



Twose Series

5 Gang Folding Rollers

10.4m, 12.4 & 15.4m Series

UWB / UWF Models 01/12 onwards

Operation Manual

Publication 697

May 2016

IMPORTANT

VERIFICATION OF WARRANTY REGISTRATION



DEALER WARRANTY INFORMATION & REGISTRATION VERIFICATION

It is imperative that the selling dealer registers this machine with McConnel Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines go to the McConnel Limited web site at www.mcconnel.com, log onto 'Dealer Inside' and select the 'Machine Registration button' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the McConnel Service Department on 01584 875848.

Registration Verification

| |
|--|
| Dealer Name: |
| Dealer Address: |
| Customer Name: |
| Date of Warranty Registration:/...../..... Dealer Signature: |

NOTE TO CUSTOMER / OWNER

Please ensure that the above section above has been completed and signed by the selling dealer to verify that your machine has been registered with McConnel Limited.

IMPORTANT: During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – *refer to torque settings chart below*. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machines general maintenance procedure.

CAUTION: DO NOT OVER TORQUE HYDRAULIC FITTINGS AND HOSES

TORQUE SETTINGS FOR HYDRAULIC FITTINGS

| HYDRAULIC HOSE ENDS | | |
|---------------------|---------|--------|
| BSP | Setting | Metric |
| 1/4" | 18 Nm | 19 mm |
| 3/8" | 31 Nm | 22 mm |
| 1/2" | 49 Nm | 27 mm |
| 5/8" | 60 Nm | 30 mm |
| 3/4" | 80 Nm | 32 mm |
| 1" | 125 Nm | 41 mm |
| 1.1/4" | 190 Nm | 50 mm |
| 1.1/2" | 250 Nm | 55 mm |
| 2" | 420 Nm | 70 mm |

| PORT ADAPTORS WITH BONDED SEALS | | |
|---------------------------------|---------|--------|
| BSP | Setting | Metric |
| 1/4" | 34 Nm | 19 mm |
| 3/8" | 47 Nm | 22 mm |
| 1/2" | 102 Nm | 27 mm |
| 5/8" | 122 Nm | 30 mm |
| 3/4" | 149 Nm | 32 mm |
| 1" | 203 Nm | 41 mm |
| 1.1/4" | 305 Nm | 50 mm |
| 1.1/2" | 305 Nm | 55 mm |
| 2" | 400 Nm | 70 mm |

WARRANTY POLICY

WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with McConnel Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

1. LIMITED WARRANTIES

- 1.01. *All machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.*
- 1.02. *All spare parts supplied by McConnel Ltd and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.*
- 1.03. *The warranty offered by McConnel Ltd is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.*
- 1.04. *This warranty does not extend to any product from which McConnel Ltd's serial number plate has been removed or altered.*
- 1.05. *This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.*
- 1.06. *Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.*
- 1.07. *Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.*
- 1.08. *Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which McConnel Ltd cannot be held liable, and may have safety implications.*
- 1.09. *If in exceptional circumstances a non McConnel Ltd part is used to effect a repair, warranty reimbursement will be at no more than McConnel Ltd's standard dealer cost for the genuine part.*
- 1.10. *Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of McConnel Ltd.*
- 1.11. *For machine warranty periods in excess of 12 months the following additional exclusions shall apply:*
 - 1.11.1. *Hoses, exposed pipes and hydraulic tank breathers.*
 - 1.11.2. *Filters.*
 - 1.11.3. *Rubber mountings.*
 - 1.11.4. *External electric wiring.*
 - 1.11.5. *Bearings and seals.*

- 1.12. All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.
- 1.13. Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.

NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. McConnel Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.

2. REMEDIES AND PROCEDURES

- 2.01. The warranty is not effective unless the Selling Dealer registers the machine, via the McConnel Ltd web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.
- 2.02. Any fault must be reported to an authorised McConnel Ltd dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which McConnel Ltd cannot be held liable.
- 2.03. Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by McConnel Ltd. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.
- 2.04. All claims must be submitted, by an authorised McConnel Ltd Service Dealer, within 30 days of the date of repair.
- 2.05. Following examination of the claim and parts, McConnel Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by McConnel Ltd and appropriate labour and mileage allowances if applicable.
- 2.06. The submission of a claim is not a guarantee of payment.
- 2.07. Any decision reached by McConnel Ltd is final.

