

# HE-VA

Operating instructions  
Spare Parts List  
Declaration of Conformity

good as it looks

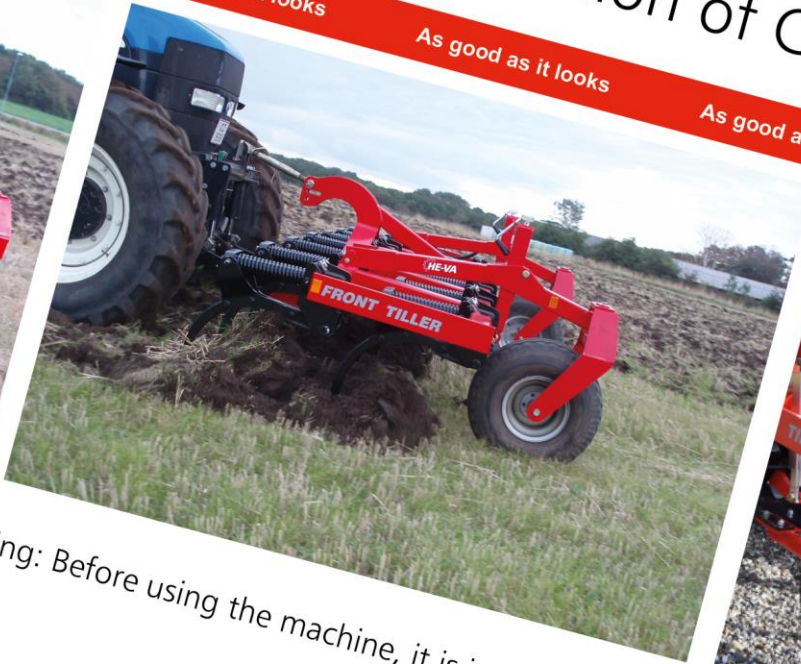
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Warning: Before using the machine, it is important to read the operation instructions.

**Front-Tiller**

3,0m - 4,0m

8000411 01 270820

**HE-VA**

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## Contents

EC DECLARATION OF CONFORMITY .....	3
1. Delivery Check .....	4
2. Specifications .....	4
3. Warranty .....	5
4. Safety at the Front-Tiller.....	5
5. Markings on the machine.....	6
6. Maintenance.....	7
7. Notes .....	8
8. Spare Parts .....	9
Tine with automatic release .....	11
Support wheel with hub .....	14
Edgeequipment (left side shown).....	15
Front-Tiller 4,0m.....	17



## **EC DECLARATION OF CONFORMITY**

in accordance with the EU Machinery Directive 2006/42/EC  
applicable as from December 29<sup>th</sup> 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 machines:

Front-Tiller 3,0 - 4,0 m

A blue ink signature of Villy Christiansen, written in a cursive style, positioned above the name 'Villy Christiansen'.

Nykøbing the 28th of Februar 2011

Villy Christiansen

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

## **1. Delivery Check**

Check the Front-Tiller for any damage when it is received at either the dealer and the final customer. Check that the frame construction has not been exposed to impacts. Check the air-pressure in the tires before operating.

## **2. Specifications**

Front-Tiller is a front harrow with tines on two bars and it has an open construction with space for plant material. The machine can be used solo or in a combination with another implement e.g sowing machine. The Front-Tiller is breaking up the surface and is working sufficient at speeds from 6 - 9 km/h, and a depth at 10 – 30 cm / 4 – 12 inches.

The Front-Tiller is delivered assembled and ready to attach to the tractors front lift. The Front-Tiller is suitable for all types of soil.

The slot for the top link attachment is to give the machine a floating condition when working. The top link can eventually be replaced by a chain with shackles in both ends for the pins, to give the machine more degrees of freedom in very hilly or uneven conditions. Do not ever use an ordinary towing chain with hooks.

The implement can be delivered with two different types of tines:

- Springtine, double coil 40x40 mm, 0 – 30 cm working depth.
- Automatic release for solid rocks– force 455 kg, 0 – 30 cm working depth.

Standard equipment:

- Adjustable 2 pc. strong 10.0/80x12 – 10 PLY wheels for the depth
- 50x25 mm reversible wearing points
- Pins and safety locks

To gain as much force from the tractor as possible, be aware of the size of the tires. By certain conditions, dual wheels are recommended.

### **Technical Specifications**

Model	3,0 m	4,0 m
Working width	3,0 m	4,0 m
Power requirement + additional implement	50-100	70-140
No. of tines	9 stk.	13 stk.
Weight when double coil spring tines	1.090	1.240
Weight when tines with automatic release	1.405	1.695
Tyre pressure - bar / psi	2 / 30	2 / 30



### **3. Warranty**

#### **2 years of warranty:**

The warranty is valid in 2 years for material- and construction failures, as long as He-Va's operating instructions has been followed at all times, and there only has been used original He-Va spare- and wearing parts.

Any work done as a warranty issue, must only be done when an agreement in advance with He-Va is made. Repairs done as warranty will be done at the dealers workshop in ordinary working hours. Implements which is taken to the workshop must be in a clean condition.

