

## CLUB SPEC MUSTANG BUYERS + BUILDERS GUIDE

This guide is intended to help you find the right Ford Mustang GT Coupe or Convertible (S197 chassis) and understand the build process. It is also intended to be a living document, where you – and others – can submit tips and tricks to finding and preparing a car. It should be noted, however, that this Buyers and Builders Guide is *not* a rulebook. It is highly recommended that all Club Spec owners review the [Rules](#) before starting their buy or build. If you have any questions, or would like to share your recommendations, contact us at [ClubSpec@SCCA.com](mailto:ClubSpec@SCCA.com).

*See bottom of the page for a complete parts list.*

### ABOUT THE S197 MUSTANG

The Mustang for Club Spec is the fifth generation, known best by the chassis code S197. These cars were sold in the US from 2005 until 2014. The production run splits into two sub models, both utilizing the D2C platform. Only the 2005-2009 models will be eligible for Club Spec Mustang. There are a variety of trim levels, packages, and options, all of which can be studied in detail on the [Ford Mustang Wikipedia page](#).

### SELECTING AN S197 MUSTANG

If you are not already a fifth-generation owner there are definitely some things to look for when shopping. First, you want to find the right engine and transmission, both of which will point you toward a Mustang GT (or special model variants).

#### MODEL YEAR CONSIDERATIONS:

##### *2005-2006*

The GT came standard with a 3.55:1 rear axle ratio, airbag seats were optional. Models from these two years likely offer the lightest curb weight compared to subsequent years.

##### *2007-2009*

The GT came equipped with a 3.31:1 rear axle ratio, but a 3.55:1 ratio was an option. The 2007 and newer Mustangs received more sheet metal/welds in key areas and stiffening to accommodate the GT500 engine. They also received A-arm chassis braces and a revised strut tower layout. The 2007 models were available with air bag seats as an option (saving some weight).

#### SPECIAL MODELS:

##### *2007-2008 Shelby GT*

The Shelby GT came equipped with the 3.55 rear end, manual transmission and Ford Racing packages for the suspension (FR-3), Power Pack (FR1), Hurst short throw shifter, front and rear fascia from the California Special package, strut tower brace and more. These models were

rated at 319-325 horsepower, offering a gain in both power and handling over the Mustang GT. If you're looking for a model that you don't have to spend time sourcing parts and installing, this package is solid right out of the box.

#### *2008-2009 Bullitt Mustang*

The Bullitt Mustang came equipped with upgrades to increase the horsepower to 315 over the GT's 300. This model also included revised exhaust, shocks, springs and a strut tower brace not offered on the GT models. Of note, this model came equipped with a 3.73:1 rear axle ratio, which will require a change to be compliant with Club Spec rules.

#### *2007-2009 California Special*

Primarily this is an appearance package that includes a revised front and rear fascia. It also includes rear side decorative "brake ducts." Performance is the same as Mustang GT.

Regardless of the year and model you choose, you'll need to ensure that it has the required 4.6L engine and the 3.55:1 (manual transmission) or 3.31:1 (automatic transmission) rear axle ratio. And while it is easier to purchase a car with these already installed, the rules do allow you to update a car if you're not able to find what you're looking for, or if you already have a car that you'd like to upgrade.

## **PERFORMANCE KIT**

With two exceptions, the Club Spec Mustang Performance Kit is required to participate in the class. The kit consists of wheels, tires, and suspension, however Bullitt and Shelby GT owners may opt to retain their factory Ford suspension, should they choose.

## **SUSPENSION**

The suspension kit for Club Spec Mustang was developed by long time Mustang competitor, builder, and four-time National Champion in a S197, Sam Strano of [Strano Performance Parts](#). If you're ready to have yours shipped, just give them a call and they'll get them on the way.

The kit starts with an "off-the shelf" [KONI](#) single adjustable shocks, commonly known as yellows. The yellows were the go-to shock for the S197 chassis when the Shelby GT version was the dominate car in Solo's F-Stock (now F-Street), just after its release.

Also in the suspension kit is an Eibach Pro-Kit – to give the car a lower stance and firmer ride and front and rear sway bars from [UMI Performance](#) to really dial in the car's handling. The Strano Performance kit with mount reinforcements is recommended for those who intend to push their car's performance to the limits – it'll give the setup the strength it needs to get you the durability you want.

The final piece of the suspension kit is a set of Caster/Camber plates, either from Maximum Motorsports or BBK Performance. These address the largest issue that the chassis had in its Stock Class days by giving the front end plenty of negative camber. This not only gives you better handling and feel, it's also a must-have for increased tire life for both track and autocross.

