

UK

HE-VA

Operating Instructions
Spare Parts List
Declaration of Conformity



Warning: Be sure to read the operation instructions before using the machine.

Disc-Roller XL Contour

Trailed: 6,50 - 7,50 m

HE-VA

N. A. Christensensvej 34
DK-7900 Nykøbing Mors
Tel: 97724288
Fax: 97722112
www.he-va.com

Contents

EF- DECLARATION OF CONFORMITY	4
Delivery check.....	5
Machine Description	5
Range of Application	5
Technical specifications	5
Safety instructions for Disc-Roller XL Contour	6
Safety and Instructions on Hydraulics	7
Transport on public roads	7
Front axle load.....	7
Labels on the machine.....	8
Start-up of the machine	9
General	9
Attachment and uncoupling (hydr. machines).....	9
Settings and adjustment.....	10
Drawbar	10
Disc	10
HE-VA SAT System:	11
Edge equipment	11
Scraper.....	12
Material damper guard	12
Maintenance.....	13
Lubrication.....	13
Spare parts list	16
Drawbar	16
Pivoting drawbar	18
Centre section/ Wing.....	20
Disc	23
Wheel frame	24
Roller.....	26
Scraper and material damper guard	28
Spring-Board	30
Support wheels (front)	32
Edge equipment	34
LED-light.....	36
Electrical depth stop f/disc.....	37
Hydraulics	38
Drawbar and Wheel frame	38

Wing (to machine number 37299)	40
Wing (from machine number 37300)	41
Disc (without and with electrical depth stop)	44
Springboard	46
Notes	47



EF- DECLARATION OF CONFORMITY

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

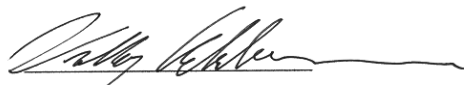
HE-VA ApS
N. A. Christensensvej 34,
DK-7900 Nykøbing Mors

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

The declaration comprises the following machine:

Disc-Roller XL Contour
6,5m – 7,5m trailed

Nykøbing, April 27st 2021

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

Upon delivery to the dealer/supplier as well as to the customer, check the Disc-Roller XL Contour for possible damages.

Machine Description

Range of Application

Disc-Roller XL Contour is a versatile disc harrow, suited for all types of soil. It can be applied for the mixing and dividing of stubble, as well as other crop residues, with a working depth of up to 175 mm in reduced soil treatment. It can also be applied for tillage before seeding. In addition, the mounting of a HE-VA Multi-Seeder enables simultaneous seeding (for example grass or catch crops) and harrowing. When turning on the headland, the machine can be driven on either roller or wheels. When turning on the roller, the discs are lifted from the soil and after turning, the discs are lowered into the soil again. The machine is mounted on the tractor drawbar or lift arms and the hydraulic depth control of the discs is operated via the tractor's hydraulics. The same applies to the hydraulic wheel frame for the transport wheels and the cylinder for the drawbar. To achieve optimal utilization of the tractor's traction, attention should be paid to the tractor's tire mounting and under certain conditions, the installation of dual wheels is recommended.

Technical specifications

Model	6,50 m	7,5 m
Working width	6,25 m	7,25 m
Transport height	3,8 m	4,3 m
Transport width	2,62 m	2,62 m
Length of machine	7m	7m
Power requirement HP	190/200 HK	230/240 HK
Requirement - double acting oil outlets	3	3
Number of discs	50 pcs	58 pcs
Weight Wave roller 600 mm	-	-
Weight U-profile roller 600 mm	-	-
Weight V-profile roller 600 mm	-	-
Weight V-profile roller 700 mm	-	-
Weight Twin U-profile roller 600/600 mm	-	-
Weight Twin V-profile roller 600/600 mm	-	-
Weight Twin V-profile roller 700/700 mm	-	-
Wheel 520/50 – 17 Flotation	2 pcs	2 pcs

Safety instructions for Disc-Roller XL Contour

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.

* Person in exposed position: 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 should 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.

IMPORTANT !! In connection with transport and machine storage, the safety lock must be activated

Safety and Instructions on Hydraulics

1. The maximum working pressure is 225 bar.
2. It is advisable to label the attachment parts at hydraulic connections between the tractor and the tool in order to eliminate incorrect operation!
3. When checking for hydraulic leaks, use suitable safety wear (eye protectors, gloves, etc.) High-pressure hydraulic oil may penetrate the skin and cause dangerous injuries. In case of injury, consult a doctor immediately. **RISK OF INFECTION!**
4. Before operating the hydraulics, lower the machine to firm ground. Relieve the hydraulics, stop the motor, and remove the ignition key.
5. Check the hydraulic hoses on a regular basis, however, every six months as a minimum due to any cracks, wear, and tear, etc. Replace any defective hoses immediately.

The life of hydraulic hoses is maximum 5 years.
New hydraulic hoses must meet the manufacturer's requirements.

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, 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.

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

Labels on the machine



Plate with number and year of manufacture.



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.

IMPORTANT!
All bolts must be tightened after the first few hours of operation, otherwise our guarantee will not apply.

IMPORTANT!
Resserrer tous les boulons et écrous après la première mise en marche. Le cas échéant nos obligations de garantie seront à considérer comme nulles.

WICHTIG!
Alle Muttern nach kurzem Gebrauch nachziehen. Bei Nichtbeachtung entfallen Gewährleistungsansprüche.

VIGTIGT!
Efterspænd alle møtrikker efter kort tids brug. Hvis dette ikke overholdes, bortfalder vore garantiforpligtelser.

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

Start-up of the machine

General

Hydraulic Hose Colour scheme	
Colour (Cable ties)	Function
Red	Trailing wheels height adjustment
Blue	wing folding
Yellow	Roller depth adjustment
Green	Disc Depth Adjustment
Black	Hydraulic automatic release system

Attachment and uncoupling (hydr. machines)

1. Be aware that the machine is to be attached und uncoupled to the tractor in transport position.
2. When the machine is hanging on the tractor, the support stands be raised to the top Position

From transport to working position:

1. The machine is to be raised to max. transport height.
2. Now unfold the wing sections
3. Adjust the working depth.

From working to transport position:

1. Raise the machine to max. transport height.
2. The depth regulating cylinder for the discs & Spring-Board is folded in order to achieve the narrowest transport width.
3. Fold in edge equipment.
4. Now the wing sections are folded together into transport position.  Be sure that the locking claws lock the wing sections.

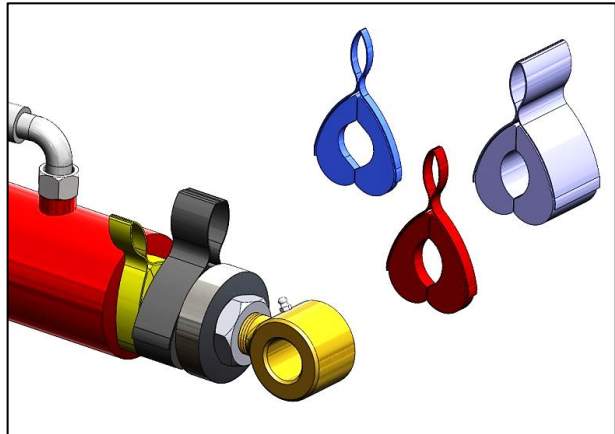
Settings and adjustment

When starting-up the Disc-Roller XL Contour in the field, it is very important that the machine is parallel with the surface of the earth. The packing roller and the tractor keep the machine in an exact working depth.

Drawbar

The horizontal position is adjusted by means of distance clips on the drawbar cylinder

Height of the towing eye: approx. 500-550 mm



Disc

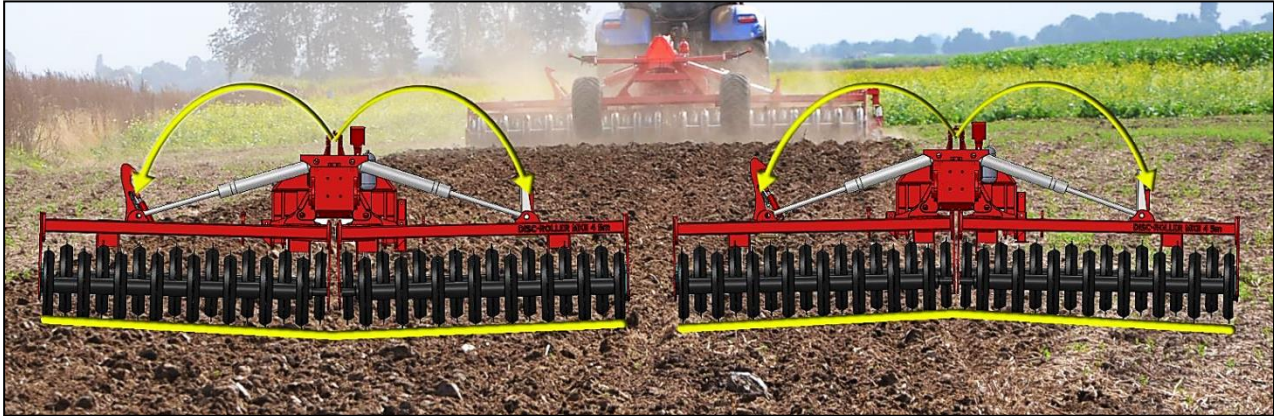
The Discs are adjusted up or down by a hydraulic Master-Slave system.

It is important that the discs are regularly lifted to the top to reset the Master-Slave system. The depth position is readable on the scale (standard). The sensor can be adjusted, where el. depth stop is mounted. It is possible to over steer the electrical system by turning off the switch mounted in the cabin, now the discs can pass the sensor, thereby a deeper working depth is achieved e.g. at headland and tramlines.



HE-VA SAT System:

Hydraulic adjustable weight transfer system, ensuring equal weight transfer in the total working width, resulting in the fact that the wing sections are following the ground.



Manometer for pressure adjustment

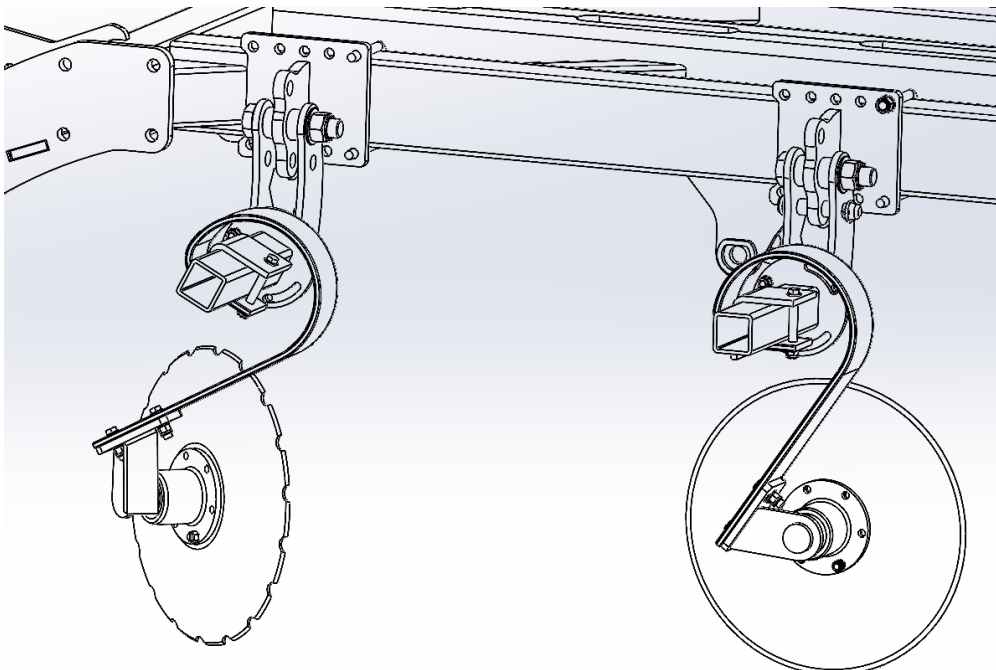
In transport position, the hydr. pressure in the system is adjusted to approx. 50 bar.

During operation, the hydr. pressure will vary - depending on the soil surface.



Edge equipment

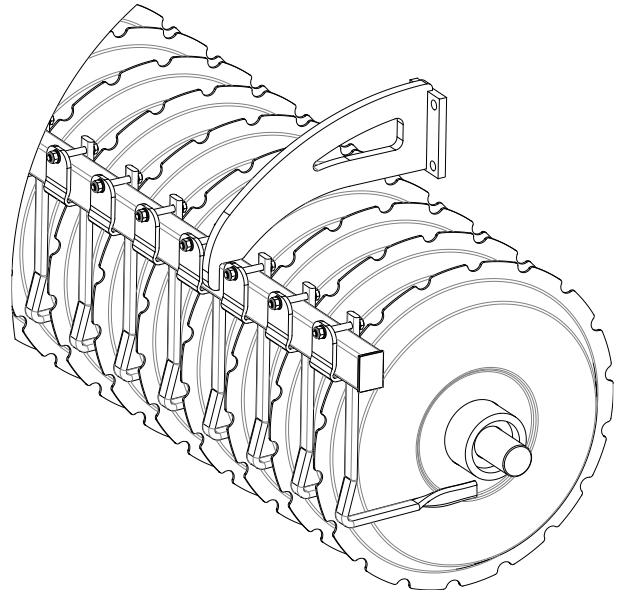
Adjustable edge plate for an even transition between every pass. Mounted on the right side.



