



Peugeot Car Club (Auckland)

# Peugeotex<sup>©</sup>



*Volume 37, #8, September 2023*



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Front cover – Donald Webster's 172BC at the AGM  
Above – Clyv Robins, Armstrongs Sales Manager

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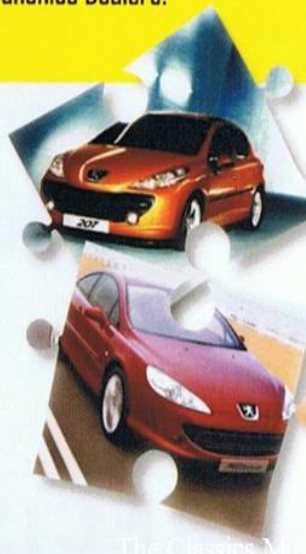
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## COMING EVENTS

**peugeotclub.org.nz**

**For updates on events, keep  
an eye on our website  
peugeotclub.org.nz**

October 7– Visit Don Webster's Car  
Collection;

October 23-28 - Targa New Zealand

November 12 – Pride of Ownership

**2024**

February 11 – Ellerslie Car Show &  
Concours d'Elegance

### THOUGHT FOR THE MONTH

Integrity is a disease and you can only  
catch it from someone who has it.



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Peugeotex is the monthly magazine of the  
Peugeot Car Club (Ak) Inc. The Club accepts no  
responsibility for any views expressed in it.

## PRESIDENT'S RAMBLE

I firstly want to apologise. I think I may have still been having a jet-lagged moment - or maybe a senior moment as I am aging (but still a little way off my Winston Peters Gold Card qualification), but I misled both you and the editor with last month's magazine cover. I informed Jeanette that the pictured 3008 was in Dubrovnik, it wasn't; it was in fact in Račišće.

The AGM has now been and gone. We got through a lot, but we didn't manage to complete reviewing the revised constitution so this will be ongoing work for the committee and our tame lawyer – Donald Webster.

Can I suggest that you show your appreciation to Donald by coming and viewing his magnificent collection of Peugeots on October 7, at 16 The Knoll, Greenhithe at 11am. We are expecting to see a number of racing and road 106s. No doubt Donald can tell us about all of the modifications they have had to have undertaken, as well as what hasn't been required. We will hopefully see his 1925 172R

again as well as potentially his 404, 504, perhaps a 406 Coupe, 508 and who knows what else. If you are there, perhaps individually thank him for both the viewing and for the time and expertise he has put into the constitution.

As I write this I suspect our September Trivia Night is going to be another failure. I am, more than happy to try it again, but maybe someone needs to come up with a date that suits, or is it the location? There are plenty of Trivia Nights around Auckland to try. Let me know (or Jeanette so she can spread the word) if you have another proposal.

On the subject of alternatives let us know if there are any other events/locations you want us to try and organise.

Coming up we do have the Pride of Ownership; prepare and compete. Note I won the "05" trophy last year so you don't have to have a pristine car to compete.

I will also be the contact and organising our participation at the Eilerslie Concours Show next year. It is to be held on Sunday 11<sup>th</sup> Feb, so, if you are interested let me know as soon as possible. I am hoping we can get a few more cars, but the

sooner I know who wants to be there the better chance I have of getting a large enough area allocated to us - so just do it. Again my car will be there. Although it is a "Concours" show your car doesn't have to be pristine, it just needs to be there. It is a long but great day for the displayers. Let's have some more next year. Get hold of me before November if you are interested, book the date in your diary.

I hope that is some encouragement for you all. Those of you out of town, and there are a number of you, please consider joining us in Greenhithe (and the later aforementioned events too). It would be good to see you. See if you can fit it in!

Finally on a personal opinion, I hear too many of us (New Zealanders in general) complaining about the Government, the opposition, or whoever else in politics. All I can say is "please vote", no matter whether it is to retain the status quo or to herald in a new government, just have your say with your vote – whatever it may be.

*Brent*

## BELIEVE IT OR NOT

Two expressways outside of Wellington could be getting their speed limits raised to 110km/h as Waka Kotahi NZ Transport Agency undergoes a speed management review.

It's looking at raising the speed limit on the Mackays to Peka Peka and Peka Peka to Ōtaki expressways next year.

However, the speed limit can't be raised on Transmission Gully as the road is not yet finished.

Director of regional relationships Emma Speight said a speed management technical review was being done and they hoped to decide on speed limits in early 2024.

