



Lamborghini Temerario: authentic “Fuoriclasse”

The new super sports car is in a league of its own: a 920 CV twin-turbo V8 hybrid powertrain offering the highest levels of performance and comfort for a peerless driving experience

Sant’Agata Bolognese/Monterey, California, 16 August 2024 – Automobili Lamborghini presents Temerario¹, the all-new super sports car equipped with a twin-turbo V8 hybrid powertrain that redefines the very concepts of performance, driving pleasure and comfort. The Temerario is the second model in the Lamborghini High Performance Electrified Vehicle (HPEV) range, after the Revuelto², and completes the hybridization of Sant’Agata Bolognese’s line-up following the market debut of the Urus SE³.

A star of Monterey Car Week 2024, the Temerario presents itself as the new benchmark in the super sports car segment, thanks to class-beating performance. The new hybrid powertrain combines an entirely new twin-turbo V8 engine with three electric motors, providing a total power output of 920 CV. The twin-turbo V8 has been designed and developed from scratch in Sant’Agata Bolognese and is the first and only production super sports car engine able to reach 10,000 rpm. The performance is an absolute revelation: maximum speed of over 340 km/h (210+ mph), 0 to 100 km/h (0-62 mph) in just 2.7 seconds.

“The Temerario is a genuine ‘fuoriclasse’: a car in a league of its own, an extraordinary and innovative vehicle both from a technical and stylistic point of view,” says Stephan Winkelmann, Chairman and CEO of Automobili Lamborghini. *“Every new Lamborghini must surpass its forerunners in performance terms, while at the same time being more sustainable from an emissions standpoint. With the Temerario, we have completed a key chapter in the electrification strategy included in our Direzione Cor Tauri plan: we also become the first luxury automotive brand to offer a completely hybridized range.”*

With the Temerario Lamborghini has also achieved new heights in terms of aerodynamic efficiency, combined with stylistic details and lines that represent a further landmark in the brand’s design. Also entirely new is the aluminum chassis which, thanks to the use of a cutting-edge high-strength, ultra-light alloy, significantly increases torsional rigidity and contributes to excellent driving dynamics.

The chassis delivers excellent passenger comfort and increased roominess: the Temerario is a super sports car that expresses its full potential on the track while offering more space for passengers and luggage than any other vehicle in its segment.

¹ The vehicle is not yet offered for sale and is therefore not subject to Directive 1999/94 EC. The fuel consumption and emissions data are in the type of approval stage.

² Consumption and emission values of Revuelto: Combined fuel consumption: 11,86 l/100km; Combined power consumption: 10,1 kWh/100 Km; Combined CO2 emissions: 276 g/km; Combined CO2 efficiency class: G; Combined fuel consumption with discharged battery: 17,8 l/100km; Combined CO2 emissions and discharged battery efficiency classes: G; [WLTP].

³ Consumption and emission values of Urus SE: Combined fuel consumption: 2,08 l/100km; Combined power consumption: 39,5 kWh/100 Km; Combined CO2 emissions: 51,25 g/km; Combined CO2 efficiency class: B; Combined fuel consumption with discharged battery: 12,9 l/100km; Combined CO2 emissions and discharged battery efficiency classes: G; [WLTP].



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The Temerario also delivers the most advanced multimedia experience in Lamborghini history, thanks to the introduction of the Lamborghini Vision Unit system, which provides access to new functions and applications that allow users to relive and share their track and road driving experiences.

POWERTRAIN

The heart of a Lamborghini has always been its drive system. With the new Temerario, Lamborghini takes an entirely new approach, with several years of development, delivering an unprecedented super sports car powertrain, comprised of an extremely high-revving biturbo Internal Combustion Engine concept combined with three electric motors. *“We wanted to develop an incomparable, high-performance sports engine that combines the best of two worlds: an emotional combustion engine based on a twin-turbocharged V8 and a performance-oriented electrification. Our concept of incorporating three electric motors with a combustion engine ensures to achieve instantaneous acceleration, torque vectoring and energy recuperation. With the Temerario we are redefining the segment,”* says Rouven Mohr, Chief Technical Officer at Lamborghini. *“Temerario is in a league of its own, in terms of engineering solutions and performance.”*

The new powertrain is integral to the second super sports car in Lamborghini's High-Performance Electrified Vehicle (HPEV) product range. The first target was to achieve the highest possible power and torque, while at the same time offering the response of a classic high-revving naturally aspirated engine. Therefore, only high-performance components are used in the drivetrain: the new 4.0-liter V8 biturbo engine has a specific output of 200 CV per liter and works together with an oil-cooled axial flow electric motor fully integrated in the V8 housing. Propulsion is supported by two electric motors on the front axle.

“By combining a high-revving V8 biturbo with three electric motors of axial flux type we are taking a very sophisticated approach that has never been seen before in series production and the result will impress Lamborghini fans all over the world - With this adrenaline-machine, we are catapulting ourselves into a new paradigm for super sports cars,” continues Mohr. This linearity and progression, with high revving characteristics, which was previously only possible with naturally aspirated engines, now offers high torque with high engine speeds, thanks to the turbochargers.

The new engine with the internal designation L411 is now one of the most powerful engines in the segment. The V8 biturbo delivers its peak power of 800 CV from 9,000 to 9,750 rpm and 730 Nm of torque between 4,000 and 7,000 rpm. The electric motor, in P1 position (between the V8 engine and the gearbox), ensures immediate response starting from low engine speed and continues consistently through gear shifts, working as a “torque gap filler” and improving the transient response, giving the sensation of linear and limitless progression up to 10,000 revs. Thanks to the two large turbochargers, efficiency and performance are increased at top speeds. These are located compactly in the V of the engine as a “hot V8” to optimize the packaging and thermal management. The V8 biturbo can rev up to 10,000 revolutions per minute: the maximum boost pressure of the turbochargers is 2.5 bar (abs). The turbines are controlled with an electrical wastegate and a wheel-speed sensor. Lamborghini has designed air filter boxes with tubular cartridges, making them extremely compact to create space and become even more efficient.



