



July 2019 FVEAA Newsletter

Fox Valley Electric Auto Association

The FVEAA is a Not-For-Profit Illinois Corporation and the Chicago-area chapter of The Electric Auto Association

Next Meeting

July 19, 2019

Starts at 7:00 p.m. Ends 9:00 p.m.

Community Christian Church

1635 Emerson Lane

Naperville, IL 60540

[Google Map](#)

Agenda

- 6:30 pm Doors open
- 7:00 pm Introductions and talk about repairs you have had to do to your EV/PHEV
- 7:30 pm Presentation on Tesla by Garlan Garner
- 8:15 pm Break
- 8:30 pm Brief announcement of upcoming events Rich Hirschberg
- 8:35 pm Miller family Bolt usage update
- 9:00 pm Adjourn

President's Words

Jeff Miller

I am starting a new format for the introductions for the July meeting. During the introductions I will pose the group a question, and as we go around the room each of us can contribute to that question to build our overall body of knowledge. This month I would love us all to share the repairs we have had to do to our EVs and PHEVs. In this way we start to learn more about what items go wrong with each model of car and what it takes to fix. This should make us more educated consumers and better educators. Owning old Tesla's has given me many things to talk about! I suspect many of you will have a shorter list, but this is what I hope to learn.

Over the last month I have been researching a couple of things , snow tires for the Bolt, and a massive thread on the Tesla Motors Club forum around older Model S batteries getting large range reductions with that software update that was released to address the car that caught fire in China.

<https://www.autoblog.com/2019/05/16/tesla-car-fire-battery-software-update/>

<https://teslamotorsclub.com/tmc/threads/sudden-loss-of-range-with-2019-16-x-software.154976/page-75>

At the time of me writing this it is 78 pages long. It seems to be impacting 85, 70, and possibly 60 kwh battery packs. At this time it might not be impacting 90 or 100kwh, or at the very least nobody seems to be

complaining as loudly about them. The forum members that reverse engineer Tesla's code have been investigating and have identified a few new parameters that the BMS software has added but they don't know what those parameters mean. The investigation continues, but here is what I think is going on.

Based on the limitations being applied we believe that the people with the most heavily affected packs have Lithium plating happening to their cells. Lithium plating is how you grow dendrites. Dendrites, once they get long enough, puncture the separator, and most likely start the cell on fire. Lithium plating can be detected with very specific voltage changes during charging and it would be reasonable to believe that the Tesla BMS would be capable of this. I believe that the battery packs that are most heavily impacted with Lithium plating are the ones with the heaviest restrictions on range and power. Thus far the cars that are being heavily impacted have not had their batteries replaced or repaired. Tesla has told their owners that the battery is fine and everything is normal. Members who have studied Tesla warranties will recall that the Model S and X have never had a capacity warranty, only a functionality warranty. Most cars have a 8 year and unlimited mile warranty on the drive unit and battery. Historically sudden loss of range was an indication of a substantial problem, for example a cell has blown it's cell level fuse. In this case the sudden loss of range is due to software now detecting a new form of battery degradation and limiting the battery. This is probably being done to prevent the battery packs from catching fire. Plenty of people believe that Tesla should fix their heavily degraded pack right now, and I see their point of view. What I hope Tesla is doing is taking a very cautious approach here and limiting the batteries that they believe are most likely to have issues, gather some data, and adjust the limits to be more appropriate. In the limited sample size of a forum community we can't narrow down who is being limited based on types of usage. There is every usage model under the sun and cars you would expect to be bad aren't and the opposite is true. Tesla isn't talking beyond some very basic statements, which isn't that unusual as they rarely provide detailed statements when these sorts of things arise. Part of that is likely to be our litigious society.

I have written most of a page on what is happening, and now we get to the useful information. When you look at used Tesla you should always check the "rated range" at 100% charge, or at least at a percent charge and calculate the 100% rated range. As Chris knows this is part of my standard pre-purchase checklist for a Tesla. Any Tesla with a few years under it's belt should have 5% degradation, which means a Model S 85kwh rear drive should have a 250 rated range. If you find a rated range down in the 220's, you should probably keep looking or at least negotiate accordingly. For those keeping track a 60kwh pack had a 208 rated range and the 70kwh had a 230 rated range. https://en.wikipedia.org/wiki/Tesla_Model_S#Specifications

As these 85's are falling below the original rated ranges of the cheaper cars it is not making their owners happy.

The Model 3 does have a range warranty in place at 70% of original range, but the warranty isn't unlimited miles either so that is much more feasible.

