



Maize header

EasyCollect 753
EasyCollect 903
EasyCollect 1053

(from serial no.: 798 561)

Order no.: 150 000 106 02 en





EC Declaration of Conformity



We

Maschinenfabrik Bernard Krone GmbH

Heinrich-Krone-Str. 10, D-48480 Spelle

hereby declare as manufacturer of the product named below, on our sole responsibility,
that the

Machine: **Krone Maize Header**

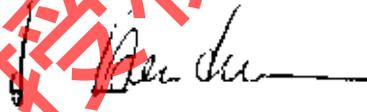
Type/types: **EasyCollect 753; EasyCollect 903; EasyCollect 1053**

to which this declaration refers is in compliance with the relevant provisions of

EC Directive 2006/42/EC (Machinery)

The signing Managing Director is authorised to compile the technical documents.

Spelle, 07.04.2010



Dr.-Ing. Josef Horstmann
(Managing Director for Design & Development)

Year of manufacture:

Machine No.:

**Dear customer,
Dear customer,**

You have now received the operating instructions for the KRONE product which you have purchased.

These operating instructions contain important information for the proper use and safe operation of the machine.

If these operating instructions should become wholly or partially unusable, you can obtain replacement operating instructions for your machine by stating the number given overleaf.

1	Foreword	6
2	Introduction	7
2.1	Purpose of Use	7
2.2	Validity	7
2.2.1	Contact	7
2.3	Identification Plate	8
2.4	Information Required for Questions and Orders	8
2.5	Intended Use	9
2.6	Technical data	9
2.7	Machine overview	10
2.8	Additional weights on the BigX	11
2.8.1	Steel design	11
2.8.2	Steel design	11
2.8.3	Cast design	12
3	Safety	13
3.1	Identifying Symbols in the Operating Instructions	13
3.2	Identification of the hazard warnings	13
3.2.1	Personnel Qualification and Training Fehler! Textmarke nicht definiert.	14
3.2.2	Dangers in Case of Non-compliance with the Safety Instructions	14
3.2.3	Safety-conscious work practices	14
3.3	Safety Instructions and Accident Prevention Regulations	15
3.4	Attached devices	16
3.5	PTO Operation	17
3.6	Hydraulic system	18
3.7	Maintenance	18
3.8	Unauthorised Conversion/Modification and Spare Parts Production	19
3.9	Inadmissible Modes of Operation	19
3.10	Introduction	19
3.11	Safety Instructions on the Machine	19
3.12	Position of the Adhesive Safety Stickers on the Machine	20
3.13	Position of the General Information Labels on the Machine	22
3.13.1	Re-Ordering the Adhesive Safety and Information Labels	24
3.13.2	Affixing the Adhesive Safety and Information Labels	24
4	Commissioning	25
4.1	Stop points	25
4.2	Storage	26
4.3	Additional weights on the BigX	26
4.3.1	Steel design	26
4.3.2	Steel design	27
4.3.3	Cast design	27

4.4	Attaching the additional weights	28
4.5	Attaching the discharge extension.....	32
5	Start-up.....	34
5.1	Attachment to the forage harvester	35
5.1.1	Adjusting the locking.....	35
5.1.2	Pendulum frame.....	36
5.1.3	Coupling.....	36
5.1.4	Connecting the hydraulic lines.....	38
5.1.5	Opening the shut-off valve.....	40
5.1.6	Parking supports in transport position on the right/left	40
6	Driving and Transport.....	41
7	Operation.....	43
7.1	From transport into working position	43
7.1.1	Removing the protective cover	43
7.1.2	Parking supports in transport position on the right/left	44
7.1.3	Swinging the right-hand / left-hand side parts into working position	45
7.1.4	Swinging the plant divider into working position.....	46
7.2	Using the Machine for Work	47
7.2.1	Using the maize header.....	47
7.2.2	Lifting gear distance control (optional).....	48
7.2.3	Autopilot (optional).....	48
7.3	Switching from working position to transport position	49
7.3.1	Swinging the plant divider into transport position	49
7.3.2	Swinging the right hand / left hand side parts upward into transport position	50
7.3.3	Installing the front guard.....	51
7.3.4	Installing guard on the right/left.....	51
7.4	Detaching the machine	52
7.4.1	Moving the right hand / left hand parking supports into parking position	52
8	Maintenance.....	55
8.1	Special Safety Instructions	55
8.1.1	Test run.....	55
8.2	Spare Parts.....	55
8.3	Tightening Torques.....	56
8.4	Tightening Torques (Countersunk Screws).....	57
8.5	Filling Quantities and Lubrication Designations for Gearboxes.....	58
8.5.1	Oil Level Check and Oil Change Intervals (Gearboxes).....	58
8.5.2	Checking the oil level and changing oil on the T-gearbox.....	59
8.5.3	Checking the oil level and changing the oil on the angular gearbox	60
8.5.4	Checking the Oil Level and Changing the Oil on the Collector Gearbox.....	61
8.5.4.1	Checking the oil level and changing the oil on the collector gearbox (top part)	61

8.5.4.2	Checking the oil level and changing the oil on the collector gearbox (bottom part on central part)	62
8.5.4.3	Checking the oil level and changing the oil on the collector gearbox (bottom part on side part)	63
8.6	Collector pre-tension on the central part (right hand / left hand)	64
8.6.1	Checking the collector pre-tension	64
8.6.2	Correcting the collector pre-tension	64
8.7	Collector pre-tension on the side part (right hand / left hand)	65
8.7.1	Checking the collector pre-tension	65
8.7.2	Correcting the collector pre-tension	65
8.8	Scraper (right hand / left hand)	66
8.8.1	Adjusting Scrapers on the Centre Section	66
8.8.2	Adjusting the scraper on the side part	67
8.9	Changing the tips	68
8.10	Adjusting the tips	69
8.10.1	Adjusting the side tips	70
8.10.2	Adjusting the row tips	70
8.10.3	Adjusting the central tip	71
8.11	Aligning the signaller brackets	71
8.12	Blade Changing	72
8.12.1	Replacing the fixed blades (bow and step blades)	72
8.12.2	Replacing the cutting blade on the right hand / left hand side parts	74
8.12.3	Replacing the cutting blades on the right hand / left hand central part	75
8.12.4	Replacing the scraper blade on the right hand / left hand side parts and on the central part	76
8.13	Replacing the wear plates	76
8.14	Hydraulic hose line(s)	77
8.15	Lubrication	78
8.15.1	Lubrication Chart	78
8.15.2	PTO shafts	79
9	Placing in Storage	80
10	Before the Start of the New Season	81
10.1	Special Safety Instructions	81
10.2	Test run	82

1 Foreword

Dear Customer!

By purchasing the maize header, you have acquired a quality product made by KRONE.

We are grateful for the confidence you have invested in us in buying this machine.

It is important to read the operating instructions very carefully before you start operating the machine to allow you to use the maize header to its full capacity.

The contents of this manual are laid out in such a way that you should be able to perform any task by following the instructions step by step. It contains extensive notes and information about maintenance, how to use the machine safely, secure working methods, special precautionary measures and available accessories. This information and these instructions are essential, important and useful for the operational safety, reliability and durability of the maize header.



Note

In the operating instructions which follow the maize header will also be referred to as the "machine or front attachment".

Please note:

The operating instructions are part of your machine.

Only operate this machine after you have been trained to do so and according to these instructions.

It is essential to observe the safety instructions!

It is also necessary to observe the relevant accident prevention regulations and other generally recognised regulations concerning safety, occupational health and road traffic.

All information, illustrations and technical data in these operating instructions correspond to the latest state at the time of publication.

We reserve the right to make design changes at any time and without notification of reasons. Should you for any reason not be able to use these operating instructions either wholly or partially, you can receive a replacement set of operating instructions for your machine by quoting the number supplied overleaf.

We hope that you will be satisfied with your KRONE machine.

Maschinenfabrik Bernard Krone GmbH

Spelle

2 Introduction

These operating instructions contain fundamental instructions. These must be observed in operation and maintenance. For this reason, these operating instructions must be read by operating personnel before commissioning and use, and must be available for easy reference.

Follow both the general safety instructions contained in the section on safety and the specific safety instructions contained in the other sections.

2.1 Purpose of Use

The Krone EASYCOLLECT 753, EASYCOLLECT 903 and EASYCOLLECT 1053 maize headers are harvesting attachments for attachment to forage harvesters and are used for harvesting maize and other forage crop with stalks independently of the rows.

2.2 Validity

These operating instructions are valid for the maize header EASYCOLLECT 753, EASYCOLLECT 903 and EASYCOLLECT 1053.

2.2.1 Contact

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Heinrich-Krone-Strasse 10
D-48480 Spelle (Germany)

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Fax.: + 49 (0) 59 77/935-239 (Spare parts - domestic)
Fax.: + 49 (0) 59 77/935-359 (Spare parts - export)
Email: info.ldm@krone.de

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2.3 Identification Plate

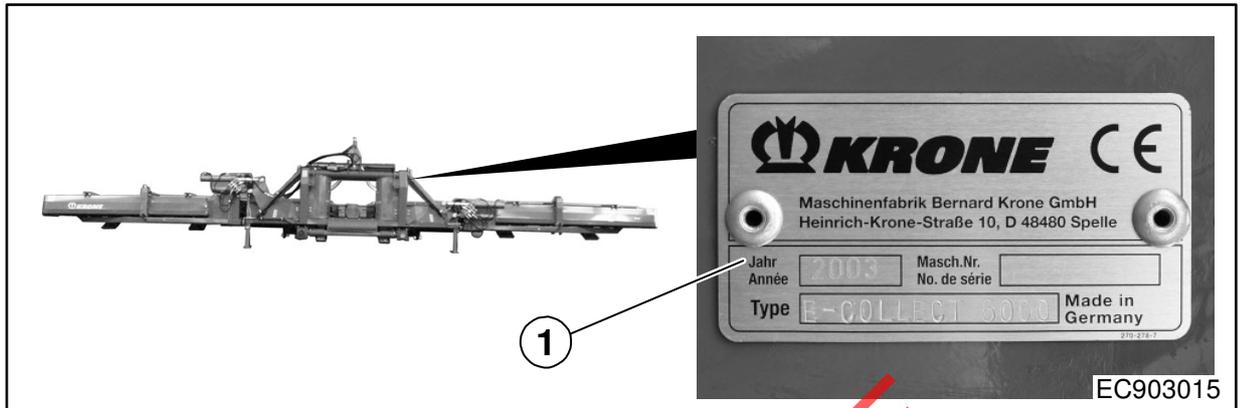


Fig. 1
The machine data are rendered on the type plate (1).

2.4 Information Required for Questions and Orders

Year	
Mach. No.	
Type	



Note

The entire identification plate represents a legal document and should not be altered or rendered illegible!

When asking questions concerning the machine or ordering spare parts, be sure to provide type designation, machine number and the year of manufacture of the relevant machine: To ensure that these data are always available, we recommend that you enter them in the fields above.



Note

Authentic KRONE spare parts and accessories authorised by the manufacturer help to ensure safety. The use of spare parts, accessories or additional equipment not manufactured, tested or approved by KRONE will exclude any liability for consequential damage.

2.5 Intended Use

The Krone maize header EASYCOLLECT 753, EASYCOLLECT 903 and EASYCOLLECT 1053 may be attached only to those carrier vehicles for which the particular adapter frame has been released (observe operating licence of the carrier vehicle). It is built exclusively for customary use in agricultural work (intended use) - also refer to Chapter "Purpose of Use".

Any use of the machine for other purposes is deemed not to be in accordance with intended use. The manufacturer shall not be liable for any resulting damage; the user alone shall bear the risk.

Operation in accordance with intended use also includes observing the operating, maintenance and service instructions specified by the manufacturer.

Unauthorised modifications to the machine may affect the properties of the machine or disrupt proper operation. For this reason, unauthorised modifications shall exclude any liability of the manufacturer for consequential damage.

2.6 Technical data

All information, illustrations and technical data in these operating instructions correspond to the latest state at the time of publication. We reserve the right to make design changes at any time and without notification of reasons.

Information	EasyCollect 753	EasyCollect 903	EasyCollect 1053
Length [mm]	2150	2150	2150
Height in working position [mm]	1590	1590	1590
Total width in working position [mm]	7530	9030	10530
Working width [mm]	7500	9000	10500
Height (folded in) [mm]	2450	2450	2450
Width (folded in) [mm]	3100	3100	3600
Weight [kg]	3200	3500	3900
Power consumption [kW]	50	60	70
Drive speed [min ⁻¹]	300...700	300...700	300...700
Max. permissible operating pressure [bar]	200	200	200
Hydraulic connections	2xdouble-action	2xdouble-action	2xdouble-action
Electr. connection (lighting)	7-pole	7-pole	7-pole

2.7 Machine overview

EasyCollect Front View

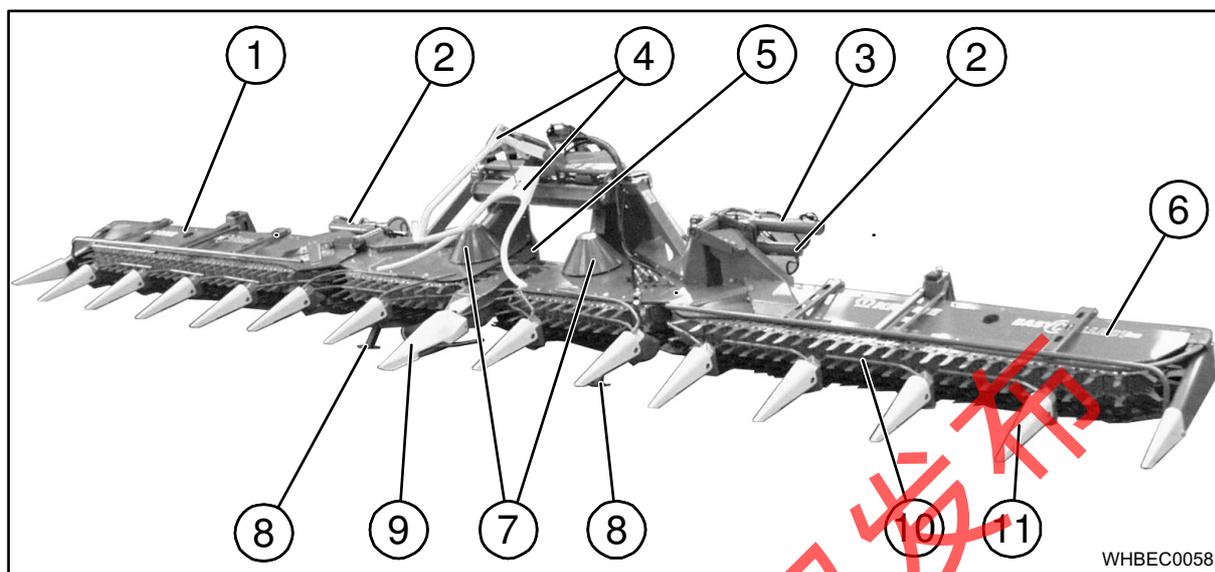


Fig. 2: EasyCollect front view

- | | | | |
|-----|--------------------|------|------------------|
| (1) | Right side section | (7) | Rotating tower |
| (2) | Folding cylinder | (8) | Parking support |
| (3) | Centre section | (9) | Central tip |
| (4) | Plant divider | (10) | Insertion finger |
| (5) | Wiper plate | (11) | Tip |
| (6) | Left side section | | |

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2.8 Additional weights on the BigX

To ensure safe and reliable operation of the self-propelled forage harvester with the maize header attached, especially in road traffic, additional weights (Z) must be connected to the rear frame.

2.8.1 Steel design

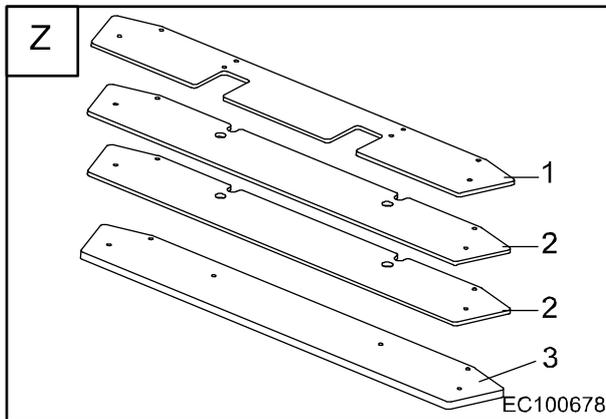


Fig. 3

Pos.	Designation	Number of weights (Big X) EasyCollect 753					
		V8	V12	500	650	800	1000
1	Cover plate			1			
2	Base plate			2			
3	Floor plate			3			

2.8.2 Steel design

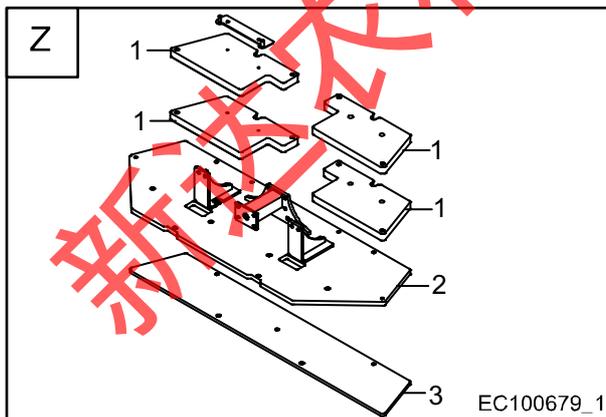


Fig. 4

Pos.	Designation	Number of weights (Big X) EasyCollect 753					
		V8	V12	500	650	800	1000
1	Cover plate	4	4	-	4	4	4
2	Base plate	1	1	-	1	1	1
3	Floor plate	3	3	-	3	1	1

Pos.	Designation	Number of weights (Big X) EasyCollect 903					
		V8	V12	500	650	800	1000
1	Cover plate	4	4	-	4	4	4
2	Base plate	1	1	-	1	1	1
3	Floor plate	10	9	-	10	8	8

2.8.3 Cast design

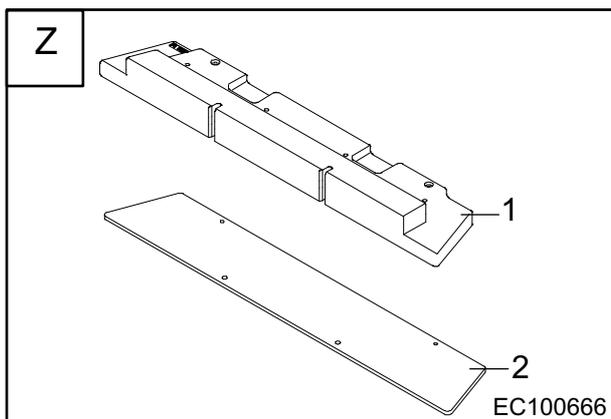


Fig. 5

Pos.	Designation	Number of weights (Fig X) EasyCollect 753					
		V8	V12	500	650	800	1000
1	Cover plate	1	1	-	1	1	1
2	Floor plate	3	2	-	3	-	-

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3 Safety

3.1 Identifying Symbols in the Operating Instructions

The safety instructions contained in this manual which could result in personal injury if not followed are identified by the general danger sign:

3.2 Identification of the hazard warnings

Danger!



DANGER! - Type and source of the hazard!

Effect: Danger to life or serious injuries.

- Measures for hazard prevention

Warning !



WARNING! - Type and source of the hazard!

Effect: Injuries, serious material damage.

- Measures for hazard prevention

Caution!



CAUTION! - Type and source of the hazard!

Effect: Property damage

- Measures for risk prevention.

General function instructions are indicated as follows:
Note!



Note - Type and source of the note

Effect: Economic advantage of the machine

- Actions to be taken

Instructions which are attached to the machine need to be followed and kept fully legible.

3.2.1 Personnel Qualification and Training Fehler! Textmarke nicht definiert.

The machine may be used, maintained and repaired only by persons who are familiar with it and have been instructed about the dangers connected with it. The operator must define areas of responsibility and monitoring of personnel. Should personnel lack the required knowledge, they must receive the required training and instruction. The operator must ensure that the contents of these operating instructions have been fully understood by personnel.

Repair work not described in these operating instructions should only be performed by authorised service centres.

