FRONT DRIVE

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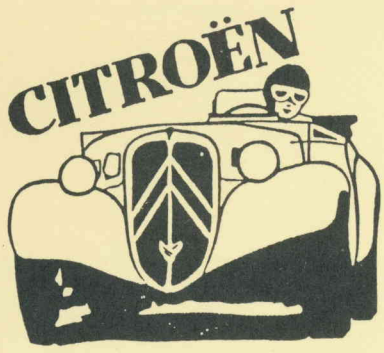
Windcheater & T shirt designs

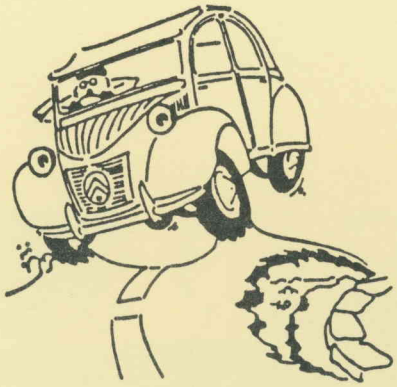


ROADSTER

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

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

COUPE



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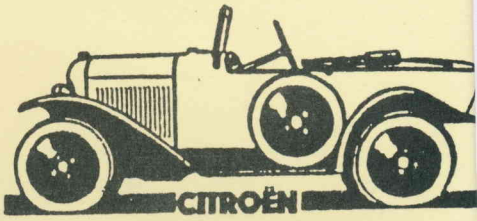

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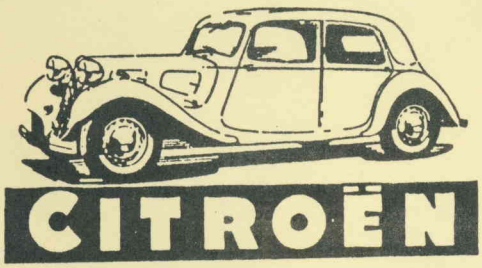
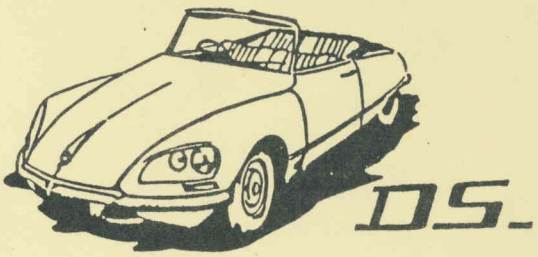


LIGHT 15

ANNIVERSARY

SCROLL
BREAST POCKET
SIZE ONLY

BIG 6



DS

CHEVRON BADGE

Dates of issue for magazine: Mid-January, March, May, July, September, November.

Closing dates for copy: Mid-February, April, June, August, October, December.

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

EDITORIAL

CCOCA POSTAL ADDRESS:

P.O. Box 52
Balwyn 3103
Victoria.

This issue, some provocative and rather mysterious correspondence from a couple of ardent followers of the famous Traction Avants. Good to hear from them, even if we don't know who they are (or do we?).

Some continuing technicalities from a couple of our reliable contributors - which is a reminder. Where the heck are your contributions? If you're not a bit sharper, our Traction Restoration Manual will go to press without the benefit of all your years of Traction experience. That would be a shame for you and your fellow members!

Looking at some photos taken at recent club rallies (kindly provided by Robyn Couche), it is obvious what a happy and relaxed bunch the members are on such occasions. So if being relaxed and happy is what you want to be, make sure you come to as many CCOCA rallies as you possibly can. A simple recipe, so see you at the next rally!

All the best for now ...

Bill Graham, Peter Simmenauer, Peter Hore.

COMING RALLIES

September 13, Sunday	Observation Run, Mornington Pen.
September 17, Thursday	General Meeting, Nunawading.
October 11, Sunday	CCOCA Parts Auction, Crosses.
October 15, Thursday	Open Night, Nunawading.
November 1, Sunday	Geelong Speed Trials.
November 19, Thursday	General Meeting, Nunawading.
November 29, Sunday	Concours, Red Plate Inspection and Break-Up for 1987, Westerfolds Park.
January 24, Sunday	Australia Day Car Display
January 26, Tuesday	Run to Werribee Park.

CCOCA MEMBERSHIP:

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

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MEMBERS' CARS

1964 ID19 - Nance Clarke.

This member's car is one of the relatively rare Australian-assembled IDs produced at Heiledberg (Vic.).

Nance and her late husband Arthur purchased the car from Regent Motors, 86 Sturt Street, South Melbourne on 26 August 1964. Original documentation in Nance's possession shows the vehicle came with two safety belts and an HMV radio. The colour was Angora White, and the price was £1700.00.00.

The car was "demonstration vehicle" with just 20 miles up. Even now, some 23 years later, it only has 73 599 miles showing.

