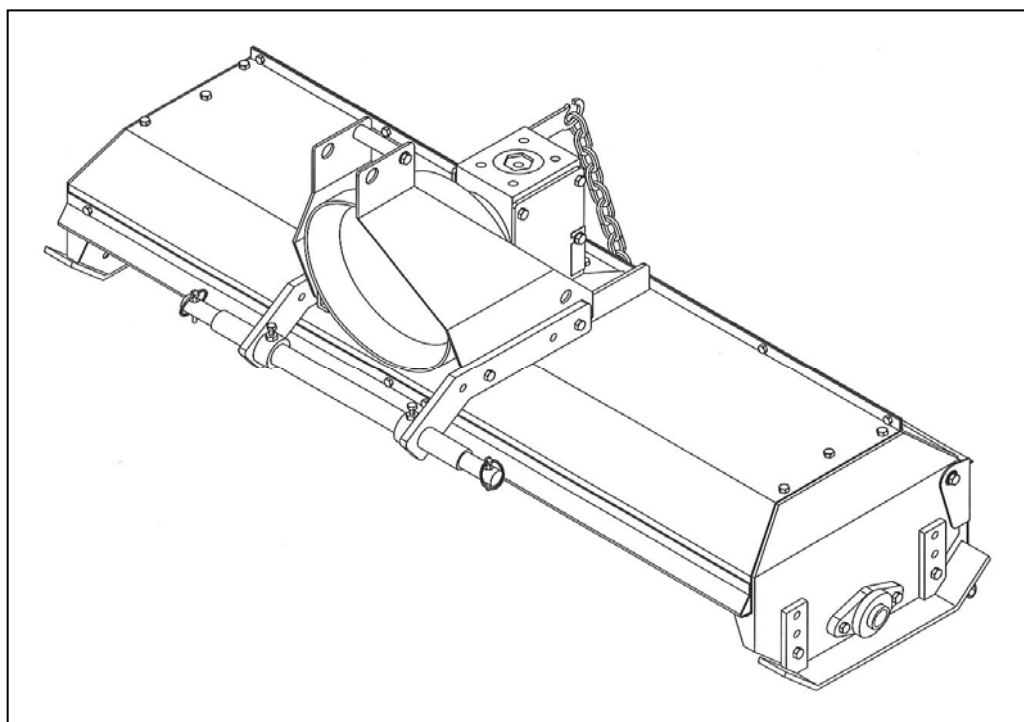


USE AND MAINTENANCE MANUAL

ROTARY TILLER FLASH



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 an integral part of this manual.

The purpose of this manual.

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

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

PURPOSE

The implement, thanks to the new central transmission that allow a easy reverse of rotor turning direction, to the strength combined with lightness and resilience of the deck and to the shear bolt protection inside the transmission shaft, can be used as rotary tiller or reverse rotary tiller in all type of ground whatever its composition (sandy soil, medium mixture, clay) and consistency (crumbly, hard, semi-plastic) at different depth.

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 implement frame, to the tools shape and to many original technical solutions.

PERFORMANCES

The implement is connected to the tractor with a three points hitch that gives the motion of translation and with a PTO shaft connected with the tractor PTO that gives the motion of rotation to the hoes shaft.

The working width is fix and it's determined from the choice of the machine type.

The working depth is adjustable.

The working zone is fixed.

The tail board besides prevents a dangerous hurling of stones and other foreign bodies, makes a clod mincing function the more emphasized the more the baffle is closed.

PERFORMANCES LIMITS

- Maximum forwarding speed: 1,2 m.p.h.
- Speeds greater 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 9 to 16 Kw \pm 5% with 540 RPM according to the type.
- Superior power to which is indicated can damage irreparably the transmission gear box; especially during heavy works.
- Max working depth: 5,5 inches.

STANDARD EQUIPMENT

- **Standard PTO shaft.**
- **Shear bolt inside transmission.**

TECHNICAL SPECIFICATIONS

CHARACTERISTICS PER MODEL

Model	Type	Power		Working width		Weight		Working depth		Overall width		N° of blades	
		HP	KW	cm.	inch	Kg.	lbs.	cm.	inch	cm.	inch	n° of flange	n° of blades
FLASH	85	12-25	9-16	82	32	100	221	14	5,5	98	38,5	4	16
	105	12-25	9-16	102	40	110	243	14	5,5	118,5	46	6	20
	125	12-25	9-16	122	48	120	265	14	5,5	139	55	6	24

SAFETY INFORMATIONS

GENERAL REGULATIONS

- ❑ Only work in daylight.
- ❑ The implement must not be used near people, especially children or animals.
- ❑ Wear long pants and heavy shoes.
- ❑ The protections are integral part of the implement: always work with the protections.
- ❑ Pay attention using the implement 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 implement if it touches foreign objects.
- ❑ Check immediately the implement 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 implement in accordance to the age.

