#### Press kit

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#### **Contact Persons**

Automobili Lamborghini S.p.A. Via Modena, 12 40019 Sant'Agata Bolognese (BO), Italy www.lamborghini.com



#### Automobili Lamborghini S.p.A.

Communications and ArtiMarca Director Dominik Hoberg dominik.hoberg@lamborghini.com

Communications Department and ArtiMarca Rita Passerini rita.passerini@lamborghini.com

Press Office - Italy and Southern Europe Clara Magnanini clara.magnanini@lamborghini.com

Press Office - Northern Europe Claudia Schneider claudia.schneider@lamborghini.com

Museum Cristina Guizzardi cristina.guizzardi@lamborghini.com

Via Modena, 12 40019 Sant'Agata Bolognese Telefono +39 051-6817716 Telefax +39 051-6817737 www.lamborghini.com

# LAMBORGHIN

#### Lamborghini Reventón

#### The most extreme

The essence of the marque: just 20 examples of a design masterpiece

Clearly a Lamborghini, but nothing quite like it. A super car without equals: the Lamborghini Reventón is a road vehicle with an extreme specification and, at the same time, a limited edition masterpiece - a coherent style, angular with sharp lines, inspired by the very latest aeronautics.

With just 20 produced, each \$1.4 million (without taxes) Lamborghini Reventón [ $\bar{r} \in \beta \in n t \circ n$ ] is a symbol of extreme exclusivity, yet still offering the extraordinary performance that makes the Reventón so unrivalled: under the completely autonomous design, the Reventón possesses the entire technical and dynamic competence of the 12cylinder Lamborghini.

Lamborghini prides itself on being *the* extraordinary manufacturer of extreme super sports cars without compromise. Sensuality and provocation characterize every Lamborghini, with an aggressively innovative style. "However, the Reventón is the most extreme of all, a true automotive superlative. Our designers at the Lamborghini Style Center took the technical base of the Murciélago LP640 and compressed and intensified its DNA, its genetic code," affirms Stephan Winkelmann, President and CEO of Automobili Lamborghini S.p.A.

#### Born in Sant'Agata Bolognese

The Lamborghini Reventón has been entirely designed in Sant'Agata Bolognese, the original birthplace of the Lamborghini and the native home of every super car born under the sign of the bull. The design drawn up in Lamborghini's Centro Stile (Style Center) is fine-tuned in close collaboration with the Lamborghini Research and Development Department. Thus, the Reventón is not only "haute couture" but it also stands out for its elevated dynamism while being entirely suitable for every day use.



The Lamborghini Reventón is not destined to remain a one-off. A total of 20 Lamborghini friends and collectors will be able to own this extraordinary car and, naturally, enjoy the incomparable pleasure of driving it.

The name Reventón has been chosen according to Lamborghini tradition. Reventón was a fighting bull, owned by the Don Rodriguez family. It is included in the list of the most famous bulls ever and is known for killing the famed bullfighter Felix Guzman in 1943.

#### Inspired by the fastest airplanes

The present day Lamborghini models are distinguished by the clear language of their shape. The coherent proportions of the Murciélago and Gallardo highlight their power and dynamism. Sharp edges, precise lines and clean surfaces: these are ingredients of a style reduced to the essential. Each element is created exactly according to its function; ornaments and decorations are totally foreign to a Lamborghini.

With the Reventón, the Centro Stile designers have coherently developed this philosophy, inspired by another sphere where speed and dynamism reign absolute: modern aeronautics, responsible for the fastest and most agile airplanes in the world. This has created an extremely precise, technically striking style with a new vitality: interrupted lines and contorted surfaces create a fascinating play of light, giving the car incredible movement.

#### Made of carbon fiber and precision

Although it is based on the extraordinarily successful Murciélago LP640, the exterior design of the Reventón is completely new. Just like the base model, the exterior is made of CFC, a composite carbon fiber material, which is as stable as it is light. The exterior components are glued and fixed to the body comprised of CFC and steel.



The front is characterized by the acute angle of the central 'arrow' and by the powerful forward-facing air intakes. Although they do not supply air directly to the turbine like an airplane, bearing in mind the 650 hp, an abundant volume of air is necessary to cool the carbon brake disks and the six-cylinder calipers.

#### Characterized by coherent functions

Naturally, both doors on the Reventón open upwards - since the legendary Countach this has also been a symbol of the V12 Lamborghini product line. With their asymmetric configuration, the large air intakes below the doors provide an example of the extreme coherence with which a Lamborghini fulfils its function: on the driver's side it is large to increase the flow of oil to the radiator. On the passenger's side of the vehicle, the air intake is flat because in this case, it only has to ensure the flow below the floor. The aerodynamically optimized flat floor structure terminates at the rear with a diffuser featuring an accentuated shape. This guarantees excellent road grip and stability even at 211 mph.

In spite of the extreme and innovative language of its shape, the Reventón not only maintains all the strong features of the Murciélago LP640, but also offers further amelioration in terms of aerodynamics, the important engine cooling system, the air intake system and brakes. The airflow and the section of the variable geometry air intakes of the engine and the rear spoiler (also adjustable) have been modified.

Owners of the 20 examples will be able to test the performance of his or her Lamborghini in person.

#### Perfected to the ultimate detail

The engine hood made of glass laminate with open ventilation slits offering a glimpse of the beating heart of the 12 cylinders of the super car. The glass also features the marked arrow angle that characterizes the design from the front to the rear spoiler. The Lamborghini designers' love for detail is beautifully illustrated by the fuel tank lid: a small mechanical work of art, achieved by milling a solid aluminum block.



The combination of lights transform the incisiveness of the design into light: the front features the most modern light-emitting diodes alongside Bi-Xenon headlights. Seven LEDs ensure continuous daylight while there are a further nine diodes for the indicator and hazard lights. Another technical innovation is found in the rear light LEDs. Because of the high temperature in the lower rear of the car, special heatproof LEDs are used for the indicator and hazard lights, stoplights and rear lights with a triple arrow optical effect.

#### A new body color

Naturally, such a refined language of shape also demands an extraordinary color. For the 20 examples of the Reventón, the designers from Sant'Agata Bolognese have created a totally new hue: Reventón, a mid opaque green/grey without the usual shine. However, thanks to the metallic particles, in the daylight this color tone features surprising depth.

#### Opaque and brilliant colors for the wheel rims

This play of opaque and luster is also featured on the wheel rims, especially created for the Reventón. Opaque carbon fins are screwed onto the black aluminum spokes, not only creating a visual effect with the precision of a surgeon's scalpel, but a turbine effect also ensures optimum cooling for the powerful ceramic brake disks.

#### TFT display similar to an airplane

The same innovative force applied to the exterior design characterizes the cockpit of the Reventón. Designed and created using Alcantara, carbon, aluminum and leather that comply with the top quality standards, the interior is inspired by the next generation cockpits: just like in modern airplanes, the instruments comprise three TFT liquid crystal displays with innovative display modes. At the touch of a button, the driver can choose from two vehicle information display modes. The instruments are housed in a structure milled from a solid aluminum block, protected by a carbon fiber casing.



The G-Force-Meter is also completely new: this display shows the dynamic drive forces, longitudinal acceleration during acceleration and braking, as well as transversal acceleration around bends. These forces are represented by the movement of an indicator on a graduated 3D grid depending on the direction and intensity of the acceleration. A similar instrument can be found in airplanes. Formula One teams also use a similar device to analyze dynamic forces.

#### Customizable instruments

The instrument on the left of the speedometer associates the number of revolutions in the form of a luminous column with the display of the selected gear. Finally, every Reventón is equipped with a robotized e.gear controlled by two small levers under the steering wheel.

By simply pressing a button, the driver can switch to the second, quasianalogical display, where the classic circular instruments, speedometer and engine speed indicator are configured in an equally innovative way and transformed into luminous pilot lamps with varying colors. The G-Force-Meter naturally remains at the center in this display mode.

