

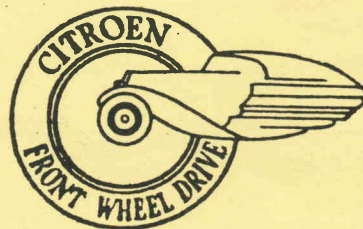


*FRONT DRIVE Volume 13 No.3 Spring 1989
Registered by Australia Post Pub No. VBH 2127*



We're sorry, too...

but, meantime, we
wish all motorists a
Merry Xmas and
hope the New Year
will bring better home
deliveries of



CITROEN

CITROEN CARS LTD. SLOUGH BUCKS.

Phone : 23811. Grams : Citroworks, Slough.

Whilst every effort is made to ensure the accuracy of information and advice in this magazine and in replies to readers queries neither the Citroën Classic Owners Club of Australia nor the officers and members thereof nor the authors accept any liability

W

Wanted: New or good S/H "T-toggles" that retain Lucas headlight rims on Traction etc etc.
Bill Graham (03) 232 0961.

Hate Ad

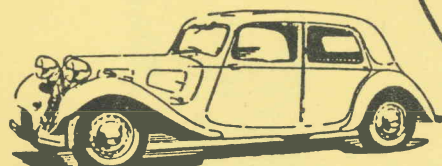
For Sale - ID bits:
Engine (needs b/f bearings)
Gearbox & diff.
Driveshafts
Front end
Rear wheels & axles
Radiator
Windscreen
Doors
Windows
Guards (ground h/lights)
Old tyres suit retreading
Tow bar
Bumpers
Workshop manual.
\$700 ONO - The lot.
Peter Harber
(044) 214421 (Nowra).

Hate Ad

Wanted - Big bits.
Water pump impeller & seal (urgent).
Also instruments & switches, hubcaps & bolts (English).
Some items available for exchange.
Jack Hawke
(052) 501095 (Geelong).

Strangest Citroën?

Over the years, many strange adaptations have been made of various Citroën models. Some have appeared in FRONT DRIVE. However, perhaps the most unusual adaptation (of a Traction) was made in Holland before or during World War II. Naturally, it had features especially suited to its Dutch environment! With assistance of Dutch sources, we intend to reveal more of this automotive anomaly in FRONT DRIVE soon. Watch this space!!



CITROËN

5CV
BREAST POCKET
SIZE ONLY



CITROËN

STOP PRESS

From a usually reliable source!! Expect to see one of the new Citroën XM's at the Melbourne Motor Show in March (Sydney too??). It'll be a Pommy one (RHD). Also AX's are being trial-fitted with anti-intrusion bars in the doors at Port Melbourne as a trial for our market.

CITROËN

BIG 6

DS

Dates of issue for magazine: Summer, Autumn, Winter, Spring.

Closing dates for copy: November, February, May, August.



CCOCA IS A MEMBER OF:

ASSOCIATION OF MOTORING CLUBS

G.P.O. BOX 2374V, MELBOURNE, VIC., 3001

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CCOCA Membership:

Annual Subscription: Full member \$27.50
Associate member \$20.00.

Joint membership is available to spouse of full member, no cost.

Overseas postage rate: Additional \$9.00 (air).

Meetings are held as follows:

Fourth Wednesday of each month except December. The meeting location is the Courtyard Room, Nunawading Civic Centre, Maroondah Highway, east of Springvale Road, at 8.00 p.m.



EDITORIAL

By the time you are reading this issue, it will be a little past the normal Festive Season that the issue was intended to mark. However, it is not too late to hope that the Christmas-New Year break has been a pleasant one for you, and of course, there are many more superb days of summer and autumn ahead of us to enjoy, perhaps getting your Citroen out onto the road for a COCA rally or other event. There certainly are plenty of interesting things to go to and to see.

Production of this issue is still by rather hybrid technology, being produced on a combination of word processing packages on a couple of personal computers. Perhaps soon, we'll get a desk-top-publishing package loaded up on one of them and then be able to upgrade our page layout and page appearance somewhat. In the meantime, we have been able to hold off making a replacement typewriter purchase for the club and hence leaving our options open for the future e.g. to purchase a PC for the club instead, perhaps loading it with both a "club management package" (as was demonstrated to COCA members at a recent meeting) and with DTP for the magazine and "A'tractions" etc.

In the meantime, our appeals for members to come forward to assist with various club functions has borne some fruit, at least with respect to "Front Drive" production. As well as having Ted Cross as backstop (as for the last issue), Secretary Mark Vickery has taken a very active role in the production of this issue. Roger Brundle has also offered a helping hand, particularly in putting technical info on paper. Older members, and the smart new members who have acquired back issues, will know of the excellent technical articles Roger produced in the "old days".

Once again, this issue provides a wide range of Citroen topics for your interest. Note the most enjoyable meetings of recent times, and be sure you go to as many as possible in 1990.

Bill Graham and Mark Vickery.

COVER: This old advert refers back to the harsh post-war times when the Brits, strapped for foreign exchange, couldn't get Citroens because they were all going "OS" (including all the Family Nines they produced which came to Australia en masse).

COMING RALLIES

Where to go and what to do in your Citroen in the coming Spring and summer months? Check out the Club Activities Calendar and recent "A'TRACTIONS".

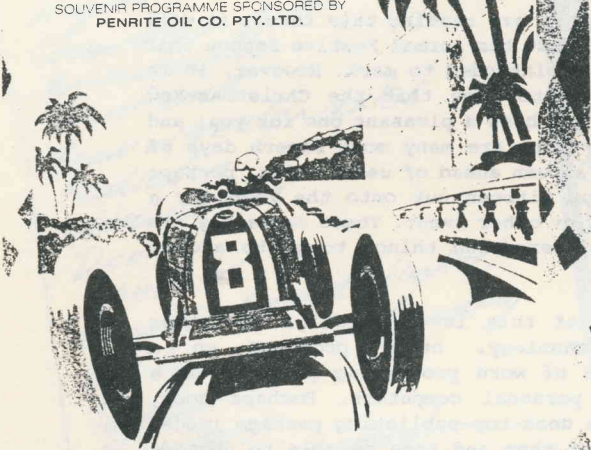
PAST RALLIES!

12th May '89

PROUDLY PRESENTED BY
THE AUSTIN 7 CLUB

ASSISTED BY
THE NORTH-EAST CENTRE OF THE A.C.U.V.

SOUVENIR PROGRAMME SPONSORED BY
PENRITE OIL CO. PTY. LTD.



HISTORIC WINTON

Historic Winton

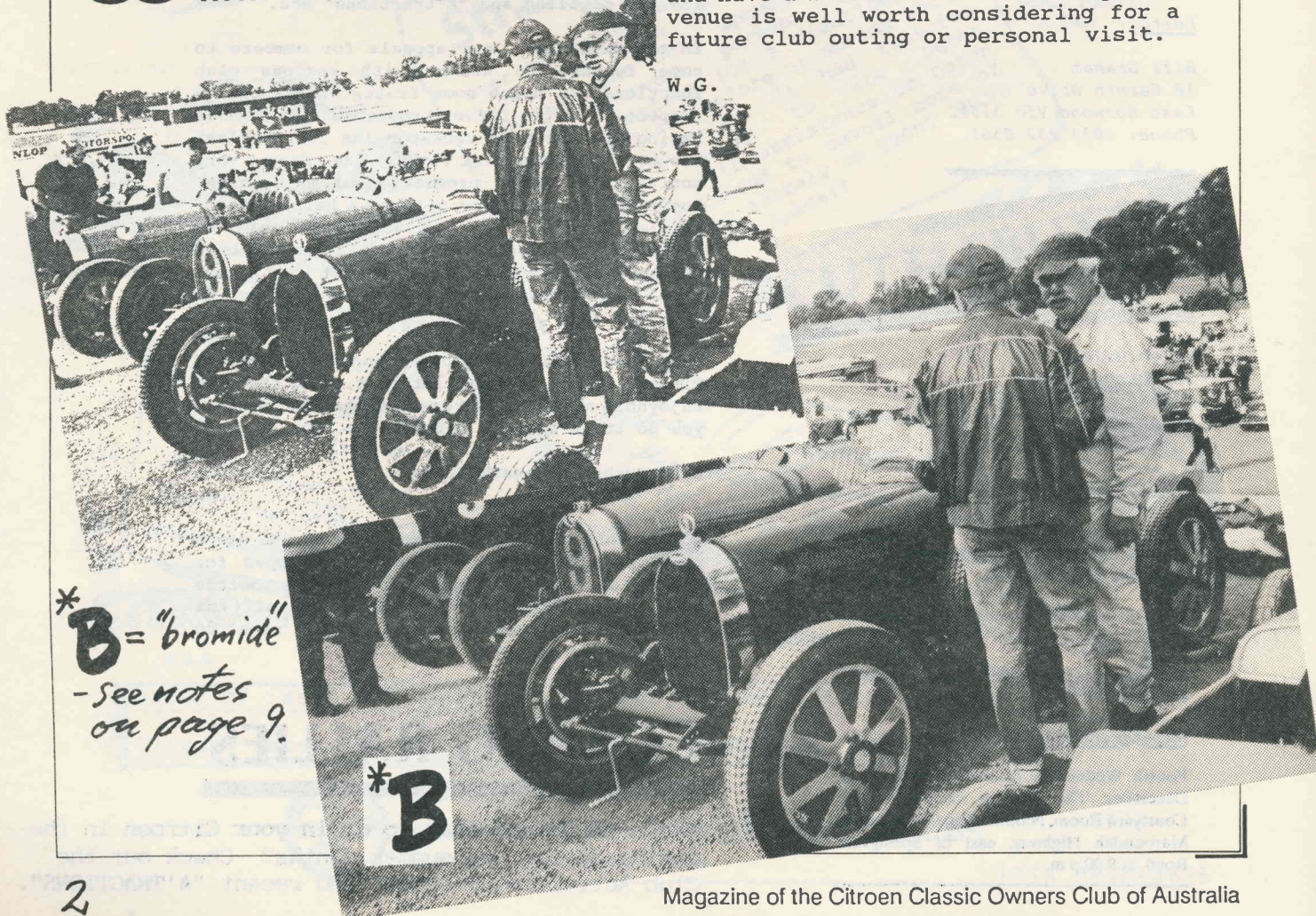
The 13th Historic Winton races were organised by the Austin Seven Club over May 27-28, 1989. The course is just off the old Hume Highway on the Albury side of Benalla. I looked in on the second day (Sunday).

