



Farm & Garden Equipment

DEL MORINO SRL

Del Morino srl , v.Caroni di Sotto 19,
I-52033 Caprese Michelangelo AR Italy
Ph: +39-575-791059 Fax: +39-575-791210
E.mail: export@del-morino.it
<http://www.del-morino.it>

USE AND MAINTENANCE MANUAL

LIGHT SLASHER TYPE FUNNY TOP



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 machine.
The owner must read this manual carefully before work with the machine.

Responsibility of the owner

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

Assistance in using this manual

Explanations: contact the dealer.

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

Pay attention to the warning signals



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



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



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

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

<Note>: indicates supplementary information.

DelMorino
DEL MORINO SRL
Via C. Bocchi di Sotto, 19
20033 Caprese Michelangelo AP

BALANCING REPORT **OK**

Date : 02/05/2023 10:38:19
Prog. N° 15 FUNNY 158

Residual unbalances:

TOLERANCE 10g		P2 (g)
P1 (g)	ST (g)	
49	110	79
199.3°	158.2°	134.0°

Measuring speed = 1988 rpm

DESCRIPTION

FUNCTION OF USE

The machine according to the different tools can makes different functions like cut grass, cut up poles exc. The use of a technical constructive concept trended to the search of high performances, reduction of trebles and durability, improves the power/consumption ratio of the tractor thanks to the elasticity of the machine frame, to the tools shape, to the perfect rotor balancing and to many original technical solutions.

PERFORMANCES

The machine 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 adjustable respect to tractor axis.

The rear roll adjusts the cutting height and provides to tread the cut material.

PERFORMANCES LIMIT

- ❑ 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 20 Kw \pm 5% with 540 r.p.m. Superior power to which is indicated can damage irreparably the transmission gear box; especially during heavy works.

STANDARD EQUIPMENTS

- **Standard PTO shaft.**
- **Free wheel device inside gear box.**
- **Rear roll.**
- **Blade tools**
- **Aluminum gear box**

VARIANTS & OPTIONS

- **Spatula tools**
- **Hammer tools**
- **Iron casting gear box**

TECHNICAL SPECIFICATIONS

CHARACTERISTICS PER MODEL

Model	Typo	Version	Power		Working width		Weight		Dimensions A x B x H	Tools nr	Rotor RPM
			Hp	Kw	cm	Inch	kg	lbs	Cm	n°	g/min
FUNNY TOP	80	S	12-28	9-20	80	32	123	271	94x60x60	12	2410
	80	GS	12-28	9-20	80	32	124	273	94x60x60	12	2410
	93	S	12-28	9-20	93	36	132	291	107x60x60	16	2410
	93	GS	12-28	9-20	93	36	133	293	107x60x60	16	2410
	106	S	12-28	9-20	106	42	136	300	120x60x60	16	2410
	106	GS	12-28	9-20	106	42	137	302	120x60x60	16	2410
	119	S	12-28	9-20	119	47	143	315	133x60x60	20	2410
	119	GS	12-28	9-20	119	47	144	317	133x60x60	20	2410
	132	S	12-28	9-20	132	52	150	332	146x60x60	20	2410
	132	GS	12-28	9-20	132	52	151	333	146x60x60	20	2410
	158	S	12-28	9-20	158	62	177	390	172x60x60	24	2410
	158	GS	12-28	9-20	158	62	178	392	172x60x60	24	2410
FUNNY TOP	80	C	12-28	9-20	80	32	123	271	94x60x60	24	2410
	80	GC	12-28	9-20	80	32	124	273	94x60x60	24	2410
	93	C	12-28	9-20	93	36	132	291	107x60x60	32	2410
	93	GC	12-28	9-20	93	36	133	293	107x60x60	32	2410
	106	C	12-28	9-20	106	42	136	300	120x60x60	32	2410
	106	GC	12-28	9-20	106	42	137	302	120x60x60	32	2410
	119	S	12-28	9-20	119	47	143	315	133x60x60	40	2410
	119	GS	12-28	9-20	119	47	144	317	133x60x60	40	2410
	132	C	12-28	9-20	132	52	150	332	146x60x60	40	2410
	132	GC	12-28	9-20	132	52	151	333	146x60x60	40	2410
	158	C	12-28	9-20	158	62	177	390	172x60x60	48	2410
	158	GC	12-28	9-20	158	62	178	392	172x60x60	48	2410
FUNNY TOP	80	M	12-28	9-20	80	32	123	271	94x60x60	12	2410
	80	GM	12-28	9-20	80	32	124	273	94x60x60	12	2410
	93	M	12-28	9-20	93	36	132	291	107x60x60	16	2410
	93	GM	12-28	9-20	93	36	133	293	107x60x60	16	2410
	106	M	12-28	9-20	106	42	136	300	120x60x60	16	2410
	106	GM	12-28	9-20	106	42	137	302	120x60x60	16	2410
	119	S	12-28	9-20	119	47	143	315	133x60x60	20	2410
	119	GS	12-28	9-20	119	47	144	317	133x60x60	20	2410
	132	M	12-28	9-20	132	52	150	332	146x60x60	20	2410
	132	GM	12-28	9-20	132	52	151	333	146x60x60	20	2410
	158	M	12-28	9-20	158	62	177	390	172x60x60	24	2410
	158	GM	12-28	9-20	158	62	178	392	172x60x60	24	2410

