



*Operating Instructions
Declaration of Conformity
Spare Parts List*

*Grass-Roller
6.3 m – 8.2 m*



Important: Before using the machine, please study the Operating Instructions thoroughly to ensure that you are familiar with the safety instructions.



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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:

Grass – Roller 6,3m – 8,2m

Nykøbing the 29th December 2009

A handwritten signature in black ink, appearing to read "Villy Christiansen".

Villy Christiansen

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

DELIVERY CHECK

Check the roller for any damage. Check the hydraulic hoses for cuts and squeezing damage. Check also that the other hydraulic components have not been damaged during transport.

Check that the frame construction has not been damaged. You should also check that the roller blocks have not been exposed to impacts, which may have damaged the roller tube or the double-sealed ball bearings.

Finally check that the transport wheel nuts are tightened and OK. Check the air pressure in the tyres: approx. 3.8 bar/55 psi.

Instructions regarding unloading and placing.

The machine is delivered in completely mounted condition. Our specially trained driver will help with the unloading of the machine.

The machine should be unloaded from the lorry using a tractor and the ramps as instructed by the driver.

The machine should then be placed on level, firm ground.

Machine description

Grass-Roller is a roller for consolidation of grassland. With water in the smooth steel rollers a high weight is achieved and with that effective consolidation which guarantees an evenly pressed grassland. This helps achieve the highest yield from the grass and good quality clean silage without soil, stones, spores etc. With a hydr. long finger harrow in 2 rows mounted in front of the Grass-Roller the grass can be ripped out and dead thatch can be removed or divided into fine particles. The Grass-Roller can be equipped with Spring-Board levelling bar or molehill bar mounted on the long finger harrow for levelling of molehills, cow pats etc., which helps avoid ingress of soil and foreign matter into fodder when harvested. Add a HE-VA Multi-Seeder onto the Grass-Roller and grass or other seeds can be drilled at the same time as the consolidation. This allows complete reseeding, and overseeding or patching in existing pastures.

Technical specifications

Grass-Roller		6.3 m	8.2 m
Working width	Cm	630	820
Max. legal speed	Km/h	25	25
Total weight	Kg	2790	3880
Total weight with water	Kg	5200	7010
Axle pressure	Kg	1980	xxxx
Axle pressure with water	Kg	3650	xxxx
Towing eye pressure	Kg	810	xxxx
Towing eye pressure with water	Kg	1550	xxxx
Total length	Cm	409	550
Width in total	Cm	242	244
Roller volume	L	3 x 770 L	1 x 770 L 2 x 1130 L

Front harrow

Tine spacing	Cm	9	9
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Technical requirements

Tractor		6.3 m	8.2 m
Motor performance	kW (HP)	100 - 140	120 - 160

Electric system

Battery voltage	V	12	12
Plug for lights		7 – poles	7 – poles

Hydraulic system

Max. working pressure	Bar	220	220
Pump effect	L/min	Min 15	Min 15
Oil type		Hydro Texaco HD32	Hydro Texaco HD32

Safety instructions

General information

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:

The machine must be lowered to firm ground.

The hydraulics must be relieved.

The tractor must be stopped and the key removed from the ignition switch.

The driver must ensure that no persons are staying in exposed positions during the operation.

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

** Hazardous area: On and under the machine within a distance of 4 m from the machine.

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.

Instructions on transport on the public roads:

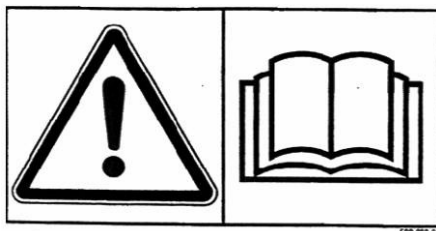
Check before transport on public roads that the attachment of the machine at the tractor is in accordance with the local rules and regulations in force (permitted total weight, permitted axle load, transport width, lights, warning signs, etc.).

Front axle load:

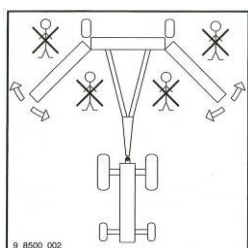
After the attachment of the machine and at maximum load, the driving properties of the tractor must be checked. Check that the front axle is sufficiently loaded. As a minimum, the front axle load must be 20% of the tractor weight. Permitted axle load and permitted total weight for the tractor must always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

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

Safety – and other markings on the machine



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



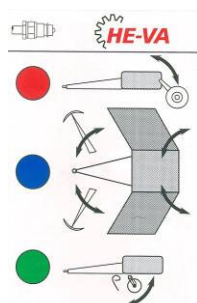
Take care that no persons are within the machine's hazardous area during the unfolding and folding procedure.

HUSK - PLEASE NOTE -
ACHTUNG - ATTENTION
EFTERSPÆND BOLTE
TIGHTEN UP THE BOLTS
BOLZEN NACHZIEHEN
RESSERRER LES BOULONS

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



Plate with number and year of manufacture.



Indication label for the machine's hydraulic systems:

- Red:** Tip-hydraulics (Lifting of middle section)
- Blue:** Wing-hydraulics (Folding and weight transfer system)
- Green:** Extra equipment

Empty the rollers of water, before the temperature is below 0 C°. If this is not observed, our guarantee obligations will no longer apply.

Operating Instructions

Attachment

On delivery the roller is in transport position. At start-up the roller is attached to the tractor.

Important:

Check that the towing hook height is between 500 and 550 mm.
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Raise the support leg and place it in the transport fittings on top of the drawbar. Now fit all the hydraulic hoses.

The roller requires two double-acting hydraulic outlets.

The hoses for the tip cylinder are provided with **red** cable straps.

The hoses for the wing cylinder are provided with **blue** cable straps.

The hoses for the long finger harrow are provided with **green** straps (extra equipment).

Unfolding and folding of the machine

1. Check that the male quick couplings mounted from the factory fit the tractor's female quick couplings.
2. Now pressurise the tip-cylinder (red), so that the side sections are lifted free of the transport cradle.
3. Then the wing-cylinders are pressured (blue), so that the side sections are folded out as much as possible, the hydraulic rams being fully closed.
4. Now relieve the pressure of the tip-cylinder (red), and the roller will tip forward, down to working position. When the bottom has been reached, let go of the hydraulic handle.
5. Now the wing-cylinders are pressured (blue), so that the side sections are pressed down against the ground and the manometer is showing the hydraulic pressure according to the schedule on the next page in order to obtain the correct weight transfer between the middle section and the side sections.

Change-over from working to transport position

6. First the side sections are lifted free of the ground by pressurising the wing-cylinders (blue).
7. The roller is tipped completely backwards and is locked by pressurising the tip-cylinder (red).
8. Now pressurise the wing-cylinders (blue), so that the side sections are turning forwards, towards the stop on the transport fittings of the drawbar.
9. When both side sections are parallel with the drawbar, they are lowered down into the transport cradle by relieving the tip-cylinder (red). This is to be performed with care.
Important: You must not pressurise any cylinders in transport position.
10. All hydraulic hoses are relieved, and the machine is ready for transport.

Settings and adjustment

Weight transfer

The weight transfer is adjusted dependent on the water quantity in the rollers. The weight transfer is adjusted by pressurising the hydraulic system (blue).

The pressure is read on the machine's manometer.

Water volume	6.3 m	8.2 m
1/1	Xxx bar	Xxx bar
3/4	Xxx bar	Xxx bar
1/2	Xxx bar	Xxx bar
1/4	Xxx bar	Xxx bar

NOTE: The weight transfer system can be loaded with max. **100 bar**.

Long finger harrow

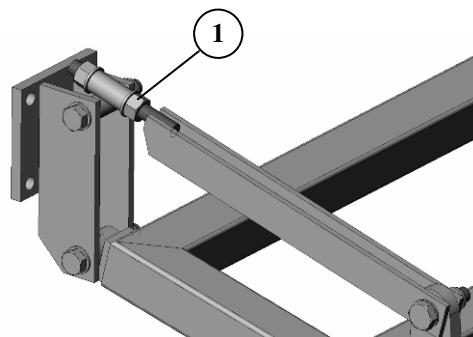
The long finger harrow is raised and lowered with the hydraulic system, which is marked with the **green** colour.

During work the long finger harrow can be raised and lowered as required. However, you have to take care that the harrow does not work too deeply meaning that it will carry the whole roller's weight.

Recommended harrow depth: 25 mm below the roller.

The front harrow is to operate in horizontal position when the machine is in working position. This is adjusted on the parallel rods, by loosening the nuts on each parallel rod and by tightening on the opposite side. ①

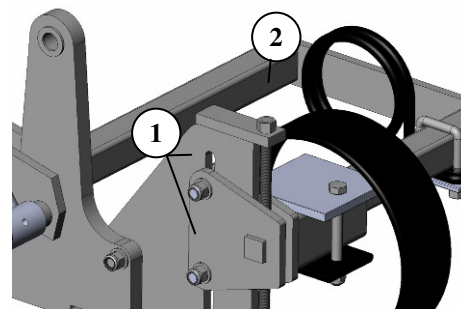
Each tine can be worn approx. 200 mm. However, they will be less flexible and maybe there is a need for an earlier replacement.



Levelling board

The levelling board is raised in proportion to the wear and tear of the tines. This is performed by loosening 2 nuts ①, and hereafter screwing with a 19 mm spanner on the thread spindle, which determines the height ②. When the desired height is reached, the 2 nuts are tightened again ①.

Be sure that all adjusters are set the same otherwise the levelling board will operate unevenly. This is easily done by measuring the length of the spindle.



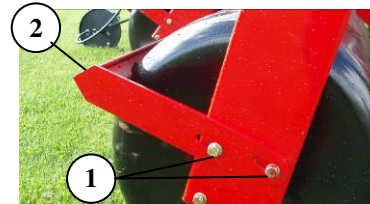
Roller scraper

6.3 m

The scrapers are bolted on the end plates. In order to adjust the scraper bar loosen the 2 bolts at the top ① and push the scraper bar against the roller ②. Please be aware that the scraper bar is to be placed 5 – 10 mm from the roller.

8.2 m

The scrapers are adjusted in the same way as for 6.3 m. In the middle of the side sections 2 bolts are placed, which are to be loosened too.



Maintenance

Lubrication

Important:

After every approx. 10 working hours the wheels, ball bearings and stop rings are tightened. Hoses, fittings and cylinders are inspected for eventual leaks and are tightened too.

After every approx. 10 working hours all movable parts in the side sections are to be lubricated as well as the 3 lubricating points on the wing cylinder. After every 30 working hours the tip cylinder's pins and the 3 pins in the drawbar are to be lubricated.

The bearings of the roller are to be lubricated after every 100 working hours and/or after cleaning.

Important:

Oil, type Hydro Texaco HD32 has been filled in the hydraulic system.

After the season, the roller is to be cleaned and lubricated with grease and oil.

Important:

The piston rods are to be lubricated with grease, for long term storage.

Repairs

All repairs are to be performed with original HE-VA spare parts.