3.2.2 Dangers in Case of Non-compliance with the Safety Instructions

Failure to follow the safety instructions could result in personal injury and environmental hazards as well as damage to the machine. If the safety instructions are not respected, this could result in the forfeiture of any claims for damages.

Failure to follow the safety instructions could result, **for example**, in the following hazards:

- Endangering of persons due to not protected working areas
- Breakdown of important machine functions
- Failure of prescribed methods for repair and maintenance
- Endangering of persons due to mechanical and chemical effects
- Damage to the environment due to leaking hydraulic oil

3.2.3 Safety-conscious work practices

Always observe the safety instructions set out in these operating instructions, all existing accident prevention rules and any internal work, operating and safety rules issued by the operator.

The safety and accident prevention regulations of the responsible professional associations are binding.

The safety instructions provided by the vehicle manufacturer should also be observed.

Observe the applicable traffic laws when using public roads.

Be prepared for emergencies. Keep the fire extinguisher and first aid box within reach. Keep emergency numbers for doctors and fire brigade close to the telephone.

3.3 Safety Instructions and Accident Prevention Regulations

- 1 Please follow all generally applicable safety and accident prevention regulations in addition to the safety instructions contained in these operating instructions!
- 2 The attached warning and safety signs provide important information for safe operation. Pay attention to these for your own safety!
- 3 When using public roads, make sure to observe the applicable traffic regulations!
- 4 Make sure that you are familiar with all equipment and controls as well as with their functions before you begin working with the machine. It is too late to learn this when you are using the machine for work!
- 5 The user should wear close fitting clothes. Avoid wearing loose or baggy clothing.
- 6 Keep the machine clean to prevent the danger of fire!
- 7 Before starting or moving the machine, make certain that nobody is in the vicinity of the machine! (Watch for children!) Make sure that you have a clear view!
- 8 Carrying passengers during operation and transport on the working implement is not permitted.
- 9 Couple implements correctly! Attach and secure implements to specified devices only!
- 10 When attaching or detaching implements, place the supporting devices in the correct positions!
- 11 Special care is required when coupling and uncoupling the maize header onto or from the forage harvester.
- 12 Always attach ballast weights properly to the fixing points provided!
- 13 Observe permitted axle loads, gross weight and transport dimensions!
- 14 Check and install transport equipment, such as lighting, warning devices and protective equipment!
- 15 Actuating mechanisms (ropes, chains, linkage, etc.) for remotely operated devices must be designed in such a way that, in whatever transport and working position, they cannot trigger accidental movements.
- 16 Ensure that the maize header is in the prescribed condition for on-road travel and lock it in place in accordance with the manufacturer's instructions!
- 17 Never leave the driver's seat when the vehicle is moving!
- 18 Always drive at the correct speed for the prevailing driving conditions! Avoid sudden changes in direction when travelling uphill or downhill or across a gradient!
- 19 Hitched implements and ballast weights affect the driving, steering and braking response of the machine. Make sure that you are able to brake and steer the machine as required!
- 20 Take into account the extension radius and/or inertia of an implement when turning corners!
- 21 Take the maize header into operation only after all safety devices have been attached and are in their proper positions!
- 22 Keep safety equipment in good condition. Replace missing or damaged parts.
- 23 Keep clear of the working range of the machine at all times!
- 24 Do not stand within the turning and swivel range of the implement!
- 25 Never operate the hydraulic folding frames if anyone is inside the swivel range!

- 26 Parts operated by external power (e.g. hydraulically) can cause crushing and shearing injuries!
- 27 Before leaving the forage harvester, lower the maize header onto the ground, apply the parking brake, switch off the engine and remove the ignition key!
- 28 There must be nobody between the forage harvester and the maize header without the vehicle being secured against rolling away with the parking brake and wheel chocks!
- 29 Observe all additional information related to safety in the operating instructions for the forage harvester.

3.4

Attached devices

- 1 Special care is required when coupling and uncoupling the maize header onto or from the forage harvester!
- 2 The maize header must only be attached to the forage harvester for which it is intended.
- 3 Do not work on the maize header until the engine has been stopped and the ignition key has been removed. All operating levers should be in the neutral position and no hydraulic lines should be under pressure.
- 4 Only perform jobs under the maize header when it is raised if it is securely supported.
- 5 The maize header (EasyCollect 1053) may only be used on public highways and roads with the designated transportation trailer.
- 6 On public highways and roads the EASYCOLLECT 753 and EASYCOLLECT 903 maize header must always be in the transport position. Attach guard cloths together with flashing lights and front guard to the maize header and connect the lighting.

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3.5 PTO Operation

- 1 Use only PTO shafts specified by the manufacturer!
- 2 The guard tube and guard cone of the PTO shaft and the PTO guard must be attached and in good working condition (on the implement side, too)!
- 3 Make sure that the required tube covers are in place for PTO shafts in transport and working position!
- 4 Before installing or detaching PTO shafts, disengage the PTO, switch off the engine and remove the ignition key!
- 5 When using PTO shafts with an overload safety or free-running coupling which are not shielded by the guard on the tractor, mount the overload safety or free-running coupling on the implement side!
- 6 Always make sure that the PTO shaft is properly installed and secured!
- 7 Attach chains to prevent the PTO shaft guard from rotating with the shaft!
- 8 Before switching on the PTO, make sure that the selected PTO speed of the forage harvester matches the permissible speed of the implement!
- 9 Before switching on the PTO shaft make sure that no person is in the danger zone of the device!
- 10 Never switch on the PTO if the engine is switched off!
- 11 No one should be in the vicinity of the rotating PTO or PTO shaft when the PTO is in use.
- 12 Always switch off the PTO shaft when the angle is too large or the PTO shaft is not required!
- 13 Caution! After disengaging the PTO danger due to the flywheel running on! Keep away from the implement during this time. Do not work on the machine until it has come to a standstill.
- 14 Cleaning, lubricating or adjusting PTO driven implements or the PTO shaft only with PTO disengaged, engine switched off and ignition key withdrawn!
- 15 Place the disconnected PTO shaft onto the support provided!
- 16 After detaching the PTO shaft, attach the protective cover to the PTO end!
- 17 If damage occurs, correct this immediately before using the implement!

**Note**

The instructions of the manufacturer must be observed with regard to the PTO shaft. (separate operating instructions)

3.6 Hydraulic system

- 1 The hydraulic system is pressurised!
- 2 When connecting hydraulic cylinders and motors, make sure the hydraulic hoses are connected as specified!
- 3 When connecting the hydraulic hoses to the forage harvester hydraulics, take care that the hydraulic system is depressurised both on the tractor side and on the device side!
- 4 When functions are connected hydraulically between the forage harvester and the front attachment, coupling sleeves and plugs should be identified so that faulty operation is excluded! If the connectors are interchanged, the functions will be reversed (e.g. raising/lowering) - **Risk of accident!**
- 5 Check the hydraulic hose lines at regular intervals and replace them if damaged or worn! The new hoses must fulfil the technical requirements set by the manufacturer of the implement!
- 6 When searching for leaks, use suitable aids to avoid the risk of injury!
- 7 Liquids escaping under high pressure (hydraulic oil) can penetrate the skin and cause serious injury! Seek medical help immediately should injuries occur! Meaning of the icons
- 8 Before working on the hydraulic system, depressurise the system and switch off the engine!

3.7 Maintenance

- 1 Always make certain that the drive and the engine are switched off before doing any repairs, maintenance or cleaning! - Remove the ignition key!
- 2 Regularly check that nuts and bolts are properly seated and tighten if necessary!
- 3 When performing maintenance work with the machine raised, always secure it with suitable supporting elements!
- 4 Oils, greases and filters must be disposed of correctly!
- 5 Always disconnect the power supply before working on the electrical system!
- 6 If protective devices and guards are subject to wear, check them regularly and replace them in good time!
- 7 When performing electrical welding work on the vehicle and mounted devices, turn power supply off at main battery switch or disconnect generator cable and battery!
- 8 Replacement parts must at least comply with the technical requirements set by the manufacturer of the implements! This is guaranteed by original KRONE spare parts!
- 9 When replacing working tools with cutting edges, use suitable tools and gloves!

3.8 **Unauthorised Conversion/Modification and Spare Parts Production**

Conversions or modifications of the machine are permitted only with prior consultation with the manufacturer. Original spare parts and accessories authorised by the manufacturer help to ensure safety. Use of other parts may void liability for resulting damage.

3.9 **Inadmissible Modes of Operation**

The operating safety of the delivered machine is guaranteed only when it is used as intended in compliance with the introductory section "Intended use" of the operating instructions. The limit values listed in the data charts should not be exceeded under any circumstances.

3.10 **Introduction**

The KRONE-attachment is equipped with all safety devices (protective devices). However, it is not possible to eliminate all potential hazards on this machine as this would impair its full functional capability. Hazard warnings are attached to the machine in the relevant areas to warn against any dangers. The safety instructions are provided in the form of so-called warning pictograms. Important information on the position of these safety signs and what they mean is given below!

3.11 **Safety Instructions on the Machine**

The safety instructions on the machine warn of residual risks associated with the machine. They consist of warning pictograms and a work safety symbol. All safety instructions must be followed. Always keep the safety instructions clean and in clearly legible condition! If any safety instructions are damaged or missing, request them from your dealer and then put them in the places provided for them. Where these safety instructions are and what they mean will be described in the following chapters.

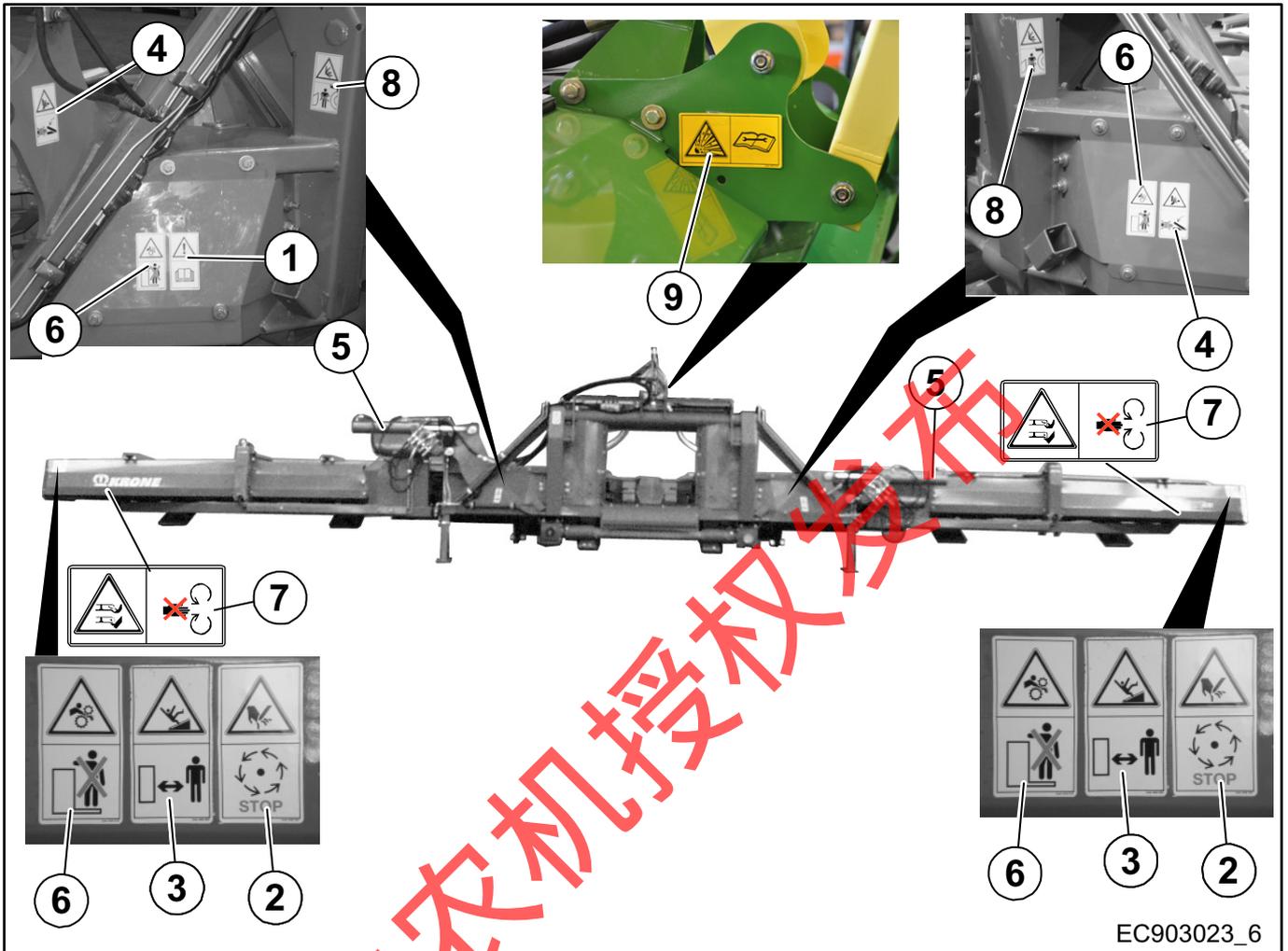


Danger! - Danger zone of the machine

Effect: Danger to life or serious injuries.

- Immediately replace damaged or illegible adhesive labels.
- Following repair work, always attach appropriate adhesive safety stickers to all the replaced, modified or repaired components.
- Never clean areas carrying an adhesive safety label using a high-pressure cleaner.
- Familiarise yourself with the statement of the warning pictograms. The adjacent text and the selected location on the machine provide information on the special danger spots on the machine.

3.12 Position of the Adhesive Safety Stickers on the Machine



EC903023_6

Fig. 6

1)
Before starting the machine, read and observe the operating instructions and safety instructions.
Order No. 939 471-1 (1x)

2)
Caution: Some machine parts will stay in operation for an extended period of time before being switched off completely. Do not touch any moving parts of the machine. Wait until they have come to a complete stop.
Order No. 939 410 2 (2x)

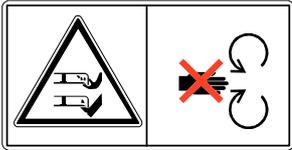
3)
 Maintain an adequate safety clearance to the harvesting attachment. Before accomplishing maintenance work or eliminating blockages, switch off drive of harvesting attachment, switch off the engine and remove the ignition key.
 Order No. 27 003 023 0 (2x)



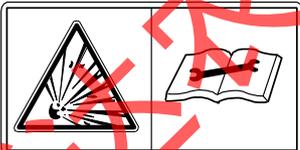
5)
 Do not stay in the swivel range of the outrigger arms! Keep your distance!
 Order No. 939 469-1 (2x)



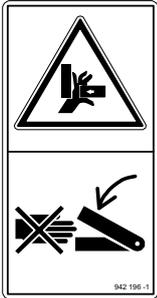
7)
 Keep adequate distance to the machine during operation.
 Order No. 27 003 022 0 (2x)



9)
 The accumulator is subject to gas and oil pressure. Disassemble and repair in strict accordance with the instructions in the technical handbook.
 Order No. 939 529 0 (1x)



4)
 While parts are moving, never reach into areas where there is a risk of being crushed.
 Order No. 942 196-1 (2x)



6)
 Do not climb onto the machine if the PTO shaft is connected and the engine is running.
 Order No. 939 408-2 (4x)



8)
 Do not enter the danger zone between the front attachment unit and the machine.
 Order No. 942 312 -0 (2x)



3.13 Position of the General Information Labels on the Machine

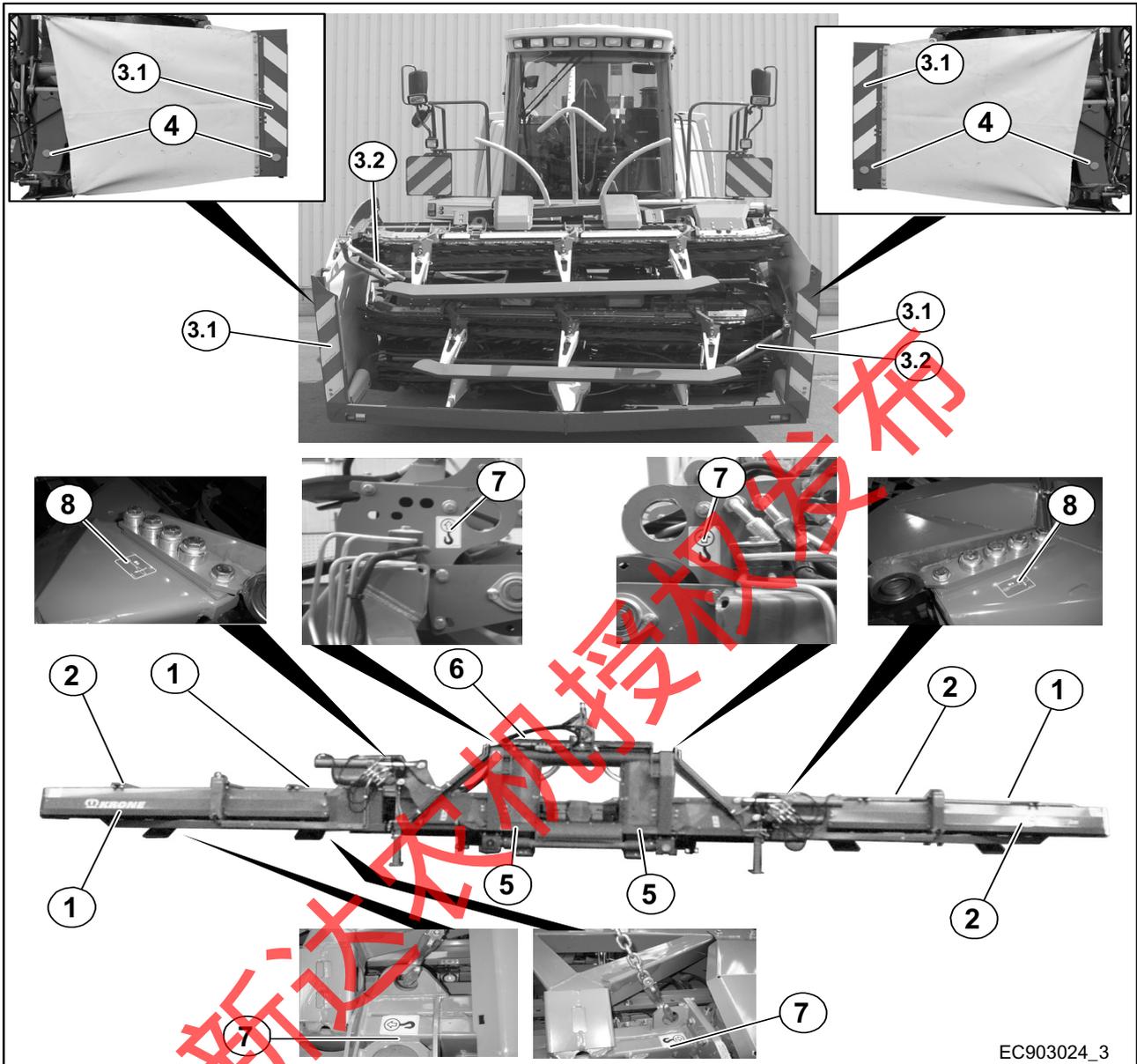
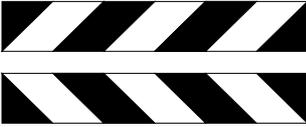
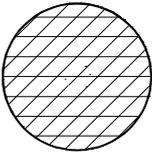
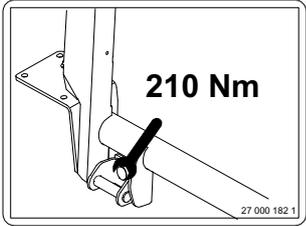
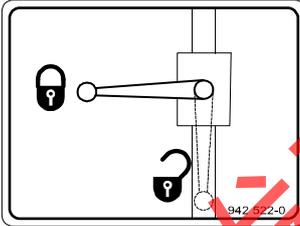
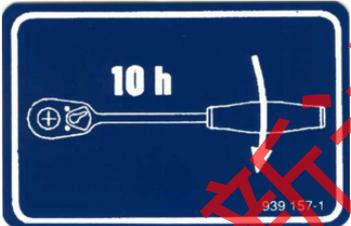


Fig. 7:

<p>1)</p>  <p>EASYCOLLECT 753 order no. 942 295-0 (2x) EASYCOLLECT 903 order no. 942 320 0 (2x) EASYCOLLECT 1053 order no. 942 320 0 (3x)</p>	<p>2)</p>  <p>EASYCOLLECT 753 order no. 27 001 560 0 (2x) EASYCOLLECT 903 order no. 27 000 634 0 (2x) EASYCOLLECT 1053 order no. 27 000 635 0 (3x)</p>
--	--

<p>3.1) fully reflecting adhesive strips</p>  <p>Order No. 942 625 0</p>  <p>Order No. 942 626 0</p> <p>3.2) fully reflecting adhesive strips</p>  <p>Order No. 924 573 0 (2x)</p>	<p>4)</p>  <p>Order No. 924 634 0 (4x)</p>
<p>5)</p>  <p>Order No. 27 000 182 1 (2x)</p>	<p>6)</p>  <p>Order No. 942 522 0 (2x)</p>
 <p>Order No. 939 451 1 (16x)</p>	<p>7)</p>  <p>Stop points</p> <p>Order No. 942 012 1 (4x)</p>
<p>8)</p>  <p>Order No. 939 157-1 (2x)</p>	

3.13.1 Re-Ordering the Adhesive Safety and Information Labels



Note

Every adhesive safety and information label is assigned an order number and can be ordered directly from the manufacturer or from an authorized dealer (see Section "Contact").

