

# Installation Instructions 1941-1948 FORD Crossmember Kit

Please read these instructions completely **BEFORE** starting your installation.

Remember the basic rule for a successful installation:

## Measure Twice, Weld Once!

1. Start by supporting the car on 4 jack stands. The car should be sitting on approximately the same angle as it does on the ground, or slightly lower in front.
2. Remove all the old front suspension components. Note that on the underside of the frame are the two rubber axle snubbers (or the holes for them, if they are missing) directly above the axle. Mark them for later reference.
3. Remove the old crossmember. If you still have the radiator support in place, it will maintain the correct frame rail width. If not, tack weld a temporary brace across the frame. Also, remove the old steering box mount.
4. Preparing the frame. The first step is to plug the two large holes on the inside of the frame just slightly rearward of the axle centerline (**Figure 1**). Two round plugs are supplied to fill the holes. Weld in place flush with the inner frame rails and grind smooth.
5. The next step is to scribe a line around the frame rails using the center of the rubber snubber holes from step 2. This will be the axle centerline. Now, on the inner lower flanges of the frame rails, the flanges must be trimmed to the 1-7/8" dimension shown in **Figure 1**.
6. The final preparation step is to slightly dimple the outer frame rails for the coil springs, centering the dimples on the axle centerline. **Figure 2** shows how to cut the frame to create the dimple reliefs. Cut as shown and press or tap the rails in; then weld back together. It is not critical that the dimples be done exactly this fashion, but the dimples should be approximately 3/8" deep at the top. After it is all welded up and ground, it will look like factory depressions in the frame. The spring towers will cover them anyway, so don't worry a lot about their appearance.
7. If you purchased a complete I.F.S. Package from HEIDTS, it was supplied with Full Lower A-Arms. Begin by installing the Spacers onto the crossmember. The holes where the lower control arms attach to the Crossmember must be enlarged to 5/8". Mount the Crossmember Spacers and the Rear Spacers which were supplied with the Lower Control Arms onto the Crossmember (as shown in **Figure 3**) using the supplied Inner Bushing Bolts, Nuts and a temporary spacer under the Nuts. DO NOT use the A-Arms for this operation as the welding heat will melt the rubber bushings. Tighten the Bolts and Nuts tight. Weld the Rear Spacers to the Crossmember all around. Weld the Crossmember Spacers as far as possible inside the crossmember on both ends. Position the Gussets horizontally, not vertically, against the Rear Spacers and the back of the Crossmember. Weld Gussets to Spacers and Crossmember. When it cools, remove the bolt.

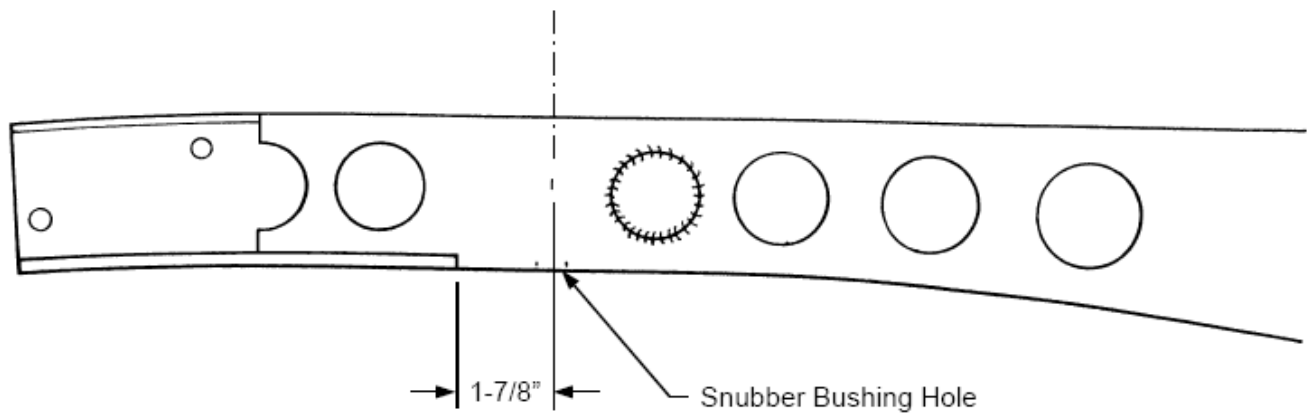
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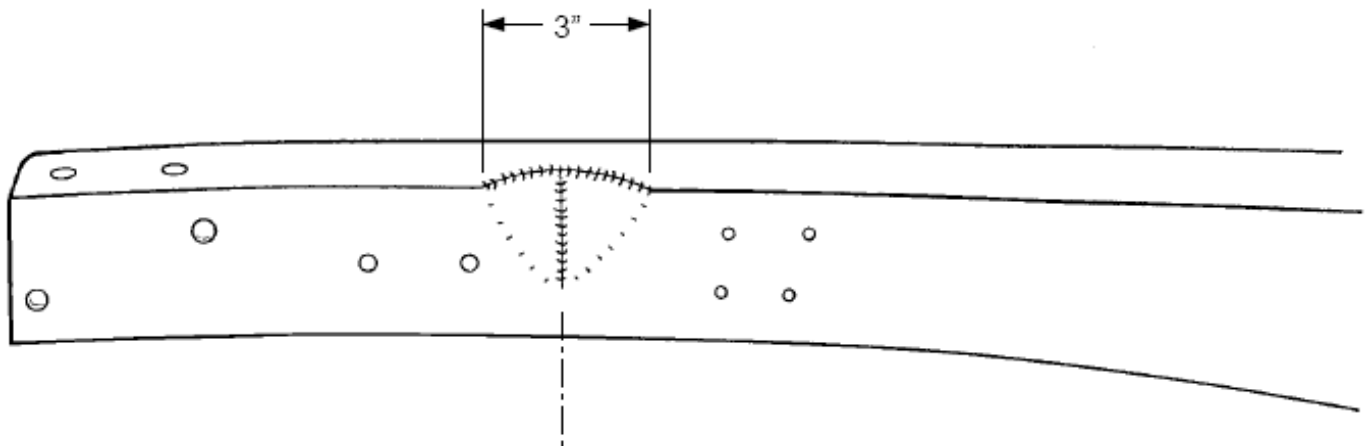
8. Now it is time to install the new crossmember. Slip it into the frame, center it on the scribed axle center line See **Figure 4**. If it does not fit, grind the sides of the crossmember until you can get the crossmember in place, as shown. Tack weld in place, check location, then weld in place, welding all around both ends, top, sides, and bottom. If you installed a temporary brace across the rails, you can now remove it.

