

GLOBUS



GRS ROLLER Cambridge & CrossKill

User manual and spare parts

Underhaug

WELCOME AS A UNDERHAUG CUSTOMER!

Congratulations on purchasing a Globus product! Before using the equipment, we ask that you carefully read the user manual. You should keep this manual and pass it along if you sell the product to others.

Underhaug manufactures a wide range of products, including stone pickers, stone rakes, seeders, round bale forks, pallet forks, harrows, Cambridge rollers, crosskill rollers, snow blowers, potato machines, excavation buckets, quick coupler attachments, and other construction equipment for excavators.

If you would like to learn more about our products, you can visit our website at www.underhaug.no or contact us by phone or email.

Our goal is for you to be a satisfied Globus customer. To achieve this, we focus on quality and user-friendly products. In collaboration with our dealers, we aim to solve any problems that may arise and guarantee the supply of spare parts for 10 years.

Underhaug is a forward-looking company, and we are committed to continuous product development. We would appreciate receiving feedback from you as a customer. Both positive and negative experiences help strengthen our development and make our products better. Please feel free to send us ideas or suggestions for product modifications or additional equipment via email at arild@underhaug.no. All suggestions will be considered during future product upgrades.

We recommend that you fill out the necessary information about the product you have acquired in the table below. This will make it easier and faster to handle any inquiries for spare parts and/or additional equipment. It is also helpful in case of a product warranty claim.

Best regards,
Underhaug AS

PRODUCT INFORMATION:

Art. no.: (see type plate)	
Serial no.: (see type plate)	
Production year: (see type plate)	
Purchase date:	
Distributor:	

Underhaug AS
Rev. 1.1
01.01.2025

DECLARATION OF CONFORMITY

Producer: Underhaug AS
Address: Torlandsveien 3
4365 Nærbø
N-NORWAY

We hereby declare under our own responsibility that the following product:

Type: *Globus GRS Roller – Cambridge & CrossKill*
Serial No.:

Year of Manufacture: 2010->

covered by this declaration, complies with the following standards:

- **NS/EN ISO 13857: 2008**
- **NS/EN 13021: 2003 + A1: 2008**
- **NS/EN ISO 12100: 2010**
- **Directive 2006/42/EC**

Nærbø, January 2025



Sales manager Arild Høien

CONTENT

1	Introduction	Side
	Welcome as costumer	2
	Product information	2
	Declaration of Conformity	3
2	Safety	
	User manual	5
	Caution	5
	Crushing hazard	5
	Hydraulic under pressure	5
	Safety labeling	6
3	Product information	
	Instruction of Use	7
	Structure and function	7
	Technical data	7
4	Assembly and connection	
	Assembly	8
	Connection	10
5	Spare parts	
	Roller	11
	Spring planer	15
	Seed Roller	17
6	User tips	
	Cambridge	19
	CrossKill	19
7	Maintenance	
	Retightening	19
	General	19
	Lubrication points	19
	Color code	19
8	Warranty	
	Warranty Terms	20
9	Maintenance overview	
	Maintenance overview	21
	Notes	22

2. SAFETY

2.1 Instructions for Use

Everyone using the Globus drum must familiarize themselves with the contents of the manual before the machine is used.

2.2 Caution

Ensure that no one is present in the machine's work area. Stones, soil, and other foreign objects affected by the machine can cause damage to persons, vehicles, buildings, and other objects.

2.3 Risk of Crushing

If something gets stuck in the machine, always stop the motor and remove the key from the ignition before starting the cleaning. Be aware of the crushing hazard when stones become dislodged from their fixed position or when working with the machine's hydraulic functions.

2.4 Crushing Hazard During Operation

Ensure that no persons are near the drum when it is in operation. When the drum rotates, it represents a significant crushing hazard that can cause severe injuries.

2.5 Uncontrolled Movements

To avoid the machine from making uncontrolled movements when using hydraulic functions, the oil amount on the tractor should be reduced.

2.6 Crushing Hazard During Hydraulic Adjustment

Ensure that no one is nearby when the GRS CA/CR switches from transport to working position. A crushing hazard can occur during both in- and out-folding as the machine is in large motion. Be aware of the crushing risk when lowering the drum into the working position. The adjustment is hydraulic, and the hydraulic oil is under pressure (see section 2.9).

2.7 Crushing Hazard with Feather Bed

The Globus GRS CA/CR may be equipped with a feather bed. Ensure that no one is nearby when the feather bed is in use and be aware of crushing hazards when adjusting the different positions. The feather bed is hydraulically adjustable, and hydraulic oil is under pressure (see section 2.9).

2.8 Repairs

Before any maintenance or repairs are performed, always ensure the motor is turned off and the key is removed from the ignition, or the drum is disconnected from the tractor. Never stay under machines suspended by the tractor's hydraulics. Make sure the machine is properly supported or parked securely before starting work.

2.9 Hydraulic Pressure

The GRS CA and CR are equipped with hydraulic control for folding and unfolding. Ensure no one is near when hydraulic functions are performed. Hose breaks can occur without warning when the machine is in use. Hydraulic oil under pressure can penetrate the skin and cause serious injuries and infections. Always wear eye protection and gloves and be cautious when working with hydraulics. Seek medical attention if you sustain an injury.

