



## Lamborghini Gallardo LP560-4

### Setting a New Standard

#### Powerful elegance - a new definition

With the new Gallardo LP560-4, Lamborghini once again sets a higher standard for super sports cars. With its new engine, permanent four-wheel drive transmission and new suspension, it delivers clearly improved performance and dynamics. In parallel, its innovative design takes the classic lines unique to the Lamborghini brand one step further. Powerful elegance has never been so defined.

The Gallardo LP560-4 is the successor of the most successful Lamborghini model of all time. Approximately 7,100 Gallardo models have left the Sant'Agata Bolognese production plant since its launch in 2003. "The LP560-4 will complete this success story," states Stephan Winkelmann, President and CEO of Automobili Lamborghini. "It will outclass its predecessor in every aspect: its dynamics are distinctly breathtaking and its design sets new standards. With the introduction of the Gallardo LP560-4, we will consistently continue Lamborghini's growth strategy."

The powerful heart of the Gallardo LP560-4 is the new 5.2 liter V10 engine with an output of 560 hp at 8,000 rpm. The increase of 40 hp compared with that of the previous Gallardo, and the approximate 20 kg (44 pound) reduction in weight, improves the power-to-weight ratio to 2,5 Kg (5.5 pounds) per hp and thus enhances performance. The LP560-4 accelerates from 0-100 Km/h (0-62 mph) in 3.7 seconds, 0-200Km/h (0-124 mph) in 11.8 seconds and its top speed lies at 325 Km/h (202 mph). At the same time the new, highly efficient engine enthralls its driver with its direct fuel injection system - "Iniezione Diretta Stratificata". Despite its clearly-increased power, fuel consumption and CO<sub>2</sub> emissions have been reduced by a staggering 18 percent.



The engineers in the Sant'Agata-based Technical Department have also improved traction, handling and stability at high speeds. The redesigned four-wheel drive transmission, the new suspension and optimized aerodynamics, as well as the reduced weight and decreased friction between the components, all contribute to the overall improvements in the vehicle. Thus, the Gallardo LP560-4 presents itself as a cutting edge super sports car also suitable for the race track. The vehicle is also surprisingly suited for long-distance driving and, despite its extreme performance capabilities, is easy to control while maintaining the utmost stability.

## **The Style**

### **Powerful elegance**

A Lamborghini is and always will be a highly-efficient athlete. Its extreme sensuality is based upon precision, performance and spontaneous action. A Lamborghini's elegance is that of stark, purist strength. The DNA of the Lamborghini brand is continuously developed by the Centro Stile in every new car. Thus, the Gallardo LP560-4 displays the precise lines and clean surface edges in its distinctly minimalist design. Ornaments or embellishments of any form are alien to it.

Evolution of form systematically follows the demands of function: the newly designed front of the LP560-4 squats deeply to the ground which contributes to its aerodynamic efficiency. The enlarged and clearly accentuated cooling intakes meet the demands of augmented engine power thus increasing the air circulation vital to a vehicle this powerful. The spoiler, positioned low between the air intakes, improves the aerodynamic equilibrium at high speeds.

### **Characteristic LED - Daytime running light**

The new headlights have a characteristic 'daytime' running light integrated beneath the Bi-Xenon lamps: 15 diodes (LED) have been positioned in a Y structure. The same design appears again in the taillights. The stop and brake lights have been inspired by the Miura Concept, the Murciélago LP640 and the Reventón, and display the Y form three times over.



The redesigned rear gives the definition “powerful elegance” a new meaning: rear lights, air cooling vents, bumper and diffuser are arranged in precise positions on the car’s exterior, which make the LP560-4 appear extremely wide and bonded to the road surface. In addition, the streamlined covers, left and right of the engine hood, accentuate the powerful shoulders and stretched lines of the new Gallardo.

### **Clearly improved aerodynamics**

The rear diffuser has been newly designed, is more efficient with respect to its predecessor and, together with the smooth underbody, contributes to the excellent steering stability even at extremely high speeds. In sum, the aerodynamic efficiency, with regard to output compared to that of its predecessor, has been increased by 31 percent. The Gallardo LP560-4 takes fast curves even more supremely.

