

MICRO-FERTILISER KIT

FOR PNEUMATIC MOUNTED SEED DRILLS

STARTING MANUAL

MAINTENANCE

DOSAGE

Please read and follow this operating manual before putting the machine into operation.



MAQUINARIA AGRÍCOLA



SOLÀ seed drills, planters and fertilizer spreaders are manufactured in a highly specialized environment and our factory has a vast network of satisfied customers.

SOLÀ machines use highly advanced technology and are guaranteed to work without malfunctions in a large variety of conditions. The **SOLÀ** machines are provided with easy-to-use and efficient devices and perform excellently with only minimum operator maintenance.

This manual will help you use your SOLÀ product with the maximum efficiency.



Certified quality system

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Created by: SOLÀ

It is forbidden to copy any part of this manual.

Specifications are subject to change or modification without notice.

The pictures included do not necessary show the standard version.

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1- INTRODUCTION

It is essential to read and follow the instructions and recommendations in this manual before operating **THE SEED DRILL**. Careful reading enables maximum operator efficiency, prevents accidents and damage, and increases the front hopper's capacity and life expectancy.

Please ensure that this manual has been read by any person involved in performing operational tasks, (including preparation, dealing with mechanical problems and supervising the machine), maintenance (inspection and technical assistance) and transport.

For your safety, please follow these technical safety instructions as **SOLÀ** will not be responsible for damages caused by not observing the information provided.

In the first chapters you will find the Technical Characteristics and Safety Instructions. Basic concepts that are required to operate the machine are explained in the Starting, Adjusting and Maintenance sections.

The last part of this manual consists of Dosage Tables for the different microgranulator types.



SOLÀ RETAINS THE RIGHT TO MODIFY ILLUSTRATIONS, TECHNICAL DATA AND WEIGHTS INDICATED IN THIS OPERATING MANUAL, IF THESE CHANGES HELP TO IMPROVE THE QUALITY OF THE MACHINES.

2- SAFETY INSTRUCTIONS

2.1 SAFETY SYMBOLS

In this operating manual you will find three different symbols relating to safety:



TO WORK MORE EASILY WITH THE KIT.



TO PREVENT DAMAGE TO THE SEED DRILL AND OPTIONAL EQUIPMENT



TO PREVENT PHYSICAL INJURY.

On the machine you will find the following warning pictograms:



Read the instructions carefully and observe the safety advice given in the operating manual.



Never mount the machine when it is in operation.



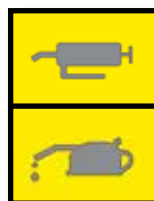
During the coupling manoeuvre, stay away from the rear part of the tractor.
Risk of serious physical injury.



Danger of infection from escaping hydraulic fluid at high pressure! This can inflict serious injuries with potentially fatal consequences if it passes through the skin and into the body. Keep the hose lines in good condition.
Risk of serious physical injuries.



During maintaining or repairing the machine, you must stop the tractor's engine completely and remove the ignition key.



Keep in good condition and greased any MECHANICAL parts showing this pictogram. See section 6.2 GREASING AND LUBRICATING.



Risk of being crushed when working under the machine, please secure the machine to prevent this risk.
Risk of serious physical injuries.

2.2 GENERAL SAFETY REGULATIONS



- Before starting the machine, check that visibility is clear around the machine and there is no person in the working area.



- It is forbidden to ride on the machine during operation or transport. Risk of serious physical injuries.



- Before using the machine, the user must be familiar with all operating elements



- Keep greased and in good condition all parts of the transmission.



- Do not deposit external elements inside the hopper.



- When maintaining the hydraulic system of the front hopper, make sure that it is depressurised and the tractor's engine is off



- Please regularly check the condition of the tubes and hosepipes in the hydraulic system. These parts age naturally and their life should not surpass 6 YEARS. Please replace when necessary.



- When raising the seed drill, the front axle is unloaded. Ensure that the machine has enough load to prevent it overturning. At this time you must ensure that the condition of both the steering and the brakes is optimal.

3- OVERVIEW

3.1 KIT OVERVIEW



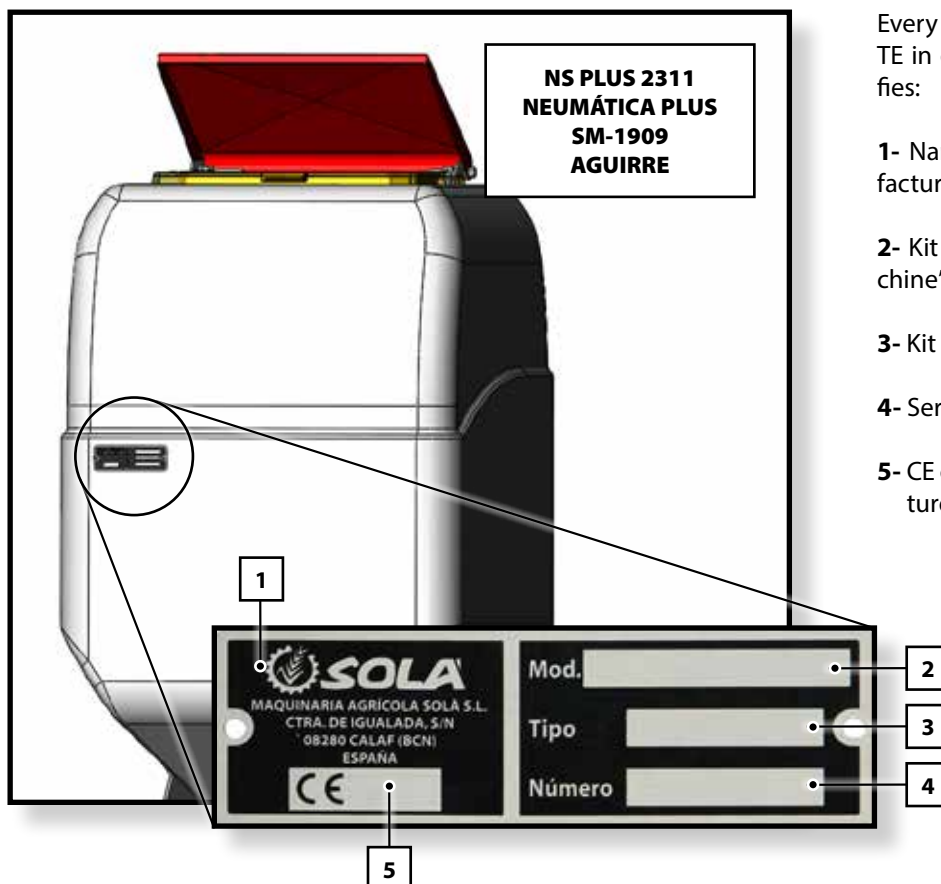
1- Hopper for micro-fertiliser (hopper's capacity 206,2 L).

2- Metering box.

3- Ducts (for the pneumatic transport of the micro-fertiliser).

4- Adjustable support (depending on the seed drill model and manufacturer).

3.2 KIT IDENTIFICATION



Every kit has an IDENTIFICATION PLATE in one of the hoppers that specifies:

1- Name and address of the manufacturer..

2- Kit model depending on the machine's model and manufacturer.

3- Kit type

4- Serial number.

5- CE certificate and year of manufacture.

3.3 USE ACCORDING TO DESIGN

The micro-fertiliser kit SOLÀ for pneumatic seed drills has been designed specifically for micro-fertiliser dosing.

The machine has been designed to work using an pneumatic top-mounted seed drill.

If the machine is used in circumstances other than those specified above, the manufacturer will not be held responsible for any damage caused to persons or to the machine.

The user must observe all regulations concerning safety, traffic and hygiene.

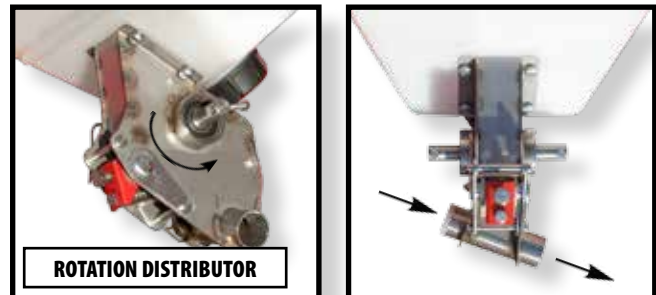
If the machine is modified by the user, the manufacturer's warranty is cancelled. SOLÀ will not be held responsible for any damage caused to persons or to the machine.

The use of micro-fertilisers with a high moisture content should be avoided since they can cause blockages.

4- ASSEMBLING THE KIT FOR MICRO-FERTILISER

4.1 METERING BOX

The metering box has to be assembled according to the turning direction shown by an arrow pictured in the metering box's side. Air coming from the fan arrives to the metering box through the upper part of the metering box's inclined tube, where the venturi's nylon piece is. The resulting air mixed with the fertiliser exits through the lower part of the metering box's inclined tube (see pictures). Any possible leak occurring between the hopper and the metering box needs to be sealed using silicone Sika or any similar one.



4.2 TRANSMISSION

Since the metering box's dose cannot be changed, the dosage tables need to be used in order to choose the proper disc. Make sure to get the correct alignment between the interchangeable disc which gets traction from the seed drill and the pinion of 15 or 22 teeth equipped with disconnection system. Furthermore, the two metering boxes and the disconnection pinion must be correctly aligned along the axle. The transmission between the disconnection pinion and each metering box is performed by the telescopic transmissions which are fixed to both the metering boxes's axles and to the disconnection system by means of the provided M5 screws.

4.3 SUPPORTING PIECES

Supporting pieces are telescopic and can be orientated in order to be versatile when assembled on different types of machine. However, once they have been placed and the system has been tested, it is recommended to strengthen the structure by soldering between the supporting pieces.

4.4 AIR INTAKE

Kit's air intake should be inserted into a straight part of the fan's outlet. If a straight part is not available and the only possibility is to be assembled on a curved part, make sure that the two outlets of $\varnothing 30$ stay at the outer part of the fan's curve (otherwise, the system may not work).

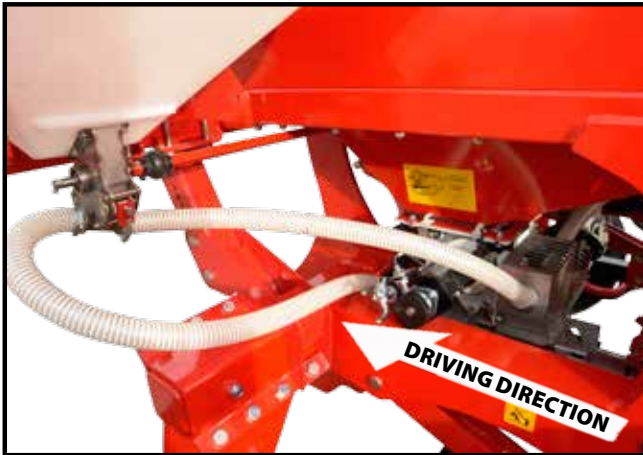
4.5 OTHER CONSIDERATIONS

Micro-fertiliser inlets to the seed drill have to be in the same place where the machine's metering box drops the seed to be incorporated to the air flow.

Make sure that the pipes that transport the micro-fertiliser are not blocked due to foldings, crushes or any other cause. Check that the inlet holes where the pipes will be placed do not show air leaks.

There should never be sections whose direction is upwards in the tubes which transport the mix of air and micro-fertiliser from the kit's metering box to the machine's metering box. This system is incompatible with the closure of the folding parts since, when connected, a mix containing seeds and micro-fertiliser would come back to the hopper.

After work, it is recommended to empty the hoppers and clean any remainder, since the micro-fertiliser absorbs the moisture from the air and tends to squeeze together.



VERY IMPORTANT: ASSEMBLE THE METERING BOX AS SHOWN IN THE PICTURES SO THAT IT TURNS TO THE CORRECT DIRECTION (AS INDICATED BY THE ARROW INSCRIBED ON THE METERING BOX'S SIDE). THIS ASSEMBLY IS INVERSE TO THE ONE REQUIRED IN THE MACHINES OF TYPE NEUMASEM OR PNEUMATIC LAMUSA.

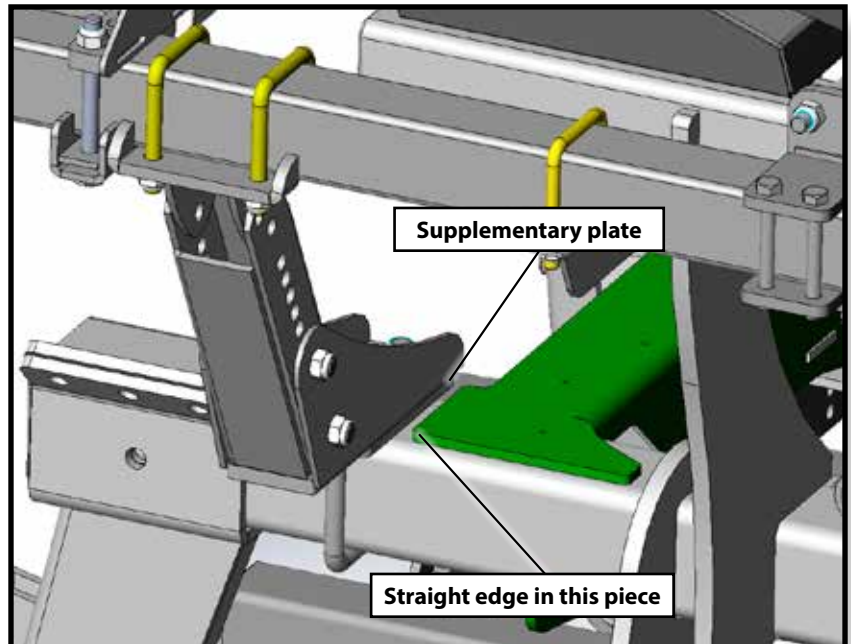
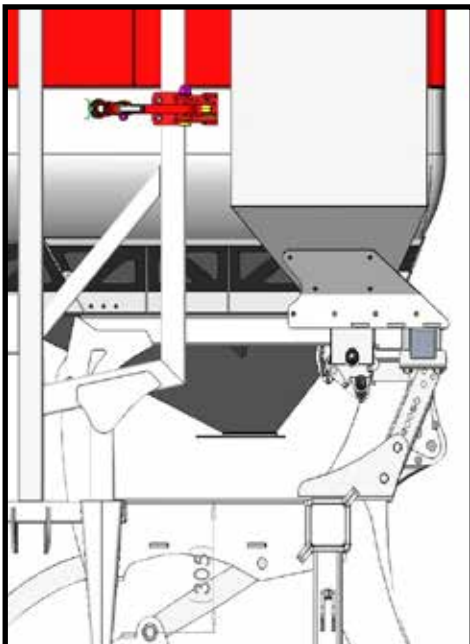
COMMENTS ON SM-1909, NS-PLUS AND PNEUMATIC PLUS

To work with dose close to 25 Kg/Ha, the disc of 22 teeth should be assembled in the disconnection system and the hopper's supporting pieces should be screwed on the last hole so that the disc 22z has enough space available.

