

# Clarke®

## air



## 3/8" AIR DRILL

MODEL NO: CAT116

PART NO: 3110872

## OPERATING & MAINTENANCE INSTRUCTIONS



ORIGINAL INSTRUCTIONS

GC0220 - rev 2

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## **INTRODUCTION**

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Thank you for purchasing this CLARKE Air Drill.

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.

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## **IMPORTANT**

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Please read all of the safety and operating instructions carefully before using this product. Please pay particular attention to all sections of these instructions that display warning symbols and notices.

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## **GUARANTEE**

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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.

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# GENERAL SAFETY RULES

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

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## 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.
5. Keep the air supply hose away from heat, oil and sharp edges.
6. Do not fit the tool to any stand or clamping device that may damage it.

## USE

1. Stay alert and use common sense - do not operate the drill when you are tired or under the influence of alcohol, drugs or medication.
2. Always wear eye protectors when using the drill - eye protectors must provide protection from flying particles from the front and the side.
3. Always wear ear protectors when using the drill.
4. Do not overreach - keep proper footing and balance at all times.
5. Never use any type of bottled gas as a source of power for the drill.
6. Do not connect the air supply hose with your finger on the trigger of the drill.
7. Do not exceed the maximum pressure for the drill 90 psi / 6.2 bar.
8. Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
9. Do not use the tool for any other purpose than that described in this manual.
10. Do not carry out any alterations or modifications to the tool.
11. Always disconnect from the air supply when:
  - Performing any maintenance
  - The tool is not in use.

- The drill will be left unattended.
  - Moving to another work area.
  - Passing the drill to another person.
12. Never use the tool if it is defective or operating abnormally.
  13. The drill should be serviced at regular intervals by qualified service personnel.
  14. Avoid damaging the drill for example by applying excessive force of any kind.
  15. ALWAYS maintain the tool with care. Keep it clean for the best and safest performance.
  16. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
  17. DO NOT force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
  18. Do not remove any labels. Damaged labels should be replaced.
  19. 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.

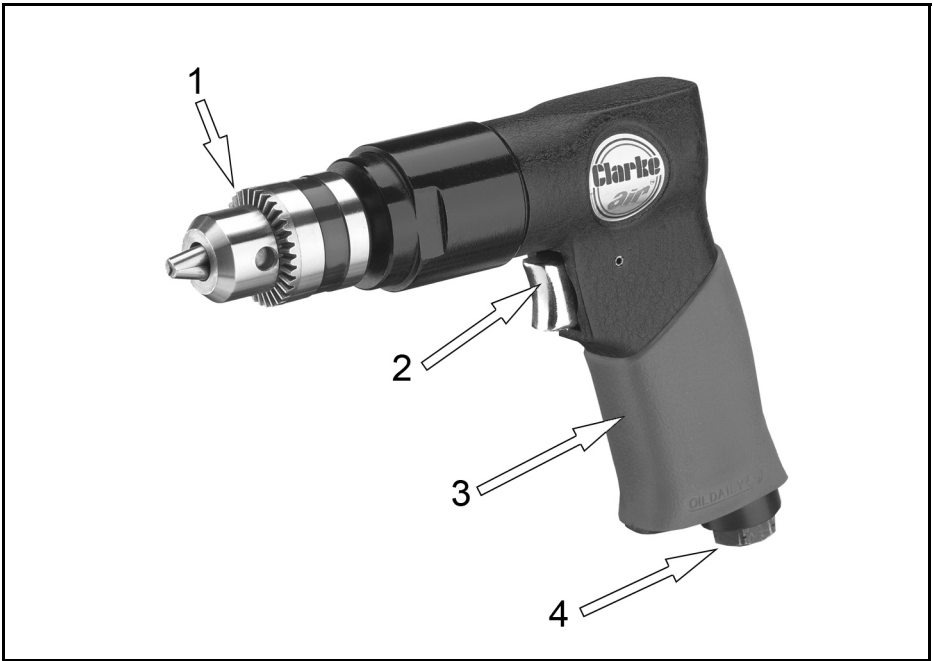
## **TRANSPORTATION**

1. Never carry the drill by the air supply hose.
2. Never carry the drill with your finger on the trigger.

## **STORAGE**

1. When not in use the drill must be disconnected from the air supply and stored in a dry place out of the reach of children (preferably in a locked cabinet).
2. Avoid storing the drill in environments where the temperature is below 0°C.

