

MCINTOSH COMBI WAGON

User Manual

McIntosh Brothers Engineers Ltd
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PO Box 4240
PALMERSTON NORTH 4442
NEW ZEALAND
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WARRANTY CONFIRMATION AND CUSTOMER DECLARATION

Your new Combi Wagon is guaranteed for a period of 24 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 manufacturer's specifications or recommendations.

Your dealer representative has instructed me on the correct use of the wagon 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's or Agent's Declaration. I have been instructed in, and understand the hazards, and the safe operating instructions and safety controls applicable to this machine including the need for further training. I understand and accept responsibility to train any operator to follow the safety measures.

Model _____ Serial # _____

Owners Information:

Signed _____

Owner _____

Date ____/____/____

Dealers Information:

Signed _____

Company _____

Salesperson _____

Date ____/____/____

Please return this completed form to:

McIntosh Brothers Engineers Ltd
PO Box 4240
PALMERSTON NORTH 4442
production@mcintosh.net.nz



Please note: It is recommended that both the owner and the dealer retain a copy of the completed warranty form for their records.

McIntosh Machine Warranty Conditions

Dear Customer,

Thank you for purchasing your new McIntosh machine. Please ensure that you read the operators manual and warranty conditions thoroughly and have your dealer explain the operation, maintenance and safety features of the machine.

GENERAL CONDITIONS

Warranty Period

24 months from the date of delivery and installation.

The warranty is limited to the repair of defective parts and/or components, the supply of replacement parts, and the direct labour cost for the fitting of the replacement or repair parts (and/or components), in accordance with the manufacturer's repair time schedules, or at McIntosh's discretion.

Owner's Responsibilities

The owner must:

- Read the machine's operators manual carefully to learn how to operate and service the machine safely and correctly.
- Teach all operators how to operate and service the machine safely and correctly.
- Operate the machine strictly in accordance with the instructions in the operator's manual, taking into account the machine's application and limitations at all times.
- Maintain and insure their machine at their own expense from the first day of installation in accordance with operator's manual, including all scheduled service and maintenance checks.
- Notify the authorised dealer of any fault in the machine as soon as it becomes apparent. The owner must then make the machine available on request for repairs to be carried out. Failure to do so may make the owner liable for any further or consequential damage and associated costs.
- For warranty repairs you must either clean down the machine ready for repair or pay for the cost of cleaning.



Combi Pro

GENERAL OPERATION AND MAINTENANCE INSTRUCTIONS

MANUFACTURED BY:	DISTRIBUTED BY:
McIntosh Brothers Engineers Ltd Palmerston North New Zealand	

SAFETY must have PRIORITY

Safety Guidelines:

- Maintain your machine in good working condition.
- Keep all guards and shields in place.
- Disconnect hydraulic supply lines 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 hydraulics when you leave the tractor seat.
- Do not allow people to travel on your Combi Wagon.

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

Check List PRIOR to Operation

- Never run Combi Wagon at over 36 kph as damage could occur.
- Look over all bolts to check none have come loose after transport from factory.
- Check all wheel nuts for tightness.
- Connect hydraulic hoses to tractor, run up machine, and check slow and fast feeds of cross conveyor and elevator.
- Please show all persons operating this machine the manual before operating for the first time.

The first time you use your wagon, if the backdoor does not move forward, screw the pressure valve, in ½ a turn at a turn until the backdoor starts to move forward.

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

HOSES

6 Hose Combi

- Grey Hoses, control the rams on the vertical elevator
- Black Hoses, Back door/ Wall
- Blue Hoses, Main Valve/ Cross conveyor/ Vertical Elevator slats
- The electric speed control operates the cross conveyor from stop to fast pushing the product into the vertical elevator. The setting varies depending on the product being feed. When feeding rounds this will be stopped at times to give the vertical elevator a chance to break the bale up.
- The angle of the elevator depends on the product being feed.

4 Hose Combi

- Black Hoses, control the rams on the vertical elevator and backdoor/wall.
- Blue Hoses, Main Valve/ Cross conveyor/ Vertical Elevator slats
-
- The electric switch on the grey box will switch between the backdoor/wall and vertical elevator rams. Only one operation can be operated at a time. The tractor key needs to be on for this box to work.

GENERAL OPERATING INSTRUCTIONS

- Never load higher than sides, load evenly.
- Tease materials out when loading.
- When feeding two crops together, load the lighter material on bottom.
- Load clear of vertical elevator where possible.
- Make sure the cross conveyor and vertical elevator are clearing materials properly.
- Use slow speeds for wet or heavy materials.
- For even feeding load the machine evenly.
- Tractor ground speed is approximately 6-8 kilometres per hour, but this will vary to suit conditions and density of row you require.
- Never run full load on fast speed. Place speed control in slow position and operate in this manner. Use fast speed when clearing the last 20-25% of load.
- When cleaning the machine, turn the tractor hydraulics off as well as the tractor itself before leaving the tractor seat.
- When clearing any blockages or checking the machine for faults, turn the tractor hydraulics off as well as the tractor itself before leaving the tractor seat.
- One month after first used, tighten sliding door chains and then check monthly.

