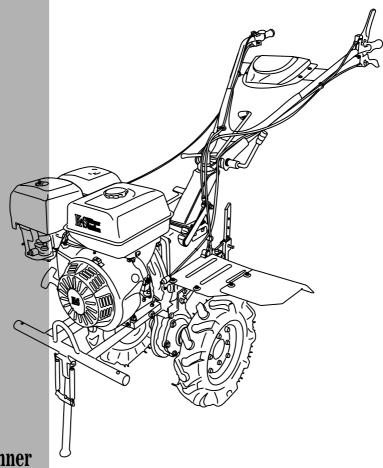
before use



Gasoline tiller

KS 7HP-950A **KS 7HP-950S** KS 7HP-1050SG KS 13HP-1350BG





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Explanation of symbols:

KS Könner & Söhnen production

950, 1050, 1350 Model name

7, 13 power of the cultivator

Read this manual carefully. Pay special attention to information starting with characters / words:



Failure to observe the recommendation marked with this sign may result in serious injury or death to the operator or third parties.



Useful information on using the machine



INTRODUCTION

We are grateful to you for your purchase of **TM Könner & Söhnen** series gasoline tiller. This manual contains safe working recommendations, operation and adjustment description of these tillers and maintenance instructions.

All data, specified in this operation manual is the most up to date for the moment of its publishing. At the end of this manual, you may find contact information which you are free to use in case of any issues occurrence.



IMPORTANT!



Manufacturer reserves the right to make alterations into the tillers, which may not be reflected in this manual. Pictures and photos of the product may vary from its actual appearance.

More information and contacts can be found on the website www.ks-power.de

TILLER OVERVIEW

All **Könner & Söhnen** tillers are equipped with the most powerful OHV engines of the last generation with such features:

- Increased lifespan;
- Low fuel consumption;
- High power with the low weight;
- Low noise level in comparison to similar engines.

Main Könner & Söhnen tiller features:

- Tiller is equipped with mechanic gearbox, which is simple in maintenance and passes the biggest torque of the engine;
- Chain transmission which is located in solid sturdy cast iron chassis;
- Reverse function to increase maneuverability and usability;
- Easiness in work with the toughest soil pieces and breasts due to forged blades;
- Easy to adjust operator panel height;
- Transportation wheel makes it easy to move the tiller;
- Two forward gears;
- Protects plants when working due to special disks;
- Package list includes a wheel, which simplifies device and its cargo transportation (model KS 7090T-2/1). You can buy a wide range of hinged equipment to your tiller that will make it the most reliable assistant in your garden.



MAIN SPECIFICATION

Tiller	KS 7HP- 950A	KS 7HP- 950S	KS 7HP- 1050SG	KS 13HP- 1350BG
Max power, hp	7,0	7,0	7,0	13,0
Nominal power, kW	3,8	3,8	3,8	7,2
Gasoline engine	KS 210	KS 210	KS 210	KS 390
Engine capacity, cm ³	208	208	208	389
Working width, cm	95	95	105	135
Working depth, cm	≤ 36	≤ 36	≤ 36	≤ 36
Fuel tank capacity, l	3,6	3,6	3,6	3,6
Oil sump capacity, I	0,6	0,6	0,6	1,1
Intertillage set diameter, mm	360	360	360	360
Starter	manual	manual	manual	manual
Transmission type	manual	manual	прямий	прямий
Drive	+2 +1 0 -1			
Noise level (7 m distance), dB	98	98	98	98
Weight (netto), kg	61	70	74	99



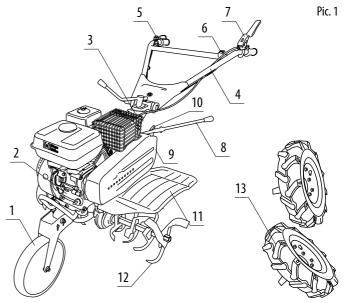


Oil recommended - SAE 10W30



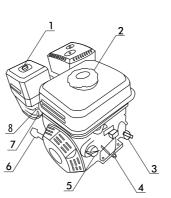
MAIN OVERVIEW

KS 7HP-950A, KS 7HP-950S



- 1. Transportation wheel for model KS 7HP-950A (parking support
- bracket for model
- KS 7HP-950S) 2. The engine
- 3. Steering column
- 4. Operator panel
- 5. Adjust the engine speed
- 6. The switch

