Los Angeles Auto Show 2006

Automobili Lamborghini at the Los Angeles Auto Show

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1. Lamborghini Murciélago Roadster LP640

Lamborghini is presenting the new version of the Lamborghini Murciélago Roadster at the 2006 Los Angeles Auto Show. 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.

Even more aggressive design

In their re-interpretation of the Roadster, the designers of the Lamborghini Centro Stile have remained true to the original style principles of purism, sportiness and functionality. As with the Coupé it has now assumed a more aggressive appearance, a substantial influence being the new front and rear bumpers. On the latter there is a new rear diffuser, in which the exhaust system is integrated within a tailpipe. The rear lights are also new, increasing the distinguishing features and making the Murciélago Roadster as unmistakable at night as in daylight. The asymmetrical design of the sides is particularly striking. Whilst the area behind the air inlet on the right is almost closed, on the left there is a large opening for the ventilation of the oil cooler. This, in addition to the aerodynamic form of the front and rear, is an illustration of how functionality dictates the shape of a Lamborghini.

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.

From its forerunner, the Lamborghini Murciélago Roadster LP640 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.

The instrument panel has also been redesigned with different display graphics. This includes a new Kenwood car radio with a 6.5 inch widescreen monitor and reader for DVD, MP3 and WMA. The navigation system (standard equipment in Japan) is also available as an option.

Like its predecessor, the Murciélago LP640 Roadster can be customised through special equipment packages. The ‘ad personam’ individualisation program offers even more scope to create a personal, unmistakeably individual sports car.

More powerful engine

As with the Coupé the new 6.5 litre (6.496 cm^3) 60° V-engine and 640 PS (471 kW) at 8,000 min^{-1} is now used also in the Lamborghini Murciélago Roadster. At 6,000 min^{-1} the 12-cylinder engine reaches the maximum torque of 660 Nm. 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 330 km/h compared to 320 km/h. The standard sprint from 0 to 100 km/h is now reached by the Murciélago LP640 Roadster in an excellent 3.4 seconds making it 0.4 seconds faster than its forerunner.

The engineers also focused their attention on optimising the torque band. The driveability of the engine thus benefits from the use of a continually variable timing system (intake and exhaust side) and engine management with Drive-by-Wire-System.

In order to meet the increased thermal requirements of the engine, the engineers built a larger oil cooler. On the exterior this is illustrated by a larger air inlet on the left wing of the vehicle. The liquid cooler on the other hand remains unchanged with the Lamborghini VASC System (variable geometry air inlet system). Additional electronically controlled air scoops open according to the outside temperature and cool air requirement. This guarantees maximum aerodynamic efficiency.

Gears and drive – more efficient and more resistant

Higher performance and torque naturally mean increased demand on the drive components. A six-gear transmission adapted to these requirements, plus a stronger rear differential and new half-axles, have therefore been deployed in the new Murciélago Roadster. An e-gear transmission with a newly tuned thrust mode (acceleration program) is also available as an option.

Like its forerunner, the new Murciélago Roadster LP640 has permanent four-wheel drive. This is based on Lamborghini’s proven VT-system (Viscous Traction), which is self-regulating without the

aid of electronic controls. In standard cases the drive force is distributed between the front and rear axles at a ratio of 30 to 70. An independent control loop adjusts the distribution of the drive force depending on dynamic oscillation, weight distribution and the relative friction values in synchronisation with the Visco clutch. In extreme cases, up to 100 percent of the drive force can thus be applied to one axle.

Electronics – closed loop for total control

Innovations have also been made to the electronics. With a closed loop control system the revised electronic control units improve the road performance and the response characteristics of the engine. All engine and vehicle parameters are controlled and monitored through a combination of three ‘master’ and one ‘slave’ control units. These are two electronic control units of the Lamborghini LIE type: a Lamborghini GFA (Gestione Funzioni Ausiliarie, i.e. Auxiliary Function Control) control unit and a Lamborghini PMC (Power Motor Control, i.e. slave unit). These control units are interconnected by means of a CAN bus.

Frame and chassis

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 fibre 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 fibre 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 160 km/h.

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.

