2006 PORSCHE® BOXSTER® AND 2006 PORSCHE BOXSTER S PROVIDE THE BEST OF BOTH WORLDS

Two-seaters offer a unique blend of the classic, mid-engine driving experience and thoroughly modern automotive technology

With powerful engines purposely positioned immediately behind the driver’s and passenger’s seats to optimize the outstanding balance of an especially athletic chassis, the 2006 Porsche Boxster and 2006 Porsche Boxster S satisfy enthusiast drivers with exceptional levels of dynamic capabilities. At the same time, Porsche’s roadsters provide styling that is thoroughly modern while carrying forward cues from the company’s rich heritage.

Thoroughly modern, but with a strong nod to heritage

The roadsters’ design theme draws heavily on such famous and historic Porsche racecars as the 550 Spyder and the RS60, vehicles that beat larger and more powerful competitors in the heyday of international sports car racing. However, the 2006 Porsche Boxster and 2006 Porsche Boxster S are modern in every way. For example, they were the first roadsters produced with standard side airbags coupled with separate airbags that help protect occupants’ heads. They also share 911 and even Porsche Carrera GT design elements, especially when it comes to aerodynamics designed to enhance road-holding dexterity and high-speed stability.

Boxster: Boxer engine, Roadster structure

The Boxster takes its name from its horizontally opposed “boxer” six-cylinder engine architecture and its classic, two-seat, open-air “roadster” chassis structure.

While the driving experience certainly is enhanced by being exposed to the elements, all Boxster and Boxster S models come with an electronically powered convertible roof that can be open or closed even while the vehicle is in motion.

From concept vehicle to production sports car

The Boxster made its debut as a show-stopping concept car unveiled at the North American International Auto Show at Detroit in 1993. The car drew such sustained praise that Porsche undertook development of a production model that launched in 1997. For the 2005 model year, the Boxster and the even more powerful and dynamic Boxster S were redesigned both in styling and engineering.

For the 2006 model year, the Porsche Boxster and Porsche Boxster S offer new features such as an optional tire-pressure monitoring system, the two-stage front airbag technology, and optional enhancements to the available navigation system including an electronic logbook feature that can record mileage, journey length, date and time, as well as the starting point.
and destination address for any or every trip, a boon to people who use the car for business come tax
time.

Unchanged are such Boxster and Boxster S strengths as their powerful engines, versatile transmissions,
strong yet nimble steering and suspension, and their roomy and well-equipped passenger compartment
with a roof that opens or closes at the touch of a button at speeds up to 30 mph.

**Power and control**

For the second year of production of this second Porsche Boxster and Porsche Boxster S generation, the
sports cars continue to provide powertrains that are more powerful yet extremely fuel-efficient, thanks in
part to five- and six-speed manual transmissions with short, crisp gear changes and
the famous Tiptronic® S automatic gearbox.

But power without control can be foolhardy, so the 2006 Porsche Boxster and 2006 Porsche
Boxster S are equipped with variable-ratio steering, precisely tuned and athletic suspension,
large wheels and tires — and brakes — as well as Porsche Stability Management (PSM)
technology as standard equipment.

Also standard on all 2006 Porsche Boxster and 2006 Porsche Boxster S models is a surprisingly roomy —
and very well equipped — cockpit for the driver and passenger, as well as two trunks:
one in the front of the vehicle, and another behind the engine.

**New for the 2006 model year**

Several features enhance the newest version of the Porsche Boxster and Porsche Boxster S.
These include:

- Two-stage front airbag technology as standard equipment. Both front airbags use an organic-based
  propellant that not only makes them lighter and more compact, but easier to recycle as well. Designed to
  accommodate child safety seats, the passenger seat features sensors that automatically switch off the
  passenger airbag depending on the weight detected. The front airbags are augmented by a side-impact
  protection system featuring side airbags integrated into the front seats that work in tandem with airbags
  that deploy upward from their housings in the door windowsills to help protect occupants' heads.

- An updated Porsche Communication Management (PCM) system that can now play MP3
  encoded CDs through the CD unit.

- A new available exterior color: Forest Green Metallic (replacing Dark Teal Metallic,
  which is now a special order color).