The documentation relating to the purchase records the car's body number as 193007745 and oddly, the very same number is also recorded as the engine number. Examination of the car verifies this situation, the same number being stamped both on the engine block and on the body number plate now attached to the scuttle on the right side and above the engine.

David Gries reports this strange numbering was common on the Australian cars. The number does not relate to listed French body numbers.

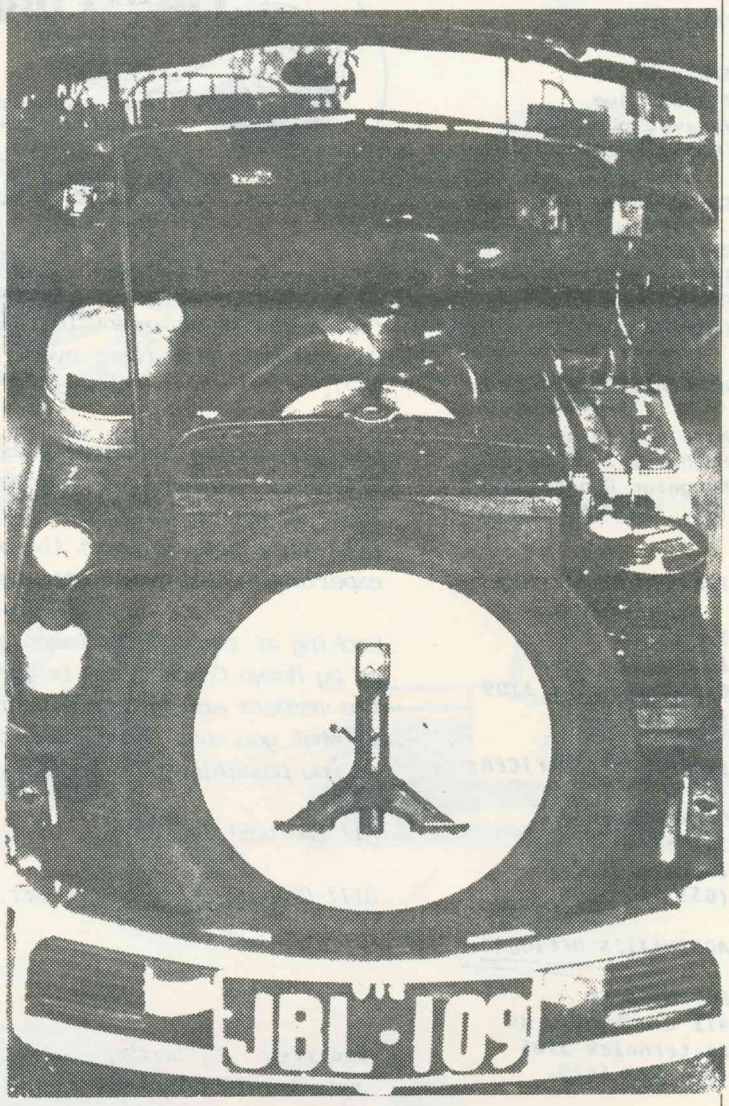
The car is in excellent "original" condition and is trimmed in grey vinyl, presumably locally made.

At the time of purchase, the Clarkes had their grey small-boot 1949 Traction (HN 727),and Arthur decided it was time to get "something better" (HN 727 is still in their garage!). They looked at a Chrysler Valiant, but neither Arthur or the family was very impressed. So they settled on the new Citroen. It seemed more appropriate for touring as the family was getting bigger, and was in fact "very nice on the open road" according to Nance. None-the-less, the grey Traction kept going for many years.

On one trip, they railed the ID to Murwillumbah and then drove up to Hervey Bay in Queensland, and then drove all the way home to Melbourne. They learned a lesson when they disembarked at Sydney though, to visit some friends. The ID was loaded onto the lower rack of rail car, and when driving off, as the hydraulic suspension came up, it caused the roof to be scraped along its full length against the supports for the car above. The railways were unsympathetic, and Arthur vowed that any such trips in the future would have the ID on the top rack!

Other mishaps in the car have been few - breaking a windscreen near Wagga and coming home swathed in plastic sheeting, spectacular loss of vision when the bonnet flipped up over the hood when they were going to Sorrento (disastrous effect on the bonnet, and the bonnet is always checked for security before driving off ever since), loss of hydraulic fluid, again on the way to Sorrento, and coming home on a tilt-bed trailer. Few other incidents if any.

The car has been mainly used for touring around Victoria, occasionally to Adelaide and into the Snowy Mountains.

