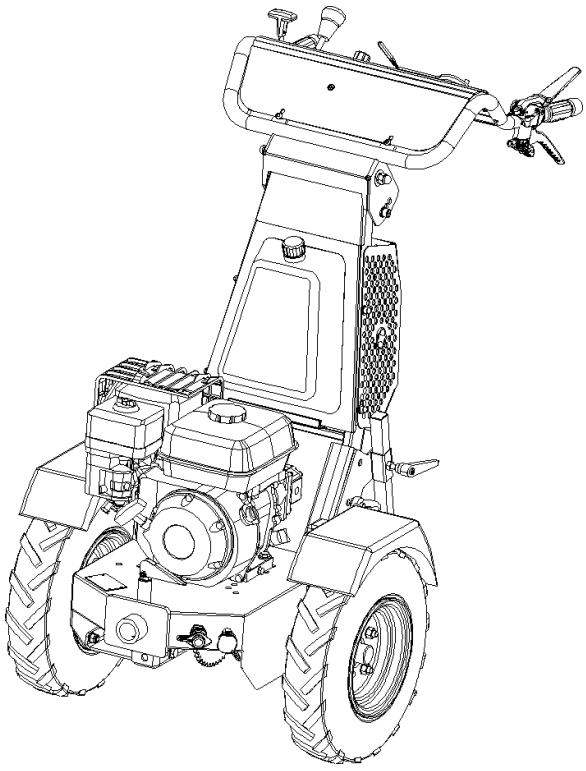
Original Operating Manual

Hydrostatic Two Wheel Tractor

K 1500



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Manufactured by
Kersten Arealmaschinen GmbH
Empeler Straße 95
D - 46459 Reeswww.kersten-maschinen.de

Distributed in UK by
Kersten (UK) Ltd Tel. 0118 986 9253
Progrees House 39 Boulton Road
Reading, RG2 0NH
www.kerstenuk.com

Table of Contents

1 Introduction

Dear Customer,

Thank you for choosing a quality product from Kersten.

This product has been manufactured according to the most up-to-date production methods and extensive quality assurance measures, because only when you are satisfied with your device, our goal is reached.

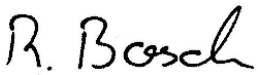
Before using this machine or implement for the first time, please read this manual thoroughly and thoroughly.

If you do not understand any of the information contained in this safety data sheet or the product-specific installation or operating instructions, please contact your sales representative or the machine manufacturer directly.

Keep this manual handy. If necessary, you can read important information and instructions.

Have fun with your Kersten device wishes you.

Dipl.- Ing. (FH) Robert Bosch



Managing Director

2 About this manual

The machine or implement is subject to technical progress. All information, illustrations and technical data are up-to-date at the time of publication. Changes in the sense of technical progress are reserved to the manufacturer at any time.

Therefore, no claims can be derived from the information and illustrations in this booklet.

2.1 Before commissioning

Since self-propelled implements and attachments can cause serious accidents or hazards if used improperly, the first time the Kersten implement is commissioned, it must be instructed by competent and authorized persons
absolutely necessary. The best way to familiarize yourself with its basic functions and its handling is to choose a free and level terrain for your first trip.

- **You reduce the risk of accidents on your part or third parties!**

For further information and difficulties of any kind, please contact the dealer, importer or directly to the manufacturer.

- **Be sure to read the safety instructions on the following pages!**
- **Read the operating instructions before commissioning!**
- **Pass on all safety instructions to other users!**

2.2 Notes on this operating manual Enumerations are marked with eye-catching points.

Example:

- Text
- Text

Instructions are marked according to the order in which they are to be carried out.

Example:

1. Text
2. Text

3 Safety instructions for hydrostatic drive tractors

The most important safety instructions in this manual can not cover all possibilities. It goes without saying that common sense and caution are factors that are not built into a machine but must be brought by the person who uses and maintains the machine.

In order to keep the accident risk as low as possible, please observe the following subchapters.

3.1 Intended use

- The towing vehicle as well as the devices approved by the manufacturer are suitable for the respective usual or common use and work in the agriculture and forestry, as for example. Green area and plant maintenance as well as built for the winter service.
- Any other use is considered improper use. The manufacturer is not liable for damage resulting from this, the risk being solely borne by the operator.
- Proper use also includes compliance with the operating, maintenance and service conditions specified by the manufacturer.
- The towing vehicle may only be used, maintained and repaired by persons familiar with it and aware of the dangers.
- The relevant accident prevention regulations as well as the other generally recognized safety and occupational health rules must be observed.
- Unauthorized modifications to the machine lead to the exclusion of liability of the manufacturer for the resulting damage.