It was basically a day for old and classic car buffs, especially where sporting pretensions are involved. There was much to see in three locations - the race course itself, the pits area, and the public car park. Only one Citroen was seen - a grey BX. However, there were some CCOCA Citroenists - Roger Brundle and Robbie Stockfield.

Naturally, modified Austin Sevens featured among the racing machinery. The meeting also made a feature of Ferraris in a wide range of models. However, it was a bit scary to see Ferraris which collectively were worth well over a million dollars racing round the track together, often only inches apart. Just as well it was other people's millions! Other strange vehicles seen in the pits were racing "chairs" - the very specialised motorcycle-and-sidecar combinations.

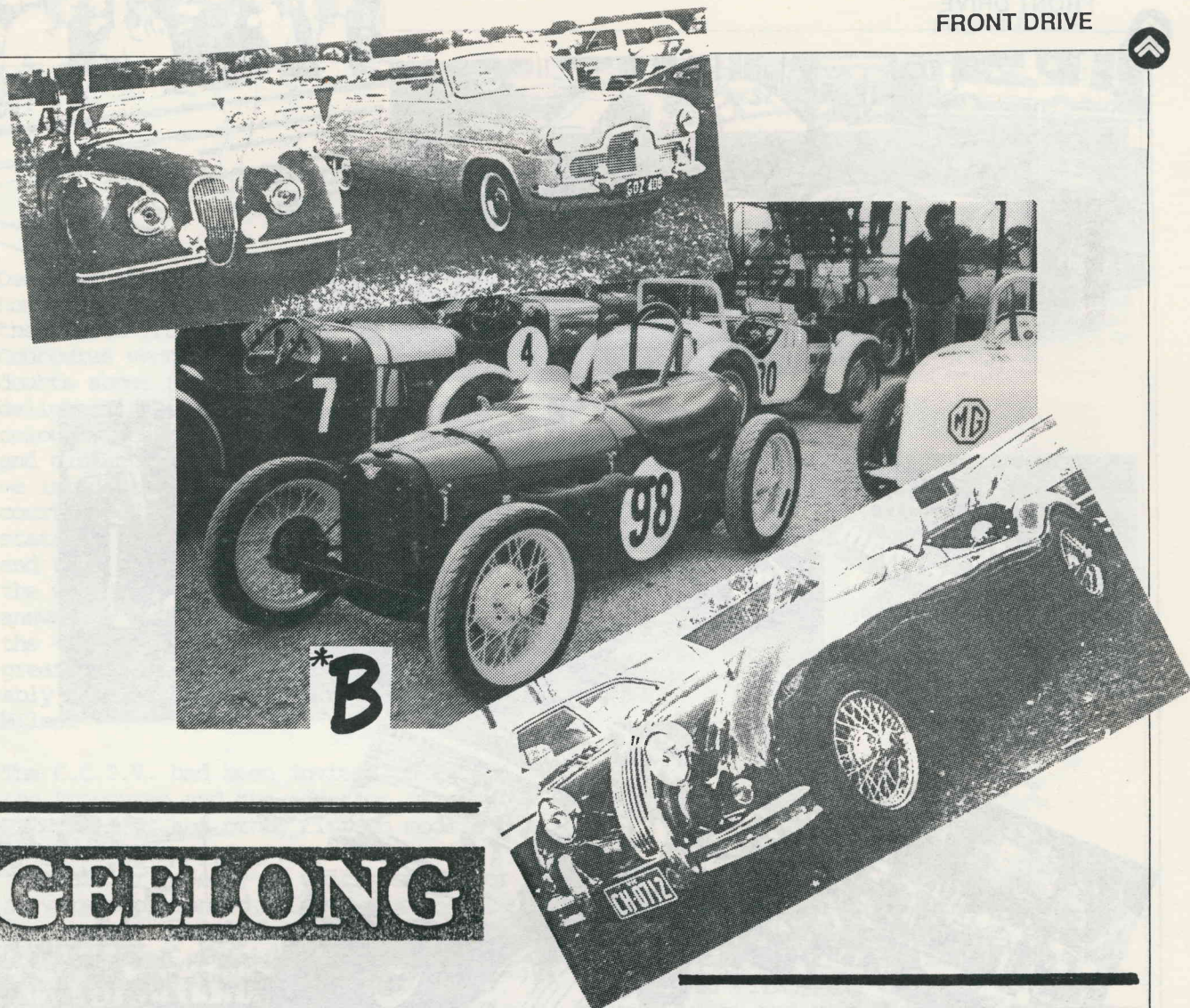
To me, the non-moving machinery was more interesting than the stuff on the track - after all one could get closer and have a better look. Definitely, the venue is well worth considering for a future club outing or personal visit.

W.G.



*B = "bromide"
- see notes
on page 9.

*B



GEELONG

SPEED TRIALS

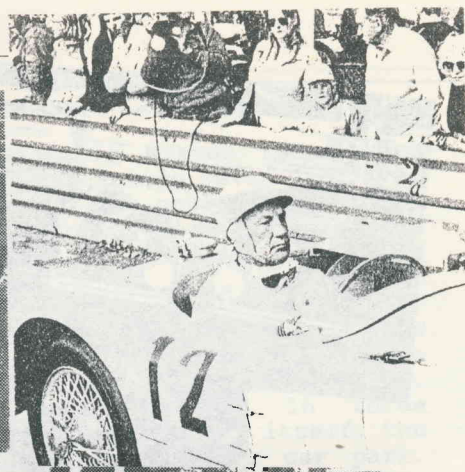
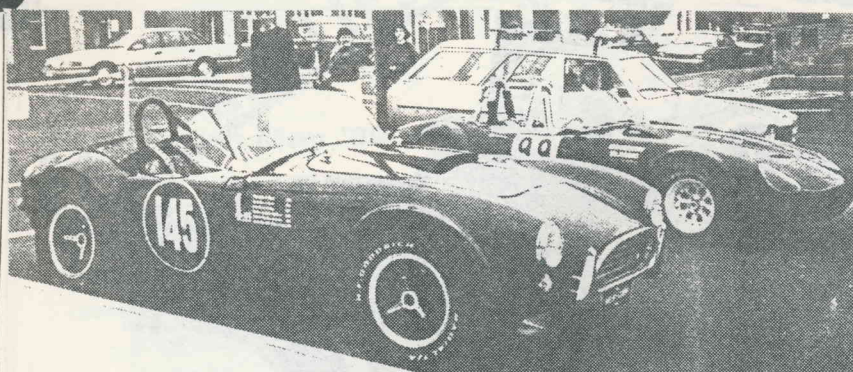
The Geelong Speed Trials is a long-standing event conducted at the very pretty venue overlooking Eastern Beach and Corio Bay at Geelong. The actual speed trials are performed along the rather tight confines of Ritchie Boulevard which is the eastern end of Eastern Beach Road. Organiser is The Vintage Sports Car Club of Australia.

The Trials are something I've wanted to see for a long time, having been the scene of some incredible record-setting feats in the past by "our own" Jack Weaver in his rear-drive Citroen Grand Prix car (of which hopefully, more anon). The 1989 Trials on November 12th were something special as the famous Stirling Moss had stayed over from the Adelaide Grand Prix. He was to provide a demonstration drive later in the day, delighting the crowd in a classic Jaguar.

