OPERATOR'S MANUAL

Vibro CropInter-Row Cultivator





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1 - GENERAL INFORMATION

Note to the user

This manual has been prepared to assist you in the correct procedure to run in, to drive, to operate, to adjust and to maintain your new implement.

This implement has been designed and built to give maximum performance, economy and ease of operation under a wide variety of conditions.

Prior to delivery, your implement was carefully inspected both at the factory and by your dealer to make sure that it reaches you in optimum condition. To maintain this condition and assure trouble-free operation it is important that routine services, as specified in this manual, are carried out at the recommended intervals.

Read this manual carefully (especially Chapter 2 that covers the safety information) and keep this manual in a convenient place for future reference. DO NOT operate or permit anyone to operate or service this implement until you and/or other persons have read this manual. Read the manual, it will save you time and hassle later. Lack of knowledge can lead to accidents. Employ only trained operators who have demonstrated the ability to operate and service this implement correctly and safely. Contact your dealer for assistance providing the required training to your operators. Contact your dealer to obtain additional manuals or alternate language versions.

If at any time you require advice that concerns your implement, do not hesitate to contact your authorized dealer. He has factory-trained personnel, genuine service parts and the necessary equipment to carry out your service requirements.

NOTICE: This implement has been designed and built in line with the requirements put forward by the European Directives 2006/42/EC and 2014/30/EU.

Always use genuine KONGSKILDE - SEKO SRL Service Parts or parts that match at least the same quality, reliability and functionality as the equivalent original Service Parts when you service and repair your implement and do not modify your implement without a written permission of the manufacturer. Failure to do so will void the responsibility of the manufacturer.

Check local road legislation before you drive the implement on public roads.

When you operate interchangeable implement, make sure that the implement complies with the product directives and regulations.

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As this publication is distributed throughout our international network, the implement illustrated, either as standard or as an accessory, may vary according to the country in which the implement is to be used. Low specification configurations, as chosen by the customer, may deviate from the specifications given.

Several figures in this operator's manual show the safety guarding or the additional guards, legally required by certain countries, open or removed to better illustrate a particular feature or adjustment. The implement must not be used in this condition. For your own safety, make sure that all guards are closed or replaced before you operate the implement.

OWNER ASSISTANCE

We at KONGSKILDE - SEKO SRL and your KONGSKILDE - SEKO SRL dealer want you to be completely satisfied with your investment. Normally, your dealer's Service Department will handle any problems with your implement. Sometimes however, misunderstanding can occur. If your problem has not been handled to your satisfaction, we suggest you to contact the owner or General Manager of the dealership, explain the problem and request assistance. When additional assistance is needed, your dealer has direct access to our branch office.

COMPANY POLICY

Company policy, which is one of continuous improvement, reserves the right to make changes in design and specification at any time without notice and without obligation to modify units previously built.

All data given in this book is subject to production variations. The information in this publication is provided on the basis of information that was available at the time that the manual was written. Settings, procedures and other items can change. These changes can affect the service that is given to the implement.

Dimensions and weights are approximate only and the illustrations do not necessarily show the implement in standard condition. For exact information about any particular implement please consult your dealer. Make sure that you have the most current and complete information from your dealer before you start any job.

ACCESSORIES AND OPTIONS

Your implement has been designed to operate in a wide variety of soils/crops and conditions. Nevertheless additional equipment may, in certain cases, be required to improve the implement performance. A list of this additional equipment is given in the "Accessories" chapter in this manual. Use only those accessories designed for your implement.

PARTS AND ACCESSORIES

Genuine KONGSKILDE - SEKO SRL parts and accessories have been specifically designed for KONGSKILDE - SEKO SRL implements.

We would like to point out that "non-genuine" parts and accessories have not been examined and released by KONGSKILDE - SEKO SRL. The installation and/or use of such products could have negative effects upon the design characteristics of your implement and thereby affect its safety. KONGSKILDE - SEKO SRL is not liable for any damage caused by the use of "non-genuine" parts and accessories.

Rely on your authorized dealer to supply you with genuine KONGSKILDE - SEKO SRL parts only. These parts are covered by our warranty and will give you the best performance.

See the parts catalog or browse the KONGSKILDE - SEKO SRL portal to find service parts for your implement.

When you order service parts, always quote the model and serial number printed on the Product Identification Number (PIN) plate.

LUBRICANTS

Your dealer sells a selection of specially formulated lubricants based on own engineering specifications.

Recommended lubricants for your implement are listed in the maintenance chapter.

WARRANTY AND LIABILITY

Warranty

This Warranty covers the product to which it was annexed at the time of purchase.

With this Warranty, you guarantee the product against any material or manufacturing defects for the duration of 12 MONTHS from the original date of purchase.

If during the warranty period there are defects in materials or workmanship (at the original date of purchase), we will repair or (at our discretion) replace the defective product or its components under the terms and conditions set out below, without any charge for the costs of spare parts. The service department reserves the right to replace defective products or their components with new or revised products or parts. All products and components replaced will become the property of the company KONGSKILDE - SEKO SRL.

Conditions

Warranty interventions will only be carried out if the defective product is presented within the warranty period together with the original sales invoice or a purchase receipt (showing the date of purchase, the type of product and the name of the retailer).

KONGSKILDE - SEKO SRL reserves the right to refuse warranty interventions in the absence of the aforementioned documents or in the event that the information contained therein is incomplete or illegible. This Warranty will lapse if the model or serial number shown on the product has been modified, deleted, removed or made illegible.

All parts shipped upon request of warranty will be invoiced and any recognition of the warranty will only be credited after receipt of the damaged piece and related verification by our Technical Department.

The Purchaser will be responsible for all charges relating to shipping, packaging and labour of both any defective parts and those recognised under warranty.

The charges deriving from the labour necessary for the replacement of the defective part and for the set-up of the machine are excluded from the warranty.

For petrol, diesel, electric, hydraulic engines, for hydraulic components for electric or electro-hydraulic control panels and in any case for all those components assembled on the machine but not manufactured by SEKO, the warranty conditions of each individual manufacturer apply.

The following are excluded from this Warranty:

- Periodic maintenance and repair or replacement of parts due to wear and tear;
- The consumable material (components that are expected to require periodic replacement during the useful life of a product, such as tools, lubricants, filters, etc.).
- Damage or defects due to use or improper treatment of the product, for purposes other than normal professional use;
- Damage or changes to the product resulting from improper use, including:
- Treatments causing damage or physical, aesthetic or superficial alterations;
- Incorrect installation or use of the product for purposes other than those envisaged or non-compliance with the instructions on installation and use;
- Improper maintenance of the product, not in accordance with the instructions on correct maintenance;
- Installation or use of the product that does not comply with the technical or safety regulations in force in the country where the product is installed or used;
- Condition or defects of the systems to which the product is connected or in which it is incorporated;
- Repair interventions or repair attempts by unauthorised personnel;
- Adjustments or modifications made to the product without prior written authorisation by the manufacturer, updating of the product exceeding the specifications and functions described in the instruction manual or modifications made to the product to make it comply with the national or local technical or safety standards in countries other than those for which the product was specifically designed and manufactured;
- Negligence;

 Fortuitous events, fires, liquids, chemicals or other substances, flooding, vibrations, excessive heat, inadequate ventilation, current surges, excessive or incorrect input supply voltage, radiations, electrostatic discharges, including lightning, other external forces and impacts.

Exclusions and limitations

Except as noted above, KONGSKILDE - SEKO SRL issues no warranties (express, implied, statutory or otherwise) regarding the product in terms of quality, performance, precision, reliability, suitability for a particular use or otherwise.

If this exclusion is not fully or partially permitted by applicable law, KONGSKILDE - SEKO SRL excludes or limits its warranties to the maximum extent permitted by applicable law.

Any warranty that cannot be completely excluded will be limited (within the terms permitted by applicable law) to the duration of this Warranty.

The only obligation KONGSKILDE - SEKO SRL under this Warranty is to repair or replace the products under these warranty terms and conditions KONGSKILDE - SEKO SRL disclaims all liability for loss or damage regarding products, services, this Warranty or otherwise, including economic or intangible losses – the price paid for the product – loss of profits, income, data, enjoyment or use of the product or other associated products – indirect, incidental or consequential loss or damage. This applies to loss or damage resulting from:

Impairment of the operation or failure of the product or associated products as a result of defects or unavailability during the time it is held KONGSKILDE - SEKO SRL or at other authorised assistance centre, resulting in downtime, loss of useful time or interruption of activity;

Imperfect performance of the product or associated products.

This applies to losses and damages under any legal theory, including negligence and other wrongful acts, breach of contract, express or implied warranties and strict liability (even if KONGSKILDE - SEKO SRL or the authorised assistance centre have been informed of the possibility of such damages).

Where applicable law prohibits or limits these disclaimers, KONGSKILDE - SEKO SRL excludes or limits its liability to the maximum extent permitted by applicable law.

Some nations, for example, prohibit the exclusion or limitation of damages due to negligence, gross negligence, willful default, fraud, and other similar acts. The liability of KONGSKILDE - SEKO SRL under this warranty shall in no event exceed the price paid for the product, it being understood that, where applicable law imposes higher limits of liability, such limits shall apply.

The purchaser must inform the manufacturer, in writing, of any defect that occurred within 8 days of the occurrence of the same.

Reserved legal rights

Applicable national laws grant purchasers statutory rights in relation to the sale of consumer products.

This warranty does not affect the rights of the purchaser established by the laws in force, nor the rights that cannot be excluded or limited, nor the rights of the customer against the retailer. The customer may decide to assert the rights due at its sole discretion.

The Court of Padua (Italy) is competent for any dispute.

CLEANING YOUR IMPLEMENT

When you use a high pressure washer, do not stand too close to the implement and avoid directing the jet at electronic components, electrical connections, breathers, seals, filler caps, and so on.

Clean decals only with a soft cloth, water and a gentle detergent. DO NOT use solvent, gasoline or other harsh chemicals to clean decals. Decals could be removed or get damaged.

DISASSEMBLY OR SCRAPPING

The critical condition of the equipment is the complete wear and tear of all components. When the costs of repair, restoration or replacement of the individual components and/or assemblies become economically impractical, a decision is made on decommissioning the equipment.

When your implement is taken out of service because it is damaged beyond repair or has reached the end of its useful life, disassembly, scrapping and/or recycling of components must be performed only by a qualified technician with service instructions, and in compliance with local law and regulations..

Intended use

KONGSKILDE - SEKO SRL implement can only perform the usual work in agriculture. Only connect the implement to a tractor that corresponds with the specifications of the implement and is legal to use.

The implement row cleaners are developed for agricultural work. Connect the implement only to agricultural tractors and drive by the hydraulic and electrical system on the agricultural tractor.

The implement is only intended for work the soil in between row crops like maize and sugar beets in order to mechanically clean out between the rows.

The implement is a rear-mounted row crop cleaner mounted on a parallelogram side shift frame, designed for mechanical row crop cleaning. The new intelligent solutions providing increased capacity, precision and userfriendliness.

The implement is self-adjusting during the work in the field due to the camera controlled side shift frame. The implement identifies and follows the rows in the field and adjusts itself when camera is active. These solution allows increase maximum working speed up to 10 km/h (6.2 mph).

The work must occur under reasonable conditions, or thorough agricultural knowledge and authorized operation, on a normal cultivation that has a reasonable extension without foreign matter and the like. The performance of the implement will depend on the crop, the condition of the field, the ground, and finally the weather.

Intended use implies that you observe the prescriptions concerning adjustment, operation and maintenance in the instruction manual. Observed altogether the safety instructions as well as common rules concerning technical safety, working practices and road safety. Also read the spare parts catalog and use original spare parts. If necessary contact an authorised workshop.

If you notice degradation of performance, contact your dealer for assistance. He may have useful information for improvements, or a kit may be available to enhance the performance.

With respect for the routine maintenance and with operating conditions, the assigned service life for the implement is minimum seven years.

Prohibited usage

NOTICE: DO NOT use this implement for another purpose than intended by the manufacturer (as described in the manual, shown by the decals, or in other product safety information provided with the implement). These information sources define the intended use of the implement

Any other use beyond the intended use is regarded as misuse and requires the authorization of the manufacturer. The manufacturer is not responsible for any damage that results from the improper use of the implement. The user bears that risk.

Contact your local dealer when you are not sure about the use or function of your implement in a particular application (for example crop, variety, unique conditions, etcetera) or you do not know if there is a need for special equipment or special precautions.

No parts must be fitted to this implement, which have not been released by KONGSKILDE - SEKO SRL. They might affect the implement operation, safety of the user or other people, stability or wear characteristics of the implement. They may also void the homologation approval obtained for your country and compliance with EC directives.

Do not make changes to the implement and its construction without the permission from the manufacturer. The manufacturer does not accept any responsibility for damages that results from unauthorized modification.

Electro-Magnetic Compatibility (EMC)

This machine complies strictly with the European Regulations on electro-magnetic emissions. However, interference may arise as a result of add-on equipment which may not necessarily meet the required standards. As such interference can result in serious malfunction of the unit and/or create unsafe situations, you must observe the following:

- Ensure that each piece of non- KONGSKILDE SEKO SRL equipment fitted to the machine bears the CE mark.
- The maximum power of emission equipment (radio, telephones, etc.) must not exceed the limits imposed by the national authorities of the country where you use the machine.
- The electro-magnetic field generated by the add-on system should not exceed **24 V/m** at any time and at any location in the proximity of electronic components.

