



Spark VRT

190 | 210 | 230 | 230 HD

Stage V



Design and performance perfectly matched.

The new members of the Lamborghini Spark family 190-230 VRT (HD) once again set the benchmark for the mid-high to high power tractor class, not only in terms of performance, safety and quality but also for minimised operating costs. The new models in the range consist of 4 models from 192 to 230 HP, with a huge choice of options on offer to let you build the perfect work partner for any situation and any task. Lamborghini Spark tractors are versatile, comfortable and reliable tractors, for working in total peace of mind even in the most challenging conditions.

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Engine

All the power, reliability and fuel efficiency you'd expect from an engine.

Hard at work under the tapered and sloped bonnet of the elegantly designed tractors of the Lamborghini Spark 190-230 VRT family are award-winning 6 cylinder, 6058 cm³ Deutz TCD engines, with electronically controlled common rail fuel injection (with injection pressures up to 1600 bar) and a turbocharger with wastegate and air-air intercooler.

Embodying the best technology, these uniquely stylish and elegant machines deliver impressive peak torque ranging from 821 Nm (for the Spark 190 VRT) up to a mighty 970 Nm (Spark 230 VRT).

Another key strength of these powerplants is their extraordinary performance even at low engine speeds. With practically all the maximum torque already available at just 1000 rpm, many tasks are not only possible but actually more effective at very low engine speeds. This translates not just to lower fuel consumption but also considerably reducing wear of all the moving parts.

Low specific fuel consumption values combined with new, larger fuel tanks with a capacity of 420 litres and an astonishing 505 litres on the Spark 230 VRT HD enable uninterrupted work the whole day.

Advanced technology is used in the assembly of the engines powering the Lamborghini Spark 190-230 VRT family to achieve extremely precise tolerances. This further reduces internal friction, allowing for longer intervals between services - with oil changes now necessary only once every 1000 operating hours (or 2 years whichever ever occurs first).

Another high-tech solution contributing to reliability and efficiency is the PowerCore engine air filter. A special air pre-filter consisting of a series of spiral cyclonic tubes is mounted in a dedicated housing over the cooling pack. This pre-filter is also equipped with a dust ejector, which uses the vacuum generated by the cooling fan to automatically expel coarser dust particles.

Reducing emissions was also a top priority in the development

of these engines. Compliance with stringent Stage V emissions regulations is attained with intelligent solutions adopted for both the engine design and the suite of exhaust aftertreatment (EAT) systems used to ensure low fuel consumption and operating costs in all conditions. A combined system consisting of a maintenance-free DOC catalytic converter, a passive diesel particulate filter (which does not need special regeneration cycles performed by injecting additional fuel into the exhaust) and an advanced SCR catalytic converter keeps both fuel and AdBlue consumption down to a minimum.





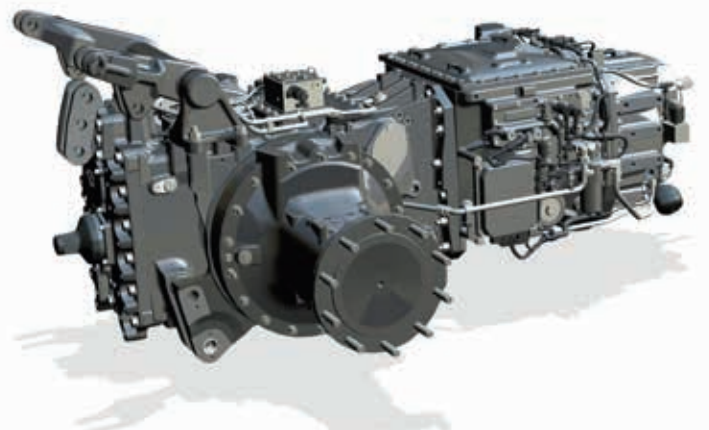
Up to 60 kph fast, with unprecedented efficiency and the tried and tested comfort: the new continuously variable VRT-transmission.

Designed and built in house for this specific power class of tractor, the all-new VRT transmissions are extraordinarily efficient and user friendly. Perfect for working effectively in all possible conditions and operating modes, the new VRT transmissions boast impressive performance and state of the art safety features, while naturally also ensuring the unrivalled comfort that only a VRT transmission can offer.

