

FVEAA Meeting

August 21, 2015

Bruce Jones
President FVEAA

Rich Hirschberg
Vice President
<http://www.fveaa.org>

https://docs.google.com/document/d/1saz_-1XBT8nNKMs5ItxUAunQR5Jon2U0Hr6gYEtZqY4/edit?pli=1

August 21, 2015 - AGENDA

- **6:30 Doors open -> Sign-in Sheet, Tags.**
- **7:00 Call To Order, Welcome Introductions**
- **7:15 Committee Reports**
 - **VP & Outreach** **Rich Hirschberg – Upcoming Events**
 - **Finance** **Jeff Miller**
 - **Elec. Communications & Membership** - **Ted Lowe**
 - **Programs & Blogs** **Rich Carroll**
 - **Newsletter Editor** **Ted Lowe**
 - **Secretary & Facebook**
- **7:20 Old Business / New Business, News from the World of Electric Vehicles**
Bruce – Street Rod PHEV Update
- **Ted Lowe – Dodge Dakota Update on Conversion from Lead to Lithium Batteries**
- **7:50 National Drive Electric Week planning**
- **Break**
- **8:30 Rich Carroll – 2015 Pikes Peak EV Results & Hacking Car Communication Systems**
- **9:30 CLOSE**

WELCOME &
INTRODUCTIONS

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Fox Valley Electric Auto Association

★★★★★ (6 ratings)

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Automotive

We are the Fox Valley Electric Auto Association (FVEAA). We are the northern Ill. chapter of the Electric Auto Association and we meet each month. Come to a meeting (3rd Fri/mo.), see members' electric vehicles (EVs) and learn more about EVs!

[About](#) [Photos](#) [Likes](#) 104

Last Month

- Alternative Transportation Show is in Batavia on Aug. 8th – did anyone attend?

LAST MONTH



- Old Business

- New Business

Elections Next Month – Sept. 18th

Nominations Open Tonight

- CURRENT
- President Bruce Jones
- Vice President Rich Hirschberg
- Secretary Open
- Treasurer Jeffrey Miller
- 3 Board Members
 - Dr. Rich Carroll
 - George Hiller
 - Jim Schmidt

COMMITTEE REPORTS

- **Things to Do**
- **Places to Go**

2015 EVCCON – EV Conversion Convention, Cape Girardeau MO September 29 to October 4

- <http://evtv.me/>
- EVTV Motor Werks
- 601 Morgan Oak Street
- Cape Girardeau, MO 63703 USA
- E-Mail Address: info@evtv.me
- At least 2 members attending so far

**National Drive
Electric Week
Sept. 12 - 20, 2015**

Sponsored by Plug In America, Sierra Club,
the Electric Auto Association and Nissan

NATIONAL DRIVE ELECTRIC WEEK

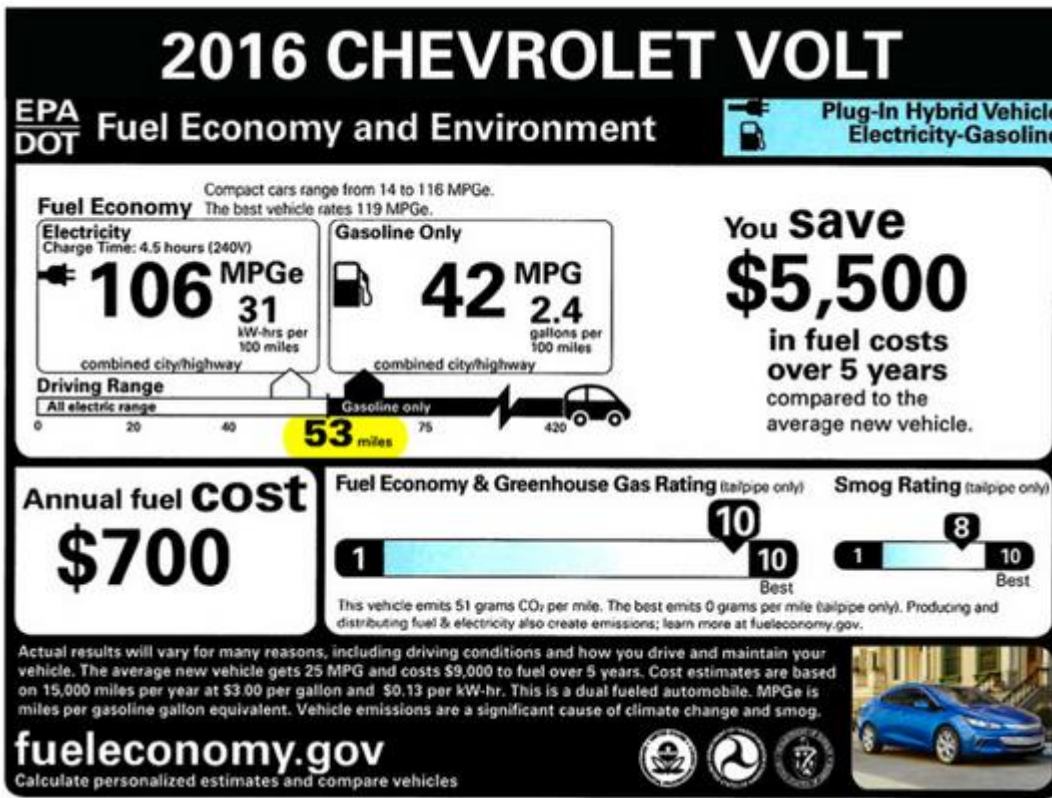
- **FEATURING EV CONVERSIONS**
- Media Show and RideNDrive Sun. Sept 13th
- Another Full Show Sun Sept. 20th
- Naperville Test Track 1720 W Jefferson