- Another new safety feature is the optional tire-pressure monitoring system. Wheel sensors constantly
  monitor the air pressure in each tire and alert the driver with two warnings. A "gentle" warning in white
  text appears on the digital display within the tachometer if air pressure drops
  by more than 2.9 psi but less than 5.8 psi. This warning appears for 10 seconds each time the
car is started. A "stern" warning is displayed in red text on the tachometer's digital display if air pressure
drops more than 5.8 psi or if pressure is falling by more than 2.9 psi per minute. This warning appears
as soon as the respective values are exceeded, whether the vehicle is
  stationary or moving.

- Also as optional equipment, an electronic logbook feature can be added to the Porsche Communications
  Management system. The logbook allows automatic recording of mileage,
  journey length, date and time as well as the starting point and destination address for any
  or every trip. Also optional is an extended navigation module that includes “back-trace”
technology so you can find your way back to your starting point even when the roads you travel may not appear on the navigation system map.

- In the first quarter of 2006, the Porsche Exclusive option program will offer a new SportDesign exterior body trim package. Other options include 19-inch Carrera Sport wheels, an aluminum-look multi-function steering wheel, aluminum gearshift and handbrake levers, a steering column with leather trim, and sport seat backrests finished with either body-colored leather or with an aluminum-look material.

Of course, the options list continues to offer such Porsche exclusives as Porsche Active Suspension Management (PASM) and the Porsche Sports Chrono Package, while the Boxster S can be fitted with Porsche Composite Ceramic Brakes (PCCB®) that significantly reduce unsprung weight.

The total package approach

For the 2006 Porsche Boxster and 2006 Porsche Boxster S, Porsche engineers and designers took a total package approach to properly match powertrain, steering, suspension, braking, structure, aerodynamics and even component cooling to provide the enhanced dynamic capabilities and safety expected by enthusiast drivers.

More power more efficiently

The 2006 Porsche Boxster draws its power from Porsche’s 2.7-liter, horizontally opposed “flat” six-cylinder “boxer” engine while the 2006 Porsche Boxster S is propelled by a 3.2-liter engine that shares the basic architecture but features enhancements to provide substantially more power.

The 2.7-liter engine provides 240 (SAE) horsepower and 199 pound-feet of torque, enough to accelerate the 2006 Porsche Boxster from a standing start to 60 miles per hour (96 km/h) in less than six seconds and on to a top track speed of 159 mph (256 km/h).

The 3.2-liter engine pumps out 280 (SAE) horsepower and 236 pound-feet of torque, pushing the 2006 Porsche Boxster S to 60 mph in a mere 5.2 seconds on its way to a top test-track speed of 167 mph (268 km/h).

The engines show their real strength in the low-to-middle section of the rev range, where they provide optimum power for passing. This is accomplished by maximizing available torque, in large part through precise management of airflow from the air filter all the way through the exhaust tips.

Thus the driver of the 2006 Porsche Boxster can stand on the throttle in fourth gear and even without downshifting experience acceleration from 50 mph (80 km/h) to 75 (120 km/h) in less than seven seconds. In this same maneuver, the car can continue on, doubling its speed from 62 mph (100 km/h) to nearly 124 (200 km/h) in just 22.5 seconds.

Meanwhile, in the Boxster S, this same exercise — and now done in an even higher gear, fifth — results in a passing sprint of just 6.8 seconds and the car needs only 19.4 seconds to leap from 62 mph (100 km/h) to double that speed.

Of course, the enthusiast driver would make a downshift to make use of lower gears’ even stronger torque output, the Porsche engineers test every driving variation during vehicle development and the figures above underscore the strength of the Boxster and Boxster S engines.
Boxster engine essentials

Both the 2006 Porsche Boxster and the 2006 Porsche Boxster S engines have four-valves per cylinder, with hydraulic valve play compensation, cylinder-specific knock control and separate coils with solid-state high-voltage distributor systems.

Cylinder head units comprise three parts: the actual cylinder head complete with valves, the cup tappet housing with hydraulic cup tappets, and the cylinder head cover.

Porsche’s VarioCam® camshaft adjust technology assures maximum power on minimum fuel consumption and exhaust emissions in both city and highway driving.

To enhance the performance of its smallest engine, Porsche engineers equip the 2.7-liter Boxster engine with a special aluminum crankshaft bearing bridge built with strong, thick bearing shells. This technology shaves 12 pounds of weight when compared to a bridge that uses cast-iron inserts.

Where's the dipstick?

Boxster engines feature integrated dry-sump lubrication with two reflow pumps drawing oil from the cylinder heads and with a separate pump supplying oil to engine lubrication points. This setup assures optimum oil supply even under the extreme dynamic conditions of high lateral acceleration. The system also is so precise in monitoring oil that the engines need no dipstick; the electronic monitor measures the oil level and displays the result on the instrument cluster.

