

INSTRUCTIONS

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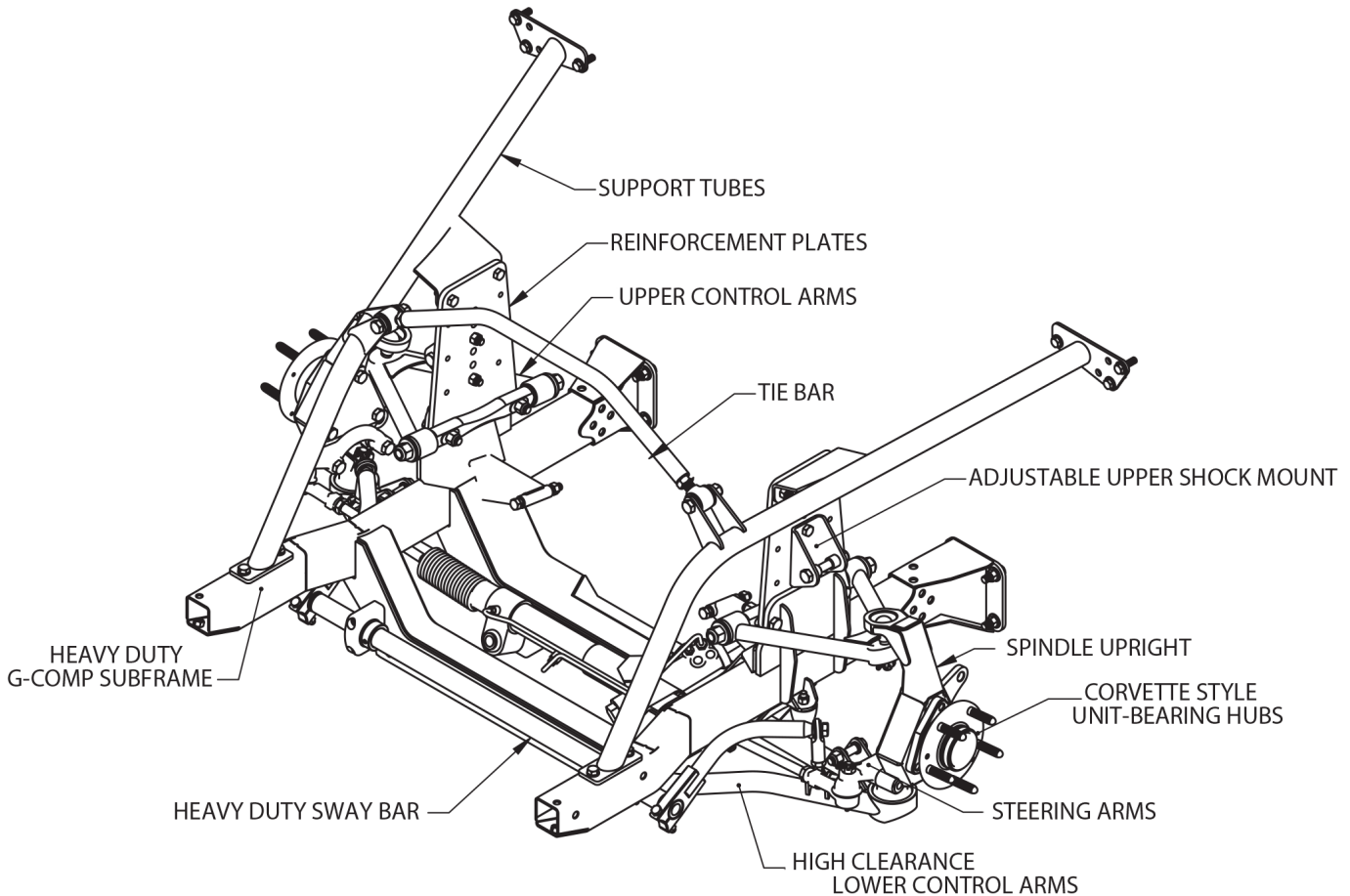


