CAMON UK
Landscape machinery

LA25 Lawn Aerator

Operating Instructions

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

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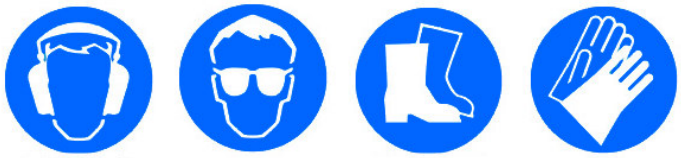

TRACMASTER
The landscape machinery specialists

Manufacturer Details

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Machine Details

Model: **CAMON LA25 Lawn Aerator**

Serial Number: .....

Engine Serial No: .....

Date of Purchase: .....

Supplier: .....

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1.0 What the Machine is Designed For

1.1 Applications

The CAMON LA25 Lawn Aerator has been designed by Tracmaster for aerating lawns and grass areas.

The benefit of aerating a lawn is that it allows air, water and nutrients to reach the roots of the grass, relieves soil compaction and removes unwanted thatch and foreign material.

⚠ IMPORTANT – READ CAREFULLY

The tines of the CAMON LA25 Lawn Aerator are designed to be used only on grassed areas where the surface soil is more than 10cm in depth.

Prior to operation of the LA25, the operator MUST test the depth of the soil. This can be done simply with a garden fork.

DO NOT use the CAMON LA25 Lawn Aerator for any alternative use other than aerating grass areas.

Operating the machine on non-grass surfaces such as concrete or tarmac will cause damage to the LA25 Lawn Aerator.

After aerating DO NOT expose the lawn to high temperatures or drought.

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

2.0 Specifications

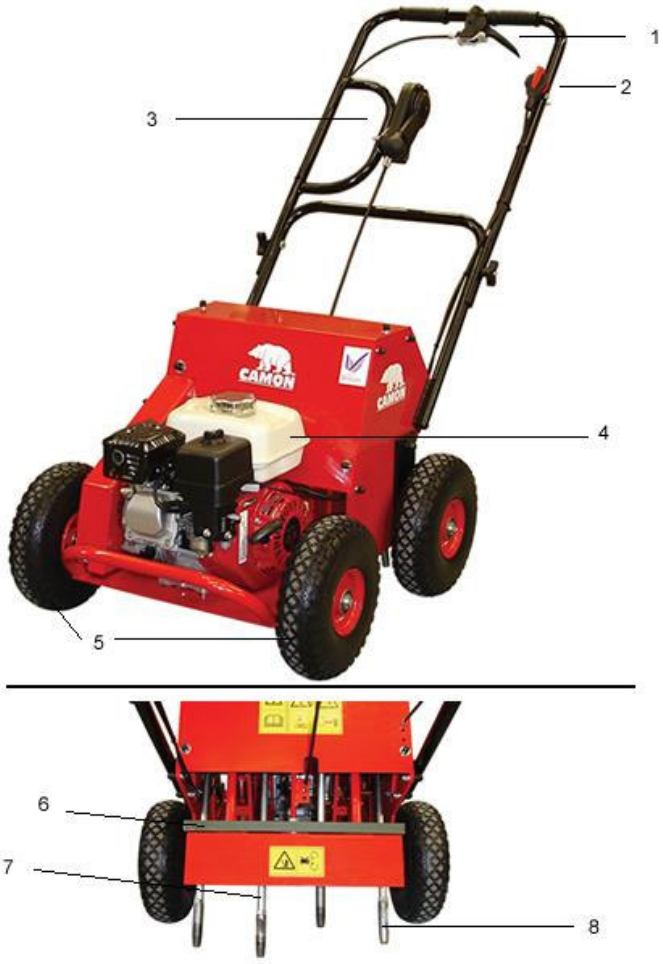
ENGINE	
Engine Manufacturer	Honda
Engine Model	GX160
Engine Type	4-stroke OHV, single cylinder
Net Engine Power	3.6kW (4.8hp) @ 3600rpm
Engine Shaft Size	¾” straight
Spark Plug	BPR6ES (NGK) / W20EPR-U (DENSO)
Spark Plug Gap	0.70 - 0.80mm
Engine Ignition Type	Recoil
Cold Start System	Choke
Fuel Tank Capacity	3.1 litres
Fuel Type	Unleaded
Fuel Consumption	1.4 litres per hour @ 3600rpm
Air Filter	Paper
Rated Engine Speed	3600rpm
Engine Oil	10w/30 API SJ or later
Engine Oil Capacity	0.6 litres
Dry Weight	15.1kg

The power rating of the engine indicated in this table is the net power output tested on a production engine for the engine model and measured in accordance with SAE J1349 at a specified rpm.