3. LIMITATION OF LIABILITY

- 3.01. McConnel Ltd disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.
- 3.02. McConnel Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.
- 3.03. Except as provided herein, McConnel Ltd shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.
- 3.04. No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.

4. MISCELLANEOUS

- 4.01. McConnel Ltd may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.02. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.03. Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.



DECLARATION OF CONFORMITY

Conforming to EU Machinery Directive 2006/42/EC

We,

McCONNEL LIMITED, Temeside Works, Ludlow, Shropshire SY8 1JL, UK

Hereby declare that:

The Product; *Tractor Trailed 3 & 5 Gang Folding Rollers*

Product Code; *TWBR / TWFR*

Serial No. & Date Type

Manufactured in; *United Kingdom*

Complies with the required provisions of the Machinery Directive 2006/42/EC
The machinery directive is supported by the following harmonized standards;

- BS EN ISO 12100 (2010) Safety of machinery – General principles for design – Risk assessment and risk reduction.
- BS EN 349 (1993) + A1 (2008) Safety of machinery - Minimum distances to avoid the entrapment with human body parts.
- BS EN 953 (1997) + A1 (2009) Safety of machinery - Guards general requirements for the design and construction of fixed and movable guards.
- BS EN 4413 (2010) Hydraulic fluid power. Safety requirements for systems and their components.

McCONNEL LIMITED operates an ISO 9001:2008 quality management system, certificate number: FM25970.

This system is continually assessed by the;

British Standards Institution (BSI), Beech House, Milton Keynes, MK14 6ES, UK
BSI is accredited by UK Accreditation Service, accreditation number: UKAS 003.

The EC declaration only applies if the machine stated above is used in accordance with the operating instructions.

Signed *Responsible Person*

CHRISTIAN DAVIES on behalf of McCONNEL LIMITED

Status: *General Manager*

Date: *May 2016*

**THIS MANUAL IS TO BE HANDED TO THE CUSTOMER
BEFORE THE MACHINE IS TO BE USED FOR THE FIRST TIME**



**McCONNEL LIMITED
TEMESIDE WORKS
LUDLOW
SHROPSHIRE
SY8 1ND**

**TELEPHONE:
01584 873131**

All dimensions and capacities mentioned in this book are approximate. In pursuance of the Companies policy of constant development, the right is reserved to depart, without notice, from any detail illustrated or specified in this book, without incurring the obligation to provide such modifications on machines previously delivered.

No responsibility will be accepted by McConnell Limited for any injury, damage or loss arising from the improper use or lack of maintenance of any machinery supplied by them or from any failure of the user to comply with all instructions published by Tractor or Loader manufacturers, particularly with regard to maximum load capacities, tyre pressures and stability, or with instructions and regulations pertaining to Tractor Cabs.

CONTENTS

| | <i>Page No.</i> |
|--|-----------------|
| Safety Notes & Warnings | 2 |
| Ram Identification | 3 |
| Specifications | 4 |
| General Information | 5 |
| Machine Description | 6 |
| Safety Information | 7 |
| General Instructions | 9 |
| Attaching Roller to Tractor | 11 |
| Unfolding and Setting Up the Roller for Work | 12 |
| Folding the Roller from Work to Transport Position | 13 |
| Routine Maintenance & Storage | 14 |
| Wear Pads Inspection & Adjustment | 15 |

SAFETY NOTES AND WARNINGS

Throughout the handbook the following sub headings are used to draw attention to various points of importance:

DANGER OR WARNING:

This is to draw attention to very important instructions which **MUST** be followed precisely to avoid injury or death.

CAUTION:

This is used to draw attention to instructions which **MUST** be followed to avoid harm to the operator or damage to machine, process or the environment.

NOTE:

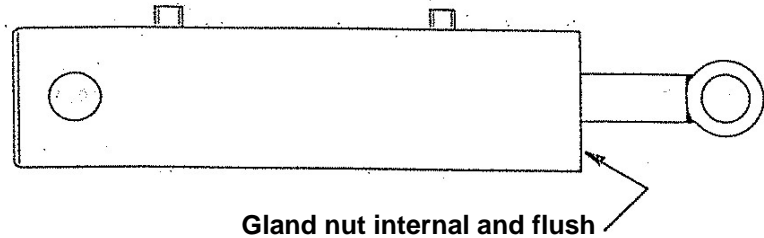
This is used to highlight points used for supplementary information.

