Australia's & National & Magazine & For & Citroën & Owners & And & Enthusiasts





CITROEN CLASSIC OWNERS
CLUB OF AUSTRALIA

Australia's National Citroën Car Club

AUSTRALIA'S NATIONAL CITROËN CAR CLUB

SUMMER '05 \$ Vol 29 \$ No 6

#### POSTAL ADDRESS

CITROËN CLASSIC OWNERS CLUB of AUSTRALIA Inc.

The address of the Club and this magazine is:

PO Box 52, Balwyn, Victoria, 3103.

The Club's website is: www.citroenclassic.org.au

Citroën Classic Owners Club of Australia Inc. is a member of the Association of Motoring Clubs.

The views expressed in this publication are not necessarily those of CCOCA or its Committee. Neither CCOCA, nor its Committee can accept any responsibility for any mechanical advice printed in, or adopted from this publication.

The Club cannot accept any responsibility for, or involvement in, any business relationship that may occur between and advertiser and a member of the Club.

#### COVER IMAGE

The cover image is taken from the **DEADLINE** Traction Avant Nederland calendar and shows Le théâtre municipal in Brive-la-Gaillarde, Limousin, France,

#### MEMBERSHIP

Annual Membership is \$40. For overseas membership add \$12.

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

#### LIFE MEMBERS

The committee awards life membership to Club members in recognition of their contribution to, and support of, the Club. Life members are:

Peter Boyle 2003 Iack Weaver 1991 Nance Clark 1984

#### CONTRIBUTORS

Contributors to this edition of 'Front Drive' include:

Mark Ebery, Andrea Fisher and Rob Little.

The deadline for the next edition of 'Front Drive' is Friday, November 25.

#### COMMITTEE

PRESIDENT -[03] 9874 I960 [H] president@citroenclassic.org.au

SECRETARY -Mark McKibbin [03]56254020[H] [03]56241111[B] secretary@citroenclassic.org.au

TREASURER -Clare Hadaway treasurer@citroenclassic.org.au

ACTIVITIES DIRECTOR — Leigh Miles activities@citroenclassic.org.au

SPARE PARTS OFFICER -Rob Little [03] 5823 I397 [H] spareparts@citroenclassic.org.au

Publication Editor — Leigh Miles [03] 9888 7506 [H] editor@citroenclassic.org.au

COMMITTEE PERSONS — Ian Sperling [03] 9874 I960 [H] Rod Ward 04 I330 2567 [M] Andrew McDougall

#### SUPPORT

#### Andrea Fisher AOMC LIAISON OFFICERS —

Ted Cross [03] 9819 2208 [H] Russell Wade [03] 9570 3486 [H]

#### CLUB PERMIT OFFICERS —

Russell Wade [03] 9570 3486 [H] [03] 9470 8080 [H] Peter Boyle Mel Carev [03] 94I9 4537 [H&B]

**LIBRARIAN** — Leigh Miles [details above]

CLUB SHOP -Graham Barton [03]59870767[H] 0418I00992[M] clubshop@citroenclassic.org.au

#### STATE ACTIVITY CO-ORDINATORS -

ACT Mike Neil [02]6254 I040 [H]04I 82I I278 [M] NSW Bert Houtepen [02] 9746 9920

PUBLIC OFFICER -

Peter Boyle [03] 9754 3583

# CITROËNING

#### **CHPLATES**

When sending the VicRoads form to a club officer for ratification. please do the right thing and enclose a stamped, addressed envelope.

#### ABOUT TO ARRANGE A CLASSIC/HISTORIC PERMIT FOR YOUR CITROËN?

CH permit applications must be accompanied by a RWC. The onus is on owners to demonstrate that their cars are safe. Feel free to consult our Permit Officers for advice regarding getting your car on the road, and keeping it going.

#### FOR SPARE PARTS & TOOLS

Contact Rob Little. Phone: [03] 5823 1397 spareparts@ citroenclassic.org.au Please do it at a reasonable hour.

#### **CLUBSHOP**

For Citroën models, memorabilia and other items contact Graham Barton on [03] 5987 0767 or clubshop@citroenclassic.org.au

#### OTHER CLUBS?

www.citcarclubvic.net.org/ www.doublechevrons.aunz.com www.citroencarclub.org.au/ www.citroen.aceonline.com.au www.oleopneumatics.com.au/ car%20club/citroenclub.htm

#### Australia's & National & Magazine &

otha! The keen eyed amongst the membership will have realised that the last issue of 'Front Drive' suf-

> fered from a bad attack of

ED SED

the gremlins!

The article title headings on pages 22, 24 and 26 should all have said 'Dookie Daze', not 'I6 Years Young'. To those of who spotted it, congratulations... for the rest of you don't worry too much. If you are really keen for a correct set of pages, you can download the full magazine, in colour from the Club's website at www.citroenclassic.org.au

This month, as promised, sees the return of 'Member's Model' and I am really pleased that Roy Begelhole has come up with the goods for us. Well, the article originally appeared in the Warrnambool Standard, and thought the eagle-eyed editor would not discover it! Roy did provide us with some additional pictures, and I hope you enjoy

Ed Sed	Page 4
Prez Sez	Page 5
A-Tractions	Page 6
Cit In '06 Update	Page 16

#### CONTENTS

Dookie Daze	Page 19
I6YearsYoung	Page 28
Spare News — Stop 1	Press Page 38
Toy A-Tractions	Page 40
TECHNICAL TALK	Page 36
Spare News	Page 44
Classified Ads	Page 46

reading about Esther and Roy's Dyane exploits.

By the time you are reading this the Club's All Citroën Concours will have come and gone... I hope you enjoyed the day as much as I did and that you have filled your diary with some of the other great events in the A-Tractions list.

Enjoy! Leigh F Miles – Editor 85

Hello everyone, By the time cannot emphasise enough the weather we booked was delivered in time!

Some great events

coming up to finish the year with - Roger Brundle and Fay Dunstan are opening up their place for us to check out their Citroën gems. Have a nice country drive, meet up with your fellow club members, check out the antiques shop; who'd want to stay home, with all this on offer?

Two more club meetings for the year:

November: Leigh is running an Observation Run: from his description it looks like it might be merciful enough...

December: a change from previous years, we are having Xmas in December with a BBQ at our place.

Note about next year's Cit-In at Dubbo NSW: although they say "ample accommodation" [p I7 of the last edition of Front Drive], if you got to p18 you would see "book your accommodation NOW... may book out... we

you read this, the Concours need to book your accomwill have been held [thanks modation early"; and also, again, Ian]; I hope the fine their own registrations are

limited to 200. Since last year was in Perth, there may be many people wanting to take advantage of the event being back East, so get in quick.

Hope to see you at an event soon! Ø Andrea



#### Australia's & National & Magazine & For

Please note: events with dark headings are CCOCA-arranged events. Those with headings in white are selected items of interest that have been taken from the AOMC programme of events.

### A-TRACTIONS



### NOVEMBER

#### BENDIGO SWAP MEET

WHEN: Saturday, November 12 All day from 6:00am TIME: WHERE: Prince of Wales Showgrounds, Holmes Rd., Bendigo COST: Adults \$8.00.

children under 16 free

**BOOKING:** Not required CONTACT: Leigh Miles,

[03] 9888 7506,

activities@citroenclassic.org.au 2005 sees the Swap Meet's 30th anniversary and for the first time there will be a huge range of stalls undercover. There are over I,500 stalls this year with a huge number of Club and Trade stands as well as the usual collection of private stands. Full onsite catering is available as well.

Why not make a weekend of it? Stay overnight and join us at the Brundle-Dunstan's on Sunday?

#### **CASTLEMAINE DAY RUN**

WHEN: Sunday, November 13 LEAVE: 9:00am FROM: Melbourne Zoo carpark opp Royal Park Station.

Melway 29 EII

TO: Roger Brundle & Fay Dunstan's, Castlemaine Gold coin donation COST: BRING: Picnic or food for the BBQ [facilities supplied] and refreshments By November II BOOKING: CONTACT: Leigh Miles

> [03] 9888 7506 [H] activities@citroenclassic.org.au

Spring in the Castlemaine environs. Trees, birds and 'roos. Roger and Fay are on 3.5 acres, plenty of parking! Bring your own food, drinks and chairs. Large undercover entertainment area. BBQ and kitchen facilities available. Boules area. Good pub [does lunch] just down the road. Citroën attractions include:

- One of the lowest mileage SMs in the world [less than I0,000miles]
- 1956 DS 19 and '58 ID 19 under restoration
- 4 cylinder/hydraulic 2CV under construction
- Half scale DS cabriolet beginning construction
- Citroën models, books and CDs In town there is an antique centre, which includes an 'open by request' section with automobilia. We hope to get them to open for us!

