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Specifications and designs are subject to change without prior notice.

Machines shown may include optional parts.

The above parameters are subject to change without notice, the illustrations in text is not always the type of standard models.

TB SERIES TRACTOR (35-70HP)

TB series multi-functional tractor will bring you new working experience that is comfortable, highly efficient, multi-functional and with multiple configuration options.

LOVOL

AGRICULTURE



LOVOL OVERVIEW

Lovol Heavy Industry Co, Ltd. is an international multi-business group primarily specializing in agricultural equipment, construction

machinery, vehicles, financial services and other businesses. The company now has a total asset of 2.5 billion dollars with 15,000 employees in and beyond China. In 2015, the sales revenue has reached 5 billion dollars.



LOVOL BRAND

In 2018, the brand value of LOVOL is evaluated to be RMB 58.195 billion.

LOVOL PRODUCT

As one of the fastest growing brands in China, Lovol is available to provide customers with a full range of products, including tractors, combine-harvester, tractor implements, etc.

LOVOL R&D

Located in Bologna, Italy, Lovol European R&D Center boasts a team of more than 200 experts, focusing on the development of power shifting platform tractors and large grain harvesters. Lovol Japan R&D Center is responsible for the research of construction machinery and hydraulic electric control technology. Equipped with Body Power Center, Transmission Capacity Center and Hydraulic Electric Control Center, Lovol Weifang Institute of Technology is mainly engaged in mechanical shifting platforms and harvest machinery; Lovol Zhucheng Technical Center is responsible for the development of agricultural implements and municipal equipment attachments.

LOVOL FACTORIES

Lovol has two major agricultural equipment production bases, one in Italy and one in Weifang, China, and 12 industrial parks, including Arbos (Europe) Factory, MaterMacc Factory, Goldoni Factory in Europe; Arbos (China) Factory and Lovol Heavy Equipment in Weifang, Shandong; Five-star Vehicle Factory, Five-star Car Factory and Arbos Agricultural Equipment and Implements Factory in Zhucheng, Shandong; Construction Machinery Factory in Qingdao; Axle Case Factory in Linyi, Shandong; Engine Plant in Tianjin; and Beidahuang Factory in Harbin, Heilongjiang.

LOVOL NETWORK

Lovol now has developed more than 300 distributors in 120 countries and regions, forming five-in-one global operating network integrating sales, after-sales service, spare parts supply, customer training and information feedback.



MULTI-FUNCTIONAL TRACTOR

Based on Lovol's sense of responsibility and your trust, we will recommend you a good assistant with luxury appearance and outstanding connotation.

What new experience will TB series tractor bring you? To be brief, it looks like a multi-functional infantry vehicle with a luxury appearance, which can be used in yard work, snow removal, mowing, gardening, lawn sowing, fence building and livestock farm work, and even in field and paddy field operations requiring large horsepower output. The functions of G3 TB series tractor will be perfectly displayed here. Being perfectly integrated with a high-torque four-cylinder engine, it is more efficient and fuel-saving. It is also equipped with a stronger chassis and synchronizer gearbox, so its operation smoothness, durability and reliability are higher.

Luxury and comfortable G3 model

G3 model of Lovol TB series tractor is a new product with the spare parts design of the complete tractor re-optimized by Lovol's European Technical Team on the basis of the original TB series tractor. With a brand new cab structure, air conditioner + sunroof window, first-class tightness + manipulation space, interior trim, luxury adjustable seat, adjustable steering wheel, brand new hood assembly, and streamline LED headlamp + rear lamp, the whole cab looks more fashionable and energetic, with its safety improved.



You can choose the paddy field, dry field, grassland and engineering tires according to the working conditions.



G3 model of TB series tractor

Handle is properly positioned and easily controlled, allowing safer and more comfortable operation



With the latest overall structure, being fashionable and energetic, the floor and framework integrated cab possesses excellent load carrying capacity, safety and tightness. The hood is wide in the front and narrow in the rear, from which the front wheel is clearly visible.

Optimized ergonomic design, reasonable control distribution and color division, as well as right-side manipulation; suspended accelerator and clutch pedal; manual accelerator and shuttle shift mechanism below the steering wheel; and steering gear can be adjusted back and forth.

