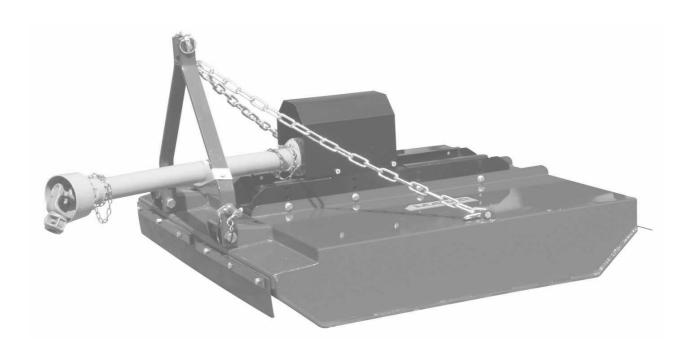


## USER AND SERVICE INSTRUCTION MANUAL

#### SPARE PART LIST



# ROTARY SLASHER GC90 - GC105 - GC120 GCD90 - GCD105 - GCD120 — GCD150

09-2016

Please read the following instructions carefully before operating the machine and refer to them as needed.

If you do not understand a part of the user manual, please contact your MAJAR reseller or MAJAR

1 Route de Montréal - CS30074

Phone 0033 4 68 25 38 16

11890 CARCASSONNE Cedex 9

#### 

TABLE OF CONTENTS

#### **FOREWORD**

Please read this user manual and the manual delivered with the rotary slasher cardan before operating your rotary slasher, the information allow you ensure quality work in complete safety. If the manual is not clear enough, please contact our technical service.

The security depends on the use of the machine with the limitations explained in this manual. You have to know and to follow the safety regulations of this manual and of the tractor manual.

The machine you bought was carefully designed and manufactured in order to give you complete satisfaction. As any mechanical gear, it requires cleaning and maintenance. Lubricate as described. Follow the regulations and safety information given in this manual and on the security stickers of the rotary slasher and the tractor.

For maintenance your MAJAR reseller has the competency and the original pieces to respond your needs.

Enter below model and serial number of your machine for reference.

In line with the goals of continous improvement MAJAR reserves the right to change the machines without changing the sold machines. The illustrations et characteristics of this manual may vary slightly on your due to production changes.

Throughout the manual the terms "left" "right", "front" "rear/back" are given refering to the driver's position. The term IMPORTANT is used to est utilisé pour indicate that a failure may cause damages for the machine. The terms WARNING and DANGER are used with safety alert symbols to indicate the degree of safety hazard.

This symbol means: attention, be careful, your safety is involved. It reminds the safety instructions or focuses your attention to dangerous practices which may cause injury or operational occurence.



**WARNING** reminds the safety regulations: may cause injury if not observed



**DANGER** reminds the safety regulations: may cause irreparable, lasting injury or cause death if the good precautions are not taken

## TECHNICAL DATA ROTARY SLASHER GC90-105-120 and GCD90-105-120-150

Reference	Recom.	Cutting	Power grip	Blade	Number	Cutting	Discharge	Weight
	power	width	speed	speed	of blades	height		KG
GC 90	15/25 CV	90 cm	540 tr/min	1500 tr/min	2	5à12 cm	Arrière	100
GC 105	15/25 CV	105 cm	540 tr/min	1500 tr/min	2	5à12 cm	Arrière	120
GC 120	15/25 CV	120 cm	540 tr/min	1500 tr/min	2	5à12 cm	Arrière	130
GCD 90	15/25 CV	90 cm	540 tr/min	1000 tr/min	2	5à12 cm	Arrière	130
GCD 105	20/30 CV	105 cm	540 tr/min	1000 tr/min	2	5à12 cm	Arrière	150
GCD 120	25/40 CV	120 cm	540 tr/min	1000 tr/min	2	5à12 cm	Arrière	165
GCD 150	30/50 CV	150 cm	540 tr/min	1000 tr/min	2	5à12 cm	Arrière	220

**POWER GRIP DIRECTION OF ROTATION OF TRACTOR:** clockwise when standing in front of the governor output shaft

#### **OPTIONS**

**ROUE GC**: Set of 2 cutting height control wheels

LCF: Friction torque clutch

**ROUELIB**: Freewheel

#### **INSPECTION CHECKLIST**

#### AT DISTRIBUTOR RESELLER

The assembly, installation and commissioning of the rotary slasher is the MAJAR reseller's responsibility. Please read carefully the use and care manuel and the savety regulations. Make sure that the indicated points of the checklist had been verified before delivery and on delivery and amended if necessary before delivering the machine to the owner