3.13.2 Affixing the Adhesive Safety and Information Labels



Note - Affixing an adhesive label

Effect: Adhesion of the label

- The surface for affixing the adhesive label must be clean and free of dirt, oil and grease.
-

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4 Commissioning



Danger! - When performing repair, maintenance or cleaning work or when making technical modifications to the machine, drive elements may start moving (caution, cutters continue to run).

Effect: Danger to life or serious injuries

- Switch off the drive and disengage PTO.
- Switch off the forage harvester engine and remove the ignition key.
- Secure the forage harvester against accidental start-up and against rolling away.
- When working under or with the machine raised, always secure it with suitable supporting elements.
- Close shut-off valve on lifting cylinder of forage harvester!
- After all repair, maintenance and cleaning tasks are complete, all protective covers and safety devices must be put in place again.

4.1 Stop points



Warning! - Stop and transportation equipment inadequately dimensioned.

Effect: Danger to life, serious injuries or serious damage to the machine

Use only adequately dimensioned stop and transportation equipment (crane, ropes)!

Before lifting the machine, make sure the locking bolt (1) is secured through linch pin (2).

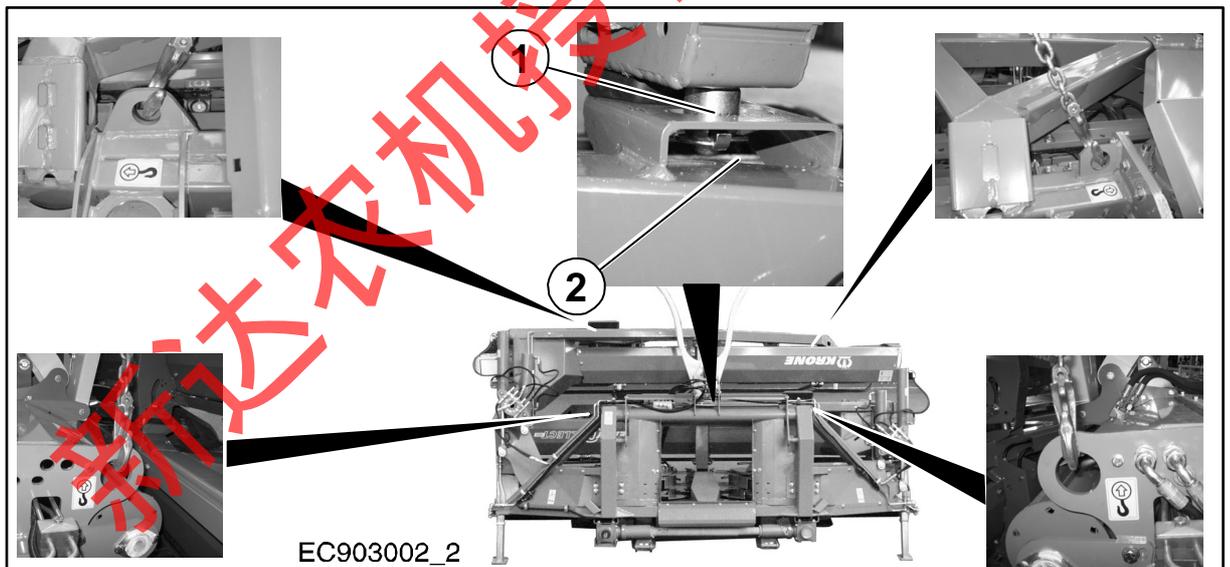


Fig. 8

- For transporting from one place to another onsite, (e.g. loading) brace the lifting tool against the illustrated points.



Note

Check the chain length!

4.2 Storage



Caution! - Danger of accident and damage!

Place hydraulic hoses (1) and electrical connection line (2,3) on the maize header (4).

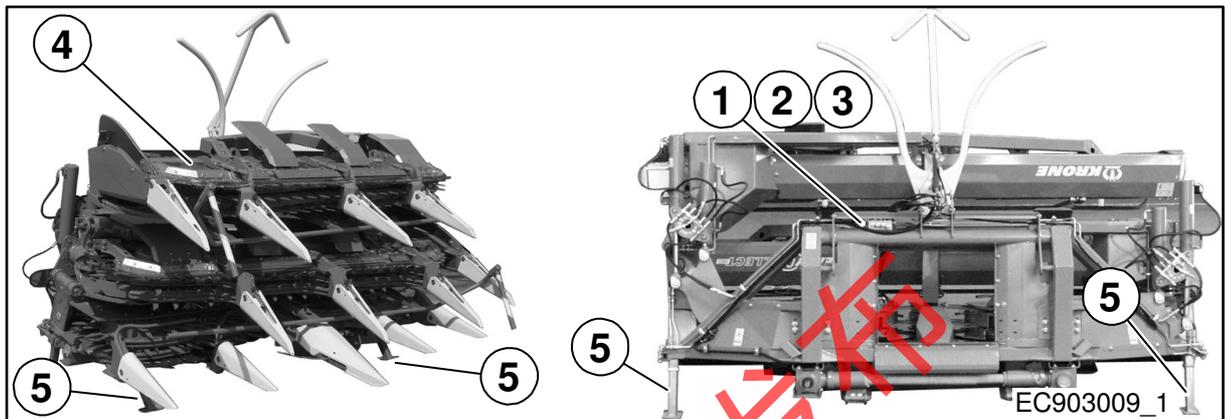


Fig. 9

- Set the maize header (4) down with the parking supports (5) extended on a solid and level surface and park it in a dry and clean place.

4.3 Additional weights on the BigX

To ensure safe and reliable operation of the self-propelled forage harvester with the maize header attached, especially in road traffic, additional weights (Z) must be connected to the rear frame.

4.3.1 Steel design

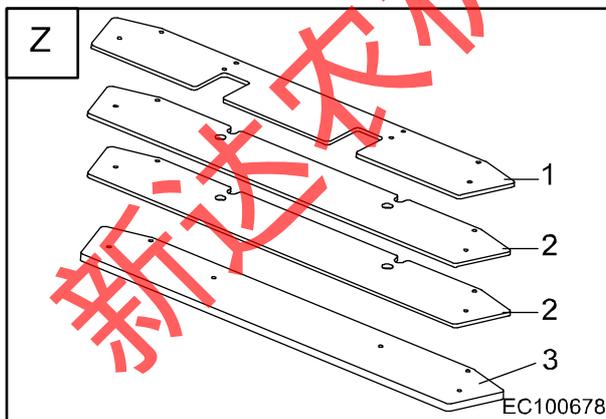


Fig. 10

Pos.	Designation	Number of weights (Big X) EasyCollect 753					
		V8	V12	500	650	800	1000
1	Cover plate			1			
2	Base plate			2			
3	Floor plate			3			

4.3.2 Steel design

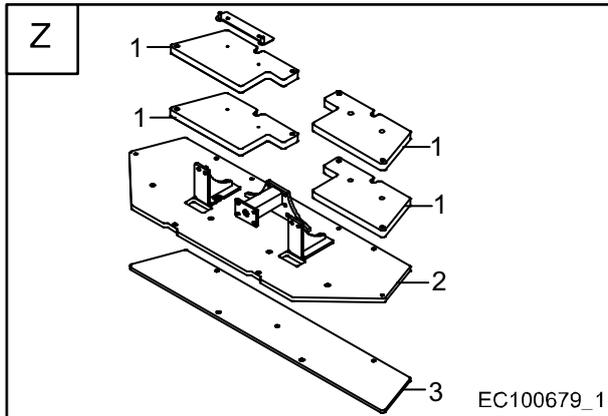


Fig. 11

Pos.	Designation	Number of weights (Big X) EasyCollect 753					
		V8	V12	500	650	800	1000
1	Cover plate	4	4	-	4	4	4
2	Base plate	1	1	-	1	1	1
3	Floor plate	3	3	-	3	1	1

Pos.	Designation	Number of weights (Big X) EasyCollect 903					
		V8	V12	500	650	800	1000
1	Cover plate	4	4	-	4	4	4
2	Base plate	1	1	-	1	1	1
3	Floor plate	10	9	-	10	8	8

4.3.3 Cast design

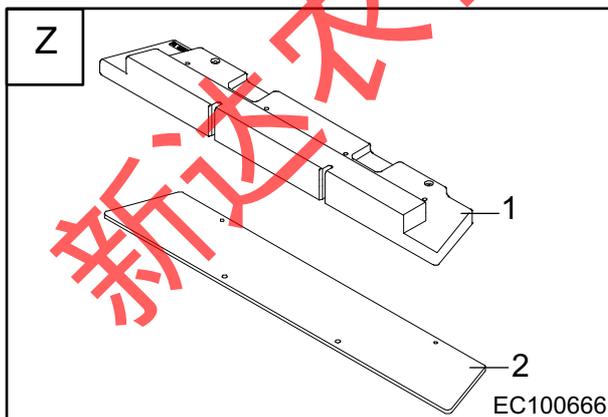


Fig. 12

Pos.	Designation	Number of weights (Big X) EasyCollect 753					
		V8	V12	500	650	800	1000
1	Cover plate	1	1	-	1	1	1
2	Floor plate	3	2	-	3	-	-

4.4 Attaching the additional weights



DANGER! – Detaching!

Effect: Danger to life or serious injuries

- Use only suitable and approved lifting gear to assemble and disassemble the parts..

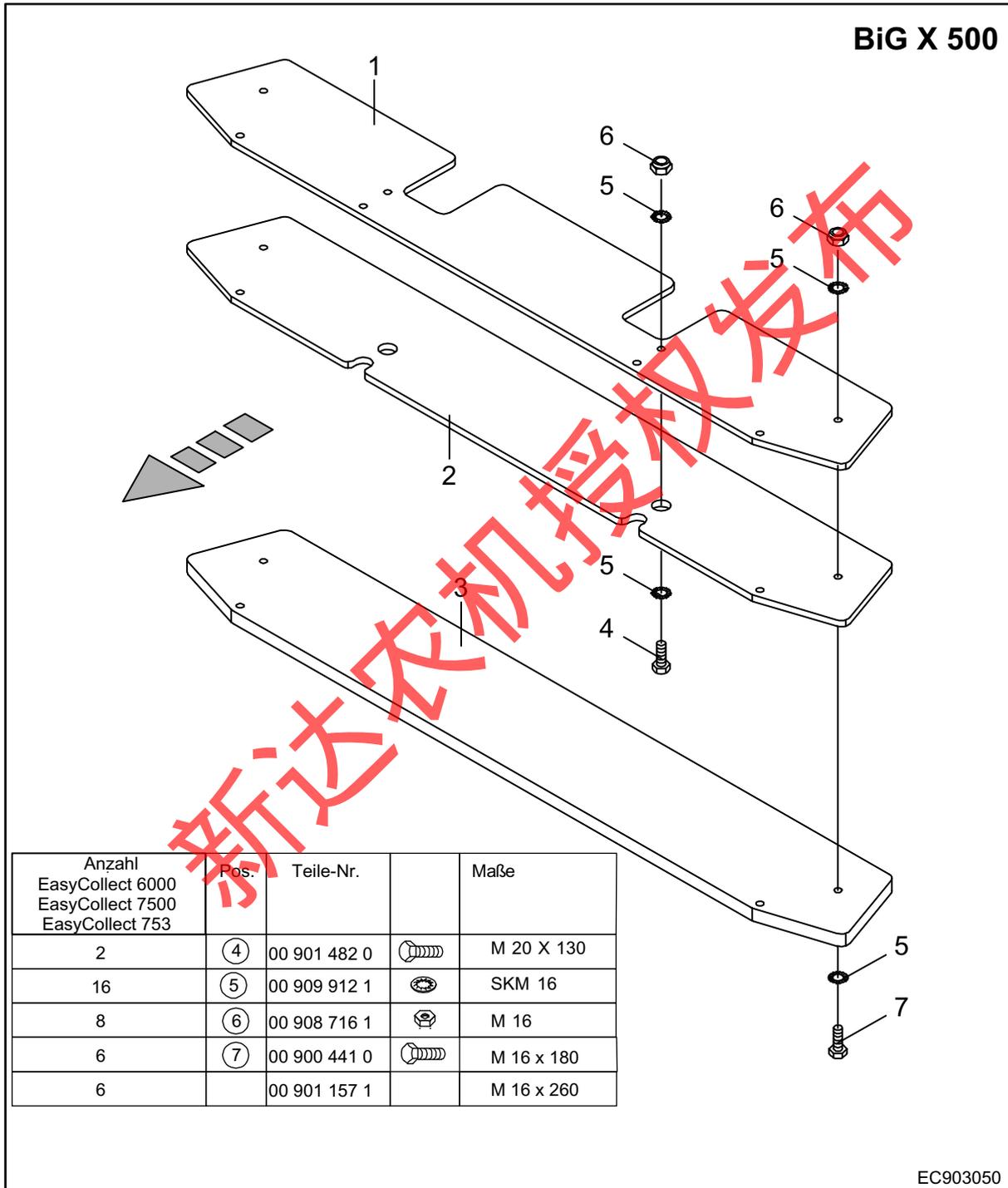


Fig. 13

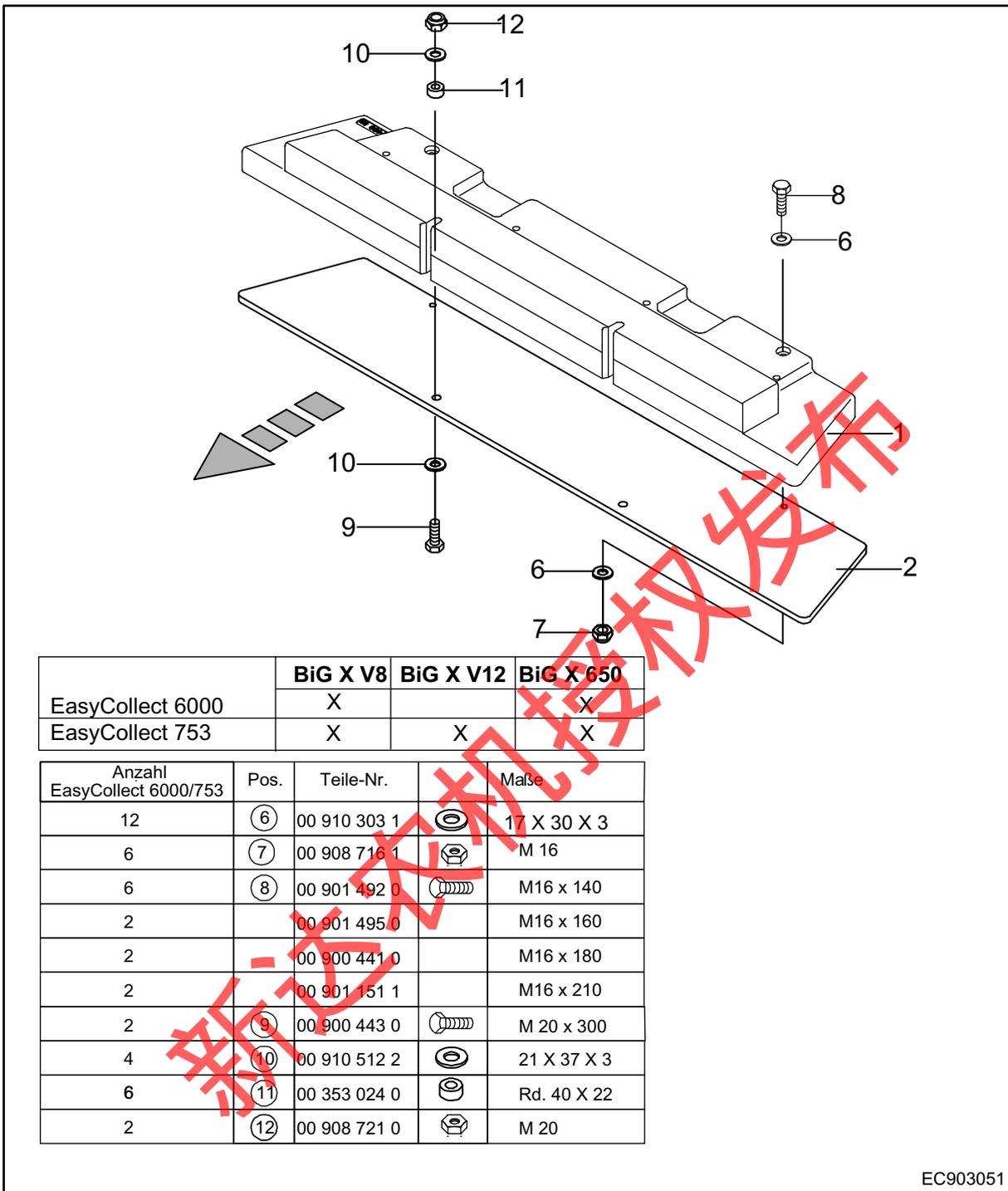


Fig. 14

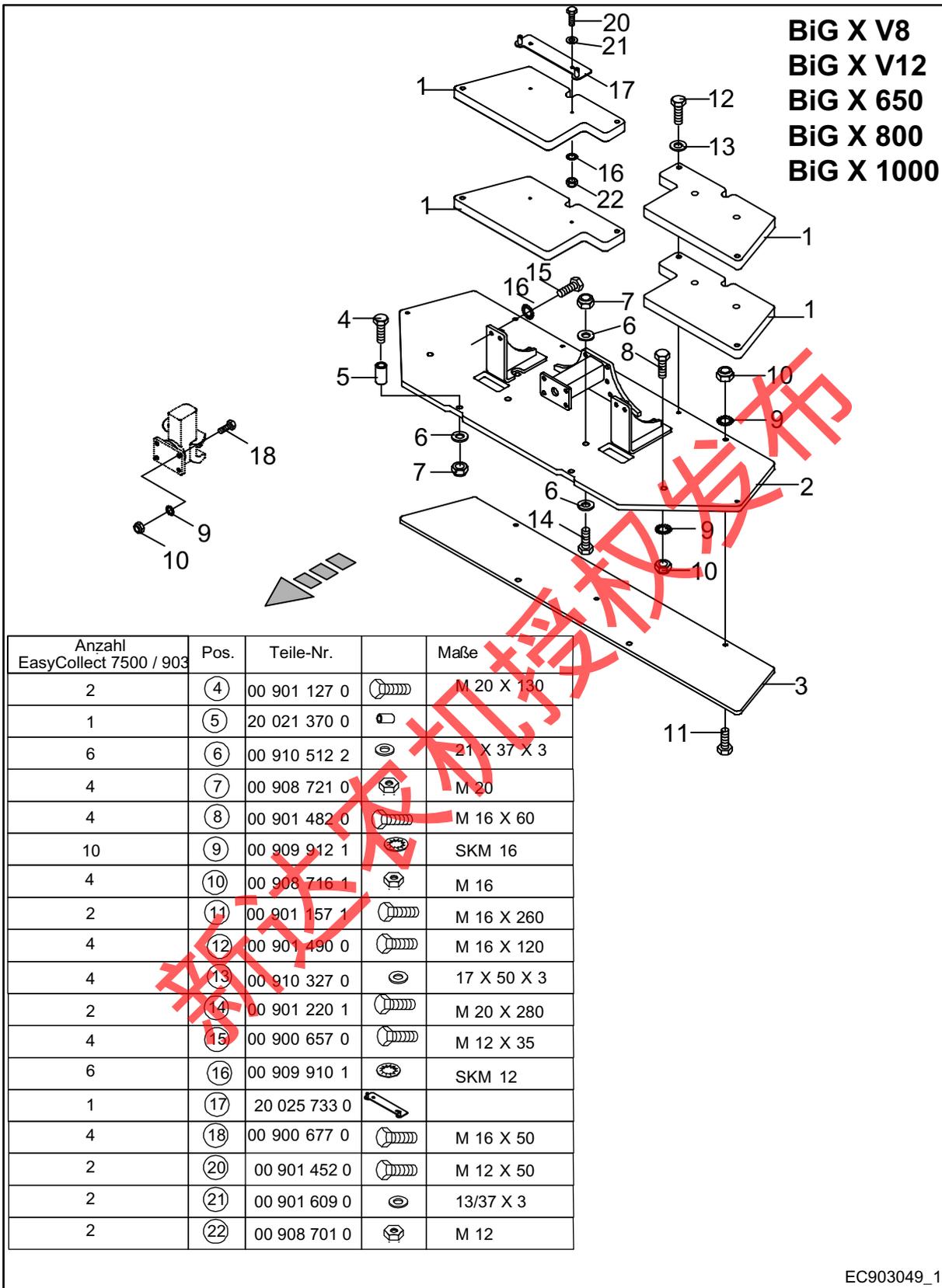


Fig. 15

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4.5 Attaching the discharge extension

