



ARTIO
MACHINERY

BC65

Lawn Scarifier Attachment

Operating Instructions

IMPORTANT – PLEASE READ BEFORE USE

Before commissioning the machine, read operating instructions and observe warning and safety instructions.



TRACMASTER

The landscape machinery specialists

Manufacturer Details

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Machine Details

Model: **ARTIO BC65 Lawn Scarifier**

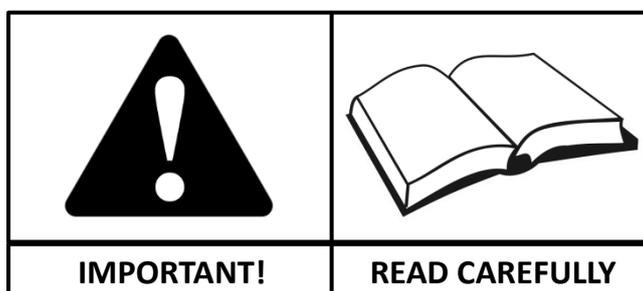
Serial Number:

Date of Purchase:

Supplier:

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1.0 What the Machine is Designed For

The BC65 Lawn Scarifier has been designed by Tracmaster for removing the dead thatch and moss from lawns and other grassed areas.

The benefit of scarifying a lawn is that it allows air, water and nutrients to reach the roots of the grass whilst removing unwanted dead and foreign material.



IMPORTANT – READ CAREFULLY

The blades of the ARTIO BC65 Lawn Scarifier are designed to pass through the grass **ONLY** - they are **NOT** designed to make contact with solid ground at any point during operation.

The machine will be damaged should blades continuously come into contact with solid ground.

DO NOT use the ARTIO BC65 Lawn Scarifier for cutting grass or slitting the ground.

Both operations will result in damage to the machine.

Operating the machine on non-grass surfaces such as concrete or tarmac will cause damage to the Lawn Scarifier.

DO NOT scarify your lawn if there is a likelihood of high temperatures or drought.

Irrigate the lawn if necessary, to ensure that the grass can recover from its treatment.

DO NOT use this machine before reading this manual.

DO NOT allow persons under the age of 16 to operate this equipment.

DO NOT operate without correct safety clothing/footwear.

DO NOT allow any person other than the operator to stand near the machine when working.

DO NOT allow people in and around the working area.

DO NOT stand on any guards.

DO NOT make any adjustments with the engine running.

DO NOT go underneath the machine without safety props.

DO make sure all guards are in place.

DO obey safety details.

DO make sure machine is switched off before making any adjustments.

DO make sure equipment is in a safe condition.

DO make sure equipment is regularly serviced.