### NOCTURN **OBSERVATION**

WHEN: Wednesday, November 23 TIME: 8:00pm FROM: Canterbury Sports Ground Pavilion, cnr Chatham & Guildford Rds., Canterbury Leigh Miles' 16 Harrow St., TO: Blackburn South COST: Gold coin donation

**BOOKING:** Essential by November 2I

Leigh Miles, CONTACT: [03] 9888 7506.

activities@citroenclassic.org.au

So you think that an Observation Run is a pretty thing? then you're thinking how much

more difficult will it be at night? Well, while I cannot guarantee that the questions will be any easier than a regular Observation Run, I can promise that you will not get lost the destination is already in your hands!

Supper [a BBQ sausage sizzle] will be provided, of course.

#### DECEMBER

#### **EVENING BBO**

WHEN: Wednesday, December 14 TIME: From 6:30pm WHERE: 6 Oak Rd, Mitcham COST: Gold coin donation BRING: Food for the BBQ [facilities supplied and refreshments **BOOKING:** By December II CONTACT: Andrea Fisher [03] 9874 I960 [H]

president@citroenclassic.org.au Normally, the December monthly meeting is replaced by a 'Christmas Break-Up', and this year is no exception. However, we have brought it forward by a week, to ensure it does clash with other festivities you may have planned.

Next door to our President's house is a very pleasant park, with BBQ facilities... so throw some food into the Esky, grab some refreshments and join us to round off 2005 in fine style.

#### **GET STUFFED!**

WHEN: Thursday, December 15 TIME: 7:00pm WHERE: Leigh Miles', 16 Harrow St., Blackburn South

COST: Cheap eats BOOKING: Not required CONTACT: Leigh Miles,

[03] 9888 7506 [H], editor@citroenclassic.org.au

Be the first to lay your hands on the next edition of 'Front Drive' by

joining in magazine stuffing. The work is not arduous, and you will be sure to enjoy the conversation.

Afterwards, we shall head out and stuff ourselves with dinner – 'Cheap

### A-TRACTIONS

Eats', in Box Hill.

### • **JANUARY 2006**

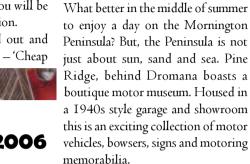
# DAY RUN - MORNING TON PENINSULA

WHEN: Sunday, January 15 LEAVE: 9:00am FROM: TBC

TO: Pine Ridge Motor Museum and Peter & Christine Sandow's at Blairgowrie

COST: Gold coin donation
BRING: Food for a BBQ or picnic
BOOKING: Essential by January 12
CONTACT: Leigh Miles

[03] 9888 7506 [H]



Then, it is off to join Peter and Christine Sandow at their house in Blairgowrie for a BBQ or picnic lunch. Pure Melbourne Bliss!

activities@citroenclassic.org.au

### RACV GREAT AUSTRALIAN RALLY



## RALLY

WHEN: Sunday, January 22
TIME: TBA
WHERE: From Melbourne
to Mornington

COST: \$30 entry fee BRING: Chair, rug, picnic lunch BOOKING: Essential by

I November

CONTACT: Frank Douglas

[03] 8704 2533

opals I@iprimus.com.ai This annual event has grown to

> become Victoria's largest veteran, vintage and classic car rally with travel from

Melbourne to the endoughed by the RACV, the rally is designed to give enjoyment to

historical motorists while providing much needed funds to Peter MacCallum Cancer Centre.

The event is organised and conducted by the All British Classics Car Club Inc. All entered vehicles must be 25years and older.

Four start points have been determined

- Federation Square
- Civic Centre, City of Casey
- Brandon Park Shopping Centre, Mulgrave
- Western Port Marina, Hastings All entrants in the rally will enjoy a sausage sizzle at their nominated starting point.

This provides an excellent opportunity to view some of the truly interesting cars that exist in Australia. So, pack a picnic and come along for a great day out.

#### MONTHLY MEETING -YARRA BANK BBO

WHEN: Wednesday, January 25
TIME: From 6:30pm
WHERE: Yarra Bank, opposite
Como Park North, Williams Rd
COST: Gold coin donation
BRING: Picnic or food for the BBQ
[facilities on site], chairs, tables,
refreshments and a jacket

BOOKING: Essential by January 23 CONTACT: Leigh Miles,

[03] 9888 7506,

activities@citroenclassic.org.au What better on a warm summer's night than to join friends for a BBQ on the banks of the Yarra River? Come along and help kick the CCOCA 2006 Year off to a great start!

Remember as well, that the following day is Australia Day — so with no reason [other than the Australia Day Historic Car Display] to be up early, there is no reason not to join us.

#### AUSTRALIA DAY HISTORIC CAR DISPLAY

### australia day

WHEN: Thursday, January 26
TIME: Participants: I0:00,
Spectators: I2:00pm

WHERE: Participants – Northland Spectators – Kings Domain Gardens, Linlithgow Ave., Melbourne.

Melway 2F JIO

COST: Free BOOKING:Spectators: not required



activities@citroenclassic.org.au

### A-TRACTIONS

This event is a real favourite with many CCOCA members. The Kings Domain Gardens will once again feature the famous Historic Vehicle display, with over 500 veteran, vintage and classic vehicles exhibited, free entertainment and activities, and scrumptious food stalls. Bring a picnic hamper, blanket and enjoy a leisurely day with other motoring enthusiasts. If you would like to display your vehicle, entry forms are available from RACV shops or by telephoning the Event Director on [03] 5983 898I. Only vehicles manufactured before 3I December 1977 are eligible for entry.

#### **GET STUFFED!**

WHEN: Friday, January 28 TIME: 7:00pm WHERE:Leigh Miles', 16 Harrow St., Blackburn South COST: Cheap eats **BOOKING:** Not required Leigh Miles, CONTACT: [03] 9888 7506 [H], editor@citroenclassic.org.au Be the first to lay your hands on the next edition of 'Front Drive' by joining in magazine stuffing. The work is not arduous, and you will be sure to enjoy the conversation. Afterwards, we shall head out and stuff ourselves with dinner - 'Cheap Eats', in Box Hill.

#### FEBRUARY

MUSEUM AND NORTH COU



WHEN: Sunday, February 12 LEAVE: II:00am Melbourne Zoo carpark FROM: opp Royal Park Station. Melway 29 EII

TO: The Tramway Museum, Union Rd., Bylands, nr Kilmore. VicRoads 60, H7

COST: \$8 museum entry BRING: Lunch, rug, chair, thermos **ROADS:** Bitumen BOOKING: Essential by February 4 Leigh Miles, CONTACT:

[03] 9888 7506 [H]

activities@citroenclassic.org.au You do not have to run to catch a tram at Bylands, in the rolling countryside. They are all sitting there, looking incongruous seen across the paddocks. Trams and a rural background are not a combination vou encounter very often. So, come along and ride the trams at The Tramway Museum. The collection incudes trams from Melbourne. Ballarat, Bendigo and Geelong and a display of heritage buses.



MONTHLY MEETING -

WHEN: Wednesday, February 22

Ground Pavilion, cnr Chatham

& Guildford Rds., Canterbury

SPEAKER

Canterbury Sports

8.00pm

GUEST

TIME:

WHERE:

CONTACT: The last couple of Monthly Meeting have been very 'social'. So it is time

Limited BBQ facilities will be available.

### Supper? What else would you expect? MARCH

ensure a great night.

#### AOMC **AMERICAN** MOTORING SHOW

Sunday, March 5 WHEN: TIME: TBA WHERE: Flemington Racecourse COST: TBC BOOKING: Not required

CONTACT: Leigh Miles

[03] 9888 7506

Leigh Miles,

[03] 9888 7506,

activities@citroenclassic.org.au

for a really automotive meeting this

month. As always, when we have a

great turn out of our members, to

activities@citroenclassic ara au

SDARE	PARTS	FUND	MEMBER
BOOKING:	Not required		
COST:	Free	activities@citroenclassic.org.au	

Peter

For a one-off \$100 fee Spare Parts Fund members receive a 10% discount on spare parts. Alain Antonious leff Graham Barton Doug Crossman Adelino da Silva Grant Bartrop Andrew Begelhole Serge Doumergue Boon Christian Ducasse Wyn Peter Bourne Ion Faine Greg Peter Boyd Fienberg Peter Boyle John Fleming Ron Brookes Eric Forster Roger Brundle Jason Glenn Greg Bill Graham Bunting Mel Carey Iohn Greive Gerry Carson Harrison Christie ND Harwood Denton

John Hawke Iain Mather Chris Reid Peter Holland Ian MacDermott Rogers Alan Hurst Andrew McDougall Barry Rogers Keith Mark McKibbin James Warren Seidel Jean-Pierre Jardel Leigh Miles Robert Shackley Fred Kidd Laurie Moers Peter Simmenauer Rob Koffijberg Michael Molesworth Smart David Derek Law Moore Robin Smith Max Dave Morrell Lewis Lelvin Stribley Rob Little Ronald Murray Bruce Stringer David Livingstone Mike Neil Barry Teesdale Brian Love Richard Oates Mark Vickery Dominic Lowe Alec Protos Wade Brian

Darien

Keith

Lowrie

Pullen

Radford

Rod

Hughie

Ward

Wilson

http://www.citroencarclub.org.au]

A range of events has been organised for Cit In 2006 Citroëns on Safari. These include:

> Show and shine on Saturday morning

& Various

self-drive or walking tours of many of the attractions of Dubbo

A trivia night for all to participate in

An observation and tourist run

Visits to wineries and art galleries

> Novelty events at the Zoo Picnic [get into training now to win the perpetual trophy for your club

Guessing Competitions

A guest speaker or two

Dancing after dinner

Technical discussions

Telling of tall and sometimes true Citroën stories...

