Publication 1044
February 2023
Part No. 24215.44

McCONNEL

SNOW BLOWER

ROBOCUT ACCESSORY (4000952)

Builds 2022 onwards

Operator Manual

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; log onto https://my.mcconnel.com and select 'Machine Registration' which can be found in the 'Warranty' section of the site. **Confirm to the customer that the machine has been registered by completing the verification form below.**

Registration Verification Serial No.

Dealer Name: ……..……..

Dealer Address: ……..……..

Customer Name: ……..……

Date of Warranty Registration: ……/……/..…. Dealer Signature: ……..……

Note to Customer / Owner

Please ensure the section above has been completed and signed by the dealer to verify 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 machine's 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 mounted 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.
All Self Propelled 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 or 1500 hours. Engine warranty will be specific to the Manufacturer of that unit.

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. The warranty policy is valid for machines registered in line with the terms and conditions detailed and on the basis that the machines do not extend a period of 24 months or greater since their original purchase date, that is the original invoice date from McConnel Limited.
Machines that are held in stock for more than 24 months cannot be registered for warranty.

1.06. 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.

1.07. Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.

1.08. 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.

1.09. 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.

1.10. 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.

1.11. 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.

1.12. For machine warranty periods in excess of 12 months the following additional exclusions shall apply:

1.12.1. Hoses, exposed pipes and hydraulic tank breathers.

1.12.2. Filters.

1.12.3. Rubber mountings.

1.12.4. External electric wiring.

1.12.5. Bearings and seals

1.12.6. External Cables, Linkages

1.12.7. Loose/Corroded Connections, Light Units, LED's

1.12.8. Comfort items such as Operator Seat, Ventilation, Audio Equipment

1.13. 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.

1.14. 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 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.

McConnel Limited

For Safety and Performance…

ALWAYS READ THE BOOK FIRST

McCONNEL LIMITED

Temeside Works
Ludlow
Shropshire
England

Telephone: +44 (0)1584 873131
www.mcconnel.com

CONTENTS

GENERAL INFORMATION

Always read this manual before attempting to operate the machine – whenever any doubt exists contact your dealer or the McConnel Service Department for advice and assistance.

Use only McConnel Genuine Service Parts on McConnel Equipment and Machines

DEFINITIONS – *The following definitions apply throughout this manual:*

WARNING
An operating procedure, technique etc., which –
can result in personal injury or loss of life if not observed carefully.

CAUTION
An operating procedure, technique etc., which –
can result in damage to either machine or equipment if not observed carefully.

NOTE
An operating procedure, technique etc., which is –
considered essential to emphasis.

LEFT AND RIGHT HAND
These terms are applicable to the machine when it is viewed from the rear facing forwards.

Note: The illustrations in this manual are for instructional purposes only and may on occasion not show some components in their entirety. In some instances an illustration may appear slightly different to that of your particular model but the general procedure will be the same. E&OA.

MACHINE & DEALER INFORMATION

Record the Serial Number of your machine on this page and always quote this number when ordering parts. Whenever information concerning the machine is requested remember also to state the make and model of tractor to which the machine is fitted.	
Machine Serial Number:	**Installation Date:**
Machine Model details:	
Dealer Name:	
Dealer Address:	
Dealer Telephone No:	
Dealer Email Address:	

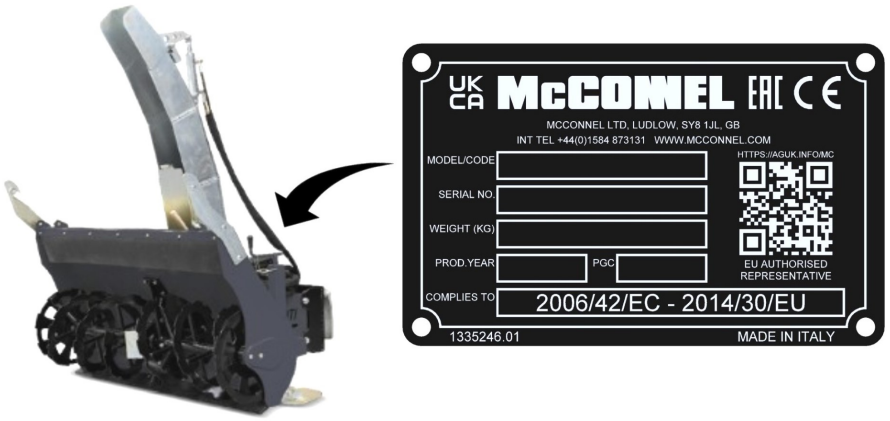
INTRODUCTION

The McConnel ‘Snow Blower’ is an efficient snow clearing machine designed for use as an alternative attachment on McConnel Robocut Mowers. It has been designed as a professional machine for the removal of snow from roads, pathways, parks, ramps and numerous other areas where accessibility is difficult or limited.

