FRONT DRIVE

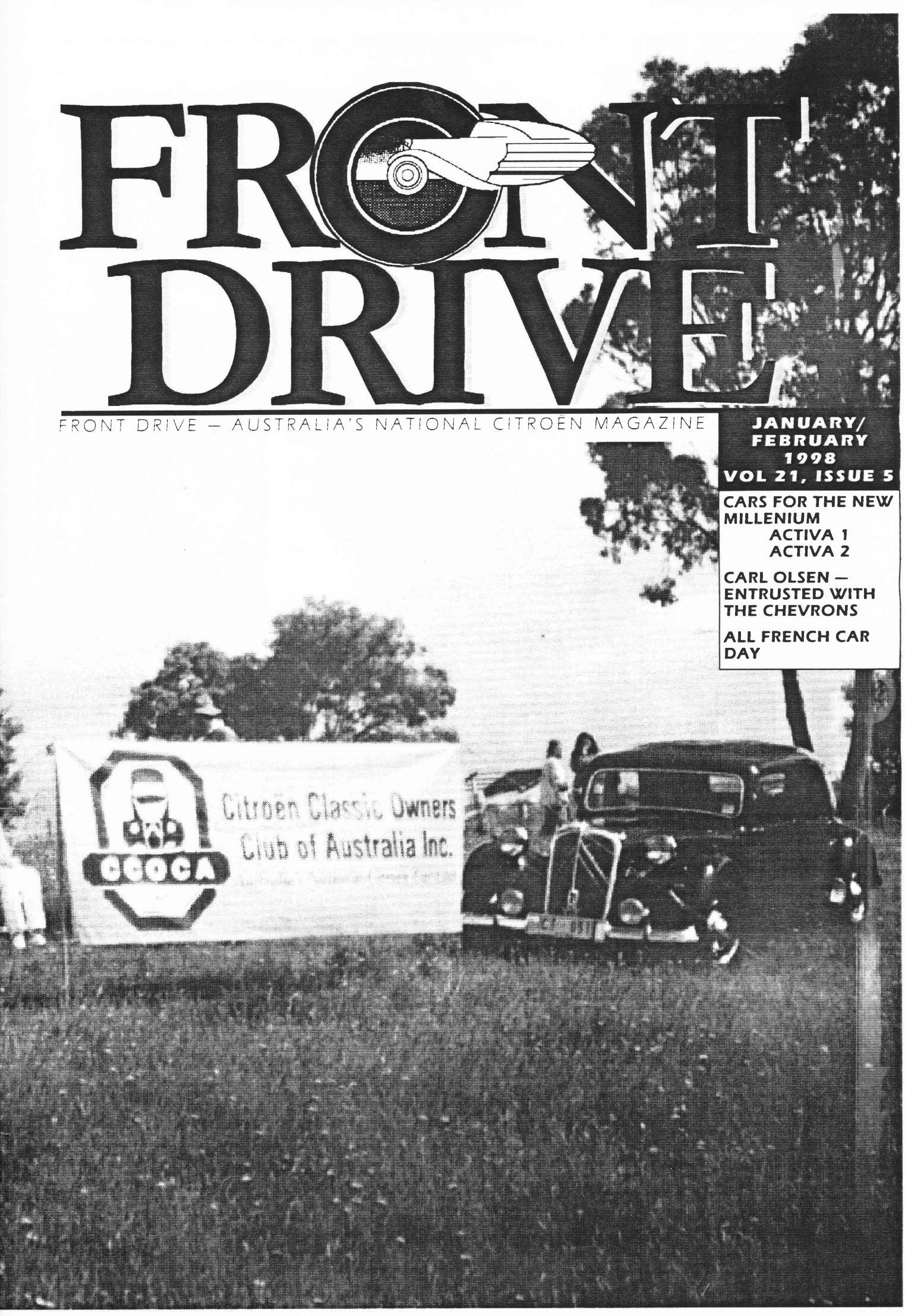
FRONT DRIVE — AUSTRALIA'S NATIONAL CITROËN MAGAZINE

JANUARY/
FEBRUARY
1998
VOL 21, ISSUE 5

CARS FOR THE NEW MILLENIUM
ACTIVA 1
ACTIVA 2

CARL OLSEN — ENTRUSTED WITH THE CHEVRONS

ALL FRENCH CAR DAY



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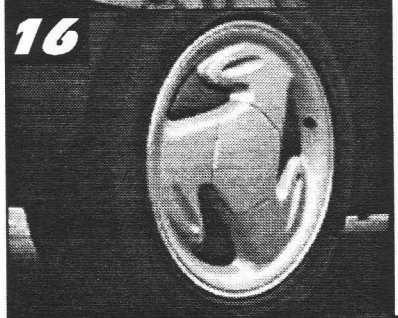

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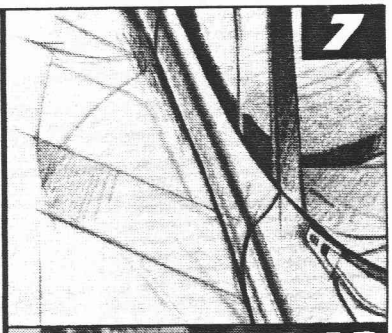

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CCOCA MEMBERSHIP

Annual Membership	$30
Overseas Postage Add	$9

CCOCA memberships are due on the 25th of March, each year and run until the following March.

CCOCA MEETINGS

Every fourth Wednesday of the month, except December.
Venue:- Canterbury Sports Ground Pavilion, cnr Chatham and Guildford Roads, Canterbury, Victoria.
Melway's Ref 46 F10.

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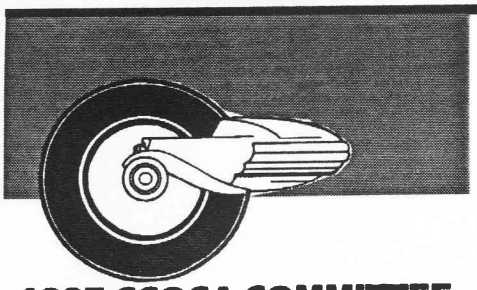
NANCE CLARK	1984
JACK WEAVER	1991



from the desk

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Welcome to 1998; a year that I am certain we all hope will bring great Citroëning joy to us all. Of course, it could well bring with it Citroëning disasters. For myself, 1998 will see both my beloved Dyane Weekend 6 and the Visa GT Cabriolet back on the road. The necessary parts arrived in Perth late in November and they were promptly trucked to Bairnsdale, for the tender ministrations of Mel Carey.

This issue of Front Drive concentrates on that unique item — French style. Not only how Citroën have captured the essence of that style but how it is seen by designers, themselves. So there is material on Citroën design exercises from the 1980s, including the Activa and an interview with the Citroën chief of design from that period, Carl Olsen.

Past Events include a photo essay from the Melbourne 'All French Car Day' and the CCOCA Christmas Event held at Rob Roy Hill Climb.

In the last issue of Front Drive the Committee was able to announce the arrival of our new Activities Officer — Jay Liebowitz. Jay has put a few words about himself onto the a-tractions page. Jay is full of good ideas for events for CCOCA and will be more than pleased to work with members to create the events you want. Be certain to check a-tractions as, in consultation with Jay, a number of previously advised event dates have been altered and additional events have been added to the listing.

You will also note that the planning for Austraction is underway. Our 'man on the ground', Andrew Begelhole, assisted by Rolf Breyer in Adelaide and myself have confirmed Mount Gambier as the destination this June. This is an area rich in history, scenery, food, the Blue Lakes...oh, yes apparently they grow a little red wine in the area too. So, start planning now, to be sure you are there. Booking forms will be with the next issue of Front Drive.

Last but not least another reminder about Easter in Busselton, WA. It is not that far off and I understand from Stuart Pekin, our Western Australian Activities Co-ordinator, that bookings are going very well. So, BE THERE! In case you have lost the information from ACE in WA another copy has been included with this issue.

Keep Citroëning,
Leigh F Miles, Editor

prez sez

Well here we go again at the start of another year! It really is very scary — looking at what has to be done in the next 12 months.

The Club will be very active again this year and it is encouraging for the Committee to see the swelling of enthusiasm throughout the membership. Many new friendships have been forged through the Club in 1997 and we are all looking forward to enjoying each others' company in 1998.

It is good to see a number of 'new' Tractions appearing with such alarming regularity. Will the torrent ever slow? [I hope not.] Many thanks must go to Traction Restorations Australasia for helping with some of these Tractions. I know the Hoolers [NSW] are delighted to have their 'beast' back in service and Jean-Pierre Jardel [Vic] has caught the Traction bug in a serious way. We hope to see him tootling around in '98. It was also great to see the Bevan's Big 15 [Vic] at the All French Car Day, in Melbourne. Ted Cross also got his Vietnamese 11 on the road in 1997 [just!]. So, as I said, it was a big year for Tractions.

1998 will be a big year for Citroën in Australia too. The last issue of 'Wheels' noted the arrival of the new XM, with its improved V6 motor; the Xsara will appear this year and the V6 Xantia range, revamped to include the V6 will also arrive — move over SM. A little bird also told me that the 2.1 Turbo Diesel Estate will be seen on Australian roads.

From the Fitzgerald Family — Zac Xantia, Hercu Xantia, Gisella GSA, Rosy Big 6 and Moriarty Jnr 2CV Van, and of course myself, have a fantastic and safe 1998 and I look forward to seeing each and every one of you at least five times this year!

THE STATE OF THE FLEET

The Big 6 is still a happy soul, the 2CV has been carted off for serious RESTORATION. The expectation is for it to be back on the road, in full glory this time next year.

The GSA is still as gorgeous as ever. Interestingly, it appears to be the only Mark 1 on Australian roads and being manufactured in the first few weeks of production, might just be one of the earliest in the world. I would be interested in following this through to find out. [With their reputation for rust in the UK, these days it might be the oldest in existence. Ed.] So, I will obviously be handling the GSA with the respect it deserves.

Regards,
Peter Fitzgerald.

a-tractions

BE SURE TO READ THIS NEW LISTING OF EVENTS, AS WITH OUR NEW ACTIVITIES OFFICER ON BOARD THERE HAVE BEEN A FEW CHANGES TO DATES AND EVENTS. IT IS HOPED THAT, YOU WILL ALL AGREE THAT THE REVITALISED ACTIVITIES LISTING HAS SOMETHING FOR EVERYBODY.

JANUARY

AUSTRALIA DAY LONG WEEKEND, JANUARY 24 — 26
DISCOVER CENTRAL VICTORIA TOUR
Experience the delights that Central Victoria can offer — the mineral spas and lavender farms of Daylesford, our heritage in Castlemaine along with a superb private motor museum, historic Bendigo.
It is also the weekend of the justly famous Fryersberg Antique Fair. Whilst there are plans for events for the weekend, the opportunity exists to 'do your own thing', should you wish.
This leisurely, inexpensive tour only covers, in total, less than 450kilometres over 3 days. It will be very easy on both you and your car. Official start is Saturday morning, although some will be heading away on the Friday evening, and returning in Monday evening.
For details on accommodation options, likely costs and to confirm your intention to join us on the great escape ring Jay, on 9525 8715.

WEDNESDAY 28TH — MONTHLY MEETING
Traditional CCOCA Twilight Picnic meeting at the Canterbury Sports Ground Club Rooms. Please note that the start time is 7.30pm — half an hour earlier than usual. Bring along your dinner and the family and take advantage of daylight saving at its peak. BBQs will be available.

