

Clarke®

air



3" ANGLE POLISHER

MODEL NO: CAT220

PART NO: 3110474

OPERATING & MAINTENANCE INSTRUCTIONS

UK
CA | CE

ORIGINAL INSTRUCTIONS

GC 0422

INTRODUCTION

Thank you for purchasing this CLARKE Air Polisher. The foam applicator and buffing pads with hook and loop attachment make changing between items quick and easy.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

SPECIFICATION

Model Number	CAT220
Dimensions (L x W x H)	170 x 45 x 90 mm
Backing Pad/Foam Pad/Wool Bonnet Diameter	3"/75mm
Weight	0.8 kg
Pad size	3" (75mm)
Air Inlet Size	1/4" BSP (female)
Operating Pressure	90 psi (6.2 bar)
Air Consumption	5.75 cfm average
No Load Speed	15000 rpm @ 90psi
Sound Pressure Level (LpA dB)	85 dB(A)
Sound Power Level (LwA dB)	96 dB(A)
Uncertainty Factor (K)	3
Vibration Levels	7.77 m/s ²
Uncertainty Factor	1.5 m/s ²

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice.

GENERAL SAFETY RULES



CAUTION: FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN PERSONAL INJURY, AND/OR DAMAGE TO PROPERTY.

WORK ENVIRONMENT

1. Keep the work area clean and tidy.
2. Dress appropriately - **DO NOT** wear loose clothing or jewellery. Tie long hair out of the way.
3. Keep children and visitors away - **DO NOT** let children handle the tool.
4. **DO NOT** operate the tool where there are flammable liquids or gases.

PERSONAL SAFETY

1. Stay alert and use common sense - **DO NOT** operate the air tool when you are tired or under the influence of alcohol, drugs or medication.
2. **ALWAYS** wear eye protection when using the tool - This must provide protection from flying particles from the front and the side.
3. **ALWAYS** wear ear protection when using the air tool.
4. **ALWAYS** wear a dust mask when operating this type of tool.
5. **DO NOT** overreach - Keep proper footing and balance at all times.

USE OF AIR POWERED TOOLS

1. **NEVER** use oxygen, CO₂, combustible gases or any type of bottled gas as a source of power for the tool.
2. **DO NOT** connect the air supply hose with your finger on the trigger.
3. **DO NOT** exceed the maximum pressure for the tool of 90 psi / 6.2 bar.
4. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
5. **DO NOT** use the tool for any other purpose than described in this manual.
6. Keep the air supply hose away from heat, oil and sharp edges.
7. **DO NOT** fit the tool to any stand or clamping device that may damage it.
8. The tool should be serviced at regular intervals by qualified service personnel.
9. **DO NOT** carry out any alterations or modifications to the tool.

10. **NEVER** use the tool if it is defective or operating abnormally.
11. **ALWAYS** disconnect from the air supply when:
 - Performing any maintenance.
 - The tool is not in use.
 - The tool will be left unattended.
 - Moving to another work area.
 - Passing the tool to another person.
12. Avoid damaging the tool by applying excessive force of any kind.
13. **ALWAYS** maintain the tool with care. Keep it clean for the best and safest performance.
14. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
15. **DO NOT** force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
16. This tool vibrates with use. Vibration may be harmful to your hands or arms. Stop using the tool if discomfort, a tingling feeling or pain occurs. Seek medical advice before resuming use.

