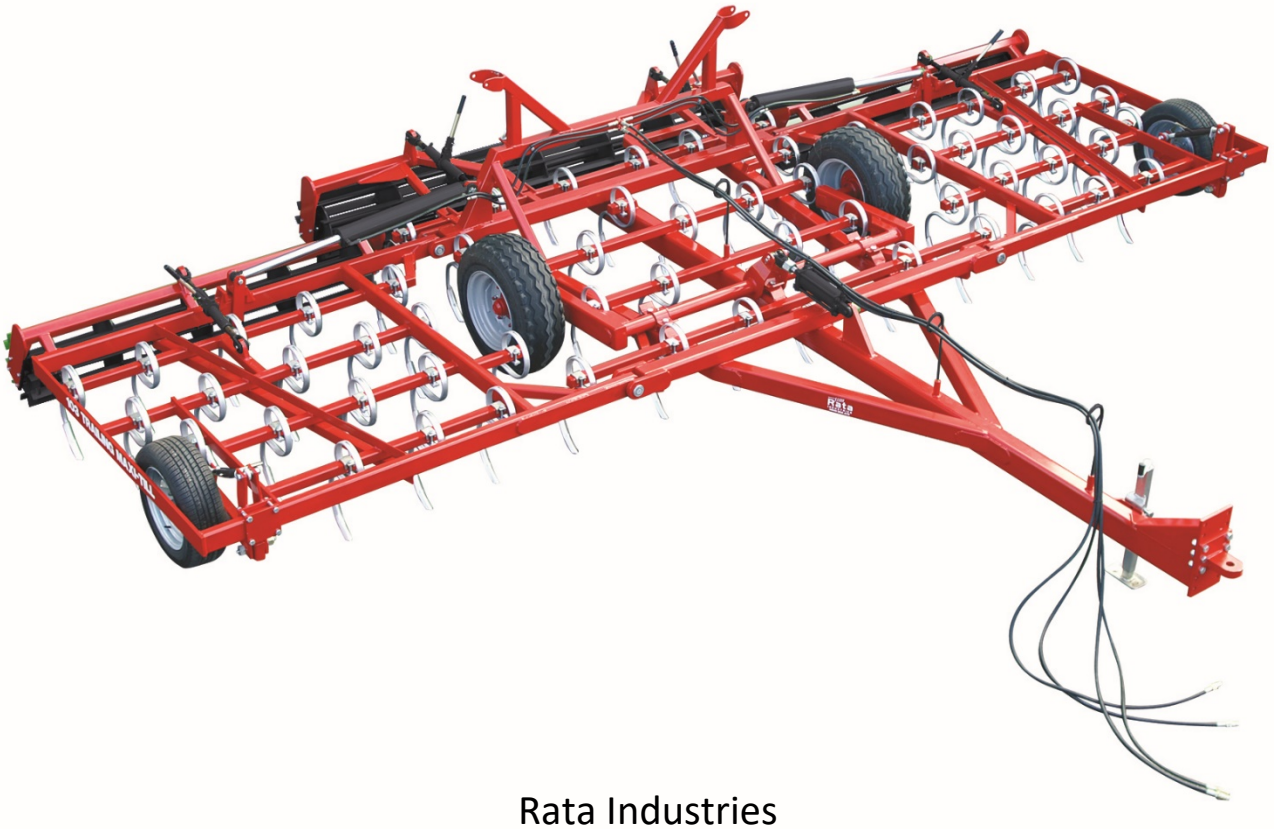
103 Trailing Maxi-Till

Operation, Maintenance & Parts Manual



Rata Industries
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****model may not be exactly as shown****

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DOUBLE YOUR CULTIVATOR WARRANTY TO TWO YEARS BY GOING ONLINE AND FILLING OUT THE RATA PRODUCT REGISTER FORM.

http://www.rataindustries.co.nz/register-product

ACQUISITION AND WARRANTY

On delivery of the cultivator carefully check for transit damage and report any defects immediately. Please visit our website and complete the product register form. The commencement of warranty is based on the purchase date of your machine, provided the product register form is received at Rata Industries within 14 days of the purchase date. Warranty claims will only be processed upon receipt of proof of purchase and submission of the warranty registration form within 14 days of purchase.

Dear Customer

Rata Industries would like to take this opportunity to welcome you as the new owner of a 103 Trailing Maxitill Cultivator. We want your Cultivator to be the most efficient and reliable piece of equipment you have. This manual has been produced to assist in the correct operation, maintenance and care of your machine.