#### INSPECTIONS BEFORE DELIVERY

Check that all the safety screens, grids and safety measures are in place and in good condition

Check that all screws and bolts are tightened to the right torque value (see table)

Make sure that the safety stickers are in place and in good condition

Lubricate the nipples and the machine; check the oil level in the angular gearbox

Check that the machine is operating correctly

Check transmission status

#### **VERIFICATIONS AT DELIVERY**

Show the client how to mount the machine and how to realize the tool adjustments

Explain the importance of lubrication and show him the lubrication points

Show him les safety devices, safety measures and options

Present the use and instruction manual to the client as well as the specific cardan manual, ask to read it

Explain to the client to use the adequate signage when driving on the road

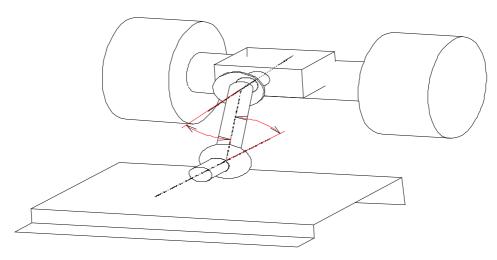
#### SAFETY REGULATIONS

### **WARNING**

Some illustrations may show the machine without protective screen or shield. Never use the machine without these devices.

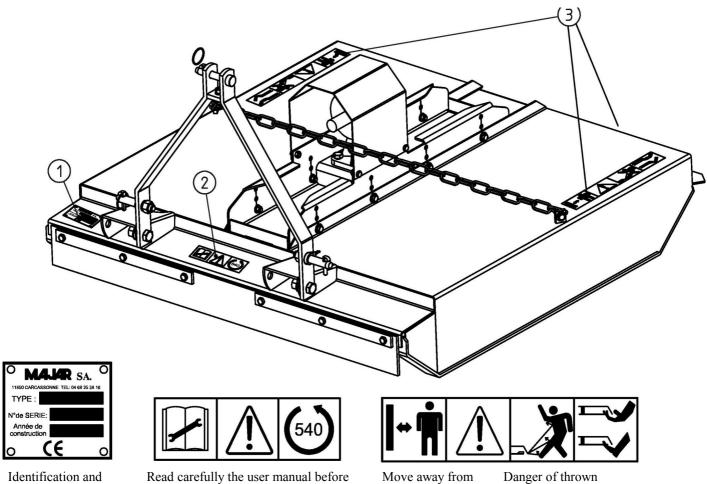
- \* Learn how to stop the machine in emergency situation. Read this manual and the tractor manual
- \* Never let anyone else use this machine if the person did not read and understand this manual
- \* Never let children use this machine
- \* Always wear protective equipment for head, ears, hands and feet using this machine.
- \* Always wear close-fitting clothing to avoid to be snatched by the moving parts or to hang on
- \* Clean the worksite from branches, stones or debris which may be projected and cause injury or damage
- \* Always work on daylight or with good artificial light
- \* Make sure that the safety stickers are in place and in good condition
- \* Clean the grass and debris accumulations
- \* Make sure that the machine is in good working condition before using it
- \* Make sure that all the safety screens, grids and safety measures are in place and in good condition
- \* Do not use the machine in areas where you cannot keep safety distance from the persons or animals to avoid projection injury
- \* If the tractor has a ROPS Roll Over Protective Structure, fasten your seat belt
- \* Make sure that nobody or anything is behind you while backing off

- \* Do not start or stop the engine abruptly on slopes
- \* Do not use the machine on too big slopes
- \* Reduce speed on slopes to avoid a loss of control
- \* Be careful while driving along embankments or ditches
- \* Pay attention to the holes or other area accidents on undulating terrains
- \*Disengage the power grip, stop the motor, apply the handbrake and remove the key before all settings, adjustments, maintenance or disassembly
- \* Never let anyone else to the driver's cab during adjustment interventions, maintenance or disassembly of the machine.
- \* Check periodically tightening torques of all fasteners
- \* While maneuvering on slope always work up and down, never across the slope
- \* Place the wheels according to the setting de la voie la plus large afin d'augmenter la stabilité du tracteur
- \* Avoid unstable embankments, rocks and holes; this can be dangerous when moving
- \* Avoid aerial cables, high-voltage lines and obstacles. Contact with power lines causes electrocution and death.
- \* Activate all the safety equipment
- \* Only operate the control panel when you are correctly seated in front
- \*Check visually hydraulic leaks and missing or faulty parts. Repair when necessary before every manoeuvre
- \* Check with the competent authorities that the linkage complies with the national legislation when driving on roads.



