

Manual Maredo® GT 230. REV045

Core- Dethatcher.

SERIAL:

IMPORTANT NOTE:

The required (hydraulic) power depends on the working depth, soil conditions, working speed etc. The condition of the triplex greensmower and the ambient temperature determine the available capacity. Everybody should check the greensmower during work if it isn't overloaded by checking the heat built up and take the correct measurements . MAREDO DOES NOT TAKE ANY LIABILITY FOR GREENSMOWER DAMAGES.

MAX. ENGINE REVS : 75% OF MAXIMUM.

MAX GROUND SPEED: 4 KMH/ 2.5 MPH.



Note:

For a safe operation it is essential, that the operator reads and understands the manual of the Maredo head and the triplex machine.

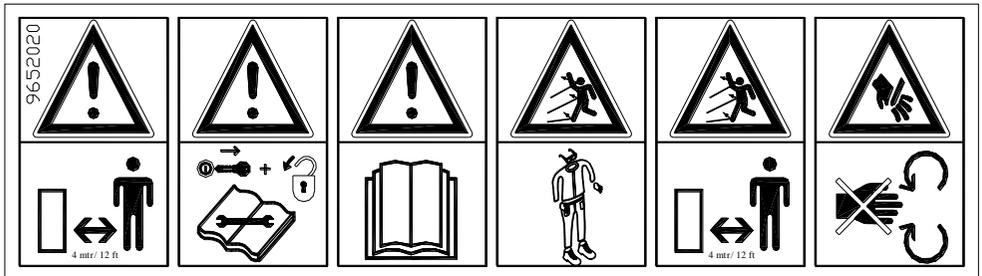
MAREDO BV, RIJKSSTRAATWEG 16, 3956 CR LEERSUM, HOLLAND.

WWW.MAREDO-BV.COM.

EN 1418

SAFETY INSTRUCTIONS.

1. Never **disconnect or shortcut any of the safety devices.**
2. Every **MAREDO user must be fully informed** and understand the safe use of the MAREDO machine.
3. **Inspect the ground,** where the MAREDO machine is to be applied. Remove loose obstacles, avoid uneven areas.
4. **Drive carefully** during work and during transport.
5. Ensure that **other people are standing at least 4 mtr./ 12 ft away** from the MAREDO machine during work and transportation.
6. **Use appropriate clothing.** Wear strong shoes with steel enforced toe caps, long trousers, gloves, tie up long hair and use protection glasses for the eyes.
7. **Never overload** the MAREDO. This is visible when the head starts to vibrate or behave unstable.
8. **Check the MAREDO minimal once a week,** to ensure there are no loose bolts and nuts. Check for damages too and repair them.
9. The MAREDO **may never be used without protection covers** and safety decals.
10. **Use only original MAREDO spare parts,** in order to ensure the safe operation of the machine.
11. **Never use the MAREDO** in the dark, in heavy rains, on frozen grounds, stony conditions and/ or on slopes steeper than 30 degrees.
12. **Maintain a log book** of the repairs.
13. Be aware that **changes made at the MAREDO,** releases MAREDO from CE regulations. You should homologate the machines yourself



FOREWORD.

Congratulations with the purchase of your MAREDO®. To ensure the safe and long lasting operation of the MAREDO machine, you and anyone using the machine, should read and understand this user's manual.

Also ensure that you understand and practice the safety rules, as described in this manual.

This MAREDO machine is delivered accomplished by a guarantee against material and assembly errors. This guarantee applies for a period of 12 months, as from the date of purchase.

TECHNICAL SPECIFICATIONS.

Model	: GT 230- 045
Working width	: 520 mm/ 21" per head
Working depth	: 5 -25 mm/ 0.25- 1.0".
Hole spacing	: 0- 45 x 45 mm/ 0- 1.77 x 1.77"
Driving speed	: 0.5- 4,0 km/h / 0.3- 2,5 mph
Weight	: 48 Kg/ 120 lbs per head.

EU- declaration.

We, MAREDO, Rijksstraatweg16, 3956CR. Leersum, Holland, hereby declare fully on our authority, that the product:

MAREDO GT 230, with serial number as indicated on the machine and in this manual, to which this declaration applies, has been manufactured in line with NEN-EN –ISO 14121-1:2007, according to the stipulations of The Machine Directive 2006/42/EG.



Marinus Reincke Maredo BV Holland.

TIPS/ REMARKS.