Failure to comply with these rules will render the KONGSKILDE - SEKO SRL warranty null and void.

Manual scope and required training level

Introduction to this manual

This manual gives information about the use of your KONGSKILDE - SEKO SRL machine as intended and under the conditions foreseen by KONGSKILDE - SEKO SRL during normal operation, routine service, and maintenance.

This manual does not contain all the information that relates to periodic service, conversions, and repairs that only trained service personnel can perform. Some of these activities may require appropriate facilities, technical skills, and/or tools that KONGSKILDE - SEKO SRL does not supply with the machine.

The manual contains the chapters as shown on the Contents pages. See the Index at the end of this manual to locate specific items about your KONGSKILDE - SEKO SRL machine.

Normal operation

Normal operation consists of the use of this machine for the purpose KONGSKILDE - SEKO SRL intends by an operator that:

- Is familiar with the machine and any mounted equipment or towed equipment
- Complies with the information on operation and safe practices as specified by KONGSKILDE - SEKO SRL in this manual and by the signs on the machine

Normal operation includes:

- · Preparation and storage of the machine
- · Addition and removal of ballast
- Connection and disconnection of mounted equipment and/or towed equipment
- Adjustment and configuration of the machine and equipment for the specific conditions of the job site, field, and/or crop
- Movement of components into and out of working positions

Routine service and maintenance

Routine service and maintenance consists of the daily activities necessary to maintain the proper machine function. The operator must:

- Be familiar with the machine characteristics
- Comply with the information on routine service and safe practices as specified by KONGSKILDE - SEKO SRL in this manual and by the signs on the machine

Routine service can include:

- Fueling
- · Cleaning
- Washing
- Topping up fluid levels

- Greasing
- · Replacing consumable items such as light bulbs

Periodic service, conversions, and repairs

Periodic service consists of activities that are necessary to maintain the expected life of the KONGSKILDE - SEKO SRL machine. These activities have defined intervals.

Trained service personnel familiar with the machine characteristics must perform these activities at the defined intervals. Trained service personnel must comply with the information on periodic service and safe practices as partly specified by KONGSKILDE - SEKO SRL in this manual and/or other company literature.

Periodic service includes:

- Oil change service for the engine, hydraulic circuits, or transmission
- Periodic exchange of other substances or components as required

Conversion activities rebuild the KONGSKILDE - SEKO SRL machine in a configuration that is appropriate for a specific job site, crop, and/or soil conditions (e.g., installation of dual wheels). Conversion activities must be done:

- By trained service personnel familiar with the machine characteristics
- By trained service personnel that comply with the information on conversion as partly specified by KONGSKILDE - SEKO SRL in this manual, assembly instructions, and/or other company literature

Repair activities restore proper function to a KONGSKILDE - SEKO SRL machine after a failure or degradation of performance. Dismantling activities occur during the scrapping and/or dismantling of the machine.

Trained service personnel familiar with the machine characteristics must perform these activities. Trained service personnel must comply with the information for repair as specified by KONGSKILDE - SEKO SRL in the service manual.

Before you operate

Read this manual before you start the engine or operate this KONGSKILDE - SEKO SRL machine. Contact your KONGSKILDE - SEKO SRL dealer if:

- You do not understand any information in this manual
- · You need more information
- · You need assistance

All persons training to operate, or who will operate this KONGSKILDE - SEKO SRL machine should be old enough to possess a valid local vehicle operating permit (or meet other applicable local age requirements). These

1 - GENERAL INFORMATION

persons			

must demonstrate the ability to operate and service the KONGSKILDE - SEKO SRL machine in a correct and safe manner.

of shipment and the related procedure to assemble the received components.

Additional documents

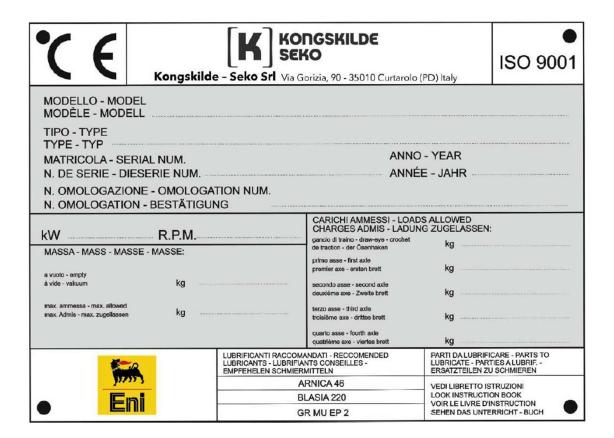
The machine is normally delivered pre-assembled. If shipped completely disassembled, the machine is delivered with an assembly instruction. The assembly instruction shows the packaging depending on the kind

Product Identification Number (PIN)

The Product Identification Number (PIN) is a serial number that identifies the implement.

The serial number, model and other specifications are on the plate.

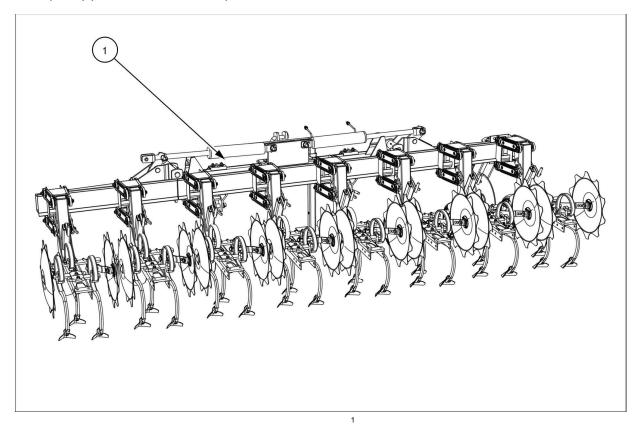
Provide your KONGSKILDE - SEKO SRL dealer with the model and the PIN when you order parts.



Product identification

NOTE: Do not remove or change the Product Identification Number (PIN) plate (1) on the implement.

The PIN plate (1) is on the front of the implement.



For future reference, record your implement model and PIN in the spaces below.

Model	
Product Identification Number (PIN)	

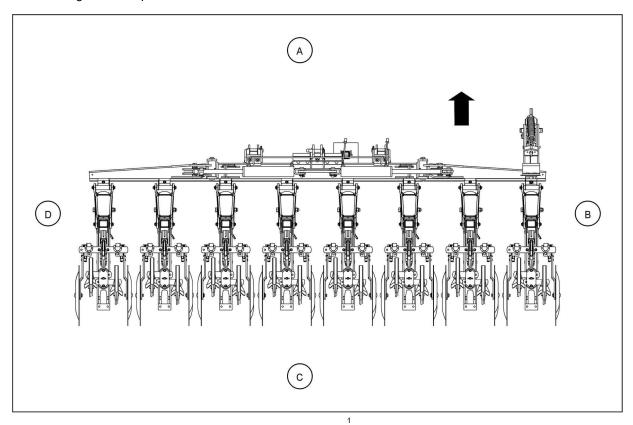
Operator's manual storage on the machine

Keep this operator's manual protected and accessible on the tractor whenever you transport or operate the implement.

Implement orientation

NOTE: To determine the left-hand side and the right-hand side of the implement, stand behind the implement and face the direction of travel during working operation.

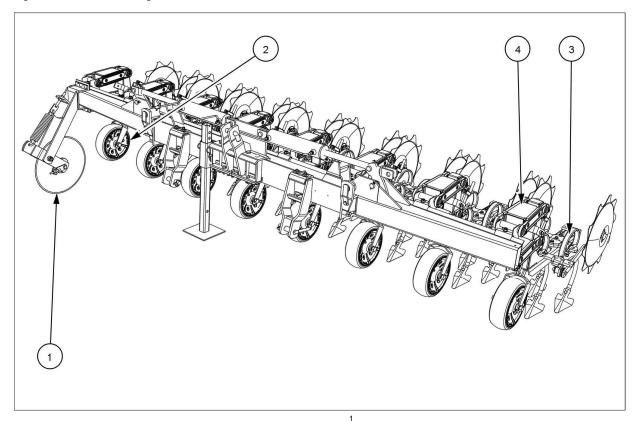
The following overhead view illustration is a general representation of the implement. The illustration indicates the sides, front, and rear orientations of the implement as referred to throughout this operator's manual.



NOTE: The arrow indicates the direction of the implement during working operation.

- (A) Front of the implement
- (B) Right-hand side of the implement
- (C) Rear of the implement
- (D) Left-hand side of the implement

Implement components



Standard equipment:

- Stabilizing disc (1)
- Support wheels
- (2) (3) Tines
- (4) Working section

2 - SAFETY INFORMATION

Safety rules and signal word definitions

Personal safety



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

⚠ DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

A WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

A CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.

Machine safety

NOTICE: Notice indicates a situation that, if not avoided, could result in machine or property damage.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

Information

NOTE: Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

General recommendations

Most farm machinery accidents can be avoided by the observance of a few simple safety precautions.

- This operator's manual contains important information concerning operation, maintenance and adjustment of the implement. Furthermore, this operator's manual mentions and emphasizes all the safety instructions.
- Read the operator's manual thoroughly before you start, operate, service, or carry out any other operation on the implement. Even though you have been driving a similar implement before, you must read the manual. This is a matter of your own and other people safety. A few minutes reading will save you time and hassle later. Lack of knowledge can lead to accidents.
- In case of an accident, stop the tractor, turn off the engine and remove the key from the contact, assess the situation and call emergency services when required.
- Your implement has been designed with safety in mind. However, caution and care is important to prevent accidents from occurring. It is very important that anyone using the implement does so correctly and with the utmost care, avoiding exposing themselves and others to unnecessary danger.
- The implement may only be used for agricultural purposes as an interchangeable implement coupled to a tractor.
- The implement must be operated only by responsible persons who have been adequately trained and autho-

- rized to use the implement. Never leave the implement to others before you have made sure that they have the necessary knowledge to operate the implement safely.
- The operator of the implement must ensure the safety of other people when working with the machine or transporting it.
- · The implement may not be used by minors.
- · Never let the implement run without supervision.
- Always keep a first aid kit handy.
- The implement has only one operator station and this is the cab of the tractor, which is a one man operated implement. Never permit anyone to ride on or in an implement. Do not allow riders on the implement or tractor; do not allow people to stand on the ladder or steps. Your view to the left or right will be obstructed and a rider risks to fall from the implement or tractor during unforeseen or abrupt movements. There is no need for other people on or around the implement during normal operation.
- Do not use this implement as a lift, ladder or platform to work at heights.
- The operator must not consume alcohol, drugs or narcotic and hallucinogenic substances that reduce his or her attention span while using the equipment.
- Before you work on the implement, disengage all drives, stop the engine and remove the ignition key. Wait for the rotating parts to run down.
- Never work around the implement with loose clothing, jewelry, watches, long hair and other loose or hanging items can be pulled in by the moving parts of the implement.
- The weight of mounted machines (including their loads) can influence tractor manoeuvrability and stability and a means of assessing stability.

Illustrations

WARNING

Illustrations in this manual may show protective shielding open or removed to better illustrate a particular feature or adjustment.

Replace all shields before operating the machine.

Failure to comply could result in death or serious injury.

NOTE: Some of the illustrations in this manual have been obtained by photographing prototypes. Standard production machines may differ in some details.

Local obligations

Your machine may be equipped with special guarding or other devices in compliance with local legislation. Some of these require active action by the operator.

Therefore, check local legislation on the usage of this machine.

Fire or explosion prevention

- 1. Crop material, trash, debris, bird nests or flammable material can ignite on hot surfaces.
- Inspect the electrical system for loose connections or frayed insulation. Repair or replace loose or damaged parts.
- Do not store oily rags or other flammable material on the implement.
- 4. Do not weld or flame cut any items that contain flammable material. Clean items thoroughly with
- non-flammable solvent before you weld or cut with a flame
- 5. Do not expose the implement to flames, burning brush or explosives.
- Promptly investigate any unusual smells or odors that may occur during the operation of the implement.

Hazardous chemicals

- If you are exposed to or come in contact with hazardous chemicals you can be seriously injured.
 The fluids, lubricants, paints, adhesives, coolant, etcetera. required for the function of your machine can be hazardous. They may be attractive and harmfull to domestic animals as well as humans.
- Material Safety Data Sheets (MSDS) provide information about the chemical substances within a product, safe handling and storage procedures, first aid measures and procedures to be taken in the event of a spill or accidental release. MSDS are available from your dealer.
- Before you service your machine check the MSDS for each lubricant, fluid, etcetera. used in this machine. This information indicates the associated risks and will help you service the machine safely. Follow the information in the MSDS, on manufacturer containers, as

- well as the information in this manual when you service the machine.
- Dispose of all fluids, filters and containers in an environmentally safe manner in accordance with local laws and regulations. Check with local environmental and recycling centers or your dealer for correct disposal information.
- 5. Store fluids and filter in accordance with local laws and regulations. Use only appropriate containers for the storage of chemicals or petrochemical substances.
- 6. Keep out of reach of children or other unauthorized persons.
- Additional precautions are required for applied chemicals. Obtain complete information from the manufacturer or distributor of the chemicals before you use them

Starting up the implement safely

Before you attach the implement to the tractor, ensure that the tractor is in good working order and that the brakes are efficient, particularly if you operate on hilly ground. Also, ensure that the hydraulic or pneumatic system is compatible with that of the implement.