## WHEELS AND TIRES

The wheel size for the Club Spec Mustang is 18x9.5, with a minimum offset of +35 (offset number must be 35 or numerically larger, 36 and up) and a minimum weight of 17 pounds. This size was chosen because of its popularity with Mustang owners and support in the aftermarket – there are lots of options to choose from. Of course, we recommend that you reach out to our partners at [Tire Rack](#) to help you find the one that is right for you. We expect they may tell you about the Enkei RPF1. That's the wheel we used to determine the minimum weight requirement. The tire for Club Spec Mustang is the Goodyear F1 Supercar 3 (220 Treadwear), size 275/40R18.

## ALIGNMENT

Alignment decisions will come down to how you want the car to feel, and how you plan to most use the car. If it's primarily a daily driver, you may want to choose more conservatively than you might on a dedicated track and/or autocross car. That said, to get optimal performance, most will go for as much negative camber as possible in the front – generally around 2.5°. There are some tricks that most performance alignment shops will know that can help you get there – like lowering the caster to get a little more camber – but those are concepts best discussed with the shop you choose.

As for toe settings, toe in generally makes the car a little more stable, toe out in the front will give you a bit quicker turn in. Typically, zero toe is a good place to start until you get a feel for the car.

Once you have the suspension kit, wheels and tires installed, you have a Club Spec car and you're ready to go!

## OPTIONAL MODIFICATIONS

### INTAKE/EXHAUST

Though not required, intake and exhaust upgrades are allowed. There is not a lot of power to be gained here, but it does give the car more of a performance feel. For the intake, any commonly available CARB-approved system with a cone filter and a divider wall will work. We recommend one from K&N, Airaid or aFe (part numbers listed below). For exhaust, any replacement mufflers that mount in the stock location and are at least six (6) inches in diameter or 4x6 oval, are allowed. Substituting exhaust piping downstream of the catalytic converter, before and/or after the mufflers (including exhaust tips), is allowed.

### REMOVAL OF ITEMS

You may also – and you should – remove any loose items in the vehicle. This includes floor mats, but you can also remove the spare tire, jack and tools, and any other items that are intended to be removed such as an emergency kit.

### ENGINE TUNE

You may have noticed in the description of the various S197 sub models that there is some difference in power in these cars from the factory. Most of the difference is attributed to the tune. To balance these cars, Club Spec Mustangs may upgrade the tune by a process

commonly referred to as an ECU flash. This is a process that reprograms the factory ECU via the OBD2 port. There are a wide variety of these available in the aftermarket and they can also be used to do things like correct the speedometer for tire size.

## SHIFTER

The Shelby GT version of the S197 came with a Hurst Short-Throw Shifter. To ensure everyone gets to have the same amount of fun, the rest of the cars are allowed to add one as well.

## OTHER MODIFICATIONS

In addition to the above, you can also add basic, non-performance items to make the car feel like yours. This includes things like gauges, data systems or cameras, an alternate shift knob and upgrades to audio equipment. Especially for track use, it is highly recommended that you add a sturdy tow hook to each end of the car, just in case. If you plan to drive your car to and from events and need to take more gear than it will haul, you can also add a trailer hitch.

## DURABILITY KIT

If you plan to put your Club Spec Mustang on track, you may want to invest in some modifications to make it more track ready. None of these modifications will make it faster, but they will all help you and your car get more laps per session and more life out of key components.

## BRAKES

You can increase the brake life of your S197 with any of the Ford Racing upgrade kits that include a 14-inch rotor and four-piston calipers. We really like and recommend the Mustang GT SVT kit – in part because it comes with the stainless steel [Goodridge G-Stop Brake Line kit](#), which is allowed with or without the rest of the kit. You may also select any brake pad you like for your car, but we do recommend products from our partners at [Hawk Performance](#).

## SUSPENSION

In addition to the suspension upgrades required in the Performance Kit, you may also upgrade the upper third link spherical differential bearing and the panhard bar. The bearing upgrade comes from Steeda (part number below), and you can pick from what seems like hundreds of panhard bars, so long as it mounts in the stock location and doesn't use relocation hardware (several part numbers to choose from below). Finally, some S197 versions came from the factory with a strut tower brace, while others did not. To keep it simple, everyone is allowed to upgrade to an adjustable front tower brace from UMI. However, if your car already has a factory brace from Ford, you probably already have what you need.

## ENGINE/DRIVETRAIN

Especially if you plan to run longer track sessions, you may want to add an oil cooler. You can add any cooler you like, provided it serves no other purpose. A known weakness on the S197 is the clutch style limited slip differential which can – and likely will – wear out. To increase

the durability, Club Spec cars may utilize a carbon fiber clutch pack from [Ford Performance](#) when the differential is rebuilt.

