



Operating Instructions

Nr. 675-2 USA

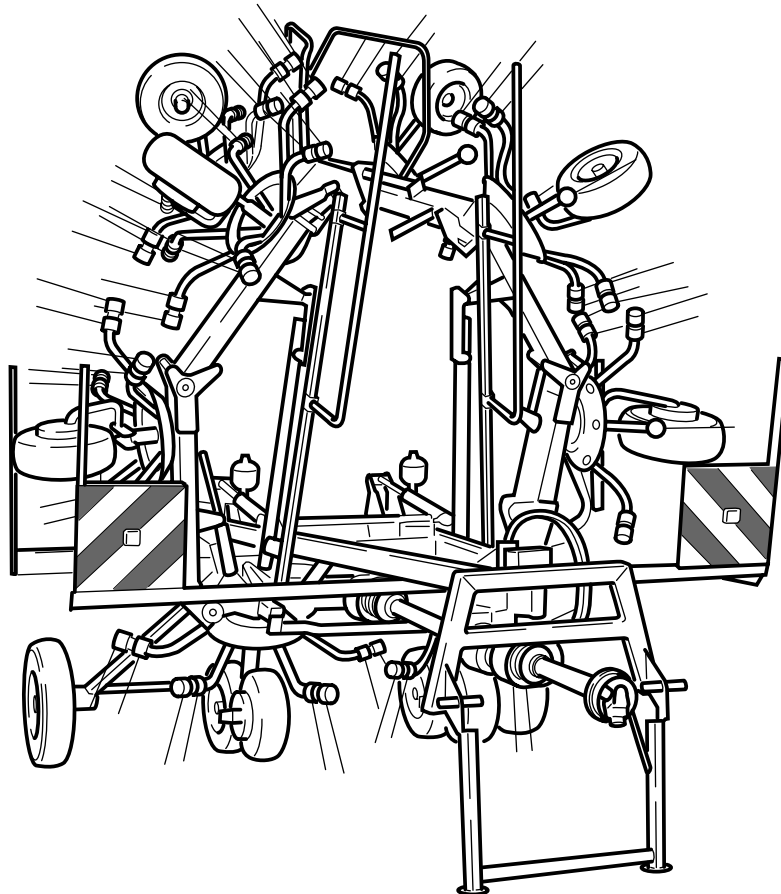
Rotary tedder

KWT 7.70 / 6 x 7

KWT 8.50 / 8 (from machine no. 506 500)

KWT 8.80 / 8

KWT 10.50 / 8 x 7



I. Foreword

Dear customer,

We thank you for the trust you have placed in us by purchasing this machine.

When you received this machine, the dealer should have given you instructions for the operation, maintenance and adjustment of the machine.

However, this **brief introduction** to the machine can not replace a detailed acquaintance with the different tasks and functions of the machine and the proper way of treating it.

These operating instructions are designed so that you are extensively informed of the activities required in each area, from commissioning and operation to the maintenance and care of the machine. The structure of the individual chapters in the text and illustrations corresponds to the sequence of work procedures when you use the machine.

Read these operating instructions carefully before you use the machine, and pay special attention to the safety instructions.

Important: To avoid accidents and to ensure maximum results, no alterations may be made to the machine without the manufacturer's permission. Similarly, the machine must only be used under the conditions prescribed by Krone.



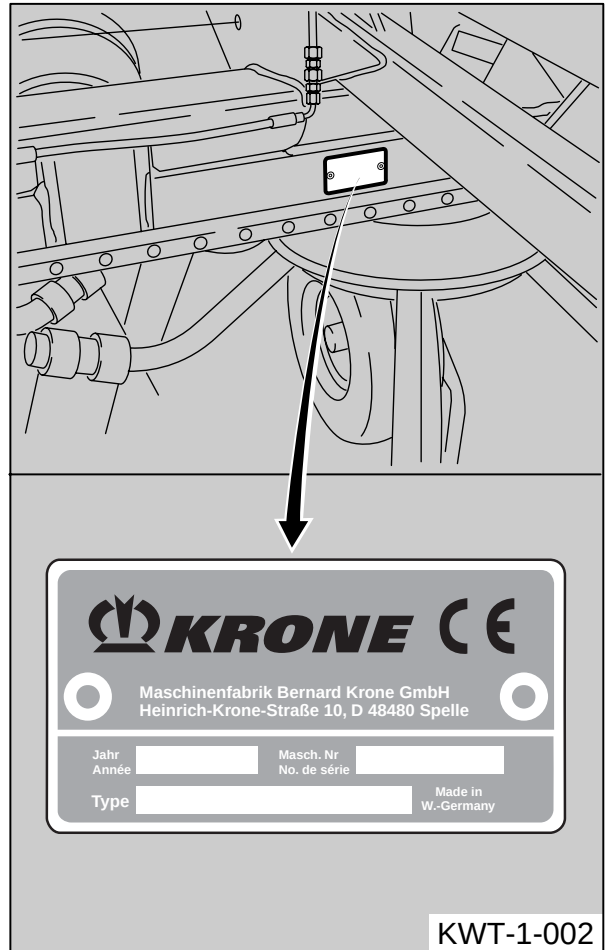
This symbol is designed to draw attention to the safety instructions contained in the operating instructions. These instructions must be observed to prevent accidents.



You will find this symbol at various points in the operating instructions. It gives special handling instructions which should be particularly observed in the use of the machine.

All information, illustrations and technical information in the operating instructions represent the latest status at the date of publication. The company reserves the right to make constructional alterations at any time and without prior notice or obligation.

Ordering Replacement Parts



Type

Mach. No.

Year

When ordering replacement parts, the machine type, machine number and year of manufacture must be given. These details can be found on the identification label on the machine.

We recommend that these details be entered in the above boxes so that they are readily available.

And please remember that imitations and copies of parts, especially wearing parts, do not keep what they appear to promise. Material quality is difficult to test visually, therefore special care is required when purchasing cheap offers and imitation parts!

The simplest remedy:
Purchase only **original KRONE parts!**

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III. General

1. Operation in Accordance with Specifications

The rotary tedder is designed solely for normal agricultural use (operation in accordance with specifications).

Any use of the machine for other purposes is deemed to be not in accordance with specifications. The manufacturer bears no responsibility for any resulting damage; such use is entirely at the operator's risk.

Use in accordance with specifications also includes adherence to the operating, maintenance and service instructions prescribed by the manufacturer.

The rotary tedder must only be used, maintained and repaired by personnel who are acquainted with the machine and have been informed of the danger involved.

The applicable accident prevention regulations and all other generally recognized safety, health and road traffic regulations must be adhered to.

Any unauthorized alterations to the machine render any liability for damage undertaken by the manufacturer null and void.

Basic rule:



Before any public roads are used and before the machine is started, check the rotary tedder and the tractor for road-worthiness and operational safety.

2. Safety and Accident Prevention Regulations

1. Take note of both the regulations in these operating instructions and also the general safety and accident prevention regulations!
2. The attached warning and information signs give important advice for safe operation. Observing them will enhance your safety!
3. When you use public roads, make sure you observe the relevant traffic regulations!
4. Make sure you know all equipment and controls before you begin working with the machine. When you are operating the machine, it's too late!
5. The operator's clothing should be tight fitting. Avoid wearing loose fitting clothes.
6. Keep the machine clean to prevent the danger of fire!
7. Before starting the machine and moving off, check the danger area around the tractor (children!). Good visibility is absolutely essential!
8. Carrying passengers on the implement during work or transport is not permitted.
9. Make sure that the implement is correctly coupled, and that it is only fixed and secured with the prescribed fittings!
10. Make sure that the supporting devices, jacks etc. are in the correct position during assembly and removal!
11. Special care is required when equipment is being coupled to the tractor or detached from the tractor!
12. Ballast weights must always be attached in the prescribed way at the designed attachment points!
13. Adhere to the permitted axle loads, total weights and transport dimensions!
14. Check and fit transport equipment – e.g. lighting, warning signs and, if required, protective equipment!
15. Operating equipment for remote controls (ropes, chains, rods etc.) must be laid out in such a way that, whatever the working or transport position, it can not inadvertently cause any movements.
16. Prepare equipment for road transport as prescribed by the manufacturer, and lock the equipment in accordance with the manufacturer's regulations!
17. Never leave the driver's position when the tractor is in motion!
18. The speed of travel must always be suited to the environmental conditions! Avoid any sudden turns when travelling uphill, downhill or across a slope!
19. The handling, steering and braking of the tractor is affected by integrated or attached equipment and ballast weights. Make sure that you allow for more flexibility in steering and braking!
20. When turning, remember to take account of the wide load and/or the greater weight of the equipment!
21. Only switch on equipment when all protective devices are fitted and in protection position!

22. Persons are not allowed to enter the working area!
23. Keep clear of the area of rotation and swing of the equipment!
24. Hydraulic controls must only be operated if no persons are in the swing area!
25. Power operated parts (e.g. by hydraulics) contain danger points which can cause injury by bruising and grazing!
26. Before leaving the tractor, rest the machine on the ground, switch off the engine and remove the ignition key!
27. Make sure that no personnel go between the tractor and the implement unless the tractor is protected from rolling by the parking brake and/or wheel blocks!
5. When using P.T.O. shafts with overload or free wheel clutches that are not covered by the guards on the tractor, the overload or free wheel clutches must be fixed on the implement side!
6. Always ensure correct assembly and guarding of the P.T.O. shaft!
7. Protect the P.T.O. shaft guard from rotating with the shaft by fitting the chains!
8. Before switching on the power take-off shaft, make sure that the p.t.o. speed of the tractor matches the permitted speed of the implement!
9. Before switching on the power take-off shaft, make sure that nobody is in the danger area of the implement!
10. Never switch on the power take off shaft when the tractor engine is turned off!

3. Attached Equipment

1. Special care is required when the implement is being connected to the tractor or disconnected from it!
2. The implement must only be coupled to the appropriate fittings (e.g. the 3-point connection), and they must be so secured (transport, operation) that unintentional lifting or lowering of the implement is not possible.
3. When connecting the three point linkage, it is absolutely essential that the hitching categories of the tractor and attachment (e.g. power take-off shaft speed, hydraulics) are matched!
4. When operating the external controls for three-point connection, make sure that nobody goes between the tractor and the implement (danger of injury)!
11. Any work on the power take-off shaft may only be carried out when nobody is in the area of the rotating power take-off shaft or P.T.O. shaft.
12. The power take-off shaft should always be turned off when the angle is too great or the p.t.o. shaft is not required!
13. **Danger!** Working elements continue to rotate after the power take-off shaft is turned off! Do not approach the machine during this time! Work may only be carried out on the machine when the machine is fully stationary and the rotating parts have been secured.
14. Cleaning, lubrication or adjustment of the P.T.O. shaft or any equipment driven by the power take-off shaft may only be carried out when the p.t.o. shaft and the engine are turned off and the ignition key has been removed! Rotating parts must be secured with the parking brake.

4. Power Take-Off shaft Operation

1. Only the P.T.O. shafts prescribed by the manufacturer may be used!
2. Both male and female guard tubes and cones of all P.T.O. shafts must be fitted and in good condition!
3. Observe the tube overlap prescribed for P.T.O. shafts in transport and operating position!
4. Before installing or removing the P.T.O. shafts, make sure to turn off the power take-off shaft and the engine, and remove the ignition key!
15. Place the detached P.T.O. shaft on the support bracket provided!
16. After removing the P.T.O. shaft, place the protective cover on the stub of the power take-off shaft!
17. Any damage must be repaired immediately before any work is carried out with the attachment!

5. Hydraulic System

1. The hydraulic system is pressurized!
2. When connecting hydraulic cylinders and motors, make sure that the hydraulic hoses are correctly coupled!
3. When connecting hydraulic hoses to the tractor's hydraulic system, make sure that all pressure has been released from the hydraulics of both the tractor and the implement!
4. When there are functional hydraulic connections between the machine and the implement, all coupling sleeves and plugs must be marked to prevent operating errors. If the connections are switched, the functions are reversed (e.g. lifting and lowering) – **this can cause accidents!**
5. Hydraulic hoses must be checked regularly, and they must be replaced if they are damaged or worn. Replacement hoses must conform to the technical requirements of the implement manufacturer!
6. When tracing leaks, suitable aids should be used to prevent injury!
7. Fluid leaking under high pressure (hydraulic oil) can penetrate the skin and cause serious injury! When injury occurs, consult a doctor immediately! Danger of infection!
8. Before carrying out any work on the hydraulic systems, lower the machine to the ground, depressurize the system and turn off the engine!