Consisting of a multi-stage planetary gearbox with electronically controlled multiplate wet clutches and state of the art, high efficiency hydrostatic units, the new VRT transmissions split the incoming power flow as effectively as possible into mechanical and hydrostatic components in real time, and then recombine these flows for delivery to the drive system of the tractor. Advanced electronic control functions work in conjunction with the hydraulic components of the transmission to ensure that shifts between the two drive ratios are executed in a fraction of a second and imperceptibly to the operator. All components of the VRT transmission work in concert to deliver power seamlessly and smoothly with no jolting and with unparalleled efficiency, minimising fuel consumption while offering outstanding driving comfort.

This new transmission is extremely robust yet light, with less weight of the moving parts. These unique characteristics have allowed for a significant increase in draft capacity transmissible to the wheels.

Higher road speeds are now attainable at even lower engine speeds: with 60 kph achieved with the engine at less than 1800 rpm, and 50 kph and 40 kph attainable respectively at engine speeds below 1500 and 1200 rpm. All versions come as standard with the PowerZero function and the proven PowerShuttle to select the driving direction. With 5 predefined responsiveness levels selectable by the user the PowerShuttle adapts to all specific shuttle needs.



All the power of a high power class tractor.

The new Spark 190-230 VRT family offers incredible scope for configuring the hydraulic system. Whichever configuration you choose, the "Clean Oil" hydraulic system delivers oil exclusively to the lift and distributors, and is completely separate from the transmission circuit. The aforementioned system uses a 120 l/min, 160 l/min or 210 l/min (only 230 VRT HD) efficient Load Sensing pump and can deliver up to 60 litres of oil to external implements (or 90 litres on the Spark 230 VRT HD), which is more than ample for even the most demanding implements. All the distributors are electronically controlled, feature timer functions and are programmable to operate proportionally. A PowerBeyond coupling with flat face couplers is also available as an option,

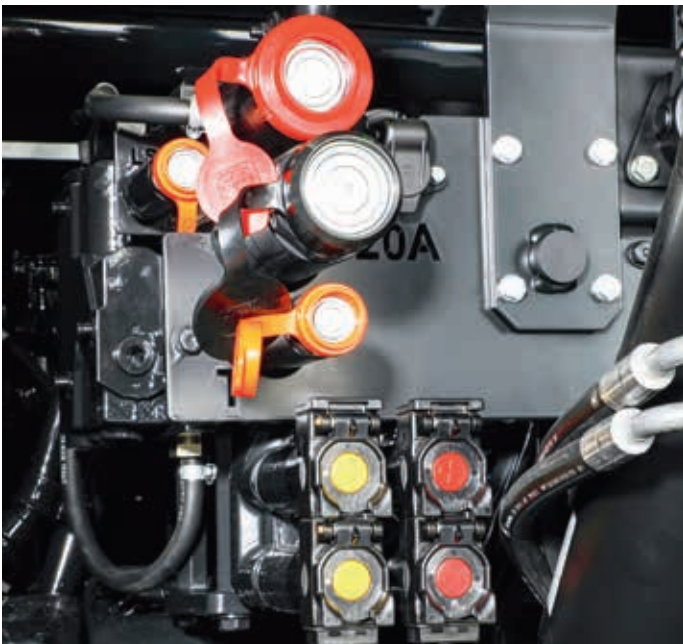
Spark 190-230 VRT tractors come as standard with 4 rear hydraulic distributors, with a fifth rear distributor available as an option; two distributors can be installed at the front, in addition to the distributor dedicated to the front lift.

The strong rear lift has an impressive maximum load capacity of up to 10000 kg.

For even greater versatility, these machines can also be equipped with an impressive 5450 kg front lift, with position control functionality and ISOBUS interface.

The rear PTO comes as standard with 540 ECO, 1000 and 1000 ECO speed modes electronically shifted and features a practical "neutral" function for connecting implements more easily. The front PTO is available as 1000 or 1000 ECO variants, while the DualSpeed option lets the driver select front speed mode from inside the cab using the InfoCentre^{Pro}.

The impressive low-end performance of the engine means that ECO mode can be used effectively for many tasks, significantly reducing fuel consumption, noise and wear.



Suspended front axle and advanced brakes for uncompromised comfort and safety

In addition to features such as air-spring cab suspension and potent dry disc brakes, the tractors of the new Lamborghini Spark 190-230 VRT family can also be equipped with an advanced front axle with electronically controlled adaptive suspension, which not only offers extreme operator comfort but also ensures unrivalled active safety, especially during road transport tasks.