The designers in Sant’Agata Bolognese have surpassed themselves with the clear-cut, pure, stark lines of the Gallardo LP560-4. They have also demonstrated distinct attention to detail: the elaborate aluminum caps for fuel, engine oil and steering fluid are testimony to this, as is the rear camera which has been integrated in a small fin in the independent rear spoiler, and the finely-crafted grille in the exhaust pipes.

### **The body**

Weight is undesirable in a sports car and a lightweight model encourages the dynamics of such a vehicle. Aluminum is much lighter than sheet steel and this is why the Gallardo LP560-4 is produced with a body in a much lighter but nevertheless more stiff structure: the two-seat car measures 4345 mm (171 inches) in length, 1900 mm (74.8 inches) in width and a mere 1165 mm (45.9 inches) in height. It weighs a total of 1410 Kg (3,108.5 pounds) (dry) - which is, effectively, 20 Kg (44 pounds) less than that of the previous Gallardo.

The construction of the Gallardo LP560-4 utilizes what is known as a ‘space frame construction method’. Integrally-molded node elements and extruded parts create its frame, and sheet metal plates made out of aluminum have been neatly and securely integrated to form the body.



The body is not only extremely light but also torsionally stiff and displays the highest safety characteristics. Thus, the basis for the extraordinary handling characteristics of the LP560-4 is formed.

### **Integrated Pedestrian Protection system**

The body of the car also demonstrates extremely high levels of 'passive security.' The Gallardo LP560-4 fulfils the not yet obligatory European directives regarding the protection of pedestrians. Furthermore, the geometry of the entire front of the car has been optimized with the addition of a special combination of materials behind the front bumper which serve to absorb any impact energy.

### **The Interior**

#### **Luxurious individuality**

Despite its low exterior height, the Gallardo LP560-4 welcomes its passengers with a spacious interior. The sports seats are covered with either fine leather or Alcantara® (upon request) and provide secure adherence and support. The position of the seats is very low, typical for sports cars. There is space behind the seats for luggage which complements the 110 litres (29 gallon) front trunk.

The wide middle console is one of the elements which characterizes the impression of sporty dynamism in the interior. It accommodates the standard Lamborghini multimedia system, as well as the air conditioning which can be regulated on both the driver's and passenger's sides. Between both of these elements lies a newly designed module consisting of classically elegant flip switches. Seven round instruments in the cockpit provide the driver with important information such as essential engine data, with a multifunctional display between the speedometer and revolution counter.



## **Workmanship of the highest quality**

The Miura and the other models of the 60s were already characterized by the excellent quality of workmanship which lay far and above the general standards of that time. Lamborghini has continued this tradition and even today delivers automobiles of the highest standards. The Gallardo LP560-4 indulges with the highest quality, aesthetically pleasing materials. With regard to the leather interior, an array of colors and stitching (also in contrasting colors) are available. As an option, Lamborghini can deliver the Gallardo LP560-4 with additional choices of leather and Alcantara® interiors, as well as Carbon Fiber Packages. Here, elements such as the air conditioning surrounds, control panel, handbrake handle and the gear-stick surrounds are available in carbon fiber.

Furthermore, the individualization program, Ad Personam, enables the customer to create any combination of color and trim, thus creating a highly personalized vehicle. After all, the new Lamborghini should perfectly reflect the owner's lifestyle.

## **The Engine**

### **Extreme power in every situation**

The Gallardo LP560-4's engine is entirely new. All that remains of the original V10 is the number of cylinders which, in this performance category, create a perfect and unique synthesis of torque, force of movement, sporty nimbleness, compact size and low weight.

The engine has a 5204 cm<sup>3</sup> volumetric displacement (5.2 liter) which, with 8,000 rpm creates the extreme 560 hp. This results in the excellent performance of 106.3 hp per liter. At maximum torque output, the engine yields 540 Nm (398 lb-ft) of torque at 6,500 rpm. The ample torque curve guarantees outstanding thrust from every engine speed. With an acceleration of 3.7 seconds from 0-100 km/h (0-62 mph) and a maximum speed of 325 Km/h (202 mph) the Gallardo LP560-4 shoots into the orbit of the most extreme and powerful sports cars.



Despite the clearly improved driving performance of this super sports car, Sant'Agata's engineers were still able to achieve a reduction in fuel consumption and CO<sub>2</sub> emissions by 18 percent. Measured by engine power and performance, the Gallardo LP560-4 e.gear's combined fuel consumption is 13.7/100Km (20,62 mpg UK).