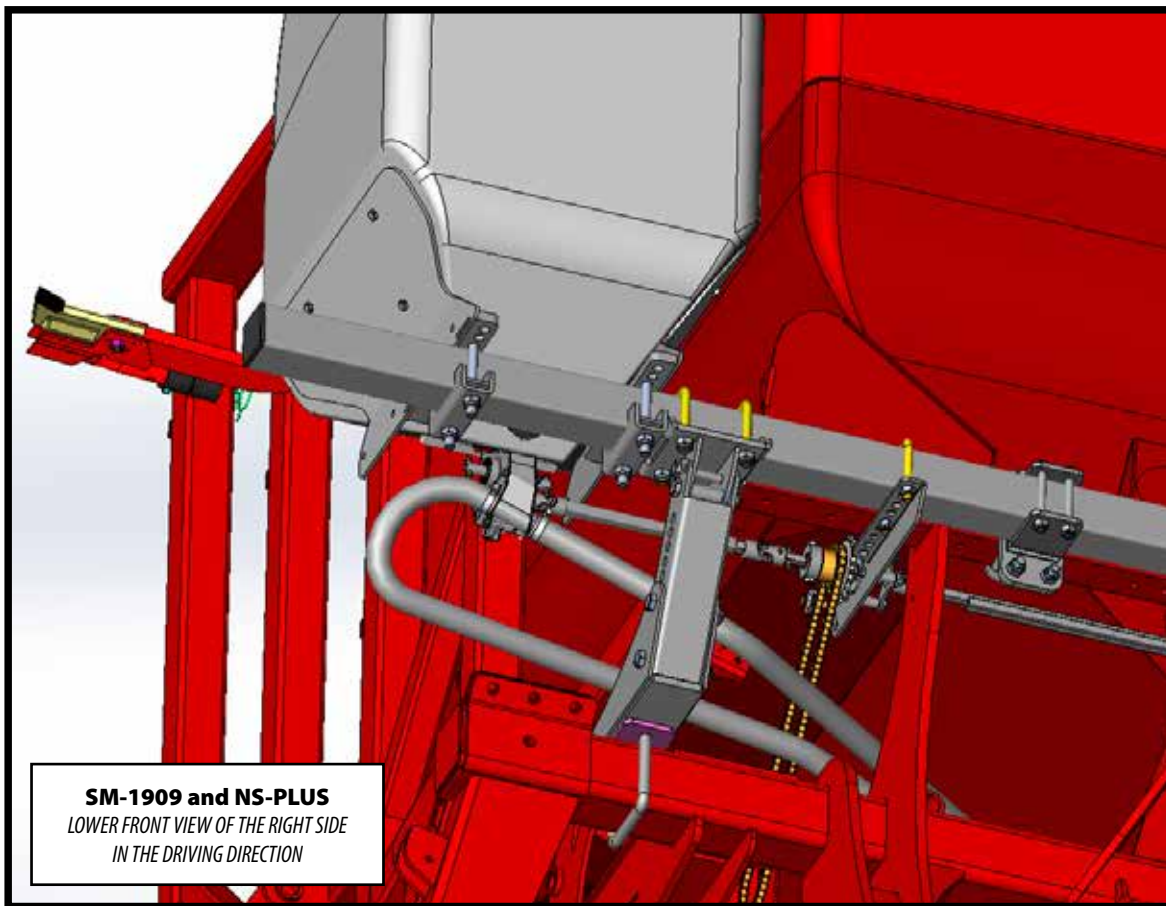
When assembling the kit, take into account the distance between the folded equipment and the micro-fertiliser hoppers.

An incorrect assembly may cause these elements to collide.

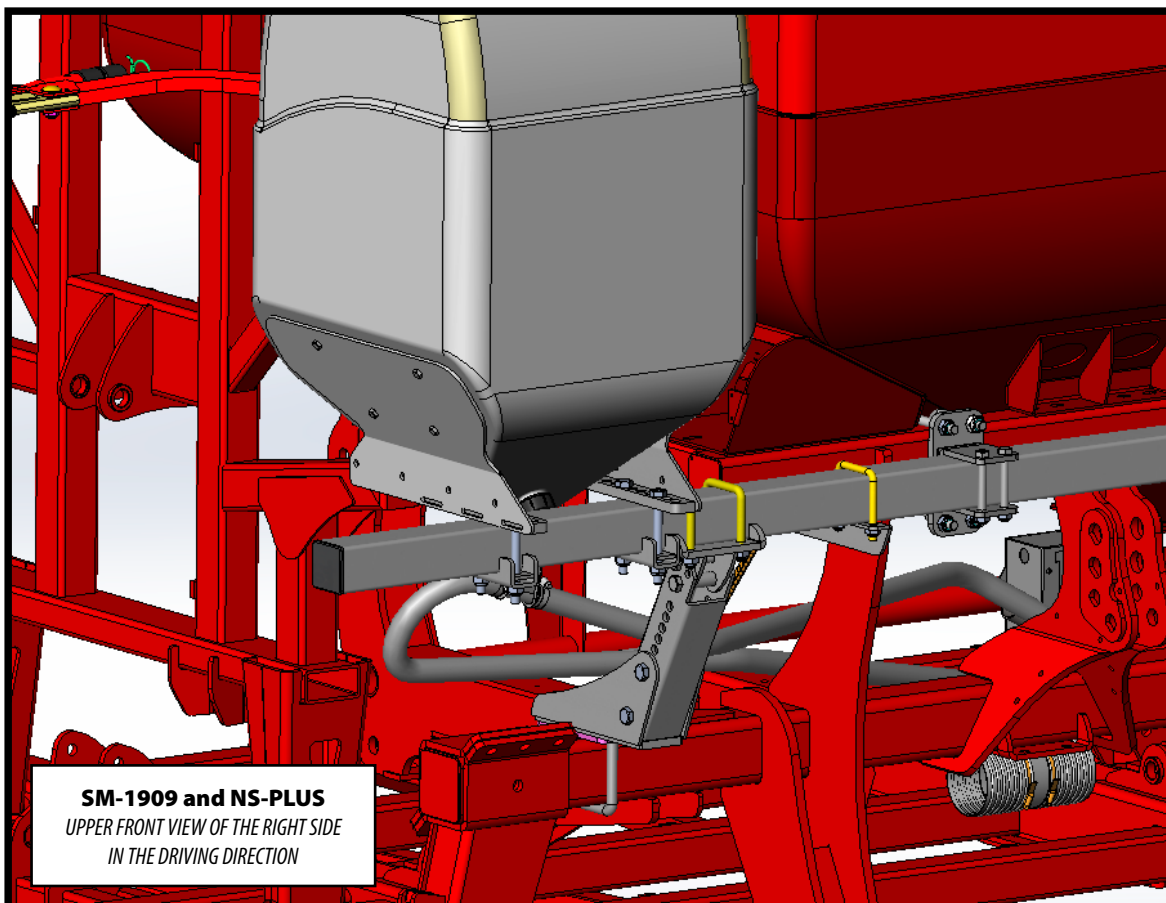
The picture shows the connecting rods in a normal working position and the looseness between the supporting piece and the hopper.



VERY IMPORTANT: when assembling the micro-fertiliser kit on a machine of type SM-1909 or NS-2311, the pillar's base must be made flush with the upper part of the green piece in the picture. If the green piece of the frame shows a straight edge, as displayed in the picture, place an 8 mm thick supplementary plate under the two pillar's base in order to level. If, on the other hand, the piece's edge is a smooth point, levelling will not be necessary and the pillar's base can be directly assembled on the piece, without the supplementary plate.



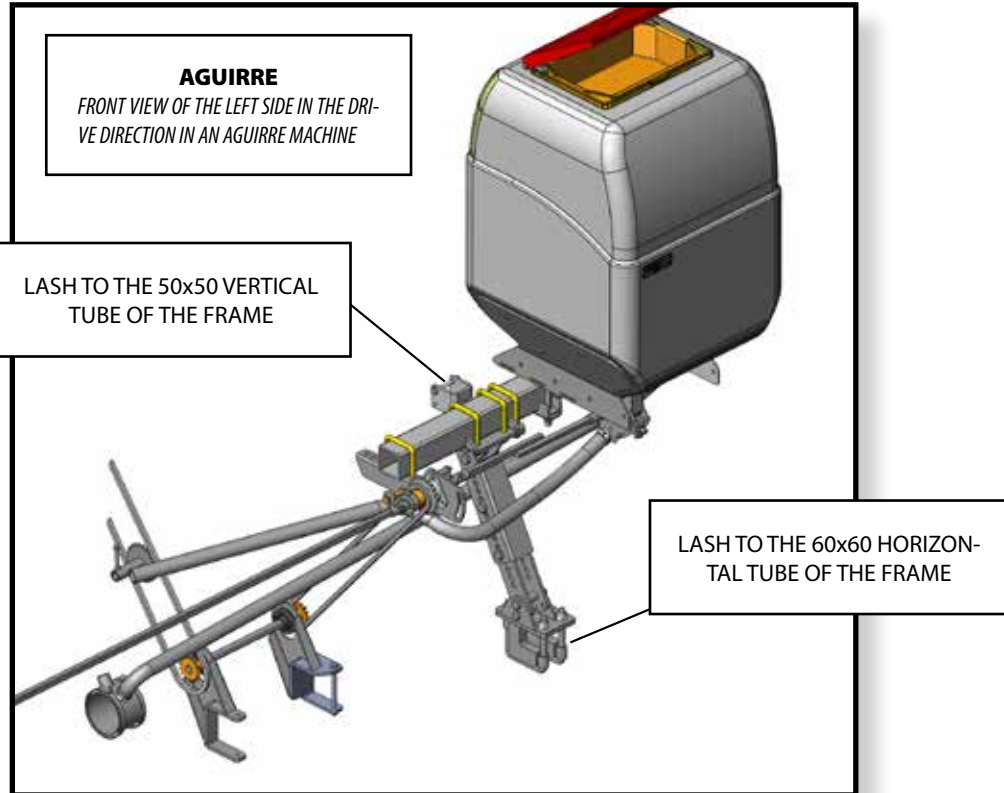
SM-1909 and NS-PLUS
*LOWER FRONT VIEW OF THE RIGHT SIDE
IN THE DRIVING DIRECTION*



SM-1909 and NS-PLUS
*UPPER FRONT VIEW OF THE RIGHT SIDE
IN THE DRIVING DIRECTION*

COMMENTS ON AGUIRRE SEED DRILLS

In this case, the 70x70 laminated tube has been cut to prevent any interference with the hopper. Due to the differences between frame models, some of them may not require the laminated piece to be cut. The chain gets traction at the metering box's inlet of the seed drill, and arrives to the kit's transmission axle through some derailleur pinions used to adjust the chain. The kit couples to the machine by means of 6 coupling points (three at each side) shown in this picture.

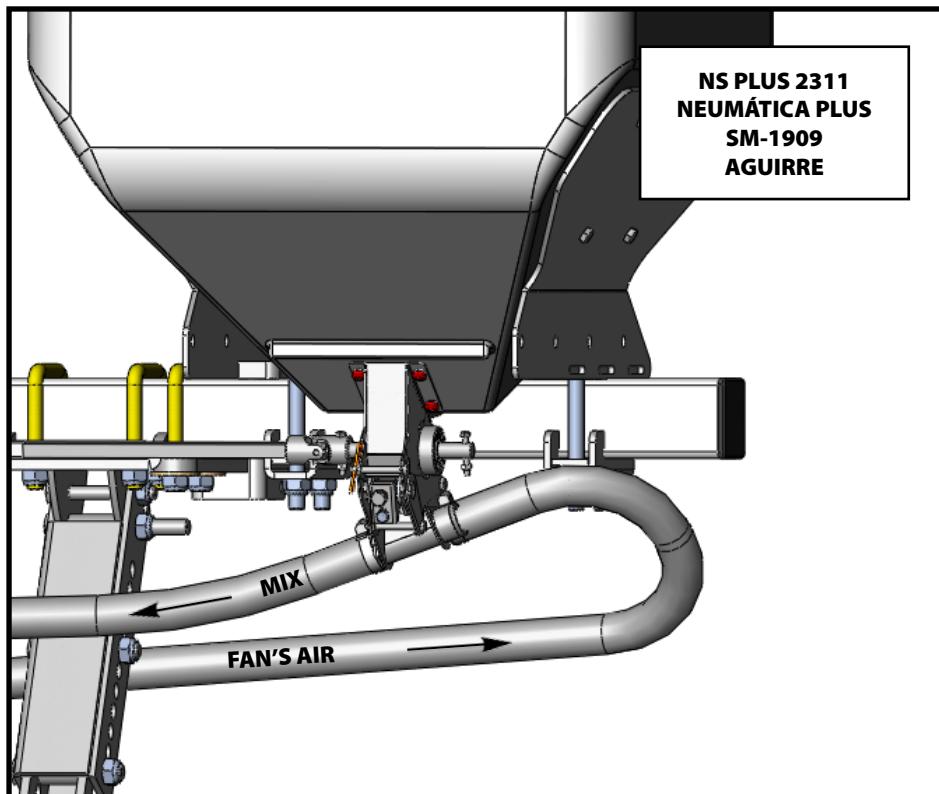


GENERAL COMMENTS

The air ducts must be assembled as shown in the next picture. Mix containing air and micro-fertiliser needs to be directed downwards.



IMPORTANT: WHEN ASSEMBLING THE KIT, PREVENT THE DUCTS FROM BENDING.



5- DOSAGE TABLES

For the next tables, the following considerations should be taken into account:

- The metering box's turning direction must be respected. It is shown by an arrow, pictured on its side.
- z3 is the interchangeable disc which gets traction from the machine.
- z4 is the pinion of 15 or 22 teeth with disconnection system which transmits traction to the inlet of the kit's metering boxes.
- New doses in the range between 40 and 60 Kg/Ha can be achieved by adapting new discs which can be easily manufactured
- Values in the following tables have been obtained after running tests with the product Agris-tart Magnum of ~ 0,9 Kg/L bulk density.

