

# FRONT DRIVE

AUSTRALIA'S NATIONAL MAGAZINE FOR CITROEN OWNERS AND ENTHUSIASTS

Apr/May 2001  
Vol.25 No 1

Citroën in WRC  
Trip to Churchill  
Island  
D Series Tech  
A-Tractions



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# FRONT



Cover photo: This line-up of Citroëns was taken at the stopoff in San Remo on the way to Churchill Island on Sunday 6th May. Is Phil Ward assessing another potential acquisition?

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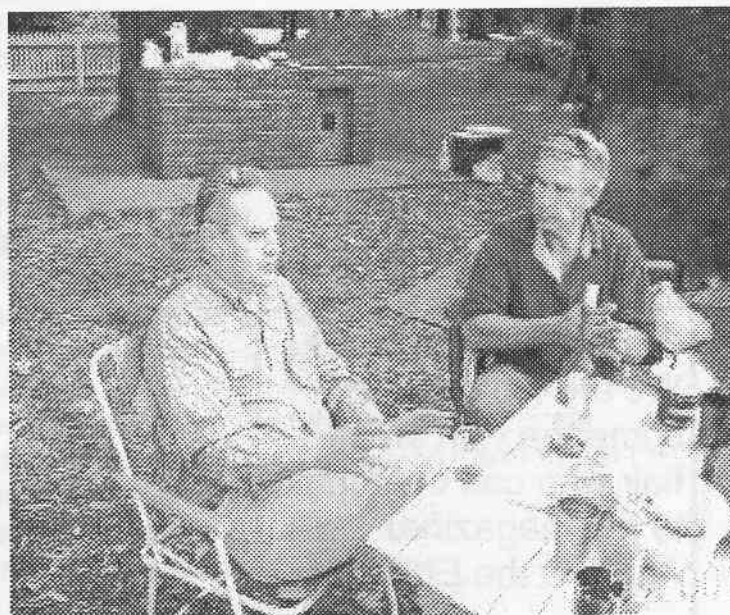
# DRIVE



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### CCOCA Membership

Annual membership is \$35  
For overseas postage add \$9

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

### Club Meetings

Club meetings are held on the  
fourth Wednesday of every month  
(except December) at 8pm.  
The venue is the Canterbury Sports  
Ground Pavilion, cnr of Chatham  
and Guildford Rds Canterbury,  
Victoria.  
Melways Ref: 46 F10.

### Life Members

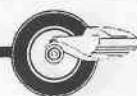
Nance Clarke	1984
Jack Weaver	1991

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# EDITORIAL VIEW

## Thanks you to our contributors of this edition;

Mel Carey  
Iain Mather  
Ted Cross  
Helen Cross

Wanted - cartoonist.  
We are looking for someone with artistic flair who can contribute to the magazine.  
Apply to the Editors.

So far we have had no suitable replies to the last edition. We are getting less fussy and may consider someone who draws men wearing tights.

You may have noticed that the previous edition landed in your letter box only a couple of weeks ago. And now you have another edition. No, Front Drive isn't going monthly. This is a game of catch up. The previous edition was running a little late. This one should be closer to on time.

One of our goals is have the magazine in your letter-box prior to every second meeting... Its going to be interesting to see how successful we are in doing this.

We are much more established now. Leon Sims and Graham Barton have both visited us and worked hard to set up our computer (and us!) so that we are better equipped for the job. We want to thank them both for their help.

Last month we failed to acknowledge Mel Carey's contributions to the magazine. Mel contributed several articles to the magazine, most notably he wrote a safety bulletin highlighting the hazards in the Traction braking system. In this edition, Mel has contributed the Citroën rally article. The omission was simply an oversight on our behalf.

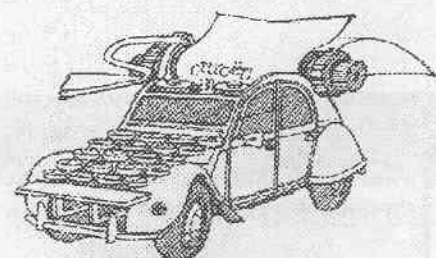
Worth mentioning also is a film that has recently reached our cinemas. **The Goddess of 1967** is as you can imagine is about a 1967 DS. From what I have heard, it's an art house road movie set in Australia, and a fairly good one at that. We hope to see it soon.

Further into Front Drive is a letter passed on by Leon, the former editor, from a fellow Citroën enthusiast in the United States. Can anyone help him out?

For those of you who have said positive things about our first issue, and provided constructive feedback, a big thank you.

Cheers

Ian Sperling & Andrea Fisher



Logo courtesy of 2CV Suisse Romande Dec 94



# PREZ SEZ

It has been a busy few weeks in CCOCA. The AGM saw the arrival of a great new committee. Welcome to you all. Special thanks to Andrew and Frances McDougall who have taken on Club Shop, also a very warm welcome to Bert Houpten from Burwood New South Wales who has volunteered to be our NSW State co-ordinator. We have many NSW members so I hope to organise another social meeting similar to the one Peter Fitzgerald arranged a couple of years ago.

The members who managed to visit South Australia this Easter Cit-In were rewarded with a great event, and as usual meeting up with friends from all over Australia was the highlight for me. Helen and I took our CX GTI Auto which proved an ideal

Choice. The ride and handling of the big Cit just gets better the faster you go - my sort of car !! It also helped us avoid an almost certain high speed accident with another car veering into our lane from the other side of the highway. Even Helen admires it now. Another social event to Churchill Island has been well supported and further events are being planned.

Whilst this sounds as though we are not missing a Social Director I can assure you we are. If you feel like giving us some time to assist with even one activity we would appreciate your involvement. Future club activities may need to be reduced later in the year depending on what assistance is forthcoming. Andrea and Ian have this magazine out on time to en-

sure timely issues for the rest of the year. Club members' cars will be a feature I'm told, so tell them about your car, and they can let all members know the background too. The June long weekend is set to be a sensational event thank to Steve and Iain. The numbers are almost at a maximum but call Steve ASAP on 9696 0796 if you would like to come along.

This year our Bastille Day celebrations will be with CCCV and probably on Sunday 15th July, the day following the actual date (14th). More details soon. The Big 6 was back on the road today for the first time in six months, so life is sweet !

