

ORIGINAL INSTRUCTIONS - according to Directive 2006/42/EC, Annex I 1.7.4.1 and according to Supply of Machinery (Safety) Regulations 2008, Annex I 1.7.4.1

OPERATOR'S MANUAL

Delta HSF 250

Delta HSF 300

Stubble Cultivator

*PIN KTNKA60*A00001152 and above*

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1 - GENERAL INFORMATION

Note to the owner

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 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 is CE approved.

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 and your KONGSKILDE 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 parts and accessories have been specifically designed for KONGSKILDE implements.

We would like to point out that "non-genuine" parts and accessories have not been examined and released by KONGSKILDE. 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 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 parts only. These parts are covered by our warranty and will give you the best performance.

See the parts catalog or browse the KONGSKILDE 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

Your implement is warranted according to legal rights in your country and the contractual agreement with the selling dealer. No warranty shall, however, apply if the implement has not been used, adjusted and maintained according to the instructions given in this operator's manual.

It is prohibited to carry out any modifications to the implement unless specifically authorized, in writing, by a KONGSKILDE representative.

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

The implement may only be used to work organic substances (for example manure in solid or liquid form, compost, etcetera) into the soil, to loosen the soil surface (for example after the winter period), and to mix layers of soil.

The work must occur under reasonable conditions, or thorough agricultural knowledge and authorised 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. Observe 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. 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.

Manual scope and required training level

Introduction to this manual

This manual gives information about the use of your KONGSKILDE machine as intended and under the conditions foreseen by KONGSKILDE 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 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 machine.

Normal operation

Normal operation consists of the use of this machine for the purpose KONGSKILDE 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 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 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 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 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 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 in this manual, assembly instructions, and/or other company literature

Repair activities restore proper function to a KONGSKILDE 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 in the service manual.

Before you operate

Read this manual before you start the engine or operate this KONGSKILDE machine. Contact your KONGSKILDE 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 machine should be old enough to possess a valid local vehicle operating permit (or meet other applicable local age requirements). These persons

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

aging depending on the kind of shipment and the related procedure to assemble the received components.

Additional documents

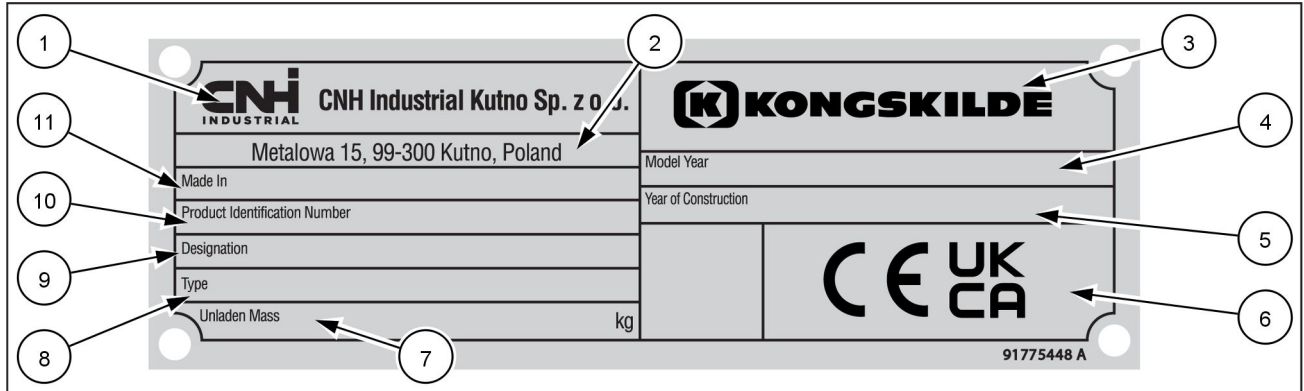
When required, the machine is delivered with an assembly instruction. The assembly instruction shows the pack-

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 PIN plate.

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



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- | | | | |
|------------|---------------------------|-------------|-------------------------------------|
| (1) | Company name | (7) | Unladen mass |
| (2) | Mailing address | (8) | Type / Variant |
| (3) | Brand identification logo | (9) | Designation |
| (4) | Model year | (10) | Product Identification Number (PIN) |
| (5) | Year of construction | (11) | Made in (country of origin) |
| (6) | Certification mark | | |

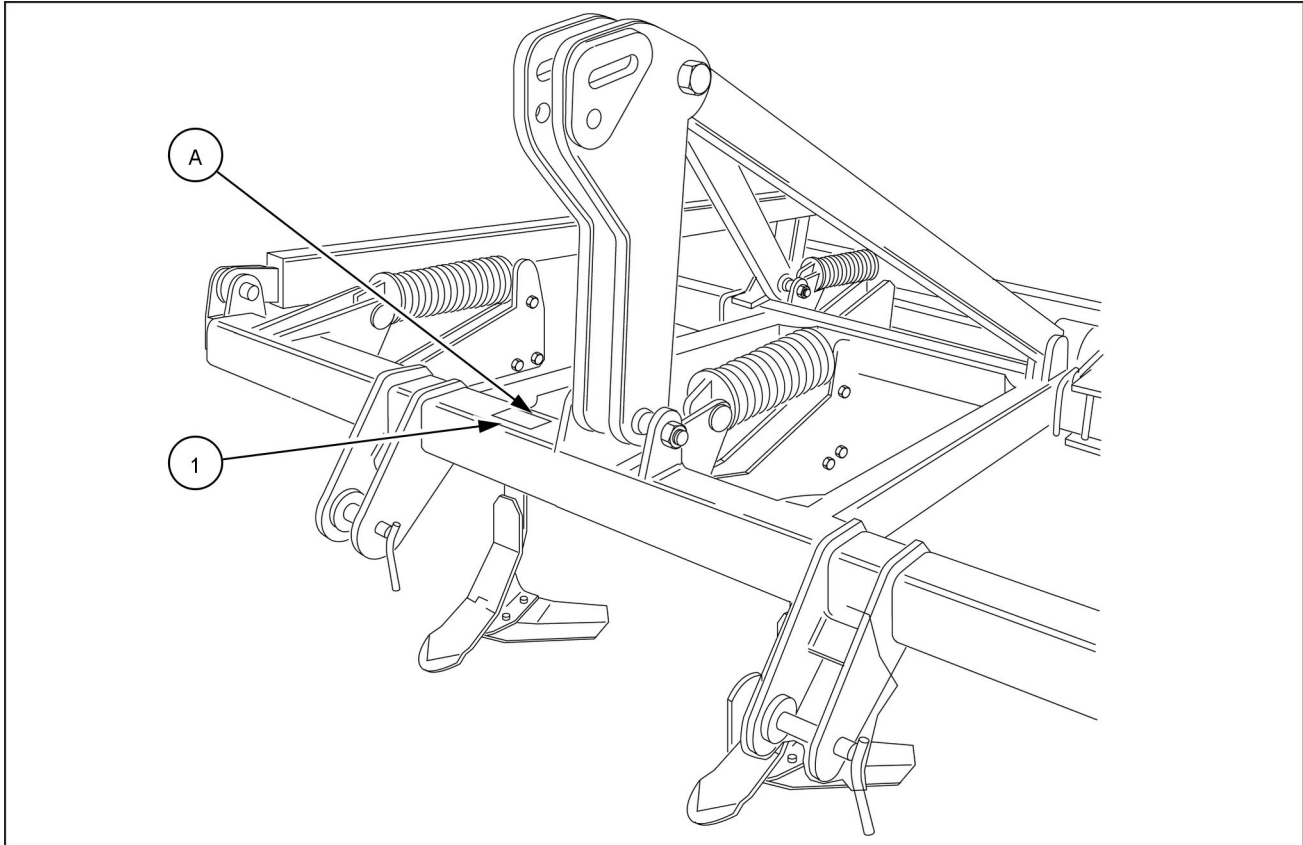
Product identification

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

The implement data are on the Product Identification Number (PIN) plate **(1)**.

The PIN plate **(1)** is on the front cross beam.

The PIN is also engraved on the chassis at **(A)** above the PIN plate **(1)**.



ZEIL19TIL0206FA 1

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

Model

Product Identification Number (PIN)

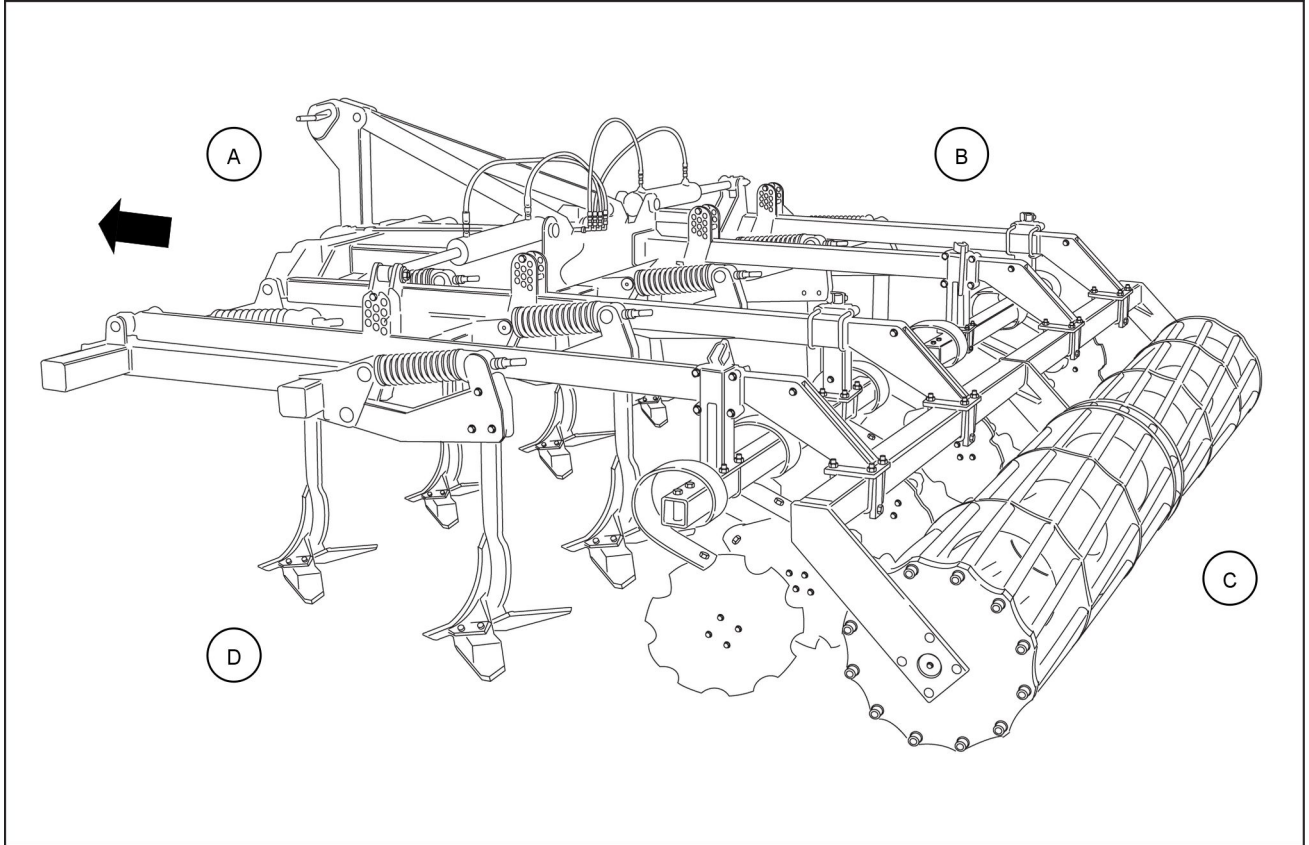
Operator's manual storage on the machine

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.



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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

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.

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

 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 was designed with safety in mind. However, there is no real substitute for caution and attention when you need to prevent an accident. Once an accident has occurred, it is too late to think about what you should have done. This means that it is very important that you as user of the implement pay attention and use the implement correctly and thereby avoid exposing yourself and others to unnecessary danger.
- The implement must be operated only by responsible persons who have been adequately trained and authorized 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.
- 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.
- 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.

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.

W0012A

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.
2. Inspect the electrical system for loose connections or frayed insulation. Repair or replace loose or damaged parts.
3. 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.
6. Promptly investigate any unusual smells or odors that may occur during the operation of the implement.

Hazardous chemicals

1. 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 harmful to domestic animals as well as humans.
2. 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.
3. 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.
4. 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.
7. 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.

When you attach the implement to the tractor:

- Never allow anyone to stand between the tractor and the implement. An unintentional manoeuvre with the tractor may cause serious injury.
- Never go under an unsupported implement.