The air inlet and outlet pipes are concealed behind the A-pillar of cab, providing you with better vision.

The larger oil tank will provide you with a longer operation time.

LED daytime running lamp, as well as convex mirror headlamp of which the high and low beams are separated, are provided with chrome-plated decorative lamp frame, being beautiful and high in grade. U-shaped wide-vision LED lamps and LED brake lamps are used as rear lamps, in streamline sector shape.

A standard tractor is equipped with the waterproof connector, highly-reliable fuse and heat-resisting engine line, making the electrical apparatus safer and more reliable.



Simple and fashionable G2 model of TB series

TB series tractor is in different body designs, so customers can choose the appearance they like.

The arc design concept satisfying ergonomic requirements is adopted for G2 sunroof-type and cab-type tractor, and such devices as air conditioner and heater are provided, offering you a larger, safer and more comfortable driving environment.

The cab and safety frame have passed the OECD certification.

TB damping flat floor tractor, with the safety frame and cab being optional;

TB non-damping tractor (non-flat floor), with only the safety frame being optional;



You can choose the paddy field, dry field, grassland and engineering tires according to the working conditions.



Simple and comfortable operation environment

Comfortable manipulation design

The width of space on both sides of the cab seat reaches 125cm, and the distance from the back of seat to the (edge of) steering wheel is 85cm, providing you with a large driving space and satisfying the ergonomic requirements.

You can choose the comfortable seat for TB series tractor, as well as the air conditioner cab with multimedia audio system and shade. The cab is designed in a 360° full-view glass structure, and the exhaust pipe is concealed behind the A-pillar, with the vision and driving comfort greatly improved.

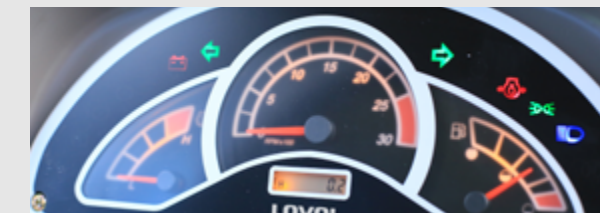
The cab is accessible from both the left and right sides, and the three-point supporting type access design conforming to the EU standard is adopted, with a pedal width of 30cm.

Above all, suspended pedals are used for the clutch, brake and accelerator of TB series tractor, which greatly reduces the driver's pedaling force required in frequent gear shifts, improves the comfort in manipulation, and reduces your fatigue.

The main control handles are arranged in restricted space, which are compact in structure but not interferential with each other, and the control handles are arranged according to the manipulation practice and operating requirements.

The control handles for the main and auxiliary gearboxes are located on the right side, and the handles for the lifter and hydraulic output are integrated on the right side too, bringing you better driving experience.

The arrangement of instruments is more proper, which is convenient for you to see the status of the tractor. In addition, the shuttle shift mechanism and manual accelerator are integrated on the dashboard, with reasonable ergonomic design and convenient manipulation.



Standard four-cylinder engine

High-torque naturally aspirated engine provides you with reliable and strong power.

If you choose Lovol TB series tractor, you will have a good assistant never feeling tired, and you can blithely cultivate in the fields, shuttle back and forth in the gardens and orchards, and feel funny in your work.

The new 4-cylinder in-line diesel engine is used for TB series tractor, which has a power range of 35-70hp; the ultralow fuel consumption (less than 245g/kwh) and extra-large torque output (155-245n.m) will make your work more efficient and energy-saving.

In addition, it has passed the EPA and Euro III Emission Standards certification.

High torque reserve

The torque reserve of engine is up to 25%, so it can provide you with enough torque in the traction operation; help you to overcome the resistance produced in the tillage so that you do not need to frequently shift gears; and make your work more efficient.

Sophisticated technology and process

As sophisticated technology and manufacturing process, as well as excellent accessories, are used for the two engines, they are not only stable and reliable, but also convenient for maintenance and repair, and you can work without worrying about anything.