"The review, along with public consultation, will see if it is appropriate to increase the speed limit on these expressways without compromising driver safety. We can consider increasing the posted speed limit when a road is designed and constructed to modern safety standards," Speight said.

The expressways were completed between 2017 and 2022 and include safety features such as median and shoulder barriers, two lanes in each direction and the removal of crossroads and tight curves.

These measures would reduce the risk of serious collisions.

## COMING EVENTS

<b>October 7</b>	Club visit to Don Webster's Car Collection, 16 The Knoll, Greenhithe at 11am; with a rain check day of Sunday 8 <sup>th</sup> .
<b>October 23-28</b>	Targa NZ
<b>November 12</b>	Pride of Ownership; any suggestions for a venue?
<b>2024</b>	
<b>February 11</b>	Ellerslie Car Show & Concours d'Elegance



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## JEANETTE'S JOTTINGS

A week in Ancient Egypt comprised of 10 days. Examining records from Deir el-Medina, the village where (non-slave) artisans who worked on the tombs in the Valley of the Kings lived, workers officially toiled away for eight hours a day with an hour's break for lunch at midday. Sounds pretty reasonable – and familiar – but they actually did this for eight days before resting for two days.

Isometric exercises involve poses that hold the body static, engaging muscles but neither lengthening nor contracting them. They look deceptively easy and are often associated with physiotherapy and rehabilitation from injury, but they're challenging moves that build strength and endurance and now, it seems they might also be the most effective moves for lowering blood pressure.

New seismic studies suggest that the Earth is not just a solid ball of iron, as has been assumed, but might have pockets of liquid iron throughout.

China has stolen a march on the rest of the world by successfully launching the first space rocket powered by liquid methane and oxygen. The Suzaku-2 Yao booster successfully lifted off from the Jiuquan Satellite Launch Center in China on July 12.

If an older person is already weakened by a medical condition, then spending all day in a hospital bed is only going to make them weaker. Research, however, suggests that as little as 25 minutes of walking per day makes a big difference.

Lighter colours are cooler than darker ones, which can limit the practical palette choices for your clothes, car or house. A new material, inspired by butterfly wings, can produce vibrant colours while reflecting 100% of light to keep them cooler.

NASA and NOAA have confirmed that July 2023 was the hottest month in recorded history, which goes back about a century and a half.

Russia has re-entered the 21st century race for the Moon with the launch of its first lunar mission in 47 years on August 10<sup>th</sup>.

Anesthesiologists in Canada and the US have sounded the alarm on the new class of weight-loss drugs, warning that they can increase the risk of serious complications for patients under sedation on the operating table.

Scientists at Stanford have created a new type of paint that passively blocks heat from entering or escaping, and can be made in a range of colours.

40% of Czech men go bald - compared with only 29% in NZ.

The atomic clock at Greenwich is only expected to vary by one second in thirty million years.

Button batteries were invented in 1952.

## PRESIDENT'S REPORT

### 44<sup>TH</sup> AGM

### 13 August 2023

As we have what I consider to be more important business to achieve, both the prizegiving and a review of the constitution, in what may be a limited time I am going to make this brief.

The club has made a loss this year of approximately \$800, in part due to decisions made at last year's AGM to hold club fees in what in hindsight has been a year of inflation, and also in part from decisions intentionally made by the committee, we as a club donated \$300 to the Federation of Motoring Clubs in assisting them in setting up a nationwide survey to attain data and lobby the government on behalf of Car Clubs and what they contribute to the economy. Something that in the long term should benefit most of us and future members of the club.

Club activities have been a mix of success and failure this year, we had a good turn out to the show and shine, to the Brit Euro car show in Pakuranga, last years AGM and prizegiving and we have had a number of independent articles sent through by members to the magazine. We also made a return to the Ellerslie Concours, a show we haven't exhibited at for a number of years, though this wasn't without trials and tribulations as many of you will know from the article I wrote about it earlier in the year, the attendance by the few of us also resulted in a contribution of close to \$300 in the

club's funds, a welcome result. The failures are that we didn't manage to hold a navigation trail, for a variety of reasons we haven't achieved a meet up with the Wellington Club and we had to cancel the Trivia Night for a lack of participants, please note we are going to try again in September – that's next month. The Gymkhana may have also been a failure, but I can assure that the three of us that did make it had a thoroughly good time.