MACHINE	
Model	LA25
Working Width	40cm
Tine Types	Solid and hollow
Solid Tine Dimensions	10mm diameter / 100mm length
Hollow Tines Dimensions	19mm diameter / 100mm length
No of Tines Fitted in Operation	4
Tine Depth Adjustment	From 90mm to 110mm
Core Discharge	To the rear
Wheel Types	Pneumatic
Steering Handle	Foldable
Noise Level	99 dB(A)
Vibration Acceleration Value	5.4ms^2
Max Gradient for Operation on Slope	20 degrees
Weight	103kg
Dimensions (l x w x h)	100 x 65 x 68cm

3.0 Unpacking and Assembly

3.1 Major Components Diagram



1 Operating Lever
2 Throttle
3 Tine Control Lever
4 Engine
5 Wheels
6 Tine Lifting Board
7 Tine Holder
8 Tines

3.2 Unpacking Instructions

Open the top of cardboard box.

Cut the box open by using a sharp knife to cut down through the four corners of the box.

Swivel the folded top part of the handlebar until it locates into position extending from the lower handlebar arms.

Tighten the top handlebar into position using the locking knobs provided.

Push the four wheels onto the axles of the Aerator and fasten in place using the split pin and washer provided.

Push the machine forward safely and gently out of the box.

Dispose of the cardboard box and other padding material.

4.0 Safety Instructions – Pre-Operation

4.1 Basic Safety Instructions

Before starting the machine, read and understand these operating instructions.

4.2 Main Components and Operating Elements

Below is a description of the main components of the LA25 Aerator and how they operate.

4.3 Engine and Drive

The Honda GX160 is a four stroke engine that runs on standard unleaded fuel.

The engine is air cooled and therefore it is important that the grille covering the recoil rope is kept clear from debris.

The engine air filter cleans the air sucked in by the engine. A clogged air filter will reduce performance.

The engine is fitted with a fuel on/off lever and a choke lever. Read the engine operating instructions to understand the operation of these levers.

4.4 Operating Lever

The LA25 Aerator tines are engaged by using the lever located underneath the top of the handlebar. **PLEASE NOTE THAT THIS IS A TWO STAGE LEVER. THE GREY BUTTON MUST BE DEPRESSED BEFORE THE MAIN LEVER CAN BE PULLED UP.**

Once the drive has been engaged it will transfer the engine power through a gearbox, to the tine rods that will rotate. The surface penetrating tines are held at the end of each tine rod and will be pushed into the ground before being withdrawn as the tine rods rotate.

4.5 Height Adjustment

The depth of the tine penetration of LA25 Aerator is altered by changing the position of the back axles. Each back axle has three holes by which it can be attached to the main chassis frame. Attaching the axles using the lowest position holes has the effect of moving the tines closer to the ground and increasing the depth the aerator will penetrate.

The two alternative positioning holes raise the height of the tines away from the ground and decrease the depth the tines will penetrate. Moving from the lowest hole to the middle hole and to the highest will decrease the depth of the tines by 10mm each step.

4.6 Tines

Four tines of a similar type must be fitted at all times for the LA25 operator to function correctly. Each tine must be threaded and secured tightly into the tine holder rods. Each tine must be fitted with a washer and spring washer to ensure the tine can be tightened sufficiently into the tine rod. A 17mm spanner must be used to tighten the tines in place.

4.7 Solid Spiking Tines & Hollow Coring Tines

The LA25 Aerator is supplied with both solid spike and hollow corer tines. You must always use a consistent tine type when setting up and operating the Aerator.

Solid tines help nutrients to reach soil roots and improve drainage.

Hollow tines, in addition to the benefits listed for solid tines, reduce surface compaction by removing a section of the soil each time a tine is punched into the soil.

4.8 Commissioning

Prior to operation it is necessary to check the engine oil level and add engine oil level to the levels indicated in the table in section 5.1.

The engine fuel tank will not contain fuel so will need filling to the recommended level before use.

4.9 General Safety Instructions

Be aware of all the safety requirements for the machine.

Visually check the machine for operational safety, complete components and fixed guarding prior to each use.

Read and be aware of the warning and instruction signs located on the machinery.

Cordon off the work area to access from the general public.

Before starting work clear the area of any objects that may cause damage to the machine.

Do not operate the machine if you are under the influence of alcohol or drugs. This equipment must only be operated by persons who are medically fit both physically and mentally.

Only work in good light and visibility.

Wear the correct personal protection equipment as instructed by this manual.

Operator clothing should not be loose and footwear should offer good grip.

