

Instructional Guide

Lower Control Arms



Speedtech
PERFORMANCE

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

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Figure 1 1968 D8nite Camaro, features our GT front suspension and Torque Arm rear suspension

Congratulations on the purchase of your new Speedtech Performance front tubular control arms. Installing this system will require the removal of your old suspension from the car. 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 suspension can be done in a home garage with hand tools and basic equipment. As your final step, review each assembly step again to be sure all fasteners are correctly secured and torqued to specification.

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!

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 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.

1.2 Overview

These instructions outline the lower control arm assembly. The system can be installed independently on a stock sub frame with a factory spindle. Some photos in the install process may have the Speedtech Performance spindle.

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.

70-73 Camaro models you may need to enlarge the mounting holes to 9/16" for the supplied bolts. Some of the early models came with 1/2 bolts.

These control arms WILL NOT work with drum brakes.

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.

While Speedtech's tubular control arms work great as a direct bolt in replacement for your factory suspension, it is also designed to meet the needs of those intending participate in off highway road racing and autocross competition. 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/feeling how the car reacts to these changes. We recommend a tire probe pyrometer and good quality air pressure gauge be in your track side tuning kit.

1.3 Tools

Installation of the Speedtech Performance Lower 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
- Anti-Seize
- 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

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 from your order, call your authorized dealer as soon as possible.

2.2 Check in Tables

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
	2	Sway Bar End Links	Factory Replacement
	4	Bolts	Depends on Vehicle
	4	Nylock Nuts	Depends on Vehicle

3.0 Getting Started

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3.1 Inspect Current Suspension

In a few short hours you can update your classic car with new Speedtech Performance Tubular Upper Control Arms. We recommend 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

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.

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

Removing the spindle from the upper control arm is not necessary, however doing so may allow you more work room. To do this, remove the cotter pin and loosen the castle nut until it has approximately 5 threads of contact. Use a pickle fork if necessary to separate the spindle from the ball joint. Remove the castle nut. Watch carefully for any tension on the spring that may pop the assembly apart as the nut is removed.

4.2.1 LOWER REMOVAL

Repeat this process for the lower ball joint. Watch carefully for any tension on the spring that may pop the assembly apart as the nut is removed. Remove the coil spring and place aside.

4.3 ARM REMOVAL

Remove the stover nuts and bolts from the mounts that hold the control arm in the frame and remove the control arm from the frame. Clean, remove rust and repaint the mounts as needed.

5.0 CONTROL ARM INSTALLATION

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5.1 LOWER CONTROL ARM INSTALLATION

Install the new lower control arm in the reverse order. Because of bushing variations and over tightening as bushings have been replaced in the past, you may encounter an overly tight fit. If so, you will need to spread the tabs on the control arm mounts. The best way to do this is to assemble a $\frac{1}{2}$ X 4" length of all thread with 2 nuts and washers inside the mount. Gently tighten the nuts so that they spread the mount tabs apart. Test fit the arm periodically, as the mounts may spring back slightly during this process.

To properly spread the control arm mount tabs, create a simple tool as shown below. Spread the mount apart as needed by tightening the nuts against the frame.



5.2 BOLT INSTALLATION

Once the desired fit is achieved, lube the bolts provided in the kit on both the threads and shank with anti-seize. Insert bolts and tighten the nuts enough so that all is secure. Do not fully torque them to specs at this point.

5.3 RE-INSTALLATION

Support the assembly by placing the floor jack under the outer portion of the lower control arm. Reinstall the spring, spindle, and shock. Torque the lower ball joint castle nut to 80 ft/lbs. Torque the upper ball joint castle nut to 40 ft/lbs. Reinstall any steering linkage that was removed.

Install new sway bar end links according to diagram at right.

5.4 BRAKE DUST SHIELD

If using factory disc brakes, you may need to clearance the dust shield slightly. With the assembly supported by the floor jack, turn the steering wheel lock to lock and have a partner check for any interference. Trim dust shield as necessary.

5.5 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.

5.6 REPEAT

Repeat process for other side of car.

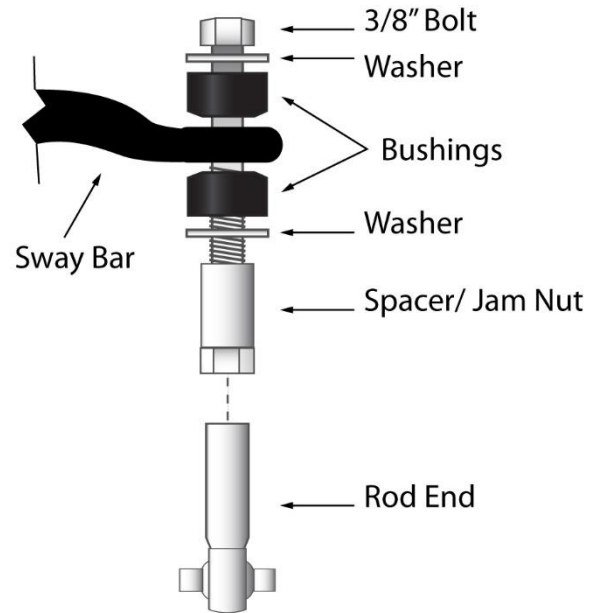
6.0 ALIGNMENT / TORQUING

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6.1 TORQUE

Once all parts are reinstalled, push down on the bumper a few times to settle the suspension to normal ride height. With the car supported on the tires, torque the lower control arm bolts to 50 ft/lbs.

NOTE: This may be less than factory torque specs and this is due to difference in materials and design, such as factory bushings upgraded from rubber to Delrin.



6.2 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

7.0 Congratulations

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Congratulations on completing your project, we know you will get many years of enjoyment from your Control Arms. 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 your custom muscle cars.

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