Install all the guards correctly before you use the implement.

Before you start up the implement (for example the first time after a long standstill period), make sure that there are no detached loose parts on the drive line area and on the moving parts of the implement.

Travelling on public roads

Comply with the relevant traffic regulations

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.

W0081A

WARNING

Transport hazard!
Observe the local government regulations when driving on public roads.
Failure to comply could result in death or serious injury.

W1019A

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.

W0089A

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.

Drive safe

Do not drive under the influence of alcohol or drugs.

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.

The implement and the ballast weight 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 place the implement in parking position, turn off the tractor engine, pull the parking brake, and remove the key from the ignition.

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.

W0207A

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.

W0304A

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.

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.

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.

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.

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.

W0004A

- 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.
- Stay clear from the area of the three point linkage during maintenance or checking operations.
- 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.
- Keep hands, feet and/or garments away from parts which move.
- 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 shield, 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.
- Transmission and 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.



NHIL13RB00001AA 1

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.

W0178A

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 hydraulic system of the tractor is activated, the hydraulic system 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 header suddenly moves downward after you open the transport lock.

Implement stability

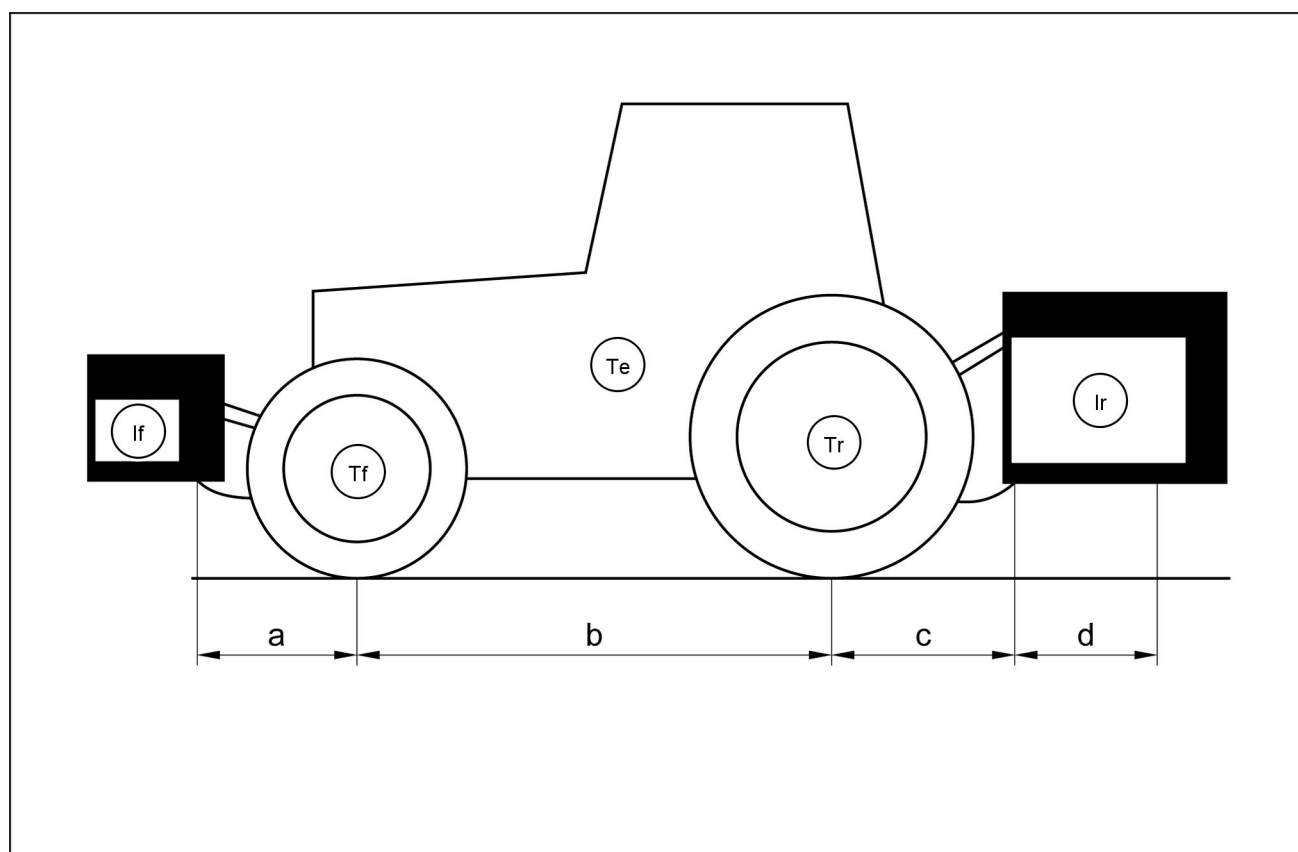
The combination of your tractor and implement can become unstable, due to the additional weight that the implement adds to the tractor.

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:

$$I_{f,min} = \frac{[I_r \times (c + d)] - (T_f \times b) + (0,2 \times T_e \times b)}{a + b}$$



ZEIL18HT00277FA 1

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 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 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 environment if the batteries are not properly recycled after use. Improper disposal of batteries can contaminate the soil, groundwater, and waterways. KONGSKILDE strongly recommends that you return all used batteries to a KONGSKILDE dealer, who will dispose of the used batteries or recycle the used batteries properly. In some countries, this is a legal requirement.



NHIL14GEN0038AA 1

Mandatory battery recycling

NOTE: The following requirements are mandatory in Brazil.

Batteries are made of lead plates and a sulfuric acid solution. Because batteries contain heavy metals such as lead, CONAMA Resolution 401/2008 as amended by CONAMA Resolution 424/2010 requires you to return all used batteries to the battery dealer when you replace any batteries. Do not dispose of batteries in your household garbage.

Points of sale are obliged to:

- Accept the return of your used batteries
- Store the returned batteries in a suitable location
- Send the returned batteries to the battery manufacturer for recycling

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 signs 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.*

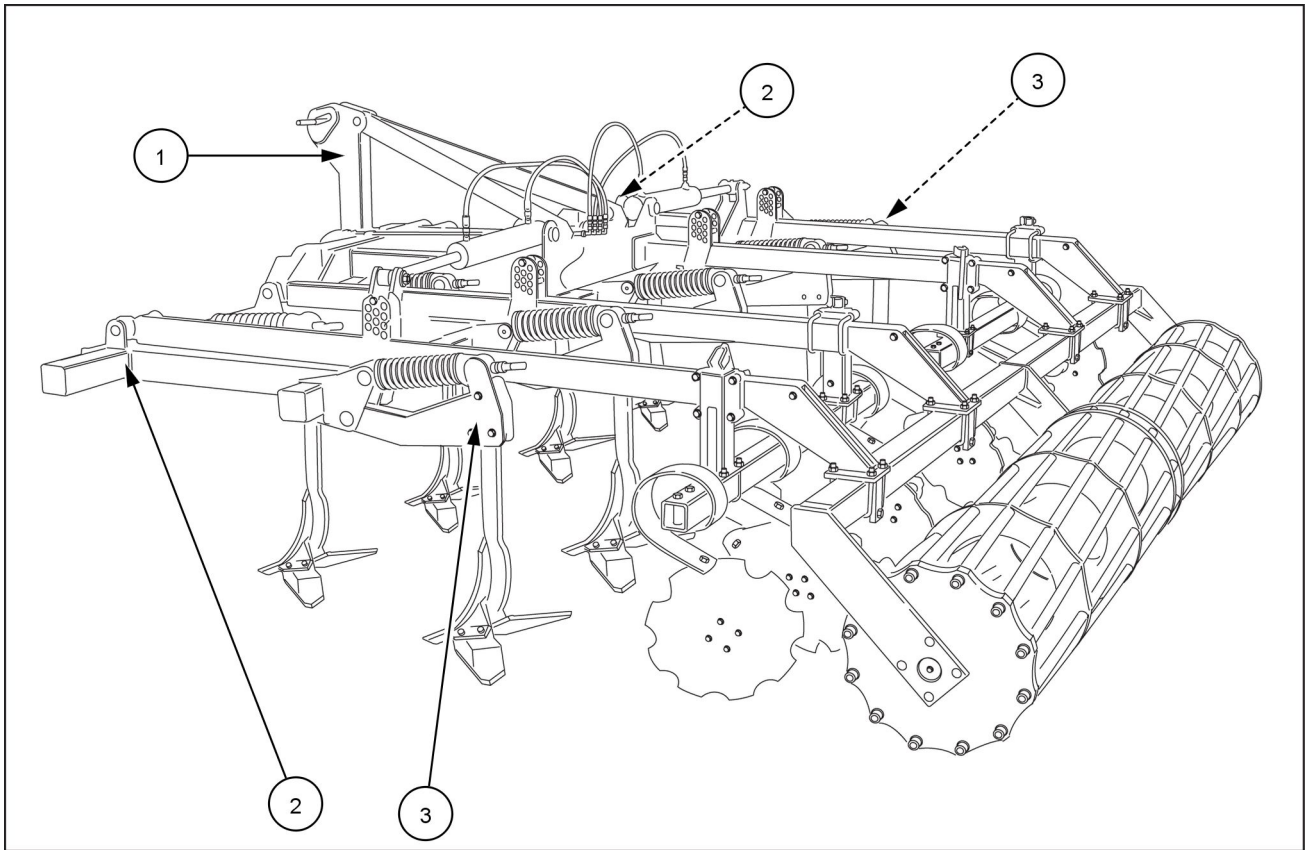
Replace all safety signs that are damaged, missing, painted over, or illegible. If a safety sign is on a part that you or your dealer replaces, make sure that you or your dealer install the safety sign on the new part. Contact your dealer for the replacement of the safety signs.

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.





ZEIL17TIL0265FA 1

Safety sign (1)

⚠ WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE DEATH OR SERIOUS INJURY.

MAKE SURE THAT EVERY OPERATOR:

- is instructed in the safe and proper use of this machine.
- reads and understands the operator's manual for this machine.
- reads and understands ALL safety signs on the machine.

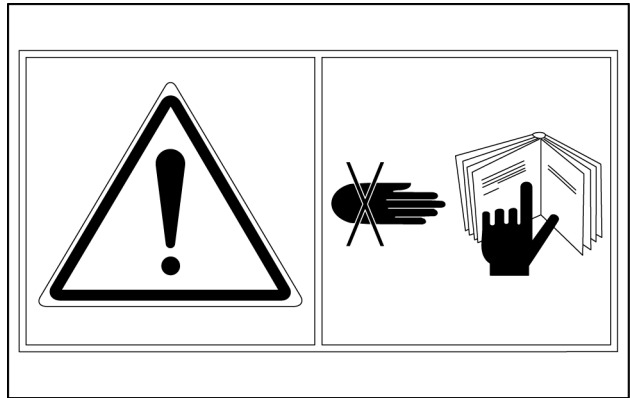
Failure to comply could result in death or serious injury.

W0188A

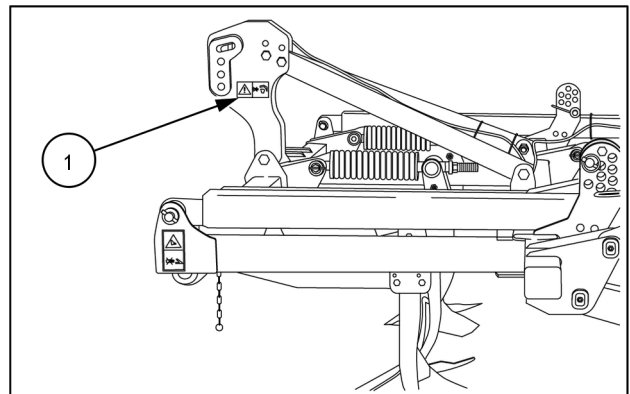
Carefully read the operator's manual before you handle the implement. Observe instructions and safety rules when you operate the implement.

Part number: 71000187250

Located on the left-hand side of the upper catch point.