This machine must only be used to perform the duties for which it was designed; use of the machine for any other tasks will risk injury to persons and/or damage to the machine.

MACHINE IDENTIFICATION

A machine identification plate is fitted to the machine in the location indicated below.

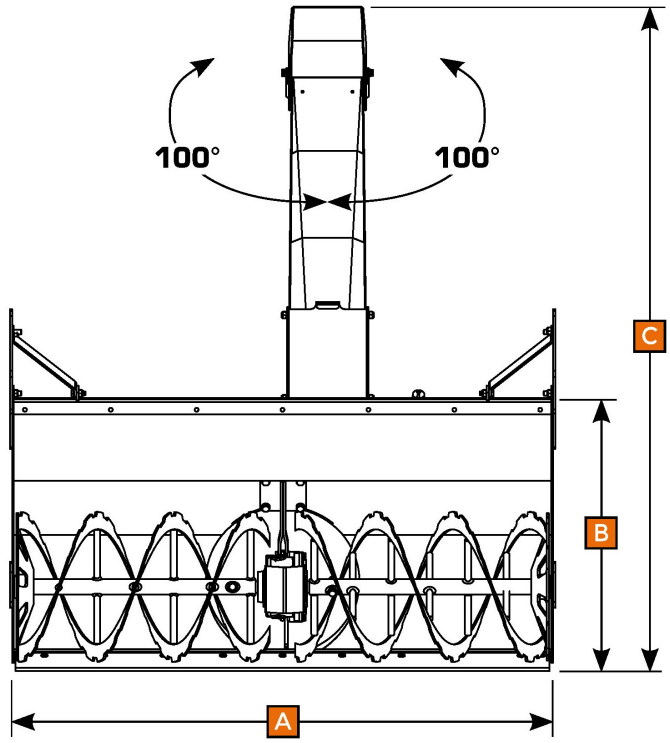


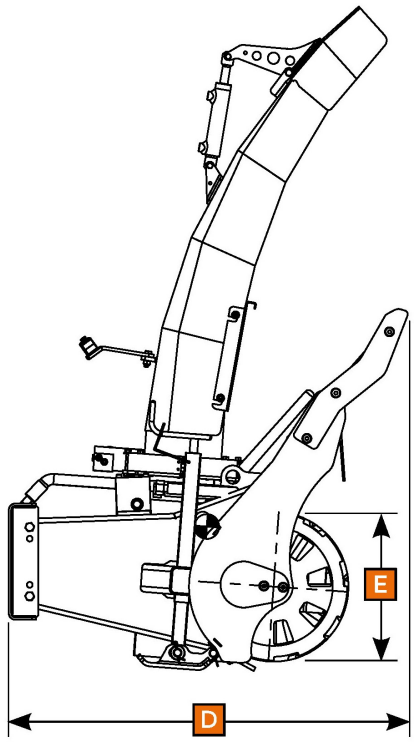
Always quote the machine code and serial number as stated on the identification plate when ordering replacement parts or requesting assistance.