The second year of the warranty period does only include delivery of parts and not replacement of the parts.

No compensation is granted for operating-, profit and other indirectly losses.

When implements are mounted in the front, He-Va declines any responsibility for damage to the tractor.

### **4. Safety at the Front-Tiller**

Do not operate the machine, if any people\*\* are at risk in the dangerous area.\*

When persons are at risk in the dangerous area (e.g. when doing adjustments, maintenance or connect or disconnecting), the following points must be met:

1. Lower the machine on solid ground.
2. Hydraulic must be relieved.
3. Tractor must be turned off, and the key removed.
4. Driver must be aware of, when operating that there is no persons at risk in the dangerous area.

\* **Dangerous area: At the machine and underneath it, and in a distance of 4 m from it.**

\*\* **People at risk: Any person, who is completely or partially in the dangerous area.**

Most accidents when operating the machine, transporting and doing maintenance occurs, when avoiding the most simple safety regulations.

For this reason, it is of highest importance, that any person who is operating the machine, strictly follows the safety regulations and other instructions, which belongs the machine.

The machine must only be operated, maintained and fixed by persons, who is confidential with and skilled for this work and is aware of moments of danger, which can occur.

**ATTENTION!! Rotating parts and loose in a loose condition, is a dangerous combination.**

**IMPORTANT!! It is strictly prohibited for any person to take place on the frame of the machine, when it is either operating or the tractor is idling.**

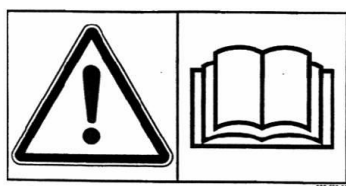


## 5. Markings on the machine

Several markings are located at your machine, which contains **safety regulations** and other instructions to inform about correct operating.

Please read these instructions carefully, and make the driver aware about the markings and **safety regulations** in this Operating Instructions. Keep the markings clean and readable. If they are not, they must be replaced.

### Safety – and other markings on the machine



Study the Operating Instructions thoroughly before any operation of the machine and observe all safety instructions.



Plate with number and year of manufacture.



Tighten up the bolts regularly. If this is not performed, our warranty obligations will no longer apply.

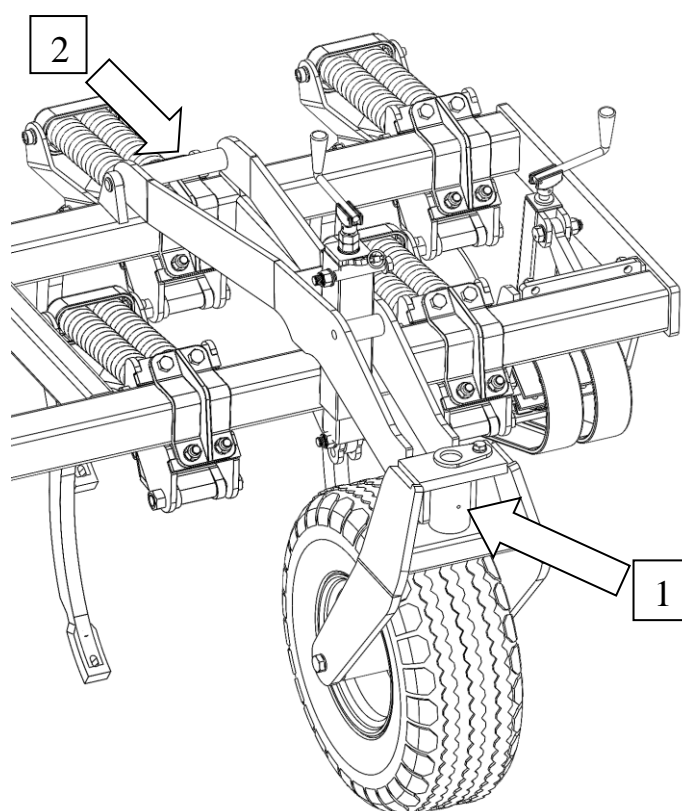


## 6. Maintenance

After 10 hours of operation, tightening of bolts must be done. If this maintenance is not followed our warranty will not be valid.

Maximum torque in Nm. w/lubricated thread			
Metric thread	Quality 8.8	Quality 10.9	Quality 12.9
M12	81	114	136
M14	128	181	217
M16	197	277	333
M18	275	386	463
M20	385	541	649
M22	518	728	874
M24	665	935	1120

- Every 25 hours the turnable bushings at the wheels must be greased (1).
- The horizontal pins / hinges for wheel console (2) must be greased once or twice per. season.
- Air pressure in the wheels must be checked.
- The adjustment spindle for depth must be cleaned and greased once per. season
- Repair any paint damage to the frame once per. season, so that the machine appears in a good state of maintenance for many years..