SAFETY SIGNS ON THE MACHINES

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



1

2

3

4

5

6

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

The safety signs on the machine must always be legible.

In case of damage, the labels of the signs must be substituted.

In the case of the substitution of implement 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.

INSTRUCTION FOR USE

BEFORE BEGINNING WORK

a) Adjust working depth as follows :

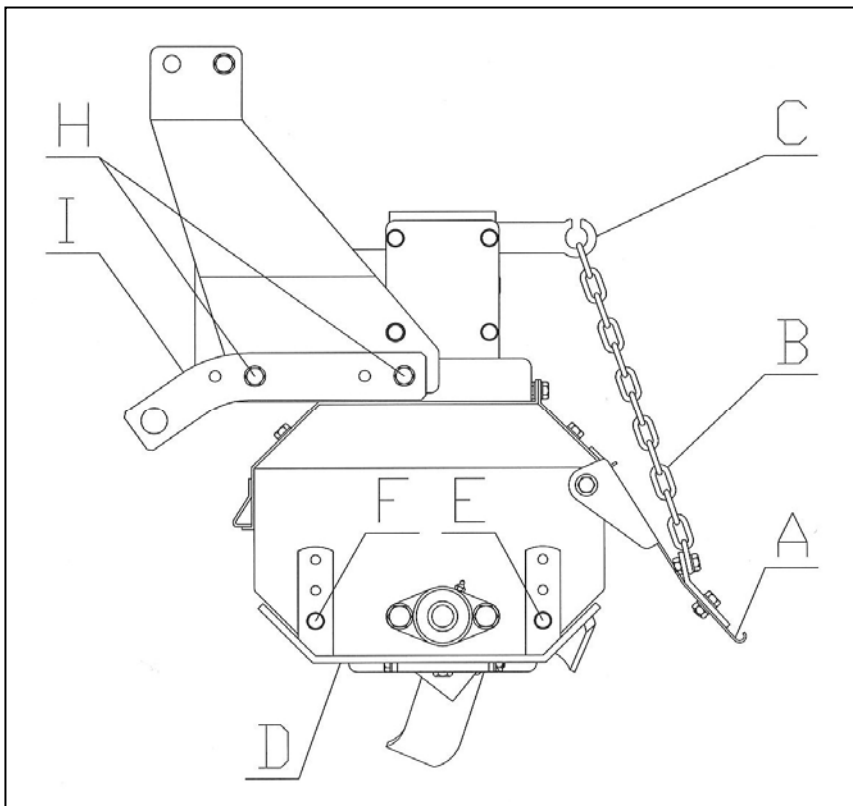
1. Unlock the screw "E" and the screw "F" then take out them from their seats.
2. Adjust working depth moving slide "D" towards up to increase and towards down to decrease.
3. Plug in and lock the screw "E" and "F".
4. Repeat the same operations on the other implement side, make sure to set up the same working depth on the two slides.

b) Adjust the tail board position operating as follows:

1. Take out the free side of the chain "B" from the housing slot "C".
2. Adjust the position of the tail board "A" then put again the said of the chain in the housing slot.

c) Hook the implement to the tractor operating as follows :

1. If necessary adjust the distance between the implement and the tractor moving the two arms "I" unlocking the four screws "H". After the adjusting lock again the screws "H".
2. Plug in the raising tractor beams into the lower pins of the implement then lock with the safety pins.
3. Connect through tie-rod the third hitch point of the tractor with the third point of the implement (the connection triangle vertex), insert the pin and lock with safety pin.



- d) With the implement raised, go to work area.
- e) Connect the tractor PTO with implement PTO.
- f) Check that PTO chain is locked to prevent the protection sheet of PTO rotating.

TO BEGINNING WORK

- a) Keep people and animals at least 65 feet radius all around the implement.
- b) Pull down the implement until the hoes touch the ground.
- c) Connect PTO power and gradually bring it to 540 r.p.m..
- d) Pull down completely the implement and start to work.