2.10 Dust and Noise

The machine makes noise during operation, so be aware of this and always wear hearing protection when working with the drum. Dust and other particles stirred up during use can be harmful to inhale. Always wear a dust mask or similar in such cases.

2.11 Safety Labels

All Globus drum models are equipped with various warning labels indicating actions to take to prevent injuries and accidents. The symbol appears on warning labels located in different places on the machine. These are shown in the images below.

If the labels are removed from the machine, new ones can be supplied by the manufacturer or dealer.



Read user manual



When performing repairs, the key must always be removed from the ignition switch.



Crushing hazard from hinged parts, maintain distance.



Crushing hazard to foot, maintain distance.

3. PRODUCT INFORMATION

3.1 Application

The Globus roller can be used with Cambridge rings for surface treatment after sowing or for rolling meadows. The Globus roller with CrossKill rings, in combination with a spring planer, can be used for processing ploughed soil, or to work on dry/hard surfaces of harrowed soil.

An additional Seed Roller allows the sowing of grass and cereal seeds.

All rollers require skilled operation, and the user manual should be read before connection and activation, even if you have prior experience with similar machines.

3.2 Construction and Functions

- The Globus GRS Cambridge (CA) is a hydraulic 3-section roller with Cambridge rings. The roller is attached to the tractor's drawbar and can be hydraulically adjusted from work to transport position.
- The Globus GRS CrossKill (CR) is a hydraulic 3-section roller with CrossKill rings. The roller is attached to the tractor's drawbar and can be hydraulically adjusted from work to transport position from the tractor.
- The Globus GRS CA/CR can be equipped with a spring planer mounted at the front of the roller. This consists of tines with wear-resistant steel for soil aeration. The spring planer has hydraulically adjustable parallel guidance. It is also possible to attach furrow pressers to the planer, two per tine.
- The Globus Seed Roller is mounted on the spring planer of the roller. It consists of a frame for the seed box, hoses, seed heads, and spring tines. The position of the seed heads and spring tines is adjusted mechanically.

3.3 Technical Data

- The Globus GRS CA/CR is available in working widths of 4.5m, 5.4m, or 6.1m. The transport width for the 3-section drums is 2.45m.
- The Feather Bed is available in working widths of 4.5m, 5.4m, or 6.1m, with a weight increase of 460kg, 515kg, and 565kg respectively.
- The Seed Roller is available in working widths of 4.5m or 5.4m, with an additional weight of 825kg and 880kg (including the feather bed) when the seed box is empty.

Model	GRS 450 CA	GRS 540 CA	GR 610CA	GR 450 CR	GRS 540 CR
Working width	4,5 m	5,4 m	6,1 m	4,5 m	5,4 m
Transport width	2,45 m	2,45 m	2,45 m	2,45 m	2,45 m
Ring type	Cambridge	Cambridge	Cambridge	CrossKill	CrossKill
*Ring diameter	50 cm	50 cm	50 cm	*45/49 cm	*45/49 cm
Weight	203 kg	2350 kg	2520 kg	2030 kg	2350 kg

*The ring diameter is 45 cm and 49 cm for the CrossKill rings.

4. ASSEMBLY AND CONNECTIONS

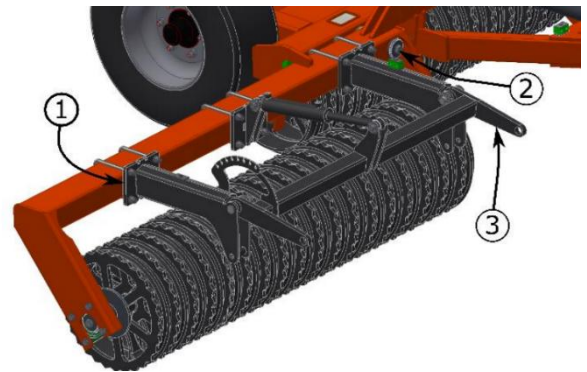
4.1 Assembly

- The Globus 3-section rollers are delivered fully ready for use unless otherwise specified.
- In some cases, the drawbar can be removed to save space during transport. The drawbar must then be reattached using the included bolts.

4.1.1 Assembly of spring planer

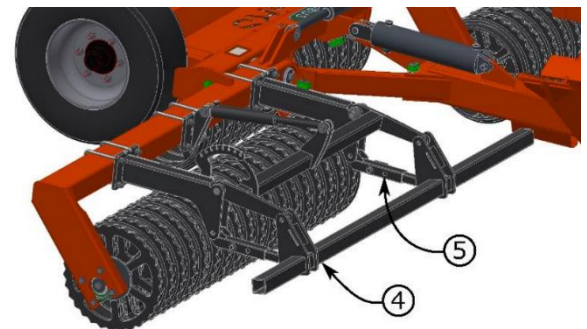
Step 1:

The main arms (1) are attached to the side plates of the roller with square brackets as shown. The inner edge of the inner main arm should be placed 19-20 cm from the centre of the support shaft (2). The parallel frame (3) is attached to the arms, and the cylinder is attached to this.



