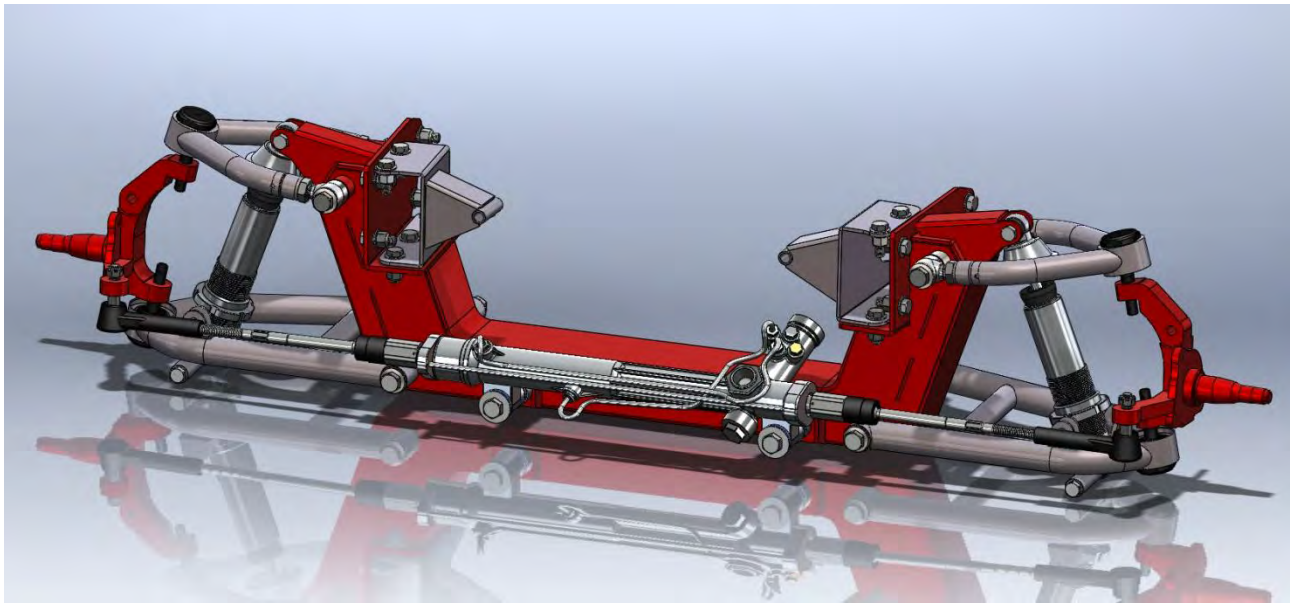
INSTALLATION INSTRUCTIONS

’67-72 CHEVY C-10

INDEPENDENT FRONT SUSPENSION



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

Assemble suspension on vehicle before powder-coating to ensure proper fitment, and to make modifications if necessary.

© HEIDTS 2005-2014

PARTS LIST

1) Chevy Bolt-On Crossmember
2) 1-1/4” Upper Control Arms
3) 1-1/2” Lower Control Arms
2) Chrome Springs
2) Spindles
1) Power Rack & Pinion
2) Adjustable Shocks
1) Wilwood Brake Kit

Hardware Package

8) $1^{3}/_{8}$” Stainless Steel Washers
2) $^{5}/_{8}$”-18 Nylock Jam Nut
2) $^{5}/_{8}$”-18 Nylock Nut
2) $^{1}/_{2}$"-13 x 1-$^{1}/_{2}$” Hex Bolts
2) $^{1}/_{2}$”-20 x 8-$^{1}/_{2}$” Hex Bolts
2) $^{5}/_{8}$”-18 x 13” Hex Bolts
16) $^{1}/_{2}$”-20 Nylock Nuts
26) $^{1}/_{2}$” Flat Washer
12) $^{1}/_{2}$"-20 x 1-$^{1}/_{2}$” Hex Bolts
2) $^{1}/_{2}$”-20 x 2-$^{1}/_{2}$” Hex Bolts
2) $^{5}/_{8}$”-18 x 11” Hex Bolts

