



INTRODUCING THE LEXUS LFA



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PURSUING THE DREAM

Ever since the development of the LFA was given the green light in 2000, myself and my team have been driven by a passion to create a world-class supercar, a car to make Japan proud. From the very beginning of automobile history, supercars have represented dreams, hopes and aspirations. They have also been a source of new technologies that have sustained the evolution of cars. Although the recent focus on environmental performance, along with the difficult global economy, may have put the excessive 'horsepower wars' on the back burner, car manufacturers show no signs of giving up on the development of stunning supercars.

For Lexus, a brand that aims to provide customers enlightened moments and memorable experiences, the development of a world-class supercar was an indispensable next step. Twenty years have passed since the LS400 made its sensational world debut backed by overwhelming product appeal and outstanding customer service. In the years that followed we created a new category of premium crossover SUV in the form of the RX, and took the lead among premium brands in launching a hybrid vehicle line-up. By anticipating future trends, Lexus has constantly set out to redefine the very essence of luxury.

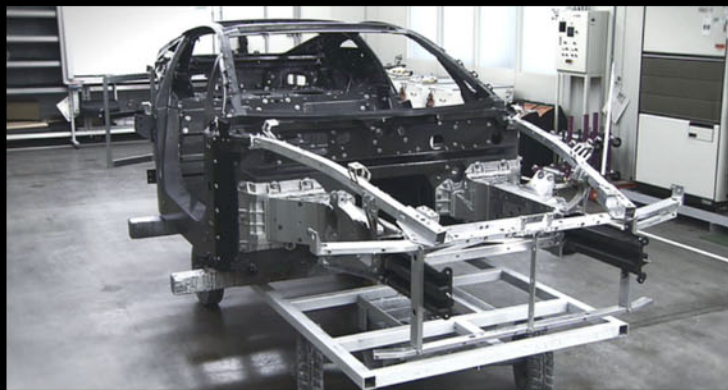
However, the development of the LFA was a challenge of a yet higher order: the goal of obtaining an unprecedented level of sensual and emotional appeal. Meeting that goal required not only a high-revving engine, or impressive aerodynamics. What we needed was a car that moved its driver in more ways than one, a car that stirred each of the five senses. We thus set out to perfect the sensual aspects of performance: the kind of response that sends the entire vehicle surging forward when you hit the accelerator, seemingly relentless power delivery, and an engine sound to give you goosebumps. Classical Lexus touches to this otherworldly performance can be seen in the facilitation of mutual interaction between vehicle and driver, and in the intrinsic respect shown towards that driver, giving them confidence all the way to the limits.

In this way, the LFA is designed to make the most of every moment each customer spends in its company, promising instants of sheer driving euphoria. While conventional passenger cars focus on getting there, the LFA is all about the journey. Although these inspirational, dreamlike moments will unfortunately only be experienced by a lucky few, I firmly believe the spirit of the LFA will be the pride of any Lexus admirer.

棚橋 晴彦

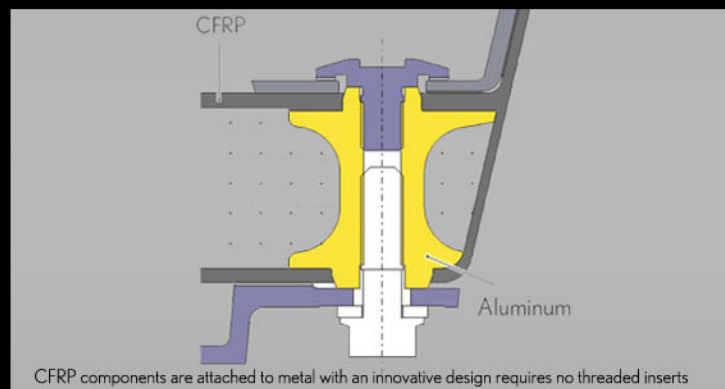
TECH FEATURES



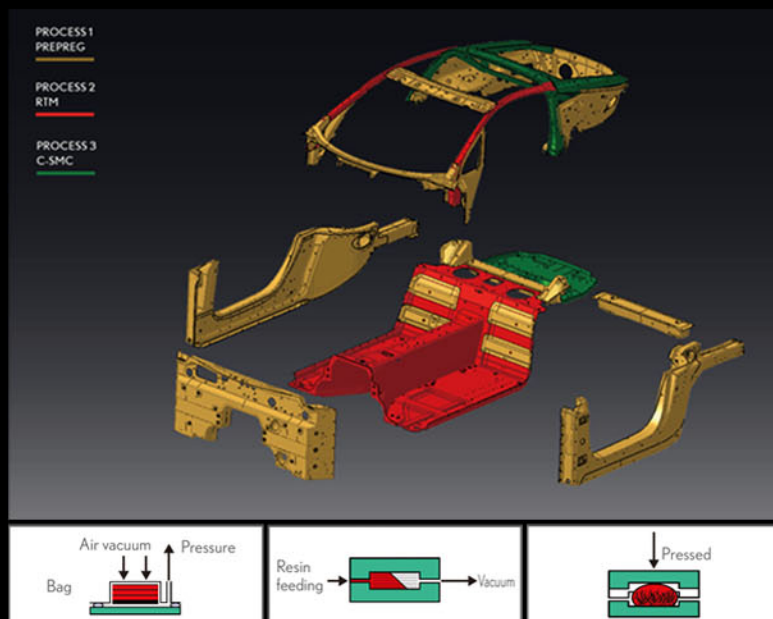


- The LFA employs a unique Carbon Fiber Reinforced Plastic (CFRP) body to achieve exceptional integrity and light-weight construction.
- A trio of sophisticated CFRP molding processes comprises 65% of the chassis structure by yielding a weight savings of 100kg.
- Pursuit of new CFRP technology internally results in an advanced new joining process for CFRP and metal alloys.
- Internal development means this world-class CFRP technology is primed for future mass production in other Lexus models.