Scraper

The Disc-Roller XL Contour has special designed scrapers among the packer rings on the single V-Profile and U-Profile as well as on the Wave Roller.

To avoid unnecessary wear and to obtain the best scraper effect it is important to check the centering of the scrapers every day.

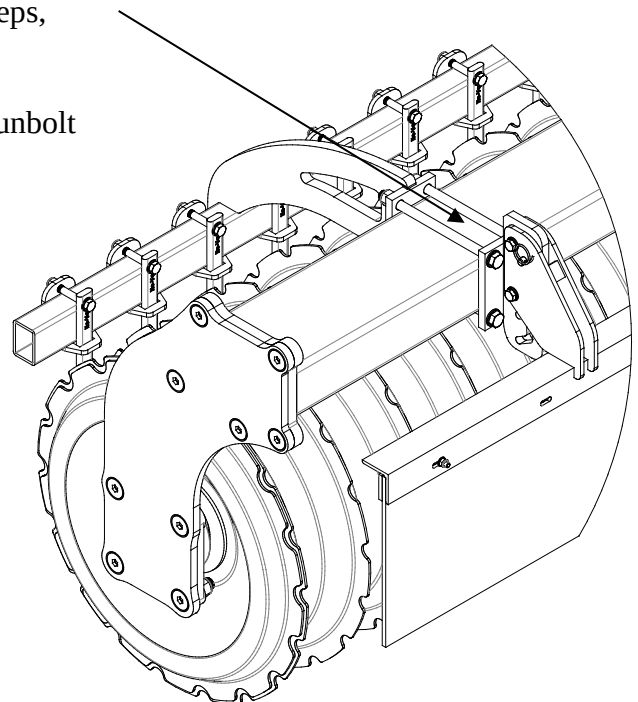


Material damper guard

The Disc-Roller XL Contour can be equipped with material damper guard, ensuring that excavated soil from the discs is falling down before packing.

The material damper guard is height adjustable in 5 cm steps, by unlocking 1 pin in each bracket

To dismount the material damper guard, unlock pins and unbolt



Maintenance

- After 10 hours of operation, retighten the machine.
Check hydraulic hoses, fittings and cylinders for leaks and retighten. See table below.
- Furthermore, check on a regular basis that all bolts are tightened.
- Before the winter storage, wash and lubricate the machine. If you use high-pressure cleaner, do not spray directly on the ball bearings. After the washing, you may spray the machine with oil.

Maximum torque in Nm. w/lubricated thread			
Metric thread	Quality 8.8	Quality 10.9	Quality 12.9
M12x1,75	81	114	136
M14x2,0	128	181	217
M16x2,0	197	277	333
M18x2,5	275	386	463
M20x2,5	385	541	649
M22x2,5	518	728	874
M24x3,0	665	935	1120
Wheel bolt M18x1,5 fine thread		433 Nm	
Wheel bolt M22x1,5 fine thread		803 Nm	

Lubrication

For lubrication, maintenance, and repair, lower the Sub-Tiller, put the brakes of the tractor on and stop the motor.

Typically, the lubrication points are located by the spring release, by the roller bearings, by the cylinders and the wing sections hinges.

The machine must be lubricated after 10 working hours as well as after cleaning in order to press out any water and dirt.

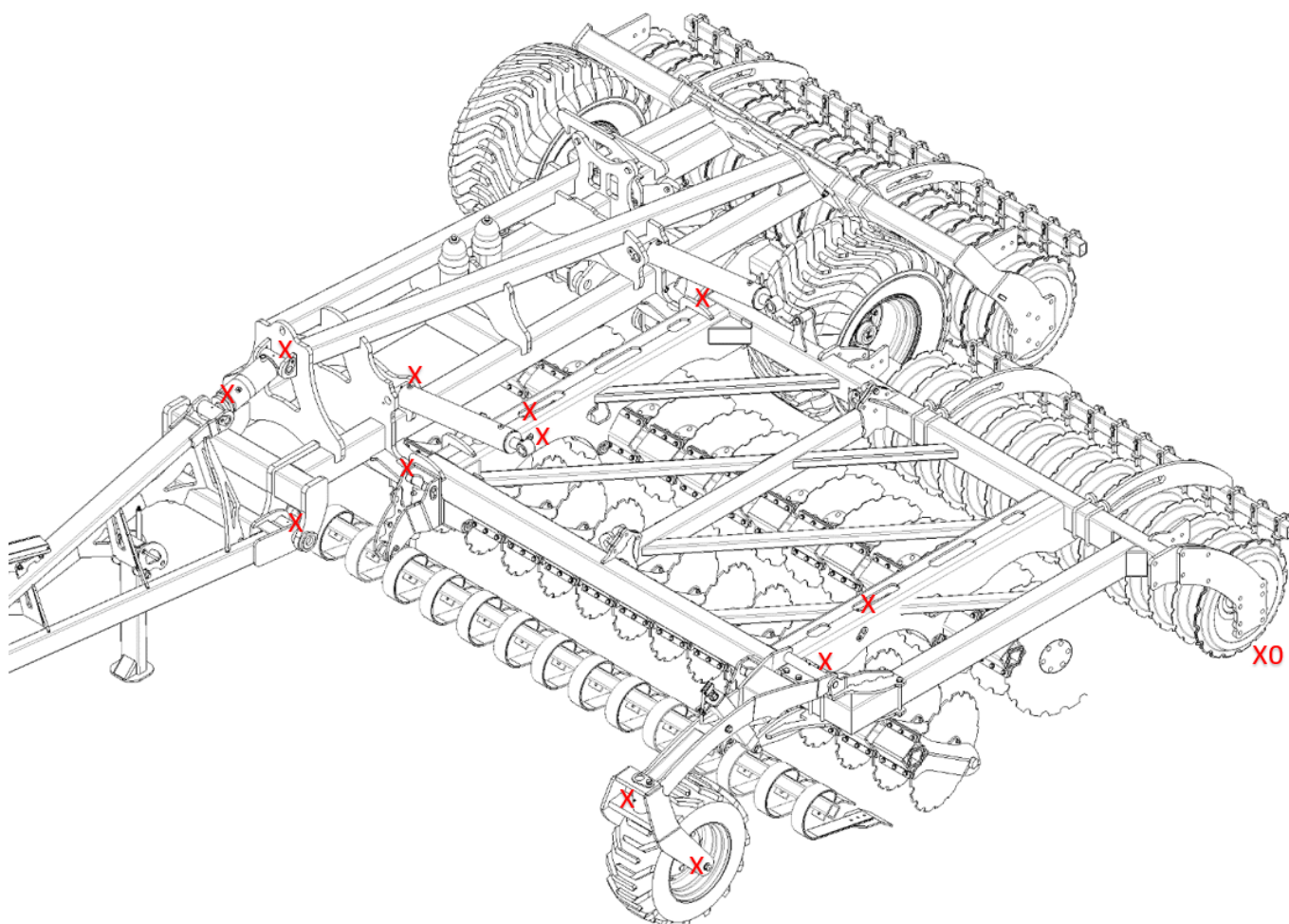
Note! XO

However, the double-sealed ball bearings in the roller should only be lubricated every 20 working hours and by 1-2 strokes so that the sealing rings

Important!

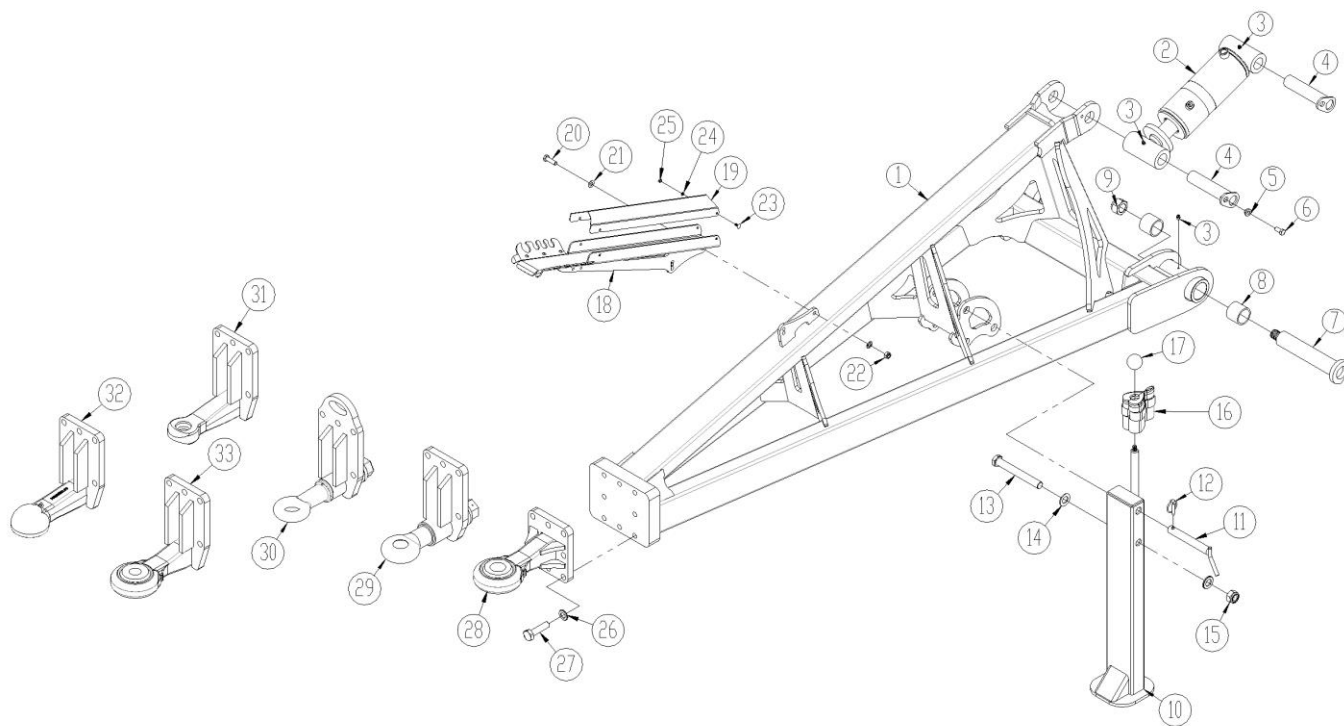
Oil, type Hydro Texaco HD32 has been filled in the hydraulic system.

Points of lubrication



Spare parts list

Drawbar

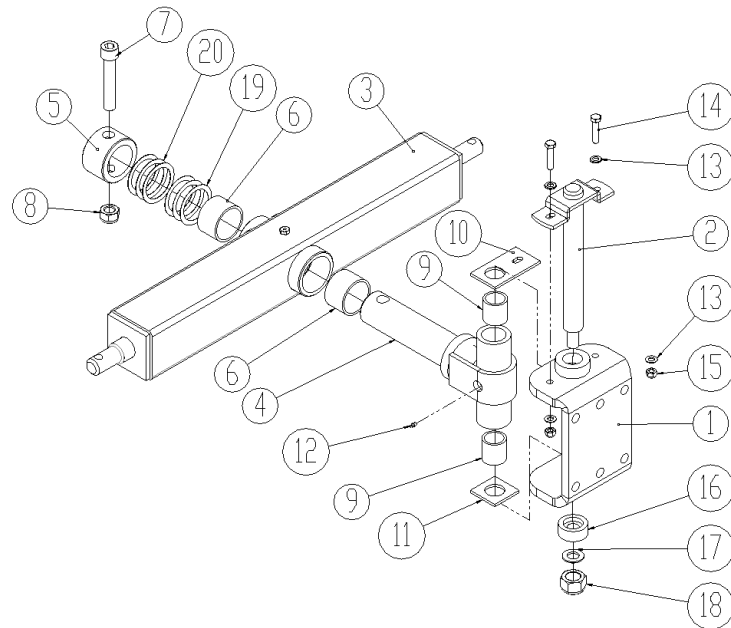


Pos.	Item no.	Designation	No.
1	631700082	Drawbar	1
2	7345124	Cylinder 110/50x145	1
	0467470	Gasket set for 7345124	
3	0432500	Lubricating nipple M8	4
4	69440187G	Pin Ø40 L=187	2
5	630532600	Lock bush for pin head	2
6	0235330	Bolt M12x25	2
7	631700127	Pin Ø50 x 260mm	2
8	0475400	Inner tension bush EG ø60/50x50mm	4
9	0264155	Locking nut M30	2
10	1295023	Support leg	1
11	69525155B	Pin Ø25 L=155	1
12	0378600	Ring pin Ø11	1
13	0236500	Bolt M24x190mm	1
14	0272330	Facet plate Ø24	2
15	0264130	Locking nut M24	1
16	690200664	Distance clips 6,2mm, blue	2