71000187250 2

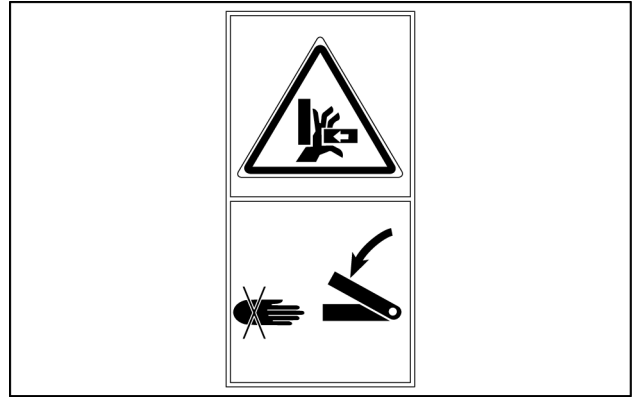


ZEIL22TIL0183AA 3

Safety sign (2)

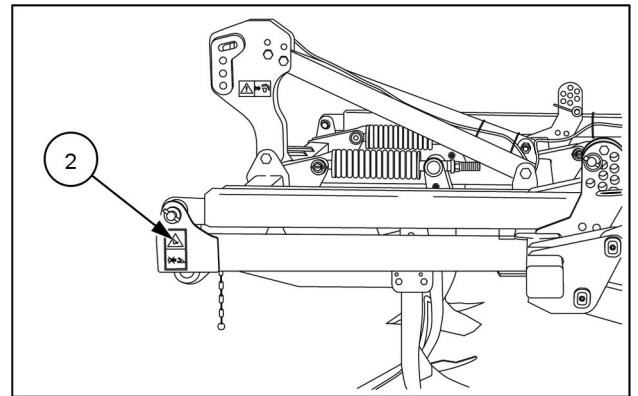
Never move your hand into the danger zone as long as the parts can move. This may cause serious injury and, at worst, result in death.

Part number: 71000629549

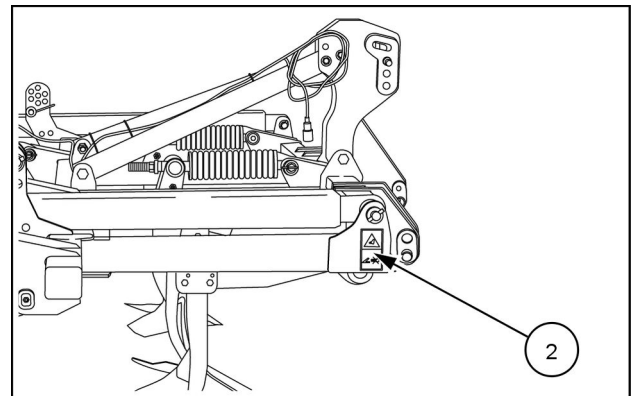


71000629549 4

Located on left-hand side frame and right-hand side frame of the implement.



ZEIL22TIL0183AA 5

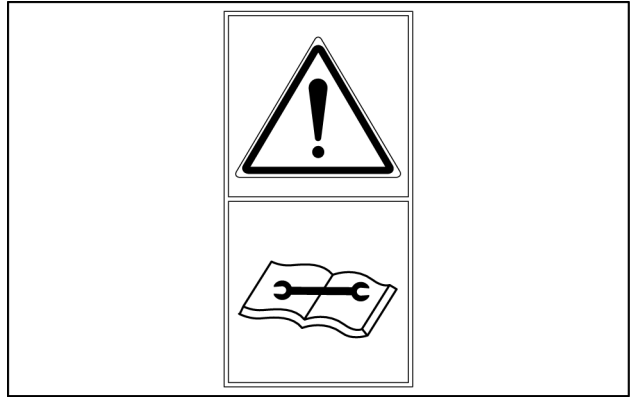


ZEIL22TIL0181AA 6

Safety sign (3)

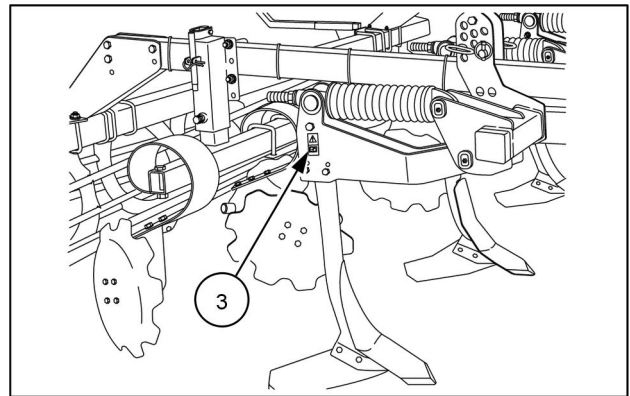
Read and observe the operating instructions.
Before maintenance and repair work, read and observe the operating instructions.

Part number: 71918835800

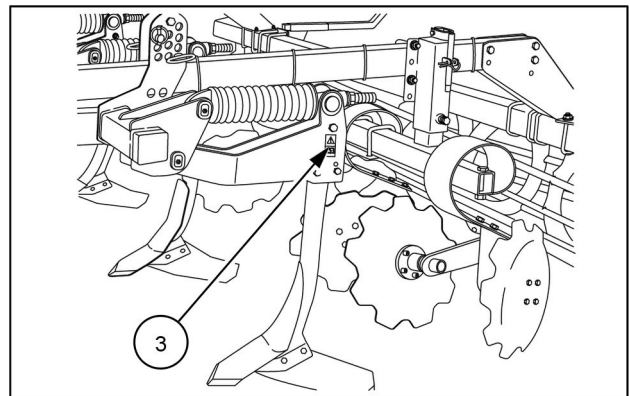


71918835800 7

Located on left-hand side tine protection and right-hand side tine protection.



ZEIL22TIL0180AA 8



ZEIL22TIL0182AA 9

3 - CONTROLS AND INSTRUMENTS

Access to operator's platform

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.

4 - OPERATING INSTRUCTIONS

Commissioning the unit

Check before use

Before you operate the implement, perform the following operations:

- 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.
- Check the correct installation of the discs, tines and roller.
- Check the implement visually to find possible errors. Always replace all parts that are damaged or wear.
- Check the correct installation of the safety devices. Also check if the safety devices are intact.
- Check the proper tightness of all the nuts and bolts.
- Grease the implement before you start the operations. This is also necessary before you use the implement for the first time.
- Remove all the tools from the implement.
- Check the correct connection and tightening of the hydraulic components.
- The air pressure of the tractor tires must be the same for the left-hand and right-hand rear wheel. This applies also to the front wheels. Refer to the operating instructions supplied by the tractor manufacturer.
- 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.
- The hydraulic controls of the tractor have to be switched to work in "float" position or "load and depth control".

NOTE: *If there is any doubt, stop the tractor and the implement immediately. If necessary, seek authorized assistance.*

Starting the unit

Connection to the tractor

WARNING

Avoid injury!

Always stay clear of the implement operating area. In particular, **DO NOT** stand between the tractor and the trailed vehicle or either three-point linkage when operating lift controls. Make sure no bystanders are within or near these operating areas.

Failure to comply could result in death or serious injury.

W1087A

WARNING

Rear upset hazard!

Use the correct location on the tractor when attaching equipment. Always use the drawbar for trailed equipment. Always use the three-point hitch for mounted or semi-mounted equipment. Do not use the hitch as a drawbar.

Failure to comply could result in death or serious injury.

W0331B

WARNING

Driving hazard!

Before operating the machine, slightly lower the three point hitch and visually inspect the connection to be sure the locking latches fully support the pick-up hitch.

Failure to comply could result in death or serious injury.

W0418A

WARNING

Tip-over hazard!

Adding additional weight (buckets, attachments, etc.) to the machine can create a tipping hazard. Do not exceed the gross weight indicated by the machine specifications.

Failure to comply could result in death or serious injury.

W0153A

When you connect the hydraulic hoses, release the pressure in the hydraulic system of the tractor and on the implement side.

Before you connect the implement to the three-point hitch, put the operating mechanism into a position which will prevent any accidental lifting or lowering.

The three-point hitch category on the stubble cultivator and on the tractor must match each other. If they do not correspond, adjust the three-point linkage on the tractor.

The lower links of the tractor must always be horizontal. Always adjust the limiting chains or stabilizers of the tractor lower links to allow moderate side free play of the implement during work.

Before you connect the implement to the tractor, perform the following preparations:

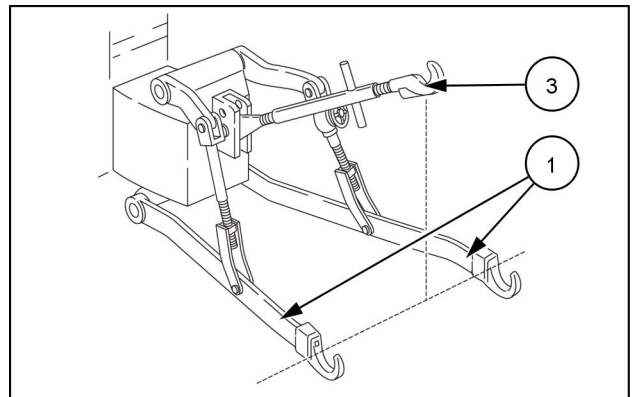
- Park the disc cultivator on firm and level ground.
- If you use a hydraulically foldable frame, switch the hydraulic system of the tractor to position control.

To connect the implement to the tractor, proceed as follows:

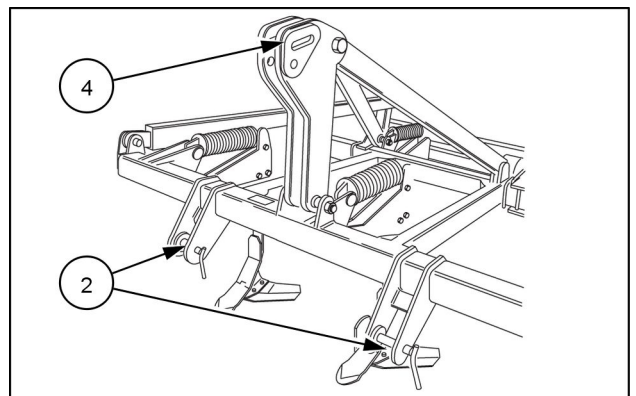
1. Lower the lower link arms **(1)** such that the linkage hooks are below the hitch points **(2)** of the cultivator.
2. Reverse the tractor up to the stubble cultivator and stop when the linkage hooks are under the hitch points **(2)**.
3. Lift the lower link arms, until the linkage hooks of the lower link arms catch the quick coupling balls of the stubble cultivator, mounted on the hitch pins bolts.
4. Lock and secure the linkage hooks.
5. Fit the top link **(3)** arm into the upper catch point **(4)** of the stubble cultivator.
6. Lock and secure the top link **(3)**.

NOTICE: Always secure the top link and the lower link arms coupling bolts with the linchpin.

7. If you use a hydraulically foldable frame, connect the hydraulic hoses of the implement to the corresponding connections on the tractor, before you open the stop-cock of the hydraulic system.



ZEIL17TIL0270AA 1



ZEIL17TIL0271AA 2

Stopping the unit

Disconnection and parking

⚠ WARNING

Avoid injury!

Always stay clear of the implement operating area. In particular, DO NOT stand between the tractor and the trailed vehicle or either three-point linkage when operating lift controls. Make sure no bystanders are within or near these operating areas.

Failure to comply could result in death or serious injury.

W1087A

⚠ 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.

W0284A

⚠ WARNING

Overturning hazard!

Always try to park the machine on firm level ground. Avoid parking on slopes. Block the wheels in both directions.

Failure to comply could result in death or serious injury.

W0051A

Before you disconnect the implement from the three-point hitch, put the operating mechanism into a position which will prevent any accidental lifting or lowering.

Before you disconnect the implement from the tractor, perform the following preparations:

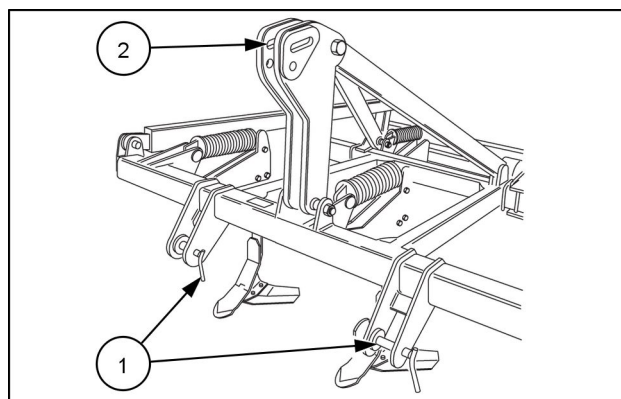
- Park the disc cultivator on firm and level ground.
- If you use an implement with hydraulically foldable frame, switch the hydraulic system of the tractor to position control.

To disconnect the implement from the tractor, proceed as follows:

1. Lower completely the cultivator to the ground.
2. If you use an implement with hydraulically foldable frame, fold completely the implement.
3. Remove any pressure from the hydraulic system.
4. Separate the hydraulic hoses from the tractor.
5. Remove the top link of the tractor from the upper catch point **(2)** of the stubble cultivator.
6. Remove the lower links from the hitch points **(1)**.

NOTICE: Pay attention when you disconnect the lower links. There is danger of injury if the implement falls down or tips.