© HEIDTS 2005-2014

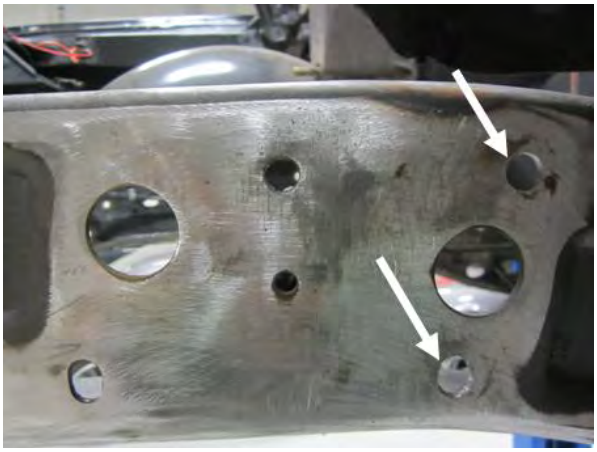
You are about to install your HEIDTS suspension system. You are probably wondering how complicated installing a complete I.F.S. system really is, with all those pieces, all the angles, anti-dive, geometry ...Don't worry. The HEIDTS I.F.S. kits are designed so all that is taken care of for you. Just follow the instructions step by step, reading each step completely, and in a very short time your car will be sitting on the nicest riding I.F.S. kit available.

1) Begin your installation by jacking up your vehicle and supporting it on sturdy jack stands. The stands must be placed on the flat section of the frame rails close to the front body mounts. First remove the engine and transmission. SAVE AND LABEL ALL FASTENERS FOR RE-INSTALLATION! Remove the front wheels and shocks. Disconnect the brake lines. Then, disconnect the tie-rods . After this, unbolt the crossmember from the frame. Now, the crossmember can be removed as one whole assembly (**See Figure 1**). Next, remove the old steering box, pitman arm, and the steering column. You can reuse the original steering column with the new rack and pinion if it is for an automatic transmission. You **cannot** reuse the original steering column if you have a manual transmission. We offer a steering hook-up kit (part number SC-311) if you cannot re-use your old steering column.

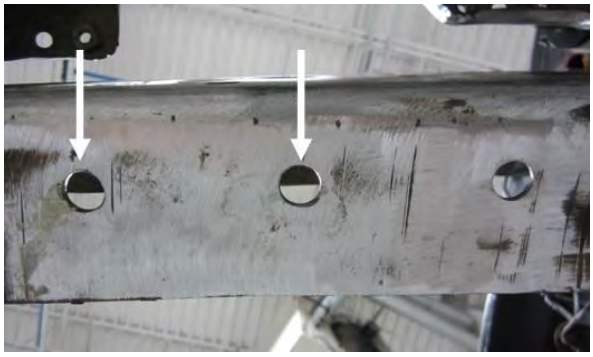
Figure 1

2) After removing the old crossmember, the middle and front holes in the bottom of the frame rail must be drilled out from $^{7}/_{16}$" to $^{1}/_{2}$", as well as the two holes on the side of the frame rail facing the rear. See **Figure 2**. Do this step on both sides of vehicle.