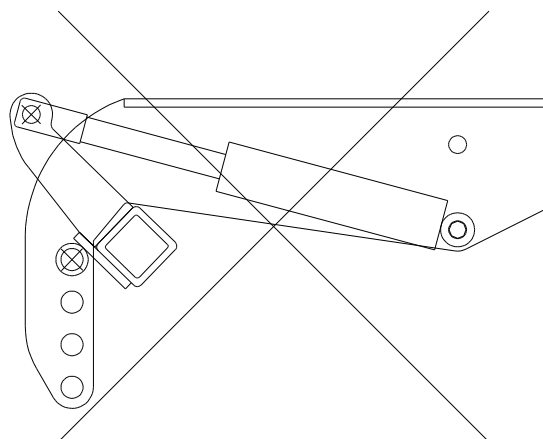
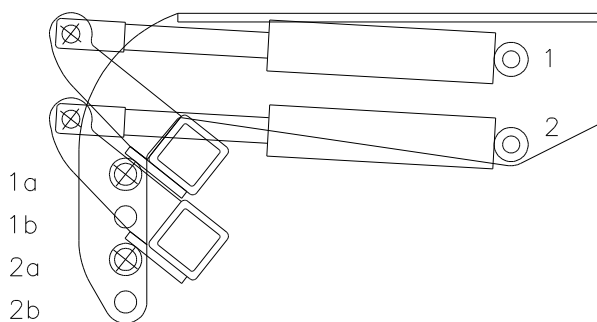
Spring-Board

The Spring-Board requires 1 double-acting hydraulic outlet on the tractor. The tine angle and thereby the aggressiveness of the tines is hydraulically controlled from the driver's cab and the depth control is done manually. The Spring-Board tine bar is adjustable in height and thereby the working angle of the tines against the ground is being changed. The tines work independently, but may be connected by means of a transverse locking system (extra equipment) if a greater levelling effect is required. The change-over is done very easily and quickly without any tools.

Mounting of cylinder on Spring-Board

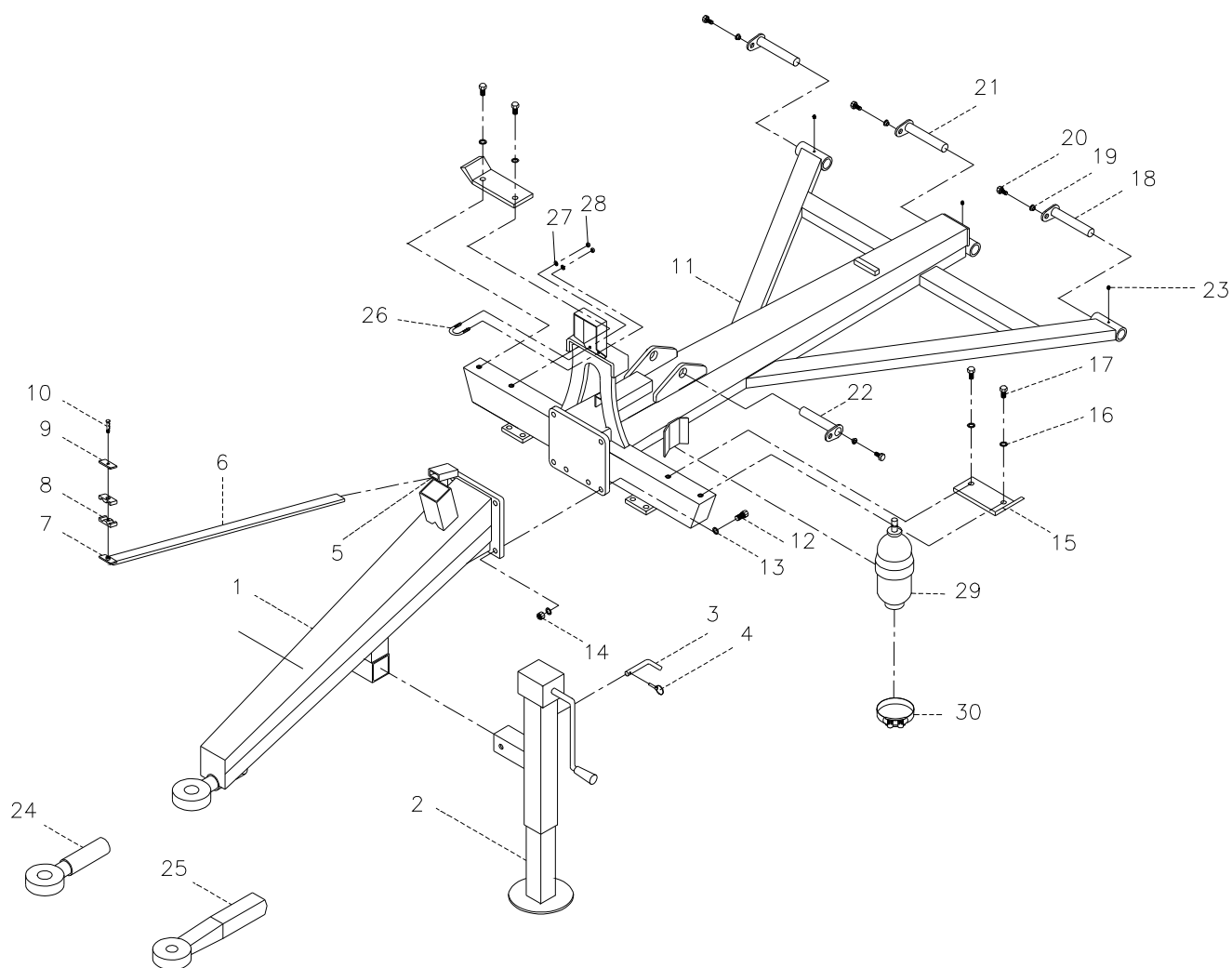
The hydraulic cylinders are mounted as shown below. It is important that the mounting is performed properly to get the correct force on the cylinders.

On the Grass-Roller the cylinders for Spring-Board must be mounted in hole 2 and 2b. Moreover, the tine points of the Spring-Board tines are placed completely down, so that they are bolted in the lower holes.



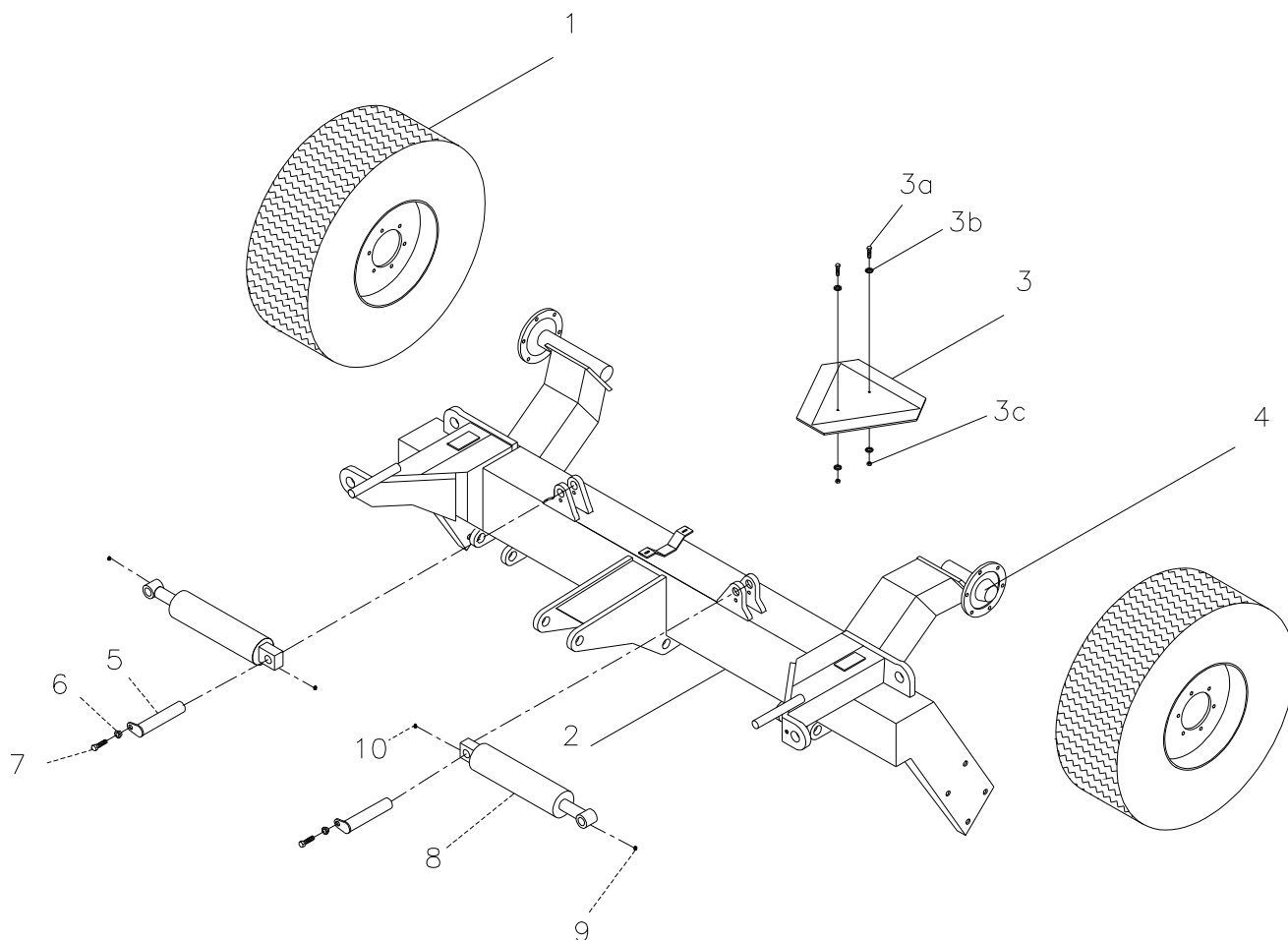
Spare parts list (Roller)

Drawbar



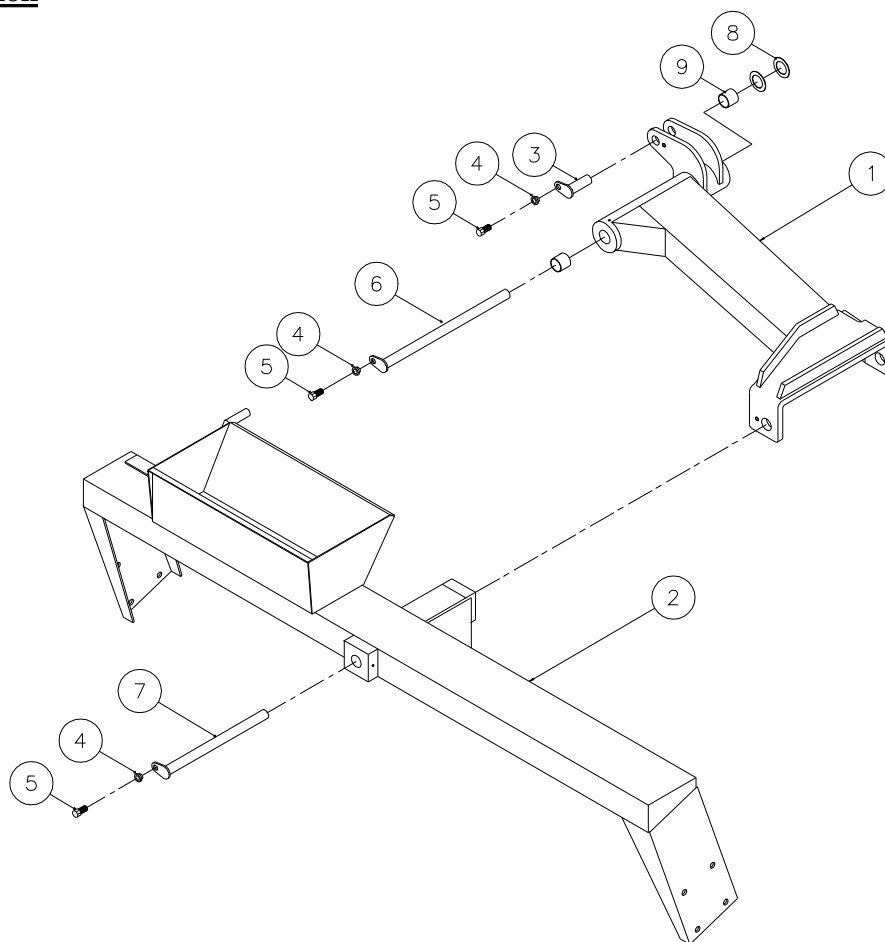
Pos.	Item no.	Designation	6.3m	8.2m
1	630771010	Front drawbar (Danish)	1	0
1	630831000	Front drawbar (Danish)	0	1
2	690141102	Supporting leg 6000 kg	1	1
3	69516094A	Pin Ø16 L=94	1	1
4	690133005	R-clip Ø4	1	1
5	690103075	Bolt M10x25	1	1
6	630771200	Parking device for hose	1	1
7	690210212	Welding plate for tube-support double	1	1
8	690210210	Tube-support double Ø14/Ø14	2	2
9	690210211	Top plate for tube-support double	1	1
10	690210213	Screw for tube-support double	1	1
11	630327110	Back drawbar	1	0
11	630347500	Back drawbar	0	1
12	690103190	Bolt M16x65	1	0
12	690103164	Bolt M20x70	0	1
13	690117013	Facet plate Ø16	1	0
13	690117005	Facet plate Ø20	0	1
14	690113008	Self-locking nut M16	1	1
14	690113009	Self-locking nut M20	0	1
15	630762045	Transport bracket	2	2
16	690119008	Spring washer Ø16	2	2
17	690103127	Bolt M16x50	2	2
18	69435175G	Pin Ø35 L=175	2	2
19	630532600	Lock-bush for pin head	4	4
20	690101101	Bolt M12x25	4	4
21	69435185G	Pin Ø35 L=185	1	1
22	69435175G	Pin Ø35 L=175	1	1
23	690136029	Lubricating nipple M8	3	3
24	690141211	Towing eye (Danish)	1	1
25	690105003	Towing eye (German)	1	1
26	690110003	U-bolt M8x60xØ35	1	1
27	690117004	Facet plate ø8	2	2
28	690113004	M8 Self-locking nut	2	2
29	690206510	Accumulator Hst 2,3 l. 10 bar.	2	2
30	690206511	Clamp for accumulator	2	2

