



PORSCHE



The New Macan Turbo
Press Kit

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Summary

Stronger, faster, more agile: The new Macan Turbo with 434 hp

The 2020 Porsche Macan Turbo leads the way in the Porsche compact SUV model range. The new 2.9-liter, six-cylinder twin-turbo engine offers 434 hp (324 kW) and 405 lb-ft. of torque, allowing a sprint from zero to 60 mph in 4.3 seconds, or just 4.1 seconds with the optional Sport Chrono Package. Both scenarios represent an improvement of 0.3 seconds versus the preceding model. Power travels to all four wheels via a seven-speed PDK dual-clutch transmission and Porsche Traction Management (PTM) all-wheel drive. The top track speed is 167 mph (up 3 mph). The new Macan Turbo also comes with powerful Porsche Surface Coated Brakes (PSCB) fitted as standard, marking the new availability of this brake technology on the Macan model line after its premiere on the third-generation Cayenne in model year 2019. The optional height-adjustable air suspension with optimized rolling pistons and new shock absorber hydraulics, Porsche Torque Vectoring Plus (PTV Plus) and Porsche Ceramic Composite Brakes (PCCB) are available for a further increase in driving dynamics. The 20-inch Macan Turbo wheels are fitted as standard.

Externally, the Macan Turbo is characterized by the styling features of the revamped model generation, including the LED rear light bar. The new top model also sets itself apart thanks to unique accents such as the Turbo-specific front end and the fixed roof spoiler with its double-wing design. The new Macan Turbo demonstrates its leading position thanks to the exclusive front end, with three large air intakes and raised front light modules, as well as the standard LED headlights including the Porsche Dynamic Light System (PDLS). From the side, this top model sets itself apart with 20-inch Macan Turbo wheels, Sport Design side skirts, Sport Design exterior mirrors and side blades in body color. The specially-developed fixed roof spoiler with its double-wing design is typical for the Turbo model. The now standard Sport Exhaust System can be identified by its thick-barreled twin silver tailpipes.

Drivers and passengers also benefit from a well-appointed interior that includes 18-way Adaptive Sport Seats with memory package, smooth leather upholstery, and BOSE® Surround Sound system as standard features. The high-quality ambience is rounded off by the Alcantara® headliner and the brushed aluminum interior package. The heated GT Sport steering wheel is available as an option, and offers a nimbler in-hand feel than the standard steering wheel due to its smaller diameter.

Porsche Communication Management (PCM) with a 10.9-inch full HD touchscreen is fully networked as standard and connected to a BOSE® Surround Sound system with 14 loudspeakers and a total output of 665 watts. It includes online navigation with real-time traffic information and smart voice control. Other standard features include Porsche Connect Plus, which comes with an LTE telephone module, an integrated SIM card and a slot for an external SIM card, as well as a Wi-Fi hotspot and numerous Porsche Connect services.

The options list now includes a smartphone tray with Qi-standard inductive charging for all Macan models. In addition, a heated windshield and an ionizer to improve the interior air quality are also available. As well as being able to accelerate and brake semi-automatically up to approximately 37 mph, the system also provides steering assistance in traffic jams and slow-moving traffic.

Engine and performance

Powerful twin-turbo engine with central turbo layout

The 2.9-liter twin-turbo V6 of the new Macan Turbo is currently also used in the Cayenne and Panamera models. As in all V-configuration engines used in current Porsche models, this design locates the turbochargers inside the cylinder V. The advantage is that short exhaust gas paths between the combustion chambers and the turbochargers improve responsiveness, which is particularly beneficial during sporty driving. A comparison with the predecessor engine clearly demonstrates the improved performance. Specific output improves by 37 percent while the peak torque value is comparable, but available over a broader rev range.

Both cylinder heads of the V-engine have integrated exhaust manifolds. In addition to the reduction in weight and number of components, the exhaust manifold can integrate into the cooling circuit. This increases the efficiency at high loads and the fuel consumptions decreases. This practically also eliminates the need for full-load enrichment for component protection because the temperature level is lowered.

New engine mounts also offer an improved connection between the engine and chassis versus the preceding powertrain. Engine roll on the engine mounts is thus suppressed more effectively under load, reducing the effect on handling as the driver accelerates out of a corner. As a result, tracking of the Macan improves when accelerating out of corners and the cornering forces of the outer tires can be used in a more controlled manner.

