



ARTIO
MACHINERY

BC65 Lawn Scarifier

ORIGINAL INSTRUCTION MANUAL



Manufactured by Tracmaster Ltd

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

Manufacturer Details

Tracmaster Ltd
Units 6-7 Winterpick Business Park
Hurstpierpoint Road
Wineham
Henfield
BN5 9BJ
UNITED KINGDOM
Tel: +44 (0)1444 247689
www.tracmaster.co.uk
info@tracmaster.co.uk

Machine Details

Model: **ARTIO BC65 Lawn Scarifier**

Serial No:

A	5	1	-	1	1	1	1	1
---	---	---	---	---	---	---	---	---

Purchase Date:

D	D	-	M	M	-	Y	Y	Y	Y
---	---	---	---	---	---	---	---	---	---

Supplier:

Table of Contents

1.0 Introduction	2
1.1 Welcome	2
1.2 About This Manual	2
2.0 What the Machine is Designed For	3
2.1 Applications	3
3.0 Specifications	4
4.0 Unpacking and Assembly	5
4.1 Major Components Diagram	5
4.2 Unpacking Instructions	5
5.0 Preparing for Use	6
5.1 Attaching to the Power Unit	6
6.0 Operating the Lawn Scarifier	7
6.1 Transporting	7
6.2 Working the BC65 Lawn Scarifier	7
6.3 Stopping the BC65 Lawn Scarifier	8
6.4 Adjusting the working height of the Scarifier for different size wheels	8
7.0 Maintenance	9
7.1 Regular Maintenance Checks	9
7.2 Belt Maintenance	9
7.3 Belt Tensioning	9
7.4 Gearbox Maintenance	10
7.5 Rotor Bearings Maintenance	10
7.6 Drive Shaft Bearing Maintenance	10
7.7 General Rotor Maintenance	10
7.8 Rotating the Blades	10
7.9 Changing the Blades	11
7.10 Replacing the Rods	11
7.11 Storage	11
7.12 Handling	12
8.0 Warranty	13
8.1 Conditions of Warranty	13
8.2 Warranty Registration	14
9.0 Spare Parts	15
9.1 Parts Diagrams	15
10.0 Service Record	16
11.0 EC Declaration of Conformity	17

1.0 Introduction

1.1 Welcome

Welcome to Tracmaster and thank you for choosing ARTIO.

We are confident that you will be more than happy with your machine.

Your machine is covered by a comprehensive warranty. However, the lifespan of your ARTIO machine depends on a number of factors. It is important that you read this manual carefully and follow the instructions regarding operation, maintenance, and care.

1.2 About This Manual

It is crucial that you read this manual carefully and understand it. Reading and understanding this manual should prevent you from operating the BC65 incorrectly and so extend the life of the machine.

This manual also contains important safety information about your machine. You must observe all safety instructions at all times. ARTIO machines are often updated and improved so models may vary due to differences in specifications.

Any illustrations, descriptions, specifications, and technical data in this manual is correct at the time of printing.

For any questions relating to this manual please contact us.

During office hours (UK) we can be contacted on:

Phone: +44 (0)1444 247689

Email: info@tracmaster.co.uk

Website: www.tracmaster.co.uk



2.0 What the Machine is Designed For

2.1 Applications

The ARTIO 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.

The blades of the BC65 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 if blades continuously come into contact with solid ground.

DO NOT use the ARTIO BC65 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 BC65 Scarifier.

