



Conditioner 2500

Operators Manual



Ensure that everybody that operates the machine reads and fully understands this manual prior to operation.

This manual is considered a permanent part of the machine and should remain with the machine at all times.

1. Introduction



Thank you for purchasing a New Rossmore Grass Conditioner 2200.

Take the time to fully read this manual carefully – it has been written to ensure that you get the very best from your purchase. Failure to do so may result in serious injury or fatality to the driver or others and/or machine damage.

1.1 Information Table

Please fill in the following information for future reference:

Serial Number:	_____
Purchased from:	_____
Date of purchase:	_____

1.2 Conditioner 2500 Specifications

Weight Approx	680 kg	1495 lbs
Height	1.34m	4'7"
Overall Length (Doors fully open)	2.9m	9'6"
Transport Width	2.75m	9'0"
Working Width (Pick Up)	2.5m	8'2"
Rotor Diameter	1m	3'3"
Number of Tines	48 (6 rows X 8 tines)	
Power Requirements	50 HP	37.5 kW
PTO Speed	540 rpm	
Working Speed (Tractor)	8 - 16 km/h	5 - 10 miles/h
Tyre Size	18 x 9 x 50	

2. Fundamental Precautions

2.1 Foreword

To ensure personal safety and the safety of others, please ensure that **everybody** that operates the machine **reads and fully understands** this manual **prior to** operation. It is essential that you observe all safety instructions. It is the responsibility of the owner to advise the operator of the operating instructions and make sure they fully understand all instructions. Failure to do so may lead to personal injury and/or machine damage. No persons under the age of 16 (sixteen) are permitted to use this implement.



2.2 Intended use

The intended use of the Rossmore 2500 Conditioner is designed for tedding, spreading and swath laying of grass, hay and straw. Use of the Conditioner in any other way is considered contrary to the intended use. Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacture also constitute essential elements for the intended use.

2.3 Safe Operation

No persons should operate this machine before fully reading and understanding the user manual. Learn how to operate the machine correctly and safely. If you are not an experienced driver, read and study the manual with an experienced driver who can explain things to you. In addition to this ensure a safe system of work is in place by the operator/owner.

3. Safety Decals

3.1 Safety Decals

Safety decals are placed on various areas of the Conditioner. They are located in various area to remind the operator of the dangers relating to a conditioner. Read and understand each decal before commence operation.







Damaged or missing safety decals must be replaced immediately. Safety decals are available directly through a local dealer or from Rossmore Engineering Stores. Any additions or changes to a Rossmore machine including replacement equipment or repairs, replacement safety decals must be included.

3.2 Safety Decal Locations



3. Safety Decals

3.2 Understanding Safety Decals

<p>Read Manual: To ensure your safety and the safety of others, please ensure that everybody who operates the machine reads and fully understands this manual prior to operation.</p>	
<p>Grease: Important to check and grease the loader at regular intervals, after 10 hours of operation. See manual (5. Service & Maintenance) for location of grease points.</p>	
<p>Articulating Area: Stay clear of articulation area while machine is in operation.</p>	
<p>Safety Guards: Do not remove safety guards from the machine while the machine is in operation. Never operate a machine with missing or damaged safety guards.</p>	
<p>Keep Clear: Keep a safe distance from the machine while in operation. Ejection of material may cause injury.</p>	
<p>Warning: Stand clear of rotor while in operation. Never reach or climb into rotor area as it will cause serious injury or death.</p>	

4. General Safety Precautions



Improper use of a Conditioner can lead to serious injury or death. The Conditioner is designed for tedding, spreading and swath laying of grass, hay and straw.

4.1 Safe Working Area

Always ensure that work is carried out in a safe environment. Ensure that all bystanders, especially children and animals are clear before starting the machine and commencing work. For improved safety, work with a safety exclusion zone of 10m around the tractor and Conditioner. If individuals or animal enter the exclusion zone, stop the machine, engage transmission in park and handbrake ON. Do not recommence work until the exclusion zone is clear.

