

## A New Front Clip and Suspension for Early Mustangs, Part 2

We bolt on the new suspension parts to the previously installed Total Control Weld-In Front Subframe



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Back in part one of this two-part series ([www.mustang-360.com/how-to/chassis-suspension/1608-replace-weak-stock-mustang-framerails-with-a-new-front-subframe](http://www.mustang-360.com/how-to/chassis-suspension/1608-replace-weak-stock-mustang-framerails-with-a-new-front-subframe)), we took a look at the installation of an classic Mustang front clip from Chris Alston's Chassisworks. The new clip was designed to provide the necessary solid foundation for further suspension upgrades. You see, a Mustang's suspension components can't do their job if the chassis flexes every time it is put under load.

Though deflection is definitely a concern, the new front clip also provides the correct pick-up points to mount the new suspension. Even the very best tubular control arms and coilover setup are next to useless if their mounting is a matter of convenience rather than design. The new front clip was designed from the beginning to allow not just one, but a multitude of different suspension systems (and options) that are available from Total Control Products. What does this mean? Whatever you have planned for your Mustang (drag racing, road racing, or even an over-the-top Pro Touring effort), the Total Control Product's front clip from Chris Alston's Chassisworks can accommodate your needs.

With the new clip providing the necessary foundation, it was time to continue our 50-year trip forward from 1966 to 2016. Already blessed with classic sheet metal, it was time the Mustang started braking and handling like a modern muscle machine. Much more elaborate (and effective) than your typical shocks, springs, and swaybars, the Total Control Products suspension added not just new parts, but a brand-new system. In fact, the new front clip was designed to accept any of five different suspension systems, depending on your needs. This particular 1966 fastback received the G-Machine Suspension, but others will include different versions of the same basic lineup. Included in our kit were upper and lower control arms, a dedicated spindle, and massive Wilwood 6-piston brakes. The system also combined a new steering rack with a tubular anti-roll bar (both with billet mounts). Finishing touches include double-adjustable VariShock coilover shocks and springs and a bumpsteer kit. Naturally, all of these components were adjustable, allowing the user to dial in the performance of the new system.

The great thing about the new suspension components is that they are more than just a conglomeration of parts thrown together. We all know a coilover shock and spring assembly is the hot setup because it allow you to adjust ride height, spring rate, and even shock valving (double adjustable on the VariShock used in this installation). The same goes for adjustable, tubular upper control arms. Heck, even the tubular anti-roll bar was adjustable to help fine-tune the handling. As great as these components sounded individually, the key to the success is they were all designed to work together.

Taking one step back, the success is actually determined by the suspension geometry, which is a function of the pick up (mounting) points designed into the front clip. Just because a suspension is adjustable doesn't mean you can make it work. By combining design, quality, and adjustability, the Total Control Products front clip and suspension from Chris Alston's Chassisworks will make your classic Mustang feel 50 years younger. Check out the install photos on how we transformed this 1966 hobbyhorse into a prancing polo pony.



**01.** Transforming that classic hobbyhorse into a polo pony was this double A-arm suspension from Total Control Products.



