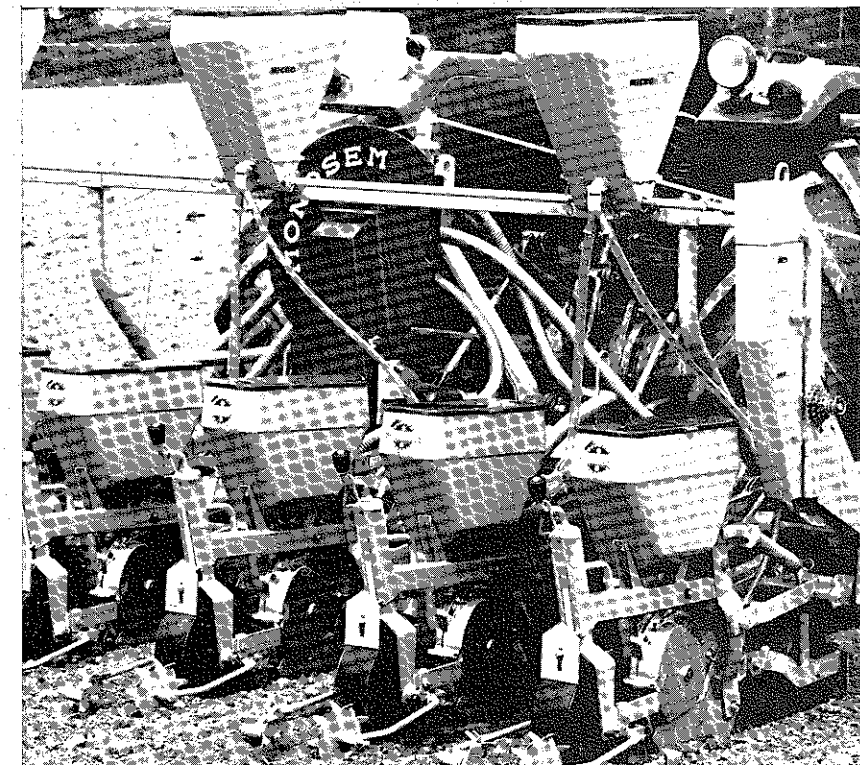
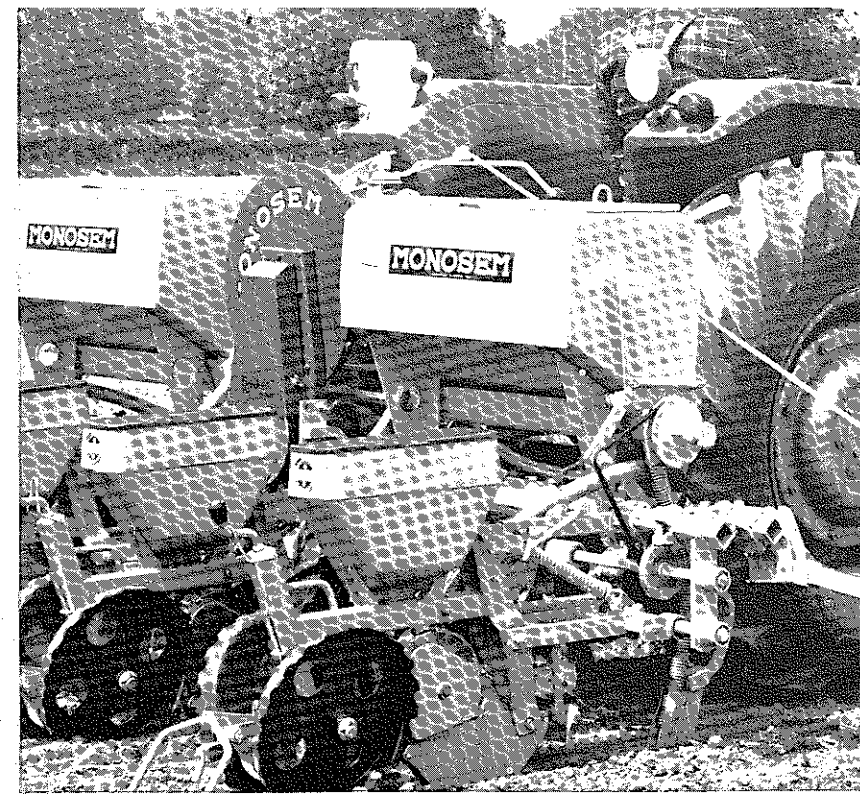
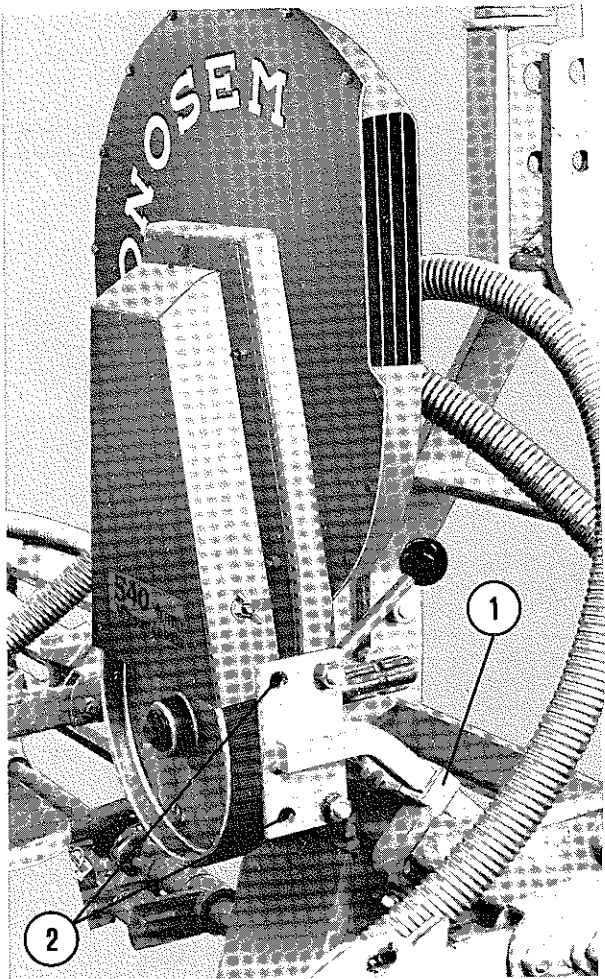
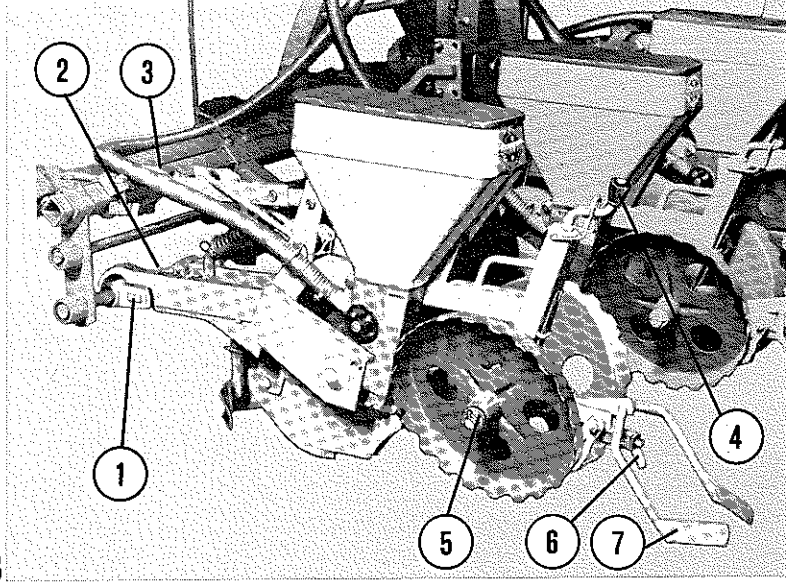