NEVER EXCEED THE MAXIMUM ANGLES OF TRANSMISSION

#### **SAFETY STICKERS**



certification plate

Read carefully the user manual before using the machine

Move away from the machine

Danger of thrown objects

Check speed and direction of rotation of power grip of the tractor

Danger from cutting off hands and feet

Replace immediately if damaged

#### INSTALLATION AND COMMISSIONING

The installation and commissioning of the tool are the responsibility of the MAJAR reseller. The rotary slasher must be delivered fully mounted, lubricated and adjusted to the normal operating conditions

WARNING Always wear safety footwear, protection equipment for eyes, ears and hands when climbing onto the machine

Do not allow anyone to sit on the driving position when mounting the machine.

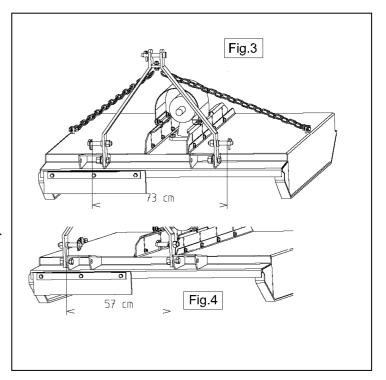
#### **COUPLING OF THE MACHINE**

#### ASSEMBLY OF LOWER PINS

Placing the lower link pins being pointed outwards, the overall distance of the arms is 73 cm (fig.3)

**Axial assembly:** Mount the 3 point linkage on the deck of the right side (fig.3). The rotary slasher runs centrically behind the tractor

Offset assembly: Mount the 3 point linkage on the deck of the left side (fig.4). The rotary slasher is 15 cm deported to the left of the tractor. This device allows to mow as close as possible to the left flank of the wheel.



#### •COUPLING

- •Drive the tractor backwards until the lower link pin is only a few cm on each side from the lower axes of the coupling (rep.A).
- •Stop the engine, shift the transmission to NEUTRAL, apply the hand break and remove the key.
- •Connect the lower arms securing with the pins. Adjust the arms so that the transversal articulation is about 4cm and the machine is parallel to the ground.
- •Coupling the 3° point securing with the pins. Adjust the 3° point bar so that the chains slightly sag. This allows the rotary slasher to follow the slopes.

WARNING The safety devices (Freewheel, friction torque clutch ...) must be imperatively placed nearby the machine.

#### CONNECTING THE UNIVERSAL JOINT SHAFT

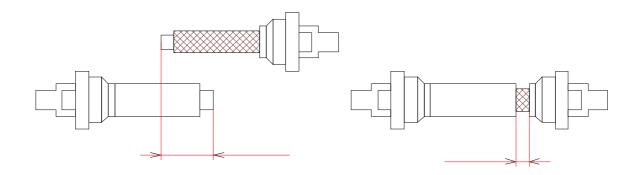
**DANGER** More detailed information in the specific manual of the cardan which is an initial part of the safety documentation to read carefully. In the event of a discrepancy with the following, follow the instructions given in the specific manual of the du cardan.

#### Setting for the length of the transmission:

Look for the linkage position where the coupling is the farthest away with the machine connected to the tractor, then check puis that there is still a connection of 15 cm in this position

Look for the linkage position where the coupling is the shortest and check if there is an additional stroke of 4 cm. If necessary cut the drive shaft, cut the protectors 0.5 cm shorter to facilitate the assembly. Lubricate the tube sliding system before assembly.

These operations are detailed in the specific manual of the cardan



#### **Connecting the transmission:**

Connect the transmission to the transmission case of the rotary slasher, check that the safty bolts and pins are engages in the groove of the drive shaft. Connect in the same way the tractor and check that both ends of the cardan are locked. Attach the protectors of the transmission on the tractor and tool so that they will not turn with the transmission

Check that no parts of the rotary slasher or the tractor get in contact with the transmission when lifting the machine.