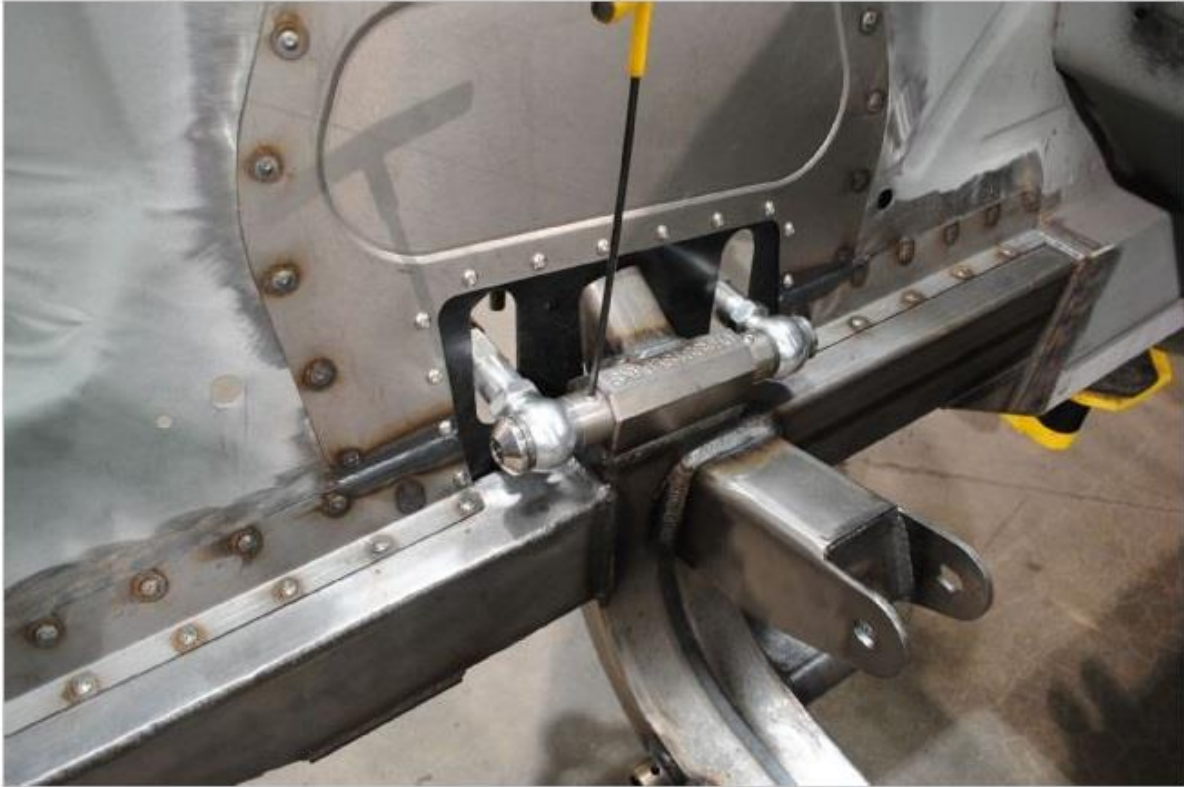
**02.** Here's an example of a complete suspension system from Total Control Products. The exact components will vary depending on your needs, but they all include upper and lower control arms, VariShock coilover shock and spring combo, and a manual- or power-steering rack. Also included are ball joints, anti-roll bars, and brake assemblies. The kit was finished up with dedicated spindles, a shock simulator, and even a ball-joint wrench.



03. After welding in the new front clip ([www.mustang-360.com/how-to/chassis-suspension/1608-replace-weak-stock-mustang-framerails-with-a-new-front-subframe](http://www.mustang-360.com/how-to/chassis-suspension/1608-replace-weak-stock-mustang-framerails-with-a-new-front-subframe)), it was time to install the suspension. We started ours with the lower control arm. This small wooden pry bar was used to guide the control arm over the mount (every component is a precision fit).



**04.** The lower arm was bolted in place using the supplied stainless hardware. Note: Each control arm features a proprietary bushing designed to optimize ride quality and minimize bushing deflection.



**05.** We installed the upper control arms next. The set-screw is designed to intersect a receiver groove in the bolt to eliminate the possibility of the bolt backing out. Both upper and lower arms used this set-screw retaining system.



**06.** With both arms in place, we installed the double-adjustable VariShock coilover assembly into the top mount.





**07.** The VariShock was installed into the upper mount and lower control arm (shown) using the supplied hardware. The supplied polished, stainless bolts featured shoulders to eliminate over-tightening and damage to the mount or shock. This suspension system used double-adjustable VariShocks (two adjustment knobs for compression and rebound).



**08.** After installation of the VariShock, the spindle was attached to the lower control arm using the supplied washer (spacer) and castellated nut.



