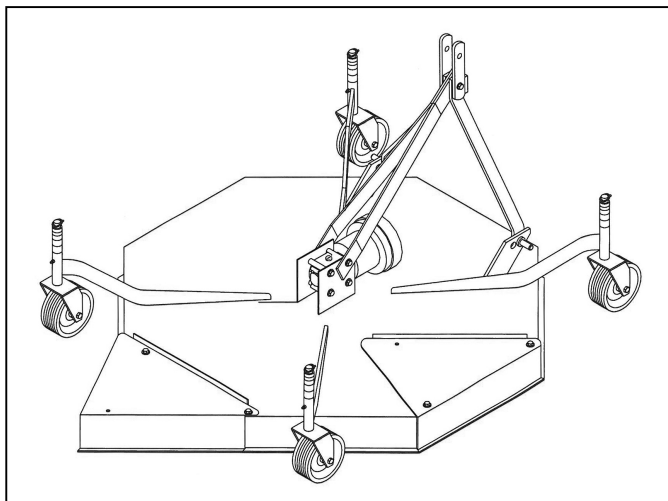


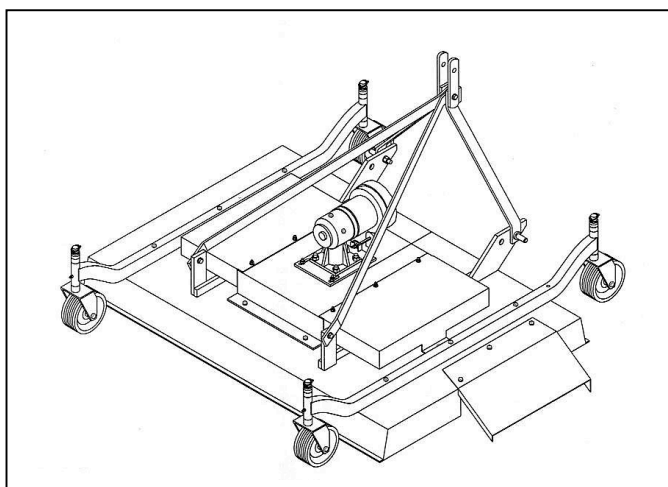
## USE AND MAINTENANCE MANUAL

# MOWER TYPE "ET"

## ET100



## ET120



## 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.

<b>DESCRIPTION</b>
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## **FUNCTION OF USE**

The machine gives grass a professional cut. The grass is first raised, and then cut with precision and discharged rear or sideways along the width of discharge.

The machine moves on the ground through four pivotal wheels, it's connected to the tractor through a three points hitch.

The machine takes motion through a PTO joint connected to the tractor PTO.

The machine follows perfectly the line of the soil making a uniform cutting action of high quality.

## **PERFORMANCES**

The machine always has its four wheels on the ground.

The pivotal wheels of the machine, permit the best control both on forward gear and reverse gear, the wheels have dimensions so as not to damage the turf.

The height of the cut is adjustable from 1 to 4 inches through distance washers that can be inserted in the vertical pivotal axles.

## **PERFORMANCES LIMITS**

- Maximum forwarding speed: 3 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 11 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.

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## **DOTAZIONE STANDARD**

- **Standard PTO shaft**
- **Rubber wheels**

## **VARIANTS & OPTIONS**

- **Mulching kit for ET 120**
- **Mulching kit for ET 120 P**

## TECHNICAL SPECIFICATIONS

### CHARACTERISTICS PER MODEL

Model	Type	Power		PTO g/min	Working width		Cutting height		Blades N°	Blades speed g/min	3 points hitch Cat.	Weight	
		Hp	Kw		cm	Inch	Cm	Inch				kg	Lbs
<b>ET</b>	100	15	11	540	100	40	2,5÷7,5	1÷3	1	1620	1	100	221
	120	15	11	540	120	48	2,5÷7,5	1÷3	2	2280	1	147	324
	120 P	15	11	540	120	48	2,5÷7,5	1÷3	2	2280	1	147	324

## SAFETY INFORMATION

### GENERAL REGULATIONS

- ❑ 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.
- ❑ Make sure that the 4 wheels of all components be adjusted to the same cutting height.
- ❑ 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.