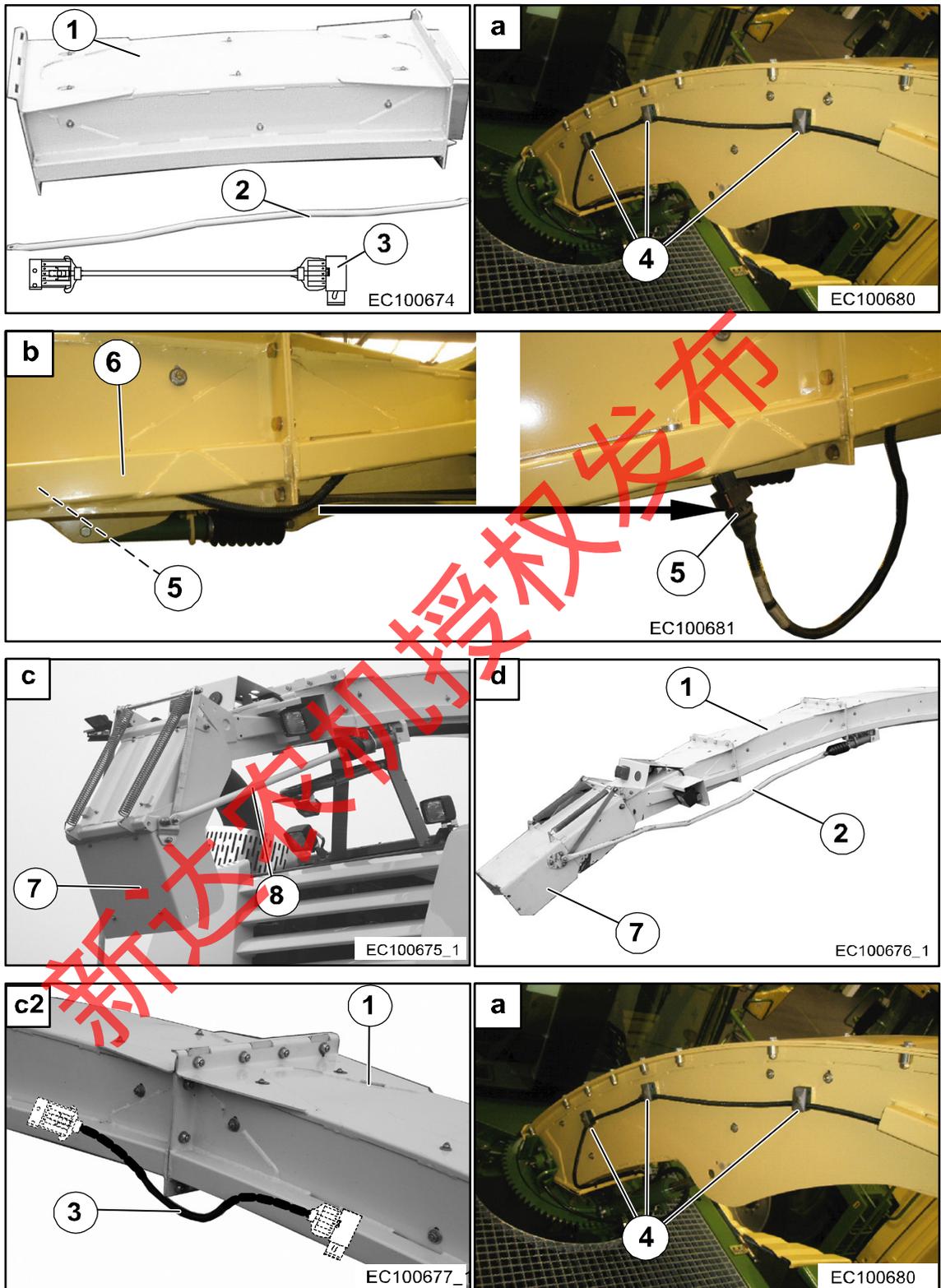


Fig. 16

- Loosen the pipe clamps (4) on the lower discharge chute
- Remove the cable harness plug (5) from the cable duct (6) and loosen the plug connection
- Unscrew the discharge manifold end piece (7) and existing folding strut (8)
- Install the extension (1) included with delivery
- Install the discharge manifold end piece (7) and new folding strut (2) included with delivery
- Connect the cable harness (3) with the cable harness of the discharge manifold end piece and discharge chute
- Reinsert the cable duct plugs into the cable duct
- Tighten the pipe clamps (4) on the lower discharge chute

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5 Start-up

**Danger! - Attaching / removing and operating the machine**

Effect: Danger to life or serious injuries.

- The machine may only be attached to the forage harvester for which it is intended!
- There must be nobody between the forage harvester and the front attachment.
- Switch off the engine, remove the ignition key, and secure the forage harvester from rolling away.
- Wait until all machine parts have come to a complete stop.
- Before working under or on the raised front attachment, support the attachment securely.
- During operation there must be nobody within the danger zone of the machine.
- The protective equipment on the machine, e.g. cloths and hoods, protects against flying stones and similar objects, and prevents access to hazardous areas. For this reason you must always move them to their protective position before starting work.
- Do not open or remove the safety devices while the engine is running.
- No one is permitted in the swivel range while the machine is being swivelled from the transport into the working position or vice versa.
- Before starting up the machine and while working, bring the machine into the working position and lower it onto the ground or to the required cutting height.



- On public highways and roads the EASYCOLLECT 753 and EASYCOLLECT 903 maize header must always be in the transport position.
- The EASYCOLLECT 1053 maize header must be placed on a special transportation trailer for road transport.

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5.1 Attachment to the forage harvester

5.1.1 Adjusting the locking



Note

When attaching the machine for the first time and whenever changing the forage harvester, the locking must be adjusted.



Note

Make the adjustment equally on the right and left of the centre frame.

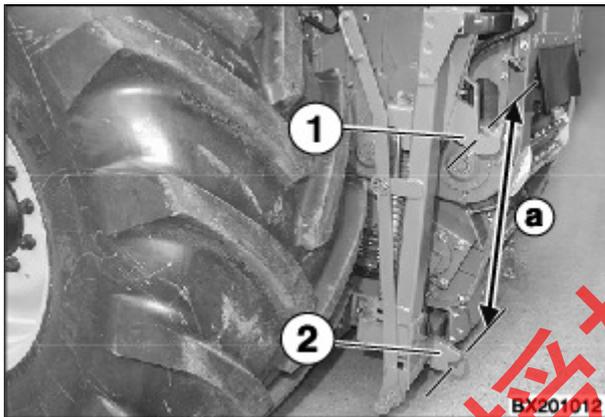


Fig. 17:

Measure the axle base "a" between holding claw (1) and locking hook (2) on the pendulum frame of the forage harvester.

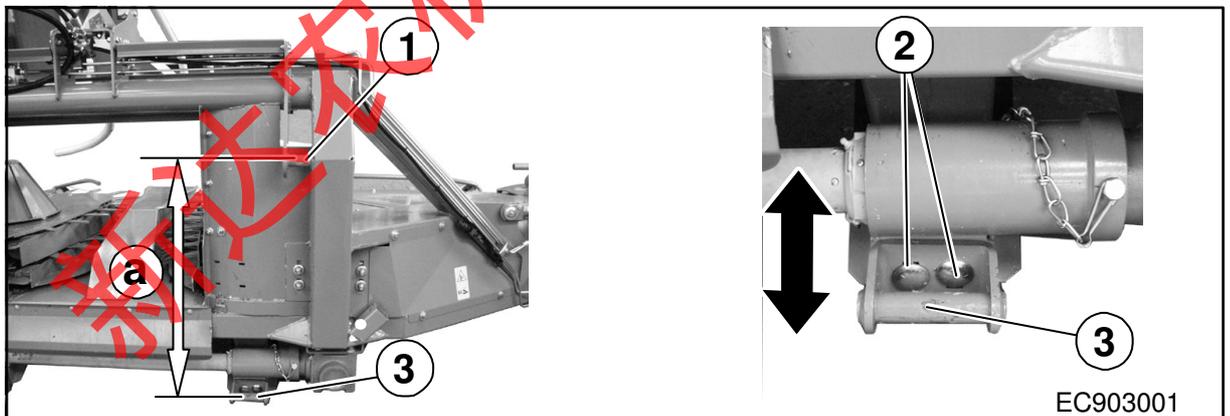


Fig. 18

Check the axle base "a" between the locating bolt (1,3) of the middle frame on the machine and, if necessary, adapt it to the size of the pendulum frame (forage harvester).

- Loosen the screw connections (2) and shift the pendulum frame holders (3) to the correct distance.
- Tighten the screw connections (2).

5.1.2 Pendulum frame

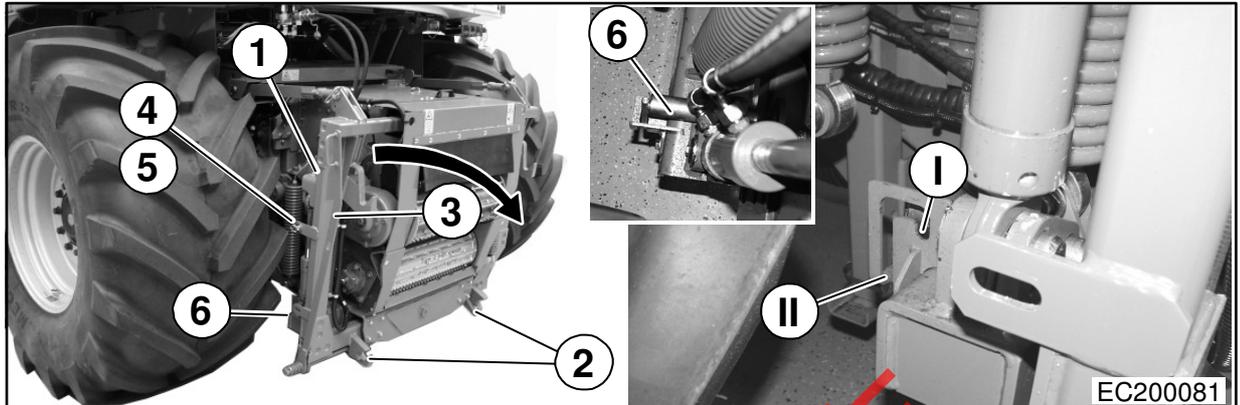


Fig. 19

- Lower the pendulum frame (1) of the forage harvester all the way.
- Align the pendulum frame (1) of the forage harvester horizontally.
- Locking hooks (2) must be opened. If necessary, open them with the locking lever (3).
- Disconnect the spring-loaded plug (5), pull the locking lever (3) from the locking pin (4) and swing it forwards.
- The pendulum frame (1) must be unlocked and the locking pin (6) must be in position II (unlocked).

5.1.3 Coupling



Danger! - Coupling

Effect: Danger to life or serious injuries.
When making the coupling, ensure there is no one between the forage harvester and the machine.

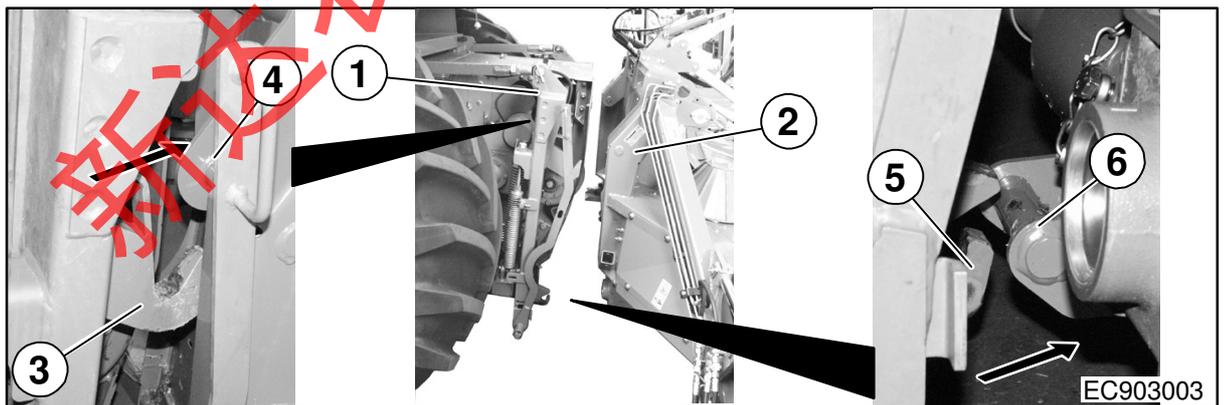


Fig. 20

- Drive the forage harvester up to the machine until the pendulum frame (1) is just in front of the middle frame (2) and the locating bolts (4) are located against the stop surfaces of the holding claws (3).
- Raise the pendulum frame with lifting hydraulics until the locking hooks (5) lie in the pendulum frame holder (6) on the central frame.
- Stop the machine.

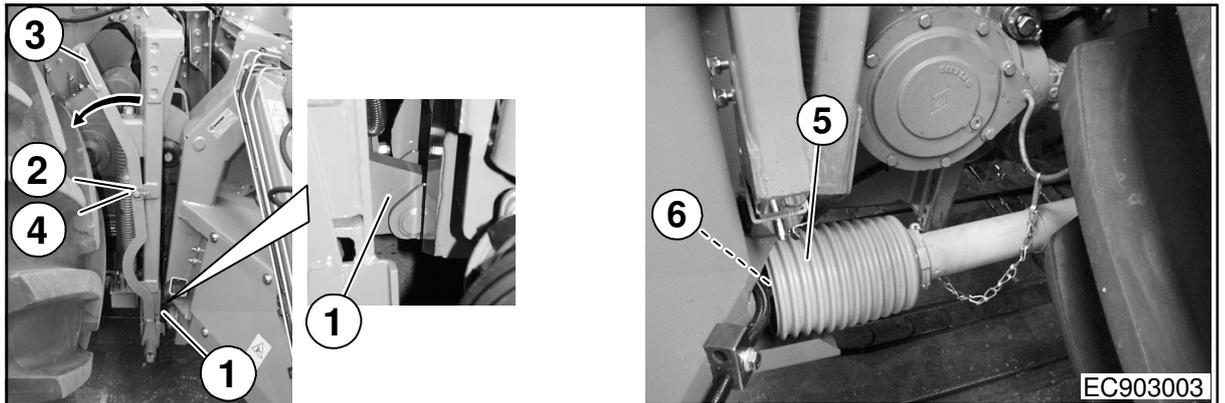


Fig. 21

Swing the locking lever (3) to the rear and engage it on the locking pin (4), secure with spring cotter pin (2).



Note

Check that the pendulum frame hooks correctly into the holding bolts (1) and the locking hooks on both sides.

- Push the joint fork (5) onto the drive journal (6) of the main angular gearbox until the lock engages.

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5.1.4 Connecting the hydraulic lines



Warning! - Connection of the hydraulic line

Effect: Serious injury due to hydraulic oil penetrating the skin.

- Before connecting the hydraulic hoses to the forage harvester hydraulics, ensure that the system is depressurised on both sides!
- When searching for leaks, use suitable aids because of the risk of injury and wear safety goggles.
- Seek medical help immediately should injuries occur! Danger of infection.
- Before uncoupling the hoses and before performing work on the hydraulic system, relieve the pressure!
- Check the hydraulic hose lines at regular intervals and replace them if damaged or worn! The replacement hoses must fulfil the technical requirements set by the equipment manufacturer.



Warning! - Interchanging the hydraulic hoses when connecting them to the forage harvester hydraulics will result in reversed functions.

Effect: Injuries, serious damage to the machine

- Identify the hydraulic connections.
- Always ensure correct connection between the machine and the forage harvester.
- Before coupling the hydraulic hose, ensure that the system is depressurised on both sides!

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**Caution! - Soiling of the hydraulic system**

Effect: Damages to the machine

- When connecting the quick couplings, ensure that these are clean and dry.
- Note chafing areas or points of contact.

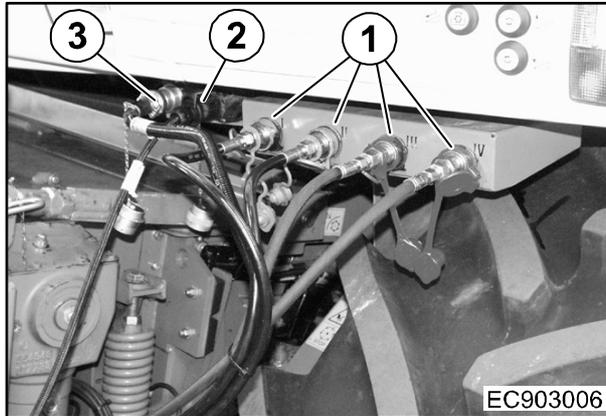


Fig. 22

- Connect the hydraulic hoses (1) to the designated plug-in connections on the forage harvester.
- Connect the lighting cable (2) to the socket.
- Connect the connection cable (3) for the sensors.

**Note**

Other adjustments for operating the maize header are described in the "Forage Harvester" operating instructions

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5.1.5 Opening the shut-off valve

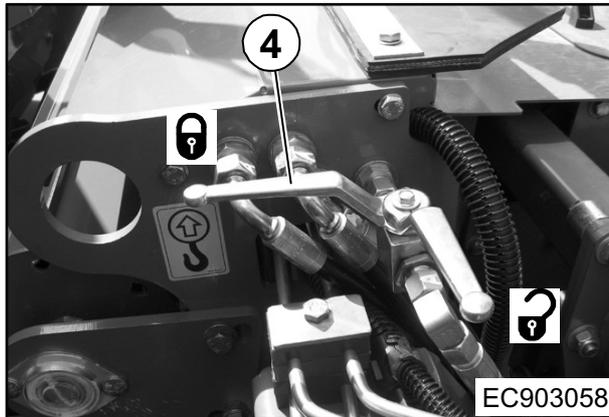


Fig. 23

- Open the shut-off valve (4) on the pendulum frame.

5.1.6 Parking supports in transport position on the right/left



Note

Stop the machine.

