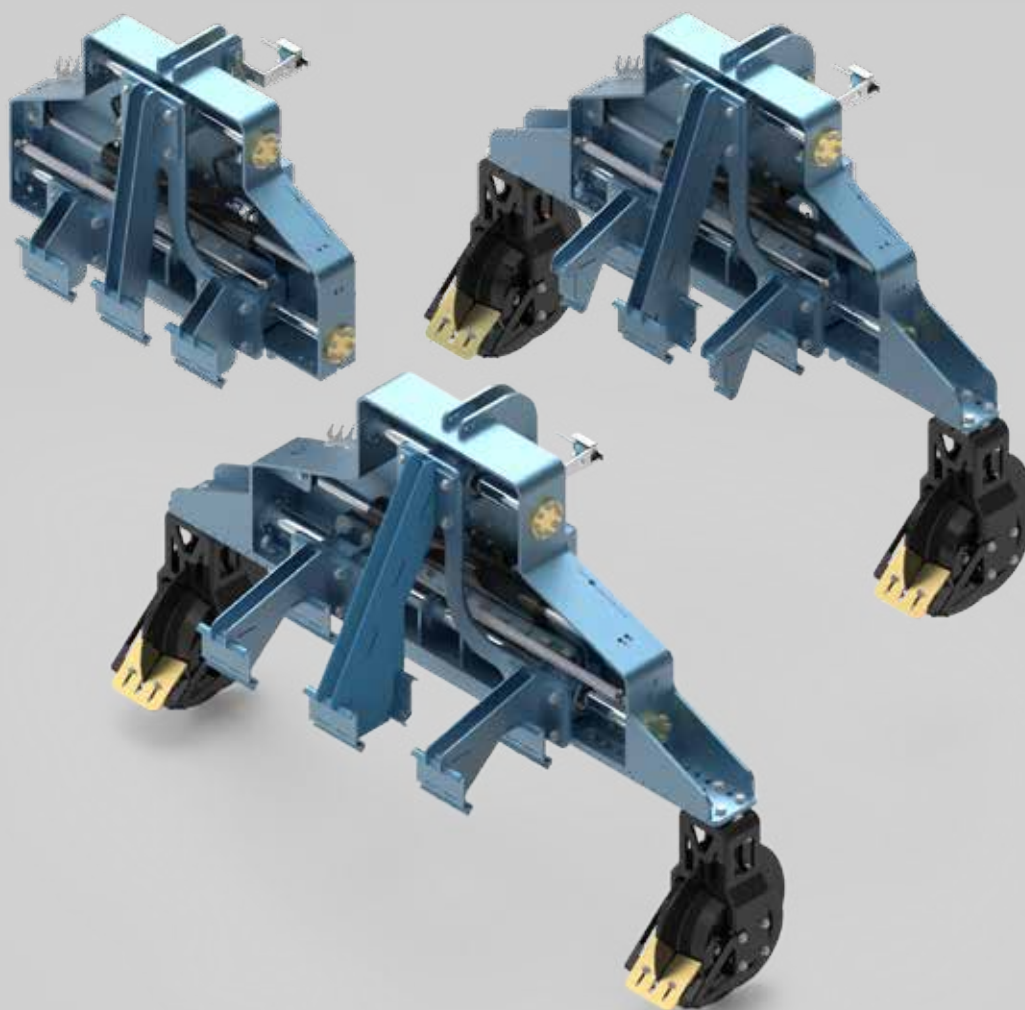


Operating manual and spare parts list **Shifting Frame**





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Acknowledgement of receipt

The acknowledgement of receipt must be returned immediately upon receipt. Without return there is **no** entitlement to a warranty!

*** Mandatory field**

Maschine type: **Shifting frame** *

Additional equipment:

Execution: *

Serial number: *

Construction year: *

Customer

sold by

Customer no.:

Customer no.:

Company / Name: *

Company / Name: *

Name contact person: *

Name contact person: *

First name of the contact person: *

First name of the contact person: *

Street: *

Street: *

ZIP: *

ZIP: *

Place: *

Place: *

Country: *

Country: *

Tel.: *

Tel.: *

Fax:

Fax:

E-mail:

E-mail:

» I hereby confirm the receipt of the operating instructions and spare parts list for the specified machine.

»

» I am aware that the warranty claim will only become effective if this acknowledgement of receipt is completed in full and signed upon receipt and returned to the company Thomas Hatzenbichler Agro-Technik GmbH.

»

» » by mail to: Thomas Hatzenbichler Agro-Technik GmbH, Fischering 2, A-9433 St. Andrä

» » by fax to: +43 4358 / 2208

» » by mail to: garantie@hatzenbichler.com

.....
Place, date

.....
Signature customer

.....
Signature of dealer or
Hatzenbichler employee



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UK
CA CE

2/36

2 Introduction

2.1 Foreword

Dear Customer!

We are pleased to congratulate you on your purchase decision and wish you much fun and success in working with this device.

Please read the operating manual carefully before putting the machine into operation. You will find information about the handling, care and maintenance of the machine and by observing them you will reduce downtimes and possible repair costs.

All people who operate, maintain, repair or transport this machine, are required to have read and understood this operating manual. In case of non-observance of the operating manual, the warranty claim is invalidated.

Hatzenbichler shall not be held liable for any damages or failures of the machine as a result of non-observance of the operating manual.

In order to ensure a safe and long-term operation of your machine, use only Hatzenbichler original spare parts. The use of non-original spare parts shall result in excluded guarantee claims or loss of warranty.

Any modification of the machine, which has not been authorized in writing by Hatzenbichler, shall result in excluded guarantee claims or loss of warranty.

Hatzenbichler recommends that you continue to use original spare parts even after the warranty period has expired, in order to ensure a safe and reliable operation of your machine.

The depictions in this manual may differ from your machine, as the depictions may also show additional equipment. We reserve the right to make any changes in the technical layout and design of the machine which are intended for its improvement.

As a proof of having received the machine and the operating manual, please immediately send back to us the acknowledgement of receipt, enclosed in this manual.

We at the Hatzenbichler company wish you much success.

2.2 Depictions

The following depictions are used in this operating manual.



DANGER

This symbol in a gray text box indicates a danger that can lead to a fatal or serious injury in the event of failure to follow the instructions!



CAUTION

This symbol in a gray text box indicates a danger that can lead to injury in the event of failure to follow the instructions.



NOTICE

This symbol indicates a note in a gray text box.

The machine is intended for normal use in the agricultural sector.

Any other use or use beyond the specified one is deemed to be not for the intended purpose.

The Hatzenbichler company shall not be liable for any resulting damages. The risk shall be borne solely by the user.

2.3 Warranty and service

Please check the machine for possible transport damages immediately upon receipt. Subsequent complaints due to transport damages cannot be accepted.

We provide a one-year factory guarantee from the date of delivery (your invoice or the delivery note and the acknowledgement of receipt shall be regarded as a guarantee certificate). This guarantee shall apply in case of material or construction faults and does not cover parts damaged by normal or excessive wear and tear.

The warranty shall be void in the following cases:

- » if damage is caused by an external forceful action
- » if there is an operating error
- » if the prescribed power limit KW/PS is exceeded
- » if the device is modified, extended or fitted with third-party spare parts without our consent.

The Hatzenbichler company would like you to be satisfied with our machine. Should you still have problems, please contact your sales partner.

In order to be able to process your request as quickly as possible, please provide us with the following information.

- » Customer number
- Name and address
- Name of the account manager
- Machine type and serial number
- Date of purchase and area performance
- Nature of the problem

2.4 Reasons for damages

Our machines are manufactured with the greatest care, however, even when used as intended, problems can still occur which can lead to a total breakdown of the machine.

such as:

- » damage to the machine due to external influences
- » worn out working tools
- » damaged or missing working tools
- » an incorrectly adjusted machine
- » unsuitable operating speed
- » lack of care and maintenance of the machine

It is therefore essential that you check the machine for completeness and proper functioning before each use. Check this also during operation.

No compensation can be claimed for damage that has not occurred on the machine. This also includes that no liability is accepted for damage resulting from incorrect operation or driving errors.

3 Safety

Read this manual carefully before you commission the machine or start working with it, and observe all safety instructions.

3.1 Intended use

The intended standard application of the machine is for mechanical weed control in arable farming and grassland.

Any other use of this machine shall be regarded as being not in conformity with the intended application. The Hatzenbichler company shall not be liable for any damage resulting from such actions. The operator alone shall be liable for the risks of such improper use.

The intended use also includes the observance of the operating manual and the adherence to the operation, maintenance and repair instructions prescribed by the manufacturer.

3.2 Employee staff

The machine may only be used, maintained and repaired by staff members who are familiar with it, who have been trained about possible dangers and meet the following minimum requirements:

- » they must be physically and mentally able to control the machine
- » they must have read and understood the Operating manual and be able to implement the information accordingly.
- » repair work may only be carried out by authorised specialist staff.

3.3 Maintenance

The operating manual describes such maintenance work, which the operator of the machine may carry out independently.

Activities which have not been described may only be carried out by authorised specialist personnel.

3.4 Operational safety

Depictions and information on technical data and weights in this Operating manual are subject to change without notice for the purpose of improvement.

The machine has been constructed in accordance with the state of the art technical achievements and the related adopted safety regulations. Nevertheless, in the process of use a risk of injury to the operator or third parties may arise.

- » The machine may only be used in good functional order, in accordance with the intended use, safety and risk awareness, and in compliance with the Operating manual!
- » Faults that may impair safety must be remedied immediately.
- » Any installation or conversion of non-Hatzenbichler products can negatively affect the constructional characteristics of the machine and thus impair the safety of people and the machine.
- » If the safety is no longer guaranteed due to defects, such defects must be remedied immediately.
- » Spare parts which are not originally supplied from Hatzenbichler, are not tested or approved. If spare parts from other manufacturers are used, this can, under certain circumstances, change the constructive characteristics of the machine and influence the safety of people and the machine. Hatzenbichler does not accept any liability for damages resulting from such use.
- » Safety labels on parts to be replaced must be replaced in any case.



DANGER

People or body parts may be gripped or smashed by hydraulically or mechanically driven machine parts.

