Factory Five Racing, Inc.

Part Number: 13267 Revision: J Effective Date: 9/16/08 By: J. SCHENCK

3 Link Rear Suspension Installation Instructions

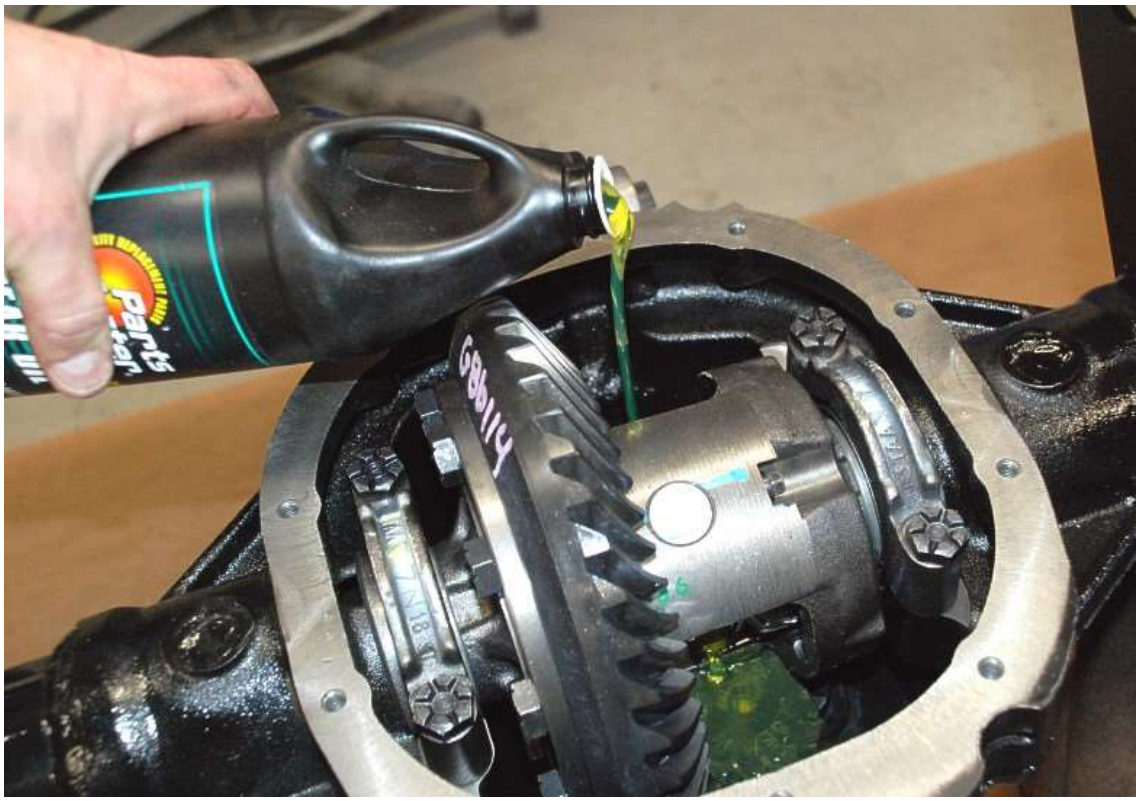
- Tools Required:
  3/16", 3/8", 1/2", 5/8" drill bit
  5/8", 3/4", 15/16" wrench
  1" wrench
  3/8", 5/8", 3/4", 15/16" socket
  Ratchet
  Drill
  Ruler/Tape measure
  Pliers
  Flat head Screwdriver
  Tin Snips/scissors/razor
  Marker
- The axle limiting straps are not required when using the 3-link suspension.
- If you have the battery mounted in the standard street car location it will need to be moved to the trunk, it will not clear the panhard bar mount.

Solid Axle Preparation

- 3/4" sockets, 3/4" wrench, 1/2" drill bit, drill, floor jack, jack stands, Torque Wrench
- 8.8" Rear axle assembly, Box 2 Solid axle Traction Lok brackets and rear control arms.
- Use caution when working with the rear end assembly, it weighs 225 lbs.
- Two bolts are included with the control arms, the other two are included in the kit with the Traction Lok Brackets.

If not on the axle, attach the desired rear brakes to the axle.