The registration fees shown below are applicable only until 31 January 2006. Registration fees will increase by \$10per person per month after that time so get in early. Registrations close 31 March 2006. No late entries will be accepted after that date.

The registration costs, per person

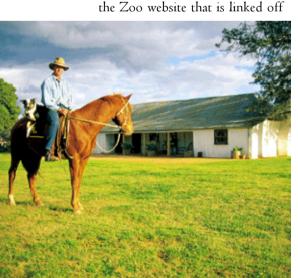


2006.

One of the things your registration for Cit In 2006 will cover is the 2 consecutive day pass for the Zoo. We are planning to have lunch, games and fun and the Gala Dinner there on Easter Sunday. That means that you can also go to the Zoo on the Saturday or Monday of Easter without further payment however, the early morning feeding tour is not 16 covered in this pass but can

be booked & paid by you

when you arrive in Dubbo [see



5 to I2 I3 & Over The Show & Shine on Easter Saturday will be held within a block of Dubbo town centre.

Please note – There is still ample accommodation in Dubbo for Easter 2006 available.

#### MOTELS

#### \*\*\*

Ages 0 to 4

All Seasons Motor Lodge 78 Whylandra Street, Dubbo, 2830. Phone: [02] 6882 6377

#### \*\*\*

Abel Tasman Motor Inn 135 Whylandra Street, Dubbo. Phone: [02]6885 2555

#### \*\*\*

Akuna Motor Inn Whylandra Street, Dubbo. Phone: [02] 6885 4422

Dubbo Mainstay Motor Lodge Newell Highway, Dubbo. Phone: [02] 6882 4777

#### \*\*\*

Country Comfort Ashwood Resort Cnr Newell Hwy & East Street, Dubbo. Phone: [02] 6881 8700

#### **★★☆**

Across Country Motor Inn Cnr Newell Hwy & Baird Street, Dubbo. Phone: [02] 6882 0877

#### CARAVAN AND CABIN PARKS

Dubbo Cabins & Caravan Parklands [Big 4] Whylandra Street, Dubbo. Phone: [02] 6884 8633

#### \*\*\*\*

Dubbo City Caravan Park Whylandra Street, West Dubbo. Phone: [02] 6882 4820

With Dubbo being a very busy place at Easter we cannot emphasise enough, the need to book your accommodation early. We also need to bring to your attention that the venues for catering are limited to a maximum of 200 people therefore

we will only be able to accept registrations up to that number and no registrations will be accepted after 3I March 2006 so please don't just roll up on the Easter

weekend as we do not want to offend you by turning you away. It has been decided that only full weekend registrations will be accepted for Cit In 2006, however you may exhibit your car at the show & shine on Easter Saturday.

Our web site is

http://www.citroencarclub.org.au

If you don't have internet access or need to ask anything please call: Craig & Debra Keller [02] 427I 5340

Please call at thoughtful times and, as we both work fulltime, after 6:30pm. Thank you

#### COCA TO HOST CIT-IN 2008 IDEAS AND VOLUNTEERS SOUGHT

host the Event there – the Committee recognises that hosting an event such as CitIn without the benefits of a member 'on the ground' increases the degree of

difficulty by a considerable degree.

# CCOCA & CITIN'08

As has previously been mentioned, CCOCA is scheduled to host the 2008 Cit-In, the National Easter Citroën rally. This year's event in Perth was a lot of fun; next year is in Dubbo, and CCCV are running the

2007 event.

We want to follow this tradition by running a truly great event. Work is progressing, but we need more skills and input to help plan the details and

put it all together. You too can be part of our dynamic team. We would love you to join us!

While tentative thoughts were directed towards Broken Hill, no firm decision has been made to

So, here is an opportunity for you to have input into the destination for the Nation's Citroëns at Easter, 2008.

Mildura? Deniliquin? Once we have considered all the alternative suggestions and decided the location we can then start investigating all the local venue options — good places get booked early, so we will want to act fairly soon. In the meantime, other early tasks will include deciding budgets and the criteria for an appropriate venue.

And of course we need people to assist, so let me know if you can give a hand!

Andrea Fisher
president@citroenclassic.org.au
[03] 9874 I960

# Why buy your Internet from someone. who drives a Mercedes Benz?

Connect to the Internet with a wholly Australian owned and operated Internet Service Provider – with an owner who's just as nuts about cars as you!

DCSI provide local call dial-up Internet and fast ADSL broadband across Australia. » great service» great prices

#### Pioneer Dial-Up

includes: 200MB downloads 10 cents per MB excess \$9.90 per month

#### 256/64 Lite ADSL

includes: 500MB downloads no excess charges \$29.95 per month

#### **Discovery Dial-Up**

includes: 1000MB downloads 5cents per MB excess \$19.<sup>95</sup> per month

#### 256/64 C10 ADSL

includes: 10GB downloads no excess charges \$39.95 per month

#### Voyager Dial-Up

includes: no download limits no excess charges \$24.95 per month

#### 256/128 Lite ADSL

includes: 10GB downloads no excess charges \$49.95 per month

www.dcsi.net.au

1300 665 575

dcsi

64 Queen Street, Warragul, Victoria 3820

We do **Internet**.

ADSL Line Activation Fee is \$125. Broadband ADSL Modem/Router \$60. Must remain connected for a period of 6 months, early termination incurs \$66. Dial-up plans capped at \$29.95 per month.



AUSTRALIA

**ICON TOWNS** 

great things scheduled for Mulwala Mischief - OzTraction '06.

#### DATES

OzTraction '06 runs from Friday

June 9 to Monday June 12,2006

# MULWALA MISCHIEF

River has been completed.

Full details of the event will be in the next edition of 'Front Drive', which is due in your letterbox in the week before Christmas. That

> edition of 'Front Drive' will also include your booking forms.

With planning in train, we thought to share some of

#### **DESTINATION:**

Mulwala, in southern New South

#### WHAT'S INCLUDED?

#### FRIDAY NIGHT

K Light Supper

#### SATURDAY

Parade through town

### of Citroën & Owners of And of Enthusiasts 17

Show & Shine on the foreshore CCOCA of Lake Mulwala

Tourist Run/Observation Run

Visit to Heritage Farm

Visit to Byraminne homestead, with afternoon tea - opening exclusively for CCOCA

**B** Banquet-style dinner

#### SUNDAY

K Visit to Pioneer Museum opening exclusively for CCOCA

& BBO Lunch

Visit and wine tasting at Monichino Wines

🌠 Visit International Model Car Museum – opening exclusively for

Formal Dinner

#### MONDAY

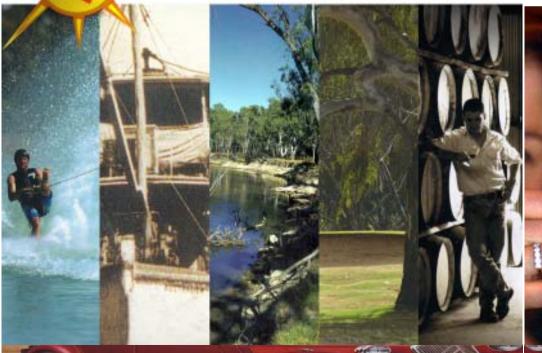
Farewell breakfast

While final details of the costs are still being negotiated with some providers the Rally Fee looks like being of the order of \$125per person.

Naturally, your accommodation and refreshments at the included meals will be to your direct account.

The Committee of CCOCA are already looking forward to this Event, and we hope to see as many members as possible turning up!

Leigh F Miles & Sue Bryant &





s motoring prices gallop re morselessly higher, drivers Lare looking to cut fuel costs. Some are going for more efficient small cars. Those with deeper pock-

ets are buying hybrids which use

even less fuel. But Roy Begelhole is

motoring in a 24-year-old French

car which uses an incredible three

litres per I00kilometres. Peter

Warrnambool resident Roy Begel-

hole has a better reason than many

to appreciate French cars. His fam-

ily connection with France goes

MEMBER'S MODEL

Collins reports...

So, it was no surprise that he has three Citroëns in his car collection.

The maintenance engineer – a selfconfessed motoring fanatic - had his first French car, a Big Six Trac-

tion Avant, when he was a teenager. He

and a mate used it to tow their hot rod to speedway meetings.

'We also used to hoon around and chase girls. We paid £50 for it and later sold it to another guy. Today it would be worth about \$30,000. Roy said.

