in a reasonable state of charge during cold weather. The need for care when topping-up a battery at temperatures below freezing point has already been mentioned.

When contemplating the laying-up of a car for winter, or other reasons, a decision must be made as to what action should be taken regarding the battery. If it is aged and promises little further useful life, it may be as well to write it off and save the trouble of storing. If, on the other hand, the battery is comparatively new and in good condition, the most satisfactory way of maintaining it during an idle period is by periodical freshening charges. This should be done about every four weeks, at the normal charge rate recommended by the manufacturer, until the battery is gassing freely. Approximately four hours' charging will normally be sufficient.

Precautions with Sulphuric Acid

Care must always be taken when dealing with sulphuric acid. Concentrated or even when considerably diluted, it causes serious burns, which are painful and do not heal easily. In the very dilute form used for battery electrolyte there is not the same danger, but even this is unpleasant on the hands and much more so on tender skins such as parts of the face. A spot in the eye would probably be serious. Sulphuric acid attacks most metals fairly rapidly, and for that reason it should be stored even temporarily only in earthenware, glass or similar vessels. It will also quickly ruin clothing and other materials.

Battery Charging

When the car is in normal use the battery will be maintained in a charged condition by the dynamo. As will be clear from the succeeding chapter, there are alternative systems of control of the dynamo output. Those in practically universal use today, known as "compensated voltage control" and "current voltage control", ensure that under normal running conditions the battery receives a charge best suited to its condition. For example, if the battery is discharged the dynamo gives its full output. As the battery becomes charged and its voltage rises the charging current is correspondingly reduced until, with a fully charged battery, the dynamo gives only a trickle charge.

It sometimes happens, however, that due to special circumstances or unusual running conditions the battery, whilst being in normally good condition, becomes so discharged that the dynamo cannot make good the deficiency, and when this occurs separate charging from the mains must be undertaken. This job can of course be done readily at a service station, but with the relatively inexpensive apparatus now available, charging can be done at home quite easily. In winter, for example, it is convenient to be able to give the battery a small boosting charge overnight, thus ensuring a lively battery for dealing with a stiff engine next morning.

A number of well-known manufacturers market charging sets suitable for home installation. The best method of using a battery-charger is to install it permanently in the garage and to provide leads sufficiently long to enable connection to be made to the battery for charging. Some cars are provided with plug-in sockets on the facia, coloured red and black (positive and negative respectively) which are connected direct to the respective battery terminals. With other models it will be necessary to make connections direct to the battery by means of battery clips. The battery maker's instructions must be followed as to the most suitable charging rates for various battery types.

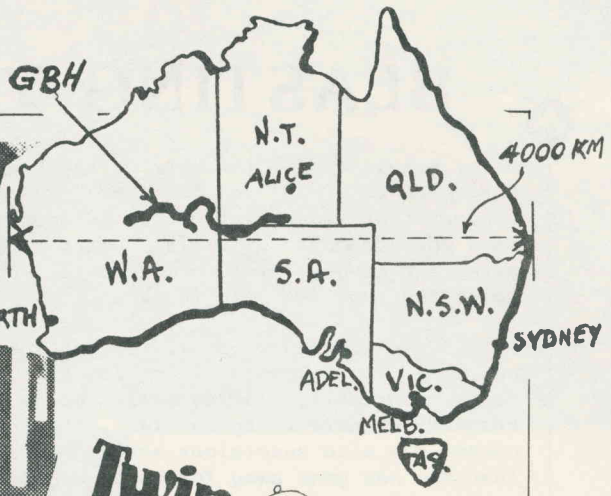
A storage battery can be charged only by direct current, and care must be taken to see that the battery to be charged is properly connected; that is, the positive battery terminal must be connected to the positive supply terminal, and likewise the negative battery terminal to the negative supply terminal.

In the few remaining areas where the mains supply is direct current, the charging apparatus can be very simple and inexpensive, since all that is required is sufficient resistance to bring the mains voltage down to just above that of the battery while allowing the passage of the required charging current.

More elaborate apparatus is necessary for battery charging from alternating-current mains—although it is cheaper to run than is the case with direct current. The mains supply has first to be transformed down to a voltage nearly that of the battery (this being done by means of a transformer, which works on the same principle as the induction coil). This low-voltage alternating supply must now be converted to direct current, and this is achieved by means of a rectifier. The latter device acts as a valve, allowing current to flow in one direction but preventing it from flowing in the other. In most home-charging sets, this is carried out by a metal rectifier, which consists of a number of metal plates stacked together. The valve effect in this case is due to a physical property of an oxide layer formed on the surface of the metal plates. This has been found to have a low electrical resistance to the flow of current from oxide to metal, but an exceedingly high resistance to current flowing in the opposite direction, with the result that the alternating-current supply applied to the rectifier is converted into a series of unidirectional current surges.

Source: The Motor Electrical Manual.
Temple Press Ltd. 1960.

RAID AUSTRALIA '88



Twin Topics Pot

The pace warms up, and preparations for the greatest Citroen event of recent times are proceeding. At the time of writing, it is expected that an advance survey party will have covered the track from Perth to the eastern states, and will have reported in at the Easter Citin at Canberra.

Meanwhile, via Jack Weaver, we have news that one of his kiwi mates, Rex Carkeek, has readied a pale blue Dyane wagon with full self-contained camping regalia for the trip. The vehicle was owned by a Dutchman who was touring the country, and Rex was able to purchase it after the trip.

We don't recall exactly where in NZ Rex comes from, but it could be Wikato or Whitomo or Whakatane or even from that notorious area in the dairy belt called Whykikamoocow! If that is so, then with the coming of this raffish band of 2CV fanatics, perhaps you should lock up not only your wife and daughters but your moo cows as well!

Have you organised to go yet? Full details from David Gries. You must register with:

Raid Australia
P.O. Box 604
Gosnells 6110 WA.

before July 1987. The $250 deposit covers the support truck and food in the desert section for each car.

W.G.

STOP PRESS

We've just had a report from Ron Westwood of W.A. Ron and six others from W.A. made the survey trip for Raid '88 from Perth to Canberra via the Gunbarrel Highway (GBH) and Alice Springs.

The party involved four vehicles (Dyane, Ds 21 sedan, Holden Rover, Holden Jackaroo). The Dyane went in front to ensure 2 CVs could take it and to radio back any warnings of problems coming up (!). The Dyane suffered just three bent rims and these were beaten out again. The DS suspension collapsed (old age ?) and was welded up in Alice Springs. All vehicles were linked up by VHF radio, and the route is regarded as quite OK at the right speed and with the right support. Speeds were from 30 to 80-90 kph. There had been no rain along the Gunbarrel since 1979, and heavy rain would be the only likely snag.