# PNEUMATIC **MONOSEM**

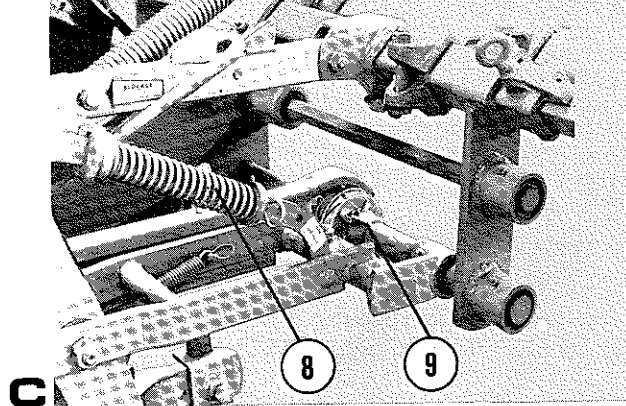




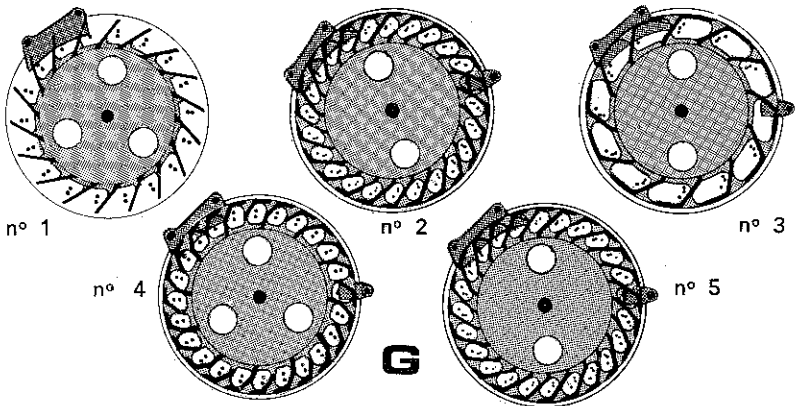
**A**



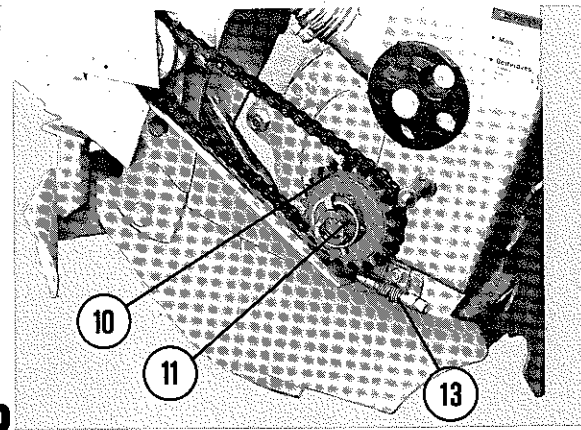
**B**



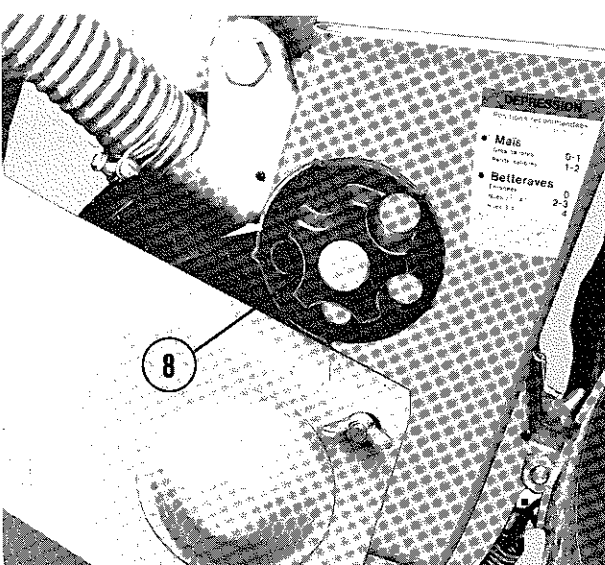
**C**



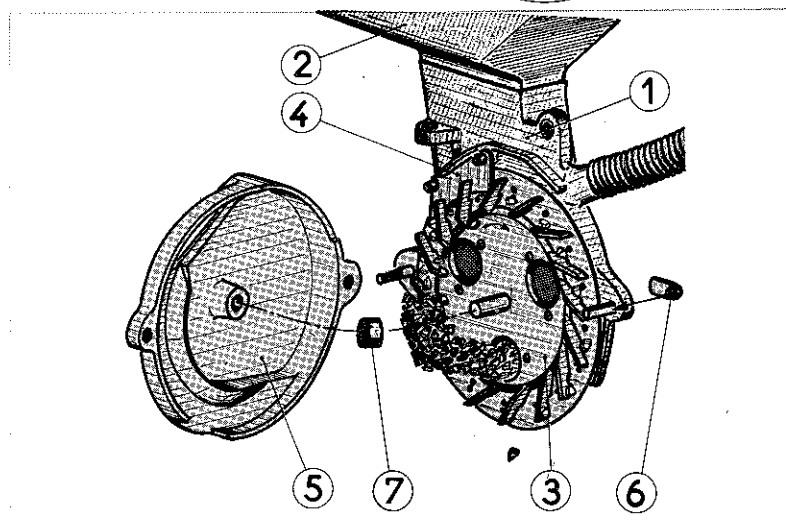
**G**



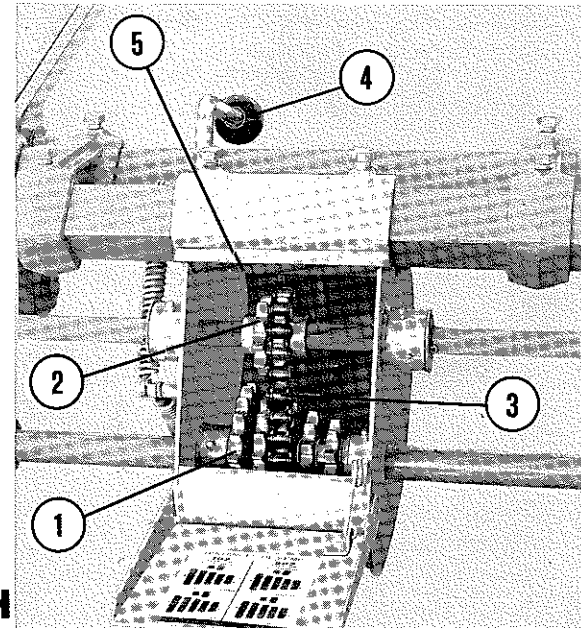
**D**



**F**



**E**



**H**

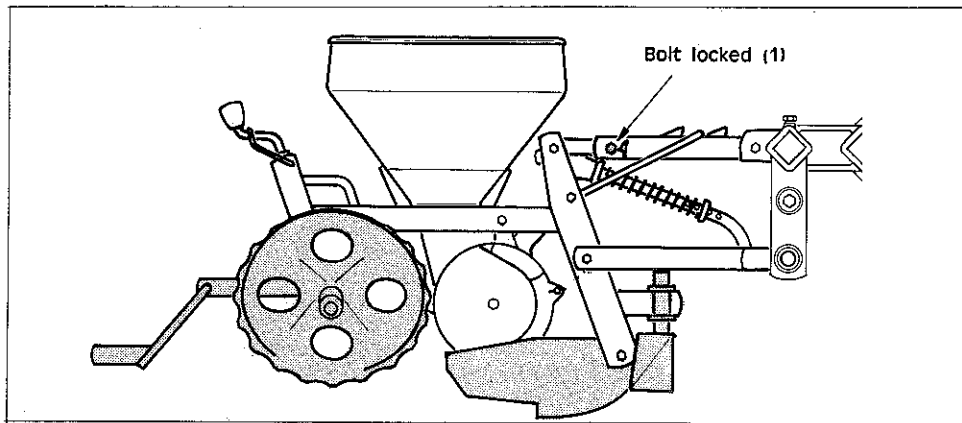
# PNEUMATIC MONOSEM

## DIFFERENT TYPES

The PNEUMATIC MONOSEM sowing machine comprises a chassis, a suction turbine and several sowing units with their distribution box.

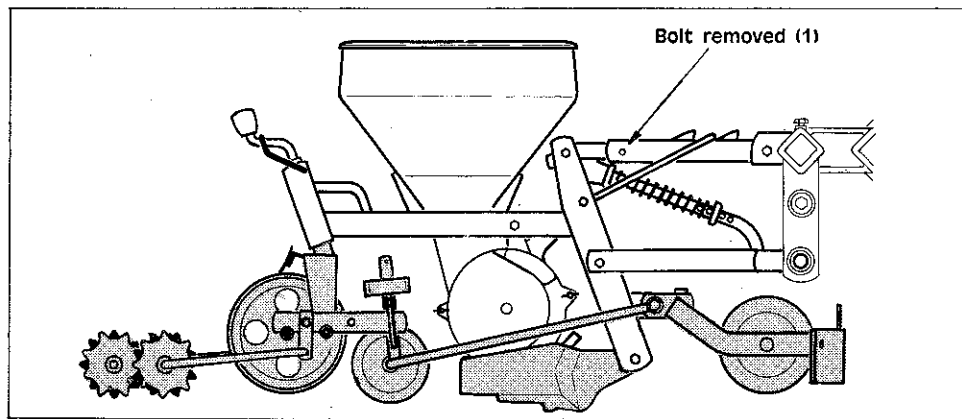
Depending on the seeds to be sown, 2 types of equipment are available :

### TYPE n° 1 for maize, sunflower seeds



Number of rows : 2 to 8  
 Standard spaces between rows : 50 to 80 cm  
 Standard spaces between seeds on the row : 10,5 to 26 cm  
 Working speed 4 to 6 km/h for spacing less than 15 cm  
 4 to 8 km/h for spacing greater than 15 cm

### TYPE n° 2 for sugar-beets, beans, sorghum



Number of rows : 2 to 12  
 Standard spaces between rows : from 45 to 50 cm  
 Standard spaces between seeds on the row : 7,5 to 19,5 cm  
 (from 4,8 cm on request)  
 Operating speed : 3,4 km/h for spacing less than 15 cm  
 : 4,5 km/h for spacing greater than 15 cm

## FITTING AND OPERATING INSTRUCTIONS

### • TURBINE (Fig. A)

When positioning it on the supports (1) and the holes (2) make sure that :

- during lifting, the universal joint neither touches the front square bar, nor the chassis support (to do this, insert the pin located on one of the pillars of this support)
- the length of the universal joint is correct ; if too long it would damage the turbine, if too short there would be too much play

Operation speed : 540 rpm upon tractor power take off

This turbine must be perfectly vertical when in operation : adjust 3 position linkage for this purpose.

### • SOWING UNITS (Fig. B.C. and D)

- adjustment of spaces between rows by the screws (2) and bolts (3) loosen sufficiently to move the handle
- adjustment of sowing depth by using the handle (6).
- adjustment of the space between the compressor wheels by using the rings (5) placed either inside or outside of the wheels.
- adjustment of compressor wheels' mud-scraper by using the handle (6)
- adjustment of the maize scrapers (7) by a crank similar to handle (6) however located between the wheels and not visible.
- adjustment of clod guard : it must clear the ground in front of the ploughshare without ploughing furrows
