



## Mustang II Crossmember Kits Installation Instructions

1. Remove all front sheet metal, bumper, radiator, engine and transmission.
2. Locate and mark centerline of front axle on top, sides and bottom of both frame rails with a scribe.
3. Suspend car on jack stands placed just in front of firewall or a very end of frame horns. Shim if necessary to get the frame level.
4. Bolt or tack weld a piece of angle iron or steel tubing between the frame rails at the very end of the frame horns.
5. Remove all stock suspension.
6. Thoroughly clean entire front of frame where crossmember and spring towers will be welded on. This can be accomplished with a wire wheel or grinder with course sand paper. All paint, dirt and grease must be removed to obtain strong, pure welds.
7. At this time box the frame with 3/16" steel making sure that there are 4" on both sides of your center mark on the frame (8" total). Weld boxing plates in place, alternating from side to side so as to not overheat the frame.

Note: On models with a "C" channel frame, the frame must be boxed from at least the firewall forward to at least 4" ahead of the new crossmember location. We make precut boxing plates for most popular models, or you can fabricate your own out of 3/16 plate steel.

8. Measure frame in an X from same points of opposite frame rails, to determine if your frame is square before continuing.
9. On vehicles where radiator core support is part of the crossmember that will be removed, measure and record location.
10. Remove front crossmember on models where it will interfere with the new Mustang II crossmember.
11. Locate crossmember with rack mounts forward under the frame, centering it with your marks on the frame. With chassis sitting at anticipated ride height and rake, check crossmember for level forward and aft as well as side to side.
12. If necessary, shim with weldable steel material until everything is right.



13. Now measure lower control arm holes, making sure they are equal distance from each side. Double and triple check all measurements, then tack weld in place.
14. Check measurements once more then weld in place, alternating sides to prevent overheating frame.

Note: If you are not completely confident in your welding skills then by all means have someone who has the necessary skills and equipment do the welding for you.

15. Place the spring / shock towers on a workbench or the floor and carefully space the centers of the shock holes 37.5" apart with the angles sides outward. Then clamp them to a piece of heavy angle iron or square tube, being careful to get them parallel with each other as well as maintaining the 37.5" spacing.
16. Set the assembly on your frame centering it with your axle centerline marks as well as side to side. The spring towers mount with the smaller side to the rear. This provides the anti-dive angle just as in the original factory design.

Note: The only exception to this is on 1933-34 Plymouth / Dodge passenger cars (only models that came originally with an axle) and 1933-35 Plymouth / Dodge trucks where the smaller side goes forward because the frame is sloping to the rear at a sharp angle.

17. Check measurements then tack weld in place.
18. Slip coil spring up into spring tower, using it to check for clearance between frame and spring. If there is at least 1/4" of clearance between frame rail side and spring, proceed to next step. If there is not enough clearance, then you will have to install reliefs in the frame rail sides to clear springs.
19. Next tack weld the triangular gussets in place, angling them in toward the top edges of the lower crossmember.
20. With everything tacked in place, recheck all measurements, and then weld in place alternating sides to prevent overheating.

Note: On some applications where the front frame horns angle downward towards the front, it may be necessary to install "C" notches in the frame rail bottoms for rack and pinion clearance. This will also be necessary if you special order a "super low" version of our kit (e.g. - 2" dropped spindles, bags, etc.)

21. Install the rack and pinion on the crossmember with the provided hardware, putting (2) of the included flat washers between the rack and pinion and the rack mounts on the crossmember as needed for clearance between the rack and the crossmember and the other washer on the outside (head) of each rack mounting bolt.



Note: If you are using a General Motors pump then you will need to order our GM power steering pump valve shim kit to reduce the pressure as GM pumps put out too much pressure for the Mustang II racks. We also have power steering hose kits to connect the GM pumps to the Mustang racks. Call for info.

22. Locate your radiator mount per your earlier measurements, weld in place (if applicable).
23. At this point you are ready to assemble your front suspension. Install the upper and lower control arms, coil springs, spindles, caliper bracket, rotors and calipers. Connect the tie rods to the spindles.
24. Proper ride height is achieved when the lower control arms are level with the ground. Sometimes it is necessary to cut 1/2 to 1 coil off of the springs with an abrasive cutoff or grinder. Never use a torch!

Note: Before cutting coil springs, install engine, transmission, all sheet metal, etc., checking ride height with all weight on the front end. There are several different spring rates for the Mustang II (stock height provided). Please call us if you have a question about which ones to use for your application.

25. Re-install sheet metal, trimming it to 1" of new suspension.
26. Install brake lines, hoses and bleed brakes.
27. The next step is to build your steering shaft. We recommend 3/4" Double D steering shaft with a rag joint at the rack and a universal joint at the steering column. If you have a "tight" engine compartment, you may need an additional universal joint with a spherical rod end. Call if you have questions.

Note: Your engine and exhaust headers must be installed prior to installing your steering shaft. We recommend that you use only the best quality needle bearing universal joints in your steering shaft. Please use the highest quality components, your life depends on it!

28. Check suspension, steering and brakes to make sure they are all functioning properly.
29. Set basic alignment spec as follows: 1/4" toe-in, 3/4-degree camber and 1-degree caster. then take it to an alignment shop and have it aligned to stock Mustang II specs.

You are now ready to enjoy the best street rod suspension available!



If you have any questions, call before proceeding. We want you to be totally happy with your kit!

Thank you for choosing Street Rod Engineering!