3.2 General safety and accident prevention regulations

3.2.1 Basic rules

- In addition to the instructions in this operating manual, observe the general valid safety and accident prevention regulations!
- The towing vehicle must not be operated by persons under the age of 16, not even under the supervision of an adult! Children and adolescents should be instructed, not with to play the device.
- Only trained personnel or persons may use this machine!
- When using public traffic routes, observe the relevant regulations!
- The tiller is not approved for public transport.
- The clothing of the user should be tight. Avoid loose-fitting clothing and wear sturdy shoes or safety shoes!
- Only work in good visibility and light conditions!
- The attached warning and information signs provide important information for safe operation; the attention serves your safety!
- For transport on motor vehicles or trailers outside the area to be machined, the motor must be switched off!

- Be careful with rotating tools - safety distance!
- Be careful with trailing tools. Wait for work on these until they stop completely!
- There are crushing and shearing points on driven parts!
- The transport of persons and objects is prohibited!
- Driving behavior, steering and possibly braking capability as well as tilting behavior are influenced by mounted or attached devices and load. For this reason, only implements approved by the manufacturer may be used. The working speed must be adapted to the respective conditions.
- Do not make any changes to the engine's upper idle speed. Too high a speed increases the risk of accidents.
- Unauthorized conversions that endanger the operational safety of the machine are prohibited!
- Check the machine for operational safety before each use!

3.2.2 Work and danger area

- The user is responsible to third parties in the work area!
- Staying in the danger area of the machine is prohibited!
- Check the near range before starting up. Pay special attention to children and animals. Ensure sufficient visibility!
- Before starting work, remove foreign objects from the surface to be worked. Pay attention to other foreign objects during work and eliminate them in good time.
- When working in enclosed areas, the safety distance to the border must be maintained so as not to damage the tool.
- When working in the immediate vicinity of public roads and paths, these should not be approached if possible, as there is a risk of injury to third parties due to flying objects.
- When working on public roads and squares or in the immediate vicinity, warning and danger signs should be set up in order to attract the attention of third parties.

3.2.3 Before starting work

- Before starting work, please familiarize yourself with all the devices and actuators as well as their function and make sure that all safety devices are properly installed and in the protective position! It's too late during the work assignment!
- Above all, learn how to stop the engine quickly and safely in an emergency.

3.2.4 Starting the machine

- When starting the motor, all drives must be switched off!
- Do not run the engine indoors!
- Do not step in front of the single-axle tractor or the implement to start the engine.
- Do not use jumper fluids when using electric jump start (jumper cable). There is a danger of explosion!

3.2.5 During operation

- Never leave the operating position on the guide rail while driving!
- Never adjust the operating handle while driving - risk of accident!
- The transport of persons and objects is prohibited!
- If, for example, the attachment has caught a foreign object and blocked it, stop the engine and clean the attachment with a suitable tool! Always switch off the engine when handling or cleaning the implement!
- Do not leave the operating station until all tools of the attachment have come to a standstill!
- In the event of damage to the self-propelled implement or attachment, stop the engine immediately and have the damage repaired.
- If the steering fails, stop the self-propelled implement immediately and stop the engine. Have the fault rectified immediately.
- If there is a risk of slipping on sloping ground, the implement carrier must be secured by an escort with a pole or a rope. The escort must be located above the vehicle at a sufficient distance from the work tools! For the helper, it is recommended to wear crampons.
- If possible, always drive across (horizontally) to the slope!
- Only drive on rough and dry ground on steep slopes! Moisture and rain increase the risk of slipping out and slipping.
- On steep slopes, lattice wheels or sprockets must be used to prevent the tractors from slipping off.
- In emergency situations, if, for example, the machine slips sideways in the slope, always release the handles! You as an operator do not manage with their physical strength to prevent the cultivator on slipping and are otherwise carried away.

3.2.6 Leaving the machine

- When stopping the machine, close the fuel cock (if present)!
- By using wheel chocks or, if necessary, by applying the parking brake, secure the machine from rolling away when leaving the vehicle.
- Secure the device against unauthorized use!
- Switch off the engine and, if present, remove the ignition key or the spark plug connector!
- Never leave the machine unattended while the engine is still in operation!

3.2.7 Screw connections and tires

- When working on the wheels, make sure the device is safely parked and secured against rolling away!
- Regularly check nuts and bolts for tightness and retighten if necessary.
- Repair work on the tires must be carried out by qualified personnel and with appropriate mounting tools!
- If the tire pressure is too high, there is a risk of explosion!
- Check the air pressure regularly!

3.2.8 Coupling and uncoupling of implements

- Attach and remove attachments only when the engine is off, and the PTO is off.
- When replacing attachments and their parts, use suitable tools and Wear gloves.
- When mounting and dismounting, bring the required support equipment into the respective position and ensure sufficient stability.
- Secure the rear-mounted tow tractor with an attachment to prevent it from rolling (parking brake, wheel chocks).
- When attaching attachments, there is a risk of injury (crushing). Special care is necessary.
- Attach implements according to regulations and fix in the prescribed places.