The road performance, handling and stability at high speeds benefit from the use of new springs and stabilisers as well as the revising of the electronically controlled silencers. The anti-dive and anti-squat properties of the axles which effectively prevent brake diving and squatting, remain

unchanged. The springs (two for each rear wheel and one for each front wheel) and silencers are coaxially aligned.

The new aluminium Hermera rims measure 8 ½" x 18" at the front and 13" x 18" at the rear. The vehicle is equipped with mixed tyres of the type PIRELLI P Zero "ROSSO": the Murciélago LP640 Roadster is driven at the front on tyres with the dimensions 245/35 ZR 18 and 335/30 ZR 18 at the rear. Pirelli P Zero Corsa tyres are available as an option: particularly appropriate for use on race tracks.

Brakes and safety

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.

Its hydraulic dual circuit braking system with LP-brake servo (unit) ensures impressive delay values under even the hardest strain. The internally ventilated brake disks measure 380 mm x 34 mm at the front and 355 mm x 32 mm at the rear. The closed loop of the four-channel anti-lock braking system (ABS) is enhanced, with electronic braking management (DRP) and traction control (TCS). The system consists of an electro-hydraulic control unit and four sensors for the wheel speeds.

When extremely high performance braking is required it is possible to equip the vehicle with carbon ceramic brakes measuring 380 mm x 36 mm with six-piston-brake callipers, which reduce pressure on the brake pedal and shorten the braking distance. Even under the toughest strain, there is almost no brake fading. Substantially reduced weight and greater durability are further advantages in addition to the carbon ceramic brakes' attractive appearance.

The new Murciélago LP640 Roadster meets rigorous standards in terms of passive safety. With two front-seat air bags, a 60-litre airbag on the driver's side and a 130-litre airbag on the passenger side, it meets all existing world-wide 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.

2. Lamborghini Murciélago LP640 Versace

This exclusive model is the fruit of an innovative collaboration between Gianni Versace SpA and the prestigious luxury sports car works at Sant'Agata Bolognese.

Working directly with Maison Versace's designers, the specialists responsible for Lamborghini's "ad personam" (personalisation) programme have created a model offering significant enhancements to the interior fittings of the standard Murciélago LP640.

The lower section of the instrument panel, the doors, the roof panel, the central console and the seats are all upholstered in opulent full grain nappa, featuring the Greek fret motif, the unmistakable and distinctive emblem of the Maison Versace.

The Lamborghini Murciélago LP640 VERSACE is equipped with all the optional extras available for this model, as well as specially designed lack "Hermera" wheel rims, carbon finish, an engine hood with transparent glass ribbing, and an e-gear automatic gearbox with sequential shifting system.

To add another dimension of luxury, this limited edition sports car comes supplied with a superb array of exclusively designed, hand-crafted accessories, all made to the exacting standards of the "Couture" line.

The luggage set, composed by two suitcases (for him and for her) and one suit carrier in matt black calfskin adorned with the Greek fret motif, is specially sized to fit in the boot of the Lamborghini Murciélago. On the outside an authentication tag in palladium-finished brass, carrying the distinctive feature of Versace "Couture Limited Edition" , snaps open to reveal, if required, the incised personal details of the owner. The white satin interiors of the luggage are also embroidered with the logo of Versace "Couture Limited Edition".

Each item bears the same serial number as the car to which it belongs, incised on a tag applied on the inside.

A fabulous pair of driving shoes in blamatt blue calfskin together with a pair of driving gloves will complement the Versace luxurious accessory line.

The "Versace Precious Items" division has exclusively created for the car buyers a Chrono Matt Soft Touch watch, available in a glossy black ceramic version and in a white one, depending on the car model chosen. The watch accessories line will be featured by a precious ladies watch in glossy white ceramic set with extra clear diamonds.

3. Lamborghini Gallardo Nera

A special edition of the super sports car with limited production of 185 units

Automobili Lamborghini has unveiled its new, exclusive model, the "Gallardo Nera", which is based on the Gallardo Coupé Model Year 07. This special edition model, limited to 185 units, is an impressive showcase for the extensive individualisation options offered by Lamborghini's personalisation service 'ad personam', which transforms each and every Lamborghini into a unique vehicle.

'ad personam' provides a wealth of options for enhancing the interior and body of the vehicle according to specific personal tastes. Other individualisation requirements can also be met, such as special colour paintwork. This allows the customer to create a unique sports car that reflects his personality and satisfies his own style down to the smallest detail.