### **Perfect weight distribution, class-leading dynamics**

The engine in this new model lays lengthways in front of the rear axle - hence the model description **Longitudinale Posteriore**. The concept of the mid-rear engine is unbeatable in sports car production, with the center of gravity being displaced next to the car's center, thus creating the car's exceptional dynamics. Furthermore, it creates the basis for the Gallardo LP560-4's perfect weight distribution with 43 percent on the front axle and 57 percent on the rear. In combination with the permanent four-wheel drive transmission, superior driving stability and road adherence are guaranteed in all situations.

### **Reduced weight for inspirational torque**

The crank case of the LP560-4's new ten cylinder engine is produced with aluminum alloy. Separate cylinder liners are not necessary with this technology: instead, the liners, due to their exposure to the hard silicone crystals during the production phase, are bored directly out of the material. The connecting rods are made out of wrought steel and the pistons are produced from an aluminum alloy. The consequent reduction in weight, inertia and friction losses contribute to the car's inspirational torque.

The engine is unusually wide for a V10, with a cylinder angle of 90 degrees. A definite advantage of this construction is the low center of gravity. A further reduction in the gravity center height also comes from the dry sump layout of the lubrication system, which also guarantees the reliability of the oil supply even during extreme lateral acceleration on the race track.



## **Direct fuel injection improves efficient combustion**

The new V10 uses the direct fuel-injection system “Iniezione Diretta Stratificata” as an innovative way to optimize performance results in part-load conditions. Here, the fuel is injected directly into the combustion chamber through the laterally-positioned injector. Combined with the use of a ‘tumble flap’ in the intake manifold runners, this solution guarantees an optimized distribution of the gasoline in the combustion chamber (higher gasoline density around the spark plug, leaner mixture close to piston and cylinder liners) and delivers the basis for a highly efficient combustion system even with stoichiometric mean mixture composition. The direct injection boosts the extremely efficient ‘full load’ performance of the V10, reduces its knock sensitivity and thus enables the very high compression ratio of 12.5:1. The cylinder heads have been optimized to deliver a very quick gas exchange and the variable valve control system on all four camshafts improves the charge efficiency across the entire engine speed range.

## **Transmission**

### **Superior control four-wheel drive**

Such extreme power must be brought onto the streets with extreme reliability. The driver of a Gallardo LP560-4 can thus rely on the four-wheel drive Viscous Traction (VT) system, with the ‘4’ in the model name as a reminder. Lamborghini originally introduced this system with the Diablo VT in 1993, and for good reason: four actuated wheels achieve more grip than two and permit acceleration earlier in the curve exit.

The protagonist in the transmission is the central viscous-coupling which requires no electronic control. In this special Lamborghini configuration, the driving torque is distributed between front and rear - generally with a 30:70 front-to-rear ratio and, within milliseconds, adapts to even the slightest variations in road conditions. A mechanical differential on the rear axle provides up to 45 percent limited slip and an electronic differential lock at the front complete the four-wheel drive system.



## **Superior traction and handling**

Not only does the maximum traction take advantage of the permanent four-wheel drive system, but also the car's clearly superior handling. Each wheel can only transfer a certain amount of torque to the road. As the propulsion power is distributed onto all four wheels through the viscous traction system, more potential for directional control remains, and reserves in every situation distinguish a perfectly made sports car.

Despite all of the engine thrust, changing gears in the Gallardo LP560-4 is one of the most exciting experiences of driving this vehicle. It is still the customer's personal preference as to whether he wishes to change gears manually through the exact 'gate' guides of the six-speed gearbox via the short gear stick, or whether he prefers to let his fingertips control the e.gear's paddle-shift system located behind the steering wheel: the latter solution becoming the preference of the majority of Lamborghini customers.

## **Gear change time reduced by 40 percent**

The robotized e.gear transmission has been entirely redesigned and improved in all aspects. The complete system has not only been reduced in weight, but the time employed to change gears has also been reduced by 40 percent in "Corsa" mode.

The Gallardo LP560-4 e.gear can either be driven 'normally' using the manual paddles, or using the fully automatic function where the e.gear system changes gear in total independence, permitting a particularly comfortable driving mode.