9. Next are the spring towers. They sit on top of the frame rails, and are located as shown in **Figure 5**, 1-9/16" forward of the crossmember measuring from the front of the crossmember to the front of the spring tower. Clamp in place, double check your dimensions, then weld all around, including the flanges down the sides of the rails. For added strength, you can also weld the inside of the flanges.

**If you are using stock components, you will need to install strut rod brackets, part no. MP-003-2, purchased separately. Continue on to Step 10. If not, then you are finished and proceed on to the assembly and alignment of your suspension.**



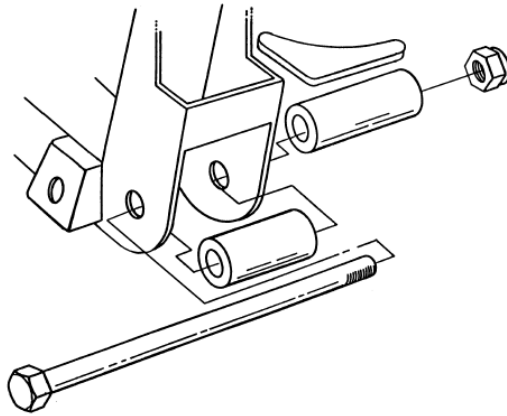
**Figure 1**-Preparing Frame & Trimming Flanges