Regards  
Ted Cross

This article was sent to us by Iain Mather from The Age  
26/04/01

## Open windscreen was a real breeze

One idea from the past that I thought was a great idea (*Drive* 12/4) was the windscreen opening outwards, like the Citroën Light 15s had in about the late 1940s/50s. Our family had an English-built one made in Slough. It cooled the car down, and getting a stream of air on your face I am sure stopped one falling asleep at the wheel. If cars today had this feature as well as air conditioning, many people would use it still. Quarter vents seem to also not be in use and yet they too let a breeze through the car. I enjoy *Drive* each Thursday; keep up the good work.

Leon Haskin  
Richmond.

## CCOCA E-mail Hotline

Could all members who have access to Email please, forward Ted and Helen Cross with their address, either work, home or both so that we can add them to a central register.  
[crossfam@ozemail.com.au](mailto:crossfam@ozemail.com.au)

Members will then be informed of upcoming events, news and all the hot gossip!

(This is a really good service. Its saved me from turning up at events that were cancelled at the last moment. Ed)



# A-TRACTIONS 2001

## **May 23rd at 8pm Monthly meeting**

At the Surrey Hills Clubrooms. The topic of the night is driveshafts.

## **June 8-11th Austraction in the Grampians**

Steve promises that it will be better than Swan Hill! Booking form and information were in the last issue. If you haven't booked in yet its probably not too late, so phone Steve Bartlett now. Come along and have a good time.

## **June 27th at 8pm Monthly meeting**

At the Surrey Hills Clubroom. Trivia night (with a twist) See you there.

**July 15th Bastille Day Dinner-with CCCV.** Location and details to be announced

## **July 25th at 8pm Monthly meeting**

At the Surrey Hills Clubrooms. Citroën electricals, the details are shocking

## **August 25 at 8pm Monthly meeting**

At the Surrey Hills Clubrooms. Enjoy a blind wine tasting with cheese. Once again by popular demand

## **October 20 Pre Concourse Dinner**

Venue and details to be advised

## **October 21 Joint Annual CCCV/CCOCA Concourse**

Date to be confirmed. More details later

## **October 24 at 8pm Monthly meeting-Instruments**

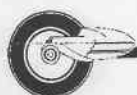
Away from the Clubrooms. Location to be advised

## **November 28 at 8pm Monthly meeting**

The last monthly meeting for 2001 at Surrey Hills.

Social night, Bring & buy Citroën auction. Food and drink provided.

Some events are subject to confirmation and further events are being considered, but are not yet scheduled. We will advise you of changes ASAP.





# Trip to Churchill Island

Who says Phillip Island is cold, wet and windy? The club's **Winter Warmer** run to Churchill Island (just off Phillip Island)

was exactly that - warm, sunny and hardly a breath of wind. Very pleasant weather for a barbecue, a chat and a walk.

An impressive array of vehicles travelled down in convoy, with others joining us on location. Citroëns included five tractions, three 2CVs, two Ds, an Ami6, a GTI CX, a Xsara and a Berlingo van, as well as some other marques.

Much of the drive was slightly foggy, but half-way across the San Remo bridge the skies cleared and all was beautiful. Phillip Island and Churchill Island were bathed in sunshine, and several people found that their woolly jumpers were not so necessary after all.

The atmosphere was warm and friendly too. We started with a relaxing picnic lunch around the BBQ. Some people toured through the historic farm house and out-

buildings; some went for a walk around the island to enjoy the scenery and walk off their lunch. Those who had



previously been traumatised by the vertical hike at Mount Hotham were no doubt relieved that the paths around the island were quite flat and short and easy. Was Christine making up for last

The outing was well supported, and it was especially good to see new members John and Leanne Bolger and their daughters, and Barry Teesdale and Loretta Hambly and their friend Amanda de Joinville. Also present were Helen and Ted Cross, Peter and Christine Sandow, Jenny and Kirk Kirkcaldy, Sue Bryant, Phillip and Maree Rogers, Sue and Mark McKibbin and their little daughter Lexie, Robin and Sue Smith, John and Trisha Fleming, Iain Mather, Steve Bartlett, Hazel and Peter Hore, Dominic Lowe, Ian Sperling, Andrea Fisher and son Ross.



time - or was she luring us into a false sense of security for next time..?

Helen Cross  
& Andrea Fisher



# Suspension of Disbelief?

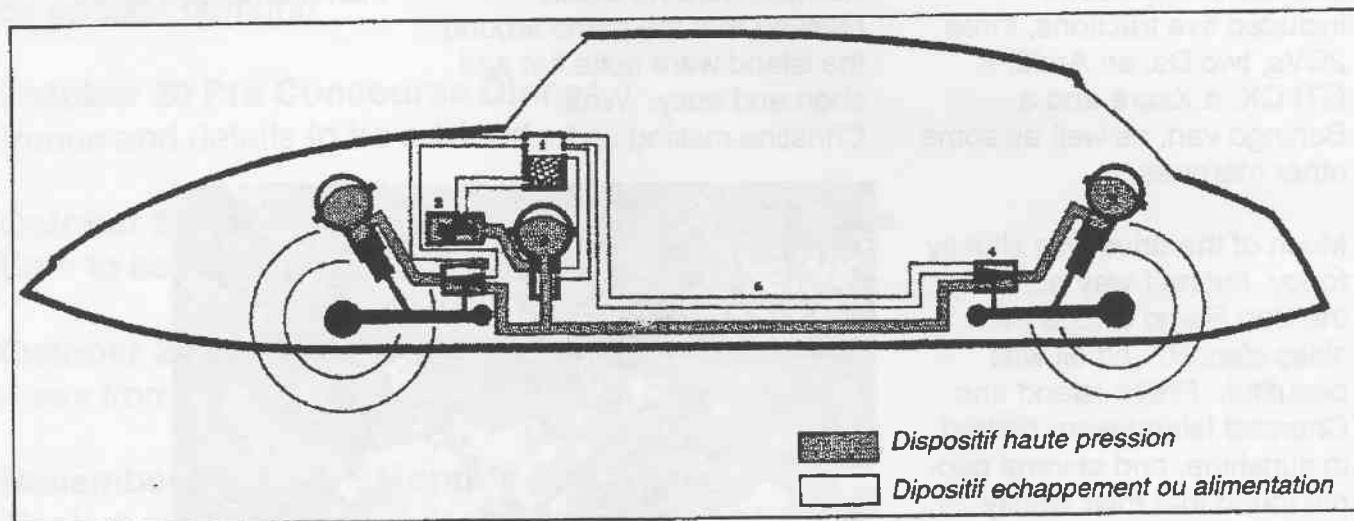
The D series has never existed in isolation, technically and functionally it shares its design ethos with many other Citroëns, and it is only through considerations of 'style' and 'image' that some people adore it whilst ignoring all other products of the marque. I was reminded of this recently when Julian Marsh sent me some technical information on the C5 with a request to analyse and comment on it at some point. This I am in the course of doing, and my deliberations will ultimately appear elsewhere in the Citroënian; however as the most noteworthy aspects of the C5 seem to be the developments with the suspension and braking systems, it occurred to me that these are best understood in comparison to what has gone before.