Version:

- C = Blade, aluminum gear box**
- S = Spatula, aluminum gear box**
- M= Hamme, aluminum gear box r**
- GC = Blade, iron casting gear box**
- GS = Spatula, iron casting gear box**
- GM= Hammer, iron casting gear box**

SAFETY INFORMATIONS

GENERAL PRESCRIPTIONS

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

❑ **CAUTION – WARNING:**

Gear box has inside a free wheel device, after P.T.O. disconnection rotor turns for at least 30 seconds, before approach the tools be sure that the rotor is stopped.

❑ **WARNING:**

To prevent damage to the PTO shaft and to the gear box, don't start the machine roughly.

SAFETY RESTRICTIONS

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

RUNNING IN

A new machine needs a running in. At the first use connect the machine to the tractor, connect the PTO shaft, pull down the machine at 15 centimeters from ground then start the P.T.O. and gradually bring it to 540 r.p.m... Run the machine for about 15 minutes. A whistle in the supports zone it is normal and it's due to the arrangement of the support protection, it will disappear in a few times. After first 30 minutes of work check belts tension.

SAFETY SIGNS ON THE MACHINE

In this section, the safety signs on the machine 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. Stay at safety distance from blades when machine is moving.
1. Danger of flying objects. Stay at safety distance.
4. Stay at safety distance from blades when machine is moving.
5. Stay at safety distance from blades when machine is moving.

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 machine 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.

INSTRUCTIONS FOR USE

1. BEFORE BEGINNING WORK

- a) Hook the machine to the tractor, operate as follows:
 1. Remove the safety pins from the two lower connection points of the machine.
 2. Plug in the raising tractor beams into the lower connection points of the machine and lock with the safety pins.
 3. Connect through tie-rod the third hitch point of the tractor with the third point of the machine (the connection triangle vertex), insert the pin and lock with safety pin.
- b) With the machine raised, go to work area.
- c) Connect the tractor PTO with machine PTO.
- d) Check that PTO chain is locked to prevent the protection sheet of PTO rotating.
- e) Adjust the cutting height as follow:
 1. Pull down the machine since the rear roll touches the ground.
 2. Extend the III° point tie rod to increase the cutting height, shorten it to decrease.
 3. After the regulation, lock the safety not of the tie rod.

2. TO BEGINNING WORK

- a) Make sure that there is no one within a radius of 50 meters (164 ft) around the implement.
- b) Insert the PTO and increase the rotation speed gradually to its normal speed.
- c) Lower the implement until the rear roller touches the ground.
- d) Start working.

3. AT THE END OF CUTTING OPERATION

- a) Stop the tractor and wait at least 30 seconds that the rotor is completely stopped.
- b) Raise the machine until the hoes goes out from ground.
- c) Disconnect PTO power.
- d) Disconnect tractor PTO from machine PTO.
- e) Raise completely the machine.

MAINTENANCE INSTRUCTIONS

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

DIAGRAM "A" SCHEDULED MAINTENANCE

	FIRST START	AFTER 10 H.	EACH 30 H.	EACH 500 H.	END SEASON	START WORK	END WORK
MACHINE	Greasing		Greasing		Cleaning Greasing		Cleaning
GEAR BOX	Oil level	Oil level	Oil level	Change oil			
SCREW		Screw	Screw				
TOOLS			Check		Check	Check	Check
BELTS		Check		Replacement			

1. GREASING

At the scheduled time on diagram "A", grease points "B" "C", "D", "E", "F", "G".
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 ALUMINUM GEAR BOX