Middle section



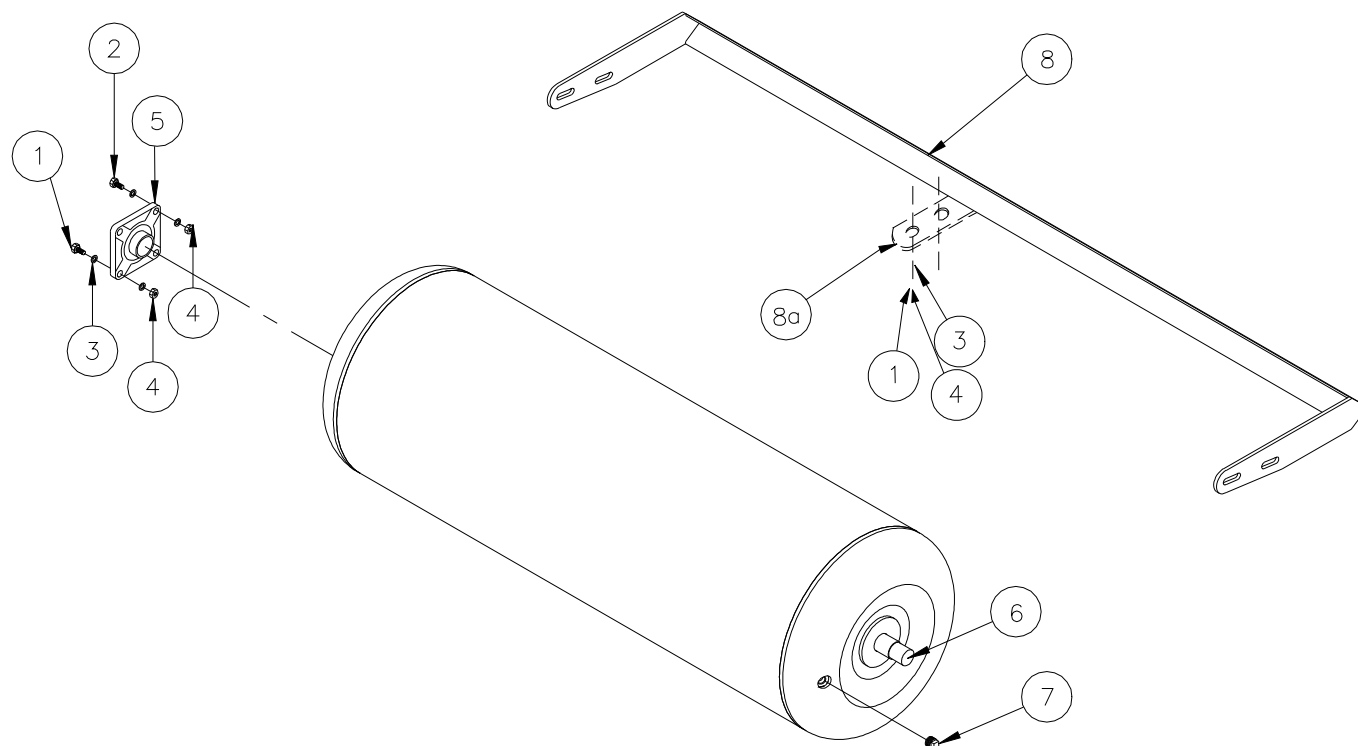
Pos.	Item no.	Designation	6.3m	8.2m
1	690141335	Wheel 400 / 60 x 15,5 14 PLY	2	2
2	630327100	Middle section	1	0
2	630347600	Middle section	0	1
3	690142001	Warning triangle	1	1
3a	690103014	Bolt M5x20	2	2
3b	690117002	Facet plate Ø5	4	4
3c	690113002	Self-locking nut M5	2	2
4	690141030	Hub 2500 kg.	2	2
4	690141031	Hub w/brakes 2500kg.	2	2
4a	690141039	Hub bolt M18x1,5x49	12	12
4b	690141055	Hub nut M18	12	12
4c	690140105	Bearing 30208 (2500 kg hub)	2	2
4d	690140111	Bearing 30211 (2500 kg hub)	2	2
4e	690141087	Sealing ring 55/100 (2500 kg hub)	2	2
4f	690141033	Hub cap ø80 (2500 kg hub)	2	2
5	69430100G	Pin ø30 L=100	2	2
6	630532600	Lock bush for pin head	2	2
7	690101101	Bolt M12x25	2	2
8	630762047	Cross cylinder	2	2
9	690136001	Lubricating nipple M6	2	2
10	690136029	Lubricating nipple M8	2	2

Wing & side section



Pos.	Item no.	Designation	6.3m	8.2m
1	630773000	Wing right	1	0
1	630773100	Wing left	1	0
1	630347710	Wing right	0	1
1	630347700	Wing left	0	1
2	630774000	Side section right	1	0
2	630774100	Side section left	1	0
2	630347810	Side section right	0	1
2	630347800	Side section left	0	1
3	69430090G	Pin $\varnothing 30$ L=90	2	2
4	630532600	Lock bush for pin head	6	6
5	690101101	Bolt M12x25	6	6
6	69440525G	Pin $\varnothing 40$ L=525	2	2
7	69440508G	Pin $\varnothing 40$ L=508	2	2
8	690140714	Sliding disc $\varnothing 42/\varnothing 66 \times 1,5$	4	4
9	690140715	Sliding sleeve $\varnothing 40/\varnothing 44$ L=40	4	4

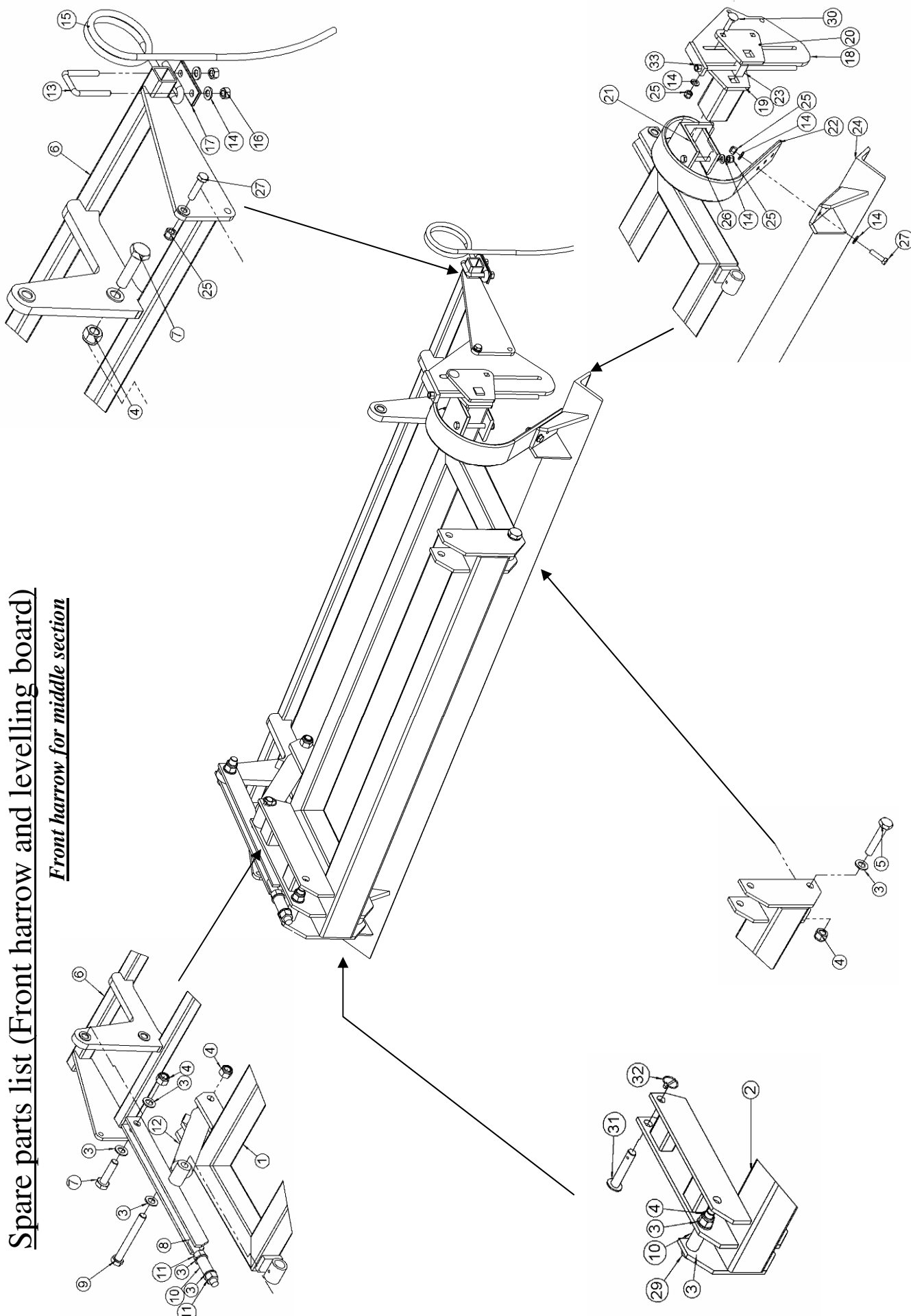
Packer roller



Pos.	Item no.	Designation	6.3m	8.2m
1	690103127	Bolt M16x50 8.8	12	16
2	690103190	Bolt M16x65 8.8	12	12
3	690117013	Facet plate ø16	48	56
4	690113008	Self-locking nut M16	24	16
5	690140813	Bearing UCF 211, ø55, 4-huls, ø60 axle	6	6
6	630327207	Roller for side sections + middle section L=2370	3	1
6	630327239	Roller for side sections L= 3283	0	2
7	690203321	Plug ¾" RG-black	2	2
8	630762041	Scraper bar	3	1
8a	630327232	Scraper bar for side section right + left	0	2