6. Maintenance

1. Repair, maintenance and cleaning work and the correction of malfunctions must always be carried out only when the drive is turned off and the engine is at a standstill! Remove the ignition key! Apply the parking brake.
2. Nuts and bolts must be checked regularly for tightness, and tightened if necessary!
3. When carrying out maintenance work on the machine in a lifted position, it must always be supported on suitable jacks.
4. When replacing fittings that contain cutting blades, always use suitable tools and gloves!
5. **Oil, grease and filters must be correctly disposed of!**
6. The power supply must always be disconnected before any work is carried out on the electrical system!
7. If protective devices are subject to wear, they must be checked regularly and replaced in good time!
8. When electric welding is carried out on the tractor and any fitted attachments, the cables must be disconnected from the generator and battery!
9. Replacement parts must conform at least to the technical requirements defined by the manufacturer! **The best guarantee is to use only original KRONE parts!**
10. Where gases are stored, only refill with nitrogen. **Danger of explosion!**

1. Introduction

1.1 Technical data

Type	KWT 7.70/6x7	KWT 8.50/8	KWT 8.80/8	KWT 10.50/8x7
Working width [mm]	7700	8500	8800	10500
Number of swather discs	6	8	8	8
Tine bars per swather disc	7	6	6	7
Area covered [approx. ha/h]	7.7	8.5	8.7	10.5
Width in transport position [mm]	2980	2980	2980	2980
Height in transport position [mm]	3800	3700	3650	3900
Power consumption [KW/PS]	37/50	37/50	37/50	37/50
PTO shaft speed [max. rpm]	540	540	540	540
Weight [kg]	1050	1200	1200	1500
Tyres	for all types 16 / 6.50 x 8			
Tyres for undercarriage	7.00/12			
Edge spreading mechanism [hydr.]	standard equipment			
Spreading angle adjustment	for all types 12°–19°			
Add. tine loss protection	accessories			
Slip-on gear mechanism for night swaths	accessories			

Quantities and lubrication requirements for the gears

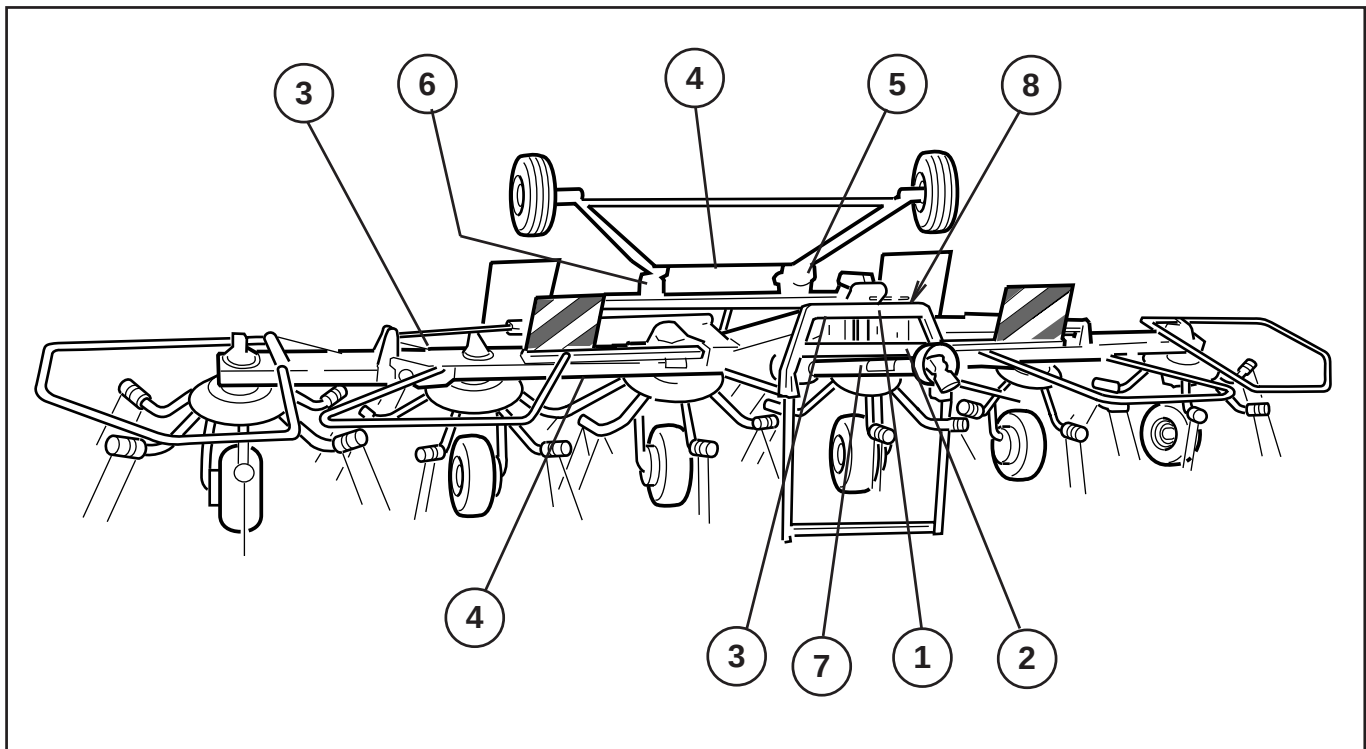
The main gearbox on the rotary tedder is greased for life and is therefore maintenance-free.

The KRONE Rotary Tedder is equipped with all the necessary safety devices (protective devices). Not all dangerous areas on this machine can be made completely safe considering that it is also necessary to keep the machine functional. There are corresponding danger notices on the machine indicating these remaining dangers. We have given these danger notices in the form of warning signs. You will find important notes on the positioning of these danger signs and their meaning/denotations below!

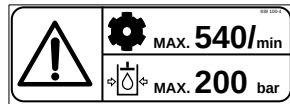


Familiarise yourself with the meaning of the warning signs. The text beside them and their location on the machine indicate the machine's particularly dangerous areas.

1.2 Positioning and explanation of the warning signs on the rotary tedder



1



Order no. 939 100-4 (1x)

Do not exceed the maximum permitted PTO shaft speed!



Order no. 939 462-0 (1x)

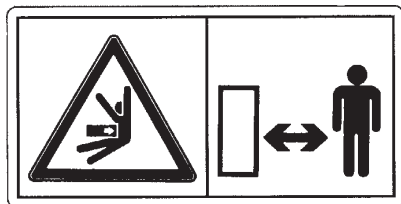
2



Read and take note of the operating manual.

Order No. 942 019-1 (1x)

3



Danger from self-turning swather disk arms. Maintain safe distance!

Order No. 939 472-2 (4x)

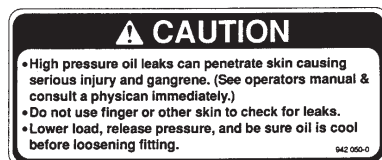
4



No personnel allowed inside swivel space of the operating equipment while the deployment arms are being folded down.

Order No. 939 469-1 (3x)

5



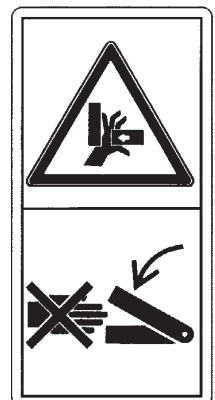
Accumulator is under gas and oil pressure. Repairs can be carried out only in connection with replacement of the complete unit.

Order No. 942 050-0 (3x)

6

Never reach into the danger zone between the three-point frame and the carrier bar of the rotary tedder while any parts located there can still move by themselves.

Order No. 942 196-1 (4x)

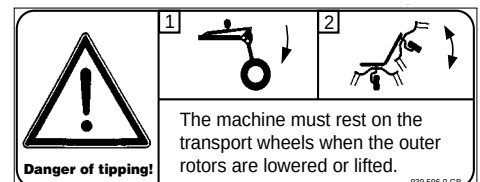


7



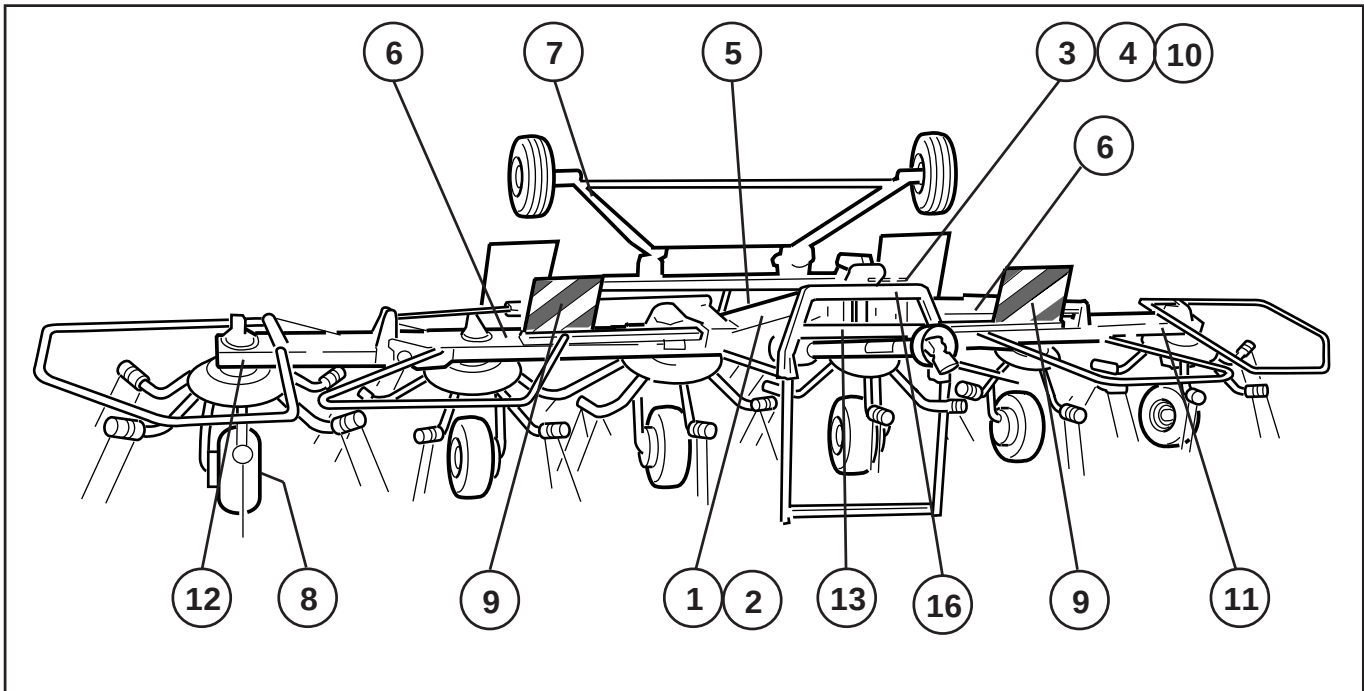
Order No. 949 228-0 (2x) Order No. 949 229-0 (2x)

8



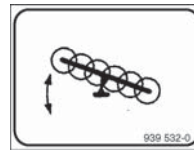
Order No. 939 596-0 (1x)

1.3 Position of the general information labels on the machine



KWT 7.70/8.50

KRONE

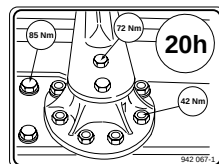
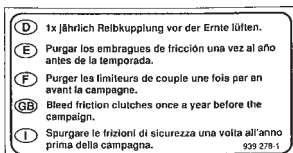


- ① 939 499-2 (2x) (KWT 7.70)
942 000-2 (2x) (KWT 8.50)
942 336-0 (2x) (KWT 8.80)
942 205-1 (2x) (KWT 10.50)

- ② 942 295-0 (1x / 4x)

- ③ 939 532-0 (1x)

- ④ 939 533-0 (1x)



2,0 bar

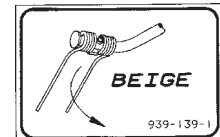
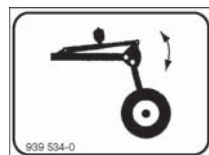
1,5 bar

- ⑤ 939 278-1 (1x)

- ⑥ 942 067-1 (2x)

- ⑦ 939 170-1 (2x)

- ⑧ 942 107-1 (8x/10x)

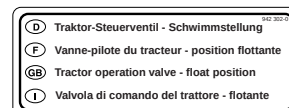
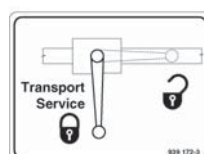
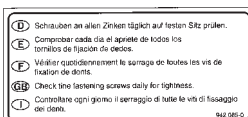


- ⑨ 924 569-0 (4x)

- ⑩ 939 534-0 (1x)

- ⑪ 939 138-2 (3x)

- ⑫ 939 139-1 (3x)



- ⑬ 942 085-0 (1x)

- ⑮ 939 172-3 (1x)
(1x - KWT 8.80/8 2x)

- ⑯ 942 302-0 (1x)
(only for KWT 8.80/8)

2 Putting the machine into operation

Special safety notes



- Basic rule for service, maintenance, repair and assembly work on the rotary tedder – switch off the PTO shaft. Switch off the engine and remove the ignition key. Secure the tractor and rotary tedder from rolling away!
- The maximum drive speed is 540 rpm.
- Actuating components such as ropes and cords; and hydraulic hoses and cable connections should be laid in such a way that they can not be activated unintentionally or come into contact with the tractor wheels. Danger of accidents!
- No-one should be standing between the tractor and the rotary tedder during raising or lowering operations. Great risk of injury!
- When activating the hydraulics, make sure that no-one is standing in the swivel space of the outer swather disc and the chassis! Danger of accidents!
- Before switching on the PTO shaft, ensure that no-one is standing in the danger area of the rotary tedder. Danger of accidents!
- Make sure that the protective devices are correctly fitted during operation and when travelling on public roads! Attach the lights and check that they are functioning correctly.
- The hydraulic hoses should be sufficiently far away from the driver when assembling the comfort control unit.
- The operator must not leave the tractor during operation!



Safety notes on the hydraulic system

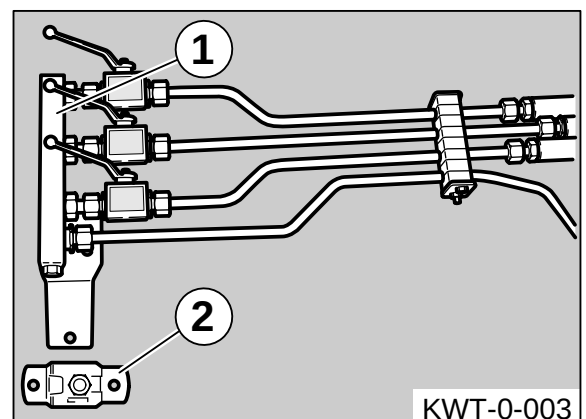
- The hydraulic system is pressurised!
- Hydraulic oil escaping under high pressure can cause serious injuries. Contact a doctor immediately if an injury occurs. Danger of infection!
- Hydraulic connections should be checked regularly and replaced when damaged or worn. The replacement hose connections must fulfil the requirements of the equipment manufacturer!
- When connecting the hydraulic hoses, make sure that the hydraulics on the tractor and on the machine are depressurised.

2.1 Preparations on the tractor and the rotary tedder

Attach the support (2) for the control unit (1) to the tractor so that the driver can reach it easily.



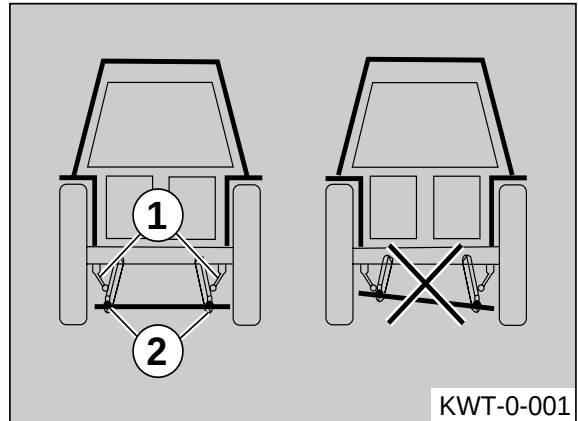
Hydraulic hoses must not be in the immediate vicinity of the driver. Danger of injury with damaged hydraulic hoses from escaping oil.