It is proposed to come down through the Flinders Ranges from Coober Pedy and then follow a route determined by the Victorian and NSW people on to Sydney. It is expected that Perth to Alice Springs will take seven days. A video has been made of the survey trip. Even non-"Dirk Shervo" types could go along as observers/support vehicles. Think about it. It will be the Citroen trip of a lifetime.

David Gries saw Robin Norton's Dyane at Canberra after the survey trip and was impressed at how little damage it suffered. It was prudently but not super prepared for the trip and David thinks any car in good roadworthy condition should have little trouble. Incidently, David has acquired limited stocks of the Raid '88 T-shirts and the cloth jacket badges.

Robin Norton (Raid '88, W.A.) can be contacted on (09) 459 2435.
CCOCA contacts are:David Gries, 274 Elgar Rd, Box Hill 3128, (03) 890 3266.
Roger Brundle, 88 Clarence St, Brunswick 3056, (03) 386 2023.

BLASTING YOUR BODY

After straightening the rear of the Light 15 body (see FD 10 (5) Jan/Feb 1987), Ron and I decided that sand-blasting was in order to remove the accumulated multiple coats of old paint and gunge, prior to more detailed tidying up of the body and painting it.

Firstly, we stripped off all the tar inside and out, and after a month of getting high on petrol fumes, and nearly blowing ourselves up with gas burners, we were ready to blast. The weekend chosen was also auspicious and appropriate in that Mum had gone away for those days!

Our first attempt was with a unit hired from Alltools (tools being the operative word), which their staff said would do the job easily. The sandblast set-up consisted of a 10 cubic foot per minute (10 cfm) compressor and a spray gun with an outlet of about 5 mm diameter. Of course this proved about as successful as leaving the shell down on the beach on a windy day!

The second attempt was with a 60 cfm unit from Lilydale Hire. This had a suction-feed gun which took the sand straight from a bucket. The bigger unit made more noise but was still too slow with too narrow a spread of sand.

The third attempt was with a 75 cfm compressor and feed hopper. This set-up made a hell of a lot of noise and went through about 3/4 tonne of sand but at least it was successful.

The medium-grade sand was found to be the best compromise between speed of removal versus excessive pitting and risk of deforming panels. Perhaps on the underside where heavy underseal was being removed and appearance is less critical, the coarse grade would be better overall. On the other hand, there is quite an amount of lead filling in the Traction body where panels join up etc, and the lead pits and exposes air pockets fairly readily. Perhaps the fine sand might be better in these areas, though care and a bit of later filling should overcome any problems caused by the medium sand.

We managed to blast the boot lid, guards and bonnet back to bare metal without damage, but we took the doors back only as far as the primer which we hand-sanded off later. Alternatively, the doors can be chemically stripped (for about $20-30 per panel for commercial rates or you can do it yourself with proprietary strippers) to avoid the risk of buckling.

We found the stripped Traction shell to be remarkably light, even with the rear suspension still on, and with three people (two at the back, one at the front), it was easy to pick the shell up and gently lay it on its side on some old foam padding to make it easier to blast the roof and floor panels. Attempting to blast the floor "right way up" simply caused the used sand to build up and obscure the work area. When on its side, it was also easier (by far!) to blast the underside and also up under the dash area and the upper areas in the boot, inner roof etc. Without the rear suspension on, two people could tip the shell. [The photo shows how light the shell is. But have our heroes developed an "un cheval" as a down-market competitor for the 2CV?].

We laid plastic sheeting all about to catch the spent sand for reuse. The collected sand was sieved to remove paint flakes and foreign debris [piece of fly-wire screening?] and while this achieved some savings, it was found that after the second use, the sand had lost much of its abrasive character.

One problem we found was that the sand was sensitive to moisture in the way it flowed. If it picked up moisture, it wouldn't flow properly or carry in the air stream. The moisture trap on the compressor wasn't completely effective and to keep the sand going, it was necessary to keep banging the feed pipe carrying the air/sand so that it didn't foul up.

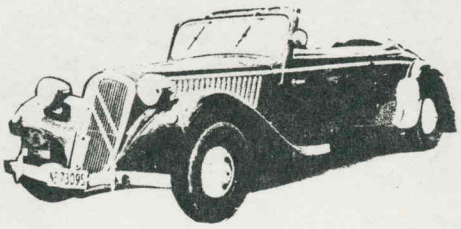
The sand cost us $60 (about 12 x 40 kg bags). The 75 cfm sand blaster and hopper and an 8 cfm spray gun (to apply the primer) cost $218 for the day. Do it yourself places charge $30 per 1/4 hour.

Note: During the blasting, it is essential that proper eye and lung protection be used.

We feel it most important to completely remove the old "tar" completely, since we found situations where the tar had shrunk, cracked, and let rust develop under it. To remove the last traces of tar and oil etc before priming, the body was thoroughly swabbed down with Prepsol [My understanding is that Prepsol is actually no more exotic than common alcohol or methylated spirits. This may prove cheaper than the proprietary product - Ed.].

We etch-primed the clean metal the same day to avoid development of rust again, using zinc chromate from Wattyl. It was a lot of trouble for the saving of money. If we have to do anything similar again, we'll have to find another spot because Mum won't let us turn the place into a "beach" again!

Hayden Chapman
Ron Lawrence.



LETTERS

Monsieur BILL GRAHAM
18 Gareth Drive
East Burwood
V I C T O R I A 3151
Australie

Entre-Deux-Rivières
Tél. 038 / 61.24.31

18 March 1987.

To my far-off friend Bill,

I had much pleasure in receiving your calendar. The several photos representing the diverse regions of your so beautiful country give us an idea of the grandeur and it should be superb.
If you know of a well-organised airline company for a free flight(!!) from Switzerland to Australia and return, don't forget to tell me, we will come straight away, our bags are ready.

For the sorties in 1987: Only one of importance - Loreley in Germany in September (International Citroen Car Clubs Rally).

Model matters
As a result of a list established by several tractionists who are toy enthusiasts, we have checked off between French and Swiss specialists, 540 models in all scales and all materials. To complete my collection, I am missing about 40 models which are very difficult to find, since they are toys from the period between 1936 and 1948.

I will sign and wish you enjoyment in your country so warm. For us, winter inflicts cold of between -8 to 0 degrees.

Best wishes,

Rene.

---

36 Main Street,
Dyke, near Bourne
South Lincolnshire,
PE10 0AF, England.
December 8 1986.

Dear Bill,

A very quick reply to say thanks for the latest magazine, and also to get Christmas Wishes in just in time to reach you before the 25th.