Articles on Lithium Plating

<http://jes.ecsdl.org/content/166/4/A725.full>

<https://www.upsbatterycenter.com/blog/lithium-plating/>

Bolt Winter Tires

As usual buying things off season is the way to get decent prices on stuff and snow tires are no exception. On the Chevy Bolt I just bought winter tires the other day and managed to get the Michelin Xice Low Rolling Resistance snow/ice tire on close out for \$100 a piece with a \$70 rebate on top of that. I opted for new tires as the difference from a close to new and a used set wasn't far enough to make it worth the trouble. I am building a full set here so TPMS and wheels are all in the picture. TPMS are everywhere. Wheels are a bit more trouble however the Chevy Cruze uses the same wheels as the Bolt so I am looking for the low end steel or aluminum 16 inch wheels from a Cruze. The Bolt usually runs on 17's but for winter use I prefer more sidewall to soak up those inevitable snow covered potholes. One tweak I did do is to order 205/60R-16 instead of the suggested slightly wider size. For winter use a bit narrower is preferred and there were far more options in this

size than the suggested 16 inch size. Chevrolet doesn't sell a 16 inch option on the Bolt so this is all build your own anyway.

<https://www.wheel-size.com/> is a useful site for looking up wheel sizes that came on various cars.
<https://www.tirerack.com/> reseller of tires wheels and so forth, excellent reviews and data comparing tires

Why winter tires? Jessica has had all wheel drive SUV's for quite a few years now and she is not looking forward to sliding around. The reality is a two wheel drive car with winter tires is going to be much safer than a four wheel drive car on all seasons. Beyond that I believe the energy consumption hit that winter brings is somewhat mitigated by running winter tires. These tires will be running in their ideal temperature range where an all season tire won't be. Winter tires are by necessity more grippy and abrasive than a low rolling resistance all season, so you won't get it all back, but having a properly pliable tread has made quite a difference in my experience. I don't drive consistently enough to have any data on my last winter with snow tires but I can tell you that I wasn't experiencing as much of a range hit as I expected.

Articles I found interesting

<https://techcrunch.com/2019/07/05/toyota-testing-improved-solar-roof-for-electric-cars-that-can-charge-while-driving/>

<https://jalopnik.com/this-electric-powered-porsche-911-rsr-was-the-coolest-p-1836166412>

<https://jalopnik.com/the-odyssey-21-is-the-electric-off-road-race-truck-form-1836151628>

<https://jalopnik.com/i-rode-in-bmws-absurd-710-hp-electric-5-series-developm-1835820250>

<https://arstechnica.com/cars/2019/06/bmw-speeds-up-plans-to-electrify-25-new-models-now-due-by-2023/>

<https://arstechnica.com/cars/2019/06/whats-it-like-to-race-a-jaguar-i-pace-electric-car/>

<https://arstechnica.com/cars/2019/07/ford-vw-alliance-means-more-evs-for-europe-joint-argo-ai-investment/>

<https://jalopnik.com/the-coolest-thing-about-the-electric-vw-id-3-is-the-shi-1836254820>

<https://jalopnik.com/the-electric-vw-id-r-keeps-proving-it-s-the-very-fast-f-1836188357>

<https://arstechnica.com/cars/2019/07/volkswagen-will-share-electric-car-platform-with-ford-says-reuters/>

<https://jalopnik.com/the-honda-e-is-the-electric-car-ive-been-waiting-for-1836042958>

<https://jalopnik.com/your-nissan-leaf-may-soon-charge-your-house-1836311220>

I want one of these.

<https://www.quickjack.com/car-lift-systems/bl-6000xlt-super-length-car-lift.html>

Not EV related, but I am glad they figured it out. Many people think titanium can't burn, but it certainly can. If it happens it is usually really bad. Unless it is the fourth of July and you have titanium fireworks.

<https://techcrunch.com/2019/07/15/spacex-and-nasa-detail-cause-of-dragon-test-failure-crewed-flight-this-year-looks-increasingly-difficult/>

I do not hold any interest in any car manufacturer or any of their subsidiaries

Nothing new report this month due to extreme over-busy-ness with outdoor projects. This is why i try to get computer work done in the Winter months! Hope to get back to the project soon!

John Emde

Bruce Jones



Jennifer Emde, daughter of John talks about him being a Father and his ability to make or fix anything. (Stepanie Lein, John's Neice is seated to the right, with her husband Brian in the black sweatshirt)



Jennifer Emde



Stephanie Lein



Brian Lein



Rich talks about John



Ted Lowe



Ted with photos



Ted's Dodge Dakota with Fred's Smart car peaking out from behind



Jeff and Ted agree this is a meticulous conversion by Chris Young





Bruce and Maureen had a chance to promote EVs at the Wheaton Vintage Rides Car Show Friday 7/12. A red Tesla was also there among the classic cars. Friday nights during the summer.

