

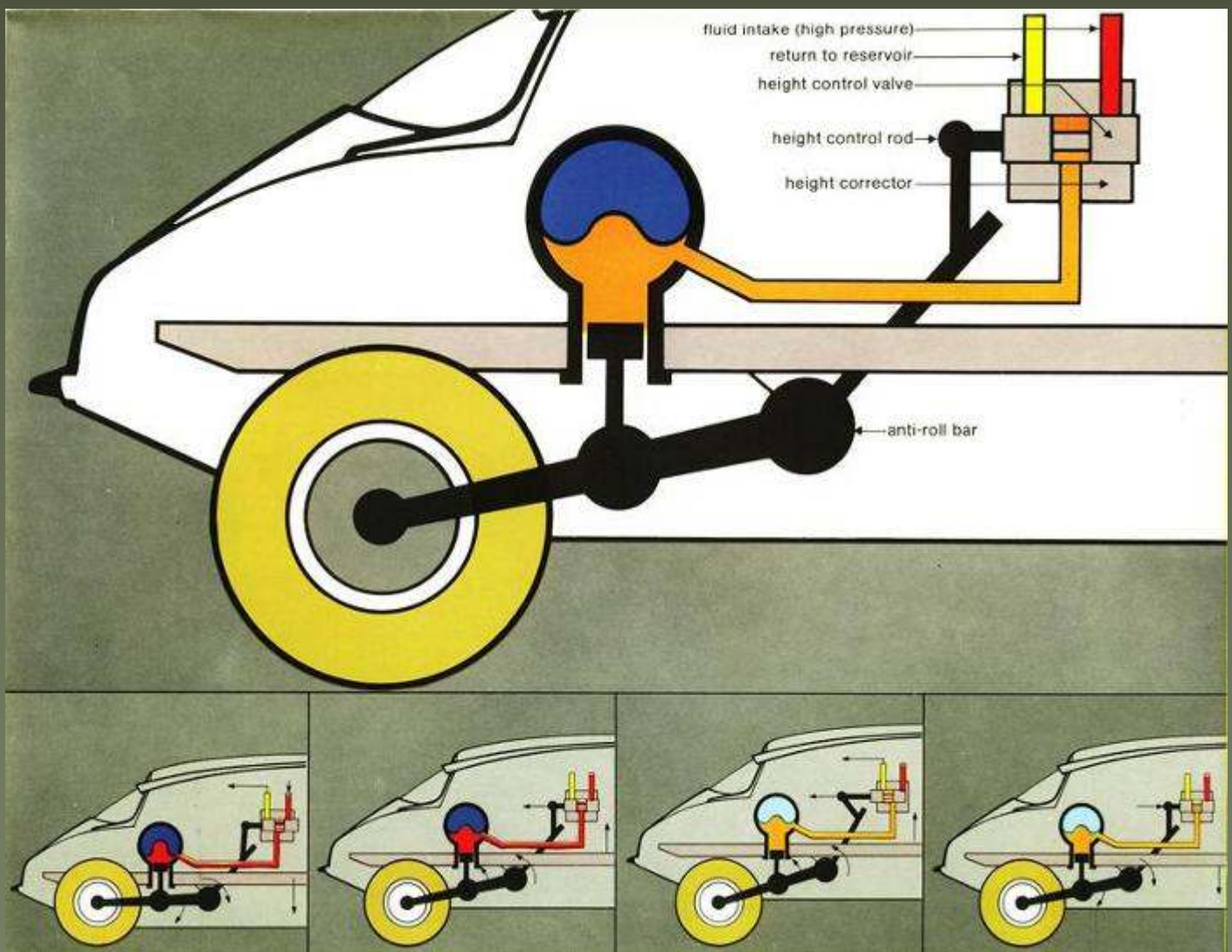


THE NEWSLETTER

THE JOURNAL OF THE CITROËN CAR CLUB OF VICTORIA Inc.

Internet: www.citcarclubvic.org.au

November 2021



IN THIS ISSUE

Tools explained

One man's passion

Citroen hydraulic fluids

Make your own drop links

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MEMBERSHIP RATE

Metropolitan including printed newsletter \$ 70.00
Country including printed newsletter \$ 55.00
Electronic only newsletter for above \$ 50.00 / \$ 35.00
For 2nd & subsequent members \$ 15.00

CCCV GENERAL MEETINGS

8.00 PM 3rd Thursday of the month except Jan.
8/41 Norcal Road Nunawading Mel 48 / G11

CCCV COMMITTEE MEETINGS

Meetings are held monthly in locations decided each month.

CLUB BANKING DETAILS FOR SUBSCRIPTIONS

AND PAYMENTS

BANK: Bendigo Bank - BSB: 633 000—ACCOUNT: 120 127 907

CLUB MEMBERS NOTE: SPHERE RE-GASSING SERVICE NOW AVAILABLE FOR \$25-00

Note: removal and fitting of spheres is not included.

This service is strictly CCCV members only

CONTACT WOLFGANG SIEM ON 0425 872 082



AUTO TOOLS AVAILABLE TO MEMBERS

USE ONE of the many tools that the club has available for members to borrow.

A full detailed list is available of what is available is listed on the Club's website.



SEW ON CLUB
BADGE—\$7.00



L108	Oil Filter for	Ds/Id
LS131	“” “”	2CV(A Series)
LS450	“” “”	GS?GSA
LS867B	“” “”	BX/Xantia/late CX
Z146	“” “”	CX LS923 C5 Diesel



Seals (O Ring) Spheres
“T” shirts, Polo shirts and Jackets with Citroën logo available for order from Club Shop and many other goodies.

CLUB SHOP

Open at every club night. See Wolfgang for Clothing, Mugs, and other Citroën accessories including Oil Filters for various models.



AGM

Thankyou to those who attended the AGM for those that missed it, the highlights were:

- A good financial result for the year with a surplus of \$3,665, most of which is attributable to our running of CitIn during the year and the profit we

made from that, but also less club activity means less cost. Our go forward financial position is planned at break even which is quite an achievement as we have not increased members subs for some years now.

- Membership reported 45 new members and 33 resignations for the year. John also reported 119 CPS cars, 35 of which were not Citroen (yep, we are allowed to do that under the rules).

- The committee was re elected with all current members standing. Tom Grucza has resigned from his position as internet administrator and Nicholas Hutton has kindly put up his hand to undertake that role. Welcome to the committee Nick. Your new committee is:

- o Peter Moloney – President & Treasurer
- o Bruno Tonizzo
- o Brian James – Club Magazine
- o David Rogers – Events coordinator and Library
- o John Wyers – Membership
- o Michael Faulks – Secretary
- o Wolfgang Siem – Club Shop
- o Nicholas Hutton - Website Manager
- o Haydn Kelvy
- o John Parsons

All of that was followed by a fantastic presentation by Michael Faulks, telling the story of his purchase and subsequent rebuild of a DS 21 BVH, only to be ruined by a fire which needed a start from scratch. Thankyou Michael it was entertaining, and we all would have learned something.

*The Newsletter proudly printed by Snap Printing
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berwick@snap.com.au*



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Christmas party

We have had so little social interaction in the past 18 months, the annual Christmas party at Frog Hollow on December 12 will be the ideal opportunity to catch up with old friends and meet new ones. We will provide you with a link to register so catering can be managed and look forward to seeing you there

Magazine contributions

Brian James always puts out a great magazine for all of us to enjoy. One of the challenges of producing a monthly magazine is ensuring that there is great content – this is where you as club members can assist. If you have done some repair or maintenance work, taken your Citroen on a holiday away, or seen an article relating to our cars which you think may be of interest to others, and have some photos and a story to share, please do not hesitate to contact Brian and provide him with this for consideration in the magazine – it is a contribution you can make which helps us to deliver to all members.

Hopefully we will all see you soon – if we can get a club run in before Christmas we certainly will.

Peter Moloney.

FRONT COVER

The tech behind icons: Citroen DS – Car expert

BACK COVER

Citroen Ds Hydraulic Technical manual, May 1960

DISCLAIMER

This newsletter may contain articles with suggestions and advice for maintaining and modifying your car. It is your responsibility to ensure that any modifications or maintenance carried out on your vehicle conforms to all applicable safety and design laws and regulations and any stipulation made to your insurance company. The editors, authors, CCCV Inc.

CCCV NEWSLETTER COPY DEADLINE: Sunday night, after the 2nd Wednesday of the month.



NOTICE BOARD



Club password for the month: This has now been deleted and by simply logging on to the CCCV website:
Citcarclubvic.org.au

You can view all sections including the newsletter without having to remember a monthly password.