The Spark 190 VRT is equipped with a front axle, which features a sturdy lower swing arm, while the other models in the family are fitted with front axles, with dual upper arms. Both front suspension configurations use dual cylinders, and offer 3 predefined damping levels selectable by the user from the InfoCentre^{Pro}.

The intelligent, adaptive anti-dive function optimises vehicle stability by countering sudden front suspension compression under braking to ensure even load distribution over the two axles and shorter stopping distances, while the power braking system delivers extraordinary performance at the lightest touch of the pedal.

For even more sure-footed stopping power, especially during road transport use with heavy implements, the Lamborghini Spark 210, 230 and 230 VRT HD can be equipped with high performance dry disc brakes on the front axle. Where permitted by law, this allows for a top speed of 60 kph with a gross vehicle weight of up to 14500 kg, or an astonishing 15500 kg in case of the Spark 230 VRT HD.

The tractors of the new Lamborghini Spark 190-230 VRT family are now also available with an intelligent dual-mode hydraulic trailer braking system, allowing them to be connected rapidly to trailers compliant with the recent EU Mother Regulation. This system automatically detects the type of tractor connected and adjusts braking performance accordingly.

For even greater safety and comfort when towing, the pneumatic trailer braking system also includes the aTBM [advanced Trailer Brake Management] function, a solution developed and patented by SDF which not only optimises trailer behaviour under braking but also provides the driver with feedback relative to the state of the braking system.



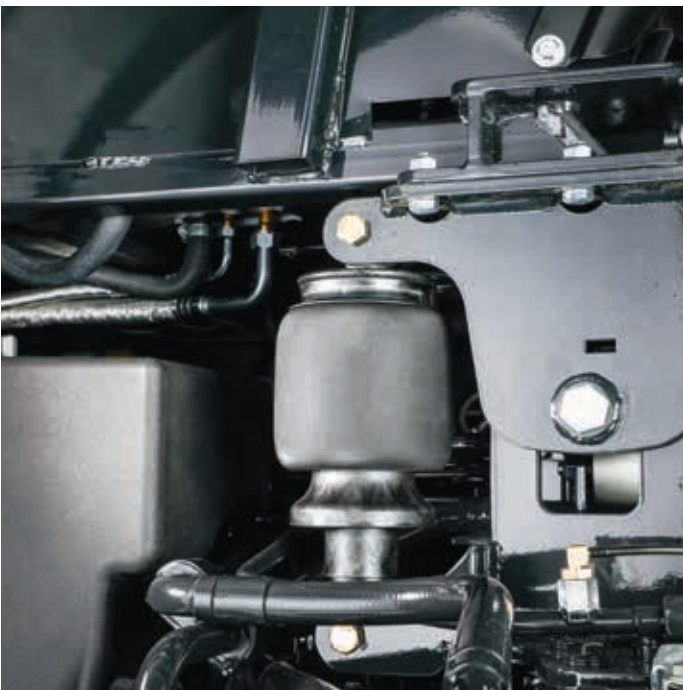
Top class comfort

The new Lamborghini Spark 190-230 VRT takes operator comfort to a whole new level. The MaxiVision 2 cab is the same as the cab already equipping its bigger sibling, the Mach 250 VRT. That means that unparalleled on-board comfort is guaranteed even in the most challenging situations and in the poorest terrain conditions. Uncompromised operator comfort is a crucial prerequisite for staying focused and alert even after the longest and most tiring work days.

This latest iteration of the revised MaxiVision 2 cab, ensuring immediate and simple access and control over the many advanced functions and automated features made possible by the extraordinary technological content of this tractor family.

The generous interior space, ergonomically designed intelligent control layout, pneumatic cab suspension, premium materials and style all come together to create a supremely comfortable working environment. Everything is exactly where you'd expect and where the operator can work at peak productivity throughout the longest field days.

So much technology has never been so simple to use: The modern and functionally designed controls are organised rationally within easy reach, while the digital display of the InfoCentre^{Pro} provides all the information concerning the functions and operating status of the machine. In addition to this the mini MMI lets the driver access and configure all the settings of the tractor easily.





