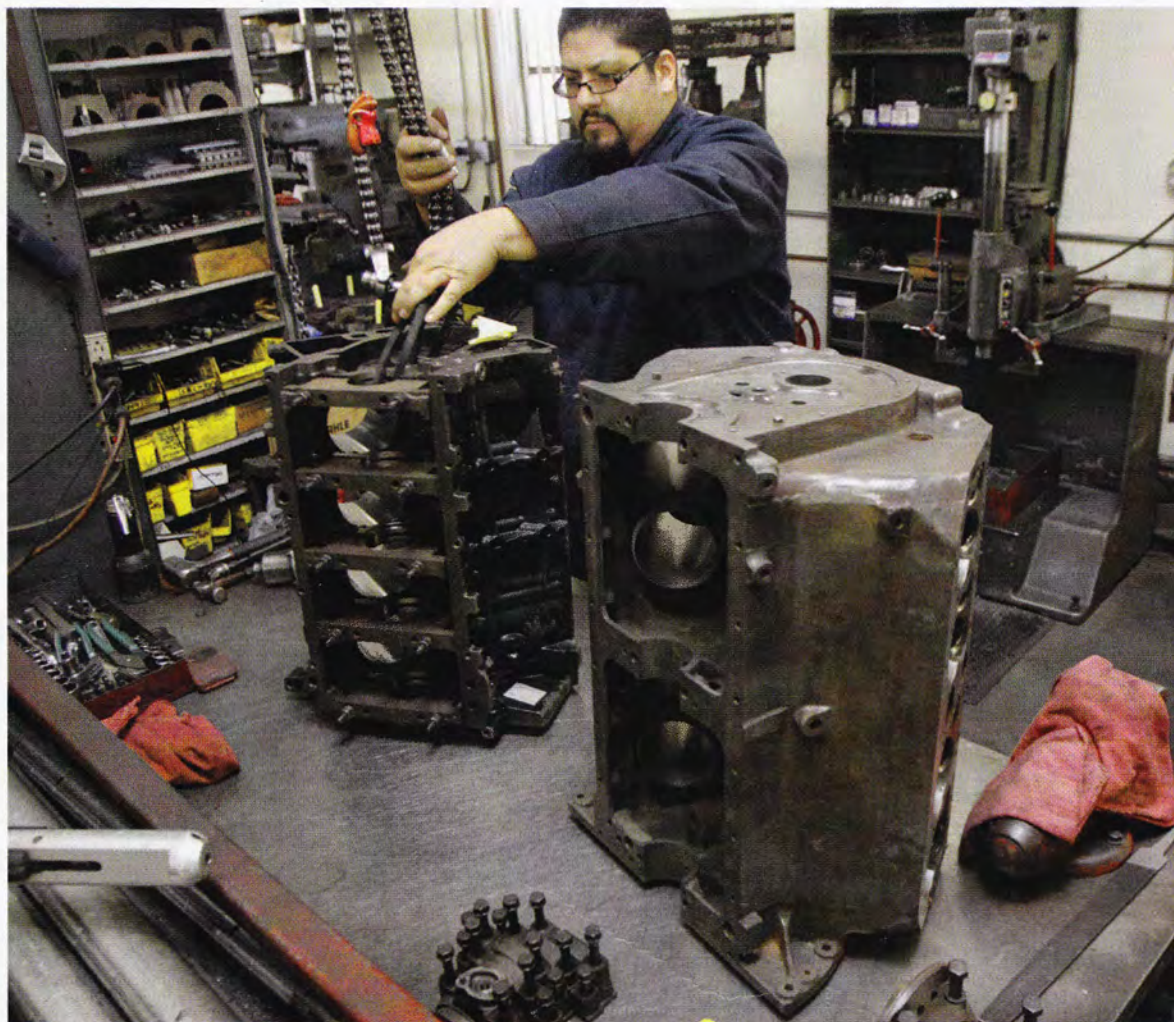


ASK ANYTHING



With four-bolt mains and cross-bolted main caps, it's easy to see why a stock LS engine block is stronger than previous small- and big-block Chevys, and especially the Flathead block to the right of it.