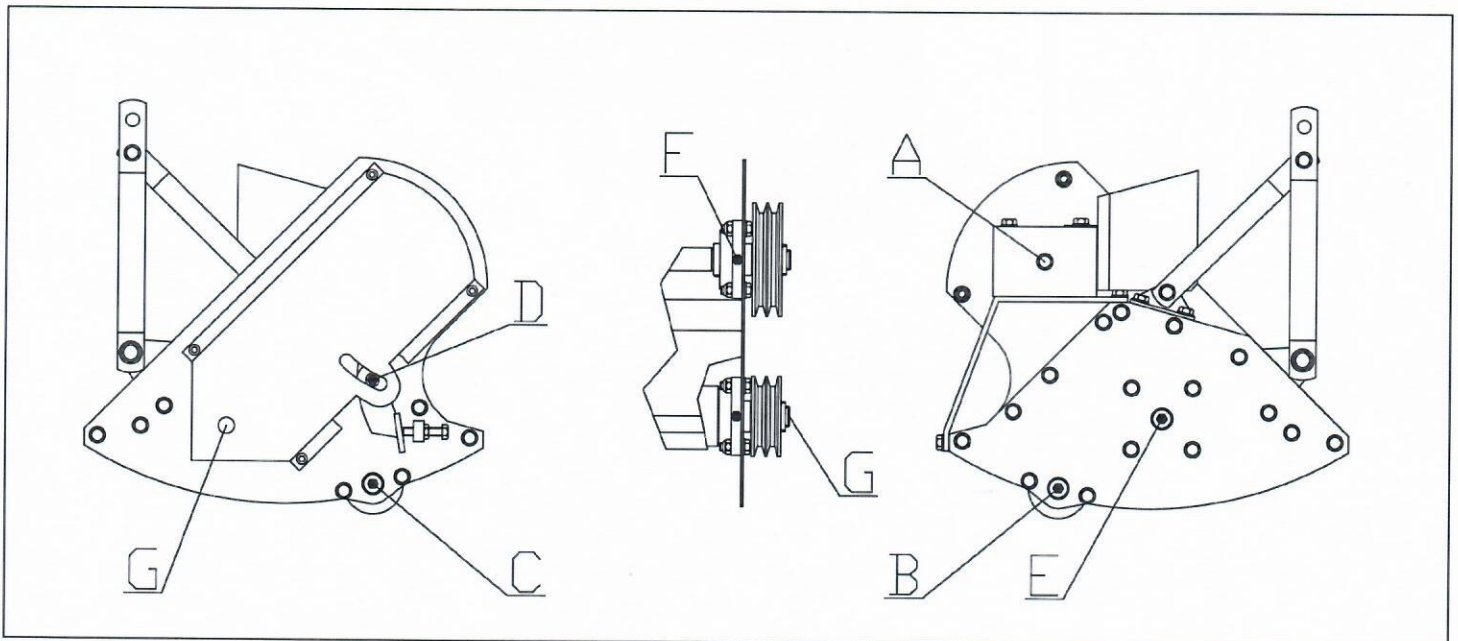
At the scheduled time on diagram "A", check or replace oil into gear box.
To fill oil use only OIL SAE 90.
Gear box capacity: 0,5 L

a) To check oil level into the gear box, operate as follow:

1. With the machine on level unscrew plug "A" then check that oil touches on lower hole rim.
2. If the level is ok, screw plug "A".
3. If the level is slow, refill.
4. When the level is ok, screw plug "A".

b) To change oil into the gear box, operate as follow:

1. Unscrew plug "A" and take away oil using a suitable little pump.
2. Fill oil from plug "A".
3. When level is ok, screw plug "A".



3. OIL CHECK - OIL REPLACEMENT IN IRON CASTING GEAR BOX

At the scheduled time on diagram "A", check or replace oil into gear box.

To fill oil use only OIL SAE 90.

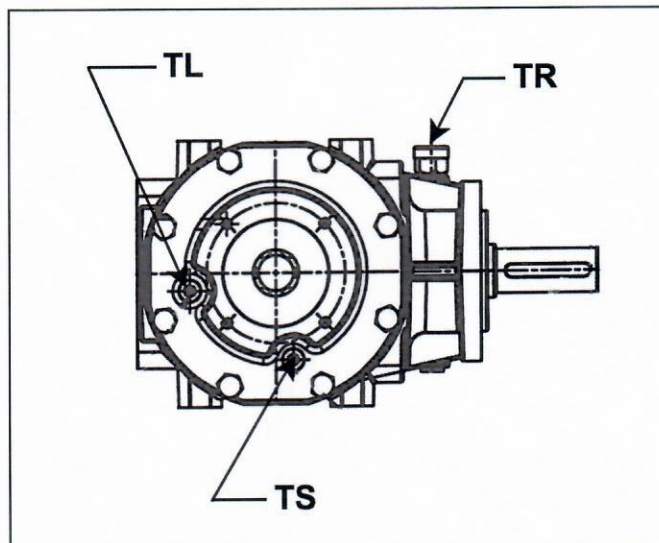
Gear box capacity: 0,8 L

a) To check oil level into the gear box, operate as follow:

1. With the machine on level, remove the safety plastic cover from the front side of the gear box, unscrew plug "TL" and check that oil touches on lower hole rim.
2. If the level is ok, screw plug "TL".
3. If the level is low, unscrew plug "TR" and refill.
4. When the level is ok, screw plug "TL" and "TR".

b) To change oil into the gear box, operate as follow:

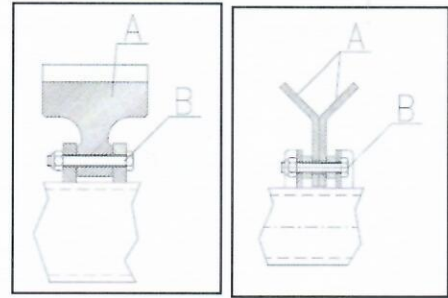
1. Remove the safety plastic cover from the front side of the gear box, unscrew plugs "TL", "TR" and the discharge plug "TS", wait until all oil has come out.
2. Screw the discharge plug "TS" then fill oil from plug "TR".
3. When level is ok, screw plugs "TL" and "TR" and assemble the safety plastic cover.



