

INSTRUCTIONS

910-44754

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Bolt-In Mustang II Cross Member for 1947-1954 Chevy 1/2 Ton Pickups

PLEASE READ INSTRUCTIONS COMPLETELY BEFORE STARTING YOUR INSTALATION

NOTE: This kit is designed for use with power steering and the full type lower control arms only.

PARTS LIST

Description	Qty
Cross member assembly	1
Left spring tower	1
Right spring tower	1
Bolt in spring cup	2
Bolt in adjuster assembly (optional)	2
Left frame boxing plate with C notch	1
Right frame boxing plate with C notch	1
Inner boxing plate	2
Gauge plate	1
3/8"-16 x 1" HHCS Gr. 5 Hex head cap screw	20
3/8"-16 Nylock nut	32
3/8"-16 x 1-1/4" HHCS Gr. 5 Hex head cap screw	12
3/8"-16 Hex nut (for set up use only)	4
1/4"-28 X 3/8" Button head bolts	6

1. Start by supporting the chassis on four jack stands.
2. Remove all the suspension and steering components from the frame. Leave the front spring shackle mounts that are riveted in the frame. They are used for a measuring point for finding your axle centerline.
3. The rear portion of the radiator support needs to be trimmed for rack and pinion clearance. This can be trimmed without removing the support from the frame, although we found it easier to remove the entire radiator support. This can be accomplished by grinding the heads of the rivets flush with the frame rail then center punching the center of the rivets and drilling a 5/16" diameter hole about 1/4" deep. Using a hammer and punch you can drive out the rivets.
4. Trim the rear portion of the radiator support per illustration #4. If the radiator support was entirely removed from the frame the rivet holes will need to be drilled out to 25/64" and bolted back in using 3/8" nuts and bolts (not included). The lower flanges on the frame rails will need to be trimmed also; they taper and get wider toward the front radiator support. Trim the lower flanges flush with the trimmed radiator cross member per illustration #4A.

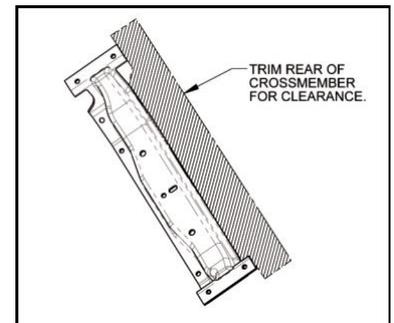


Illustration #4

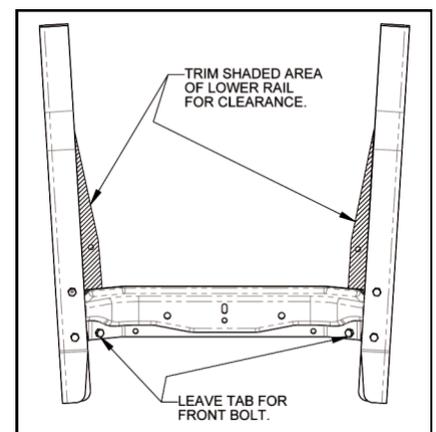


Illustration #4A

5. Measure straight back 18-1/8" from the center of both front spring shackle holes and scribe a vertical line on the frame as shown in the illustration #5. Using a long straight edge; line up both of the vertical lines and scribe a line on the top of the frame rails. This is the cross member centerline.