His next was a 1954 Citroën Big 15, which he bought about 20 years ago and totally rebuilt.

A 1970 DS 21 Special with the trademark fluid suspension was next in his collection, which also includes a 1910 Vulcan tourer and a 1927 Whippet tourer.

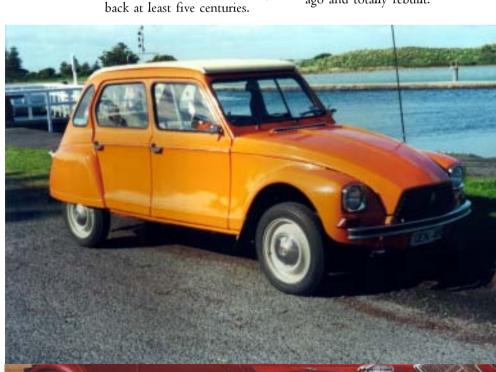
But his quest to own a baby 2CV Citroën was not satisfied until he heard about a 1981 Dyane in the Blue Mountains, near Sydney. The Dyane is the 'luxury' version of the two-cylinder classic, which was first produced in 1948 and became on of the most famous cars in his-

'The bloke had bought it secondhand in England, toured England and Ireland in the late '80s and shipped it back to Australia in 1991. He used it for a while and then put it off the road, Roy said.

'I bought it after looking at photographs and he delivered it to Geelong on a trailer. I paid about \$3,000 for it.'

However, the Dyane was a bit worse for wear with a rusty body and a 'crook' chassis, so Roy - a selftaught mechanic and panel beater - spent the next six months of his spare time rebuilding the body and chassis. He also put a new set of rings in the 602cc motor and gave the rest of the mechanicals a thorough check-over.

'We wanted it ready for the 2CV National Rally in 2000, he said. Almost 70 of the little 2CVs from





Maximum speed through the four-

speed gearbox is II5kph with the

motor spinning at about 6,000rpm.

After the big northern Raid in

2000, the Dvane ran a more

leisurely life around War-

rnambool until the Begelholes

loaded up again for another

Raid last year around north-

ern Victoria and New South

They drove their little car

through the Big Dessert, Swan

Hill, Beechworth, Dargo, up to

Roy had earlier helped survey the

route by travelling most of it in

his 'other car', a Mitsubishi Pajero.

Canberra and back to Victoria.

Wales.

various parts of the globe were entered in the Rally, which is called a Raid. Under the rules, the maximum total weight of the car and contents is a tonne. So, Roy and his

through the Gulf district to Cairns, up to Cape York and back to Cairns. Then the Begelholes drove back to Warrnambool.

'We went through places where

four-wheelting bogged,'

drives were get-

Roy boasted. I got 55mpg sitting at 100kph on the open road, but it

got back to 35mpg on the rugged sandy tracks.' The Citroën's unique swinging-arm,

fore-aft linked suspension system enabled the Begelhole's to travel up to 100kph on corrugated roads. 'Once you get used to the body roll,

wife Esther had to pack their 700kg car as economically as possible.

EMBER'S MODEL

Roy in typical

Dyane/2CV

mode-through

the roof and

leaning on the

windscreen sur-

round. This il-

lustration ac-

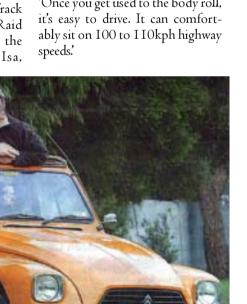
companied the

original press

article.

Into the tiny vehicle went an extra 20kg of petrol, 20kg of water, tent, sleeping bags, clothing and food. It was to be their 'home' for the next six weeks.

They left Warrnambool and drove via the rugged Oodnadatta Track to Alice Springs where the Raid started. From Alice Springs, the convoy headed to Mount Isa,



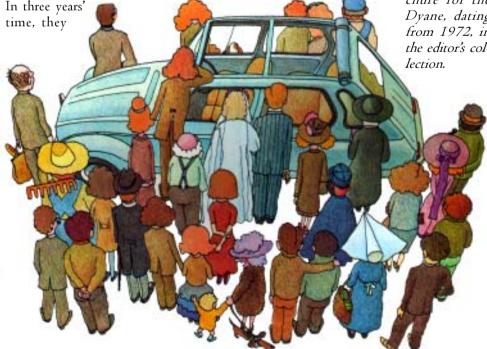
**GEN-488** 

hope to take part in another Raid around Western Australia. 'You've got to be a bit crazy to do one of these runs,' Roy said.

He calls his little burnt orange Citroën 'Tigger' because – like the character in 'Winnie the Pooh' - it is light and agile on its feet.

His secret to mechanical reliability is to change the oil and filter

Here, and over leaf are the images from the front and back covers of an English brochure for the Dyane, dating from 1972, in the editor's collection.



every I,600km [I,000miles].

MEMBER'S MODEL

The 2CVs were originally built for French peasants and could be driven over a ploughed field car-

#### TAIL END

When Citroën launched the radical little 2CV car in 1948 it caught the motoring world by surprise, but soon became one of the most

popular cars in history.

The 2CV la-

rying a basket of eggs without breaking one.

Tve seen pictures of them towing caravans and tandem trailers,' Roy said.

His machine has a twin throat Webber carburettor. 'When vou're at full throttle you have a carby barrel for each cylinder'.

bel is French for deux chevaux. literally 'two horses', from the tax horsepower rating of the first 375cc engine which only developed 9bhp.

Dubbed 'The Tin Snail' by English critics, it proved that simplicity really works.

A total of 3.872.583 2CV 'lim-

and 1990 before finally succumbing to customer demands for more speed, comfort and safety.

Pierre Boulanger's early 1930s design brief - said by some to be astonishingly radical for its time - was for a low-priced, rugged 'umbrella on four wheels'. It was to enable two peasants to drive 100kg of farm goods to market at 60kph, in clogs, across muddy, unpaved roads if necessary and use no more than three litres of petrol to travel 100km.

Boulanger later also had the roof raised to allow him to wear a hat while driving.

When Citroën finally unveiled the car at the Paris Salon in 1948,

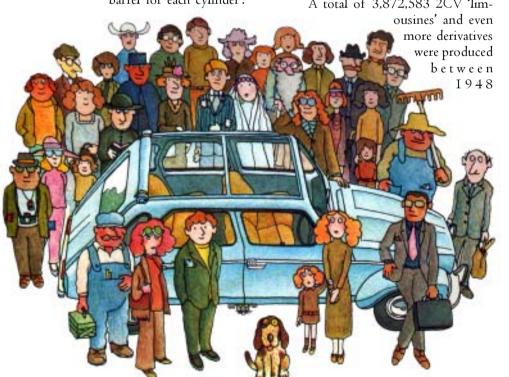
journalists laughed at it. But there was a three-year waiting list within months.

The body was constructed on a dual H-frame chassis, an aeroplane-style tube framework and a very thin steel shell, propelled by a flat-twin air-cooled engine.

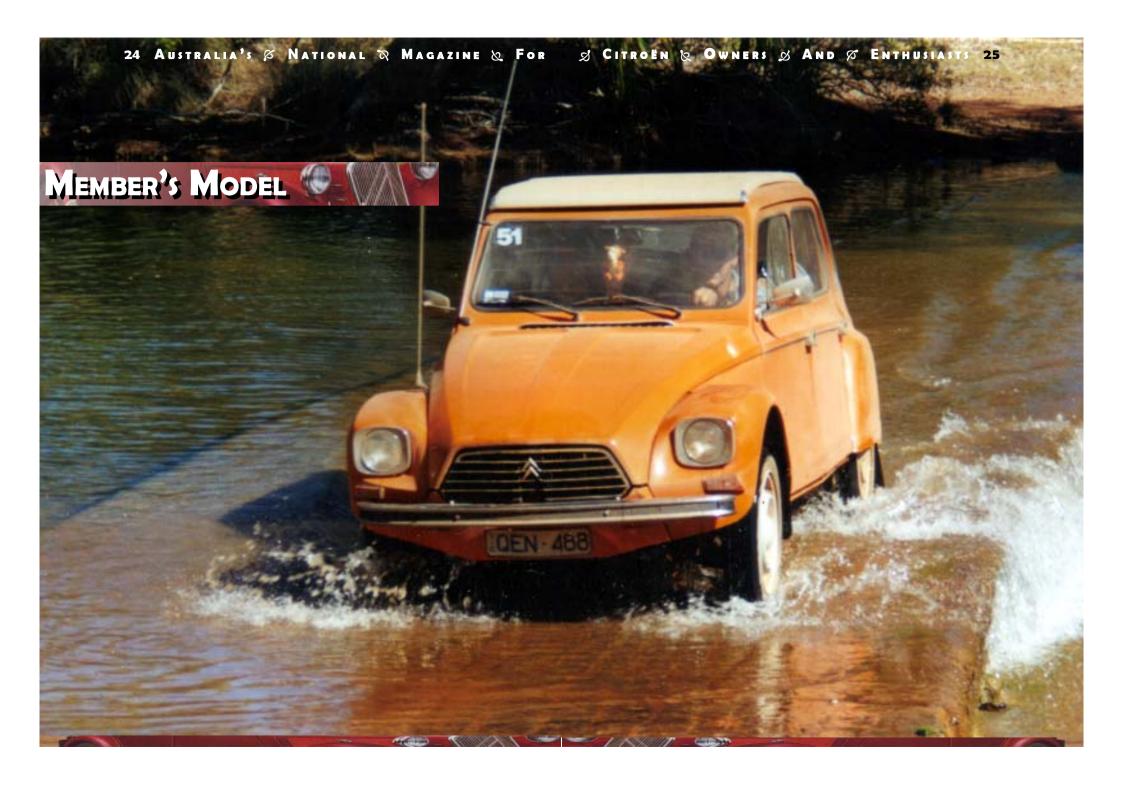
Front-wheel drive made the car easy and safe to drive. The canvas roof could be rolled completely open. The seats were hammocks suspended from the roof by wires.