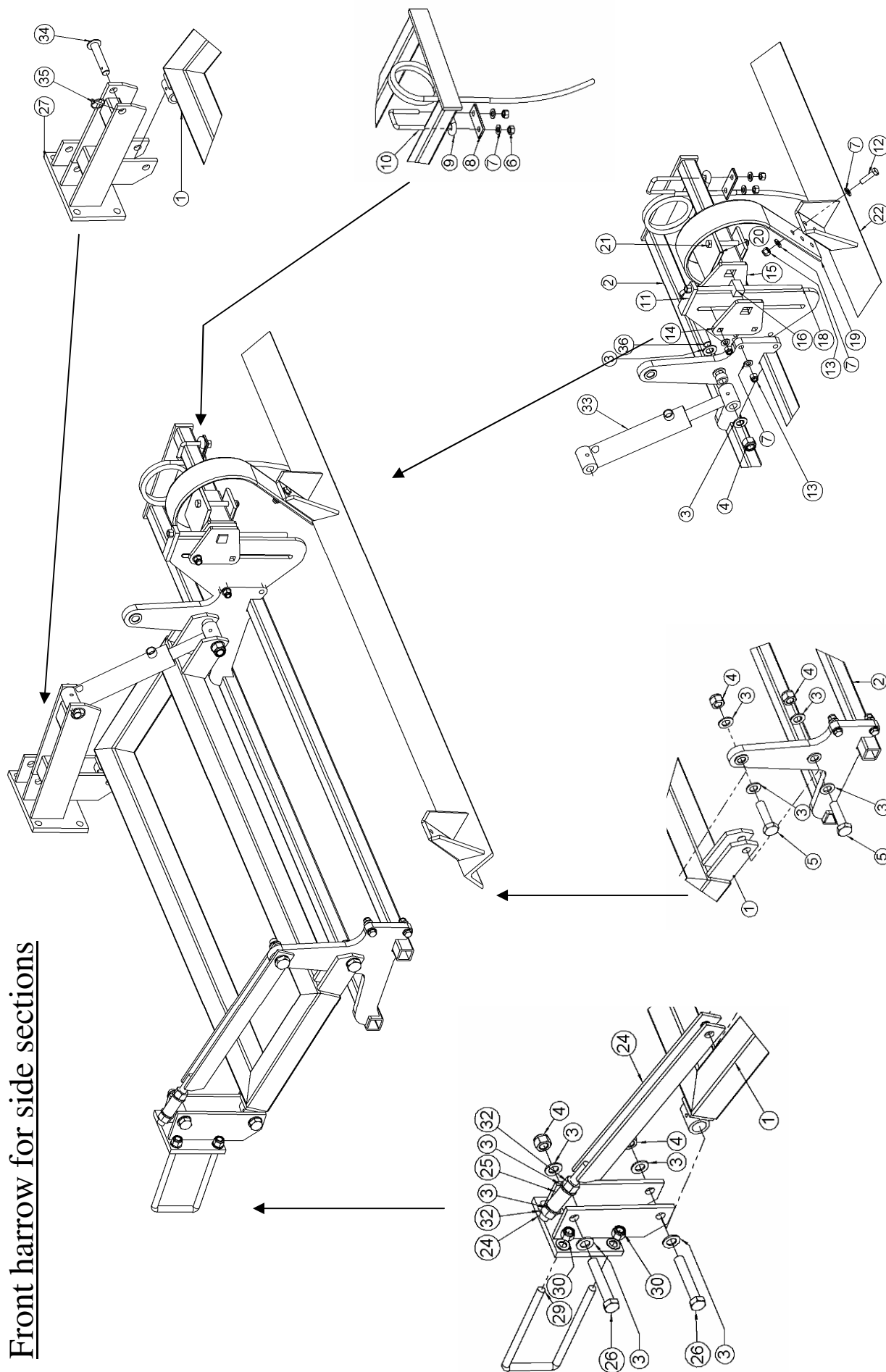
Spare parts list (Front harrow and levelling board)

Front harrow for middle section



Pos.	Item no.	Designation	6.3m	8.2m
1	630327182	Lifting frame left + middle front harrow	1	1
2	630327183	Suspension f/harrow middle section	1	1
3	690117005	Facet plate Ø20	24	24
4	690113009	Self-locking nut M20	8	8
5	690103196	Bolt M20x110 8.8	2	2
6	630327178	Harrow section middle section	1	0
6	630327226	Harrow section middle section	0	1
7	690103153	Bolt M20x80 8.8	3	3
8	630327180	Parallel rod f/front harrow	2	2
9	690103160	Bolt M20x180 8.8	1	1
10	630327179	Toggle joint at bracket on the harrow	2	2
11	690112009	Nut M20	4	4
12	690200040	Cylinder 50/30x155mm Ø20/Ø20 mm	1	1
13	690110050	U-bolt M12 40x40x40	23	23
14	690117014	Facet plate Ø12	74	74
15	0426110	Long finger tine ø12 x 100 curved	23	23
16	690113013	Self-locking nut M12 (all-metal)	46	46
17	1012520	Clamping plate M12	23	23
18	630327192	Height adjustment for levelling board	2	2
19	630327193	Clamping plate w/bar for height adjustment	2	2
20	630327191	Clamping plate for height adjustment	2	2
21	633052200	Clamp	2	2
22	0422144	Spring-Board tine 80x10mm – short	2	2
23	630327199	Threaded block for height adjustment of levelling board	2	2
24	630327196	Levelling board – Middle section	1	0
24	630327237	Levelling board – Middle section	0	1
25	690113019	Self locking nut M12 (all-metal)	16	16
26	690103098	Bolt M12x110 8.8	2	2
27	690103096	Bolt M12x50 8.8	10	10
28	690103159	Bolt M20x120 8.8	3	3
30	690101221	Bolt (carrier bolt) M12x50	4	4
31	69520087F	Pin Ø20 L=87	1	1
32	690134001	Ring pin Ø4,5 mm	1	1
33	630327217	Threaded rod for levelling board	2	2

Front harrow for side sections

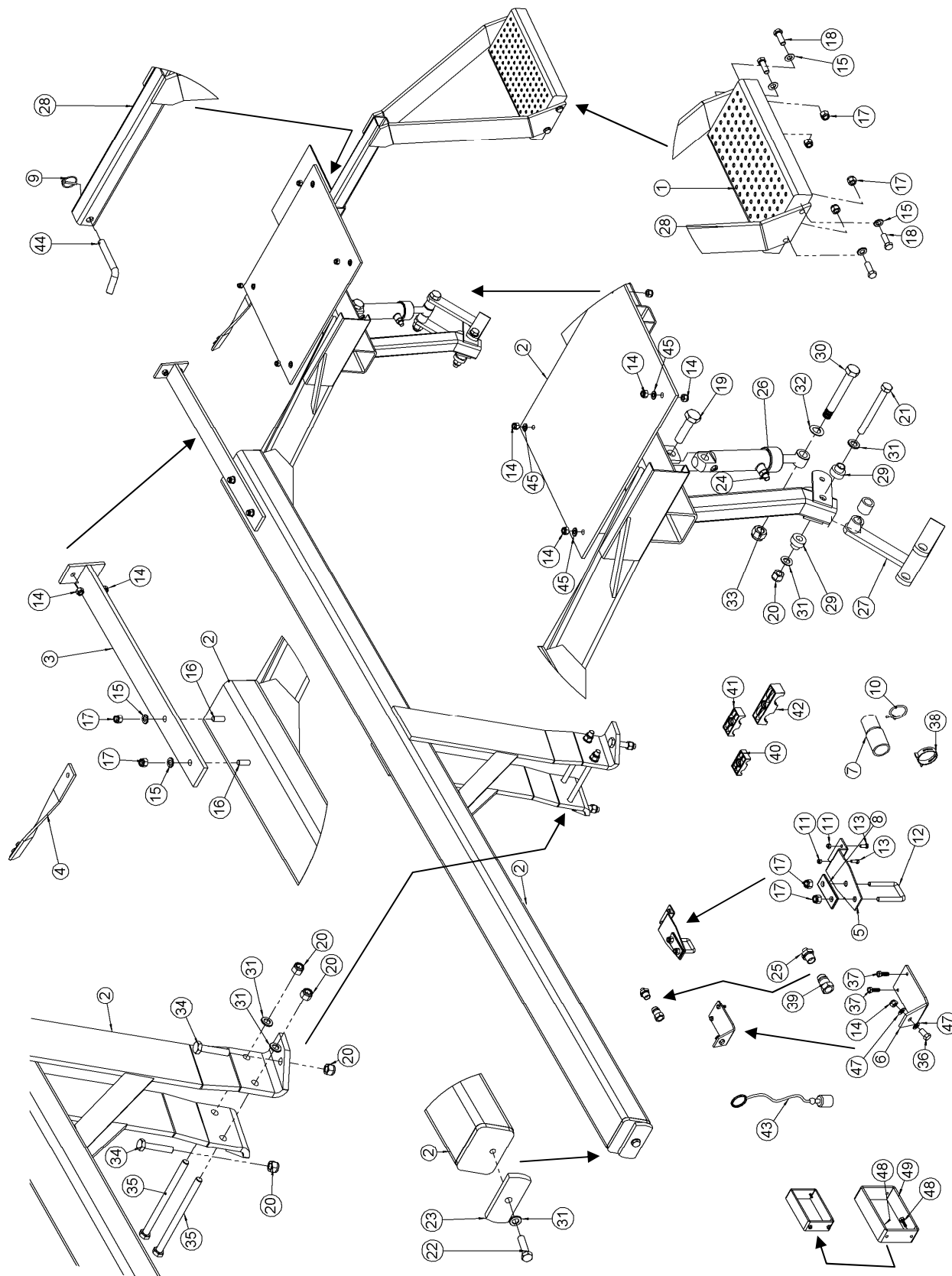


Pos.	Item no.	Designation	6.3m	8.2m
1	630327182	Lifting frame left + middle front harrow	1	0
1	630327181	Lifting frame right	1	0
1	630327221	Lifting frame left	0	1
1	630327220	Lifting frame right	0	1
2	630327177	Harrow frame left	1	0
2	630327176	Harrow frame right	1	0
2	630327228	Harrow frame left	0	1
2	630327227	Harrow frame right	0	1
3	690117005	Facet plate Ø20	20	30
4	690113009	Self-locking nut M20	8	12
5	690103151	Bolt M20x90 8.8	2	3
6	690113013	Self-locking nut M12 (all-metal)	48	62
7	690117014	Facet plate Ø12	76	88
8	1012520	Clamp, M12	24	31
9	0426110	Long finger tine ø12 x 100 curved	24	31
10	690110050	U-bolt M12 40x40x40	24	31
11	630327192	Height adjustment f/levelling board	2	3
12	690103096	Bolt M12x50 8.8	10	15
13	690113019	Self-locking nut M12 (all-metal)	16	16
14	630327191	Clamp for height adjustment	2	3
15	630327193	Clamp with bar for height adjustment	2	3
16	630327199	Threaded block for height adjustment of levelling board	2	3
17	690101221	Bolt (carrier bolt) M12x50	4	6
18	630327217	Threaded rod for levelling board	2	3
19	633052000	Spring-Board tine 80x10 mm	2	3
20	633052200	Clamp for Spring-Board tine	2	3
21	690103098	Bolt M12x110 8,8	2	3
22	630327195	Levelling board, left	1	0
22	630327194	Levelling board, right	1	0
22	630327236	Levelling board, left	0	1
22	630327235	Levelling board, right	0	1
24	630327180	Parallel rod f/front harrow	2	3
25	630327179	Toggle joint at bracket on the harrow	2	3
26	690103159	Bolt M20x120 8.8	4	6
27	630327185	Left cylinder bracket f/side sections	1	2
27a	630327186	Right cylinder bracket f/side sections	1	2
28	630327184	Mounting bracket on side sections without cylinder	1	1
29	690110106	U-bolt M16x200x100x200	4	6

Pos.	Item no.	Designation	6.3m	8.2m
30	690113008	Self-locking nut M16	8	12
31	690117013	Facet plate Ø16	8	12
32	690112009	Nut M20	4	6
33	690200040	Cylinder 50/30x155mm Ø20/Ø20 mm	1	2
34	69520087F	Pin Ø20 L=87	1	2
35	690134001	Ring pin Ø4,5 mm	1	2
36	690103160	Bolt M20x180 8.8	1	2

Spare parts list - mounting of Multi-Seeder

Spare parts and wearing parts for HE-VA Multi-Seeder can be found in a separate operation instructions which also contains a spare parts list.



