

# Instructional Guide

*Bump Steer Adjustment Kit  
67-69 F-Body / 68-74 X-Body*



***Speedtech***  
**PERFORMANCE**

CHASSIS - SUSPENSION - PRO TOURING - AUTOCROSS - DRAG RACING - CUSTOM BUILDS

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*Figure 1 1967 Camaro, features our suspension compenents*

Congratulations on the purchase of your new Speedtech Performance Bump Steer Adjustment Kit. Use only approved and appropriately rated jack and jack stands, be sure to take all safety precautions required to do the job safely and correctly. If you are unsure seek the assistance of a highly qualified workshop to assist you.

Read and understand all instructions thoroughly before you begin. For the most part, assembly and set up of your new Bump Steer Adjustment Kit can be done in a home garage with hand tools and basic welding equipment.

We enjoy seeing the progress our customers are making as they work through their builds so join the Team Speedtech group on Facebook and share your pictures and your story.

From everyone at Speedtech Performance we send you all best wishes for your project!

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# Installation Guide

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## 1.0 GENERAL INFORMATION

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### 1.1 This Guide

The following instructions are intended for professional installers and are guidelines only. Speedtech Performance assumes no responsibility for the installation of any of its products installed by others. All products are intended to be installed by qualified professionals.

**NOTE!** Some Items pictured may look different then the parts you have in the kit you received. For example, in this guide we have only used pictures of the Bump Steer Adjustment Kit for the early Camaro. Your application may have a slightly different shape the part is functionally the same and is installed in the same manner described.

### 1.2 Overview

These instructions outline the Bump Steer Adjustment Kit. The system has been designed to work with factory subframe or chassis. Some photos in the install process may vary slightly from your exact application.

This Bump Steer Adjustment Kit can be installed with basic hand and power tools. You will be required to drill/machine some holes. If you are unsure how to use the tools and materials and carryout the work required to install this cover, stop and seek a professional installer's help.

### 1.3 Tools

Installation of the Speedtech Performance ExtReme Transmission Tunnel can be done on the floor with simple hand tool, cut off wheel and a basic welder.

Additional things to have before you start:

- Wrench/Socket
- Drill
- Floor Stands
- Floor Jack
- Torque Wrench
- Anti-Seize

## 2.0 CHECK IN PARTS AND HARDWARE

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### 2.1 Checking in the Order

Best practice will be to check in your order as soon as possible after receiving the order. To check in the order we have provided tables, these can be used as check lists for your order. If you discover anything missing form your order, call your authorized dealer as soon as possible.

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## 2.2 Check in Tables

X	#	Description	Size
	2	Billet Tie Rod Sleeve	
	2	Heim Joint	
	2	Shoulder Bolt	5/8"
	2	Nylock Nut	
	2	Right Hand Thread Jam Nut	
	2	Left Hand Thread Jam Nut	
	1	Pack Tall Shims	5/8"
	1	Pack Short Shims	5/8"
	4	Aluminum Heim Spacer	

## 3.0 GETTING STARTED

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### 3.1 LEVELING AND SUPPORT

**The vehicle should be on a level surface before you start.** Jack up and properly support the vehicle's frame. Remove the front wheels. For cars with drop off style rotors, reinstall one lug nut if needed to prevent the rotor from falling off.

### 3.2 TIE ROD REMOVAL

Remove the old outer tie rods and adjusting sleeves from the steering linkage. Do not remove the inner tie rods from the center link unless they need to be replaced.

### 3.3 MACHINING

This kit uses a 5/8 diameter shoulder bolt to attach the heim joint to the spindle's steering arm. Because the arm has a taper to match the tie rod end pin, your steering arm must be machined to remove the taper and match the bolt's diameter. You will have to remove the steering arms from your spindles and this simple process can be performed by most machine shops. Because the bolts are manufactured slightly under 5/8" and have very slight manufacturing tolerances be sure to bring your shoulder bolts to your machine shop so that they can measure their diameter and machine the steering arm to the appropriate size.

**In our machining process we use a .623 reamer for the final size.**

The end result should be a bolt that fits snug in the bore but not so tight it needs to be pressed in. *Simply drilling the steering arms with a 5/8 drill bit may have too much clearance and may cause the bolt to be too loose in the bore. This could lead to premature wear and a potentially dangerous situation. DO NOT shortcut this step.* After final assembly the bolt and spacers along with the steering arm should tighten down tight to the heim end which will then rotate within itself.



