



## 1960 - 1965 Fairlane Custom IFS Install Sheet

Tech Line: 1-855-693-1259

[www.totalcostinvolved.com](http://www.totalcostinvolved.com)

**Read and understand these instructions before starting any work!**

**USE THE PARTS LIST BELOW TO MAKE SURE YOUR KIT IS COMPLETE BEFORE INSTALLATION.**

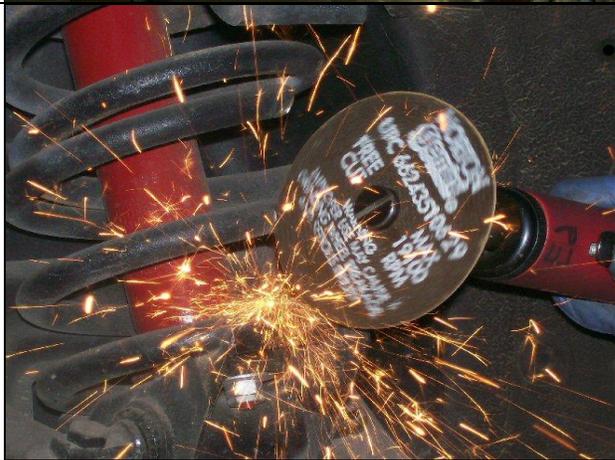
**IF ANY PIECES ARE MISSING, PLEASE CONTACT: Total Cost Involved Engineering 855-693-1259**

### 1960 -1965 Fairlane Front Suspension Installation Instructions

Thank you for choosing TCI Engineering's Fairlane Custom front suspension package. The kit has been designed to not only allow your vehicle to handle corners, steer and brake better and have more engine compartment room but also have that low sports car stance. Although the install will require some cutting, grinding, drilling, welding and some manual labor, the results are well worth the effort.



Remove all the old suspension components including the steering column.



Remove all the old suspension components including the steering column. I used a die grinder with a cut off wheel to cut the coils in a couple of places for much easier removal.



**Remove the lower A-arm/motor mount brackets first.**

**When cutting, be careful not to cut into the main frame rail.**

**We will be grinding off the material welded to the main rail.**



**When removing the inner fenderwells cut across the top leaving roughly 1/4" gap at the fender. This will be ground back before the panels go in.**



**Next are the shock towers. The first cut will be made from inside the wheel well just above the main frame rail flange.**



**The rest of the cutting will be from inside the engine compartment.**

**Cut the lower edges of the tower from the frame rail.**



The vertical cuts on the towers are made at the bend radius between the tower and fender panel.



Remove the shock tower. You can now grind down the 1/4" extra we left all around. Grind it back flush to the stock panel being careful not to grind back too far.

Remove excess material around shock tower opening until it is flat to the fender panel; also straighten up inside cut lines for a clean appearance.



You will need to install the panels at this point to use them as a template to finish cutting the lower portion of the factory panel. There are existing holes you can use to hold it in place. Use the provided 5/16" hardware to hold them in place.



Make a mark on the factory panel using the new inner panel as a template. Remove the panel and cut along the line.



**Preparing the frame rails. Remove all excess material, welds and paint from the main rails for the installation of the boxing plates.**



**There is a split between the top and side rails that need to be massaged down. Any high spots or irregularities that aren't straight or square must be removed.**

**\*see next step**

**\*NOTE\* Passenger side shown**



**We made a quick little welding guide fixture so we could weld the seam as straight as possible. We clamped a two foot flat piece of material just below the top of the frame rail to maintain a straight edge. Then we just laid the welding tip onto the top of the bar and used it as a guide.**

**Weld the top and side together making sure the seam attaches both pieces of material.**



**Grind the welded area flat and square.**

**\*NOTE\* Passenger side shown**



**You are now ready to start installing the boxing plates to strengthen the frame.**

**The folded outside boxing plates are located by using a bolt and aligning the rear holes (drivers side 7/16" x 3" bolt) and the upper idler arm hole (passenger side 3/8" x 3" bolt).**

**\*NOTE\* Passenger side shown**



**You can now install the inside plate using the same rear bolt hole to locate it. Install the nut and tighten it down.**

**\*NOTE\* Passenger side shown**



**Install a couple clamps, one to hold the side plates and one to hold the top plate. The gap along the top edge is critical. Align the boxing plate edges parallel with the top plate exposing an even section of the stock frame that when welded will tie both boxing plates to each other and to the frame.**