It is accepted that the techniques that embodied in the DS work exceptionally well, and after almost half-a-century and countless fleet Xantias, even the sceptics admit that the system is basically reliable. Previously, I have described the operation of the components in some detail, and from this and other sources, no doubt those of you with a technical bent will have a fair idea how the hydraulics on your D work.

Beyond all this, however, lies the fundamental question: why did the Citroën 'bureau d'études' create this technology in the first place, and what advantages does it possess over more conventional solutions? The answers are not as obvious as you may think, but they

sharing the same basis. The 'original' hydropneumatic system, initiated on the DS, also appears on the ID, SM, GS/A, BX, most Xantias, lower-specification European XMs, and certain specialized applications (who mentioned the M35?) This has been supplemented by Hydractive, fitted to all UK-market XMs, and the remaining Xantias, with the exception of the Xantia Activa, which embodies the eponymous third version of the system. The consistency of the engineering design is such that everyone familiar with the first DS would be entirely at ease with any hydropneumatic car, and would not find the later versions entirely alien.

Hydropneumatic suspension incorporates several worthwhile

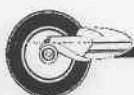


It is common knowledge that the 1955 DS represented the first Comprehensive application of a centralised high-pressure hydraulic system and hydropneumatic suspension. (The immediately preceding 6H Traction Avant was effectively a test-bed for elements of the new system).

constitute the basics of the use of hydraulics in successive Citroëns - including the C5 - it is opportune to examine the question.

The Citroen hydropneumatic suspension system currently exists in three production forms, all

features, but if I were to say that in my opinion the fundamental reason for its existence lies in its ability to provide infinitely rising rate springing you would probably be little wiser. To clarify this, let us look at conventional steel springs - these may be coil (which compresses), leaf





(which bends), or torsion bar (which twists) - but in each case, when a load is applied, the spring deflects in direct proportion. Think of the traditional spring balance - hang a one pound weight on it and spring stretches by (say) one inch; two pounds results in two inches and so on. Although, there are ways to alter their characteristics to some extent, all steel springs react in essentially the same way. Overdo it, and the spring fails to return, taking on a permanent new setting; beyond this, it will ultimately break.

On a vehicle, bump stops are incorporated to limit suspension travel and keep it within the safe operating range of the springs; but if a loaded vehicle is driven over a bump in the road, the additional movement of an already deflected spring may result in 'bottoming' - a sudden impact on the bump stops.

Obviously, the ideal would be for the suspension to become stiffer (i.e. more resistant to deflection) as the load increases. Technically, this is called 'rising rate' suspension; steel springs are essentially 'constant rate', the 'rate' referring to the spring's resistance to load.

Gas possesses the desired characteristic, in that the more it is compressed the harder it becomes to do so. Anyone who has ever blocked the outlet of a bicycle pump with their finger and then tried to compress it will recognize this effect! If the gas is sealed in with no means of escape, then you have the basis of a spring of 'infinitely rising rate', because no matter how much load is applied, it is impossible to compress gas into no space at all. (Inflate a balloon to about three inches in diameter, then try to squeeze it flat in your

hands - you cannot!) So, given that it is advantageous to use gas as a suspension medium, it must be contained in a way that allows a load to be applied to it. If a piston within a cylinder is used, there will always be some leakage past the piston; it is logical to contain the gas behind a flexible seal and apply the suspension loads to this. At the

**Why did the Citroën 'bureau d'etudes' create this technology in the first place, and what advantages does it possess over more conventional solutions?**

same time, it is useful for the gas to be pre-compressed (even before a load is applied) to reduce its volume to something practicable, and also to reduce the amount the flexible seal will need to deflect. Finally, the gas itself should be inert, because the act of compressing it generates heat (which is why the bicycle pump gets warm!).

In production form, the resulting thick-walled steel vessel containing inert nitrogen gas at high pressure maintained by a flexible diaphragm, is familiar to us all as a suspension sphere. Other than a change in constructional technique from a two part screwed assembly (D series) to a one-piece welded unit subsequently, and differing charging pressures (35-75bar/500-1100lbs/sq, in) for various applications, the sphere remains essentially unaltered. This is the Citroën suspension; in principle, the remaining components serve only to transfer the load from the road wheels to the gas. Although it is theoretically possible to transfer loads to the diaphragm mechanically via a pushrod, the use of a fluid serves the same purpose more conveniently and evenly; fluid is effectively incompressible, so suspension move-

ments will be accurately conveyed to the diaphragm. The fluid is contained in a cylinder with the sphere at the top, and a piston - linked to the suspension arms by a pushrod - at the bottom. (The assembly may equally be arranged horizontally in the case of the rear suspension). Assuming that the suspension leverages are

correct - so as to convert a large wheel travel into a much smaller pushrod movement at a higher load - and there is a damper

valve in the sphere 'neck' to restrict fluid flow and thus reduce oscillations, we now have a functional suspension system. It will work in this form, as can be proved by 'bouncing' your D by the bumpers when the engine has been switched off after a run. There is suspension travel, which becomes firmer with greater movement, and there is considerable damping. (You can stop that now!)