# OVERVIEW



NO	DESCRIPTION	NO	DESCRIPTION
1	Chuck	3	Handle
2	Trigger	4	1/4" BSP (Female Air Inlet)

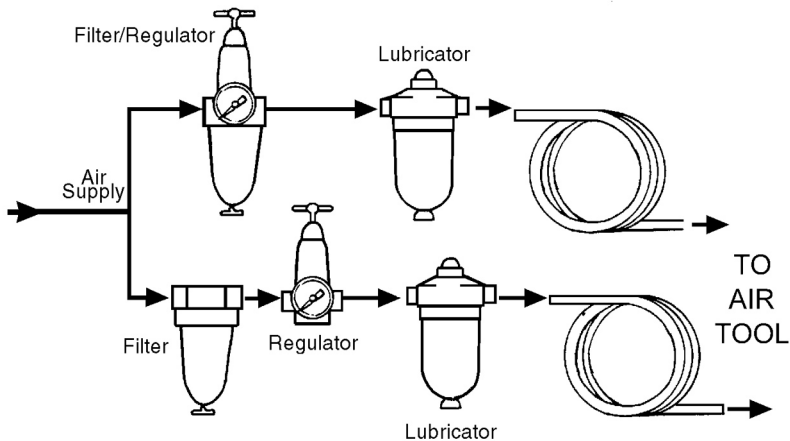
# THE COMPRESSED AIR SUPPLY

## AIR SUPPLY REQUIREMENTS



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

- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the impact wrench 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 impact wrench. 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.
- The air hose must be rated at least 150% of the maximum operating pressure of the tool.



- A typical air line layout is shown above. 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.
- The minimum hose diameter should be 5/16" (8mm) ID and fittings should have the same internal dimensions.

- 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.

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## BEFORE USE

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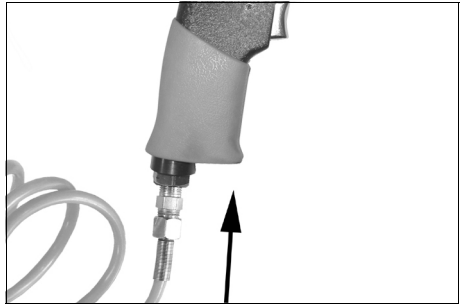


**WARNING: COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF AIR COMPRESSORS AND COMPRESSED AIR SUPPLY.**

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**NOTE:** Ensure the compressor is turned off.

1. If required, connect an in-line mini oiler to the tool.
  - A mini oiler helps to prolong the life of the air tool. Remove the oil fill screw from the side of the mini oiler and fill with Air-line Oil available from your CLARKE dealer. Replace the screw before using the tool.
2. 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 inlet strainer or via the hose at the nearest connection to the air supply.
3. Connect a suitable hose as shown.
4. Connect the other end of the hose to the compressor.
5. Turn on the air supply and check for air leaks. Rectify any found before proceeding
6. Your air tool is now ready for use.



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

# OPERATION

## OPERATING THE AIR DRILL

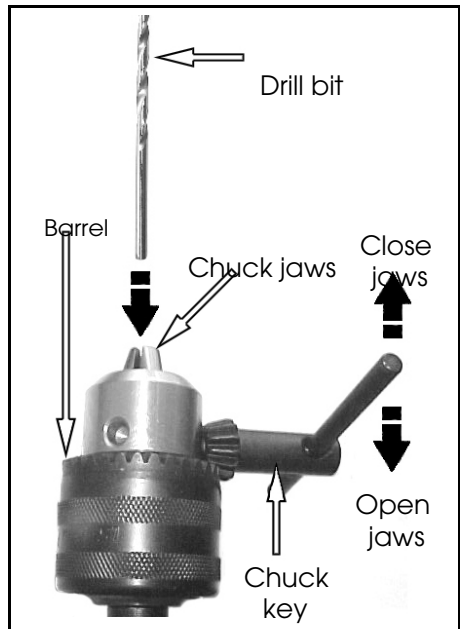


**WARNING: MAKE SURE THAT THE CHUCK KEY HAS BEEN REMOVED BEFORE USING THE DRILL.**

1. Squeeze the trigger to start the drill.
2. Wait until the drill is running at its maximum speed before applying it carefully to the workpiece.
3. Release the trigger to stop.
4. Always ensure the drill has stopped before putting it down.

## INSERTING/REMOVING THE DRILL BIT

1. Open the chuck jaws by inserting the chuck key in one of the holes in the chuck and turning it as shown.
2. Make sure that the head of the chuck key is located on the barrel of the chuck.
3. Turn the chuck key until the chuck jaws are open sufficiently to take the drill bit.
4. Place the drill bit in the jaws of the chuck as far as it will go.
5. Close the chuck jaws and tighten to grip the drill bit by turning the chuck key as shown.
6. Make sure that the chuck jaws are fully closed and that the drill bit is held firmly.
7. Your air drill is now ready for use.



## DISCONNECTING THE AIR SUPPLY

Do not disconnect the air supply hose until the compressor has been shut down and the compressed air released.



1. Refer to the compressor instruction manual for the procedure to shut down and release the compressed air.
2. Once the pressure has been released, disconnect the air supply hose from the air drill.

Store the tool safely in its box in a dry, secure environment.

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# MAINTENANCE

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

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## DAILY

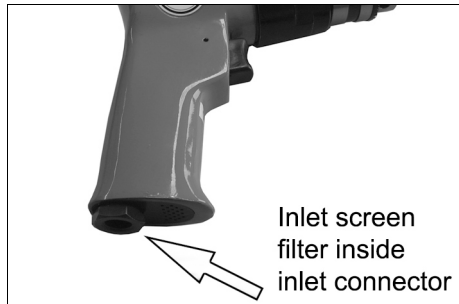
- Before use, drain water from the air tank, air line and compressor.
- Pour a few drops of CLARKE airline oil, into the air inlet. This should be carried out regardless of whether or not an in-line mini oiler is used. If an in-line mini oiler is not used, this procedure should be repeated after every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

## WEEKLY

- Check the air inlet screen filter for blockage and clean if necessary.