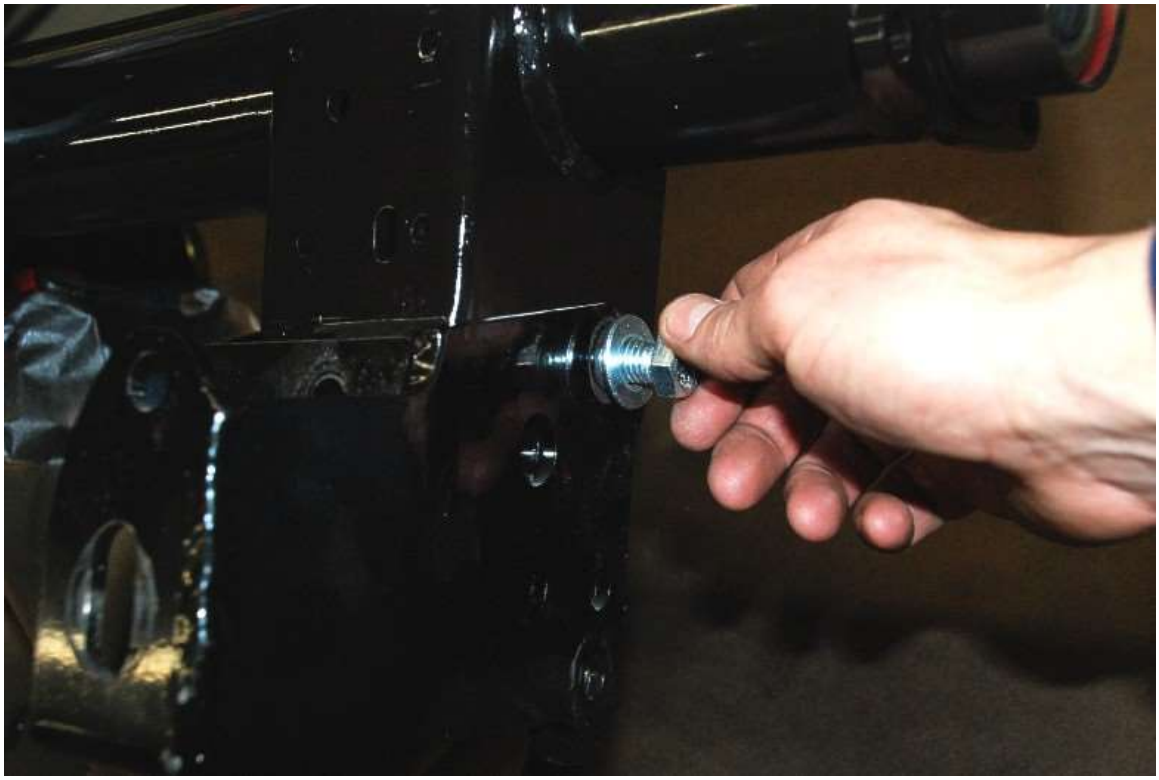
- Check out the Appendix for the optional FFR brake install or www.factoryfiveparts.com for Wilwood brake options.



If not already done, fill the axle with gear oil. See Appendix for specifications and capacities.

If using a used rear axle, remove the lower shock mounts and the anti-vibration weight under the pinion.

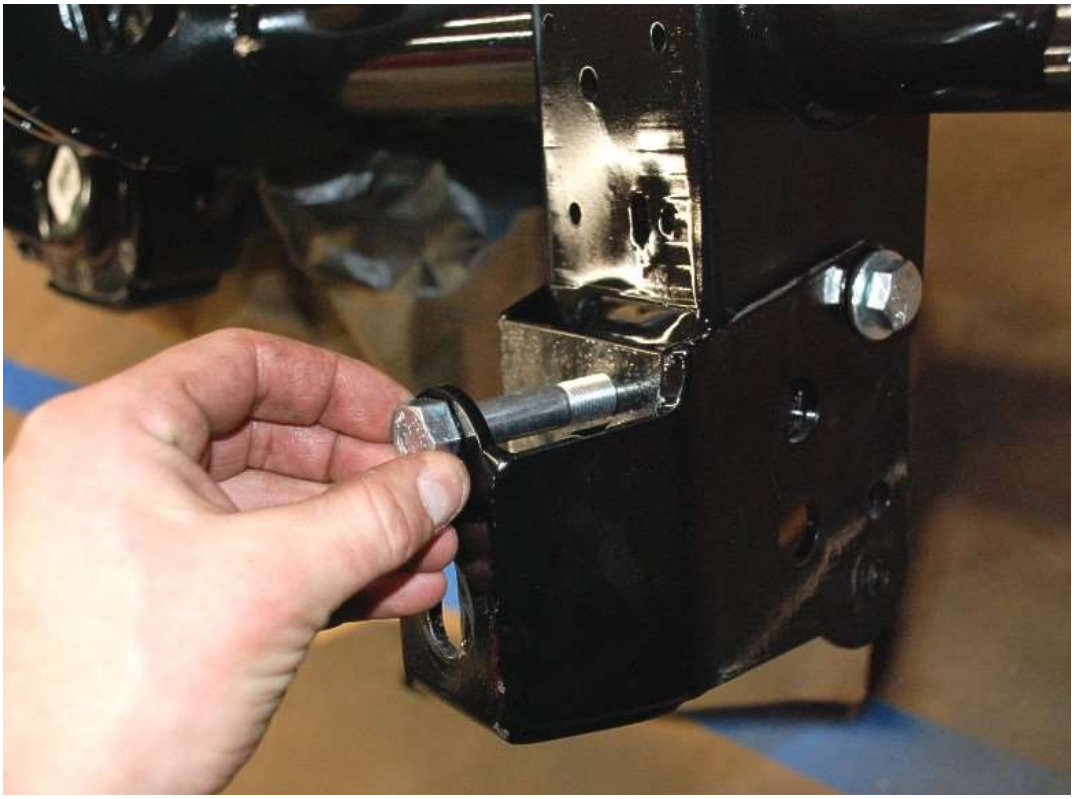
Drill the lower control arm mount holes with a ½” drill bit.