CAUTION: Hydraulic hoses must not be taut when raising or lowering or when driving round corners.

Putting the machine into operation

CAUTION: Lower link arms (2) on the tractor should be the same height. Secure the lower link arms from moving sideways using braces or chains (1).

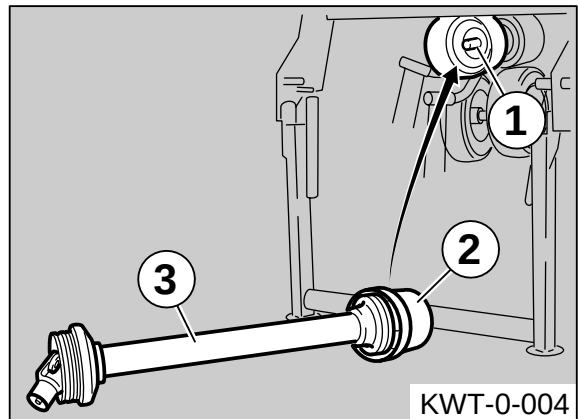


Mounting the PTO shaft on the rotary tedder

Slide on the PTO shaft (3) with wide-angle connecting piece (2) to the PTO shaft stub (1) of the rotary tedder.

NOTE

Observe the marking (arrow and tractor) on the PTO shaft.

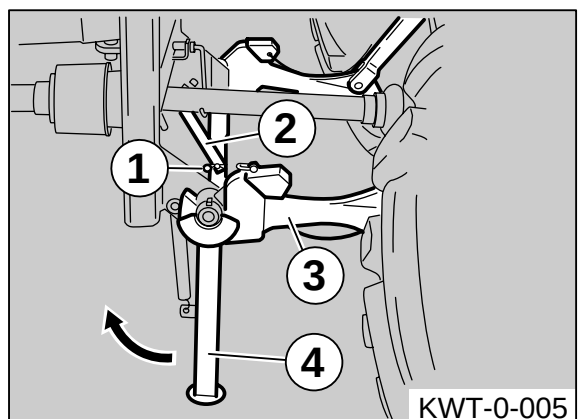


2.2 Attachment to the tractor

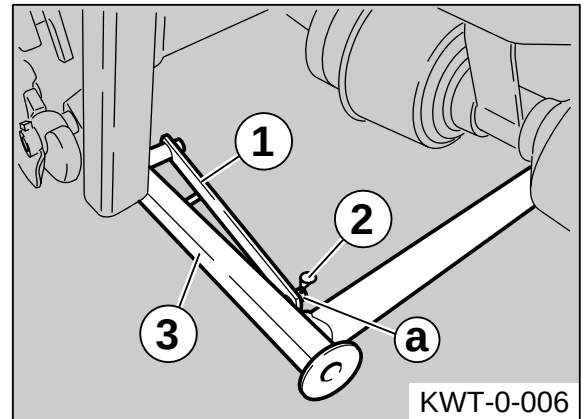


No-one should be standing between the tractor and the machine during attachment.

- Couple the lower link arms (3) to the rotary tedder
- Raise the lower link arms slightly
- Pull out the spring pin (1)
- Remove the support (2)
- Move the jack stand (4) back
- Secure the actuating cable on the transport locking device to the tractor



Secure the raised jack stand (3) in position “a” with the support (1) and spring pin (2).

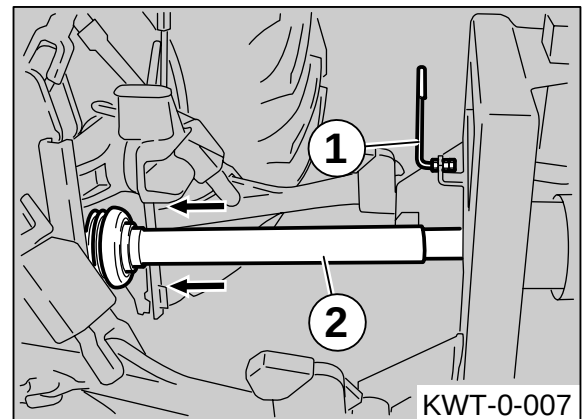


PTO shaft



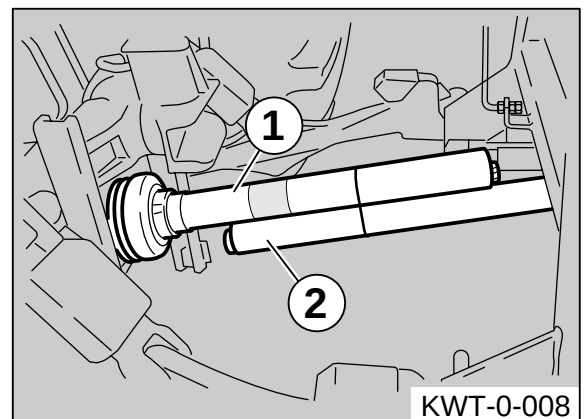
Switch off the engine after coupling the rotary tedder. Remove the ignition key. Secure the tractor from rolling away.

- Move the PTO shaft support (1) upwards
- Slide the PTO shaft (2) on the PTO shaft stub
- Secure the PTO shaft guard from rotating with the shaft with the retaining chain



Adjusting the length of the PTO shaft

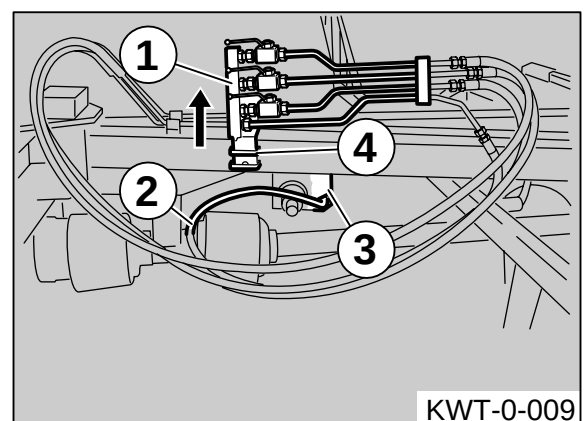
- Attach one half (1) and (2) each to the tractor and the machine
- Move the rotary tedder to the smallest position for the PTO shaft
- Measure both halves against one another
- For further instructions please see the operating instructions from the PTO shaft manufacturer.



Hydraulics

CAUTION: The hydraulics on the tractor and on the machine must be depressurised during attachment.

- Remove the control unit (1) from the machine mount (4) and insert into the support on the tractor.
- Remove the hydraulic hose (2) from the machine mount (3) and connect to a single-action control device. (KWT 8.80/8 double action control valve)



Putting the machine into operation

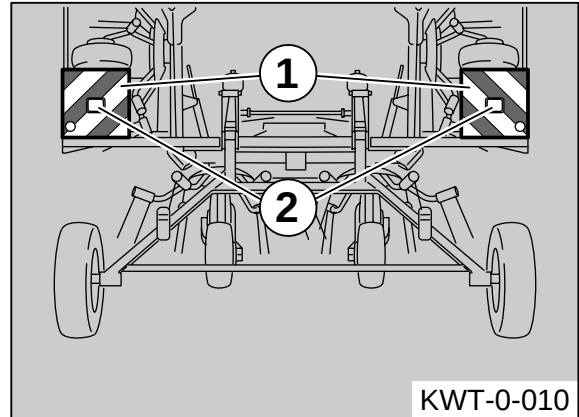
Lights



Before travelling on public roads, attach the lights and check for correct functioning.

The rotary tedder is equipped with a fixed lighting system:

- three-unit lamps at the rear (2) on warning plates (1)
- white side lamps at the front on warning plates

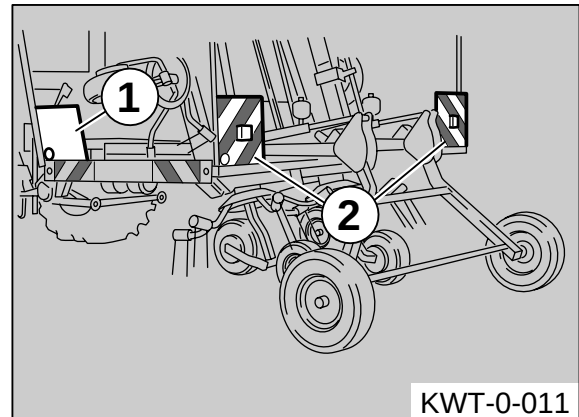


2.3 Warning and protective equipment



Make sure that the warning and protective equipment is functioning correctly. Replace damaged warning plates immediately.

- Front warning plates (1)
- Rear warning plates (2)



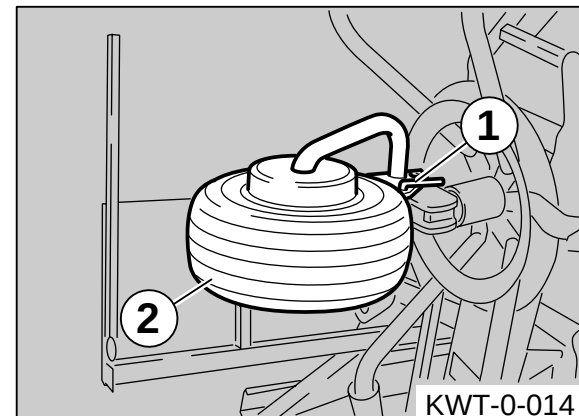
2.4 Working position

Only for KWT 7.70/6x7; KWT 8.80/8 and 10.50/8x7

Move the undercarriage wheel (2) on the second swather disc forward into working position. Secure with the bolt (1) and linch pin.



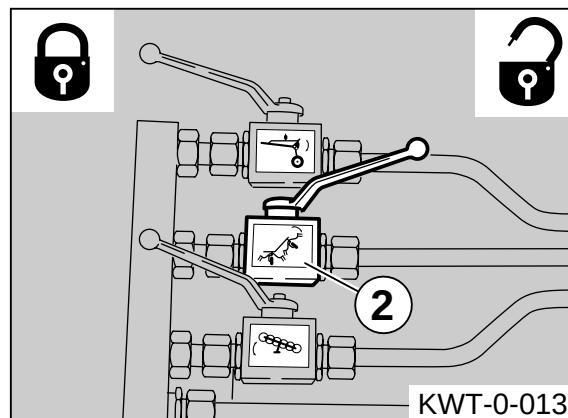
NOTE
Observe the position of the individual wheels when lowering into working position. (see. chapter "Adjusting the swather disc spreading angle")



Lowering the outer swather discs

Open the control valve (2) on the control unit.

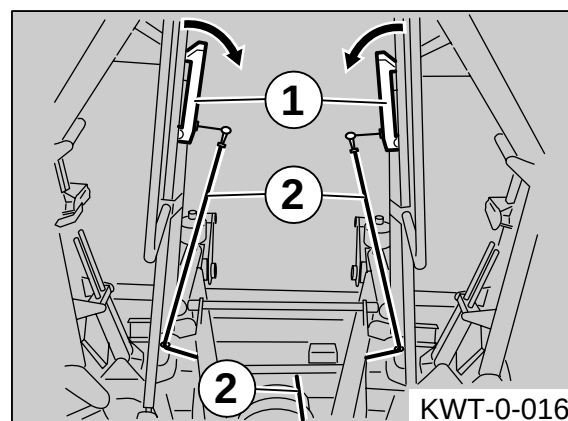
CAUTION: Before lowering or raising the outer swather discs, support the machine on the transport chassis.



Locking the transport safety device

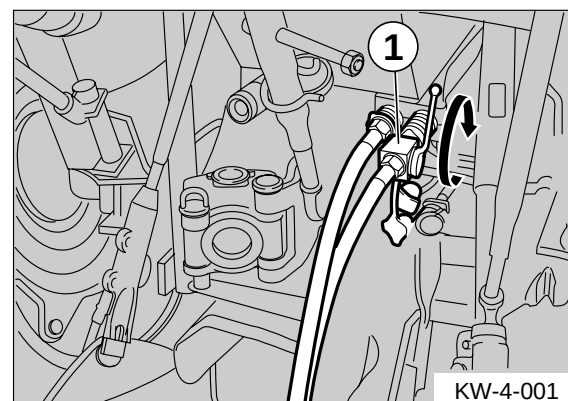
KWT 7.70/6x7; KWT 8.50/8 and 10.50/8x7

- Pressurise the hydraulic cylinder to release the locking device (1)
- Pull the actuating cord (2) and hold to lift up the locking device
- Slowly release the pressure from the hydraulic cylinder
- The outer swather discs are lowered



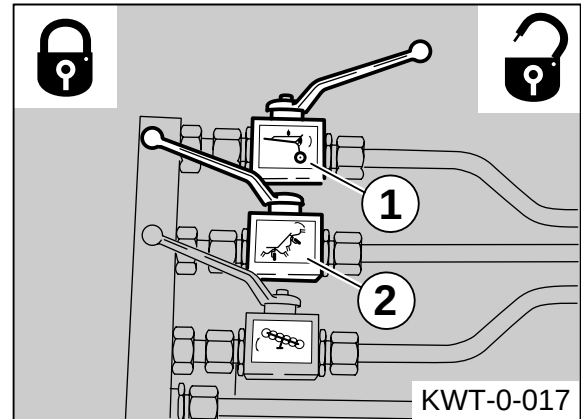
KWT 8.80/8

- Open the shut-off valve (1) and actuate the double-acting control valve on the tractor
- Slowly lower the outer swather disks.



Raising the transport wheels

- Close the control valve (2)
- Open the control valve (1)
- Actuate the control valve on the tractor. Release the pressure
- The chassis is raised, actuated by the hydro-accumulator
- Close the control valve (1)
- Open the control valve (2)

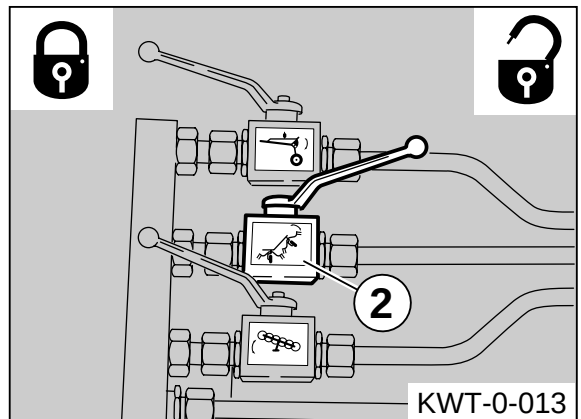


Operating position

- Control valve (2) open



When in use, leave the control valve on the tractor in the „**Float Position**“.

