

CAMON[®]

LANDSCAPING MACHINERY

CAMON C22 Tiller

ORIGINAL INSTRUCTION MANUAL



Manufactured by Tracmaster Ltd

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

Manufacturer Details

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Henfield
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UNITED KINGDOM
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www.tracmaster.co.uk
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Machine Details

Model: CAMON C22 Tiller

Serial No:

A	1	4	-	1	1	1	1	1
---	---	---	---	---	---	---	---	---

Engine Serial No:

G	A	A	A	A	-	1	1	1	1	1	1	1
---	---	---	---	---	---	---	---	---	---	---	---	---

Purchase Date:

D	D	-	M	M	-	Y	Y	Y	Y
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Supplier:

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1.0 Introduction

1.1 Welcome

Welcome to Tracmaster and thank you for choosing CAMON.

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 CAMON 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 C22 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. CAMON 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 CAMON C22 Tiller has been designed by Tracmaster for cultivating soil for planting of vegetables, plants and flowers.

The benefit of using a C22 Tiller is the ease and efficiency with which the machine is able to dig the ground, saving the operator substantial time and effort.

The tines of the CAMON C22 Tiller are designed to be used only on soil where there is no grass present.

DO NOT use the CAMON C22 Tiller for any alternative use other than cultivating soil.

Operating the machine on non-grass surfaces such as concrete or tarmac will cause damage to the C22 Tiller.

3.0 Specifications

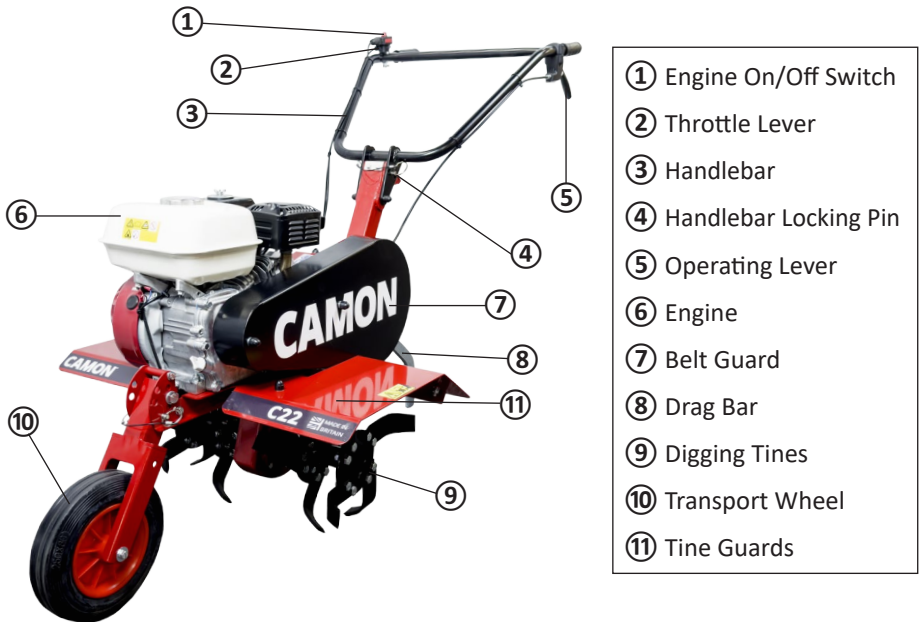
ENGINE	
Engine Manufacturer	Honda
Engine Model	GX160
Engine Type	4-stroke OHV, single cylinder
Net Engine Power	3.6kW (4.8hp) @ 3600rpm
Engine Shaft Size	¾" straight
Spark Plug	BPR6ES (NGK) / W20EPR-U (DENSO)
Spark Plug Gap	0.70 - 0.80mm
Engine Ignition Type	Recoil
Cold Start System	Choke
Fuel Tank Capacity	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	C22
Working Width	54cm
No of Blades	16 [8 left / 8 right]
Wheel Types	Solid rubber
Handlebar Feature	Foldable
Noise Level	97 dB(A)
Vibration Acceleration Value	6.9ms ²
Max Gradient for Operation on Slope	20 degrees
Weight	69kg
Dimensions (l x w x h)	140 x 70 x 84cm

4.0 Unpacking and Assembly

4.1 Major Components Diagram



4.2 Unpacking Instructions

The C22 Tiller is usually delivered secured to a wooden pallet, and covered with pallet wrap.

Carefully remove any outer packaging.

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

Swivel the folded top handlebar until one of the three holes at the bottom of the handlebar line up with the holes on the handlebar stem.

Insert the locking pin to fix handlebars into position.

Push the machine forward safely and carefully off the pallet.

Dispose of the pallet and other packing material. Recycle where possible.

5.0 Safety Instructions

5.1 Basic Safety Instructions

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

5.2 Main Components and Operating Elements

Below is a description of the main components of the C22 Tiller and how they operate.

