

FLATOUT

TRI-PLEX ROLLER

Flatout Tri-plex Owner's Manual



Manufacturer: OzValue Ag Machinery
Site: 6 Wiltshire lane, Delacombe,
Vic. 3356
Machine: Tri-Plex Rollers – all models
Document: Owner's Manual
Version: 01

I. Version Control

Version	Date	Description
1.0	6-03-18	Release

Limited Warranty

This warranty applies only to new machinery which has not been altered or repaired in anyway since delivery to the new buyer from OzValue Ag Machinery or its authorized dealers, it is valid only to the original new buyer and cannot be transferred to another buyer.

This warranty does not apply to its accessories, attachments or any other parts sold or used with this machinery not purchased through OzValue Ag Machinery.

OzValue Ag Machinery will only be liable for faulty workmanship or material defects that can be proved by the buyer. This warranty specifically excludes repairs arising from but not limited to, general wear and tear or misuse.

This warranty will be automatically void if, any part is modified, damaged or removed from the machine or used in such a way the differs from use as outlined in the owner's manual. The land roller must be serviced and maintained regularly as outlined in the owner's manual. Failure to do so will void the warranty.

The warranty will be valid for one year from the date of purchase.

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1. Introduction

This manual has been provided by OzValue Ag Machinery (OzValue Ag) for the sole purpose of providing instructions regarding the operation and maintenance of the land rollers. Nothing in this manual creates any warranty, either expressed or implied. The only warranty offered by OzValue Ag is set out in the limited warranty terms.

It is the owner's responsibility to provide service and maintenance to the land rollers. Failure to do so may void any warranty offered by OzValue Ag.

The instruction of operations provided for the land rollers are for the capabilities of the rollers them self. Operations mentioned herein are for particular tow vehicles, some tow vehicles may operate differently. Please refer to the manufacture of the tow vehicle to check the capabilities and operation of services.

2. ID Plate

The land rollers are fitted with identification plates unique to each set. Fill out the details below regarding the roller set and purchase, these details will need to be referred to when contacting OzValue Ag regarding warranty or ordering spare parts. The ID plate is fitted to the front middle of the centre roller frame. These details and manual should remain with the rollers when sold

Model number:

Serial number:

3. Safety

3.1. Symbols

This manual uses symbols to identify risk associated with each task. The risks are defined by Danger, Warning, Caution and Attention.

Danger – Danger indicates an immediate hazard. If the hazard is not avoided or attended to, it will result in serious injury or death. This statement is limited to use in the most extreme hazards.

Warning – Warning indicates a potential hazard. If the hazard is not avoided or attended to, it may result in significant machinery damage, serious injury or death.

Caution – Caution indicates a potential hazard. If the hazard is not avoided or attended to, it may result in minor machinery damage or minor injury.

Attention – Attention refers to a situation or fault that may result in damage to the machinery.

3.2. Safety and Safety Equipment

It is advised that the operator should undertake their own risk assessment of the machine before operating to take into account the environment, conditions and circumstance the machine is being operated in. OzValue Ag has taken reasonable action to identify all hazards, but further hazards may arise due to these factors.

Before undertaking any task with the machinery, familiarise yourself with this manual and the operation of land rollers and any potential hazards.

Wear personal protective equipment (PPE) at all times when working with the land rollers. Equipment required are safety boots, safety glasses and gloves.

The land rollers contain many pinch points, be aware of these points when working on the machinery.

DANGER



If any component is found to be damaged or faulty, contact OzValue Ag for advice before operating the machinery. Failure to do so may result in serious injury or death

For damaged replaceable parts contact OzValue Ag and quote the serial number and model number of the machine to acquire new parts.

WARNING



Before working on land rollers ensure all energy systems are de-energised. This includes hydraulic and potential energy. Failure to do so may result in serious injury or death

When working on the machinery, ensure all energy sources are de-energised. Energy sources include

- Hydraulic – ensure all hydraulic pumps are not running and all lines are de-pressurised.
- Potential energy – Parts of the machine with a mass may be suspended in the air by a hydraulic cylinder or similar. Ensure these components are securely fastened or lowered so they cannot fall.