RAM IDENTIFICATION

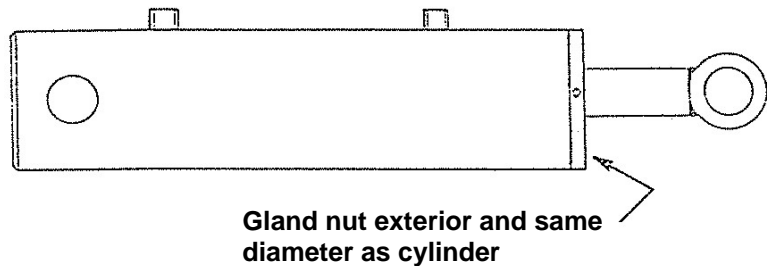
When ordering seal sets, ram parts etc. please follow the simple guidelines below to ensure receipt of compatible parts:

Examine the gland nut area of the ram in question – it will be one of three possible types:

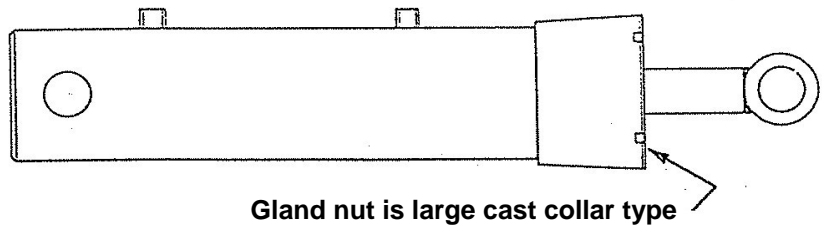
RAM TYPE 'A'



RAM TYPE 'B'



RAM TYPE 'C'



When ordering parts please state: Type 'A', 'B' or 'C' - This does not apply when a complete ram is required as all types are fully interchangeable.

SPECIFICATIONS

| Specification / Model | | 10.4m Model | 12.4m Model | 15.4m Model |
|------------------------------|--------------|--------------------|--------------------|--------------------|
| Rolling Width | 22" C Rings | 10.4m (34' 1") | 12.4m (40' 8") | 15.4m (50' 6") |
| | 19" CB Rings | 10.4m (34' 1") | 12.4m (40' 8") | 15.4m (50' 6") |
| | 22" CB Rings | 10.4m (34' 1") | 12.4m (40' 8") | 15.4m (50' 6") |
| Transport Width | 22" C Rings | 2.9m (9' 6") | 2.9m (9' 6") | 2.9m (9' 6") |
| | 19" CB Rings | 2.9m (9' 6") | 2.9m (9' 6") | 2.9m (9' 6") |
| | 22" CB Rings | 2.9m (9' 6") | 2.9m (9' 6") | 2.9m (9' 6") |
| Transport Length | 22" C Rings | 6.19m (20' 4") | 6.19m (20' 4") | 6.9m (22' 8") |
| | 19" CB Rings | 6.19m (20' 4") | 6.19m (20' 4") | 6.9m (22' 8") |
| | 22" CB Rings | 6.19m (20' 4") | 6.19m (20' 4") | 6.9m (22' 8") |
| Weight | 22" C Rings | - | - | - |
| | 19" CB Rings | - | - | - |
| | 22" CB Rings | - | 8200Kg | - |
| Min Power Req't | 22" C Rings | 75kW (100HP) | 80kW (110HP) | 95kW (125HP) |
| | 19" CB Rings | 75kW (100HP) | 80kW (110HP) | 95kW (125HP) |
| | 22" CB Rings | 75kW (100HP) | 80kW (110HP) | 95kW (125HP) |

NOTE: All weights, dimensions, and details are for guidance only.

GENERAL INFORMATION

NOTE:

The provision of this information is a requirement of the Health & Safety at Work Act 1974.

NOTE:

This handbook has been designed to help the operator and service/mechanic; to use and understand the machine fully, safely and efficiently, bearing in mind the Health & Safety requirements and the new CE requirements which come into force from January 1st 1995.

NOTE:

The handbook/manual will be supplied in a waterproof plastic outer cover to prevent damage from rain, condensation etc. The cover of the handbook will include its own part number, which includes information as to machine type and issue date of manual in question.