I would also like to thank Stiaan and his predecessor Lukas for agreeing to host us here today, it is much appreciated, and also in the order they appear in the Magazine to all of our advertisers, Euroline, Euro Motorworks, Auto France, Apex Auto Centre, Southern Autos and Armstrong Motor Group. Your support is appreciated.

*Brent*

## BRIEF 44th AGM REPORT

**PRESENT;** Neil Andrews, Liesje Bradley, John Cooney, Andrew Corbett, Ray & Ann Cotterill, Brent Druskovich, Matthew Ensor, John & Jeanette Grant, Don & Dawn Hadfield, Peter Hagglund, Jayden Hardie, Mark Heimgartner, David Holmes, Don Howarth, Dennis & Rosalind Lowe, Graeme Pooley, Mary Pullman, Ian Robinson, Kaelem Swanepoel, Peter Vuletic, Donald Webster, Buster West-Hill, Soo Land Wong

**APOLOGIES;** Dave & Dorothy Duirs, Alex & Dylan Grant, Kevin Hardie, Nathan Strawbridge, Paul West, Greg Winkley.

A full copy of the Minutes will be emailed to all members.



The meeting was preceded by a 15 minute talk by Clyv Robins about the current range of models available and the 'Clean Car Clean Out' programme. The committee was re-elected en bloc with the addition of Liesje Bradley. The greater part of the meeting was concerned with discussions about the future of Peugeottex amid rising costs and after considerable debate it was agreed to raise the club's annual subscription by \$10 to \$60 a year.

Donald Webster, one of our three remaining foundation members, wrote our original constitution, so it was appropriate that he explained what changes were needed to comply with the new incorporated society rules which come into effect next year. As this was a considerably lengthy process and we ran out of time, approval was given for those changes discussed and it was moved that the committee would consider the last ones remaining and if necessary hold a Special General Meeting to approve them – or possibly leave it until the 2024 AGM which should be before the deadline.

The Trophies and Certificates as listed earlier in Peugeottex were awarded – although several winners were not physically present.

The afternoon tea we had been promised did not eventuate – for reasons as yet unknown.

However we thank Armstrongs for the use of their premises and the opportunity to display cars including

Donald Webster's 172BC, two 404s and a 306 convertible . **The Trophy Table**



## TREASURER'S REPORT 2022-2023

Our Income for the year, at \$3,350.00 was about \$400.00 more than last year and included \$276.00 from us attending the Ellerslie Concours.

Our Expenses were \$4,150.00 which was higher than last year but included a one-off Grant, of \$300.00, to the Federation of Motoring Clubs.

The printing of our Magazine increased by \$400.00 and our Public Liability Policy increased by \$210.00

These costs, in line with general price increases, resulted in a loss of \$803.63. For next year we have increased our Advertising rates which should help.

We have \$625.00 in the 00 bank account plus \$3,704.00, receiving good interest rates, to give us \$4,329.00 in cash as well as \$550.00 in pre-paid envelopes.

As a Club we are in healthy position, going forward.

*Steve Cornwall, Treasurer*

# RUC FOR EVs?

Story by Phil Pennington

Documents show the government expects problems ahead over road user charges (RUC) on electric vehicles (EVs), amid talk of an "e-RUC for electric vehicles".

One predicts growing non-compliance with road user charges and debt for customers entering the system.

Others - released under the Official Information Act - said the road user system as it is could not cope, suggesting strategic changes to road user charges to deal with financial pressures as part of a wide regulatory overhaul of transport.

EVs have been exempt from the charges to encourage people to buy them, but this has eaten into revenue raised at the fuel pump for fixing roads.

*"Electric vehicles currently exempted but [are] expected to be added to the system in April 2024,"* said a May 2023 Waka Kotahi document.

As things stand, that would see owners begin to be charged \$76 per 1000km, to add to the \$2 billion in RUC raised from other motorists, mostly truckers and diesel car owners.

However, the documents also show officials have been investigating what to do next as they struggle to modernise the whole regulatory system.

*"Environmental regulation projects include investigating... low-emission Road User Charges changes, such as e-*

*RUC for electric vehicles,"* said a Waka Kotahi document last month.

Most of the three documents released by NZTA to RNZ were blanked out, and officials at the Transport Ministry also remained tight-lipped about road user charges.

However, a short unredacted part of a May 2023 Waka Kotahi document forecast problems - *"an increase of non-compliance and debt for customers entering the RUC system"*.

