

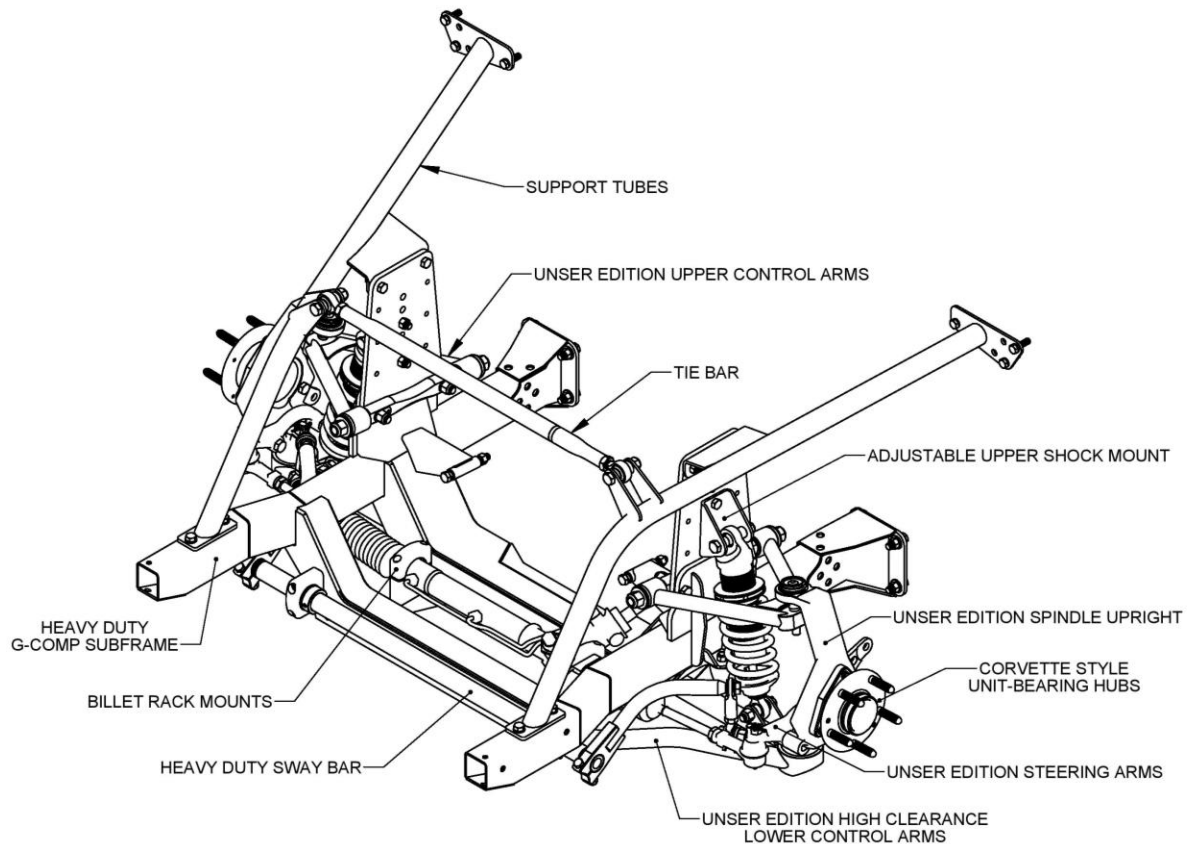
INSTRUCTION

350-200 G-Comp Front Suspension – Unser Edition: 62-67 Chevy Nova