When driving 'normally' using the e-gear paddles, the driver may choose between three different driving programs: in addition to the "Normal" mode, the Gallardo LP560-4 offers a "Sport" program with its even more rapid gear changing times. The "Corsa" program directs the engine to optimum acceleration. It permits a greater slip angle and also allows - with maximum safety - the full dynamism of the LP560-4 to be enjoyed, especially on a race track. When driving in the fully automatic mode, the





Normal and Sport programs can be selected: the Corsa program is not available when driving in fully automatic mode.

ESP is always active in all driving modes, with less intervention and traction control in the Sport and Corsa modes.

Lamborghini's 'Thrust' function ensures maximum acceleration from neutral while the angle of the throttle valve and the clutch are here optimally adjusted to one another.

## **The Suspension**

### **High-tech parts with Lamborghini know-how**

The Gallardo LP560-4's predecessor was one of the world's best super sports cars with regard to handling, precision and driving stability. However, the latest model provides an even more intense driving experience: the new suspension improves the car's handling, its driving comfort and its directional stability at high speeds.

The Gallardo LP560-4's suspension is uncompromisingly high tech. Its technical production was conceived from motor sport technologies. The double wishbones made out of aluminum with newly-designed kinematics, while the springs and shock absorbers are tightly adjusted for grip.

The rear axle now has an additional track rod which further improves the excellent control of this super sports vehicle. Newly developed elements are the rubber-metal bearings, highly technical parts, which clearly improve the special Lamborghini driving dynamics with well chosen material combinations and cleverly defined assembly.

### **Extreme road adherence**

The steering rack works with relatively little assisted steering support, thus bonding the driver closely to the road. This in-turn provides the



driver with an intense experience of power and impulse. The steering unit has its own cooling system for the power steering fluid.

Precise, breathtakingly fast, whilst stable and free from surprises, the Gallardo LP560-4's dynamics assure a sensuous experience. The LP560-4's tires (235/35 ZR 19 front and 295/30 ZR 19 rear) appear to bond with the asphalt. Specially developed Pirelli P-Zero series tires are fitted: these have a particularly low roll resistance which also maintains tire wear at a minimum without, of course, any reduction in performance quality. At a speed of more than 120 Km/h (78 mph), an automatically extending rear spoiler increases the down force on the rear axle. It acts in association with the specially formed underbody which directs the air stream under the car.

### **Optional Carbon Ceramic Brake system**

The new braking system acts with brute force. At the front, eight-cylinder calipers grasp the 365 mm (14.37 inch) diameter brake discs. At the rear, four cylinder calipers act on the 356 mm (14 inch) brake discs. In addition, the new disc ventilation system improves the thermal stability in extreme situations. Optionally, discs made out of Carbon Ceramic are offered. At the front, the CCB (Carbon Ceramic Brakes) discs measure 380 mm (15 inches) in diameter, while the rear measure 356 mm (14 inches) They deliver much improved performance at a reduced weight. In total, the CCB braking system is lighter in weight, improving driving dynamics.

### **The interior and trim**

With the Gallardo LP560-4 Lamborghini provides its customers with a generous and sporty standard equipment package. Direct from the production line, a customer will find included in his vehicle passenger and lateral air-bags; a two-zone air conditioning system with sun regulation; the Lamborghini Multimedia System including an USB connector; and sports seats with an electronically operated backrest. The interior trim is created from fine leather. Bi-Xenon headlights with LED daytime running light are included.



A large variety of options increases the interior comfort of the vehicle, including a navigation system and a module for TV reception; a hands-free Bluetooth® phone set; an anti-theft device; and a rearview camera. A further option is the lifting system control of the front of the vehicle which, at the touch of a button, is raised to enable driving over obstacles. and Bi-Xenon headlights with LED daytime running light. The car is supplied with new Apollo wheels as standard and new polished cross-wheel rims 'Cordelia' or the black Y-rims 'Callisto' are offered. Finally, the engine hood made from glass creates a showcase for the heart of the Gallardo LP560-4.