According to Haruhiko Tanahashi, chief engineer of the LFA's development program, keeping the car's overall weight to a minimum would be a fundamental requirement. So, in a dramatic decision early in the development process, the team switched from aluminum construction to an advanced Carbon Fiber Reinforced Plastic (CFRP) body, yielding a weight savings of 100kg (220lbs) over an equivalent aluminum design.



The LFA team also developed an advanced joining technology to bond carbon fiber and metal components. Conventional joining processes use a threaded aluminum insert that is wrapped in the CFRP. However, the LFA uses an innovative system that required no insert or direct CFRP contact by employing a flanged aluminum collar to link the two materials, overcoming inherent weaknesses in such joints.



CFRP MOLDING PROCESS

Process 1

Prepreg is a hand-laid process, employing carbon fiber sheets impregnated with thermosetting resin. It creates an extremely stiff and stable structure. On LFA, it is primarily used to form the main cabin frame.

Process 2

Resin Transfer Molding (RTM)

RTM uses pre-formed carbon fiber components, which are later impregnated with thermosetting resin. It is used on the LFA transmission tunnel, floor panel, roof, and hood.

Process 3

Carbon Fiber Reinforced Sheet Molding Compound (C-SMC)

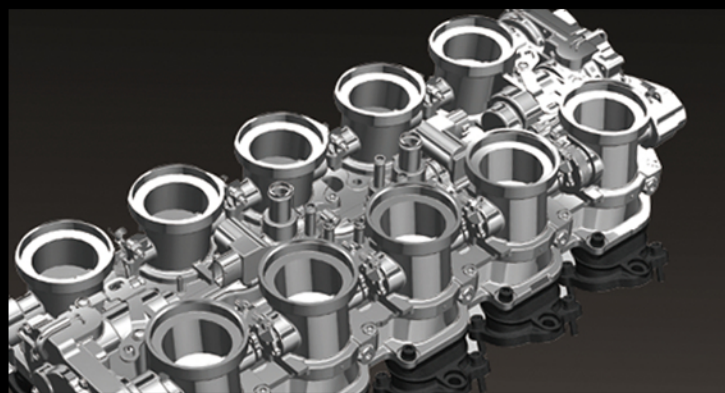
C-SMC uses short carbon fibers pressed into a die. It is used on the LFA C-pillar and the rear floor.



- Breathtaking performance from a purpose-built, all new 4.8L V10 engine.
- Incredibly responsive design able to rev from idle to its 9,000rpm redline in 0.6 seconds.
- Low friction, motor-sport developed components push max power and torque to 412kW (552hp) at 8,700rpm and 480Nm (354 lb-ft) at 6,800rpm.
- Compact design as small as a traditional V8 with weight of a typical V6, generating 85.7 kW per liter (1.9hp per cubic inch)
- Extreme power combined with ultra light weight rockets the LFA to 100km/h (62 mph) in just 3.7 seconds and a top speed of 325 km/h (202 mph).

Drawing on racing experience from the grueling Nurburgring 24 Hour race in Germany, the LFA development team equipped the LFA with a track-oriented bespoke V10 engine that sets new automotive standards for compact dimensions, lightweight architecture and scintillating performance. The purpose-built 1LR-GUE engine uses a wide 72° angle between cylinder heads for perfect primary and secondary balance and adopts exotic light-weight materials, including titanium valves and connecting rods, forged aluminum pistons and Diamond-Like Carbon Silicon coated rocker arms.

Naturally aspirated induction comes from 10 individual, electronically controlled throttle bodies that provide very linear and predictable power delivery. This advanced design estimates intake volume based on throttle pedal angle, thereby calculating fuel injection volume based directly on driver input, giving an instantaneous response.



10 INDIVIDUAL THROTTLE BODIES

In addition, a fully integrated crankcase with paired cylinder valves is used to minimize pumping loss. All said, the LFA's low-friction program and high-response induction system allows the powerplant to reach an astounding rev limit of 9,000rpm in a mere 0.6 seconds from idle. In fact, this level of responsiveness necessitates the use of a digital rev counter where a conventional analogue unit simply cannot keep pace with the engine's ability to gain and lose revolutions.



DRY SUMP LUBRICATION SYSTEM

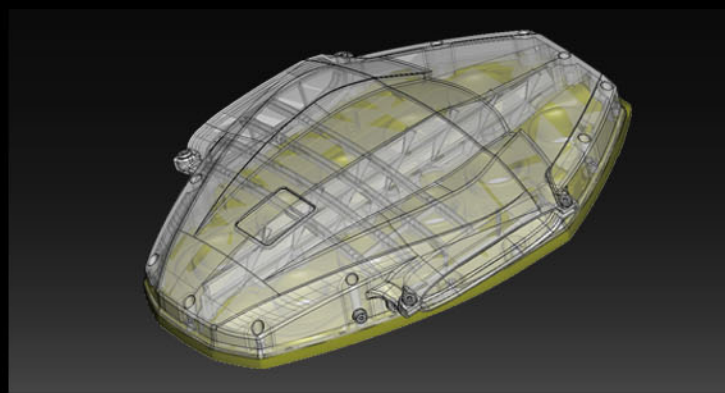
The LFA V10 also features a dry sump lubrication system that not only positions the block deep within the engine bay to lower the center of gravity and the car's moment of inertia, but enables the engine to sustain its oil lubrications even at high speed cornering with strong G-force.



- The LFA V10 has been acoustically tuned to deliver a unique and dramatic Formula-1 inspired sound.
- Horizontally split intake surge tank with acoustic designed walls emits optimal induction frequencies.
- Tuned large diameter, equal length exhaust manifolds run through a titanium dual stage rear silencer.
- Three acoustically optimized sound channels fill the LFA cabin with rich intake and exhaust sounds.