- Media Coverage, hoping WLS Drive Chicago with Paul Brian, radio, newspaper, large signs,

- **From the World of Electricity, Batteries and Transportation**

Updated 2016 Chevy Volt

<http://www.wired.com/2015/08/range-chevys-volt-means-hardly-ever-need-gas/>

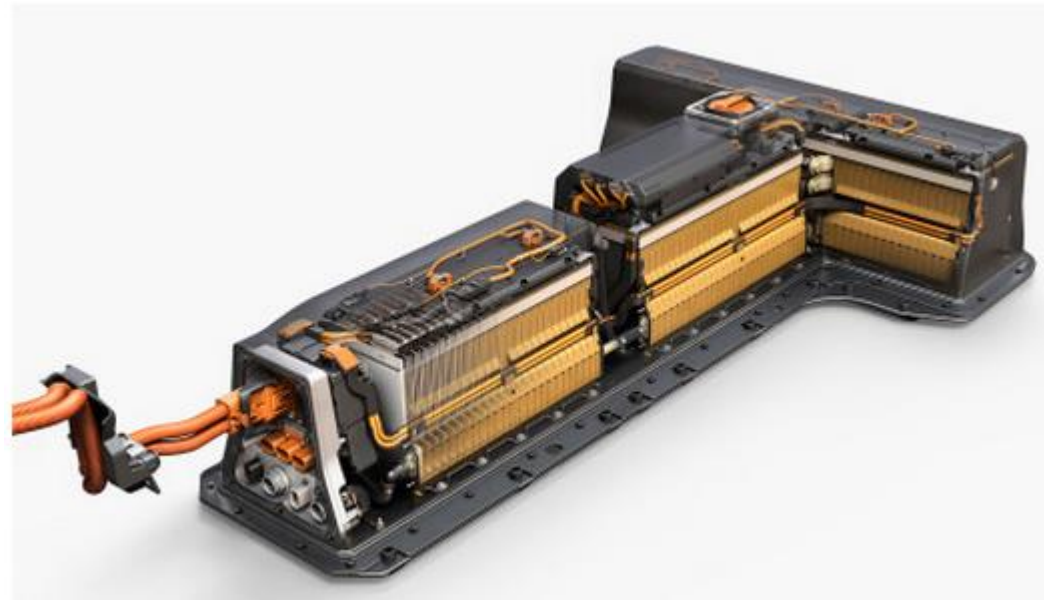


VOLT 2016 VERSUS ~ 2012 (draft)

CHEVY VOLT	2016	2012
Lithium ion batter - KWh	18.4	16
LG battery cell qty	192	~ 286
electric miles	53	35
0 - 30 mph (sec)	2.6	
0 - 60 mph (sec)	8.4	9
eMPG	106	62
gas-only MPG	42	
	1.5 liter aluminum w direct iron	1.4 liter injection
	updated mgmt system	
price	\$ 33,995.00	\$ 34,185.00
motor weight	100 lbs less	
curb weight (lbs)		3794
efficiency improvement	12%	
engine power kW / hp		63 / 83
electric motor 1 power kW / hp		111 / 149
electric motor 2 power kW / hp		55 / 74
	Voltec extended range propulsion unit	
	more powerful heater in seats and steering wheel	

Volt

- 18.4 kilowatt-hour lithium-ion pack. It cut the number of cells by one third to 192 and revised the hardware that manages them, creating a lighter, more powerful battery.