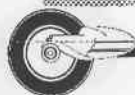
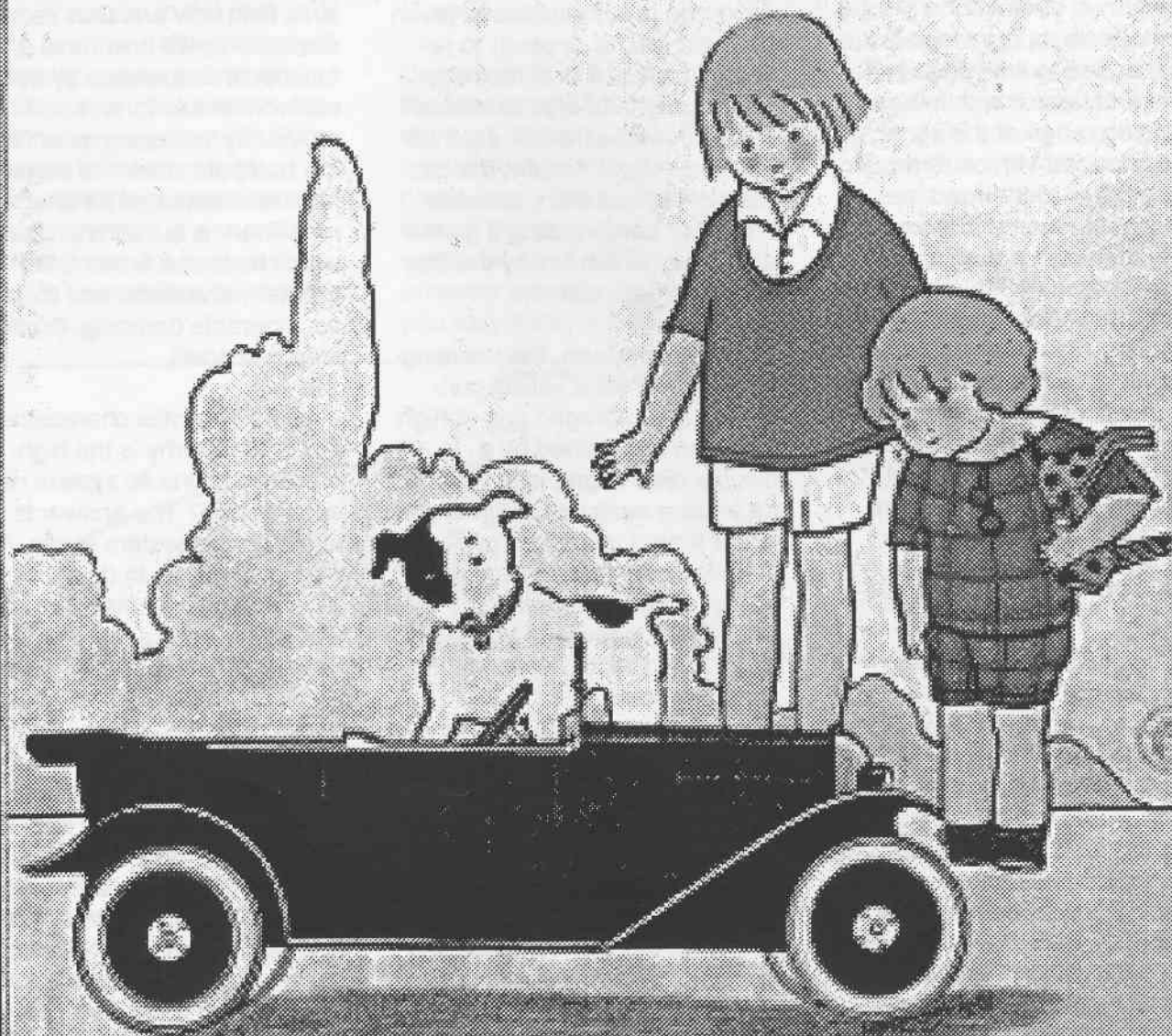
If all the essential characteristics are present, why is the high-pressure hydraulic system necessary at all? The answer is that although the system works, it will not continue to do so for long; just as we noted that gas would leak past a piston (hence the use of a diaphragm) so to will fluid, and a means to compensate for this is required. How this is achieved, and the significant benefits that are almost incidentally created by the solution, will form the next article in this series. You may never look at Citroën in quite the same way again, and we'll even involve one or two other manufacturers!  
Citroënthusiastically  
Nigel Wild

