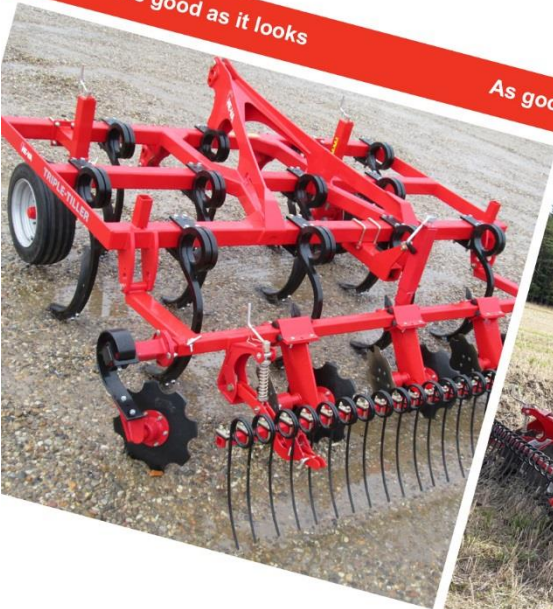


UK

HE-VA

Operating Instructions
Spare Parts List
Declaration of Conformity

As good as it looks



As good as it looks



As good as it looks

As good as it looks



Warning: Before using the machine it is important to read the operation instructions.

Triple-Tiller Airy
Rigid: 3.0 m - 3.5 m - 4.0 m

 **HE-VA**

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EC- Declaration of Conformity

in accordance with the EU Machinery Directive 2006/42/EC
applicable as from December 29th 2009:

HE-VA ApS
N. A. Christensensvej 34,
DK-7900 Nykøbing Mors

hereby confirms that the following machine has been manufactured in accordance with the Council
Directive 2006/42/EC.

The declaration comprises the following machine:

Triple-Tiller Airy

3,0 / 3,5 4,0 m (rigid)

No : _____

Nykøbing d. 01. oct. 2011



Villy Christiansen

The undersigned is furthermore authorized to compile technical documentation for the above machine.

Machine description

Range of application

HE-VA Triple-Tiller Airy stubble harrow is available in 3,00 m - 3,50 m and 4,00 m working width.

All models are rigid and lift-mounted with a row spacing of only 25 cm. The 3 rows of tines are mounted at a height of 85 cm and with 70 cm interval. The tine spacing is 75 cm.

Triple-Tiller Airy is supplied standard with 35 x 35 cm double-twisted spring tines, fitted with 75x12 mm reversible and adjustable wearing points, able to work as deep as 20 cm.

Extra equipment includes our "Quick change system" for mounting chisel points or the 260 mm wide wing shares. Behind the harrow section, the Triple-Tiller Airy has disc eradicators with centre spindle adjustment.

Technical specifications

Model:

Working width	3,0 m.	3,5 m.	4,0m
Transport width	3,0 m.	3,5 m.	4,0m
Machine length	3,35 m	3,35m	3,35m
Power requirement	100-200HP	120-240HP	140-250HP
No. of double-acting outlets	1	1	1
No. of tines	12 pcs	14 pcs	16 pcs
Weight:	1360 kg	1470 kg	1580 kg

Wheels	200/60 x 14,5
Tyre pressure	4 bar / 60 p.s.i.
Voltage	12 volt
Working speed	6-12 km/h

Triple-Tiller Airy is in conformance with DS/ISO 11001-1, three-point mounted.

Delivery check

Preparation of the machine

Check:

- the machine for any damages.
- for transport damage to the paint.
- hydraulic hoses for cuts and other damage. Check that none of the other hydraulics components were damaged during transport.
- that the frame has not been damaged.
- that the transport wheels are secure and in good condition.
- air pressure level according to technical specifications.
- that all wearing points are intact.
- that all distance clips for depth adjustment are included.
- that all light systems are in working order (if any such system is mounted).

Check the torque:

- wheel bolts 386 NM
- 6 pcs bolts 541 NM

Check machine functioning (tractor needed):

- raising – lowering – hydraulic unfolding
- spindle adjustable levelling discs / levelling tines
- spindle adjustable support wheels

Safety instructions

Do not start-up the machine if there are persons in exposed positions** within a hazardous area*.

When persons are in exposed positions (e.g. in connection with adjustment, maintenance, attachment and uncoupling), the following conditions must be observed:

1. The machine must be lowered to firm ground.
2. The hydraulics must be relieved.
3. The tractor must be stopped and the key removed from the ignition switch.
4. The driver must ensure that no persons are staying in exposed positions during the operation.

* Hazardous area: On and under the machine within a distance of 10 m from the machine.

** Person in exposed position: Any person who is staying wholly or partly within a hazardous area.

Most accidents that happen in connection with the operation, transport and maintenance of machines are caused by non-compliance with the most elementary safety conditions.

Therefore it is vital that anybody working at the machine carefully complies with the safety instructions as well as other instructions applying to the machine.

The machine may only be operated, maintained and repaired by persons, who are familiar with this work and who are further familiar with the possible elements of danger with this particular machine.

ATTENTION !! Rotary parts and loose clothes are a dangerous combination.

IMPORTANT !! In connection with the risk of parts falling down, it may endanger the lives of persons staying on the base frame of the machine, when it is operated attached to a tractor.

Transport on public roads:

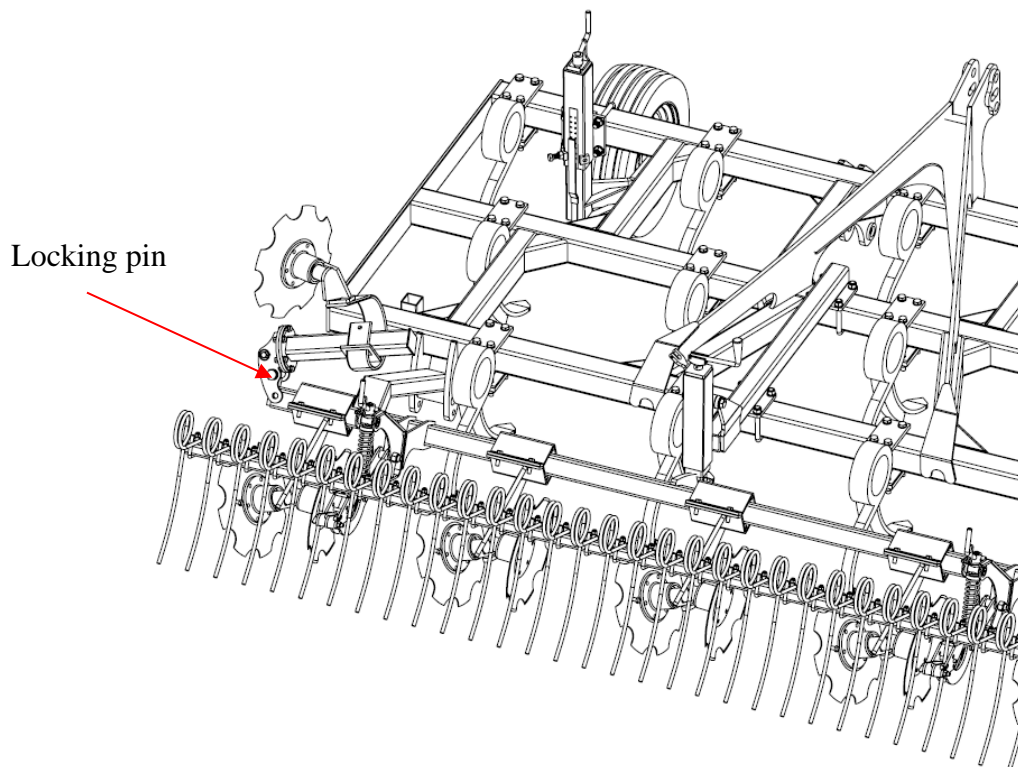
Check before transport on public roads that the attachment of the machine at the tractor is in accordance with the local rules and regulations in force (permitted total weight, permitted axle load, transport width, lights, warning signs, brakes etc.).