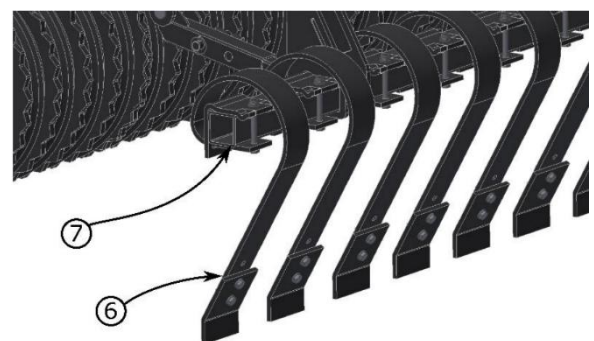
Step 2:

The tine tube (4) is attached at the other end of the parallel frame. The inner and outer telescoping pipes (5) are attached, and the tine tube is lifted to fit the telescoping sections together.



Step 3:

The tines are attached to the 70x70 pipe as shown, with a centre distance of 21.5 cm. This should give a centre distance of 40 cm between the innermost tines to avoid collision with the Seed Roller. If the Seed Roller is not used, consideration can be given to reducing this distance by moving the main arms further inward. Connect the hose set for hydraulic lifting of the tine.

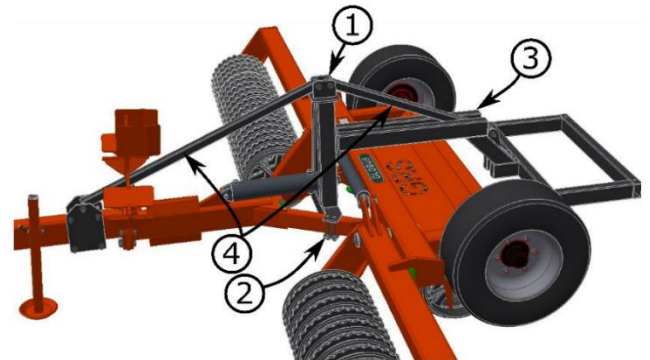


4.1.2 Assembly of Seed Roller

Step 1:

The single-acting cylinder is loosened, and the tower (1) is positioned as shown in the image. The mounting plates (2) are screwed in place to lock the tower's position. The frame (3) for the seed box is attached with bolts, and the diagonal braces (4) at the front and rear are attached to stiffen the framework.

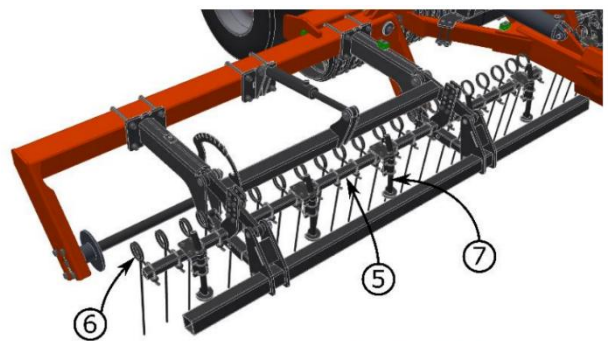
For simplicity, the image does not show the spring planer.



Step 2:

The spring tine tube is attached to the parallel frame with bolts. The spring tines (6) are spaced 12 cm apart, and the seed heads (7) are spaced 50-60 cm apart. Note that the innermost spring will be the limiting factor, as it may come into contact with the tower in the middle when the roller is lowered.

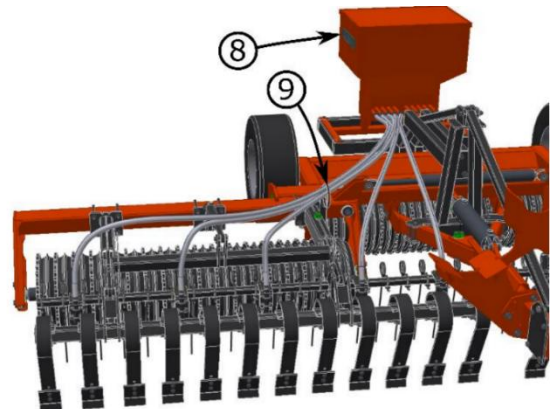
The roller and tine tines are excluded from the drawing.



Step 3:

The tank (8) is attached at the rear, and the hoses are spread out and secured with hose clamps. The three outermost hoses are routed through a ring (9) that is attached to the innermost square bracket of the main arm of the spring planer.

Test the hydraulics and adjust if necessary. Power is supplied to the tractor's battery.



4.2 Connection

- Ensure that no one is between the tractor and the roller during connection. Back the tractor up to the rollers drawbar and make sure the tractor's hitch locks before starting to drive.
- Connect the hydraulic hoses to the tractor. Remember to use matching colours on the same outlets. Stop the tractor and ensure that the valves are not under pressure. This will make it easier to connect the hoses.
- The GRS CA/CR requires one double-acting and one single-acting outlet on the tractor.
- The spring planer requires an additional double-acting outlet on the tractor.
- The Seed Roller requires power to be routed from the seed box's fan motor directly to the tractor's battery.