5.3 Engine and Drive

The ON/OFF switch for the Honda GX160 engine is located on the right handlebar. This is the main operating control for the engine. Rotating the switch to the "I" position allows the engine to be started and run. Rotating the switch to the "O" position will stop the engine.

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 drawn in by the engine. A clogged air filter will reduce performance.

The engine is fitted with a choke lever. Read the engine operating instructions to understand the operation of these levers.



5.4 Operating Lever

The drive to digging tines is controlled by the operating lever located under the grip on the left handlebar.

Pulling upwards on this lever engages the drive to the tines which will start rotating and digging into the ground.

5.5 Drag Bar

Located at the rear of the machine, the drag bar is used to control the depth and speed at which the C22 will dig into the ground.

The depth is controlled by varying the position at which the drag bar is held into its location at the rear of the C22. The drag bar has a choice of holes through which its locating pin can be positioned. The lower the hole used on the drag bar to hold it in its position, the deeper the machine will dig.

Forward speed is controlled by the drag bar as during operation of the tiller downward pressure is applied on the handlebars by the operator that forces the drag bar into the ground. This acts as an anchor holding the tiller in place whilst it digs down to its required depth. Releasing downward pressure on the drag bar allows the tiller to walk itself forward into its new cultivating position.

5.6 Transport Wheel

The transport wheel is used solely for moving the C22 Tiller to its designated digging location.

NB: The transport wheel is not required at any point during actual ground cultivation.

The transport wheel is held in its downwards travel position using a spring mechanism. By pulling on the wheel it is possible to overcome the tension of the spring and rotate the wheel 180° upwards and around to a location where it is held out of the way of the digging tines.

5.7 Throttle Lever

The throttle lever is mounted under the ON/OFF switch and controls the engine speed, which in turn controls the speed of the digging tines.

A faster throttle speed will result in an increased rotational speed of the digging tines.

5.8 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 6.1.

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

5.9 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.

5.10 Engine Specific Safety Instructions

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

Always start the engine in 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.

5.11 Hazard Pictorial Explanations



Danger - Rotating blades. Keep feet clear of digging tines.



**Maximum sound power level (LWA).
Ear protection must be worn when operating the machine.**



ALWAYS wear suitable Personal Protective Equipment (PPE):

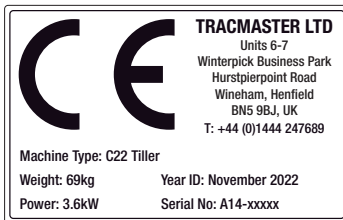
- Ear Defenders
- Eye Protection
- Foot Protection
- Safety Gloves



Ensure safety guards are in place. Machine **MUST NOT** be operated without guards.



- ① Read operating instructions before use.
- ② Remove spark plug before servicing or performing maintenance.
- ③ Warning: Keep bystanders away.



Machine identification label. Indicates compliance with European standards (CE mark). Includes unique serial number, machine weight, power output, and month and year of manufacture.

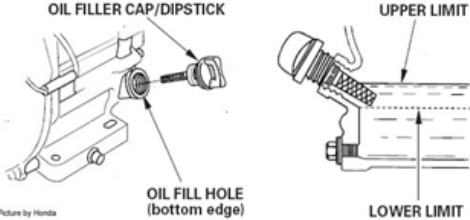
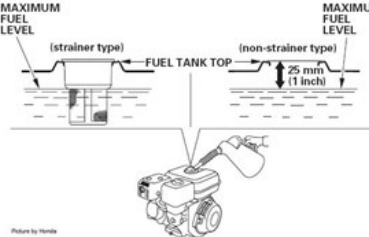
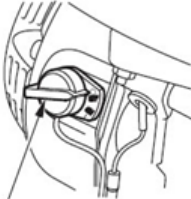

It is important that these stickers are in good condition, are legible, and are in the correct positions on the C22 Tiller.

Do not use the machine if any of these stickers are missing or damaged.

If any stickers are missing or damaged then they must be replaced. They can be obtained from the Spare Parts Department at Tracmaster Ltd.

6.0 Safety Instructions Starting and Operating

6.1 To Start the Engine

<p>Using the dipstick provided, check the engine oil level. Top up with SAE 10W/30 oil, API SJ or equivalent, if the dipstick is clear of oil.</p>	 <p>OIL FILLER CAP/DIPSTICK</p> <p>OIL FILL HOLE (bottom edge)</p> <p>UPPER LIMIT</p> <p>LOWER LIMIT</p> <p><small>Picture by Honda</small></p>
<p>Check the fuel level. Refill as necessary and as determined by the fuel tank type – see diagram.</p>	 <p>MAXIMUM FUEL LEVEL</p> <p>(strainer type)</p> <p>FUEL TANK TOP</p> <p>25 mm (1 inch)</p> <p>MAXIMUM FUEL LEVEL</p> <p>(non-strainer type)</p> <p><small>Picture by Honda</small></p>
<p>Switch the engine ignition switch to the ON position.</p>	 <p>ENGINE SWITCH</p> <p><small>Honda Picture</small></p>
<p>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.</p>	 <p>FUEL VALVE LEVER</p> <p>CHOKE LEVER</p> <p>THROTTLE LEVER</p> <p><small>Picture by Honda</small></p>

Pull the engine recoil handle slowly until it engages then pull briskly to start the engine.