Front axle load:

After the attachment of the machine and at maximum load, the driving properties of the tractor must be ensured. Check that the front axle is sufficiently loaded. As a minimum, the front axle load must be 20% of the tractor weight. Permitted axle load and permitted total weight for the tractor must always be observed.

Edge equipment

Before transport, the edge equipment must be folded and locked on both sides using the pins. See drawing below!



NB! The driving, controlling and braking properties are affected by the attached machine combination.

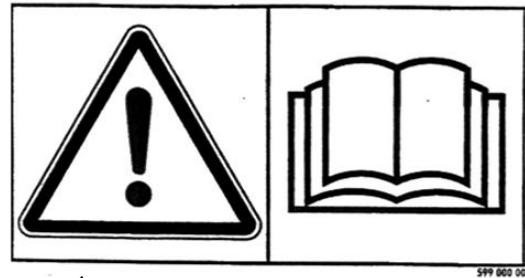
Labels on the machine

There are several labels on the machine advising on **safety precautions** and practical use.

Please study these instructions carefully, and make sure the operator are familiar with all labels and safety instructions. Keep the labels clean and legible – if not, they should be replaced.



A



B



C

Explanation:

- A Plate with number and year of manufacture.
- B Study the safety instructions carefully before operating the machine, and observe all safety precautions.
- C Tighten up all bolts regularly.
If this is not done, our warranty obligations will no longer apply.

Start-up

General information

Rigid models require 0 – 1 double-acting oil outlets (see technical specifications p. 5)

Attachment (rigid lift-mounted machines)

1. Reverse the tractor to the machine and attach it.
2. Lift the machine to maximum transport height.

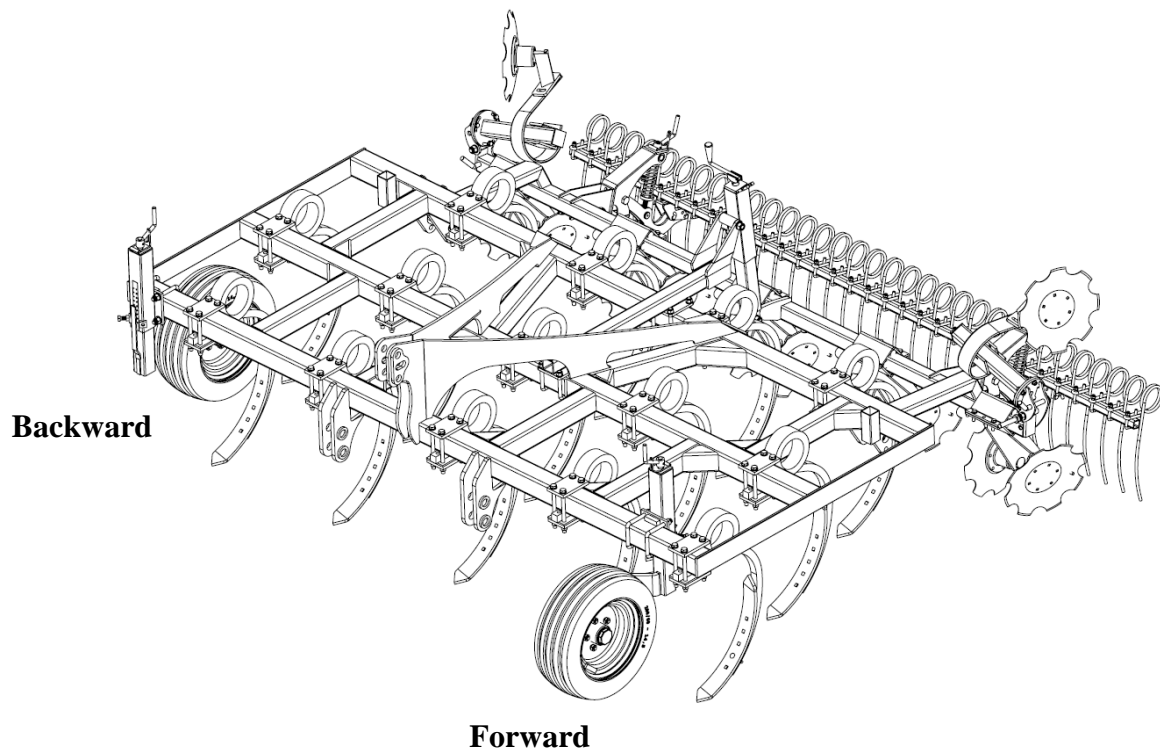
Uncoupling (rigid lift-mounted machines)

1. Lower the machine onto level, firm ground, and release all hydraulic hoses.
2. Lower the support leg.
3. The machine may now be uncoupled.

Placement of support wheels

The support wheels can be placed in a forward or backward position. **See drawing below.**

If the tractor does not have twin tires, the forward position assures a better clearance for the harrow.