### 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.

## SAFETY SIGNS ON THE MACHINE

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



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.**

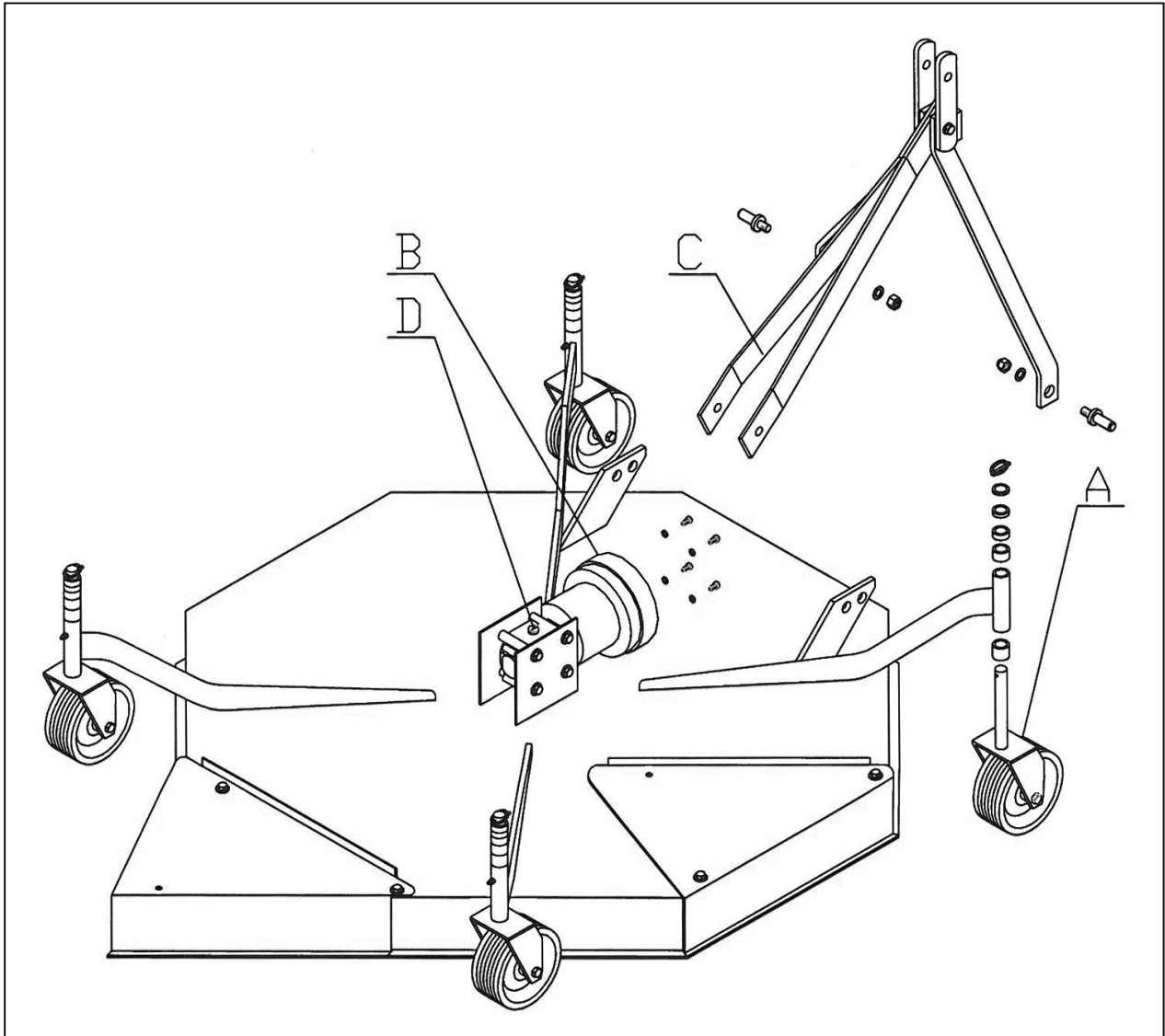
In case of damage, the labels of the signs must be substituted.

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**

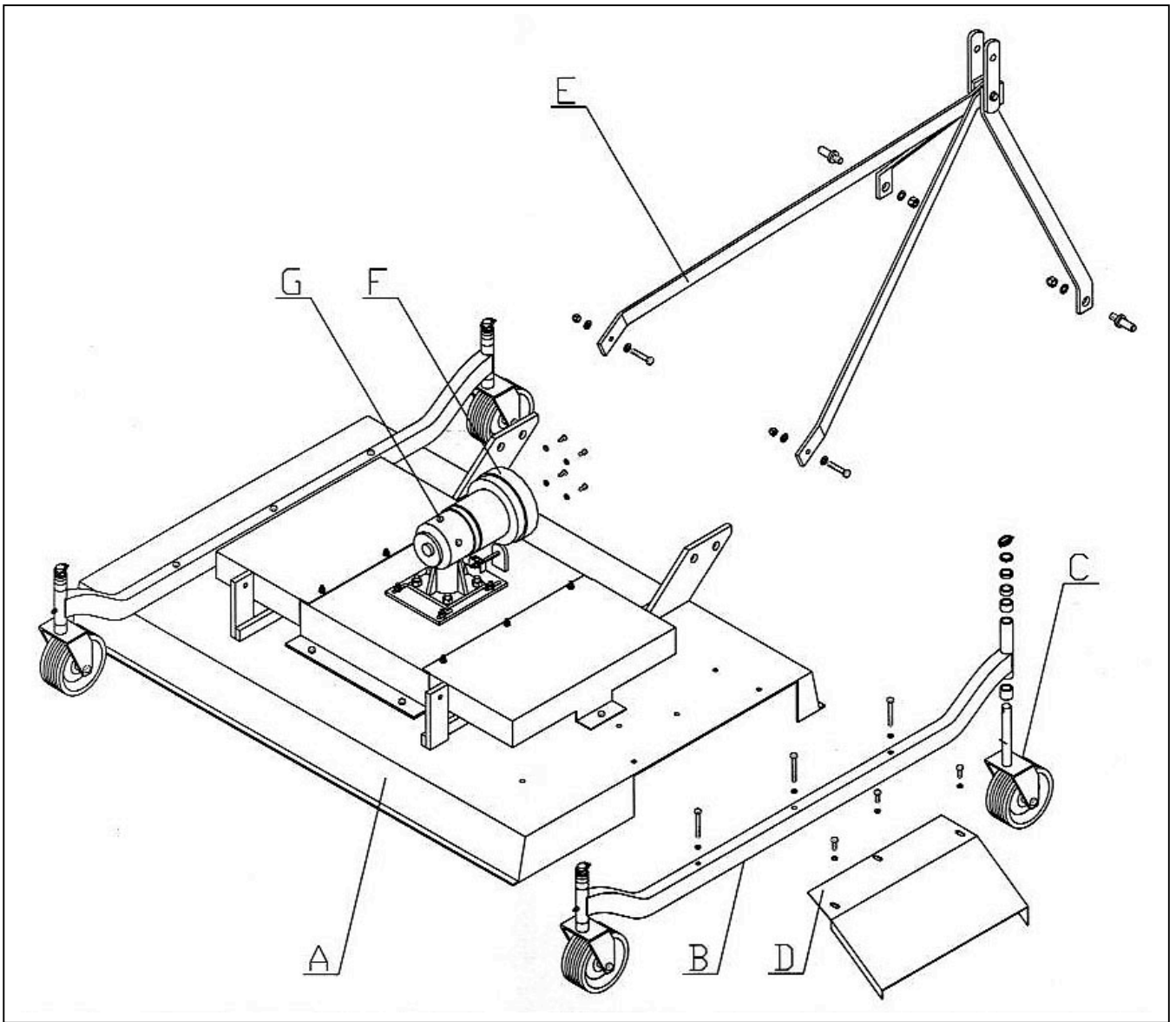
Contact your dealer to receive new safety labels with instructions for application.

