







1979-2004 SVE FULL LENGTH SUBFRAME CONNECTORS

General Installation:

1. 1983-93 CONVERTIBLE ONLY (ALL OTHERS SKIP TO STEP 12)

Using a Sharpie, or other marking device mark the front, and rear edges of the front factory reinforcement plates where they first touch the factory subframe. These marks will be used in Step 10 to determine how narrow the factory reinforcements must be cut.



- 2. Remove the 6 bolts holding the rearward portion of the factory x-brace to the vehicle, and remove the brace.
- 3. Using a drill bit, or die grinder, remove the rivets retaining each of the front factory reinforcement plates to the vehicle.
- 4. Remove the front factory reinforcement plates from the vehicle.
- 5. Using a drill bit, or die grinder, remove the rivets retaining each rearward factory reinforcement plate to the factory subframe. Only remove the rivets that are in the subframe.
- 6. There is a raised lip on each rear factory reinforcement plate that is perpendicular to the centerline of the vehicle. This raised lip is directly in front of the opening for the rear lower control arm mount. The portion of this lip that lies below the factory subframe must be removed or flattened so that the SVE full length subframe connectors can rest flat against the bottom of the vehicle. Using a hammer or grinder, make the lip, flush with the surrounding factory reinforcement plate surface.
- 7. Using a grinder, cut a 3/16" or wider slit approximately 3" long in each of the rear factory reinforcement plates.

This slit should be parallel to and directly below the outboard corner of the factory subframe. Be sure the slit goes all the way through the rear factory reinforcement plates.

- 8. With the reinforcement plate pressed firmly against the bottom of the factory subframe, weld along all contacting areas.
- 9. Weld through the slits made in step 7 to the factory subframe.
- 10. Beginning with the driver side factory reinforcement plate, align a ruler with the marks made in step 1, and draw a straight line connecting the two points. Repeat for the passenger side factory reinforcement plate.

11. Using a hacksaw or other cutting device, cut along the lines drawn in the previous step to trim the factory reinforcement plates to size. Discard the smaller sections that have been cut away.

12. 1996-98 COBRA ONLY

(ALL OTHERS SKIP TO STEP 13)

Notch both the passenger side and driver side transmission cross member mounting brackets so that the subframe connector will sit into position underneath the car's front subframe, as detailed in the steps below. The notch should only be large enough to allow installation of the subframe connectors. Once notched, we recommend welding the mounting brackets to the subframe for extra strength.

13. Hold the subframe connector up against the bottom of the car, underneath the front and rear subframe of the car.

NOTE: The connectors fit specific sides. The forward end of the subframe connector tube has a side plate which is to be positioned on the outside of the front subframe.

14. Place a straightedge on the front subframe connector end-cap, extending above the top surface of the connector by about 1".

Use the straightedge to align the front of the subframe connector with the car's front subframe, where the front subframe angles upwards. This sets the fore, and aft position of the subframe connector. Mark a line along the forward edge of the end cap to mark the correct position.

- 15. Push the front of the subframe connector towards the center of the car, so that the forward side plate is tight against the outboard side of the car's front subframe.
- 16. The rear of the subframe connector is to be positioned with the inboard side of its end aligned with the inner side of the car's rear subframe. This positions the subframe connector directly underneath the car's rear subframe, and provides the most clearance for the muffler.
- 17. Check how closely the subframe connector fits to the underside of the car's front subframe. A gap of no more than 1/8" is acceptable.
- 18. If there is a gap between the car's front subframe, and the subframe connector at its front end, the subframe connector tube needs to have its forward bend straightened.

Very small changes in the bend angle will have a large effect on the gap. The subframe connector tube can have the bend angle straightened out slightly while off the car by careful use of a hydraulic press. If using a press, be careful not to crush the tube.

- 19. With the subframe connector held in the correct position (as described above), mark on the subframe every place that will be welded. If using powder coated subframe connectors, mark the corresponding area on the subframe connectors.
- 20. Remove any coating in the marked areas down to bare metal. A power disc sander works well for this.

- 21. Remove the two factory rearward mounting bolts from each front seat and replace them with the provided 10mm bolts, using a washer underneath the bolt head.
- 22. Loosely mount the seat braces to the bottom of the vehicle using the provided 10mm nuts. Make sure to use one of the provided washer underneath each nut.
- 23. On the outboard side of the passenger side front subframe, remove any retaining clips that hold the brake and fuel lines in place. This will allow the lines to be pulled away from the subframe slightly during the subsequent welding steps.
- 24. With the subframe connector again held in the correct position, tighten the seat brace mounting nuts.
- 25. The seat brace may prevent the subframe connector from resting against the frame rail, and cause a gap to form between the two. This gap should be reduced by pushing up the subframe connector directly below the seat brace.
- 26. Tack-weld the four legs of the seat brace to the subframe connector.
- 27. Tack-weld the forward end of the subframe connector in place.
- 28. Tack-weld the rearward end of the subframe connector in place. With the subframe connector now secured in place, double check that its position is correct. If necessary, remove the tack welds and reposition the subframe connector.
- 29. Weld the rearward end of the subframe connector into place.
- 30. Weld the forward end of the subframe connector into place. Do not weld across the end-cap, as doing so will create a heat-affected zone on the subframe that may later lead to cracking due to the orientation of the weld relative to the bending loads.
- 31. The two middle side plates of the subframe connector tube will need to be custom-fitted into place against each side of the car's front subframe. This can be done by squeezing them with a C-clamp or large channel lock pliers, or by careful hammering. We position the plates to accommodate the range of tolerances in the placement of the front subframe on the floor pan, which requires the plates to be custom-fitted to the car during installation.
- 32. Weld the two middle side plates to the car's front subframe.
- 33. Weld the legs of the seat braces to the subframe connector. Make sure to wrap the welds around the ends of the legs.
- 34. Locate the forward bend of the subframe connector tube. Place a supplied reinforcing plate against the bottom of the tube so it covers the bend area. Weld the entire perimeter.
- 35. Follow steps 1-22 to weld the driver side subframe connector into place.
- 36. 1996-98 COBRA ONLY

(ALL OTHERS SKIP TO STEP 37)

Weld the notched edges of the transmission crossmember mounting bracket to the subframe connectors.

37. If so desired, the subframe connector tube may be stitch-welded to the car's front subframe. Weld the corners of the subframe connector tube to the car's front subframe. A 1-inch weld every 3 inches is sufficient.

38. 1983-93 CONVERTIBLE ONLY (ALL OTHERS SKIP TO STEP 40)

Using a vice grip, or similar holding device, clamp the front factory reinforcing plates back into their stock locations. The cut-off portion of the front factory reinforcing plates should be touching the subframe connectors along the entire cut-off length.

- 39. Weld the factory reinforcement plates to the subframe connectors, and to the reinforcing Z-rail that is riveted to the rocker panel's lower pinch weld along the entire length.
- 40. Clean the weld areas, and pain with a high quality rust proof primer and topcoat.
- 41. Reinstall any bolts/rivets holding the fuel, and brake lines in place

42. 1983-93 CONVERTIBLE ONLY Reinstall the rearward portion of the factory X-brace and torque the mounting bolts to 32 lb-ft.



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*New Edge Mustang pictured. Installation proccess carries over both generations.

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