





PORSCHE'S NEW 911 TURBO IS MOVING IN THE RIGHT DIRECTION

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DH/OL/HS



EXCUSE ME. IS MY stomach back here somewhere? Engage launch control on a 2010 Porsche 911 Turbo with the optional PDK transmission, and sequential lights on the steering wheel evoke images of a Christmas tree. With the gas pedal planted, the electronics hold engine speed just past 5,000 rpm until you slide your left foot off the brake. Then your gut will drop, and your head will reel as it might when you crack the throttle wide on a Yamaha V-Max, or maybe when a Super Stock drag car launches from the tree, and the bit of saliva left in your slightly nervous mouth will be slammed into your throat.

There's almost no clutch slip and little in the way of slither or tire squawk—just prodigious grip at all four wheels and raw acceleration rarely experienced in automobiles certified for class reunions in the Hamptons or profiling on the Vegas Strip. And launch is only the start of what the new Turbo has in store.

Elvis is in the building. He's fit and trim and maybe a bit more

socially conscious, but he's rockin' like never before.

August Achleitner, Porsche's head of passenger-car development, calls the Turbo a "spearhead of technology," and he's not off the mark. Yet for 35 years, the Turbo's appeal has been more emotive or impressionistic than technical. There are cars with turbocharged engines, and then there is the Turbo. In some circles, the 911 with the big rear wing—like Elvis and a handful of pop stars and athletes known by a single name—is just the Turbo.

GETTING TECHNICAL

Motivated partly by changes in motorsport homologation requirements, Porsche unveiled the original Turbo at the Paris motor show in 1974, in the midst of the first oil crunch and the worst recession since World War II. The Turbo is widely considered the first series-built sports car with exhaust turbocharging and pressure regulation. Its air-cooled, 3.0liter six delivered 260 hp and 260 lb-ft of torque. If those numbers seem puny by today's standards, note that the first Turbo also was the quickest, fastest seriesproduction car then available (0 to 60 mph in 5.2 seconds, top speed of 160 mph). It was anything but civil, described in contemporary reviews as a handful even for expert drivers. Sales exceeded Porsche's modest expectations, and Turbo posters proliferated on bedroom walls across America.

In 1995, with the last of the air-cooled 911s, the Turbo became a twin-turbo and cracked the 400-hp barrier. The first Tiptronic automatic transmission debuted in the watercooled 996 in 2001, and all-wheel drive arrived with the 997 platform in 2006. Through six generations, the Turbo has grown more powerful, faster, more refined and less edgy.

The seventh generation is probably better than ever. But given the visceral rage that planted the original Turbo in the hearts of enthusiasts everywhere, we're pleased to report that the new one has halted one of those trends: the arrogance of efficiency.

The 2010 Turbo starts with the 911 platform launched in the fall of 2008 with the Carrera and the Carrera S (997 Gen II to Porschephiles). It possesses both of Gen II's defining traits: the



latest evolution of Porsche's flat six-cylinder, with a one-piece crankcase and direct fuel injection, and the optional Porsche-Doppelkupplungsgetriebe (PDK) dualclutch, auto-shift transmission.

The engine starts with 40 percent fewer cast parts than Porsche's previous, split-crankcase boxer for faster assembly, fewer sealing surfaces and more rigidity. It's lighter, with less reciprocating mass and higher maximum speed than the previous Turbo engine (7,000 rpm). ratio compared with the previous Turbo engine (9.8:1, from 9.0:1), improving stoichiometric efficiency—and generating more power from less fuel. Higher compression enables lower maximum boost from the twin variable-vane turbochargers (11.6 psi, versus 14.5 psi for 2009), delivering more immediate response if a driver floors the gas pedal while trundling along at 2,000 rpm.

The numbers that count most: 500 hp at 6,000 rpm, up from 480

cent and fuel consumption by 16 percent compared with the 2009.

Gear ratios for the PDK are roughly the same as those in the Turbo's standard six-speed manual, except for PDK's way-overdrive seventh gear (0.62). Yet to bear up under the Turbo's massive torque, PDK gets larger clutches with an additional plate, compared with standard Carreras. It's also offered with an optional three-spoke steering wheel with cast-zinc shift paddles, as opposed to the more

uses the mechanically locking rear differential and stability electronics to brake the inside rear wheel and increase torque at the outside wheel in a curve, yawing the Turbo through the corner. Torque vectoring operates even if the stability electronics are switched off.

WEIGHTY ISSUES

The body is mostly steel, with aluminum hood and doors. Two-tone forged rims—with 235/35ZR-19 Potenza RE050As front and 305/30ZR-19s rear—are seven pounds lighter. The Turbo can be ordered with RS-style center-lock wheels from the GT3. In either case, the '10 models are lighter than the '09s by about 40 pounds, with more standard equipment: 3,461 pounds for the coupe, 3,516 with PDK.

This poses an interesting comparison with a couple of possible supercar Turbo competitors: the supercharged Chevrolet Corvette ZR1 (considerably less expensive) and the normally aspirated Ferrari 458 Italia (considerably more expensive). Thanks to its all-wheel-drive system, the Turbo is relatively pudgy, weighing 474 pounds more than the 458 with PDK and



ON SALE: January BASE PRICE: \$132,800 DRIVETRAIN: 3.8-liter, 500-hp, 479-lb-ft H6; AWD, six-speed manual curb weight: 3,461 lb 0-60 MPH: 3.5 sec (mfr) FUEL ECONOMY: N/A



Stroke increases two millimeters over the 2009 model, bumping displacement from 3.6 liters to 3.8 liters. The dry-sump lubrication system has seven separate pumps spraying 2.8 gallons of oil.