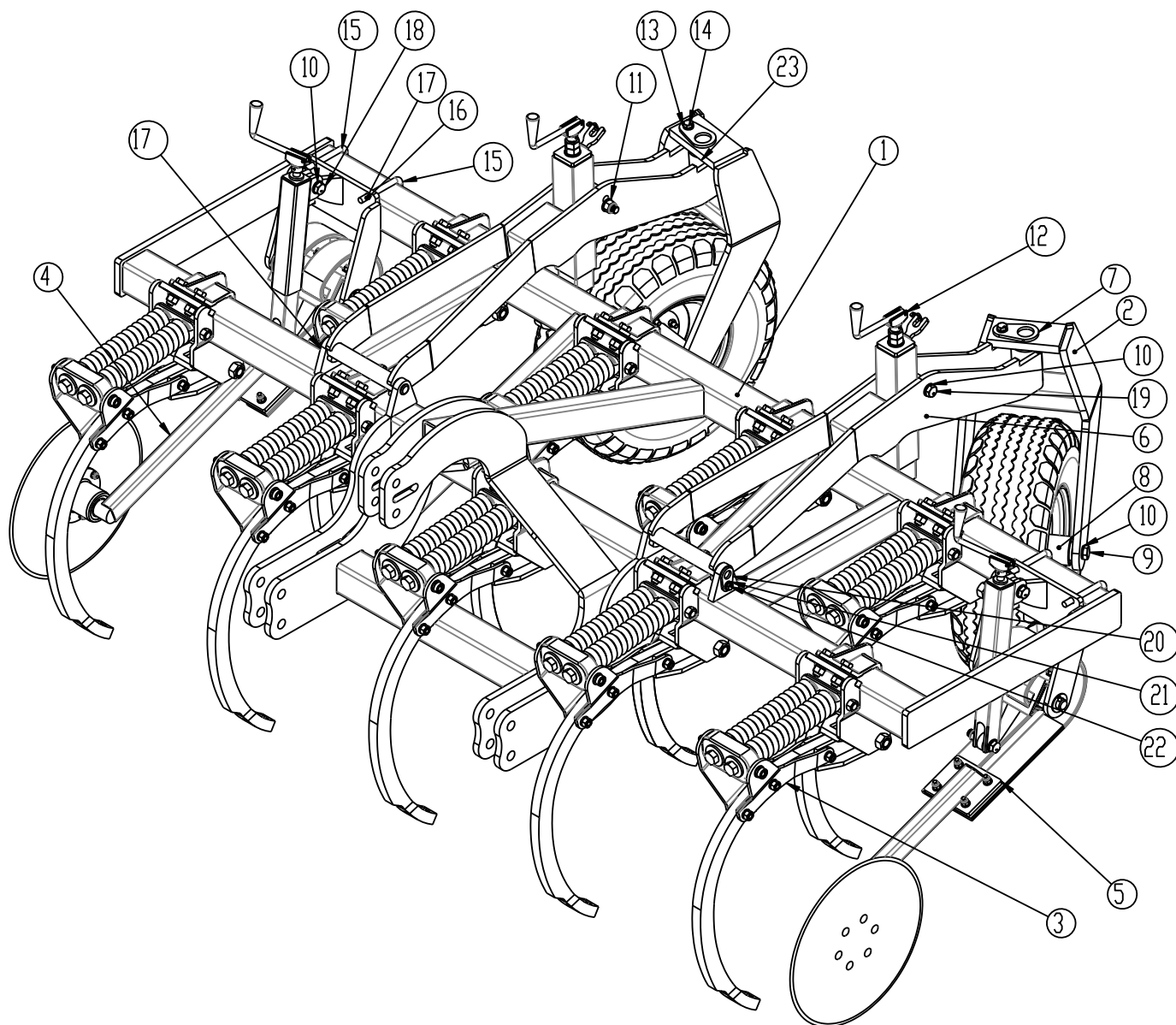




## 7. Notes

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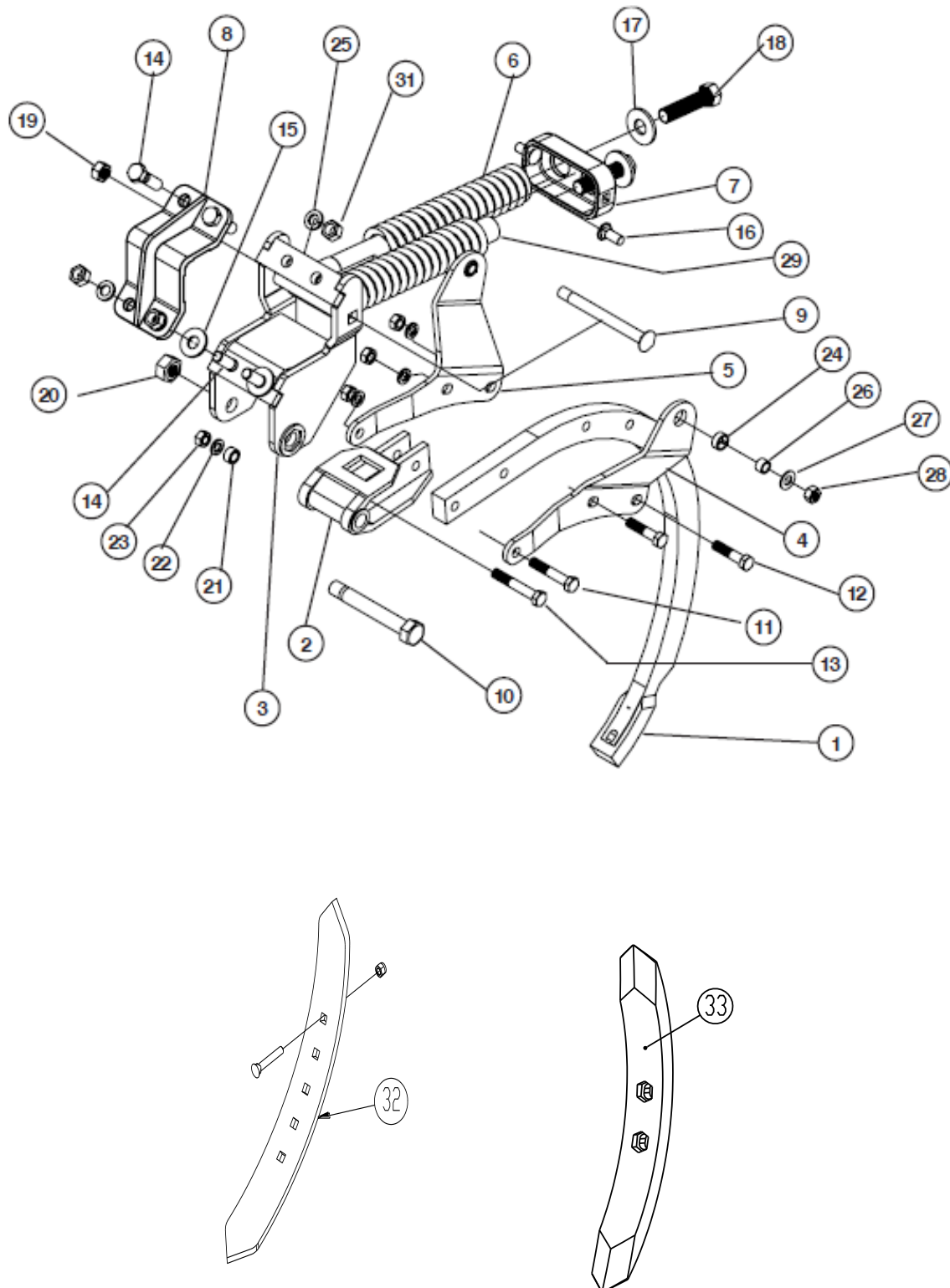
## 8. Spare Parts



Pos.	Part no.	Description	3,0m	4,0m
1	675100501	Frame 3,0m	1	
1	675100547	Frame 4,0m		1
2	675100538	Turnable wheel suspension	2	2
3	0424300	Harrow tines	9	13
4	675100528	Edge equipment, left	1	1
5	675100532	Edge equipment, right	1	1
6	675100543	Complete wheel suspension	2	2
7	69450230G	Pin Ø50 L=230	2	2
8	1145390	Wheel hub	2	2
9	690103153	Bolt M20x400mm, 8.8 fzb	2	2
10	690117005	Faceted washer Ø20	12	12
11	690113009	Safety nut M20	6	6
12	675101001	Adjustable unit	2	2
13	630532700	Lock bushing for pin head Ø16	2	2
14	690103124	Bolt M16x35 8.8	2	2
15	690110101	U-bolt M16 100x100x100	4	4
16	690117013	Faceted washer Ø16	8	8
17	690113008	Safety nut M16	8	8
18	690103151	Bolt M20x90 8.8	2	2
19	690103188	Bolt M20x160 8.8	2	2
20	69430300G	Pin Ø30 L=300	2	2
21	630532600	Lock bushing for pin head Ø12	2	2
22	690101101	Bolt M12x25 8.8	2	2
23	690140710	Bushing bearing Ø50/55 L=50 (2 pc. in each suspension)	4	4

