

Ottawa



Jaguar Jottings



Jaguar I-Pace

Electric SUV

March 2020 - ottawajaguarclub.com

"A Technical View of Electric Vehicles" – See page 5

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Membership with the Ottawa Jaguar Club includes membership with the Jaguar Club of North America, a *Jaguar Jottings* monthly newsletter and JCNA's bi-monthly magazine, *Jaguar Journal*. Make your cheque for \$60.00 payable to: **Ottawa Jaguar Club**. And mail it to the Membership Director, Jay Hunt. 613-521-6839 (leave message)

Please do not mail cash.

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Presidents Musings – March 2020

Well another month bites the dust. Over 20 members enjoyed the Valentine breakfast / brunch on February 9th. Josee Dubois did a great job organizing the event and

providing some extras for the ladies. We also had a large contingent of Jaguar Club contestants at the Triumph Club's annual dart tournament. In the final, an MG Club team was victorious.

We have had a lot of behind the scenes planning for upcoming events. Phil Karam is planning the technical sessions that will take place once warmer weather rolls in. Paul Balharrie has taken on the task of the spring drive in May. It will involve a trip to the British Car Event in Hudson Quebec. We have our Family Day / Concours in July as well as the All British Car Day later in July also. Mike O'Brien has taken

the lead for an interclub time / distance Rally in August.

A reminder of our Club dinner meeting March 18th at Stacked Smoked Meat & Grill on Bank Street.

Josee Dubois and Lyse Clarke have also been busy planning our Roaring 20s Spring dinner for April 18th.

The new Jaguar dealership has opened on Hunt Club Road and I am trying to arrange an introductory Club visit. I am also looking forward to the upcoming driving season, Club events and meeting with members.

Lee

Mark Your Calendar !! April 18th

THE SPRING DINNER

Our Spring Dinner Party is getting closer!! The Roaring 20s, 2020 - Speakeasy!! Can you feel the heat!

We have retained the venue for our Spring Dinner. It will be held at Robbie's Italian Restaurant in their basement hall. What more appropriate for this Speakeasy Party! Robbie's is located at 1531 St-Laurent Blvd.

Menu and costs are now being concluded. So stay tuned!

We will be sending out the invitation, menu, costs and more information about the event via our Goggle Group email, Facebook and our next Jottings issue.

You can reserve your place now. Please send your confirmation to ojcactivities@gmail.com

There will be time period music, trivia and raffles. Even though the Jaguar car started in 1935, we will

have plenty of car trivia to stimulate all car enthusiasts.

Josee



The Valentines Brunch

As Lee has already mentioned, the Valentines Brunch was another great event and was well attended by 20 OJC members, potential members, and guests.



A good time was had by all, with roses and gifts for the ladies, candies and chocolates for everybody. The breakfast menu selection was wide and varied, with something to suit every taste.



Having the event on a weekend was obviously a good choice. Along with those stalwart regulars, there were a few faces of members whose schedules are not flexible enough to accommodate weekday events. This provided an opportunity to catch up with good friends and enjoy the banter.

Thanks to Josee Dubois and Lee Keely

for the effort that they put into making this brunch such a success.



We now look forward to the Spring Dinner on Saturday April 18th, Josee is again planning and organizing. The Roaring 20's, Speak-Easy theme promises to be lots of fun, mark your calendar and stay tuned!

Ray

The Darts Were Fun !

The Darts Tournament

The Ottawa Jaguar club was well represented at the OVTC Darts Tournament on February 15th. With nine members present, we made up 4 of the 14 teams that were entered. Our 9th member, Roy

Macrae, teamed up with Ivan Wood (The Flighty Team) to take on the MG club's Don Barr and Andy Lowie, team Bored Sleeve, in a thrilling finale! Once again, an MG team won the day. It was an entertaining afternoon well spent, perhaps with a little practise we may earn the trophy next year.



You Be The Judge !



With Judges training for our annual Concours just around the corner, we would like to hear from anybody interested in becoming a JCNA certified Judge. This is not a difficult or onerous task, you will also benefit from not only being able to judge Jaguar cars to JCNA standards, but how to prepare your own to be judged.