NEUMASEM , SM-1909, NS-PLUS-2311, NEUMÁTICA PLUS (FLOATING WHEEL +)

Cog wheels	WORKING WIDTH (cm)			
	400	450	500	600
z3 / z4	Approximate dose (Kg/Ha)			
19 / 15	62,1	63,7	62,1	59,7
18 / 15	58,8	60,3	58,8	56,6
17 / 15	55,6	57,0	55,6	53,4
15 / 15	49,0	50,3	49,0	47,1
13 / 15	42,5	43,6	42,5	40,9
12 / 15	39,2	40,2	39,2	37,7

AGUIRRE (FLOATING WHEEL +)

Cog wheels	WORKING WIDTH (cm)			
	400	450	500	600
z3 / z4	Approximate dose (Kg/Ha)			
23 / 15				57,8
19 / 15	71,7	63,7	57,3	47,8
18 / 15	67,9	60,3	54,3	45,3
17 / 15	64,1	57,0	51,3	42,7
15 / 15	56,6	50,3	45,3	37,7
13 / 15	49,0	43,6	39,2	32,7
12 / 15	45,3	40,2	36,2	30,2

AGUIRRE (WHEEL 10,80-12)

Cog wheels	WORKING WIDTH (cm)			
	400	450	500	600
z3 / z4	Approximate dose (Kg/Ha)			
23 / 15				64,5
19 / 15		71,1	64,0	53,3
18 / 15		67,4	60,6	50,5
17 / 15	71,6	63,6	57,2	47,7
15 / 15	63,1	56,1	50,5	42,1
13 / 15	54,7	48,6	43,8	36,5
12 / 15	50,5	44,9	40,4	33,7

NEUMASEM , SM-1909, NS-PLUS-2311, NEUMÁTICA PLUS (FLOATING WHEEL +)

Cog wheels	WORKING WIDTH (cm)			
	400	450	500	600
z3 / z4	Approximate dose (Kg/Ha)			
19 / 22	42,3	43,4	42,3	40,7
18 / 22	40,1	41,1	40,1	38,6
17 / 22	37,9	38,9	37,9	36,4
15 / 22	33,4	34,3	33,4	32,1
13 / 22	29,0	29,7	29,0	27,9
12 / 22	26,7	27,4	26,7	25,7

AGUIRRE (FLOATING WHEEL +)

Cog wheels	WORKING WIDTH (cm)			
	400	450	500	600
z3 / z4	Approximate dose (Kg/Ha)			
23 / 22	59,1	52,6	47,3	39,4
19 / 22	48,9	43,4	39,1	32,6
18 / 22	46,3	41,1	37,0	30,9
17 / 22	43,7	38,9	35,0	29,1
15 / 22	38,6	34,3	30,9	25,7
13 / 22	33,4	29,7	26,7	22,3
12 / 22	30,9	27,4	24,7	20,6

AGUIRRE (WHEEL 10,80-12)

Cog wheels	WORKING WIDTH (cm)			
	400	450	500	600
z3 / z4	Approximate dose (Kg/Ha)			
23 / 22		58,7	52,8	44,0
19 / 22	54,5	48,5	43,6	36,4
18 / 22	51,7	45,9	41,3	34,4
17 / 22	48,8	43,4	39,0	32,5
15 / 22	43,1	38,3	34,4	28,7
13 / 22	37,3	33,2	29,8	24,9
12 / 22	34,4	30,6	27,6	23,0

6- MAINTENANCE



IN CASE OF MALFUNCTION, STOP THE FRONT HOPPER IMMEDIATELY AND REMOVE THE IGNITION KEY. LEAVE THE TRACTOR AND VISUALLY INSPECT AND EVALUATE THE EXTENT OF THE PROBLEM. PERFORM THE REQUIRED OPERATIONS ON THE FRONT HOPPER BEFORE RESTARTING IT.



MAINTENANCE OPERATIONS MUST BE PERFORMED IN PROPERLY EQUIPPED GARAGES BY QUALIFIED PERSONNEL.



NO REPAIRS SHOULD BE PERFORMED WITHOUT THE NECESSARY SKILLS AND KNOWLEDGE. IT IS ESSENTIAL THAT THE INSTRUCTIONS DETAILED IN THIS MANUAL ARE STRICTLY FOLLOWED. IF THESE INSTRUCTIONS ARE MISSING, PLEASE CONTACT THE FRONT HOPPER'S PROVIDER OR QUALIFIED PERSONNEL.



IN ORDER TO PERFORM MAINTENANCE OR REPAIR OPERATIONS TO THE FRONT HOPPER, IT IS ESSENTIAL TO USE PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE): SAFETY BOOTS AND GLOVES, HEARING PROTECTION, DUST MASK AND PROTECTIVE GLASSES).



IT IS RECOMMENDED TO AVOID WEARING LOOSE CLOTHING SINCE IT MAY BECOME TANGLED WITH THE MACHINE'S MOVING PARTS.

Before performing any task on the machine, it is essential to take into account the following factors:

- Maintaining or repairing the front hopper should be performed on a flat and compact ground. Before starting any of these tasks, the tractor's engine must be turned off and the ignition key removed.
- The chosen device to raise the front hopper needs to be appropriate for the operations to be performed. Please ensure that all safety regulations are observed.
- Always use appropriate protective equipment for any task to be performed.
- In case compressed air is used to clean the front hopper, or an airbrush is used to paint any front hopper's part, you are required to wear protective glasses and mask.
- If any operation needs to be performed on a part of the machine which is at more than 1,5 metres height from the ground, check if it is possible to reach this part using the front hopper's access points (front hopper's access platform). If not possible, use either a ladder or a platform which is in accordance with the current safety regulations.
- Prolonged and/or repetitive skin contact with fuel and lubricants is harmful. In case these products come accidentally into contact with the eyes or other sensitive parts, wash well the affected parts with clean water. In case of ingestion, contact the medical services immediately.

6.1 CHECKING FREQUENCY

The frequency of the checks indicated below is provided as a guideline. It may vary depending on machine application and use, environment, temperature, weather conditions, etc.

- BEFORE STARTING THE SOWING SEASON

Check the general operation of the machine. Perform this check without any micro-fertiliser inside the hopper.

Check that the plastic components of the machine are in good condition. The wear of this material due to natural ageing or to the presence of rodents causes damages to these components.

Check that all mechanical parts are in good condition and do not show rust.

Clean the parts of the machine which are permanently in contact with the chemical products, such as metering boxes.

Check that no ducts or pipe unions from the hydraulic system are leaking.

- PERIODICALLY

Before washing the equipment with water, check that there are no micro-fertiliser remains inside the hopper or the metering boxes. After washing the machine, turn on the fan for some minutes in order to remove the moisture from the air circuit.

Check that all the screws are in good condition. Tighten every single screw and nuts.

Check that both the metering box and the pneumatic circuit do not contain any residue (such as fertiliser residue, dust, etc). Residue accumulation may block or damage some parts.

Check that the transmission chain is tight.

- PERIOD OF INACTIVITY / END OF SOWING SEASON

Wash the equipment well with a lot of water, making sure that no products remain inside the hoppers, metering boxes or ducts.

Properly lubricate the transmission (see section 6.2 GREASING AND LUBRICATING).

Repaint any metallic part whose paint has been worn out due to work.

Thoroughly check all components and replace the ones which are damaged or worn.

Lubricate and tighten the transmission chain.



PERFORM THESE OPERATIONS ONLY WHEN THE TRACTOR'S ENGINE IS OFF AND THE IGNITION KEY HAS BEEN REMOVED.

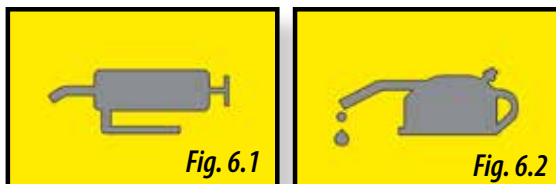


AFTER THE FIRST 10 HOURS OF WORK, TIGHTEN THE SCREWS THAT SECURE THE METERING UNITS, THE THREE POINT LINKAGE, THE WHEELS AND THE TRACK MARKERS' SUPPORTS.

6.2 GREASING AND LUBRICATION

Every non-painted metallic component of the machine is exposed to atmospheric and weather conditions, which may oxidize them. For this reason, it is important to grease and lubricate these components.

Attached to specific parts of the front hopper, you will find adhesives with symbols to indicate the parts to be GREASED (Fig. 6.1) or the points to be LUBRICATED (Fig. 6.2).



BEFORE LUBRICATING OR GREASING, WASH THE EQUIPMENT TO REMOVE EARTH RESIDUES ATTACHED TO THE MACHINE (see section 6.3 CLEANING).



PTO LUBRICATE THE INDICATED PARTS, ALWAYS USE HIGH PERFORMANCE OIL TO GET A RELIABLE LUBRICATION.



TO GREASE THE INDICATED PARTS, ALWAYS USE SOLID CALCIUM GREASE.



THE TRANSMISSION CHAIN NEEDS TO BE GREASED EVERY 50 WORKING HOURS AND AT THE END OF SEASON (SEE SECTION 6.1 CHECKING FREQUENCY). NOT OBSERVING THESE GREASING RULES MAY RESULT IN DAMAGE TO THE MACHINE.

6.3 CLEANING

The equipment must be well washed using running water or, preferably using a high-pressure cleaner. In order to prevent the mechanical parts from rust, let the machine dry before proceeding to grease and lubricate it.

After washing the machine, turn on the fan for some minutes in order to remove the moisture from the air circuit.



EVERY TIME THE HOPPERS ARE CLEANED USING COMPRESSED AIR, USE PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) (see section 6- MAINTENANCE).

7- SPARE PARTS

The terms **RIGHT**, **LEFT**, **FRONT** and **REAR** refer to the machine in its DRIVE DIRECTION.

When guidance describes parts that have a matching pair (symetrical handles, wheels etc) only one will be demonstrated in the drawings shown. Please search for the distinguishing reference in the spare parts list.



The number and type of the machine can be found on the machine's IDENTIFICATION PLATE, on the front part of the frame.



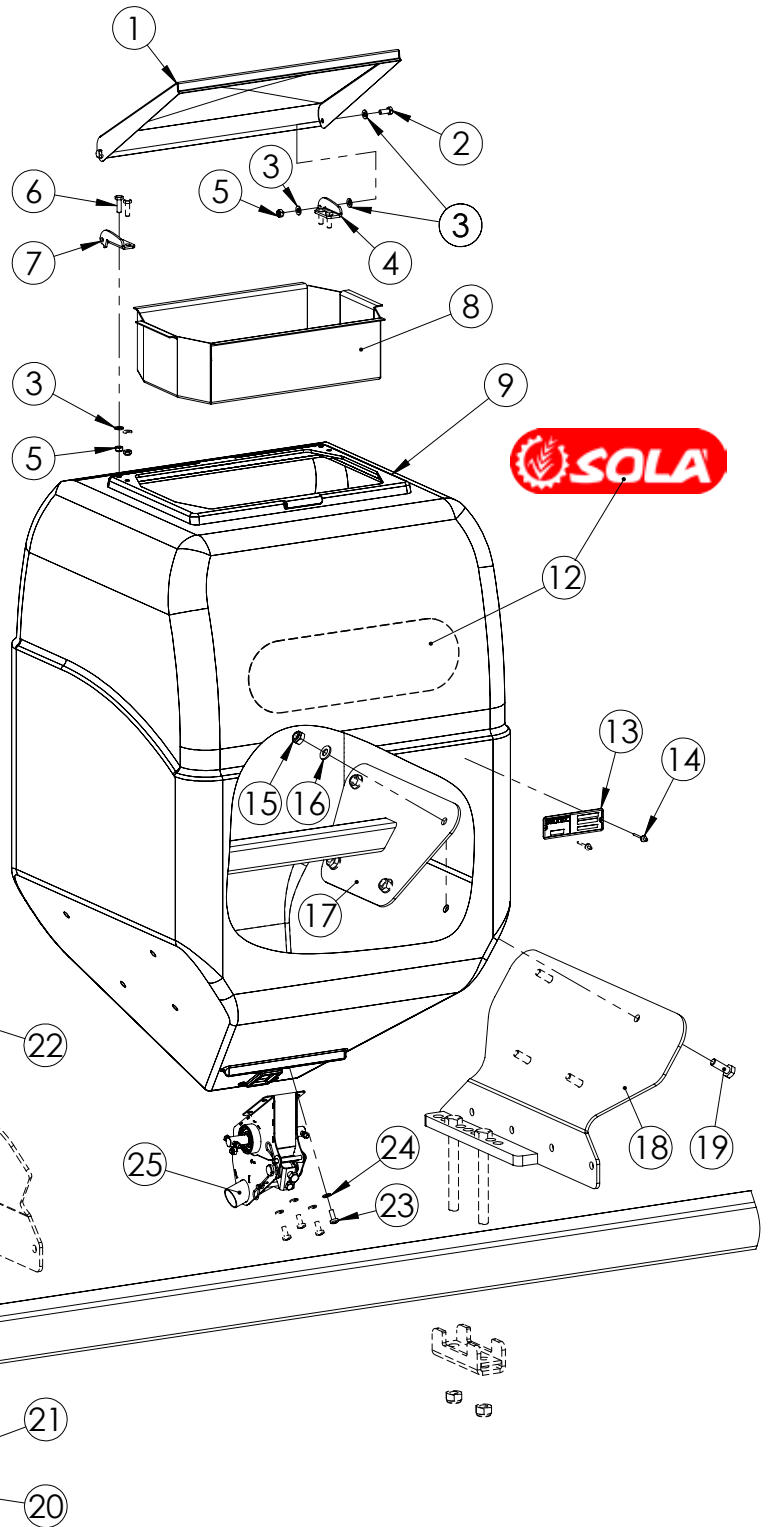
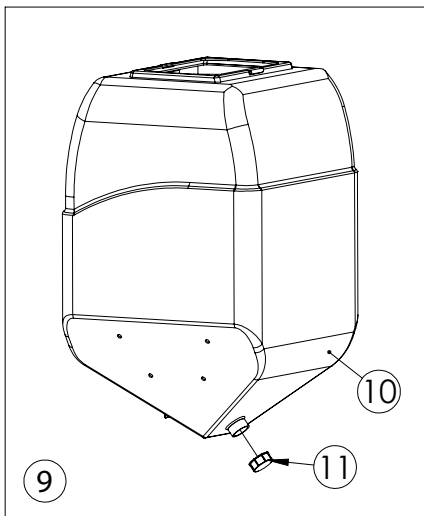
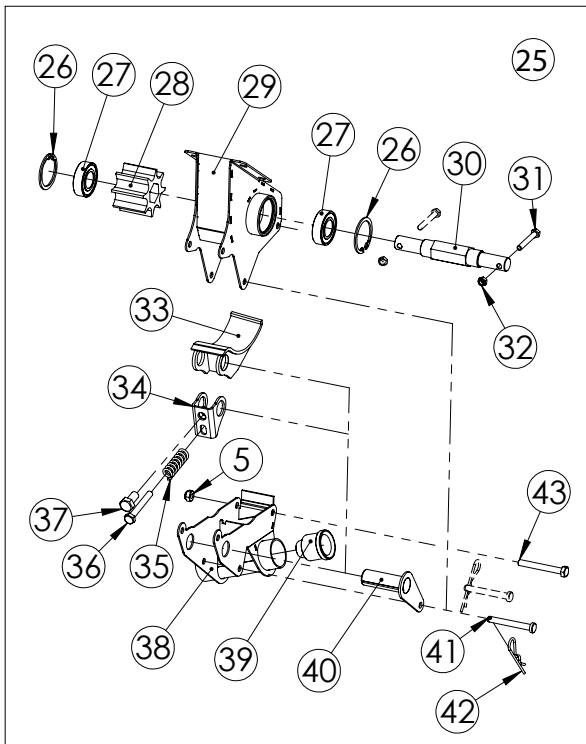
BE CAREFUL WHEN REPLACING ANY PART OF THE MACHINE, SHARP EDGES CAN CAUSE INJURY.