#### REGLAGES ET UTILISATION



Check the tightness of all the bolts according to the table at the end of the manual.

The safety is a challenge that concerns the most while designing and manufacturing this tool. However, the efforts of the constructor may be shattered due to user carelessness.

The accident prevention depends on prudence and training of staff in charge of using and maintenance of the machine

The best safety device is a careful and informed user; we ask you to be this user.

The user of this machine is responsible for the use and safety. The user has to be qualified and trained to the machine and also know the tractor. Read all the safety instructions.

**WARNING** Never use the machine without performing the described operations in chapter « daily maintenance ».

This machine is designed to cut grass and bushes with a diameter of less than 1.5 cm. It is not designed to cut hart objects, stones, garbage or small wood pieces that could damage the machine or cause injury. It should not be used to transport persons or material.

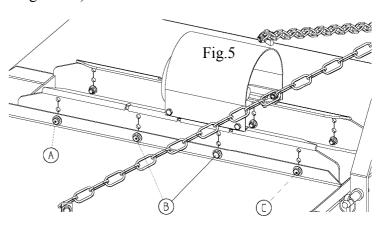
#### • REGLAGE DE LA HAUTEUR DE COUPE

The cutting height must be adjusted depending on the result you want to achieve, but also depending on the grass height. Do not try to cut more than a third of the grass height, this would lead to a bad cutting quality. At the first cut adjust at the highest like in Fig.5 .(see also chap. Mowing below)

**Adjustment of the central part:** Put the rotary slasher on the ground, stop the tractor engine and settle the transmission.

Settler the bolts and the washers (B). Unlock the bolts (A) and (C), place the nuts and leave the screws in place.

Sustain firmly the central part removing the screws (C), rotate and replace the screws at the top and the lower hole. Repet this operation on the screws (A) Replace the screws (B), mount the washers and the nuts, and tighten firmly as indicated on the table at the end of the manual.



If you lowered the cutting height, try to lift to assure that the transmission does not get in contact with the rotary slasher chassis.

#### • <u>USE</u>



Always wear close-fitting clothing to avoid to be snatched by the moving parts. Always wear safety footwear, protection equipment for eyes, ears and against dust.



Never let children or unqualified persons use this machine.

Do not use the machine nearby other persons or objects that could be reached by projections.

Never make adjustments or interventions on the machine when somebody is on the driving position of the tractor.

Nobody except the driver should be on the tractor.

#### • ROTARY SLASHER CLUTCH

The power grip control couples the rotary slasher; idle the engine, couple the joint shaft progressively and increase the the speed up to rate speed indicated on the indiquée sur tractor dash panel.

Do not couple the rotary slasher with the engine at full throttle, this would submit the transmission under to important effort and would cause failure.

Do not exceed the rated joint shaft speed (540tr/min), that would cause damages or irreparable injury.

#### • MOWING

The recommended mowing speed is between 3 and 10 km/h and depends on the grass height. When you hear the engine speed decrease, reduce your speed until the engine resumes the maximum authorized rpm (540tr/min).

A rotary slasher with sharp blades needs less power.

At the first time cut higher to discover hidden objects which could be projected. Never presume a worksite clean, check!

Avoid to cut across slopes on a hillside plot, cut always working up and down.

<u>GRASS JAM:</u> If the engine speed lowers even if you stopped travel speed, the amount of gras sis too important and causes paper jam:

Declutch the power grip and take the engine out of gear - Attendez l'arrêt complet des pièces en mouvement - Relevez le girodébroussailleur et arrêtez le moteur - Tirez le frein de parking et enlevez la clé de contact -

DANGER Chock the machine to avoid failure of the hydraulic lifting – Remove built up of grass clippings under the rotary slasher – Lower the rotary slasher – Operate it empty on a part you have mowed yet to check the operation

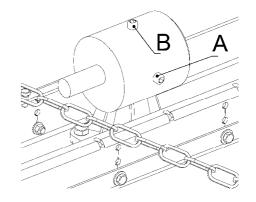
#### MAINTENANCE BY THE USER



Before maintenance or troubleshooting on the machine, stop the engine, apply the hand break and remove the key. Never let approach anybody to the driving position.