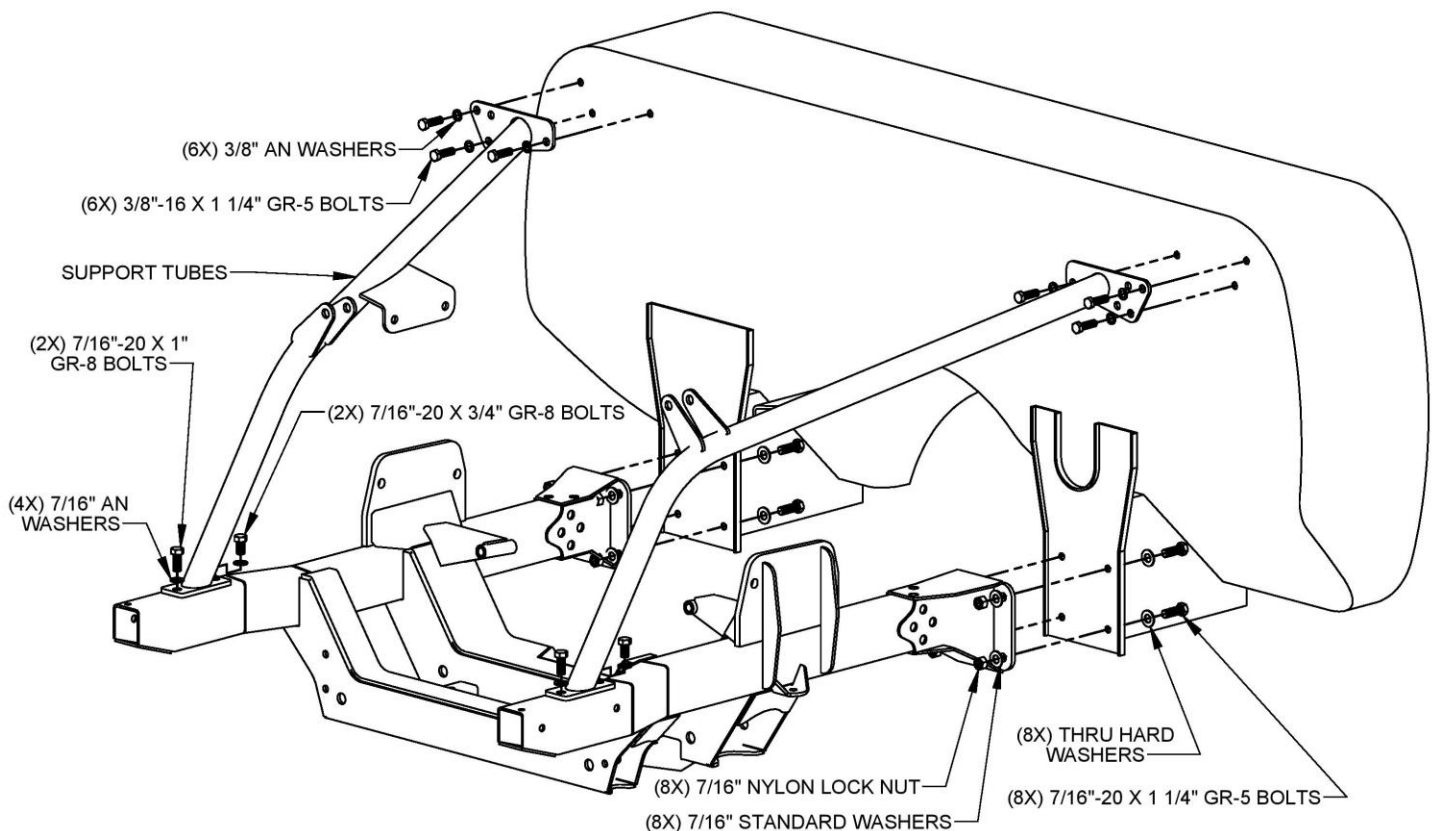
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Kit Contents:

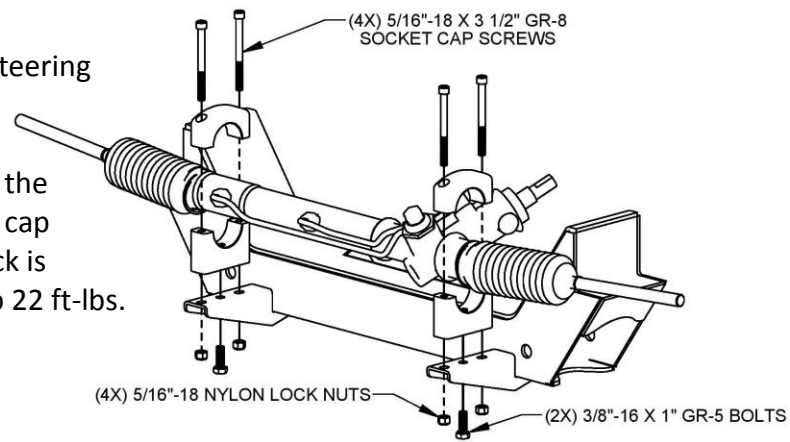
- 91035702 G-Comp Subframe Hardware Kit
- 3501100 Unser Edition Spindle Upright
- 91035340 Narrow Power Steering Rack for G-Comp
- 91035900 G-Comp Sway Bar Mount Kit
- 91035250 G-Comp Front Sway Bar Arms
- 91035200 G-Comp Heavy Duty Sway Bar
- 350022 G-Comp Billet Rack Mount Kit
- 350201 G-Comp Unser Edition Subframe
- 350202 G-Comp Unser Edition Support Tubes
- 350203 G-Comp Unser Edition Upper Control Arms
- 350204 G-Comp Unser Edition Lower Control Arms
- 91035010 G-Comp Steering Arms
- 350206 G-Comp Unser Edition Shock Mount Kit
- 350350 Unser Edition Front Hubs
- 350207 Unser Edition Hub Bolt Kit



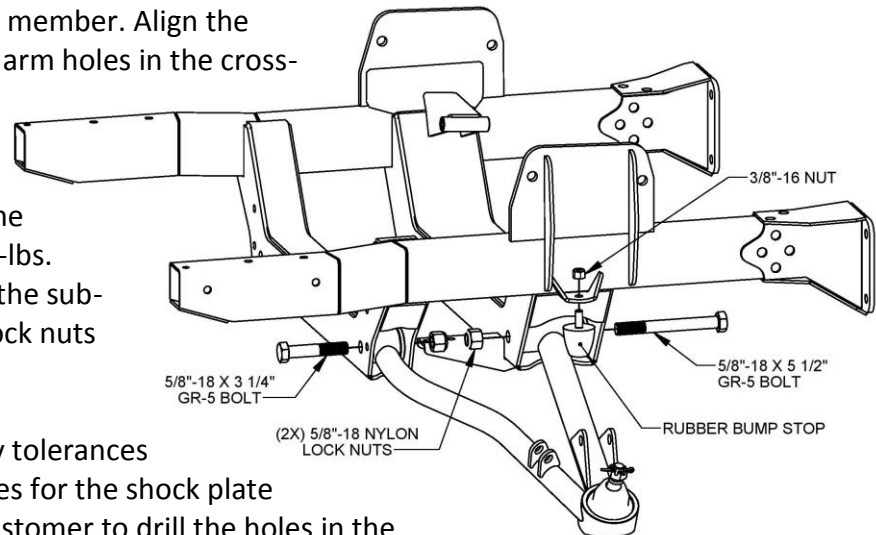
1. **Support the car** on jack stands or hoist. The front stands must be located on the main floor just behind the firewall. Do not support the car on the front sub-frame.
2. **Remove:** the hood, hinges, and front fenders. Disconnect all electrical components from the firewall forward. Remove the front bumper, brackets, grill, and lights. Retain all hardware to be used during re-assembly. Remove the core support and radiator. The lower section of the core support is riveted to the sub-frame. Drill out the rivets and remove the core support. Remove the engine, transmission, and accessories. Remove the OEM steering column. Support the subframe with a floor jack. Unbolt the subframe from the firewall and lower it down until the weight is supported by the front tires. The sub-frame with the inner fenders can now be rolled out of the way.
3. **Install the G-Comp subframe.** Using a floor jack, raise the new G-Comp sub-frame into position, lining up the holes in the sub-frame with the holes in the firewall. Bolt the sub-frame to the firewall using the eight supplied 7/16"-20 x 1-1/4" Grade 5 bolts, washers, and nylon insert lock nuts. Note: The bolts and washers will need to be installed from the back side of the fire wall. **Do not fully tighten these bolts at this time.** Support the front of the sub-frame with jack stands and remove the floor jack. Install the support tubes to the sub-frame using two 7/16"-20 x 1" and two 7/16"-20 x 3/4" Grade 8 bolts and four AN washers. Use the shorter (3/4" long) bolts behind the support tubes and the longer (1" long) bolts on the front side. **Do not fully tighten.** Install the support tube to the fire wall with the six 3/8"-16 x 1-1/4" bolts and AN washers. (Torque to 26 ft-lbs). You can now fully tighten the sub-frame and support tube bolts. (Torque to 42 ft-lbs). **Note:** upper support firewall shims can be used to set your fender gaps after final assembly.