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

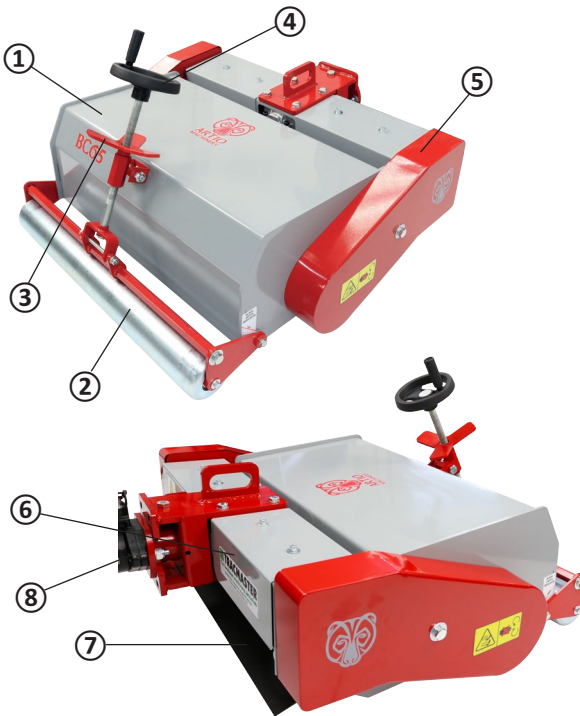
Irrigate the lawn if necessary to ensure that the grass benefits from its treatment.

3.0 Specifications

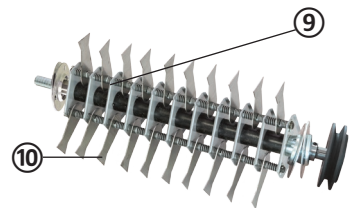
MACHINE			
Model	BC65		
Working Width	59cm		
Cartridge Types	Free Swinging	Fixed	Spring Rake
Number of Blades	48	24	42
Direction of Rotor	Rotor rotates in the same direction as travel		
Height Adjustment	From 0mm above ground to 20mm		
Max Gradient for Operation on Slope	20 degrees		
Weight	65kg		
Dimensions (l x w x h)	82 x 77 x 50cm		

4.0 Unpacking and Assembly

4.1 Major Components Diagram



- ① Chassis
- ② Roller
- ③ Locking Knob
- ④ Height Adjuster Handle
- ⑤ Cover
- ⑥ Gearbox Frame
- ⑦ Rear Flap
- ⑧ Coupler
- ⑨ Rotor Assembly
- ⑩ Blade



4.2 Unpacking Instructions

The BC65 Lawn Scarifier is usually delivered on a pallet and covered with pallet wrap.

Carefully remove any outer packaging.

Locate and remove any cable ties or straps that secure the Scarifier to the pallet.

Push the machine forward safely and gently off the pallet.

Dispose of any packing material, please reuse or recycle where possible.

5.0 Preparing for Use

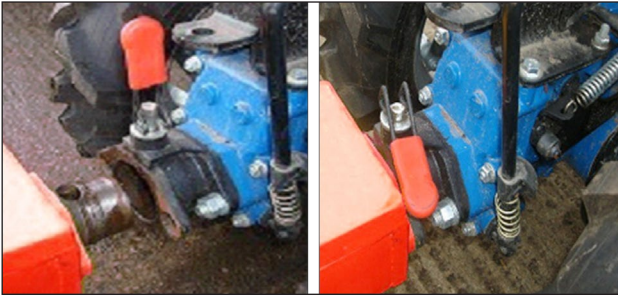
5.1 Attaching to the Power Unit

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 - BCS 740 - BCS 630 - BCS 630WS

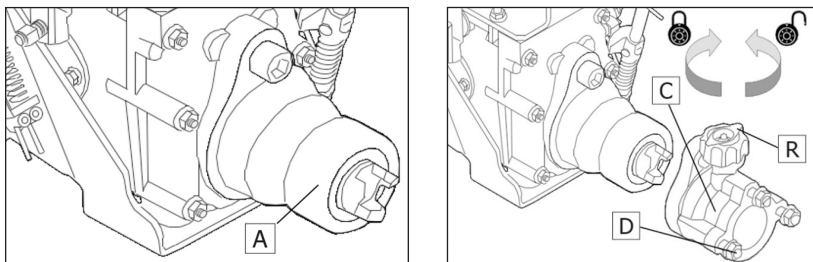
To attach the Lawn Scarifier to the BCS 738 and 740 power units, couple the implement to the machine PTO and make sure the nuts are tightened securely.

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 - BCS 660HY

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



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

6.0 Operating the Lawn Scarifier



IMPORTANT: Always read all separate instruction manuals supplied with the 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.