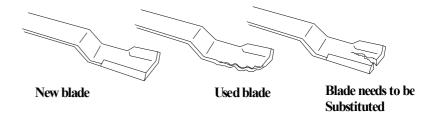
#### **DAILY MAINTENANCE BEFORE STARTING WORK**

- **Protectors:** First check the caoutchouc anti-spitting protection, the protectors and the cover of the transmission and the angular gearbox.
- **Lubrication:** do not leave excess grease around the pieces. Clean the grease nipple of the rear wheel and push one or two presses the grease gun.
- **Tightening of the connection bolts:** Check tightening torques of all fasteners. The vibrations of the rotary slasher may loosen the screws and nuts. Refer to the table at the end of the manual.
- Oil level in the angular gear: check the oil at the plug (A), if necessary add in the oil filler cap (B). Use gear oil 80W90 A.P.I G.L4 or 5. The first oil change should be done after 50 hours. The next after 500 hours.



• Condition of blades: Check the condition of the blades.

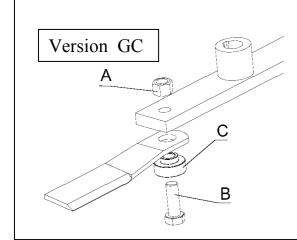
They should not be twisted, damaged or worn. A damaged blade may cause un imbalance, strong vibrations resulting in failure of the transmission or frame. A worn blade causes bad cutting and needs more power.



#### • Removing the blades:

ATTENTION the sharp blades can cause injury, always wear gloves when handling the blades, do not cut yourself.

Lift a maximum the rotary slasher with lifting slings or the tractor lift, then chock the machine to avoid failure. Stop the engine, apply the hand break and remove the key. Never let approach anybody to the driving position. Always change both blades to avoid imbalance of the turning part causing vibrations and accelerated deterioration.

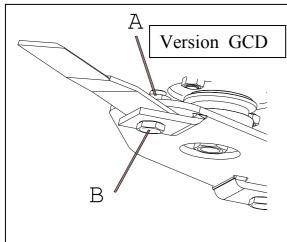


Unscrew the brake nut (rep.A) holding the screw (rep.B) with a wrench. Remove the screw, blade and clamping ring (rep.C).

Before reassembly: Check the condition of the screw, replace it if

necessary by original pieces. Do not replace by standard screw missing the same characteristics. The brake nut A and the clamping ring C must be replaced. (the assembly and the dissambly damaged the nylon ring of the nut.)

<u>Reassembly:</u> Check that the cutting edge of the blade is on the right side, replace the screw, ring and knife. Tighten firmly the nut and check that the blade can rotate and retract. Refer to the table at the end of the manual.



Unscrew the brake nut (rep.A) holding the screw (rep.B) with a wrench. Remove the screw and blade.

<u>Before reassembly</u>: Check the condition of the screw, replace it if necessary by original pieces. <u>Do not replace by standard screw missing the same characteristics</u>. The brake nut must be replaced, the frequent assembly and the disassembly damages the nylon ring of the nut.

<u>Reassembly:</u> Check that the cutting edge of the blade is on the right side; replace the screw and the nut down. Tighten enough to limit the play between the blade and the support and check that the blade can rotate and retract.

#### MAINTENANCE AFTER EACH CAMPAIGN OR ONCE A YEAR

- Clean the machine completely; remove accumulations of material or debris reducing the performance and hiding a leak or failure.
- After cleaning with water, grease the la machine and run the machine to eliminate the water.
- Check tightening of all fasteners specified in the table.
- Remove the rust and paint if necessary.
- Check the general condition of the machine. Check by hand that the rotor is free to turn and without run-out. Check that there is no space on the angular gearbox input shaft and on the transmission of power grip.
- Drain the oil of the angular gearbox and refill until the recommended level.
- Control potential oil drip, tighten the plugs and chance the seals if necessary.

