



Steering, Brake & Suspension Specialists

#E5559M2IFS-K - Installation Instructions

for 1955-59 Chevy & GMC 1/2 Ton Truck Mustang II

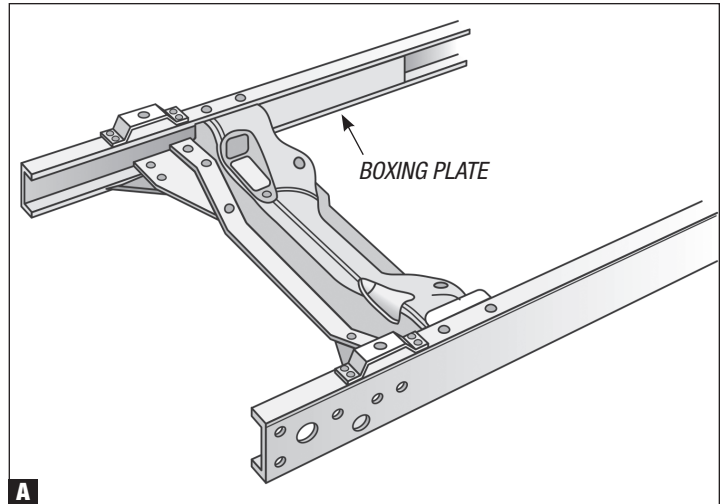
Thank you for your purchase of one of our full Mustang II Independent Suspension Kits or Crossmember only. If you opted for the full front end suspension, you will notice this is truly one of the most comprehensive all inclusive full hub-to-hub front suspension you can purchase on the market. We are here to answer any installation/technical questions you have during your assembly. For more information, call us at (800) 522-5004, email info@classicperform.com, or visit our website at www.classicperform.com.

This full suspension kit is fabricated to make installation a breeze. Each crossmember is fully welded for proper fit and all control arm mounts are factory welded with final welding into the frame necessary. By following this instruction sheet we will provide all the information to properly install. Please read through this entire sheet to familiarize yourself with each step prior to starting your installation.

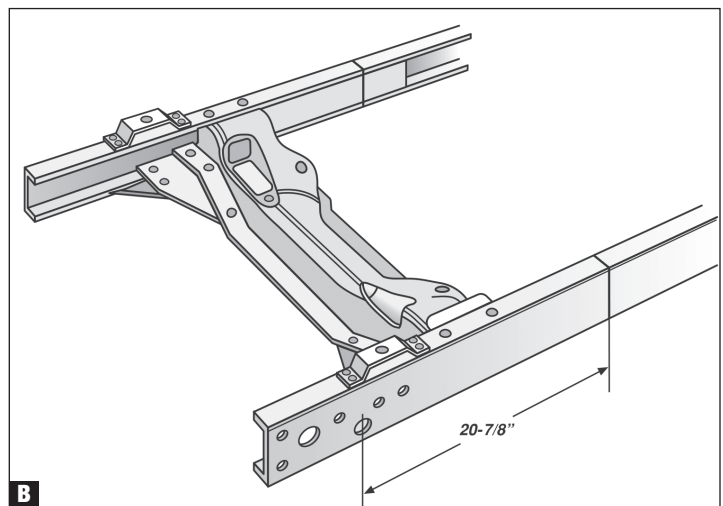
PLEASE NOTE: The installer needs to make sure that nothing can make contact with a brake hose, caliper, or other brake component at any point through the entire range of steering and suspension movement. The installer also needs to make sure none of the steering or braking components can become bound or jammed at any time through the range of suspension or steering movement.

Instructions:

1. Start with the truck or frame securely on jack stands with the frame parallel to the ground (even all 4 corners simulating ride height) Remove engine and transmission (if installed) for easier access to the engine bay of your truck. Having the front sheet metal off the truck and starting with a bare front rail setup with all stock suspension removed, will allow for the most amount of space to work with.
2. With only the stock front crossmember in place you will start by boxing the frame rails. The frame must be clean and down to bare metal so the best weld penetration can be made. The frame section where the stock steering box mount is, must be flattened, leaving the frame rail straight and true like the passenger side (Fig. A). The boxing plates can either be capped or mounted flush to the upper and lower frame rail. This all depends on the crossmember fitment on your particular frame. Measure the frame width (where the new crossmember centerline will be installed) compared to the new crossmember width and install for the best fit. Prepare the frame rails so the boxing plates can be welded squarely to the frame. The original frame lip will be wider on the bottom compared to the top and may also taper front to rear. Cut or grind so that both are equal width. Align the front part of the boxing plate square with the back of the stock crossmember and tack weld the boxing plates in place on both sides. Test fit the new crossmember in place to verify gaps are aligned/square and make adjustments to the boxing plates if necessary. Once the boxing plates are tack welded in the proper position, begin welding into place (Fig. A). It is recommended to weld small sections at a time alternating locations to minimize any warpage. Finish all welds so they are smooth with the frame rails for proper crossmember fitment.