3.2.9 Maintenance, cleaning and repair work

- Do not carry out maintenance and cleaning work on the running engine!
- Always remove the spark plug connector when working on the engine.
- If guards and working tools are subject to wear, they must be checked regularly and replaced if necessary.
- Damaged cutting tools must be replaced.
- When replacing cutting tools, use suitable tools and wear protective gloves.
- Only use original spare parts from the manufacturer, as these comply with the technical requirements and thus the risk of accidents is minimized!
- Cleaning with the high-pressure cleaner should be carried out so that the water jet is not held directly in bearings, turned parts, grease nipples, shaft seals, wheel hubs, etc. After each cleaning with the high-pressure device, the lubrication points must be re-greased. In the case of infringement, the right to guarantee expires!
- Check the moving parts for ease of movement and regrease if necessary!
- After maintenance and cleaning work, be sure to replace the guards and put them in the protective position!
- To avoid the risk of fire, keep the machine clean!
- Regularly check nuts and bolts for tightness and retighten if necessary.
- When carrying out maintenance, cleaning and repair work on the lifted device, always make sure that it is protected by suitable support elements!

- Before carrying out any repairs, make sure that the hydraulic system is depressurised, because fluids under pressure can penetrate the skin and cause serious injuries! Therefore
  See a doctor immediately - danger of infection!
- Repairs may only be carried out by qualified personnel.
- When working on the electrical system, always remove the earth strap from the battery!
- Check the hydraulic hose lines for damage and aging at regular intervals and replace if necessary.
- When welding the tractor or mounted equipment, disconnect the battery.
- Repair work such as welding, grinding, drilling etc. must not be carried out on load-bearing and other safety-related parts such as frames, axles, etc.

3.2.10 Engine, fuel and oil

- Before refueling, switch off the engine and remove the ignition key (if available)!
- Do not top up with fuel and do not spill fuel (use a suitable refilling aid). If necessary, take up spilled fuel immediately.
- Dispose of oils, fuels and filters separately and properly!
- When handling fuel, caution is required, increased risk of fire. Never refuel near open flames, hot engine parts, and sparks when flying. Do not smoke when refueling!

3.2.11 Electrical system and battery

- When working on the electrical system, always disconnect the battery (negative pole) (if present).
- Make sure the connection is correct - first positive pole and then negative pole!
- Be careful with battery gases - Explosive!
- Avoid sparks and open flame near batteries.
- Take care when handling battery acid - corrosive!
- Always provide the positive pole with the intended cover or terminal protection cap.
- Caregivers of pacemakers must not touch the live parts of the ignition system while the engine is running!

3.3 Pictograms used

Explanation of the pictograms used:

Before commissioning read and observe the operating instructions and safety instructions.

Switch off the engine and remove the spark plug connector before carrying out any repair, maintenance or cleaning work.

Never open or remove protective devices while the engine is running!

Touch machine parts only when they have come to a complete stop.

Danger from passing parts while the engine is running - keep safety distance.

Follow the instructions in the technical manual.
Smudge!

3.4 Warnings and safety instructions for filled lead – acid batteries

- Follow the instructions on the battery and in the operating instructions.

- Use eye protection.

- Keep children away from acid and battery.

Explosion hazard:

- When charging batteries, a highly explosive bang mixture is produced, so please note the following:

- Feuer, Funken, offenes Licht und Rauchen verboten.
- Fire, sparks, open light and smoking prohibited. Avoid sparking when handling cables and electronic devices, as well as through electronic charging.
- Avoid short circuits

Burn Hazards:

- Battery acid is highly corrosive, therefore:
- Wear protective gloves and eye protection.
- Do not tip the battery, acid can escape from the degassing openings.

First aid:

- Acid splash in the eye; immediately rinse with clear water for several minutes. Then seek medical attention immediately.
- Acid splashes on the skin or clothing; Immediately neutralize with an acid converter or soapy water and rinse with plenty of clear water.
- In case of drunk acid, consult a doctor immediately.

Warnings:

- Do not expose batteries to direct daylight unprotected.
- Discharged batteries can freeze, therefore store frost-free.

Disposal:

- Hand over used batteries at a collection point.
- During transport, the following instructions for use must be observed.
- Never dispose of old batteries in the household waste.

3.5 Instructions for Use for Starter Batteries

1. Removal and installation of the battery

- Before removing the battery, switch off the engine and all power consumers.
- Avoid short circuits due to tools.
- When removing, first disconnect the negative pole (-), then the positive pole (+).
- Clean battery terminals and pole terminals and treat with acid-free grease.
- Clean the footprint / support before installing the battery.
- Tighten the battery firmly.
- When installing, first connect positive pole (+), then negative pole (-).
- Make sure that the pole terminals are secure.
- Leave at least one gas outlet unlocked.
- This also applies to the return transport of used batteries.

