

# The Volt Vette Project

## Chapter 52

### Running on Lithium

I start testing using just ten 12 volt batteries, all in the front.  
That makes the car a little nose heavy, but it still handles reasonably well.

Performance is another matter; at 120 volts it stinks!  
I start with the motor controller set at 800 amps.  
The vette is a good 620 pounds lighter than before, yet it works hard just to hold 25mph!  
I kick the amps up to 1200.  
I'm now getting above 40mph. Dialed up to 1600 amps, the car will do 60. But it takes all day to get there. My plan to have two separate battery packs is not going to work.

After 72 miles of testing, I add 2 more batteries. Fully charged, my pack voltage is now 156. But, after 150 miles at this voltage, SUV's are still kicking sand in my face all day long.  
0 to 60 in 25 seconds? Am I reading that right??

Bad! Bad!! Bad!!!

Well, maybe it's not That bad.  
But the Vette's performance is not as good as the Chevy Volt.

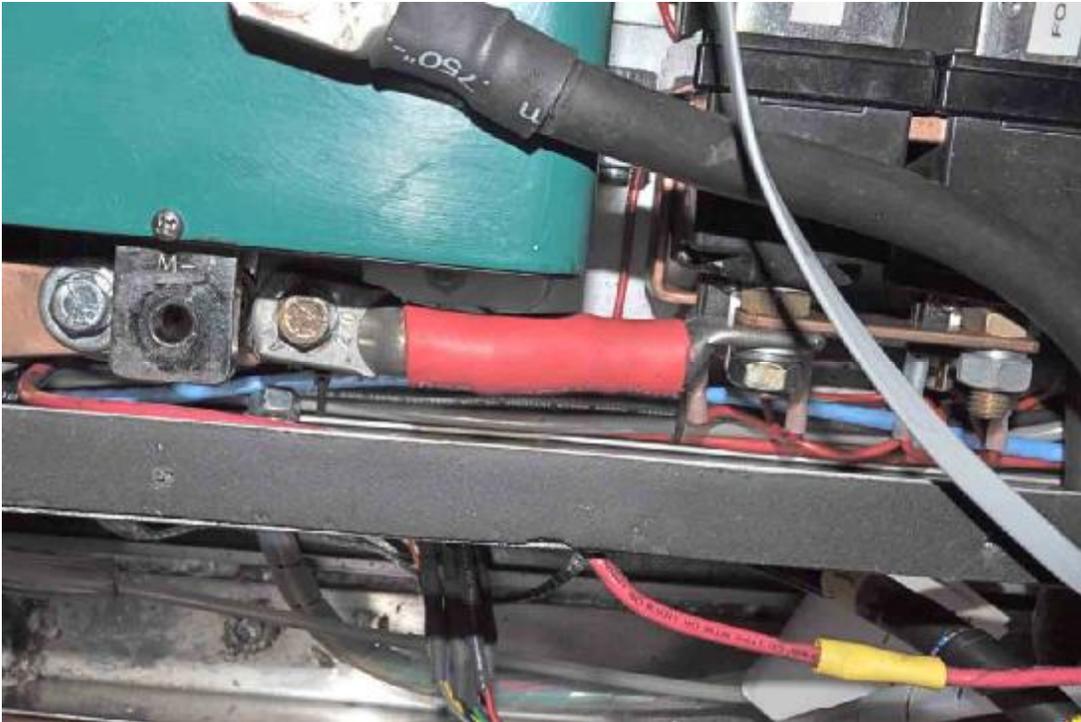
Adding a 13<sup>th</sup> battery helps, somewhat.

It may be time to throw money at the problem.

The problem being my Zilla motor controller can not handle more than 170 volts.  
But, 22 fully charged lithium batteries, wired in series, puts out about 300 volts.

I will need to send it back to the shop and have it upgraded to handle higher voltage.

Not looking forward to undoing all those wires!

