Operators Manual

Ibex Power Harrows
Model: TX40 and TS52

Ibex TX40 Power Harrow
with Mesh Roller &
Leveling blade

2022-11.1

ibexequipment.com
833-888-IBEX

PREFACE

This manual is an integral part of the machine.

It must always accompany the machine and be kept within reach of the operator.
The enclosures mentioned are on integral part of this manual.

The purpose of this manual.

This manual gives information for the correct and safe use of the machine.
The owner must read this manual carefully before work with the machine.

Responsibility of the owner

The owner is responsible for accidents or damages caused to people or things due to negligence in following the instructions in this manual.

Assistance in using this manual

Explanations: contact the dealer.
Request for additional copies of the manual: in case of loss or wear and tear, or in case one wants the manual in a different language, the customer should ask the dealer or manufacturer.

Pay attention to the warning signals

 . <**Danger**>: indicates a situation that is potentially dangerous which, if not avoided, will cause death or serious damage.

 . <**Warning**>: indicates a situation that is potentially dangerous which, if not avoided, will cause death or serious damage.

 . <**Caution**>: indicates a situation that is potentially dangerous which, if not avoided, can cause minor to moderate damage or it indicates to be careful about an unsafe procedure.

<**Important**>: indicates instructions that must be followed precisely in order to avoid damage to the product, process or environment.

<**Note**>: indicates supplementary information.

DESCRIPTION

FUNCTION OF USE

The machine, thanks to the large range of types models and versions all configurable through many available variants according to specific requirement, carries out all the function related with tools rotation in various work environment (open field, vineyards, orchards, flower gardens, parks, vegetable gardens), in all type of ground whatever its composition (sandy soil, medium mixture, clay) and consistency (crumbly, hard, semi-plastic) may be.
The use of a technical constructive concept trended to the search of high performances, reduction of troubles and durability, improves the power/consumption ratio of the tractor thanks to the elasticity of the machine frame, to the tools shape and to many original technical solutions.

PERFORMANCES

The machine is connected to the tractor by a 3° point hitch which gives a movement of translation and a cardan shaft connected to the PTO which gives a movement of translation to the tools carrier.
The working width is fix and it is determined by the choice of the machine type.
The working depth is adjustable by a rear roller.
The working area is fix.

PERFORMANCE LIMITS

- Maximum forwarding speed: 5 km/h.
- Speeds higher than the maximum can compromise the condition of the machine, the quality of the work and the safety of the operator.
- Maximum power applicable to the gear box: from 13 to 59 kW ± 5% at 540 g/min depending from the models.
- Higher power than one indicated, can damage irreparably the transmission gear box; especially during heavy works.
- Maximum working depth: from 180 to 210 mm depending from the model.

STANDARD FEATURES

- **Shear bolt cardan shaft.**

VARIANTS & ACCESSORIES

- **Wire roller.**
- **Cage roller.**
- **Spiked roller.**
- **Levelling blade.**
- **Seeder.**

CHARACTERISTICS FOR MODEL

Model	Type	Power		Working width		Weight		Maximum working depth		Total width		N° of tools	
		HP	KW	cm.	inch	Kg.	lbs.	cm.	inch	cm.	inch	n° rotors	n° teeth
ROTEX-L	80	12-25	13-26	88	35	127	280	16	7	96	38	5	10
	104	12-25	15-30	104	41	145	320	16	7	112	44	6	12
	120	12-25	18-33	120	48	160	353	16	7	128	51	7	14
	136	12-25	22-38	136	54	170	375	16	7	144	57	8	16

GENERAL REGULATIONS

- Only work in daylight.
- To prevent damage due to lunch of objects or parts of blades, before to start job be sure that any persons or animals should be in the radius of 50 meters from the machine.
- Wear long pants and heavy shoes.
- The protections are integral part of the machine: always work with the protections.
- Make sure that the 4 wheels of all components be adjusted to the same cutting height.
- Pay attention to the soil: make sure that are not stones, sticks, iron wires, etc…
- Pay attention using the machine on slopes: proceed to the maximum slope and never work in slanting direction.
- Before leaving the driver's seat, turn off the engine and disengage the transmission engine-shaft.
- Check immediately the machine if it touches foreign objects.
- Check immediately the machine if there are unusual strong vibrations.
- Change quickly defective parts.

SAFETY RESTRICTIONS

Children and people who are not familiar with these instructions must not be permitted to use the machine.
Local regulations can restrict the use of the machine in accordance to the age.

SAFETY SIGNS ON THE MACHINE

In this section, the safety signs on the machine are reproduced and explained.

1. Read the operator manual.
2. Disconnect the tractor key before maintenance and repair operations.
3. Stay at safety distance from PTO shaft.
4. Danger of flying objects. Stay at safety distance.
5. Danger. Stay at safety distance from blades.
6. Danger. Don't climb on the machine

The safety signs on the machine must always be legible.

In case of damage, the labels of the signs must be replaced.
In the case of machine replacement parts that have safety signs, the signs must be replaced.

Supplying of new safety labels and the application procedure

Contact your dealer to receive new safety labels with instructions for application.

BEFORE BEGINNING WORK

a) Connect the machine to the tractor as follows :

1. Insert the lifting arms of the tractor in the lower attachment points of the machine, lock by safety pin.
2. Connect the tractor linkage to the 3° point hitch of the machine (triangle vertex), insert the pin and lock with safety pin.

b) Check the gearbox and transmission oil level.

c) With the machine raised, go to the working area.

d) Connect the tractor PTO to the machine PTO.

e) Check that PTO chain is locked to prevent the protection sheet of PTO rotating.

BEGINNING WORK

a) Keep people and animals at least 65 feet radius all around the machine.

b) Pull down the machine until the hoes touch the ground.

c) Connect PTO power and gradually bring it to 540 r.p.m...

d) Pull down completely the machine and start to work.

AT THE END OF WORK

a) Stop the tractor.

b) Raise the machine until the hoes goes out from ground.

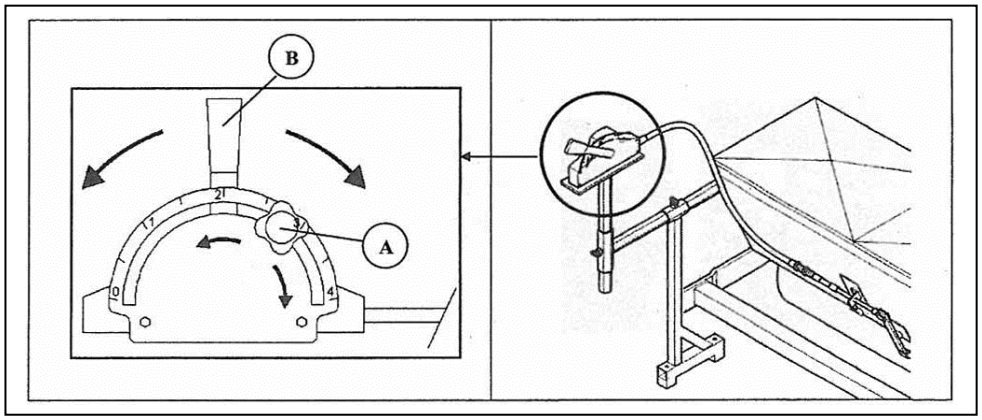
c) Disconnect PTO power.

d) Disconnect tractor PTO from machine PTO.

e) Park the PTO shaft on the provided support.

f) Raise completely the machine

SEEDER ADJUSTMENT



a. Fill the hopper with the seed then close the cover.

b. To set the quantity of seed that will fall. operate as follow :

1. Move the latch knob "A" in the desired position.

2. Rise the lock knob placed on the upper part of the lever "B" then turn the lever clock wise to increase the quantity of seed that will fall, turn counter clock wise do decrease. To increase or decrease the dosage, modify the position of the latch knob then move the lever.