DANGER NOTE:

It is very important that the handbook/manual has been read thoroughly - throughout, and is completely understood before attempting to attach or use machine in any way.

CAUTION:

When ordering spares, please state clearly:

- (a) *Machine type and Model No.*
- (b) *Part No. of component.*
- (c) *Description of component.*
- (d) *Quantity required.*
- (e) *Full address to which spares are to be sent.*
- (f) *Method of delivery required.*

CAUTION:

Always insist on genuine and correct spare parts.

NOTE:

Further copies of this handbook/manual can be obtained from:

McCONNEL LIMITED
TEMESIDE WORKS
LUDLOW
SHROPSHIRE
SY8 1ND

TELEPHONE:
01584 873131

MACHINE DESCRIPTION

This is a set of Hydraulic Folding Cast Rollers with an option of Cambridge or Cambridge/Breaker rings. It is intended to be attached to an agricultural vehicle by means of the 'drawbar-hitch' couple-up system. A set of wheels aids the transportation of the machine to and from the desired place of work.

The purpose for its production and its sole intention is to roll cultivated land. At no time must this machine be used for anything other than, or to do any job other than for which it has been designed as stated above.



SAFETY INFORMATION



READ THE BOOK FIRST: Never attempt to assemble, couple up, or operate machinery until you understand fully the functions, controls, and safety precautions required as shown in the operator's manual.

DANGER WARNING:

Always follow tractor safety operations and instructions **VERY CAREFULLY** - **NEVER TAKE RISKS**

CAUTION:

Be aware of warning stickers and instruction stickers on machine as care must be taken and instructions obeyed.

CAUTION:

Contact your dealer should you need advice, assistance, or if you do not understand the manual or machine. "NEVER ASSUME" - if not sure - ASK.

CAUTION:

Machine **MUST NOT** be altered or modified in any way without permission - No liability will be accepted in respect of a machine that has been modified without manufacturers permission.

DANGER WARNING:

Never drive machinery at speeds that could cause danger to other persons or properties, or in a manner that may cause accidents.

CAUTION:

Always 'SWITCH-OFF' tractor engine before attempting to carry out adjustment or service repairs and inspections on the machinery.

DANGER WARNING:

Always be aware of your surroundings - and operate machinery accordingly. Beware of confined-tight areas, low height restrictions, buildings and overhangs etc. Also drive and operate bearing in mind weather conditions such as sun, rain, ice, snow, wind etc. Make allowances in all situations.

CAUTION:

Never carry 'passengers' on machinery or on tractor.

Ensure bystanders/onlookers are kept well away from operational area of apparatus.

CAUTION:

'PARKING UP' THE MACHINE - When machine is being removed from tractor linkage and being 'parked up' it is essential that a good firm base and level site be found. Always chock and prop machine to ensure a good firm position to leave parked. Ensure that stand legs of machine are correctly locked into position.

CAUTION:

Never allow children to play on, or around, parked machinery.

CAUTION:

Never wear loose fitting or ragged clothing which could get caught in machinery or controls.

CAUTION:

Ensure visibility is clear through cab-screens at all times.

CAUTION:

Always dispose of discarded or worn out parts thoughtfully - by disposing of them in an approved and specified legal scrap site, bin or skip.

CAUTION:

Worn out and spent waste oil, grease and other obnoxious substances must always be disposed of in suitable and legally approved dumping containers suitable for the waste in question.

DANGER WARNING:

When unfolding, roller must be coupled to tractor and hydraulic hoses attached at all times.

DANGER WARNING:

Never attempt to unfold the roller on sloping land.

DANGER WARNING:

Always treat the roller with great respect and unfold/crowd machine at very slow speeds, keeping hydraulic flows to minimum.

DANGER WARNING:

It should be noted and remembered that the 12.4m roller requires a setting up area of approx. 14.0m wide x 18.0m long to unfold in safety.

DANGER WARNING:

The 10.4m roller requires a setting up area of approx. 12.0m wide x 18.0m long to unfold in safety.

DANGER WARNING:

Transportation speed must not exceed a maximum of 12mph.

