



1968-1974 Chevy Nova Rear 4-Link

Install Instructions

1-855-693-1259

www.totalcostinvolved.com

**CHECK ALL PARTS INCLUDED IN THIS KIT TO THE PARTS LIST BEFORE INSTALLATION OF THE KIT.
IF ANY PIECES ARE MISSING, PLEASE CONTACT: TOTAL COST INVOLVED 1-855-693-1259**



67 [429-4202-00] OR 68-69 [429-4202-00]		REAR BRACKETS		BARS		Shocks	
Includes:		Includes:		Includes:		Includes:	
1	REAR C/O CROSSMEMBER	1	DRV SIDE BKT	2	11 1/4 * 1 1/4 Performance Bars w/ bushings	2	All-American C/O Shocks
1	BOLT-ON PANARD BRACKET	1	PAS SIDE BKT			2	5/8-18 * 4 1/2" Bolts
2	RE-ENFORCEMENT PLATES	1	DRV SIDE TOP PLT	2	18 1/2 * 1 1/4 Performance Bars w/ bushings	2	5/8-18 * 5 1/2" Bolts
2	SHOCK BLOCK OFF PLATES	1	PAS SIDE TOP PLT			2	Upper 5/8" Spacer
1	WELD-ON PANARD BRACKET	32	5/16-24 * 1 1/4 SBCH	4	3/4 Stainless Adjustors w/ jams & bushings	2	Lower 2 3/8" Spacer
4	5/16-24 * 1 1/4 SBCH note (67 will have 8)	32	5/16-24 NYLOX			Axle Brackets	
4	5/16-24 NUT NYLOX note (67 will have 8)	32	1/4 USS WASHERS	8	5/8-18*2 3/4 SBCH	2	4-Link Axle Brackets
4	5/16 FLAT WASHERS note (67 will have 8)	4	3/8-16 * 1" BOLTS	8	5/8-18 1/2 NYLOX		
4	5/16 -18 * 3/4 SBCH	2	3/8-16 * 1 1/4" SHCS	1	Panard Bar Reg = 39" Pro = 37"		
4	5/16 LOCK WASHERS	1	3/8 Drill Guide				
4	3/8 -24 * 3" HEX G8	4	3/8 -16 * 3 1/2" HEX G8 3/8-24 * 3" G8 (PRO)	1	5/8 RH Heim w/jam		
4	3/8 24 NUT NYLOX	4	3/8-16 NUT, PLAIN 3/8-24 1/2 NYLOX (PRO)	1	5/8 LH Heim w/jam		
8	3/8 FLAT WASHERS	6	3/8 LOCK WASHERS	2	1/2-20 * 2" G8		
		8	3/8 FLAT WASHERS	2	1/2-20 NYLOX		
			Options	4	1/2 Flat Washers		
SUBFRAME CONNECTORS		SHOCKS		Bar Kit		SWAY BAR KIT	
TCI CONV [429-4622-00]		Chrome All-American		Chrome or Polished Bar Kit (Link & Panard)		3/4" Sway Bar Kit Plain or Chrome	
TCI COUP [429-4621-00]		Billet Adjustable C/O Plain		STK CONV [429-4623-00]		7/8" Sway Bar Kit Plain or Chrome	

STK CONV [429-4624-00]

Billet Adjustable C/O Polished

TCI COUP [429-4621-00]

STK CONV [429-4624-00]

STK CONV [429-4623-00]