To verify the weight (Kg) that will be sown (generally the correct quantity in kg per hectare is indicated on seed bag), follow the instructions below:

Model	Rear roll rotations	Factor K
88	**30**	**400**
104	**25**	**400**
120	**22**	**400**
136	**19**	**400**

Rise the seeder till the rear roll can turn free.
Place a towel under the seeder spreader to collect the seed.
Fill seed inside the seeder then turn the rear roll clockwise many times as showed on the above table, choose the line that corresponds to your seeder model.
Collect and weight the seed in the towel.
The seed weight multiplied per Factor K will be the total weight sowed per hectare.
In case of discrepancy respect to the desired weight, act on the control level to increase or decrease the seeder opening, then repeat weight verification.

MAINTENANCE INSTRUCTIONS

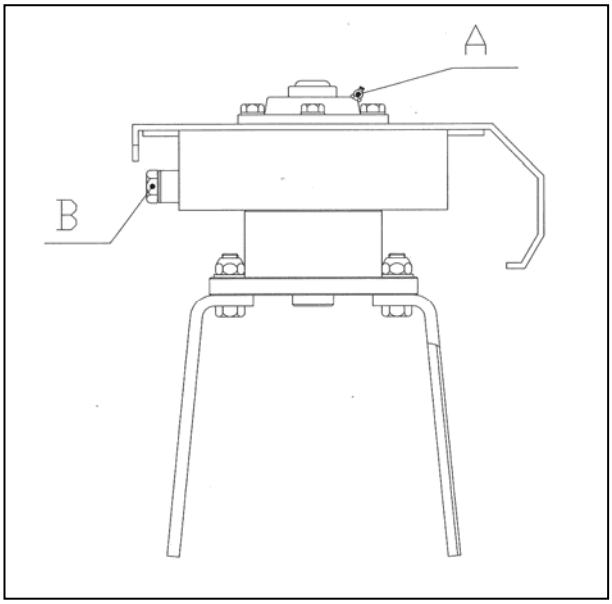
On diagram "A" the maintenances are indicated with their terms to effect on the machine.
Not follow the scheduled terms can compromise the functionality of the machine and in this case the warranty is not applicable.

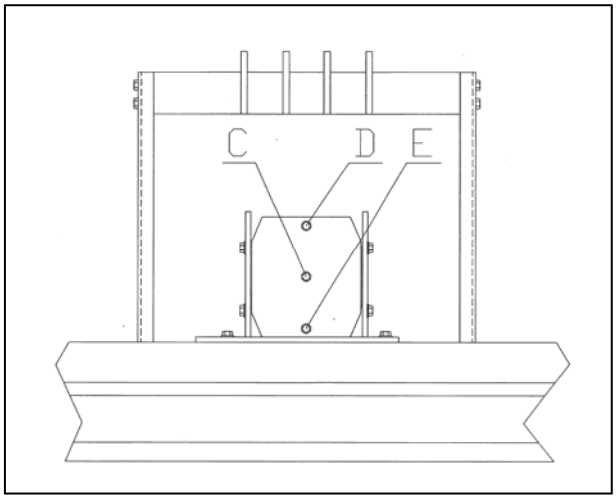
DIAGRAM "A" SCHEDULED MAINTENANCE

	FIRST START	AFTER 10 HOURS WORK	EVERY 30 H.	EVERY 500 H.	END OF SEASON	BEGIN WROK	END WORK
MACHINE	**Greasing**	**Greasing**	**Greasing**		**Cleaning Greasing**		**Cleaning**
GEARBOX	**Oil level**	**Fill oil**	**Fill oil**	**Oil replacement**			
TRANSMISSION	**Oil level**	**Fill oil**	**Oil level**	**Oil replacemnet**			
SCREWS		**Locking**	**Locking**				
TOOLS			**Check**		**Check**	**Check**	**Check**

1. GREASING

At the scheduled time on diagram “A”, grease point “A”.
Greasing point is equipped with greaser HYDRAULIC TYPE MODEL "A" UNI 7663.
To greasing use only MULTIFUNCTIONAL GREASE LITHIUM BASED Type NLGI 2.





2. OIL LEVEL – OIL REPLACEMENT IN GEARBOX

At the scheduled time on diagram “A” verify the level and replace oil in the gearbox.
To fill oil use only OIL SAE 140 EP.
Gearbox capacity: 1 L.

a) To check the oil level in gear box, operate as follows :

1. With the machine on level unscrew the level plug "C" and check that oil touches lower hole rim.
2. If the level it's ok screw and lock plug "C".
3. If the level it's low, unscrew plug "D" and fill oil.
4. When the level it's ok screw and lock plugs "C" and "D".

b) To replace oil in the gearbox, operate as follows:

1. With the machine on level unscrew the level plugs “C”, "D" and “E” and drain completely oil.
2. Screw the plug “E”.
3. Fill new oil through the hole “D” up to oil touches lower hole rim “C”.
4. When the level is ok, screw the plugs “C” and “D”.

3. OIL LEVEL – OIL TRANSMISSION REPLACEMENT

At the scheduled time on diagram "A" check the level or replace oil in the transmission.
To fill oil use only OIL SAE 140 EP.
Tank capacity: from 3,0 L, 3,4 L, 3,8 L , 4,2 L depending from the model.

c) To check the oil in the transmission, operate as follows:

1. With the machine on level unscrew the plug "B" and check that oil touches lower hole rim.
2. If the level is ok, lock the plug "B".
3. If the level is low, fill oil.
4. When the level is ok, lock the plug “B”.

d) To replace oil in the transmission, operate as follows:

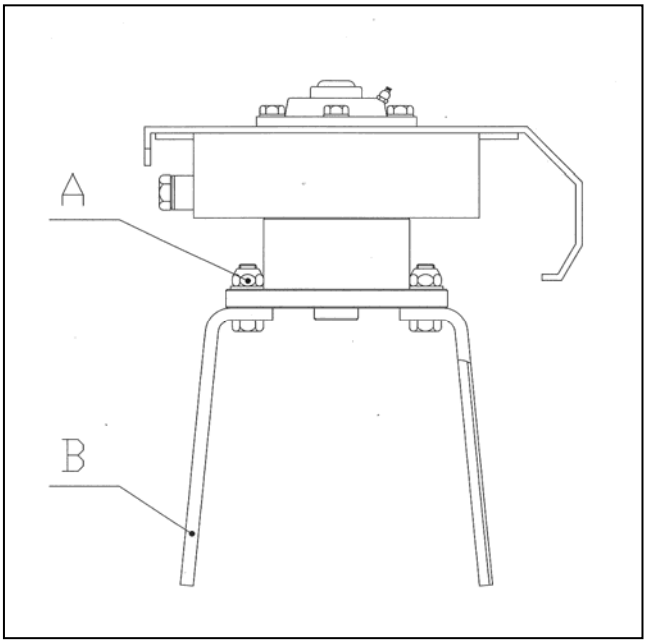
1. Unscrew the plug “B”, turn backward the machine and drain completely oil.
2. Introduce the new oil through the hole “B” up to oil touches lower hole rim.
3. When level is ok, lock the plug “B”.