From The Citroënian February 2001





# LES JOUETS CITROËN





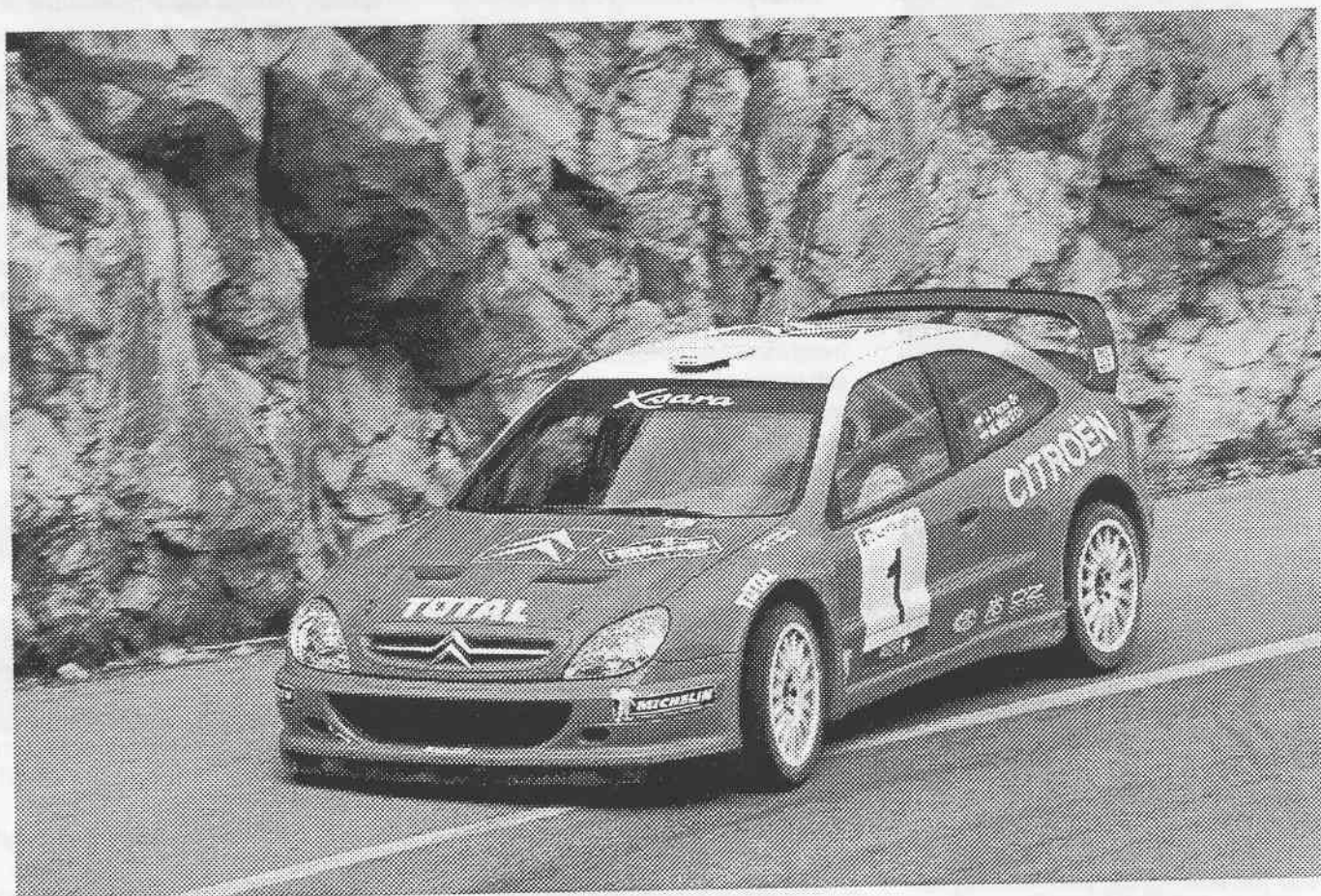
# SO NEAR BUT SO FAR FOR CITROËN XSARA WCR'S FIRST WORLD CHAMPIONSHIP OUTING

Citroën came with in a hair's breath of an outstanding first time out Win in the World Rally Championship with its new Citroën Xsara Coupe World Rally Car, after it dominated the Rally Catalunya in Spain at the weekend.

formance by the Citroën team, victory remained out of its grasp. First Puras fell foul of a fault in the hydraulic clutch and then on stage 14 Bugalski suffered the same problem. Unlike Puras, Bugalski was able to get going again and put in

our critics who said our victory in 1999 was a one off event."

Commenting on the problem that robbed him of first place, Bugalski said, "The clutch problem caused me to loose three places right near



Philippe Bugalski - 1999's winner in the two wheel drive Citroën Xsara kitcar - and Jesus Puras dominated the three day tarmac event from the first stage with Puras leading from stage one to stage eight and Bugalski at the front from stage nine to stage 14. On 17 stages - one stage was cancelled - Puras and Bugalski set first or second fastest 19 times in an outstanding debut for the new Citroën that has thrown down the gauntlet to all the other manufacturers.

But despite this superb debut per-

the sixth fastest time on the stage, but despite finishing 1/2/2/1 on the final four stages, it wasn't enough to get him back on the winners podium, with Citroën team finishing in fourth place.

"This result is obviously disappointing," said Bugalski at the finish. "But only in part because the Xsara showed that it was highly competitive over the three days. I am happy too because I stayed at the front for most of the rally. We had the cake, but not the cherry on top! Our performance here has also allowed us to silence

the finish. It's a shame but that's how it is in sport. We finished many other races without any trouble at all. Then a little problem occurs and puts an end to a rally. It's such a shame, but that's life."

Team Manager, Guy Fréquelin, was also disappointed with the final result, but overall he was pleased with how the Citroën Xsara had performed. "Other than for the one fault, the Citroën Xsara WRC has gone straight to the front. Now we aim to keep it there!"





## The Serviceable D Part 6

The final service interval is at 18,000 miles; the mathematicians amongst you will realize that the most major service possible on a D occurs every 36,000 miles, when all the servicing intervals coincide! Taken on its own, there are but a few tasks; nevertheless, you will not complain of boredom...

### Every 18,000 miles:

Renew the fuel filter on fuel-injected cars—this is located behind the right hand sill cover panels, and is a non-serviceable plastic box; the Bosch replacement should be fitted with the arrows on it facing forwards.

Parking brake adjustment may be carried out from underneath the car. Having carefully chocked the rear wheels and supported the front of the car to allow sufficient access, remove the unpainted steel undertray to permit access to the underside of both calipers. Ensure that the parking brake is fully released. The parking brake pads are located to the rear of the discs and there is an adjuster for each individual pad. Each has a locknut and adjuster bolt—on earlier cars these were 16mm and 14mm (in which case the 16mm spanner used may need to be ground thinner it to fit the inner pad locknuts as these are very close to the gearbox casing); on later cars both are 14mm.

Release the locknut, insert a 0.1mm (0.004in) shim steel strip between the head of the adjuster and the back of the pad, and adjust the bolt until the shim is just 'nipped'. The shim should be about 1 inch by 3 inches; it is pointless attempting to measure between pad and disc because of the grooves almost invariably worn in both! It helps if there is sufficient friction material left on the pads before adjusting them—the slotted finger on each pad (pointing downwards) serves as a wear indicator, often touching the disc when the pads are worn out. Replacement is a lengthy job, so do not skimp on regular maintenance to ensure optimum pad life!

It is well worth checking that the levers on the calipers actually come

back as far as possible when released; it is more than likely that some crafty servicer has previously 'adjusted' the handbrake by adjusting the cables! This should never be done—it greatly reduces the leverage efficiency, to no ultimate advantage. The cable adjustments are purely presets to take up slack—not apply tension!

Finally, on refitting the undertray (after cleaning it and retrieving all the 'missing' components/tools) ensure that the foam rubber pad is in place against the hydraulic pipes to prevent chafing.

Drain and refill the hydraulic system. This is not as forbidding as you might imagine; it just requires care. With the engine off—preferably after a long run to get the fluid as warm as possible—set the manual height control to low and allow the car to settle completely. It is useful to the rear wheels resting on blocks—or even ramps—to ease access to the rear suspension boots. Release the bleed screw on the main pressure regulator (below the l/h front suspension sphere)—about quarter turn. Note that on EFI cars the regulator is mounted on the l/h side of the gearbox and the air duct must be removed to gain access (see 6,000 mile service).

