

MINI TRACTOR

User's Manual



**Model: KDT9104-4WD
KGT9104-4WD**



ATTENTION: BEFORE USING THE EQUIPMENT, PLEASE READ CAREFULLY ALL INSTRUCTIONS AND KEEP THEM FOR FUTURE REFERENCES.

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Congratulations on your purchase of the **FRD** mini tractor. Please read the user manual carefully and follow the instructions in it. If used according to the instructions in the manual, the equipment will have a very long service life.

SAFETY INSTRUCTIONS

 **ATTENTION!** If you have a problem with this mini tractor or have any questions please contact your authorized dealer.

 **WARNING:** This manual may not be reproduced without written approval. The manual must remain permanently next to the equipment.

Before using the equipment, please read the user manual carefully to know how to install, use and repair it.

I. WARNINGS

 It is recommended to use the equipment for the purpose for which it was designed, following the instructions and explanations in the user manual.

Do not install accessories other than those mentioned in the user manual.

 The equipment must be operated by a single user. Keep other people away.

II. GENERAL SAFETY INSTRUCTIONS

ATTENTION, DANGER!

- The user must know how to quickly stop the engine!
- Familiarize yourself with the control levers and the correct way to use the equipment.
- Before starting work, remove foreign objects (stones, metal cables, rods, etc.) from the work area of the equipment. Read all safety labels on the equipment and consult the instructions before starting, operating, refueling or performing any maintenance on the mini tractor.
- Follow the safety instructions.
- Stop the mini tractor before checking or repairing it; if the equipment starts to vibrate abnormally, check it completely.
- Stop the engine before leaving the equipment or to make any adjustments to the accessories and before refueling.
- Always make sure that the screws and nuts are properly fastened.

- Always keep the equipment clean to avoid the danger of fire.

THE FUEL IS VERY FLAMMABLE:

- Store fuel in appropriate containers.
- Always fill the tank in open spaces; smoking is prohibited during this operation.
- Add fuel when the engine is stopped. Feed only in open spaces.

THEN WHEN IT WORKS:

- Always use the equipment during the day or in a well-lit area.
- Always wear work equipment (non-slip shoes and long pants) during use. Do not operate the equipment when barefoot or wearing sandals.



FORBIDDEN!

- Avoid using the equipment when people, especially children or animals, are nearby. Keep in mind that the operator is responsible for accidents and property damage.
- Do not allow children or untrained persons to use the equipment.
- Do not use the mini tractor if the guards and safety devices are defective.
- Do not store equipment indoors when there is fuel in the tank.
Removed vapors can be dangerous.
- It is forbidden to open the cover and add fuel if the engine is started or it is still hot.
- If there is a little fuel spilled next to the equipment, do not start the engine, but move the equipment to another clean area. Wipe up spilled fuel immediately.
- Do not start the engine indoors. Exhaust gases contain carbon monoxide, which is toxic!

MAINTENANCE AND STORAGE

- Keep additional equipment and devices, including the battery, in safe operation. -
- Make sure that all screws, bolts and nuts are tightened so that the equipment will be in safe operation.
- Remember to let the engine cool down before storage.
- If the mini tractor needs to be stored for a long time, keep the user manual with it.
- Do not repair the equipment without proper tools and devices.



Do not dispose of waste electrical and industrial equipment and components in household waste!

In accordance with the legislation in force: Directive 2008/98 / EC on waste, Directive 2012/19/EU, on waste electrical and electronic equipment, etc., electrical, industrial equipment and specialized parts for collection and recycling. It is forbidden to throw them in nature, because they are a potential source of danger and environmental pollution.