The operator can only couple the implement to a tractor as specified in CHAPTER 9 SPECIFICATIONS

When you attach the implement to the tractor:

- Never allow anyone to stand between the tractor and the implement. An unintentional maneuver with the tractor may cause serious injury.
- · Never go under an unsupported implement.
- Before you start the implement, learn all components of the implement and service equipment.

- Before you start the implement, make sure that all subassemblies are fully operational and complete. Pay particular attention to all locks and safety devices.
- Before you start the implement, repair or replace all malfunctioning elements with new ones.
- Never start the tractor until all persons are safely away from the tractor and the implement.
- Make sure that all tools have been removed from the implement before starting the tractor.
- Make sure that all spare part and moving equipment are intact and have been mounted correctly.
- Do not stand near the implement while it is working.
- Before coupling the implement to the tractor, the operator must secure the tractor against unwanted movements

Traveling on public roads

Comply with the relevant traffic regulations

A WARNING

Loss of control hazard!

Uneven brake force exists on left-hand and right-hand brakes. Always use brake pedal coupler when traveling on public roads to ensure brakes are actuated together.

Failure to comply could result in death or serious injury.

WARNING

Impact hazard!

Take care when making turns. The machine rear end swings out when changing direction. Failure to comply could result in death or serious injury.

The implement is built according to the homologation requirements of your country. Do not modify the implement in a sense that would conflict with the national regulations.

If you wish to transport the implement on the public road, make sure that the combination tractor and implement observes the traffic rules in your country. This gives you and your surroundings the best possible safety.

The operators must observe relevant statutory or other national regulations that deal with road safety and labor safety issues.

Before you drive the implement on public roads:

- · Check the allowable transport dimensions and weights.
- Install correctly the lighting and the warning panels.

Always observe the principles for permissible axle loads, the total unit mass and the transport gauge.

Observe the tractor manufacturer regulations and recommendations, specifically those relating to maximum transport loads and maximum speed.

Even in similar circumstances, the maximum allowed speed can vary depending on which country you travel in.

Always drive with the statutory lights and safety marking during transport on public road and at night.

Install all the required signs that indicate the vehicle width. Also install all the required lights that indicate the vehicle width during the nightly transport. If in doubt, contact your government department responsible for road transport.

Travel may be restricted to certain road types. Transport may be restricted to daytime or outside peak traffic hours. However plan your route to avoid heavy traffic and peak traffic hours.

Passengers

Do not allow passengers to ride in the tractor unless a specific seat is provided.

During transport, the transportation of people on the top of the implement is strictly forbidden.

Transport safety

Transport the implement only in transport position. Secure the implement for transport. Always activate the mechanical transport safety devices before transport.

Make sure to fit all the hitch pins with retaining pins correctly. Mechanically secure the hydraulic cylinders to prevent cylinders from creeping.

The speed of the tractor during the transport of the implement must comply with local regulations as well as the indications given in CHAPTER 1 GENERAL and CHAPTER 9 SPECIFICATIONS.

The implement must not be transported in conditions of poor visibility.

The operator must have the relevant driving licence and must observe all relevant road rules and signs.

The implement can affect the stability and steering of the tractor during transport.

Drive safe

Do not drive under the influence of alcohol or

drugs.

Do not drive on roads with reduced visibility

Never travel at speed in crowded areas.

When you maneuver the tractor with the implement, always be aware and conscious of its size.

The tractor driver must not leave the cabin during transport.

Always consider other road users.

Always adopt safe driving practices. Slow down and signal before turning. Give way to oncoming traffic in all situations, including narrow bridges, intersections etcetera. Pull over to allow faster traffic to pass.

If the implement is marked with a maximum speed limit, never exceed this maximum speed limit.

Always adjust the driving speed to the road and weather conditions. In case of bad road conditions and high driving speeds, big forces may occur and cause overload of

tractor and implement.

Drive at a safe speed to ensure control and ability to stop in an emergency.

Lock the tractor brake pedals together. Never use independent breaking at transport speeds.

Mounted implements and ballast weights influence the driving, steering and braking capacity of the tractor. Make sure that the additional weight of the implement on the linkage does not compromise driving, steering and braking capacity of the tractor. Install front weights or repair the brakes if the tractor is not safe to drive.

Reduce speed during turns. Tractors have not been designed for fast turning. Avoid that the rear end of the implement hits an obstacle.

When you turn during transport pay attention to the overhang and/or oscillating weight of the implement.

Use engine braking when you drive down hills. Do not coast.

Watch for obstructions, particularly if over-width. Observe any load ratings applicable on bridges.

After you finish the transport, before you leave the tractor, always lower the implement to the ground in parking po- sition, turn off the tractor engine, pull the

Operating the implement safely

WARNING

Roll-over hazard!

Special care is required when operating the machine on slopes or in a tilted position. A wrong maneuver or unexpected event could create a dangerous situation.

Failure to comply could result in death or serious injury.

A WARNING

Hazard to bystanders!

Always sound the horn before starting the machine. Make sure the work area is clear of other persons, domestic animals, tools, etc. before you operate the machine. Never allow anyone in the work area during machine operation.

Failure to comply could result in death or serious injury.

WARNING

Hazard to bystanders!

THE MACHINE SHALL BE USED BY ONE PERSON ONLY

When the operator identifies somebody in the working area, the operator shall not operate the starting control

NOTE: Only put the implement into operation according to the instructions from the dealer.

Never operate the implement under the influence of alcohol, drugs, or while otherwise impaired.

Before you operate the implement, familiarize yourself with all facilities and operating elements. Once an accident happens it is too late to think about what you did.

Examine the work surface for hidden obstacles. Obstacles pose a risk.

Keep people away from the implement during operation. Ask bystanders to leave the field. There is the risk for bystanders to be overrun by the implement. Stop the implement immediately if someone approaches.

The tractor or its implement may strike or crush against a person or pet within the operator area of the tractor. Do not allow anyone to enter the work area. Make sure that the area is clear and operation is safe before you move the implement.

Before you raise or lower the implement, check that nobody is near the implement or touches the implement.

When you operate the implement, always remain seated

in the tractor cab. Operate controls only when seated in the tractor seat, except for those controls expressly intended for use from other locations.

The transportation of people on top of the implement is strictly forbidden at all times.

Avoid using the implement in unsuitable weather conditions. It is better to stop work temporarily rather than to operate in such conditions.

When the operator leaves the tractor cab he is required to safely lower the machine to the ground and secure it against unwanted movements as indicated in the next chapter.

Do not operate the implement during a thunderstorm. If you are on the ground during a thunderstorm, stay away from machinery and equipment. Seek shelter in a permanent, protected structure.

If a lightning from a thunderstorm should strike during operation, remain in the tractor cab. Do not leave the cab. Do not make contact with the ground or objects outside the machine.

Always operate the implement at a safe speed in accordance with the ground conditions. On uneven ground, proceed with the utmost caution to ensure proper stability.

When you turn on hillsides always be careful. Adjust the speed to these conditions.

Drive in a low tractor gear if you work on hillsides.

When you drive up and down and across hillsides, avoid sharp turns.

When you turn during operation, pay attention to the overhang and/or oscillating weight of the implement.

Avoid changing direction abruptly, avoid dangerous pitching of the implement.

Pay the necessary attention while you operate next to public roads or footpaths.

A DANGER

Danger of death by electrocution!

Danger of death by electrocution!

Pay special attention to the overhead power lines. Always ask the owner of the field about the presence of overhead power lines. Make sure the implement has sufficient clearance to pass in all directions (also with raised or opened implement components). Also think of the radio aerial(s) or any other accessory or parts which may have been added afterwards.

High voltage lines may require significant clearance for safety. Contact local authorities or utilities to obtain safe clearance distances from high voltage power lines.

Should a contact between the implement and an electric power line occur, then the following precautions must be taken: Stop the implement movement immediately, stop the tractor engine and apply the tractor handbrake.

Check if you can safely leave the cab or your actual position without direct contact with electric wires. If not, stay in your position and call for help. If you can leave your position without touching the lines, jump off the last step or support position and make sure that there is no contact between any part of your body, the tractor and the ground at the same time. Never touch the tractor or the implement afterwards until power to the lines has been shut off. When people approach the tractor or the implement, warn them not to touch the tractor or the implement but to ask the electric power supply company to shut off the power to the lines.

Stopping the implement safely

Always interrupt the operation of the implement before you leave the tractor seat.

Make sure to secure the tractor by means of the hand brake and/or stop blocks if you need to stand between the tractor and the implement.

When, due to exceptional circumstances, you decide to keep the tractor engine running after you leave the tractor cab, you must:

- · Bring the tractor engine to low idle speed.
- Disengage all drive systems.
- · Shift the tractor transmission into neutral.
- Apply the parking brake.

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When you park the implement there are some operational risks which may cause personal injury. Therefore, you must:

- Make sure that the ground is firm and even during parking.
- Make sure that tractor and implement cannot move.
- · Always lower the implement to the ground.
- Stop the tractor engine and remove the ignition key.
- Use correct support or transport safety device when the implement is parked. Make sure that the parking stand is secured.

When you detach the implement from the tractor:

- Never allow anyone to stand between the tractor and the implement. An unintentional manoeuvre with the tractor may cause serious injury.
- Always detach the implement carefully and on a flat surface to prevent damage.
- Never go under an unsupported implement

t

Maintenance

▲ WARNING

Maintenance hazard!

Before you start servicing the machine, attach a DO NOT OPERATE warning tag to the machine in a visible area.

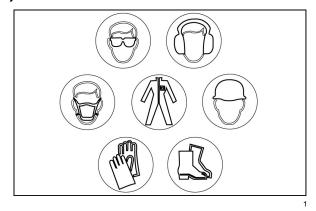
Failure to comply could result in death or serious injury.

- Maintenance must be performed with the machine turned off. If it is necessary to attach the implement to the tractor, the ignition key must be removed and kept segregated in order to avoid unexpected starting.
- Follow the maintenance schedule with regard to the implement servicing intervals.
 - Remember that the implement requires attention from time to time. Also remember that the maintenance will greatly extend the life of the implement.
- Take the necessary precautions: not to spill any oil, fuel or grease.
 - To avoid oil and grease contact with your skin, wear protective gloves.
- · Service the implement on a firm level surface.
- Do not attempt to remove material from any part of the implement, clean, lubricate or carry out any adjustments on the implement while it is in use.
- Raised implement and/or loads can fall unexpectedly and crush persons underneath. Never enter or allow anyone to enter the area underneath raised implement during operation.
 - Unsupported hydraulic cylinders can lose pressure and drop the implement and cause a crushing hazard. Do not leave the implement in a raised position while parked or during service, unless securely blocked on wooden blocks.
- Never work under a raised implement unless a support chain or other mechanical securing device secure the

- link arms of the tractor so that the implement cannot move to a lower position unintentionally.
- Relieve the pressure, stop the engine and remove the ignition key, before you connect or disconnect fluid lines.
- Before you adjust, clean, lubricate or you carry out repairs on the implement, stop the engine and remove the ignition key.
- Any leakage of hydraulic oil or fuel under pressure may cause severe harm, so always use a shielding, goggles and gloves when you trace oil or fuel leaks.
 Do not use your hand to check for leaks. Use a piece of cardboard or paper.
- Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.
- If hydraulic fluid or diesel penetrates the skin, seek medical care immediately.
- Observe all recommendations that are mentioned in this manual such as service intervals, torques, lubricants, etcetera.
- · Always replace all parts that have damage or wear.
- Never build flexible hose assemblies from hoses that were previously part of a hose assembly.
- Never weld to the tubes.
- Always use gloves when you work with parts on the implement as the parts can have sharp edges.
- The hydraulic lines may become hot during operation.
 Be careful when you service such components. Allow surfaces to cool before you handle or disconnect hot components. Wear protective equipment when required.

Personal protective equipment (PPE)

Wear Personal Protective Equipment (PPE) such as protective clothing, eye protection, hearing protection, dust mask, hard hat, heavy gloves, work boots, and/or any other PPE that provides for the safety and protection of the individual that operates this equipment.



Safety requirements for fluid power systems and components - hydraulic systems

WARNING

Escaping fluid!

Hydraulic fluid or diesel fuel leaking under pressure can penetrate the skin and cause infection or other injury. To prevent personal injury: Relieve all pressure before disconnecting fluid lines or performing work on the hydraulic system. Before applying pressure, make sure all connections are tight and all components are in good condition. Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose. If injured by leaking fluid, see your doctor immediately.

Failure to comply could result in death or serious injury.

Before you start the engine or pressurize the hydraulic system, install and tight correctly all the hydraulic couplings. Check that all hoses and fittings are undamaged. Replace immediately damaged components.

Only connect the hydraulic hoses to the tractor outlets if the tractor and the implement are pressure-free. If the hydraulics of the tractor is activated it may lead to uncontrolled movements which may cause secondary damage.

Make sure that no persons are near the implement when you start the implement, as there might be air in the hydraulic system which might lead to sudden movements.

When the tractor engine has stopped, activate the tractor hydraulic spool valves to make sure that there is no pressure in the hydraulic hoses.

