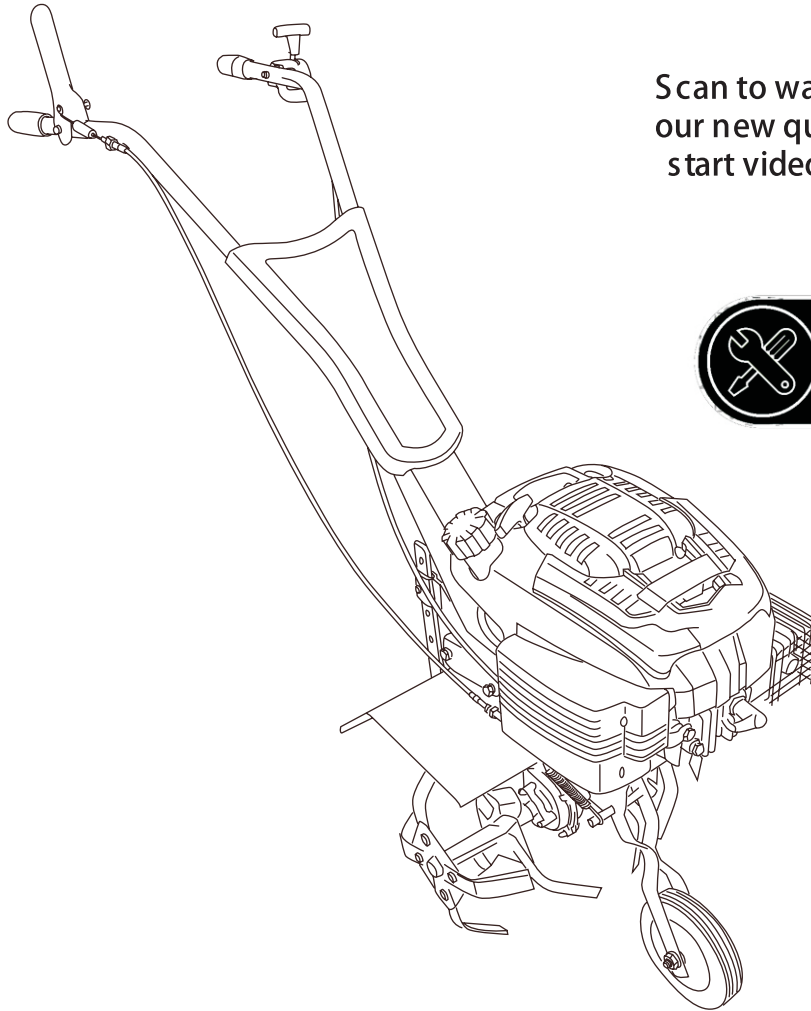


# Qualcast 149.3cc Petrol Rotavator

Assembly Manual

HST-1003A



Scan to watch  
our new quick  
start videos!



**Important - Please read these instructions fully before starting assembly**

These instructions contain important information that will help you get the best from your Rotavator, ensuring it is assembled correctly and safely.

If you need help or have damaged or missing parts, call the Customer Helpline on 01904 727500 prior to returning product to store.

# Contents

Safety Information.....	3
Warning Symbols.....	3
General Safety.....	3
Personal Safety .....	3
In the Box.....	4
Parts.....	4
Tools.....	4
Assembly.....	5
Preparing to assemble the petrol rotavator.....	5
Step 1.....	5
Step 2.....	6
Step 3.....	6
Step 4.....	7



Important - Please read these instructions fully before starting assembly

## Warning Symbols

The following warning symbols appear throughout this assembly manual and indicate the appropriate safety measures you should take when assembling and operating the petrol rotavator.



This symbol indicates there is a danger of serious personal injury or death if you do not observe the warning.



This symbol indicates that there is a danger of damaging your hands if you do not wear thick, protective gloves.

## General Safety



**WARNING!** Keep this assembly manual in a safe place for future reference.



**WARNING!** Always ensure anyone intending to operate this petrol rotavator is fully conversant with the content of this assembly manual prior to assembling, maintaining or operating the petrol rotavator. Safety Information



**WARNING!** Perform assembly operations described in this manual .Failure to observe this warning may lead to serious injury, death, or damage to the petrol rotavator.



**WARNING!** Always take care when removing the packaging to prevent damage to you or to the petrol rotavator.



**IMPORTANT!** Before assembling the petrol rotavator, check all the parts indicated in the manual are in the box. Inspect all the parts for signs of damage. Do not assemble the petrol rotavator if you observe any damaged components.

## Personal Safety



**WARNING!** Only operate the petrol Rotavator if you are wearing the correct Personal Protective Equipment (PPE)as described in the following warnings.