DESCRIPTION OF MINI TRACTOR



TECHNICAL SPECIFICATIONS

Model		KDT9104-4WD, KGT9104-4WD	
Tiller	Working width	1560 mm	
	Working depth	300~400 mm	
	Transmission and gears	Front gearbox	-1, 0, 1, 2
		Rear gearbox	PTO (Power socket) 1: -1, 0, 1, 2(output speed:600 rpm/min PTO (power soecket) 2: -1, 0, 1, 2(output speed:1200 rpm/min
	Starting system	String start / Electric start with 32Ah battery	
	Wheels	Front: 6.00-12; Rear: 6.00-12	
	Blades	40 pcs 2 x (12+4+4)	
	Noise level LwA	≤ 95 dB(A)	
	Vibration total value	6.3~6.5 ^a h _v	
	Travel speed	Front gearbox:182.7 m/min(fast), 107.1 m/min (slow), 69.3 m/min (reverse)	
		Rear gearbox: 50.76 m/min(fast), 30.08 m/min (slow), 18.8 m/min (reverse)	
Engine	Engine model	188F/ FC192F	
	Engine max. power	13HP / 18HP	
	Speed	3600 rpm	
	Displacement	406 / 457 cm ³	
	Fuel type	Diesel / Petrol	
	Fuel consumption	≤ 30 kg/hm ²	
	Working efficiency	≥ 0.04 hm ² /(h*m)	
	Fuel tank capacity	5.5 / 6.5 L	
	Engine oil capacity	1.65 / 1.1 L	
	Gearbox oil capacity	Front	2.6 L
		Rear	2.3 L
	Net / Gross weight	260 / 290 kg	
	Packaging dimensions	1700 x 770 x 850 mm	
Accessory lifting system		Hydraulic	For rear rotary cultivator
		Manual	For one side ditcher, reversible ditcher, 2-line ditcher
Available accessories		Rear rotary cultivator, one side ditcher, reversible ditcher, 2-line ditcher	
Tools needed to change wheels		A jack (winch) for lifting the mini tractor and spare wheels	

INSTRUCTIONS FOR USE

Fuel and oil supply

1. *Diesel engine with air cooling*
 - Refuel the engine with 0 # diesel during the hot season and 10 # diesel during the cold season (make sure the fuel level does not exceed the line on the fuel return line).
 - Add 1.5L diesel engine oil to the crankcase (add SAE30 oil, CC grade in the hot season and SAE10W30 oil, CC grade in the cold season). From the same type of oil add 0.15L to the air filter.

2. Gasoline engine, with air cooling

- Add unleaded gasoline, octane number 92 # to the fuel tank.

Make sure you refuel the fuel tank with fresh unleaded gasoline, free of impurities.

Use unleaded gasoline to minimize deposits in the combustion chamber.

Do not use an oil / gasoline or dirty gasoline mixture. Avoid getting dirt, dust or water into the fuel tank.

Gasoline is extremely flammable and explosive under certain conditions.

Refuel in very well ventilated areas with the engine off. Smoking and the presence of open fire or sparks in the area where the engine is refueled or where the fuel is stored are prohibited.

Be careful not to spill fuel when refueling. Spilled fuel or fuel vapors may ignite. Wipe up spilled fuel immediately and make sure the area is dry before starting the engine.

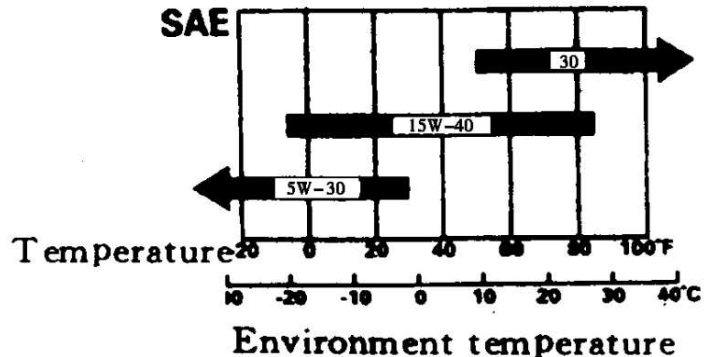
Avoid repeated or prolonged contact with skin or inhalation of vapors.

- Add 1.1L of petrol engine oil to the crankcase, then add 0.1L of the same type of oil to the air filter.
- Add 2.5L 85W / 90 heavy-duty gearbox oil to the front gearbox.
Add 1.5L 85W / 90 heavy load gearbox oil to the rear gearbox.
- Add 0.2L 85W / 90 oil to the transmission and gearbox.