7. After the disconnection, check that the stubble cultivator rests in a safe position.
8. If you use an implement with hydraulically foldable frame, close the stopcock of the hydraulic system. To protect the coupling plugs of the hydraulic hoses from dirt, place the coupling plugs into the parking sockets provided.



ZEIL17TIL0271AA 1

5 - TRANSPORT OPERATIONS

Road transport

Transport position

When the stubble cultivator is connected to the three-point hitch and is in transport position, ensure sufficient locking at the side of the three-point linkage.

NOTE: Adjust the limiting chains/stabilizer in such a way that the implement cannot swing out sideways.

Release mechanism for quick couplings must hang loosely and not trigger themselves at a low level.

Do not transport the stubble cultivators with a width larger than **3 m (118.11 in)** on public roads, when the stubble cultivator is connected to the tractor. To transport the implements wider than **3 m (118.11 in)** on public roads, you need a special permit from the appropriate authorities.

If the stubble cultivator conceals the lights of the tractor, duplicate the direction indicators as well as the licence plate of the tractor on the stubble cultivator. The lighting equipment with warning sign are options.

If the stubble cultivator projects more than **40 cm (15.75 in)** beyond the front side lights of the tractor, identify the implement to the front side. Use warning signs and foils during the day and lights at the front during the night or periods of poor visibility.

NOTICE: Remove the lighting equipment and the warning signs before you work in the field to avoid damage.

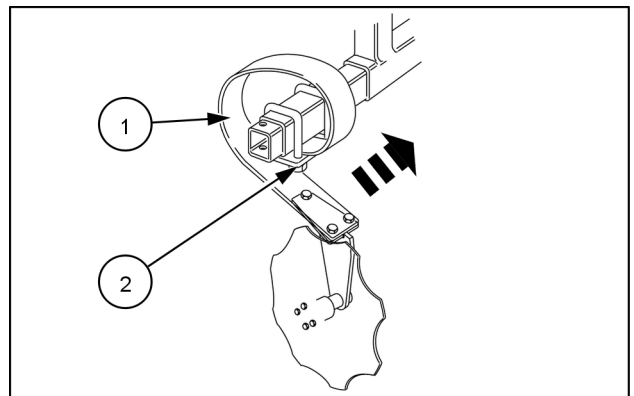
To transport the implement on public roads, lock the control valves of the tractor.

To transport the implement on public roads, move in the edge discs **(1)**.

Never drive on public roads if the edge discs are in working position and if the implement exceeds the admissible transportation width of **3 m (118.11 in)**.

To move in the edge discs **(1)**, proceed as follows:

1. Remove the safety bolts **(2)**.
2. Slide the edge discs **(1)** toward the inside.
3. Secure using the bolts **(2)**.



ZEIL17TIL0266AA 1

If you use an implement with hydraulically foldable frame, shut the stopcock of the hydraulic system on the stubble cultivator side.

Secure the hydraulically foldable frame parts for transportation on public roads against any accidental folding out by turning the stopcock of the implement to the close position.

The locking device on the hydraulic cylinders prevents from accidental folding in case of a defect in the hydraulic hoses. However, it does not prevent unintentional folding if you operate the control device by mistake. Never drive with the frame folded up while the stopcock is open.

After the transport, lower completely the foldable frame parts and close the stopcock.

Use warning signs or markers to identify the stubble cultivator during the day.

During the night and periods of poor visibility, use tail lights and reflectors to complement the warning signs or markers.

Preparing for road transport

Folding and unfolding

⚠ DANGER

Crushing hazard!

Stay clear of the implement when the wings are folded or unfolded. Hydraulic or mechanical failure may cause rapid uncontrolled falling of the wings.

Failure to comply will result in death or serious injury.

D0108A

NOTICE: Make sure that no one gets close to the discs, due to risk of cutting.

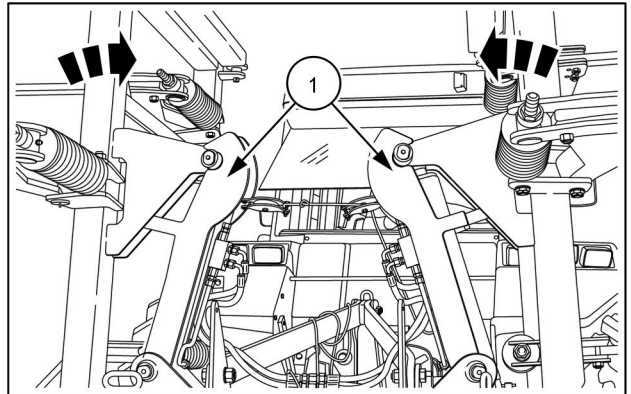
NOTE: Raise the implement before you perform folding operations.

The security hooks prevent the implement from accidental unfolding in case of a defect in the hydraulic hoses. However, it may not prevent unintentional unfolding or lowering if the control device is operated by mistake.

Folding

To fold the implement, proceed as follows:

1. Check that the valve is in open position.
2. Lift the implement completely off the ground.
3. Operate the hydraulics of the folding cylinders and check that both wings fold completely in.
4. Check that the security hooks **(1)** automatically click into place.
5. Check that the security hooks **(1)** have locked the frames in the upright position.
6. Close the valve to prevent accidental unfolding.

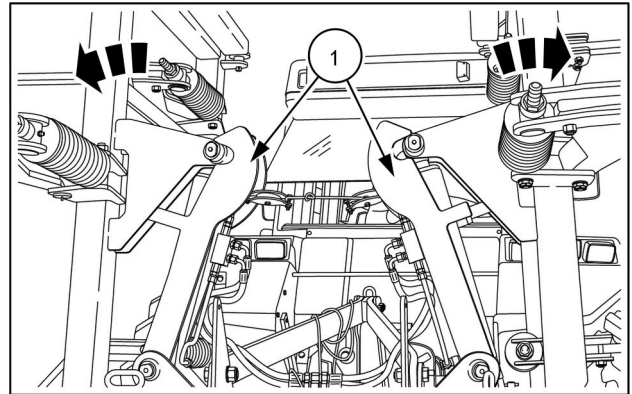


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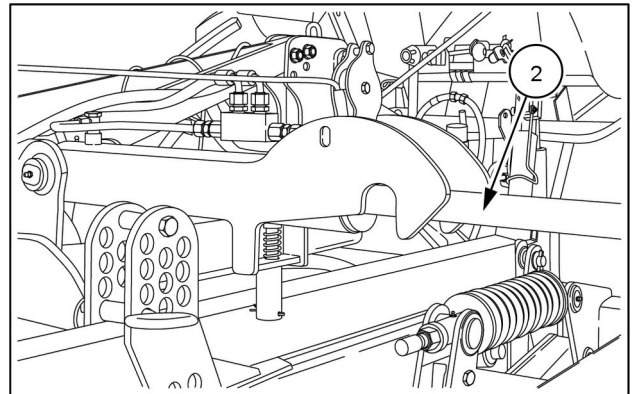
Unfolding

To unfold the implement, proceed as follows:

1. Open the valve to prevent accidental unfolding.
2. Lift the implement completely off the ground.
3. To ensure clearance between the hooks and the pins, fold in the wings completely before you unfold the wings.
4. Pull the 2 strings attached to the wing locks to open the security hooks **(1)**. If the hydraulic system is slightly leaking, there may be tension on the security hooks. In this case operate the hydraulic valve to fold the implement and then pull the strings.
5. Slowly unfold both wings and fully extend the wing cylinders **(2)**.



ZEIL19TIL0469AA 2

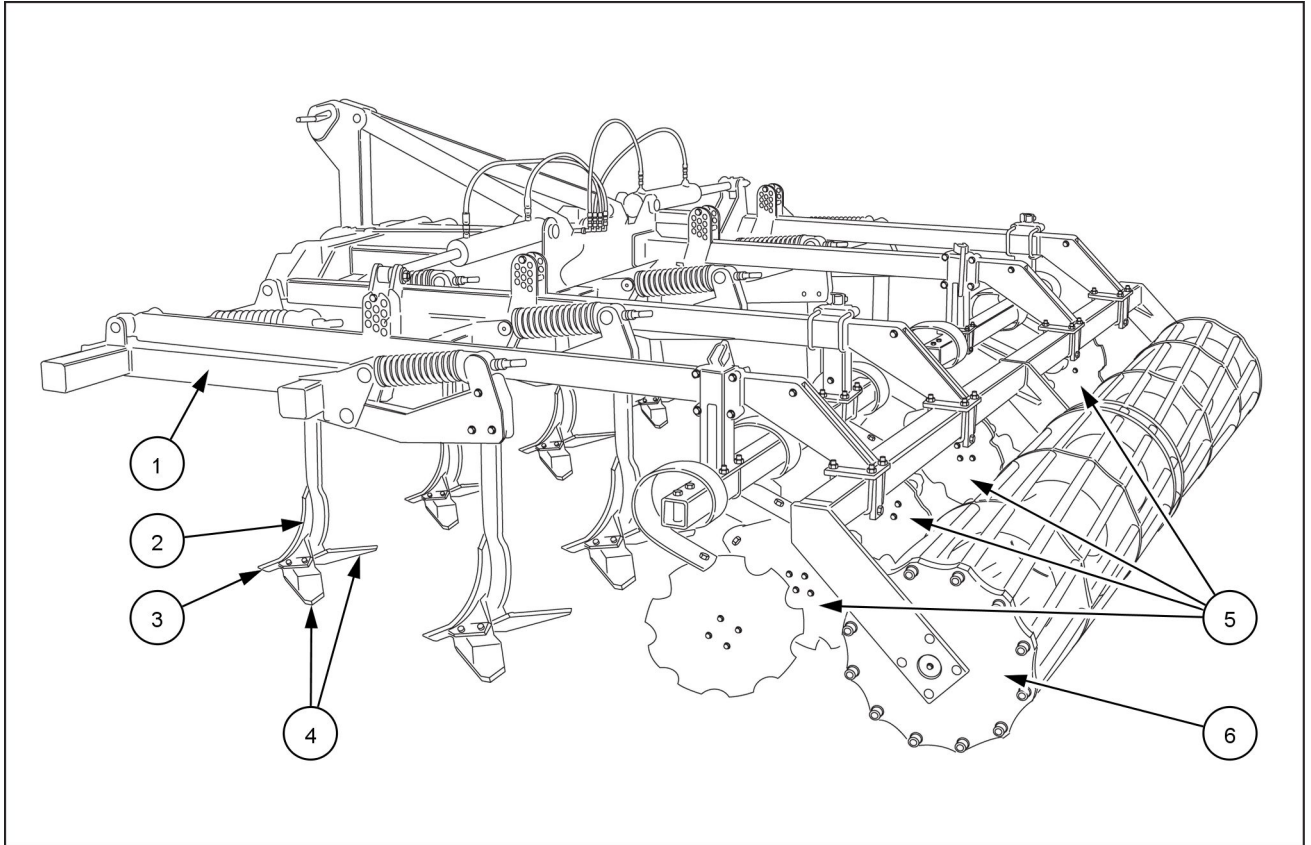


ZEIL19TIL0468AA 3

6 - WORKING OPERATIONS

General information

Implement overview



ZEIL17TIL0265FA 1

Frame

The frame (1) is made of a strong box section of **100 mm (3.94 in)**. The height of the frame is **800 mm (31.5 in)** and the distance between the rows of tines is **1000 mm (39.37 in)**.

Tine, shear, wings and guiding plate

The tines are equipped with guiding plate (2), point (3), and wings (4) (left-hand and right-hand), which ensure full cut and proper mixing, suitable for shallow cultivation. Each part is individually screwed in and can be changed independently.

If request for deeper cultivation, the wings (4) can easily be dismantled.

Concave discs

The concave discs (5) have serrated edges and have a diameter of **460 mm (18.11 in)**. The rollers and the concave discs form one unit and can both be set simultaneously to the same working depths resulting in a constant work performance.

Cage rollers

The cage rollers facilitate the exact depth guidance of the cultivator.

The stubble cultivator comes with four different cage rollers and one cutter roller **(6)**.