4. **Steering Rack.** Install the lower halves of the billet steering rack mounts to the cross member using the 3/8"-16 x 1" grade 5 bolts supplied with the kit. **Do not fully tighten at this time.** Install the upper halves of the Billet rack mounts using the 5/16"-18 x 3.5" grade 8 cap screws and nylon insert lock nuts. Make sure the rack is centered before fully tightening the bolts. Torque to 22 ft-lbs.

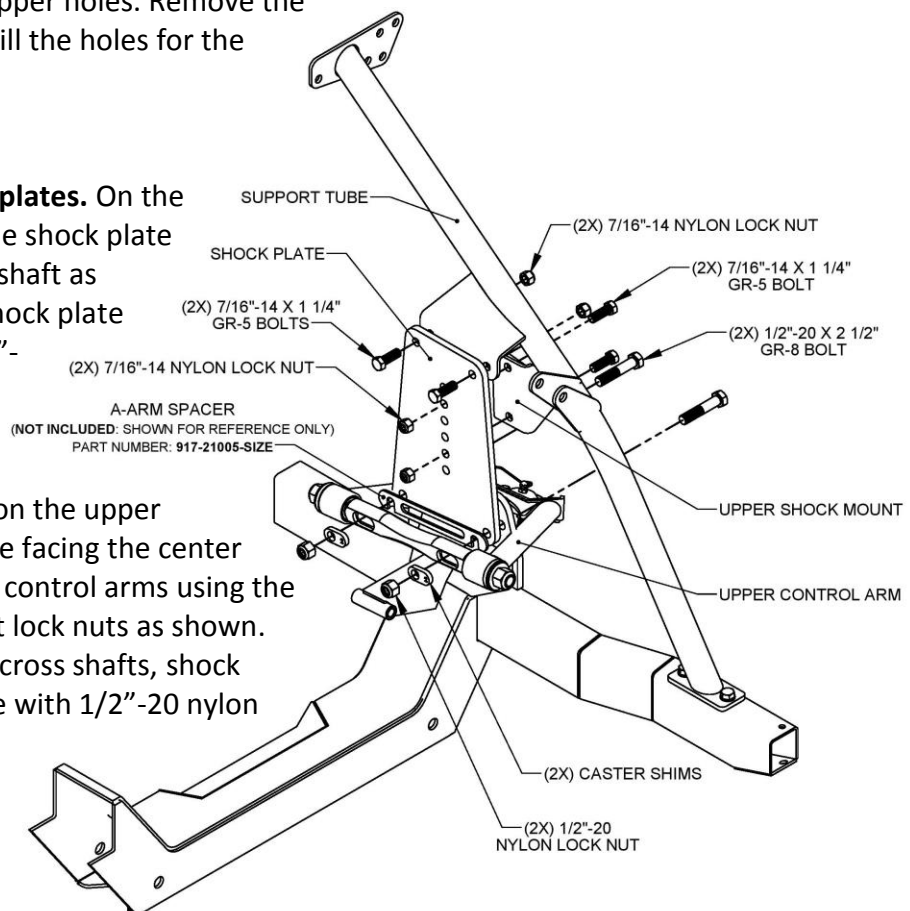


5. **Install the lower control arms** into the cross member. Align the control arm bushings with the lower control arm holes in the cross-member. The front bolts, 5/8"-18 x 3-1/4" Grade 5, are to be installed from the front side. The rear bolts, 5/8"-18 x 5-1/2" Grade 5, are to be installed from the rear. Install the 5/8"-18 nylon lock nuts and torque to 130 ft-lbs. Install the lower control arm bump stops to the sub-frame using the supplied 3/8" nylon insert lock nuts as shown.



6. **Drill the Support tubes.** Due to loose factory tolerances and variations between cars, the upper holes for the shock plate bracket are left un-drilled. This allows the customer to drill the holes in the proper location for their particular car. The shock plate is to be used as a template. Start by installing the shock plate and tighten the the two lower bolts to secure it in place. Now use the shock plate as a template and mark the locations for the upper holes. Remove the shock plate and use a 15/32" drill bit to drill the holes for the upper shock plate bolts.

7. **Install the Upper control arms and shock plates.** On the Unser Edition G-Comp front suspension the shock plate mounts between the subframe and cross-shaft as shown. With the upper control arm and shock plate sitting in place, install the upper two 7/16"-14 x 1 1/4" grade-5 bolts and nylon lock nuts into the upper holes of the shock plate. These will secure the shock plate to the support tubes. Rotate the cross shaft on the upper control arm, so the caster shim pockets are facing the center of the vehicle as shown. Mount the upper control arms using the 1/2"-20 x 3" grade 8 bolts and nylon insert lock nuts as shown. Install the bolts through the caster shims, cross shafts, shock plate, and the sub-frame as shown. Secure with 1/2"-20 nylon lock nuts and torque to 72 ft-lbs.



NOTE: Shown is an optional camber spacer. These can be purchased separately if additional negative camber is desired. With the upper control arm in place, the adjustable upper shock mount can be installed as shown. Use the 7/16"-14 x 1 1/4" grade 5 bolts and nylon lock nuts. Torque the shock mount, and shock plate bolts to 40 Ft-Lbs.