The cab is physically separated from the engine bay to minimise the heat, vibration and noise transmitted to the interior of the cab itself. For even greater operator comfort, the lower rear window with acoustically insulating glass helps minimise noise in the cab. With a peak noise level of only 69 dB(A) at maximum engine speed, a very pleasant working environment is created. The MaxView windscreen, together with the generously sized side windows and the tapering, sloped design of the bonnet, ensure clear and unobstructed visibility in all directions. With the optional lighting package with 23 LED lights the Lamborghini Spark VRT turns even the darkest night into day!

Owners can take the already impressive comfort of the Spark VRT to even greater heights with a choice of exclusive and luxurious optional equipment features: generously sized, comfortable leather seats for both the driver and passenger (and with the driver seat capable of swivelling by 23°), a multifunction armrest with adjustable position, active automatic air conditioning system with additional new air vents, DAB+ radio with hands free function and Bluetooth, practical smartphone and tablet holders.

The opening roof hatch is offered in a choice of three variants: with an opaque shade screen, with a special surface coating reducing UV light transmission by 70%, or in high density, clear polycarbonate certified as a FOPS (Falling Object Protective Structure).



Lamborghini tractors have always been renowned for simple maintenance and extraordinary multi-role capability.

Scheduled maintenance intervals for the Spark 190-230 VRT family are longer than ever, with engine oil changes only needed once every 1000 operating hours (or 2 years).

Special sight glasses that allow the operator to visually check the coolant level as well as the oil level in the hydraulics, transmission and front PTO in no time, make daily maintenance work much faster and easier. The cooling pack consists of all-aluminium radiator elements which swing out to make them quick and easy to clean. The engine oil dipstick is accessible without opening the cowl, while the compressed air coupling conveniently placed on the left tractor side make cleaning radiators, the cab and the cab air filters much easier.

The battery is accessible via a practical aperture on the right hand side of the machine, while the fuses can be checked directly from inside the cab. Extended service intervals, reduced machine downtimes and easy access to all maintenance points increase the overall cost effectiveness of every single model in the family.

Taking the Lamborghini tradition for reliability and trouble-free ownership even further, the tractors of the new Spark 190-230 VRT family are also offered with a choice of two SDF ExtraCare extended warranty packs, with coverage for 3 years (or 3000 operating hours) or 5 years (or 5000 hours).

The multi-role specialists.

Complementing the outstanding multi-role capability of these tractors, a choice of three different factory-fitted kits is offered - named Light Kit, Intermediate Kit and Ready Kit - to make the subsequent installation of a front loader much simpler and quicker, and, above all, safer and much less costly. The Light Kit consists of a carrier frame designed specifically for this series, which acts as an interface between the tractor and the loader, ensures that the additional loads involved are transmitted correctly to the structure of the tractor and allows for implements to be connected and disconnected quickly and simply. In addition to the carrier frame, the Ready Kit also upgrades the vehicle with the complete hydraulic circuit for operating a front loader, and the entire electrical circuit needed. But on top of all this, the Ready Kit also includes a specific joystick installed in the cab, designed specifically to offer total, precise control over the front loader.



Precision is the basic prerequisite for productivity.

SDF Smart Farming Solutions combines a large number of digital solutions for efficient and comfortable operation of tractors. These solutions include reliable and extremely precise auto-guidance systems, ISOBUS applications and a number of data management systems. The iMonitor is a simple to use centralised controller which plays a key role in the majority of these solutions and applications.



SDF Guidance

Auto-guidance systems are increasingly becoming standard equipment on tractors in many farms today, due to the evident advantages they offer: saving resources, increasing convenience and productivity as well as reliable precision. You can trust its high reliability even in difficult working conditions such as fog or night time. Anyone who has ever worked with a steering system will never want to be without it again. Many precision farming applications are based on satellite navigation. Our receivers use free, internationally available signals which offer different accuracy levels depending upon the correction service and the receiver model. You can choose the system that best suits your operation.



SDF Data management

Efficient data management is becoming increasingly important to optimise work processes. No matter which type of data you want to work with, whether it's machine or agronomic data: SDF provides various applications for reliable transfer and insight of valuable data. Using standard file formats, customers can keep an overview at all times and data is transferred in a coordinated manner. This ensures maximum compatibility while our customers are always master of their decisions.