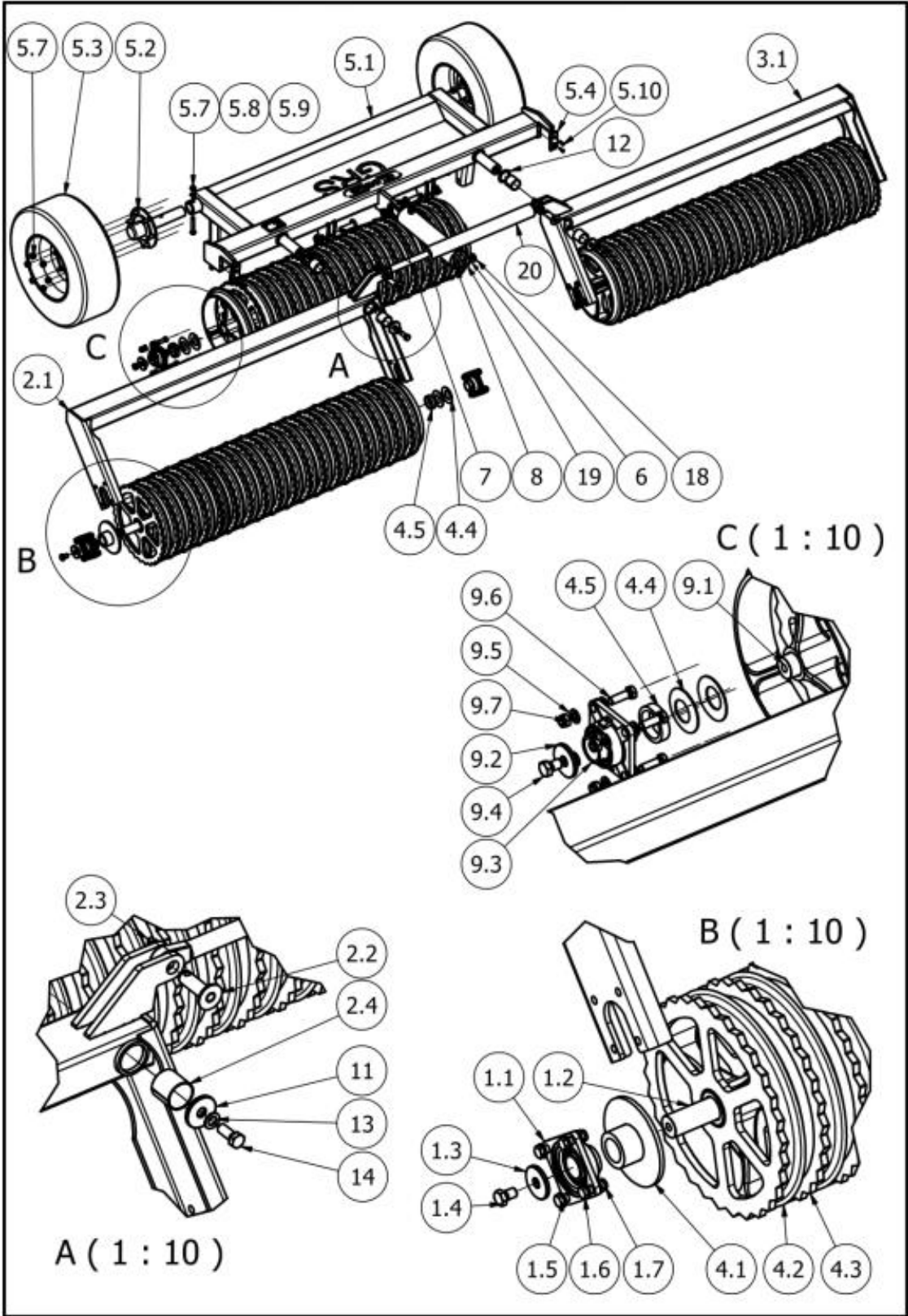
- The nozzle is designed with a folding feature that allows snow to be thrown in front of the snow blower without stopping the fan, and then the nozzle can be swung back out when the obstruction has passed.

- To ensure the snow blower scrapes effectively, it is important to adjust the height of the skid shoes or wheels. Place the snow blower on a flat surface and adjust the skid shoes and wheels fully up. The snow blower will then rest all its weight on the wear blades, ensuring a good scrape. Lowering the wheels or skid shoes reduces the wear on the blades, but the snow blower will scrape less effectively.

- Regularly check that the top link is adjusted so that the snow blower lies flat on the road surface. If the top link is pulled too far in, the snow blower tilts forward, causing unnecessary wear on the front of the wear blades. If the top link is extended too far, the snow blower tilts up in the front, causing excessive wear on the rear of the blades. If a three-point hitch is used, it is recommended to operate the top link in the float position.