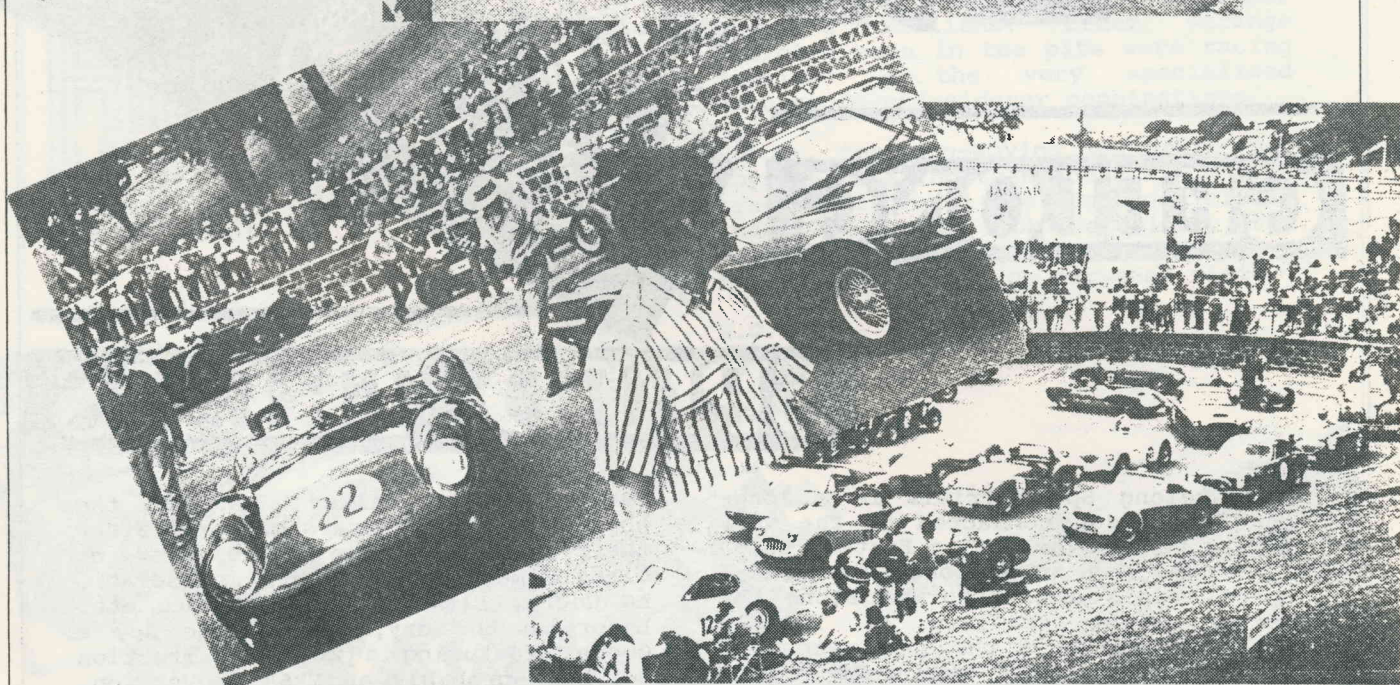
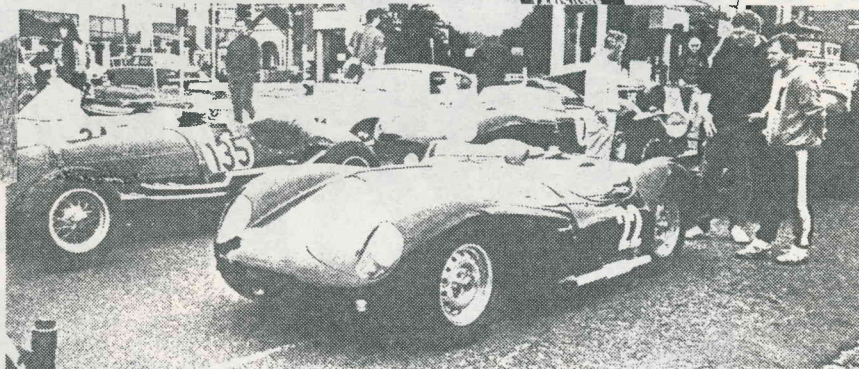
Ted Cross drove down to have a look, and I gladly accepted the offer of a ride. We took "standard transport", not, as I hoped, in Ted's Big Six.

We parked and walked along to the holding area where cars gathered after their runs for our first view of classic machinery - Jaguar, Maserati, AC Cobra, Elfin, Allard, MG etc etc. Later in the day, we were to spy a Cooper featuring a modified Traction gearbox - probably an ERS conversion. Again, a subject we hope to follow up for more information later. Brief conversation revealed that this car or a sister vehicle had been fitted with one of a pair of locally-produced square-cut crownwheel-and-pinions. What about the noise? Doesn't matter when you're racing, we were told.

Afterwards, we wandered up to the associated concours d'elegance held in Austin Park. Here was a superb collection of classic machinery. Among them, we spied CCOCA member Peter Hughan's 11BL. Peter didn't surface while we were there so a furtive look under the bonnet gave the chance to examine Peter's very effective ID conversion. Peter is very happy with the every-day ease-of-use and long-



*Stirling Moss
souvenir program*



leggedness which the conversion has given his car. He has come up with a smart way to convert the behind-the-dash shift mechanism to operate the D box via two shift rods, somewhat like the original.

We hope to report more of Peter's conversion in a later issue.

Many cars in the concours warranted mention and each viewer would have his favourite. To me, it was a toss-up between a beautiful "ground-up" restoration of an ex-US Austin Healy

3000-Six and a tomato-red pre-war SS Airline - possibly even the one which I used to admire as a kid at the Bacchus Marsh motorbike races on the Darley circuit.

Other CCOCA people seen at the event were Robbie Stockfield and John and Wilma Coleman, the latter having taken their Light 15 PB 007 across the bay to the event on the ferry between Portsea and Queenscliff.

There is no doubt. The Geelong Speed Trials make an excellent day out for people interested in classic cars. Perhaps we can get a CCOCA group together to go down to the 1990 trials?

W.G.

Best two-pot

CONCOURSE OR CAVALCADE?

December the 3rd dawned.....well to be honest, a trifle grey and unlikely, but the vision from the access road to the Concourse venue soon dispelled any doubts about the day ahead. A delightful sunken oval, deep green in colour with a pleasant backdrop of near and distant trees. For this concourse, we introduced the C.C.O.C.A. 'tent', courtesy of Bill Graham (including a state of the art public address system) and this proved to be a focal point for the whole day providing a forum for answering a multitude of queries from the visiting public and the sale of a great deal of Club Shop merchandise, ably handled by Leigh 'Marketing' Miles.

The C.C.C.V. had been invited to attend the Concourse and the addition of some superb 'D's' and other Citroen models made for interesting comparisons with the earlier models, of which some 15 or so were represented. Did I say Concourse? One of the earlier starters which arrived via a tandem trailer was Ron and Hayden's Family 9 'sans' motor, transmission, interior (well - most of it) paintwork and a substantial section of flooring. I believe this car's presence was a very positive step, despite the owners' thinly concealed attempts at gaining some advantage in a future 'Most improved' award. It is good to see members willing to display their cars in any condition and, of course, have the option of judges inspection. Anybody out there supporting a change of name to 'Parade' rather than Concourse? Perhaps if we did, we could double the number of cars attending. Speaking of Ron and Haydens' Family 9, this is the first Concourse where I have seen two of these cars together, with Jon Faine's original Family 9 an early arrival on the day.

Some excellent cars were displayed and many envious members of the public attracted by our 'Age' ads, regaled us with questions.....(How much? Where can I buy one? etc.) to the familiar "I had one of those once."



Our category winners were superb but also a great deal of interest was shown in many other cars. John Couche's 'anglised' 11BL, the Family 9's, the two well kept and very different 2CV's, Max Graham's immaculate big boot L.15 and the spectacular 'Diva Car' - Jeremy Shaw's much changed (from rusty to virginal white) 11BL which won the most improved award.

Award winners in summary were:-

Best Traction & Best Overall -

Brian Grant's immaculate '53 L.15
-still hard to beat.

Best Twin Cylinder -

Leigh Miles superb Visa

Most Improved -

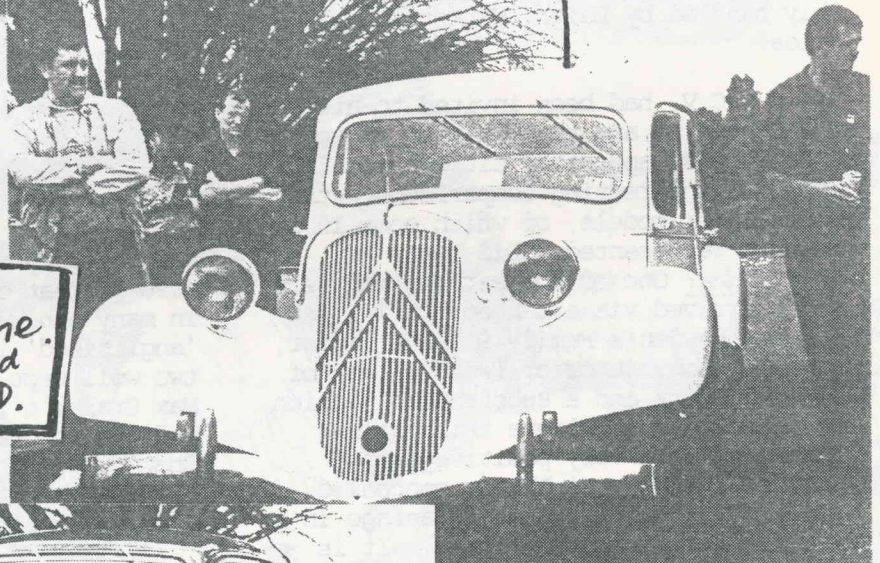
as discussed, Jeremy Shaw's
beautiful 11BL.

Most Popular -

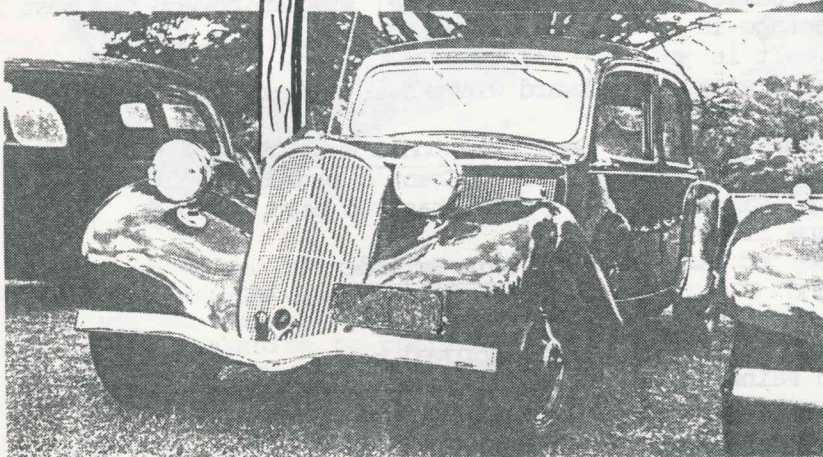
a new choice this year - and one chosen by all in attendance, via a voting slip. It was rewarding to see the 'public' came up with their worthy winner: Peter Boyle's delightful and popular Vintage 5CV.



