



SPARK SPARK VRT

120 | 130 | 140



**A concentrated
package of
technology,
power and
efficiency.**



Engine

The beating heart of the Lamborghini Spark 120-140 models is the FARMotion engine, which are fully compliant with the Stage IV tier of the European Emission Standard. These propulsion units have been designed specifically for the agricultural sector and are capable of delivering excellent performance specifications and extremely low fuel consumption. Four-cylinder architecture, turbocharger with intercooler and waste-gate valve, fully electronically controlled Common Rail direct injection, electronically controlled viscocstatic cooling fan, combustion chamber optimisation with engine displacement downsizing to 3,849 cm³. Thanks to this formidable package, FARMotion engines offer reduced fuel consumption together with improved power and torque performance, which have been optimised for both field and road use.



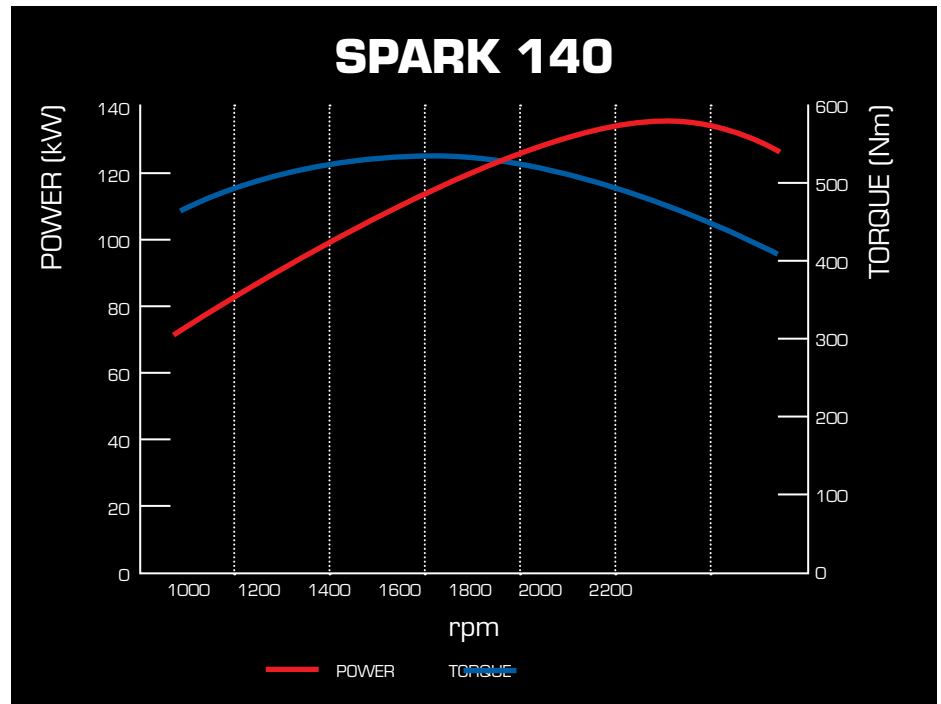
The Lamborghini Spark 120-140 models are equipped with the very latest technology, boast superior levels of comfort and are incredibly easy to use.

The new Spark 120-140 guarantee maximum versatility, as

well as record levels of efficiency, both in terms of working capacity and fuel consumption. But what really sets them apart from the competition is their unique style.

The new 120, 130 and 140 models features increased power and improved performance, with a modern, energy-saving hydraulic system, unrivalled driver comfort, and wide range of transmission, hydraulic and cab configurations.

The range is complete with a vast selection of accessories, including the Agrosky automatic satellite positioning system. Thanks to the refined, exclusive design, developed in collaboration Italdesign Giugiaro, Spark stands out among its rivals, while remaining firmly in line with the current Lamborghini "family feeling", capable of lending that touch of class that makes all the difference.



Thanks to its highly advanced design, the FARMotion engine conforms to the most stringent anti-pollution regulatory requirements in terms, simply by combining an externally cooled, electronically modulated EGR with the latest SCR exhaust gas post-treatment techniques. This means that, through the use of the AdBlue additive, it is possible to reduce harmful emissions drastically, without increasing diesel consumption levels.

To optimise use during rapid road transfers

Spark 120-140 is equipped with the HEB (Hydraulic Engine Brake), which makes it possible to use the tractor hydraulics to increase the efficiency of the engine braking, thereby increasing safety in road conditions significantly, especially on downhill stretches.

Recognised as a technical innovation at Agritechnica 2013, the HEB is activated by a dedicated command on the cab platform so as to modulate tractor deceleration without overloading the braking system, through a combination of engine braking, the hydraulic system and the viscstatic fan.