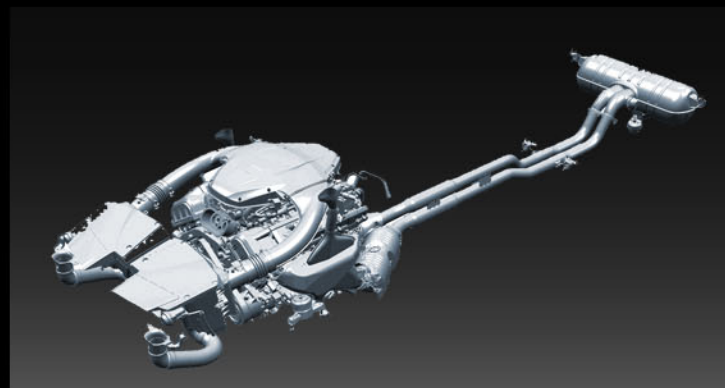
"The Lexus LFA is a car with relentless power delivery and an accompanying exhaust note to give you goose bumps," enthuses its chief engineer Haruhiko Tanahashi. Inspired by the unmistakable soundtrack generated by a Formula 1 car at maximum revs, Chief Engineer Haruhiko Tanahashi and his team enhanced and fine tuned the acoustics of the LFA's ground-breaking V10 powerplant to deliver an awe-inspiring soundtrack – from the elegant yet understated rumbling idle note to a nape tingling red-line wail – for those both inside and outside of the cabin.

By emphasizing the secondary combustion frequency of the LFA's engine and then introducing primary, secondary and tertiary firing harmonics, Tanahashi-san and his team created a signature exhaust note unlike that of any other road car and called it 'Octave Harmony'. This significantly enhanced the sensation of acceleration and speed, and was made possible by meticulously tuning the LFA's multi-stage exhaust system.



SURGE TANK

An essential component responsible for generating the engine's tone, the surge tank, has been carefully tuned to achieve optimal acoustics. Borrowing from the design of an actual musical instrument, the sides have been made rigid and horizontal ribs have been added at the forward half to obtain a more powerful induction sound.

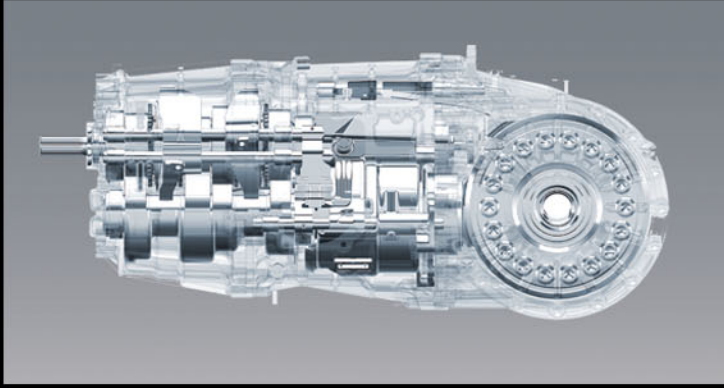


ENGINE AND EQUAL LENGTH EXHAUST SYSTEM

After combustion, exhaust exits the engine's left and right banks through separate equal-length, large diameter exhaust manifolds that not only enhance torque levels, but also create a crisp sound quality. After passing through the catalytic converters, the dual exhausts flow through twin sub-mufflers and then meet at the rear of the vehicle in a multi-stage titanium silencer positioned behind the rear-mounted gearbox.

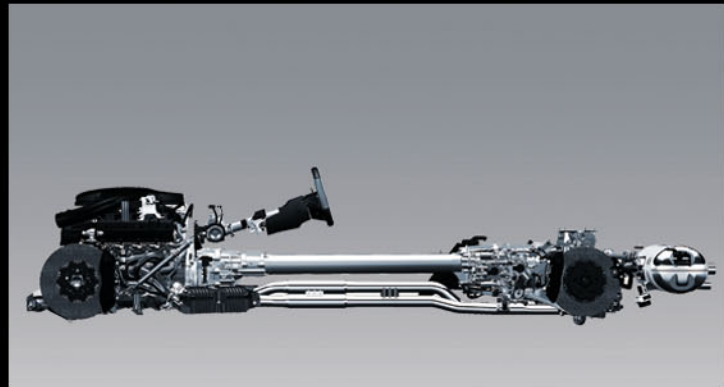
The titanium rear silencer incorporates a valve-actuated structure that channels exhaust flow according to engine speed. At 3,000rpm and below, the valve remains closed to route exhaust through multiple chambers, ensuring the exhaust note remains civilized. Above 3,000 rpm, the valve opens to allow exhaust to pass through a single chamber and enter the world in the form of a hi-octane soprano.

The engine's induction and exhaust sounds are carefully channeled into the LFA's cabin. The main channel runs from the surge tank into the cabin below the main dash panel. This is complemented by two further channels-- one at the upper cowl opening and one at the lower reflector. These sound channels ensure the driver sits at the center of a 3-D surround sound concert of engine performance.



- Lightning-quick six-speed Automated Sequential Gearbox (ASG) that always puts the driver in full control.
- Unique paddle-shift feeling, with choice of seven gearshift speeds.
- Transaxle layout over the rear axle results in exceptional cornering agility and high-speed controllability.
- Ultra-quick upshifts as quick as 200 milliseconds complemented by computer-controlled rev-matching downshifts.
- Four driving modes—Auto, Sport, Normal, and Wet for ultimate versatility.