- 7. Injection pen
- 8. Switch position
- 9. Transmission housing
- 10. Soshnik
- 11. Wing
- 12. Mills
- 13. Pneumatic wheels
- (KS 7HP-950S only)

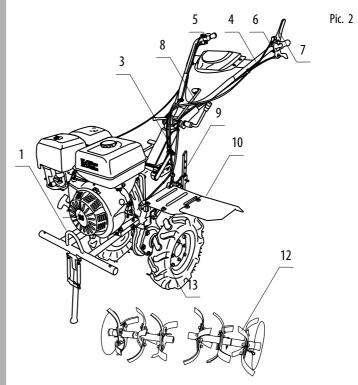


- 1. Air filter
- 2. Fuel tank cap
- 3. Oil filler cap
- 4. Oil filler neck
- 5. Switcher
- 6. Recoil starter
- 7. Fuel valve
- 8. Choke



GENERAL VIEW OF CULTIVATORS

KS 7HP-1050SG, KS 13HP-1350BG



- 1. Parking support bracket
- 2. The engine
- 3. Steering column
- 4. Operator panel
- 5. Adjust the engine speed
- 6. The switch
- 7. Injection pen

- 8. Switch position
- 9. Soshnik
- 10. Wing
- 11. Protective disk
- 12. Mills
- 13. Pneumatic wheels



SAFETY TECHNIQUE

Before operating the cultivator, please read carefully the operating instructions. Do not allow other people and children to use the device. Do not use the appliance in close proximity to the work area of adults, children and animals - the responsibility for accidents and property is borne by the cultivator user. The Könner & Söhnen motor cultivator meets the safety requirements of the current European standards. In no case do any changes to the design of the appliance.

WARNING THESE REQUIREMENTS FOR WORKING WITH THE CULTIVATOR:

- 1. Read this manual before starting to work with equipment. Keep it for the future, follow the recommendations contained in it, as this will help prevent injury and damage to the device.
- 2. Familiarize yourself with the cultivator management and its functions. In the event of unforeseen circumstances, the operator must know how to stop the cultivator's working parts and its engine.
- 3. The operator of the device must be in good physical and mental state, must be able to quickly make decisions if necessary. It is forbidden to work with a cultivator after drinking alcohol, drugs or taking medications that can slow down the reaction.
- 4. The cultivator is intended for use with soil during sowing, as well as for the care and treatment of plants. The use of a cultivator for other purposes is forbidden.

WORKING WITH THE CULTIVATOR

The device must be turned on according to the instructions in this manual. Ensure that the cultivator is safely spaced from the legs. Do not place your feet or hands on rotating items or underneath them. In order to lift the device, two people have to take up the handle and the cultivator shafts. Wear special gloves for protection of hands and protective shoes, do not work with a cultivator in an open shoe.

BE CAREFUL!

- Keep clean engine and exhaust pipe in order to avoid burning. Carefully check them for the absence of leaves, grass and leaks of oil or fuel.
- Be careful with the rotating parts. Do not touch the mill when rotated.



ATTENTION - DANGER //



WARNING! Stop the engine before refueling, transport and if the device is unattended.



OPERATION OF THE DEVICE AT THE GOOD LOCATION

- 1. Keep track of the correct location of the appliance on the slopes. The angle of inclination of 10% corresponds to 10 cm, a rise of 100 cm to the horizontal plane. Do not apply soil plowing on steeper slopes, in order not to lose control of the device.
- 2. When working on slopes or hilly terrain, reinstall all mills.
- The person working with the cultivator is prohibited from standing below the device in order to avoid getting into the working cultivator in case of loss of control over it.
- 4. It is prohibited to operate the device across the slope. Only move forward, do not pull the cultivator back and forth.
- 5. Be careful when changing the direction of the cultivator.
- 6. Reduce speed on rocky soil.
- 7. Work with the cultivator should occur only in the pace of the step, as there is a risk of stumbling, slipping, etc. when moving fast.
- 8. To adjust the depth of the device, change the force of pressing on the handle, pressing the coulter in the ground more or less.
- 9. Do not turn engine, do not change its main position!