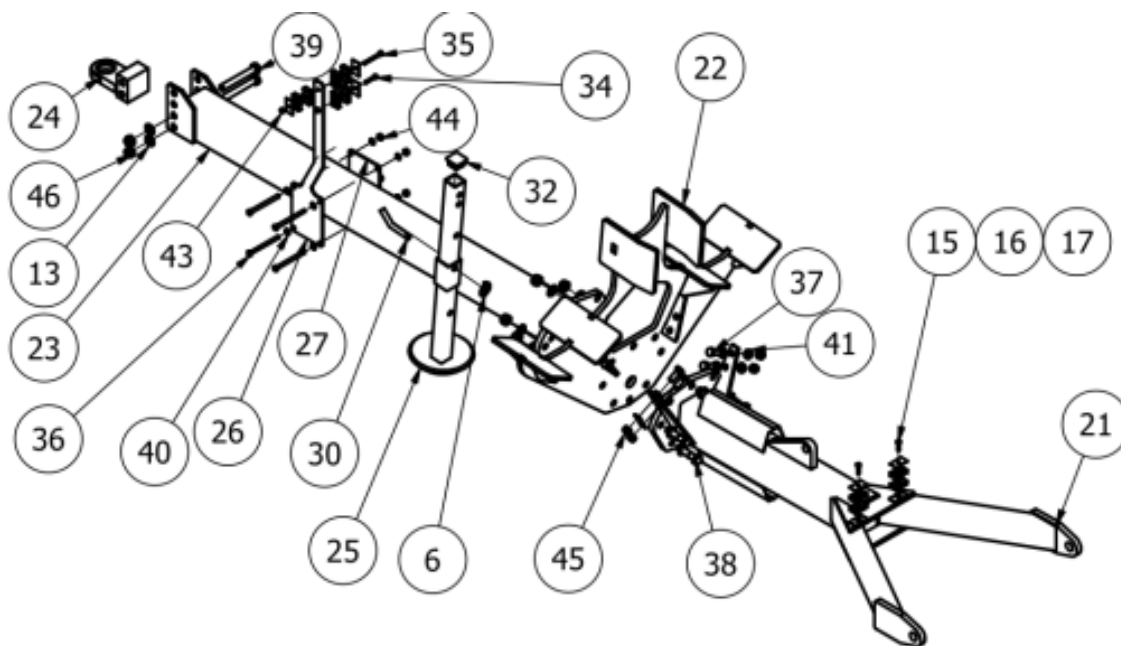
5 SPARE PARTS

5.1 Spare part list Roller



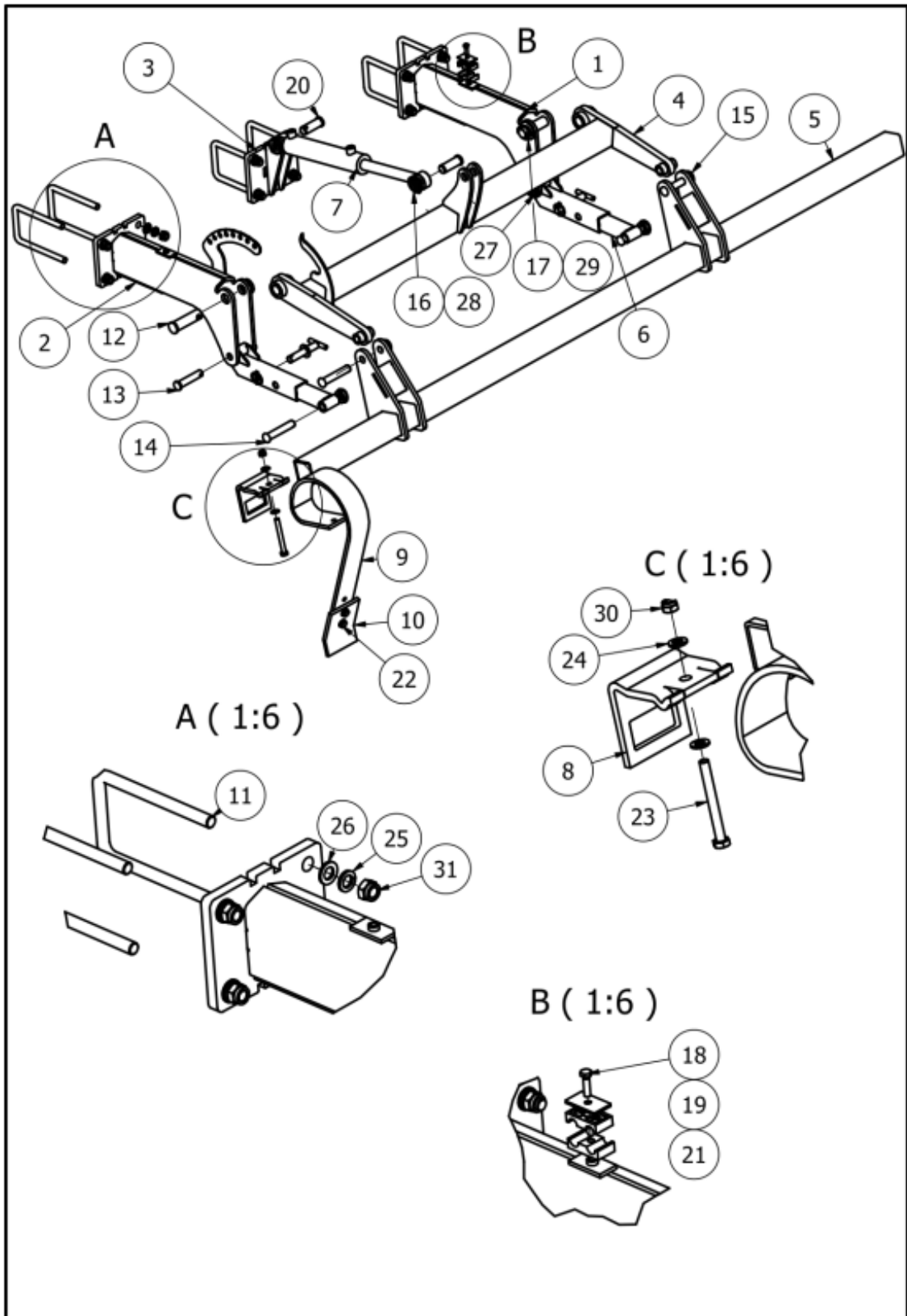
POS:	Art. no:	Qty	Description:
1	127162	2	Shaft mounted side 540
1.1	G-010567	2	Fange bearing FY 50 TF
1.1	970037	2	Foot bearing SY 50 TF (earlier type)
1.2	971382	1	Shaft side
1.3	971272	2	Locking plate
1.4	Bolt M20 x 30	2	Hex-head bolt
1.5	Washer A17	16	Washer
1.6	Bolt M16 x 50	8	Hex-head bolt
1.7	M16 nut	8	Hex nut
2	127169	1	Side R 540 mounted
2.1	127170	1	Side pipe welded L 540
2.2	109000	1	Bolt $\varnothing 29,8$ x 94 mm w/washer
2.3	G-010704	1	Ring splint $\varnothing 8$ x 45 mm
2.4	011253	2	Slide bearing 60/65 x 60
3	127171	1	Side L 540
2.2	109000	1	Bolt $\varnothing 29,8$ x 94 mm w/washer
2.3	010703	1	Ring splint $\varnothing 8$ x 45 mm
2.4	011253	2	Slide bearing 60/65 x 60
3.1	127172	1	Side pipe welded L 540