The Lamborghini Gallardo Nera, which is available in Europe in the basic colour "Nero Serapis", while for USA in "Nero Noctis", features special paintwork in matt black on the side mirrors, rear spoiler, rear body panels, roof, selected front panels and on the door sills and rear apron. Additional details such as matt black rims in the "Callisto" design with the Lamborghini logo, brake callipers in silver, white side indicator lenses and darkened tail lights complement the martial look of the exterior.

The interior is styled in the colours "Nero Perseus" and "Bianco Polar" using the "bicolour sportive" equipment variant. A further "Branding Package" and the 'ad personam' equipment package provide additional distinctive touches. The additional leather package variant in "Bianco Polar" includes leather trims for the climate control operating panel, handbrake and gear lever console in addition to the inner door handles. The seats boast rhomboidal stitching in the "Q-citura" pattern, which can also be found on the Alcantara roof lining, door trims and the partition wall between the seats and the engine compartment. Instrument rings and decorative stitching on the steering wheel, plus white piping on the seats and mats, round off the modifications in the interior.

The Lamborghini Gallardo Nera includes, as standard, a navigation system, rear-view camera, on-board computer, alarm system, lifting system and a made-to-measure vehicle cover. Optional equipment for the model includes the e gear automatic transmission, an engine hood with transparent glass panels, a Bluetooth-compatible radio and carbon ceramic brakes.

Like the Lamborghini Gallardo Coupé MY07, the Lamborghini Gallardo Nera boasts the established V10-cylinder engine with a displacement of 4,961 cc and an output of 382 kW (520 hp). It sprints from 0 to 100 km/h in 4 seconds (0 to 62 mph in 4 seconds), and reaches a top speed of 315 km/h (196 mph). The drive train of the mid-engine sports car includes permanent all-wheel drive, based on Lamborghini's proven VT (viscous traction) system.

Innovations of the Lamborghini Gallardo model year 07 (Coupé and Spyder)

As already mentioned, the Lamborghini Gallardo Nera is based on the Lamborghini Gallardo MY07. The Coupé and Spyder versions of Lamborghini's most successful model of all time enter the year 2007 with slight modifications. The serial production car's enhancements include the steering wheel, flattened on the underside with partially galvanised areas; the galvanised instrument circles; the bespoke vehicle cover and the skyroof in imitation leather (Coupé).

The base colour "Marrone Janus" and contrasting colours such as "Bianco Polar" and "Azzurro Australis" (also Spyder) are now available as colour options for the interior.

Two are the new items for the Coupé: carpets coloured in dark brown, orange and red, and the Interiorline Unicolor sportive.

Furthermore there are available the following options for Gallardo Modelyear 07: Alcantara roof lining and Alcantara pillers, small interior carbon package, steering wheel in suede or perforated leather.

The most significant change can, however, be found in the brakes: for the first time, the highly efficient carbon ceramic braking system, which is already available in the Lamborghini Murciélago, is now offered as an optional feature on the Gallardo range. For extremely high brake performance requirements, on request the vehicle can be equipped with carbon ceramic brakes measuring 380 mm x 36 mm with six piston brake calipers, which reduce the brake pedal pressure and shorten the braking distance. With the standard steel brakes already producing first class performance, the optional carbon ceramic brakes provide absolute insensitiveness to fading. Further advantages are brought by a considerable reduction in weight and greater durability, in addition to the brakes' attractive aesthetic appearance.

4. 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-engined sports car, which measures 4.30 metres in length, 1.90 metres in width and just 1.19 metres 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 characterised 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 ten-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 120 km/h and retracted by 90 km/h.

The hood

The Gallardo Spyder's soft top is easy and quick to operate, and is opened and closed by a switch on the centre 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 colour 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 fibre 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).

Engine

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 ten-cylinder unit with a displacement of 4,961 cc and a maximum output of 520 bhp (382 kW) at 8000 rpm. At more than 100 bhp per litre, its specific output is on a par with that of racing cars.

These specifications enable the Gallardo Spyder to attain a top speed of 314 km/h (195 mph) with the roof up and 307 km/h (190 mph) when the roof is down. It sprints from 0 to 100 km/h (0 to 62 mph) in an impressive 4.3 seconds.