© HEIDTS 2005-2014



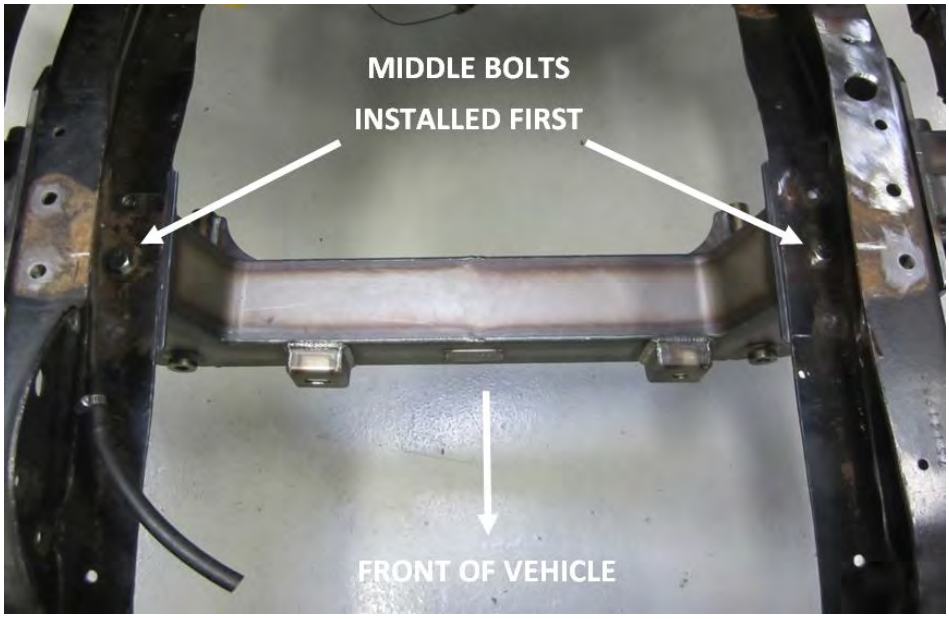
View From Drivers Side Wheel Well



Bottom View Drivers Side Frame Rail

Figure 2

3) Install HEIDTS crossmember (HEIDTS tag facing the front). The threaded middle hole of the crossmember that butts up against the bottom of the frame rail is the **most important** hole, because it locates the placement of the crossmember and therefore needs to be bolted up first using the using $^{1}/_{2}$"-13 x 1-$^{1}/_{2}$" coarse thread hex bolts. Repeat for the other side. See **Figure 3a**. After ***snugging*** down the two bolts, continue to bolt the rest of the crossmember ***finger tight*** to the frame rails using the previously mentioned bolts and $^{1}/_{2}$"-20 nylock nuts. You should only be able to put in three bolts (See **Figure 3b**) on each side. The rest of the holes will need to be drilled out, using the crossmember holes as a guide.

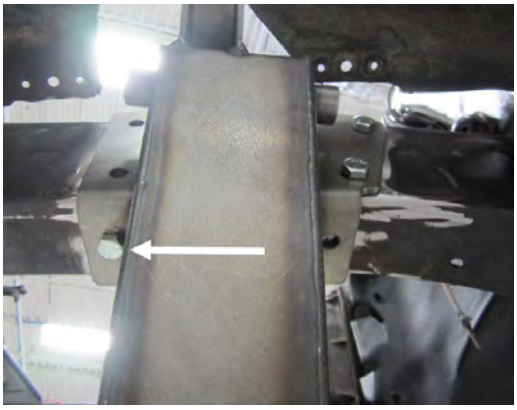


Top View of Engine Bay

Figure 3a

© HEIDTS 2005-2014

View from Drivers Side Wheel Well



Bottom View Drivers Side Wheel Well

Figure 3b

4) Once the HEIDTS crossmember is bolted up finger tight, make sure that the crossmember is seated firmly against the frame rails. Using the holes in the crossmember as a template, center-punch the remaining three holes. Repeat for the other side of the vehicle. Unbolt the crossmember and remove it. Then drill out the holes to $^{1}/_{2}$". (See **Figure 4**). Don't forget to punch and drill the holes on the bottom of the frame rail!

View From Drivers Side Wheel Well

Drivers Side Wheel Well, Drilled Holes

Figure 4

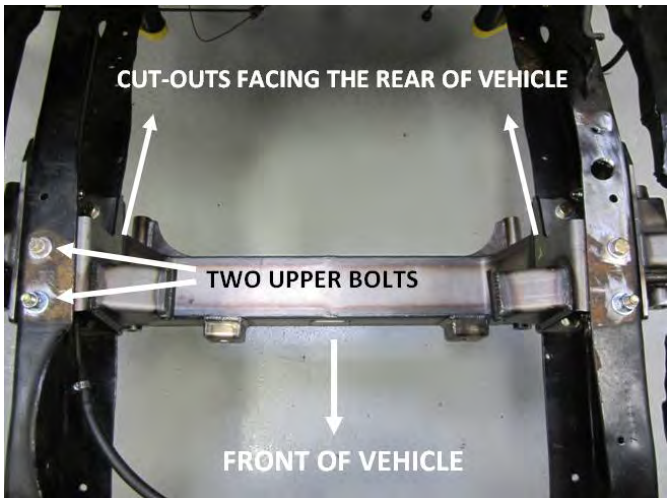
5) After drilling out the holes, the crossmember can be re-installed. In addition to re-installing the crossmember, the motor mounts can now be installed. Our motor mounts offered (part number MM-070) are a direct bolt on application.

6) ***To install motor mounts:*** Insert mount into the frame rails and align the holes. The mounts should slide tightly into the frame rails. The mounts have a cutout section, which should be facing the rear. The cut-out will distinguish the left and right mounts. Also, the three holes are the bottom side of the mount. Those three holes will line up