Know how to stop the machine in an emergency.

4.10 Engine Specific Safety Instructions

Always ensure the engine is turned off and fuel tap is turned off when transporting the machinery, cleaning the machinery and making adjustments.

Always start the engine in the open air. Starting an engine within a confined space can lead to the inhalation of toxic substances.

Do not smoke or use a naked flame when refueling.

Use only unleaded petrol from fuel containers designed for this purpose. Refuel outdoors only and replace the fuel tank cap securely.

Do not mix oil with the fuel.

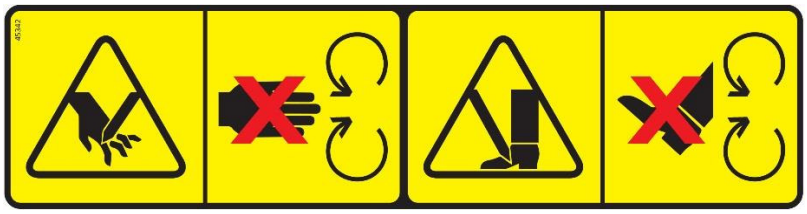
Leave one inch of space in the fuel tank during refilling.

Clear up any petrol spillages immediately.

Avoid contact with the engine during operation as it will become hot. Leave the engine to cool prior to contact.

Never interfere with the control settings of the engine.

4.11 Hazard Pictorial Explanations



DANGER – MOVING BLADES. KEEP HANDS AND FEET AWAY.

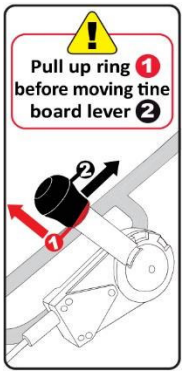
**MAXIMUM SOUND POWER LEVEL (LWA).
EAR PROTECTION MUST BE WORN WHEN OPERATING THE MACHINE.**

READ OPERATING INSTRUCTIONS BEFORE USE.	REMOVE SPARK PLUG BEFORE SERVICING OR PERFORMING MAINTENANCE.	WARNING: KEEP BYSTANDERS AWAY.

WEAR SUITABLE PPE:

- **EAR DEFENDERS**
- **EYE DEFENDERS**
- **FOOT PROTECTION**
- **SAFETY GLOVES**

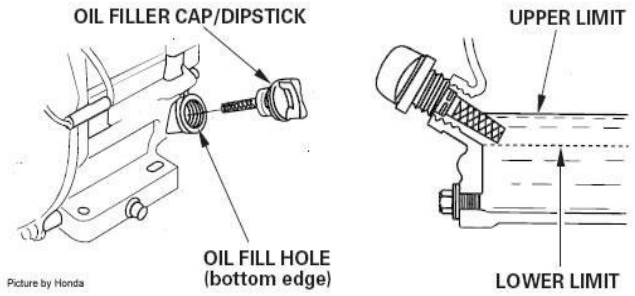
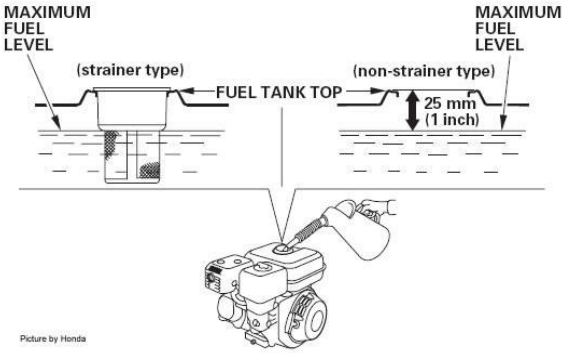
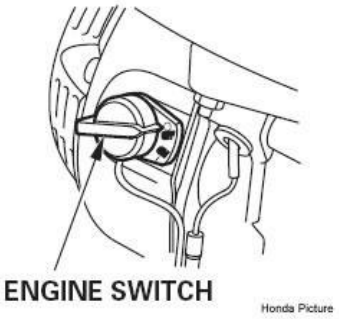
ENSURE SAFETY GUARDS ARE IN PLACE. MACHINE MUST NOT BE OPERATED WITHOUT GUARDS.



IMPORTANT! LIFT RING UP FIRST THEN MOVE LEVER TOWARD OPERATOR TO MOVE TINE BOARD.

5.0 Safety Instructions Starting and Operating

5.1 To Start the Engine

Using the dipstick provided, check the engine oil level. Top up with 10w/30 oil if the dipstick is clear of oil.	
Check the fuel level. Refill as necessary and as determined by the fuel tank type – see diagram.	
Switch the engine ignition switch to the ON position.	
Turn the fuel tap located on the engine carburetor to the ON position. If the engine is cold or has not been operated recently set the choke lever on the carburetor to the ON position.	