## ASSEMBLING INSTRUCTION



### 1. "ET 100" ASSEMBLING

- a) Assemble on frame the four wheels "A".
- b) Assemble on frame the hitch group "C", open the side or rear carter discharge according with use.
- c) Assemble on gear box the safety protection "B" and through plug "D" check oil level (see page 12 point "a")



## 2. "ET 120" ASSEMBLING

- a) Assemble on frame "A" the two wheel brackets "B" and the four wheels "C".
- b) Assemble on frame "A" discharge carter "D" and hitch group "E".
- c) Assemble on gear box the safety protection "F" and through plug "G" fill oil in foreseen type and quantity (see page 13 point "A").

## 3. "ET 120 P" ASSEMBLING

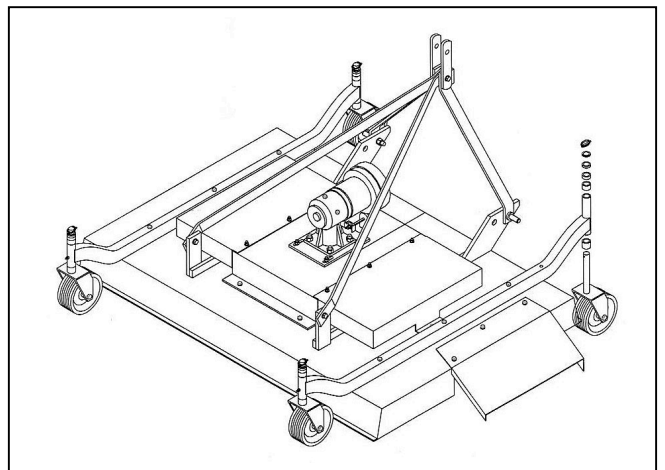
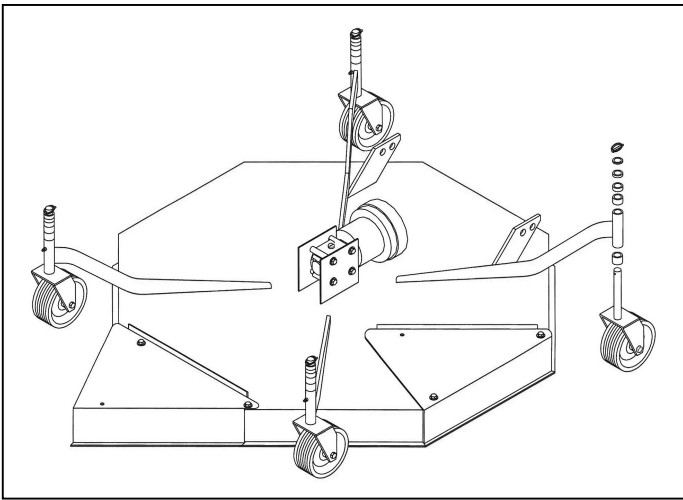
- a) Assemble on frame "A" the two wheel brackets "B" and the four wheels "C".
- b) Assemble on frame "A" the hitch group "E".
- c) Assemble on gear box the safety protection "F" and through plug "G" fill oil in foreseen type and quantity (see page 13 point "A").



## INSTRUCTION FOR USE

### 1. BEFORE BEGINNING WORK

- a) Check oil level in gear box. (See page. 12-13 point "a")
- b) Hook the machine to the tractor.
- c) With the machine raised, go to the work area.
- d) If necessary regulate the cutting height as follows:
  1. Remove the spring pin from the pivotal axle.
  2. Move the distance washer above or below the hub.
  3. Reposition the spring.
  4. Make sure that the same cutting height is set up on each wheel of all cutting components.



- e) Connect the PTO shaft to mower P.T.O.
- f) Check that the PTO chain is attached to the dragging hook so as to prevent the protection sheath of the PTO from rotating.

## **2. TO BEGINNING WORK**

- a) Keep people, animals and things at least 15 meters from the machine. Start the engine and lower the 3 cutting components as follows:
- b) Insert the PTO gradually bring it to 540 r.p.m.
- c) Begin cutting.

## **3. AT THE END OF CUTTING OPERATION**

- a) Stop the tractor.
- b) Disconnect the PTO.
- c) Disconnect the PTO joint.
- d) Raise the machine.
- e) Clean the under sides of the cutting components to remove deposits of grass and dirt. Use a wooden spatula so as not damage the paint.
- f) Proceed to a visual check of the blades to make sure if there are damages.

