

CharmBe®



PETROL EARTH BORER MODEL NO: ED160A

PART NO: 3400962

OPERATION & MAINTENANCE INSTRUCTIONS



ORIGINAL INSTRUCTIONS

GC0319 ISS 1

INTRODUCTION

Thank you for purchasing this CLARKE product, designed for boring holes in soil for fence posts, reforestation, and similar operations.

Before attempting to operate the machine, it is essential that you read this manual thoroughly and carefully follow all instructions given. In doing so you will ensure the safety of yourself and that of others around you, and you can also look forward to the machine giving you long and satisfactory service.

OVERVIEW

The Earth Borer comprises two major components.....the drive mechanism, (engine and gearbox), and an auger (ordered as a separate item on page 13).

The machine is designed for one man operation, but some exertion may be necessary due to the forces involved, the type of soil being worked and the uncertainty of what lies below the surface.

Care must therefore be exercised when using the machine, as it may lurch suddenly if, for example it comes into contact with strong tree roots or grabs on dense clay etc. All of these possibilities should be considered.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

SAFETY WARNINGS

WORK AREA

1. **Keep the work area tidy and well lit.** Cluttered and dark areas invite accidents.
2. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.
3. **ALWAYS** check, before use, to ensure there are no submerged drains, water or gas pipes or electrical cables etc., that may interfere with the boring operation.
4. **ALWAYS** be alert and adopt a firm stance when handling the machine. Be prepared for the machine to jar suddenly should the auger come into contact with a submerged or heavy object, heavy clay or tree roots etc.
5. **NEVER** operate an engine driven unit in an explosive atmosphere, near combustible materials, or where there is insufficient ventilation.
6. **NEVER** start the engine in confined spaces.
7. **NEVER** use this machine for boring in landfill or soil known to contain rocks or debris.

PERSONAL SAFETY

1. **Stay alert and use common sense when operating a machine.** Do not use a machine while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating machinery may result in personal injury.
2. **Remove any adjusting key or wrench before turning the machine on.** A wrench or a key left attached to a rotating part of the machine may result in personal injury.
3. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the machine in unexpected situations.
4. **Dress properly.** Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
5. **ALWAYS** use BOTH hands to control the machine.
6. **ALWAYS** wear ear defenders/protection and safety goggles, manufactured to the latest European standards.

7. **NEVER** allow anyone without the necessary physical strength to operate this machine as it may vibrate and its handling will requires a degree of physical exertion.

MACHINE USE AND CARE

1. **Do not force the machine.** Use the correct machine for your application. The correct machine will do the job better and safer at the rate which it was designed.
2. **Do not use the machine if the switch does not turn it on and off.** Any machine that cannot be controlled with the switch is dangerous and must be repaired.
3. **Store idle tools out of the reach of children and do not allow persons unfamiliar with the machine or these instructions to operate the machine.** Machines are dangerous in the hands of untrained users.
4. **Maintain machines.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the machines operation. If damaged, have the machine repaired before use. Many accidents are caused by poorly maintained machines.
5. **Keep cutting tools sharp and clean.** Tools with sharp cutting edges are less likely to bind and are easier to control.
6. **Use the machine and accessories in accordance with these instructions and in the manner intended, taking into account the working conditions and the work to be performed.** Use of the machine for operations different from intended use could result in a hazardous situation.
7. **ALWAYS** check to ensure the auger securing bolts are tight before each use.
8. **ALWAYS** observe all safety precautions for the handling of fuel.
9. **NEVER** refuel the engine whilst it is running, and allow the engine to cool sufficiently before refuelling. Use **ONLY** recommended 2-stroke mixture.
10. **NEVER** make any adjustment or perform a service operation with the engine running.

SAFETY SYMBOLS

The following safety symbols are to be found on the product.



