



# FRONT DRIVE

Incorporating

THE



## NEWSLETTER

Australia's National Magazine  
for Citroën Owners and Enthusiasts

**CITROËN CLASSIC OWNERS'  
CLUB OF AUSTRALIA**  
Australia's National Citroën Car Club

February/March 2024 Vol 47 No 5  
GS in Australia





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0422 229 484 [M]  
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0418 945 461 [M]  
Ashburton Peter Moloney  
0411 869 705 [H]

### CCOCA Life Members

The committee awards life membership to Club members in recognition of their contribution to, and support of, the Club. Life memberships have been awarded to:  
Arthur and Nance Clarke 1984  
Jack Weaver 1991  
Peter Boyle 2003  
Ted Cross 2012  
Rob Little 2012  
Sue Bryant 2017  
Brian and Esther Wade 2017  
Leigh Miles 2022  
Lance Wearne 2023

### CCOCA Meetings

Club meetings are held on the fourth Wednesday of every month [except December] at 19:30. The venue is the Hawthorn Bowling Club, 1 Wood St., Hawthorn [cnr Denham St.]

### CCOCA Spares, Tools & Shop

Contact Max Lewis. Phone: 0458 993 771 [if you do phone, please do so at a reasonable hour] or [spareparts@citroenclassic.org.au](mailto:spareparts@citroenclassic.org.au)  
CLUB SHOP  
Club Shop is presently not operating. For further information please contact the Club's President.

### Postal Addresses

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](http://www.citroenclassic.org.au)

CITROËN CAR CLUB OF VICTORIA Inc.

The address of the Club is:

PO Box 122, Nunawading, Victoria, 3131.

The Club's website is:

[www.citcarclubvic.org.au](http://www.citcarclubvic.org.au)

Citroën Classic Owners' Club of Australia Inc and Citroën Car Club of Victoria Inc are members of the Association of Motoring Clubs.

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

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

### Other Clubs

NSW [www.citroencarclub.org.au](http://www.citroencarclub.org.au)  
QLD [www.citroenclubqld.org](http://www.citroenclubqld.org)  
SA [www.clubcitroensa.com](http://www.clubcitroensa.com)  
WA [www.citroenwa.org.au](http://www.citroenwa.org.au)  
Tas [www.citroentas.org](http://www.citroentas.org)

### CCCV Meetings

Club general meetings are held on the third Thursday of each month [except January and December]. They alternate monthly between get-togethers in our Club rooms at 8/41 Norcal Rd., Nunawading and social gatherings in various venues, such as pubs and restaurants. Details of each month's event are published here and on the Club's website and advised to members by email.  
CCCV COMMITTEE MEETINGS  
Meetings are held monthly in locations decided each month.

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**Cover Image**

This collection of derelict Citroëns was found in the Netherlands by Dick and Bart Veldhuizen. Photo by Sim van Gyseghem. [www.drivetribe.com](http://www.drivetribe.com)

**Contributors**

Contributors to this edition of 'Front Drive' include Chris Bailey, Alan Brown, Michael Sparke, Peter Robinson and Brian Wade.

**Deadline**

The deadline for the next edition of 'démarrreur' is Wednesday, 21 February and for 'Front Drive' it is Friday, 15 March.

This is a momentous magazine. You may not realise it but this is a very special edition of 'Front Drive'. It is the first CCOCA magazine to be a joint publication with our friends at the Citroën Car Club of Victoria.

Two clubs sharing a resource sounds like a perfect idea and it gives the whole committee, and me in particular, great pleasure to welcome a whole new set of readers to 'Front Drive' and 'démarrreur'.

I can already hear our new readers asking why two magazines? In common with CCCV we only produce printed copies of six magazines each year. These are titled 'Front Drive'. In five of the intervening months we produce a magazine which is only available as soft copy. To ensure you know which is which, we gave the soft copy magazine a different title.

Every edition we will tell you



when the next magazine will be published and what its special focus will be. Every member, of both Clubs is encouraged to make contributions to every magazine.

What have we got for you this month?

As you can see from the front cover this edition has a focus on the GS, Citroën's mid-range car dating from the 1970s. We last featured this model in December 2020 when we celebrated the model's 50th Anniversary.

This time around, CCCV member Michael Sparke has written about his ownership of two GSs.

We have a reprint, from my archive, of Peter Robinson's first drive of a GS and what is probably the last test of the model locally. Brian Wade has written a history of the GS in Australia. In it he makes reference to the abortive attempt to assemble the GS in Sydney.

We also have a lengthy French article from 1971 where seven 6

and 7CV sedans are pitted one against the other. While the authors seem reluctant to give the 'prize' to the GS this is the model with the 'top score'.

There is of course Traction news as well with a reprint of an article about 'Double Yokes, Cardans and Spiders' and we have Traction news from the UK where Chris Bailey has been solving an elusive electrical issue.

I am especially pleased to welcome our French correspondent, Alan Brown, back to the fold. After a couple of months hiatus [which is explained in his article] he is back with news from both the Vendée and Australia.

And, don't forget we have all the information about the New Zealand national rally in May.

Something for everyone? I hope so!

Enjoy,  
Leigh F Miles ~ Editor

**Citroëning**

Club Permit applications to VicRoads must be accompanied by a RWC [pre-1949 cars can be inspected by a Club Safety Officer], ownership validation and VicRoads forms endorsed by the Club including financial

validation.

New Permit holders must supply the Club with approved photos, club permit number and expiry date.

The owner of a vehicle registered under the CPS will

receive a Club Permit Renewal from VicRoads. The owner must complete the form and provide it to their Club's CPS Secretary [see page 2 for contact details] for sign off.



## CCOCA Prez Sez

I am looking forward to our club activities in 2024. There are many events to attend within Australia and overseas. A national meeting of the New Zealand Citroën clubs will be a great event to attend if you are able. Also, of course, the 90 Years of Traction event in France.

By now you will know that our events calendar will be shared with CCCV, so there will be more to enjoy for all. Welcome to CCCV members who are reading my report. Your new magazine is widely read and respected around the world, and you will receive a wider source of information from overseas and nationally.

If you are a sponsor of either club, we welcome you to this new format, and we trust that your business will receive greater exposure than previously.

We have new club rooms and we need a quorum for our CCOCA AGM in March. This



immediately follows the Tasmanian Cit-In. So, if you are an interstate member and will still be in Melbourne on Wednesday, 27 March, we would love to see you at the AGM. If you can join us, please feel free to contact me personally so we can make you welcome, and help with any logistical needs. If not, please send a proxy form [this can be found on the website] as this ensures we can run a lawful meeting and elect your next committee. This is also a good time for me to thank the current committee, who continue to provide wonderful support to me, they run the club with great professionalism and empathy.

It is also my sad duty to report that we have recently lost two long-standing CCOCA members.

Fred Kidd passed away peacefully on November 20, 2023. Fred had a long love affair with his treasured Traction and was a great supporter of our club. We extend our best wishes to Kath, Becky and her family. Becky is the current custodian of Fred's Traction, so the family ownership remains.

We also lost Brian Wade from Queensland on December 15. Brian had an unquenchable interest in Citroën over his entire life, and he was a CCOCA Life Member. He and Esther have many Citroën friends

across Australia. Brian and Esther contributed constantly by running events around Australia and helping other Citroën owners. We extend our condolences to Esther, Nathan, and family. Brian's cars will remain in the family. He was my personal friend and I will miss him greatly.

Also, one special mention. In 1924 Gaston Doumergue was elected President of the French

Republic [1924-1931]. Now 100 years later, congratulations to Serge Doumergue in Montville Queensland. Serge is the grandson of Gaston, and is our friend, Citroën enthusiast/collector, and all-round good bloke. He and Greg will be at the Tasmanian Cit-In.

Helen and I hope to meet you at a future event in 2024.  
Ted Cross ~ President

## CCCV President's Report

CCCV

Happy new year to all our members and welcome to the new home of 'The CCCV Newsletter'. As most of you will be aware, our friends at CCOCA have stepped up and graciously given CCCV space in their newsletter following the retirement of our editor. This new partnership brings with it many benefits and I'm sure all of you will find lots of interesting things to read here. Although CCOCA have final editorial control, we still encourage our members to send in tech tips, roadtrip stories, restoration sagas and anything else you think someone else might like to hear about.

One slight change is that for sale and wanted ads will now only be posted to our website and shared to CCCV members via email. The main contact point for CCCV members is still

editor@citcarclubvic.org.au

Hopefully everyone had a nice break and found some time to spend with friends and family over the last couple of months. For me it's been a busy time sorting the last few niggles on the BX which I can now proudly say is sporting a set of club plates. If anybody ever offers you a chance to hoon around in a 16-valve BX don't hesitate to

Continued on page 8





# CCCV President's Report

Continued from page 7

take them up on the offer.

Since Christmas I've put over 500km on the clock and loved every one of them. Just to bring me back down to earth though, the speedo cable decided it has had enough and snapped half-way back from Wonthaggi to Melbourne last week. This did give me the opportunity to play a new roadtrip game of 'guess how fast you're going' which certainly put the potential for freeway boredom to bed!

The other big news is that in a return to previous years, this year all the events will be joint CCCV and CCOCA events. Naturally, each Club will continue to host individual monthly meetings, as well. The aim is to provide a wider range of events and avoid clashes between the two calendars as the Clubs share a good few members.

## CCCV Noticeboard

### LHM OIL FOR MEMBERS

The price of LHM oil is now \$18.00 per litre as at 10/11/21.

Cheque, money order or EFT [payable to CCCV Inc.] Note: Purchasers must receive a receipt.

Check for your nearest rep:

Mentone	
Stephen Maloney	0438 155 797
Western Suburbs	
Ferdi Saliba	0409 384 977
Glen Iris	
Colin Bates	9822 2864
Ringwood	
Wolfgang Siem	0425 872 082

Speaking of events, we have a full year of exciting trips and outings ahead of us. Highlights include the annual show and shine, Bastille Day, and Cit-In. For anyone who has yet to make up their mind about Cit-in, now is the time! Registrations close on February 9 and spaces on the boat are limited. See page 14 for details.

Our first club night is on February 15 starting at 19:30. The evening will be a swap meet and general catchup at the club rooms in Norcal Rd. Dust off those boxes of unwanted parts or shopping lists and bring them along. You never know, someone might just be able to help out.

Finally I'd like to welcome new members David and Arleen Reimers to the club. Hopefully we'll see you at an event in the near future

Michael Faulks ~ President

Somerville	
John Parsons	0407 045 388
Ashburton	
Robert Belcourt	0439 798 079
Shepparton	
Rob Little	0419 581 622
Warrnambool	
Roger Wilkinson	0427 115 224
Hurstbridge	
Adelino de Silva	0419 886 480
Also available from club shop at club meetings.	

### LDS OIL

LDS oil is available at club rooms on club nights only at \$25.00 per litre.

## A-Tractions

*Please note: To book or RSVP for a CCOCA organised event you must register on line at the club's website. Do not contact the organiser to register your attendance.*

*The Clubs strongly recommend wearing a mask in areas where you cannot maintain social distancing.*

*CCOCA/CCCV Events Look Like This*

*Other Citroën Events Look Like This*

*Non-Citroën Events Look Like This*

### • February Picnic at Hanging Rock

WHEN: Sunday, 11 February

TIME: From 08:00

WHERE: Hanging Rock Reserve,  
139 South Rock Rd., Newham

COST:

BOOKINGS: Not required

BRING: Everything for a great  
day out

MORE INFO:

<https://mradm.com.au>

### HANGING ROCK INFO

Thanks to the great support of our sponsors ~ Shannons Insurance, Rare Spares and Bowdens Own, this iconic event will be back for its 37th year in the shadow of the picturesque Hanging Rock.

Sunday, 11 February the muted roar of engines will permeate the countryside as thousands of motoring enthusiasts flock back to The Rock for a big day out. Collectors and restorers bring their unique rarities, including old, veteran, classic, modified

and restored cars, as well as trucks and motorcycles to display. All equipment, although of venerable age over 25 years, arrives at the site of the exhibition on its own.

Entry is via a pre-purchased ticket through the Eventbrite website and prices for tickets will remain the same as last year, based on a ticket per vehicle regardless of the patrons along for the ride.



## A-Tractions

Thanks to the presale of tickets on Eventbrite there is no need to rush for the early entry times as there is plenty of parking. So cruise on up and settle into a prime spot [There's acres of them].

Exhibitions including the Shannons Team, Rare Spares and Bowdens Own will have plenty of their brilliant car care products to check out. The Gisborne Vintage Machinery Society will also have free to rides for children on their Miniature Train and the Parklands Animal Farm joins us and you will be able to get up close to some cute and cuddly animals.

Come along and enjoy the sights and sounds in the family friendly surrounds.

Bring your picnic lunch or purchase something from one of the food stalls.

This event is organised by the Macedon Ranges and District Motor Club.

### Lindsay Fox Car Museum & Lunch

WHEN: Saturday, 17 February

TIME: From 10:00

WHERE: Fox Classic Car Collection, 749-755 Collins St., Docklands

COST: \$16.50, \$9.50 concession



You need to buy your ticket to the museum yourself

Optional lunch to your account

REGISTRATION: Essential by

Monday, 12 February

BRING: Camera and your wallet if you are staying for lunch

MORE INFO: Nick Hutton 0412 051 358

[nhutton@tpg.com.au](mailto:nhutton@tpg.com.au)

Immersed within the historic walls of the Queen's Warehouse in Melbourne's Docklands, the Fox Classic Car Collection is your opportunity to explore a sparkling array of the world's rarest and most prestigious vehicles.

Opened in 1997, the collection showcases almost a century in automotive technology and design with models from Mercedes Benz, Jaguar, Porsche, Ferrari, Bentley, Volkswagen,

Ford, Lexus, Nissan and MG made between 1923 and 2023 found at the museum. No mention of Citroën... the man clearly lacks automotive taste.

Pulling from over 250 rare and exotic vehicles, this ever changing collection is a must visit for any car enthusiast, historian and lover of all things spectacular.

After we have had our fill of cars we will adjourn for lunch... to fill our stomachs! Optional lunch [12:30] is at the Nixon Hotel, a 300m walk away.

Car parking has been arranged at the museum and you can leave your car there when you go to lunch. But remember, the car park closes at 14:00.

You must book your tickets for the museum directly with them at: <https://www.foxcollection.org.au/>

### FOX TICKETS

Register for the event here:

<https://citroenclassic.org.au>

### FOX REGISTRATION

### CCCV February Monthly Meeting ~ Swap Meet

WHEN: Thursday, 15 February

TIME: 19:30

WHERE: CCCV Club Rooms, 8/41 Norcal Rd., Nunawading

COST: Free

REGISTRATION: Not required

BRING: Anything you want to swap

MORE INFO: Peter Moloney 0411 869 705

[peterm@crosstrees.com.au](mailto:peterm@crosstrees.com.au)

The swap meet is an opportunity to buy, sell and swap car parts and anything else you might want to get rid of. If it is too big, bring a list in large type. You never know what you might find.

### British & European Motor Show

WHEN: Sunday, 18 February

TIME: Display cars from 09:00, spectators from 10:00

WHERE: Yarra Glen Racecourse, Armstrong Gve., Yarra Glen

COST: Display cars: \$15 [includes all occupants] Spectators: \$10 Children free

BOOKINGS: Not required

BRING: A picnic lunch, hat, sunscreen and your camera

MORE INFO: [www.aomc.asn.au/britishand](http://www.aomc.asn.au/britishand)





## A-Tractions

european2024

### BRITISH & EUROPEAN SHOW

The British and European Motoring Show has firmly established itself as a highly anticipated event within the Victorian motoring enthusiast community. This annual event draws enthusiasts, collectors and admirers alike from far and wide. At its core, this show serves as a dynamic platform for celebrating the rich and diverse heritage of British and European automobiles.

One of the standout features of the British and European Motoring Show is its ability to bring together an impressive array of clubs, each of which is dedicated to the preservation, appreciation and celebration of these iconic vehicles. These clubs form the beating heart of the event, contributing to the show's unique charm and appeal.

Visitors have the opportunity to engage with passionate enthusiasts who are more than happy to share their knowledge and stories. The show fosters a sense of camaraderie among attendees, creating an atmosphere where conversations about horsepower, design and engineering flourish..

The British and European Motoring Show is more than just a calendar event; it's a celebration of a shared love for British and

European automobiles. It's a place where enthusiasts come together to revel in the timeless beauty, craftsmanship and innovation that define these iconic automotive traditions. Food and refreshments will be available.

There will be Children's entertainment and trade stalls.

Dogs are allowed into the display area subject to them being restrained on a lead at all times.

### CCOCA February Monthly Meeting

WHEN: Wednesday,  
28 February

TIME: From 19:30

WHERE: Hawthorn Bowling Club, 1 Wood St., Hawthorn  
[cnr Denham St.]



Note the New Venue!



COST: Free

BOOKINGS: Essential for catering by 26 February

MORE INFO: Lee Dennes,  
[l.dennes@bigpond.net.au](mailto:l.dennes@bigpond.net.au)

DO NOT CALL LEE TO REGISTER! You must register/book via the CCOCA website <https://citroenclassic.org.au>

CCOCA FEBRUARY BOOKING

### • March

### Pre Cit-In & Traction Avant 90th Birthday Run, Tasmania

WHEN: Thursday, 14 to Friday,  
22 March 2024

WHERE: Anti-clockwise around  
Tasmania, ending in Devonport, Tasmania

COST: TBC

BOOKINGS: Essential

MORE INFO: Grahame Vaughan

0412 593 075

[vaughan.grahame@gmail.com](mailto:vaughan.grahame@gmail.com)

PREAMBLE [Please read carefully]  
An anticlockwise trip around interesting parts of Tassie over eight days finishing for the start of CIT-IN 2024 in Devonport. The Tour is ideally suited to Traction and will celebrate the 90th Birthday, so please drive yours! Naturally, other models all welcome.

Accommodation is TIGHT and it will be first in best dressed, so book ASAP.

So get together with your friends and share IF POSSIBLE as this will be less expensive and will help with accommodation tightness.

Telephone or email the venues; if you look on their websites they may appear 'booked out' because space is being held for

## A-Tractions

us.

You will need to Register with Grahame Vaughan to get updates.

Book and pay yourselves for all accommodation.