New Members . CCCV welcomes the new members to our family: Peter Dimitrieski, Fred Simms, Peter McBeth and Jon Faine. We trust you will enjoy your membership and we look forward to seeing you at club meetings and monthly outings.

LHM OIL for members: The price of LHM oil is now \$14.00 per litre as at 9/7/20 ([see p/27 for your closest rep](#))

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

Events Calendar

2021

Draft Activities Program

2022

Nov 18 Club night via Zoom.

Dec 12 Christmas BBQ. CCCV & CCOCA event
Frog Hollow Reserve, 21 Fordham Avenue,
Camberwell VIC 3124, Australia

**NOTE: Club nights are held in our club rooms at 8/41
Norcal Road Nunawading. Mel 48/G11 at 8pm
ON THE THIRD THURSDAY IN THE MONTH.**

Monthly 1st- Chit-Chat Tuesday Chit-Chat Tuesdays will be at Laneway Espresso Café – next door to Dromana Hotel – from 10 am onwards.
This is a low-key “DIY” event for likeminded Citroen owners to meet and chat. Contact: Warwick Spinaze 0407 016 719
CCOCA & CCCV event for coffee & chat.

Monthly BOY'S DAY OUT-Port Arlington Golf Club-
WHEN: The fourth Thursday each month and the third Thursday in December (*See p/7*) 10.30 am for 11.30 departure & leaving from 1/29 Everist Rd, Ocean Grove Industrial Estate. **CCOCA & CCCV event for coffee & chat.**

Feb 6 Maling Road Autoclassico –Canterbury.
17 Club night
13 Beaumaris Concourse Car and Bike Show.
20 RACV British & European car show.
Yarra Glen Racecourse.
25-26 Ballarat Swap Meet.

Mar 4-6 Venus Bay camping w/end.
17 Club night
19-25 For those folks who would like to have a bit of fun and enjoyment before CITIN 2022, we are inviting you to join us on "Helen's Happy Holiday / Teddie's Terrific Tour / Dave's Dirty Deeds Done Dirt Cheap", to be held over 7 days and 6 nights. March 19, 2022 @ 8:00 am - March 25, 2022 @ 5:00 pm
Check CCCV website for full details.

Mar 25-28 **CIT-IN COWRA NSW**
See website below for details

<http://citroencarclub.org.au/cit-in/cit-in.html>

For more details on club events contact : Dave Rogers..

CCCV Club Advice Line

Traction Avant	Ted Cross	9819 2208	SM	Garth Campbell	0406427657
2CV	Dave Rogers	0422229484	Xantia/Xsara	John Wyers	9787 6280
AX/Berlingo	Kirk Kirkcaldy	9363 2464	XM & modern models	Salman Chaudhry	0410 040 505
GS/GSA	Andrew Smith	9755 2439	C2/C3	Don Scutt	9807 8999
ID/DS	Contact CCCV		C6	John Fedorko	0438 597384
BX	John Wyers	9787 6280			
CX/C5	Graeme McDonald	9781 1649			

Forthcoming Club Events

CCOCA/CCCV Christmas BBQ



- WHEN:** Sunday 12 December 2021
- TIME:** 12.00pm – 4.00pm
- WHERE:** Frog Hollow Reserve
Fordham Ave, Camberwell
- PROVIDED:** Everyone will be provided with a pre dished up plate of food consisting of cooked BBQ meats and salads. An ice-cream will be provided for dessert.
- BRING:** BYO – Tables, chairs, cutlery, glassware, nibbles, and drinks.
- BOOKINGS ESSENTIAL:** *CCOCA Members Register here and nominate dietary requirements if needed.*
CCCV Members Register here and nominate dietary requirements if needed.
- RSVP:** Monday 6 December
- ORGANISER:** Lee Dennes.
- You need to be double vaccinated to attend.
There will be a QR Code check in on the day.



December BBQ 2021.pdf

Click on the PDF (above) to open the BBQ graphic above.

Then click the **RED CCCV LINK** shown to register.



Date: February 11th-13th
**HEATHCOTE
WINERIES**

Booking details to be advised next month or check the club website.



HOW TO MAKE YOUR OWN DROP LINKS

Save cash with basic DIY engineering, says Rob Hawkins

EQUIPMENT NEEDED

Nuts, rod ends, threaded bar, hacksaw, spanners, mole grips, angle grinder (possibly)

Annoying suspension rattles are often caused by worn anti-roll bar drop links, which can be expensive to replace. Drop links for the Mk I Toyota MR2, for example, have traditionally been available from main dealers only at £70 apiece. Aftermarket producers have begun to bring prices down, but some are poor quality products. The best practical solution is to make your own.

The purpose of an anti-roll bar is to reduce body roll and improve handling. Consisting of a U-shaped sprung steel bar, it is fitted across the front or rear suspension, and is under tension to allow it to compress and take up unwanted suspension movement. The drop links connect the ends of the anti-roll bar to the mounts on the suspension. They usually consist of a couple of ball joints on a rod. They are therefore straightforward to make using generic rod ends and threaded bar.



£ DIY From £5 Component parts are surprisingly cheap

🕒 DIY 1-2hrs Quick to make, but old ones can take a while to remove

🔧 SKILL LEVEL 2 4 8 8 10

REMOVING OLD DROP LINKS

Tips to tease off rusty joints



1 Penetrate first

Most drop links consist of a top and bottom ball joint secured with a couple of nuts. The nuts are usually covered in dirt so wire brush them and give them a good soaking in penetrating oil.



2 Spinning stud

When attempting to undo a ball joint's nut on a drop link, the stud of the ball joint will probably spin with the nut. They commonly have a flat or an allen key hole at the end to enable you to hold them still.

File a flat

If there's no allen key hole or flat on the stud of a drop link's ball joint, try filing a flat on it and securing it with mole grips before attempting to undo the nut.



Lever off

Some drop links can be levered off their respective ball joint. This provides more space to hold the ball joint with a pair of mole grips and makes it easier to undo the nut.





5 Grind it off
The last resort is to fire up the angle grinder and cut through the threaded section with a cutting disc. Protect your eyes and skin from flying sparks. The sheared part of the drop link will be very hot.



6 Clean the ends
When you've managed to remove a drop link, clean the end of the anti-roll bar and the mount on the suspension member. This ensures dirt won't contaminate the new drop link and reduce its life span.

MAKE YOUR OWN REPLACEMENTS Knock up drop links using basic bits



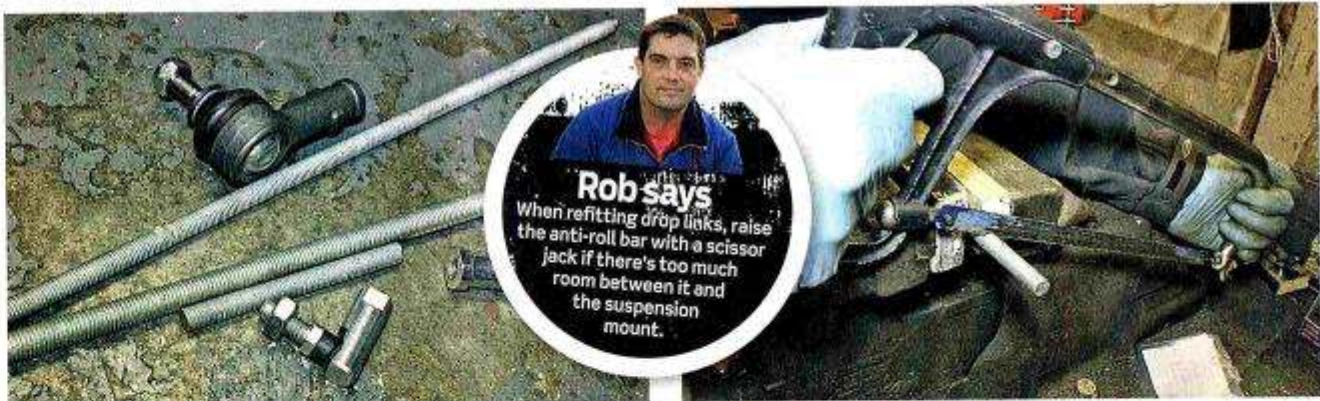
1 Track rod ends
Track rod ends used for a car's steering are a useful source of cheap rod ends. However, they are often bulky and may not squeeze into the space available. These MGF/Metro track rod ends use imperial threads, so matching nuts and threaded bar are required (see Step 4).