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## 4.0 INSTALLATION

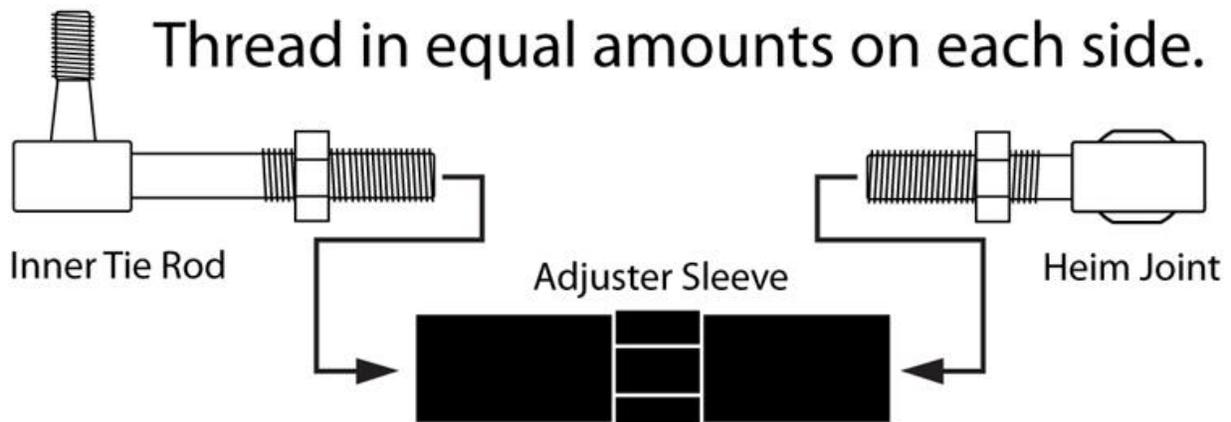
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### 4.1 JAM NUTS

Thread a jam-nut several threads onto both the heim joint and the inner tie rod. Paying close attention to using the correct nut left hand or right-hand thread direction in the appropriate corresponding locations.

### 4.2 ADJUSTER SLEEVE

Apply anti-seize to the threads on both ends of the adjuster sleeves. Thread one adjuster sleeve a couple of threads onto one inner tie rod, paying close attention to using the correct thread direction. If you find the sleeve won't thread on, try threading the opposite end instead. Thread one heim joint *the same number of threads* into the other end of the adjuster. (see diagram below) Holding the heim joint steady use the other hand to rotate the adjuster sleeve so that it simultaneously tightens down both sides an equal amount until it lines up with the spindle steering arm with the wheel pointed straight forward.