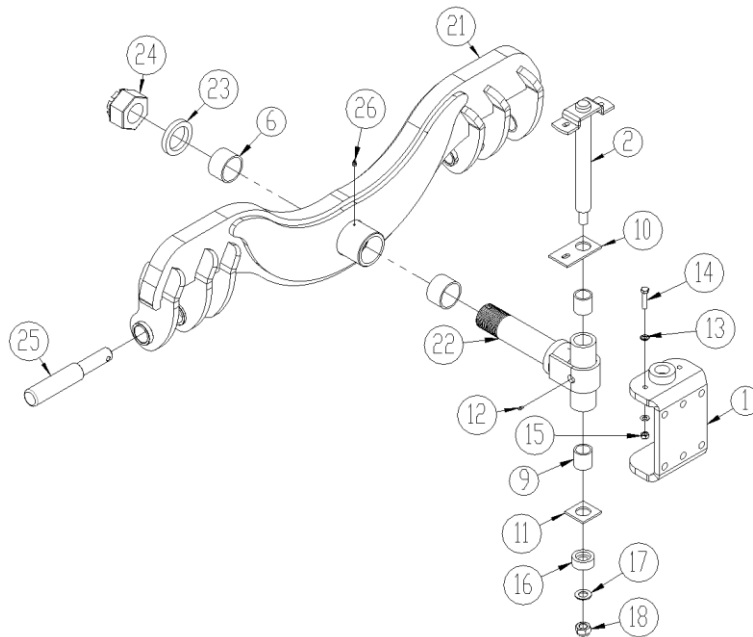
Pos.	Item no.	Designation	No.
	690200665	Distance clips 9,4mm, red	2
	690200666	Distance clips 18,8mm, yellow	2
	690200667	Distance clips 31,6mm, black	1
	690200668	Distance clips 50,8mm, silver	1
17	0489060	Handle Ø45	1
18	7345004	Horse holder	1
19	7345003	Screen for hose holder	1
20	0235360	Bolt M12x40mm	2
21	0272270	Facet plate ø12	4
22	0264070	Locking nut M12	2
23	0246060	Carriage bolt M6x16 8,8	4
24	0272240	Facet plate Ø6	4
25	0264040	Locking nut M6	4
26	0272310	Facet plate Ø20	8
27	0228503	Bolt M20x65mm 12.9	8
28	7420007	Towing eye Kat 3 (Ø39)	
	7420006	Towing eye Kat 4 (Ø51)	1
	7420005	Towing eye Kat 5 (Ø71)	
28a	630757106	Ball for Towing eye Ø39	
	630757107	Ball for Towing eye Ø51	
	630757108	Ball for Towing eye Ø71	
29	630757017	Towing eye, pivoting (strong) ø50mm	
	630757046	Towing eye, pivoting (High quality) ø50mm	
30	630757043	Towing eye, pivoting (Homologated, strong) ø50mm	
31	630757030	Towing eye ø40mm	
32	630757023	Ball hitch f/Ø80 mm ball	
33	630757111	Towing eye Kat 3 (Ø39)	
	630757112	Towing eye Kat 4 (Ø51)	
	630757113	Towing eye Kat 5 (Ø71)	
33a		Ball for Towing (see pos. 28a)	

Pivoting drawbar

630757034

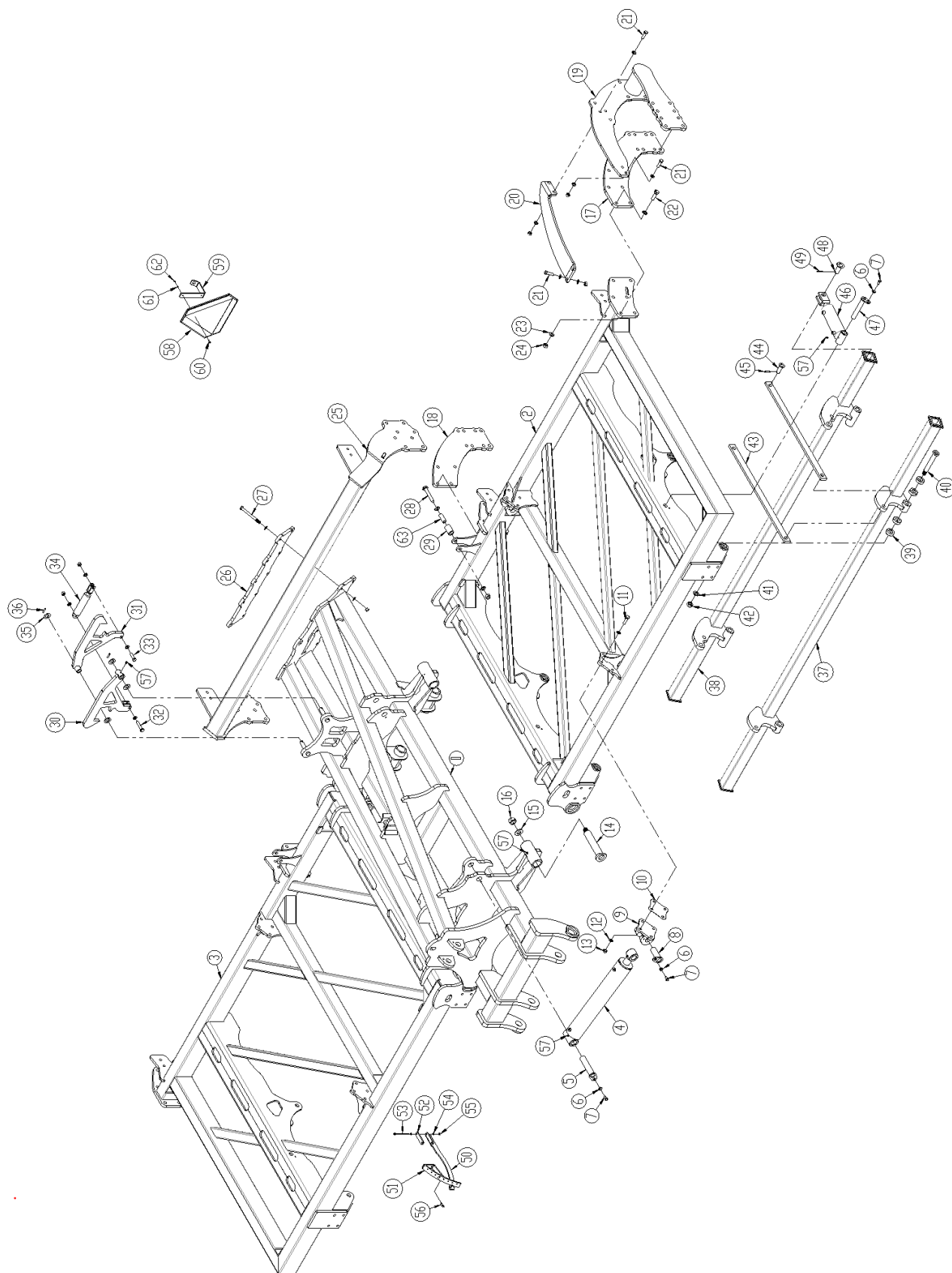


630757077



Pos.	Item no.	Designation	No.
	630757034	Pivoting drawbar	
	630757077	Pivoting drawbar	
1	1145335	U-bracket	1
2	1127870	Draw pin	1
3	1127911	Drawbar	1
4	1128001	Draw shaft	1
5	1128041	Bushing	1
6	0475450	Inner tension bush EG ø80/70x50mm	1
7	0227935	Unbraco bolt M24x130	1
8	0264130	Locking nut M24	1
9	0475350	Inner tension bush EG ø50/40x50mm	1
10	1128390	Wear plate	1
11	1127990	Wear plate	1
12	0432100	Lubricating nipple M6	1
13	0272270	Facet plate Ø12	2
14	0235390	Bolt M12x55	1
15	0264070	Locking nut M12	1
16	1127900	Washer	1
17	0272330	Facet plate Ø24	1
18	0264130	Locking nut M24	1
19	690140656	Shim ring ø70/ø90x0,5 mm (DIN 988)	
20	690140654	Shim ring Ø70/Ø90x1,0 mm (DIN 988)	
21	630757078	Drawbar	1
22	630757076	Drive shaft	1
23	7420000	Spacer ring 15mm	1
	7420001	Spacer ring 12mm	1
24	0262500	Castellated nut M64x4mm	1
25	69537273C	Pin for lift arm Ø37/Ø50	2
26	690136029	Lubricating nipple M8	1

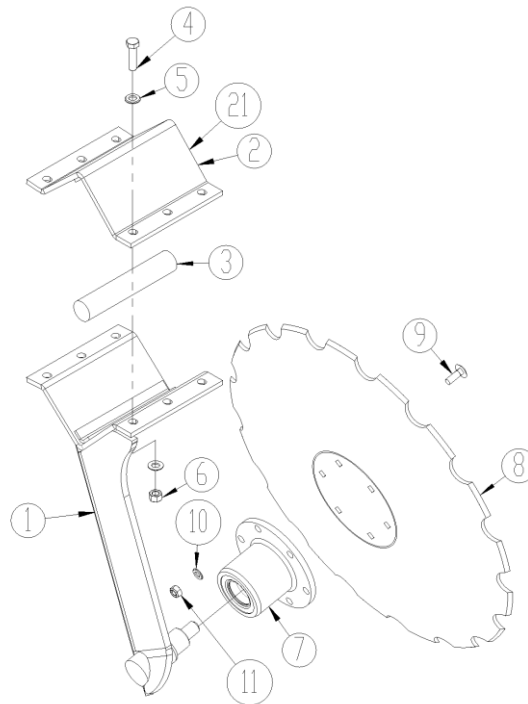
Centre section/ Wing



Pos.	Item no.	Designation	6,5m w/single roller	6,5m w/twin roller	7,5m m/single roller	7,5m w/twin roller
1	631700000	Centre section	1	1	1	1
2	631700037	Wing (left)	1	1		
	631700155	Wing (left)			1	1
3	631700077	Wing (right)	1	1		
	631700159	Wing (right)			1	1
4	690200113	Cylinder 100/50x600mm Ø40/Ø40 mm	4	4	4	4
	0463175	Gasket set for 690200113				
5	1145308	Pin Ø40 L=180	4	4	4	4
6	630532600	Lock bush for pin head	12	12	12	12
7	0235330	Bolt M12x25	12	12	12	12
8	69440110G	Pin Ø40 L=110	4	4	4	4
9	631700151	Bracket f/cylinder	4	4	4	4
10	631700137	Shims 2mm				
11	0235840	Bolt M16x60	16	16	16	16
12	0272290	Facet plate M16	32	96	32	96
13	0264090	Locking nut M16	16	48	16	48
14	631700129	Pin Ø50 L=240	4	4	4	4
15	0272350	Facet plate Ø30	4	4	4	4
16	0264155	Locking nut M30	4	4	4	4
17	1295245	Bracket f/roller (left)	2	2	2	2
18	1295247	Bracket f/roller (right)	2	2	2	2
19	631700176	Bracket f/twin roller (wing) left		2		2
	631700180	Bracket f/twin roller (wing) right		2		2
	631700181	Bracket f/twin roller (centre) left		1		1
	631700184	Bracket f/twin roller (centre) right		1		1
20	1295037	Reinforcement f/twin roller (wing) left		2		2
	1295038	Reinforcement f/twin roller (wing) right		2		2
	1295039	Reinforcement f/twin roller (centre) left		1		1
	1295040	Reinforcement f/twin roller (centre) right		1		1
21	0235830	Bolt M16x55		32		32
22	0236140	Bolt M20x65	16	16	16	16
23	0272310	Facet plate Ø20	34	34	34	34
24	0264110	Locking nut M20	16	16	16	16
25	631700049	Roller bar (centre)	1	1	1	1
26	631700148	Bracket f/ Roller bar	1	1	1	1
27	0235960	Bolt M16x170	10	10	10	10
28	0236220	Bolt M20x130	2	2	2	2
29	1295003	Bush	2	2	2	2
30	645000169	Locking claw (left)	1	1	1	1
31	645000170	Locking claw (right)	1	1	1	1
32	0235880	Bolt M16x80	1	1	1	1
33	0235830	Bolt M16x55	1	1	1	1
34	690200170	Cylinder 40/25x 80mm	1	1	1	1
	690200175	Gasket set for 690200170				
35	0272340	Facet plate Ø27	4	4	4	4
36	0371690	Retaining pin Ø8x40	2	2	2	2
37	631700018	Bar front (left)	1	1		