### Cit-In 2024: Devonport, Tasmania

WHEN: Friday, 22 to Monday, 25 March 2024

WHERE: Devonport, Tasmania

COST: \$350pp [adults]  
\$125 [children 5-12]  
Free [children under 5]

BOOKINGS: Essential by Friday, 9 February 2024

MORE INFO: Michael Barrett,  
President CCCT,  
0407 360 443

mikesgaragel23@outlook.com  
WEBSITE: <https://citroentas.org/cit-in-2024/>

#### CIT-IN 2024 SITE

#### Bookings Now Open

<https://citroentas.org/files/ccct3553284500530/document-library/registration-document-final-version-printable-2.pdf>

#### CIT-IN BOOKING FORM

Welcome to Tasmania, the host state for Cit-In 2024

'Our Little Secret'

#### PROGRAMME OF EVENTS

##### Friday, 22 March

Registration: From 14:00  
Market Square Pavilion, 17 Oldaker St, Devonport. A 350m stroll from the Novotel Hotel.

Pick up your Presentation



Bag. In the Market Square Pavilion you will find Southern Wild [Gin] Distillery, Island State Brewing and Tourist Information Centre.

'Devonport's only local brewery! Nestled amongst the towering stainless steel of our



state of the art brewery sits a funky taproom and amazing undercover beer garden. Come taste the freshest of brews and meet the makers!

'Southern Wild is a distillery located in Devonport, Tasmania, producing premium gins created around the pure water, fresh ingredients and passionate growers of Tasmania.'

Dinner:

From 18:00

Market Square Pavilion

Join us for a relaxed, casual fun get together evening, with premium Canapes & Gourmet Pizzas.

# Cash/Card bar will be available to purchase drinks

NB: Evening dining is also available at Mr Good Guy Asian Restaurant and Bar [on site] or visit the local township

for alternate places to dine.

##### Saturday, 23 March

Show and Shine by the Mersey River. Shannons Insurance Show and Shine. Let's get polishing!

'You know you're a Citroën Car enthusiast when you have more pictures of your car on your phone than of your significant other.' Lunch provided.

Free afternoon, to explore our great City of Devonport: Some things to see and explore:

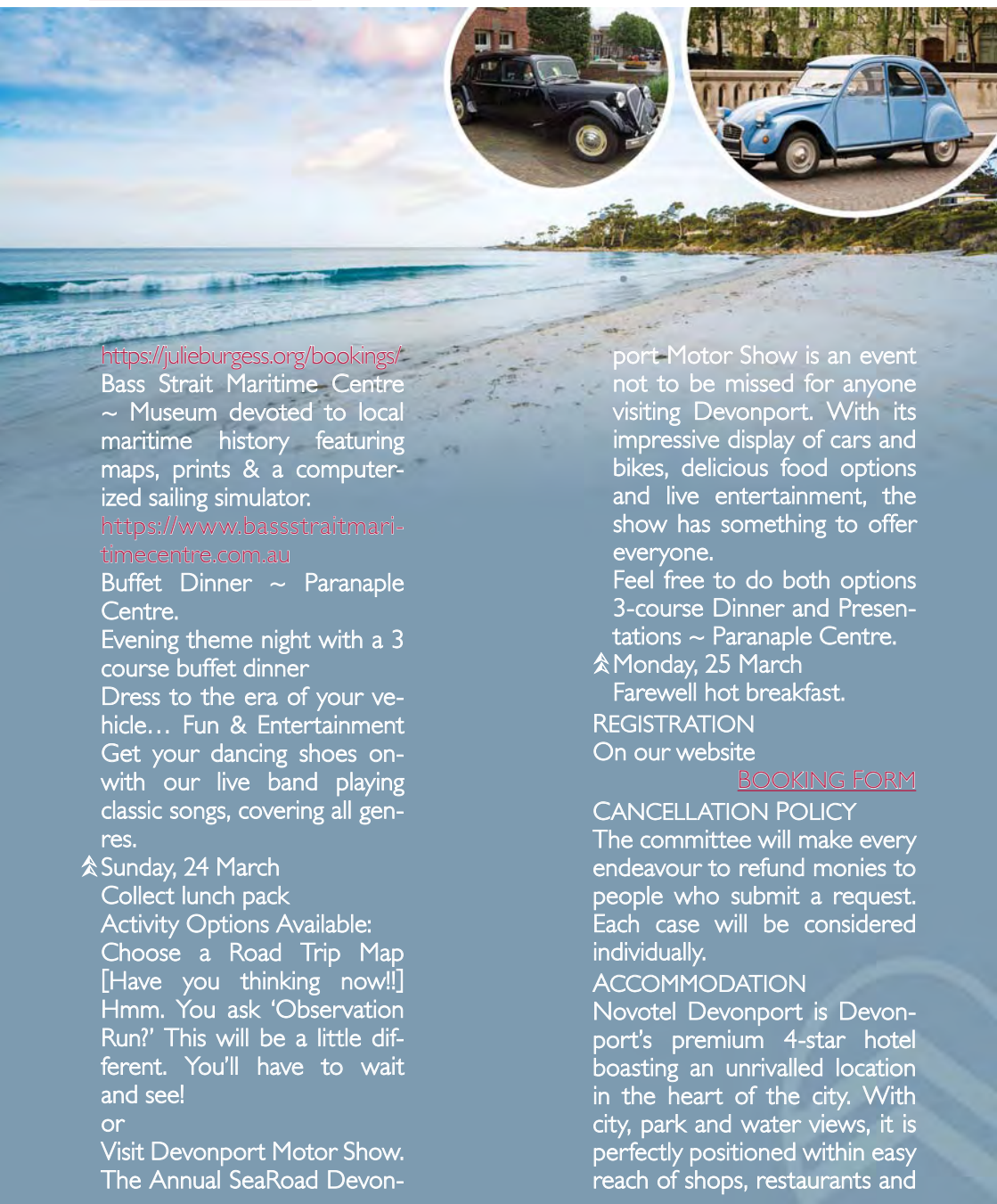
Don River Railway ~ Heritage railway with steam train trips along the Don River and a museum showing restored locomotives.

<https://donrivrailway.com.au>

The Julie Burgess ~ Tall Ship Sailing Experiences [Booking Required]



# A-Tractions



<https://julieburgess.org/bookings/>  
Bass Strait Maritime Centre  
~ Museum devoted to local  
maritime history featuring  
maps, prints & a computer-  
ized sailing simulator.

<https://www.bassstraitmaritimecentre.com.au>

Buffet Dinner ~ Paranple  
Centre.

Evening theme night with a 3  
course buffet dinner

Dress to the era of your ve-  
hicle... Fun & Entertainment  
Get your dancing shoes on-  
with our live band playing  
classic songs, covering all gen-  
res.

⚡ Sunday, 24 March

Collect lunch pack

Activity Options Available:

Choose a Road Trip Map  
[Have you thinking now!!]

Hmm. You ask 'Observation  
Run?' This will be a little dif-  
ferent. You'll have to wait  
and see!

or

Visit Devonport Motor Show.  
The Annual SeaRoad Devon-

port Motor Show is an event  
not to be missed for anyone  
visiting Devonport. With its  
impressive display of cars and  
bikes, delicious food options  
and live entertainment, the  
show has something to offer  
everyone.

Feel free to do both options  
3-course Dinner and Presen-  
tations ~ Paranple Centre.

⚡ Monday, 25 March

Farewell hot breakfast.

REGISTRATION

On our website

[BOOKING FORM](#)

CANCELLATION POLICY

The committee will make every  
endeavour to refund monies to  
people who submit a request.  
Each case will be considered  
individually.

ACCOMMODATION

Novotel Devonport is Devon-  
port's premium 4-star hotel  
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⚡ Novotel Devonport Contact  
details

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and Best Sts., Devonport,  
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You can book your accom-  
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[www.idem.events/r/citroen-  
car-club](http://www.idem.events/r/citroen-car-club) or follow the link:

[NOVOTEL BOOKING](#)

\* Securing accommodation is  
your responsibility

ALTERNATIVE ACCOMMODA-  
TION

A selection of alternative ac-  
commodation options, including  
motels, B and Bs and caravan  
parks, will be publicised on our  
Website [www.citroentas.org](http://www.citroentas.org)  
shortly.

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\* Securing travel is your re-  
sponsibility, sailing bookings  
are limited so don't miss out  
on this great adventure. Book  
now!



## A-Tractions



### Chit Chat Tuesday

WHEN: 1st Tuesday  
6 February  
5 March  
2 April  
TIME: 10:00  
WHERE: Laneway Espresso  
Café, Dromana  
COST: Cheap Eats  
BOOKING: Not required  
CONTACT: Warwick Spinaze  
0407 016 719.

Laneway Espresso Café ~ next door to the Dromana Hotel, 167 Nepean H'way, Dromana. Easy to find, plenty of parking, under-cover seating if the weather is wet. This is a low key 'DIY' event for like minded Citroën owners to meet and chat.

### CCCV March Dinner Meeting

WHEN: Thursday, 21 March  
TIME: From 19:00  
WHERE: The Hobson's Bay Hotel,  
COST: Food and refreshments to your account  
BOOKINGS: Essential, date TBC  
BRING: Hunger and a thirst  
MORE INFO: Michael Faulks  
0432 537 060

[president@citcarclubvic.org.au](mailto:president@citcarclubvic.org.au)

Once again in place of a club night in the Nunawading club rooms, we are heading for a pub outing and meal.

These sojourns are to encourage members who otherwise might not attend Club meetings. We rotate the area that they

are held in so as to make them convenient to members in far flung areas. This month we head to Williamstown.

### CCOCA Annual General Meeting and Wine & Cheese

WHEN: Wednesday, 27 March  
TIME: From 19:30  
WHERE: Hawthorn Bowling Club, 1 Wood St., Hawthorn [cnr Denham St.]

COST: Free  
REGISTRATION: Essential for catering by 25 March  
MORE INFO: Lee Dennes,  
[l.dennes@bigpond.net.au](mailto:l.dennes@bigpond.net.au)

DO NOT CALL LEE TO REGISTER! You must register/book via the CCOCA website <https://citroenclassic.org.au>

### CCOCA AGM BOOKING

Yes, it is that time of the year again ~ the Annual General Meeting is rolling around.

The Annual General Meeting has a reputation for being boring, but this year it will be especially streamlined as all the Committee Reports will have been published in the April edition of 'Front Drive'. So no need to sit and listen to the Committee drone on. Questions from the floor are, of course, encouraged!

Every year the Committee exhorts you to come along to this important event, and almost every year we manage to have sufficient members at-

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## A-Tractions

tend to assure us of a quorum. Remember, if we do not get a quorum, we simply have to go through the whole thing again. So, please make the effort to come along.  
VOLUNTEER!



Have you thought of standing for Committee?

All Committee positions are 'up for grabs'. A link to the Nomination Form can be found on the website, or use the link below.

On a personal note from the Editor, being on the Committee is not an onerous job ~ Committee meetings occur once a month and often finish in just over an hour. The Club can only continue to prosper if the members take up the challenge of making the Club what you want it to be. Nomination forms can be found on the website as well:

<https://citroenclassic.org.au>

[AGM NOMINATION](https://citroenclassic.org.au)

VOTE!



Voting for the 2024/2025 Committee is a very important right you have as a member of CCOCA. So, come along and make sure you have your input. If you cannot come on the night be sure to complete a proxy, which can be found online at <https://citroenclassic.org.au>

[AGM PROXY](https://citroenclassic.org.au)

After the AGM is finished, we will enjoy some wine and cheese. [Please drink responsibly.]



## • April

### CCCV April Monthly Meeting

WHEN: Thursday, 18 April  
TIME: 19:30  
WHERE: CCCV Club Rooms,  
8/41 Norcal Rd., Nunawading  
COST: Free  
REGISTRATION: Not required  
MORE INFO: Dave Rogers  
[drogers@gmail.com](mailto:drogers@gmail.com)

Travel tales ~ the Moloney's  
Round the Block Trip

### Traction 90 Celebration Dinner

WHEN: Saturday, 20 April  
DETAILS: Full details will be  
available shortly  
MORE INFO: Lee Dennes  
[l.dennes@bigpond.net.au](mailto:l.dennes@bigpond.net.au)

DO NOT CALL LEE TO REGISTER! You must register/book via the CCOCA website

<https://citroenclassic.org.au>

[TRACTION 90 BOOKING](https://citroenclassic.org.au)

2024 sees the ground-breaking



Citroën Traction Avant celebrate its 90th Anniversary. On this night our Clubs will celebrate that momentous event with a celebratory dinner. This is a 'once in life-time' event and one which no real Citroënist will want to miss.

Numbers are limited, so be sure to book as soon as possible.

### Combined CCOCA/CCCV Show and Shine

WHEN: Sunday, 21 April  
TIME: Display cars from 08:30  
General admission from 10:00  
WHERE: Rippon Lea Estate,  
192 Hotham St., Elsternwick  
COST: Free [see details below]  
REGISTRATION: Not required  
BRING: Everything for a picnic  
MORE INFO: Ted Cross,  
[03] 9803 2208

[info@l23goloans.com.au](mailto:info@l23goloans.com.au)

Michael Faulks

0432 537 060

[president@citcarclubvic.org.au](mailto:president@citcarclubvic.org.au)

The garden and the mansion of this National Trust property will provide a great backdrop to our magnificent vehicles.

Rippon Lea Admission: Entry for the driver and a single passenger in a car being displayed will be free. Those not displaying a car, and additional passengers in display cars, will pay the normal admission fee.

Adults	\$15
Concession	\$12
Children [3-15]	\$9
Free admission for National	



## A-Tractions

Trust members and free garden admission for residents of Glen Eira and City of Port Philip [refer to Rippon Lea website for details: <https://www.ripponleaestate.com.au/>]

<https://www.ripponleaestate.com.au/>  
[RIPPON LEA WEBSITE](https://www.ripponleaestate.com.au/)

Arrival Time: It is a requirement of Rippon Lea that all display cars must arrive on site between 08:30 and 09:00. No cars will be admitted after 09:00. Cars will be able to de-



part from 15:00.

Feel free to explore the grounds throughout the day. Mansion entry is only available by organized tour which can be booked on the day.

Spruce up your car to be in the running for a prize or just come along and enjoy the day, all cars welcome from shining garage princesses to everyday drivers to restoration projects. Bring along your family and friends and make a day of it. We look forward to seeing you there.

### CCOCA April Monthly Meeting

WHEN: Wednesday, 24 April  
TIME: 19:30

WHERE: Hawthorn Bowling Club, 1 Wood St., Hawthorn [cnr Denham St.]

COST: Free

REGISTRATION: Essential for catering by Monday, 22 April

BRING: Your photos from the Show and Shine

MORE INFO: Lee Dennes, [l.dennes@bigpond.net.au](mailto:l.dennes@bigpond.net.au)



## PARIS APARTMENT

Apartment in Paris available to rent for CCCV and CCOCA members, sleeps up to 6 people.

Chic, sunny, renovated.

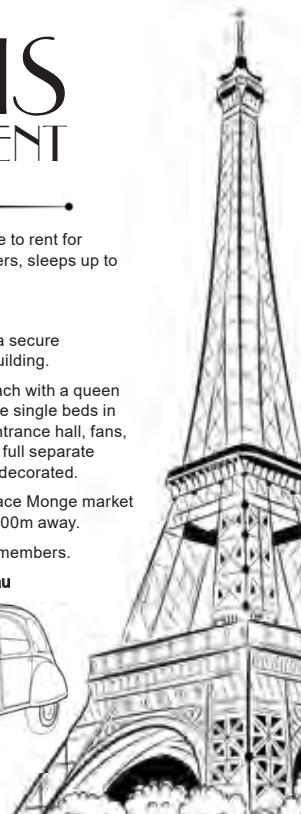
Located on the 4th floor of a secure residential Hausmannian building.

Comprising 2 bedrooms, each with a queen sized bed, plus two separate single beds in the living room. Elevator, entrance hall, fans, full kitchen, full living room, full separate walk-in shower. Beautifully decorated.

Famous rue Mouffetard, Place Monge market and two metro stations all 100m away.

Melbourne owners, CCCV members.

[www.maisondelaclef.com.au](http://www.maisondelaclef.com.au)



DO NOT CALL LEE TO REGISTER! You must register/book via the CCOCA website <https://citroenclassic.org.au>

[APRIL BOOKING](https://citroenclassic.org.au)

### Florence Thomson Tour

WHEN: Friday, 26 to Sunday, 28 April

WHERE: Based around Wangaratta Closed

BOOKING: Closed

MORE INFO: [florencethomsonstour@gmail.com](mailto:florencethomsonstour@gmail.com)



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Fax: (02) 9484 1900

[eai@eai.net.au](mailto:eai@eai.net.au)

[www.eai.net.au](http://www.eai.net.au)

In February 1905, Florence Thomson was the sole female entrant in the Dunlop Reliability Motor contest from Sydney to Melbourne.

The Florence Thomson Tour is proudly brought to you by the Association of Motoring Clubs [AOMC] on behalf of the RACV. The Tour celebrates the pioneering spirit and contribution of Women to Australian motoring.



## GS in Australia

On December 16, 2023 the Committee learned that Brian Wade had died. Brian, and his wife Esther, have been members of CCOCA for as long as I can remember. Brian was a keen Citroënist [a trait he shared with his son Nathan] but specifically a devoted Tractionist, with a fine car collection.

Brian was a strong defender of CCOCA's independence and in 2017 he was made our sixth Life Member. That recognition of Life Membership passes to Esther and we look forward to her maintaining the family's links with the Club.

Over the years Brian wrote a number of articles for 'Front Drive' and it seems fitting that in recognition of his contribu-

tions that one of these be re-printed. While Tractionists were at the heart of Brian's allegiance to the marque he also wrote about the GS in Australia. Here is what he wrote in June of 2007. Leigh F Miles ~ Editor

The first GS to reach our shores arrived in mid 1971, this was a LHD car fitted with the 'French' instrument cluster [Cyclops speedometer].

The car was displayed at various dealers around the country where it generated considerable interest with over two dozen orders being taken.

Peter Robinson was given the opportunity to test drive it and a 4 page report was pub-

**The original [in every sense of the word] dashboard which was fitted to the original 'Wheels' test car.**



lished in the July 1971 edition of 'Wheels' magazine. [The car was also featured on the front cover of the magazine].

He was greatly impressed with the car, his only complaint being that it was going to cost more than double the price it was selling for in France.

