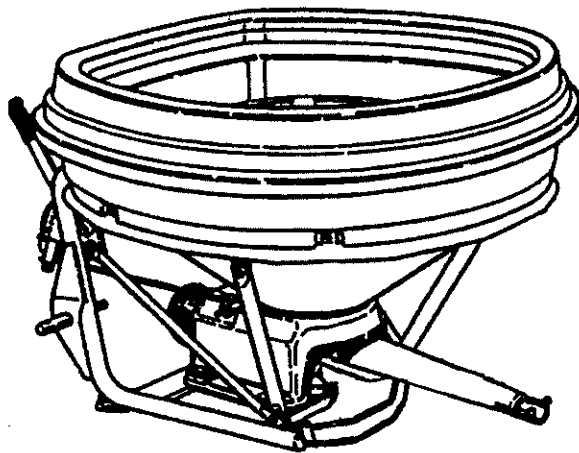


AGRICULTURAL MACHINERY
sitrex[®]
Spa

ASSEMBLY
SPARE PARTS LIST



SWINGING SPREADERS

FERTILIZER SPREADER

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1 FOREWORD

This guide is integral part of the machine and contains all necessary information for use and maintenance.

Before using or servicing the machine, operators and technical staff are required to read this guide carefully.

This guide, or a copy of it, must be kept in a convenient place for reference.

It is advisable to contact the manufacturer for any further information.

2 WARRANTY

The manufacturer warrants new machinery to be free from defects in material and workmanship at the time of delivery to the original purchaser if correctly set up and operated according to this Operator's Handbook.

The manufacturer undertakes to repair or replace free of charge any defective part which should be returned by the purchaser (freight prepaid) and found to be defective on inspection authorised by the manufacturer during the warranty period.

This warranty shall be valid for 12 (twelve) months from the delivery of the goods to the original purchaser.

If the customer is unable to return the defective part to the manufacturer, the manufacturer cannot be held responsible for any cost due for repair or replacement of any part of the machine. He shall only supply the part(s) required for such repair and/or replacement.

The warranty shall be considered null and void when it is evident that the machine has been improperly used or at least repaired without authorisation.

The manufacturer shall not be held responsible for any obligation or agreement reached by any manufacturer employers, agents or dealers who do not comply with the above warranty. The manufacturer cannot be held responsible for the subsequent damages. This warranty replaces any other warranty, either explicit or implied, as well as any other obligation of the manufacturer.

3 CONFORMITY STATEMENT

The machine is identified by means of the following technical data:

- Type of machine
- Registration number

stamped on the rating plate fastened to the frame of the machine. This data should be mentioned when requesting any replacements or information.

NOTE:

ALL WARRANTY WORK OR REPAIRS MUST BE APPROVED BY THE MANUFACTURER BEFORE WORK BEGIN.

ANY WORK OR REPAIRS MADE BEFORE APPROVAL MAY NOT BE COVERED UNDER WARRANTY.

PLEASE NOTIFY YOUR SALES & SERVICE DEPARTMENT OF THIS POLICY.

4 - MARKINGS

The machine markings, with all identity information, is on the front of every guard (fig.1)



Fig. 1

5 - WARNING SYMBOLS

The labels are on the hopper, on the frame and on the pendulum spout unit



It is necessary that both markings and caution symbols are kept clean and in good condition if damaged new ones must be bought from the manufacturer.

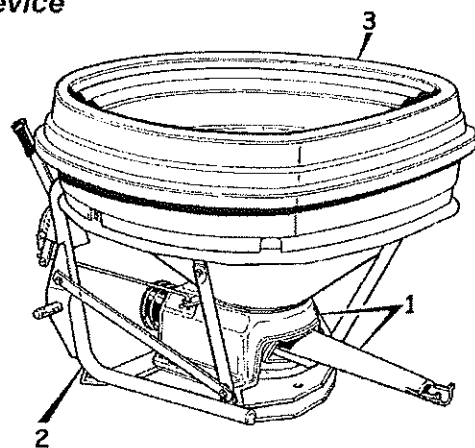
6 - MACHINE DESCRIPTION

It is a spreader of dry, damp, granular or powdering substances, operating a centrifugal action, designed for self-propelled machines or tractors. The centrifugal action is due to a rotating disc and its 4 blades fixed on the surfaces.

The machine essentially consists of (see fig.4):

- 1 - pendulum spout unit with spreader device**
- 2 - frame and relative parts**
- 3 - hopper**

Fig. 4



7 - SAFETY STANDARDS

HOW TO REDUCE HAZARDS



In order to avoid accidents, pay close attention to the warning signs affixed to the machine and read this guide carefully.

Make sure no bystanders (especially children) or animals are in the spreading area.

Wear close-fitting and laced-up equipment, heavy safety shoes, protective gloves, protective mask and spectacles while spreading powdering fertilizers, especially if windy.



The power take off must always be disengaged when transporting the machine.



Disengage the P.T.O. shaft, switch the engine off, engage the hand-brake and ease the spreader to the ground, when the machine is not operating.



Do not carry out any maintenance operations with tractor in motion.

Unless the spreader is blocked, do not carry out any maintenance operations on the machine while it is connected to the three point hitch of the tractor; the machine could suddenly fall down otherwise.

Make sure the revolutions of the machine correspond, before connecting the P.T.O. shaft.

Respect the national traffic code when transporting the machine on public roads.

Do not carry anyone while the machine is operating or during transfers.

Noise level under 70dB.

Be aware that, a careful operator is the best insurance against accidents.

8 - MACHINE USE

The machine can be mounted on any kind of tractor with suitable power to handle the spreader.



Only start the machine outside where there is good visibility. One should be able to see the full spreading range of the fertiliser.

UN-ADVISABLE PROCEDURES

The machine is not to be used for any other function than the one prescribed in this book.

It is forbidden to remove safety devices and chain guard protectors.

No modifications are to be made on the machine.

It is forbidden to place hands, arms or any other part of the body in close proximity of moving parts.

Never load the hopper with wet substances; the machine could become obstructed.

Never use the spreader to spread dangerous substances i.e. glass, pebbles or similar products as it could hurt people or property.