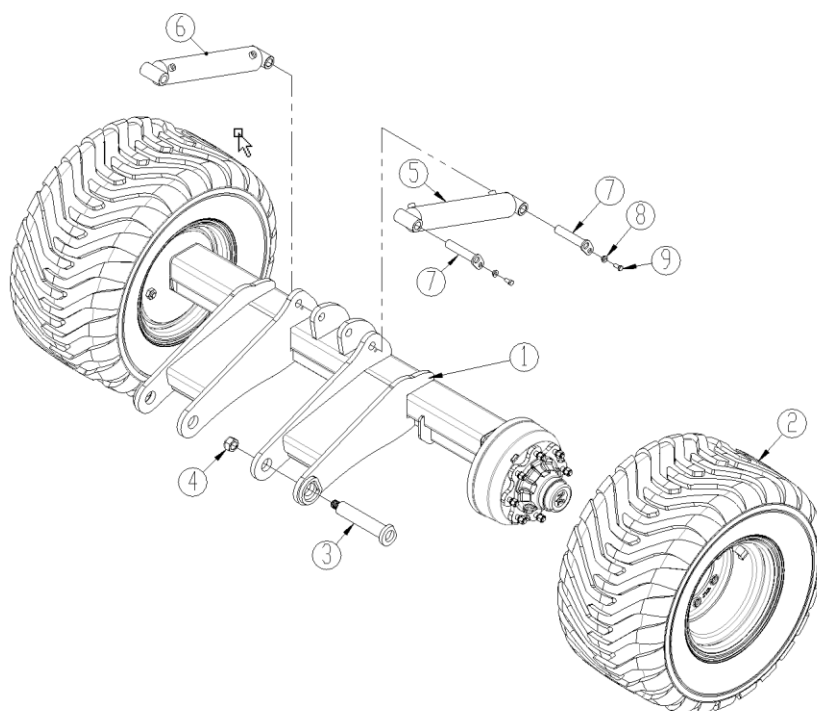
Pos.	Item no.	Designation	6,5m w/single roller	6,5m w/twin roller	7,5m m/single roller	7,5m w/twin roller
	631700029	Bar front (right)	1	1		
	631700164	Bar front (left)			1	1
	631700168	Bar front (right)			1	1
38	631700011	Bar back (left)	1	1		
	631700030	Bar back (right)	1	1		
	631700166	Bar back (left)			1	1
	631700169	Bar back (right)			1	1
39	631700136	Bushing	16	16	16	16
40	631700133	Pin Ø30 L=174	16	16	16	16
41	0272330	Facet plate Ø24	16	16	16	16
42	0264130	Locking nut M24	16	16	16	16
43	631700140	Parallel bar	8	8	8	8
44	69525061F	Pin Ø25 L=58	8	8	8	8
45	690130132	Retaining pin Ø6x40mm	8	8	8	8
46	690200620	Cylinder 80/30x155mm (left wing)	2	2	2	2
	690200621	Gasket set for 690200620				
	690200640	Cylinder 85/30x155mm (right wing)	2	2	2	2
	690200641	Gasket set for 690200640				
47	69430186G	Pin Ø30 L=186	4	4	4	4
48	69530060F	Pin Ø30 L=58	4	4	4	4
49	0371540	Retaining pin Ø6x50mm	4	4	4	4
50	1295027	Pointer	1	1	1	1
51	1295029	Scale	1	1	1	1
52	1295225	Bracket f/scale	1	1	1	1
53	0234990	Bolt M8x120	2	2	2	2
54	0272250	Facet plate Ø8	4	4	4	4
55	0264050	Locking nut M8	2	2	2	2
56	0234740	Bolt M8x16	2	2	2	2
57	0432510	Lubricating nipple M8x1,25				
58	1295123	Bracket f/Warning Triangle	1	1	1	1
59	0521010	Warning Triangle	1	1	1	1
60	0233860	Bolt M5x20	2	2	2	2
61	0272230	Facet plate Ø5	2	2	2	2
62	0264030	Locking nut	2	2	2	2
63	1295004	Bush	2	2	2	2

Disc



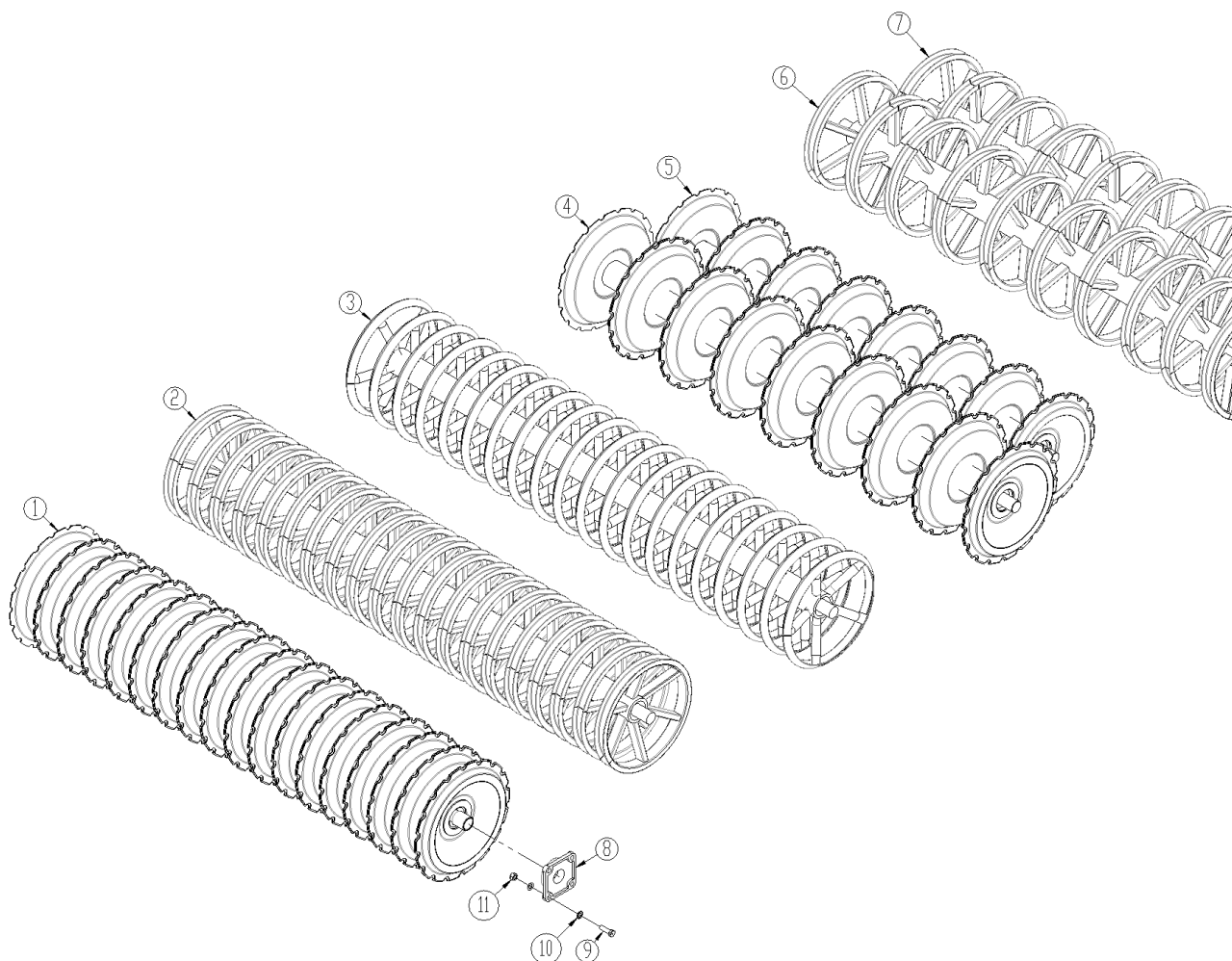
Pos.	Item no.	Designation	Number per disc
1	631700004	Carrier arm (left) without hub (back row)	1
	631700020	Carrier arm (right) without hub (front row)	1
1a	631700002	Carrier arm (left) w/hub (back row)	
	631700019	Carrier arm (right) w/hub (front row)	
2	631700005	Bracket	1
3	690210711	Rubber cord	4
4	690103091	Bolt M12x45	6
5	0272270	Facet plate Ø12	12
6	0264070	Locking nut M12	6
7	630949032	Hub	1
7a	630949019	Steel washer (offset) Ø45/71,7 mm	
7b	690140651	Sealing cassette 72-45-14/17	
7c	0379253	Seeger circlip ring I 72 DIN 984	
7d	690140199	Bearing (Taper roller bearing) JMR3565XD	
7e	30949032	Hub (35mm bearing)	
7f	0483730	O-ring 80x3mm	
7g	690117062	Plate 5mm (ø20)	
7h	0263000	Locking nut M20 kv. 10 (all metal)	
8	631700003	Disc ø608mm	1
9	0248421	Carriage bolt M10x30	6
10	0272260	Facet plate Ø10	6
11	0264060	Locking nut M10	6

Wheel frame



Pos.	Item no.	Designation	6,5m	7,5m
1	631700071	Wheel frame without braking	1	1
	1295069	Wheel frame with braking		
2	0396700	Wheel 520/50x 17 (left)	1	1
	0396710	Wheel 520/50x 17 (right)	1	1
3	631700129	Pin Ø50 L=240	2	2
4	0264155	Locking nut M30	2	2
5	690200301	Cylinder 80/40x400mm Ø30/Ø30	1	1
	690200138	Gasket set for 690200301		
6	690200300	Cylinder 80/40x400mm Ø30/Ø30	1	1
	690200138	Gasket set for 690200300		
7	69430145G	Pin Ø30 L=145	4	4
8	630532600	Lock bush for pin head	4	4
9	0235330	Bolt M12x25		

Roller



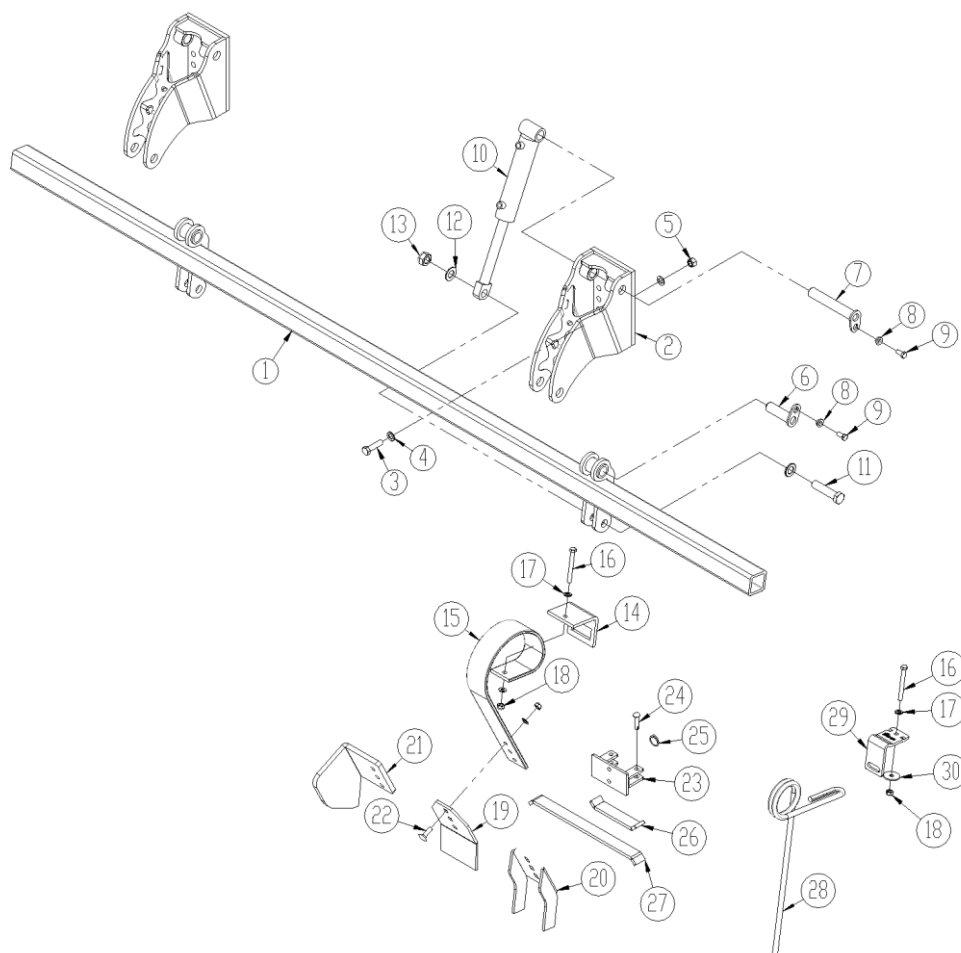
Pos.	Item no.	Designation	6,5m	7,5m
1	1160667	V-profile roller (left + right) Ø600	2	
	7451042	V-profile roller (centre) Ø600	1	1
	7451187	V-profile roller (left + right) Ø600		2
	7451138	V-profile roller (left + right) Ø700	2	
	7451137	V-profile roller (centre) Ø700	1	1
	7451151	V-profile roller (left + right) Ø700		2
2	xx	U-profile roller (left + right) Ø600	2	
	xx	U-profile roller (centre) Ø600	1	1
	xx	U-profile roller (left + right) Ø600		2
3	xx	Wave roller (left + right) Ø600	2	
	xx	Wave roller (centre) Ø600	1	1
	xx	Wave roller (left + right) Ø600		2
4	7451152	Twin V-profile roller (left + right, front) Ø600	2	
	7451148	Twin V-profile (centre , front) Ø600	1	1
	7451150	Twin V-profile roller (left + right, front) Ø600		2
	7451116	Twin V-profile roller (left + right, front) Ø700	2	
	7451059	Twin V-profile (centre , front) Ø700	1	1
	7451055	Twin V-profile roller (left + right, front) Ø700		2