*"Current resources are set up to manage the existing RUC system,"* it said. *"There will not be enough resource to cope with the increase in education, engagement and enforcement needed."*

ALSO

Transport Minister David Parker has admitted it is unfair that electric vehicle road users are getting a free pass from road user charges.

The Government has exempted EVs from the charges to encourage people to buy them as they come with a higher price tag than petrol vehicles. However, since the Green Car Discount has made EVs more affordable, owners are scheduled to lose their exemption from road user charges.

Parker confirmed the charges will come into effect in March next year unless the Government delays it.

*"Cabinet is yet to make a final decision on that but it's imminent and you'll know that before the election,"* he said.

The National Party has also confirmed it would make EV drivers pay road user charges if elected.

## WHAT HAPPENS TO DEAD EV BATTERY PACKS

A common concern about EVs is the fate of their battery packs once their operational lives conclude. While a landfill may be the first idea brought to mind, several companies are currently working to tackle the problem of EV and lithium-ion battery recycling. One of the most prominent is a firm called Li-Cycle, founded in 2016.

Like all lithium-ion batteries, a battery in an early Nissan Leaf or an old iPhone will be encroaching on the end of its service life. Eventually, the time will come when these batteries have degraded significantly or had a fault, requiring a replacement.

This raises a valid question: what happens to the old, partially (or completely) unusable batteries? With new recycling techniques being implemented, there are now ways to salvage these batteries and even utilize the components in future battery applications.

Lithium, cobalt, copper, and nickel are contained inside the batteries. As pure elements, they are able to be recycled an infinite number of times. Li-Cycle is a company capitalizing on this chemistry.

This firm has an Arizona-based manufacturing facility that recycles all types of lithium-ion batteries. Whether it's a Tesla Model S battery pack or a battery pack for an electric leaf blower, Li-Cycle can recycle all of these thanks to a proprietary "water-based solution."

In other words, the company doesn't melt the batteries down; rather, it uses the

solution to separate all the battery pack components out into three containers. At the end of the line, the three bags contain plastic scraps, aluminum and copper, and a bag of "black mass."

The black mass bag contains lithium, nickel, and cobalt. After the facility collects the materials, the black mass containers will be shipped to a different location to be separated further.

From there, manufacturers can produce lithium-ion battery packs with these recycled elements. Effectively, Li-Cycle's work "closes the loop" with the life cycle of a lithium-ion battery.

Li-Cycle says that its Arizona facility can process 18,000 tons of lithium-ion batteries every year. Moreover, the firm claims it can recycle up to 95% of the batteries' resources.

Source: JerryRigEverything, Li-Cycle

## IMPROVED BATTERIES

The Chinese company CATL launched what it calls the "world's first 4C superfast charging LFP battery," the Shenxing, at its 2023 product launch event. With a total range over 700 km (435 miles), it's also designed for exceptional performance in freezing conditions. CATL is the world's biggest EV battery manufacturer, selling packs, cells and technologies to a range of global OEMs including BMW, Daimler, Honda, Tesla, Volkswagen and many others, including most of China's biggest automakers.

This is the second groundbreaking battery the company has released this year, the first being a mass-production "condensed battery," targeted at the electric aviation world, that holds twice as

much energy per weight as a Tesla Model Y battery at a remarkable 500kWh/kg. And that's not to mention the monster 140-kWh "Qilin" battery CATL supplied last year for a special edition of the Zeekr 001, making it the first production electric car with a range over 1,000 km (621 miles).

Sheer size and capacity is one way to alleviate range anxiety, but the new Shenxing battery attacks from the other direction, promising to charge up so quickly that a flat battery will be no more of an impediment than a flashing fuel light. To safely pump electrons in at that crazy 4C rate, CATL has designed a "fully nano-crystallized lithium iron phosphate cathode material to create a super electronic network, which facilitates the extraction of lithium ions and the rapid response to charging signals."

"Fast ion ring" technology has been deployed on the graphite electrodes, creating more metaphorical freeway lanes and shortening travel distances for the lithium ions as they travel toward and away from the active surfaces. And a new "superconducting electrolyte formula" reduces viscosity, helping ions move charge more rapidly.

CATL says the battery will charge from 0-80% in 10 minutes, unlocking up to 400 km (249 miles) of driving range in a single, very quick stint on a fast charger. That's at normal temperatures; take things down below freezing to -10 °C (14 °F), and an 80% charge using built-in battery heating will take you 30 minutes. The company says that low temperatures won't affect the battery's ability to deliver its full power to the wheels if needed.