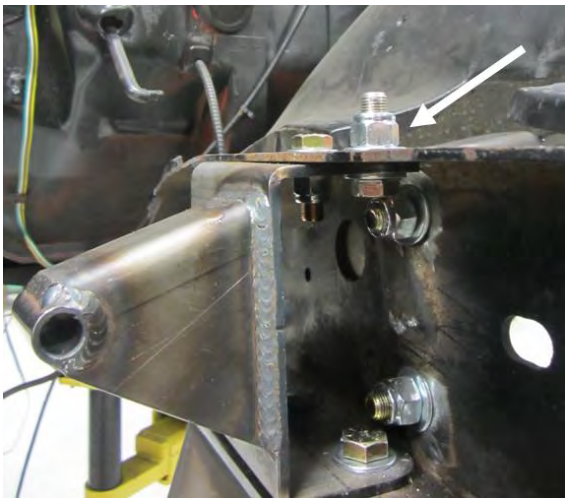
© HEIDTS 2005-2014

with the inner bottom section of the frame rail, while the upper two holes will line up with the holes on the top of the frame rail. It is important that the same middle bolts from **Step 3** are installed ***first*** . When installing the middle bolt, be sure to apply anti-seize to the threads. See **Figure 5a**. Install all hardware ***finger tight*** to ensure proper fitment first, before fully tightening. When installing the front-most bolts for the top of the motor mounts, they will have to be installed upside down in order to fit. See **Figure 5b**.

*******Note: If you are having trouble getting the holes to line up, remove crossmember again and ream out holes. Be careful not to enlarge holes.*******



View From Top of Engine Bay
Figure 5a



Drivers Side Motor Mount
Figure 5b

7) Now the suspension components can start being installed. Start with the upper control arms. There isn't a specific right or left piece. Position the upper control arms where the threads for the ball joint are facing up. (See **Figure 6a**). Before screwing in ball joints, remove boot, washer and castle nut that came with it in the package. It is **VERY IMPORTANT** to apply Anti-Seize to the threads before screwing in ball joints. Screw in ball joint by hand, until you cannot tighten it any further. Use a large crescent wrench or socket and tighten it further to ensure that it is completely screwed in all the way. Screw in grease fitting (See **Figure 6b**). Next is installing the adjusters. Before screwing them in, **apply Anti-Seize to the threads**. Screw in until approximately four threads are left exposed. (See **Figure 7**). The adjusters will later be adjusted when setting the alignment of your vehicle. ***Finger tighten*** nuts to secure adjusters.

© HEIDTS 2005-2014

Installing Ball Joint

Tightening Ball Joint

Figure 6a

Figure 6b

Figure 7

© HEIDTS 2005-2014

8) To install upper control arms use the $^{5}/_{8}$"-18 x 11" Hex Bolts, $1^{3}/_{8}$" Stainless Steel Dished Washers, and $^{5}/_{8}$"-18 Nylock Jam Nuts provided. Position upper control arm against the upper control arm mount of the crossmember. If you have having trouble getting the control arm to fit, apply some silicon lubricant to the face of the mount on the crossmember. When installing, use washers on the outside of the control arms (See **Figure 8**). ***Finger tighten*** for alignment later.

View From Drivers Side Wheel Well

Figure 8

9) Next is preparing the lower control arms for installation. Repeat the process in **Step 7** for installing the ball joint and grease fitting. Remember, **<u>you must apply anti-seize to the ball joint before installing it!</u>** After installing and tightening the ball joints in both lower control arms, install the bushings and bolt sleeves into the bushing cup. Install both bushing halves. Slide sleeve through the hole in the middle of the bushing. Apply silicon lubricant to sleeve if needed. Now you are ready to install the arms to the crossmember. To differentiate between which arm is right and left, observe where the sway bar mounts are. The sway bar mounts are facing the front of the vehicle. See **Figure 9**.