**We used a screwdriver to move the inner plate into place.**

**It is critical that the two edges are parallel even if you have to trim off of the bottom edge of the boxing plate.**

**\*NOTE\* Passenger side shown**



**It's time to tack weld the inner and outer boxing plates to each other and to the frame. When it comes to welding, we prefer to heli-arc because it's cleaner and less grinding afterwards but a wire feed will work fine, just a little more clean-up grinding afterwards.**



**About halfway finished welding the plates in this picture.**

**Weld the whole outer perimeter of each boxing plate.**



**Lay the bottom boxing plate on the bottom of the frame with the rounded cutout to the outside. The leading edge of the bottom plate will need to sit flush with the rear edge of the factory anti-sway bar mount.**

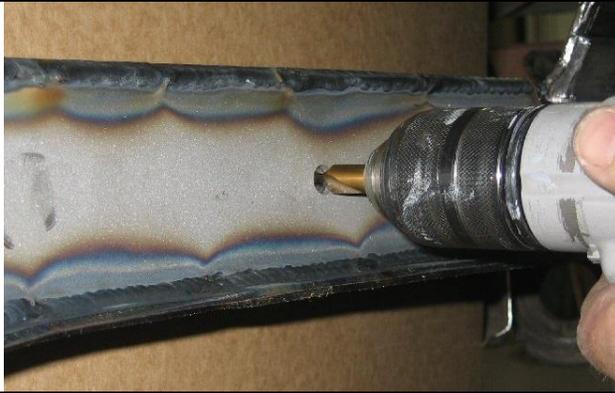
**Use a c-clamp to hold the plate in place and put a couple tack welds to hold it securely.**



Using the rounded cutout of the lower boxing plate as the template, grind the stock frame flange until they match the profile of the boxing plate edge.

Weld the whole outer perimeter of the lower boxing plate including the seam at the rounded contour.

Grind the weld edges, round the corners and spot weld any pits or imperfections for a clean finish.



Drill through the outer boxing plate using the existing 3/8" hole as a guide into the first layer of the frame. Do not try to drill all the way through the frame in one motion. Repeat from the inside using the existing 3/8" hole as the guide.

Once the inside and outside hole is drilled separately you can then run the bit all the way through the frame to align it.



You are now ready to start installing the cross member and shock towers.

Install the one inch wide locating plates using a 3/8 inch bolt and nut through the 3/8 inch hole drilled in the boxing plates. Just finger tight is fine.



Slide the cross member (steering rack brackets forward) between the rails behind (firewall side) the locating plates.

You may have to trim the ends of the crossmember slightly to get it into position. Trim equally from both sides. The crossmember needs to fit tight up against the bottom of the frame.

You want a tight fit so tap the cross member in with a soft mallet.



Check to make sure that the cross member is at the proper angle.

The goal is to have the crossmember at zero with the vehicle at ride height/rake. If the chassis is level you will want to lean the crossmember back roughly 2.5 degrees to account for rake. We mocked ours up with the vehicle at 2.5 degrees rake so the crossmember was at zero.

This is critical for correct engine and lower control arm angle.

Corrections can be made by slightly by trimming the front or rear edge of the cross member that contacts the bottom of the frame.



Once your angles are confirmed you can tack weld all sides and the bottom.

Remove the locating plates and finish welding all the way around, switching from side to side so as to not build up to much heat.

**\*NOTE\* DO NOT weld up the 3/8 inch holes yet as it will be used to locate the shock towers.**



The a-arm/shock tower bracket is mounted with the highest a-arm bolt slot forward and the lowest slot rearward. This is the built in anti-dive feature.

Use the 3/8 inch bolt to fasten the tower to the frame rail checking to make sure the brackets sit flat against the boxing plate.



Use a C-clamp from the inside and pull the bracket down snug to the top of the frame rail.

When everything is tight, tack weld all the way around then finish weld. Remove the tab with the bolt hole in the shock clearance relief. Finish welding the brackets to the boxing plates. Weld up the four 3/8 inch locating holes and finish grind for a clean appearance.



The sway bar brackets are mounted using existing holes on the frame.

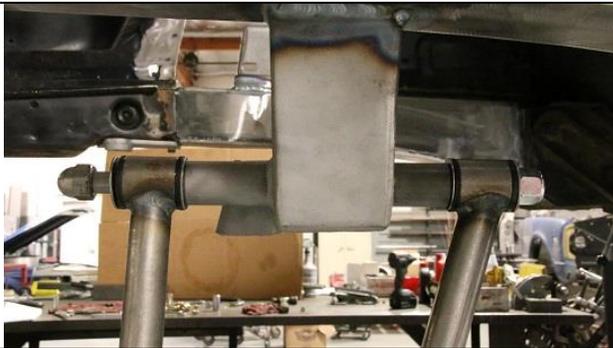
Using the new bracket as a template, trim the frame rail back to match.