Pos.	Item no.	Designation	6,5m	7,5m
5	7451153	Twin V-profile roller (left + right, back) Ø600	2	
	7451147	Twin V-profile (centre , back) Ø600	1	1
	7451149	Twin V-profile roller (left + right, back) Ø600		2
	7451118	Twin V-profile roller (left + right, back) Ø700	2	
	7451064	Twin V-profile (centre , back) Ø700	1	1
	7451057	Twin V-profile roller (left + right, back) Ø700		2
6	7450058	Twin U-profile roller (left + right, front) Ø600	2	
	7450055	Twin U- profile roller (centre, front) Ø600	1	1
	7450019	Twin U-profile roller (left + right, front) Ø600		2
7	7450061	Twin U-profile roller (left + right, back) Ø600	2	
	7450016	Twin U- profile roller (centre, back) Ø600	1	1
	7450022	Twin U-profile roller (left + right, back) Ø600		2
8	0478971	Bearing UCF 312 (Ø60)	6	6
	0478972	Bearing HCF 312 (Ø60) (twin roller)	12	12
9	0236140	Bolt M20x65mm	24	24
	0236180	Bolt M20x90mm (twin valse)	48	48
10	0272310	Facet plate Ø20		
11	0264110	Locking nut M20		

This exploded view diagram illustrates the assembly of a mechanical component, likely a bracket or support structure. The components are numbered 1 through 23. The assembly process involves mounting various plates, brackets, and fasteners onto a central horizontal rail (17) and a vertical support (23). Key sub-assemblies include a top bracket (1) with associated fasteners (2, 3, 4, 5, 6, 7, 8, 9, 10), a middle bracket (11) with fasteners (12, 13, 14, 15, 16, 18, 19, 20, 21, 22), and a bottom bracket (12) with fasteners (13, 14, 15, 16, 18, 19, 20, 21, 22). The diagram uses dashed lines to show the alignment and assembly sequence of the parts.

Pos.	Item no.	Designation	6,5m	7,5m
1	1295355	Scraper bar (left) Ø600 roller	1	
	1295356	Scraper bar (right) Ø600 roller	1	
	1295354	Scraper bar (centre) Ø600 roller	1	1
	1295353	Scraper bar (left) Ø600 roller		1
	1290083	Scraper bar (right) Ø600 roller		1
	1295212	Scraper bar (left) Ø700 roller	1	
	1295223	Scraper bar (right) Ø700 roller	1	
	1295207	Scraper bar (centre) Ø700 roller	1	1
	1295277	Scraper bar (left) Ø700 roller		1
	1295276	Scraper bar (right) Ø700 roller		1
2	630938520	Scraper (Ø600 roller)	40	46
	630938521	Scraper (Ø700 roller)	40	46
3	630938522	Scraper holder	40	46
4	0235450	Bolt M12x90	40	46
5	0272270	Facet plate Ø12		
6	0264070	Locking nut M12		
7	0489487	Plastic plug	6	6
8	0382800	U-bolt M16x100x150x100	12	12
9	0272290	Facet plate Ø16		
10	0264090	Locking nut M16		
11	0235950	Bolt M16x150	8	8
12	0235360	Bolt M12x40	8	8
13	0235400	Bolt M12x60	8	8
14	1295255	Adjustment bracket (horizontal)	4	4
15	1295227	Adjustment bracket (vertical) (left)	2	2
	1295232	Adjustment bracket (vertical) (right)	2	2
16	1295230	Bar (left)	1	
	1295231	Bar (right)	1	
	1295260	Bar (left)		1
	1295259	Bulle (right)		1
17	1285013	Mounting rail	2	
	1295258	Mounting rail		2
18	69512040K	Pin Ø12,5 L=40	4	4
19	0431975	Locking ring	4	4
20	0234790	Bolt M8x40	16	20
21	0272250	Facet plate Ø8	32	40
22	0264050	Locking nut M8	16	20
23	1285121	Rubber mat	2	
	1295261	Rubber mat		2

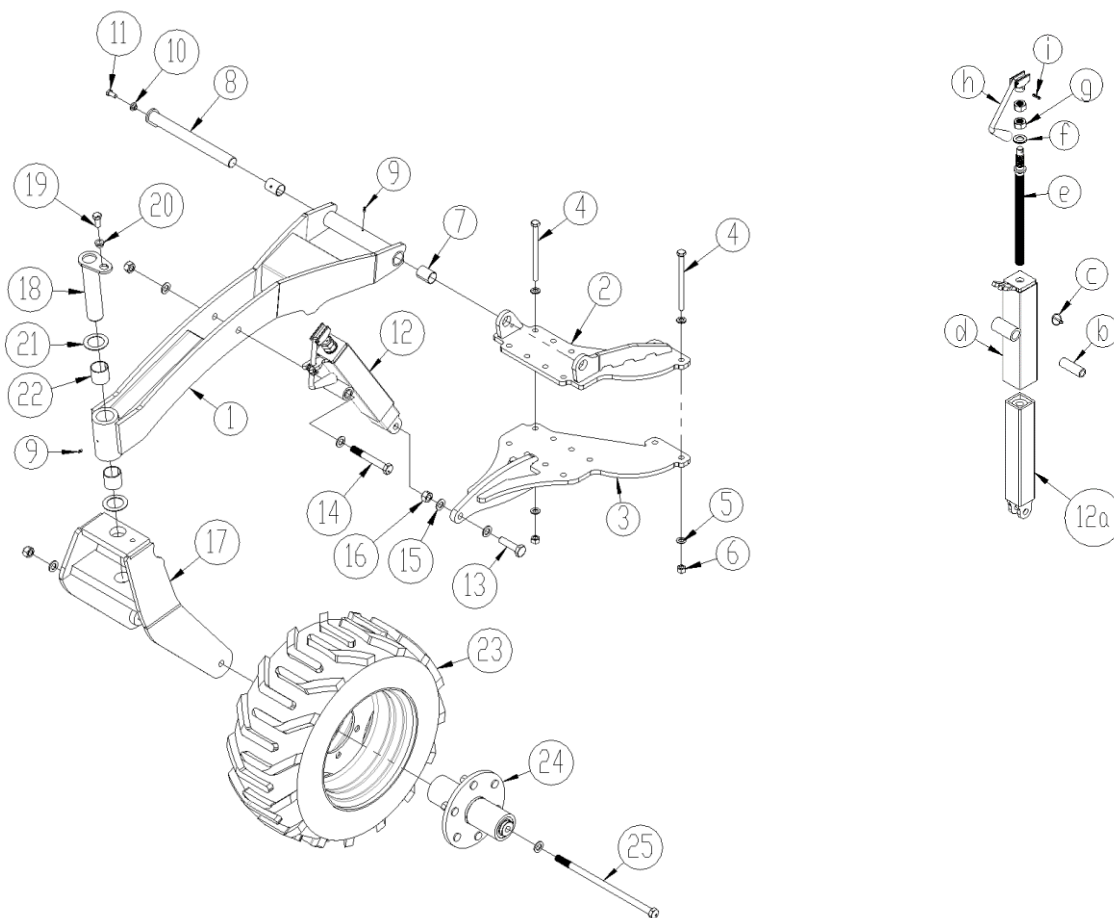
Spring-Board



Pos.	Item no.	Designation	6,5m	7,5m
1	631700117	Bar	2	
	631700170	Bar		2
2	631700113	Horn	4	4
3	0235840	Bolt M16x60	16	16
4	0272290	Facet plate Ø16	32	32
5	0264090	Locking nut M16	16	16
6	69430100G	Pin Ø30 L=100	4	4
7	69430186G	Pin Ø30L=186	4	4
8	630532600	Lock bush for pin head	8	8
9	0235330	Bolt M12x25	8	8
10	1140941	Cylinder 60/50x30-150mm	4	4
	0465970	Gasket set		
11	0236410	Bolt M24x100	4	4
12	0272330	Facet plate Ø24	8	8
13	0264130	Locking nut M24	4	4
14	0422390	Clamp for tine (80x10mm tine/ 70x70 bar)	26	30
15	0422145	Tine 80x10mm (long)	26	30
16	0235470	Bolt M12x110	26	30
17	0272270	Facet plate Ø12	52	60
18	0264070	Locking nut M12	26	30

Pos.	Item no.	Designation	6,5m	7,5m
19	0422143	Tine point 150x8mm	26	30
20	633052150	Slicing plates point	26	30
21	633052250	Edge equipment (left)	2	2
	633052255	Edge equipment (right)	2	2
22	0248660	Carriage bolt M12x40	26	30
	0248670	Carriage bolt M12x45 (transverse locking system)		
23	633055500	Tine bracket f/transverse locking system	26	30
24	69512040K	Pin Ø12,5 L=40	54	60
25	0431975	Locking ring	54	60
26	633055700	Locking bar f/transverse locking system (short)	26	30
27	633055710	Locking bar f/transverse locking system (long)	26	30
28	633055610	Long finger tine Ø16 H=535mm	26	30
29	633055612	Clamp for tine (70x70 bar)	26	30
30	0272820	Plate Ø12,5x50x6	26	30

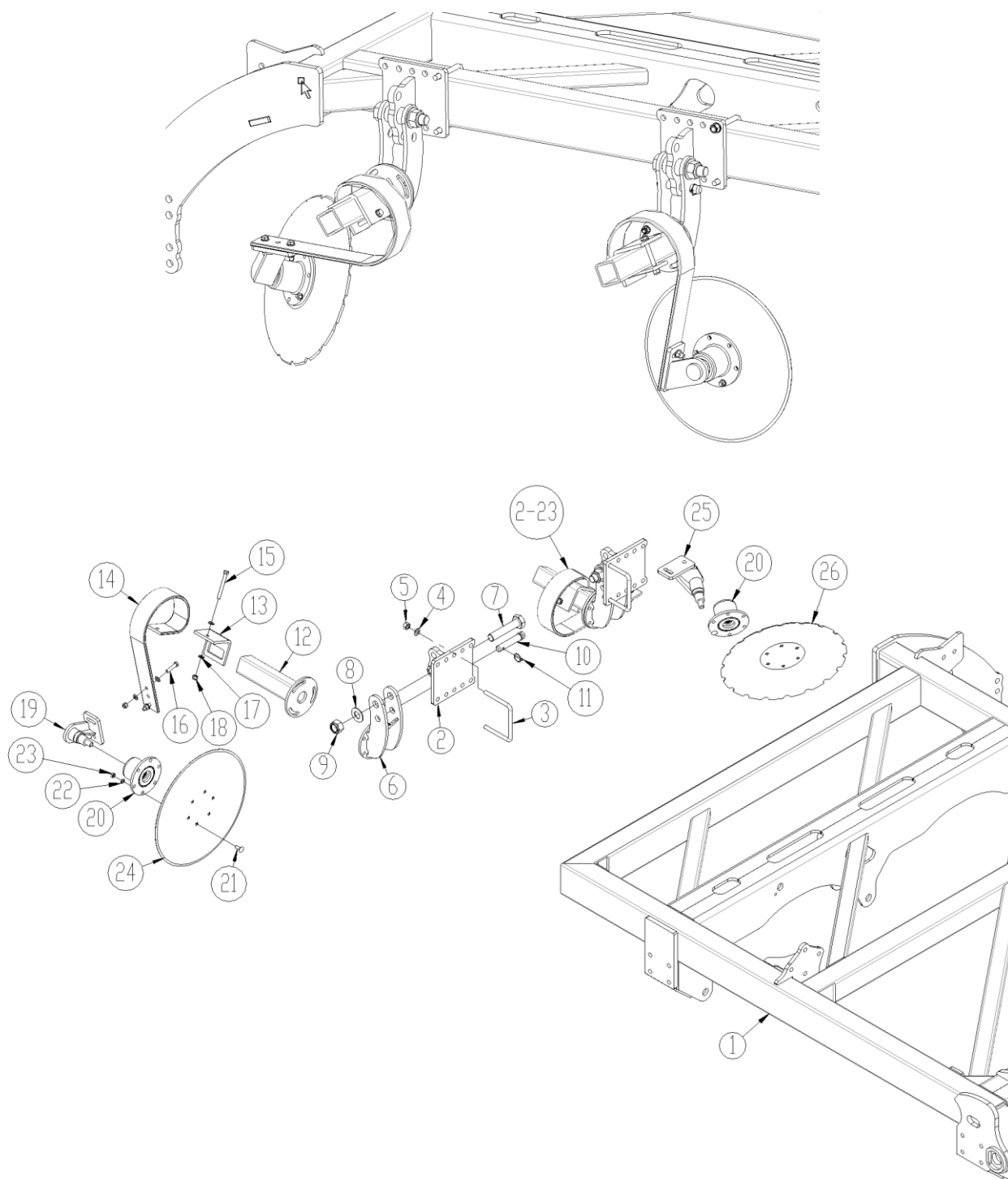
Support wheels (front)