Read instruction manual before use



Wear eye protection



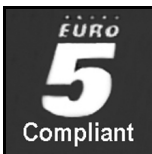
Wear gloves



Wear protective footwear



Wear ear defenders



This product meets Euro5 emission standards

ASSEMBLY

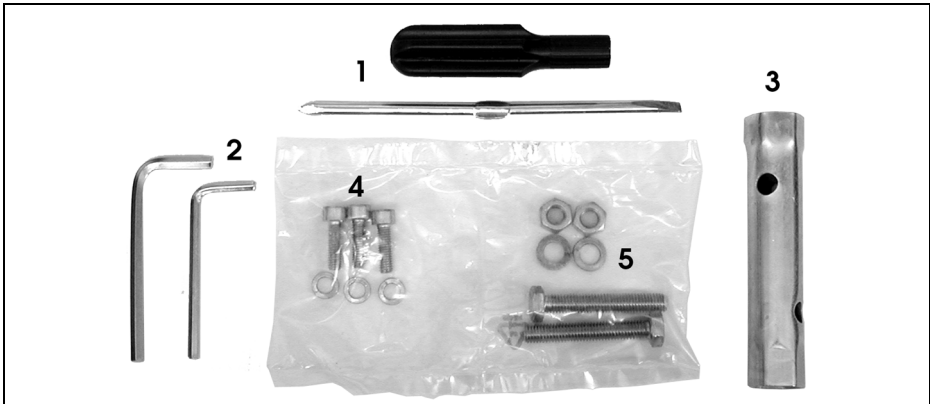
Remove the components from the packing and inspect for signs of damage which may have occurred during transit. Should any damage be apparent please inform your Clarke dealer immediately.

The carton contains the following components:

- The motor/drive assembly complete
- The handle complete with the throttle controls
- A wallet containing the items shown below

These are:

1. Double ended screwdriver blade (crosshead/ flat) plus handle
2. Hex wrenches
3. Double ended socket spanner
4. Hex head socket screws with spring washers
5. Machine screws with nuts and spring washers

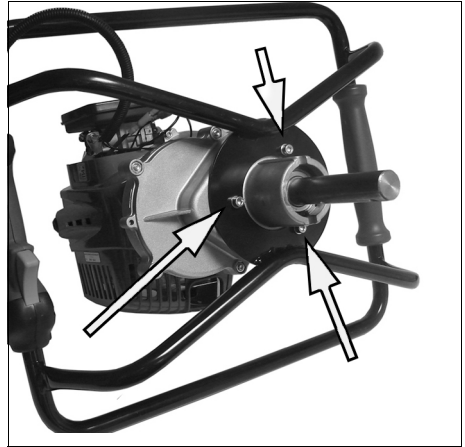


Attach the handle, throttle controls and the auger attachment as follows:

FITTING THE HANDLE

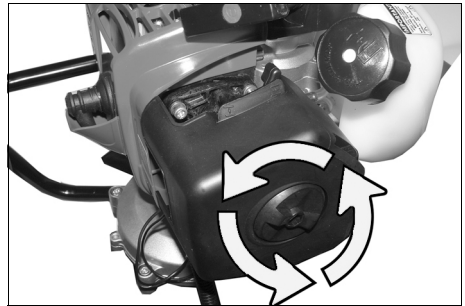
1. Attach the handle using the three socket head screws and washers provided.

NOTE: The hand controls will be located closest to the spark plug on the side of the machine.

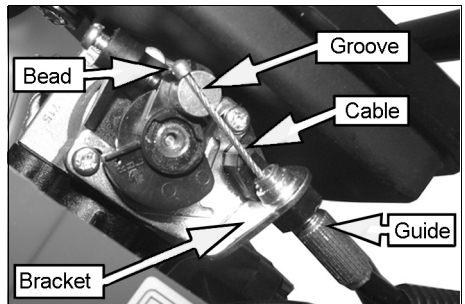


FITTING THE THROTTLE CABLE

1. Unscrew the centre cap and lift away the air filter housing in order to gain better access to the carburetor parts.

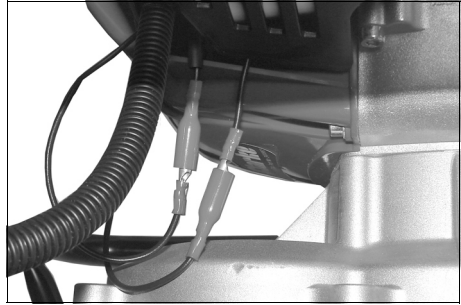


2. Pass the throttle cable through the small bracket so as to locate the cable into the groove in the swivel block on the throttle lever.
3. Ensure the bead on the end of the cable rests beyond the groove, to position the cable before screwing the threaded guide into the bracket.



4. When the cable is secure, operate the throttle lever to check for correct movement of all parts before tightening the locknut on the threaded guide to eliminate any play in the cable.

5. Connect the two cables coming from the handlebar to their corresponding connectors coming from the drive assembly.
6. Re-fit the air filter housing.