A retuned seven-speed PDK dual-clutch transmission and Porsche Traction Management (PTM) including intelligent all-wheel drive are both standard in all Macan models. The new Macan Turbo accelerates from a standstill to 60 mph in 4.3 seconds, or in 4.1 seconds with the optional Sport Chrono package. Both cases represent a sprint that is 0.3 seconds quicker than the previous model. Top track speed increases by 3 mph to 167 mph. In addition to improved engine performance, the optimized tuning of the PDK is also responsible for the quickened acceleration capability in this model. In Sport mode, the transmission is even more responsive and allows very fast gear changes. In Normal mode, the PDK shifts earlier and selects higher gears when possible. This saves fuel and increases comfort when driving long distances. In combination with adaptive cruise control (ACC), the modified PDK now also offers a coasting mode, which further reduces fuel consumption under real driving conditions. The optimized Auto Start Stop function also contributes to increased efficiency. This function already switches off the engine when coasting to a stop. The Auto Start Stop function is automatically deactivated in Sport and Sport Plus driving modes.

The all-wheel drive PTM distributes power to the four wheels in the best possible way in every dynamic driving situation. This has advantages not only when driving in a sporty manner, but also when towing, for example: with a towing capacity of 5,291 lbs. (2,400 kg) and a drawbar load of 211 lbs. (96 kg), most leisure activities are no problem for the new Macan Turbo.

The Sport Chrono package in the Macan Turbo operates by means of the mode switch integrated in the steering wheel. In addition to the Normal, Sport and Sport Plus driving modes, it is also

possible to select an Individual mode. The driver can store an individual setup here and can activate it directly with the mode switch. The Sport Response button in the middle of the mode switch allows the driver to boost the responsiveness of the Macan Turbo for 20 seconds at the push of a button so that the maximum performance is immediately available. In combination with the optional Sport Chrono package, the Porsche Stability Management (PSM) additionally offers the separately selectable PSM Sport mode. With this especially sporty setup, ambitious drivers can get even closer to the dynamic driving limit of the Macan Turbo. The PSM always remains active in the background. PSM Sport mode can be enabled regardless of the selected driving mode.

Chassis and chassis systems

Improved setup with high-performance brakes

The new Macan Turbo comes with the Porsche Surface Coated Brake (PSCB) system as standard. This high-performance brake system features a tungsten carbide coating on the brake discs that reduce brake dust by almost 90 percent while also improving responsiveness and increasing friction values. In addition to the benefits of the new coating, the front brake rotors grow in diameter by 30 millimeters to 390 millimeters while the rear rotors have the same diameter: 356 millimeters. The high-gloss brake discs and white painted brake calipers are characteristic for PSCB, which is also newly available as an option for all other Macan models.

Drivers of all new Macan models will experience a change in pedal feel thanks to a new brake pedal lever made of a molded, fiberglass-reinforced thermoplastic sheet material. The pedal is stiffer and offers a more direct connection to the brake master cylinder. This results in more immediate brake response, and a firmer feeling connection.

The chassis of the new Macan Turbo has been revised as part of the mid-cycle refresh. Like other Macan models, the new range-topping model features lighter aluminum spring forks. These spring forks are spread over the drive shafts and connect the springs and dampers with the front-axle carrier. The new light alloy design is more rigid and reduces unsprung mass by roughly 3.3 lbs. In addition, the steel spring suspension with Porsche Active Suspension Management (PASM) dampers is revised, offering a wider spread in spring rates. These changes help to allow for a more comfortable suspension and more precise steering. Newly tuned anti-roll bars are based on the revised spring characteristics. For the driver, this means more neutral handling without compromising stability. The top model now comes with standard 20-inch wheels as compared to the 19-inch wheels that were standard in previous model years. As before, all Macan models have staggered wheel and tire widths. Macan Turbo alloy wheels are 9 inches wide on the front axle and have 265/45 tires. On the rear axle, the rim width is 10 inches and the tires are size 295/40. Newly developed tires with improved performance characteristics also provide improved lateral dynamics.

Height-adjustable air suspension is still available as an option. As with the other refreshed Macan models, the system features with optimized rolling pistons and new shock absorber hydraulics that offer improved damping over rough surfaces without compromising on performance. Porsche

Torque Vectoring Plus (PTV Plus), Porsche Ceramic Composite Brakes (PCCB), and up to 21-inch alloy wheels are available for further performance enhancements.

Design and equipment

Unique design with Turbo front end and double wing at the rear

The Macan Turbo is visually distinct within the model line. This is mainly due to the exclusive front fascia that reduces front overhang as compared to its model line siblings. The higher front light modules also make the Macan Turbo stand out uniquely at night. A further distinguishing feature is the enhanced range of parts painted in the exterior color. Raised front light modules with a separation of the position light and direction indicator also distinguish this as a Turbo model. The front view is rounded off by the standard Porsche Dynamic Light System (PDLS). The optionally available PDLS Plus features a cornering light and automatic switching between high and low beams based upon vehicles detected by the on-board camera system.