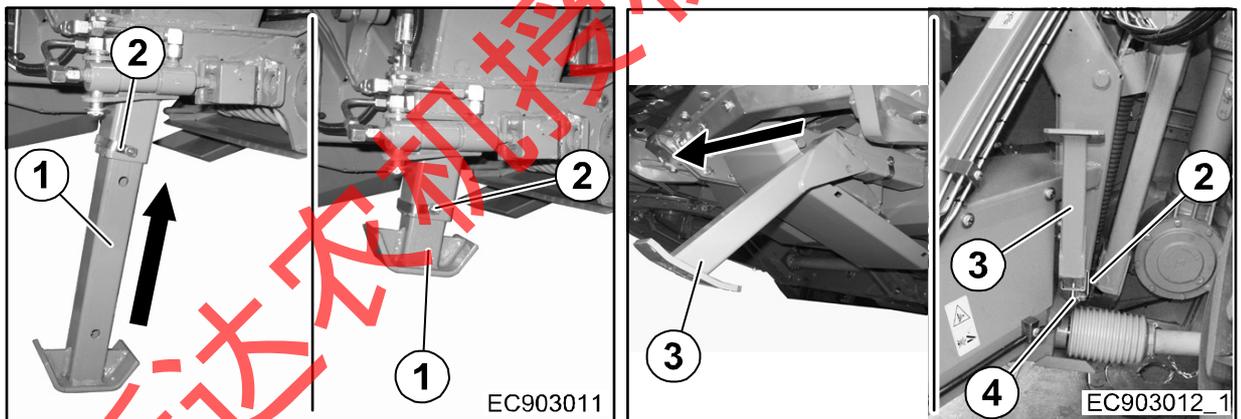


Fig. 24

Rear parking supports on the right / left:

- Remove the spring cotter pins (2) and push in the parking supports on the rear (1).
- Secure the position with spring cotter pins (2).

Front parking supports on the right / left:

- Remove the front parking support (3) and place it into the insert pocket (4) on the pendulum frame.
- Secure the position with spring cotter pins (2).

6 Driving and Transport



Danger! - Road travel, carrying passengers, driving conduct

Effect: Danger to life, injuries or damage to the machine.

- It is forbidden to carry passengers on the machine.
- The protective equipment must be attached for transportation on public highways.
- When driving on roads, observe the conditions / requirements of the Road Traffic Type Approval Law (StVZO) and the Road Traffic Law (StVO).
- The driving speed of the forage harvester must to be adapted to local conditions.

EasyCollect 753 / EasyCollect 903



- On public highways and roads the EASYCOLLECT 753 and EASYCOLLECT 903 maize header must always be in the transport position.

EasyCollect 1053



- The EASYCOLLECT 1053 maize header must be placed on a special transportation trailer for road transport.



Note

Operating licence

In the case of self-propelled work machines the harvesting attachments must be included in the operating licence for the work machine (if necessary extend the operating licence). Observe the conditions in the operating licence.

新达农机技术文档

EasyCollect 753 / EasyCollect 903



Fig. 25

During transportation / road travel the maize header must be raised.

To do this:

- Swing the plant divider into transport position.
- Swing the right-hand / left-hand side parts upward into transport position.
- Switch off the engine and remove the ignition key.
- Push the parking supports on right/left into the transport position (see chapter on operation "Parking supports on right/left in transport position").
- Attach guards on right/left and front guards (see chapter on operation "Installing guard on right/left" or "Installing the front guard").
- Connect lighting (see chapter on operation "Connecting indicators and position lights on right/left").

EasyCollect 1053



- The EASYCOLLECT 1053 maize header must be placed on a special transportation trailer for road transport.
- The attachment must **not** be transported on public highways in the mounted state. For transportation on public highways the front attachment **must** be placed on a special transportation trailer.



Note

For further information, please consult the supplied "Transportation Trailer" operating instructions

7 Operation

7.1 From transport into working position



Danger! - Lowering the machine into working position

Effect: Danger to life, injuries or damage to the machine.

- Do not lower the machine until you are absolutely sure that neither persons, animals nor objects are in the swivel range of the machine.
- Keep persons out of the danger zone. If persons do approach the danger zone, turn off the machine immediately.
- Never leave the machine running unsupervised.
- Check the safety devices each time before the machine is used. Replace damaged safety devices immediately.
- Do not work on the front attachment until the engine has been stopped and the ignition key has been removed. All operating levers should be in the neutral position and no hydraulic lines should be under pressure.
- Always check the attachment before use and after driving into an obstacle. Worn, damaged or deformed blades must be replaced immediately. This also applies to holders.
- Do not switch on the drive until the front attachment is in the working position.

7.1.1 Removing the protective cover

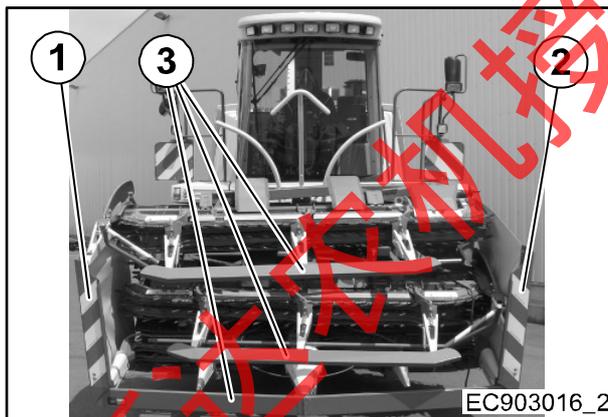


Fig. 26

- Stop the machine
- Pull off the lighting cables
- Remove the guards (1,2) from the right and left-hand sides of the machine.
- Remove the front guard (3).

7.1.2 Parking supports in transport position on the right/left



Note

Stop the machine.

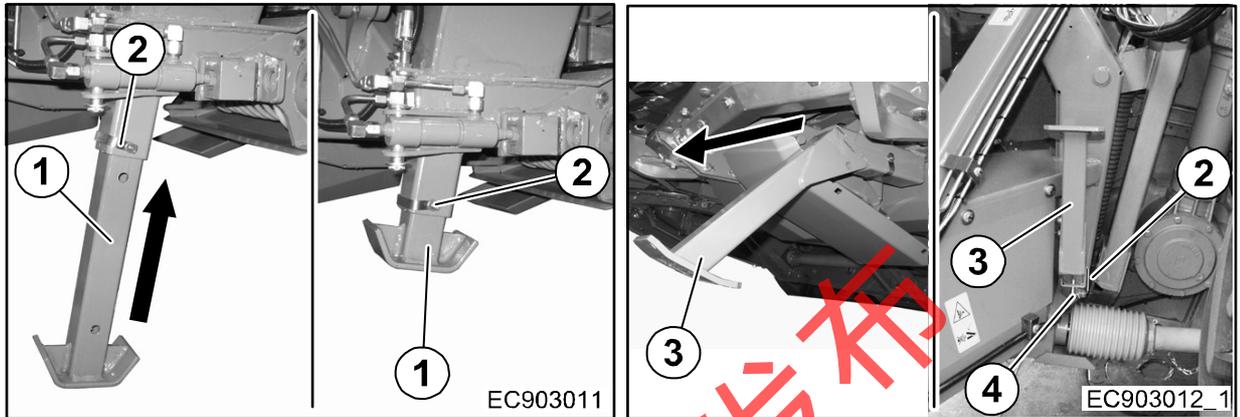


Fig. 27

Rear parking supports on the right / left:



Note

Before switching to working position, ensure that the parking supports (1) have been pushed in and have been secured by spring cotter pins (2).

Front parking supports on the right / left:



Note

Ensure that the parking supports (3) have been moved to the insert pockets (4) on the pendulum frame and are secured with spring cotter pins (2).

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7.1.3 Swinging the right-hand / left-hand side parts into working position



Note

Side parts must only be swivelled when the forage harvester is at a standstill!

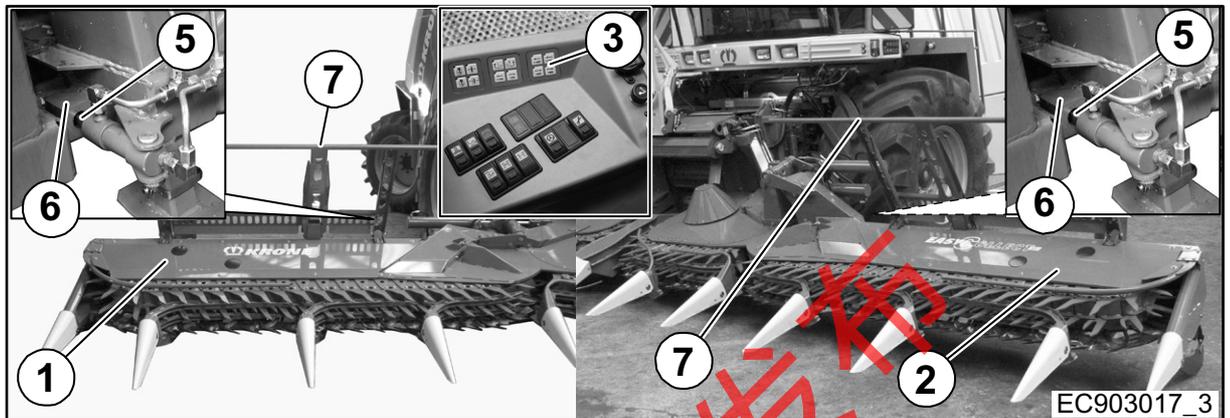


Fig. 28



Note

Make sure that the plant divider is in the highest position of the transport position before folding down the side parts.

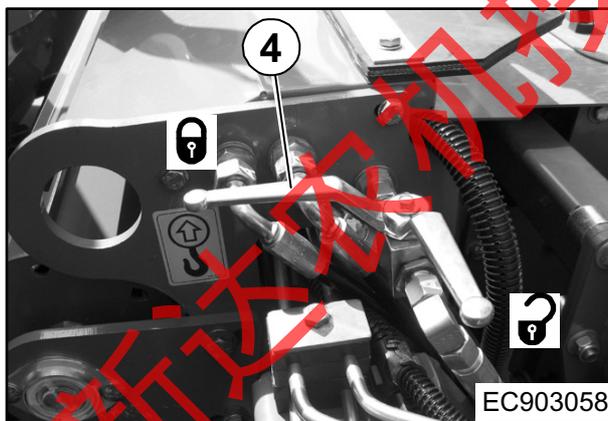


Fig. 29



Note

Make certain the shut-off valve (4) is opened before the side parts fold down.

- Swing the side parts (1,2) into working position by pressing the actuating keys (3).



Note

The hydraulic procedure of the folding down process of the side parts is predetermined by the hydraulic control. First, the left-hand side part is lowered, then the right-hand side part is lowered. Thereafter the tubular bars on the right and left-hand sides swivel upward.

- Keep pressing the actuation key (3) until the locking bolt (5) of the left-hand and right-hand side parts is in guidance (6) and the tubular bars (7) (right hand and left hand machine side) are in working position.

7.1.4 Swinging the plant divider into working position

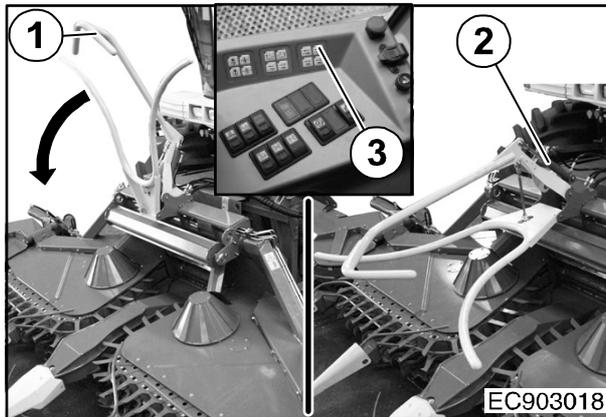


Fig. 30

- Press the actuating keys (3) to swing the plant divider (1) into working position through the hydraulic cylinder (2).



Note

Adjust the plant divider (1) in height to the crop to be harvested so that the upper plant parts are guided by the tubular bars when being drawn into the foraging unit.

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7.2 Using the Machine for Work



Danger! - Lowering the machine into working position

Effect: Danger to life, injuries or damage to the machine.

- Do not lower the machine until you are absolutely sure that neither persons, animals nor objects are in the swivel range of the machine.
- Keep persons out of the danger zone. If persons do approach the danger zone, turn off the machine immediately.
- Never leave the machine running unsupervised.
- Check the safety devices each time before the machine is used. Replace damaged safety devices immediately.
- Do not work on the front attachment until the engine has been stopped and the ignition key has been removed. All operating levers should be in the neutral position and no hydraulic lines should be under pressure.
- Always check the attachment before use and after driving into an obstacle. Worn, damaged or deformed blades must be replaced immediately. This also applies to holders.
- Do not switch on the drive until the front attachment is in the working position.

7.2.1 Using the maize header



Note - clean cut

- The collector speed must not be higher than the feed rate of the crop into the harvester.
 - The collector speed must be set as high as is required to ensure a clean cut crop.
 - The travelling speed is based primarily on the throughput of the forage harvester.
-

- Move the maize header to the working position and lower it down to the ground or to the required cutting height.
 - Switch on the maize header drive and adjust it to working speed.
 - Drive into the crop with the forage harvester.
 - The driving and collector speed is based on the particular conditions of usage (ground conditions, the height and nature of the crop).
-



Note regarding resonance vibrations

It may happen in headland position while in idle that noises are produced on the machine by resonance vibrations. In this case change the set speed slightly.

7.2.2 Lifting gear distance control (optional)

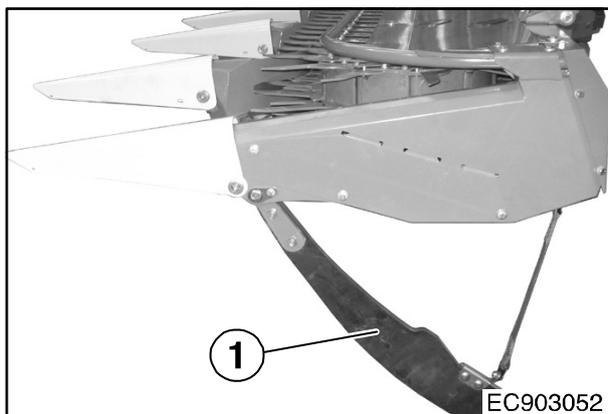


Fig. 31



Note

The lifting gear distance control is available only if distance sensors (1) have been fitted. When lifting gear distance control is active, the control of the forage harvester sets the stubble height (max. stubble height about 50 cm.) constant relative to the ground (header contour).

Lifting gear distance control depending on stubble height is only guaranteed if the distance sensors (1) have sufficient contact with the ground.

7.2.3 Autopilot (optional)

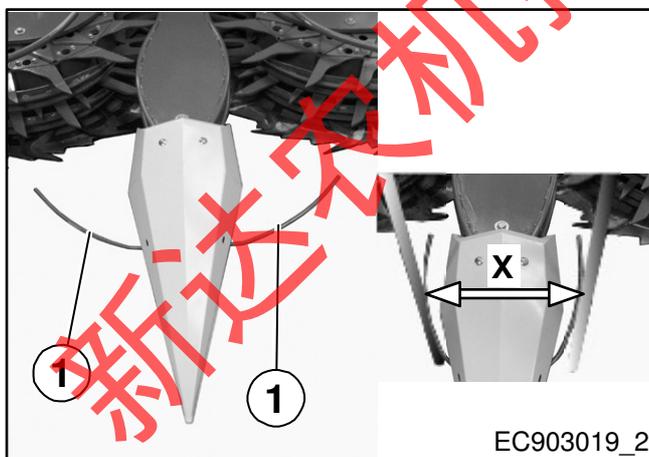


Fig. 32



Note

The autopilot function is available only if sensors (1) and autopilot equipment have been fitted. Using the sensors on the maize header, the autopilot guides the forage harvester along the maize row.



Note

Prerequisite for a correct function of the autopilot is a minimum row distance of the maize plants or other stem-like forage crops of $X=50$ cm.

7.3 Switching from working position to transport position

**Note**

Before folding the maize header into its transporting position, turn off the drive. The maize header must not be folded in until the drive is at a standstill.

**Note**

Side parts must only be swivelled when the forage harvester is at a standstill!

7.3.1 Swinging the plant divider into transport position

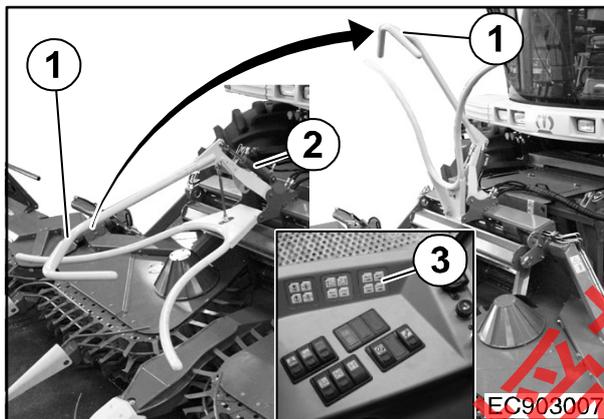


Fig. 33

- Press the actuating keys (3) to swing the plant divider (1) into transport position through the hydraulic cylinder (2).

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7.3.2 Swinging the right hand / left hand side parts upward into transport position



Caution! – Plant divider is not in transport position

Effect: Damage to the machine

- Before swinging up the side parts (1, 2), make sure the plant divider (4) is in transport position.

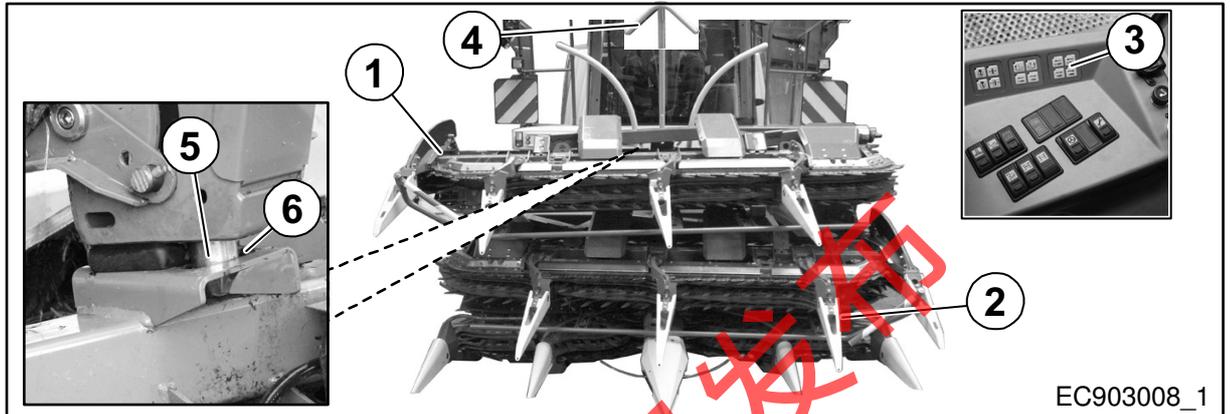


Fig. 34

- Swing the side parts (1,2) into transport position by pressing the actuating keys (3).



Note

The hydraulic procedure of the folding up process of the side parts is predetermined by the hydraulic control. First, the tubular bars on the right and left-hand sides will swivel downward. Then, the right-hand side part is lifted followed by the left-hand side part.

- Keep pressing the actuation key (3) until the bolt (5) of the left-hand side part is in the guidance (6).
- Swing up the maize header with the forage harvester hydraulics to the extent that there is sufficient ground clearance for travel on the road.

7.3.3 Installing the front guard

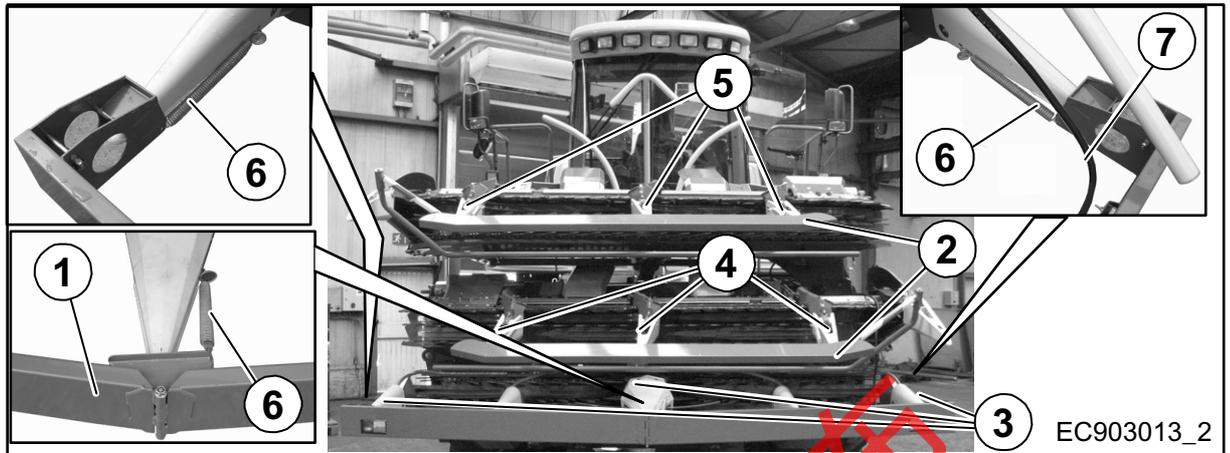


Fig. 35

- Slide the front guard (1,2) onto the tips (3,4,5) and secure it with tension springs (6).
- Neatly lay the lighting cable (7) and plug it into the socket provided for this purpose on the forage harvester.