4	127173	2	Cambridge rings side 540
4.1	971388	1	Roller mounted middle GRS CR
4.2	129992	19	Smooth roller
4.3	129993	19	Spiked roller
4.4	970038-1	2	Spring plate
4.5	970039-3	1	Distance pipe (20)
5	127122	2	Main frame welded
2.2	109000	2	Bolt $\varnothing 29,8$ x 94mm w/washer
2.3	G-010704	1	Ring splint $\varnothing 8$ x 45 mm
5.1	971210	2	Main frame welded 450-540-630
5.2	971391	2	Boss cpl. w/shaft
5.3	011380	2	Wheel 260/70-15
5.4	971325	2	Sliding rail
5.5	DIN 6924 – M18 x 1,5	12	Hex Nut
5.6	Washer A31	2	Washer
5.7	Washer A17	2	Washer
5.8	M16 nut	2	Hex Nut
5.9	Bolt M16 x 100	2	Hex-head bolt
5.10	DIN 912 – M8 x 25	4	Cylinder head cap screw
6	G-010702	3	Ring splint $\varnothing 6$ x 45mm
7	102536	1	Bolt $\varnothing 25$ x 95 w/greas nipple
8	102572	1	Bolt $\varnothing 25$ x 80 $\varnothing 8$
9	127135	1	Shaft mounted
9.1	971380	1	Shaft mounted