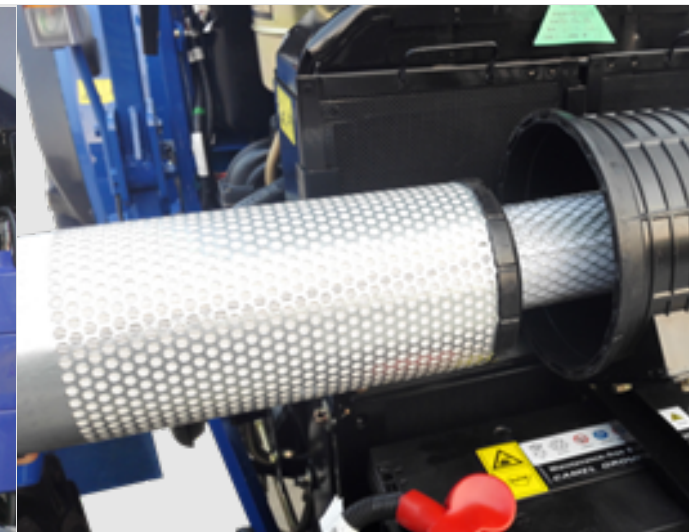
Enhanced cylinder

The cylinder is enhanced and connected with the gearbox, when they are to bear the weight of the complete tractor, the high-strength and high-rigidness cylinder will help you to calmly handle the heavy operations or bad ground working conditions. In case of heavy field operations, the high-strength cylinder will minimize the impact of such operations on the chassis, and help you to save maintenance costs.



More efficient two-stage dry air filter, and maintenance-free storage battery

Effectively improving the engine efficiency and saving maintenance costs



TB series tractor is equipped with the two-stage dry air filter, which is high in filtering efficiency and easy to maintain. In such case, the reliability and fuel efficiency of tractor are improved, and the maintenance time and cost are saved. The engine can be started, ensuring the safety of starting the tractor.

High fuel efficiency

Direct injection technology is adopted in cylinder to realize full combustion. The engine does more work with unit fuel consumption.

Equipped with preheating start-up device, the engine can be successfully started at -15°C in winter.

The filter is in a two-stage form, and the primary main filter element is arranged outside, which has an original filtration efficiency of 99.7%*. The safety filter element is arranged inside, which not only can act as a safety filter in the same grade, but also can prevent the dust from entering the engine accidentally when the main filter element is changed.

In addition, the radial sealing design in the filter can prevent the invasion of dust through the gap between structures under pressure.

You should clean or replace the filter element at the maintenance interval specified in the Operation Manual. Pressure sensor and alarm light are available on the air inlet at the back of the filter, which can timely remind the user who has not cleaned the filter element in time. The whole maintenance process is easy and simple, and no tool is needed.

Being maintenance-free, no electrolyte is required for the storage battery, which guarantees its high reliability and long service life, and saves the maintenance costs.

Smooth and convenient gearbox

Synchronizer and shuttle shift mechanism are optional
8+8 shuttle shift

8+8 gearbox consists of 3 gear levers. The main gear lever A can reach 4 gears (1, 2, 3 and 4), auxiliary gear lever B can reach 2 speed zones (L represents the low-speed zone, and H represents the high-speed zone), and shuttle shift gear lever C can reach the forward and reverse gears.

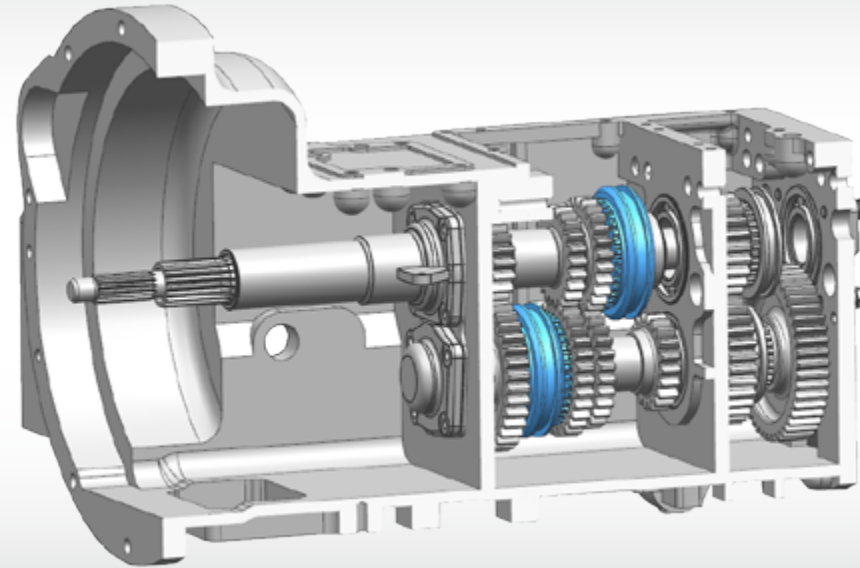
Shuttle shift gear lever C is located on the right side of floor. If you push the gear lever C forward from the neutral position, forward gear is reached; and if you push it backward, reverse gear is reached.