2. External loading

- Read and follow the operating instructions of the charger manufacturer!
- Check electrolyte level before charging and level if necessary.
- Disconnect the battery cable and remove the battery from the vehicle.
- Ensure good room ventilation.
- Use only suitable DC chargers.
- Connect the positive pole (+) of the battery to the plus output of the charger. Connect negative pole (-) accordingly.
- Only switch on the charger after the battery has been connected and switch off the charger after charging.
- Charging current should be 1/10 Ah of battery capacity.
- Interrupt the charge if the acid temperature exceeds 55 ˚C.
- Battery is fully charged if charging voltage does not increase within 2 hours.

3. Maintenance

- Keep the battery clean and dry.
- Do not use any improvers.
- Do not open the battery.
- If the starting power is insufficient, recharge the battery.

4. Start Help

- Nur genormte Starthilfekabel verwenden und deren Gebrauchsanweisung beachten.
- Use only standardized jump leads and observe their instructions for use.
- Use only batteries of the same nominal voltage.
- Switch off the engine from the helping vehicle.
- First connect both positive terminals (+) with the red jumper cable. Then connect a pole tongs to the negative pole (-) of the dispenser battery. Then clamp the second pole on one of the bare spots of the needy single-axle tractor.
- Start the helping vehicle, then max. The engine of the auxiliary towing vehicle max. Start 15 seconds.
- Disconnect the cable in reverse order.

5. Decommissioning

- Store the battery in a cool place.
- When decommissioning, disconnect the negative pole (-).
- Regularly check the charge status of the battery and recharge if necessary.
- First connect both positive terminals (+) with the red jumper cable. Then connect a pole tongs to the negative pole (-) of the dispenser battery. Then clamp the second pole on one of the bare spots of the needy single-axle tractor.

4 Disposal

The equipment must be disposed of in accordance with local, state, or local regulations.

Depending on the material, you can dispose of the parts as residual waste, special waste or recycling. The company Kersten Arealmaschinen GmbH assumes no disposal

5 Warranty

The device is accompanied by a sales message, which among other things determines the time for the start of the warranty period. When selling the device, please complete the sales message completely and send it back to us within 14 days. If warranty claims are asserted without us having received a sales notice, no warranty service will be provided.

Warranty claims should be submitted promptly, but no later than six weeks after the occurrence of the damage, giving details of the purchase data, otherwise no warranty service will be provided. Complaints must be confirmed by the company Kersten Arealmaschinen GmbH. Wear parts are excluded from the warranty. Furthermore, the warranty expires due to improper operation, when performing no or incorrect maintenance work, when using inadmissible equipment and when using non-original spare parts.

6 Recommendations

6.1 Lubricants

For engine and gearbox, use the specified lubricants (see under "Technical data").

For "open" lubrication points or nipple points, we recommend using biolubricant oil or biolubricant grease. With the use of biolubricants you act ecologically correct, protect the environment and promote the health of people, animals and plants.

6.2 Fuels

The built-up B & S or Honda engine can be easily operated with commercial unleaded normal and premium gasoline and leaded premium gasoline.

Do not add oil to the gasoline.

If unleaded petrol is used for the environment, engines that are to be decommissioned for more than 30 days should have their fuel drained completely to avoid resin residues in the carburettor, fuel filter and tank, or to add a fuel stabilizer to the fuel.

6.3 Maintenance and repair

Your dealer has trained mechanics who perform proper maintenance and repair. You should only carry out major maintenance work and repairs yourself if you have the appropriate tools and knowledge of machines and internal combustion engines.