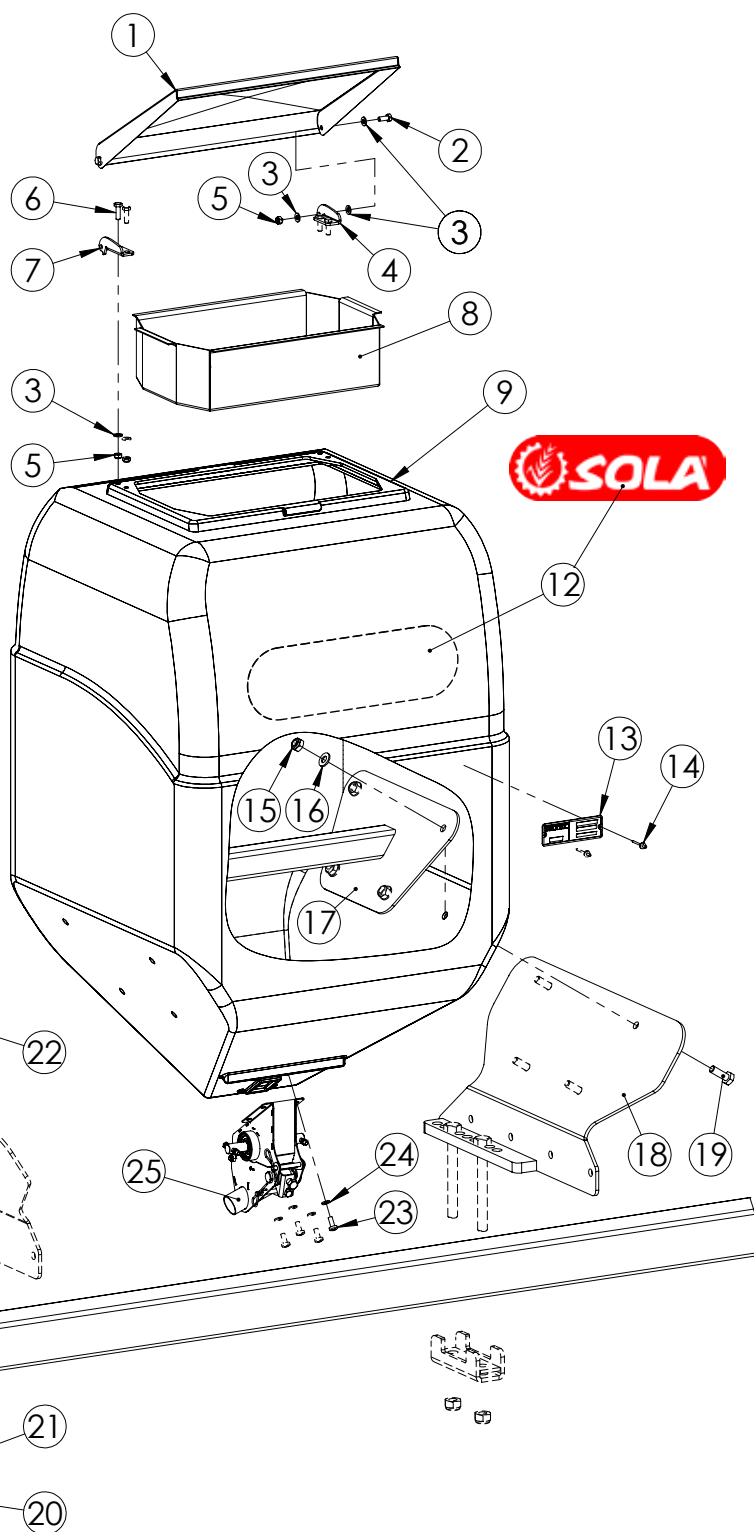
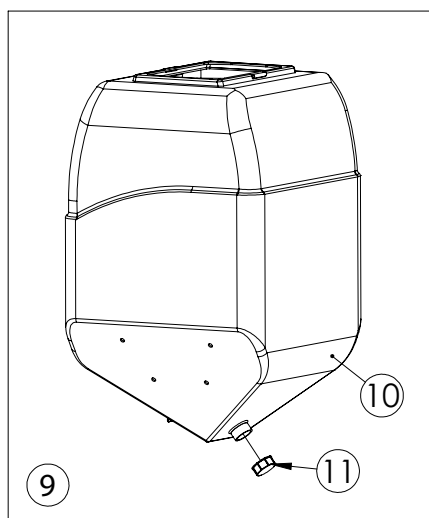
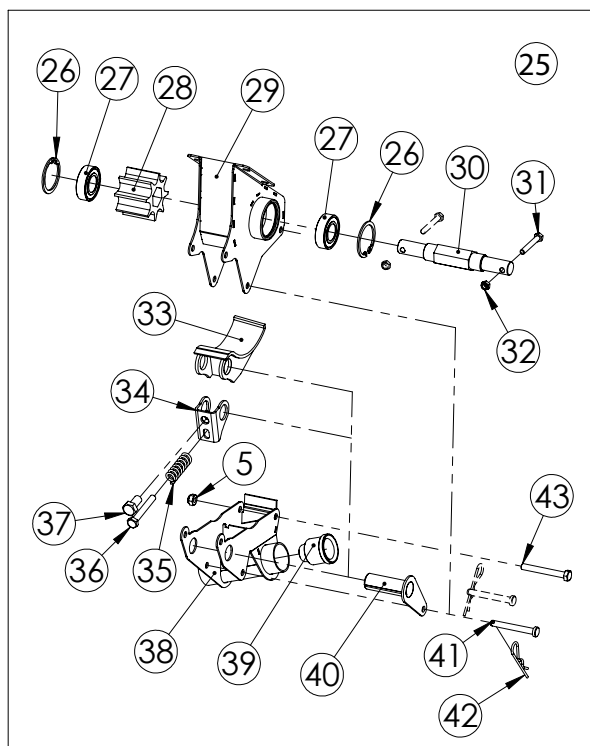
AS A GENERAL RULE, DO NOT WORK UNDER THE MACHINE WHEN IT IS RAISED. IF SUCH A WORK IS REQUIRED, ALWAYS SECURE THE MACHINE PROPERLY TO PREVENT IT FROM COLLAPSING AS A PRESSURE LOSS IN THE TRACTOR CAN OCCUR.

7.1- HOPPERS

Nº	REFERENCE	DESCRIPTION
1	PS-021719	CONJUNTO TAPA TOLVA MICRO PROSEM
2	933 6X15 I	TORNILLO DIN 933 M6X15 INOXIDABLE
3	125 6 I	ARANDELA PLANA DIN 125 M6 INOXIDABLE
4	PX-021773/D	CHAPA SOPORTE DER. TAPA MICRO
5	985 6 I	TUERCA DIN 985 M6 INOX
6	933 6X20 I	TORNILLO DIN 933 M6X20 INOX
7	PX-021773/I	CHAPA SOPORTE IZQ. TAPA MICRO
8	PS-201326	CRIBA TOLVA PLASTICO MICROGR. 2012
9	CO-101312	TOLVA MICROGRANULADOS C/TAPON S/TAPA 2012 PE
10	PL-101303	TOLVA MICROGRANULADOS 2012 PE
11	PL-101305	TAPON ROSCADO 1 1/2"
12	AD-071318	CONJUNTO ADHESIVO TOLVA PLASTICO MICROGR.
13	AD-070217	PLACA PATENTE 100X33 ALUMINIO MATE
14	FE-602005	REMACHE ACER INOX 3,2X9,5
15	985 10 I	TUERCA DIN 985 M10 INOX
16	125 10 I	ARANDELA DIN 125 10 INOX
17	PS-201310	REFUERZO INTERIOR TOLVA MICROGR.
18	PS-201325/D	SOPORTE TOLVA PLASTICO DERECHO
18	PS-201325/I	SOPORTE TOLVA PLASTICO IZQUIERDO
19	933 10X30 I	TORNILLO DIN 933 M10X30 INOX
20	985 14	TUERCA DIN 985 M14
21	PS-052820	BRIDA 70 BRAZO SIEMBRA REGULABLE SM-1909
22	931 14X130 8.8B	TORNILLO DIN 931 14X130 8.8 BI
23	7985 6X15 BI	TORNILLO DIN 7985 6x15 BI
24	127 6 I	ARANDELA GROWER DIN 127 M6 INOX
25	MO-101363/D	DISTRIBUIDOR MICROGR. NEUMASEM 2012 DER.
25	MO-101363/I	DISTRIBUIDOR MICROGR. NEUMASEM 2012 IZQ.
26	472 35	ANILLO SAEGER DIN 472 35
27	FE-600092	RODAMIENTO 6003 2RSR CLASE C
28	PL-101301	RODILLO DISTRIBUIDOR MICROG. NEUMASEM-11
29	PS-201313	CUERPO SUP. DISTRIBUIDOR MICROG. 2012
30	ME-101343	EJE DISTRIBUIDOR MICROG. NEUMASEM
31	931 5X35 8.8B	TORNILLO DIN 931 M5X35 8.8 BICROMATADO
32	985 5	TUERCA DIN 985 M5 BICROMATADO
33	PL-040205	TAPETA FONDO MOVIL

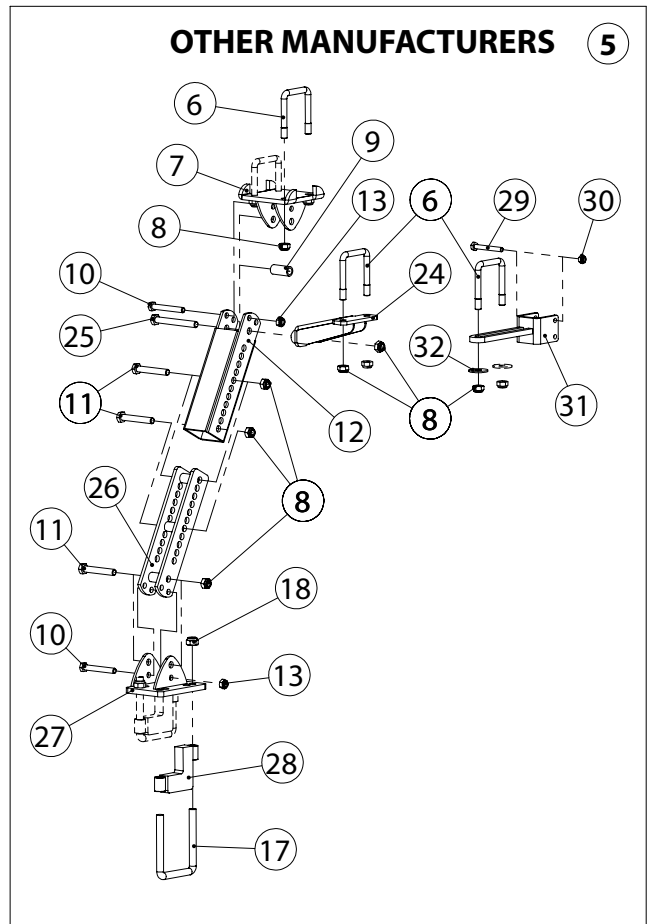
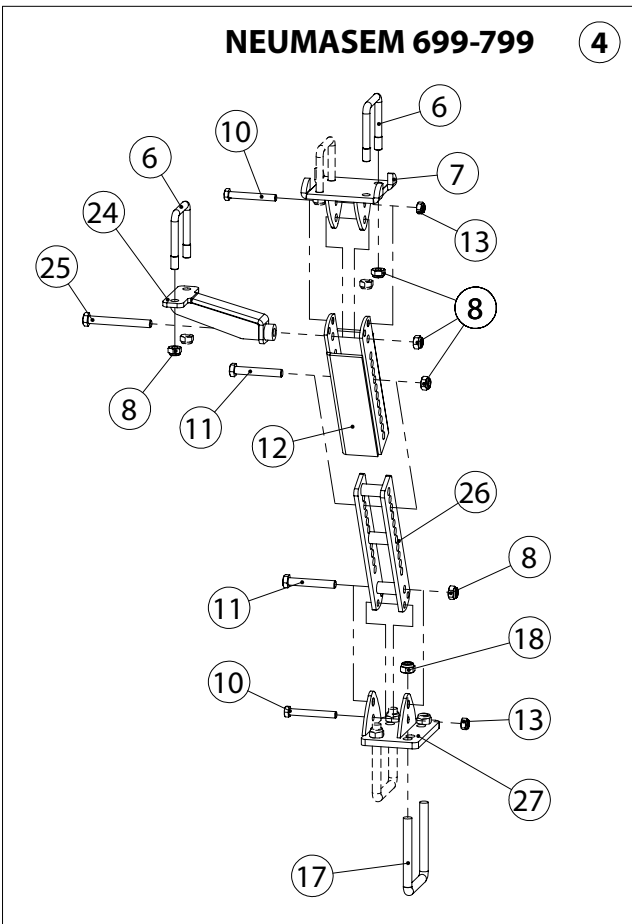
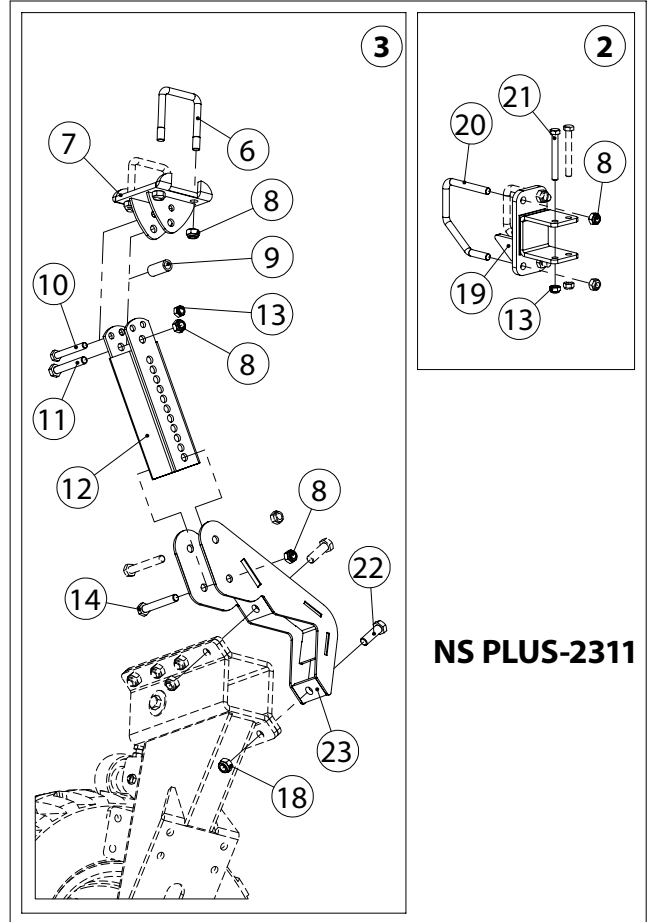
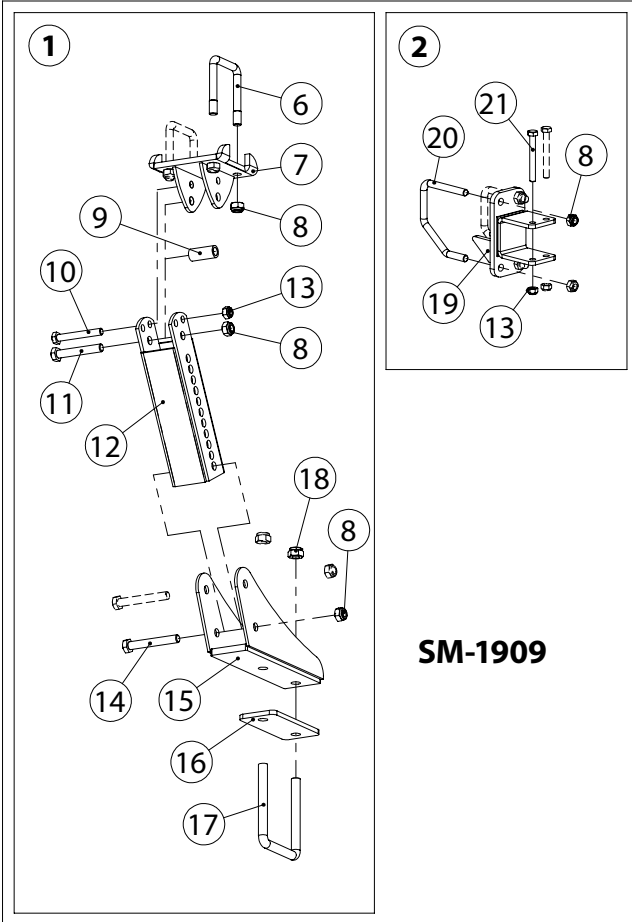


