

INSTALLATION GUIDE FOR UNASSEMBLED RUST REPAIR KIT 79-93 MUSTANG FRONT RAILS



This is a guide for the installation of the right or left frame rail in a fox body mustang. So with some help from good friends we designed reproduction frame rail and all the additional pieces that goes with it to duplicate (the best we could) a frame rail that would replace the rusted one. We made the pieces out of 12 and 14 gauge metals. We have the mainframe rail, inter supports for the front bumper mount and also the sway bar mount, the inter support for the tow hook mount, bottom plate and crush tubes, the inter strut tower mounts where the k-member bolts in and the bottom brace at the firewall where the rear saddle is. This job is not for a novice, it requires someone that is familiar with cutting out spot welds and can weld and fabricate metal to get the fit that you need. If you take your time and pay attention to details you can replace the rusted rail with a factory looking replacement that would last and will look like the original.

For this job the engine will need to be out of the car and all wiring and bolt on to the frame will need to be removed. Before ever cutting a spot-weld out you must get a lot of measurements to insure that you can replace the frame rail in the exact location that the existing rail is setting. I measured from the radiator support to the back for the location of the sway bar mount, and also to the rear saddle that the frame rail sets in. Cross measurements on the k-member mounting holes and angle line from left front to right rear and right front to left rear to be sure that the frame is in square and the new one can be put in the correct location. Height needs to be measured also so the rail will be correctly placed. If the car will remain in the same position you could get measurements from the floor up or you can measure from the top of the fender supports down by using any thing across the engine compartment and measuring down from it. Be sure all point are marked and labeled so when installing the new one you have the exact measuring points you had before removing the old one.

The spot welds will all need to be cut so the rail can be removed. Some of the spot welds are hard to find but you can use a wire wheel to help clean up the area so you can see where they are at. Also there is one inside the rear of the frame rail where it

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attaches to the firewall saddle. When the frame rail is removed, clean up all the areas where the spot-welds were located so the surface is as smooth as possible so the new replacement will not hang up in anyway.

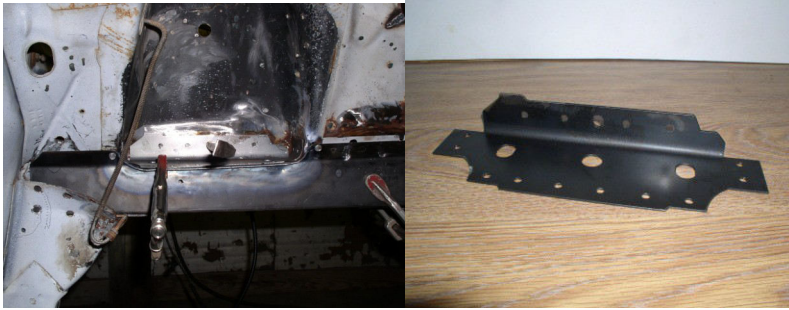
We fitted the main rail with the front cover that has the slot in it. The frame rail has a slight bend in where the slot is cut into the rail and front cap. This is used to help in bending at the correct location, and can be modified to help get the measurements that you need. If you need more of an angle then some of the material can be removed from inside the slot to make more of an angle. Tack weld or screw with self-tapping screws the cap into the frame rail and bend the two pieces in till the slot comes together, check your measurements and tack weld the rail at the slot. The front of the rail and cap has tabs that have been slotted to bend them where it welds to the radiator support. The rail needs to be put in the rear saddle first, and then bend the outer tab on the front of the rail with the slots in it so the front can be moved outward to the radiator support. Once the rail is in the proper placement, we used self-tapping screws to hold it in place then marked with a sharpie a line on the frame rail and also the body so it can be removed and installed in the exact location. Mark the front cap also and cut the tack welds or unscrew the front cap so the inter supports can be installed at the bumper mount and the tow hook mount. This process may take several tries to get the fit you need. Some of the top cap may need to be trimmed to fit around the strut tower.



The bumper inter support can be welded in once aligned with the holes in the front of the rail. The tow hook inter support can be welded in once aligned with the tow hook oblong hole that is on the outside of the rail. The smooth rail does not use this. Now drill holes in the front cap to spot-weld the front cap into place. The spot welds can be put where the 2 pieces come together. Use your own judgment on how many and where to put them. We did every 2" with a 1/4" bit. Reinstall the frame rail and check for any areas that need to be cut or smoothed up to make a good fit.

With the frame rail in the proper location you can begin work on the inter strut tower. What I did was to screw the frame rail to the strut tower on both sides to hold it so the lip could be bent down for the inter shock tower plate. Heat the frame rail lip at the area between the sides of the strut tower and bend down to a 90 with the side of the rail. This part is slotted to help with the bend. Once the bend is done, you should have a nice rounded down area where the rail mounts to the strut tower and the lip that is bent down at a 90. Weld the slots in solid on the lip and dress down for a smooth ledge for the upper plate. The inter strut tower plate can be drilled with a 1/4" drill bit to be welded to the back of the strut tower and the lip that is bent on the frame rail drilling the plate to weld into place.

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The bottom plate with the three large holes is to weld the crush tubes onto. Check the plate in the rail to be sure the holes line up for the k-member support bolts and now that you know what side goes up you can tack weld the crush

tubes onto this plate at a 90 to the plate. The inter strut tower plate will need to be fitted now so the crush tubes line up with inter plate. The plate will set on the lip that was bent down and the outer tabs will need to be marked and bent up to fit on the inside walls of the strut tower. Once the fit is good you can weld the crush tube plate down to the frame rail and weld the crush tubes in place. Then fit the strut tower plate and mark it if all your other measurements are on target. Now that the pieces are fitted and inter bumper mount and tow hook support is welded and the crush tubes and plate the crush tubes set on is welded, I pulled the assembly out and POR 15 inside the rail and around the inter pieces. I did this to help prevent any rust to start on inside of the rail. I also primed and painted after the POR 15 had dried.

The next step is to reassemble the rail and fit the inter strut tower plate and begin spot welding the rail. I drilled 1/4" holes where needed. The screw holes can also be welded shut. Weld in like what the original was and added spot welds will not hurt. Just make sure measurements are right and holes align, as they should. The front tab can be bent into the radiator support and tacked in place then weld slots solid and smooth down for a clean appearance. Once the rail is welded in, the aprons can be spot welded onto the new rail at the original location. On some of the parts the spot weld holes are already cut in and some you will have to drill the holes for spot welds. Also on some models the rear outer support on the rear of the frame rail next to the firewall is not used. They are included in the kit for older models.

We used clamps a lot and vise grips to help hold the pieces. The sway bar mount could be tacked on and welded the outer tab of the sway bar mount can be heated and bent up and welded or can be welded then trimmed when the rail is out or could be welded in later. You can drill holes in the tabs that fit next to the frame rail to weld them on. Also the sway bar saddles can be drilled to tack weld them to the sway bar see pic for holes location.

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BE SURE OF YOUR MEASUREMENTS!!

Hope this helps with the install and both would be similar. If there is something I forgot or you need more info you can contact me at:

bwd@adams.net

Thanks for purchasing the Fox Rails for your Fox Body Solution.