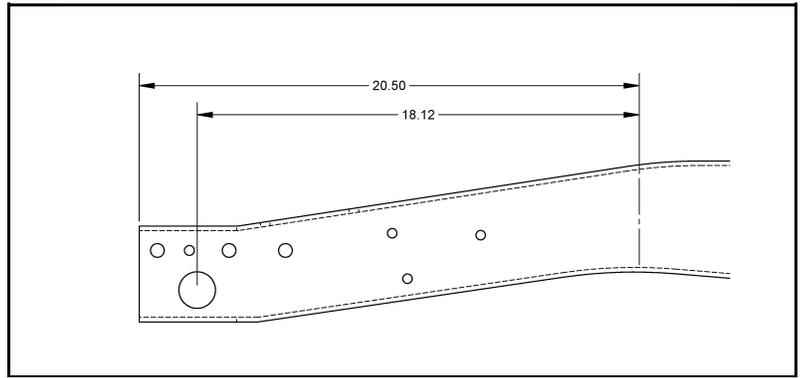


Illustration #5

6. Take the cross member and slide it up in between the frame rails centering the cross member on the scribed axle centerline. NOTE: The rack mounts are on the front side of the cross member. Clamp in place making sure the cross member fits flush with the bottom of the frame rail. See illustration #6

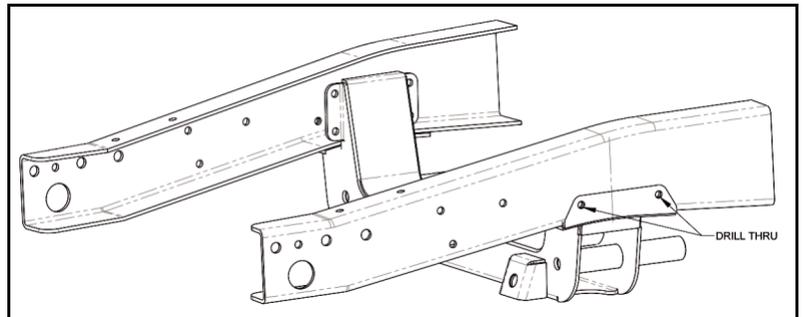


Illustration #6

7. Using a 25/64" drill, drill out the four outer holes of the cross member through the frame rails. Temporarily bolt the cross member in place using four 3/8"-16 x 1" bolts and set up nuts. See illustration #6 Remove the clamps, mark and drill the four lower mounting holes on the bottom of the cross member using the same 25/64 drill. See illustration #7

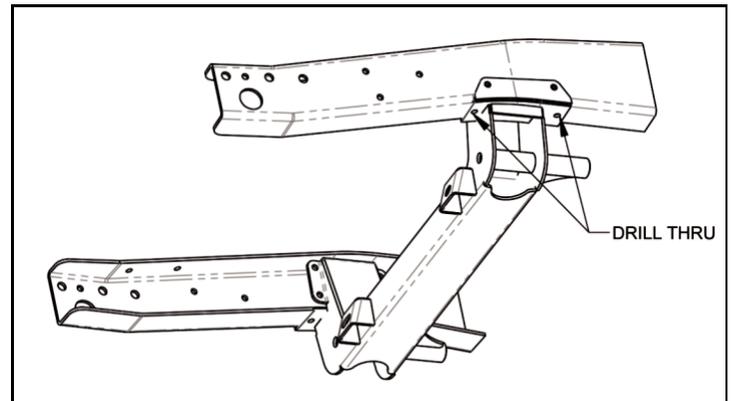


Illustration #7

8. Remove the cross member and temporarily bolt the drilling template to the outside of the frame rails using the 3/8" bolts and set up nuts. The c-notch in the template goes toward the front. Mark and drill the eight 25/64" holes in the template through the frame rails. Using the template as a guide, scribe the lines on the outside and the bottom of the frame rails for the c-notches. Trim the c-notches per illustration #8.