Air control produces power

A large air filter significantly minimizes counter pressures and facilitates air intake while, in wet conditions, minimizes any precipitation that might otherwise splash into the intake manifold.

The 2.7- and 3.2-liter engines have large intake manifolds that feature a two-chamber pipe with its distributor flap moved downstream between the cylinder banks.

With the flap closed, the banks draw air separately and the engine operates like a “double” three-cylinder powerplant. At low speeds this significantly increases torque, providing greater boost from as little as 1,500 rpm.

Starting around 3,000 rpm in the Boxster and 3,500 in the Boxster S, the flap closes again and a flap in the second pipe opens, generating extra power though a resonance charge effect.

Above 5,600 rpm in the Boxster and 5,400 in the Boxster S, both flaps open to provide maximum airflow. As a result, maximum torque — 199 pound-feet in the Boxster and 236 pound-feet in the Boxster S — is available from 4,700 to 6,000 rpm.

The Boxster S gets a multi-section manifold with equal length exhaust pipes for each cylinder improving the charge cycle and boosting engine output.

On both versions of the Boxster, Porsche’s patented and heat-resistant woven-steel cushions reduce engine vibration and special bearings, designed to limit the transmission of vibrations to the Boxster’s body, connect the exhaust system to the engine.

The exhaust systems feature pipes with thin walls but large cross sections to move gases more directly to the mufflers while reducing counter pressures and allowing the engine to exhale more efficiently. To reduce emissions, Porsche uses small pre-catalysts and fits them directly to the exhaust manifold so they heat more quickly and thus achieve their maximum efficiency more quickly. The main catalysts are integrated to the mufflers. While this exhaust system is complex, it also is light in weight and thus enhances vehicle dynamic capabilities while still enabling both
the 2006 Porsche Boxster and 2006 Porsche Boxster S to meet the U.S. government’s LEV (low-emission vehicle) II emission standards.

The Boxster has a large, oval-shaped central exhaust tip while the Boxster S exhales through twin oval pipes mounted at the center of the lower rear fascia. Careful airflow management from intake through exhaust also allows fine-tuning of the audible emissions from the 2006 Porsche Boxster and 2006 Porsche Boxster S. Both cars produce pleasingly muscular and powerful tones that underscore powertrain performance.

**Gearing up the Boxster and Boxster S**

The 2006 Porsche Boxster employs a standard five-speed manual gearbox and can be optioned with the six-speed manual that is standard equipment on the 2006 Porsche Boxster S.

Compared to the manual gearbox used through the 2004 model year, shift travel is reduced by some 26 percent and enhanced synchromesh makes those shifts go even more smoothly. Gearing was revised to match the larger standard rear wheels used on second-generation Boxsters.

The six-speed manual was built especially for the Boxster S and, like the five-speed manual, has reinforced synchromesh rings on all gears. Multiple synchomesh assures quick and easy shifts even with short shifter travel, so the five-speed manual features triple synchromesh on first gear and double synchomesh on second. The six-speed has triple synchomesh on first and second gears and double synchromesh on third, fourth, fifth and sixth.

As on the 911 Carrera, the synchromesh rings in first and second gear on both Boxster manuals have a wear-proof carbon coating.

**Upgraded Tiptronic S**

Optional on either the 2006 Porsche Boxster or 2006 Porsche Boxster S is Porsche's Tiptronic S five-speed automatic transmission that allows for manual gear changing via fingertip controls located on the crossbar of the steering wheel.

For the second-generation Boxsters, Tiptronic S was upgraded to match the roadsters’ more powerful engines. In addition, the gearbox and its electronic controls were retuned to better recognize uphill and downhill gradients and to prevent unwanted up shifts.

**Variable-ratio steering**

The Boxster and Boxster S come with standard variable-ratio rack-and-pinion steering that helps enhance their agility on winding roads while helping maintain stability at higher speeds.

When the steering wheel is within 15 degrees of its on-center position, the steering ratio remains similar to that used on the first-generation Boxster. This assures a smooth and calm driving experience, even on rough surfaces.

However, when the steering wheel angle exceeds 15 degrees from center, the ratio becomes more direct, reducing lock-to-lock and giving the driver better control on winding roads as well as in slow-speed maneuvers, such as when parallel parking.