Tesla Charger Plugs Itself In



- <http://www.cnbc.com/2015/08/06/tesla-unveils-new-charger-that-can-plug-itself-in.html>



Tesla – Fixes Security

- Aug 6 - Cyber security researchers found six significant flaws in Tesla's Model S cars
- They initially had to physically plug into the Tesla with an Ethernet cable
- Slow/stop car at slow speeds and manipulate some of the electric dash elements
- Tesla issued patch to fix the flaws the following day.
- Drivers download updates via WiFi or cellular
- Tesla praised for having the remote update capability
- *Rich Carroll will talk about security later tonight*

BRUCE - UPDATE ON
STREET ROD PHEV

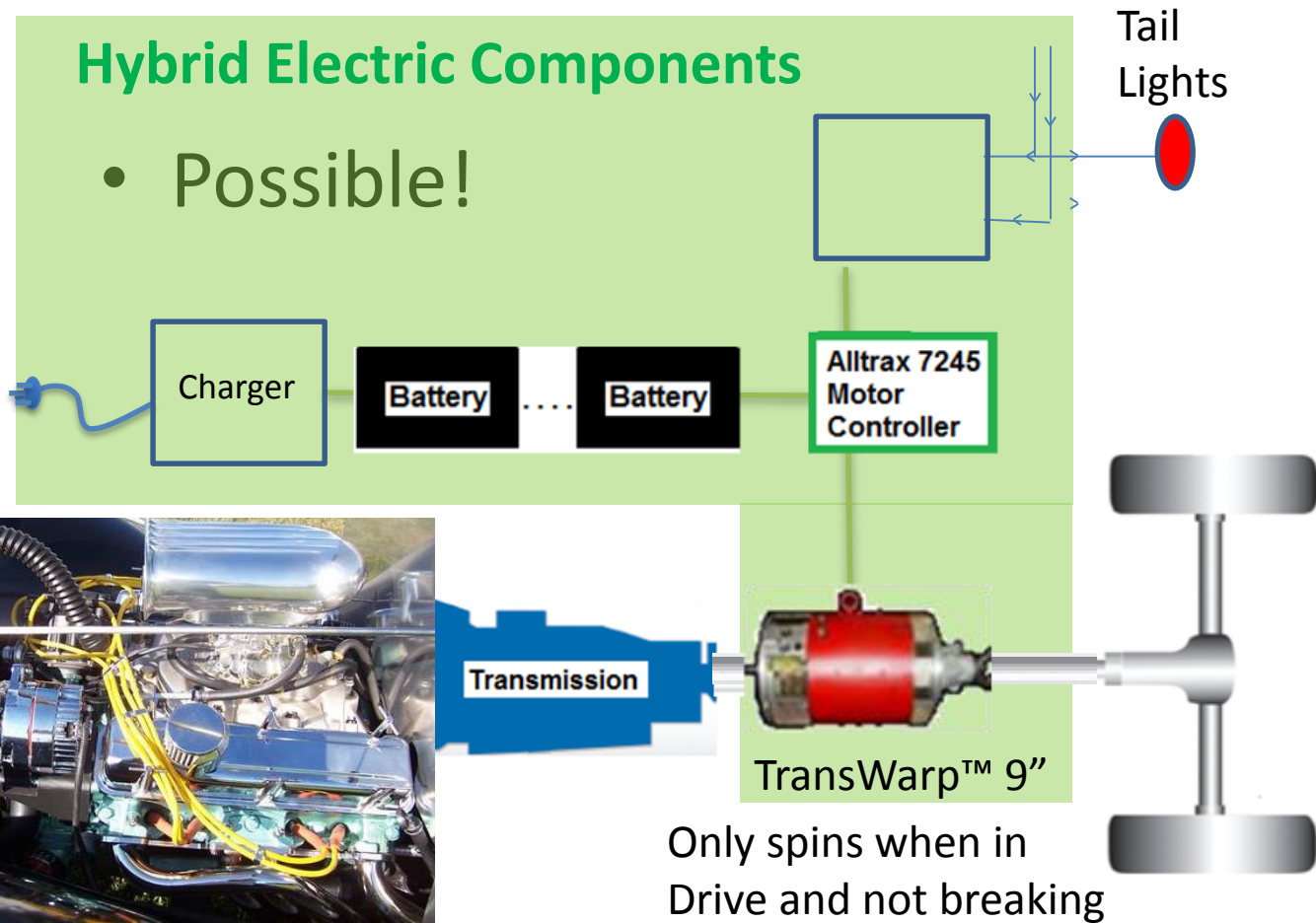


NO on-board communications systems, just gauges

Hybrid Hupmobile Design – It's a GO

Hybrid Electric Components

- Possible!



Work being done at Build-EV in Crest Hill by John Emde and John Jeide

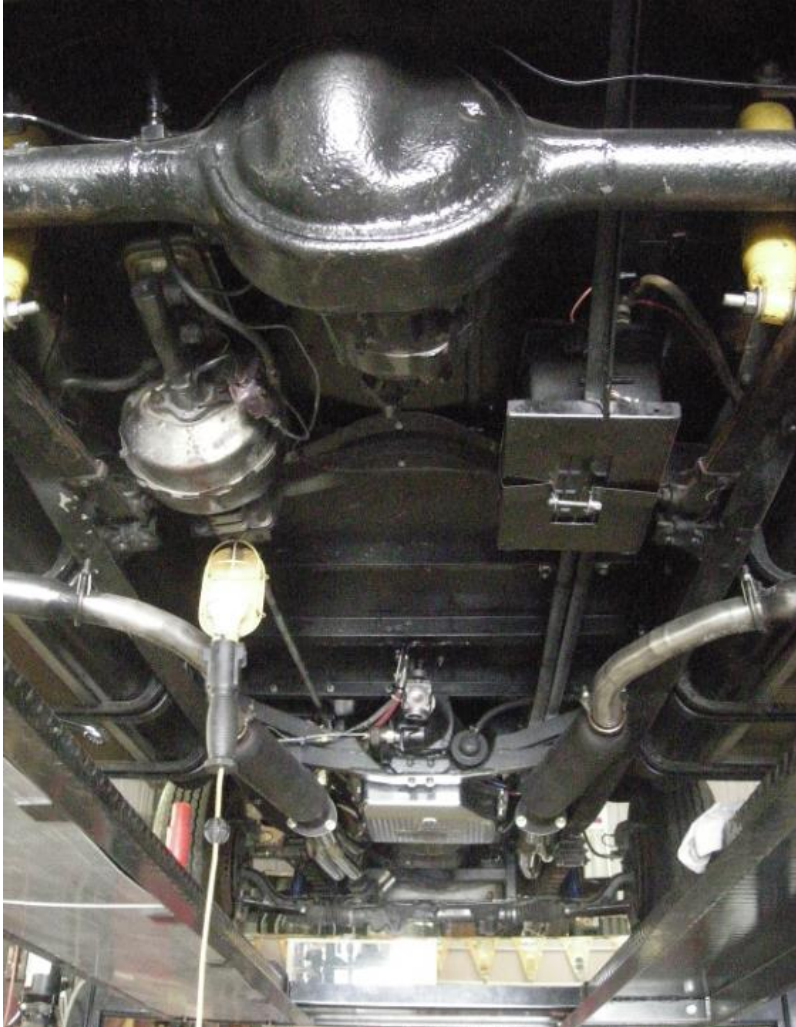
- <http://tgeponline.com/commercial/page-24>
- 840 BRIAN DR SUITE A CREST HILL, IL - 60403
- Tel (630) 847-1421