<b>MAINTENANCE INSTRUCTIONS</b>
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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**

	<b>FIRST START</b>	<b>AFTER 10 H.</b>	<b>EACH 30 H.</b>	<b>EACH 500 H.</b>	<b>END SEASON</b>	<b>BEGINNING WORK</b>	<b>END WORK</b>
<b>MACHINE</b>	Greasing		Greasing		Cleaning Greasing		Cleaning
<b>OIL</b>	Put	Check level	Check level	Substitution		Check level	
<b>SCREWS</b>		Locking	Locking				
<b>BLADES</b>			Check Sharpness Balance				Check Cleaning
<b>BELTS</b>		Check tension		Substitution			

## 1. ET 100 GREASING

All the greasing points, both those situated and both centralized, are equipped with greaser HYDRAULIC TYPE MODEL "A" UNI 7663.

To grease use only MULTIFUNCTIONAL GREASE LITHIUM BASED Type NLGI 2.

Refer to diagram, greasing points are: points "C" one per each wheel.

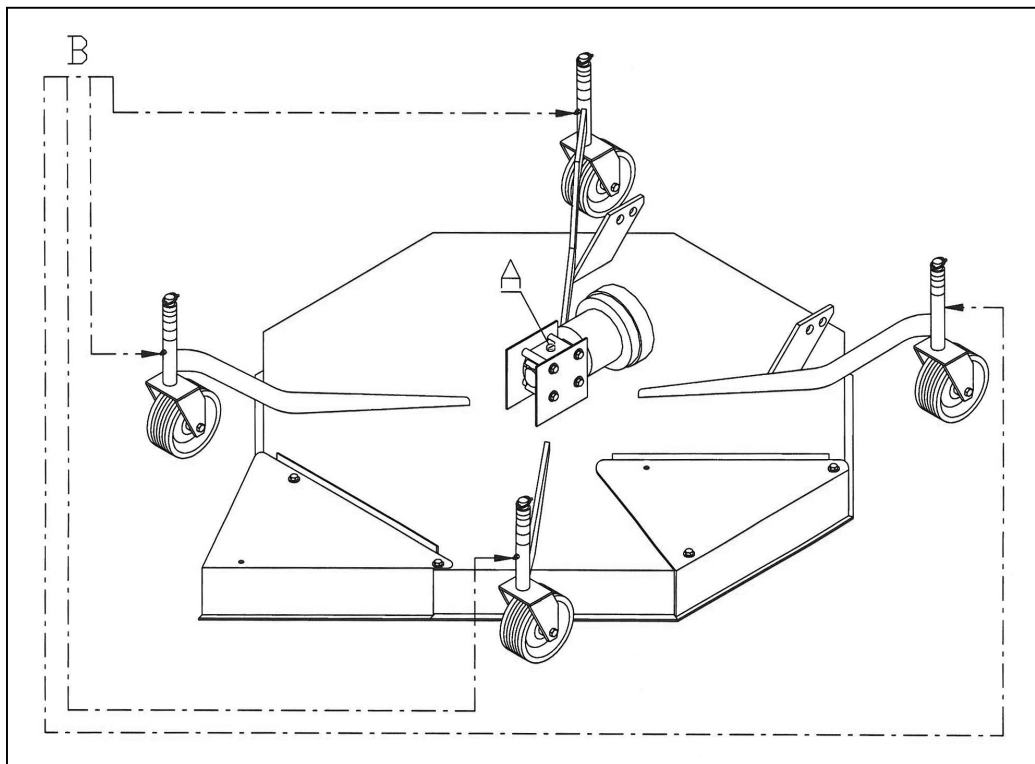
Greasing operation must be made at the terms scheduled on diagram "A".

## 2. ET 100 - OIL CECK – OIL SUBSTITUTION

To fill and to change oil use only OIL SAE 140 EP, oil capacity of angular gear box is 0,5 L.

Oil fills and oil change operations must be made at the terms scheduled on diagram "A".

a) To check oil level in angular gear box operate as follows :



1. Unscrew plug "A".
2. With machine on level check oil level.
3. If necessary fill oil.
4. Screw plug "A".

b) To change oil in angular gear box operate as follows :

1. Unscrew plug "A".
2. Overturn machine and take out oil.
3. Make straight and on level the machine then fill new oil through hole "A".
4. When level is ok, screw plug "A".

### 3. ET 120 – ET 120 P GREASING

All the greasing points, both those situated and both centralized, are equipped with greaser HYDRAULIC TYPE MODEL "A" UNI 7663.

To grease use only MULTIFUNCTIONAL GREASE LITHIUM BASED Type NLGI 2.

Refer to diagram, greasing points are: points "C" one per each wheel, point "D" one per each blade, accessible removing the two belts safety carters.