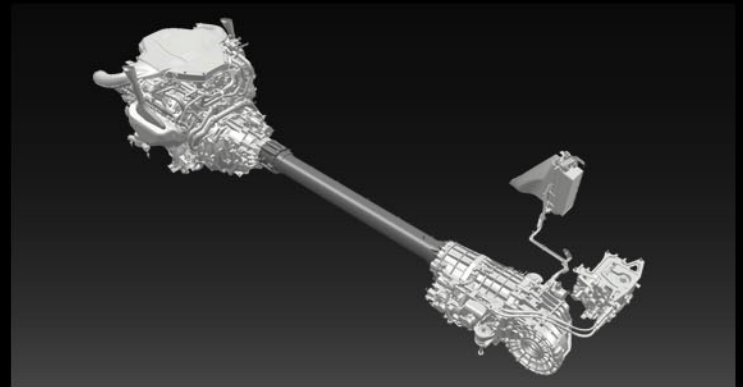
DYNAMIC BALANCE



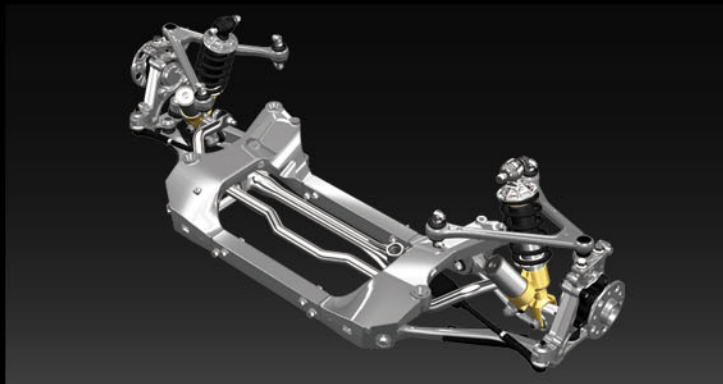
- Mid-front engine mounting with a rear transaxle layout delivers the ideal 48:52 front-to-rear weight distribution vital for optimal dynamic balance.
- The front engine and rear transaxle are connected through a rigid torque tube, creating a flex free link between engine and transmission – a crucial element in the ultra-stiff and balanced chassis construction.
- All major ancillary components are weight-optimized and located within the wheelbase to minimize the moment of inertia and maximize agility.

Going at high speed requires a gearbox that provides a relentless torrent of acceleration that can be delivered in an instant. The lightning-quick Automated Sequential Gearbox (ASG) accommodates the engine's wide powerband while remaining lightweight and compact. Operated by steering column-mounted paddle shifters, the ASG works hand-in-glove with the engine to put the driver in full control even under the most extreme conditions.

The LFA's strong drive-centric focus is encapsulated by the paddle-shifter function. The force necessary to operate the right-hand upshift paddle and left-hand downshift paddle is different. Upshifts require only the slightest flick of the fingers while downshifts require more effort to enhance the mechanical link between driver and transmission.



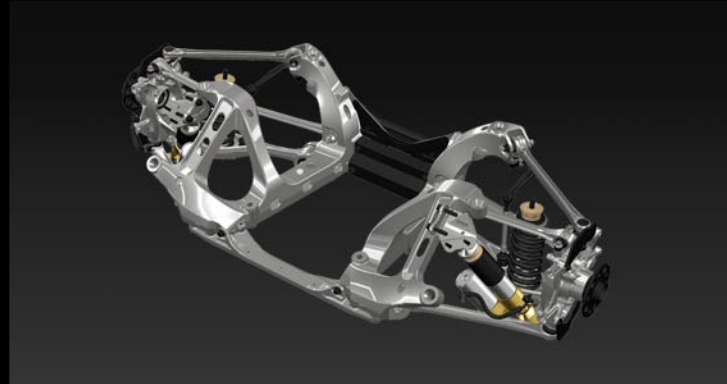
While many believe that a 50:50 weight distribution is the most desirable for a high-performance sportscars, the perfect weight ratio is actually the one that will allow the vehicle to live up to its full dynamic potential. With this in mind, the LFA development aimed for a 48:52 weight distribution. To realize this ideal front/rear weight distribution and a highly rigid construction, the LFA adopts a front midship engine/rear transaxle layout. This configuration also combines the controllability and straight line stability of a front engined rear-drive layout with the handling and cornering agility of a mid-engined rear-drive platform.



- A unique double wishbone front and multi-link rear suspension layout with aluminum alloy construction high agility and low weight.
- Bespoke remote-reservoir monotube shocks direct from the LFA race car.
- Forged aluminum knuckles and hollow anti-roll bars further reduce unsprung weight.
- 20-inch forged aluminum wheels shod with asymmetric Bridgestone tires: 265/35ZR20 at the front and 305/30ZR20 at the rear.
- Two-piece Carbon Ceramic Material (CCM) brake discs with six-piston calipers up front and four-piston calipers in the rear for rock steady braking even at the maximum speed of the LFA.
- Full floating disc construction negates high-temperature expansion.

The LFA rides on a high-performance, double wishbone front and multilink rear suspension layout. Developed after extensive work at the Nürburgring Nordschleife, it delivers vital steering and chassis feedback to the driver, perfectly balancing on-the-limit capability, exceptional levels of grip and secure high-speed stability.

Developed exclusively for the LFA for their uncompromised straight-line and cornering dampening force at any speed, the dampers feature piston rods coated in a diamond-like carbon compound and nickel-silicon plated cylinder walls for exceptional, friction-free response. The remote reservoir cylinders employ expanding and contracting metal bellows that are connected to the main cylinder via base valves.



MULTI LINK REAR SUSPENSION

Focused on lowering weight wherever possible, the suspension features forged aluminum knuckles and suspension arms along with hollow anti roll bars to reduce unsprung weight. Borne out of the LFA's Nurburgring 24 Hour races, the LFA adopts cross bracing along the bottom of the chassis structure to ensure an extra rigid platform capable of extreme G-force. The front and rear cross bracings are connected by a lattice-style central brace. These bracings are complemented by a CFRP performance rod and aluminum delta brace at the chassis' front.