He wrote, 'As it stands the GS is simply the most advanced small car in the world and will probably continue to hold that title until Citroën releases its Wankel-powered car. That the GS is destined to receive a rotary engine is fairly obvious'.

What he did not comment upon was the panel gap. From the pictures that accompanied the article the gaps ~ espe-

**Peter Robinson at the wheel of the first [LHD] GS in Australia. [Image: Wheels]**



cially around the leading edge of the front door ~ and poor alignment of the bonnet to the guard are plain to see.

It is not known for sure what happened to this car; however rumour has it that ended up in Noumea.

In November 1971 Citroën dealers were informed that deliveries would commence in January 1972 with an anticipated price of \$3,890.

Dealers were also supplied with brochures of the car at this time.

Although two models [Confort and Club] were featured in the brochure dealers were advised that only the Club version would be available.

The first shipment arrived on schedule and the first cars were



## GS in Australia

sold in February.

This shipment consisted only of sedans all of which had the early [rotating] interior door handles.

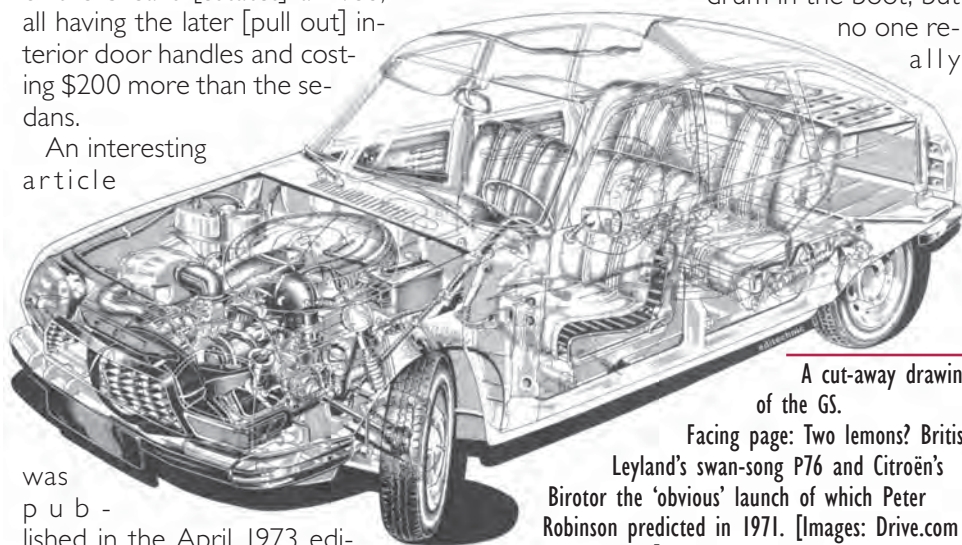
A full road test [six pages] was published in the March 1972 edition of 'Wheels' magazine and this was also conducted by Peter Robinson.

Once again he thought the car was marvellous only complaining about its cost.

He thought that the 'English' dash that had replaced the French one was a great improvement.

In late February 1972 the first of the breaks [estates] arrived, all having the later [pull out] interior door handles and costing \$200 more than the sedans.

An interesting article



was

p u b -

lished in the April 1973 edition of 'Australian Motor Manual'.

The article stated that talks were underway between Citroën France and Pressed Metal

Corporation of Sydney to locally assemble the GS.

Pressed Metal had been assembling Datsun 1600s and as their assembly had been moved to Melbourne, they were looking for a new order to take up their unused capacity.

It was estimated that a locally assembled car would be between \$200-300 cheaper than the fully imported version. However Pressed Metal was a wholly owned subsidiary of Leyland Australia and at that time Leyland was in dire straits following the disaster of the P76 [you could carry a 44gallon drum in the boot, but no one really

A cut-away drawing of the GS.

Facing page: Two lemons? British Leyland's swan-song P76 and Citroën's Birotor the 'obvious' launch of which Peter Robinson predicted in 1971. [Images: Drive.com and Stellantis]

Following pages: A Dutch magazine advertisement for the launch of the GS Pallas. It references 'boxline' upholstery, which is vinyl. Australian delivered Pallas cars were all trimmed in jersey cloth. [Image: Stellantis, translation by the Editor using DeepL [free version].



GS Birotor rotary piston engine car







## GS Pallas - for drivers who want far-reaching luxury in a refined car

An economical, safe and comfortable car, that is the most desirable combination for the ideal car. Pictured is such a car: the GS Pallas from Citroën. It rests on four flexible gas cushions, better known as the hydropneumatic suspension system. Roadholding is stable and sublime because of it. Driving comfort rises to great heights. There is so much that sets the GS apart. Like the air-cooled yet silent engine. The constant ride

height above the road surface, regardless of load. The front-wheel drive. The stabiliser bars that prevent leaning in corners. The anti-reaction front triangle that keeps it level on the road even under the most intense braking. All safety-giving traits that make the GS so popular. Is it any wonder there is now also the GS Pallas? For drivers who want to find extra refinement in an already refined car? Like a fully padded

interior and seats fitted with boxline or jersey fabric. Like trims on both sides of the car. Like a vinyl roof (as an extra) and in the utmost of colour harmony between interior and body. For anyone who likes the GS, the GS Pallas is the answer to the demand for more luxury and refinement.

**for safety, economy, comfort: Citroën**



## GS in Australia

cared]. Because of Leyland's precarious position these talks were abandoned.

August 1973 saw the arrival of cars fitted with the 1,220cc motor and the end of imports of the 1,015cc models.

Both sedans and breaks had a price increase of \$200 at this time.

Apart from a further price rise the situation for 1974 remained unchanged. The cost of the sedans had now risen to \$4,850 and the breaks to \$5,050.

In September '74 Citroën released the details for the 1975 season with a greatly expanded range available.

The new models being the G Special [1,015cc], GSX [1,015cc], GSX2 [1,220cc], Pallas and the ill fated Birotor which had gone on sale the previous March.

However Citroën [France] decided to continue the policy of only supplying the 'Club' version to Australia.

The 'Wheels' edition of August 1974 featured a road test of the Birotor [conducted in Belgium] and in it the correspondent indicated that a very small number could possibly come our way but of course the model was scrapped within weeks of the article being published.

The next road test to be published was in the October 1974 of 'Australian Motor Manual'

and in the article, the author noted that although somewhat expensive it was well worth the price for its comfort and performance and most importantly, its safety features.

However, in March 1975 the situation regarding model availability was to change with the arrival of a shipment of G Special sedans. According to reliable sources, the shipment was bound for Indonesia but the order was cancelled after the ship had sailed. The cars were then offered to Australia and accepted without hesitation.

The majority of these cars were the ubiquitous Citroën beige although other colours including red, orange, blue and white were available in small numbers. The prices for 1975 remained unchanged for the Club sedan and break with the G Special sedan costing \$250 less than the Club sedan.

To demonstrate the capabilities of the G Special one was used to tow a caravan that accompanied Jim Reddix on his 'Around Australia' re-enactment in the 5CV 'Bubsey II' in 1975.

As far as I am aware the last article to be published in an Australian car magazine was a road test on a 1,220 Break that appeared in the March 1975 edition of 'Wheels'. Again the correspondent had full praise for the car stating that it was a

## The new Citroën GS Club Saloon



### A new concept for today's motoring.

Trying to compare the new Citroën GS with ordinary 'medium sized' cars is rather like trying to compare an apple with an orange. There is no comparison. Quite simply, because it's a car that's years ahead of anything in its class for roominess, road-holding, ride, performance and durability.

And a car in a class of its own.

#### PERFORMANCE



On the road, the GS is full of surprises. It's powered by an air-cooled motor that's around 1100cc's. Yet you'll find it one of the quietest cars you've ever driven. With performance that's shattering. And like all Citroëns, the GS has front wheel drive... with fat radial tyres that give you an astonishing road holding, cornering and cruising under even the wettest conditions.

#### LUXURIOUS COMFORT

The GS gives you an extraordinarily smooth ride. Because it has Citroën's

unique self-levelling air-oil suspension that keeps the car constantly level regardless of load or road surfaces. It also gives you luxury and appointments usually found only in the most expensive cars.

Like really deep, thick, reclining seats richly upholstered in knitted jersey nylon or targa trim. Fully instrumented dashboard with clock, rev counter and control warning lights. Cigar lighter, dual-speed fan-assisted separate ventilation and heater. Rear window demister. And of course, Citroën's unique single spoke steering wheel, to mention but a few features.

#### SEATS FIVE COMFORTABLY

You can seat five in luxurious comfort.



And carry them smoothly, quietly, and quickly in exceptional safety. And to stop, the GS has dual circuit, power assisted 4 wheel disc brakes. The boot is enormous. All 16 cu. ft. of it - with completely flat sides and no wasted space.



#### AN INVITATION

The GS's remarkable features (only a few of which have been mentioned here) will completely change your idea of what a medium sized car should be. But to appreciate them, you need to test drive a GS. Once you have done so, you'll agree. The GS is indeed a new concept in motoring. Call us now for your personal road test.

Winner of more  
"Car of the Year"  
awards in more countries  
than any other car.

## CITROËN^GS

N.Z. Distributors: Citroën Distributors Limited

Authorised Dealers:

## SHORTERS CAR SALES LIMITED

55-57 Shortland Street, Auckland. Phone: 30-145.  
After hours: 52-252. Open 9 p.m. Fridays. L.M.V.D.

Unfortunately your Editor could not locate any Australian advertising material for the GS but many years ago he was given two flyers out of New Zealand which promote the GS. The reference to the engine being 'around 1100cc' suggests it is the 1,015cc motor and the interior photo shows it is fitted with the early circular door handles.



## GS in Australia

shame that the cost of it put it out of the reach of many buyers.

In 1976 prospective buyers were faced with a huge price increase. The Club sedan was now listed at \$7,350 and the break at \$7,730. By early that year all the G Specials had been sold and no more were to be made available.

This huge price increase was not restricted to Citroën with all other cars [including those locally built] experiencing similar price rises.

It was announced in mid-1977 that in the near future the only model that would be available would be the Pallas sedan with the first of these being sold in September of that year. All of these cars featured the 'Grande

Export' quad headlamps but strangely enough did not feature any of the other 'Export' model features. By now the price had risen to a whopping \$9,950, more than double the price of a Club sedan only three years earlier.

---

Left to right: The first GS which arrived in Australia had the original circular internal door handles and the 'launch' French dashboard. The white on black tachometer was only found on the pre-series model in the press photos. At some stage the 'pull' style door handles became standard. The first delivery of cars for sale had the 'English' dashboard and circular door handles. Your editor was not able to locate an image of this combination. The final image shows the more usual Australian-delivery layout. English dash and pull-out door handles.



The only thing of interest to occur in 1978 was a price reduction of \$600 to \$9,350.

The last road test I have seen was published in the 'Sunday Telegraph' on 5 February 1978. It is in a similar vein to previously published tests in that it praises the car in most areas but complains about the high purchase cost. It is interesting to note that the cost of insuring the car was given in the article. For a driver on a full no claim bonus it was \$705.32. This is almost double the cost of insuring a new C4 for a rating 1 driver in 2006. A reprint of this article can be found elsewhere in this edition.

For the entire time that the GS was sold here an optional semi automatic version

[convertisseur/C-Matic] was available. This added approximately 5% to the purchase price. All prices quoted in this article are for the manual versions.

1979 saw Bryson Industries take over Citco thus securing the distribution rights of Citroën for both Victoria and New South Wales.

On taking over they announced that henceforth only one model the CX Pallas C-Matic would be imported thus ending the availability of the GS in Australia.

Citroën launched the GSA range in late 1979 for the 1980 season and the new model addressed some of the inadequacies of the GS. These included a more powerful engine, five

## GS in Australia

speed gear box, better rust proofing and a proper hatch-back. However due to Bryson's 'one model' policy we were not to see this excellent car reach our shores.

Between 1972 and 1978 a total of 3,724 new Citroëns were sold in Australia, according to 'Wheels' Dec '84. As the GS was selling roughly two to one against the D-Series/CX it can be assumed that roughly 2,500 GSs were sold here. Their best year was 1975 with over 600 being sold, the availability of the G Special no doubt helping sales. 1976 was their worst year with less than 400 finding buyers. [Ed: Interestingly, 1976 was the year I bought my first car. While I ended up with a Renault 12, I had been very keen to buy a GS. But issues surrounding the French atomic tests in the South Pacific made supply of the car difficult ~ Duttons, the Melbourne dealer, was not actually able to supply a car! Ed.]

### CCCV Club Advice Line

Traction Avant	
Ted Cross	9819 2208
2CV	
Dave Rogers	0422 229 484
AX/Berlingo	
Kirk Kirkcaldy	9363 2464
GS/GSA	
Andrew Smith	9755 2439
ID/DS	
Contact CCCV	
BX	
John Wyers	9787 6280

And so where are they all now?

Unfortunately the GS [especially the 1,015s] had a number of problems. These including developing horrendous oil leaks [a real problem in NSW where the annual pink slip is required]. Cam belts had a habit of disintegrating with catastrophic results. They also had a voracious appetite for brake discs and pads. Being highly susceptible to the dreaded tin worm was also another area of major concern.

Because of these and other problems coupled with the relatively high maintenance costs many cars were scrapped quite early in their life.

In conclusion, I will say that in my opinion, the GS most certainly deserved the accolades and awards that it won and hopefully their owners will cherish the survivors so that we may see the occasional GS on the road in the years to come. Brian Wade

CX/C5	
Graeme McDonald	0409 134 836
SM	
Lee Scholte	0407 150 038
Xantia/Xsara	
John Wyers	9787 6280
XM and modern models	
Salman Chaudhry	0410 040 505
C2/C3	
Don Scutt	9807 8999
C6	
John Fedorko	0438 597384

## Period Piece: Local Road Test

Citroën is a good friend in bad weather. Given more bad weather, Australians would buy more cars like the Citroën GS.

It is hard to appreciate the virtues of most European cars when test-driving around a city block on a bright sunny day.

But when faced with dreadful visibility last weekend, rain pelt-ing from all directions, windows trying to mist up and torrents pouring across the road, I felt secure in the little GS.

Even when aquaplaning, it kept pointing straight ahead.

Braking never brought any suggestion of skidding or instability.

Up on Gladesville Bridge in high winds and heavy rain the car showed no signs of the buffeting.

That is what good cars are about ~ they protect the driver.

Many Australian drivers have to cope with the deficiencies of their vehicles.

---

The cover of the brochure for the Grande Exportation [GE] models of the GS and CX. The GS sports the quad headlamps that were fitted to later Australian-delivery cars. [Image: Stellantis, Editor's archive]

### ENTREZ DANS LE MONDE DES CITROËN PALLAS WELCOME TO THE WORLD OF THE CITROËN PALLAS





## Period Piece: Local Road Test

### Demand

Many people appear to misunderstand Citroëns.

They see them as sophisticated monuments to engineering ingenuity ~ self-indulgence for its own sake.

This is not so. The French demand that their cars be practical ~ comfortable, durable and economical with good handling, road holding and braking.

The don't mind how seemingly-curious the result is ~ as long as it works.

Every Citroën is practical.

Many Australians see them as complex because they have been raised on ordinary cars ~ ordinary in performance.

As an example, the GS is one of the most aerodynamic cars in the world ~ this cuts fuel consumption and improves directional stability in cross winds.

It has a superbly comfortable ride, a gigantic, easy-to-load boot, good visibility and is capable of remarkable average speeds with fuel economy. The shame is that high tariffs and restricted quotas have combined to put a car that can save lives out of the reach of many people.

Yet some inferior cars get official encouragement.

The morality of such discrimination and legislation is questionable.

The GS may not be perfect,

### CITROËN GS DETAILS

1978 GS Pallas

#### COSTS

Price \$9,350  
Insurance NRMA \$705.32

#### BODY

Four-door, front-wheel drive saloon

#### DIMENSIONS [m/kg/L]

Length 4.15  
Width 1.608  
Height 1.35  
Ground Clearance 0.152 to 0.212  
Wheelbase 2.55  
Weight 930  
Fuel Tank 43

#### TECHNICAL

Steering Rack and pinion, 3¾ turns lock to lock  
Turning circle 10.4m  
Brakes Power hydraulics with 270mm front discs, 178mm rear discs and load-sensitive pressure limiting valve  
Suspension Hydro-pneumatic with transverse arms front, trailing arms rear, front and rear anti-roll bars. Automatic height correctors.

#### ENGINE

Capacity 1,220cc  
Power 44.8kW @ 5,750rev/min  
Torque 87.3Nm @ 3,250rev/min

its first couple of years it has proved as reliable and maintenance free as any normal suspension but with many advantages:

Constant and level ride height, irrespective of load.

Headlight aim, steering, suspension travel and handling remain constant under all conditions.

High ground clearance for rough ground, driveways.

Variable height makes wheel changing and car cleaning easy.

Allows an easy-to-incorporate valve, which greatly improves brakes under varied conditions.

More comfort than all but the most expensive luxury saloons.

### Pressure

Should the engine be cut, suspension pressure is used to boost brake pressure.

Many cars run out of brake boost after two or three applications. Citroëns will achieve more than 50.

The only penalties are that it doesn't handle severe humps as well as other suspensions and if you have clearance problems in your driveway, you have to wait for pressure to build up before driving off in the morning.

After you get used to it, you regard non-selflevelling suspensions as old-fashioned.

### Hesitant

Among makes that have begun to follow Citroën's lead in this

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## Period Piece: Local Road Test

are Rolls Royce, BMW, Mercedes Benz and Range Rover.

Equally, the one-spoke steering wheel is also gradually being copied.

No wonder, for with great simplicity, lack of bulk and cost, it gives excellent vision of instruments and no hard centre that needs padding to prevent driver injury.

The test car was sometimes hesitant and rough when accelerating out of a corner, but the distributors advise that this can be rectified with tuning.

GS models in Australia seem too have suffered a change in front and rear door locks because they are not as described in the handbook.

Australian design rules also have required an annoying buzzer to sound until brake pressure is built up.

The biggest original equipment supplier of brakes to the Australian industry, PBR, is now designing a similar system.

The instrumentation and

warning lights were comprehensive and included warnings for lights, front brake pads worn and choke. The only gauge not fitted was oil pressure.

Interior accommodation was good with ample leg room, seats with thigh, lumbar and lateral support, low centre tunnel, herringbone pattern cloth and simulated suede roof lining.

The air-cooled engine was surprisingly quiet, although it worked hard.