9.2	971272	2	Locking plate
9.3	FY 50 TF UCF-210	2	Flange bearing
9.4	M20 x 30	2	Hex-head bolt
9.5	Washer A17	16	Washer
9.6	Bolt M16 x 50	8	Hex-head bolt
9.7	M16 nut	8	Hex nut
10	127145	1	Cambridge rings cpl. middle
4.2	129992	15	Smooth roller
4.3	129993	14	Spiked roller
4.4	970038-1	3	Spring plate
4.5	970039-3	2	Distance pipe (20)
11	971272	2	Låseplate
12	971270	2	Nylonforing $\varnothing 80/\varnothing 60,5 \times 5$
13	Washer A21	14	Washer
14	M20 x 50	2	Hex-head bolt
15	907037	12	Clamps
16	907038	6	Cover plate
17	Bolt M8 x 30	3	Hex-head bolt
18	Washer A25	2	Washer
19	351012	1	Cylinder 100-40 x 400 cpl
20	351007	1	Cylinder $\varnothing 70/40 \times 600/1157$
Not illustrated			
	G-500154 (Additional)		Stone box side welded



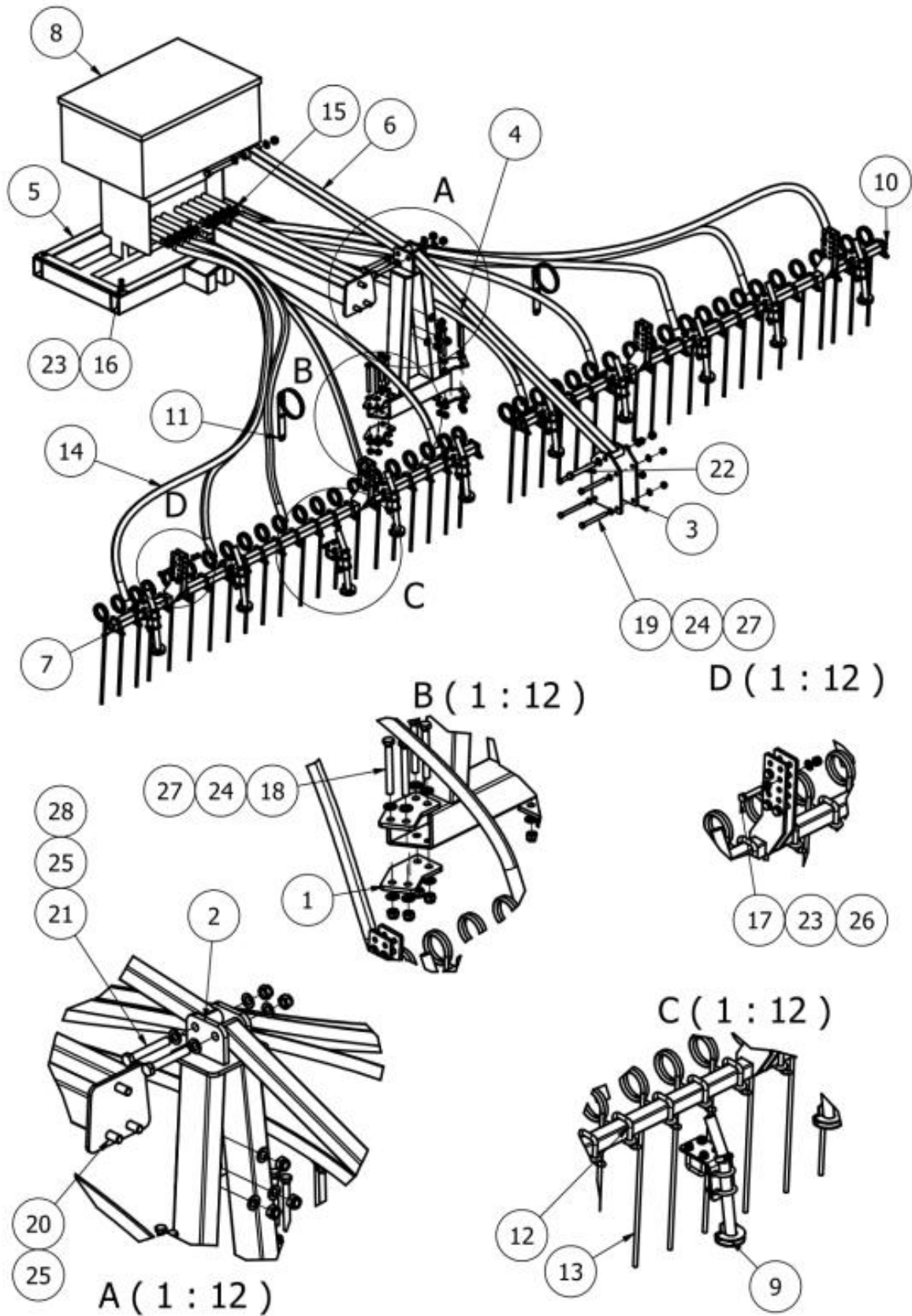
POS:	Art. no:	Qty	Description:
21	971350	1	Tow bar rear welded
22	971352	1	Cradle new w/base plates
23	971260	1	Tow bar front welded
24	971364	1	Tow point welded
25	971367	1	Parking leg welded
26	G-500110	1	Hose bracket 1
27	G-500109	1	Hose bracket 2
15	907037	12	Clamps
16	907038	6	Cover plate
30	970049	1	Bolt D-16
6	G-010702	3	Ring splint Ø6 x 45 mm
32	970032	1	Plug
17	Bolt M8 x 30	3	Hex-head bolt
34	Bolt M8 x 45	1	Hex-head bolt
35	Bolt M8 x 75	1	Hex-head bolt
36	Bolt M10 x 130	4	Hex-head bolt
37	Bolt M16 x 40	4	Hex-head bolt
38	Bolt M20 x 60	5	Hex-head bolt
39	Bolt M20 x 150	2	Hex-head bolt
40	Washer A10,5	8	Washer
41	Washer A17	8	Washer
13	Washer A21	14	Washer
43	M8 Nut	2	Hex Nut
44	M10 Nut	4	Hex Nut
45	M16 Nut	4	Hex Nut
46	M20 Nut	7	Hex Nut

5.2 Spare parts Spring planer



POS:	Art. no:	Qty	Description:
1	971510	1	Main arm
2	130154	1	Main arm w/scale part
3	971531	1	Cylinder bracket welded
4	127125	1	Parallel frame welded R
5	127167	1	Tine pipe 540 R welded
6	127130	2	Adjusting rod cpl
7	351004	1	Cylinder 32-50-200
8	350463	12	Tine bracket GRS
9	350462	12	Post-harrow tine GRS CR
10	971546	12	Wear steel GRS
11	303130	6	Clamp 101 x 180 M16
12	010322	2	Bolt Ø30 L106
13	010321	2	Bolt Ø6 D20 L83
14	971560	4	Bolt for attaching the harrow plank
15	010703	4	Spindle Ø4,5 x 3mm
16	G-010702	4	Ring splint Ø6 x 45 mm
17	010700	2	Ring splint Ø11 x 45 mm
18	907038	1	Cover plate
19	907037	1	Clamps
20	010329	2	Bolt Ø25 x 70mm w/hole
21	Bolt M8 x 30	2	Hex-head bolt
22	Bolt M12 x 40	24	Hex-head bolt
23	Bolt M12 x 110	12	Hex-head bolt
24	Washer A13	72	Washer
25	Washer A16	12	Spring washer
26	Washer A17	12	Washer
27	Washer A21	6	Washer
28	Washer A27	2	Washer
29	Washer A31	2	Washer
30	M12 nut	36	Hex Nut
31	M16 nut	12	Hex Nut