12+12 gearbox

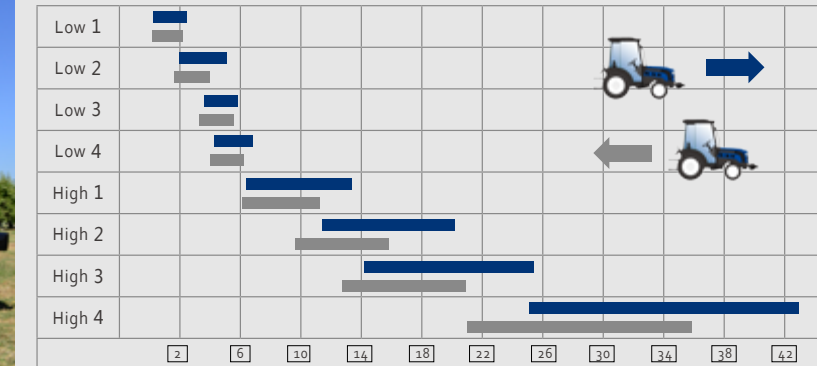
12+12 gearbox consists of 3 gear levers. The main gear lever A can reach 4 gears (1, 2, 3 and 4), auxiliary gear lever B can reach 2 forward speed zones (1, 2 and 3), and shuttle shift gear lever C can reach the forward and reverse gears.

Proper speed distribution

Proper working speed selection can not only deliver maximum productivity and economic efficiency, but also extend the service life of tractors. Tractors shall not always be operated at overload, so that engine can have a certain power reserve. Field working speed of tractors shall ensure that engine works at around 80% of its rated load. To save fuel, you can throttle down at gear H1 in case of light load operation and low working speed.

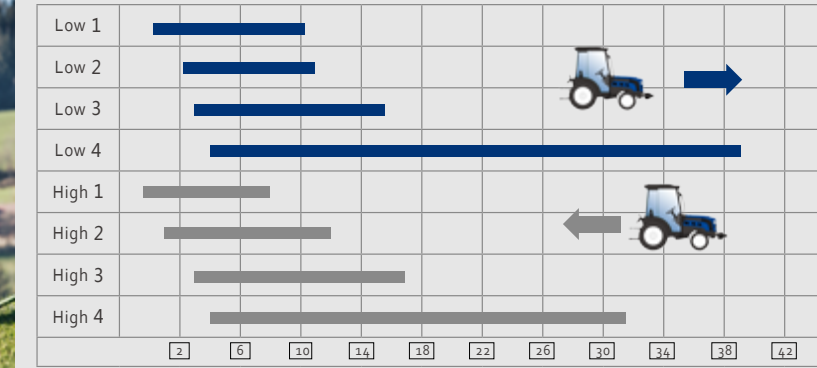


8+8: Type



Type	Operation speed
Plowing	6-9
Returning straws to field	7-8
Rotary tillage	3-5

12+12: Type



Type	Operation speed
Furrowing	0.37-2
Spraying	2-5

Digital Model for Synchronizer Gearbox of TB Series Tractor

Front axle with good manipulating performance and high reliability



The front drive of TB series product is divided into two types, namely, the front drive axle and front axle, of which the former is in four-wheel drive structure, and the latter is in the mechanism that the two rear wheels drive the front wheel. The front drive axle is applicable to all the TB series products, which enjoys the best design. The housing is formed in an integrated manner, so its load carrying capacity is stronger and dragging and traction are easy to realize. It can also be well matched with such front machines and tools as the front loader. The double-

level gear drive structure is provided with high watertightness, as well as good operation performance in paddy fields, so it not only can meet the daily operation requirements, but also minimize the maintenance costs.

