

The Volt Vette Project

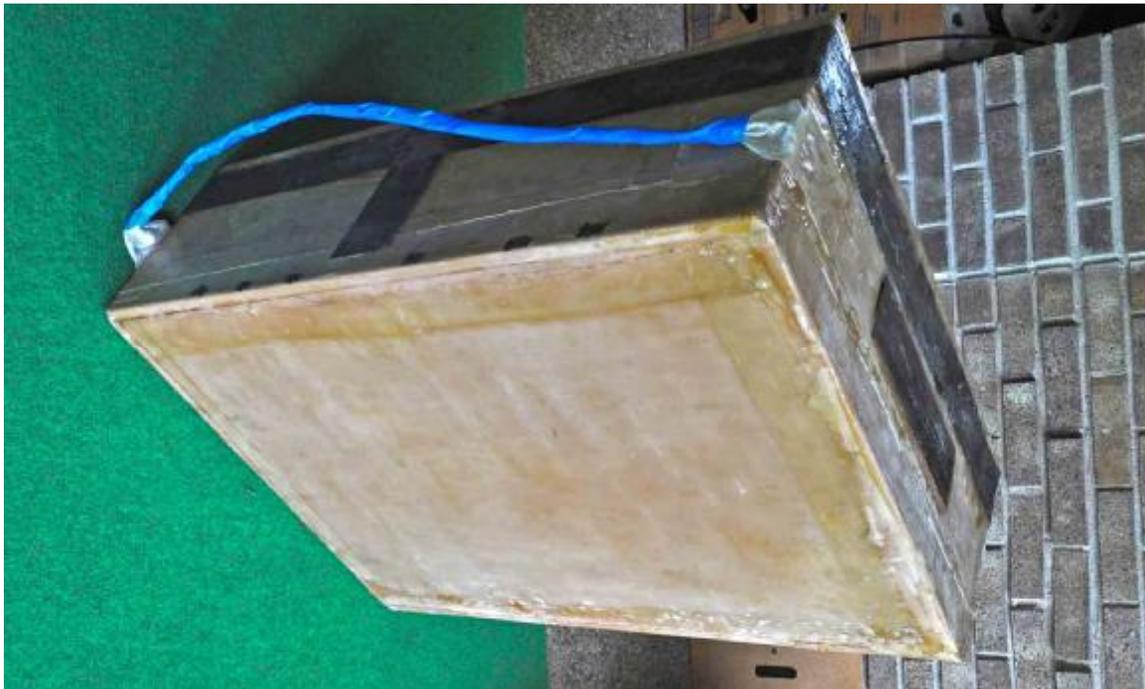
(the never ending story)

Chapter 50

Five years! 50 chapters. Will this project ever be complete?

I duck under this question hanging in the air, and get back to work.
First, I must find room for 22 batteries.

After, much, much, thought, I decide to put 5 batteries in the forward battery box, 5 more in the middle box, and 12 in a new bigger box in the rear. My on-line critics think the inner workings of the Volt Vette look a little too slap dash. I decide not to dash over to my computer and E slap my critics, because they are right. So I spend a lot of time trying to make the new battery box a neat and clean affair. No. Such. Luck.



Just another butt ugly box.



After 5 years, cracks had appeared on the bottom of the old fiberglass box. To keep that from happening again, I made the bottom of the new box twice as strong as the old,



and have it rest on 8 rollers instead of 6.



The angle iron that supported the rear edge of the battery box is now replaced with a wider piece of angle aluminum for better support.

Moving on to the front battery box. There should be no problem here since I will replace 280 lb of lead with 150 lb of lithium.

But there is a problem, really 2.

First, the bottom of the box had sagged under the weight of the lead batteries. Second, 5 lithium batteries take up less space than the lead.

The upshot is that I have batteries that shift around a lot, which is unsafe; and we have some batteries that sit lower than the others, so the buss bar connectors can't make the proper battery to battery connections.

So I think and I think, and I think I have an idea.

The idea is to build a metal framework that will hold the 5 batteries close together and perfectly level with one another.

I watch a riveting U Tube video on riveting, buy a rivet gun, and have at it.



After the usual false starts, and one false finish,



I have what is needed, an aluminum, open-sided box that can keep the lithium straight, level, and in its place.



With the unforeseen problems of the front battery box behind me, I can now address the long-standing problem of the middle box.

The Big Problem: 5 lithium batteries sitting side by side take up more space than the 3 former lead batteries. Can't make the box bigger. No extra space. The painful solution is to take apart the batteries and make 4 five-cell batteries from the 5 four-cell batteries. A very difficult task. I can reuse the end plates, but need to make new longer steel straps.



Chris Simon builds me a bending jig exactly the right length for making longer 5-cell straps.



But, drilling screw holes in thin stainless steel proves to be very dangerous! The stainless steel wants to grab the drill bit, twist itself up and hit my hand.



Chris comes by to check on my work. Each strap must be drilled out exactly the same, otherwise the pressure on the cells will not be equal top to bottom.

After weeks of dangerous work, it dawns on me that this is an impossible task.

I must seek a higher power.

That means taking my problem to Lee Hart. He had the right tools, to get the job done right, in just a few hours.

Chris wires his batteries to form 2 separate battery packs. This means if there is a problem with one battery in one pack, the second pack can still keep the car going.

I like the 2 pack plan and decide to use it in the Volt Vette.

My brain trust thinks 2 packs of 11 batteries each will not work well in the vette; so we will hope for the best, and make 2 ten cell packs.

On Nov. 18, 2012, with the front pack in place, I take my first drive under lithium power.

Now on to Battery Management.