From the side, the Macan Turbo distinguishes itself in particular by its 20-inch Macan Turbo wheels with a colored Porsche crest as standard. Widened wheel arches span the rear axle above the wheels. This increases the overall width of the Macan Turbo to 75.8 inches, which is slightly more than other Macan models. The standard Sport Design exterior mirrors, like numerous other painted parts on the top model, are finished in the exterior color. At the rear, the double-wing roof spoiler, specially developed for the top model, and the twin tailpipes of the standard Sport Exhaust System stand out. The design of the new Macan Turbo is rounded off at the rear by a rear lower section painted in the exterior color.

Adaptive Sport Seats with 18-way adjustment, leather upholstery and comfort memory settings are standard features. Alcantara® headliner and the brushed aluminum interior package complete the high-quality ambience. More extensive leather interior upholsteries in various colors are optionally available. Further personalization of the leather interiors is possible through the Porsche Exclusive Manufaktur.

Porsche Communication Management (PCM) with a 10.9-inch full HD touchscreen is fully networked as standard and connected to a 665-watt, 14-speaker BOSE® Surround Sound system. As with the other Macan models, the PCM includes online navigation with real-time traffic information via Here Cloud, mobile phone preparation, two audio interfaces and intelligent voice control. Other standard features include Porsche Connect Plus, which comes with an LTE telephone module, an integrated SIM card and a slot for an external SIM card, as well as a Wi-Fi hotspot and numerous Porsche Connect services. The Porsche Car Connect App offers access to selected vehicle functions via smartphone. Security Services help to protect the vehicle against theft and, in a worst-case scenario, to find it again. Remote locking, emergency breakdown call and accident alarm functions enhances security and safety. The extensive options list now includes a smartphone tray with inductive charging function according to the Qi standard. For more comfort, a heated windscreen and ionizer is available as an option. This feature, in conjunction with the fine particulate air filter fitted as standard, further improves the quality of the air inside the vehicle.

Assistance and comfort systems

Greater assistance for the driver

Porsche has expanded its range of assistance systems for the Macan as part of the mid-cycle refresh, including the new Turbo model. More powerful sensors as well as data and image processing allow new functions. Lane Keeping Assist, Lane Change Assist, Speed Limit Display, and Adaptive Cruise Control are still optionally available,

Using the radar sensor located in the middle of the central air intake, the adaptive cruise control system monitors the distance from vehicles driving in front and automatically adapts this. Vehicles that cut in from adjacent lanes are also detected. If necessary, the system will brake to a standstill when following a vehicle in front. Thanks to the stop-and-go function, the vehicle is able to resume motion independently after braking to a standstill. If the vehicle is stopped for longer than three seconds, the driver may press the accelerator or resume the function with the control stalk in order to continue.

The additional Traffic Jam Assist function extends the stop-and-go function with steering assistance. Using the optimized radar and video sensor systems, the system detects lane markings and vehicles driving ahead in the same lane or adjacent lane in a speed range from zero to approximately 37 mph. When the system is active, the vehicle can be kept in lane by targeted steering interventions. When in a traffic jam or slow-moving traffic, this leads to a considerable reduction in the strain on the driver and significantly increased comfort. The warning and brake assist system, which reduces the risk of collisions with vehicles and pedestrians, is a component of the adaptive cruise control and thus also of Traffic Jam Assist. The system uses the front camera to detect when vehicles or pedestrians are in the collision area and warns the driver visually and acoustically in the first stage. For vehicles, the system warns the driver in a second stage via a braking jolt if the vehicle moves too quickly towards it. A braking operation initiated by the driver is reinforced up to full braking if necessary.

Park Assist, which is standard equipment and includes a reversing camera, informs the driver with visual and acoustic warnings when maneuvering and parking. This function uses ultrasonic sensors located at the front and rear of the vehicle. This helps with maneuvering by showing a color camera image on the PCM screen with dynamic guidelines and distances to potential obstacles. Optional Park Assist with Surround View calculates a birds-eye view from four individual cameras that helps when parking and maneuvering.

A heated windscreen is optionally available for the Macan model line for the first time. For this, a special film integrates in the windscreen that does not need any heating wires. The Macan can also be optionally equipped with enhanced thermally and noise insulated glass. A new acoustic film in the laminated glass blocks almost 100 percent of harmful UV rays and reduces noise from the outside.