Most improved



FOR SALE
J. Couche.
Apply - see Ad
in FD.



Many thanks to the judges and particularly to Ron and Bill for the organisation on the day, and in the weeks preceding. The venue was well appreciated and possibly will be used

again - any other suggestions are always welcome. The arrival of the tandem trailer at the Concourse caused much interest. What about some competition next year!

David Giddings.



Rarely is the human mind completely idle (well, there may be exceptions!). CCOCA minds, naturally, are usually very active. This photo shows several well-known CCOCA members tucking into Chinese nosh with enjoyment and gay abandon at the Sunday evening of the Beechworth Austraction in June.

Clearly, they are all thinking at the time. What do you think each has on his/her mind? Fill in the thought balloons or write on a scrap of paper - don't destroy your magazine - and send your ideas back to the Editor. We'll print any or all which we believe can get past the censors!!

Rack ---

Enthusiastic sippers of the various forms of nectar will be breathlessly waiting to know who won the excellent wine-rack donated to the club by Graham Harder. Graham, who spoke to club members about restoration of old car radiators, will carry out this service for enthusiasts. The production of wine racks is just one of his family's sidelines.

After much tub-thumping to encourage members to purchase tickets, Susanne Couche drew the winning ticket in a small ceremony at the recent Club Concourse. And the winner was ---- Ted Cross!

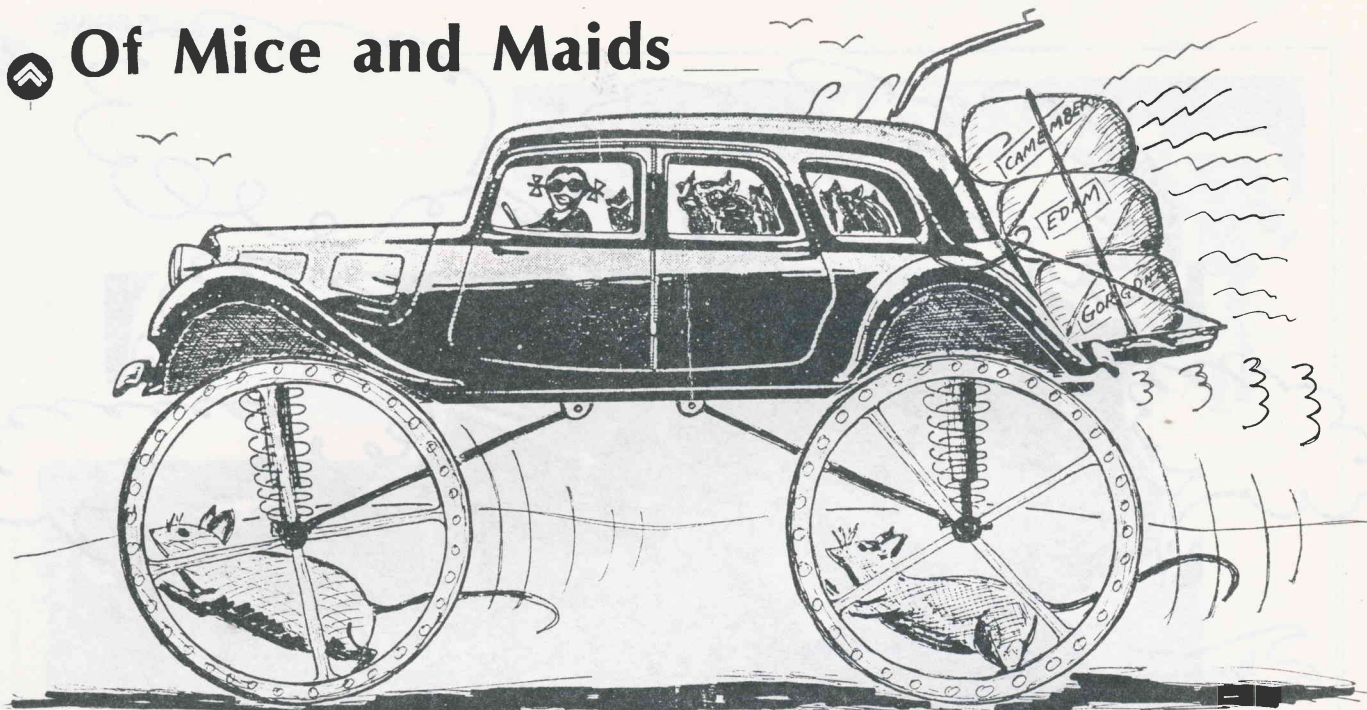
Congratulations to Ted. We're not sure if Ted is the ideal recipient though. He was quoted as saying:

"If you need a wine-rack, you're either not very thirsty or you've got too much wine".

Anyway, we're sure Ted and Helen will put the rack to good use. And many thanks to Graham Harder for his generosity to the club, and to those who bought tickets. The raffle benefitted club funds by \$74. Oh, and for radiator service, call Graham on (03) 807 2821.

or Ruin??

Of Mice and Maids



"Every family should have a Citroën - agreed?"

No, Enquiring Reader, we are not returning to Steinbeck's Cannery Row, with Doc and the boys easing Life's pains through the medium of a gallon of "Old Tennis Shoes".

However, our tale (or should that be "tail"?) is nonetheless one of pathos and much intertwining, involving great and tender emotions, and managing to link these to matters Citroën - perhaps not too difficult a link to forge you might think.

Those of you (and that would be most) who have started a restoration being confronted by unmistakable evidence of rodent habitation might have already concluded that a fundamental affinity exists between our favoured vehicles and the little furry critters. How then to bring in young members of the distaff side?

Our story opens with the finding of a middle-sized metal box, seemingly abandoned on the front door-step of a vacationing neighbour's house. The box was a small-animal enclosure, almost certainly having fallen at some time off the back of a laboratory trolley. Inside were several mice - white, black and grey - a plastic mouse house and some bedding. Wedged into the slots in the lid of the box was a message handwritten on part of a page torn from an exercise book. The message read as follows:

"You may of heard of babies left on the door-step. Well, I guess mice are a bit different. Please, please don't kill them or ~~throw~~ let them loose. They're pets. If you don't want the mice, could you at least take them to the pet shop? I would myself but my mum and I have had a fight over the mice and I went for a walk and had 2 leave them somewhere. I'm not going 2 go home 2 nite so can U please give these mice a home or at least take them to a pet shop. But please whatever you do don't kill them or set them loose. They haven't done anything rong!

Yours sincerely
Confused!"

We have assumed, perhaps wrongly, that "Confused" is a little girl.

The surplus mice were duly off-loaded at the local pet shop, and the three remaining mice (one of each colour, with pink eyes) were passed on as a birthday present to the eight-year old daughter of a well-known Citroën enthusiast.

The enthusiast extended the cage with glass sides, put in an exercise wheel, and scrap paper for bedding in the mouse house, and waited to see what happened. Great and amusing antics followed, with much energy being expended by mice running inside and falling off the wheel.

Soon, there were signs of a developing pregnancy, and much delight was taken in the rapid development of the ensuing tiny offspring. Naturally, things didn't stop there, and soon a second litter appeared. It was observed that the gestation period is about three weeks and that litter size is about 10. Why, the little blighters were breeding like rabbits!

Young daughter saw the commercial possibilities and soon had sold off four of the livestock to her friends. However, emotional attachment soon intruded, and as any entrepreneur will tell you, sentiment and business do not go well together. The mercenary side of the business foundered and a population crisis was looming!

Fortunately in a sense, the paterfamilias of the rodent tribe, a bleary-eyed and understandably neurotic character called "Bicycle-pump", made the mistake of once too often biting the hand which was feeding him. For his troubles, he was promptly dispatched to that great cheese repository in the sky. Crisis was temporarily averted.

Anyone wanting to stock up on mice, enter into a franchising arrangement, or lend genuine character and "patina of age" to their Citroën can enquire about supplies through "Front Drive".

Bill Graham/Jack Weaver.
Magazine of the Citroën Classic Owners Club of Australia

Money for old dope?

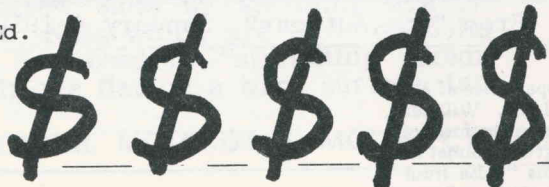
Advertising revenue

One way we could get more money into the club is by taking paid advertising in FRONT DRIVE (others include getting more members, other fund-raising, or - shudder - raising subs!). Money, as you know, is used in the club for communication with members (FRONT DRIVE, A'TRACTIONS etc), subsidising events, spare parts stock etc - all we believe to be important, even essential activities. Extra money would also enable us to consider improving publication quality or reducing the labour required in its production.

Currently, every extra page (single side A4) we put into a given issue of the magazine costs us about 10 extra dollars. Hence, we would need to sell each page of advertising space in a given issue at more than \$10 to break even - ideally, we'd want to sell it at much more than \$10 to make it financially worthwhile. Of course we need to allow that the ads may have intrinsic interest or value to members anyway, irrespective of any profit made - that is how we regard normal copy. Presumably, we would apply such a criterion to any advertising accepted anyway i.e. it would be of interest/value to members, but personally, I believe we should not be too finicky on this point, provided the advertising was still significantly profitable to carry.