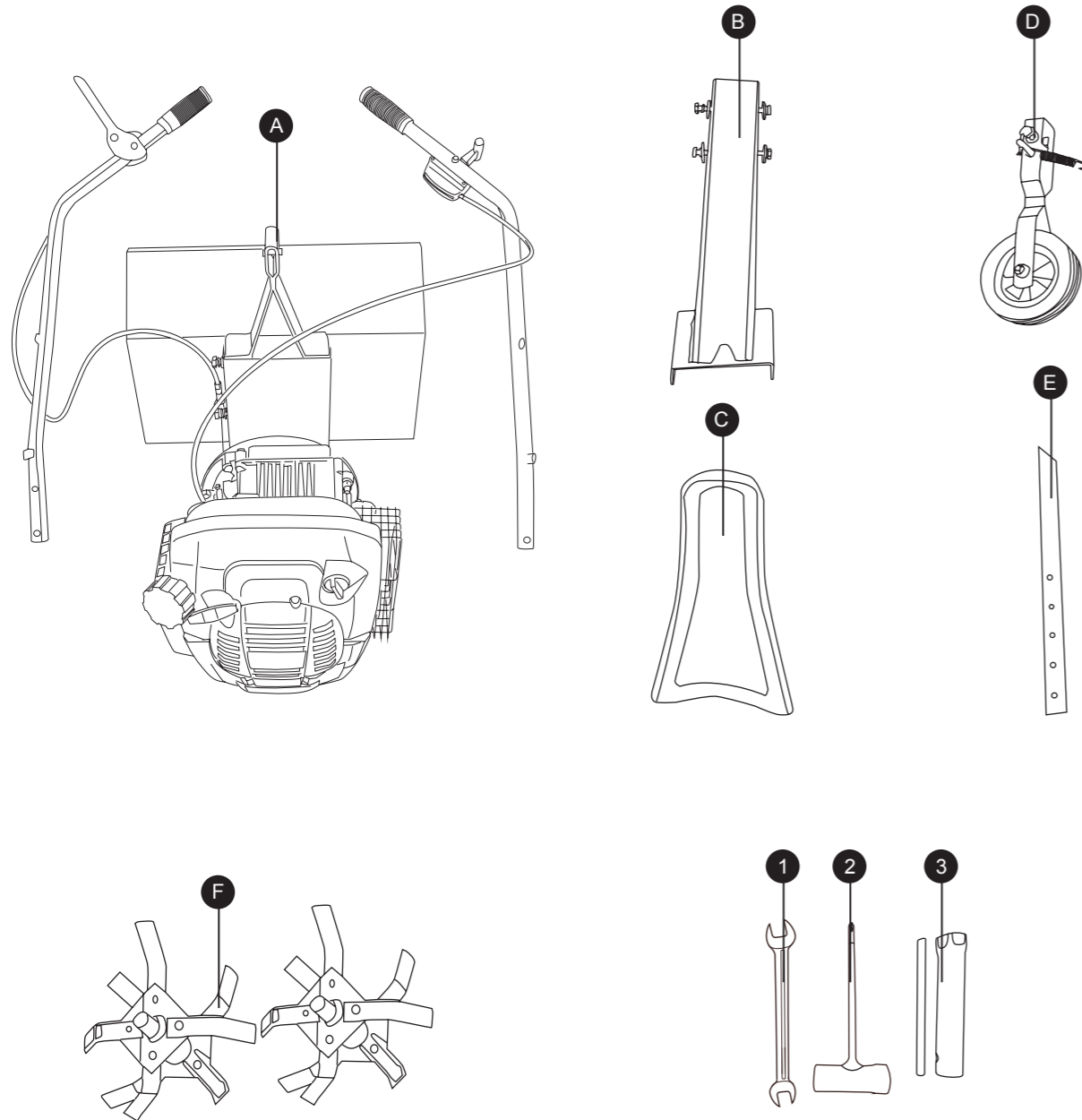


**WARNING!** Always wear suitable gloves when operating petrol rotavator to protect your hands from fying debris and/or sharp objects.

# In the Box

## Parts

- |   |                              |                              |                                   |
|---|------------------------------|------------------------------|-----------------------------------|
| <b>A</b> Main unit (with upper handle attached) | <b>C</b> Face plate          | <b>F</b> Blade assembly 2pcs | <b>1</b> Hexagonal spanner        |
| <b>B</b> Handle bar support                     | <b>D</b> Front support wheel |                              | <b>2</b> Spanner and screw driver |
|   | <b>E</b> Draw bar            |                              | <b>3</b> Spark plug spanner       |



# Assembly

## Preparing to assemble the petrol rotavator

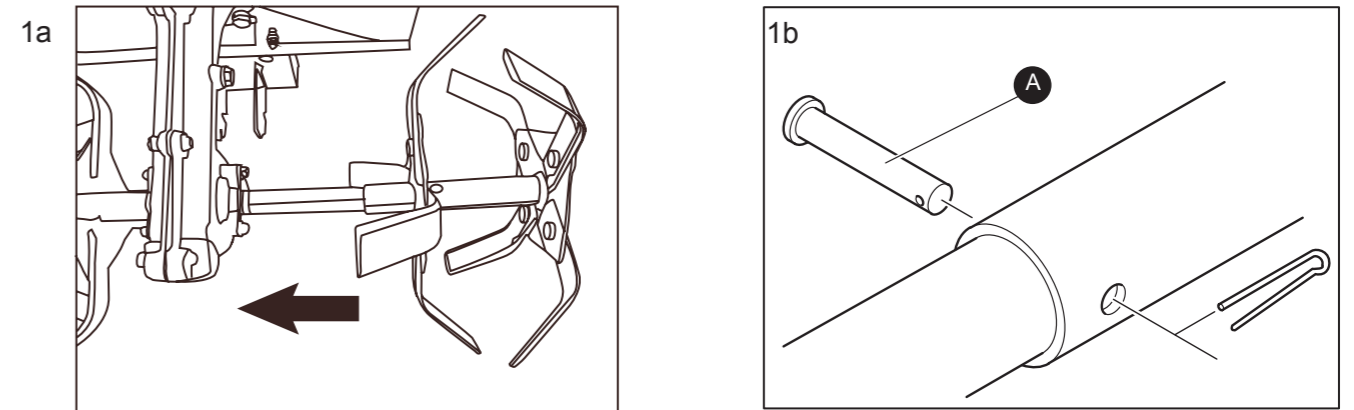
**WARNING!** Always take care when removing the packaging to prevent damage to you or to the petrol rotavator.

**IMPORTANT!** Before assembling the petrol rotavator, check all the parts indicated in the manual are in the box. Inspect all the parts for signs of damage. Do not assemble the petrol rotavator if you observe any damaged components.

1. Remove all parts of the petrol rotavator from the box and carefully remove all packaging. Take care not to lose any instructions which may be affixed to the parts. These provide important information which will be required while assembling the petrol rotavator.
2. Box should be kept for duration of warranty.