- » The machine may only be put into operation if all necessary safety devices are fitted in place and are free of damage.
- » During operation or folding, no one is allowed to stay in the area of the machine.
- » Riding on the machine is strictly prohibited.
- » Maintenance and repair work may be carried out only when the machine is in standstill, and must be in compliance with all safety regulations.

3.5 Accidents prevention

To ensure a safe and accident-free work on and with the machine, it is essential to observe the following section.



DANGER

The general accident prevention regulations of the respective country must be observed.

- » There is a risk of injury when coupling and uncoupling the machine to and from the towing device of the tractor.
- » When parking the device, it is essential to secure it against rolling away unintentionally
- » The device may only be used by persons who know the regulations for transport on public roads.
- » Place the hitched machine on the ground before

3.6 Hydraulic system

Every hydraulic system is under high pressure, thus leaking fluid can cause serious injuries.



CAUTION

Observe the following points to avoid injuries.

- » Do not connect the hydraulic hoses to the tractor until the hydraulics are depressurized on the tractor and implement sides.
- » Hydraulic hoses must be checked regularly and replaced immediately if damaged or aged. The hoses must be replaced after six years at the latest. Replacement lines must comply with the technical requirements.
- » Before carrying out any work on the hydraulic system, the implement must be set down, the hydraulic system depressurized and all hydraulic connections to the tractor disconnected.

3.7 Transportation on public roads (main provisions)

Before using public roads, you must be familiar with the operation of the machine and all controls.

When transporting on public roads, close the shut-off valve on the cylinders to prevent unintentional folding of the machine.

The axle load and the total weight of the tractor must not be exceeded.

The attachment must be marked with warning signs or foils with a white-red diagonal bar (according to DIN, ÖNORM, or respective standards).

Parts that are hazardous to traffic or dangerous must be covered and additionally marked with warning signs or foils.

Warning signs or foils should not be more than 1.50 m above the roadway when the vehicle is in motion.

Lighting devices of the tractor must not be covered by the implement, otherwise they must be repeatedly attached to the implement.

The steering ability of the tractor must not be impaired or reduced by the attachment.

The device may only be used by persons who know the regulations for transport on public roads.

When transported on public roads, it is allowed to drive with max. 25 km/h.

The permissible transport widths and heights must be observed. Pay attention to the transport height, especially for power lines and bridges.



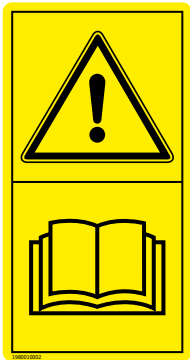
INDICATION

When driving on public roads, appropriate traffic equipment is mandatory.

- » Observe the country-specific regulations

3.8 Safety sticker

These stickers warn of danger points and are an important part of the machine. Missing or damaged safety stickers must be replaced immediately.



1980010002

Before commissioning the machine, read and follow the operating instructions!



1980010004

Riding on the machine is prohibited!



1980010005

When hitching up the machine and operating the hydraulics, make sure that there are no persons between the machines!



1980010006

Never reach into the crushing hazard area as long as parts can move there!



1980010003

Do not stay within the swiveling range of foldable machine parts!



1980010001

Caution with escaping high-pressure liquid!



1980010007

In transport position, the valve on the cylinders must be closed!



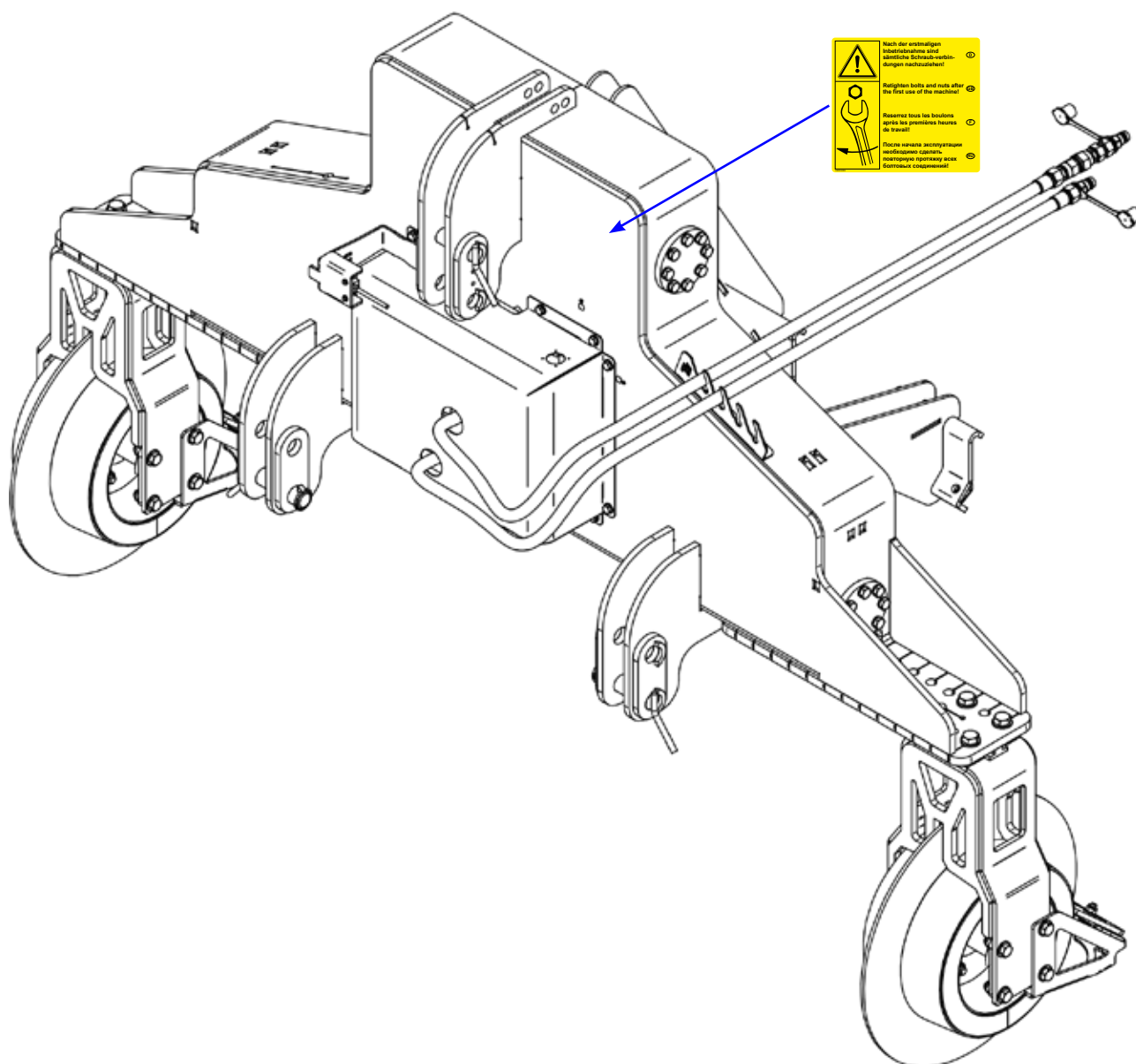
1980010008

After the first commissioning, all screw connections must be tightened!

! INDICATION

If safety stickers are damaged, they must be replaced.

» You will find the article number of the sticker on the lower left corner of each safety sticker.



4 Commissioning

- » Pay attention to the correct air pressure in the tractor rear tires when operating.
- » Additional wheel weights can be advantageous under difficult operating conditions. Refer to the tractor manufacturer's operating instructions.

4.1 Preparations on the tractor

- » The tractor must be sufficiently ballasted at the front to ensure steering and braking ability.

INDICATION

Please refer to the section on axle load range in these operating instructions.

- » The lifting struts must be set at the same height on the left and right.

4.2 Hitching up the machine:

- » Hitch the machine to the three-point, drawbar or ball hitch on the tractor, depending on the equipment.
- » Connect the hydraulic lines. In case of double-acting hydraulic connections, make absolutely sure that both hoses are connected to the tractor hydraulics. When connecting, make sure that the hoses are depressurized on the tractor and machine sides.
- » Connect the plug for the lighting and check the function.
- » Lift the machine.
- » Remove or raise the parking support (if available)
- » Fold in (for transport) or fold out side panels for the working position.

INDICATION

During transport, observe the transport position section in these operating instructions.

5 Technical data

Designation	Weight	Number of rows	tube frame	Attachment category
light	ca. 480 kg	up to 6	single	Cat-2
light with flanged wheels	ca. 600 kg	up to 6	single	Cat-2
standard	ca. 780 kg	6 to 8	double	Cat-3
heavy XL	ca. 1030 kg	from 8	double	Cat-3

5.1 Axle load calculation

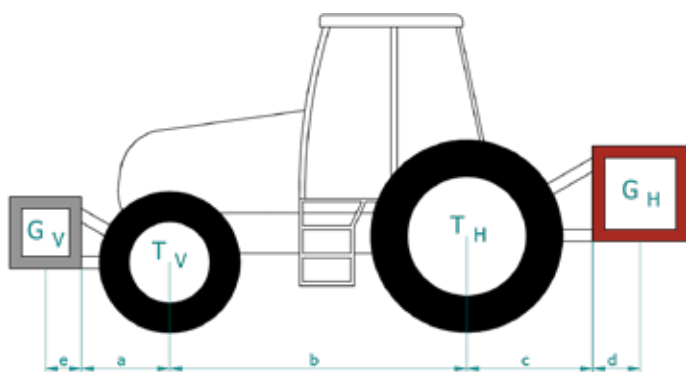
By hitching a machine in 3-point, this changes the total weight and axle loads of the towing machine. These values must not exceed the permissible weight.

The front axle of the tractor must always be loaded with 20% of the own weight.



CAUTION

Before road transport, check that the tractor is not overloaded and that the permissible weights are not exceeded.



- T_L Tractor own weight
- T_V Front axle load of the empty tractor
- T_H Rear axle load of the empty tractor
- G_H Total weight rear attachment
- G_V Total weight front attachment
- a Distance from center of lower link ball to center of front axle
- b Tractor wheelbase
- c Distance from center of rear axle to center of lower link ball
- d Distance from center of lower link ball to center of gravity
- e Distance from center of gravity front attachment (front ballast) to center of lower link ball

all weights in kg and dimensions in mm



INDICATION

For the dimension of the center of gravity, see chapter „Technical data - Dimensions“

Calculation of minimum ballasting front for rear mounted implements

$$G_{V\text{mind}} := \frac{G_H \cdot (c + d) - T_V \cdot b + 0.2 \cdot T_L \cdot b}{a + e + b}$$

Enter the result in the table below.