#### Electronic system developed entirely by Lamborghini

All this is possible thanks to the fact that the entire electronic platform of the Reventón, together with all the control devices, has been autonomously developed by the Lamborghini experts.

The same process for integrating the electronic displays in the car was applied to the Lamborghini Engineering Department.

From the conception of the very first radical ideas, the entire Reventón has been developed in Sant'Agata Bolognese thanks to tight teams of remarkably creative experts. An extremely refined and efficient process was employed: CAD design and development, creation of the prototype in the Prototype Department, all carried out under the constant supervision of the Research and Development Department's technicians and testers.



#### Atelier of creativity and high efficiency

Inaugurated in 2004, the Centro Stile is dedicated to design and characterized by a high degree of efficiency: an "atelier" of creators, designers and prototype constructors, who encapsulate the Lamborghini culture and spirit by using their remarkable skills to create aesthetic innovation.

The Centro Stile is located in a 2,900 square two-story building. The large pavilion houses two test floors and related production and analysis equipment, while other rooms are set aside for the most advanced computerized workstations for designers and a style-model construction workshop. The Centro Stile is also closely linked to the nearby Engineering Department: the direct line between the Lamborghini development departments guarantees that ideas rapidly become reality.

#### Creativity and production under the same roof

The Lamborghini Reventón is a practical illustration of the streamlined functionality and efficiency characterizing the Centro Stile: it took less than a year to progress from the first ideas to the finished car. The complete design process from the first sketches on paper, to three dimensional computer models with 1:10 or 1:4 scale, right up to the real size prototype is organized around streamlined, fast, efficient work groups. Thanks to the Centro Stile, for the first time in its history, Lamborghini is now able to create its own style philosophy in-house without having to rely on any external collaboration.

The 20 units will be manufactured in Sant'Agata, using a production process characterized by artisan perfection and rigorous quality standards.



#### A masterpiece with tested technology

The technology found in the Murciélago LP640 has not been modified. The engine in the LP640 forwards is the classic twelve-cylinder engine with 6.5 liter displacement. Only for this car, Lamborghini guarantees, an astounding 650 HP at 8,000 revolutions per minute (rpm). The huge torque, equal to maximum 487 lb-ft, ensures a powerful switch from any number of revolutions: even the slightest pressure on the accelerator is spontaneously transformed into thrust. The robotized e.gear changes gear faster than even the most expert driver. In addition, the permanent Viscous Traction four-wheel drive system ensures that every force is constantly translated into movement.

As in the original Murciélago LP640, the Reventón accelerates from 0 to 62 mph in just 3.4 seconds, with a maximum speed of more than 211 mph.

#### Born to become a legend

Since its foundation, Lamborghini has been a creator of trends in the world of sports cars and has always manufactured cars with absolutely unmistakable character. Models such as the Miura or Countach, for example, were veritable forerunners and rapidly acquired the status of timeless classic cars. From the moment they are launched, every new Lamborghini promises to become a legend, destined to become a soughtafter and precious possession.

With the Lamborghini Reventón, Lamborghini has done it again; it has created an unequalled super car; the perfect synthesis between the exclusivity and appeal of a limited edition design masterpiece, and the dynamism and drivability of a standard sports car. Thus, the Lamborghini legend is further enhanced by another, stylish future classic.



### Lamborghini Reventón

#### Technical data

#### Frame

High-strength tubular steel structure with carbon fiber components.

#### Bodywork

Constructed of carbon fiber, except roof and door external panels (steel)

#### Steerina

Туре	Mechanical (rack and pinion) power-assisted
Right-hand turning circle	41.17 ft

#### Wheels and tires

Front	245/35 ZR 18
Rear	335/30 ZR 18

#### Engine

12 cylinders at 60°
3.46 in x 3.50 in
396.41 in
11:1
650 HP at 8000 rpm (guaranteed through
the engine selection)
487 lb-ft at 6000 rpm
Longitudinal central-rear
Aluminum
Variable geometry with 3 operating modes

#### Timing

4 valves per cylinder, 4 overhead camshafts	
Timing gear transmission	2 chains
Continuous timing variator (int. and ex.)	Electronically controlled

#### lanition system

Static type ignitio	n system with individual coils (one for each spark plug).	
Firing sequence	1-7-4-10-2-8-6-12-3-9-5-11	

Fuel system/injection Lamborghini LIE electronic engine control unit, multipoint, sequential timed, DRIVE BY WIRE

#### Lubrication system

Туре	Dry sump
Recovery pumps	2 gear pumps
Delivery pump (high pressure)	1 gear pump

#### Cooling system

<u> </u>	
Туре	Liquid cooled, with pressurized circuit



#### Transmission

Type of transmission	Permanent all-wheel drive with Viscous
Type of transmission	Traction system
Gearbox	6-speed mechanical gearbox
Clutch	Dry single disc
Clutch disc diameter	10.7 in

#### Transmission ratios

Gearbox:	
1 <sup>st</sup>	1:3.091
2 <sup>nd</sup>	1:2.105
3 <sup>rd</sup>	1:1.565
4 <sup>th</sup>	1:1.241
5 <sup>th</sup>	1:1.065
6 <sup>th</sup>	1:0.939
Reverse	1:2.692

#### Brakes

4 self-ventilated rotors with pedal control, hydraulic transmission with dual independent circuits, one for each axle with vacuum servo. ABS antilock device + DRP function.

<u>Steel brake lines</u>		
Front rotor	14.96 in x 1.34 in	
Front caliper cylinders	1.26 in-1.10 in/1.26 in-1.10 in	
Rear rotor	13.98 in x 1.26 in	
Rear caliper cylinders	1.57 in-1.73 in	
Ceramic rotors system (Optional)		
Front rotor	14.96 in x 1.5 in	
Front caliper cylinders	1.26 in-1.42 in-1.5 in	
Rear rotor	14.96 in x 1.5 in	
Rear caliper cylinders	1.26 in-1.42 in-1.5 in	
Handbrake	Mechanical, acting on rear wheels	

#### Suspension

4-wheel independent articulated quadrilateral system. Hydraulic shock absorbers and coaxial coil springs. Suspension with dual front and rear struts, anti-roll, anti-dive and anti-squat bar.

#### Performance data

Top speed	211.3 mph
Acceleration 0-62 mph	3.4 s (before: 3.8 s)



#### Dimensions

Wheelbase	104.92 in
Total length	185.04 in
Total width	81.02 in
Total height	44.69 in
Dry weight (no fuel and no liquids)	3670.7 lb
Front track width	64.37 in
Rear track width	66.73 in
Front overhang	42.52 in
Rear overhang	37.60 in
Maximum overall width with external rear- view mirrors	87.20 in

#### Liquid capacities (gallons)

Engine oil	3.17 gal
Gearbox oil	0.92 gal
Front differential oil	0.26 gal
Rear differential oil	0.66 gal
Cooling circuit	3.96 gal



## Lamborghini 2008 model year – New model features including three-year warranty

Automobili Lamborghini has announced its 2008 model year Gallardo and Murciélago LP640 models.

All Lamborghini models in all markets now offer a new three-year warranty with unlimited mileage, reflecting the high level of manufacturing qualities found in its cars.

The Gallardo MYO8 now offers the following additional standard equipment: onboard computer, heated mirrors, and USB connection under the front bonnet in place of the CD loader which is still available as a free alternative iPod.

The list of Gallardo optional equipment has also been enhanced. A new soft-top color - beige - will become available for the Gallardo Spyder, plus iPod preparation/connection can be provided in the glove compartment.

Within the interiors options range, the special Q-citura upholstery stitching has now become an option across the Gallardo range, following the success of this stitching in the seat centers, door panels and roof liner of the Murciélago LP640 and the Gallardo Nera limited edition.

For the Murciélago LP640, the MY08 is available with iPod preparation or a USB interface as new options, with CD loader still available as standard equipment but also available with a satellite navigation system.

Other options offered include the steering wheel in perforated leather and two new choices of dark blue and grey colors for the soft-top of the Murciélago LP640 Roadster.

