

# How To

Update Your First-Gen Camaro With the Latest Suspension Goodies

# SUBFRAME TO SURFACE MISSILE

The removal of the front doghouse of a '67-69 Camaro has always been somewhat of a disappointment. That big, clunky OEM front subframe unearthed in a first-generation

Camaro recalls a dogtracking mid-'70s Nova...too primitive and pedestrian for a serious performance car. Though the aftermarket has stepped up with improvements over the factory components, first-gen Camaros have screamed for a serious, "clean sheet of paper" front-clip update. The answer: Chris Alston's Chassisworks direct bolt-on clip.

Formed out of laser-cut, CNC-machined,

precision-bent 7-gauge steel, the subframe is fixture welded for an exact fit. The replacement subframe is completely street-able and features billet side-motor frame adapters, stock-location emergency-brake cable mounts, transmission crossmember brackets, and a clutch-shaft pivot mount. Mounting stubs are installed at the rear of the subframe to accommodate Chassisworks bolt-in subframe connectors.

If you want to fit fairly large rollers, you'll be happy to know that there's sufficient room for a 17x8 front wheel with a 4 $\frac{1}{2}$ -inch backspace, enabling you to mount a P225/45R17 wheel and tire. For our build, we decided to go with the full Chassisworks design for the Camaro and ordered the Street Machine Front Suspension Package, which includes tubular upper and lower A-arms, choice

of coilovers (or Air Ride Shockwaves), and precise billet rack-and-pinion steering. Incorporating the Chassisworks suspension pieces ensures outstanding geometry and adjustability for serious handling.

The Chassisworks front clip attaches to the body using urethane or aluminum body bushings. In order to button up the installation, rubber inner-fender splash

guards are attached to the factory inner-fender panels. If you're a do-it-yourself type of guy then know this: Chassisworks includes a highly detailed 104-page installation guide that answers most questions. If you're still stumped, tech support is always available. Now follow along as Route 66 Motorsports installs the foundation for a serious street-missile Camaro.



## QUICK NOTES

**WHAT IT IS**  
Chris Alston's Chassisworks direct bolt-in clip for first-gen Camaros

**BOTTOM LINE**  
It's a true bolt-on!

**PRICE (APPROX)**  
\$1,395

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In order to stay with the entire Chassisworks design, Route 66 Motorsports ordered a pair of the subframe connectors that attach to the stubs at the rear of the subframe. Moving forward, the front clip also adds the triangular emergency brake mounting bracket at the stock location.



Chassisworks provides these holes (arrow) for easy alignment.



The coilover mount and upper tubular control arm are designed for optimum suspension characteristics. The welds especially stand out—they're absolutely beautiful.



The tubular transmission cross-member attaches to the subframe at these mounting points.

**The new subframe from Chassisworks is every bit as stout as the OEM unit, yet it's constructed with the engineering to incorporate modern-day suspension.**

**The Chassisworks front clip for the '69 Camaro is far and away the best subframe on the market**



To assemble the rotors, we started by attaching the hat to the rotor, then attaching the hub and studs to the rotor. After the Timken inner wheel bearing was packed with grease, we dropped in the bearing race. After we tapped the inner seal into place, the rotors were ready for installation.



Another option is the stainless steel upper and lower A-arms kit. It comes complete with all hardware, and the ball joints come already installed, leaving only the installation of the rod ends to complete.



Prior to mounting the rack, be sure to chase the threads in the rack mounting bosses. The lower half of the billet rack clamp can then be attached to the front of the crossmember. While you're at it, it's a good idea to apply Loctite to the Allen bolts.



Drop spindles are available to lower the car approximately 2 inches and are specifically designed to work with the new front clip.



If you're looking to upgrade your brakes, the Wilwood 13-inch front rotors feature four-piston calipers and match well with the Chassisworks hubs.



Both upper and lower A-arms fit fairly snug over the mounts, so take extra care not to damage the threads in the mounts or on the pivot studs.

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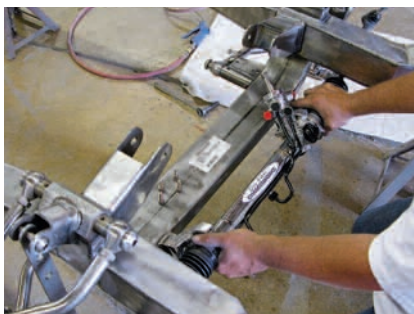
We used antiseize compound on the pivot stud threads. Once we snugged it down, we checked the upper and lower A-arms to ensure they could swing freely throughout full extension.



The dropped spindle was installed to the upper and lower A-arms using the supplied castle nuts. To install, simply tighten the castle nuts and insert the cotter pins.



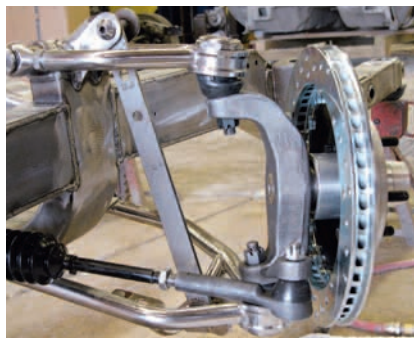
To help mock up the suspension components, we used the shock-absorber simulators and completed a frontend alignment.



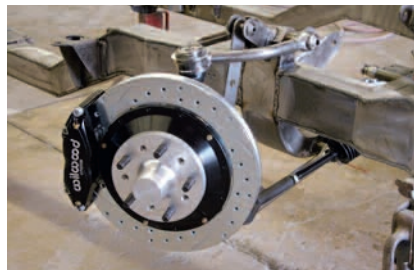
One of the greatest features of the mounting design is the ability to rotate the rack to provide any desired angle from the steering column to the rack input shaft. With the rack in place, the billet rack-clamp caps were installed. Tie-rod ends were also installed and attached to the steering arms of the spindles.



After the frontend alignment was completed, the assembled rotors were slipped on the spindles. Bearings, retainers, and castle nuts were then installed, finished off with the always important cotter pin.



The steering was checked for uninterrupted full range of motion.



To assemble the four-piston caliper Wilwoods, we started by installing the pads and followed by attaching the supplied bracket onto the caliper and mounting the assembly onto the spindle.



Pulling out the factory subframe is only a matter of four bolts. While air tools aren't required, it certainly makes the job easier. Make sure you support the front of the body when dropping the subframe.



With the bolts out, we could drop the entire front subframe with a floor jack. That's all there is to it.



Once we had the front clip lined up, we supported the rear of the subframe with a pair of jackstands, and loosely installed the mounting bolts, checking for proper alignment. Everything looked good, so we went ahead and torqued it down to spec.



There you have it. The new front clip has the perfect combination of up-to-the-minute technology with the durability necessary for a high-performance street car. Adding to the user-friendly appeal, the front clip also accommodates the stock radiator support, bumper, grille, and inner-fender panels. Add in the rubber inner-fender shield and it'll protect the engine compartment during inclement weather.