

MCINTOSH MANURE SPREADER

User Manual

McIntosh Bros Engineers Ltd
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PO Box 4240
PALMERSTON NORTH
NEW ZEALAND
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WARRANTY CONFIRMATION AND CUSTOMER DECLARATION

Your new manure spreader is guaranteed for a period of 12 months from date of entering service, provided that such equipment has not been subject to improper usage and or overloading or any other conditions contrary to the manufactures specifications or recommendations.

Your dealer representative has instructed me on the correct use of the trailer and the adjustment and maintenance requirements, and the need to check wheel nuts and other bolts as per the operation manual.

Your dealer must fill out this form below and send back to **McIntosh Brothers** within 14 Days.

Purchaser and/or Agent Declaration: I have been instructed in, and understand the hazards, and the safe operating instructions applicable to this machine. I understand and accept responsibility to train any operator to follow the safety measures.

Model _____

Serial # _____

Owner's Information

Dealer's Information

Signed: _____

Signed: _____

Owner: _____

Company: _____

Date: _____

Salesperson: _____

Date: _____

Please return this completed form to;

McIntosh Bros Engineers Ltd
PO Box 4240
PALMERSTON NORTH 4442





MANURE SPEADER

GENERAL OPERATION AND MAINTENANCE INSTRUCTIONS

MANUFACTURED BY
McINTOSH BROS. ENGINEERS LTD
PALMERSTON NORTH
NEW ZEALAND

DISTRIBUTED BY

Safety must have **PRIORITY**

- **Maintain your machine in good working condition**
- **Keep all guards and shields in place**
- **Disconnect hydraulic supply lines and PTO shaft when any maintenance, greasing or adjustments are undertaken.**
- **Keep hands, feet, clothing away from power driven parts**
- **Keep other people clear of machine when in use**
- **Always shut down the PTO drive and the hydraulics when you leave the tractor seat**
- **Do not allow people to travel on your spreader**

**HUMAN ERROR IS THE MAJOR FACTOR IN
ACCIDENTS**

Check List PRIOR to Operation

Check all wheel nuts for tightness.

Check the floor chain adjuster bolts are still locked up after the delivery trip.

Connect the PTO shaft and run the PTO up to 540 revs which gives the beaters a speed of 350.

Connect hydraulic hoses to tractor and check the slow and fast speeds and direction of floor chains, and that the back door goes up and down ok.

Check tyre pressures, these should be 68 PSI FOR 385/65 tyres (9.5 cubic meter spreader) and 70 PSI for the 15/70-18 tyres (7.5 cubic meter spreader).

If solid material is to be used in this machine remove the large rear rubber skirt by taking out the 4 bolts. For runny material leave the large rear rubber skirt in. The front rubber skirts stay in at all times.

**NOTE: ALL MACHINES ARE RUN UP PRIOR TO LEAVING THE FACTORY
BUT THE ABOVE STEPS SHOULD BE DONE PRIOR TO USE**

General Operating Instructions

The spreader is designed to run off your 540 PTO range on your tractor. The reduction gearbox will reduce the revs to a maximum of 350 for the beaters.

When using the spreader make sure no one stands at the back of the machine or close to the side when starting and spreading as stones can be thrown from the machine. Stones and rocks will be thrown further than the material being spread.

The rate of spread will vary according to the

- Material being spread
- Ground speed of the tractor
- The floor speed of the spreader
- The revs of the beaters
- The height of the back door

It may take a number of loads to get the combination of speeds right to spread the correct amount for each type of material being spread.

When loading avoid loading lumps of concrete including concrete fence posts, steel objects and large rocks as **these will not go out the back, or if they do, they will cause damage.**

The rear door can be lifted to whatever height best suits the material being spread. For heavy material it is better to lift the door right up otherwise excessive chain wear may result.

Once the machine is loaded and you are ready to unload make sure no one is near the rear and side of the spreader.

Start your PTO drive up slowly. If it is put in too quickly you may snap a shear bolt. The maximum revs for the PTO is 540 revs.

Start moving the tractor forward to the required ground speed so that once the door is opened you do not dump a large amount in one area.

When spreading wet or runny material use the door to stop excessive material coming out the back. For heavy material it is better to lift the door right up otherwise excessive chain wear may result and use the floor speed to regulate the spreader. If you are using the door to regulate the spread the relief valve needs to be set so that the floor drive cuts out once too much material comes up against the door.

