

# Instruction Guide

Street Fighter Suspension Kit  
70-81 F-Body



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

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

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*Figure 1: 1970 ZL70 Camaro (First Build Version), features our Street Fighter front suspension [photo by Nick Relampagos]*

Congratulations on the purchase of your new Speedtech Performance street fighter suspension kit. 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 street fighter suspension kit 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 ExtReme suspension kit. 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. 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 Street Fighter Suspension work great as a 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.

**NOTE:** These instructions may be limited to the installation processes that are not contained in the instructions for each individual part. See the instructions found with the individual parts for those not listed here.

**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 street fighter suspension. Photos in the instruction process may vary slightly from your exact operation. 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.

Take necessary precautions when welding the inside of your vehicle and remove any close-by flammable materials including the seats, carpet, inner heater box, and insulation padding before performing this instruction. Be sure to wear proper protective gear when using power tools and keep sparks away from glass and other interior components when grinding and welding.

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## 1.3 TOOLS

Installation of the Speedtech Performance Street Fighter Suspension can be done on the floor with simple hand tools, a cut off wheel, and a basic welder.

Additional things to have before you start:

- Silicon Based Grease
- Wrench Set
- Torque Wrench
- Floor Stands
- Floor Jack
- Cut Off Wheel
- Welder

## 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 tables which can be used as check lists, 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

Below is the check in table.

X	#	Description	Size
	1	Drivers Side Control Arm with Ball Joint installed	
	1	Passenger Side Control Arm with Ball Joint installed	
	4	Upper Control Arm Bolt	1/2 x 2 1/4 NF
	4	Upper Control Arm Washer	1/2
	4	Upper Control Arm Nylock Nut	1/2
	4	Sway Bar Pivot Mount Bolt	3/8 x 1 1/4 NC
	4	Sway Bar Pivot Mount Washer	
	4	Idler Arm Mounting Bracket Bolt	3/8 x 1 1/4 NC
	4	Idler Arm Mounting Bracket Nylock Nut	3/8
	4	Idler Arm Mounting Bracket Washer	3/8

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

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## 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 street fighter suspension. Speedtech recommends you inspect all of your car's components prior to installation of our parts, such as steering and other suspension parts which may be worn and could cause adverse effects. Replace parts as necessary.

### 3.2 DISCONNECT THE BATTERY

Since you will be cutting and welding, disconnect the battery before any removal begins.

### 3.3 LEVELING AND PREP

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

First, jack up and properly support the vehicle's frame. Before any removal of the old sub frame begins, disconnect and remove the battery.

**NOTE:** There will be some modification to your subframe. This may be a convenient time to remove the entire frame. Doing so will allow easier access to make the modifications. Then you may clean/sandblast and choose a paint or powder coat. Speedtech solid body mounts, part #220508, are a great compliment to this package if you do not have them already.

## 4.0 SUBFRAME PREP

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### 4.1 MOUNTING HOLES

You will need to modify the mounting holes for the upper control arms to achieve better camber gain and lower the roll center.

First remove the control arm mounting studs.

Next, use a die grinder and lengthen the holes downward, approximately  $\frac{3}{4}$ ", as seen in figure 3.

**NOTE:** The stainless cross shaft on the upper control arms should not make contact with the angled part of the crossmember where it meets the vertical control arm mount. Because of differences in factory tolerances, be sure to have proper fitment grind a little less than  $\frac{3}{4}$ " and test fit the control arms. Continue grinding as necessary to lower the arm mount up to  $\frac{3}{4}$ " without contacting the crossmember. Both slots should be the same length.

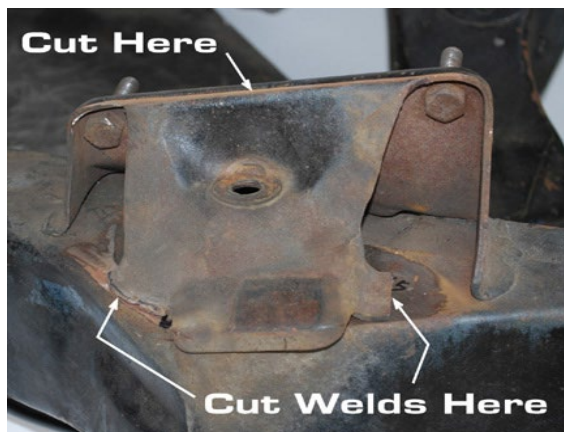


*Figure 3: Lengthening the holes*

#### 4.2 CHICANE COILOVER

Remove the existing upper shock mount by cutting along the factory weld, where the arrows are located in figure 4. Pay close attention that the brackets may look different that brackets you have; however, they function the same.