To expel all the air from the oil in the hydraulic cylinders, test all the functions after you connect the hydraulic connections to the tractor, especially before you enter or drive on the public roads. Otherwise you risk that the cutting unit suddenly moves downward after you have dismounted the transport lock

Implement stability

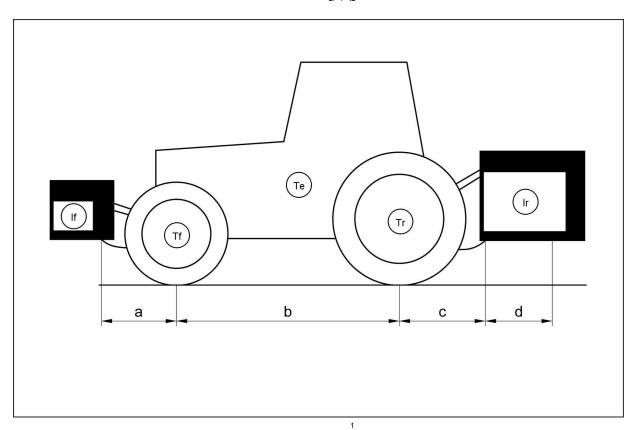
The combination of your tractor and implement can become unstable, due to the additional weight that the implement adds to the tractor.

In order to guarantee stable and safe transport, you must check if you need ballast weights for transport and field work.

You must also check and guarantee that you have at least 20% from the tractor weight on the front axle.

For rear mounted implements and front-rear combinations, the formula is:

If,min =
$$\frac{[Ir x (c + d)] - (Tf x b) + (0.2 x Te x b)}{a + b}$$



Example of references to stability of the combination tractor - implement

List of signs

Te [kg]	The tractor own weight.
Tf [kg]	Front axle load with empty tractor.
Tr [kg]	Rear axle load with empty tractor.
Ir [kg]	Total weight of the rear-mounted implement/rear ballast.
If [kg]	Total weight of the front-mounted implement/front ballast.
a [m]	Distance between the center of gravity of the front-mounted implement/front ballast and the middle of the front axle.
b [m]	The tractor wheel distance.
c [m]	Distance between the middle of the rear axle and the middle of the link arm balls.
d [m]	Distance between the middle of the link arm balls and the center of gravity of the rear mounted implement/rear ballast.

Ecology and the environment

Soil, air, and water quality is important for all industries and life in general. When legislation does not yet rule the treatment of some of the substances that advanced technology requires, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

Familiarize yourself with the relative legislation applicable to your country, and make sure that you understand this legislation. Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, anti-freeze, cleaning agents, etc., with regard to the effect of these substances on man and nature and how to safely store, use, and dispose of these substances. Your KONGSKILDE - SEKO SRL dealer can also provide assistance.

Helpful hints

- Avoid the use of cans or other inappropriate pressurized fuel delivery systems to fill tanks. Such delivery systems may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of these products contain substances that may be harmful to your health.
- Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
- Avoid spillage when you drain fluids such as used engine coolant mixtures, engine oil, hydraulic fluid, brake fluid, etc. Do not mix drained brake fluids or fuels with lubricants. Store all drained fluids safely until you can dispose of the fluids in a proper way that complies with all local legislation and available resources.
- Do not allow coolant mixtures to get into the soil. Collect and dispose of coolant mixtures properly.
- Do not open the air-conditioning system yourself. It contains gases that should not be released into the atmosphere. Your KONGSKILDE - SEKO SRL dealer or air-conditioning specialist has a special extractor for this purpose and can recharge the system properly.
- Repair any leaks or defects in the engine cooling system or hydraulic system immediately.
- Do not increase the pressure in a pressurized circuit as this may lead to a component failure.

Battery recycling

Batteries and electric accumulators contain several substances that can have a harmful effect on the enviroment if the batteries are not properly recycled after use. Improper disposal of batteries can contaminate the soil, groundwater, and waterways. KONGSKILDE - SEKO SRL strongly recommends that you return all used batteries to a KONGSKILDE - SEKO SRL dealer, who will dispose of the used batteries or recycle the used batteries properly. In some countries, this is a legal requirement.



Mandatory battery recycling

Since batteries contain sulfuric acid solution and heavy metals such as lead, before disposing of them, check your country regulations in terms of content and obligations related to the collection and recycling of used batteries.

Safety signs

The following safety signs are on your implement as a guide for your safety and for the safety of those who work with you.

Walk around the implement and note the content and location of all safety signs before you operate your implement. Read all the safety decals adhered to the implement and follow the instructions.

Keep all safety signs clean and legible. Clean safety signs with a soft cloth, water, and a gentle detergent.

NOTICE: Do not use solvent, gasoline, or other harsh chemicals. Solvents, gasoline, and other harsh chemicals may damage or remove the safety signs.

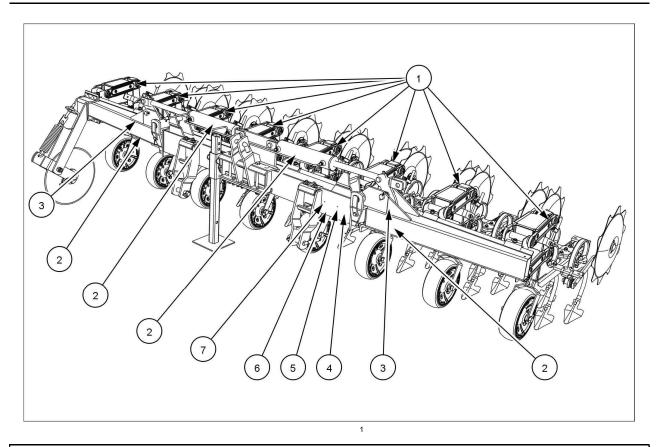
Replace all safety signs that are damaged, missing, painted over, or illegible. If a safety sign is on a part that you or your dealer replaces, make sure that you or your dealer install the safety sign on the new part. Contact your dealer for the replacement of the safety signs.

Safety signs that display the "Read operator's manual" symbol direct you to the operator's manual for further information regarding maintenance, adjustments, or procedures for particular areas of the implement. When a safety sign displays this symbol, consult the appropriate page of the operator's manual.



Safety signs that display the "Read service manual" symbol direct you to the service manual. If you doubt your ability to perform service operations, contact your dealer.





Safety sign (1)

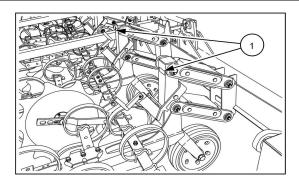
Keep hands away.

Never move your hand or your body into the danger zone as long as the parts can move or are moving. The hazard could result in death or serious injury.

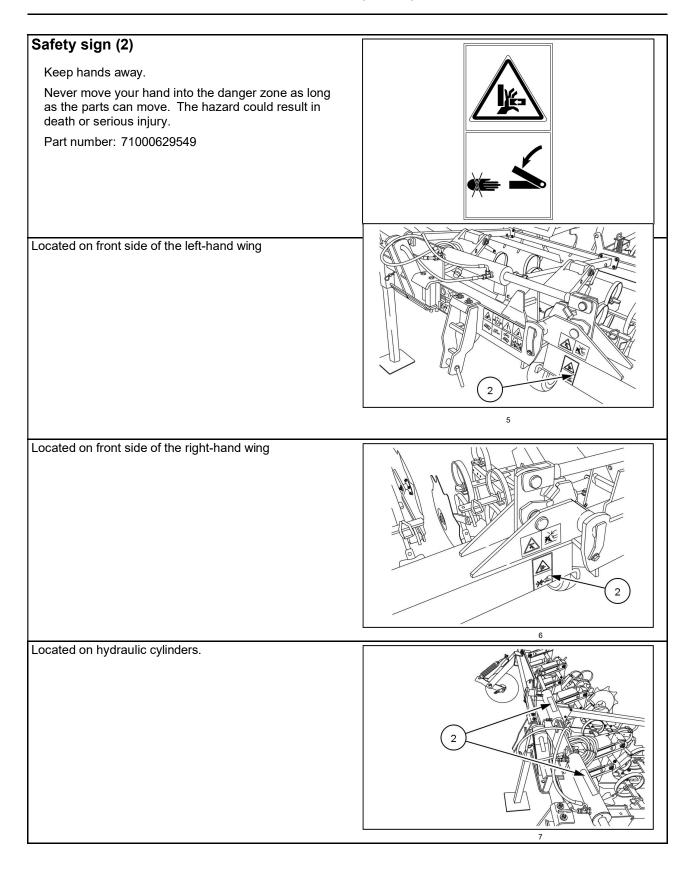
Part number: 7002152848



Located one each section.



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Safety sign (3)

Attention! Folded elements.

There is a danger that the implement unfolded could crush the body.

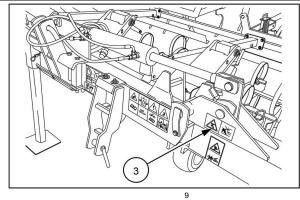
The danger may cause severe injuries to the entire body, with possible lethal effect.

To avoid the danger, don't stand within the range of the folding implement. Before you fold/unfold the implement, make sure that there are not people standing in its range.

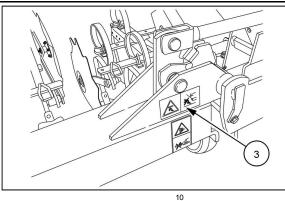
Part number: 71000629546



Located on front side of the left-hand wing



Located on front side of the right-hand wing



Safety sign (4)

A hazard of your body being crushed when standing between the tractor and the implement to be connected.

The hazard could result in death or serious injury.

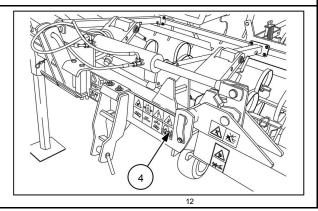
When connecting the implement to a tractor, standing in between the implement and the tractor with the tractor engine running and the tractor not secured against accidental rolling is strictly prohibited.

With the engine running do not remain in the tractor's maneuvering area



Part number: 300007974

Located on the central front frame.



Safety sign (5)

A WARNING

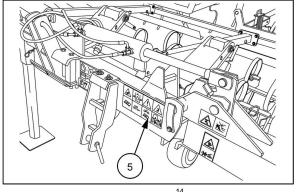
Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.

- 1. Disengage all drives.
- 2. Engage parking brake.
- 3. Lower all attachments to the ground, or raise and engage all safety locks.
- 4. Shut off engine.
- 5. Remove key from key switch.
- 6. Switch off battery key, if installed.
- 7. Wait for all machine movement to stop. Failure to comply could result in death or serious injury.



Part number: 71000629551

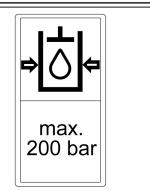
Located on the central front frame.



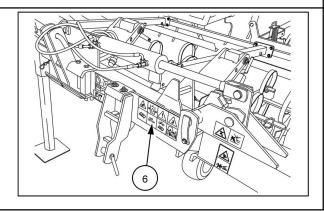
Safety sign (6)

Maximum working pressure of the hydraulic system: **200 bar (2900 psi)**

Part number: 300007977



Located on the central front frame.



Safety sign (7)

Avoid pressurized outflowing of liquid.

Danger generated by hydraulic oil out flowing under pressure.

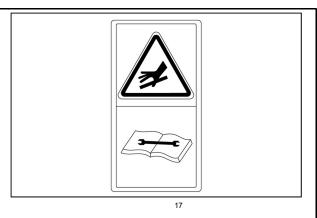
The danger may cause severe injuries to the entire body, with possible lethal effect.

Before proceeding to maintenance procedures or repairs of the hydraulic system, make sure the system is depressurized.

Do not try to seal hydraulic oil leaks using your hands or fingers.

Part number: 300007973

Located on the central front frame.



18

3 - CONTROLS AND INSTRUMENTS

Information

Operating principles

For all information related to the description and the location of the controls to use your implement, see chapter "Controls and Instruments" in the operator's manual of your vehicle.

3 - CONTROLS AND INSTRUMENTS		

4 - OPERATING INSTRUCTIONS

Commissioning the unit

Choice of the tractor

To operate the implement in compliance with the intended use, the tractor must fulfill the following requirements.

Tractor engine power				
Vibro Crop 3T-6R				
Vibro Crop 5T-4R	26.0 E0.0 k/M /E0.0 00 hm/			
Vibro Crop 5T-5R	36.8 – 58.8 kW (50.0 – 80 hp)			
Vibro Crop 5T-6R]			
Vibro Crop 3T-7R				
Vibro Crop 3T-8R				
Vibro Crop 3T-9R	58.8 – 73.5 kW (80.0 – 100.0 hp)			
Vibro Crop 5T-8R				
Vibro Crop 5T-9R				
Vibro Crop 3T-10R				
Vibro Crop 3T-11R	66.2 – 88.3 kW (90.0 – 120.0 hp)			
Vibro Crop 3T-12R				
Electrical system				
Battery voltage	12 V (volts)			
Lighting socket	7 pin according ISO1724			
Hydraulic system				
Maximum operating pressure	200 bar (2900 psi)			
Tractor pump power	At least 30 L/min at 160 bar (2320 psi) Maximum oil flow 20–40 L/min			
Implement hydraulic fluid	Transmission/hydraulic fluid HLP68 *			
Maximum oil temperature	50 °C (122 °F)			
Hydraulic outlets for Vibro Crop				
Control unit	Double-acting control unit			

^{*} The implement hydraulic/transmission fluid is suitable for the combined hydraulic/transmission fluid circuits of all standard made on tractor.