STORAGE AND USE OF GASOLINE

Petrol is extremely toxic and combustible, so observe the following rules for its storage and use:

- 1. Only store fuel in hermetically sealed containers specially designed for this purpose. Hold the canister with gasoline in the cool Dark place as far away from sparks and open flames.
- 2. During operation of the engine, the cultivator allocates exhaust gases that can cause poisoning. Do not use the device in closed, badly ventilated areas.
- 3. Fill the cultivator in the open air before starting the engine. Do not squeeze the gas tank cover and do not fill the fuel if the cultivator is still hot after work.
- 4. Leave the place to expand the fuel after refueling. Pour fuel to the edge of the filling pipe (about 4 cm from the top of the tank). Do not fill the tank completely.
- 5. If there is too much gasoline, thoroughly wipe excess from the surface if it is filled with fuel. In no case do not start the engine until the surface is cleaned up and until steam of gasoline evaporates.
- 6. Always close the gas tank cover tight.
- 7. To empty the fuel tank, start the cultivator engine out of the room until complete fuel production.
- 8. The cultivator should only be transported empty
- A fuel tank and a closed fuel tap.
- 9. Wait until the device cools down before putting it on storage.
- 10. For safety reasons, do not leave the fuel tank in the gas tank in the enclosed area. Gasoline vapors can come in contact with sparks or open flame, which may lead to vaporization.
- 11. Regularly check the device for damage and imperfection of the fuel line, tank and fuel tank plugs, as well as damage to the muffler and protective plates. In time, replace the parts if necessary.



MAINTENANCE AND REPAIR

When using a cultivator on slopes, lifting must not exceed 10% (5.7°). Operation of the device is possible only in daylight or good artificial lighting. To avoid injury and damage

Use only original spare parts, replace worn or damaged parts on time, tighten all bolts, screws and nuts all the way.

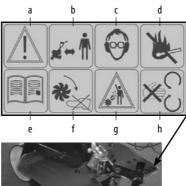
Follow the maintenance instructions listed in the instruction manual yourself. Before starting work on the device, disconnect the plug of the spark plug wire. Works that are not foreseen for self-fulfillment must be performed at an authorized Könner & Söhnen Service Center. The addresses of the service centers can be found on our official website www.ks-power.com.ua.



The fuel contaminates the earth and groundwater. Do not allow gas to run out of the tank!

DESCRIPTION OF SYMBOLS





- A. WARNING! Important information! B. Other people should keep distance from
- the operating device;
- C. Use safety glasses and headphones;
- D Do not use a cultivator near open fire!
- E. Read the manual Before starting work:
- F Do not lift your legs to rotating mills; G. Not allowed to stay
- In the cultivator's working area
- H Do not lift hands to the parts of the rotating cultivator.





REVERSE BIEG WSTECZNY

Задній хід



3чеплення





Position of the knob of the air damper (to start it put into the «Closed» position in the direction of the arrow)

Faucet (move to «Open» position in the direction of the arrow)

- The volume of crankcase

Recommendations for oil



Fill the oil
Only to the specified level



Do not touch! The surface is heated at work



Попередження щодо бензину





Noise level at a distance of 7 meters



Speed control notation: MAX - MIN

Transmission





COMPOSITION

- 1. Cultivator 1 pc.
- 3. Number of blades for mills:

KS 7HP-950A 24 pcs.

KS 7HP-950S 24 pcs.

KS 7HP-1050SG 32 pcs.

KS 13HP-1350BG 40 pc.

- 4. Soshnik 1 pc.
- 5. Parking support bracket (except model KS 7HP-950A) 1 pc. Transport wheel (KS 7HP-950A only)
- 6. Transmission case (for models KS 7HP-950A, KS 7HP-950S) 1 pc.
- 7. Console 1 pc.
- 8. Protective wings 2 pc.
- 9. Control panel 1 pc.
- 10. Side protectors 2 pcs.
- 11. Pneumatic wheels (except KS 7HP-950A) 2 pcs.
- 12. A set of fasteners and tools (Figure 3) 1 pc.
- 13. Operating Instructions 1 pc.
- 14. Packing 1 pc.