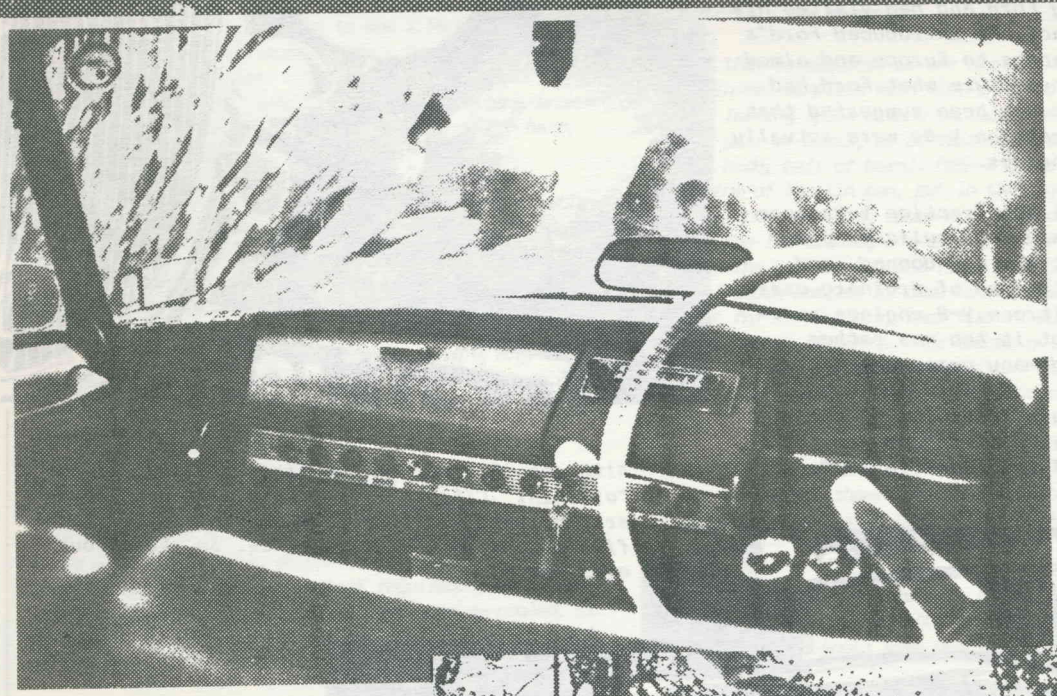


The other well-known Clarke Citroen is the regular Concours-winner KSE 442, now gracing the Grant garage.

There is no doubt that Nance's ID19P is a beautiful example, down to its original registration plate (JBL 109). It looks set to keep going for a long time yet!

Bill Graham.


JBL·109




JBL·109

V-8 TRACTION?

A glance at our photo might suggest that we've finally tracked down one of the elusive (now non-existent?) Traction V-8s of which there were only about 20 made in 1934. And right here in Victoria, too!

But, hold hard Hector! Before you risk a hernia as you drag out your checkbook and set off in pursuit of the owner of ISV 405 who no doubt doesn't realise what a rarity he has, let's look a little closer.

Yes, that's right. It's not a 1934 Citroen V-8 at all. It's an excellent example of a 1933 Ford V-8, seen at the Bendigo Swap Meet two or three years ago.

The photo has been carefully angled and cropped to play up Traction-like aspects of the car and to hide as far as possible "give-aways".

None-the-less, the similarities are very striking. Note the shape of the grill, guards, headlights, bonnet and windscreen, the bonnet vents and bonnet handles, and windscreen wipers.

It seems most unlikely that the similarities are purely coincidental. Andre Citroen was a great admirer of Henry Ford and had visited his American plants. In fact, he introduced Ford's mass-production approaches to Europe and aimed to do for European manufacture what Ford had done for American. It has been suggested that some of the protype Traction V-8s were actually powered by Ford V-8 engines.

It is thought that all the Traction V-8s were re-engined with standard four-cylinder power units when the project was abandonned, and were sold as part of the run of ordinary cars. However, one of the Citroen V-8 engines survived after the war, but it too was rather thoughtlessly scrapped many years ago.

Citroen sought to regain something of the grandeur of the V-8s when it introduced the six-cylinder "Queen of the Road" in 1938.

Although 1934 marked the first and last of the "official" Citroen V-8s, there have been several private versions produced in various configurations in the years since. So, keep your eyes peeled!

W.G.

TECH TIPS

CASE HARDENING

How often have you thought to yourself, or have been told, "If this component was to be heated red-hot then quenched in oil or water, it would be so much harder or stronger, as the case may be"?

Well, gentle reader, I have news for you, and most of it is bad. With most, though not all, steel components, you could heat it red hot and quench it out for 24 hours on and off over a week, and all that would happen is that it would become smaller through surface oxidation, but not a whit harder for all your efforts.

Now without delving into all the intricacies of metallurgy and the iron-carbon diagram, the "magical" component of steel is carbon (after all, this is a carbon world). All steel with less than 0.4% of carbon can be, and is, classified as "mild steel" and to which the foregoing heating comments apply.