Pos.	Item no.	Designation	6.3m	8.2m
1	0487007	Step panel 200 x 400 x 45 mm	1	1
2	1131850	Mounted frame for Grass-Roller	0	1
2	1131470	Mounted frame for Grass-Roller	1	0
3	1131960	Mounted fan bracket	0	1
3	1131950	Bracket for fan	1	0
4	1131840	Mounted cable bracket	1	1
5	1131780	Bracket for distribution plate	8	16
6	1131770	Wide holder short		8
7	0489020	Rubber bellow for drill hose		8
8	1012520	Clamping plate M12	8	16
9	0378200	Ring split, ø4.5 mm, galv. No.2045321	1	1
10	0435100	Clamp for drilling tube 38/12		8
11	0264040	Self-locking nut M6, fzb DIN985	16	32
12	0382120	U-bolt M12	8	16
13	0234280	Steel set screw M6x16mm 8.8 fzb	16	32
14	0264060	Self-locking nut M10, fzg DIN985	6	6
15	0272270	Facet plate 12mm, fzg	12	12
16	0235360	Steel set screw M12x40mm,8.8 fzg	2	2
17	0264070	Self-locking nut M12, fzb DIN985	21	37
18	0235350	Steel set screw M12x35mm, 8.8 fzb	4	4
19	0236170	Steel bolt M20x80mm, 8.8 fzg	1	1
20	0264090	Self-locking nut M16, fzb DIN985	5	5
21	0235950	Steel bolt M16x150mm, 8.8 fzb	1	1
22	0235840	Steel bolt M16x60mm, 8.8 fzb	1	1
23	1131120	Clamping flange	1	1
24	0444500	Hexagon nipple 1/4" Kon 01BK04	2	2
25	0444490	Hexagon nipple 1/2"x1/4" 02BP0804	2	2
26	0468200	Hydraulic cylinder 40/20 x99mm 2x1/4"	1	1
27	1131130	Mounted lifting bracket for wheel, short	1	1
28	30551200	Mounted bracket for step panel	1	1
29	1130290	Bush	2	2
30	0236240	Steel bolt M20x150mm, 8.8 fzb	1	1
31	0272290	Facet plate 16mm, fzb	11	11
32	0272310	Facet plate 20mm, fzb	4	4
33	0264110	Self-locking nut M20, fzb DIN985	2	2
34	0235880	Steel bolt M16x80mm, 8.8 fzb	0	2
34	0235900	Steel bolt M16x100mm, 8.8 fzb	4	0
35	0242760	Machine bolt M16x240mm, 4.6 fzb	0	2

Pos.	Item no.	Designation	6.3m	8.2m
36	0235030	Steel set screw M10x20mm, 8.8 fzb	8	8
37	0230825	Screw Tapetite M8x25 6k.hov 211-08-025	0	16
38	0435110	Clamp for tube 46/12	0	8
39	0444020	Quick-coupling 1/2" Hanpart-kegle Sterling	2	2
40	0449430	Tube-support double ø14-14mm green	1	1
41	0449700	Tube-support double ø22-22mm green (at hydraulic fan)	1	1
42	0449730	Tube-support double ø32-32mm green	2	5
43	0449020	Dust cap 1/2" Std., 1/2" C51	2	2
44	1030280	Pin for wing, ø16x150mm	1	1
45	0235430	Steel bolt M12x75mm, 8.8 fzb	1	1
46	0230320	Screw Tapetite M6x50 6k.hov 211-06-050	2	7
47	0272260	Facet plate 10mm, fzb DIN125B	8	18
48	0230290	Screw Tapetite M6x20 6k.hov 211-06-020	4	4
49	630327242	Hose bracket square	2	2
	0455160	Hydr. hose 1/4"x8000 mm	0	1
	0455060	Hydr. hose 1/4"x6900 mm	1	0
	0454490	Hydr. hose 1/2" x 1550mm	0	1
	0434450	Clamp Ø22-32mm, 9 mm wide	8	32
	0434531	Clamp Ø68-85mm, 9 mm wide	0	2
	0434531	Clamp Ø68-85mm, 9 mm wide (at hydraulic fan)	2	0

Spare parts list (Spring-Board)

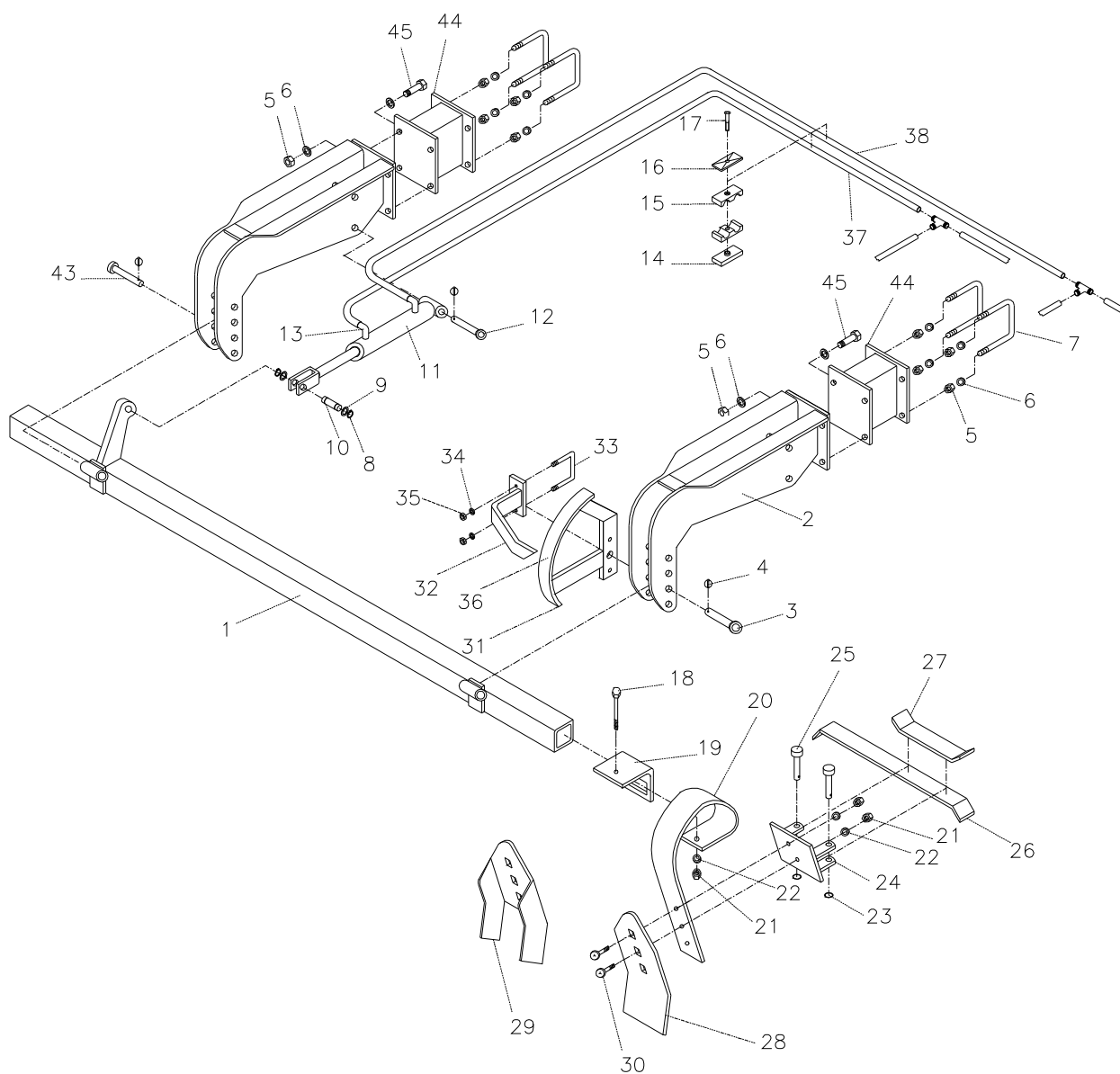
Middle section 6.3 – 8.2m

Fejl! Objekter kan ikke oprettes ved at redigere feltkoder.

Pos.	Item no.	Designation	6.3m	8.2m
1	635053020	Bar for tines	1	0
1	633073020	Bar for tines	0	1
2	635051000	Suspension for middle section	1	0
2	633061000	Suspension for middle section	0	1
3	69525087F	Pin Ø25 L=87	2	2
4	690134001	Ring pin Ø4,5	3	3
5	670861100	Flange	2	2
6	690110101	U-bolt M16x100x100x100	2	2
7	690117013	Facet plate Ø16	8	8
8	690113008	Self-locking nut M16	6	6
9	690200160	Cylinder 50/30x155	1	1
9a	690200041	Cylinder tube 50/30x155 mm	1	1
9b	690200162	Piston rod 50/30x155 mm	1	1
9c	690200044	Piston 50/30 mm	1	1
9d	690200043	Packing box 50/30 mm	1	1
9e	690200045	Gasket set 50/30 mm	1	1
10	691372020	Seeger circlip ring Ø20 Din 471	2	2
11	690115010	Washer Ø20/Ø28x1mm	2	2
12	69520046D	Pin Ø20 L=46	1	1
13	69520087F	Pin Ø20 L=87	1	1
14	690203006	Fitting 90angle 10 x 3/8" BSP	2	2
15	690201051	Hydraulic hose 1/4" L=250 mm	1	1
16	690201059	Hydraulic hose 1/4" L=350 mm	1	1
17	690203015	Fitting T10	4	4
18	690201032	Hydraulic hose 1/4" L=1130 mm	1	1
19	690201053	Hydraulic hose 1/4" L=1260 mm	1	1
20	690201038	Hydraulic hose 1/4" L=4000 mm	1	0
20	690201047	Hydraulic hose 1/4" L=4610 mm	0	1
21	690201006	Hydraulic hose 1/4" L=3800 mm	1	
21	690201047	Hydraulic hose 1/4" L=4610 mm		1
22	690203003	Fitting, straight 10 x 1/2" BSP	2	2
23	690203001	Quick coupling (male) E402 1/2"	2	2
24	690210213	Screw for tube-support double	5	5
25	690210211	Top plate for tube-support double	5	5
26	690210210	Tube-support double ø14/ø14	10	10
27	690210212	Welding plate for tube-support double	5	5
28	633052200	Clamp for tine	8	6

Pos.	Item no.	Designation	6.3m	8.2m
29	690103098	Bolt M12x110	8	6
30	633052050	Tine (10x80)	8	6
30a	633052000	Tine complete	8	6
31	690113006	Self-locking nut M12	24	18
32	690117014	Facet plate ø12	24	18
33	690134000	Locking ring 30xø3	16	12
34	633055500	Tine bracket for transverse locking system	8	6
35	69512040K	Pin Ø12,5x40	16	12
36	633055710	Long locking bar for transverse locking system	7	5
37	633055700	Short locking bar for transverse locking system	2	2
38	633052100	Tine point (8x150)	8	6
39	690101220	Bolt (carrier bolt) M12x45	16	12
40	633052150	Tine point (slicing plates)	8	6
41	635055010	Distance plate for mounting	2	2
42	690103126	Bolt M16x45	4	4