### Quiet

Driven enthusiastically, it performed briskly ~ 80, 120 and 151kph maximum in the top three gears ~ with acceptable consumption between 8 and 11.3L/100km.

But the heating, ventilation and demisting system was disappointing.

The GS may not be everybody's cup of tea and at \$10,000 it's more in the champagne class, but it has much to recommend it, particularly for safety.

Sue and Andrew Cunningham's lovely GS Pallas was featured in 'Front Drive' Vol 44, No 4. Both it and green car in the shot feature round quad headlights. [Image: Andrew Cunningham]



Ed: This is the road test to which Brian made reference in his article about the GS in Australia. It was written by Will Hagon and appeared in the [Sydney] Sunday Telegraph on 4 February, 1978. It was reprinted for distribution to customers through the Citroën dealer network here. It is taken from the Editor's archive.

At the time Australia was moving towards the metric system of measurement and the following information about the change was printed as part of the road test.

### How it Works

Metric conversion continues to grow on the roads ~ now

in tyre pressures and fuel consumption.

If you are buying a metric tyre pressure gauge, buy one that shows kilopascals [kPa].

Others are available showing various units such as kilograms per square centimetre but these are of no use in Australia.

Some equivalents are: 20psi equals 137.8kPa, 22 equals 151.6, 25 equals 172.3, 28 equals 192.9.

Fuel consumption is measured in litres per 100 km instead of miles per gallon.

Some equivalents are: 8L/100 km equals 35mpg, 10 equals 28, 15 equals 19, 20 equals 14. Notice that a large figure was desirable in the old mpg but that a lower figure is better in metric.

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# New Zealand National Rally

## Réunir à Mahurangi 5 to 7 March 2024

A warm welcome to those intending to Register for the 2024 National Rally hosted by the Auckland Citroën Car Club, to be held in Warkworth/Mahurangi region north of Auckland, Tuesday to Thursday 5 to 7 March.

Registrations opened at 6.00pm on the 1st October 2023.

A little about the Rally region. The Rally will be held in the Warkworth/Mahurangi region. Warkworth is a pretty town with a rich history, that today hosts an interesting selection of restaurants and accommodation. It is in the northern part of the Auckland region and is located on State Highway 1, 64km north of Auckland and 98km south of Whangarei, at the head of the Mahurangi Harbour. The Warkworth district is known as the Kowhai Coast and the town's annual Kowhai Festival is one of the largest community festivals in the country, running for a week in spring.

New Zealand's main satellite communications ground station is located 5km south of Warkworth. We will utilise the Vintage Car Club clubrooms there as

Bridgehouse Lodge, Warkworth.



part of our rally format.

A new toll motorway speeds up the journey from Auckland considerably, but the old north road is still in use.

It's a playground for Aucklanders keen to visit great beaches [Omaha, Mathesons Bay, Pakiri] and the Tawharanui Regional Park. The area is also home to many vineyards, sculpture parks and artisan manufacturers.

It's a popular place, weekend traffic can be chaotic, especially at the Saturday Matakana market. For this reason, we have chosen to hold the rally mid-week on the 5, 6 and 7 March. This timeslot also meshes well with the Auckland Brit and Euro Classic Car show on Sunday, 3 March.

Accommodation in the area is at a premium in March, so if you're intending to join, we recommend that

Warkworth wharf.



you consider pencil booking. There are some 'Boutique' or 'Classic' Rooms held at Bridgehouse Lodge for a limited time at a special price. Contact Ramona Holt at the Bridgehouse. Or email:

[bridgehouse@bridgehouse.co.nz](mailto:bridgehouse@bridgehouse.co.nz)  
Website:

<https://www.bridgehouse.co.nz/BRIDGEHOUSE LODGE SITE>

We are looking forward to another successful CCCNZ National Rally that reunites old friends.

### Registration

Registrations for New Zealand Club members opened on 1 October. We have a maximum number of 140 registrants, due to the capacity of the venue on 6 and 7 March. Bookings for non-New Zealanders opened on 1 November.

Registration for those who are not members of CCCNZ can be achieved by clicking link below:

<https://cccnz.club/overseas-national-rally-registration/>  
[CCCNZ O/S REGISTRATION](#)

### Programme of Events:

#### ▲ Tuesday 5 March

- Evening reception and rally pack collection from 18:00 at The Bridgehouse Lodge, 16 Elizabeth St, Warkworth. Food and refreshments available while you catch up with friends old and new. Dine in the restaurant afterwards if you wish.

#### ▲ Wednesday 6 March

- The Pride of Ownership in the morning will take place at a location still to be determined and then in the afternoon the Grass Gymkhana will take place. Hopefully, the venue will enable both events. We have made approaches, but nothing is confirmed as yet.
- Dinner on Wednesday evening will be held at the Bridgehouse Lodge

#### ▲ Thursday 8 March

- The CCCNZ AGM will be held at the VCC Club Rooms, 92 Satellite Earth Station Rd. The Spotting Run briefing and departure point is at the same location. The Bridgehouse Lodge will be location of the prize giving dinner on Thursday evening.
- Lunches to be provided on Wednesday and Thursday and morning and afternoon tea will also be available.

A timetable of all events will be included in your rally pack.





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## GE: Grande Export

In his article about the GS in Australia Brian Wade tells us from 1977 the only model of the GS to be imported to Australia was the Pallas, which was to be fitted with GE-specification quad headlamps. What was *Grande Exportation* specification?

While exports of the GS began quite soon after production began it was not until November 1975 that Citroën commenced offering specific versions that were suitable for areas where the operating conditions were deemed to be 'severe'. These were designated as *Grande Exportation*, or GE, models.

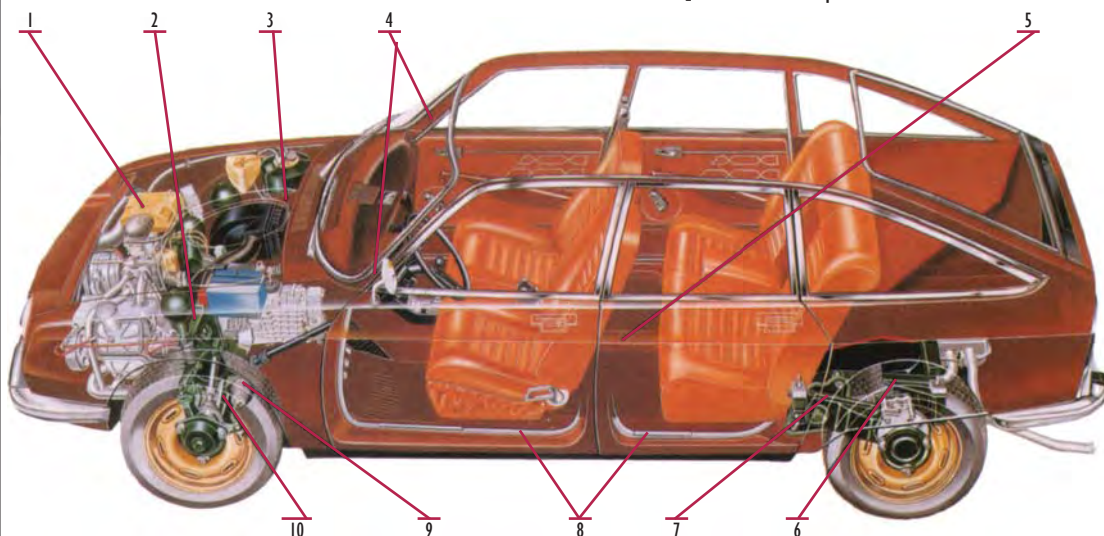
Climate and infrastructure, rather than geographic location. Japan was not designated as GE, but Australia was, claims Marc

Stabèl in his book 'Citroën GS & GSA ~ Citroën's avant-garde mid-range cars', published by Citrovisie in the Netherlands.

The GS models were standard factory cars, modified by fitting reinforcement and protection pieces to deal with local conditions. These cars were built in France, and had to be specifically ordered as GE.

There were GE and PO ver-

- 1] Revised air filter
- 2] Reinforced front sub-frame
- 3] Reinforced front sub-frame mountings
- 4] Reinforced body shell at the front
- 5] Shielded hydraulic lines beneath the car
- 6] Reinforced rear sub-frame
- 7] Reinforced rear suspension arms
- 8] Improved dust proofing of door openings
- 9] Modified steering gear
- 10] Reinforced suspension





## GE: Grande Export

sions of the CX. PO stands for *pays d'outre-mer*, which were former French colonies, also known as DOM-TOM ~ *départements et territoires d'outre-mer*. That is too simplistic... this is France after all. The four *départements d'outre-mer*, Guadeloupe, Martinique, French Guiana [Guyane], and La Réunion, date back to the earliest stages of French colonization, and are treated in many, though not all, respects as ordinary *départements* within metropolitan France. The *territoires d'outre-mer* are more diverse in their administrative structures. They include New

Caledonia, St Pierre et Miquelon, Wallis and Futuna Is, among other territories [and claimed territories including those in Antarctica].

Anyway, PO versions has slightly less reinforcement compared with GE versions. As far as is known there were no PO versions of the GS produced.

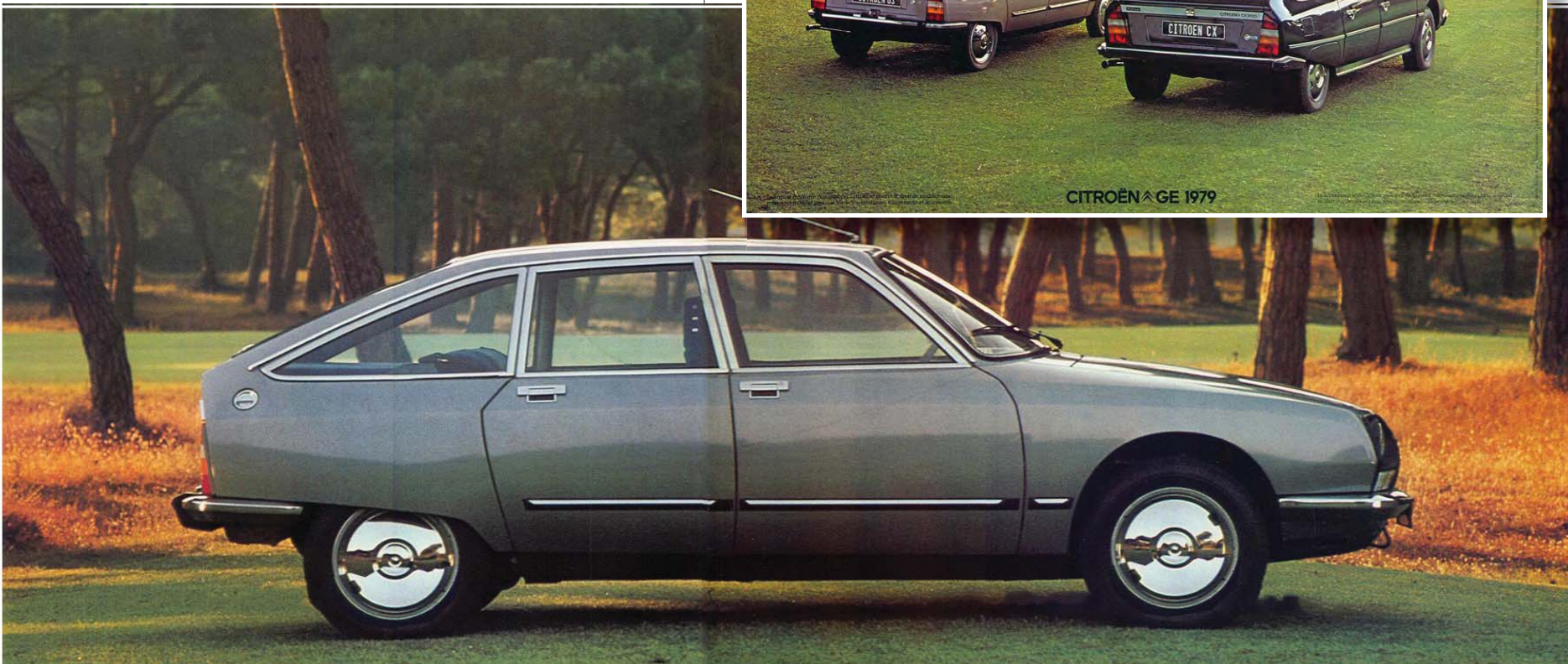
Towards the end of the '70s the GE brochures became more luxurious and more extensive. When the GE brochures featured both the GS and CX, as the examples accompanying this article, there were often separate version for berlines and breaks.

### PALLAS GS

La Pallas GS, plus compacte, bénéficie des mêmes solutions techniques de pointe que la Pallas CX. Elle offre le même confort et assure le même sécurité. Spacieuse, elle permet à 5 passagers de voyager avec leurs bagages dans des conditions que pourraient lui envier bien des berlines classiques plus encombrantes et beaucoup plus coûteuses.

### PALLAS GS

The Pallas GS, a more compact car, is equipped with the same advanced technology as the Pallas CX. It offers you as much comfort and security. Its roominess allows 5 passengers and their luggage to travel in conditions many other classic sedans, more expensive and less maneuverable don't provide you with.



The left-hand drive version was called 'Réunion' and was based on the French GS while the right-hand drive version, which was based on the British market model, was called 'Jamaïque'.

There were also *Grande Exportation* models of the GSA, although after 1982 these would appear to have only been available in the 'Réunion' [left-hand drive] version. Leigh F Miles







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## Totally Traction

I do like the simplicity of the Traction in everyday use. But it is an old car and age brings problems and as winter approaches one becomes more aware of them.

I've had my Normale for 27 years and it was restored a few years before I bought it. So in some respects it's a 30-ish year old car and in others it is a 72 year old. It looks OK for either age ~ but compared with a new, or newly restored, car it is getting quite shabby and tired. It does, however, continue to be a reliable means of transport.

We didn't take it on a recent trip to Cornwall, choosing instead our modern Golf Estate which is also reliable. But we had two warning lights on when we got home. One was telling me we were low on fuel; which was true. The other was warning of low tyre pressure; which was a complete lie. I must admit it would be nice to have a working fuel gauge or warn-



ing light on my Traction. Since I don't, I always reset the mileometer trip when I fill up and look for fuel when it gets to 200km. I certainly do not want a tyre pressure indicator ~ the Golf's did not tell us we had a flat tyre when we had one and every time it has indicated low pressure a check with a proper gauge confirms the pressures are OK.

Without a dashboard full of information and lamps you have to do the real physical checks and keep an eye, and an ear, out for developing problems.

You will remember my hot ignition key which got so hot it burnt my finger when I removed it? I suspected a faulty ignition switch with a high resistance being heated by the current drawn by my radio which, for some reason does need to be turned up loud to hear it. However, I was probably as sceptical as you about this, but I couldn't think of anything else. Now I can. It wasn't the ignition switch

**Facing page:** The ignition key hole and the offending indicator switch.

The key hole complete with the ignition key and the bottle opener.

**This page:** With the original indicator switch removed it was clear its hole was not exactly circular, indicating previous heavy-handed work.

The 'new' indicator switch which operates the 12volt indicators and one day will also work the pig's ears.



## Totally Traction

at all ~ it was my original indicator switch which is located just below the ignition switch. How so? And how did I discover this? Read on...

To answer the second question first, I happened to notice out of the corner of my eye an occasional spark as the bottle opener hanging off my key ring touched the indicator switch knob. This was quite surprising ~ it meant that either the key or the indicator switch was live. Out came the voltmeter and it turned out that the screw in the centre of the indicator switch knob had volts on it, 6 of them to be precise.

As you may know most of my car's electrics have been converted to run at 12volts, and that includes the indicators. At least the indicators I added to the front and rear are 12volt but the original Scintex pigs' ears on the rear pillars are connected to the 6volt circuit that powers the wiper motor. I don't use these indicators and have been intending to fit them with 12volt LEDs and connect them to flash with the other indicators which are controlled from a switch I have added to the steering column.

The switch on the dashboard is effectively redundant ~ but still powered. And it turns out that the screw that holds the plastic knob protrudes a little and for some reason is live.



I suspect that both of these things have been true for ever but I never knew it until now. Certainly the screw has always protruded ~ but has it always been live? It's the only example of the switch that I have and I have not taken it apart so I have nothing to compare it with and have no proof that it has not become damaged in some way.

My immediate fix was to take

advantage of the very worn nature of my key and/or switch which allowed me to pull the key out as soon as I turned the ignition on. This became my habit for a week or so and the only problem was finding the key when I needed to turn the engine off again.

My more robust solution was to disconnect the power from the indicator switch. I removed the switch from the dashboard which revealed that the hole was not particularly round, as if it had been opened up with a file. This suggests the switch was not an original factory fitment. My next action was to order some 12volt LEDs for the

---

**Facing page:** The original indicator switch once it had been removed. The voltmeter showed 6volts going through the indicator switch. That can't be right.

**Above:** Jim Gibson's black Normale beside Richard Vick's White Big 6 along with Richard's Panhard.



## Totally Traction

pigs' ear indicators so that I can wire them up to the others and to order some bits to fix the 'problems' that caused me to ignore these indicators for the last couple of years.

These 'problems' are that one of the glasses is broken and neither has any seals, nor do they have the red and white parking lamp lenses. For a long time they were just open to the elements but recently those holes have at least been taped over. All that exposure to the weather, together with being only 6volts, meant they were, at best, dim and more likely not working at all.

I now have the LEDs for both

the indicators and the parking lights ~ and new reproduction glasses with seals and a couple of second hand bases which include the red and white lenses. The bases need a bit of paint and they will be fitted this weekend. This will require removing the trim panels inside the rear pillars as the bolts for the lamp bases are screwed into non-captive nuts. It will be [mildly] interesting to see how neat the holes are.

It will be nice to have functional pig's ear indicators flashing along with the others.

The nights are drawing in ~ although when you read this w e will be changing

the clocks so we will get some daylight back in the evenings and this just makes the mornings worse. Lighting becomes important. It will be nice to have functional parking lamps, although I cannot believe I will ever use them.

Another little job for this weekend will be to fit the heater tube which has been absent for several years. I had the radio aerial cable routed through the heater vent hole in the bulkhead ~ but that now runs through a different hole. I tried to fit it a few weeks ago but discovered

the rubber sleeves were perished. I now have replacements.