- adjustment of relief spring (8). By compressing the spring, weight is taken off the unit which prevents it from sinking into loose ground
- emptying of the seeds through the hatch (13)
- disengagement of 1 or more units by using the ring (11) which when turned over, with the notches to the outside, no longer drives the distributor.
- a safety system : each unit is fitted with a dog-clutch (9) this comes into operation becomes if the distributor jammed. In this case the unit must be shut off in order to find the fault.

### • SEED DISTRIBUTION BOX (Fig. E)

A distribution box includes a body (1) with : a hopper (2), distributor (3), selector (4) and if required an ejector (6), cover (5) and spacer ring (7).

#### TO DISMANTLE :

- place the unit in an upper, hooked position
- lower the ploughshare
- remove the cover (5) by loosening the wing nuts
- the distributor (3), selector (4), ejector (6) and ring (7) can then be carefully removed. When reassembling make sure to mount all components in the right order.

#### DISTRIBUTION ADJUSTMENT

The seeds are sucked up and held in the distributor's holes

When the suction is too much two seeds at a time are often taken in

If the suction is too weak not enough seeds are taken in

Suction power therefore has to be adjusted according to the size and weight of the seeds.

For this purpose, a numbered control wheel (8) (fig. F) is mounted on the distribution box.

When this wheel is set to 0 or 1 there is maximum suction, suitable for large seed sizes (maize, beans etc) and pelleted seeds.

When this wheel is set to 3 or 4 there is minimum suction, suitable for light seeds (beet).

Carry out this adjustment in conditions identical to normal operation with the turbine rotating at 540 rpm. With the machine running, correct selection can be checked by means of the cover control window.

## DISTRIBUTORS (Fig. G)

A specific type of seed selector disc assembly is available for each of the following types of seed :

- n° 1 for maize (18 segments)
- n° 2 for sugar-beets (24 segments)
- n° 3 for sunflowers (12 segments)
- n° 4 for beans and soya (24 segments)
- n° 5 for sorghum 48 holes in 24 segments)

The distributor is made up of a stainless steel disc, a segment disc, a selector, as well as an ejector for n° 2-3-4 and 5.

## • ADJUSTMENT OF SOWING DISTANCES

A main adjustment is carried out on the chassis distance box (fig. H) : after loosening the chain (3) with the lever (4), choose the appropriate pinion ratio (1) and (2) as shown in the table below.

A secondary adjustment is possible with double pinions 19/20 tooth (fig. D) which are reversible.