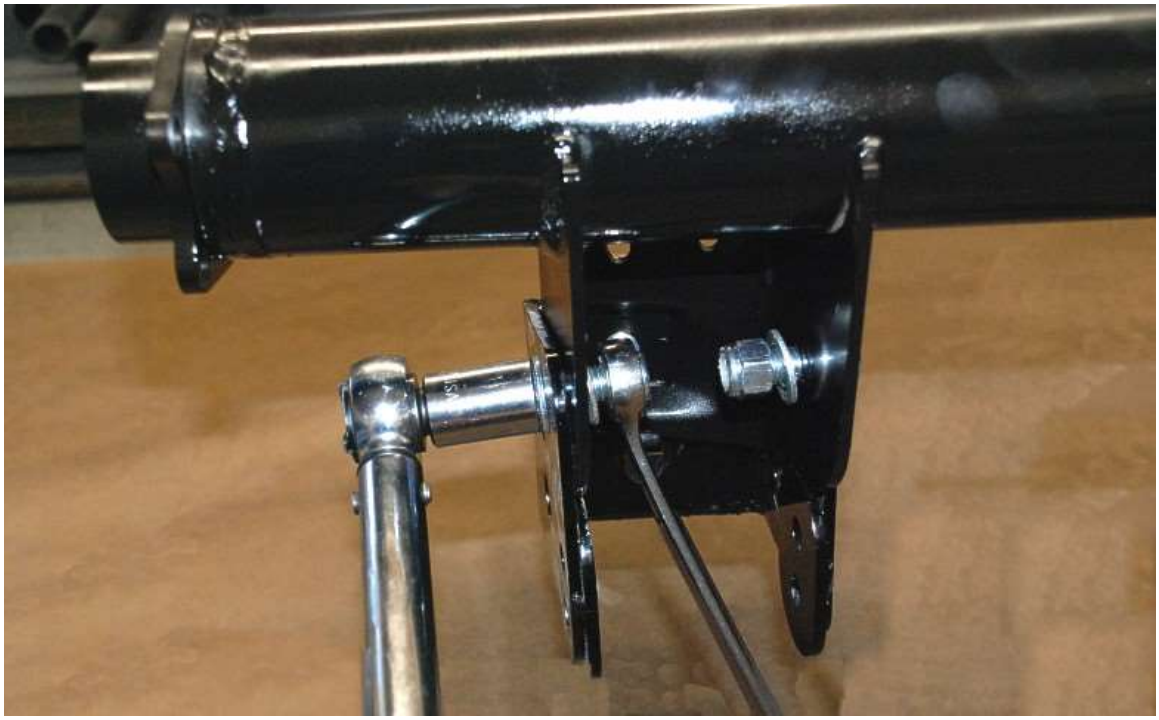
Position the Traction Lok brackets on the rear end with ½”x 1.25” bolts.

Axle Bracket left Side

Axle Bracket right Side



Temporarily put the lower shock bolt (½”x 3” bolt) through the traction lock bracket and stock shock hole on the axle.