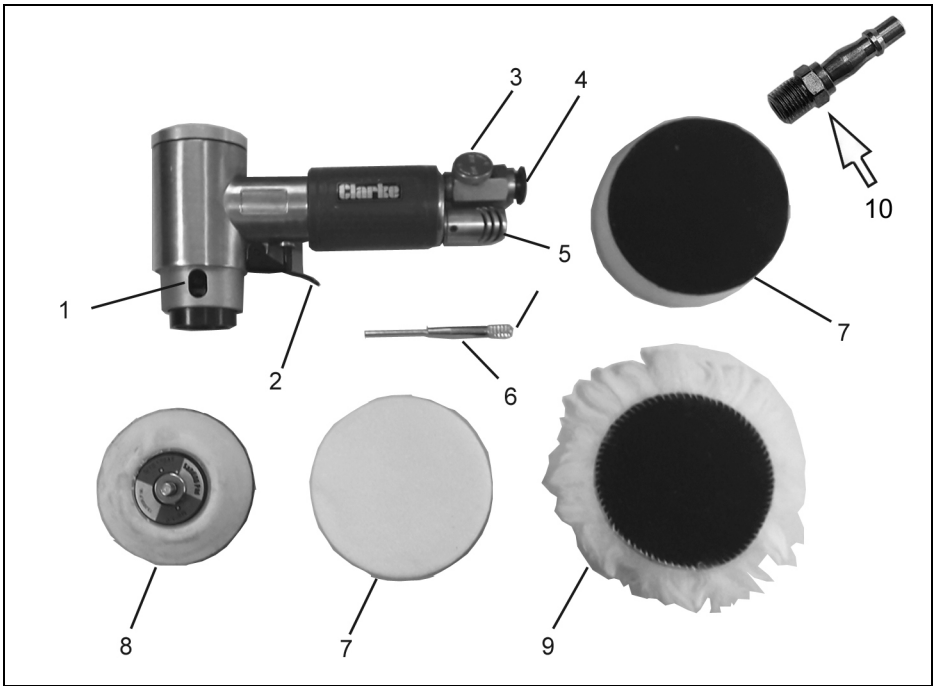
USE OF THE POLISHING TOOL

1. Try to hold the tool with both hands. Ensure that the workpiece is kept at waist height where possible. **NEVER** use the tool between the legs whilst sitting on the floor.
2. **ALWAYS** allow the tool to run up to full operating speed before applying it to the job.
3. Use clamps, or vices to hold a loose workpiece. Failure to secure the workpiece could result in personal injury.
4. Inspect the pad/mop before use. **DO NOT** use if split or torn.
5. **ALWAYS** wear a face mask as protection from airbourne particles. Avoid disturbing existing dust and minimise the scattering of dust in the worplace environment. Take steps to control the dust at the point of emission.

TRANSPORTATION AND STORAGE

1. **NEVER** carry the tool by the air supply hose.
2. **NEVER** carry the tool with your finger on the trigger.
3. When not in use the tool should be disconnected from the air supply and stored in a dry place out of the reach of children.
4. Avoid storing the tool in environments where the temperature is below 0°C.

OVERVIEW



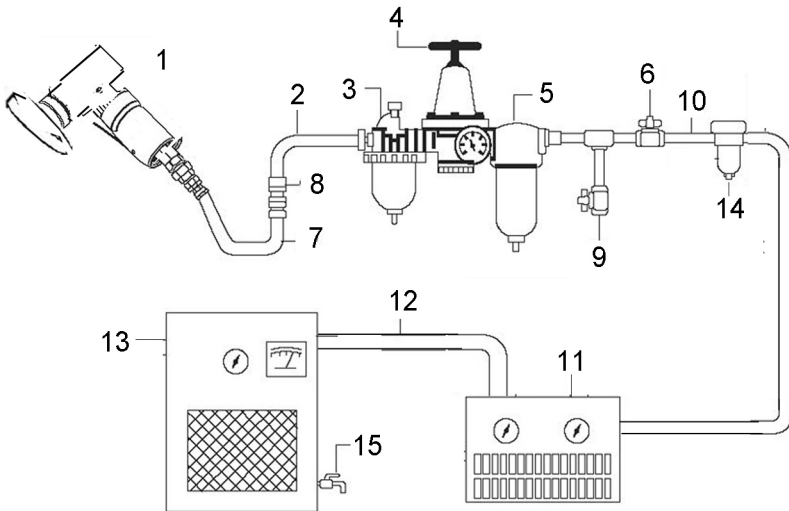
NO	DESCRIPTION	NO	DESCRIPTION
1	Spindle access port	6	Spindle Locking pin
2	Trigger	7	Foam applicator pads (coarse/fine)
3	Speed Regulator	8	Backing disc
4	Air Inlet (with travel plug)	9	Wool buffing mop
5	Air exhaust		

COMPRESSED AIR REQUIREMENTS



WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND COMPRESSED AIR SUPPLIES.