4. TOOLS REPLACEMENT

a) To change tools, operate as follow :

1. Unscrew the nut then take out the screw "B".
2. Take out tools "A" with bushes.
3. Assemble the new tool.
4. Fit the screw "B" then screw the nut.
5. **ATTENTION: all tools must be of the same type.**
6. **ATTENTION: changing type of tools you must balance again the rotor.**



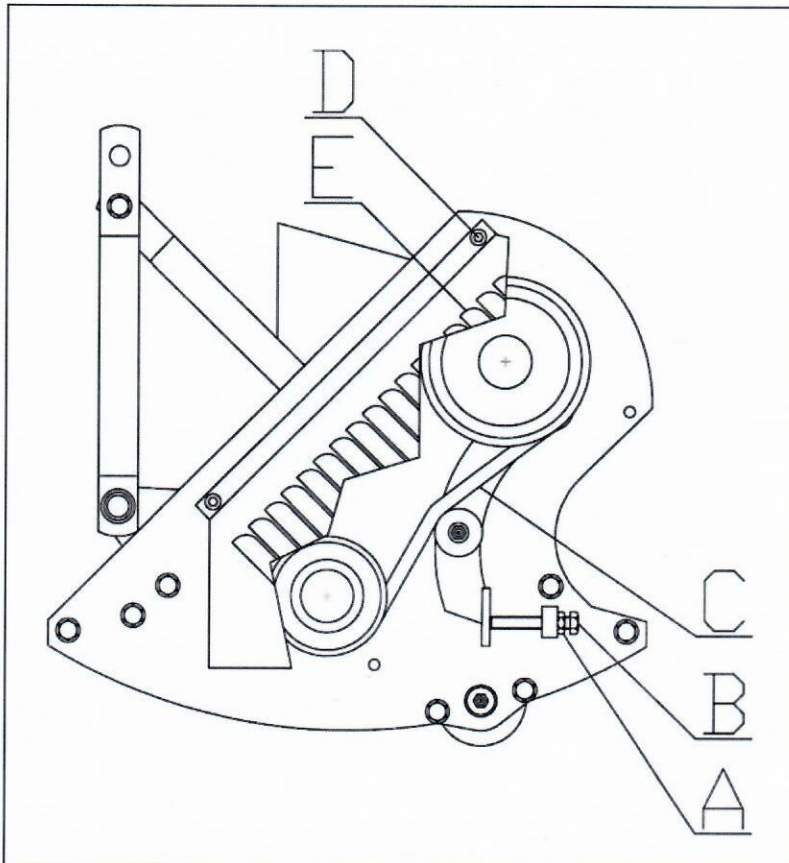
5. BELTS ADJUSTING AND REPLACEMENT

a) To adjust the tension of the transmission belts, operate as follow:

1. Disassemble safety protection "E" unscrewing the four screws "D".
2. Unscrew the lock nut "A", screw the screw "B" to increase or unscrew to decrease the tension.
3. After operation screw the lock nut "A" then assemble the safety protection "E".

b) To change the transmission belts, operate as follow:

1. Disassemble safety protection "E" unscrewing the four screws "D".
2. Unscrew the lock nut "A" then full unscrew the screw "B"
3. Remove the old belts "E", to prevent adjusting problems you must replace both, and then assemble the new referring to the characteristics in the SPARE PART LIST.
4. Make operations "2" and "3" point "a".
5. **ATTENTION: after first 30 minutes of work check belts tension.**



PROBLEMS SOLVING

TROUBLES	GROUNDS AND SOLUTIONS
Abnormal vibrations	-Not balanced rotor – Enquire a dealer. -Loss of one or more tools – Replace. -Damaged bearings – Replace.
Uneven or unsatisfactory cut	-Damaged tools – Replace. -Tools choice not good – Change with another type.

TRANSPORT

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

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

<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 machine in a dry place that isn't dusty.