FEBRUARY

SUNDAY 15TH — MORNINGTON PENINSULA DAY RUN
We gather at the McDonalds at the corner of Springvale Rd and Wells Rd, Melway's 93, E7 at 10am and travel to the famous Heronswood Estate to view these beautiful gardens, with a spot of morning tea. BBQ lunch will be at the Pines Reserve, near Cape Schank. After lunch you might enjoy a walk to Fingal's Beach — one of the Peninsula's hidden treasures — or take the tour of the Cape Schank Lighthouse. Alternatively, the fine wineries of the Peninsula are just a stones throw away.
BYO food and refreshments.

WEDNESDAY 25TH — MONTHLY MEETING — SPECIAL PRESENTATION
Car Care — The Exterior and Interior. Come and learn from the specialists how to care for the paint, plastique, leather, cloth, timber in your car. Find out which products are best for the age and condition of your vehicle.
Venue: Canterbury Sports Ground Club Rooms starting at 8pm.

MARCH

SATURDAY 14TH — TRAMCAR DINNER
Join us for dinner on the move! CCOCA will be riding the Colonial Tram Car and dining in style. Not a cheap-eats night but certainly a memorable event. The price is $75 per person, including wine and beer and a three course

introducing Jay

Originally from New York, Jay set foot upon the shores of Australia in 1989. Arriving in Oz for work, Jay soon fell in love with the country and it's people and over time has become a citizen, adopting Australia as home.

Over the years, New York and Oz were not the only places that Jay parked his motor cars. Having lived in North America, Europe and Asia, Jay has also had the opportunity to visit South America, Central America the Carribean and Africa. Travelling was a passion and a benefit of work. This passion also led to other means of transport that includes Motor Cars.

Ownership of cars has included such models as his current '96 Xantia and '70 DS 21 Pallas (both co-owned with his partner) and such beauts as a '67 Mercedes 250 SE, '64 Mercedes 220, '80 Alfa Romeo Graduate convertible, '69 Fiat 850 Spyder, '83 Volkswagen convertible and a few others. Peugeots have also part of the family over the years. As you can see, although Jay currently does not

dinner. Naturally, spaces are limited.
Find out for yourself why so many overseas tourists demand to experience this uniquely Melbourne attraction. You must confirm your intention to join us by telephoning Jay by February 26th. **No late bookings can be accepted.**

WEDNESDAY 25TH — ANNUAL GENERAL MEETING
Make your vote count and be sure to either be at the AGM or send your proxy forms in to the Secretary to ensure we make a quorum, the first time around.
This year the AGM is especially important as the Committee will be putting to the membership a number of changes to the Constitution. Full details of the AGM, including the planned alterations to the Constitution, proxy forms, nomination forms for Committee positions will all be posted to you late in February.
So, show your support, come along [or send in those proxy forms] and be present for the election of Office Bearers and presentation of the Club's financial statement. Supper, naturally, will be provided.

APRIL

EASTER EVENT — CITIN 1998 BUSSELTON, WESTERN AUSTRALIA, APRIL 13TH — 16TH
The Association of Citroën Enthusiasts [Perth] will make CitIn '98 a truly memorable event. Busselton is a thriving resort some 2½hours south of Perth and ½hour from the well known Margaret River and its surrounding wine district.
Our venue is the Broadwater Resort on Geographe Bay, 6½km from the centre of town. [Busselton is very long, but only two blocks wide!] The resort has its own shopping centre and other facilities. ACE have booked a number of 6 berth, fully self contained chalets. So, contact friends and form a group of 6. Bookings must be forwarded to Carmel Borg in Perth.
A booking form, and full accommodation listing is included with issue of Front Drive.

own a convertible, they have been a big part of his motoring life.

Currently a Call Centre Manager for Yarra Valley Water, Jay has previously worked for NRMA Insurance and had an earlier career in the Entertainment Industry as a Make-up Artist. Jay resides in North Caulfield and will bring to his new role as Events Coordinator a bit of fun and adventure which he hopes will be appreciated by all members of the Club.

Jay is very conscious of keeping the events geared towards the wants and needs of the membership, therefore any ideas or any person/s who would like to organise an event.....YOU'RE ON!! Let me Jay know how he can assist and the glory is all yours.

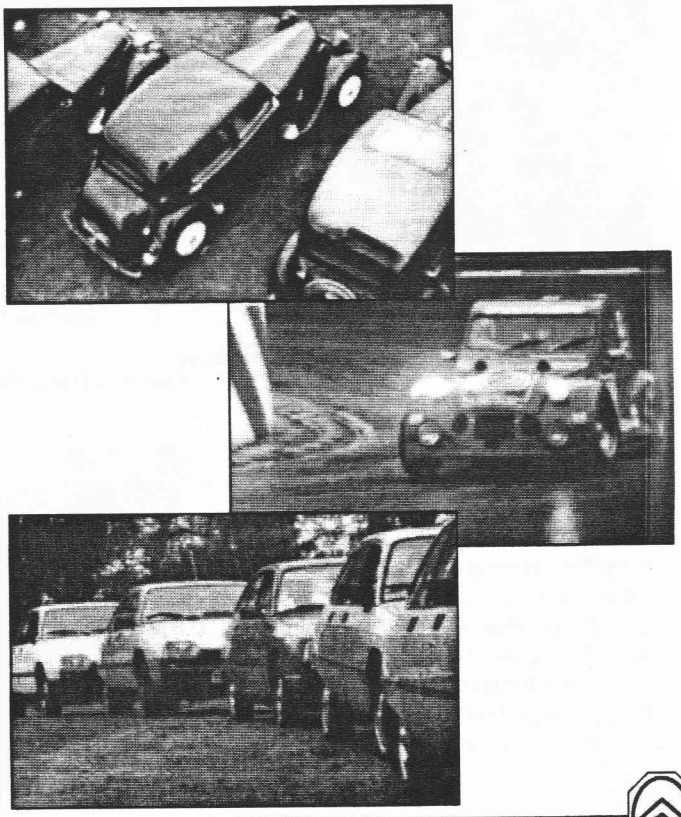
Remember...

EVENTS R US!

1998 Citroën Calenders now available from CCOCASHOP

These calenders, produced in England, are available in two types. The first is clearly for the 2CV enthusiast, with 13 full colour images of 2CVs, both standard and modified as only the Europeans can do. Or, for the more traditionalist amongst our members the 1998 Calender of Classic Citroëns may appeal. Using some superb photographs of everything from a vintage truck to the latest XM, and much in between [yes, Tractions, too] these calenders will grace any wall.

Use the enclosed order form to secure your copy at just $12 each, including postage. Better still, buy them both for $20, including postage.



Rob & Roy ... yuletide cheer

Just for a change, this year the CCOCA Christmas Event was undertaken in conjunction with the last hill climb for the year at the MG Car Club's famous Rob Roy Circuit. The event particularly suited CCOCA as each year this is when the Classic and Vintage cars are out on the hill displaying their power and grunt. [I know, you have trouble thinking of an Austin 7 with grunt. So do I. Ed.]

I must admit to not being overly impressed with the idea — the smell of exhaust and the roar of the engine not being on my list of favourite things. But, I must assure all members that it was a wonderful day. In many ways it reminded me of going to 2CV Cross in the UK. The pits are accessible to all, you can chat with the drivers and their crew and it really is a very family oriented day.

President Pete had arranged with CCOCA and MGCC member, Leon Sims, for an area on Classic Hill to be allocated to us. Not only did this give us a great view of the starting line and at least ¾ of the hill but gave the rest of the crowd a great view of the fine array of Citroëns present on the day. Peter was also given the opportunity during the afternoon to be 'interviewed' over the loudspeaker system. The Club therefore received some excellent publicity on the day and a number of people were very keen to talk to us about the Club in general and to Mel Carey regarding spare parts in particular.

Naturally, Peter Fitzgerald was there in his Big 6, Ted Cross and Peter Sandow arrived in Ted's Big 6 and Mel and Colleen Carey were also there in the TRA restored 6. Three Big 6s made a wonderful show. The 6s were complimented by the Light 15s of George Tibbet, Philip Rogers and Marie and John and Maggie Knaggs. Gerry and Pat Propsting were there representing the GS-brigade and the 2CVs were there with Andrew and Frances McDougall [Beachcomber], Bill Graham and Natasha and Helen Cross and Christine Sandow, who rolled in just in time for lunch in the Charleston look-alike. Naturally I was there in the Visa Club.

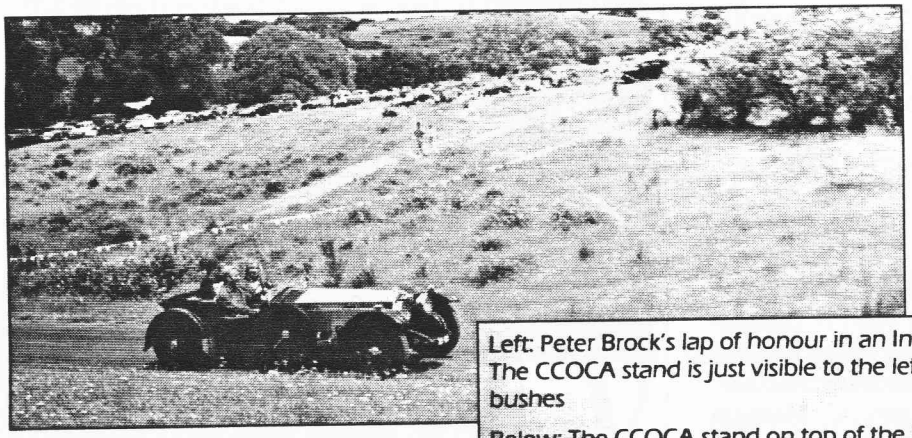
Lunch ranged from Sausages in bread, bought from the stand manned by the Panton Hills Fire Brigade to carefully prepared BBQ and salad. It was interesting to note that John and Maggie decided they were not to be out-done on the quality of lunch scale, after previous experience of the standards set by some in the Club. This time they joined the quality BBQers.

There was a wonderful array of cars competing in the hill climb and certainly everyone in our group had a great time watching the event. Naturally, Mel Carey continues to display the more base side of his character and kept rabbiting on about there being 'no substitute for cubic inches' and trying to persuade anyone who would listen for longer than 10 seconds that the American grunt on display was just top of his list!

Others were of the opinion that the Jaguar C-type or the SS100 were better examples of the car builder's art. The French were not absent from the hill, by the way. A positive bevy of Amilcars were to be seen along with an Alpine or two. The Italians were represented by Fiat [124S], Alfa Romeo [of various ages] and a Lancia Aprilla.

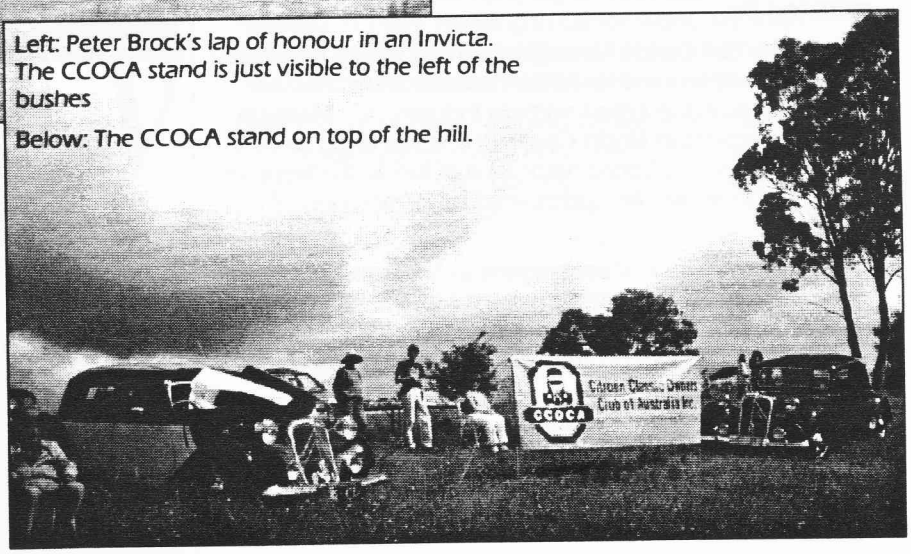
Personally, I hope that next year we will be using the same venue for the last event of the Club Year.