- A typical air line layout is shown below. If an automatic in-line filter/regulator is used, it will keep the tool in good condition, but should be regularly checked and topped up with oil. SAE 10 oil should be used, and the lubricator adjusted to approx 2 drops per minute.



AIR SYSTEM LAYOUT :

- | | |
|-------------------------------|-------------------------------------|
| 1. Air Tool | 9. Drain Daily |
| 2. Air Hose 3/8" (I.D.) | 10. 1/2" Or Larger Pipe And Fitting |
| 3. Oiler | 11. Air Dryer |
| 4. Pressure Regulator | 12. 1" Or Larger Pipe And Fitting |
| 5. Filter | 13. Air Compressor |
| 6. Shut Off Valve | 14. Auto Drain |
| 7. Whip Hose | 15. Drain Daily |
| 8. Coupler Body And Connector | |

- The air hose must be rated at least 150% of the maximum operating pressure of the tool
- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the tool must comply with the appropriate European Community Safety Directives.
- A build-up of moisture or oil in the air compressor will accelerate wear and corrosion in the tool. ensure any moisture is drained from the compressor daily and the inlet filter is kept clean.
- If an unusually long air hose is required, (over 8 metres), the line pressure or the hose inside diameter may need to be increased.
- NEVER exceed the maximum operating pressure for the tool. It is recommended that air pressure to this tool does not exceed 90 psi at the tool when running. Higher pressures and unclean air will shorten the life of the tool due to faster wear and is a possible safety hazard.

BEFORE USE



WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND COMPRESSED AIR SUPPLIES.

NOTE: Ensure the compressor is turned off and remove the travel plug from the inlet connection of the air tool.

1. If required, connect an in-line mini oiler to the tool.
 - A mini oiler helps to prolong the life of the air tool.
2. Connect a suitable hose with a male connector to the air inlet as shown by screwing it in as shown.
3. Connect the other end of the hose to the compressor.
4. Run the compressor at low pressure and check for leaks.
5. If a mini-oiler is not being used, run a few drops of oil through the tool before use. It can be entered through the air inlet or via the hose at the nearest connection to the air supply.



You can fit a whip hose with a quick fit coupling if required (available from your CLARKE dealer).

FITTING THE BACKING DISC

Insert the spindle locking pin through the aperture provided and into the hole in the drive spindle to stop the spindle from rotating.

Thread the backing disc into the drive spindle by turning it clockwise.

Tighten the disc using the locking pin provided to prevent the drive shaft from rotating.



ATTACHING THE PAD OR MOP

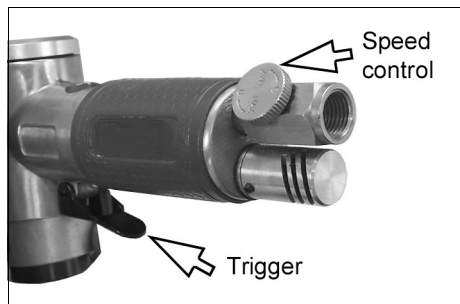
1. Select your attachment (either lambswool mop or sponge pad). Line up and centre your choice of attachment to the backing disc.
2. Press either the sponge pad or mop against the backing disc so that the hook and eye surfaces engage. Run your hand over the surface to ensure it is affixed.

OPERATION

RUNNING THE TOOL

The polisher should run at a suitable speed which can be regulated as required by turning the regulator.