Other options for the LP640 include an additional set of winter tires, and enhancement of the carbon kit with the carbon weave on the lower part of the steering wheel and on the gear levers (e.gear version).



The new prices (not including VAT) of the Gallardo MY08 and Murciélago LP640 in effect as of June 2007 are:

- Gallardo Superleggera: \$222,800
- Gallardo Coupé: \$186,250
- Gallardo Spyder: \$217,000
- Murciélago LP640 Coupé: \$325,200
- Murciélago LP640 Roadster: \$356,600
- Reventón: \$1.4 million (price worldwide)



#### The Super cars

#### The new Lamborghini Gallardo Superleggera

The sportiest and most 'purist' Gallardo ever

#### The new more powerful and lightweight series leader

With the Gallardo Superleggera, Automobili Lamborghini presents an uncompromisingly high-performance sports car. Thanks to increased power (an additional 10 hp) and a 154 lb. reduction in weight, the new range-leading Gallardo Superleggera is even more dynamic than the already very sporty Gallardo. The weight/power ratio of the Lamborghini Gallardo Superleggera is only 5.5 lbs/hp, which puts it unquestionably at the top.

The Superleggera also has the fastest acceleration in its class. It needs only 3.8 seconds to go from 0 to 62 mph; 0.2 seconds less than the basic model, and boasting speed and dynamic performance under various driving conditions.

The Lamborghini Gallardo Superleggera is an extremely high-performance car: it includes a standard robotized mechanical 'e.gear' gearbox that guarantees shifting without removing hands from the steering wheel.

#### More power thanks to technological developments

The Lamborghini Gallardo Superleggera's engine is the latest version of Lamborghini's well-known 302.72 cubic inch V10. Now 530 hp is reached at 8,000 rpm. The increase in power was made possible by the engine's improved volumetric efficiency through reduced intake load losses and by exhaust backpressures, together with optimized electronic control. Naturally, emission levels observe the strict EURO 4 and LEV II standards.

#### Higher power thanks to lighter construction

Lamborghini engineers decreased the Lamborghini Gallardo's already low dry weight of 3152 lbs. by another 220 lbs. using advanced materials and technologies. The engine hood is made of visible carbon fiber and



transparent polycarbonate, a type of material that guarantees lightness and also shows off the magnificent V10. The rear diffuser and underbody covering, the rearview mirrors, door panels and the central tunnel's covering are also made of carbon fiber. Further reductions in weight were achieved by replacing certain glass surfaces with transparent polycarbonate. For the interior, monocoque carbon fiber sports seats covered in Alcantara® were chosen to ensure restraint of the driver and passenger during the intense lateral accelerations that the Gallardo Superleggera is capable of achieving around curves.

#### Exclusive specification and options range

A comprehensive specification and extensive range of options will be available, with some exclusive to the Superleggera. The Lamborghini Gallardo Superleggera comes with robotized mechanical e.gear as standard; a sports package including shock absorbers; and special suede-covered steering wheel. The car is available in four colors: Midas Yellow, Borealis Orange, Telesto Gray and Noctis Black. Pirelli P Zero Corsa tires (standard) on new Scorpius forged rims accentuate the Lamborghini Gallardo Superleggera. A few of the options that can be requested include the multimedia system with navigator and CD-changer; a rear video camera to make parking easier (with optional rear wing only); a carbon accessories kit for the interior; a fixed rear spoiler; a four-point seatbelt (not for USA); tubular rear frame or fitting points for later inclusion (not for USA, Japan or Middle East); and carbon-ceramic brakes.



#### The Lamborghini Gallardo Coupé

#### Design

The design concept was initiated in year 2000. The Designer's objective, at once difficult and fascinating, was to identify the formal attributes of Lamborghini and combine them in an individual whole. The design, based on a proposal from Italdesign-Giugiaro, was then developed by the Lamborghini Centro Stile to incorporate the parameters of the Lamborghini Design Philosophy. The Gallardo dimensions combined with the competitive performance targets ensure the car's athletic compactness. The long wheelbase complemented by the short overhangs dynamize its appearance.

It was clad in the typical and unique mono volume proportioning, a distinctive stylistic element which was characterized by the Countach. It integrates the Lamborghini design attributes of purism, athleticism and sharpness. The distinctive aeronautical influence, a traditional Lamborghini trademark, is evoked in the cab-forward cockpit integrated in the main car body, in the strongly slanted front windscreen and tensed pillars and in the complex surfacing intersected by crisp graphics.

With its blade-like front light graphics, the front face is orchestrated around the dominant cooling inlets.

The scissor doors are not present in the Gallardo, but have rather been reserved for the traditional 12-cylinder lineage. The foldable wing mirrors, which are mounted on a 'shoulder' incorporating more air intakes, can be slanted forward in order to render the side view more dynamic. The flush integration of the door handles emphasize the lateral air intakes and like all details improves the aerodynamic efficiency. The rear lights which prolong the line of the upper air intakes finish in an additional aerodynamic element which is also present on the retractable spoiler, thus combining once again function and emotion. The wheels, which have always been a distinctive stylistic factor in Lamborghini's design history, have been developed with more round holes, combining them with spokes.

From the very beginning and in coherence with the defined car layout, the design phase was completely integrated in the car's development project.



Perfect harmony was achieved between the stylistic and functional demands, thus avoiding any stylistic elements which did not have a functional base or functional parts without visual impact. In conclusion, the Gallardo design highlights its unmistakable presence, totally uncompromising both in its proportions and details.

#### Engine

The Lamborghini V10 cylinder DOHC four-valve V90 5 liter, 520 HP is the concept solution for the high performance Gallardo. Instead of the classical choice of a V72, an angle of 90 degrees was preferred in order to limit the height of the engine with advantages in the car layout (e.g. lower engine bonnet and better rear view) and in the lowering of the center of gravity (i.e. better car dynamic characteristics).

The torque output is optimized in the full rpm range. In order to achieve such an objective, the charge efficiency was increased at various speeds by a precise utilization of gas dynamic effects that take place in the intake and exhaust system. These effects are managed by the adoption of a variable geometry intake manifold and of a continuously variable valve timing system, both for intake and exhaust. The maximum torque of 376 lb-ft is reached at 4250 rpm, with 80% of this maximum already achieved at only 1500 rpm; conversely, the maximum power is obtained at much higher speed, i.e. 8000 rpm. The throttle control is performed via a Drive by Wire system, with two electronic throttle bodies. The construction technology is all aluminum.

#### Electronics

The core of the Gallardo's electronic system is the new generation Lamborghini LIE engine management system based on the strong Lamborghini know-how in this field. This system is connected through a sophisticated Can Bus network to the Lamborghini vehicle computer GFA and to the e.gear, ESP/ABS, Dashboard ECUs and the other satellite ECUs (door modules, climate system, rear spoiler, comfort/infotainment). In order to improve the direct control of the main functions and the driving safety, all main information and warnings are centralized on the instrument panel. A dedicated ECU controls the air bag operation.



#### The Transmission

The main feature is the permanent four-wheel drive transmission, based on the well-proven Lamborghini Viscous Traction system. Such a system, which at constant speed on homogenous adhesion roads presents a traction force distribution of around 30% front and 70% rear, is conceived to be "selfregulating" without the necessity of electronic controls.

During acceleration (or during climbing) on high adherence roads, the distribution will change favoring the rear axle (more rear traction force percentage e.g. 80%, corresponding to the increased weight on the rear axle). However, if in these conditions the rear axle tends to lose adherence, more traction is immediately biased to the front, with the system tending to reach a point where the adhesions utilized by the two axles are identical.

The gearbox is 6-speed, using the latest generation double and triple-cone synchronizers and optimized actuation linkage in order to achieve precision and velocity in shifting while ease of operation is guaranteed. A robotized sequential gear shifting system, the Lamborghini e.gear, has also been developed, maintaining the basic mechanical gearbox unchanged. The main features of this system, available as an option are:

- Electronic control, interfaced via CAN bus to the engine control and ESP system
- Actuation by paddles directly mounted on the steering column
- Possibility to select different modes of operation: normal, sport, automatic, low adherence
- Very fast but smooth shifting, equal to or better than that which is achievable by a very good driver with a standard gearbox.