AT THE END OF WORK

- a) Stop the tractor.
- b) Raise the implement until the hoes goes out from ground.
- c) Disconnect PTO power.
- d) Disconnect tractor PTO from implement PTO.
- e) Raise completely the implement.

MAINTENANCE INSTRUCTIONS

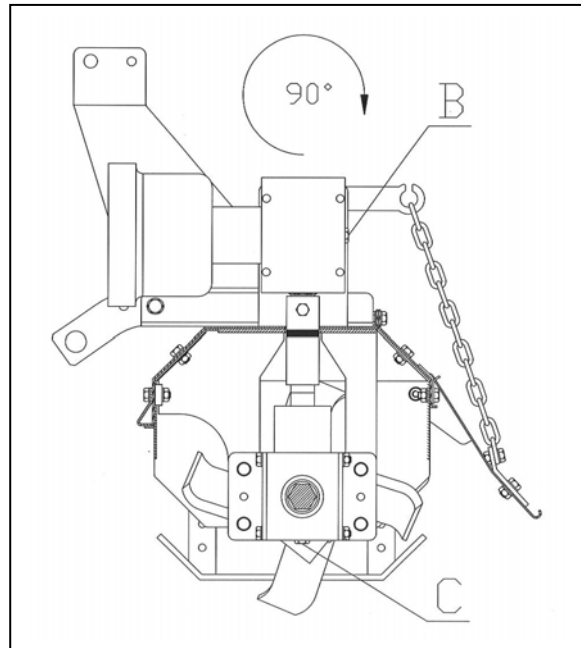
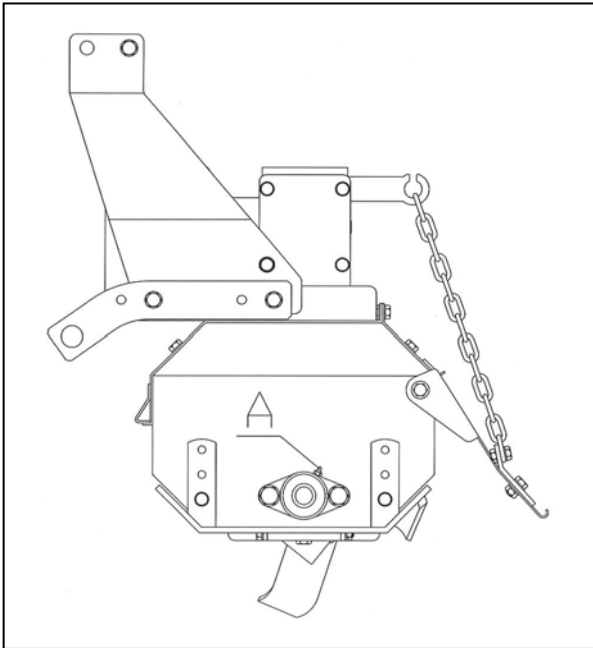
On diagram "A" the maintenances are indicated with their terms to effect on the implement.
 Not follow the scheduled terms can compromise the functionality of the machine and in this case the warranty is not applicable.

DIAGRAM "A" SCHEDULED MAINTENANCE

	FIRST START	AFTER 10 HOURS	EACH 30 HOURS	EACH 500 HOURS	END SEASON	BEGIN. WORK	END WORK
IMPLEMENT	Greasing		Greasing		Cleaning Greasing		Cleaning
UPPER GEAR BOX	Oil level	Oil level	Oil level	Change oil			
LOWER GEAR BOX	Oil level	Oil level	Oil level	Change oil			
SCREWS		Locking	Locking				
HOES			Check		Check	Check	Check

1. GREASING

At the scheduled time on diagram "A", grease point "A" on both sides of the implement.
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 CHECK - OIL REPLACEMENT IN GEAR BOXES

At the scheduled time on diagram "A", check or replace oil in gear boxes.
To fill oil use only OIL SAE 140 EP.
Gear box capacity: 0,9 L

- a) To check the oil level in upper gear box, operate as follows :
1. Turn the implement 90° in opposite arrow direction, unscrew the plug "B" and check that gear box should be full of oil.
 2. If the level it's ok screw and lock plug "B".
 3. If the level it's low fill oil.
 4. When the level it's ok screw and lock plug "B" and turn the implement on level.
- b) To check the oil level in lower gear box, operate as follows :
1. Rotate the implement 180° in arrow direction, unscrew the plug "C" and check that gear box should be full of oil.
 2. If the level it's ok screw and lock plug "C".
 3. If the level it's low fill oil.
 4. When the level it's ok screw and lock plug "C".
 5. Turn the implement on level.