I recently attended a classic car show at a local school which was raising money for charity. For a change I took my '59 Chrysler but Jim Gibson and Richard Vick both took their Tractions. Jim's black Normale and Richard's white Big 15 are big boot models which, side by side, show the differences between the French and British equivalents. Richard also took his lovely Panhard.

Chris Bailey



## Looking Forward

The next 'démarréur' will be published on March 4 and will focus on the Axel. A three-door Visa or a small-bodied GS? Did anyone know what it was?





## GS: Not Despised, Just Forgotten

**B**onjour. As a schoolkid in 1965 I was occasionally driven to a Northern New South Wales country bus stop in a Peugeot 404 wagon. It was possibly this Gallic experience; the steering wheel, the dash design, the manicured hands of the French female driver [who was married to an Australian farmer] which shaped my appreciation of things. Why was the Pug different to my mum and dad's 1962 FB Holden? The

Pug could comfortably fit seven school kids without seat belts.

Fast-track to 1980 with the Australian rite of passage, claiming Scottish/English heritage and as a carpenter journeyman hitch hiking through the French Pyrenees. I got a lift in a dark blue Citroën ID 19B. In my best London Tube textbook tutorial French, I had a crack; '*il a tres bon voiture*' [he has a very good car]. The driver smiled, shrugged and grimaced for the next corner. He used angel gear on every descent.

Living in Glebe in Sydney during the early 1980s recession we had to have, I noticed some squatter camps had progressively grown on the edge of



Rozelle Bay. Naturally, I thought times are tight and the homeless were doing it tough. As it transpired, because of political unrest in Indonesia, filming of 'The Year of Dangerously' was relocated to Sydney and Johnstone Creek was the perfect setting for a slum. What does this have to with Citroëns? One of the film crew had a light blue D Special and as I commuted past the film set in my 1300 Beetle each day, my passion for the French marque began to escalate.

The return to Australia from backpacking left me in reduced circumstances and with a \$750 budget, in Mortlake by the Parramatta River, I bought a

dark blue ID 19B. To great joy it was identical to my Pyrenees experience. My joy was certainly tempered by the ID roughness which resembled an ID only a mother could love.

A work transfer to Tamworth meant there was no suitably skilled personnel in the area to do my ID mechanical work. I may have been spoilt in Glebe because I lived down the road from Citroën expert *extraordinaire* Tom Dolan. I didn't have much of a mechanical tool kit,





## GS: Not Despised, Just Forgotten

so with shifter in hand I took to keeping the ID on the road.

Oil and filter changes were in accordance with the speed; every 1,000 miles. I now know experience is the best teacher, but the school fees are heavy because due to a lack of maintenance on my first car, a Holden EJ panel van, I blew the motor up. With a wrecking yard replacement motor fitted, I sold the EJ for \$350. My eyes now water when I think of how much that car would be worth in today's motoring climate.

While a student in Armidale I was

offered an opportunity I could not refuse. A DS 23 Pallas, *Automatique, Injection Electronique*. What a beautiful car. Well, it didn't come from the back of the car lot like most of my purchases. The viewing was held in an Armidale industrial sector yard. It was too embarrassing to display it in a car yard. A mild restoration was done on



the DS 23 to get a road worthy. European motoring on a farm boy's wages was very challenging and the DS 23 eventually went to a good Brisbane home.

It was an All-French car day in Bundoora where it all came undone. A white GS Break was on display [wagon for the uninitiated]. I was fixated by the 210mm wide central fore and aft perforated hood lining. From that moment, every angle of the GS began to speak more profoundly. Like whimsical supermarket muzak; I became hypnotized. It is interesting to know what resonates with people when or if they get fixated on a passion or other worldly interest.

While I was very grateful for receiving a 2010 Citroën Car Club of Victoria [CCCV] Concourse trophy for our family Xantia Break, like a thief in the night I was already plotting to bring another Citroën into the fold and had made some GS availability enquiries. Not owning a classic Citroën felt like I wasn't maximising my CCCV membership.

Through CCCV I was able to source a brown 1974 GS Break. The Break presented a bit rough, but the car had potential. The potential to give my bank balance a serious tilt. The test drive was the first time I

While they say 'Nothing can frighten a Triton', clearly 'There's nothing a GS Break can't take'.



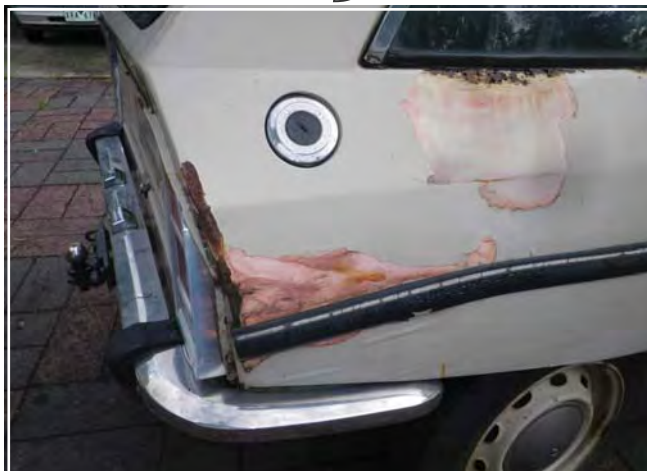
## GS: Not Despised, Just Forgotten

had ever travelled in a GS and I was really taken by the similarity to my D Series ride.

With a 28-day unregistered vehicle permit in hand, I cycled 15km from my Glen Waverly workplace for a Moorabbin pick-up. I bunged the bike in the back of the Break and banged the car out into Monday afternoon peak hour traffic.

I spent around 600 hours restoring the GS. I outsourced the minor rust work and final paintwork to professionals. Thank you to Frank Williams and Heidelberg Smash Repairs. Often members of the public remark that it must be hard to source parts for a GS. On the contrary, Daniel Engelhardt of Französische Klassiker in Germany has been an excellent source for new parts. GS parts can be nearly half the price of comparable items for a D Series. Club members alerted me to a white 1973 GS Break suitable as a parts car to complement my 1974 brown GS; which I ultimately purchased. It's a bit like dachshunds, they are better in pairs. This car was not used for parts and after 700 hours of passionate input it was duly placed on club registration.

On separate occasions, the Spirit of Tasmania has carried both of my GSs to one of my favourite destinations; Van Diemen's Land. One visit which included a surfing safari with my



white GS included the Cit-In event based at Smithton.

Another trip down in my brown GS was in response to a Melbourne heatwave. There was a prediction of 43°C one weekend. Based on this information, perched up Fri-

day morning at my workstation, I made a decision to bail. I booked a berth on the Spirit, told the boss I was flexing off early [time-in-lieu] and drove home where I swapped four wheels across from one GS to another. The set had been previously swapped for RWC purposes. I threw a surfboard on the racks and bombed it down to Victoria Dock. In almost fog-like conditions, I waved to the upcoming heat and drifted towards the Apple Isle. There are allegedly three very rare rotary powered GS Birotors in Australia and one of these is located in Tasmania.





## GS: Not Despised, Just Forgotten

Located on the fringe period of COVID restrictions, following is an excerpt from the December 2020 CCCV antipodean 50th GS anniversary that was held in Healesville:

Designed by aeronautical designer, Robert Opron, the GS took 14 years of development before its release in 1970. The GS, with 2.5 million units produced was the second most built Citroën after the 2CV with 4 million units. Voted 1970 European Car of the Year, the Kammback [chopped off rear] design contributed to a claimed drag coefficient of 0.361 compared with the DS with 0.382 [this boils down to pretty good mpg-L/100km]. Worldwide GS/A production spanned the years 1970 to at least 1990 in Indonesia.

While out and about, people often query the car's brand name. The only emblem on either of my cars is 'GS Break'. Often car restorers like to discuss their restoration efforts at great length, whereas my preference is to turn the discussion. I always redirect the question and ask, what car they think it is? Around eighty percent believe it is a Renault, followed by Fiat. At least they are on the European pathway. One young fellow suggested it was a Holden. That poor young bloke needs to go out and buy himself some

miss-spent youth.

When they ask what year is it, you guessed it; what year do you think it is? I have had 1950s through to the 1980s. With the mid-century guesses, I flippantly suggest bakelite grilles were still being made in the '50s. And with a further prompt, my grille is plastic.

For readers who are not familiar with the term 'Break', I invite you to look up the term 'Shooting Break'. It has an interesting etymology. If you are super excited about doing something like this, you may want fries with that and look up the documentary by renowned film director Louis Malle, '*Humain, Trop Humain*'. This is a quasi-documentary of the Citroën manufacturing process in Rennes and embraces subtle human aspects of factory life in the production of GSs and 2CVs.

I have two kids and I'm constantly saying that I do not believe in favouritism, therefore when I leave this mortal coil, I have a GS each for them. This is a very hard sell, but I keep trying.

A number of lifts I got while hitch hiking in the Pyrenees involved the 2CV and while I haven't made the connection yet, there could be scope for a nostalgic reset. But the trouble is, I will need two.

*Bonne conduite automobile*  
Michael Sparke, CCCV Member

## The Great 6 and 7CV Corrida

At the end of the year, producing a giant comparative test has become both a tradition and a goal for us. With this formula, which poses a thousand problems and at least as many difficulties, we would like to offer the reader a complete panorama of all the cars in the most representative category of the year that has just passed.

It is therefore not by chance, or subjective sympathy, that we

have brought together, in this comparison, the 6 to 7CV cars that are most widespread on the French market or that have, on paper, the best chances of being the most widely distributed in the months to come.

Long before these arguments, one figure made a particularly strong case for the priority of this test: 41% of the French fleet is, in fact, made up of 5 to 7CV cars. This percentage puts this category at the top of the sales market. Added to this, of





## The Great 6 and 7CV Corrida

course, is the participation of the Citroën GS. As the only shock newcomer to the French market in 1970, the child of the Quai de Javel had to prove its worth against its most direct rivals.

The other models did not require any particular comment. Proximity in terms of engine size and price were the determining factors in our choice.

The presence of a Mazda, whose distribution is relatively limited, is surprising at best. This car only features insofar as we thought it would be interesting to determine the exact size of the 'Yellow Peril' in relation to European production. [Ed: While current norms would discourage the use of such derogatory terms, the use of the expression in this period, and these circumstances is not surprising.]

As for the absence of the Kadett, it can be explained by the fact that this model should, in the short term, make way for a new car. As for the Ford Taunus, even though it was presented at the Paris Motor Show, a very late acceptance from the Service des Mines prevented us from entering it in this match. [Ed: The Ford Taunus in 1970 was the Continental equivalent of the Ford Cortina TC, which on the surface, at least, is a far larger car than any of the vehi-

cles included in this test.]

As for our test itself, the formula is now too well known for us to return to it. We will simply point out to our new readers that all the cars are, point by point, tested and judged under strictly identical test conditions, ie time, road and load conditions. To conclude our presentation, we would like to add that our road test this time took us to the co-prefecture of Andorra, which enabled us to cover

almost 2,500km in each of the cars assembled for this super face-to-face test.

### *Their Origins. Their Prices.*

The selling price indicated here corresponds to what is usually referred to as the 'on the road price', ie when delivery costs, vehicle registration, etc have been taken into account. In addition, we give some information on the vehicle's maintenance budget and the price of the main standard parts.

### CITROËN GS



There was the Ami 8 and the DS, and then... nothing. This fact, emphasised a thousand times over, led Citroën to present an intermediate car at the 1970 Paris Motor Show: the GS. Like all Citroën models, the newcomer was destined to arouse even the most dormant curiosity. This completely new model is based on the principle of front-wheel drive, has an air-cooled 4-cylinder flat engine with ACT valve timing and produces 41.0kW DIN from a displacement of 1,015cc.

It is remarkable to note that the 6CV limit is 1,135cc and that Citroën has thus deprived itself of 130cc.

The suspension is hydraulic with height control. The brakes are hydraulically assisted discs.

### FIAT 128

It was through its Autobianchi subsidiary that Fiat first tried out front-wheel drive. The results were encouraging, as the technical solutions used on the Primula [front-wheel drive, transverse engine] are





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used in the design of the Fiat 128. This car appeared a year ago, and it replaced the 1100R, which had been retired after 16 years of loyal service. Using the same weapons as its rivals in the 1,100 to 1,300cc class, the 128 immediately established itself as a challenger in this category. With this model, Fiat inaugurated independent rear wheels. Since the Turin Motor Show, the 128 has been available in 2 and 4-door versions, as well as an estate.

FORD ESCORT 1300 GT



The Anglia was once a major asset for Ford on the European mid-size car market.

The Escort was launched in February 1968. This 2-door, 4-seater saloon was offered in five versions, two of which were sold in France: the 1,100

and 1,300cc. These two models, built by Ford-Belgium, were very classic in architecture. The difference lay in the increased stroke of a twin-barrel carburettor and a special manifold. Braking was limited to four drums on the 1,100, and two discs and two assisted drums on the 1,300. The same year, a station wagon with an 1,100 engine was launched. At the 1968 Paris Motor Show, a stripped-down 940cc version was added to the Escort range. The 1,100 received front discs and power assistance. The GT received a number of detail modifications. At the 1969 Paris Show, the 4-door model finally became available, while an automatic gearbox could be fitted to the 1,300 on request.

At Geneva in 1970, Ford launched the Escort RS, whose twin-cam 1,600 engine developed for Formula 2 gave 89.5kW. Finally, in November, Ford took advantage of its victory in the London-Mexico rally to launch the Mexico: a 1,600cc offering 64.2kW DIN.

MAZDA 1200



The Mazda car division represents only a small part of the activities of Toyo Kogyo, one of Japan's biggest businesses. The Japanese have made a considerable leap forward in the automobile sector over the last few years, but a large part of their production is geared towards the manufacture of trucks. Mazda, in particular, has acquired engineer Wankel's rotary engine patent.

The Mazda 1200, which is the subject of this article, is based on the 1000 model, which appeared in October 1964 and underwent major bodywork modifications in November 1967. The engine fitted to this car was a 987cc single ACT.

In early 1968, a 1,200-engined saloon based on the 1000 made its appearance. The genetic architecture of the old engine was retained, but this time the distribution was no longer by ACT, but was entrusted to a lateral camshaft.

This version, which is the one we are testing, was completed a few months later by a break and then a coupe, which we tested in our March 1970 issue, as well as a rotary-engined coupe called the R100. A more advanced version of this engine was built in Japan, but is not yet available in France. It will soon be followed by a Birotor version.

PEUGEOT 304

The 304 is a direct descend-



ant of the 204. This car, launched in 1965, made use of a number of interesting technical solutions: aluminium engine block, transverse engine, overhead camshaft driven by a tensioned chain, gearbox and differential unit in the same housing, etc.

Based on the principle that tried and tested recipes are the best, Peugeot simply took the 204 and added to it, both in terms of the engine [redesign] and the bodywork, resulting in a new model: the 304.

This reasoning was apparently sound, as the 304 presented at the 1969 Paris Motor Show already seems to be enjoying an excellent career.

RENAULT 12

At Renault, the need was felt to rejuvenate the range of medium-sized cars made up of the





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R8 and R10. The 'new' Renault 12 was to appear at the 1969 Paris Motor Show. It was intended to be a medium-sized car, despite its relatively imposing dimensions. For this model, the company was committed to front-wheel drive, one more from Billancourt after the R4, R6 and R16. The engine, derived from that of the Estafette, produced 40.3kW DIN. The gearbox and brakes were borrowed from the Renault 16.

Since the 1970 Paris Motor Show, the Renault 12 range has been extended to include a station wagon and a sports version, the Gordini, which replaced the old R8 Gordini. SIMCA 1100 SPECIAL

1969 was an important turning point in the history of Simca. It was the first time that the Poissy firm produced a car with front-wheel drive. This newcomer, christened the Simca 1100, was equipped, like the 204, with a transverse engine, a solution pioneered by Alec Isigonis on the famous Austin Mini. The 1100 was very favourably received, and its roadholding qualities im-

pressed all those who drove it.

Originally sold in three versions, with 39.5kW DIN for the GL and GLS, the 1100 was joined in 1968 by a more economical model with a 5CV engine from the Simca 1000. The following year, all models benefited from a 2.2kW increase in power and received a few minor modifications. Finally, in 1979, a long-awaited model with higher performance made its appearance, the Simca 1100 Special, or rather, the Chrysler 1100 Special, since the American firm was taking over Simca's destiny. The latter, therefore, apart from the more luxurious interior fittings and 'Sports' equipment [long-range headlights, imitation wood steering wheel, etc] was fitted with the 1,204cc unit from the 1200 S coupé, but in a quieter version [56.0kW DIN compared with 63.4kW on the coupé].

### Body & Accessories

Under this name, specialists usually create everything to do with interior design. Whether it's the instruments needed for driving, grouped together on the dashboard, or the equipment put in place for the driver's comfort, such as armrests, sun visors, etc., they are all grouped together in the table to the left.

If you look through the table, you will see that each accessory or instrument is awarded a cer-



### PRICES, OPTIONS & COSTS [FRENCH FRANCS]

	CITROËN GS CLUB	FIAT 128	FORD ESCORT 1300 GT	MAZDA 1200	PEUGEOT 304	RENAULT 12 TL	SIMCA 1100 SPECIAL
<b>COSTS</b>							
Price including VAT	12,200	10,600	11,360	11,330	12,180	11,580	12,170
Transport and delivery	360	608	515	400	328	317	218
Grey card	120	120	140	140	140	140	140
Vignette	90	90	90	90	90	90	90
Total	12,770	11,418	12,105	11,960	12,738	12,127	12,618
<b>OPTIONS</b>							
			None				
Rear seat belts	140						
Radio	568		~500				425
Head rests	100						
Rear demister	96					104	116
Demister & heater fan	128						
Skai/Faux leather		100				136	
Reclining seats		100	177				
Laminated screen			1,400				
Auto gearbox			185				896
Metallic paint						144	95
RH Rear mirror			24				
Sunroof					210		
<b>TYRES [each]</b>							
Michelin ZX	90.50						
Michelin X		90			87	80	
Michelin XAS							80
Pirelli		80.07					
Kleber V			90		87.33	80.07	
Dunlop SP				91.84	87.33	80.07	
Goodyear G800						80.07	
<b>OTHER</b>							
Service interval [km]	5,000	10,000	10,000	6,000	5,000	5,000	5,000
Delivery time	6mo	2wks	4wks	Instant	1mo	3-4wks	~1mo

tain number of points according to its practical importance. These points are added together to arrive at a total out of 20, which would honour the ideal car. A simple rule of three was then used to establish both the quality of each car's equipment and its ranking.