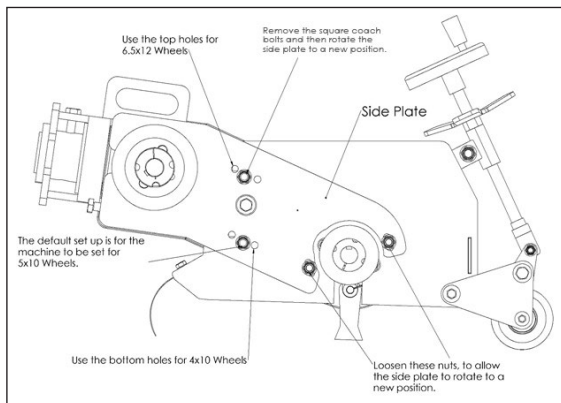
Insert the square coach bolts from the inside of the chassis so that they locate the side plates in their new position. Fix the locking nuts onto these bolts.

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

Re-attach the belt guard.

Re-tension up the belts using the belt tensioning bolts.

See Fig 4 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.

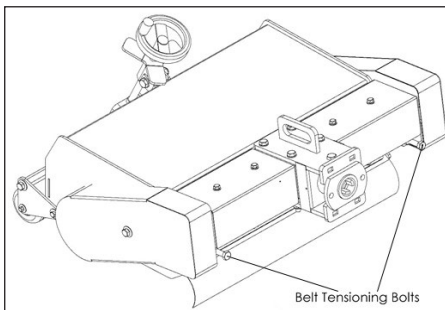
To do this remove the right-hand cover guard by unscrewing the central bolt.

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, although 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.

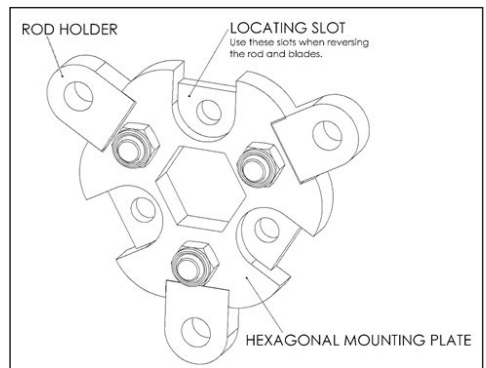
Ensure the rotors are not missing any blades or springs and that the rods that hold the blades are not showing any signs of wear or damage. If a rod is showing signs of wear then replace the rods.

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° 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

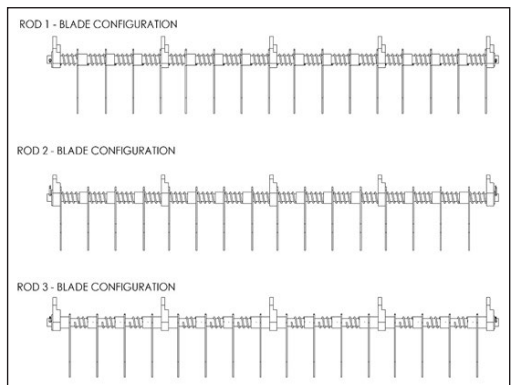
The rotor is made up of three rods with each containing blades or springs, spaces, spacer springs and rod holders.

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.

Always clean the machine and dry thoroughly prior to storage and ensure all lubrication points have been re-greased.

7.12 Handling

Do not attempt to lift the machine alone. At least two people is the minimum required.

Gloves must be worn when lifting the BC65 Lawn Scarifier.

When performing maintenance on the BC65 Lawn Scarifier, if it is situated on a work bench, ensure that the machine is firmly held in position at all times.

8.0 Warranty

8.1 Conditions of Warranty

Tracmaster Ltd guarantees all equipment supplied by them against any defect in The Warranty applies to any part of the machine, except the engine, which presents manufacturing or assembly defects in the opinion of Tracmaster Ltd.

The Warranty covers the original purchaser of the machine from the date of sale for the warranty period. The Warranty is non-transferable.

The warranty period begins the day the machine is delivered to the customer and is valid for the following periods:

- For domestic or private use: 3 years
- For commercial and hire use: 2 years

Tracmaster Ltd will replace or repair, at their discretion, free of charge, any such defective material providing the machine is returned to their workshops or an Authorised Tracmaster Dealer (contact us or see www.tracmaster.co.uk).