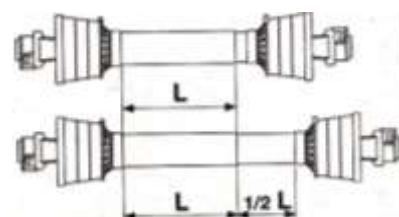


4.2 Safe Attachment

The conditioner is mounted in normal way to the 3 pt (three point) linkage. Never leave the Conditioner partially attached to a tractor. Ensure that the 3 pt linkage is securely attached. Ensure the lift arm balls are locked in position, and all three pins are secure with linch clips. Adjust top link to appropriate length.


4.3 Power Take Off (P.T.O)Shaft Settings

Check the length of the power shaft in both a working position and transport position before use. The length of the power shaft may need re-sizing before use. Ensure the power shaft has a minimum opening of $1/2 L$ when in a working position. Required length for each tractor can vary. Always check Power shaft length when operating on different tractor. A power shaft that is too long or too short may damage both the conditioner and tractor (not covered by warranty). Secure the PTO guard by means of check chains to suitable points on the tractor and machine.




Important! The over-run on the power shaft must always be fitted on the conditioner.

4. General Safety Precautions


 **Warning!** Before starting the power shaft, ensure there are no loose safety guards, parts or tools placed on or underneath the machine.

 **Warning!** Never step over a power shaft at any time.




 **Warning!** Never operate a power shaft with a damaged or missing safety guard.



 **Warning!** Secure the PTO guard by means of check chains to suitable points on the tractor and machine.

4.4 Safe Operation

- Ensure as much visibility as possible at all times.
- Avoid working on slopes where possible.
- If working on a sloped surface, approach the slope in an uphill direction.
- Reduce speed, avoiding sharp turns, holes, ditches and other obstructions.
- Avoid fast movements when lowering and raising the conditioner.

 **Note!** The rotor can take up to 30 seconds to fully stop after disengaging the power shaft.

5. Attaching the Conditioner

5.1 Attaching the Conditioner

Note: Make sure both tractor and conditioner are on hard level ground when attaching and detaching.

Attach the machine to the tractor using the three point linkage in the usual manner. Secure the lift arms in a centre position using locking chains or stabilisers. After the machine has been attached to the lift arms, lift and lock the leg if a raised position. Attach the top-link to the conditioner first and then to the tractor. Adjust the Conditioner so there is a distance of 25 - 40 mm (1" - 1.5") between the tines and ground. Secure the locking collar on the top-link.

Fit the PTO shaft in the correct position, attaching the overrun to the tractor side.






Ensure the PTO shaft is the correct length for the tractor it is being attached too. (See 4.3 *Power Take Off (P.T.O) Shaft Settings*) for correct settings.

6. Operating Instructions

The intended use of the Rossmore 2500 Conditioner is designed for tedding, spreading and swath laying of grass, hay and straw.

When the Conditioner is connected to the tractor raise the support leg. Reduce speed when turning sharp.

6.1 Transporting Conditioner


-  **Important!** Always transport the conditioner in a raised position.
-  **Important!** Ensure the headstock is locked in position when transporting to prevent machine articulation.
-  **Important!** Lock both wheels when transporting conditioner.
-  **Important!** Use moderate transport speed when driving on roads, especially narrow and uneven roads.
-  **Important!** Never reverse while the conditioner is touching the ground.

6.2 Setting Up

Before commencing work it is important to ensure the conditioner is properly set up. Ensure the power shaft is the correct length for the tractor it is being attached to. (See section 4.3).

6.3 Safety Checks

Grease the machine and check the gearbox lubricant. (See section 7: Service and Maintenance).

-  **Important!** Never operate the machine with any missing parts or safety guards.

Check that all the parts are present and securely and correctly fitted to the machine. Check that all safety guards, including the PTO cover are in place. Make sure that none of the safety decals are damaged or missing. (See Section 3).