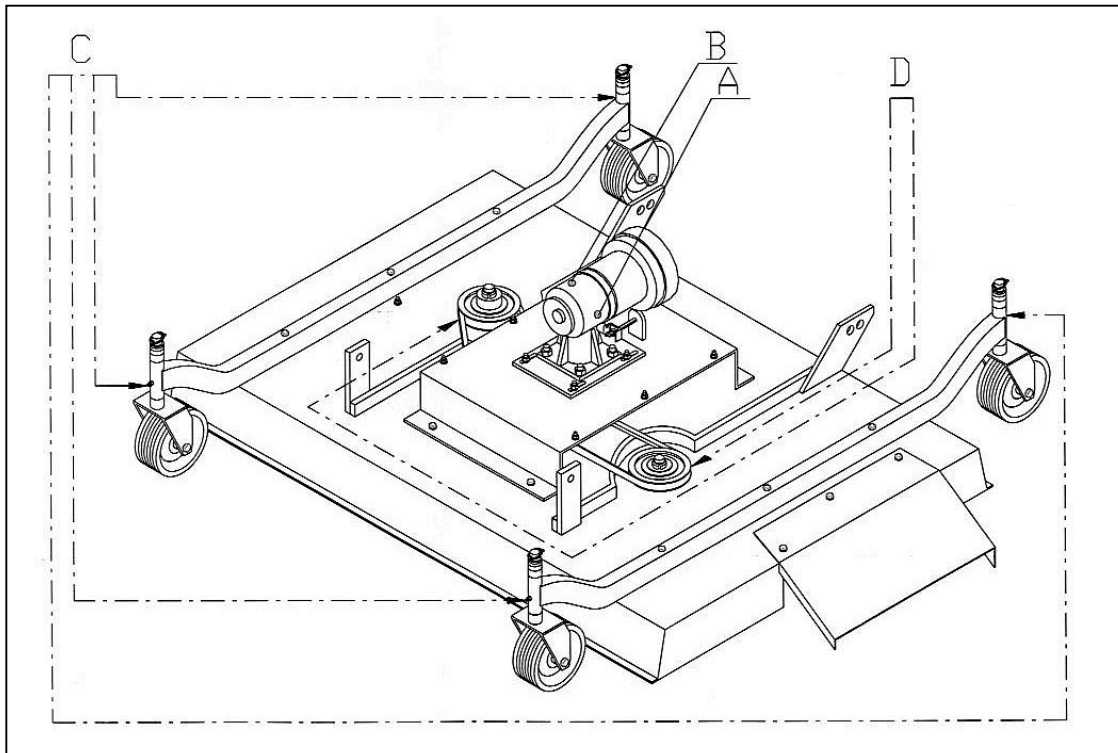
Greasing operation must be made at the terms scheduled on diagram "A".

### 4. ET 120 – ET 120 P OIL CECK – OIL SUBSTITUTION

To fill and to change oil use only OIL SAE 140 EP, oil capacity of angular gear box is 0,5 L.

Oil fills and oil change operations must be made at the terms scheduled on diagram "A".

a) To check oil level in angular gear box operate as follows :



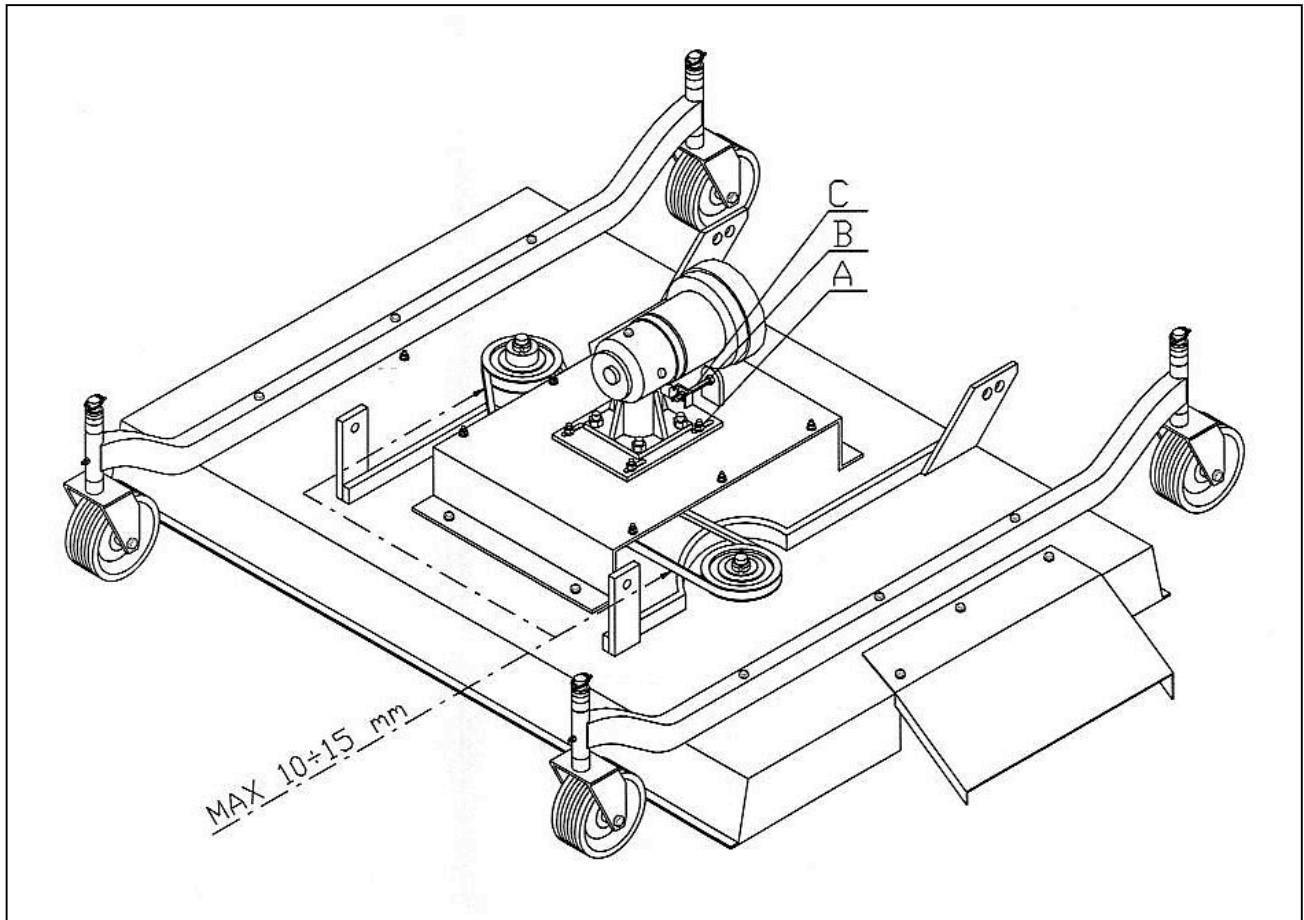
1. With the cutting machine on level, unscrew level plug "A", then check that oil touches on lower hole rim.
2. If level its ok screws the plug "A".
3. If level its low unscrew plug "B" and fill oil.
4. When level its ok screw plugs "A" and "B".