I see you are mentioning the 7th International event to be held in Germany next year [1987]. Let me know if anyone is interested in coming over. As you well know, it is a great help if someone can give assistance or advice in a strange country.

My latest news at present is that drive shafts are now being manufactured. They will accept the modern joint to give a better turning circle to the steering. It had to come really - after 30 years of recycling, metal fatigue, tapers wearing etc etc. At present, I haven't a price to pass on but will keep you informed.

Another tit-bit - do you think anyone has enough cash or thoughts of owning a ROADSTER - albeit a replica, but perfect in detail and in new steel? I enclose a photograph of the first prototype under construction. The body jigs have been constructed from a 1939 roadster which was taken apart very carefully and measured. In many respects, it will be better made than the original because of the care taken in making each one. Your thoughts and comments would be appreciated.

One would have to know about the importing of a body shell. Of course, a prospective buyer would have to have a donor car for the front and rear axles, brakes etc. Comments from your club members may decide whether to proceed with this idea!! There are so many ifs and buts, and probably ones I haven't thought of. I have written to Olivier de Serres and I'm awaiting his thoughts on it.
I also expect that by now, you've read the first part of "Run to the South" in Floating Power [Yes, and the second]. At present, I'm getting copy for the reprint in "The Citroenian" and also going over an article I wrote six years ago on "How to restore a Traction" for "Floating Power". Other news is that winter is getting to be much nearer, so once Christmas is over, we'll be in for it. Life is much quieter now and gradually I'm getting my own work done.

I hope all is well with you and your family - any how, enjoy Xmas even if we do win the cricket. Best wishes to John, David etc and all. Happy Christmas,

Edna and Fred.

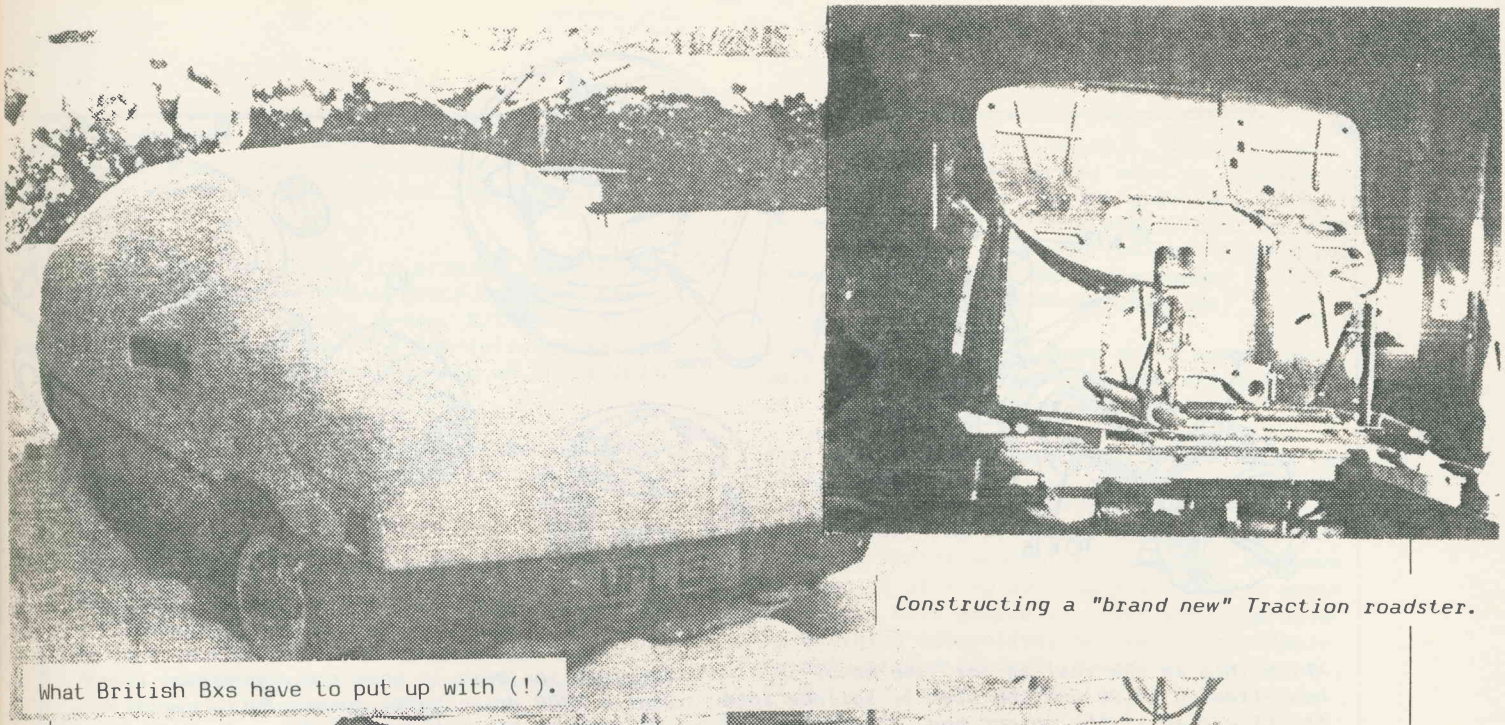
[Many thanks for the greetings and the news. Both are greatly appreciated].

March 24 1987.

Dear Bill, Barbara and family,

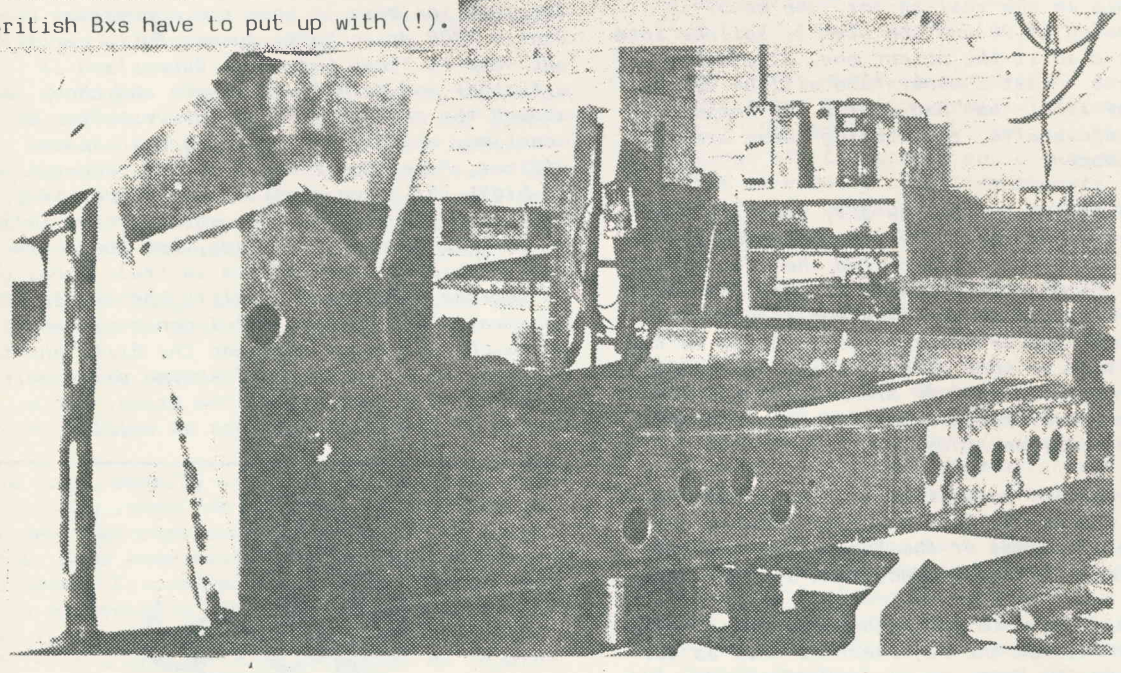
Many thanks for sending the mags. on and the calendar with the photo of the coupe ENE 442.