4. TOOLS REPLACEMENT

a) To replace the tools, operate as follows:

1. Unscrews the two screws "A" which lock the tools to replace.
2. Take out the two screws and remove the tool “B”.
3. Place the new tool and the two screws “A”.
4. Lock the screws "A" with pneumatic wrench.
5. Repeat this operation for all the tools to replace.

ATTENTION: each rotor is equipped with a couple of right and left tools according to the position, don’t invert the right tools with the left ones.



PROBLEMS SOLVING

TROUBLES	CAUSES AND SOLUTIONS
Insufficient working depth	-Decrease the forwarding speed -Tools are not sharpened or damaged
Tools don't penetrate **Rotary harrow bounces on the round and vibrates**	-Broken or damaged tools -Check the tools assembling **-**Foreign objects between hoes - clean -Decrease the forwarding speed -Soil too dry and hard
Rotor compactness, obstruction	**-**Soil too wet -Reduce working depth -Increase number of revolutions of the rotor
Excessive tilling of the soil	-Increase forwarding speed - Decrease number of revolutions of the rotor
Poor tilling of the soil	**-** Decrease the forwarding speed -Increase number of revolutions of the rotor
Tools locking	**Stones wedged between the tools** -Stop the tractor PTO -Full rise the machine -Stop tractor engine then remove the key from the ignition -Disconnect the machine from PTO shaft -Remove the wedged stones -Connect the PTO shaft to the machine then start work

TRANSPORT

Except when working, moving the machine takes place when the machine is standing still and the transmission is disconnected.
<**Important**>: keep speed low avoiding holes and ground roughness.
<**Note**> when on the road, obey existing traffic laws. Exhibit the signal signs on the rear ends. Respect any local laws there may be.
<**Note**> Lock the lifting bars of the tractor with the chain and tightners. They must be parallel to the bars.

STORAGE

Store the machine in a dry place that isn't dusty.

INFORMATION ON DEMOLITION


At the end of its working life, the machine must be sent to be demolished and that can only be done by an authorized authority, in accordance with the national laws in force for the environment. Therefore it is necessary to get information from the qualified local authorities on the procedure to follow. The machine is mainly composed of: iron materials and paints.

WARRANTY

The machine is covered by the manufacturer warranty for a period of 24 months.
The warranty is not applicable when:

a) The maintenance work has not been done correctly.

b) The machine has been used out of its own service.

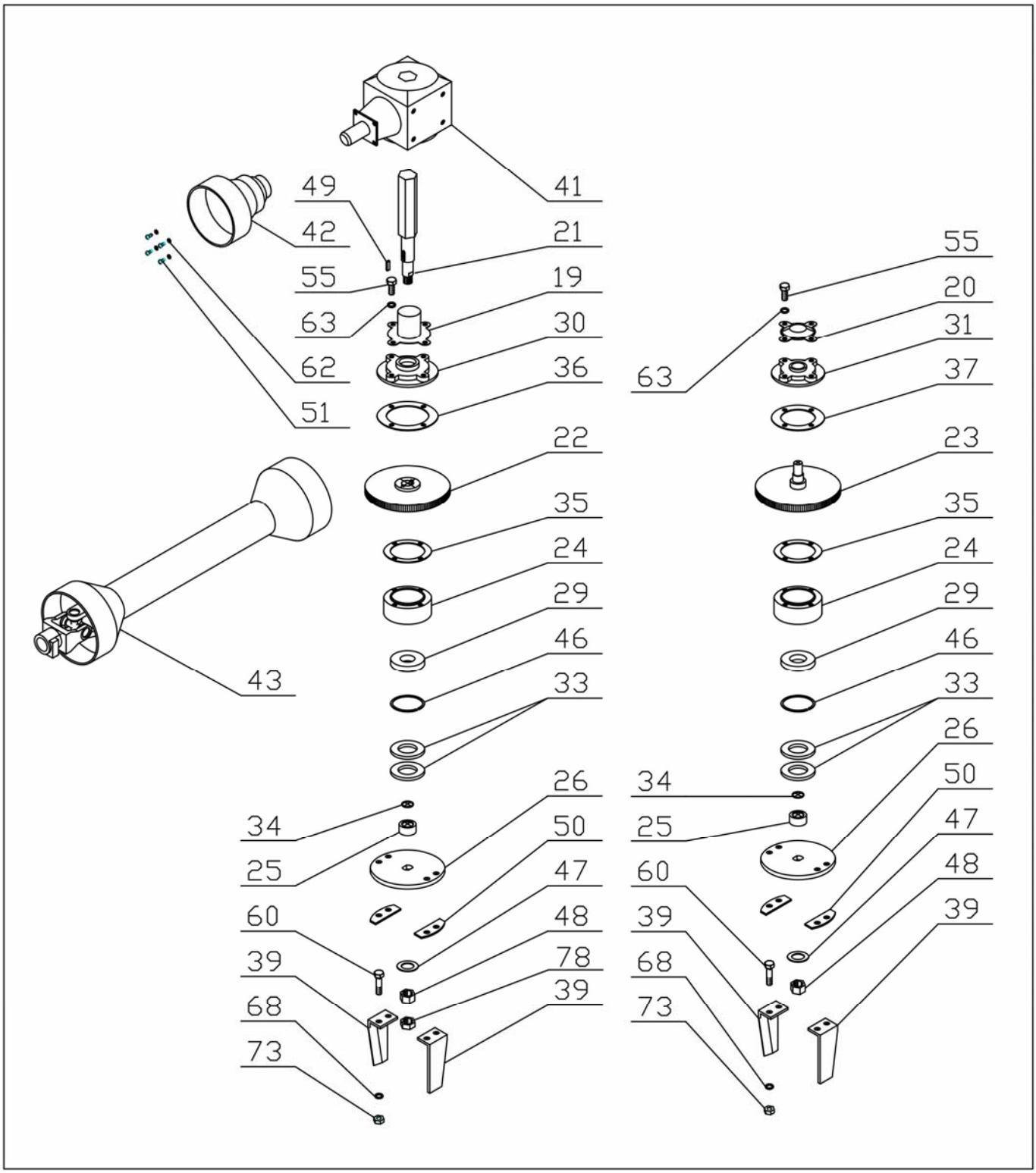
c) The machine has been transformed or modified without the manufacturer's written authorization.