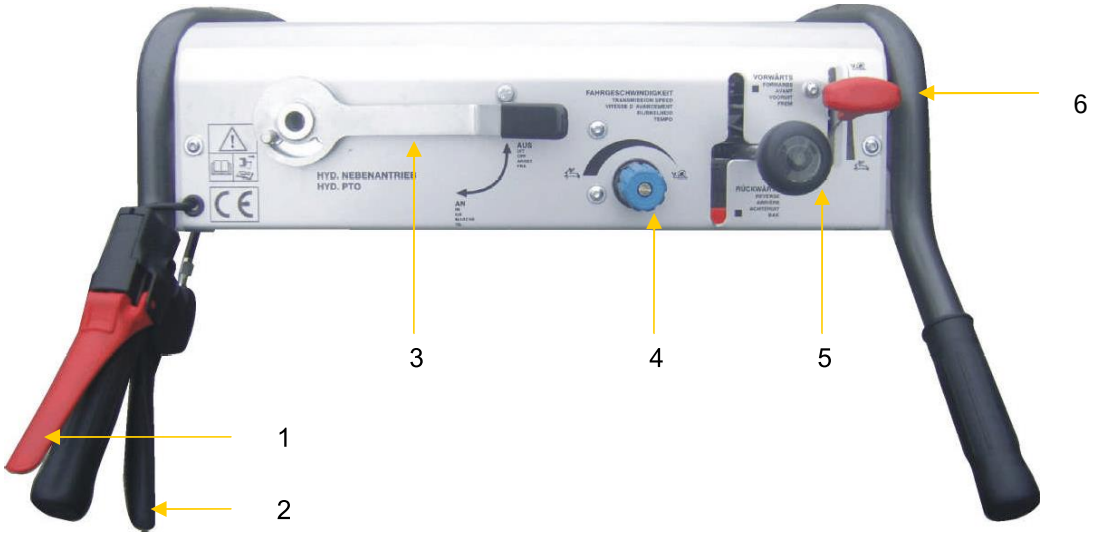


Figure 7.1

7 Operation of the self-propelled implement

7.1 Start combustion engine

- To start the engine, the drive lever (Fig.7.1, item 5) must be in the recess of the shift gate and the lever for the PTO (Fig.7.1, item 3) in the "off" position.

If the levers are not in the position described above, the ignition of the engine is interrupted and the engine does not start.

- During the starting process, it is forbidden to operate the deadman switch (Fig.7.1;
- To start the engine, refer to the respective Honda engine owner's manual.

7.2 Driving off

- Press the throttle lever (Fig.7.1, item 6) approx.
- Press down the deadman switch (Fig.7.1, item 1) and keep it pressed. Similarly, the lower lever (Fig.7.1; Pos.2), which works like a conventional "drive clutch" of the car, pull and pulled.
- Make sure that nobody is in front of and behind the machine!
- For the forward movement push the driving lever (Fig.7.1, Pos.5) upwards and for the reverse drive the driving lever downwards.

Make sure that the drive lever is always in its end position!

- After selecting the direction of travel, slowly release the lower lever (Fig.7.1, item 2). The faster the lever is released, the faster the machine starts to move. To spare the components, a jerky start should be avoided.
- If the machine is moving too fast or too slow, it can be changed by pressing the rotary knob (Fig.7.1;

The presetting of the speed and the preselection of the direction of travel may only be carried out when the single-axle system is at a standstill, by operating the lower lever (Fig.7.1, item 2).
Respectively!

- The throttle lever (Fig.7.1, item 6) influences the engine speed and thus also the driving speed. Always try to drive with the lowest speed required, this protects material and the environment.
- The auxiliary drive is switched on with the lever (Fig.7.1, item 3) "On" or "Off". This lever locks automatically.

7.3 Parking the internal combustion engine

- Before switching off the combustion engine, make sure that the drive lever (Fig.7.1, item 5) in the recess of the shift gate and the lever for the PTO (Fig.7.1, item 3) in the "off" position are located.
- Place the throttle lever (Fig. 7.1, item 6) in the neutral position and allow the engine to idle for about ½ minute.
- Set the engine off switch located on the internal combustion engine to "0".
- Close the fuel tap
- Secure the towing vehicle against unauthorized use and, if necessary, remove the ignition key.
- When leaving, secure the device against rolling away, by using wheel chocks or, if necessary, by applying the parking brake..

Tip:
In case of prolonged downtime, do not stop the engine with the engine off switch, but close the fuel cock and let the engine run until it comes to a standstill by itself. Thus, the carburettor is empty and no gumming can occur.
This procedure may not be used in confined spaces, otherwise it exists
Choking hazard. Basically pay attention to adequate ventilation!

7.4 Height and inclination angle adjustment of the hand rail

- In order to guarantee the operator an ergonomically optimal working height, the height of the handrails (Fig.7.2, item 1) can be adjusted at two different points.