**IMPORTANT:** Do not cut off the upper mount.



*Figure 4: Two pictures of the location of where to cut and the final product*

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After the shock mount is removed, you will need to remove the inner spring cup and clearance the hole to about 4 1/2" in diameter. This is best done with a plasma cutter or oxyacetylene torch. Clean up the rough edges as needed.



*Figure 5: Cut line for the inner spring cut and the final product*

Continue the frame modifications according to the instructions for installing the [Chicane Coilover brackets](#).

#### 4.3 FINISHING

Clean and/or sandblast and then coat the frame with your favorite products or powder coat to prevent rust from forming.

### 5.0 INSTALLATION

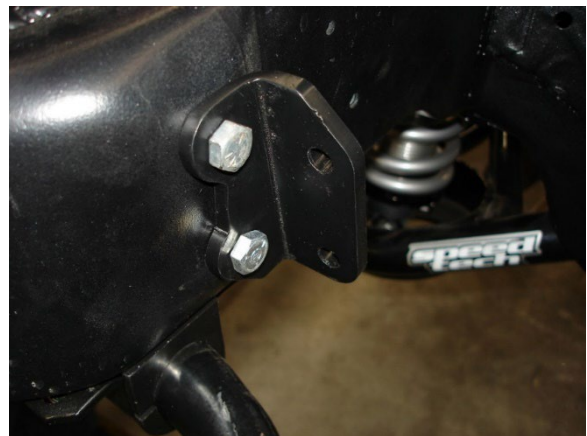
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#### 5.1 SUSPENSION INSTALLATION

Install the coilovers; [lower control arms](#); the steering arms on the [spindles](#), [tie rod sleeves](#), [upper control arms](#); and brakes according to their individual instructions.

#### 5.2 IDLER ARM BRACKET INSTALLATION

Install the idler arm relocation bracket in the stock location on the frame and the idler arm on the bracket.



*Figure 6: Idler arm bracket*

### 5.3 ASSEMBLY

Assemble tie rod ends, center link, and idler arm. Install the assembly in the chassis.



Figure 7: Assembly

### 5.4 SWAY BAR END LINKS

Install new sway bar end links according to diagram.

## 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 in figure 9, 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.

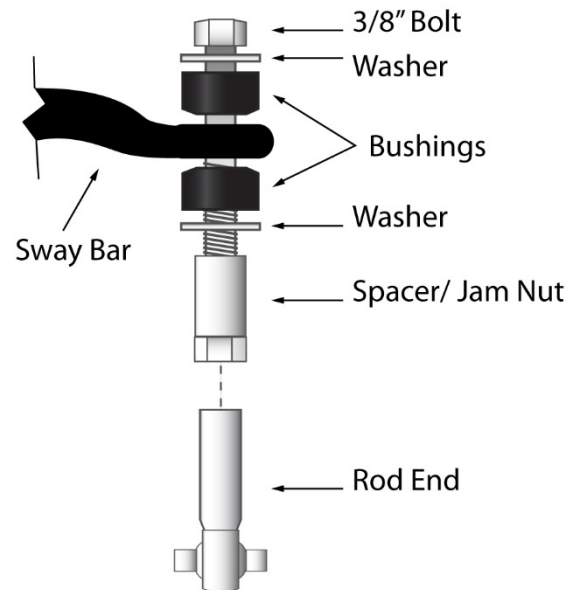


Figure 8: Sway bar end links diagram

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**Daily Driving, Street Performance Specifications**

<b>Driver Side</b>	<b>Passenger Side</b>
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**

<b>Driver Side</b>	<b>Passenger Side</b>
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.

<b>Driver Side</b>	<b>Passenger Side</b>
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 9: Three tables with alignment specifications*

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## 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 street fighter suspension for your custom muscle car.

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