This is not to say that 0.4% of carbon is a magical cut-off point, and that nothing happens with heating and quenching below this value. Rather, certain chemical changes take place in the structure of the metal, but they are minimal below this point. However, the changes become quite dramatic with more than 0.4% of carbon content, up to a maximum of 1.5%, and this material is classified as "high carbon steel". In other words, it can be heated and quenched and thus become hard and brittle, the hardness and brittleness increasing up to the 1.5% carbon point. After 1.5% carbon, the steel doesn't become any harder but it does become even more brittle. Files are a good example of 1.5% carbon steel. Hands up all those who have broken a file, inadvertantly of course! Though they are hard, files are also rather brittle.

At this point we had better define hardness and brittleness. "Hardness" can be defined as "resistence to mechanical abrasion", and is measured in units of Rockwell 'C' or Brinell. Brinell is now employed less than Rockwell 'C' which is more accurate on harder materials (the closer to 100, the harder the material). "Brittleness" is hardness coupled to a total resistence to bending e.g. a spring is hard but is tempered to become flexible. A sheet of glass is hard but brittle, and thus it shatters readily if bending is attempted.

How then is a spring, which has been heated red-hot and quenched so as to make it brittle, then made "springy"? This is achieved by the process of "tempering". The tempering process is simply re-heating the material to a specific temperature for the task required. This causes granular changes in the material, and when re-cooled, it is now not so hard and has become flexible i.e. in short, it has been "tempered".

So - mild steel has less than 0.4% carbon. High carbon steel (capable of being hardened by heating and quenching) has from 0.4% to 1.5% carbon content. Cast iron for example, has about 4.5% carbon content, and we all know how brittle cast iron is.

Mild steel objects can be hardened, but this is achieved by heating the object to be hardened in an atmosphere, either liquid or gaseous, having an excess of free carbon. This free carbon is promptly absorbed by the skin of the red-hot object, changing it to a layer of "high carbon steel" which when quenched becomes very hard, but still leaving a "soft" centre. This process is called "case hardening" and is employed extensively for gears.

Now you know what is amiss when gear teeth are "through the hardening". The hard skin of the teeth has worn away, leaving the softer metal underneath exposed.

Quenching is the process of cooling quickly and thus changing the molecular structure of the material. Water and oil are the most common media for quenching, but many other methods and additives are employed.

CASE HARDENING WITH LEATHER

The case hardening process can be carried out (with varying degrees of success) in most home workshops utilising one or the other of the proprietary case hardening compounds e.g. Casenite or Hardite. Both carry quite explicit instructions for use on the can. The real problem with them is having to warm the item to red-heat, covering it with the compound, heating it again, and the quenching. Normally this results in a quite poor surface finish. However, one of the oldest, and still very effective methods does leave a good surface, and requires the simplest of materials and equipment.*

All that is required is the object to be case hardened, a tin can complete with lid, into which the object will fit leaving space around it, and last but not least, an old pair of boots, or at least lots of leather scraps (or hide, hair or horn). Pack a layer of scraps into the bottom of the tin can, put in the object to be cased, and pack the remaining space with more carbon-rich scraps. Fit the lid tightly and wire it on. Put the whole thing into the back of an open fire, solid fuel space heater or fuel stove and let it come to red-heat. Keep it at red-heat for 4 - 6 hours, then fish it out, and quench it out in a bucket of water. This can be quite dramatic, so keep the admiring throng well back, and don't put your face over the bucket to observe what occurs. You may not enjoy it.

The tin can may end up rather "second hand" in the process, but the object should be unmarked with a fine grey finish, and a very hard skin about 0.20 - 0.30 inch (say 0.5 mm) deep.

I am still using odd cutters (made from mild steel only) which I case hardened with the aid of a space heater and a pair of old boots some years ago.

Note that the commercial method of casing is merely a pot of molten and temperature-controlled carbon-rich salts in which the objects to be hardened are immersed. They thus absorb skin carbon and are protected from surface oxidation. A little beyond the average home workshop.

Jack J. Weaver.

*Possibly also known as "Kasenit".

Gearbox repairs from page 7.

There is room here for error, though the smaller the better. You will have noticed that I have not written of replacing the three spindles (17) which carry the satellite gears. New ones are not available and there is no cost-efficient alternative. You will find that there is annular wear on both the spindles and in the bore of the satellite gears. Hence, there is room for the satellite gears to displace with any high spots on the washers.

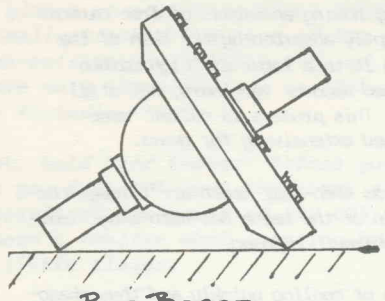
Reassemble the unit and again check the clearance and freedom of rotation of the output shafts. This procedure may have to be repeated a few times to reach the desired standard.

(To be continued).

Kenn Gilbert.