I feel I owe you an apology for such a late reply. Christmas seems such a long time ago now but I hope you had a great time, and saw the old year out and 1987 in? On Christmas Day it was really beautiful, it must have almost compared with yours. The sun was streaming in through the lounge whilst we had our turkey with all the trimmings, but oh how that changed on January 7th no doubt you had TV pictures.



Constructing a "brand new" Traction roadster.

What British Bxs have to put up with (!).



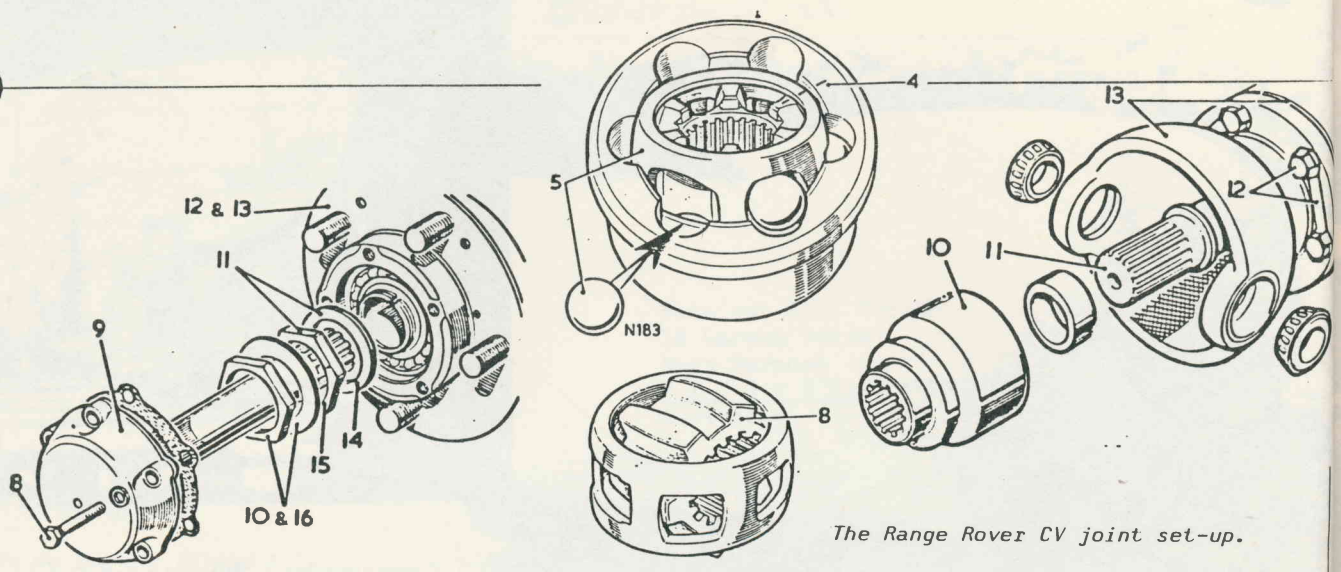
We were snowed in for three days and we had about two feet of snow. The BX was caught out and although I tried to move it, it was too much. As fast as I tried to clear the snow, more came down. So I left it and it didn't come to any harm. I turned the key once it was possible to think about moving it again and hey presto, she started.

Some parts of the country suffered worse than we did. Although we didn't get out, our larder was well stocked, almost enough to cope with a siege! Edna learnt that all through the war years even the birds didn't go short although the cold at -15° was just too much for some. Still that's all past now and spring is well on its way.

On the Citroen front, we had our Dinner Dance (CCC) at Bournemouth with the usual sell-out. It's the one time I don't worry how much of the "hard stuff" I drink. Its always a success. Paul Buckett of Citroen Cars briefs us on the progress of the company. It is doing very well with sales of both the BX and 2CV. The hope is that the AX (due in England this year) will have a great impact on the small car market.

I was looking for a three-part article that I wrote on the restoration of a Light 15 some years ago in "The Citroenian" when I came across an article on a Light 15 that was raced by Don Wright in Australia many years ago - ever heard about it? I wonder if it still exists. It was capable of 100+ mph, a very much worked on engine, as much as was possible. There is so much copy in those old magazines. [Yes, we have heard of it and it was written up in Front Drive some years ago. We also supplied photos to Olivier de Serres who used them in his "Big Book". Believe the car is back with Don Wright for rebuilding. An equally or more potent car but of rear-drive layout was built by Jack Weaver (also in the "Big Book"), and it too is awaiting a rebuild after Jack had a bad stack in it at the Geelong Speed Trials a couple of years ago].

Had a letter from Olivier de Serres who says there is much interest in the "Roadster" being made by Mick Peacock, and also in the drive shafts - brand new, using a Range Rover CV joint. A pair have been fitted to a Commerciale which is used every day. The owner is known to drive his cars hard, so this will "prove" them and I



The Range Rover CV joint set-up.

think this is the real answer. The metal is heat-treated EN 24 and the stub is splined into the CV and so is the output end. Altogether a superb job - cost I understand will be in the region of £155 - not bad really. It competes with modern shafts, remembering these are not mass-produced.

We had a TV program on the 2CV, starting with the first prototypes. I've included details of whom to write to - it's called the`"Tin Snail", Equinox, PO Box 4000, London W3 6XJ. They will send information about the video if you are interested. Fabian Sabates was involved in the story. [Yes, we know of Fabian and his extensive Citroen writings. We are helping him with Aussie material for his next issue of the Almanach du Citroenist].