350-2002 - 1962-67 Nova G-Comp X Front Suspension

Kit Contents	
P/N	Description
350100.2	G-Comp Camber Shim Kit
3502002.1	G-Comp X Edition Subframe
350203	G-Comp X Edition Upper Control Arms
350204	G-Comp X Edition Lower Control Arms
350206	G-Comp X Edition Shock Mount Kit
350207	G-Comp X Edition Hub Bolt Kit
3503502*	G-Comp X Heavy Duty Wheel Bearing Hub Upgrade
3501100	G-Comp X Edition Spindle Upright
91035010	G-Comp Steering Arms
91035200	G-Comp Heavy Duty Sway Bar
91035250	G-Comp Front Sway Bar Arms
91035345	Narrow Power Steering Rack for G-Comp Kit Contents
91035703	G-Comp Subframe Hardware Kit
91035900	G-Comp Sway Bar Mount Kit

* Revision Note - October 15, 2025

Kit Components List updated to reflect the new #3503502 - G-Comp X Heavy Duty Wheel Bearing Hub Upgrade, replacing #350350 - GM Genuine 85144278 C7 Corvette Front Wheel Hub & Bearing.



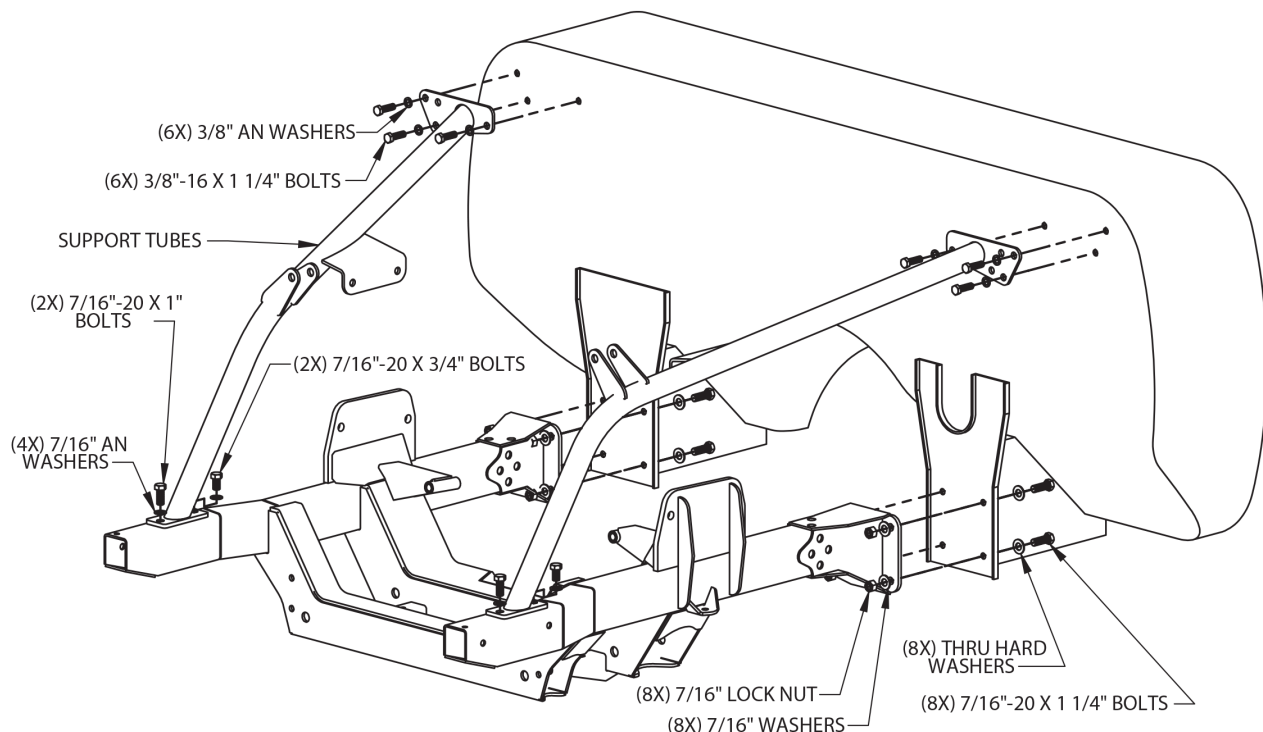
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Please read through the entirety of the instructions before beginning installation and assembly.

