

# INSTRUCTIONS

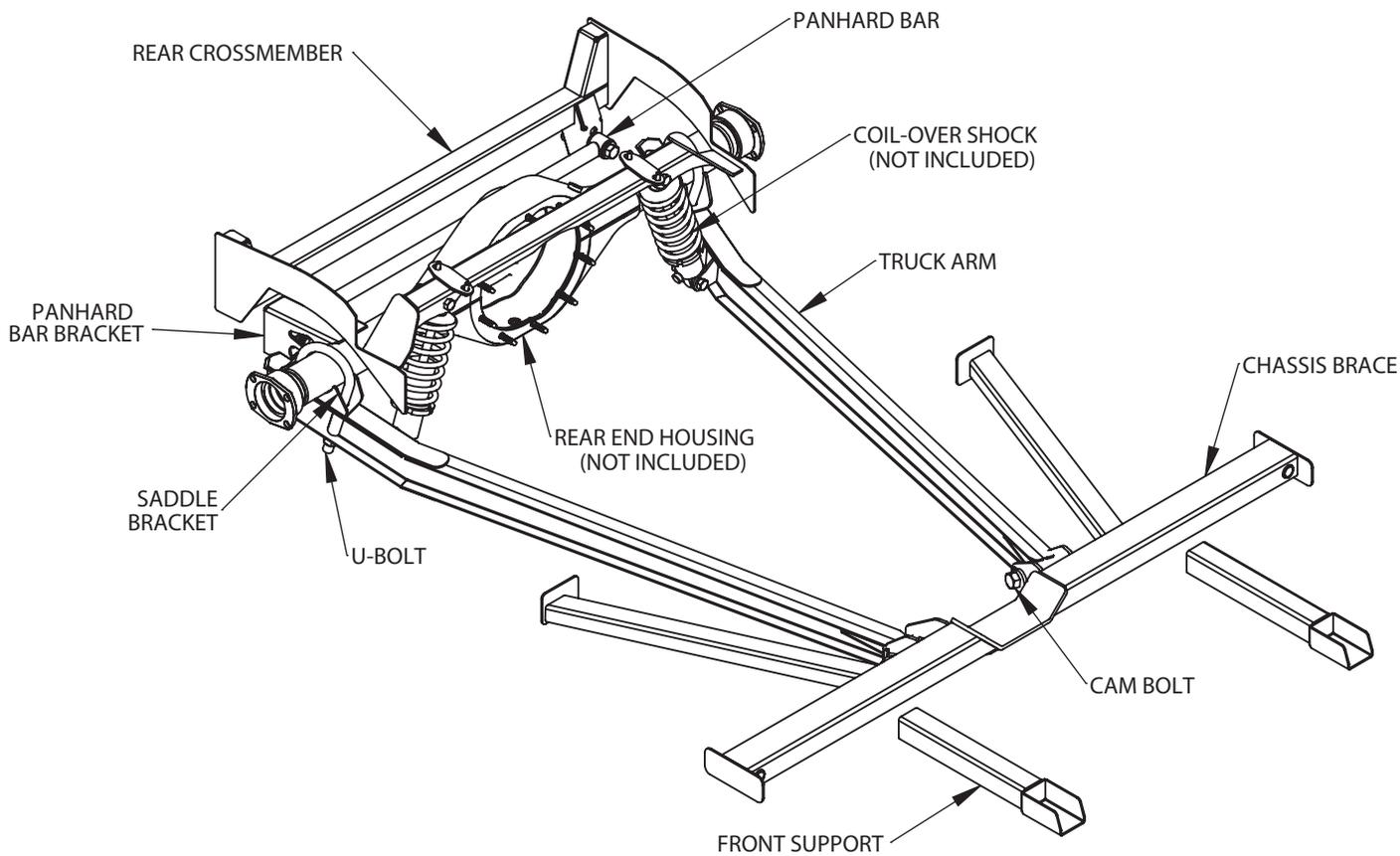
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## 350-300

G-Comp Rear Suspension  
62-67 Nova

Kit Contents	
350003.1	G-Comp Chassis Brace
350003.2	G-Comp Front Supports
350003.3	G-Comp Upper Rear Crossmember
350003.4	G-Comp Panhard Bar
350003.5	Hardware Kit
350004	G-Comp Rear Truck Arms
350023	Panhard Bar Hardware, Nova
350024	G-Comp Rear Panhard Bar Brackets