This article first appeared in 'The Standard', on June 25, 2005. 8

Early advertising images of the Dyane are difficult to find. But this image shows the original fourlight Dyane 6 not as some expect either a Vauxhall Viva. nor a Holden Viva!







an air of mystery. ing motoring writers who made →LJK Setright, who died this 'Car' required reading for discernmonth, inspired a generation of ing enthusiasts for a quarter of a readers, including David Wilkins century or so after its birth as

'Small Car' in 1962

Many of 'Car'

of the UK newspaper, 'The Independent'

VALE LJK SETRIGHT

I never met LJK [Leonard] Setright, but I am sure I was not the only person who knew him only by his work to have been saddened by the news of his death.

Over the course of a career spanning several decades he wrote a number books on motoring subjects, including 'Drive On!', his fascinating social history of the motor car. ['Drive On!' is in the CCOCA library and is a book that is well worth borrowing. Ed.] He contributed to many magazines and newspapers, including this one. But he was best known as perhaps

magazine's early features did not carry by-lines, so from the reader's perspective, it is difficult to establish the precise date of Setright's first contribution, although his Sport Report column was an established fixture from 1966. This enjoyed a prominent position in the magazine, although at first there was little indication of the enormous range of his later work.

In the June 1966 issue, an early photograph of Setright accompanied an interview with Colin Chapman, the founder of Lotus. The picture shows a distinguished looking gentleman with an extravagant moustache, although at this early stage, there was no evidence of the monocles, hats, capes, cigarette holders or other accessories in later photos.

For the reader, these props contributed to the air of exotic mystery that surrounded Setright to the end. Considering the extent of his output, he disclosed surprisingly little in print about his personal background or circumstances.

One wonders what those who encountered him on the road made of him. He sometimes gave a clue, as here during his 1967 account of the Lamborghini Miura: 'The man at the Swiss customs smiled indulturned back to front.

In December 1966, a piece appeared that set the pattern for much of Setright's later work for 'Car'. In it, he records his impressions of the Jensen FF, a remarkable car that scored two notable firsts: the use of four-wheel drive for improved traction on a fast road car, years before the Audi Ouattro, and Maxaret anti-lock brakes. It is the only car test where the words 'Jupiter Pluvius' may be read.

His precise, elegant prose conveys the purpose and possibilities of these then-unfamiliar technical features with superb clarity, and, while he could be a stern critic of the motor industry's more half-hearted products, Setright was generous in his praise of genuine innovations.

Carmakers were bolder then, and like Jensen, they often bet their companies on untried technologies. gently when I told him that the Daring, advanced models of the Miura was simply a Mini Cooper late Sixties and early Seventies, such as NSU's rotary-engined Ro80 and Citroën's GS and SM, didn't always live up to their promise, but they brought out the best in Setright's writing, which often combined with the outstanding artwork and photography for which Car was



LJK Setright, and the rest of the writers that made up the 'Frontline' crew for 'Car' in 1990. The others? George Bishop [also a Citroën enthusiast and sadly deceased], and Phil Llewyen on the extreme right.

justly famous to brilliant effect. bit - Setright-ian skill, it was pos-Here he is on the GS, in 1971: 'According to Voltaire, 'the secret of art is to improve on nature'. It is a

sible to ease the lever between gears without operating the clutch. My parents owned one of the then-new peculiarly French attitude, one that 305s, and I did much of my early

driving in it; I was tempted to copy Setright's technique, but

never quite summoned up the cour-

There was an assumption on Setright's part that you, the reader, would be as well read as he: 'You will remember from reading your Suetonius that the proudest boast of the Roman Emperor Augustus was that he had found the city brick and left it marble. In the same vein, Citroën may claim to have found the automobile a motorised cart and made of it a magic carpet.'

He wrote warmly about other models he ran for long periods, such as the Volkswagen Scirocco Storm and, more recently, the Honda Prelude. Most famously, he was a long-standing Bristol enthu-

Setright contributed to 'Car' well into the Nineties, and he was recalled at least once to contribute to commemorative issues when the magazine celebrated milestones in its history. But if you want to read Setright in his prime, it is well worth tracking down old copies of Car from the Sixties and Seventies via eBay or dealers in second-hand car magazines and brochures. For

VALE LJK SETRIGHT

is manifested as much in their engineering as in their graphic, plastic or musical artefacts. In their automotive engineering it is especially apparent...'

Setright did not just write about cars; his long-running Handlebars column provided a platform for his views on motorcycles, and he often analysed and explained the finer points of in-car entertainment. But whatever his subject, his extensive knowledge of art, music, history and a dozen other fields shone through.

Another distinctive feature of Setright's writing was that it often contained intriguing references to unusual advanced driving techniques. His long-term tests for Car of the Peugeot 305 in the late Seventies, for example, praised the ease with which it was possible to execute something called a clutchless gear-change.

I am not sure I ever entirely understood what this involved, but as far as I could tell, he had discovered that given a particular combination of road speed, engine speed and - this was probably the vital

a mere £5 or so - not much more than the cover price of today's glossy mags - you can experience the master at his best.

This article first appeared on September 20, 2005.

LJK Setright over the decades wrote lovingly of Citroën, the marque, and of many of the models from this manufacturer. I have included below just some of his Citroën-related comments that can be found in his last book, 'Drive On! A Social History of the Motor Car'. If you only read one more motoring book in your life, I cannot recommend too highly to you that it should be this one.

Leigh F Miles

was important was what was happening at the other end of the gamut, where an absolutely brilliant little man [petulantly described by Louis Renault, the even tenor of whose meanness had been grievously disturbed, as *le petit Juif* had set about mass-production in the style of Henry Ford. This was André Citroën, erstwhile chief engineer of Mors and more lately the wartime savour of France's ammunition industry, who had in month set up Europe's first real line-assembly plant and took 20,000 orders at the 1919 Salon for his Type A tourer which incidentally was the first low-priced car to embody electric lighting and starting, satisfying half of them within a vear. His affairs went so well that in 1922 he took over Clement-Bayard and began production of the three-seater 5CV, the eternally admirable Cloverleaf, a light car designed to endure the bestial servitude imposed by the French peasantry and so good that Opel hurried to build it under licence the Laubfrosch. His factory on the Quai de Javel in Paris was a model of enlightenment, not least in its thoughtful provision for the women who began to do so much factory work during the war, many of them when there were so many men who were sadly missed

remaining after it.

There were groceries and other shops on the premises, crèches for little children, and proper medical facilities. Considering the scale on which he worked, there was prob-

ALE LJK SETRIGHT

Citroën 7CV *Traction Avant* took rationalist France by storm when it appeared in 1934.

Not until 1934 was there a car which seriously [that is addressing

all commercial considerations made an

ably never an individual industrialist as great or as good, though certain corporations such as Fiat and the Japanese came to exercise a similar paternalism.

SETRIGHT ON THE TRACTION AVANT

In France there was a man who made his own way, and thus made the way literally smooth for the people, a man whose name had shone in 250,000 lights from the Eiffel tower in 1925. Since 1926 he had extra factories in Belgium, England, Germany and Italy; and in 1933 he set about demolishing his main Paris factory and building a new one able to make 1,000 cars a day - while somehow maintaining production of 360 a day in the midst of the reconstruction. Le petit Juif had determined to introduce a front-wheel-drive car, a stiff squat Budd body with an independently sprung wheel at each of its pressed-steel corners. It would be quite fast, quite economical; it would enjoy unprecedented stability, undying fame; it would stay in production for a whole generation, father a whole genus of popular cars; and it would cost him his livelihood, if not his life. The

onslaught on the conventions whereby car design was trapped. At first sight, it was the absence of running-boards that made the Citroën 7A and its prompt and definitive derivative the Onze Legere distinctive. Then the proportions began to show: the car was wider and lower than cars in its class commonly were. A look inside showed that, despite the lowness, there was no propeller shaft tunnel combining with the chassis to turn the floor into the semblance of an of an eggcrate, as was the case with low-built but otherwise conventional cars: this car did not have a chassis either. The floor was not even encumbered by the gearlever, which instead protruded from the dashboard. This car, then the most modern and forward-looking production car in the world, had front-wheel-drive.