CEMENTED BLOCK

Jason Wood; via email: I've been wrenching on my old pickup since 2008, and your mag has been great at leading me to learn more about what's become a healthy obsession of mine. I've dug into welding, carb tuning, DIY Megasquirt EFI, upholstery, wiring—the list keeps growing and I never tire of it. So here's my question: What's "hard bloc" and why would anyone use it? I get that it's something for high-performance applications, but I saw the owner of Nelson Racing talking about putting concrete in blocks before the LS came out and wondered what that's all about. Until I get your answer, I'll continue to dream of a BBF 460 stroked to 522 ci powering my old truck—inspired

from one of your articles. And, of course, I am considering a turbo.

John McGann: Jason, it's good to hear you've found inspiration within the pages of **CC**. We will strive to keep providing good information of a wide variety of topics. To answer your question, HardBlok is a brand of cement-based water-jacket fillers commonly used to support the cylinders and main bearing webbing of factory engine blocks. In many cases, it's done as a low-cost alternative to purchasing an aftermarket engine block. Aftermarket blocks tend to be thicker castings with reinforced main caps and webbing, usually have four-bolt main caps, thicker cylinder walls, or even

siamesed cylinder bores. In short, they are stronger and more stable, which is the key factor. At certain power levels and/or engine speeds, stock blocks will become unstable and experience problems such as main cap walk. When the main caps start to walk, or twist as the crankshaft is turning, the likelihood of spinning a bearing is very high. Filling the water jackets with block filler stabilizes the bottom half of the engine block, allowing a stock block to withstand more forces and greater power levels than it was ever designed for. In some all-out race engines, you can fill the water jackets to the top of the block, while streetable engines that need to maintain a stable coolant temperature can be partially filled, as most

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of the heat from combustion is transferred to the coolant at the top of the cylinders and inside the cylinder heads around the combustion chambers. Nelson Racing Engines' owner, Tom Nelson, specifically mentions the LS engine block because, with a deep-skirt block and cross-bolted main cap design, the LS architecture is stronger than the small block that preceded it. Bone stock, it can take more abuse as a result. It's worth noting that all the newer V8s from the Big Three have a similar, cross-bolted main cap design. That's why the performance versions of each can push more than 600 net horsepower from the factory.

MORE INFO

HardBlok; H&H Specialties;
865/457-0509;
HardBlok.com

LEMANS NEEDS A BREAK

Anthony Santini; via CarCraft.

com: I recently purchased a 1970 LeMans with four-wheel manual drum brakes I plan to upgrade. I have some four-piston Brembo calipers and rotors from a 2010 Camaro SS I bought at a salvage yard to do a swap on a V6 Camaro I had a few years ago. I was going to sell them to buy a kit and do the front-disc conversion on the LeMans, but I was wondering if anyone made a kit to put these Brembo brakes on a car like my LeMans and what kind of road blocks I would encounter doing this. It seems a waste to sell the four-piston brakes for a single-piston caliper like the ones that come on most of the disc-brake conversion kits I see for sale. Mine is not an original car, so I'm not worried about that. Any advice would be appreciated.

Steve Magnante: Well, Anthony, you said it, any advice would be appreciated and I have to say you should forget about trying to piece together a bitsa-this-bitsa-that front disc-brake conversion kit for your LeMans. Hey, I'll be the first to stand behind junkyard-sourced projects

and I also tend to toss pie in the faces of the overzealous safety fanatics who claim silliness like how vintage tires have an expiration date, but I see too many hassles in store to endorse your plan. Especially when numerous well-engineered front disc-brake conversion kits exist for modest sums.

I wish I could base my decision on some show-stopping detail like 6-lug rotors (hey, Viper!), but it's a fact the 9½-inch-diameter brake drums on your 1970 LeMans share the same 5-on-4.75-inch wheel-lug pattern as the 2010 Camaro SS rotors. Of course, your stock 14- or 15-inch rims would need to go in favor of hoops with sufficient caliper clearance.