c) To replace oil in upper gear box, operate as follows :

1. Rotate the implement 90° in arrow direction, unscrew the plug "B" and drain oil through the hole.
2. Turn the implement 180° in opposite arrow direction.
3. Fill new oil, see prescriptions for type and quantity at page 10. ATTENTION : fill oil slowly to prevent overflow.
4. When gear box is full screw and lock plug "B".
5. Turn the implement on level.

d) To replace oil in lower gear box, operate as follows :

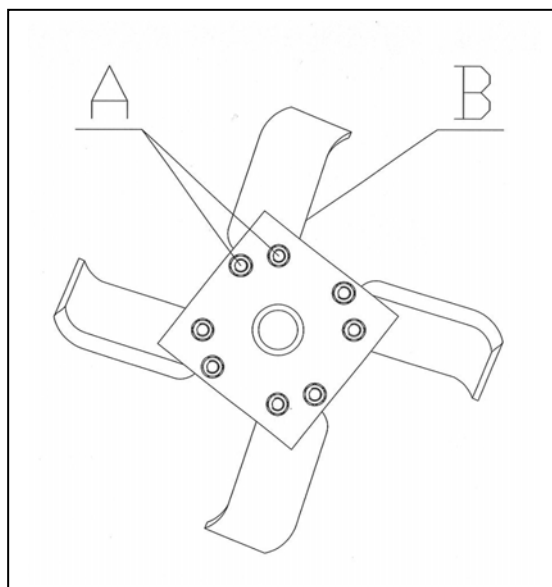
1. Unscrew plugs "C" and drain oil through the hole .
2. Turn the implement of 180° in arrow direction.
3. Fill new oil, see prescriptions for type and quantity at page 10. ATTENTION : fill oil slowly to prevent overflow.
4. When gear box is full screw and lock plug "C".
5. Turn the implement on level.

3. HOES SUBSTITUTION

a) To change the hoes, operate as follows :

1. Unscrew the two nuts "A" that lock the screw of the hoes to change.
2. Take out the two screws from the holes and take out the hoe "B".
3. Put the new hoe using the new screws enclosed.
4. Lock with the nuts "A".
5. Repeat these operations for all the hoes to change.

ATTENTION: on each flange are assembled 2 right hoes and 2 left hoes.



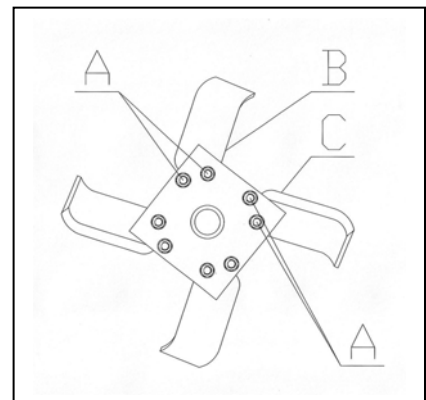
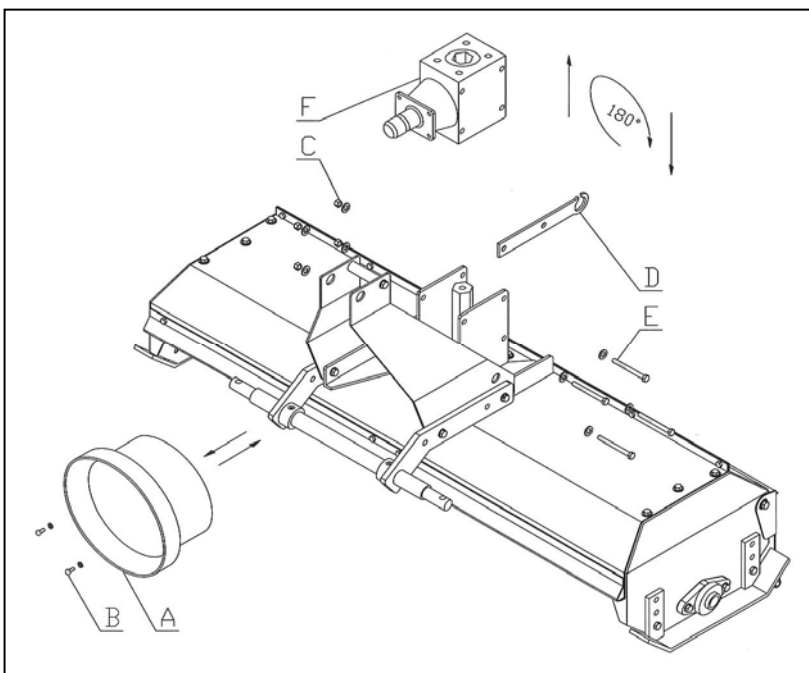
4. SET UP TILLER OR REVERSE TILLER