The possibilities and different combinations available in the Individualization Program 'Ad Personam' are almost inexhaustible. Behind this program stands the philosophy that a super sports car of this nature should, after all, reflect the personality of its owner by enabling him or her to completely indulge their expectations and wishes. As a consequence, extreme exclusivity is the trademark of Lamborghini's individualization program. "Think the Impossible" states the motto. Ad Personam offers a host of options to allow customers the ability to give their car an imprint of their own style with respect to the interior and exterior trim. A new highlight in the program are the following three exclusive matt colors: Nero Nemesis (matt black), Bianco Canopus (matt white), Marrone Apus (matt brown). The new matt colors underline the clearly defined and purist precision of the Lamborghini design.



## LP560-4 Technical data - EN

### Frame & Body

Frame	Structural aluminum space frame, based on aluminum extruded parts welded to aluminum-cast joint elements
Body	Aluminum with thermoplastic "hang on" parts
Rear Spoiler	Electronically controlled
Mirrors	External mirror with electrical closing system
Suspension	Double wishbones front and rear suspension system, anti-roll bar anti-dive and anti-squat
ESP 8.0	Full ESP System with ABS, ASR and ABD

### Airbags

Front	Front Dual-Stage driver and passenger airbags, side Head-thorax airbags
-------	---

Tires (front/rear)	Pirelli Pzero 235/35 ZR 19 - 295/30 ZR 19
Wheels (front/rear)	Aluminum alloy, 8.5" x 0.19" - 11" x 0.19"
Steering	Power-assisted rack and pinion
Curb-to-Curb turning circle	11.50 m (37.73 ft)

### Brakes

Steel brakes	Power vacuum, aluminum alloy calipers: 8 cylinder front calipers and 4 cylinder rear calipers Ventilated discs (front-rear) $\varnothing$ 14.37 x 1.34 in front - $\varnothing$ 14 x 1.26 in rear
CCB brakes	Power vacuum, aluminum alloy calipers: 6 cylinder front calipers and 4 cylinder rear calipers Ventilated discs (front-rear) $\varnothing$ 15 x 1.5 in front - $\varnothing$ 14 x 1.26 in rear

### Motor

Type	10 cylinders V90°, DOHC 4 valves, common-pin crankshaft
Displacement	5.2 l
Compression ratio	12.5:1
Maximum power	560 hp at 8,000 rpm
Maximum torque	540 Nm (398 lb-ft) at 6,500 rpm
Engine management system	Bosch MED 9
Cooling system	Engine and gearbox radiator
Cooling system oil	Oil to Water cooler
Cooling system water	Two water radiators
Emission control system	Catalytic converters with lambda sensors
Lubrication system	Dry sump

### Drivetrain

Type of transmission	Permanent four-wheel drive with viscous traction system
Gearbox	6 Speed + reverse, an optional robotized sequential e.gear system with actuation by paddles on the steering column
Clutch	Double plate $\varnothing$ 215 mm (8.46")



Rear Differential	45% limited slip
Front Differential	Slip limitation by ABD function

### Performance

Top speed	325 Km/h (202 mph)
Acceleration 0-100/h (0-62 mph)	3.7 sec
Acceleration 0-200Km/h (0-124 mph)	11.8 sec

### Dimensions

Wheelbase	2560 mm (100.7 in)
Overall length	4345 mm (171 in)
Overall width	1900 mm (74.8 in)
Overall height	1165 mm (45.9 in)
Track (front/rear)	1632 mm- 1597mm (64.3 - 62.9 in)
Dry Weight	1410 Kg. (3108,5 lbs)
Weight distribution (front/rear)	Front 43%/rear 57%

### Capacities

Engine oil	10 litres (2,2 gal UK)
Fuel tank	90 litres (19,8 gal UK)
Engine coolant	20 litres (4,4 gal UK)

## EU - version

### Consumption with E.Gear

Urban	20,7 l/100 Km (13,62 mpg UK)
Extra urban	9,6 l/100Km (29,42 mpg UK)
Combined	13,7 l/Km. (20,62 mpg UK)
CO <sub>2</sub>	327 g/km

### Consumption with manual transmission

Urban	22 l/100Km (12,84 mpg UK)
Extra urban	10 l/100Km (28,25 mpg UK)
Combined	14,7 l/100Km (19,22 mpg UK)
CO <sub>2</sub>	351 g/km

## US - version

### Consumption with E.Gear

City	14 mpg
Highway	20 mpg
Combined	16 mpg

### Consumption with manual transmission

City	12 mpg
Highway	20 mpg
Combined	16 mpg