GREASING AND MAINTENANCE

Make sure your machine is well greased (refer to list for greasing points).

Wagon Grease Nipples

Swivel	1	
Jack	1	
Conveyor	4	
Elevator (without Auto Tip)	9	
Elevator (with Auto Tip)		15
Floor shaft	4	
Tandem axle	6	
Rear Floor Idlers	1 per chain	

Grease all nipples daily for the first week when in use, then weekly after that. If you are doing a lot of travelling, then the axle pins should be greased more often. Grease daily if the wagon is being used all day and doing a lot of kilometres. Check wheel bearings periodically.

Oil floor, cross conveyor and elevator chains periodically which will give smoother running, particularly when the machine has not been used for a while.

If the floor gets to the stage where it is possible to cut two links off each side, then do so. If the chains are adjusted out further and further, then at some point serious damage will be caused.

Grease is cheap - use it. Set a time each week to adjust and grease your wagon and you will save money and hassles in the future.

STORAGE

When machine is not in use, wash down thoroughly and apply a good coating of oil to the body, vertical elevator, cross conveyor and floor chains (half oil/half diesel does the job well).

ROLLER CHAIN CONVEYOR

Oil the roller chain when finished for the season, otherwise the links may seize up. These are on your cross conveyor and vertical elevator.

SLIDING DOOR FLOOR CHAINS

To tension up floor chains, bring door right back. Adjust up floor chains until firm. If your door is pulling on an angle check the chains are at the same tension. If being pulled unevenly adjust the chains until they pull evenly.

SAFETY

Always disconnect the wagon from tractor hydraulics before making any adjustments or working on the machine.

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 dial on your electric speed control is between 0 & 20.

Vertical Elevator pressure setting

This is the adjustable cartridge on the top 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 conveyor is getting overloaded and will go back to the floor motor once the elevator has cleared the load against it. To get more pressure to the floor, undo the locking nut on the valve, then screw the knob clockwise ½ a turn at a time, then run the wagon to check if this is the correct setting for your tractor and loading. To get less pressure to the floor, turn the knob anti clockwise.

You may need to screw the valve in:

- The first time you use the Combi, and the load does not come forward.
- If you travel further and get more compacting.
- If you load the wagon at night and it rains. This will make the load heavier.
- If you change pits and the second pit has heavier silage.

If you screw the valve right in and leave it there, you will have very little protection on the floor. If you then have a jam there is a good chance, you will do damage to the machine.

The motors and valve on the wagon are sized and set to meet the size load the wagon can carry with the average tractor oil flow and pressure that could be pulling the wagon. With smaller wagons, you can get away with a tractor that may not be up to specifications with flows and pressure, but when you get up to the larger wagons, if the tractor has not got the performance or not working to its specifications, then the wagon may not feed out as expected.

REASONS FOR THE WAGON NOT PERFORMING CORRECTLY

The valve pressure setting is wrong.

A problem with the tractor

- the tractor is too small oil wise for the wagon or loading
- the pump is not working to its full capacity
- tractor relief valves are not working properly
- quick release fitting is not letting enough oil through

A valve in the hydraulic block not working correctly due to something in the oil jamming the valve either opened or closed.

Cross conveyor

- Chains too loose or too tight
- Chains not adjusted correctly
- Keys loose in coupling between gearbox and roller
- Bearing problems

Reasons to alter the pressure settings

Turn the valve in to increase the pressure to the floor because the floor will not move.

- First time using the wagon and the floor will move forward
- Load compacts while travelling
- Load left overnight and has compacted
- Feeding out a very heavy material

COMMON FAULT PROBLEMS

- If the valve is screwed right in and left there, there will be very little protection on the hydraulic motors.
- Please show all persons operating this machine the manual before operating for the first time.
- These wagons are designed to operate at 30-40 litres per minute. If the machine is run at 60-80 litres per minute, the wear and tear is accelerated on the chains by approximately five times.
- Most problems occur by lack of maintenance and adjustments. Save yourself money and hassles.
- Machines need to be greased/adjusted regularly. There is no excuse for not making time to do this. If you do not grease or adjust the chains, you will have problems with the machine. When problems do occur, chances are that they will be at the worst time.

TYRE PRESSURES

Tyre Size	PSI
15/70x18	62
400/60x22.5	60
385/65R22.5	68
500/45x22.5	45

Wheel Nut Recommended Torque Setting

M18 – 200 ft/lbs or 270Nm

M20 – 280 ft/lbs or 380Nm

M22 – 330 ft/lbs or 450Nm

CHECK ALL WHEEL NUTS ARE SUFFICIENTLY TIGHT