GENERAL INSTRUCTIONS



1. Before attaching any machine to a tractor or loader make sure that implement is still standing firmly on good solid - level site as it will be, providing unit was previously parked correctly.
Check that all wheels are 'chocked' correctly and that supports/props are in position where necessary to prevent booms etc. dropping.
2. Before and during all maneuverings of the tractor or vehicle in order to attach the machinery/implement ensure that no other persons are in the vicinity.
Keep other persons well clear and make known your intentions whilst keeping a sharp lookout during reversing and aligning machines for coupling up.
3. Always secure tractor into selected position by ensuring that brakes are applied correctly in order to prevent vehicle moving off on its own to cause injury and damage.
4. Make sure that the lift arms and top link ball ends of the tractor are properly fitted to the machine/implement by using correct adaptor sleeves where necessary, and that retaining pins of the correct type are used on all three point linkage points. Secure pins with relevant pin and ring assembly.
5. If the machine is of the drawbar type - check that the hitch on the tractor is in good condition and that the hitch pin used is of the correct size and type, and is properly secured when fitted.
6. Should it become necessary to make adjustments or service the machine while it is raised on the tractor linkage, or raised on a front end loader - trestles or suitable supports **MUST** be positioned to support machine to prevent accidental dropping of lift arms, loader arms or mechanical failure. **THE MACHINE MUST ALWAYS BE PROPPED AND CHOCKED.**
7. Never attempt to work on, adjust or service repair machinery of any kind whilst it is still running or working. Always stop the machine and **STOP THE TRACTOR ENGINE** - before any service/repairs begin. **(SWITCH OFF TRACTOR ENGINE BEFORE LEAVING TRACTOR SEAT)**

8. In transit always use transport stays or locking devices where provided. If, as in the case of some longer machines, the unit is transported lengthways - make sure that the front of the tractor is suitably ballasted to maintain stability. A method of achieving this would be to add suitable weights to a correctly specified and fitted front weight frame.
9. Always use machines in a sensible and reasonable manner and do not attempt to use them in work for which they are not intended. Avoid overloading and abusing them as this can cause damage to machine and tractor and can be very dangerous.
10. When unhitching/detaching a machine from a tractor three point linkage or from a front end loader ensure that any stands or legs are securely positioned and that the machine is parked where it will not be a safety hazard or cause annoyance to others. Make sure that chose 'parking site' is a firm and level site.
11. Carry out regular periodic maintenance - Always with safety in mind.
12. Ensure regular maintenance procedures are maintained for the lifetime of the machine.
13. HEALTH AND SAFETY RULES AND REGULATIONS MUST BE ADHERED TO IN ALL AGRICULTURAL RESPECTS.

ATTACHING ROLLER TO TRACTOR

1. Attach roller to tractor via pick-up hitch ensuring hitch and hook/pin align. If applicable use the Drawbar conversion Bush provided. If tractor drawbar is to be used it may be necessary to couple the two snap ends of Drawbar ram hoses to tractor to enable the drawbar of roller to align with tractor towing hitch.
2. Couple the remaining two male quick release couplings into the tractors double-acting service.
NOTE; ensure hoses are coupled correctly to tractor double acting spool.

REAR LIGHT BRACKETS – Transport & Work Positions

Rear lighting brackets are fitted for use when transporting the machine on the public highway; prior to unfolding the machine for work both lighting brackets must be placed into their work position, the procedure is as follows: lift and fold the brackets backwards so that hole ‘A’ locates on pin ‘B’, secure in position with lynch pin. When returning to the transport position the procedure should be reversed after the machine has been folded.