**NOTE** Always recycle the packaging in accordance with local recycling schemes.

## Step 1 - Fitting the Rotavator assembly

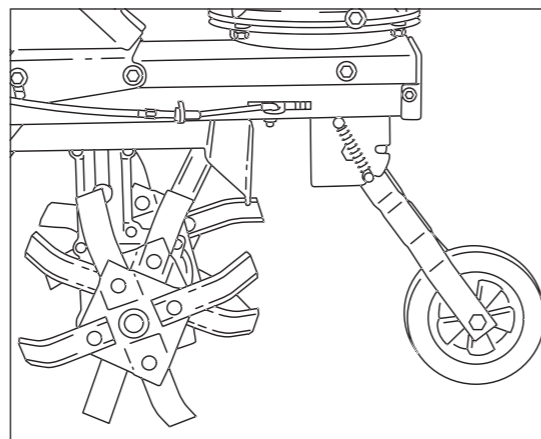
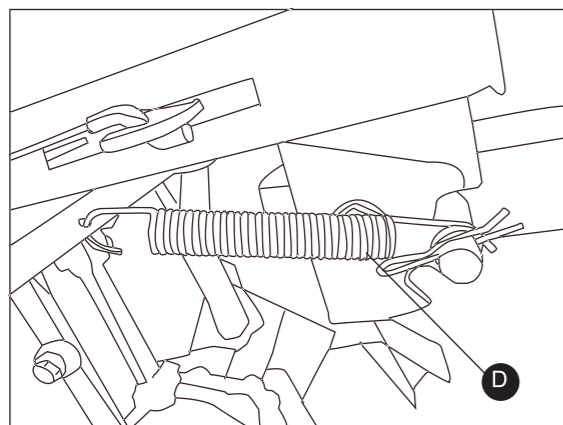
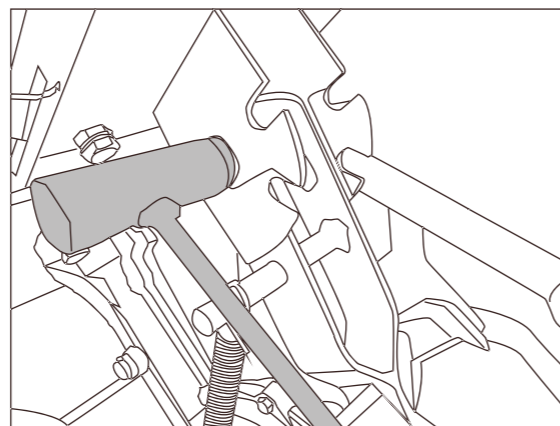
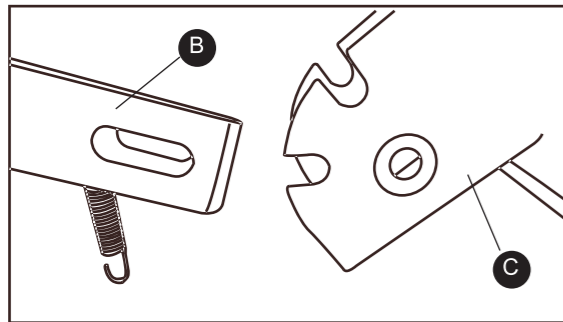


1a Put the device on the ground. Fit the rotavator assembly over the axle.

1b Fix the split pin (A).

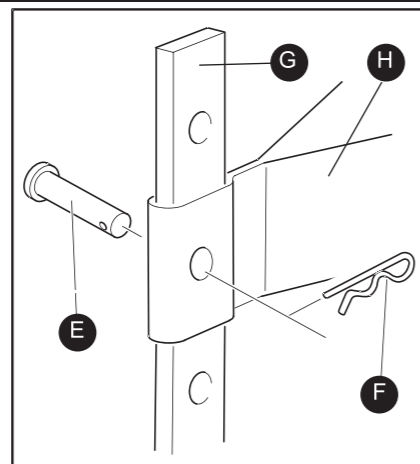
# Assembly

## Step 2 - Fitting the front wheel



Screw the front wheel unit (B) to the machine (C) with the hexagonal bolt and nut as shown.  
Pull the front wheel from its rest position. Attach the tension spring (D).

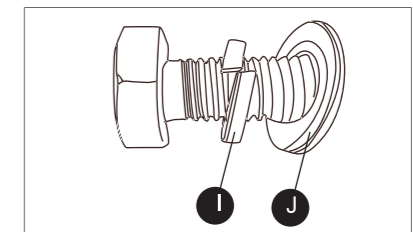
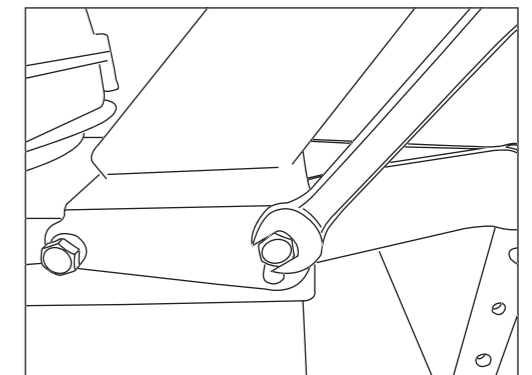
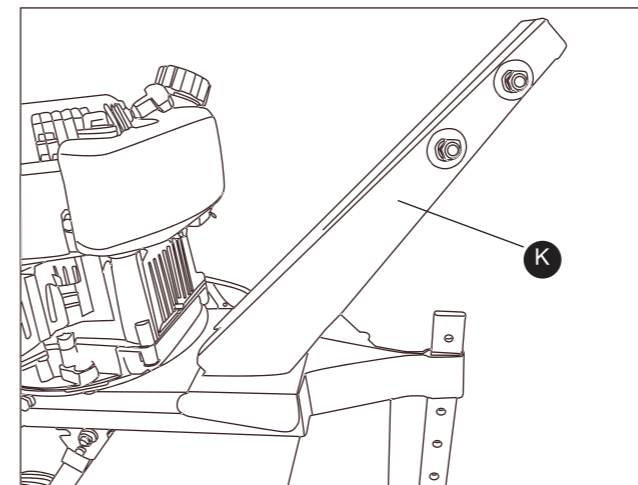
## Step 3 - Fitting the draw bar



Pull out the securing splint (E) and the pin (F).  
Insert the draw bar (G) into the main plate (H).  
Insert the pin and secure it with the R/clip (E).

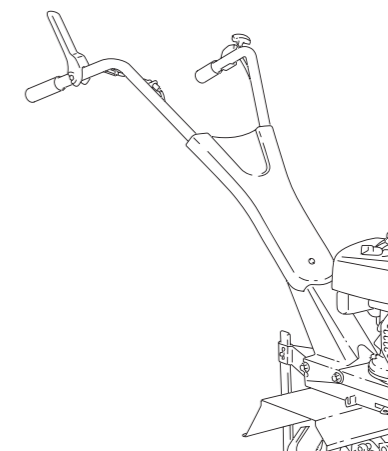
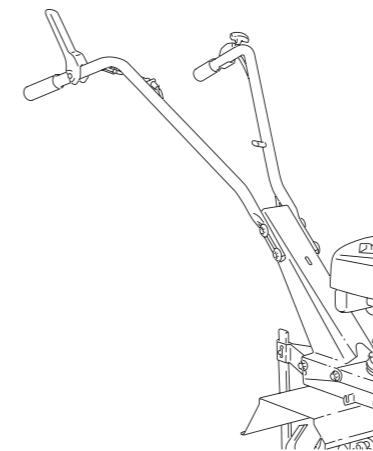
# Assembly

## Step 4 - Fitting the handle bar support



Hold the handle bar support (K) on the frame.  
Tighten four hexagonal bolts with washers.