1. Support the car on jack stands or a 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 reassembly. 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 subframe 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" bolts, washers, and 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 subframe 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" 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. You can now fully tighten the subframe and support tube bolts. **NOTE:** upper support firewall shims can be used to set your fender gaps after final assembly.

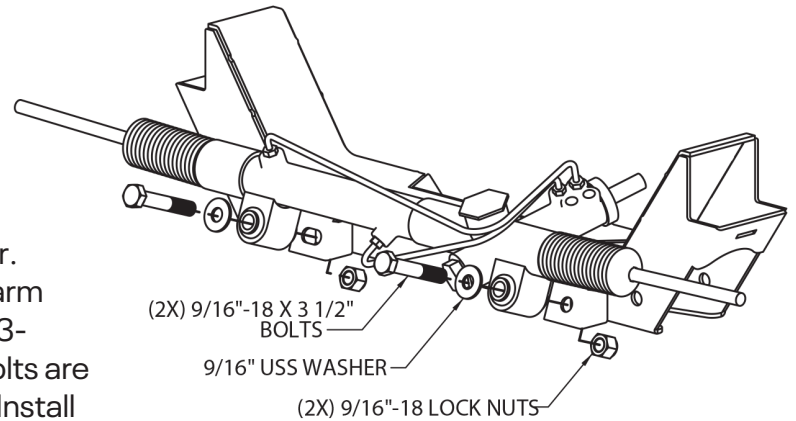


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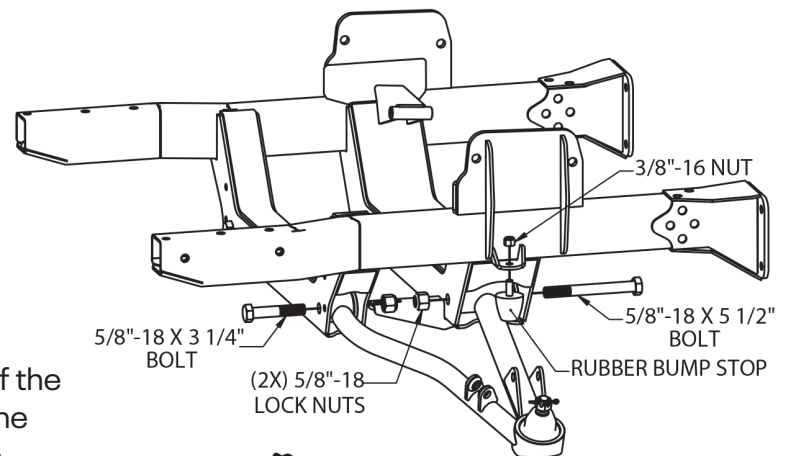
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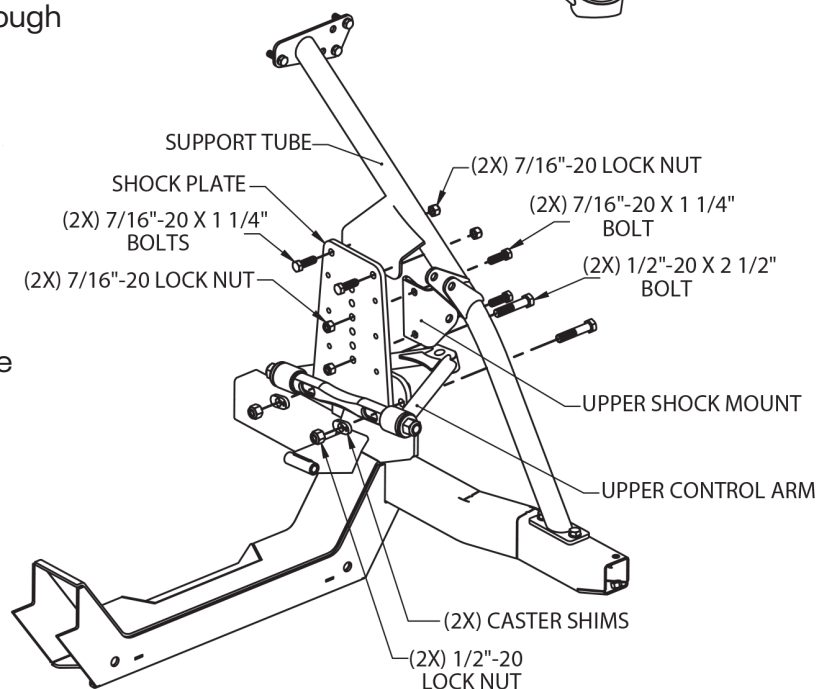
4. Steering Rack. This G-Comp X kit is designed to use a narrowed Mustang II style rack. Install the rack as shown, using the 9/16"-18 x 3-1/2" bolts, washers and lock nuts.