Actuate the steering until it becomes very heavy; operate the brake button until it feels slack. Squeeze each of the rear suspension boots firmly but slowly (no smiles please!) until you feel the fluid has been evacuated; wait a few minutes to allow all the fluid to return to the reservoir. Drain the reservoir by unclipping the tube from its from its side, removing the end cap from the tube and using an extension tube to drain off the contents (about 10 pints). Keep the fluid away from the brakes! Set this up and allow to drain (lunch break?) You will then discover in the bottom of the reservoir a quantity of unspeakable black residue which must be removed; this can only be done with syringe, patience and finally a non-fluffy cloth, until the bottom is scrupulously clean. Anything left only contaminates your expensive new LHM! Clean the filter (see

6,000 mile service).

Refill the reservoir and start the engine; a loud 'clattering' noise emanating from the high-pressure pump indicates that it is cavitating, i.e. sucking air—prime the system by simply removing the pick-up pipe from the main reservoir, inserting it and pouring some fluid into it. When the pump starts to draw fluid, quickly plunge the pipe into the reservoir and clip in place.

You may have to bleed the system at the regulator bleed screw (i.e. loosen—wait briefly—retighten gently) several times to remove air if the car will not 'lift' after the fluid change. Once it does, remember to check that the fluid level is between the MIN and MAX marks with the suspension in the high position. This completes the fluid change and the system bleeding; brake bleeding is a separate operation, which I will hold over until the next installment, amongst other miscellaneous service items.

The final part of the service is to adjust the rear brakes—you may not believe this, but they are entirely conventional! Use a hexagonal socket or ring spanner (in preference to bihexagonal) to avoid 'rounding off' the adjusters—these are often very stiff. It is worth removing the drums (two countersunk Phillips screws) having backed-off the adjusters (move spanner upwards) to check both lining and cylinder condition. Free off and lubricate the adjusters; set these 'in' until you refit the drum. This operation is carried out so infrequently that it as well to be certain that your work is having the desired effect; D series rear brakes tend to 'stick' due to lack of serious use (put ½ ton in the boot). Incidentally, the brake linings are meant to be short in relation to the shoes, which differ in width between saloon and Safari, the later being the wider. Citroënthusiastically  
Nigel Wild

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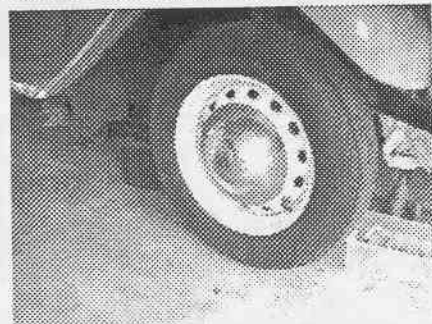
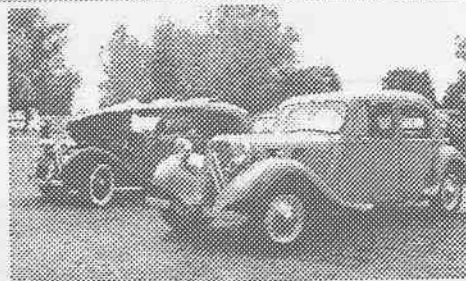
## Letter to the Editors

Dear Leon,

As editor of the Front Drive, I'm hoping you can help me locate some Citroën parts. I live in Los Angeles, California and I'm president of the Citroën Club here so I get to read Front Drive before it gets passed on to our editor. A year ago, I acquired a 1938 Light 15 that came out of New Zealand (picture attached). I had planned on some movie work and started dressing it up but I ran into a problem when I took the hubcaps in to be rechromed. One of the caps disintegrated in the dip tank and another came back less than perfect. I'm hoping that you may have knowledge where some of these early hubcaps still exists and can be bought (editors tend to be the clearing house of all knowledge worth knowing). Attached are two pictures of the wheel and cap. They are the pre-pilote types that snap onto a 6 inch (152 mm) retaining ring. The car had both the early French and British types, the only difference being how the outer shell was made, two piece versus one piece. If any of your members might have two to sell, please let me know. I'm also looking for another wheel identical to the one shown for the spare tire. These are the 400 mm size. I'm intrigued by the wire wheels that Peter Sandow offers. Does he have a web address? Do any pictures exist on the web of these wheels? Are they made locally? The only wire sets I've seen were the French aftermarket pattern (big center cap with short wires) and a set on an ex-Jamaican Ambassador Light 15 that came to one of our meets. It had a set of 16 inch British wires with knockoffs. I don't know how the spline adaptation was done for the knockoffs. They certainly gave the Traction a British look.

Thanks for the assistance.

Chuck Forward



## Spare Parts Fund Members

Alain Antonius  
Graham Barton  
Andrew Begelhole  
Chris Bennet  
Paul Bishop  
Peter Boyle  
Ron Brookes  
John Buckley  
Roger Brundle  
Walter Burkhardt  
Mel Carey  
Gerry Carson  
John Couche  
Jeff Cox  
Sam Crisi  
Doug Crossman  
Mark Douglas  
Jon Faine  
John Fleming  
Jason Glenn  
Bryan Grant

John Grieve  
John Hawke  
David Hayward  
Paul Hibberd  
Ray Hobbs  
Peter Holland  
Geoff Hooler  
Michael Hort  
Jean-Pierre Jardel  
Fred Kidd  
Rod Koffijberg  
David Law  
Robert Little  
David Livingstone  
Iain Mather  
Ian Macdermott  
Andrew McDougal  
Leigh Miles  
Derek Moore  
Mike Neil  
Richard Oates

Gerry Propsting  
Alec Protos  
Darian Pullen  
Keith Radford  
Phillip Rodgers  
Barry Rodgers  
Alexander Scales  
Warren Seidel  
Peter Simmenauer  
John Smart  
Robin Smith  
Barry Teesdale  
Mark Vickery  
Brian Wade  
Bill Wellwood  
Hughie Wilson