CATL says it expects the Shenxing battery to be in mass production by the end of 2023, but is yet to nominate which M's EVs we're likely to see it appear in first.

## CLASSIC COVER ELLERSLIE CAR SHOW 11 FEBRUARY 2024

We have just received our invitation to participate in the 2024 Ellerslie Car Show at the Ellerslie Racecourse, 11am to 4pm on Sunday 11<sup>th</sup> February.

Anybody desirous of displaying their car /cars should contact Brent as we need to confirm our intention of participating. [ph , 09 638 9421 brentdruskovich@gmail.com]

The Carshow Committee recommends that interested parties follow their website as listed below to keep uptodate with plans.

<https://www.facebook.com/EllerslieIntermarque>

### UK HEADLINE

A unique crash in the UK involved a car transporter full of exotic supercars, including a Lamborghini Aventador, Mercedes-AMG GT, two Ferrari F430s, Audi R8, Aston Martin DB9, Nissan GT-R, BMW M3, Bentley Continental GT, and Jaguar F-Type. The combined value of the cars in the crash is expected to be well into the millions (the Aventador alone is worth in excess of \$500,000), not including the truck or trailer. Most of the cars appear to be repairable. Thankfully the transporter driver escaped with just minor injuries.

A video of the accident can be seen on <https://www.stuff.co.nz/motoring/132824832/transporter-carrying-10-exotic-supercars-flips-over-in-the-uk>

# 1Stroke INNengine

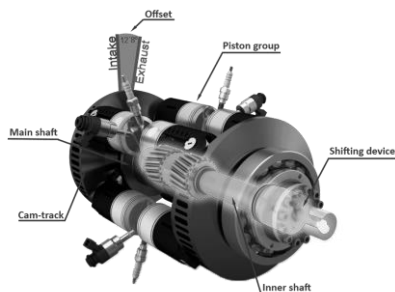
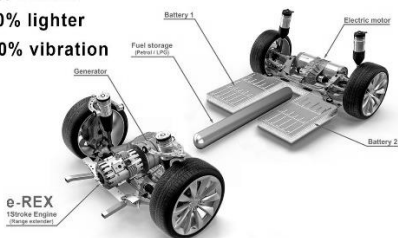


## e-REX

55% smaller

70% lighter

0% vibration



INNengine, a startup company based in Spain, is showcasing a "one-stroke" engine that works as an opposed piston with a wavy twist.

At INNengine we have patented and developed two disruptive engine concepts: the e-REX and the REX-B.

Both e-REX and REX-B have INNengine patented 1Stroke engine technology. This means they have 4x more power events per revolution than a conventional 4Stroke and twice more than a 2S.

The e-REX motor is 55 percent smaller and 70 percent lighter than any four-stroke ICE, making it an ideal choice for range-extender applications. The firm says that an e-REX equivalent to a traditional 2000cc engine weighs just 77 lbs (35 kg). *"This allows you to have a full range extender powertrain (including motors, alternators, batteries) within the same space and weight of a traditional engine saving energy cost by up to 40%."*

The e-REX is 55% smaller and 70% lighter than any 4-stroke ICE, thanks to a design that is devoid of crankshaft, valves, camshaft, or cylinder head.

This is made possible by an opposed-piston design with four pistons on each side for eight. The opposing pistons share a combustion chamber and are held together by fixed rods. These rods press on plates with an oscillating wave-like shape, allowing the rods to push and release the pistons in a smooth, synchronized action. Having a variable compression ratio on demand means that the "engine and its combustion chamber does not have to be optimized for a particular fuel's energy release conditions but can be configured to work with many different ones."

The engineering on e-REX also makes sure that the users are greeted with a smooth running motor as *"moving parts do so reciprocally and in equilibrium at all times in all 3 planes, cancelling out one another."*

## 2023 Winter Woollies Rally

On Saturday 1st of July the Wellsford and Warkworth Vintage Car Club held their annual winter rally around the back country roads of the Warkworth and Wellsford areas.

Our Northland weather, as with much of the North Island, was pretty bad this winter so come the week of the rally Dome Valley was closed again by another major slip and we had booked our motel on the wrong side of Warkworth.

There has been much finger pointing over the extension of the Puhio to Warkworth Motorway through to north of Wellsford.