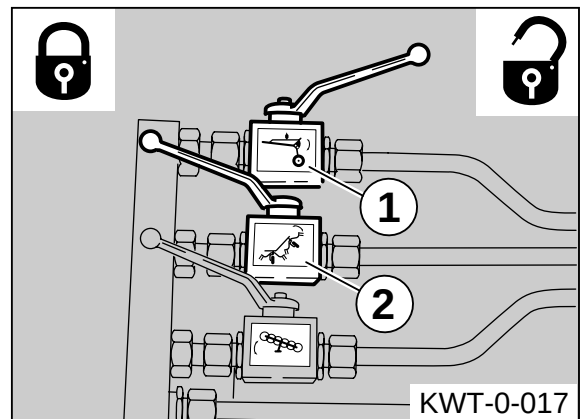


2.5 Transport position

CAUTION: Support the machine on the transport chassis before lowering or raising the outer swather discs.

Lowering the transport wheels

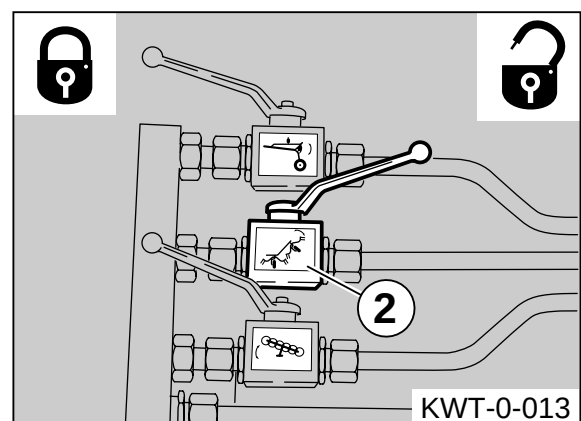
- Close the control valve (2)
- Open the control valve (1)
- Actuate the control valve on the tractor, thereby pressurising the hydraulic cylinder on chassis
- Swing out the chassis as far as it will go
- Close the control valve (1)



Lifting the outer swather discs

KWT 7.70/6x7; KWT 8.50/8 and KWT 10.50/8x7

- Open the control valve (2)
- Actuate the control valve on the tractor, thereby lifting off the outer swather discs
- Close the control valve (2)



When the outer swather discs are raised, make sure that the locking devices engage. Danger of injury!

KWT 8.80/8

Lift outer swather disks until the cylinders have travelled completely inward. Close shut-off valve (1).

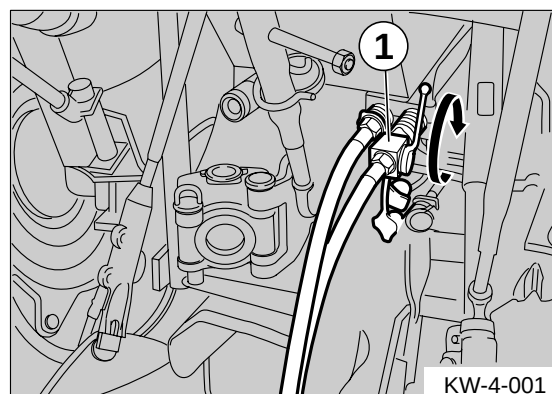


Before raising the rear hydraulics, check that the rear window of the tractor cabin is closed. Otherwise, the protective frame could cause damage.

Attach the lighting system. Check that the lights work.



The swather disk arms are secured in transport position with hydraulic stop valves on the hydraulic cylinders. In cases of transport journeys, the shut-off valve (1) must be closed and the tractor operation valve must be blocked!

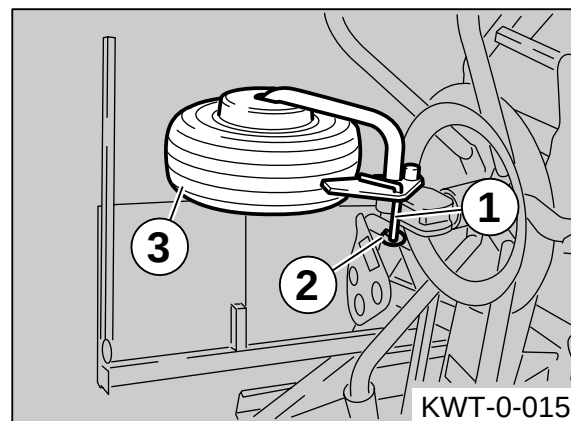


KWT 7.70/6x7; KWT 8.80/8 and 10.50/8x7

CAUTION: Observe the maximum width of the machine when travelling on public roads.

For reducing the transport width (< 3 m):

- Lower the undercarriage wheel (3) on the second swather disc backwards into transport position
- Secure with the bolt (1) and the linch pin (2)



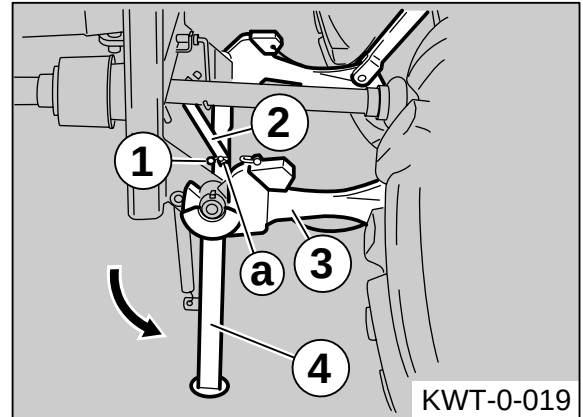
Putting the machine into operation

2.6 Removing the rotary tedder

NOTE: • Store the rotary tedder on a level and solid area only.

• When the tedder is folded together, the transport running gear must be locked in the transport position.

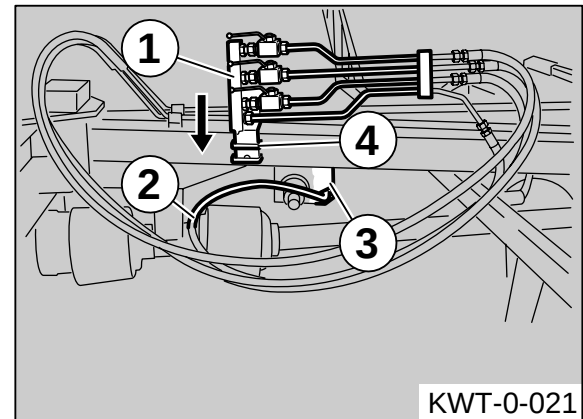
- Remove R-clip (1)
- Remove strut (2)
- Fold prop stand (4) to the bottom and attach strut (2) to the cam again in the lower position "a". Secure using a R-clip.
- Lower bottom links (3) and detach them from the machine
- Store the pull rope for the transport locking facility on the rotary tedder



Hydraulic system

NOTE: Release pressure from the hydraulic system at the side of both tractor and machine.

- Detach connecting hose (2) from the tractor coupler
- Fit control unit (1) to support (4)
- Store connecting hose (2) on support (3).

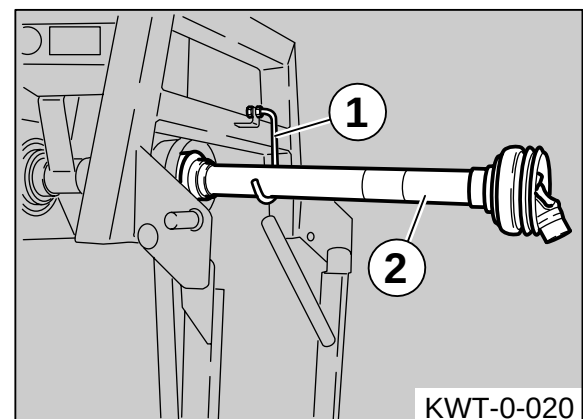


PTO shaft



After detaching the rotary tedder, stop the engine. Remove the ignition key and secure the tractor with wheel chocks.

Detach drive shaft (2) from the tractor p.t.o., slide sections together and store the shaft on support (1).



3 Adjustments

Special safety notes



- The adjustment work described below must only be carried out when the machine is at a standstill. Switch off the engine and remove the ignition key.
- Secure the rotary tedder and tractor from rolling away.
- Secure the hydraulically-raised rotary tedder from unintentional lowering!

3.1 Adjusting the swather disc spreading angle

CAUTION: The swather disc tines spreading angle should be adjusted according to the conditions of the crop. Adjustment is carried out on the undercarriage wheels on the rotary tedder.

Basic rules for adjusting the spreading angle:

Obtuse angle:

- large pick-up width
- short crop
- crop widely-distributed
- fodder with less than 40 % moisture content

Acute angle:

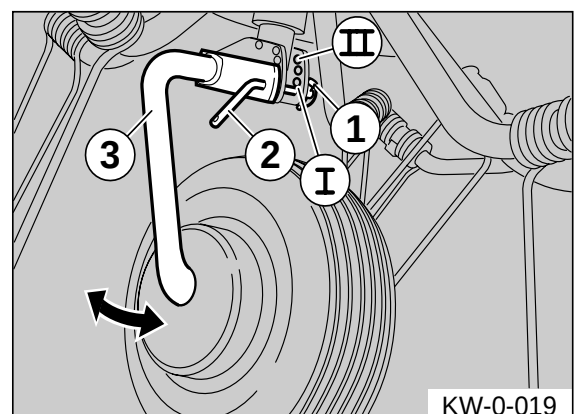
- high throwing distance
- long crop
- better spreading with cut swaths
- wilted silage
- fodder with more than 40 % moisture content

Adjustment with one wheel:

- Take out the linch pin (1). Pull out the bolt (2).
- Move the wheel carriers (3) to the selected position.
- Slide in the bolt and secure with the linch pin.

Undercarriage wheel = more acute spreading angle
direction I

Undercarriage wheel = more obtuse spreading angle
direction II



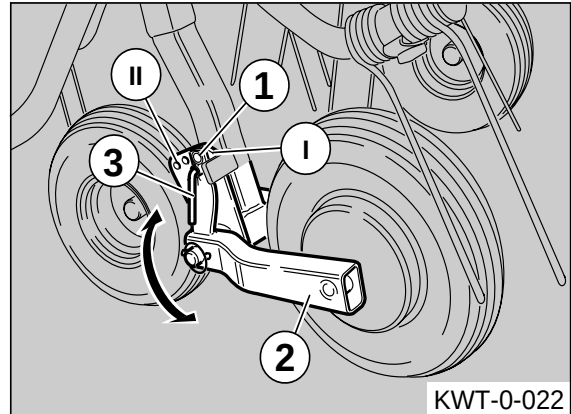
KW-0-019

Adjustment with a tandem axle

- Remove the load from the tandem axle (2) (lower the chassis)
- Pull out the spring pin (1)
- Pull out the bolt (3)
- Move the tandem axle to the selected position
- Insert the bolt and secure

Undercarriage wheel = more acute spreading
direction I in angle

Undercarriage wheel = more obtuse spreading
direction II in angle



Drive rpms

Wide spreading (tedding)

Take the mowing swaths as much as possible between the swather disks.

In cases of heavy fodder, move with high rpm (540/min) and a not-too-high travel speed (4 - 6 km/h) (steep spreading angle).

Turning

The drier the fodder, the lower the PTO rpm to be chosen (approx. 450/min), in order to avoid damaging the fodder. The movement speed (6 - 8 km/h) should be adjusted to the condition of the fodder. If the fodder is moist, the rpm and the movement speed should be selected as with wide spreading (flat spreading angle).

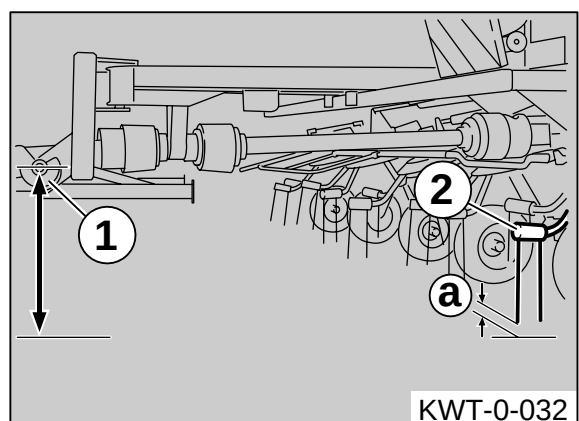


These specifications are approximate values which will need to be adjusted in practice to the actual circumstances.

3.2 Swather disc tine height adjustment

CAUTION: Adjust the working height of the swather disc tines according to the conditions.

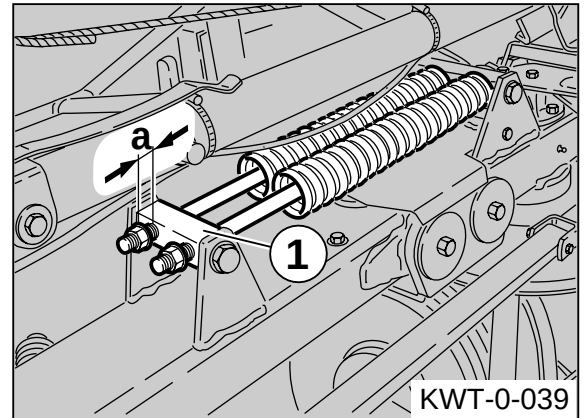
The working height of the swather disc tines (2) is adjusted by raising or lowering the rear hydraulics (1). The distance to the ground should be approx. **a = 2 cm**.