If interested, please contact
Rob Dunlop Email -
editor@ottawajaguarclub.com



Dave Kenny

Electric Vehicles

There are 3 basic types:

- 1) Pure electric propulsion with a battery and electric motor (Nissan Leaf and Tesla).
- 2) Operation with either Internal combustion, (gasoline, diesel or natural gas) or electric motor plus battery (Chevrolet Volt), but not both together.
- 3) Hybrid comprising a Computer-controlled variable combination of internal combustion and electric motor plus battery (Toyota Prius and Honda Insight).

Each version has its own specific advantages and drawbacks. The technology, particularly concerning batteries, can be quite intricate and is currently still in a state of flux. Obviously, the capability of pure electrics and combined gas/electric like the Volt or hybrid is critically dependent on the batteries.

Electric motors are a mature and well-developed technology with energy transfer efficiencies near 98%, very high reliability and low maintenance requirements. The advent of electric vehicles dates back about 140 years with the solely available lead/acid battery in its most primitive form and a range of about 20 miles. These electrics, along with steam propulsion, were

soon superseded by gasoline power by the late 1920's particularly regarding range.

The recent advent of the climate change/environment cause has stimulated the development of electric vehicles as an alternative to hydrocarbon combustion power sources.

The simplest alternative vehicle, the pure electric, raises three serious questions:

1. Actual driving range
2. Charging time
3. The effect of ambient temperature.

Under the Latin phrase Caveat Emptor (Buyer Beware) the definition of range is very important. Usually range is expressed as the maximum possible under certain conditions, which often are no air conditioning, no cabin heating, a cruise speed of 93 kmph. and moderate ambient temperature around 20 deg. C. Air conditioning can reduce the range on average by 18% and cabin heating by 29%. Some cars are still using simple resistance heating, absorbing a lot of battery capacity compared to a heat pump. Heat pumps can also provide A/C and are used on some newer cars. The cruise speed effect on energy absorbed by drag is the square of the speed ratio so that at 110 kmph. the energy absorption increases by 40% and the range is decreased accordingly relative to 93 kmph.

Recent tabulations of ideal range for the 24 different products available in the US vary from 315 miles for the Tesla model S sedan to 59 miles for a Mitsubishi mini car. Tesla seem to have the lead in this technology, where all

manufacturers are applying lithium ion batteries with differing mixtures of active metals and carbon anodes or negative terminals. The major trade-off parameters for batteries are energy storage, weight, cost, cyclic life and safety. Sony of Japan developed the initial lithium technology in 1991 and cost and performance fell and rose correspondingly relative to today, where costs are down by over 5 and energy density up by a factor of 3. Safety, mostly fire prevention, has risen significantly. Cost in absolute terms for these lithium ion batteries is still significant as it can equal the cost of the rest of the vehicle and nearly doubles the total cost relative to a gas-powered vehicle (A Tesla model S retails for \$88,000 US ranging down to a Nissan Leaf at \$30,000 US).

The elephant in the room here is the global reserve of lithium ore. Recently a group of university engineering ore specialists in the US assembled an accounting of the total world reserves. The primary sources of the ore are Chile 57.5%, Australia 19.4%, Argentina 14.4%, China 7.2%, Zimbabwe 0.5%, Portugal 0.43%, Brazil 0.39% and the US 0.25%. In Chile the source is a massive Andean dry lakebed. The bad news is that these total reserves amount to enough ore to supply only ten percent of the current world population of vehicles not counting the needs of the electronics market. A recent discovery elicited that a new form of carbon dubbed graphene can stretch the energy storage capacity of lithium ion but it cannot substitute for lithium.

Continued on page 6

Electric Vehicles, continued

Calculating the Tesla for the previously-quoted potential effects yields at 110 kmph is 225 miles without A/C and heating, 185 miles with A/C and 160 miles with heating. These are estimates based on average industry figures, but they yield an order of magnitude effect.