2 Motorsport rod ends
Motorsport stockists such as Demon Tweaks (www.demon-tweaks.co.uk) sell generic rod ends. A bolt can be fed through and secured with a nut to the anti-roll bar and suspension mount. Some rod ends have a stud for the ball joint (male) instead of a hole (female).



3 Caterpillar rod ends
We found these four rod ends with M10 studs and threaded holes for sale at Illston and Robson (www.illstonandrobson.com) for a bargain £10.56, plus £1.32 postage. They're designed for use on Caterpillar earth movers, so should stand up to the demands of an anti-roll bar.



Rob says
When refitting drop links, raise the anti-roll bar with a scissor jack if there's too much room between it and the suspension mount.

4 Link them together
Threaded bar is useful for making the long length of a drop link that connects the top and bottom ball joints. Specialists such as Screwfix (www.screwfix.com) and FastFix Direct (www.fastfixdirect.co.uk) can supply all sorts of sizes, as can all good hardware shops.

5 Cut and clean
Most threaded bar can be cut with a hacksaw. Make sure you cut a sufficient length to screw all the way into the rod end. Ensure the new drop link is the same length as the old one. After cutting the threaded bar, clean the end of the thread with a nut or a die set.



DO NOT DRILL!
Some aftermarket and performance anti-roll bars have several holes in their ends to help reduce tension. Do not attempt to drill extra holes into a standard anti-roll bar. It is made of sprung steel and will be very tough going – and if you succeed, it will be weakened.



6 Assemble with locknuts
Fully wind the rod ends into position and use two nuts to lock them in position. Note that adjusting the length of the drop links does not alter the handling of the car – this is governed by the stiffness of the bar. Shortening the links increases wear and tear.

FINISH

Article supplied by Ian Downie.

Tools Explained

An article blatantly purloined from the May/June 2020 issue of Floating Power and written by John Ogborn - Kevin.

Hammer: Originally employed as a weapon of war, the hammer nowadays is used as a kind of divining rod to locate the most expensive parts adjacent to the object you are trying to hit.

Engine Hoist: A tool for testing the maximum tensile strength of everything you forgot to disconnect.

Crowbar: A tool used to crumple metal surrounding that clip or bracket you needed to remove, in order to replace a 50-cent part.

Pipe Cutter: A tool used to make pipes too short

Wire Wheel: Cleans paint off bolts and then throws them somewhere under the workbench with the speed of light. Also removes fingerprints and hard-earned calluses from fingers in about the time it takes you to say 'Oh sh*t'.

Belt Sander: An electric sanding tool commonly used to convert minor touch-up jobs into major refinishing jobs.

Hacksaw: One of a family of cutting tools based on the Ouija board principle... it transforms human energy into a crooked, unpredictable motion, and the more you attempt to influence its course, the more dismal your future becomes.

Drill Press: A tall upright machine useful for suddenly snatching flat metal bar stock out of your hands so that it smacks you in the chest and flings your beer across the room, denting the freshly painted project which you had carefully set in the corner where nothing could get to it.

Drop Saw: A tool to make stud too short

Pliers: Used to round off bolt heads. Sometimes used in the creation of blood blisters.

Mole Grips: Generally used after the pliers to completely round off bolt heads. If nothing else is available, they can also be used to transfer intense welding heat to the palm of your hand.

Oxyacetylene Torch: Used almost entirely for setting fire to various flammable objects in your workshop. Also handy for igniting the grease inside the wheel hub out of which you want to remove a bearing race.

Table Saw: A large stationary power tool commonly used to launch wood projectiles for testing wall integrity.

Hydraulic Floor Jack: Used for lowering a car to the ground after you have installed your new brake shoes, trapping the jack handle firmly under the bumper.

Band Saw: A large stationary power saw primarily used by most shops to cut good aluminium sheet into smaller pieces that more easily fit into the rubbish bin after you cut on the wrong side of the line.

Straight Screwdriver: A tool for opening paint cans. Sometimes used to convert common slotted screws into non-removable screw and butchering your palms.

Adjustable Spanner: aka 'another hammer' or 'the Swedish nut lathe' Commonly used as a one size fits all spanner, usually results in rounding off nut heads before the use of pliers. Will randomly adjust size between bolts, resulting in bruised knuckles, swear words and multiple threats to any inanimate objects within the immediate vicinity.

Also copied from TRACTION AVANT October 21

The magazine of the Auckland Citroen Car Club Inc. Ed.

Revised Summary of Citroën Hydraulic Fluids

Conceived and Compiled by Tony Jackson and Mark L. Bardenwerper, Sr.
Updated March, 2016

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Editors Note:

Tony Jackson began supplying the Citroën virtual community with this summary many years ago. Since then it has seen numerous edits and modifications. Keeping old cars in running condition is difficult enough, but these Citroëns offer the extra challenge of hydropneumatic systems involving braking, steering, suspension and transmission control.

Given the increasing difficulty in finding original specification hydraulic fluids, owners have often relied on ingenuity to devise alternatives. LHS is now made periodically by only one company, Pentosin. The supply is sporadic and prices can vary widely as inventories dwindle. LHM is not available everywhere, though prices seem stable right now. The Fluid Summary is an attempt to provide an updatable source of information on older as well as ongoing trials.

It must be stressed that the authors do not in any way wish to take responsibility for consequences arising from the use of any of this information. Readers are hereby informed that all of this work is fully experimental in nature and any actions taken by readers will be considered as on their own volition. In other words **USE THIS INFORMATION AT YOUR OWN RISK.**

While original fluids are not always readily at hand, in most cases it is best for your car to use them. One exception might be a car that is undergoing restoration and is prone to leaks.

We invite the Citroën community to offer us information on your efforts. This document is by no means complete or final. As you can see by the following chapters, charts and articles, there are many gaps in our knowledge. Please send your contributions to the authors. It is going through constant changes, so please check back regularly.

Fluids for LHS Cars

Original Fluids For LHS Cars [Top](#)

Early production cars used LHV (Liquide Hydraulique Vegetal), a red colored fluid which was basically brake fluid with castor oil thickener. It was sold by several companies, each giving it a different name. There were Castrol HF, Lockheed HD19, Donax D, Energol Hydraulique CF, Pentosin 259 and Stop SP19 and several others. The main hydraulic components were painted black. These fluids proved to be problematic because they were hygroscopic and anything less than frequent fluid changes resulted in corrosion and damage to the system, particularly in humid climates, where it could actually completely break down.

In late 1964, synthetic based LHS (Liquide Hydraulique Synthetique) supplanted the old formula. LHS was apparently manufactured only by Eugene Kuhmann in France and Deutsche Pentosin Werke in Germany. All other suppliers bought from one of them and packaged under their own labels. Some problems subsided, but hygroscopy was still an issue. A list of approved fluids was issued by Citroën in Technical Note No. 29-D, dated September, 1964. The note also specified four seals that had to be changed to make the cars compatible with the new fluid. The old ones were of natural rubber and the replacements were of EPDM, a newly developed synthetic. Here is a copy of the [technical note](#). Included are the old and new part numbers for the four seals.

Old and new seal numbers (from Tech Note 29-D, September, 1964) and their use

Old Seal Number	New Seal Number	Part Involved
4 929 S	4 986 S	Security Valve (ID) 7 Cylinder Pump (DS)
4 930 S	4 987 S	7 Cylinder Pump (DS)
4 905 S	4 983 S	Rear Wheel Cylinder, Saloon
4 906 S	4 984 S	Rear Wheel Cylinder,



Cars sold in the United States and Canada faced more difficulties. None of these fluids were available. Instead, Citroen specified standard brake fluids. Lockheed 70R1 grade fluid was initially listed in the owners' manuals to comply with standardizing Federal regulations. By 1966 the factory approved any fluid complying with specification SAE 70R3, including Mobil Super HD, Delco Super 11, Lockheed Wagner 21B, Mopar Hi Temp. SAE 70R3 was later replaced with DOT 3. Each new fluid provided improvements, especially higher boiling points, but even when DOT 3 came along, it still lacked sufficient viscosity and lubricity for best ride performance, transmission shifting and control of wear.

Everywhere except in the US production changed in 1966 to use a green-dyed mineral fluid, LHM, which did not take up water, and which has proven highly successful ever since. LHM was not compatible with the seals used in cars built previously, so the hydraulic component color was changed to green as a warning. Cars sold in the US changed to LHM in the middle of the 1969 model year due to delays in governmental certification, so consequently, early 1969 model cars in the U.S. still used LHS. Again, the color of the hydraulic components is the tell tale; black is for LHS and green signified that the car used LHM.