Maintenance

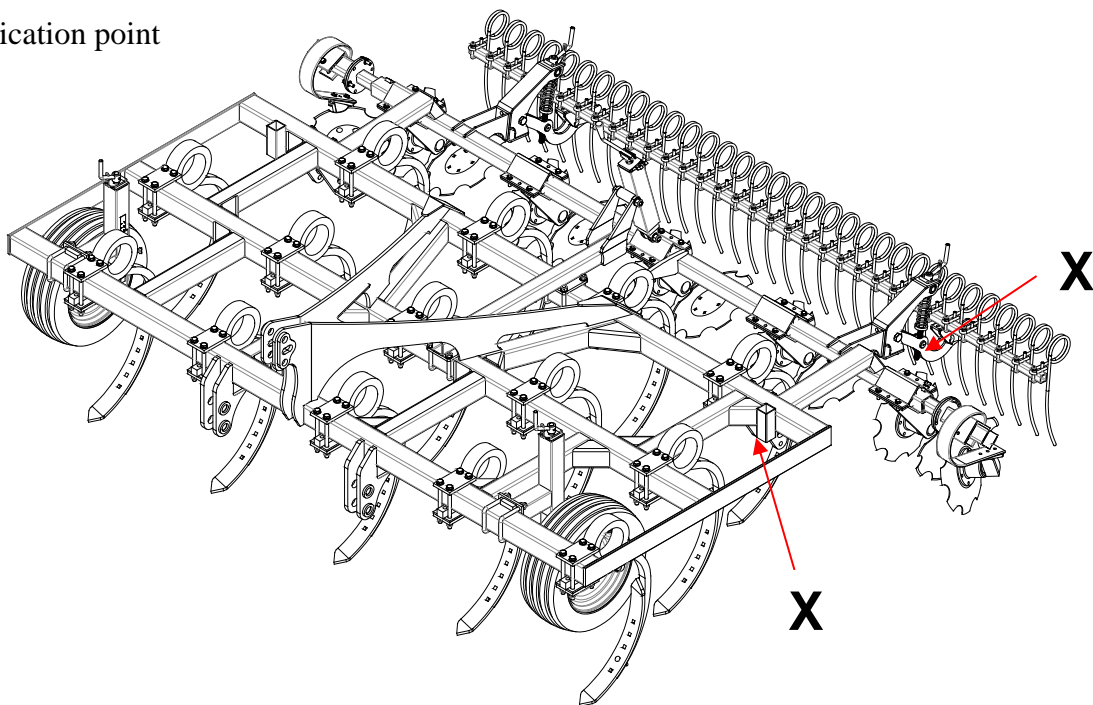
- After the first 10 hours of operation, all bolts must be tightened
- Check regularly that all bolts are tightened.
- After the season all lubricating points must be lubricated, then wash and lubricate the machine. Do not use high-pressure water directly on ball bearings. After washing it, you may spray the machine with a rust preventive oil.

Lubrication

When lubricating, maintaining and repairing the Triple-Tiller, always lower the machine, brake the tractor and stop the engine.

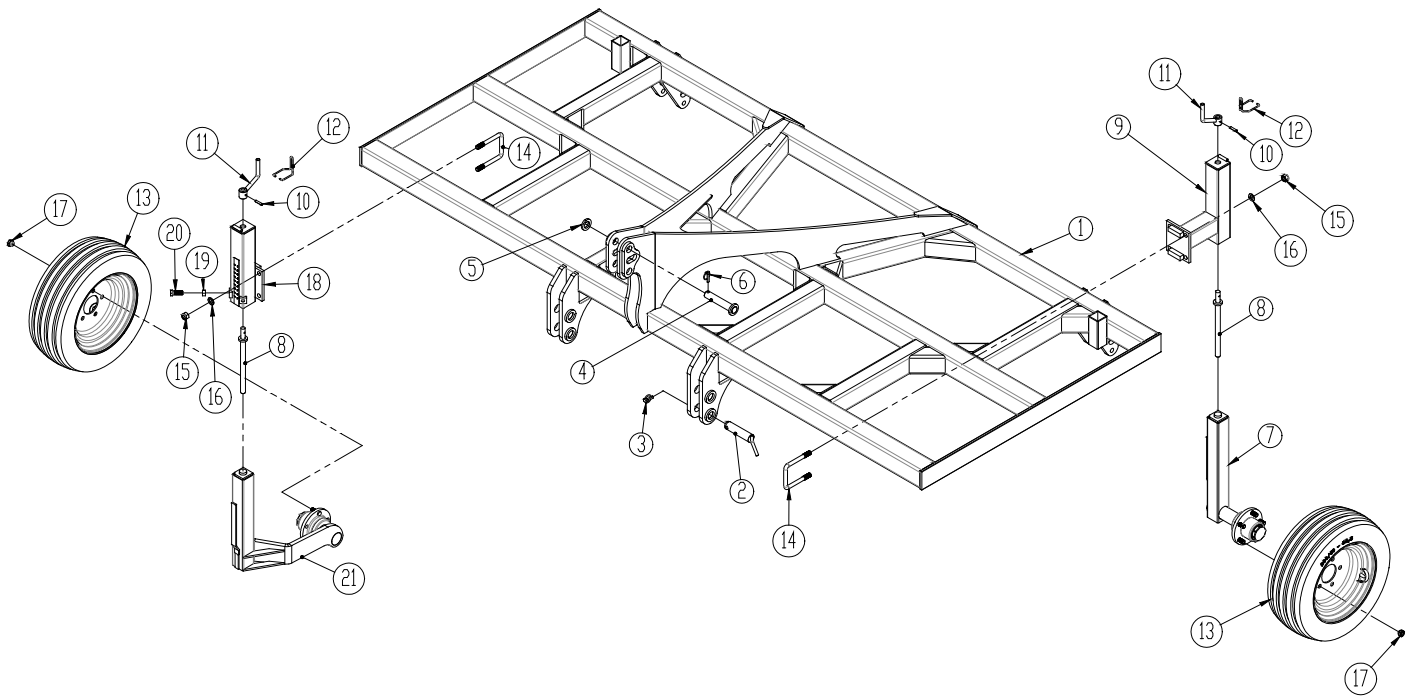
Typical lubricating points are located around the spindle and the brackets for the levelling bar. The points must be lubricated every 50 hours of operation, as well as after cleaning in order to drive out any water or dirt.