3.3 Swather disc ground adjustment

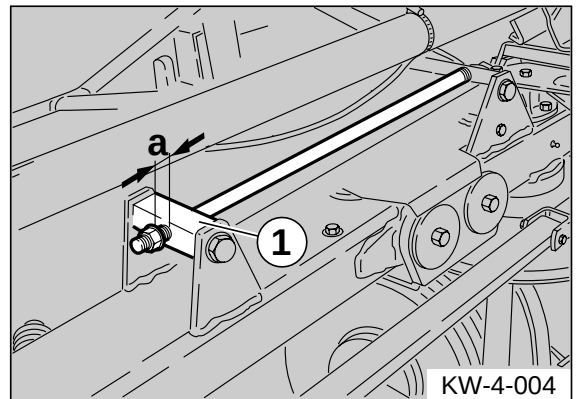
Second swather discs on the KWT 8.50/8 and KWT 10.50/8x7

- Move the rotary tedder into working position
- Adjust the ground setting of the second swather disc on the limiting stop (1)
- Basic setting is **a = 10 mm**
- If the ground is very uneven, the measurement can be increased to **a = max. 20 mm**



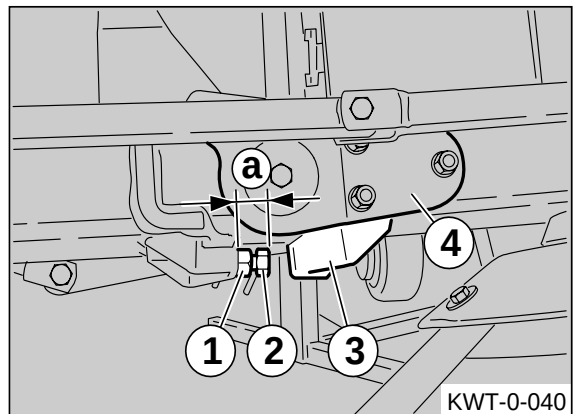
Second swather disc on KWT 8.80/8

Bring rotary tedder into working position. With the KWT 8.80 rotary tedder, the second swather disk's adjustment for the ground can be set on the tow bar (1). For the basic setting, the bolt on the tow bar is set with a gap of **a = 1 cm**. In cases of greater ground unevenness, the dimension „a“ can be increased where necessary. (The cylinder must not however come into contact with the tow bar.)



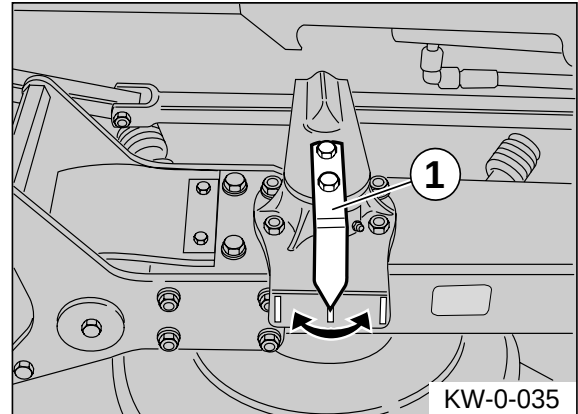
Outer swather discs on the KWT 7.70/6x7

- Move the rotary tedder into working position
- Raise the outer swather discs slightly. The stop (3) must not rest on the adjusting screw (2)
- Undo the counter nut (1)
- Turn the adjusting screw until in the required position, (**a = at least 41 mm**).
- Tighten the counter nut again after adjustment.



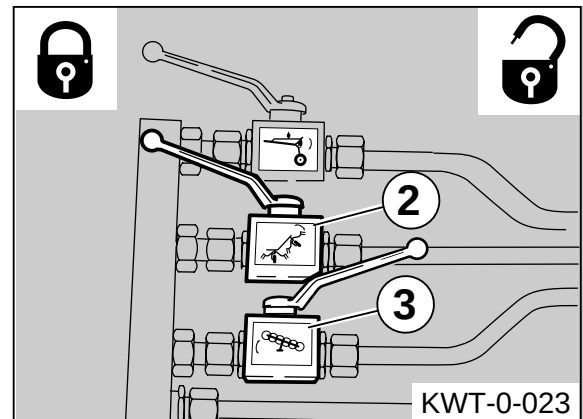
3.4 Edge spreading mechanism

The current position of the undercarriage wheels can be read from the indicator (1). It is located to the right (in direction of movement) of the carrier bar.



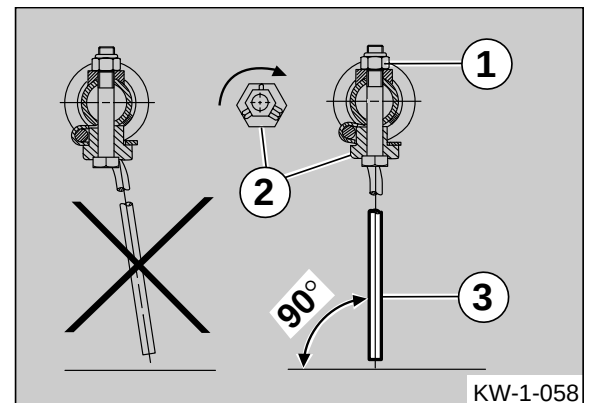
Adjusting the edge spread mechanism

- Lower the chassis to remove the load from the tandem axle (see chapter "Transport position")
- Close the control valve (2)
- Open the control valve (3)
- Actuate the control valve on the tractor
- Read off the setting on the indicator
- Close the control valve (3)
- Open the control valve (2)



3.5 Tine adjustment

The tines (3) should be set vertically to the ground. For adjustment release securing bolt (1) and turn eccentric (2) to the next position. Tighten the adjustment screw to a torque setting of **95 Nm**.



4 Service and maintenance

Special safety notes

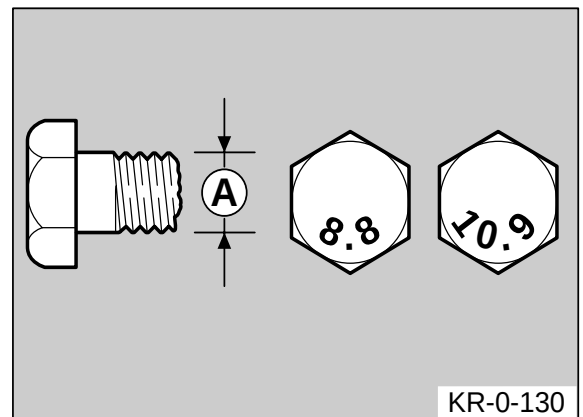


- Repair, servicing, maintenance and cleaning work must only be carried out when the machine is at a standstill. Switch off the engine and remove the ignition key.
- Secure the rotary tedder and tractor from rolling away.
- Secure the raised rotary tedder against unintentional lowering.
- All protective plates and protective devices should be reassembled correctly after completion of service and maintenance work.
- Avoid oil and grease coming into contact with the skin.
- Contact a doctor immediately for injuries caused by escaping oil.
- Follow all other safety notes to avoid injuries and accidents.

A = thread size (solidity class given on the head of the screw.)

4.1 General

Caution: Certain maintenance and service intervals should be observed to guarantee correct operation of the rotary tedder and to reduce wear and tear. These include cleaning, greasing, lubricating and oiling parts and components, as well as checking and retightening screws. Check the screws on all tines for tightness after the first few operating hours and then daily. Retighten if necessary (110 Nm)! See table below for other torque values.



Deviations from the table opposite include the following torque values M_A [Nm]:

Screws/nuts	M_A [Nm]
Tines	95
Swather disc bearings	42
Hinge plate on the frame joints	85

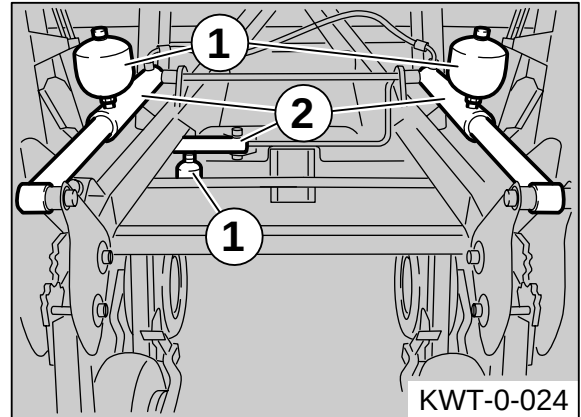
A Ø	5.6	6.8	8.8	10.9	12.9
	M_A (Nm)				
M 4		2,2	3,0	4,4	5,1
M 5		4,5	5,9	8,7	10
M 6		7,6	10	15	18
M 8		18	25	36	43
M 10	29	37	49	72	84
M 12	42	64	85	125	145
M 14		100	135	200	235
M 14x1,5			145	215	255
M 16		160	210	310	365
M 16x1,5			225	330	390
M 20			425	610	710
M 24			730	1050	1220
M 24x1,5	350				
M 24x2			800	1150	1350
M 27			1100	1550	1800
M 27x2			1150	1650	1950
M 30			1450	2100	2450

4.2 Hydraulics

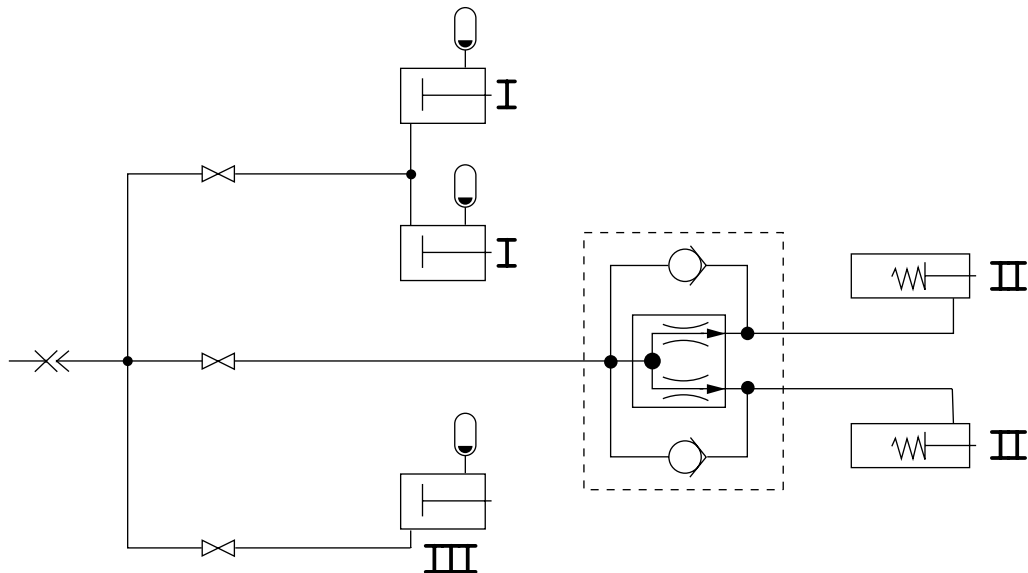


- Work on the hydraulic system may only be carried out by authorised experts.
- Hydraulic accumulators are pressurised. There is a danger of injury when dismantling the hydraulic cylinders!

The hydraulic cylinders (2) and accumulators (1) are maintenance-free. The complete units have to be replaced if there is a fault.



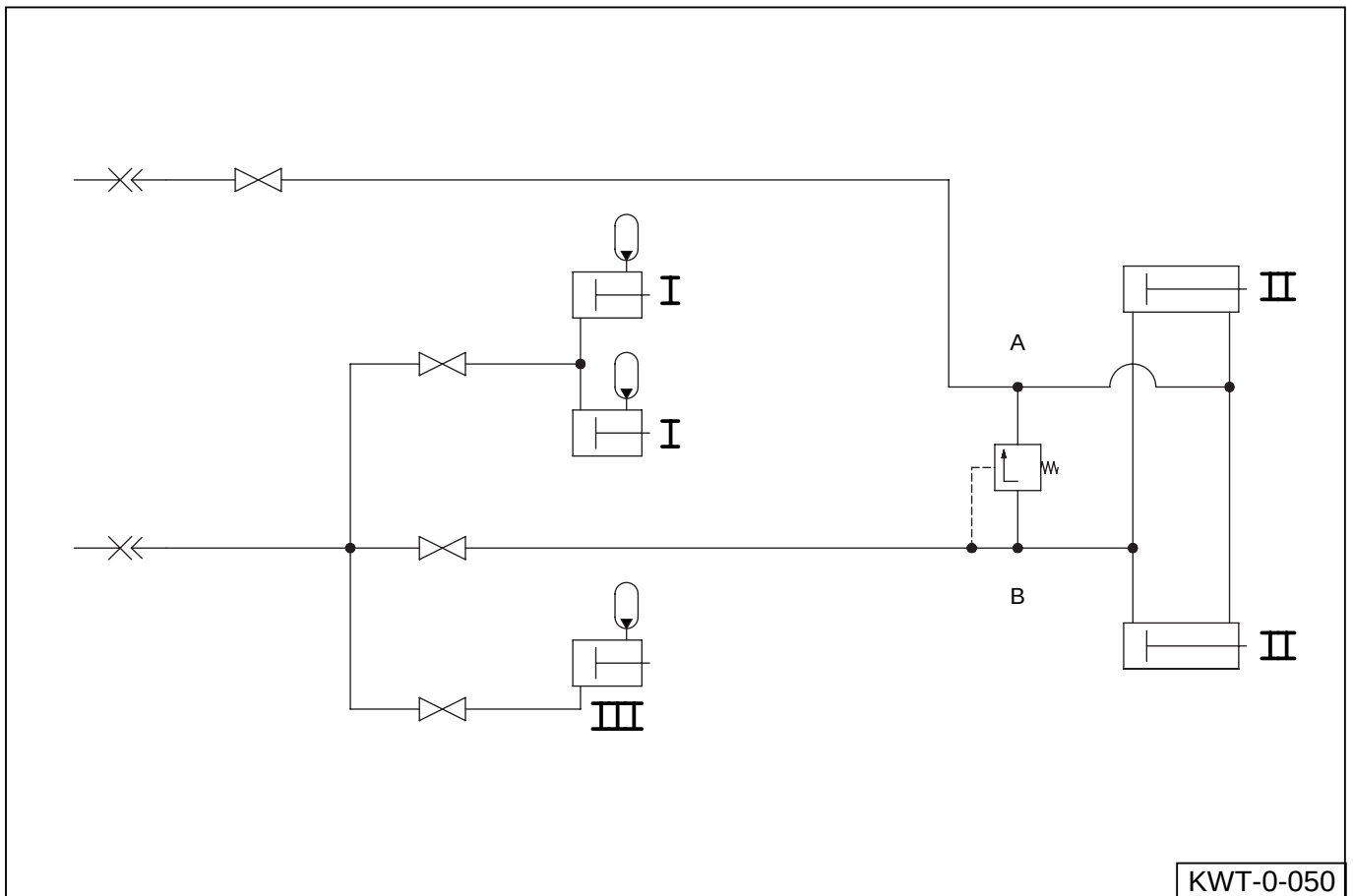
Hydraulic circuit diagram KWT 7.70/6x7; KWT 8.50 and KWT 10.50/8x7



KWT-0-034

- I Undercarriage hydraulic cylinder
- II Outer swather disc hydraulic cylinder
- III Edge spreading mechanism hydraulic cylinder

Hydraulic circuit diagram KWT 8.80/8



KWT-0-050

- I Undercarriage hydraulic cylinder
- II Outer swather disc hydraulic cylinder
- III Edge spreading mechanism hydraulic cylinder

4.3 Gears

The main gearbox in the rotary tedder is greased for life and is maintenance-free.

