2005 PORSCHE® 911® TURBO S MODEL PACKS THE PUNCH OF 444 HORSEPOWER

Porsche Ceramic Composite Brake technology is standard equipment on all-wheel-drive coupe and cabriolet

The 444 horsepower (SAE) is supplemented by 457 pound-feet (620 Nm) of torque, yet all of that awesome energy is kept under control by all-wheel drive and the amazing stopping power provided by Porsche Ceramic Composite Brake (PCCB®) technology, which is standard equipment on the 2005 Porsche 911 Turbo S.

The Turbo S is available in either Coupe or Cabriolet body styles, and is built on the 911 platform that has provided the underpinning for Porsche 911 sports cars since 1999. An all-new 911 makes its debut in 2005 only in the form of the Porsche 911 Carrera® and Porsche 911 Carrera S models.

High performance at a competitive price

The 2005 Porsche 911 Turbo S comes standard with what previously was known as the optional X50 engine enhancement package that boosts turbocharger pressure to generate even more power from Porsche’s twin-turbocharged, 3.6-liter, horizontally opposed, six-cylinder “boxer” engine. Yet even with 444 horsepower (SAE), ceramic brakes with yellow-painted calipers and other upgrades, the 2005 Porsche 911 Turbo S Coupe carries a base price of just $131,400 ($192,400 in Canadian dollars) while the Turbo S Cabriolet is $141,200 ($206,800 Canadian).

Those base prices include such standard equipment as 18-inch wheels painted in “GT silver metallic,” special insignia on the rear deck lid, door moldings and center console, aluminum gauge faces, as well as cruise control, a six CD changer and a green-tinted band at the top of the windshield. Also for this new model, special Dark Olive Metallic paint is a no-cost option and special “natural” leather is available for the seats, steering wheel, shift lever and hand brake lever.

Increased horsepower

With 444-horsepower, and with 457 lb.-ft. of torque available between 3,500 and 4,500 rpm, the 2005 Porsche Turbo S can sprint from a standing start to a speed of 124 mph (200 km/h) in a mere 13.6 seconds, nearly a second faster than last year’s 911 Turbo. 0-62 mph (100 km/h) time for the Turbo S is 4.2 seconds for the Coupe and 4.3 seconds for the Cabriolet. In testing on closed circuits, the 2005 Porsche Turbo S achieved speeds as high as 190 mph.

The Porsche Turbo S Coupe and Cabriolet are designed for long-distance comfort as well as high performance, with equipment such as a Bose® digital audio system and leather seating on the standard equipment list as well as the Porsche Communication Management system with navigation and a 5.8-inch color monitor.
Cabriolet features Z-fold protection

The cabriolet comes with a fully automatic three-piece top that opens in a Z-configuration and folds down into a compartment behind the rear seat. Unlike most cabriolet tops that expose the inside of the roof lining when the top is retracted, Porsche’s Z-configuration keeps the inside of the roof protected at all times, takes up less space when the top is stowed, and provides better protection for the heated rear glass window when the top is down.

The cabriolet top is made of a high-quality fabric, with a special plastic material between the outer and inner layers providing superior sound insulation and heat protection. A light but solid aluminum frame helps keep the structure stable and resistant to ballooning, even at very high speeds, and applies tension to the section of the roof between the windshield and the first bracket. The top has been tested in a wind tunnel at speeds of nearly 210 mph (338 km/h) without problems.

The roof is fully automatic, operated by a hydraulic system and electric motors that lock the front roof bracket to the windshield frame. A microcomputer masterminds the smooth flow of all functions that opens and closes the top in 20 seconds.

The Turbo S Cabriolet comes with a standard wind deflector and an aluminum hard top.

The wind deflector, made of two frames covered by a net fabric, extends over the area between the front seats and the supplemental safety bar cover and ensures a draft-free driving experience when the top is down. The wind deflector can be installed or removed in a matter of seconds and can be stored in the front luggage compartment.

The aluminum hard top is made from two shells riveted together and includes a parcel shelf that helps reinforce its structure. The hard top has a heated rear glass window, yet weighs only 71 pounds (32 kg), making it easy for a driver and passenger to install when they want the security of a hard roof over their heads. Whether the hardtop is installed or the soft top is up or down, the Turbo S cabriolet provides outstanding protection for its occupants. The car has two supplemental safety bars that are discreetly hidden behind the rear seats. Should one of the angle sensors detect the imminent risk of the car rolling over, the safety bars automatically deploy.