## SAFETY UPGRADES

Those who are interested in putting their Club Spec Mustang on track should spend some time reviewing the [SCCA Time Trials Safety Levels](#). The S197 coupe does meet Level 1 requirements with the factory safety equipment installed, however, Level 2 is highly recommended for the coupe and required for track use of the convertible. Level 3 is also allowed.

### LEVEL 2 SAFETY

Level 2 includes a compliant roll bar, fixed back seats and racing harness(es). For Club Spec, you must add the roll bar in order to substitute seats and belts and, in doing so, you may also substitute the steering wheel or remove the airbag from the factory one.

### ROLL BAR

There are several reputable roll bar manufacturers out there. In choosing yours you'll want to make sure that you buy from a brand you're comfortable with. We recommend reaching out to a Mustang safety expert, another place where [Strano Performance Parts](#) can help. Ensuring that your roll bar has the proper roll bar padding is also a must.

### RACING SEATS

Seats not only improve the fit and feel of your car, they're also an important safety decision and there are lots of great options on the market. For Safety Level 2 compliance, they need to be one piece, fixed back seats with routing for belts through the seat. You may replace both seats or just the driver's seat. The key to seat selection is fit, so it's always a good idea to do some test fitting if you can. Good news – lots of common and popular seat models are generally found at an autocross or Track Night near you, and it's a great way to meet people. We recommend starting your safety gear shopping with our partners at [Summit Racing Equipment](#).

With awareness that some may wish to build their car in phases, you do have the option to keep the stock seat with a roll bar, but it is not recommended.

### HARNESS

The harness you select will depend on several factors including whether you use a head and neck device such as a HANS, preferences in fastening mechanisms, and even color. Again, [Summit Racing Equipment](#) is a great place to learn about options and pick the right one for you.

### STEERING WHEEL

The steering wheel allowance is both a practical modification – you may not want an airbag deployment in the event of an on-track incident – and a bit of a perk of adding all the safety gear to your car. Steering wheels almost exclusively come down to preference, and there are lots of great options to check out on [Summit's site](#).

## INSURANCE

Don't forget!! Whether you're planning to track it or not, protect the car that you've put time, money and love into with the great insurance products from our partners at [Hagerty](#). They can protect it on track, at home and everywhere in between.

## PARTS LIST

Part Number	Quantity	Description
8741-1494SPORT	2	KONI Sport Strut, Front*
8241-1240SPORT	2	KONI Sport Strut, Rear*
35101.14	1	Eibach Pro-Kit Lowering Springs
SpecS197-1	1	Strano Performance Parts Kit Level 1 (choose 1)
SpecS197-2	1	Strano Performance Parts Kit Level 2 (choose 1)
35101.32	1	Eibach Mustang Anti-Roll Bar Kit (choose 1)
MM5CC-1	1	Maximum Motorsports Caster Camber Plates (choose 1)
2551	1	BBK Performance Caster Camber Plates (choose 1)
TR-3650	1	Hurst Competition Plus Short Throw Shifter (optional)
555-7305	1	STEEDA Ford Mustang Tri-Ax Shifter (optional)
	1	MGW 2005-2010 GT & V6 Short Throw Shifter (optional)
	1	MGW 2005-2010 GT & V6 Flat Stick Shifter (optional)
M-2300-S	1	Ford Racing 2005-2014 Mustang GT 14-inch SVT Brake Upgrade Kit (optional)
12364	1	Goodridge G-Stop Brake Line Kit (Included in SVT Kit)
9R3Z5A649B	2	Ford Racing Rear Control Arm (optional)
4R3Z3078B	2	Ford Front Control Arm (optional) (choose 1)
3079B	2	Ford Front Control Arm (optional) (choose 1)
M-3075-E	2	Ford Racing Front Control Arm (optional) (choose 1)
MCF 2364 & 2365		Motorcraft Front Control Arm (optional) (choose 1)

**Club Spec**  
**Ford Mustang GT Coupe**

M-5570-A	1	Ford Performance Bump Stop Kit (optional)
UPI-1044-B	1	UMI Performance On-Car Single Adjustable Panhard Bar (optional) (example)
UMI-1005-B	1	UMI Ford Mustang GT Adjustable Front Strut Tower Brace (optional)
57-2565	1	K&N Intake (optional) (example)
450-172	1	Airaid Intake (optional) (example)
51-10293	1	aFe Power Intake (optional) (example)
54-10293	1	aFe Power Intake (optional) (example)
555-4104	1	STEEDA Mustang Upper Third Link Spherical Differential Bearing (optional)
M-4700-C	1	Ford Performance Traction-Lok Rebuild Kit with Carbon Fiber Clutch Pack (optional)

\*For competition programs, struts must be sealed by an authorized KONI dealer.