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At the heart of the crankshaft housing is a flat-plane crankshaft with a 180-degree angle between the crankshaft bends. This crankshaft, which is typically used in racing engines, ensures optimal fluidodynamic behavior due to even firing orders in comparison to the cross-plane crankshaft, and a unique engaging sound. Titanium conrods reduce the rotating masses and offer excellent material properties in terms of strength and lightness, reducing weight. The engine casting material consists of A357+Cu, the same used in motorsport applications.

The particularly robust and reliable finger followers covered in DLC (Diamond Like Carbon) can withstand speeds of up to 11,000 revolutions per minute - a range previously reserved for racing engines in motorsport. This is also where the engineers drew their inspiration for the engine layout concept. As is usual in motorsport, most of the auxiliary units are located on one side, including the two water pumps for the intercooler and engine cooling, as well the electronically-controlled barrel valve for fine temperature control.

The oil and water pumps, which are arranged in series on the right-hand side of the engine, are driven up to a specific ratio pump speed of 7,800 rpm. The engineers integrated the oil tank in one side of the engine that works according to the dry sump principle with five-stage gear scavenge pumps. As a result, the drive unit is flat and sits low in the Temerario lowering the center of gravity of the vehicle, while improving its handling characteristics. A newly designed water-cooling system ensures a balanced temperature regime. The internal cooling of the cylinder heads has been extremely refined using 3D printing technology for the casting core, allowing a uniform cooling of the combustion chamber and high knock resistance. The direct petrol injection atomizes the fuel extremely finely into the eight combustion chambers at up to 350 bar, thus ensuring fast and clean combustion.

The characteristics of a smoothly revving, naturally aspirated engine, with the power delivery of a turbo engine in combination with electric drives, is unique in the way it works and sounds. Lamborghini has thus succeeded in developing a new V8 biturbo that combines the pronounced linearity of the rev development in the previous Lamborghini naturally aspirated V10, with enormous power and torque of a modern turbo engine. In conjunction with the three electric motors, the system output is an outstanding 920 CV / 676 kW.

Engine Sound

Lamborghini has invested significant technical effort in the development of a unique and unmistakable audio experience from the Temerario's completely new drive system. Ensuring a highly emotive and unmistakably Lamborghini sound and sensation feedback.

"With the V8 biturbo, the amplitude and frequency of the sound increase as the engine speed rises, and thanks to the flat-plane crankshaft, subtle vibrations underline the power of the drive depending on the engine speed. For the occupants, the ride in the Temerario is an incredible experience for all the senses. Drivers will be roused by the powerful Lamborghini sound and will feel its unmistakable character with all senses," says Mohr.



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The technical complexity of this special soundscape is immense. To ensure that the crescendo up to 10,000 rpm provides an emotional, sporty sound, Lamborghini integrates various technical measures and enriches them with high-frequency modulation effects.

A special connection between the engine banks enhances the sound effect of the power unit subject to the engine speed. Depending on the driving mode, the silencer box and exhaust valve of the V8 biturbo work in the low rev range to improve acoustic comfort. At the same time, the different driving modes are clearly differentiated through acoustic tuning.

An exhaust system routed from the manifold to the tailpipes also acoustically emphasizes the combustion processes of the engine. Lamborghini guarantees a clear and clean sound thanks to the smoothed pipe routing. The height and position along the transverse axis of the exhaust tailpipes further focuses the sharpness of the engine with a high frequency component, thus emphasizing its power.

In addition, Lamborghini has designed the engine mounts and body in such a way that the drive has a flat crankshaft character that can be felt by the driver at high engine speeds and under full load. Thanks to the flat-plane crankshaft, in which the crank pins are at an angle of 180 degrees, the V8 biturbo produces subtle vibrations.

Lamborghini makes the amplitude of these vibrations more pronounced at high engine speeds, which enhances the overall impression of speed and power at high revs. The sound engineers also manage to transport the pleasantly sporty acoustics into the interior and at the same time emphasize the desired frequencies by means of lightweight body parts and panels. The light vibrations transmitted to the frame provide a comprehensive sensory experience, in addition to the thrilling soundtrack. As the engine speed increases, the seat vibrations intensify, especially at higher engine speeds of up to 10,000 rpm: a speed range previously only known from motorsport.

Furthermore, an additional sound symposer emits acoustic waves into the interior, creating an immersive auditory experience in every driving mode.

Lamborghini has also designed a completely different soundscape for the different driving modes Città, Strada, Sport and Corsa. In Città mode, Lamborghini offers a high level of comfort with a special sound from the electric drive unit. The composition achieves a smooth and pleasant listening experience in urban environments. In Città mode, the Temerario is emission-free and quiet.

In Strada mode, for country roads and fast autoroutes, occupants enjoy a comfortable and homogeneous V8 biturbo sound experience with evenly distributed frequencies, without any barking or sharp peaks for sporty yet discreet driving pleasure. In Sport and Corsa modes, Lamborghini amplifies the second- and fourth-order overtones of a V8 four-stroke engine and air-intake harmonics, creating an exhilarating and powerful listening experience. At speeds of up to 10,000 rpm, the engine not only delivers incredible power of up to 920 CV, but also an inimitable sound - a new Lamborghini sound of a new generation.