As a result of an evolution in working requirements, the new series of Spark models also introduces improved use of the space available under the engine hood, without affecting cab visibility or complicating routine maintenance operations in any way.



Transmission (Powershift) versions

The Lamborghini Spark 120-140 transmission is available in a various different configurations, designed to meet the needs of a wide range of working conditions and requirements. The basic configuration features 5 synchromesh mechanical gears and two ranges with shuttle, each with three Powershift ratios with a proportional engaging solenoid valve for a total of 30 + 30 gears. By installing the (optional) super-creeper gear it is possible to double the available ratios, increasing the number of gears from 30 to 60 (forward and reverse), but above all it is possible to work with the engine at full throttle at just



The advanced continuously variable transmission available on the VRT models is based on the "power split" principle, whereby the power available at the engine shaft is split into two components : the majority of the power is transmitted to the wheels via the mechanical section, while the remaining power "passes" through the hydraulic system; the purpose of this is to modulate the vehicle speed in continuous mode, from stand-still up to the maximum velocity, in either direction.

The mechanical part of the transmission is based on planetary gears and multi-disc, oil bath clutches, whereas the hydrostatic unit uses a Load Sensing pump to activate a hydraulic motor. Modulating the hydraulic flow rate results in a corresponding continuous, smooth variation in the tractor speed, eliminating the noticeable "jerking" effect produced when changing gears using a traditional transmission system. The system is completed by an electro-hydraulic power shuttle and a sophisticated electronic control unit, which dialogues continuously with the corresponding unit on the engine so as to identify and implement the most efficient engine/transmission operating combination in response to variations in the working conditions.

The control software features 3 different operating modes:

1. Manual: when the operator presses the drive pedal (which, in this case, varies the engine

Transmission (VRT versions)

134 metres/hour. In any event, it is possible to reach speeds of 40 km/h at low engine speeds, with obvious benefits in terms of fuel consumption and operator comfort.

Thanks to the APS (Automatic Powershift) and SpeedMatching, the appropriate ratio for the current ground speed is selected automatically in Powershift, while the proportional valves render gear shifting extremely smooth, for increased comfort in every working condition.

The standard version also features the electro-hydraulic shuttle that can

be engaged under load, with a dual multi-plate oil bath "Long Life" clutch, in addition to the SenseClutch and Stop&Go functions and the handy ComfortClutch push-button, which can be used to shift between the 5 basic gears without having to operate the clutch pedal.

The PowerShuttle response when changing direction can be set to 5 different levels; this function is particularly useful when using the front loader, since the "soft" setting eliminates the risk of sudden jolts when reversing direction, thus improving

safety.

The ASM function locks and unlocks the differentials and engages and disengages the front wheel drive automatically; by installing the (optional) radar system it is possible to monitor and control slippage in real time, which is particularly important when traction is a priority.

The versatility of the Spark 120-140 range is further enhanced by the special new watertight sealing gaskets that guarantee complete reliability even when working in flooded rice fields.



speed) and the multifunction joystick (varying the ground speed) the VRT versions behave substantially like a tractor with a manual gear shift, but with the smooth gear changes typical of CVT transmission systems, with an "infinite" number of ratios,

2. PTO: in addition to manual activation, this operating mode is also activated automatically when the power take off is engaged in order to maintain the engine speed constant even in the case of variations in the ground speed

3. Automatic: This is the recommended mode for traction applications in the field and transporting. When the operator presses the drive pedal, the tractor accelerates until it reaches the pre-set ground speed, thereafter the control unit modulates the engine speed in response to variations in the requested load so as to maintain the ground speed constant at

this value.

The VRT versions have the additional advantage of being able to work at very low speeds, without the necessity of a creeper gear. The VRT versions are also equipped with a series of standard automatic systems designed to increase safety, such as active slippage control when releasing the drive pedal to stop the vehicle, which is particularly useful in guaranteeing the stability of the tractor/operator pairing when transporting heavy loads over sloping ground.

The VRT models offer unparalleled levels of comfort: in the majority of cases the smooth, gradual movements of the joystick replace the need to operate the clutch, gear shift, drive pedal and the brakes. In addition, functions such as automatic front wheel drive engagement and differential locking, which have become consolidated features of this range of tractors, contribute to increasing productivity even further.

The maximum in productivity and comfort.