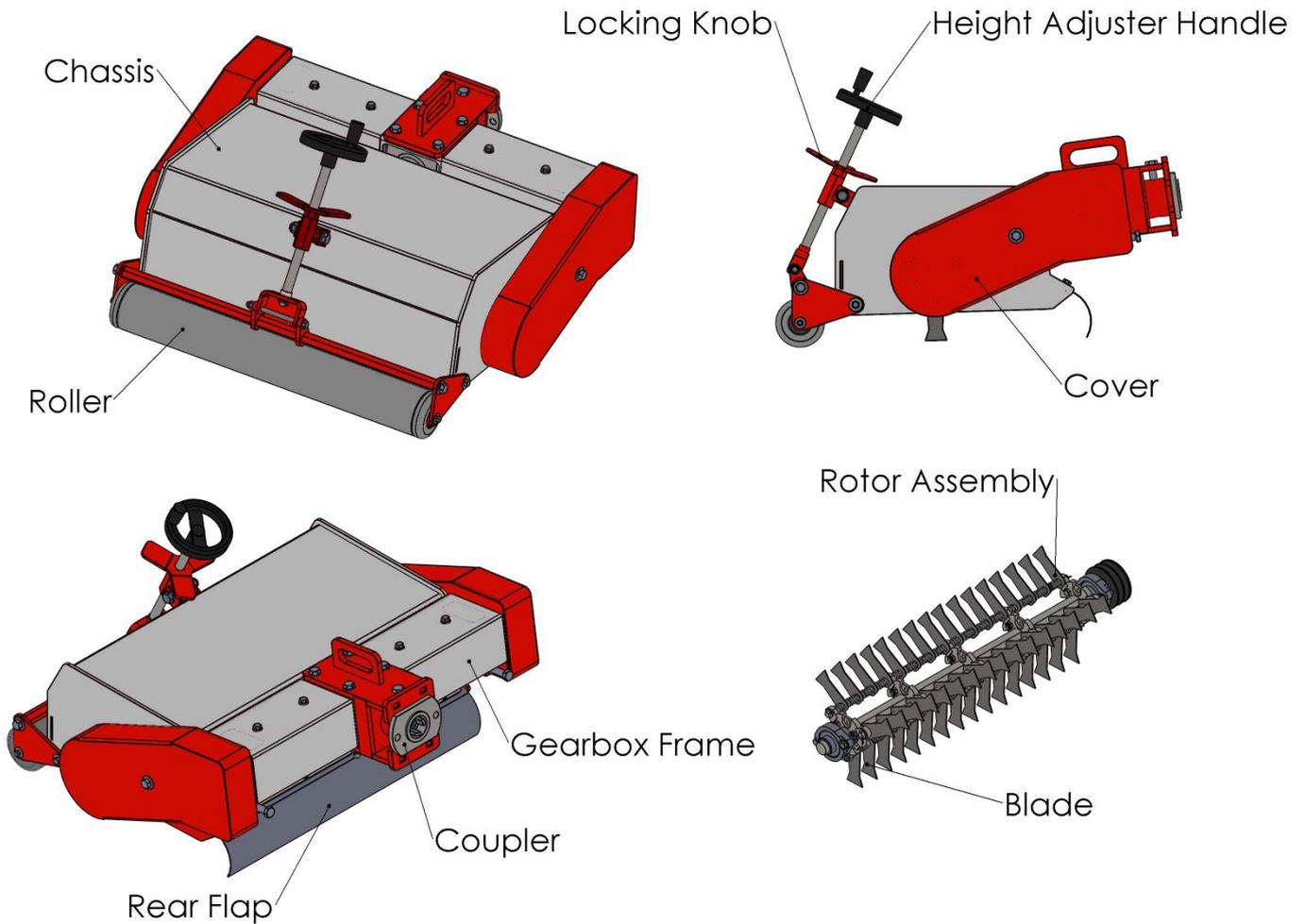


PLEASE READ ALL OPERATING MANUALS, INCLUDING THOSE FOR THE POWER UNIT, BEFORE OPERATION.

2.0 Specifications

MACHINE	
Model	BC65
Working Width	590mm
Max gradient for operation on slope	15 degrees
Weight	65kg
Dimensions (l x w x h)	82 x 77 x 50 cm

3.0 Major Components Diagram



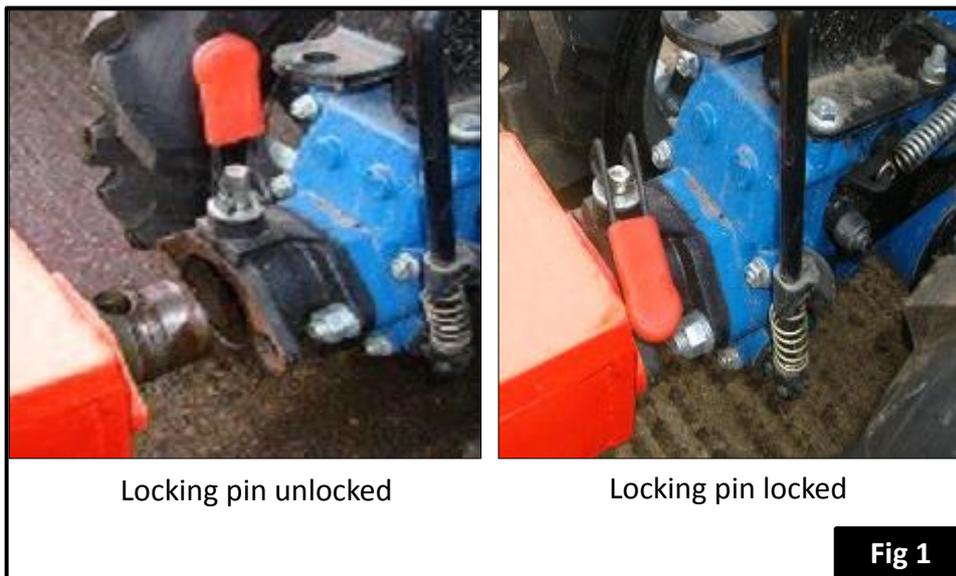
4.0 Preparing for Use

The ARTIO BC65 Lawn Scarifier will be delivered already assembled, lubricated and ready for work. It will need to be attached to the power unit. This is achieved as follows.

BCS 738, 740, 770HY, 615SL, 630 and 630WS

To attach the Lawn Scarifier to the BCS 738, 740, 770HY, 615SL, 630 and 630WS power units, couple the implement to the machine PTO and make sure the nuts are tightened securely.