Caution! - Lighting cables not laid properly.

Effect: Lighting system no longer functions.

- Position the lighting cable so that it will not come in contact with the cutter blades.

7.3.4 Installing guard on the right/left

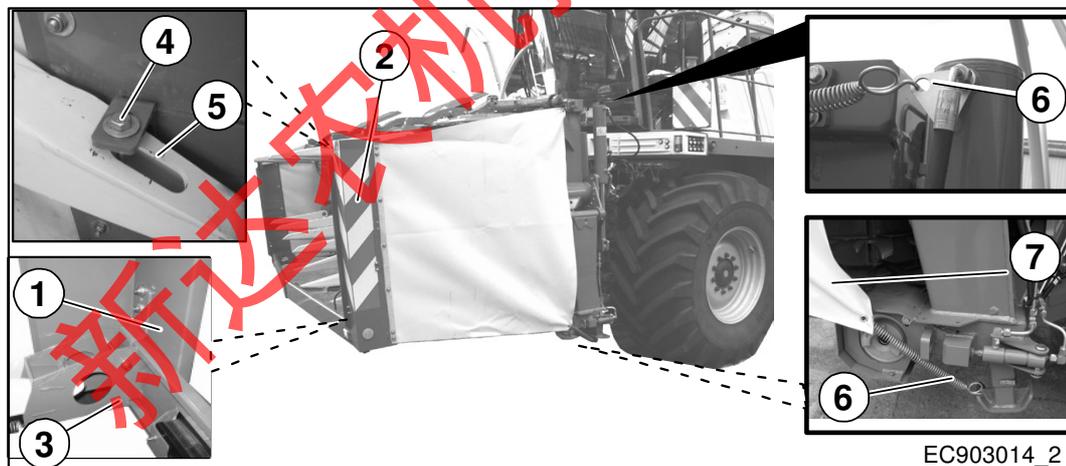


Fig. 36

- Slide the retainer (1) of the guard (2) into the insert pocket (3) of the front guard and the hexagonal head screw (4) into the guidance of the tip (5) (right-hand and left-hand sides of the machine).



Note

Make sure the retainer (1) and the hexagonal head screw (4) rest properly in the insert pocket or guidance (right-hand and left-hand machine sides).

- Fasten protective cloths (7) with tension springs (6) to the parking jack or frame.

7.4 Detaching the machine



Danger! - Unexpected movements of the machine

Effect: Danger to life, serious injuries

- There must be nobody between the forage harvester and the front attachment.
- No one is permitted in the swivel range while the machine is being swivelled from the transport into the working position or vice versa.
- Put the machine down only in working position and with parking supports extended on solid and level ground.
- Switch off the engine, remove the ignition key, and secure the forage harvester from rolling away.
- Wait until all machine parts have come to a complete stop.
- Before working under or on the raised front attachment, support the attachment securely.

- Swing up the maize header completely.



Note

Stop the machine.

7.4.1 Moving the right hand / left hand parking supports into parking position

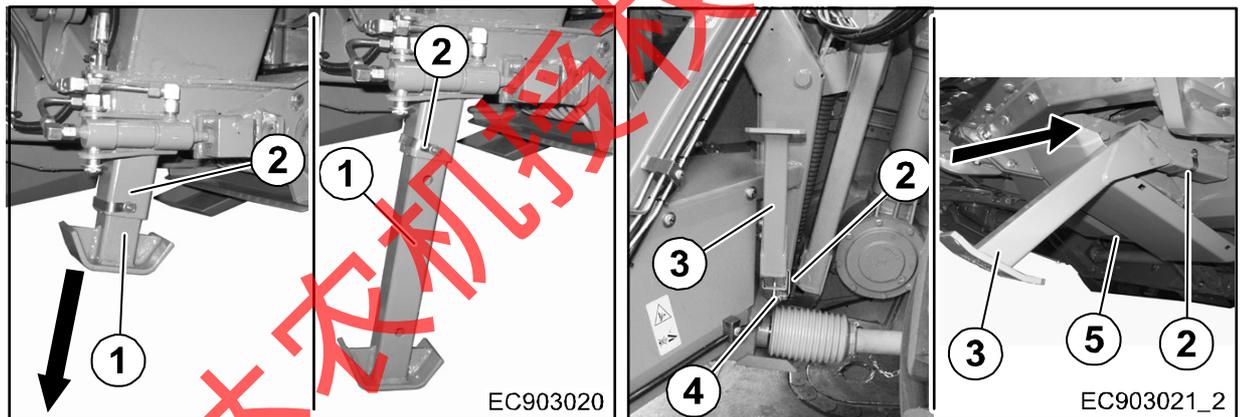


Fig. 37

Rear parking supports on the right / left:

- Remove the spring cotter pins (2) and pull out the rear parking supports (1) .
- Secure the position with spring cotter pins (2).

Front parking supports on the right / left:

- Remove the front parking support (3) from the insert pocket (4) and place it into the front holder.
- Secure the position with spring cotter pins (2).
- Lower the maize header (5) with the forage harvester hydraulics to the ground.

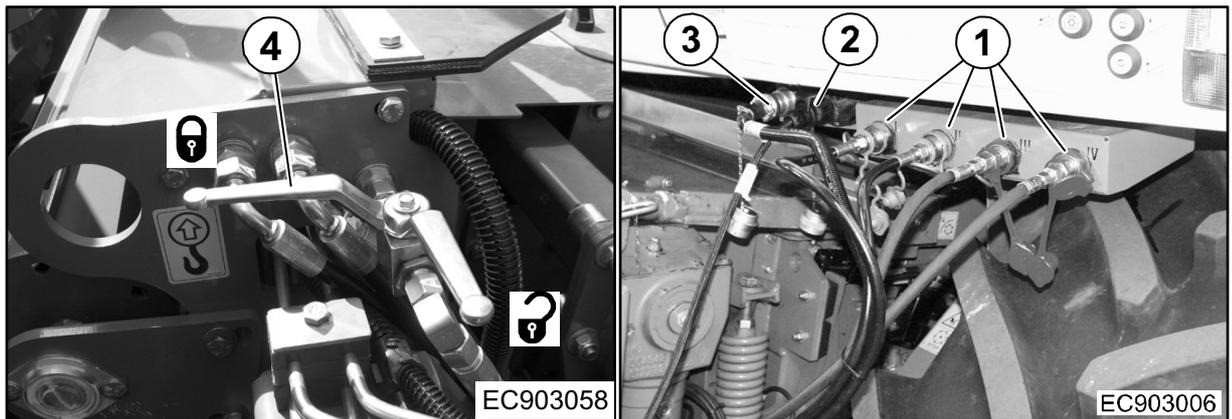


Fig. 38



Caution! - Danger of accident and damage!

Place hydraulic hoses (1) and electrical connection line (2,3) on the maize header (4).



Note

Before disconnecting the hydraulic hoses (1), depressurise the system on both sides.

- Close the shut-off valve (4) on the pendulum frame before removing the hydraulic lines (1).
- Disconnect the hydraulic lines (1) at the hydraulic couplings and close off with dust caps.
- Detach the lighting cable (2).
- Loosen the connection cable (3) for the sensors.

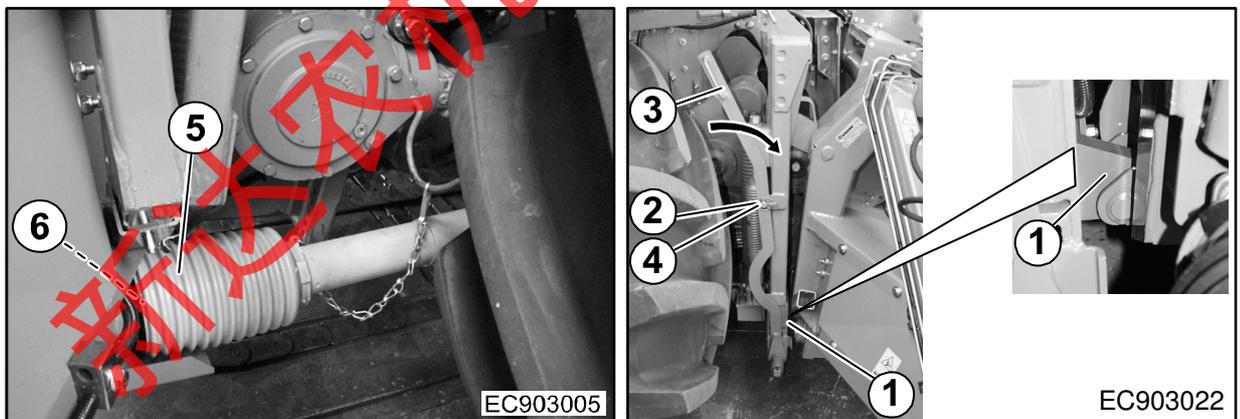


Fig. 39

- Pull the joint fork (5) off the drive journal (6) of the main angular gearbox.
- Open the locking hook (1): Disconnect the spring-loaded plug (4), pull the locking lever (3) from the locking pin (2) and swing it forwards.
- Lower the pendulum frame of the forage harvester until the receiving claws are below the holding bolts.
- Move the forage harvester back.

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8 Maintenance

8.1 Special Safety Instructions



Danger! - When performing repair, maintenance or cleaning work or when making technical modifications to the machine, drive elements may start moving (caution, cutters continue to run).

Effect: Danger to life or serious injuries

- Switch off the drive and disengage PTO.
- Switch off the forage harvester engine and remove the ignition key.
- Secure the forage harvester against accidental start-up and against rolling away.
- When working under or with the machine raised, always secure it with suitable supporting elements.
- Close shut-off valve on lifting cylinder of forage harvester!
- After all repair, maintenance and cleaning tasks are complete, all protective covers and safety devices must be put in place again.

8.1.1 Test run



Danger! - Testing the machine after repair, maintenance or cleaning work and after technical intervention.

Effect: Danger to life or serious injuries

- The machine must be in working position.
- Do not switch on the drives until the machine is in cutting height and you are absolutely sure that neither persons, animals nor objects are in the danger zone.
- Start a trial run of the machine from the driver's seat only.

8.2 Spare Parts



Danger! - Using non-approved spare parts.

Effect: Danger to life, serious injuries or loss of warranty claims as well as exclusion of liability

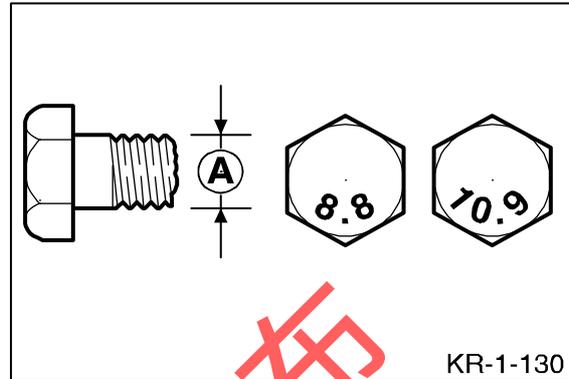
- Use only authentic KRONE spare parts and accessories authorised by the manufacturer. The use of spare parts, accessories or additional equipment not manufactured, tested or approved by KRONE will exclude any liability for consequential damage.

8.3 Tightening Torques

The tightening torque M_A is stated in Nm (unless otherwise indicated).

A Ø	5.6	6.8	8.8	10.9	12.9
	MA (Nm)				
M 4		2.2	3	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
M12	42	64	85	125	145
M14		100	135	200	235
M14x1.5			145	215	255
M 16		160	210	310	365
M16x1.5			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
M30			1450	2100	2450

A = Thread size
(The stability class can be seen on the head of the screw.)



NOTE

The table above does not apply to countersunk screws with a hexagonal socket head if the countersunk screw is tightened with the hexagonal socket head.



Note

Regularly check that nuts and bolts are tightly in place (approx. every 50 hours) and tighten them if necessary.



Note

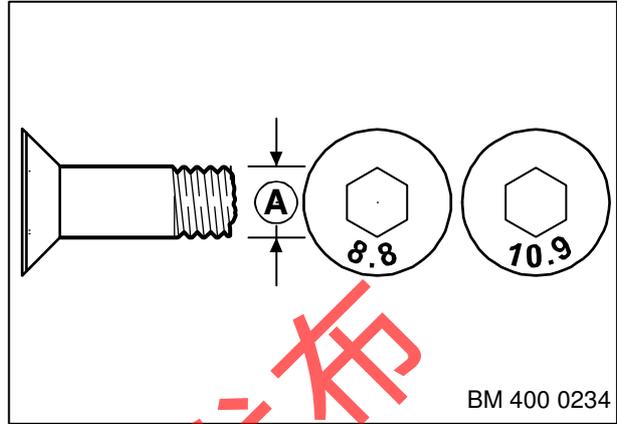
Self-locking nuts must always be replaced.

8.4 Tightening Torques (Countersunk Screws)

The tightening torque M_A is stated in Nm (unless otherwise indicated).

A Ø	5.6	8.8	10.9	12.9
	MA (Nm)			
M 4		2.5	3.5	4.1
M 5		4.7	7	8
M 6		8	12	15
M 8		20	29	35
M 10	23	39	58	67
M 12	34	68	100	116
M 14		108	160	188
M 16		168	248	292
M 20		340	488	568

A = Thread size
(The stability class can be seen on the head of the screw.)



NOTE

The table above applies only to countersunk screws with hexagonal socket heads and metric threading that are tightened by the hexagonal socket head.



Note

Regularly check that nuts and bolts are tightly in place (approx. every 50 hours) and tighten them if necessary.



Note

Self-locking nuts must always be replaced.

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8.5 Filling Quantities and Lubrication Designations for Gearboxes

Gearbox	Filling quantity (litres)	Type of oil	Bio-degradable lubricants
T-gearbox	0.5	SAE 90 GL 4 or Esso Spartan EP 150 Shell Omala Oil 150 Fuchs - EP 85 W90 Castrol EPX 90	on request
Angular gearbox	0.5		
Collector gearbox (top part)	4 x 0.8		
Collector gearbox (bottom part on centre part)	2 x 1.7		
Collector gearbox (bottom part on side part)	2 x 1.4		

8.5.1 Oil Level Check and Oil Change Intervals (Gearboxes)

- If no other instructions are given, change the oil once a year on all gearboxes.
- Check the oil level before the beginning of the season.
- Check all gearboxes for leaks and, if required, check the oil level.



Caution!

With bio-degradable oils it is essential to observe the change intervals due to the ageing of the oils.

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8.5.2 Checking the oil level and changing oil on the T-gearbox



Note

Check the oil level and change the oil while the gearbox is in a horizontal position!

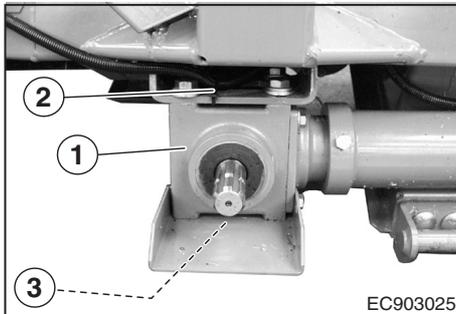


Fig. 40

Oil level check



Note

An oil level check is not possible on this gearbox.

Oil change

- Unscrew the oil drain plug (3). Collect the used oil in a suitable container.
- Screw in the oil drain plug (3) again.
- Unscrew the venting screw (2) and add oil.
- Screw the venting screw (2) back in.

Oil quality / oil quantity: see Chapter "Filling Quantities and Lubricant Designations for Gearboxes"



Note

The used oil must be disposed of correctly

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8.5.3 Checking the oil level and changing the oil on the angular gearbox



Note

Check the oil level and change the oil while the gearbox is in a horizontal position!

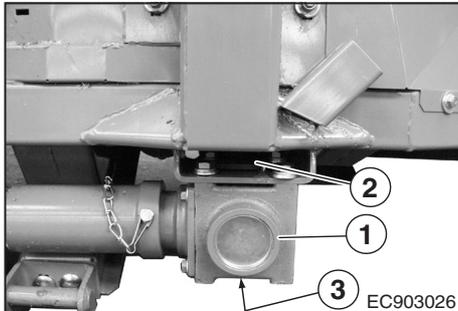


Fig. 41

Oil level check



Note

An oil level check is not possible on this gearbox.

Oil change

- Unscrew the oil drain plug (3). Collect the used oil in a suitable container.
- Screw in the oil drain plug (3) again.
- Unscrew the venting screw (2) and add oil.
- Screw the venting screw (2) back in.

Oil quality / oil quantity: see Chapter "Filling Quantities and Lubricant Designations for Gearboxes"



Note

The used oil must be disposed of correctly

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8.5.4 Checking the Oil Level and Changing the Oil on the Collector Gearbox

8.5.4.1 Checking the oil level and changing the oil on the collector gearbox (top part)



Note

Check the oil level and change the oil while the gearbox is horizontal in the working position of the attachment!

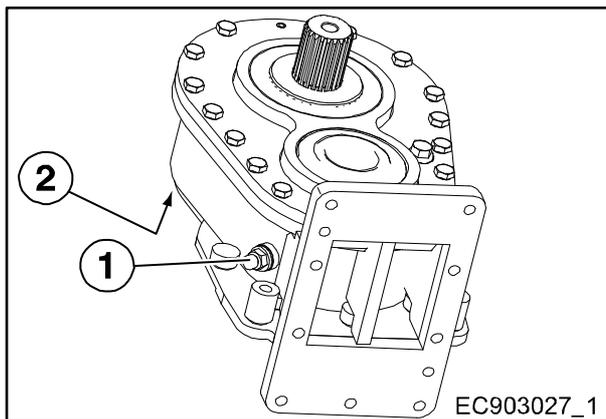


Fig. 42

Oil level check:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Unscrew the inspection screw (1)
- Oil level up to bore hole (1)
- If necessary, top up the oil (SAE 90)
- Screw the check screw (1) back in.

Oil change:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Screw out the screw plug (2).
- Collect the used oil in a suitable drip pan
- Screw in the screw plug (2)
- Fill oil (1) (oil level up to hole (1))

Oil quality / oil quantity: see Chapter "Filling Quantities and Lubricant Designations for Gearboxes"



Note

The used oil must be disposed of correctly

8.5.4.2 **Checking the oil level and changing the oil on the collector gearbox (bottom part on central part)**



Note

Check the oil level and change the oil while the gearbox is horizontal in the working position of the attachment!

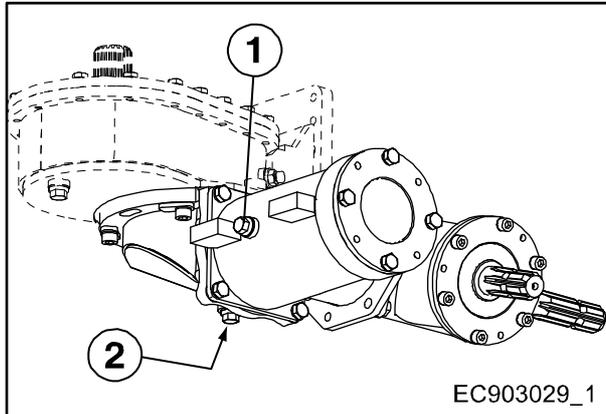


Fig. 43

Oil level check:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Unscrew the inspection screw (1)
- Oil level up to bore hole (1)
- If necessary, top up the oil (SAE 90)
- Screw the check screw (1) back in.