The remaining important consideration is the ambient temperature effect. The lithium batteries continually generate heat when current is flowing through them. The car systems include an automatic cooling unit for the battery and the heat removed can be used to heat the cabin in cooler conditions. At ambient temperatures above 40 deg. C the batteries can overheat and the current draw must be reduced. Down to -12 deg. C the battery power may drop as much as 30%, which limits the power output. If the battery is used at this low temperature, it will gradually warm up

and output will improve somewhat. The batteries have a cyclic life of up to 8-10 years. Charging can occur at the standard 110 volts or 220v. Generally, a full charge at 220 volts takes 4 hrs. and double that for 110. It is time consuming compared to filling with gas in 10 mins. or so. Tesla has a built-in GPS system to automatically direct drivers to a Tesla charging station as the battery depletes (although the number of ports may be limited).

These cars all have regenerative braking, so that the electric motor automatically converts to a generator to recover the kinetic energy of motion for battery charging with the brakes applied. Another bonus of these electrics is the massive standing stop acceleration due to the characteristic of electric motors to exhibit max torque at zero speed. This is also a great way to deplete the battery charge. The operating economics are much better than pure gas or hybrid as

electric power cost is a small fraction of the cost of gasoline.

The Chevrolet Volt has both a gas engine and an electric motor and the car may run on either but not both together. With a charged battery the car will initially run on the electric system until the battery is depleted. Then, it automatically converts to the gas engine. With an electric range of 85 km it is ideal for urban short trip driving at a fraction of the cost of gas. After depleting the battery charge the car will switch to the gas engine for longer trips.

The hybrid system of the Prius works the gas engine and battery together, where the electric motor can reverse to a generator mode to charge the battery driven by the gas engine as well as for regenerative braking charging. This concept is only possible with modern computers.

Continued on page 7

Don't Forget!

Ottawa Jaguar Club Bi-Monthly Dinner Meeting

Wednesday March 11th

The March meeting will be held at Stacked Smoked Meat & Grill, 2679 Bank St. starting at 5pm everyone is welcome to come and join this social event!



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The intent here is to maintain the gas engine at its minimum specific fuel consumption point vs. power level. Generally, internal combustion piston engines (spark ignition/gasoline and diesel) produce a minimum specific fuel consumption (defined as lbs. fuel/hr./hp., which is the inverse of thermal efficiency) at about mid-range power, often equivalent to about 55 kmph. Ideally, thermodynamically the specific fuel consumption and torque are constant vs. power, since the thermal efficiency or specific fuel consumption is proportional to an exponential form of the compression ratio, which is a constant geometric ratio.

Due to the real effects of piston ring, bearing and accessory drag, the fraction of power absorbed by this drag increases as power decreases, driving the specific fuel consumption up (low speed urban driving). Meanwhile, as power increases the air induction system, including the valves, creates increasing pressure loss proportional to the square of power level again

increasing specific fuel consumption from the ideal. Torque will drop off at both low and high power for these reasons. These two effects create a bowl-shaped specific fuel consumption characteristic.

The computer continually monitors both the fuel consumption rate and the state of battery charge. By operating the gas engine and the electric motor together or separately but instantaneously the computer maintains the gas engine at its minimum specific fuel consumption point. Whereas in pure gas engine mode it would burn more fuel at both ends of the speed range. The net result is a specific consumption about half or less than in pure gas mode and the larger gain occurs in urban driving. Typically, my 2016 Prius reaches 4 l./100 kms. in town in the summer with A/C and rises to 5 in the winter with the heater. On the highway it gets 4.9 l./100 kms. with A/C. At 105 kmph. in the summer and about 5.1 in the winter.

Like the pure electrics, hybrids have a large standing stop acceleration capa-

bility as the computer automatically brings on the electric motor to boost the gas engine for max depression of the accelerator pedal. The same happens for rapid passing acceleration on the highway; somewhat like a turbocharger without the time lag as the turbine accelerates to speed. These hybrids have a large range advantage over the pure electrics; highway range for the Prius is about 880 kms. Or 545 miles at 105 kmph. (44 l. tank), while heating or in A/C mode.