Early specimens needed a greasing of the driveshafts every 500miles [or was it 500km?], but the major mechanical problems were overcome and the Citroën rightly flourished

Rightly, but for the wrong reasons. The truth was that its unitary hull

made it lower, lighter, and stiffer than conventional saloons; its wide track, long wheelbase, and minimal overhangs, made it stable; and its low power made it insensitive to mid-corner throttlings.

People ascribed all its virtues to front-wheel drive, but perhaps only in one way did it help. A frontdrive car is naturally nose-heavy; add to this the debasement of the front tyres' cornering power by the camber changes induced by the independent suspension which was a natural corollary of front-drive; add the further debasement caused by the sheer loads on the tyres, which in those days were skinny affairs running closer to their limits than today – and the result was a pronounced understeer that the unskilled driver, and especially the fast unskilled driver, found very forgiving.

#### SETRIGHT ON THE 2CV

Something even longer-lasting made its appearance in France that year [1949], when Citroën unveiled the 2CV upon which they had been working since the prewar prototype had been recovered from its hiding-place. It was such a car — a car of studied utility, remorseless economy, and irrefutable logic — millions of folk had wanted since 1945; millions would still do well to have it today.

#### SETRIGHT ON THE DS

When autumn had softened the

agonies of that horrific summer, France had cause to rejoice again in *l'automobilisme*. She had created a car, a production car meant for the ordinary man in the street, sublimely endowed with such complexities of execution and refinement of conception as made the bristling technology of the racing Mercedes-Benz appear merely the laborious handicraft of gifted mechanics. The Citroen DS was an engineer's car, the thinking man's

LJK Setright and the prototype 2CV, from 'Classic Cars' in 1997. 'The 2CV was not really small. It was merely light and frugal'.



car, far and away the most modern car in the world, not only in 1955 but for at least 15 years until another even cleverer Citroën should emerge from the closeted

have inspired the world to embark on a new course of motoring engineering, to accept and advance the new standards that Citroën had set. All it did was to gratify the desires

of I.3million people, to stimulate a lot of arguments,

ALE LJK SETRIGHT

brains of that most uncompromisingly logical of design teams.

The Citroën DS should have had a flat-six engine, either water- or air-cooled and with either a carburettor or fuel injection, when it first appeared. It should have acquired active suspension before it gave way to the CX. These things, though readied, were just too much for the firm's production resources, alas; but it was more then enough that the original DS already had powered high-pressure hydraulics to serve the brakes, the steering, the gearchange, and the self-levelling suspension. It also had perfectly progressive nitrogen springing, disk front brakes [Citroën's own], automatic load-sensitive lock-inhibition for the rear brakes. Michelin X radial-ply tyres [that particular revolution began when the X became the standard fitment on the previous model], a detachable roof of translucent resin-bonded glassfibre, front-wheel-drive stability, and a drag coefficient rivalling that of the slippery little Porsche coupé.

No car had ever been cleverer. No car was ever braver. The DS should

to expose a great deal of ignorance, and to stand as a lasting reproach to the rest of the industry whenever we compared what they were making with what, on the evidence of the DS, they should have been making. If it achieved no more than that, it was the fault of Citroën; it was the fault of everybody

#### SETRIGHT ON THE SM & GS

No manufacturer was ever more serious than Citroën, and none [until the firm was acquired by, and ground under the heel of, Peugeot, whose irrational and obsessive boss Jacques Calvert demonstrated that he was by nature as well as by career a politician] ever displayed more contempt for what was popular. The 1970 Citroën SM was a low-drag, high-density demonstration of what could be done for the modern car by systems engineering. This discipline had become very highly developed in the dauntingly complex machinery of aviation; it was a much simpler aid to modern flight, the rocket engine, which that year drove Gary Gabelich across the Utah salt at 622.41mph,

so that man could now proclaim that he had exceeded I,000kph on wheels. The Citroën GS, of that same year, was no rocket, but it shared with the SM the best steering geometry ever built into a production car. [Zero caster, zero camber, zero kingpin inclination; with so many corruptive influences removed, any messages conveyed by the steering wheel were likely to be true.] Production was what was amazing about the GS: to massproduce a car with powered hydraulics for self-levelling ride, ride height control, and braking - not to mention a most elegant aircooled flat four engine, an immensely strong gearbox, an aerodynamically exceptional body, and detail felicities bevond number would have been beyond the ability of half the world's mass producers, and beyond the comprehension of the other half. If the SM demonstrated systems, the GS demonstrated logic; and if the Fiat 128 has been inadequately acknowledged as the most influential car so far, the Citroën GS deserves appraisal as one of the most meritorious.

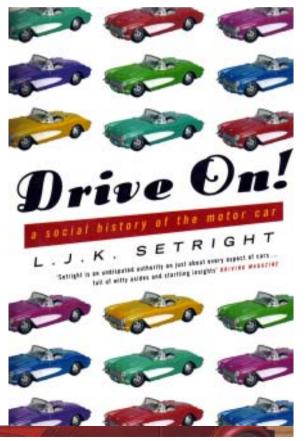
#### SETRIGHT ON THE BX

Conscious of their obligations to the lower middle classes, Citroën extended their range of sophisticated saloons downwards as distinct from tarting up their economy cars, as others might] with the BX, which brought their ad-

mired hydropneumatic suspension into a broader market-place. It also addressed a matter of growing concern, which was the cost of repairing body damage in a car that was all body: extending their principles of removable and replaceable panels, and using lots of plastics, they enabled the owner of a BX to dismantle much of the body using only a Philips screwdriver.

These excepts are from 'Drive On!', by LJK Setright, published by Granta Books, London.

Setright was best known as the most talented of the outstanding motoring writers who made 'Car' required reading for discerning enthusiasts. Discover him again, by reading Drive On!'.



**¬** he Dyane and Méhari. In the mid-sixties, Citroën had embarked on an ambitious plan to update and widen its range. In particular, work had

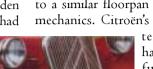
Since funds for updating the 2CV were scarce, it was decided to redesign the bodywork whilst fitting it to a similar floorpan and existing mechanics. Citroën's own design

team already had its hands full, so the project for

what was surely intended [though this was never mentioned as the replacement for the 2CV was given to Panhard's Louis Bionier, What emerged in 1967 was a very much modernised version of the 2CV, the frontal aspect having some relationship with Panhard's 24 range, and with a name, Dyane, closely linked to past Panhards: the Dyna and Dynamic.

Early Dyanes had a 425cc engine and four-light body. Just a few months after the car had entered production, a slightly larger 435cc engine was fitted; six months later the Dyane 4, as it was called, was joined by the 602cc Dyane 6. The Dyane 4 was withdrawn in early 1974, whilst the last '6' left the production line in 1984.

The only major



A-Tractions started on the car that would eventually emerge as the GS, a very important project for the company

since it was intended to plug the yawning gap in the range between the Ami and the DS. Meanwhile. the designs of both of these cars were themselves being freshened up. In the midst of all this, the longrunning 2CV must have been causing some concern to management; its direct rival, the Renault 4, which had come out in 1961, was both more modern in appearance and better equipped. Sales of the 2CV in France had peaked and were

The Majorette

models of the

Dyane were

produced in a

wide array of

paint finishes

and with various

model furthest

from the cam-

era is the editor's

favourite - the

parasol auto-

matically

spins as the

car moves.

decals.

The

beginning to decline, and so the decision was made to update t h e Deuche.



No maintenance EVER agai

Mobile:

0400 59 2208

29/05

Toys factory, was produced in Spain. It also came out as an English Dinky Toy [No. 149], the shown at the I969 Paris Salon. Over French body casting being mated

to an English base and rather unattractive 'Speedwheels'.

Toy A-Tractions

I.4million Dyanes were built, so it can be counted a successful design in its own right, even though the car that it was intended to replace outlived it by about six years - the fuel crisis of the mid-'70s, together with some clever marketing that played to the upsurge of interest in retro style, combining to keep the ing doors and 2CV in production.

Matel's larger

dimensioned

'Hot Wheels'

range also in-

cluded the Dy-

ane. With open-

bonnet, which

revels a quite

well detailed en-

gine, complete

wheel. Barbie at

ferred to be seen

in a Dyane.

with

some

clearly

spare

point

pre-

The French Dinky Toys model [No.1413] of the Dyane 4 came out in 1968 and is a very accurate representation. Bonnet and hatchback both open, and the model came complete with two pieces of luggage. The box carries an attractive picture of the Dyane, cornering at speed, roof rolled back. This model had a long life, and after

The real-life Dyane enjoyed respectable sales in Britain, and Dinky's rival, Corgi, also brought out a model. This was of the Dyane 6 and was available in two distinctive scales [1/36 and 1/58, the latter being called a 'Corgi Junior'].