Leigh Miles



Left: Peter Brock's lap of honour in an Invicta. The CCOCA stand is just visible to the left of the bushes

Below: The CCOCA stand on top of the hill.



Tomorrow's Car
Driving the car for 2001

François Mitterrand and I share a certain distinction. According to Citroën, we are the only people outside the company who have enjoyed a ride in the Activa idea car. The French President would doubtless out-poll me in any election but I am one up with the Activa.

I have had a brief turn at the world's first steering wheel with no direct mechanical connection with those variously steered wheels at the car's four corners.

This intriguing Activa is an off-shoot of the XM and a quantum leap beyond XM technology. Call it a kissin' cousin, for all its experimental status, but also a sure pointer to your Citroën for the year 2001. Any show car exists primarily to burnish the firm's image of course, but this one goes beyond super sleek.

Citroën already claims the closest thing to 'active' suspension in current production with its 'hydroactive' XM. Activa adds a brain to that, plus four-wheel steering of the 'drive-by-wire' type.

Floorpan for this experimental project came from an XM while styling is Citroën specific with the low, flat nose. You see a clear family resemblance to SM and DS. Engine is a tuned version of Citroën's ubiquitous alloy V6. Naturally, the suspension is based on Citroën's nitrogen/oil spheres. But all these things have been carried a step further.

Unlike XM, where Bertone won the styling competition from Citroën's staff in Velizy and PSA's non-marque Advanced Styling Centre, Activa is pure Citroën. There was a competition here too, among the designers of a compact, 64-person Velizy team [a figure including model makers, etc.]. The entire studio naturally wanted a hand in the excitement but Citroën only had a year from first discussions to launch at the 1988 Paris Auto Salon.

American Dan Abramson and three others were picked to turn out Activa in short order. One indication of how personal this project was: the car's vivid colour is known throughout Citroën as 'Yasamin red', in honour of the trim and colour designer in this quartet.

Design Director Art Blakeslee awarded his team this bonbon in part because the production-car styling centre today is far more concerned with perfecting details for production. Fast track show cars are welcome refreshment. XM, for instance, had its shape frozen relatively early in the 4½ year birth cycle, precisely to allow enough time for up-market detailing.

Activa had to get it right in a few months. Abramson, along with Ray Downes, the engineering man within Style Citroën, went directly from a full-scale tape drawing of the show car to a 1:5 model because this avoids errors inherent in the usual method of scaling. It also saved time. When I wondered aloud about all these American and English names on the strength of this most French car firm, they pointed out that eight nationalities are represented among the 64. Anyway, the famous DS, about as Gallic as a car can be, was designed by an Italo-Frenchman.

Prototype engineering, in the same Velizy complex as their design centre, naturally provided a great many avant garde inputs here but you notice that when Styling wanted a very low front lid they got it, although a special intake manifold had to be designed to fit underneath.

The engine is a four-cam, 24 valve version of the familiar, transverse V6. With normal sports tuning it produces 160kW, compared with 125 in XM form. Something in between can be expected in the Peugeot 605 and probably later in an XM. The gearbox is a four-speed automatic [again fore-shadowing an XM option about 1990]. Four-wheel

Top: The overriding consideration for any 'show' car is good aerodynamics. With production cars below Cd 0.30, you have to achieve something like this car's 0.25.

Bottom:Doors which slide out of latching grooves, move outwards and only then swing wide requiring patented, three-plane hinges in massive alloy.

Tomorrow's Car
Driving the car for 2001

drive stems from the Peugeot 4x4 with drive shafts from the Peugeot's rally cars.

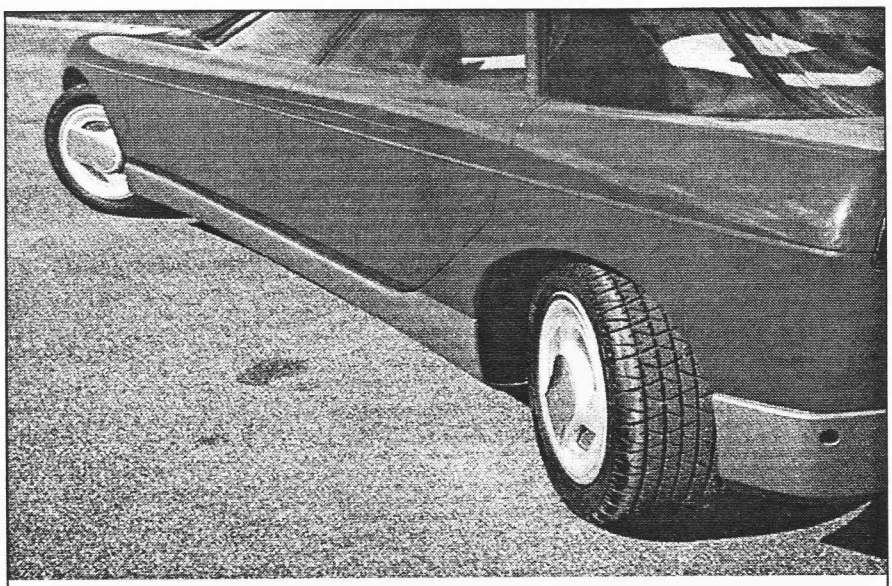
Since the basic pan is XM, Activa also served as test bed for the six-sphere, semi-active suspension of that model, in its fanciest form.
Gas/oil spheres at each wheel function as both springs and shocks. Extra oil from a reservoir adjusts ride height and self-leveling. Next they added a third sphere at each end with orifices through which the oil flows.

This provides a softer, more supple ride in the straight-ahead position, while flow transfer from side to side controls roll stiffness. Ride height control is mapped, not mechanical, with override to lower the car at speed or adjust for passengers entering or exiting.
Activa has three computers for high-pressure hydraulics alone: steering, suspension and brakes.

Three sensors anticipate extreme pitch, roll or yaw movements, another two monitor the result to determine sensitivity, feed angular movement and speed of steering, car velocity, throttle position and brake pressure, plus gearbox input and body roll angle from the front stabiliser bar, to computers. When it decides you are cornering it switches the hydraulic suspension to 'firm' for crisper handling. This occurs on 40-60 milliseconds. A passenger would need three times as long to perceive body response.

That's 'hydroactive' with its always level ride. Citroën says front/rear spring rates will be some 80/90% firmer and roll stiffness 15/30% firmer in this mode. The Activa mode is spheres plus brain. Not just 'firm' but a debate over how much stiffer for each case.

Of course, anti-lock brakes are part of the package. Activa also uses an anti-slip traction aid alongside its 50/50 front/rear torque split as a four-wheel drive machine.
Progress remains smooth because the car is fitted with a fully automatic gearbox [two pedals]. You make sure the 'N' button is depressed to start and then select either 'A' or 'R' to 'advance' or 'retreat' [a fair translation of the French]. Furthermore, there is a tap-plate switch by your right knee which provides manual ratio selection — providing the gearbox computer does not find your choice too ridiculous.



Above: Of all the high-tech features, wheels turned by hydraulic rams at angles chosen by computer are the most advanced item on Activa. Steering is drive-by-wire and drive is four-wheel.

This free-form selector is only one off-beat feature of the interior. Obtaining access to Citroën Styling's deep-dish seat with integrated belt is curious enough. A remote blipper of the usual infrared kind causes any of the four doors to slide outwards and then swing wide on patented, multiplane hinges which look sturdy enough to carry a vault door.

Rear doors are hinged at the rear so the pair on each side meets in the middle, where there is no B-pillar, only pins and deep grooves [top and bottom] to lock them shut. This explains the slide-closed feature and apparently allows legal use of what used to be called suicide doors — opening at the front edges. No question that they offer far easier access.

All four seats are comfortable buckets. The driver has a position memory activated by opening his door. Rear seats feature electric semi-recliners, although knee room is a little tight for that.
Citroën is proud of building a proper four-seater although it does not match XM spaciousness in its 4.75m length [width is 1.9m, height is 1.27m]. Aerodynamics were naturally a prime consideration, but shoulder width and headroom counted too. Result: ample room but an honest Cd of 0.25 at normal ride height.

You sit comfortably upright in front with somewhat marginal seat length under thighs and legs stretched out beneath an oblong wheel. People of average height can just sit in the rear comfortably, with a bit of scalp clearance. The boot is full of electronics to control all these futuristic features — a tooth-brush is all any show car will carry.

Instrumentation is electronic with a head-up speed readout and thin band of other data well ahead of the wheel. A screen on top of the console tells you almost more than the wildest computer freak would want to know about the car's internals. Below this is a Minitel alphabetic and numeric keyboard for navigation, etc. Switches are almost normal, except for light and wipers in the wheel hub. The car does not have wipers.

Citroën makes much of pushing glass use to the limits — there are also four proximity sensors in each bumper to warn of any objects within 1.4metres of the ends, which are entirely out of sight of the driver. All that glass is heavily sloped and often multi-curved.

The rear plane is dished in the middle but bends over either side. Tail is high, nose low. Lateral vision is actually better

than expected. There is a computer-controlled air conditioner to cope with the greenhouse effect.

Shape is pleasing and even looks reasonable for road use about the model after next, yet it could hardly be mistaken for any other brand. Apparently some pre-launch critics thought it might even be 'too wedge-like' and the slightly pointed tail was more extreme originally. It includes an extendible spoiler [at speed] but that is pretty much state of the aerodynamic art these days.

Fit and finish are [intentionally] well above 'show car' levels, underlining Activa's role as a mobile test bed for future Citroëns. If reverse-curve glass is the trickiest styling feature, steer by wire is easily the most intriguing advance, a co-operative effort with the aerospace industry. This sets Activa ahead of other four-wheel-steering projects and overwhelms all other impressions from our drive.

For a start, that oblong 'kart-style' wheel only turns 60 degrees each way, which means very direct arm inputs. Then its only connection with the four road wheels is via computer. Since each hydraulically steered wheel can take on the angle that best suits your chosen curve radius, each could theoretically aim at a different point of the compass. You do not steer Activa around a corner, you select a car position for the exit and electronics take you there.

Any variation in road-wheel angles can be programmed for testing in a system that monitors swerve rate and lateral acceleration as well as steering inputs and car speed.

In practice, they still need work on the software. At the moment what seems a small steering movement is generally too great and the tail suddenly steps sideways on you and progress becomes something akin to driving a dodgem. There is built-in resistance so you do not feel disconnected, but this includes return resistance. There is an initial tendency to steer too far and over-correct coming back. Those wags of your tail really stem chiefly from overdoing this return motion.

They claim that all this smoothes out when the computer reads greater speed. We did not have the space to prove this theory and, indeed, nobody has apparently had the car above 100km/h and only then in a wide-open area.