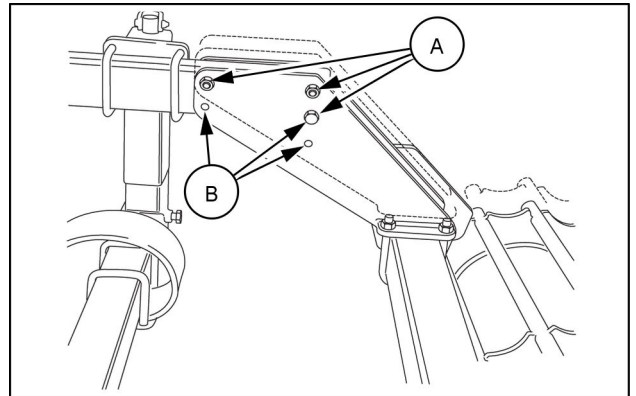
- Standard rollers with diameters of **450 mm (17.72 in)**, **550 mm (21.65 in)** or **630 mm (24.8 in)**.
- Tandem roller with a diameter of **450 mm (17.72 in)**.
- Cutter roller **550 mm (21.65 in)**.

Adjustments

Adjustment of the furrow press

If the space is limited, transport the cross beam of the furrow press separately with the cage rollers. In this case, connect the cross beam to the parallel linkage.

The position **(A)** represents the basic setting. The difference in height between position **(A)** and position **(B)** is **50 mm (1.97 in)**.



ZEIL17TIL0268AA 1

Adjustment of the concave discs

⚠ WARNING

Avoid injury!

Always engage the parking brake and switch off the engine before working on the machine.
Failure to comply could result in death or serious injury.

W1046A

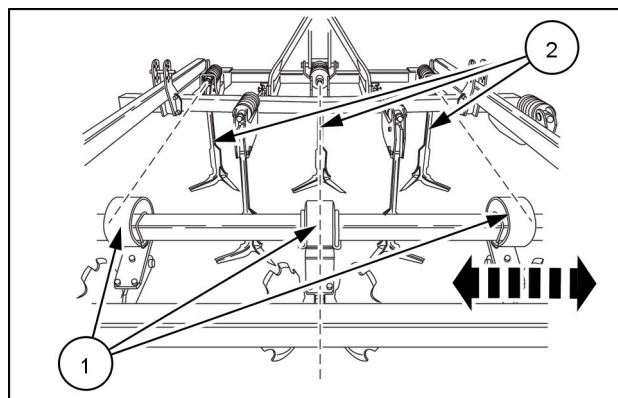
Alignment of the concave discs

NOTE: Place the pairs of the concave discs (1) in line behind the shares (2) of the first row.

To align the pairs of the concave discs (1), proceed as follows:

1. Loosen the fastenings of the pairs of the concave discs (1).
2. Move the concave discs (1) along the cross beam.
3. Fasten again the pairs of the concave discs (1).

NOTE: For models with screwed fastenings, it is also possible to move the shares on the first row.



ZEIL17TIL0269AA 1

Adjustment of the working depth

The discs must work at about half the depth of the tines. The concave discs must even out and level off the furrows and mounds left by behind the tines.

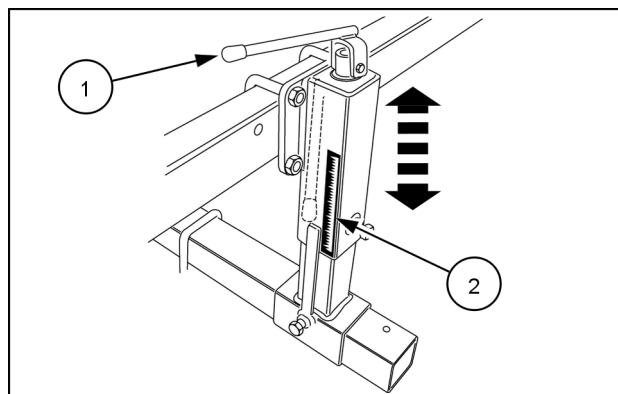
To change the working depth, proceed as follows:

1. Fold the handle (1) in horizontal position.
2. To lift or low the concave discs, turn the handle clockwise or counter-clockwise.
3. Read the height on the indicator rod markings (2).
4. Repeat the setting at the other bars.
5. Fold down the handle (1).

NOTE: The adjustment of the depth control is correct when the following roller is evenly "filled" with soil over its whole width or is covered in an even "veil of soil".

The discs are not deep enough, if there is more soil in the roller, directly behind the pairs of discs, than between the pairs of discs. The discs are too deeply, if there is clearly less soil behind the pairs of discs than between the pairs of discs.

NOTE: It is not necessary to readjust the working depth of the tines after you adjust the depth of the concave.



ZEIL17TIL0278AA 2

Adjustment of the working depth of the tines

⚠ WARNING

Avoid injury!

Always engage the parking brake and switch off the engine before working on the machine.

Failure to comply could result in death or serious injury.

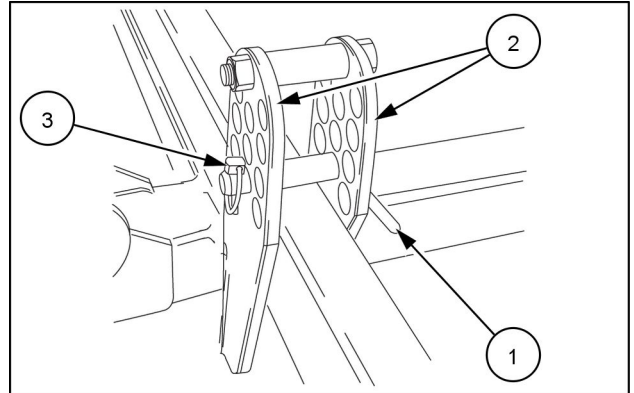
W1046A

NOTE: *There is danger of crushing and cutting in the area of the furrow press arm, the concave discs and the rollers.*

The shares work **8 – 10 cm (3.15 – 3.94 in)** deep. If the area is very uneven or has deep ruts, work a little deeper. Set the working depth by means of the drilled plate on each side of the furrow press hoist arm.

To change the working depth, proceed as follows:

1. Loosen the linchpin **(3)**.
2. Move the bolt **(1)** to a different position in the drilled plate **(2)**.
 - Lower hole = less working depth.
 - Higher hole = greater working depth.
3. Secure the bolt **(1)** with the linchpin **(3)**.
4. Check the fitting of the safety ring **(3)**.



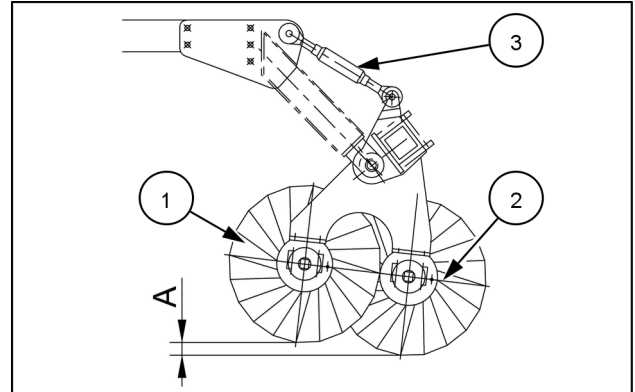
ZEIL17TIL0273AA 1

Adjustment of the cutter roller

Adjustment of the height

When you adjust the cutter roller of the stubble cultivator, the front disc shaft **(1)** runs higher than the rear disc shaft **(2)** of **(A) = 10 – 20 mm (0.39 – 0.79 in)**.

To adjust the cutter roller, use the spindles **(3)**. Make sure that all spindles have the same length.



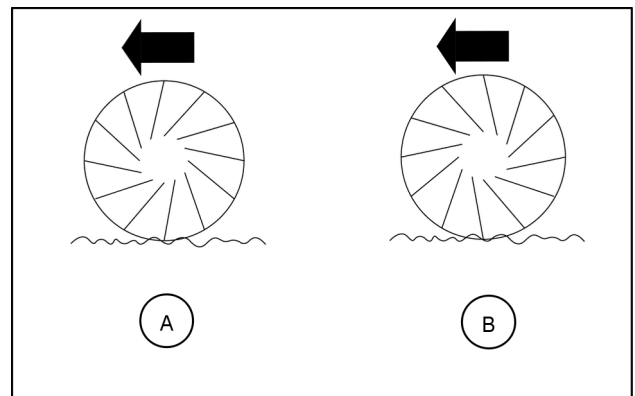
ZEIL17TIL0274AA 1

Adjustment of the direction

It is possible to use the cutter roller **450 mm (18 in)** in two directions of movement:

- Passive direction **(A)**, less soil cutting, more consolidation.
- Active direction **(B)**, more soil cutting, less consolidation.

As standard, all cutter rollers are in the passive direction **(A)**. It is possible to convert the cutter rollers to active direction and vice versa.



ZEIL17TIL0275AA 2

Adjustment of the share position

⚠ WARNING

Avoid injury!

Always engage the parking brake and switch off the engine before working on the machine.

Failure to comply could result in death or serious injury.

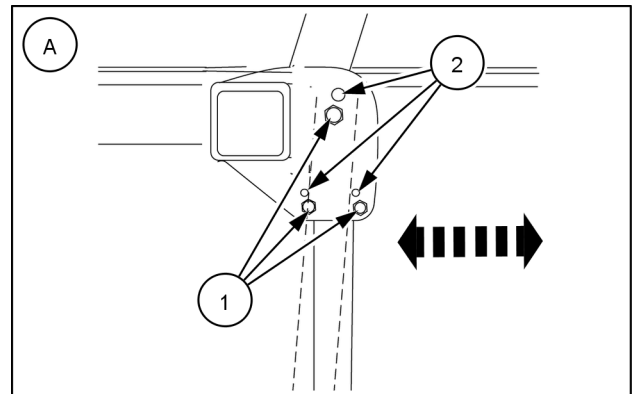
W1046A

Secure the stubble cultivator on suitable stands.

It is possible to set the tines or the shares on the stubble cultivator in two positions:

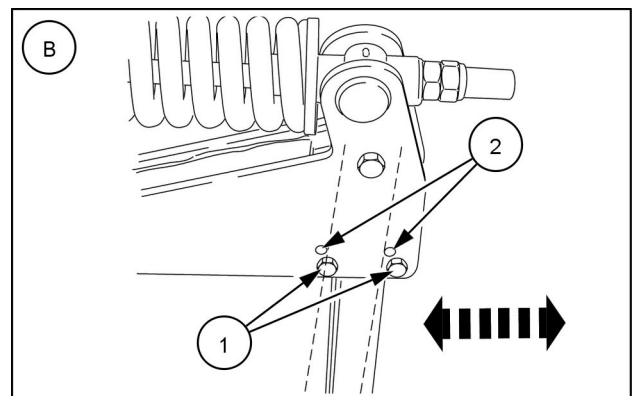
- The steep share position **(1)** ensures that the stubble cultivator will penetrate both hard and dry soils well.
- The flat share position **(2)** ensures an even working level - share tip and wing shares work nearly at the same depth and reduce the requirements for pulling power. This position is recommended for heavy and muddy soils.

(A) Shear bolt protection



ZEIL17TIL0276AA 1

(B) Non-stop protection



ZEIL17TIL0277AA 2

Adjustment of the roller

NOTE: There is danger of crushing and cutting in the area of the furrow press arm, the concave discs and the rollers.

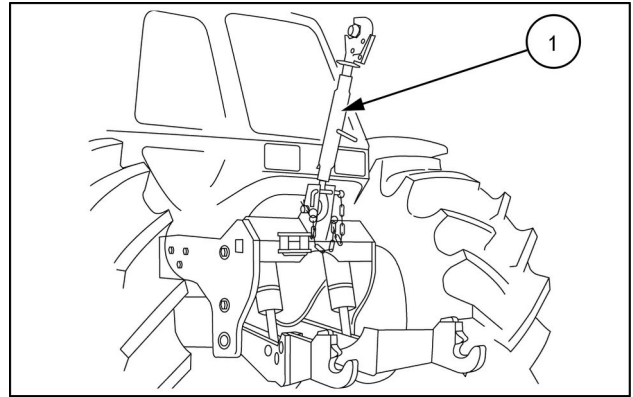
NOTE: Change the position of the top link (1) only if the stubble cultivator is completely lowered.

Do not adjust the top link (1) so that the top link slopes downward from tractor to implement.

To change the compressing effect of the rollers, adjust the angle of the top link (1). Switch the hydraulic controls of the tractor to “float” position or “load and depth control”. The latter setting is applicable if there is too much slip.

To adjust the top link (1), consider the following rules:

- Steep angle of the top link, that means rising from tractor to implement = low compression.
- Less steep angle of the top link = medium compression.
- Flat position of the top link = strong compression.



ZEIL17TIL0279AA 1

Adjustment of the overload protection

⚠ CAUTION

Spring under tension!

