



67-69 Camaro/Firebird and 68-74 Nova Steering Rack Installation (316-3)

The objective is to mount the rack as high as possible between the cross members, without interfering with the ability to remove the harmonic balancer. Furthermore, you're also looking to make sure the rack is level, centered, and square in the chassis.

After removing all stock steering components:

1. Locate the drivers-side rear lower control arm bolt access hole, and enlarge it approximately 2 inches towards center of car to an oval like shape.
2. Install the new billet aluminum steering arms.
3. Install the bump steer kit onto the rack and steering arms using the supplied hardware. This will now leave your manual rack suspended between the billet aluminum steering arms.
4. With the rack hanging between the cross members, use 2 jack stands to support the rack at its optimal height.
5. Once the rack is located reverse build from the rack to the cross members with the included brackets.
6. Tack weld the brackets in place before final welding.
7. Using a 2"-2.5" hole saw, drill a hole in the rear of the drivers-side cross member as high as possible, directly in front or slightly outboard of the outlet of the stock steering column. This will allow the steering shaft to be passed through the stock cross member.
8. Cut off the stock "rag-joint" just behind itself, to allow placement of one of the supplied u-joints. A portion of $\frac{3}{4}$ x .058 tubing, about 4 inches, will be slid inside the stock column tubing to adapt to the u-joint.
9. Determining the length of each portion of steering shaft is up to the fabricator. Keep in mind that the center steering shaft must be supported to the drivers-side frame using the included shaft brace.
10. After determining proper placement and movement of all components you may final weld all of the brackets.

11. It is recommended to use a 1/4-28 x 1.5 inch long grade 8 bolt (not included) to fasten at least one portion of steering shaft to its u-joint, either above or below the steering shaft brace. This allows removal of rack and or column when necessary.
12. When adjusting for 'bump steer', you want to adjust the rod-end height to be as parallel as possible with the working angle of the control arms at race-weight and at ride height as a starting point. The working angle of the control arm is an imaginary line drawn between the pivot bolt in the frame and the ball portion of the ball joint. This is accomplished by adjusting which spacers are above and below the rod -end. Small changes from this location, either up or down, will effectively eliminate the 'bump steer'. You will need to run the suspension through its entire travel for best results when doing this.
13. The universal joints, tubing, and rack clamp bracket are chrome-moly and require TIG welding for best results.