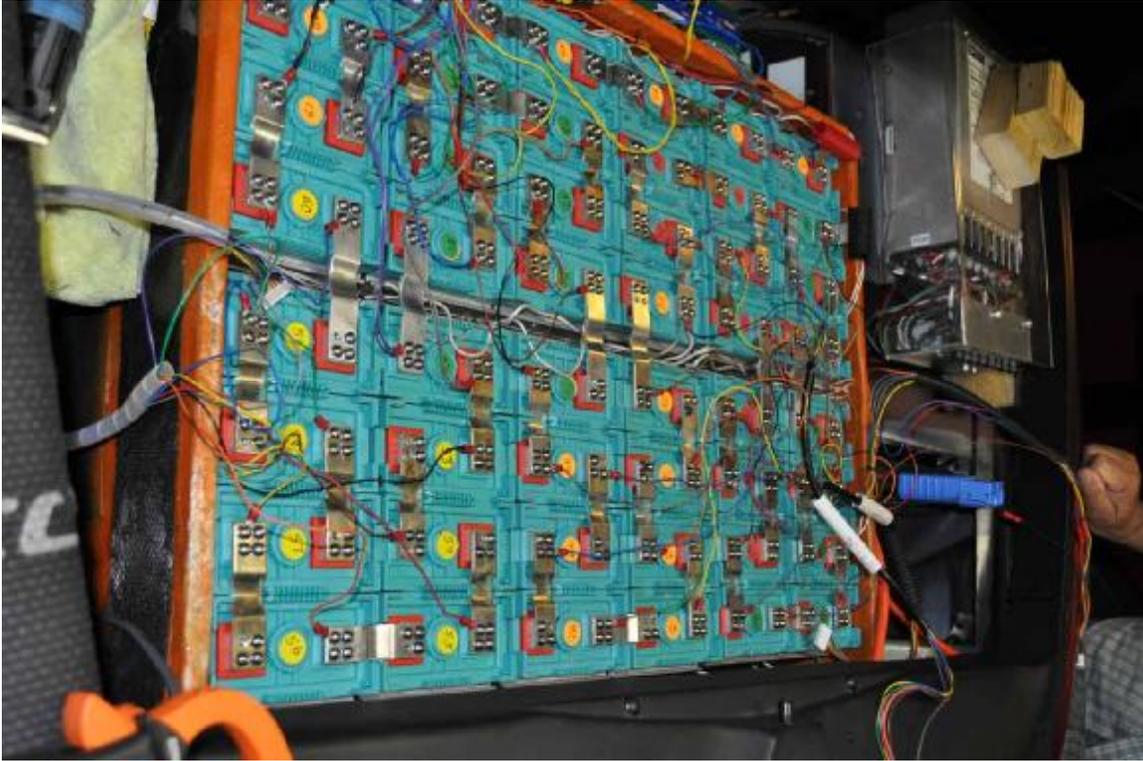


Getting the Zilla out of it's waterproof box is a job and a half. I must photograph every wire and bolt to make certain I can get it rewired properly.



Tim did all the Zilla wiring back in 2008. I think he liked the color red.

Once I get the Zilla Controller and Hairball back from the shop, it takes weeks to rewire this stuff, even with help from Bryan and Chris. The controller can now handle up to 348 volts.



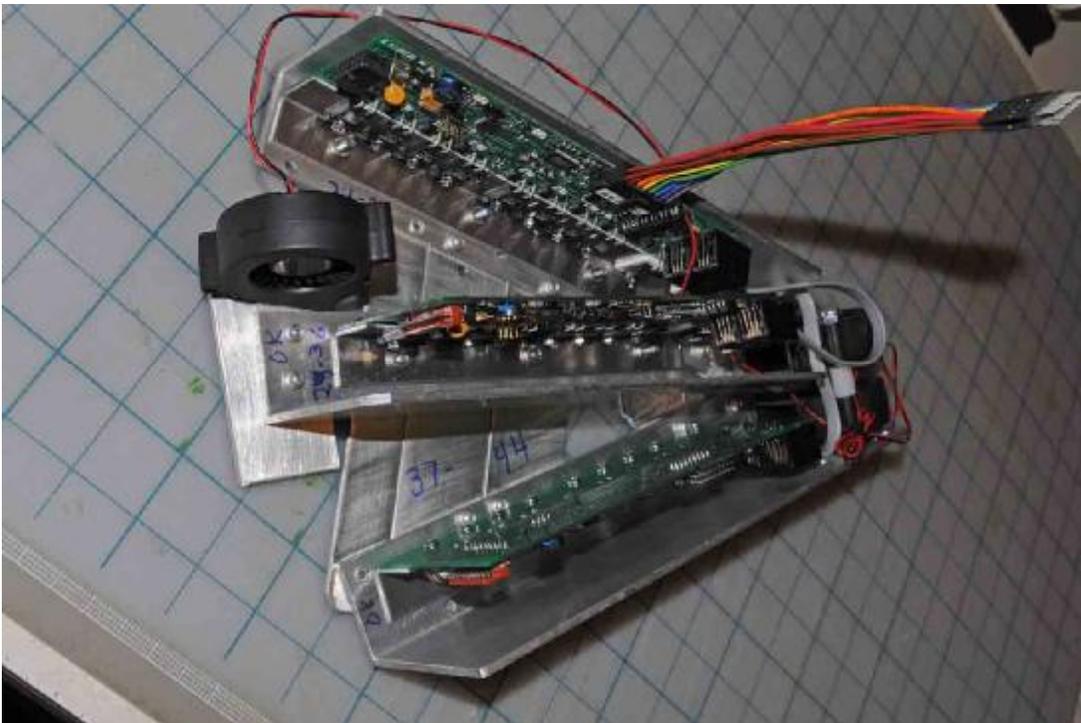
I put the remaining batteries into the rear box, and carefully bolt them together.

Finding a place for the battery regulator boards was not at all easy!

There is no room in the battery box, and I do not want to lose any more cargo room.



After a good deal of thought, I remove the rear radio speakers. Once I have thoroughly cleaned the speaker enclosures; I make 2 metal brackets.



Each bracket has 3 regulators, with cooling fans, bolted to it.



The brackets are made to fit snugly where the rear speakers used to be.

Finally, I can get the Volt Vette back on the road!

I dial the Zilla back down to 800 amps, which is more than enough to make the car really fly!

I put on as many miles as I can before the snow flies. I am careful to avoid going over 80mph, I'm not as young and foolish as I once was,

Next, I need to get the 156v heater to work at 300 volts.