Pic. 3





COLLECTING THE CULTIVATOR

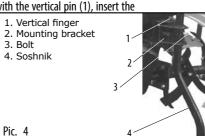
COULTER

To adjust the depth of the plow in the cultivator there is a coulter. It is regulated by moving it up and down with an elongated clamp. The more depth the coulter gets, the greater the depth of processing the earth.

Secure the coil holder (2) with the vertical pin (1), insert the

coil (4) into the bracket, adjust the height using a bolt (3).

ASSEMBLY OF THE TRANSPORT WHEEL (FOR THE MODEL KS 7HP-950A)

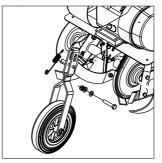


To move the cultivator, it is equipped with a forward transport wheel. Attach the transport wheel to the cultivator frame using bolts (Figure 5)

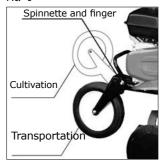
To move, lower the wheel down and fix it with the mounting pin. Raise the steering wheel so that the cultivator is easy to roll on the ground. Before starting ground treatment

Turn the wheel in the raised position and lock it with a pin.

Pic. 5



Pic. 6





CUTTING CUTTERS ASSEMBLING.

KS 7HP-950A and KS 7HP-950S models come with 24 knives and there are two assembly options available:

- 1. Three sections with four knives (82 cm width).
- 2. Four sections with four knives (115 cm width).



Pic. 7

To increase the trim width, kit also includes an elongated midsole.



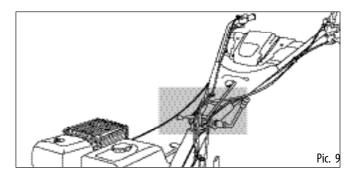
Pic. 8



PROTECTIVE WINGS.

Attach protective wings to the cultivator frame by mounting in the appropriate openings on the frame.

OPERATOR PANEL



Mount the operator panel to the steering column using the operator panel latch (Figure 9a) as shown in Figure 9b.







Pic. 9a

For the KS 13HP-1350BG model, pick up the steering column as shown in Figure 9c first. And then attach the operator panel as shown in Figure 9d.

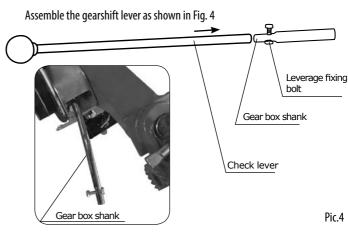


Pic. 9c



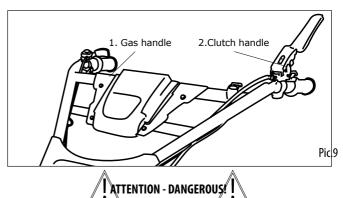
Pic. 9d





ENGINE SPEED CONTROL AND CLUTCH CABLES

Engine speed adjustment is carried out with the help of a gas handle (1). The start of the cultivator is carried out with the clutch handle (2).



The cultivator is supplied without oil and fuel. Before first start-up, be sure to fill in the oil and refuel the device! Use a funnel (not supplied) to refuel.

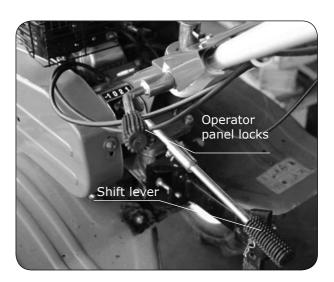


Drain the waste oil into a tight container. Allow waste oil to the point of recovery of waste oil.



OPERATOR PANEL POSITION.

- 1. Loosen the bolt that fixes the position of the operator panel.
- 2. Install the operator panel to the required height.
- 3. Fasten the panel with a bolt.



SHIFT LEVER. TO WORK WITH THE LEVER:

- 1. Set the lever to the neutral position «0».
- 2. Move the shift lever to the required speed to the right «2» or «1».
- 3. To turn the reverse «-1», move the lever to the left.