WARNING



Before operating the land roller, ensure all guards and interlocks are in place. Do not operate with these removed. Failure to do so may result in serious injury or death

WARNING



Do not perform make shift repairs to any part of the machinery. Contact OzValue Ag for advice on repair. Failure to do so may result in serious injury or death



WARNING

Ensure all personnel and bystanders are clear of the operating area before undertaking any task. Failure to do so may result in serious injury or death



WARNING

Ensure the hydraulics to the rollers are disconnected from the tow vehicle when servicing or maintaining the rollers. Failure to do so may result in serious injury or death

3.3. Hydraulics



WARNING

The hydraulic system contains high pressure fluid. Always de-energise the system before undertaking any maintenance or servicing. Failure to do so may result in serious injury or death



WARNING

If any hoses or fittings are damaged, do not operate the machinery. High pressure leaks are capable of piercing into the human body. Failure to do so may result in serious injury or death

All hydraulic repairs should be carried out by a qualified technician.
For replacement hoses contact OzValue Ag and quote the serial number and model number.

3.4. Road Safety and towing checks

The land rollers may need to be towed on public roads for transport. Before towing, check your local road rules for any requirements to be met.

Before towing the land rollers, check the land rollers are in a condition suitable for road use. Check all tyres are inflated to the correct pressures and in suitable condition.

The maximum tow speeds recommended for the land rollers is 30 km/h on flat roads, when driving on undulating bumpy roads decrease road speed to 10 km/h.

4. Tractor Requirements

To ensure safe and reliable operation, each implement must be properly match to the towing tractor. The below points must be met before any tractor can be connected to the implement.

- Hydraulic System-Each tri-plex roller requires 3 double acting hydraulic circuits. Wheel Lift, A Frame Locks and Rear Wheel Steer. Twist Roller models require 2 double acting hydraulic circuits, Wheel Lift and Drawbar Swing. The towing tractor hydraulic system must be capable of at least 2800PSI operating pressure and minimum 25LPM flow.
- Horsepower-The below table outlines approximate horsepower for each implement, the lower rating is recommended for combinations used on flat, smooth and hard ground, the higher rating is recommended for undulating, steep or soft ground. Please consult your authorised agent before connecting the implement to any tractor.

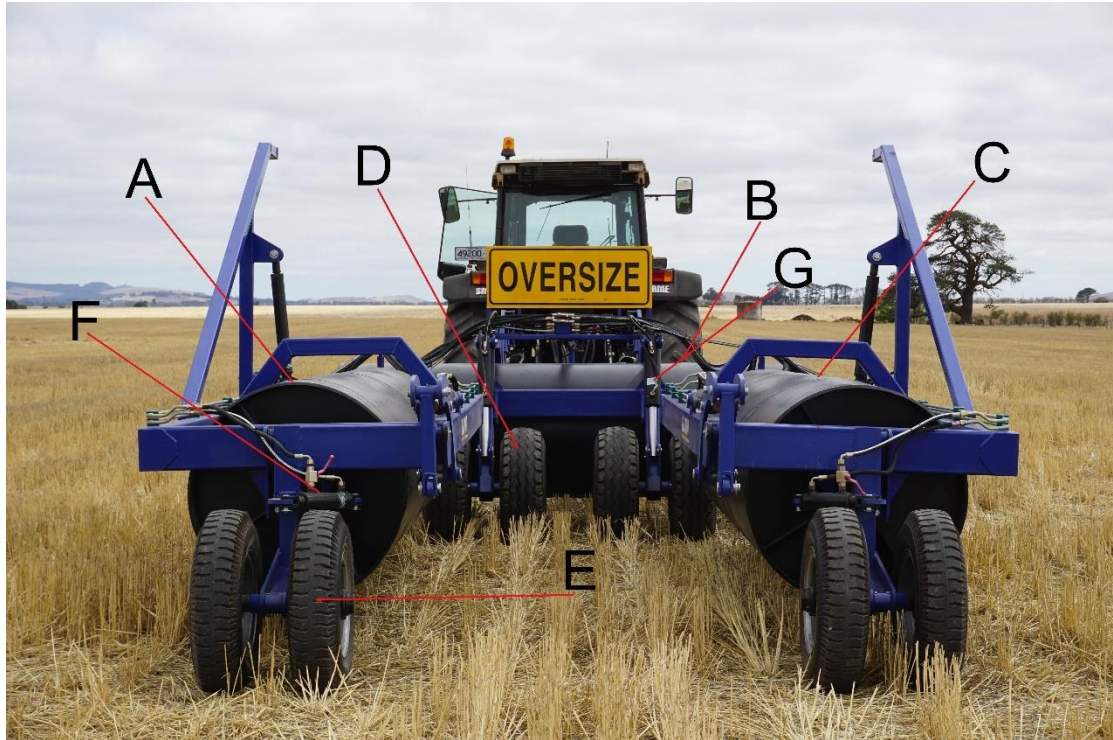
Machine Model	Recommended Tractor Horsepower
TR2016	125-180
TP3216	150-200
TP4216	200-300
TP5216	300-400