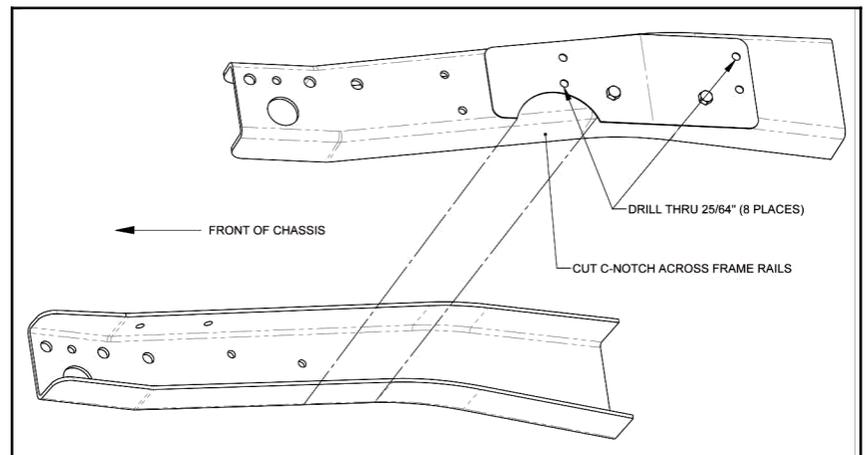


Illustration #8

9. Slide the channeled boxing plates into the frame rails lining up the c-notch on the boxing plates with the c-notch in the frame. If necessary trim the frame to fit around the c-notch. See illustration #9

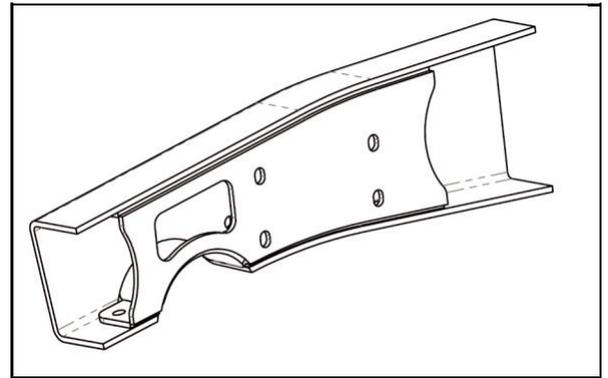


Illustration #9

10. Slide the cross member up in between the frame rails and into position lining up the eight mounting holes on the cross member with the eight holes on the inner boxing plates. Using the 3/8"-16 x 1 bolts and 3/8"-16 nylock nuts bolt them together but do not fully tighten. See illustration #10

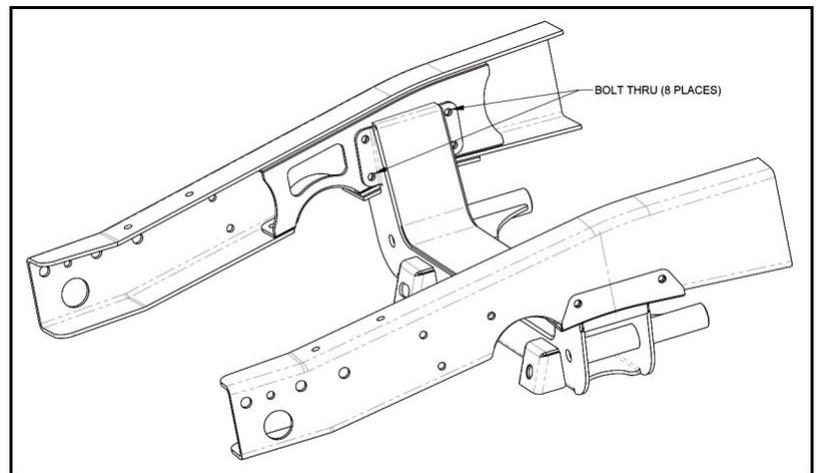


Illustration #10

11. Line up the four mounting holes on the bottom of the cross member with the four holes on the bottom of frame rail and inner boxing plates. Using a rubber mallet you can tap the inner boxing plates into position. Install the 3/8"-16 x 1 bolts and 3/8"-16 nylock nuts through the four mounting holes but do not fully tighten.