3. Once the frame is prepped, installation of the main suspension crossmember can begin. Start with measuring 20 7/8" back from center of the front stock shackle hole and clearly mark the new crossmember centerline. Measure and mark both sides of the frame evenly (Fig. B), making sure your mark is square from top to bottom on the frame rail on both sides. Next, test fit the crossmember into the frame making sure it sits properly into the frame. Each truck can be a little different and may require minor trimming and/or additional fitment to ensure proper fit.



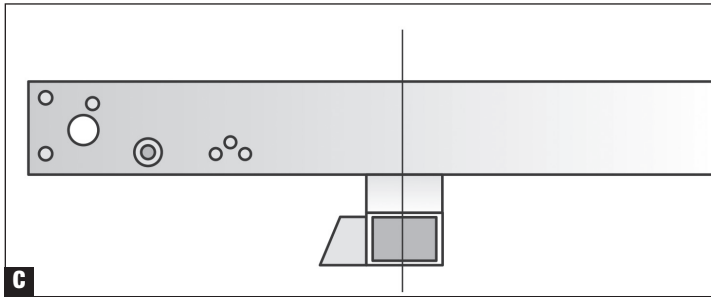
4. When you are happy with the fitment and the crossmember fits square to the frame, mark the spindle centerline on the crossmember (Fig.C) making sure that your mark is parallel to your axle centerline you marked on the frame. Next, tack weld the lower crossmember in place.

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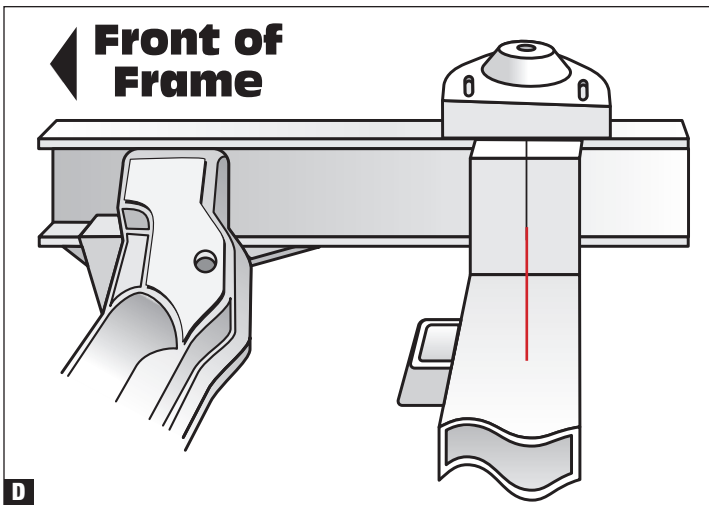


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5. Install the upper spring/shock tower next. These are both cut at a slight angle. The lower side mounts towards the back of the crossmember to create the proper anti-dive in your suspension. This is a very important step to ensure these are installed correctly. After determining the proper right and left assembly, mark the shock centerline using the hole in the top of the tower as a point of measurement. Next, mark the centerline on the tower (Fig. D) and tack weld these in place when you have them perfectly square to the lower crossmember and again making sure the angle is tilted back Fig. D).



6. With the crossmember and upper towers tack welded in place, now you can test fit the rack and pinion. With a Manual rack, minimal trimming to the front crossmember may be needed for clearance. For Power applications, further trimming and/or partial crossmember removal is needed. Simply lay the rack and pinion on top of the crossmember and mark the provisions needed to clear this rack and pinion. Some choose to remove the factory crossmember now, since the rigidity of the new IFS crossmember and boxing plates will take its place for strength. This is up to the builder, and what they choose to decide. Since the factory motor mounts are no longer used, either option works.
7. With the main crossmember and components welded in place, begin assembling the front suspension parts. It is advised to fully assemble the suspension, run the brake lines, engine installation, etc. prior to painting or powder coating the frame. This small amount of work will pay off during final assembly as everything will be an easier bolt-in assembly ▶

after paint/powder coat. We have engine and transmission mounting components available. For small or big block Chevy installations, we offer the #CP4810-S weld-in side mounts and the #CP9424 transmission crossmember. These will allow any SBC/transmission combination to be installed into your truck. Check with your CPP sales person or CPP dealer to obtain these if you don't already have them.

8. Engine installation is very straight forward. You can use your engine or a dummy mock up block helps. The #CP4810-S engine mounts are purposely left long to allow final trimming and fitment. It is recommended to have the frame and cab mated together at this point so you can have the engine as far back towards the firewall as possible for the best weight transfer. Keep in mind there are typically two types of distributors (stock and large cap HEI units) so having this on the engine during mockup is recommended. This way you can make sure you have enough room at the firewall for clearance.
9. Making sure the engine and transmission are perfectly centered in the frame rail, allow your engine /transmission to have a (add proper slant back 4 degree) to make sure the intake manifold/carburetor base is flat and parallel to the ground. This will make sure proper fuel flow happens and you do not starve your engine during driving.
10. Tack weld the mounts in place and make sure all measurements are correct prior to fully welding the motor mounts in place. It is also a good idea to mock up your steering column and universal joints with your exhaust to see if the lower part of the drivers side motor mount needs to be clearance for proper U-joint hook up from the column to the rack and pinion. Consult your CPP sales person or CPP dealer for many different steering column and U-joint options. The transmission crossmember #CP9424 simply bolts in place once you drill the proper holes.

