

Recovering the Lower Door Panels

Submitted by MarkyMarkGTM (Minneapolis, MN) on CorvetteForum.com. (7/21/10)

I did this modification over the winter and am just now getting to the write up. Through searching I was able to find a few other people that have done this but I always feel like everyone does things just a little differently and when I am searching for modifications, I love being able to find a TON of info on the subject, so this is mostly for those considering something like this.

Since I am doing this for someone who might want to tackle this modification themselves, I will be going into a lot of detail and description. Just warning you upfront it could get long. There will be lots of pictures along the way if you don't like reading. Here we go.

If you can't tell from the title, this thread will be outlining the process I used to recover the lower portion of the door panels with Alcantara. It involves separating the panel pieces, recovering the lower, and reassembly. I would give this modification a moderate difficulty level. It's certainly not easy to do but not all that involved either. If you are mechanically handy, it should be no problem. My upholstery background spans back to recovering a pool table in high school so I am no pro and did just fine.

What is Alcantara? By now I am sure everyone has started to see the trend of having a "suede" material featured on the interior of high end luxury cars right? Well suede is an animal product (backside of leather) and it usually isn't used for automotive purposes due to a lack of durability. It is fragile and gets dirty easily. Micro suede or ultra suede refers to a synthetic material made to mimic the properties of real suede like the feel and texture. Alcantara is a brand of micro suede that is the standard for automotive use for most car manufacturers. It is expensive at \$100 a yard and is very durable and UV resistant. I figured if it is good enough for Lamborghini then it will work for my C5. Here's some Alcantara featured in the cockpit of the Lamborghini Reventon:



Step one would be to take off the trim panels. A quick search will yield many results

for this process so I won't get into it. Actually here you go, first few pictures are what you need: <http://forums.corvetteforum.com/c5-g...w-problem.html>
Ok now take the styrofoam off the back of the trim panels too.



Here comes the commitment to the modification - separating the two halves. If you look along the backside of the trim panel you will see where the panels have been plastic welded together. They look like...



You will need to break all the welds to get the panels apart. I used a small butane torch and a pry tool and just heated up the plastic until it melted just a little. Once it was in that state gentle prying with the tool helped to push the two pieces apart. Ready for a sweet action shot.



Zoom in on that torch action.

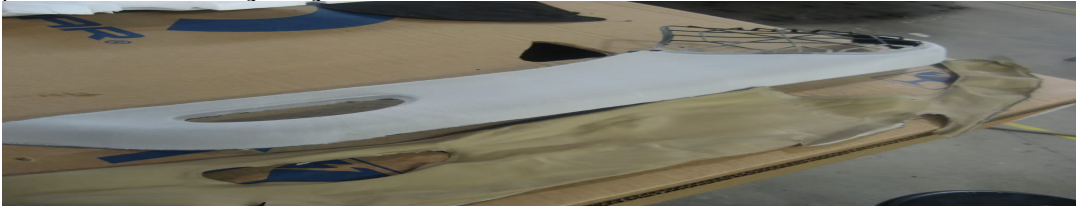


Here you can see that the plastic isn't drippy and melted, but if you look closely at the weld I am working on you will see that the plastic becomes shiny right before it melts away. Once it gets shiny then the prying takes place. It only takes a few seconds of heat to get it there and the separation goes really fast once you get the hang of it.

Pry apart all the welds, pull the speaker grill off, and bam - two separate pieces. Like I said before, no going back after this step, all in. I safely stored the upper halves in a closet because you won't need them for a while and the work space will get messy and you wouldn't want to risk potential damage. I grabbed them here and there for little stuff like test fitting but I put them away safely when not directly working with them.



Next I peeled the vinyl off of the piece and discarded. You may notice a layer of foam is left behind - sometimes it comes off with the vinyl, sometimes not. Here is a picture with factory vinyl removed.



To get the foam off the panel I sanded it with 80 grit on a 6" DA. It got messy but sanded off fairly quickly. I guess I should note here that it isn't 100% necessary to remove the old covering. You could just glue your new material right over the old stuff if you wanted to. The reason I did it this way was to insure good fitment with my speaker grille and reflector light/cover. If you just cover the old vinyl you are adding thickness to the piece and fit could go south. By first removing the old then applying the new I maintained the factory fit of the grille and such. Again, not sure that this step needs to be done but it seemed like the right way to do it to me, so that's what I did. Here is the piece with foam removed.