34	EE-040235	BRIDA SOPORTE TAPETA FONDO MÓVIL INOX
35	M01-60	MUELLE TAPETA FONDO MOVIL SEMBRADORA
36	931 6X45 I	TORNILLO DIN 931 M6X45 INOX
37	933 8X20I PUNTA	TORNILLO DIN 933 8X20 INOX CON PUNTA
38	PS-201312/D	CUERPO INF. DISTRIBUIDOR MICROGR. DER.
38	PS-201312/I	CUERPO INF. DISTRIBUIDOR MICROGR. IZQ.
39	ME-101349	BOQUILLA VENTURI MICROG. NEUMASEM-11
40	PS-101381	EJE FONDO MOVIL DISTRIBUIDOR MICROGR. 2011
41	BU-101303	BULON Ø6X52 INOX
42	FE-610018	PASADOR "R" DE 2 MM
43	931 6X50 I	TORNILLO DIN 931 6X50 INOX
44	CT-101363	TUBO 70X70X5X2857
45	CN-817049	CONTERA PARA TUBO 70X70X5



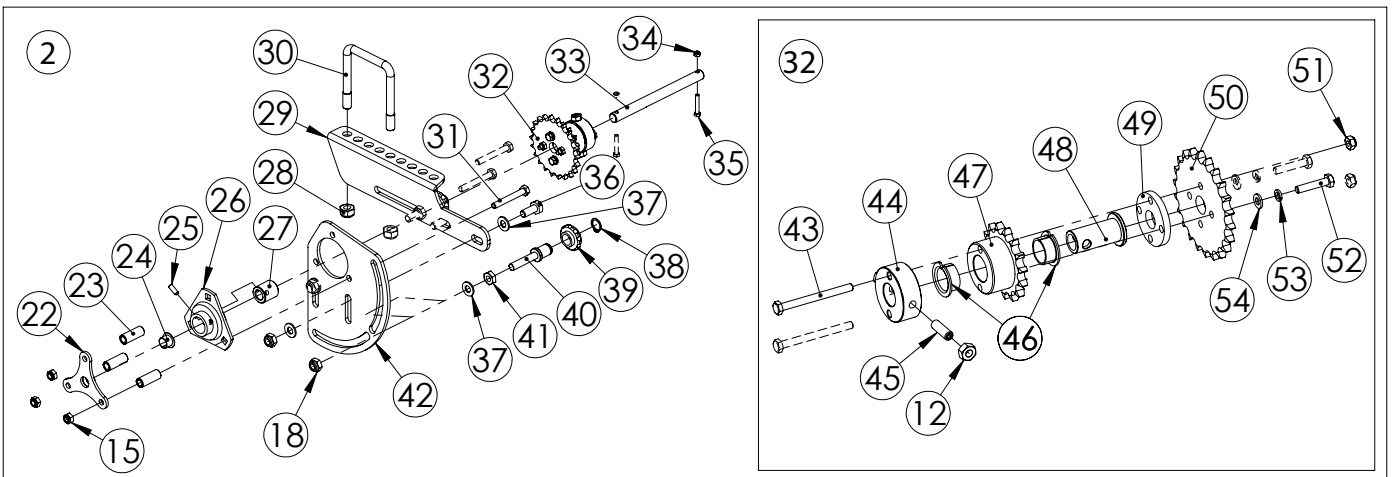
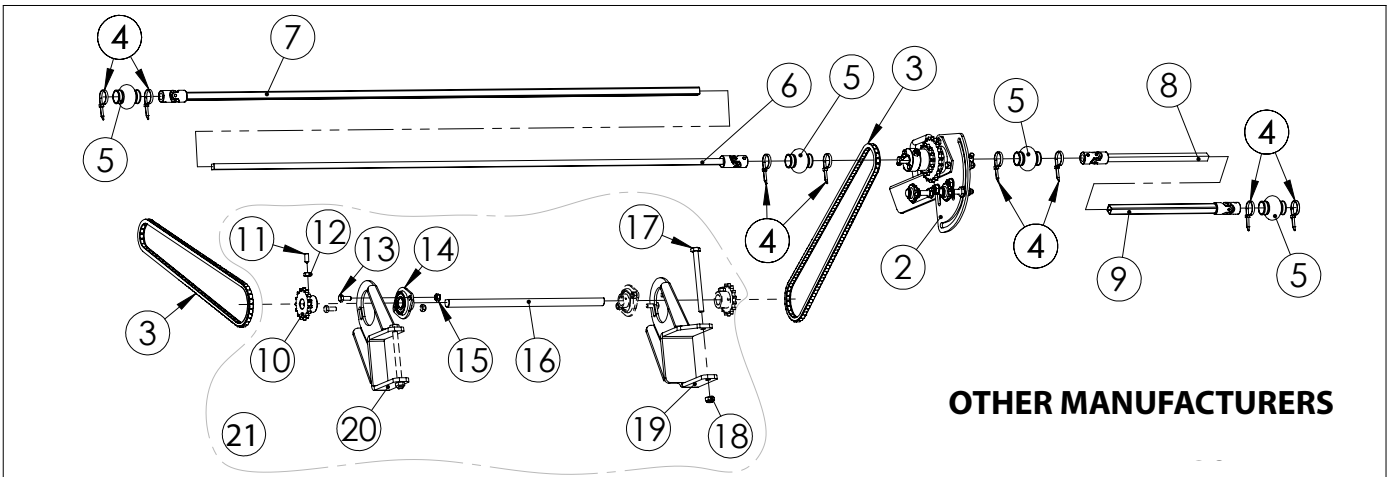
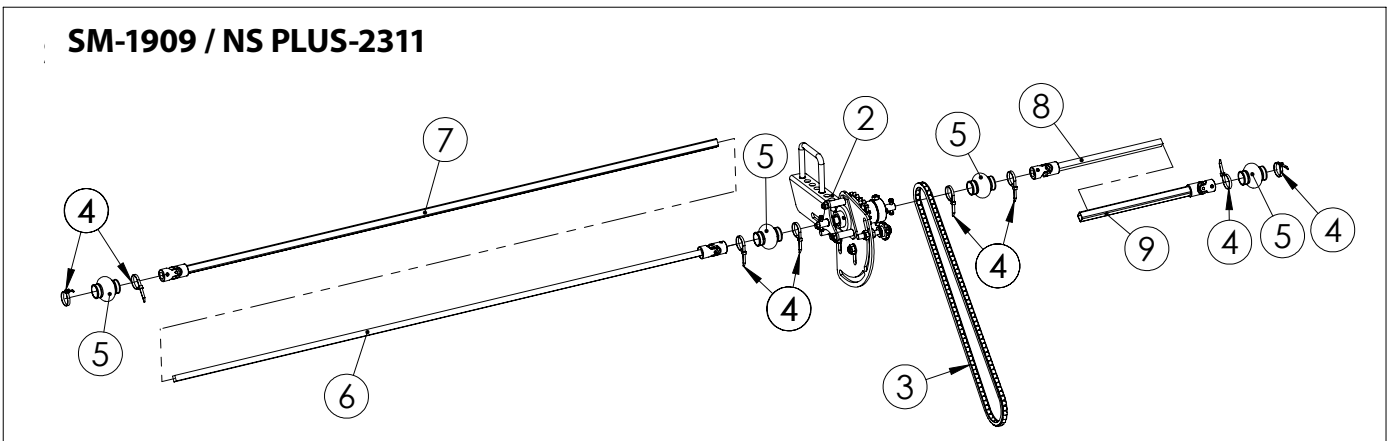
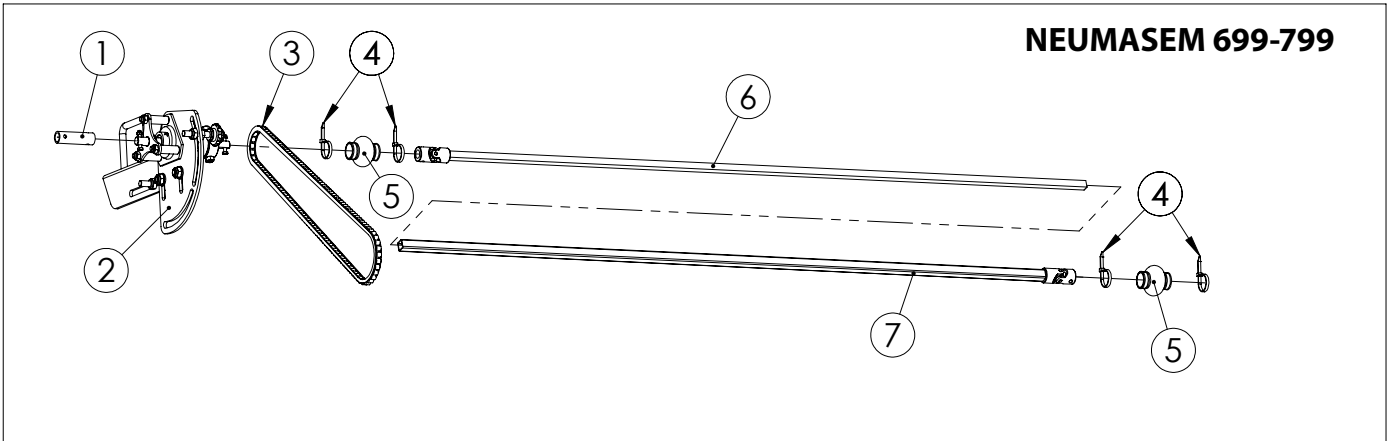
7.2- HOPPERS'S SUPPORTING PIECES

Nº	REFERENCE	DESCRIPTION
1	MO-102829	SOPORTE TUBO 70 MICROGR. SM-1909/NS-PLUS
2	MO-102830	UNION TUBOS KIT MICROGR. SM-1909/NS-PLUS
3	MO-101381	SOPORTE RUEDA MICROGR. NS-PLUS-2311
4	MO-101372	MONTAJE SOPORTE EXTENSIBLE NEUMASEM
5	MO-101376	SOPORTES TUBO 70 MICROGR. AGUIRRE
6	EE-101353	BRIDA "U" 70 M-14
7	PS-101386	SOPORTE SUP.EXTENSIBLE MICROG. NEUMASEM-11
8	985 14	TUERCA DIN 985 M14
9	ME-101346	SEPARADOR EXTENSIBLE EXT. MICROG. NEUMASEM-11
10	931 12X90 8.8 B	TORNILLO DIN 931 M12X90 8.8 BI
11	931 14X90 8.8 B	TORNILLO DIN 931 M14X90 8.8 BI
12	PS-101388	EXTENSIBLE SUPERIOR MICROG. NEUMASEM-11
13	985 12	TUERCA DIN 985 M12
14	931 14X100 8.8B	TORNILLO DIN 931 14X100 8.8 BI
15	PS-102814	UNION TUBOS KIT MICROG. SM-1909
16	PX-102852	SUPLEMENTO BASE PILAR SM-1909 NS-PLUS 2012
17	EE-063126	BRIDA TUBO 100 M16x136 LAMUSA
18	985 16	TUERCA DIN 985 M16
19	PS-102814	UNION TUBOS KIT MICROG. SM-1909
20	EE-102802	BRIDA M-14 KIT MICROG. SM-1909
21	931 12X100 8.8B	TORNILLO DIN 931 12X100 8.8 BI
22	933 16X50 8.8 B	TORNILLO DIN 933 M16X50 8.8 BI
23	PS-102835	BASE SOPORTE MICROGR. NS-PLUS 2012
24	PS-101372	ESCUADRA SOPORTE EXTENSIBLE MICROGR.2011
25	931 14X120 8.8B	OBSOLETO
26	PS-101389	EXTENSIBLE INFERIOR MICROG. NEUMASEM-11
27	PS-101387	SOPORTE INF. EXTENSIBLE MICROG. NEUMASEM-11
28	PS-101379	SUPLEMENTO BRIDA 100 P/TUBO 60 KIT MICROG. AG.
29	931 10X80 8.8 B	TORNILLO DIN 931 M10X80 8.8 BI
30	985 10	TUERCA DIN 985 M10
31	PS-101395	AMARRE COLISO P/TUBO 70 A 50 MICROGRANULADOS 11
32	9021 14 BI	ARANDELA PLANA DIN 9021 M14 BI