INFORMATION ON DEMOLITION



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

WARRANTY

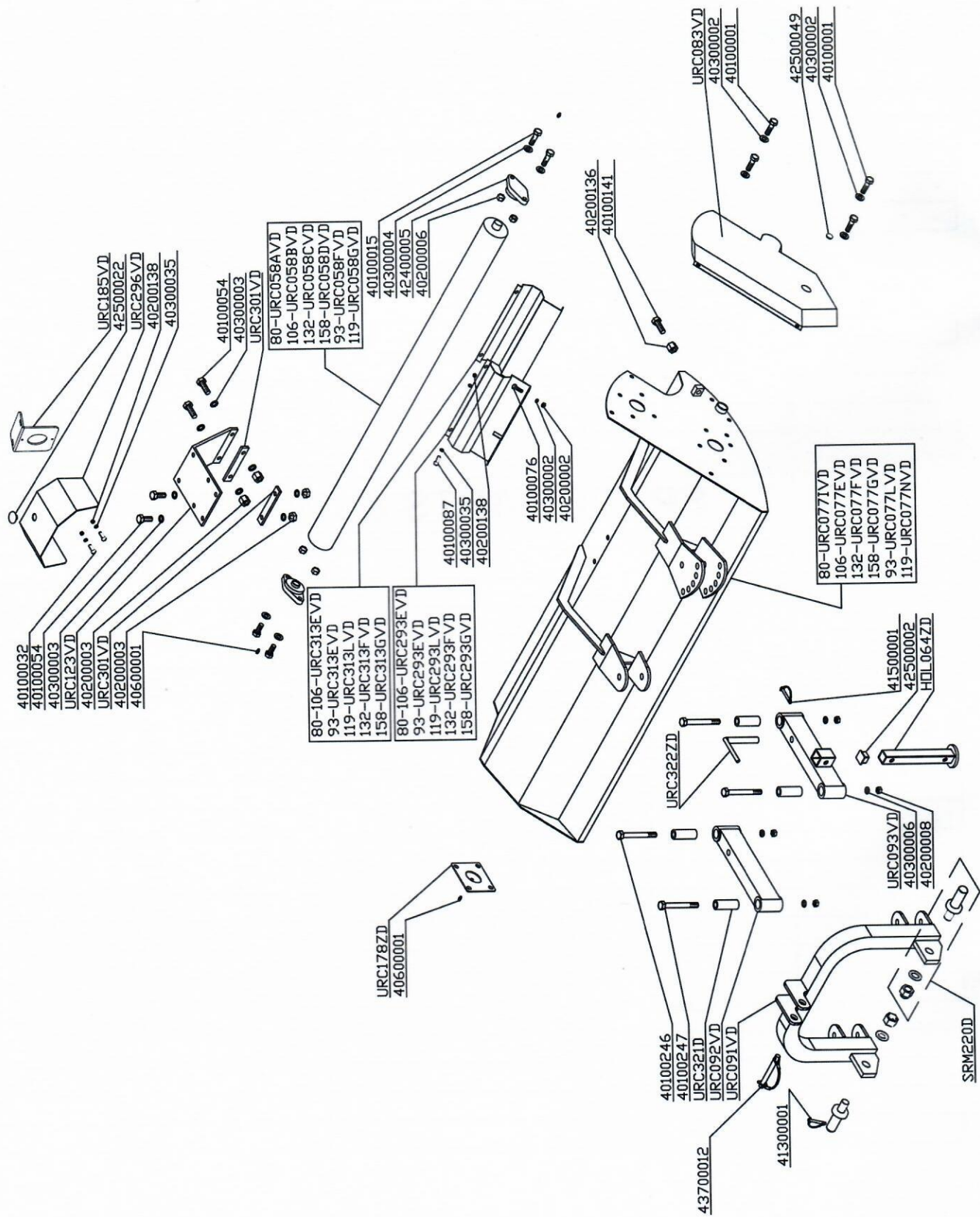
The machine is covered by the manufacturer warranty for a period of 24 months.

The warranty is not applicable when:

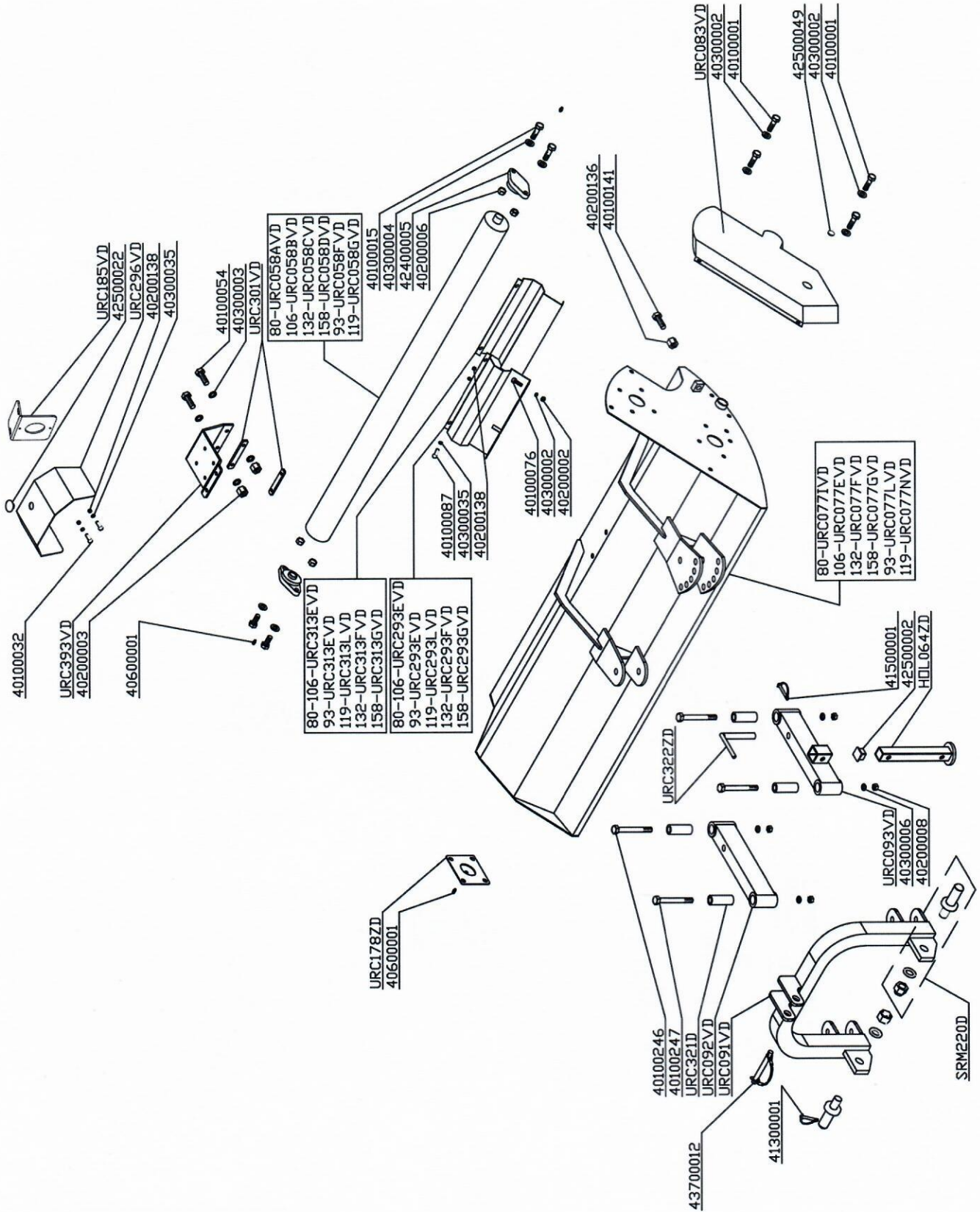
- a) The maintenance work has not been done correctly.
- b) The machine has been used out of its own service.
- c) The machine has been transformed or modified without the manufacturer's written authorization.