LHM was introduced at the following serial numbers for all except U.S. export models		LHM for US export models was introduced at the following serial numbers	
DS19A-H	4 316 000	DS19A-H	4 330 000
DS19A-M	4 442 000	DS20-H	4 332 001
DS21-H	4 376 200	DS20-M	4 451 001
DS21-M	4 473 100	DS21-H (including cabriolet)	4 621 000
Cabriolet DS21-H	4 376 050	DS21-M (including cabriolet)	4 490 001
Cabriolet DS21-M	4 473 020	ID19B	3 794 600
Cabriolet Chapron DS21-H	4 376 000	ID20	3 820 001
Cabriolet Chapron DS21-M	4 473 000	Break ID19FA-M	3 546 800
ID19B	3 710 001	Break ID19FHA	3 980 380
Familiale ID19FA	3 535 000	Break ID20F	3 980 501
Break, Ambulance, etc. ID19FA	3 536 000	Break ID20FH	3 985 001
Familiale ID21F	3 554 000	Break ID21F	3 561 600
Break, Ambulance, etc. 21F	3 554 500	Break ID21FH	3 575 350

Factory [Seal part number interchange chart](#) for LHS and LHM vehicles, dated June 1969

Alternate Fluids For LHS Cars [Top](#)

Pure Brake Fluid

Standard glycol-based DOT 3, DOT 4 or DOT 5.1 brake fluids work but are less viscous and have poorer lubricant properties than LHS. Rolls Royce used DOT 3 in bottles labeled RR 363 for their application of Citroën patents, but theirs was a much more restricted use of hydraulics. DOT 5 is a newer category for brake fluids that attain a higher dry boiling point. DOT 5 silicone fluid was the first. Later, glycol-based fluids were developed. This fluid was designated DOT 5.1. DOT 4 and 5.1 may seem better choices because of their higher initial boiling point, but they tend to be more hygroscopic than DOT 3, hence lose their boiling point faster. 5.1 is also a poorer lubricant.

There are several very good summaries of DOT brake fluids on the Internet. Here are two:

[Stop Tech](#)
[Moss Motors](#)

This one, in French, is by Yves Frelon and echoes a lot of our observations. Claude would likely be our friend Claude Moritz, who is mentioned below and has done a lot of experiments with PAG:

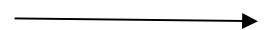
[Rouler en DS liquide rouge. par Claude](#)

DOT 5 Silicone Based Fluid

It is unfortunate that silicone based brake fluid was designated 5 because it causes confusion with DOT 5.1, which is glycol based. Some believe that silicone based DOT 5 fluid might be an improvement as it does not take up water. Experience has shown that if a system is at all suspect, all moveable seals should be replaced before conversion. Where seals have already deteriorated, they can fail when the change is made to silicone.

It should be further noted that while silicone DOT 5 does not absorb moisture, it displaces it. Water will still enter the system, but instead of being absorbed into the fluid, it will settle in low places or accumulate in points of low flow. This water can freeze.

Because of the difficulty in avoiding trapped air bubbles, bleeding the system is more difficult. Air in the brakes causes delayed braking action and vagueness.



DOT 5 does not attack paint but it leaves a difficult to remove residue behind that can cause problems with subsequent paint applications.

Even so, several owners have run cars satisfactorily on silicone DOT 5. Some add an additional filter between the pump and reservoir to collect sloughed off material. Some report problems caused by its very high electrical insulating tendencies. Weeping around the brake mushroom can cause trouble with the brake switch. Steps must be taken to isolate this part. One owner installed a pressure activated switch on one of the front calipers. Trouble with contamination of ignition points has also been reported. Many owners convert their systems to electronic, thereby eliminating the points.

Brake Fluid and Castor Oil

Other owners have suggested that the addition of castor oil to the glycol-based fluids improves lubrication and ride without causing harm. This theory is supported by the discovery that the original specification fluids had castor oil additives. In addition to its effect on lubricity the castor oil raises the viscosity to around 35 mPa.sec at 75 deg. Fahrenheit, the same as LHS (plain glycol brake fluid of DOT 3 has a viscosity at this temperature of 23.1 mPa.sec).

This mixture has been used for some time without problems, except in cold climates. If the car is to be used while ambient temperatures are below the freezing point, the castor oil fluid should be drained and replaced with DOT 3 brake fluid and the brakes bled. This is to prevent any castor oil separating out and freezing in lines or components. When warm weather resumes, just add 4 oz. of castor oil. Castrol R racing oil (used by some racing motorcycles) is one source. Model engine or aircraft suppliers are another. Unfortunately, the advent of synthetic oils has made it harder to source. Castor oil is also available in health stores with unpredictable prices.

DOT 4 brake fluid can be used, but has a tendency to absorb water more quickly, so it's boiling point decreases faster than DOT 3. Because it is open to the atmosphere, this is an important consideration in our systems.

Converting to LHM

LHS cars can be converted to LHM if all the seals are replaced with LHM-safe seals. This sounds like a better use of the labour of changing all the seals than switching to DOT 5.1. While their paint color changed from black to green, the metal components actually were not changed when Citroën changed to LHM. Here is a factory [seal part number interchange chart](#) for LHS and LHM vehicles, dated June 1969. It might be tempting to leave the original component colors, but to avoid future fluid mixups repainting them to green should not be omitted.

Canola and Rapeseed Oil Based Fluids

Canola (rapeseed) based fluids had the advantage of being safer to handle, did not harm paint and were biodegradable. They were theoretically compatible with both types of seals. Viscosity was high at all temperatures. Texaco, who used to offer a product called Biostar, claimed it was for use between -15 and +80 degrees Celsius. Biostar was more viscous than LHS or LHM at the temperatures for which I have information and had a lower viscosity index than LHM, meaning that viscosity changed more rapidly with temperature. This had a negative effect on suspension damping and shift characteristics on hydraulically shifted cars. Studies also showed that high temperatures accelerated decomposition.

Biostar 32 was nearest to the Citroën specs. However, its rather high pour point and low viscosity index still gave problems when used in very cold conditions. Biostar is now unavailable, but other companies offer similar products, such as [Hydrosafe](#). The comparison chart, below, now lists the Hydrosafe product rather than Biostar. Note also, there is **no specification for boiling point**.

Now that rapeseed has been in experimental use for some time, several problems have cropped up. It is proven to be fatal to cars made before 1963 unless every seal has been replaced. This is because those older cars had seals made of natural rubber, which is not compatible. These cars also suffered from decomposition of rubber parts adjacent to hydraulics, such as suspension bump pads. We have now found that some cars that used rapeseed oils have not fared as well due to accelerated wear in moving parts. Even though some owners continue to use it, for these reasons we can no longer recommend the use of canola base fluids.

PAG and Brake Fluid

Claude Moritz and Mark Bardenwerper have been doing research on the use of the automotive air conditioning lubricant PAG (polyalkylene glycol), mixed with DOT 3 brake fluid. PAG did not freeze or separate in tests we could perform with a household refrigerator/freezer. It is entirely soluble in most brake fluids and the mixtures flow even at extreme low temps. Rubber samples are showing no damage after a year's immersion. One car was run on 10% mixture. However, in the 150 viscosity specification, it is only half as viscous as castor oil, so in order to match LHS, the ratios must be doubled. For now, we are not willing to condone this. We have found higher viscosities available, but only in large quantities to commercial entities.

Still, lubricity is vastly superior to pure brake fluid. It should be noted that PAG is actually used in many brake fluid formulations, particularly DOT 5.1. We do recommend that you test several brands of DOT 3 brake fluid before using to determine solubility.

With the availability of genuine LHS becoming spotty, we must continue our work on viable substitutes. While each have merit, they also have drawbacks. Pentosin refuses to disclose the formula for LHS, so anything we use must be used with caution. The only thing they have told us is that one of the components is hard to source. That is why we can not recommend the use of any of the substitutes. Unless you are willing to assume the risks of damage to your car or possibly of failures of vital systems, **especially the brakes**, you should use the factory recommended fluids.

Specifications For Fluids Used In LHS Cars [Top](#)

These specifications are harvested from other sites. They are not intended for use as MSDS or true data sheets, as many of these fluids vary greatly by manufacturer!