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Three electric motors for support

The new drivetrain incorporates three electric motors. With 110 kW of power each, the electric motors are an integral part of the powertrain strategy. Two oil-cooled axial flow electric motors with a total peak output of 220 kW and up to 2,150 Nm of torque (the continuous output is 60 kW) drive the front axle when required to achieve all-wheel drive. The electric front axle weighs just 73 kilograms, and each electric motor only 15.5 kilograms.

A major challenge was the design of the powertrain to be as compact as possible. To achieve this, the engineers integrated the electric motor into the housing of the V8 biturbo, directly, without an intermediate clutch. This fills any turbo lag, no matter how small, at any speed delivering 300 Nm of torque. The entire electric drive unit is located compactly between the combustion engine and the dual clutch transmission. This electric motor also works as a starter motor and three-phase generator.

Furthermore, the two electric motors on the front axle also improve the power output and can transform the new Temerario into a fully electric super sports car. In this way, Lamborghini reduces CO2 emissions by up to 50 percent compared to the Huracán.

Battery

The Lamborghini Temerario is equipped with a lithium-ion high specific power (4500 W/kg) battery pack situated within the central tunnel, keeping the car's center of gravity as low as possible and ensuring optimal weight distribution. The battery is protected by a lower structural layer and is connected to the front electric motors, the rear electric motor, and an integrated recharging unit.

The battery pack is 1550 mm long, 301 mm high, and 240 mm wide, containing pouch cells with an overall capacity of 3.8 kWh. When the charge drops down to zero it can be recharged using both ordinary domestic alternating and charging column current up to 7 kW in power, and completely recharges in just 30 minutes. It can also be recharged under regenerative braking from the front wheels or directly from the V8 engine.

Thanks to the e-axle, the Temerario incorporates Lamborghini Dinamica Veicolo (LDV) 2.0 system. Electric torque vectoring increases the car's agility in narrow cornering as well as its stability in high-speed cornering, distributing torque optimally to each wheel. Unlike conventional systems, the new torque vectoring intervenes on the brakes only when strictly necessary, to maximize efficiency and ensure a more natural driving style as well as an even higher level of performance. When braking, the e-axle and rear electric motor contribute to deceleration, reducing stress on the brakes while recharging the battery.

Dual-clutch transmission

The gears of the second Lamborghini super sports car in the High-Performance Electrified Vehicle (HPEV) category are shifted by an eight-speed dual-clutch transmission (DCT) installed transversally behind the V8. The newly-designed compact transmission meets all the requirements of such a powerful drive unit.



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To save installation space and weight, the layout is not a standard DTC. An additional hollow shaft is used to share the same synchronizers for different gear torque paths. Without electrical components, the new DCT weighs less than the Huracán's seven-speed dual-clutch transmission and achieves faster shift times. At 560 millimeters long, 750 millimeters wide and just 580 millimeters high, the new DCT also remains extremely compact.

Lamborghini has installed the new eight-speed dual-clutch transmission behind the V8 biturbo. This creates sufficient space in the center tunnel for the lithium-ion battery that powers the electric motors. Another advantage is that this technical layout optimizes the weight distribution of the Temerario and ensures a compact wheelbase for ideal driving dynamics and balanced handling.

With the new eight-speed dual-clutch transmission, drivers experience extremely fast shift times even with a very sporty driving style and daily driving. Continuous downshifts in particular are easy: when braking and simultaneously pressing and holding the left shift paddle the transmission shifts down gears sequentially, allowing the driver to feel and hear the gear change. The long ratio eighth gear reduces the engine speed, which helps to optimize fuel consumption and improves drivability at cruising speed. The Temerario gearbox has been equipped with a mechanical reverse gear system.

DESIGN

Brave, unexpected and authentically a Lamborghini: with the Temerario Lamborghini Centro Stile has created a new and inimitable super sports car that opens a fresh chapter in Lamborghini design DNA. following a new styling with its own essential and iconic identity. The new design creates its own essential and iconic identity.

“The Lamborghini Temerario marks definitively a new milestone in our design language. We call it “essential and iconic” with enhanced athleticism from its surfaces. From the first glance, this is a puristic, futuristic and yet fascinating super sports car, with its compact and agile proportions, the new hexagonal light signature, the ‘Feel like a pilot’ interior design and its sharp lines emphasizing the new hybrid powertrain and its fun-to-drive dynamics. We provide a clear view of the new V8 biturbo engine: the emotional heart of the car and an innovative source of power,” says Mitja Borkert, Director of Design at Automobili Lamborghini.

The new car’s design points towards the future of Lamborghini's legendary mid-engine sports cars, while the shapes of the car stay pure, athletic and well-defined. With a clean-sheet design and new drive concept, the Temerario carries a connection to its legendary predecessors while its all-new persona is characterized by reduction, clarity, sharpness and recognizability. *“We have created an elevated stylistic experience with the Temerario: we started from scratch to combine design and dynamism into compact proportions, testifying that this is a true Lamborghini super sports car designed for everyday driving pleasure and track-driving fun,”* explains Borkert.

Exteriors



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From first glance, the Temerario reveals Lamborghini DNA in its typical Lamborghini silhouette: clear and puristic lines, short and compact overhangs, integrated aerodynamics and a bold shark nose.

The Lamborghini design language has evolved to create a new hexagonal Daytime Running Light (DRL) signature, rendering it strongly recognizable and identifiable from far away. The hexagon concept can be found as the main design theme throughout the car: on the main bodywork, the side air intakes, the taillights and in the remarkable hexagonal exhaust pipe. *“This unique hexagonal light signature ensures a high recognition value within the Lamborghini range, and is also a clearly identifiable in the distance,”* emphasizes Borkert. The geometric hexagon paradigm has been one of Lamborghini's most recognizable symbols since the 1960s.