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", are to be installed from the front side. The rear bolts are 5/8"-18 x 5-1/2" and are to be installed from the rear. Install the 5/8"-18 lock nuts and tighten. Install the lower control arm bump stops to the sub-frame using the supplied 3/8" lock nuts as shown.



6. Install the upper control arms and shock plates. Due to loose factory tolerances and variations between cars, the top shock plate mount holes in the support tube are left undrilled. It is necessary to mock up the shock plate in its exact position to locate these holes. The shock plate can be used as a jig to drill the holes while installed in the car. To do this, place the shock plate between the control arm and sub-frame and install the upper control arm by rotating the cross shaft 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" bolts and lock nuts. Install the bolts through the sub-frame, shock plate, cross shaft, and caster shims. Secure with 1/2"-20 lock nuts. Once the shock plate is tightly fastened, drill the necessary holes using a 15/32" drill bit. A clamp can be used to securely hold the shock plate and support tube together while drilling. After the holes have been drilled, install the 7/16"-20 x 1-1/4" bolts and lock nuts into the top holes of the shock plate to secure it to the support tube. The adjustable upper shock mount can now be installed as shown. Use the remaining 7/16"-20 x 1-1/4" bolts and lock nuts.



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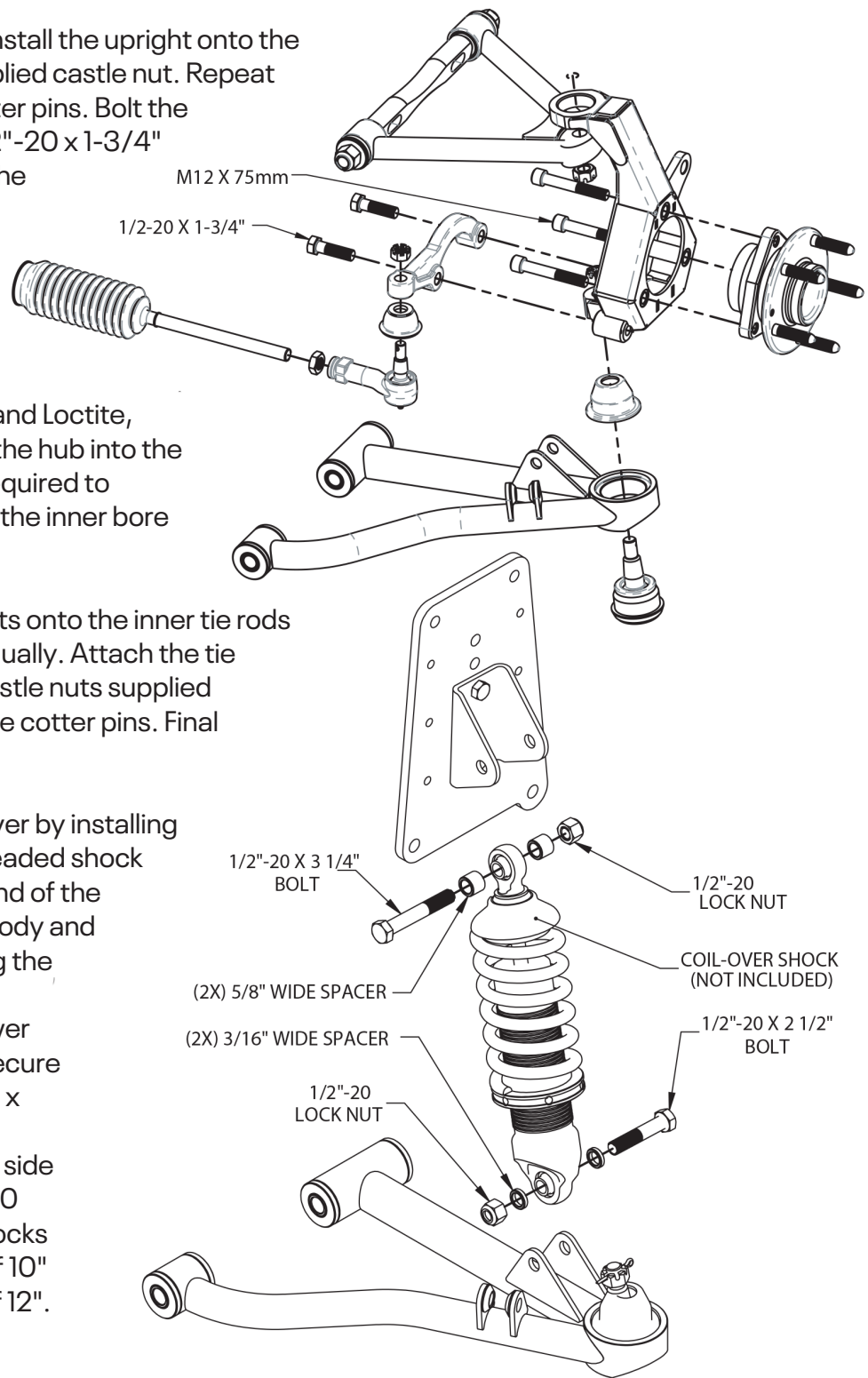
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7. Install the uprights and steering arms. Install the upright onto the lower ball joint. Install and tighten the supplied castle nut. Repeat with the upper ball joint and install the cotter pins. Bolt the steering arms to the spindles using the 1/2"-20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

8. Install the hubs. The Corvette style hubs included with this kit use metric hardware, including metric lug nuts. Using the supplied M12 metric bolts and Loctite, secure the hubs to the uprights. 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 before assembly.

9. Install the outer tie rod ends and jam nuts onto 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 will be done at a later time.

10. 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" bolts and two 3/16" wide spacers, install the shock into the lower mount on the control arm as shown and secure with a 1/2"-20 lock nut. Install the 1/2"-20 x 3-1/4" upper shock bolts and 5/8" wide spacers, placing one spacer on each side of the shock bearing. Secure with a 1/2"-20 lock nut. **NOTE:** This kit is design to use shocks with a 4" stroke and compressed length of 10" or a 5" stroke 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.