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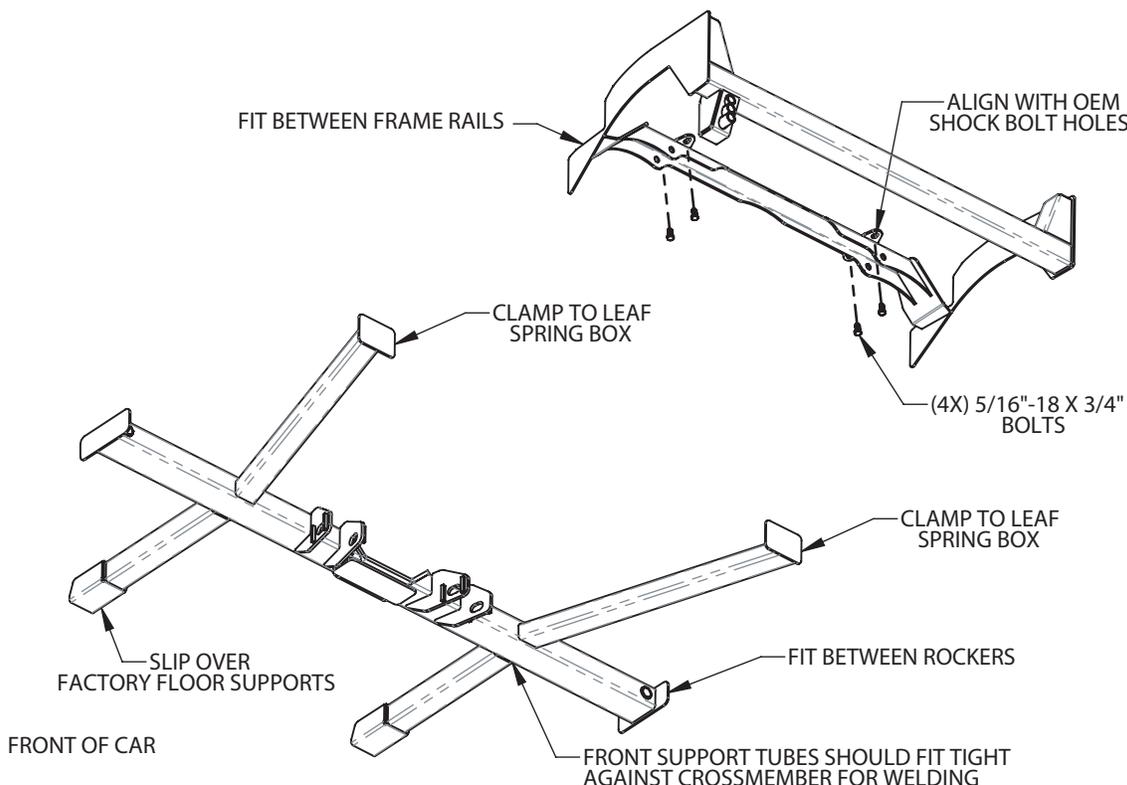
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- 1. Remove Rear Suspension:** Raise the car and support it with jack stands or a lift. Remove the exhaust, drive shaft, rear end, and all rear suspension components including the rubber bump stops. Disconnect fuel lines and remove fuel tank. Remove fuel lines, brake lines, and E-brake cables from bottom of car. These can be re-routed through the holes in the chassis brace after installation.
- 2. Prep for Welding:** Raise the chassis brace into its approximate position and mark all areas that will be welded. These areas should be ground down to bare metal to provide the proper conditions for welding. (Any carpet or padding installed on back side of weld areas should be removed at this time.) To position the chassis brace, the rear flanges of the chassis brace should be clamped tight against the leaf spring boxes while the chassis brace is pushed up against the bottom of the car and centered left to right.



- 3. Repeat step two with the rear cross member and front supports.** Depending on the car, minor trimming/fitting may be required. Bolt the upper rear crossmember to the car using the four supplied 5/16"-18 x 3/4" bolts. These bolts will go into the factory shock bolt holes. This will locate the crossmember in the proper position.
- 4. Tack-Weld Crossmembers:** Once all areas that will be welded are prepped and cleaned, then the cross member, chassis brace, and front supports can be tack welded into place. (Some grinding and trimming may be necessary to provide proper fit up.) Note: Do not fully weld the crossmembers at this time! Only weld enough to securely hold the parts in place during mock up. **Hint:** Weld in places that can be easily accessed with a grinder in case it becomes necessary to move or adjust the parts.