The cabriolet body shell was designed to maintain its safe, stiff structure even without a top. Three-dimensional junction plates are integrated into the side sills and so-called shaft reinforcements, which are welded and bonded, are integrated behind the B-pillars to provide even more strength. Providing such additional reinforcements was no easy job for Porsche’s development engineers, since the intake openings for the Turbo’s intercooler are located at exactly this point on the sides of the car, and the mechanical and electrical systems for the rear side windows are fitted in this area. To achieve their goals, Porsche’s engineers used high-strength steel.

The Turbo S cabriolet is equipped with larger side airbags designed to provide protection for the occupant’s head, chest and hips in the event of a side impact, even when the roof is open and the side windows are lowered.

Engine based on Porsche racing heritage

Whether Coupe or Cabriolet, the 2005 Porsche Turbo S draws its power and its name from its 3.6-liter horizontally opposed “boxer” engine, which provides 444 horsepower (SAE) and 457 lb.-ft. of torque.

Porsche began using turbochargers in the famed Porsche 917 racecar in the early 1970s and introduced its first 911 Turbo production model in 1974. The 911 Turbo arrived in the United States for model-year 1976, and with its 234-horsepower (SAE) engine could achieve 0-62 miles per hour (0-100 km/h) in 5.5 seconds.

Porsche also pioneered innovations that increased turbocharging reliability, including the exhaust wastegate to regulate boost pressure and intercoolers to reduce the temperature of the compressed intake air.
The 911 Turbo S engine is based directly on the 3.6-liter engine from the GT1 racecar that won the 24 Hours of Le Mans in 1998. (The engine is not a turbocharged version of the 3.6-liter unit used in Porsche’s 911 Carrera models.)

Intake air enters through louvers in the engine lid, flows into a joint air filter housing and then into the twin turbochargers. The turbos compress the air to a maximum of 11.76 psi (0.8 bar over atmosphere). From the turbos, the intake air flows through dual intercoolers (one mounted in each rear fender) and then into the induction system.

Like all current Porsche engines, the 911 Turbo S features double overhead camshafts and four valves per cylinder and Porsche’s patented VarioCam® valve timing system, which provides continuously adjustable intake valve timing. The system helps boost low-end and mid-range torque. Dual valve springs ensure reliable, high-performance operation.

Sequential multi-port fuel injection features separate fuel mixture control for each cylinder bank, and a coil-on-plug ("distributorless") ignition system provides quick response and reliable operation. The ME 7.8 engine control module incorporates the E-Gas electronic throttle. In place of a conventional throttle cable setup, E-Gas electronically transmits pedal position to the engine control unit. The system provides even sharper throttle response and ensures low emissions.

**Six-speed manual or advanced Porsche Tiptronic® S**

The engine’s amazing output reaches the drive wheels through a standard six-speed manual transmission. Porsche’s advanced Tiptronic S five-speed automatic transmission is available as an option. The six-speed manual features a dual-mass flywheel for decreased vibration and a hydraulic clutch for consistent performance.

With Tiptronic S, the driver can place the shift lever into “D”, or Drive, and let the transmission do the shifting, or shift into "M", Manual, and control gearshifts with steering wheel-mounted thumb switches.

In automatic mode, Tiptronic S uses infinitely variable shift points to respond to the driving circumstances and the driving style. During leisurely driving, Tiptronic S up shifts early to provide a quiet ride and the best fuel efficiency. With quicker gas pedal action, the transmission responds by raising shift points to hold each gear longer for crisp response and power. The Tiptronic S transmission draws from among 250 different shift maps to provide optimal performance.

Even while in automatic mode, the computer-controlled Tiptronic S responds like a driver working a manual transmission, downshifting or holding lower gears when cornering and driving on hills. Tiptronic S allows the driver to select manual mode by pressing an up- or downshift button, even with the shift lever in the “D” position.

**All-wheel-drive plus Porsche Stability Management**

The 911 Turbo S uses an all-wheel drive system based on a viscous multi-plate clutch located directly behind the front differential. Weighing only 120 pounds (54 kg), the all-wheel drive system in the 911 Turbo S qualifies as one of the lightest such systems in the industry.