BRIDGESTONE TIRES

To complete the rolling architecture, LFA rides on 20-inch forged aluminum BBS wheels and are shod with bespoke asymmetric Bridgestone tires. 265/35ZR20 up front and 305/30ZR20 out back.



- A high-performance cockpit design that provides a unique supercar experience.
- Hooded instrument panel yielding an exceptionally high level of driver information.
- Central tachometer featuring a Thin Film Transistor (TFT) Liquid Crystal Display (LCD) panel and motor-driven movable ring provides supercar exhilaration and Lexus sophistication.
- Ultra high quality hand-finished cabin trim reflect premium supercar character and refinement synonymous with Lexus.

Opening the LFA doors reveals a dramatic low-slung cockpit that has been intelligently designed and hand assembled with the finest materials to reflect the car's driver centric dynamics. A sophisticated instrumentation interface brings driver and machine together for a true supercar experience. The advanced technology of the LFA's hooded instrument panel enables it to deliver an exceptionally high level of information to the driver in a clear and logical manner. It combines a dramatic Liquid Crystal Display panel with a color Thin Film Transistor and a motor-driven movable ring. The acrylic lens in the metal ring is composed of multiple layers to create an advanced, three-dimensional appearance, and the overall appearance of the meter changes according to the vehicle's mode.

* Navigation function not available in all markets



INTERIOR

The raised center console that divides the cabin houses the seven-inch integrated display screen as well as the intelligently located controls for climate control and infotainment. It is coated in satin metal accents and leather and complemented by 10 matte black buttons running down the console's flanks. The LFA also features the innovative Remote Touch system, located precisely where the driver's hand falls for optimal control and ease of operation. This multi-function control device operates on the same basic principles as a computer mouse and its on-screen cursor to provide quick access to the LFA's satellite navigation, configuration, and infotainment functions.

The LFA's leather wrapped seats are orthopedically designed with a split rear backrest, pronounced side bolsters and eight-way electric adjustment. The seats are positioned at the center of the vehicle's wheelbase and laterally as close to the car's center as possible. This configuration allows the driver to feel and respond intuitively to changes in the vehicle's behavior.

The cabin trim uses soft hand-finished leather or Alcantara with accent stitching complemented by both matte and glossy CFRP and satin metal accents. An expansive file of matte-coated carbon fiber sits below the windshield to reduce reflected sunlight, while glossy coated carbon fiber flanks the center console and is used on the steering wheel and door panels. Naturally, LFA owners will be able to choose from a wide selection of textures and hues to truly personalize their cabin. In addition, each LFA has comprehensive equipment levels that include dual zone climate control and Hard Disc Drive satellite navigation* and a standard 12-speaker lightweight high-output audio system that employs high efficiency speakers with Lexus First Class D amplifiers. Also available is a Mark Levinson 12-speaker Premium Sound System custom designed for the unique LFA cabin acoustics.

CENTER DISPLAY MODES



The single central circular dial takes center stage and combines Lexus sophistication with the cutting edge precision befitting a supercar of 325km/h (202mph) potential. The central tachometer runs through the red zone to 10,000rpm and features a fast reacting LCD needle designed to exactly replicate the V10 engine's acceleration even at high-speed cruising. Housed within the dial are the digital speedometer, gear indicator, transmission mode, vehicle control data, trip information displays and Tire Pressure Warning System display. The color TFT LCD panel delivers superior visual clarity in even the brightest conditions.



- Clean, muscular and athletic, the LFA combines supercar styling with the Lexus L-finesse design philosophy into one cohesive form.
- A low drag coefficient of just Cd 0.31
- Flat underbody and speed-activated rear wing with a Gurney flap on the trailing edge yields exceptional downforce to keep the LFA planted at high-speeds

Sleek, athletic and muscular, the low-slung LFA coupe exudes super style from every curve and angle. Despite its mould-breaking styling, the LFA can immediately be identified as a Lexus through adherence to the Lexus L-finesse design philosophy. Rooted deeply in both traditional and modern Japanese culture, L-finesse expresses three fundamental elements: "Incisive Simplicity" or purity, "Intriguing Elegance" of emotional appeal, and Seamless Anticipation of the experience and care of Japanese hospitality.

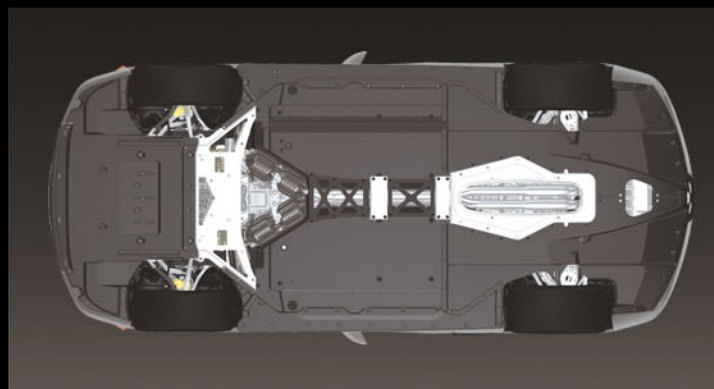
The LFA's coherent lines flow from roof to sill in a seamless convex to concave line. With its low weight and high strength, Carbon Fiber Reinforced Plastic (CFRP) body gave the LFA's designers a higher degree of design freedom, allowing them to create shapes, curves and edges that would have been impossible with metal. For example, the sharp trailing edges at the rear of the LFA would not have been possible had traditional metal been used for the bodywork.

The LFA's sleek shape is the work of hundreds of hours of wind-tunnel testing and relentless computer modeling using powerful Computational Fluid Dynamics programming. The result is a super car with both head-turning looks and extraordinary aerodynamic qualities that deliver superb high-speed stability and a wind-cheating profile. With its wing retracted the LFA boasts a drag coefficient of just Cd 0.31.