DISTANCE BOX RATIOS (fig. G)											
<b>18 segments</b> (maize)	19 tooth pinion (fig. D)	8,5	10,5	12	13,5	15	17	19	21	23,5	26,5
	20 tooth pinion (fig. D)	9	11	12,5	14	16	18	20	22,5	25	28
<b>24 segments</b> (beetrots)	19 tooth pinion	6,5	8	9	10	11,5	13	14	16	18	20
	20 tooth pinion	7	8,5	9,5	10,5	12	13,5	15	17	19	21
<b>30 segments</b> (beans-Soya)	19 tooth pinion	5	6	7	8	9	10,5	11,5	13	14	16
	20 tooth pinion	5,5	6,5	7,5	8,5	9,5	11	12	13,5	15	17
<b>12 segments</b> (Sunflower)	19 tooth pinion	13	16	18	20	23	26	28	32	36	40
	20 tooth pinion	14	17	19	21	24	27	30	34	38	42

## • NUMBER OF PLANTS PER HECTARE (100 % of germination)

		DISTANCES BETWEEN SEEDS IN THE ROWS (in cm)																
		10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
DISTANCES BETWEEN ROWS (in cm)	45	222220	202000	185160	170920	158740	148140	138900	130720	123460	116960	111110	105820	101000	96620	92580	88900	85460
	50	200000	181800	166680	153840	142860	133320	125000	117640	111120	105260	100000	95240	90900	86960	83340	80000	76920
	55	181820	165280	151520	140000	130000	121200	113640	106950	101010	95690	90910	86580	82640	79050	75760	72730	70000
	60	166660	151500	138880	128200	119040	111110	104160	98040	92590	87720	83330	79360	75750	72460	69440	66670	64100
	65	153840	139860	128200	118340	109880	102560	96150	90500	85470	80950	76920	73250	69930	66890	64100	61540	59170
	70	142850	129860	119040	109880	102030	95240	89280	84030	79360	75180	71425	68020	64930	62110	59520	57140	54940
	75	133330	121200	111100	102560	95230	88860	83330	78430	74080	70170	66665	63490	60600	57970	55550	53330	51280
	80	125000	113640	104160	96160	89280	83300	78120	73530	69450	65790	62500	59525	56820	54350	52080	50000	48080
	85	117640	106960	98040	90500	84030	78430	73530	69200	65360	61920	58820	56020	53480	51150	49020	47060	45250

## • FERTILIZER DISTRIBUTORS

Are fitted on the chassis rear square bar as shown in cover photograph. The flow is adjusted by making the rotation speed of the worm screw vary by using the expandable and double pulleys.

Fertilizer density is very variable, and it is therefore impossible to establish an adjustment table. As a guide, please note that the expandable pulley allows flows varying from 80 to 300 kg/ha when it is used with the small, lower pulley, and varying from 280 to 400 kg/ha when it is used with the large pulley. —  
When the operation is over, empty and clean completely.

## • MICROSEM

Is also fitted on the chassis as shown in cover photograph. The transfer located on the chain casing indicates the applications as well as adjustments to be made with each product.

Emptying to be carried out each time the machine has to be stopped for several hours.

When the operation is over, complete the emptying by turning the axle manually, to remove any thing remaining in the unit.  
Not to be used with powders.

## GENERAL MAINTENANCE

Tyre inflation pressure 1 kg/cm<sup>2</sup> (14 lb/in<sup>2</sup>)

General lubrication to be carried out once per working day.

Do not forget the various wheel hubs, the chassis bearings, the distance box chains, and the wheel assemblies.

Slightly lubricate rollers, pins and unit chains.

The hubs without visible lubricators are fitted with self-lubricating rings requiring no lubrication.

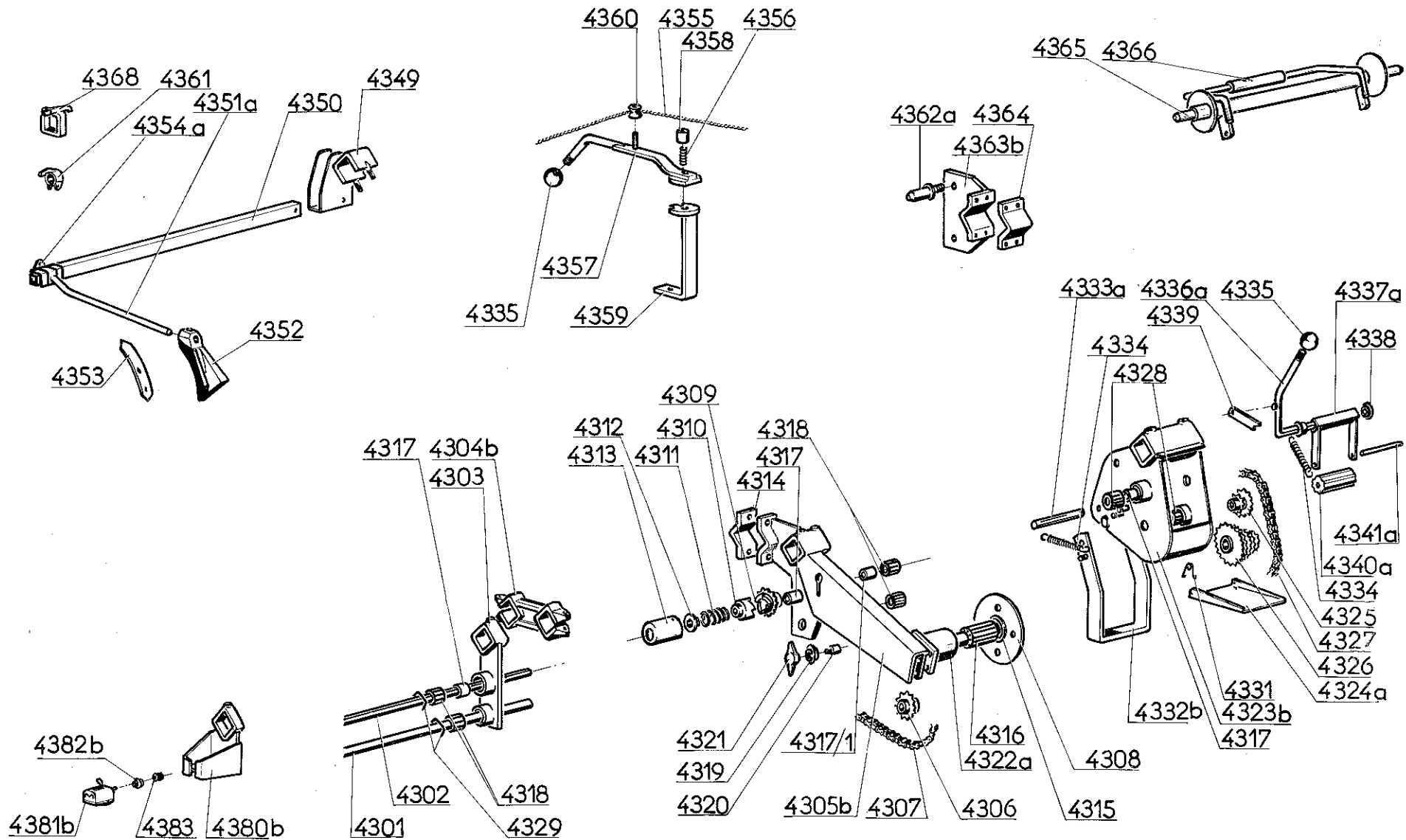
Use clean seed.

Occasionally open the distribution box to check the inside.