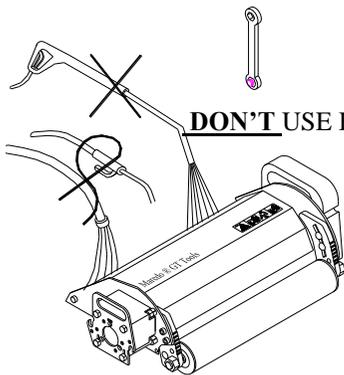
1. **Do not use the corer unit in wet conditions.** The tines may clog and your turf damaged.
2. **Clean the unit regularly with air or low pressurized water. DON'T USE HIGH PRESSURIZED WATER.** The water can enter the bearings causing them to seize.
3. **Use the trolley to move the heads easily to you triplex.** Next connect the head to your triplex. In some cases you need to raise the head and remove the trolley, before you can mount the hydraulic motor.
4. **Be careful with tightening the hydraulic motor bolts.** Do it evenly and do not over tighten. The ears of the hydraulic motor may crack.
5. Raise the heads and see if they stay in the right position and does not hit anything. If it does, make some adjustments till it fits well.
5. Be sure that the heads do have **enough ground clearance.** Otherwise the tines can hit the ground during transport, causing the rubbers to crack.
7. **Make your first test run outside the green.** Play with the engine throttle and the driving speed, if the holes do not look nice. Continue till you are satisfied.
8. Be sure that the **hydraulic motor speed setting of the triplex is set at its maximum.** Next use only 70-80% of the max engine rev's . NOTE: AT THE MOMENT YOU HEAR A SMALL HAMMERING NOISE, YOUR ENGINE/ REEL RPM'S ARE TOO HIGH AND/ OR YOUR RUBBERS ARE WORN.
9. If the hole edge is damaged, play with the groundspeed. You also may need to adjust your working depth. Or you may need to remove your core collector (scraper) at the back. On weak turf, this scraper can hurt the hole edges.
10. **Be careful with dropping the units on a hard (concrete) floor.** Put something (trolley or rubber carpet) underneath to protect the tines against folding. Damage to the heads may occur.
11. Check bolts and nuts regularly. Re-tighten if necessary.
12. The core collector has a limited capacity. Make short passes, if you want to collect all the cores to one side of the green.
13. The hole spacing in drive direction is set by the ground speed. Play with the groundspeed to get the right spacing and the correct hole.
14. Do not over-tighten the tine secure bolts, as the threaded holes get damaged.
15. **START AND STOP PROCEDURE:** Set the engine throttle at appr. 60%. Drop the heads and move forwards. Increase throttle till 75% of max revs. **At the end of the pass STOP MOVING FORWARDS** and raise the heads. If you don't stop, the tines may FOLD BACKWARDS (especially TORO) and damage the rubbers or the turf.
16. You can make curves with the heads during work, **BUT DO NOT MAKE TIGHT CURVES.** Damage to the units and green may appear.
17. The opening of the hollow tines should face to the rear of the machine, otherwise the hole edge get damaged.
18. **CHECK THE (HYDRAULIC) DRIVE OF THE GREENSMOWER REGULARLY. DO NOT OVERHEAT THE (HYDRAULIC) DRIVE. MAREDO IS NOT RESPONSIBLE FOR DAMAGES TO THE GREENSMOWER.**

FIRST SETUP:

The heads are standard delivered with the motor connection at the Right Hand side. We can easily swop this to the Left Side by removing the clutch parts and mount them at the other side of the machine (swop the side weights at the same time). Be sure you mount them in exact the same position as before (do not mirror them).

Next, we need a parts kit to mount the head to your triplex greensmower. Maredo has several kits available. Each kit comes with its own mounting instructions and partslist.

MAINTENANCE.

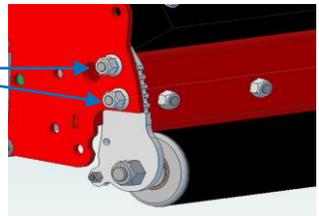


CHECK BOLTS
AND NUTS REGULARLY

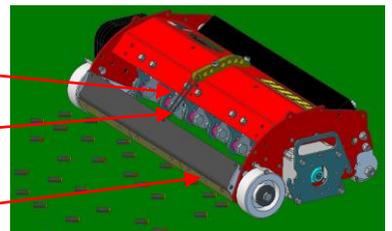
DON'T USE HIGH PRESSURIZED WATER TO CLEAN

ADJUSTMENTS/ IMPORTANT NOTES.