Side section (left) 6.3m



Side section (left) 8.2m

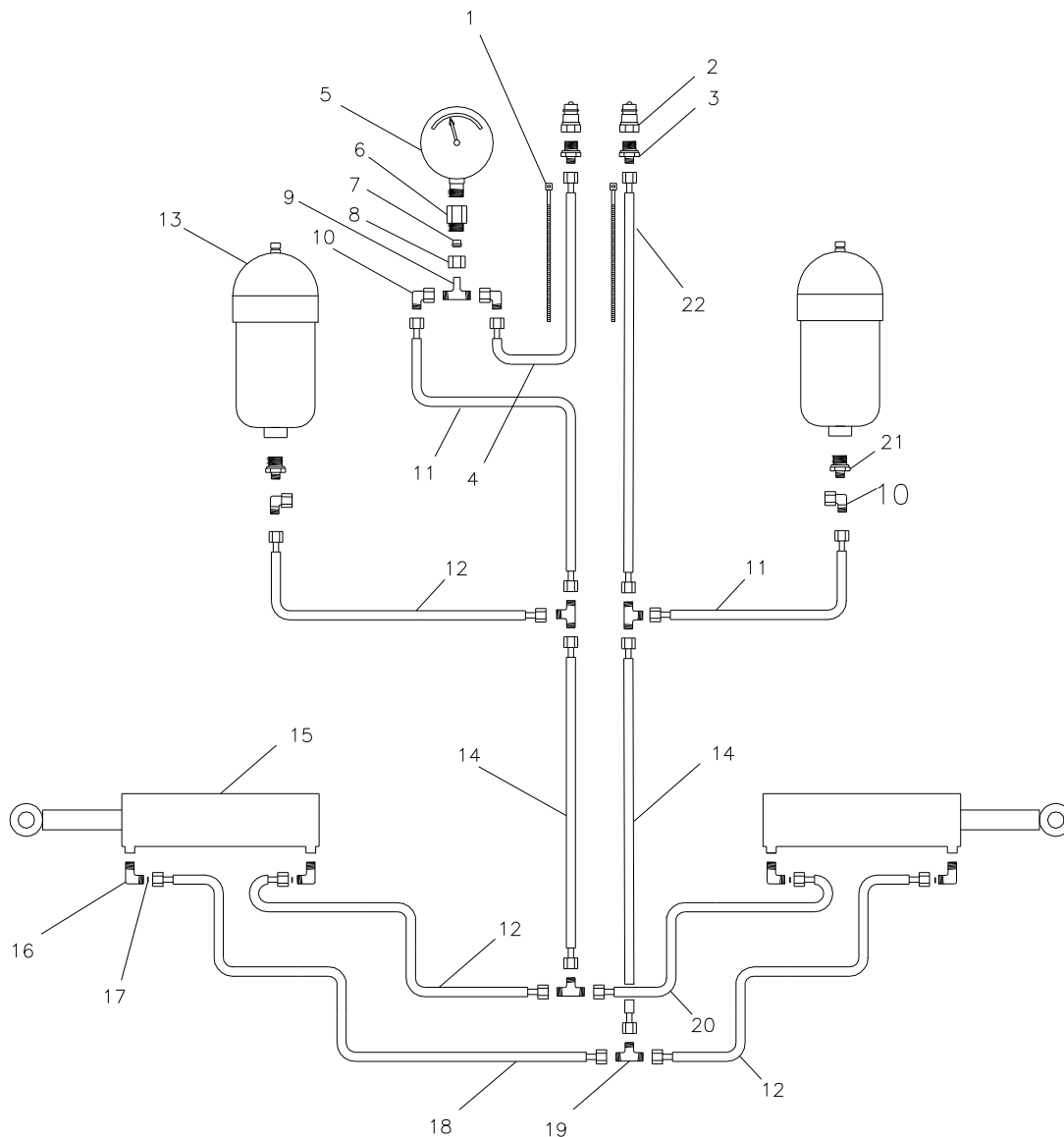
Fejl! Objekter kan ikke oprettes ved at redigere feltkoder.

Pos.	Item no.	Designation	6.3m	8.2m
1	635053010	Bar for tines (right)	1	
1	635053030	Bar for tines (left)	1	
1	633063010	Bar for tines (right)		1
1	633063030	Bar for tines (left)		1
2	635054500	Horn	4	4
3	69525095F	Pin Ø25 L=95	1	1
4	690134001	Ring pin Ø4,5	6	6
5	690113008	Self-locking nut M16	32	32
6	690117013	Facet plate Ø16	48	48
7	690110106	U-bolt M16x200x100x200	8	8
8	691372020	Seeger circlip ring Ø20 Din 471	4	8
9	690115010	Washer Ø20/Ø28x1mm	4	8
10	69520046D	Pin Ø20 L=46	2	4
11	690200160	Cylinder 50/30 x 155	2	4
11a	690200041	Cylinder tube 50/30 x 155	2	4
11b	690200162	Piston rod 50/30 x 155	2	4
11c	690200044	Piston 50/30 mm	2	4
11d	690200043	Packing box 50/30 mm	2	4
11e	690200045	Gasket set 50/30 mm	2	4
12	69520087F	Pin Ø20 L=87	2	4
13	690203006	Fitting, 90angle 10 x 3/8" BSP	2	4
14	690203002	Fitting, straight 10 - 3/8" BSP	2	4
15	690210210	Tube bracket double ø14/ø14	16	20
16	690210211	Top plate for tube-support double	8	10
17	690210213	Screw for tube-support double	8	10
18	690103098	Bolt M12x110	16	26
19	633052200	Clamp for tine	16	26
20	633052050	Tine (10x80)	16	26
20a	633052000	Tine complete	16	26
21	690112011	Binding nut 12mm	32	52
22	690117014	Facet plate Ø12	48	78
23	690134000	Locking ring 30xø3	32	52
24	633055500	Tine bracket for transverse locking system	16	26
25	69512040K	Pin ø12,5x40	32	52
26	633055710	Long locking bar for transverse locking system	14	24
27	633055700	Short locking bar for transverse locking system	4	4
28	633052100	Tine point (8x150)	16	26

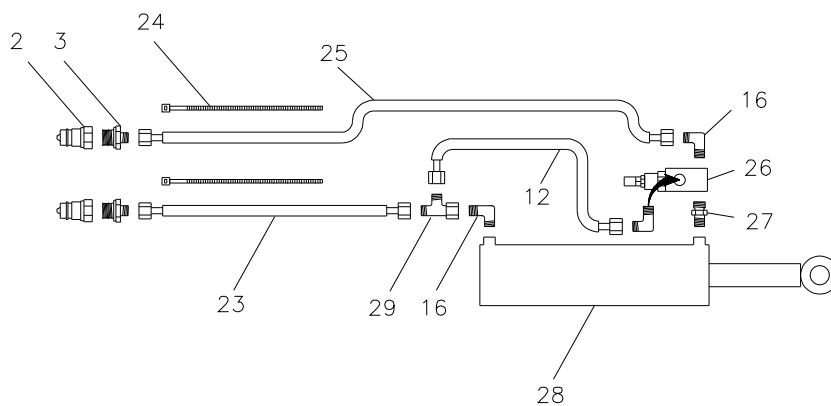
Pos.	Item no.	Designation	6.3m	8.2m
29	633052150	Tine point (slicing plates)	16	26
30	690101220	Bolt (carrier bolt) M12x45	32	52
31	635151000	Scale f/depth control	1	1
32	635152000	Pointer f/depth control	1	1
33	690110020	U-bolt M10x70x70x70 mm	1	1
34	690117012	Facet plate Ø10	2	2
35	690113005	Self-locking nut M10	2	2
36	698500018	Label for scale for depth control	1	1
37	690201048	Hydraulic hose 1/4" L= 3610 mm (right side section)	1	0
37	690201006	Hydraulic hose 1/4" L= 3800 mm (left side section)	1	0
37	690201022	Hydraulic hose 1/4" L= 3140 mm	0	2
38	690201044	Hydraulic hose 1/4" L= 3460 mm (right side section)	1	0
38	690201048	Hydraulic hose 1/4" L= 3610 mm (left side section)	1	0
38	690201060	Hydraulic hose 1/4" L= 3000 mm	0	2
39	690201009	Hydraulic hose 1/4" L= 355 mm	0	2
40	690201069	Hydraulic hose 1/4" L= 450 mm	0	2
41	690201063	Hydraulic hose 1/4" L= 1600 mm	0	2
42	690201016	Hydraulic hose 1/4" L= 1830 mm	0	2
43	69525087F	Pin Ø25 L=87	3	3
44	635055000	Connecting link	4	4
45	690103197	Bolt M16x50	16	16

Spare parts list (Hydraulics)