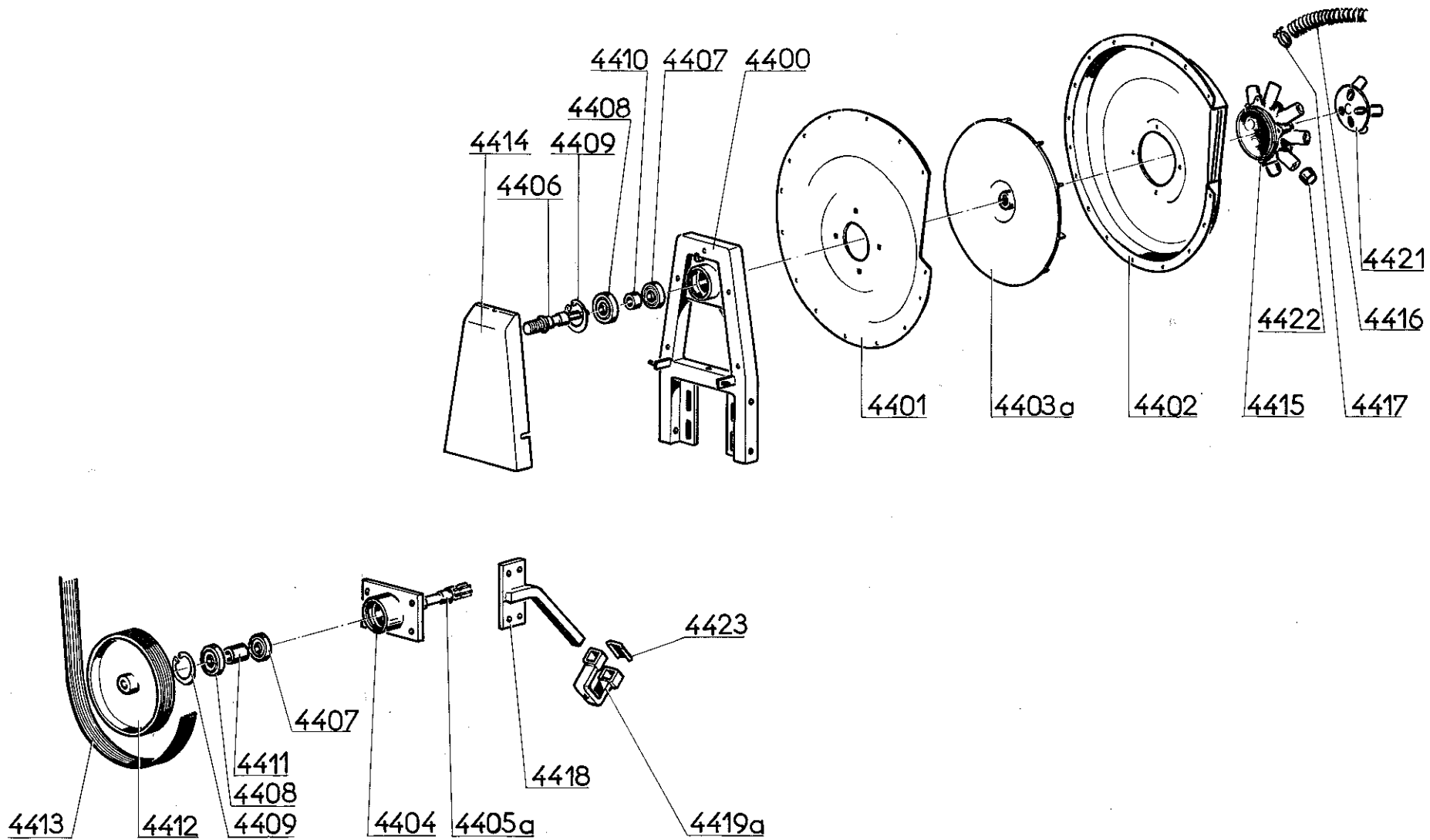
When sowing is over, carry out general cleaning and greasing and keep the sowing machine in a dry, dust-free place.