c) To change oil in angular gear box operate as follows :

1. Unscrew plugs "A", "B".
2. Take away oil through hole "B" using a suitable little pump.
3. Put new oil through plug "B".
4. When level its ok screw plugs "A" e "B".

## 5. ET 120 – ET 120 P BELD ADJUSTING AND SUSTITUTION

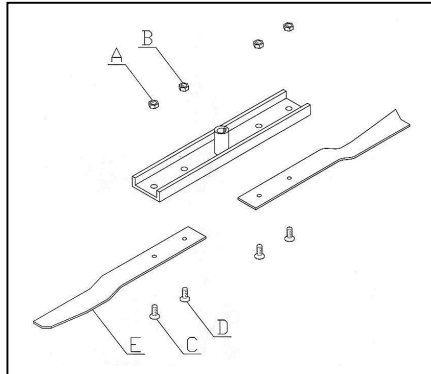
To adjust the tension or substitute the trapezoidal transmission belts operate as follows :



- a) Remove the two upper protection of the cutting component unlocking the fixing screws.
- b) Unlock the 4 screws "A" and nut "B".
- c) To substitute the belts, turn the screw "C" in counter clockwise direction.
- d) Remove the old belt and substitute it with a new one referring to the characteristics in the SPARE PART LIST.
- e) Turn the screw "C" in clockwise direction until to obtain the required tension. The best tension is when pushing with a hand on the belt, this subsides of 10-15 mm, screw nut "B".
- f) To adjust only the tension of the belt, don't read step "d".
- g) Lock the screws "A".
- h) Reassemble the protection.

## 6. ET 100 – BLADE SUBSTITUTION

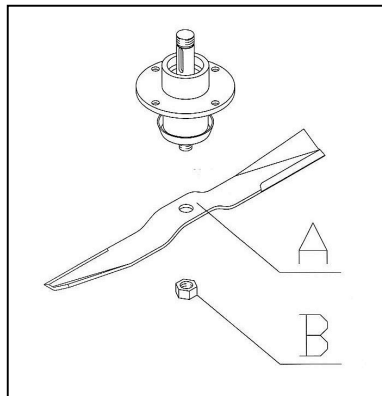
To substitute the blades or to make operations of sharpness and/or balance, referring operate as follows:



- a) Bring mower in raised position and make sure that the transmission be disconnected.
- a) Unscrew nuts "A" e "B" and take out screws "C" e "D".
- b) Change the blade "E" or make the operations of sharpening and/or balancing.
- c) Put on place screws "C" e "D", then screw and lock nuts "A" and "B".

## 7. ET 120 – ET 120 P BLADE SUBSTITUTION

To substitute the blades or to make operations of sharpness and/or balance, referring operates as follows:



- a) Bring mower in raised position and make sure that the transmission be disconnected.
- b) Unscrew nuts "B" and take out blade "A".
- c) Change the blade "A" or make the operations of sharpening and/or balancing.
- d) Screw and lock nut "B".

### NOTE:

**Every time that you disassemble the blade from the spindle you must substitute also the self locking nut.**

**PROBLEMS SOLVING**

<b>TROUBLES</b>	<b>CAUSES AND SOLUTIONS</b>
<b>Abnormal vibrations</b>	<ul style="list-style-type: none"><li>-Damaged blade - Replace</li><li>-Broken blade - Replace</li><li>-Not balanced blade - Balance</li><li>-Damaged bearings – Change</li><li>-Damaged hub - Change</li></ul>
<b>Uneven or unsatisfactory cut</b>	<ul style="list-style-type: none"><li>-Not sharp blade - Sharp</li></ul>



