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Classic Performance Products 1968 Chevelle Brake Upgrade

By Johnny Hunkins

There's something disconcerting about pulling the trigger on a 600-plus-hp big-block, then stomping the stop pedal and getting no reaction. Our '68 Chevelle is the car in question, and with a curb weight approaching 3,700 pounds, there really isn't any excuse for having stock brakes. For the longest time we retained the stock brakes so we could use the 15-inch pizza-cutters up front. This helped us with our quarter-mile e.t., but was a thorn in the side around town.

We finally said, "enough is enough!" The crappy stock brakes have to go, the dragstrip be damned. Since Classic Performance Products (CPP) supplied most of our suspension components, we gave them a call. It turns out they had exactly the budget-oriented front disc brake system we envisioned. CPP makes a very affordable (\$799) system for '64-'72 Chevelles that consists of 13-inch vented, cross-drilled, slotted, and zinc-washed rotors. These are paired with dual 52mm PBR pin-guided calipers. These are the same calipers that equip all '99-06 GM trucks and SUVs with six-lug wheels. That type of OE vehicle typically weighs up to 9,000 pounds, and has a towing capacity of 8,000 pounds, so you know those calipers are rated for severe duty.

The PBR calipers in the CPP kit take the same pads as all '99-06 GM six-lug SUV/trucks, so you can buy replacements at any AutoZone. The kit also includes caliper mounting brackets, brake lines, hoses, hubs, and all hardware. We also needed CPP's new master cylinder, due to the fact that our Chevelle was originally a manual drum brake car. The previous owner had made the conversion to stock manual disc brakes, but kept the smaller drum brake master cylinder. That's a no-no, especially since we were getting ready to increase our caliper bore diameter even more. That CPP master cylinder story will run at a later date. Brakes for Chevelles are pretty straightforward. All Chevelles used the same disc brake spindle, so one system fits all. What we didn't know is that Chevelles shared OEM brake components with Novas. Novas, being narrower and having more confined wheelwells, had to have a special narrow hub when equipped with the Chevelle's disc brakes from the factory. This means that a Nova disc brake hub can be used on a Chevelle in cases where wide wheel fitment calls for extra clearance. That was indeed the case with our 17x8-inch Vintage Wheel Works V40 wheels. Our brake kit included the "Nova" hubs, and carries the part number 6267WBK-P1.

Testing

Rarely do magazines test brake systems all-out; usually the tire is what limits the stopping power and the results. In our case, we already had a set of nitto nt01 r-compound tires, so the limiting factor in our "before" and "after" testing would truly be the brakes, not the rubber. We made a dozen 60-0-mph stops with the stock brakes, with the results ranging from 160 feet to a low of 137 feet. After the swap to the larger 13-inch rotors and larger calipers, we made a dozen more stops (after adjusting the built-in brake bias of our new CPP master cylinder). Results ranged from a high of 126 feet to a new best of 120 feet. Our best stop went from 137 to 120 feet, shaving 17 feet off the distance. Also, the big spread (over 20 feet) before the swap shows the negative effect of fade (heat) on small brakes, while the narrow spread (6 feet) after the swap shows how effectively the larger cpp brakes eliminate heat. And keep in mind, we were still running the late-model ford drum brakes in the back!



The front brake kit from CPP fits all '64-'72 Chevelles (Part No. 6267WBK-P1), and includes 13-inch rotors, dual 52mm piston calipers from PBR, hoses, hardware, mounting brackets, hubs, bearings, seals, cotter pins, pads, and instructions. The chrome master cylinder (part No. CP31500-C) is not included, but if you're upgrading from drum brakes, it's recommended.



After removing your old brakes, start by installing the CPP caliper mounting bracket. Note that if you are converting from drums to discs, you'll first need to convert to disc brake spindles (Part No. 6474SP-S, pair). Two bolts—a 3/8-inch upper anchor bolt, and a 1/2-inch lower mounting bolt—are a cinch.



Pack the wheel bearings with high-quality high-temp disc brake bearing



The aluminum hub expands at twice the rate as steel, so wheel bearing clearance with the new aluminum hub is critical. You want to tighten the spindle nut hard to make sure the bearings are seated, then back it off till it's full loose.



Snug the spindle nut by hand, then install the cotter pin. When the hub expands from the heat, the necessary clearance will be there to prevent premature failure from binding.



Install the outer seal with a dead-blow hammer and a piece of pipe. This will keep the seal square with the hub. Don't cave in the dome of the outer seal with the hammer.



The Chevelle CPP brake kit comes with new rubber brake hoses standard, but Teflon-lined stainless braided lines are available as a \$50 upgrade. Regardless, the banjo bolts (hollow bolts that pass brake fluid) need to be installed with new copper crush washers (included). These washers are dead soft, and are designed to conform to the surface for a perfect seal. We recommend that they not be reused if for any reason you need to take the hoses off.



Copper crush washers are not used at the chassis connection, as flared compression fittings are used. After attaching and tightening the hose at the chassis, add fresh fluid and bleed the brakes, checking for leaks around the copper crush washers. If any leakage appears, tighten the banjo bolt incrementally until the leakage stops.



This powerful yet inexpensive front brake upgrade for Chevelles will give us years of worry-free service. These parts are designed to handle weight multiples several times the mass of our Chevelle, which make it safe for any hardcore road course work we

grease. The new bearings are included in the CPP kit.



After packing the wheel bearing, put the bearing in the new CPP aluminum hub, and install the inner bearing seal (included) using a dead-blow hammer and a piece of flat stock. No need to go crazy, just keep it level going in.

Slide the new 13-inch rotor over the wheel studs, and hold the rotor in place with a few lug nuts. This will properly position the rotor for the installation of the brake caliper. Note that the rotors are marked "L" and "R" for left and right. Double-check that you're putting the right rotor on the right wheel.



The PBR dual-piston caliper attaches to the caliper mounting bracket with two 14mm bolts that need to be tightened to 100-120 lb-ft.

decide to tackle. If we desire a pad upgrade, any number of specialty brake pad manufacturers make various pads for track use. We did not see any appreciable fade with the standard CPP pads after 12 consecutive stops from 60 mph.



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