HANDLING THE MACHINE

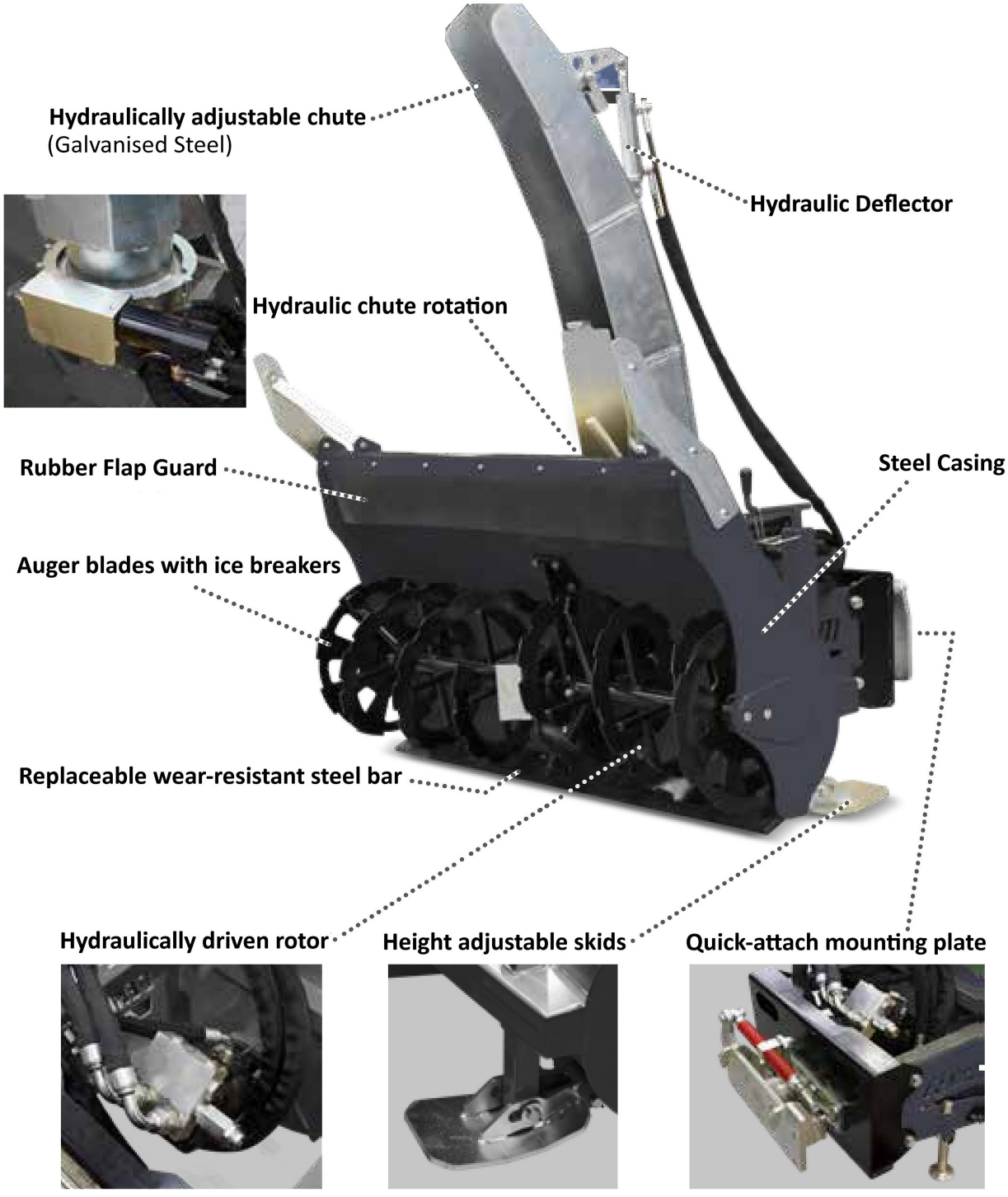
Handling the machine should be performed using suitable overhead lifting equipment with a minimum safe lifting capacity over and above the maximum weight of the machine.
Lifting equipment should be attached to the dedicated lifting points to ensure even weight distribution during the handling procedure.
Ensure lifting equipment is kept clear of the chute at all times when handling the machine to avoid damaging this component.

WARNING! Ensure bystanders are kept at a safe distance during handling of the machine.





Technical Data			
(A) Machine Width	1420mm	**(E)** Auger Blade Ø	400mm
(B) Chassis Height	710mm	Hydraulic Motor	51cc (350 bar)
(C) Machine Height	1730mm	Chute Adjustment	+/- 100°
(D) Machine Depth	1030mm	Machine Weight	280kg


Hydraulically adjustable chute
(Galvanised Steel)
Hydraulic Deflector
Hydraulic chute rotation
Rubber Flap Guard
Steel Casing
Auger blades with ice breakers
Replaceable wear-resistant steel bar
Hydraulically driven rotor
Height adjustable skids
Quick-attach mounting plate

In addition to the general advice stated below, the main safety implications surrounding the use of this machine relate to the safe use of the Robocut machine; it is therefore vital that all users have read and understood all safety information in the operation manual provided with the Robocut machine.