### Habitation and Boot Space

The table on next page shows the 14 habitability dimensions that have been determined for the practical use of the cars. These dimensions correspond to the practical habitability of the car. When taking these measurements, we also



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took into account the volume of the boot, which is therefore included in the overall habitability classification.

Here, the Renault 12 wins by a narrow margin, ahead of the Citroën GS. Elsewhere, there's nothing particularly noteworthy. Clearly, everyone has focused on finding the maximum amount of living space around the minimum exterior dimensions. In this respect, our seven cars, with the exception of the Renault and Citroën, which were considerably more brilliant, succeeded in almost equal measure. Only Ford has failed to preserve the necessary legroom for the rear passenger, when the driver's seat is set back as far as possible. Similarly, Mazda's boot space is considerably smaller than that of its rivals.

### RANKING

- 1] Renault 12
- 2] Citroën GS
- 3] Peugeot 304
- 4] Simca 1100 Special
- 5] Ford Escort
- 6] Fiat 128
- 7] Mazda 1200

This section is a veritable mini car show of cars facing off against each other. As if the cars were on a catwalk, the reader can compare the liveliness of the colours, the shape of the seats and the geometry of each interior.

With the exception of the

### INSTRUMENTATION

	MAX POINTS	SIMCA	CITROËN	RENAULT	FORD	PEUGEOT	FIAT	MAZDA
Oil pressure gauge	5	0	0	0	5	0	0	0
Oil pressure light	3	3	3	3	0	3	3	3
Oil temperature gauge	3	0	0	0	0	0	0	0
Ammeter	3	0	3	3	3	3	0	0
Charge indicator light	1	1	1	0	1	0	1	1
Water temperature gauge	5	5	5 <sup>1</sup>	0	5	5	0	5
Water temperature light	3	0	3 <sup>1</sup>	3	0	0	0	0
Low fuel light	5	5	0	0	0	0	5	0
Clock	5	5	5	0	5	5	0	0
Dashboard light switch	1	0	0	0	0	0	1	0
Dashboard rheostat	3	0	3	3	0	3	0	0
Trip meter	5	5	5	0	0	5	0	0
Tachometer	10	10	10	0	10	0	0	0
Windscreen washer	10	10	9	6	10	5	4	8
Two-speed wipers [intermittent +2]	5	5	5	5	5	0	5	5
Optical signal	3	3	3	3	3	3	3	3
Handbrake warning light	2	0	0	2	0	0	0	0
Brake circuit indicator	5	0	0	5	0	5	0	0
Starter button	5	0	5	5	0	0	0	0
Sun visor*	2	4	4	4	4	4	4	4
Sun visor mirror	2	2	2	2	0	2	0	0
Dippable rear view mirror	5	5	5	5	5	5	5	0

Ford Escort GT, all the cars have fully reclining seats. As a general comment, we would add that the seats in the Renault 12 and Citroën GS are certainly the most comfortable, and that the Peugeot 304 makes a commendable effort in terms of the quality of its upholstery.

As for the originality of the

### INSTRUMENTATION

	MAX POINTS	SIMCA	CITROËN	RENAULT	FORD	PEUGEOT	FIAT	MAZDA
Adjustable sun visor	2	2	2	2	2	2	2	2
Exterior rear view mirror	5	0	5	5	5	0	0	0
Glove box, with lid	2	2	0	0	0	0	0	0
Glove box light	2	0	0	2	0	0	0	0
Door pockets*	1	4	1	1	1	1	3	1
Interior cabin light*	1	2	1	1	1	1	2	1
Ashtrays*	1	3	3	3	3	3	3	1
Cigar lighter	3	3	3	3	3	3	0	3
Headlight control	2	2	2	2	2	2	2	2
Horn	2	2	2	2	2	2	1	2
Driving lights	10	10	0	0	0	0	0	0
Fog lights	10	0	0	0	0	0	0	0
Reversing lights	3	0	3	0	3	0	0	3
Armrests*	1	4	4	6	4	4	4	0
Grab handles*	1	3	3	3	3	3	3	0
Reclining seats	5	5	5	5	5	5	5	5
Ventilation	10	9	8	9	8	8	7	6
Interior bonnet opener	5	5	5	5	5	5	5	5
Bonnet stay	6	4	6	2	2	6	6	6
Boot opening	3	3	3	3	2	3	2	2
Under bonnet light	2	0	0	0	0	0	2	0
Boot light	2	0	2	2	2	2	2	0
Rear window demister	10	0	0	0	0	0	0	0
Head rests	5	5	0	0	0	0	0	5
Sleeper seats	5	5	5	5	0	5	5	5
Total	212	141	130	115	109	108	85	83

### Notes

1 Because the GS is air-cooled, and so does not need a water temperature indicator, in order to not penalise the car it has been given 3 points for a water temperature light.

\* Points per unit.

overall presentation, the Ford Escort deserves a special mention, as it has managed to stay on the edge of understatement.

It's a shame that the Simca's relatively meticulous finish can't hide its headrests, which are as inviting as hundred-year-old oak! The Fiat, on the other hand, also attracts attention, by managing, without fuss, to present a fairly balanced compromise between coquetry and good taste.

### Performance and Consumption

To establish the performance ranking, we used three criteria: top speed, acceleration and overtaking.

The average of these three points has resulted in the general performance ranking. This method, which is certainly debatable, is based above all on the principle of a balanced engine, a quality that a medium-capacity car must possess, especially when it has a significant market position.

In fact, top speed is only of interest if the quality of the acceleration is good, ie if the engine's ability to pick up at low revs does not require incessant gear changes. This quality is, for example, essential in urban traffic or for users who drive peacefully.

Of course, all these figures, as in all our tests, are verified values when unladen and loaded



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with four people. In the same way, all our time trials were carried out on the same day, which means that all the test conditions are exactly the same and remain comparable one from another.

The same attention was paid to recording fuel consumption. The figures published correspond to the average of seven drivers who, in turn, passed from one car to another on an identical circuit at the same speed and in the same traffic conditions.

The best car in each of the three performance categories [top speed, acceleration and overtaking] will be awarded 20 points.

From this maximum for the speed classification, each car is penalised by 0.5 points per kilometre/hour difference compared with the fastest car. This principle applies both unladen [1 person] and laden [4 people and 50kg of luggage].

For acceleration and overtaking, the same principle applies, but this time the penalty is one point per second difference [400m standing start time and 1,000m standing start time].

In the lead, with unquestionable authority, was the Simca 1100 Special. It won all three heats ~ top speed, acceleration and overtaking ~ by a wide margin. Beneath the apparent docility of this model, we find a

### DIMENSIONS [CM/KG]

	RENAULT	CITROËN	PEUGEOT	SIMCA	FORD	FIAT	MAZDA
Length	434.0	412.0	414.0	394.4	398.0	385.6	379.5
Width	163.6	160.8	157.0	158.8	157.0	159.0	148.0
Height	143.4	134.9	141.0	145.8	135.0	142.0	139.0
Wheelbase	244.1	255.0	259.0	252.0	239.0	244.8	226.0
Track [Fr]	131.2	137.8	132.0	136.7	124.5	130.8	120.0
Track [Rr]	131.2	132.8	126.0	131.0	127.0	130.6	119.0
Ground Clearance	14.5	14.0	12.0	14.0	15.0	15.0	16.0
Tare weight	880	880	870	930	835	770	735
Legroom [Fr]	62	48	55	54	58	48	54
Seat/Steering wheel	20	15	17	16	14	19	17
Headroom [Fr]	88	92	86	86	83	90	83
Legroom [Rr]	13	22	19	11	7	15	13
Headroom [Rr]	82	86	82	85	78	87	84
Boot length	103	75	97	85	99	77	55
Boot height	50	51	40	39	48	44	45
Seat width [Fr]	54	56	58	58	51	53	52
Interior width [Fr]	129	132	123	128	123	125	121
Backrest width [Fr]	54	56	55	53	48	49	49
Interior width [Rr]							
Knee	130	124	126	124	118	131	120
Shoulder	128	131	120	128	124	124	121
Head	125	124	118	118	123	119	118

The boots and their luggage capacities.

- 1) Renault 12
- 2) Citroën GS
- 3) Peugeot 304
- 4) Simca 1100
- 5) Ford Escort
- 6) Fiat 128
- 7) Mazda 1200

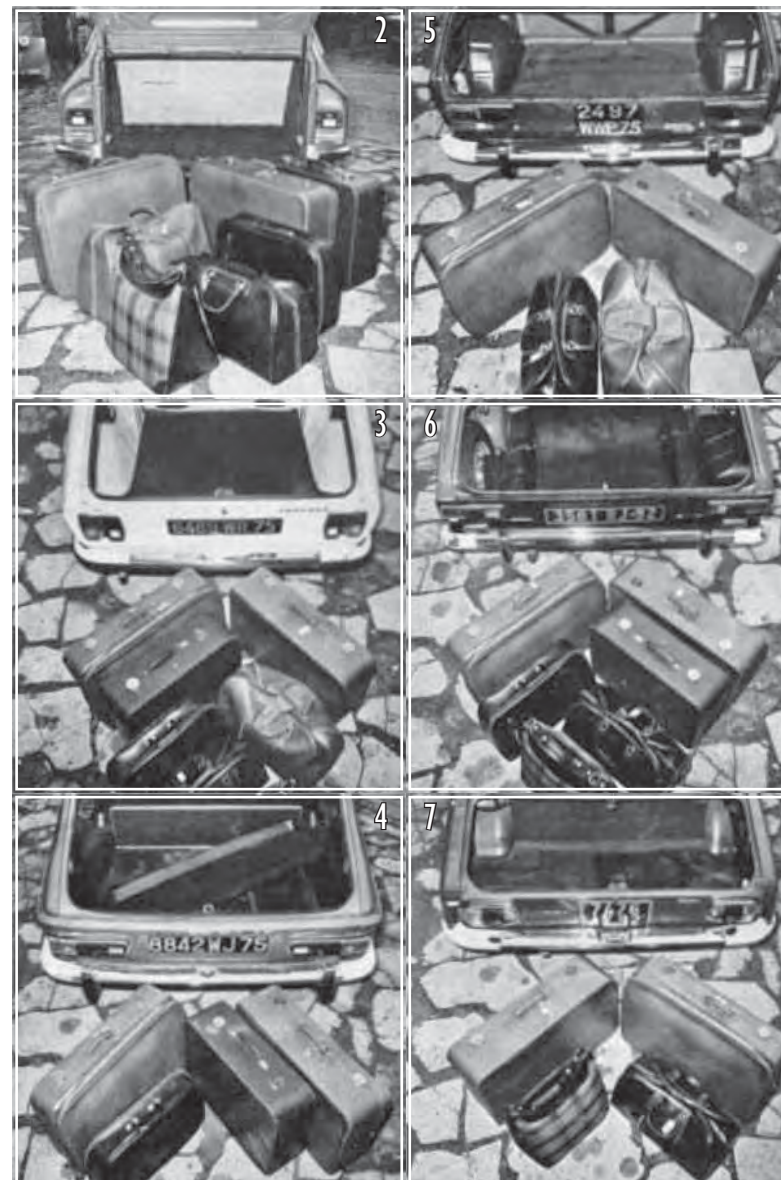


1,200cc motor which, without pretension, boasts performances that many supposed sports cars could envy.

In second place again is the Ford Escort 1300 GT. This car, sold as good for 150kph, revealed a speed that was closer

to 160kph than the figure claimed by its manufacturer. Outside of its top speed, it is still the most responsive car behind the Simca. However, without being open to criticism, its flexibility is less obvious.

The Peugeot 304 came third. We were surprised; the car we had did not offer us the same performance as the car we tested last year at the same time [-2kph this year]. Nevertheless, it is still a very interesting compromise, and





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its repeat ranking shows, in particular, that the flexibility of its engine remains one of its best qualities.

The Citroën GS took fourth place. Its top speed is sufficient, given the fairly high starting mileage. Acceleration is still acceptable, but the low displacement is particularly noticeable when it comes to acceleration, and the car's overall rating is still good.

The Renault 12, in fifth place, also confessed to a regressive performance [-4 kph on the car tested compared to the one we had at our disposal during a previous test]. Fairly insensitive under load, we'd like to see a little more verve under acceleration.

The Fiat 128, which, let's not forget, like the GS, is a 6CV, appears in sixth place. The Mazda rounds out the group. A lot of good will, quite lively on acceleration, but a few more kph of top speed would be welcome.

When you look at the fuel consumption figures, you're always surprised at the differences that exist according to use, and at the fact that the car that consumes the least on the motorway is also the most fuel-efficient on a winding road, for example, at medium speed.

The explanation lies in the distribution of engine power for each of the cars compared here. Power distribution is always a choice that has to be combined with a compromise,



that of gearbox staging, and that explains it!

Having said that, it's the Fiat 128 that wins the contest for least greediness. At over 12 litres per 100km, the Peugeot 304 and Renault 12 trail the field with fuel consumption levels that are a little too high, in our opinion, for cars of this size.

### Handling

It goes without saying that we paid particular attention to roadholding. All things being equal, we have even been stricter on this point than with sports cars, for example. In fact, we felt that this category of cars was so popular that each of the seven models compared could be driven by almost anyone.

We therefore wanted to gather together as many road

and grip conditions as possible before deciding on the classification, and in doing so we focused much more on the tolerance of the car than on its personality.

Motorways, banked bends, deformed surfaces and flooded roads were the examiners in this round, the referees in a match of extreme complexity. Having said that, and without wishing to anticipate the conclusion, we must say straight away that mass-market motor cars, and those we have just compared in particular, have made considerable progress over the last few years, to the point where, when it comes to buying a car, this will no longer be as distinguishing a factor as it once was.

First of all, the Simca 1100

Special has lost none of the qualities of the basic model, apart from a very significant increase in performance. Its stability in a straight line is quite simply remarkable, while cornering, even at sometimes unbelievable speeds, requires nothing more of the driver than to keep his or her hands on the wheel in complete bewilderment.

The Citroën GS is second, with a very fine array of qualities. Its stability in a straight line is never in doubt, its cornering speed is astonishing, and you have to get to the tight corners to notice the seemingly harmless understeer.

Next in order are the Fiat and the Renault, separated by a mere 0.5 points. Both react like very good front-wheel-drive cars and present no particular problems in normal driving conditions.

The Mazda is fifth. Neutral and docile, the Japanese car is tolerant, tame and easy to handle. In sixth place is the Peugeot 304. Strictly speaking, the car's roadholding is not in question,



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but the front axle is too loose on bends and hairpins not to detract from the driving experience.

The Ford Escort came last in this ranking. Bad roads and rain sometimes cause it quite serious grip problems.

### RANKING

- 1] Simca 1100 Special
- 2] Citroën GS
- 3] Fiat 128
- 4] Renault 12
- 5] Mazda 1200
- 6] Peugeot 304
- 7] Ford Escort

### Braking

The scores used to establish the braking rankings are calculated on the basis of four factors with which regular readers of our test section will be familiar. These are, in order, efficiency or the quality and capacity of the car to brake; balance, which is essentially based on the correct distribution of braking on the four wheels; hot performance or endurance, judged on the basis of the willingness of the braking system to withstand frequent braking at high speed; and finally, comfort, which is essentially the ratio of pedal effort to stopping distance.

Unanimously, the 304 retains a superiority that makes it the best-studied car in the field of braking. Efficiency, endurance and progressiveness are all united under the banner of success.



The Citroën GS came second: overall, its qualities were on a par with those of the 304, but the absence of even the slightest amount of dead travel [rather like on the DS] made the balance rather delicate, especially at the initial handover stage.

The Renault 12 came third; its braking required some effort [there was no servo assistance], but its effectiveness was generally good and its endurance correct.

Fourth is the Fiat; its brakes have made some progress in terms of endurance behaviour since our tests last year.

The Simca was fifth; as we had frequently pointed out, the rear wheels locked too quickly when the brakes were too cold or too hard. This unfortunate phenomenon requires careful control and makes braking quite worrying on wet roads.

Sixth, the Ford has average braking, nothing more. Finally, it's the Mazda which, despite an acceptable endurance performance, brings up the rear, because its efficiency is mediocre.



### PERFORMANCE [KPH/SEC] & FUEL CONSUMPTION [L/100KM]

	SIMCA	FORD	PEUGEOT	CITROËN	RENAULT	FIAT	MAZDA
Max Speed	158.1	153.4	147.9	148.7	141.5	140.7	138.1
Score	20.0	17.7	14.3	16.0	12.5	11.1	10.5
Acceleration							
Standing 400m	18.6	19.4	19.6	20.6	20.2	20.0	20.4
Standing 1,000m	35.4	37.0	37.6	38.6	38.4	38.4	39.0
Score	20.0	18.2	17.3	15.7	16.0	16.1	14.5
Reprises at 40kph							
400m	20.8	21.6	21.2	21.4	21.6	21.8	21.4
1000m	38.8	40.4	40.4	41.6	42.0	41.8	41.8
Score	20.0	18.7	17.7	17.2	17.2	16.3	17.6
Overall Score	20.0	18.2	16.4	16.3	15.2	14.5	14.2
Fuel Consumption							
Autoroute	11.1	12.3	12.0	11.7	12.9	11.7	12.8
Main Roads	10.8	10.0	10.3	10.2	9.5	9.8	10.2
Mountains	12.9	12.7	13.8	13.6	15.3	12.1	11.9
Medium Speed	11.6	11.6	12.0	11.8	12.5	11.2	11.6
Overall Score	19.3	19.3	18.6	18.9	17.9	20.0	19.3

### RANKING

- 1] Peugeot 304
- 2] Citroën GS
- 3] Renault 12
- 4] Fiat 128
- 5] Simca 1100 Special
- 6] Ford Escort
- 7] Mazda 1200

### Transmission

The gearbox is, of course, the most important mechanism when it comes to judging the overall quality of a transmission. The analysis of its personality is generally based on the study of synchronisation, ie the ease and convenience with which the different gears agree to engage.

To this important point, we must add the guidance of these same gears; this is, briefly, the



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possibility offered to any driver to obtain, without effort, the gear in which they will find the speed they wish to engage. Finally, it is important to note the staging, which is the calculation of the different ratios that enable the greatest number of uses of engine power to be reconciled with the staging of gearbox ratios.