5. Operating Instructions

6.4 PPE (Personal Protective Equipment)

Due to possible exposure to high levels of noise (90dB +), and the possibility of extreme dust conditions, we strongly recommend that all users keep the cab windows closed and wear ear defenders and a dust mask.

6.5 Tine Settings

Adjust the Conditioner so there is a distance of 25 - 40 mm (1" - 1.5") between the tines and ground. Never adjust the Conditioner as low as the tines make contact with the ground.

6.6 Locking & Unlocking Wheels



1. Disengage PTO and ensure the rotor has come to a stop.
2. Raise the Conditioner until the wheels are 125mm (5") from the ground.
3. Place handbrake on, Transmission is in neutral and tractor is turned off.
4. Unlock the clip and lift and then turn the locking bush.
5. Insert clip ensuring the wheel is secured in an unlocked or locked position.

7. Operating

Ensuring you get the best from the machine

Before commencing work, check that the field contains no hidden objects/debris likely to cause damage to the machine, people or property.

Work the Conditioner in the opposite direction of the mower.

When operating unlock (1). the wheels **or** (2). the headstock. Do not operate the machine with both wheels and headstock in an unlocked position.

Unlock the headstock and lock the wheels when working along the headlands to allow for a better pickup line similar to the that off a baler.

Lock the headstock and unlock the wheels when working in straight line direction in centre of field.

7.1 Tedding

When tedding, open the back doors to maximum setting in Fig. 7b.

Place the centre deflector board underneath as shown in Fig 7a.

This will allow the swath to be spread to the full width of the machine.



Fig. 7a



Fig. 7b

7.2 Swathing

When swathing, close the back doors to the inner settings. Correct adjustment will vary depending on the crop condition.



Fig. 7c

7. Operating

7.3 Tedding: Moving Swath

The Conditioner can be offset to move the swath off-centre. This is done to move the swath out from headlands to aid baler and/or move to a dryer area of ground.

Set up the Conditioner as shown right.

Fig. 6c: Lock headstock as shown.

Fig. 6d: Machine is offset. (Ensure wheels are unlocked and free to rotate.)



Fig. 6c



Fig. 6d

7.4 Forward Speed

Rossmore recommends that the conditioner be operated at a forward speed between 8 – 16 km/h (5 – 10 miles/h). The choice of forward speed best suited will vary depending on the condition of the swath, the conditions of the ground and the quality of finish required. Travelling too slowly can cause the swath to become lumpy due to the machine grabbing and throwing out the material before the machine has time to pass over it. Travelling at too high a speed on rough ground conditions can cause the conditioner to bounce and throw out an uneven lumpy swath.

7.5 Turning Sharply

When turning sharply with at the end of swaths or along headlands, the conditioner should be raised above the height of the swath. (A minimum of 150mm (6”) above the ground should be adhered to). The PTO and rotor can be left running under these conditions.



Important! Never raise the conditioner fully under these conditions as the PTO joints and drive line will be severely over loaded.

8. Machine Storage

8.1 Storage

Store the Conditioner on a hard level surface. Ensure the leg is fitted before storing. Incorrect storage may lead to serious injury or even death. If the conditioner is fitted on the tractor, ensure the conditioner is lowered to the ground and the tractor is placed in park and the handbrake on. Close the back doors when storing to prevent access to the rotor and pointed tines.


8.2 Storage Checks


- a) Clean the conditioner thoroughly. Remove any debris, dirt, excess grease or oil.
- b) Apply a thin layer of grease on visible piston rods or top-link threads in order to protect them.
- c) Paint the conditioner where needed.
- d) Replace any damaged or missing parts, decals, hoses or hardware.
- e) Place a cover on the conditioner when storing outdoors.

9. Service and Maintenance


9.1 Replacement Parts

Important! When a spare part is needed for regular maintenance or service, use only genuine, original equipment spare parts to restore your equipment to original specifications. The manufacturer is not responsible for damages that may occur due to installation of non-approved parts and/or accessories.