Check before use

Before you operate the implement for the first time, perform the following items:

- Read this operator's manual carefully; especially the chapter headed "Safety information".
- Check the correct assembly of the implement. Also check that the implement is undamaged.
- Check that no parts have been tied up inside the implement in connection with the delivery of the implement.
- · Remove all the tools from the implement.
- Connect the implement to the tractor and check if the subassemblies work properly.
- Check the correct connection and tightening of the hydraulic components.
- Check the entire hydraulic system all tubes, hoses and connections. Upon noticing any traces of damages or even the slightest leaks make sure to replace these parts.
- Check that the hydraulic hoses are long enough for the movements of the implement in relation to the tractor.
- Check the length of the hydraulic hoses when the implement is in working position. Check that the hydraulic hoses are not too tense.
- Grease sufficiently the implement (see Page 7-10).
- · Check the proper tightness of all the nuts and bolts.
- Check if the electrical installation works properly, including the lights.

Starting the unit

Connection to the tractor

A WARNING

Pressurized system!

Before removing the attachment from the machine, make sure the air pressure and hydraulic oil pressure are at zero.

Failure to comply could result in death or serious injury.

A WARNING

Hitching hazard!

Always keep the area between the tractor and the implement clear of all persons while the tractor or three-point hitch is in motion. Lock the tractor transmission in Park and engage the parking brake(s) before you allow anyone to complete hitching or unhitching.

Failure to comply could result in death or serious injury.

Before you connect the implement to the tractor:

- Use only tractors specified in the operator's manual as recommended for connecting the implement.
- Verify if the connection matches the three-point suspension system of the implement and the tractor.
- Always make sure that the implement will not accidentally disconnect from the tractor during field works.
- Make sure that the tractor's stabilizer chains are slack so that they do not impede the movements of the lower links.

NOTICE: Make sure, that the height of the tool bar above the ground is the same at either end. Only use KONGSKILDE - SEKO SRL spare parts.

- Perform all the necessary adjustments if the connection is inconsistent.
- Make sure that the implement stands on a firm and even ground.

To connect the implement to a three-point suspension system of the tractor, proceed as follows:

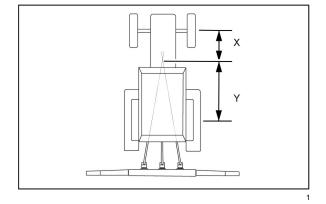
- Lower the lower links and reverse the tractor to place the hooks of the lower linkages under the ball sleeves.
- 2. Raise the jack.
- Secure all the connections to avoid unintentional disconnection.

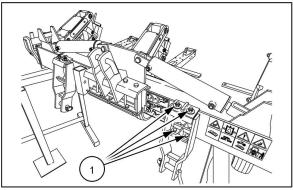
NOTE: The connections must be as tight and stiff as possible. Any side movement is not allowed because it decreases the implement performance.

- Mount the top link so that it is approximately parallel with the link arms. Hereby you obtain the smallest change in the implement inclination when raised and lowered, so that it does not incline away from or towards the tractor.
- 5. Check that the draw brackets are mounted at equal distance from the top link hitch point.
- 6. Check that the distance between the draw brackets is in accordance with the tractor. The lower links lengthened should cross each other behind the front axle of the tractor, approximately at the distance (X) from the front axle and distance (Y) from the rear axle.
 - (X) = 1/3 of the distance between the axles of the tractor
 - **(Y)** = 2/3 of the distance between the axles of the tractor

If the angle formed by the lower links is tapered too much or too little, the tractor cannot guide the row-crop cultivator.

- 7. Adjust the position of the lower hitches using the bolts **(1)**.
- 8. Check that all hydraulic connections are clean and then make all the necessary hydraulic connections.
- Inspect the implement for any leaks from hydraulic connections.
- 10. Connect the implement lighting.
- 11. Check if all devices are fully operational.
- 12. Lift the implement with the tractor three point linkage so that the jack do not touch the ground.





2

Hydraulic connections

Hydraulic connections are marked with the following color:

• Black – the line operating the implement folding.

NOTE: Make sure that hoses of the same colors are connected to the same pairs of hydraulic outlets on the tactor.

Parking the unit

Disconnection and parking

To disconnect and park the implement, proceed as follows:

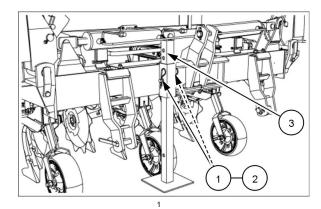
- 1. Place the implement on a firm and level ground.
- 2. Make sure that sections are in transport position.
- Disconnect all the hydraulic couplers in working position.
- 4. Disconnect the lighting equipment.
- 5. Remove the linchpins (1) and pull out the pins (2).
- 6. Lower the jack (3).
- 7. Re-insert the pins (2) in hole and secure it with the linchpins (1).
- 8. Depressurize the hydraulic system.
- 9. Dismount the top link.
- 12. Unlock and pull out the hooks from lower couplings.
- 13. Lower the jack arms until they are released from the couplings on the implement.

A WARNING

Escaping fluid!

Do not connect or disconnect hydraulic quick coupler under pressurized conditions. Make sure all hydraulic pressure is removed from the system before connecting or disconnecting hydraulic quick coupler.

Failure to comply could result in death or serious injury.

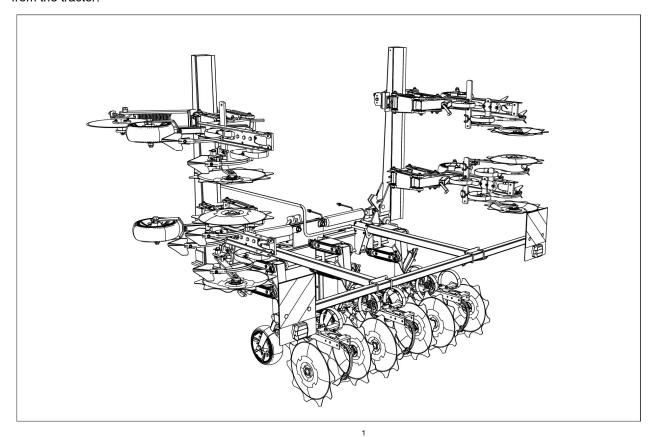


5 - TRANSPORT OPERATIONS

Road transport

Transport position

The implement is equipped with a special hydraulic cylinders for raising the side extension bar, which are activated from the tractor.



To fold the implement to the transport position, proceed as follows:

- 1. Make sure that implement is connected to 3 point link and to hydraulic line.
- 2. Lift the jacks to the transport position so that the jacks do not touch the ground.
- 3. Fold up the side wings by briefly activating the hydraulic outlet.

Transport on public roads

▲ WARNING

Transport hazard!

If the tractor hydraulic system accidentally engages during transport, the machine could drop to the ground, swing into roadside obstacles, or swing into oncoming traffic. Before transport, always engage the header lift lock valve and the tongue swing cylinder valve in the LOCKED position.

Failure to comply could result in death or serious injury.

NOTICE: When you drive on sloping ground, you must be aware that the implement's high center of gravity will increase the risk of overturning, and also affects the roadholding qualities around corners etc.

NOTE: The behavior of the tractor when you drive with the implement may vary. Adjust the style of driving to the conditions on the road. Do not drive on roads with reduced visibility. Pay special attention to the location of the center of gravity of these implement elements which are folded with the use of hydraulic cylinders. The maximum permissible speed for driving with the implement attached is **25 km/h** (**15.5 mph**).

NOTE: Make sure that the implement is equipped with the correct lighting system and other traffic markings in accordance with the country's current rules. The implement must be equipped with front lights (position lights) and rear lights (turn signals, position lights, braking lights) connected to the electrical installation of the tractor. Plus a triangle sign must be mounted on a special grip for slow vehicles.

NOTE: In vertical transport position the wings must be folded in and the 3-point linkage must be lifted so that the transport height is below 4 meters and still safe clearance above the road from the lowest point. The exact transport height for the individual implements is stated under technical data.

NOTE: During transport and in operation, transporting people on the structure of the implement is strictly prohibited.

NOTE: Before you transport the implement on a public road, make sure not to exceed the transport height of **4 m** (13.1 ft).

Only transport the implement behind a tractor in the tractor linkage arms.

Transport the implement only in the transport position.

Before you drive on public roads, convert the implement from transport to working position and back again to ensure that there is no air in the hydraulic system.

Always immobilize (close) the ball valve that secure the implement before you drive on public road.

Lift the sections, put into transport position and lock them with the use of the safety bars (1) as shown in the Image 1 to obtain the correct transport width and inhibit the sections from moving during transport.

Place the jacks into the transport position. Lift the jacks and secure the support in the transport position with a latch pin. Make sure that the four latch pins are reengaged.

When you drive with the implement attached on any public roads, railway tracks or other surfaces, never exceed the transport width the implement, specified by applicable regulations. If the maximum permissible transport width is exceeded, then, in extraordinary conditions, the authorities may issue a special permit for the transport of a large-size vehicle.

Always observe the principles for permissible axle loads, the total implement mass and the transport gauge.

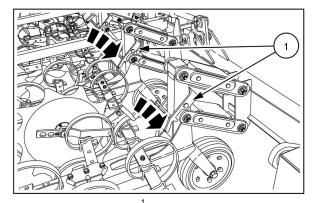
When you turns or drive next to corners, maintain a safe distance to account for the inertia of the implement and location of the center of gravity of the folded frame, which is at height.

After you finish the transport, before you leave the tractor, always lower the implement to the ground to the parking position (see Page **4-6**), turn off the tractor engine, remove the key from the ignition and pull the hand brake.

To lower the center of gravity, and to ensure more stable transport conditions, the implement must be lowered to the lowest position available, ensuring however that sufficient space is left from the surface of the road.

Make sure that the implement is safe and that nothing falls off it during transport, for instance large lumps of soil.

Control the operation of the implement's lamps and the condition of warning plates.



Shipping transport

Lifting the implement

A WARNING

Falling object hazard!

DO NOT go underneath a hanging load. Make sure the area is clear of all bystanders.

Failure to comply could result in death or serious injury.

A WARNING

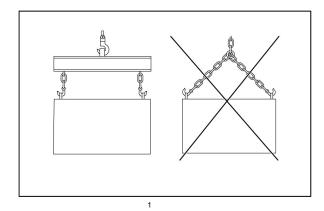
Crushing hazard!

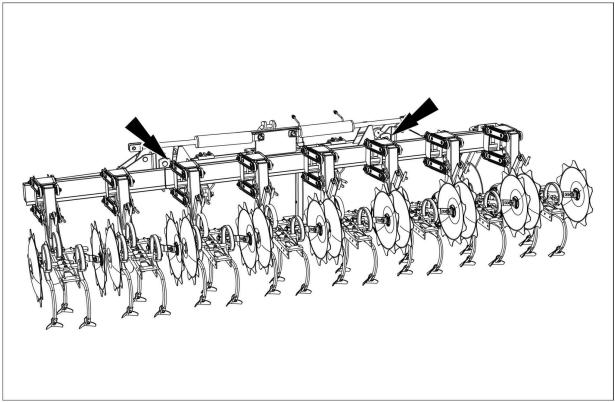
Use the machine lifting points when you lift and/or move the machine with heavy handling equipment. Lift the machine only from the indicated lifting eye hookup points. Always use adequate lifting equipment.

Failure to comply could result in death or serious injury.

If you lift the implement with a crane or a forklift, always proceed according to the following guidelines:

- The crane or forklift used to lift the implement must have proper lifting capacity and is equipped with proper ballast.
- Lift the implement in the folded position or with unfolded only main fold wings.
- Always use transport belts with proper load-bearing capacity.
- To lift the implement correctly use the lifting point shown in the Figure 2.





2

Loading and unloading of the implement with suitable lifting device

- For loading and unloading the implement, use only a suitable lifting device with an operational operating braking system.
- When you perform the loading / unloading procedure, ask an additional person for help in pointing the right directions.
- When you load the implement, disconnect it from the tractor and secure it for the duration of transport, according to applicable regulations.

6 - WORKING OPERATIONS

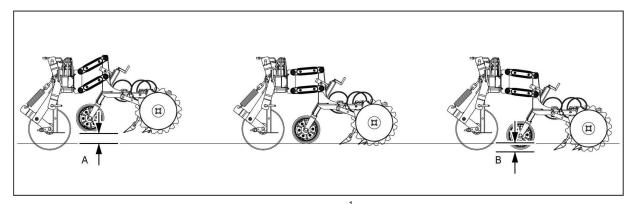
General information

Working position

To unfold the implement to the working position, proceed as follows:

- 1. Lift the jacks to the transport position highest position.
- 2. Fold out the wings by briefly activating the hydraulic outlet.
- 3. Lower the 3 point linkage until the sections are in working position the parallelograms are horizontal with the field.
- 4. Adjust the linkage arms so that the foremost end of the bar is vertical.
- 5. Make sure that the row spacing is adjusted correctly if no, correct the distance.
- Adjust the wheels on the sections in accordance with the required working depth - normally 2 – 3 cm (0.8 – 1.2 in).

The sections must be horizontal when work is started in the field and able to move freely up and down without interference. Each individual section can move upwards approximately **25 cm** (**9.8 in**) (**A**) and downwards approximately **7 cm** (**2.8 in**) (**B**) in relation to the horizontal position to be able to follow the contours of an uneven field. If the tines and discs on the working sections are blocked; stop the tractor engine, activate the parking brake and remove the foreign matter.