The safe operation and maintenance of your Cultivator is very important to prevent any personal injury and/or damage. Read and fully understand the following instructions before using your machine or carrying out any maintenance.

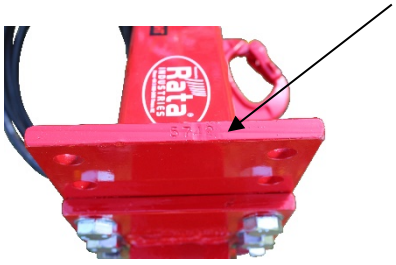
Machine Identification

The machine serial number is stamped on the top section of the drawbar flange plate. Please record the machine serial number in the product registration form on the Rata website.

http://www.rataindustries.co.nz/register-product

Always quote the serial number when re-ordering parts.

Serial number is located on top of Drawbar Flange Plate



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WARRANTY

Rata Industries warrants new products sold by it, to be free from defects in material and workmanship for a period of 12 months after the date of purchase to the initial user. This warranty is for the replacement or repair of any part found to be defective during the warranty period. This warranty only applies to new Rata products.

If the product is purchased for commercial use or hire gain, then the warranty is reduced to three months.

Should the product fail as a result of a fault in material or sub-standard workmanship by the manufacturer within the warranty period then Rata Industries will agree to repair this product subject to the conditions of this warranty.

This warranty excludes any transport costs or damage and excludes all normal maintenance costs. Rata Industries will not pay for mileage, freight, courier costs, oil, grease or any other expendable materials.

As the use of the Rata product is outside our control, Rata Industries accepts no liability for lost earnings or down time directly or indirectly caused by the machines performance.

Replacement parts provided under the terms of this warranty are covered for the remainder of the warranty period applicable to the product in which they were installed as if such parts were original components of that product.

No warranty work is to be started without first getting approval and following the correct warranty procedures as set out by Rata Industries. Rata Industries will not under any circumstances pay for or repair any damage caused by misuse or neglect of any machine.

All warranty issues and claims are totally at the discretion of Rata Industries.
Warranty Exclusions: loose bolts and screws including worn holes for the same, belts, tyres, blades, PTO shafts, disc bearings and hydraulic hoses, these parts are generally not covered by this warranty.

DELIVERY

The machine is delivered fully assembled, however, before use carefully check the entire machine for transit damage and report any problems immediately.

Rata Industries thanks you for buying our product.
We are sure you will be impressed!

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MAINTENANCE AND LUBRICATION



Use extreme caution around suspected hydraulic leaks or damaged hose lines. Hydraulic fluid under pressure can be extremely dangerous. Always wear hand and eye protection. Always lower the cultivator to the ground and release hydraulic pressure before performing maintenance to the hydraulic system.



Take care to keep the floor area clean when performing maintenance to the machine. Help protect our environment and prevent injuries from falls by cleaning up any spilled or leaking fluids with absorbent products. Take care to dispose of contaminated rags or absorbents in accordance with your local environmental regulations. Put away tools and roll up any air lines or electrical cords that were used when making repairs to the equipment and dispose of scrap materials or worn out parts in an appropriate manner.



Never crawl under the machine to make repairs or adjustments or replace tines and shares, unless you have properly blocked and supported the cultivator frame. The cultivator must be secured in a fixed position in order to prevent it from moving or falling before making any attempt to work underneath. Use suitable shop stands or lifting devices that can support the entire weight of the implement. Never use cement blocks, bricks, hollow tiles or other props that may crumble or collapse under continuous load.



Wear gloves when changing points and/or tines as the edges can become extremely sharp when worn.



Regularly check all nuts and bolts for tightness and secure if loose. Replace worn out or damaged machine components.

Establish a good routine for regular inspection, lubrication and maintenance in order to keep the machine in good operating condition.

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SAFETY INSTRUCTIONS

WARNINGS AND CAUTIONS

1. Throughout this manual the word WARNING is used to alert the operator and others to the risk of personal injury during the operation of the equipment. CAUTION indicates the possibility of damage to the machine.

2. Carefully read and take note of the following warnings before attempting to tow or operate the Cultivator.

Warning: Ensure the cultivator tow hitch is in good repair and suitable for towing.

Warning: Check that all moving parts are in good repair and that all the fasteners are correctly tightened.

Warning: Never allow any person to ride on the cultivator.

Warning: Never tow the cultivator in transport mode without the wing holder pins inserted and locked.

Warning: Do not exceed the maximum weight/capacity specified by the manufacturer of the towing vehicle.