Calculation of the minimum rear ballasting for front mounted implements

$$G_{H\text{mind}} := \frac{G_V \cdot (a + e) - T_H \cdot b + 0.45 \cdot T_L \cdot b}{b + c + d}$$

Enter the result in the table below.

Calculation of the actual front axle load

$$T_{V\text{tat}} := \frac{G_V \cdot (a + e + b) + T_V \cdot b - G_H \cdot (c + d)}{b}$$

Enter the result and the permissible front axle load from the operating manual for the tractor in the table below.

Calculation of the actual total weight

$$G_{\text{tat}} := G_V + T_L + G_H$$

Enter the result and the permissible total weight from the operating manual for the tractor in the table below.

Calculation of the actual rear axle load

$$T_{H\text{tat}} := G_{\text{tat}} - T_{V\text{tat}}$$

Enter the result and the permissible rear axle load from the operating manual for the tractor in the table below.

Enter the value of the permissible tire load capacity from the tire manufacturer's documentation in the table. Be sure to multiply the value by the number of wheels mounted per axle.

In addition, check the calculated values by weighing.

5.2 Table for the ballast calculation

	actual value according to calculation		permissible value according to operation manual		permissible tire load capacity per axle
Minimum front ballast for rear mounted implements	$G_{Vmind} =$ kg				
Minimum rear ballast for front mounted implements	$G_{Hmind} =$ kg				
Total weight	$G_{tat} =$ kg	\leq	kg		
Front axle load	$T_{Vtat} =$ kg	\leq	kg	\leq	kg
Rear axle load	$T_{Htat} =$ kg	\leq	kg	\leq	kg

6 Care and maintenance

- For maintenance and servicing work, park the machine on level and stable ground and secure it against rolling away.

- After cleaning, check all hydraulic lines for leaks and loose connections. (check the hydraulic connections and hoses approx. every 50 operating hours).

- Inspect for chafing and damage. Immediately correct any defects found.

- Check nuts and bolts regularly for tightness and retighten if necessary. (For new devices, after 10 operating hours at the latest and again after approx. 20 operating hours.)

- Do not use a high-pressure cleaner to clean bearing and hydraulic parts.

- During the winter, protect the device from rust with environmentally friendly agents.

- Park the unit protected from the weather and store it in such a way that no unnecessary pressure is exerted on the working tools of the machine.



INDICATION

Hydraulic cylinders, bearings as well as electrical components should never be cleaned with high pressure or direct water jets.

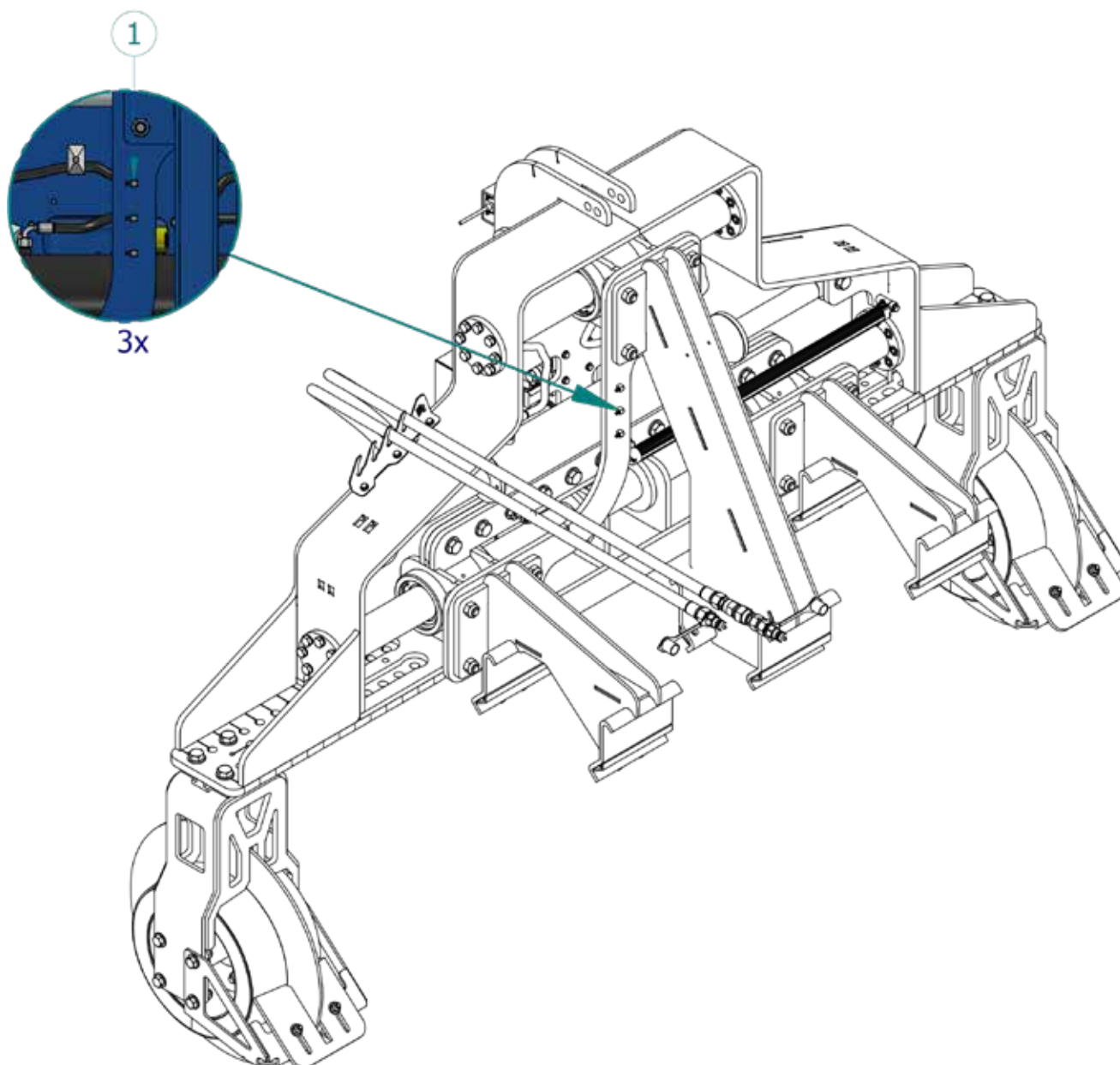
» non-observance can lead to damage of the parts

6.1 Machine lubrication

Lubricate the machine regularly and after each wash.

Lubrication points - grease: DIN 51825 - K2K-30

Pos. no:	Designation	Number of lubrication points on the machine	Interval
1	Mounting plate f. frame	3x	50 h



6.2 Machine maintenance

Since the maintenance intervals of the machine can be influenced by many factors (operating conditions, operating speed, travel speed, quality of the lubricants used...), the following intervals only serve as reference values and must be adjusted accordingly if required.

Designation	Remarks	Interval
Screw connections	After the first 10 and 20 hours of operation, check all screw connections for tightness. After that, stick to the interval.	weekly
Wheel nuts M12x1,5 (90 Nm $^{+10}_{-0}$)	<ul style="list-style-type: none"> » after the first use or 10 hours » again after another 10 hours » tighten daily until further tightening is no longer possible » acc. to the interval 	50 h


Hydraulic system



CAUTION

Before working on the hydraulic system, make sure that the machine is parked on solid ground and that the hydraulic system is depressurized.

» after operating the machine, allow the hydraulic system to cool down

Hydraulic connections	After the first 10 hours of operation, check all hydraulic connections, then according to the interval.	weekly
Hydraulic hoses	<ul style="list-style-type: none"> » Check hydraulic hoses for cracks, chafe marks » damaged hoses must be replaced immediately » after 6 years at the latest, the hydraulic hoses must be replaced. The date of manufacture can be found on the hydraulic hose (quarter/year).  <ul style="list-style-type: none"> » depending on operating conditions and weather, an earlier change may also be necessary 	50 h

Wheels

Wheels	Checking the wheels for damage	daily
	Check air pressure » 16x650: 3,5 bar	daily

Safety devices

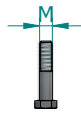
Warning signs and lighting	Check function and condition	daily
Safety and warning stickers	Check legibility and presence	daily


6.3 Tightening torques

INDICATION

Nuts and bolts must not be treated with oils or lubricants, as this affects the coefficient of friction.

The following torques are guide values for new screws without oil or lubricant.

