

# ZETOR FORTERRA

FORTERRA CL / HSX / HD



Tractor is Zetor. Since 1946.

*Zetor*

# ZETOR FORTERRA

## INEXHAUSTIBLE POWER

### FORTERRA CL

The ZETOR FORTERRA CL model has a four-cylinder engine with an output up to 136 HP. Construction of FORTERRA tractors has been adapted accordingly – to be robust, heavyweight tractors. Thanks to excellent torque parameters, FORTERRA CL is valued as powerful machines at a reasonable price at and unbeatable operating cost.

### FORTERRA HSX

FORTERRA HSX is equipped with technology providing higher comfort during your daily work: the 40 ECO transmission, Power-Shuttle, five-speed gearbox with three-stage multiplier, increased rear linkage capacity, HitchTronic threepoint hitch controls, suspended front axle and cab, and much more.

### FORTERRA HD

The best equipped tractor in the ZETOR model range. Reinforced axle drive, larger rear axle, an extended wheelbase for greater stability, with a suspended front axle and cab, righthand panel with electronic control, larger fuel tank etc. This combination makes FORTERRA HD a strong partner for high productivity.



#### **PERFORMANCE**

FORTERRA tractors are one of the most powerful machines in the ZETOR portfolio. The tractors are equipped with ZETOR engines, which are designed for maximum performance under all conditions.

#### **ENDURANCE**

Great emphasis is put on simple, smart and effective design of FORTERRA models. Our tractors have a simple design for simple maintenance and serviceability.

#### **TOTAL COST OF OWNERSHIP**

Low fuel consumption and affordable spare parts make the FORTERRA tractors one of the most economical on the market.





## NEW IN 2020 MODELS



1. Upgraded plastic technology ensures higher temperature resistance and UV stability of the material.



2. Better heat dissipation from the engine part of the tractor.



3. The use of new headlights allows illumination of a larger work area and offers higher luminosity.



4. Indented shape of the roof and newly shaped sunroof ensures better view on the front loader. FOPS (Falling Object Protective Structures) protection is fitted as a standard.



5. Completely new air conditioning and heating system offers a significant improvement in performance.



6. Safety is ensured by the wet brake system on all wheels complemented with power brakes.

# ENGINE

## PROVEN BY GENERATIONS OF USERS

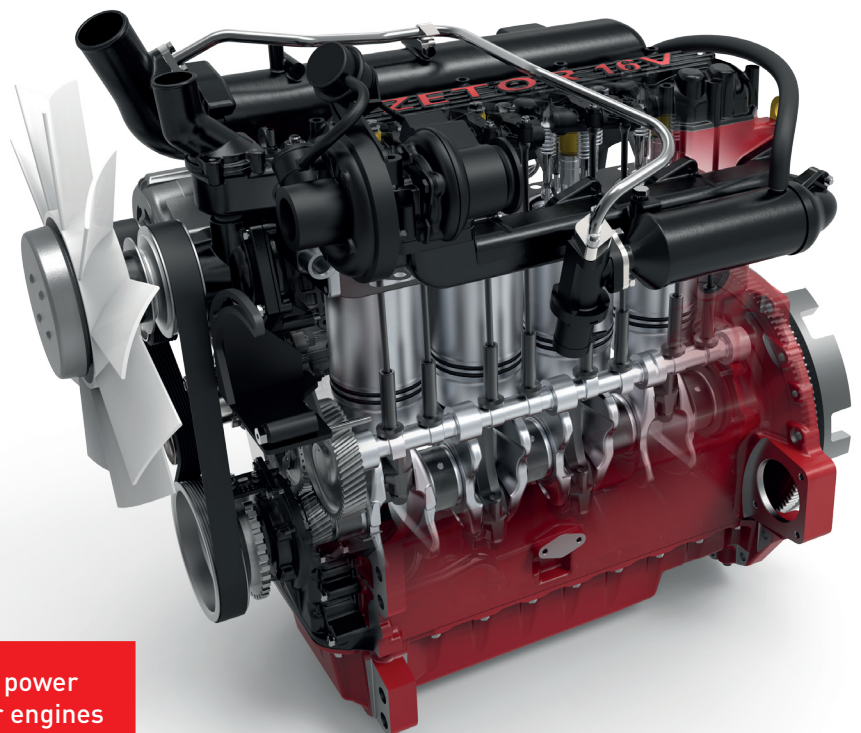
The exceptional popularity of ZETOR tractors is based on low fuel consumption, high reliability and simple design – these reward the customer not only with low operating costs but also great reliability, and low maintenance and service requirements.

Tractors with ZETOR engines therefore rank among the most economical in the market.