X = Lubrication point



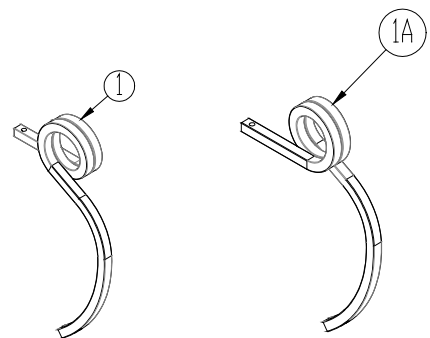
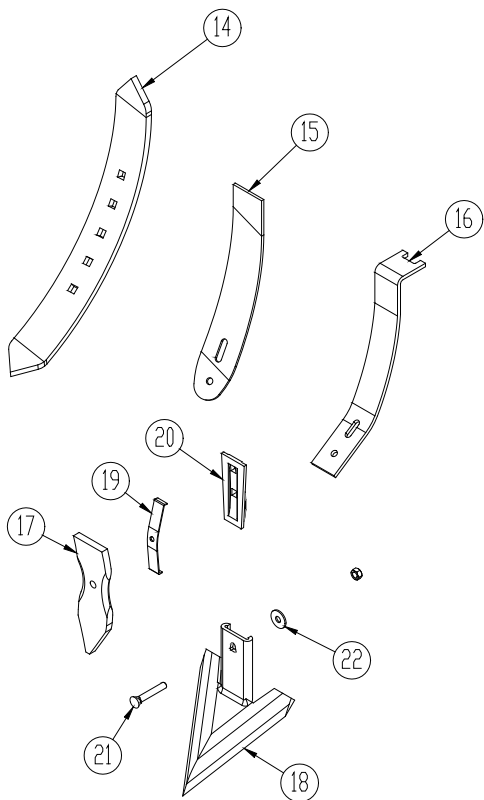
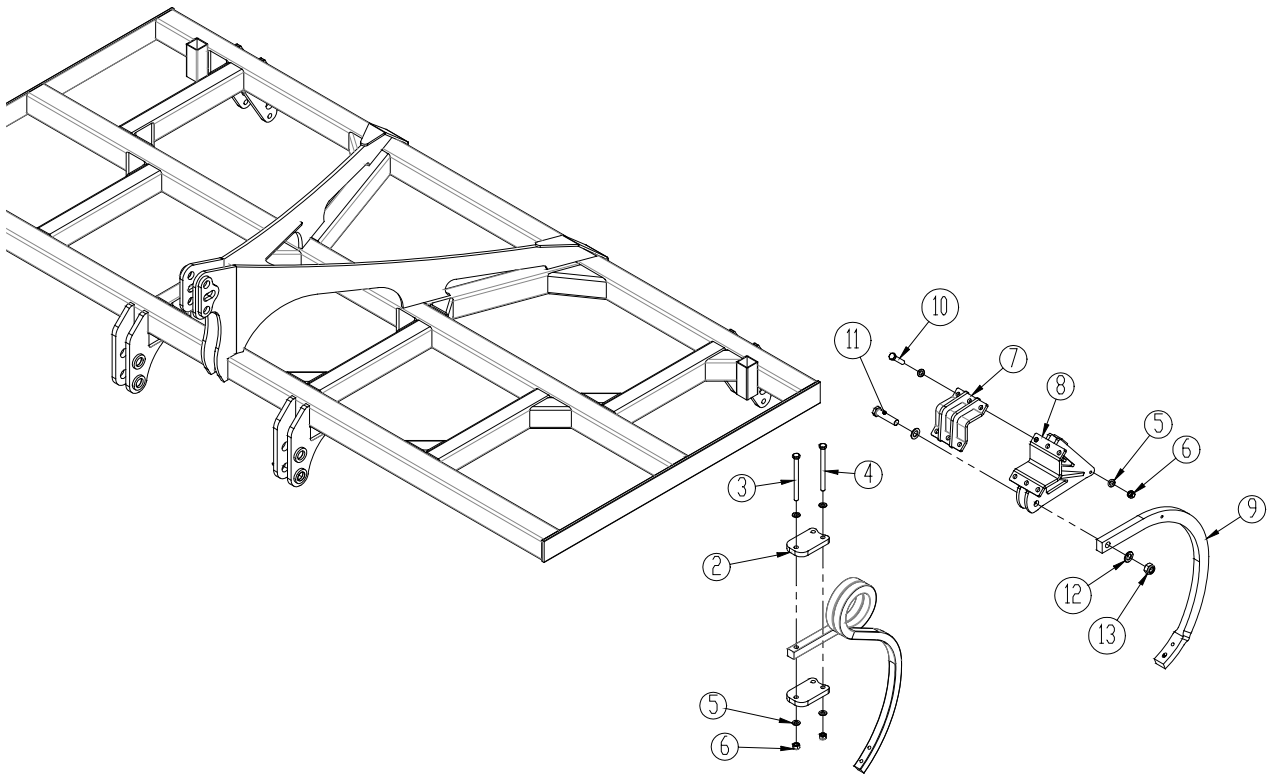
Spare parts

Frame



Pos.	Item no.	Designation	3m	3,5m	4m
1	1160751	Frame	1		
1	1160752	Frame		1	
1	1160753	Frame			1
2	1140600	Pin Ø37x150	2	2	2
3	0378650	Ring split Ø10x42	2	2	2
4	1140361	Pin Ø32x175	1	1	1
5	1069950	Disc ø33	1	1	1
6	0378600	Ring split Ø11x40	1	1	1
7	1160759	Spindle tube with hub (for machine No 32892)	2	2	2
7a	0395425	Hub (short shaft)			
7b	0395438	Steel sealing			
7c	0395230	Sealing ring Ø90/55			
7d	0479010	Bearing 30210			
7e	0478900	Bearing 30207			
7f	0395242	Castellated nut m27x1,5mm			
7g	0395436	Hub cap Ø72			
8	1080520	Spindle	2	2	2
9	1160762	Spindle tube (left) (for machine No 32892)	1	1	1
		Spindle tube (right) (for machine No 32892)	1	1	1
	1160760	Spindle tube (right) (for machine No 32892)	1	1	1
10	0371690	Retaining pin Ø8x40	2	2	2
11	1036260	Crank handle	2	2	2
12	0431980	Locking hoop	2	2	2
13	0395600	Wheel 200/60x14.5-10pr	2	2	2
14	690110404	U-bolt M18x100x100x100	4	4	4
15	0264100	Self-locking nut M18	8	8	8
16	0272300	Facet plate ø18	8	8	8
17	0395291	Wheel nut M16x1,5 R19	12	12	12
18	1160788	Spindle tube (left and right) (from machine No 32893)	2	2	2
19	0261392	Nut M16	2	2	2
20	0235800	Bolt M16x45mm	2	2	2
21	1160790	Spindle tube with hub (right) (from machine No 32893)	1	1	1
		Spindle tube with hub (left) (from machine No 32893)	1	1	1
	1160801	Spindle tube with hub (left) (from machine No 32893)	1	1	1
21a	0395425	Hub (short shaft)			
21b	0395438	Steel sealing			
21c	0395230	Sealing ring Ø90/55			
21d	0479010	Bearing 30210			
21e	0478900	Bearing 30207			
21f	0395242	Castellated nut m27x1,5mm			
21g	0395436	Hub cap Ø72			