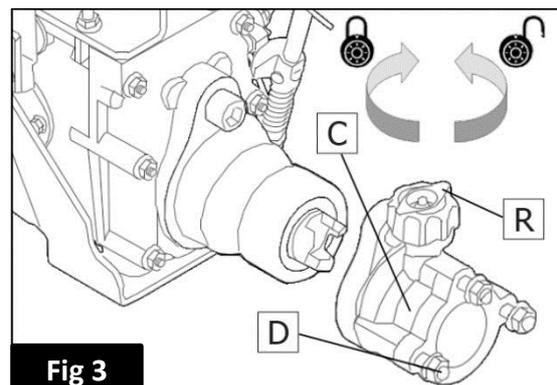
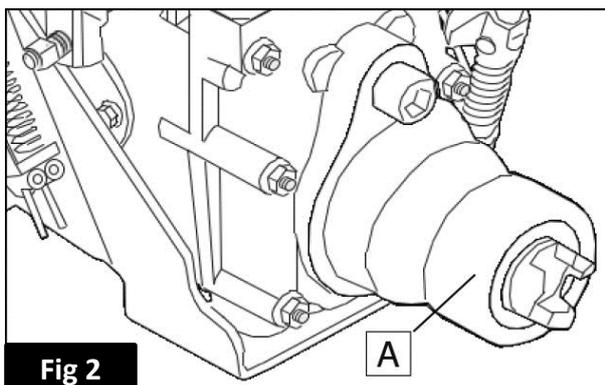
If the Implement Quick Coupling Assembly is being simply move the locking pin lever to raise the pin, then slide the male coupler (fitted to the Scarifier) into the female coupler (fitted to the power unit) until the slotted hole lines up with the locking pin. Once the couplers are lined up in the correct position, release the locking lever to secure the two couplers together (fig 1).



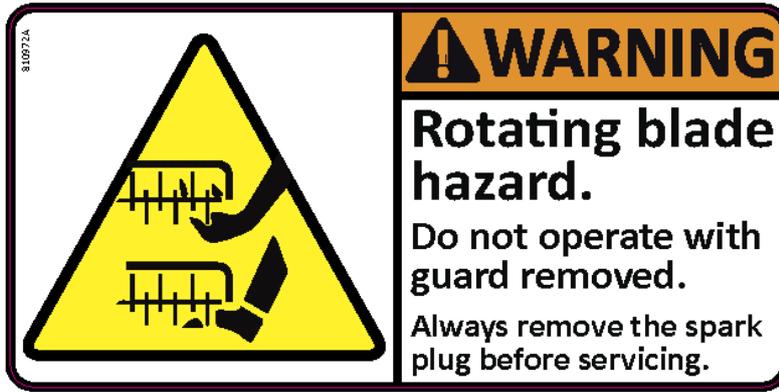
BCS 750 and 660HY

The Lawn Scarifier is mounted directly to the machine coupler (fig 2A) by attaching the coupler (fig 3C) that is fixed to the implement.

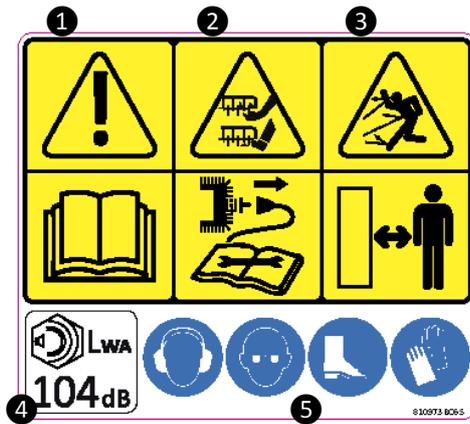
To fit and remove the Lawn Scarifier simply rotate the knob (fig 3R). The device is locked by turning the knob clockwise and unlocked by turning the knob anti-clockwise. It is important that nuts (fig 3D) are well tightened.



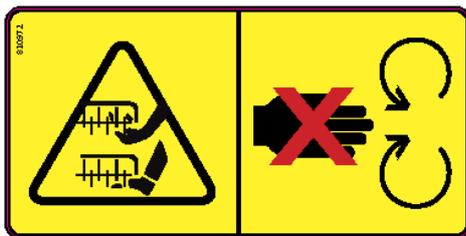
5.0 Hazard Pictorial Explanations



WARNING! ROTATING BLADE HAZARD. DO NOT OPERATE WITH GUARD REMOVED. ALWAYS REMOVE THE SPARK PLUG BEFORE SERVICING.