Ever thought of contacting Citroen Slough for film or videos? We have the ones showing the Kegresse crossings of the Sahara and the ones of the Paris-Peking journey back in the 1920s.

1987 again looks to be another busy year, with more meetings on the Continent as well as our own events. No doubt the launch of the AX will be the occasion for some dealers to try to have a Traction in their showrooms. They always catch the public eye. Due to the success of the BX, the number of dealers is growing.

Well Bill, that's about all the up-to-the-minute news from me. I hope all is well at your end? Glad to know the Monte Carlo story made good reading - am still looking forward to other versions of it from France etc.

Give my regards to Barbara and your lads, and the lads I know in the club. I see David Gries has hands full with the 1988 event [Fred, we think he is going to have his hands full for another reason in 1987, but we'll leave you in suspence on that point]. Wish him luck for me.

Cheers for now --- Edna and Fred.

[Many thanks for your news, Fred. There certainly are some exciting developments. By the time this is published, Peter Hore and his wife Hazel from CCOCA should have called in on you. Peter is very interested in both projects and has been looking into what might be involved in getting a new "Roadster" into the country. The drive shafts sound a very thorough job. One reaction here is that the conversion using Austin 1800 driveshafts successfully carried out here by Steph Laguna in Queensland is a further and relatively simple and cheap way around the problem of aging driveshafts. In the meantime, members are reminded that Spares Officer, Peter Boyle has a set of reconditioned Light 15/Legere shafts from France. Snap them up while you can! No, sorry, Peter tells me they've been sold already, but there are very promising developments in train locally to further refine and simplify the Austin 1800 conversion for shafts. All I can recommend is to watch this space. Between the Brits and the Aussies, we'll solve the Traction driveshaft problems, and courtesy of the Brits, get a supply of Traction roadsters as well!].

TOR-SHAUN BARR CHALLENGES DIRK SHERVO

Dear Editor,

Who is this David Gries character?
Is he a cohort of Dirk Shervo?
Or is he intent on undermining the supreme glory of the Traction Avant in the same way as that Shervo villain?
Good Grief! Include D-series cars in CCOCA indeed!! Never! Never!
Her I am, Tor Shaun Barr no less, back dear Traction reader to fight yet another campaign for you it seems.

Several years ago, you recall of course, I devoted my life to the cause of freeing Australia from that insipid life-form, the 2CV, Dyane,

Ami, AK vans. The ring-leaders of the conspiracy at that time were a cunning villain called Dirk Shervo and his twin-pot steed, Brute the Ami 8.

My untiring and unselfish efforts finally paid dividends for Shervo and Brute have not been seen or heard from for years. Without a strong leadership, the remaining two cylinder brigade members have disintegrated into an undisciplined rabble.

The glorious Traction had, thanks to my efforts, been restored unchallenged to the top of the automotive tree.

Now, this has happened!!
D-series cars!
What does the "D" stand for anyway - disaster, dull, dreadful, demonesque??
We must rid the world of this threat now!
I will commence another crusade on your behalf and do just that immediately.

Oops, I forgot. The CW/P in my trusty Traction has thrown in the towel, along with the generator and the driveshafts - maybe I'd better take my wife's CX on the crusade instead - Oh hell! Let's forget the whole idea. I want to stay in retirement and besides, the red fluid cars are only re-bodied Tractions anyway.

Let them in I say, but keep an eye open for Dirk Shervo, he might try to buy one!

Your wondrous hero,

Tor-Shaun Barr.

[The true identity of Tor-Shaun Barr has never been established. He is an occasional and infrequent correspondant in the pages of Front Drive. Some know him by the anglicised form of his Nordic/Celtic/Anglo name i.e. Torsion Bar. He is obviously a fanatical devotee of the Citroen Traction Avant motor car, and will have little if anything to do with what he regards as lesser machinery. His gravest enemy is the hapless Dirk Shervo who it seems favours Citroens of the twin-pot variety. Perhaps he can afford no better, this seemingly placid Dirk.

No images of Tor-Shaun Barr are known to exist, but recently a rendition of what is thought to be Dirk Shervo was published. Perhaps you know who Tor-Shaun Barr is and what he looks like. Do let us know.

Ed.].

Dear Bill,

Concern was expressed at the AGM about the lack of numbers present at meetings and functions held by CCOCA throughout the year, and what could be done to improve the situation.

The lack of response from members to the organised functions is difficult to analyse as there is an excellent variety of events throughout the year. The general meetings and open nights are, on the other hand, easy.

Quite simply, they are DEAD BORING.

The AGM was a classic example. About a dozen or so people turned up for what is supposed to be the "big" meeting of the year. According to my membership list, there about 70 or so Melbourne members in the club (not counting joint members which would boost the number to 100 or so), so where was everybody else?

They were probably at home doing something more exciting like watching the paint fade on the wall or cleaning the oven!

What ever happened to the guest speakers, technical demonstrations and movies? Admittedly the first two can be difficult to arrange and are embarrassing if no-one turns up; but the range of videos and movies is almost endless. So what is if they are not specifically about Citroens; most people in CCOCA are interested in anything automotive. Movies are available on subjects from how oil is made to the history of Ford in motor racing.

Every second month is supposed to be an "open night" where nothing special is arranged, and that's OK, but how about getting the general meetings off the ground again - even to the extent of keeping committee reports to the bare minimum of facts and no waffle and maybe scrapping open nights altogether.

In the past, we have had demonstrations by professionals on auto painting, trimming, welding, batteries, spark plugs, polishes, Nu-Lon products, oils and many others. Since these demonstrations, the membership has changed greatly, and none of the new members have had the benefit of these demos. In other words, how about some repeat demonstrations - I for one would like to see them all again anyway.

What is vitally important though is to arrange the speakers/demonstrators well in advance so that a Big Deal can be made in Front Drive etc about the time, date and subject matter to be covered at the meeting. A vague reference to a "guest speaker" is not good enough!

To digress for a moment, remember that the focal point of CCOCA is the committee - if they show no enthusiasm for their jobs and reek with disillusionment, the everyone else sitting in the room at the same time will suffer the same symptoms. Again, the classic example was the AGM - it should have been put in a bottle and sold as an instant cure for insomniacs. Come on, committee- show some excitement. I know it is difficult when speaking to only a dozen or so people, but give it a go anyway. The results may surprise a lot of people on both sides of the table!