Warning: Foreign objects can cause extensive damage to the machine and result in injury to the operator. Make sure there are no foreign objects in your path of travel.

Warning: Before using the cultivator the operator should ensure that this manual is read and fully understood.

Warning: Obey all road rules and regulations while towing the cultivator on the road.

Warning: Wings may fall rapidly causing injury. Always stay clear of wings when being lowered or raised.

Warning: Never touch hydraulic hoses without protective clothing. An almost in visible leak can penetrate the skin.

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PRODUCT SAFETY PRECAUTIONS

Make certain all safety decals and reflectors signs are applied to your machine. Refer to your local governmental regulations for more information on proper procedures and markings for safe road transport in your area.

IMPORTANT NOTE: This unit has a narrow transport width and a high centre of gravity which may pose a tipping hazard when folded for transport.

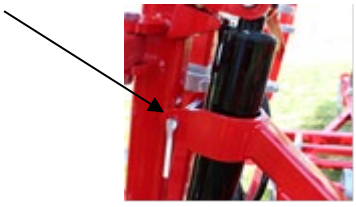
Do not transport over 32 kmh (20 M.P.H.) Reduce speed in adverse weather, when turning or travelling on inclines or uneven ground. Always start and stop slowly.

DANGER! Watch for wires.
Take care when transporting, folding or unfolding the implement around power lines. Serious injury or death to the operator or bystanders will result through direct or indirect contact with power lines. The operator is responsible at all times to comply with the local government regulations and ensure the safe transport of the implement when transporting large or oversized implements on public or private roadways. Careful consideration must be given in order to prevent accidents with other vehicles and avoid coming in contact with obstacles such as: bridges, tunnels, overpasses, guard rails, road signs, traffic lights, power lines, public utilities, and other structures that may be encountered along the chosen route. In some jurisdictions the operator may be required to obtain special permits or arrange for escorts before transporting oversized equipment. Rata Industries is not liable for personal or property damage caused by inappropriate, unauthorized or unsafe transport or operation of equipment.

Never unfold when there are bystanders in the area of the wing fall zone. Be certain all persons are clear of working area in and around the machine whenever folding, unfolding, raising or lowering the machinery or in any way using the hydraulic system.

Be alert when walking around the machinery in the folded transport position to avoid walking into the point of a tine. Severe head or body injury could result.

Make sure that the tractor is shifted into park before getting out to remove wing fold lock pins. Never remove wing lock pins when the implement is sitting on uneven ground where tipping could occur.

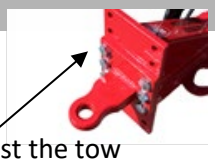


Never remove transport lockout devices or unfold the unit unless cylinders are completely full of oil. Failure to properly charge the folding hydraulics with oil could allow the wings to free fall when unfolding, causing damage to the equipment and possible injury to the operator or bystanders.

Never fold the cultivator wings by any mechanical method! Always charge the hydraulic system first and use it to fold and unfold the wings. Stand clear of the machine and watch for overhead hazards or objects in the wing-fall zone when folding and unfolding.

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USING AND SETTING UP THE MACHINE



1. Tractor draw bar must be level with the cultivator draw bar when setting up. Adjust the tow eye using the bolt adjustment on the flange plate.



2. Make sure the drawbar stand is folded away before moving the cultivator.
3. Wing wheels should be set last after setting up pitch and correct level of main frame and crumbler or depth control.