- In-house development and manufacture guaranteed precise workmanship using quality materials
- Mechanical pump injection reliable and trouble-free operation, long-life
- Two balance shafts reduce vibrations and make the engine run more smoothly
- Environmental friendly operation - FORTERRA series use SCR and DPF system in order to meet the most stringent emission limits (Stage V)

## LOW CONSUMPTION LEADER

New engine generation brings a further consumption and emission reduction. ZETOR tractors equipped with the new engines meeting the Stage V emission standard were tested by scientists from Mendel University, Brno, Czech Republic. The study results confirmed that fuel consumption of the new engines is up to 19.2 % lower than the previous engine generation.



ZETOR tractors do not use power boost, i.e. power available only under certain conditions. Zetor engines have full power available regardless of what speed the tractor is travelling or whether the PTO has been engaged.



# TRANSMISSION

## PERFECT SYNCHRONIZATION OF POWER AND ACCURACY

Gearboxes for the FORTERRA range are developed and manufactured directly by ZETOR. Own production allows the company to control the quality, design and wide variability of options offered. High endurance and long life is achieved by using high quality materials.

### FORTERRA CL

The classic, four-speed, fully synchronized gearbox in FORTERRA tractors, supplemented with two speed ranges and a three-stage multiplier (24/18). Gears are suitably spaced with seven speeds available within the operating range from 6–12 km/h.

### FORTERRA HSX / HD

A five-speed gearbox with two driving speed ranges, a three-stage multiplier and a reverser under load (30/30, can be used to speed 10 km/h) satisfies the demands of users requiring a higher level of comfort. Wet disc clutches give reliable and smooth reversing.



Transmission with ECO regime allows to reach maximum traveling speed (40 km/h) at reduced engine rpm (around 1800 rpm). This optimization helps to reduce fuel consumption by approximately 15–20 %, reduce engine wear and noise. There are 13 gears within the operating range from 6–12 km/h.

- In-house production control and enforcement of high quality standards
- High-quality and durable materials ensure long service life
- Variability
- Independent PTO as standard

### PTO

The rear PTO speed is completely independent of the travelling speed, and solely depends on the engine rpm. The tractor has the following rear PTO speed combinations: 540 / 540E / 1,000 / 1,000E. Tractor can be optionally equipped with ground speed 540/1,000.

### INNOVATED PTO CLUTCH

The wet plate clutch in an oil bath provides long service life. Modulated switching ensures that attached implements start up smoothly.

### FORTERRA HD

The rear PTO clutch has feedback controlled starting that ensures easy, comfortable and a longer life for the clutch.



### PowerShift

Three-stage torque multiplier



### PowerClutch

Clutch button



### PowerShuttle

Electro-hydraulic reverser

# HYDRAULICS

## HIGH EFFICIENCY OF WORK

ZETOR was the first to offer the **HitchTronic** function – a subsequent winner of many awards.

FORTERRA is equipped with EHR (Bosch electrohydraulics) with **HitchTronic** function. Two auxiliary hydraulic cylinders ensure unified three-point hitch loading and above average lifting capacity. Up to 77 kN for FORTERRA CL and up to 85 kN for FORTERRA HSX and FORTERRA HD. FORTERRA HD offers four auxiliary hydraulic quick couplers with electro-hydraulic control. In combination with Category III hitches, you can enjoy a wide selection of usable implements.

## HEADLAND TURNING SEQUENCES

FORTERRA HD is equipped with the possibility of combinations of automatic operation of the front driving axle 4WD, differential locks and the rear PTO – depending on the combination of travel speed, wheel turning angle and rear three-point hitch position. This significantly increases comfort during field work; to increase pulling force it is not necessary to manually switch on and again switch off at headlands to improve manoeuvrability.

## HITCHTRONIC

When using system, there is no need to set up types of regulation or combinations. Only the implement working depth is set. When the implement attached to the rear three-point hitch reaches the set depth, the control system measures the soil resistance, and this value is used as the initial value for automatic hitch control.

- Option to use heavy implements
- Maximum lifting capacity is 77 kN for FORTERRA CL and 85 kN for FORTERRA HSX/HD
- High productivity thanks to HitchTronic automatic control of three-point hitch





# CAB

## COMFORT AND ERGONOMICS

Comfort and user-friendly, ergonomic design – these are the main features of FORTERRA cabs. Every control feature has been designed with the respect to highest ergonomics, tractor operation and to increase maximum utility and comfort in all terrains and environments. The tractor can be equipped with the mechanically or air suspended swivel seat that guarantees driver comfort. FORTERRA HD is equipped with the ergonomic, multifunctional panel with various controls. Thanks to their position on the right, the driver has everything at hand, from hydraulics control to automatic headland turning.