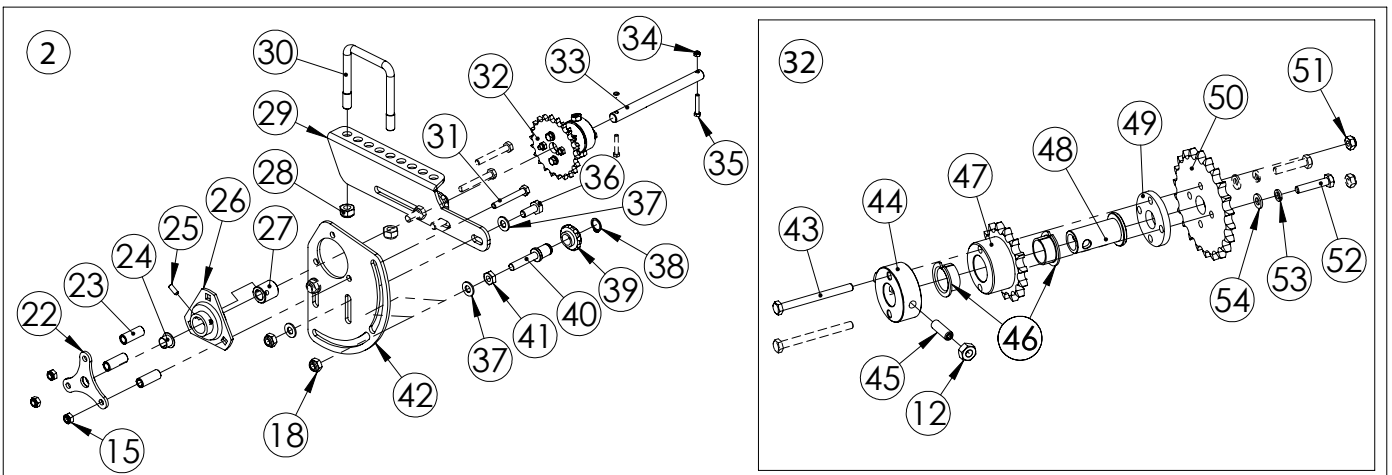
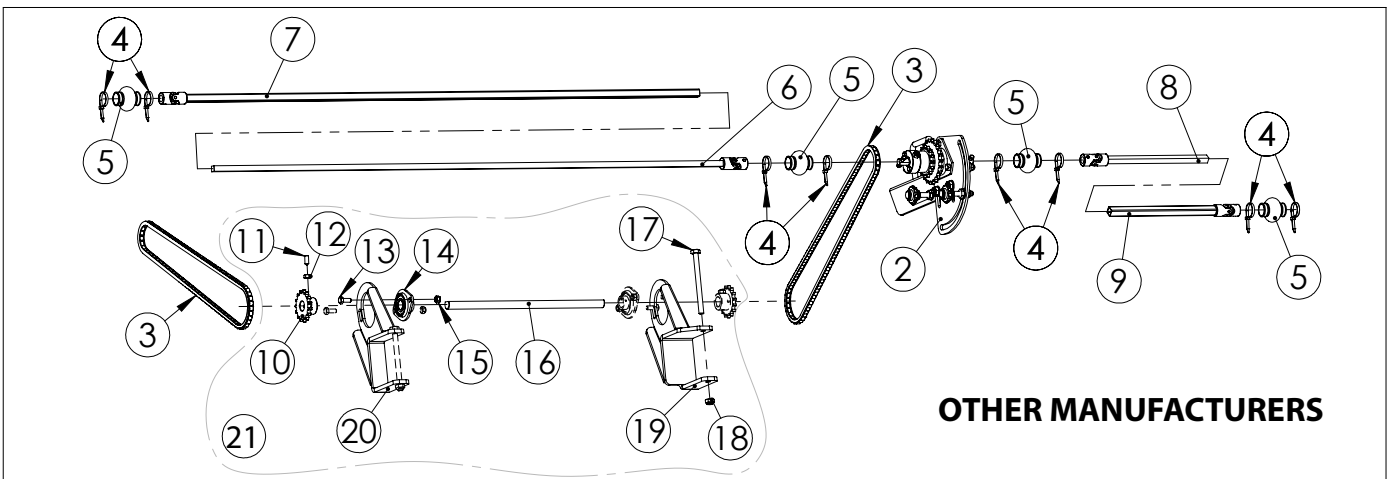
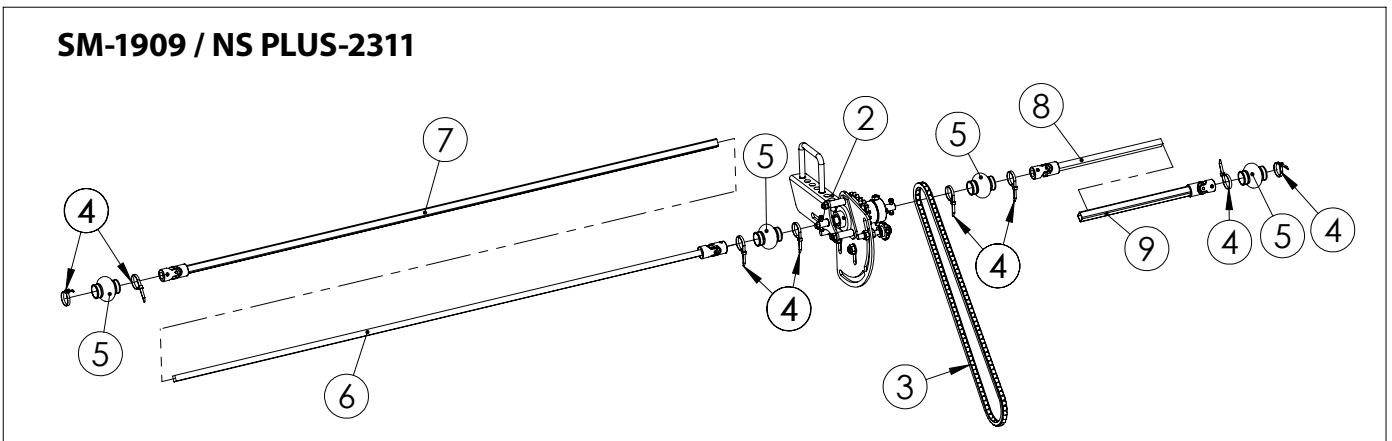
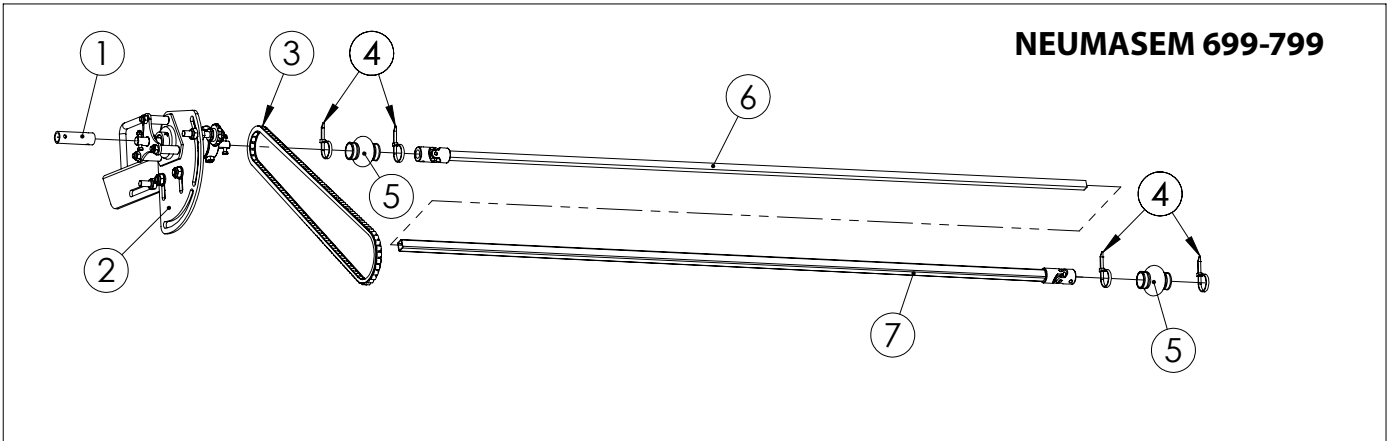


7.3- TRANSMISSION

Nº	REFERENCE	DESCRIPTION
1	TA-102807	TUBO EMPALME TRANSM. MICROGR. NEUMASEM 2012
2	MO-101373	SOPORTE RODAMIENTO PARA TRANSMISION
3	FE-605067	CADENA 1/2" ISO 08B-1 L=1308,1 101P+AC+1E ABIER
4	FE-606013	BRIDA NYLON 4,8X200
5	PL-041714	FUELLE JUNTA UNIVERSAL 104G
6	PS-102826	MACHO LARGO TRANSM. TElesc. MICROGRANULADOS 2012
7	PS-102827	HEMBRA LARGA TRANSM. TElesc. MICROGRANULADOS 2012
8	PS-102824	MACHO CORTO TRANSM. TElesc. MICROGRANULADOS 2012
9	PS-102825	HEMBRA CORTA TRANSM. TElesc. MICROGRANULADOS 2012
10	ME-041107	PIÑON 15Z 1/2" EJE C. HA. TOLVA PRATENSE
11	914 8X20 BI	ESPARRAGO ALLEN DIN 914 M-8X20 BICROMATADO
12	934 8	TUERCA DIN 934 M8
13	933 8X20 8.8 B	TORNILLO DIN 933 M8X20 8.8 BI
14	FE-600134	RODAMIENTO 1020 C/SOPORTE SLFL20A (2 AGUJEROS)
15	985 8	TUERCA DIN 985 M8
16	ME-101351	EJE INTERMEDIO Ø 20 CADENA MICROGR. 2011
17	931 10X130 8.8 B	TORNILLO DIN 931 M 10X130 8.8 BICROMATADO
18	985 10	TUERCA DIN 985 M10
19	PS-101396	SOPORTE ANCHO EJE INTERM. CADENA MICROGR-11
20	PS-101390	SOPORTE EJE INTERM. CADENA MICROGR. 2011
21	MO-101377	SOPORTE EJE INTERMEDIO AGUIRRE
22	PS-102837	APOYO PIÑON DESCONEXION MICROGR. NEUMATICO
23	ME-102826	DISTANCIADOR APOYO PIÑON DESCONEX. MICRO. NEUMAT.
24	FE-600055	CASQUILLO DE FRICCION D14xD16x12 CON VALONA
25	916 6X16 BI	ESPARRAGO ALLEN DIN 916 M6X16 BICROMATADO
26	FE-600133	RODAMIENTO 1025 C/SOP. TRIANGULAR SLFT25A
27	ME-101347	ACOPLAMIENTO EJE 14 A ROD.1025 C/SOP MICROG.2011
28	985 12	TUERCA DIN 985 M12
29	PX-101392-02	BASE SOP. AJUSTABLE RODAM. MICROGR. NEUMAT. 2014
30	EE-061712	BRIDA "U" 70
31	931 8X60 8.8 B	TORNILLO DIN 931 M8X60 8.8 BI
32	MO-101340	EMBREGUE PIÑON 15Z MICROGR. NEUMASEM
33	ME-101348	EJE Ø14 TRANSMISION MICROG. NEUMASEM-11
34	985 5	TUERCA DIN 985 M5 BICROMATADO
35	931 5X30 8.8B	TORNILLO DIN 931 M-5X30 8.8 BICROMATADO

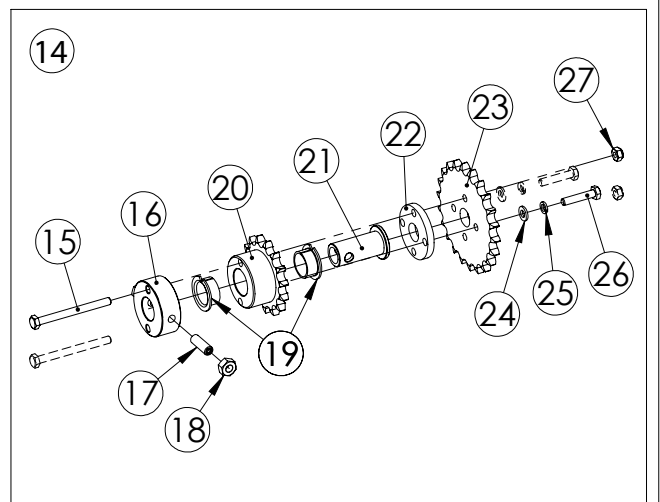
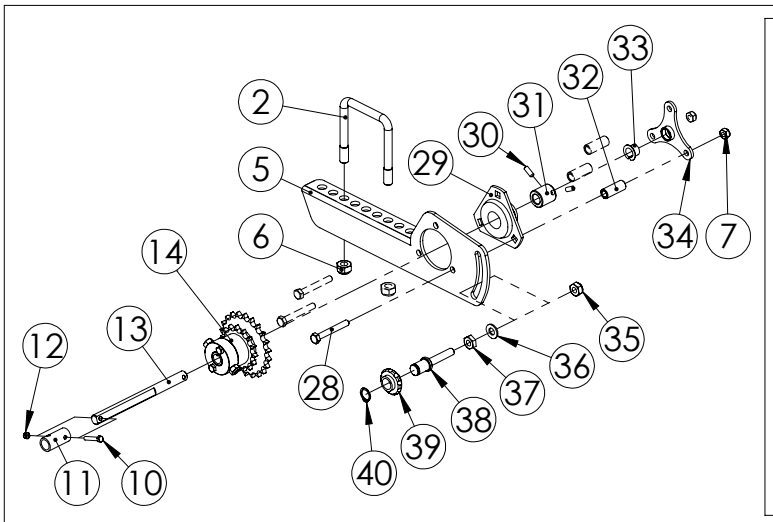
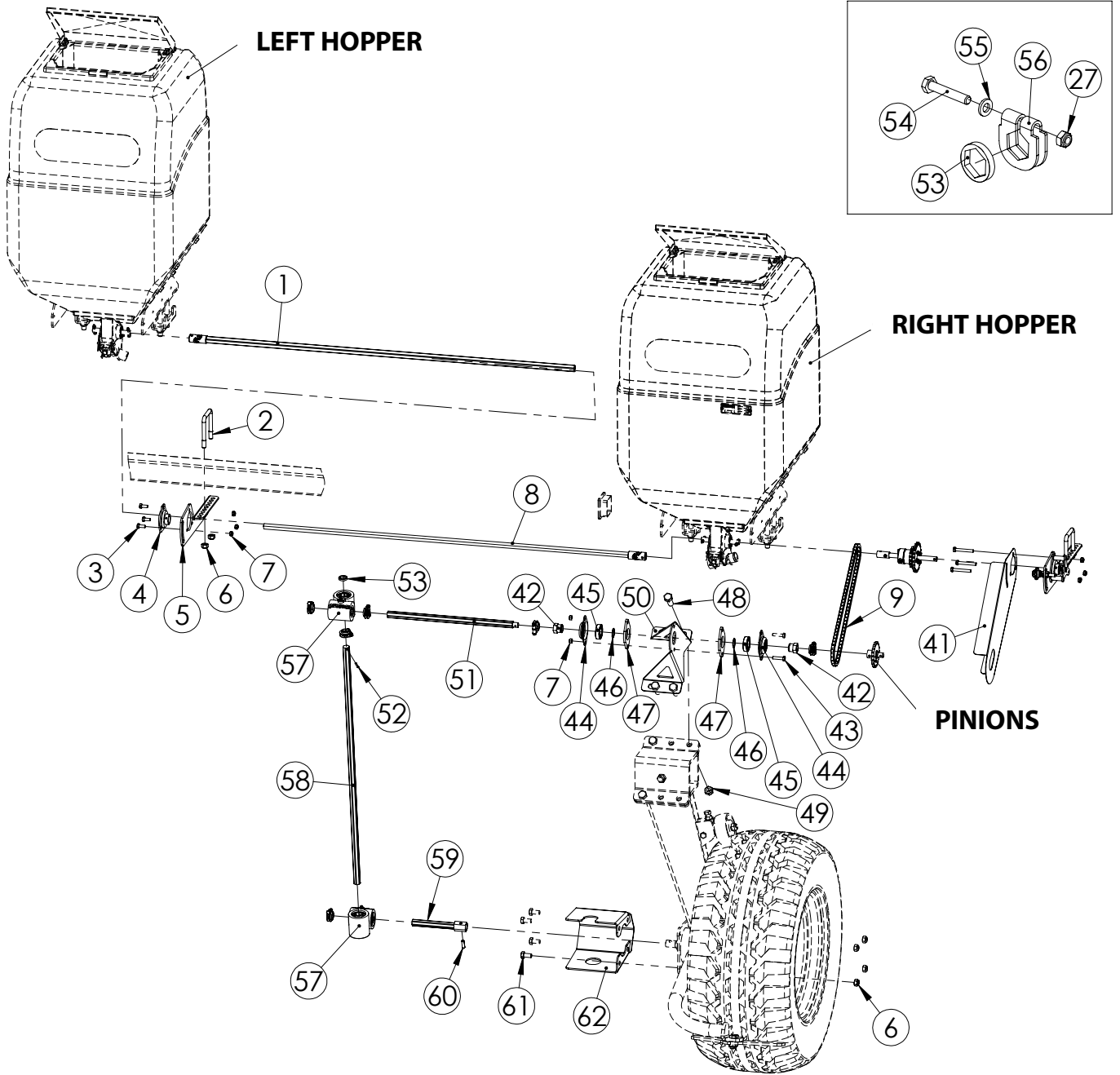