The rear differential features a friction-type 45% limited slip, while the front differential slip limitation is controlled by the ABD (automatic brake differential) function of the ESP system. The clutch is a reduced diameter double plate clutch. This is a logical consequence of the Gallardo's engineering car concept definition, in order to keep the engine (and consequently the centre of gravity) as low as possible.

# LAMBORGHINI

#### Space frame and body

Together with the perfect definition of suspension, weight distribution, center of gravity and aerodynamic characteristics, the achievement of high body stiffness is fundamental in order to obtain optimum car dynamics and driving enjoyment even on long trips. For the Gallardo, Lamborghini engineers chose to utilize aluminum technology developed by AUDI, world leader in this field.

The final result is a structural aluminum space frame based on aluminum extruded parts welded to aluminum cast joint elements. On this structural frame, the exterior aluminum body parts are mounted by differentiated systems (rivets or screws or welding) depending on the function of the part. Other external "hang-on" parts (such as the bumpers) are made of thermoplastic material and connected by bolts. Such a solution has achieved very good torsional stiffness with an optimum stiffness/weight ratio and also with excellent energy-absorption capabilities during the crash tests.

The reduced space frame and body weight permit a total car "dry" weight of 3152 lbs., in spite of its 4WD.

#### Suspension and brakes

The choice of double wishbone front and rear suspension system, true to the Lamborghini engineering tradition and a must for high performance sports cars, has also been employed for the Gallardo.

Great attention was given to optimizing the Gallardo's dynamic behavior in curve. The introduction of "anti-dive" and "anti-squat" characteristics guarantee optimum car behavior also during acceleration and braking. The Pirelli Pzero tires guarantee optimum adherence characteristics in various driving conditions. As an option, winter tires are also available.

The braking system which also features a state of the art ABS/ESP system, guarantees excellent brake efficiency and the absence of fading efficiency also after extreme use. The full stability control system (ESP) has been



conceived and calibrated in order to assist the driver in demanding conditions, while still allowing a true sports driving experience.

#### Performance

The high engine power and torque output permit a top speed of 196 mph and high acceleration capabilities. The top speed is reached guaranteeing excellent car stability and controllability.

Indeed, in addition to the optimization of the suspension characteristics, a must was the definition of the correct aerodynamic features. Important aerodynamic body refinements (e.g. front flap, flat bottom)

#### Safety

The Gallardo well exceeds all the European and North American safety standards. The driver's and passenger's "dual-stage" front airbags, side "head-thorax" airbags and doors anti-intrusion bars are standard in all versions.



#### The Lamborghini Gallardo Spyder

#### Design

As with every Lamborghini, the Gallardo Spyder adopts the stylistic principles of purity, athleticism and sharpness. The Spyder is not just an open-top version of the Coupé; it continues the tradition as seen with Murciélago Coupé and Roadster, by creating a self standing model.

The designers of the Centro Stile Lamborghini have succeeded in creating an athletic body with a sports car's ideal dimensions. This rear mid-engine sports car, which measures 169.3 inches in length, 74.8 inches in width and just 46.6 inches in height, conveys an impression of extreme power potential even when stationary. The design language, inspired by contemporary aircraft construction, is clearly discernible. The appearance is characterized by edges and straight surfaces. The front is defined by the two distinctive air inlets and the large trapezoidal light units, which contain efficient ellipsoidal-principle headlights. Like the Gallardo Coupé, the Spyder's far-forward cockpit with its steeply raked windscreen gives it a dynamic silhouette. In keeping with the style of the Coupé, the Spyder's flowing roofline mirrors the Coupé when the soft top is closed.

The tail has a short overhang for a powerful rear profile. However the design was dictated to achieve the authentic Spyder experience: hence no visible roll-over bars but instead a fully retractable glass window and invisible pop-up bars which are activated in case of an emergency.

Designers and engineers collaborated closely throughout the development phase of the new Lamborghini Gallardo Spyder. The car's fully integrated design and technical development has yielded stylistic elements that invariably have an underlying practical function. At the same time, all technical functions are implemented aesthetically. The most striking example: the body, which has an inverted wing profile to ensure optimal aerodynamic flow to provide the 10-cylinder mid-engine with sufficient air intake. Its design also generates downforce at the rear axle, which is reinforced by the automatic controlled rear-spoiler, activated at 75 mph and retracted by 56 mph.



The Gallardo Spyder's soft top is easy and quick to operate, and is opened and closed by a switch on the center console. Fully-automatic opening or closing takes approximately 20 seconds. The Spyder will initially be sold with a black fabric top, but this will be supplemented by the color variance including blue, grey and beige during the coming months.

The Lamborghini Gallardo Spyder's fully-automatic folding roof mechanism comprises the following elements:

- the soft top
- the carbon fiber engine hood, which also serves as a cover for the soft top
- an electronic control unit, which is integrated in the car's CAN-BUS
- network and monitors the movement of the hood
- an electric pump
- six hydraulic rams (four to operate the soft top; two for the engine hood)
- two electric actuators (one to engage the lock at the front of the roof, one to release the engine hood lock)
- an electric motor to raise or lower the rear window.

A service function positions the roof to allow access to the engine.

The rear window is activated automatically by the electronic control unit when the roof is opened or closed. This automatically-controlled movement always returns the rear window to the raised position.

When the roof is open, the driver can leave the rear window in the raised position, where it acts as a wind deflector. By using a switch on the centre console, the driver can lower the rear window (this can also be done when the roof is closed).

The new Lamborghini Gallardo Spyder is powered by the 90° V-engine familiar from the 2006 model-year Lamborghini Gallardo and the Lamborghini Gallardo SE. It is a 10-cylinder unit with a displacement of 302.72 cubic inches and a maximum output of 520 bhp at 8000 rpm. At



more than 100 bhp per liter, its specific output is on a par with that of racing cars.

These specifications enable the Gallardo Spyder to attain a top speed of 195 mph with the roof up and 190 mph when the roof is down. It sprints from 0 to 62 mph in an impressive 4.3 seconds.

The maximum torque of 376 lb-ft is reached at 4,250 rpm, with 80 % of this value available at just 1,500 rpm. The stroke is 3.65 inches, the bore 3.25 inches. The cylinder liners are made of a eutectic alloy. The cylinder heads have four valves per cylinder, operated by chain-driven double overhead camshafts on each cylinder bank. The ignition system features spark plugs with integrated ignition coils.

Lamborghini engineers opted for a cylinder angle of 90 degrees rather than the classic 72 degrees. The advantage: the reduced engine height permits a lower center of gravity for enhanced vehicle dynamics. Crankpins offset by 18 degrees ensure quiet engine operation. A further measure for lowering the centre of gravity is dry-sump lubrication. Even during sporty driving that produces high lateral forces, this ensures that the engine is supplied correctly with oil at all times.

To maintain an ample torque characteristic across the entire speed range, gas exchange is controlled by an intake manifold with variable geometry and continuously variable valve timing (inlet and exhaust sides). The variable geometry optimizes the basic dynamic gas flow characteristic at both low (long intake path) and high speeds (short intake path). Variable valve timing guarantees that the valves open and close at the optimal moment across the entire speed range. For example, the inlet valve closes earlier at low speeds and later at high speeds in order to take advantage of the positive pressure impulse peaks at the inlet valves.

The throttles are operated by a drive-by-wire system with two electronically controlled throttle valves. The exhaust system comprises two separate blocks with two '5 in 1' exhaust manifolds. It goes without saying that the Lamborghini Gallardo Spyder complies with the stringent EURO 4 exhaust emissions standard.