The hexagonal daytime running lights, which incorporate an air tunnel, are part of the design philosophy of incorporating lights within the aerodynamic concept. Furthermore, air channels positioned below the headlights improve the aero performance and cooling of the front high-performance braking system for better efficiency.

The Temerario's designers combine elements from aviation with a visceral muscularity that starts at the front. The design is characterized by well-formed athletic surfaces and a cabin that tapers towards the hexagonal tailpipes. The tip of the hood dominates the entire front end in a strong and striking shark's nose design: a symbol of bravery and speed. The sharp, elegant headlights are slightly overlapped by the hood, drawing inspiration from the sports motorcycle world. Air-guiding slats connect the low front spoiler with the hood, while fins on the sides direct the airflow along the flanks. Sharply shaped side skirts support the aerodynamics and increase downforce at the same time.

With a broad shoulder and long, powerful muscularity, the side stretches from the front over the door, emphasizing the extreme sportiness of the Temerario. The powerful and efficient air intakes behind the side doors ensure the necessary airflow for the V8 biturbo's performance and at the same time, visually enhance the chassis' downforce. A fixed rear spoiler emphasizes the car's rear width. The compact yet technical rear end incorporates details from motorsport, such as the wide diffuser that extends under the vehicle and the integrated exhaust tailpipes. The rear lights feature the new hexagonal design, also allowing air to pass through for engine cooling.

The roof is also functional in terms of aerodynamics. A slightly rearward offset profile directs the air directly onto the integrated rear wing. The designers almost invisibly integrated air inlets behind the passenger compartment above the sculpted shoulder: a highly functional component that helps supply the engine, radiator and turbocharger with sufficient air.

The heart of the Temerario is the new 4.0-liter V8 biturbo engine with an integrated axial flux electric motor. In realizing the new powertrain concept, designers and engineers developed a new chassis and body: the Centro Stile Lamborghini had the greatest possible freedom to present the drive system in a visually appropriate way to emphasize a true mid-engine feeling. Lamborghini presents the V8 biturbo openly, like a motorcycle's engine under a transparent hood.



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“With the clean yet exciting styling of the Temerario, we give a new shape to the essential and iconic Lamborghini design language, and take a huge step towards the future,” says Borkert. “The Temerario combines style and performance to perfection, presenting an unprecedented convergence of design, engineering and driver experience in a new model.”

Interiors: “Feel like a pilot”

“Lamborghini’s ‘Feel like a pilot’ philosophy comes to life in a new way in the Temerario, through a low seat position; the slim and lightweight dashboard; and a perfect inclination of the steering wheel allowing the driver to feel part of the typical fun-to-drive approach of Lamborghini. The combination of digital screens and mechanical and physical buttons such as the iconic start button or the racing car inspired steering wheel, results in the unique experience of ‘pilot interaction’,” explains Borkert. “New, electrically adjustable and comfortable sports seats are standard, or optional carbon fiber double-shell sports seats encompass the passengers within the vehicle like a perfectly fitting glove, ergonomically surrounding them with the cockpit and center console unit”. The seats are available in many different colors and four different stitching patterns. No other Lamborghini seat currently offers such a wide range of options as the newly-developed comfort seat in the Temerario: the 18-way adjustable comfort seat is heated and ventilated.

The interior mirrors the extraordinary exterior design, creating a balance between digital and physical experiences. Lamborghini uses best-quality materials such as carbon, leather and Corsatex by Dinamica suede throughout the interior, combining them to create a high-quality interior experience with a special feel. Many interior elements can also be ordered in carbon fiber as an option, including parts of the center console, air vents, door panels, parts of the dashboard, steering wheel and steering column. In addition to the elegant lightweight materials, customers can find classical Lamborghini elements such as the Start/Stop “Power button” inspired by aviation; e-gear lever; and red ‘line-up’ indicator on the steering wheel to emphasize the extreme sportiness of the Temerario.

Following the “Feel like a pilot” philosophy, thanks to the new generation dashboard, the pilot and co-pilot quickly become one with the car. Clear and intuitive to operate, the pilot can reach all the controls from their perfect seat position. Iconic hexagonal air vents are elegantly integrated into the cockpit, and the center console has space for a smartphone and wallet.

The newly-developed steering wheel with optional carbon elements takes inspiration from the racing world, and allows the driver to control the main driving functions. On the left-hand side of the steering wheel is the red-crowned rotor, which is used to select driving modes. Below this are buttons for the lift function to raise the vehicle; the ‘race start’ button; and between them the switches for the indicators. The driver can operate Launch Control with a simple touch of a button, for maximum control.

PILOT INTERACTION



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The new and modern graphic concept continues in the interior. Iconic elements are distributed inside the car including on the center tunnel, touchscreen tiles, and around ventilation openings and seams. *“The hexagonal graphics, the choice of materials and the fresh, digital graphics make the interior of the Temerario very sophisticated and emotive,”* says Borkert. For the first time, the co-pilot has their own slim and informative display, which they can use to call up driving information and vehicle functions. Pilots operate the instruments important for driving in analog form, while those for the entertainment system and navigation are operated by touch via the display in the center console. The “Pilot Interaction” concept actively involves the driver even more closely in the operation of the Temerario, providing perfect control in driving.