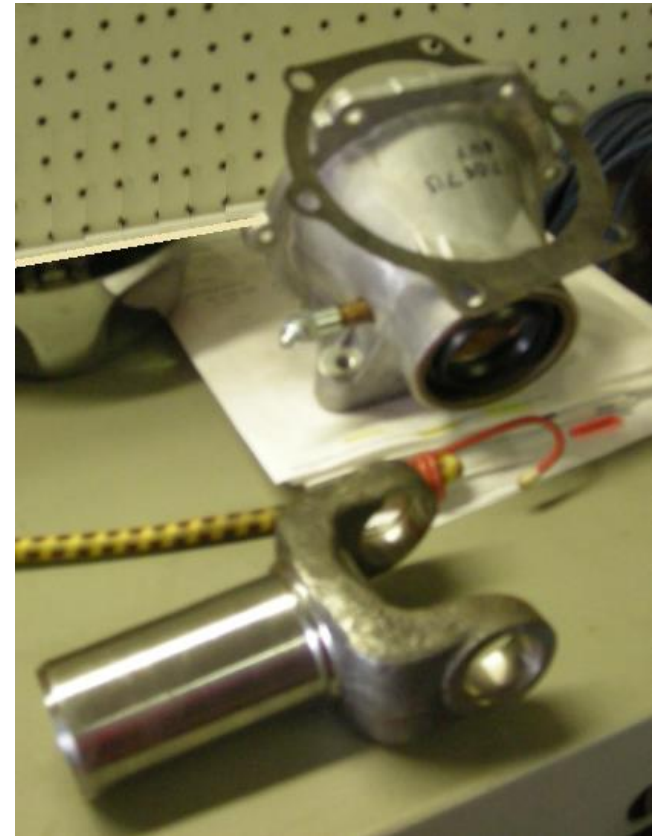
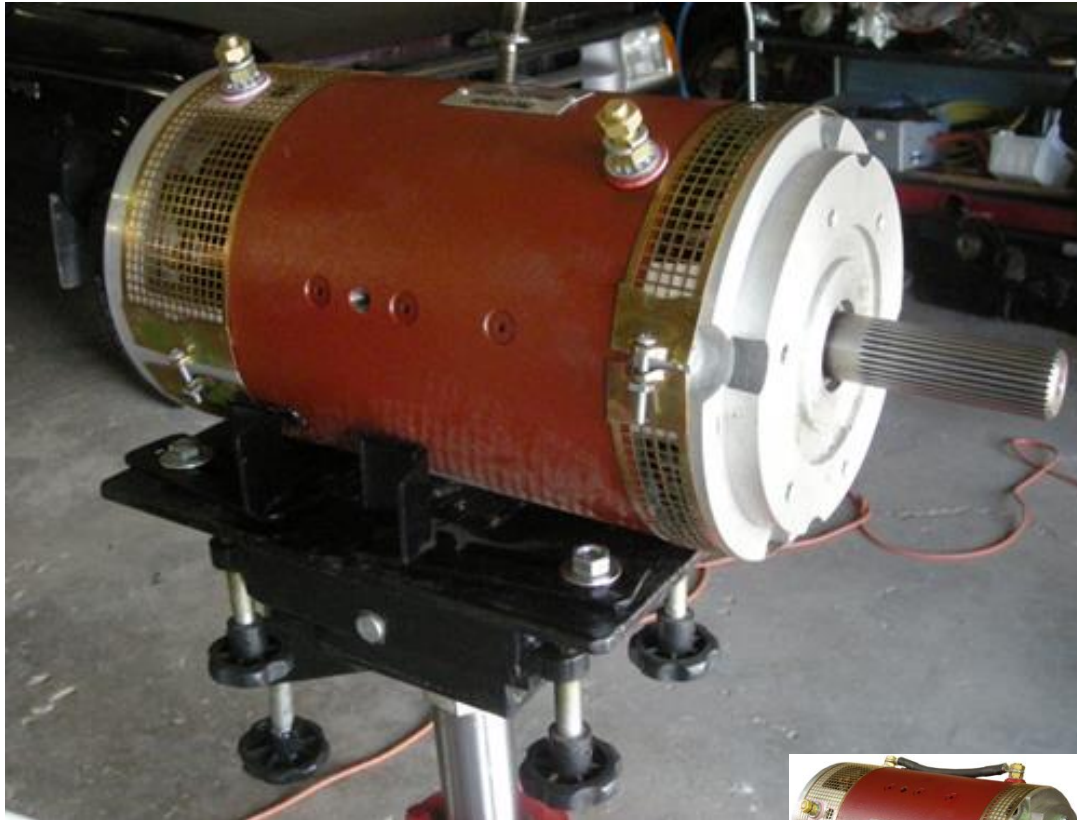


