

**Repair and Installation Help from**



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### **Diagnostic help, installing headlamp header bar.**

This is an interesting topic but one that I'm very familiar with. All 1968-1982 Corvettes used the steel header bar combined with the fiberglass bonding strip that was held together with aluminum rivets. This must have seemed fine over the production run of the C3 Corvette and I'm sure the design engineers didn't put much thought into those tiny aluminum rivets.

Over time, the rivets swell due to what is called galvanic corrosion, or dissimilar metal properties. What makes this even worse is the environment in which you live in. For example, states in the north tend to get more salt put on the roadways and the saltwater will act as an electrolyte, speeding up the corrosion effects of the rivet.

This is also why headlamp supports rot on the ends where the bolts pass through. Few people ask me this question, but just as a tidbit, now you know.

Ok, so you know you have the problem. Now how do you fix it? There seems to be more debate over this one subject than any other I've seen in the past. Some say to just drill out the rivets, while some say "no way".

For me and in my past experiences, I would NEVER drill a hole in a fiberglass panel, and especially one on top of the surround panel. Repaired holes, over time, will show and believe me.. I've tried every trick in the book to hide holes such as those left from a luggage rack, antenna holes, and even a stick hole on a front fender. Nothing will hide it forever, period! I've not found anyone in the years I've been working on Corvettes that has ever proved to me that he/she can hide a hole in a fiberglass panel and not have the after effects show through.

So the next question is how to fix it. This is our story:

First you should remove the headlamps from the car. Remove the entire assemblies to gain access to the header. For us we also remove the radiator support and radiator to allow for more access.

Next we take an air cutter and cut the old header into three pieces while still on the car. I've illustrated where we do these cuts below with the red lines.



Next we have a really old putty knife or a paint scraper. I'm not really sure which one was but it is not one of those thin bladed scrapers. This thing has good thick steel in it and can be reworked with ease, given some heat, cooling water and metal break. The scraper is fashioned as shown below so that it can be driven between the steel header and the bonding strip. Note that I said bonding strip and not the upper surround panel.

The idea is to separate the old steel header from the bonding strip leaving the original bonding strip in place. To do this you must use a pretty thick knife, because you'll be hammering it through the old soft rivets. The old header is cut into three sections so that you can see the knife position at all times and not drive it through the surround panel.



Rare and Special Tool

Once the header is removed from the upper surround panel, it will look something like the picture on the left below. What you will see under the car will look like the picture on the right.



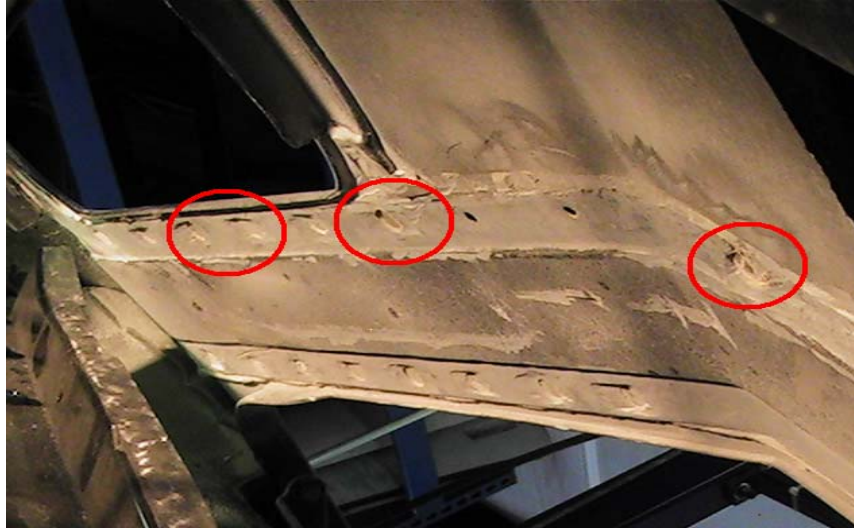
Once to this stage we still need to get to those pesky rivets. We use a bit similar to this one only it is flat on the end.



What we do is remove the fiberglass bonding strip only in the area where the rivet is located and then remove the rivet. We usually remove about the size of a half dollar to make sure the entire rivet is removed. You must do this large enough so that the upper panel can be allowed to lay flat again.

Once the rivet and portion of the bonding strip is removed you will see this. I've circled a few spots on the second picture below:





Once you have the rivets all removed, it is time to bond in the new upper header. This time we are not using rivets to hold the header, we will be bonding using SEM 39747 panel adhesive. 39747 adhesive will bond fiberglass to metal, metal to metal and just about anything else you want to glue. It does take a special gun to shoot this mixture, but it is well worth the expense if you are going to do more than one. I'm not so sure how well it would work out for a one time application cost wise.