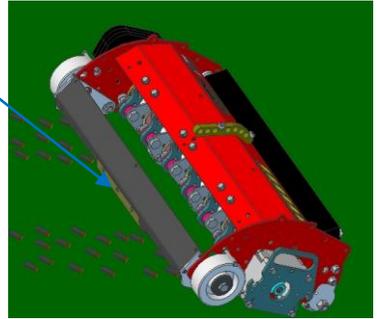
The working depth can be changed, by moving The front roller up or down. Loosen the 2 x 2 bolts, adjust both sides evenly and tighten again. **DO NOT OVERTIGHTEN THESE NUTS**



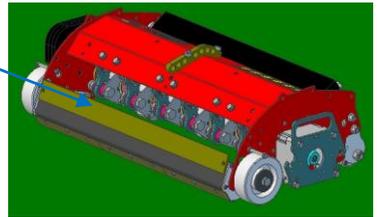
The rear scraper can be removed or simply be tied up. Use a ty-rap or rope and pull the scraper up. If the core collector is too aggressive, put an elastic band in the centre, which takes some weight off. In case the core collector hit the rear wheel, move the complete head forward, or remove the scraper completely.



The bottom scraper plate is split in 3 sections. If we work with one and position it in the centre of the triplex wheel behind, we can make longer passes. The cores will be divided and laid down aside the wheel. We can make long passes without the wheel squeezing the cores anymore.



In case the full scraper isn't cleaning the surface well enough, an additional weight (a simple metal strip) can be mounted on the floating scraper base plate.



The rubbers are a wear part. The life time depends on the usage. Replacement is easy.

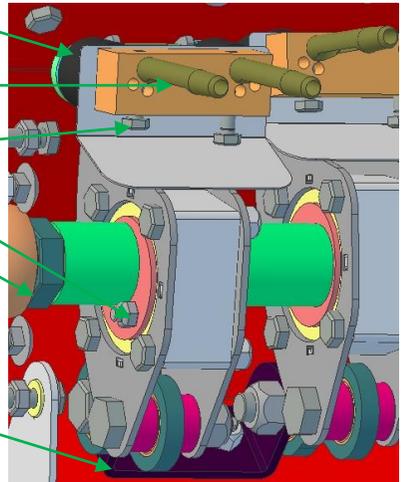
The opening of the hollow tine should face to the rear.

Do not over tighten the tine secure bolts.

The timing of the cams is very critical. The sequence is: 1,6,2, 4,3,5.

Check and re-tighten (+Loctite) the main nut on the main shaft. Otherwise the tine sections become loose and vibration occurs.

For inspection or easy rubber replacements, you can easily turn the complete tine sections around, if you loosen the U bracket from the main frame.