The Turbo's direct-injection system needs even higher pressure than the normally aspirated version (up to 2,000 psi), requiring a six-piston fuel pump. The cooling effect of direct injection allows for a higher compression

hp in the '09 Turbo, or 131.6 hp per liter. Torque increases from 464 lb-ft to 479 lb-ft between 1,950 rpm and 5,000 rpm. For even more kick, the optional Sport Chrono package includes a 10-second overboost feature that raises peak torque to 516 lb-ft, or roughly double that of the original 911 Turbo. Yet with direct injection and other efficiencies, the more powerful 2010 Turbo reduces CO₂ emissions by 18 per-

familiar buttons on the spokes.

The Turbo's all-wheel-drive system has been modified, too, for faster response and smoother torque transfer rear to front. The protocol for torque split is biased more heavily to the rear in nearly all circumstances, delivering more snap at the back of the car.

To reduce further any inclination to understeer, the Turbo also is the first Porsche with a torquevectoring rear axle. The option

'10 PORSCHE 911 TURBO | '11 BMW ACTIVEHYBRID 7 | '10 HONDA ACCORD CROSSTOUR | '10 MERCEDES-BENZ E350 CGI | '10 SALEEN 435S FORD MUSTANG | LONG-TERMERS

183 pounds more than the ZR1. Its power-to-weight ratio (1 hp/6.90 pounds) suffers accordingly, ranking behind the ZR1 (1 hp/5.25 pounds) and the 458 (1 hp/5.36 pounds).

Yet thanks largely to its AWD system, the Turbo accelerates as quickly as or quicker than either. It has the smallest engine, the highest specific output and considerably lower fuel consumption and CO₂ emissions than the Ferrari or the Vette in the European cycle. The Turbo will not carry a gas-guzzler tax.

"Of all high-performance sports

of 194 mph. The company says this Turbo laps the Nürburgring in 7 minutes, 39 seconds, in the hands of its highest-rated test drivers, on the standard Bridgestones. That's a tick faster than the 911 GT3 and 11 seconds faster than the previous-generation Turbo.

We'd guess that most Turbo owners will rarely drive with Nürburgring verve, so the numbers may matter most for bragging rights. Regardless, the beast within is subtle. The Turbo remains one of the most cooperative, potentially docile 500-hp supercars anywhere. It's not de-

The DI engine is more responsive to the throttle but not twitchy or overly sensitive. There's so much torque that it doesn't matter much what gear you're in when you floor it. The PDK can be almost as smooth and accommodating as a torque-converter Tiptronic in lazy commuter driving, but it's more responsive, more decisive, when the driver keeps the right foot planted. It picks the right gear, up or down, almost all the time. The speed and power of shifts under hard throttle will amaze.

This Turbo is so good for driving on public roads that it

There's more noise inside this Turbo, perhaps, mostly mechanical, but also a hint of boomy resonance in the shell at certain engine speeds. Aural splendor is not one of its strengths. Still, the net effect of changes for the seventh generation moves the Turbo toward sporting or edgy and away from *gran turismo* supple, without sacrificing GT sensibilities. If Porsche's objective with the '10 Turbo was to make it more interesting to drive, it has succeeded.

Porsche has sold about 80,000 Turbos since 1974. The sixth-gen 997 has been the biggest seller so









cars, the Turbo must assuredly be the most socially acceptable," says Achleitner.

TRACK THIS

With the new Turbo, superfast gets faster and more super. This car hovers near GT3 RSR (race-car) territory on a track, stretching the envelope of road-car sensibilities. Porsche's numbers are impressive—0 to 60 mph in 3.4 seconds with PDK and Sport Chrono—and may be conservative. With a handheld accelerometer, we measured 3.1 seconds to 60. Porsche reports 0 to 124 mph in 11.8 seconds and 0 to 186 mph in 38.8 seconds, with a top speed

manding to drive to that reunion in the Hamptons, amazingly flexible and quite comfortable.

The Turbo steers with firm directness, without the overboosted feel that some remarkably capable competitors deliver these days or significant corruption from the AWD. Handling is free of vice on the road, and there's so much lateral grip that the stability electronics are hard to find on dry pavement. The ride is supple, and the active shocks know when the road surface gets rough. At autobahn speeds, rapid up-down wheel movement rarely transfers to body movement, and the tires stay in firm contact with pavement.

approaches nondescript, like a good microwave oven that cooks things fast with a supremely intuitive keypad. But back on a track, the beast is easier to find. The manual has a firm, high-release clutch, in the manner of the no-frills 911 GT3, without the GT3's more demanding shifter. The Turbo still pushes a bit more than the GT3 but less than its predecessor, and it wants to rotate or change directions more eagerly. The torque-vectoring rear end sharpens turn-in. Despite the electronic aids, the Turbo seems more willing than its predecessor to be hammered, yet it prefers a slightly more deft touch from its operator.

far, supporting Porsche's decision to offer it as both a coupe and a cabriolet with an optional automatic. The seventh-gen Turbo is a more appealing car, in our view, and the recession certainly didn't kill the original.

The 2010 Turbo coupe and cabriolet go on sale here in January, at \$132,800 and \$143,800, respectively. The full ride, including Sport Chrono with dynamic engine mounts, PDK, paddle-shift steering wheel, torque vectoring, ceramic-composite brakes and center-lock rims pushes the cabriolet past \$165,000.

It's expensive, but the value of visceral rage is immeasurable.