Porsche pioneered the all-wheel drive supercar with the limited production 959 of the mid-1980s. Although not imported to North America, the twin turbocharged 959 became a Porsche legend and paved the way for the first standard-production all-wheel drive Porsche 911 Turbo, which arrived in the United States in 1996.

The all-wheel drive system directs torque to the front wheels at a rate of 5 to 40 percent, depending on available traction and power applied. The viscous unit compensates for differing wheel speeds during cornering. The 911 Turbo exhibits outstanding traction on all road surfaces. However, Porsche did not originally intend the all-wheel drive system as an all-weather traction assistant.
Porsche equips the 2005 Turbo S with the Porsche Stability Management system (PSM), an innovation the automaker introduced on the 1999 911 Carrera 4. Using data from several sensor inputs, PSM can detect a loss of grip at the front or rear and reduce instability by applying braking to individual wheels and, if necessary, altering engine power. PSM can help keep the 911 Turbo S going in the direction the driver steers, especially on slippery roads.

The PSM system operates so quickly that most drivers likely will not feel it making corrections, and, if activated, the system operates whether or not the driver is using the brakes. The driver can disengage PSM with a dashboard switch, but, for safety, PSM will engage under braking and then disengage when the driver lifts off the brake.

While the system provides dynamic handling assistance, Porsche cautions drivers that PSM cannot counteract the laws of physics.

The 2005 Porsche Turbo S also is equipped with special bodywork that enhance aerodynamics to provide both cooling of components such as brakes and engine as well as stability at high speeds. The engine compartment lid carries a two-piece rear stabilizer wing, the upper part of which automatically rises at speeds of more than 75 mph (120 km/h) and lowers at 50 mph (80 km/h).

**Optimized suspension, large wheel/tire package**

The four-wheel independent suspension features a Porsche-optimized MacPherson-strut design in front and a multilink setup in the rear, both with aluminum suspension components to reduce unsprung weight. Front and rear stabilizer bars and gas-charged shock absorbers provide flatter cornering. Standard power rack-and pinion steering yields a quick 2.98 turns lock-to-lock and a tight 34.8-ft. (10.6-meter) turning circle.

A “staggered” wheel/tire array (wider wheels and wider, lower-profile tires in the rear) contributes to neutral handling. The standard aluminum hollow-spoke alloy wheels measure 8 x 18 inches in front and mount 225/40 ZR18 tires; the 11 x 18-inch rear wheels mount 295/30 ZR18 tires.

**Racing-bred ceramic brake system**

The 2005 Porsche Turbo S comes standard with Porsche’s outstanding ceramic composite brake technology, which was developed for use in high-level international motorsports competition. Porsche was the first automaker to apply this technology for road use. Porsche Ceramic Composite Brakes (PCCB®) also are standard equipment on the 2005 Porsche Carrera GT.

Ceramic composite brake discs provide a 50-percent weight savings compared to conventional metal discs. This reduces unsprung weight, enhances shock absorber response and vehicle handling, and also improves fuel efficiency and thus contributes to reduced emissions.

Ceramic composite brake discs have an extremely hard surface that provides consistent frictional values throughout the deceleration process, even in braking from extremely high speeds and at high operating temperatures, such as those generated from repeated braking. But the system also provides benefits in low-speed situations. In the event of an emergency stop, PCCB technology does not require heavy pedal forces or outside technological boosting assistance to achieve maximum and immediate stopping force.

With cross-drilled discs and pads that are resistant to water absorption, the ceramic composite brakes provide superior response in wet conditions as well as dry.

Because of their hard surface and immunity to salt corrosion, Porsche Ceramic Composite Brakes have an enhanced operating life. Discs measure 13.78 inches (350 mm) for both the front and rear brakes.
Safe by design
With the high performance potential of the Porsche Turbo S comes a high level of occupant protection. A patented crumple zone body structure helps to protect a reinforced passenger compartment. Supplementing the three-point inertia-reel seatbelts, the 911 Turbo has seatbelt pretensioners and load limiters.

All current Porsche models include dual front airbags plus the Porsche Side Impact Protection System that includes boron-steel door reinforcement beams, energy-absorbing door panels, and door-mounted side airbags. The 30-liter capacity side bags provide additional protection for the chest, head, and pelvis.