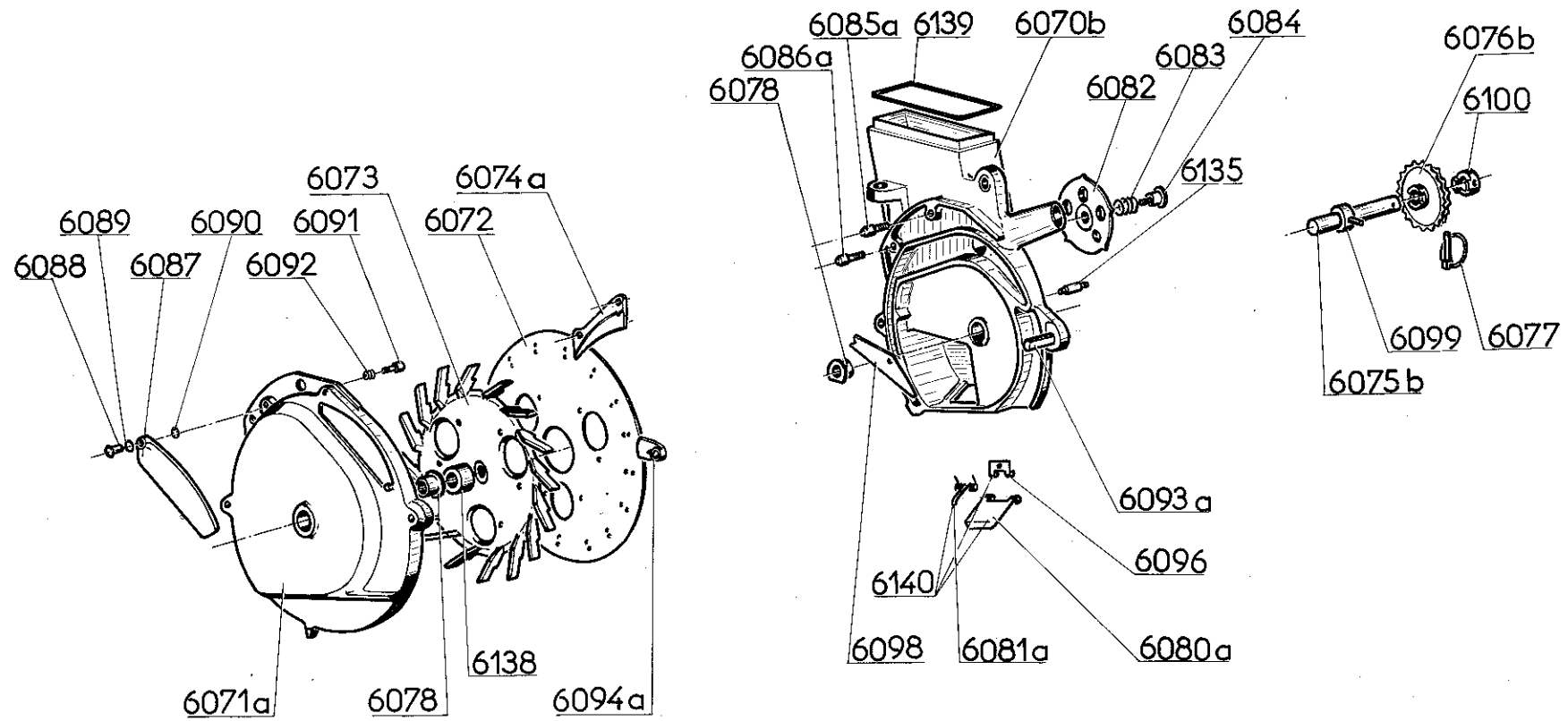
## SPARE PARTS

See pages 3-4-5-6-7-8-9-10

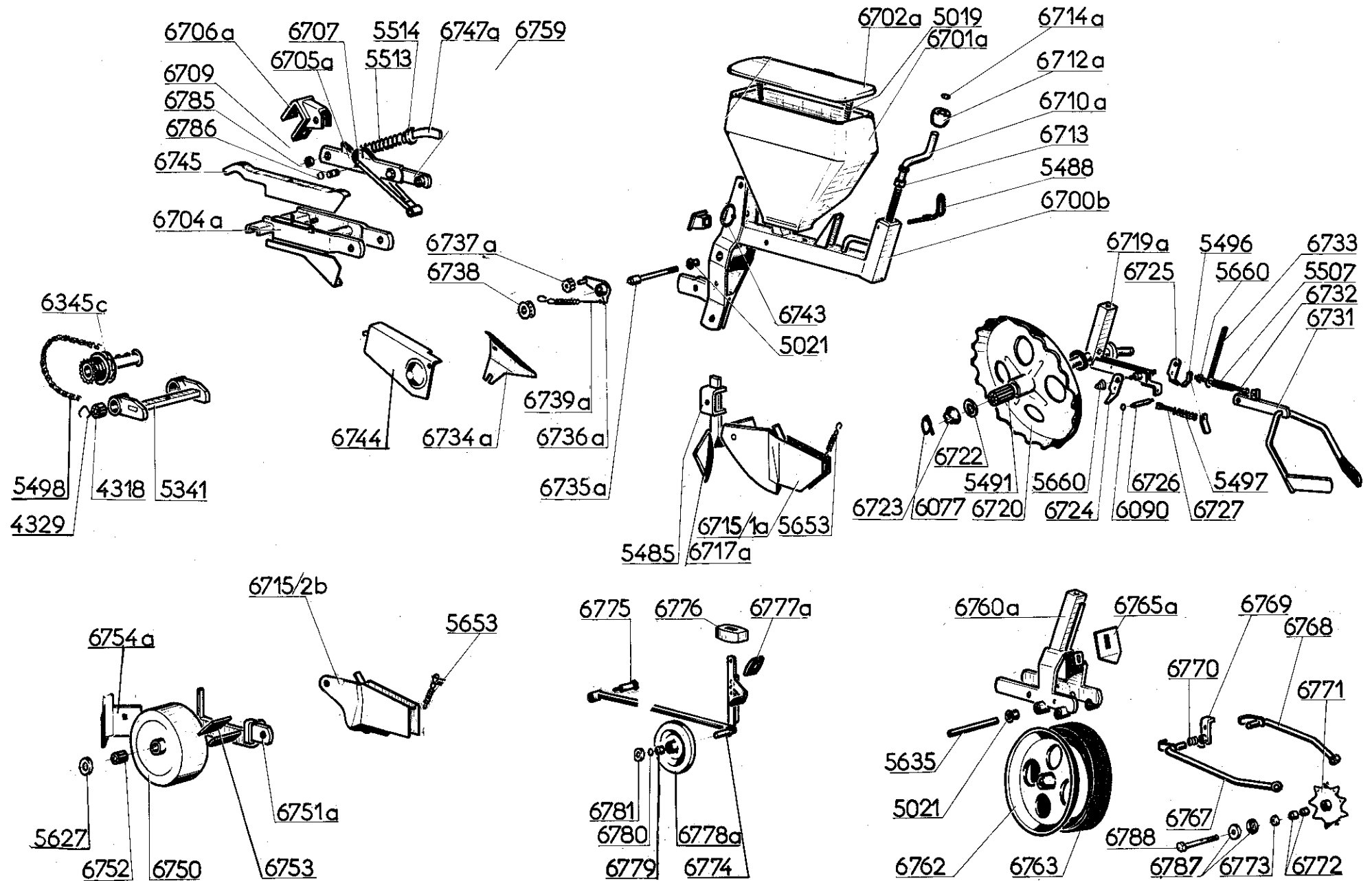


# Turbine

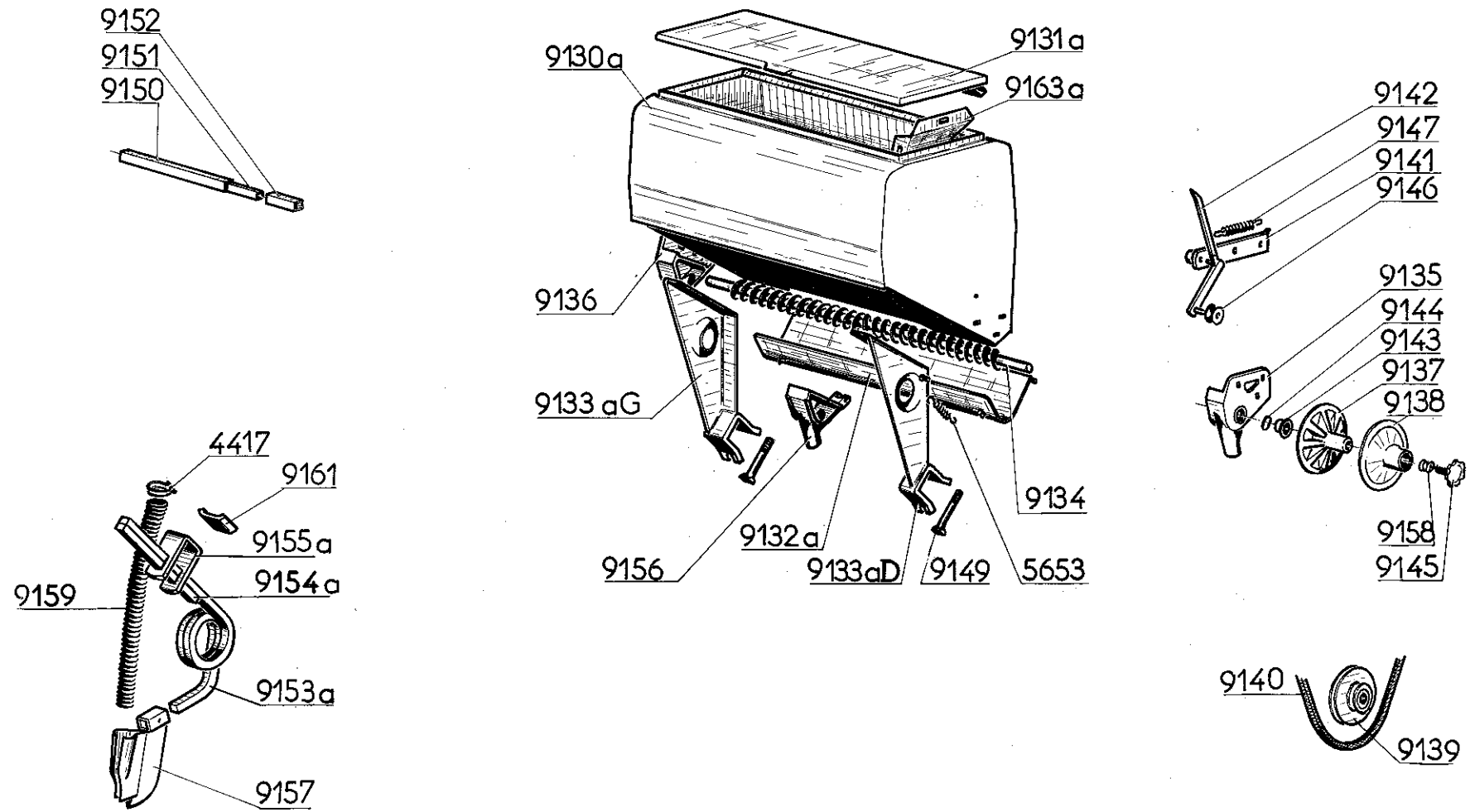




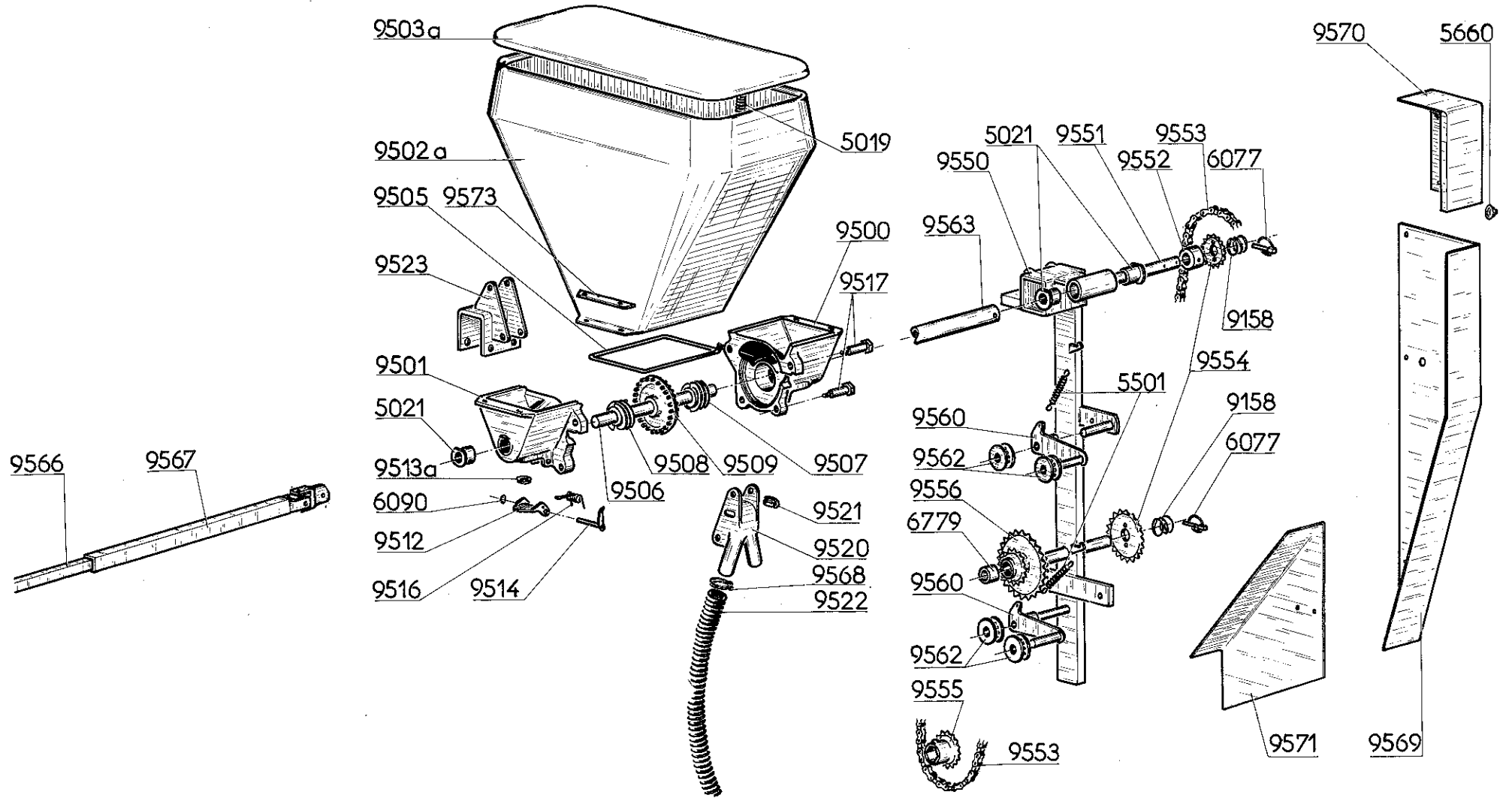
# Sowing elements







# Microsem



# INDEX DESCRIPTION

Index	Description	Index	Description	Index	Description
4301	Round shaft, diameter 30 mm (state length and number of rows)	4400	Turbine frame	6089	Flap rubber washer
4302	Hexagonal shaft (state length and number of rows)	4401	Turbine flat casing	6090	Flap circlip
4303	Outer bearing cross bar	4402	Turbine swaged casing	6091	Pin n° A 111
4304 b	Flange n° B 140	4403 a	Turbine wheel n° S 92 A	6092	Spring n° R 132
4305 b	Wheel assy. strut	4404	Turbine lower bearing	6093 a	Threaded rod n° A 112 A
4306	Pinion n° T 113 R	4405 a	Pin n° A 230 A	6094 a	Ejector n° E 9 A
4307	Wheel assy. chain	4406	Pin n° A 174	6096	Emptying hatch hinge
4308	Chassis wheel pin	4407	Bearing, diameter 62 mm n° 62062 RS	6098	Level plate
4309	Pinion dog-clutch, left side n° C 11 G	4408	Bearing, diameter 72 mm n° 63062 RS	6099	Pin reinforcement ring
	Pinion dog-clutch, right side n° C 11 D	4409	Circlip n° 72 i	6100	Ring n° B 63
4310	Hexagonal dog-clutch, left side n° C 12 G	4410	Upper bearing spacer tube	6135	Ring n° A 84
	Hexagonal dog-clutch, right side n° C 12 D	4411	Lower bearing spacer tube	6138	Blade wheel spacer ring
4311	Spring n° R 96	4412	Pulley n° S 93	6139	Joint n° T 89
4312	Dog-clutch spring stop	4413	Belt n° 1168 J 19	6140	Complete hatch for emptying
4313	Dog-clutch tube guard	4414	Belt casing		
4314	Counter flange of 60	4415	Spout assy n° S 90		
4315	Washer n° C 14	4416	Suction hose (state length)		
4316	Bearing n° R 122	4417	Turbine pipe collar		
4317	Hexagonal tube, length 25	4418	Right side turbine support (state right or left)	6345 c	Complete pinion assy n° K217
4317/1	Hexagonal tube, length 40	4419 a	Turbine support flange	6700 b	Element frame PN
4318	Bearing n° R 40	4421	Optional 12 row spout assy n° S 89	6701 a	Hopper PN
4319	Roller n° G 50 A	4422	Stopper n° C 37	6702 a	Hopper cover PN
4320	Roller pin n° A 17	4423	Turbine support flange shim	6704 a	Parallelogram lower strut
4321	Control wheel n° V 69-12			6705 a	Parallelogram fronté upper strut
4322 a	Wheel assy bearing housing			6706 a	Upper strut plate
4323 b	Distance box casing			6707	Latching bracket
4324 a	Distance box cover	5019	Spring n° R 45	6709	Upper strut articulation ring
4325	Double pinion n° T 113 B	5021	Self-lubricating ring n° B 25	6710 a	Claying handle PN
4326	Stepped pinion n° T 113 E	5341	Unit head-piece	6712 a	Ball n° B 73 A
4327	Distance box chain	5485	Clod guard plate PH	6713	Handle tube PN
4328	Bearing n° R 25	5488	For handle catch	6714 a	For handle circlip PN