Very good view from comfort and spacious cab.



Completely new dashboard with color display improves clarity and awareness of information given to the driver. All important data are placed in one place.



The tractor is equipped with a new controller for controlling work lights and beacons. It offers a number of advanced functions such as automatic activation of work lights according to the selected driving direction or a memory function.



All FORTERRA models can be optionally equipped with cab suspension system to maximize operator's comfort.



The front driven axle of the FORTERRA HSX and HD models can be optionally suspended. In combination with the suspended cab, this offers a smooth and comfortable drive.

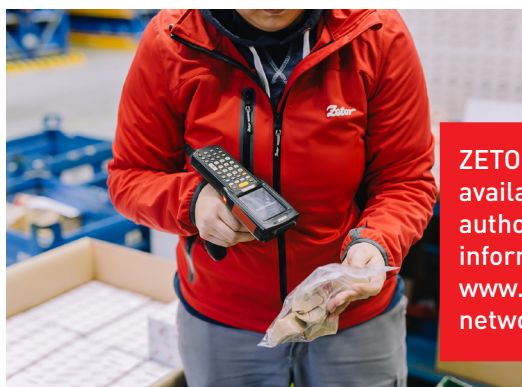


# ZETOR ORIGINAL SPARE PARTS

ZETOR TRACTORS a.s. secures the world-wide sale of original ZETOR spare parts for the warranty and post-warranty service of ZETOR tractors through its distribution network. The quality of spare parts is continually checked during production and is identical to the quality of the parts used in the assembly of new products.

The original parts include all improvements and innovations ensuring the full restoration of the operational and utility characteristics of the repaired machine. The authenticity of the supplied spare parts is secured by packing in original packing with a unique identification number.

- ZETOR spare parts attain high quality for reasonable prices.
- In order to maintain the high lifetime of the tractor, we recommend using only original ZETOR spare parts.



ZETOR original spare parts are available only through ZETOR authorised dealers. For more information, visit [www.zetor.com/sales-and-service-network](http://www.zetor.com/sales-and-service-network)

# ZETOR ORIGINAL OILS

For ZETOR tractors we recommend original oils, which are identical to the oils the tractors are filled with from the factory.

ZETOR Oils may be purchased through our sales and service network.

- Engine oils
- Transmission oils
- Front axle oil
- Hydraulic oil

Extend the lifetime of your tractor by using ZETOR original oils.





# DEVELOPED AND MANUFACTURATED IN THE HEART OF EUROPE

MORE THAN ONE MILLION  
CUSTOMERS CANNOT BE  
WRONG

## PRODUCTION

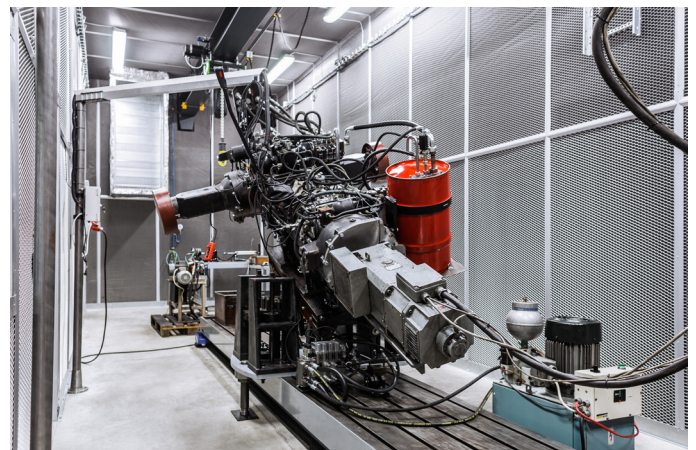
The manufacturing base of ZETOR tractors, engines and transmission is concentrated in the Czech Republic. The background of our own development and manufacturing centre contributes to the ultimate quality of the offered products and enables the effective management of innovation development and application. ZETOR TRACTORS a.s. is a corporately responsible company that emphasises the quality of its products, ecology and protection of the environment. These principles are guaranteed by the ISO 9001 quality certificate, which the company has acquired.



Since the beginning of the production of ZETOR brand tractors in 1946, more than 1.3 million units have been made, with the majority of these units being exported to over 130 countries around the world.

## DEVELOPMENT

The technical section forms the long-term and stable research, development and testing background of ZETOR TRACTORS a.s. It represents the high professional level of the research staff team, which uses their extensive knowledge base and experience in the field, supported by cutting-edge technologies. It secures the comprehensive and systematic research and development of the manufacturing programme – from concept, design, assembly, and the production of functional samples and prototypes all the way to lab tests and operation tests of the tractors and engines.