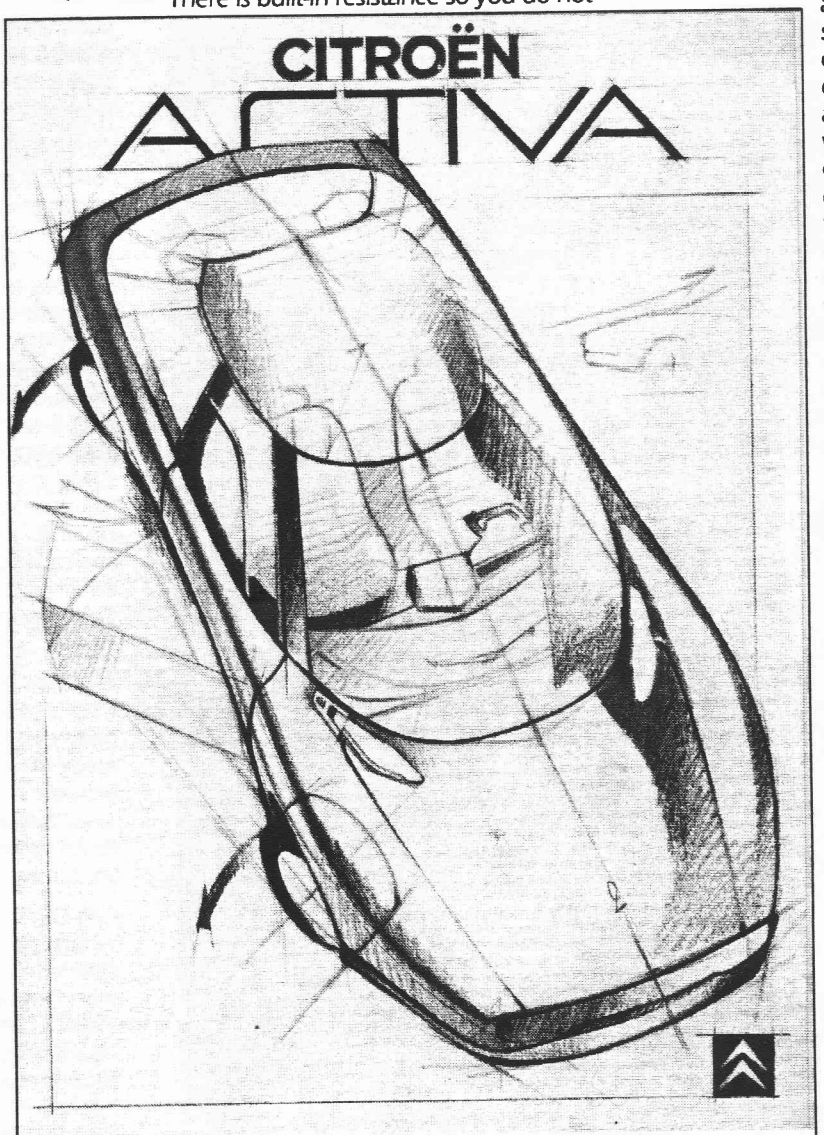
Tight-space manoeuvres and parking are almost too easy since computer control places no limits on the range of wheel angles. Figure eights within the space most cars need for a half circle are good sport too. Anybody who has driven a formula car would find the wrist twitches required by Activa second nature. For the rest, there can obviously be new software.

This steer by wire feature is almost certainly the item furthest from production. Basically, I think it should be better integrated with the anti-roll/dive/squat/self-levelling computer.

Maybe not on Activa — but Art Blakeslee hints strongly this is far from the last such special. He even knows that there will be more than a year to do the next one — suggesting it could be underway already for Paris '90.

By that time they will doubtless invent an equally high-tech fuel filler cover. Meanwhile, it's comforting to know cars that are smarter than we are still take on petrol through a totally common twist-off cap underneath a normal, manually lifted lid. The more some things change...

Reprinted from Modern Motor, July 1989.



Above: For the UK a special brochure was prepared for the 'launch' of the Activa.

Keeper of the CHEVRONS

Carl Olsen, Citroën's design head for 18months, says his job is to guard the marque traditions, as well as to make fine new cars. Steve Cropley interviewed him for Car magazine, in February 1984.

Carl Olsen, Citroën's Head of Design for the past 18months, is looking right now at about the toughest job in the European motor industry. Until recently, his company had the biggest range of small cars in the world [Deux Chevaux, Dyane, LNA, Visa, Axel, GSA — and Mehari]; rationalisation has begun with the deletion of the Dyane and Mehari, and more axing must be contemplated. So the task for Olsen and his staff of 60 at Velizy, 10miles outside Paris, is to create two or three new models in the next half-dozen years that have the versatility to cover the demand created by the previous models, renowned for their multi-purpose natures.

Add to this the fact that Citroën are none-to-profitable at present and need their new cars to be right, that the standing of the whole Citroën image has recently been under threat, and the size of the task becomes very clear. Yet for a man with so much to do, Olsen, a tall and good-looking American of 50 who looks a decade younger, seems surprisingly relaxed and casual to those he meets on the 'outside'. His achievements in 18months, and the obvious depth of his commitment to Citroën as he speaks about the job in his soft voice, make it clear that the Velizy studio is doing things better and faster than ever before.

Carl Olsen seems slightly torn between two points of view when you talk to him. On the one hand he is not the kind of man who speaks much about his achievement; on the other he is proud of what has been done at Velizy in a year-and-a-half.

The fact that the facilities and management structure have been overhauled from top to bottom. The design studios have been organised and given more space, and Olsen now has a tightly knit team of young department heads to guide a total staff of 60 people. There is nothing very formal about the organisation, everyone insists, but it directs their activity better.

'Citroën have always been an engineering company', Olsen says. 'There were never stylists-in-charge until Trevor Fiore came late in the '70s. After that, Trevor sort of ran the exterior side of things and Michael Armand handled the interiors. Management really didn't exist.'

What was clearly needed was a design head with what Olsen describes as 'big studio experience'. And he had it. A designer all his working life, Olsen started in GM's styling department in Detroit in 1957, moved to Sigvard Bernadotte styling centre in Denmark in 1961 [working on designs for clients as diverse as Rosenthal and Facit], before going to Ogle Design in '63 where he stayed until '81 as head of design. For 13 years he taught automotive design at London's Royal College of Art.

'Citroën were the one company I would have left Ogle for', Olsen says. 'I was very happy there. I would have considered a move to Mercedes-Benz very seriously, I suppose, but I don't think they compare with Citroën in the æsthetic sense.'

Olsen presented Citroën management with seven objectives soon after he arrived in June 1982. 'I wanted to set up an efficient structure for the place', he says, 'then to begin using the most recent techniques to achieve quicker results. I said I wanted a stable, modern environment for the department. I wanted my people to have clear direction, good equipment and constant review of their projects. I wanted to institute a programme to help young French designers develop by sending them to recognised courses, such as the ones at the Art Centre in Los Angeles and the RCA in London. I wanted to formulate new concepts as well as to design to management briefs. Then, I reckoned, we could design worthy cars!'

According to several of Olsen's subordinates I met, the organisational aspects are achieved. The 'worthy cars' part is on the way, they say, though details are not forthcoming.

Citroën designers speak surprisingly fondly of several constraints under which they work. One is something called DDV — a department of vehicle definition — whose main function seems to be to keep the definition clear between Citroën, Peugeot and Talbot models; to ensure that all new designs are in keeping with the image of the marque badge they will wear. The other limit is to liaise with a body known as 'feasibility engineering' which ensures that the serious projects are practical. 'We don't present anything that can't be built', says Olsen. 'In the old days, stylists would sometimes propose things which were straight from cuckoo-land. This way far less time is lost in feasibility studies.'

Another change far more significant than it seems, Olsen claims, is a switch from modelling in plaster to more modern quick-drying clays. 'It has brought a dramatic time saving', Olsen says. 'Besides, it's a less permanent material which helps because designers are famous for not knowing their minds...'

Carl Olsen says he did not think for long when offered the Citroën job. Did he consider the significance of the merger with PSA, which might cramp Citroën's individuality? 'Not at all', he says disarmingly. 'I took all that on trust. I thought for a few minutes than went into it with blind enthusiasm. I just couldn't resist the proposition.'

Olsen says his huge enthusiasm stems from the fact that their design philosophy so closely suits his own. 'I think we should aim to produce great pieces of art-stroke-design which suit people of every taste, cultural background, every walk of life. Some firms famous for their designs are elitist; the German firm Braun is a good example. They have a reputation for sophisticated industrial design, and I like it. But it's not great because many people, perhaps most people, don't like it.'

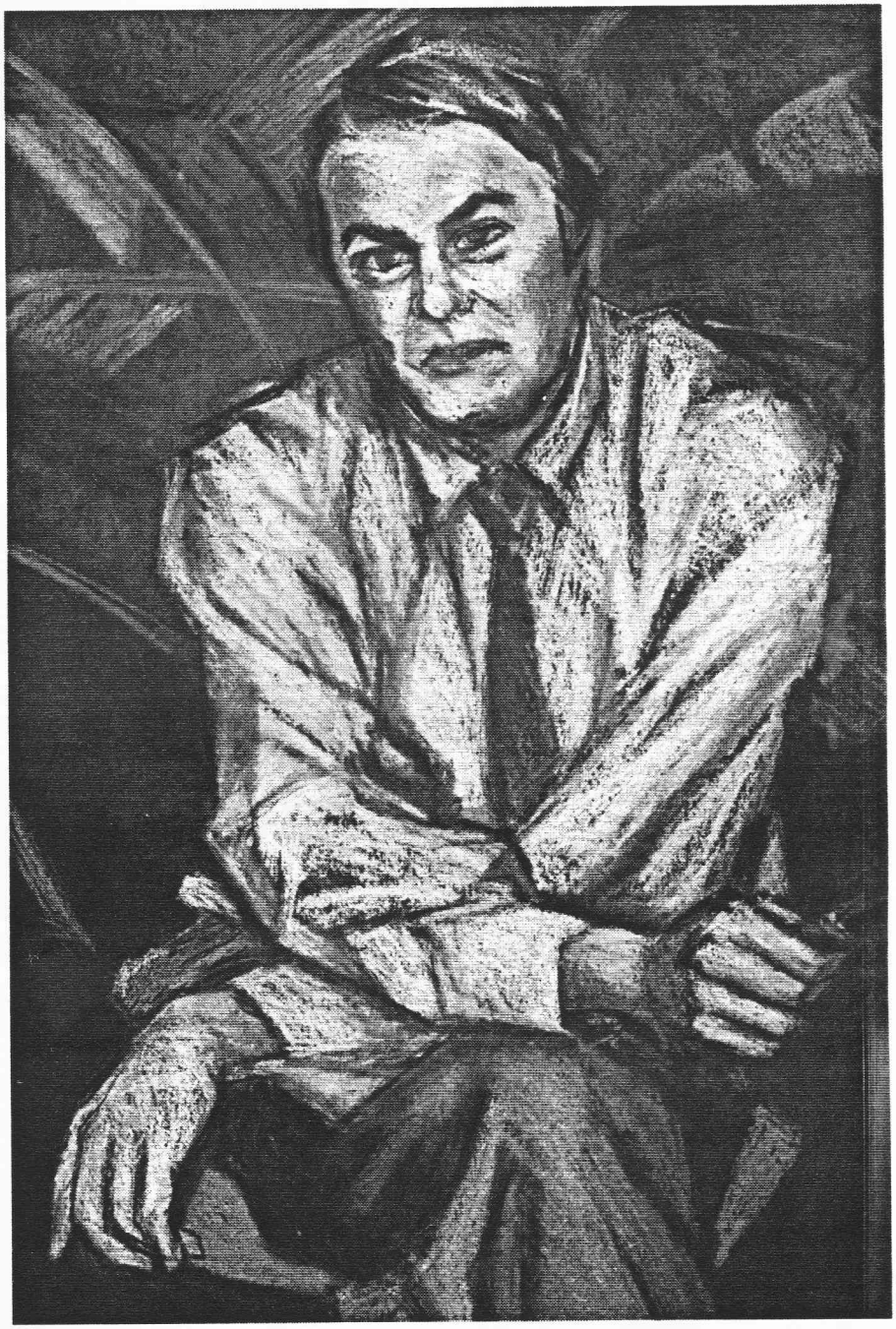
'Take a look at the Mona Lisa. That's a matchless painting because it's great on three levels. It's a nice picture to anyone. Those who want to can appreciate its symbolism. Others can appreciate the painter's marvellous technique.'