- Weight-Land rollers are heavy implements and must be matched with appropriate weight to safely control during use and transport. Be sure to check the towing tractors specifications before connecting any implement.

5. Machine operation

5.1. Machine identification

The Flatout Land Rollers can be configured in a number of ways, below is an example of two of the models, Tri-Plex and Twist, be sure to check your roller model whilst looking at the diagrams. Note that your roller may vary slightly depending on build date and options, if you are unsure, please contact your local dealer before proceeding.





- A-Left Roller
- B-Center Roller
- C-Right Roller
- D-Center Lift Wheels
- E-Rear Lift Wheels
- F-Rear Steer Cylinder
- G-Center Lift Cylinder
- H-Drawbar Tongue
- I-Jack Stand
- J-Drawbar
- K-Floating Hitch Cylinder
- L-Floating Hitch Arm
- M-Floating Hitch Cylinder Lock
- N-Floating Hitch Transport Pin
- O-A-Frame Lock Pin
- P-Rear Steer Lock Valves
- Q-Left A-Frame Arm
- R-A-Frame Lock Cylinder
- S-Right A-Frame Arm
- T-Center Frame Lock



5.2. Operational checklist

Before using the land roller.

- Read and understand the operator's manual before using any part of the roller.
- Be sure that there are no bystanders within 100m of the roller before any operation.
- Install and secure all guards and shields before operating.
- Do not allow riders on the machine at any time.
- Follow appropriate state regulations when transporting rollers.
- Inspect all hydraulic lines and fittings before pressurizing.

5.3. Operation

5.3.1. Connecting to tractor

1. Reverse slowly until the drawbar of the tractor is within 150mm of the drawbar of the land roller.
2. Raise or lower the land roller drawbar using the jack stand to such a height that allows the connection of the drawbar.
3. Insert the drawbar pin into the drawbar tongue.
4. Lower the drawbar using the jack stand and fold the jack stand into field operation position.

5. Connect the hydraulic hoses to the tractor hydraulic remotes following the hydraulic schematic attached to the drawbar of the land roller. See below image.



6. Fit the wheel lift circuit to hydraulic remote 1, fit the lock cylinder circuit to hydraulic remote 2, fit the rear steer cylinder circuit to hydraulic remote 3.
7. Check all connections are secured properly and that there are no leaks.

WARNING



Before performing any work on the machine ensure all energy sources are isolated and de energised. Failure to do so may result in serious injury or death

CAUTION



Failure to repair or replace worn or damaged components may result in serious damage to the machine

5.3.2. Unfolding

Tri-Plex Land Roller

1. Begin by raising the entire land roller using remote circuit 1 (wheel lift circuit) to its full height.
2. Remove transport pins located on the floating hitch of the drawbar.
3. Turn rear steer wheels outward using circuit 3 to the outermost position.