5.3 Spare parts Seed Roller



POS:	Art. no:	Qty	Description:
1	G-500013	2	Tower mounting plate
2	G-500018	1	Welded seed hopper tower
3	G-500019	2	Mounting plate
4	G-500023	1	Inclined bracekts front welded
5	G-500031	1	Frame seed box welded
6	G-500035	1	Inclined bracket rear welded
7	G-500078	1	Seeding pipe welded 540 R
8	G-500094	1	Seeding box
9	G-500100	10	Seed head mounted
10	G-500101	1	Seeding pipe welded 540 L
11	G-500121	2	Hose routing welded
12	140145	21	Mounting bracket for tine
13	140146	21	Tine for post-harrow
14	10205	1	MONOFLEX ECO SAF LE Ø30 mm
15	190181	20	Hose clamp (25-40 mm/12mm)
16	Bolt M12 x 30	4	Hex-head Bolt
17	Bolt M12 x 60	12	Hex-head Bolt
18	Bolt M16 x 140	8	Hex-head Bolt
19	Bolt M16 x 160	4	Hex-head Bolt
20	Bolt M20 x 50	3	Hex-head Bolt
21	Bolt M20 x 130	2	Hex-head Bolt
22	Bolt M20 x 160	2	Hex-head Bolt
23	Washer A13	32	Washer
24	Washer A17	24	Washer
25	Washer A21	14	Washer
26	M12 nut	16	Hex Nut
27	M16 nut	12	Hex Nut
28	M20 nut	7	Hex Nut

6 USER TIPS

6.1 Drum with Cambridge Rings

- Rolling should be done after sowing on dry surfaces.
- Assess the field to be rolled and, if possible, plan the driving pattern to avoid excessive overlap and driving on already rolled surfaces.
- To avoid tire tracks from the tractor, twin wheels should be used at the back.
- Choose a speed that ensures smooth progress, as this makes the job easier. However, adjust the speed based on conditions.
- Be aware of larger stones. Large stones can damage the rings if the speed is not reduced or if the stones are not removed.

6.2 Drum with CrossKill rings and/or spring planer

- A drum with CrossKill rings and a spring planer should be used directly on plowed soil to level and create a seedbed.
- Drive at a 45-degree angle to the plow furrows for optimal filling. This also applies especially to headlands.
- Plan your driving to avoid excessive overlap, which can cause soil compaction.
- Adjust the angle of the spring planer so that it consistently pulls soil to fill in gaps. The more the angle is increased, the more soil will be moved.
- Choose a speed that ensures smooth progress, making the task easier. Adjust the speed according to the conditions.
- For the CrossKill rings to be effective, the machine needs to maintain a certain forward speed, so the soil is flung around the rings.
- If driving on hard-packed stone, always reverse slightly and lift the machine before continuing. This is to prevent deformation and damage.
- Be aware of larger stones. Large stones can damage the rings if the speed is not reduced or if the stones are not removed.

7 MAINTENANCE

7.1 Retightening

- After a few hours of use, all screw connections should be checked and retightened where necessary. This should then be checked regularly.

7.2 General Maintenance

- If repairs are to be made, always ensure that the roller is either in working or transport position with no pressure on the hydraulic hoses. Also, make sure to properly support the machine before starting work.

7.3 Lubrication Points

- The foot and/or flange bearings should be lubricated daily during use.

7.4 Paint Code

- The paint color codes are orange RAL2004 and matte black 9005.

8 WARRANTY TERMS

8.1 Warranty

Underhaug AS guarantees that the product, including all parts, is manufactured in accordance with the applicable specifications and is free from material or manufacturing defects for a period of 12 months from the date of sale. The sales date is the invoice date. The receipt for the paid invoice serves as the warranty proof.

8.2 Valid Warranty

For a warranty to be valid, the following conditions must be met:

- The product must be set up and used in accordance with the instructions and warnings provided by the manufacturer or dealer.
- Warranty claims must be made in writing to the dealer or manufacturer immediately after the defect occurs and within the warranty period.
- Written and/or photographic documentation must be submitted regarding the defect, including details about the product's model designation/serial number/year of manufacture.

Once a warranty claim is approved, a time and location for the repair will be agreed upon, and the necessary parts will be sent to the dealer. The cost for repairing defects covered under the warranty will be defined by the manufacturer.

8.3 What a Valid Warranty Covers

- The warranty covers the rectification of faults, defects, or issues with the product or its components.
- The warranty covers defects due to material failure, production errors, assembly mistakes, or secondary faults caused by inadequate testing and control performed by the manufacturer.
- The warranty covers new parts delivered free of charge under regular shipping conditions to the dealer. If parts are required more urgently, the additional cost must be covered by the customer.

8.4 Invalid Warranty

- The warranty is void if defects or damages to the product occur due to improper use or failure to follow the instructions in the user manual.
- The warranty is void if the product is used for purposes other than those described.
- The warranty is void if non-original spare parts are used or if the prescribed maintenance of the product is not followed. Documentation of performed maintenance may be required.

8.5 What an Invalid Warranty Does Not Cover

- The warranty does not cover financial losses resulting from downtime.
- The warranty does not cover consequential damages due to improper use.
- The warranty does not cover normal wear and tear.
- The warranty does not cover transportation of the product between the customer and the dealer for repairs.
- The warranty does not cover travel, accommodation, or meal costs for service personnel. The product must be transported to the nearest dealer, or the customer must cover travel, accommodation, and meal costs for service personnel if the warranty work is performed at the product's location.

WWW.UNDERHAUG.NO

PRODUCER:

Underhaug AS
4365 Nærbø
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