To date, where I have contacted suitable potential advertisers e.g. HECKA, Shannon's Classic Cars/Insurance, the response has been positive and encouraging. In short, I believe there is money out there which could be readily tapped to help us pursue our club interests and make it a healthier and better club serving you (and me). However, it would take a little effort to make it work, and I don't want to do it myself. Leigh Miles and John Couche have already said they will look into it, BUT, more hands would help to GET IT GOING. Once set up, and rates established etc, it should be easy to administer. WHAT ABOUT YOU GIVING A HAND? Speak to a Committee Member about it ASAP!

Ed.



Pix Fix v. \$

Like most things in life, reproducing photographs in publications is usually a trade-off between quality and cost. Naturally, the situation in FRONT DRIVE is no exception. Photos are very desirable in a magazine to give it "life" and "visual appeal", even if they are not as clear as one would hope for. Photos also help to conserve precious text, and since only a limited number of members put in written material for publication, or text has to be "borrowed" from other sources, such saving is important. Also, too much text can be monotonous and off-putting for many people.

In recent years, we have tended to concentrate on a very cheap way of setting up photos for reproduction by "screening" them via a Letraset screen on the best photocopier we can get access to at the time. This also permits some changing of print size at the same time. However, this technique usually (but not always) gives a final printed photo quality less than that obtained if the photos have been screened by "professional" methods instead ("bromide" or photo-mechanical transfer (PMT) methods). Not surprisingly, professional methods usually involve the paying of "professional fees".

Just now, courtesy of Copycat Printers who printed the last magazine, we can get about four standard coloured prints turned into "screened bromides" for \$10, provided they are "matched" for print density as a group. Naturally, their use adds to the cost of production. In this issue, we've included a few photos which have been screened by Copycat. They are marked with a "B" (for bromide) to permit you to make your own assessment.

Note that photos which we have taken (by photocopying or other methods) from previous publications are normally screened already and don't need further screening by us (unless the original screening was too fine for the equipment we are using at the time - say 150+ dots per inch; in which case, we may have to "re-screen" it at say 60-100 dpi to suit). Screening is only needed to help preserve the "grey tones" in a photo - material which is all black and white e.g. text or line drawings and diagrams, doesn't need screening unless for some reason you want to turn the blacks into greys.

Anyway, we'll be very interested in any comments you may have about the quality/cost tradeoff in photos, as illustrated with photos in this issue.

Ed.

FRONT DRIVE

Some people can't resist the temptation of trying to improve on the original - the time-honoured process of "gilding the lily".

"Fair enough", you might say, "from such efforts often come spectacular improvements. Look at how "The Patron" himself improved the motor car when he developed the Traction Avant".

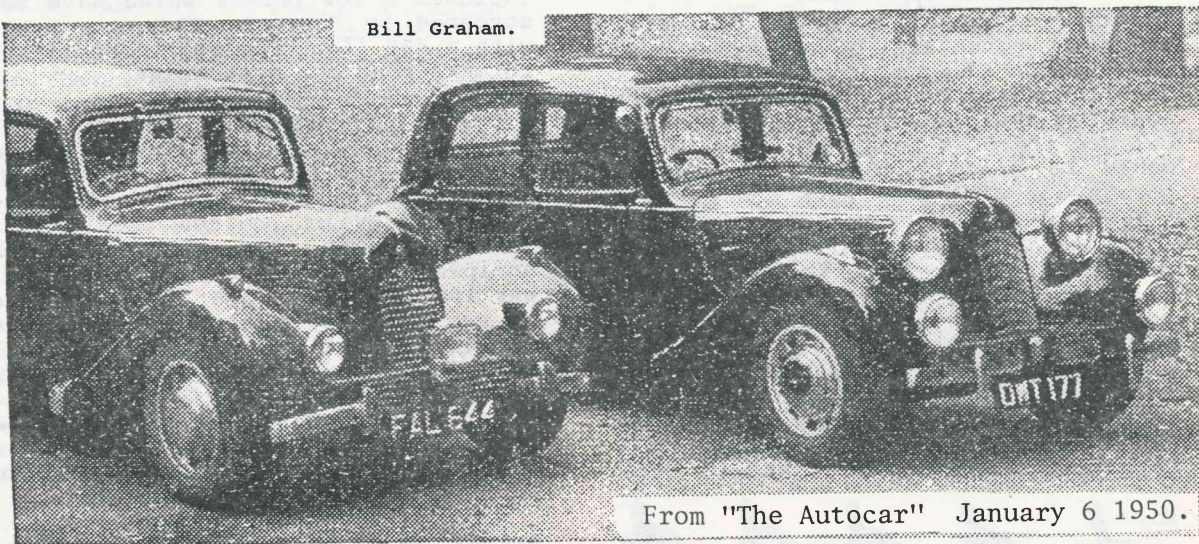
Well, few would take issue with that example, but it is true that sometimes the originator had an optimal product in the first place. Then it is obviously better to leave well alone.

I believe the Traction Avant radiator grill is a case in point. Andre's close friend, Henry Ford was happy enough to use an almost identical grill shape when, in the same year (1934), he presented a new face on his V8. Andre's V8 didn't quite make it onto the commercial scene, but for his very successful Traction fours (and, later, sixes), he did little more than add his famous chevrons to the Ford grill to achieve something close to perfection (well, maybe the ideas flowed the other way, who knows?). Anyway, the point is that most attempts to improve on the classic Traction grill have been less than aesthetic masterpieces. A few examples are shown here to illustrate the point - I take it you agree with my conclusion.

I was prompted to these sombre thoughts by coming across an old issue of The Autocar at the recent Bendigo Swap Meet. Illustrated was a novel set of replacement grills available in the '50s, made by Gallay, the producers of vehicle radiators and more recently, of commercial dishwashers. Certainly, the Gallay grills were distinctive, but from my point of view, they were well behind the original in aesthetic appeal. Still, I don't want to come down too hard on the Gallay jobs since I recall having seen a photo of one fitted to a Tractionist's pride-and-joy in the UK in quite recent times.

Anyway, the message is I believe, "when you're dealing with lilies, go easy on the gilding".

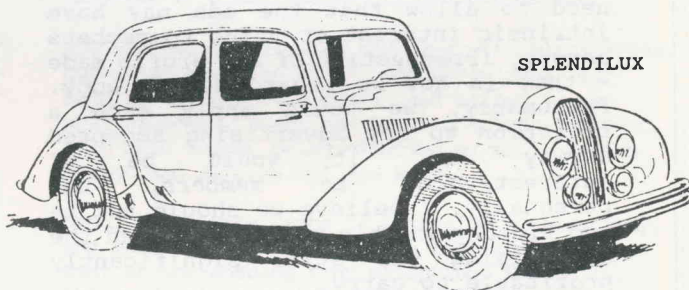
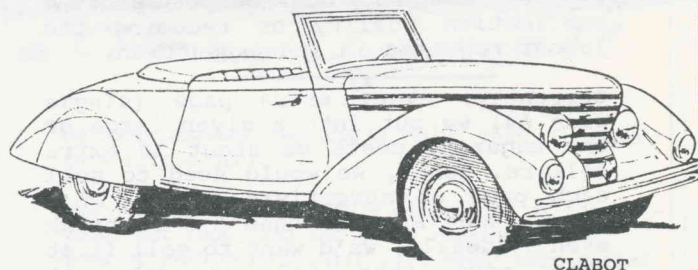
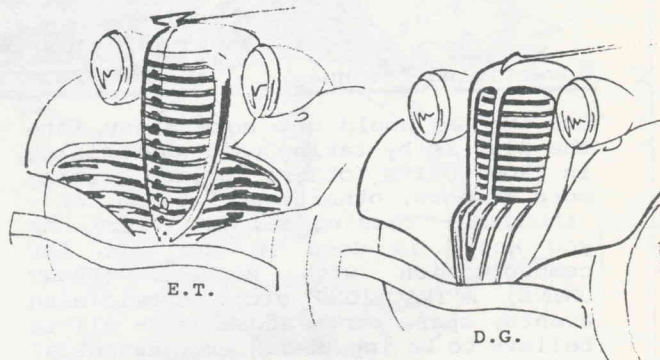
Bill Graham.



From "The Autocar" January 6 1950.

CITROËN SURGERY. For those who wish for an individual appearance of their Citroën cars, the firm of Gallay, Ltd., 103-109, Scrubs Lane, Willesden, London, N.W.10, are offering a conversion to the standard model in the form of a superimposed casing over the original radiator, giving a greater length of bonnet line. A separate valance is fitted to the bumper brackets. The cost of this "false front" is about £30, unpainted but fitted. The surface is rust-proofed and the grilles are chromium plated.

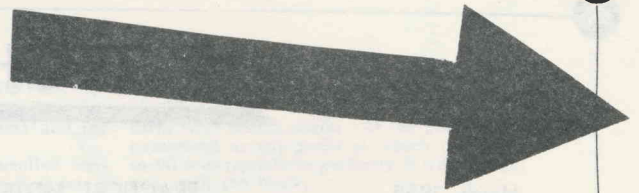
Full-Frontal Crudity?



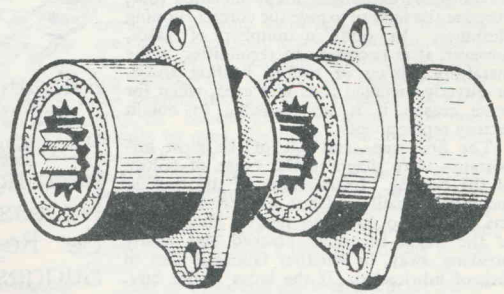
BEARING UP

The adjoining article on renewing poured bearings will serve as an introduction to the topic for members. It is worth noting that these days, even the replaceable thin-shell or slipper bearings are becoming hard to find for some cars, especially to suit undersized journals. Early D-series Citroens are a case in point, of interest to owners of Ds and "transplanted" Tractions. You may be interested to know then that one local Citroen expert is investigating the remetalling of old shells back to standard and undersized dimensions. Watch out for more details later.

