

■ UPGRADING 1966 FORD MUSTANG - IN TOTAL CONTROL

**Give Your Mustang Serious Race Car Handling With Bolt-On Ease.
Total Control Product's Coil-Over Suspension Can Make That Happen.**

Street Fighter

If you have been following the progression on our Project Street Fighter '66 Mustang, you know we're building this pony to be a corner carver that's competitive with late-model sports cars. We're giving it an old-school Trans-Am style with modern performance goodies under its skin. This Mustang isn't meant to be a smooth fairgrounds cruiser, but a built-tough race car that's legal for the street.

Last month, we installed Total Control Products four-bar coilover rear suspension using a Chassisworks FAB9 rearend. The installation went surprisingly well, and it involved converting the original leaf-spring 8-inch Ford rearend to a tubular control arm, coilover 9-inch. There was some welding involved, but it was ridiculously easy. The front suspension went in just as smoothly. We've all heard the phrase "bolt-in" or "direct-fit," but we've grown weary from past experience of putting too much faith in those words. So far, the suspension assemblies from TCP, a Chassisworks company, adhere to their promise of easy installation.

This Mustang has only been touched for regular maintenance since the day it left the factory; no upgrades had been made until we got hold of it. We're starting with a virgin front suspension that hasn't seen a loose bolt in 40 years. The most difficult part of this suspension project was removing the factory pieces. Once the stock stamped control arms, 6-cylinder springs, puny sway bar, and rusty hardware was removed, we quickly gained momentum, and installed the new goodies.

We're using TCP's coilover conversion kit that features their tubular upper and lower control arms, adjustable strut rods, and VariShock double-adjustable coilovers. There are two different upper control arms you can get for this kit: the standard pivot shaft version, or the dropped shaft to improve suspension geometry without the hassle of drilling new mounting holes through the shock tower. If you are using a standard shaft, TCP has a fixture to locate the new arm's mounting holes to give the same effect. The matching lower arms are made to directly replace the factory stamped ones. Adjustable strut rods replace the fixed, bushing-style unit, and can replace the factory rod for use with the factory control arm, or TCP's. The pivot housing at the body-side of the strut rod is a unique item. Its internal workings allow the rod to move without exposed bushings.



We chucked the stock coil springs and shocks for the VariShock coilovers. The factory stuff set the tire-to-fender gap at about three inches, slightly too nose-up for this car. The coilovers give us the flexibility to adjust ride height without changing the spring's behavior. The coilover can't be adjusted out of the shock's range, however. The TCP kit is designed to lower the car two inches in the front, and can be adjusted one inch in either direction from there. The shock body is also adjustable for compression and rebound for optimum tuning. We chucked the small stock sway bar for TCP's 1 1/8-inch bar, which has billet aluminum center mounts and endlinks with polyurethane bushings. We already have the TCP spindles that use the large '70 Mustang bearings, and TCP's power rack and pinion system, so with the new parts, the front suspension will be completely taken care of.

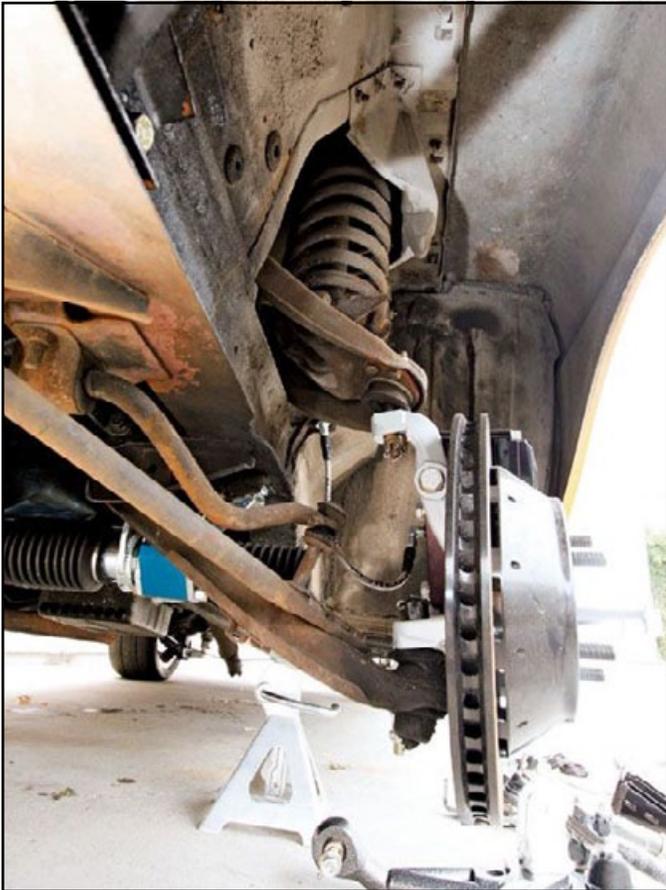
The only thing missing in this suspension overhaul is a really great alignment. We'll handle that final detail after our new 427-ci Windsor stroker motor from Smeding is installed (plus some other components). Part of that process will also be to adjust the corner weight for balance to get the full potential from these parts.