a) To transform the implement from tiller to reverse tiller and vice versa is necessary to reverse the turn direction of the rotor. To make the Set Up operate as follow :

1. Take out the protection "A" after unscrewing the two screws "B".
2. Remove the four screws "E" and the chain holder "D" after unscrewing the nuts "C".
3. Take out gear box "F" from the support, turn it 180° then insert it again inside support.
4. Insert the screws "E", the chain holder "D" then lock the nuts "C".
5. Place the protection "A" using the screws "B".

b) After rotor turn direction reversing, is also necessary reverse the position of right blades with left blades. To make this operation operate as follow :

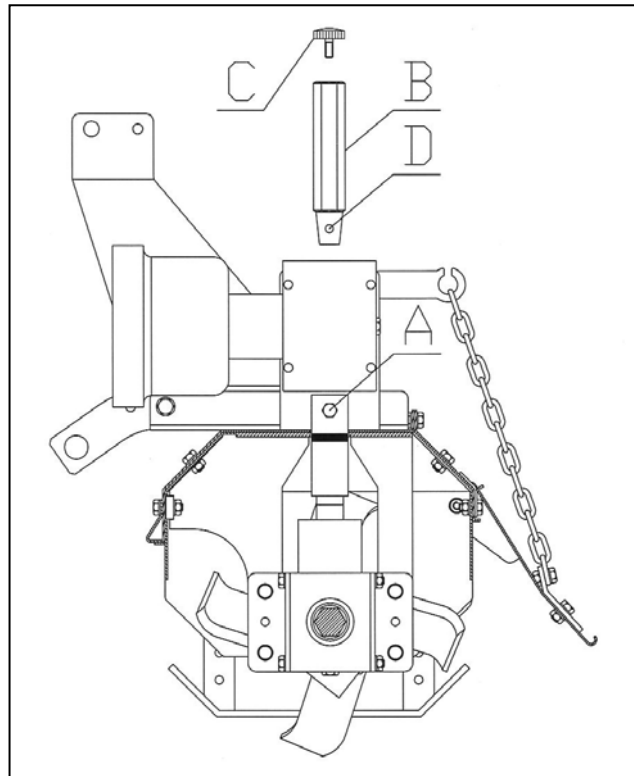
1. Unscrew the screws "A" of two blades "B" and "C" placed on the same flange.
2. Reverse the position of the blade "B" with the position of blade "C".
3. Screw the screws "A".
4. Make the same operation on all blades of each flange, on all flanges.



5. SHEAR BOLT REPLACEMENT

a) To replace the shear bolt, operate as follow :

1. Screw the handle "C" on the top of the transmission shaft "B".
2. Using the handle "C" take out the shaft "B" from the gear box.
3. Take out from hole "D" the bolt broken.
4. Grase the conical side of the shaft "B".
5. Insert the shaft inside the gear box and in the conical seat of the bush placed on lower gear box.
6. Place on the same axle the holes on shaft and bush.
7. Insert inside the hole the new shear bolt "A" (M10x75 UNI 5737 8.8) and lock well the nut.



PROBLEMS SOLVING

TROUBLES	CAUSES AND SOLUTIONS
Not enough depth of work	<ul style="list-style-type: none"> -Decrease the forward speed -Increase the working depth (slides) -Broken hoes - Replace -Not balanced hoes - Balance
Hoes don't penetrate Tiller bounces on the ground and vibrates	<ul style="list-style-type: none"> -Broken or damaged hoes - Replace -Check the hoes assembling -Foreign objects between hoes - Clean -Soil too dry and hard - Decrease the forward speed
Rotor compactness, obstruction	<ul style="list-style-type: none"> -Soil too wet - Reduce depth of work -Increase number of revolutions of rotor
Excessive tilling of the soil	<ul style="list-style-type: none"> -Increase forward speed -Raise the rear baffle -Reduce number of revolutions of rotor
Poor tilling of the soil	<ul style="list-style-type: none"> -Decrease forward speed -Lower the rear baffle -Increase number of revolution of rotor

TRANSPORT

Except when working, moving the implement takes place when the machine is standing still and the transmission is disconnected.