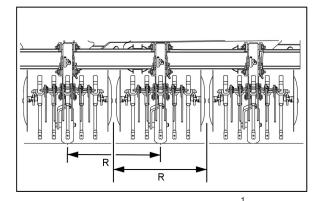


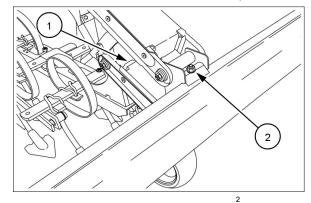
Adjustment of working section

NOTE: The row spacings should be between 45 cm - 55 cm for 3 tines sections and 55 cm - 80 cm for 5 tines sections.

With proper spacing section, the support wheels must roll a middle of inter rows. The distance between sections (measured from center of support wheel) must be the same and correspond to widths of inter rows (R). In case of irregularities the sections should be moved. To move the section, proceed as follows:

- 1. Loosen the bolt (2).
- 2. Lift and move the parallelogram (1) as required.
- 3. Tighten the bolt (2).

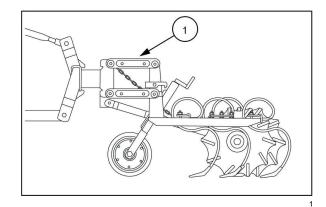




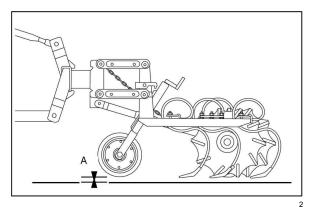
Adjustment of the working depth

Position the boom correctly in relation to the field; horizontal sections and vertical tool bar at the foremost end of the bar. Mount the cleaning sections so that they clean between the rows of crops.

The working sections (1) must be horizontal during work to achieve the best possibility for the sections to follow the soils contours. Position the boom correctly in relation to the field.



While regulation, remember that the wheel sections collapse in the soil for about 2-3 cm (0.4-0.6 in). To set the correct working depth, adjust the support wheel at the height (A).



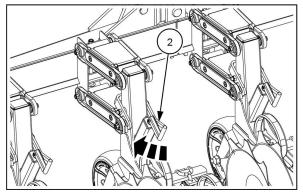
Each individual unit is a separate self contained cultivator with its own depth control an parallelogram suspension. The depth control wheel makes the section very stable while maintaining the uniform depth. The wheel is maintenance free and is adjustable by means of a crank.

NOTE: Make sure the working depth is set on the same value on each section.

To change the working depth, proceed ad follows:

- 1. Turn the crank (2) clockwise to increase working depth.
- Turn the crank (2) counter-clockwise to decrease working depth.

Use the scale and indicator (3) to set the same working depth for each section.



3

3

Working in the field

Before you work in the field, check that the implement has been connected correctly, that it is in the working position and that the equipment has been adjusted correctly as described in the previous chapters.

When you go into or out of the headland have a slower speed than driving in the field. Always remember to lift and lower the implement when you go in and out of the headlands.

Depending on the crop and the working conditions, the driving speed should be between 5.0 - 12.0 km/h (3.1 - 7.5 mph). Always adjust the speed to the conditions in the field.

Adjustment of spacing of the tines and protection shields

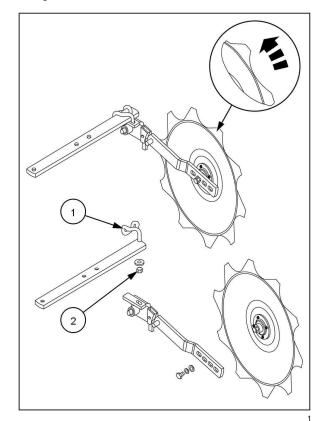
The step-less adjustable shields are adjustable in width from 7 cm (2.8 in) to prevent plant damage. They are mounted on the parallelogram and are used to minimize the area in contact with the soil and prevent weed, seeds and soil thrown into the crop rows.

The shields can be locked manually in raised position when not needed or in a later plant stage. Due to the rotation there will be minimal plant damage and no dragging of plant residues.

Protection shields and tines are fixed to the beam by clamps (1). To change the position of protection shield or tine, proceed as follows:

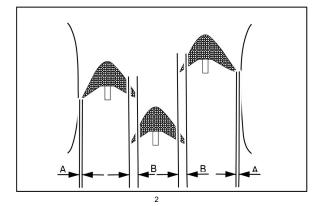
- 1. Loosen the nut (2).
- 2. Move the protection shield to the right position.
- 3. Tight the nut (2).

NOTE: There are right-hand side and left-hand side protection shield arm and protection shields. Mount the protection shield so that the serrations turn in the direction shown.



Cleaning sections are mounted with the vibrating tines. The tines vibrate the weeds free from surrounding soil, so that they can disappear quicker. The tines also improve drainage without disturbing the soil structure. During adjustment, the range of action of the tines should overlap each other approximately 2 cm (0.8 in) (B) and the distance between nearest share and protection shield should be no larger than 1 cm (0.4 in) (A).

NOTE: Row widths of up to **55 cm** (**21.7 in**) are cultivated with 3 tines on each parallelogram. Distances from **55 cm** (**21.7 in**) and above are cultivated with 5 tines.



Adjustment of the stabilizing disc

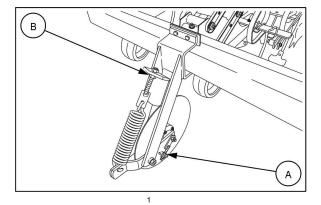
With side shift or guiding disc, the implement is ensured of following the correct course even on undulated and sloping land while still maintaining a high working speed.

 Adjust the stabilizing guide coulter so that it is in line with the driving direction (when one stabilizing disc is equipped).

NOTE: On the machines equipped with two discs, adjust the stabilizing guide coincidently against each other (toein).

- 2. Adjust the alignment of the stabilizing disc. Use the lock nuts (A) after loosening the bolt in the hub.
- 3. Adjust the spring tension so that the nuts **(B)** are in the middle of the threaded part.

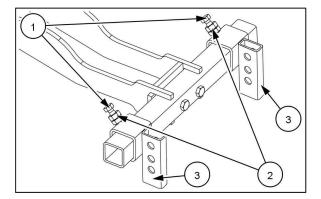
NOTE: The working depth of stabilizer disc should be about **5.0 cm** (**2.0 in**). The working depth is correct when the spring tension is adjusted so that the nuts are in the middle of threaded part.



Adjustment of the starwheel kit (if equipped)

To adjust the starwheel kit, proceed as follows:

- 1. Loosen the bolts (1) and nuts (2).
- 2. Move and adjust the starwheel supports (3) as required.
- 3. Tighten the nuts (1) to 35.0 N·m (309.8 lb in).



1

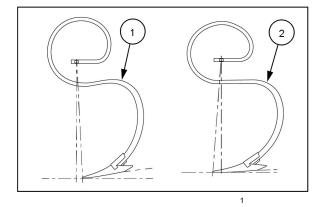
Tines (Vibro Crop tines for vulnerable crops)

The implement with the combination of vibrating S-shaped tines (for improved accuracy, while working minimum depths) and rolling shields enables the user to work the maximum area possible between the rows as well as maintaining a high working speed. The implement is designed to give absolute accuracy both above and below the working surface.

Two different types of tine are available:

- 1. The universal tine (1) for the implements with row width 60 75 cm (23.6 29.5 in).
- The Vibro Crop-tine (2) for the implements with row width 45 – 50 cm (17.7 – 19.7 in), specially designed to work on shallow depths.

The vibrating tines are not only cutting the weeds but are also vibrating the weeds free from the surrounding soil, so that they can die on the soil surface. In conjunction with this they are also aerating the soil and improving the drainage without disturbing the soil structure.



7 - MAINTENANCE

General information

General

A WARNING

Improper operation or service of this machine can result in an accident.

If you do not understand a maintenance procedure, or doubt your ability to perform a maintenance procedure correctly, see your authorized dealer.

Failure to comply could result in death or serious injury.

A WARNING

Avoid injury! Always do the following before lubricating, maintaining, or servicing the machine.

- 1. Disengage all drives.
- 2. Engage parking brake.
- 3. Lower all attachments to the ground, or raise and engage all safety locks.
- 4. Shut off engine.
- 5. Remove key from key switch.
- 6. Switch off battery key, if installed.
- 7. Wait for all machine movement to stop. Failure to comply could result in death or serious injury.

A WARNING

Cutting hazard!

Use care handling sharp components. Always wear appropriate Personal Protective Equipment (PPE), including heavy gloves.

Failure to comply could result in death or serious injury.

NOTICE: Be sure that all the service operations in this chapter are carried out punctually at the intervals given, in order to ensure optimum performance levels and maximum safety when using the implement.

Adequate lubrication and maintenance on a regular schedule is vital to maintain your implement. To ensure long service and efficient operation, follow the lubrication and maintenance schedules outlined in this operator's manual. The use of proper, oils, grease, and filters, as well as keeping the systems clean, will also extend the implement and components life.

NOTICE: Failure to complete the required maintenance at the recommended intervals can cause unnecessary downtime.

Use the intervals listed in the maintenance chart as guidelines when you operate in normal conditions. Adjust the intervals when you operate in adverse environmental and working conditions. Shorten the intervals for sandy, dusty, and extremely hot operating conditions.

NOTICE: While any company can perform necessary maintenance or repairs on your implement, KONGSKILDE - SEKO SRL strongly recommends that you use only authorized KONGSKILDE - SEKO SRL dealers and products that meet given specifications. Improperly or incorrectly performed maintenance and repair voids the equipment warranty and may affect service intervals.

Always disengage the hydraulic pressure and power, before you:

- 1. Lubricate the implement.
- 2. Clean the implement.
- 3. Disassemble any part of the implement.
- 4. Adjust the implement manually.
- Connect and disconnect electronics and electrical equipment.

When you repair or maintain the implement it is especially important to ensure the correct personal safety. Therefore, always park the tractor (if mounted) and the implement safely (see Page **4-6**).

Secure the implement by applying suitable supports before performing maintenance works with the implement in the raised position.

Check and torque all the bolts regularly.

Switch off the electric power supply before doing anything with the electrical system.

Disconnect the cables from the alternator and battery of the tractor before electrically welding of parts of a tractor and the drill implement installed on it.

If the cultivator tines get loosened, tighten the clamping ring mounting the tine to a torque between **60 – 65 N·m**.

Used and destroyed parts must be unconditionally replaced with the next possible opportimplementy in order to ensure that the implement operates correctly and safely.

Use only original spare parts and consumables, manufactured by KONGSKILDE - SEKO SRL.

Cleaning and maintenance

After you finish to work with the implement, clean it thoroughly.

Before you clean the implement:

- 1. Turn off the drive.
- 2. Turn off the engine.
- 3. Remove the key from the ignition.
- 4. Disconnect the power supply from the implement.

Before you clean the implement, make sure that the implement is properly secured against unintentional rolling.

To protect your health, always wear adequate protective equipment when you clean the implement.

Do not clean hydraulic cylinders, bearings, or any other electrical elements using high-pressure implements.

Torque

Minimum hardware tightening torques (in N m or lb in /lb ft) for normal assembly applications unless otherwise stated

The minimum hardware tightening torque on drawings, in specifications, etcetera have priority. In the following tables, torque specifications are shown following the standard **ENS7001**, applicable for material class 8.8 and material class 10.9.