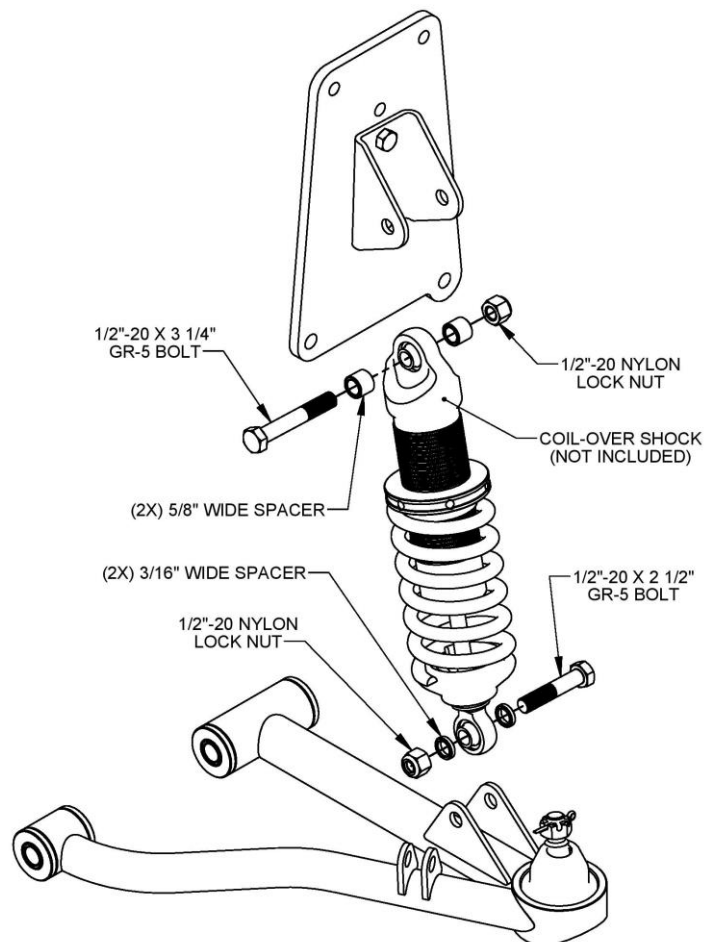
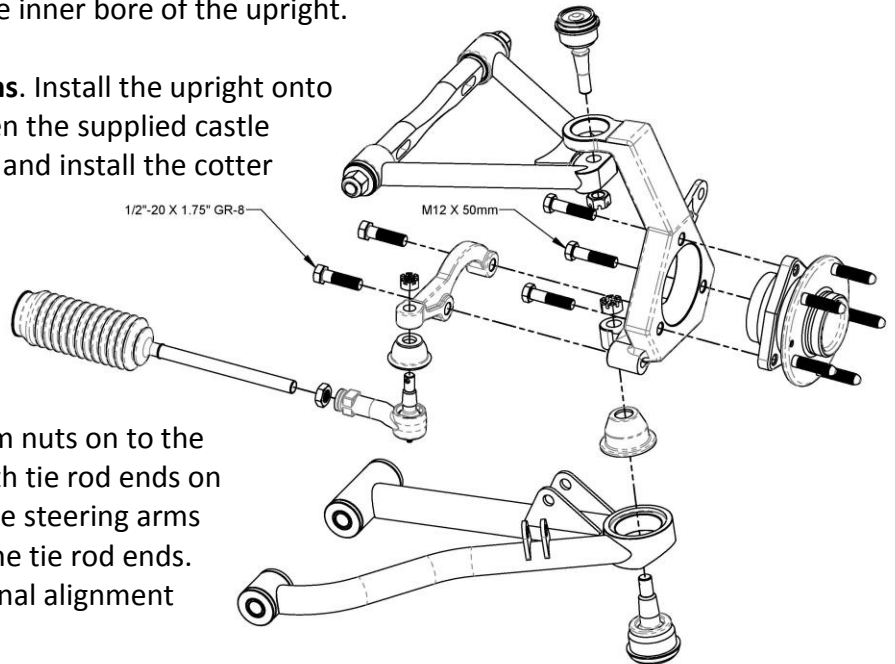
8. **Install the hubs.** The Corvette style hubs included with this kit use metric hardware, **including metric lug nuts**. Use the supplied M12 metric bolts to secure the hubs to the uprights. Use loctite and torque the bolts to 80 ft-lbs. The fit of the hub into the upright is a close tolerance fit. It may be required to remove any paint or powder coating from the inner bore of the upright.

9. **Install the uprights and steering arms.** Install the upright onto the lower ball joint. Install and tighten the supplied castle nut. Repeat with the upper ball joint and install the cotter pins. Bolt the steering arms to the spindles using the 1/2"-20 x 1-3/4" Grade 8 bolts. **NOTE:** Make sure to use Loctite on the threads and torque to 80 ft-lbs.