Pull the engine recoil handle slowly until it engages then pull hard and fast to start the engine.

After the start, guide the cord back into its position. Do not let it snap back.

Once the engine has started, if the choke lever has been used, return this to its OFF position after the engine has run for a few seconds.

5.2 To Stop the Engine

Release the operating lever.

Switch the engine ON/OFF switch to the “O” OFF position.

Turn the fuel tap lever to the OFF position.

Ensure the tines have stopped prior to moving the machine.

WARNING: THE EXHAUST COVER MAY BE HOT – DO NOT TOUCH.

5.3 Safety Equipment

The LA25 operator must be wearing:

- Ear Defenders
- Gloves
- Protective Footwear
- Safety Glasses

5.4 Operation

Before aerating can be carried out, the grass must be cut short and be cleared of any objects such as stones or sticks that would damage the Aerator.

WARNING: AERATING LONG GRASS WILL QUICKLY CAUSE DAMAGE TO COMPONENTS OF THE MACHINE. WE RECOMMEND THE GRASS IS CUT PRIOR TO AERATING.

Do not operate the Aerator on wet lawns or in wet weather.

Hollow tines should only be used on moist ground conditions.

Hardcore or rubble located under the surface of the turf will cause damage to the machine.

Use a garden fork to test the depth of the turf. The fork must enter the ground up to 100mm in depth to avoid damage to the tines or corers.

When safety checks have been completed, start the engine following the correct procedure.

Position the throttle lever in its midway position.

Lift the operating lever to engage the drive and start the tines rotating in their lifted position.

Using the central tine control lever, lower the tine lifting board, allowing the rotating tine rods to fall to a vertical position where the tines will be penetrating the ground.

As the tines begin to penetrate the ground they will start to also propel the LA25 Aerator forwards.

DURING OPERATION OF THE LA25 AERATOR APPLY A SMALL PULLING PRESSURE ON THE HANDLEBAR AS THIS WILL ENSURE THAT THE TINES AND TINE RODS REMAIN IN A VERTICAL POSITION. THE TINES MUST BE VERTICAL FOR MAXIMUM AERATING DEPTHS AND EFFICIENT PROPULSION TO BE ACHIEVED.

Do not work the Aerator on slopes of more than 20 degrees. Always work across the slope, not up and down it.

5.5 Procedure for Unexpected Shut Down

Release the operating lever.

Turn the engine operating switch located on the handlebars to the OFF position.

Ensure the tines have stopped prior to moving the machine.

5.6 Residual Risks of the LA25 Aerator

The LA25 Aerator is designed to be pushed by the operator during transportation and whilst it propels itself during operation it does not have a driven axle. It has no brake system and therefore the operator must hold firmly onto the machine at all times when the machine is on sloped areas.

6.0 Maintenance

6.1 Schedule

	Operation	Daily	Every Week	Every Month
Engine	Check engine oil level 10w/30 See separate engine manual	X	X	
Machine	Check condition of tines	X		
	Check condition of tines rods		X	
	Check belt condition			X
	Check operating lever and cable		X	
	Check protection cover condition			X
	Check bearings			X
	Lubricate wheel bearings			X
	Tighten all nuts and bolts			X

6.2 Basic Maintenance

Check that all guards are fitted securely.

Ensure the cable connecting the operating lever to the engine is securely fastened at both ends and shows no sign of wear.

Check the pressure of pneumatic tyres and ensure that they do not show any indentations or significant wear and tear.

Ensure the wheels are held securely and the fixed pin that holds the wheels onto the axles is in place.

6.3 Engine

6.3.1 Check Engine Oil Level

This is to be checked prior to each use and every 8 hours during operation.

Check only when the engine is off and in a horizontal position.

Clean the oil filler plug and its surrounding parts.

Remove the oil filler plug. Clean the dipstick with a clean cloth and put the oil filler plug all the way back into the engine. Remove the oil filler plug and check the oil level.

Refill the oil if indicator shows more is required. For the Honda GX160 the recommended oil is SAE 10w/30.

6.3.2 Change Engine Oil

Refer to the engine manufacturer's manual for location of components and more detailed assistance.

The first oil change is after 50 hours of work.

Subsequent oil changes should be made after each 100 hours of work.

At extreme temperatures or conditions change the oil after every 50 hours.

Open the drain plug on the engine and the filling plug and drain the oil into a suitable container or use a suction pump to remove oil through filler neck.

Ensure the waste oil is disposed of properly.