If driving is mostly urban, the pure electrics are attractive as well as the Volt with a significant reduction in operating cost, although this must be weighed against the purchase or lease cost. For highway intercity driving they are rather limiting due to range and charging time. The hybrids are a compromise for both and can still more than halve fuel cost relative to pure gas or diesel power without a range problem.

Dave Kenny

Get Ready For The Rally

The Ottawa Jaguar Club is planning a rally in the Lanark Highlands for **Saturday August 1st**. This is a repeat of one we did 9 years ago that attracted a number of cars from each of the Ottawa Area Car Clubs. The rally will offer an interesting drive and an opportunity to gather and meet other club members at the end. It will have two components: a time and

distance option that will be simple to achieve based upon a number of check points and/or a question and answer portion where questions such as who lives in the farm at KM XXX. More details will be available in the Spring. In the meantime "Mark Your Calendars"

Mike O'Brien



Wheel structural repair: Better to repair or buy new?



Since damaged or bent rims can be dangerous, they are likely to be given priority when it comes to repair and maintenance of vehicles. Rim repair might very well be affordable and less expensive than a new one. The rims and tires assembly make up the

wheel and this is the only contact your vehicle has with the ground as your vehicle moves.

The types of rims involved are;

Steel wheels: A bent steel wheel becomes problematic when the bend is enough to deflate the tire. The air will leak from between the rubber and the damaged rim, and the tire needs to be removed to allow for inspection. In most cases, the rim can be properly repaired on-location at no additional cost. If the tire is not damaged, the wheel can be reassembled, rebalanced, and installed on the vehicle for a permanent fix.

Alloy wheels: A bent alloy rims requires special attention and TLC. The process requires heating the wheel to about 200 degrees Celsius, the deformed section is then pushed back into position. enTIREly mobile always places the resulting wheel on a lathe to be smoothed out and therefore remove any potential chance of vibration while driving.

consequently lead to blowouts. They can also make controlling your car difficult, thus making driving dangerous. The following can be an indication that a rim is bent and that a quick inspection by an expert is required.

- Shaking or vibration in your car primarily felt in the steering wheel.
- The handling and performance of your car is unusual.
- Noticeable damage to the wheel.
- A thorough inspection of the wheel after removing the hubcap should give you a hint.
- If your tire is consistently losing pressure, there is a possibility that your rim is bent.

Repairing versus replacing your bent rim:

The decision between the two will most likely be determined by the extent of the damage on the rim and the replacement cost of the wheel.

Steel wheels can often be repaired with specialized tools while your wheel is off the car. enTIREly mobile does not charge extra to repair a bend causing deflation in a steel wheel.

Alloy wheels can be repaired in most cases and depending on the brand of wheel, a wheel repair is often more affordable than purchasing a new one. To keep you mobile, a wheel substitution (spare or off season wheel) can be used while the damaged wheel is being repaired.

You are invited to [contact](#) enTIREly mobile for a free evaluation of your damaged wheel.



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Bent rims can also cause tire pinching and popping that can

Eric Fauteux

Events & Activities 2020

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Some event times and locations are still in the process of being organized and arranged. All dates are accurate at this time, to the best of our knowledge. Activities for the current month will always be highlighted in **red**, Ottawa Jaguar Club Activities will be highlighted in **bold** lettering. Associate club activities and activities of interest to our members will also be included here as appropriate. Time, location and any pertinent information will be updated on the website, via Facebook as it becomes available, and updated here in the Jottings monthly.