Characteristics	Unit	LHM+ For Comparison Only. Do Not Use!	LHS 2	DOT 3	DOT 4	DOT 5.1	DOT 5 Silicone based brake fluid	Hydro- Safe ISO- VG- Premium 32 (rapeseed based)	Mark's Mix 9.25% Castor Oil/DOT 3	DOT 3/ PAG 150 10%

Colour	-	Green	Red	Amber	Amber	Amber	Blue/Purple	Clear, light amber	Yellow	Light Amber
Density at 15C	g/cm3	0.830	1.007	?		1.05	?	.88	~1	No tests,
Viscosity at -40C	cSt	<1200	?	1065		900	900	?	?	But should
Viscosity at 20C	cSt	?	32.4	?		?	?	?	34.7	be about half
Viscosity at 40C	cSt	18	14.5-16.5	7.1		?	?	30.7	?	way between
Viscosity at 100C	cSt	6.3	4.5-5	2.0	1.5	~1.5	7	6.9	?	DOT 3
Viscosity index	-	355	256	30		?	?	199	?	and
Pour point	Deg C	-62	?	?		?	?	-40	?	LHS
Boiling point Wet is 3.7% water	Deg C	255	?	205 dry 140 wet	230 dry 155 wet	260 dry 180 wet	260 See above	?	?	Unknown, but should be near DOT 3
Flash point	Deg C	135	99	149		?	204	236	?	

Fluid for LHM Cars

Original Fluids For LHM Cars [Top](#)

Best is LHM. No other readily available fluid has the same characteristics and any replacement runs the risk of giving rise to behaviour other than that which was originally intended, most particularly in conditions of extreme temperature. It is not difficult to ship in the U.S. and is readily available in Europe.

Properties of LHM+ (the latest version, fully compatible with original LHM). Recommended by Citroën.

- Exceptionally high viscosity index
- Very low pour point
- High stability
- Excellent lubricating properties
- High boiling point
- Non hygroscopic
- Very good protection against corrosion

Alternate Fluids For LHM Cars [Top](#)

Aviation Hydraulic Fluids

Next best is what is known in the aviation community as "red oil" (MIL-H-5606). It is cheap to buy and is just slightly lower in viscosity. Having existed before LHM, it's reasonable to believe that Citroën would have allowed it if they thought it delivered what they required. But the demands of the Citroën system are unique and very specific. It is also conceivable that they were concerned with the color similarity of LHS, a potential disaster for older car owners, should incompatible fluids be accidentally intermixed.

The actual specifications for LHM differed from the earlier version of "red oil" in one important aspect, VI (viscosity index). The VI represents how much a fluid's viscosity changes with temperature. The higher the number, the more constant the viscosity will remain across a given temperature range. As of 2/97, MilSpec 5606(F) was supplanted by 5606(G). The major improvement was in the area of low temperature viscosity. Since then, the specification has again changed and is now (H). The VI for LHM is over 350, while the older 5606(F) red oil was around 300. The VI of the new MIL-H-5606(H) is now above 370, surpassing LHM. For comparison, the VI for Dexron (regardless of type) is only about 200. However, the viscosity of red oil is lower than LHM at all temperatures.

A comparison of MilSpec 5606(H) and LHM+:

- Seal compatibility - fine
- Non-foaming under high pressures - fine
- Viscosity/temperature stability - acceptable
- Lubrication qualities - fine
- Corrosion resistance - fine
- Volatility - passable
- Resistance to thermal breakdown - fine

Dexron Automatic Transmission Fluid

Third best is Dexron automatic transmission fluid. More than twice as viscous as LHM at low temperatures, Dexron may be problematic in cold conditions. Steve Hammond of Citroën in the U.S. had this to say about the use of Dexron. "The original Dexron that was used 40

years ago could cause measurable wear to three principal components in the car-the pump, the height corrector slide valves and power steering control valves. However, that has not been the case since the introduction of Dexron II. The current version, Dexron IV, is classified as a compatible 'hydraulic fluid' by most all of the major hydraulic pump manufactures such as Vickers and others. The only problem with Dexron III or IV is its viscosity index (VI). It is not high enough for normal use in a hydraulically shifted (BVH) car. IOW its change in flow characteristics with temperature changes is beyond the adjustment range designed into the BVH system to produce the shifting results and consistency the system is designed to provide."

Here is a comparison of Dexron:

- Seal compatibility - fine
- Non foaming under high pressures - passable
- Viscosity/temperature considerations - thick at low temperatures
- Lubrication qualities - adequate in later versions, inadequate in Dexron II.
- Corrosion resistance - passable
- Volatility - passable
- Resistance to thermal breakdown - passable

Motor Oil

30 weight engine oil can be used for emergencies only, as it will not attack the seals in a LHM car. However it does not have the high pressure shear characteristics of quality hydraulic fluids nor a sufficiently high viscosity index as well as other necessary properties for long term use.

Kendall Hyken Blue

Several owners are using a hydraulic fluid made by Kendall called Hyken Glacial Blue. Usually well behaved, it reportedly gets thin in hot climates causing abrupt shifts in BVH cars. Others have used Exxon's Univis 13. Some Mercedes and BMW cars use a fluid called Pentosin CHF. We've found two versions of this, and both look to be suitable for use in later D series suspensions (they are even green) according to the information we have. They are usually quite expensive! Mercedes uses a fluid called ZH-M in some of their cars for power steering and self-leveling rear suspensions. This fluid, while almost certainly harmless to seals in Citroën cars, has a lower viscosity index and its viscosity is generally lower than that of LHM. This would demand more work of the high pressure pump and would have some effect on suspension behaviour. It might also be a bit marginal in high ambient temperatures, or when the brakes were really punished, as when descending a long mountain pass. It is, however, probably a better option than Dexron (see below). It is cheaper than the Pentosin CHF fluids but costlier than Dexron. We have added that data to the chart below, though so far there are no confirmations of owners' experiences.

Lubriplate 70

Several hydraulic fluids developed to replace petroleum based fluids have become more economically viable in recent years. One of the most recent is Lubriplate 70. It has a favorable viscosity index, a very low pour point and is readily available at least in the United States, where LHM is more hard to find. It has only one drawback that we have found so far. It is nearly clear and is hard to see in the stand pipe on the reservoir. Some have considered using some type of dye. Most likely any type of dye used in petroleum products could be used. Of course, the preferred color would be green!

Conclusions

Generally speaking, the vast majority of mineral oil based hydraulic fluids are fully compatible with the seals in LHM cars. I have added Shell Tellus to the list below for comparison purposes. However, most of them do not have viscosity characteristics the hydraulic systems were designed for. They can adversely effect shift characteristics in (BVH) equipped cars and if extreme, will even cause suspension behavior and steering problems. Fluids with low VI will cause problems with temperature fluctuations. A good minimum would be 280. LHS2 has a VI index of 280 and a cST rating of 14 at 40c. LHM+ has VI index of 350 and a cST value of 18 at 40C. When the factory went from LHS2 to LHM the only thing that was changed was the rubber seal composition. The actual design of the various hydraulic components remained unchanged. There is sufficient allowance in the system design that a change in fluid cST at 40C from 12 to 20 will have little to no effect on basic performance or system feel.

Specifications For Fluids Used In LHM Cars [Top](#)

These specifications are harvested from other sites. They are not intended for use as MSDS or true data sheets!											
Characteristics	Units	LHM+	Pentosin CHF 7.1	Pentosin CHF 11S	ATF+3	Texaco MIL-H-5606 (H)	ARAL Vitamol ZH-M	Shell Tellus 22	Exxon Univis 13	Kendall Hyken Glacial Blue	Lubriplate 70
Colour	-	Green	Green	Green	Red	Red	Green		Red	Blue	Pale Yellow
Density at 15C	Kg/L	0.830	0.857	0.825	0.825	0.86	.861	.866		.855	.87
Viscosity at -40C	cSt	<1200	1050	<1100	1500	600	6000 (?)		371	2840	
Viscosity at -20C	cSt			230						240	
Viscosity at 0C	cSt		75					180	338		
Viscosity at 20C	cSt		32				~32				
Viscosity at	cSt	18	18	18.6	36.8	13.2	16	22	13.5	14.9	16

Continued pages 16-17

ONE MAN'S

Hi Guys, hope you are all keeping well.

Firstly many thanks for your kind words of condolences on Jerry Hathaway's passing, greatly appreciated, again thank you..

At times like these it's good to keep busy and as you can see from the attached photos that's been the case in my garage.

A week ago I finally received the cylinder head for the machine shop that meant I could complete the task i.e., rockers, tappets setting etc then bolt it to the block, fitted a new timing chain & tensioner and clutch plate.

Being on my own has been challenging, working on the floor and rolling this big lump of iron.

The Next task was mating the transmission, new brake discs and piston overhauled, to the block, but figured this should also be possible if I took my time, which I have plenty of...and as you can see my methodology worked!

Yesterday I decided to position the engine assembly back on the trolley and by moving the D hard against the back wall I could with millimetres to spare locate the trolley in front to the engine bay.