Hydraulics for folding & weight transfer system (red) 6.3m

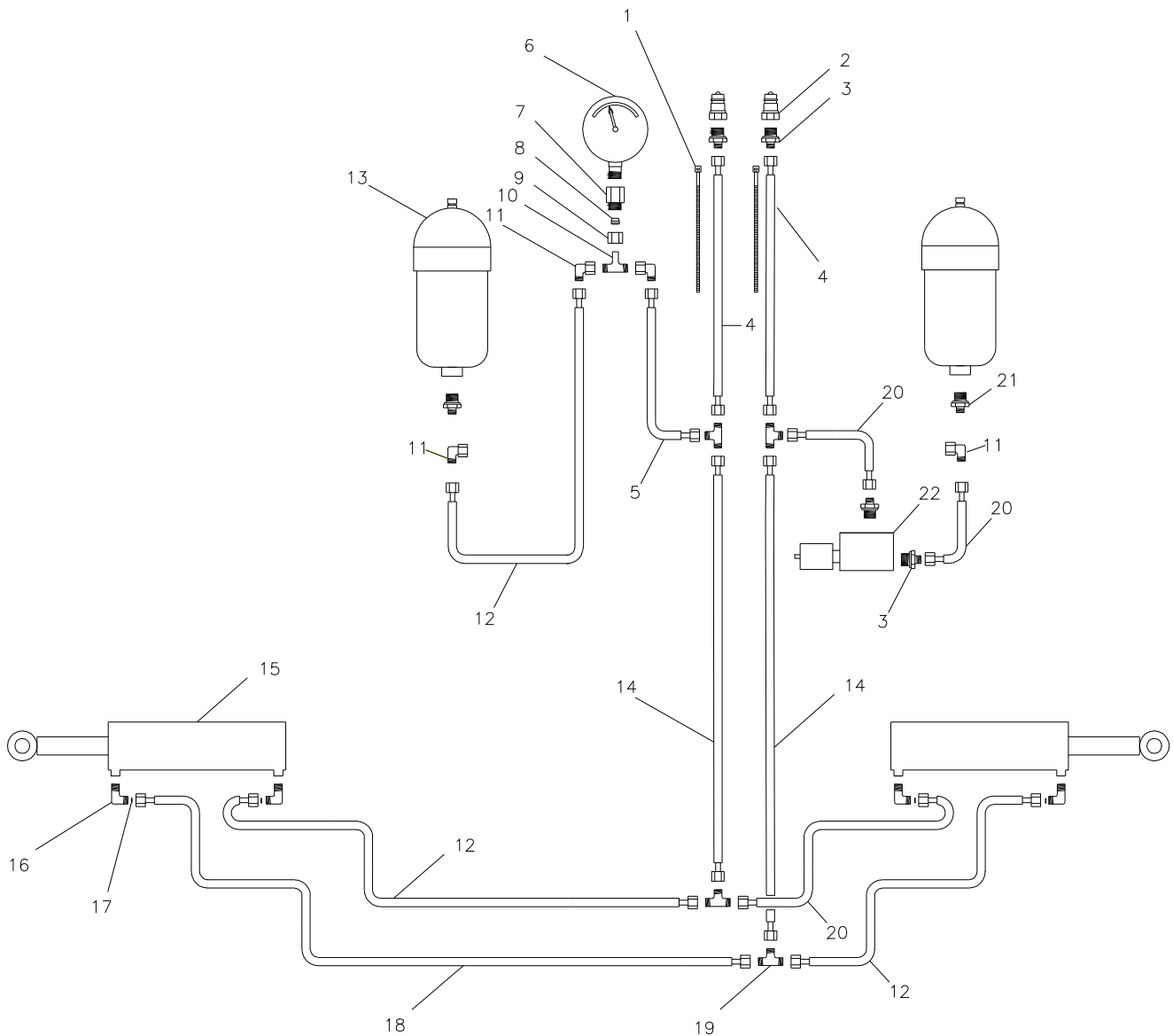


Tip cylinder for middle section (blue) 6.3m

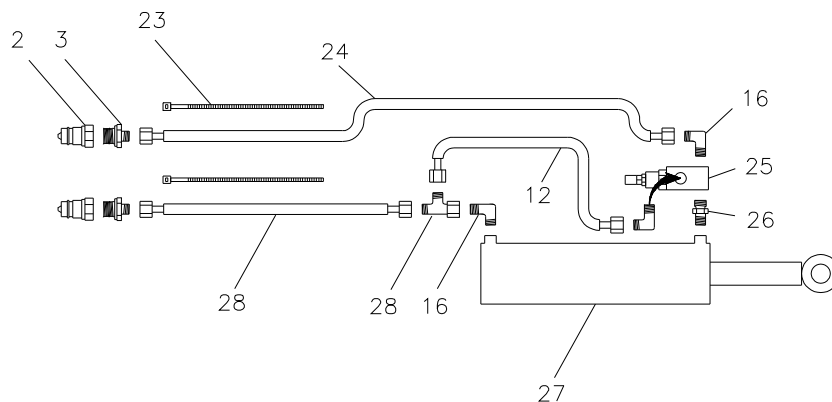


Pos.	Item no.	Designation	6.3 m
1	690119202	Cable straps (blue)	2
2	690203001	Quick coupling, male E402 ½"	4
3	690203003	Fitting, straight 10- ½" BSP	4
4	690201006	Hydraulic hose 3800mm ¼" st/st	1
5	690206822	Manometer 250 bar Ø100mm	1
6	690206823	Manometer fitting 10- ½"	1
7	690203010	Cutting ring Ø10	1
8	690203011	Union nut Ø10	1
9	690203020	Fitting EVT 10 L without union nut/cutting ring	1
10	690203016	Fitting 90angle 10mm	4
11	690201042	Hydraulic hose 500mm 1/4" st/st	2
12	690201015	Hydraulic hose 710mm 1/4" st/st	4
13	690206510	Accumulator HST 2,3 ltr. 40 Bar	2
14	690201016	Hydraulic hose 1830mm 1/4" st/st	2
15	630762047	Cross cylinder 90/40x280mm (right + left)	2
16	690203006	Fitting, 90angle 10-3/8" Bsp	7
17	690207901	Restrictor 1mm	4
18	690201055	Hydraulic hose 1010mm 1/4" st/st	1
19	690203015	Fitting T10	4
20	690201059	Hydraulic hose 350mm 1/4" st/st	1
21	690203012	Fitting, straight M18x1,5x12mm w/joint ring	2
22	690201038	Hydraulic hose 4000mm 1/4" st/st	1
23	690201029	Hydraulic hose 4300mm 1/4" st/st	1
24	690119203	Cable straps (red)	2
25	690201045	Hydraulic hose 4800mm 1/4" st/st	1
26	690207104	Adjustable pressure control valve 3/8"	1
27	690202810	Hexagon nipple 3/8"x 3/8" BSP-T	1
28	690200020	Tip cylinder Ø100/50 x 700mm, Ø35 mm	1
29	690203004	Fitting T10V	1

Hydraulics for folding & weight transfer system (red) 8.2m

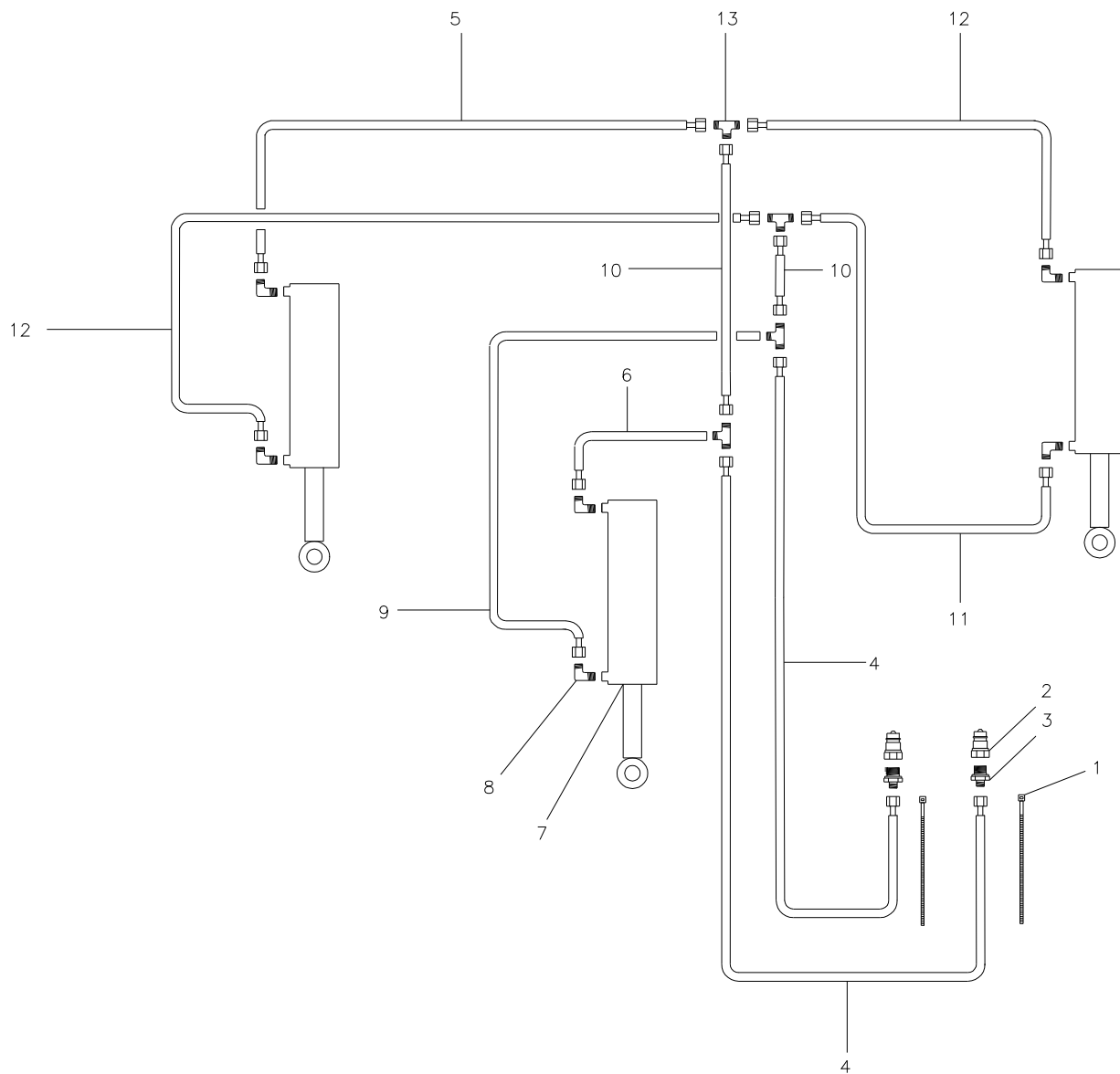


Tip cylinder for middle section (blue) 8.2m



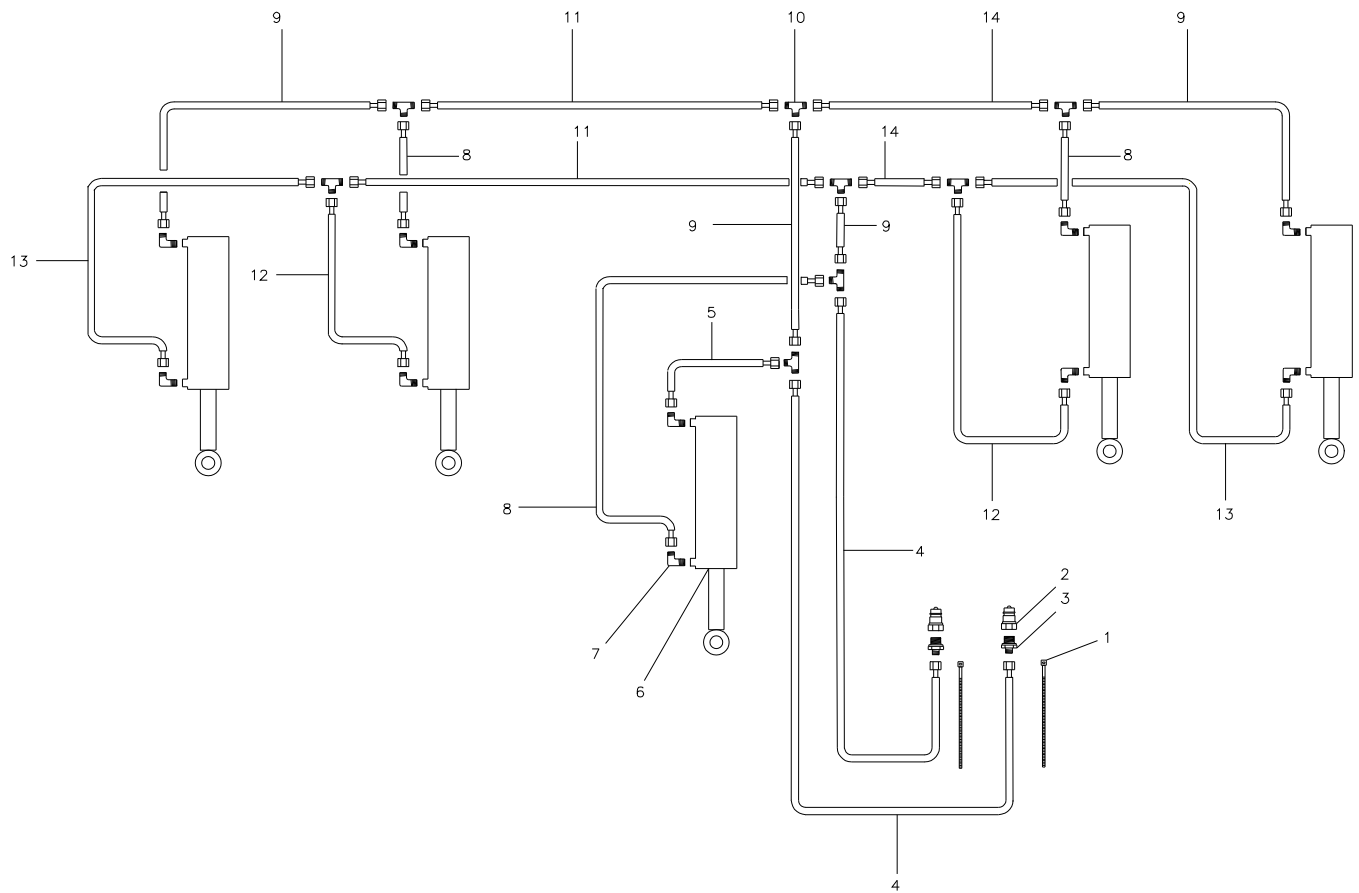
Pos.	Item no.	Designation	8.2m
1	690119202	Cable straps (blue)	2
2	690203001	Quick coupling, male E402 ½"	4
3	690203003	Fitting, straight 10- ½" BSP	4
4	690201048	Hydraulic hose 3610mm 1/4" st/st	2
5	690201051	Hydraulic hose 250mm ¼ " st/st	1
6	690206822	Manometer 250 bar Ø100mm	1
7	690206823	Manometer fitting 10- ½"	1
8	690203010	Cutting ring Ø10	1
9	690203011	Union nut Ø10	1
10	690203020	Fitting EVT 10 L without union nut / cutting ring	1
11	690203016	Fitting 90angle 10mm	4
12	690201055	Hydraulic hose 1010mm 1/4" st/st	3
13	690206510	Accumulator HST 2,3 ltr. 40 Bar	1
14	690201022	Hydraulic hose 3140mm 1/4" st/st	2
15	630762047	Cross cylinder 90/40x280mm (right)	2
16	690203006	Fitting, 90angle 10-3/8" Bsp	4
17	690207901	Restrictor 1mm	4
18	690201055	Hydraulic hose 1010mm 1/4" st/st	2
19	690203015	Fitting T10	4
20	690201059	Hydraulic hose 350mm 1/4" st/st	3
21	690203012	Fitting, straight M18x1,5x12mm w/joint ring	2
22	690209453	Depth stop valve, electric	1
23	690119203	Cable straps (red)	2
24	690201025	Hydraulic hose 5640mm 1/4" st/st	1
25	690207104	Adjustable pressure control valve 3/8"	1
26	690202810	Hexagon nipple 3/8"x 3/8" BSP-T	1
27	690200014	Tip cylinder Ø100/60 x 1000mm, Ø35 mm	1
28	690203004	Fitting T10V	1
29	690201047	Hydraulic hose 4610mm 1/4" st/st	1