WORK AND MAINTENANCE SHEET

Every user should register on this sheet the facts about the life of the machine (both work and maintenance), so as to attest its conditions.

DATE	WORKING HOURS	MAITENANCE	NOTE	USER

SPARE PART AND ACCESSORIES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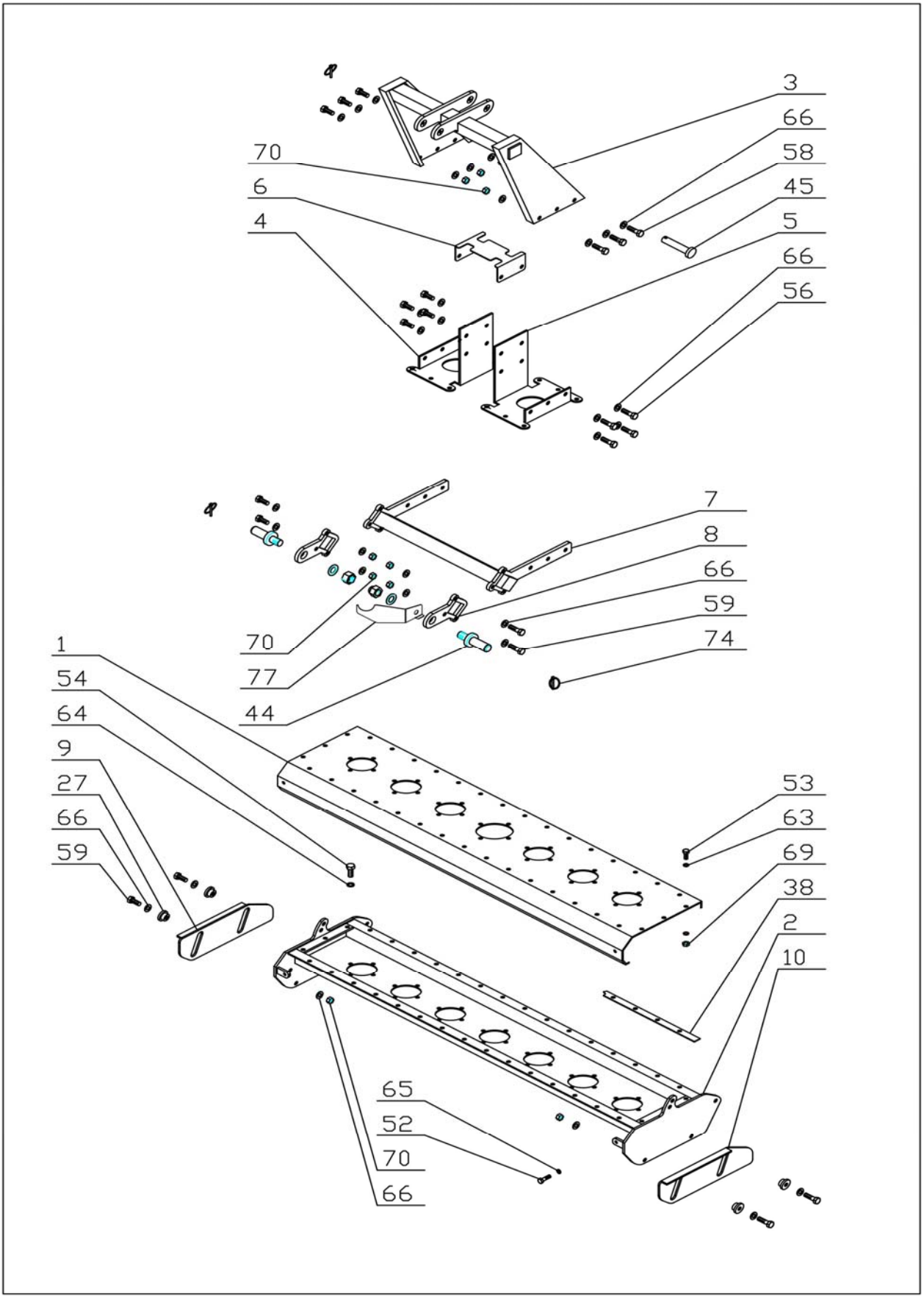
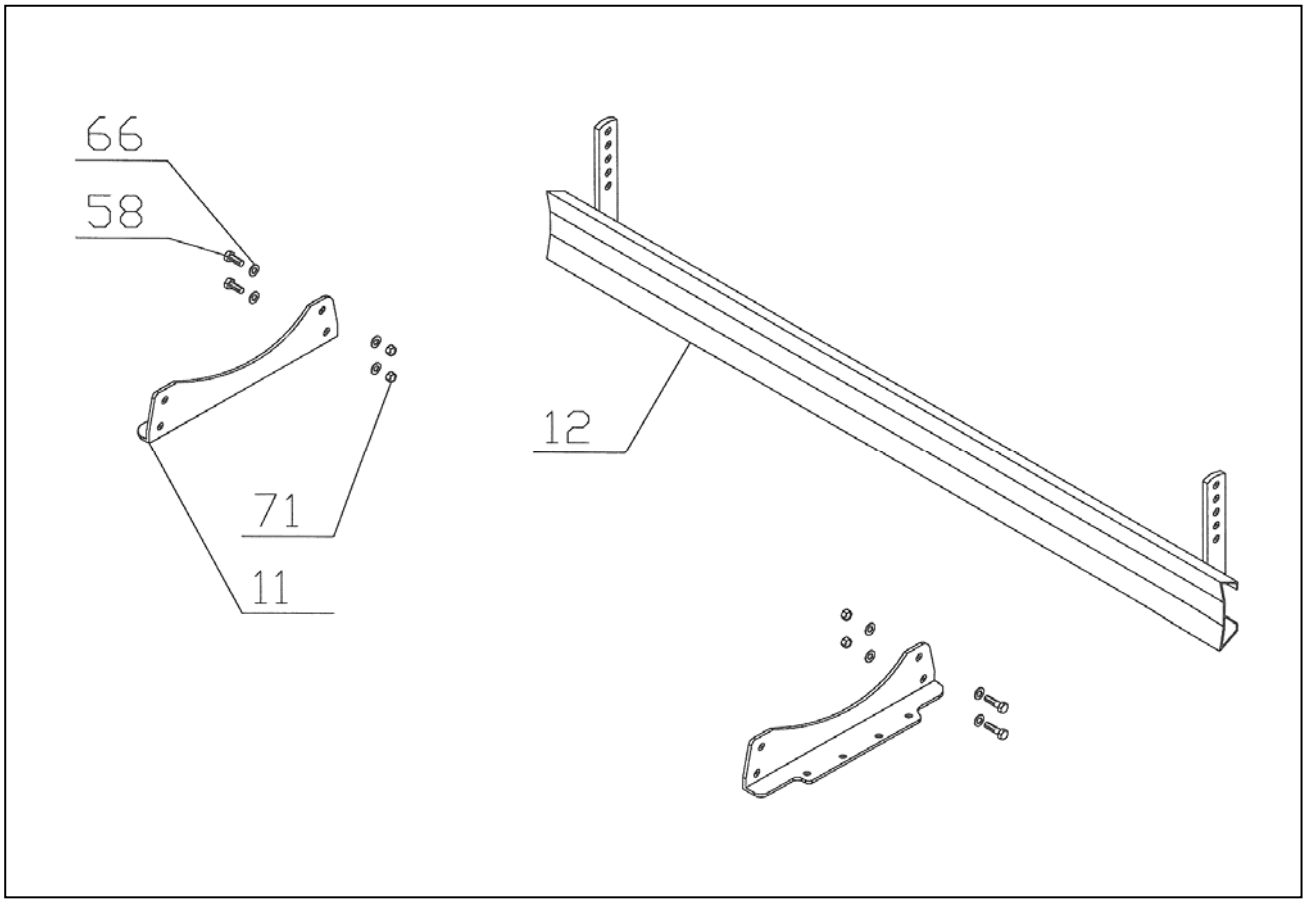
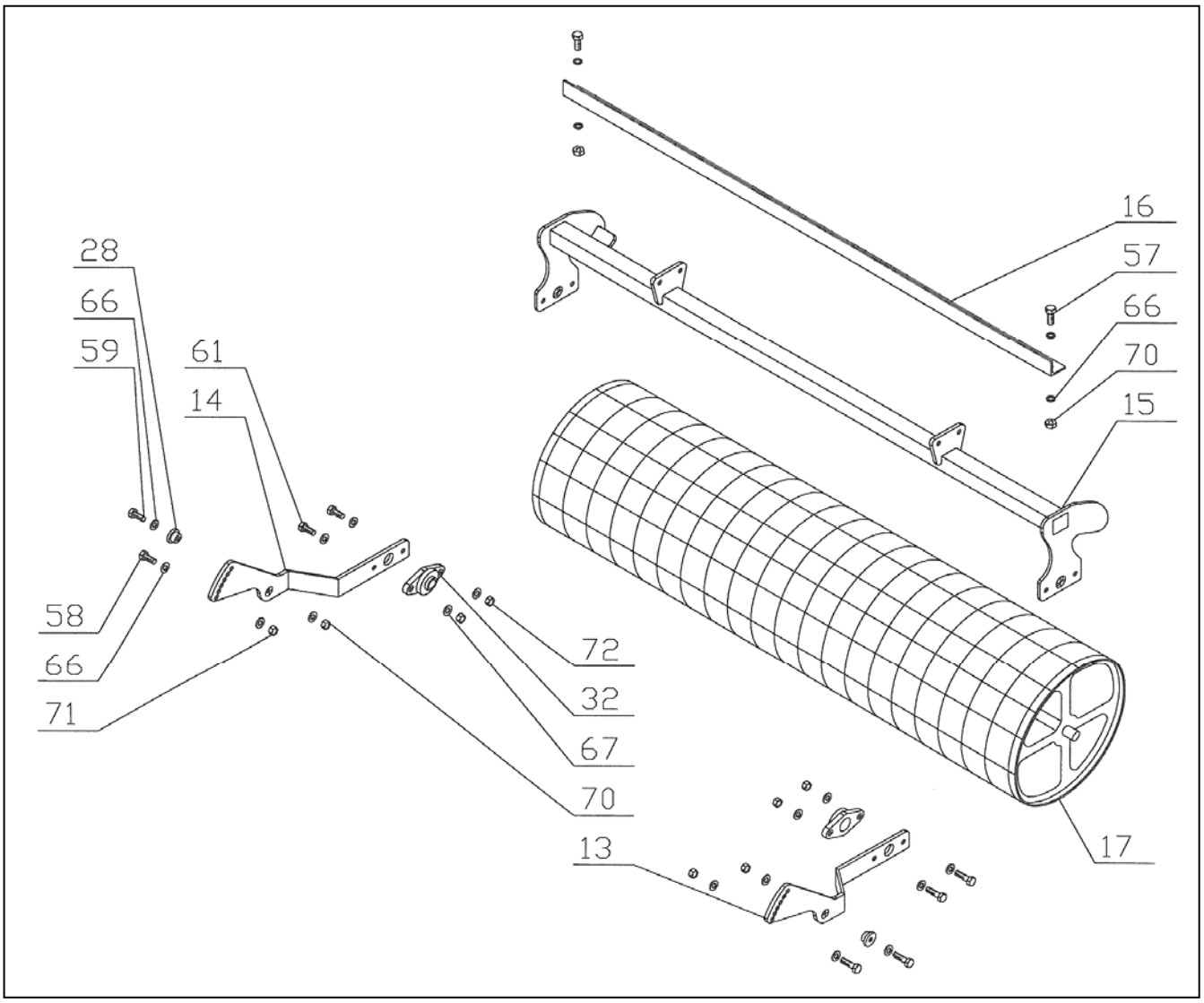
ROTEX-L SHEET