Time for some Alcantara action. I bought mine from Gulf Fabrics (I'd throw you a link but I think that is against the rules, so use Google) and they have two blacks to choose from. One is a jet black and the other is what I got. It is perhaps more of a charcoal but it is definitely an OEM looking color which is exactly what I wanted. You

also have two choices for type, panel fabric and seat fabric. Go with panel because it is thinner and easier to work with plus I think the seat stuff is perforated.

I forget the dimensions of a yard of this fabric but I want to say 3 feet by 5 feet. I know it is close to that but you would have to call them to verify (I know it is between 52 and 60 inches). Anyway, you could get by with a yard of it for doing both door panels and you should be fine. I was doing several pieces so I had a few yards to work with so lack of material was not an issue.

You want to cut a piece that is WAY oversized compared to the panel you are covering. You can always trim away excess but if the piece is too small you are screwed. At this price it is a good idea not to mess up and cut a piece too small. Here is my fabric draped over the panel.



This next part is going to be more self taught and hard to explain. I used 3M Super 90 adhesive and sprayed down the front of the piece. Next I laid the fabric over it and smoothed it out with my hands. This works for the majority of the panel but up near the front I sprayed the adhesive into a cup and brushed it on in small areas at a time. Up by the speaker is the most challenging part.

Then after the surface was bonded, I cut flaps by the edges and used hot glue to fold them over. Hard to explain but you will get the feel for it and here's a few shots to better understand the process.





And when I finished up I had a piece that looked something like this.



Everything is looking good so far. Now back to reuniting the two pieces together. This is another area where methods can be different depending on who is doing it. Some people use the existing plastic nubs left over from the separation and simply heat them up again to "re weld" the two halves back together. Some people glue them back together but I couldn't see how you could effectively clamp the two pieces tight without doing damage to the newly covered lower. I wanted to make sure they NEVER came apart again and were actually stronger than factory so here's what I did.

There will be nubs of plastic after you break the two apart and they look like this...



I sanded them smooth so that they were flat but I could still see where they once were. Sorry for the reused picture.



On the other piece that I haven't used in awhile (upper half) I cleaned the holes up a bit and ran a drill bit through them to make them round again. This step will vary depending on how much damage was done while separating the two halves. Now it is going to get tedious. I went to Home Depot and looked at their bolt and fastener selection but couldn't find anything that I wanted so I decided to make my own hardware. I'm handy, why not.

I took a bolt and a washer like so.



Then I welded them together.



Next I ground off the weld so it was flat. I was left with a threaded stud that can be glued to the panel. (Yes I am going somewhere with this.) I made over 20 of these and got fairly fast at it.



I felt like I should have been able to buy something like this fairly easily but the hardware store was no help. If anyone has a source for something like this, post up. Nothing like custom hardware and it wasn't too bad making them all.

After I had a whole gang of them I glued them along the lower trim panel piece and the locations of the pre-existing plastic nubs. Basically everywhere that the factory had a weld, I now had a threaded stud.

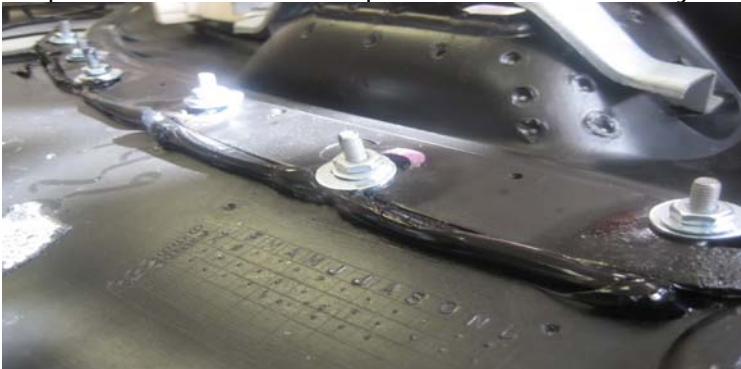


If you get into this project you will find that the corners a bit different and for those I just used a bolt and cut the head off and glued the threaded end where I needed. This picture will make sense if you do this project.