Disabled workers are forbidden to use this machine

The spreader must not be used by minors.

9 - LOADING

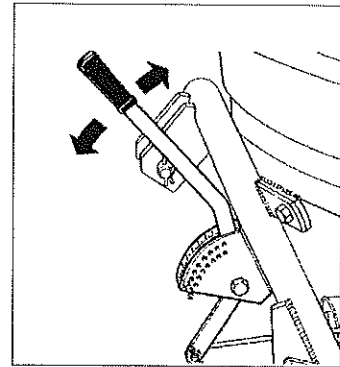
Before loading the hopper, be sure the engine is switched off and the P.T.O. shaft is disconnected.



We suggest the whole loading operation to be done by the same person. After having lowered the tractor three-points connection and eased the spreader to the ground, the machine is ready to be loaded.

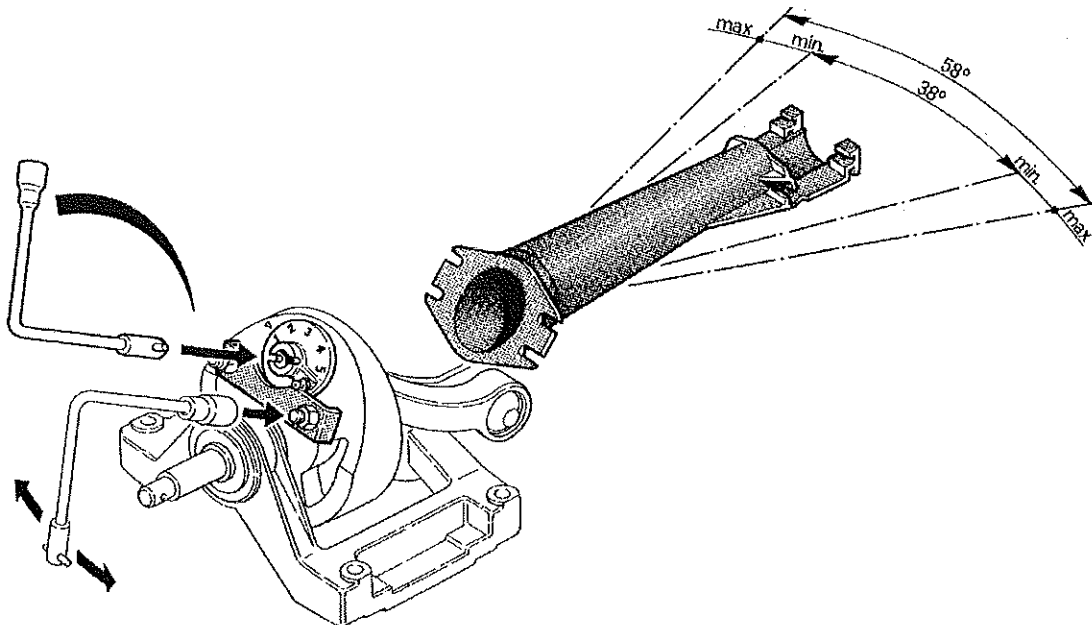
10 - SPREADING CONTROL

Move the lever next to the three point hitch connection to control the fertilizer outlet. Push the lever down to increase fertiliser flow, Pull it up to reduce flow, pulling it up totally will stop the fertiliser flow completely.



11 - GEARBOX AND SPREAD-RANGE ADJUSTING

The gearbox permits the spout stroke regulation, from 38° to 58°. Modify the spreading range from 6 up to 24 meters, by turning the graduated stroke adjuster.

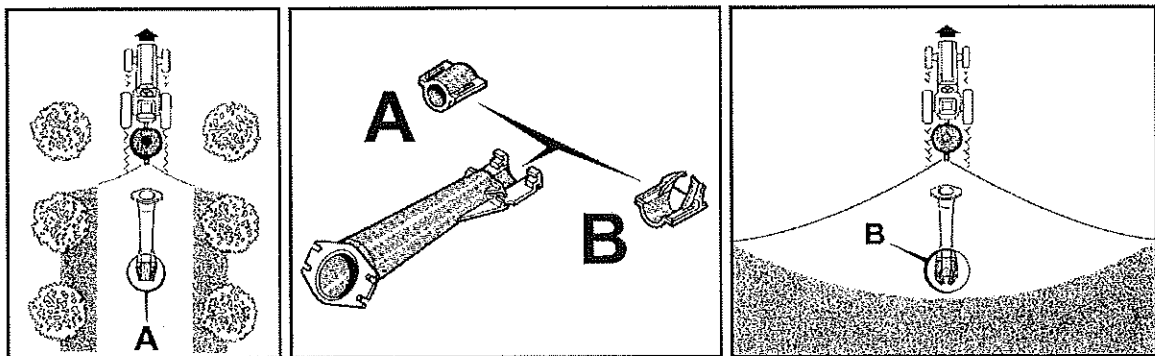


12 - PENDULUM-SPOUT WITH INTERCHANGEABLE FRONT-END

The interchangeable front-end permits a uniform or spotted spreading.