Tine

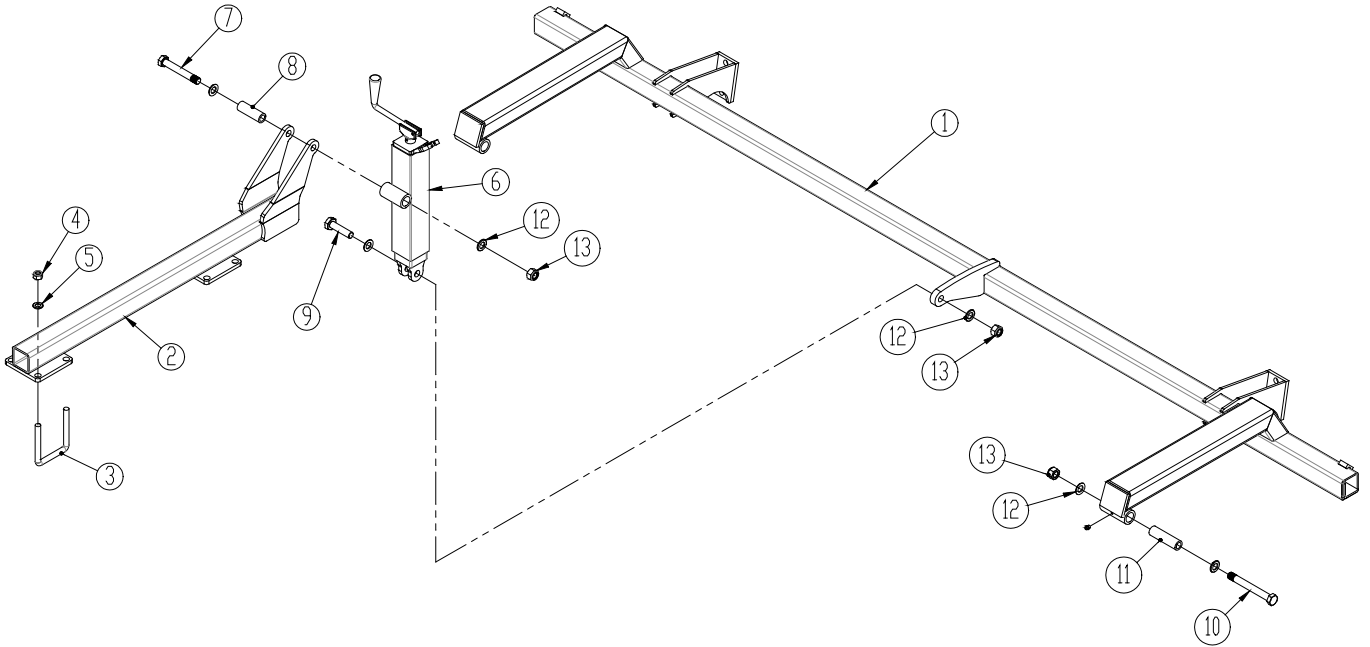


Pos.	Item no.	Designation	3m	3,5m	4m
1	0424250	Spring tine, double-twisted 35x35 mm	12	14	16
1A	0424252	Spring tine, double-twisted 35x35 mm	12	14	16
2	1160745	Bracket for spring tine	24	28	32
3	0235990	Bolt M16x200 8.8	24	28	32
4	0235991	Bolt M16x200 10.9	12	14	16
5	0272290	Facet plate Ø16	216	252	288
6	0264090	Self-locking nut M16	108	126	144
7	1160501	Upper part for tine holder	12	14	16
8	1160455	Lower part for tine holder	12	14	16
9	1160450	Tine	12	14	16
10	0235870	Bolt M16x75	72	84	96
11	0236410	Bolt M24x100	12	14	16
12	0272330	Facet plate Ø24	24	28	32
13	0264130	Self-locking nut M24	12	14	16
14	0424330	Point 75x12 incl. bolt and nut (left)	8	9	11
	0424340	Point 75x12 incl. bolt and nut (right)	4	5	5

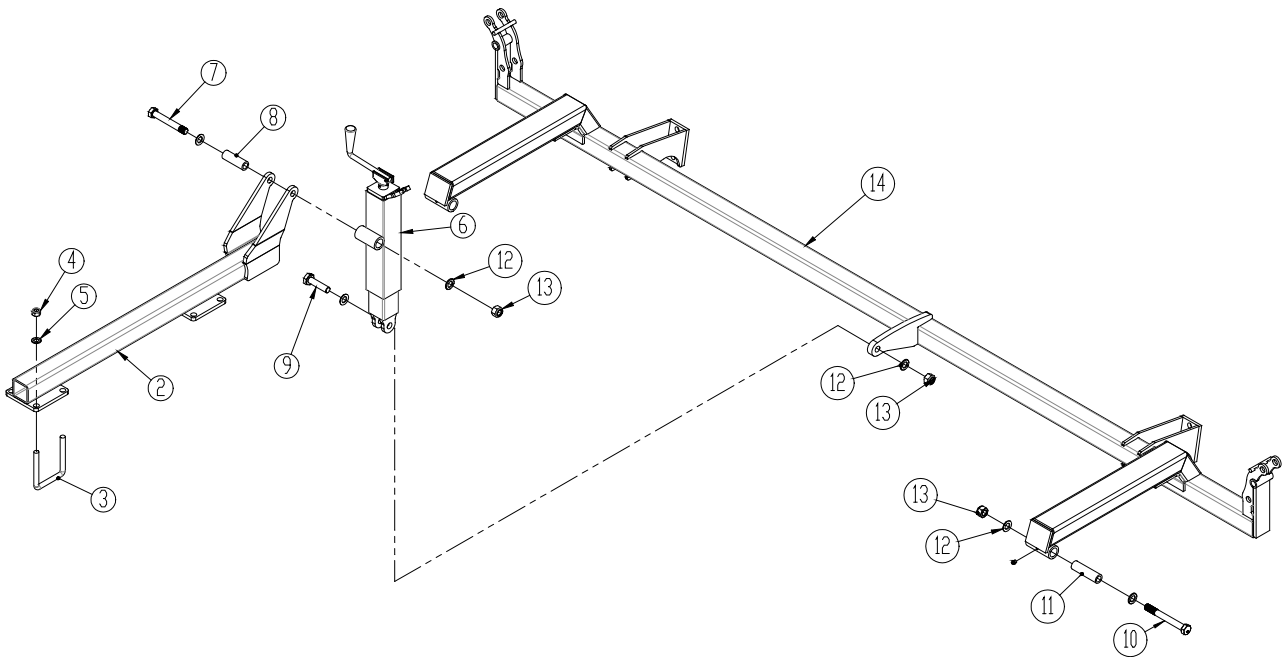
Extra equipment

15	0424480	Twisted mould board (left)	8	9	11
	0424490	Twisted mould board (right)	4	5	5
16	1139890	Straight mould board	12	14	16
17	0424450	Chisel point 75mm	12	14	16
18	0424402	Wing share 260mm	12	14	16
19	0424360	Retaining spring	12	14	16
20	0424350	Adapter	12	14	16
21	0381300	BP-bolt M12x70 12,9 w/nut	12	14	16
22	0272620	Disc Ø13/37 x 3mm	24	28	32

Levelling bar (for machine No 33364)