4. Drive the tractor slowly in reverse, be sure to keep each wing roller at an equal angle to the centre roller.
5. Stop when the rollers are approximately 15 degrees from the working position. See below image

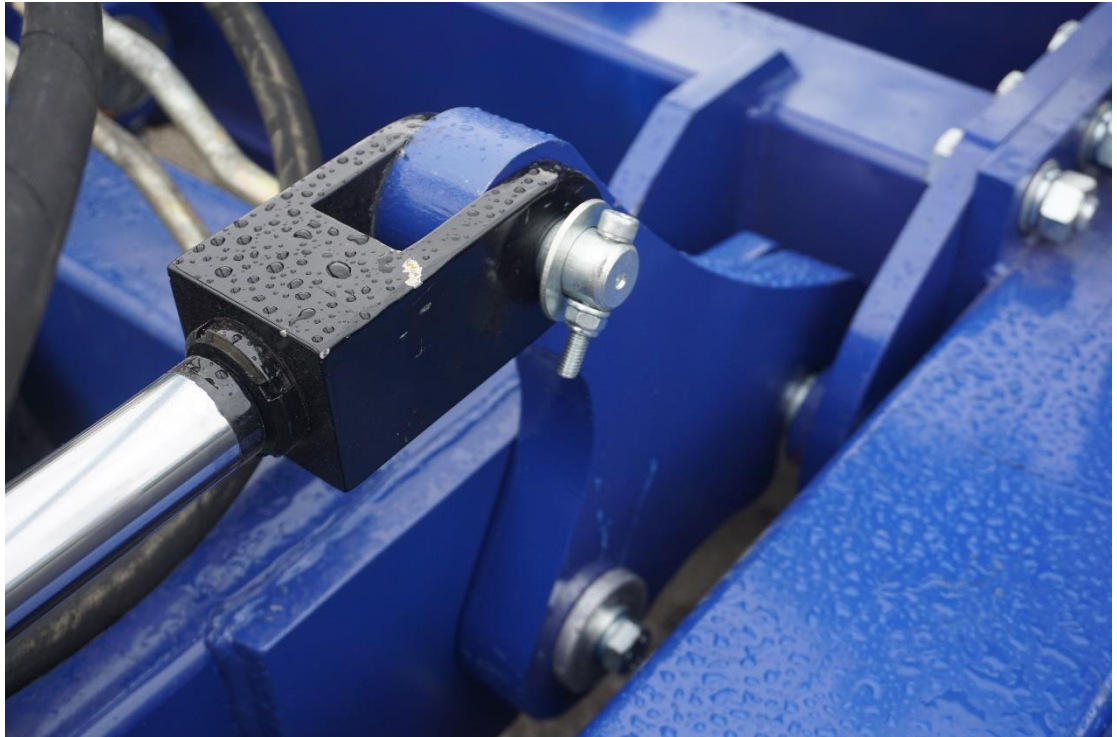


6. Lower the roller into the working position using circuit 1 (wheel lift circuit), being sure that the transport wheels travel to the highest position, and the floating hitch cylinders are completely compressed.
7. Continue to drive in the reverse direction, allowing the rollers to sit parallel to the next.
8. Once all rollers are parallel, lower the a-frame arms and center frame locks using circuit 2 until they are fully engaged. See below image



9. Before leaving the tractor, ensure that the park brake is applied and the engine is switched off. The a-frame lock must be secured in place using the safety lock located at the front of the center roller directly beside the a-frame lock pin in the working position.

10. Walk around the machine paying close attention to the a-frame locks and center frame locks that they are secured in the working position. See below images



11. You may now begin rolling.

5.3.3. Folding

Tri-Plex Land Roller

1. Before leaving the tractor, ensure that the park brake is applied and the engine is switched off, the a-frame safety lock must be removed before folding the machine to the transport position.
2. Raise the a-frame locks and center frame locks using circuit 2, make visual checks from the tractor cabin that all four cylinders are fully compressed.
3. Drive forward just enough for the wing rollers to begin the fold process, similar to the position as explained earlier on page 14.
4. Lift the entire roller to maximum height using circuit 1.
5. Activate circuit 3 to steer the rear steer wheels fully outward.
6. Drive forward until the two rollers are almost directly behind the tractor.
7. Before the rollers are inline with the tractor, straighten the rear steering wheels by using circuit 3.
8. Re insert floating hitch transport pins and turn off all valves on rear steer cylinders and a frame locks before travelling.