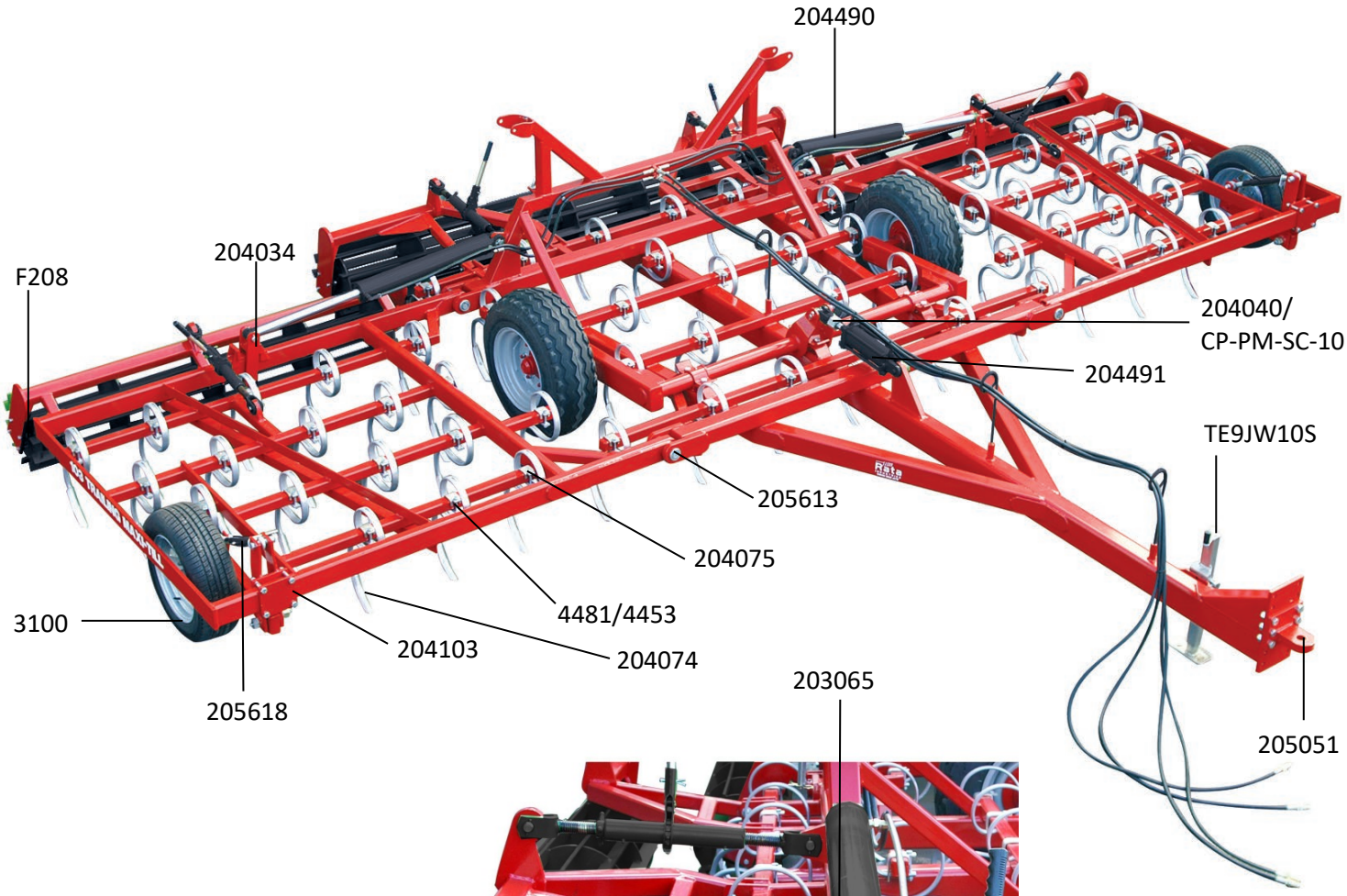
4. Check tire pressures are correct (this may affect depth control)
5. Salesman and customer must check all nuts and bolts and wheel nuts pre-operation, customer should check daily thereafter.
6. Grease crumbler bearings and pivot points daily and before storage.
7. When cultivator is in use, wing hydraulics must be in the float position.
8. Ensure the cultivator is secured to the tractor using a correctly specified chain on the safety hook supplied.