A gearbox that has been well studied in the area of staging is one that, with the same happiness, gives satisfaction to the driver who tends not to leave fourth gear, just as it does to the spirited sportsman who, on the contrary, 'pulls' as hard as possible on each of the intermediate gears.

Of course, the overall silence of the operation of the gearbox and the various other components of the transmission also plays a part in establishing the ranking of each of the cars compared here.

For various reasons, three cars occupy first place. With different arguments, the Peugeot 304, the Mazda and the Ford Escort all have well-structured gearboxes, whose behaviour is almost immune from criticism. The Citroën came fourth. The engagement of its various gears is comfortable, its ratios are correct, but there are still some difficulties in terms of synchronisation and it still needs to be disengaged carefully and with-

out getting carried away.

The Renault 12 is fifth. No major problems, but too much firmness in the engagement of its gears and a certain imprecision in their guidance explain this place. The Fiat 128 would also have to make progress in terms of engagement and synchronisation accuracy if it were to improve from sixth place.. Lastly, the Simca 1100: also with engagement problems and, above all, a reverse gear that frequently requires a great deal of patience.

### RANKING

- 1] Ford Escort
- Mazda 1200
- Peugeot 304



- 4] Citroën GS
- 5] Renault 12
- 6] Fiat 128
- 7] Simca 1100 Special

### Steering

The analysis of a steering system's quality is based on four factors, which we will briefly mention here. Firstly, the precision, or fidelity and instancy with which the steered wheels register the impulse given to the steering wheel. Secondly, stability, or the steering's ability to maintain the course chosen by the driver. Thirdly, reversibility, which is the time and progressiveness with which the steering wheel returns to its normal position after a curve or bend.

Fourthly, the importance of the turning radius.

Another first place in this round for the Citroën GS. Its driving position, thanks to a sophisticated and practical seat adjustment; an appreciable effort has been made, compared with the Ami, as regards the steering wheel angle. But, as we have previously noted elsewhere, we could undoubtedly have gone even further in this direction. As for the steering itself, its smoothness and precision are satisfactory in all circumstances. This same steering system does not pick up road deformations or the effects of engine torque, which is quite remarkable for a front-wheel drive vehicle. As for





## The Great 6 and 7CV Corrida

straight-line stability, it's simply irreproachable.

Second place went to the Peugeot 304, which was also unaffected by uneven road surfaces. In addition to this quality, the car is extremely smooth, precise and stable. In third place were four cars: the Fiat, the Ford, the Renault and the Simca, all of which had a mechanism that was relatively well adapted to the overall behaviour of the car it was driving.

Last place goes to the Mazda. Its steering has an obvious lack of precision. What's more, it's notoriously unstable.

### RANKING

- 1] Citroën GS
- 2] Peugeot 304
- 3] Fiat 128
- Ford Escort
- Renault 12
- Simca 1100 Special
- 7] Mazda 1200

### Comfort

With their average wheels, all seven of our cars must have a suspension comfort that allows them to cope with fairly long journeys, even on bad roads. Here again, subjective impressions must be banished, and determining the relative importance of roll, pitch and vertical acceleration for the average user or passenger is no mean feat!

Some people are allergic to very specific traits, while others

are perfectly insensible to them, so we need to gather together as many different types of road as possible, before constructing a comfort ranking. We have, of course, taken this into account in drawing the following conclusions.

The GS confirms our initial test impressions. Not a single line needs to be taken away or added to what we wrote in our Number 292: "The very principle of this car's suspension offers a comfort that far outstrips its most serious rivals. Like the DS, the GS literally 'swallows' most obstacles or deformations, and even the worst road surfaces never erase the feeling of a taut, soft carpet laid out under the wheels by the virtues of the hydropneumatics.

Only low-amplitude obstacles, absorbed at low speed without ever being transmitted by the suspension to the seat, would require the tyre to have a slightly greater vertical damping power. In the midst of all this beauty, the only slight shadow cast on the picture is the slightly too abrupt recall of roll oscillations on average roads. On rougher roads, the main problem arises when negotiating bumps in the road at speed, obstacles to which the GS is frankly allergic! It immediately expresses its repugnance by taking off very abruptly from all four wheels, leaving its driver

with no other recourse than to choose a much wiser passage speed for the next bump."

All that said, the Citroën is undoubtedly the most comfortable car in its class today. The runner-up is the Renault 12; thanks to excellent seats that make you forget, on most obstacles, that its suspension itself is rather firm, a firmness that is evident especially in comparison with the softness offered by the other Renault models.

At short dis-

tances, the 304 took third place, with satisfactory seats and a suspension that overcame most road difficulties without too many problems. However, the significant deformations would undoubtedly require a little more progressive damping, especially when the car is being driven in a relaxed manner.

The Simca shared third place with the Peugeot. Its comfort is average, and its seats even more so, but it is the absence

of any obvious shortcomings in the area of comfort that puts it in this very honourable position.

In fifth place, the Fiat 128 is equipped with a fairly harsh suspension, but whose damping, strictly speaking, is not open to a high level of criticism. If it were to accept the collaboration of higher-backed seats and a more enveloping shape, it could be on a par with the Peugeot and the Simca.

The Ford Escort came sixth. Its desire to appeal to the sporty type is obvious, perhaps too much so. The suspension travel is very relia-

ble and this, combined with the admitted austerity of the car, means that the driver is too actively involved in all aspects of the car's handling via the steering wheel and seat, which become a haven for vibrations of all kinds.

The Mazda puts up little fight to fill last place to one of its rivals. Excessive firmness is the main feature of its suspension, which is even more noticeable

After a night of driving, in the early morning, cold and grey, it's already Andorra. Here, in the Ordino Valley, the Sant-Antoni gorges provide a backdrop which our photographer cannot resist.





## The Great 6 and 7CV Corrida

for the driver because the seats are particularly firm.

### RANKING

- 1] Citroën GS
- 2] Renault 12
- 3] Peugeot 304
- Simca 1100 Special
- 5] Fiat 128
- 6] Ford Escort
- 7] Mazda 1200

### Conclusion

As with all our comparative tests, today we'll be bringing together the scores obtained by each of the seven cars in the various areas examined, by way of a final conclusion in the large comparative table below.

This table makes it easy to pinpoint a given model's biggest flaw and greatest quality almost instantly. It also enables anyone considering buying a car on the basis of a decisive criterion, such as habitability or fuel economy, to select the best car in a given speciality. Having said that, we won't be publishing a general classification because we have to accept that, apart from price and tax category, the personalities of these cars are too different [which is not to say at odds] to confine them to the strait-jacket of a classification which, being too prescriptive, would only be more arbitrary.

However, we had to endorse part of our headline, which read: 'The Citroën GS and its Rivals', a title in the form of a terribly

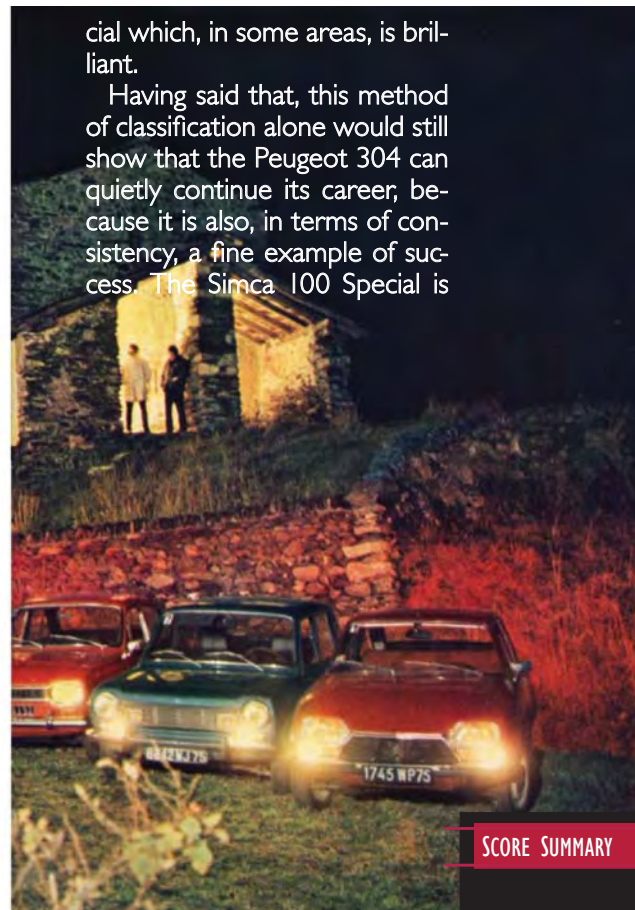
tempting question, since the GS generates double the interest. Firstly, in the long term, it is destined to become Citroën's No 1 workhorse. Secondly, commercially, it is being integrated into a category where places are terribly difficult to come by. At the end of this match, the sum of the points it obtained in each of its tests would make it the most homogeneous car in its cat-



egory, which is no mean compliment. We'd like to take the liberty of pointing out that you shouldn't confuse a homogeneous car with a brilliant one. The former is a car which, without necessarily possessing cutting-edge qualities, has been able to pass its test without ever revealing a single major weakness in a single area. In contrast, we would say that this is not the case with the Simca 1100 Spe-

cial which, in some areas, is brilliant.

Having said that, this method of classification alone would still show that the Peugeot 304 can quietly continue its career, because it is also, in terms of consistency, a fine example of success. The Simca 100 Special is



undoubtedly 'the charmer' of this batch of seven cars. Fast and responsive, it combines youthful charm with practicality and unquestionable economy. But above all, given its performance, it needs to improve its braking. An effort could also be made to improve the seats.

The Renault 12 is a very close third: very sensible, very wise, very roomy, but the gearbox could do with some work. The

Ford Escort and the Fiat are almost equal, but for different reasons. Internally, the Escort is more flattering, but its road qualities are much less obvious than those of its Italian rival. The Mazda hangs on bravely, but it would seem that the Asian challenger is not yet competitive on our market.

This article by J-P Thevenet, H Morisi, R Fernandez, J Graudens, J-C Letrou, E Moity, B Picard, Ch-F Pouzadoux, G Rocroy and R Verdelet first appeared in 'L'Automobile' magazine in January, 1971. It was translated by the Editor using [www.DeepL.com/Translator](http://www.DeepL.com/Translator) [free version] and is taken from his archive. He must apologise that the quality of the scans is not up to the usual standard, which is reflected in the quality of the photos which accompany the article.

### SCORE SUMMARY

	CITROËN	FIAT	FORD	MAZDA	PEUGEOT	RENAULT	SIMCA
Equipment	13.1	8.0	10.2	7.8	10.1	10.8	13.3
Habitability	19.2	18.5	18.5	18.2	18.8	20.0	18.7
Performance	16.3	14.5	18.2	14.2	16.4	15.2	20.0
Fuel Consumption	18.9	20.0	19.3	19.3	18.6	17.9	19.3
Handling	17.0	15.5	11.0	14.0	12.0	15.0	18.0
Braking	17.0	13.0	10.0	9.0	18.5	15.0	11.0
Transmission	14.0	11.0	17.0	17.0	17.0	12.0	10.0
Steering	17.0	14.0	14.0	10.0	16.0	14.0	14.0
Comfort	16.5	12.0	9.0	8.0	13.0	14.0	13.0
Overall Total	149.0	126.5	127.2	117.5	140.7	133.9	137.3



# The Great 6 and 7CV Corrida



## You Sed

Shortly after the publication of the last edition of 'démarréur' I received the following email from George Dyke of Citroën Autoclub Canada. You may recall that he provided some of the information that appeared in my article 'Fleche de Direction'. Here is what he wrote...

Hi Leigh,

I read with interest the article you wrote about Traction traffickers in the latest issue of your fine publication. I would like to offer a few 'corrections' though;  
 1 The photo you show on page 71 showing the Mme Michelin's 15-Six Traction being driven out of the service bay of Red Dellinger Citroën Sales & Service garage ~ the person behind the wheel is Red Dellinger's nephew Brad Nauss, [not Barry], and Red Dellinger's place was near Mechanicsburg Pennsylvania, [not Wisconsin].

2 The pictures of the Mme Michelin's 15-Six on Page 73 were not taken by me. They are from photo archives I got from Citroënvie member Ronny Kienhuis who now lives in France but attended Red Dellinger's estate auction near Mechanicsburg, PA on September 10, 2008, when he was living in the USA. Ronny recalled in 2020 that at the auction he purchased an en-

velope marked 'Mme Michelin Traction' that contained a number of photos and negatives showing the car as it was found by Red on Auggie Pabst's farm at Oconomowoc Lake, Wisconsin in 1990 and its transport to Red's Citroën service shop in Mechanicsburg. The photos were taken by Red Dellinger.

I know firsthand how difficult it is to get things totally accurate in Citroën history articles, but I thought you would like to know the above.

Best wishes for a Happy New Year! If you are going to the 90th Anniversary of the Traction in France this coming May, perhaps I'll see you there!

Cheers,

George Dyke.

I am most grateful to George for taking the time to make these corrections to the article. As a result of his letter I have made the necessary amendments to the previous edition and this has now been uploaded to the Club's website.

Feel free to download the correct version.

It is only with the support of people like George, who hold Citroën's heritage dear that we can preserve the history of the marque and that of important vehicles, such as Mme Michelin's car for the benefit of future enthusiasts.

Leigh F Miles



## Papybus et Airbus Omnibus '24

Bonjour les amis Citroën-  
nistes des antipodes.

Kindly receive best wishes for 2024 from your Vendée correspondent :

« Bonne Année, et meilleurs vœux à toutes et à tous... »

I hope that you enjoy this month's [to borrow our Esteemed Editor's phrase from last month's démarreur] « slice of Vendée life ». Perth and Paris feature too, thanks to 2CV Mockette Miniature, and our venerable C8 Papybus.

Regular readers will know that these yarns have featured in 'Front Drive' and 'démarreur' for some years. Leigh, with his archivist skills and memory for such things, reminded me recently that the first tale was published in April 1997. Previous to that, CCOCA reprinted a number of pieces submitted to the UK 'Citroënian' magazine about rural happenings in Western France between 1991 and 1996.

For the benefit of our new readers, I would simply indicate that these stories are based on real encounters, events

and conversations. Where appropriate I take the liberty of altering some details [mostly the names of strangers, friends and neighbours] in order to protect privacy: I hope that this does not detract too much from their authenticity, or from the enduring fascination that results when discovering the extraordinary within the ordinary happenings of everyday life here... and down your way, too.

Bonne lecture et à bientôt.

Alan Brown

Janvier 2024

### Papybus et Airbus Omnibus 2024

HOMEWARD BOUND, AIRBUS

We returned to Vendée on Christmas Eve.

What a trip !

Six weeks catching up with family and friends in the Wide Brown Land.

Our last day in WA, as we

prepared ourselves for the 24-hour transition from the longest day to the shortest, was pure travel-brochure Perth: a pristine and world-class rail-link from airport to city centre; 38 degrees under sapphire skies; an afternoon in the WA museum's tea-rooms, air-con and

iconic displays.

Then a shower under the stairs at the airport. No kidding: the *ne plus ultra* in easy-going Aussie traveller comfort ?

One last beer before the overnight A380 to Doha. An overheard phone conversation in a strident Ulster accent from a twentysomething gal who revealed to persons within ear-shot [possibly all 526 fellow-passengers] « Hey look I've had six pints and two Mogadon, so sorry if I sound a bit tired »...

Half a day later, an early-morning Qatari departure for Paris, the Captain welcoming us on board with her soothing tones reminiscent of a teenager overdubbing a Bollywood blockbuster.

The onboard camera, fitted, after they finally got the wiring right, atop the superjumbo's tailplane allowed a view of a perfect crosswind 2pm landing

ing at Roissy-Charles de Gaulle. Our Ulster-girl companion had slept through it all two rows behind.

Then from Airbus terminus to... Papybus.

Our son-in-law Jérémy





## Papybus et Airbus Omnibus '24

and 8-year-old grandson Oliver were waiting for us at Arrivals.

The placard the kids had made exclaimed, duo-lingually:

« Welcome Home

Papy and Mamie »

A pair of French PapyMamies with whom we'd chatted in Doha amidst white-robed Meca-bound pilgrims smiled at us. The lady quipped that it was a relief for them to be « Back in a country where people understand us ! » [In French, bien sûr.]

Within minutes we were in the lift to level 7, where Papybus awaited.

« La batterie était à plat hier Alan. Mais pas de problème, j'ai trouvé ton chargeur ; elle a chargé toute la nuit. »

Resourceful as ever, Jérémy had cranked up the C8 that morning, having clipped in a spare seat for Oliver.

HOMEWARD BOUND, PAPYBUS

Well, the battery certainly received a good charge on the six-hour journey home. Some Christmas Eve traffic on the Périphérique, but within an hour we reached the A10 péage, then I cruised up to an indicated

140kph and pointed us into a surreal sunset between Chartres and Le Mans.

« Il roule bien, Le Papybus » Remarked J as we paused at the Aire d'Autoroute in Parcé-sur Sarthe .

I grinned, knowing that he wanted to add « for a 20 year-old monospace with non-functioning electric doors, a sprinkling of mute electricals and 394,860kilomètres on the clock ».

Electricity was proving to be something of a theme, as we walked past the ranks of charging-points before entering the almost-deserted cafétéria.

Jérémy remarked that there had been thousands of « bornes de charge » installed at auto-route services during the past 12months. I said that it reminded me of a report I'd recently archived from 1972. It was from L'Automobile magazine, and the

headline had exclaimed :

« Autoroutes ! By 1978 France will have as many kilometres as Germany had... in 1956 ! »

We joked that French infrastructure construction can be a bit slow to get going, but advances inexorably once it gets into its stride.

« Un peu comme Le Papybus ? » queried J.

Over a coffee, as our travelling companions sought lollies and dunnies we discussed the merits and demerits of winter versus summer tyres. We decided that the four-season ones we fitted to the C8 before our Aussie trip were a good compromise.

We concluded that pneus toutes saisons, even if they are a bit noisier and not so long-lasting, are probably the best option these days, with winter tyres now being compulsory in many départements from November to May.

We whooshed past casual ranks of monumental Autoroute-side Eoliennes [wind turbines], usually in parks of five or six, and were home by 8pm, more than two hours after nightfall. The dashboard thermometer proved it was still working by showing 11°C; the warmest Vendée Christmas Eve 8pm on record.

« Un grand changement par rapport à Perth ! » said Oliver.