<Important>: keep speed low avoiding holes and ground roughness.

<Important>: Before begin the movements always make sure that the safety hooks be in position.

<Note when on the road, obey existing traffic laws. Exhibit the signal signs on the rear ends. Respect any local laws there may be.

STORAGE

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

INFORMATION ON DEMOLITION



At the end of its working life, the implement 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 implement is mainly composed of iron materials and paints.

WARRANTY

The implement 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 implement has been used out of its own service.
- c) The implement has been transformed or modified without the manufacturer's written authorization.

SERVICE

For service, spare parts and information, call:

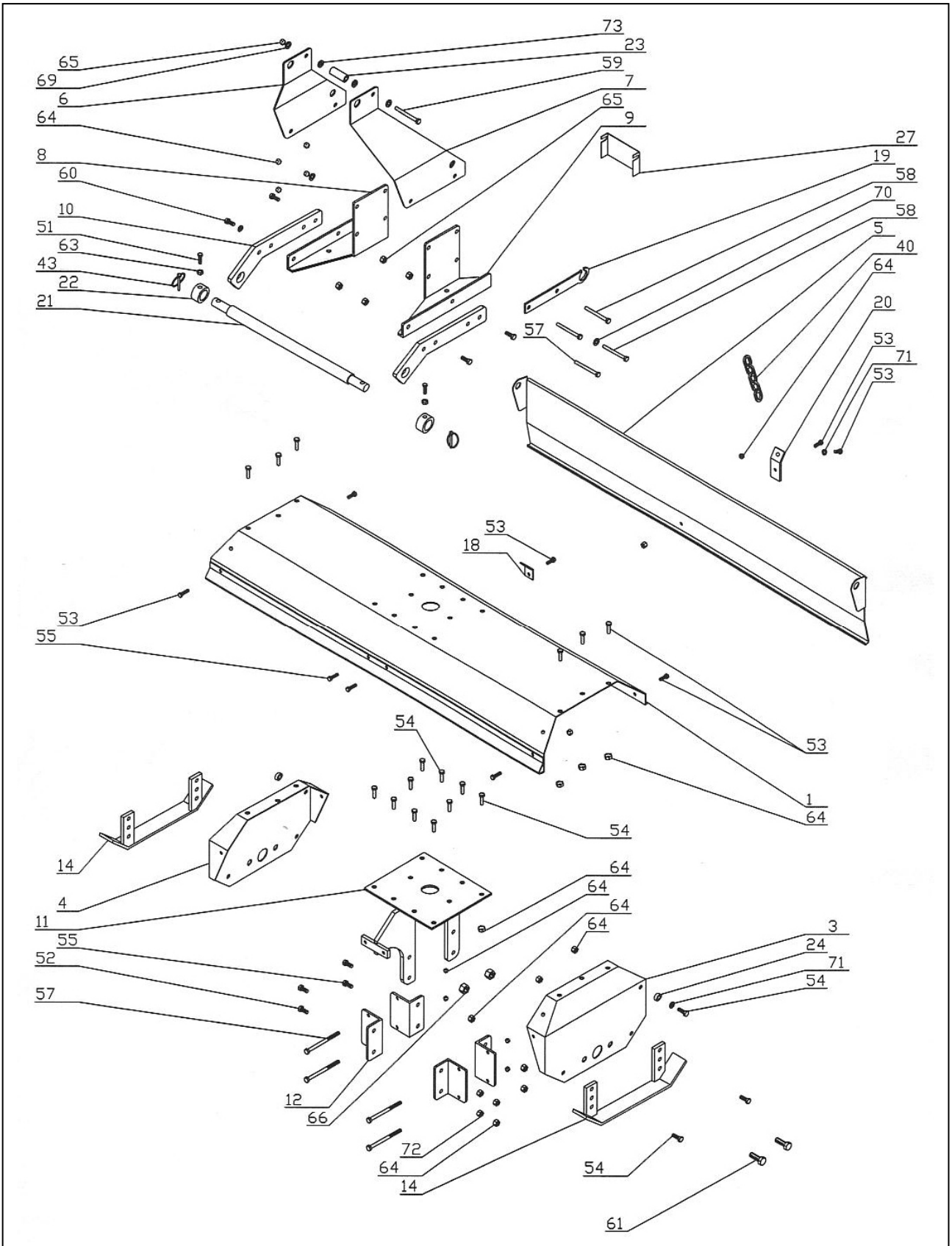
WORK AND MAINTENANCE SHEET

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

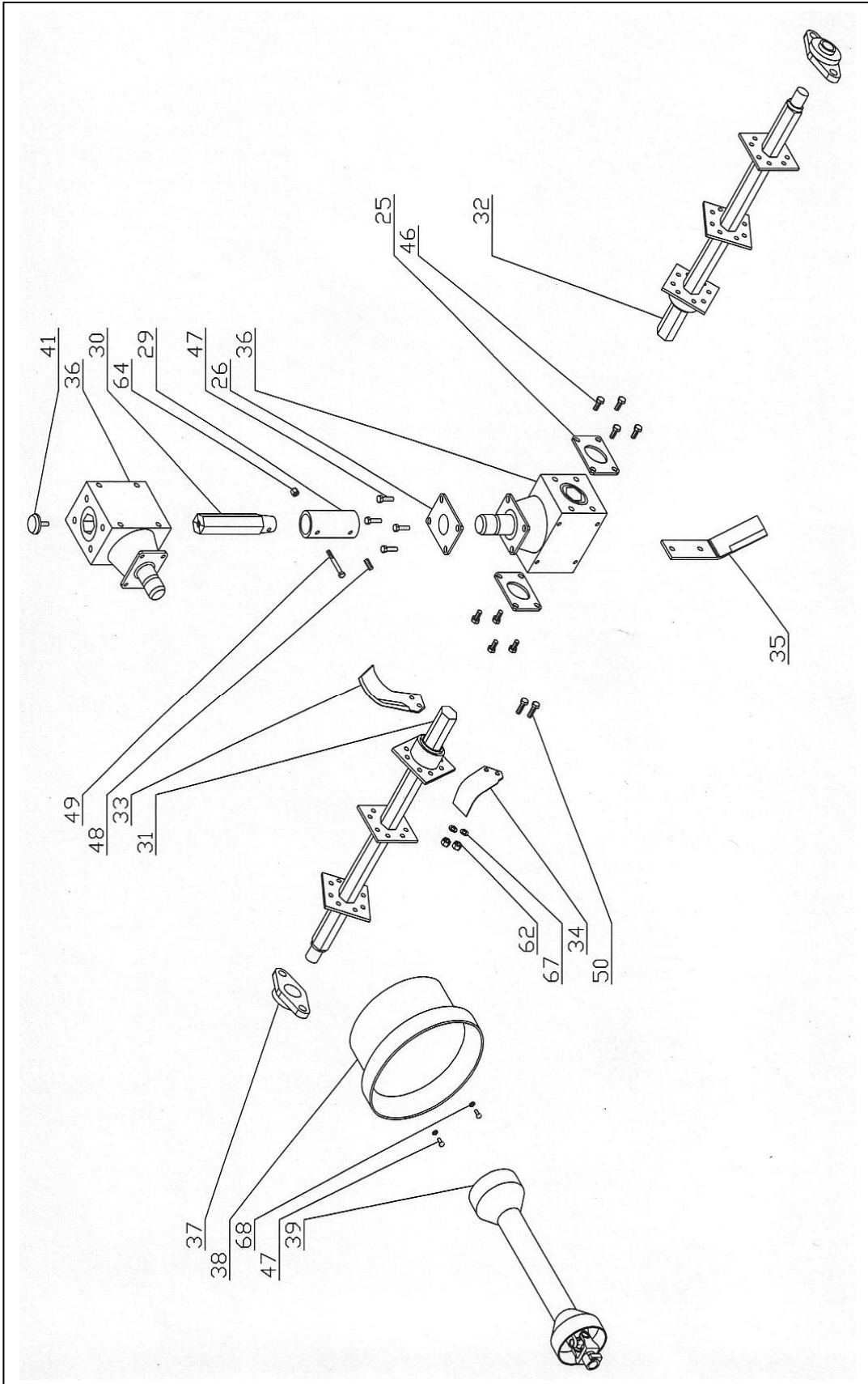
DATE	WORKING HOURS	MAITENANCE	NOTE	USER

SPARE PARTS AND OPTIONS

SHEETS



MECHANISMS



SPARE PARTS LIST

Position	Code	Description	Quantity		
			85	105	125
1	SOL057AVD	Deck 85	1		
1	SOL057BVD	Deck 105		1	
1	SOL057CVD	Deck 125			1
2					
2					
2					
3	SOL194VD	Left side	1	1	1
4	SOL195VD	Right side	1	1	1