**\*Note\* Driver Side Shown**



**\*NOTE\* All bushings need to be lubed before installation with the provided Energy Suspension Poly Lube.**

The lower a-arms are installed with the sway bar bung facing forward and the ball joint pointed up. The 5/8 inch shaft is installed with the acorn nut facing forward with a thin stainless washer on both sides of the urethane bushings on the a-arm.



**Install the a-arm onto the cross member and install the nylock nut using anti-seize on the threads and tighten.**



**The shock assembly is installed next using the 1/2 inch bolts. The threaded adjuster side of the shock goes on the top. Install the 1/2" bolt from the front using the provided, spacers, AN washers and short nylock and tighten.**



**The adjuster knob should point outwards towards the ball joint. Install the 1/2" bolt from the front using the provided, spacers, AN washers and short nylock and tighten.**



**When using Shock Waves with a spherical bearing follow the same steps as the coilovers.**



**Install the upper a-arm with the shaft on the inside of the tower. Install one washer on the button head bolt and push it through the tower from the outside. Install 4 camber adjustment washers, the crossshaft, and one additional washer. Put some anti-seize on the threads and install the nylock. Position the a-arm bolts in the center of the caster slots for a starting point and tighten the nuts.**

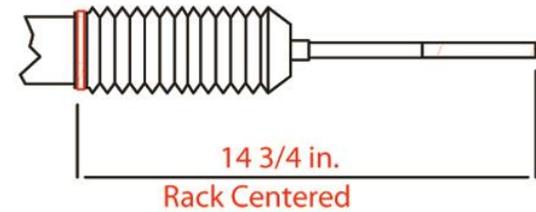
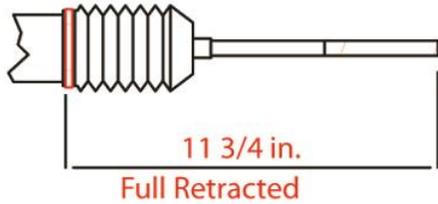
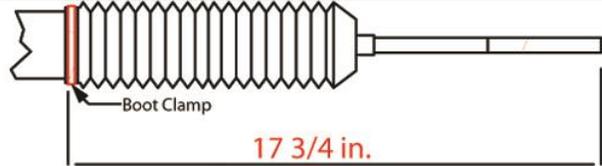


The spindle and brake assemblies come completely assembled with the bearings packed and seals installed. With the steering arm forward and caliper rearward set the spindle onto the lower ball joint and install AN washer and nut, tighten and cotter pin.

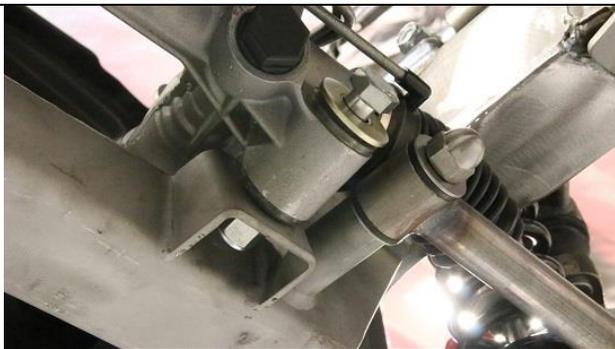
**\*Note\*** Driver Side Shown



Install the top a-arm ball joint into the spindle. Install AN washer and nut. Tighten and cotter pin.



The rack assembly needs to be centered to allow equal steering left to right. On a bench, turn the pinion out to full lock one way. Measure from a convenient point to the end of the tie rod. (This rack was 17 3/4 your measurement may vary). Turn the pinion the opposite full lock position and measure from the same point to the end of the same tie rod (11 3/4).  $17\frac{3}{4}$  minus  $11\frac{3}{4}$  = 6. Divide by 2=3 Add that number to the smallest measurement ( $11\frac{3}{4}$  + 3" =  $14\frac{3}{4}$ ") and turn the pinion back until you get that measurement and your rack is centered.