Despite this initial green light, the biggest hassle you face is sourcing caliper adapters to merge your drum-brake spindles to the Brembo clampers. I snooped a bit online and don't see any outfits selling these items loose. Yes, you could undoubtedly fabricate the needed parts with a CNC mill and careful measurements, but use only top-grade materials here. Braking systems are no place for shortcuts or haphazard effort. Without a doubt, where there's a will, there's a way. But unless you possess the needed equipment and skills, the cost of hiring someone to help you with this project would surely exceed the price of even the most exotic conversion kit.

Then there's the matter of hubs to mount the Camaro rotors to. Like the Gen 4 Camaro and Firebird, the Gen 5 doesn't use the traditional spindle with its mini-axle and dual-row tapered roller bearings. Instead, they use press-fit stubby hubs that bolt to bulky spindles that incorporate the MacPherson struts. It's all pretty bulky and none of it is related to the equipment found on your Poncho.

I know it's a bummer to have the majority of the necessary parts for the project in your hands only to be stymied like this. On the upside, front and

John McGann: Ed raises an excellent point that most of us need to be reminded of: always check the basics—in this case, measuring the resistance of the conductive part of the distributor rotor. 778,000 ohms will definitely kill nearly all your spark energy, leaving you with little to no voltage available to jump the gap at the spark plug. It's no wonder the Tahoe wouldn't start. We guarantee that checking the basics like this will always save you money. Imagine the rabbit hole Ed and his son-in-law could have fallen down if they had just started replacing parts randomly? Ignition modules, crank position sensors, or a coil would all have been on the list of knee-jerk replacement parts they could have thrown at the car, none of which would have solved the problem. The other valuable lesson is to check all your replacement parts before installing them. Not all cheap parts are bad, but they do need careful scrutiny. I've experienced problems with off-brand replacement parts as well. One of the more costly mistakes I made was replacing the alternator in my Subaru with a cheap rebuild from the local parts store. Within a week of installing it, I was left stranded on the side of the freeway because the alternator failed and was no longer charging the battery. Though it was purchased with a lifetime warranty, I wasn't about to start a cycle of frequent alternator changes. I replaced it with a factory rebuild I bought at the Subaru dealership. It cost quite a bit more, but that alternator that has given me years of trouble-free operation. That's why we always recommend buying the best parts you can afford.

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**ASK ANYTHING—
WE'VE GOT
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rear disc-brake conversion kits are readily available from numerous sources with calipers and rotors to suit every application from the weight-conscious drag racer to Corvette-comparable Pro Touring-style binders. If I were you, I'd stick the 2010 Camaro SS bits on eBay and put the funds toward the fully engineered brake-conversion kit that best suits your needs. And don't scrap those drums! Believe it or not, there's probably a GTO restorer out there who needs them, no joke. Between the cast-off Brembos and your ancient iron drums, you might pay less than you're expecting.

MORE INFO

Classic Performance

Products; 866/593-2423;

ClassicPerform.com

Wilwood Disc Brakes;

805/388-1188; Wilwood.com

ALWAYS CHECK EVERYTHING

Edward Sullivan; via email:

About six months after my son-in-law, Josh, tuned up his used 1996 Tahoe, it started generating a P-0300 trouble code, which is defined as a general misfire. Having just replaced the cap, rotor, and plugs, we looked for many other possibilities, assuming the new parts were good. Then when it rained, the thing wouldn't start at all. One day we pulled the distributor cap off and discovered a lot of corrosion on the eight terminals inside the cap. Cleaning off the corrosion allowed the engine to start. Soon after, we replaced all parts with genuine Delco components and cleared the check-engine light. Truck ran great without fail. Afterward, we checked the [non-Delco] rotor with an ohm meter. The measurement between the brass and spring contact terminal read 778,000 ohms! It should have read nearly 0 ohms. The only thing we could figure out was maybe the way the two pieces were attached: riveted, but maybe non-conductive corrosion between them. We learned a lesson, however. Always buy premium parts.