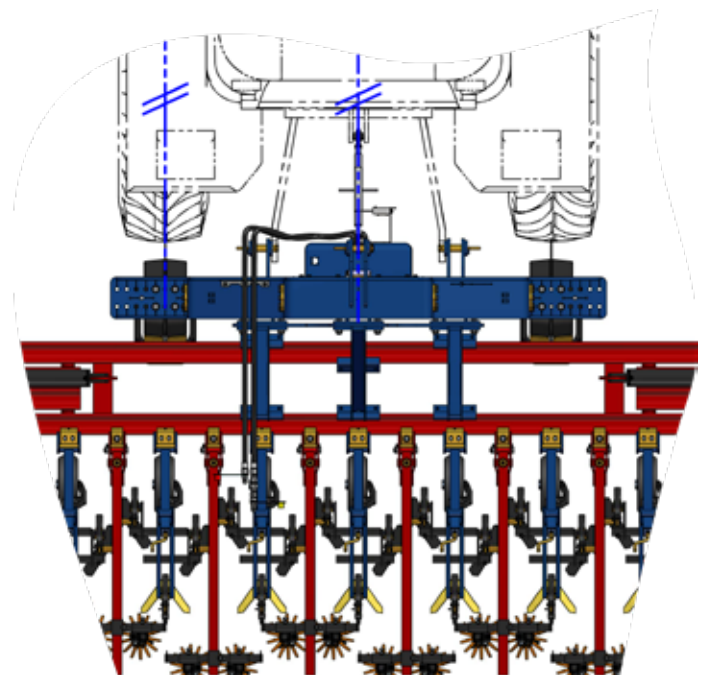
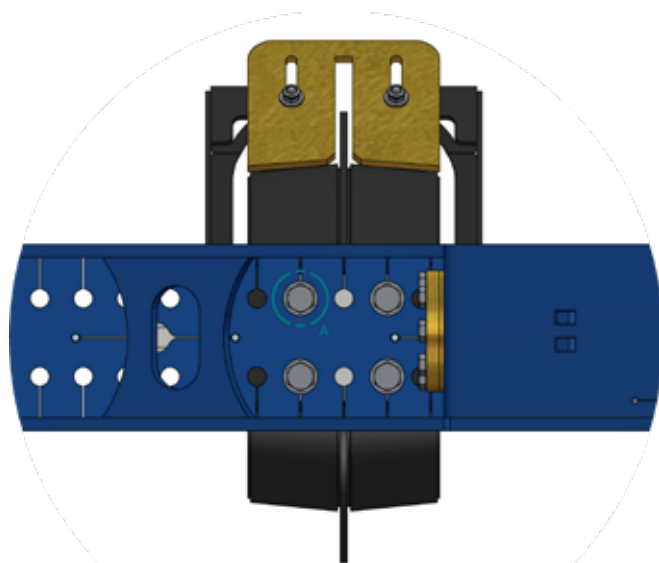
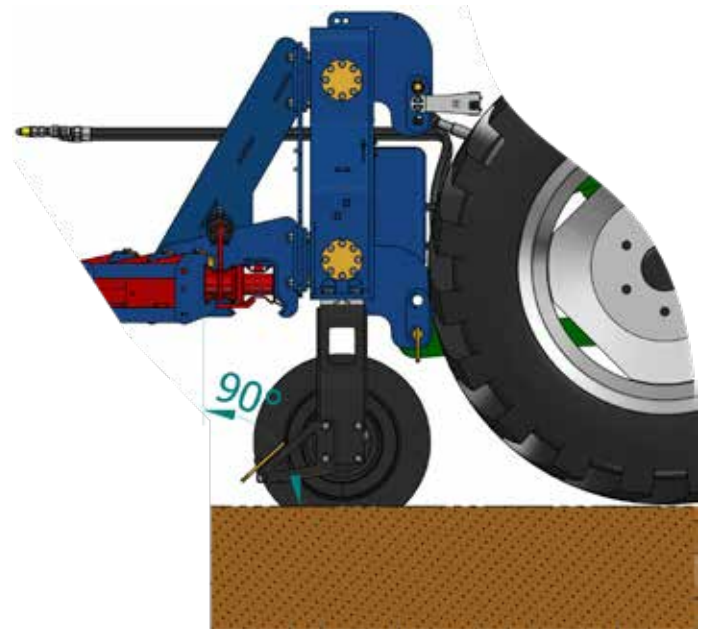
metric screws - standard thread		
	Tightening values in Nm for strength classes	
	8.8	10.9
M4	3,0	4,3
M5	6,0	8,5
M6	10,3	14,7
M8	25,5	35,3
M10	50,0	70,6
M12	87,3	122,6
M14	138,3	194,2

metric screws - standard thread		
	Tightening values in Nm for strength classes	
	8.8	10.9
M16	210,8	299,1
M18	289,3	411,9
M20	411,9	578,6
M22	559,0	784,5
M24	711,0	1000,0
M27	1049,0	1481,0
M30	1422,0	2010,0

7 Setting the chipper

7.1 Mounting and adjusting the automatic steering

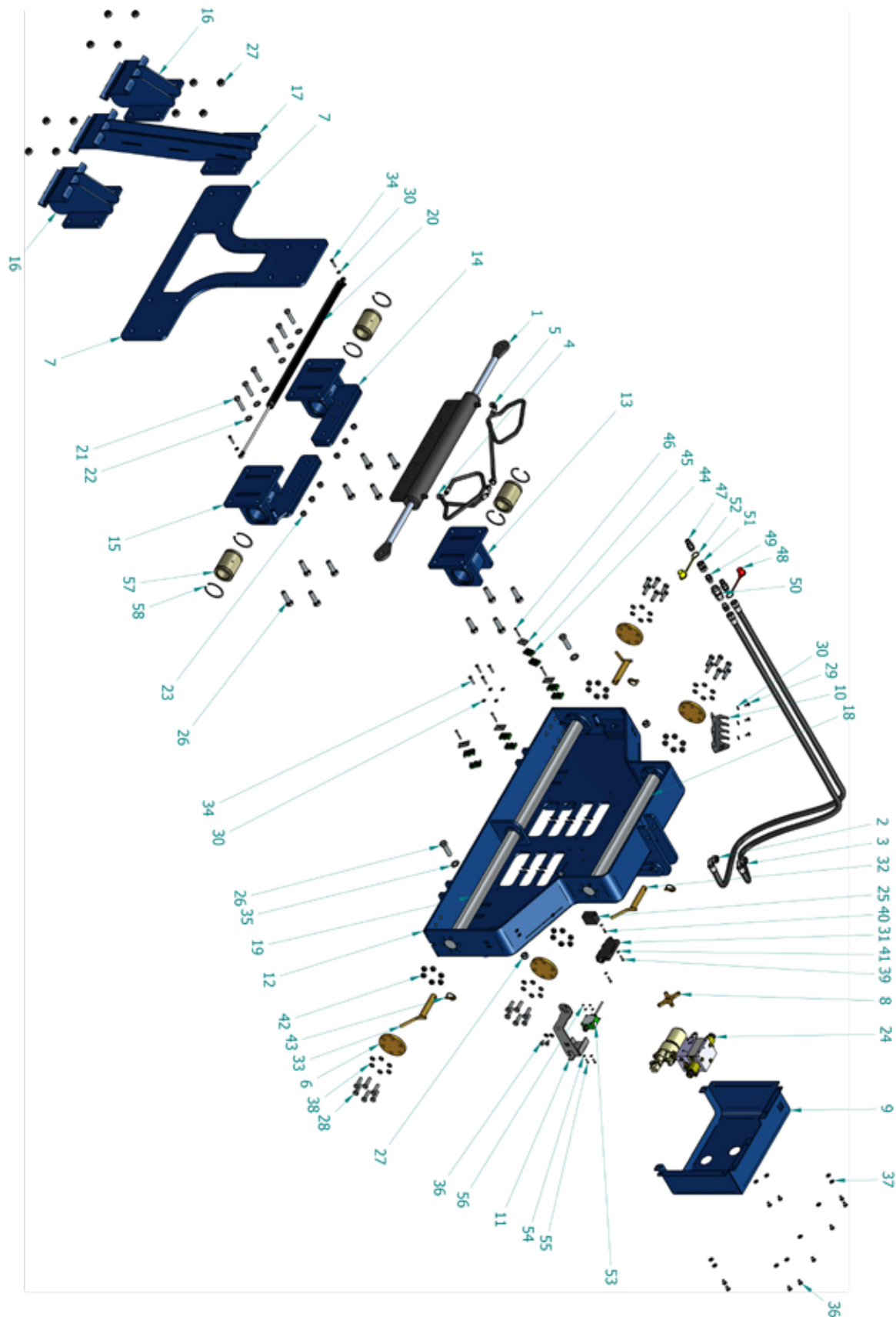
- » When adjusting the flanged wheels, the machine must be lifted from the ground using the tractor's hydraulics.
- » Loosen screws
- » The support wheels must be adjusted so that they run parallel behind the tractor tires (see following figures)
- » Tighten screws again



Adjustment of the flanged wheels

8 Spare parts list

8.1 Shifting frame light



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Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
1912010015	1	Double cylinder 60/30/250	1
1912020157	2	Hydraulic hose DN16 bent-straight l=1600mm	1
1912020156	3	Hydraulic hose DN16 bent-straight l=1500mm	1
1912020155	4	Hydraulic hose DN8 bent-bent l=1400mm	1
1912020155	5	Hydraulic hose DN8 bent-bent l=1400mm	1
0299010433	6	Cover f. piston rod	4
0201020002	7	Mounting plate f. frame standard-light	1
0299010430	8	Distance f. Hydr.-block V-2019	1
0299010431	9	Cover f. Shifting-frame V-2022	1
0199010401	10	Hose holder f. tractor connection left	1
0299010432	11	Holder f. OL switch MK4HD	1
0201010006	12	Base frame light V2022	1
0201030021	13	Sliding element top f. LPAR60 V2022	1
0201030022	14	Sliding element bottom left f. LPAR60 V2022	1
0201030023	15	Sliding element bottom right f. LPAR60 V2022	1
0201030009	16	UL-Mounting trestle short	2
0201030008	17	OL-Mounting trestle short	1
1912120008	18	Piston rod Ø60 l=764mm	1
1912120007	19	Piston rod Ø60 l=1464mm	1
1918030003	20	Linear potentiometer LWG_0600	1
1901010144	21	Hexagon head screw DIN 933 M16x70	6
1908010015	22	Washer M16 - DIN134	6
1902010014	23	Locknut M16 - DIN 985	6
1918030013	24	Hydraulics system	1
1918030012	25	Relay f. Linear potentiometer	1
1901010051	26	Hexagon head screw DIN 933 M20x70	14
1902010001	27	Locknut M20 - DIN 985	14
1901010081	28	Hexagon head screw DIN 933 M14x50	24
1901010073	29	Hexagon head screw DIN 933 M8x16	3
1908010010	30	Washer M8 - DIN 134	9
1918030006	31	CAM-starter-Kit	1
1903020006	32	OL-bolt Cat-2 - l=140mm	1
1903020006	33	UL-bolt Cat-2 - l=140mm	2
1901010146	34	Hexagon head screw DIN 933 M8x40	6
1908010020	35	Washer M20 - DIN134	2
1901010066	36	Hexagon head screw DIN 933 M10x16	12
1908010007	37	Washer M10 - DIN134	12
1901100007	38	Nordlock washer M14	24
1901070017	39	Cylinder screw DIN 912 - M6x25	2
1901070009	40	Cylinder screw DIN 912 - M6x16	1
1908010008	41	Washer M6 - DIN134	3
1902010004	42	Locknut M14 - DIN 985	24
1904010002	43	Hinged cotter pin large Ø10mm	3

Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
1912070013	44	Stauff clamp size 2 Ø15mm - double	8
1912070012	45	Stauff clamp cover size 2	4
1901010090	46	Hexagon head screw DIN 931 M6x50	4
1912030008	47	18L Push Pull Plug	2
1912040001	48	Dust cap red	1
1912030004	49	straight screw-in fitting GE 18L - 1/2"	2
1912030036	50	12L Check valve, connector G1/2" -14	1
1912030037	51	Double nut 18L	1
1912040006	52	Dust cap Yellow	1
1918030004	53	Sensor working position	1
1908010014	54	Washer M5 - DIN134	4
1901010040	55	Hexagon head screw DIN 933 M5x20	2
1902010011	56	Locknut M5 - DIN 985	2
1906030010	57	Linear plain bearing LPAR60	3
1904030009	58	Circlip DIN 472 - 90x3	6

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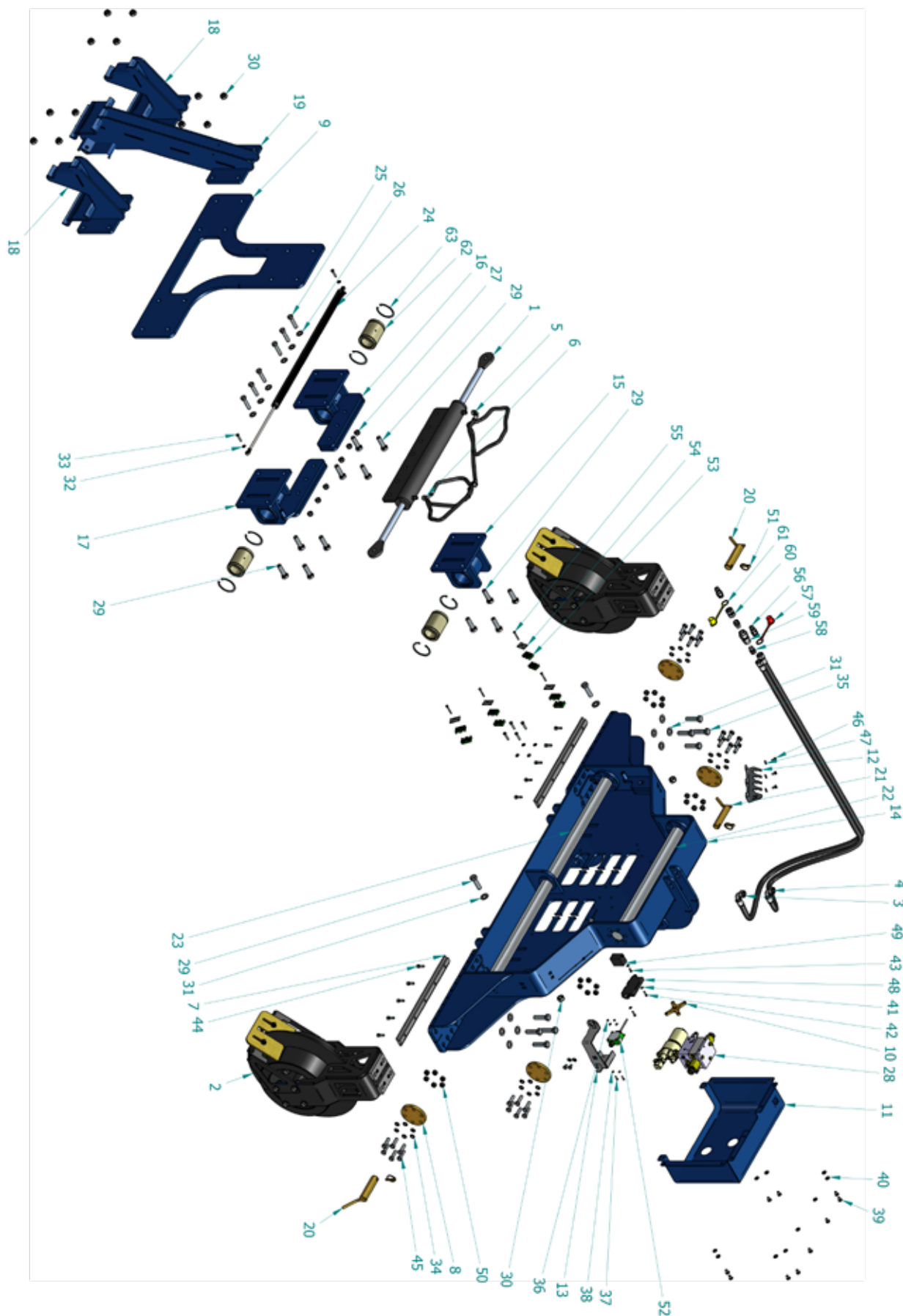
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8.2 Shifting frame standard



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Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
1912010015	1	Double cylinder 60/30/250	1
0200160018	2	Flanged wheel complete f. VR V2022	2
1912020157	3	Hydraulic hose DN16 bent-straight l=1600mm	1
1912020156	4	Hydraulic hose DN16 bent-straight l=1500mm	1
1912020155	5	Hydraulic hose DN8 bent-bent l=1400mm	1
1912020155	6	Hydraulic hose DN8 bent-bent l=1400mm	1
0299050007	7	Guide rail f. SF standard V2022	2
0299010433	8	Cover f. piston rod	4
0201020002	9	Mounting plate f. frame standard-light	1
0299010430	10	Distance f. Hydr.-block V-2019	1
0299010431	11	Cover f. Shifting-frame V-2022	1
0199010401	12	Hose holder f. tractor connection left	1
0299010432	13	Holder f. OL switch MK4HD	1
0201010007	14	Base frame standard V2022	1
0201030021	15	Sliding element top f. LPAR60 V2022	1
0201030022	16	Sliding element bottom left f. LPAR60 V2022	1
0201030023	17	Sliding element bottom right f. LPAR60 V2022	1
0201030007	18	UL-Mounting trestle medium	2
0201030006	19	OL-Mounting trestle medium	1
1903010003	20	UL-bolt cat-3	2
1903020003	21	OL-bolt cat-3	1
1912120008	22	Piston rod Ø60 l=764mm	1
1912120007	23	Piston rod Ø60 l=1464mm	1
1918030003	24	Linear potentiometer LWG_0600	1
1901010144	25	Hexagon head screw DIN 933 M16x70	6
1908010015	26	Washer M16 - DIN134	6
1902010014	27	Locknut M16 - DIN 985	6
1918030013	28	Hydraulics system	1
1901010051	29	Hexagon head screw DIN 933 M20x70	14
1902010001	30	Locknut M20 - DIN 985	14
1908010020	31	Washer M20 - DIN134	10
1908010010	32	Washer M8 - DIN134	6
1901010146	33	Hexagon head screw DIN 933 M8x40	6
1901100007	34	Nordlock washer M14	24
1901010145	35	Hexagon head screw DIN 933 M20x75	8
1902010011	36	Locknut M5 - DIN 985	2
1901010040	37	Hexagon head screw DIN 933 M5x20	2
1908010014	38	Washer M5 - DIN134	4
1901010066	39	Hexagon head screw DIN 933 M10x16	12
1908010007	40	Washer M10 - DIN134	12
1908010008	41	Washer M6 - DIN134	3
1901070017	42	Cylinder screw DIN 912 - M6x25	2
1901070009	43	Cylinder screw DIN 912 - M6x16	1

Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
1901070015	44	Cylinder screw DIN 912 - M10x30	10
1901010081	45	Hexagon head screw DIN 933 M14x50	24
1901010073	46	Hexagon head screw DIN 933 M8x16	3
1908010003	47	Washer M10 - DIN125	3
1918030006	48	CAM-starter-Kit	1
1918030012	49	Relay f. Linear potentiometer	1
1902010004	50	Locknut M14 - DIN 985	24
1904010002	51	Hinged cotter pin large Ø10mm	3
1918030004	52	Sensor working position	1
1912070013	53	Stauff clamp size 2 Ø15mm - double	8
1912070012	54	Stauff clamp cover size 2	4
1901010090	55	Hexagon head screw DIN 931 M6x50	4
1912030008	56	18L Push Pull Plug	2
1912040001	57	Dustcap red	1
1912030004	58	straight screw-in fitting GE 18L - 1/2"	2
1912030036	59	12L Check valve, connector G1/2" -14	1
1912030037	60	Double nut 18L	1
1912040006	61	Dust cap yellow	1
1906030010	62	Linear plain bearing LPAR60	3
1904030009	63	Circlip DIN 472 - 90x3	6

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Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
0200160018	1	Flanged wheel complete f. VR V2022	2
1912020155	2	Hydraulic hose DN8 bent-bent l=1400mm	1
1912020155	3	Hydraulic hose DN8 bent-bent l=1400mm	1
1912020156	4	Hydraulic hose DN16 bent-straight l=1500mm	1
1912020157	5	Hydraulic hose DN16 bent-straight l=1600mm	1
1999010047	6	Hexagon head screw DIN 933 M20x70 with internal thread	1
0299050006	7	Guide rail f. SF heavy V2022	2
0201020001	8	Mounting plate f. frame heavy	1
0201020004	9	Cover f. piston rod V2018	4
0299010431	10	Cover f. Shifting-frame V-2022	1
0299010430	11	Distance f. Hydr.-Block V-2019	1
0199010401	12	Hose holder f. tractor connection left	1
0299010432	13	Holder f. OL switch MK4HD	1
0201010005	14	Base frame heavy V2022	1
0201030016	15	Sliding element right LPAR80 V2022	1
0201030017	16	Sliding element bottom left LPAR80 V2022	1
0201030003	17	Sliding element top f. LPAR80 V2022	1
0201030005	18	UL-Mounting trestle long	2
0201030004	19	OL-Mounting trestle long	1
1903010003	20	UL-bolt cat-3	2
1903020003	21	OL-bolt cat-3	1
0299020313	22	Spacer f. pathfinder VR heavy V2022	1
1912010043	23	Double cylinder 100/50/250 Shifting frame heavy	1
1912120005	24	Piston rod Ø80 l=1770	1
1912120006	25	Piston rod Ø80 l=770	1
1918030003	26	Linear potentiometer LWG_0600	1
1906030009	27	Linear plain bearing LPAR80	3
1904030007	28	Circlip DIN 472 - 120x4	6
1901010051	29	Hexagon head screw DIN 933 M20x70	25
1902010001	30	Locknut M20 - DIN 985	26
1901010081	31	Hexagon head screw DIN 933 M14x50	32
1918030013	32	Hydraulics system	1
1918030004	33	Sensor working position	1
1918030006	34	CAM-Starter-Kit	1
1918030012	35	Relay f. Linear potentiometer	1
1908010010	36	Washer M8 - DIN 134	11
1901010073	37	Hexagon head screw DIN 933 M8x16	3
1908010007	38	Washer M10 - DIN134	12
1901010066	39	Hexagon head screw DIN 933 M10x16	12
1901070017	40	Cylinder screw DIN 912 - M6x25	2
1908010008	41	Washer M6 - DIN134	3
1901070009	42	Cylinder screw DIN 912 - M6x16	1
1904010002	43	Hinged cotter pin large Ø10mm	3

Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
1908010020	44	Washer M20 - DIN134	22
1901010145	45	Hexagon head screw DIN 933 M20x75	8
1901100007	46	Nordlock washer M14	32
1901010040	47	Hexagon head screw DIN 933 M5x20	2
1908010014	48	Washer M5 - DIN134	4
1902010011	49	Locknut M5 - DIN 985	2
1901010146	50	Hexagon head screw DIN 933 M8x40	5
1901010147	51	Hexagon head screw DIN 933 M8x50	1
1902010004	52	Locknut M14 - DIN 985	32
1912070013	53	Stauff clamp size 2 Ø15mm - double	8
1912070012	54	Stauff clamp cover size 2	4
1901010090	55	Hexagon head screw DIN 931 M6x50	4
1912030004	56	straight screw-in fitting GE 18L - 1/2"	2
1912030036	57	12L Check valve, connector G1/2" -14	1
1912030037	58	Double nut 18L	1
1912030008	59	18L Push Pull Plug	2
1912040006	60	Dust cap yellow	1
1912040001	61	Dust cap red	1
1901070015	62	Cylinder screw DIN 912 - M10x30	10

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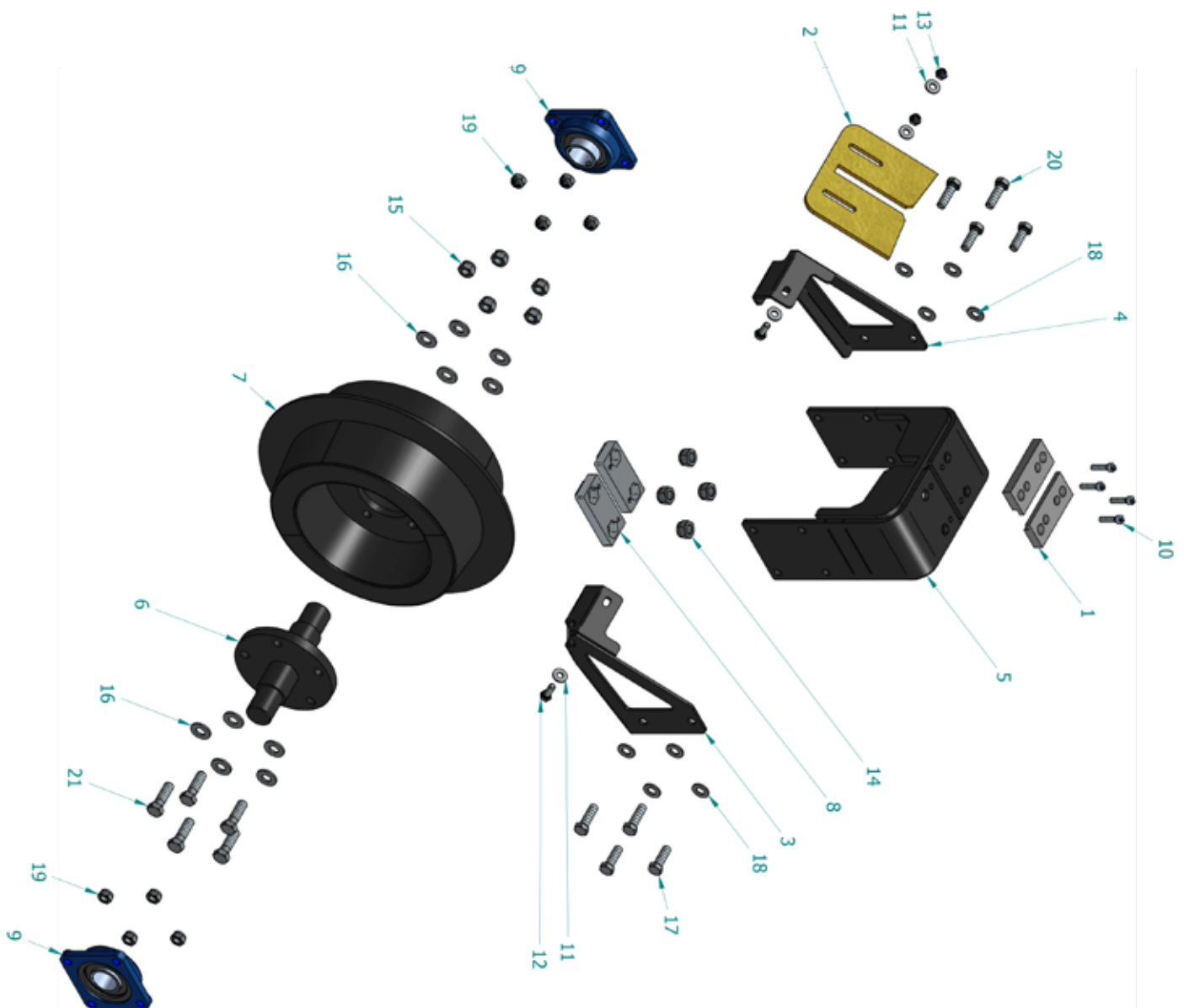
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8.4 Flanged wheel



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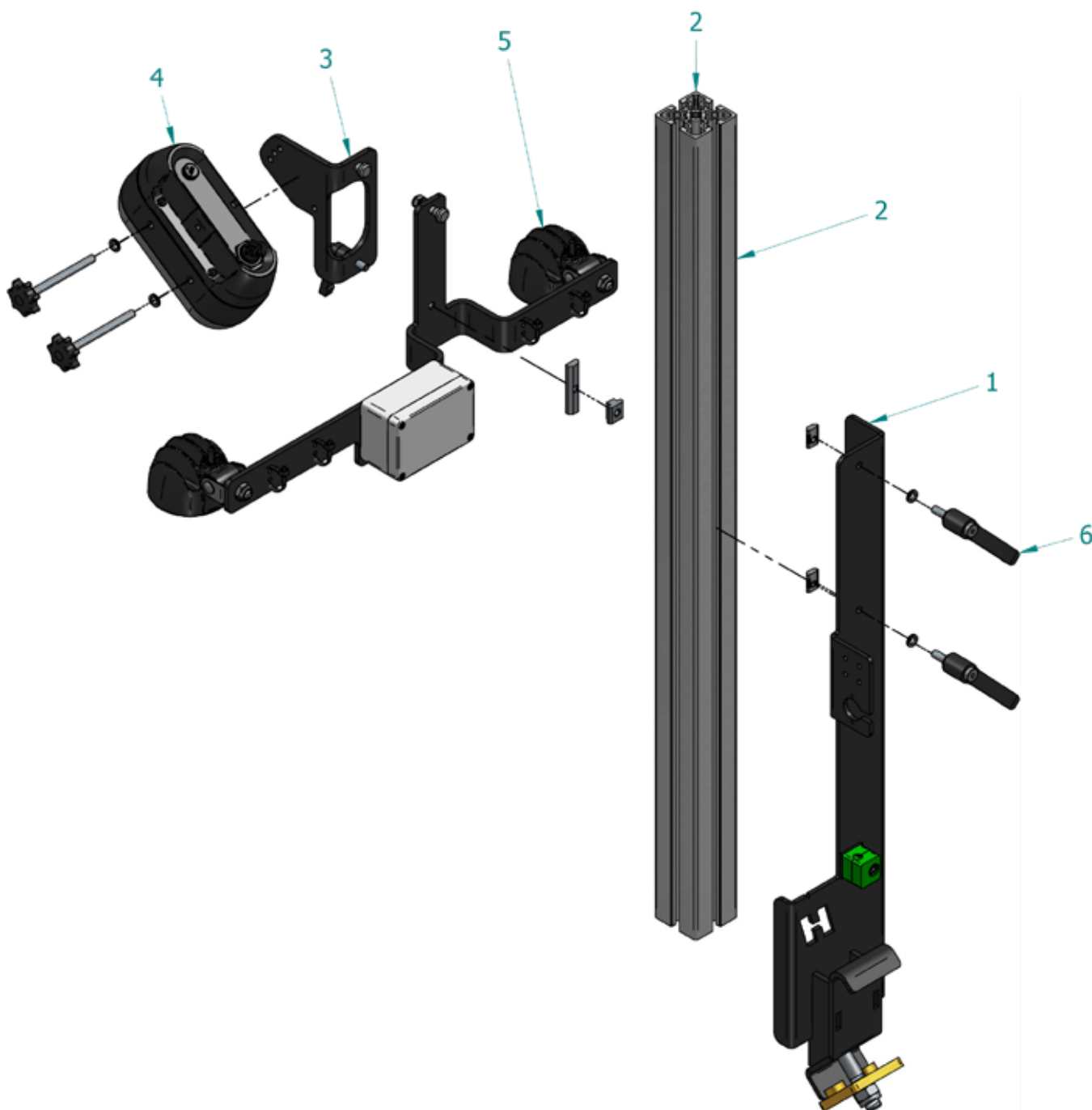
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Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
0299050004	1	Mounting rail f. guide rail VR V2022	2
0299010362	2	Wiper plate for support wheel	1
0206020022	3	Retaining plate right f. wiper 2022	1
0206020021	4	Retaining plate left f. wiper 2022	1
0201030018	5	Holder f. flanged wheel VR USA-CAN V2022	1
0206020018	6	Mounting f. flanged wheel large	1
0201030020	7	Flanged wheel USA V2017	1
0201030019	8	Basket f. M20 nut support wheel shifting frame	2
1906030020	9	Flange bearing UCF210	2
1901070016	10	Cylinder screw DIN 912 - M10x40	4
1908010001	11	Washer M12 - DIN134	4
1901010089	12	Hexagon head screw DIN 933 M12x35	2
1902010003	13	Locknut M12 - DIN 985	2
1902010001	14	Locknut M20 - DIN 985	4
1902010012	15	Hexagon nut DIN 985 M18	5
1908010017	16	Washer M18 - DIN134	10
1901010108	17	Hexagon head screw DIN 933 M16x50	4
1908010015	18	Washer M16 - DIN134	8
1902010014	19	Locknut M16 - DIN 985	8
1901010114	20	Hexagon head screw DIN 933 M16x55	4
1901010141	21	Hexagon head screw DIN 931 M18x60	5