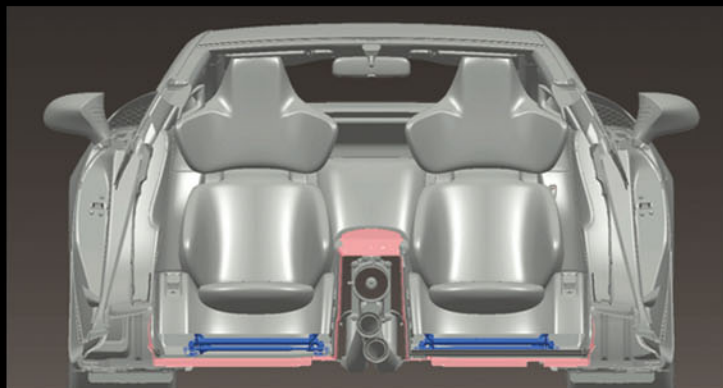
REAR WING

Optimally shaped aerodynamic components designed to precisely manage airflow, under and around the LFA, are effectively positioned throughout the body. For example, at the front, a centrally positioned inlet is fitted with rubber seals at the side to prevent excessive airflow into the engine compartment. Also, at the point the A-pillar meets the windscreen, the LFA is fitted with small turbulence-reducing fins to enhance both straight-line and cross-wind stability. The active rear wing, complete with a Gurney flap on the trailing edge, deploys according to vehicle speed. It is retracted at low speeds, but rises at speeds of 80km/h (50 mph) to provide down force and stability. In addition, the LFA has a completely flat underbody engineered to create strong downforce. The speed of air flow under the vehicle is comparatively faster than the airflow over the vehicle, creating a strong pressure differential that effectively sucks the vehicle to the road.



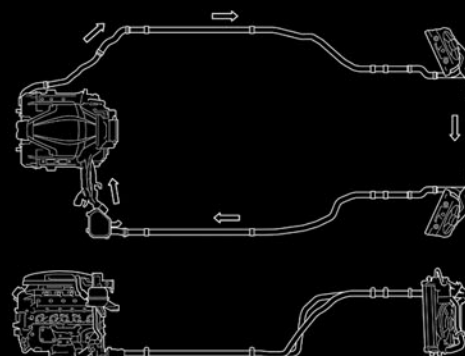
FLAT UNDERBODY

Flat underbody engineered for downforce



- Central heat tunnel running the full length of the chassis to extract power-robbing latent heat
- Large twin rear-mounted radiators and a high capacity low-mount centrifugal water pump provide exceptional powerplant cooling.
- Large functional air ducts to cool brakes allows for sustainable braking power.

For a supercar to be truly track ready, it must have the ability to manage the massive heat build up that occurs throughout the vehicle. Left unchecked, the heat levels generated from mechanical and aerodynamic friction can severely diminish power output or cause complete functional breakdown altogether. In the world of performance car engineering, a great deal of attention is usually given to the typical hot spots such as the engine and brakes, however, exhaust systems and electronic systems must be equally protected to ensure high endurance and dependability. The LFA development team tackled this challenge with a comprehensive solution in mind. One of the key mechanisms was the adoption of a large heat tunnel that runs from the front of the chassis, down the central spine of the body, and out the rear of the vehicle via twin heat ports below the tail lamps. This tunnel structure effectively scavenges lingering heat generated from multiple sources of vehicle friction and sends it out the rear of the vehicle, thereby protecting the CFRP body, drivetrain, and electronic components from damage.



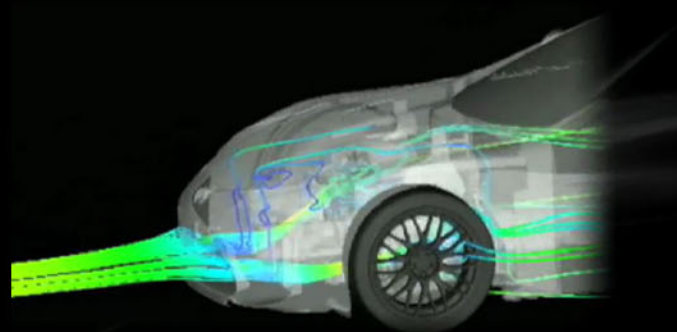
COOLING SYSTEM

For maximum engine cooling while supporting optimum dynamic balance, twin radiators are mounted at the rear, pulling in air directly from the large inlets mounted above the rear wheels. In addition, a large capacity centrifugal water pump is mounted low on the engine and feeds the radiators through large light-weight aluminum plumbing. This is complemented by a large, liquid-cooled oil cooler inside the V-bank water tank, wrapped in thermally conductive sheets to provide efficient and consistent lubrication cooling.



FRONT DUCTS

Large front ducts cool the large high-performance Carbon Ceramic Material (CCM) brakes.





- Each LFA hand built by a team of skilled craftsmen
- In keeping with the LFA's bespoke nature, each V10 engine will be hand-assembled by a single engineer and bears his signature.
- Each LFA is affixed with a special placard showing its sequence number among the 500 units to be built.

The LFA team is no ordinary group. It is a team staffed by talented engineers and craftsmen – all sharing the passion for high performance driving and unconventional engineering methods. This small and prestigious team led by Chief Engineer Haruhiko Tanahashi have steered the LFA program from concept, to design, to engineering, to manufacturing – all the way creating completely new methods that would ensure that the LFA was sensational and distinct. One of the areas the team closely examined was the way of assembly. Their goal was to ensure a process that not only created peerless build quality, but one that would be sure to inject each LFA with the passion and DNA that the LFA program was based on. This is an assembly process that only hand craftsmanship could fulfill.