Prizes for the largest number of versions of a single toy might go to Majorette, the French equivalent to Matchbox Toys, which produced a 1/60 scale version of the Dyane for many years. The Encyclopédie des Jouets Et Miniatures Citroën states simply 'Version portant de nombreux numéros et décorations différents.' Suffice it to say that there must be dozens of varieties, many with different racing or rallying configurations. Incidentally, Majorette

ane-based light commercial vehicle called the Acadiane, again in many different versions. Slightly smaller in scale  $\lceil 1/65 \rceil$  to the Majorette model was Norev's offering in its 'Minijet' series. Whilst this was produced in metal, Norev's larger 1/43 scale version was in plastic. Norev recently resurrected this model and it is again in the catalogue [No.153711], this time in metal.

Models of the Dyane are not nearly as numerous as those of the 2CV, but apart from those mentioned above, there are versions from Clé, Mebetoys, Polistil and Minialuxe.

Mention of Minialuxe brings me to models of the Méhari, a small Jeep-like vehicle based on a strengthened Dyane 6 platform, which came out in 1968 and was produced until 1987. During this time a total of almost 145,000 of the plasticbodied Mini-Moke rival was produced. In fact, the Méhari had not started off as a Citroën design, but was created by the

SEAB company which

specialised in special plastics. Citroën was soon convinced of its potential and quickly decided to put it into production themselves. The Méhari was available in two-seat or four-seat form and a four-wheel drive version was also produced, though in small numbers. The only thing that let the Méhari down was that its detachable upper frame denied the fitting of seat belts and thus it fell foul of safety legislation.

The Minialuxe model appeared in 1970 at the scale of about 1/40. Like the original vehicle, it sports a windscreen that can be lowered flat onto the bonnet, and comes in a similar range of colours: white, red, forest green and orange. Minialuxe produced several versions of its model, some towing a trailer carrying a replica of a Zodiac inflatable boat.

Left: Matel Mebeltovs model A84 with opening front doors and unfortunate allov-look wheels.

Centre: Dinky model 149 with opening bonnet and 'allov' more wheels.

Right: Pilen model M357 has opening bonnet and tailgate with quite realistic

wheels.



Norev also brought out a version other model of the Méhari availof the Méhari in plastic, and like the Minialuxe model, this is accurately detailed. Like Norey's model

able in a properly miniature scale: a 1/43 version from the Italian Polistil company. But it seems that of the Dyane, it has recently been models of the Méhari were also

> popular in much larger scales: there are several pedal

car or electric-engined versions in scales of 1/4 or about 1/10. Mark

Tore talk about Light I5 crown wheel and pinions **▲**by Bernie Hadaway

The teeth on our spiral bevel pinions live in a very stressful environ-

ment and anything we can do to make

their life less stressful and long lived is less stressful for everyone. Stressful lifestyles, as we know, lead to fatigue. This, I believe, is a cause It follows, that if we can avoid for spiral bevel pinion failures in Light I5 gearboxes - and many other gear failures, if it comes to

Metal fatigue takes root from surface imperfections, such as grooves or machining marks, where high stress concentration, above the average operational stress forces takes place. They are particularly of concern when the grooves, or machining marks are in a plane across the applied acting strain forces [bending].

The stressed concentrations, when repetitive, cause local surface cracking sympathetic to the surface defect, and in a short time will generate into a total fatigue failure. The progression of fatigue failure can be traced across the fracture surface after a gear tooth separates. The surface of the fracture will show the progression of the fatigue crack which can nearly always be traced to a surface irregularity.

An analogy of *selective fatigue* can

be observed when a length of wire - coat-hanger wire would do - is vee notched with a file and then subjected to repetitive bending. It will invariably break at the notch,

## TECHNICAL TALK

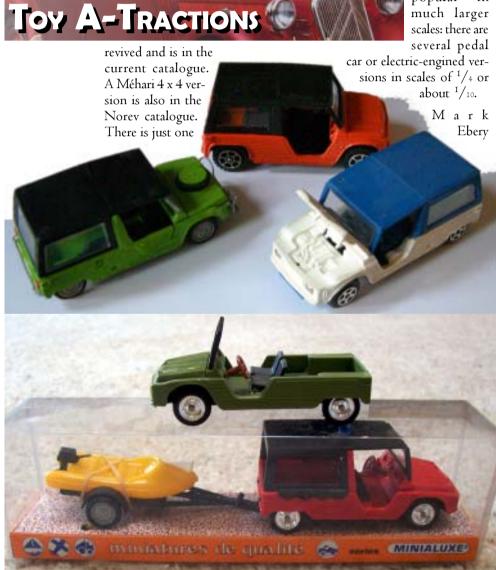
whereas wire without notching will not when subjected to the same treat-

areas of stress concentration on the spiral bevel pinion, then the life of our Light 15 gearboxes should improve – and as a consequence, ours as well.

The source of stress fatigue is generated from the longitudinal machining marks or grooves, in the pinion tooth root or gullet, left over from the gear hobbing process. In most cases where adequate design safety factors exist, low stress is encountered and the marks would not be a problem. In the case of the

Photo I: 1/8 inch diameter diamond plated burr driven by a s m a İ 1 25,000rpm modellers' power head





Light 15 crown wheel and pinion it does not appear to be the case, and it is reasonable to consider the removal of the marks.

It is not a difficult undertaking.

ECHNICAL TALK

Photo No. 2 shows typical hobbing marks before removal.

There can be other longitudinal marks on the pinion tooth flanks; these will be on the forward drive

pinion face. They usually result from

Photo No. I shows a pinion where the gullet imperfections are converted into a smooth fillet radius. It will provide the opportunity for uniform stresses in this vital area and should increase operational life.

The correcting tool is shown. This is a relatively inexpensive 1/8 inch diameter diamond plated burr driven by a small 25,000rpm modellers' power head. The tool's rotation leaves directional marks in the tooth gullet which will not cause fatigue. The longitudinal imperfections have gone.

too much meshing clearance between crown wheel and pinion, and are discovered when we pull down a box for maintenance. These marks are caused by tip interference when the pure involute action under power is not achieved. The tips of the crown wheel teeth bear hard into the pinion tooth face due to poor involute action, resulting in surface spalling of the pinion tooth faces. If these marks are not too bad I am inclined to blend them out before returning to service.

Photo No. 3 shows what to look for. I have exaggerated a typical defect for photographic purposes.

Problems associated with tip interference are now recognised and computer programming of gear cutting geometry provides precise tip relief profiles on the gear teeth and would be great on Light 15 crown wheels!

If we examine the crown wheel as is the case with my example we will see evidence of the highpressure edge at the tips of the teeth, which is a bright, shiny line. Some indication of the contact forces involved can be appreciated by the slight chipping of the teeth on outside corners

Photo No. 4 shows this quite clearly.

One is tempted to ease these edges,

but I am not sure if I can guess a proper profile to overcome this problem – I will think about it!!

In any case, the meshing clearance, which our manual tells us about. is usually about 0.008inches.

This should be observed and certainly not exceeded because it could generate another source for fatigue problems.

After all this, I cannot positively qualify my recommendations as being a cure for all ills because I have only in recent times put them into practice. However, as always I know I am right!!! [ask my wife, Clare?!!!

There is one more assembly precaution I take to look after my crown wheel and pinion – but this is another story.

Bernie Hadaway.

Below left to right.

Photo 2: Typical hobbing marks prior to removal.

Photo 3: An exaggerated image of what to look for.

Photo 4: Slight chipping of the teeth on the outside corners.



**FOLLIES** 

cars, recently.

→ his month Andrew Mc ports with new ones, kindly given Dougall and Rod Ward - to me by Ian Sperling, liberally our two Committee Per- sprayed fish oil into all the cavities sons with Portfolio are telling us and polished the body paint and what they have been up to their plastic hood. She does retain her

various 'character' panel dents, however from a dis-

tance she now looks quite present-

able.

Andrew McDougall

McDougall OMMITTEEMAN

Until recently the 2CV remained as purchased, four different coloured wheels, a rough front bumper bar, small patches of rust around the fuel filler and boot and bonnet hinges and various panel dents. Since this time, the car has only done about 10,000miles, but has run faultlessly and with a good performance. A couple of months ago I decided it was time for some long overdue refurbishment. By this time there was a rotted front muffler and engine pipe. I purchased the necessary parts, as well as oil and air filters and grommets for sealing the plastic reservoir to the brake master cylinder from David Gries and was agreeably surprised how reasonably priced they were. Whilst fitting these parts I rubbed down the wheels and repainted them - it looks smart with 4 wheels the same colour, straightened out the front and rear bumper bars, painted them and also applied new black tape, treated the various rusty areas and applied paint, replaced the heavily corroded front bumper bar sup-

#### ROD WARD - COMMITTEEMAN

Hardly a fleet by some standards however my Slough built 1948 Traction is the folly. It has been under my stewardship for just over 12 months now. We have been the carriage at a wedding and a few balls and have yet to turn into a pumpkin.