## 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.

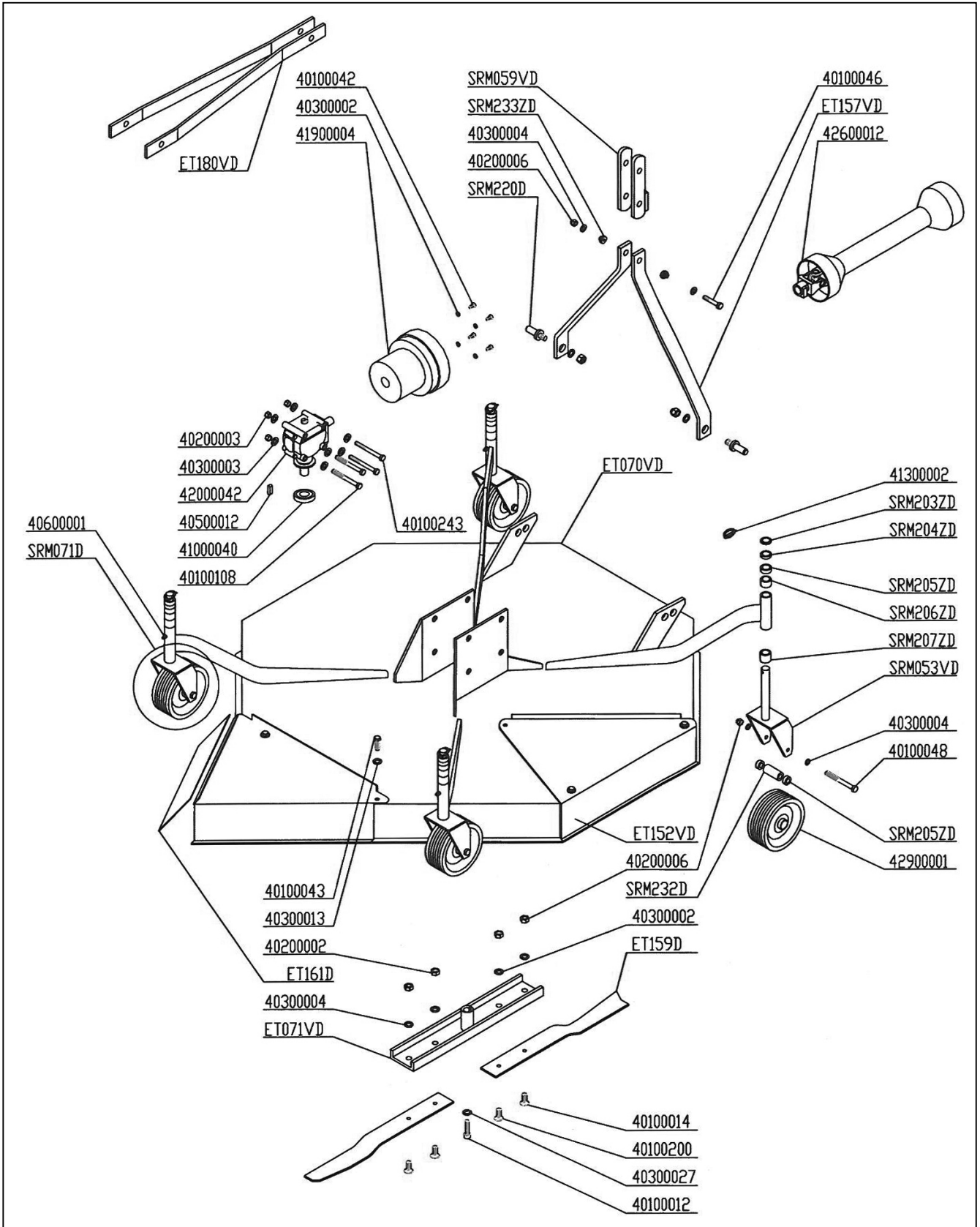
The warranty is not applicable when:

- 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.