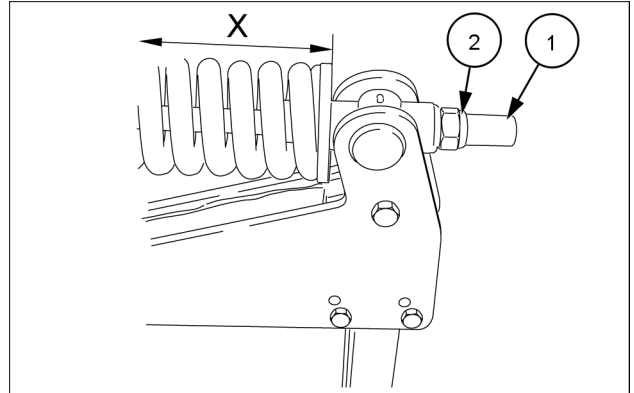
This assembly is spring-loaded. Remove the parts carefully!

Failure to comply could result in minor or moderate injury.

C0147A

To adjust the overload protection, proceed as follows:

1. Remove the cap **(1)**.
2. Loosen the lock nut **(2)**.
3. Turn the lock nut **(2)** to change the length of the spring.
 - When the spring is relaxed, the spring length **(X)** > **405 mm (15.94 in)**.
 - When the spring is loaded optimally, the spring length **(X)** = **330 mm (12.99 in)**.
4. Tighten the lock nut **(2)**.
5. Reinstall the cap **(1)**.



ZEIL17TIL0280AA 1

7 - MAINTENANCE

General information

General

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.

W0157A

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.

W0047A

WARNING

Knife 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.

W0274A

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 strongly recommends that you use only authorized KONGSKILDE dealers and products that meet given specifications. Improperly or incorrectly performed maintenance and repair voids the equipment warranty and may affect service intervals.*

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.

NOTE: *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.*

NOTE: *Always support a raised stubble cultivator before you work under the stubble cultivator.*

Only use original KONGSKILDE spare parts to avoid unintentional risks and damages.

Install the used spare parts correctly and torque all the bolts and nuts to the correct tightening torque.

NOTICE: *Worn and damaged parts must be changed at the earliest possible moment in order to secure correct and safe function.*

Hydraulic system

When you replace parts of the hydraulic system, always make sure that the implement rests on the ground.

Remember to relieve the oil pressure before you work with the hydraulic system.

Hydraulic hoses must be checked before each use, and minimum once a year. If necessary, replace the hydraulic hoses. All hoses are marked with date of production. The working life of hydraulic hoses should not exceed 6 years, including maximum 2 years of storage.

When you replace hoses, always use hoses which comply with the requirements stated by the manufacturer.

Before every use of the stubble cultivator, check the hydraulic pipes, hoses and connections. If there is any sign of breakage emerging, make sure to change the parts in question.

To perform the maintenance and the repair work on the foldable frame parts, lower the foldable frame parts and release the pressure of the hydraulic system (only for hydraulic foldable version).

NOTICE: *When the hydraulic system fails during folding or unfolding, then the wings may immediately unfold (for foldable version).*

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

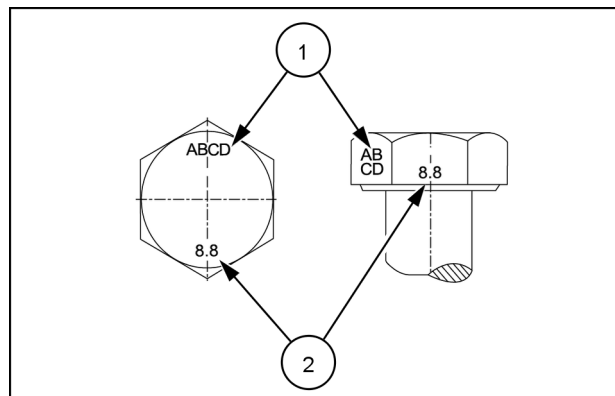
Nominal Size	Class 8.8 in N m (lb in or lb ft)			Class 10.9 in N m (lb in or lb ft)		
	Plated nut	Lock nut	Hardened nut/Oiled plated nut	Plated nut	Lock nut	Hardened nut/Oiled plated nut
M3	1.3 N·m (11.5 lb in)	0.7 N·m (6.2 lb in)	1.2 N·m (10.6 lb in)	1.8 N·m (15.9 lb in)	0.9 N·m (8.0 lb in)	1.6 N·m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

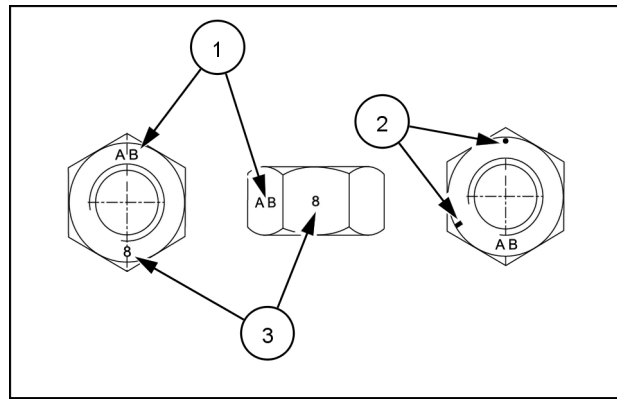


NHIL14RB00662AA 1

Metric bolt identification markings

1. Manufacturer's identification
2. Property class

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



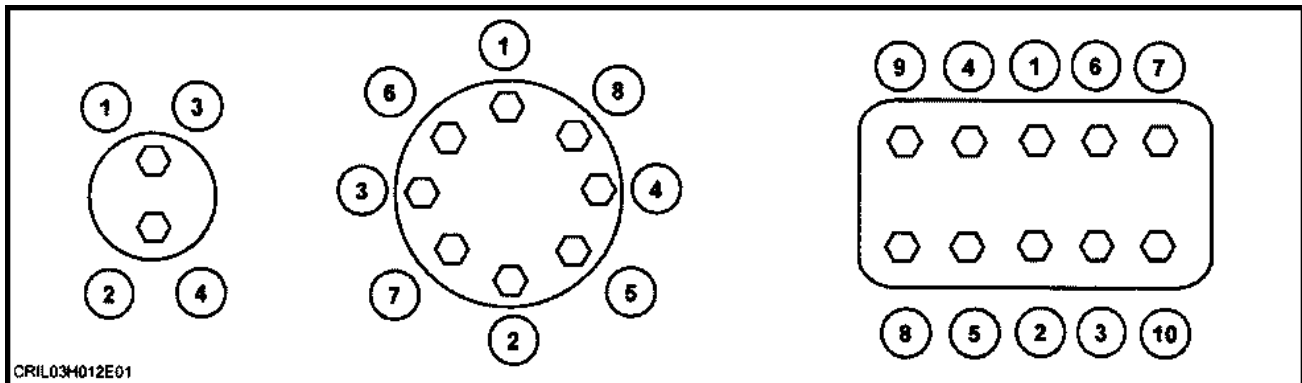
NHIL14RB00663AA 2

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.



CRIL03H012E01

DF5019-1 3

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.

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

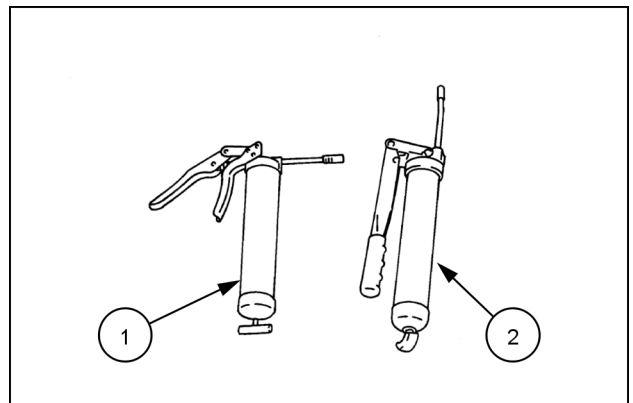
In general, a pistol grip-style grease gun injects half of the amount of grease per pump as a lever-style grease gun.

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.



1431-2-58N 1

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.

W0314A

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	-	TUTELA MULTI-PURPOSE GR-9 GREASE or TUTELA 75 MD GREASE	M1C 137-A M1C 75-B

Maintenance planning

Overview

				Grease		Replace	
				Tighten			
Maintenance action						Page no.	
After the first 10 hours							
Nuts and bolts				x			7-10
Every 20 hours							
20 hours grease fittings					x		7-11
Every 100 hours							
100 hours grease fittings					x		7-13
Nuts and bolts				x			7-13
As required							
Shear pin						x	7-14

After the first 10 hours

Nuts and bolts

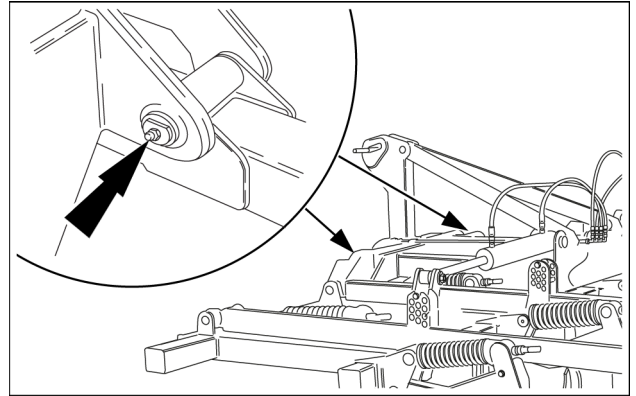
Torque again all the nuts and screws after the first **10 h**.

Every 20 hours

20 hours grease fittings

Front side

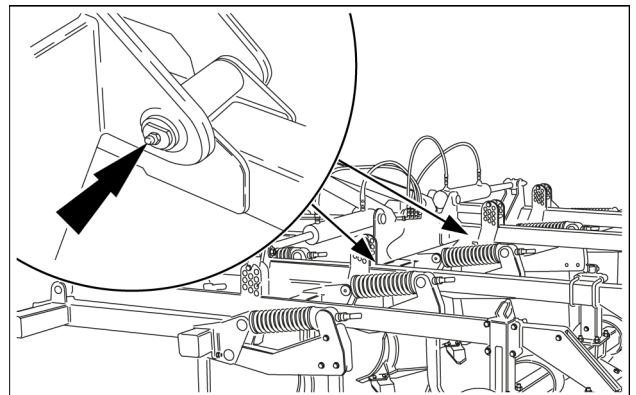
1. Hinges of the foldable frame (2x).



ZEIL19TIL0198AA 1

Central

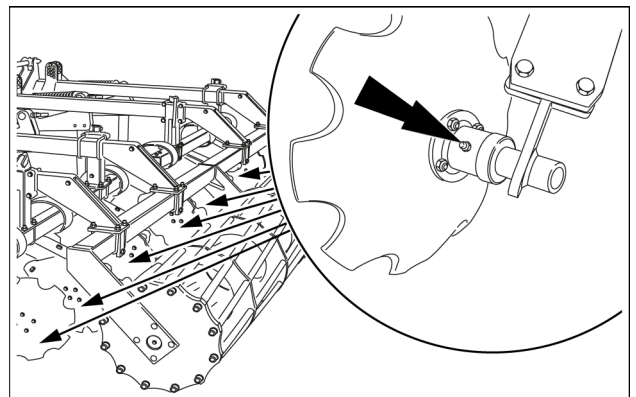
2. Hinges of the foldable frame (2x).



ZEIL19TIL0199AA 2

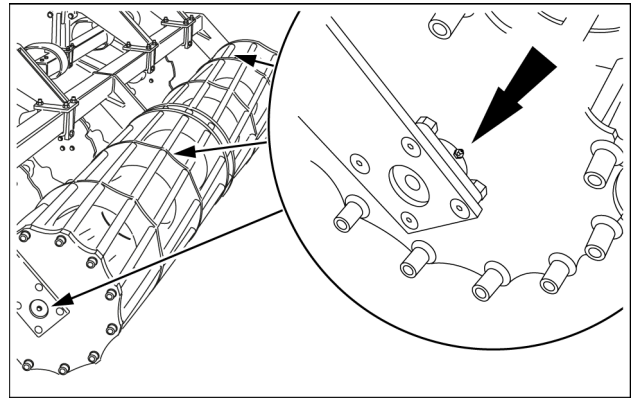
Rear side

3. Discs bearing (6x).



ZEIL19TIL0195AA 3

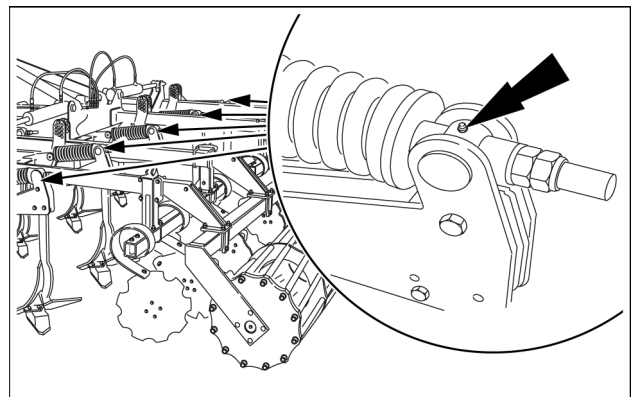
4. Roller bearing (3x).