## Step 5 - Fitting the steering handles



Hold both steering shafts at the side of the device, and insert two hexagonal bolts with washers into each.

Tighten the hexagonal bolts.

Fit the steering cover on and screw it on tightly with four tapping screws.



**NOTE!** Make sure the clutch control lever (L) is at your right hand side when you stand behind the unit.

# STOP!

Do not start the engine before putting 500ml of SAE 30 oil into the engine.

Failure to do so will result in irreparable damage to the engine and invalidate your warranty.

## Getting Help

**Customer Helpline 01904 727500**

Our dedicated UK based customer helpline is open 7 days a week to assist you with assembly, parts queries and technical support. We are open during office hours but you can always send an email via [support@gardenservicecentre.co.uk](mailto:support@gardenservicecentre.co.uk) Our experts are here to get you back enjoying your garden in no time.

For useful assembly, starting and maintenance videos and ordering spares please visit [www.gardenservicecentre.co.uk](http://www.gardenservicecentre.co.uk).

Calling our service does not affect your statutory rights

UK/Ireland 01904 727500

Monday to Friday 9am - 5pm. Saturday & Sunday 11am - 4pm

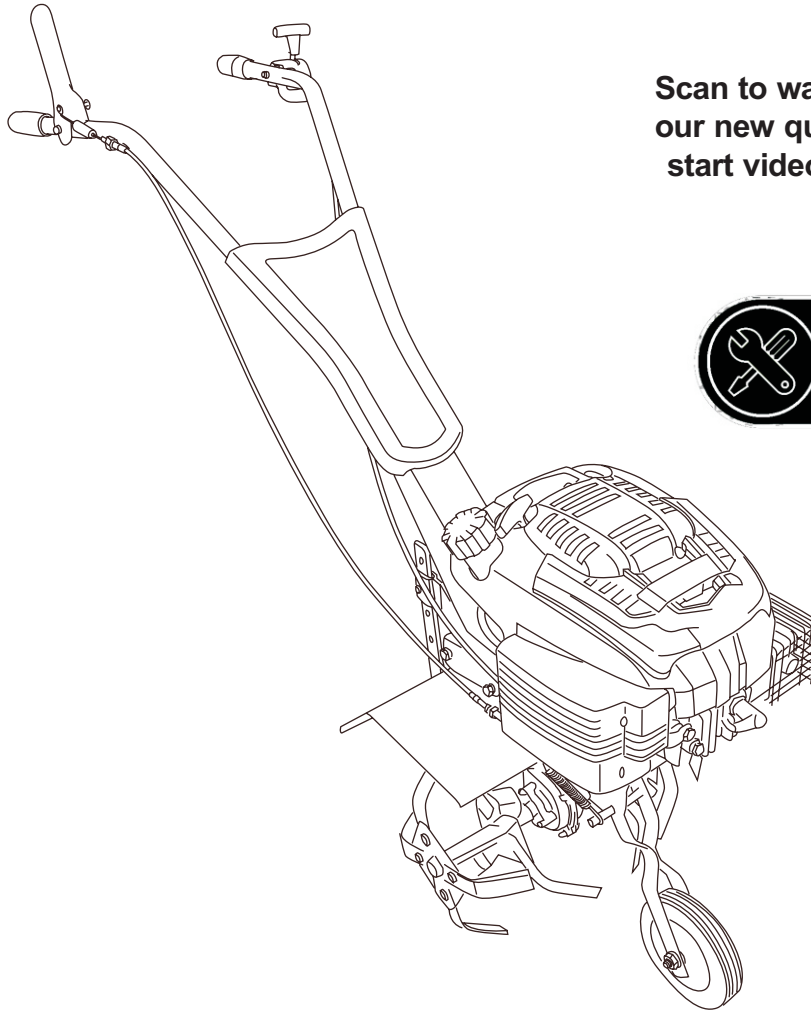
[www.gardenservicecentre.co.uk](http://www.gardenservicecentre.co.uk)

email: [support@gardenservicecentre.co.uk](mailto:support@gardenservicecentre.co.uk)

# Qualcast 149.3cc Petrol Rotavator

Operation and Maintenance Manual

HST-1003A



Scan to watch  
our new quick  
start videos!



**Important - Please read these instructions fully before operating or maintaining your lawnmower**

These instructions contain important information that will help you get the best from your rotavator, ensuring it is assembled correctly and safely.

If you need help or have damaged or missing parts, call the Customer Helpline on 01904 727500 prior to returning product to store.

# Contents

Safety Information.....	3
Warning Symbols.....	3
General Safety.....	4
Training.....	4
Preparation.....	4
Operation.....	5
Maintenance and Storage.....	6
Special Safety Instructions.....	6
Preparing to Operate the Petrol Rotavator.....	7
Step 1 - Commissioning.....	7
Step 2 - Filling with Fuel.....	9
Step 3 - Filling with Engine Oil.....	9
Operating the Petrol Rotavator.....	10
Step 1 - Check before Use.....	10
Step 2 - Starting the Engine.....	10
Step 3 - Rotovating.....	11
Maintenance.....	12
List of Vulnerable Parts.....	12
Cleaning and Maintenance.....	12
Replace Worn or Damaged Parts for Safety.....	13
Store.....	14
Troubleshooting.....	15
Technical Data.....	17
Guarantee.....	18
Declaration of Conformity.....	19

# Safety Information

Important - Please read these instructions fully before operating or maintaining

## Warnings Symbols

The following warning symbols appear throughout this manual and indicate the appropriate safety measures you should take when operating and maintaining the rotavator.