- 1 READ OPERATING INSTRUCTIONS BEFORE USE.
- 2 REMOVE SPARK PLUG BEFORE SERVICING OR MAINTENANCE.
- 3 WARNING: KEEP BYSTANDERS AWAY.
- 4 MAXIMUM SOUND POWER LEVEL (LWA). EAR PROTECTION MUST BE WORN WHEN OPERATING THE MACHINE.
- 5 WEAR SUITABLE PPE:
 - EAR DEFENDERS
 - EYE DEFENDERS
 - FOOT PROTECTION
 - SAFETY GLOVES



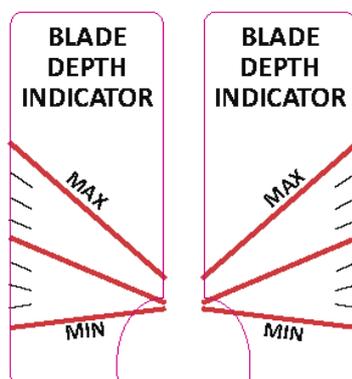
DANGER – ROTATING BLADES. KEEP HANDS AND FEET AWAY.



ENSURE SAFETY GUARDS ARE IN PLACE. MACHINE MUST NOT BE OPERATED WITHOUT GUARDS.



LOCATION FOR APPLYING LUBRICANT TO MACHINE.



ADJUSTABLE BLADE DEPTH INDICATOR FOR LEFT AND RIGHT SIDE OF MACHINE.

6.0 Operating the Lawn Scarifier



IMPORTANT: Always read all separate instruction manuals supplied with power unit **before** use, to ensure you are familiar with the machine's controls.

6.1 Transporting

To transport the BC65 Lawn Scarifier, wind the height adjuster to its highest position where the blades are the furthest from the ground.

NB: ENSURE THE PTO LEVER IS NOT ENGAGED ON YOUR POWER UNIT. DO NOT ENGAGE THE PTO LEVER DURING TRANSPORTATION.

Select a suitable speed gear and proceed with caution.

6.2 Working the BC65 Lawn Scarifier

Clear the grass area of all objects that may be present on the ground. These may cause damage to you and the machine if you run over them whilst the scarifier is working.

THE SCARIFIER WORKS MOST EFFICIENTLY ON SHORT GRASS. DO NOT USE THE SCARIFIER IN LONG GRASS.

Ensure the working area is clear of people.

Ensure that during the operation of the scarifier people cannot enter the working area.

Position the machine on a flat working area.

Ensure that the machine is switched off and the engine is not running.

At the front of the scarifier use the Height Adjuster Knob to change the height of the blades to your required working height.

A STICKER LOCATED ON THE SIDE OF THE MACHINE INDICATES THE HEIGHT OF THE BLADES.

AT FIRST SET THE WORKING HEIGHT OF THE BLADES SIGNIFICANTLY ABOVE THE GROUND LEVEL.

LOCK THE REQUIRED WORKING HEIGHT USING THE LOCKING KNOB.

Follow the instructions for your two-wheel tractor to engage the wheel drive and PTO drive to the scarifier attachment.

Assess the performance of the scarifier over a 2-3m length of grass.

To lower the height of the blades, stop the power unit and turn the engine off to ensure there is no drive to the wheels or power take off.

Use the height adjuster knob to lower the blades as indicated by the height sticker on the side of the machine.

6.3 Stopping the BC65 Lawn Scarifier

The BC65 Lawn Scarifier is controlled via your two-wheel tractor power unit. To stop the machine, follow the standard operating procedures to stop the wheel drive and power take off drive as instructed in your two-wheel tractor manual.

6.4 Adjusting the working height of the Scarifier for different size wheels

The working height of the BC65 Lawn Scarifier can be modified for power units with different size wheels.

The initial set of the BC65 is in the position suitable for 5x10 agricultural wheels.

NB: WE RECOMMEND THAT THIS IS UNDERTAKEN BY AN EXPERIENCED MECHANIC.

Loosen the tension on the belts by loosening the belt tension bolts.

Remove the side cover guards from the machine.

Loosen but do not remove the two bolts at the bottom of the side plates that are located around the rotor bearings. DO NOT UNDO THE NUTS ON THE ACTUAL BEARING ITSELF.

Remove the nuts from the two bolts located in the centre of the side plates. Remove the square coach bolts from the inside of the chassis.

It is now possible to rotate the side plates to a higher position that suits a power unit with 6.5x12 agricultural wheels, or to rotate the side plates to a lower position for 4x10 agricultural wheels.