- The regulator turns through 90 degrees between fully on and fully off.
1. Squeeze the trigger against the body of the tool to run.
 2. Release the trigger to stop the tool.
 - The tool will continue to rotate very briefly after the trigger has been released.
 3. ALWAYS ensure the tool has stopped before putting it down.



USING THE POLISHER

IMPORTANT: Do not add too much wax to the applicator pad, as it will increase the time and effort needed to complete the task. A saturated pad may also separate from the disc pad during use.

1. Clean the workpiece's surface to remove dust, dirt, oil or grease.
2. Place a clean foam applicator pad securely onto the backing disc.
3. Apply a smear of wax polish (not included) evenly on the clean foam applicator pad. The pad will absorb some of the wax.
4. Place the polishing pad on the workpiece and squeeze the trigger.
 - The speed is controlled by adjusting the air regulator.
5. DO NOT apply pressure to the polisher until it reaches full speed. Apply light pressure while moving the polisher across the surface in sweeping strokes, creating a criss-cross pattern. Apply any polishing wax evenly.
6. Increase the air flow if more power is needed to accomplish the task. DO NOT exceed the maximum airflow or PSI (see Specifications).
 - A larger tool may be required if the tool still does not have sufficient force at maximum pressure and sufficient airflow.
7. Add additional wax to the pad as needed. Release the trigger and allow the polisher to come to a complete stop, add a small amount wax and resume operation.
8. After the wax has been applied to the vehicle's surface, release the trigger and disconnect the air supply.
9. Allow sufficient time for wax to dry.
10. Place a clean wool buffing pad securely onto the disc.
11. Start the polisher and begin buffing off the dried wax.
12. When you have removed as much wax as you can with the polisher, release the trigger and disconnect the air supply.
13. Remove the buffing pad from the backing disc. Using the buffing pad, remove the wax from all hard-to-reach areas of the vehicle.
14. To prevent accidents, release the trigger, detach the polisher from the air supply and safely discharge any residual air pressure in the tool.

POLISHING TIPS

- DO NOT use excess pressure on the pad as this will shorten its life.
- Allow the pad to reach working speed before polishing.

- Avoid overloading the polisher. If it becomes hot during use, rest for a few minutes while it cools down.

DISCONNECTING THE AIR SUPPLY

1. DO NOT disconnect the air supply hose until the compressor has been shut down and the compressed air released.
2. Refer to the compressor instruction manual for the procedure to shut down and release the compressed air.
3. Once the pressure has been released, disconnect the air supply hose from the tool.

MAINTENANCE



WARNING: MAKE SURE THAT THE AIR TOOL IS DISCONNECTED FROM THE AIR SUPPLY BEFORE STARTING ANY CLEANING OR MAINTENANCE PROCEDURES.

DAILY

1. Before use, drain water from the air tank, air line and compressor.
2. Pour a few drops of CLARKE airline oil into the air inlet. This should be carried out regardless of whether or not an in-line mini oiler is used. If an in-line mini oiler is not used, this procedure should be repeated after every two to three hours of use.

CLEANING

1. Wash the mop after each use by hand and use mild soap with water. Hang it up to dry.
 - Store flat and allow it to regain shape.
2. Check the air inlet strainer for blockage and clean if necessary.
3. Keep the body of the tool clean and free from debris.
4. Grit or gum deposits inside the tool may also reduce its efficiency. This condition can be corrected by cleaning out the air strainer and flushing out the tool with gum solvent or oil, or failing this, the motor may require dismantling. This is better left to your CLARKE dealer.



SERVICE AND REPAIR

If the tool runs erratically or becomes inefficient although the air supply is in good order, it may be necessary to dismantle the air motor and replace any worn or damaged parts. Such servicing and repair work should be carried out by a qualified service technician.