When we purchased her, she was Tasmanian registered. The change to Victorian plates was relatively uneventful save for the 'requirement' to install a new windscreen. I kept the old one, as I could not see too much wrong with it. Guess that means I will never need it more rare spares in the closet. The inspector at the Vic Roads office made a few rude remarks about the droopy gearstick protruding from the dash but was otherwise inoffensive and off we drove in a fully Victorian registered traction.

Since then we have attended most CCOCA events and a few displays - the last being the free day's parking in Federation square.

Our current philosophy has tended toward conservation rather that restoration. However, the next project will involve replacement of the torn head lining. This will inevitably highlight the relative tattiness of the rest of the interior and may well lead to a time consuming restorative process.

I have managed to seal the water pump shaft and now appear free of the dreaded clutch sticking due to water dripping into the bell housing.

The only significant mechanical change has been to install a I23Ignition system.

This project involved a negative earth conversion – very simple and straightforward however, you need to get behind the dash in order to reverse the ammeter connections, probably the most difficult part of the process.

The I23 unit fitted directly into the existing mounting system and the only messing about was to replace the original external vacuum advance unit with a spring loaded threaded shaft. This facilitates easy adjustment of timing without the need for any spanners. I have included a photo of the adjustment system just for fun.

Rod Ward Ø



pectacular Werribee Park, located just outside of Melbourne, is host to the annual Helen Lempriere Sculpture Award. Each year visitors make the short

rusted steel [and they are not referring to the CX.

While Jason Waterhouse did not win the prize, I am sure members of CCOCA will join me in believ-

ing he deserved so to do.

I a s o n

Waterhouse - Citroën Pod 2004

1978 Citroën CX, mild steel, ply wood, polyester filler, automotive paint, I30 x I73 x 466 cm

The original complete Citroën has been stripped back to a shell, reformed and sealed. The viewer recognises evidence of the original, but

the duality unveils an uneasy second impression, one that questions the prior knowledge of function and the ability to access this. Citroën Pod aims to bring awareness to the nature of our relationship with the automobile, its social and environmental impact, its place in the future and the value we place on it today.



trip to wander, mesmerised, through the immaculate gardens sprouting all manner of visually arresting objects. There is something incongruous yet wonderful about juxtaposing vibrant artworks against a natural setting. The sculptures this year were made from eve-

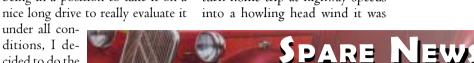
was so pleased with the per Kosciuszko I was quite pleased, as ▲ fitting the I23 ignition and not being in a position to take it on a

under all conditions, I decided to do the same to my D

Special before embarking on the 50th Anniversary 'D' run with Brian Wade.

The immediate benefit to this car was as astounding as the Big I5 and I can imagine 2CV owners that have fitted 123 to their cars agree; the smoothness is very noticeable right from the first turn of the key. I met another D owner on the run who absolutely agreed. My car in its life with me has never shown a great tenacity in climbing hills, much less mountains, this was to be my next revelation, while the engine is on its latter stage of life and is starting to use a little bit of oil, the ability has now returned to hang on much better in the hills and even accelerate up a lot of reasonable grades. Not everyone will experience great gains in power as this will depend upon the condition of your present distributor, but remember even the youngest is now 30 years old, so wear and tear will take its toll. Over the trip we covered 2,500km at an average of 29.65miles per gallon; considering the terrain between Tallangatta and Jindabyne as we climbed Mt.

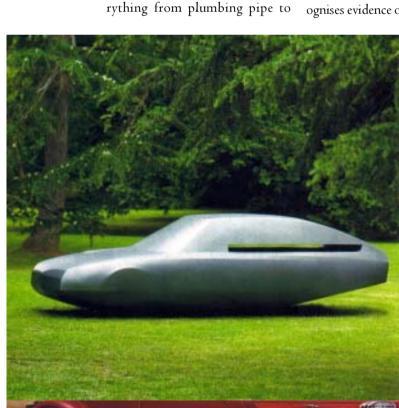
formance of my Big I5 after this section involved a lot of 2nd and 3rd gear work and then a return home trip at highway speeds



probably better than expected. I23 is doing it for me.

Tyre pressure for Tractions: The following article has been lifted from the CTA website.

The problem of tyre pressure. In the service manuals it is written that the tyre pressure in the front has to be I.2 [I.3] and the rear I.4 [I.5] atmosphere. In our garage, we have raised the tyre pressure to 2.0, this way the car will respond much better when turning the steering wheel. This has no bad effect on the wear and tear of the tyres. To verify this we have contacted Michelin in the Netherlands, they passed our question on to Michelin France, Department Techniques, and they advised to raise the tyre pressure to I.7 front and I.9 rear with a load of 2 persons and 2.0 front and 2.2 rear with a load of 4 persons and some luggage. The reason for this according to Michelin is: the roads are much better now than in the past and the tyres are made from better material. Our experiences correspond to the statement from Michelin. We have never seen any increase in wear and tear due to the higher pressure.



Rob Little continues:-

If I remember correctly I atmosphere = 14.7 psi. I just thought this article was worth reprinting.

it may be nice to give it a birthday, so after colluding with another local member Brian Love who incidentally has every spark plug and filter book published from the year

dot, we established that the NGK B-6L was the best

equivalent. I now have IO of these in stock and more on their way and will have them available at the club shop on Concours day at a cost of

Rob Little.

books, sales brochures, books, memorabilia, notes/facts, interesting articles, 2CVGB Help binder-book & magazines, Planet 2CV magazines in English, a few in French, photo/postcard album. Front Drive magazines

• I x English 2CV original bonnet badge. All these items are in Mildura, Vic. Contact John Hancock, PO Box 962 Cooroy, Qld., 4563, phone [07] 5442 6523 or email hankyI0@bigpond.com [29/06]

#### PILOTE WHEELS

How to ensure your Traction has all the right bits? Well, to complete your restoration, or enure you win the next Concours a pair of rare Pilote wheels might be just what you need. These are in excellent condition. In the first instance, contact the Editor by email: editor@citroenclassic.org.au [29/06]

#### 1939 11 BL TRACTION AVANT

Bangkok, Traction Avant II BL with sun roof. Manufacturing date: 1939, RHD. Excellent condition. Michelin tyres. Black with red leather seats. Perfect brightwork. Imported in Thailand [legally] in 1951. Find out more about this car at http://www.citroenthai.org/ CitroenHistory.html Contact Fabrice Mattei by email: Fabrice@iprights.com. [29/06]

#### 1985 CX 25 IE PALLAS

White, beige leather upholstery, no cracks in the dash. Auto. CCN 586 [No RWC]. One Owner 124,000km. Registered to February 2006. Deceased estate \$1,250 ONO. Phone David Walker [03] 9725 7255 [B] or 04 1854 5000 [M]. [29/06]

CX 1987 25

Rare 5-speed manual, recently fitted fully re-conditioned engine, tyres with less than 2,000km. New front and rear discs, pads lower ball joints, inner and outer steering track rods. Upper ball joints could do with replacement and these parts are supplied with the car. Mechanically excellent, as is the body, although there is some slight corrosion in the sills. Asking \$1,500, but the car is in Bangkok. Seller estimates landed price in Australia is \$5,000. Contact Peter Symons by email: SymonsP @halcrow.com [29/06]

# BX HAYNES MANUAL

I have just acquired a brace of BXs. One has a done gearbox and the other has a screwed engine! I would love to get a hold of a Haynes owners work shop manual for these cars. Contact Tim Donaldson by email: donaldson @fuzion.com.au [29/06]

Below: Bangkokbased II BL is for sale. RHD. sunroof, 1939build.



### PARE NEWS

Another item we have added to spares recently is spark plugs for Tractions, many people have asked what type I use and I have confessed I have never purchased any but after ignition mods I thought

\$3.90 each.

### FOR SALE

#### 1955 2CV #85510007

More than a car, this is a complete life! Ex-CCOCA member has decided to 'divest' himself of his 2CV and his collection of parts, publications and the like. Babette is a 1955 2CV, #8551007. Registered as JS IIII Tasmania [JS=John Stafford]. It is all there, I bought it as a project, body/chassis has the usual steel cancer. The owner has not had the engine running, however.

Other parts

- 2 x chassis, I on wheels, I incl. axles/
- I x spare driver's door & front wing
- at least 2 gearboxes. [see photos]
- 2 x early engines [not complete]
- also odd pistons/pots/miscellaneous engine/body parts
- Crankcase of the earliest 2CV through Commonwealth Mtrs. # 8530005
- Original registration: GCS 900 photocopied micro documents in associated box
- 4 x boxes of workshop manuals, spares



Right: Three images of Babette and just some of the parts that go with her. Contact ex-member John Hancocks for more information.