Tighten the two short bolts. Torque to Ford Specs 75-95 Nm (**55-70 lb-ft**).

Attach the lower control arms to the brackets on the axle using the M12 x 110mm bolt provided. Torque to 101-111Nm (**75-82 lb-ft**).

The lower bolt holes provide more traction than the upper holes.

3 Link Rear Suspension

$^{3}/_{16}$”, ⅜”, ½” drill bits, ⅝”, ¾”, $^{15}/_{16}$”, 1” wrenches, ⅜”, ⅝”, ¾”, $^{15}/_{16}$” sockets, $^{5}/_{16}$” Hex key, Ratchet, Torque Wrench, Drill, Ruler/Tape measure, Pliers, Flat head Screwdriver, Tin Snips/scissors/razor, Marker.

Box 2 3-Link rear suspension.

The Panhard bar frame mount is mounted to the chassis during shipping

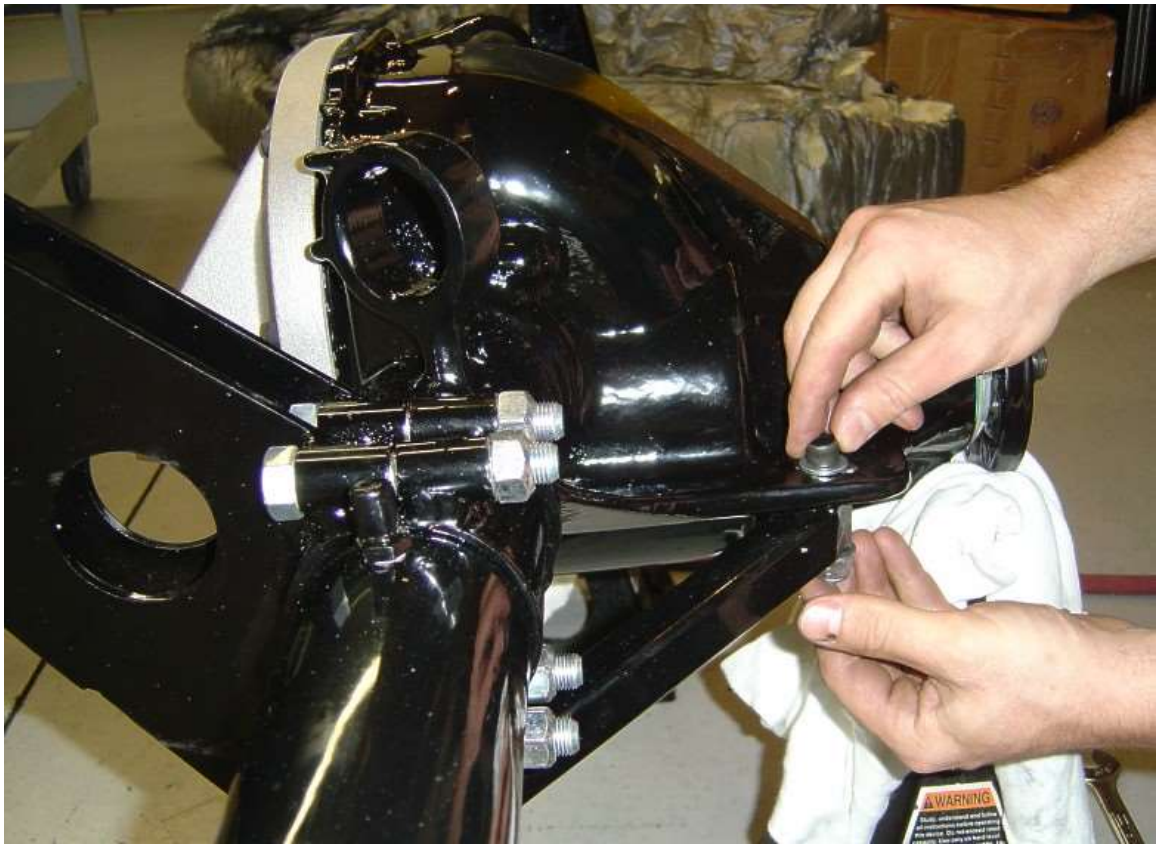
Upper Link Axle Mount

If using the FFR Moser axle skip to the next section since the upper link bracket is welded to the axle.

Test fit the two halves of the upper arm mount together. If it is hard to put all of the bolts in the mount holes, put in as many as you can then use a ½" drill bit through the remaining bolt holes.