Even with its wide tires, the Boxster offers a turning circle of only 36.4 feet (11.1 meters).
Wide track is part of enhanced front suspension

While the Boxster and Boxster S ride on the same basic suspension geometry that made the first generation so much fun to drive, the entire system was updated and components optimized to be lightweight yet strong.

Each of the four wheels is independently mounted on a Porsche-optimized MacPherson strut/spring suspension arrangement with longitudinal and transverse control arms. This system assures precise wheel control as well as a comfortable ride.

For the second-generation Boxster, front suspension geometry was updated to provide even better protection in an offset frontal collision. Porsche engineers widened the front axle by 0.59 inches (15 mm) on either side, moving axle pivot points outward and widening the car’s track by up to 1.38 inches (35 mm) in front and 0.95 inches (24 mm) in the rear, depending on the wheel and tire package. Additionally, the use of pressure-cast aluminum reduced the axle crossbar weight.

Lighter but stronger aluminum pivot bearings enhance steering precision and handling of high lateral forces. They also provide better airflow for brake cooling.

To deal with the cars’ increased power and torque, wheel bearings were increased to 3.15 inches (80 mm) in diameter. These bearings are stiffer and, thanks to a multi-pole seal with a magnetic layer that generates speed pulses, they perform the function formerly handled by anti-lock brake pulse rings.

A hydraulic bearing replaced a conventional rubber/metal bearing to connect longitudinal and transverse suspension arms. This provides an even more comfortable ride by absorbing vibrations caused by rough road surfaces.

Porsche engineers also reset springs, shocks and other suspension components to match the chassis, wheel and tire package, assuring an extremely dynamic driving experience without any damper to ride comfort.

Rear suspension: stiff but light:

Engineers set a target of putting the second-generation Boxster and Boxster S on a rear suspension that is stronger but lighter while increasing transverse stiffness so the car can deal with higher forces of lateral acceleration while providing extremely comfortable ride quality.

One significant change was using pressure-cast aluminum for the carrier element on the rear suspension subframe. This change reduced weight by more than two pounds (nearly one kilogram).

Axle kinematics and the tie bar mount were optimized to improve response and agility.

Long, two-sleeve shock absorbers enhance camber stiffness and vehicle response. A longer pivot lever on the aluminum wheel mount provides more precise wheel control. Camber stiffness also was improved — by 30 percent — and hollow casting of the wheel mount reduced weight another 2.6 pounds (1.2 kilograms).

New-generation tires wrap large wheels

Second-generation Boxsters ride on 17-inch wheels and the Boxster S comes standard with 18-inch wheels. Optional on either vehicle are 19-inch rims. Boxster and Boxster S wheels are strong but lightweight, thanks to a flow-forming process.

The Boxster comes with wheels that feature a forked, five-spoke design. Wheels are 6.5 inches wide in front and eight inches wide in the rear. All tires are Z-rated radials, 205/55 aspect in front and 235/50 in the rear.
The Boxster S rides also rides on forked, five-spoke wheels, though the design is different from the Boxster pattern. The front wheels are eight inches wide and the rears are nine inches wide. Tires are 235/40 aspect in front and 265/40 in the rear.

Three 19-inch wheels are available as options. All are eight inches wide in front and 9.5 inches wide on the rear axles. The larger wheels enhance vehicle dynamics and also shorten stopping distances.

Latest-generation tires are designed to handle the increased dynamic forces the cars are capable of generating while providing a comfortable yet athletic ride.

**Spare tire would add unnecessary weight**

To save 22 pounds (10 kilograms) per car, and to provide additional room for luggage, the Boxster and Boxster S are not equipped with a spare tire or a jack for changing tires. Instead, the cars have an electrical air compressor and emergency tire sealant. Damage, such as that caused by a nail in the tread, can be temporarily repaired by using the tire sealant and re-inflating the tire.

Porsche reminds drivers not to exceed 50 mph (80 km/h) on a tire with a temporary repair and to have the tire replaced or professionally repaired as quickly as possible.

**Enhanced braking system**

The Boxster and Boxster S are equipped with cross-drilled disc brakes at each wheel. Like all Porsche vehicles, brakes undergo extreme testing both for stopping power, durability and resistance to fading.

On the Boxster, front brakes are 11.73 inches (298 mm) in diameter and 0.94 inches (24 mm) thick while the rear brakes are 11.77 inches (299 mm) across and 0.79 inches (20 mm) thick.

