



**1967-1969 Chevy Camaro Front End, 1968-1972 Chevy Nova Front End
1967-1969 Pontiac Firebird Front End Suspension
Installation Instructions**

1-866-925-1101

www.totalcostinvolved.com

**CHECK ALL PARTS INCLUDED IN THIS KIT TO THE PARTS LIST BEFORE INSTALLATING OF THE KIT.
IF ANY PIECES ARE MISSING, PLEASE CONTACT: TOTAL COST INVOLVED 800-925-1101**

'67-'69 Camaro, '67-'69 Pontiac Firebird & '68-'72 Nova Front Suspension

Thank you for choosing TCI Engineering's Chevy front suspension package. The kit has been designed to not only allow your Camaro to handle corners, steer and brake better and have more engine compartment room but have that low sports car stance. Although the install will require cutting, grinding, drilling, welding and quite a few hours of your labor, the results are well worth the effort. I will take you through the install step by step.

Read and understand these instructions before starting any work

***APPLY ANTI-SEIZE COMPOUND TO THREADS TO AVOID SEIZING AND GALLING OF THREADS**

***APPLY THREAD LOCKING COMPOUND TO APPLICABLE FASTENER FROM VIBRATING LOOSE**

Do not paint or powder coat front clip till you check fit on the body first, not all Camaro bodies are exactly the same and if adjustments need to be made, you will want to do that before you do any painting or powder coating. This clip is made to be installed without the factory rubber body bushings, it bolts directly to the car without using any bushings. The original core support bushings are the only bushings that will be reused.

Begin installation by jacking the car up and supporting it on sturdy jack stands. The stands must be located just behind the firewall on the flat side. Do not support the car from the front sub-frame. It is not necessary to remove the front fenders, inner fenders and grill, this clip should fit with very little if any clearance issues. Disconnect the steering and transmission linkage and remove the radiator, engine and transmission. The factory brake lines on the front will have to be remade to fit your new clip and you should be able to reuse the rear hard lines from the cowl back. Now unbolt and remove the factory sub-frame making note to where the original sub-frame is mounted. The original steering column will not work with the TCI front clip and an *Ididit* (67-69 Camaro application) column must be used. None of the factory steering system will be reused. You will need to purchase two universal steering joints and a steering shaft to hook your steering back up.

Alignment Spec.

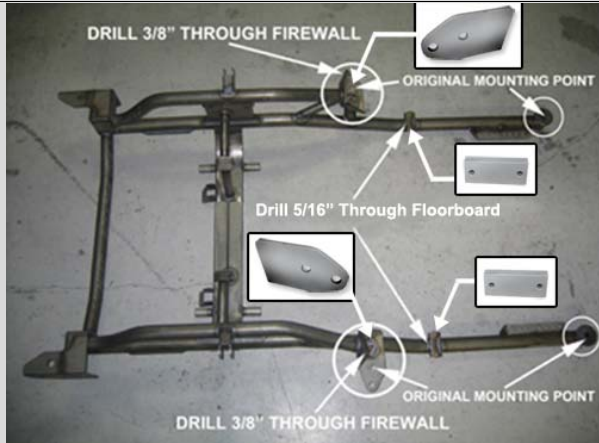
Power Rack & Pinion: 5 degrees positive

Camber 0 degrees

Toe-In 1/32"



Prep the firewall mounting surface edge on the firewall side by grinding smooth the flange edge so that the TCI clip will be mounted flush to the firewall.



Start the installation of the new sub-frame by raising it up into the original mounting position. A floor-jack will help here. Line up the holes in the firewall and the far rear mounting point and fasten it using the new supplied bolts, lock washer and flat washer (Qty. 4 5/8-11 x 2" Gr. 8 Hex Head) Using a 15/16" shallow socket. Do not tighten up the bolts at this time until all mounting bolts have been started then tighten and secure to the body.

The high lighted pictures showing the 5/8 inch thick aluminum spacers that are for the 68-72 Chevy Nova only. They will be placed between the sub-frame and the body during install for correct sub-frame to body height.



Drill 3/8 hole through the firewall using the mounting bracket as a guide. Make sure that all four of major mounting bolts are tight first.



Then fasten it with the supplied 3/8-24 X1 Button Head Bolt



Next, drill (2 holes per side) through the floorboard located between the firewall mounting point and the rear-most mounting point using a 5/16" drill bit.



Fasten by using a 5/16-24 x1 Button Head Bolts with head of the bolt inside the car.



Continue with the front suspension component installation. First, install the lower control a-arm shaft with acorn nut towards the front of the car into lower A-arm (shock mounting tabs facing up) and through the cross-member, the washers go on each side of the bushings.



After insert the control arm bolt from the front to the rear and place the supplied flat washer between each side of the polyurethane bushing, complete assembly by tightening the 5/8 inch full Nyloc nut.



Next install the upper control arm into position.

Install the upper control arm into position using the supplied 9/16-18 x 2 1/4" button head bolts. Space out the upper A-arm using the supplied 9/16" flat washers between control arm and the clip. Use 3 flat washers on each bolt, this should be a good start to get to the alignment shop.



Complete installation by tightening the supplied 9/16-18 full height Nyloc nut.