5	SOL161AVD	Tail board 85	1		
5	SOL161BVD	Tail board 105		1	
5	SOL161CVD	Tail board 125			1
6	SOL152VD	III° point right side	1	1	1
7	SOL151VD	III° point left side	1	1	1
8	SOL157VD	Right gear box holder	1	1	1
9	SOL156VD	Left gear box holder	1	1	1
10	SOL181VD	Bracket	2	2	2
11	SOL054VD	Lower gear box holder	1	1	1
12	SOL159VD	Lower gear box bracket	4	4	4
13					
14	SOL058VD	Slide	2	2	2
15					
16					
17					
18	SOL184ZD	Tail board protection	1	1	1
19	SOL183VD	Chain holder	1	1	1
20	HOL203VD	Chain holder – tail board	1	1	1
21	SOL175VD	Shaft	1	1	1
22	SOL059ZD	Shaft locker	2	2	2
23	SOL154ZD	III° point bush	1	1	1
24	SOL169ZD	Tail board bush	2	2	2
25	SOL060ZD	Lower gear box side flange	2	2	2
26	SOL167ZD	Lower gear box upper flange	1	1	1
27	SOL189ZD	Cover	1	1	1
28					
29	SOL062VD	Transmission bush	1	1	1
30	SOL165D	Transmission shaft	1	1	1
31	SOL063AVD	Right rotor 85	1		
31	SOL063BVD	Right rotor 105		1	
31	SOL063CVD	Right rotor 125			1
32	SOL064AVD	Left rotor 85	1		
32	SOL064BVD	Left rotor 105		1	
32	SOL064CVD	Left rotor 125			1
33	HOL154D	Right blade	8	10	12
34	HOL215D	Left blade	8	10	12
35	SOL200D	Middle blade	1	1	1
36	42000003	Gear box	2	2	2
37	42400006	Pillow block UCFL 205	2	2	2
38	41900008	Plastic protection	1	1	1
39	42600009	PTO shaft II° L=700	1	1	1
40	40900001	Chain	1	1	1