So now with all my threaded studs in place you can see that I have transformed the panel from a "one time fuse together" piece to a "two separate bolt together" system. It is now two pieces that can be bolted together and taken apart. This worked great for dry fitting and I could have been done but I wanted extra integrity. I glued the two halves back together using windshield urethane as I have found it to be very strong, yet somewhat flexible for when I need to remove the door panel in the future. The threaded studs acted as my "clamps" for the drying process and worked very well. I ran a bead along the edge and simply bolted them together, then set it and forget it. I came back a day later to super strong trim panels that were ready for installation.

Here are some gluing shots. You can see that the panel is bolted together and the bead of urethane is applied and squirting out the sides as the two halves were tightened down. Be very careful not to go overboard on the urethane and have it seep out to the front of the panel. That would ruin your day.



And then just smoothing the excess over with my finger.



Reinstall the speaker grille, the reflector, and then the trim panels to the door and you are done. I guess that means time for finished pictures.





I also did some other interior pieces as well.

A pillars.





Knee bolster.



Center console arm rest.



Door jamb/sill trim.



Sub box and storage compartments.



I think that's all I got. Overall I think that the project went really well and I don't think there are too many things that I would do differently if I were to do it again. It is a subtle modification that brings the interior quality up a bit. My favorite piece I did was the center console arm rest, I enjoy that supple feel every time I drive the car.

Thanks to those that went before me and showed me it could be done. Hopefully I have added to the content for this modification and anyone wanting to give it a go should have all the tools they need to get the job done.

If I left anything out please post up with questions or comments and hopefully this will help someone in the future.

Submitted by \$\$\$frumnuttin' on CorvetteForum.com. (7/21/10)

When I did mine I opted to Velcro the upper and lower panels and it worked great, and I can remove just the bottom if I really want to. I used an old woodburning iron to soften the plastic, then cleaned up with a Dremel disc. Got my alcantara on the NSX forum for \$60 a yard and have lots left over after careful measuring and cutting.

Submitted by MarkyMarkGTM on 7/23/10.

Originally Posted by **Jewjenk** [↗](#)

Do you think that the plastic electric welders would be able to re-weld the two pieces back together instead of making the studs as you did? I saw one advertised at the same store that people are buying the cheap aluminum jack from.

As an auto body technician I have grown to hate plastic welders over the years and do everything in my power to avoid using them. I don't think they work very well and also the whole process of plastic welding is very dependant on the type of plastic

and its properties. The term "plastic welding" is also very misleading because you really aren't making two pieces into one like when you weld metal. Rather you are more or less "brazing" two plastic pieces together with a filler material.

The welders really aren't that complicated either and are basically a heating element with a flute to feed in a filler material rod. For this project you could replicate the tool by heating anything made of metal and once hot enough, using that metal object to work/melt the plastic back together. There's a picture of the end of a typical plastic welder so you can see what I am talking about, pretty basic.



To better answer your question, yes you could re-weld it back together. Depending on the separation process there should be enough of the plastic nubs left to simply re melt and get a decent hold. No, I would not buy a special tool to do this. Any object hot enough to melt plastic will do the job. I went with the method I chose because I have a way of "over engineering" things and wanted to make sure they never came apart.

Submitted by \$\$\$frumnuttin' on CorvetteForum.com. (7/26/10)

Here's some more detail. After separation I dremeled down the remaining plastic posts and smoothed all surfaces that would touch each other, then applied industrial strength Velcro in long strips test fitting as I went along. I had to make sure the lower panel did not protrude away from the upper panel because of the added material at the interface - it worked fine. The ends were a bit more difficult, but it just takes a little more fine tuning to get them tight.

Also, I went right over the existing vinyl with my Alcantara and got excellent results using a glue gun (don't even try to staple it like the OEMs - staples will fall out later and you will be pissed and end up with the glue gun after all). I spent at least 30-40 hours off and on doing this modification - part of the time off was waiting for my fingers to heal up from burns, cuts, etc. I used just one yard of material and did the center console cover and the lower door panels, with lots left over for next winter. Also, I picked up a beat up (Katrina soaked) door panel on E-bay to practice on first. This really helped and I got my money back reselling the red reflector and speaker screen.