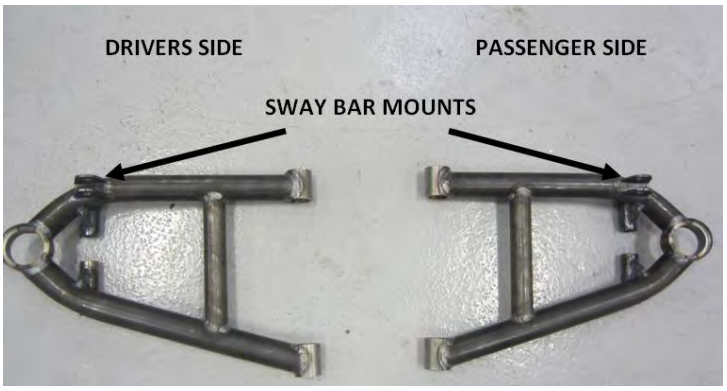


Figure 9

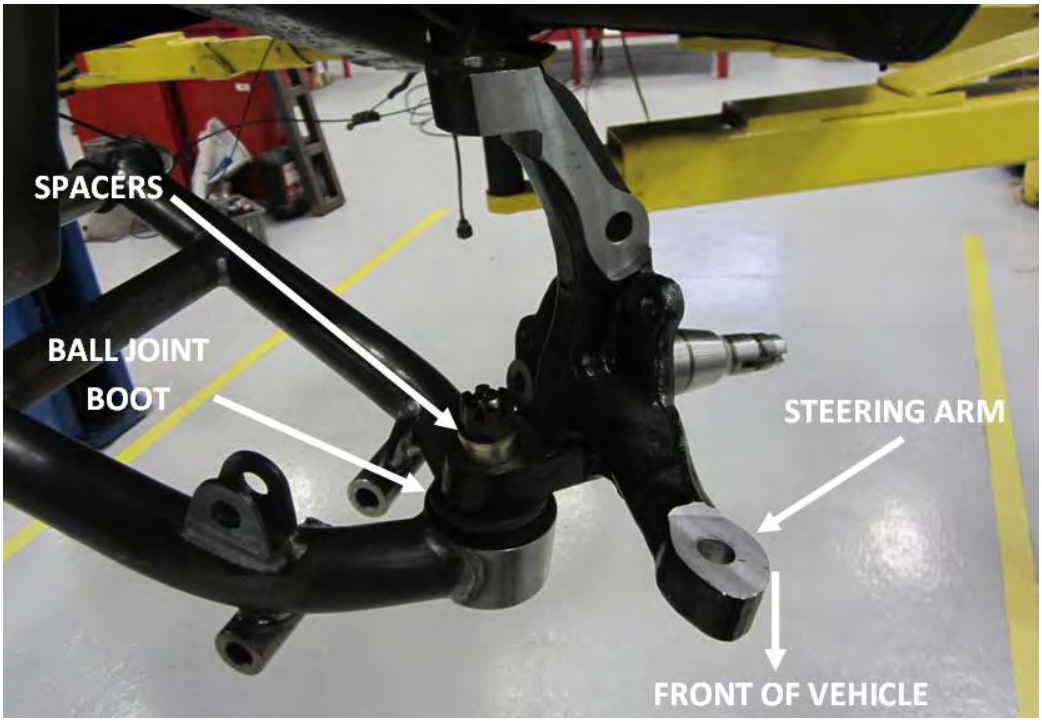
© HEIDTS 2005-2014

10) To install the arms, use the $^{5}/_{8}$"-18 x 13" Hex Bolts, $1^{3}/_{8}$" Stainless Steel Dished Washers, and $^{5}/_{8}$"-18 Nylock Nuts provided. Use one washer directly between the bolt head and bushing, and another one between the bushing and nylock nut, See **Figure 10**.

View From Drivers Side Wheel Well
Figure 10

11) Next, the spindles can be installed. To differentiate between right and left, the steering arms should be facing the front of the vehicle. Also, to distinguish between the top and bottom, the section for mounting the lower ball joint is very short, and the part of the spindle that mounts to the upper ball joint is elongated. See **Figure 11**. Before installing the spindle, first place the boot on top of the ball joint cup. After mounting the spindle on the ball joint, install the provided gold-colored spacers. Next, screw on the castle nut. After tightening down the castle nut all the way, install the cotter pin and secure it by bending the tangs out. See **Figure 12**. Repeat for the passenger side.