Ray Newson, For your OJC Executive

March	11th	Wednesday	OJC Bi-monthly meeting	5PM - Stacked Smoked Meat & Grill - 2679 Bank St.
	20th	Fri. to Sun.	JCNA - AGM Mar. 20th to 22nd	Las Vegas, Nevada, USA (JCNA Website for info.)
April	4th	Saturday	Spring Garage tour with Phil (weather permitting)	8AM - Stacked Smoked Meat & Grill - 2679 Bank St.
	18th	Saturday	OJC Spring Dinner	Robbie's Italian Restaurant, 1531 St-Laurent Blvd.
			A Roaring 20's Event!	Final details to come.
	19th	Sunday	Ancaster Car Show	Ancaster, Ontario
	23rd	Wednesday	Carlisle Spring Show & Swap	Apr. 23rd to 26th. - Carlisle, Pennsylvania
May	2nd	Saturday	SU Carburettor Clinic	Time & Location to be announced
	3rd	Sunday	Boot'n'Bonnet Auto Jumble	Kingston, Ontario
	13th	Wednesday	OJC Bi-monthly meeting	Time & Location to be announced
	15th	Friday	Carlisle Import & Performance	May 15th to 17th. Carlisle, Pennsylvania
	24th	All Week	British Car Week	
	31st	Saturday	OJC Spring Drive	Hudson P.Q.-Hudson British Car Show, details pending
			(Note: This is a change of date from the OJC Calendar, previously May 23rd.)	
June	4th	Thursday	Barrie Automotive Flea Market	June 4th to 7th. Barrie , Ontario
	5th	Friday	Calabogie Motorsport Show-n-shine	Calabogie, Ontario
	18th	Thursday	OJC Concours - Judges Training	St. Anthony's Soccer Club, Preston St. Ottawa
	20th	Saturday	OJC Club Brunch	Time & Location to be announced
	27th	Saturday	Alexandria Car Show	Alexandria. Ontario
	28th	Sunday	Wheels on the Mississippi Car Show	Carleton Place , Ontario
July	5th	Sunday	OJC Family Day & Concours	Cumberland Heritage Museum, Cumberland, Ont.
	11th	Saturday	All British Car Day (ABCD)	Clark Fields Park, 93 Houlahan St., Nepean, Ontario
	25th	Saturday	OJC BBQ Party	Manotick, Ontario
	26th	Sunday	Canadian Capital Classic Car Show	Wesley Clover Park, Kanata, Ontario
	26th	Sunday	Perth Rib-Fest & Car Show	Perth. Ontario
	31st	Friday	Glengarry Highland Games	July 31st to Aug. 2nd. Maxville, Ontario
August	1st	Saturday	OJC Car Rally	Details to follow in April
	9th	Sunday	Boot'n'Bonnet Car Show	Kingston, Ontario
	15th	Saturday	OJC Club Picnic	Time & Location to be announced
	16th	Sunday	Brits On The Lake in Port Perry	Port Perry, Ontario
	30th	Sunday	Classic Car Expo	Beaconsfield, Quebec
September	8th	Tuesday	Hazeldean British Invasion & Pub Dinner	Hazeldean, Ontario
	11th	Friday	British Invasion at Stowe	Sept. 11th to 13th. Stowe, Vermont
	16th	Wednesday	OJC Bi-monthly meeting	Time & Location to be announced
	20th	Sunday	British Car Day at Bronte Creek	Bronte Creek, Provincial Park, Ontario
	27th	Sunday	Classic European Car Show	Merrickville, Ontario

October	1st	Thursday	Carlisle Fall Show	Oct. 1st to 4th. Carlisle, Pennsylvania
	3rd	Saturday	OJC Fall Colours Drive	Time & Route to be determined
	3rd	Saturday	OJC Fall Harvest Party	Time & Location to be announced
	4th	Sunday	OMGC Fall Colour Run	MG Club event, Time & Route to be determined
	18th	Sunday	OJC Club Brunch	Time & Location to be announced
November	15th	Sunday	OJC 2021 Membership	May be paid anytime now
	23rd	Monday	Interclub Trivia Challenge	Time & Location to be announced
December	12th	Saturday	OJC Christmas Dinner	Time & Location to be announced
	21st	Monday	First Day of Winter	Looking forward to spring
	25th	Friday	Christmas	OJC Wishes you all a Merry Christmas
	31st	Thursday	New Years Eve	Drive Carefully & All the Best in the New Year



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