UNFOLDING AND SETTING UP THE ROLLER FOR WORK

1. Make sure the unfolding site is clear of all obstacles and people before the procedure is attempted.
2. Position tractor and roller at suitable selected spot and ensure tractor handbrake is ON.
3. Lift and fold the transport light brackets backwards into the work position and secure in place with lynch pins.
4. Remove transport stay from rear of roller by removing the spring clips from the two anchor pins and sliding off the adjusting bar. Replace spring clips into anchor pins for safe keeping.
5. Place transport stay into storage position on the main drawbar and secure with spring clip through anchor pin.
6. Reverse tractor/roller 'SLOWLY' (and in a straight line) which will allow the wing sections to fold outwards about the pivots at nearside and offside of main centre frame. Continue reversing until both nearside and offside 'double' wing sections are at an angle of approximately 30 degrees from starting position.
7. Move hydraulic lever (SLOWLY) to operate both outer wing cylinders - this operation will swing out the 'outer' offside and nearside wing sections.
8. Reverse the unit until whole roller is 'in line'.
9. Tractor handbrake should now be at this stage released (IN THE OFF) position and ensure also now that tractor is OUT of gear. This is to allow the tractor to 'move' and 'roll' with the roller whilst continuing the unfolding operation.
10. The whole machine has now been opened into a long line and is now to be crowded forward allowing tractor to roll with it. The crowding operation is done by operating the main drawbar cylinder.
Continue the crowding movement until all the roller wing sections are seated on the ground and the transport wheels have raised into the horizontal work position.
11. The tractor handbrake should now be applied (to the 'ON') position, in order to stabilise unit.
12. NOTE: It may be necessary to raise or lower the actual drawbar eye bracket in drawbar to ensure that drawbar is parallel to floor when rolling; *3 positions are available.*
13. Ensure all tractor hydraulic functions for the roller are now in "float position" to allow the machine to follow ground contours.
14. The machine is now ready for rolling.

ENSURE HYDRAULICS ARE NOT OPERATED DURING ROLLING

FOLDING THE ROLLER FROM WORK TO TRANSPORT POSITION

1. Make sure the folding site is suitable – clear area of obstacles and people, before the procedure is attempted.
2. Position tractor and roller at suitable selected spot and ensure tractor handbrake is in the OFF position.
3. Crowd whole machine ‘back’ from the ‘work’ position to the position where the transport wheels move from a horizontal to a vertical line and contact the ground. This is done by extending hydraulically the main drawbar ram. This operation will move tractor, which will ‘roll’ back with machine and will follow the drawbar ram "instructions". **This can only be done with handbrake ‘OFF’ NEVER attempt this operation with brake “ON”.**
4. With the transport wheels now vertical and on the ground the machine should be pulled forward by the tractor to position the intermediate rollers to an angle of approx. 45 degrees to the "work line".
5. The extreme offside and nearside roller sections should now be hydraulically folded in behind the intermediate frames fully, ensuring in the case of the 12.4m machine only that the guide support is located between the two frames. The outer frames and the intermediate frames should now be together, on both sides of the roller.
6. Put tractor into LOW forward gear and move slowly forward - in a straight line. This will allow the outer and intermediate section at both nearside and offside to follow the tractor and will align themselves until parallel and will eventually stop once the stop brackets have been contacted.
7. Apply tractor HANDBRAKE. Release safety spring clip and remove transport stay from storage point on drawbar and replace spring clip for safe keeping.
8. Remove spring clips from transport stay pins.
9. Fit transport stay to stay pins and secure with spring clips.
10. Adjust transport stay by turning centre tube (as standard tap link adjust) to lock into parallel position. The transport lock position is achieved when the stop brackets which are situated at inner edge of intermediate frames, are in firm contact with rear face of main centre frame.
11. Remove lynch pins and unfold the transport light brackets to place them into the transport position, replace lynch pins for stowage.
12. When packing and disconnecting, roller parking stands must be lowered to ‘down’ position and secured by security pins where fitted.

ROUTINE MAINTENANCE AND STORAGE



DAILY

- Check wheel nut tightness – torque setting is 340Nm (250lbs.ft.).



WEEKLY

- Grease all pivot points.
- Check all nuts and bolts for tightness.
- Check tyre pressure – correct pressure is 70psi (4.8 BAR).



EVERY 2 YEARS or EVERY 50,000kms (whichever occurs first)

- Grease wheel bearings in normal conditions every 2 years or every 50,000kms, (whichever occurs first), and where applicable always when replacing the brake shoes. In harsh conditions greasing frequency should be increased.
Use EP Grease formulated for the lubrication of plain and ball roller bearings typically used in HGV and Agricultural type hubs.



STORAGE

- Ram rods must be closed or greased to protect the chromed surface.
- Clean machine and note any damage or repairs needed – arrange for replacement parts or repairs to be made before next use of the machine.
- Fully lubricate and preferably store in a clean dry location protected from the elements.



McConnel Limited, Temeside Works, Ludlow, Shropshire SY8 1JL. England.
Telephone: 01584 873131. Facsimile: 01584 876463. www.mcconnel.com