Designation/Brand	Quantity lit
Flowing gearbox grease GFO35	0,5l

4.4 Tyres



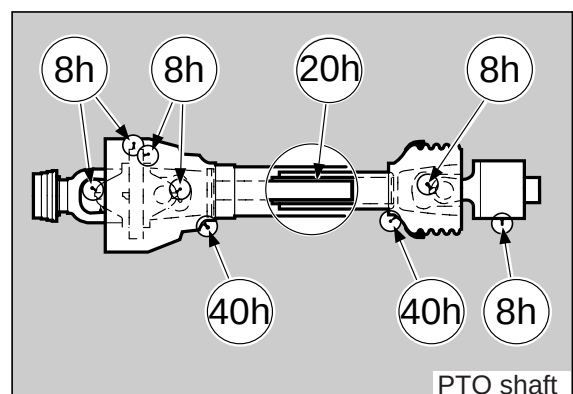
- Repair work on the tyres may only be carried out by experts using suitable assembly tools.
- Bring the rotary tedder to a standstill before starting assembly work. Switch off the engine. Remove the ignition key.
- Park the rotary tedder on solid and level ground. Secure against rolling away unintentionally using wheel chocks.
- Check the air pressure regularly.

	Pressure
Undercarriage wheels	1.5 bar
Transport wheels	2.0 bar

4.5 Lubrication points on the rotary tedder

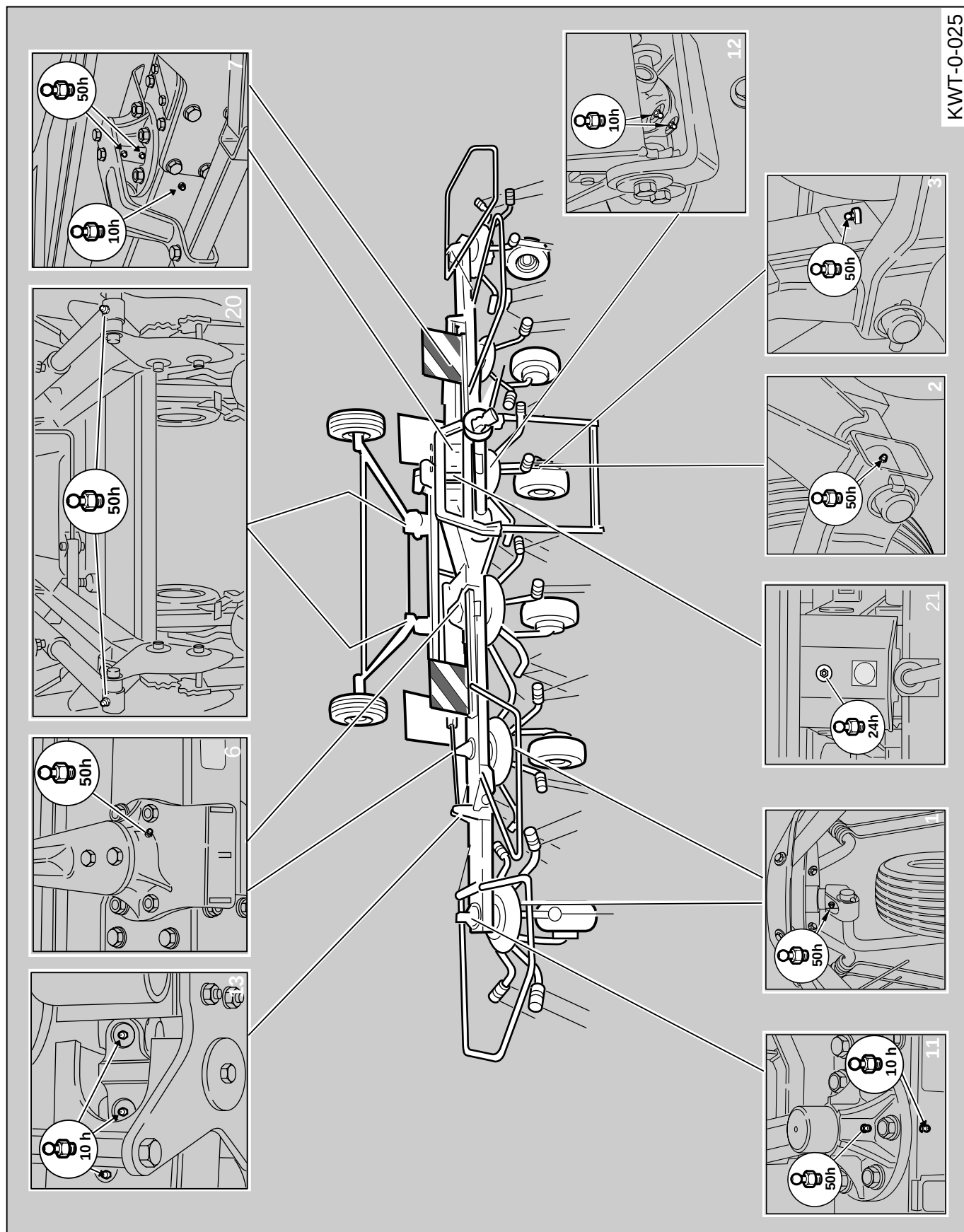
PTO shaft

The PTO shafts on the machine should be lubricated at the positions shown in the diagram opposite at the given time intervals. Also observe the operating instructions from the PTO shaft manufacturer.



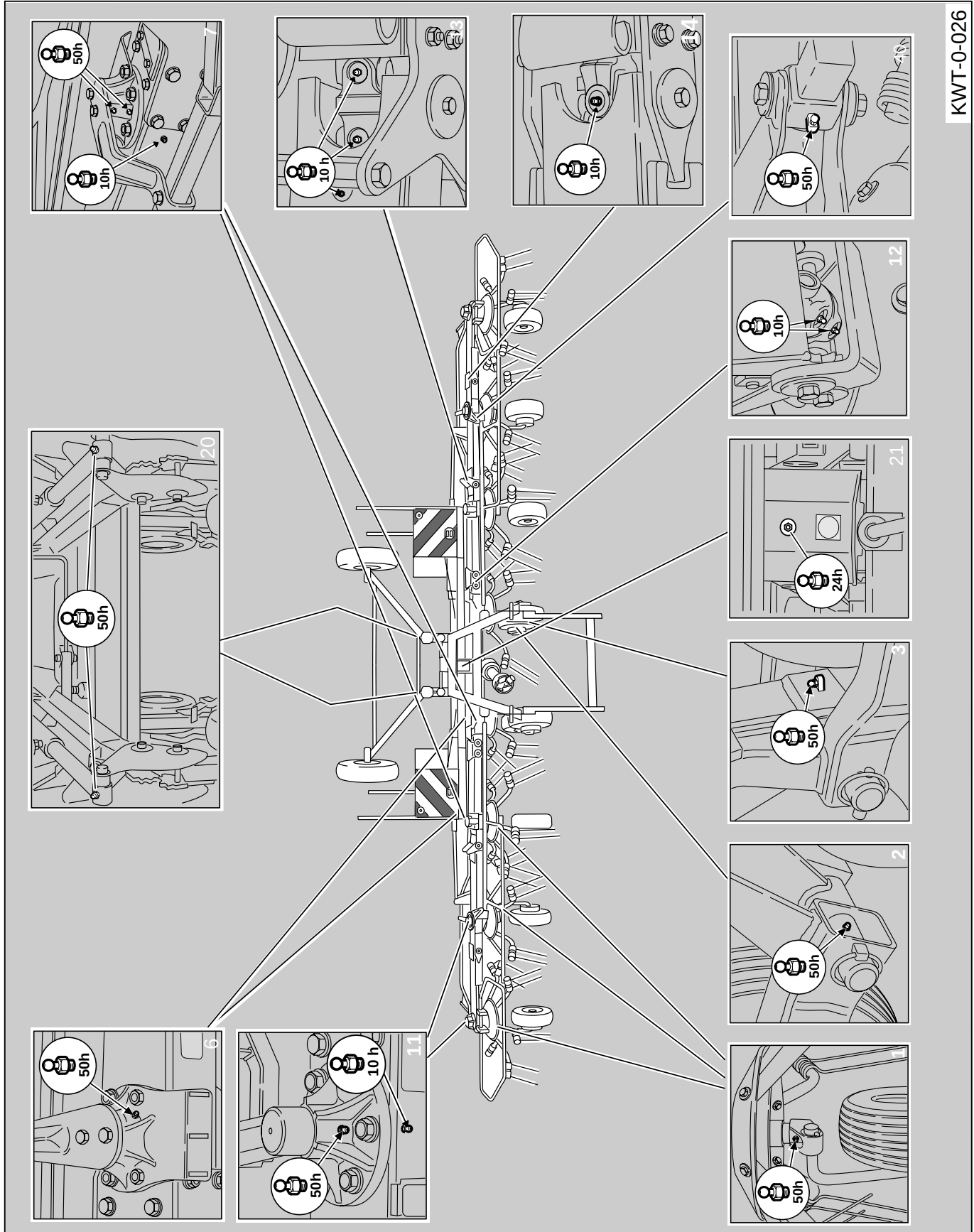
Lubrication points on the KWT 7.70 16x7

To give a better overview, the lubrication points have only been shown on just one side. There are lubrication points at the same position on the other side (mirror image).



Lubrication points on the KWT 8.50/8; KWT 8.80/8 and 10.50/8 x 7

To give a better overview, the lubrication points have only been shown on just one side. There are lubrication points at the same position on the other side (mirror image).



5 Winter storage

Safety notes



- Repair, servicing, maintenance and cleaning work may only be carried out when the machine is at a standstill.
- Switch off the engine and remove the ignition key.
- All protective plates and protective devices should be mounted correctly after servicing and maintenance work has been completed.
- Prevent oils, grease, cleaning agents and solvents coming into contact with the skin.
- For injuries or irritations caused by oil, cleaning agents or solvents, contact a doctor immediately.

5.1 General

Clean the rotary tedder thoroughly before storing over the winter. If a high-pressure cleaner is used, do not direct the water jet directly at the bearings. Grease all lubrication nipples after cleaning. Do **not** wipe grease escaping from the bearings. The ring of grease forms additional protective against moisture.

Check all moving parts for freedom of movement. If necessary, dismantle, clean and grease before reassembling. Replace with new parts if necessary. Only use **Original KRONE spare parts**.

Pull apart the PTO shaft. Lubricate the inner tube and the protective guard with grease. Grease the lubrication nipple on the universal joint and the bearings rings on the protective tube.

Store the rotary tedder in a dry place, but not near artificial fertiliser or stalls.

Touch up the paintwork and treat bare metal thoroughly with rust protection agent.



Only jack up the rotary tedder with a suitable vehicle jack. Make sure that the jacked up rotary tedder is secure.

Jack up the rotary tedder to remove the load from the tyres (the tyres may be damaged if the rotary tedder is left to stand in the same position for an extended period). Protect the tyres against external influences such as oil, grease, sunlight etc.

Carry out the repair work required during the period immediately after the harvest season. Make a list of all spare parts needed. It is then easier for your KRONE dealer to carry out your instructions and you can be sure that your machine will be ready for use at the beginning of the new season.

6 Putting back into operation

Special safety notes



- Repair, servicing, maintenance and cleaning work should only be carried out when the machine is at a standstill. Switch off the engine. Remove the ignition key. Secure the tractor against rolling away.
- All protective plates and protective devices should be reassembled correctly after servicing and maintenance work has been completed.
- Prevent oil or grease coming into contact with the skin.
- Contact a doctor for injuries caused by escaping oil.
- Follow all safety notes to avoid injuries and accidents.

6.1 General

- Remove grease and oil used to preserve the machine.
- Carry out the measures given in the chapter “Maintenance”.
- Ventilate the overload coupling.
- Carefully read through the operating instructions again.

6.2 Overload coupling

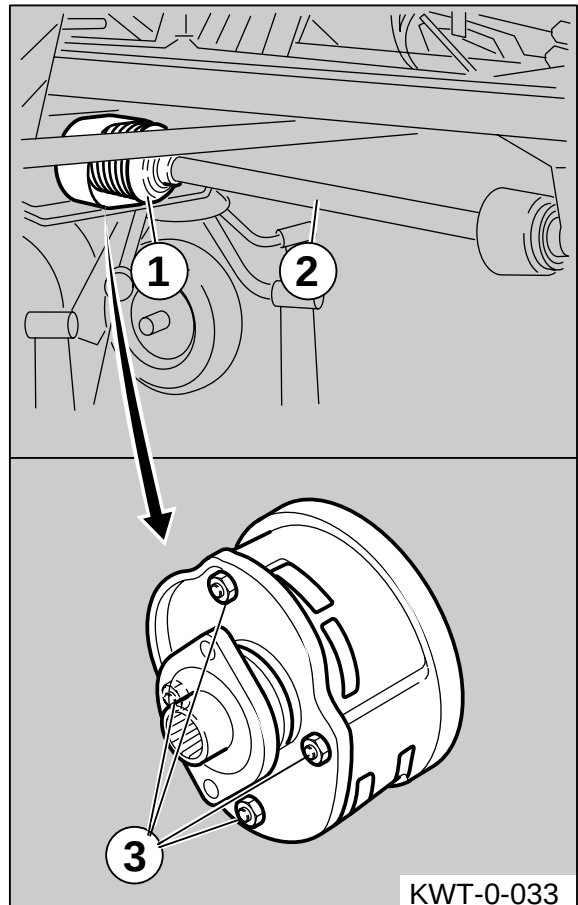
The overload coupling (1) is located on the PTO shaft (2). It should be connected to the main gearbox.