 **Warning!** Never service the conditioner when in a raised position. If the conditioner has to be raised it must be securely supported underneath. Do not work or walk under a raised conditioner unless it is securely supported in a safe position.


 **Warning!** Never service, adjust or lubricate the conditioner while in operation or the tractor is engaged. Place the tractor in park, place handbrake On, turn off ignition and remove key.

It is important to keep the conditioner in good condition at all times. Repair any damages immediately. Replace worn or broken hoses and parts. Any build up of grease, oil or debris should be removed.

 **Warning! All repairs and servicing should be undertaken by competent/qualified personnel. If you are not competent we recommend work is carried out by your local dealer or garage.**

9.2 Hydraulic hoses

Inspect hydraulic hoses on a **weekly** basis. Ensure there are no leaks, twists, kinks or defects in the hoses. Remove any debris, dirt and grime.

 **Warning!** Never check hydraulic hoses for leakages with fingers or hands. Use a piece of cardboard. Pressurised oil can penetrate skin. Ensure hydraulic pressure is relieved beforehand. **In the occurrence of an accident seek medical attention immediately.**



After 6 years, it is recommended to replace hydraulic hoses due to wear and tear.

Service and Maintenance

9.3 Lubrication & Greasing

Check and grease the Conditioner at the following times;

- ✓ Prior to operation.
- ✓ After every 4 hours of operation.
- ✓ Prior to leaving the machine up for storage.



Rossmore Engineering LTD recommends only *Pin and Bush grease*.

Pin and bush grease is lithium based containing molybdenum disulphide and high grade graphite to enhance anti-wear characteristics. Used where adhesion, pivoting and shock loading is present.

9.4 Greasing Points

There are 8 greasing points throughout the machine.

Point	Location
1 & 2	Head Stock
3	Drive Knuckle under cover
4 & 5	Bearing housings under cover
6	Rotor bearing
7 & 8	Wheel bushings



Trouble shooting

Through regular maintenance and correct intended use of a Conditioner, frequently caused faults can be avoided. In the event a fault occurs please check the following factors which may help to identify the problem.

It is often the case the nature of a conditioner problem is simple and easily rectified. The following 'troubleshooting table' will aid with identifying, locating and rectifying problems.

<i>Problem</i>	<i>Cause</i>	<i>Action</i>
<i>Lumpy swath</i>	<ul style="list-style-type: none"> • Incorrect rotor speed • Travelling to fast • Machine bouncing • Material not flowing along swath boards 	<ul style="list-style-type: none"> • Correct PTO speed • Adjust forward speed • Reduce speed on rough ground • Adjust rear gates and/or swath board
<i>Tines breaking</i>	<ul style="list-style-type: none"> • Not enough ground clearance 	<ul style="list-style-type: none"> • Ensure tines clearance is set correctly • Ensure tines are set in correct position • Tyre pressure to low
<i>Machine vibration</i>	<ul style="list-style-type: none"> • Rotor off balance • Incorrect PTO shaft angles 	<ul style="list-style-type: none"> • Check for missing or broken tines • Check for loose tines • Correct tines fitted and match the weight of opposite tines • Alter linkage angles

EC Declaration of Conformity

Directive 2006/42/EC, Annex 2A

**ROSS
MORE**

Engineering Ltd,

Coolanga, Clonoulty, Cashel,

Co. Tipperary

Phone: +353 (0) 504 42230


Hereby certifies that the product:

Conditioner 2500

is manufactured to comply with EU provisions:

Directive - Safety of Machinery.....2006/42/EC

The person authorised to compile technical documentation at Rossmore Engineering Ltd is
Jason Forrestall, Product Development Director.



Jerry Carroll (Director)

Email: sales@rossmoreeng.ie

Website: www.rossmoreeng.ie



Rossmore Engineering Ltd,
Coolanga, Clonoulty,
Cashel,
Co. Tipperary,
Ireland.

Tel: +353 (0) 504 42230
Fax: +353 (0) 504 42280
sales@rossmoreeng.ie
www.rossmoreeng.ie