ZEIL19TIL0194AA 4

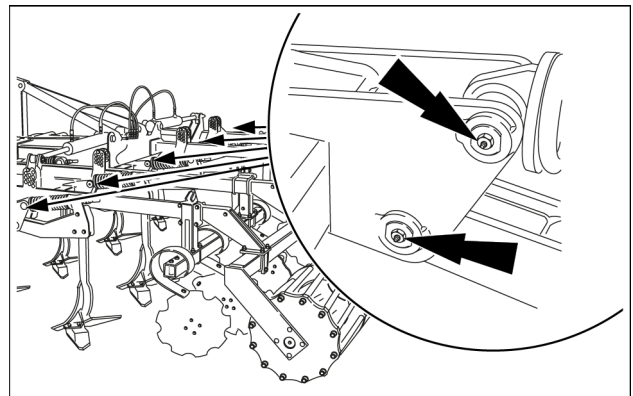
Tines

5. Spring bar shaft (5x).



ZEIL19TIL0196AA 5

6. Pin (10x).



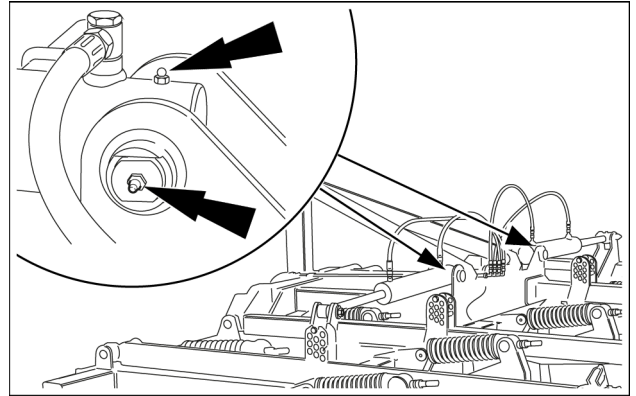
ZEIL19TIL0197AA 6

Every 100 hours

100 hours grease fittings

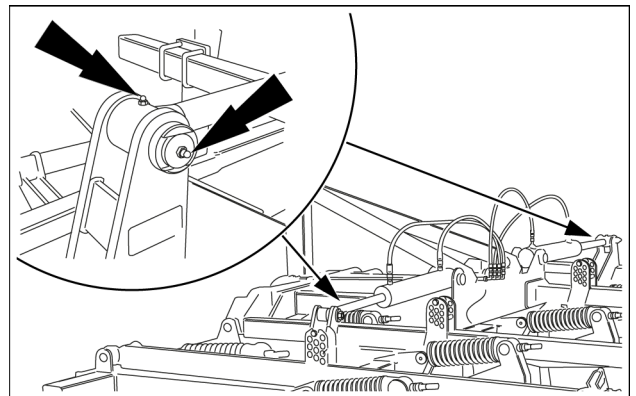
Central

1. Cylinder hinge (4x).



ZEIL19TIL0201AA 1

2. Cylinder hinge (4x).



ZEIL19TIL0200AA 2

Nuts and bolts

Torque again all the nuts and the screws every **100 h**.

As required**Shear pin**

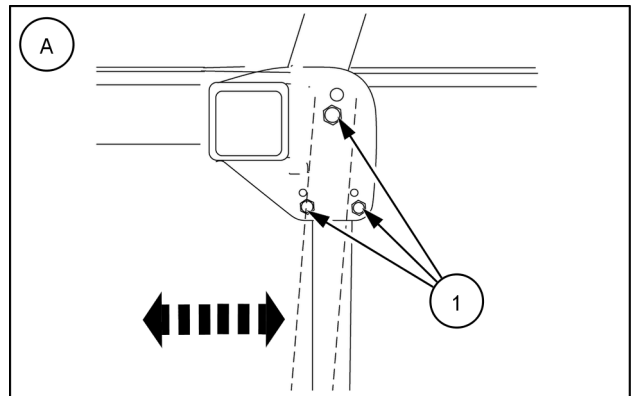
Each tine (with the exception of the coiled spring tines) is equipped with a shear pin. This protects the frame and the tines against overload. After a shear pin has been broken, proceed as follows.

NOTE: Use suitable tools for changing the shear pin.

To replace a shear pin, proceed as follows:

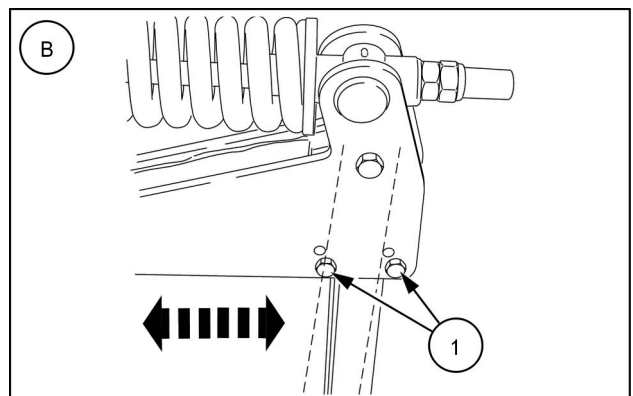
1. Raise the stubble cultivator a few centimeters.
2. Remove the shear pin.
3. Tilt back the tines.
4. Insert a new shear pin into the same drill hole that had been used before, and fasten with bolts and nuts **(1)** (see Figure 1 and 2).

Rigid tines with overload protection **(A)**.



ZEIL17TIL0276AA 1

Rigid tines without overload protection **(B)**



ZEIL17TIL0277AA 2

Storage

End of season service

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

To prepare the implement for winter storage:

1. 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.
3. Grease all grease fittings according to the "Maintenance chart".
4. Before the storage of the implement, check carefully for damaged parts, loose screw-joints, leakage, wear and other defects. 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. Disconnect the Power Take-Off (PTO) shafts, lubricate the profile tubes and keep them in a dry place.
6. Spray the implement with a coat of rust-preventing oil.
7. Support the implement to relieve the weight.

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 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:

1. Park the implement on hard and level ground. Bring all moveable components to the lowest position and/or safest position.
2. Store the implement with the axles on wooden blocks in order to keep the implement upright, as the tires will deflate over time.
3. 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 dealer to perform this service.

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

Ordering parts 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 dealer the model number and the Product Identification Number (PIN) of your implement. See "Product identification" in Chapter 1 of this operator's manual.

Insist on genuine KONGSKILDE "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 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 dealer.

Troubleshooting chart

Problem	Possible Cause	Correction
Cage roller sinks in too deeply and/or bull dozes.	The roller pressure is too high.	<ul style="list-style-type: none"> Adjust the top link to a steeper position. Adjust the hydraulic controls of the tractor to pulling power or load and depth control. Use either a bigger or a tandem roller.
Grooves and mounds behind the cage roller	The grooves and the mounds left behind by the tines at the back are not sufficiently levelled off by the concave discs.	The working depth of the concave discs must be changed. The discs should work at about half the depth of the tines.
There is clearly less soil in the cage roller behind the pair of discs than there is between the concave discs.	The concave discs work too deep.	Adjust the discs to a higher position.
There is clearly more soil in the cage roller behind the pair of discs than there is between the concave discs.	The concave discs are not set deep enough.	Adjust the discs to a lower position.
Overload protections are constantly triggered.	The spring tension is too low.	Increase the spring tension.
	The working depth of the tines is too deep.	Reduce the working depth of the tines.
	The position of shares is set too aggressively.	Reduce the angle of entry of the share. Change the share position.

9 - SPECIFICATIONS

Technical data

		Delta HSF 250	Delta HSF 300
Working width		2.5 m (8.2 ft)	3 m (9.84 ft)
Transport width		2.5 m (8.2 ft)	3 m (9.84 ft)
Number of tines		5	7
Number of discs		6	6
Power requirements		55 – 88 kW (75 – 120 Hp)	66 – 110 kW (90 – 150 Hp)
Implement weight		650 – 900 kg (1433.00 – 1984.16 lb)	765 – 1080 kg (1686.54 – 2380.99 lb)
Weight	Cage roller 450 mm (17.72 in)	125 kg (275.58 lb)	145 kg (319.67 lb)
	Cage roller 550 mm (21.65 in)	190 kg (418.88 lb)	225 kg (496.04 lb)
	Cage roller 630 mm (24.80 in)	215 kg (474.0 lb)	260 kg (573.2 lb)
	Cutter roller 450 mm (17.72 in)	265 kg (584.22 lb)	315 kg (694.46 lb)

Fluids, lubricants, and capacities

Application	Capacity	Product name	Specification(s)
Grease fittings	-	TUTELA MULTI-PURPOSE GR-9 GREASE or TUTELA 75 MD GREASE	M1C 137-A M1C 75-B

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.

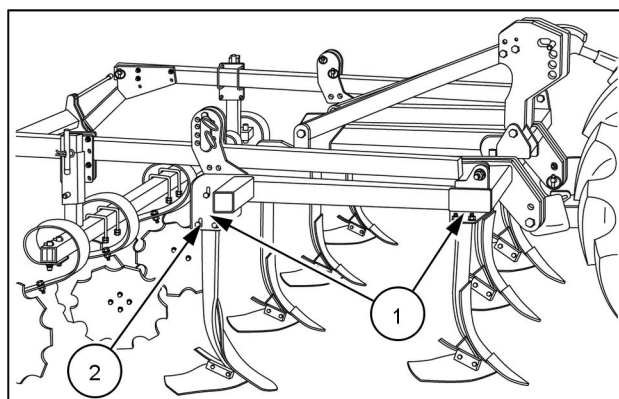
Tine protection

The implement can be equipped with either a shear bolt option or a mechanical spring release system.

With the shear bolt option **(1)**, when the tine reaches the overload, the shear bolt **(2)** snaps.

The broken shear bolt **(1)** must be replaced by a new shear bolt. In case of damage read the spare parts catalog.

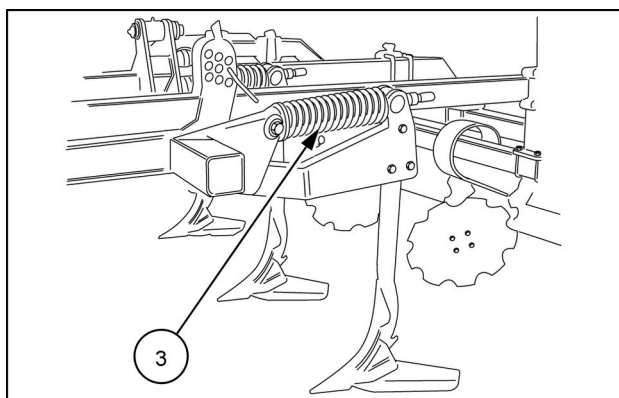
NOTICE: Do not use shear bolts in a different quality, as it may damage the cultivator.



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The mechanical spring release system **(3)** protects the tines against increased strain, wear or destruction. If a tine meets an obstacle, the tine will move upward and backward.

The mechanical spring release system will travel to a height of **400 mm (15.75 in)**, then the tine will return to the starting position.



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Bank leveller

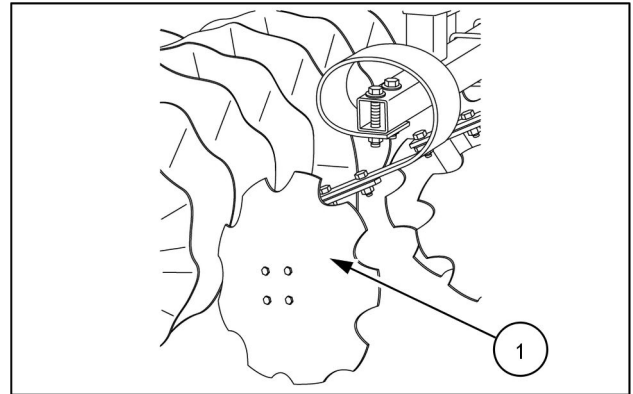
The base unit comes with serrated discs to ensure proper levelling. In extension to the levelling section, an optional bank leveller kit **(1)** can be chosen to minimize any bank of soil in between the passes. The kit consist of one extra disc for both right-hand side and left-hand side of the implement.

The bank levellers **(1)** enable an exact passage without building up mounds.

The bank levellers are fastened at the ends of the concave disc carriers.