We carried our bags to our

front door, where we were surprised and greeted by Oliver's little sister Eleanor and our daughter; between them they had found the box marked « XMAS » in Moquette's garage. Hence our house glowed and twinkled.

It all felt rather magical.

THEN CAME THE RAIN

The week between Christmas and New Year was dry and mild.

Then came the rain.

Day after day, 25mm or more.

On the second of January, we broke all the records with 60mm.

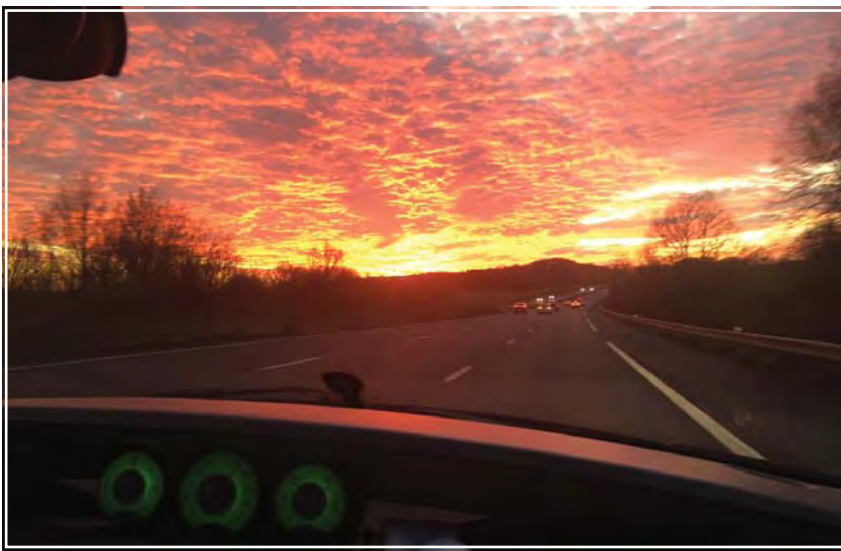
Despite the deluge, with our other grandsons Victor and Paul we filled the Papybus trailer with winter prunings and headed, in horizontal rain, for the déchetterie in Chantonay.

We got as far as the railway bridge. A rare passenger train dawdled above the flood on its way between Saumur and Les Sables d'Olonne.

« Hey Papy, un jour we could take the train up to Saumur. Voir le château au printemps. Ce serait bien, non ? »

We've become used to salad composée conversations with the grandkids; we usually answer in English. In public places though, or in the company of others who are not anglophones, the protocol of course is to speak French.

Jumping down from the pas-





## Papybus et Airbus Omnibus '24

senger seat to the edge of the muddy floodwaters to assess the situation, Victor continued :

« Oh, and by the way Papy, I've found out where the word Omnibus comes from... »

« Brilliant, mate. Last year a nice elderly lady called Marie-Pierre promised to tell Mamie and me about that. She used to teach Latin in Nantes. »

« And she didn't tell you Papy? My teacher at Collège told me the explanation was linked with Nantes, tu sais ? »

« Well mate, her husband died and we didn't get to meet up at Le Goulet beach café last year. So isn't it great that you have found out ? »

Then, as we unhooked the trailer so that we could perform a delicate seven-point turn between two overflowing Vendée bocage ditches, Victor explained the Omnibus mystery...

NEXT TIME...

Stay tuned, dear readers, for next month's instalment, when we meet a Traction-owner Citroophile

neighbour who did a January rant about France's new 2024 government subsidies to car buyers...

...When we finally learn of the Nantes Papybus/Omnibus connection...

...And, as the trusty silver C8 cruises towards its 400,000th kilometre... we make an ap-



pointment for its two-yearly Contrôle Technique/roadworthiness test.

Oh dear. What could possibly go awry ?

With the return of frost and blue skies yesterday, after all that rain, it seemed like a good idea to take Edna May the GSA for a dry-road excursion, followed by a winter vacuum-clean.

Look what secret hoard there was behind that panel in front of the left-hand rear light...

Edna May will be sold in 2024 due to the requirement for garage space when the DS returns from restoration work in... Wales ! Regular readers will know that Edna is the earliest GSA known to survive. She is in remarkable original condition with an interesting history involving champagne and an island home in Vendée. Should any club member be interested in becoming her third owner,

please do not hesitate to express your interest via the usual channels.

Alan Brown

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# Talking Technical: Double Yokes...

## Cardans and Spiders

Once again this month we are bringing you a re-print of a technical article from the CCOCA archives. This article about Traction drive shafts first appeared in 'Front Drive', Volume 3, No 5 [Dec., '79/Jan., '80]. In common with last month's feature the writer was Roger Brundle.

This article was prompted by the imminent arrival of the first set of reconditioned driveshafts imported by CCOCA from Europe. It should be read in conjunction with the information given in the factory workshop manual, but rather to supplement it...

The success of the introduction of volume-produced front wheel drive cars during the twenties and thirties was dependent to a large extent on the availability of an efficient and reliable means of transmitting the drive to the front wheels.

The problem of driving through a wheel which is also steered and sprung has exercised the minds of engineers over many years. One can, of course, drive through fixed front wheels and steer the rears - a solution used for most fork lift trucks, but hardly suitable for even moderate speeds, and in any case, why not turn the



Figure 1: Single Hooke's joint and a three-shaft system using two Hooke's joints.

drivers seat around and drive the other way. The advantages of front wheel drive in terms of stability, traction and space utilisation have long been recognised by the more enlightened manufacturers, and the development of reliable front driveshaft designs has been vital to their success.

What is the problem? A typical driveshaft assembly in a FWD car fitted with independently suspended wheels [such as the Traction] consists of three shafts ~ the gearbox output shaft, which is fixed relative to the hull, but free to rotate, the stub axle in the wheel hub which moves relative to the hull and also rotates, and finally the shaft that joins the first two together via universal joints.

As the wheel moves up and down over bumps and/or is steered away from the straight ahead position, these three shafts take up various angles to each other.

The most common means of

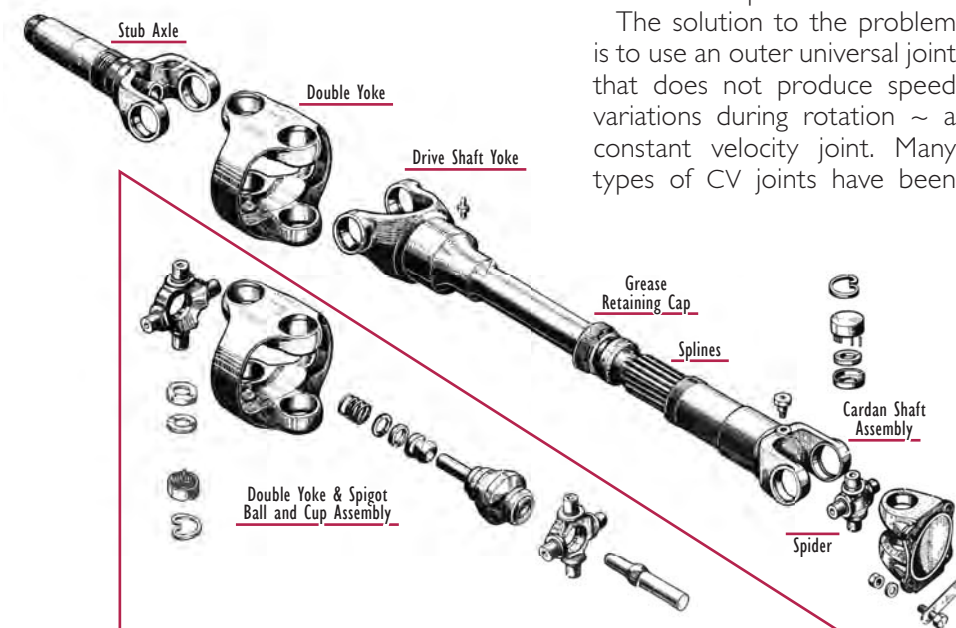
transmitting power between two shafts that run at an angle is to use a Hooke's universal joint [Figure 1]. This is the type that is almost invariably fitted to both ends of the prop-shaft of front engine/rear drive cars, and consists of two yokes at 90° coupled by a cross.

One unfortunate characteristic of the Hookes joint is that, as it runs at an angle, the output speed increases and decreases during each revolution, even though the Input speed may be constant. The greater the angle, the higher the speed variation. Two such joints are able to be used in a conventional prop-shaft [Figure 1] as this shaft system only runs at angles in one

[vertical] plane with the input and output members substantially parallel. By correct phasing of the two joints, the speed variations can be arranged to be self cancelling.

In a FWD driveshaft, however the input shaft [the stub axle] moves in two planes ~ vertically during suspension movement, and horizontally about the steering axis during steering. If single Hooke's joints are used, then the speed variations during rotation would give unacceptable vibration and kick-back through the steering during cornering under power. Despite this drawback, the early 2CV used such a system due to its simplicity, lower cost and the car's minimal power.

The solution to the problem is to use an outer universal joint that does not produce speed variations during rotation ~ a constant velocity joint. Many types of CV joints have been





## Talking Technical: Double Yokes...

designed, and the Traction was fitted with most of them during the prototype and early production stage.

The design eventually adopted uses two Hookes joints back to back. With a centralising spigot ball and cup as the outer CV joint and a single Hookes joint at the gearbox [inner] end.

A sliding, splined coupling at the inner end accommodates changes in driveshaft length during suspension movement.

"ALL GOOD JOINTS COME TO AN END" ~ GRIFFITH FARMER.

And so do Traction driveshafts usually deteriorating until finally crying 'enough!'

Problems encountered include:

- 1 Shearing of hub keys ~ rendering the car immobile.
- 2 Excessive wear of universal joint cross bearings causing vibrations, snatching and clonking on lock. If allowed to continue, this can lead to breakage of the universal joint yokes with dramatic consequences ie the car is immobile again.
- 3 Wear of splines causing noise snatch and vibration.

### Replacing Drive Shafts .

The first point to be made regarding replacement is that it is impossible without the use of a number of special tools, namely:

- 38mm or 1½" AF socket

- Hub puller
- Outer wheel bearing extractor [if the bearing is tight on the shaft]
- Inner ring nut spanner
- Lower ball joint extractor.

Second point is that it helps to read the workshop manual before getting your hands dirty.

### Removal

- 1 Slacken hub nut [38mm/1½" socket] Remember right-hand side, left-hand thread; left-hand side, right-hand thread!
- 2 Jack car under lower link arm and just slacken four inner universal coupling bolts [14mm].
- 3 Remove road wheel.
- 4 Remove brake drum using puller.
- 5 Unscrew outer ball race slotted ring nut [using proper tool if available or by drifting with square ended bar] after removing small lock tab.
- 6 Withdraw outer ball race with extractor if necessary. I have seen somewhere that an extractor can be improvised from two large exhaust clamps, but jury-rigged tools should be used with care as the pulling lip on the bearing is rather fragile. Remove distance piece and as much of the grease inside the hub as possible to reveal the inner ring nut.

- 7 Turn back the locking tabs of the inner ring nut and assemble inner ring nut spanner on the stub axle. Next step is to

firmly prevent the drive shaft from turning as the inner ring nut can be reluctant to budge. If the special tool [1830T] is available, fine; if it isn't, then select first gear and have a helper prevent the gearbox mainshaft from turning using an adjustable spanner on the starter dog. Again, unless the wrong side shaft has been fitted at some time, right-hand shafts have left-hand threads and vice versa, for the inner ring nut.

- 8 Separate the swivel hub assembly from the lower link arm by removing the lower ball joint using extractor.
- 9 Separate the steering arm from the tie rod end.
- 10 Unscrew the sheet metal grease retaining cap from the spline coupling and disengage the driveshaft/swivel hub assembly from the cardan shaft by swinging it outwards.

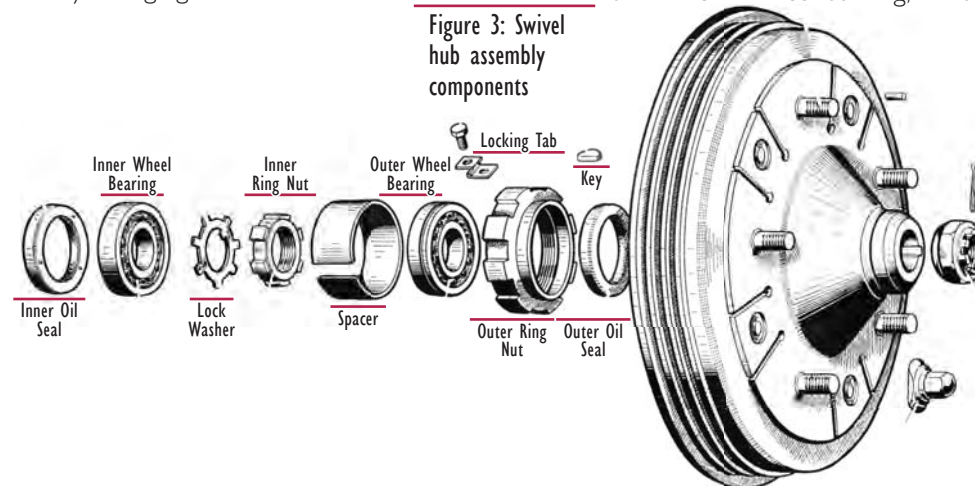
11 While a helper supports the swivel hub assembly, carefully drift the drive shaft inwards through the inner wheel bearing with a copper hammer.

12 Prise out the inner oil seal and drift the inner wheel bearing outwards through the hub bore.

13 Remove the cardan shaft assembly from the gearbox flange.

### Assembly:

Examine the replacement driveshafts and check that the stub axle tapers are not scored, that the stub axle keyways are not chipped or enlarged, that the splines are reasonable and the threads are OK. Determine which shaft is for which side of the vehicle and check the fit of the stub axle taper in the mating taper of the relevant brake drum hub. This step, although time consuming, is





## Talking Technical: Double Yokes...

essential if sheared keys are to be avoided in future.

Lightly blue the stub axle with engineer's blue and fit into the hub. The key need not be fitted, but locate the stub axle as it would be if the key was present. Tighten the hub nut, then unscrew and check that the outer face of the hub protrudes by a small amount from the shoulder of the small diameter of the stub axle taper. [If it doesn't, find another hub that does!]

Remove hub carefully so as to not disturb the blue markings on the bore. There should be continuous contact over the bands at both ends of the bore. If not, then lightly lap the tapers together using fine grinding paste and repeat the bluing procedure until the hub is well seated. After lapping, clean both tapers with meths until wiping with a Kleenex produces no dirtying of the tissue.

Reassembly is basically reversal of the dismantling procedure, but a few points should be noted.

- 1 The cardan shaft/gearbox flange bolts have a habit of working loose. When assembling, clean the threads thoroughly with a degreasing solvent and apply Loctite Grade 242 before tightening.
- 2 Fit new inner and outer oil

seals and wheel bearings. You don't want to go through all this again for the sake of a few dollars.

- 3 Pack the wheel bearings and oil seal recesses with a multi-purpose lithium-based grease such as BP Energrease L2. The bore of the hub between wheel bearings should not be packed with grease, but should only have a moderate coating.
- 4 Do not use a locking washer under the inner ring nut ~ just tighten as much as possible.
- 5 When engaging the splines of the driveshaft into the cardan shaft, coat the splines liberally with a grease containing molybdenum disulphide [such as BP Energrease LMS 210]. To ensure constant velocity it is essential that one axis of spiders in the outer universal should line up with one axis of the spider in the inner universal joint.
- 6 Always fit new keys between the stub axle and the hub. These are a fairly common general engineering item and can be obtained at most engineering supply houses. Try to buy keys wider than required, then reduce the width by filing until the key is a snug fit in both stub axle and hub.
- 7 Tighten hub nuts to 216lb-ft and fit new split pins.

## Graeme Dennes' 2CV Articles

Below is a list of the articles with revision status written by Graeme Dennes.

The articles may be downloaded from the CCOCA website at <https://citroenclassic.org.au> under Technical Articles, or the CCCV website at <https://citcarclubvic.org.au> under Tech Tips. Both sites hold the latest revisions.

As the articles may be updated in the future, please always ensure the latest revisions are used.

Extensive positive feedback on the articles has been received from many members, which is very gratifying. Thank you!

The articles and their revision status are as follows:

- 1] 2CV 40-Litre Fuel Tank
- 2] 2CV API GL-4 Gearbox Oil [Revision 2]
- 3] 2CV Battery Charging Circuitry [Revision 2]
- 4] 2CV Battery Problems Solved [Revision 7]
- 5] 2CV Brake Saga [Revision 1]
- 6] 2CV Buyer's Questions [Revision 2]
- 7] 2CV Carburettor Cover Screws [Revision 1]
- 8] 2CV Carburettor Jets and Adjustments [Revision 1]
- 9] 2CV Engine Problems [Revision 6]
- 10] 2CV Fuel Filter [Revision 1]
- 11] 2CV Fuel Gauge and Battery Meter [Revision 1]
- 12] 2CV Gearbox Output

Hubs [Revision 2]

- 13] 2CV Gearbox Unwinding Debacle
  - 14] 2CV Hard Luck Stories [Revision 2]
  - 15] 2CV Headlights Improvement [Revision 4]
  - 16] 2CV Ignition Coil [Revision 6]
  - 17] 2CV Knife Edges Replacement [Revision 3]
  - 18] 2CV Low Oil Pressure Beeper and Lights On Beeper [Revision 1]
  - 19] 2CV Maintenance ~ Part 1 of 2 [Revision 18]
  - 20] 2CV Maintenance ~ Part 2 of 2 [Revision 18]
  - 21] 2CV Oil Breather [Revision 5]
  - 22] 2CV Oils and Maintenance Advice From Burton [Revision 3]
  - 23] 2CV Points Ignition Reinstallation [Revision 1]
  - 24] 2CV Roof Rack [Revision 3]
  - 25] 2CV Secondary Choke Butterfly Adjustment [Revision 4]
  - 26] 2CV Spare Parts to Carry [Revision 5]
  - 27] 2CV Valve Clearance Adjustment [Revision 2]
  - 28\*] Better Fuel Hose Clamps [Revision 1]
  - 29\*] Better UHF CB Car Radio Performance [Revision 7]
  - 30\*] Ignition Coil Ballast Resistors [Revision 5]
  - 31\*] The Workshop [Revision 3]
- NB \* Nos 28 to 31 are relevant for all vehicle brands





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