TECH TIPS



DOING YOUR BLOCKS



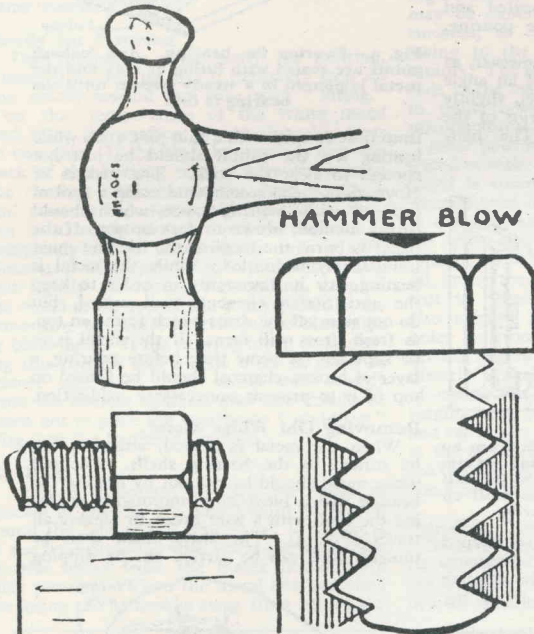
While holidaying recently along the Gippsland coast, I happened to meet up with CCOCA member, Mel Carey, together with his wife Pauline and their delightful brood of small ankle-biters. Based on rural land just east of Bairnsdale, they run a mobile vehicle-servicing business in the district, and Mel still picks up the odd bit of work out on the oil-rigs of Bass Strait. As well as the meeting providing the opportunity to "drown a worm or two" together, conversation ranged at times over matters Citroenish. Mel is, as you probably recall, the possessor of two Big Sixes both well along the road to restoration. Mel also has an interesting family association with the marque, going back many years - of which more anon.

Perhaps though, many may not be aware that over several years, Mel has been experimenting to develop what is now an excellent methodology for restoring Traction silentblobs - the often sorrowfully mangled devices of metal and rubber which act as pivots in both the front and rear suspensions. Working closely with Spare Parts Officer, Peter Boyle, it is intended to have these items available as a change-over set-up "off-the-shelf". Mel's efforts in this regard have been greatly appreciated in the club. It is intended to provide more detailed coverage of Mel in a later issue in the form of a Technical Note/Member Profile/Member's Cars. In the meantime, best wishes to the family and thanks from CCOCA for your inspiring efforts on our behalf.

Bill Graham.

"FROZEN" THREADS BEATEN

TIGHT or rusted bolts and nuts can often be loosened before the spanner or screwdriver is applied by tapping with a hammer. The exaggerated sketch shows that usually a screw, stud, or bolt has only one side of the thread in a state of compression and intimate contact. A sharp hammer blow on the head of the screw or bolt tends to break the thread faces apart, and a spanner or screwdriver can then be used as normally.



Loosening rusted nuts. (Left) Method of "stretching" nut which is tight on bolt. (Right) Usually only one side of thread is in state of compression: hammer blow on head of nut will free it.

Not only does this save a lot of effort, but it also prevents damaging the flats or screw slots by straining against them. Nuts which are tight on bolts can be loosed by "stretching" them. With one flat on a hard surface, tap

the opposite flat with a hammer—working right around the nut—then just turn off with a spanner.—(A. J. Barnes, Dundas, N.S.W.).

TECH TOPICS

March, 1955

PRACTICAL MOTORIST AND MOTOR CYCLIST

RE-METALLING *the* BEARINGS

THE majority of modern engines use main and connecting rod bearings of the thin shell steel-backed, or full-ring directly metallized type; thin-shell bearings are replaced without scraping and fitting, while the directly metallized connecting rods are normally exchanged for re-metalled rods, bored at the factory to give the correct running clearance. In quite a number of cases, however, it is necessary to recondition white metal-lined brass or bronze bearing shells, or directly metallized rods and caps, when for some reason it is not possible to obtain factory replacements.

The first step—and one of the most important—is to diagnose the cause of failure of the bearing. Examination of the bearing metal will usually indicate whether the metal has broken up owing to fatigue, the surface of the metal becoming cracked and finally breaking away, or whether failure is due to lack of lubrication. If the latter is the case,

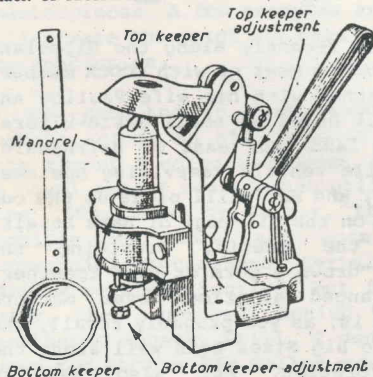


Fig. 1.—An Ammco universal jig which enables re-metalling to be carried out in rapid sequence on bearing shells of varying sizes.

the cause of the stoppage of the oil feed to the faulty bearing must be ascertained.

In any case, when a big-end or main bearing fails, it is essential to examine the crankshaft for the presence of small particles of white metal which may be lodged in the oilways.

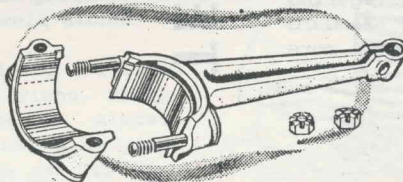
Cleaning Oil Passages

Strictly speaking the crankshaft must be removed from the engine, when the oil passages should be blown out by connecting the nozzle of an air-gun to the oil inlet in the cylinder block or crankcase. If air pressure is not available oil can be injected under pressure at the main feed inlet from the pump without removing the crankshaft, after undoing all the connecting-rod bearing caps, although this is something of a makeshift. If oil does not escape freely from each oil feed hole in the journals, the crankshaft must certainly be removed from the crankcase in order to extract the sealing plugs, so that the oilways can be cleaned out with a length of stiff wire. It may even be necessary to drill out the oilways, but in this case it is usually preferable to return the crankshaft to the works.

If the crankshaft is not removed from the engine, do not attempt to clear out the oilways by injecting the oil through the oil feed hole in the journal, as this will only force any foreign matter further into the oilway.

Re-metalling Equipment

Having made sure that the crankshaft oilways are clear and that the crankpins are not badly scored, the necessary equipment for re-metalling must be assembled. First, let us assume that detachable bearing shells for the connecting rods or main bearing are to be dealt with. A proprietary re-metalling



Although Most Modern Cars are Fitted with Easily Renewed Thin-shell Bearings, it is Sometimes Necessary for Them to be Re-metalled and the Suggestions Given in This Article Will Assist the Owner-driver in the Task

By L. ANDERSON

jig should preferably be used (Fig. 1). Most types are adaptable to take a wide range of bearings, and some are gas-heated and water-cooled in order to facilitate pouring, as will be described later.

A simple jig can be made up, however, as shown in Fig. 2. This consists of an angle plate, against which a half-mandrel, slightly smaller in diameter than the interior of the finished bearing, is clamped. The half-

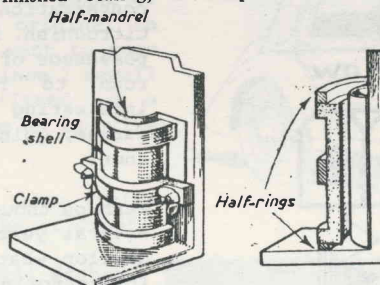


Fig. 2.—A simple pouring jig made from an angle-plate sheet, iron mandrel and clamp. The sectional sketch shows the use of the half-rings if the bearing metal is to be built up over the edges of the bearing.

mandrel can be made of sheet iron shaped around a piece of tube of the correct diameter. Around the mandrel is placed the bearing shell clamped against the plate by a bar secured by wing nuts and bolts.

If it is necessary to build up the bearing metal over the edges of the shell, half-rings of the desired thickness, and of slightly smaller diameter than the exterior diameter of the flange of the shell, should be placed at the top and bottom of the mandrel. As it may be difficult to prevent leakage of the molten metal from an improvised jig, any gaps can be stopped up with clay, putty or asbestos "luting" made by pulping asbestos mill-board in water (Fig. 3); the asbestos luting, however, must be dried thoroughly with a blow-lamp before pouring the metal.

Melting Pot

The next requirement will be a pot in which to melt the white metal and a ladle. Practically any pot capable of holding the necessary amount of metal will do, although a commercial melting pot, preferably of the muffle-heated type, will give the best results. If the pot is heated by an open gas ring, a

casing around the ring and the base of the pot can be made up from sheet iron, to distribute the heat evenly. For general use any recognised form of bearing metal, such as Hoyt, Findlay's Motor Metal, or "Vulcan" brand white metal can be used, but the best plan is to get in touch with the manufacturers of the white metal, who will be able to advise the most suitable grade for the work in hand.