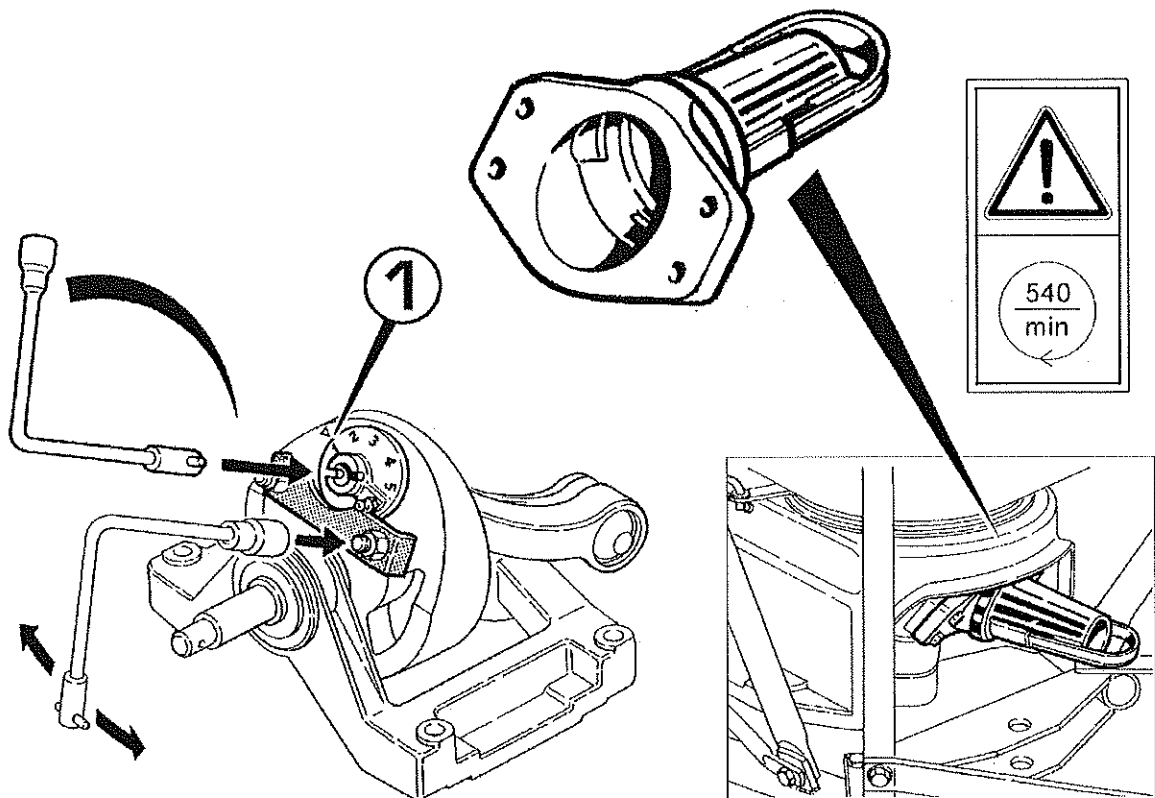
The pendulum spout equipped with front-end A allows for a spotted spreading.

The pendulum-spout equipped with front-end B allows for even spreading.



13 - STAINLESS STEEL PENDULUM - SPOUT FOR SALT AND SAND SPREADING

When spreading with the salt/sand spout it is necessary to adjust the spout stroke setting it on the position n. 1 and the PTO doesn't have to exceed 540 revs/min.

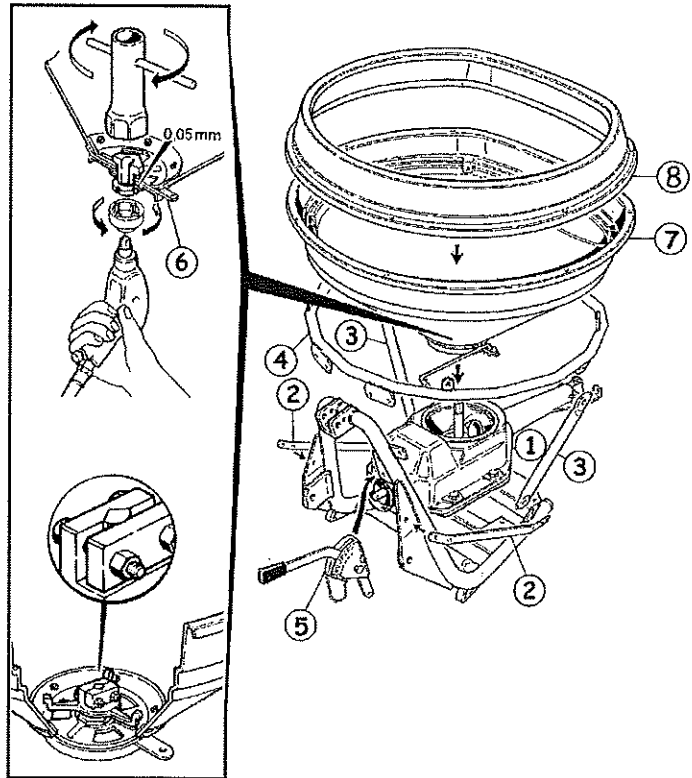


14 - SPREADER-DEVICE FITTING-UP



Operators must pay special attention when mounting the machine. All the various phases must be performed in compliance with what is written in this manual. **All safety measures must be respected:** protective clothing and instruments must be used according to the type of work to be performed.

- 1- Fit-up the pendulum-spout unit by fixing the proper screws to the frame-base.
- 2- Fix the lateral tie-rods to the frame.
- 3- Fix the vertical supports to the lateral tie-rods.
- 4- Mount the hopper-ring on the upper frame and on the tie-rods.
- 5- Fix the selector to the frame.
- 6- Mount the dosing disc on the hopper.
- 7- Put the hopper on and fix it to the ring.
- 8- Put the extension on the hopper on models 550/700/900.



15 - HITCHING



Make sure the engine is off, the P.T.O. shaft is disconnected and the hand-brake has been applied.

Put the lower bars of the tractor-lifter on the inside or outside lower coupling pins of the fertilizer spreader, depending on the pinholes-diameter. Next, affix the breakpins.

Connect the third point with the fit pin and the safety split pin.

Place in the drive-shaft, making sure the backstop has been released at the power takeoff and that the screw on the drive-shaft of the fertilizer spreader is locked.

Tend the lower tension bars of the three point hitch by the proper tie-rods avoiding the 1st and 2nd locking points, so as not to increase the machine whipping.

The right tension of the tie-rods allows for a flexibility of about 8-10 mm. (Fig.9)

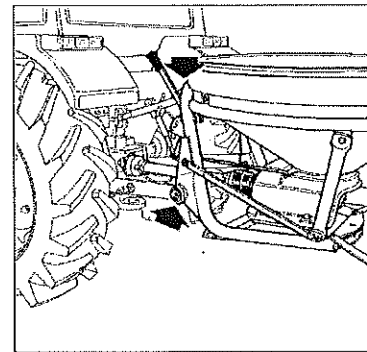


Fig.9

Adjust the three-point hitch length so that the spreader, while operating (70-80 cm from the ground), is perfectly level (fig.10).