Hydraulics

The Lamborghini Spark 120-140 hydraulic systems have been designed for maximum configurability and versatility. The solutions range from an open centre system with a 90 l/min pump that supplies 8 mechanical control rear couplings, to a high-efficiency, closed centre version with a 120 l/min Load Sensing pump that can be used to supply up to 10 couplings, this version features an alternative



PTO

Further evidence of the extreme versatility of the Lamborghini Spark 120-140 range is the availability of the 4 typical PTO speeds (3 speeds in the case of the VRT versions), complete with electro-hydraulically modulated engagement of the multi-plate oil bath clutch for all configurations. The optional gear shift synchronised PTO may be fitted upon request on an independent output shaft.

The Auto PTO function, which automatically engages and disengages the PTO in relation to the position of the implement hitched to the 3-point linkage, is available as standard. Additional options include the highly useful interchangeable splined spigot and the front PTO, which may be installed together with a powerful new front hitch, capable of lifting up to 2880 kg.

Axles and brakes

For total safety in all working conditions, in addition to the HPB (Hydraulic Parking Brake), Lamborghini 120-140 tractors are also equipped as standard with an all-wheel braking system with wet multiple disc brakes on all four wheels and automatic engagement of the front wheel drive during the braking phase.

The Powerbrake servo brake, also fitted as standard, minimises brake pedal effort while ensuring a powerful, controllable response at all times. Safety levels are further enhanced by the Powerbrake, which guarantees up to 10 emergency braking manoeuvres even when the engine is switched off.

The gap between the rear brake pads and discs is self-regulating, thereby optimising response times while



mechanical/electronic control system as well as a timed flow function and the availability of a "Power Beyond" socket.

In addition, Spark 120-140 models are also fitted with the HPB (Hydraulic Parking Brake) as standard; this hydraulic parking brake may be used to increase the pressure exerted on the rear brake discs, immobilising the vehicle even on the steepest slopes This

safe, efficient braking system also reduces power consumption (with respect to a traditional parking brake).

The optional features include the SDD device, which may be used to double the steering capacity of the steering wheel at low ground speeds, speeding up manoeuvres on headland and rendering them less laborious.

The rear hitch comes as standard

with electronic control and an anti-dumping function, which damps oscillations generated by the carried implements. The maximum lifting capacity is 5000 kg, however this may be increased to 7000 kg by fitting the optional supplementary cylinders (standard on Spark 140 models).



reducing wear and preventing the transmission oil from overheating, prolonging the efficient service life of the braking system.

Spark 120-140 may also be fitted, upon request, with various types of braking lines for trailers: hydraulic, pneumatic or both at the same time. The new range of options now includes the hydraulic version that is fully compliant with recent European safety directives.

The SDF front axles include electro-hydraulic engagement of integral differential locking as standard (may be managed automatically by the ASM); increased comfort and a further guarantee of safety under road transport conditions are provided by the optional electronically controlled, hydro-pneumatic axle suspension systems.

Cab

The new layout of the Spark 120-140 driver's position has been designed to render the machine extremely simple to operate, guarantee total visibility and, above all, provide a high level of comfort;

although this is nothing new, since Lamborghini strives to guarantee that all its tractors offer these features.

The new InfoCentre^{Pro} instrument panel includes a central 5" TFT colour terminal, which can be used to display a wide range of customisable information.

The operator environment may also be customised thanks to the availability of a wide variety of hydraulic controls and window options. To simplify the use of all this technology, the standard colour logic is also implemented on the Spark 120-140 models, enabling operators to identify, easily and unequivocally, the various controls, which have been positioned around the driver's seat in such a way that they may be operated ergonomically and that they reflect the frequency of use of the corresponding functions.

Total comfort is guaranteed by the seat, featuring an air suspension system, the mechanical or pneumatic (optional) cab suspension systems, the 'iMonitor, and the machine operating functions display and control unit. In addition to the Agrosky satellite guidance system, Spark 120-140 models may also be fitted with up to 2 optional external vision cameras, while, in order to be able to use the very latest tools and appliances without having to install additional control devices, the vehicles are also available with the ISOBUS communication protocol.