It was pointed out at the AGM that with the exception of a couple of people, all those present were long-standing members. I have been a member of CCOCA since its inception and used to know nearly everyone on the membership list - if not very well, at least I'd seen them at one time or another. Not so any more. I would guess that about 85% of new members who have joined in the last few years have nver been sighted by another member at an event or meeting. Why? Buggered if I know, buggered if anyone knows! Come on guys (and gals), turn up to something and prove that you are not

simply a figment of the Secretary's fertile imagination when he was typing up the membership list. Our new meeting hall holds about 100 people and if all new members came along, we could just about fill it.
The result of the above would be a chain reaction:- the committee would become enthusiastic, the members would be enthused, more members would come along, the enthusiasm would grow, speakers would be invited, the committee would become more enthused and then....Aw, shut up, it's all a dream - or is it??

Originally, I wasn't going to sign this letter but I've changed my mind. Maybe if a few more people spoke and made some suggestions or offered help in any way, CCOCA would once again become what it deserves to be - THE Citroen club in Australia.

DO IT NOW➡ OR I may have to go back to watching the paint fade!

John Couche.

PAST RALLIES

1986 CCOCA END-OF-YEAR BREAK-UP

The annual CCOCA break-up was again held at Lou Molina's Anchor and Hope Pub in Richmond. Again, the gathering was characterised by the quality rather than the quantity of the members present.

It was a warmish night and I arrived early. None of the CCOCA people was in sight, and I had a quiet drink and looked around Lou's automobilia. Still no familiar faces.

Ah well - how about a quiet stroll over to the river? Very pleasant. I had never walked over the river at this point before. Even a fisherman or two. Casually back to the pub.

Aha, several bodies there, claiming they'd been there for ages!

Then followed a few more drinks and a pleasant and enjoyable meal. Quiet conversation, not a little of which covered Citroen topics.

I had to go off to another engagement at about 9 a.m. The rest looked settled in.

Those attending were:

Bryan Grant, Robyn Couche, Dennis & Avril Walton, Robin & Sue Smith, Ted & Helen Cross, David & Janet Gries, Peter Hore, Bill Graham.

There is no question -- Lou's is a pleasant spot for an automotive gathering. However, it is planned that for 1987, the end-of-year wind-up will be out-of-doors for a change, combined with the club concours in Westerfolds Park on November 29 (Sunday). Remembering how enjoyable the recent presentation BBQ was, be sure to come to the break-up.

W.G.

ANNUAL BARBECUE AND PRIZE-GIVING

On Sunday March 14, the Annual CCOCA Barbecue and Prize-giving was held at Peter and Ann Simmenauer's house and proved to be a great success.

For once, the right combination of date, time and weather brought CCOCA members out of the woodwork by the busload. All up, about 50 or so adult members arrived together with a large number of kids.

A few new members turned up for their first event with CCOCA and it was most pleasing to see them enjoying themselves. This year, the BBQ was a professionally catered affair and for a modest $10 for adults and $2 for kids, wine, fruit juice and the tastiest of BBQ treats (kebabs, sauteed grilled sausages etc) and deserts were provided. Definitely finger-lickin' good, with adequate lubricant for thoroughly enjoyable and uninhibited conversation.

A good line-up of Tractions temporarily increased the property values in Rubens Grove by their presence, and included the following cars:

Alan & Marie Thomas	Big 15
Ted & Helen Cross	Big 6
Robin & Sue Smith	Light 15
Alan & Sandi Baker	Light 15
Peter & Ann Simmenauer	Big 15
Bryan Grant	Light 15
John Couche	11 BL

Two-cylinder cars were conspicuous by their non-appearance, although a few twin-pot owners did attend, sans 2CVs. The closest thing to a 2 CV would have been Simmenauer's Renault 4s.

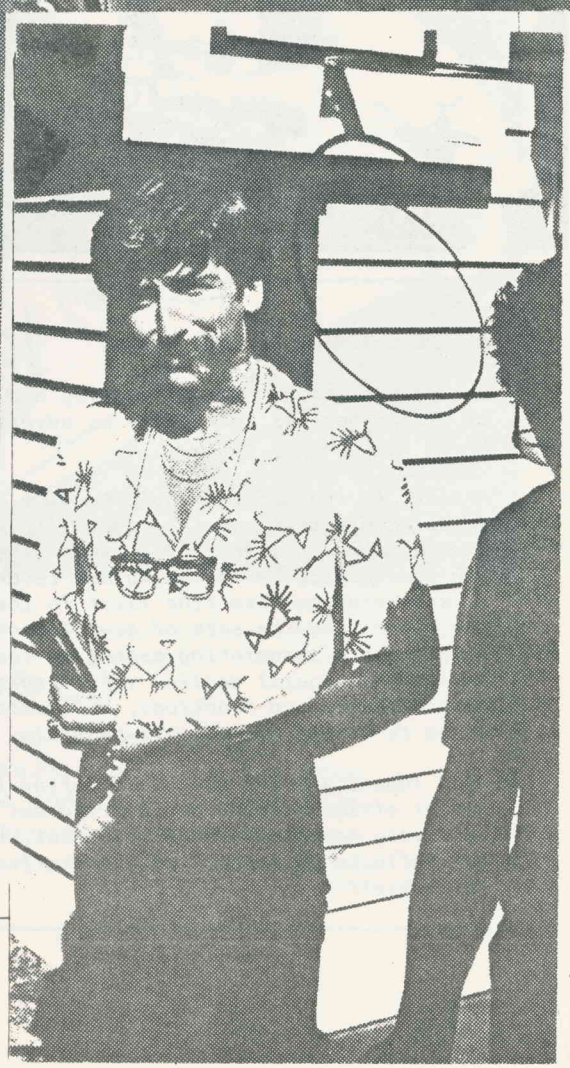
The BBQ was in fact an international event this year due to the presence of a family of English Citroen enthusiasts who happened to be in the area and who dropped in. They were John and Marina Oxford and their two daughters.