Pos.	Item no.	Designation	Number per set
1	630910742	Wheel assembly	1
2	631700120	Bracket (left)	1
	1295013	Bracket (right)	1
3	631700125	Bracket (left)	1
	1295011	Bracket (right)	1
4	0236010	Bolt M16 x 220	20
5	0272290	Facet plate M16	40
6	0264090	Locking nut M16	20
7	690140716	Slide bush Ø35/Ø39 L=50	4
8	69435355G	Pin Ø35 L=355	2
9	0432100	Lubricating nipple M6	4
10	630532600	Lock bush for pin head	2
11	0235330	Bolt M12x25	2
12	675101001	Spindle	2

Pos.	Item no.	Designation	Number per set
a	675101110	Inner pipe	
b	675101006	Bushing	
c	0378200	Ring pin Ø4,5mm	
d	675101007	Outer pipe	
e	690304122	Spindle	
f	0272330	Facet plate Ø24 mm	
g	0261425	Nut M24	
h	90304102	Crank handle	
i	0371660	Retaining pin Ø8x32	
13	0236170	Bolt M20 x 80	2
14	0236240	Bolt M20 x 150	2
15	0272310	Facet plate Ø20 mm	12
16	0264110	Locking nut M20	6
17	630910740	Wheel suspension	2
18	69450230G	Pin Ø50 L=230	2
19	690103124	Bolt M16x35	2
20	630532700	Lock bush for pin head	2
21	690140712	Sliding disc Ø52/Ø78x2	4
22	690140710	Bearing shell Ø50/55 L=50	4
23	0395654	Wheel 300/55-14,5 SG (left)	1
	0395653	Wheel 300/55-14,5 SG (right)	1
24	7365005	Hub w/6 hub bolt)	2
	7365004	Bush	
	7365001	Axle	
	7365002	Bushing	
	630949019	Steel washer (offset) Ø45/71,7 mm	
	630949019	Hub bolt M18x1.5 L=49mm	
	0396460	Hub nut M18x1.5	
	690140201	Bearing (Taper roller bearing) ø72mm x ø35mm x 33	
	0379250	Seeger circlip ring I 72 DIN472	
	690140651	Sealing cassette 72-45-14/17	
25	0236333	Bolt M20x420 8.8	2

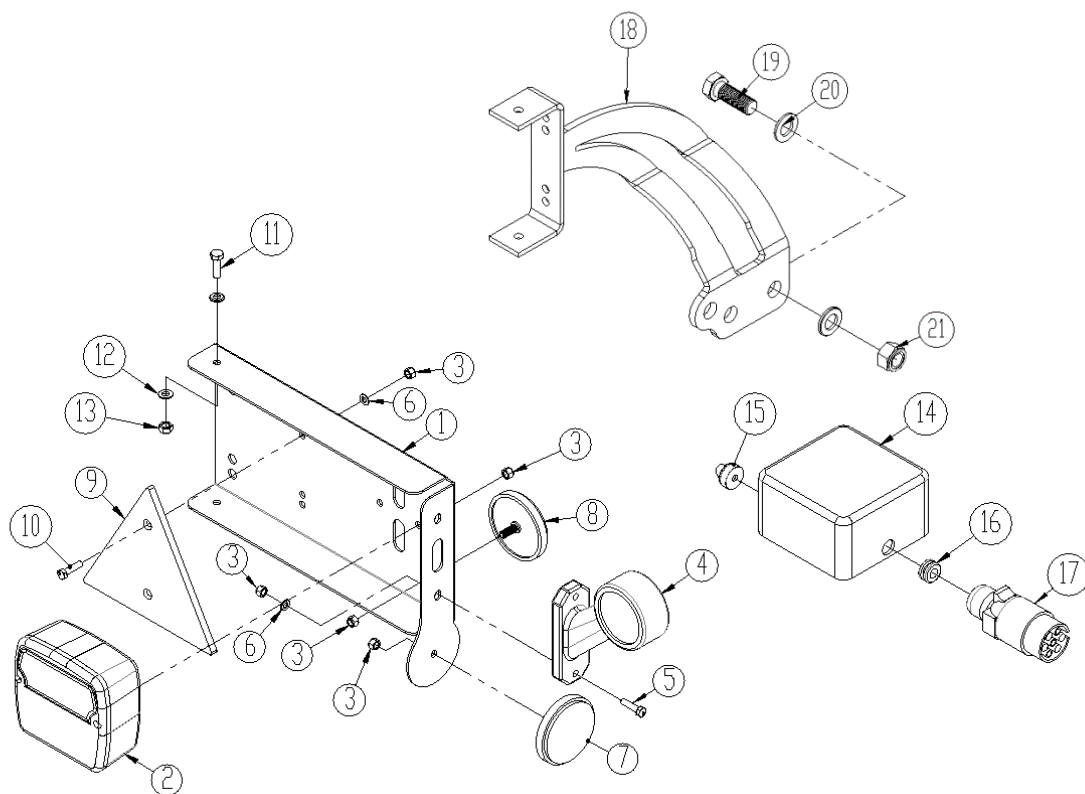
Edge equipment



Pos.	Item no.	Designation	No.
1		Look at pos. 3 page 20 (right wing)	
2	1295056	Bracket f/edge equipment	2
3	0382800	U-bolt M16x100x150x100	4
4	0272290	Facet plate Ø16	
5	0264090	Locking nut M16	
6	1295057	Bracket f/edge equipment	2

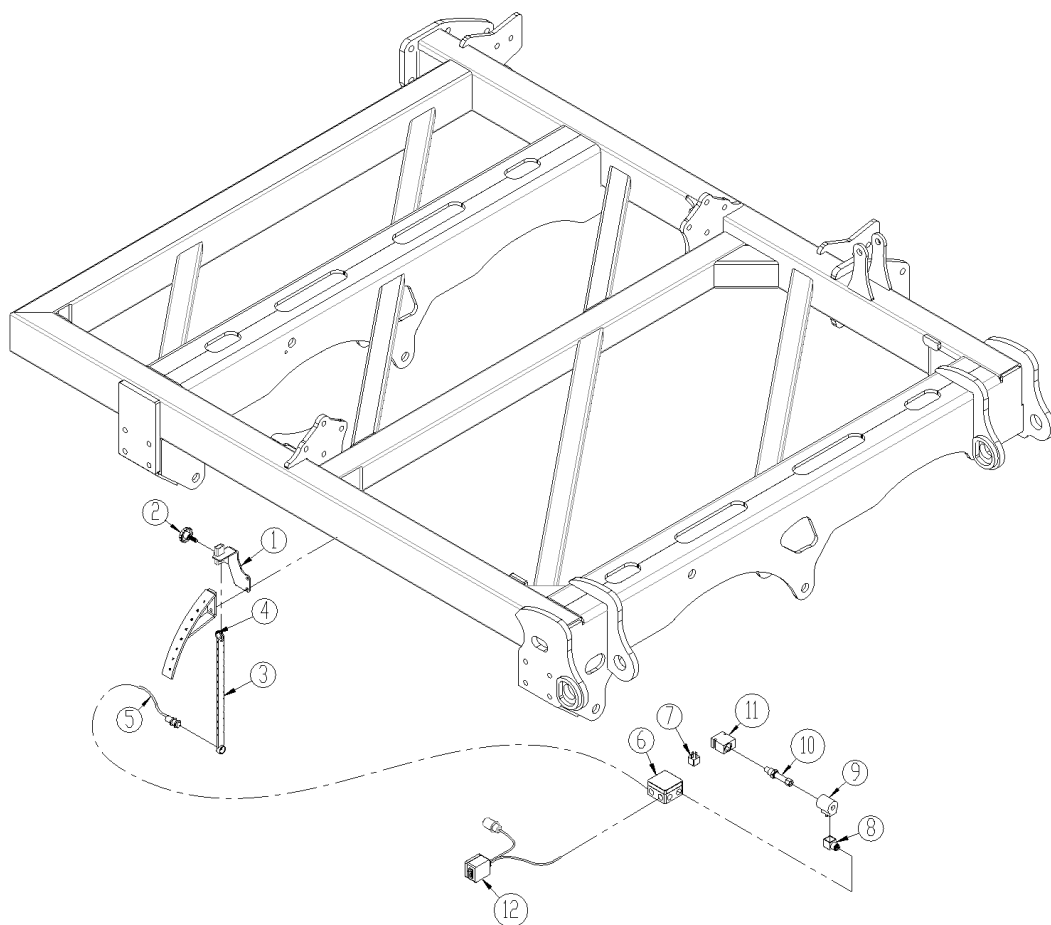
Pos.	Item no.	Designation	No.
7	0237040	Bolt M30x150mm	2
8	0272350	Facet plate Ø30	4
9	0264155	Locking nut M30	2
10	69525097J	Pin for top link Ø25 L=97	2
11	0378200	Ring pin Ø4,5mm	2
12	1295058	Clamp for tine	2
13	0422390	Clamp for tine	2
14	0422145	Tine 80x10mm (long)	2
15	0235470	Bolt M12x110 10,9	2
16	0248670	Carriage bolt M12x45	4
17	0272270	Facet plate Ø12	12
18	0264070	Locking nut M12	6
19	1295044	Console w/axle	1
20	630949035	Hub (complete)	2
20a	30949030	Hub	
20b	0263000	Locking nut M20 kv. 10 (helmetal)	
20c	0379250	Seeger circlip ring I 72 DIN472	
20d	0483730	O-ring 80x3	
20e	630949019	Steel washer (offset) Ø45/71,7 mm	
20f	690140652	Tight-fitting washer Ø40/50x1mm (Din 988)	
20g	690117063	Disc spring 20,4x45x2,5	
20h	690140651	Sealing cassette 72-45-14/17	
20i	690140201	Bearing (Taper roller bearing) ø72mm x ø35mm x 33	
21	0248421	Carriage bolt M10x30	12
22	0272260	Facet plate Ø10	12
23	0264060	Locking nut M10	12
24	690153509	Disc Ø508	1
25	1139840	Console w/axle	1
26	690153508	Disc Ø510	1

LED-light



Pos.	Item no.	Designation	No.
1	7357505	Light bracket, left	1
	7357508	Light bracket, right	1
2	7357504	Rear light	2
3	0264030	Locking nut M5	
4	7357507	Marking lights (left)	1
	7357509	Marking lights (right)	1
5	0233860	Bolt M5x20	
6	0272230	Facet plate Ø5	
7	0656240	Reflex, yellow	2
8	0656250	Reflex, white	2
9	0521030	Reflex, red	2
10	0233860	Bolt M5x20	
11	0234330	Bolt M6x20	
12	0272240	Facet plate Ø6	
13	0264040	Locking nut M6	
14	0520492	Connecting box 105x105x60	1
15	7357545	Rutaseal nippel M20 8-12mm	2
16	7357546	Rubber bushing	1
17	0527140	Plug 7 poles DIN 72 577 – ISO 1724	1
	690160080	Cable 5x1mm ²	
18	1295122	Bracket (right)	1
	1295120	Bracket (left)	1
19	0235800	Bolt M16x45	4
20	0272290	Facet plate Ø16	8
21	0264090	Locking nut M16	4