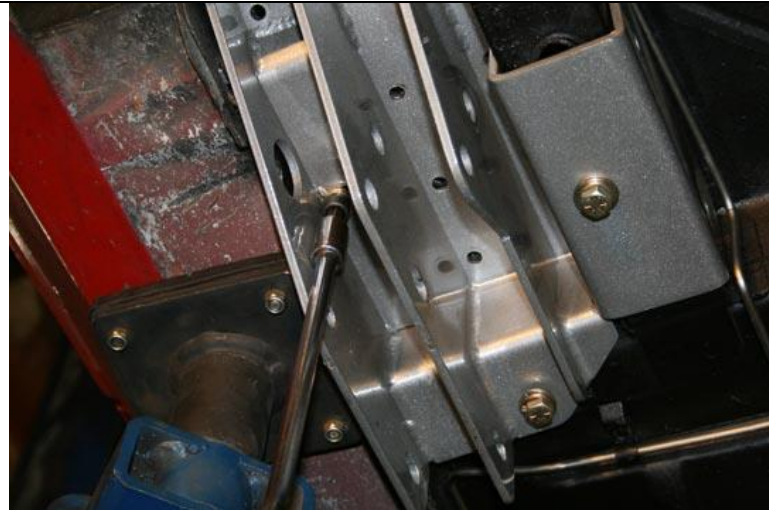
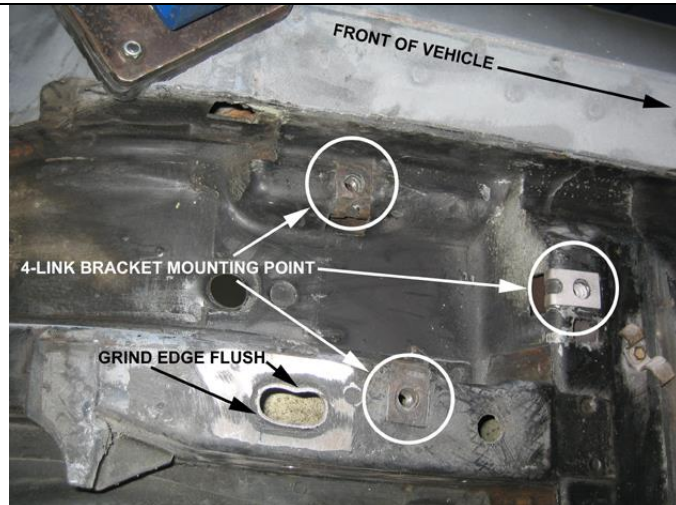
Drive Shaft Loop [529-5103-00]

Complete Rear End Assembly w/ Brakes

The car needs to be securely positioned on tall jack stands or preferably a hoist to facilitate removal of the old components. Temporarily remove the rear seat and the carpet in the area that the floor will be drilled through.

The 2/4 link bracket is installed first. Any high spots on the floor pan will have to be ground flush so the bracket will set flat against the body when bolted up to the original front leaf spring hanger holes.

Position the brackets with the curved end rearward going up the floor pan and the channel aligned over the frame rail. Install the 2 hex head 3/8 x 1 inch bolts on the front and frame channel using flat washers and lock washers. Leave bolts partial loose to facilitate installing the 3/8 x 16 x 1/4 socket head bolt with lock washer on the outside hole up inside of the bracket. This can be a little tricky as the nut is on a clip that wants to move around. I ground a slight point on the bolt to help center the inside nut. With the socket headed bolt tight finish tightening the rest of the bolts.



The flange on the outer rail will have to have a radius for clearance to install the link bolt if the top hole is to be used. The bracket shown is for a two inch inset mini-tub application.



The flange on the outer rail will have to have a radius for clearance to install the top link bolt for the 4-link bar.



Next using the 5/16 inch bracket holes as a guide, drill one 5/16 hole through the floor pan and install one of the 5/16 x 1 1/4 x 24 button head bolts and install nut on inside and tighten. This will keep the bracket from moving around while drilling and all holes will line up when finished. Finish drilling remainder of the holes using a long shank 5/16 inch drill bit.



Align the appropriate curved re-enforcing plate on the inside of the car over the drilled bolt holes and have a second person push the 5/16 button headed bolts through the bracket underneath. Install the washers and the 5/16 Nylock nuts and tighten.

Note: You may have to grind a flat on the side of the bolt head because a few of the holes are close to the inside of the bracket.

