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Bigger is

REVAMPING THE BRAKE SYSTEM ON A '72 CHEVELLE/EL CAMINO WITH A CLASSIC PERFORMANCE BIG BRAKE KIT

We've all seen a muscle car at a show with big diameter wheels and little, tiny stock brakes. The bigger the wheels get, the smaller it makes the stock brakes look. The small brakes made us wonder exactly how well one of these cars could actually stop. That's when we started to hunt for a car that had a set of big wheels and stock brakes, and it didn't take long to find one.

Long-time friend and talented fabricator James Crosby had just started work on the '72 El Camino that he recently came into. He really hasn't had much time to do a lot to the car other than lowering it and bolting up a set of custom wheels. He hadn't delved into the brake system at all. It was the worst possible scenario because the ElCo had been equipped with a manual brake master cylinder, so hauling it to a stop was a chore.

But you don't have to take our word for it, because we did a little test of our own. We decided to do a stop test and from 50 mph, James stomped on the brakes and the best distance he could bring the ElCo to a stop in was 133.5 feet. That was a full panic stop, the kind where you pull on the steering wheel to get leverage on the brake pedal.

Then we pulled it into the shop and installed the Classic Performance Products 13-inch front brake/drop spindle, the Classic Performance Products rear disc brake kit with the 12-inch rotors and the



Better!



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175 East Freedom Avenue
Anaheim, CA 92801
800.823.0980
Classicperform.com

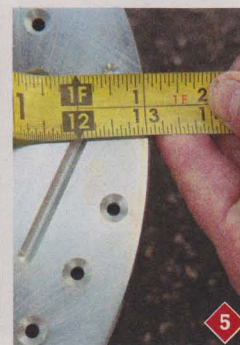
11-inch vacuum booster conversion. The kit also comes with all new hard lines for the front and rear axle, all of the brake hoses, hardware, longer rear wheel studs, rear emergency brake cables, proportioning valve and gaskets. The installation took about six hours and we headed back out to the same place to test the new brakes.

The CPP kit performed significantly better, to say the least. From 50 mph the average stopping distance was 59 feet shorter.

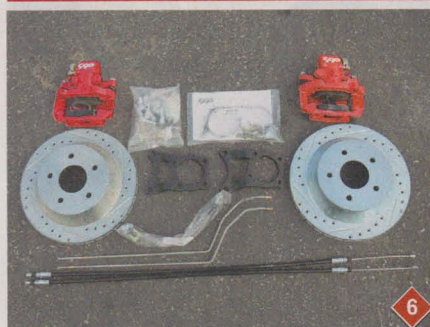
And that was the average, not the shortest distance. The El Camino was now stopping on average of just 74 feet from 50 mph; that's a 44-percent improvement in braking distance from 50 mph to zero. That extra braking power will come in handy the next time you are headed for a turn a little bit hot or when a guy in a minivan isn't paying attention and pulls out into traffic in front of you.

Like we noted earlier, the whole installation took about six hours, but we had a

lift and James has installed several of these kits in the past. If we were going to attempt the job in a driveway, we would expect it to be a weekend project. As you will see in the following photos, there isn't anything that can't be done with simple hand tools to install this kit on your car. If you have any specific questions about the parts or installation procedures, feel free to contact Classic Performance Products using the information located in the source box. **D**



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(1 & 2) The space inside the 20-inch wheels swallows up the factory front disc brakes and rear drums. The good news about the big wheels is that there is still plenty of room for the big brake upgrade.

(3) Another mark against the El Camino's braking system is the manual master cylinder, which made stopping the car difficult.

(4 & 5) Up front, the 13-inch drilled and slotted rotors come preassembled on a set of Classic Performance Products drop spindles and two-piston calipers.

(6) The box for the rear kit has calipers, caliper mounts, 12-inch rotors, parking brake cables, hardware and a complete set of longer 7/16-inch wheel studs.

(7) The third box contained the new master cylinder and 11-inch booster assembly, proportioning valve, pre-bent hard lines, hardware and the vacuum port and hose to connect the booster to the engine.

(8) James wanted to start with the rear conversion. He began by putting the ElCo up on the lift, removing the wheels and drums and draining the gear oil into a drain pan.