The middle double action oil cylinder is more flexible in manipulation, and the overall ground clearance is larger.

The middle double action oil cylinder is provided with the oil inlet and outlet functions, which shortens the lever between the cylinders, and makes the structure simpler. One cylinder controls the action of levers on both sides, and the hydraulic steering makes the manipulation more flexible. With larger ground clearance and better accessibility, the user can drive it without trouble in complex landforms.

1. Step-less adjustable limit bolt

Step-less adjustment of steering angle is possible via the limit bolt. The steering angle is limited, which not only ensures the steering safety, but also provides more adjustment options for users on the steering radius. It also can cope with the local agronomic conditions, and make sure that the machine works within the proper steering zone.

2. Regulating lever

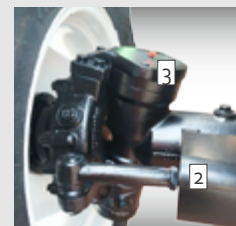
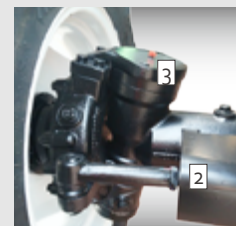
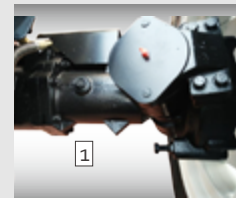
The manipulation of regulating lever is more accurate.

The regulating lever can be shorter, which makes the manipulation more accurate and helps to obtain consistent, reliable and strong steering performance in case of uneven landform.

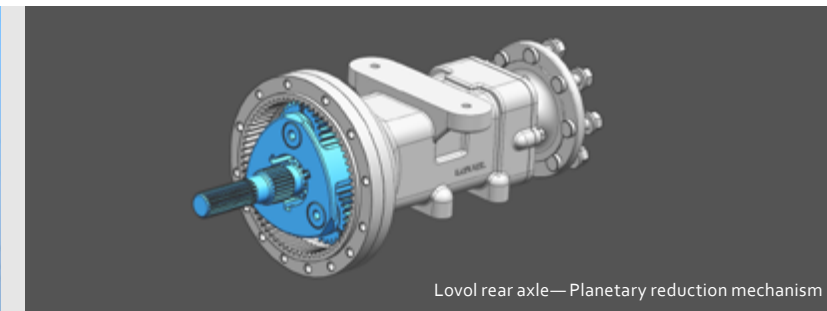
The toe-in has already been adjusted in place before delivery, so there is no need for the customer to calibrate again. This effectively avoids the early abrasion of tire due to improper toe-in regulation, and maximizes the service life of tires.

3. Excellent tightness

The tractor design is optimized, and high-quality seals are provided to achieve high waterproofness. It can perfectly work even in paddy fields, so quality problems and maintenance costs can be significantly reduced.



Rear axle with high reliability and large driving force



Lovol rear axle—Planetary reduction mechanism

Planetary reduction mechanism with high reliability

This rear axle with planetary reduction mechanism, differential mechanism and wet brake is used on the rear drive axle of TB series products, which possesses high durability, stability and reliability and is almost free of maintenance under normal conditions. In addition, the operation is comfortable, safe and reliable.

The built-in final planetary reduction mechanism in the rear axle casing distributes the rear axle's pressure to three gears. Compared with the common externally meshing cylindrical gear at the same horsepower section, the planetary reduction mechanism has greatly reduced the stress on single gear and axle, as well as the gear's fracturing risks. The durability, stability and reliability of brake are improved and it is almost free of maintenance under normal conditions. In addition, the operation comfort and safety are greatly improved. Therefore, the customer will be provided with a rear axle with longer life, as well as less maintenance costs and time. In other words, more highly efficient operation time will be won for the customer.