There are still a number of Items to bolt on to the engine before I attempt the next step....and that is!! And will update you how I go...

Stay safe and keep the spirit, Lee Scholte.



S PASSION



40C											
Viscosity at 50C	cSt		14.3								
Viscosity at 100C	cSt	6.3	6.0	>6	7.65	5.0	~4.2	4.3	5.3	4.4	6
Viscosity index	-	355	326	320	185	370	181	100	404	233	340
Pour point	Deg C	-62	-62	<-62	-45	-60	-40	-30	-60	-60	-56.7
Boiling point	Deg C	255									288
Flash point	Deg C	135				82	140	204	100	170	93.3

Seal Compatibility [Top](#)

A seal's compatibility is determined by its durability in the fluid that it must operate in. The systems that we are concerned with use glycols (normal brake fluid) or petroleum (paraffin /mineral oil/others) or synthetics fundamentally designed to supplant them. Seals come in many shapes. Automatic transmissions have "O" and square rings, flanged, or lip seals and gaskets. Primarily, the hydraulic systems in our cars use o-rings and protective covers such as those found on the ends of the height correctors and in the suspension ram boots. But seals can also be made of other elastomers, metal, paper or other fiber products, or specialized plastics such as teflon.

For glycol based fluids the material of choice is ethylene propylene (epm, pdm, epdm). Introduced in 1964, it still has the best resistance to brake fluid. A new compound that has been recently introduced and shows promise as being suitable for both glycol and petroleum based fluid is Aflas (TFE Propylene/trademarked 3M).

For Petroleum based fluids (LHM, Dexron, 5606 Spec, etc.) the following materials are the most widely used: Fluorocarbon based, (Vinylidene fluoride-hexafluoropropylene) also know under the trade name Viton (and others) and Nitrile (NBR or Buna N, Acrylonitrile-Butadiene Copolymers). Of the two Viton has the best mechanical strength/temperature resistance and is much more expensive compared to Buna N. While there are others, the above two are the most common.

The seals in our cars are of two types-static and dynamic. Static seals are those where the sealing faces do not move. Dynamic seals are those where one or more of the sealing faces moves relative to the other. To list a few, the power steering rack, suspension cylinders, brake pistons, clutch engagement control/steering speed control (in SM's), height control valves, rear brake articulating joints on ID/DS series are all examples of dynamic sealing points. The high pressure pump has one dynamic seal, though it is a metal to metal seal at its driveshaft. The suspension sphere diaphragm is a special kind of seal and presents real problems from a design standpoint. Not only must it be resistant to the fluid in use, it also has to have extremely low gas permeability, excellent flexibility and tear resistance over a wide range of temperatures and pressures.

When Citroën introduced LHM in 1966, they encountered serious high temperature problems with the diaphragm material during the first couple of years, primarily with gas permeation. This problem has been almost completely eliminated in the latest cars, such as the C5. The diaphragms are now 2 ply.

These are the three commonly found compounds in our systems built since the introduction of LHS and their usage (earlier cars used natural rubber)

- LHS - EPDM - marked red
- LHM - Nitrile - marked green
- Universal - Neoprene - marked white (for static usage only)

More complete information on seal compatibility can be found at [Engineering Fundamentals](#) and [Marco Rubber](#).

Fluid Changes and Flushing [Top](#)

Before we close we'd like to address the issue of fluid changes. Flushing instructions can be [found here](#). This old brochure was written before LHM was put into use. For later cars, the procedures are much the same (later cars have a drain tube on the reservoir). Just substitute the proper fluids for those stated. Though owners of LHS cars should already know that they must make frequent changes because of hygroscopy, the fluids used in later cars also degrade with use. The long chain polymers that are used to improve viscosity and provide lubrication under extreme pressure begin to break down. This is caused by the physical shearing of these chains as the fluid is pumped under high pressure throughout the system. Furthermore, corrosion can occur in later cars, too. Anti-oxidant additives have a finite life. Once they become ineffective, the polymers oxidize and change their characteristics. Moisture trapped in the system will cause corrosion. Dirt and other particles collect in the system and accelerate wear. Keep in mind that just because the fluid looks "clean" does not mean that it is providing optimum protection. The factory recommendation of a change every 24,000 miles/40,000km is not overly restrictive for LHM cars.

LHM systems use a flushing agent called "Hydraurince" ("hydro-rinse-ahj"). It can be used full strength for full effect, or it can be mixed. Hydraurince can be left in the system for as long as 3,000 miles/5,000km. before it needs to be removed and fresh fluid installed. It can be hard to find in the US in particular, but Citroen part suppliers stock it. It does not need to be used frequently. It is most effective on cars that have been taken out of long storage or that have had a history of neglect. When in the system, frequent filter cleanings will be needed. Gasoline can be used to clean components (use great care) or mineral spirits.

Never use Hydraurince in cars using LHS fluid.

Those with D's with glycol-based fluids (LHS) need to be more diligent regarding changes. When the car rises, fluid moves out of the reservoir drawing air in. Moisture in the air is absorbed by the fluid. This problem is aggravated in moist climates and lessened in dry greatly increases the potential for corrosion in the system-especially on parts and areas where there is little movement of the fluid, such as wheel cylinders. High moisture content drastically lowers boiling point of your fluid which can braking dangerous as it actually can turn into

compressible vapor. Several owners have tried alternative fluids to counteract these problems. Like LHM, viscosity modifiers, lubrication additives and corrosion inhibitors all degrade over time. All these things happen faster in our cars than in typical closed systems. Because of higher working pressures, constant circulation and influx of moisture laden air, the factory recommended change interval was 18,000 miles/30,000 km. We recommend every two years in dry climates and light use and every year in humid conditions or heavy use regardless of mileage. In cars that are not used frequently, those intervals might be extended.

The flushing agent specified by Citroen for LHS cars is hexylene glycol. It should only be left in for 20 miles/30km if used full strength. Mark Bardenwerper used it in a U.S. specification ID 19 with excellent results. As it was rather expensive, he drained and added only about a quart instead of a complete change and left it in for double the time. He did have to clean his filter a few extra times. His steering had better feel and power, for one thing.

Some owners used pure brake fluid and a little alcohol. I would not recommend using alcohol as it will not lubricate at all and could cause damage, though alcohol or soapy water can also be used to clean LHS components during repairs (parts must be thoroughly dried before reassembly).

Credits [Top](#)

Image courtesy Pomini Paolo

Special thanks to John Titus, Stan George, Alastair Macintosh, Adam Reif, Shane Leviston, Bob Dircks, Brad Putschat, Jan Forrest, Maurice Gunderson, Steve Hammond, Ulf Petermann, Dale Ice, Jack Shotton, Jint Nijman, Carter Willey, Nils Oehler, Claude Moritz and the selfless contributions of the Citroën List communities found at [Dseries-L](#) and [citroen-dsid](#). This is truly a world class effort!

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Please send suggestions to [Mark](#) or [Tony](#).

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[Home](#)



**Mark your diary
now**

**Sunday 20th
February 2022**

**RACV British and
European
Motoring Show**

**Incorporating the
annual MG
Concours**

Open to all vehicles and motorbikes manufactured in Britain and Europe.

Yarra Glen Racecourse

**Entry conditions as per COVID restrictions at the time Watch our website for up to
date details**

<https://www.aomc.asn.au/>



CIT-IN COWRA 2022 REGISTRATION FORM

Friday 25th to Monday 28th of March



IMPORTANT

The Citroën Car Club of NSW, Inc. reserves the right to vary Covid Management Practices and Guidelines to respond to health advice plus Government and Suppliers policies leading up to and during Cit-in 2022. Use the Citroën Car Club of NSW website citroencarclub.org.au/cit-in/cit-in.html as a reference source.

PLEASE PRINT IN BLOCK LETTERING USING A BLACK PEN

REGISTRATION FEES

Dates indicate receipt of registration by CCC of NSW, Inc.
Final Bookings close on Friday, 18th February 2022

	Adult or Teenager	Child 5 to 12 years	Child 1 to 4 years
Prior to 10/11/21	\$280.00	\$175.00	free
11/11/21 to 15/01/22	\$295.00	\$175.00	free
15/01/22 to 18/02/22	\$320.00	\$175.00	free

Please contact Ian Frost treasurer@citroencarclub.org.au to establish fees for partial attendance.

PAYMENT METHOD Please tick the appropriate method(s)

- CASH Payment at a car club general meeting. \$.....
- CHEQUE Payment to: CITROEN CAR CLUB OF NSW INC \$.....
- EFT Account Name: CITROEN CAR CLUB OF NSW INC
BSB: 062 562 Account Number: 10156846 \$.....
- PAYPAL Account Name: treasurer@citroencarclub.org.au \$.....