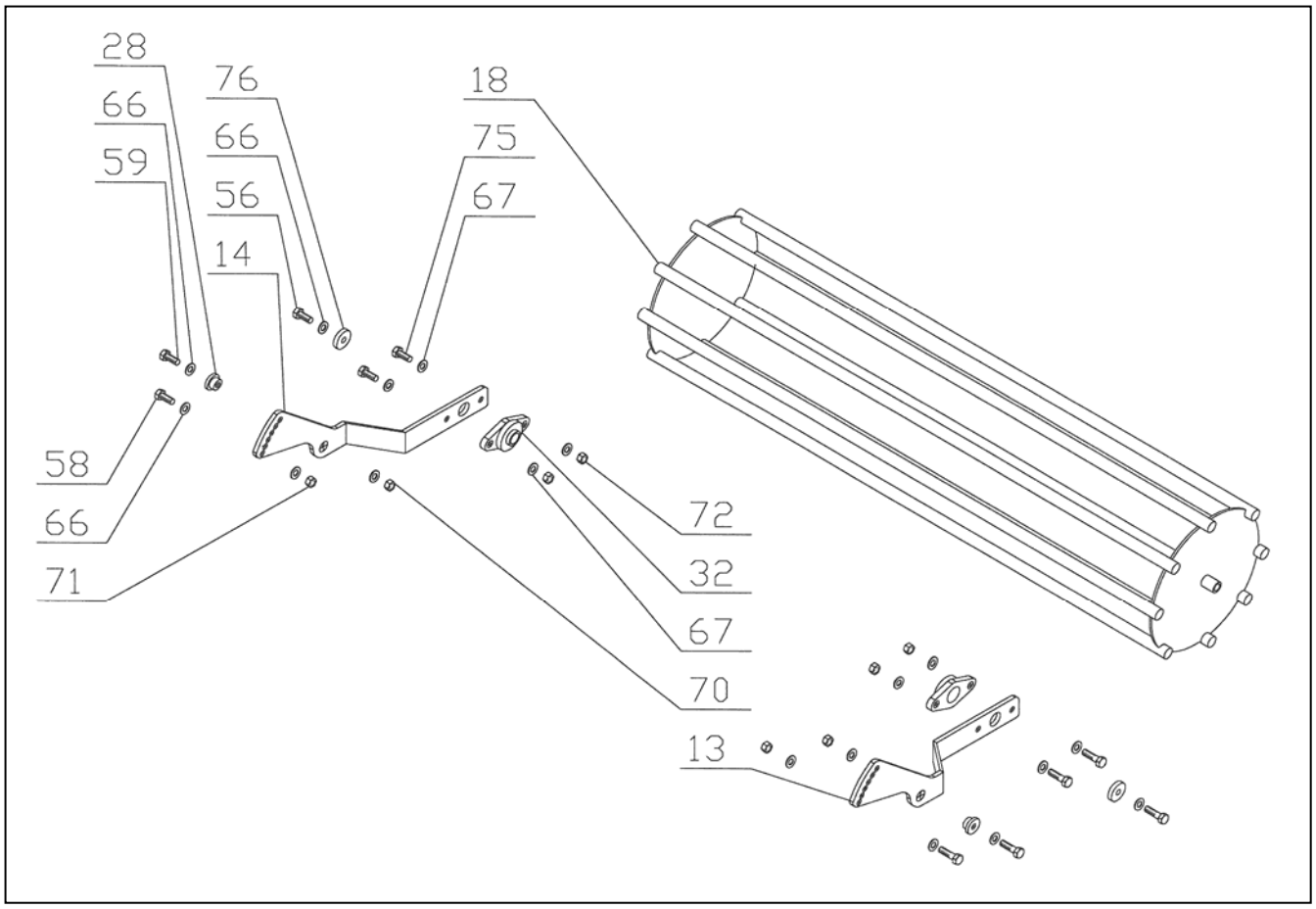
LEVELLING BLADE ROTEX-L



ROTEX-L WIRE ROLLER



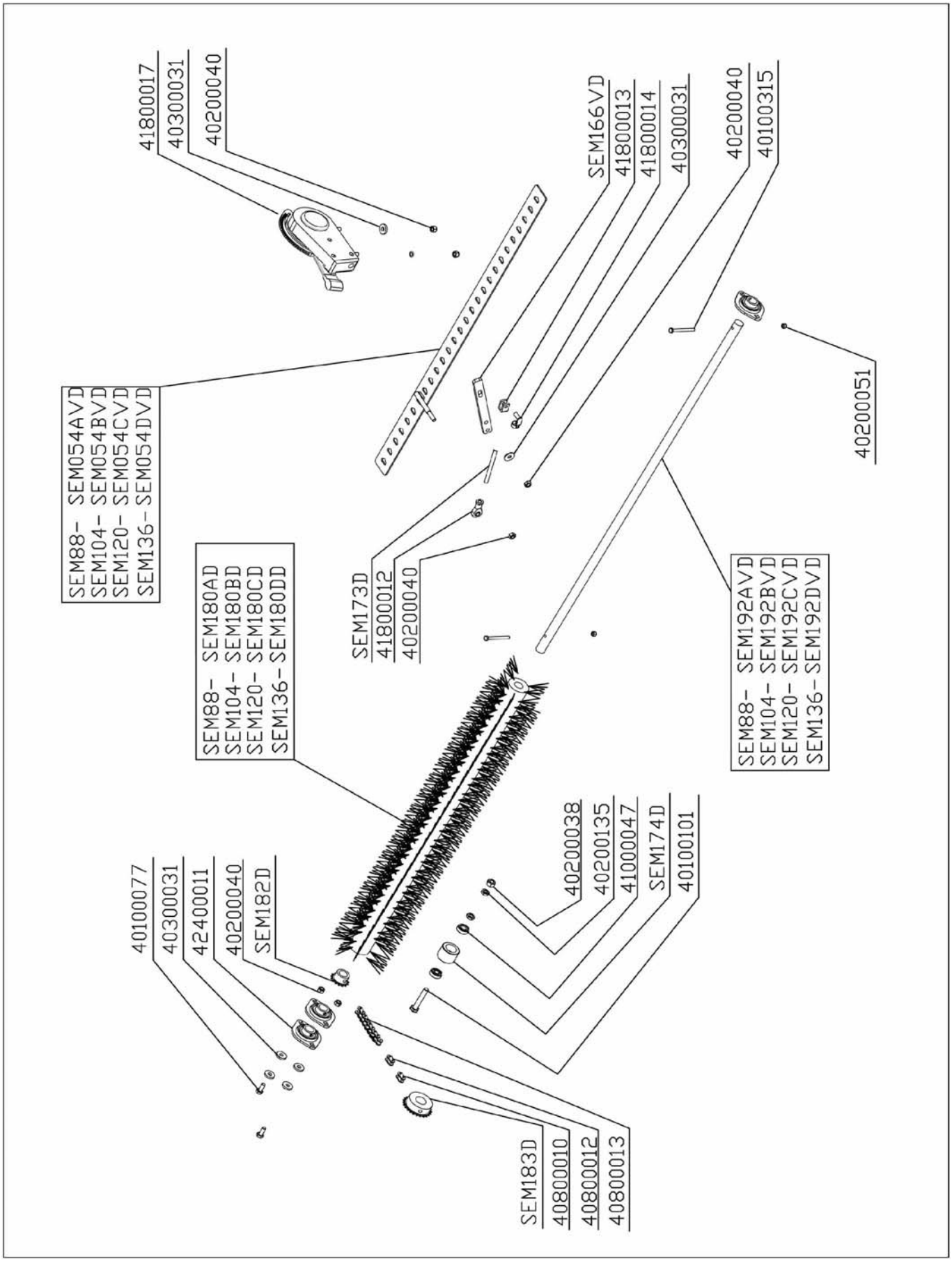
ROTEX-L CAGE ROLLER



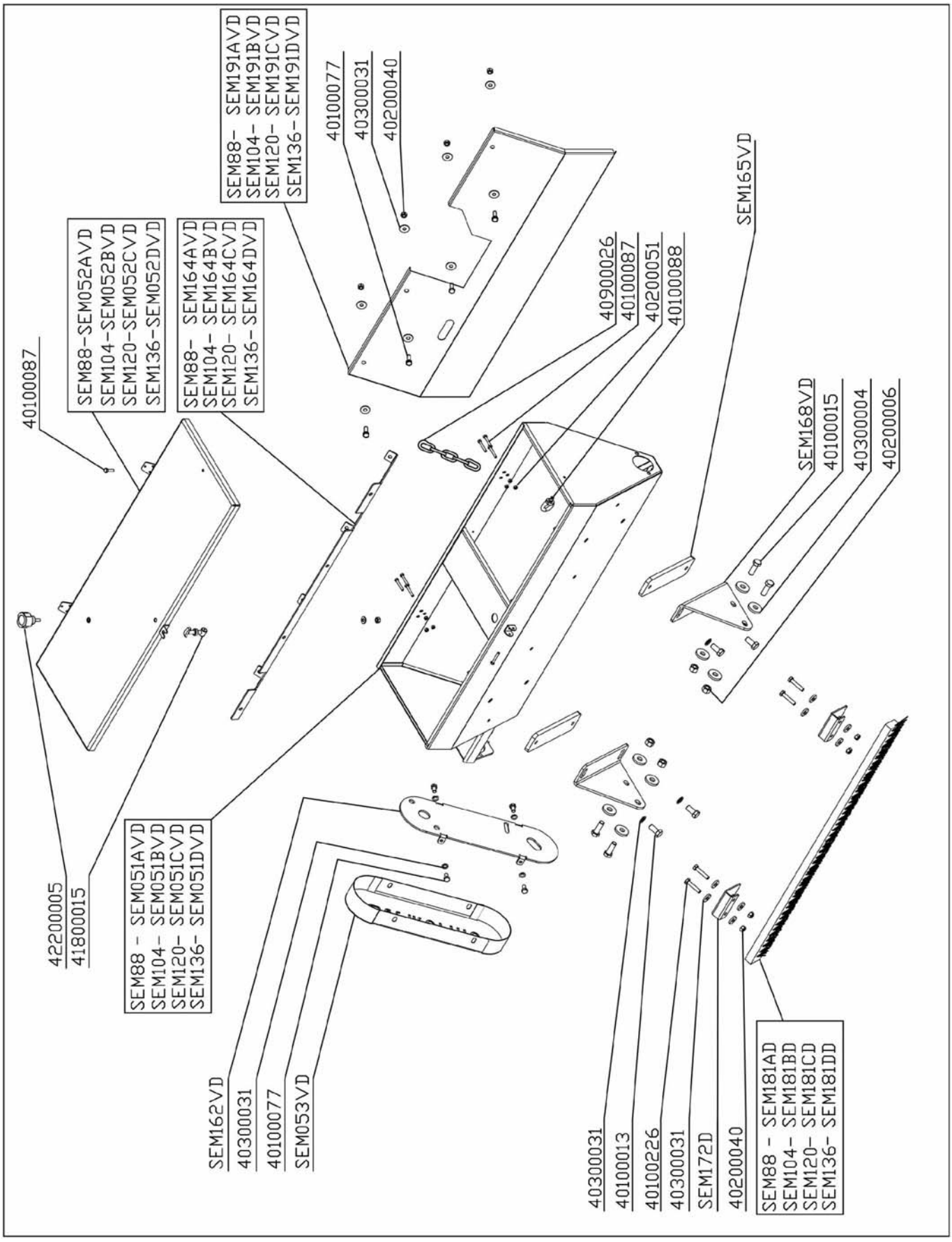
Pos	Code	Description	Quantity			
			88	104	120	136
1	ERP100AVD	COVER	1			
1	ERP100BVD	COVER		1		
1	ERP100CVD	COVER			1	
1	ERP100DVD	COVER				1
2	ERP101AVD	MAIN FRAME	1			
2	ERP101BVD	MAIN FRAME		1		
2	ERP101CVD	MAIN FRAME			1	
2	ERP101DVD	MAIN FRAME				1
3	ERP102VD	III° POINT HITCH	1	1	1	1
4	ERP506VD	RIGHT GEAR BOX SUPPORT	1	1	1	1
5	ERP507VD	LEFT GEAR BOX SUPPORT	1	1	1	1
6	ERP508VD	GEAR BOX COVER	1	1	1	1
7	ERP103VD	SUPPORT	1	1	1	1
8	ERP322VD	LOWER HITCH	2	2	2	2
9	ERP513VD	RIGHT TAIL BOARD	1	1	1	1
10	ERP514VD	LEFT TAIL BOARD	1	1	1	1
11	ERP518VD	BLADE SUPPORT	2	2	2	2
12	ERP107AVD	BLADE	1			
12	ARP107BVD	BLADE		1		
12	ERP107CVD	BLADE			1	
12	ERP107DVD	BLADE				1
13	ERP544VD	LEFT ROLL ARM	1			
13	ERP526VD	LEFT ROLL ARM		1		
13	ERP542VD	LEFT ROLL ARM			1	