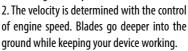




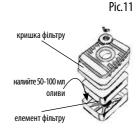
OPERATION INSTRUCTION

Commissioning

1. To determine the depth of processing, set the drag bar at different height. When deep establishing of a drag bar, blades also go deep into the soil and promoting the device forward significantly slows.



To accelerate the advancement of the tiller, set the drsg bar forth above, so the blades will rise.



- 4. Dry and hard soil may contain large lumps of soil and probably will need two passes. Do not work with moist soil, because it is difficult to break.
- 5. Immediately release the clutch lever if the tiller is blocked with foreign things. Turn off the engine, remove barriers and check harrow lack deformation and damage. If necessary, replace damaged parts.

Fuel and engine oil

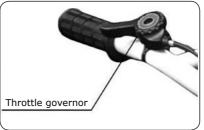
The tiller needs normal unleaded fuel with 92 octane for proper work. Gasoline should be fresh, vintage variety. Use a funnel (not supplied) for best device filling.

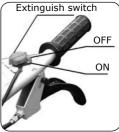
The tiller also can not run without oil, so fill it before the first launch. Set the device on a flat horizontal surface, open the tank with oil and pour oil to the minimum mark. Use the probe to check the oil level. Oil level must be constantly monitored. Do not let excess of oil and its lack. Information on used motor oil can be found in the technical characteristics of the tiller.



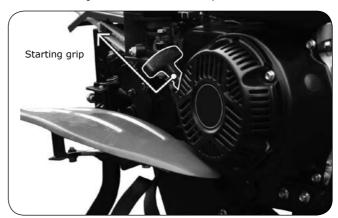
Starting and stopping the engine

Before starting the engine, make sure the switch is in position **I** (on). Turn the rotary engine speed dial to **MAX** (see picture 12). Damper motor switch to position **CHOKE**. Grasp the starter handle and slowly pull it to the emergence of resistance, then sharp fast motion pull starter all the way. Repeat the operation until the engine starts. After starting the engine let the rope to entangle on trigger without throwing the starter handle. Put the flaps in position **RUN**.





To eliminate the engine turn the switch to **0** (Off.) position.



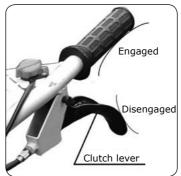
The Throttle Adjustment

Clutch transmits engine from the engine to the transmission torque. When you press the handle grip, rotation turns on and belt movement is transmitted to the chain transmission. Transport the tiller to plowing land. Start the engine and turn the required forward speed of the assisted lever gearbox. After pressing and holding the lever, tiller starts to bury into the ground while moving forward. Adjust the height of the depression in the ground with opener.









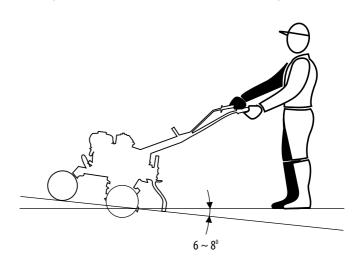
Reverse function for model KS 7090T-2/1

The cultivator is equipped with reverse function for better maneuvering. For blades to begin the reverse rotation, press and hold the gear lever in reverse position. Stop the engine after completion.

Caution! Don't use reverse mode for ground tilling!

Next steps

Gradually increase the depth of plowing when tilling the solid ground. Press on the steering wheel to facilitate turning of the machine, transfer the weight of blade back when turning on the soil blade. To adjust the forward speed, press the left handle grip. To move backwards which facilitates the work with the tiller, use the right handle grip. Lower the front wheel for device transportation. After work or during a break at work, release the clutch and turn off the engine.





MAINTENANCE

In order to prevent unintentional inclusion of the engine, disconnect the spark plug of the engine when storaging device, transportation and all the works on cleaning and maintenance (such work is permitted only with cooled engine).

The use, storage and maintenance of Könner & Söhnen tillers must be made according to this manual. For all the damage and malfunctions, which were caused by mishandling of service, safety and working with the machine manufacturer is not responsible.

