

# STOP, DROP, AND ROLL

INSTALLING DISC BRAKES, DROP SPINDLES,  
AND NEW ROLLING STOCK ON A 1964 CHEVELLE



**Brakes should be number** one on your to-do list if you're planning on driving your classic Chevy regularly. Even if you just drive it occasionally the brakes need to be in tiptop shape for the safety of you and everyone on the road around you. And let's get this out of the way right off the bat—drum brakes are not dangerous if they are in good working order. Of course, they do not perform as well as disc brakes but for everyday driving they will suffice. The really scary component for pre-1967 Chevrolet passenger cars is that the entire braking system draws fluid from a single reservoir master cylinder. That means a leaky wheel cylinder or a split brake line could evacuate the brake fluid from the entire system before you fully realize something is wrong. Dual reservoir master cylinders are a must for any classic car that is getting driven. That's where our brake upgrade started, and it snowballed into a slightly larger project from there.

When swapping to a dual master cylinder you want to have the right brake lines and distribution blocks to tie it all together. For our daily driver 1964 Chevelle, our research sent us to Classic Performance Products (CPP) as its dual master cylinder conversion is a simple install. Then, our mind got the best of us as we considered the reduced brake

pedal effort afforded by a power booster. And that thought turned into the drastically better stopping power of a front disc brake setup. Then we realized that CPP offered a disc brake kit that included a set of 2-inch drop spindles. So you can see how we got carried away. And how could you blame us when everything we just mentioned only cost \$799 and comes pre-assembled for easy installation (CPP offers an unassembled kit for less money).

If you're installing a power disc brake conversion kit it's safe to assume that your vehicle is nearing the 50-year-old mark. That means you'll need to consider other suspension and steering restoration and/or upgrade

# TECH

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components as the OE stuff is likely toast. Before we were done with the brake swap install we ended up installing new control arms and rebuilt the steering linkage and added a bigger sway bar. Those installs will be covered in our continuing series of tech articles to show how to take an old Chevy and turn it into a true daily driver, like our 1964 Chevelle four-door. For now, follow along as we install a CPP Power Disc Brake kit and new front tires and wheels from Coker Tire, and take this daily driver to another level of reliability without breaking the bank.



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After jacking up the car and placing it on jack stands, we removed the original 14x5 steel wheels. These will no longer fit due to the disc brakes so they will be going to the swap meet pile.

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The brakes on our 1964 Chevelle four-door sedan were in great working order. It required a lot of pedal effort but the brakes worked well, and rarely pulled to one side or the other. With the drum removed you can see a little bit of gunk buildup, but no leaks or problems.

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We start by removing three cotter pins—one at the tie-rod end and one each at the upper and lower ball joints. Then we can start loosening the nuts. Here, we loosen the tie-rod end where it attaches to the spindle with an 11/16-inch nut.

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The lower ball joint is attached with a 7/8-inch nut. Typically, these aren't that stubborn to remove. You'll spend more time trying to remove the cotter pin than the nut. Do not remove the nut completely.

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The upper ball joint is held in place with an 11/16-inch nut. Again, do not completely remove the nut at this point. The ball joints need to be broken loose from the spindle before the nuts are removed.



**6** A mini sledgehammer is your friend when it comes to breaking the ball joints loose from the spindle. Always put a jack beneath the lower-control arm to keep pressure on the coil spring—safety first. You can use a pickle fork to separate the ball joints, but we gave it a few good blows on the raised boss on the spindle and it dropped loose.



**7** After the upper and lower ball joints are free from the spindle, remove the upper ball joint nut and lower the jack slowly. Then, remove the lower ball joint nut and remove the spindle and drum brake assembly. Don't forget to remove the brake flex hose.



**8** The CPP power disc brake conversion kit is super simple and it is available as a pre-assembled unit. This certainly saves a few steps as we can easily bolt the new spindles into place. We also opted for 2-inch drop spindles to enhance the stance of our family-friendly Chevelle.



**9** We placed the spindle and brake assembly onto the lower ball joint and then gave the jack a few pumps to reach the upper ball joint. The installation process could not be simpler.



**10** Using a ratcheting wrench makes quick work of the nut. We switched to a torque wrench for final tightening. GM calls for a minimum torque value of 50 ft-lb, so we tightened it to spec. The lower nut torques to a minimum of 70 ft-lb.



**11** The torque values for the castle nuts are minimum requirements and you can safely continue tightening the castle nut until the hole lines up for the cotter pin.



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Now, we moved up top to dispose of the tiny single reservoir master cylinder. This item was the number one reason we wanted to upgrade the brakes—a leaky wheel cylinder or a split brake line could've quickly evacuated all of the brake fluid from the system. A new dual-reservoir master cylinder is a must for any old Chevy!

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The CPP Power Disc Brake kit (PN CPP6466CBK) comes pre-assembled with your choice of four sizes of brake booster. CPP does not suggest using an 11-inch booster with early Chevelles so we opted for the 9-inch booster. The unit comes out of the box as pictured, with brake lines and proportioning valve installed.

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The new booster and master cylinder mounts to the firewall and slides over the original studs. Simply tighten the supplied nuts and the assembly is installed.