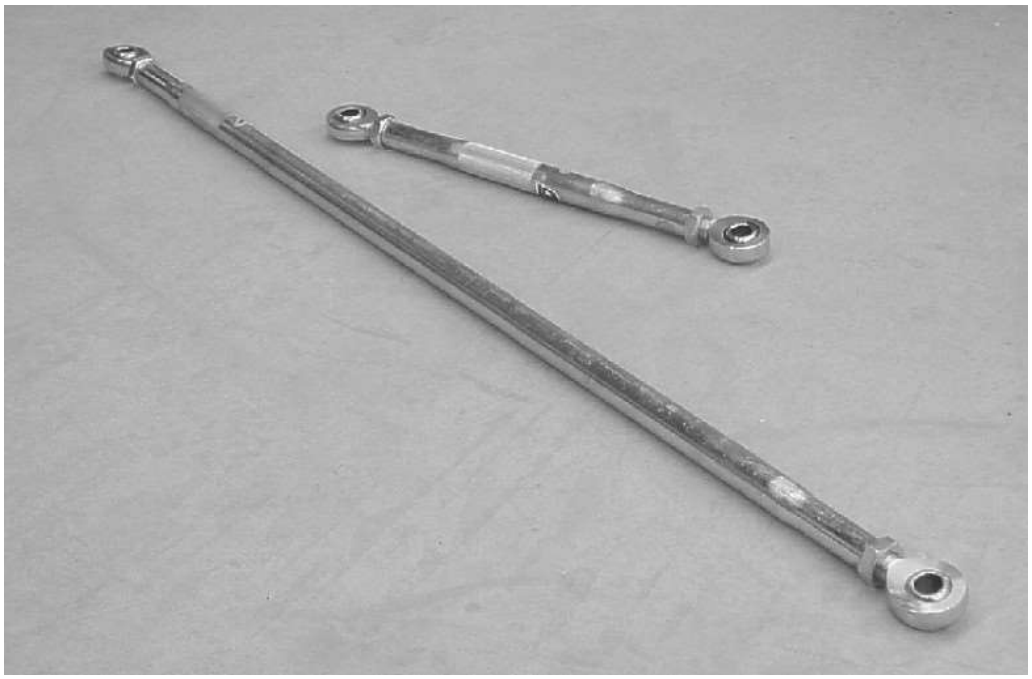
Attach the upper link bracket onto the axle using the fine hardware 12217 ½"-20 x 3" Hex head bolt and 12218 mechanical lock nuts.

The front attachment of the upper link axle mount attaches to the hole on the flange section of the pumpkin. This hole has some variance and may need to be drilled out from the bottom side using the mount as a guide.



Attach the front of the upper link axle mount to the front axle flange using the 60387 $^{3}/_{8}$”-16 x 2” socket head cap screw and 13964 $^{3}/_{8}$”-16 nylon lock nut.

Upper Link



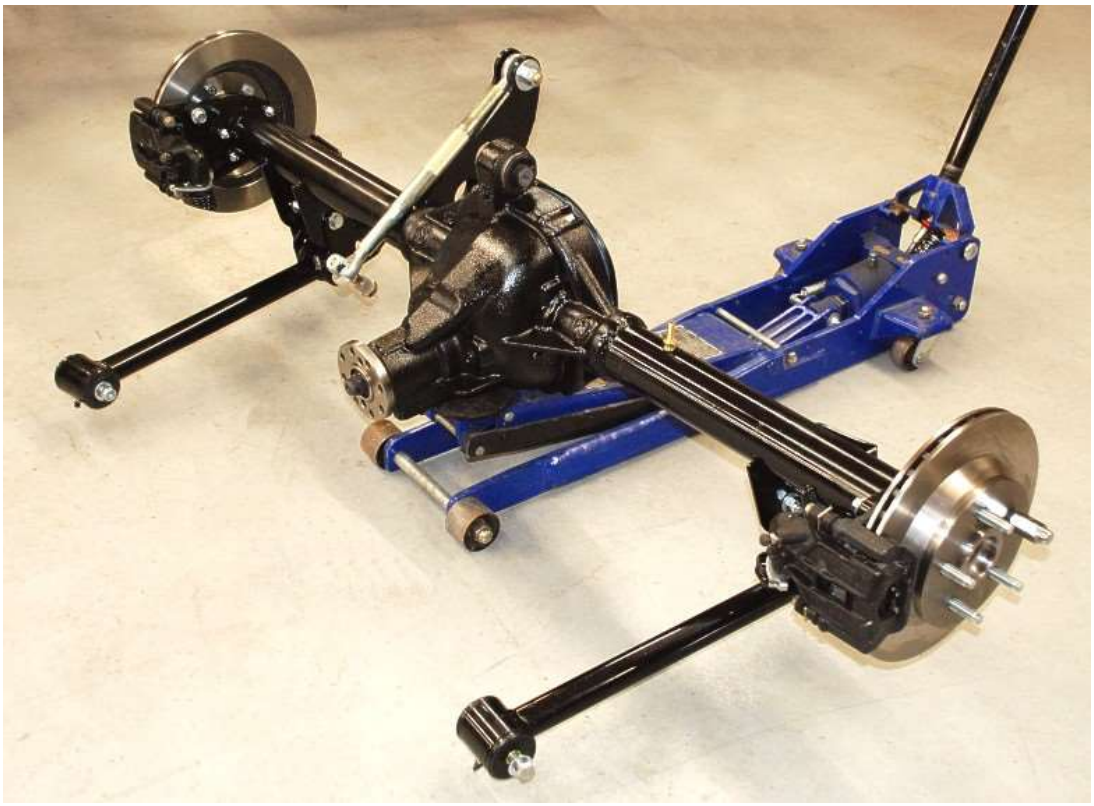
Install a jam nut on each of the rod ends, remembering that two of them are left hand thread.