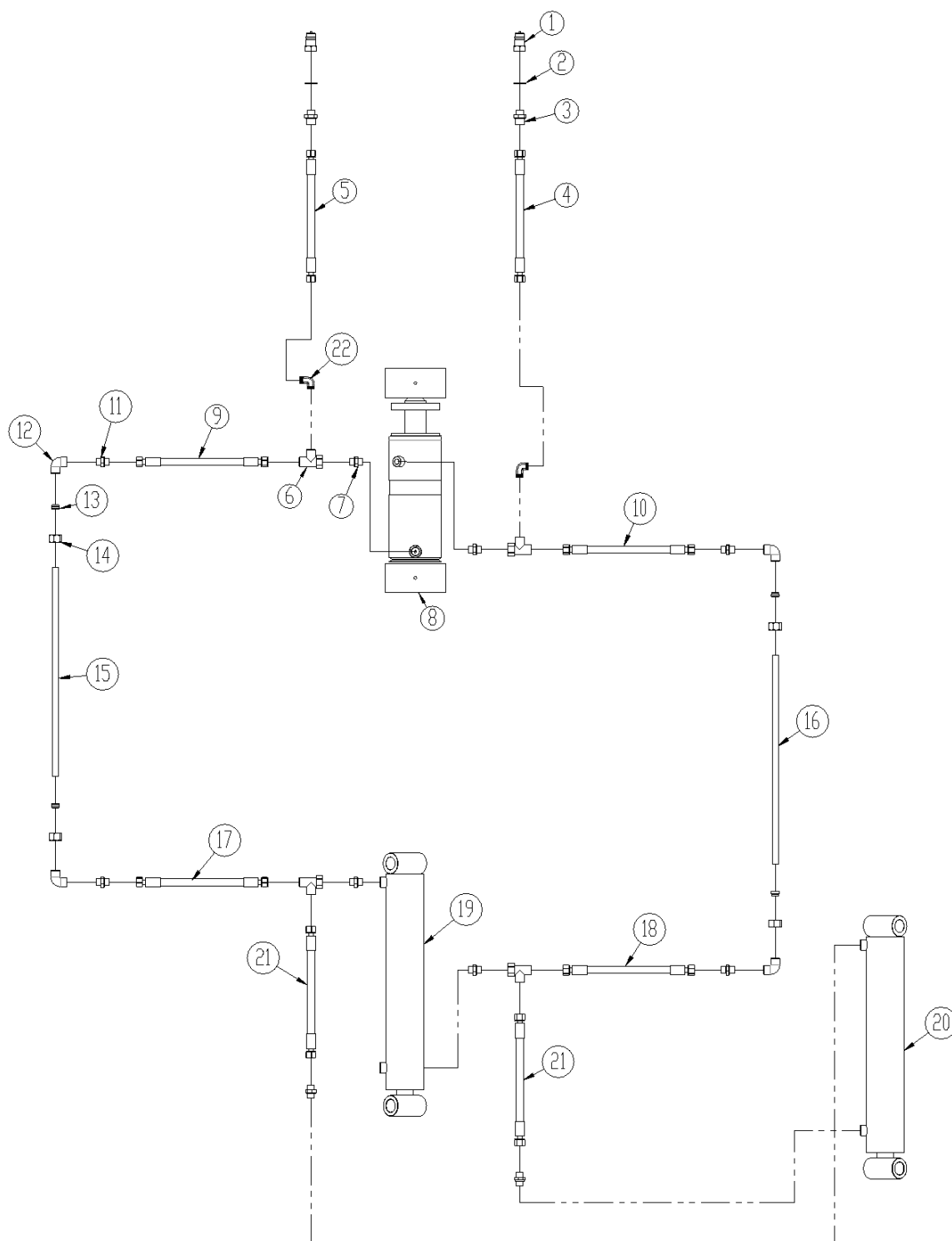
Electrical depth stop f/disc



Pos.	Item no.	Designation	Pcs.
1	1295251	Bracket f/scale	1
2	0489103	Thumbscrew	1
3	1295252	Scale	1
4	0431975	Locking ring	1
5	0442768	Inductive sensor M18 (incl. cable)	1
6	0520490	Connection box	1
7	0527120	Relay	1
8	0442766	Plug 2 poles +/- 12V	1
9	0442764	Magnet coil	1
10	0442762	Valve	1
11	0442763	Valve block	1
12	0527175	Breaker f/ Electrical depth stop (complete)	1
	0525060	Cable 2 x 0,75 mm ²	

Hydraulics

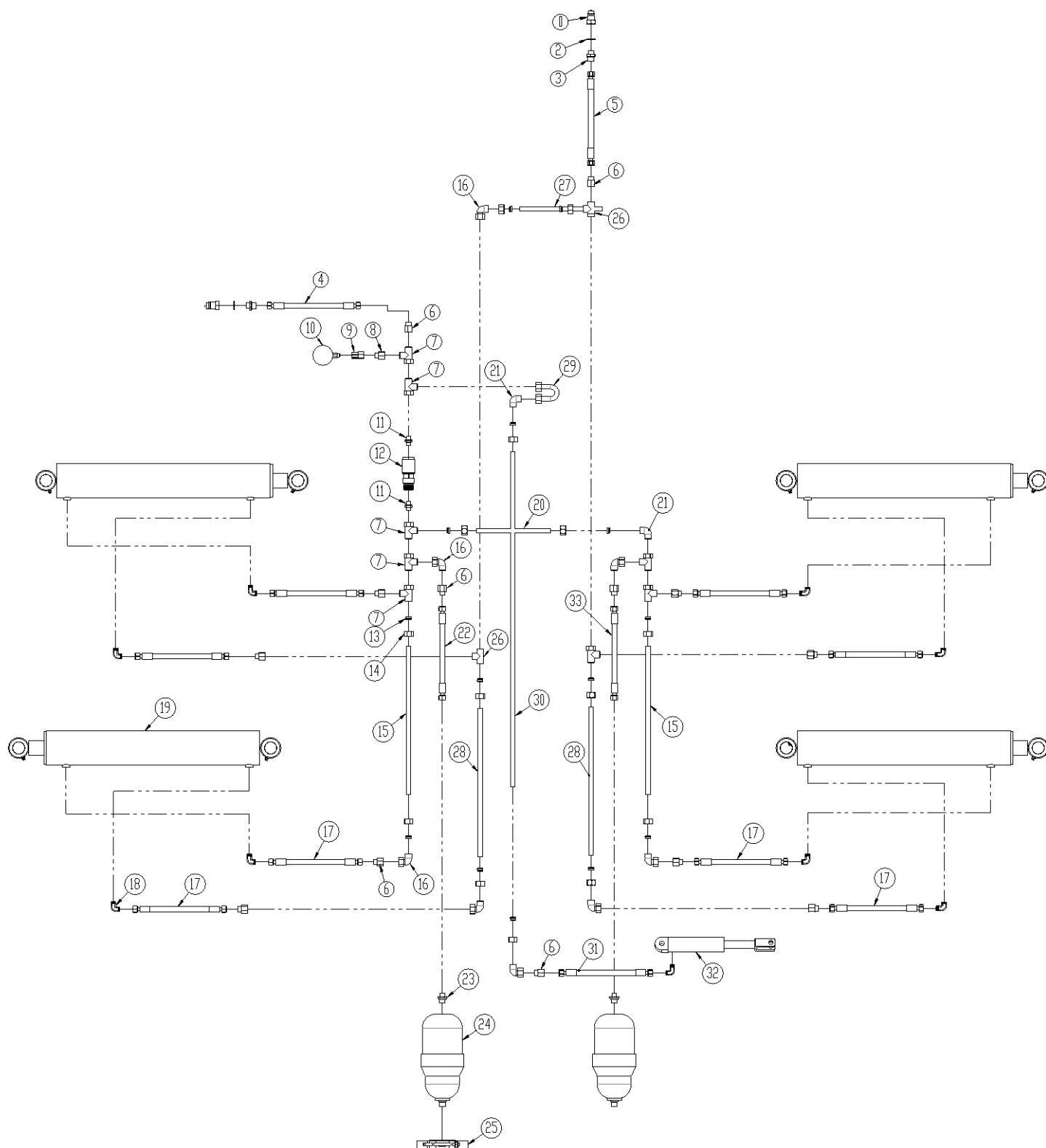
Drawbar and Wheel frame



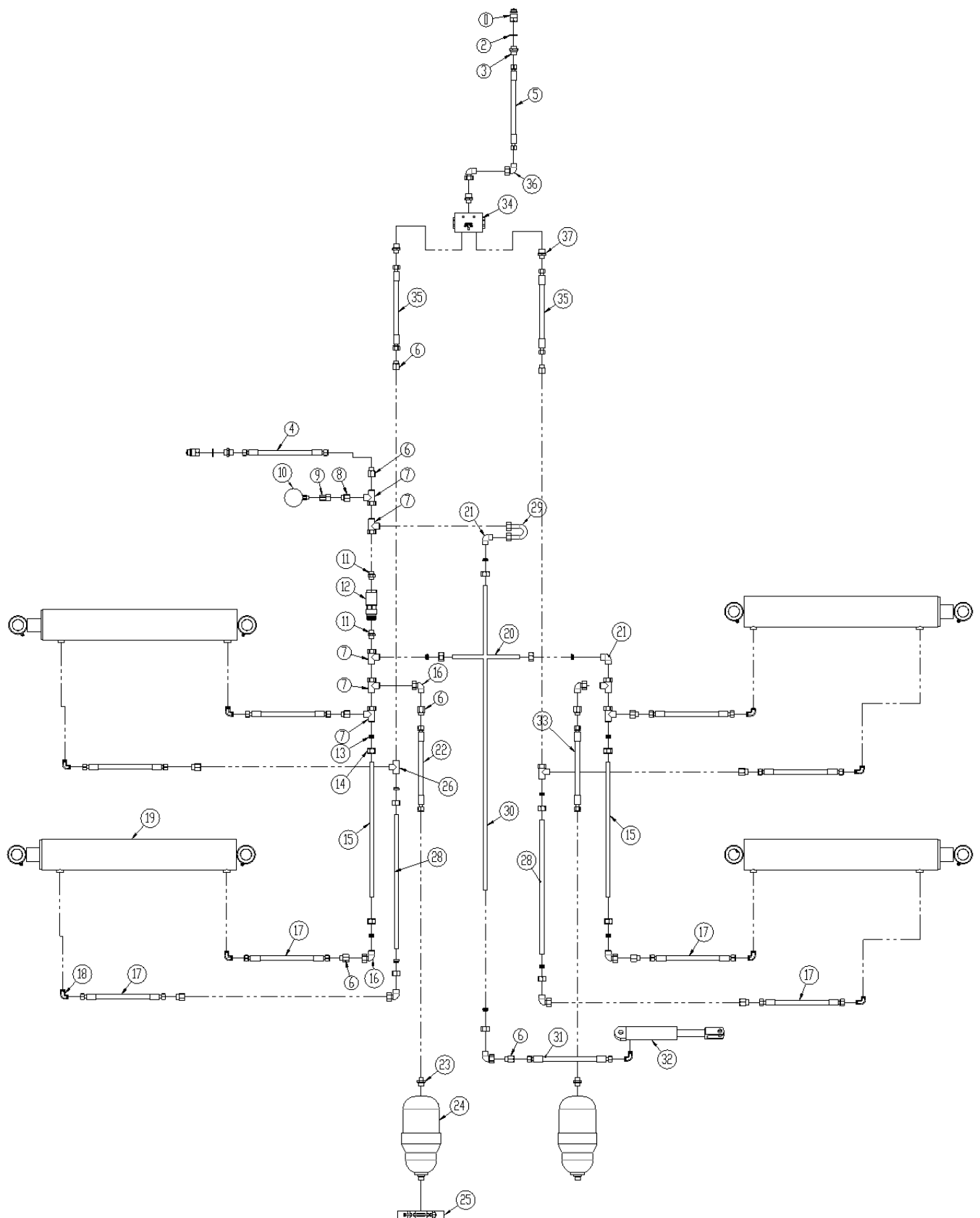
Pos.	Item no.	Designation	6,5m	7,5m
1	0444020	Quick coupling ½", male	2	2
2	0449070	Bounded seals 1/2"	2	2
3	690203103	Fitting, straight 12 x 1/2"	2	2
4	0454973	Hose 4500 mm 3/8" st/st	1	1
5	0454969	Hose 4300 mm 3/8" st/st	1	1
6	0446502	Fitting T12L	4	4
7	0446754	Fitting 12 x 3/8"	6	6
8		Look at pos. 2 page 16		
9	0454240	Hose 900mm 3/8" st/st	1	1
10	0454306	Hose 1100 mm 3/8" st/st	1	1
11	0447701	Fitting reduction nut Ø15/Ø12	4	4
12	0446240	Fitting 90° ø15mm	4	4
13	690204503	Cutting ring Ø15	4	4
14	690204504	Fitting nut Ø15	4	4
15	7345161	Hydraulic pipe Ø15 mm, L = 2000mm	1	1
16	7345160	Hydraulic pipe Ø15 mm, L = 21500mm	1	1
17	0454240	Hose 900mm 3/8" st/st	1	1
18	0454245	Hose 1000 mm 3/8" st/st	1	1
19		Look at pos. 5 page 24		
20		Look at pos. 6 page 24		
21	0454172	Hose 500 mm 3/8" st/st	2	2
22	0446200	Fitting 90° ø12 / 3/8"	2	2

Recommends measuring hydraulic hoses before re-ordering

Wing (to machine number 37299)