'Now, I think the Citroën CX meets those criteria. It's a unique achievement, and a most influential motor car. The shape, and the interior, are the most influential to be produced anywhere in recent years.' It is true enough; though the CX is eight years old, the cars of the '80s have come to look more like it.

Olsen is surprisingly candid about work on Citroën's 2CV replacement, now in the planning stage, for a probable launch at the end of this decade. 'I sit at home and sketch the 2CV replacement on weekends', he says, after a thoughtful silence. 'That's a real challenge. It needs technology to be applied in a very radical way, to keep the tooling cheap. That's the way to keep costs low. Everything will have to be designed to do three jobs, not even just two. But, we've got some well-formed ideas about applying plastics technology in a way that's never been used in cars.'

As the architects of the new order at Velizy, Olsen is naturally anxious to defend the company against criticism for their adoption of an outside designer's [Bertone's] body on the BX. 'Everyone uses outside consultants these days. You can't afford not to, for the comparatively little it costs. But we obviously would like to do all the work here if it were possible — and are using consultants less...'

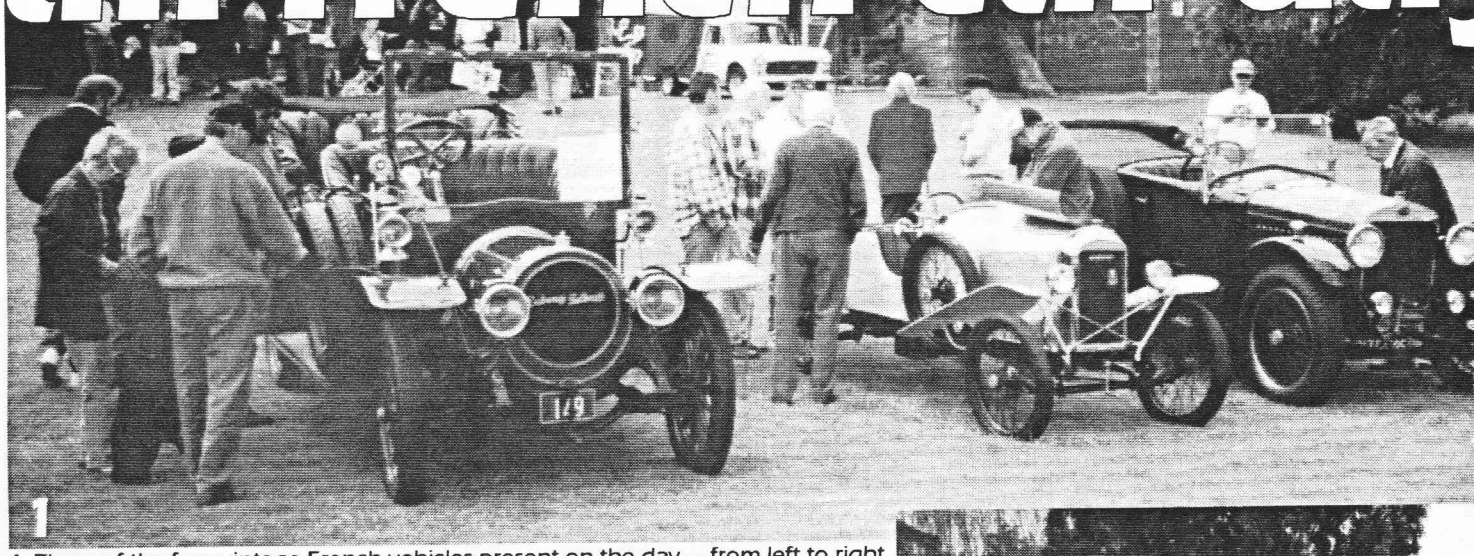
Carl Olsen is very keen, you can tell, on the re-establishment of Citroën today [as opposed to Citroën in the days of the GSA and CX] as a dominant car styling force. He is so keen, that he coped with remarkable style and aplomb with one French journalist's truly offensive question at a recent press conference: 'Why do you employ these migrant workers?' the French man of letters enquired of Citroën's Xavier



Karcher chairing the meeting. 'You used not to.' After the chairman had made some too-polite reply quoting Olsen's extensive European experience, Carl himself leaned forward and said quite firmly: 'I am here to develop new designs more quickly, using better methods. I hope eventually that you will be able to take my faith in Citroën on trust.' The rest of us did, there and then.

Reprinted from 'Car', February 1984.

all french car day



1. Three of the four vintage French vehicles present on the day — from left to right — a Delauney Belville, Amilcar and 'the Editor cannot remember what!' The other was a Peugeot.

2. Craig and Jacquie Little's 2CV attracted admiring glances. [ROB, WHEN IS HE JOINING? Ed.]

3. Always looking attractive — Julian Newton-Brown's DS Cabriolet, along with his DS utility [ex-Duttons], a 'normal DS and his CX Safari.

4. As always, there was a good showing of Renault Alpines.

5. Peugeot 403's just seem to go on and on.

6. Over from South Australia was this attractive [?] Renault 6 [Some would suggest it no worse than Citroën's equivalent — the Dyane.]

7. Richard and Elaine Bevan brought their Big 15 along for its first outing on 'Red Plates'. Richard says there is still a good deal of work to be done, but it's great to see another Big 15 on the road.

y— brighton, vic

TECHNICALLY speaking

THE SOLEX BI-STARTER CARBURETTOR

The Solex carburettor is well known for simplicity and accessibility. In common with other makes it has to perform two duties. One is to deliver the mixture in an atomised form. The other is to ensure that the two ingredients — petrol and air — are mixed in their correct proportions.

The first is not hard to understand when we realise a liquid can only burn when it is contact with the oxygen in the air. So the mixture when entering the cylinders must consist of very large numbers of exceedingly small drops carried in the air stream.

The second is the carburettor's ability to supply the correct ratio of fuel to air at variable engine speeds. In general, maximum power is secured from air fuel ratios of 14 to 1 [by weight] and maximum economy with ratios of about 15½ to 1. For cold morning starts this ratio is increased to something like 7 to 1.

To get this low ratio, the Solex carburettor employs what is known as a bi-starter. This is in effect a separate carburettor on its own, although attached to the main carburettor and is operative only during starting and the warming up period of the engine.

The starting device is brought into use by means of a dashboard control which is connected to the starter lever. [see Fig 1, #7] This lever has two adjustable positions. To start the engine when cold pull out fully the dashboard control. In this position it will give a very rich mixture which is essential for cold starting. The engine begins to warm up almost immediately after starting and the dash control can then be pushed in approximately half way to the 'bi-starter' position, when a resistance will be felt, determined by the location of the spring ball [#9] in a notch in the rotating valve disc [#5].

At this stage, the mixture strength is considerably reduced, but without risk of the engine stalling when the accelerator pedal is depressed.

As soon as the engine is warm enough, the dashboard control must be fully pushed home, thus putting the starting device out of action.

The bi-starter has two units for gauging the correct supply of petrol and air; the air jet [#2] metres the air supply and petrol jet [#8] metres the petrol.

IDLING

When the engine is idling, the mixture is provided by the pilot jet [#17], the air bleed [#16] and the volume control screw [#21], the mixture strength being weakened by turning the screw [#21] in a clockwise direction and vice versa.

IDLING SYSTEM

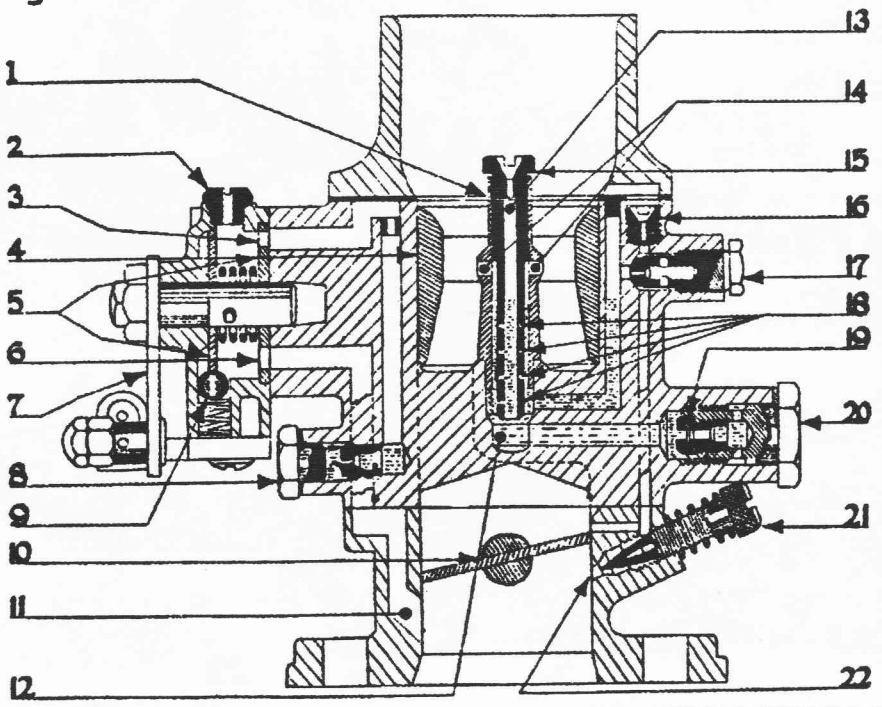
Petrol drawn from the reserve well [#12] is fed through a series of channels and eventually passes through the pilot jet [#17], then into the downward tract where it is partly broken up with a metered amount of air which has passed through the pilot jet air bleed [#16]. On reaching the idling orifice [#22], the flow is controlled by the tapering volume control screw [#21].

It will be noted that the idle orifice [#22] is on the engine side of the throttle and therefore open to depression when the throttle butterfly [#10] is at the closed position. When the throttle is opened it will be seen that the orifice is just above the throttle plate and will come into action. This is a by-pass or progression outlet and is used to provide an easy move over from idling to general running.

Figure 1:The various parts are identified in the key below. For an explanation of how they work, see the text.

1. Spraying well
2. Starter air jet
3. Starter valve
4. Choke tube [venturi]
5. Spring loaded disc valves
6. Starter valve exit duct
7. Starter lever
8. Starter petrol jet
9. Spring ball [Bi-starter position]
10. Throttle butterfly
11. Starter mixture delivery duct
12. Reserve well
13. Emulsion tube
14. Spraying orifices
15. Air correction jet
16. Pilot jet air bleed
17. Pilot jet
18. Emulsion holes
19. Main jet
20. Main jet holder
21. Volume control screw
22. Idling mixture delivery duct

Fig 1.



Important parts are drawn separately [left].
External view of carburettor [right] shows where to look for them.