Insert the rod ends into the swaged tubes (one is right hand thread and one is left hand thread). The longer tube is the Panhard bar and the shorter one is the upper link.

Attach the short upper link tube to the axle upper link mount using the ¼" spacers on either side of the rod end using a 12382 $^{5}/_{8}$"-11 x 3" hex head bolt and 15216 mechanical lock nut.

Rear Axle

Have someone help with this step, the rear axle is very heavy and mistakes can result in serious injury.

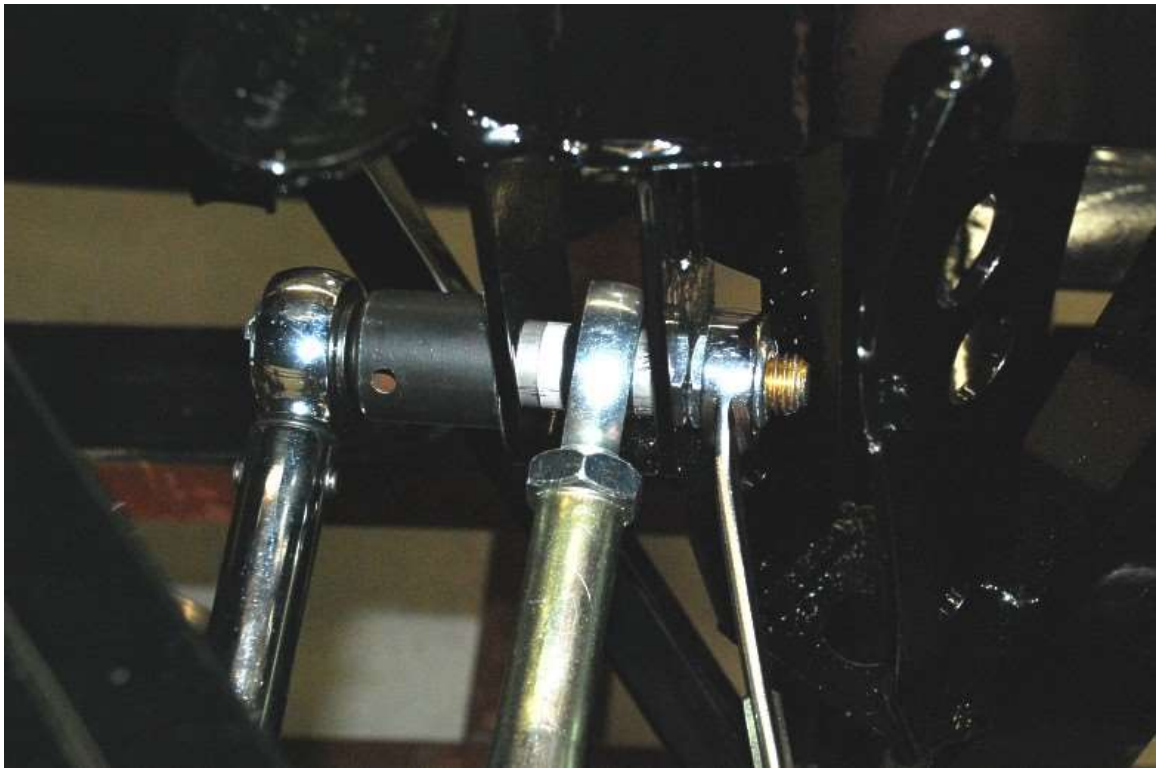


Use a floor jack to position the rear axle assembly under the frame.