GEARBOX / DIFFERENTIAL

TRACTION AVANT FOUR CYLINDER



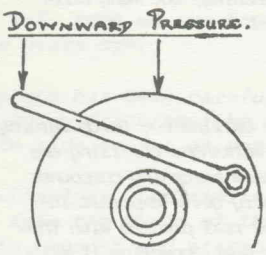
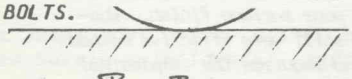


FIG. 14: REMOVING THE CROWN WHEEL/DIFF. CAGE BOLTS.



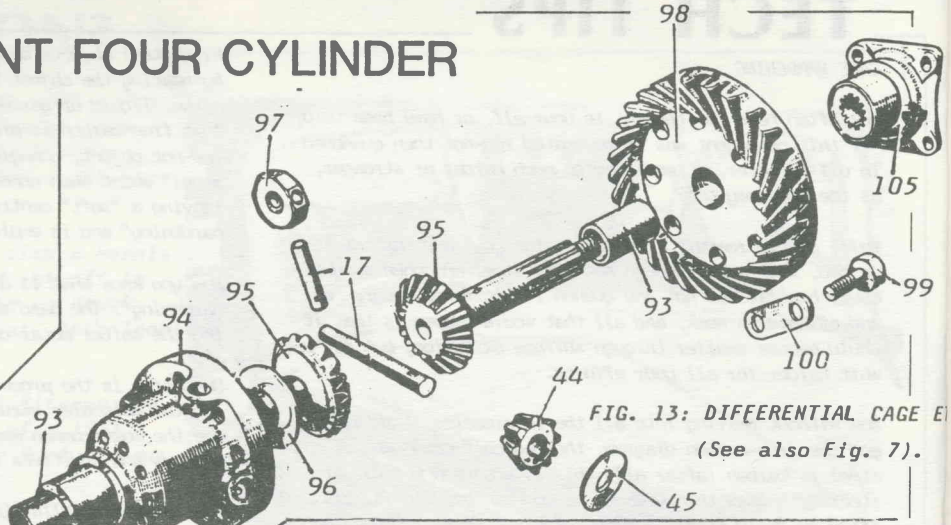


FIG. 13: DIFFERENTIAL CAGE E
(See also Fig. 7).

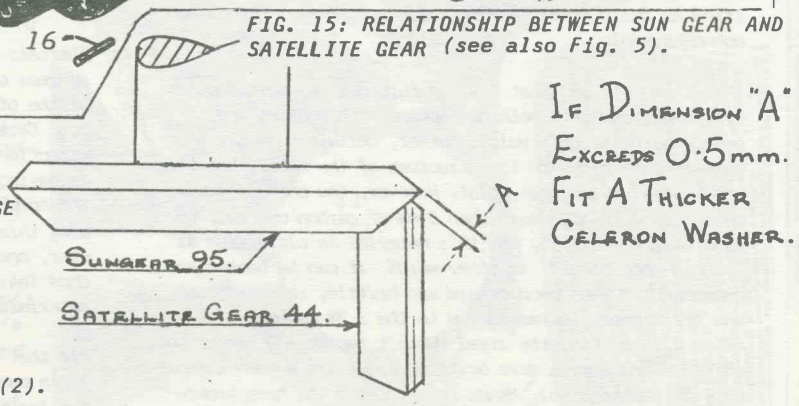


FIG. 15: RELATIONSHIP BETWEEN SUN GEAR AND SATELLITE GEAR (see also Fig. 5).

Continued from Front Drive 9 (2), 9 (6), 10 (2).

You may remember that we started working our way through the Traction gearbox some 18 months ago? Well, no more suspense - the saga is continuing.

The next step is to rebuild the differential assembly if necessary (and that's most likely). The differential assembly is essentially item 94, the pinion carrier, bolted up to item 98, the crown wheel - see Fig. 7 in FD 9 (2), reproduced in part here as Fig.13.

Take the differential assembly and place it in a vice with the crown wheel uppermost. Remove the eight bolts (99) securing the crown wheel (98) to the differential cage or pinion carrier (94) and lift the crown wheel off, taking care not to drop the sun wheel and output shaft (95) which pass through it.

If a suitable vice is not available, a piece of timber can be employed instead. An offcut of 25 mm pine, 150 mm wide and 300 mm long would be best. Place the differential on the offcut so that the differential is resting on the outer circumference of the crown wheel and the protruding end of the output shaft. By fitting a spanner "across the crown wheel" as in Fig. 14 to the retaining bolts (99) in turn, the bolts usually give before the crown wheel turns on the board. In exceptional circumstances, it may be necessary to have a second person assist in holding the differential on the board.

At this point, remove the sun wheel (95) from the crown wheel and inspect its teeth. Any degeneration here will be indicative of the other gears. If wear is appreciable, you had best chase up another set.