The more powerful Boxster S gets even larger front brakes: 12.52 inches (318 mm) by 1.1 inches (28 mm) while the rear brakes are 11.77 inches (299 mm) by 0.94 inches (24 mm) thick.

Both cars have four-piston aluminum monobloc calipers and anti-lock braking technology.

To reduce the force required on the brake pedal and to expedite brake response, brake power assist was boosted by 18 percent on the second-generation cars and provides a consistent, fatigue-free and spontaneous response.

The Boxster and Boxster S use a mechanically driven vacuum pump that supplies pressure to the brake servo instead of a conventional suction jet pump within the engine intake manifold. Driven by the exhaust cam on the right-hand cylinder bank, the pump provides a high and consistent level of power, even in low ambient air pressure or high altitude conditions and during highly dynamic driving conditions under mostly open throttle.

**Porsche Ceramic Composite Brakes available**

Optional on the Porsche Boxster S are Porsche Ceramic Composite Brakes (PCCB). Because of their exceptional performance in extreme conditions, ceramic composite brakes were developed for use in high-level motorsports competition. Porsche was the first automaker to apply them for road use, where they are standard equipment on vehicles such as the Porsche Carrera GT and Porsche 911 Turbo S.

Instead of metal, the 13.78-inch (350 mm) brake discs are a ceramic material that provides high and consistent levels of friction during application. They also weigh approximately 50 percent less than metal discs and thus reduce unsprung mass by 34.4 pounds (15.6 kg) per car.
The newest generation of Porsche Ceramic Composite Brakes is even more rigid, yet includes more interior cooling ducts. Fiber reinforcement on the friction surface is increased, significantly enhancing resistance to abrasion under high loads.

**Porsche Active Suspension Management available**

Porsche introduced PASM — Porsche Active Suspension Management — technology on the 2005 911 Carrera, and this system also is available as an option on the Boxster and Boxster S. PASM provides two suspensions in one: a sporting but comfortable setup for normal use and a very dynamic setup for performance-driving situations.

By pressing a button on the center console, the driver can switch from PASM “Normal” to PASM “Sport.” In testing at Germany’s famous Nürburgring racing circuit, a Porsche 911 Carrera equipped with PASM and set in the Sport mode produced lap times an average of five seconds faster than with the standard suspension setup. But there are advantages to PASM even when left in its normal setting because it automatically adjusts to changes in driving style, gradually becoming firmer in response to greater dynamic forces.

The PASM system combines continuously adjustable shock absorbers, a pair of accelerometers — one in the front right damper dome, the other in the left rear — that determine vertical movements of the car’s body, and an electronic control unit that also has access to steering angle, road speed, brake pressure and engine torque figures. This provides optimum damper control for each wheel with active dampers that have a similar structure as standard shocks, providing damping with oil pressure, but also a bypass valve that opens and closes to increase or reduce the oil flow as needed.

(Should the system fail, the bypass valve automatically closes, putting PASM into its hardest position to assure the safety dynamic driving mode.)

**Dynamic modules for nearly any driving situation**

PASM is equipped with five special software modules — lane change, vertical control, lateral acceleration, brake and load change — to provide optimum settings for many driving conditions:

- **Lane change module**: In response to rapid movements of the steering wheel in a sudden maneuver, the system instantaneously increases damper forces on both axles, reducing any tendency toward sway or rocking.

- **Vertical control module**: In the normal program, damper forces increase whenever vertical movement of the car’s body exceed a threshold, for example, when driving on a bumpy surface. This prevents any risk of the body starting to rock. However, when in the sport program, the system reduces the damping effect to maintain wheel contact with a rough surface, preventing the risk of the car “jumping” around.

- **Lateral acceleration module**: In the normal program, damping varies through a curve, adjusting with road speed and lateral acceleration.

- **Brake module**: As soon as the driver applies the brakes, PASM firms damping to reduce body dive, ensuring faster transmission of brake forces to the road. Then, at a certain point in the braking process, the system switches to softer damping, with different forces applied in the front and rear of the car. This ensures better surface contact and shortens stopping distances, even on rough roads.

- **Load change module**: In all-out acceleration, with the driver lifting off the accelerator while shifting gears, the control maps are adjusted for the front and rear axles. In the normal mode, harder damping is used briefly to prevent too much squat. In the sports mode, a softer damper response is used to improve traction, for example, on a rough road surface.
**Porsche Stability Management is standard equipment**

All second-generation Boxster and Boxster S models are equipped with enhanced Porsche Stability Management (PSM) as standard equipment. PSM is a computerized system that uses the sensors for ABS (anti-lock braking), ASC (anti-spin control), EDC (engine drag control) and ABD (automatic brake differential) and intervenes to help the driver keep the car on its intended path rather than sliding too far sideways, say in a fast and tight turn.