© HEIDTS 2005-2014



View From Drivers Side Wheel Well
Figure 11

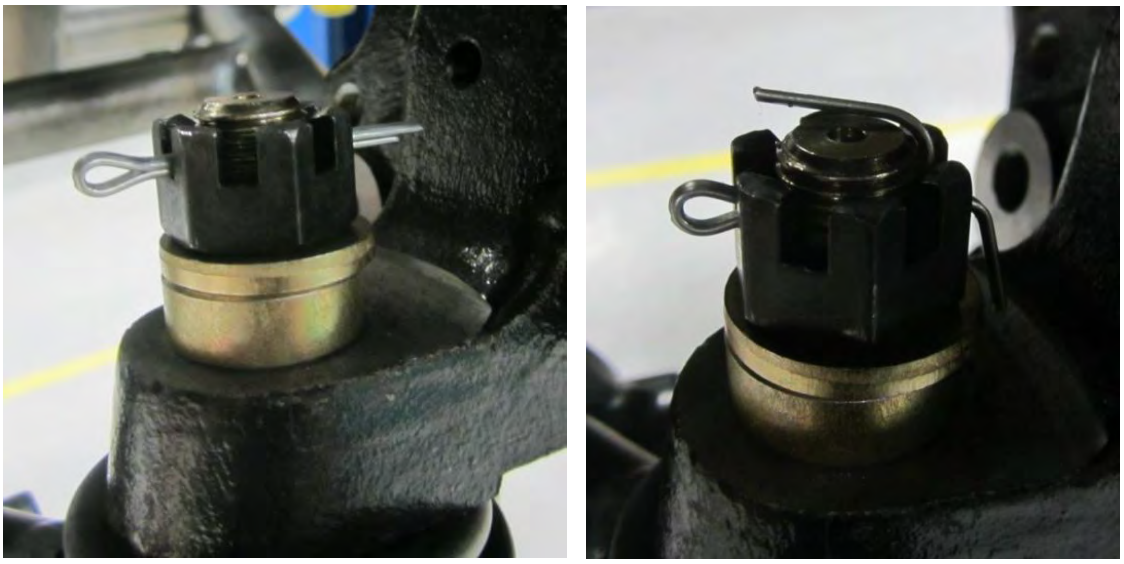


Figure 12

12) The next step is to bolt down the upper ball joint to the top of the spindle. Repeat the same procedure from **Step 11**, except this time using the single black spacer (**See Figure 13**). Install castle nut and cotter pin. Repeat for the passenger side.

© HEIDTS 2005-2014

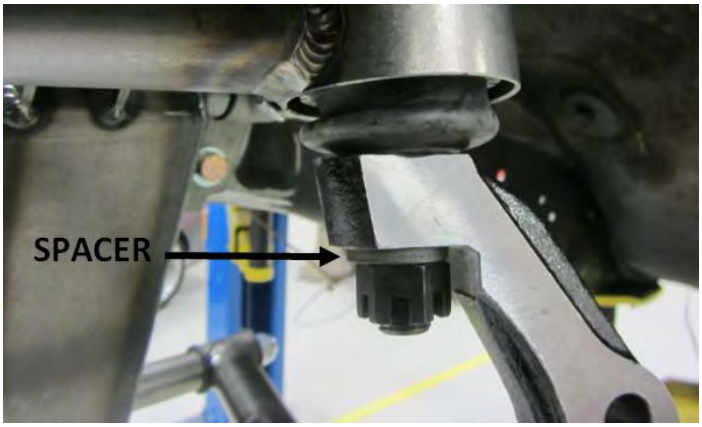
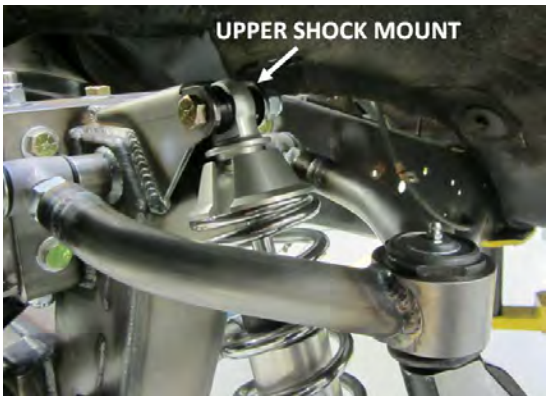
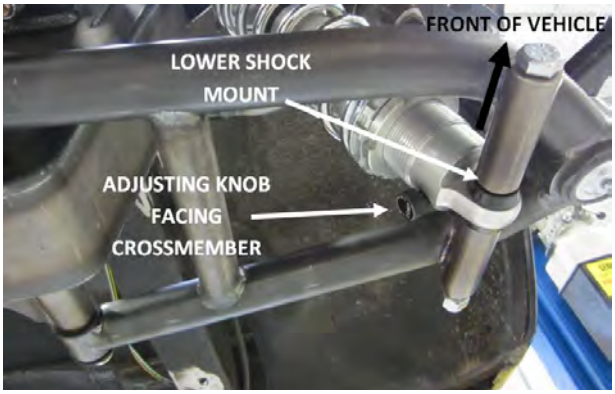


Figure 13

13) At this point you are ready to install the shocks. To do so, use the $^{1}/_{2}$"-20 x 2-$^{1}/_{2}$" Hex Bolts, $^{1}/_{2}$"-20 x 8-$^{1}/_{2}$" Hex Bolts, and $^{1}/_{2}$"-20 Nylock Nuts. The adjusting knob will distinguish the bottom of the shock. Make sure that the adjusting knob is facing the crossmember. Slide the $^{1}/_{2}$"-20 x 8-$^{1}/_{2}$" Hex Bolts through the shock sleeve in the lower control arm, and use a $^{1}/_{2}$"-20 Nylock Nut and tighten all the way down. Do the same for the top in the upper shock mount, using the $^{1}/_{2}$"-20 x 2-$^{1}/_{2}$" Hex Bolts and another $^{1}/_{2}$"-20 Nylock Nut. See **Figure 14**. Do the same for the passenger side.