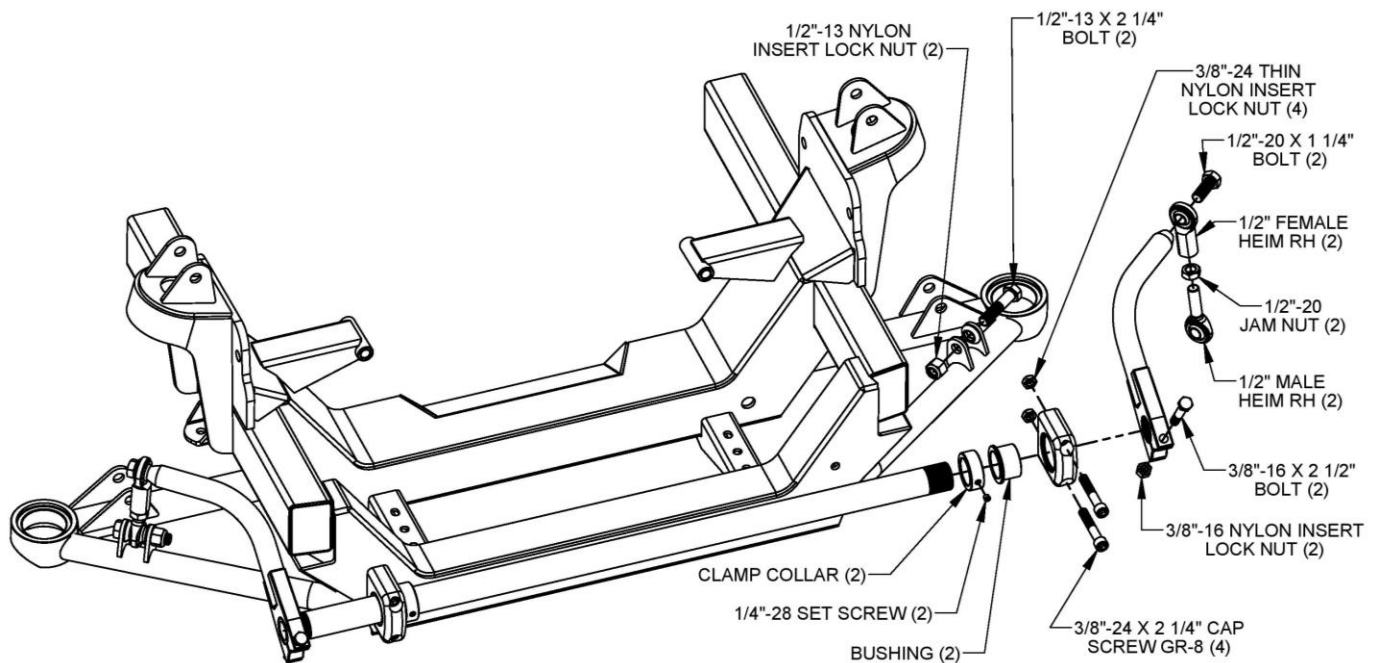
10. **Install the outer tie rod ends** and jam nuts on to the inner tie rods of the rack. Thread both tie rod ends on equally. Attach the tie rod ends to the steering arms using the castle nuts supplied with the tie rod ends. Tighten and install the cotter pins. Final alignment to be done at a later time.

11. **Install the shocks.** Assemble the coil over, by installing the threaded adjusting collar onto the threaded shock body. Adjust the collar all the way to the end of the threads. Place the spring over the shock body and install the spring cup onto the shock. Using the 1/2"-20 x 2-1/2" Grade 5 bolts and two 3/16" wide spacers, install the shock into the lower mount on the control arm as shown. Secure it with a 1/2"-20 nylon lock nut. Install the 1/2"-20 x 3 1/4" Grade 5 upper shock bolts and 5/8" wide spacers, placing one spacer on each side of the shock bearing. Secure it with a 1/2"-20 Grade 5, nylon lock nut, and torque to 64 ft-lbs.

Note: This kit is design to use shocks with a 4" stroke and compressed length of 10" or a 5" stroke shock with a compressed length of 12". Shock ends should be 1/2" bearings with a mounting width of 1". For recommended part numbers please visit our website or contact one of our tech experts.