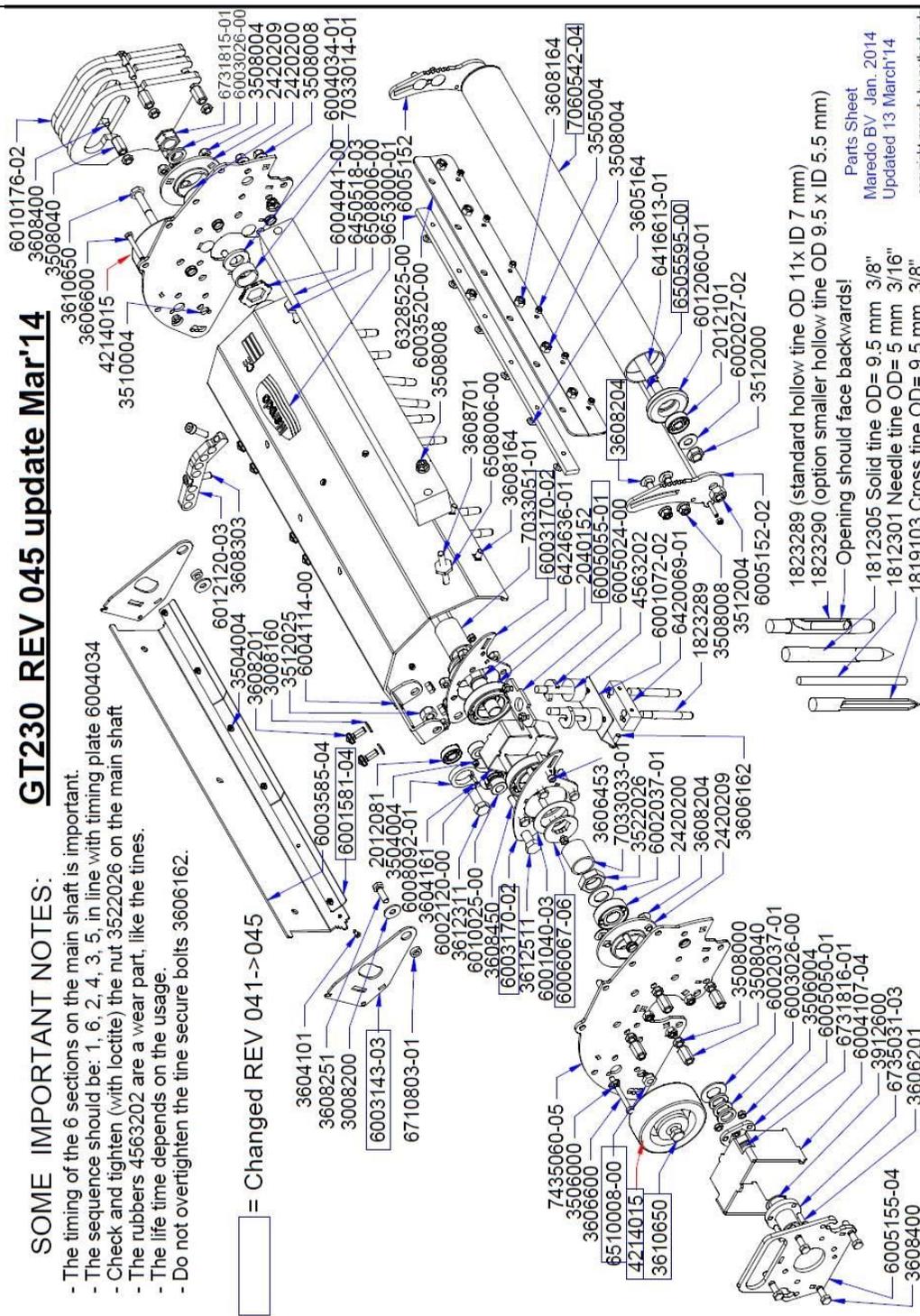
Quant.	Part Number- REV + Name for GT230 REV 045	6	3605164 Mushroom head bolt M5 x 16 DIN 603
12	1821689 Hollow tine 10x90 230	12	3606162 Bolt M6x 16 10.9 plated DIN 933
12	2012081 Bearing 6001 2RS	3	3606201 Bolt M6x 20 DIN 933
2	2012101 Bearing 6201 2RS	12	3606453 Hex socket screw M6x45 8.8 D912
12	2040152 Bearing 6008 ZZ + Refill of Maredo greas	2	3606600 Bolt M6x 60 DIN 931
2	2420200 Bearing SC 204	6	3608164 Mushroom head bolt M8 x 16 DIN 903 5.
2	2420209 PF 204 housing	12	3608201 Bolt M8 x 20 ISO 4017
10	3008160 Washer M8 DIN 125A	10	3608204 Mushroom head bolt M8 x 20 DIN 903 8.
2	3008200 Large washer M8 DIN 9021	2	3608251 Bolt M8 x 25 4017 S
6	3012105 Shimm washer 12-18-1 D988	2	3608303 Hex socket screw M8 x 30 DIN 912
21	3504004 Self lock nut M4 D985	8	3608400 Bolt M8 x 40 DIN 931
8	3505004 Self lock nut M5 D985	24	3608450 Bolt M8 x 45 DIN 931
2	3506000 Nut M6 DIN 934	2	3608701 Bolt M8 x 70 4017 S
29	3506004 Self made nut M6 985	2	3610650 Bolt M10 x 65 DIN 931
8	3508000 Nut M8 DIN 934	6	3612311 Bolt M12 x 30 x 1.25 DIN 961
44	3508004 Self lock nut M8 D985	6	3612511 Bolt M12 x 50 x 1.25 DIN 961
6	3508008 Self lock nut with washer D6926	1	3912600 Cir clip d=26 DIN 471
8	3508040 Nut M8 DIN 6334	2	4214015 Wheel D100 d10 b35 B44 black_grey
2	3510004 Self lock nut M10 D985	12	4563202 Rubber block 75 shore 30-20-M6x10_20
2	3512000 Nut M12 DIN 934	12	6001040-03 Shimm washer 40 - 61 - 05
2	3512004 Self lock nut M12 D985	6	6001072-02 Tineholder catchplate 1150
12	3512025 Self lock nut M12 x 1.25 DIN 985	3	6001581-04 Core collecting scraper 230 1401
1	3522026 Low height nut M22 x 1.5 plated D439	2	6002027-02 Washer 30- 12- 1.5 1150
9	3604101 Bolt M4 x10 DIN 933	2	6002037-01 Washer 37 - 20 -2 204 bearing
12	3604161 Bolt M4 x 16 DIN 933	12	6002120-00 U shaped distance plate for 6008
		4	6003026-00 Washer d18 D27 s3
		2	6003143-03 Side support core collector 230 1401

GT230 REV 045 update Mar'14

SOME IMPORTANT NOTES:

- The timing of the 6 sections on the main shaft is important.
- The sequence should be: 1, 6, 2, 4, 3, in line with timing plate 6004034
- Check and tighten (with locite) the nut 3522026 on the main shaft
- The rubbers 4563202 are a wear part, like the tines.
- The life time depends on the usage.
- Do not over tighten the tine secure bolts 3606162.

= Changed REV 041->045



Parts Sheet
Mareco BV Jan. 2014
Updated 13 March'14
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