FITTING THE AUGER

1. Bolt the auger on to the output shaft using the nuts, bolts and spring washers supplied, ensuring the nuts are tight. **ALWAYS** make this check before each use.



FILLING WITH FUEL

The engine runs on a 2-stroke mixture as follows:

- 20 Parts Petrol to 1 Part 2-Stroke MINERAL oil.....or
- 50 Parts Petrol to 1 Part 2-Stroke SYNTHETIC 2-Stroke oil.

Use regular unleaded petrol mixed with 2-Stroke oil.

Mix the fuel and oil in a separate container in a well ventilated area, away from naked flame. Observe all precautions for handling fuel. **NO SMOKING** etc.

Unscrew the fuel tank filler cap (retained on a toggle) and fill the tank to an inch (25mm) below the filler neck using a funnel. Wipe away any spillage thoroughly, replace the cap on the fuel container and move the container a safe distance away.



WARNING: NEVER REFILL THE FUEL TANK WHEN THE ENGINE IS HOT....ALWAYS WAIT UNTIL IT HAS STOPPED AND COOLED DOWN SUFFICIENTLY

OPERATION

BEFORE USE

Check the security of the auger. Ensure the securing nuts are tight.

Check for fuel leaks and rectify before use.

Check for any damage and rectify before use or consult your Clarke dealer.

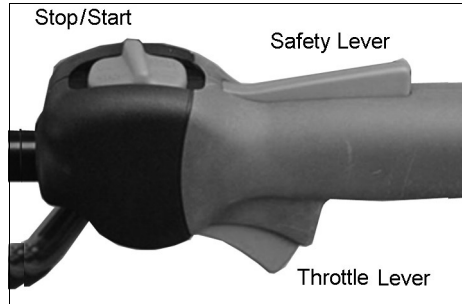
After selecting the site for the required hole, clear the area of any plant material that might get caught up in the auger as it rotates. Grasp the handle bar firmly and take a balanced, firm stance with both feet. Start the engine and allow it to run on idle for a couple of minutes to ensure it is running smoothly.

ENGINE STARTING

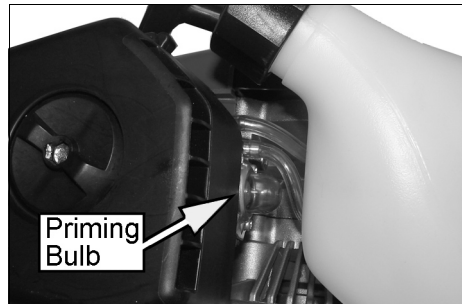
The control handle as shown, comprises three components.

- Safety Lever
- Throttle Lever
- Stop/Start Switch

The illustration shows all 3 controls in the STARTING position (both levers released and the stop/start button central).



1. Lay the machine, with the auger attached, on its side with the starter pull rope facing upwards.
2. Press the priming bulb 5-6 times until the bulb becomes full of fuel and firm to the touch.
3. Set the **Stop/Start** switch in its central (START) position.
4. Grasp the pull rope and pull sharply. If sufficiently warm, the engine should start within 2 or 3 pulls.



WARNING: DO NOT PRESS THE SAFETY OR THROTTLE LEVER ON START-UP. THIS WOULD CAUSE THE ENGINE TO START AT HIGH RPM WITH THE AUGER BIT ROTATING IMMEDIATELY AND CREATING A POTENTIALLY HAZARDOUS SITUATION.

NOTE: After the engine has started the Stop/Start button automatically returns to its central position.

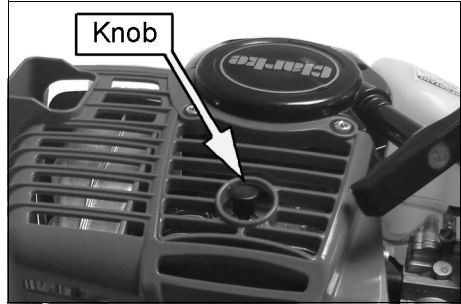
COLD STARTING

THE DECOMPRESSOR

The engine is provided with a decompression device for easy starting of a cold engine. The decompressor knob is located on top of the engine as shown.

Before attempting to start, push the knob **DOWN** fully. As soon as the engine starts, the knob will automatically reset.

Once started, allow the engine to run briefly in order to warm up, then increase engine speed momentarily using the throttle lever. The **STOP/START** switch will automatically revert to its central position and the engine will idle.

