

Instruction Guide

Upper Control Arms



Speedtech
PERFORMANCE

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

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Figure 1: 1967 Quickchange Camaro features our road assault front suspension and torque arm rear suspension

Congratulations on the purchase of your new Speedtech Performance ExtReme upper control arms. Use only approved and appropriately rated jack and jack stands, and be sure to take all safety precautions required to complete the job safely and correctly. If you have uncertainties, seek the assistance of a highly qualified workshop to assist you.

Read and understand all instructions thoroughly before you begin. Your main assembly and set up of your new ExtReme upper control arms can be done in a home garage with hand tools and basic welding equipment.

Speedtech enjoys seeing the progress our customers are making as they work through their builds. Join the group, [Team Speedtech](#), on Facebook and share your pictures and your story.

Speedtech Performance sends you best wishes for your project!

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1.0 GENERAL INFORMATION

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1.1 THIS GUIDE

Thank you for purchasing your new Speedtech Performance upper control arms. Read through all instructions thoroughly before beginning and take all safety precautions required to do the job carefully and correctly. If you have uncertainty, seek the assistance of a highly qualified workshop.

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.

While Speedtech's ExtReme suspension systems are safer and more comfortable compared to factory suspension on the street, it is also designed to meet the needs of those intending to participate in off highway road races and autocross competitions. To achieve maximum benefit from our system, you should anticipate adjusting and tuning of the suspension to achieve optimum performance specific to the vehicle, driver, and type of racing. Some of this, such as tuning sway bars and shock settings, can be done track side through making adjustments and seeing or feeling how the car reacts to these changes. Speedtech recommends that a tire probe pyrometer and an air pressure gauge be in your track side kit.

Other adjustments, such as tuning a bump steer and caster may require specialized equipment and professional help. Speedtech's technical department can share insight on making these adjustments to help get you started.

NOTE: This kit does not come with bolt/hardware as a stock GM vehicle comes with studs instead of bolts. If your studs have been removed, we recommend using a bolt with the same specs as your factory application.

WARNING: Once assembled you will need a professional wheel alignment performed. Driving a vehicle without a proper alignment can be dangerous, towing is recommended to transport the car prior to the alignment being performed.

1.2 OVERVIEW

These instructions outline the upper control arm assembly. The system can be installed independently on a stock subframe with a factory spindle; however, some photos in the install process may have the Speedtech Performance spindle. Photos in the instruction process may vary slightly from your exact operation. For example, in this guide Speedtech has only used pictures of the control arms 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.

1.3 TOOLS

Installation of the Speedtech Performance upper control arms can be done on the floor with simple hand tools and no special tools are required.

Additional things to have before you start:

- Silicon Based Grease
- Wrench Set
- Torque Wrench
- Floor Stands
- Floor Jack

2.0 CHECK IN PARTS AND HARDWARE

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2.1 CHECKING IN THE ORDER

Check in your order as soon as possible. To check in the order, Speedtech has provided a table which can be used as a check list, as displayed in figure 2. All bolts and nuts are NF unless otherwise noted. Hardware comes in several boxes. If you discover anything missing from your order, call your authorized dealer as soon as possible.

2.2 CHECK IN TABLE

Upper Control Arms

X	#	Description	Size
	1	Drivers Side Control Arm with Ball Joint installed	Factory Replacement
	1	Passenger Side Control Arm with Ball Joint installed	Factory Replacement

Figure 2: Check in table with amounts, descriptions, and sizes

3.0 GETTING STARTED

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3.1 INSPECT CURRENT SUSPENSION

Speedtech recommends you inspect all of your car's suspension prior to installation of our parts, such as tie rods, ball joints, and other suspension parts which may be worn and could cause adverse effects. Replace parts as necessary.

3.2 LEVELING AND SUPPORT

WARNING: The vehicle should be on a level surface before you start.

Jack up and properly support the vehicle's frame, and remove the front wheels. For cars with drop off style rotors, reinstall one lug nut if needed to prevent the rotor from falling off.

4.0 FACTORY DISASSEMBLY

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4.1 SPRING COMPRESSION

Place the jack under the outer end of one of the lower control arms. Gently raise the jack to compress the spring slightly and relieve the pressure on the ball joint.

4.2 SPINDLE REMOVAL

Remove the spindle from the upper control arm by removing the cotter pin and loosening the castle nut on the upper ball joint until it has approximately five threads of contact. Use a pickle fork if necessary to separate the spindle from the ball joint. Next, remove the castle nut and watch carefully for any tension on the spring that may pop the assembly apart as the nut is removed.