REGISTRATION PAYMENT TOTAL \$.....

SUBMISSION OF COMPLETED FORMS AND PAYMENT

All Registration payments must include the details "Cit-in 2022" plus YOUR NAME.

Registration Forms for a Cash payment or with an attached Cheque should be posted to:
Treasurer of CCC of NSW, Inc. Post Office Box 4041 WAGSTAFFE, NSW, 2257

Registration Forms utilising only EFT or Paypal payments can alternatively be emailed to:
treasurer@citroencarclub.org.au

REFUND POLICY

If you have registered and paid, but are unable to attend Cit-in due to unforeseen circumstances, the Citroën Car Club of NSW, Inc will refund your registration fee in part according to the following:

Before 01/12/21 = 100% Up to 01/02/22 = 50%
Up to 10/03/22 = 25% After 10/03/22 = NIL

Refunds for cancellations under exceptional circumstances will be looked at on a case by case basis.

<http://citroencarclub.org.au/cit-in/cit-in.html>

2007 Citroen C2

7/21

I am looking for a buyer for a Citroen C2 2007.
It is in ok condition and has 170k on the odometer, recently had transmission fault and is not drivable.
I am not interested in repairing it so am selling unregistered.
Fine for parts.

VIN: VF7JMNFC97373215

Can provide photos and further details. \$500 ONO.
Glen Waverley area.



Contact Paul on 0408 936 969

Helen's Happy Holiday - Teddie's Terrific Tour - Dave's Dirty Deeds Done Dirt Cheap **Check CCCV website for full details**

We are planning a pre-Citin touring trip to Cowra in New South Wales – leading up to CITIN 2022.

For those folks who would like to have a bit of fun and enjoyment before CITIN 2022, we are inviting you to join us on "Helen's Happy Holiday / Teddie's Terrific Tour / Dave's Dirty Deeds Done Dirt Cheap", to be held over 7 days and 6 nights. March 19, 2022 @ 8:00 am - March 25, 2022 @ 5:00 pm

We are starting out from Melbourne and finishing up at Cowra.

Each day is planned to be doing some interesting things and seeing new places, as well as cementing friendships over shared morning tea and lunch each day, pre-dinner drinks, and dinners each evening.

There is no actual cost involved to be part of the group, but some extra excursions along the way will attract a modest amount of money.

Interstate people from all states (as well as Victoria) are most welcome to join us.

We are suggesting accommodation, but you are welcome to arrange your own accommodation elsewhere – your choice.

We are mainly staying in caravan parks with cabins.

You will need to book your own accommodation - I have let places know that people may ring to book - *please mention* that you are part of the Citroen car group.

At the time of writing, accommodation was available at the suggested venues.

I **strongly** suggest that you book it ASAP.

We are hoping for/planning a BBQ dinner in Canberra, I will need firm numbers for this evening.

For the second evening in Canberra we may be going for a restaurant meal – details to come down the track.

If you are interested in being part of the tour group, please contact the organising crew ASAP, ideally by email, otherwise by phone –

Ted and Helen Cross - crossfam@ozemail.com.au

Helen 041 935 69 63

Ted 0400 59 2208

Home phone (03) 9819 2208

For Sale — Citroen 1922 10 HP-B 2

08/21

Fully restored, dark green body, black mudguards Currently unregistered, previously on club plates.
Phone 0354431662—Darrell Tonkin—Bendigo Vic . \$27,000 Last Club Plate was 6-542

This is a 1922 single seat with a dicky seat Citroen all fully restored by myself .The total wooden body has been rebuilt using airdried Vie Ash and then stained .Where possible the original metal panels were used but new ones were made as required .

When the metal was completed it was fully assembled and then taken apart again before painting I made a steamer to bend the hood bows ,and then was fortunate to locate a very experienced tradesman who specialized in manufacturing hoods and seats in vintage cars, using only the very best materials He did a fantastic job and was happy to incorporate the Citroen emblem on the inside door panels and on the spare tyre cover.

The brakes have moulded linings and the drums have been skinned to suit.

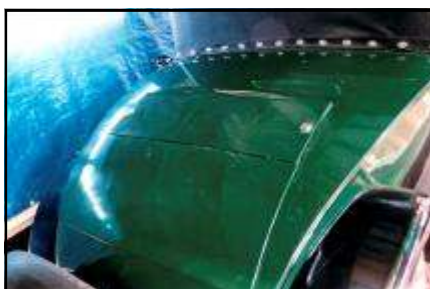
It has new tyres and tubes, a new battery and the original hand book.

There is also a Tech bookshop manual on B2 Citroens, another large book on early Citroen cars, and another on l0 HP Citroen B2 half track .

Attached to the car is a vintage spotlight.

Spares that come with the car include:

- 3 -B2 Motors
- 6 -Magnetos
- 1 -Citroen jack
- 1 -running board expanding rack
- 1 -B2 radiator S
- 2 -B2 oil cans
- 3 -B2 headlights and glass
- 1 -rubber universal joint
- Spare carburettor and parts
- 1 -Starter motor
- 1 -Generator
- 1 -Updated wiring diagram .



1999 Citroen Xantia Series II

05/21

I have a superb Xantia Series II 2.0L Auto for sale. Green with grey cloth interior all in very good condition.

53,000 ks from new, with service history from 1999. RWC supplied.

Only selling due to purchase of CX 2500.

Reg No: 1IC 7FP

VIN: VF7X1RFM7215683,

Engine No: REV3004723.

Asking \$6,000 or best offer.

Please ring Graham on 0418 390 053.

Citroen ID9 or DS19 Wanted

05/21

Wanted – Good body ID19 or DS19 (single headlight)

Firstly, keen to help club members with their cars to learn about the mechanics etc.

Looking for either a good car that has been restored and can be driven now. I will not be converting such a car, or:

A good panel car that needs restoration with all or most parts in tact. I would like to make it roadworthy in the short term and drive it as is now, with the view to doing a full resto in time and turning it into a daily electric driver. Keen to talk to anyone who is interested in such a project or have one of these cars.

Thanks, Shane

0474 423 356

shane@cloudaudiovisual.com.au

'D' Spares The Club has available a range of used parts, both body and mechanical, for sale to Club members.

Contact: GARTH CAMPBELL on 0406 427 657 for details.

Pleiades

Automotive Hydraulics (Australia) Pty Ltd

A.C.N. 087 262 388

« THE CITROËN HYDRAULICS SPECIALISTS »

Over 35 years experience

We recondition: - Steering racks, Pumps, Spheres, CX steering control units, Gas struts, Height correctors, BX strut etc.

We supply (Ex UK):- Corrosion resistant pipe, Flaring tools, Fittings, Seals & a wide range of Citroën Spares



IF YOU HAVE ANY CONCERNS BUT ARE UNSURE OF THE CAUSE, PLEASE RING FOR ADVICE



AUSTRALIA: -

PO Box 834 Childers Qld 4660

Phone/Fax (07) 4126 2502

Mobile: 0427 161 132

email: pleiadesauto@hotmail.com

UK:-

12a Brookside

Sawtry Cambs PE28 5SB UK

Tel/Fax: (001144) 1487 831 239

email" Pleiades.sawtry@gmail.com

www.pleiades.uk.com

Sales and Wants

2004 Citroen C5 Wagon

06/21

C5 – Wagon 2004 Ltd Ed 2.0 HDi Auto. Registered until 12/2021

The original owner won the car on “The Price is Right”. He never drove it but choose to sell it to me (indirectly). Basically I have owned it from new. VIN VF7DERHZE76530609. 160,000 Kms. Colour – Gris Iceland with matching leather seats.

Accessories include: Alloy wheels (although spare is steel with roadworthy tyre), factory towbar, headlight covers, bonnet protector, weather shields, dual sun visors for both front seats and after market tinted widows. Low mileage tyres, and recently replaced cam belt, accessories belt and water pump.

The vehicle was subject to a factory recall to check that the towbar was fitted correctly – which it was.

Some additional spare parts available (sold without roadworthy) \$2,200

Located in Edithvale

Contact Leigh Snell 9772 1810 or SNELL@bigpond.net.au

WANTED

7/21

Citroen Safari -

Late model preferred.
Please send details to:

Email:
keithjwherry@gmail.com

FREE

9/21

Heavy duty car ramps.
No longer required.

Free to a fellow CCCV member before I put them on Aussie Frogs. Pick up from TEMPLESTOWE.