Oil change:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Screw out the screw plug (2).
- Collect the used oil in a suitable drip pan
- Screw in the screw plug (2)
- Fill oil (1) (oil level up to hole (1))

Oil quality / oil quantity: see Chapter "Filling Quantities and Lubricant Designations for Gearboxes"



Note

The used oil must be disposed of correctly

8.5.4.3 Checking the oil level and changing the oil on the collector gearbox (bottom part on side part)

**Note**

Check the oil level and change the oil while the gearbox is horizontal in the working position of the attachment!

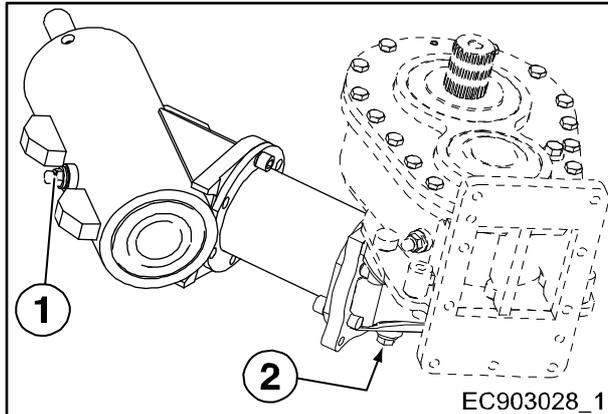


Fig. 44

Oil level check:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Unscrew the inspection screw (1)
- Oil level up to bore hole (1)
- If necessary, top up the oil (SAE 90)
- Screw the check screw (1) back in.

Oil change:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Screw out the screw plug (2).
- Collect the used oil in a suitable drip pan
- Screw in the screw plug (2)
- Fill oil (1) (oil level up to hole (1))

Oil quality / oil quantity: see Chapter "Filling Quantities and Lubricant Designations for Gearboxes"

**Note**

The used oil must be disposed of correctly

8.6 Collector pre-tension on the central part (right hand / left hand)

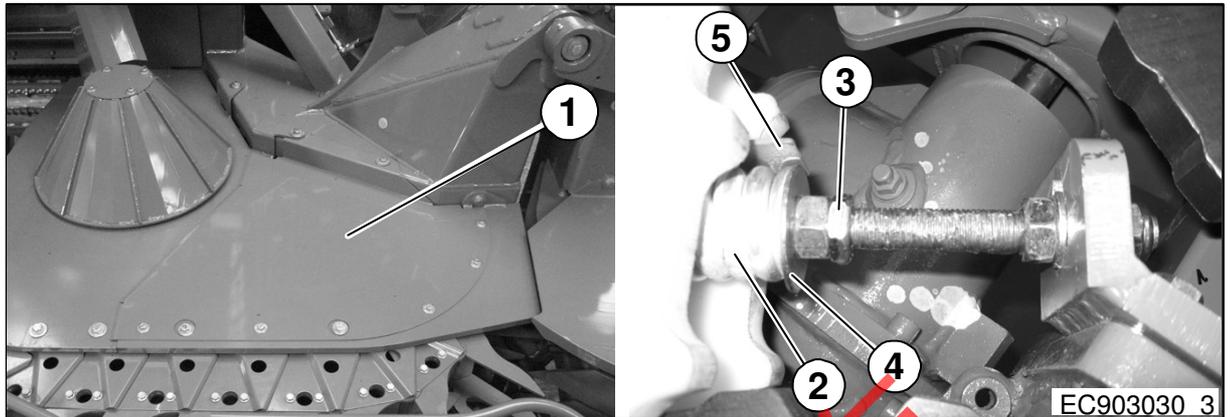


Fig. 45

8.6.1 Checking the collector pre-tension



Note

Check the collector pretension after the first 10 operating hours (e.g. after change), then every 60 operating hours.

- Remove the guard (1)
- The compression spring (2) is correctly pre-tensioned if the washer (4) flushes with the plate (5).

8.6.2 Correcting the collector pre-tension

- Loosen the counter nut (3).
- Correct the pre-tension (2) of the compression spring until the washer (4) flushes with the plate (5).
- Tighten the counter nut (3).
- Install the guard (1)

8.7 Collector pre-tension on the side part (right hand / left hand)

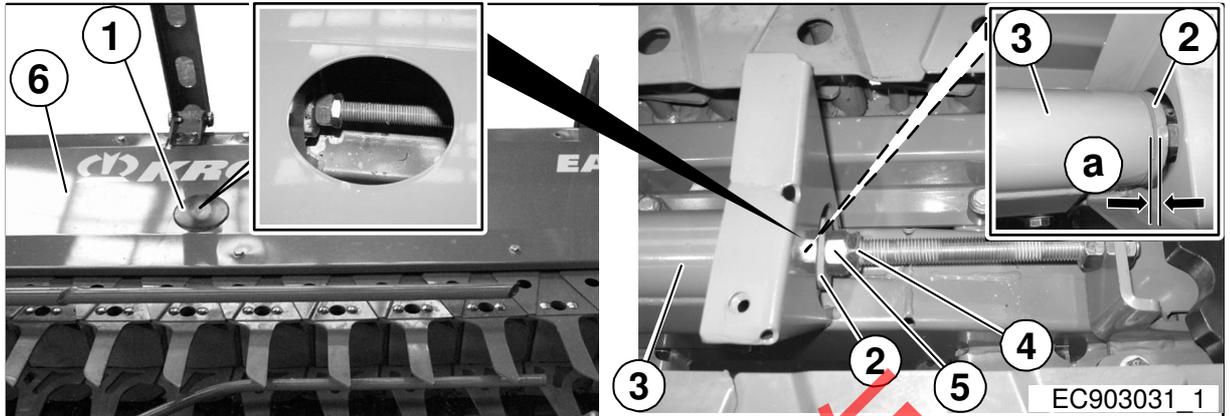


Fig. 46

8.7.1 Checking the collector pre-tension



Note

Check the collector pretension after the first 10 operating hours (e.g. after change), then every 60 operating hours.

- Remove the plastic cover (1).
- The pressure disc (2) must be set with $a = 2\text{mm}$ from the spring housing (3).
- If necessary, correct the collector pre-tension.

8.7.2 Correcting the collector pre-tension

- Disassemble the cover (6).
- Loosen the counter nut (4) and adjust the compression spring by turning the hexagonal nut (5) until the pressure disc (2) has a distance of $2^{\pm 1}\text{mm}$ to the spring housing (3).
- Tighten the counter nut (4).
- Install the cover (6).
- Plug the plastic cover (1)

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8.8 Scraper (right hand / left hand)



Note

The distance between back of the collector (2) and scraper (1) must not exceed dimension "a = 3 mm".

8.8.1 Adjusting Scrapers on the Centre Section

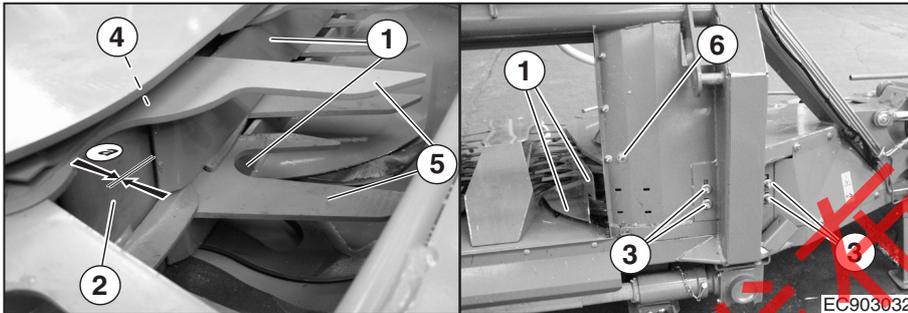


Fig.47

- Undo screwed connections (3) slightly and adjust scraper (1) so that the distance is "a = 1...3 mm" between the backs of the collector (2) (in the collector bolt area (4)) and the scraper (1).

Gap Dimensions (b):

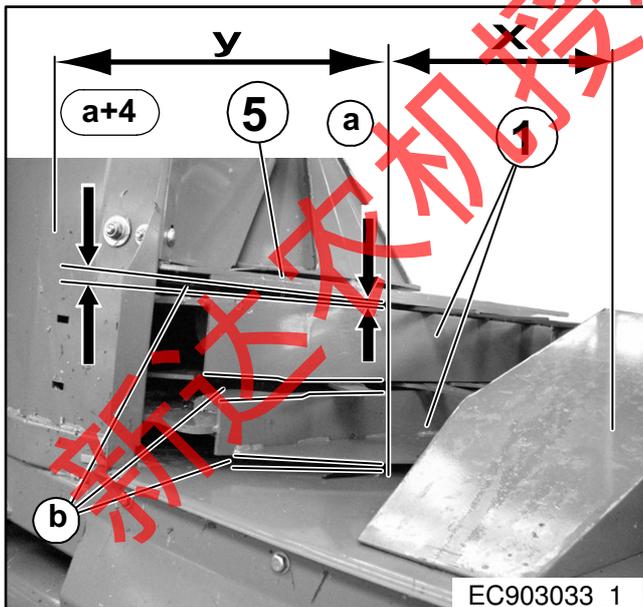


Fig.48

Within the range "X" the scrapers (1) must be centrally aligned with the collector fingers (4). Within the range "Y" the gap between the scrapers must be widened conically towards the rear (a+4).



Note

If required, align the cover (5) by loosening the screws (6).

- Tighten screw connections (3 and 6).

8.8.2 Adjusting the scraper on the side part

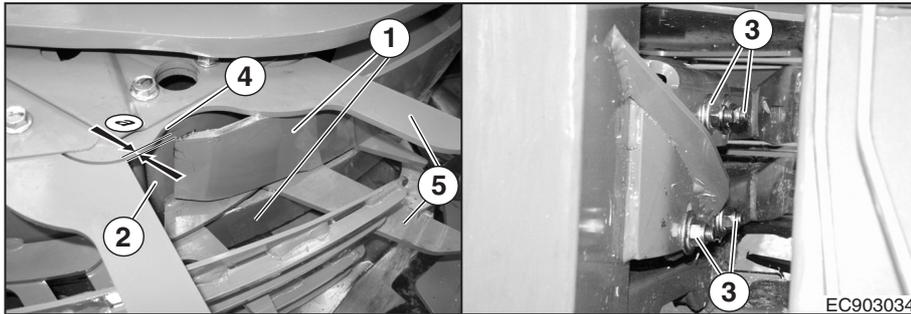


Fig. 49

- Slightly loosen the screw connections (3) and set the scraper (1) in a way, that the distance between the back of the collector (2) (in the area of the collector bolt) and the scraper (1) is "a = 1-3 mm".

Gap dimensions (b):

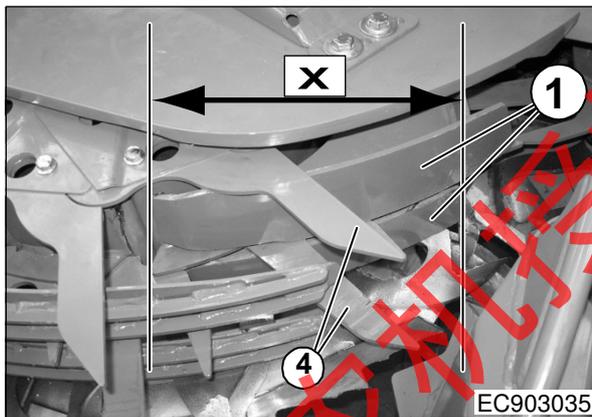


Fig. 50

Within the range "X" the scrapers (1) must be centrally aligned with the collector fingers (4).

- Tighten the screw joints (3).



Note

The scrapers can exert light contact pressure on the collector fingers (< 1 kg)

8.9 Changing the tips

How to change the side tips is described below; the central tip and the row tips are changed similarly.

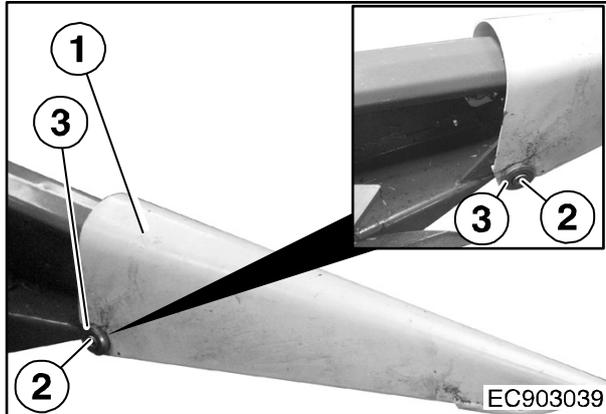


Fig. 51

- Disconnect the row registration sensor (on the central tip only) from the cable harness.
- Unscrew the cheese head screws (2) on both sides of the tip (1) and remove the tip (1).
- Remove the bearing rings (3) from the tip (1) and insert them into the new tip. If required, renew worn bearing rings (3).
- Install the new tip (1) with the cheese head screws (2).
- Connect the row registration sensor (on the central tip only) to the cable harness.



Note

Use a "high-strength" screw locking agent (for example Loctite).

8.10 Adjusting the tips

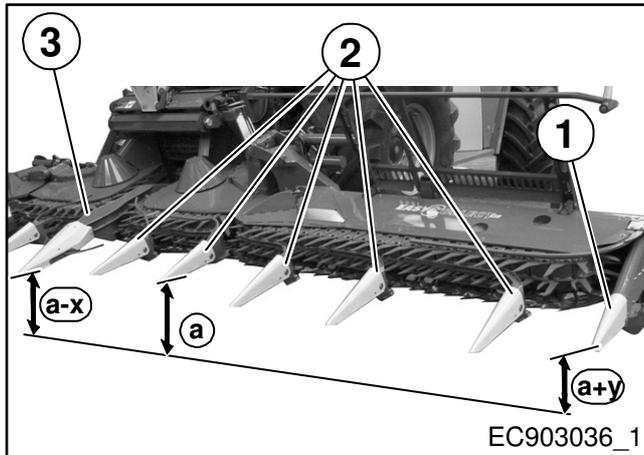


Fig. 52

a = freely chosen ground clearance (we recommend a = approx. 20 to 40 cm).

Adjust the bottom edges of the row tips (2) to the same height.

Adjust the bottom edges of the side tips (1) approx. $y = 0$ up to 30 mm higher than the bottom edges of the row tips (2).

The bottom edge of the central tip (3) should be approx. $x = 30$ to 50 mm lower than the bottom edges of the row tips (2).

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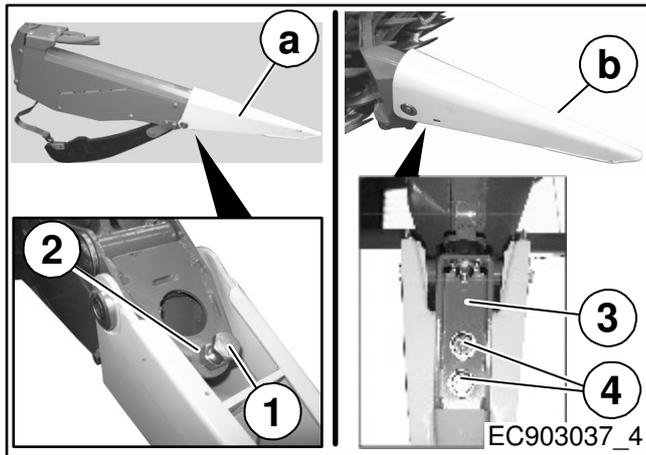


Fig. 53

8.10.1 Adjusting the side tips

The height of the side tips (a) can be adjusted with the screw (1).

To do this:

- Unscrew the counter nut (2)
- Adjust the height of the tips with the screw (1)
- Tighten the counter nut (2)

8.10.2 Adjusting the row tips

The height of the row tips (b) can be adjusted by moving the try square (3)

To do this:

- Undo screws (4).
- Move the try square (3).
- Tighten the screws (4).

8.10.3 Adjusting the central tip

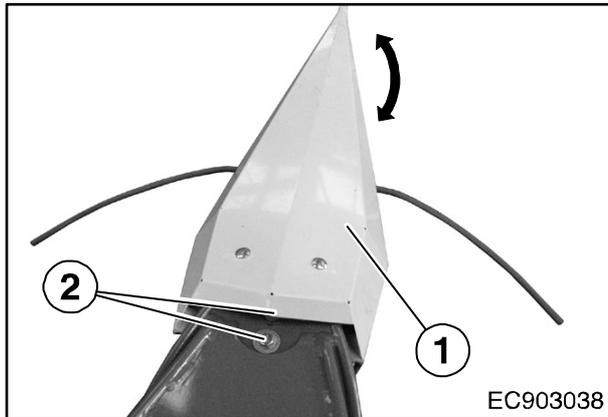


Fig. 54

- Loosen the screw connections (2) a little.
- Adjust the central tip (1) so that the bottom edge of the central tip is approx. $x = 30...50$ mm below the bottom edges of the tips.
- Tighten the screw connections (2).

8.11 Aligning the signaller brackets

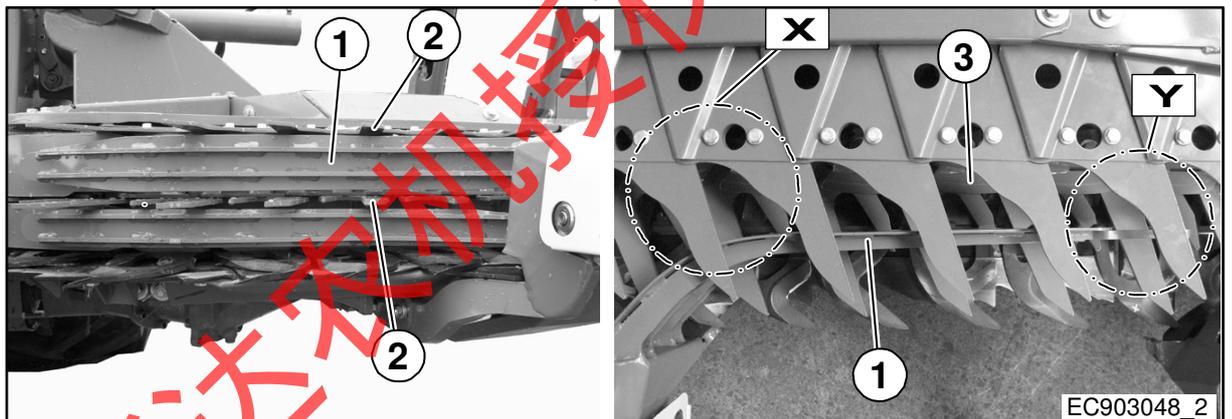


Fig. 55



Note

Periodically check the signaller brackets (1) for proper position and align them as required.

- The signaller brackets (1) must be aligned in parallel to the collector fingers (2).
- In the front range "X", the signaller brackets (1) must be at a distance of approx. 70 mm and in the rear range "Y" at a distance of approx. 60 mm from the back of the collector (3).

8.12 Blade Changing



DANGER! – Danger from sharp blades!

Serious injuries, in particular to the hands, may occur.

- Wear protective gloves when performing any work on the collector to avoid being cut by the blades.



Note

Always check the blades before use and after driving into an obstacle. Worn, damaged or deformed blades must be replaced immediately.



Note

Before making any adjustments on the blades let the collector run (not reverse) for a short time. Afterwards, switch drive off and wait until all drive elements have come to a complete stop. Remove the ignition key, secure the machine against accidental start-up and against rolling.

8.12.1 Replacing the fixed blades (bow and step blades)



Note

When replacing observe the cutting direction right/left, blade short/long!



Fig. 56

- Unscrew the hexagonal head screws (2) and pull out blade (1) to the front.
- Insert the new blade (1) and fasten it with the hexagonal head screws (2).



Note

Use a “high-strength” screw locking agent (for example Loctite).

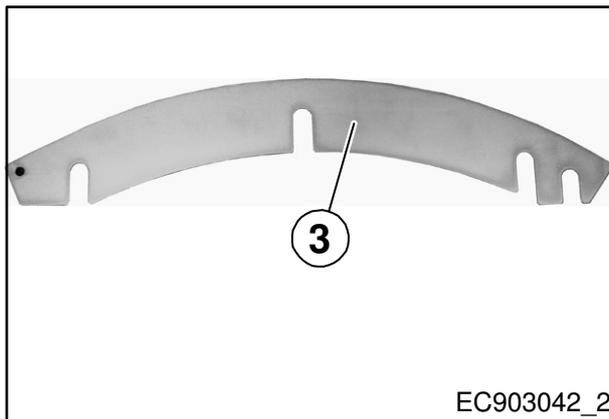


Fig. 57



Note

After replacing the blades, ensure that there are no abutting edges.
If required, adapt the height compensation by removing a compensation plate (3).