Ensure that all users of this machine are trained in its safe use and have read the operation manual for both this machine and the Robocut Machine.

General Safety

- Never run or operate the machine with safety devices missing or removed.
- Never approach the machine whilst it is running or operating.
- Never attempt to use the machine for clearing any materials other than snow.
- Never aim the ejected snow at persons, animals, vehicles or buildings.
- Never allow persons to ride on the machine.
- Never allow the snow cutter rotor to touch the ground during operation.
- Never attempt to introduce materials to, or extract materials from, the machine when the rotor is running with any type of tool, in particular your hands or feet.
- Never attempt to use a machine with damaged or missing components; repair or replace the parts immediately.
- Read and abide by all safety message decals displayed on the machine; they are there for your safety and the safety of others.
- Keep all persons and animal at a safe distance of at least 10m from the working machine.
- Stop the machine immediately if persons or animals enter into the working zone of the machine, do not restart operations until they are at a safe distance.
- Before performing any work on the snow blower, including cleaning and maintenance operations, stop the Robocut, wait for the rotor to stop, turn off the engine and remove the security key from the radio-control.

Personal Safety Gear

Users should wear suitable personal safety gear at all times whilst operating this machine.
Suggested safety gear;

- **Safety Boots**
- **Eye Protection**
- **Ear Defenders**
- **Safety Helmet**
- **Safety Gloves**
- **Overalls**

Mounting of the machine should be performed on a firm level site. Keep bystanders at a safe distance from the machinery.

The mounting procedure is as follows;

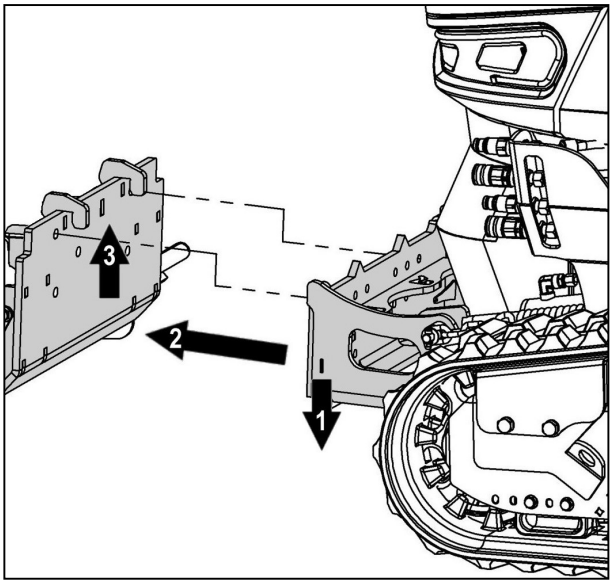
1. Lower the Robocut mounting frame to a height lower than lugs on mounting frame of Snowblower.

2. Carefully manoeuvre the Robocut to a position where the mounting frames are adjacent and centred.

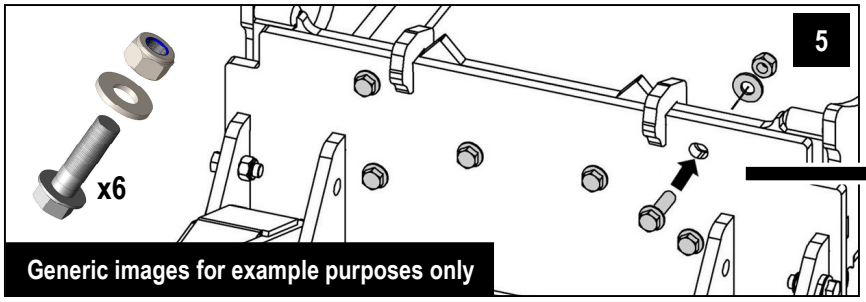
3. Raise the Robocut mounting frame to engage with the lugs on the mounting frame of the Snowblower.