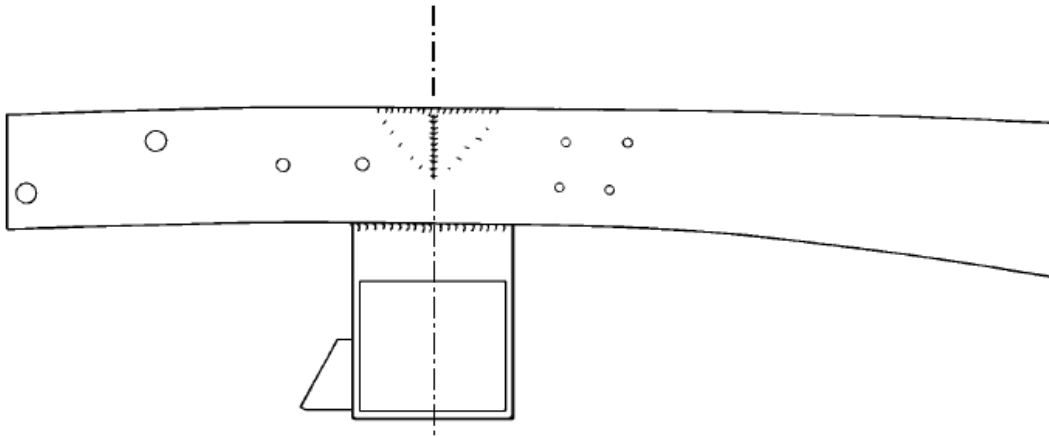
**Figure 2**- Dimple Frame Rails

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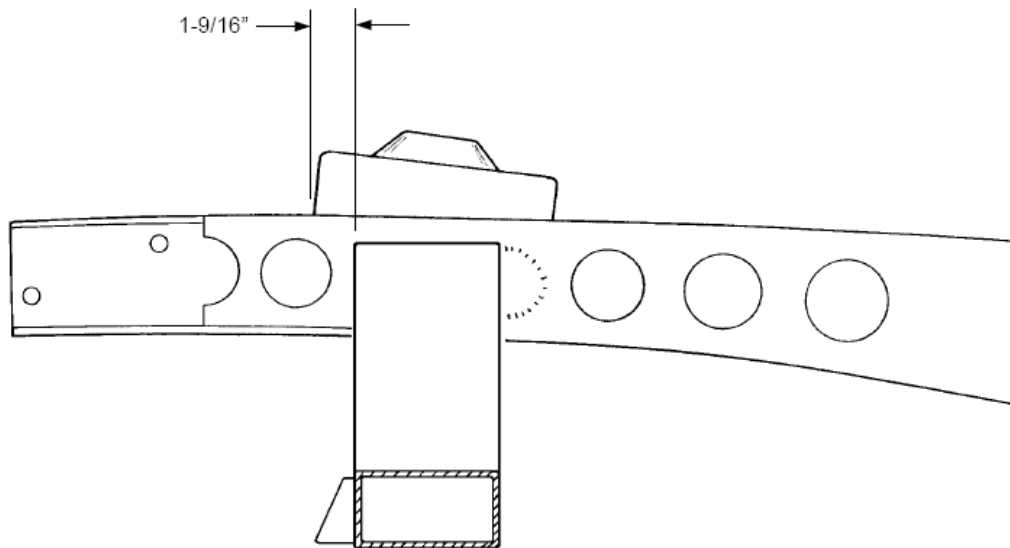




**Figure 3A-** Mounting Crossmember Spacers



**Figure 3B-** Mounting On the Crossmember



**Figure 4-** Crossmember Install

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## **OPTIONAL STOCK STRUT ROD INSTALLATION**

10. If you are using factory lower control arms and strut rods you will continue here. Use the lower control arm and strut rod for locating the rear strut rod supports and gussets. Using a 2 x 4 and a C-clamp, install the control arm as shown in **Figure 5**.

11. Install the strut rod onto the control arm. Now, assemble onto the strut rod the large rubber bushings, including the cupped washers, and the strut mount plate. Be certain to fully tighten the nut on the strut rod to its' fully seated position. See **Figure 6**. There are two rubber bushing sets available; the standard replacement and the improved set. We recommend the improved set, as it provides more stability to the front suspension. The Pinto and Mustang strut rods are different lengths. We recommend the use of Pinto strut rods, as they are bent less than the Mustang strut rods. You will find that with either strut rod the strut rod plate does not line up with the bottom of the frame rail. The strut rod must be heated in the elbow area and bent outward. The rod is bent outward until the strut mounting plate lines up to the frame rail. You will find that because the Pinto strut rod is initially bent less and requires much less bending. The strut rod will act as an alignment fixture while you tack weld the mount plate in place, then tack weld the gusset in place. Remove the strut rod, bushings, and arm, and finish welding to the frame and each other.

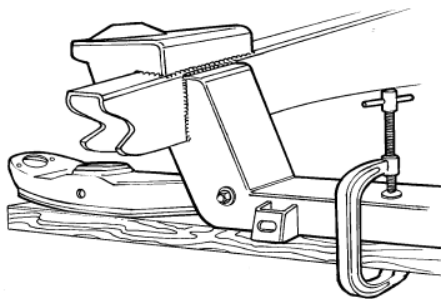
That's all there is to it. Go ahead and finish the assembly of the rest of the suspension components. After the rest of the car is assembled and back on the ground, do your front end alignment as follows:

Caster 1° positive

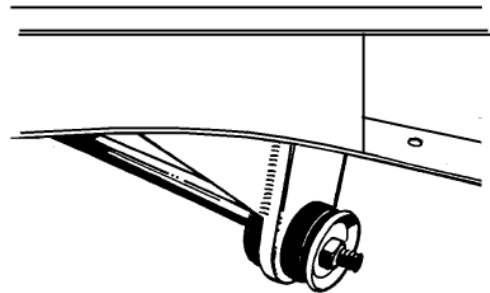
Camber 1/2° positive

Toe-In 1/8"  $\pm$  1/8"

Check the installation after 100 to 200 miles, including the alignment. The springs should have settled down by now, so the lower control arms are parallel to the ground. If the car still sits too high, you may need to change to softer springs to get the lower arms horizontal. If it sits too low, stiffer springs or HEIDTS new Spring Spacers are available. If you have any questions during or after the installation, feel free to call us for technical assistance.



**Figure 5**- Lower Control Arm Install



**Figure 6**- Strut Rod Install

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