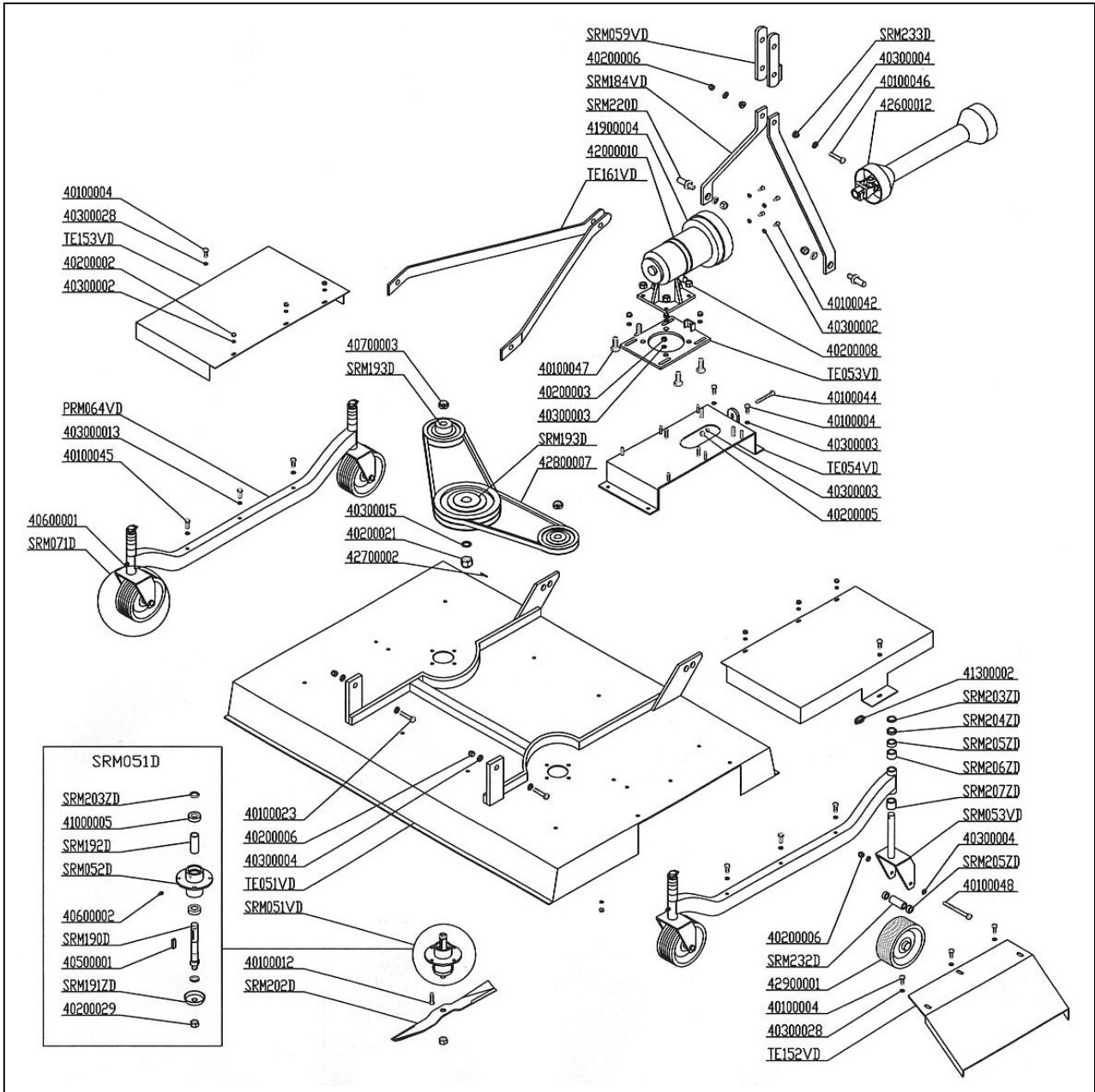


# **SPARE PARTS AND ACCESSORIES**

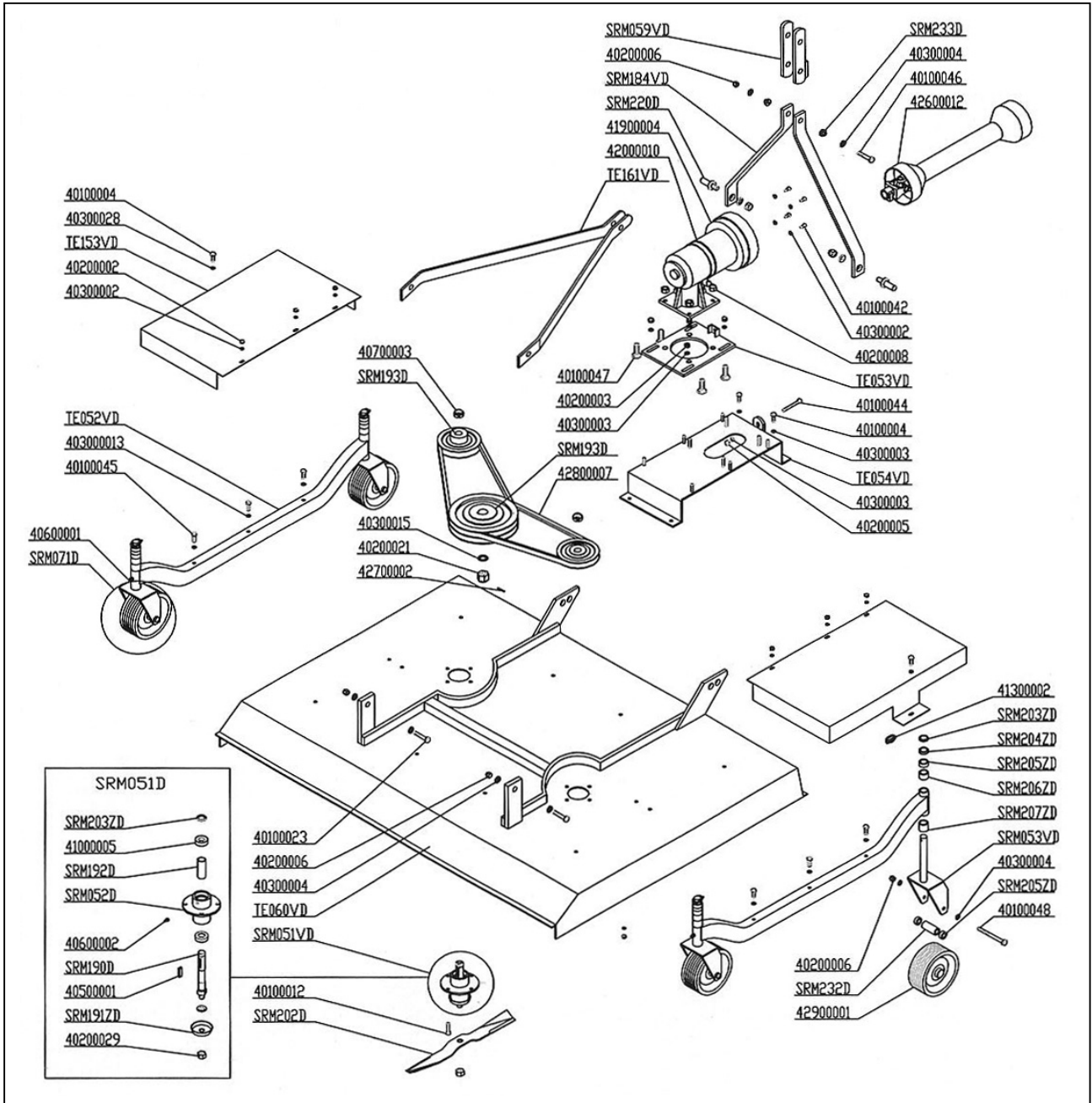
ET 100 SPARE PARTS



ET 120 SPARE PARTS



ET 120 P SPARE PARTS



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