Documents available through NZTA show that as at September 2017 the previous Government had not authorised the Dome Valley Bypass. The design had not been completed, land had not been purchased and funding had not been allocated. There was still debate in mid 2017 as to whether the top of the Dome Valley bypass would have a 700 metre tunnel or would there be longer steeper gradients.

The present safety improvements have been a quick fix with a wider road and median barriers where appropriate as the 2017 Public documents show the that extra section of the Motorway was not going to open until 2026 at the earliest.

Jen and I talked about our plan for the rally start at 9 am in Warkworth so we were up and on the road by 7am which would give us plenty of time to

find a route south. Fortunately Highway 16 was fully open with minimal weather damage so our run was simple via Cleaseby's Hill and West Coast Road, through Woodcocks to the start in Warkworth.

This year there were just over 30 entries from the Upper North Island, including a 1940 Citroen Traction to give our 1951 Citroen some company. Northland VCC was also represented by Colin and Sandra Ashby's 1930 Ford Model A, Ernie and Beryl Dawes' 1966 Wolseley 6/110 and Dave and Sue Dreardon's 1971 Austin Westminster.

We were sent off on the morning stage at about 9am and headed into the wilds of the Tapora area, west of Wellsford. There was a "hick-up" just north of Tauhoa on Highway 16 where a sign said "Port Albert", Wharehine Road, so a few cars turned left down the hill on a gravel road. The instruction actually said, "left" at "Port Albert Road" which was about 4 and a half miles, 7 km, further north along Highway 16.

We continued on to the correct instruction, over Cleaseby's Hill and down towards Port Albert. About 20 minutes later Jen and I came to the intersection of Wharehine and Run Roads where there was a group of bewildered entrants who were "lost".

A short while later we came to the Minniesdale Chapel which had been built from Kauri by the Albertland Settlers in 1867. What a marvellous location for a church and cemetery with wide views across the Kaipara Harbour and surrounding hills. The Chapel, with a Category 1 Historic Places status, has been rebuilt and is a popular wedding venue.

After some more navigation we came to a huge area of established and new avocado orchards before lunch at the Tapura Hall which is next to the Tapura school who catered lunch for us.

Because the Dome Valley highway was closed a quick revision was apparently made to the afternoon route so we travelled further east to cross over the Matakana Hill and back to Warkworth. I said to Jen that I thought that travelling home to Paihia back over the Matakana Hill, northbound, would be a challenge as most of the up hill would be in first gear, straining the engine and holding up large numbers of vehicles.

We finished the rally in Warkworth and after extending a few farewells we started our journey home.

In one day we had travelled much of Highway 16, over Cleaseby's Hill, 3 times northbound and 1 time southbound.

We had a refuel stop at Wellsford and then we travelled back to Paihia with a couple of driver changes in time for dinner, just after dark.

During the event we had a bit of trouble starting at steep intersections and our Citroen felt a bit sluggish on the hills. The engine wasn't overheating, there were no strange noises, the fuel consumption wasn't excessive, and the ignition was running perfectly so I said that there was something else wrong. We agreed that it was time to get to root of the problem.

Timing, ignition, fuel, all OK; it must be lack of compression in a cylinder!

I purchased, online, a compression tester that would fit easily down the long sparkplug holes and duly psyched myself to make the "test".

With pencil and paper ready, sparkplugs out, compression tester in my hand, Jen with her left hand at the starter button and right foot hard down on the throttle pedal, we started the compression test.

Cylinder 1, 115 psi, cylinder 2, 120 psi, cylinder 3, 120 psi, cylinder 4, 90psi; diagnosis made, sparkplugs replaced and bonnet down.

We phoned David Jones at Auto France, near Pukekohe, and have booked Fifi in for an operation in mid August. I decided that due to my lack of knowledge on working on an engine with wet liners and a lack of parts and local expertise the job was best left to the expert.

Anyway we again enjoyed the well run Winter Woolies and look forward to some "touring" later this year.

*Jen and Steve Cornwall  
Paihia*



## CONTI CITYPLUS CONCEPT TIRE

Continental has unveiled a new concept tire at the IAA Mobility show in Hanover, Germany. Called the Conti CityPlus, it takes an unusual approach to "tire efficiency," focusing on urban use rather than highway driving.

The Conti CityPlus is optimized for use in stop-and-go traffic, where deformation of a vehicle's tires occurs as torque is applied when either braking or accelerating. These tire deformations are most prevalent in heavier vehicles such as EVs.