Final Adjustments

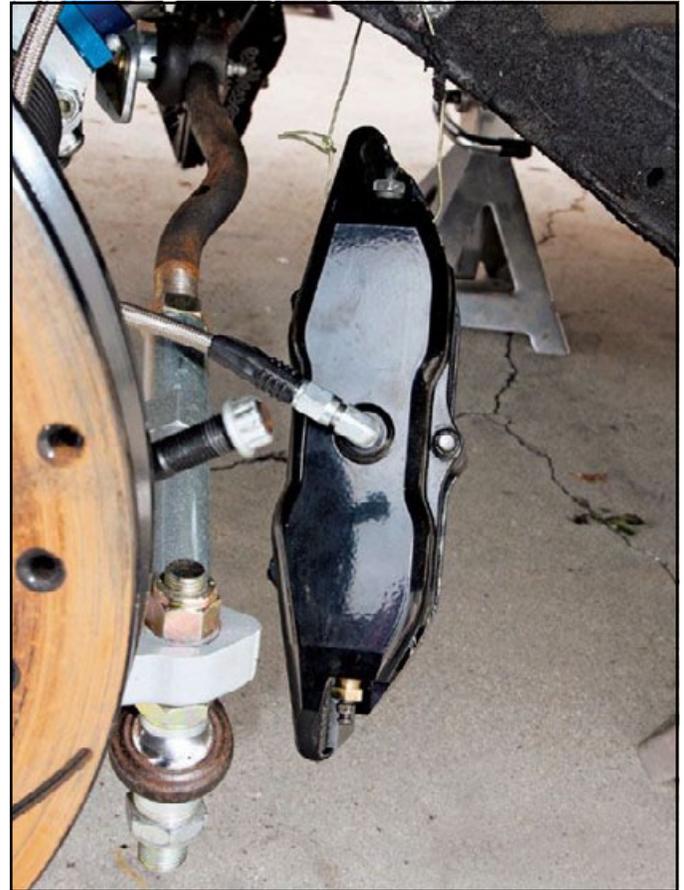
Setup is very important. We love the way the Mustang looks now with a very small tire-to-fender gap, but the tires rub at full lock, so we have to adjust it. The great thing about coilovers is you can change the ride height without replacing or cutting up parts. The coilover shouldn't be adjusted more than about one inch to

set ride height; if you need more height change, TCP sells extensions separately. Aside from making sure nothing rubs, right height adjustments can be made to adjust the static weight at each corner for the best handling. A little bit of anti-seize on the shock body threads helps the adjusting process.

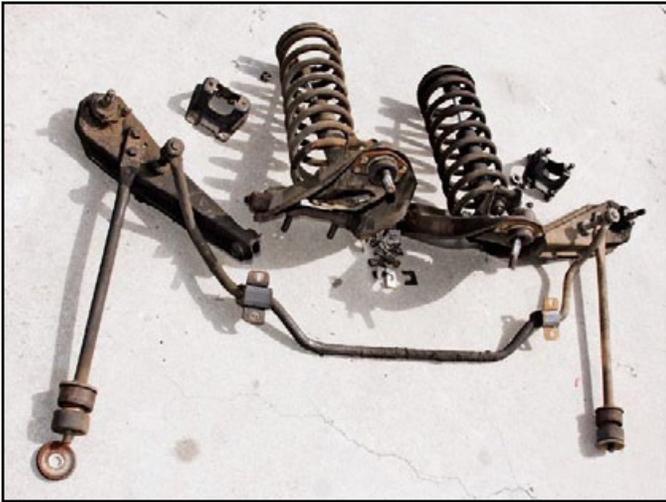
Getting an alignment is crucial to getting the most from your suspension package. TCP has suggested alignment specifications that can get you headed in the right direction. Street and track driving require different alignment settings, so finding a middle ground can help save tires and make the car drivable on the street, while optimizing performance at the track.



Here's what we started with. The 40 years of use and neglect wore heavily on the parts found on this Mustang. The hardest part of this project was getting the old junk out. We suggest giving the bolts a round of Royal Purple Maxfilm penetrating lubricant several hours before trying to work them out.