5.3.4. Operational use

- Starting/Stopping-Be sure to take off slowly and consistently, do not accelerate quickly or brake suddenly when transporting or operating the roller.
- Travel Speed-It is up to the competent operator to determine the best travel speed for each situation. It is not recommended to travel any faster than 10 km/h during any use.
- When following contours or cornering, reduce the tractor speed to no more than half of the field travel speed, eg travel speed 10kmh, cornering speeding 5kmh. The weight of the roller can have a big effect on the drawbar of the tractor, be aware of the slew of each end of the roller when turning.

6. Preventive Maintenance and Servicing

6.1. Maintenance schedule

Component	Inspect	Adjust	Lubricate
Drawbar hitch	Pre-start	N/A	10 hours
Barrel bearings	Pre-start	As required	10 hours
Wheel bearings	Pre-start	50 hours	50 hours
Hydraulic cylinders	Pre-start	As Required	10 hours
Centre roller wheel lift arms	Pre-start	N/A	10 hours
Union joints	Pre-start	N/A	10 hours
Rear steer pivot shafts	Pre-start	N/A	10 hours
Wheel nuts	Pre-start	As required	N/A

Tyres	Pre-start	N/A	N/A
Frame welds	Pre-start	As required	N/A
Bushes	Pre-start	N/A	10 hours
Pins	Pre-start	N/A	10 hours
Rear roller wheel lift arms	Pre-start	N/A	10 hours
Rear roller wheel lift linkages	Pre-start	N/A	10 hours

All grease points on the machine are marked with a greasing sticker, if you believe any are missing, please contact your nearest dealer for replacement stickers.

- Tow hitch bush x1
- Centre wheel lift cylinder x2
- Centre wheel swingarm x2
- Main Pivot knuckles x6
- A-Frame lock cylinders x4
- Rear wheel lift cylinders x2
- Rear wheel pivot frame x4
- Rear wheel steer bush x2

6.2. Tyre condition/inflation

Tyres must be checked before each use of the machine for wear, cuts, punctures and pressure levels. The recommended tyre pressure for the Centre Roller tyres is 55PSI. The recommended tyre pressure the Outer(Wing) Roller tyres is 65PSI. If any tyre becomes unserviceable it must be replaced before re-using the machine.

6.3. Frame and welds

Over time steel parts of the machine can fatigue and need to be monitored for cracks and tears. Due to the conditions the land roller is operating in, the frame and weld joints must be inspected before each use to prevent major failure of components.



CAUTION: Failure to do so could cause injury or even death.

6.4. Bolt checks/torque

All bolts should be checked that they are tightened to the correct torque after 1 hour of operating the machinery for the first time

After the initial check, all bolts should be checked they are tightened to the correct torque every 500 acres or 10 hours, whichever occurs first.

Due to the resonating vibrations through the machine, nuts and bolts have a tendency to rattle loose. All bolts/nuts must have liquid thread lock applied to their threads before tensioning.

Bolt/Nut size	Torque
M10	44 NM

M12	77 NM
M14	122 NM
M16	190 NM
M18	269 NM
M20	372 NM
M24	640 NM

7. Service record

The regular checks and preventative maintenance will ensure longevity of the machine. It is recommended once a year a thorough pre-season check be carried out for any overlooked concerns. It is also recommended that the wheel bearing be removed, inspected, replaced as required and re-greased.



OzValueAG
MACHINERY

Oz Value Ag Machinery
6 Wiltshire Lane
Delacombe
Vic 3356
PH: (03) 53 35 81 81
www.ozvalueag.com.au