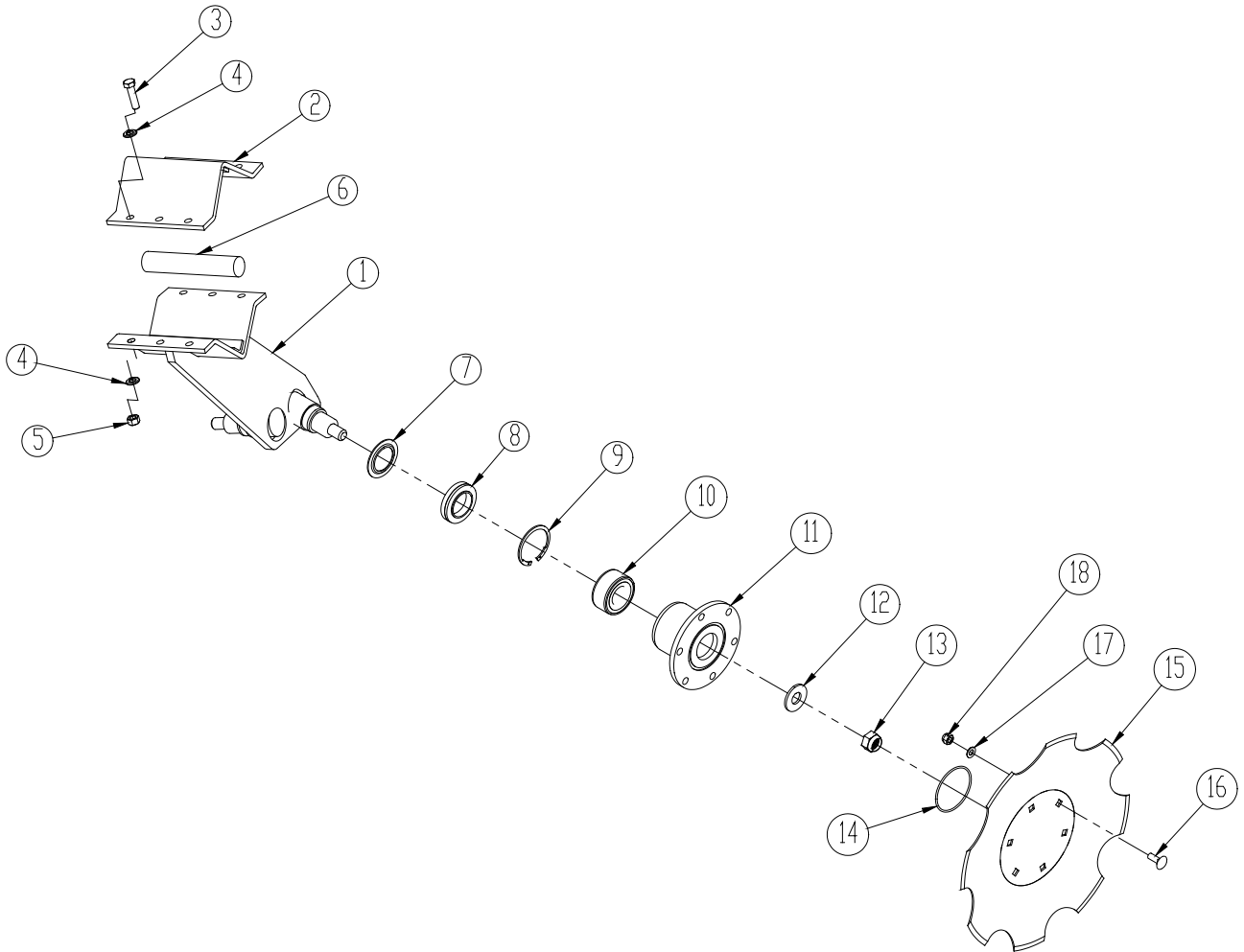


Levelling bar (from machine No 33365)



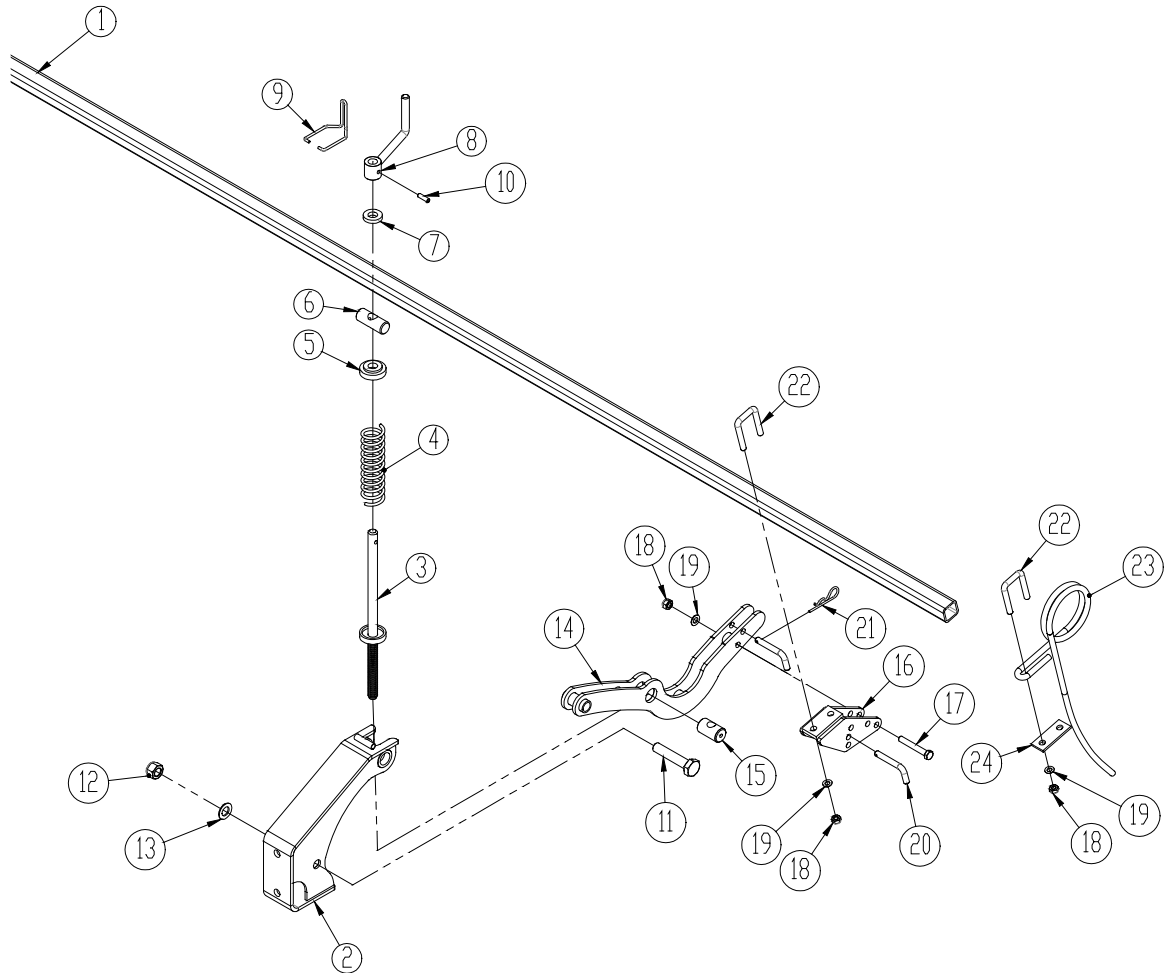
Pos.	Item no.	Designation	3m	3,5m	4m
1	1160742	Levelling bar (for machine No 33364)	1		
	1160650	Levelling bar (for machine No 33364)		1	
	1160743	Levelling bar (for machine No 33364)			1
2	1160653	Spindle bracket for levelling bar	1	1	2
3	0382160	U-bolt M16x100x100x100	4	4	8
4	0264090	Self-locking nut M16	12	12	24
5	0272290	Facet plate Ø16	8	8	16
6	1160325	Spindle	1	1	2
7	0236230	Bolt M20 x 140mm	1	1	2
8	675101006	Bush 30x5 L=89	1	1	2
9	0236170	Bolt M20 x 80mm	1	1	2
10	0236260	Bolt M20 x 170mm	2	2	2
11	1160560	Bush 30x5 L=108	2	2	2
12	0272310	Facet plate Ø20	8	8	12
13	0264110	Self-locking nut M20	4	4	6
14	1160781	Levelling bar (from machine No 33365)	1		
14	1160774	Levelling bar (from machine No 33365)		1	
14	1160803	Levelling bar (from machine No 33365)			1