# CCOCA Classifieds

## For Sale

Refurbished Traction Gearbox  
Complete with bellhousing,  
gearbox, belt pulley, etc etc.  
Ready to install  
Price \$2,000 Ring Gabriel (02)  
9523 1364

## 5CV Motor & Transmission

Complete motor & transmis-  
sion for a 1920s (?) 5CV.  
Estimated 950cc. Includes  
starter,  
generator & carburettor  
(however the magneto is  
missing).  
Expressions of interest in-  
vited.  
Martin Bray (M & W Bray,  
Citroën Dismantlers)  
Ph (08) 83383 6207

## Essential Traction Tools

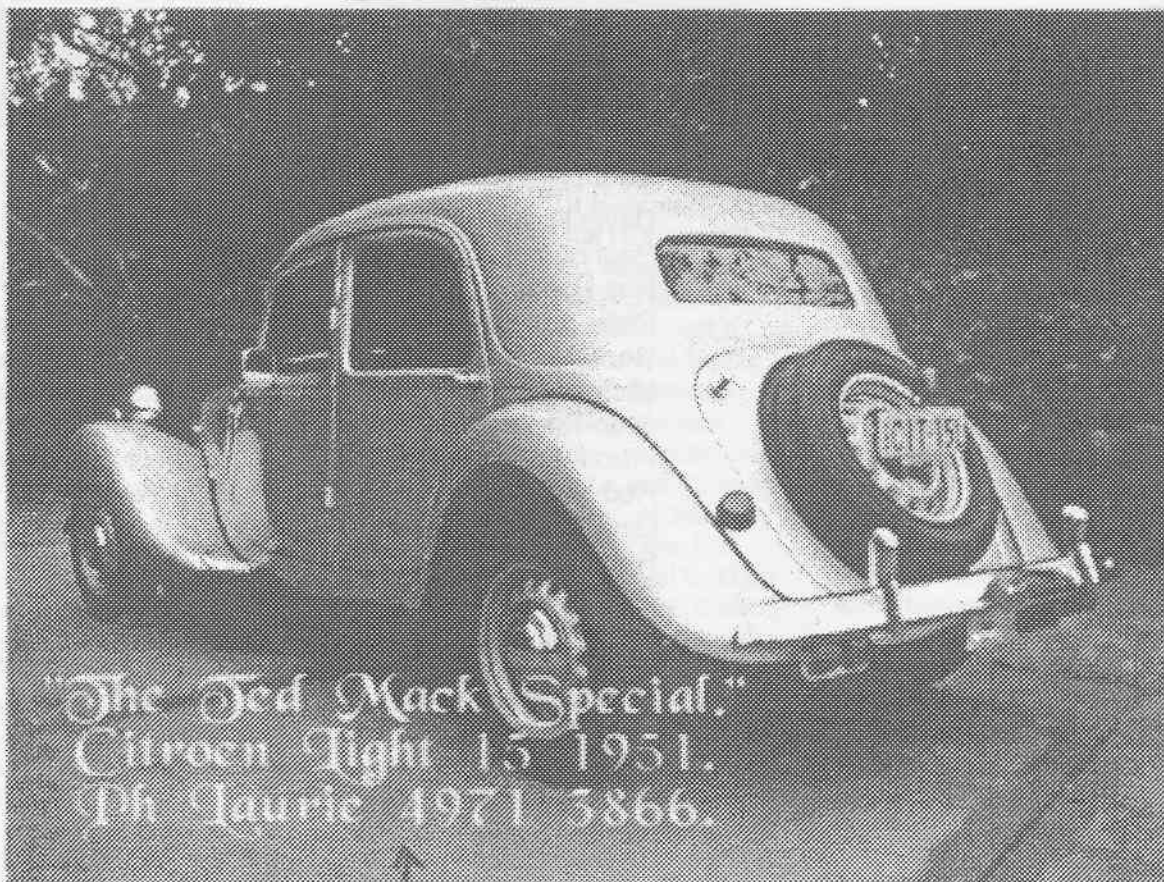
Hub nut socket & bar (3/4"  
drive); Hub puller with collets for  
outer bearing; Inner driveshaft  
nut (castellated) spanner; Up-  
per ball joint puller; Lower ball  
joint puller. Will deliver Mel-  
bourne metro area. \$450 ex.  
freight Peter Simmenauer  
Ph. (03) 9877 0141.

**Citroen Light 15, 1951.** This is  
Ted Mack's car (Ted was Mayor  
of Nth Sydney and independent  
state MP). The car is in good  
condition and is a 4-speed D  
conversion. Offers of interest  
are invited.

Contact Laurie Gough,  
15 Northcote Ave, Swansea  
Heads, NSW 2281  
ph. (02) 497 13866  
CIT 15L  
See Photo below

## For Sale

1938 BL chassis No 417867  
Built approx Nov/Dec.  
Total engine rebuilt and bal-  
anced  
Gearbox with new crown and  
pinion #10x31#  
New radiator: refurbished car-  
buretor: Rebuilt brake system:  
master cylinder, shoes: Exhaust  
system full length s/steel: Drive  
shafts rebuilt: New bearings in  
all wheels: 5 Michelin wheels  
(pilot) with brass nuts: 5  
165x400 near new tyres: Cloth  
upholstery of the era: Wool car-  
pet of the era: Gunmetal grey  
metalised as per factory: Rep-  
lica driving lights plus etc etc.  
Drive anywhere anytime.  
Reg NO GD 649 Price \$20,000  
Ring Gabriel (02) 9523 1364





# CCOCA Classifieds

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

## 1982 Citroen CX 2400

### Prestige

ZF Auto, A/Con. LPG.

231,000 miles

Rust in doors

Green in colour

Tan velour

\$5,250.00 ono Geoff Hopkins

0408 595 328

## BX19Gt

\$1,000.00

Geoff Hopkins 0408 595 328

## 1976 Citroen CX 2000 Safari

QRR-269

Ph. Frank Oldham

03 5348 2319

**2CV6 1975.** Mech. excellent, any test. Rust taken out properly, new original blue paint, upholstery, sleeves and pistons, have all receipts and photos of restoration. Reg. to Sep. 2001, nothing to spend. URL 509. \$11,000 ono. Joe Schembri (02) 9629 1573 mobile 0418 281 755

## 1955 Citroën Traction Big 15

Slough Built, fitted with ID19 Engine & Gearbox, Excellent Condition and a pleasure to drive. This Black Beauty has red leather interior, full history of vehicle from new, spare ID Engine & Gearbox, many new & second hand parts. \$15,500.00 ONO Contact (08) 9377 7365

## TRACTION RESTORATIONS AUSTRALASIA

4 cyl and 6 cyl Traction reconitions and gearboxes.