**09.** The upper control arm and spindle mount received the same treatment. Make sure to line up the hole for the cotter pins.



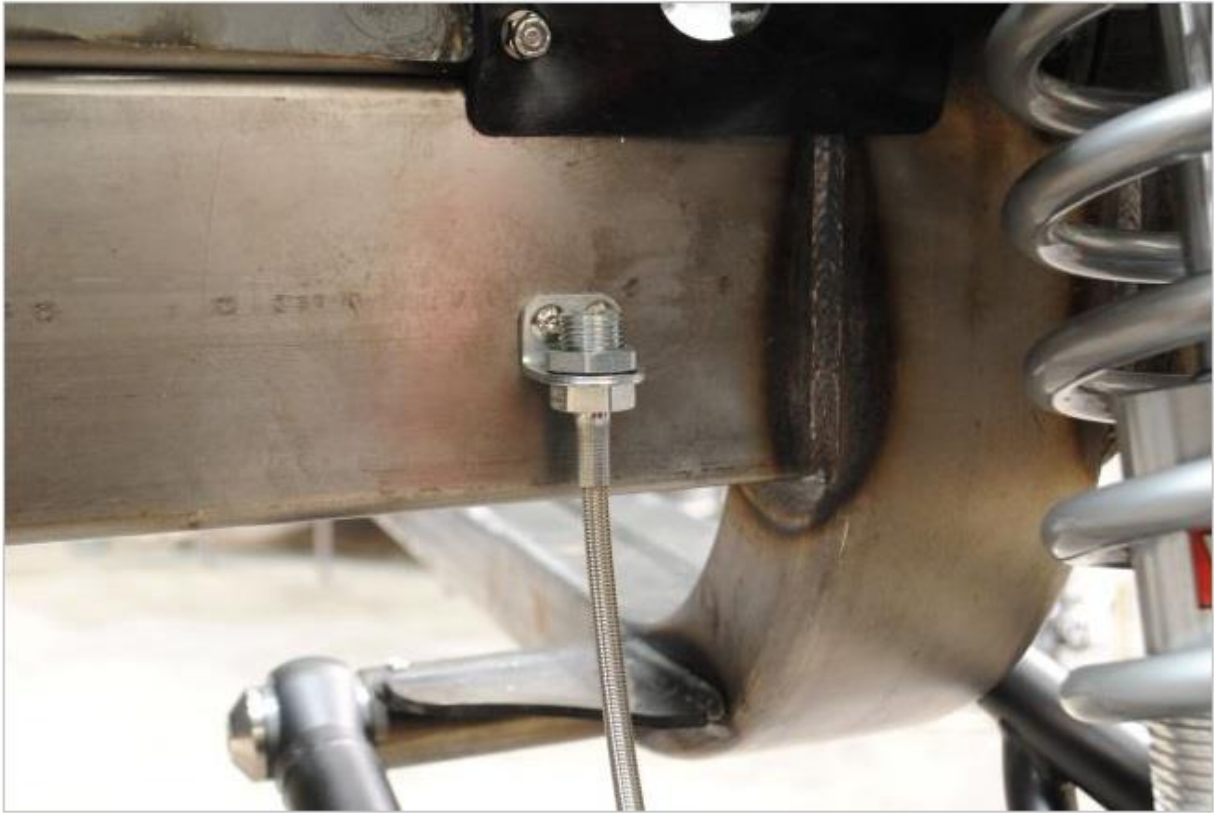
10. Once the spindle was in place, we installed the brake caliper mounts.



**11.** A number of different brake systems are available, but this Wilwood system included massive 14-inch, drilled, and slotted rotors. Check out the aluminum rotor hat, retaining nut (and pin) for the supplied wheel bearings, and the billet aluminum (threaded) cover.



**12.** The 14-inch rotors were teamed with 6-piston Wilwood calipers. Once bolted in place (two Allen bolts), we installed the brake lines and fittings.