A central element of the Gallardo Spyder's electronics is the Lamborghini LIE engine management system. It is connected to the Lamborghini GFA vehicle computer and to e.gear, ESP/ABS, the control devices on the instrument panel and other control devices (door module, air conditioning, rear spoiler, comfort/infotainment) via a highly advanced CAN-BUS network. To enhance direct control of the most important functions and increase driving safety, all relevant information and warnings are displayed centrally on the control panel. A dedicated electronic control device monitors the function of the airbags.

The principal functions are:

#### Engine:

- torque
- drive-by-wire accelerator
- fuel injection management (multipoint sequential) and ignition (spark plugs with integrated ignition coils)
- management of the exhaust system with variable geometry
- management of variable valve timing
- management of the on-board diagnosis system
- emission control management
- 'black box recorder'

#### Vehicle:

- electronic gear shifting ('e gear')
- electronic stabilization program (ESP) including traction control (TC),
  ABS with electronic brake force distribution and automatic brake differential (ABD) at front
- control of the air conditioning
- control of the rear spoiler
- control of the airbags
- monitoring of the control panel and comfort/infotainment system management

In order to ensure the best possible traction at all times, the engineers have given the Lamborghini Gallardo Spyder permanent four-wheel drive. It is based on Lamborghini's tried and tested VT (viscous traction) system, and



regulates itself without electronic control. Drive power is normally distributed between the front and rear axles in a ratio of 30:70 at constant speed. An independent control loop varies the drive force distribution in accordance with dynamic fluctuations, weight distribution and actual friction values.

For example, when accelerating or driving uphill, more drive torque is supplied to the rear axle. If friction values at the rear axle suddenly fall under these conditions, drive torque is immediately transferred to the front axle.

Like the coupé, the Lamborghini Gallardo Spyder boasts a new six-speed gearbox with shorter ratios. More specifically, compared to the original version, first gear is 27% lower, second gear is 13%. Third, fourth and fifth gears are all 6% lower, while sixth gear is 3.5% lower.

The six-speed gearbox operates with the latest double- and triple-cone synchromesh. The optimized gearshift linkage is user-friendly and permits precise, rapid gear shifts.

The Lamborghini Gallardo Spyder can also be specified with e.gear, an electronically controlled, sequential gear shift. Using paddle switches located on the steering column, the gear changes are fast and smooth, even better than the performance of experienced drivers using the manual gearbox. e.gear has four different functional modes: normal, sport, automatic and a program for road conditions with reduced traction, for instance on snow. In the normal program, gear shifts can be performed manually. The sport setting further reduces the already extremely dynamic gear shift speed. In the automatic program, gears are changed fully automatically. When driving in urban areas in particular, this represents a significant gain in comfort.

The rear axle has a friction-type limited-slip differential (locking action 45%); the front axle limited-slip differential is controlled via the ABD (automatic brake differential). The clutch is a twin dry plate unit of a reduced diameter - a logical consequence in accordance with the concept of keeping the engine (and thus the centre of gravity) as low as possible.



In conjunction with the perfect harmonization of chassis, weight distribution, center of gravity and aerodynamics, high body rigidity is essential to ensure optimal vehicle dynamics and driving pleasure.

For the Gallardo series, the Lamborghini engineers chose the aluminum technology developed by Audi, the world's leading manufacturer in this area.

The car uses a space frame construction based on extruded aluminum profiles. These are welded to connecting elements made from cast aluminum. The exterior elements of the aluminum body are riveted, bolted or welded to the space frame depending on their function. Other exterior add-on parts, such as the bumpers, are made of thermoplastic material and bolted on.

These measures achieve an exceptional torsional stiffness, which is represented by an optimal relationship between rigidity and weight as well as outstanding energy absorption proven in crash tests. To meet the specific demands of an open-top car, the Spyder's space frame has been structurally reinforced in the sills and A-post areas. The bonnet is made from light but extremely torsionally rigid carbon fiber.

The low weight of the space frame and the aluminum body results in an overall dry weight of just 3461 lbs.

The chassis in the Lamborghini Gallardo Spyder confidently meets the severe demands made of a super sports car. As is Lamborghini tradition, the Gallardo Spyder has double wishbones at front and rear suspensions.

Accurately controlled chassis geometry and the use of optimized dampers make for impressive chassis performance with excellent handling and stable road behavior at high speeds. Another remarkable feature of the Lamborghini Gallardo Spyder is a level of ride comfort that is extraordinary in this class.

The Gallardo Spyder's cornering ability is designed for slight under steer on entry into the bend. It performs neutrally through the rest of the bend. Even



in tight corners, this results in an absence of body roll, in contrast to some vehicles with four-wheel drive using a viscous clutch.

The anti-dive function effectively prevents the nose of the vehicle from pitching when braking. Anti-squat ensures that the car retains its directional stability when accelerated powerfully. Power assistance designed to be some 20 percent more direct further enhances the precision of the steering. For consistent performance even during strenuous, sporty driving, it has a power steering fluid cooler as standard.

The Lamborghini Gallardo Spyder is equipped with 19-inch wheels with Pirelli P Zero tires of size 235/35 ZR19 at the front and 295/30 ZR19 at the rear. Winter tires with the same dimensions are available as optional extras, as are Pirelli P Zero Corsa tires, which further enhance the car's performance.

The brake system is equipped with an ultramodern ABS/ESP system and uses discs with a diameter of 14.37 inches at the front and 13.2 at the rear. Brembo 8-piston brake calipers at the front and 4-piston brake calipers at the rear provide top-class deceleration values. Extremely resistant to fading, the system achieves deceleration of more than 1.1 g on dry road conditions.

The fully-electronic stabilization program (ESP) has been developed and calibrated to assist the driver in difficult situations and, at the same time, to permit a sporty driving style. The ESP can be switched off for really sporty and track driving.

The Lamborghini Gallardo Spyder exceeds all European and North American safety standards. One example: the standard dual-stage front airbags for the driver and passenger, which also comply with U.S. 'out-of-position' requirements. Also standard are head/thorax side airbags and collision protection in the doors. Two automatically extending rollover bars are located behind the rear window and integrated into the airbag control system. In conjunction with the reinforced A-posts, they ensure reliable passenger protection should the car roll over.



#### The Lamborghini Murciélago LP640 Coupé

The new version of this highly successful super-sports car features considerable innovations in terms of body design and mechanics. And also with a new name: Murciélago LP640, which refers to its engine position - longitudinal posterior - and to its power of 640 hp. Designers and engineers have not only focused on reworking the engine, suspensions, gearbox, exhaust system, brakes and electronics, but also the interior and exterior design; improvements that make the Murciélago LP640 the most extreme and fastest sports car in its class, placing it at the very top.

The designers at the Lamborghini Style Centre have remained true to the traditional Lamborghini principles of purism, sport and function: the Murciélago LP640 now appears even more aggressive, with the new front and rear bumpers contributing significantly to its appearance. The exhaust system terminal has been incorporated in the diffuser on the rear bumper. Other innovations include the rear lights, which enhance the distinguishing features of the Murciélago LP640, making it unmistakable even at night. The design of the sides is also worth mentioning: while the area behind the air intake on the right side is practically closed, the left side features a vast aperture for cooling the oil radiator. Together with the aerodynamically defined front and rear, this proves yet again that the shape of a Lamborghini is dictated by function.

For those wishing to flaunt the heart of their Murciélago LP640, on request an engine hood made of transparent glass can be supplied. The rear view mirrors and the windscreen wipers have been modified to improve aerodynamics and Hermera light metal wheel rims have been added. The graphics of the instrument panel lights in the cockpit have been revamped. The interior upholstery also has a new look thanks to the lozenge-shaped stitching.

The engine of the new Murciélago LP640 has undergone outstanding and radical modification. The increased bore and longer stroke have boosted the displacement of the classic 60° V-engine from 6.2 liters to 6.5 liters. Thus the already extraordinary 580 hp engine power has now been elevated to an impressive peak of 640 hp at 8,000 rpm. The 12-cylinder engine reaches



a maximum torque of 487 at 6,000 rpm. Naturally, the Lamborghini Murciélago LP640 complies with every European and North American law governing exhaust fumes.