<https://www.downtownwheaton.com/all-events/vintage-rides-car-show>

FVEAA On Facebook - Join Us! Like Us!

Ted Lowe

In October 2015, I created a **Facebook group for the FVEAA** and invited all the past and current FVEAA members i know that are on Facebook. There are 86 members as of 3/11/19. If you're on Facebook but not in the group, yet please join us! If you're not on Facebook yet, please consider joining so you can join our group there! This group supplements our forums because it is much easiEr to use, read, post pictures and videos and get notifications. Please let me know if you have any questions/comments/suggestions. Hope to see you there! <https://www.facebook.com/groups/889497691136309/>

Grant Gerke started **FVEAA's Facebook Page**. Like Us!

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

Membership Update

Ted Lowe

We currently have **52 active paid-up** members, up 1 from last month!
Please renew & recruit new folks in 2019!!!



FVEAA Membership Report

as of 2019-07-16 04:58:08

Count of Members by Type

Membership Type	Count	Paid Up
BusinessStd	1	1
Family	5	5
Individual	45	44
LifetimeInd	2	2
Totals	53	52

Other Statistics

Statistic	Value
% Paid Up	98.1%
Avg. Paid Up Days	171.1 days
% With Email	94.3%

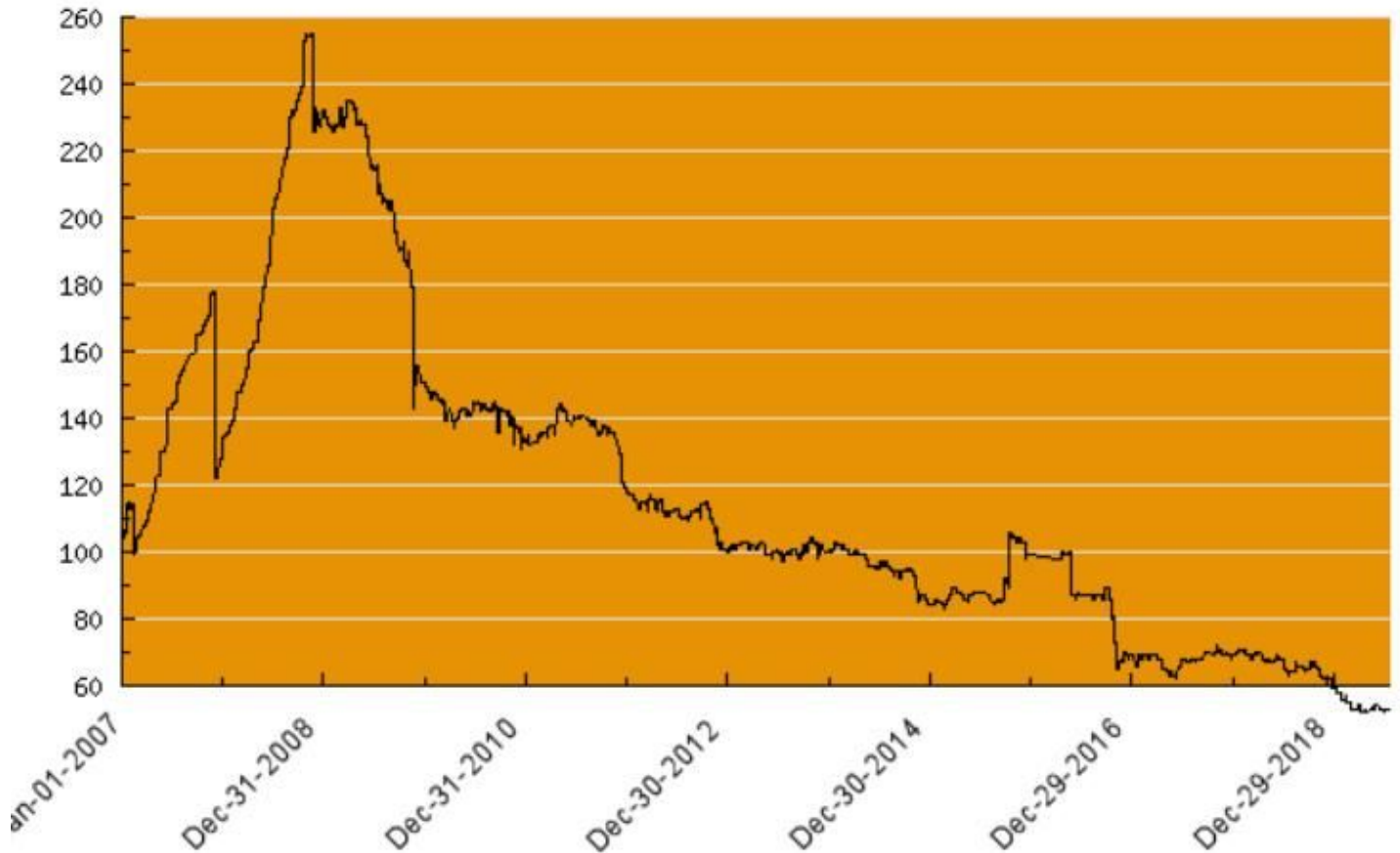
Encouraging Our Membership To Grow in 2019 and Some History