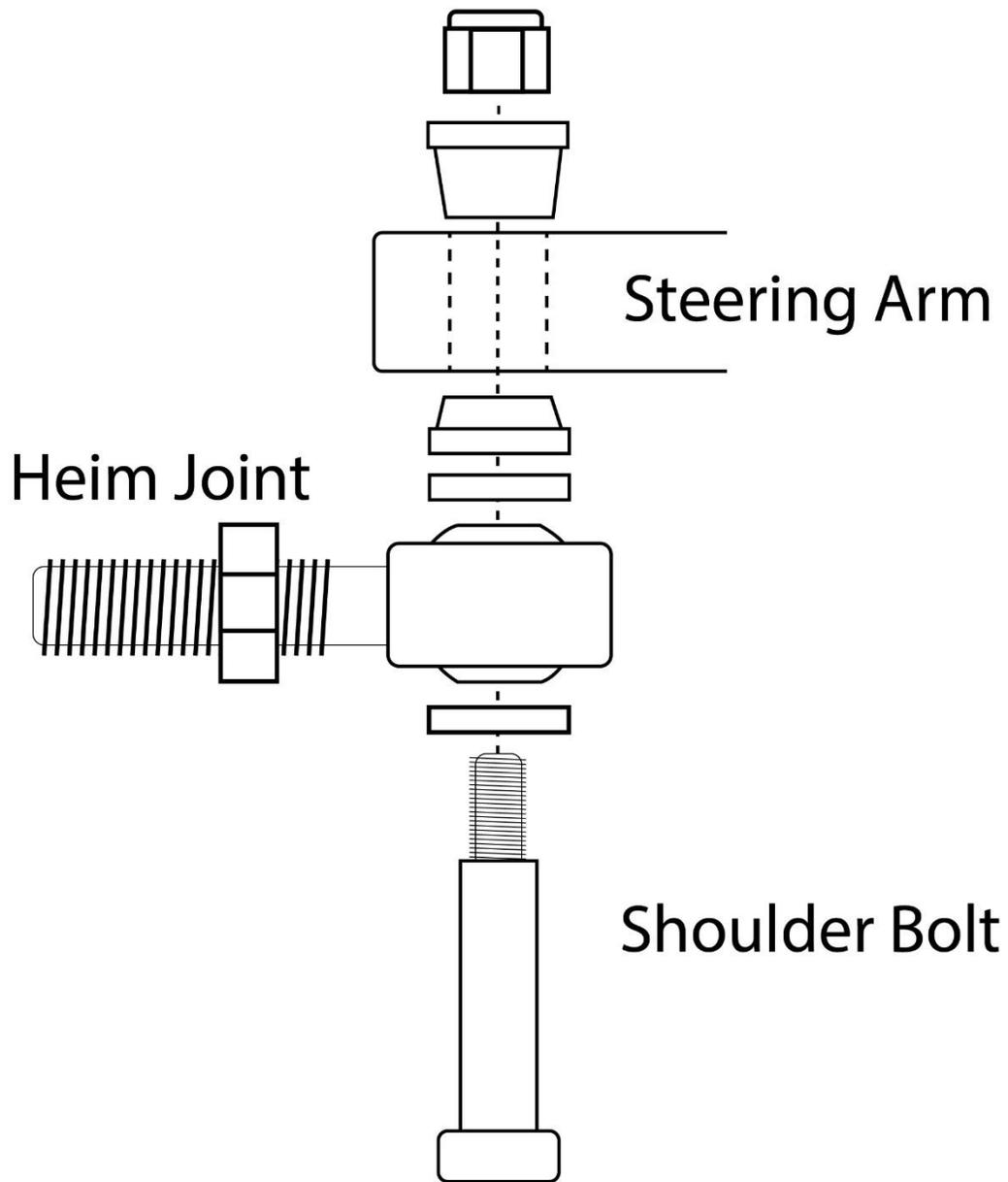


### 4.3 SHIMS

Install the shims, shoulder bolt and nylock nut as seen in the diagram below. With the suspension mocked up *at ride height*, if necessary, change the positioning order of the shims to have the tie rod assembly close to parallel with the ground. This will give you a good base bump steer setting to start with. Finger tighten the nylock nut, do not fully tighten it at this point.

**NOTE:** ON SOME AFTER MARKET WHEELS you may need to remove the lower thin aluminum spacer washer to maintain clearance. Minimum clearance to the wheel should be .125"

**SEE DIAGRAM ON NEXT PAGE**



#### 4.4 REPEAT

Repeat steps 1-3 on the other side of the car.