SDF Fleet management

Optimise operations. Increase efficiency. The new SDF Fleet Management offers customised solutions to manage relevant machine data at a glance. Our customers like farmers, contractors or any other users benefit from full control of their machines by accessing various valuable data. The browser-based SDF Fleet Management application is the central interface to insight telemetry data for Lamborghini Trattori machines. Machine data like fuel level, position or speed are transferred in real time into the application where users can monitor, analyse and optimise the use of their machinery. Error messages can be transmitted to dealer's service manager to prevent upcoming issues and even decrease machine downtime.



Agrirouter

For reliable online data exchange between different endpoints, Lamborghini Trattori provides an interface to the agrirouter. It is a universal data exchange platform that allows farmers and contractors to exchange data like field boundaries or guidelines between machinery and any agricultural software applications (e.g. an FMIS) from a wide range of manufacturers.



ISOBUS

Electronics make agricultural machinery safer, more powerful, more precise and more efficient. ISOBUS connectivity lets the operator use multiple applications to control different implements individually from a single monitor. iMonitor is the central controller for all ISOBUS applications and can perform many different tasks intuitively and easily, such as assigning AUX-N functions, generating and handling application maps and automatically controlling up to 200 different sections. A great number of functions are even available without activation. TIM automates various functions between tractor and implement to increase comfort, efficiency and ensures highest level of work quality. A wide range of Lamborghini Trattori tractor models are already TIM-ready and can easily be activated for full use of tractor implement management.

HIGHLIGHTS


- Increased productivity
- Easy to use
- Secure data
- Added convenience
- Unprecedented precision
- Advanced connectivity
- Superior compatibility
- Maximised profitability
- More efficient task management

		190	210	230	230 HD
ENGINE					
Model		DEUTZ TCD 6.1 L06			
Emission level		Stage V			
Cylinders/Displacement	n°/cc	6 / 6058			
Turbocharger with charge air cooling		■			
e-VISCO cooling fan		■			
Injection @ pressure	Type/ bar	Common Rail @ 1.600			
Max. power (ECE R120)	kW/Hp	141 / 192	159 / 216	169 / 230	
Power at rated speed (ECE R120)	kW/Hp	141 / 191	245 / 197	165 / 225	
Speed at maximum power	rpm	1900			
Max. engine speed (rated)	rpm	2100			
Max. torque	Nm	821	849	970	
Speed at maximum torque	rpm	1500			
Air filter with dust ejector		■			
Fuel tank capacity	l	420		505	
AdBlue capacity	l	29		35	
Oil change interval	Hours	1000			
TRANSMISSION					
Model		VRT transmission T7340	VRT transmission T7540		VRT transmission T7560
Transmission ratio		1,3350		1,3584	
PowerShuttle with 5 different settings		■			
Gearbox		VRT - Stepless transmission			
Cruise control	qty.	2 each direction			
Driving strategies		Auto / Advanced Auto / PTO / Manual			
Active standstill (PowerZero)		■			
Top speed 40 km/h UltraECO	rpm	1195		1199	
Top speed 50 km/h SuperECO	rpm	1494		1499	
Top speed 60 km/h ECO	rpm	-	1792		1799
HYDRAULICS AND LINKAGE					
Pump flow (STD)	l/min	120 LS			
Pump flow (OPT)	l/min	160 LS		160 LS / 210 LS	
Separate steering pump (double)	l/min	58 + 28 double pump option (Performance steering)			
Spool valves controls	Type	Electronic			
Hydraulic auxiliary control valves (STD)	n°	4			
Hydraulic auxiliary control valves (OPT)	n°	5 rear / 1 or 2 in front / 1 for front lift			
Aux valves settable in time and flow - proportional engagement		■			
Power Beyond (standard couplers)		□			
Power Beyond (flat face couplers)		□			
Automatic lower link stabilisers (mechanical)		□			
Automatic lower link stabilisers (hydraulic)		□			
Rear linkage lifting capacity (STD)	Kg	9200		10000	
External operation on rear fenders		■			
Front linkage		□			
Front linkage lifting capacity	Kg	5450			
Hydraulic upper link		□			
Oil change interval	Hours	2000			
PTO					
Rear PTO 540ECO/1000/1000ECO		■			
Rear auto PTO		■			
Front PTO 1000 or 1000 ECO		□			
Front PTO DualSpeed 1000/1000ECO changeable in InfoCentre ^{Pro}		□			
Front auto PTO		□			
AXLES AND BRAKES					
Model		DANA M50	DANA M60L		
Suspended adaptive front axle		□			
Electro-hydraulic differential lock 100%		■			
ASM system		■			
Performance steering ready with EasySteer function		□			
Steering angle	Degrees	52			
Brake booster (PowerBrake)		■			
External dry disc brakes, front		-	□		
Electronic parking Brake (EPB)		■			
Pneumatic trailer brake (with aTBM system)		■			
Hydraulic trailer brake with DualMode function		□			
ABS socket		□			
Exhaust Engine Brake ^{Plus}		□			