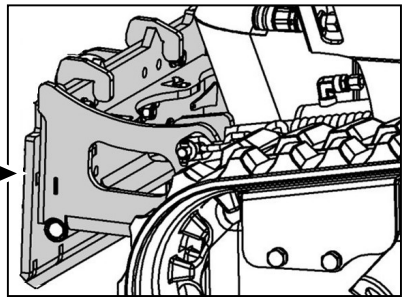
Check bolt holes in mounting frames are correctly aligned.

Switch the Robocut 'OFF' and remove the security key from the controls.



4. Connect mounting frames together using bolts, washers and locknuts provided.

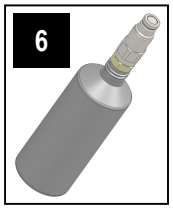




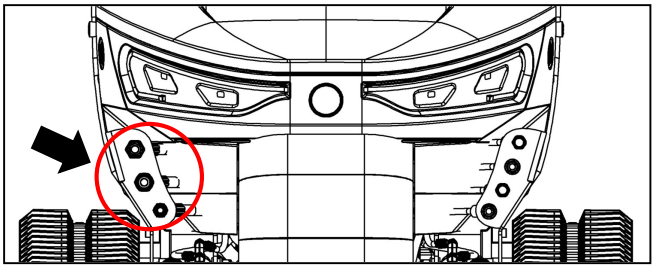
5. Remove the expansion vessel from drain line hose on Snowblower.

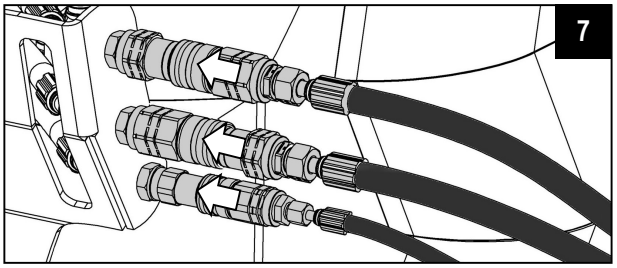
NOTICE

The expansion vessel should be stored in a safe location and must be reinstalled on the drain line hose whenever the machine is removed.

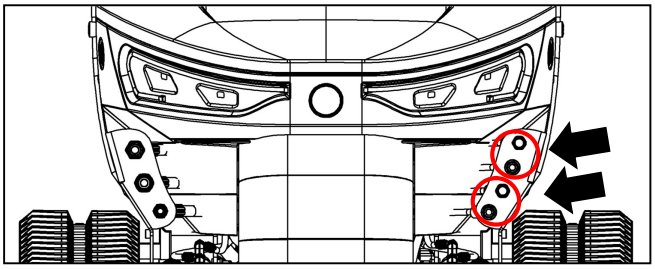


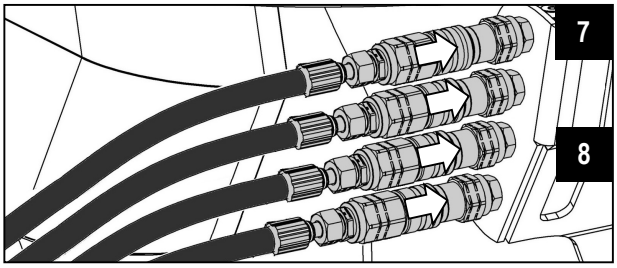
6. Connect Snowblower motor hoses to hydraulic connection points on Robocut.





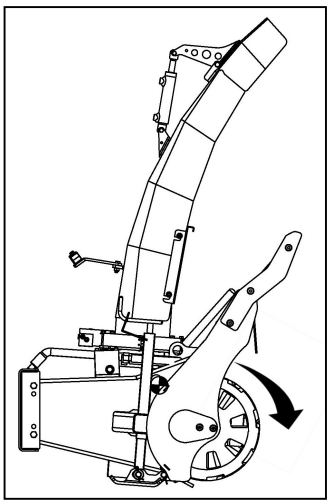
7. Connect hoses from chute rotator to one of the sets of auxiliary connection points.





8. Connect hoses from chute deflector ram to the other set of auxiliary connection points.

When all connections have been fitted correctly, start the machine and carefully operate all controls to verify they correspond to their correct functions - in particular ensure that the snow blower's rotor turns in the downhill direction; if this proves not to be the case, turn the machine off and swap the hose positions for the pressure and return hoses without disconnecting the drain line.