4329	Circlip n° R 47	5491	Bearing n° R 80	6715/a	Maize ploughshare n° Z 272 A
4331	Spring n° R 111	5496	Handle	6715/2b	Beet ploughshare n° Z 273 C
4332 b	Chassis support	5497	Spring n° R 83	6717 a	PN maize clod guard
4333 a	Support pin	5498	Unit chain PN	6719 a	Maize wheels support assy
4334	Spring n° R 94	5501	Spring n° R 125	6720	Maize PN wheel
4335	Ball n° B 21	5507	Spring n° R 115	6722	Ring n° B 149
4336 a	Distance box adjuster lever	5513	Spring n° R 117	6723	Ring n° B 48
4337 a	Adjuster roller guide	5514	Relief strut plate	6724	Mud scraper, left side
4338	Ring n° D 30	5627	Roller plate M21T	6725	Mud scraper, right side
4339	Distance box lever bracket	5635	Rear wheel pin PN	6726	Mud scraper spacer
4340 a	Adjuster roller G 74	5653	Spring n° RS 17	6727	Mud scraper pressure rod
4341 a	Adjuster roller pin	5660	Spring n° R 124	6731	Maize scraper
4349	Left side tracer flange support (state right or left side)	6070 b	Body n° S 172	6732	Scraper pressure rod
4350	Marker strut (state length)	6071 a	Cover n° S 73 B	6733	PN depth gauge
4351 a	Shoe strut	6072	Stainless steel disc (state type of seed)	6734 a	Lower PN casing
4352	Shoe n° Z 13 c	6073	Segment disc	6735 a	Pin n° A 106 A
4353	Shoe ploughare		n° S 18 A for maize seeds	6736 a	Adjuster PN
4354 a	Shoe strut adjustment plate		n° S 37 for sunflower seeds	6737 a	Roller n° G 13
4355	Marker cord (state length)		n° S 38 for beet and sorghum seeds	6738	Iron roller n° T 87 A
4356	Spring n° R 3		n° S 40 for beans, field-beans, and sorghum seeds	6739	Spring n° R 140
4357	Switch arm	6074 a	Selector n° S 19 A for maize, beans, field-beans, sorghum seeds	6743	Ring n° R 134
4358	Spring cap		n° S 39 A for beet, sunflower, sorghum seeds.	6744	Lateral casing PN
4359	Switch support	6075 b	Pin n° A 83	6745	Higher casing PN
4360	Roller n° G 40	6076 b	Pinion n° X 1920 A (19 and 20 tooth)	6747 a	PN relief strut
4361	Marker flange, rows 6-8-12 n° B 37		n° X 12 A (12 tooth)	6750	Roller n° M 21 T
4362 a	Coupling pin, diam.22 mmn° A 22 A or diameter 28 n° A 28 A	6077	Pin clip	6751 a	Roller strut
4363 b	3 point coupling flange	6078	Self-lubricating ring n° B 61	6752	Bearing n° R 50
4364	Counter flange of 80	6080 a	Emptying hatch bare	6753	Mud scraper
4365	Semi-automatic coupling flange n° A 28 S	6081 a	Ring n° R 133	6754 a	PN beet clod guard
4366	Semi-automatic coupling bracket	6082	Control wheel n° S 74	6759	Parallelogram upper rear strut
4368	Marker flange, rows 6-8-12 n° B 43	6083	Spring n° R 131	6760 a	Beet rear wheel support assy
4380 b	Hectare meter support	6084	Pin n° A 109	6762	Wheel n° Z 89
4381 b	Hectare meter	6085 a	Pin n° A 180 (diameter 8 mm)	6763	Rim n° C 78
4382 b	Ring n° B 74 B	6086 a	Pin n° A 179 (diameter 10 mm)	6765 a	Mud scraper (state whether it is bent or straight)