The Conti CityPlus concept reduces such deformation by adding rigidity to the sidewalls through a stiffer carcass. Specially formulated fillers, rubber, and polymer compounds aid in reducing deformation, and also improve the performance of the tire's contact surfaces. These surfaces are further enhanced with a tread pattern that has less spread and more traction, to make stops quicker and acceleration more controlled.

The Conti CityPlus reportedly boasts a 10% improvement in tire efficiency, which could result in a 3% boost in range for an EV. That equates to 0.6 kWh saved over 100 km (62 miles) of driving in stop-and-go driving.

Continental has not given a production timeline for the Conti CityPlus concept. It will need to undergo EU safety testing before being commercialized.

Source: Continental



## PEUGEOT 172BC

Peugeot 5CV was a popular name for several models of the Peugeot Type 172 between 1925 and 1929.

The first of the 5CV series was the Type 172 BC, itself a new model, though similar to the Quadrilette, which was still sold through 1924. The Type 172 BC carried over the 667 cc engine from the Quadrilette, but with power up to 11hp (8.2 kW). It debuted at the Tour de France automobile in 1924. Between 1924 and 1925, 7084 examples of the 172BC were built.

Small styling changes and a new 720cc engine changed the



Type 172 BC into the Type 172 R in 1926. 27,199 were built.

Donald's actual car has been restored and ended up with the 172BC body and the 172R engine.

## RISE IN EV SALES

China has been the biggest growth market for refined oil products for more than 20 years.

According to CNEV Post, Chinese new car buyers are now choosing "new energy vehicles" (NEVs, meaning battery-electric and plug-in hybrid cars) at a rate of 37.8%, a percentage which has rocketed up from 30.0% in 2022, 15.5% in 2021 and just 5.4% in 2020.

While Scandinavian countries like Norway (87.8%), Iceland (56.1%) and Sweden (56.1%) led the world for EV adoption in 2022, China sells somewhere around 10 times more EVs than all those three combined, and there's a lot more room for growth in the world's second-most populous country, since as of 2022, less than 5% of cars on Chinese roads were NEVs.

So China's largest oil company Sinopec is already seeing a drop in demand, from which it doesn't expect to recover. Previous predictions placed peak demand somewhere in 2025, but at a conference in Zhengzhou in August, Bloomberg reported that

one Zhou Yan, from Sinopec's retail sales division, said EVs were already displacing some 15 million tons of Chinese oil product sales in 2023, and that the company is forecasting that 2024 and subsequent years will see declining demand.

According to the International Energy Agency, Chinese demand accounted for more than 70% of global oil market growth in 2023, so while global oil product sales are at record highs of around 102.2 million barrels per day in 2023 (up around 2.2 million barrels per day over figures from 2022), and gasoline for passenger cars is only a percentage of total oil product demand, it'll be interesting to see how China's rapid EV uptake affects predictions for global peak oil demand.

The IEA released its forecast in June, estimating that peak global oil use for transport will arrive around 2026, but strong demand from the petrochemical and aviation sectors would continue to support overall market growth, albeit at slower rates, at least as far out as 2028.

A global oil demand peak, then, could arrive before the end of the decade. And unexpectedly rapid transitions to cleaner vehicles like what we're seeing in China, as well as continued increases in fuel economy for new fossil burners, could bring that date closer.

Source: Bloomberg

## 508 PSE SW

If you are interested in buying a facelifted Peugeot 508 PSE, it would be worth reading the full review in the July 2023 issue of AUTOCAR.

Here are a few quotes:-

"...very literally a facelift. there are no changes to the mechanicals of this beefy, plug-in hybrid executive, only stylistic ones... the whole fascia is new, with 'three claw' LED running lights, slimmer headlights and a gloss black grille being chief among the changes. But the most significant change is actually inside where the dated infotainment has been replaced by a 10.01in touch screen, complete with new menu layout and high-def graphics...New i-Connect Advanced software being a more responsive screen, better graphics and, crucially a much more logical menu layout..."

But while the 508 has undeniable appeal for the way it looks and bludgeons its way down the road, it remains frustratingly difficult to justify. The saloon cost nearly £54k and the SW over £55k... Peugeot has long been moving itself more upmarket, but it may have overestimated itself with this one... This car is such a characterful and fun thing... an option you would be advised to avoid in favour of the better and cheaper alternatives."