13	ERP546VD	LEFT ROLL ARM				1
14	ERP543VD	RIGHT ROLL ARM	1			
14	ERP515VD	RIGHT ROLL ARM		1		
14	ERP541VD	RIGHT ROLL ARM			1	
14	ERP545VD	RIGHT ROLL ARM				1
15	ERP109AVD	SCRAPER SUPPORT	1			
15	ERP109BVD	SCRAPER SUPPORT		1		
15	ERP109CVD	SCRAPER SUPPORT			1	
15	ERP109DVD	SCRAPER SUPPORT				1
16	ERP537AVD	SCRAPER	1			
16	ERP537BVD	SCRAPER		1		
16	ERP537CVD	SCRAPER			1	
16	ERP537DVD	SCRAPER				1
17	ERP097AVD	WIRE ROLL	1			
17	ERP097BVD	WIRE ROLL		1		
17	ERP097CVD	WIRE ROLL			1	
17	ERP097DVD	WIRE ROLL				1
18	ERP098AVD	CAGE ROLL	1			
18	ERP098BVD	CAGE ROLL		1		
18	ERP098CVD	CAGE ROLL			1	
18	ERP098DVD	CAGE ROLL				1
19	ERP106VD	MIDDLE SUPPORT PROTECTION	1	1	1	1
20	ERP523VD	SIDE SUPPORT PROTECTION	4	5	6	7
21	ERP527D	MIDDLE SHAFT	1	1	1	1
22	ERP104SD	MIDDLE GEAR	1	1	1	1
23	ERP105SD	SIDE GEAR	4	5	6	7
24	ERP532VD	HUB	5	6	7	8
25	ERP529D	GEAR SPACER	5	6	7	8
26	ERP533VD	TOOLS HOLDER	5	6	7	8
27	SRM233ZD	TAIL BOAR BUSH	4	4	4	4
28	ERP328ZD	ROLL ARM BUSH	2	2	2	2