Short or long engines, standard or modified.

Reconditioned ID engines and gearboxes, short and long.

Reconditioned 4 and 6 cyl Traction front ends, complete.

Reconditioned 4 and 6 cyl Traction front ends, silentblocs only.

Reconditioned 4 and 6 cyl Traction and ID water pumps.

Reconditioned brake master and wheel cylinders.

Relined brake shoes.

Part engine rebuilds to customer requirements (top or bottom end. Reconditioned driveshafts, 4 and 6 cyl Traction with modern CV joints. All the above are offered on a change over basis. Carey Motors P/L

Phone Mel on (03)5152 1040, Mob: 0427 526 126

Or Fax (03) 5152 2615

## For Sale

### 1951 L15.

Grey in color, technicolor in character. All the charm of a French damsel.

Club plates CH4986, Artillery style wheels, sunroof, leather upholstery.

Very original older restoration.

A little TLC & more on road use would invigorate this damsel's enthusiasm.

Asking \$8000

Offers to Leon

on 03 9583 3972 ah

Australian Clothing Company  
102 Rupert Street  
Collingwood 3066  
Office Phone: 9412 9500  
Direct Phone: 9412 9525  
Mobile: 0412 348848  
Fax: 9412 9501

**2 x new 165 x 400 tyres,** suit TA, perfect condition. Best offer.

Peter Simmenauer

Ph. (03) 9877 0141.

## For Sale

**Now only \$300.00**

### New twin Manifolds for Traction Avant

Cast from an original after-market manifold which utilises two standard carbs. This manifold has been tried and proven to give excellent results.

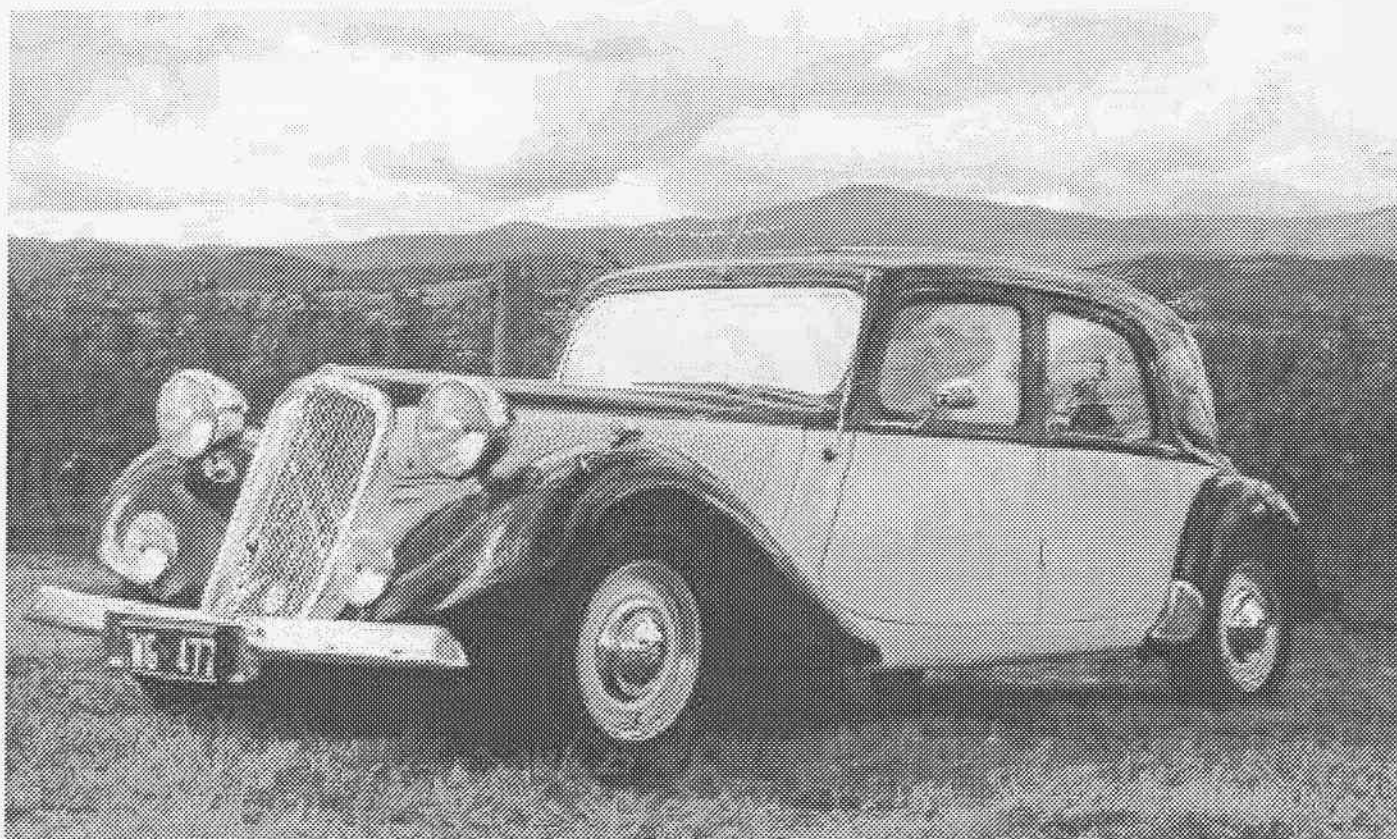
Enables you engine to perform better, make use of the extra power or fuel economy depending on your driving style.

\$300.00 fitting extra. Phone for a free quote.

Carey Motors 03 5152 1040



# CAREY MOTORS PTY LTD



## Citroën Authorised Service and Parts Agent

Telephone (03) 5152 1040  
Fax (03) 5152 2615  
Mob 0427 526 126  
P.O. Box 469 Bairnsdale 3875  
Forge Creek Road Bairnsdale,  
Victoria, Australia 3875

A.C.N. 080 560 327