4383	Spring n° R 136	6087	Flap n° C 76	6767	Roto-press long strut
		6088	Pin n° A 110	6769	Roto-press support

Index	Description	Index	Description
6770	Spring n° R 135 (state whether right or left)	9500	1/2 body, right side n° F 75 D
6771	Roto-press	9501	1/2 body, left side n° F 75 G
6772	Self-lubricating ring n° B 64	9502 a	« Microsem » hopper
6773	Roto-press plate	9503 a	« Microsem » cover
6774	PN intermediary roller strut	9505	Joint n° F 79
6775	Pin n° A 85	9506	« Microsem » centre pin
6776	Weight n° Z 75	9507	Worm screw n° V 75 G
6777 a	Mud scraper n° D 174	9508	Worm screw n° V 75 D
6778 a	Roller n° Z 158	9509	Wheel n° F 78
6779	Self-lubricating ring n° B 20 A	9512	Hatch n° F 77
6780	Intermediary roller joint	9513 a	Joint n° B 70 A
6781	Intermediary roller plate	9513 a	Hatch strut
6785	Pin n° A 124	9516	Spring n° R 139
6786	Pin circlip A 124	9517	Bolt n° A 117
6787	Universal joint washer n° B 81	9520	Spout assy n° P 76
6788	Roto-press pin.	9521	Stopper n° B 71
		9522	« Microsem » hose chute
		9523	« Microsem » attachment flange
		9550	Control support strut
9130 a	Fertiliser distributor hoppers (state whether 2 or 3 rows)	9551	Control pin
9130 a	Fertiliser distributor cover (state whether 2 or 3 rows)	9552	Drive ring
9132 a	Fertiliser distributor lower casing (state whether 2 or 3 rows)	9553	« Microsem » chain, reference VM
9133 a D	Foot support, right side	9554	« Microsem » interchangeable pinions, 10-12-15-18-22-25 tooth
9133 a G	Foot support, left side	9555	Pinion n° X 12 M
9134	Fertiliser distributor wormscrew (state whether 2 or 3 rows)	9556	Pinion n° X 312
9135	Bearing n° F 73 D	9560	« Microsem » adjustor
9136	Bearing n° F 73 G	9562	Roller n° G 12 AS
9137	Fixed 1/2 pulley n° F 71	9563	Conector tube (state length)
9138	Loose 1/2 pulley n° F 72	9566	Central conector male tube (state whether 8 rows maize or 12 rows beet)
9139	Double pulley		
9140	V-belt	9567	Central conector female tube (state whether 8 rows maize or 12 rows beet)
9141	Fertiliser distributor adjuster support		
9142	Fertiliser distributor adjuster	9568	« Microsem » hose collar
9143	Ring n° B 30	9569	Intermediary casing
9145	Flow adjustment control wheel	9570	Upper casing
9146	Roller n° G 41	9571	Lower casing
9147	Spring n° R 127	9573	Hopper reinforcement plate.
9149	Bolt n° A 101		
9150	Female conector tube (state 2 or 3 rows)		
9151	Male conector tube (state 2 or 3 rows)		
9152	Connecting tube		
9153 a	Shoe support tine n° R 130 G (left side) n° R 130 D (right side)		
9154 a	Tine reinforcement		
9155 a	Tine flange		
9156	Central bearing n° P 73		
9157	Shoe n° Z 172		
9158	Spring n° R 57		
9159	Fertiliser distributor hose (state length)		
9163	Corner plate		