To provide the driver with more latitude in slower curves, PSM intervenes later when the vehicle is traveling at a rate of approximately 45 miles per hour (70 km/h).

The driver can deactivate the system with a switch and the system stays off until the driver applies the brakes. However, with enhanced PSM, the system doesn’t reactivate until the driver presses firmly on the brakes, reaching the ABS threshold on at least one front wheel. For the enthusiast driver, this change allows more dynamic freedom, including slight use of the brakes in curves.

**Sport Chrono Package**

Available as an option on the Boxster and Boxster S is the Sport Chrono Package that allows the driver to engage more aggressively set electronic management system control maps. This feature also includes a separate stopwatch gauge on top of the instrument panel.

By pressing a button on the center console, the driver engages Sports Chrono to take driving dynamics to a standard never before available. The Sports Chrono options provides a more aggressive throttle map for the engine controls throttle mapping, and also effects the engine speed limiter, PSM, PASM and Tiptronic S.

When the Sports telltale lights up on the center portion of the gauge cluster, the driver knows that the E-gas control line has switched to a steeper configuration that puts the Tiptronic S in its manual mode, thus the throttle butterfly responds more quickly to movements of the gas pedal and the driver enjoys even more spontaneous response from the engine. Should the driver keep the accelerator pedal fully depressed without shifting gears, the engine speed limiter in gears 1-5 intervenes far more abruptly than in routine driving. Shifts become less oriented to comfort and the throttle butterfly closes faster when the driver lifts off the accelerator pedal, thus providing a more dynamic driving experience, more similar to the feedback a racer gets from a car on the track.

The operation and intervention of PSM also changes to provide greater agility. For example, when accelerating out of turn in the Sports mode, higher anti-spin control thresholds allow more slip from the rear wheels. This can result in even faster acceleration because PSM does not intervene as quickly.

Likewise, other PSM thresholds, such as those that control the anti-lock braking system, are raised to a level that allows more dynamic control by the driver before the system intervenes. And the particularly skilled driver retains the option of switching off the PSM system and taking full manual control of the car’s dynamic direction.

If so equipped, PASM also switches automatically when needed to a sports program that provides firmer suspension settings, reducing even further any body lean through corners and enhancing contact between the tires and the road surface. However, there are circumstances, such as on wet or snowy roads, in which a “softer” suspension setting can enhance traction and the PASM button can be pushed to put the car in its normal setting even when the sports mode is active.

The “Sport Chrono” feature includes a stopwatch and lap-counting function. So the driver can graphically verify the improved dynamics of the second-generation Boxster and Boxster S, the driver can push a stalk attached to the left side of the steering column to record various route segment
times, which can be reviewed graphically on the optional Porsche Communications Management (PCM) system screen.

**At Porsche, form always follows function**

Form follows function at Porsche and the 2006 Boxster and 2006 Boxster S are faithful to that philosophy.

Just as the venerable Porsche 911 has retained its basic silhouette for more than 40 years, so the second-generation Boxster was extensively redesigned while retaining its basic shape and well-balanced proportions. Porsche prefers to focus on the fine points of improving its vehicles rather than investing in wholesale styling changes.

One focus of the design was enhanced aerodynamics — both for cooling and for enhanced vehicle dynamics.

**Slicing through the air**

Although the frontal area increased with the second-generation of the mid-engine Porsche roadsters, designers and engineers worked hard to reduce the coefficient of drag and the results were dramatic.

The Boxster’s figures dropped to 0.29 and the Boxster S to 0.30 despite a wider stance, enlarged wheel wells to cover larger wheels and tires, a muscular bulge replacing the former concave body sides, enlarged functional side scoops in each rear quarter panel, and, to accommodate taller drivers and occupants, a redesigned supplemental safety bar and a reshaped convertible top.

Carefully profiled A pillars, Carrera GT-style side mirrors, a new rear spoiler and a fully covered under tray help the roadsters cut even more cleanly through the air. In addition to reducing drag, lift was minimized at both ends of the car. As a result, the top speeds the Boxster and Boxster S can achieve on the test track increased, as did high-speed stability.