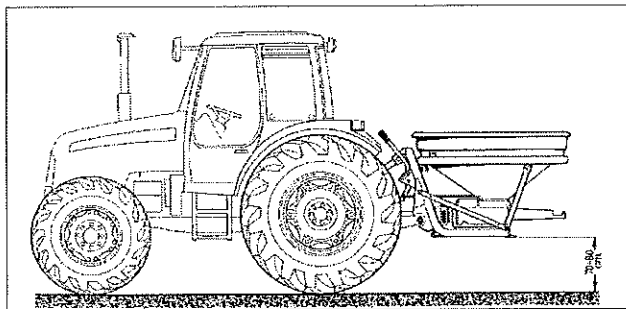


Fig.10

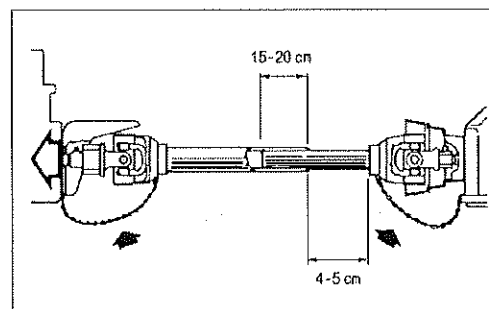


Fig.11

Make sure that, when the drive-shaft is at maximum closing, it doesn't remain open more than 4-5 cm, when it is at maximum extension, the two parts overlap by at least 15 cm (fig.11). (Please pay special attention to the instructions given in the PTO Shafts manual)

16 - ACCESSORIES

The fertilizer-spreader can be equipped with the following accessories:

- Long-fingered agitator for damp and powdery fertilizers (Fig.12)
- Hydraulic drive (Fig.13)
- Pendulum-spout for salt/sand spreading(Fig.14)
- Opening adjustment drive, controlled from the seating-point (Fig.15)

LONG-FINGERED AGITATOR FOR DAMP AND POWDERING FERTILIZERS

This accessory's function is to mix the fertilizer in its way-in to the the pendulum-spout; fitted together with the standard agitator it permits the spreading of damp or powdery fertilizers.

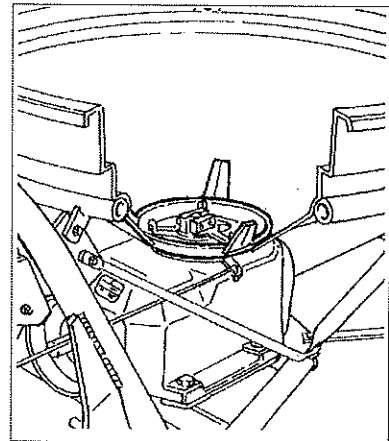


Fig.12

HYDRAULIC REMOTE CONTROL

Supplied on request. It consists of a double-acting hydraulic cylinder with scale and opening control at the seating point. This allows the driver to operate safely and efficiently.

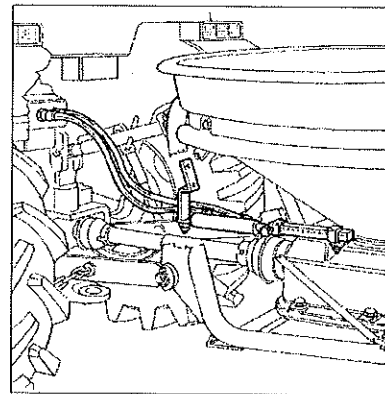


Fig.13

STAINLESS STEEL PENDULUM - SPOUT FOR SALT AND SAND SPREADING

If you want to spread salt or sand it is necessary to remove the standard pendulum-spout and to place the stainless-steel spare one on. This will preserve the original plastic spout longer.

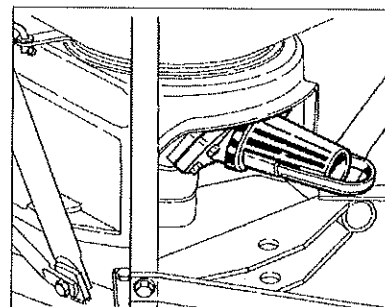


Fig.14

OPENING ADJUSTMENT DRIVE CONTROLLED FROM THE SEATING POINT

Supplied on request. It consists of a 2.5 m extension containing a steel wire that, after being connected to the adjustment lever, makes the adjustment possible from the tractor seat-point. This allows the driver to operate safely and efficiently.

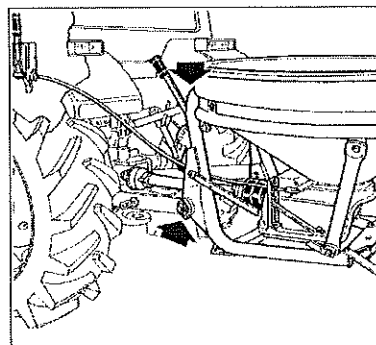


Fig.15

17 - MAINTENANCE

For whatever maintenance or mounting of spare parts the Spreader must be detached from the tractor or totally lowered to the ground to avoid it collapsing down.

Always switch the engine of the tractor off, remove the power supply and make sure the spreader can't descend. **It is forbidden to perform work on the machine when it is in function or when the tractor is in function.**

Only follow the instructions written in this book.

Always clean the machine before performing any maintenance work or controlling it. Always wear protective gloves and always use the correct instruments for the job at hand.

USUAL MAINTENANCE

Before every use make sure that the hopper is not blocked by any obstacles.

After every use, clean the hopper thoroughly from any pieces of fertiliser that may be present. It is best, on storing the spreader, to empty it completely so as to prevent that product residue obstructs the bottom of the hopper or the opening shafts.