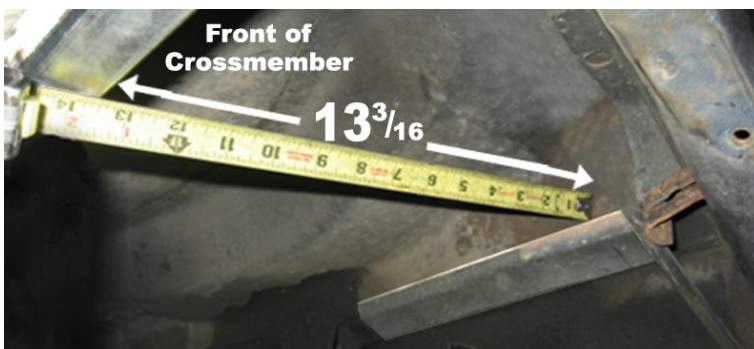


Using a 3/8 inch drill bit and using the 3/8 inch holes in the channel bracket, drill the inside holes through the frame rail. Then using the furnished drill guide, align the drill bit in the guide with the drill bit in the previously drilled hole and clamp the guide as pictured. This will facilitate in keeping the drill bit in line with the outside holes in the bracket.

Install the four 3/8 x 16 x 3 1/2 inch bolts washers and Nylock nuts. **Note:** On mini-tub applications use 3 inch long bolts with 1/2 nuts. With the link bar bolt installed the clearance is tight.



Install the 1 3/4 neoprene end caps in the optional sub-frame connectors. If using a TCI front clip, position the connector tube as shown and install the front 1/2 x 20 x 3 1/2 inch bolts with the bolt heads on the inside of the clip tube and the nuts go on the curved receiver side of the connector tube. The rear bolts take washers on both sides and go through the bracket with the nuts on the inside. Bolting on the connectors for a stock clip will require drilling six 3/8 holes using a furnish template. Comes with an inside re-enforcing plate and hardware.



The coil-over cross-member is next. Remove any hanger brackets that will interfere.

On the 68-72 Nova, the cross-member is installed up flush with the rear frame rails and measured 13 3/16 inches from the flat vertical body panel to the front edge of the cross-member. The ends of the cross-member are angled in at the front.



Top View



Side View

1968 - 1974 Nova Rear Crossmember

Note:
(68-69 Camaro Rear Crossmember Displayed in Image)

The 1968-1972 Nova coil-over cross-member is located by the two existing 3/8 x 16 threaded holes in the frame rail. Using the four 3/8 x 16 x 1 inch bolts, fasten the front flange of the cross-member to the frame and push the saddle of the cross-member flush before tightening.



With the channel bracket pressed flush against the frame rail, use a 3/8 drill bit and drill the two outside holes in each frame rail using the holes in the channel bracket as a guide.


Using the drill bushing guide over the previously drilled hole, clamped the guide to the bracket, drill horizontally through the other side of the frame and through the hole in the bracket.

Finish by installing the four 3/8 x 16 x 3 inch bolts, washers and Nylock nuts and tighten.



3/8" Drill Bushing

Flush to the bottom of rail

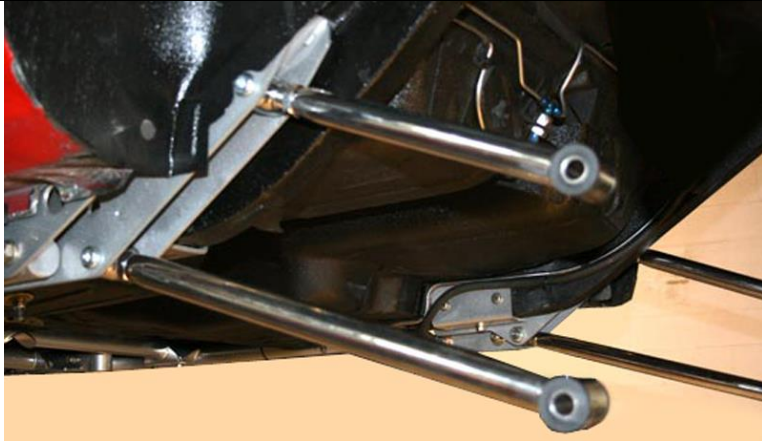


Using the 5/16 inch holes on the flange of the channel bracket as a guide, use a long shank 5/16 drill bit and drill the 4 holes (2 on 68-69) through the floor of the trunk.