The new Human-Machine Interface (HMI) “Pilot Interaction” serves as the information center of the Temerario. Lamborghini developed the new graphics and design exclusively for the Temerario, evolving the new graphic design DNA started in the Revuelto. A new 8.4-inch display mounted on the center console gives the option to swipe and individualize the themes. The pilot and copilot can use it to slide apps and information left and right from the central display to the driver’s and co-pilot’s screens, just like a smartphone. While the driver receives information on the 12.3-inch digital instrument cluster, the data for the front passenger is shown simultaneously on a 9.1-inch screen in front of them. If the pilot changes the driving mode, the display graphics change to match the drive.

More space and room for everyday life

Compared to the Huracán, the interior of the Temerario has been completely redesigned, while at the same time further developing the design language first seen on the Revuelto. Thanks to the new spaceframe chassis, the Temerario offers significantly more interior space than its predecessor. A low and ergonomic seating position offers the pilot and co-pilot a perfect connection and integration with the vehicle while at the same time providing a high level of comfort, true to the Lamborghini philosophy of “Feel like a pilot”.

The new spaceframe chassis concept increases headroom by 34 mm and legroom by 46 mm, plus a 4.8° increase in visibility and accommodates passengers up to 200 cm tall, even when wearing a helmet. This means that even the tallest drivers wearing a helmet can comfortably complete their laps on a racetrack. There is room for items such as sports equipment in the load compartment under the front hood with 112 liters of stowage volume available equivalent to two cabin trolleys. Other everyday items can be stowed behind the seats.

“Offering customers the greatest possible comfort was one of the first objectives we set ourselves,” said Paolo Racchetti, Director of Model Line Temerario. *“Our super sports cars are driven and enjoyed by customers in the city and on long journeys: improving habitability while keeping the dimensions and proportions of the car as compact as possible was an important challenge during its development. Temerario is an absolutely versatile super sports car, ready to give its all on the track or to be the perfect travel companion during a long weekend.”*

Personalization and ‘Alleggerita’ Package



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The Temerario is launched with two new dedicated colors, Blu Marinus (blue) and Verde Mercurius (green). Over 400 body colors and special liveries will be available offering clients almost infinite customization possibilities through Lamborghini's Ad Personam program. The new rims, 20" at the front and 21" at the rear, are available in three different designs and materials: cast rims (three colors), forged (four colors) and carbon. A wide range of carbon fiber elements for exteriors and interiors is offered: front splitter, mirror caps, side upper vents, rear diffuser; central tunnel, instrument cluster, air vents, door switch frame, steering wheel in carbon, steering column cover and gearshift.

For the first time a Lamborghini debuts on the market, it will be available with the 'Alleggerita' (lightweight) package for customers more oriented towards track driving. It reduces the car's weight by 12.65 kg through body components alone, with a reduction of over 25 kg when incorporating lightweight interior elements, carbon rims and titanium muffler, and is even more efficient from an aerodynamic point of view (+67% aerodynamic load).

The Alleggerita pack includes a splitter made of CFRP (Carbon fiber reinforced polymers) (-0.19 kg) and recycled carbon fiber underbody panels (-0.55 kg): a further step in Lamborghini's commitment to sustainability. New side skirts in CFRP deliver a further 0.6 kg of weight saving, as do the rear bonnet (-9.2 kg) and the panel where the high-load spoiler is integrated (-1.6 kg).

Inside, the Lightweight Pack incorporates carbon fiber door panels and passenger footrest to offer a driving experience inspired by the world of competition. Window weights are also reduced: the rear window in lightweight glass saves 0.85 kg, while the fixed side windows are in polycarbonate (-0.45 kg).

An alternative Carbon Pack is also available, which includes a rear diffuser, rear-view mirror caps and carbon side air intake covers, helping to reduce the weight by a further 1.82 kg.

AERODYNAMICS

With the Temerario, Lamborghini has achieved the peak of aerodynamic efficiency through the attainment of three primary design goals: stability at high speeds; increased cooling performance; and maximum braking efficiency.

Lamborghini's designers and engineers took into account the new hybrid powertrain and the increased aerodynamic load targets, particularly at the rear, when developing the bodywork and underbody of the Temerario: the result is +103% rear downforce compared to the Huracán EVO, increasing to +158% if the car is equipped with the Alleggerita Pack.

Each individual element was designed to contribute to excellent aerodynamic performance. Starting with the front, where the DRLs have become aerodynamic elements, the hexagonal lights with dedicated air intakes and deflectors have the task of conveying airflow from the bumper to the upper part of the side radiators, and the two fins have been installed on the inlets. The upper fin with a wing-shaped profile diverts the flow



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downwards, which is captured by the second horizontal fin, directing it to enter the radiator perpendicularly and maximizing cooling efficiency.

Moreover, the fins which make up the grilles on the wheel arches convey the flow to the outside of the wheel, moving it away from the side radiator and minimizing its slipstream, with the dual effect of reducing aerodynamic resistance and moving the downforce towards the rear.

The wing mirrors, working in unison with the front of the vehicle, have the goal of not only minimizing drag, but also directing the air towards the side radiators, increasing the cooling capacity of the mechanical components.

The roof design with a central channel directs air towards the rear spoiler, integrated in the vehicle body and thus improving the aerodynamic efficiency and increasing downforce. The curved sides of the engine hood also contribute to this result, increasing the portion of air which flows through the side part of the spoiler. The optional Alлегgerita package features a high-load lightweight rear spoiler, obtained by increasing the height of the trailing edge with consequent increase in curvature.