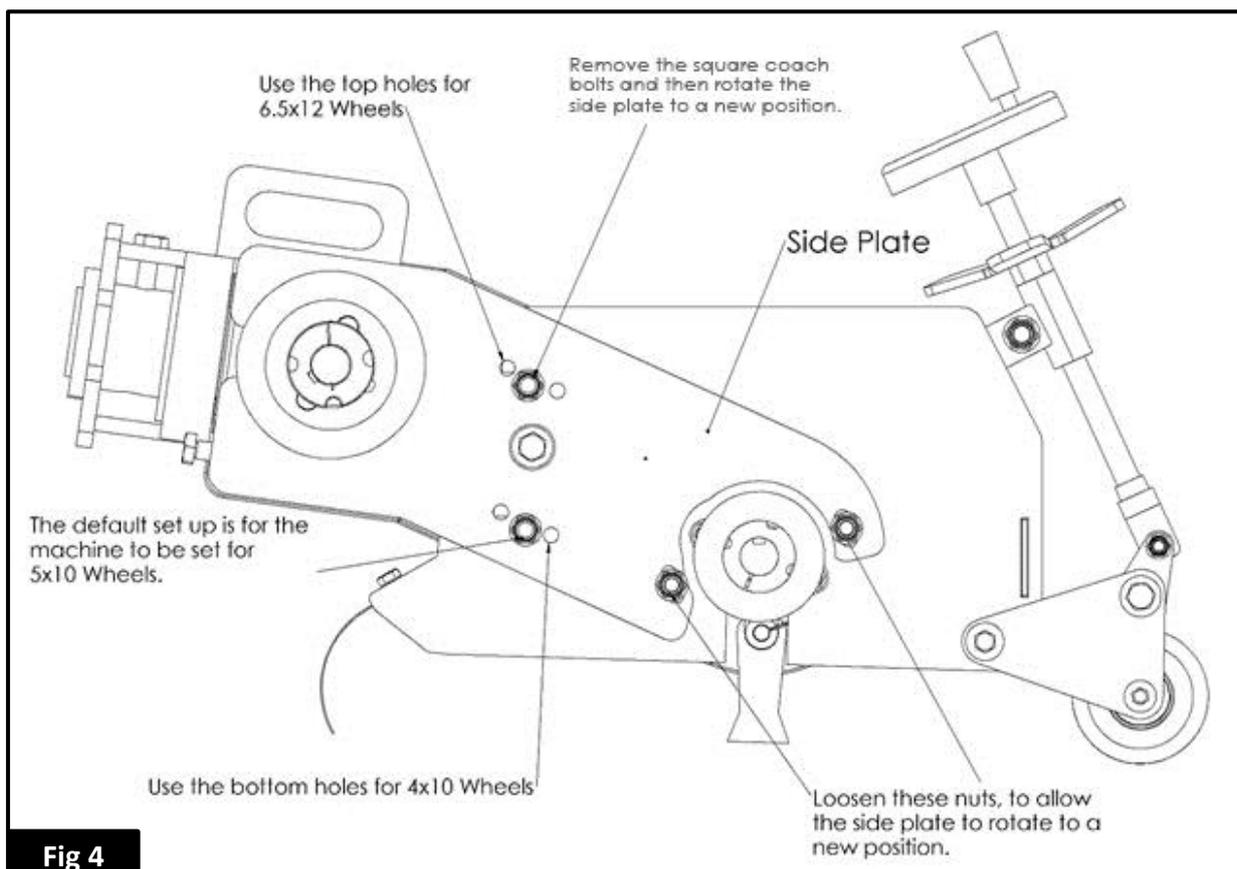
Insert the square coach bolts from the inside of the chassis so that they locate the side plates in their new position. Fix the locking nuts onto these bolts.

Tighten the nuts and bolts at the bottom of the side plates.

Re-attach the belt guard.

Re-tension the belts using the belt tensioning bolts.

See fig 4 below for pictorial representations.



7.0 Maintenance

7.1 Regular Maintenance Checks

Always clean the Lawn Scarifier after use.

Remove any wire, string, plastic netting etc from the rotor shafts and bearings.

7.2 Belt Maintenance

Check the condition of the belts after the first four hours of work.

