Bringing a Tri-Five Chevy’s Suspension up to Modern Standards

Up to Snuff

Upgrading the front suspension on a Tri-Five Chevy sedan used to mean replacing the entire chassis in order to get the modern ride and handling we all crave. This probably sounds like a nightmare; who has the time to tear down their hot rod to change out the entire frame? Enter the folks at Classic Performance Products (CPP). CPP has developed a kit that allows customizers to simply unbolt the factory components and bolt on modern, car-specific suspension components.

Most Tri-Five owners are convinced their car has decent disc brakes. Whoever attempted to upgrade the factory suspension and brakes and add an oversized anti-sway bar certainly deserves a pat on the back. Thirty years ago that conversion was top-of-the-line technology, but three decades is a long time and those parts are more worn out and should be replaced.

Since most classic car restorers these days convert to an LS engine that generates at least 500 hp, who wants to rely on their 30-year-old disc brake conversion to get around the next corner safely? And what about that boat-like ride? Modern Tri-Five owners want handling and ride quality that mimics their daily driver or better.

Is it possible to have both? The folks at CPP say yes. The company’s new Tri-Five front suspension kit features upper and lower A-arms that modify the geometry of the factory suspension to increase the handling of the high-centered sedans. CPP also partnered with world-renowned coil-over shock manufacturer QA1 to offer its unique pocket coil-over shock in the new kits. The coil-over allows the user to adjust ride height and ride quality.

To round out the experience, CPP’s oversized multi-piston brake kit and its close ratio 500 series steering box will make your shoebox Chevy feel like a luxury performance car. If downtime is a big concern, don’t fret because this conversion can be done in the better part of a day, leaving plenty of time to hit the local cruise night to show off your ride’s new suspension rehab.

Sources:
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Disassembly

01. Included with the kit are the following parts: upper and lower A-arms, spindles, rotors and calipers, coil-over shocks, anti-sway bar and CPP 5300 series steering box.

02. Because this '56 Chevy Bel Air hardtop will receive an LS swap, we removed the engine and front sheet metal. If you plan to do the work yourself, it isn't necessary to remove all of these parts. You should be able to convert everything to the new kit in one day.

03. The installation begins by supporting the frame on jack stands and removing the front wheels. Next, place a jack underneath the lower A-arm at the ball joint; this will safely support the suspension while you remove the fasteners that hold the suspension components in place. Remember that the coilsprings are under tension, so pay attention while removing the old components, and use the jack to slowly lower these components to avoid injury.

04-05. Once you remove the upper and lower A-arms, springs, shock absorbers, and anti-sway bar, you're halfway finished installing the kit. Be sure to hold on to your parts until the conversion is finished, because you'll need to reuse the factory steering arms on the new CPP spindles.

06. We removed the through bolts that hold the steering box in place on the frame. This can be a bit tricky to do with the engine in the way. The best tip we can offer is to remove the driver's side exhaust manifold or header for access.

07. You'll need to drop the factory steering column and make the column rod and factory box out of the engine bay. This can also be tricky when the engine is in place, but it can be done by removing the pitman arm before removing the box and column.

08. This is what the front end should look like once all of the components are removed.

09-11. Reconstruction begins at the bottom, because the lower A-arms go in first. CPP designed the cross shafts on the arms to bolt back into the factory arm positions. The company supplies new zinc-plated fasteners to hold everything down snugly.
Coil-over Shocks

12-13. These particular QA1 coil-over shocks are not traditional. They were specifically designed for this application to allow the user to adjust the ride height of the vehicle by turning the lower spring collar on the shock body. You can adjust the shock damping by turning the knob located at the base of the shock. Installation starts with removing the coil collar through the threaded shock body.

14. Slip on the Teflon washer that resists metal-to-metal wear and prevents the annoying squealing that can develop over time.

15. Finally, the coil spring drapes over the shock, and the small end aligns with the shock collar.

16. Before we can install the shocks, we need to slide on the lower retaining washer and the shock bushing over the stem.

A-arms

17-18. Drill out the mounting holes on the lower A-arm that holds the shock transition, aka the lower shock mount. Why does it need to be modified to the lower arm? This kit does double duty and can be used with a factory-style coil spring that uses smaller fasteners. Since we wanted to outfit this vehicle with modern coil-over-style shocks, we require larger fasteners.

19. Once we drilled the hole to accept the larger fasteners, we mounted the trunnion to the lower A-arm, and the upper shock bushing and bolt to the shock stem.

20. Install the upper A-arms and the spindle/ball joint assembly. Step one: slide the lower shaft of the upper arm over the factory studs located on the frame.

21. Next, slip the lower ball joint stem into the spindle and attach the castle nut.

22. Repeat the same exercise with the top ball joint and spindle and install the castle nut. Be sure to install cotter pins in both castle nuts to ensure they don’t back out when you’re driving.
23. The official term for the next component is an anti-sway bar; however, most just shorten the name to sway bar. Its purpose is to control body roll and high-speed sway while driving. There's a fine line on how big the bar can be without creating an uncomfortably stiff ride. CP9 has developed just the right-size bar that allows the best of both worlds.

24-26. We prep for installation by adding a dab of urethane grease to the bushing before sliding it around the bar and securing it in place with the frame bushing band on both sides of the bar.

27. Using one of the factory anti-sway bar mount holes for reference, measure and drill out a new hole to accept the larger pattern where the frame bushing band can be mounted.

28-30. Next, slide the frame mount U-bolts through the top of the frame that holds the frame mount in place. Finally, configure the sway-bar stems on each side that attaches the bar to the lower A-arms to control the lateral forces while under load or at speed.
Steering Box

31. Upgrading the factory-style steering box to CPP’s 500 series box is a must for the driver who yearns for excitement. The close ratio 1:3 produces excellent road feel, giving the driver more confidence.

32-34. It simply goes right back into the factory location using the supplied fasteners that mount through the frame. However, you’ll need to change out the factory steering column to a joint style column that’s also available from CPP.

35-36. To finish off the look of the 500 series box, remove the fastener that holds down the adjuster plate, and replace them with CPP’s plate cover and stainless fasteners. This gives the box a noticeably finished look.

37. Reinstall thrustman arm.

38-40. Remember when we said to keep the factory parts? Well, we hope you did, because the OEM steering arms will marry the spindles to tie rods. They bolt back in place using the new fasteners that come with the spindle kit. Attach the tie-rod back to the steering arms and get ready to align the steering back to spec.

41. The installation was a rear bolt-on affair. Now the suspension provides better handling, rear ride quality, and it’s safer. Best of all, we like the fact that we can adjust the ride height and quality however we choose.