## SOLAR-PANEL- COVERED HYBRID TRUCK



Designed to reduce the amount of fuel used by haulage companies, the 560-hp plug-in hybrid truck has an 18-m trailer with 100 sq m of 13.2-kWp panels giving it the equivalent solar-surface area of an average house equipped with similarly powerful 13.2-kilowatt-peak panels.

The truck uses new, lightweight tandem solar cells, that are based on a combination of Midsummer's solar cells and new perovskite solar cells, and generates an estimated 8,000 kWh annually when operated in Sweden. The research truck's batteries have a capacity of 300 kWh, being 100 kWh on the truck and 200 kWh on the trailer.

This offers a prolonged annual driving range of up to 5,000 km (3,100 miles). Countries with more overhead sun hours can expect more readily available solar energy, up to double that energy contribution for countries close to the equator.

Developed by Sweden's innovation agency, Vinnova.

## PUTTING AN END TO POTHOLES?

An ambitious project out of the University of Surrey aims to stop potholes from developing, using super-efficient ground source heat pumps and phase change microcapsules... In 2022, England spent £1.2 billion (about US\$1.5 billion) repairing potholes – and lord knows what they've cost the country as a result of an estimated 5,000 pothole-related accident injuries that have happened since 2018.

Three elements are needed for pothole formation. The first is a surface crack – these form and expand over time due to traffic. The second is water, and the third is the freeze/thaw cycling. In winter, it gets down to about -10 °C (14 °F) in the UK, so that water freezes and expands, pushing open those cracks. In spring, when the temperature rises again, that water thaws and contracts...

The system which has been designed works roughly like this: during road construction, workers will lay a series of slim, 10-mm-diameter plastic pipes across the road, maybe every 5-10 m (16-32 ft). Beside or below the road, they'll dig down maybe 5-10 m into the subgrade soil, and create more loops of piping down there. The surface loops and the underground loops will interface at a heat pump.

All the heat pumps really need to do is gently circulate water, with an antifreeze mixture, around the loops. And not continuously, either; once enough heat is stored underground, they can be switched off, and they won't need to be switched back on until the road temperature drops to a couple of degrees above freezing...

They say a single set of these underground coils and heat pump could likely handle more than a 100 m (330 ft) length of road. *"Every unit of electricity you use to run that heat pump, moves four units of thermal heat..."*

The last task is to do a full scale field trial with the Transport Agency. *"In that field trial, we'll embed some of these pipes and a pump under a road segment of maybe 20 meters (66 ft). We'll monitor the performance for a whole year, and that'll tell us if we've captured enough heat through summer and warmed the road properly in winter. The critical things we'll be looking at are whether we can keep the road surface from freezing, whether our ground loops are deep enough, do we need more phase-change material..."*

Will it be economically viable to roll out across the United Kingdom? Well, that depends on a number of factors that'll be examined through the project. *"We haven't done a cost analysis and I feel like we couldn't do one until the field trial,"*

Source: University of Surrey

## FOMC MARKET SURVEY REPORT

Greetings everyone

A brief, but important note to you all to convey our sincere thanks for your financial support for the FoMC's important Market Survey Project. I'm writing this note to you all, a great mix of many of our member clubs and a number of external supporters and funders, to let you know that the in-field research phase of the Survey was completed last week, and the FoMC project team are now waiting for our Research Agency to pull together and analyse the vast amounts of data collected, and to report back to us in the next few weeks. The survey research

itself was extensive, with many of the surveys (7 separate surveys in total) all receiving good responses, many of which far exceeded the Agency's expectations.

Ahead of receiving of the actual results we now working on the first draft of the communications plan to publicise the results and outcomes public in early September, and we're hopeful of some great headline outcomes which will make NZ really sit up and take notice of just how substantial and important our collective automotive interests and passions are!

Again, our thanks for your support and energy for the FoMC Project Survey.

Best regards  
*Garry Jackson*

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## KATHERINE JOHNSON; 1918-2020

She was an American mathematician whose calculations of orbital mechanics as a NASA employee were critical to the success of the first and subsequent U.S. crewed spaceflights.

During her 33-year career at NASA and its predecessor, she earned a reputation for mastering complex manual calculations and helped pioneer the use of computers to perform the tasks. Johnson discovered the path for the Freedom 7 spacecraft to successfully enter space in 1961, and later for the Apollo 11 mission to land on the Moon in 1969.

She often went unrecognized by her male colleagues and faced racial discrimination.

## JOKE OF THE MONTH

Q] Do you know what's the best air to breathe if you want to be rich?

A] Millionaire.



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