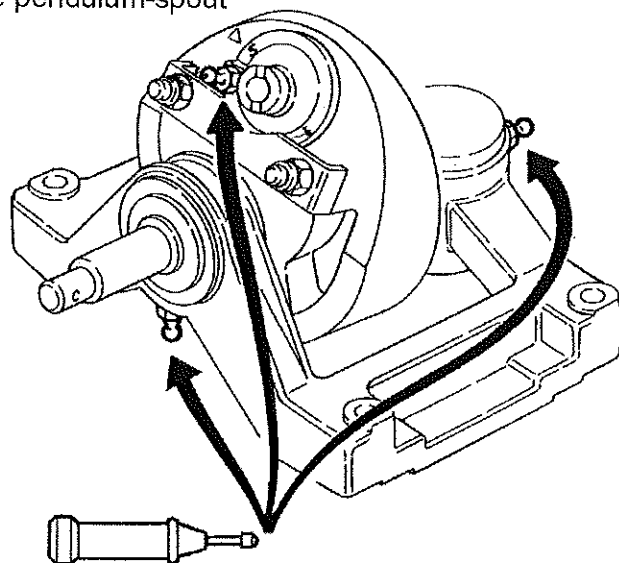
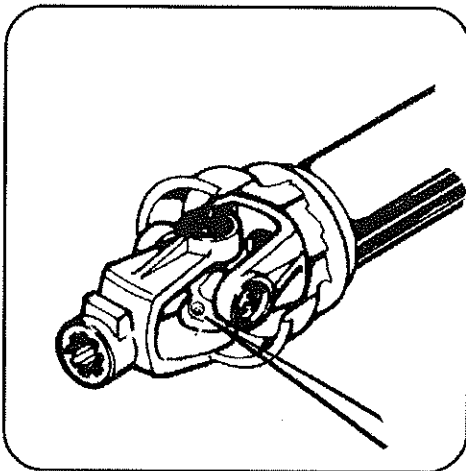
PROGRAMMED MAINTENANCE

Each 10 hours:

- grease the joint spiders of the drive-shaft
- Grease the pendulum points as indicated in the bellow figure.

Each 50 hours:

- check screw firmness
- check the increasing-rate wear of the pendulum-spout



18 - STORING OPERATION

At the end of the season or when storing the machine for a long time, one must:

- Thoroughly clean the machine of any residue fertiliser.
- Check for used or damaged parts and change them if necessary.
- Strengthen all the bolts

It will be beneficial for the operator to find the machine in continuous perfect working order.

19 - TRANSPORTATION

The machine is supplied disassembled, packed in cardboard and nylon. It is important to read this guide to mount it up correctly.

Respect the natural environment. Throw the carton boxes in the proper containers

20 - TECHNICAL FEATURES

Model	S400	S550	S700	S900
Capacity (l)	380	530	680	850
Spreading width (m)	6 - 24	6 - 24	6 - 24	6 - 24
Max load (kg)	1.100	1.100	1.100	1.100
Weight (kg)	146	153	156	160
Length (cm)	180	180	180	180
Width (cm)	142	144	144	144
Height (cm)	88	100	118	130
Outlet shutter control	Mechanic/Hydraulic			
Dose setting	Manually			
Spreading width adjustment	Full width or on rows			
Power Point	Tractor P.T.O. shaft at 540 RPM			
Power	9 kW			
Working pressure all remote control versions	100 Bar (max)			

21 - MACHINE DISPOSAL

Scrap the machine at the end of its life-cycle; do not leave the machine or its parts in the natural environment. Take it to a demolisher so as to follow demolition laws of the country. Leaving the machine without demolishing it could harm people and property.

SPREADING TABLE

Fertilizer Type	Nominal rotation frequenc	Spreading range (m)	km/h	kg/ha of fertilizer to be spread with engine r.p.m. as in column km/h						
				OPENING						
				1	2	3	4	5	6	7
Coarse-Grain fertilizers	540	18	4	48	218	549	977	1496	1991	2428
			6	32	145	365	651	996	1327	1619
			8	24	109	274	488	748	995	1214
			10	19	87	219	391	597	795	970
			12	16	72	182	325	498	663	809
Medium grained fertilizers	540	15	4	54	254	638	1111	1634	2193	2795
			6	36	170	425	741	1088	1462	1863
			8	27	127	318	555	817	1097	1396
			10	22	102	254	435	653	877	1117
			12	18	85	212	370	544	663	809
Fine grained fertilizers	540	14	4	64	376	823	1356	1954	2552	3066
			6	42	250	549	904	1303	1701	2044
			8	32	188	412	673	976	1276	1533
			10	25	150	329	541	781	1021	1227
			12	21	125	274	451	651	850	1022
Medium cristal fertilizers	540	14	4	90	485	976	1678	2386	3033	3621
			6	60	324	650	1118	1590	2021	2413
			8	45	242	488	838	1193	1516	1810
			10	35	193	390	671	955	1213	1448
			12	30	162	324	559	796	1010	1206
Calcium Cyanamide and similar	540	6	4	148	743	1440	2611	3934	5104	6303
			6	98	495	950	1741	2622	3402	4202
			8	74	371	721	1306	1967	2552	3151
			10	58	297	576	1045	1573	2042	441
			12	46	247	480	870	1311	1701	2100
Ammonium Sulpate	540	18	4	164	928	1807	3176	4316	5419	6858
			6	110	618	1205	2117	2876	3612	4571
			8	82	464	903	1588	2158	2709	3429
			10	65	371	723	1270	1725	2167	2742
			12	55	309	602	1058	1438	1805	2285
Scorie Thomas	400/540	18	4	280	1134	2096	3507	5770	7864	9540
			6	186	755	1397	2337	3846	5242	6354
			8	140	566	1048	1753	2885	3932	4770
			10	112	453	838	1403	2308	3145	3816