This evolutionary leap forward has been possible thanks to a coherent review of every engine component: the cylinder head and the entire intake system (based on the tried and tested Lamborghini variable geometry system), have been completely reworked. The crankshaft, camshafts and exhaust system have also undergone innovation.

The increase in power naturally determines an increase in performance. The excellent performance of the Murciélago LP640 means it can now accelerate from 0 to 62 mph in 3.4 seconds (0.4 seconds faster than the previous model).

Lamborghini engineers have also concentrated on improving torque development. The "drivability" of the engine is enhanced by a continuous variable timing system (intake and exhaust side) and a drive-by-wire engine management system.

To meet the thermal requirements of the engine, the engineers have foreseen a considerably larger oil radiator and subsequently, the air intake on the left side of the vehicle has been enlarged. The liquid cooling system, characterized by the Lamborghini VACS system (variable geometry air inlet system) remains the same. Electronically managed air intakes open depending on the outdoor temperature and the need for cooling air, ensuring maximum aerodynamic efficiency.

#### Gearbox and transmission: improved efficiency and strength

More power and higher torque call for superior gearbox component performance. To meet these new demands, the new Murciélago LP640 features a modified six-ratio gearbox as well as a tougher rear differential and new axle shafts. On request, the e.gear automatic gearbox is also available equipped with the new dedicated "Thrust" (acceleration program) mode.



Just like its predecessors, the Murciélago LP640 features permanent fourwheel drive, based on the reliable Lamborghini VT (Viscous Traction) system. The system is self-governing and does not feature any electronic controls. The drive force is usually divided between the front and rear axles in the ratio of 30 to 70. An independent control circuit adjusts the distribution of the drive force depending on dynamic oscillation, weight distribution and the relative friction factor in perfect synchronization with the Visco clutch. In extreme cases, up to 100% of the drive force can be applied to a single axle.

#### Electronics: a 'closed loop' for total control

The electronics have also been updated. The modified engine control units improve engine performance and drivability thanks to closed loop control.

Every engine and vehicle parameter is managed and controlled by three master control units and a satellite control unit. The master control units consist of two Lamborghini LIE engine control units, a Lamborghini GFA (Auxiliary Function Management) control unit and a Lamborghini PMC (Power Motor Control) satellite control unit. The control units are interconnected by a CAN Bus line.

The body of the Murciélago LP640 with its characteristic scissor doors is created from the prized union of sheet steel and honeycombed carbon fiber, glued and riveted together.

Driving, handling and stability at high speed are enhanced by new springs and stabilizers, as well as by a redesigned electronically controlled damper. The anti-dive and anti-squat features on the axles, which efficiently prevent so-called 'brake diving' and 'squatting', have not been changed. The two springs on every rear wheel, the single spring on every front wheel and the damper are placed coaxially.

The new aluminum "Hermera" rims measure 8.5" x 18" (fore carriage) and 13" x 18" (rear axle). The vehicle can be fitted with various sized Pirelli P Zero Rosso tires. The Murciélago LP640 features 245/35 ZR 18 front tires and 335/30 ZR 18 rear tires. For sports use, especially on racetracks,



Lamborghini provides optional Pirelli P Zero Corsa (Race) tires. Pirelli P Sottozero (Sub zero) winter tires are currently being developed.

A super sports car such as the Lamborghini Murciélago LP640 ensures high safety levels.

The dual hydraulic circuit brake system equipped with a vacuum brake booster ensures considerable deceleration values. The self-ventilating front and rear brake disks measure 14.96 x 1.34 and 13.98 x 1.26 inches respectively. The control circuit of the four-channel anti-blocking system (ABS) with electronic brake control (DRP) and traction control (TCS) features a new characteristic curve. The system consists in an electro-hydraulic control unit and four speed sensors.

When particularly high braking performance is required, on request it is possible to equip the vehicle with 14.96 x 1.41 inch ceramic carbon brakes featuring six-piston brake calipers. Thus, less pressure needs to be applied to the brake pedal and the braking distance is reduced. Even in extremely demanding conditions there is almost no perceptible fading. Considerably reduced weight and superior lifetime represent two further advantages, as well as a captivating graphic design.

The new Murciélago LP640 also meets with even the most rigorous safety requirements. Thanks to the two front airbags, the Murciélago LP640 complies with every international law in effect in terms of head-on and side crashes, impacts against posts, occupant safety, fuel supply integrity and flammability of materials. The luggage compartment also complies with childproof safety regulations.

The seats in the cockpit have undergone the most radical changes; more spacious and equipped with redesigned head restraints, the seats now ensure better comfort. The leather upholstery features lozenge-shaped stitching called Q-citura. The same design is recaptured on the upholstery on the door panels, the panel between the seats and the engine compartment, and on the roof panel.



A new instrument panel has been developed with lights featuring a new graphic design, flanked by a new Kenwood car radio with a 6.5" widescreen monitor and DVD, MP3 and WMA player. An optional navigation system is also available (standard in Japan).

Like its predecessors, the new Murciélago LP640 can be customized thanks to the special fittings and upholstery packages. For the first time, the renowned characteristic Murciélago Roadster asymmetric and driveroriented fittings and upholstery are available for the Coupé, featuring a perforated leather driver's seat and door panel.

Thanks to the Ad Personam customization program, any Murciélago LP640 can be transformed into a customized sports car. For example, the cockpit can be enhanced with an extremely refined carbon finish applied to the air conditioning control panel, the control lever console and the parking brake.



#### The Lamborghini Murciélago LP640 Roadster

#### More aggressive design, improved technology, more power

The Lamborghini Murciélago LP640 Roadster benefits from the same extensive modifications to the bodywork and mechanics as the LP640 Coupé, as well as delivering its own distinct character.

As with the Coupé, the designers of the Lamborghini Centro Stile have remained true to the original style principles of purism, sportyness and functionality. Like the Coupé it has now assumed a more aggressive appearance.

The asymmetrical design of the car's sides externally is echoed internally: from its forerunner, the Lamborghini Murciélago LP640 Roadster has inherited the characteristic asymmetrical interior arrangement. The whole interior is tailored to the driver and arranged in such a way that a true driver-focused experience is offered; a car which challenges yet at the same time is entirely geared to the driver. This is illustrated in the use of perforated leather for the chair cushions, the dashboard tunnel console and the door lining on the driver's side.

Changes to the rear-view mirror make the Murciélago Roadster more aerodynamic, with other features including new windscreen wipers and the option of new Hermera alloy wheels.

Like its predecessor, the Murciélago LP640 Roadster can be customized through special equipment packages. The 'Ad Personam' individualization program offers even more scope to create a personal, unmistakably individual sports car.

As with the Coupé the new 6.5 liter 60° V-engine and 640 hp at 8,000 rpm is now used also in the Lamborghini Murciélago Roadster. At 6,000 rpm the 12-cylinder engine reaches the maximum torque of 487 lb-ft. Naturally the Lamborghini Murciélago meets all the current valid European and North American emission standards.



The increased power naturally leads to increased road performance. The maximum speed now lies at 205 mph compared to 199 mph. The standard sprint from 0 to 62 mph is now reached by the Murciélago LP640 Roadster in an excellent 3.4 seconds making it 0.4 seconds faster than its forerunner.

Although the Lamborghini Murciélago Roadster LP640 is principally based on the Murciélago Coupé, it has further distinguishing features beyond its distinctive appearance. First and foremost, newly designed frame structure parts made of steel and carbon fiber guarantee an unswerving torsion resistance even without a roof. A special reinforcement structure in the engine area makes a major contribution to this aspect. This optically distinctive reinforcement can also be delivered in carbon fiber on request. Without impairing the extreme character of a typical roadster, a canvas roof (R.top) can be fitted which, true to the design tradition of this type of vehicle, is principally conceived for temporary use (for example in a sudden shower of rain) and for speeds of up to 124.2 mph.

With its characteristic wing doors, the bodywork of the Murciélago LP640 Roadster is still made from an extremely high quality combined structure of sheet steel and carbon honeycomb. The combination of these materials is achieved by bonding and riveting.