PERFORMANCE

Please note that factors other than the tool may effect its operation and efficiency such as reduced compressor output, excessive drain on the airline moisture or restrictions in the air-line, or the use of connectors of improper size or poor condition which will reduce air supply.

**CLARKE Air Line Oil (part no. 3050825) is available from your CLARKE dealer.

STORAGE

If the tool is to be stored, or is idle for longer than 24 hours, run a few drops of CLARKE airline oil into the air inlet and run the tool for 5 seconds in order to lubricate the internal parts.

When not in use, disconnect from the air supply, clean tools and store, ensuring the blanking plug is replaced on the airline connector when the airline is disconnected.

ACCESSORIES

A wide range of accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc. Contact your CLARKE dealer for further information or CLARKE International Service Department.



The in-line oiler is placed between the air tool and air supply and will prolong the life of the tool.



An in-line filter will remove moisture from the air supply



A mini air regulator will maintain a constant output pressure



In-line lubricators automatically provide the necessary oil to keep air tools in good condition

Air hoses are available in a range of lengths including



BLACK RUBBER AIR HOSE
Complete with connections, this hose is available in lengths from 10m to 50m



RECOIL HOSE
Ideal for DIY and professional use, this recoil hose is available in a range of lengths

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	<ol style="list-style-type: none"> 1. Excessive pressure on tool. 2. Motor parts worn. 3. Worn or sticking mechanism due to lack of lubricant. 	<ol style="list-style-type: none"> 1. Reduce the force applied to the tool. 2. Return to your CLARKE dealer for repair. 3. Drip air tool lubricating oil into air inlet. Allow oil to soak moving parts before using.
Tool runs slowly. Air flows weakly from exhaust.	<ol style="list-style-type: none"> 1. Motor parts jammed with gum/dirt. 2. Regulator in closed position. 3. General airflow blocked by dirt. 	<ol style="list-style-type: none"> 1. Examine inlet air filter for cleanliness. 2. Adjust regulator to open position. 3. Operate tool in short bursts.
Tool will not run. Air flows freely from exhaust.	<ol style="list-style-type: none"> 1. Motor vanes stuck due to buildup of foreign material. 	<ol style="list-style-type: none"> 1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts
Loss of power or erratic performance.	<ol style="list-style-type: none"> 1. Excess demand on air supply. Wrong size or type of inlet connectors. 2. Moisture or other restriction in airline 3. Compressor supplies insufficient air. 4. Air hose leaks. 	<ol style="list-style-type: none"> 1. Isolate other air tools in use. Check air hose and confirm correct fittings. 2. Vent system and ensure air reservoir and airline are free of water. Insert oil into tool and run briefly. Confirm no water is expelled. 3. Ensure flow rate is adequate for the size of air tool. 4. Tighten and seal fittings.
Tool will not shut off.	<ol style="list-style-type: none"> 1. Throttle O-rings damaged or ill-fitting in seat. 	<ol style="list-style-type: none"> 1. Return to your CLARKE dealer for repair.

DECLARATIONS OF CONFORMITY



Clarke®
INTERNATIONAL

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

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):
2006/42/EC Machinery Directive

The following standards have been applied to the product(s):
EN ISO 1148-8:2011

The technical documentation required to demonstrate that the product(s) meet(s) the requirements 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: 2022

Product Description: 3" Air Polisher Kit
Model number(s): CAT220
Serial / batch Number: N/A
Date of Issue: 30/03/2022

Signed:

J.A. Clarke
Director

CAT220 CE Clarke DOC 033022

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INTERNATIONAL

Hemncill Street, Epping, Essex CM16 4UG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following statutory requirement(s):
Supply of Machinery (Safety) Regulations 2008

The following standards have been applied to the product(s):
EN ISO 1148-8:2011

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

The UKCA mark was first applied in: 2022

Product Description: 3" Air Polisher Kit
Model number(s): CAT220
Serial / batch Number: N/A
Date of Issue: 30/03/2022

Signed:

J.A. Clarke
Director

CAT220 UKCA Clarke DOC 033022

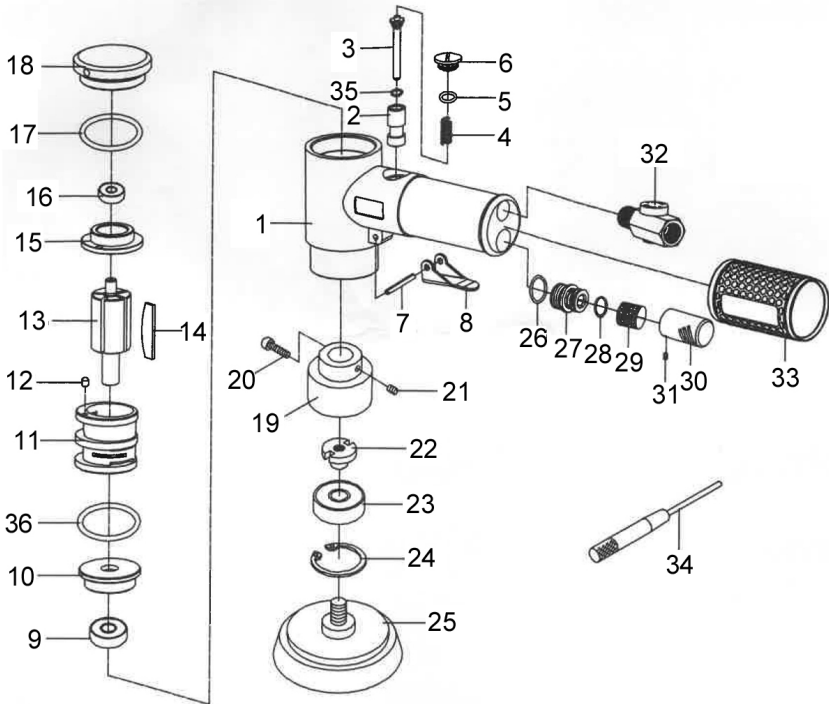
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PARTS LIST

No	Description
1	Main housing
2	Bush
3	Valve pin
4	Spring
5	O-ring
6	Screw cap
7	Trigger pin
8	Trigger
9	Bearing
10	Front plate
11	Cylinder
12	Pin
13	Rotor
14	Rotor blade
15	Rear plate
16	Bearing
17	O-ring
18	Top cover

No	Description
19	Eccentric wheel
20	Screw
21	Grub screw
22	Drive spindle
23	Bearing
24	Circlip
25	Backing disc
26	O-ring
27	Muffler stand
28	O-ring
29	Muffler liner
30	Muffler
31	Grub screw
32	Air regulator
33	Soft grip
34	Spindle locking pin
35	O-ring
36	O-ring

PARTS DIAGRAM



GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required 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.

A SELECTION FROM THE VAST RANGE OF

Clarke®

QUALITY PRODUCTS



AIR COMPRESSORS

From DIY to industrial, Plus air tools, spray guns and accessories.

GENERATORS

Prime duty or emergency standby for business, home and leisure.

POWER WASHERS

Hot and cold, electric and engine driven - we have what you need

WELDERS

Mig, Arc, Tig and Spot. From DIY to auto/industrial.

METALWORKING

Drills, grinders and saws for DIY and professional use.

WOODWORKING

Saws, sanders, lathes, mortisers and dust extraction.

HYDRAULICS

Cranes, body repair kits, transmission jacks for all types of workshop use.

WATER PUMPS

Submersible, electric and engine driven for DIY, agriculture and industry.

POWER TOOLS

Angle grinders, cordless drill sets, saws and sanders.

STARTERS/CHARGERS

All sizes for car and commercial use.

PARTS & SERVICE: 0208 988 7400

Parts Enquiries
Parts@clarkeinternational.com

Servicing & Technical Enquiries
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