Engine oil - **BE CAREFUL!** Low engine oil operation can cause serious engine damage.

Use the recommended oil depending on the ambient temperature.

 **ATTENTION: engine oil is an important factor in engine performance. Don't use engine oil with additives or 2-stroke engine oil, as it may shorten the life of the engine.**



Checks before starting the equipment

1. Make sure the gear levers are in the neutral position.
2. Make sure that the clutch pedal can be disengaged normally.
3. Make sure all main components are securely fastened.
4. Check the fuel level and add, if necessary.
5. Check the oil level and add, if necessary.
6. Check the gearbox oil level and add if necessary.
7. Check the tire pressure.

Starting, Using and Stopping the equipment

Starting the engine

1. *Diesel engine, air cooling*
 - Open the fuel valve, set the throttle lever to 1/3 of the position;
 - Gently pull the starting string all the way, then release it to return to the starting position, then press the pressure relief valve;
 - Turn the ignition key to start the engine (please let the engine run idle for 5 minutes before use).
2. *Gasoline engine, air cooling*
 - Open the fuel valve.
 - Set the ON / OFF button to the ON position.
 - Turn the key to start the engine (please let the engine run idle for 5 minutes before use).
- Make sure the shock is closed when you turn on the equipment.

Stopping the engine

To stop the equipment, depress the clutch lever.

Instructions for the working gears (accessory gearbox of the mini tractor)

1. When the rear rotary cultivator is used, depress the main clutch pedal and engage the front gearbox in low gear, then engage the rear gearbox in low gear as well, then release the clutch pedal. (switch between work steps slowly and quickly depending on your work requirements)
2. When used on the road, make sure that the mini tractor is operated only by the only gearbox.
3. When you want to move backwards (reverse), depress the main clutch pedal when the gear lever is in neutral, pull the control rod all the way to the end and lock automatically; when the rear gearbox is in neutral, release the main clutch pedal. (Instead, when you want to go back with the rear gearbox, set the front gearbox to neutral.)

MAINTENANCE

In order to reduce the possibility of technical problems or accidents caused by improper operation of the equipment and to ensure that all components operate safely, it is recommended to perform regular maintenance of the tractor to keep it in good condition and to expand. operating time.

In particular, fuel lines and rubber components should be replaced annually, electrical parts and wires should be checked annually to ensure that all mechanical parts are in the best condition.

Proper maintenance and lubrication will help keep the equipment in perfect working order. The equipment is delivered without engine oil and transmission oil. The user must add the necessary oils before the first start. The required quantities are mentioned at the beginning of this manual, in the table with Technical Data.

Make sure all screws and nuts are tight.

Schedule of periodic maintenance

Parts to be checked and adjusted	The right amount	Checking and adjusting	Verification and replacement period
Engine lubricant	1.65 L for diesel engine	SAE30#, grade CC (spring and summer), SAE10W30, grade CC (cold season)	First shift: after the first 20 hours of operation. After the first change, replace the oil every 100 hours of operation.
	1.1 L for gasoline engine	APRSJ10W/40	
Transmission oil change	2.6 L for front gearbox	Gearbox oil 85W / 90	First shift: after the first 40 hours of operation.
	2.3 L for the rear gearbox		After the first change, replace the oil every 200 operating hours
	0.2 L for transmission and gearbox		
Cleaning the fuel filter			Clean after every 500 hours of operation, replace the filter with a new one after 1000 hours of operation
Tire air pressure	1.2 kg/cm ²		Check before use
Cleaning the air filter	0.1 L oil the same as the gearbox oil	Oil for petrol engines	Clean the air filter or change the oil after 30-50 hours of operation under normal conditions. Clean the air filter or replace the oil every hour of operation in severe conditions.