Install the 4 hole re-enforcing plate (2 hole on 68-69) over the holes and install the 5/16 x 24 x 1¼ inch button head bolts and washers through the plate, trunk sheet metal and through the cross-member channel bracket.

Install the 5/16 Nylock nuts and tighten.

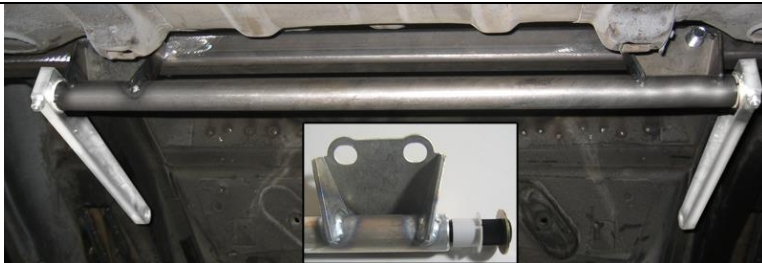


Mount the 4-link bars into the frame bracket using the button headed 5/8 x 18 x 2¾ bolts with the stainless adjusters forward in the frame bracket. Tighten the ½ nylock nuts and position bars to accept rear axle housing.

After the rear axle assembly is installed, the lower bar is adjusted to center the tire in the wheel well and the top bar is adjusted to arrive at the correct pinion angle.



When installing the optional ¾ inch rear sway bar, first slide the lock rings on. Next the split urethane bushing with flange facing lock ring. Next the brackets with the flange facing rearward and the sway bar forward install on the front of the cross-member. Leave lock rings loose to facilitate install. Install the four 3/8 x 2½ bolts, washers and Nylock nuts. Adjust sway bar location after rear axle is installed. Note: We mounted the fuel filter and pump to the cross-member.



The optional 7/8 inch billet sway bar is installed in the sway bar housing using the sleeve bushings, next the flat washer then the splined aluminum arms are installed. Clock the arms evenly and tighten clinch bolts. The sway bar housing is bolted the back side of the cross-member using four 5/8 x 18 x 2½ inch bolts and full nylock nuts.



1968-72 Nova

Housing width stock-----52 1/2 inches; Axle flange to axle flange 57 1/2 inches
 Housing width mini-tub--50 1/2 inches: Axle flange to axle flange 55 1/2 inches

1967-69 Camaro & Firdbird

Housing width stock-----53 1/2 inches: Axle flange to axle flange 58 1/2 inches
 Housing width mini-tub---50 1/2 inches: Axle flange to axle flange 55 1/2 inches



The axle brackets are designed to slide over a 3 inch axle tube before the bearing flange housings are installed. If the bearing ends are already on the axle bracket 3 inch ribs can be cut 90 degrees to the flat shock mounting face and re-attached after the bracket is tacked on. The brackets are positioned 44 1/8 centers for stock width and 40 1/8 for the 2 inch mini-tub. The flat rear surface of the axle bracket is parallel with the front mounting surface of the 3rd member.

The panhard bar bracket is installed onto the back of the driver's side axle bracket with the channel facing out and the inner curved radius inside the outer axle bracket rib up against the 3 in axle tube rotated down against the rear face of the axle bracket.



Finish welding the axle brackets and the panard bar bracket as pictured. If an optional sway bar is being used the sway bar brackets are located on the front of the axle tubes at axle centerline on 33 inch centers.



Next the rear axle assembly has to be installed. It's a lot easier to install the bare housing and install the 3rd member, axles and brakes later but that's your choice. First, install the coil-over's on the front of the top cross-member using the 5/8 x 18 x 4 1/2 bolt, washer on each side of the shock bushing then the 5/8" spacer against the cross-member and the full nylock nut on the back.