The maximum torque of 510 Newton metres is reached at 4,250 rpm, with 80 % of this value available at just 1,500 rpm. The stroke is 92.8 millimetres, the bore 82.5 millimetres. 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 centre 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 optimises 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.

Electronics

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 stabilisation programme (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

Drivetrain

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.

Space frame and body

In conjunction with the perfect harmonization of chassis, weight distribution, centre 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 aluminium technology developed by Audi, the world’s leading manufacturer in this area.

The car uses a space frame construction based on extruded aluminium profiles. These are welded to connecting elements made from cast aluminium. The exterior elements of the aluminium body are either 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 torsion ally rigid carbon fibre.

The low weight of the space frame and the aluminium body results in an overall dry weight of just 1,570 kg.

Chassis and brake system

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 optimised dampers make for impressive chassis performance with excellent handling and stable road behaviour 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 365 mm at the front and 335 mm at the rear. Brembo 8-piston brake callipers at the front and 4-piston brake callipers 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.

Passive safety

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.

5. The ‘ad personam’ Lamborghini customisation programme - unlimited freedom of creation

The highest level of individuality and exclusivity are the hallmark of ‘ad personam’. This programme 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 colour 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 personalisation 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, personalisation 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 customisation requirements can be met. It is as possible to have the car lacquered to match a client's colour sample as it is to fulfil special wishes regarding the colour 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 Coupè and the Gallardo Spyder.

6. Technical data

Lamborghini Murciélago LP640 Roadster

Frame

High strength tubular steel structure with carbon fibre components.

Bodywork

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

Steering

Type	Mechanical (rack and pinion) power-assisted
Right-hand turning circle	12.55 m

Wheels and tyres

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

Engine

Type	12 cylinders at 60°
Bore and stroke	88 mm x 89 mm
Displacement	6496 cc
Compression ratio	(11 ± 0.2):1
Maximum power	640 hp (471 kW) at 8000 rpm
Maximum torque	660 Nm at 6000 rpm
Engine position in vehicle	Longitudinal central-rear
Cylinder heads and engine block	Aluminium
Intake system	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

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

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

Cooling system

Type	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	272 mm
Disengagement	With self-adjusting hydraulic control

Transmission ratios

Gearbox:	
I^{st}	1:3.091

IInd	1:2.105
IIIrd	1:1.565
IVth	1:1.241
Vth	1:1.065
VIth	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	
Front rotor	Ø 380 x 34 mm
Front calliper cylinders	N. 8 (32-28 mm/32-28 mm)
Rear rotor	Ø 355 x 32 mm
Rear calliper cylinders	N. 4 (40-44 mm)
Ceramic rotors system (Optional)	
Front rotor	Ø 380 x 38 mm
Front calliper cylinders	N. 6 (32-36-38 mm)
Rear rotor	Ø 380 x 38 mm
Rear calliper cylinders	N. 6 (32-36-38 mm)
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, antiroll, antidive and antisquat bar.

Performance data

Top speed	330 km/h (before: 320 km/h)
Acceleration 0-100 km/h	3.4 s (before: 3.8 s)

Dimensions

Wheelbase	2665 mm
Total length	4580 mm
Total width	2045 mm
Total height	1132 mm (with roof) 1068 mm (without roof)
Dry weight (no fuel)	1665 kg
Front track width	1635 mm
Rear track width	1695 mm
Front overhang	1005 mm
Rear overhang	1695 mm
Maximum overall width with external rear-view mirrors	2240 mm

Liquid capacities (litres)

Fuel tank	100 litres
Engine oil	12 litres
Gearbox oil	3.5 litres
Front differential oil	1 litre
Rear differential oil	2.5 litres
Cooling circuit	15 litres

Consumption (according to DIR 1999/100/CE)

Urban	32,3 l/100km
Extra-urban	15,0 l/100 km
Combined	21,3 l/100 km
CO_2 emissions	495 g/km

Lamborghini Murciélago LP640 Coupé

Frame

High strength tubular steel structure with carbon fibre components.