MALFUNCTIONS DIAGNOSIS AND SOLUTIONS

Malfunctions diagnosis for gasoline engine

Technical problems	Components to be checked	Solutions
Engine failures	Fuel level	Refueled
	Spark plug	Replace the spark plug
	Carburetor atomization	Curatati sau inlocuiti carburatorul
	Check whether witch on/off is at OFF position	Turn the switch on/off to ON position
	Battery voltage	Check and charge battery
	Fuse	Replace fuse
Poor engine power	Check whether air filter is blocked	Clean sponge in air filter and fill oil
	Check oil level	Refill oil or change oil
	Check choke	Make sure choke is ON
	Check whether engine is compressed	Replace piston and piston rings

Malfunctions diagnosis for diesel engine

Technical problems	Components to be checked	Solutions
Engine failures	Fuel level	Refuel
	Check whether starting motor works normally or not	Check and replace starting motor
	Check whether engine is compressed in good condition	Pull the recoil start handle repeatedly without press the pressure release valve, please contact the distributor or after-sale service if there is no compression of engine.

	Failure of fuel injection	Exhaust air, check and replace fuel injection parts
	Battery voltage	Check and charge battery
	Fuse	Replace fuse
Poor engine power	Check whether air filter is blocked	Clean sponge in air filter and fill oil
	Check oil level	Refill oil or change oil
	Check whether fuel injector and injection pump supply enough fuel	Check and replace fuel supply system
	Check whether engine is compressed	Check whether engine is compressed

ACCESSORIES

This mini tractor is equipped with 3 gearboxes, one for the front axle, one for the rear axle and the third for the speed reduction in the middle.

For transport purposes, with the tires fitted, you can disengage any of the 2 gearboxes, changing the tractor into 2-wheel drive.

When the mini tractor is used in the field, with mounted accessories, make sure that both gearboxes are engaged in the appropriate gears. Otherwise, the mini tractor will not be able to work the land and move, but will only work the land in the same place.

The accessories that can be mounted on the mini tractor are presented below. For information on the delivery set, please contact your authorized dealer.

Function: Cultivation



Metal wheel



Front axle cultivating blades

The plows are mounted on the back of the mini tractor to the connection device and are fixed with bolts.

Function: Making furrows



Reversible ditcher



One side ditcher



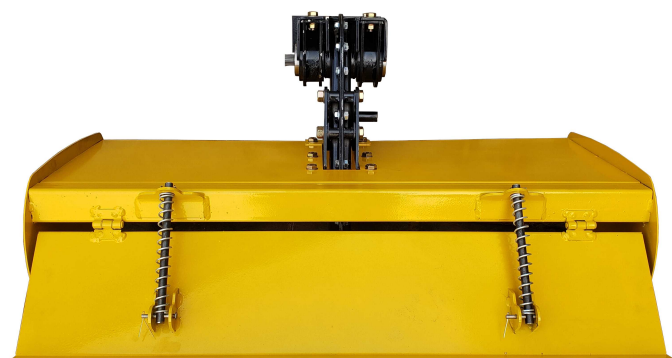
2-line ditcher



Accessory connection device

A trailer can also be connected to the connection device of the accessories. Max capacity The load of the trailer must be 500 kg.

By adding the hydraulic system for lifting the accessories in the rear, the mini tractor can be used together with the towed cutter. It can be used for cultivation and making furrows.



GUARANTEE

These products benefit from a guarantee according to the guarantee certificate, provided that:

1. The product in question has been used and maintained according to the instructions for use;
2. The product has not been damaged (damaged) due to carelessness, improper use or abuse.
3. The cost of transporting the products from the owner to the authorized service and from the service to the owner, is the responsibility of the owner. Also, the risk to which the products are subjected during transport belongs to the owner.

Impact damage is not covered by the warranty. The clutch is not covered by any warranty.

The engines are guaranteed by their manufacturer.

WEIFANG FRD MACHINERY CO.,LTD

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IMPORTANT! - SAFETY FIRST!

Before using this product, please read the safety precautions presented in this manual to reduce the risk of fire, electric shock and personal injury. **The images and technical data in this manual are for reference only. They are subject to change without notice.**