12. Slide the inner boxing plates in between the frame rails and the outer boxing plates lining up the outer four mounting holes on the cross member. Install four 3/8"-16 x 1-1/4" bolts and nylock nuts do not fully tighten. See illustration #12

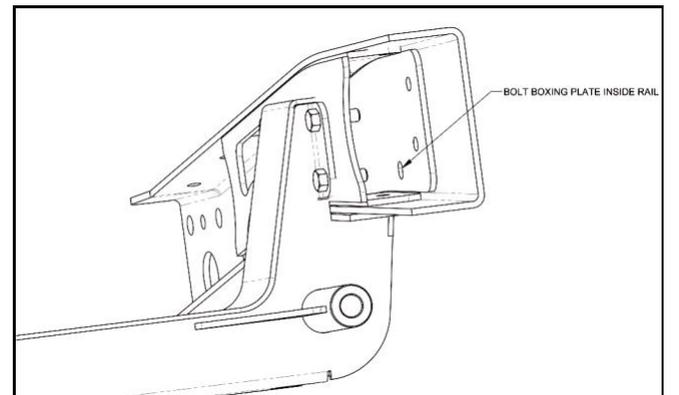


Illustration #12

13. Bolt both spring towers onto the frame rails using the outer eight mounting holes. Use the 3/8"-16 x 1-1/4" bolts and 3/8"-16 nylock nuts. Make sure the spring towers fit flush to the top of the frame rail. NOTE the spring towers are taller in the front and angle downward toward the rear. See illustration #13

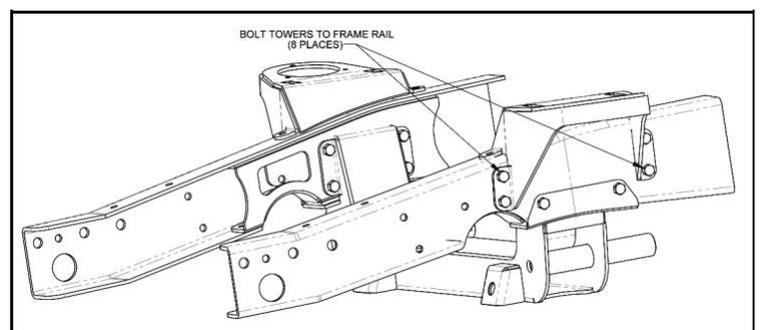


Illustration #13

14. Tighten all the 3/8" mounting bolts and nuts to 35 ft. lbs.

15. Using a 25/64" drill, drill out the four upper spring tower mounting holes and install the 3/8"-16 x 1" bolts and nylock nuts. See Illustration #15

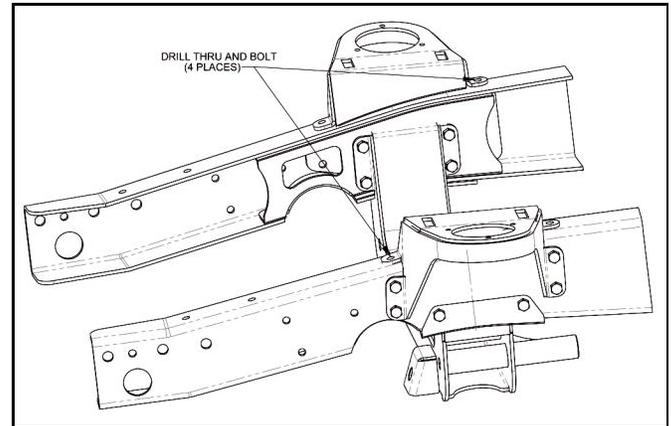


Illustration #15

16. Drill the final four 25/64" mounting holes through the frame rails and the channeled outer boxing plates per illustration #16. Locate the upper holes 3-1/8" forward from the center of the upper spring tower bolt centering it in the middle of the frame rail. The lower hole is located 5/8" forward of the c-notch in the bottom of the frame again centering it on the frame rail. Bolt together using the 3/8"-16 x 1-1/4" bolts and nylock nuts. See Illustration #16