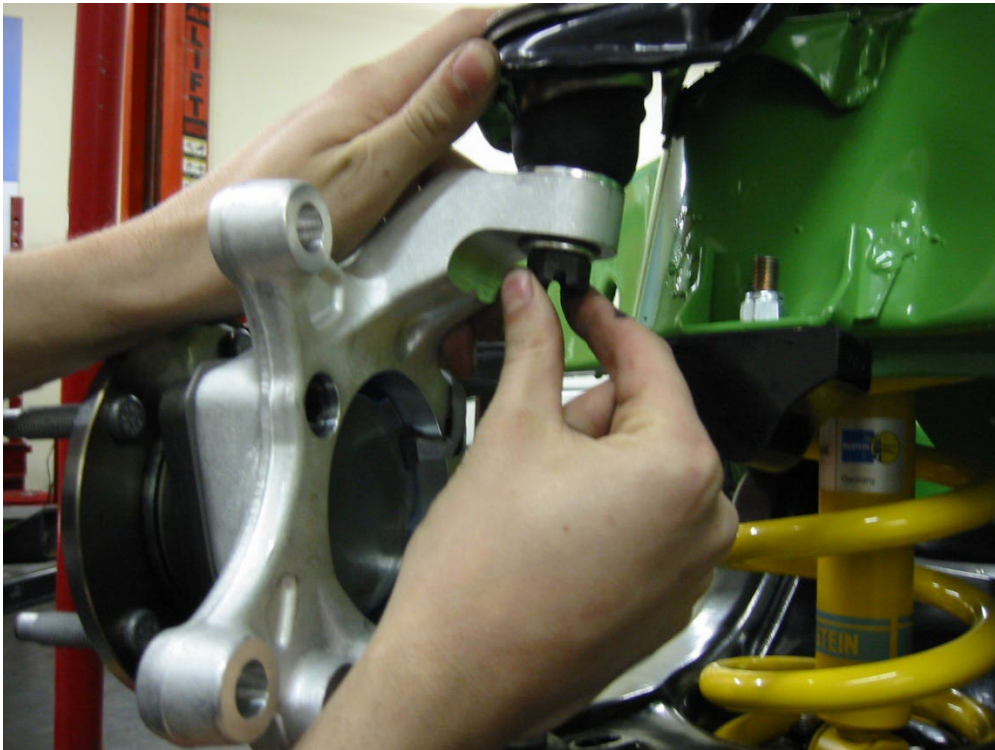


Figure 3: Spindle removal

4.3 ARM REMOVAL

Make a careful note of shim placement and quantity used for the upper control arm alignment. Remove the two nuts holding the upper control arm shaft to the control arm mount and remove the upper control arm. Clean and remove, rust and repaint the frame as needed.

5.0 CONTROL ARM INSTALLATION

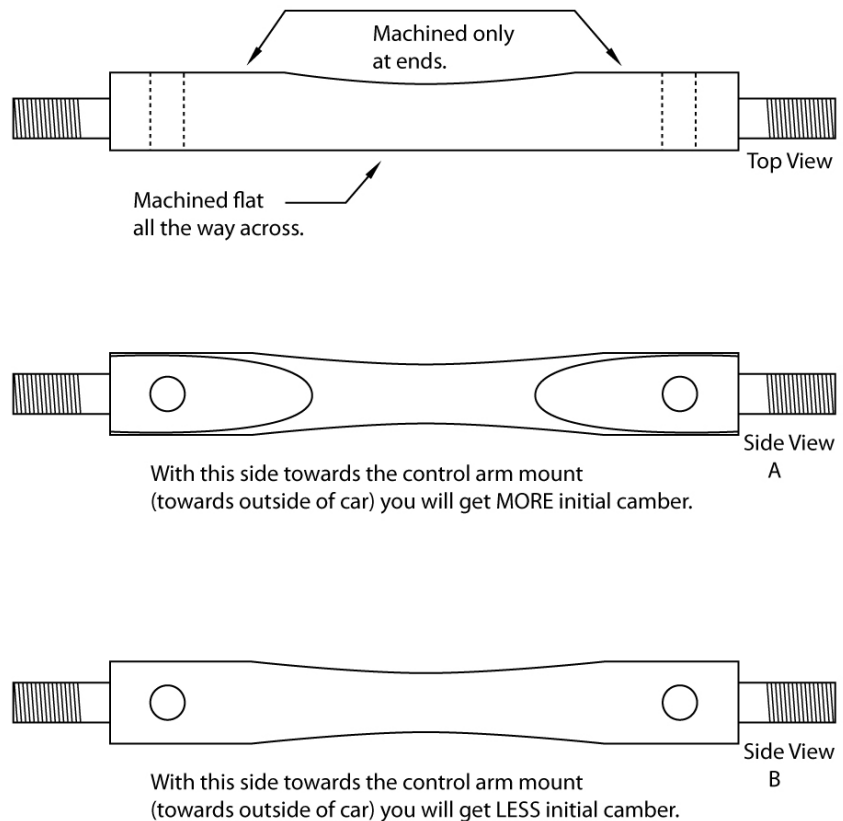
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5.1 UPPER CONTROL ARM INSTALLATION

Install your new Speed Tech tubular upper control arms according to this chart.

Control arms can be mounted two ways.

Figure 4: Control arm installation



Please double check that both left and right sides have the same orientation before tightening.

5.2 SHIMS

Replace the shims in the same placement that you removed them from. Tighten down the shaft nuts. Torquing the upper arms will be to factory specs, but should not be torqued until the alignment is complete.

NOTE: This is only a rough estimate on shim placement to get you to the alignment shop.

5.3 SPINDLE INSTALLATION

- Connect the upper ball joint to the spindle.
- Install the new castle nut.
- Torque to 40 ft/lbs.
- Install the new cotter pin.

5.4 LUBRICATION

Grease control arm bushings and new ball joint. Grease other suspension components as needed. We recommend silicon-based grease; however, any high-quality grease will do. Reinstall wheel, torque to recommended specs.

5.5 REPEAT

Repeat process for other side of car.

6.0 ALIGNMENT

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

NOTE: Use alignment specifications below, in figure 5, not alignment shop pre-programmed factory specifications!

These 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

Figure 5: Alignment specifications

7.0 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 customers, dealers, and factory employers that have a passion for pro touring muscle cars and are using Speedtech Performance products. You can ask questions and get advice from the group members and share your experience. Everyone enjoys seeing the videos and pictures during the progress of your project and Speedtech encourages you to share them!

Thank you for choosing Speedtech Performance and entrusting us with your upper control arms for your custom muscle car.

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