Rotor operating direction

CAUTION! Clean all hydraulic fittings thoroughly before connecting hoses; this will help avoid the risk of contamination by foreign bodies which can cause pump damage if introduced to the system.

Machine Removal

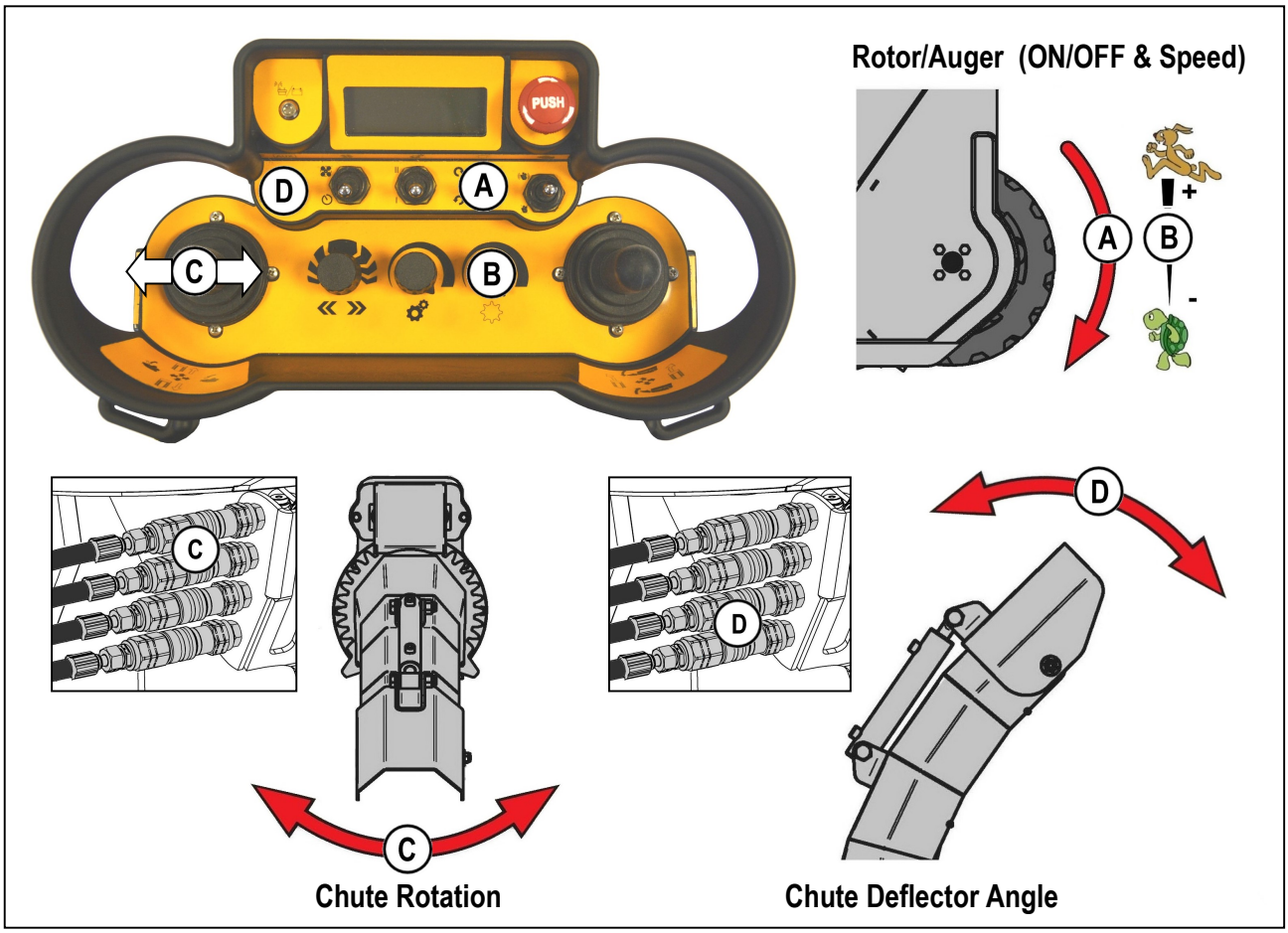
Removal of the machine is basically a reversal of the mounting procedure and should be performed on a firm level site.