It goes without saying that a super sports car such as the new Lamborghini Murciélago LP640 Roadster goes hand-in-hand with a high level of safety, including passive safety. With two front-seat air bags, a 15.85-gallon airbag on the driver's side and a 34.3-liter airbag on the passenger side, it meets all existing worldwide standards in the event of head-on and side crashes, impact against poles, occupant safety in the case of accident, fuel supply integrity and fuel combustibility. The luggage compartment also complies with childproof safety regulations. The Murciélago LP640 Roadster has automatically lowered roll bars; if the electronic control of this device detects a critical situation, the roll bars shoot out behind the seats within just a few milliseconds.



### 'Ad Personam' Lamborghini individualization program unlimited freedom of creation

The highest level of individuality and exclusivity are the hallmark of Ad Personam. This program gives every Lamborghini client the possibility of creating their own unique sports car, personifying their own style down to the last detail. With Ad Personam, every Lamborghini becomes a unique car.

Ad Personam offers a multitude of options via which to give both a car's interior and exterior its own unique style. For this purpose, the fabric and color designers from Sant' Agata have created particularly prestigious equipment packages for the entire Lamborghini range. For example, the leather packages offered use only the finest quality leather and offer further scope for personalization via the finish and stitching. A hint of the race track is felt with the carbon packages, which include a carbon finish for the control panel of the air-conditioning, gear change console and handbrake amongst other areas. This high tech material is also available for various mounted parts of the car body. For the car exterior, personalization options include an extended choice of rims, brake calipers available in yellow and silver, plus smoked rear windows and tail lamps.

In addition to the above, almost all clients' further customization requirements can be met. It is as possible to have the car lacquered to match a client's color sample as it is to fulfill special wishes regarding the color of the leather, Alcantara or thread used for the seams. The only limits are those set by Lamborghini's own quality standards, with which any modifications made must comply.

Ad Personam is available for Automobili Lamborghini's entire model range: the Murciélago LP640, Murciélago LP640 Roadster, Gallardo Coupé and the Gallardo Spyder.



#### **Technical Data**

### Lamborghini Gallardo Superleggera

d on minum-casted
" parts
e transparent
e tranoparente
rear
ve and anti-
$\mathbf{O}$
: 8 piston
.19 in x 1.26
-
/30 ZR 19
r airbags. Side
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crankpin
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List 1.2.242 and 1.2.052 and 1.4.450 Ath 1.1.420
$1^{\text{st}} = 1:3.313; 2^{\text{nd}} = 1:2.053, 3^{\text{rd}} = 1:1.458; 4^{\text{th}} = 1:1.138;$
5 <sup>th</sup> = 1:0.939; 6th = 1:0.784; Reverse = 1:2.813
1:1.320
Double plate 8.46 in
45% limited slip
Slip limitation by ABD function
195.6 mph
3.8 s
100.8 in
169.3 in
74.8 in
45.9 in
2998 lbs
2790 105
23.8 gal
2.64 gal
5.28 gal
wing USA EPA regulations)
10 mpg
17 mpg
13 mpg
11 mpg
17 mpg
13 mpg



# Lamborghini Gallardo Coupé

Chassis and body	
Tires (front-rear)	Pirelli Pzero 235/35 ZR 19 - 295/30 ZR 19
Engine	
Туре	10 cylinders
Displacement	302.72 cid
Compression ratio	11:1
Maximum power	520 hp at 8000 rpm
Maximum torque	376 lb-ft
Drive train	
Type of transmission	Permanent 4-wheel drive with wheel-drive / Viscous Traction system
Gearbox	6 speed + reverse
Performance	
Top speed	196 mph
Dimensions	
Wheelbase	100.78 in
Overall length	169.29 in
Overall width	74.80 in
Overall height	45.86 in
Weight (dry-no fuel)	3152.58 lb
Capacities	
Fuel tank	23.77 gal



# Lamborghini Gallardo Spyder

Chassis and body				
Frame	Aluminum space frame			
Body	Aluminum			
Engine bonnet	Carbon fiber			
Suspension	Double wishbones, anti-roll bars, at front			
	and rear, anti-dive, anti-squat			
ESP	BOSCH 5.7 with ABS, ASR, ABD			
Brakes	14.37 in x 1.34 front, 13.2 in x 1.26 rear			
Calipers	Aluminum alloy,			
	8 pistons front, 4 pistons			
Steering	Power assisted rack and pinion			
Curb to Curb turning circle	37.73 ft			
Tires	235/35 ZR19 front. 295/30 ZR19 rear			
Rims	Aluminum alloy			
	8.5" x 19" front, 11"x19" rear Electronically activated at 120 km/h (74.6			
Rear spoiler	Electronically activated at 120 km/h (74.6			
	mph)			
Air bags	Front dual stage module			
·	Side and thorax side modules			
Engine				
Туре	10-cylinder 302.74 cid			
Displacement	302.74 cid			
Compression	11:1			
Bore and stroke	3.25 in x 3.65 in			
Intake system	Variable geometry			
Valve gear	Chain driven, intake and exhaust			
	continuously variable timing			
Maximum output	520 hp at 8000 rpm			
Maximum torque	376 lb-ft at 4250 rpm			
Cooling system	Two water radiators, engine oil cooler,			
	gearbox-rear differential cooler			
Engine management	Lamborghini L.I.E., individual static			
	ignition, multipoint sequential fuel			
	injection, Drive-by-wire body throttles,			
	OBD system			
Lubrication transmission	Dry sump			
Drivetrain				
Transmission type	Permanent four-wheel with viscous			
	clutch			
Gearbox	6 speeds and reverse			
	Robotized sequential E.GEAR system as			
	optional			
Gears	1 <sup>st</sup> 3.313, 2 <sup>nd</sup> 2.053, 3 <sup>rd</sup> 1.458, 4 <sup>th</sup> 1.138, 5 <sup>th</sup>			
	0.939, 6 <sup>th</sup> 0.784, R 2.813			
Final drive	3.077			
Clutch	Double plate 8.46 in			
Rear differential	45% limited slip			
Front differential	Slip limited by ABD function (ESP)			



Denfermene	
Performance	
Maximum speed	195.1 mph (roof closed)
	190.8 mph (roof open)
Acceleration 0-62 mph	4.3 s
Dimensions	
Wheelbase	100.78 in
Length	169.29 in
Width	74.80 in
Height	46.61 in
Weight (dry - without fuel)	3461 lb
Capacities	
Fuel tank	21.1 gal
Engine oil	2.64 gal
Engine coolant	5.28 gal
Consumption USA (following	EPA regulation)
City	11 mpg
Highway	17 mpg
Combined	13 mpg



## Lamborghini Murciélago LP640 Coupé

#### Frame

High strength tubular steel structure with carbon fiber components.

#### Bodywork

In carbon fiber, except roof and door external panels (steel)

#### Steering

Туре	Mechanical (rack and pinion) power-assisted
Right-hand turning circle	41.17 ft

#### Wheels and tires

Front	245/35 ZR 18
Rear	335/30 ZR 18

#### Engine

Туре	12 cylinders at 60°
Bore and stroke	3.46 in x 3.50 in
Displacement	396.41 cid
Compression ratio	11:1
Maximum power	640 hp at 8000 rpm
Maximum torque	487 lb-ft at 6000 rpm
Engine position in vehicle	Longitudinal central-rear
Cylinder heads and engine block	Aluminum
Intake system	Variable geometry with 3 operating modes

#### Timina

4 valves per cylinder, 4 overhead camshafts	
Timing gear transmission	2 chains
Continuous timing variator (int. and ex.)	Electronically controlled

#### Ignition system

Static type ignition	on system with individual coils (one for each spark plug).
Firing sequence	1-7-4-10-2-8-6-12-3-9-5-11

Fuel system/injection Lamborghini LIE electronic engine control unit, multipoint, sequential timed, DRIVE BY WIRE

#### Lubrication system

Туре	Dry sump
Recovery pumps	2 gear pumps
Delivery pump (high pressure)	1 gear pump

#### Cooling system

Туре	L	_iq	uid	coole	ed, '	with	pressurized circuit	



#### Transmission

Type of transmission	Permanent all-wheel drive with Viscous Traction system
Gearbox	6-speed mechanical gearbox
Clutch	Dry single disc
Clutch disc diameter	10.7 in

#### Transmission ratios

Gearbox:	
1 <sup>st</sup>	1:3.091
2 <sup>nd</sup>	1:2.105
3 <sup>rd</sup>	1:1.565
4 <sup>th</sup>	1:1.241
5 <sup>th</sup>	1:1.065
6 <sup>th</sup>	1:0.939
Reverse	1:2.692

#### Brakes

4 self-ventilated rotors with pedal control, hydraulic transmission with dual independent circuits, one for each axle with vacuum servo. ABS antilock device + DRP function.