View From Drivers Side Wheel Well

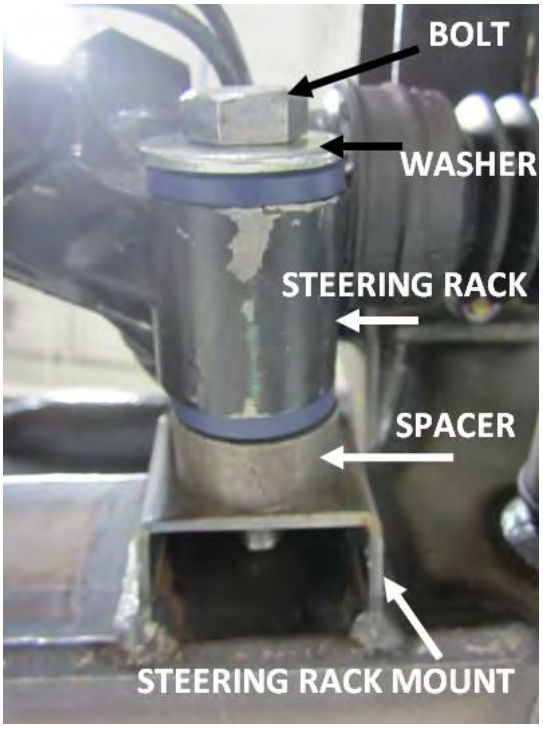


View From Bottom Drivers Side Control Arm

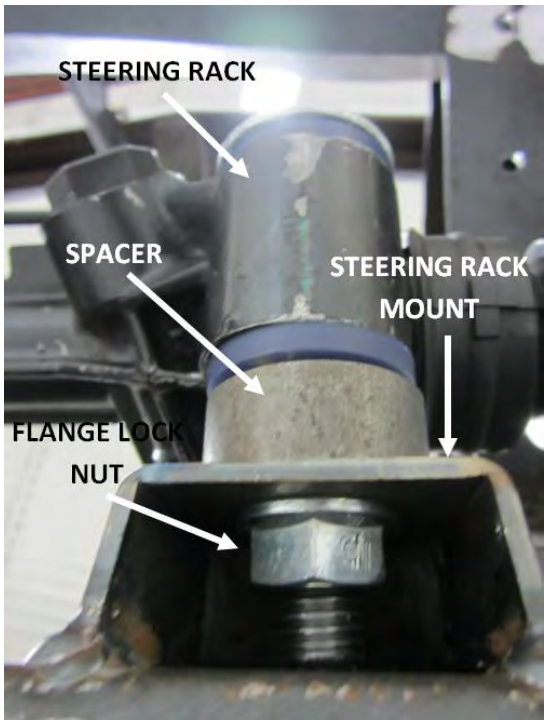
Figure 14

14) Now you are ready to install the steering rack. To do so, use the hardware package that came with the steering rack. Use the $^{5}/_{8}$-11 x 4-$^{1}/_{2}$" Hex Head Bolts, $^{5}/_{8}$ Flat Washer, Spacer, and $^{5}/_{8}$ x 11 Flange Locknut. The input to the steering rack should be positioned on the drivers side. The order of the hardware is as follows: $^{5}/_{8}$-11 x 4-$^{1}/_{2}$" Hex Head Bolt, $^{5}/_{8}$ Flat Washer, Steering Rack, Spacer, Steering Rack Mount on the Crossmember, and lastly the $^{5}/_{8}$ x 11 Flange Locknut. See **Figure 15**.