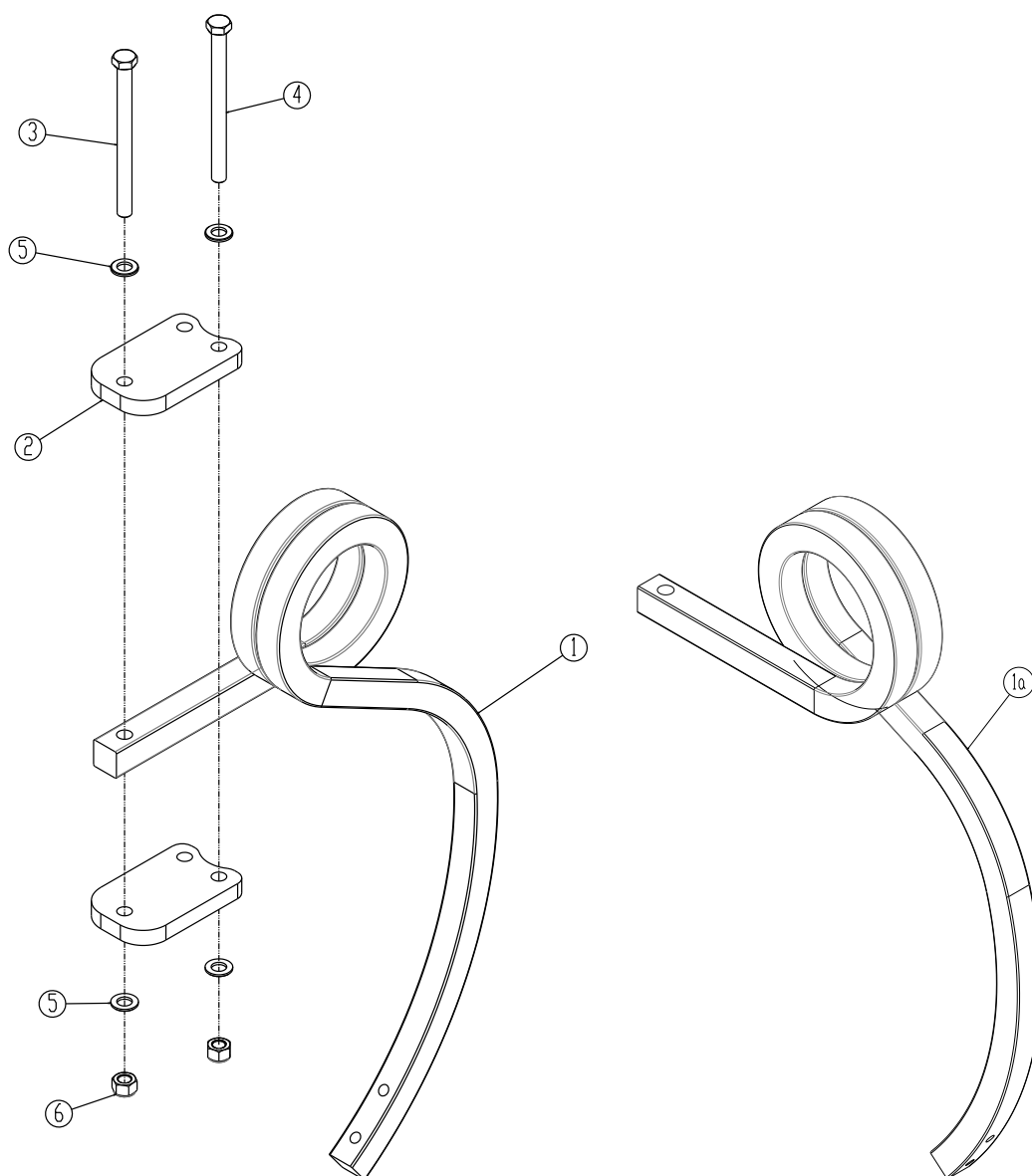


## Tine with automatic release



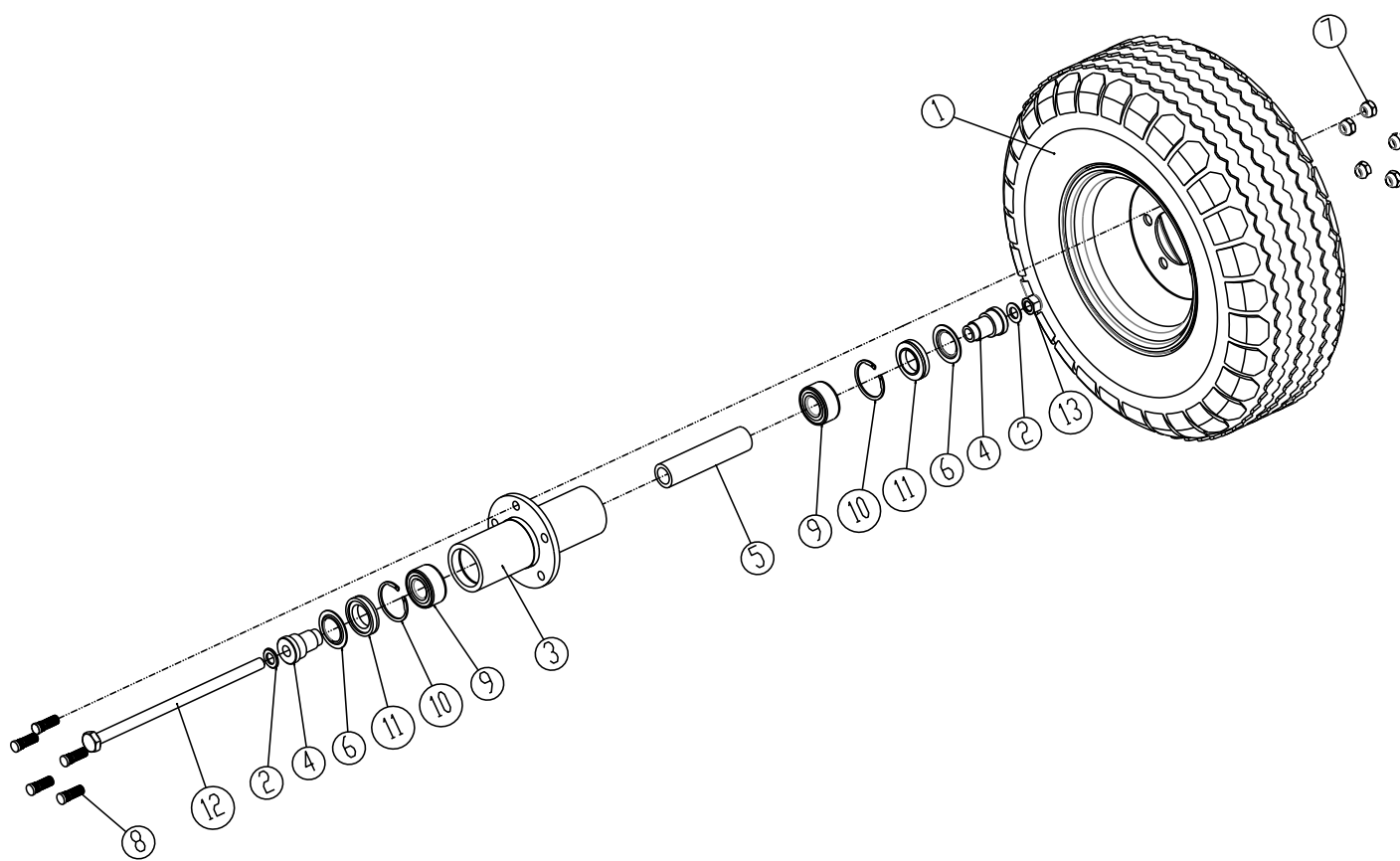
Pos.	Part no.	Description	No. each tine
1	0424601	Shank	1
2	0424602	Holder for shank	1
3	0424603	Tine attachment	1
4	0424604	Side plate for shank, Left	1
5	0424605	Side plate for shank, Right	1
6	0424606	Spring	2
7	0424607	Spring retainer	1
8	0424608	Clamping bracket	1
9	0424609	Carrier bolt 3/4NC-2A (Replaced in new models)	1
9	1160600	Pin Ø30 L=69	1
10	0424610	Pivot bolt (Replaced in new models)	1
10	1160600	Pin Ø30 L=69	1
11	0424611	Steel set screw 5/8NCx4	1
12	0424612	Steel set screw 5/8NCx2-3/4	2
13	0424613	Steel set screw 5/8NCx3-1/2	1
14	0424614	Steel set screw 3/4NCx2-1/4	4
15	0424615	Facet washer 3/4	2
16	0424616	Carrier bolt 5/8NCx1-1/2	2
17	0424617	Facet washer 1/1	2
18	0424618	Steel bolt 1NCx4	2
19	0424619	Steel nut 3/4	1
20	0424620	Steel nut 1/1	1
21	0424621	Distance bush 9/16x1	2
22	0424622	Facet washer 5/8	4
23	0424623	Steel nut 5/8	4
24	0424624	Bush	2