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CPP also provides a T-fitting that should be installed in the intake manifold. Luckily, our original two-barrel intake manifold had a port just behind the carburetor that made for easy installation. The supplied rubber hose is cut-to-length and the other side of the T-fitting is plugged.

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The booster and master cylinder assembly is complete with a new pushrod and clevis, ready to slide into place on your original brake pedal. You'll need to adjust the clevis to get the pedal height where you want it.

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Sliding under the dash to attach the brake pedal pushrod and clevis was the toughest part of the master cylinder install. We found it easiest to drop the entire pedal out, attach the clevis, and then re-install the pedal assembly.

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Our only deviation from the CPP power disc brake kit was a new front brake line kit that utilizes both front ports in the proportioning valve. The CPP kit features a single line for the front brakes that is split by the original distribution block on the frame.

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With the hard lines routed, we can attach them to the supplied rubber flex hoses on each side. After tightening the fittings, we slide the securing clip onto the original hose bracket.

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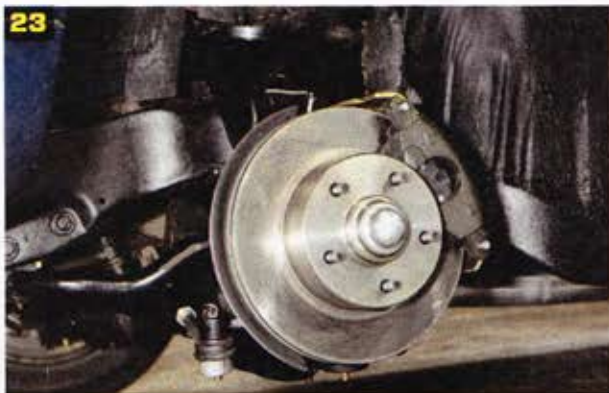
The CPP instructions offer illustrations for the proper banjo fitting installation. You must have a copper washer on each side of the fitting and the "flat" side of the fitting fits against the caliper.

**21**

Bench bleeding the master cylinder is very important and we saved this step for the end of our install. We removed the master cylinder and clamped it in a vise, installed the provided bleeder kit, and filled both reservoirs with fluid. We used a broom handle to press the piston until the fluid did not have any bubbles throughout the piston cycle.

**22**

After we finished bench bleeding the master cylinder, we bolted it back into place and tightened the lines. Now we can bleed the brakes, starting with the passenger-side rear wheel cylinder, then the driver-side rear wheel cylinder, the passenger-side front caliper and, finally, the driver-side front caliper.

**23**

The CPP Power Disc Brake kit was affordable and easy to install. Shown are the standard one-piece cast-iron rotors. CPP offers several upgrades, including “drum offset” rotors that help with tire and wheel clearance issues.

**24**

Adding disc brakes to an early Chevelle typically requires the use of 15-inch wheels, and this particular kit moves the wheel 7/16-inch closer to the fender. This may not seem like a lot, but it matters. We called Coker Tire to get a tire and wheel package that would simply bolt into place.

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The Vredestein Sprint Classic 185/70R15 tire and 15x5 OE steel wheels with 3 inches of backspacing fit perfectly. Coker Tire helped us dial in the sizing and then mounted and balanced the tires and wheels. Finally, we applied a few coats of semi-gloss black before snapping our late '60s Chevrolet dog dish caps into place.

**26**

With new power disc brakes and drop spindles from CPP and new tires and wheels from Coker Tire, our 1964 Chevelle daily driver is now much safer and it looks great, too!

**SOURCES:**

**Classic Performance Products**  
800.522.5004  
classicperform.com

**TIRE AND WHEEL FITMENT**

It's important to consider wheel backspacing in regard to any disc brake upgrade, especially one that includes drop spindles. At stock ride height, wheel backspacing isn't a huge deal because you won't likely have interference between the tire and the fender. However, on a lowered vehicle like this Chevelle you could have some serious tire and wheel fitment issues if you don't do your homework. Backspacing and overall tire and wheel size is a concern because disc brakes typically increase the car's track width compared to drum brakes. CPP's kit is based off of later-model Chevelle spindles and one-piece cast-iron rotors, which position the wheel 7/16-inch closer to the fender. Since our car had the original 14-inch wheels on it we had to upgrade to 15s to clear the calipers so we carefully measured to determine the proper fitment. We found that the dimensions on the front side of the wheel were more important than the backside, and that 2 inches on the front side was our maximum allowance with our given ride height (drop springs and drop spindles for 4 inches of total drop). Otherwise, the tires would rub the fenders in hard-turning situations.

We called the folks at Coker Tire, gave them our measurements, and told them we wanted to stick with the original-style Chevrolet dog dish center caps. Coker Tire's package includes Vredestein Sprint Classic 185/70R15 radial tires mounted to a pair of 15x5 OE steel wheels. This wheel features 3 inches of backspacing, leaving us with 2 inches on the front side of the wheel. Considering our lowered ride height, we also had to take tire size into our calculations. The 185/70R15 tire measures 25.20 inches tall and 7.40 inches wide, giving us an excellent stance and just enough clearance. The end result was a tire and wheel package that we could simply bolt on and hit the road!