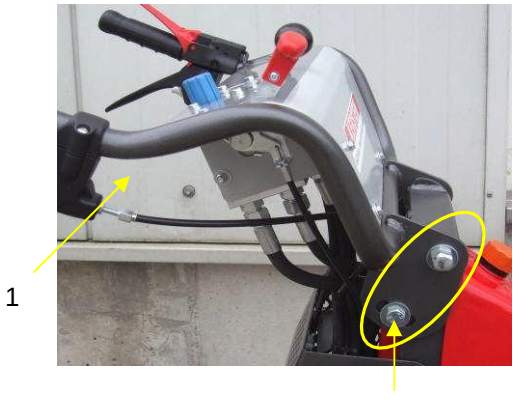


Figure 7.2

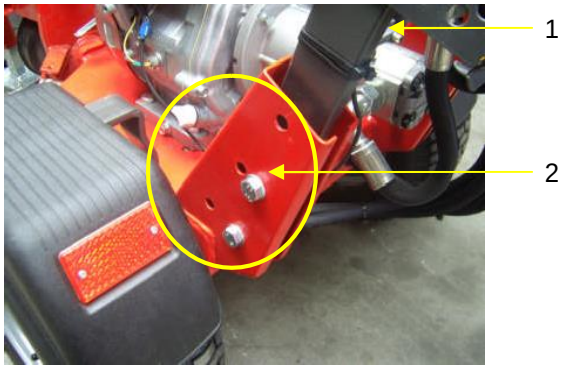


Figure 7.3

- Durch das Lösen der oberen Schrauben und Herausnehmen der unteren Schrauben (Abb. 7.2; Pos.2) links und rechts am Handholm, kann dieser in zwei weiteren Positionen fixiert werden. Werkseitig ist die mittlere Position eingestellt.
- Sollte die Höheneinstellung über den Handholm nicht ausreichen besteht weiter die Möglichkeit, den Führungsholm (Abb.7.3; Pos.1) zu verstellen. Dies geschieht durch das Lösen und Herausnehmen von vier Schrauben (Abb.7.3; Pos.2). Werkseitig wird der Führungsholm jeweils in den beiden unteren Bohrungen montiert.
- Bei der Verwendung von leichten Anbaugeräten empfiehlt es sich den steileren Neigungswinkel des Führungsholmes zu nutzen. Dies geschieht ebenso durch das Lösen und Herausnehmen von vier Schrauben (Abb.7.3; Pos.2).

7.5 Securing the machine during transport

- Pay attention to the trailer load of the towing vehicle and the permissible total weight of the trailer!
- Suitable loading ramps with sufficient load-bearing capacity must be used for loading the machine.
- The ramps must be secured against slipping.
- The machine must be secured against rolling during transport.
- If present, engage the parking brake of the drive wheels.
- Switch off the engine and close the fuel tap.
- Before unloading the machine make sure that there is no obstacle immediately before the ramps on the ground, otherwise there is a risk of collision. When unloading several machines, these are far enough to drive out of the loading zone.

8 Maintenance

8.1 General maintenance instructions

- Personal injury or damage to the machine may occur.
  Check all safety-related parts before every use of the machine.
- Oil changes must be made according to the recommendations of the respective engine manufacturer.
- Check the hydraulic connections for leaks before each use.
- **High pressure fluids (such as hydraulic oil and diesel fuel) can penetrate the skin and cause serious injury! Therefore, seek medical attention immediately - risk of infection!**
- The hydraulic system is operated with biodegradable oil.
- The machine must be regularly serviced.
- Dispose of oils, fuels and filters separately and properly!
- When working on the electrical system, disconnect the earth connection from the battery!
- Repairs, maintenance and cleaning work as well as the elimination of malfunctions must always be carried out with the drive switched off and the engine stationary. Remove ignition key or spark plug connector! After carrying out this work, replace all protective devices!
- If the machine is transported in a different way than with its own drive, this must be done with the motor switched off!
- Regularly check nuts and bolts for tightness and retighten if necessary.
- When carrying out electrical welding work on the tractor and attached equipment, disconnect the cables at the generator and at the battery!
- Only use original spare parts from the manufacturer!
- After the first 5 hours of operation, check all screw and bolt connections.
- Lubricate or lubricate all moving parts regularly.
- Check hydraulic connections for the first time after 5 operating hours, retighten if necessary.

Only tightening has no success!

Release a leaking hydraulic fitting first, then move the hose or fitting, and then retighten the fitting.

8.2 Daily maintenance

- Before each use, the safety elements and moving parts must be checked for wear.
- Check the hydraulic oil level before each use. To do this, unscrew the cap from the tank and visually check whether the oil in the tank easily covers the horizontally arranged plate.
- Check the oil level and the air filter of the engine for dirt (see operating instructions of the engine manufacturer).
- Before and during use, especially during mowing work, constantly check the protective grid for the intake of cooling air and keep it free of dirt and parts of plants sucked in. In continuous operation with a clogged cooling system, the engine becomes too hot and can be damaged.
- Do not spray the engine with water, use a brush or compressed air.
- Check hydraulic connections and lines.
- Check the air pressure of the drive wheels.
- Carry out a test run before each use.
- Clean the unit after each use.

8.3 Maintenance after 20 operating hours or longer downtime

- At regular intervals and at the beginning and end of the season, the moving parts of the unit must be greased or oiled.
- There is a grease nipple below the device receptacle on the basic unit, which it regularly lubricates.
- Regularly grease the mounting of the attachment or the pick-up tube of the self-propelled work machine.
- Lubricate or lubricate Bowden cables as required
- Hydraulic oil and filter change for the first time after 20 operating hours, then every 100 operating hours. Change the hydraulic oil filter at the same time interval as the oil change. (used oil type see chapter for technical data)

8.4 Maintenance after 100 operating hours

- Fan housing after every 100 operating hours or min. Take off once a year - preferably before the season - and clean the cooling fins on the cylinder and cylinder head as well as the baffles, cooling air strainer and oil cooler necessary for air circulation.
- Hydraulic oil and filter change for the first time after 20 operating hours, then every 100 operating hours. Change the hydraulic oil filter at the same time interval as the oil change. (used oil type see chapter for technical data)
- Cleaning the spark plug of soot deposits with a wire brush followed by checking the distance between the electrodes. The electrode distance should be approx. 1 mm. Renew spark plugs after 200 operating hours.
- Clean the air filter cartridge at the latest after 100 hours of operation and in very dusty conditions after a few hours

8.5 Storage

If the machine is not used for a long time, the following measures are recommended:

1.) Carry out cleaning

2.) Preserve the motor (observe the instructions of the motor manufacturer)!