SPARE PARTS & OPTIONS

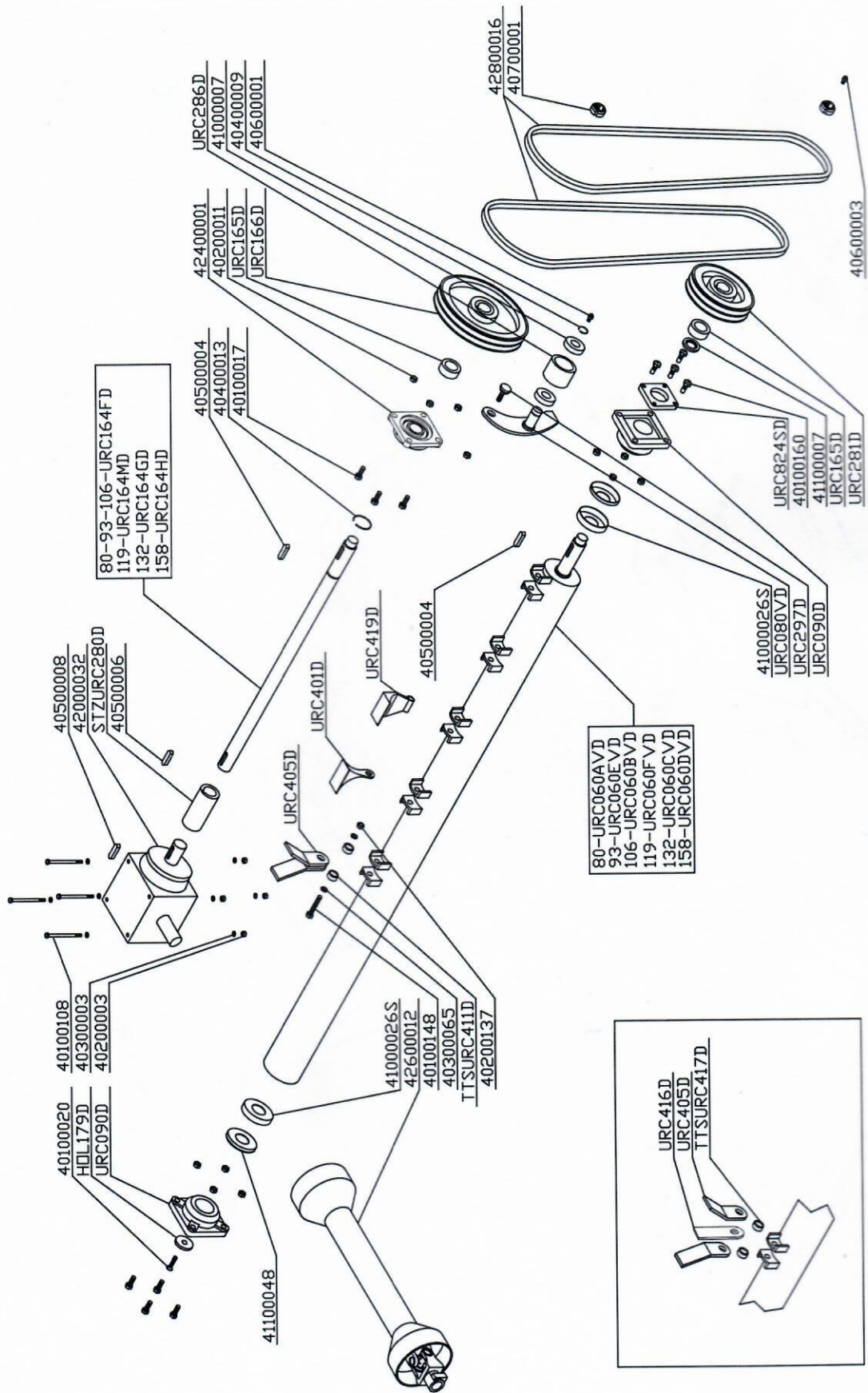
SHEETS ALUMINUM GEAR BOX



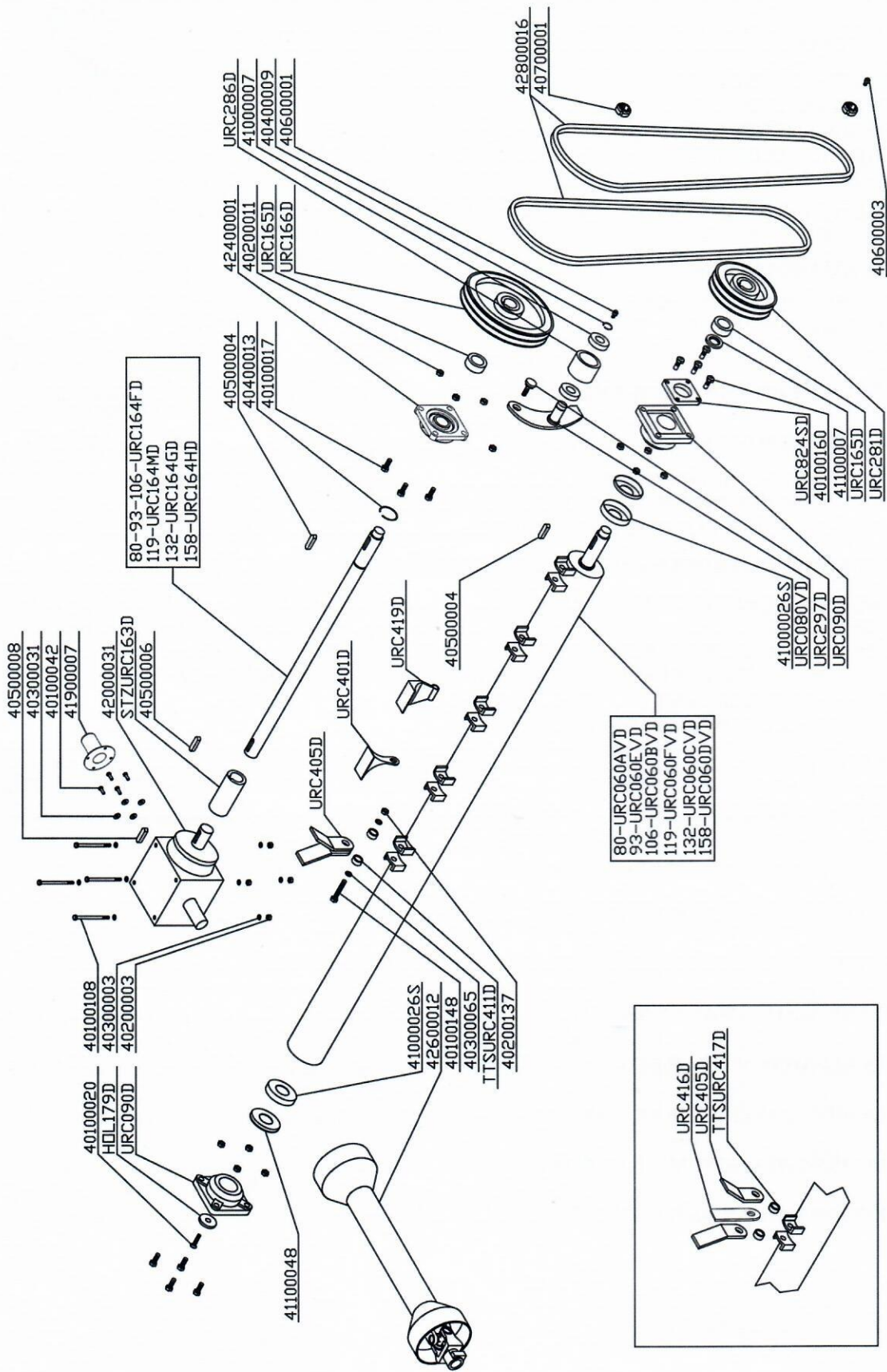
SHEETS IRON CASTING GEAR BOX



MECHANISMS ALUMINUM GEAR BOX



MECHANISMS IRON CASTING GEAR BOX



INDEX

PREFACE	2
DESCRIPTION.....	3
FUNCTION OF USE	3
PERFORMANCES.....	3
PERFORMANCES LIMIT.....	3
STANDARD EQUIPMENTS	3
VARIANTS & OPTIONS.....	3
TECHNICAL SPECIFICATIONS	4
SAFETY INFORMATIONS.....	5
GENERAL PRESCRIPTIONS.....	5
SAFETY RESTRICTIONS	5
RUNNING IN.....	5
SAFETY SIGNS ON THE MACHINE.....	6
INSTRUCTIONS FOR USE.....	7
1. BEFORE BEGINNING WORK.....	7
2. TO BEGINNING WORK	7
3. AT THE END OF CUTTING OPERATION.....	7
MAINTENANCE INSTRUCTIONS.....	8
DIAGRAM "A" SCHEDULED MAINTENANCE	8
1. GREASING	9
2. OIL CHECK - OIL REPLACEMENT IN ALUMINUM GEAR BOX.....	9
3. OIL CHECK - OIL REPLACEMENT IN IRON CASTING GEAR BOX	10
4. TOOLS REPLACEMENT.....	11
5. BELTS ADJUSTING AND REPLACEMENT.....	11
PROBLEMS SOLVING.....	12
TRANSPORT.....	13
STORAGE.....	13
INFORMATION ON DEMOLITION	13
WARRANTY	13
WORK AND MAINTENANCE SHEET	14
SHEETS ALUMINUM GEAR BOX.....	16
SHEETS IRON CASTING GEAR BOX	17
MECHANISMS ALUMINUM GEAR BOX	18
MECHANISMS IRON CASTING GEAR BOX.....	19



Dichiarazione CE di conformità ai sensi della Direttiva Macchine 2006/42/CE
 CE declaration of conformity under the Machinery Directive 2006/42/CE