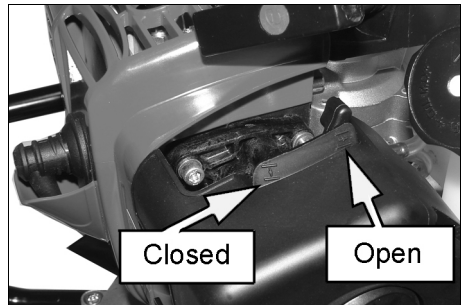


THE CHOKE

In cold conditions the choke may be used to aid starting.

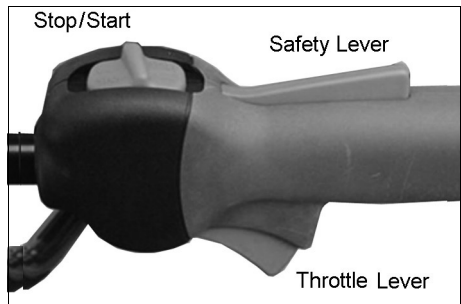
Before attempting to start, move the Choke Control lever towards the **CLOSED** position shown. You may set the lever to fully or partially closed, depending upon conditions.

Once the engine has started and warms up a little, the choke lever can be returned to the normal **OPEN** position with the engine settling at its idling speed.



NORMAL OPERATION

1. Depress the safety lever with the palm of the hand whilst pulling up the throttle lever with the fingers.
- The throttle lever will not operate until the safety lever is depressed.
2. Control the speed of the machine using the throttle lever.
- Increasing the engine speed will engage the centrifugal clutch



and cause the auger to rotate. The auger should stop rotating at Idle speed, allowing the machine to be safely handled and positioned as required.

3. **To stop the engine, release both the throttle and safety levers and set the stop/start button to the STOP position.**
4. Position the tip of the auger on the spot where the hole is to be dug and use the throttle to increase the speed of rotation. When the auger becomes full of soil, remove it from the hole and discard the spoil to one side.
 - Take care that the auger may stop suddenly if it encounters any large roots or stones which could stop the machine suddenly and make you lose control.

If the auger gets stuck, stop the engine and try twisting the auger in the reverse direction to unwind it from the obstruction. To assist with this, a tommy bar of 8 mm diameter can be used by inserting it through the hole in the base of the auger and drive shaft together and twisting the auger in the reverse direction to release it. Try to find the cause of the blockage before continuing.

MAINTENANCE

EVERY 25 HOURS OF USE

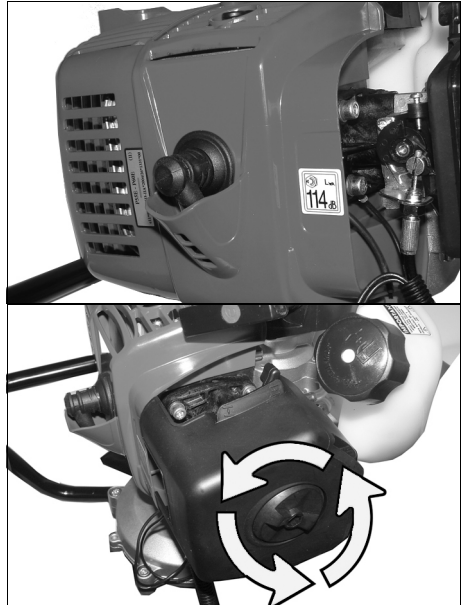
SPARK PLUG

Pull off the spark plug lead, remove spark plug, clean and set gap to 0.5 mm.

AIR FILTER

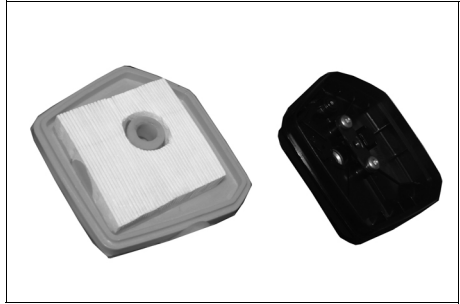
The air filter cover is secured by the centre cap on top.

Remove the cover and the sponge filter and wash in warm soapy water. Rinse thoroughly and ensure it is thoroughly dry before replacing.



Clean the cover and the housing, which is still attached to the carburetor.