The manufacturer is not liable for:

- Using of lubricants, gasoline and motor oil, whichare prohibited by supplier;
- Using the device for other purposes;
- Losses due to further use of faulty tiller parts;
- Technical changes of the device.

Maintenance work

All works shown in «maintenance» section should be done regularly. If you can not perform work, tiller user should contact the service center to complete an application for technical works execution.

In case of losses due to injury, acquired as a result of outstanding maintenance, the manufacturer is not responsible.

These damages also include:

- Damage and losses resulting from the use of non-original spare parts;
- Corrosive damage and other consequences of invalid storage;
- Damage caused by the maintenance works that were carried out by unauthorized personnel.

Cultivator cleaning

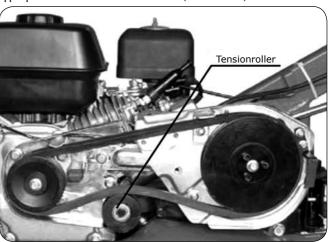
Thorough cleaning and care of the device extends its life and protecting it from damage. After each use, clean the tiller blades of the land, dust and grass straw. Keep under control the state of the product - damaged parts, landing threaded elements. It is forbidden to send jets of water on the seals, engine components and bearing seats. Otherwise the tiller may need an expensive repair.



Chain transmission regulation

Occasionally, after extended tiller use, regulation of chain transmission is necessary. To do this, follow these steps:

- 1. Remove the chain transmission, previously removing its screw.
- 2. Grip the handle grip. Check the distance between the upper point of the belt and upper-point of roller it should be 60 65 mm (2.4 2.5 inches).

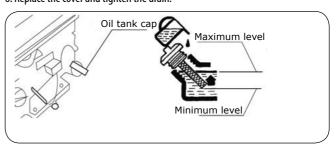


3. Remove four engine mounting bolts for work on regulation. Move engine forward or backward the required belt tension and make sure that the external surfaces of driving and driven pulleys are in the same plane.

Changing and adding fuel to the engine

Follow the maintenance schedule and regularly check the oil level in the engine. By reducing the oil level is necessary to add new oil to ensure proper operation of the engine. To replace the oil, follow these steps:

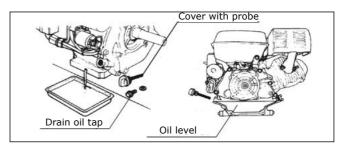
- 1. Make sure that the tiller is placed on a flat surface.
- 2. Place the capacity to drain the oil under tiller engine.
- 3. Unscrew the drain cover, located under the hood oil probe, using allen key 10 mm
- Wait until the oil drains.
- 6. Replace the cover and tighten the drain.





Follow these steps to add oil:

- 1. Make sure that the tiller is placed on a flat surface.
- 2. Remove the probe tap on the engine.
- 3. Pour the oil into the carter..
- 4. Oil level should be close to the maximum probe level.



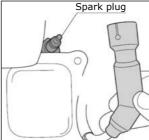
Spark plug maintenance

Spark plug is an important part which provides correct and long work of the engine. It is important to keep an eye on the plug — it should not have cracks, must be installed in a right way and have no soot.

Dpark plug checking

Recommended for use are spark plugs F6RTC, for example NGK BPR6ES. Follow

this steps to check the spark plug:

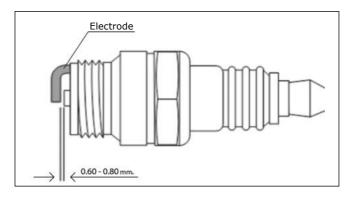


- 1. Take off the cap from the spark plug.
- 2. Loosen the plug with the help of candle brace.
- 3. Carefully check if the plug is damged. Remove if it has any damage.
- 4. Measure the gap it should be within 0,7 0,8 mm.
- 5. Carefully clean the spark plug with the

metal brush and remove the dust before reuse of the unit. Please don't forget to measure the gap.

6. Plug in the spark plug to its place.





Internal combustion engine

For the most long-term use of the engine it is important to watch the condition of an oil and air filter, oil level. Cooling fins should always be in a clean condition - this provides the best cooling for the engine.