SPARE PARTS LIST

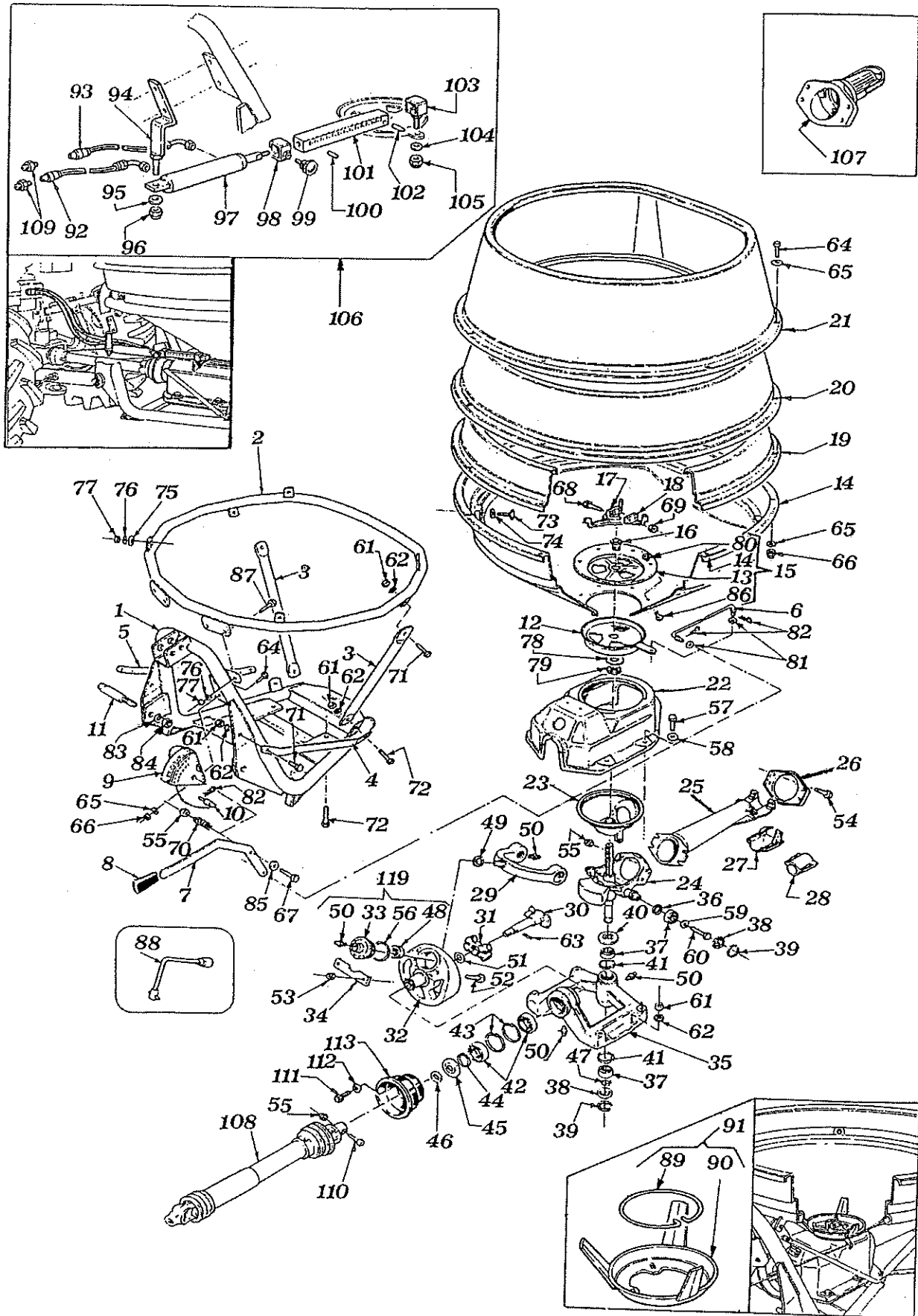
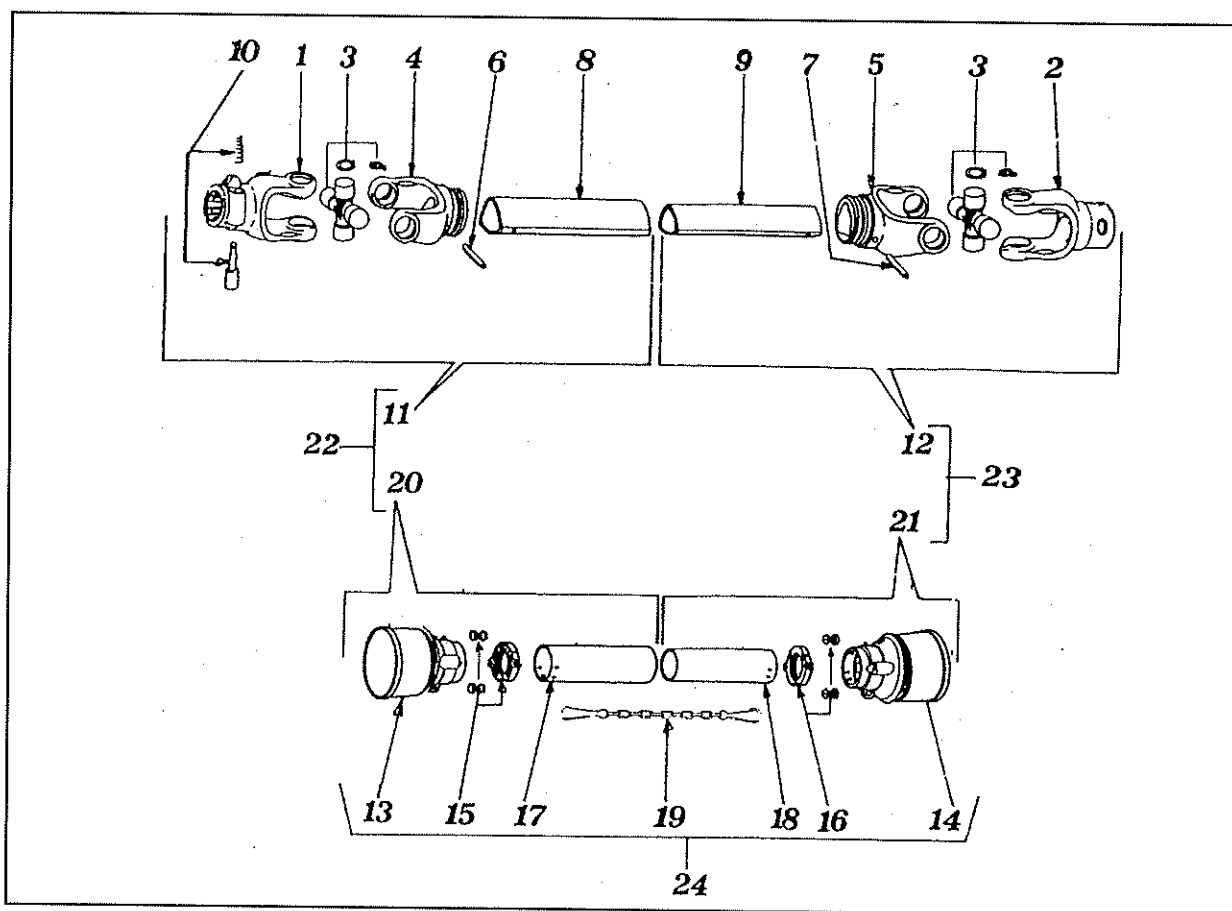