Eradicator disc



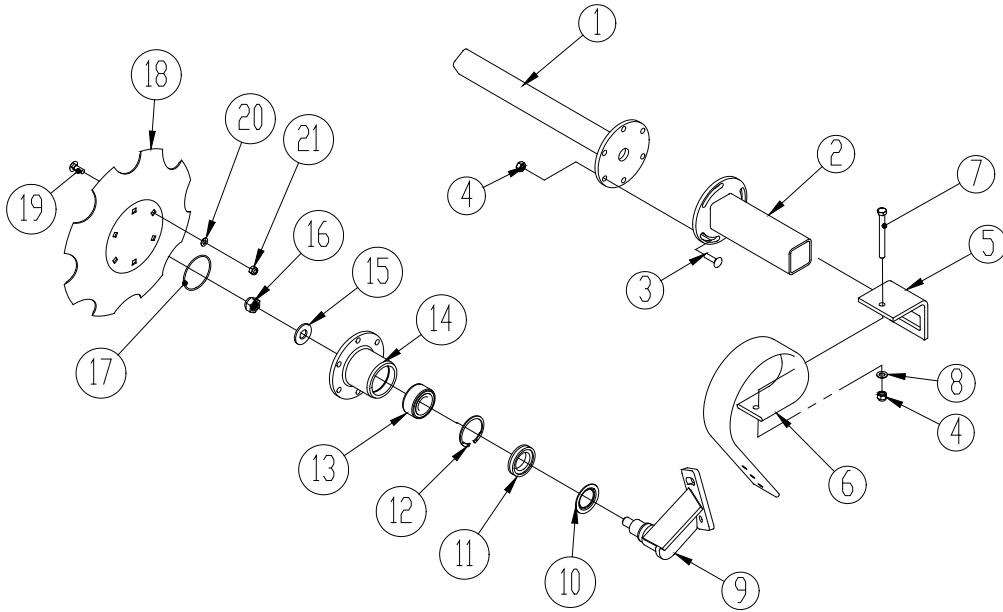
Pos.	Item no.	Designation	3m.	3,5m.	4m
1	1139870	Carrier arm (R + L)	3	3	5
	1139871	Carrier arm (R)	1	1	1
	1139872	Carrier arm (L)	1	1	1
2	30949046	Clamping plate	5	5	7
3	690103091	Steel bolt M12x45 10.9	30	30	42
4	0272270	Facet plate M12	60	60	84
5	0264070	Self-locking nut M12	30	30	84
6	690210710	Rubber cord	20	20	28
7	630949019	Disc Ø45/71,7	8	8	12
8	690140651	Seal Ø72	8	8	12
9	0379250	Seeger circlip ring I Ø72	8	8	12
10	690140201	Bearing Ø35	8	8	12
11	30949030	Hub	8	8	12
12	690117062	Disc Ø20	8	8	12
13	0263000	Lock nut M20	8	8	12
14	0483730	O-ring Ø80/3	8	8	12
15	0427791	Serrated disc Ø400 with 6 holes	8	8	12
16	0248421	Carrier bolt M10x30	48	48	72
17	0272260	Facet plate Ø10	48	48	72
18	0264060	Self-locking nut M10	48	48	72
	1139860	Complete carrier arm (R +L)	-	-	-
	1139861	Complete carrier arm (R)	-	-	-
	1139862	Complete carrier arm (L)	-	-	-
	630949035	Repair outfit/conversion set incl. hub (no: 7 – 14)	-	-	-