It is very important to make sure both surfaces are scuffed to allow the adhesive something to bite on. Below you'll see the glue we use and actual header it is applied to before installation:

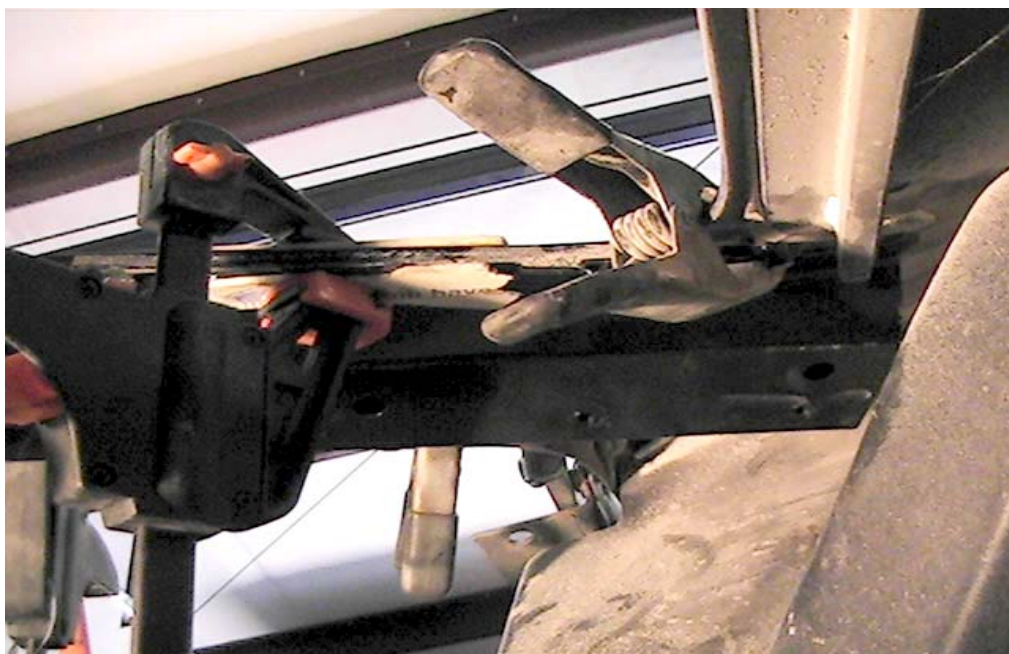


Installing the header is actually very easy if you have left the original bonding strip in place. You can use the edges of the bonding strip to make sure you have the new header in place. With your glue on the bar, place it in position and clamp. As you can see in the following pictures, clamping position is very important. The areas that have risen up from the rivet are now sitting over a pocket, and this pocket will fill with the new glue. It is very important that you clamp with a board over top of each one of the places. This



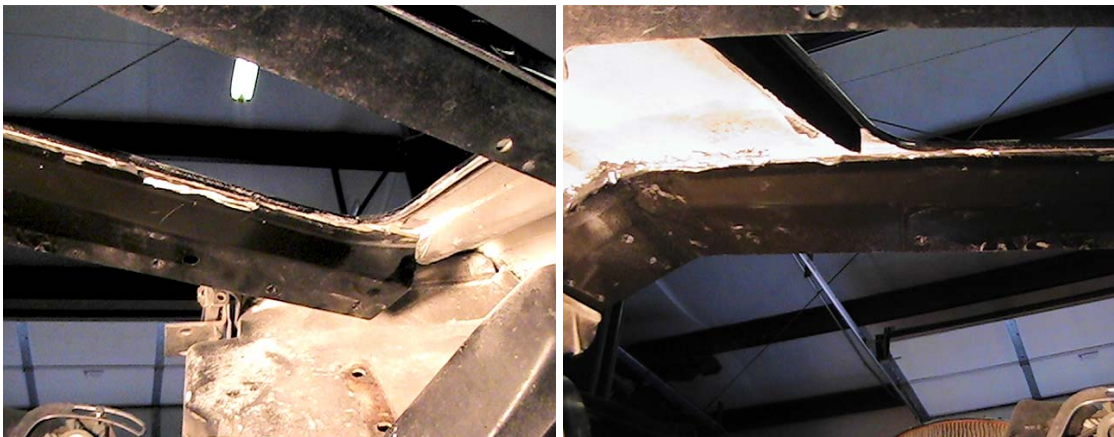
will allow the upper surround panel dimples to become flush to the car again, thus allowing less finish work if you are painting the car.

In the following pictures you'll see the new header clamped in position and ready to cure. Since this is slower curing glue than any fiberglass adhesives, it will allow you to move the header into the exact position before clamping. If needed, you can move and tweak it. Allow this to sit for twenty four hours before you remove the clamps.





Once you remove the clamps you are ready to re-install the parts you had removed to gain access. You can view the installed header in the two pictures below.



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