Temperature

At the same time the correct temperature to which the metal should be heated can be ascertained. A special thermometer should normally be used, and the metal should be heated to between 320 deg. C. to 430 deg. C. with most types of metal. If a thermometer is not available, test the metal

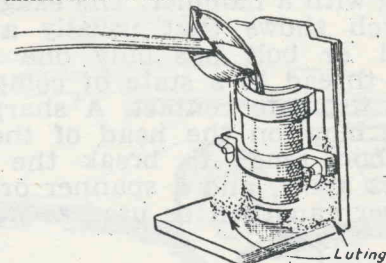


Fig. 3.—Pouring the bearing. Any leakage points are sealed with luting or clay and the metal is poured in a steady stream until the bearing is full.

from time to time with a thin pine stick while heating it; the babbitt should be just hot enough to clear the stick. The makers of Hoyt white metal recommend using a spill of ordinary white writing paper, which should turn a medium brown to dark brown. If the paper is burnt the metal is too hot and must immediately be cooled. While the metal is heating, stir it thoroughly in order to keep the anti-friction elements well mixed, but do not skim off the dross which forms on top, as fresh dross will form. If the metal is to be kept hot for some time before pouring, a layer of broken charcoal should be floated on top of it to prevent unnecessary oxidation.

Removing Old White Metal

When the metal is heated, attention can be turned to the bearing shells. The old white metal should be run out by heating the bearing with a blow-lamp, thoroughly brushing the shell with a wire brush to remove all traces (Fig. 4). The shells must then be tinned. This can be carried out by dipping

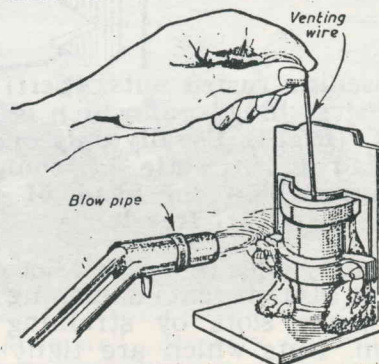


Fig. 4.—Venting or puddling. While the top of the bearing metal is kept fluid by the application of gentle heat from a blow lamp, a stiff wire is dipped lightly and rapidly in and out around the bearing.

them in a pot of molten tinman's solder, after first thoroughly brushing the bearing surfaces with liquid flux, killed spirits, or any other soldering fluid. In order to prevent the tinning adhering to the back of the shell, this should be painted with whitewash before fluxing. The shell is then dipped in the pot of molten solder, removed immediately, given a fresh coating of flux, and again placed in the tinning pot. The surplus solder can

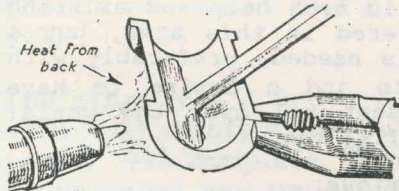


Fig. 5.—Tinning the bearing shell by heating it from the back while a stick of solder is rubbed over the bearing surface.

then be brushed off with a clean bristle brush—not the flux brush—and the bearing again coated with flux to prevent oxidation until it is required.

As an alternative to dipping the bearings, the shells can be carefully heated from the back, fluxed and tinned by rubbing a stick of solder over the bearing surface (Fig. 5). Great care must be taken to keep the flame from the surface to be tinned. Preferably a gas blow-lamp should be used, but if this is not available a spirit blow-lamp should be employed in preference to the paraffin type, as the flame is cleaner. A paraffin blow-lamp can, however, be used if care is taken to regulate the flame correctly.

Ready for Pouring

The bearing is then ready for pouring. Clamp it in the jig and if necessary stop up any cracks around the base with "luting." Test the temperature of the white metal and skim the surface by scraping the dross to one side. If the shell has cooled, heat the back of the bearing with a blow-lamp until the tinning becomes molten, heat the ladle and pour in the metal fairly gently at first, but in a steady stream, until the bearing is completely filled. Immediately take a stiff, clean steel wire and dip it in and out rapidly and lightly all around the bearing, keeping the metal at the top of the bearing fluid at the same time by gentle heat from the blow-pipe or blow-lamp. If the bearing metal sinks during this process add a little more in order to restore the level. The metal will solidify from the bottom upward, and care should be taken not to push the venting or "puddling" wire into the hardening metal.

Cooling

As it is important to chill the metal as quickly as possible wet rags should be placed round the foot of the bearing or, if the jig is of the type provided with water passages, turn on the water from the mains immediately after pouring. When the metal has hardened the luting can be broken away from round the

foot of the jig, the clamps undone and the shell removed.

When dealing with directly metallised connecting rod caps, most of the foregoing points apply. The best method of removing the old white metal, however, is to immerse the complete big-end in a pot of scrap metal heated to about 400 degrees C., afterwards thoroughly brushing the bearing surfaces with a wire brush to remove all traces of the old metal. Tinning should be carried out by dipping, although the surface can be heated by a blow-lamp if preferred. If the big-ends are dipped they can be left in the tinning pot until the jig is ready; dipping is advisable since the heating is more uniform, thus reducing the risk of distorting the rods.

Duralumin Rods

When pouring directly lined bearings, the use of a proprietary jig is generally to be preferred, since it is a simpler matter to pour the two halves of the bearing accurately, although it is possible to carry out the work

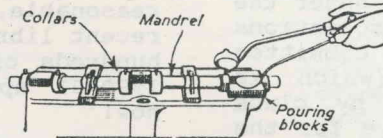


Fig. 6.—Re-metalling Ford main bearings in the crankcase with the re-metalling fixture in place.

in an improvised jig of the type already described. A point which should be borne in mind is that when the connecting rods are made of duralumin, as in the case of certain high-efficiency sports car engines, difficulty may be experienced in tinning the bearing surfaces, as ordinary fluxes are unsuitable owing to the fact that duralumin oxidises rapidly. The safest plan is to return duralumin rods to the manufacturers for re-metalling, or to send them to a firm of bearing-metal manufacturers, who will undertake this work.

After pouring the bearings, they should be tested to make sure that adhesion of the white metal is complete. They should ring true when tapped with a light wooden article, such as a pencil, and if they emit a cracked note the metal should be run out and the bearing relined. If the shells are impregnated with oil, or are themselves cracked, it may be difficult to obtain a good ringing note; this also applies if there are a number of oil holes or grooves in the bearings, so that a certain degree of discretion is necessary. A directly metallised connecting rod cannot, of course, be satisfactorily checked by the ringing test, but if both the connecting rod and cap halves of the bearing have been poured at the same time, the ringing test applied to the bearing cap will give some indication of the condition of the other half of the bearing.

Paraffin Test

The well-known paraffin test can, of course, be applied to any type of bearing. Immerse the bearings or shells in paraffin for at least half an hour, carefully dry them, and sprinkle

them with french chalk. If the paraffin has penetrated at any point at which the white metal does not adhere perfectly, it will emerge, and stain the chalk.

Main Bearings

The remarks regarding re-metalling bearing shells apply, of course, to detachable shells for the main bearings in the crankcase. If, on the other hand, the crankshaft halves of the main bearings are re-metalled directly in the crankcase, as in the case of Ford cars, and a number of American models, the work is hardly within the scope of the average owner or small garage, which is not equipped with the necessary re-metalling jig.

This consists in essentials of a long bar or mandrel which is clamped into place in the crankcase bearing housings. To that bar are clamped collars, which are slid up against the sides of the bearings, while special pouring blocks are placed in position above the bearing housing when pouring the metal (Fig. 6). Special grades of white metal must usually be used, the Ford metal, for instance, having a high percentage of copper. As the method of setting up the mandrel, checking the alignment and procedure in pouring varies in different engines, the work should be placed in the hands of the service department of the maker of the car, or a firm specialising in this class of work.

After re-metalling the bearings in the crankcase it is usually necessary to bore them in line, and this again is a job for the specialist. Actually, even in the case of connecting rod bearings and detachable shell main bearings,

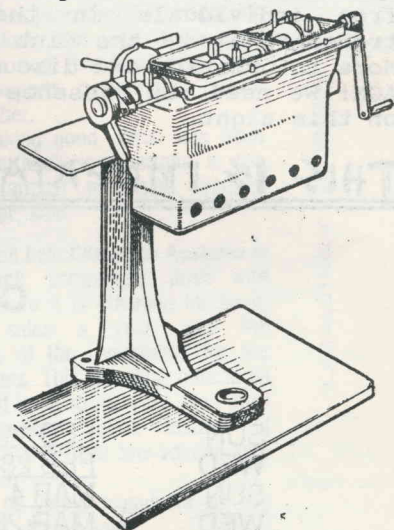


Fig. 7.—Boring the main bearings in line with a hand-operated boring bar. A V.C.L. engine stand is used to carry the engine.

boring the bearings accurately to size with the aid of a special boring bar is the accepted practice of the majority of car manufacturers. (Fig. 7).



PREZ

SEZ...

February 1990.

FROM THE PRESIDENT.

Apologies for the lateness of this magazine! We're still experiencing production problems and hope you will bear with us! Some important reminders for the next few months

1. THE ANNUAL GENERAL MEETING (Wednesday, 28th March 1990)

An important one this year as the club is considering incorporation under the provisions of the Associations Incorporations Act 1981. The Committee feel that incorporation (which is increasingly being adopted by clubs such as ours) is a wise move for the future. Basically, it allows the club to exist in its own right. For instance, in the question of liabilities, it takes the onus away from individuals in the club and transfers it to the club as a whole. More information and discussion at the AGM! We need you presence and support on this night.

Committee positions are often available to those interested in the continuing well-being of the club. What about you this year, providing some competition? The urgent need at this moment is for someone to take the "baton" from Bill Graham, who has served his time with distinction, and take on the editorship of the magazine. Perhaps you have been a member for some time, but have not stepped forward before. NOW IS THE TIME! There is much help and existing material offered in this area, but a KEY PERSON is needed, preferably with typing skills and a desire to have their work sent all over the world! THINK ABOUT IT!! ...