**Keeping cool**

Clever and effective engineering devised ways to incorporate enhanced cooling for the engine, transmission and brakes.

Two large inlets for cooling air characterize the front air dams of the Boxster and Boxster S. Boxsters have a pair of front radiators, with a third unit added for the Boxster S. A highly efficient water pump moves more cooling liquid, yet is lighter in weight and allows for the installation of a more compact oil/water heat exchanger.

The under tray manages airflow beneath the cars, effectively gluing them to the roadway. At the same time, flexible “blades” direct air for cooling the transmission. “Spoilers” installed on the front longitudinal suspension arms enhancing brake cooling.

**Large windows offer view with a vroom.**

The driver’s view of the world through which the Boxster travels — and travels quickly — was enhanced by other design updates. Side windows are larger while the redesigned roof provides enhanced visibility at the three-quarter rear-view angle when the top is up.

**Lighting the way**

The Boxster’s headlamps have the traditional Porsche look, but with separate fog lamps that are positioned low and well apart from the car’s centerline to better light the way through inclement weather while driving and very dark roads.
The headlamps are designed to enhance the driver’s lateral illumination.
Rear lighting features three separate elements on each side of the car with strong distinction between red and white areas.

**Stiffer, stronger structure**

The Porsche Boxster and Boxster S always have been known for their stiff and stable body structure, but the newest generation cars are even stronger. Torsional stiffness was increased 9 percent while resistance to flex improved by 14 percent.

To make the cars as light as possible, aluminum is used for the luggage compartment hoods. To make the cars as strong as possible, the front structural sections are made from extra-strength steel and are designed to enhance occupant safety in a frontal collision. A bonus is the provision for room for storage and for the foot wells. As a dividend of the extra space, gas and brake pedals were moved forward by nearly four-tenths of an inch (10 mm) and the clutch pedal by six-tenths of an inch (15 mm), making the cars more accommodating to taller drivers.

Tailored blanks, which had been used for the rear chassis structure, also are used at the front. These blanks are made from different types of steel laser-welded into a single, ultra-strong but lightweight unit that has been engineered to deform in a defined manner to help maximize occupant protection in a frontal collision. Forces from a frontal impact are directed around the upper portion of the passenger compartment and through the doors toward the rear of the vehicle.

Door structures are reinforced and a support tube of ultra-strong steel extends from the lower bulkhead crossbar to the A-pillar. Nicknamed the “hockey stick” because of its shape, this tube helps to further strengthen the passenger cell.

Providing additional structure is a supplemental safety bar made of hydroformed, stainless steel alloy. The bar is nearly an inch (25 mm) higher than on the first generation Boxster and Boxster S and was moved 1.22 inches (31 mm) toward the rear.

**First roadster with head airbags**

The second-generation Boxster and Boxster S are the first roadsters to go into production with head airbags.

All Boxsters are equipped with three-point inertia-reel seat belts with belt-latch tensioners and belt force limiters as well as six airbags. In addition to two-stage frontal airbags, the Boxster and Boxster S feature the Porsche Side Impact Protection (POSIP) system with a thorax-protecting airbag at the outside of the seat backrest and with head airbags in the door windowsills.

**Even the lightweight convertible top contributes to dynamic capabilities**

With a frame made from aluminum and magnesium, the power convertible top on the 2006 Porsche Boxster and 2006 Porsche Boxster S helps lower the cars’ center of gravity and thus contributes to their enhanced dynamic capabilities.

The canvas roof uses light synthetic fleece fiber for improved noise and heat insulation and has an electrically heated rear glass window. The top is power operated and can be opened or closed even while the car is moving — at speeds up to approximately 30 miles per hour (50 km/h).

A wind deflector is available, as well as a removable aluminum hardtop that weighs only 51 pounds (23 kilograms).
Interior provides support and comfort

The interior of Porsche's roadsters provides both comfort for cruising and the support needed for dynamic driving.

The dashboard, interior door panels and the sides of the center console are covered in a special durable material while the gearshift lever, steering wheel rim, handbrake lever handle and door handles are covered in leather. On the Boxster S, the cover on the storage box in the center console and those on the storage pockets in the doors are covered in leather. Aluminum-look trim is used around air vents and on the gearshift lever.

The Boxster provides a second 12-volt power outlet on the passenger's side of the center console while a pair of cup holders is integrated into the dashboard and remain hidden behind a trim strip when not in use.