Operation and control of the machine is via the Robocut remote-control unit as detailed below;

Starting the Rotor
Starting the propeller rotor/auger is by operation of switch '**A**' - ensure the correct direction for work is selected; the rotor must turn in the downhill direction.
Stopping the rotor is by returning the switch to the 'OFF' position.

WARNING! When stopping the rotor do not attempt to approach the machine until rotor movement has ceased completely.

Rotor Speed
The operating speed of the rotor (RPM) is controlled by operation of the potentiometer switch '**B**'; rotation speed can be increased or decreased as required. The optimum speed for efficient operation will be dictated by the particular working conditions, i.e. depth and/or consistency of snow.



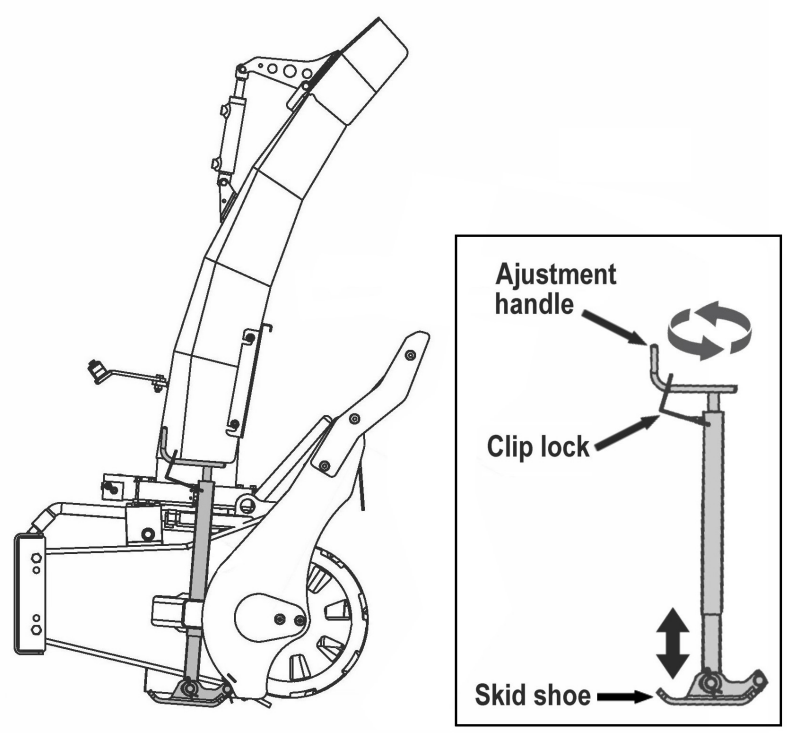
NOTE: Controls operation stated here are for installations where chute rotation hoses are connected to the upper set of auxiliary connections on the Robocut and deflector ram hoses connected to the lower set; if preferred, these can be installed the opposite way, in which case the controls for operating the functions will swap.

Chute Rotation
The rotational position of the snow chute is controlled by operation of lever '**C**'; operate the lever to rotate the chute to the required direction and position for expelling the snow, the chute can be rotated to either side of the machine as required.

Chute Deflector Angle
The chute deflector is controlled by auxiliary switch '**D**'; the switch operates the hydraulic ram located on the back of the chute allowing angle adjustment of the deflector. This feature in conjunction with the rotor operating speed will determine the trajectory of the ejected snow.

WARNING!
Ensure snow is ejected away from persons, animals, vehicles and buildings at all times.

Skid Adjustment (Minimum Working Height)
The machine features two adjustable skids for pre-setting the minimum work height.



The skids are located on the outer edges of the machine and are adjusted via their built-in screw handles. When adjusting the skids they should be set at the same height to ensure the machine remains parallel to the ground whilst operating.
Skids must be set to a height that ensures machine components are not in contact with the ground.

Blockage Clearing Pole
A pole is provided for clearing blockages within the machine if they occur. The machines must be switched off before attempting to clear a blockage.

DANGER!
Never attempt to clear a blockage whilst the machinery is switched on or running.

When not in use the blockage pole is stored in its receptacle on the rear of the casing.