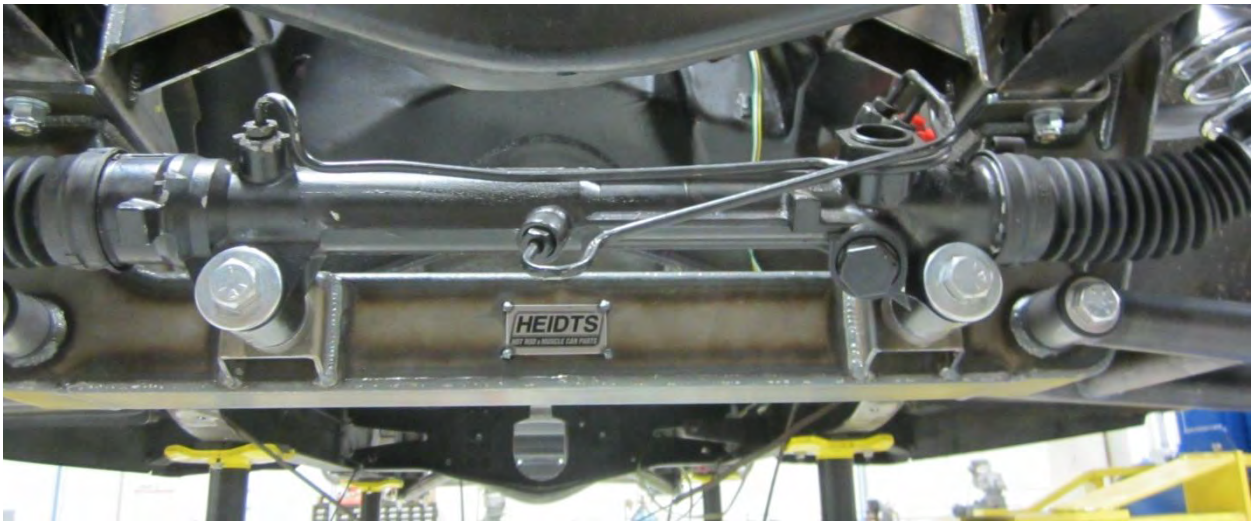
© HEIDTS 2005-2014



Bottom View of Steering Rack



Rear View of Steering Rack

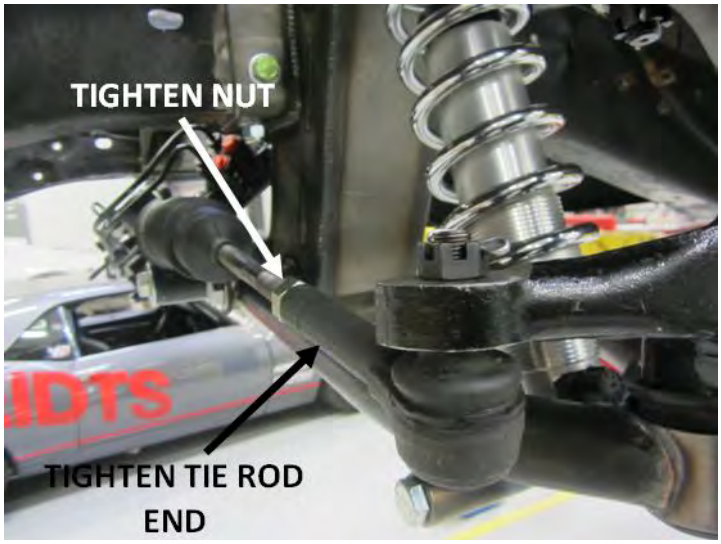


Front View of Steering Rack

Figure 15

15) The last step to installing the steering rack, is bolting on the tie rod ends. Using two crescent wrenches, tighten up the nut and the tie rod end, (you'll adjust them later when setting the alignment of your vehicle), slide the tie rod end through the steering arm of the spindle, tighten down the castle nut and lastly install a cotter pin. (See **Figure 16**).

© HEIDTS 2005-2014



View From Drivers Side Wheel Well
Figure 16

Lastly, you are ready to set the alignment of your vehicle. Be sure to do so with the arms and shocks set at ride height (the lower control arms should be level). The caster and camber settings are done with the adjusters in the upper control arms. Both adjusters are screwed in or out an equal amount to change the camber, and they are adjusted opposite each other to change caster. Approximately 3° of caster is built into the crossmember already, so not much change is required there. The interesting thing about the caster setting is that you can experiment with different settings and actually "tune" the characteristics of the handling of your truck to your driving style. 3° of caster will give a nice road feel and good low speed drive-ability. 4° or 5° will yield better high speed stability and tracking, putting a better self-centering characteristic in the steering wheel, but will tend to start to make parking slightly more difficult. Have fun with this one, as it truly makes your truck your own truck. Just be sure that both sides have equal caster settings, or the truck will tend to pull to one side.

Alignment Specifications:

Caster: 3° - 4° Positive

Camber: 0° - .5° Negative

Toe: 0 - 1/16 Toe-In

Since you are now to the point where you have a finished, running truck (we hope!) it is time to test drive it. After a few hundred miles, double check the ride height and the alignment. The springs may have settled, which would change the ride height and the camber setting. Readjust the ride height before changing the alignment. After this initial setting period, the springs and bushings should have pretty much taken their final set, so you should be on your way to many miles of cruising in style.

© HEIDTS 2005-2014