2. SUBSCRIPTIONS

Please pay early. Our subs are very reasonable, and benefits are many e.g. recent library acquisitions alone cost hundreds of dollars. Enclosed is the 1990-91 application form. Return it now!

3. PROXY VOTING

If you can't make it to the AGM, consider sending the proxy form as below. Your vote is valued!!

Good Luck for 1990,

David Giddings, President.

THIS IS IMPORTANT --- PLEASE READ !!!

CCOCA CALENDER 1990

SUN	FEB 11
WED	FEB 28
SUN	MAR 4
WED	MAR 28
FRI	APR 13-16
WED	APR 25
SUN	MAY 6
WED	MAY 23
FRI	JUN 8-11
WED	JUN 27
WED	JUL 25
SUN	JUL 29
WED	AUG 22
SUN	AUG 26
WED	SEP 26
SUN	SEP 30
WED	OCT 24
SUN	OCT 28
SUN	NOV 18
WED	NOV 28
SAT	DEC 8

Picnic at Hanging rock
Open night
European motoring show
Annual General meeting
Citaround Mt Tamborine (Brisbane)
Open night
Day run to Pine ridge car museum
Arthurs seat.
General meeting
Austraction 90
Open night
General meeting
Day run to Coolart, Somers
Open night
Technical day
General meeting
Club auction/BBQ
Open night
Joint concourse with CCCV
Day run to Werribee Park
General meeting
Break-up dinner.

CLASSIFIEDS

FOR SALE:

Two 1953 Big Fifteens.

One is a genuine sunroof model in original condition. Sills have rust. It is missing a gearbox and head. (Citroen identity Roger Brundle has been heard to say - "That's not a bad car!") \$900-. (ONO)

The other was a Redex Rally contender, with hull reinforcing, but was never raced. 95% complete. The hull is sandblasted and undercoated, and all parts are reasonable to good, however - no engine or gearbox. \$1100-. (ONO)

Mark Vickery (03) 434-5079

FOR SALE

- . Set of Light 15 doors, some rust, \$50- or \$15 each.
- . Big 6 front end, poor condition, no drive shafts. \$20-.
- . Rear end - complete. \$20-.
- . Light 15 Head. \$20-.
- . Block & Crank. \$20-.
- . Some other parts.
- . Swap my English head lights for your French ones.

Neil Rankine (056) 27 1185
(Can deliver to S.E. Suburbs.)

FOR SALE

One Traction Gearbox -complete except for bell housing. Good crown wheel & pinion. As is \$800-.

David Gries (03) 890-3266

FOR SALE

1950 11BL As seen at 1989 concourse d'elegance. Engine, gearbox, drivetrain, etc. excellent condition. Interior professionally retrimmed and in excellent condition. Paint is fair. Five excellent tyres, chrome is perfect. Radio fitted. 99% rust free. Brand new battery. Drives and starts very well.

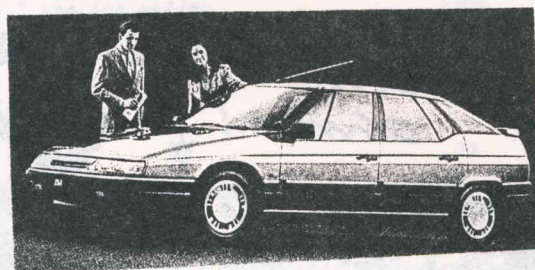
\$6,000.00

CONTACT: JOHN COUCHE

AH: 754 3583

BH: 508 2274

WANTED - In a desire to keep my interior original, I would be interested in door trims, or front seats in repairable condition. If you have some off an English Light 15 you can't use - Contact D. Giddings (03) 836-6038



The Australian Citroen range will get a top-and-tailing in 1990 with the arrival of the AX and XM models to join the existing BX line.

The AX will be slotted in beneath the BX, at just under \$20,000, while the XM will be the company's luxury flagship with a price in the \$70,000 range.

Citroen has promised that production of Australian XMs will begin next September and the local distributor, Franzcar Imports, is planning a launch by November.

"It's looking good. What has been holding us back in Australia is the range," Franzcar' managing director, Ross Moller, said.

What will help Citroen in Australia is the French company's push into Japan, where it is planning for up to 30,000 sales a year, and the closeness of the regulations for the two markets. This will allow cars to be introduced in Australia very soon after their Japanese debut, instead of waiting for a special low-volume production run.

"We'll be riding piggyback on the Japanese," Moller said.

He said Franzcar was only planning on 300 sales in 1990, but that could grow dramatically if supplies of AX match an expectation of up to 1200 potential sales each year.

The XM will only be a low-volume seller, but Moller expects the V6 3-litre car to do well against its targeted opposition including BMW 525 and Alfa Romeo's 164.

The 1990 International Car of the Year, France's Citroen XM.

THE new Citroen flagship, the XM, has won the International Car of the Year award — keeping up with tradition.

It finished well ahead of the Mercedes SL and the Ford Fiesta in the voting by 57 European motoring writers from 17 countries.

THE AGE,

CAR AUSTRALIA DECEMBER

SPECIAL INTEREST CITROENS

LETTERS

Citroen olivier ? ↓

Try CCOCA, Ocker!!!



Dear Bill,

To my Christmas card I just add this little letter to give answer to your questions. My books are selling well and I thank you to ask about it.

I can tell you that they are not at all sold out and I shall ask the editor if there is a way for you to obtain the number of copies you want directly. I also made a booklet on the Traction Avant issued in 1989 that may interest you also.

About the Almanachs Fabian Sabates published the years 1983, 1984, 1985, 1986, I think you still can supply the last two years.

Yes the I.C.C.C.R. in Nederland has been a fantastic event with the coming of about 3,800 Citroën cars of all types. (What!!? -Ed.) Everyone is excited about the V-8. Photos will follow. (What again!!! Is it true-Ed)

Yours

Olivier de Serres

C.J. Swales
20 Wyman Street,
BRASSALL, QLD, 4305
(07) 201 8051

Dear Mr. Couche,

I have been advised of your Club by Citroën, France, to whom I recently wrote requesting information about my recently acquired Citroën of unknown vintage. I bought the vehicle as a 1924 model but information that I have been able to get shows it may be as late as 1927.

According to a copy of a dealer's guide of that era, the front wheel brakes working in conjunction with the transmission brake signify it to be a 1926, 11.4 hp. model.

Regardless of the year model, I wish to restore the vehicle, which has been dismantled since 1970. My research into the previous owners is broken at that time.

I have been conducting the search to locate various missing items and to date have had some small success, however I am unable to locate the clutch thrust race assembly, with the part that obviously operates on the clutch fingers.

The purpose of this letter is to ask your members if they could help me with either the missing parts or information that I could use to have the parts manufactured such as a drawing, photograph or sketch with sizes.

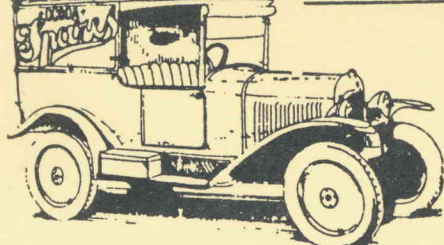
I am also seeking a headlight and horn button surround, a speedometer and oil gauge unit.

I should be grateful for any support you can give, naturally I am prepared to pay for any parts that may be available.

Yours sincerely,

Carl Swales

SPARES



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

ODD SPOT

A Lille woman was so enraged by neighbors parking outside her house that she rose early and scratched the paintwork of an offending Citroën. Her husband then told her it was her anniversary present.

NOTE: ORDER FORMS TAKE PRECEDENCE OVER PHONE CALLS.

PARTS LIST (TRACTIONS) as at 1 NOV 87

Clutch thrust bearing	\$24
New oil pump gears (ea)	55
Wishbone shaft, upper, second.	180
Lower ball joint adjusters (permanently fixed to car) (set)	50
Windscreen wiper blade	9
Bushing, second gear	12
Bronze bush for brake shoes	3.50
Big boot top rubber	12.80
Big boot bottom rubber	11
Rubber door seal	25.60
Scuttle vent rubber	25
Pedal rubber	10.00
Rubber grommet petrol filler (2 sizes)	9.00
Rear bumper grommet	12.50
Rubber V-blocks for doors (8)	34.50
Bonnet rubbers	0.30
Big boot paint protectors (under handles & lights)	30
As above (small boot)	25
Windscreen rubber - alum frame	40
Steering rack boots (pairs)	30
Gearbox gasket set	8
Complete gasket set motor L15/L1BL	76.44
Sump set "1"	10.20
VRS set "1"	50
Complete gasket set motor Big 6	70
Exhaust muffler incl. tail pipe L15	95
" " B15	105
" " B6	140
Rubber exhaust hanger	2
Gearbox output shaft seal	8.50
Front hub outer seal	8
" " inner	8
Rear hub seal	8
Door lock set French big boot	22
" " Small	22
Radiator hose upper/lower	13
Fan belt	12.25
Door lock springs	3
Piston & liner set	360
Liner seal	7.50
Exhaust valve	15
Inlet valve	15
Outer cross (driveshaft)	43.80

Tie rod ball joint kit	65
Upper/lower ball joint boot (leather)	12
Brake hose front/rear Slough	28
" " rear French	22
Throttle shaft 32 PBJC 0.5 mm O/S	20
Hub & bearing pulley	140
Lower ball joint pulley	65
Bonnet strip clamp (internal)	1.50

DYANE

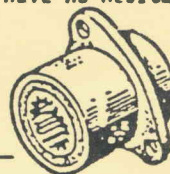
Brake hose	22
Seat rubber	1
Wiper blades pair	10

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

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

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

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



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

Don't forget the firm's motto:

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

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