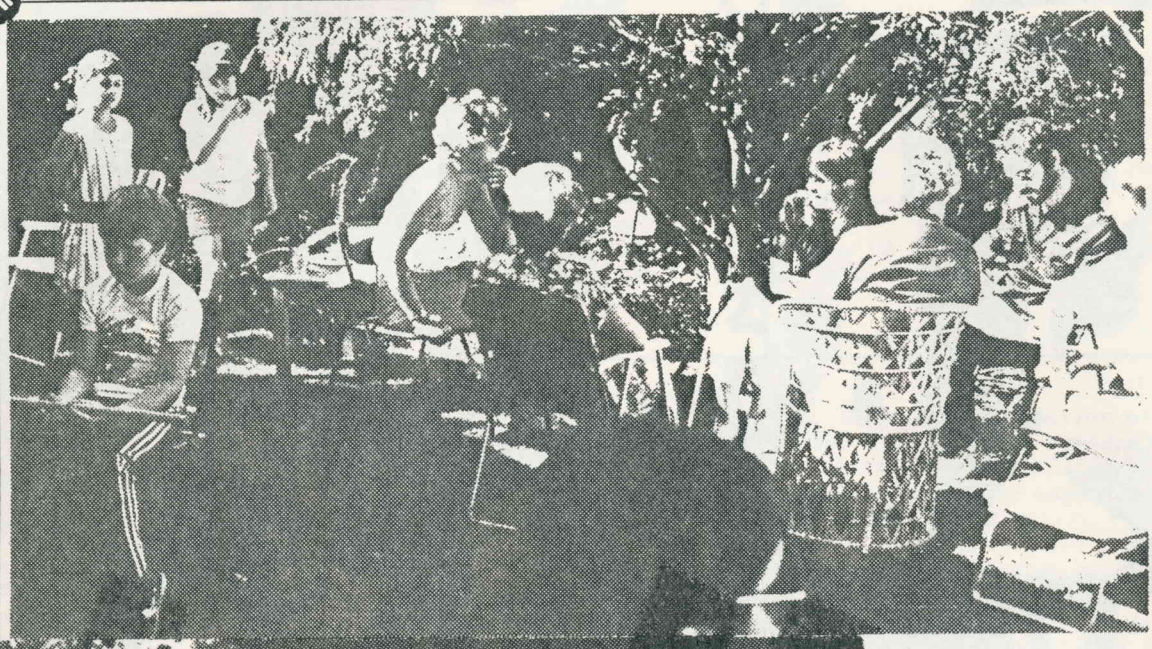
Prizes were awarded in the regular categories, and the winners were as below:

Club person of the year	Robyn Couche
Outright concours winner	Bryan Grant
2 CV concours winner	Leigh Miles
Arthur Clarke trophy for the most improved vehicle	Leigh Miles
Observation Run winners	Leigh Miles/ David Gries.

Congratulations to those people.
Hopefully the excellent turnup of members for this event will be a sign of a good year for CCOCA. As the Victorian Tourist Authority says; "All it needs is you".

John Couche.





Previous page (Clockwise from top left):

Arthur Clarke Trophy
The trophies
Robyn Couche - Club Person
Leigh Miles - 2CV Concours (fallen angel?)
Club Person Trophy
Bryan Grant - Presidential bon mots from the Outright Concours winner

This page:

Soaking it up
Bryan presents the Arthur Clarke Trophy to Leigh.

ANNUAL GENERAL MEETING

The club's annual general meeting and election of office bearers took place as advertised on March 19.

Reports to the meeting indicated the continuing satisfactory state of the club, with a record club membership (over 130), finances again having good prospects following our recent increase in subscription rate (the first in the life of the club!) and the sale of significant spares stock. One disappointing aspect in recent times has been a general decline in attendance at club meetings and functions, and members are urged to attend when at all possible.

Alan Thomas assumed the Chair during the election of office bearers and carried out the role in a very capable fashion - in fact, he had the definite appearance of being officer material himself!

Officers elected were as follows:

President: Bryan Grant
Secretary: Robyn Couche
Treasurer: Ted Cross
Spare parts: Peter Boyle
Activities: Robin Smith (also Club Shop)
Editor: Bill Graham
Librarian: David Giddings.
Mark McKibbin is to assist the secretary, particularly with respect to membership matters.

It is worth noting that this is the first time in many years when the committee does not include Peter Simmenauer. Having been Secretary, Librarian, Editor, Peter is having a well-earned break, presumably to give more time to matters dear to his heart. It is a pleasure to record here the debt which the club owes Peter for his dedication and effectiveness in the club offices above.

W.G.

1987 EUROPEAN MOTORING SHOW

29th March saw the weather deal a cruel blow to the organisers of this event - the forecast was so incredibly bleak that it detered all but the most dedicated of European car owners and fanciers from attending.
As this was the first major event for car club members for the year, it was hoped that CCOCA would field a strong representation of the marque. It was most pleasing to see those few who did brave the elements and attend. Rain drops on well polished paint work can make for some creative mood photograhy!
It was decided by the Committee prior to the event that an award would be made for the 'Best Presented Vehicle' at the event. The trophy will be presented at the next club meeting. Bryan Grant received one of the five merit awards presented on the day for KSE - another trophy to add to that ever expanding collection which is threatening the future of Joan's glass ware display on the mantelpiece.
Members present;
Bryan Grant, Alan and Marie Thomas, Peter Boyle, Leigh Mason, Peter Simmenauer, Ted Cross, Russell Wade, and Robbie Couche.
SEE YOU AT THE SHOW IN 1988!

COMING RALLIES

SPECIAL NOTICE: AS WELL AS THE EVENTS LISTED IN THE EXISTING CLUB CALENDAR OF EVENTS, WE ARE PLANNING TO JAZZ UP THE GENERAL MEETINGS AND OPEN NIGHTS WITH VIDEOS, FILMS, TECHNICAL SPEAKERS AND "SPECIAL ACTIVITIES".

IN THE LATTER CATEGORY, GET YOUR PHOTOS TOGETHER FOR THE COMPETITION ON JULY 16.

AND AS SOMETHING DIFFERENT, ROBYN COUCHE IS ORGANISING AN "ARMCHAIR" RALLY FOR THE MEETING OF AUGUST 20. JUST BRING A MELWAYS. YOUR CAR WON'T GET WET!!

YOU WILL "TAKE ON BOARD" THE DETAILS OF RAID '88 AND THE 7th ICCCR IN SEPT, BUT DON'T FORGET AUSTRACTION AT BEECHWORTH ON JUNE 5-8. ROBIN SMITH HAS BEEN CHECKING THE VENUE AND IT IS SOUNDING GREAT! OF COURSE IF A GREAT CITROEN GET TOGETHER IN BEAUTIFUL SCENERY, AND A TASTY LUNCH AT LUCIEN CHABAUD'S WINERY DON'T GRAB YOU, THEN DON'T COME. IF THEY DO, THEN GET ONTO ROBIN SMITH AND BUST A GUT TO BE THERE.

NEW MEMBERS/ADDRESSES

A warm welcome is extended to any new members who have joined the club. Normally these people are listed by address, but this has been held over pending the imminent production of a complete updated list of all members and current addresses. We are hoping Mark Mc Kibbin will be able to hold and update the list on computer so as to facilitate future records.

CLUB SHOP

CLUB SHOP:

Robin Smith
411 Glenhuntly Rd
Elsternwick 3185
(03) 527 5429.

Windcheaters and T-Shirts

Supply your own windcheater or T-shirt and we will print your chosen design for $2 each, or order a pre-printed T-shirt from stock for $6. Fiftieth anniversary T-shirts at $6.50.
PLEASE SPECIFY SIZE, COLOUR, AND DESIGN WHEN ORDERING.