Looking at the open side of the differential cage, you can now see the surface which mates with the crown wheel. Within that surface are the ends of three planet gear spindle retaining pins (16). All three pins are tapered and to remove them, they must be drifted toward you as now viewed. Once the pins are removed, the planet gear spindles (17) of which there are two short and one long, can now be pushed out - these are a sliding fit. You can now remove all the remaining components, preferably one at a time so that you can re-assemble more easily.

In each of the differential cage and the crown wheel, there is an output shaft bush (93). Both of these bushes will need to be replaced as each carries the weight of both the output shaft and the inner end of the drive shaft. Wear on the corresponding rubbing area of the output shafts (95) will generally be negligible. A standard bush can be fitted to each side if you can get one. There is nothing available through bush manufacturers which comes even remotely close to what is needed. In all probability, you will have to have a pair turned up by someone with a lathe.

The bushes can usually be removed by selecting a socket which is slightly smaller than the outside diameter of the bush, and using the socket as a "drift" to enable the bush to be tapped out of the bore containing it.

Refitting the bushes is best done with a press but it is usually alright to use an output shaft as a mandrel passing through the bush and guiding it into the bore of the crown wheel or cage. In tapping the output shaft to drive

the bush in, it is necessary to protect the gear teeth cut on its end by placing a suitable sized socket in the centre of the sun wheel and striking it with the hammer. The bushes are driven in until flush.

Once the bushes have been fitted, and the components have been cleaned up, re-assembly will permit examination of the mesh of the differential gears (see Fig. 5, page 12 of FD 9 (2). Re-assembly is simple enough. First place the celeron washer (96) onto the output shaft, ensuring that the oil grooves are towards the back of the gear, then slide the shaft into the differential cage (94). Take the longest of the planet gear spindles (17), and insert the end without the machined rebate into the second bore which has provision for the sun gear spindle retaining pin. The count may be taken clockwise or anti-clockwise as there are three such bores. The fourth bore is without provision for a retaining pin, and it will be found that this fourth bore is directly opposite the one we seek.

Now fit in sequence a dome washer (45), planet gear (44), planet shaft centre (97), planet gear (44) and dome washer (45). Then slide the spindle (17) home and fit the retaining pin (16) to secure the assembly thus far. Next, offer up a short spindle (17), fit a dome washer (45) and planet gear (44), push the spindle home and again fit a retaining pin. Repeat for the remaining short spindle section.

There are two factors which control the proper meshing between the sun wheels (95) and the satellite (planet) gears (44) - see Figures 5 and 15. These factors are the dome washers (45) fitted behind the satellite gears, and the celeron washers (96) fitted behind the sun gears. Wear in the celeron washers is normally negligible, so that free play in the differential is taken as due to wear in the dome washers.

To check the meshing of these gears, pack out the four planet gears away from the cage so that they are fully meshed with the sun wheel. Now place the second sun wheel, complete with its celeron washer, into full mesh with the assembly of planet gears. A straight-edge placed across the open face of the cage should almost touch the outer exposed face of the second celeron washer. If the celeron washer is "too low" and the sun wheel protrudes beyond the planet gears by more than 0.5 mm, a thicker celeron washer will have to be fitted so as to bring this overlap into the range of +0.5 to -0.5 mm. As in Fig. 5, the ideal is for the gears to be flush at their outer mating circumferences. As mentioned earlier, the celerons usually wear very little, and the main wear occurs at the dome washers.

To determine the amount of wear which must be adjusted out at the dome washers, insert feeler gauge blades between the planet gear and the dome washer - check the one opposite at the same time. Repeat the operation for the other pair of gears. The wear is usually much the same for all the dome washers, so it is possible to make four spacing washers of a common thickness in most cases. These spacers should be turned up from 60 ton steel and then rubbed down with fine emery on a piece of plate glass to ensure the flat surfaces are parallel. If there is appreciable difference, then allowance should be made from gear to gear so that each spacing washer brings its gear within the acceptable meshing tolerance.

It can be seen that this tolerance is quite broad, but it is desirable that variations of controlled meshing between gears be kept to a minimum. Too great a variation would put most of the load onto one or two gears, and not spread it evenly over the four gears as is intended.

Having had the spacing washers made up, they will need to be trial fitted. Lightly oil all the components and assemble as before, only now fitting a spacer washer between each of the planet gears and the dome washers. Place the sun gear in situ and check the mesh once again, using the straight edge as directed earlier.

If the mesh checks out properly, remove the loose sun gear. Take hold of the differential assembly and turn the output shaft - it should move freely though it might be a little "notchy". Next, fit and secure the crown wheel complete with the remaining sun wheel and celereon washer. Torque up the retaining bolts (99) to 44-50 foot-pounds. Secure the bolt heads by bending up the lock tab against a flat and/or put a drop of Lock Nut on the clean threads before fitting each bolt (at final fitting - see below).

If the earlier checks have been satisfactory, this one is likely to be also. However, to fully verify that the differential cage assembly is acceptable, make the further checks as below.

