

62-67 Nova Rack/Pinion Install

Note: This installation is recommended for experienced installers only. Improper removal techniques can result in serious injury or death. Consult with a reputable mechanic for assistance.







The first thing that you will need to do is remove the following items:

-Cross member, Lower control arms, Strut rod brackets, steering arms, Steering box, and all of the related steering connections

When removing the steering box keep in mind that the 62-66 box and steering shaft to the column are connected as one piece. Remove the steering column housing, then you will be able to remove the box and shaft as one unit down through the bottom of the engine bay. 67 models make use of a coupler between the steering box and the steering column; you may remove them as two individual pieces. While removing the factory bolts and or rivets take care as to not cut open the frame mounting holes. Your new CHURCH BOYS RACING LLC (CBR) components will re-use these holes.

Now that your frame is clear and clean you are ready to install your cross member. To orient your cross member properly your CBR sticker will face the front of the car. Install your cross member with the supplied grade 8 bolts and tighten. Your bolts come with lock washers, it is also recommended to use BLUE Loctite as well. Once you are finished you can use now use your cross member for a jacking point, please take precautions not to lift the car via the rack, double check your mounting point for the jack.

When you have successfully finished the cross member install it will appear like the photo below.



This product is an aftermarket component that was not designed by the vehicles manufacturer for use on this vehicle. Therefore the buyer assumes all risk of any damage caused to the vehicle/person during installation or use of any and all Church Boys Racing LLC. products/components



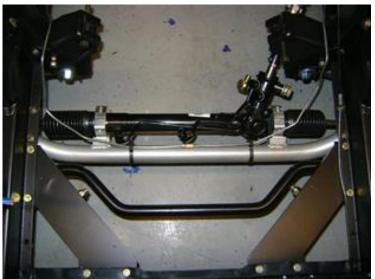
For your next step you will be installing the Billet Rack Clamps to hold your rack to the cross member. When mounting the "rack half" of the Billet Clamp be sure to use RED Loctite for your install. For a Manual or a Power rack both clamps will install the same way. Please note that the cross member half of the clamp will have a marking to show which way is up, when the rack is installed there will be a small gap between the two halves of the clamp. 6 Cyl. Cars will use the clamps with the arrow down.







The next photo shows the rack installed on the cross member and in the car. Please also note that the inside (toward the engine) fitting is the pressure side of the rack. These fittings are a banjo style of fitting so that ease of install with any angle of fitting will be accommodated.





Notice the bango style of fitting, you are looking at the

pressure side in this photo.

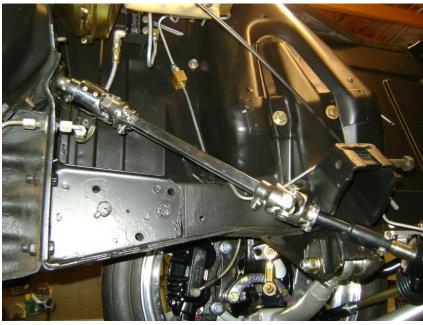
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-----NOTE-----if the pressure and return lines are reversed your rack will immediately blow the internal o-rings and your rack will now leak, we will NOT warranty this situation. An indicator of an improperly installed pressure line is that the rack will steer itself back and forth. A clean system is a must any and all old or used power steering fluid must be flushed from the system and care must be taken to ensure that there is no dirt around the fittings when hooking up your lines. Small particles of dirt will rip the seals and again deem your rack a leaky mess.

With your new CBR rack and pinion you will have the ability to rotate the rack to gain further clearance with headers and or motor mounts. With the 17MM coupler and 3/4DD joint installed you will want to rotate the rack up toward the motor mount just enough to allow for about 1/8" clearance. 6 cylinder models will need extra clearance to allow proper rotation for oil pan clearance with the hard lines. Be sure to apply some thread locker on the set screw threads and then tighten the jam nut. Check these fasteners periodically for sufficient clamping.