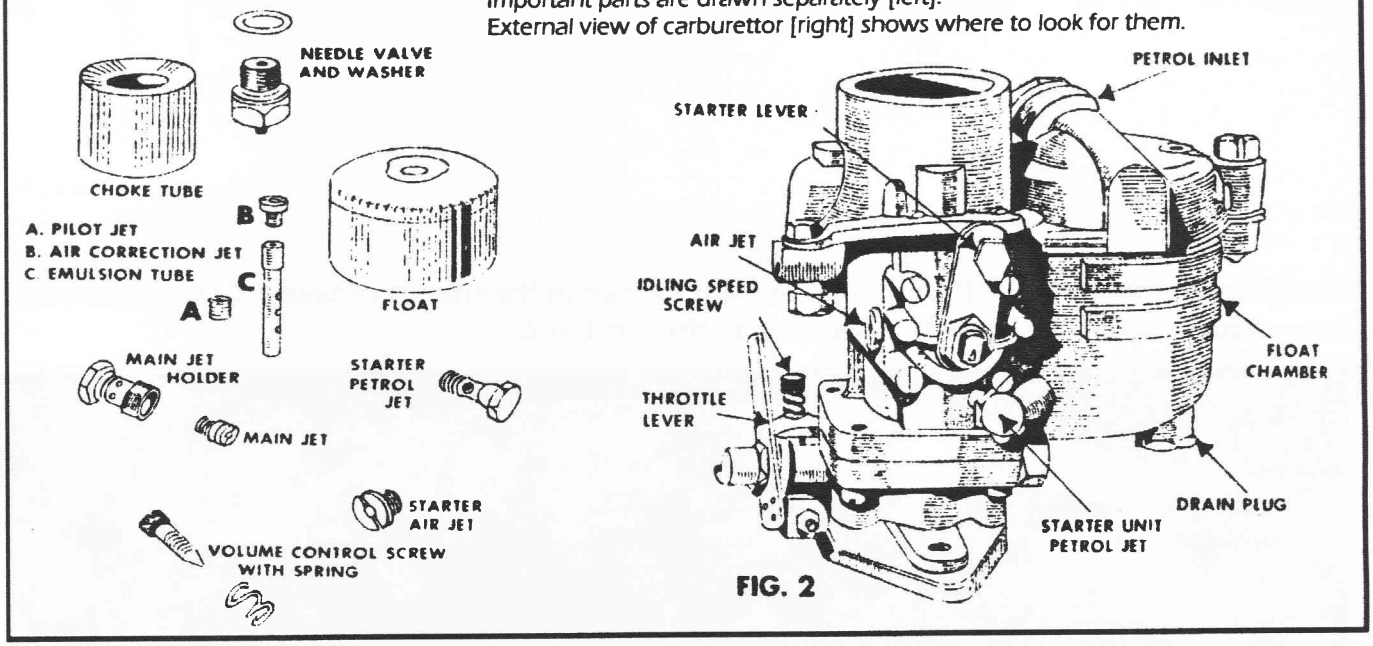


FIG. 2

GENERAL RUNNING

For general running above idling speed, the fuel is drawn from the float chamber [not illustrated, but it is of conventional design carrying a float which closes off a needle valve when petrol in the float chamber has reached the right level] through the main jet [#19], which is housed in the main jet holder [#20], then into the spraying well [#1] via the reserve well [#12], where it meets air drawn down via the air correction jet [#15]. This air passes out through the emulsion holes [#18] where an emulsion is formed with the petrol. The resultant mixture rises and is drawn out of the spraying orifices [#14] by a vacuum created by air rushing through the choke tube [#4]. The mixture is then carried past the throttle butterfly and on into the firing chamber of the engine.

DISMANTLING THE CARBURETTOR

The main construction of the carburettor illustrated comprises three die castings, namely [A] the throttle body, [B] the float chamber and the main carburettor body to which is attached the bi-starter unit, [C] the float chamber cover and the air intake. [On some smaller Solex models there are only two die castings. On these the throttle body and main carburettor are cast as one piece.]

A study of figure 1 will show that the main jet [#19], the pilot jet [#17] and the starter air jet [#2] are all accessible from the exterior without dismantling the carburettor. With removal of the air cleaner, if fitted, access to the interior of the carburettor is quite easy. To get to the float chamber it is necessary to remove screws holding the cover in position, together with the petrol pipe union, when the cover may then be lifted off, exposing the float chamber, float, air correction jet [#15] and pilot jet air bleed [#16].

GENERAL NOTES

On warm days, if the engine is not stone cold, it is usually possible to start up with the dashboard control pulled out only to the half-way position. If an instant start is not forthcoming and the carburettor is suspect, remove and clean the starter petrol jet [#8]. Blow through it with compressed air. Do not probe with a pin or wire.

Before adjusting the carburettor it is important that the ignition system must be in good condition and that the compression is equal in all cylinders. It is also important that there are no leaks in the intake manifold and that the engine is at operating temperature. The carburettor must be clean internally, in good mechanical condition and the float level must be correctly set. The float level can be adjusted if necessary by using different thicknesses of washers under the needle and seat. An extra or thicker washer will reduce the petrol level. A high float level can generally be determined by looking down through the throat of the carburettor with a flashlight while the engine is idling. If the spraying holes flush alternately wet and dry, it is a true indication of a high fuel level in the float bowl which must be corrected before the engine will idle smoothly.

Normal adjustment is carried out as follows:
Wait until the engine is hot and set the idling speed screw [Fig. 2] so the idling speed is running a little on the high side. Next slacken the volume control screw [#21] until the engine begins to hunt, then screw it in until the hunting just disappears. If the engine speed is still too high, set the idling speed screw until a nice even idle is obtained. Should this cause a resumption of hunting, turn the volume control screw in a clockwise direction until the idling is perfect. When removing the volume control screw for cleaning, care should be taken to see that the tapered point is not bent or worn. If this is the case, then a new screw should be obtained immediately.

AIR FILTERS

An air filter with too small an area of filtering medium will raise fuel consumption owing to the increased vacuum imposed upon the jets. If this is suspected, make a comparative test with the air filter removed. Should the cause be located here, first clean carefully the filtering medium then try again. If after this the consumption is still bad, it is probably the result of the filter itself being too small.

Reprinted from Wheels, November, 1956.

Looking to the Future
Another car for 2001?

Motoring journalist and enthusiast LJK Setright jumped at the chance of taking Citroën's concept car — Activa 2 — off the show stand and on to the test track.

The people who saw the Activa 2 on Citroën's stand at the Paris Salon all sought to look at is more closely. This Citroën looked too intriguingly real, too realistic, for such perfunctory treatment; but when people did stand close and look carefully, they were invariably astonished.

This, they all said, looks like a production car, not a mere Salon ornament. How near could production be? How numerous the output? More than one admitted they would not mind having one right now. Not right now, for me; I should not want mine in that despicable colour, Bristol red is for Bristols, signal red is for Post Office vans and any other red vehicle is either a fire appliance or a confession of inadequacy. Black for my Activa, please; and tomorrow morning would do.

In the Activa 2 it is already tomorrow; but it will not go into production. The reason for the car's existence is to demonstrate some of the systematic advances that will feature in production Citroën cars within the next ten years. The car has to be made more thoroughly, more carefully, complete and sanitary and proper than the average factory prototype, so that people other than the factory's own testers can drive it, can test it thoroughly and properly. Would Setright, for instance, care for the chance to drive it properly?

Silly question. I have always wanted to drive properly. If this Citroën allows me to satisfy that ambition, then take me to it.

They did. Whether I did is perhaps still being debated somewhere in France. Certainly I drove it methodically, devoting each lap of an ingenious little test track to further and faster exploration of the car's unique behaviour. Having reached a stage where, on a particular series of S-bends, I was using all the road and much of the car, the Citroën engineer riding with me broke a deepening silence. 'Please do not go any faster!' said he. Apparently he was concerned for the fact that this car was the only specimen they had.

To be honest, I could not see why he should worry; it was perfectly evident from the car's composure, and from the faithful feedback relayed by all its controls, that its margins of roadholding and handling were ample enough for my driving to grow yet more enterprising. So far the going had been easy; the car circulated with an air of imperturbable calm, riding absolutely flat level in every corner, on every straight, regardless of how flat my foot might be on brake or accelerator, whether I was tweaking the wheel, or not. Fast or slow, this car was always consistent and predictable; nothing altered except the speed.

Ten minutes later, leaving the car on the track, I walked back the way I had come — and discovered a new experience, that of being retrospectively frightened. I actually became terrified at the very thought of what I had been doing in Activa 2. Those curves that had felt so gentle, that the car had negotiated with such sang froid, were now revealed as a vicious succession of whiplash corners.

So what made the Citroën feel so calm? Strict discipline, that is what. The Activa does as it is told, precisely, and nothing else. When I directed it to turn left, it turned left; it responded to command instantly. Other cars, even other Citroëns, will lurch a bit if cornered briskly: turned left, they will sway to the right, rolling

Above: The beautiful, smooth-flowing lines of Activa 2 make it a stunning model.

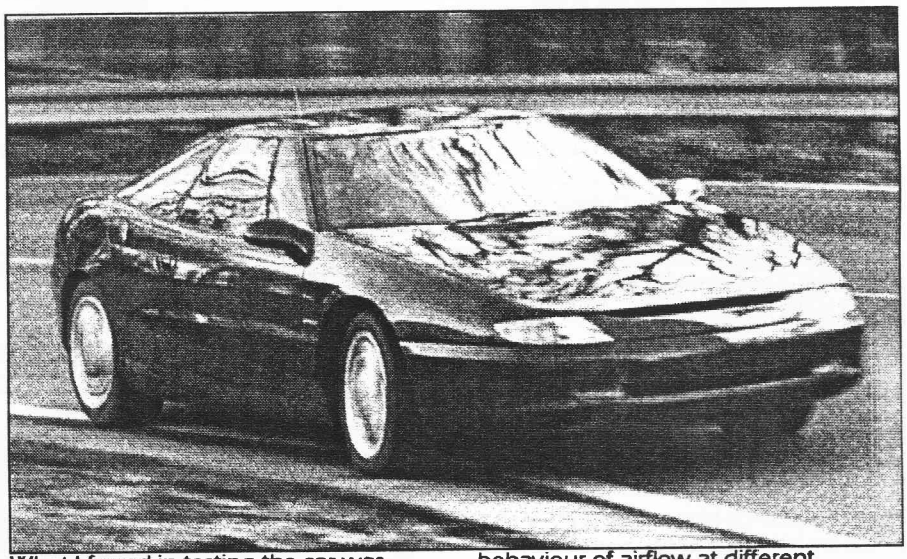
about a longitudinal axis which may vary its position as the car's suspension flexes.

There is your source of all that disorderly behaviour. As the car rolls to the right, the wheels are tilted and tipped in disarray, no longer perpendicular to the road, not always pointing in the direction they should. This confuses the tyres — and if the situation is constantly changing, as it can if there are bumps on the road in mid-corner, it confuses the driver at least as much.

In the Activa 2, Citroën has killed roll by making the anti-roll system active. Instead of detecting that a cornering load has been developed, the active system forecasts it. Sensing road speed, steer angle and the rate at which the steering is being turned, the electronics deduce what the driver asking of the car. Should it be a gentle change of course, such as a minor steering correction or a mild-mannered lane change, the anti-roll apparatus will not interfere; but if the likely outcome is a more forceful manoeuvre than the system goes into action.

Before it interferes, the anti-roll torsion bars at each end are pneumatically cushioned; when it does, the cushion is removed and the car's mechanical resistance to roll is doubled. At the same time the engine-powered hydraulics come into action to restore the car to an even keel.

Below: Activa 2's unique anti-roll system ensures unequalled road handling.