Long finger harrow

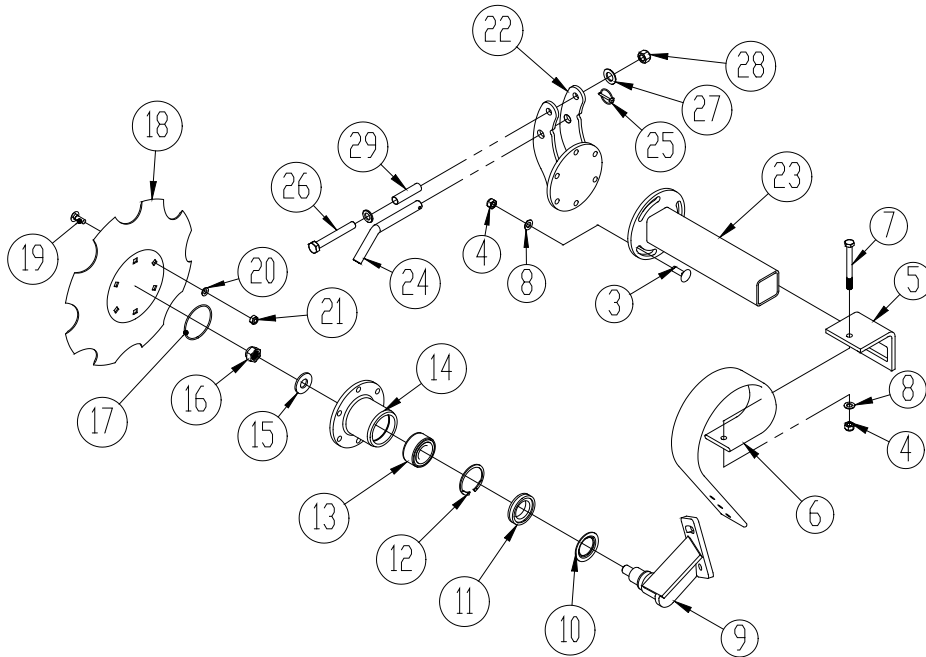


Pos.	Item no.	Designation	3m.	3,5m.	4m
1	1170122	Bar	1		
	1140422	Bar		1	
	1141028	Bar			1
2	1160739	Slideway	2	2	2
3	1170467	Spindle	2	2	2
4	0431250	Pressure spring	2	2	2
5	1170460	Plate	2	2	2
6	1011470	Bearing f/spindle	2	2	2
7	1011410	Stop ring	2	2	2
8	1036260	Crank handle	2	2	2
9	0431980	Locking hoop	2	2	2
10	0371660	Retaining pin Ø8x32mm	2	2	2
11	0236190	Bolt M20x100	2	2	2
12	0264110	Self-locking nut M20	2	2	2
13	0272310	Facet plate Ø20	2	2	2
14	1160741	Arm f/after-harrow	2	2	2
15	1012300	Spindle nut	2	2	2
16	1170469	Adjusting unit	2	2	2
17	0235440	Bolt M12x80	2	2	2
18	0264070	Self-locking nut M12	52	60	70
19	0272270	Facet plate Ø12	52	60	70
20	1170478	Pin Ø12	4	4	4
21	0377400	R-clip Ø4	4	4	4
22	0382120	U-bolt M12x40x40x40	25	29	34
23	0426125	Long finger tin	23	27	32
24	1012520	Clamping plate	23	27	32

Edge equipment (for machine No 33364)

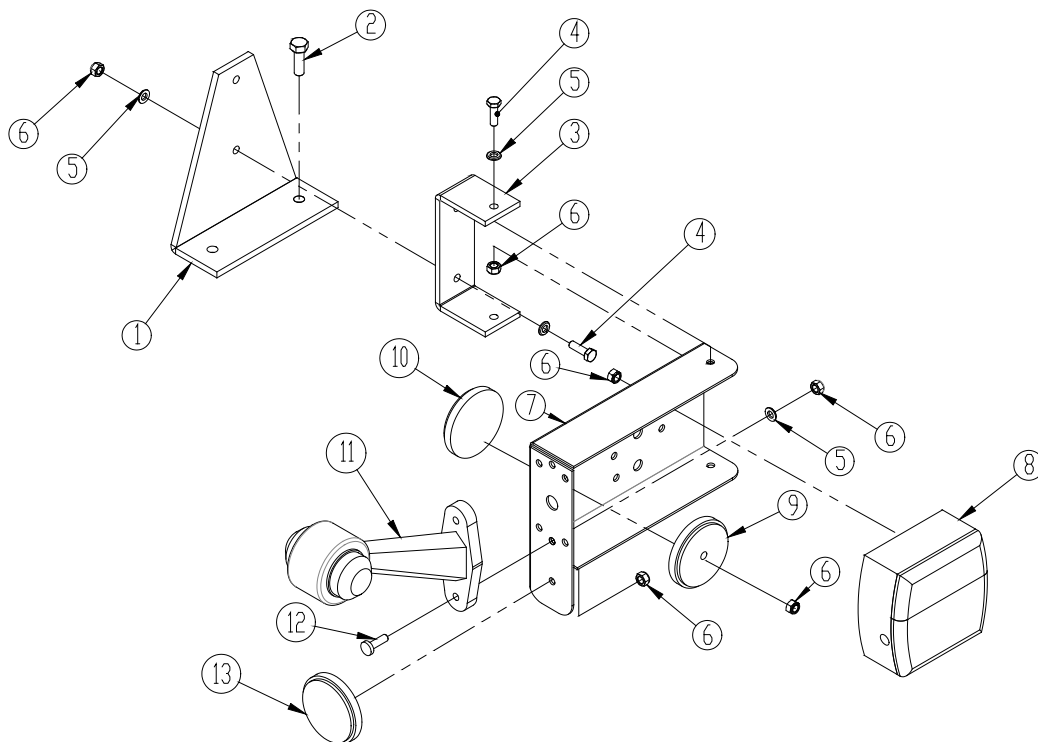


Edge equipment (from machine No 33365)



Pos.	Item no.	Designation	No.
1	1139830	Inner tube f/edge equipment (for machine No 33364)	2
2	1139800	Outer tube f/edge equipment (for machine No 33364)	2
3	0248660	Carrier bolt M12x40mm	6
4	0264070	Nut M12	8
5	0422390	Tine holder f/ 80x10 mm tine	2
6	0422144	Tine 80x10mm	2
7	0235480	Bolt M12x120mm	2
8	0272270	Facet plate Ø12	8
9	1139850	Bracket w/axle (right)	1
	1139840	Bracket w/axle (left)	1
10	630949019	Disc Ø45/71,7	2
11	690140651	Seal Ø72	2
12	0379250	Seeger circlip ring I Ø72	2
13	690140201	Bearing Ø35	2
14	30949030	Hub	2
15	690117062	Disc Ø20	2
16	0263000	Lock nut	2
17	0483730	O-ring Ø80/3	2
18	0427791	Serrated disc Ø400x5,0 mm	2
19	0248421	Carrier bolt M10x30mm	12
20	0272260	Facet plate Ø10	12
21	0264060	Self-locking nut M10	12
22	1160786	Bracket (right) (from machine No 33365)	2
23	1160772	Outer tube f/edge equipment (from machine No 33365)	2
24	1141072	Pin Ø20 L=115mm	2
25	0378200	Ring split Ø4,5	2
26	0235920	Bolt M16x120	2
27	0272290	Facet plate Ø16	4
28	0264090	Self-locking nut M16	2
29	1160924	Bush	2

Lights



Pos.	Item no.	Designation	No.
1	30910110	Bracket	2
2	0230825	Screw Tapetite M8x25mm	4
3	30930110	Bracket	2
4	0234330	Set screw M6x20 mm	8
5	0272240	Facet plate Ø6	20
6	0264040	Self-locking nut M6	10
7	1043480	Light bracket (L)	1
	1043510	Light bracket (R)	1
8	0527000	Rear light (L)	1
	0527010	Rear light (R)	1
9	0656260	Reflector, red	2
10	0656250	Reflector, white	2
11	0527040	Marking lights	2
12	0243000	Machine screw M6x20 mm	4
13	0656240	Reflector, yellow	2

Notes

Maskiner til vækst
Maskiner til vækst
Maskiner til vækst
Maskiner til vækst
Maskiner til vækst
Maskiner til vækst
Maskiner til vækst



2010
Danmark