25	0424625	Facet plate 3/4	4
26	0424626	Bush	2
27	0424627	Facet plate 3/8	2
28	0424628	Steel nut 5/8	1
29	0424629	Spring bracket	2
31	0424619	Steel nut 3/4	2
32	0424330	Standard point incl. bolt and nut (left) for upper tilling <b>(5 pc each machine 3,0m)</b>	1
32	0424340	Standard point incl. bolt and nut (right) for upper tilling <b>(4 pc each machine 3,0m)</b>	1
32	0424330	Standard point incl. bolt and nut (left) for upper tilling <b>(7 pc each machine 4,0m)</b>	1
32	0424340	Standard point incl. bolt and nut (right) for upper tilling <b>(6 pc each machine 4,0m)</b>	1
33	0424447	Point for deep tilling, incl. bolts	1
	0424300	Complete tine without/point (pos. 1-31)	

## Double coil spring tine



Pos.	Varenr.	Betegnelse	3m	4m
1	0424260	Double coil, spring tine 40x40 mm, right spiral	9	13
1a	0424262	Double coil, spring tine 40x40 mm, left spiral	-	-
2	1160745	Bracket f/tine	18	26
3	0235991	Bolt M16x200 10.9	9	13
4	0235991	Bolt M16x200 10.9	18	26
5	0272290	Faceted washer Ø16	54	78
6	0264090	Safety nut M16	27	39