Differential lock provides the driving force that is more stable. The differential lock pedal is located on the floor at the right side of cab so that the driver can hitch the differential lock when releasing the clutch. If the driving forces on both sides of the rear axle are uniform, the differential lock will be automatically released. In case of skidding, the differential lock can make sure that the driving force acts uniformly on tires on both sides of the rear axle, so the traction force is maximized and the driver can move in the slimy ground without any worry.

Field operations

TB series tractor is equipped with dual-speed power output shaft, which has three speed combinations as shown in the table below (Unit: r/min).

Model	TB350/TB354/TB400/TB404/TB450/TB454/ TB500/ TB504/TB550/TB554/TB600/TB604/TB650/ TB654/TB704
Low-speed/High-speed gear	540/1000 or 760/1000 or 540/760

The power output shaft can be manipulated in the following steps: turn the control handle to neutral position, remove the safety cover and power output shaft cover, and connect the operating machinery with the power output shaft. Step on the clutch pedal to the greatest extent to disconnect the power output clutch, and turn the control handle to the required speed gear. Slightly release the clutch pedal to make the operating machinery run, and throttle down and check the operating conditions before throttling up for normal work.

The driver can choose the optimum PTO speed according to the actual ground conditions, which not only improves the working efficiency, but also reduces the fuel consumption. The two speeds are realized at the rated speed of engine, 2,400RPM. Low speed is applicable to heavy PTO operations like rotary tillage, especially in the case that soil is compact. You can switch to the high PTO speed when the soil is soft in such light PTO operations as the secondary rotary tillage or mowing, to maximize the working efficiency and complete the operations faster. As the engine speed is better matched with the working load, the fuel efficiency can be maximized and the costs can be saved.



We provide waterproof electrical system configuration for rainy and wet areas, and the high-tightness electrical circuits and connectors can ensure the service life of the electrical system, making you worry-free.

Engineering operations

Customized front loader against the structure of TB tractor

The mutually supported front loader is well designed according to the structure of the tractor, as well as the engine power. During the work, the front loader will not interfere with the tractor hood, tire and other components. The equipment is installed as close as possible to the tractor's longitudinal center so that the weight of front loader and materials is uniformly distributed to the front and rear axles and the tractor's bearing capacity is improved.

High-performance control valve

High-performance hydraulic control valve of European brand is applied, which is stable in performance, reliable in quality, and low in maintenance costs. You can choose the third loop to provide hydraulic control for the multi-functional equipment.



Operations in gardens and orchards

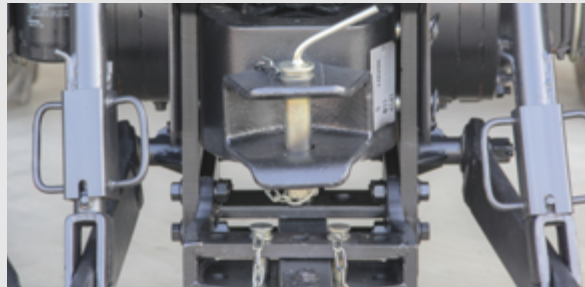
Based on the excellent chassis of general TB model, and according to special operation requirements in graperies, gardens and orchards, the chassis for TB series narrow-track model is optimized to a minimum width of 1,400mm, allowing it to move agilely in the gardens and orchards. In addition, power options such as 50, 60 and 70hp are applicable to various working devices to meet all kinds of your needs.



Transportation operation



The standard TB series tractor is equipped with 25mm-thick draw bar (enhanced 36mm-thick draw bar optional) made of high-quality steel produced with heat treatment process, featuring high strength and toughness. When small-sized trailers or pesticide vehicles are dragged, enhanced draw bars are capable to bear stronger traction and torque force.



According to the height of the trailer, the trailer coupling can be adjusted upwards or downwards to avoid hindering the output of PTO, maximizing the convenience for users.