- Make sure that the rear jack stands are positioned under the 4” round tube as far back as possible to prevent the frame from tipping up once the axle is mounted
- Do not hold the end of the axle from the bottom of the disc, if the axle falls, the axle can crush your fingers and result in serious injury.

With one person holding a side of the axle raise the axle so that the lower control arms can be bolted onto the frame.

Attach the lower control arms to the frame mounts using the 13706 M12 x 110mm bolts.



Jack the rear axle up and attach the upper link to the frame using a 12382 $^{5}/_{8}$”x 3” hex head bolt and 15216 mechanical locknut.

Panhard Bar Frame mount

- The Panhard bar frame mount is mounted to the chassis during shipping

With the axle jacked up, attach the Panhard Bar frame mount to the inside of the quad shock brackets, the forward leg will attach to the back of the angled 2”x 3” tube. Do not tighten the quad shock bracket bolts yet.

For the front mount, use a ½” drill bit and drill through the sleeve on the mount. Make sure before drilling that the hole is away from the side of the 2”x 3” tube so that a nut can be attached on the back of the bolt from the bottom of the tube.

Install the 12385 ½”-13 x 2.5” bolt and 10834 nylon locknut then tighten.

Tighten the 10833 ½”-13 x 1.25” bolts and 10834 nylon locknuts on the quad shock brackets.

Lower the rear axle.

- With the rear end correctly installed with the 3-link, the rear axle will rest on the 3-link Panhard bar mount with the suspension at full droop.

Rear Coil-Over Shock Assembly

- Snap ring pliers, ¾” wrench, ¾” socket, ratchet, ruler, marker, hack saw, chassis or lithium grease.
- Box 3 Roadster/Coupe rear shock kit, Box 2 1.09” spacers and fasteners
- The rear shocks are pre-valved at the factory in compression and rebound for good street use. The shocks can be adjusted in rebound as per Koni’s instructions if so desired. The rear springs are 350lb. Other springs are available for different ride characteristics.
- WARNING! Incorrect assembly and maintenance of this part can cause serious injury or death.
- If using the silver double adjustable shocks, these must be mounted with the body of the shock down.

Unpack the rear shocks, coil overs and hardware.

Double check the jam nut under the rod end and bump stop to make sure that it is tight.
Screw the spring seat down on the sleeve so it is closer to the unthreaded end. The center high part of the set should be pointed away from the unthreaded end.

Slide the coil sleeve over the body of the damper beginning at the end which has the rubber bump stop. The unthreaded end of the sleeve goes first so that it will sit on the snap ring on the shock body.

Place a small amount of white lithium or chassis grease on one side of the Delrin washer.

Put the Delrin spacer grease side down onto the spring seat on the threaded tube (shown without tube)

The coil-over hats have a snap ring which holds it in place. Remove this snap ring to assemble the coil over shock.

Slide the rubber bumper about two inches down on the shaft.

Put the spring on the shock, then install the spring hat on the shaft end of the shock and push the rubber bumper up against it.
Rotate the spring seat back up the sleeve so that the spring pushes the hat tight against the end of the shock.

Install the snap ring on the spring hat so that it holds onto the shock end. Make sure that the slot in the snap ring and the slot in the spring hat are not aligned.

Use zip ties to hold the spring to the spring hat.

Assembled solid axle Koni coil-over shock.

- If using the silver double adjustable shocks, these must be mounted with the body of the shock down in the top hole location.
- For the stock red Koni shocks, use the **lower** holes.

Attach the body end of the shock to the upper shock mount using the two equal length (1.09”) spacers, 12332 ½”-13 x 4” hex head bolt and 10834 nylon locknut.

Jack the rear axle up so the rod end of the shocks can be mounted on the axle through the shock mount hole.