41	42200005	Handle M10x15	1	1	1
42					
43	41300001	Safety pin Ø10	2	2	2
44					

Position	Code	Description	Quantity		
			85	105	125
45					
46	40100139	Screw M8x25 UNI 5933	8	8	8
47	40100077	Screw M8x20 UNI 5739	6	6	6
48	43200002	Set screw M10x15 UNI 5927	1	1	1
49	40100198	Screw M10x75 UNI 5737	1	1	1
50	40100010	Screw M12x35 UNI 5738	32	40	48
51	40100030	Screw M10x20 UNI 5739	2	2	2
52	40100006	Screw M10x50 UNI 5739	2	2	2
53	40100043	Screw M10x25 UNI 5739	23	23	23
54	40100012	Screw M10x30 UNI 5739	18	18	18
55	40100054	Screw M10x35 UNI 5739	4	4	4
56	40100149	Screw M10x30 UNI 5933	4	4	4
57	40100024	Screw M10x130 UNI 5737	5	5	5
58	40100108	Screw M10x140 UNI 5737	3	3	3
59	40100022	Screw M12x90 UNI 5737	1	1	1
60	40100023	Screw M12x40 UNI 5739	4	4	4
61	40100080	Screw M16x35 UNI 5739	4	4	4
62	40200007	Nut MB12x1,25 UNI 5587	32	40	48
63	40200005	Nut M10 UNI 5588	2	2	2
64	40200003	Nut M10 DIN 980	62	62	62
65	40200006	Nut M12 DIN 980	5	5	5
66	40200008	Nut M16 DIN 980	4	4	4
67	40300005	Washer Ø12 UNI 9195 – DIN 127B	32	40	48
68	40300031	Washer Ø8x24	2	2	2
69	40300004	Washer Ø12 UNI 6592	10	10	10
70	40300003	Washer Ø10 UNI 6592	57	57	57
71	40300013	Washer Ø10x30	3	3	3
72	40200139	Nut M10 UNI 5587	2	2	2
73	40300045	Washer Ø12x36	2	2	2

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