Pre-Operational Checks
Inspect the machine prior to work to ensure all components are in good working condition. Do not attempt to use the machine if any components are broken or unsuitable for work.
The work area should be inspected prior to operations to determine the existence of any obstacles that may be hidden beneath the snow; obstacles should be marked and avoided or carefully manoeuvred around.

Pre-Operational Settings
Adjust the working height using the skids to suit the type of terrain. On unpaved roads the machine should be set a few centimetres clear of the ground to avoid the risk of gravel, stones or other materials entering the auger.
Position the chute to face the side of the machine you want the snow to be ejected to; the deflector can be adjusted during operation to set or adjust the expulsion distance.

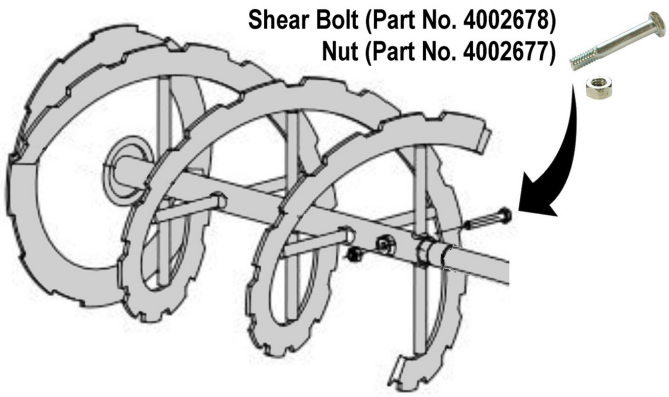
Starting Work
Ensure the area is clear of persons and/or animals before starting operations.
With the machine in a raised position, start the machine running at approximately 80% power, gradually increase the power and lower the machine into the snow before starting forward movement.

RPM & Forward Speed
RPM and forward speed should be kept at a rate that provides efficient clearing and ejection of the snow, this will vary depending on the depth and consistency of the material. High forward speeds should be avoided as this increases the likelihood of the machine becoming blocked by snow and will reduce the ability to stop the machine quickly if an obstacle is struck.

DANGER!
Stop operations and switch the machine off immediately if persons or animals enter the work zone, only restart operations when they have left the work zone.

Stopping Work
At the end of the work area, raise the machine out of the snow and gradually reduce power. Stop the machine when snow is no longer being ejected from the chute.

Machine Protection
The machine is equipped with a ‘shear bolt’ protection system to prevent damage to drive components should the rotor be stopped abruptly by stones or large-sized foreign bodies. Shear bolts are installed on the left-hand and right-hand augers as shown below.



All maintenance, cleaning and repair operations must be performed with the machine firmly lowered to the ground with the carrying vehicle engine switched off.
Should any repairs or maintenance require access from beneath the machine it should be firmly and safely raised and propped using suitable purpose designed supports that are capable of bearing the full weight of the machine. Care should be adopted at all times when working with or under a raised machine.

Machines should be inspected on a daily basis prior to work to ensure all components are in safe working order.

- Check all components for signs of wear or damage and replace or repair if required.
- Check nuts and bolts for tightness and retighten if required.
- Check all safety guarding is in place and in good working order.
- Check hydraulic hoses for signs of wear or leakage; replace or repair if required.
- Check hydraulic connections for signs of leakage; tighten or replace if required.

Never operate a machine with damaged or missing components; repair or replace them before attempting to use the machine.

Lubrication
Machine lubrication points should be fully greased on a daily basis and at the end of the season prior to storage using grade 2 mineral grease.
The worm gear on the chute rotator should be generously ‘smeared’ with grease on a regular basis to ensure smooth movement; access to the worm gear will require removal of the rotator cover panel at the base of the chute.

Skid Shoes
Inspect both skids on a daily basis for signs of wear; they should be replaced immediately if they are excessively worn or damaged.

Hydraulic Hoses
Inspect hydraulic hoses and connections on a daily basis for signs of wear or oil leakage; replace any worn or damaged hydraulic components immediately if they are found to be defective in any way.
When inspecting the hoses (a), check that they are not kinked, stretched or being chaffed by other components on the machine.
Ensure when replacing hoses that they are routed in the exact same manner as the original hose.

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