Hex head bolts

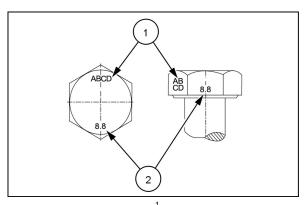
	Class 8.8 in N m (lb in or lb ft)			Class 10.9 in N	Class 10.9 in N m (lb in or lb ft)			
Nominal Size	Plated nut	Lock nut	Hardened nut/Oiled plated nut	Plated nut	Lock nut	Hardened nut/Oiled plated nut		
M3	1.3 N·m	0.7 N·m	1.2 N·m	1.8 N·m	0.9 N·m	1.6 N·m		
	(11.5 lb in)	(6.2 lb in)	(10.6 lb in)	(15.9 lb in)	(8.0 lb in)	(14.2 lb in)		
M4	2.9 N·m	1.6 N·m	2.6 N·m	4.2 N·m	2.3 N·m	3.7 N·m		
	(25.7 lb in)	(14.2 lb in)	(23.0 lb in)	(37.2 lb in)	(20.4 lb in)	(32.7 lb in)		
M5	5.9 N·m	3.2 N·m	5.3 N·m	8.5 N·m	4.6 N·m	7.6 N·m		
	(52.2 lb in)	(28.3 lb in)	(46.9 lb in)	(75.2 lb in)	(40.7 lb in)	(67.3 lb in)		
M6	10.1 N·m	5.5 N·m	9.1 N·m	14.5 N·m	7.9 N·m	13 N·m		
	(89.4 lb in)	(48.7 lb in)	(80.5 lb in)	(10.7 lb ft)	(69.9 lb in)	(9.6 lb ft)		
M8	24.5 N·m	13.5 N·m	22 N·m	35.1 N·m	19.3 N·m	31.5 N·m		
	(18.1 lb ft)	(10.0 lb ft)	(16.2 lb ft)	(25.9 lb ft)	(14.2 lb ft)	(23.2 lb ft)		
M10	48.7 N·m	26.8 N·m	43.8 N·m	69.5 N·m	38.2 N·m	62.5 N·m		
	(35.9 lb ft)	(19.8 lb ft)	(32.3 lb ft)	(51.3 lb ft)	(28.2 lb ft)	(46.1 lb ft)		
M12	85 N·m	46.7 N·m	76.5 N·m	121 N·m	66.5 N·m	108.9 N·m		
	(62.7 lb ft)	(34.4 lb ft)	(56.4 lb ft)	(89.2 lb ft)	(49.0 lb ft)	(80.3 lb ft)		
M14	135 N·m	74.2 N·m	121.5 N·m	193 N·m	106.1 N·m	173.7 N·m		
	(99.6 lb ft)	(54.7 lb ft)	(89.6 lb ft)	(142.3 lb ft)	(78.3 lb ft)	(128.1 lb ft)		
M16	210 N·m	115.5 N·m	189 N·m	301 N·m	165.5 N·m	270.9 N·m		
	(154.9 lb ft)	(85.2 lb ft)	(139.4 lb ft)	(222 lb ft)	(122.1 lb ft)	(199.8 lb ft)		
M18	299 N·m	164.4 N·m	269.1 N·m	414 N·m	227.7 N·m	372.6 N·m		
	(220.5 lb ft)	(121.3 lb ft)	(198.5 lb ft)	(305.4 lb ft)	(167.9 lb ft)	(274.8 lb ft)		
M20	425 N·m	233.72 N·m	382.5 N·m	587 N·m	322.8 N·m	528.3 N·m		
	(313.5 lb ft)	(172.4 lb ft)	(282.1 lb ft)	(432.9 lb ft)	(238.1 lb ft)	(389.7 lb ft)		
M22	579 N·m	318.4 N·m	521.1 N·m	801 N·m	440.5 N·m	720.9 N·m		
	(427 lb ft)	(234.8 lb ft)	(384.3 lb ft)	(590.8 lb ft)	(324.9 lb ft)	(531.7 lb ft)		
M24	735 N·m	404.2 N·m	661.5 N·m	1016 N·m	558.8 N·m	914.4 N·m		
	(542.1 lb ft)	(298.1 lb ft)	(487.9 lb ft)	(749.4 lb ft)	(412.1 lb ft)	(674.4 lb ft)		
M27	1073 N·m	590.1 N·m	967.5 N·m	1486 N·m	817.3 N·m	1337 N·m		
	(791.4 lb ft)	(435.2 lb ft)	(713.6 lb ft)	(1096 lb ft)	(602.8 lb ft)	(986.1 lb ft)		
M30	1461 N·m	803.5 N·m	1315 N·m	2020 N·m	1111 N·m	1818 N·m		
	(1077.6 lb ft)	(592.6 lb ft)	(969.9 lb ft)	(1489.9 lb ft)	(819.4 lb ft)	(1340.9 lb ft)		

Flange head bolt/Flange nut

Nominal Size	Class 10.9 in N m (lb ft)
M3	2.0 N·m (1.5 lb ft)
M4	4.6 N·m (3.4 lb ft)
M5	9.4 N·m (6.9 lb ft)
M6	15.9 N·m (11.7 lb ft)
M8	38.7 N·m (28.5 lb ft)
M10	76.5 N·m (56.4 lb ft)
M12	134 N·m (98 lb ft)
M14	213 N·m (157 lb ft)
M16	331 N·m (244 lb ft)
M18	455 N·m (336 lb ft)
M20	645 N·m (476 lb ft)
M22	881 N·m (650 lb ft)
M24	1118 N·m (824 lb ft)
M27	1635 N·m (1206 lb ft)
M30	2222 N·m (1639 lb ft)
M36	3880 N·m (2862 lb ft)

Identification markings

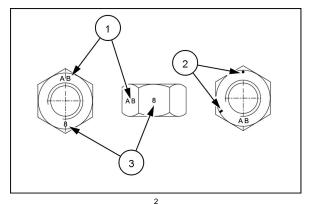
Metric hex head, flange hex head and carriage bolts, Classes (CL) 5.6 and upward



Metric bolt identification markings

- 1. Manufacturer's identification
- 2. Property class

Metric hex nuts and locknuts, Classes (CL) 05 and upward

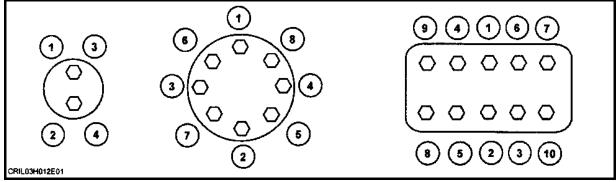


Metric hex nut identification markings

- (1) Manufacturer's identification
- (3) Property class
- (2) Clockwise type markings indicate property class and may include manufacturer identification (if applied), Example: property marks 240° apart (shown) at the eight o'clock position indicate a Class 8 property, and marks 300° apart at the ten o'clock position indicate a Class 10 property.

Torque tightening sequence

NOTICE: Shown below is the suggested initial torque tightening sequences for general applications, tighten in sequence from item 1 through to the last item of the hardware.



Grease fittings and intervals

Regular lubrication is the best insurance against delays and repairs. Proper lubrication will extend the life of the implement.

Grease fittings

On new implements, the grease fitting may be covered with paint. Remove the paint to ensure the grease fitting can accept grease.

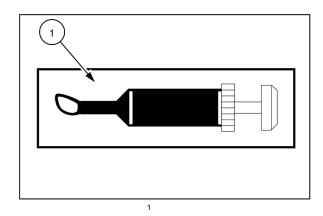
Wipe the dirt from all of the fittings and from the grease gun nozzle before you grease the implement to minimize the chance of contamination.

Pump fresh grease into the fitting to adequately lubricate the component and force out any contamination from the grease passage. Wipe off any excess grease.

Follow the lubrication schedule outlined in this operator's manual. Refer to the illustrations to identify each grease fitting on this implement.

All grease fittings are labeled with the sticker (1).

Not all grease fittings are readily visible. Various grease fittings can only be accessed through the removal of shields or guards. Always install the shields or guards before you operate the implement.



Grease guns

Different types of grease guns provide a different amount of grease per pump of the handle.

Two commonly used grease gun types are as follows:

- (1) Pistol grip-style grease gun
- (2) Lever-style grease gun

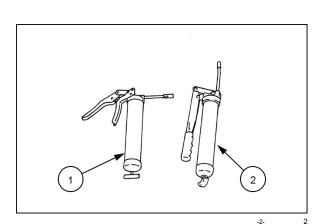
In general, a pistol grip-style grease gun injects half of the amount of grease per pump as a lever-style grease gun.

For listed components to grease on this implement, the number of pumps of grease for each grease location are based on the use of a pistol grip-style grease gun (1).

If you use a lever-style grease gun, use only half of the indicated number of pumps of grease.

Grease specification

See Page 7-9 for the correct grease specification.



Pressure washing

▲ WARNING

Flying debris!

Always wear protective clothing and safety glasses or a face shield when using a steam cleaner or power washer.

Failure to comply could result in death or serious injury.

NOTE: Legislation in certain countries and good practice requires special treatment of waste water through sedimentation and oil separation and controlled removal of residues.

Before you use pressure washing, clean the implement with compressed air.

Avoid pressure washing at ambient temperatures below 10 °C (50 °F) or when the implement is wet. Place the implement in a heated workshop or dry barn for at least 24 h. Clean the implement only when fully dry.

Be careful when you clean the implement with a high pressure washing. Avoid to direct water jets on electric equipment, bearings, seals, gearboxes, etcetera.

Grease all grease fittings carefully after you clean the implement to press possible water outside bearings.

When you use a high pressure washer:

- Keep a minimum distance of 30 cm (12 in) between the spray gun and the surface to be cleaned.
- Spray under an angle of minimum 25° (do not spray straight at the implement).
- Maximum water temperature: 60 °C (140 °F).
- Maximum water pressure: 60 bar (870 psi).
- · Do not use chemicals.

NOTICE: On the cylinders, do NOT direct the stream of a high pressure washer at the wiper seal. Water could come through the rod guide and create corrosion. This corrosion could generate pollution and seizing of the cylinder rod and the rod guide.

Fluids, lubricants, and capacities

Application	Capacity	Product name	Specification(s)	
Grease fittings	As required	TUTELA 75 MD GREASE	M1C 137-A	

Maintenance planning

Overview

	Grease Check		 [leaning Replace
	Tighten		П	Γ	Storing
Maintenance action			Н	İ	Page no.
Afte	er the first 10 hours				•
Nuts and bolts	x		П		7-10
	Every 10 hours				
Hydraulic connections		Х	П		7-10
	Every 100 hours				
100 hours grease fittings		Х	П		7-11
Nuts and bolts	x		П		7-12
Connectors			X		7-12
Every six years					
Hydraulic hoses			\prod	Х	7-13
As required					
Stabilizing disc					x 7-14

After the first 10 hours

Nuts and bolts

Torque again all the bolts, the nuts and the fasteners after the first ${\bf 10}~{\bf h}$ of work.

Every 10 hours

Hydraulic connections

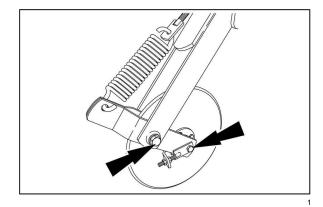
Check the tightness of all hydraulic threaded connections every **10 h** of work.

Every 100 hours

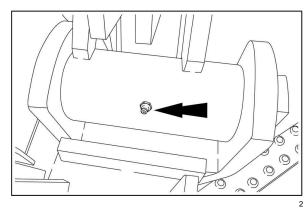
100 hours grease fittings

Front side

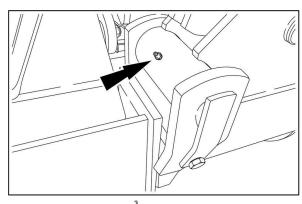
1. Stabilization disc pin (2x).



2. Pin (2x).



3. Pin (2x).



Nuts and bolts

Torque all the bolts, the nuts and the fasteners every ${\bf 100~h}$ of work. If necessary, tighten all loosened elements you come across.

Connectors

Clean the area surrounding connectors of individual components and surrounding the hydraulic valve connector every **100 h** of work. If necessary, clean the connectors with a moist cloth.

Every six years

Hydraulic hoses

A WARNING

Escaping fluid!

Do not disconnect hydraulic quick coupler under pressurized conditions. Make sure all hydraulic pressure is removed from the system before disconnecting hydraulic quick coupler. Failure to comply could result in death or serious injury.

A WARNING

Escaping fluid!

Hydraulic fluid or diesel fuel leaking under pressure can penetrate the skin and cause infection or other injury. To prevent personal injury: Relieve all pressure before disconnecting fluid lines or performing work on the hydraulic system. Before applying pressure, make sure all connections are tight and all components are in good condition. Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose. If injured by leaking fluid, see your doctor immediately.

Failure to comply could result in death or serious injury.

Hydraulic hoses are important safety elements in modern machinery. However, over the years, hose characteristics alter under pressure, thermal load and UV light. Therefore, most hoses now have a production date printed on the metal clamp bushing which allows to determine the age.

Legislation in certain countries and good practice require that hydraulic hoses are replaced when they become 6 years old.

When the hydraulics hoses are stiff and hard to bend it means that the hydraulic circuit is under pressure.

Upon the occurrence of leaks, make sure oil does not penetrate the soil or water, and remove the source of the leak as fast as possible.

After you replace the hydraulic hoses, maintain proper cleanness.

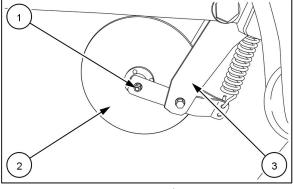
Inspect the entire hydraulic installation at least once a year.

As required

Stabilizing disc

Removal of the stabilizing disc

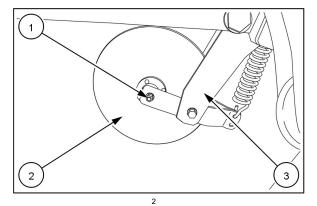
- 1. Lift the implement.
- 2. Remove the hardware (1) and remove the disc (2).
- 3. Install the hardware (1) on the frame assembly (3).



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Installation of the stabilizing disc

- 4. Lift the implement.
- 5. On the frame assembly (3), remove the hardware (1). Keep for later use.
- 6. Install the disc (2). Use the hardware (1).



Storage

End of season service

When the season is over, prepare the implement for the storage immediately.

To prepare the implement for winter storage, proceed as follows:

- Clean the implement thoroughly. Dust and dirt absorb moisture and moisture increases the formation of rust.
- 2. Store the implement in a dry place, protected against wind and weather in the best possible way.
- Grease all grease fittings after you clean the implement, according to the "Maintenance planning" (see Page 7-10).
- 4. Check the implement for damaged parts, loose screwjoints, leakage, wear and other defects carefully before the storage. If there is any damage, it may be forgotten during the storage and result in problems the following season. Note down the necessary parts you will need before the next season and order the spare parts.
- 5. The piston rod of the hydraulic cylinders may get rusty. Clean with brush and grease the components in order to protect them against wind and weather.
- Dismount the hydraulics and electronic cables and wires. Leave the hydraulic components on the machine and secure the camera and the monitor.
- Support the implement to relieve the weight from the tires. Keep tires inflated. Tire and rubber components life will be extended if protected from sunlight during storage.

NOTE: Periodic checks will help to keep your implement maintenance and repairs to a minimum and avoid costly breakdowns during the season. Therefore, it is good practice to have the implement inspected at the end of the season.

Implement long-term storage and/or disposal

When the implement reaches the end of its useful life, observe the following recommendations for disposal:

- See your KONGSKILDE SEKO SRL dealer to make an agreement for your dealer to properly dispose of the implement, or
- Sell the implement to a company that specializes in the proper disposal of industrial machinery.