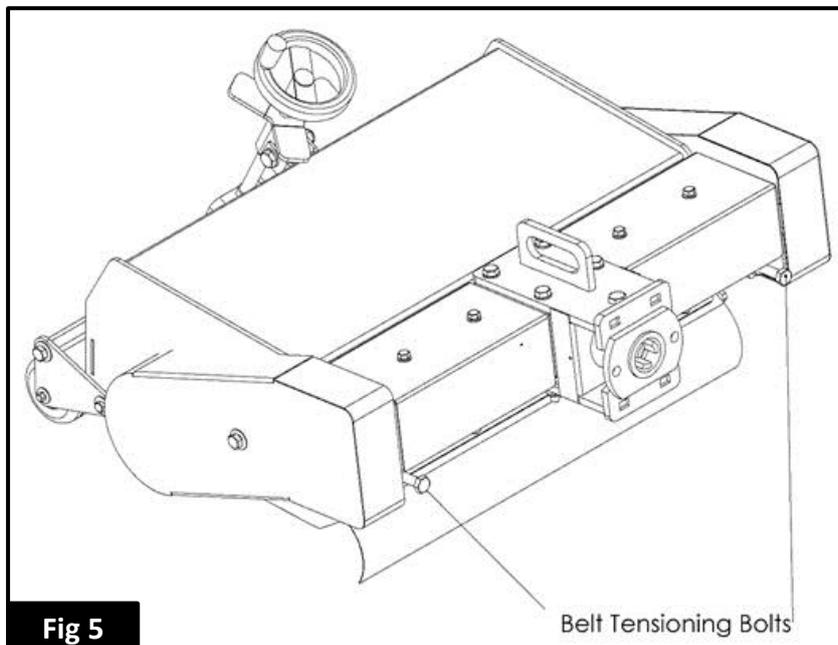
To do this remove the right-hand cover guard by unscrewing the central bolt.

Assess the belts for wear and damage and replace if necessary. Both belts should exhibit an equal amount of tension when compared. If the belts are not equally tensioned then replace both belts.

After checking the belts replace the right cover guard and tighten the bolt.

7.3 Belt Tensioning

The two belts are tensioned using the belt tensioning bolts located under the gearbox frame (fig 5).



Remove the gearbox frame covers by undoing the two bolts holding each cover onto the gearbox frame.

Lightly loosen the 4 nuts that connect the gearbox frame to the side plates on both inside ends of the gearbox frame.

Loosen the locking nut on the belt tensioning bolts and unwind the locking nut away from the hexagonal holder. Using a 19mm ratchet spanner wind the belt tensioning bolts clockwise to tension the belts.

NB: Ensure that the belt tensioning bolts are set at an equal length so that the gearbox frame remains square in its position relative to the chassis. Measure the distance from the chassis to the edge of the gearbox frame and adjust the belt tensioning bolts accordingly until the gearbox frame is parallel to the main chassis.

Once the belts are tensioned and the gearbox frame is square, lock the position of the belt tensioning bolts using the locking nut.

Tighten the four bolts that were previously loosened at each end of the gearbox frame.

Re-attach the gearbox covers on both sides.

7.4 Gearbox Maintenance

The gearbox is filled with 350ml of gear oil. This should be checked every 50 hours of work.

7.5 Rotor Bearings Maintenance

Both rotor bearings can be greased, although be aware it is possible to over-grease the bearings as well as under-grease them.

Check and, if necessary, grease the bearings every 20 hours.

To access to the rotor bearings, remove the side guard by undoing the single bolt holding the cover to the machine.

7.6 Drive Shaft Bearing Maintenance

The drive shaft bearing can be greased though be aware it is possible to over-grease the bearings. Check and, if necessary, grease the bearings every 20 hours.

Removing the right-hand gearbox frame cover provides clear access to the drive shaft bearing.

7.7 General Rotor Maintenance

Check the rotor after each use to ensure that the blades are clear from wire, rope and similar material that could damage the blades, rods or springs.

Ensure the rotors are not missing any blades or springs and that the rods that hold the blades are not showing any signs of wear or damage. If a rod is showing signs of wear then replace the rods.