Ventilate the overload coupling.

- Tighten the four nuts (3)
- Block the machine
- Turn the PTO shaft by hand
- Undo the nuts

NOTE

Also see maintenance notes from the PTO shaft manufacturer on the PTO shaft.



KWT-0-033

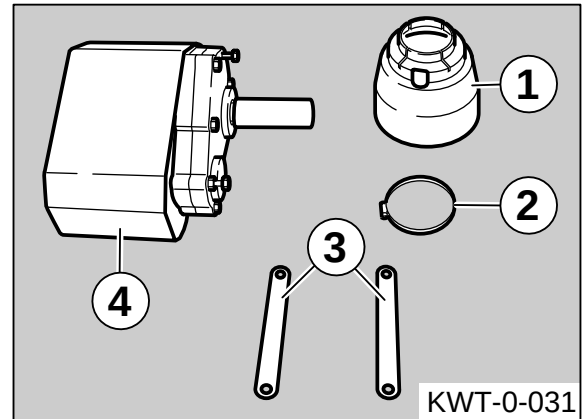
7 Accessories

7.1 Night swath gearbox

The rotary tedder can be fitted with a night swath gearbox.

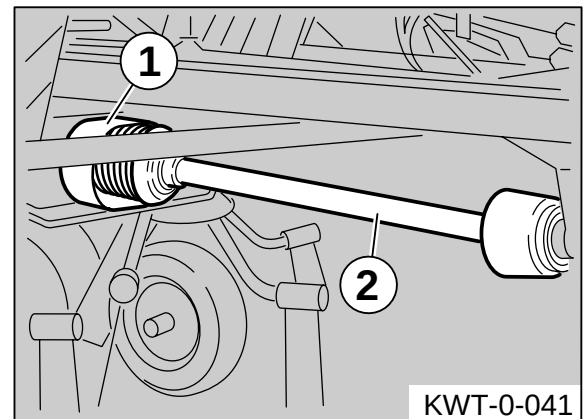
The parts supplied include:

- Night swath gearbox (4) (greased for life, therefore maintenance-free)
- Two flat irons for assembly (3)
- Protective cover (1)
- Clamp fitting (2)
- Four screws with nuts and washers

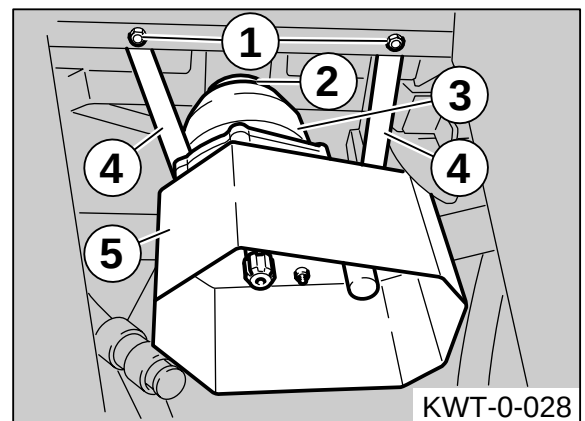


Assembling the night swath gearbox

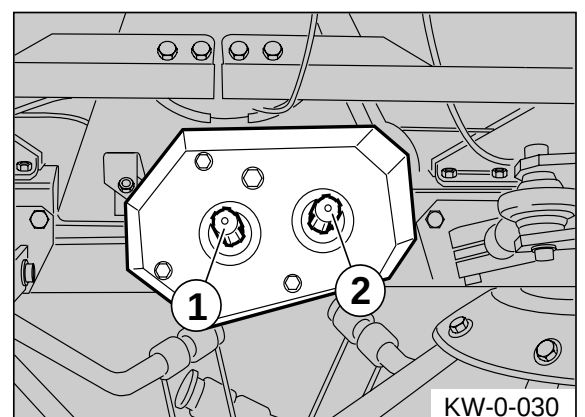
- Remove the p.t.o. shaft (2)
- Disassemble the protective cover (1)



- Secure the protective cover (3) with the clamp fitting (2)
- Screw the flat irons (4) with the screws (1) on the frame
- Slide on the night swath gearbox (5) to the PTO Shaft stub and screw onto the flat irons
- Tighten the screws securely



- The PTO shaft stub (1) is intended for spreading and conditioning
- To process night swaths, slide the PTO shaft onto the stub (2)



The protective cap must be placed on the exposed PTO shaft stub.

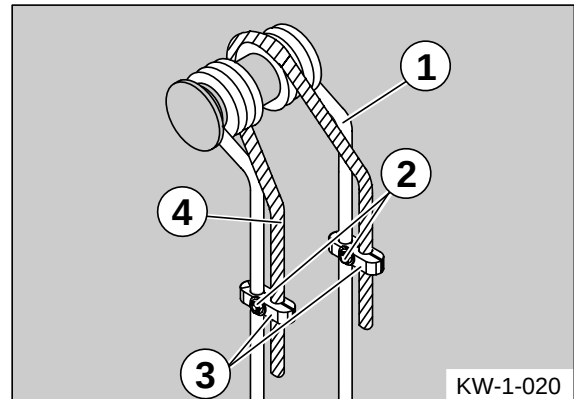
7.2 Additional tine loss protection



- The basic rule for servicing, maintenance, repair and assembly work on the rotary tedder – switch off the PTO shaft.
- Switch off the engine and remove the ignition key.
- Secure the tractor and rotary tedder from rolling away!

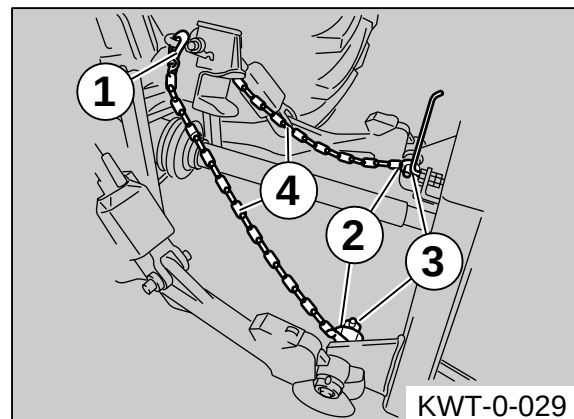
It consists of the following per tine:

- a cord
- two cord clamps
- two each of saucer-head screws, washers and fixing nuts
- Secure the cord (4) to the swather disc tines (1) with the cord clamps (3). The cord should be situated behind the swather disc tines in relation to the direction of rotation. The nuts (2) on the cord clamps should be pointing outwards.



7.3 Depth control chain for the lower link arms

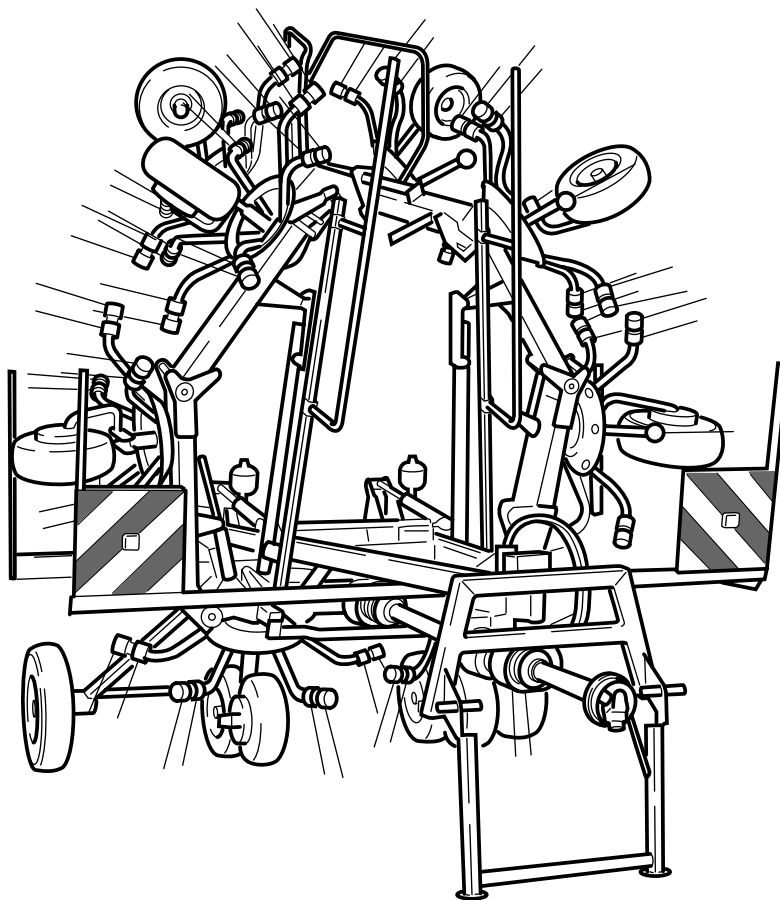
- Secure the chains (4) with a dowel pin (3) and washer (2) on the lower link arm mounting pin.
- Hang the chain hook (1) onto the tractor.
- Select the length of chain according to the desired max. lowering depth.



Appendix to the operating instructions

Assembly instructions for the KWT 7.70/6x7, KWT 8.50/8, KWT 8.80/8 and KWT 10.50/8x7

Caution: The work described below may only be carried out by authorised expert dealers!



Special safety notes



- Park the rotary tedder on solid and level ground.
- Assemble all protective devices before putting the machine into operation.
- When unfolding the outer swather discs into the working position, make sure that no one is standing in the swivel space of the swather disks.
- Particular care should be taken when assembling the supplied components.

1. Preparations

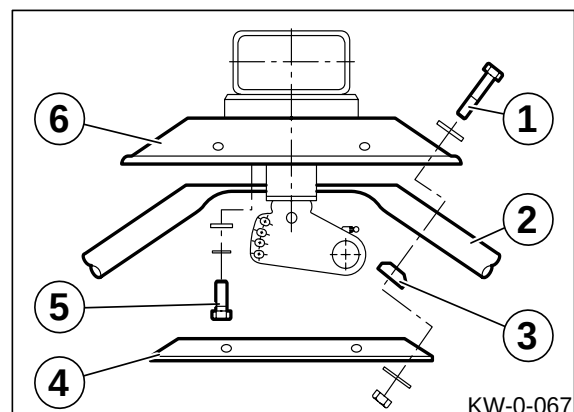
- Remove the protective frames attached to the rotary tedder.
- Unscrew the tine arms with tines from the control pipe on the edge spreading mechanism.
- Move the rotary tedder into the working position.

2. Assembling the swather disc arms to the swather disc plate

Caution: The swather disc arms with the tines attached should be assembled according to the direction of rotation. Observe the decals on the rotary tedder.

- beige tines = swather disc rotating left
- green tines = swather disc rotating right

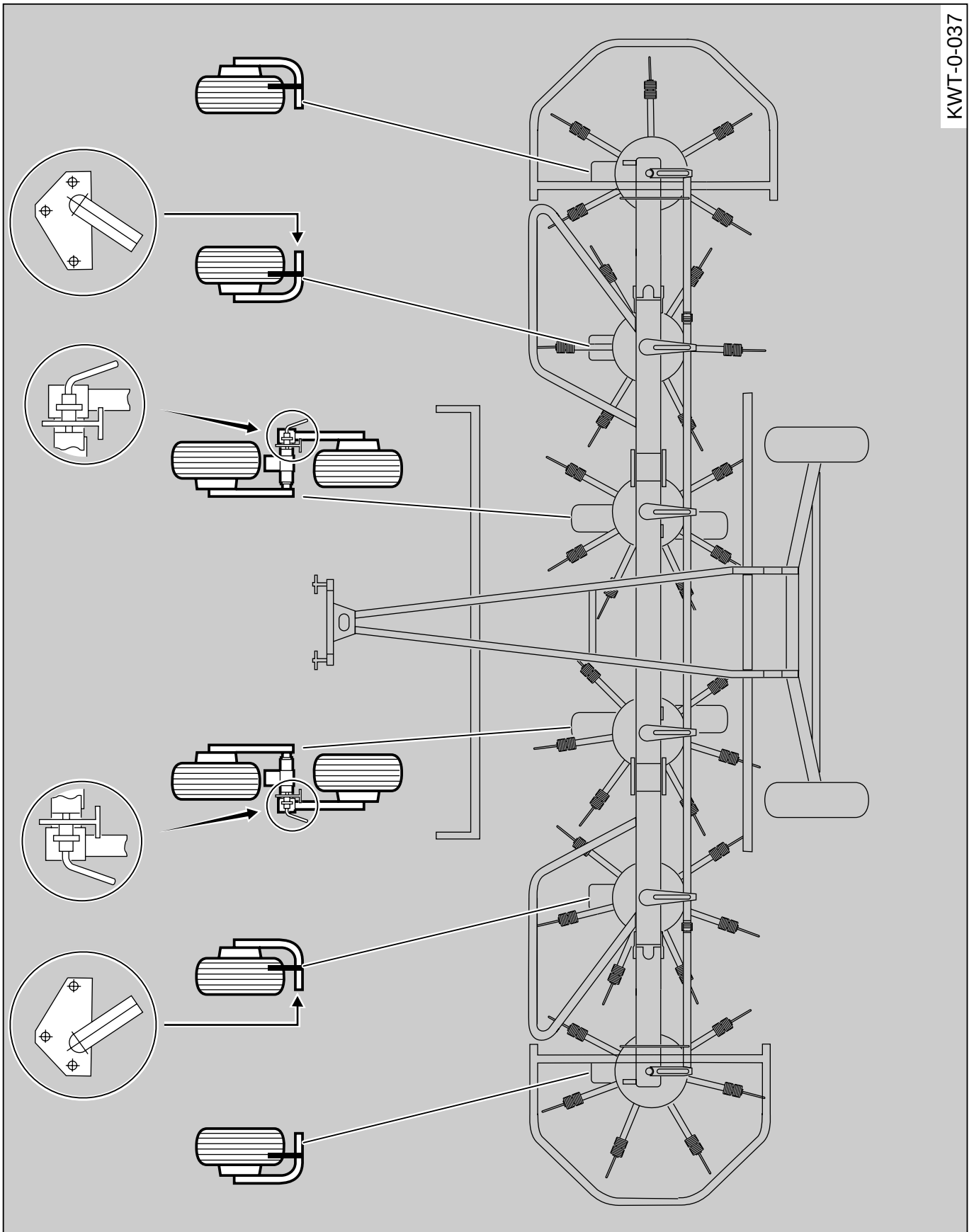
Fix the tine arms (2) from below to the disc plates (6) with M16 bolts (5) and spring washers. Do not tighten the bolts. Then insert M12 bolts (1) with washers from above and place them through the hole in the tine arm. Push on the semi-round support (3) as shown in the illustration. When all tine arms have been fitted as described, place the reinforcement ring (4) on the bolts and secure the bolts with nuts and washers. For the torque settings, see chapter 4 "Care and maintenance".