Take great care NOT to allow foreign bodies to enter the carburetor intake. Moving the choke control lever to the CLOSED position, to close off the air intake, will help keep out any debris.



EVERY 50 HOURS OF USE

The machine should be serviced by a qualified technician. Please contact your Clarke dealer for advice.

STORAGE

If you do not expect to use the machine for some time then the following tasks should be undertaken before storing.

1. Empty the fuel tank completely, then start the engine and allow to run until it stops for lack of fuel. Ensure the fuel cap is replaced and is secure.
2. Remove the spark plug (see page 8) and pour into the cylinder chamber several drops of 2-stroke oil.
3. Crank the engine slowly using the starter pull rope in order to distribute oil around the cylinder and piston, then replace the spark plug.
4. Carefully clean all parts, ensuring a film of oil covers bare metal parts. Use a brush to clean the cooling fins. Oil the throttle linkage at the carburetor.
5. Store in a dry environment.

FAULT FINDING

In the event that you find difficulty in starting, or there is lack of power, it is likely that the problem lies with either fuel or ignition. The following checks will help to diagnose the problem.

1. Check to ensure the fuel tank has sufficient fuel mixed at the correct ratio shown on page 8.
2. Check to ensure there is no water contamination of the fuel. If necessary, drain the fuel tank and refill with new fuel.
3. Check the fuel line from tank to carburettor...it may be clogged.
4. Check the fuel cap. Remove the cap then replace loosely. If the engine starts, it likely that the fuel cap breather is clogged. Replace if necessary.
5. The air filter may be clogged.

6. The spark plug may be dirty or gap is excessive. Clean it and have it tested.
7. Possible ignition fault...check for a spark by removing the spark plug and with the lead attached, crank the engine with the metal part of the plug held against bare metal. **DO NOT UNDER ANY CIRCUMSTANCES TOUCH THE METAL PART OF THE PLUG. RISK OF ELECTRIC SHOCK.** The spark plug must be known to be in good condition.
8. The 'STOP' button wire may be broken or become disconnected, creating a permanent STOP condition.

Should these checks not solve the problem consult your Clarke dealer.

ACCESSORIES

A selection of augers is available as follows:

Type	Model No	Diameter	Length	Part No
Single start spiral bit	EDA100	100 mm	800 mm	3400991
Single start spiral bit	EDA150	150 mm	800 mm	3400993
Single start spiral bit	EDA200	200 mm	800 mm	3400995
Extension Piece	EDA400	n/a	400 mm	3400990

ENVIRONMENTAL PROTECTION



Recycle unwanted materials instead of disposing of them as waste. All unwanted accessories and packaging should be sorted and taken to a recycling centre for disposal in a manner which is compatible with the environment.

Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

TECHNICAL SPECIFICATIONS

Engine type	2-stroke
Capacity	53 cc
Power output	1.8 kW
Engine rpm	7000 rpm
Fuel Capacity	0.9 litres
Fuel Mix	20:1 (mineral or semi synthetic oil)
Spark Plug	Champion RCJ6Y
Starter type	Recoil
Clutch	Auto centrifugal
Output rpm	160 - 200 rpm
Vibration	14 m/s ²
Uncertainty Factor (K)	0.10 m/s ²
Sound pressure (L _{pA})	92 dB
Sound power (L _{WA})	112 dB
Uncertainty Factor (K)	2 dB
Dimensions (L x W x H)	490 x 420 x 340 mm
Weight (Drive unit only)	10.7 kg
Auger diameter	100-200 mm (see accessories page 13)
Overall length	930 mm (with auger)
Effective length	800 mm

DECLARATION OF CONFORMITY



Clarke[®]
INTERNATIONAL

Hemnal Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s):

2014/30/EU *Electromagnetic Compatibility Directive.*
2006/42/EC *Machinery Directive.*
2016/1628 *Regulation (EU), Emission of Gaseous Particulates.*

The following standards have been applied to the product(s):

EN ISO 14982:2009, EN ISO 5349-1:2004.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2019

Product Description: Petrol Earth Auger
Model number(s): ED160A
Serial / batch Number: N/A
Date of Issue: 21/02/19

Signed:

J.A. Clarke
Director

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WATER PUMPS

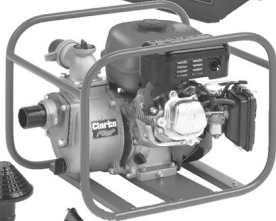
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