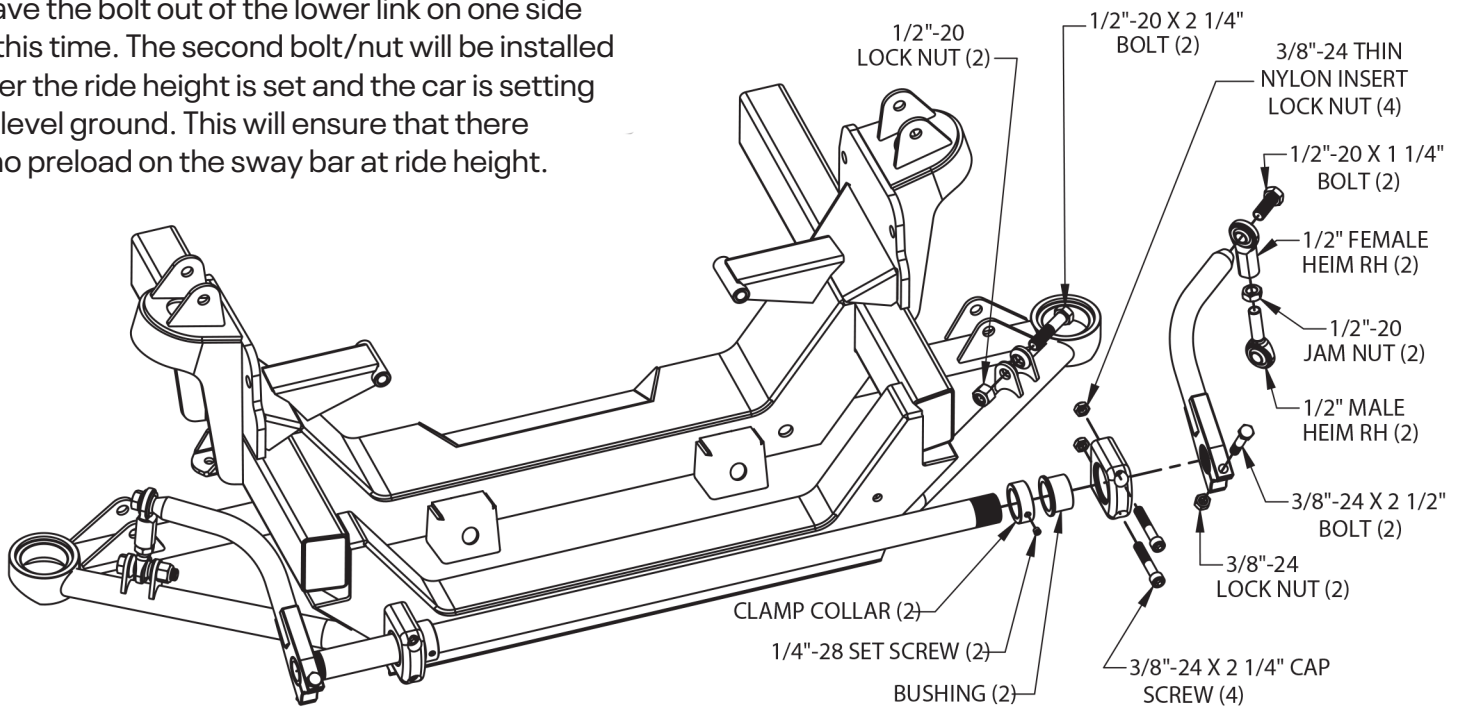
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11. Sway bar assembly: Press the bushings into the aluminum pillow-blocks and install the pillow-blocks to the front cross member with the bushing shoulder to the inside. Use the four 3/8"-24 x 2-1/4" socket head cap screws and secure them with the 3/8"-24 thin lock nuts. Slide the sway bar through the bushings, installing the two clamp collars to the inside of both pillow blocks. Tighten the 3/8" cap screws. 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"-24 x 2-1/2" pinch bolts and lock nuts. Slide the 1/2"-20 x 1-1/4" 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. Mount one of the lower links into the bracket on the lower control arm using a 1/2"-20 x 2-1/4" bolt and secure it with the 1/2"-20 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.



12. 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.

13. 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 Motors'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 Motor's transmission cross-members.

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14. Install the tie bar using the 1/2"-20 x 2-1/2" bolts, lock nuts, and spacers provided with the kit.

15. 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.

16. 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" bolt will slide through easily. Secure it with the 1/2"-20 lock nut and tighten.

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

17. 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".

18. Camber is adjusted using the included A-arm shim plates. Additional shim plates can be purchased separately if desired under Speedway Motors Part # 917-21005. These are available in thicknesses ranging from 1/8" to 1/2".