Ted Lowe

Happy 2019 EVeryone! We live in a large metro area with 8 million people and EVs are the latest buzz so we should be able to grow the FVEAA! **Please invite your friends, neighbors, family, colleagues**, etc. to FVEAA meetings and EEvents. Volunteer to attend EEvents on behalf of the FVEAA (with or without an EV)! Your ideas on how to help grow the FVEAA are welcomed at anytime, thanks! Howard Hansen had a **great idea**... giving an FVEAA membership as a gift!

Here is a time-varying graph of our membership size from 2007 to now. Note that we peaked at about 255 members in the Summer of 2008 when gas was nearing \$5 per gallon. We were also attending lots more invitational EEvents with our EVs. **Let's get out there and grow the FVEAA in 2019!!!**

FVEAA Paid Up Members as of July 16, 2019 9:32pm



Monthly Treasurer Reports

Ted Lowe

As Treasurer, i am publishing a brief Treasurer's Report to our forums around the time our monthly newsletter is published.

i am publishing our various cash balances (Money Market, Checking, PayPal) to this location:

[FVEAA Committees](#) > [Finance](#) > [Treasurer Reports](#)

This area of the forums can only be seen by FVEAA members. As an IL Non-Profit corporation, we have no requirement to publish our assets or financial statements publicly.

Feel free to contact me if you have any FVEAA financial matters to discuss.

Membership Renewals

Ted Lowe

Our membership system sends out "renewal reminder emails" before your membership is due. You will receive up to 3 before being marked "not renewed" (inactive). The sooner you renew, the fewer emails you will receive :)

So please pay attention to your email from the FVEAA and renew online using this link (for the easiest approach for all of us):

<http://www.fveaa.org/renew>

THANK YOU for your continued support of the FVEAA!

- **National Drive Electric Week (NDEW) Sept 14 - 22, 2019**
 - **Event #1**
 - **Saturday Sept. 14th, 1:00 - 4:00 p.m.**
 - **855 West University Drive, Arlington Heights, IL**
 - **Contact Marty Belovicz 847-321-5734**
 - **(currently being registered)**
 - **Event #2**
 - **Sunday Sept. 22nd 1:00 - 4:00 p.m.**
 - **Naperville Test Track 1720 W Jefferson Ave. Naperville, IL**
 - **Contact Mike Padberg 574-807-2990**
 - **<https://driveelectricweek.org/events.php?year=2019>**
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Welcome

- **Jeff Miller opened the meeting at 7:05 - a tribute evening for the late John Emde**
- **Rich Hirschberg presented photos on John and related stories about him**
- **Ted Lowe presented additional stories and showed a board of photos, talked about how John was unselfish and educated Ted and everyone in the group. Then he showed early videos including John racing his electric dragster against an airplane!**
- **Bruce Jones also presented stories on John Emde highlighting the conversion of the 1930 Hupmobile into a Plug-in Electric Hybrid Hot Rod**
- **8-8:20 pm Break**
- **We held introductions and went around the room recounting additional stories.**
- **Jennifer Emde, John's daughter was there and she talked about John and how he was such a good father. Stephanie Lein, John's niece with husband Brian were also there.**

Meeting adjourned at 9:35 p.m.

FVEAA Membership Application Form - Version 2014-01-01

Name: _____

Address: _____

City, State Zipcode: _____

Phone: _____ Phone Type: Home ___ Work ___ Cell ___

Email: _____

Please check one: New Member Renewal

How did you hear about the FVEAA ? _____

Membership Types and Annual Dues (please circle one):

Individual	\$20
Business	\$100
Premier Business	\$250
Charter Business	\$500

Newsletter Delivery Type (please circle one): No Newsletter Electronic

Please make checks payable to "FVEAA" and postal mail it with this membership application form to:

FVEAA

PO Box 214

Wheaton, IL 60187-0214

Attn: Membership



Best Hybrid Batteries

Only The Best

Michael Bradley

18600 IL-59

Shorewood, IL 60404

Phone: 708-669-9402

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