#### **TIGHTENING TORQUE**

diameter of screw (mm)	dimension of wrench (mm)	Tightening torque (daN.m)			
8	13	2.5			
10	16/17	5			
12	18/19	8.5			
14	21/22	13			
16	24	21.5			
20	30	43.5			

#### MALFUNCTIONS AND REMEDY

PROBLEM	CAUSE	REMEDY		
The rotary slasher does not cut	Jamed blades on the pin The blades are blunt The rotary slasher is crammed The angular gearbox is damaged	Unjam the blades Sharpen or change blades Empty the rotary slasher The resseller should check		
Grass badly cut	The blades are blunt or twisted Insufficient blade speed Excessive forward speed Grass is too high	Sharpen or change blades Increase the engine speed Reduce forward speed Cut a number of times		
Transmission too noisy Rotary slasher vibrates	The bearings are worn or damaged Damaged or unbalanced blade Damaged bearings Incorrect power grip speed Damaged transmission	Change bearings Change blades or balance out Let check bearings Check power grip speed Check transmission		

#### **C.E DECLARATION OF CONFORMITY**

The letters CE on the identification plate of this machine certify that it is conforming to EC machine directive 2006/42/CE.

MAJAR SA.  11850 CARCASSONNE TEL: 04 68 25 38 16					
TYPE :					
N°de SERIE:					
Année de construction					
(€					

The Director, J.-L. Checa .....

#### **GUARANTEE**

Each new manufactured by MAJAR SA is guaranteed as follows below, warranted against defects of construction and assembly and/or of the materials when used appropriately during 1 year.

- 1° This guarantee is limited to 1 year to the replacement of pieces mounted and recognized as faulty by MAJAR.
- 2° All pieces requested on guarantee must be returned to MAJAR for inspection, reparation or replacement prepaid postage with proof of purchase of the machine, serial number and carefully packed for protection.
- 3° The machine must not be damaged, repaired or maintained without authorization from MAJAR. The machine must not have had an accident, been misused, abused or used acting not conform instructions and specifications contained in this manual

This guarantee does not oblige MAJAR or representative to reimburse labor costs or transport costs of the machine for reparation.

NO GUARANTEE WILL BE APPLIED TO THIS EXCEPT THE LEGAL WARANTY FOR HIDDEN DEFECT.

MAJAR CANNOT BE HELD RESPONSIBLE FOR DAMAGES OR COSTS INCURRED BY THE MACHINE FOR PAR EXAMPLE:

1 RENTAL FEES FOR MATERIAL

2 LOST OF SALE

3 EXECUTION OF WORK CARRIED OUT NORMALLY BY THE MACHINE

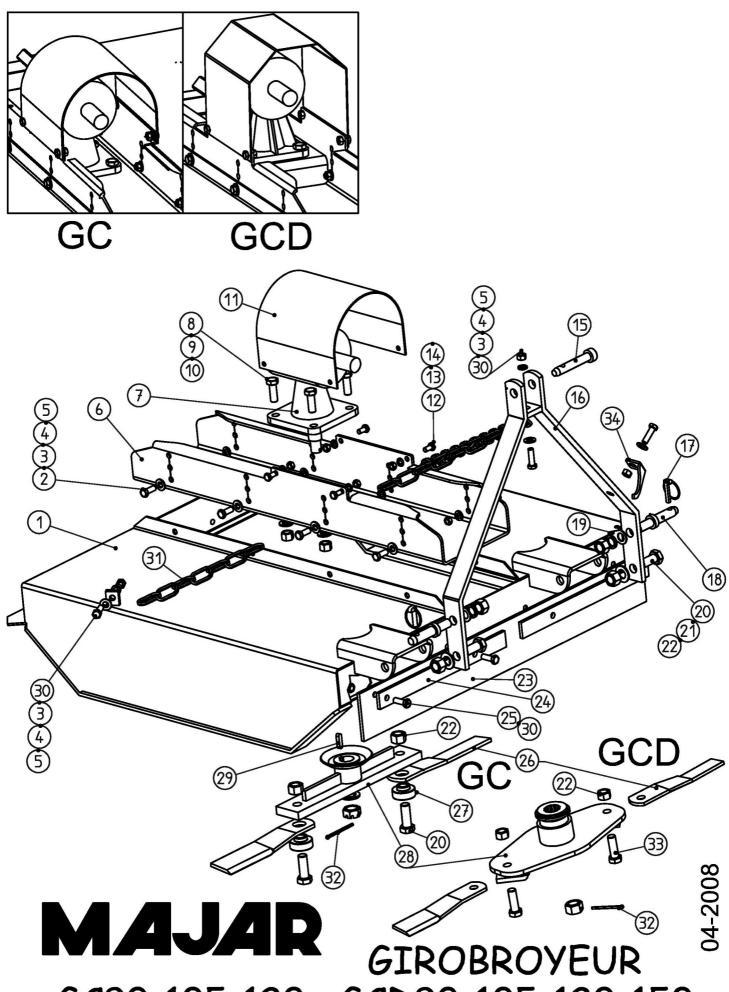
MAJAR ASSUMES NO OBLIGATION AND DOES NOT ALLOW ANYBODY TO ASSUME ANY OTHER OBLIGATION THAN THEM IN THE 3 PREVIOUS PARAGRAPHES.