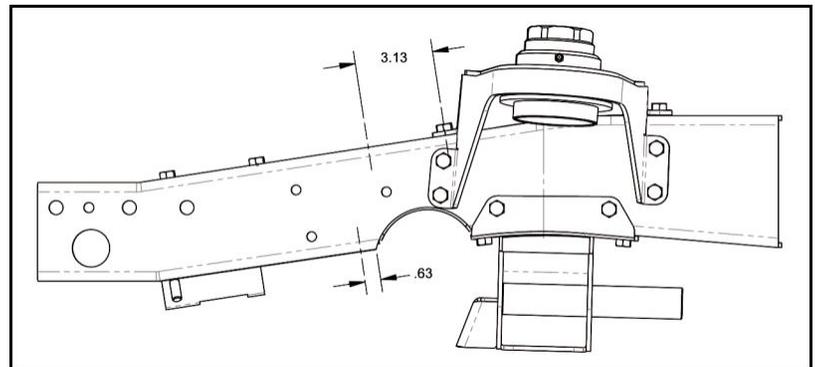


Illustration #16

IF YOU ARE USING THE OPTIONAL THREADED ADJUSTERS SKIP TO STEP #20

17. Bolt the upper shock mounts into position from the bottom side of the spring tower using the 1/4"-28 x 3/8" button head bolts. NOTE: make sure you use loctite on the threads.

18. Install all the Mustang II suspension components to complete the installation. This bolt in cross member is designed to use the after market type full lower control arms only.

Alignment specifications

Caster 1° + for manual steering
Caster 3° + for power steering
Camber 1/2° +
Toe in + or - 1/8

OPTIONAL THREADED ADJUSTERS

20. Slide the threaded adjuster sleeve into position from the bottom side of the spring towers. Bolt it in using the six 1/4"-28 x 3/8" button head bolts. NOTE: make sure you use loctite on the threads. Install the adjuster sleeve by threading it in from the bottom side of the spring tower and adjusting it to the midpoint. Install the grease zerks and the set screws into the adjuster ring and grease the adjusters.

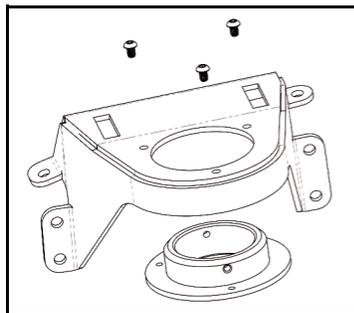


Illustration #20

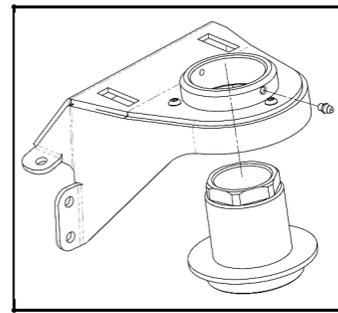


Illustration #20B

21. Install all the Mustang II suspension components to complete the installation. This bolt in cross member is designed to use the after market type full lower control arms only.

22. To adjust the height, take all the weight off the springs. This means jacking the front suspension up off the ground and possibly unhooking the shocks. A spring compressor may also be helpful in this procedure. Make sure you support the car with jack stands. Loosen the set screw and turn the adjusting sleeve to the new position. (An adjusting wrench is available from Speedway Motors part number 910-34613). The adjustment can be used to raise or lower the car, but it is designed to compensate for differing springs. For the correct geometry the lower control arms should be parallel to the ground with all the weight on the suspension. Once the suspension is set tighten the set screws.

Once the ride height is set have the front end aligned.

Caster 1° + for manual steering
Caster 3° + for power steering
Camber 1/2° +
Toe in + or - 1/8

Once you have a couple of hundred of miles on the car it may be necessary to once again adjust the ride height due to the setting of the new front coil springs. The lower control arms must remain parallel to the ground for good geometry and prolonged ball joint life. Remember to loosen the set screw and grease the adjuster.

IMPORTANT

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