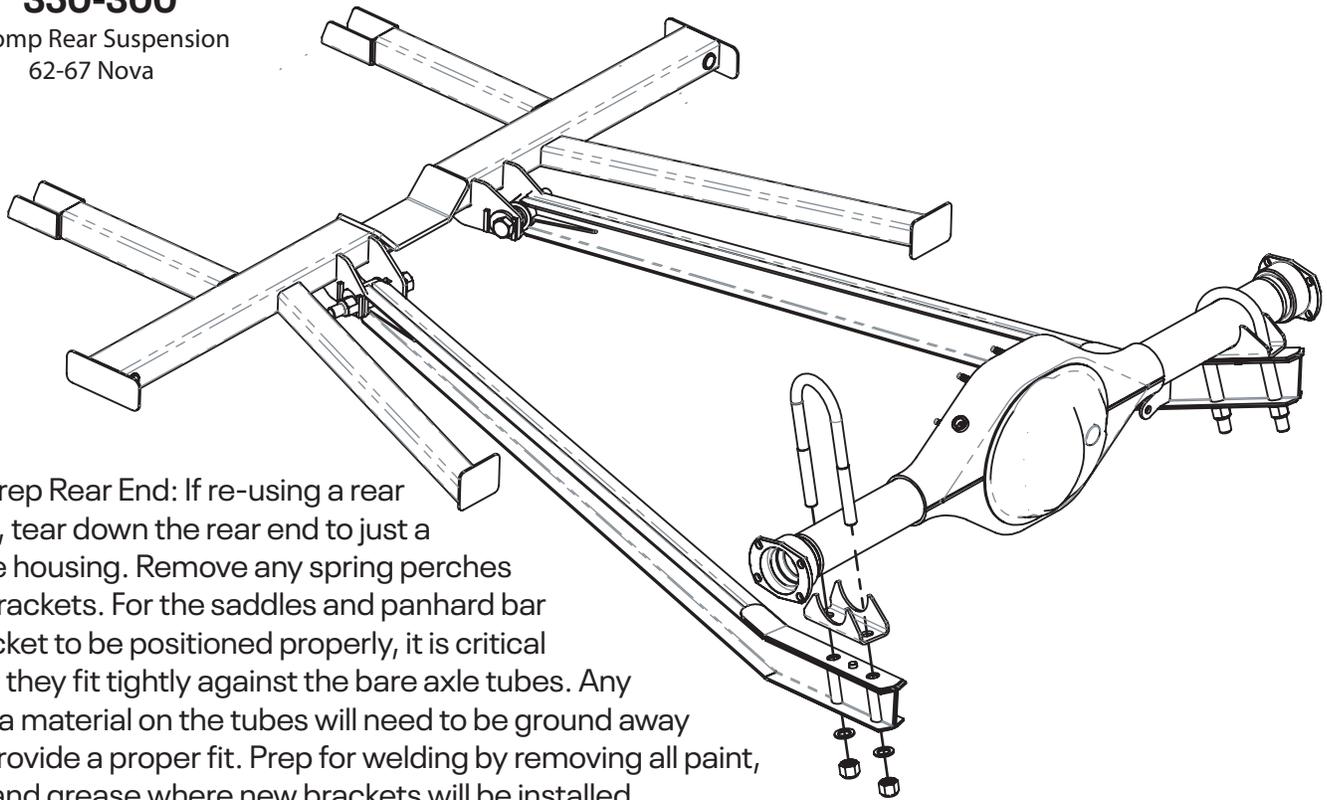
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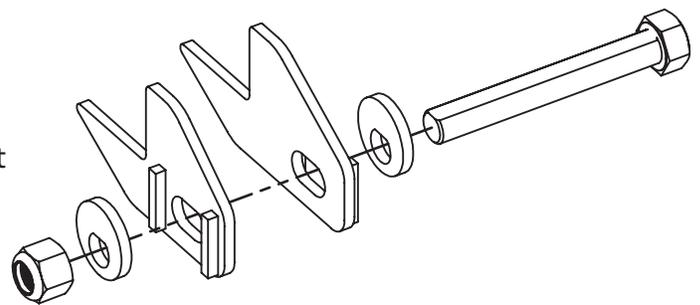
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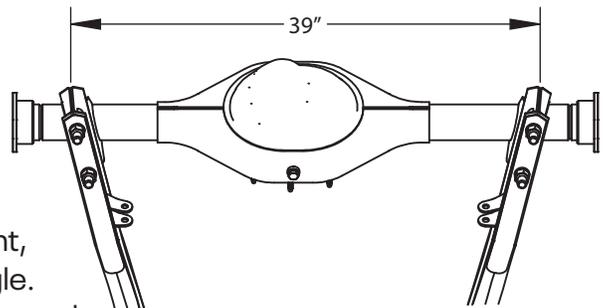


**5. Prep Rear End:** If re-using a rear end, tear down the rear end to just a bare housing. Remove any spring perches or brackets. For the saddles and panhard bar bracket to be positioned properly, it is critical that they fit tightly against the bare axle tubes. Any extra material on the tubes will need to be ground away to provide a proper fit. Prep for welding by removing all paint, oil, and grease where new brackets will be installed.