To obtain the name of resseller, contact:

MAJAR S.A 1 Route de Montréal CS30074 11890 CARCASSONNE Cedex 9 FRANCE

#### SPARE PART LIST

According to Article L.111-3 of the Consumer Code and of the Decree implementing the Code N°2014-1482 of 9th of december 2014, the availability duration of indispensable spare parts for use of MAJAR material is 7 years.



GC90-105-120

GCD90-105-120-150

34	1	Support cardan	185435	185435	185435	185435	185435	185435	185435
33	2	Vis HM20x60/36 c			100400	9961946	9961946		9961946
32	1	Goupille	9907019		9907019	9907019	9907019	9907019	9907019
31	1	Chaine	080542	080542	080542	080542	080542	080542	080542
30	8	Vis H12x40/30	9962083	9962083	9962083	9962083	9962083	9962083	9962083
29	1	Clavette 10x8x36	082551	082551	082551	0002000	0002000	0002000	0002000
28	1	Support lame	582165	582171	582171	081808	582222	582222	081902
27	2	Bague	185199	185199	185199	1	00222	00222	001002
26	2	Lame	185213	185213	185214	083305	083305	083302	083385
25	5	Ecrou frein H12	9900542	9900542	9900542	9900542	9900542	9900542	9900542
24	2	Plat de bavette	185200	185201	185202	185200	185201	185202	185332
23	 1	Bavette	185216	185217	185218	185216	185217	185218	185331
22	4	Ecrou frein H20	9900550		9900550	9900550	9900550	9900550	9900550
21	2	Rondelle MN20	9908020			9908020	9908020	9908020	9908020
20	4	Vis H20x55/55	9962057	9962057	9962057	9962057	9962057	9962057	9962057
19	2	Patte BI	185019	185019	185019	185019	185019	185019	185019
18	2	Axe BI complet	080307	080307	080307	080307	080307	080307	080307
17	2	Goupille et lien Ø10	075568	075568	075568	075568	075568	075568	075568
16	1	Potence	081051	081051	081051	081051	081051	081051	081051
15	1	Axe sup. complet	144101	144101	144101	144101	144101	144101	144101
14	4	Ecrou H10	9900210	9900210	9900210	9900210	9900210	9900210	9900210
13	4	Rondelle W10		9908074	9908074	9908074	9908074	9908074	9908074
12	4	Vis H10x25	9962011		9962011	9962011	9962011	9962011	9962011
11	1	Bol GC	185210	185210	185210	185298	185298	185298	185298
10	4	Ecrou Frein H16	9900546	9900546	9900546	9900546	9900546	9900546	9900546
9	4	Rondelle W16	9908068	9908068	9908068	9908068	9908068	9908068	9908068
8	4	Vis M16x45/26	9962048	9962048	9962048	9962048	9962048	9962048	9962048
7	1	Renvoi d'angle	082572	082572	082572	081163	081163	081163	081163
6	1	Partie centrale	185180	185241	185241	582206	582206	582206	582206
5	11	Ecrou M12	9900215	9900215	9900215	9900215	9900215	9900215	9900215
4	11	Rondelle W12	9908069	9908069	9908069	9908069	9908069	9908069	9908069
3	12	Rondelle MN12	9908012	9908012	9908012	9908012	9908012	9908012	9908012
2	8	Vis H12x30/30	9962017	9962017	9962017	9962017	9962017	9962017	9962017
1	1	BATI	582162	582163	582164	582162	582163	582164	582223
REP.	NB.	DESIGNATION	GC90	GC105	GC120	GCD90	GCD105	GCD120	GCD150

MAJAR

GIROBROYEUR GC90-105-120 GCD90-105-120-150



1 Route de Montréal CS30074 11890 CARCASSONNE Cedex 9

Phone: 0033/468253816