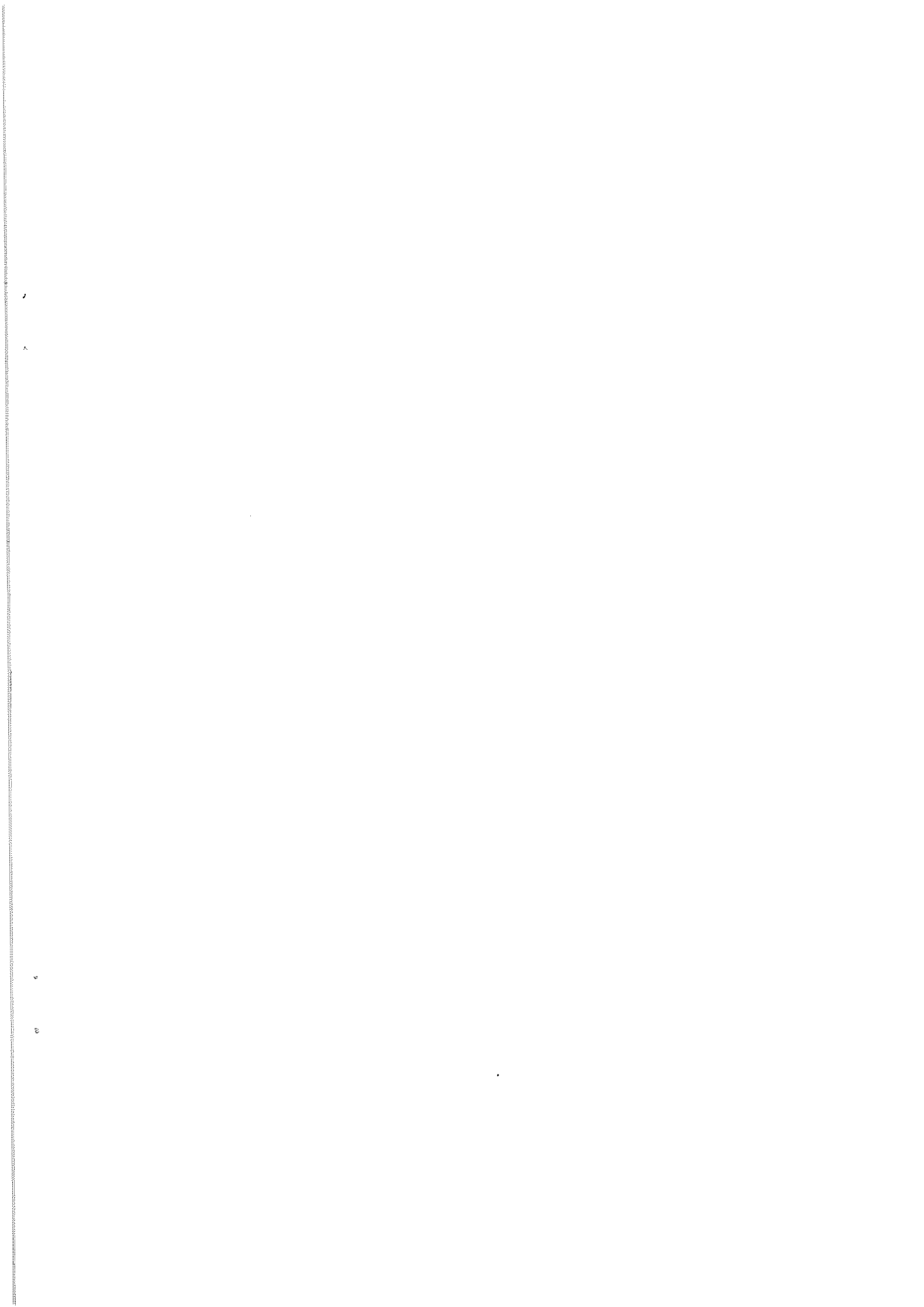
TABLE NO. 940.002

ITEM	Q.ty	PART/NO	DESCRIPTION	NOTE	ITEM	Q.ty	PART/NO	DESCRIPTION	NOTE
1	1	400.099	FRAME		58	4	600.920	WASHER	
2	1	400.100	HOPPER RING		59	2	400.129	BEARING LOCK WASHER	
3	2	400.101	HOPPER SUPPORT		60	2	600.922	SCREW	
4	1	400.102	HOPPER TIE ROD, RH		61	10	600.923	NUT	
5	1	400.103	HOPPER TIE ROD, LH		62	10	600.924	SPRING WASHER	
6	1	400.104	RATE SETTING TIE ROD		63	1	600.925	SPRING PIN	
7	1	400.105	RATE SETTING LEVER		64	2	600.926	SCREW	
8	1	600.901	HANDLE		65	2	600.927	WASHER	
9	1	400.108	LEVER GUIDE BRACKET		66	10	600.928	SELF-LOCKING NUT	
10	1	400.109	LEVER LOCK PIN		67	1	600.929	SCREW	
11	2	400.110	PIN		68	2	600.930	SCREW	
12	1	400.106	DISC		69	2	600.931	NUT	
13	1	400.111	HOPPER BOTTOM		70	1	600.932	SPRING	
14	1	400.112	S400 HOPPER		71	4	600.933	SCREW	
15	1	400.113	S400 HOPPER ASSY		72	6	600.934	SCREW	
16	1	400.114	AGITATOR GUIDE BUSH		73	4	600.935	SCREW	
17	1	400.115	AGITATOR		74	4	600.936	WASHER	
18	1	400.116	LOCK		75	4	600.937	WASHER	
19	1	400.084	S550 SIDE EXTENSION		76	8	600.938	SPRING WASHER	
20	1	400.085	S700 SIDE EXTENSION		77	8	600.939	NUT	
21	1	400.086	S900 SIDE EXTENSION		78	1	600.940	WASHER	
22	1	400.107	CASE		79	1	600.941	SELF-LOCKING RING NUT	
23	1	400.117	LOWER CONVEYOR		80	6	600.942	LARGE NUT	
24	1	400.118	PENDULUM SUPPORT		81	2	600.943	WASHER	
25	1	400.123	SWINGING PIPE		82	3	600.944	PIN	
26	1	400.119	FLANGE		83	2	600.945	SPRING WASHER	
27	1	400.120	SPREADING CUP		84	2	600.947	NUT	
28	1	400.121	STRAIGHTSLEEVE		85	1	600.948	WASHER	
29	1	400.122	FORK		86	6	600.949	SCREW	
30	1	400.126	GROOVED SHAFT		87	4	600.950	SCREW	
31	1	400.128	SHOCK ASSORBER		88	1	405.044	SETTING WRENCH	
32	1	400.127	FLYWHEEL		89	1	600.954	SNAP RING	
33	1	400.130	ADJUSTER		90	1	400.088	AGITATOR LONG	
34	1	400.124	LOCK		91	1	400.089	KIT AGITATOR LONG	
35	1	400.125	PENDULUM ASSY SUPPORT		92	1	600.955	HOSE	
36	2	600.902	GROMMET		93	1	600.964	HOSE	
37	4	600.903	BEARING		94	1	400.132	SUPPORT	
38	3	600.952	FORK PROTECTION COVER		95	1	600.956	FLAT WASHER	
39	3	600.904	SPLIT RING		96	1	600.957	SELF-LOCKING NUT	
40	3	600.953	MAIN SHAFT PROTECTION		97	1	400.133	CYLINDER	
41	1	900.905	SNAP RING		98	1	400.134	SLIDER	