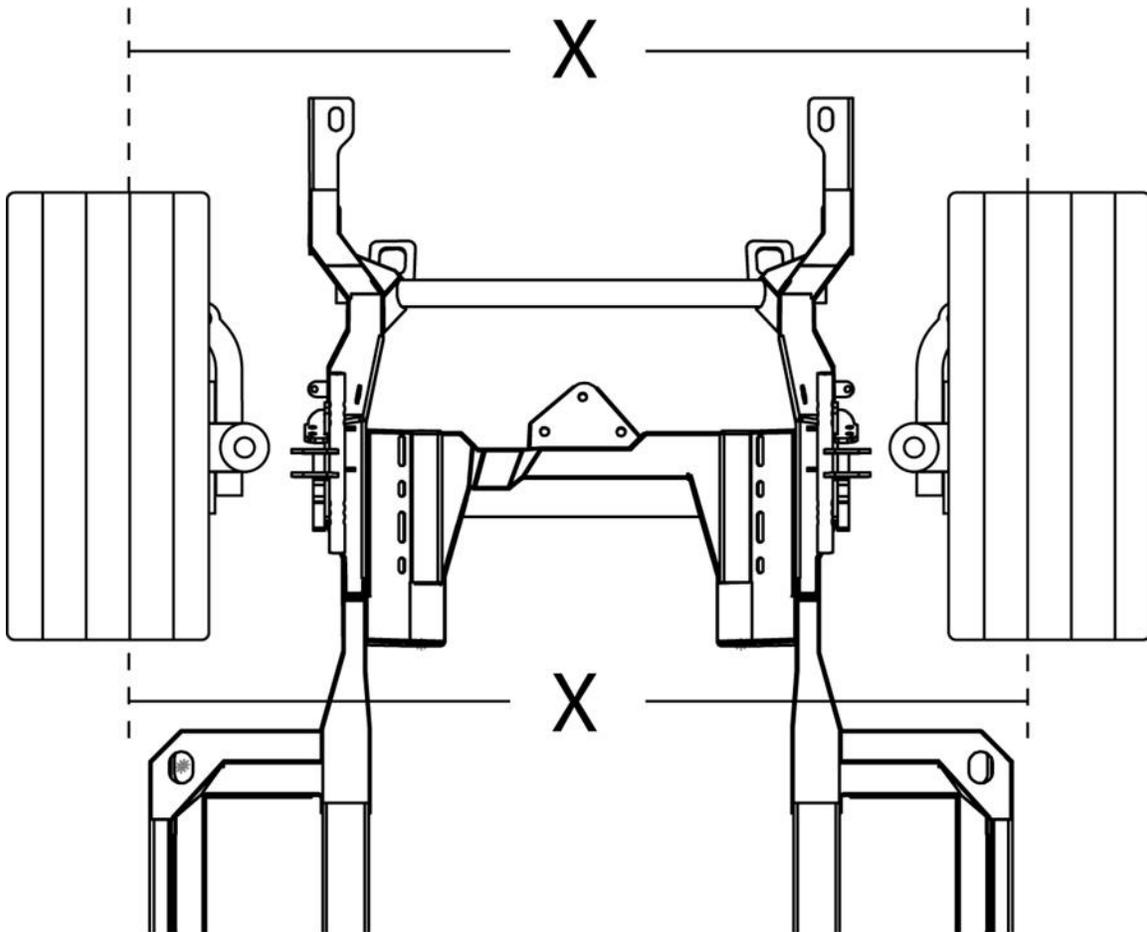
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## 5.0 ALIGNMENT

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### 5.1 INITIAL/BASIC ALIGNMENT

Using a center point on the frame as a reference align the middle of the center-link to the center of the vehicle. Now with the suspension *at ride height* and the wheels and tires bolted in place adjust each side's toe setting by turning the adjuster sleeves equally either forward or backward until the tires are facing forward. You can get the toe setting fairly close by adjusting the suspension until measuring the distance between the same points on the front side of each tire is equal to the distance between the same points on the rear side of each tire, see (X) in the diagram below. Adjust as needed until both front and rear measurements are near the same. When finished snug all four jam nuts finger tight. This will be close enough to drive the car onto a trailer to take to a competent alignment shop. **Do not street drive the car in this condition** other than to load it on a trailer.



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## 5.2 ALIGNMENT

When finished, take the vehicle to a competent professional alignment shop to have an alignment performed.

**Note: Use alignment specifications below, not alignment shop pre-programmed factory specs!**

These specs are only suggestions and may need additional changes to achieve the optimum settings for your driving style or situation.

### Daily Driving, Street Performance Specifications

Driver Side	Passenger Side
4 Degrees positive Caster	4 ½ Degrees positive Caster
0 to ½ Degree negative Camber	0 to ½ Degree negative Camber
3/ 32 Total Toe-in	3/ 32 Total Toe-in

### Aggressive Track Alignment Specifications

Driver Side	Passenger Side
5 ½ Degrees positive Caster	6 Degrees positive Caster
½ to 1 Degree negative Camber	½ to 1 Degree negative Camber
3/ 32 Total Toe-in	3/ 32 Total Toe-in

### Original Alignment Specifications

\*\*For reference purposes only. **Do Not** use these specs.

Driver Side	Passenger Side
½ Degree positive Caster	½ Degree positive Caster
¼ to ½ Degree negative Camber	¼ to ½ Degree negative Camber
1/8 Total Toe-in	1/8 Total Toe-in

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## 6.0 Congratulations

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Congratulations on completing your project, we know you will get many years of enjoyment from your project. Please join the group [Team Speedtech](#) on Facebook. Team Speedtech is a community of like-minded individuals using Speedtech Performance products. The Group's members include customers, our dealers and factory employees - each with a passion for Pro Touring muscle cars. You can ask questions and get advice from the group members as well as share your experience. Within the group we enjoy seeing the videos and pictures during the progress of your projects so post up. We also encourage you to share pictures and videos of your finished projects out on the road, at the show & shine, on track or however you get enjoyment from your ride, we want to see it!

Thank you for choosing Speedtech Performance! We know you have a choice, and we appreciate that you entrust us with your chassis and suspension needs for you custom muscle cars.

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