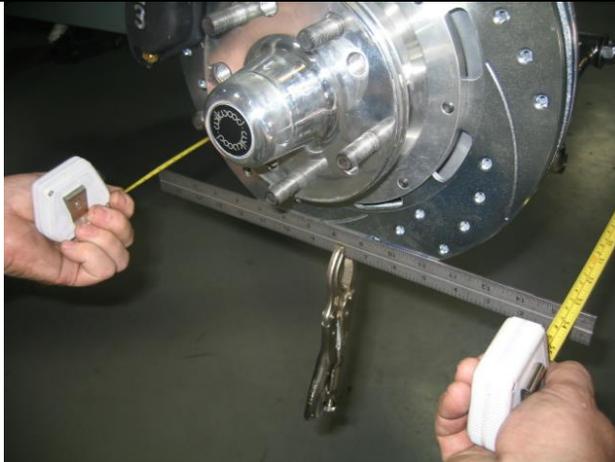
Install the rack using the two 5/8" bolts, washers and nylock nuts with anti-seize on the threads and tighten.

**\*NOTE\*** Make sure not to move the pinion, knocking it out of center.



**Install the jam nut and tie rod end onto the inner tie rod. Then install the tie rod end onto the steering arm, install the castle nut, tighten it down and insert the cotter pin.**

**\*NOTE\*** Make sure not to move the pinion, knocking it out of center.



**Clamp a straight edge to each rotor as shown then measure front and rear. Turn the inner tie rod to set the toe-in approximately 1/8" for a starting point. Tighten down the tie rod end jam nut once toe is set.**

**\*NOTE\*** Make sure not to move the pinion, knocking it out of center.



**\*NOTE\*** All bushings need to be lubed before installation with the provided Energy Suspension Poly Lube.

**Install the anti-sway bar (center drop of bar facing down to clear the oil pan) using the four provided bolts, washers and nylock nuts. The spacer plate gets sandwiched between the frame & saddle bracket. Leave bolts loose for now.**

**\*Note\*** Driver Side Shown



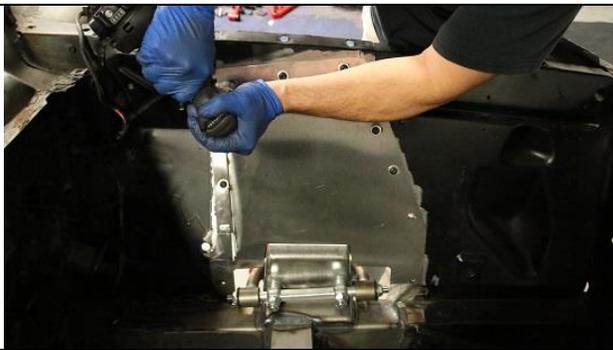
**Install the 1/2" rod ends as shown with the male end facing up. The sway bar rod end link needs to be straight up and down to allow adequate rack and pinion tie rod lock to lock clearance. Adjust the bar positioning by sliding it for and aft and side to side then tighten the bracket bolts.**

**\*NOTE\*** To adjust anti-sway bar preload (or lack thereof) leave one button head bolt uninstalled (doesn't matter which one). When the vehicle is ready to be driven, have the driver sit in the driver's seat with the full weight of the vehicle on the ground and at desired ride height. Now you can adjust the remaining loose heim joint such that the button head bolt falls into place. You can now tighten down all the button heads and jam nuts.



**Position the correct panel over the a-arm until the pre-existing factory bolt holes line up. Most of the top holes in the panel use existing factory holes.**

**Install the 5/16" button head bolts into the existing holes and tighten them down.**



Using the new panels existing holes as a template, drill the remaining holes. Install the remaining bolts and tighten.



Proper ride height is set with the lower a-arm level to the ground. Adjust the height with the threaded ring on the bottom of the coil-over.

Caster 4-6 degrees positive with Power steering  
Caster 2-4 degrees positive with Manual steering  
Camber 0 degrees  
Toe-in 1/8"

#### AXLE STUD SIZES:

4.5" Bolt circle rotors = 1/2"x20('75-'80 Ford Granada)  
4.75" Bolt circle 10.5" rotors = 12mmx1.5('82-'87 Camaro)  
4.75" Bolt circle 11" rotors = 7/16"x20('75-'80 Granada redrilled)  
ALL Wilwood hubs = 1/2"x20



#### \*OIL PANS\*

289-302 = Ford Racing # M-6675-A50

351 Windsor = Ford Racing # M-6675-A58

429-460 = Ford Racing # M-6675-A460

No returns or exchanges without a RMA#.

Packages must be inspected upon receipt & be reported within 10 days.

If you are missing parts from your kit, TCI Engineering will send the missing parts via FedEx or U.S. mail ground. Returned packages are subject to inspection before replacement/refund is given.(Some items will be subject to a 15% restocking fee)

Thank you for your business!