Bodywork

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

Steering

Type	Mechanical (rack and pinion) power-assisted
Right-hand turning circle	12.55 m

Wheels and tyres

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

Engine

Type	12 cylinders at 60°
Bore and stroke	88 mm x 89 mm
Displacement	6496 cc
Compression ratio	(11 ± 0.2):1
Maximum power	640 hp (471 kW) at 8000 rpm
Maximum torque	660 Nm at 6000 rpm
Engine position in vehicle	Longitudinal central-rear
Cylinder heads and engine block	Aluminium
Intake system	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

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

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

Cooling system

Type	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	272 mm
Disengagement	With self-adjusting hydraulic control

Transmission ratios

Gearbox:	
Ist	1:3.091
IInd	1:2.105
IIIrd	1:1.565
IVth	1:1.241
Vth	1:1.065
VIth	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	
Front rotor	Ø 380 x 34 mm
Front calliper cylinders	N. 8 (32-28 mm/32-28 mm)
Rear rotor	Ø 355 x 32 mm
Rear calliper cylinders	N. 4 (40-44 mm)
Ceramic rotors system (Optional)	
Front rotor	Ø 380 x 38 mm
Front calliper cylinders	N. 6 (32-36-38 mm)
Rear rotor	Ø 380 x 38 mm
Rear calliper cylinders	N. 6 (32-36-38 mm)
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, antiroll, antidive and antisquat bar.

Performance data

Top speed	340 km/h
Acceleration 0-100 km/h	3.4 s

Dimensions

Wheelbase	2665 mm
Total length	4610 mm
Total width	2058 mm

Total height	1135 mm
Dry weight (no fuel)	1665 kg
Front track width	1635 mm
Rear track width	1695 mm
Front overhang	1005 mm
Rear overhang	910 mm
Maximum overall width with external rear-view mirrors	2240 mm

Liquid capacities (litres)

Fuel tank	100 litres
Engine oil	12 litres
Gearbox oil	3.5 litres
Front differential oil	1 litre
Rear differential oil	2.5 litres
Cooling circuit	15 litres

Consumption (according to DIR 1999/100/CE)

Urban	32,3 l/100km
Extra-urban	15,0 l/100 km
Combined	21,3 l/100 km
CO_2 emissions	495 g/km

Lamborghini Gallardo Spyder

Chassis and body	
Frame	Aluminium space frame
Body	Aluminium
Engine bonnet	Carbon fibre
Suspension	Double wishbones, antiroll bars, at front and

	rear, anti-dive, anti-squat
ESP	BOSCH 5.7 with ABS, ASR, ABD
Brakes	ϕ 365x34 mm front, ϕ 335x32 mm front
Calipers	Aluminium alloy, 8 pistons front, 4 pistons
Steering	Power assisted rack and pinion
Kerb to kerb turning circle	11.5 m
Tyres	235/35 ZR19 front. 295/30 ZR19 rear
Rims	Aluminium alloy 8.5” x 19” front, 11”x19” rear
Rear spoiler	Electronically activated at 120 kph
Air bags	Front dual stage module Side and thorax side modules
Engine	
Type	10-cylinder
Displacement	4961 cc
Compression	11:1
Bore and stroke	ϕ 82.5 mm x 92.8 mm
Intake system	Variable geometry
Valve gear	Chain driven, intake and exhaust continuously variable timing
Maximum output	520 bhp (382 kW) at 8000 rpm
Maximum torque	510 Nm 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

Drive train	
Transmission type	Permanent four-wheel with viscous clutch
Gearbox	6 speeds and reverse Robotized sequential E GEAR system as optional
Gears	I 3.313, II 2.053, III 1.458, IV 1.138, V 0.939, VI 0.784, R 2.813
Final drive	3.077
Clutch	Double plate ϕ 215 mm
Rear differential	45% limited slip
Front differential	Slip limited by ABD function (ESP)
Performance	
Maximum speed	314 km/h (roof closed) 307 km/h (roof open)
Acceleration 0-100 kph	4.3 s
Dimensions	
Wheelbase	2560 mm
Length	4300 mm
Width	1900 mm
Height	1184 mm
Weight (unladen – without fuel)	1570 kg
Capacities	
Fuel tank	80 litres
Engine oil	10 litres
Engine coolant	20 litres
Consumption	

Urban	24.8 l/100 km
Extra-urban	12.4 l/100 km
Combined	17.0 l/100 km
CO_2 emissions	400 g/km