**6. Assemble Truck Arms and Rear End Housing:** Install truck arms onto the front crossmember using the supplied 3/4"-16 X 5-1/2" cam bolts and spacers. **NOTE:** Install the cam bolts in the center of adjustment as shown. The flat side of the bolt should be facing upwards. Install rear end housing using the supplied U-bolts and nuts as shown above. Do not fully tighten U-bolts at this time.



**7. Adjust Rear End:** Raise the rear end to the desired ride height, relative to the car. (Suggested ride height is about 12 1/2" center to center for the shock bolt holes). Support the rear end at this height and center it in the car. The center to center distance on the top side between the two truck arms should be 39" as shown. The distance from the outer flange of the rear end housing to the truck arm should be the exact same on both sides. Once the rear end is centered, and at ride height, spin the rear end housing to achieve the desired pinion angle. Now, double check that the rear end is in the proper location and tighten down the U-bolt nuts.



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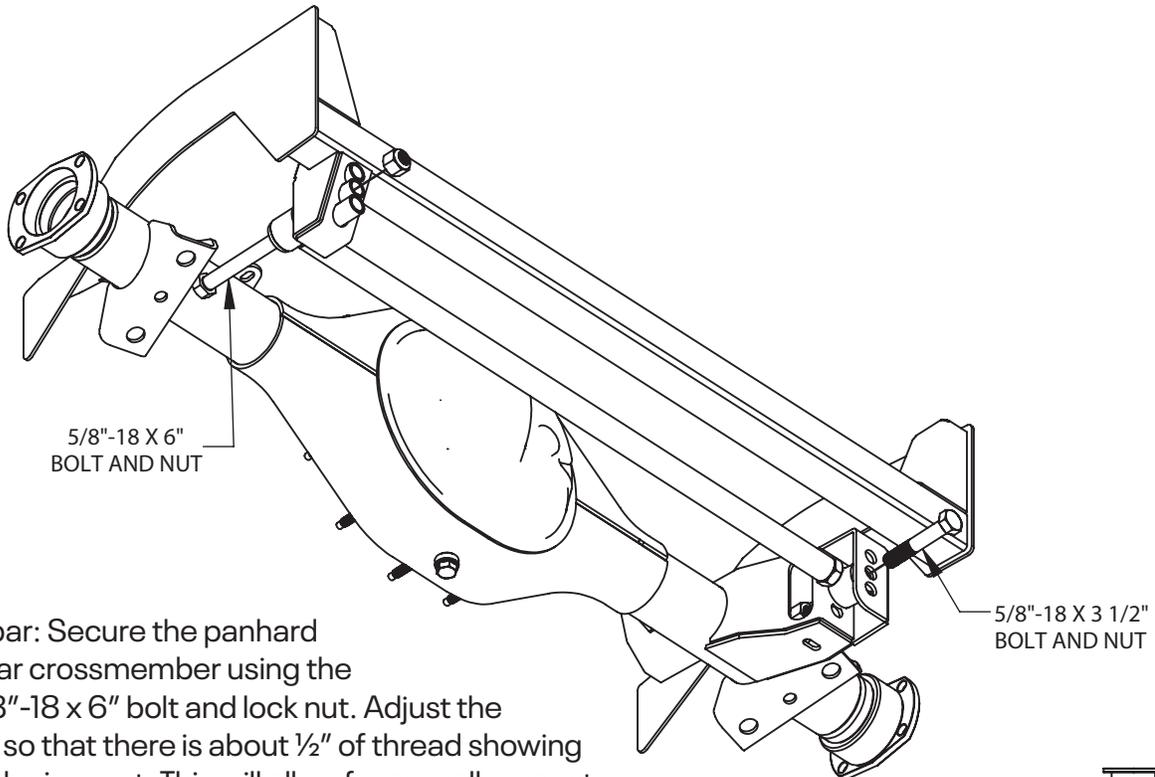
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**8. Tack-Weld Saddle Brackets:** Once you are sure the rear end is located properly, tack-weld the saddle brackets to the rear end housing. It is recommended to double check all measurements after tack welding.