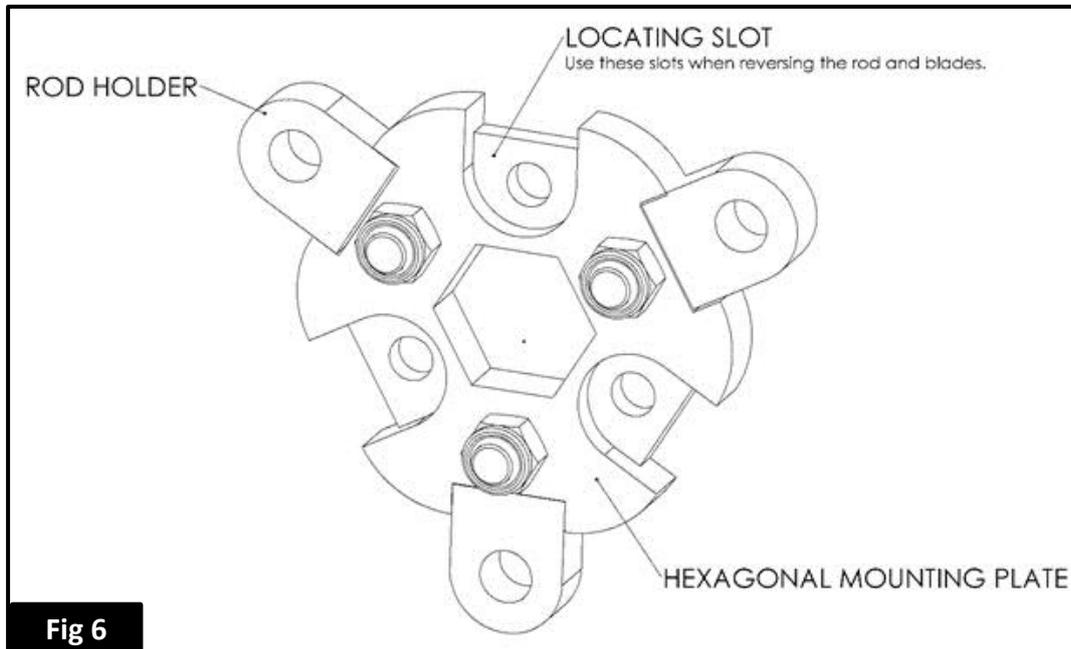
Check the rotor shaft does not have any material wrapped around it close to the rotor bearings. Remove any material that could get pushed into the bearings causing damage.

7.8 Rotating the Blades

The BC65 features a system that allows you to remove a rod from the rotor assembly and to rotate and re insert it so that the unused side of the blades can be utilised.

To do this, use a set of 13mm spanners to remove the bolts from the rod holders connecting a rod onto the central hexagonal plates. There are 5 rod holders per rod, each of which is connected to a hexagonal mounting plate.

Once the rod has been removed, rotate the rod 180 degrees and then re-insert the rod holders back into the hexagonal plates but this time bolting them into the adjacent locating slot on the other side of the plate. See fig 6.



NB: IT IS IMPORTANT THAT ALL 3 RODS ARE ROTATED AT THE SAME TIME TO ENSURE THAT THE ROTOR REMAINS BALANCED DURING OPERATION.

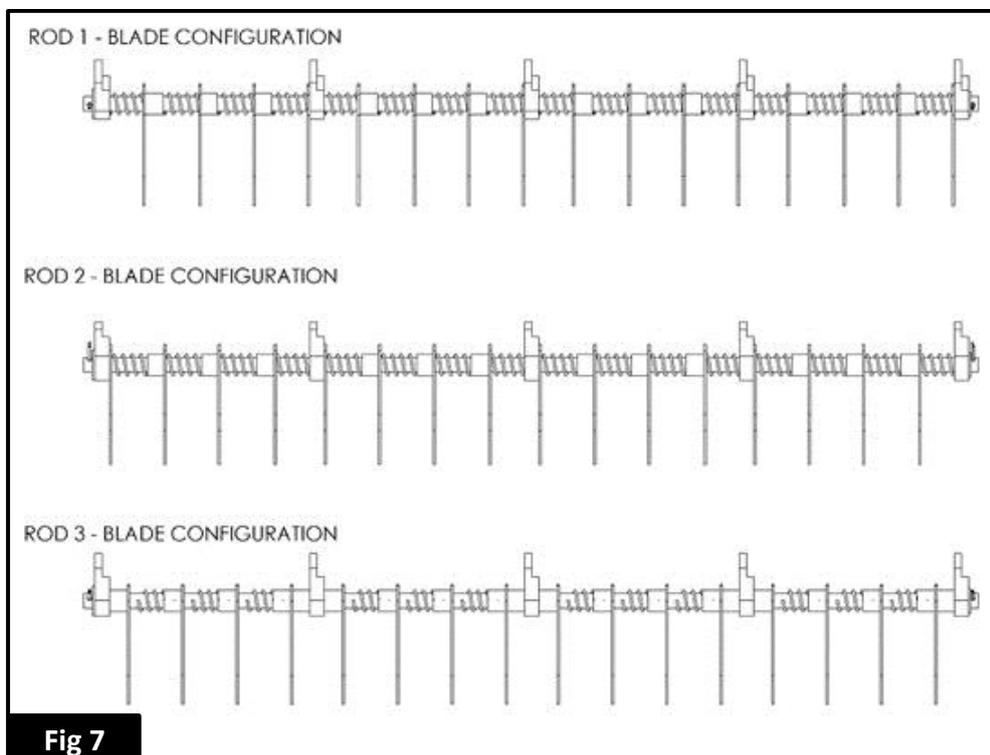
Ensure that the bolts holding each rod holder onto the mounting plates are tight.