**13.** This L-angle bracket was used to mount the brake line to the chassis.



**14.** With the control arms, spindle, and brakes in place, it was time for the steering rack. The billet aluminum rack mounts featured slotted (male and female) tabs to positively locate them on the sub frame.





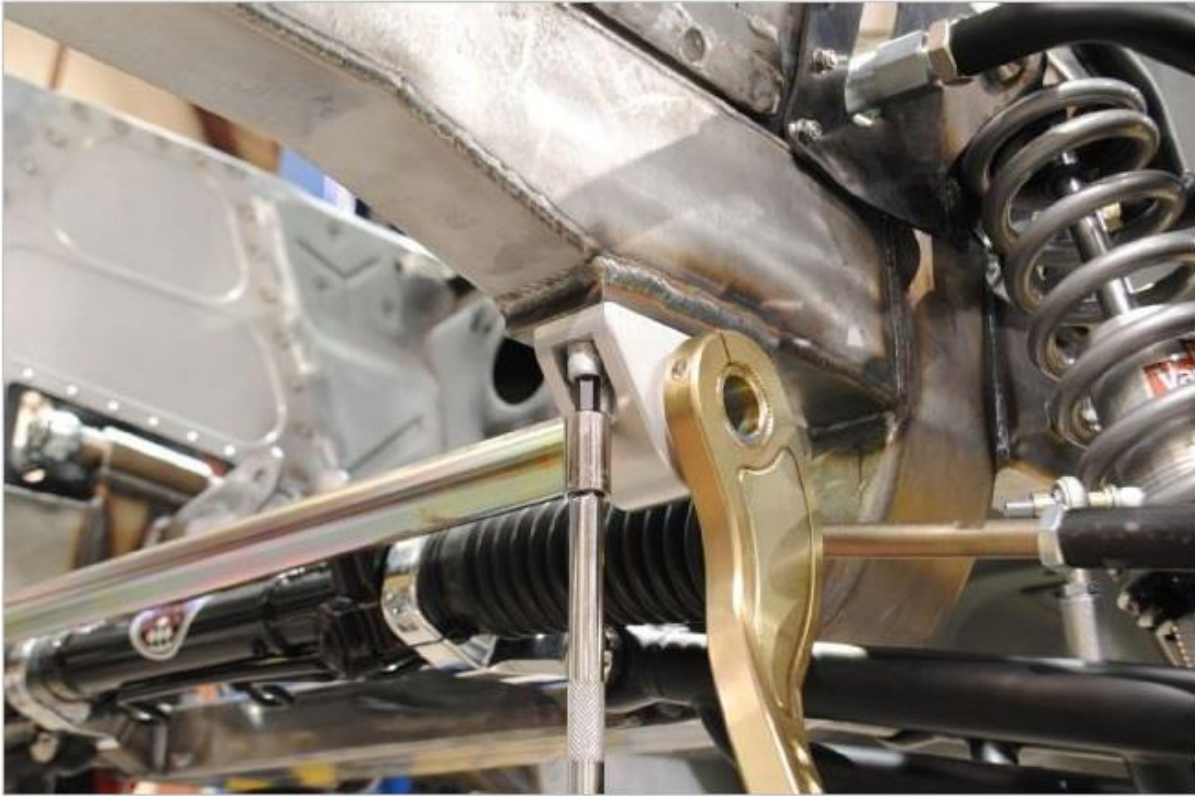
**15.** Using the supplied hardware, we bolted the aluminum mounts in place.



**16.** The steering rack was secured using these billet aluminum, U-shaped clamps. This mounting system allows zero deflection to help provide precise steering.