If you do not have the beaters going before you lift the back door you could also dump a large amount in a small area.

Lift the back door to the required height.

If you are spreading very wet material you may have to lift the door slowly.

Start the floor moving.

There is a shear bolt in the rear PTO shaft with spares on the side of the spreader. The front PTO shaft has a runaway clutch on it.

There are two large and two small rubber skirts on the machine. The two large rubber skirts are in the machine to contain runnier material. If you do not lift the door before you start the floor you may damage the rear skirt. Always lift the door first.

If you are spreading more solid manure you do not need the big rear rubber skirt. There is less chance of damage if you take out the rear skirt by removing the 4 bolts and taking the steel panel with the rubber attached out of the machine.

There is a valve in the system to stop the floor going forward so the front rubber skirts can be left on the machine.

Make sure all operators read this manual now and in the future

SAFETY FIRST

Keep all guards in place.
Stop machine to adjust and oil.
Disengage power before cleaning.
Keep hands, feet and clothing away
from power-driven parts.
Keep off implement, when in use.
Keep others off.

Greasing & Maintenance

Grease is cheap – please use it. It can save a lot of money and problems.

Make sure your machine is well greased. Do not forget the grease points on the PTO driveline.

Grease all nipples daily for the first week when in use, and when the machine is being used all day. If the machine is not used all day then grease according to usage.

Check floor after the first three to four loads for tension and then once per week when in use. To tension up the floor chains, have one floor slat directly under the front cross member. Adjust up the floor chains until there is a 5mm gap between the floor slat and the RHS runner.

Floor slat bolts should be tightened up after the first week of operation and then monthly after that.

Check wheel nuts monthly.

When adjustments are being made make sure the PTO shaft and hydraulic hoses are disconnected.

Storage

When you have finished using the machine, wash it down thoroughly and apply a good coating of waste oil or diesel to body and floor chains.

Hydraulic Valve

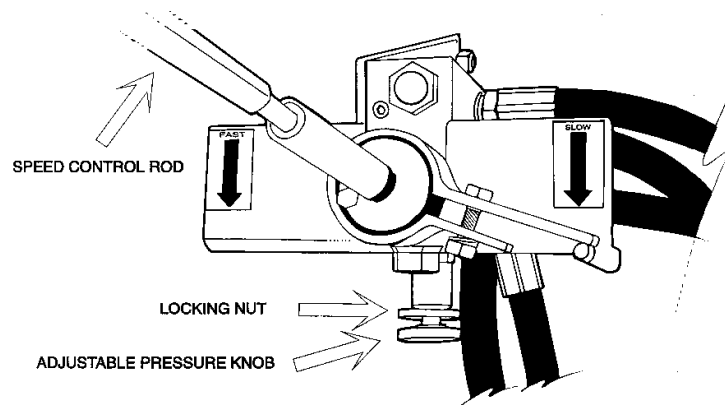
There are two adjustable settings on the valve

- *Floor speed control*
- *Floor pressure relief setting*

Floor Speed Control

The floor should not be moving when the indicator is against the slow stop. To adjust, undo the bolt on the clamp and turn the control lever till the floor stops moving. Turn the level anti clockwise to increase the floor speed.

With a full load make sure the floor is moving backwards and not forwards otherwise damage could occur to the front skirt. Look at the floor chains behind mesh in the bottom guard to check direction of travel. Have the hoses set up so the tractor lever goes backwards for the floor to go backwards.



Floor Pressure Setting

This is the adjustable cartridge on the bottom of the valve. This valve will divert the oil from going to the floor motor; it will instead go back to the tractor. The oil is diverted when the floor is getting overloaded and will go back to the floor motor once the beaters have cleared the load against it. To get more pressure to the floor when it will not move a heavy load undo the locking nut, on the valve, then screw the knob clockwise $\frac{1}{2}$ a turn at a time, then run the spreader to check if this is the correct setting for your tractor and loading. To get less pressure to the floor to protect the spreader more turn the knob anti clockwise.

Caution – Running the pressure too high may result in mechanical damage especially while the door is only part way up and trying to ram heavy material under the door.

Floor drive gearbox oil capacity is 4.2 litres using Shell Omala 320.

Beater gearbox oil level is 100mm up from the bottom of the dipstick or 8 litres, oil type – Shell Spirax SAE 80W 90.

Equivalent oil types from other manufactures may be used.