The underside of the vehicle also plays a structural role in terms of aerodynamic efficiency. The underbody is equipped with vortex generators: three pairs of fins arranged like the branches of a tree increase the rear aerodynamic load, assisting the action of the diffuser which, thanks to a 70% greater surface area compared to the Huracán EVO and an angle increased by 4°, maximizes the vertical extraction of the air flow from the bottom. The increased cooling demand dictated by the new turbo-hybrid powertrain has necessitated the development of a new radiator layout, providing a 30% improvement in cooling performance.

Moreover, to maximize the Temerario's exceptional performance, a new brake cooling concept has been developed to optimize vehicle braking. The front section incorporates a deflector fastened to the lower suspension arm which exploits the flow diverted by the front diffuser and directs it towards the front brake caliper, helping to cool it. Another two specific inlets have been incorporated into the bumper to convey a high air flow from the bumper itself towards the disc ventilation channels; then a wye duct – with dual inlet but a single outlet – draws in air at high pressure, helping to improve the brake system cooling. The overall result is a total improvement in cooling performance over the Huracán EVO of 20% for the discs and 50% for the calipers.

The rear incorporates a solution already successfully tested on the Revuelto. The ventilation channels of the rear discs are fed via a NACA duct positioned in the front part of the rear wheel housing, which collects the high-energy flow of the underbody and directs it towards the brake cooling duct.

SPACEFRAME

The structural assembly of the Temerario sees the new Body-in-White constructed with a multi-technology aluminum spaceframe approach to withstand the higher loads deriving from the new hybrid power unit. This guarantees excellent mechanical qualities together with remarkable efficiency in weight reductions.



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Made entirely of aluminum, the frame of the Temerario debuts a new high-strength alloy for high-pressure castings; the use of high-strength hydroformed extrusions; and an increase in the number of hollow castings with thin closed inertia sections, achieved through the use of internal cores. These technologies allowed the constructional complexity of the spaceframe to be minimized and weight to be optimized, while at the same time the new hybrid powertrain adopts over 50% fewer components compared to the same parameters on the Huracán. In addition, the Temerario incorporates a significant reduction in the number of heat welds: over 80% less total weld bead length compared to the Huracán.

The new construction archetype delivered increases in torsional stiffness of over 20% to be achieved compared to the previous generation spaceframe, as well as offering the best possible vehicle weight limitation, ensuring the highest level of occupant safety and making a significant contribution to the vehicle's excellent driving dynamics.

DRIVING EXPERIENCE

Temerario offers 13 driving experiences that make the super sports car versatile and capable of exciting both in daily driving and on the curbs of a circuit. The drive modes can be selected via the rotors on the steering wheel: the upper left red-crowned rotor allows the driver to choose between Città, Strada, Sport, Corsa and Corsa Plus (ESC Off - electronic controls deactivated); furthermore, by pressing the "checkered flag" button for two seconds, Launch Control is activated to exploit the maximum potential when starting from a standing start.

"Temerario offers an innovative and emotional driving experience at the same time. The e-4WD system including real torque vectoring is a perfect combination," comments Mohr. *"On the one hand we have a car that is absolutely precise and effective on the track, on the other we have a more typically rear-wheel drive character, oriented towards maximum involvement for the driver."*

Together with the hybrid system, three new dedicated driving modes also debut: Recharge, Hybrid and Performance, selectable via the upper right rotor. The choice of driving mode is displayed on the driver's 12.3-inch digital dashboard, where the animated graphics replicate the rotation of the selectors to make the selection immediately intuitive.

Città is the experience designed for driving in urban areas, which can be used both in Hybrid mode (fully electric with a maximum power of 140 kW – 190 CV) and in Recharge mode, to allow the V8 to quickly recharge the battery if necessary. Strada is ideal for extra-urban routes and long autoroute journeys, for efficient and sporty driving, with all-wheel drive that activates on demand. The V8 engine always supports electric motors, with maximum power of 800 CV delivered by the powertrain in Hybrid mode, while in Recharge mode the maximum power output is 725 CV. The front e-axle supports torque vectoring and the active aerodynamics work to offer maximum stability at high speeds, for example on the motorway.

By selecting Sport, the Temerario changes character and the car's behavior is set to offer emotive, fun and responsive driving in each of the three combinable modes: Recharge, Hybrid and Performance. The



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combustion engine, assisted by the hybrid system, is active in all three situations, delivering a maximum of 920 CV of power while the sound of the V8 becomes more present; the gearbox responds with maximum responsiveness while the suspension and aerodynamics enhance the agility of the car and the pleasure of driving in corners.

The pinnacle of effectiveness and power expressed, both in terms of performance and sound, is reached with Corsa, the mode designed to enhance the dynamic capabilities of Temerario on the track. In Performance, the powertrain expresses the peak of its potential by delivering 920 CV, and the control of the hybrid system is calibrated to get the most out of the e-axle both in terms of torque vectoring and all-wheel drive, for ultra-sporty driving but accessible at the same time. The sound also reaches maximum emotiveness for an engaging and exhilarating sound experience.

The Drift Mode option also makes its debut on the Temerario, to help the driver generate controlled oversteer and maximize driving fun. Operated via the lower rotor on the right side of the steering wheel, Drift Mode is adjustable according to three different levels: from level one, which facilitates oversteer while maintaining a limited yaw angle, up to level three dedicated to expert drivers to allow a wide angle of yaw.

HMI, INFOTAINMENT AND CONNECTIVITY

The new Temerario is the most advanced car in the history of Lamborghini from a multimedia perspective. Compared with the Huracán, the connectivity is significantly more advanced, offering users services and features related to everyday use of the car, together with others designed specifically for the fun of driving on road or on track.