- Motor ca. 1 Minute laufen lassen
- Completely drain fuel or top up fuel tank, add fuel stabilizer to fuel.
- Run the engine for approx. 1 minute
- Add one teaspoonful (approx. 0.03 ltr.) Of engine oil to the spark plug opening and then slowly crank the engine.
- Reinstall the spark plug and do not attach the spark plug connector. Pull on the starter handle until the compression resistance is felt, thus the valves are closed.
- Every two to three weeks, crank the engine slowly and pull it again until the compression resistance is felt.

3.) Jack drive wheels

- Using wooden blocks, jack up the machine so that the drive wheels are not restingon the ground. Pay attention to stability!

4.) Subordinate the machine

- To prevent corrosion, protect the machine from weathering. Do not store the machine in damp rooms, fertilizer storage or stables.

5.) Maschine mit einem Tuch oder Ähnlichem abdecken.

9 Technical Data

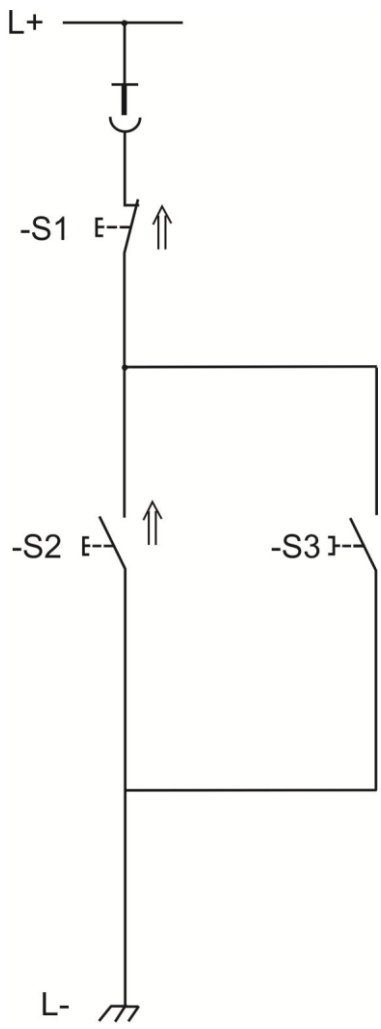
Technical specifications	
Type	K 1500
engine	Honda gasoline engine
power	4.8 kW (6.5 hp)
Max. Torque	13.2 Nm / 2,500 rpm
capacity	196 cc
Upper idle speed	3,400 min-1
spark plug	NGK BPR 6 ES
Engine oil	approx. 0.6 l multi-grade oil
fuel	SAE 10W-30 API SJ (or higher) is recommended for general use
Fuel tank	see chapter "Recommendations"
fuel consumption	3.6 liters
air filter	313 g / kWh
starting device	Dry filter element
E-starting device	recoil
battery	12V
Zapf Elle	12 V 90 AH
PTO	unavailable
Hydraulic oil tank	hydraulic max. approx. 10.5 l at 210 bar and 3,400 min-1
hydraulic oil	about 7 liters
Viscosity grade according to ISO	Synthetic Ester Bio-hydraulic oil Avia Syntofluid N68 (recommended)
driving speed	VG 68
driving speed forward	0 - 7 km / h (infinitely variable)
driving speed forward	0 - 7 km / h (infinitely variable)

- Reserve technical changes! -

Technical specifications		
Parking brake	Optionally mechanically switchable	
Handlebar	Height adjustable and vibration damped	
Steering	Unavailable	
Tire pressure at:	Standard values (maximum tire pressure 1.5 bar - risk of explosion) max. 1.5 bar	
4.00 - 8	110 kg (Without tires)	
Weight of basic unit	4.00-8 default 7,5 kg	16x6,5-8 10,2 kg
	685 mm with 4.00-8 Tires	
Weight Tires (set)	< 2.5 m / s² left handle with sweeper measured 2.7 m / s² right handle with sweeper	
Wide basic unit	95,8 db(A)	
Handarmschwingungen	82,0 dB(A)	

- Reserve technical changes! -

10 Wiring Diagram - Safety Device



Reserve technical changes!

Name	Used
- S1	- S1 deadman lever
- S2	- S2 driving lever
- S3	- S3 hydraulic auxiliary drive
- L+	- L + ignition coil, engine
- L-	- L mass

11 Fault cause and remedy

This chapter describes in more detail the most important faults which can occur during operation on the self-propelled implement. Faults which require major intervention must always be rectified by your specialist workshop.

Observe safety instructions!