Preparations Underneath

- Drive Shaft to be Cut



NetGain TransWarp™ 9" w/ housing



Placement of the TransWarp™ 9”

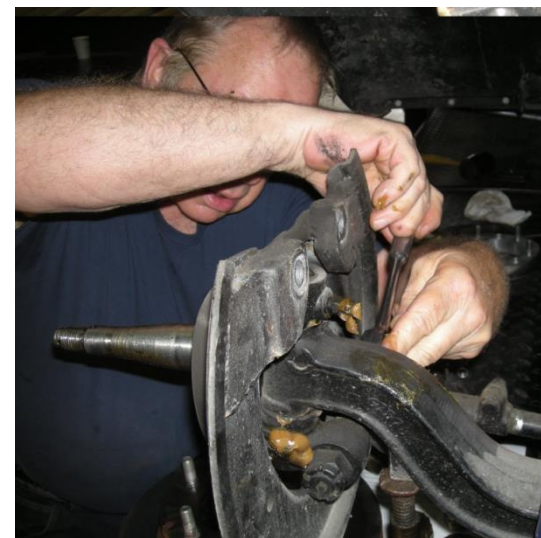




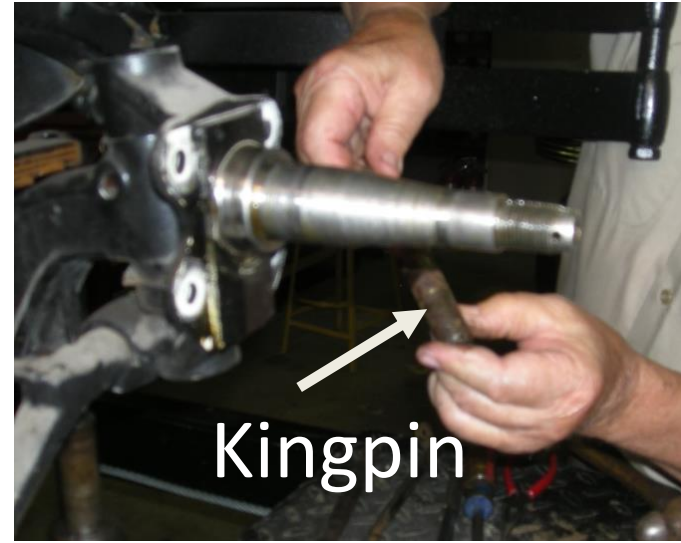
But Steering needs some work too
“Before” photo – getting to the Kingpins