Fit and secure an output (drive) flange (105) to either of the output shafts, hold the differential assembly, and rotate the flange. Rotation should be smooth and free. Depending on the gears used, you may find that the flange turns freely but not smoothly. This is no cause for alarm. The fact that it can be turned by hand without great force is what counts. As a comparison, the force should be no more than is needed to turn the chuck of your 10 mm dual-speed drill when it is in low-range. If more torque than this is needed, it is likely that there is insufficient longitudinal clearance on the output shaft and sun wheel (95). This clearance should be between 0.025 and 0.15 mm (0.001 - 0.006 inch).

The most probably remedy will be to reduce the thickness of the celeron washer. The only time that this remedy would not work is if the sun gear is excessively proud of the satellite gear i.e. as it is depicted in Figure 15. In such a case, one would have to reduce ever-so-slightly the thickness of the new flat washers.

Reducing the washers at fault can be achieved by sanding them on a piece of fine wet-and-dry paper. Place the paper on a flat surface such as a piece of glass sheet. Work the washers on the wetted paper in a circular motion, applying as even a pressure as possible in order that the washers will retain a uniform thickness. A vernier caliper or micrometer is desireable for gauging this uniformity, but a sensitive touch, a dose of patience and ordinary fitter's calipers can see an adequate job done.

Continued on page 5.

LETTERS

13 July 1987.

The Editor,
Front Drive,

Sir,
What is this club coming to in recent times. As a member of the club since its inception, I can recall its early years when Traction was king (or queen), and Front Drive was almost totally devoted to news and views of this great family of cars.

But now what do we see? Page after page of this once-fine magazine filled with articles on twin-pots, CXs, BXs, AXs, SMs, Zabrus (Zab-who?), the list is endless. And dare I mention that lunatic folly Raid 88. May they all disappear into some bottomless pot-hole filled with bull-dust on the Gunbarrel Highway. And when we do see the occasional paragraph or two concerning Tractions, it is about such outrageous things as replica Roadsters, Range Rover copied driveshafts, or Austin 1800 driveshaft conversions. Whatever happened to ORIGINALITY, obviously a word not in the present vocabulary of the present Editors of Front Drive. They may as well call this club the Citroen Model Owners Club, not Classic Owners Club.

Now the latest outrageous proposal from none other than that long-time twin-pot and D-series addict David Gries to devote regular space to the D-series models, and what is more outrageous is that this proposal is endorsed by none other than Torr-Shaun Barr himself, no less, that great defender supposedly of the Traction cause. Who is this Torr-Shaun Barr anyway? Obviously an illiterate who can't even spell his own name; any good Irishman knows that middle name should be spelled Sean.

Where too has he been all these years of silence. Certainly not labouring over one of his "glorious Tractions", I am sure, for if you ask me, he doesn't own a single one. He's probably been lazing on a beach in some South Pacific haven, dreaming of his beloved twin-pots, for if you ask me, he is none other than Dirk Shervo, himself, the arch villain, in disguise.

I intended tendering my resignation with this letter but have changed my mind for a little while anyway, just to see what further outrageous proposals are aired.

Your devoted Traction Lover,

Traks John East.

Vive La Traction, vive l"originalité.

[Bit of a stirrer, folks. He'll go off the planet with this issue. Our only clue is that he can't spell "tractioniste", and the postmark was Randwick - bit of a punter or is he just keen on the "chevaux", whether they are deux chevaux, onze chevaux, quinze chevaux or whatever? In which case, he sounds like a real Citroenist, and good luck to him. What do you think, folks? - Ed].

Dear Readers,

I read with fascinated interest a note penned by the esteemed Editor two or three editions ago which posed the question of what my physical appearance is like.

Well, Traction purists, as they say in the classics - Ve haff some goot news, und some batt news. The bad news is that I cannot, as a result of the constant perusal of myself by that arch villain, Dirk Shervo, reveal my true appearance to you in photographic form, lest the outcome adversely affect my crusade to rid the world of "you-know-what"!

I have, however, at huge personal expense, commissioned one of the world's leading character [caricature?] artists to create a near-perfect likeness (minus a few identifying details) of my appearance. With the kind acceptance of the Editor, this likeness is reproduced in this issue.

At last, after all these years, you the Traction purists of the world, can relate visually to a name you have worshipped and loved faithfully. Treasure the vision, dear people, for my exact identity must remain a mystery until my mission is completed. I pledge to you, the faithful, that once the last trace of the insipid twin-cylinder blot is erased from the face of the world's automobile mecca (I speak of course of the Traction), all will revealed [could be a shocking event folks, better keep the women and kids inside].

Fear not, for the time grows near. You will have read of my recent success in beating back the 2CV hordes so that they no longer dare leave from their breeding ground in Paris. Next stop, Portugal!

You magnificent hero,

Torr Shaun[Sean?] Barr.

[That face is vaguely familiar - Ed].