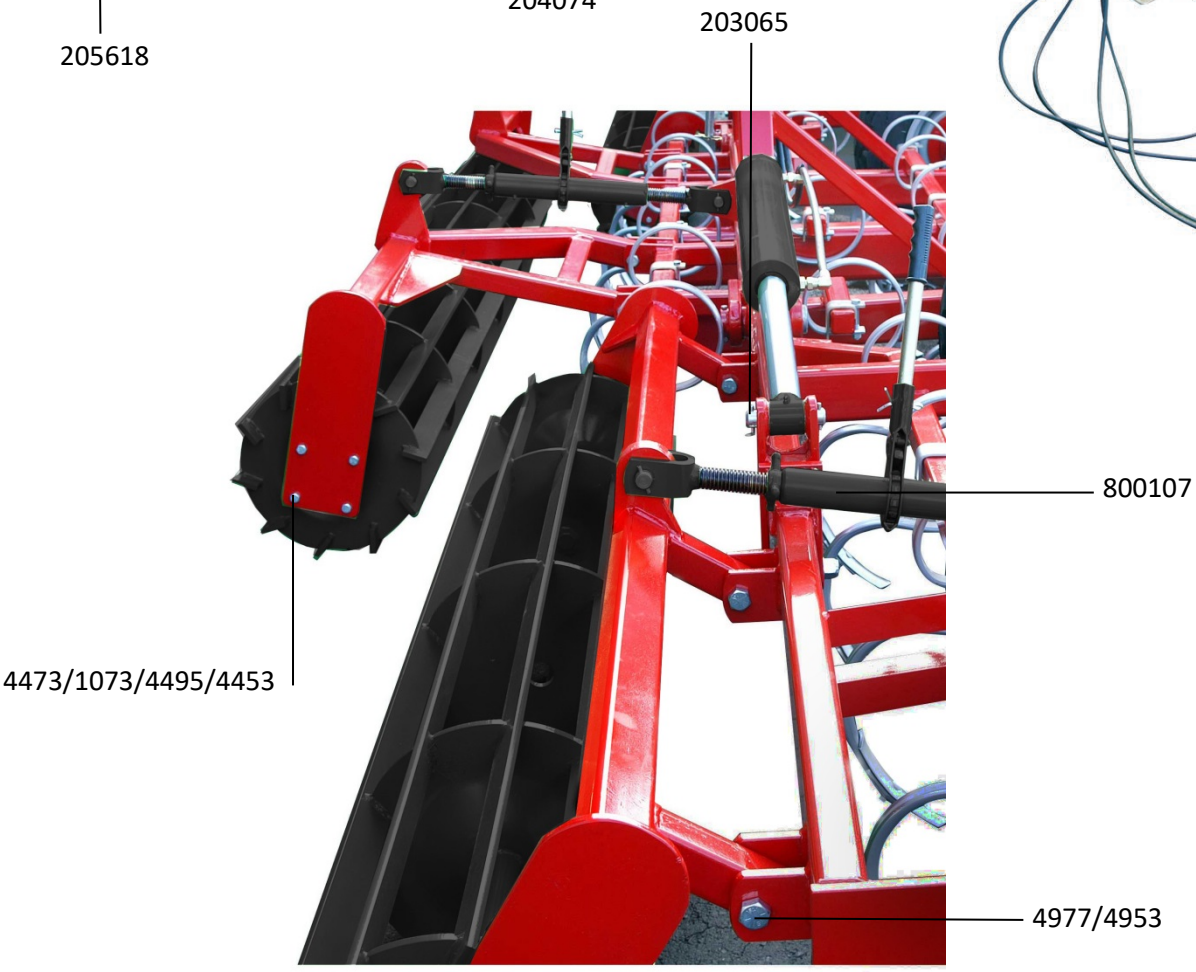
TROUBLE SHOOTING

Malfunction	Cause	Remedy
Uneven Depth.	Drawbar not level. Crumblers positioned too low.	Adjust tow eye position on flange plate. Wind crumbler turnbuckles in.
Front/Back tines cultivating deeper/shallower.	Machine not level in working position. Crumblers/wing wheels not in unison	Adjust tow eye position on flange plate. Adjust turn buckles and or wheel adjusters to be in unison
Drawbar not level in working position.	Tow eye in wrong position on flange plate.	Remove bolts, adjust tow eye up or down flange plate, replace bolts.
Crumblers blocking/dragging.	Obstruction.	Check for obstructions, e.g. rocks, sticks, branches etc.

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PARTS ANNOTATION





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PARTS DESCRIPTION

Part No.	Description
F208	Bearing and housing UCF208.108 D1
TE9JW10S	Stand
CP-PM-SC-10	Hydraulic Depth Stop - Limiting valve
1073	7/16 Washer HD Zinc
3100	Wheel 195/60-14 Galve rim c/w tyre and tube
4453	M12 Nut Nyloc Zinc
4473	M12x50 Bolt Zinc
4481	M12x90 Bolt Zinc
4495	M12 Washer Friction Lock Zinc
4953	3/4 Nut Nyloc UNC Zinc
4977	3/4 x 4 1/2 UNC Bolt & Nut ZP
203065	Centre Fold ram Pin
204034	103 Maxi toggle
204040	Valve Stopper / 2 Piece
204074	KKK Tine 32x10
204103	16mm U Bolt 102 x 140 deep
204075	6mm Tine Clamp Plate
204490	Ram 103 Wing
204491	Hydraulic Ram
205051	103 Front Linkage
205613	103 Maxitill wing hinge pin
205618	103 Wing Wheel Adjuster
800107	Levelling Arm - ATMC5RTHD Painted

To re-order parts, contact your local dealer or call Rata Industries on 0800 802 478.

Alternatively, you can visit the Rata website and fill out the parts order form.

http://www.rataindustries.co.nz/orderform

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