 Déclaration CE de conformité conforme a la Directive Machine 2006/42/CE
 Eg konformitätserklärung im Sinne der Eg Vorschrift Maschine 2006/42/CE

DEL MORINO S. R. L."

- Via Caroni di Sotto n. 19 -

- 52033 CAPRESE MICHELANGELO (AREZZO) ITALIA

Dichiara sotto la propria responsabilità che la macchina: "TRINCIA" è conforme ai requisiti di sicurezza e di tutela della salute di cui alla "Direttiva Macchine 2006/42/CE."

Per la verifica delle conformità alla direttiva sopramenzionata sono state consultate le norme armonizzate **UNI EN ISO 12100:2010; 13857:2008; 4254-1:2010; 4254-12:2010.**

Under its own responsibility declare that the machine "FLAIL MOWER" complies to the safety and health protection requirement of machinery directive **2006/42/CE.**

To verify the conformity to the above mentioned directive, have been consulted the harmonized standards **UNI EN ISO 12100:2010; 13857:2008; 4254-1:2010; 4254-12:2010.**

Déclarons sous notre responsabilité que la machine "BROYEUR" est conforme aux prescriptions en matière de sécurité et de santé stipulée dans la directive machine **2006/42/CE.**

Pour le contrôle des conformités des directive citées ont été consultées les règles unifiées **UNI EN ISO 12100:2010; 13857:2008; 4254-1:2010; 4254-12:2010.**

Erklärt hiermit in eigener Verantwortung dass der maschine "HÄCKSELMASCHINE" Die Schutzanforderungen und den Gesundheitsschutz, gemäß der **2006/42/CE** einhalt.