Right side

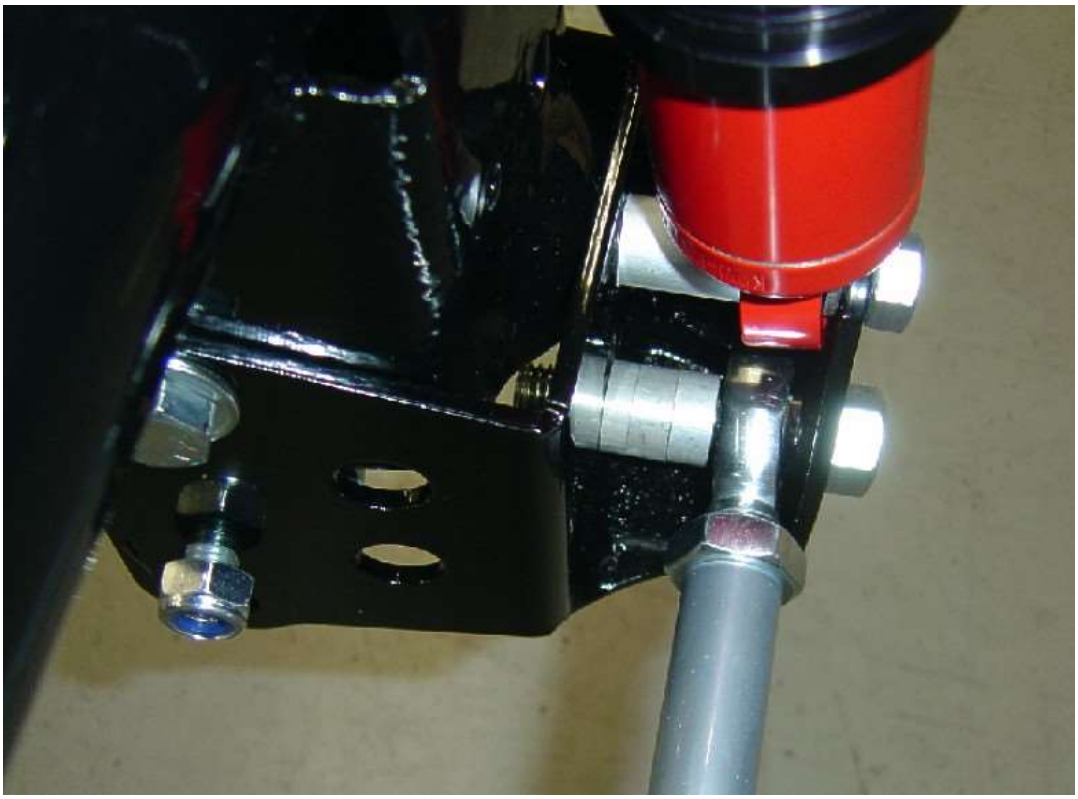
Left Side

Install the kit 12217 ½”-20 x 3” bolts are provided for each lower shock mount. From the rear, the bolt goes through the bracket, ⅛” shim, shock, then the long spacer (1.09”) followed by the bracket and axle. Use a ¾” socket and Torque wrench to tighten both upper and lower mounts to **40 lb-ft**.

Check for shock clearance on brake lines, emergency brake cables, brake calipers, frame and axle parts. Check to make sure that the spring is seated correctly on the shock.

Run zip ties through the holes in the spring hat and around the spring to prevent the spring from becoming unseated.

Panhard Bar



The Panhard bar mounts to the car using the 12382 ⅝”-11 x 3” bolts and spacers. Install the Panhard bar to the passenger side traction lock bracket. Three spacers are used in the front (2) 0.375" (FFR# 14064) and (1) 0.25" (FFR# 14065). The rear uses the thin 0.0625" shim (FFR# 13337). It will be necessary to adjust the length some to fit, make sure that you adjust the same amount on both sides. There should never be less than ¾” of threads screwed into either the Panhard bar or the upper arm.

Attach the Panhard bar to the frame mount using the spacers provided.

There should never be less than ¾" of threads screwed into either the Panhard bar or the upper arm.
To set the pinion angle, make sure that your ride height is where you want it, and then adjust the upper arm until the desired angle is reached. We usually run about 2° up on the rear axle, but you can adjust this to fit your particular set-up.
The Panhard bar can center the axle left to right in the frame.
At ride height, level the Panhard bar as much as possible.
Double check all your nuts and bolts, and make sure that all four jam nuts are tight.

3 link Rear Suspension Torque Specs Chart

Item	Nm	lb-ft
Upper link to axle	101-111	75-82
Upper link to frame	101-111	75-82
Lower control arm to axle	101-111	75-82
Lower control arm to frame	101-111	75-82
Upper shock to frame	54-67	40-50
Lower shock to axle bracket	54-67	40-50
Panhard bar	101-111	75-82