Final Installation of All Main Suspension Parts:

11. Once your full front suspension is welded into place, you begin installing the main suspension components. First, fit the lower tubular control arm. There is a right and left lower control arm assembly. Please take note that the lower sway bar mounting holes will be facing forward towards the front of your vehicle. The lower control arm cross shaft should fit freely through the arm into the crossmember, making sure there is a washer both outside portions of the cross shaft where the shaft and the outer bushings meet. If your lower control arm is a little too tight against the crossmember, you may spring the control arm by placing one end against a metal bench or equivalent and lightly tapping the other end with a rubber mallet to temporarily expand the gap. You can also clearance the lower crossmember tube if springing the control arm does not work. This will open the control arm enough to fit over the crossmember and allow it to properly torque down seating the inner bushing shaft to the crossmember.

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12. Next, install the upper control arms with the supplied T-bolts. The head of the bolt drops through the top of the crossmember into the slots, allowing for camber and caster adjustment for final alignment. When installing the upper control arm, make sure the serrated section on the cross shaft is facing down, allowing the cross shaft to grab the crossmember properly. For now, simply snug the bolts until the coil spring is in place.

13. With both upper and lower control arms properly in place, you can now install the coil spring and shock. Having the engine and transmission at this time will make the steps much easier, as the added weight to the frame and vehicle can make it easier to get the coil springs in. Be very careful installing the coil springs and make sure you are using the proper coil spring compressor. This tool can be found at your local tool supply and auto parts stores.

Working on one side at a time with the coil spring compressed, install the spindle and brake assembly. *Note: Some spindles and brake kits come pre-assembled for ease of installation.* Make sure your steering arms are pointing forward allowing it to connect to the tie rod end and rack and pinion. You'll also notice there is a spacer supplied with the upper and lower control arms that goes between the castle nut and the spindle to allow the cotter key hole to line up with the ball joint hole.

The upper ball joint uses the narrow, thin spacer and the lower ball joint uses the wider, thick spacer. With the coil spring in place, attach the spindle to the upper and lower ball joints with each proper spacer in place. Torque the castle nuts to 60-65 ft/lbs to seat the tapered shaft properly into the spindle. Continue to tighten each castle nut until the cotter key hole lines up with the groove in the castle nut. Now you can remove the coil spring compressor and install the shock with supplied hardware. Repeat on the other side of the suspension.

Rack and Pinion Installation:

14. This starts with a little bench work. A rack extension is included in your kit and should be installed under the driver's side boot of the rack and pinion. Remove the driver's side boot and take the tie rod off the rack. Install the extension between the rack body and the tie rod itself. Use red thread lock for a permanent attachment. Re-install the boot. The attaching hardware is included with the bushing, bolts, nuts and washers. Making sure the flanged edge of the bushing is facing the crossmember attach the rack and pinion. Tighten the supplied hardware to the crossmember. Tighten the lock nut just enough to expand the opposite non-flanged bushing side even with the washer. Evenly thread the outer tie rods on to the rack and with the rack and pinion centered, connect them to the steering arm of the spindle.

The rack and pinion tie rod ends are also on a taper, so torque to 40-45 ft/lbs. Line up the cotter key hole to the castle nut and install the cotter pins. Final toe adjustment can be made with these installed because of the pivot ball under the rack boot.

Final alignment:

15. Using the following specs, final alignment can now be done on your suspension:

Toe in: +1/8 (both sides)
Caster: 1 Degree positive (both sides)
Camber: 1/2 Degree positive (both sides)

GENERAL TORQUE SPECIFICATIONS:

| | | | | | |
|-------|---------|-----------|-------|---------|-----------|
| 1/4" | grade 5 | 10 lb/ft | 1/4" | grade 8 | 14 lb/ft |
| 5/16" | grade 5 | 19 lb/ft | 5/16" | grade 8 | 29 lb/ft |
| 3/8" | grade 5 | 33 lb/ft | 3/8" | grade 8 | 47 lb/ft |
| 7/16" | grade 5 | 54 lb/ft | 7/16" | grade 8 | 78 lb/ft |
| 1/2" | grade 5 | 78 lb/ft | 1/2" | grade 8 | 119 lb/ft |
| 9/16" | grade 5 | 114 lb/ft | 9/16" | grade 8 | 169 lb/ft |
| 5/8" | grade 5 | 154 lb/ft | 5/8" | grade 8 | 230 lb/ft |

NOTE: With 18" and larger wheels we recommend 1/2" wheel studs. The larger the wheel diameter, the greater the force is on the wheel studs. Please inquire about replacement wheel stud kits available from CPP.

Optional Items Available:

#M2PSH-RT (power steering hoses) #5559BB2/BB4 (booster kits)
#CPP U-joints #TC-series of steering columns
#CP4810-S (engine mounts) #CPFM (floor mount)
#CP9424 (transmission crossmember) #CPCD-2/3/4 (column drops)
#CPP brake line kits

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