Malfunction:	Possible causes:	Remedy:
Benzin Motor:		
Gasoline engine does not start	- Spark plug connector not plugged.	Insert plug connector
	- Motor-off switch on "0"	Move choke lever to choke position Switch motor off switch to position "I"
	- Safety circuit not in Start position	Bring safety circuit into starting position
	- Fuel tank emply or bad fuel	Fuel tank with fresh fuel füllen
	- Clogged fuel line	Fuel tank with fresh fuel
	- Spark plug defective	Clean, adjust or replace the spark plug
	- Engine too much fuel (flooded)	Dry the spark plug, clean and start with FULL GAS
	- Motor off line defective	Check line and connections
	- False air due to lose carburetor and suction line	Tighten fixing screws
Gasoline Engine hat Aussetzer	- Engine is running in the CHOKE area	Move the choke lever to the operating position
	- Ignition cable loose	Plug the spark plug connector firmly onto the ignition cable. Clamp the ignition cable attachment
	- Fuel line clogged, or Bad fluel	Fit the spark plug plug firmly onto the spark plug. Change fuel filter or fresh. Refuel your fuel
	- Ventilation in the fuel tank cover congested	Replace fuel tank cover
	- Water or dirt in the fuel system	Drain and clean the fuel, refuel with fresh fuel Clean or replace the air filter
	- Air filter dirty	
	- Carburetor adjusted	Adjust carburetor
Benzin-Motor gets too hot	- Too little engine oil	Immediately refill engine oil
	- Cooling air system restricted	Clean fan grille, internal
	- Air filter dirty	Clean cooling fins Clean or replace the air filter
	- Carburettor not set correctly	Adjust carburetor
Benzin-Motor has dropouts at high speeds Zahlen	- Ignition distance too low	Adjust spark plug
	- Idle mixture not corrects adjusted	Adjust carburetor
Gasoline engine often idles out	- Ignition distance too high, Spark plug defective	Set or replace spark plug
	- Carburettor not set correctly	Adjust carburetor
	- Air filter dirty	Clean or replace the air filter

Malfunction:	Possible causes:	Remedy:
Benzin Motor:		
Gasoline engine operates irregularly Moderate	- Controller linkage dirty, jammed	Clean governor linkage
Gasoline engine does not go out in Check earth contact stop position	- engine stop line defective, - missing sizes	Check line and connections Check earth contact
Petrol engine Too little power	- Luf Air filter dirty - Cylinder head gasket loose or Seal damaged Renew gasket - Too little compression	Clean or replace the air filter Tighten the cylinder head gasket Renew gasket Have engine checked
E-Start equipment:		
E-Starter it does not work	- Battery emply - Fuse defective - Broken wire harness electric start	Batterie laden bzw. austauschen Sicherung austauschen Check wiring harness and electric starter

12 EG – Konformitätserklärung

CE Déclaration de conformité
EC Declaration Conformity
EG conformiteitsverklaring

D	F	GB	NL
Wir	Nous	We	Wij

Kersten Arealmaschinen GmbH
Empeler Straße 95
D- 46459 Rees

erklären, dass das Produkt	déclarons que le produkt	herewith declare produit	verklaren dat het that the product
Einachsschlepper	**Porte-Outils**	**Tool Carrier**	**Werktuigdrager**

K 1500 G – GE

mit allen einschlägigen Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG in Übereinstimmung ist.	satisfait à l'ensemble de la directive machines 2006/42/CE.	fulfiles all relevant provisions of Directive 2006/42/EC.	voldoet aan alle toepasselijke bepalingen van EG-Machinerichtlijn 2006/42/EG.
Die Maschine ist auch in Übereinstimmung mit allen einschlägigen Bestimmungen der folgenden EG-Richtlinien:	Cette machine satisfait également à toutes les dispositions pertinentes des directives CE suivantes:	The machinery is also in compliance with all relevant provisions of the following EC directives:	De machine is ook in overeenstemming met alle toepasselijke bepaligen van de volgende EG-richtlijnen:

-

Weiterhin wurden folgende Normen angewarden wendet:	En outre, les normes et spécifications techniques suivantes ont été utilisées:	The following harmonised standards apply:	Volgende geharmoniseerde normen gehanteerd:

DIN EN 12733
EN ISO 12100:2010

Herr	Monsieur	Mr.	De heer

Dipl. Ing. (FH) Robert Bosch
Empeler Straße 95
D-46459 Rees

ist bevollmächtigt die technischen Unterlagen zusammenzustellen.	est autorisé à constituer la documentation Technique conformément à l'annexe VII A.	is authorised to compile the technical file according to Annex VII A.	is gemachtigd het technische dossier samen te stellen.

Rees, 28.04.2014

R. Bosch

Geschäftsführer	Directeur	Managing Director	Bedrijfsleider

Kersten

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Progress House
39 Boulton Road Reading, RG2 0NH
www.kerstenuk.com - info@kerstenuk.com