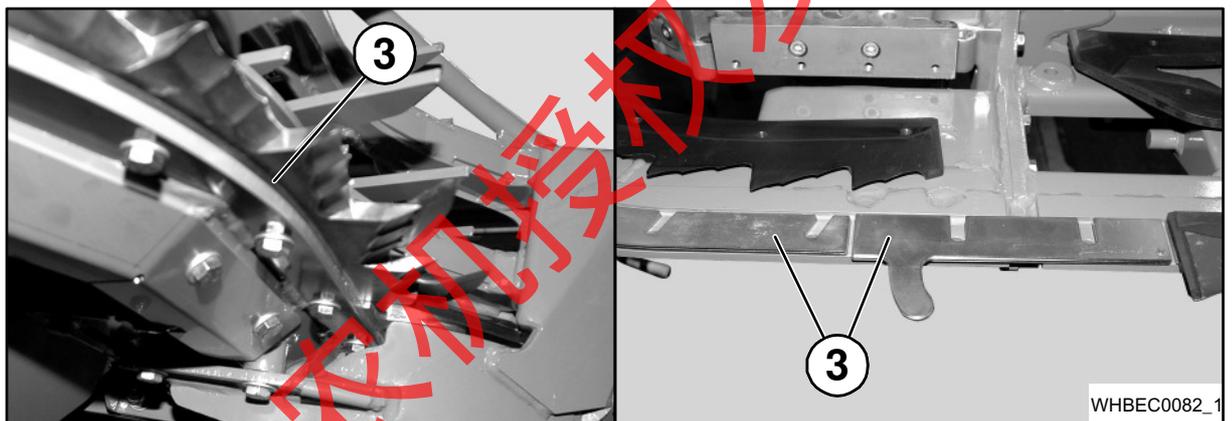


Fig. 58



Note

For machines before Machine No. 785 000, the adjacent "old" blades must be raised with compensating plates so that there are no more edges abutting each other.

8.12.2 Replacing the cutting blade on the right hand / left hand side parts



Note

When replacing observe the cutting direction right/left, blade short/long!



WARNING!

Position the blade to be changed by reversing the machine.
Ensure that no persons are in front of the machine.

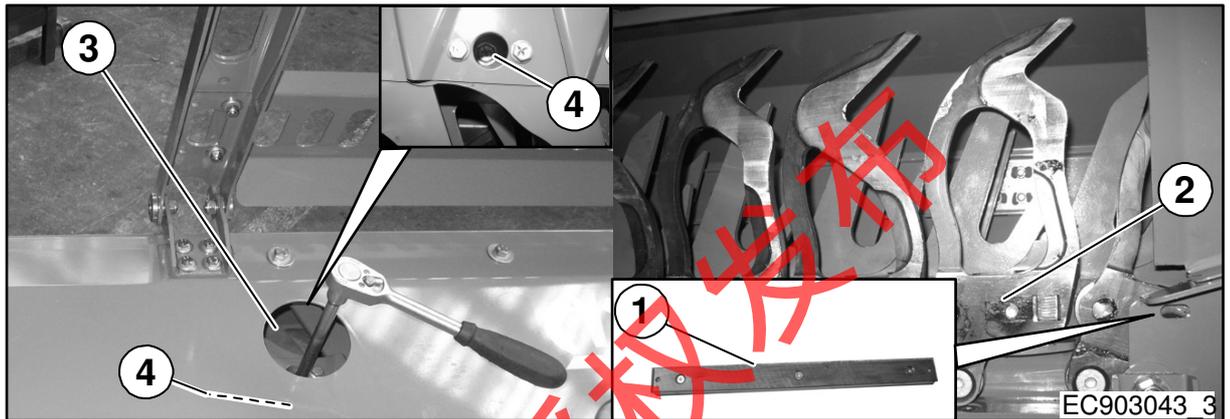


Fig. 59

- Remove the angle (1)
- Position the blade to be changed (2) by reversing the machine.
- Remove the plastic cap (3)
- Remove the hexagonal head screw (4), replace the blade (2) and secure it with the hexagonal head screw (4).
- Fit the plastic cap (3)
- Install the angle (1)



Note

Secure the hexagonal head screw using a “high-strength” screw locking agent.

Tightening torque of the hexagonal head screws of strength 10.9 = 110 Nm

8.12.3 Replacing the cutting blades on the right hand / left hand central part

**Note**

When replacing observe the cutting direction right/left, blade short/long!

**WARNING!**

Position the blade to be changed by reversing the machine.
Ensure that no persons are in front of the machine.

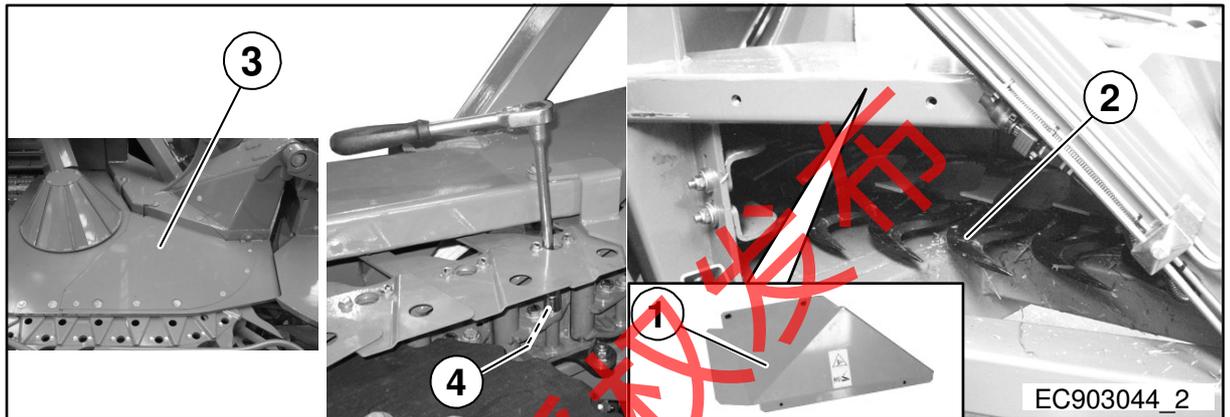


Fig. 60

- Remove the guard (1)
- Position the blade to be changed (2) by reversing the machine.
- Remove the guard (3)
- Remove the hexagonal head screw (4).
- Replace the blade (2) and secure it with the hexagonal head screw (4).
- Install the guard (3)
- Install the guard (1)

**Note**

Secure the hexagonal head screw using a “high-strength” screw locking agent.
Tightening torque of the hexagonal head screws of strength 10.9 = 110 Nm

8.12.4 Replacing the scraper blade on the right hand / left hand side parts and on the central part

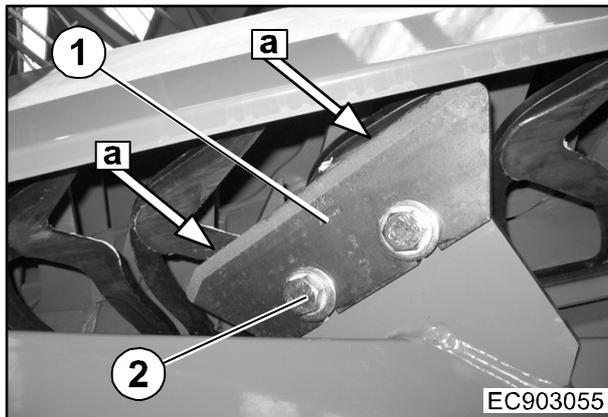


Fig. 61

- Loosen the hexagonal head screw (2).
- Replace the blade (1) and secure it with the hexagonal head screw (2).



Note

The scraper blade must rest flush against the collector blade without any gaps (a), but must not lift the collector.

8.13 Replacing the wear plates

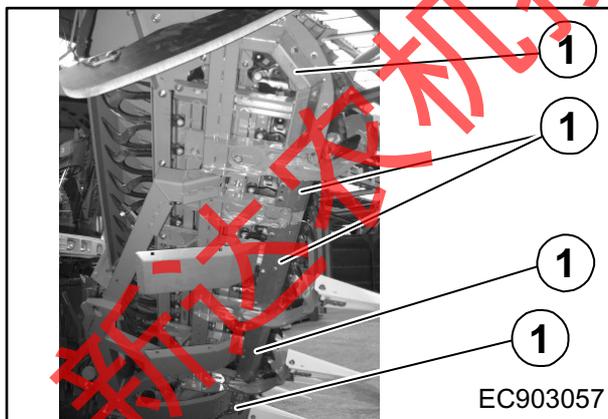


Fig. 62



Note

Check once a week if the wear plates (1) on both side parts right hand / left hand and on the central part are seated correctly and check the wear; if necessary remediate or change.

- Loosen corresponding screw connection.
- Replace wear plate.
- Tighten the screws.

8.14 Hydraulic hose line(s)

**Danger! - Hydraulic hose lines are subject to ageing**

Effect:

The characteristics of the lines change depending on pressure, heat load and the effect of UV rays.

The date of manufacture appears on the hydraulic hoses. This way the age can be ascertained quickly.

By law the hydraulic lines must be replaced after six years.

Use original spare parts when replacing hydraulic hoses!

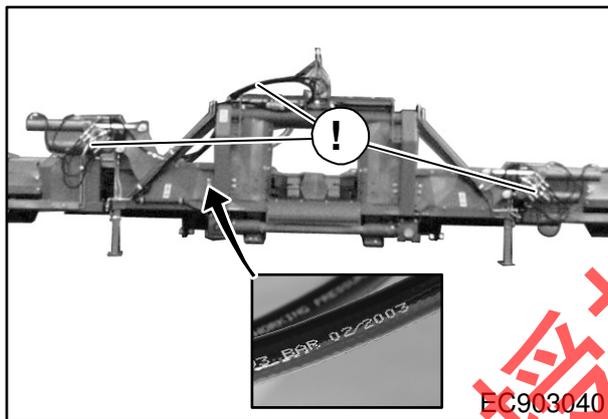


Fig. 63

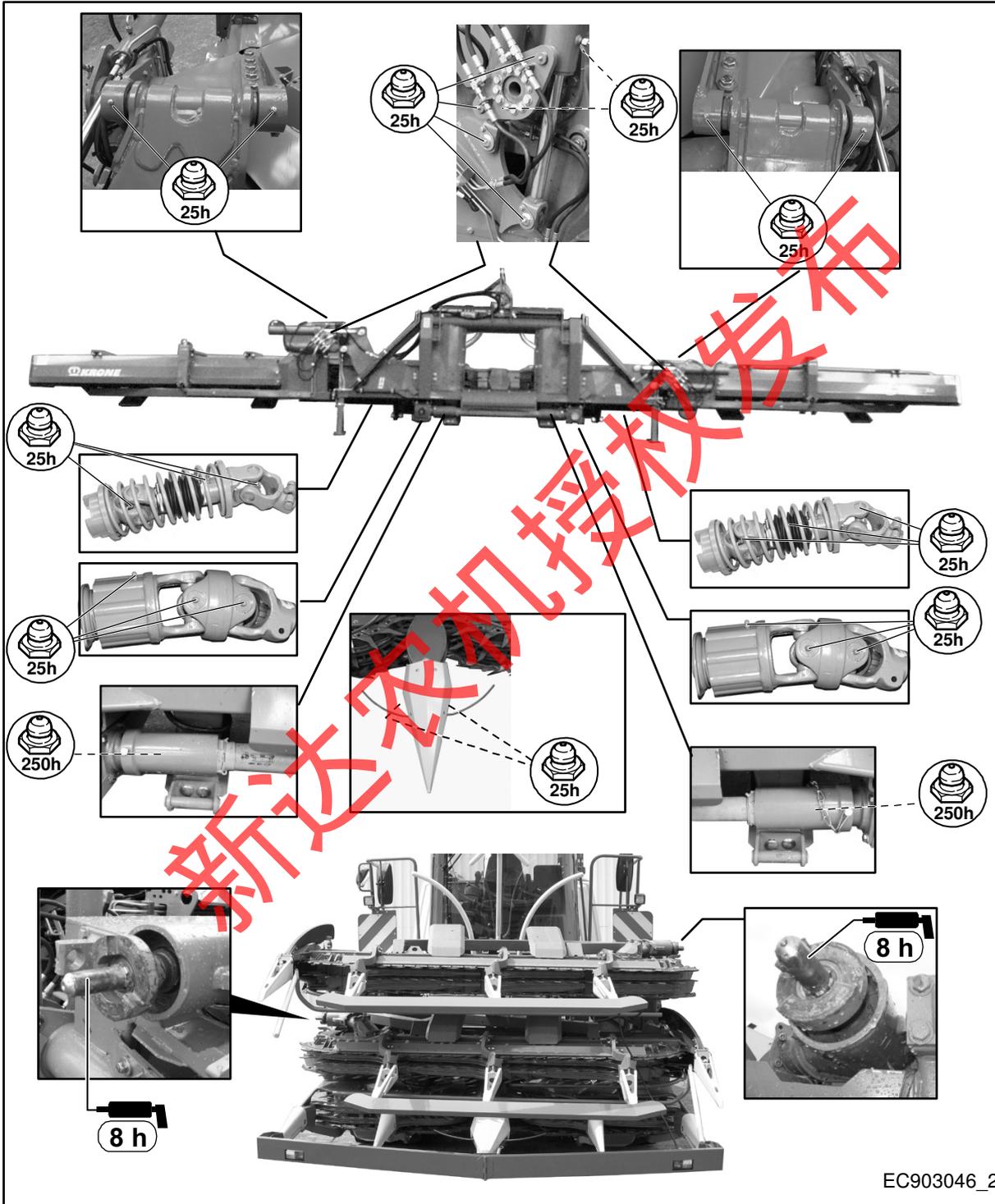
- Check the hydraulic hose lines at regular intervals and replace them if damaged or worn! The new hoses must fulfill the technical requirements set by the manufacturer of the implement!

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8.15 Lubrication

8.15.1 Lubrication Chart

- The lubrication points mentioned below must be lubricated after the operating hours indicated.



EC903046_2

Fig. 64:

8.15.2 PTO shafts

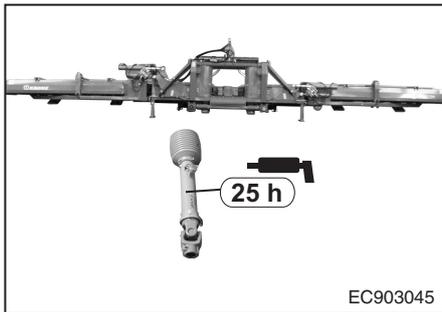


Fig. 65

The lubricating intervals of the PTO shafts can be found in the diagram.



Note

The instructions of the manufacturer must be observed with regard to the PTO shaft. (separate operating instructions)

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9 Placing in Storage

Before placing the machine in winter storage, clean inside and outside thoroughly. If you use a high-pressure cleaner to do this, do not keep a stream of water directed at bearing points. After cleaning is completed, lubricate all lubrication points. Do not wipe off any grease that comes out of bearing points. The hardened grease will provide additional protection against moisture.

Oil all joint points!

Check all movable components such as deflector rollers, joints, tension rollers, etc. to make certain they move easily. If necessary remove, clean, grease and remount. If necessary, replace with new parts.

Use only original KRONE replacement parts.

Disassemble the PTO shaft. Lubricate the inner tubes and the guard tube with grease. Grease the lubrication points on the cross joint and on the bearing rings of the guard tubes.

Touch up damaged paint and preserve all uncoated areas thoroughly with rust protection agent.

Park the machine in a dry location, but not in the vicinity of artificial fertilisers or livestock buildings.

Perform the necessary repair tasks during the time immediately after the harvest season. Draw up a list of all replacement parts you will need. This will make it easier for your KRONE dealer to process your orders and you will be certain that your machine will be ready for use at the beginning of the next season.

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10 Before the Start of the New Season

10.1 Special Safety Instructions



Danger! - When performing repair, maintenance or cleaning work or when making technical modifications to the machine, drive elements may start moving (caution: cutting discs continue to run).

Effect: Danger to life, injuries or damage to the machine.

- Move the machine to the working position and lower it to the ground
- Switch off the forage harvester engine and remove the ignition key.
- Secure the forage harvester against accidental start-up and against rolling away.
- Switch off the PTO and disengage it.
- After the repair, maintenance, cleaning work or technical modifications are completed, mount all protective covers and protective devices properly again.
- Avoid skin contact with oils, greases, cleaning agents and solvents.
- In the event of injuries or burns due to oils, cleaning agents or solvents, contact a doctor immediately.
- All other safety instructions must also be followed to avoid injuries and accidents.



Danger! - When performing repair, maintenance or cleaning work or when making technical modifications to the machine, drive elements may start moving (caution, cutters continue to run).

Effect: Danger to life or serious injuries

- Switch off the drive and disengage PTO.
- Switch off the forage harvester engine and remove the ignition key.
- Secure the forage harvester against accidental start-up and against rolling away.
- When working under or with the machine raised, always secure it with suitable supporting elements.
- Close shut-off valve on lifting cylinder of forage harvester!
- After all repair, maintenance and cleaning tasks are complete, all protective covers and safety devices must be put in place again.

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10.2 Test run.



Danger! - Testing the machine after repair, maintenance or cleaning work and after technical intervention.

Effect: Danger to life or serious injuries

- The machine must be in working position
- Do not switch on the drives until the machine is in cutting height and you are absolutely sure that neither persons, animals nor objects are in the danger zone.
- Start a trial run of the machine from the driver's seat only.

- Lubricate the machine thoroughly. Remove any condensation water which may have collected in the bearings.
- Check oil level in the gearbox(es) and top up if necessary.
- Check all screws to make certain they are tight or retighten them if necessary.
- Check all electrical connection cables and the lighting. Repair or replace if necessary.
- Check the entire setting of the machine and correct if necessary.
- Re-read the operating instructions thoroughly.



Note

Use vegetable oils and greases.

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A			
Adjusting Scrapers on the Centre Section.....	66		
Adjusting the central tip	71		
Adjusting the tips	69		
Affixing the Adhesive Safety and Information Labels	24		
B			
Before the Start of the New Season	81		
Blade Changing	72		
C			
Changing the tips.....	68		
Checking the oil level and changing oil on the T-gearbox.....	59		
Checking the oil level and changing the oil on the collector gearbox (bottom part on central part)	62		
Checking the oil level and changing the oil on the collector gearbox (bottom part on side part).....	63		
Commissioning	25		
Connecting the hydraulic lines.....	38		
Contact.....	7		
D			
Dangers in Case of Non-compliance with the Safety Instructions	14		
Detaching the machine.....	52		
Driving and Transport	41		
F			
Filling Quantities and Lubrication Designations for Gearboxes	58		
From transport into working position	43		
H			
Hydraulic hose line(s)	77		
Hydraulic system	18		
I			
Identification Plate	8		
Identifying Symbols in the Operating Instructions	13		
Inadmissible Modes of Operation	19		
		Information Required for Questions and Orders..	8
		Intended Use.....	9
		Introduction	7
		L	
		Lubrication	78
		Lubrication Chart.....	78
		M	
		Machine overview	10
		Maintenance	18, 55
		O	
		Operation	43
		P	
		Personnel Qualification and Training.....	14
		Placing in Storage.....	80
		Position of the Adhesive Safety Stickers on the Machine	20
		Position of the General Information Labels on the Machine	22
		PTO shafts.....	79
		Purpose of Use	7
		R	
		Re-Ordering the Adhesive Safety and Information Labels	24
		Replacing the scraper blade on the right hand / left hand side parts and on the central part ...	76
		Replacing the wear plates	76
		S	
		Safety.....	13
		Safety Instructions on the Machine.....	19
		Safety-conscious work practices	14
		Spare Parts	55
		Start-up	34
		Stop points	25
		Switching from working position to transport position.....	49
		T	
		Technical data.....	9

Test run.....82
Test run.....55
Tightening Torques.....56
Tightening Torques (Countersunk Screws).....57

U

Unauthorised Conversion/Modification and Spare
Parts Production 19
Using the Machine for Work 47

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