**17.** The tie-rod ends on the new rack were attached to the steering arms on the installed spindles. Stock-style tie rods work perfectly fine for clips using Total Control's standard alignment specs. This pony may see a few track days, so bumpsteer outers are used to perfectly dial-in more aggressive alignment settings



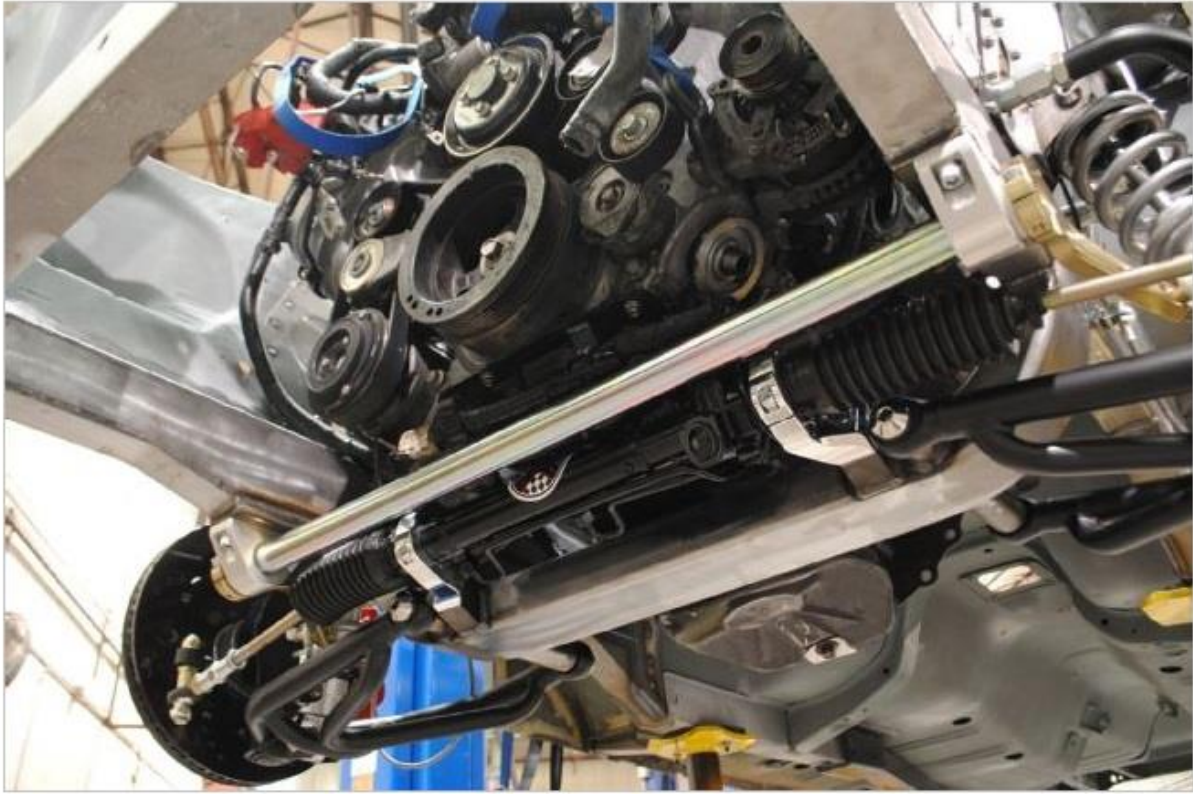
**18.** The final component in the Total Control Products suspension system was the anti-roll bar. Available to accept different configurations, this front clip featured mounting for a gun-drilled, splined, adjustable front bar. Like the steering rack, the anti-roll bar also uses billet aluminum mounts.



**19.** As with the rest of the suspension, the anti-roll bar was adjustable thanks to a trick end-link system. During installation, we made sure to properly orient the end links using the supplied spacers (the mount on the lower control arm is wider than the end link).



**20.** The adjustability comes from these three different mounting points. Shortening the bar increases the effective bar rate. The anti-roll bar should be used as a fine-tuning adjustment to dial in the suspension.



**21.** The front clip and complete suspension (including steering rack) are designed to not only provide the ultimate in handling and braking (without sacrificing ride quality), but also to allow installation of a variety of different engine choices (like this four-valve Coyote).