	Action	Each time you start	First month (or every 20 hours)	Every month (or every 20 hours)	Every 3 month (or every 50 hours)	Every 6 month (or every 100 hours)	Every year (or every 200 hours)
Engine oil	Level check	>					
Engine on	Replacement		/		>		
Air filter	Cleaning		/	/			
Air IIIter	Replacement				/		
Carada alesa	Cleaning				/		
Spark plug	Replacement					/	
Fuel tank	Fuel level check	/					
i dei tarik	Cleaning						

Air filter

To ensure proper airflow in the carburetor regular maintenance of the air filter should be conducted. Occasionally it is important to check for contamination:

- 1. Loosen the clamp on the top cover of the air filter.
- 2. Remove the casing from the sponge filter element.
- 3. Remove dirt inside the filter casing.
- 4. Rinse sponge filter element in warm water, then dry it.
- 5. Dip a dry filter with clean engine oil and squeeze it to remove excess oil.
- 6. The filter replace should be carried out every 50 working hours of a tiller.



TROUBLESHOOTING

Malfunction	Possible cause	Troubleshooting	
	Engine circuit breaker is in the OFF position	Bring the engine circuit breaker to ON position	
	There is no fuel in the tank	Add fuel, clean the fuel line	
	Clogged fuel line	Always use fresh fuel of branded varieties, good unleaded gasoline	
	Poor, old or contaminated fuel in the tank	Clean fuel tank, fuel line to the carburetor	
	The air filter is dirty	Clean the air filter	
The engine does not start	Spark plug wire disconnected from spark plug; high voltage wires badly loosen in plug	Insert the plug wire to the spark plug; check the connection between the high voltage wire and plug	
	Spark plug is blacken with smoke or damaged; wrong distance between the electrodes	Clean or replace the spark plug; set the distance between electrodes	
	Engine "drowned" after several attempts to launch	Unscrew and dry the spark plug, pull the rope several times when spark plug is off; fuel supply controller is in STOP position	
Hard start or decreased engine power	The fuel tank is dirty	Clean fuel tank	
	The air filter is dirty	Clean the air filter	
	Spark plus is sooted	Clean the spark plug	
	Water in the fuel tank and carburetor; carburetor is occluded	Empty the fuel tank; clean the fuel line and carburetor	
Engine overheating	Wrong distance between spark plug electrodes	Set the right distance between spark plug electrodes	
	The air filter is dirty	Clean the air filter	
	Cooling ribs are dirty	Clean the cooling ribs	
	Too low level of engine oil	Add engine oil	
No draft when pressed on clutch lever	Improperly installed clutch cable	Adjust the clutch rope	
Increased vibration when working	Weakened engine mounts	Tighten the engine screws	



TRANSPORTATION

Before moving or transporting the cultivator, make sure the ignition switch ON / OFF valve and fuel are in the «OFF» (OFF). Set the cultivator horizontally to avoid fuel spillage. Steam of gasoline or spilled gasoline is fire and explosive!

For the convenience of transporting the cultivator, use the packaging in which it is sold. Fix the box to avoid overturning the cultivator sideways during transportation. Drain / run fuel before moving.

Use the transport wheels to move the cultivator on-site from place to place. Be careful - the cultivator has a lot of weight. Move carefully, do not put your feet under the cultivator.



A collision with parts of the system of release or a touch of a hot engine can provoke a strong burn or flash. Allow the engine to cool completely before moving, transporting or storing the cultivator.

STORAGE

Before installing the tiller deposited carefully inspect the device for possible faults

- the machine should always be in readiness for operation. Keep it in dry and non-dusty room, out of reach of children.

When installing for the lengthy storage (eg in winter), you should observe the following storage conditions:

- External engine parts, devices, cooling fins should be thoroughly cleaned of dirt.
- All moving parts should be lubricated with tiller oil or grease.
- The fuel tank and carburetor should be empty. For this work out fuel idling outdoors.
- Unscrew the spark plug and fill it in for 3 cm³ engine oil through a hole.

WASTE

When disposing the product please keep in mind that the tiller packaging, accessories and the device is made of suitable to the secondary use materials.

The current list of service centers can be found on a web-site of our exclusive representative:

www.ks-power.de



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