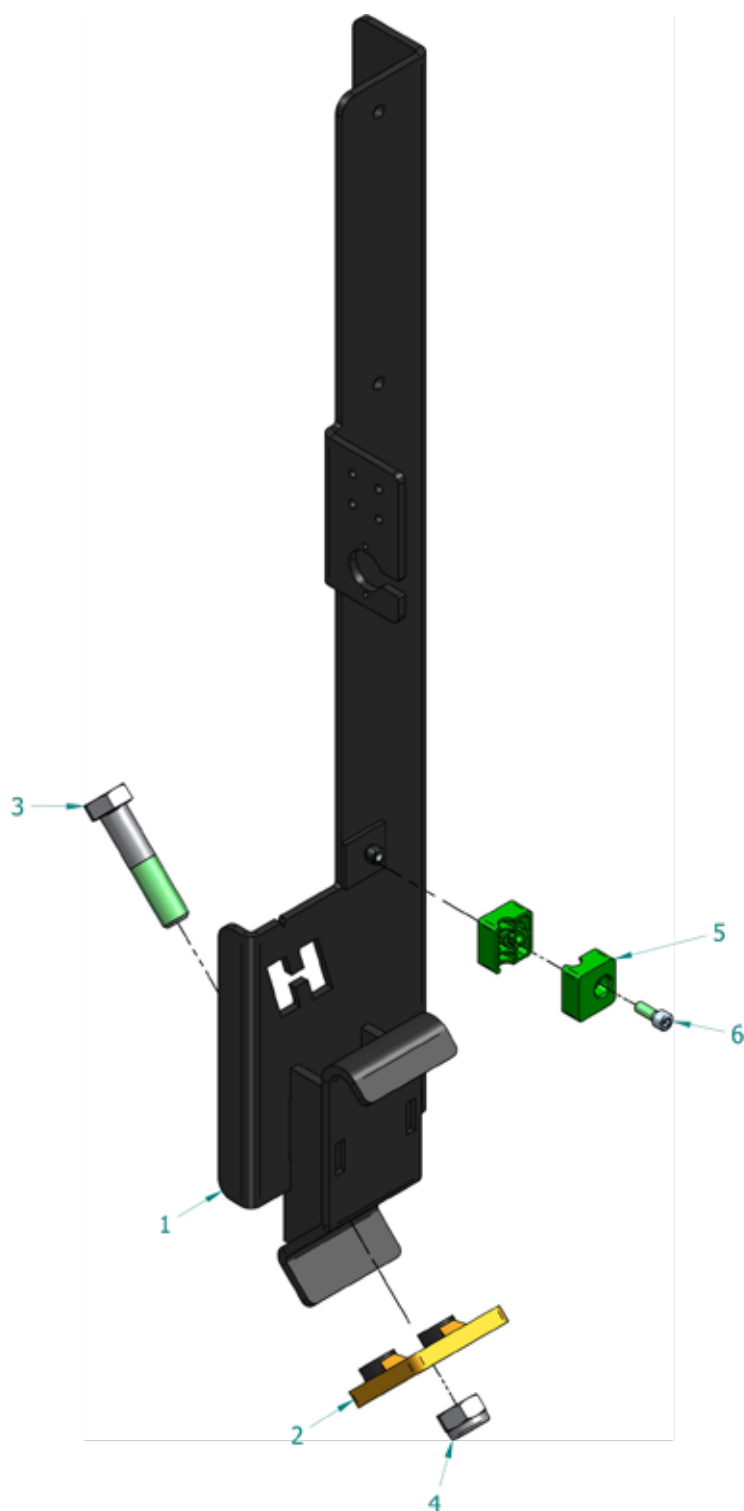
8.5 Camera holder



Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
0200240001	1	Camera holder V-2019/2 - mounted	1
1918120002	2	MK4HD Alu profile	1
1918120004	3	MK4HD Camera mount with star grips	1
1918120003	4	MK4HD Camera	1
1918120005	5	MK4HD Light package - mounted	1
1918120001	6	Clamping lever + sliding block with Nordlock washers	2

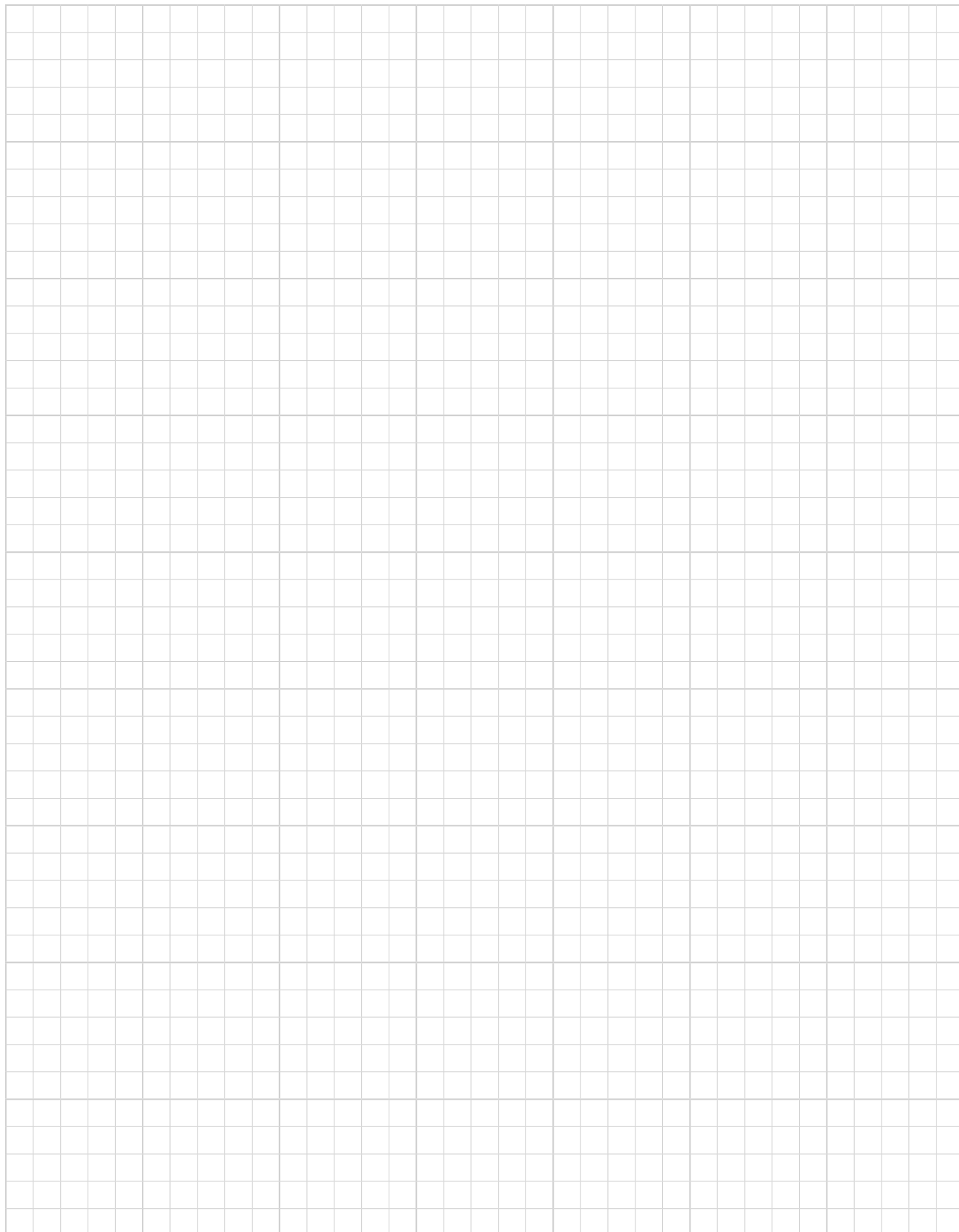
! INDICATION

Item 5 „MK4HD light package - fitted“ only with additional equipment.



Art.Nr.:	Pos.-Nr.	Bezeichnung	Menge
0222010001	1	Camera holder V-2019/2	1
0202010006	2	1-hole clamping plate dam harrow	1
1901010129	3	Hexagon head screw DIN 931 M16x70	1
1902010014	4	Locknut M16 - DIN 985	1
1912070020	5	Stauff clamp size 1 Ø10mm	2
1901070009	6	Cylinder screw DIN 912 - M6x16	1