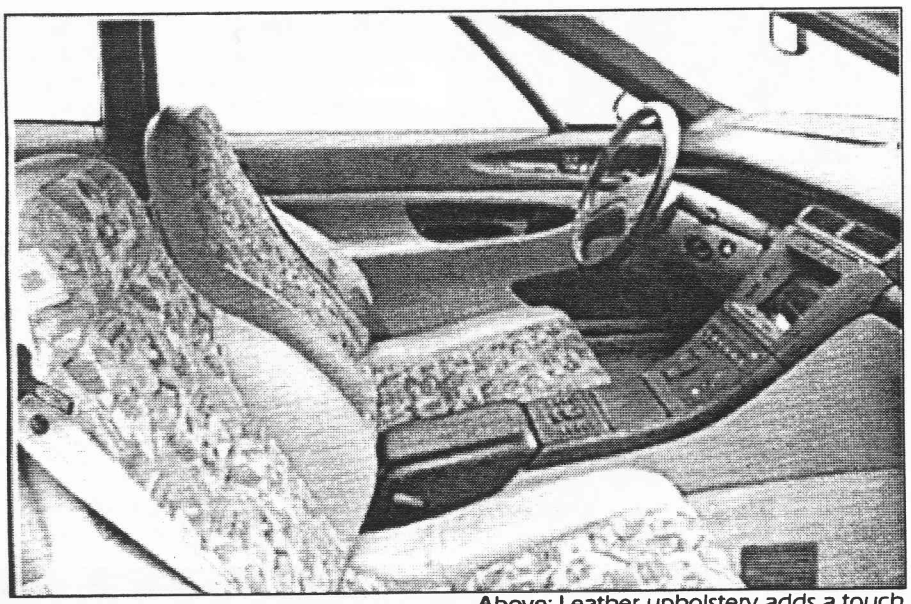
What I found in testing the car was unwavering consistency of behaviour, without any of the intrusions of roll-induced handling aberrations which mar the pleasure and predictability of driving other cars.

I found a good deal else besides. There is more, much more, to the Activa 2 than active anti-roll. Before leaving the suspension department, there is also ride-height control. Other Citroëns have had self levelling, but in this specimen the ride heights front and rear are controlled separately and adjusted according to speed.

Being strictly a working prototype, Activa 2 is much heavier than a production version would be. The acceleration is nevertheless brisk and the speed continues to mount to high levels because of the car's aerodynamic refinement. Really get going in Activa 2 [and with a drag coefficient of only 0.25 to counter the engine's 200bhp, this will be a decidedly fast car] and the nose is progressively lowered by 45mm, the tail by 15mm; this is real aerodynamic refinement, trimming the car's angle of attack to suit the varying behaviour of airflow at different velocities. Slow the car to a halt [the brakes are big and splendid inside those 17inch wheels] and it resumes its original height. When it is parked and time to get out, the whole car rises another 44mm to make exiting easier.

Many of the luxuries to be expected of a high-class production car are to be found in this very high class prototype,

Looking to the Future
Another car for 2001?



Above: Leather upholstery adds a touch of luxury to the interior.

Below: Driving pleasure is accentuated by the automatic transmission which is operated by four pressure pads.

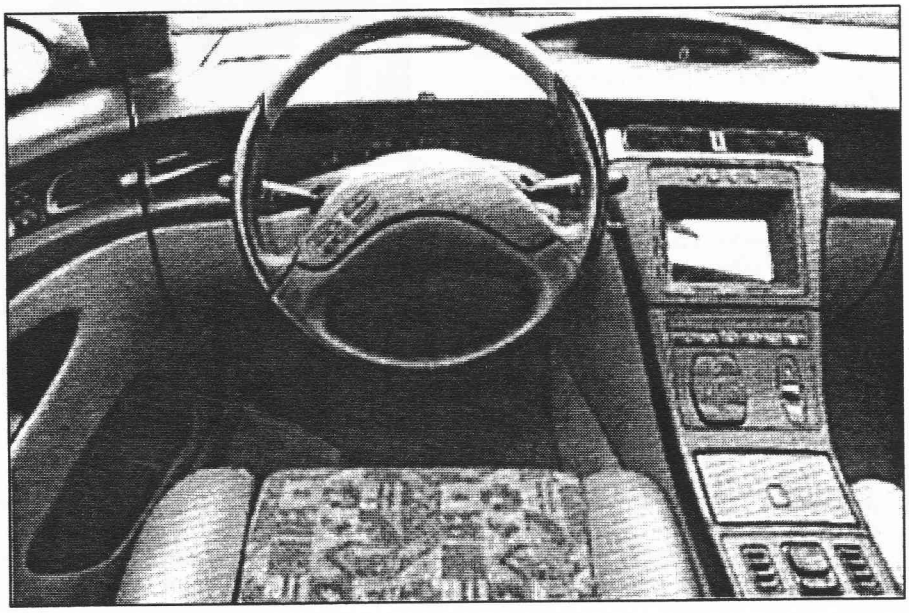
all helping to make life easier. So did in particular, a truly automatic transmission in which electronics do everything except usurp the driver's choice of whether to go forward or backwards or stand still. It needs no clunking gear lever to make it work. Instead there are four pressure pads of comfortable size arranged in a clover-leaf pattern on the surface of the central tunnel.

The interior also displayed an assortment of quite fancy new instrumentation, complete with monitor screen, navigational aids, optically collimated speedometer and enough computational power to deduce the time of high water in the Solomon Islands. I ignored all that, but the stuff is entirely appropriate to the future of which the Activa 2 is a precursor.

It is just a little confusing that Activa 2 also had a precursor, now known as Activa 1, which was in some ways more advanced still. Is time running backwards? No; with number 1, Citroën was showing us in 1988 what could be done, might be done, in some foreseeable future. In that car, there were experimental lighting systems, four-wheel drive and [best of all] hydraulically operated four-wheel steering. Number 2 shows what will very probably be done in Citroëns of a future within predictable reach; that is why it has been made so astonishingly realistic.

The realism extends to keeping an eye on energy consumption. The anti-roll system never uses as much as 1bhp, even when working at its hardest. The car is very undemanding too, as a realistic car should be; and its prowess in doing what I demanded of it, and doing nothing else, impressed me considerably. It should impress everybody else too — particularly in black.

Reprinted from Citroën Frontlines Magazine, Winter 1991.



member's models

Name:
Adrian Schoo.

Occupation:
Physiotherapist, who operates the Bendigo Physiotherapy Centre in McIvor Rd, Bendigo which offers an innovative holistic approach to health care. Adrian specialises in manipulative therapy and acupuncture and his centre carries out workplace injury prevention, education and assessment and 'fast tracking' rehabilitation. Adrian has lectured at universities in Europe and does some teaching here as well; he also contributes occasional articles to Australian Health Review and other journals.
This year he established a second business arm, ProActive Health Publications, focusing on health education and management.

Car:
A yellow and black Citroën 2CV. It is a 1978 model, or thereabouts, but was designed in 1937, during the Volkswagen 'Beetle' era. The resemblance is obvious.
A manual model with the gearstick in the dashboard, the car also has a 2-cylinder 600cc air-cooled Boxer engine which never breaks down, windows which fold up and an unusual suspension system. If the car has a heavy load in the back, the flick of a lever on the dash drops the headlights down to a more appropriate angle.

Top Speed:
'It depends if I'm driving into the wind or not...with a tail wind and going downhill, we get over 100kph.'

Cost:
'I swapped my Citroën Light 15 for this car. It is probably worth $10,000 to $11,000.'

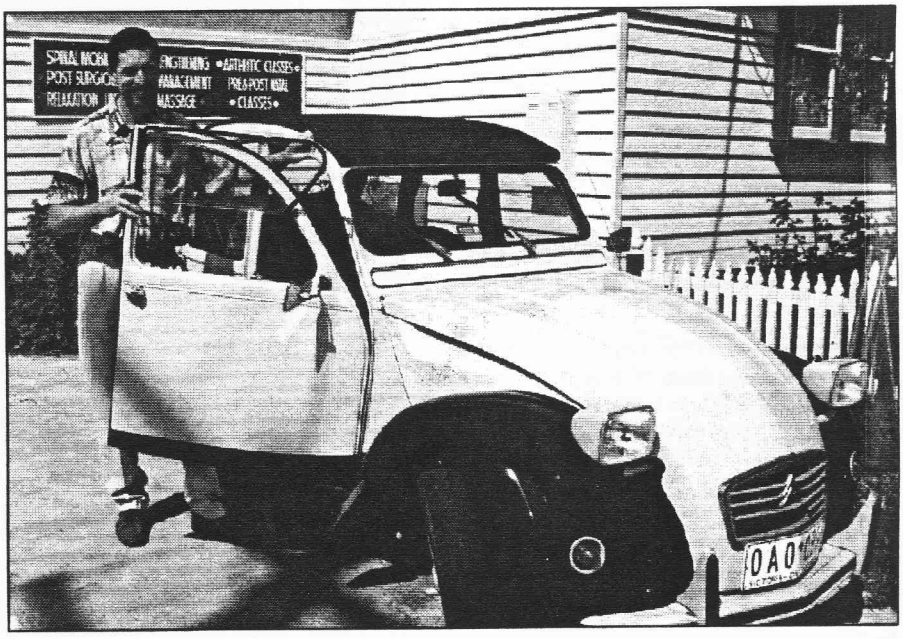
Attraction:
Adrian bought the car 12 months ago because it brought back memories of his student days in Europe, and on the sentimental side he and his wife Madeleine used an old Citroën as their wedding car. He likes the fact that it is a convertible and by opening the roof he can load up the back. By taking out the back bench seat, he even gets his pushbike in. He has also joined the Bendigo Vintage, Veteran and Classic Car Club.
'Another attraction is that it is the opposite of a glamorous car; it's unconventional and down-to-earth, but it's still very different...eccentric, if you like.'

Is it economical to drive?:
'It uses leaded petrol, but I get around 6litres/100km.'

Any problems?:
'The suspension is great – dirt roads and speed humps are no problem! But it does mean the car is hard to jack up; you need to lift it fairly high. A wooden wedge comes as a standard accessory.'
With the emphasis on lightness, everything is pretty basic. But at least now the seats are bolted in, Adrian says in early models they were suspended from the roof.
In fact, the parts are so light, when Adrian visited his mother in Europe he brought back two tyres in his suitcase.

Who would a car like this suit?:
'An eccentric person. It was a standard student's car in Europe for many years, because it's so cheap to run.'

Your next car?:
'We have a 4WD family car as well, as we love camping and exploring. I have no plans to get rid of the Citroën as yet.'



le look français?

What is it that makes up what we like to call French style, something we all seem to recognise but find so difficult to define?

Sebastian Conran, a successful young British designer, and son of Sir Terance, has clear views on the subject. 'There's a distinctive quality to French design and a desire to be new and different. The French public are not scared of new things.'

As this interview was conducted from the front seat of Conran's Traction Avant, cars seemed a suitable place to start discussing design.

The car is parked in the forecourt of the ceramic-faced Michelin building in west London and it was fascinating to note the reactions of passers-by when they saw the Traction Avant. Most stopped, had a good look inside, circled the car and then walked away with a smile and a far-away look in their eyes. Everything about the car is design conscious. Mr Conran clearly loves it, 'It's got a 42 foot turning circle, which is a bit impractical but it's extremely, comfortable, it's nippy and handles beautifully'.

Once inside the car, the comfort and style continue, with plenty of room in the front and back.

'They even produced a bigger version called the grand famille which could seat seven in the back!' and the details are important, wooden ends to the window handles and grey wool seats add to the impression of comfort.

'It can do up to about 70mph and in 1934 when the car first came out, that was very fast! This car is full of firsts, it was the first production car to have front wheel drive, the first to have a monocoque construction.'

Mr Conran smiles the true enthusiasts' smile, 'In fact, André Citroën went broke making the the car and sold out to Michelin.'