Submitted by MarkyMarkGTM on 7/27/10.

Originally Posted by **HP_Addict** [↗](#)

Great job. I plan to recover mine gray. Any secrets on recovering the glove box or knee bolster?

On the glove box the hardest part will be the center area where the latch goes. Do this spot first because you will need extra fabric to get down in there. On the door panels I did everything, then cut the hole for the reflector. If you did that on the glove box you would be screwed because the fabric would be too short and would look awful.

The cover is also glued to the box so you will need to separate the two and glue them back together. I used a putty knife and they came apart just fine. It's the putting together part that is hard though and I haven't done that yet.

Knee bolster is fairly straight forward. I would research a stronger adhesive though because there are more concave areas where the fabric will want to pull away more. On parts such as my arm rest, convex shapes in general, I really didn't even need glue on the surface because after stretching and gluing the edges over, the natural shape of the part didn't let the fabric pull loose. Maybe a better illustration of this would be a pool table. There is no glue on the surface holding the felt to the slate, the fabric is just stretched and stapled at the edges and it holds fine due to the flatness of the table surface.

Once you start doing parts with curves you rely more on the glue to hold the fabric down to the substrate and I would use something stronger than the 3M stuff. I don't know what professional upholstery shops use but I'd like to find out.

Originally Posted by **HP_Addict** [↗](#)

You can buy bolts like that, I think they are called elevator bolts.

YES YES YES, this is what this thread is for. I knew that they had to be manufactured by some hardware company but didn't have a clue as to what they would be called. Here that guys, look for ELEVATOR BOLTS. Thanks for posting.



Submitted by MarkyMarkGTM on 1/2/12

Originally Posted by **chasboy** [↗](#)

You did a fabulous job, and this tutorial was as good as the other one you

did.

I didn't know the name of the elevator bolts either, but I knew they existed. I've been curious about what alcantara actually was, and thanks to your excellent tutorial I now know.

The lower panel for me is frequently an area I hit with my shoe. I think others probably do that too. How does it hold up to that kind of abuse? What about errant moisture on the other areas where water could hit? The lower panel is not loaded with compound curves like the other, but is the material stretchy enough to wrap in 'ticklish' areas?

Thanks for your comments, I appreciate it. Alcantara is very durable as it relates to normal wear and tear. This is precisely why auto manufacturers are using it on things like steering wheels and seat inserts, and other high wear areas.

I too commonly kick the bottom of the door panel, as much as I make a conscience effort to NOT do it. They are holding up well so far and there is NO sign that it has been beaten a little bit (kicks, rubs, scuffs, etc.). The lower portion, or the entire door panel for that matter doesn't really see any moisture so I am not sure what you are asking in that aspect. I mist it with cleaner and wipe it back and forth when I am doing detailing work but that is about it. Being a synthetic material it isn't going to discolor, shrink, warp, stain, etc like a fragile suede or leather might. It is important to note that mine are black so it obviously wouldn't show damage from scuffs or dirt as easily as another color might.

You make a great observation in that the lower portion is fairly flat and doesn't have lots of complex curves. That makes this project fairly simple and a good one to start out with if you are wanting to get into upholstery a little bit. As far as the stretch and ease of workability, I would say there isn't much. If you are wanting to recover an entire door panel for instance you will be making patterns and sewing various pieces together. If you look at a pro level door panel by Apsis or another vendor you will see where they use separate pieces to conform to the panel. I'm not saying it is easy, in fact it would be incredibly difficult to recover door panels like that and I give those dudes a ton of credit.

I do get water on the sill portion but if you open your door and look at where the weatherstrips run that will give you an idea of where the seal is made when the door is closed. When closed the entire trim panel is basically on the inside of the car and there would be no way for water to get at it. When opening or closing there is no way for the trim panel to contact the area you are talking about. Water just kind of chills there until you wipe it dry after you wash it or it just dries on its own from after a rain drive.