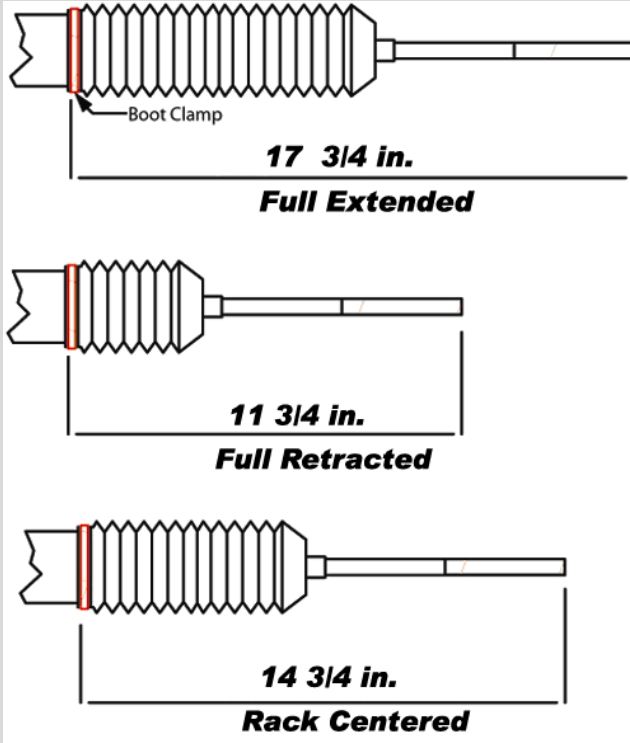
Install the shock to the upper mount using the supplied 1/2 -20 by 1 3/4 inch button head bolt and 1/2 -20 half height nut.



Next, install the shock into the lower a-arm tabs making sure that the adjustment dial towards the rear of the vehicle and install the 3 3/4 inch shoulder bolt from the rear through the rear bracket, then the shock bearing, front bracket, then the spacer and last the rod end link for the sway bar. Install the washer and nut and tighten. The top rod end will be attached to the sway bar later.



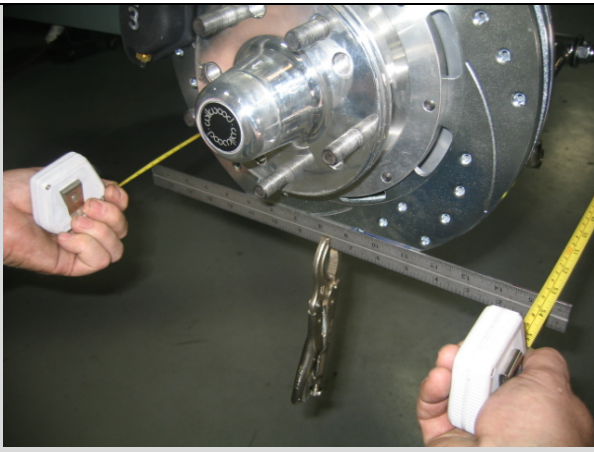
The spindle assembly is installed next. Set the spindle assembly on the lower ball joint with the steering arm facing forward and the brake caliper towards the rear. Install the lower ball joint nut, tighten and install cotter pin. Pull the upper a-arm ball joint down into the top of the spindle and install nut, tighten and install cotter pin.



The rack assembly needs to be centered to allow equal steering left to right. On a bench, turn the pinion out to lock one way. Measure from a convenient point to the end of the tie rod. (This rack was 17 3/4). Turn the pinion to the opposite 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 till you get that measurement and your rack is centered.



Install the rack & pinion assembly using the two 5/8" in. bolts, washers and lock nuts supplied. On power rack and pinions units the 5/8 thick spacer goes between the rack brackets on the cross member and the rack. Install the tie rod ends onto the rack and into the spindle steering arms.



Clamp a straight edge to each rotor as shown then using a tape measure front and rear; set the toe-in approximately 1/8" for a starting point.



Install the front anti-roll bar into position using the supplied polyurethane and saddle mount making sure that the stepped down center section is down to clear the engine pulley. Fasten anti-roll bar saddle mount using the supplied 3/8-16 x 1 inch hex head bolt; 3/8 inch lock and flat washer.



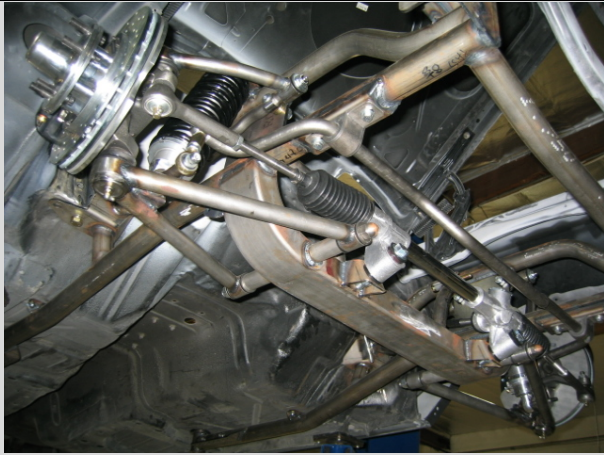
Complete installation by fastening the upper 1/2 inch rod end of the sway bar link from the lower shock mount bolt to the end of the anti-roll bar with the 1/2-20 x 1 1/2 inch button head bolt.

The TCI Camaro clip comes with an adjustable transmission cross-member to accommodate different types of Chevy transmissions. Fasten with the supplied 3/8-16 x 1 1/4 inch Gr. 8 Hex Head Bolt and 3/8 inch full height Nyloc nut.



Mount the emergency brake cable bracket on the driver side with the same mounting point as the transmission cross-

member.



Make sure all fasteners are tightened to the recommended torque specifications and you have completed the assembly of the TCI front suspension.



Fender Panel Cover

The stock inner fender does not have any holes to fasten the fender panel covers so clamp panels into position fitting the notch over the upper shock mounts drill 7 holes that are spaced evenly using a 3/16" drill bit. Fasten with the supplied 8/32 bolts nuts and washer.



View from engine compartment passenger side



View from fender well passenger side