Für Überprüfung der Konformität der oben genannten Vorschriften wurden Vorschriften konsultiert **UNI EN ISO 12100:2010; 13857:2008; 4254-1:2010; 4254-12:2010.**

TRINCIA - FLAIL MOWER - BROYEUR - HACKSELMASCHINE

TYPE	MODEL												
	Funny Top C	Funny Top M	Funny Top S	Funny Top GC	Funny Top GM	Funny Top GS							
80													
93													
106													
119													
132													
158		X											

Matr. n° : 209897 Caprese Michelangelo li : 04 MAG. 2023

Del Morino SRL
 Via Caroni di Sotto, 19 - 52033 CAPRESE MICHELANGELO (AR)
 Tel. 0575 791056 (RA) - Fax 0575 791210
 PORTAL SITE: <http://www.del-morino.it>
 E-mail: info@del-morino.it - spdg@del-morino.it
 Cap. Soc. 400.000 I.V. MECCANOGRAFICO AR 005224
 N° ISCRIZIONE RI - Cod. Fisc. e P. IVA: 01041010511
 R.L. AREZZO N° REA 81382



Custode del Fascicolo Tecnico : **Dott. A. Del Morino**, Via Caroni di Sotto 19, 52033 Caprese Michelangelo Arezzo Italy.
 Keeper of the technical folder : **Dott. A. Del Morino**, Via Caroni di Sotto 19, 52033 Caprese Michelangelo Arezzo Italy.
 Dépositaire du dossier technique: **Dott. A. Del Morino**, Via Caroni di Sotto 19, 52033 Caprese Michelangelo Arezzo Italy.
 Verwalter der technischen Unterlagen: **Dott. A. Del Morino**, Via Caroni di Sotto 19, 52033 Caprese Michelangelo Arezzo