Windscreen stickers, club emblem, $1.50.

Cloth badges, for jacket etc, club emblem in blue on white oval background, $1.75.

Lubrication charts, high quality reprint of original Traction "oil & grease" chart, $1.

Metal grill badges, superb quality cast metal with blue enamel and sealed in extra clear acrylic resin, shown here appr. natural size, $12.

Posters, full colour, Light 15, $2.50.

Puzzle cards, 2CV, $5.

New!!

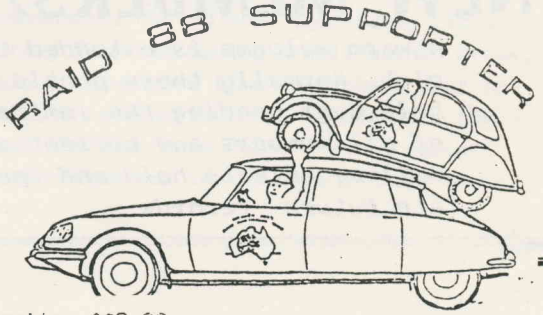
Lapel badges, Citroen script, gold, $4.50.

Front Drive back issues, originals or good quality photocopy, $1.

ALL PRICES PLUS POSTAGE AND PACKING.

$6 EACH PLUS POSTAGE AND PACKING 50c
OVERSEAS $1-50
P&P FREE IF ORDERED WITH A T-SHIRT.

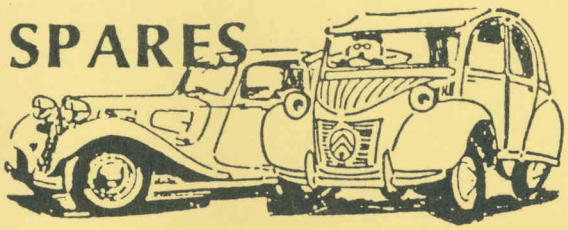
Available from David Gries or
Raid Australia. Addresses - Page 11.



BACK LOGO

T-SHIRTS cost $10.00 each + $1.00 postage within Australia, A$2.00 overseas. Bulk orders will be posted at cost price.

SPARES



SPARE PARTS OFFICER:

Peter Boyle
35 Newman St
Thornbury 3071.
Phone: (03) 480 3560.

HOURS:

10am - 5.30pm
Monday - Saturday

PLEASE NOTE THE NEW HOURS FOLKS. Please, oh, please try to restrict your calls to these hours. Remember, the name's not Arkwright and we're not open all hours.

NOTE: ORDER FORMS TAKE PRECEDENCE OVER PHONE CALLS.

PARTS LIST (TRACTIONS) as at 1/9/86.

Big boot top rubber		$12.80
Big boot bottom rubber		11
Rubber door seal		25.60
Scuttle vent rubber		25
Pedal rubber		5.50
Rubber grommet petrol filler (2 sizes)		7.50
Rear bumper grommet		12.50
Rubber V-blocks for doors (8)		34.50
Bonnet rubbers		0.30
Big boot paint protectors (under handles & lights)		25
As above (small boot)		25
Windscreen rubber - alum frame		15.50
Steering rack boots (pair)		26
Gearbox gasket set		8
Complete gasket set motor	L15/11BL	76.44
Sump set	"/"	10.20
VRS set	"/"	50
Complete gasket set motor	Big 6	70
Exhaust muffler incl. tail pipe	L15	95
"	B15	105
"	B6	140
Rubber exhaust hanger		2
Gearbox output shaft seal		8.50
Front hub outer seal		6
" inner "		6
Rear hub seal		6
Door lock set French big boot		22
" Small "		22
Radiator hose upper/lower		13
Fan belt		12.25
Door lock springs		3
Piston & liner set		360
Liner seal		7.50
Exhaust valve		15
Inlet valve		15
Outer cross (driveshaft)		43.80
Water pump shaft & bush		18
Water distributor tube (head)		20
Tie rod ball joint kit		65
Upper/lower ball joint boot (leather)		12
Wheel cylinder rear 4-cyl (1" diam)		40.70
Brake hose front/rear	Slough	28
" rear	French	22
Brake master cyl kit		9.50
Shocker mount rubber		1
Throttle shaft 32 PBIC	0.5 mm O/S	20
Hub & bearing puller		105
Lower ball joint puller		65
Bonnet strip clamp (internal)		1.50

DYANE

Brake hose	22
Seat rubber	1
Wiper blades pair	10

Early 2CV parts, all new unless indicated, LIMITED SYOCKS, NEVER TO BE REPEATED OFFER!!

Clutch linings	$15
Exhaust valves	$9
Rear engine mount	$9
Tie rod covers (metal)	$3
Suspension arm seals	$8.50
Engine push rods	$2.50
Suspension bumper rubbers	$4
Starter motor (reco)	$40
Crown wheel & pinion	$200
Front brake drum	$15
Rear brake drum	$15
Starter Bendix unit	$10
Windscreen wiper speedo worm & drive	$8
Front over-riders	$5
Head gaskets 375 cc	$2
Lock & key set - 2 barrels, 2 keys	$15
Oil pump bodies, bronze, no gears	$10
Valve rocker arm & shaft	$15
Valve springs	$1
Steering pinion & bearings	$15
Brake bleed nipples & caps	$1.50
Dip stick & holder rubber	$1.50
Door catch, righthand front	$6
Ditto LHF	$6
Accelerator pedals	$1

STOP PRESS

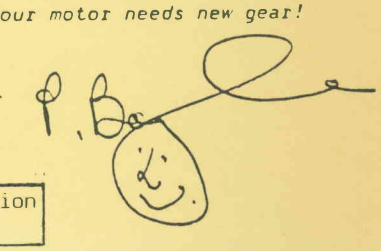
Wanted, wanted: Your old silentblocs for reconditioning. The Spares Department needs any amount, be it one or 10, we will be pleased to purchase them off you, or if you'd like to donate them, we'll have no hesitation in accepting your offer!

Peter Boyle
35 Newman St
Thornbury 3071
(03) 480 3560.

By the way, I just can't justify the time to chase up second-hand parts, so if you need them, please advertise in the classifieds in the magazine.

Don't forget the firm's motto:

Never fear!
Luigi's here,
When your motor needs new gear!



Special, never-to-be-repeated offer: One set only, Light 15 driveshafts, fully reconditioned in France. At cost, last chance. $820. Contact Peter Boyle. Sold

Super special: New fabricated replacement ends for rear of Traction front mudguards. L11/B15/B6. LHS & RHS. $55 each.