Hydraulics, front harrow (green) 6.3m



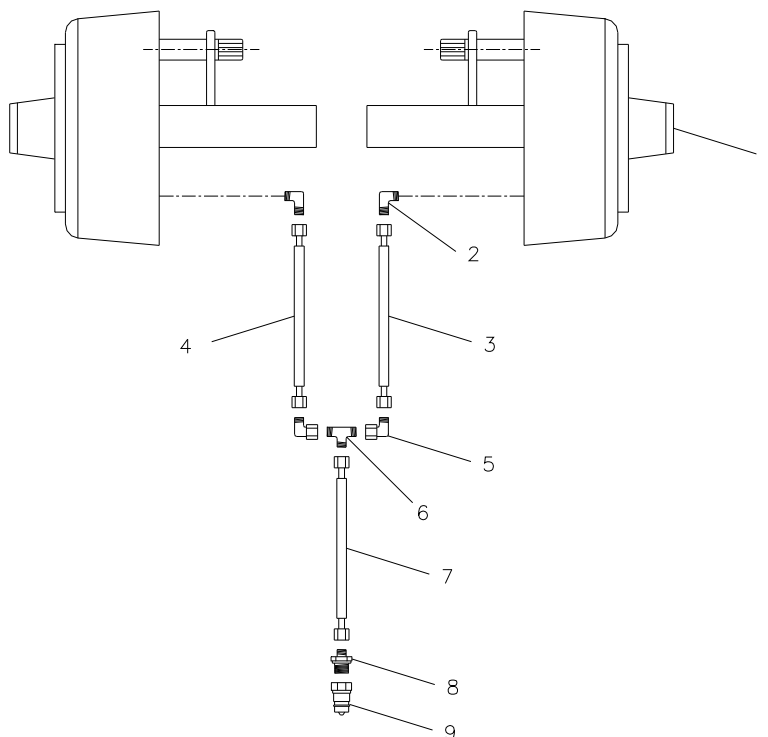
Pos.	Item no.	Designation	6.3 m
1	690119204	Cable straps (green)	2
2	690203001	Quick coupling, male E402 ½"	2
3	690203003	Fitting, straight 10- ½" BSP	2
4	690201038	Hydraulic hose 4000mm ¼ " st/st	2
5	690201044	Hydraulic hose 3460mm 1/4" st/st	1
6	690201064	Hydraulic hose 820mm ¼ " st/st	1
7	690200040	Cylinder 50/30x155mm ø20/ø20	3
8	690203006	Fitting, 90angle 10-3/8" Bsp	6
9	690201055	Hydraulic hose 1010mm ¼ " st/st	1
10	690201068	Hydraulic hose 1950mm ¼ " st/st	2
11	690201006	Hydraulic hose 3800mm 1/4" st/st	1
12	690201048	Hydraulic hose 3610mm 1/4" st/st	2
13	690203015	Fitting T10	4

Hydraulics, front harrow (green) 8.2m



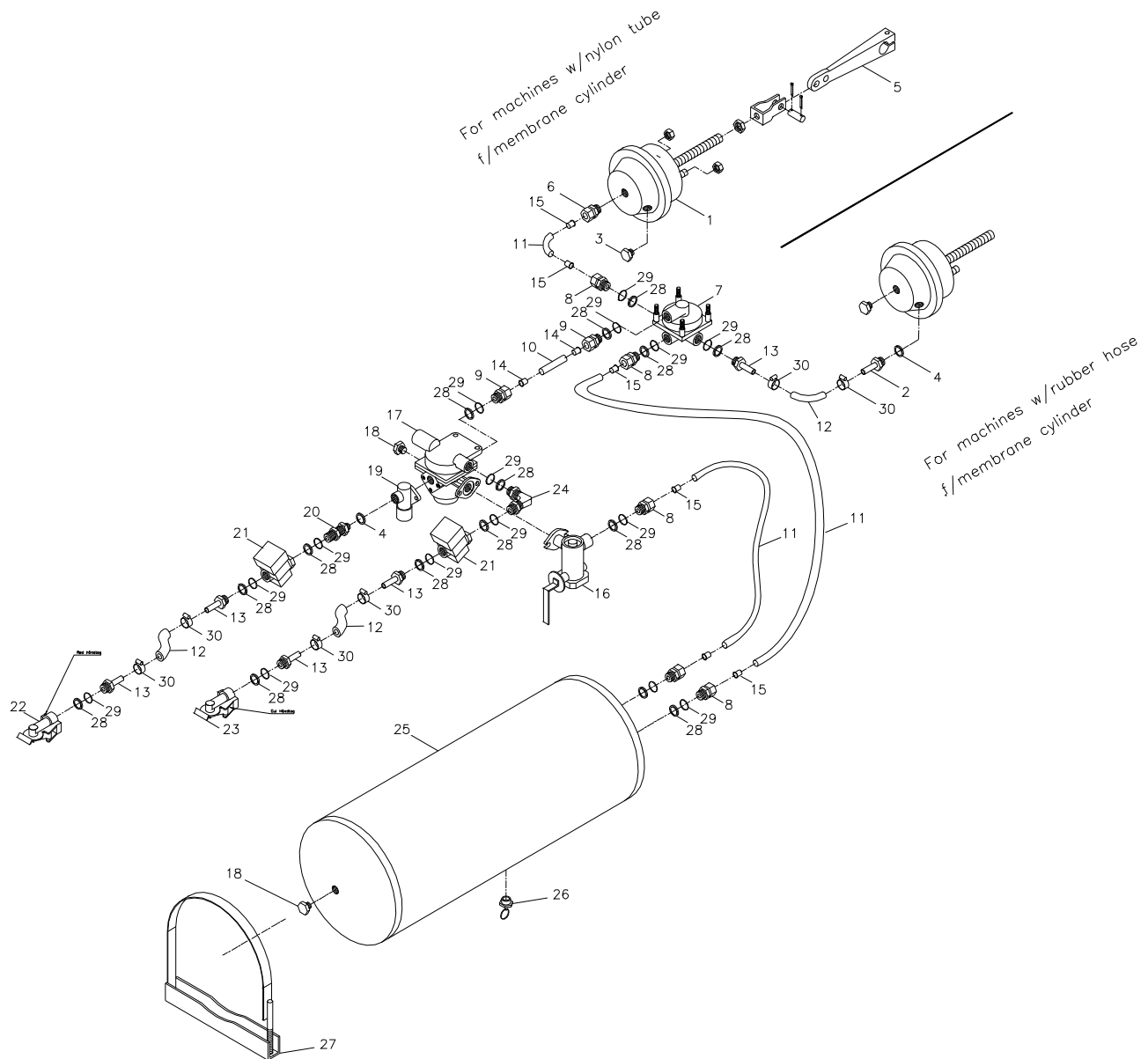
Pos.	Item no.	Designation	8.2m
1	690119204	Cable straps (green)	2
2	690203001	Quick coupling, male E402 ½"	2
3	690203003	Fitting, straight 10- ½" BSP	2
4	690201045	Hydraulic hose 4800mm ¼ " st/st	2
5	690201042	Hydraulic hose 500mm ¼ " st/st	1
6	690200040	Cylinder 50/30x155mm ø20/ø20	5
7	690203006	Fitting, 90angle 10-3/8" Bsp	10
8	690201015	Hydraulic hose 710mm ¼ " st/st	3
9	690201068	Hydraulic hose 1950mm ¼ " st/st	4
10	690203015	Fitting T10	8
11	690201237	Hydraulic hose 2800mm ¼ " st/st	2
12	690201052	Hydraulic hose 935mm ¼ " st/st	2
13	690201021	Hydraulic hose 2300mm ¼ " st/st	2
14	690201060	Hydraulic hose 3000mm ¼ " st/st	2

Hydraulic brakes



Pos.	Item no.	Designation	Pcs.
1		Look at pos. 4 page 11	2
2	690202921	Fitting, 90angle 1/4"x 10 w/union nut	2
3	690201018	Hydraulic hose 1480mm 1/4" st/st	1
4	690201053	Hydraulic hose 1260mm 1/4" st/st	1
5	690203016	Fitting 90angle 10mm	2
6	690203015	Fitting T10	1
7	690201012	Hydraulic hose 6000mm 1/4" st/st	1
8	690203003	Fitting, straight 10-1/2" BSP	2
9	690203013	Quick coupling 1/2" female BSP ISO567	2

Air brakes



Pos.	Item no.	Designation	w/artificial tube for membrane cylinder	w/rubber hose for membrane cylinder
1	690190001	Membrane cylinder 16"	2	2
2	690190070	Hose fitting M16x1,5 m/ Ø12 fitting	0	2
3	690190005	Test fitting, straight M16x1,5	2	2
4	690208102	Bonded seal PP 45-12	1	3
5	690190010	Mounting set, short yoke	2	2
6	690202930	Fitting, straight M16x1,5, Ø15 hose	2	0
7	690190015	Relay valve M22x1,5	1	1
8	690202941	Fitting, straight M22x1,5, Ø15 hose	6	4
9	690202940	Fitting, straight M22x1,5, Ø10 hose	2	2
10	690190080	Artificial tube Ø10x1mm	1	1
11	690190085	Artificial tube Ø15x1,5mm	4	2
12	690190105	Hose Ø14,5x5mm	2	4
13	690190073	Hose fitting M22x1,5, m/Ø12 fitting	4	6
14	690190090	Support bushing for tube Ø10x1,5mm	2	2
15	690190095	Support bushing for tube Ø15x1,5mm	8	4
16	690190020	Brake power regulator M22x1,5	1	1
17	690190025	Trailer air brake valve M22x1,5	1	1
18	690190026	Plug	2	2
19	690190035	Relief valve	1	1
20	690203420	Fitting straight M16x1,5+M22x1,5	1	1
21	690190040	Filter M22x1,5	2	2
22	690190045	Hose coupling M22x1,5 (red)	1	1
23	690190046	Hose coupling M22x1,5 (yellow)	1	1
24	690190030	V-Fitting M22x1,5	1	1
25	690190050	Air receiver 40ltr	1	1
26	690190051	Drainage valve	1	1
27	690190052	Suspension for air receiver	2	2
28	690190060	Pressure ring M22x1,5	15	15
29	690190065	O-ring M22x1,5	15	15
30	690109305	Clamp 15-24 mm	4	8

Notes



The design is subject to modification without notice.