Product parameter and configuration									
	Unit	TB500	TB404	TB454	TB504	TB554	TB604	TB704	
Engine		A498	C490	A495	A498	A4K41T	A4K41T	QC4108/A4K43T	
Rated Engine Power *ISO TR14396-ECE R120	hp/kW	50/36.8	40/29.4	45/33.1	50/36.8	55/40.4	60/44	70/51.5	
Type		4 cylinders, diesel							
Rated Engine Speed	rpm	2400	2400	2400	2400	2400	2400	2400	
Max. Torque ISO TR14396	Nm	">180/1600-1800"	">150/1600-1800"	">170/1600-1800"	">180/1600-1800"	">215/1600-1800"	">235/1600-1800"	">260/1600-1800"	
Rated PTO Power	kW	31.2	25	28.1	31.2	34.4	37.5	44	
Displacement	ltr	3.168	2.672	2.977	3.168	3.857	4.087	4.32	
Fuel Tank Capacity	ltr	The second generation 42/ The third generation 60						75 (with auxiliary fuel tank)	
Transmission									
Dry Dual Clutch (Ceramic disk)	in.	10	10	10	10	10/11	10/11	11	
8F+4R Collar Shift		○	○	○	○	○	○	*	
8F+8R Synchro/Shuttle Shift		●	●	●	●	○	○	*	
12F+12R Collar Shift/ Shuttle Shift		○	○	○	○	○	○	●	
12F+12R Synchro / Shuttle Shift		○	○	○	○	●	●	○	
16F+8R Collar /Creep Shift		○	○	○	○	○	○	*	
Speed Range	km/h	8F+4R/8F+8R/12F+12R: Forward (2.46-34.78) / Reverse (2.15-30.49) 16F+8R: Forward (0.37-34.78) / Reverse (0.55-12.1)							
Differential Lock		●	●	●	●	●	●	●	
Power Take-Off 540/1000 rpm		●	●	●	●	●	●	●	
Power Take-Off 540/760 rpm		○	○	○	○	○	○	○	
Brake									
Type		Wet Disc, Mechanical							
Parking Brake		Mechanical, Independent of main brakes, Hand lever operated							
Air Trailer Brake		○	○	○	○	○	○	○	
Front Axle									
4WD Front Axle		○	●	●	●	●	●	●	
2WD Front Axle		●	○	○	○	○	○	○	
Steering Angle	°	>40	>40	>40	>40	>40	>40	>40	
Turning Radius Without Brake	m	3.7±0.3			4.3±0.3			4.3±0.3	
Turning Radius With One Side Brake	m	3.3±0.3			3.8±0.3			3.2±0.3	
Hydraulic Power Lift									
Type		Force control, position control, separated force and position control							
Cat. I Three Point Hitch		●	●	●	●	●	●	●	
Cat. II Three Point Hitch		○	○	○	○	○	○	○	
Hydraulic Flow									
Hydraulic Flow	l/min	The second generation 30/ The third generation 35						The second generation 30/ The third generation 38	
Lift Capacity at 610mm behind Hitch Point	kg	928	740	830	910	1020	1150	1530	
No. of Multi-way Valves		2	2	2	2	2	2	2	
Cab									
ROPS		●	●	●	●	●	●	●	
Full-View Cab		○	○	○	○	○	○	○	
Air Conditioning		○	○	○	○	○	○	○	
SKD CAB		○	○	○	○	○	○	*	
Tires and Weights									
Front Tires	Standard	6.0-16	8.3-20	8.3-20	8.3-20	8.3-20	8.3-20	8.3-24	
	Optional							8.3-24 paddy Tire	
Rear Tires	Standard	12.4-28	12.4-28	12.4-28	12.4-28	14.9-28	14.9-28	14.9-30	
	Optional		14.9-24	14.9-24	14.9-24	14.9-24		11-32 paddy Tire	
Structure Weight (ROPS) *	kg	1870	1965	1965	1965	2190	2190	2500	
Structure Weight (Cab) *	kg	2050	2165	2165	2165	2370	2370	2630	
Appearance of the Machine									
Length		3980		3980			4030	4100	
Width		1650		1650			1650	1795	
Height		2520		2520			2520	2675	
Wheelbase		1966		1990			2040	2072	
Ground Clearance		400		310			310	410	

Note: ● Standard ○ Optional* Tractor Dry Mass