Notes



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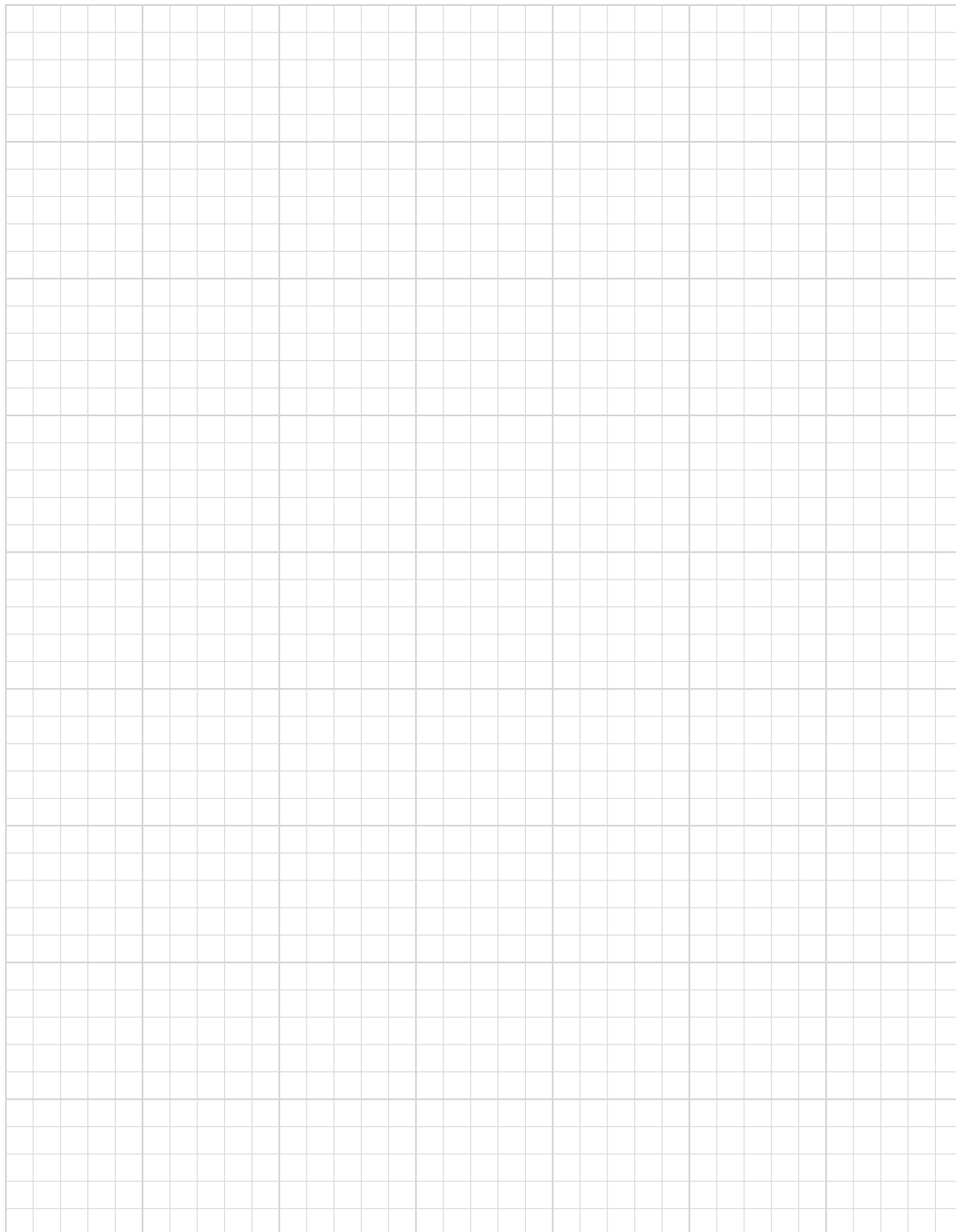
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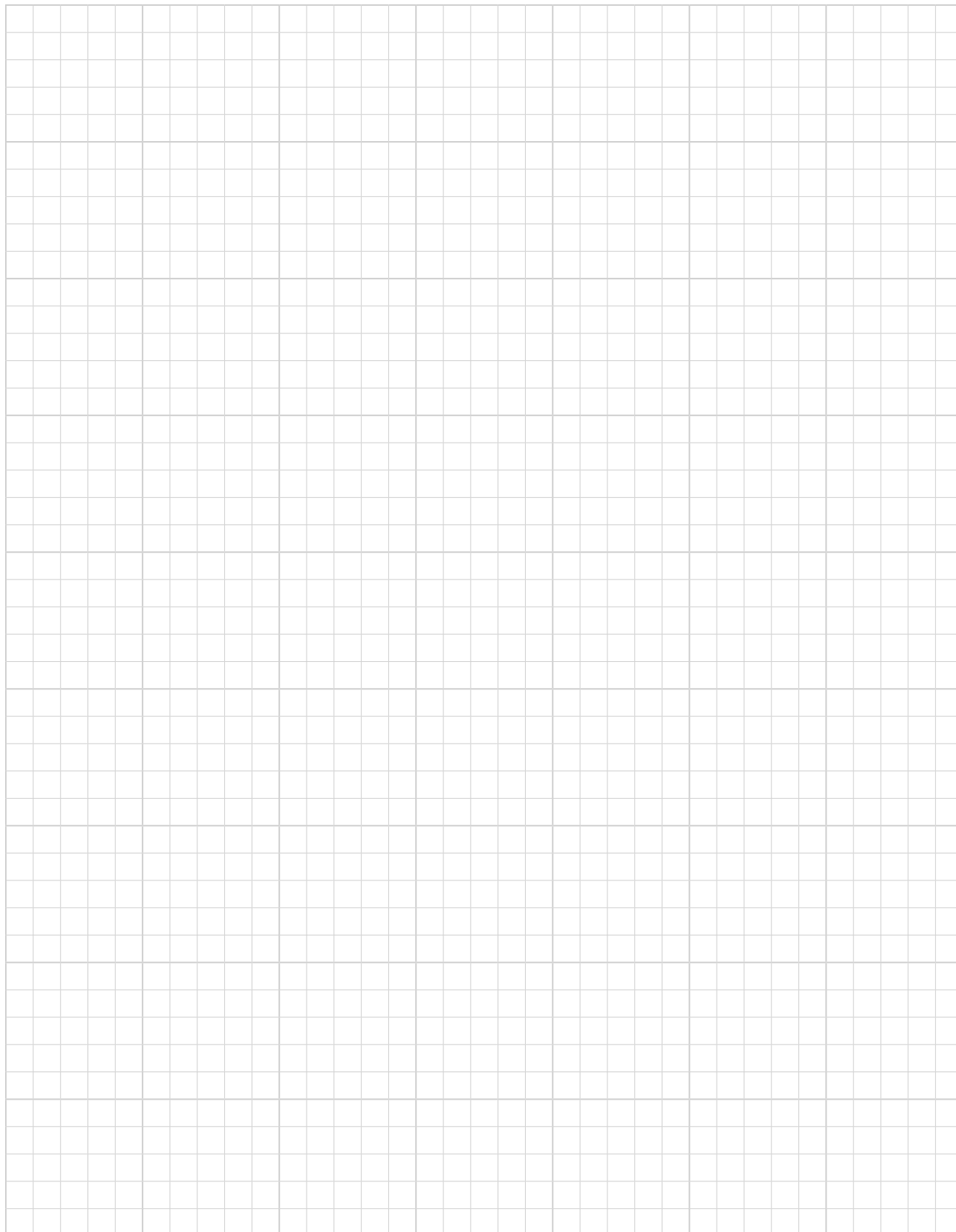
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Notes



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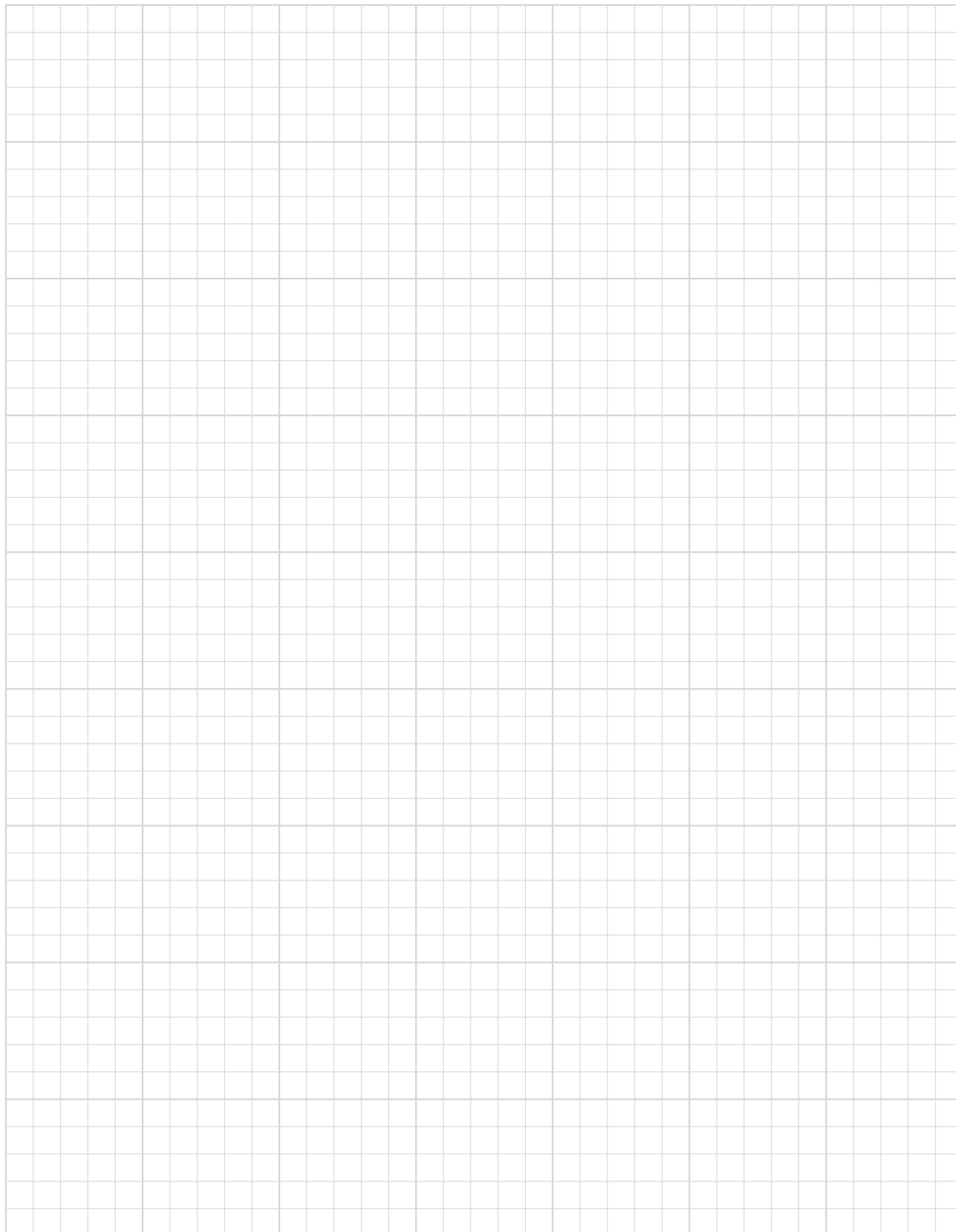
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Notes





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