**Before any use, refer to the corresponding paragraph in the present manual.**



**This symbol, before a safety comment, indicates a precaution, a warning or a danger. Ignoring this warning can lead to an accident for yourself or for others. To limit the risk of injury, fire, or electrocution always apply the recommendations indicated.**



**Conforms to European standards.**



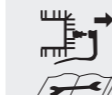
**Danger of injury from flying parts!**



**Always maintain a sufficiently safe distance.**



**Danger of injury from rotating parts!**



**Remove the ignition cable before all maintenance work, and read the instructions for use.**



**Take care when handling fuel and lubricants!**



**Wear hearing protection and eye protection when using the device.**



**Wear robust footwear when using the device.**









**Wear protective gloves when using the device.**

# Safety Information

Important - Please read these instructions fully before operating or maintaining


## General Safety

-  **WARNING!** Keep this operating and maintenance manual in a safe place for reference at a later date.
-  **WARNING!** Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
-  **WARNING!** Never allow children or people unfamiliar with these instructions to use the rotavator. Local regulations can restrict the age of the operator.
-  **WARNING!** Never mow while people, especially children, or pets are nearby. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
-  **WARNING!** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
-  **WARNING!** Do not touch rotating blade.

## Training

- a). Read the instruction carefully. Be familiar with the controls and proper use of the equipment.
- b). Never allow children or people unfamiliar with these instructions to use the machine. Local regulations can restrict the age of the operator.
- c). Never work while people, especially children, or pets are nearby.
- d). keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

## Preparation

- a). While working, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- b). Thoroughly inspect the area where the equipment is to be used and removed all objects which can be thrown by the machine.
- c).  **WARNING!** Petrol is highly flammable:
  - store fuel in containers specifically designed for this purpose;
  - refuel outdoors only and do not smoke while refueling;
  - add fuel before starting the engine. Never remove the cap of fuel tank or add petrol while the engine is running or when the engine is hot;
  - if petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapours have dissipated;

# Safety Information

Important - Please read these instructions fully before operating or maintaining

## Preparation (continued)

- replace all fuel tank and container caps securely.
- d). Replace faulty silencers;
- e). Before using, always visually inspect to see that the tools are not worn or damaged. Replace worn or damaged elements and bolts in sets to preserve balance.

## Operation

- a). Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- b). Work only in daylight or in good artificial light.
- c). Always be sure of your footing on slopes.
- d). Walk, never run with the machine.
- e). For wheeled rotary machines, work across the slope, never up and down.
- f). Exercise extreme caution when changing direction on slopes.
- g). Do not work on excessively steep slopes.
- h). Use extreme caution when Reversing or pulling the machine towards you.
- i). Do not change the engine governor setting or over speed the engine.
- j). Start the engine carefully according to manufacturer's instructions and with feet well away from the tools.
- k). Do not put hands or feet near or under rotating parts.
- l). Never pick up or carry a machine while the engine is running
- m). Stop the engine:
  - whenever you leave the machine
  - before refueling
- n) Reduce the throttle setting during engine shut down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of working.

# Safety Information

Important - Please read these instructions fully before operating or maintaining

## Maintenance and Storage

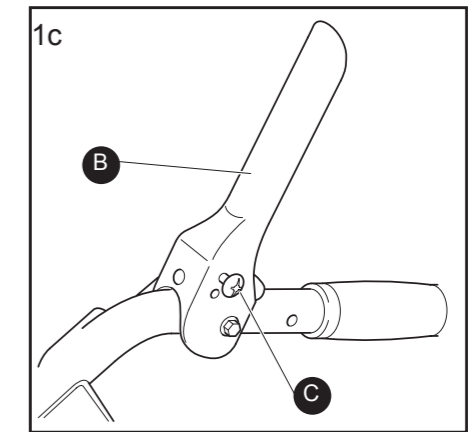
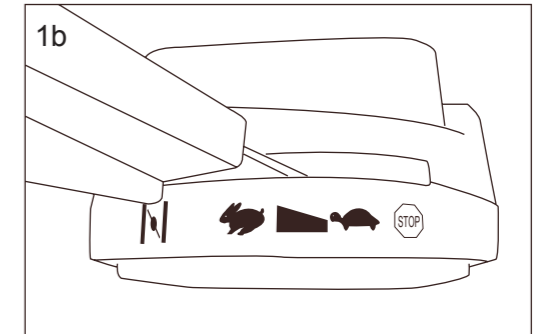
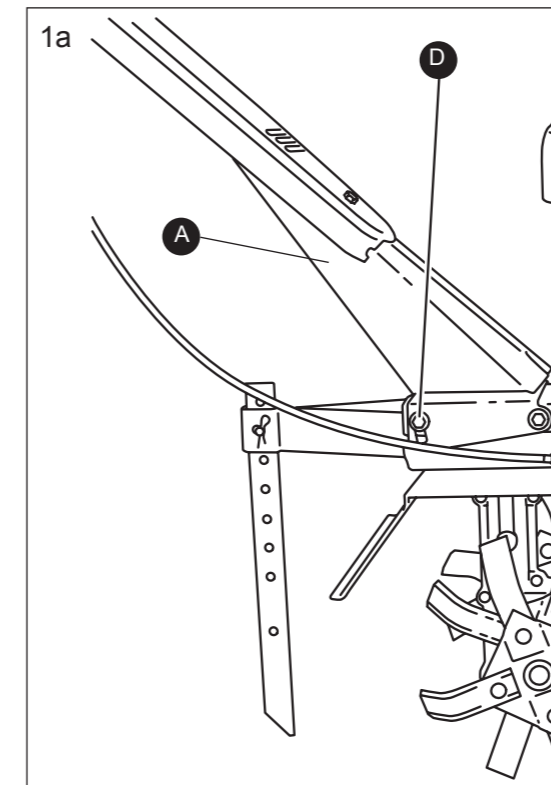
- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Never store the equipment with petrol in the tank inside a building where fumes can reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire risk, keep the engine, silencer, and petrol storage area free of vegetative material and excessive grease.
- Replace worn or damaged parts for safety.
- If the fuel tank has to be drained, this should be done outdoors.

## Special Safety Instructions

- While working, always wear substantial footwear and long trousers. Don't operate the equipment when barefoot or wearing open sandals.
- Thoroughly inspect the area where the equipment is to be used and remove all objects which can be thrown by machine.
- Before using, always visually inspect to see that the tools are not worn or damaged. Replace worn or damaged tines and bolts in sets to preserve balance.
- The engine shall be stopped when carrying out maintenance and cleaning operations, when changing tools and when being transported by means other than under its own power.
- The hazards may arise when working on slopes.
- Some special hazards may arise when working on difficult soil (stony, hard, etc.)
- The machine should only be operated by suitably trained persons.
- During the operation of the machine, safety shoes should be worn.
- In order to reduce hazards due to vibration limit the time of operation and wear personal protection equipment.