TECHNICAL DATA		SPARK					
		120	130	140	120 VRT	130 VRT	140 VRT
ENGINE		FARMotion	FARMotion	FARMotion	FARMotion	FARMotion	FARMotion
Emissions compliance		Stage IV	Stage IV	Stage IV	Stage IV	Stage IV	Stage IV
Exhaust gas after-treatment system	Type	SCR	SCR	SCR	SCR	SCR	SCR
Cylinders/Capacity	n°/cm³	4/3849	4/3849	4/3849	4/3849	4/3849	4/3849
Bore/Stroke	mm	103/115.5	103/115.5	103/115.5	103/115.5	103/115.5	103/115.5
Turbo intercooler	Type	•	•	•	•	•	•
Common Rail Injection @ 2000 bar	Type	•	•	•	•	•	•
Maximum power @ 2000 rpm	kW/hp	85/116	93/126	100/136	85/116	93/126	100/136
Nominal power @ 2200 rpm	kW/hp	80.6/110	88.2/120	94.9/129	80.6/110	88/120	94/129
Max. torque @ 1600 rpm	Nm	462	506	544	462	506	544
Torque backup	%	32%	30%	28%	32%	30%	28%
Viscostatic fan		•	•	-	•	•	-
Electronic viscostatic fan		o	o	•	o	o	•
Hydraulic Engine Braking (HEB)		o	o	o	o	o	o
Diesel fuel tank	L	185	185	185	185	185	185
AdBlue tank	L	12	12	12	12	12	12
TRANSMISSION							
Type		Mechanical with 3 Powershift 3 stages			VRT - continuous variation		
RANGES	No.	2 / 4 (with mini and super-creeper gears)			2 (Field / Transport) with electronic control		
5 speed gearbox		•	•	•	-	-	-
Number of speeds		30+30	30+30	30+30	-	-	-
Number of speeds with mini and supercreeper gear	No.	60+60	60+60	60+60	-	-	-
Max. speed	km/h	40 (at economy engine speed) / 50			40 (at economy engine speed) / 50		
SenseClutch hydraulic reverse shuttle		•	•	•	•	•	•
HPB parking brake		•	•	•	•	•	•
Four wheel drive electrohydraulically engaged		•	•	•	•	•	•
Electro-hydraulically engaged differential locking		•	•	•	•	•	•
ASM system		-	•	•	•	•	•
Suspended front axle		o	o	o	o	o	o
REAR PTO540/1000		•	•	•	-	-	-
Rear PTO 540/540ECO/1000		-	-	-	•	•	•
Rear PTO 540/540ECO/1000/1000ECO		o	o	o	-	-	-
Ground speed PTO with independent spigot.		o	o	o	o	o	o
Front PTO speed (optional)		1000	1000	1000	1000	1000	1000
HYDRAULICS							
90 l/min hydraulic system (open centre)	l/min	•	•	•	•	•	•
120 l/min hydraulic system (Load Sensing)	l/min	o	o	o	o	o	o
Mechanically controlled rear distributors	No.	3/4	3/4	3/4	3/4	3/4	3/4
Electronically controlled rear distributors	No.	4/5	4/5	4/5	4/5	4/5	4/5
Electronically controlled front distributors	No.	1	1	1	1	1	1
Electronic rear hitch		•	•	•	•	•	•
Rear hitch capacity	kg	5000	5000	-	5000	5000	-
Rear hitch lifting capacity with supplementary lifting cylinders	kg	7000	7000	7000	7000	7000	7000
Rear 3-point linkage category		II or III N	II or III N	II or III N	II or III N	II or III N	II or III N
Front hitch (optional)	kg	2880	2880	2880	2880	2880	2880
Trailer brake		Hydraulic (◐) / Pneumatic (◑) / Hydraulic + Pneumatic (◒)					
CAB							
Cab suspension		Hydro Silent-Block (●) / Mechanical (◐) / Pneumatic (◑)					
InfoCentre ^{Pro} with 5" colour display		•	•	•	•	•	•
8" iMonitor touch screen		o	o	o	o	o	o
Mechanical/air suspension driver's seat		●/o	●/o	●/o	●/o	●/o	●/o
Passenger seat		o	o	o	o	o	o
Manual A/C		o	o	o	o	o	o
Automatic A/C		o	o	o	o	o	o
High-visibility roof		o	o	o	o	o	o
FOPS roof protection		o	o	o	o	o	o
LED work lights		o	o	o	o	o	o
SDD		o	o	o	o	o	o
DIMENSIONS AND WEIGHTS							
Wheelbase	mm	2540	2550	2550	2540	2550	2550
Length	mm	4428	4428	4428	4428	4428	4428
Width (min./max.)	mm	2063-2727	2147-2727	2147-2727	2063-2727	2147-2727	2147-2727
Height (centre of rear axle - roof)	mm	2025	2025	2025	2025	2025	2025
Weight	kg	5300	5600	5600	5500	5800	5800
Maximum permissible load	kg	8000	9000	9000	8000	9000	9000

STD • OPT ◐ Not available -

DEALER

www.lamborghini-tractors.com

Lamborghini Trattori is a brand of SDF