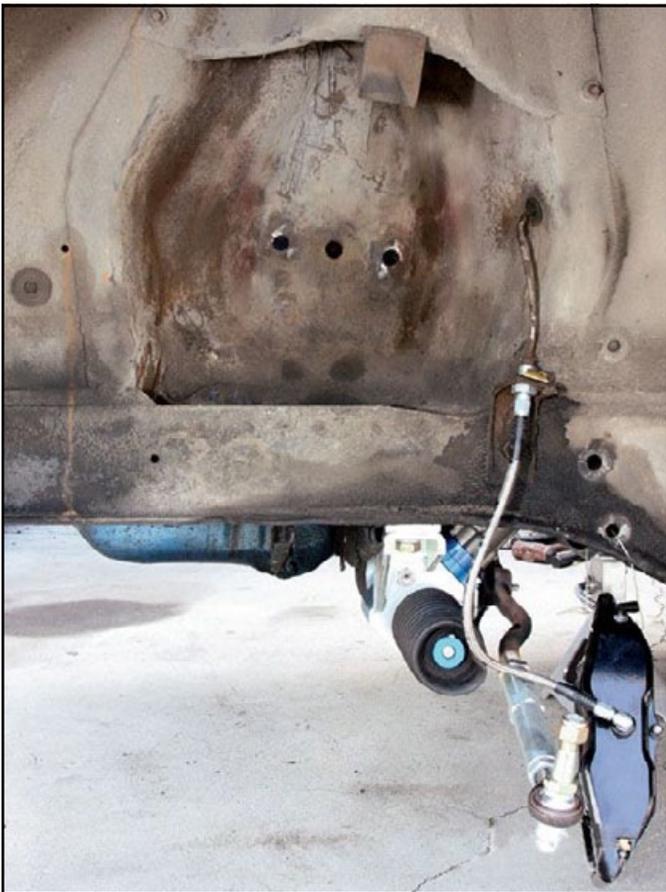
Before disassembly, we hung the Wilwood calipers with some wire to keep them out of the way. Disconnecting them isn't necessary and would mean re-bleeding them. Hang them high enough to keep the weight of the caliper off the brake line.



We've sold many of the parts off the Mustang on eBay, and the front suspension will soon find itself there too. We try to get what we can out of the parts we won't need anymore, and eBay is by far the best way to maximize your dollars for stuff like this.



The factory upper shock mount is replaced by TCP's plate that drops in through the top of the shock tower and sandwiches...



There wasn't a whole lot to clean up for us, but now is a great time to undercoat the wheelhouses before the new suspension goes in. Aren't rust-free California cars great?



...the factory perch with a backing ring. This becomes the upper coilover mount.



Here is TCP's lower control arm, strut rod, and lower coilover mount assembly. All of these pieces are compatible with factory parts as well as the other aftermarket parts from TCP.



TCP's lower control arm bolts in the same as the factory arm. New bolts come in the kit, but we used the bolts from the rack and pinion system since they are longer than the stock ones. The longer ones are needed to accommodate the rack's brackets.



This aluminum bracket is the lower coilover mount. It's threaded to accept the bolts that hold the strut rod to the lower control arm. In a coilover conversion kit without the aftermarket arms, the coilover is mounted between the upper control arm and the body, like the spring is from the factory; that kit retails for \$988.



This is the jewel of TCP's adjustable strut rod. It's the first of its kind, housing a Delrin bushing inside the aluminum housing.....



.....This minimizes caster change during braking, and gives the driver a more positive feel. Best of all, there is no need to modify the body for these pivot links.



Next in are the upper control arms. You want to adjust the arm to be in the middle of its range. This will ensure everything will fit together; further adjustment will be done at the alignment stage. The arm has a dropped pivot shaft to use the factory pick-up points-this give the TCP system a nice negative camber gain during cornering.



Here's the final TCP coilover front suspension installed in Street Fighter. The new parts from TCP fit perfectly with each other and required zero fabrication. When you've got everything done, go around the front suspension and give each zerk fitting a dose of the good stuff, like Royal Purple's synthetic Ultra Performance Grease.



Prior to this photo, we ran the suspension through its travel without the spring installed to check for any binding. You need to make an educated guess of how much space the spring takes up while doing this test. If everything looks good, install the spring into the coilover, then into the car.



The last part of this project is installing the new sway bar. The kit comes with a 1 1/8-inch diameter bar, billet aluminum frame mounts, endlinks with polyurethane bushings, and all the necessary hardware.



The TCP aluminum frame mount for the sway bar replaces the factory clamp, and uses the same bolt holes. The endlinks go in the exact same way as the factory. This sway bar bolts up very easily, not like in first-gen Camaros.