At a customer’s request, an authorized U.S. Porsche dealer can install a system that deactivates the passenger airbags when a U.S. Porsche-approved child seat is used. The system features a cross brace with belt lock in front of the passenger seat. Buckling the special child seat into this brace deactivates the airbags. To activate the system, the dealer also must reprogram the airbag control module.

Luxury features are part of the package
From the beginning of the program, Porsche designed the 2005 Turbo S as a fully equipped grand touring car with a high level of standard luxury features.

The 911 Turbo S comes equipped with a full slate of standard luxury and security features:

• Anti-theft system with engine immobilizer and alarm
• Automatic climate control with dust/pollen and activated charcoal odor filters
• Bi-Xenon headlights (xenon high-intensity discharge lights for the low and high beams)
• Bose® digital audio system with six-channel amplifier and 12 speakers
• Heated power side view mirrors
• Heated windshield washer nozzles
• Leather-covered telescoping three-spoke steering wheel with Porsche Crest
• Metallic paint
• Power opening for the luggage and engine compartment lids
• Power sunroof
• Power windows with one-touch up/down
• Power-adjustable full leather seats with driver’s seat memory
• Programmable remote locking system
• Trip computer
• Full leather interior
• Six disc CD Changer

The remote entry system allows the driver to open the luggage compartment lid and operate the seat memory function.

Porsche Communications Management
Porsche’s Communication Management system (PCM®) comprises tuners, CD player, navigation system, and trip computer, all linked through Media-Oriented Systems Transport (MOST) digital data bus. The MOST system incorporates light-wave conductors that exchange data between the individual components without loss of quality and at ultra-high speeds.
PCM includes a 5.8-inch (147 mm) color screen with its 16:9 aspect ratio and 12-position keyboard for easily and efficiently entering radio frequencies. The system ensures excellent audio quality. The navigation module provides such features as road junction zoom-in, dynamic navigation to avoid congestion, map scrolling so you can see beyond your current position, tour planning with the ability to memorize as many as eight destinations in a row and a CD-ROM system that can be used for the navigation system or for music.

**Standard Bose® audio system**

The 911 Turbo S features the Bose system as standard equipment. Each Bose audio system has been custom-engineered for a particular Porsche model. The Bose automotive music systems combine balanced stereo, a panoramic soundstage, deep bass and smooth frequency response to produce lifelike music reproduction even in the challenging environment of a car. Digital amplifiers provide clean, uncolored sound at any listening level. In the 911 Turbo S, 12 advanced loudspeakers (11 in the cabriolet) and a subwoofer blend seamlessly into cabin trim, raising and widening the sound stage and ensuring balanced stereo.

**Opportunity to personalize options**

Porsche Cars North America offers customers in the United States and Canada the opportunity to personalize their cars through two option-selection channels.

Together with the choice of limited-availability special paint colors, the special options allow a customer to make a Porsche into a truly one-of-a-kind car. The Porsche Exclusive program offers a wide array of optional features installed at the factory. Options include custom interior trim packages and individual trim items.

The Tequipment (“Tech-quipment”) program offers a line of accessories available only from authorized Porsche dealers. Tequipment options include such items as special wheels, an aerobody kit, instrument panel trim kits, CD changers, and custom floor mats. Customers can order Tequipment options at the time of purchase or return to the dealership for installation later. While installation of Tequipment may require some modifications to the car, such modifications do not affect the standard limited warranty. Tequipment items come with a two-year warranty when installed by a certified technician at an authorized Porsche dealership.

**Substantial warranty**

Every new model-year 2005 Porsche car sold in the United States and Canada is covered by a four-year/50,000-mile (80,000 kilometer), bumper-to-bumper limited warranty, which includes Porsche’s roadside assistance program. The galvanized body and 26-step paint and anti-corrosion process enable Porsche to warrant each car against rust perforation for 10 years and unlimited mileage.

In addition, Porsche guarantees the paint finish for three years – also without a mileage limitation.

Porsche Cars North America, Inc. (PCNA), based in Atlanta, Ga., and its subsidiary, Porsche Cars Canada, Ltd., are the exclusive importers of Porsche sports cars and Cayenne sport utility vehicles for the United States and Canada. A wholly owned, indirect subsidiary of Dr. Ing. h.c.F. Porsche AG, PCNA employs approximately 250 people who provide Porsche vehicles, parts, service, marketing and training for its 203 U.S. and Canadian dealers. They, in turn, provide Porsche owners with best-in-class service.

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