36	933 10X25 8.8 B	TORNILLO DIN 933 M10X25 8.8 BI
37	125 10 BI	ARAN PLANA DIN 125 M10 BI
38	471 16	ANILLO SAEGER DIN 471 16
39	PL-040100	PIÑON TENSOR CADENA 1/2 Z10
40	ME-101313	TENSOR CADENA TRANSMISION ABONO MICROGRANULADO
41	936 10 BI	TUERCA DIN 936 M10 BI
42	PX-101392-01	SOPORTE AJUSTABLE RODAMIENTO MICROGR. NEUMAT. 2014
43	931 6X70 8.8 B	TORNILLO DIN 931 M 6X70 8.8 BI
44	ME-101337	FIJADOR PIÑON 15 Z MICROG. NEUMASEM 10
45	916 8X25 BI	ESPARRAGO ALLEN DIN 916 M 8X25 BICROMATADO
46	FE-600004	CASQUILLO DE FRICCION Ø20xØ23x11,5 CON VALONA
47	ME-101336	PIÑON 15 Z KIT MICROGRANULADOS NEUMASEM 10
48	ME-101338	ADAPTADOR PIÑON 15 Z MICROG. NEUMASEM 10
49	PX-201342	SEPARADOR PIÑONES DESCONEXION MICROGR.2012
50	ME-101369	DISCO 22Z DESCONEXION MICROGR.2012
51	985 6	TUERCA DIN 985 M6
52	933 6X30 8.8 B	TORNILLO DIN 933 M 6X30 8.8 BICROMATADO
53	7980 6 BI	ARANDELA GROWER DIN 7980 M 6 BI
54	125 6 BI	ARANDELA PLANA DIN 125 M6 BICROMATADA

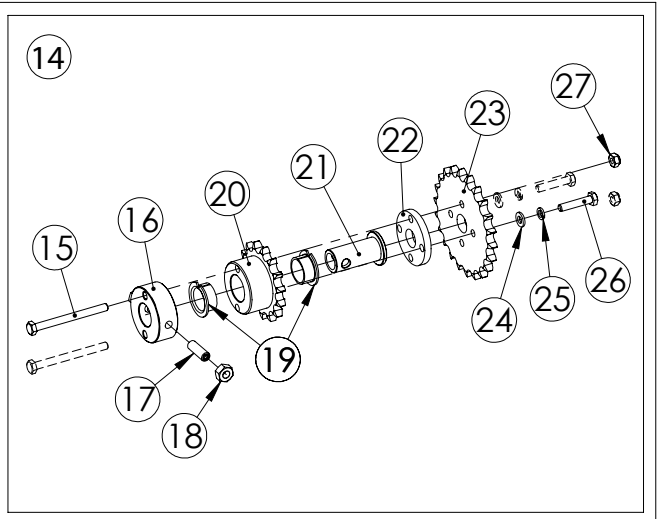
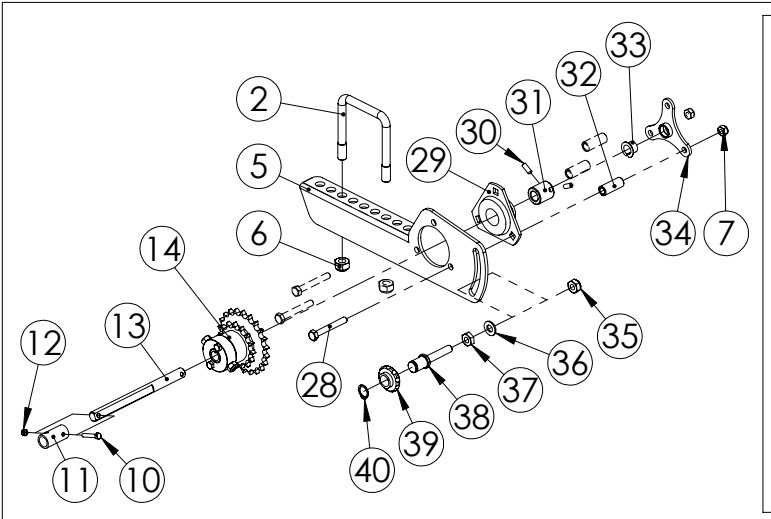
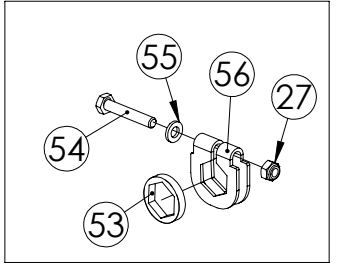
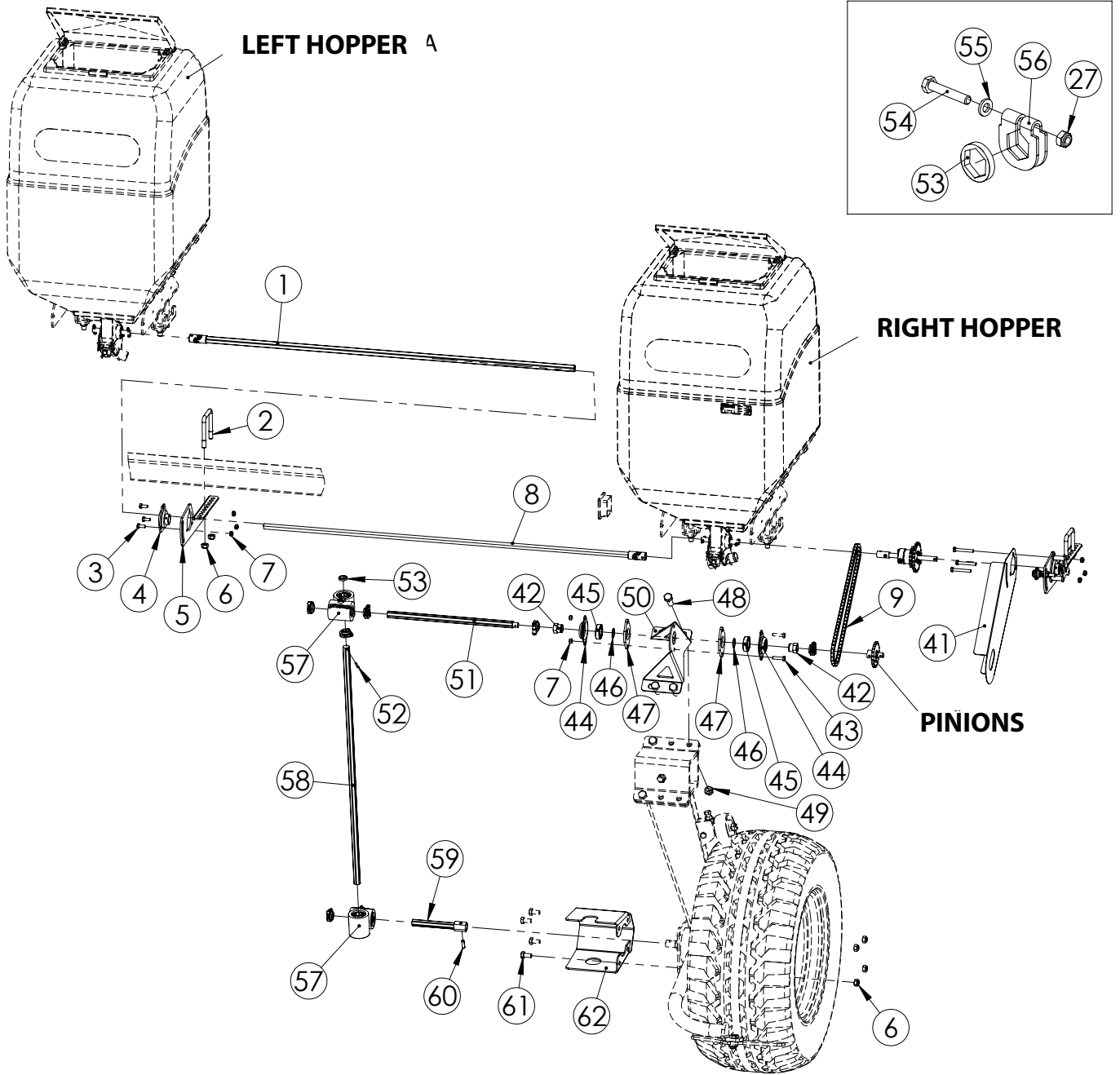


7.4- TRANSMISSION FOR MACHINES EQUIPPED WITH RADAR

Nº	REFERENCE	DESCRIPTION
1	PS-102827	HEMBRA LARGA TRANSM. TElesc. MICROGRANULADOS 2012
2	EE-061712	BRIDA "U" 70
3	933 8X20 8.8 B	TORNILLO DIN 933 M8X20 8.8 BI
4	FE-600133	RODAMIENTO 1025 C/SOP. TRIANGULAR SLFT25A
5	PX-101392	SOPORTE RODAMIENTO KIT MICROG. NEUMASEM-10
6	985 12	TUERCA DIN 985 M12
7	985 8	TUERCA DIN 985 M8
8	PS-102826	MACHO LARGO TRANSM. TElesc. MICROGRANULADOS 2012
9	FE-605067	CADENA 1/2" ISO 08B-1 L=1308,1 101P+AC+1E ABIER
10	931 5X30 8.8B	TORNILLO DIN 931 M-5X30 8.8 BICROMATADO
11	TA-102811	EMPALME TRANSM.MEC.MICROGR. SM-1909 P/MOTOR
12	985 5	TUERCA DIN 985 M5 BICROMATADO
13	ME-101348	EJE Ø14 TRANSMISION MICROG. NEUMASEM-11
14	MO-101340	EMBRAGUE PIÑON 15Z MICROGR. NEUMASEM
15	931 6X70 8.8 B	TORNILLO DIN 931 M 6X70 8.8 BI
16	ME-101337	FIJADOR PIÑON 15 Z MICROG. NEUMASEM 10
17	916 8X25 BI	ESPARRAGO ALLEN DIN 916 M 8X25 BICROMATADO
18	934 8	TUERCA DIN 934 M8
19	FE-600004	CASQUILLO DE FRICCION Ø20xØ23x11,5 CON VALONA
20	ME-101336	PIÑON 15 Z KIT MICROGRANULADOS NEUMASEM 10
21	ME-101338	ADAPTADOR PIÑON 15 Z MICROG. NEUMASEM 10
22	PX-201342	SEPARADOR PIÑONES DESCONEXION MICROGR.2012
23	ME-101369	DISCO 22Z DESCONEXION MICROGR.2012
24	125 6 BI	ARANDELA PLANA DIN 125 M6 BICROMATADA
25	7980 6 BI	ARANDELA GROWER DIN 7980 M 6 BI
26	933 6X30 8.8 B	TORNILLO DIN 933 M 6X30 8.8 BICROMATADO
27	985 6	TUERCA DIN 985 M6
28	931 8X60 8.8 B	TORNILLO DIN 931 M8X60 8.8 BI
29	FE-600133	RODAMIENTO 1025 C/SOP. TRIANGULAR SLFT25A
30	916 6X16 BI	ESPARRAGO ALLEN DIN 916 M6X16 BICROMATADO
31	ME-101347	ACOPLAMIENTO EJE 14 A ROD.1025 C/SOP MICROG.2011
32	ME-102826	DISTANCIADOR APOYO PIÑON DESCONEX. MICRO. NEUMAT.
33	FE-600055	CASQUILLO DE FRICCION D14xD16x12 CON VALONA
34	PS-102837	APOYO PIÑON DESCONEXION MICROGR. NEUMATICO
35	985 10	TUERCA DIN 985 M10