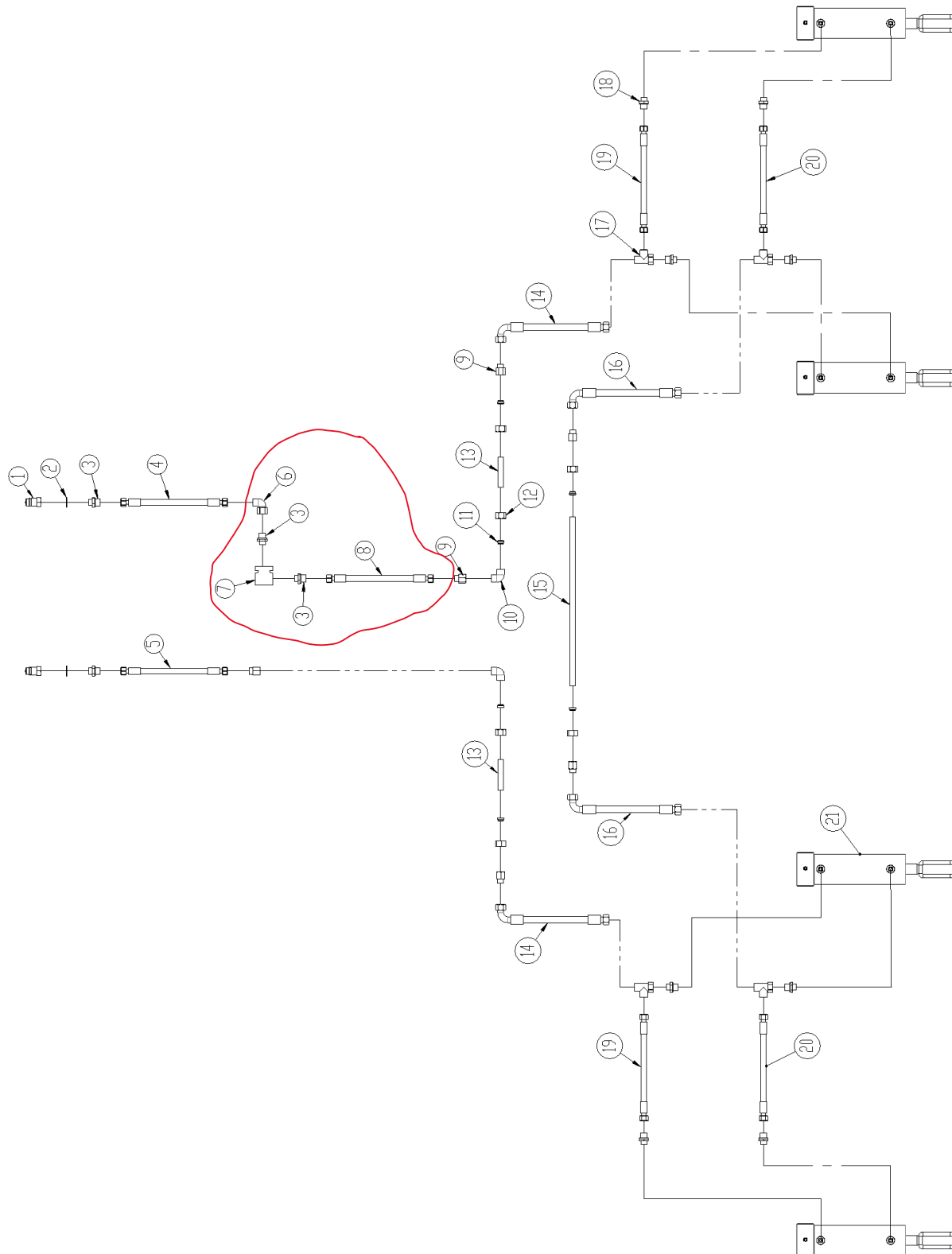
Wing (from machine number 37300)



Pos.	Item no.	Designation	6,5m	7,5m
1	0444020	Quick coupling ½", male	2	2
2	0449070	Bounded seals 1/2"	2	2
3	690203103	Fitting, straight 12 x 1/2"	2	2
4	0454990	Hose 5000 mm 3/8" st/st	1	1
5	0455016	Hose 5600 mm 3/8" st/st	1	1
6	0447701	Fitting reduction nut Ø15/Ø12	14	14
7	0446500	Fitting T15L	8	8
8	0447700	Fitting reduction nut Ø15/Ø10	1	1
9	690206823	Pressure gauge fitting Ø10 / 1/2"	1	1
10	0442052	Manometer 250 bar Ø100mm	1	1
11	0446757	Fitting, straight 15mm x 1/2"	2	2
12	0442450	Sequential valve ½" m33X2 (145 bar)	1	1
13	690204503	Cutting ring Ø15	14	14
14	690204504	Fitting nut Ø15	14	14
15	7345162	Hydraulic pipe Ø15 mm, L = 1250mm	2	2
16	0446240	Nippel 90° ø15mm	7	7
17	0454306	Hose 1100 mm 3/8" st/st	8	8
18	0446200	Nippel 90° ø12/3/8"	9	9
19		Look at pos. 4 page 20		
20	7345166	Hydraulic pipe Ø15 mm, L = 280 mm	1	1
21	0446240	Fitting 90° Ø15	2	2
22	0454204	Hose 700 mm 3/8" 90/90	1	1
23	690203096	Fitting straight M18x1,5x10mm	2	2
24	690206510	Accumulator	2	2
25	690206511	Clamp f/accumulator	2	2
26	0446525	Fitting T ½"	1	1
27	7345165	Hydraulic pipe Ø15 mm, L = 250mm (to machine number 37299)	1	1
28	7345163	Hydraulic pipe Ø15 mm, L = 1130mm	2	2
29	0440210	U- hydraulic pipe	1	1
30	7345161	Hydraulic pipe Ø15 mm, L = 2000mm	1	1
31	0454130	Hose 310 mm 3/8" st/st	1	1
32		Look at pos. 34 page 20		
33	0454246	Hose 1000 mm 3/8" 45/90	1	1
34	0442775	Flow dividers	1	1
35	0454172	Hose 500 mm 3/8" st/st	2	2
36	0446679	Fitting 90° Ø12	2	2
37	0446754	Fitting 12 x 3/8"	3	3

Recommends measuring hydraulic hoses before re-ordering

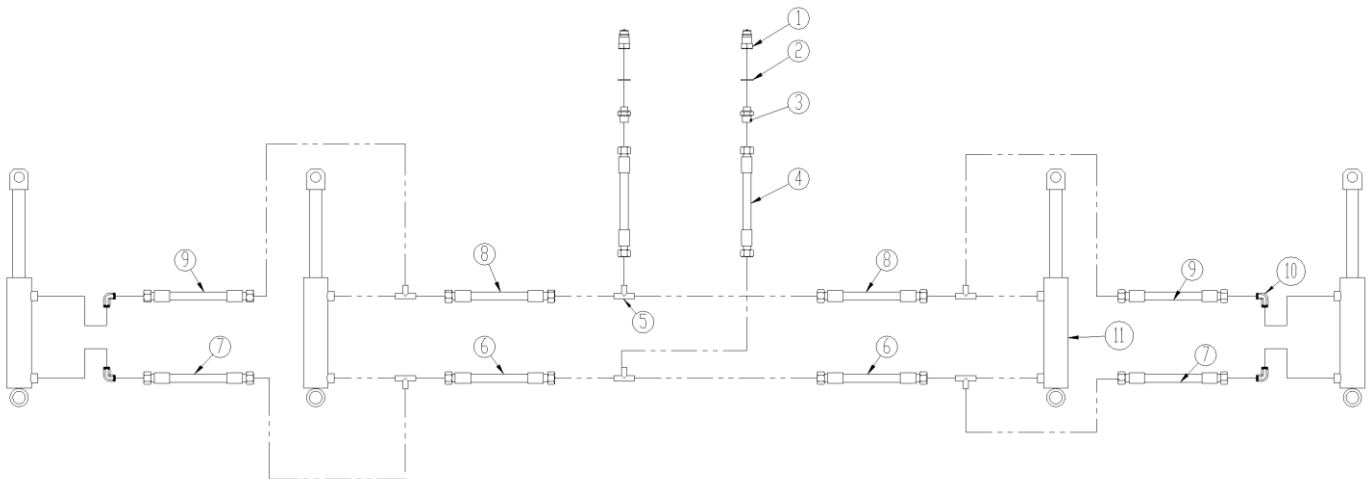
Disc (without and with electrical depth stop)



Pos.	Item no.	Designation	6,5m	7,5m
1	0444020	Quick coupling ½", male	2	2
2	0449070	Bounded seals 1/2"	2	2
3	690203103	Fitting, straight 12 x 1/2"	2	2
4	0455016	Hose 5600 mm 3/8" (without electrical depth stop)	1	1
	0454990	Hose 5000 mm 3/8" (with electrical depth stop)	1	1
5	0455016	Hose 5600 mm 3/8"	1	1
6	0446679	Fitting 90° Ø12 (with electrical depth stop)	1	1
7		Look at pos. 11 page 37 (with electrical depth stop)		
8	0454194	Hose 670 mm 3/8" st/st (with electrical depth stop)	1	1
9	0447701	Fitting reduction nut Ø15/Ø12	6	6
10	0446240	Fitting 90° Ø15	2	2
11	690204503	Cutting ring Ø15	6	6
12	690204504	Fitting nut Ø15	6	6
13	7345164	Hydraulic pipe Ø15 mm, L = 90mm	2	2
14	0454245	Hose 1000 mm 3/8" st/st	2	2
15	7345159	Hydraulic pipe Ø15 mm, L = 500mm	1	1
16	0454335	Hose 1200 mm 3/8" st/st	2	2
17	0446502	Fitting T12L w/o-ring	4	4
18	0446754	Fitting 12 x 3/8" w/O-ring	8	8
19	0454916	Hose 3300 mm 3/8" st/st	2	
	0454926	Hose 3500mm 3/8" st/st		2
20	0454916	Hose 3300mm 3/8" st/st	2	2
21		Look at pos. 46 page 20		

Recommends measuring hydraulic hoses before re-ordering

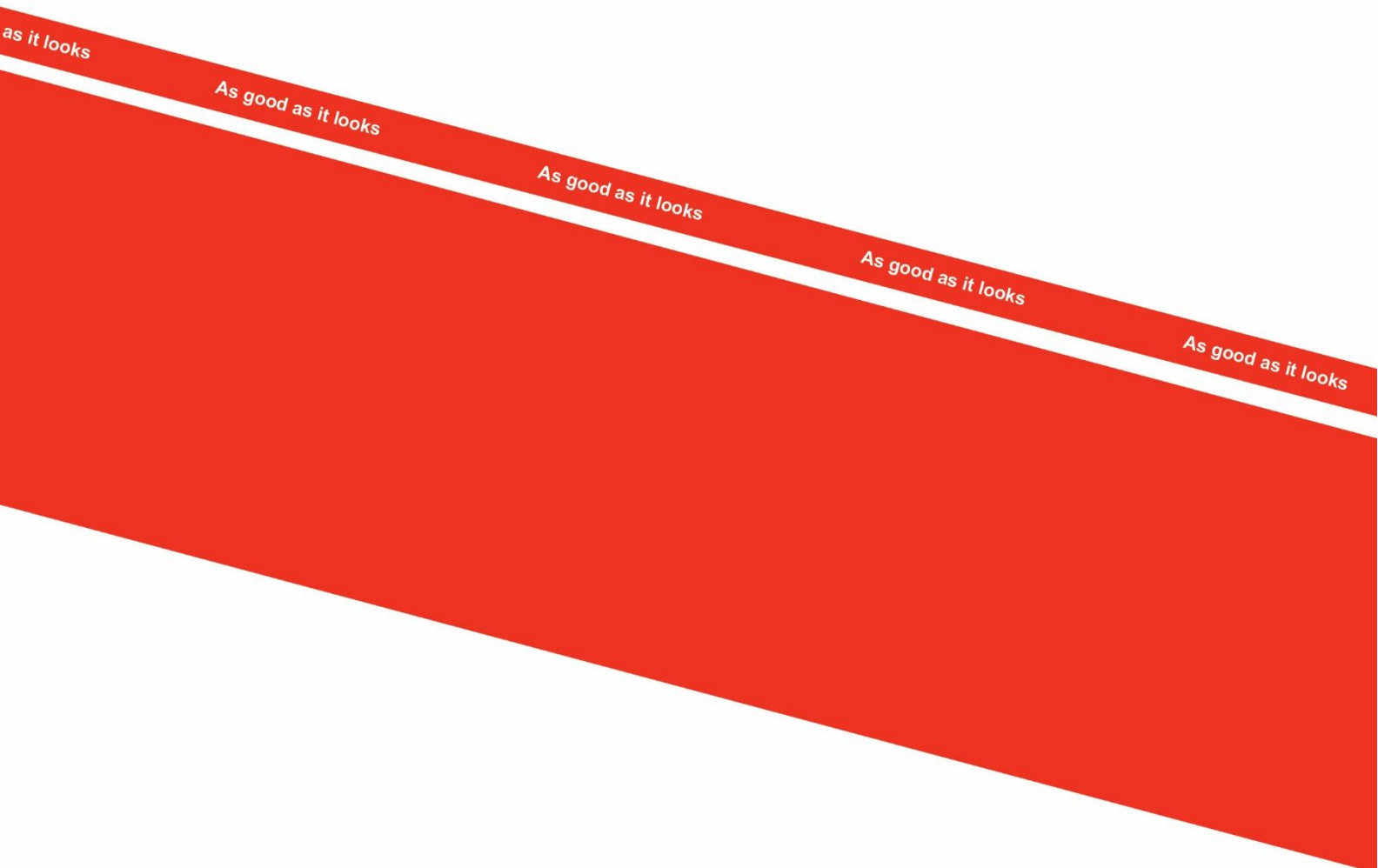
Springboard



Pos.	Item no.	Designation	6,5m	7,5m
1	0444020	Quick coupling 1/2", male	2	2
2	0449070	Bounded seals 1/2"	2	2
3	0444490	Fitting 1/2"x1/4"	2	2
4	690201025	Hose 5640 mm 1/4" st/st	2	2
5	0446510	Fitting T 1/4"	6	6
6	0454313	Hose 1130 mm 1/4" st/st	2	2
7	xx	Hose xxx mm 1/4" st/st	2	
	xx	Hose xxx mm 1/4" st/st		2
8	0454313	Hose 1130 mm 1/4" st/st	2	2
9	xx	Hose xxx mm 1/4" st/st	2	
	xx	Hose xxx mm 1/4" st/st		2
10	690203006	Fitting 90° 10-3/8" BSP	4	4
11		Look at pos. 10 page 30		

Recommends measuring hydraulic hoses before re-ordering

Notes



2011
Denmark