42	2	600.906	BEARING		99	1	600.958	LOCKING VALVE	
43	2	600.907	SNAP RING		100	1	600.959	SPRING PIN	
44	2	600.908	SNAP RING		101	1	400.135	INDEX ROD	
45	1	600.909	FRONT COVER		102	1	600.960	SPRING PIN	
46	1	600.910	FRONT WASHER		103	1	400.136	FIX SLIDER	
47	1	600.911	SNAP RING		104	1	600.961	FLAT WASHER	
48	1	600.912	BEARING		105	1	600.962	SELF-LOCKING NUT	
49	1	600.951	FORK PROTECTION HOOD		106	1	400.090	HYDRAULIC CONTROL KIT	
50	5	600.913	GREASE NIPPLE		107	1	400.087	SALT AND SAND SPREADING SPOUT	
51	1	600.914	WASHER		108	1	600.963	CARDAN SHAFT	
52	2	600.915	SCREW		109	2	600.986	NIPPLES	
53	2	600.916	SELF-LOCKING NUT		110	1	600.987	SCREW	
54	4	600.917	SCREW		111	3	600.988	SCREW	
55	6	600.918	SELF-LOCKING NUT		112	3	600.989	WASHER	
56	1	600.946	GASKET		113	1	600.990	HOOD	
57	4	600.919	SCREW		119	1	400.141	ADJUSTER COMPLETE	

ARBRE A CARDAN 610.119



ARBRE A CARDAN cod. 610.119						
Pos.	Code	Q.té	DESCRIPTION	DESCRIPTION	NOTE	
1	610.099	1	FOURCHE EXT.	OUTER YOKE		
2	610.125	1	FOURCHE INT.	INNER YOKE		
3	610.120	2	CROISILLON COMPLET	CROSS JOURNAL ASS.		
4	610.121	1	FOURCHE TUYAU EXT.	OUTER TUBE YOKE		
5	610.124	1	FOURCHE TUYAU INTERIEUR	INNER TUBE YOKE		
6	600.027	1	GOUPILLE	SPRING PIN		
7	600.108	1	GOUPILLE	SPRING PIN		
8	610.122	1	MOITIE EXT.	OUTER TUBE		
9	610.123	1	MOITIE INT.	INNER TUBE		
10	610.057	1	POUSSOIR COMPLET	COMPLETE PUSH BUT TTON		
11	610.132	1	MOITIE ARBRE EXT.SANS PROT.	OUTER HALF SHAFT (WITHOUT GUARD)		
12	610.133	1	MOITIE ARBRE INT.SANS PROT.	INNER HALF SHAFT (WITHOUT GUARD)		
13	610.127	1	COIFFE COMPLETE EXT.	OUTER BASIC CONES		
14	610.130	1	COIFFE COMPLETE INT.	INNER BASIC CONES		
15	610.126	1	FRETTE	OUTER BEARING		
16	610.131	1	FRETTE	INNER BEARING		
17	610.128	1	MOITIE PROTECTION EXT.	OUTER SAFETY TUBE		
18	610.129	1	MOITIE PROTECTION INT.	INNER SAFETY TUBE		
19	610.139	1	CHAINE	CHAIN		
20	610.136	1	MOITIE PROTECTION EXT.	OUTER HALF SAFETY GUARD		
21	610.137	1	MOITIE PROTECTION INT.	INNER HALF SAFETY GUARD		
22	610.134	1	MOITIE ARBRE EXT.AVEC PROT.	OUTER HALF SHAFT (WITH GUARD)		
23	610.135	1	MOITIE ARBRE INT.AVEC PROT.	INNER HALF SHAFT (WITH GUARD)		
24	610.138	1	COMPLETE PROTECTION	COMPLETE SAFETY GUARD		





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