The bank levellers do not operate as low as the inner discs. The bank levellers merely move soil, thrown beyond the working width, back into the furrows made by the outer tines.

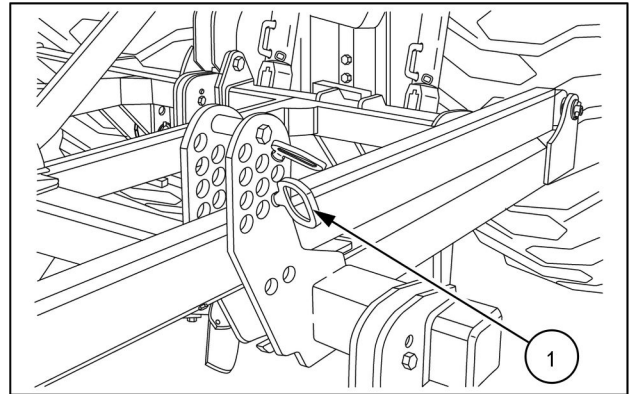
NOTE: To transport the implement on the public roads, move the bank levellers toward the center of the frame.



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Rollers

The main purpose of the roller is to ensure a proper depth control, in extension to crumbling and re-consolidation. The working depth is easily set by the pin (1).



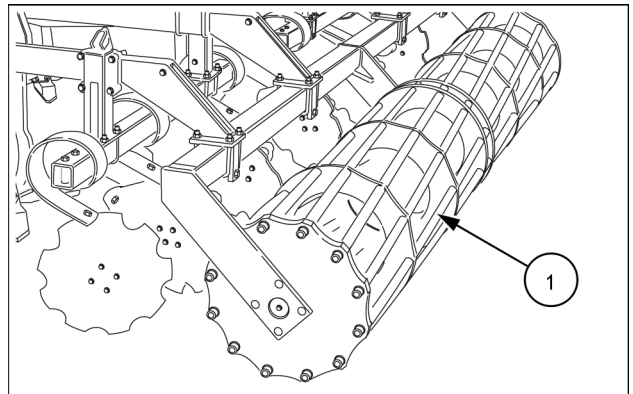
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The table below shows the seven different rollers available for the cultivators.

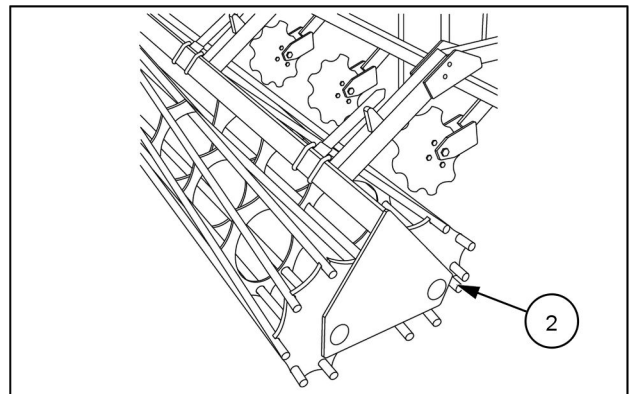
Type of roller	Light soil	Medium soil	Heavy soil
Cage roller, Ø = 450 mm (18 in)	X	X	—
Cage roller, Ø = 550 mm (21.6 in)	X	—	—
Cage roller, Ø = 630 mm (25 in)	X	—	—
Tandem cage roller, Ø = 450 mm (18 in)	X	—	—
Tandem cutter roller, Ø = 550 mm (21.6 in)	—	X	—
Vibro pack, Ø = 570 mm (22 in)	X	X	X
Max pack, Ø = 550 mm (21.6 in)	—	X	X

Cage roller

The cage rollers (1) are the choice for the lighter soils without stones, ensuring flotation and crumbling. Three dimensions are offered and one tandem solution (2).



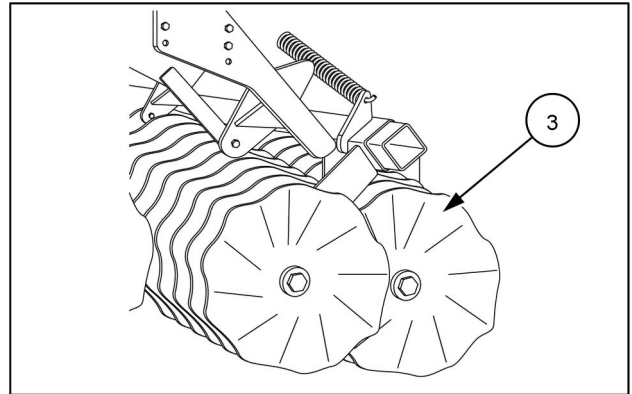
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ZEIL19TIL0369AA 3

Tandem cutter roller

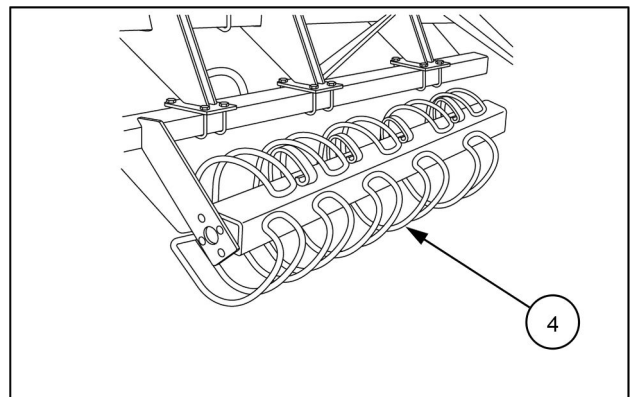
The cutter roller (3) consists of discs in a unique wavy design, mounted off-set in a tandem formation to ensure flotation and best possible flow. As the name states, the roller cuts the lumps and leave a good finish.



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Vibro pack

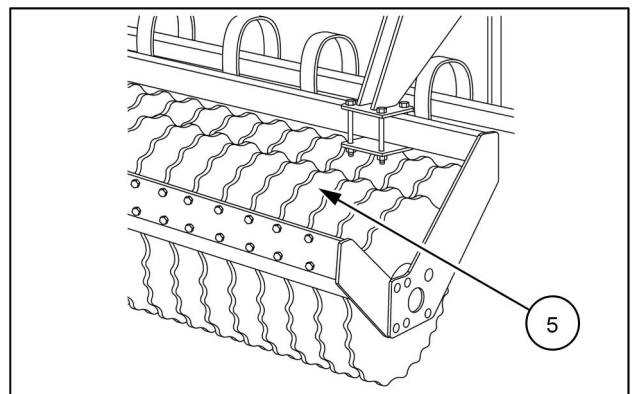
The vibro pack (4) is the versatile choice with spring steel parts mounted offset to ensure packing in stripes. The open design and spring steel ensure self-cleaning effect and low weight.



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Max pack

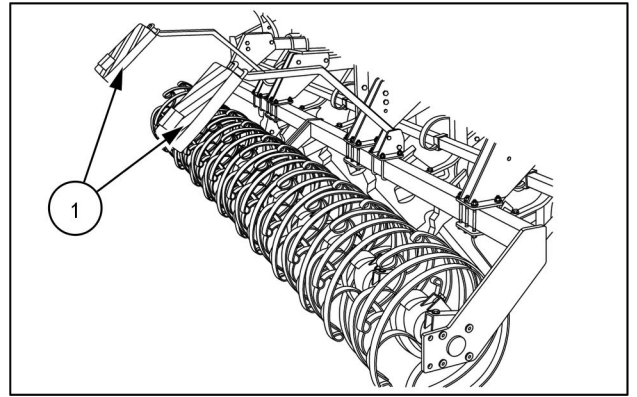
The max pack (5) is the choice for the heavy, hard and potentially stony soils. The weight and sturdiness of the roller ensure crushing and levelling.



ZEIL19TIL0096AA 6

Light kit

The light kit and plates **(1)** are present in transport position of the implement. This kit marks the rear of the implement.



ZEIL19TL0111AA 1

11 - FORMS AND DECLARATIONS

[illegible]

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 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 4254-1: 2015

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:

NOTE: Only for United Kingdom.

	Declaration of Conformity of the Machinery according to Supply of Machinery (Safety) Regulations 2008 n.1597 and Electromagnetic Compatibility Regulations 2016 n.1091	[1]
1.A.1	We, [1] declare under our sole responsibility, that the product:	[2] [3] [4] [5] [6]
1.A.3	Agricultural machine Commercial Name and Model: [2] Denomination: [3] Type (Specify any variant/version): [4] Planning key: [5] Serial Number: [6]	[7] [8] [9] [10] [11] [12] [13] [14] [15] [16]
1.A.4	to which this declaration relates, fulfills all the relevant provisions of these Regulations.	[17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30] [31] [32] [33] [34] [35] [36] [37] [38] [39] [40] [41] [42] [43] [44] [45] [46] [47] [48] [49] [50] [51] [52] [53] [54] [55] [56] [57] [58] [59] [60] [61] [62] [63] [64] [65] [66] [67] [68] [69] [70] [71] [72] [73] [74] [75] [76] [77] [78] [79] [80] [81] [82] [83] [84] [85] [86] [87] [88] [89] [90] [91] [92] [93] [94] [95] [96] [97] [98] [99] [100]
1.A.7	For the relevant implementation of the provisions of these Regulations, the following published (designated) standards have been applied: [8]	[101] [102] [103] [104] [105] [106] [107] [108] [109] [110] [111] [112] [113] [114] [115] [116] [117] [118] [119] [120] [121] [122] [123] [124] [125] [126] [127] [128] [129] [130] [131] [132] [133] [134] [135] [136] [137] [138] [139] [140] [141] [142] [143] [144] [145] [146] [147] [148] [149] [150] [151] [152] [153] [154] [155] [156] [157] [158] [159] [160] [161] [162] [163] [164] [165] [166] [167] [168] [169] [170] [171] [172] [173] [174] [175] [176] [177] [178] [179] [180] [181] [182] [183] [184] [185] [186] [187] [188] [189] [190] [191] [192] [193] [194] [195] [196] [197] [198] [199] [200]
1.A.2	Name: [9] Position: [10] and address: [11] of the person authorized to compile the Technical File:	[201] [202] [203] [204] [205] [206] [207] [208] [209] [210] [211] [212] [213] [214] [215] [216] [217] [218] [219] [220] [221] [222] [223] [224] [225] [226] [227] [228] [229] [230] [231] [232] [233] [234] [235] [236] [237] [238] [239] [240] [241] [242] [243] [244] [245] [246] [247] [248] [249] [250] [251] [252] [253] [254] [255] [256] [257] [258] [259] [260] [261] [262] [263] [264] [265] [266] [267] [268] [269] [270] [271] [272] [273] [274] [275] [276] [277] [278] [279] [280] [281] [282] [283] [284] [285] [286] [287] [288] [289] [290] [291] [292] [293] [294] [295] [296] [297] [298] [299] [300]
1.A.9	Place: [12] and date: [13] of the declaration.	[301] [302] [303] [304] [305] [306] [307] [308] [309] [310] [311] [312] [313] [314] [315] [316] [317] [318] [319] [320] [321] [322] [323] [324] [325] [326] [327] [328] [329] [330] [331] [332] [333] [334] [335] [336] [337] [338] [339] [340] [341] [342] [343] [344] [345] [346] [347] [348] [349] [350] [351] [352] [353] [354] [355] [356] [357] [358] [359] [360] [361] [362] [363] [364] [365] [366] [367] [368] [369] [370] [371] [372] [373] [374] [375] [376] [377] [378] [379] [380] [381] [382] [383] [384] [385] [386] [387] [388] [389] [390] [391] [392] [393] [394] [395] [396] [397] [398] [399] [400]
1.A.10	Signature: [14] Name: [15] and position: [16] of the person empowered to draw up the UKCA Declaration of Conformity.	[401] [402] [403] [404] [405] [406] [407] [408] [409] [410] [411] [412] [413] [414] [415] [416] [417] [418] [419] [420] [421] [422] [423] [424] [425] [426] [427] [428] [429] [430] [431] [432] [433] [434] [435] [436] [437] [438] [439] [440] [441] [442] [443] [444] [445] [446] [447] [448] [449] [450] [451] [452] [453] [454] [455] [456] [457] [458] [459] [460] [461] [462] [463] [464] [465] [466] [467] [468] [469] [470] [471] [472] [473] [474] [475] [476] [477] [478] [479] [480] [481] [482] [483] [484] [485] [486] [487] [488] [489] [490] [491] [492] [493] [494] [495] [496] [497] [498] [499] [500]

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Dealer's stamp



The manufacturer and its authorized representative reserves the right to make improvements in design and changes in specifications at any time without notice and 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 dealer.



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