One of the reasons why C-10 trucks are so popular is thanks to nearly 30 years of similar platforms having many of the same underlying components throughout model year changes. This not only makes a large quantity of parts available but it also makes the platform attractive to aftermarket companies because they can produce a single part number that covers a wide range of years, and as a result, a larger customer base. One of the companies that has hit the C-10 and classic truck market by storm is Classic Performance Products, better known as CPP.

It wasn’t until 1971 that General Motors made front disc brakes factory option on C-10 trucks, which leaves a decade of trucks with drum brakes and room to improve on the rest of the model years. The rear ends remained drum for even longer. With 50 years of road miles on a classic C-10, a brake upgrade is one of the first things anyone does when these trucks The folks at Classic Performance Products produce a series of kits that provide stopping power to the older truck crowd. Its C-10 Front Big Brake Kit offers a 13-inch cross-drilled and slotted rotor with a modern dual-piston caliper wrapped around it. This all attaches to CPP’s modular drop spindle, which allows for a variety of brake options depending on your budget and provides 2 inches of drop up front.

Moving on to the rear, it’s a bit more complicated than a simple replacement job because it’s actually necessary to convert the tired and inefficient drum brakes to discs. The axles need to be removed to replace the drum brakes with a new mounting plate and disc brakes. The CPP C-10 Truck Rear Big Brake Kit calipers offer a built-in emergency brake cable for the utmost safety. Since disc brakes require more pressure than drum brakes, a CPP proportioning valve must be installed as well to help adjust the distribution of brake fluid when stopping. Usually 70-80% of the stopping force of a vehicle comes from the front brakes since a majority of the weight is over the front end or behind it. This puts a lot of stress on the front braking system, so upgrading the rear brakes can increase stopping power all around. Without a proportioning valve, the rear disc setup will rob more pressure for itself than necessary, depriving the front brakes of much needed pressure. As always with fresh brake installations, a full system bleed is necessary and it’s important to bed the brake pads when making this upgrade.

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BEFORE

[01] Here we see the current front brake setup. The C-10 had been converted to front disc brakes years ago, but the mild factory-style rotors and worn pads just won’t cut it.

[02] The rear drum brakes are nearly 50 years old. They’ve been rebuilt recently, but the technology is antiquated, and since this is a show truck with added horsepower, it’s best to make sure that the brakes can live up to the rest of the C-10.

FRONT BRAKES

[03] Here’s the CPP Front Big Brake Kit featuring cross-drilled and slotted rotors and a strong aluminum hub with bearings. The rotors and hubs feature a 6 x 5.5 lug pattern. You can convert to the more common 5 x 5 pattern using new hubs and rotors, but to keep the same set of billet wheels, we’re sticking with the six-lug pattern.

[04] To show you how Classic Performance Parts assembles its brake kits, here are the rear disc calipers. The brake pads come preloaded and the emergency brake cable bracket is installed.

[05] A proportioning valve adjusts the brake fluid pressure because the rear calipers require a higher pressure than factory drum brakes. This truck already has the valve installed, but now it will control the rear brake pressure as well.

[06] The hub is outfitted with the wheel studs and the bearings are installed before slipping the hub over the CPP modular drop spindle. Make sure to fully grease or pack the bearings before installation. You can never have too much grease on these tightly moving parts.

[07] The new 13-inch rotors are slid over the hub and wheel studs. Then the hub is secured using a castle nut and the dust cap is installed to protect the bearings and keep them greased.

[08] The CPP two-piston calipers are installed onto the back part of the spindle thanks to the supplied bracket. The bracket allows CPP to offer several different brake options.

[09] To install, a simple swap of the spindle hub and brake assembly is in order. With the lower control arm supported, the spindle is loosened from the ball joints.
[10] The brake line is cinched off to prevent leaking, and the rubber flex line is removed from the caliper.

[11] With the spindle and hub assembly free, the upper control arm is disconnected.

[12] A quick hit from a dead blow hammer to the spindle helps knock it loose from the lower control arm. The upper control arm is pried up to make room for the new spindle assembly.

[13] The CPP assembly is bolted up to the control arms.

[14] The ball joints and spindle are tightened up by hand. You’d think an impact gun would be the best tool for the job, but because of limited space, hand-tightening is best. You’ll also be able to tighten the spindle more using your hand, which makes the assembly safer to use.

[15] Here’s the front CPP Big Brake Kit fully set up. You can see that the truck also uses CPP upper and lower control arms for improved steering and replaceable ball joints.

[16] The flex line is reinstalled into the new CPP calipers.

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**PROPORTIONING VALVE**

[17] A proportioning valve is necessary when upgrading drum brakes to a rear disc setup. This valve allows you to adjust pressure to the front and rear of the brake system. Without the valve, pressure is evenly dispersed, meaning the front brakes become weaker and unsafe. An adapter is used to install the rear brake lines.
The brake line is cinched off to prevent leaking, and the rubber flex line is removed from the caliper.

With the spindle and hub assembly free, the upper control arm is disconnected.

A quick hit from a dead blow hammer to the spindle helps knock it loose from the lower control arm. The upper control arm is pried up to make room for the new spindle assembly.

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Once the full system is installed, it's necessary to bleed the brake system, pumping out any air bubbles.

A final inspection of the front end includes tightening every bolt and nut to spec and cycling the suspension to see if there is rubbing or kinks.

For the rear disc brake conversion, the axles need to be pulled to completely remove the drum brakes and install the backing plates for the disc setup. The rear differential cover is cracked open. Go slowly and keep a catch pan close for the gear oil.

The C-clips holding the axles in place are removed and the axles are pulled out. This is accomplished by removing the center pin that holds them in place. The drum brake backing plates are removed and tossed.

The backing plates are installed onto the end of the housing. The axles are slid back in place and the cross-drilled and slotted rotors are placed over the axle studs. The rear rotors feature a built-in emergency brake.

The rear calipers are installed using the backing plate mounts.
[24] The E-brake cable is hooked up to the rear calipers.

[25] New stainless steel flex lines are installed onto the calipers and to the factory brake lines.

[26] The C-clips and center pin are reinstalled to secure the rear axles.

[27] Before reinstalling the differential cover, the old silicone material is scraped off and a clean seal using new silicone is applied.

[28] The rear differential cover is hit with silicone before it’s reinstalled. This helps to ensure that there no leaks.

[29] The new stainless steel flex lines are secured.

[30] The new rear brake lines are connected to the new line coming from the proportioning valve.