Install the 5/8 x 18 x 5 1/2 inch bolt through the back of the shock with a washer on both sides of the shock bushing then the 2 3/8" spacer through the axle housing 4-link bracket and the full nylock nut on the front side.

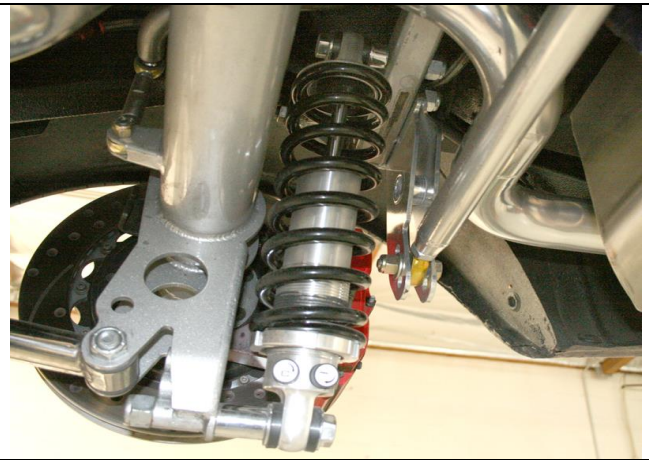
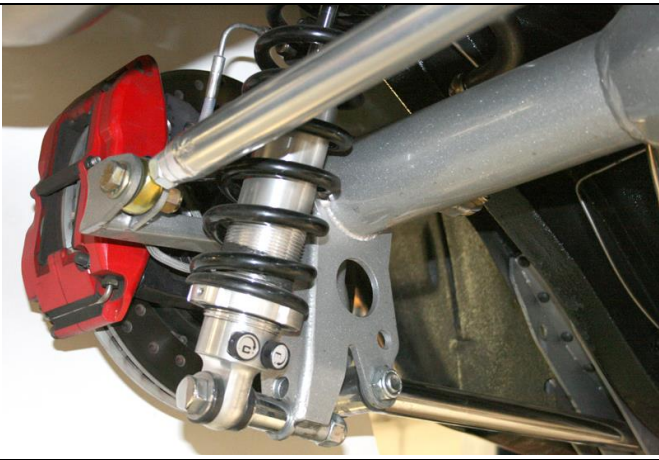
Install the rear of the 4-link bars into the brackets and install the 5/8 x 18 x 2 3/4 inch button headed bolts and 1/2 nylock nuts. You may need to tap the ears of the bracket outward with a soft hammer to allow the bushed end of the bar to go in the bracket.



If the optional sub-frame connectors and driveshaft loop were purchased they are installed next. The driveshaft loop cross-member is installed under the brackets on the connectors using the 3/8 x 1 inch bolts, nuts and washers. Center the loop in the driveshaft tunnel before tightening.



The sway bar is connected to the axle housing brackets with a 3/8 x 1 1/4 inch button headed bolts. The link is tapped 3/8 inch left and right for ease of adjustment while still bolted up. The sway-bar end uses a lock washer and the bracket on the axle housing a nylock nut.



The photo on the left shows the panard bar attached to the axle housing bracket using $\frac{1}{2}$ x 20 x 2 inch bolt, washers and Nylock nut. The process is repeated on the right side on the panard bar bracket that is bolted to the coil-over cross-member. The three hole adjustment gives the choice of raising or lowering the rear roll center. Finish the project by installing the shock hole block off plates using the four $\frac{5}{16}$ x 18 x $\frac{3}{4}$ button head bolts.



The finished project. This particular install utilized the 2 inch inset mini-tub frame brackets, the optional sub-frame connectors, driveshaft loop cross-member, Curries fabricated F-9 housing, aluminum adjustable coil-over's and Wilwood 13 inch disc brake kit with red 4 piston calipers.