Should the owner of the machine wish to install the parts themselves then the labour involved will be at their cost and will not be reimbursed. Expenses arising from any subsequent failure of any part due to incorrect assembly by the owner of the machine shall be borne by the owner of the machine.

To validate warranty the Warranty Registration Card must be completed and returned, or complete the form online at www.tracmaster.co.uk/pages/warranty-registration-form.

The Warranty does not cover any transport costs, or direct or indirect losses owing to loss of use of the machine as a consequence of manufacturing defects or mechanical failure.

No Warranty shall be acknowledged in the following instances:

- The failure is caused by non-compliance of Tracmaster's directions for the correct use and operation of the machine.
- Seals and settings have been tampered with.
- Repair or modification has not authorised by Tracmaster Ltd.
- Routine maintenance, as advised in this manual, has not been undertaken.
- Incorrect fuels or lubricants have been used.
- Wear to consumable items such as blades, tines, belts, cables, tyres etc.
- Normal wear and tear.
- The failure is due to abuse / misuse / neglect.

For any issues relating to the engine please contact an authorised service centre for the engine. The engines are warranted according to the practices set by their respective manufacturers and distributors.

If an issue develops with the machine, within the warranty period, the problem must be verified by Tracmaster or an Authorised Tracmaster Dealer before any repair is undertaken.

Any other express or implied warranty is cancelled and substituted by this Warranty, whose clauses can be modified in writing only.

This Warranty provides specific legal rights and is in addition to any statutory rights. Your statutory rights are not affected by this Warranty.

For any queries relating to this Warranty Information please contact our Technical Department at Tracmaster.

8.2 Warranty Registration

To validate your warranty please complete and return the enclosed FREEPOST card. Alternatively, complete the online registration form at www.tracmaster.co.uk.

9.0 Spare Parts

9.1 Parts Diagrams

The spare parts diagrams and part numbers for the ARTIO BC65 Lawn Scarifier can be found on our website or by contacting our spare parts department.

Spare parts can be ordered via the following methods:

Phone: +44(0) 1444 247689 (option 1)

Website: www.tracmaster.co.uk

Email: spares@tracmaster.co.uk

Or via your local Authorised Dealer.

10.0 Service Record

To ensure your machine is kept in peak condition we recommend that your ARTIO BC65 Lawn Scarifier is serviced at regular intervals.

Contact Tracmaster on 01444 247689 to find out who your local Authorised Tracmaster Dealer is, or check our Dealer Locator online at www.tracmaster.co.uk.

Company:		Company:	
Date:		Date:	
Company Stamp: <i>(or address & authorised signature)</i>	1	Company Stamp: <i>(or address & authorised signature)</i>	2
Company:		Company:	
Date:		Date:	
Company Stamp: <i>(or address & authorised signature)</i>	3	Company Stamp: <i>(or address & authorised signature)</i>	4
Company:		Company:	
Date:		Date:	
Company Stamp: <i>(or address & authorised signature)</i>	5	Company Stamp: <i>(or address & authorised signature)</i>	6

11.0 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
Units 6-7 Winterpick Business Park
Hurstpierpoint Road
Wineham
Henfield
BN5 9BJ
UNITED KINGDOM

Machine Description: Lawn Scarifier

Type: ARTIO BC65

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.

Responsible Person: Jody Symons

Position in Company: Technical Director

Address: Tracmaster Ltd, Units 6-7 Winterpick Business Park, Hurstpierpoint Road, Wineham, Henfield, BN5 9BJ

Date: March 2020

Signature: 



ARTIO
MACHINERY

ARTIO BC65 Lawn Scarifier

Original Instruction Manual

© 2021 Tracmaster Ltd

 **TRACMASTER**
The landscape machinery specialists

Tracmaster Ltd

Units 6-7 Winterpick Business Park | Hurstpierpoint Road | Wineham | Henfield | BN5 9BJ | UK

Tel: +44 (0)1444 247689 | www.tracmaster.co.uk | info@tracmaster.co.uk