Re-fit the drain plug and tighten.

Fill fresh engine oil through the oil filling opening. Use a funnel or similar device for ease of filling.

Replace the oil filler plug and tighten.

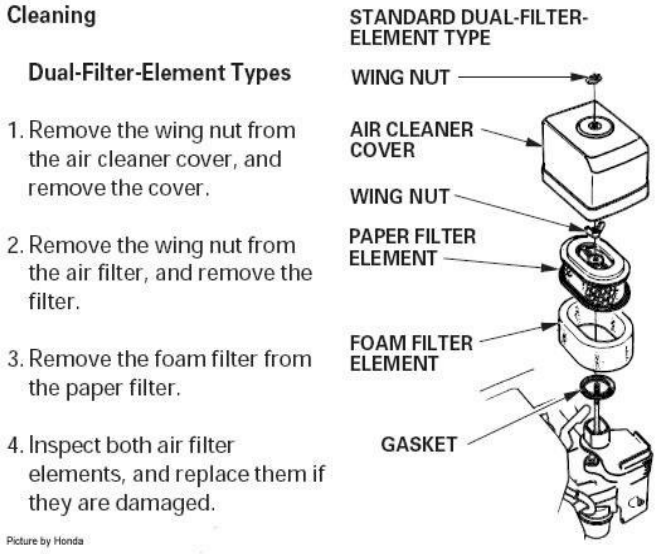
6.3.3 Air Filter

Inspection Check:

Remove the air cleaner cover and inspect the filter elements.

Cleaning:

See diagram below containing information provided by Honda



6.3.4 Spark Plug

Clean and replace.

6.4 Cleaning

After cleaning, particularly if a pressure washer has been used, ensure any lubrication points are re-lubricated.

Clean the engine with a cloth only. Avoid spraying the engine with jets of water as this may leak into the fuel and ignition systems.

6.5 Troubleshooting

6.5.1 Machine

Have all serious malfunctions on the machine and engine repaired by an authorised Tracmaster or Honda agent.

Problem	Possible Cause	Remedy
No drive to blades	Broken belt	Replace belt
Poor depth and propulsion	Operator is pushing the machine	Pull back on handlebar during operation to ensure tines are vertical

6.5.2 Engine

Problem	Possible Cause	Remedy
Engine does not start	Spark plug connector not connected	Connect spark plug connector
	Choke lever is not actuated	Actuate choke lever
	Fuel tank empty	Fill fuel tank
	Fuel line clogged	Clean fuel line
	Defective spark plug	Clean or replace spark plug
	Engine has too much fuel	Dry and adjust spark plug and start engine on full throttle
Engine overheats	Low engine oil	Refill immediately
	Impaired cooling	Clean cooling fan grille
	Air filter clogged	Clean air filter

6.5.3 Lubricants

Use the specified 10w/30 oil specified by Honda for the engine oil.

To lubricate the roller bearings in the wheels we recommend using bio-lubricating grease.

7.0 Transportation, Storage and Handling

7.1 Transportation

Use ramps where possible to manoeuvre the Aerator into a transportation vehicle.

The LA25 Aerator must be fixed securely using straps and by placing chocks behind the wheels.

Always transport the LA25 Aerator horizontally and not tilted at an angle.

Ensure that the fuel control lever on the engine is moved into the OFF position so fuel does not leak into the carburetor during transportation.

7.2 Storage

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

For periods of long storage, change the engine oil.

Either drain the fuel completely or fill the fuel tank and add fuel stabilizer.

Do not store the Aerator in wet rooms, where fertiliser is stored, or in stables as heavy corrosion may occur.

Always store the machine in a horizontal position.

7.3 Handling

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

Gloves must be worn when lifting the LA25 Aerator.

Do not tilt the machine so that fuel can leak into the air filter of the engine.

When performing maintenance on the Aerator when it is situated on a work bench, ensure that the machine is firmly held in position at all times.

Do not lift the machine solely by the engine at any point.

8.0 Service Record

To ensure your machine is kept in peak condition we recommend that your CAMON LA25 Lawn Aerator is serviced regularly.

Contact Tracmaster on 01444 247689 to find out who your local Authorised Agent is.

Company:_____ Date:_____	Company:_____ Date:_____
Company:_____ Date:_____	Company:_____ Date:_____
Company:_____ Date:_____	Company:_____ Date:_____

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:	Lawn Aerator
Type:	CAMON LA25
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.

Responsible Person:	Jody Symons
Position in Company:	Technical Director
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Date:	April 2015
Signature:	J Symons ….....….....

TRACMASTER

The landscape machinery specialists