Contact Glenn Drake
Email:
glenn Drake62@gmail.com



WANTED

8/21

DS windscreen and chrome chevrons for the boot lid wanted.

Contact Peter Bartlett

Email :
plbartlett5@bigpond.com

0414532774

WANTED

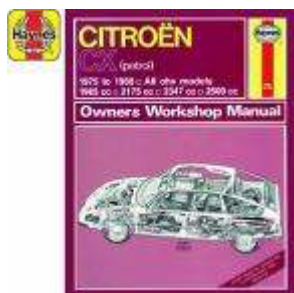
10/21

Workshop manual for CX 25 GTI Turbo.

Reasonable price paid.

Treasurer@citcarclubvic.com.au

0411 869 705



For sale for BX 16 Valve and Xantia:

7/21

New Air filter : \$50
New Distributor cap (from England): \$80
Used Steering wheel VG condition: \$200
Used Plastic Oil filler fitting (without cap): \$60
Rear indicator (Driver's side) needs repair but roadworthy : \$60
New Xantia Matched pair of doors locks (told last in Australia) with key : \$80
Contact Neil Smith on 0468 396 602

WANTED

05/21

Wanted: Left hand door mirror for GS 1220 Club sedan. Also genuine right hand mirror GS mirror too.

Michael Browning 0418 324 328

Sales and Wants

Email the wording you would like in the advert. If a vehicle is to be sold please include details including year, condition, history etc. VicRoads require the registration number (or VIN/engine number) and asking price. Limited number of photos may be included. Where the car is located is also useful.

The one-off payment of \$20 applies. When payment is confirmed the advert will be posted. If you are a CCCV member there is no charge. The ad will also appear in our next club magazine and will run for three editions, or longer by arrangement.

Email ad to: editor@citcarclubvic.org.au or ring (03) 97285526

Please send cheque, or money order, made out to "Citroen Car Club of Victoria" (include a note saying what the payment is for.)

Send to

The Treasurer
CCC
PO Box 122
Nunawading
Vic 3131

Payment can also be made by direct debit.

Account Name Citroen Car Club of Vic Inc.
BSB 633-000
Acct 120127907

Include your name as reference eg Smith Adv

All "for sale" advertisements are accepted in good faith and the Editor or CCCV committee members accept no responsibility for the accuracy or otherwise of their content.

ADVERTISERS NOTE:

When you have sold or disposed of the article you have advertised here, would you please advise the editor ASAP at photoimage2001@yahoo.com.au that you have done so, otherwise as we normally leave it in for three months prior to removing we run the risk of the newsletter ending up containing a number of "dead" ads; and consequently you will receive a number of unwanted calls. Thank you.

2005 Citroen Pluriel

5/21

Citroen C3 Pluriel 2005 for sale.
Silver.

Reg number 1RC 1FX

Expiry July 2021

125,000 km, New clutch- drives great. Roof not working

Everything else works well.

Factory roof racks and tonneau.

\$2900

Located in Aspendale, Vic.



Contact David Fletcher: 0425 826 138

DS bits no longer required

11/21

- Left track rod \$ 87-00
- Reversing lights with used mounting brackets
- \$200-00

Glen Drake: glenndrake62@gmail.com

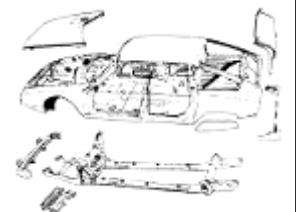


CX 25GTi Subframe Wanted

09/21

Wanted front subframe for CX25GTI, Series 2

Contact Peter Dimitrieski peterdimitrieski@gmail.com



Sales and Wants

Citroen 1984 CX2500 Gti

4/21

5 speed manual in excellent overall condition.
It has travelled 185,000 Kms and recently passed a RWC.
The car is totally original with all factory "add-ons".
I believe this car to be quite rare in Australia and not only great driving but also collectable.
Firm asking price is \$15,000-

Please ring Richard on 0417 316 060



FOR SALE

05/21

2007 Citroen C4 HDi Auto

C4 1.6 HDi Auto Black **Reduced to \$1,900-00**

188,000 kms VIN VF7LC9HZZH74658585

Runs well, mechanically sound. New battery. Low kms on tyres

Scratch on drivers door

Currently unregistered. Will require the windscreen to be replaced for roadworthy.

Maintenance record.

Located in Edithvale.

Leigh Snell 9772 1810 or SNELL@bigpond.net.au

Citroen SM & DS Parts

05/21

I have a quantity of Citroen parts that I wish to sell. I was a member of CCCV many years ago and have owned a DS 19 Special, a DS23 Pallas, a couple of CX 2400's and an SM.

Some of the parts are new and consist of:
Genuine SM headlight glass covers for European model.
New boot tail light reflector (long) and other sundry bits for SM.

DS front end wishbones.
DS front mudguard (driver's side)
DS rear mudguards both sides.
DS wheels & tyres, water pump, suspension cylinders and sundry parts.

I would prefer to sell all of the above in one lot but would consider separating.

Contact John on 0448 762 005



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For almost 30 years Shannons have been committed to providing tailored insurance products for the motoring enthusiast. We understand the passion and the sheer emotional attachment motoring enthusiasts have for their special vehicle - even Goggomobils.

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So call Shannons for a    quote on 13 46 46.



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stock and prices.*



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ABN 74557610508

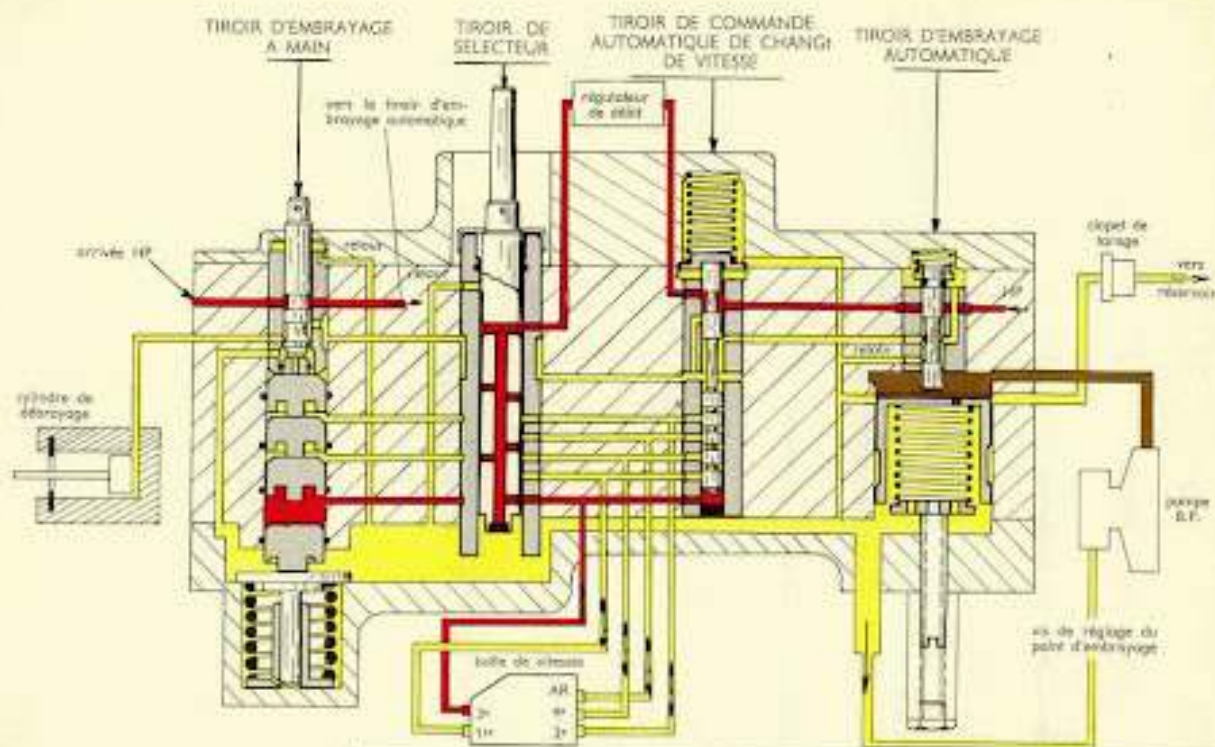
\$14.00 for 1000 ml container

Cheque or money order (payable to CCCV Inc.)

Note: Purchasers must receive a receipt.

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
Somerville	John Parsons	5977 6115
Ashburton	Robert Belcourt	9885 4376
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Warrnambool	Roger Wilkinson	5567 1037
Hurstbridge	Adelino de Silva	0419 886 480

Also available from club shop at club meetings.



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