Users can take advantage of a navigation system with over-the-air map updates and real-time information on traffic and points of interest. The connectivity suite incorporates entertainment content including web radio, voice assistant and wireless smartphone connection via Apple Car Play and Android Auto. The Temerario offers a Human Machine Interface (HMI) system which consists of three displays: the 12.3" digital instrument panel, the 8.4" central screen and the 9.1" passenger display. The system features graphics including 3D, with animations, widgets and a completely new style created specifically for the car. Furthermore, the three screens are controlled by a single "electronic brain" to ensure maximum coherence of design, interaction and use.

The instrument panel, in addition to having a completely renewed graphic design, presents new customization functions that allow users to select three types of views: "Dynamic view" with vehicle dynamics information; "Navi view" with full screen map; and "Essential view" with essential information for driving. The Infotainment system implements new functions with a wide range of customization options to create a truly immersive experience, including the swipe function that allows users to move contents from the central monitor to the driver and passenger displays with a gesture of the fingers, like on a smartphone screen. Among the customizations available on the central display is the option of creating a page that manages up to three applications simultaneously, allowing the driver to easily reach their 'favorite' functions such as climate control, navigation, radio and much more, minimizing distraction while driving. Favorite shortcuts to



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individual applications can also be created, such as the climate control, telephone contacts, radio and navigation destinations.

The Temerario also debuts the Lamborghini Vision Unit (LAVU) system, an option which, via three cameras and a dedicated control unit, enables three new on-board services: Lamborghini Telemetry 2.0, Memories Recorder and Dashcam. The apps are easily accessible through the infotainment system and steering wheel controls, as well as via the Lamborghini Unica app.

The LAVU system enhances the authentic "Feel like a pilot" experience, using telemetry in a way that records performance on the track to help improve it. It also allows the best driving moments to be saved using the Memories Recorder and improves safety via the Dashcam.

The three hi-definition cameras are positioned to frame both the cabin and the road: the front camera is positioned on the roof liner and records images from the road or track; the 'emotion' camera, also on the roof liner, frames the cabin to capture the emotions of the driver and passenger; while the rear wall camera is attached to the fireproof shield, behind the seats, and frames the steering wheel, instrument panel and windshield.

The Driving Experience section allows users to recall all the experiences recorded with their car through the LAVU system, while the Remote Trip Statistics service collects data on the distance traveled and the use of the hybrid powertrain after each trip.

The Lamborghini Unica app extends the experience even when the Temerario's engine is turned off. Using a smartphone or Apple Watch users can continuously monitor their car, viewing information such as the fuel level, battery charge, range and the exact position in which it is parked. Furthermore, through the app it is possible to implement a series of remote-control operations, such as locking and unlocking the doors.

One of the safety and protection features on the Temerario is the Lamborghini Connect Vehicle Tracking System (LCVTS), which proactively detects unauthorized use of the car and notifies the owner via the app as well as the Security Operations Center, in order to promptly activate the necessary procedures. Lamborghini guarantees the confidentiality and protection of clients' personal data right from the vehicle design stage, applying a 'privacy and security by design' approach, maintaining the highest standards for the whole life cycle of the product.

Sound

The Temerario Sound System is crafted by Sonus faber, the Italian artisans of sound hailing from Vicenza, Italy. This premium system creates an immersive audio environment, characterized by the renowned natural sound for which Sonus faber is celebrated. Each component is meticulously designed and fine-tuned to ensure a listening experience that mirrors the artistry and precision synonymous with Italian craftsmanship. The Temerario's encompassing cabin and powerful engine are seamlessly complemented by the Sonus faber sound system, guaranteeing an emotive and luxurious experience.



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Lamborghini Telemetry 2.0

Lamborghini Telemetry 2.0 is an onboard app designed for track use aimed at improving the driver's confidence and performance, helping the driver to make the most of the Temerario's potential. The graphic interface and user experience in the car have been completely revamped, making operation more intuitive and immediate and with steering wheel controls making it ideal for use on track.

During track sessions, the course and information about the lap time and each sector can be viewed on the dashboard display. It is also possible to select a reference time to get an immediate report on performance. Lamborghini Telemetry 2.0 includes over 150 of the world's most important circuits (including variants); compared to the previous version available on the Huracán STO. In addition, more information is available, such as tire pressure or where and when the electronic intervention has kicked in.

Users can also record videos of their experience using the cameras integrated into the LAVU system: immediately after the session, the telemetry data and videos can be viewed directly on the dashboard display or shared on the Unica app for a more in-depth analysis, even combining the car data with the user's heart rate thanks to Apple Watch integration.

The Lamborghini Unica app also features enhanced usability thanks to the collaboration of Lamborghini Squadra Corse drivers. Performance analysis is now more user-friendly through the modular visual display of the route map, identifying the recorded videos and the data collected during the session. Images and data can be shared in a personalized video thanks to a video editor integrated into the app, allowing the user to choose between different frames, templates and new overlay widgets.

Memories Recorder

The fun continues off track, where every moment on board the Temerario can be recorded using the Memories Recorder. This feature allows drivers to record up to two minutes of driving using the LAVU system cameras, and to share the video through the Unica app. The usability and personalization options of the Memories Recorder is further improved by the ability to choose the camera frame; the information to display on the graphical interface; and the video format.

Dashcam

The LAVU system has also allowed the implementation of the Dashcam app, designed to improve driving safety. The three cameras provide an efficient continuous surveillance system and, in the event of an accident or emergency maneuver, a one-minute video is automatically recorded. It is also possible to view up to 40 seconds of images before the moment of impact or a maneuver, and the video can be viewed both on the infotainment system and from the Unica app.