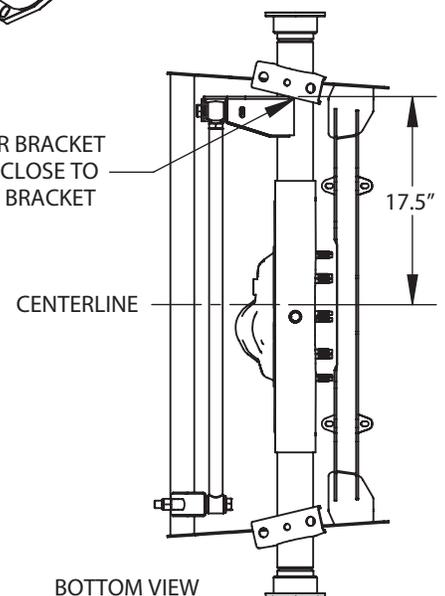
**9. Panhard bar:** Secure the panhard bar to the rear crossmember using the supplied 5/8"-18 x 6" bolt and lock nut. Adjust the panhard bar so that there is about 1/2" of thread showing and tighten the jam nut. This will allow for a small amount of adjustment in both directions. Now, raise the panhard bar bracket into place on the rear end and bolt the panhard bar to it using the 5/8"-18 x 3-1/2" bolt and lock nut. Rotate, or "clock" the bracket on the rear end so that the bolt is horizontal. Double check that the bracket is in the proper position and tack weld the bracket to the rear end housing.

As shown, the panhard bar bracket should be about 17 1/2" from the center of the housing. The center of the housing can be found by measuring the flange to flange distance and dividing by two.

DO NOT assume that the drain plug or third member are centered, this is often not the case. You must measure to find the center!

**NOTE:** There are 3 possible locations for each end of the panhard bar, use the mounting holes that make the panhard bar level with the ground at ride height. This will vary depending on ride height.

PANHARD BAR BRACKET  
WILL BE VERY CLOSE TO  
THE SADDLE BRACKET



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**10. Check Alignment and Clearances:** It is recommended at this point to cycle the suspension through its travel and check for any clearance issues. This is also a good time to double check that the rear end is aligned properly with the car and the pinion angle is correct. (use the cam bolts on the truck arms to adjust the alignment)

**11. Finish Weld:** Remove the rear end, panhard bar, and truck arms from the car. Fully weld the cross member, chassis brace, and front supports to the car. Weld the saddle brackets and panhard bar bracket to the rear end. **NOTE:** It is a very good idea to only weld a small bead at a time, then move to a new area and allow the first area to cool completely before welding further in that area. This will greatly reduce the risk of warping, especially on the rear end housing.

**12. Re-Assemble:** Once all of the welding is complete, everything can now be re-assembled.

Secure the truck arms to the chassis brace using the cam bolts and cam spacers as shown in step 6.

Now is a good time to fully assemble the rear end by installing gears, axles and brakes. (This can also be done after installing the housing into the car)

Raise the complete rear end into position. Attach the rear end to the truck arms using the supplied U-bolts, washers and nuts.

Install the panhard bar using the 5/8"-18 x 6" bolt and lock nut on the crossmember end and the 5/8"-18 x 3 1/2" bolt and lock nut on the housing end.

Install your coil over shocks using the supplied 1/2"-20 bolts. The 2-3/4" bolts and 3/16" wide spacers are for the bottom while the longer 3" bolts and 5/16" spacers are for the top. **Note:** This kit is designed to use shocks with a compressed length of 10" and an extended length of 14". 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.

Re-install the drive shaft, fuel tank, fuel lines, brake lines, and E-brake cable etc...

Bleed the brakes.

Fill the rear end with fluid.

Install wheels and tires.

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### **13. Alignment:**

Lower the car onto the ground and check for desired ride height. Adjust ride height if necessary by raising the car and spinning the adjusting collar on the coil-over. Repeat procedure until desired ride height is obtained.

Once the ride height has been set, lower the car onto the ground and make sure the rear end is centered in the car body. Adjust the panhard bar if necessary. Lengthening the panhard bar will move the rear end toward the passenger side, while shortening it will move the rear end toward the driver side.

Now that the ride height is set and the rear end is centered perfectly in the car, the rear end can be aligned by adjusting the cam bolts on the front of the truck arms. NOTE: This is difficult to do accurately and a professional alignment is recommended. This method will get you close enough to drive the car to an alignment shop.

# IMPORTANT

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