

## Brake-Dust Busters: Porsche's New Brake Rotors Promise to Keep Wheels Clean

Porsche's tungsten-carbide-coated brakes claim to aid stopping power while looking pretty and keeping wheels clean. We put them to the test to see if they deliver on those promises.



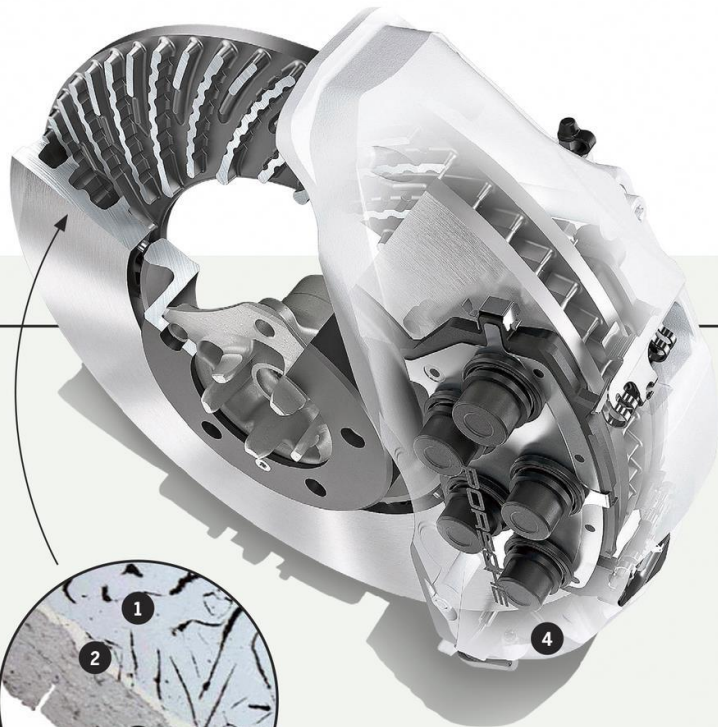
BY [ERIC TINGWALL](#) PUBLISHED: APR 15, 2020



MICHAEL SIMARI | CAR AND DRIVER

Porsche, very much in the business of solving First World problems, finally has the technology to reduce the amount of dust produced by the [Cayenne's](#) brakes. The company says its new Porsche Surface Coated Brakes, or PSCBs, cut down on dust by 90 percent compared with conventional iron discs. The appeal to vanity doesn't end there. The mirror-like surface of the rotors is so reflective that you can see yourself well enough to pick spinach out of your teeth, fix your hair, or take a selfie.

**Brake dust that accumulates on a car's wheels comes from the rotors, not the pads.** Porsche's solution, developed with Bosch, sprays a 0.004-inch tungsten-carbide coating onto iron discs, making them five times harder. In addition to reducing dust, the tungsten--carbide-coated brakes are said to limit high-temperature fade, never rust, and last 30 percent longer than conventional iron brakes, all at a \$5590 discount over the Cayenne's optional carbon-ceramic rotors.



The cast-iron disc ① is laser etched and galvanized with an intermediate layer ② that provides a flexible bonding surface for the tungsten-carbide coating ③. A 10-piston caliper ④ squeezes the front disc.

### Standard Brakes



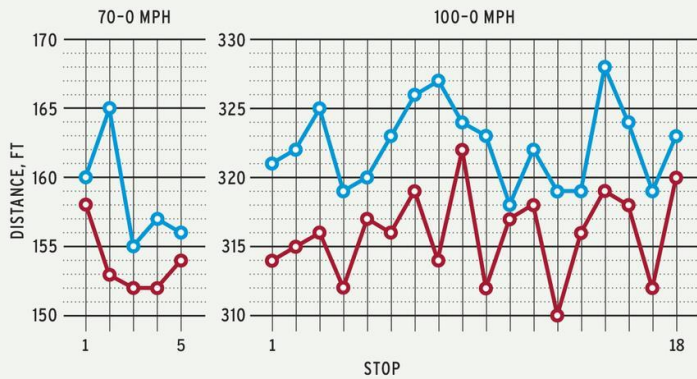
### PSCBs



### Shine On, Tungsten Carbide

Over 23 stops, Porsche's coated brakes demonstrated small but measurable performance differences.

● STANDARD BRAKES ● PSCBS



## CAR AND DRIVER

The new stoppers are standard on the 2019 Cayenne Turbo and a \$3490 option on lesser, non-hybrid Cayennes. You can expect them to spread to the rest of Porsche's lineup in due course. We tested the tech on an S model and brought along a mechanically identical Cayenne S with cast-iron brakes for comparison. The PSCB rotors are larger than the S model's stand-ard discs by 1.0 and 1.4 inches, respectively, front and rear, and Porsche replaces the six-piston front calipers with 10-piston units painted white to flaunt just how little dust the brakes produce.

With both Cayennes wearing the same tires, we didn't expect much difference in stopping distances. The PSCB-equipped Cayenne's best stop from 70 mph was in 152 feet, three feet shorter than the iron-brake model's. From 100 mph, that advantage grew to eight feet, a 3 percent improvement compared with the stand-ard setup. The tungsten-carbide coating is far smoother than the surface of an iron rotor, increasing contact area and, thus, friction between the pads and discs. The PSCB model's shorter distances are won at the beginning of the stop as the pads bite harder, quicker. But that cuts both ways. Our drivers noticed that the new brakes are grabby and tough to modulate during light braking in real-world environs. And the PSCBs provided no advantage in fade resistance. During 18 stops from 100 mph, both systems showed minimal fade, with the difference between the shortest and longest stops measuring 10 feet for the iron discs and 12 feet for the PSCBs.

While the performance benefits are marginal, the PSCBs keep the rollers bright and shiny. We started with clean wheels and wiped a finger across the rims after our testing to reveal how much dust had accumulated [see photos]. The real advantage of PSCBs shows up on the spokes, not in the test results.