If you want to keep the implement on your premises (for spare parts or other reusable components, etc.) you must observe the following instructions:

- Park the implement on hard and level ground. Bring all moveable components to the lowest position and/or safest position.
- Store the implement with the axles on wooden blocks in order to keep the implement upright, as the tires will deflate over time.
- Drain the oil from gearbox, and hydraulic systems into appropriate containers. Take the oil to your local waste recycling facility. Pay attention to local rules that may require you to store the different types of oils separately. Remove the filters (if available).

NOTE: The implement is now ready for a long-term storage and/or for scrapping after the removal of reusable components.

Long-term storage

The assigned storage life for the implement is minimum seven years, during this time the implement must be packed in a dry and clean place without condensation.

NOTE: All the requirements for the storage of the implement must be met.

Scrapping

When you scrap the vehicle, you must keep materials apart. Separate the following:

- Plastics
- Rubber hoses
- Belts
- Electric and electronic components
- Tires
- · Wiring harnesses
- Sheet metal
- Castings
- · Weld assemblies
- Aluminium
- · Any other additional category

NOTE: See your local waste recycling facility for specific rules on how to deliver the scrapped materials.

When you dismount mechanical systems, make sure that there is no risk of residual energy (such as compressed springs in belt variators). If you do not have the proper tools or instructions to disassemble a system or component, contact your KONGSKILDE - SEKO SRL dealer to perform this service.

NOTE: Make sure that the implement maintains stability during the dismantling process.

Ordering parts and/or accessories and / or accessories

When you prepare the implement for storage, check thoroughly for any parts that may have become worn and need replacing.

Order and install the spare parts and/or accessories at once before the next season.

When you order spare parts, always make sure to give your KONGSKILDE - SEKO SRL dealer the model number and the Product Identification Number (PIN) of your implement. See "Product identification" in Chapter 1 of this opera- tor's manual.

Insist on genuine KONGSKILDE - SEKO SRL "quality" spare parts as they will give the best performance and are covered by our warranty.

For best performance, have your implement serviced by an authorized KONGSKILDE - SEKO SRL dealer.

8 - TROUBLESHOOTING

Fault code resolution

General

This chapter describes the easy diagnostic methods for generic problems and the related remedies for them. If you cannot find the cause of a problem or solve a problem, consult the KONGSKILDE - SEKO SRL dealer.

Field operation

Problem	Possible Cause	Correction
Too shallow / deep work.	Incorrect adjustment of the working section.	Turn the working section crank to set the desired working depth.
The working section does not work correctly between the rows.	The working section moves on the frame.	Adjust the width of the working section on the frame.
	Too weak pressure of the stabilizing disc on the ground.	Increase the pressure of the stabilizing disk on the ground.
Inaccurate work between rows.	Worn elements in the working sections.	Replace worn elements in working sections.
	Incorrect tine positions in the working section.	Set the tines correctly in the working sections.
The plants in the row are covered with soil.	Incorrect setting of protective shields.	Move the protective shield to the correct working position.

9 - SPECIFICATIONS

Technical data

Name	Vibro Crop 3T-6R	Vibro Crop 5T-4R	Vibro Crop 5T-5R	Vibro Crop 5T-6R					
Frame width	3.0 m	(9.8 ft)	3.7 m (12.1 ft)	4.7 m (15.4 ft)					
Working width		3.7 m (12.1 ft) 4.7 m (15.4 ft							
Row distance	44.0 cm (17.3 in)		55.0 cm (21.7 in)						
Quantity of cleaned rows	6	4	5	6					
Quantity of sections	7	5	6	7					
Quantity of tines	19	21	26	31					
Share width	135.0 mm (5.3 in) , 200.0 mm (7.9 in) as an optional								
Working depth	up to 7 cm (2.8 in)								
Diameter section wheels	300.0 mm (11.8 in)								
Quantity of steering disc	1 2								
Diameter of steering disc		470.0 mm	n (18.5 in)						
Power consumption		36.8 – 58.8 kW	(50.0 – 80.0 hp)						
Hydraulic oil pressure		160 – 200 bar (2	2320 – 2900 psi)						
Maximum hydraulic oil pressure		200 bar (2900 psi)						
Hydraulic outlet		1 [DA						
Electrical system		12 V (7-pin)						
Transport width(T2)*		3.0 m	(9.8 ft)						
Clearance (G)	0.25 m (0.82 ft)								
Weight	850 kg (1874 lb)	750 kg (1653 lb)	800 kg (1764 lb)	950 kg (2094 lb)					
Working speed		up to 12 km							
Transport speed		up to 25 km /	h (15.5 mph)						

9 - SPECIFICATIONS

Name	Vibro Crop 3T-7R	Vibro Crop 3T-8R	Vibro Crop 3T-9R	Vibro Crop 5T-8R	Vibro Crop 5T-9R			
Frame width	3.7 m (12.1 ft)	4.7 m (15.4 ft)	6.7 m (22.0 ft)			
Working width	3.7 m (12.1 ft)	4.7 m (15.4 ft)	6.7 m (22.0 ft)			
Row distance		44 cm (17.3 in)		55 cm ((21.7 in)			
Quantity of cleaned rows	7	8	9	8	9			
Quantity of sections	8	9	10	9	10			
Quantity of tines	22	25	28	41	46			
Share width		135.0 mm (5.3 in)) , 200.0 mm (7.9	in) as an optional				
Working depth			up to 7 cm (2.8 in)				
Diameter section wheels		3	300.0 mm (11.8 in)				
Quantity of steering disc	1			2				
Diameter of steering disc		4	170.0 mm (18.5 in	1)				
Power consumption		58.8 –	74.5 kW (80.0 – 1	100 hp)				
Hydraulic oil pressure		160 – 2	00 bar (2320 – 2	900 psi)				
Maximum hydraulic oil		;	200 bar (2900 psi)				
pressure								
Hydraulic outlet			1 DA					
Electrical system			12 V (7-pin)					
Transport width*			3 m (9.8 ft)					
Clearance (G)			0.25 m (0.82 ft)					
Weight	900 kg (1984 lb)	1050 kg (2315 lb)	1100 kg	(2425 lb)	1150 kg (2535 lb)			
Working speed	up to 12 km/h (7.5 mph)							
Transport speed		up t	o 25 km/h (15.5 n	nph)				

9 - SPECIFICATIONS

Name	Vibro Crop 3T-10R	Vibro Crop 3T-11R	Vibro Crop 3T-12R					
Frame width		6.7 m (21.98 ft)						
Working width		6.7 m (21.98 ft)						
Row distance		44 cm (17.3 in)						
Quantity of cleaned rows	10	11	12					
Quantity of sections	11	12	13					
Quantity of tines	31	34	37					
Share width	135.0 mm (5.3 in) , 200.0 mm (7.9 in) as an optional							
Working depth	up to 7 cm (2.8 in)							
Diameter section wheels	300.0 mm (11.8 in)							
Quantity of steering disc	2							
Diameter of steering disc		470.0 mm (18.5 in)						
Power consumption	66.2	2 – 88.3 kW (90.0 – 120.0	hp)					
Hydraulic oil pressure	160	- 200 bar (2320 - 2900	psi)					
Maximum hydraulic oil pressure		200 bar (2900 psi)						
Hydraulic outlet		1 DA						
Electrical system		12 V (7-pin)						
Transport width*		3 m (9.8 ft)						
Clearance (G)		0.25 m (0.82 ft)						
Weight	2700 kg (5952 lb)	2450 kg (5401 lb)	2700 kg (5952 lb)					
Working speed		up to 12 km/h (7.5 mph)						
Transport speed		up to 25 km/h (15.5 mph)						

Fluids, lubricants, and capacities

Application	Capacity	Product name	Specification(s)
Grease fittings	As required	TUTELA 75 MD GREASE	M1C 137-A

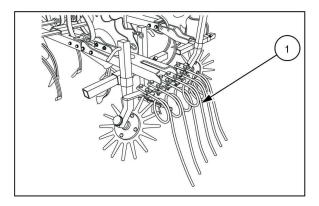
10 - ACCESSORIES

General information

Accessories or optional equipment listed hereafter may be part of the standard equipment for certain countries. Some of these accessories or options may not be available in certain markets.

Long finger harrow

The long finger harrows (1) allow for an accurate cleaning of the soil between one row and the other.



1

Starwheel kit

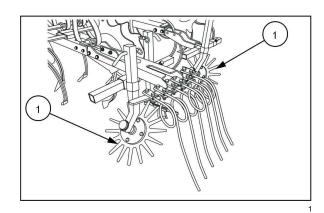
The starwheel kit (1) can be attached to every common hoe and allow for a more accurate cleaning of the soil, cleaning also the space between one plant and the other of the same row.

The rubber fingers grip from the side around the plant and there they hoe the weeds.

NOTE: To achieve the maximum weed-control, the kit should be used when the weeds just emerge.

Depending on the plant cultivation use the recommended size of the kit as summarized in the table below.

Size	Row distance	Plants
Large (Ø 370 mm)	45.0 – 50.0 cm	Strawberries,
	(17.7 – 19.7 in)	cabbage,
		maize, tobacco
		and tree
		nurseries
Medium (Ø 290 mm)	60.0 – 75.0 cm	Sugar beets,
	(23.6 – 29.5 in)	soybeans and
		leek



Light kit extension

If the implement is equipped with finger harrows or/and starwheel kit, the standard light kit will collide with the equipment while folding the wing frames.

To prevent collision, a **720.0 mm** (**28.3 in**) extension (**1**) has been added to the light kits and shall be mounted for the light bar to clear the equipment.

11 - FORMS AND DECLARATIONS

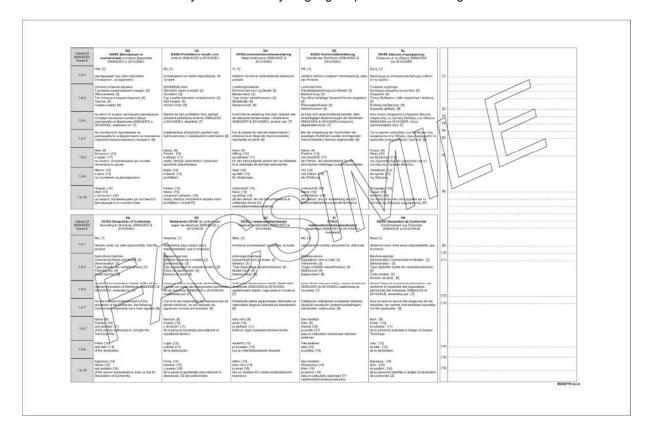
European Community (EC) Declaration of Conformity

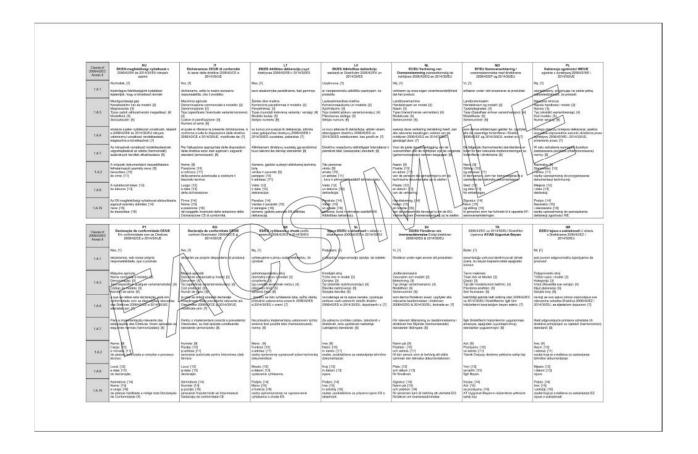
ACCORDING TO DIRECTIVES 2006/42/EC & 2014/30/EU

Inside the European Community and for some specific countries, an EC Declaration of Conformity is separately delivered with your implement. The EC Declaration of Conformity is the manufacturer's declaration about equipment compliance to relevant European Union (EU) provisions.

Store the EC Declaration into a safe place like the storage box for your operator's manual. Local authorities may require you to show this document in order to assure compliance of your equipment.

Translation of this declaration in your own country language is provided on the original document.





For your better and easier understanding of the document, you will find the text reproduced hereafter.

EC/EU Declaration of Conformity

According to Directives 2006/42/EC & 2014/30/EU
We,
declare under our sole responsibility, that the product:
Agricultural machine
Commercial Name KONGSKILDE - SEKO SRL and Model:
Denomination: Tillage
Type (Specify any variant/version):
Planning key:
Serial Number:
to which this declaration relates, fulfills all the relevant provisions of Directives 2006/42/EC & 2014/30/EU, amended by: -
For the relevant implementation of the provisions of the Directives, the following (harmonized) standards have been applied:
• EN ISO 12100:2010
Name, position, and address of the authorized person to compile the Technical Construction File:
Place and date of the declaration:
Signature, name and position of person empowered to draw up the EC Declaration of Conformity:

11 - FORMS AND DECLARATIONS	

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The manufacturer and its authorized representative reserves the right to make improvements in design and changes in specifications at any time without notice an without incurring any obligation to install them on units previously sold. Specifications, descriptions, and illustrative material herein are as accurate as known at the time of publication, but are subject to change without notice.

Availability of some models and equipment builds varies according to the country in which the equipment is being used. For exact information about any particular product, please consult your Kongskilde - Seko Srl dealer.



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