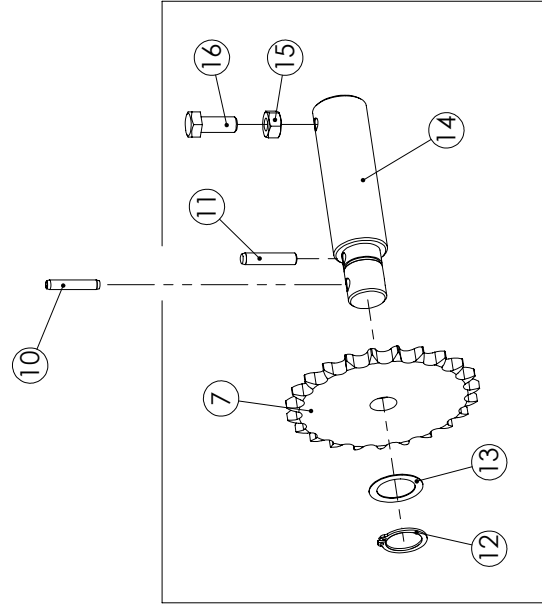
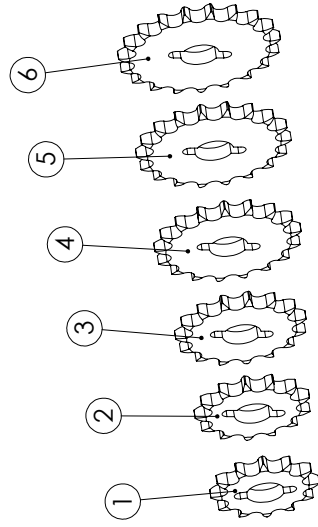
Nº	REFERENCE	DESCRIPTION
36	125 10 BI	ARAN PLANA DIN 125 M10 BI
37	936 10 BI	TUERCA DIN 936 M10 BI
38	ME-101313	TENSOR CADENA TRANSMISION ABONO MICROGRANULADO
39	PL-040100	PIÑON TENSOR CADENA 1/2 Z10
40	471 16	ANILLO SAEGER DIN 471 16
41	PX-102871	TAPACADENA TRANSM. MEC. MICROGR. P/MOTOR SM-1909
42	ME-041711	EJE TUBO HEX. PARA 6005 P.V. PROSEM
43	933 8X35 8.8 B	TORNILLO DIN 933 8X35 8.8 BI
44	EE-041701	SOPORTE RODAMIENTO 6005 PROSEM
45	FE-600047	RODAMIENTO 6005 2RS CLASE C CNR
46	471 25	ANILLO SAEGER DIN 471 25
47	PX-241787	GRUESO 6mm SOPORTE ROD. 6005
48	933 16X45 8.8 B	TORNILLO DIN 933 M16X45 8.8 BI
49	985 16	TUERCA DIN 985 M16
50	PX-102870	SOPORTE TRANSM. MEC. MICROGR. P/MOTOR SM-1909
51	ME-102823	EJE HEXAGONAL TRANSM. MICROGR. SM-1909 P/MOTOR
52	1481 4X30 BI	PASADOR ELASTICO DIN 1481 M 4X30 BI
53	PX-042820	DISTANCIADOR HEX. 19 E=5
54	931 6X35 8.8 B	TORNILLO DIN 931 6X35 8.8 BICROMATADO
55	125 6 BI	ARANDELA PLANA DIN 125 M6 BICROMATADA
56	PX-141726	BLOQUEADOR HEX. 19
57	CO-141736	TRANSMISION 90° HEX. 19 1:1 (S.W. 2023)
58	TA-042801	EJE VERTICAL HEXAGONAL 19
59	PS-102844	EJE ADAPT. RUEDA MAQUINA P/ MICRO Y RADAR
60	1481 8X30 BI	PASADOR ELASTICO DIN 1481 M 8X30 BI
61	933 12X25 8.8 B	TORNILLO DIN 933 M12X25 8.8 BI
62	PX-012840	PROTECCION TRANSMISION RUEDA MAQUINA



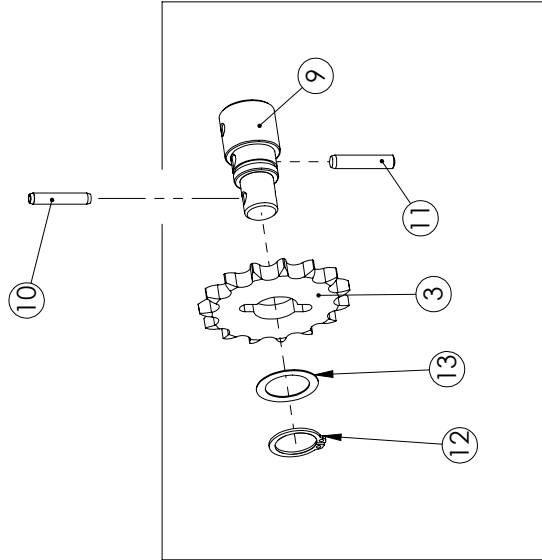
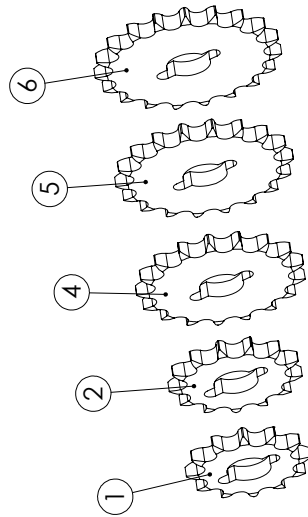
7.5- PINIONS

Nº	REFERENCE	DESCRIPTION
1	ME-101358	DISCO 1/2"X5/16" 12Z MICROGR. NEUMASEM-11
2	ME-101354	DISCO 1/2"X5/16" 13Z MICROGR. NEUMASEM-11
3	ME-101353	DISCO 1/2"X5/16" 15Z MICROGR. NEUMASEM-11
4	ME-101357	DISCO 1/2"X5/16" 17Z MICROGR. NEUMASEM-11
5	ME-101356	DISCO 1/2"X5/16" 18Z MICROGR. NEUMASEM-11
6	ME-101352	DISCO 1/2"X5/16" 19Z MICROGR. NEUMASEM-11
7	FE-609070	DISCO 1/2"X5/16" 23Z P/CADENA ISO 08B-1
8	ME-102814	DISTANCIADOR PIÑON KIT MICROG. SM-1909
9	ME-101314	EJE DISCO SAL. MAQ. ABONO MICROGRANULADO
10	1481 5X28 BI	PASADOR ELASTICO DIN 1481 M 5 X28 BI
11	6325 6X30	PASADOR DIN 6325 DE 6X30
12	471 20	ANILLO SAEGER DIN 471 20
13	988 20X28X0,5	ARANDELA DE AJUSTE SAEGER DIN 988 20X28X0,5
14	ME-101340	DISTANCIADOR PIÑON KIT MICROG. AGUIRRE
15	934 8 BI	TUERCA DIN 934 M8 BI
16	933 8X20 8.8 B	TORNILLO DIN 933 M8X20 8.8 BI

OTHER MANUFACTURERS

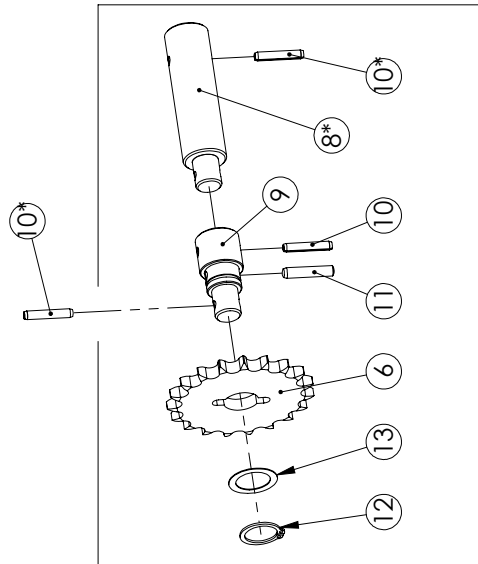
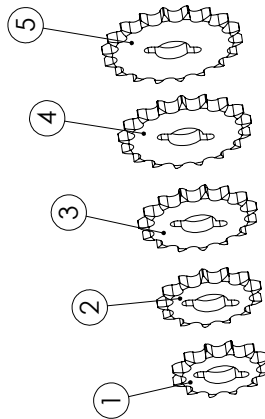


NEUMASEM 699-799



**SM-1909
NS PLUS-2311**

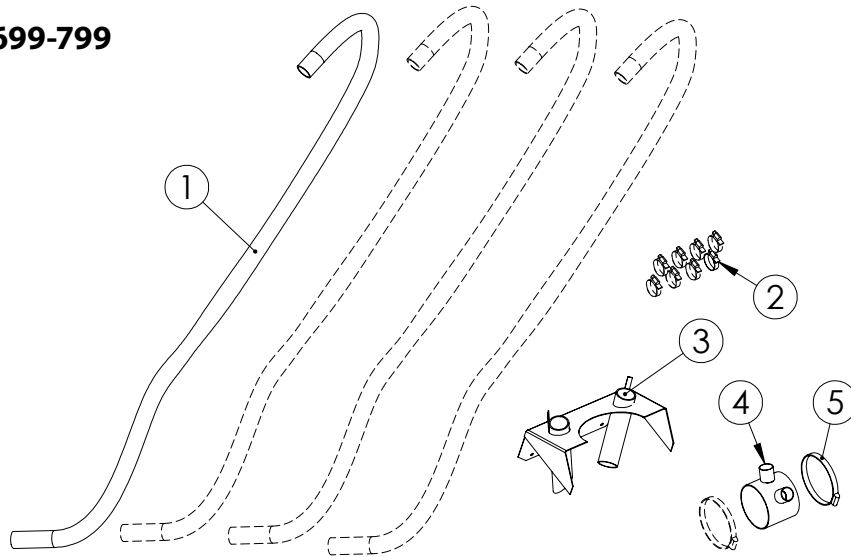
for machines with RADAR, not assemble parts marked with *



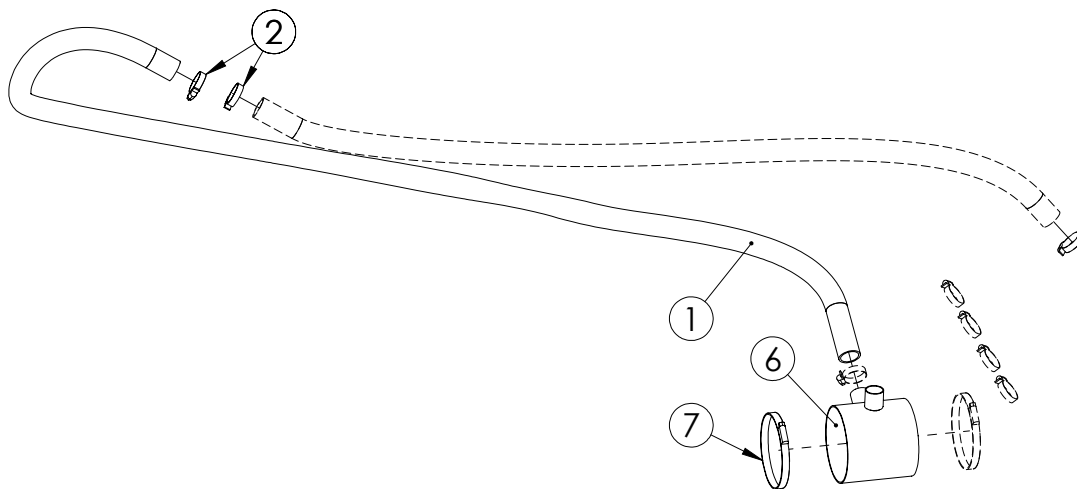
7.6- PIPES AND NEUMATIC PARTS

Nº	REFERENCE	DESCRIPTION
1	VA-101318	TUBO TRANSPORTE AIRE MICROGRANULADOS (2,3M)
2	FE-606023	BRIDA MIKALOR 25/40 L W1
3	PS-101351	PROTECTOR VENTURI T.MISTRAL C/ENTRADAS ABONO
4	PS-101391	COLECTOR TOMAS DE AIRE MICROGR. NEUMASEM-11
5	FE-606008	ABRAZADERA 90-110/12 W1 TORRO
6	PS-102846	COLECTOR MICROG. DE AIRE Ø127 2014
7	FE-606036	BRIDA SINFIN DIN 3017 W1 Ø110/130
8	PS-201309	COLECTOR TOMAS DE AIRE MICROGR. AGUIRRE

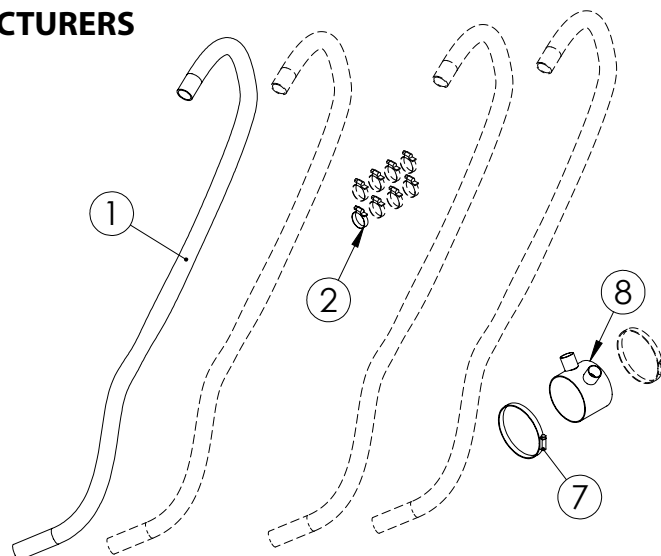
NEUMASEM 699-799



SM-1909 / NS PLUS-2311



OTHER MANUFACTURERS



8- WARRANTY

MAQUINARIA AGRÍCOLA SOLÀ, S.L. ensures the smooth functioning of any product according to the technical specifications of the WARRANTY CERTIFICATE provided with each machine. Any delivery note accompanying the goods will eventually result in a VAT invoice. If the BUYER considers the goods to be in warranty and they should not be invoiced, the problem will be analyzed and, if appropriate, your account will be credited. In order for the warranty to be valid, the WARRANTY CERTIFICATE must be returned once it has been properly filled in by the DEALERSHIP and the BUYER.

MAQUINARIA AGRÍCOLA SOLÀ, S.L. will not be held responsible for any damage caused by misuse, or by not checking the smooth functioning of the goods when either starting the machine or during the sowing season (see section 3.2).

Neither the DEALERSHIP or the BUYER or the USER will be able to claim compensation to MAQUINARIA AGRÍCOLA SOLÀ, S.L. for incidental damages such as labour costs, transport, faulty work, damages to persons or goods, harvest loss or reduced harvest, etc.

Material exchanges or returns will be paid by the buyer with the previous consent of MAQUINARIA AGRÍCOLA SOLÀ, S.L. OPTIONAL EQUIPMENT and SPARE PARTS which have surpassed three months since delivery or have been manufactured ex professo, will only be accepted as an exception. Parts eligible for warranty coverage need to be returned to the factory to be checked and eventually exchanged, They need to be returned accompanied with a note explaining the problem and containing the machine model and serial number. Warranty coverage remains subject to the decision of MAQUINARIA AGRÍCOLA SOLÀ, S.L. Any repair which has not been approved by MAQUINARIA AGRÍCOLA SOLÀ, S.L. will not be covered under WARRANTY.

DATE	NOTES

MAQUINARIA AGRÍCOLA SOLÁ, S.L.

Ctra. de Igualada, s/n. Apdo. Correos, 11
08280 CALAF (Barcelona) **SPAIN**

Tel. 34 93 868 00 60

Fax. 34 93 868 00 55

www.solagrupo.com

e-mail: sola@solagrupo.com

