

# 95-04 Mustang Frame Rail Installation Guide



This is a guide for the installation of the Left or Right replacement frame rail. This replacement will require that the engine be removed and all wires hoses or mounting hardware will need to be removed from frame. Radiator will also need to be removed to access the support that the front of the frame rails attach to. Once the frame rails in the car are clear it's time to start measuring.

The frame rails we design are a complete replacement of the original so become familiar with the different parts that make up the complete rail. Measurements need to be made and recorded so each part can be replaced in the exact same location as the original part was placed. This included the left and right and vertical numbers. Try to measure from fixed items so if the car is moved the readings will always be the same. Be sure to take several readings to match up. The front 3<sup>rd</sup> of the rail has a slight bend inward that will need to be set at the same location. The replacement rails has a vertical cut that will need to be finished, this is marked with "Cut" Also the top cap has a matching cut on it. The cut is used to make the bend that is needed.

# 95-04 Mustang Frame Rail Installation Guide

You can adjust the amount of bend by grinding some more material from the V to make the bend correct. Later in the install the cut will be welded shut. This process is not for the novice it will take some skill in fabrication work to get the fit right. Measurements are so important. Pictures are also helpful once they



are cut out you can look at pictures to help remind you of an area of concern.

Cutting the frame rail out can be time consuming but you need to take your time. Frame rails are installed by spot welds that need to be cut out. Several spotweld cutter are available for this task. Do get a good one. Be sure of the cuts that you make. The main goal is to not distort any of the adjacent panels that attach to the frame rail. A reciprocating saw could be used under the panels you need to save and then come back and clean the remaining pieces off the panels you want to leave undisturbed. Some spot welds are hidden under the skirt that covers the rear of the frame rail. You need almost surgical skills to remove layers of the side skirts to get to the spot welds cut. Most of the frame rails that

Once the old is out its time to clean up all the spot welds and grind down smooth. Remove all the remaining pieces and clean up the skirt down to the frame rail. Clean up the radiator

# 95-04 Mustang Frame Rail Installation Guide

support grinding down all the spot welds remaining and smooth it even with the surrounding area. Rear saddle area needs cleaned as the replacement will fit into that area.

Now is time to prep the frame rail to install. On the main frame rail at the radiator support end the outside tab has slots on it to assist in bending it out away from the rail also the bottom of the front of the rail has a tab that will need to be bent down to fit the support. This will allow to set the frame rail in the rear saddle and slide the front in position on the radiator support then once all adjustments are made the tab can be bent to the support and tacked on and weld the slots closed. Screws can be used to hold in place while fitting. The top cap and be fitted on with the cut matching the rail and screwed on for a temp fit to get the



bend correct on the rail. By removing



more material on the sides of the V will allow the front 3<sup>rd</sup> to bend the proper amount. Once the bend is correct the slot can be tack welded to hold the position. The Toe



# 95-04 Mustang Frame Rail Installation Guide

Hook/sway bar mount support can be welded into position with the holes matching up with the rail. Smaller holes are for spot welding them in. Get the rail fitting proper and measurements matching the self-tapping screws to hold the position while working on the inter strut plate.



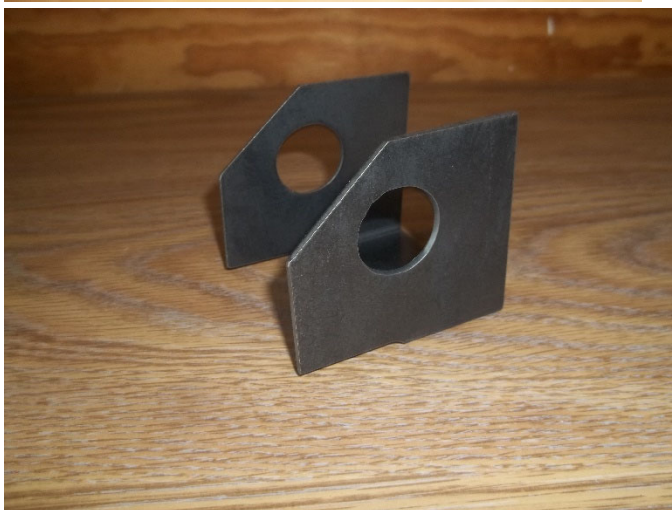
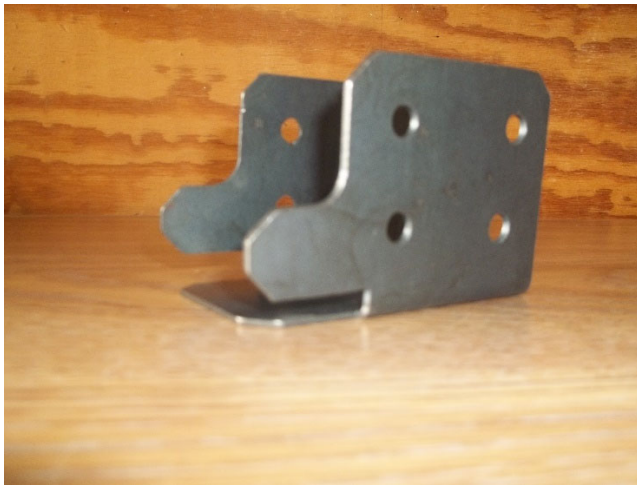
The lower inter strut plate will match the holes in the bottom of the rails. They will match the holes for the K member when installed, be sure measurement are correct. Crush tubes are tacked over the holes to prevent crushing the upper strut plate when tightening. I extended the lower strut plate to allow a good backing to the strut tower skirt as they seem to rust out bad. All the piece can be trimmed to fit your application, crush tubes also may need to be trimmed to fit.



# 95-04 Mustang Frame Rail Installation Guide

Once the lower plate is fitted the top plate will have tabs on both sides. The tabs will need to be bent up to allow the plate to slide into the cavity of tower. On the frame rail a bend line slots are on the outer lip that once the position is determined of the top plate the lip will need to be heated and bent down at a 90 so the outer edge of the top plate will rest on the lip. I did use self-tapping screws to hold the outer edges to bend this piece down, vise grips could also be used for this. Be sure to check the fit on all pieces first, mark with a sharpie so the pieces can be removed and reinstalled the same location.

Once done fitting the rail it could be removed and tack weld the pieces you can. Also a good time the paint or rust proof inside the rail before finish welding up. Some of the parts have ¼" holes that are places to tack weld the pieces in. or you may want to drill holes for this purpose. Pay close attention before starting to see how many spot welds are used and location of the parts being replaced. Look inside the cavity at strut towers to see how the parts fit together. This will help in understanding how to reinstall them. This kit was made to replace a rusted weak spot that the Mustang have suffered for years.



# 95-04 Mustang Frame Rail Installation Guide

Once the rail is fitted and secured in place, the inter strut plate are installed and welded it's time to put in the rear saddle and front saddle. Rear saddle goes over the frame rail attaches to the saddle from the firewall. Some had this piece and some did not. And the front saddle has a tab that will need to be bent down and align with the drop down tab on the front of the frame rail. It lays over the frame rail tabs and is tack welded to the radiator support with the frame rail. Should be the same as when you remove the old one. The frame rails I offer are a kit and can be modify to fit the best they can some fab work will be need to install them. Be sure to make quality welds to attach all the pieces, then smooth to make a good appearance for paint.

Please feel free to contact me if I can help out in any way. Always trying to perfect the pieces so any suggestion or comments I will take into consideration. I will be working on designing a kit that will have the unnecessary holes deleted so they are more of a smooth appearance when installed .. Stay tuned!

Thanks for Purchasing the Kit

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