Beginning in December 2010 at the LFA Works facility at the Motomachi manufacturing plant in Toyota City, Japan, each LFA will be hand-built by a team of highly skilled craftsmen. LFA will therefore be produced at a maximum rate of only 20 per month. In addition, the heart of each LFA, the bespoke 4.8L V10 engine, will be assembled by a single engineer and a metallic label bearing his signature will be attached to the left cylinder head of each engine. Finally, upon completion of each LFA's assembly and functional check, each unit will be affixed its own placard indicating its unique build sequence among the very limited five hundred units that will ever be produced.



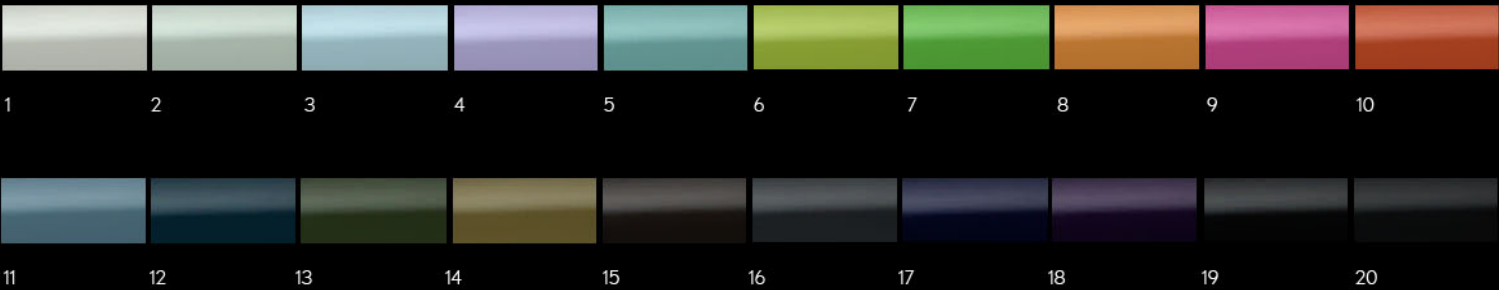
STANDARD COLORS

- | | | | | |
|------------------|-----------------|--------------------|---------------|----------------|
| 1. WHITEST WHITE | 2. PEARL WHITE | 3. METALLIC SILVER | 4. PEARL GRAY | 5. PEARL BROWN |
| 6. PEARL BLUE | 7. PEARL YELLOW | 8. PEARL RED | 9. RED | 10. BLACK |



OPTIONAL COLORS

- | | | | | |
|----------------|------------------|--------------------|---------------------|-------------------|
| 1. IVORY WHITE | 2. MINT GREEN | 3. AQUA | 4. LAVENDER | 5. SKY BLUE |
| 6. LIME GREEN | 7. FRESH GREEN | 8. ORANGE | 9. PASSIONATE PINK | 10. SUNSET ORANGE |
| 11. SLATE BLUE | 12. STEEL BLUE | 13. MOSS GREEN | 14. CRYSTAL GOLD | 15. BROWN STONE |
| 16. STEEL GRAY | 17. LAPIS LAZULI | 18. BLACK AMETHYST | 19. STARLIGHT BLACK | 20. MATTE BLACK |





SEAT FRONT / SEAT BACK / CENTER CONSOLE AND LOWER INSTRUMENT PANEL

- | | | | | | |
|-----------|-----------|----------|--------------|--------------------|---------------|
| 1. WHITE | 2. SILVER | 3. CREAM | 4. ORANGE | 5. CAMEL YELLOW | 6. SADDLE TAN |
| 7. VIOLET | 8. BLUE | 9. RED | 10. BORDEAUX | 11. BLACKISH-BROWN | 12. BLACK |

LEATHER



1 2 3 4 5 6 7 8 9 10 11 12

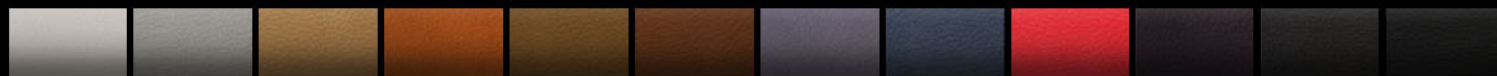
ALCANTARA



3 4 5 6 7 8 9 10 11 12

STEERING WHEEL / STITCHING

LEATHER



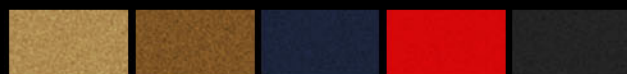
1 2 3 4 5 6 7 8 9 10 11 12

METAL FINISH



SILVER BLACKISH-BROWN

CARPET / FLOOR MATS



3 5 8 9 12

HEADLINER



3 9 12

Major Dimensions & Vehicle Weights

Overall	Length	mm (in.)	4,505(177.4)
	Width	mm (in.)	1,895(74.6)
	Height *1	mm (in.)	1,220(48.0)
Wheelbase		mm (in.)	2,605(102.6)
Tread	Front	mm (in.)	1,580(62.2)
	Rear	mm (in.)	1,570(61.8)
Seating Capacity			2
Overhang	Front	mm (in.)	940(37.0)
	Rare	mm (in.)	960(37.8)
Min. Running Ground Clearance		mm (in.)	115(4.5)
Approach Angle		Degrees	9.4
Departure Angle		Degrees	19.2
Curb Mass	Total	kg (lb)	1,480-1,580(3,263-3,483)
Fuel Tank Capacity		L (Us.gal)	73(19.3)
Cd			0.31

*1: Unladen Vehicle

Performance

Max. Speed		km/h	325 (202)
Acceleration (with weight equivalent to 2 occupants)	0~60 km/h	sec.	3.6
Max. Permissible Speed	1st Gear	km/h	83 (51)
	2nd Gear	km/h	123 (76)
	3rd Gear	km/h	167 (103)
	4th Gear	km/h	218 (135)
	5th Gear	km/h	277 (172)
	6th Gear	km/h	-
Turning Radius	Curb to Curb	m/ft	6.1 (19.69 ft)