		FORTERRA CL					FORTERRA HSX			FORTERRA HD		
MODEL	UNITS	100	110	120	130	140	120	130	140	130	140	150
ENGINE												
Type	•	Stage V										
Max. / Rated power (ECE R120)	kW	70.4	78.4	86.2	93.2	100.2	86.2	93.2	100.2	93.2	100.2	108.2
	HP	95.7	106.6	117.2	126.7	136.2	117.2	126.7	136.2	126.7	136.2	147.1
Rated Speed	rpm	2200										
No. of Cylinders/Valves	•	4 / 16										
Aspiration	•	Turbocharged										
Displacement	cm³	4,156										
Bore / Stroke	mm	105 / 120										
Max. Torque	Nm	420.0	471.5	507.3	557.6	606.6	507.3	557.6	606.6	557.6	606.6	607.1
Torque Rise	%	42	43	40	42	43	40	42	43	42	43	32
TRANSMISSION												
Type	•	Reversing 4-stage with 2 ranges and automatic 3-stage multiplier					Reversing 5-stage with 2 ranges and automatic 3-stage multiplier					
Number of Gears (F/R)	•	24/18					30/30					
Shifting	•	Synchronized										
Reverser	•	Mechanical (SynchroShuttle)					Eleetrohydraulic (PowerShuttle)					
Mutiplier	•	3-stage PowerShift										
Clutch Button	•	–					Clutch button located on the shift lever (PowerClutch)					
Max. Speed	km/h	40					ECO 40					
PTO												
Type	•	Multi-plate PTO clutch										
Rear PTO Revolutions	rpm	Independent (540/540E/1,000/1,000E) / Independent & ground speed (540/1,000)										
Front PTO Revolutions <sup>OPT</sup>	rpm	1000										
Max. Power of Front PTO <sup>OPT</sup>	kW	60									90	
HYDRAULICS												
Gear Pump Capacity	l/min	70									85	
Hydraulic remotes (Quickcouplers)	•	6+1									8+1	
External hydraulic circuits control	•	Mechanically controlled									Electrohydraulically controlled sections [flow & timing]	
THREE-POINT HITCH												
Type	•	Bosch electro-hydraulics with HitchTronic, 2 auxiliary cylinders										
Three-Point Hitch	•	Category II / Category III N <sup>OPT</sup>									Category III	
Max. Lifting Capacity	kN	77					85					
Lifting Capacity in full range	kN	69					75					
Operating Pressure	MPa	20										



		FORTERRA CL					FORTERRA HSX			FORTERRA HD			
MODEL	UNITS	100	110	120	130	140	120	130	140	130	140	150	
CAB													
Cab suspension	•	OPT								Standard			
Driver’s Seat	•	Mechanical suspended / Pneumatically suspended								Pneumatically suspended			
Passenger Seat	•	Standard (with safety belt)											
Heating / Air-Conditioning	•	Standard / OPT								Standard / Standard			
Heated Mirrors and Rear Defroster	•	Standard											
Roof	•	Sunroof with FOPS protection											
Pre-Wiring for radio / radio	•	Standard / OPT											
Steering Wheel	•	Titable and telescopic											
UNDERCARRIAGE													
Drive System	•	4WD											
Front driven axle	•	Solid					Solid / Suspended <sup>OPT</sup>			Suspended			
Steering	•	Hydrostatic											
Operating brakes	•	Independent hydraulic wet four wheel brakes								Pneumatically controlled wet rear brakes, hydraulically controlled wet front brakes			
Trailer brakes <sup>OPT</sup>	•	Pneumatic 2+1 hoses / Hydraulic and pneumatic 2+0 hoses											
Fuel tank	l	230					270						
Urea tank	l	28											
Front Mudguards	•	Fixed / Pivoting <sup>OPT</sup>								Pivoting			
OTHER SPECIFICATIONS													
Operating Weight <sup>1</sup>	kg	4300-5200					4300-5310			4980-5700			
Max. Front Ballast	kg	800								900			
Max. Rear Wheel Ballast	kg	472											
Max. Total Weight	kg	8000					9000			10000			
Length min. - max.*	mm	3980 - 5016					3980 - 5116			4115 - 5275			
Width min. - max.**	mm	2200 - 2383								2177 - 2496			
Height min. - max.	mm	2915 - 2943								3008 - 3053			
Wheelbase	mm	2490					2590			2720			





Other optional equipment: Front PTO, front 3PH with front hydraulic remotes, radio, LED working lights, beacons, wheels. <sup>OPT</sup> Optional <sup>1</sup> Without front and rear ballast  
 \* Max length with 3PH and front ballast \*\* Max width without mirrors



My family.  
My work.  
My Zetor.



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