That enthusiasm for the new still seems to characterise French design. It runs right through French life, from architectural innovations of huge huge public building projects to the way a waiter serves you a cup of coffee in a French bistro.

That sense of style runs deeper than buildings, it is a sense of the importance of the the everyday quality of life. If a French person stops for a cup of coffee, that moment itself becomes important, it's not just an interval in life. So the quality of the coffee, the way it is served are given value. To be a waiter in France is not shameful, there is no sense of servility, they are doing a valuable job well and regard their customers as equals.

'The French are fashion conscious, not just in the clothes sense but in everything, they like what's new and fashionable.' Indeed the latest fashion is described as 'le look' whether it's le look anglais or le look classique'.

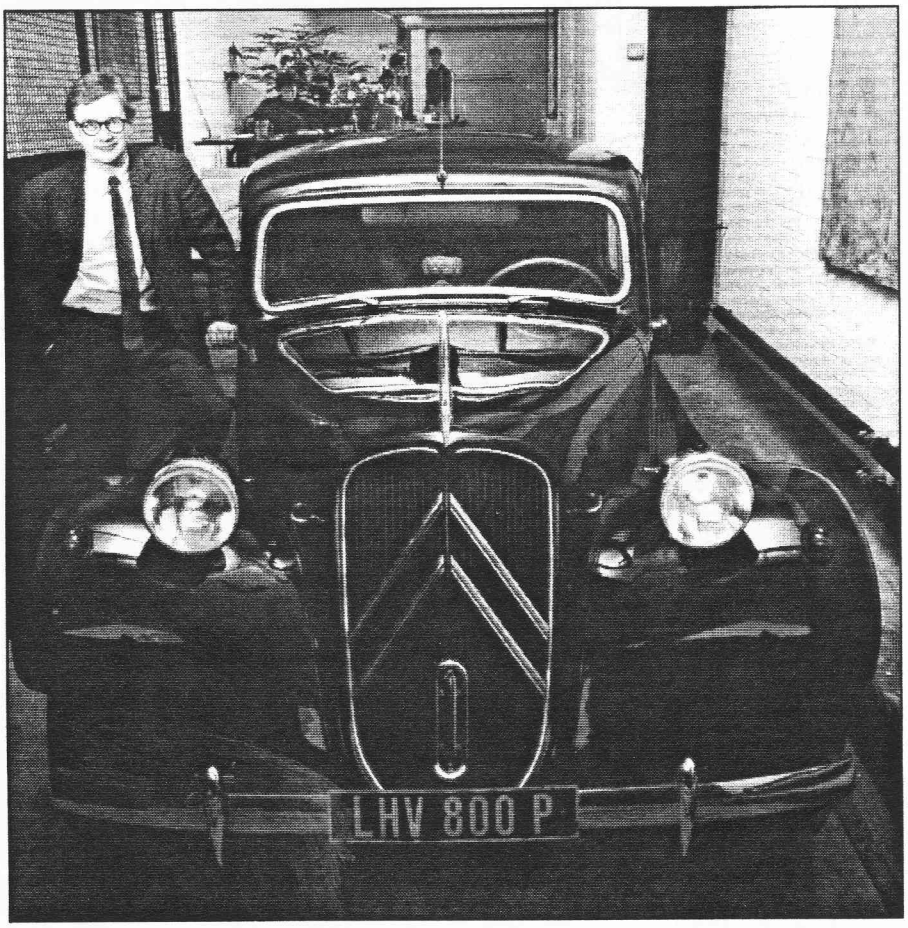
Where does Conran see design going in the future? 'It's important as a designer not to think about it too hard because you get predictable and everything becomes bland. Design is all about making things attractive and the most attractive is not necessarily the most beautiful.'

'A good design is something people want to use. I'm keen on applying the theories of sports equipment design to products for the disabled to improve human quality. Form follows function, projects must be made desirable. Why do walking frames have to be so ugly? An attractive walking frame will mean people are more likely to use them. It seems that the more necessary an object is, the more functional, the less people think it matters what it looks like.'

That seems to be the essential difference between the British and the French. 'Part of the problem is that manufacturers think we're a load of poofs who are good with colour. They resist change and don't see us as important in the creative process at all. But France shows that the new can exist alongside the old.'

'The Traction Avant is a perfect example of good pro environmental design, it's still here, not littering the countryside!'

So what is it that makes French design so stylish? The French love the phrase for the little extra something 'je ne sais quoi' — and it's the je ne sais quoi that makes the difference.



Twin Pot Topics

PRODUCT CHECK — CASTOR OIL

In last 'Front Drive' I introduced you to Holden Spray Grease [part # M39760] as a simple and clean way to apply lubrication to the suspension knife-edges on your 2CV.

However, some squeaking/ graunching continues from beneath 'Mathilde/Truffle', and for this, the Haynes manual suggests lubricating the central suspension unit [spring pot] under each side of the vehicle, using castor oil. The oil is introduced past the rubber concertina gaiter at each end of the spring pot, using some thin tubing, presumably attached to a suitable elevated reservoir or some form of clean pumping device. This should lubricate the internals of the pot.

Haynes do not specify the volume of castor oil to be used, but my guess is that 200-300ml at each end should be plenty [maybe excessive — perhaps an initial trial with less and see how it goes].

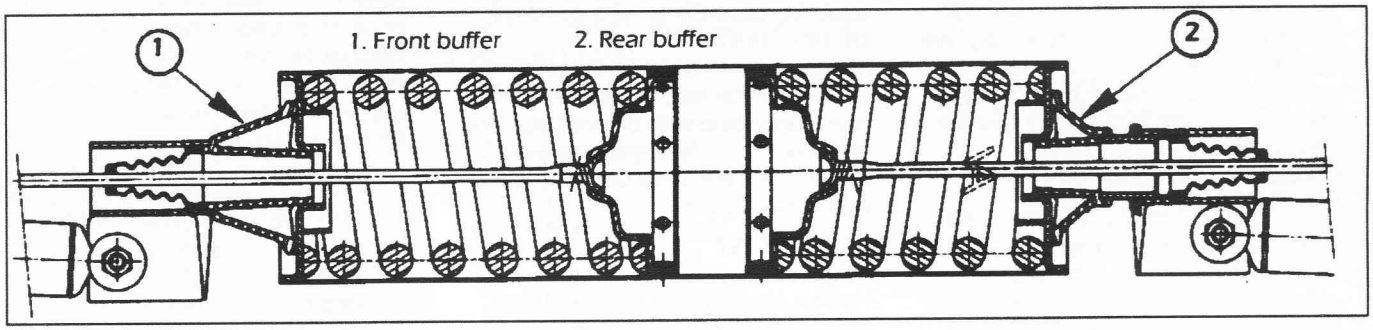
Next thing was to obtain some castor oil. My local supermarket has pharmaceutical grade [laxative] castor oil at about $7 for 200ml. This sounded a ridiculously expensive 'way to go'. I considered other vegetable oils but shied off because of the fear of them forming sticky gums through oxidation.

Roger Brundle [a CCOCA lubrication specialist] suggested trying Castrol, who in turn recommended their Castrol M, which is a pure low-acid olive oil. Castrol R40 while attractive because of its anti-oxidant content to resist gumming, was rejected because its small mineral oil content might attack rubber parts in the spring boxes.

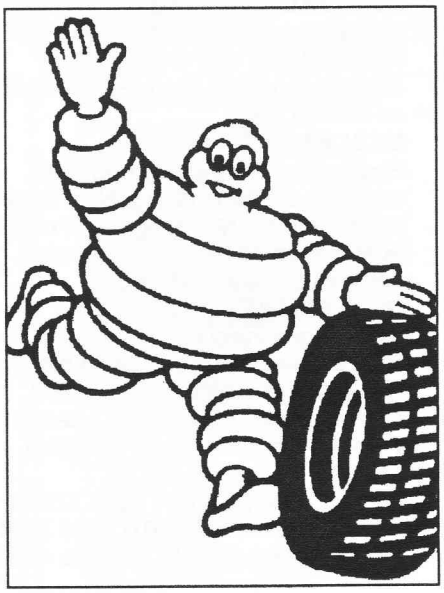
Castrol M is available at $13.80 per litre pack or in 5litre packs for $33. A much better proposition!

The nearest supplier to me is Banlay, 26 Kitchen Rd., Dandenong, Vic. Telephone [03] 9794 7199. I would be grateful for any feedback from readers.

Bill Graham



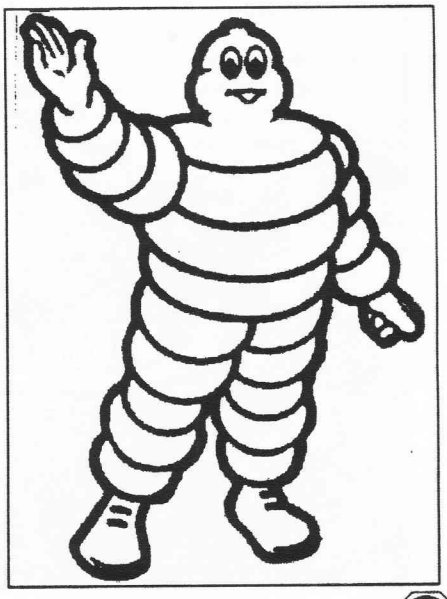
READERS RIGHT



Recently my attention was drawn to the new slimmed down Peter Fitz [Prez Légère?]. Then I saw a news item in the Melbourne Herald-Sun of 5 December, saying Michelin's M. Bibendum has had to be slimmed down [20% off the girth] — primarily to meet the preferences of Asian buyers who buy huge numbers of 'Michies"

Many French are mortified as it may be seen as a rejection of 'their country's love of good food and wine'. President Pete, we know, also enjoys la dolce vita, but his loss of 14 kilos was not a CCOCA initiative to show a lead to Michelin and our northern neighbours. Pete says he was severely leaned on by his insurance company!

Name and address supplied, but with-held by request. Ed.



talkingtechnical

SPARE PARTS OFFICER — MEL CAREY

NEW ITEMS IN STOCK

Grill Crest for Light 15/11BL
Door Hinge Pins — Stainless
Bronze Door Striker Plates
Grill & Bonnet Braid
Screws For Door Handles , Striker Plates & Windscreen hinge
Petrol Cap & Locking Cap for 11BL
Speedo Cable , complete , for L15

SPECIAL FOR NEW YEAR AVAILABLE TO PARTS FUND MEMBERS ONLY

WINDSCREEN & DOOR SEAL RUBBERS

$1 per Metre !!!!!!!!!!!!!!!!!!!!

Yes , Only one dollar a metre until sold out .

TRACTION THOUGHT FOR THE MONTH

"The Citroën is essentially a machine for motoring in, using the phrase in a specialised sense; it is robust and rugged and perhaps a little rough by some standards , but its somewhat vintage character is not spoiled by any desire to remind its occupants of either a gin palace or a stately home".

From the MOTOR

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

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

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

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

PLEASE NOTE NEW POSTAL ADDRESS FOR CCOCA SPARE PARTS

PO BOX 469
Bairnsdale
Victoria, 3875
Australia

You can now use your credit card to purchase your parts

VISA

bankcard

MasterCard

And that means you can now pay for your subscriptions, rally fees, not to mention the all important spare parts in a more convenient way

SPARE PARTS FUND

The Spare Parts Fund members receive a 10% discount on parts purchased through CCOCA Spare Parts, with a new member fee of $100.

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

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

Current members are:

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

CITROËN CLASSIC OWNERS CLUB OF AUSTRALIA INC.

Australia's National Citroën Car Club