TYRES



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As Lamborghini's long-term partner and exclusive tyre partner for the new Lamborghini Temerario, Bridgestone, a global leader in premium tyres and sustainable mobility solutions, has developed a full tyre line-up to maximise the supercar's performance on and off the track, year-round, to answer all drivers' needs.

Bridgestone has turned to its iconic Potenza tyre family for the Temerario's summer and track fitments, delivering custom engineered Potenza Sport and Potenza Race tyres. The bespoke Bridgestone Potenza Sport fitment applies a pattern design that maximises dry handling, wet handling and high-speed performance, to enhance the vehicle's sport behaviour.

Alongside this standard ultra high-performance fitment, Bridgestone has also engineered a Potenza Sport fitment which is Run-Flat homologated. This allows drivers to maintain control after a puncture and safely continue driving for 80km at up to 80km/h. Bridgestone has brought this technology to the Temerario in a custom fitment that provides a higher grip level, superior traction and extreme road driving comfort, alongside safety and peace of mind.

In addition, Bridgestone has engineered a bespoke race tyre to unleash the incredible performance of the supercar. This unique Bridgestone Potenza Race fitment delivers excellent grip, enhanced handling and long-lasting performance for all track enthusiasts. The tyre's high-level grip is enabled by a bespoke compound developed for track usage and then transferred to road application.

Completing a full line-up to meet every driver need and demand, Bridgestone has also custom-engineered a Blizzak LM005 winter fitment, enabling the supercar to deliver top performance even in tough winter conditions.

Developed and manufactured in Europe, the different custom-engineered tyres will be available in eight dimensions across 20" and 21" sizes. After the Huracán STO, Tecnica, Sterrato, Huracán EVO and the V12 HPEV Revuelto, the Temerario is the latest Lamborghini super sports car to be equipped with Bridgestone tyres as original equipment.

TECHNICAL SPECIFICATIONS

Powertrain

Engine: V8 Bi-Turbo - Hot-V 4.0l

Displacement: 3995,2 cm³ (243,8 cu in)

Bore and Stroke: 90 mm x 78,5 mm (3,54 x 3,09 in)

Compression Ratio: 1 : 9,3

Max power @ rpm (ICE): 800 CV @ 9000-9750 rpm

Max power (combined ICE+EE): 920 CV



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Max torque @ rpm (ICE): 730 Nm @ 4000-7000 rpm

Cooling System: Liquid cooled - dedicated circuit for HV components

Engine Management System: Central DI - Bosch

Lubrication System: Dry sump

Transmission

Transmission: Automatic

Gearbox: 8 gears

Clutch: Dual clutch

Hybrid System

Battery: Lithium-ion high specific power battery with pouch cells

Generator: P1 eMotor

Electric Engines: Front e-axle (220kW @3500rpm)

Performance

Max Speed: 343 km/h

Acceleration 0-100 km/h: 2.7 s

Braking 100-0 km/h: 32 m

Body and chassis

Frame: Full Aluminium

Body: Aluminium

Wheels

Tyres – Front: Bridgestone Potenza Sport 255/35 ZR20



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Tyres – Rear: Bridgestone Potenza Sport 325/30 ZR21

Front Rims: 20 x 9J

Rear Rims: 21 x 11.5J

Braking system

Brakes: CCB Plus (Carbon Ceramic Brakes Plus) brakes with fixed monoblock calipers in aluminum with 10 pistons (front) and 4 pistons (rear)

Front Brakes: 410x38mm discs

Rear Brakes: 390x32mm discs

Dimensions

Wheelbase: 2.658 mm (104,6457 in.)

Length: 4.706 mm (185,2756 in.)

Width (Excluding Mirrors): 1.996 mm (78,58268 in.)

Width (Including Mirrors): 2.246 mm (88,4252 in.)

Height: 1.201 mm (47,28346 in.)

Dry Weight: 1.690 kg (3.725,8 lb)

Weight-to-power Ratio: 1,84 kg/CV

Photos and videos: media.lamborghini.com

Information on Automobili Lamborghini: www.lamborghini.com



Automobili Lamborghini S.p.A.

Headquarters

Director of Communication
Tim Bravo
T +39 051 9597611
tim.bravo@lamborghini.com

Brand & Corporate Communication
Camilla Manzotti
T +39 360 1077907
camilla.manzotti@lamborghini.com

Product & Motorsport Communication
Francesco Colla
T +39 348 8629861
francesco.colla@lamborghini.com



Media Information

Media Events & Brand Extension Communication
Rita Passerini
T +39 349 4598271
rita.passerini@lamborghini.com

Corporate Publishing
Barbara Grillini
T +39 366 8778823
barbara.grillini@lamborghini.com

Motorsport Communication
Giovanni Zini
T +39 342 1318474
giovanni.zini@lamborghini.com

Regional Offices

Europe, Middle East & Africa
Liliya Dovbenchuk
T +39 349 756 2077
liliya.dovbenchuk@lamborghini.com

Asia Pacific
Tricia Tan
T +65 9073 3031
tricia.tan@lamborghini.com

South-East Asia & Pacific
Alethea Tan
T +65 8711 1329
alethea.tan@lamborghini.com

United Kingdom
Juliet Jarvis
T +44 (0) 7733 224774
juliet@jic.uk.com

Chinese Mainland, Hong Kong & Macau
Ma Weichao (Ms.) 马唯超
T +86 138 1009 5399
weichao.ma@lamborghini.com

Japan
Yasuki Yamagishi
T +81 801 1343 7756
yasuki.yamagishi@lamborghini.com

North & South America
Jory Wood Syed
T +1 332 220 5217
jory.syed@lamborghini.us