Steering columns tilt and telescope to better fit every driver. The tilt feature allows the steering wheel position to move by 1.57 inches (40 mm). Taller drivers also benefit from the slightly higher roof profile, lower mounting of the seats and from pedals being moved slightly closer to the front firewall.

Attached to that tilting and telescoping steering column is one of three steering wheels.

The standard wheel has a three-spoke design. It is 14.76 inches (375 mm) in diameter and is built around a composite magnesium skeleton that reduces weight by 10 percent compared to the aluminum frame formerly used.

The optional sports wheel is just 14.57 inches (370 mm) in diameter with ergonomically contoured grab recesses on the rim to accommodate dynamic driving maneuvers.

Also available in conjunction with the optional Porsche Communication Management system is a multifunction wheel that allows the driver to operate audio, navigation and telephone functions by six function keys built into the steering wheel. The keys are embedded into aluminum-look trim panels.

Four seating choices

The Porsche roadsters come with four leather-covered seating choices:

- The standard seats can be adjusted in six directions, with power travel for the backrest angle and manual fore-aft and height adjustment.
- Full power seats are adjustable 12 ways and include a pneumatic lumbar support with two inflating air cushions. The memory function on the driver's seat includes the lumbar inflation setting.
- Sports seats are based on the standard seats but provide even more side support for dynamic driving, in the seat and back cushions and also around the shoulder area.
- Adaptive sport seats combine the benefits of full electric adjustment and enhanced lateral support. These seats also allow individual adjustment of the various side supports.

All seats in the second-generation Boxster and Boxster S are mounted as low as possible, helping to lower the center of gravity and enhance driving dynamics. This lower seating position also increases the available headroom when the convertible top covers the passenger compartment.

Lightweight technology enables Porsche engineers to develop seats that are strong and stable yet provide taller backrests with thorax-protecting airbags mounted within the seat. Porsche also has developed a patented vibration dampening system for its seats.

Instrument cluster informs the driver
A large tachometer dominates the central spot on a three-gauge instrument cluster. Road speed is presented in both analog and digital formats with rpm, fuel level, coolant temperature, odometer, clock and outside temperature displays providing the driver with important information.

The Boxster has black face gauges with light gray gauges in the Boxster S. Using LEDs in white rather than yellow enhances readability of all gauges in low-light conditions.

Additionally, cars equipped with the Sports Chrono system display information in the dot matrix display in the lower third of the rev counter.

An eye-catching center console descends from the center of the instrument panel, just beneath a pair of vertically oriented and oval air outlets. All switchgear, including window controls mounted in the doors, have small “finger strips” that facilitate manipulation of the various control functions.

The Porsche CDR-24 CD radio has a larger control surface for easier use and is illuminated by white LEDs. The system includes two tweeters in the instrument panel with a woofer in each door.

Optional on the Boxster and standard on the Boxster S is the 180-watt Porsche Sound Package Plus with seven speakers and an external analog amplifier, two tweeters and a mid-range speaker in the instrument panel as well as a subwoofer and mid-range speaker in each door.

Also available is a 325-watt Bose® Surround Sound system with 11 speakers and a seven-channel digital amplifier.

**Porsche Communication Management**

Optional on both the Boxster and Boxster S is the enhanced Porsche Communication Management (PCM) with its DVD-based navigation located in the luggage compartment. This allows the CD drive on the PCM to be used exclusively for audio CDs, or MP3 encoded discs.

The navigation system features 23 zoom stages from a minimum resolution of 55 yards (50 meters). Its information is displayed on a 5.8-inch color monitor.

**Abundant storage space**

Among the Boxster’s unique features are two luggage compartments, one at the front of the car and another behind the seats. An added benefit of the Boxster’s architecture is that its convertible top system takes up none of the car’s available storage area even when the top is down.

The front luggage compartment offers 4.99 cubic feet (140 liters). The rear compartment provides 4.59 cubic feet (130 liters).

**Impressive list of options**

The long list of options available for the Boxster or Boxster S includes Bi-Xenon headlamps and Park Assist that uses ultrasound to measure the distance to the nearest obstacle and warns the driver as needed.

**Low ownership costs**

Helping to reduce the ownership costs of the 2006 Porsche Boxster and 2006 Porsche Boxster S are the need to change oil only every 20,000 miles (30,000 km) and to perform routine service only every 40,000 miles (60,000 km).

**Substantial warranty**
Every new 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.

Information on all Porsche models can be found at www.press.porsche.com in the 2006 Model Year Press Kit section.

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