7.9 Changing the Blades

The rotor is made up of three rods with each containing blades or springs, spaces, spacer springs and rod holders.

Each rod is configured differently to ensure that the scarifier blades cover a wide an area as possible and to ensure each blade does not hit another during operation.

The three configurations are as below (fig 7).



Each rod can be disassembled. The first step is to remove the split pin used to contain the elements of the rod. Once this has been removed it is possible to slide the components easily off one of the rod.

Assemble the rods according to the diagram (fig 7) using a new split pin to hold the configuration together. Once assembled the rods can be reinserted into the rotor.

7.10 Replacing the Rods

Unbolt the rod from the rotor assembly by undoing the 5 bolts that connect the rod holders to the hexagonal plate for the rod you wish to change.

Remove the split pin from the end of the rod and slide the components off the rod.

Using a new rod, fit a split pin and washer to one end and slide on the components required in the same order as they were removed. Use Fig 5 as a guide to help you fit the components in the correct order.

Once the rod has been assembled and secured with a split pin, attach the rod holders of the rod assembly to the hexagonal mounting plate in the same position from which it was removed.

7.11 Storage

Always store BC65 Lawn Scarifier in a clean, dry place.

8.0 Warranty

8.1 Warranty Registration

To validate your warranty please ensure you complete and return the warranty registration card to the address provided.

Alternatively, complete the online warranty registration form at www.tracmaster.co.uk.

8.2 Conditions of Warranty

Tracmaster Ltd guarantees all equipment supplied by them against any defect in manufacture and assembly. This guarantee is for a period of one year. The period of guarantee commences on the date of delivery to the customer.

This guarantee is restricted to the first purchaser and is not transferable

The Tracmaster Ltd guarantee may be invalidated where the following has been found to apply:

- The machinery has been used to perform tasks which require more than the design and strength limitations of the product.
- The machinery has undergone modifications not approved by Tracmaster Ltd.
- Conditions of usage can be determined to be abnormal.
- Normal maintenance, in accordance with the requirements as set out and detailed by Tracmaster Ltd has not been adhered to.

No liability is accepted by Tracmaster Ltd in respect of machine or component failure when it can be determined that such failure was the result of using the equipment with one or more attachments not given prior applications approval by them.

In the case of making a claim against the guarantee the procedure to adopt is as follow is:

- Notify the Tracmaster Ltd dealer from where you obtained the equipment within 10 days of failure.
- Make equipment available for inspection by Dealer technician.
- If the failure is found to be the result of faulty manufacture or assembly, the failed components will be replaced entirely free of charge. Dealers are requested to make their report and claim within 28 days of failure.
- All warranty repairs carried out by customer / dealer must be authorized by Tracmaster Ltd prior to commencement.

Given correct maintenance and providing your Tracmaster Ltd machine is used for the purposes for which it was designed, we are sure you will have many years of effective and trouble-free operation. Always consult your Tracmaster Ltd Dealer should you notice irregularities in operation or a decline in performance.

These warranty terms are in addition to and not in substitution for and do not affect any right and remedies which an owner might have under statute or at common law against the seller of the goods under the contract by which the owner acquired the goods.

EC Declaration of Conformity



Tracmaster Ltd declares that the machinery stipulated below complies with all the relevant provisions of:

Machinery Directive 2006/42/EC

EMC Directive 2004/108/EC

and the National Laws and Regulations adopting these directives and other relevant directive.

Manufacturer: Tracmaster Ltd
Sovereign Centre
Victoria Road
Burgess Hill
RH15 9LR
UNITED KINGDOM

Machine Description: ARTIO BC65 Lawn Scarifier

Serial No:

Harmonised Standards applied: (including parts of):

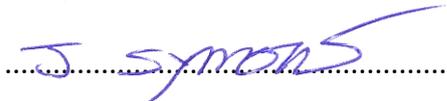
EN 294:1992	Safety of machinery: Safety distance to prevent danger zones being reached by the upper limbs.
EN 954-1:1996	Safety of machinery: Safety related parts of control systems. Part 1 – general principles for design.
EN 20643:2008+A1:2012	Hand arm vibration: Laboratory measurement of vibration at the grip surface of hand guided machinery – general.
EN 12100-1:2003 & EN12100-2:2003	Safety of machinery: Basic concepts, general principles for design parts 1 & 2.
EN 13684:2004+A2:2009	Garden equipment. Pedestrian controlled lawn aerators and scarifiers.
ISO 11684:1995	Tractors, machinery for agriculture and forestry, powered lawn and garden equipment: Safety signs and hazard pictorials – general principles.

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Date: October 2017

Signature: 



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