		190	210	230	230 HD
ELECTRICAL SYSTEM					
Voltage	V	12			
Standard battery	V/Ah	12 / 180			
Alternator	V/A	14 / 200			
Starter motor	V/kW	12 / 3,1			
External socket		■			
Interface for attachments 11786 (7-pole)		□			
MAXIVISION CAB					
6-pillar cab		MaxiVision II			
Mechanic cab suspension		■			
Pneumatic cab suspension		□			
Adjustable and telescopic rear view mirrors		■			
Heated and electronic adjustable rear view mirrors		□			
Air conditioning		■			
High visibility roof		□			
High visibility roof FOPS		□			
Multifunction satellite armrest with MaxCom joystick		■			
iMonitor with 8" or 12"		□			
AutoTurn		□			
XTEND		□			
ISOBUS (with rear and in-cab connectors)		□			
TIM (Tractor Implement Management)		□			
VRC (Variable Rate Control)		□			
SC (Section Control) 200 sections		□			
SR20 RTK receiver		□			
CTM connectivity module		■			
Attachment bracket		□			
Comfortip Professional		□			
Seat Max-Comfort Plus XL with heating function		■			
Seat Max-Dynamic Plus DDS XXL with 23° swivel, heating and dynamic damping system		□			
Seat Max-Dynamic Evo DDS XXL with synthetic leather, 23° swivel, active climate system and dynamic damping system		□			
Passenger seat		■			
Pre-arrangement for radio with antenna and loud speakers		■			
High-level DAB+ Radio with Bluetooth		□			
12x Halogen work lights on cab roof		■			
Up to 23x LED work lights		□			
Up to 2x Beacon light LED		□			
LED driving light		□			
FRONT LOADER					
Pre-arrangement light kit or intermediate kit		□			
Pre-arrangement ready kit with electronic joystick (including HydroFix)		□			
Front loader model		FZ 48-33 FZ 48-42 FZ 46-33	FZ 48-33 FZ 48-42 FZ 46-33 [FZ 46 only with front lift]		
Overloading height	mm	4590 4590 4340			
Breakout force 800 mm before the pivot point	daN	4140 4900 4560			
DIMENSIONS AND WEIGHTS					
Front tyres (min.)		320/85 R34"			420/85 R30"
Rear tyres (min.)		340/85 R48"			520/85 R42"
Front tyres (max.)		600/65 R28"			710/55 R30"
Rear tyres (max.)		900/50 R42"			900/60 R38"
Wheelbase	mm	2769	2848		2918
Length	mm	4718 - 6122	4797 - 6201		4867 - 6271
Height (max.)	mm	3250 - 3300			
Width (max.)	mm	2350 - 2990			
Ground clearance	mm	510 - 560			
Front axle width (flange to flange)	mm	1740	1940		
Front axle width with external dry disk brakes (flange to flange)	mm	-	2046		
Rear axle width (flange to flange)	mm	1890			
Unladen weight, front	Kg	3465 - 4160	3540 - 4235		3640 - 4385
Unladen weight, rear	Kg	5215 - 5715	5290 - 5790		5390 - 5940
Total unladen weight	Kg	8680 - 9875	8830 - 10.025		9030 - 10.325
Wheel weights		□			
Maximum permissible axle load, front	Kg	5200 @ 50 kph	6000 @ 60 kph		
Maximum permissible axle load, rear	Kg	10.000 @ 50 kph	10.000 @ 60 kph		11.000 @ 60 kph
Maximum permissible weight	Kg	14.500 @ 50 kph	14.500 @ 60 kph		15.500 @ 60 kph

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Lamborghini Trattori is a brand of  SDF