12. **Sway bar assembly:** Press the bushings into the aluminum pillow-blocks and install the pillow-blocks to the front cross member with the bushing shoulder to the inside. Use the four 3/8"-16 x 2-1/4" Grade 8 socket head cap screws and secure them with the 3/8"-16 thin nylon lock nuts. Slide the sway bar through the bushings, installing the two clamp collars to the inside of both pillow blocks. Torque the 3/8" cap screws to 42 ft-lbs. Center the sway bar between the pillow blocks. Slide one clamp collar up against the bushing shoulder in the pillow block and tighten the set screw. Slide the second clamp collar up to the opposite bushing in the pillow block leaving about .075" of side clearance between the clamp collar and the bushing. Tighten the set screw. A nickel is about .075" thick and can be used as a spacer between the clamp collar and the bushing to provide the proper side clearance. Assemble the sway bar links as shown, leaving roughly 1/4" of threads showing. Slide the sway bar arms onto the splined ends of the sway bar aligning them flush with the end of the bar. Make sure they are parallel or "clocked" to one another then tighten the 3/8"-16 x 2-1/2" grade 5 pinch bolts and nylon lock nuts. Slide the 1/2"-20 x 1-1/4" grade 5 bolts through the female heim joints and thread them into either end of the sway bar arms making sure to use Loctite on the threads and torque to 64 ft-lbs. Mount one of the lower links into the bracket on the lower control arm using a 1/2"-13 x 2-1/4" grade 5 bolt and secure it with the 1/2"-13 nylon insert lock nut. Leave the bolt out of the lower link on one side at this time. The second bolt/nut will be installed after the ride height is set and the car is setting on level ground. This will ensure that there is no preload on the sway bar at ride height.



13. **Install the brake kit** to the hub per the instructions included with your brake kit. **Note:** For recommended part numbers please visit our website or contact one of our tech experts.
14. **Install the engine and transmission.** The front jack stands can now be moved to support the front of the new sub-frame. The G-Comp sub-frame was designed to use stock type GM motor mounts (910-18012) or Speedway's Prothane mounts (910-18015). **Note:** The original drive train in the 62-67 Nova was offset 1/2" to the passenger side. On the G-Comp sub-frame the drive train is in the center and will require the use of a centered transmission cross-member. An OEM transmission cross member can be modified to work or use one of Speedway's transmission cross-members.

15. **Install the tie bar** using the 1/2"-20 x 2-1/2" grade 5 bolts, nylon insert lock nuts, and spacers, provided with the kit. Torque to 64 ft-lbs.
16. **Install** the core support, radiator, grill, and fenders. Check the front fender gaps at the door. It may be necessary at this time to shim the upper support tube mounts at the firewall to align the front fender gaps at the door. This kit contains two thick shims and four thin shims to adjust these gaps. Additional shims can be used if needed. The upper support tube bolts can be fully tightened once the fender gap is set. All accessories and other components can now be installed.
17. **Alignment.** The lower control arms should be level with all the weight on the car. To adjust the ride height, take the weight off the suspension and turn the threaded adjusters on the coil over shocks. Once the ride height has been set, place the car back down on level ground. Adjust the free heim end on the sway bar link so that it lines up with the bracket in the lower control arm. Keep adjusting the heim end until the remaining 1/2"-20 x 2-1/4" grade 5 bolt will slide through easily. Secure it with the 1/2"-20 nylon insert lock nut, and torque to 64 ft-lbs.

Set the alignment to the following initial settings:

Caster	=	5°	
Camber	=	Street: Negative .25°-.5°	Race: Negative 1.5°-3.0°
Toe	=	0" - 1/8" Toe Out	

18. **Caster** adjustments are made by changing the caster inserts. The caster inserts are identified with numbers indicating the distance of the hole from the center of the insert in 1/8" increments.
#1 = 1/8" #2 = 1/4" #3 = 3/8"
The inserts can be reversed to move the hole in front of or behind center for a total adjustment of 3/4".
19. **Camber** is adjusted using A-arm shim plates. Speedway Part # 917-21005 these are available in thicknesses ranging from 1/8" to 1/2".

IMPORTANT

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