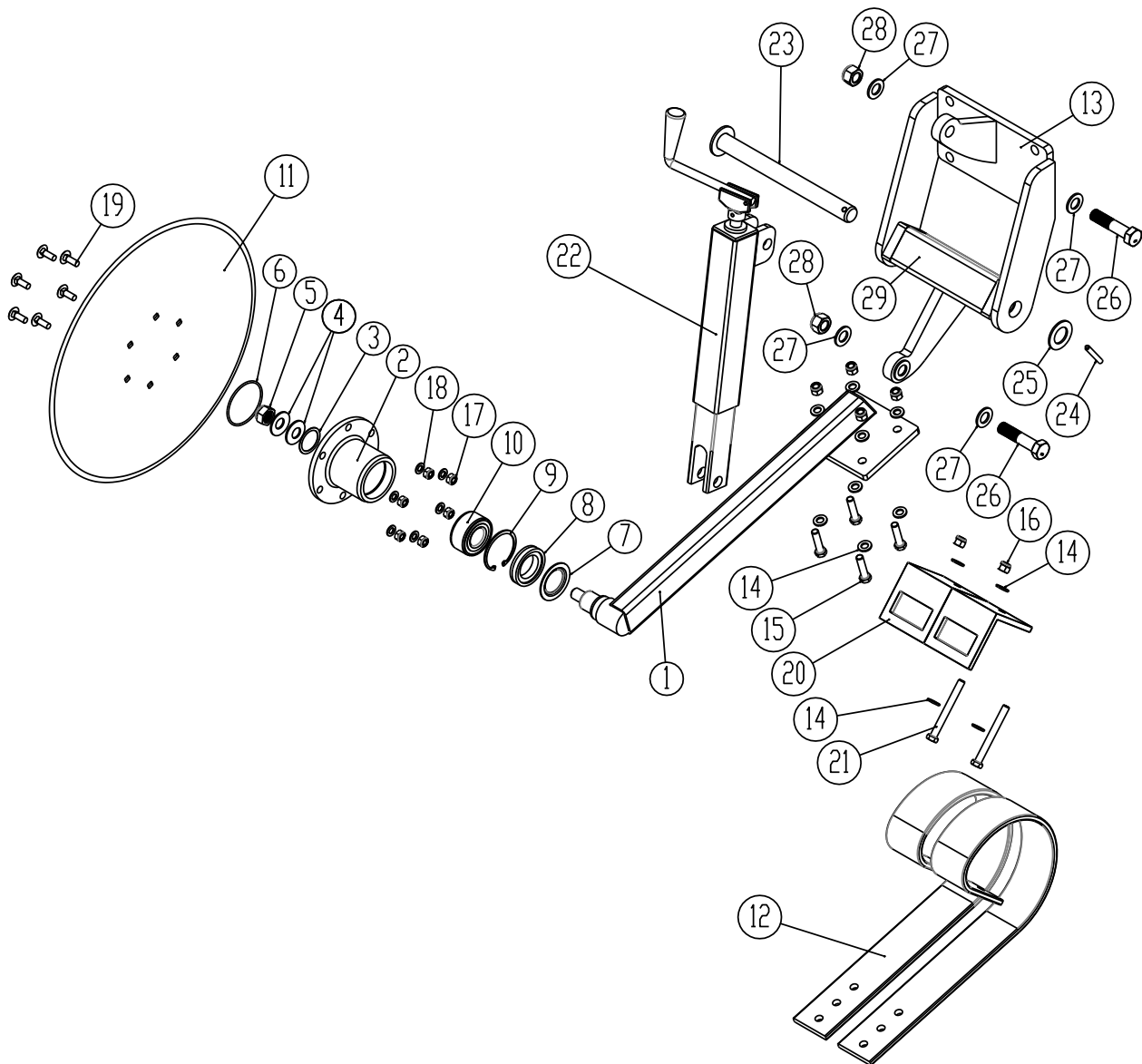
## Support wheel with hub



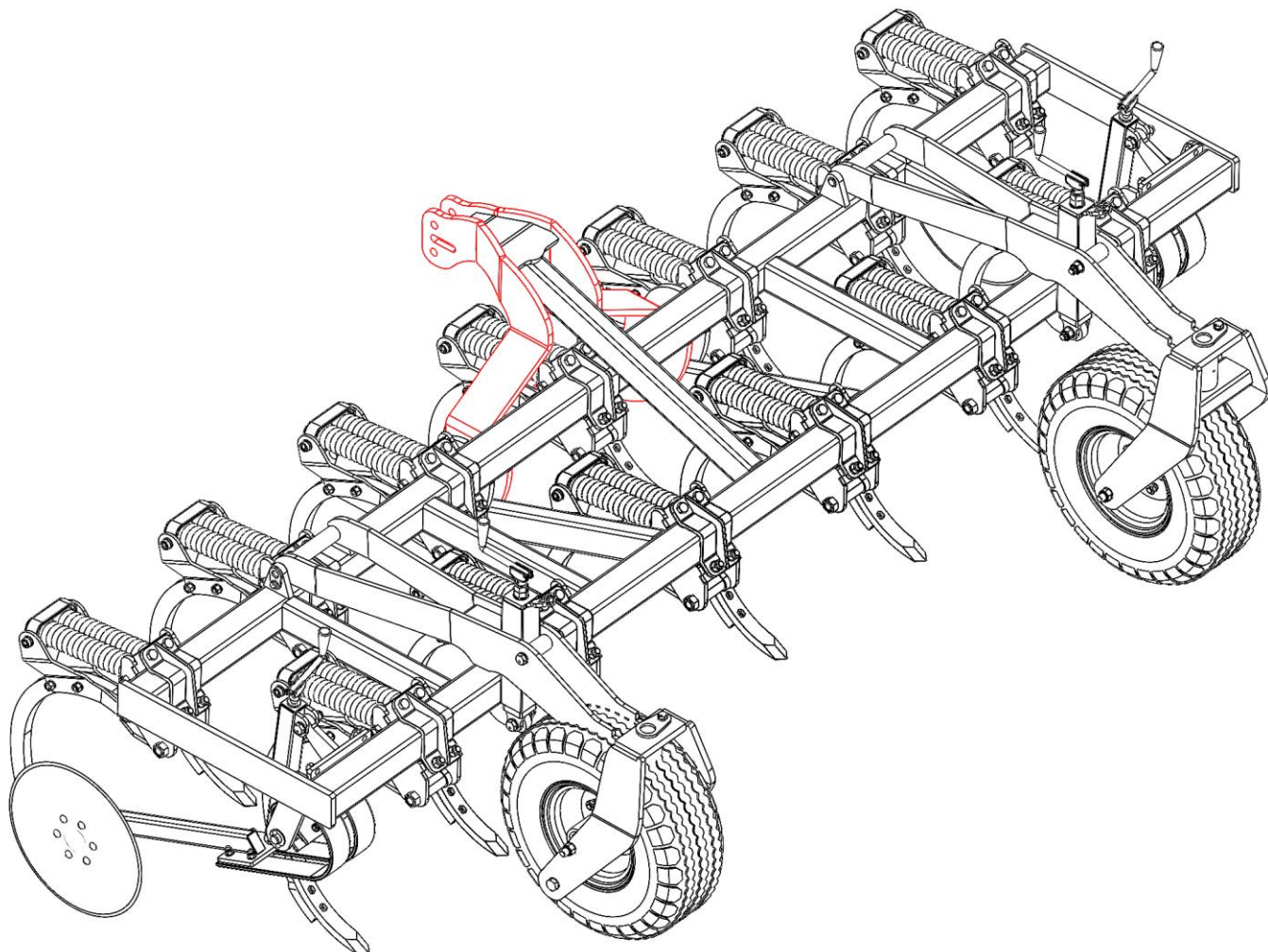
Pos.	Part no.	Description	Pc. per machine
1	0394700	Wheel 10.0/80x12 x 10 PLY, complete	2
2	0272310	Facet washer Ø20 DIN 125B	4
3	7365012	Hub, welded	2
4	7365001	Bushing, hub end Ø50x73,5 St. 50	4
5	7365002	Pipe Ø45x7	2
6	630949019	Disc, forsatt, Ø45/71,7	4
7	0395291	Hub nut M16x1,5 R19	10
8	0395271	Hub bolt M16x1,5x50mm	10
9	690140201	Double roller bearing conical	4
10	0379250	Seeger circlip ring	4
11	690140651	Sealing ring 72-45-14/17	4
12	0236332	Bolt M20x400mm, 8.8 fzb	2
13	0264110	Self-locking nut M20	2



# Edgeequipment (left side shown)



Pos.	Part no.	Description	Pc. per machine
1	675100529	Left arm edge equipment	1
1	675100530	Right arm edge equipment	1
2	30949030	Hub	2
3	690140652	Spacer Disc Ø40/Ø50x1,0 mm	2
4	690117063	Spring for disc 20,4x45x2,5	4
5	690113011	Self-locking nut M20	2
6	690140910	O-Ring 80x3	2
7	630949019	Disc Ø45/71,7	2
8	690140651	Sealing ring 72-45-14/17	2
9	691370072	Seeger circlip ring Ø72 DIN 471, indiv.	2
10	690140201	Double roller bearing conical	2
11	690153509	Disc plain Ø508x4,0 mm	2
12	0422145	Spring-Board tine 80x10mm - lang	4
13	675100517	Edgeequipment bracket, rigid part	2
14	690117014	Facet washer Ø12	24
15	690103096	Bolt M12x50 8.8	8
16	0264070	Self-locking nut M12	12
17	0264060	Self-locking nut M10	12
18	690117012	Facet washer Ø10	12
19	690101210	Carriage bolt M10x30 8.8	12
20	633052200	Clamp for Spring-Board tine	4
21	690103098	Bolt M12x110 10.9	4
22	690304105	Spindle complete	2
23	69430304F	Pin Ø30 L=304	2
24	690130164	Roll pin Ø8x60mm	2
25	690115017	Disc Ø55/Ø32x3	2
26	690103151	Bolt M20x90 8.8	4
27	690117005	Facet washer Ø20	8
28	0264110	Self-locking nut M20	4
29	675100530	Edgeequipment bracket, spindle part	2

**Front-Tiller 4,0m**



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The design is subject to modification without notice.