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You will be instructed a little later on the proper steering shaft fitment procedures.



Time for your steering arms to be installed. Your new arms will have the CBR letters milled into them. These letters will face the inboard side of the car when installed correctly. If your spindles have 7/16" mounting holes you will need to drill them for the supplied 1/2" bolts in your kit. DO NOT use 7/16" bolts in place of the 1/2" bolts. Torque to factory specs and use RED Loctite.



SWAY BAR AND LOWER CONTROL ARM INSTALL.

You are now ready to install your tubular lower control arms. Please refer to your Install instructions that were sent with your control arms. At the same time now is when you will install your new Church Bar. Again follow the instructions that came with your sway bar.



When installing the lower ball joint stud you will need to install the Castle nut prior to fully engaging the ball joint. Also keep in mind the location of your cotter pin hole. A forward facing hole will allow ease of installation.





With your car resting on its wheels you can now install your tie rod ends. Please note that you will not have enough travel to engage or fully dis-engage the tie rod to the steering arm if the suspension is hanging. To get an equal dimension for alignment start by threading both tie rod ends on equal distances. You will adjust them accordingly later while at the alignment shop. For preliminary settings your tie rods will install similar to the photo below.





Your CBR R/P kit will come with a new column floor support plate and gasket. This will support the end of the column at the fire wall. With the new plate and gasket in place, using your original bolts, you will install your factory column or your new Ididit column in the same manner in which your factory column was installed. Finally you will use the supplied stainless clamp to secure the column to the clamp.









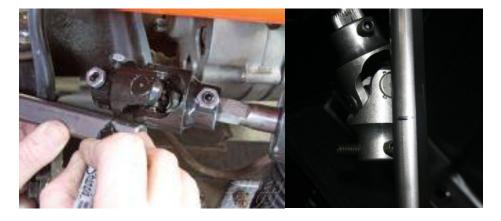
Regardless of which column you are using the Borgeson Joints will install the same. It is very important not to install the joint too far onto the end of the column and or the DD shaft. You will want the DD shaft or column shaft to sit flush with the inside of the joint, any further and the excess will contact the small universal on the inside of the joint creating tight spot while turning.







To fit the DD shaft for length, install the column knuckle on the column and the rack knuckle on the rack. Install one end of the DD shaft into one of the knuckles. Hold the other end close to it's knuckle and mark the length to be cut.



Once everything is fit properly remove the set screws and mark their location on the DD shaft. Remove the DD shaft and drill a small dish into the shaft for the set screw to seat into, remember to use Loctite when re-installing your set screw, finish by tightening up the jam nut.



Before test driving your new suspension be certain to double check that all of the mounting hardware are tightened and secure. Once you are comfortable with the install you will need to enlist the help of a certified Alignment specialist. You will want to achieve the following specs.

-1 to 0 Camber
+2 to +6 Caster
1/32" TOE IN to 1/16" TOE OUT
************Please use the space below to record your actual alignment specs***********************************
CASTER
CAMBER
TOE



QUICK FACTS

-CBR Rack/Pinion

-Outer Tie rod ends ES-3008R

-Power rack 17MM input coupler

-Manual rack 17MM input coupler

-Automatic headers Hooker 2243

-Standard shift will require a 3rd joint/brg. Kit

-CBR rack works with LS engines

- V-8 front sump has minimal clearance

-6Cyl. Engines require a rear sump pan and modification the engine frame mount for input shaft clearance.

-Kit does not work with mix matched suspension components...I.E. Flamming river/CPP

Two Piece drop spindles work with 17" or larger diameter wheels. Anything smaller than 17" with a drop spindle will not work. Extreme back space with a 17" wheel and 2" drop spindle may cause issues as well. Example 17-7 with 5" b.s. and drop spindle will have no clearance between the tire and tie rod end.

No need for a flow reducer. The use of a GM power steering pump will be a perfect match.



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