Removing wheel parts to get to Kingpins



Removing Kingpins – Bushings need Replacing



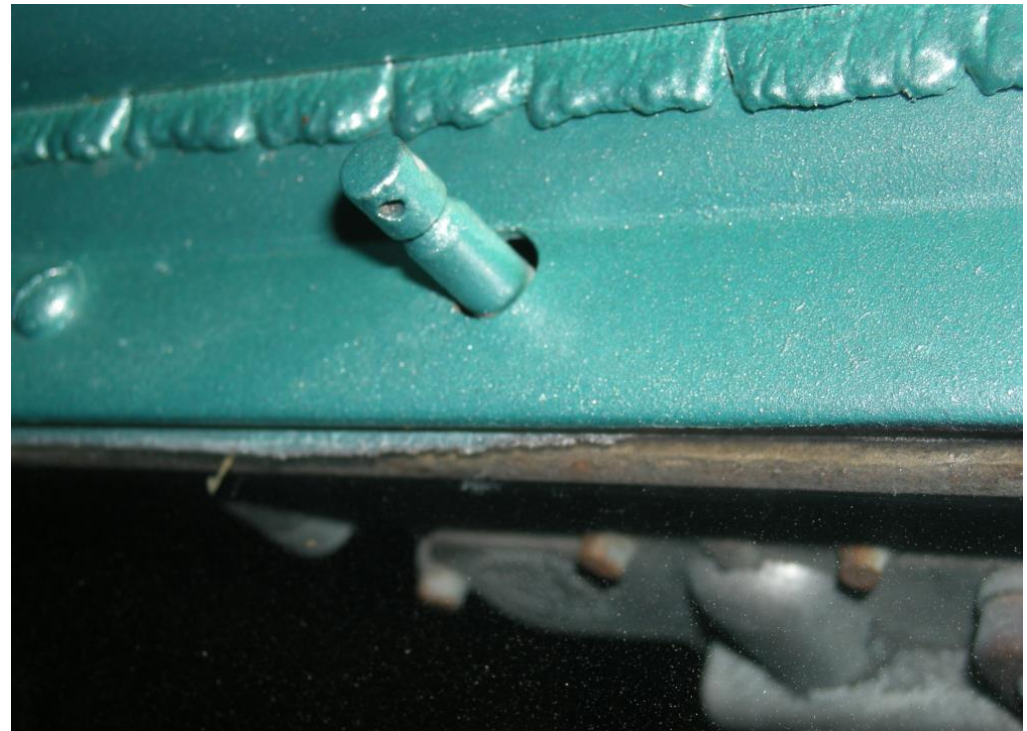
Need to replace brass bushings



and Also Need Exterior Windshield Wiper BladeParts

Inside Mechanism

Exterior Windshield Wiper post



Need Wiper Blade Assembly

Next Steps – Before Sept 13

- Finalize TransWarp™ 9” motor placement and support, yoke, housing, joints
- Cut drive shaft to fit and install – align it
- Install Alltrax controller and battery charger
- Install wiring, contactors, pot box, fuses, switch
- Temporary batteries to insure operation
- Replace kingpin brass bushings if possible
- Windshield wiper for 1930 Hupmobile Century 6
- Install 4-point seatbelt harnesses if possible

TED LOWE

UPDATE ON THE DODGE DAKOTA CONVERSION FROM LEAD TO LITHIUM

(PREVIOUS WORK SESSIONS
MAY 13, 2014 AND JUNE 28, 2014)
NEXT ONE . . .



BREAK

RICH CARROLL

2015 PIKES PEAK

INTERNATIONAL HILL CLIMB

RESULTS

&

HACKING & SECURITY OF CAR

COMMUNICATION SYSTEMS –

WHAT YOU NEED TO KNOW

Upcoming Attractions for the Months Ahead

Need IDEAS / Presenters

- September – National Drive Electric Week Sept 13 & Sept 20
- Bil Becker – The Art of EV Charging Systems
- Argonne Labs – Test Results from 2014 EV Charging System Compatibility Analysis - Festival
- William McDaniels – Electric BMW
- Jeep Conversion Update
- NetGain Technologies - Advanced Motor Technologies
- Bob Baker's 3rd of 3 on How to Build an Electric Vehicle

EV QUESTIONS

AND

ANSWERS

THE END

TransWarp™ 9" Motor



- This motor has an 9.25" diameter. It is a series wound DC motor with a double ended shaft. The TransWarp 9™ motor has been designed to ease the conversion process for people who want dual motor and/or direct drive applications. It has many unique features that set it apart from any other EV motor currently manufactured.
- This motor has a "shorty" tail shaft housing from a Chevrolet Turbo 400 transmission fitted to the drive end-bell (may be ordered with or without housing!) This is because the drive end shaft is not the typical 1.125" single-keyed type, but rather a hefty 1.370", 32-tooth involute spline that is identical to the tail shaft spline of a Turbo 400 transmission. In other words, this motor was designed to replace a transmission and couple directly to a drive shaft
- Uses double wide bearings on the drive end, added grease fittings (for a slip-yoke assembly...). Uses industry standard 1350 universal, to easily adapt to any manufacturers drive shaft.
- Motor also has brush wear indicators and a temperature snap switch.
- Has the same high efficiency fan and massive commutator and brushes as the WarP 9 motor.
- Commutator end shaft is the same diameter as the drive end of a typical WarP 9 - just in case you wanted to connect 2, 9" motors together!
- 2 lifting holes.

Why Dealers are Good (??)

- http://www.greencarreports.com/news/1095260_car-dealers-fire-back-why-negotiating-is-good-for-car-buyers-video
- From the National Automobile Dealer Association (NADA)

What if everything ran on gas?

- <http://www.egmcartech.com/?s=what+if+everything+ran+on+gas>
- (Thanks to Steve Ledger for passing this along from Leslie Grossman from Knoxville EAA)