# Preparing to Operate the Petrol Rotavator

## Step 1 - Commissioning







### 1a Steering handles (A)

Adjust steering handle height.

- Loosen bolts (D).
- Set the desired steering handle height.
- Tighten the bolts again.

### 1b Throttle handle

- Throttle handle in position  = motor stopped;
- Throttle handle in position  = minimum rotational speed;
- Throttle handle in position  = maximum rotational speed;
- Throttle handle in position  = choke (setting for cold start).

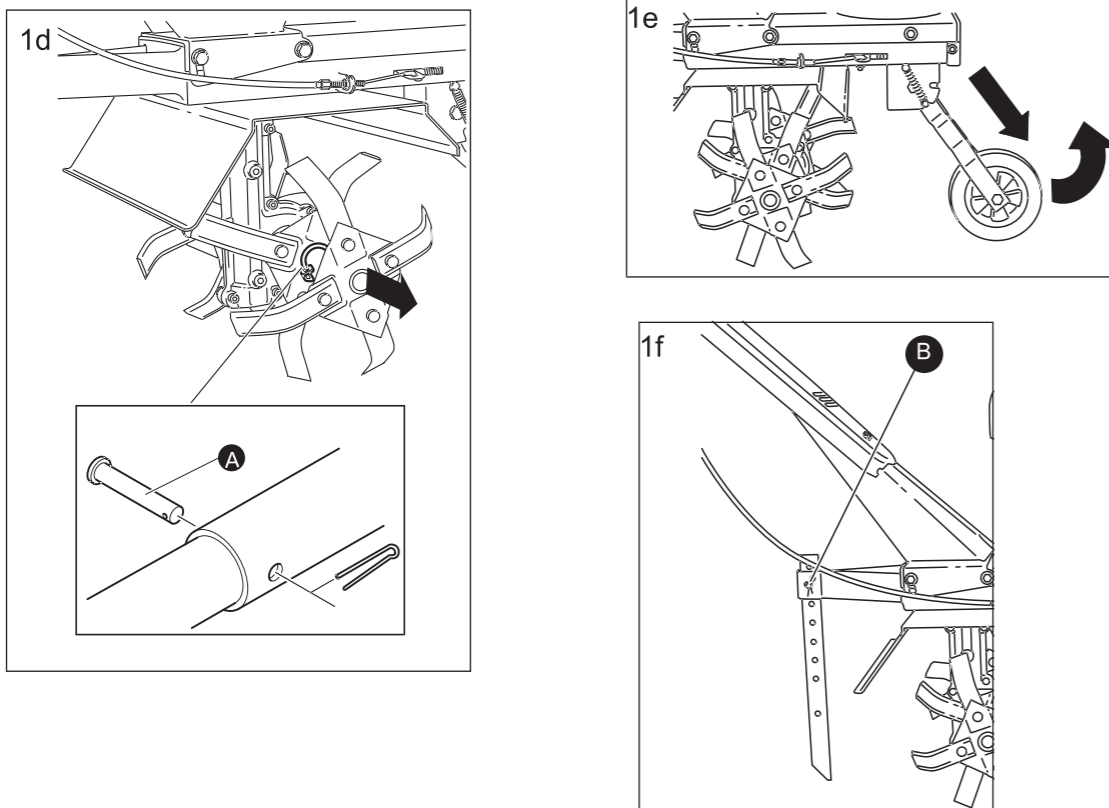
### 1c Clutch handle

- Clutch handle is pulled out (position  ) = rotavator assembly turns;
- Clutch handle is released (position  ) = device is running in neutral.

The handlebar (B) is secured with a lock trigger (C). Before the operation the handlebar must be released.

# Preparing to Operate the Petrol Rotavator

## Step 1 - Commissioning (continued)



### 1d Rotavator assembly

Removing rotavator assembly:

- Loosen and remove the spring pin (A).
- Remove the implement from the axle.

### 1e Front support wheel

The front support wheel makes it easier to move the device. When rotavating, it must be folded upwards.

- Pull the front support wheel from its rest position.
- Fold the front support wheel upwards and let it engage.

### 1f Draw bar

The device's forward motion is braked by means of the draw bar. The desired rotavating depth is achieved by pushing the draw bar into the soil at different levels. Setting the draw bar:

- Pull out the R/clip (B) and pin.
- Set the draw bar to the desired height.
- Insert the pin again and secure it with the R/clip.

# Preparing to Operate the Petrol Rotavator

## Step 2 - Filling with fuel



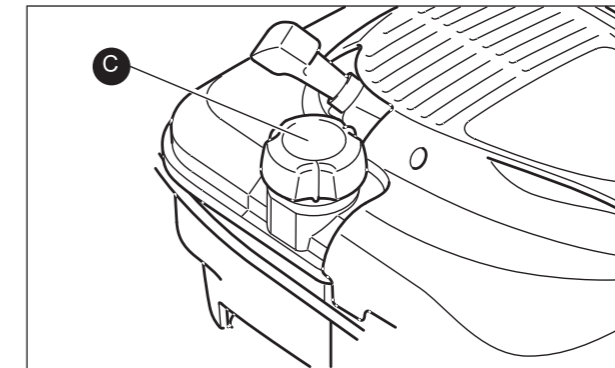
**WARNING!** Danger of injury! Fuel is explosive!

- Turn off and cool the motor down before filling the tank with fuel.
- You must observe all safety instructions relating to handling fuel.

Risk of device damage!

The device is supplied without motor oil.

Before operating, you must fill it with motor oil.

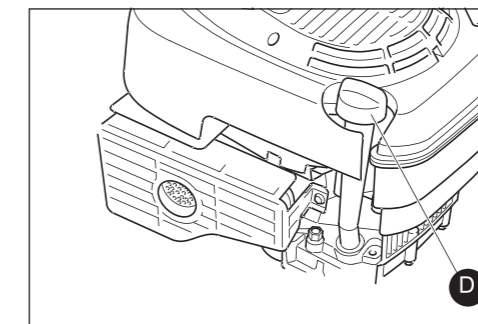


- Unscrew the tank cap (C) and remove it.
- Pour in the fuel carefully. Avoid spilling!
- Check the seal inside the tank cap for damage and replace it if necessary. Replace a damaged seal immediately!