23 O'Briens Road
Port Macquarie
NSW 2444.
August 10 1987.

Dear Bill,

In belatedly acknowledging your letter of July 11, thought I'd drop a note advising that there'd be a delay in completing my notes on the restoration of my Traction.

I have to have an operation and probably will be in hospital for the next two weeks, but hope to complete draft during convalescence.

We have just completed the upholstery, finally mastering "fluting" - very time-consuming. If I paid myself a dollar an hour, I'd go broke.

Kind regards,

Jack Towner.

[Many thanks Jack. Sounds like the story of your restoration should go down very well with fellow members. Now that we've got "Tracks John East" into print, perhaps you'll inspire him to send us some general or technical stuff to displace the "riff raff" from our pages? Good luck with both your personal and Traction restorations - Ed].

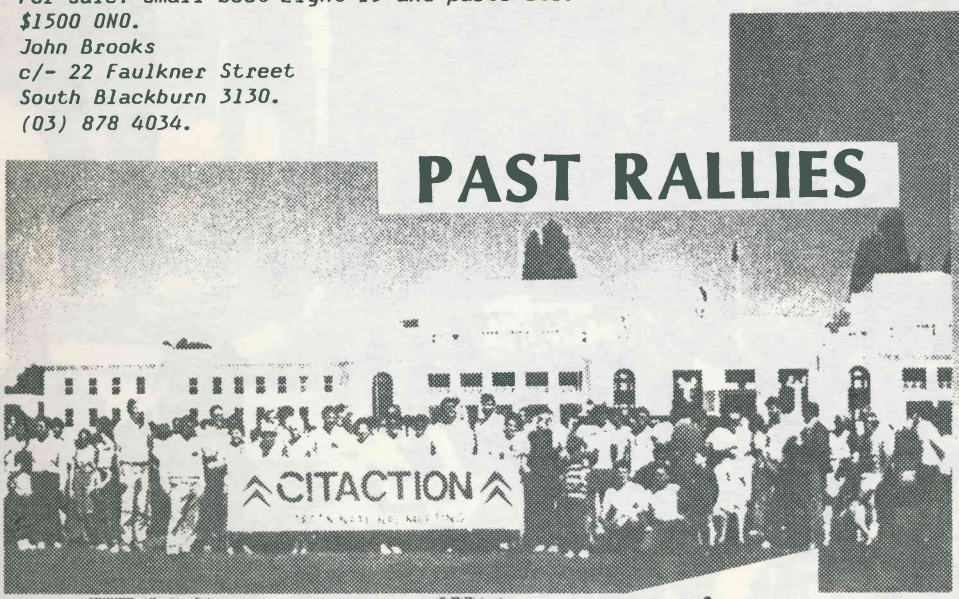
CLASSIFIEDS

For sale: Brand new black roof for 2CV, complete with glass. Available for cost - $450.
Leigh Miles
1 Streeton Court
East Burwood 3151.
(03) 429 5699 (B/H).

For sale: Small boot Light 15 and parts etc.
$1500 ONO.
John Brooks
c/- 22 Faulkner Street
South Blackburn 3130.
(03) 878 4034.

For sale: Early D engines and gearboxes, suit Traction conversions. Complete, condition unknown. $50 each. Will help out with bits if broken or incomplete.
David Gries
274 Elgar Road
Box Hill 3128.
(03) 890 3266.

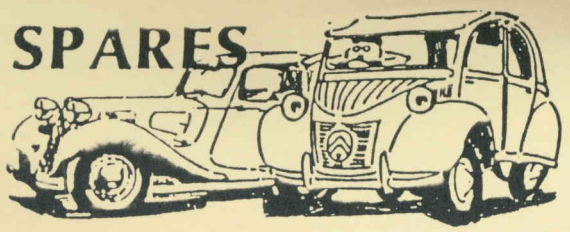
PAST RALLIES




BEECHWORTH


D-CONVERSION WORKSHOP

SPARES



SPARE PARTS OFFICER:

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

HOURS:

10am - 5.30pm
Monday - Saturday

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

NOTE: ORDER FORMS TAKE PRECEDENCE OVER PHONE CALLS.

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

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

DYANE

Brake hose	22
Seat rubber	1
Wiper blades pair	10

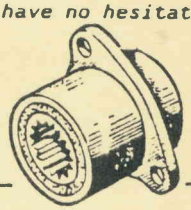
Early 2CV parts, all new unless indicated, LIMITED SYOCKS, NEVER TO BE REPEATED OFFER!!

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

STOP PRESS

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

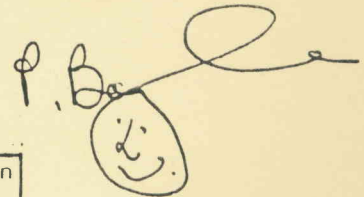
Peter Boyle
35 Newman St
Thornbury 3071
(03) 480 3560.



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

Don't forget the firm's motto:

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



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

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