Pos	Code	Description	Quantity			
			88	104	120	136
29	41000065	BEARING 22205 CC	5	6	7	8
30	42400008	MIDDLE SUPPORT UCF 206	1	1	1	1
31	42400012	SIDE SUPPORT UCF 204	4	5	6	7
32	42400006	ROLL SUPPORT UCFL 205	2	2	2	2
33	41100037	SEAL 52x40x7	15	18	21	24
34	41200009	OR 3100	5	6	7	8
35	ERP539D	HUB SEAL	5	6	7	8
36	ERP166D	MIDDLE SUPPORT SEAL	1	1	1	1
37	ERP540D	SIDE SUPPORT SEAL	4	5	6	7
38	42500038	COVER SEAL	1			
38	42500039	COVER SEAL		1		
38	42500040	COVER SEAL			1	
38	42500041	COVER SEAL				1
39	ERP547D	TOOTH	10	12	14	16
41	42000001	GEAR BOX 9.259.871	1	1	1	1
42	41900005	GEAR BOX PROTECTION	1	1	1	1
43	42600019	PTO SHAFT IV° CAT. L=700	1	1	1	1
44	SRM220D	I° CATEGORY PIN	2	2	2	2
45	43700012	III° POINT PIN	1	1	1	1
46	40400025	SEEGER ø52 UNI 7437	5	6	7	8
47	40300069	WASHER ø40xø20,4x2,5 DIN 2093	5	6	7	8
48	40200140	NUT MB20 UNI 5588	5	6	7	8
49	40500001	KEY 8x7x35 UNI 6604	1	1	1	1
50	ERP521D	TOOTH SPACER	10	12	14	16
51	40100011	SCREW M8x15 UNI 5739	4	4	4	4
52	40100043	SCREW M10x25 UNI 5739	2	2	2	2
53	40100012	SCREW M10x30 UNI 5739	26	30	34	38
54	40100230	SCREW M10x30 UNI 5739 – 10.9	20	24	28	32
55	40100183	SCREW M10x55 UNI 5739	20	24	28	32
56	40100013	SCREW M12x25 UNI 5739	10	10	10	10
57	40100015	SCREW M12x35 UNI 5739	2	2	2	2
58	40100023	SCREW M12X40 UNI 5739	12	12	12	12
59	40100061	SCREW M12x45 UNI 5739	10	10	10	10
60	40100229	SCREW MB14x45 UNI 5740	20	24	24	32
61	40100145	SCREW M14x55 UNI 5739	4	4	4	4
62	40300031	WASHER ø 8 UNI 6593	4	4	4	4
63	40300003	WASHER ø 10 UNI 6592	72	84	96	108
64	40300066	WASHER CONTACT ø 10 UNI 7604	20	24	28	32
65	40300013	WASHER ø 10 UNI 6593	2	2	2	2
66	40300004	WASHER A ø 12 UNI 6592	62	62	62	62
67	40300009	WASHER ø 14 UNI 6592	8	8	8	8
68	40300064	WASHER CONTACT ø 14 UNI 7604	20	24	28	32
69	40200003	NUT M10 DIN 980	26	30	34	38
70	40200006	NUT M12 DIN 980	18	18	18	18
71	40200037	NUT M12 DIN 982	6	6	6	6
72	40200011	NUT M14 DIN 980	4	4	4	4
73	40200155	NUT MB14 DIN 980	20	24	24	32
74	41300001	SPRING PIN ø 10	2	2	2	2
75	40100158	SCREW M14x45 UNI 5739	4	4	4	4
76	ERP564VD	CAGE ROLL STOPPER	2	2	2	2
77	ERP373VD	BRACKET FOR ROTEX M CARDAN SHAFT	1	1	1	1
78	40200133	NUT M20X1.5 UNI 5589	5	6	7	8

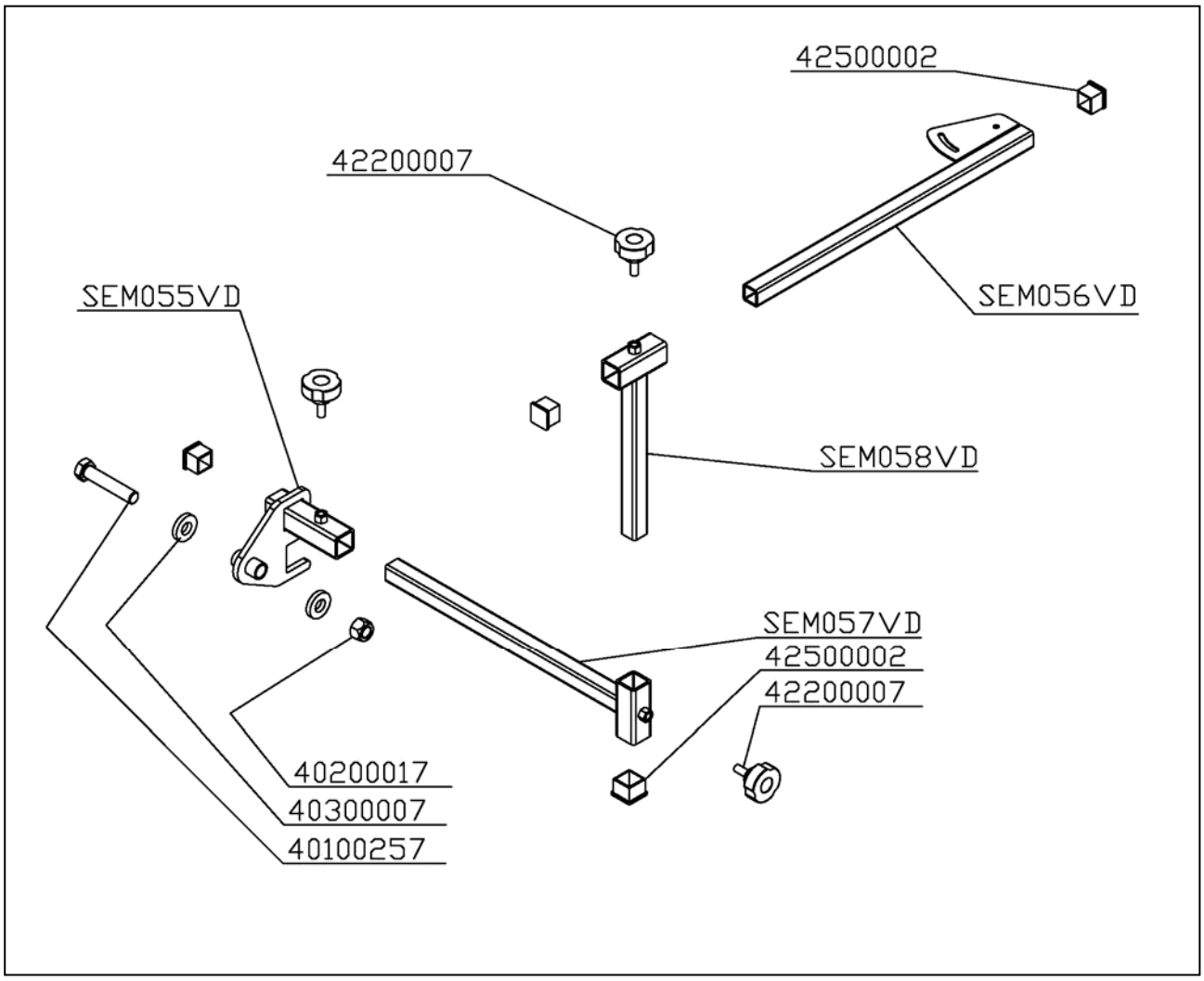
SEEDER GRASS - MECHANISM



SEEDER GRASS - SHEET



SEEDER GRASS - ATTACHMENT



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