- Screw the tank cap on firmly by hand.

Fuel: Unleaded gasoline 90# or above.

## Step 3 - Filling with engine oil



- Unscrew the motor oil filling bolt (D) and remove it.
- Carefully pour in motor oil (approx. 500 ml). Avoid spilling!
- Tighten the motor oil filling bolt again by hand.



Engine oil: SAE 10W-30 grade

**NOTE!** The appliance is supplied without engine oil. Fill with engine oil before use.

# Operating the Petrol Rotavator

## Step 1 - Check before use

**! WARNING! Danger of injury! Do not operate the device unless you did not find any faults. If a part has become defective, make sure to replace it before you use the device again.**

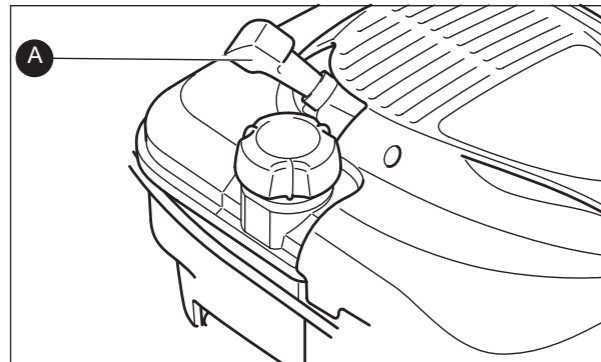
Check the safe condition of the device:



- Check the device for leaks.
- Check the device for visual defects.
- Check that all parts of the device have been securely fitted.
- Check that all safety devices are in proper condition.

## Step 2 - Starting the engine

**! WARNING! Risk of device damage! The lifetime and operating safety of the motor is highly dependant on the running-in time. Always allow a cold motor to idle for a few minutes to warm up, and do not use it at full power straight away.**

For the frst 20 hours of operation (running-in period), do not push the motor to the limit of its capabilities.



- If the engine is cold, set the throttle to  .
- If the engine is warm, set the throttle to  .
- Slowly pull out the pull starter (A) until the starter engages, and then pull frmly.
- Once the motor has started, set the desired motor speed using the throttle.



NOTE! Pull the pull starter out no more than 50 cm, and slowly guide it back using your hand.

### Stopping the engine

- Set the throttle to  .

**! WARNING! Danger of injury! Always switch the device off, even when taking a short break.**

# Operating the Petrol Rotavator

## Step 3 - Rotovating

**! WARNING! Danger of injury! Before starting work, always check the ground and remove all objects which could be thrown by the device.**

**! WARNING! Danger of injury! Never release the steering handles while working.**

**! WARNING! Danger of injury! On downhill slopes , there is a danger of slipping away, so the device should be held back by an assistant using a rod or a rope. The assistant must be uphill of the device at a sufficient distant from the rotovator.**

- Fold the front support wheel upwards.
- Set the desired rotovating depth by adjusting the draw bar.



NOTE! That the adjustable part of the protective device should be adjusted to the working depth of the tool so that only that part of the working tool that cuts into the soil remains uncovered.

- Start the motor.
- Pull up the clutch handle, and keep it pulled.
- Use the throttle to set the desired rotational speed for the rotovator.

**! WARNING! Danger of injury! Do not clean the rotovator implement while the motor is running. Stop the motor and detach the ignition cable. Remove jammed objects only by means of an implement, e. g. with a wooden stick.**

**! WARNING! Risk of device damage! Do not move the device over concrete , asphalt foors etc while the rotovating implement is turning. Stop the motor and use the front support wheel.**

# Maintenance

## List of vulnerable parts

RJ19LM	Spark plug champion	105000	Blade tool assy
1P65F.2.1-2	Foam air filter element	203500	Throttle cable
1P65F.2.1-1RV	Air filter cover		

## List of vulnerable parts

### Prior to every start:

- Cleaning the air filter
- Check the pull starter for damage to the cord. ( Visual inspection )
- Checking the motor oil level
- Checking threaded connections for tightness


### Every 40 operating hours or every 4 months:

- Cleaning/replacing the spark plug
- Changing gear/motor oil

### Cleaning the device

Wipe the device with a soft damp cloth.

### Cleaning the air filter

 **WARNING! Risk of device damage! Never operate the device without the air filter, otherwise damage to the motor may occur.**

- Remove the air filter housing.
- Saturate the air filter with a few drops of oil.
- Install the air filter and replace the air filter housing.

### Cleaning/replacing the spark plug

- Pull off the ignition cable plug.
- Unscrew the spark plug.
- Check the electrode for discoloration. Standard color: light brown
- Check the electrode separation.

Correct separation: 0.7mm to 0.8mm

### Cleaning the spark plug

- Remove soot deposits from the electrode with a wire brush.

# Maintenance

## Cleaning and Maintenance

### Replacing the spark plug

- Insert the cleaned or new spark plug and screw it in hand-tight.
- After screwing it in hand-tight, use the spark plug spanner to tighten the spark plug (no more than a quarter turn, as you may otherwise damage the thread).
- Replace the ignition cable plug firmly back onto the spark plug.

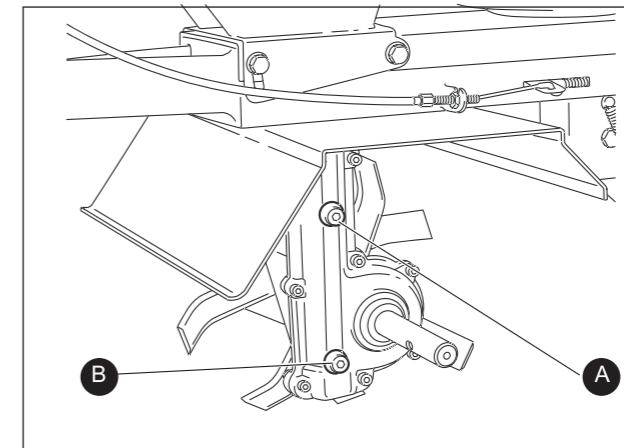


**WARNING!** Risk of device damage! Screw in the spark plug only when the motor is cold.



**WARNING!** Risk of device damage! When cleaning the spark plug, use only a wire brush with brass bristles. Bristles made from other materials damage the electrode!