Engine

Engine Type		1LR-GUE
No. of Cyls. & Arrangement		10-cylinders, 72° V-type
Valve Mechanism		40-valve, DOHC, Rocker Arm Type
Bore x Stroke	mm (in.)	88 x 79 (3.5 x 3.1)
Displacement	cm3 (cu.in.)	4,805 (293.2)
Compression Ratio		12.0:1
Fuel System		EFI
Research Octane Number		min. 95
Max. Output (EEC-NET)	kW (HP)/rpm	412 (552)/8,700
Max. Torque (EEC-NET)	Nm (lb. ft.)/rpm	480 (354)/6,800
Red zone	rpm	9,000
Tailpipe Emission Certificate		EURO5
Evaporative Emission Certification		EURO-Evapo

Electrical System

Battery Capacity (5HR)	Voltage & Amp.hr.	12V-56AH(48AH)
Alternator Output	Watts	2,640
Starter Output	kW	1.7
Chassis		
Transmission Type		Automatic Sequential Gearbox
Front Counter Gear Ratio		1.259
Transmission Gear Ratio	1st	3.231
	2nd	2.188
	3rd	1.609
	4th	1.233
	5th	0.970
	6th	0.795
	Reverse	3.587
Differential Gear Ratio		3.417
Brake Type	Front	Disc (Carbon Ceramic material)
	Rear	Disc (Carbon Ceramic material)
Brake Disc (Diameter)	Front	mm (in.) 390 (15.4)
	Rear	mm (in.) 360 (14.2)
Braking System		ECB
Wheel Size/Type	Front	20 x 9.5J
	Rear	20 x 11.5J
Tire Size	Front	265/35ZR20 (95Y)
	Rear	305/30ZR20 (99Y)
Tire Brand		Bridgestone
Suspension	Front	Double wishbone
	Reare	Multi-link
Stabilizer Bar (Front/Rear)		Standard/Standard
Steering Gear Type		R&P
Steering Gear Ratio		14.3
Lock to Lock		2.35
Power Steering Type		EPS

Active Safety	VDIM (3 mode) Rather than combining the independent functions of the conventional ABS (Anti-lock Brake System), TRAC (TRAction Control system)/TRC (TRAction Control system), and VSC (Vehicle Stability Control system), VDIM integrates and coordinates these systems while also implementing various controls to achieve excellent acceleration, handling and braking.
	VSC function Depending on the road surface and other circumstances such as vehicle speed and steering inputs, the vehicle may have a tendency to exhibit rear wheel slip (oversteer) or front wheel slip (understeer).Oversteer tendency is based on inputs from a host of sensors that detect the status of the vehicle. Based on the amount of oversteer tendency detected, selective braking is applied to the wheels on the outside of the turn. As a result, an outward moment is generated and the vehicle's tendency to oversteer is suppressed.Understeer tendency is determined by comparing the driver's desired yaw rate based on steering angle and vehicle speed with the vehicle's actual yaw rate. Based on this comparison, a moment is generated in the direction of travel by reducing engine output and selective braking to suppress the vehicle's tendency to understeer.
	TRAC/TRC function When sudden acceleration is attempted during a turn on slippery roads, the rear end of the vehicle may slip sideways due to excessive rear wheelspin.The TRAC/TRC and VSC functions integrated into VDIM adjust torque and apply selective braking to the drive wheels in accordance with the turn and any wheelspin encountered. Doing so empowers the driver with their intended acceleration and helps keep vehicle stability.
	ABS function This prevents tires from locking during sudden braking or braking on slippery roads. By ensuring sufficient braking force, the ABS function helps maintain handling performance and vehicle stability.
Passive Safety	SRS Airbag system Driver & passenger's dual stage airbag Driver's seat knee airbags Driver & passenger's seat belt airbags
	Restraint system For the driver seat, a 3-point ELR (Emergency Locking Retractor) seatbelt has been adopted.- A 3-point ELR, ALR (Automatic Locking Retractor) seatbelt has been adopted for the passenger seat.For the driver and passenger seatbelts, an SRS seatbelt airbag and a pre-tensioner and force limiter have been adopted.
Navigation	HDD navigation (7 inch high resolution display *Remote touch) * Navigation functions will vary by market. Contact local sales representative for details. Navigation system includes a rear monitor system.
Audio Systems*1	Mark Levinson® Premium Surround Sound System*1 Audio Mini-jack/USB Terminals Bluetooth-compatible Audio Player Playback Function Sound Library Function DVD Playback Function (Standard) 6-disc DVD playback system upgrade available in certain markets World-first high-efficiency speakers and Lexus-first Class D amplifiers have been adopted. A Mark Levinson® Premium Surround Sound System with 12 speakers and 12 channel amplifiers is also available. *1 Audio systems will vary by market. Contact local sales representative for details *2 Source: Harman Becker Automotive Systems GmbH, May 2009
Convenience Items	Liquid Crystal Display panel with a color Thin Film Transistor, CFRP steering wheel (manual tilt and telescopic steering column), Power seat with seat heater (Driver & Passenger's Seat), Auto Airconditioner (Dual zone climate control), Power windows with one-touch auto/open close, Power door locks with remote, Audio Mini-jack/USB Terminals, Intermittent wipers, Discharge Headlamp, Headlamp cleaner, Rear Fog Lamp, LED tail lamps
Check with local market for more detailed information. Spec is subject to change without notice.	

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Notes on the descriptions about high-speed driving and performances of brakes, etc. The descriptions written in our website regarding the high-speed driving, braking performance, etc. are based on the data collected from the test drives on the race tracks those were done by professional drivers who possess specific internal qualifications. Depending on the weather / road conditions and skills of the driver, the performance described in our website may not be performed. Please drive safely on public roads by following laws and rules of the road, by adjusting your driving to the weather / road conditions, and by driving under speed limits.

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