1.26 in-1.10 in/1.26 in-1.10 in 13.98 in x 1.26 in	
12.00 in v1.26 in	
13.90 III X 1.20 III	
1.57 in-1.73 in	

Front rotor	14.96 in x 1.5 in
Front caliper cylinders	1.26 in-1.42 in-1.5 in
Rear rotor	14.96 in x 1.5 in
Rear caliper cylinders	1.26 in-1.42 in-1.5 in
Handbrake	Mechanical, acting on rear wheels

#### Suspension

4-wheel independent articulated quadrilateral system. Hydraulic shock absorbers and coaxial coil springs. Suspension with dual front and rear struts, anti-roll, anti-dive and anti-squat bar.

#### Performance data

Top speed	211.3 mph
Acceleration 0-62 mph	3.4 s (before: 3.8 s)



## Dimensions

Wheelbase	104.92 in
Total length	181.50 in
Total width	81.02 in
Total height	44.69 in
Dry weight (no fuel)	3670.7 lb
Front track width	64.37 in
Rear track width	66.73 in
Front overhang	40.75 in
Rear overhang	35.83 in
Maximum overall width with external rear- view mirrors	88.19 in

## Liquid capacities (gallons)

Fuel tank	26.4 gal
Engine oil	3.17 gal
Gearbox oil	0.92 gal
Front differential oil	0.26 gal
Rear differential oil	0.66 gal
Cooling circuit	3.96 gal

Manual (Coupé and	City	9 mpg	
	(Coupé and	Highway	14 mpg
(following EPA regulation)		Combined	11 mpg
e.gear	City	10 mpg	
	(Coupé and	Highway	16 mpg
Roadster)	Combined	12 mpg	



## Lamborghini Murciélago LP640 Roadster

#### Frame

High strength tubular steel structure with carbon fiber components.

#### Bodywork

In carbon fiber, except roof and door external panels (steel)

### Steering

Туре	Mechanical (rack and pinion) power-assisted
Right-hand turning circle	41.17 ft

#### Wheels and tires

Front	245/35 ZR 18
Rear	335/30 ZR 18

### Engine

Туре	12 cylinders at 60°
Bore and stroke	3.46 in x 3.50 in
Displacement	396.41 cid
Compression ratio	11:1
Maximum power	640 hp at 8000 rpm
Maximum torque	487 lb-ft at 6000 rpm
Engine position in vehicle	Longitudinal central-rear
Cylinder heads and engine block	Aluminum
Intake system	Variable geometry with 3 operating modes

### Timing

4 valves per cylinder, 4 overhead camshafts	
Timing gear transmission	2 chains
Continuous timing variation (int. and ex.)	Electronically controlled

### Ignition system

Static type ignition system with individual coils (one for each spark plug). Firing sequence 1-7-4-10-2-8-6-12-3-9-5-11



# Fuel system/injection

Lamborghini LIE electronic engine control unit, multipoint, sequential timed, DRIVE BY WIRE

## Lubrication system

Туре	Dry sump
Recovery pumps	2 gear pumps
Delivery pump (high pressure)	1 gear pump

## Cooling system

Туре	Liquid cooled, with pressurized circuit

## Transmission

Type of transmission	Permanent all-wheel drive with Viscous	
	Traction system	
Gearbox	6-speed mechanical gearbox	
Clutch	Dry single disc	
Clutch disc diameter	10.7 in	
Disengagement	With self-adjusting hydraulic control	

## Transmission ratios

Gearbox:	
1 <sup>st</sup>	1:3.091
2 <sup>nd</sup>	1:2.105
3 <sup>rd</sup>	1:1.565
4 <sup>th</sup>	1:1.241
5 <sup>th</sup>	1:1.065
6 <sup>th</sup>	1:0.939
Reverse	1:2.692



#### Brakes

4 self-ventilated rotors with pedal control, hydraulic transmission with dual independent circuits, one for each axle with vacuum servo.

ABS antilock device + DRP function.

Steel brake lines
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Front rotor	14.96 in x 1.34 in	
Front caliper cylinders	1.26 in-1.10 in/1.26 in-1.10 in	
Rear rotor	13.98 in x 1.26 in	
Rear caliper cylinders	1.57 in-1.73 in	

### Ceramic rotors system (Optional)

Front rotor	14.96 in x 1.5 in
Front caliper cylinders	1.26 in-1.42 in-1.5 in
Rear rotor	14.96 in x 1.5 in
Rear caliper cylinders	1.26 in-1.42 in-1.5 in
Handbrake	Mechanical, acting on rear wheels

## Suspension

4-wheel independent articulated quadrilateral system. Hydraulic shock absorbers and coaxial coil springs. Suspension with dual front and rear struts, anti-roll, anti-dive and anti-squat bar.



## Performance data

Top speed	205 mph
Acceleration 0-62 mph	3.4 s (before: 3.8 s)

## Dimensions

Wheelbase	104.92 in
Total length	181.50 in
Total width	81.02 in
Total height	44.57 in (without roof)
	44.69 in (with roof)
Dry weight (no fuel)	3725.8 lb
Front track width	64.37 in
Rear track width	66.73 in
Front overhang	40.75 in
Rear overhang	35.83 in
Maximum overall width with external rear-	88.19 in
view mirrors	

# Liquid capacities (gallons)

Fuel tank	26.4 gal
Engine oil	3.17 gal
Gearbox oil	0.92 gal
Front differential oil	0.26 gal
Rear differential oil	0.66 gal
Cooling circuit	3.96 gal

(following EPA regulation) (Coupé and Roadster) e.gear (Coupé and Roadster)	City	9 mpg	
	(Coupé and	Highway	14 mpg
	Combined	11 mpg	
	e.gear	City	10 mpg
	Highway	16 mpg	
	Roadster)	Combined	12 mpg



#### The Contact Persons

Communication:

Dominik Hoberg Director of Communications and Corporate Image Tel.: (+39) 051 68 17 848 Fax: (+39) 051 68 17 737 dominik.hoberg@lamborghini.com

Rita Passerini Press Office Tel: (+39) 051 6817 716 Fax: (+39) 051 6817 737 rita.passerini@lamborghini.com

Claudia Schneider Press Officer Northern Europe Tel. (+39) 051 6817 757 Mobile: (+39) 349 4598 283 claudia.schneider@lamborghini.com

Clara Magnanini Press Officer Southern Europe Tel. (+39) 051 6817 653 Mobile: (+39) 349 4598 284 clara.magnanini@lamborghini.com

Maria Federica Fazzini Press Office Tel: (+39) 051 6817 613 Fax: (+39) 051 6817 737 mariafederica.fazzini@lamborghini.com

Soon Nguyen Press Office North America Tel: (+1) 323.951.0529 ext 202 Fax: (+1) 323.951.0567 Mobile: (+1) 323.839.3858 soon@luxecommunications.com

Juliet Jarvis Press Office UK and Middle East Tel: +44 (0) 1604 722375 Fax: +44 (0) 1604 791053 Mobile: +44 (0) 7733 224774 juliet@jjc.uk.com