(9) After the inspection cover is off the rearend, the bolt that holds the carrier cross pin in place is loosened up so that the pin can be slipped out.

(10) Once the pin is out, the passenger side axle shaft is rotated to remove the spider gears and washers.

(11) The axle shafts can be pushed in to allow the C-clips to be removed, and then the axles are slipped out of the housing.



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(12) The four bolts that hold the backing plate to the axle are removed along with the parking brake cable to expose the outer ends of the axle housing.

(13) The factory hard lines are removed from the axle housing.

(14) The new Classic Performance Products rear caliper mounts are bolted to the axle housing ends with the provided hardware.

(15) The press is the only specialty tool James used during the installation of the wheel studs, but we have all installed wheel studs with a vise before, it just takes longer.

(16) The axle is slipped into the housing and the new rotor is installed over the new wheel studs.

(17 & 18) The caliper is bolted to the new caliper mount with the provided hardware and then the parking brake cable extension is installed with the provided C-clip. The shock was in the way when we went to shoot photos of the installation, so we had James pull the calipers back off to show us where it went. The reason it goes on after the caliper is installed is so that you can get to the mounting bolt on the caliper.

(19) With both sides buttoned up, the C-clips are reinstalled on the axle shafts, and the spider gears are reinstalled along with the carrier cross pin.

(20) Once the rear axle is reassembled, a gasket scraper is used to clean the housing and the inspection cover, and a thin coat of RTV is applied before the inspection cover is reinstalled and fresh gear oil can be added.

(21) The new pre-bent hard lines are installed on the rear end housing with the stainless steel braided hoses at each end.

(22) The hoses are attached to the calipers with the provided banjo bolts and crush washers.

(23) The new rear parking brake cables are installed between the new rear calipers and the intermediate cable to finish off the rear.

(24) Up front, the wheels are pulled off to expose the anemic front brakes.

(25) James starts to disassemble the front suspension by removing the outer tie rod ends from the steering arms on the spindle.

(26) Next, the nuts on the upper and lower ball joints are loosened and "shocked" by hitting the spindle with a hammer to free the spindle. Now this car is already equipped with a set of Classic Performance Products coil-over shocks, if it still had the stock coil springs, a jack would be used under the lower control arm to slowly relieve the pressure created by the stock coil springs.

(27) The stock brake hose is the last thing to be removed.

(28) The entire spindle assembly is removed with the brakes intact.



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(29) Here is a comparison shot of the new CPP 13-inch brakes with the stock disc brake setup. Notice how much of the steering arm of the spindle you can see on the factory unit. It's completely hidden behind the rotor on the CPP unit.

(30) The new spindle and brake assembly is lifted into place and the nuts are tightened on both the upper and lower ball joints. The cotter pins are pushed into place and folded over to lock everything in place.

(31 & 32) The outer tie rod end is installed on the steering arm. Now it's time to move on to the master cylinder because the hard lines need to be swapped over before the new brake hoses can be installed.

(33) The lines are removed from the side, the two bolts that hold the master cylinder to the firewall are removed, and the master cylinder is tossed in the scrap pile.

(34) The stock proportioning valve is bolted to the frame under the master, which is removed and replaced with the one that comes with the kit. Most of the new hard lines are obstructed by something like the exhaust or frame. You'll have to take our word that we swapped them out for the new ones.

(35) After the new hard lines are installed, the new brake hoses can be installed on the front.

(36) Because there was barely enough room under the dash for James by himself, we couldn't really see him removing the crevice and pushrod from the brake pedal, but it has to be removed because the new vacuum booster has one pre-installed.

(37) The 11-inch booster and master assembly is bolted to the firewall and the clevis is installed on the brake pedal, and then the new pre-bent lines are run between the new master and the proportioning valve.

(38) Because the car wasn't equipped with a vacuum booster, there wasn't a vacuum port in the intake. The crew at CPP thought of that and includes one with the brake upgrade kit.

(39) Once the vacuum port is installed in the manifold, the provided vacuum hose is routed between the port and the new brake booster.

(40) After the system is buttoned up, the brakes are bled and the wheels are bolted on. Now the car is ready for its after test.