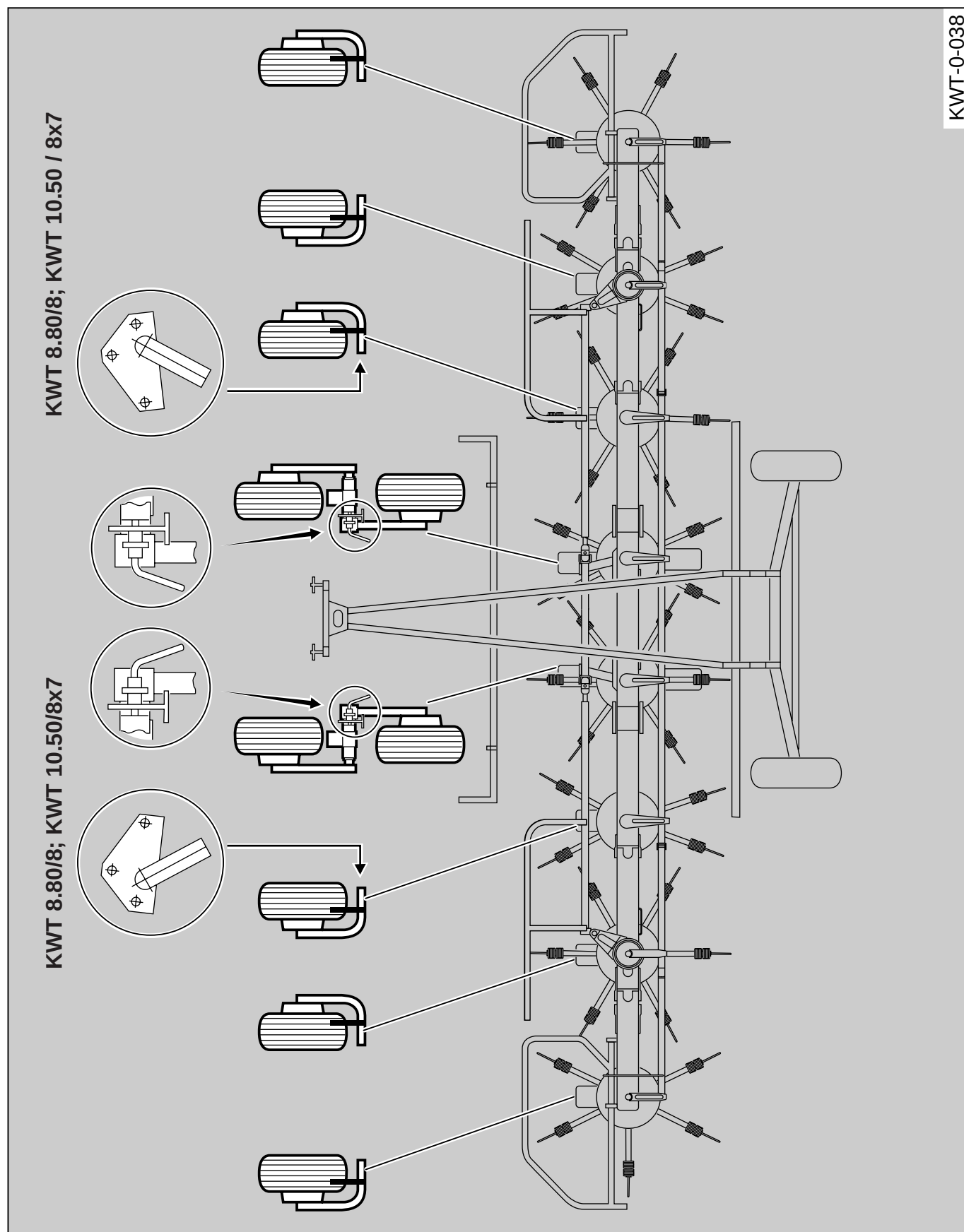
KW-0-067

3. Assembling the tandem axles and undercarriage wheels

KWT 7.70/6x7

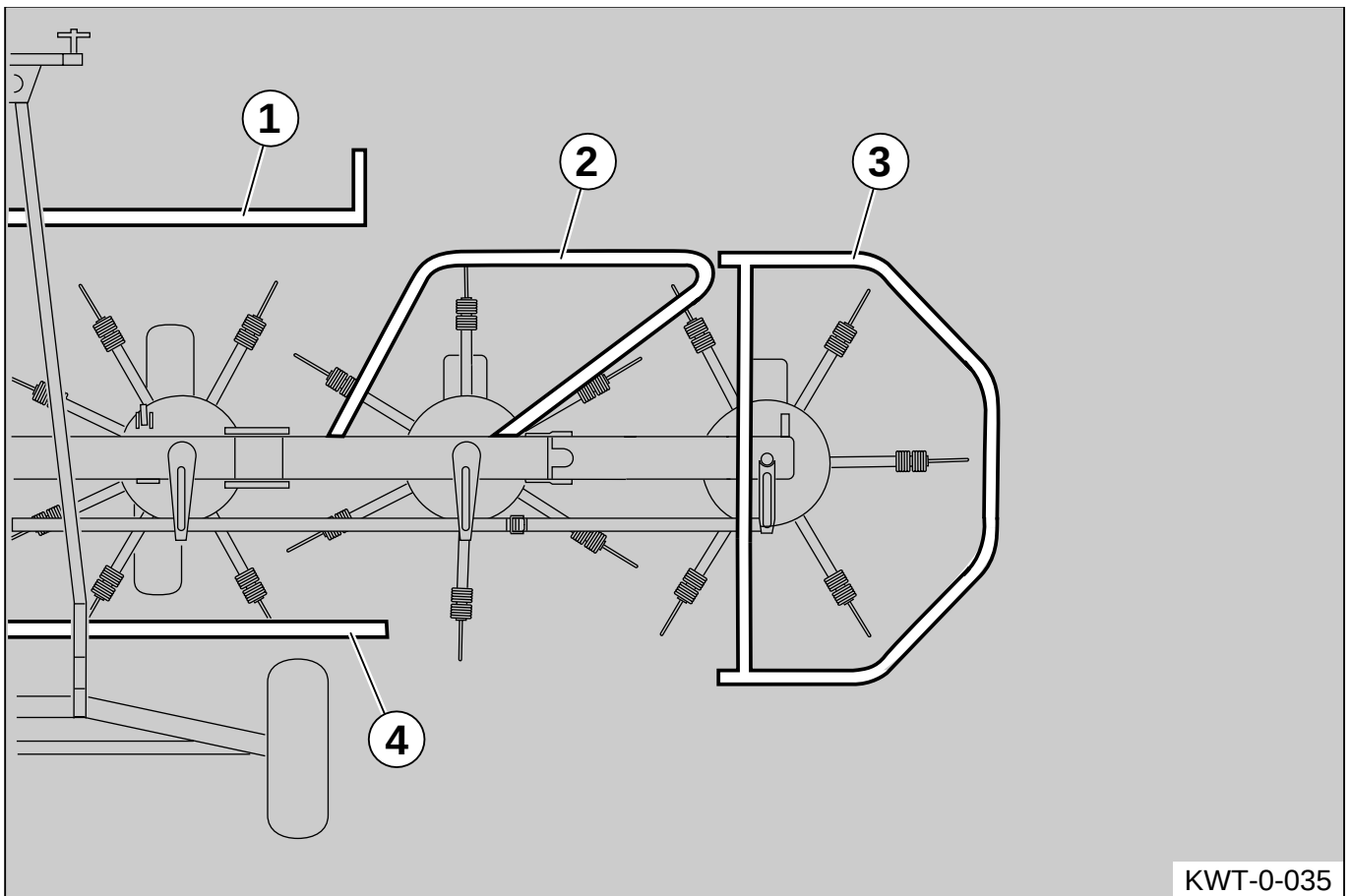


KWT 8.50/8, KWT 8.80/8 and 10.50/8x7



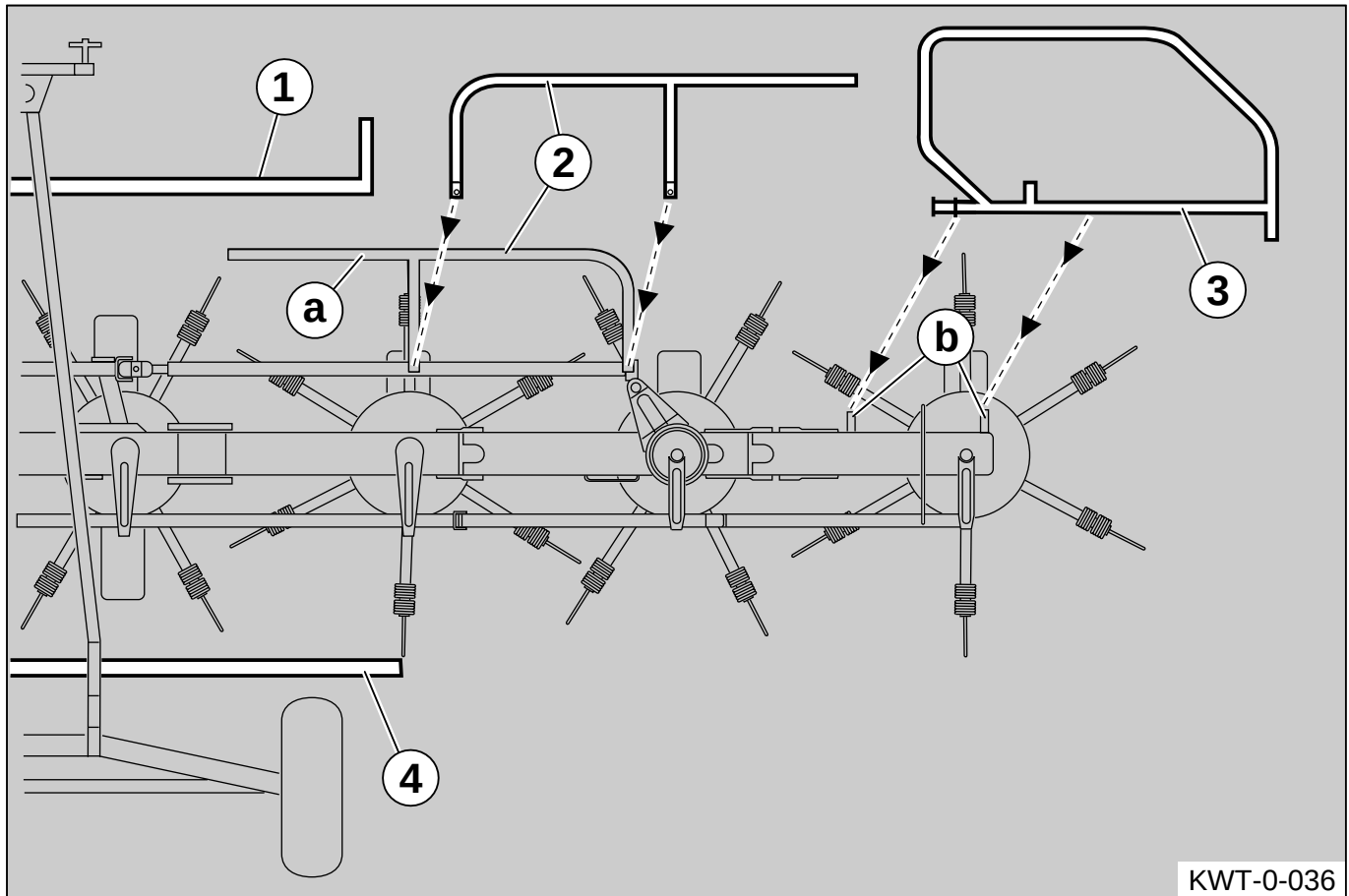
4. Assembling the protective frames and lights

4.1 Assembly for the KWT 7.70/6x7 and KWT 8.80/8



- The protective frames (2) and (3) are assembled at the factory.
- Assemble the front and rear protective frames (1) and (4) according to the holes in the chassis frame
- The assembly position of the rear and front protective frames are given by the various positions of the bores
- The lights are assembled on the warning plate mounted on the protective frame
- Connect the electrics between the lights and the connection cable on the rotary tedder after correct assembly. Check that the lights are functioning correctly.

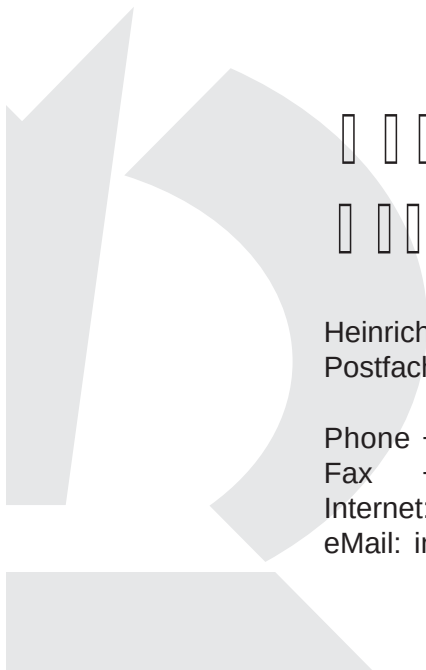
4.2 Assembly for the KWT 8.50/8 and 10.50/8x7



- Protective frame (2) is assembled on the machine in position (a). Undo the screws, **turn the frame by 180°**, so that the exposed side points towards the outside. Assemble in this position.
- Protective frame (3) is fixed in position (b) using clips.
- Assemble the front and rear protective frames (1) and (4) according to the holes in the chassis
- The lights are assembled on the warning plate on the protective frame
- Connect the electrics between the lights and the connection cable on the rotary tedder after correct assembly. Check that the lights are functioning correctly.



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