## Replace worn or damaged parts for safety



### Adding gearbox oil

- Removing rotavator assembly.
- Unscrew the gearbox oil filling bolt (A) with the Allen key provided, and remove it.
- Carefully pour in gearbox oil (approx. 200ml, SAE 85W-90). Avoid spilling!
- Retighten the gearbox oil filling bolt.



Fuel: Unleaded gasoline 90# or above  
Engine oil: SAE 10W-30 grade  
SAE 10W-40 grade  
SAE 15W-40 grade

Please fill gear oil after repaired.

### Draining gearbox oil

- Hold a collection container beneath the gearbox oil drain bolt (B).
- Unscrew the gearbox oil filling bolt (A) and the gearbox oil drain bolt with the Allen key provided, and remove them.
- Allow the gearbox oil to run out completely.

# Maintenance

## Store

- Never store the equipment with gas in the tank, inside a building where fumes can reach an open flame or spark.
- Allow the engine to cool before Petrol in any enclosure.
- To reduce the fire hazard, keep the storage area.
- If the fuel tank has to be drained, this should be done Outdoors.



# Troubleshooting

## General Troubleshooting



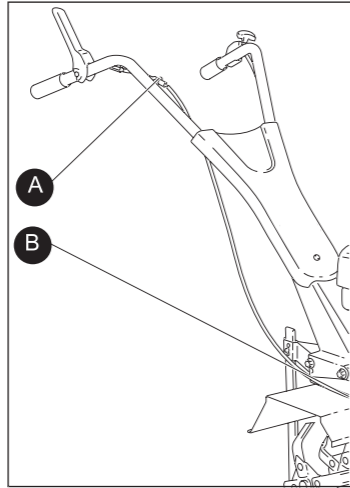
**CAUTION!** Danger of injury! Improperly conducted repairs may prevent your device from working safely. Such repairs will endanger you and your surroundings.

Minor faults are often Sufficient to cause a malfunction. In most cases, you will be able to correct these faults easily. Please start by referring to the following table before contacting our technical support. This will help you save much effort and possibly expense.

Fault/malfunction	Possible Cause	Solution
Engine will not start	Is the tank empty?	Fill with fuel
	Is the throttle set to  ?	Set the throttle to  .
	Ignition cable plug not frmly attached?	Push the plug on tightly.
	Is the ignition cable plug dirty?	Clean the plug.
	Is there excess fuel inside the combustion chamber?	Remove the spark plug, dry off the electrode, and start at full throttle.
	Spark plug dirty?	Clean the spark plug.
	The distance between the electrodes of the spark plug is too large.	Set the gap to 0.7 to 0.8 mm.
	Wrong fuel?	Drain the tank and fill it with the correct fuel.
	Spark plug defective?	Replace the spark plug.
Engine will not reach its maximum speed	Air filter dirty?	Cleaning the air flter.
	Spark plug dirty?	Clean the spark plug.
	Is the electrode separation of the spark plug too large?	Set the gap to 0.7 to 0.8 mm.
	Wrong fuel?	Drain the tank and fill with the correct fuel .
Clutch does not release	Incorrect clutch setting?	Adjust the clutch.

# Troubleshooting

## Adjusting the clutch



– Set the adjustment screws on the clutch handle (A) and on the device (B).

When the clutch handle is released, the cable must be fully loose; when the clutch handle is pulled right out, the cable must be drawn far enough that the spring on the clutch handle begins to be extended.

If you are unable to correct a fault yourself, please contact our technical support directly. Please note that improperly conducted repairs will void your rights under warranty and may cause you additional expenses.

# Technical Data

## Technical Data Table

Maximum motor output	2.1 kW
Engine	4-stroke petrol motor
Displacement	149.3 cm <sup>3</sup>
Max. Engine rotation speed	3100 min <sup>-1</sup>
Engine oil capacity	600 ml
Tank capacity	800 ml
Transmission ratio	1:35.6
Working width	400 mm
Tine rotating diameter	270 mm
Net weight (including engine)	29.5 kg
Fuel	Unleaded gasoline 90# or above
Engine oil	SAE 10W-30
Gear box oil	SAE 85W-90
Sound level	L <sub>WA</sub> =89.8 dB(A), L <sub>PA</sub> =76.1dB(A),K=1.5 dB(A)
Vibration	5.83 m/s <sup>2</sup> K=1.5 m/s <sup>2</sup>
Spark plug	RJ19LM

# Guarantee

Dear Customer,

In the unlikely event that your device develops a fault, please contact our customer service department on the telephone number shown below.

1. These guarantee terms cover additional guarantee rights and do not affect your statutory warranty rights.

Claims must be accompanied by Proof of Purchase. This must be in the form of a sales receipt or bank statement and must show that the product has been purchased within 2 years prior to the claim, from the retailer that it was originally sold to.

2. Our guarantee covers problems caused by material or manufacturing defects, and will result in the repair of these defects or replacement of the device with a like for like or similar article. Please note that our devices have not been designed for use in commercial, trade or industrial applications. Consequently, the guarantee is invalidated if the equipment is used in commercial, trade or industrial applications or for other equivalent activities.

3. The following are also excluded from our guarantee:

A) Faults due to accidents, customer misuse, or unauthorized repairs

B) Consumable Parts such as Blades/ /Spark plugs or Filters

C) Failure due to lack of routine maintenance

D) Failure as a result of not using the equipment in accordance with the manual and safety instructions

E) The adjustment of cables, drive belts, or recoil starters

4. The guarantee is valid for a period of 2 years starting from the purchase date of the device. Guarantee claims should be submitted before the end of the guarantee period within two weeks of the defect being noticed. No guarantee claims will be accepted after the end of the guarantee period. The original guarantee period remains applicable to the device even if repairs are carried out or parts are replaced. In such cases, the work performed or parts fitted will not result in an extension of the guarantee period, and no new guarantee will become active for the work performed or parts fitted. This also applies when an on-site Service is used.

5. Please keep your sales receipt in a safe place. If the defect is covered by our guarantee your device will either be repaired under the terms of guarantee or we will send you a replacement device. This device may be re-conditioned or Like for like replacement.