After the start, return the recoil handle gently. Do not let it snap back.

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

6.2 To Stop the Engine

Release the operating lever.

Switch the engine ON/OFF switch to the “0” OFF position.

Turn the fuel tap lever to the OFF position.



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

6.3 Safety Equipment

The C22 operator must be wearing:

- Ear Defenders
- Gloves
- Protective Footwear
- Safety Glasses

6.4 Operation

Before cultivation can be carried out, the ground must be cleared of long grass and any objects such as stones or bricks that would damage the Tiller.



WARNING: USING THE TILLER ON LONG GRASS WILL QUICKLY CAUSE DAMAGE TO COMPONENTS OF THE MACHINE.

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

Position the Tiller in the direction you wish to cultivate

Ensure the transport wheel has been located in its upright digging position.

6.5 Procedure for Unexpected Shut Down

Release the operating lever.

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

Ensure the tines have stopped rotating prior to moving the machine.

6.6 Residual Risks of the C22 Tiller

The C22 Tiller is designed to be pushed by the operator during transportation. 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.

7.0 Maintenance

7.1 Schedule

	Operation	Daily	Weekly	Monthly
Engine	Check engine oil level 10W/30. See separate engine manual.	X	X	
Machine	Check condition of tines.		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

7.2 Basic Maintenance

Check that all guards are fitted securely.

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

Ensure the wheel is held securely.

7.3 Engine

7.3.1 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.

7.3.2 Change Engine Oil

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

Do not change the oil if the engine is hot.

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. Drain the oil when the engine is warm, as it will drain quickly and completely when warm.

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.

7.3.3 Air Filter

Inspection Check:

Remove the air cleaner cover and inspect the filter elements.

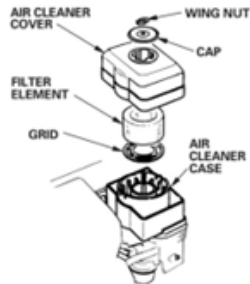
Cleaning:

See diagram below containing information provided by Honda.

Cleaning

Oil-Bath Type

1. Remove the wing nut, and remove the air cleaner cap and cover.
2. Remove the air filter element from the cover. Wash the cover and filter element in warm soapy water, rinse, and allow to dry thoroughly. Or clean in non-flammable solvent and allow to dry.
3. Dip the filter element in clean engine oil, then squeeze out all excess oil. The engine will smoke if too much oil is left in the foam.
4. Empty the used oil from the air cleaner case, wash out any accumulated dirt with non-flammable solvent, and dry the case.
5. Fill the air cleaner case to the OIL LEVEL mark with the same oil that is recommended for the engine (see engine manual).
Oil capacity: 60 cm
(2.0 US oz, 2.1 Imp oz)
6. Reassemble the air cleaner, and tighten the wing nut securely.



7.3.4 Spark Plug

Clean and replace.

7.4 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.

7.5 Troubleshooting

7.5.1 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.
	Broken spring tensioner.	Replace spring.
Poor depth.	Drag bar set incorrectly.	Adjust drag bar.

7.5.2 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.

7.5.3 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.

8.0 Transportation, Storage and Handling

8.1 Transportation

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

The C22 Tiller must be fixed securely using straps and by placing chocks behind the wheels.

Always transport the C22 Tiller 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.

8.2 Storage

Always clean the machine and thoroughly dry 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 Tiller in wet rooms, where fertiliser is stored, or in stables as heavy corrosion may occur.

Always store the machine in a horizontal position.

8.3 Handling

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

Gloves must be worn when lifting the C22 Tiller.

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

When performing maintenance on the Tiller 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.

9.0 Spare Parts

The spare parts diagrams and part numbers for the CAMON C22 Tiller 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

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 Tiller is serviced regularly.

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

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: Tiller

Type: CAMON C22

Harmonised Standards applied (including parts of):

EN 13857:2008	Safety of machinery: Safety distance to prevent danger zones being reached by the upper and lower limbs.
EN 12100-1:2003	Safety of machinery: Basic Principles. Terminology. Methodology.
EN 12100-2:2003	Safety of machinery: Basic Principles. Technical Principles.
EN 709:1997	Agricultural & Forestry Machinery – Pedestrian Controlled Tractors with mounted rotary cultivators, motor hoes, motor hoes with drive wheels.

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: January 2023

Signature: 

12.0 Warranty Information

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/tools/find-a-dealer).

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.



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Original Instruction Manual
Rev. 01/2024.A

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