## CLEANING

1. Keep the body of the tool clean and free from debris.
2. Grit or gum deposits in the tool may also reduce efficiency. This condition can be corrected by cleaning the air strainer and flushing out the tool with gum solvent oil, or failing this, the tool should be disassembled, thoroughly cleaned, dried and reassembled.
3. After extensive use, remove the inlet screen filter and flush out the mechanism with gum solvent oil or an equal mixture of SAE No10 oil and paraffin. Allow to dry before use.
4. Clean the air inlet filter screen inside the hose adaptor.
5. If the tool runs erratically or becomes inefficient, and the air supply is of good quality, it may be necessary to dismantle the air motor and replace worn or damaged parts. You may prefer to take the tool to your CLARKE dealer if internal maintenance is required.



Your Clarke air tool has been designed to give long and trouble free service. If, however, having followed the instructions in this booklet carefully, you encounter problems, take the unit to your local Clarke dealer.

## **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 air line 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 air supply, clean & store in a safe, dry place.

## **ACCESSORIES**

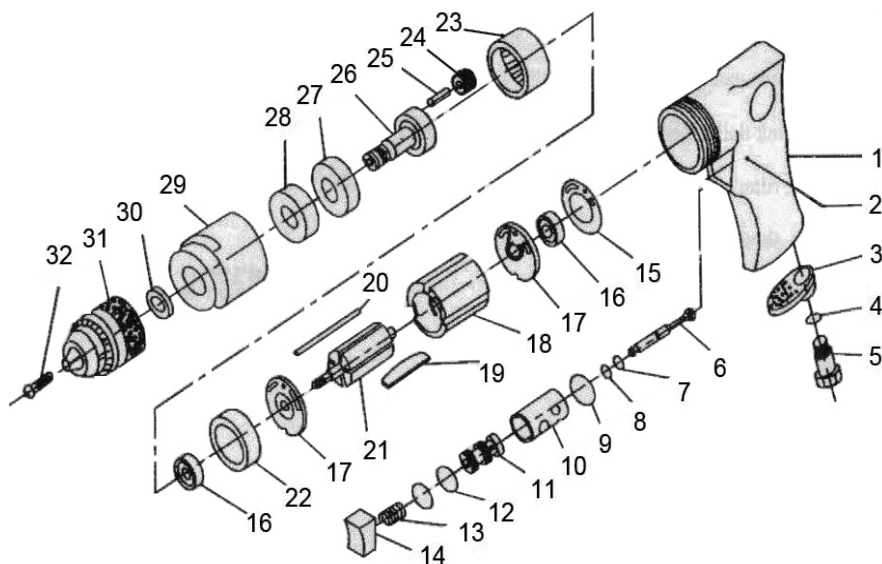
A wide range of accessories is available including filter/regulators, lubricators, high-pressure hoses (5 to 50 metres) etc.

Contact your CLARKE dealer for further information or CLARKE International Service Department on 01992 565333.

# TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	<ol style="list-style-type: none"> <li>1. Excessive pressure on drill.</li> <li>2. Motor parts worn.</li> <li>3. Worn or sticking mechanism due to lack of lubricant.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the force applied to the drill.</li> <li>2. Return to Clarke dealer for repair.</li> <li>3. Drip air tool lubricating oil into air inlet. Allow oil to soak moving parts before using.</li> </ol>
Tool runs slowly. Air flows weakly from exhaust.	<ol style="list-style-type: none"> <li>1. Motor parts jammed with gum/dirt.</li> <li>2. Regulator in closed position.</li> <li>3. General airflow blocked by dirt.</li> </ol>	<ol style="list-style-type: none"> <li>1. Examine inlet air filter for cleanliness.</li> <li>2. Adjust regulator to open position.</li> <li>3. Operate tool in short bursts.</li> </ol>
Tool will not run. Air flows freely from exhaust.	<ol style="list-style-type: none"> <li>1. Motor vanes stuck due to buildup of foreign material.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disconnect air supply and rotate tool assembly manually.</li> <li>2. Try operating tool in short bursts.</li> <li>3. Tap motor housing gently with a rubber mallet.</li> <li>4. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.</li> </ol>
Tool will not shut off.	<ol style="list-style-type: none"> <li>1. Throttle O-rings damaged or ill-fitting in seat.</li> </ol>	<ol style="list-style-type: none"> <li>1. Return to Clarke dealer for repair.</li> </ol>

## PARTS LIST & DIAGRAM



No	Description
1	Housing
2	Roll Pin
3	Exhaust Deflector
4	O-Ring
5	Air Inlet
6	Valve Stem
7	O-Ring
8	O-Ring
9	O-Ring
10	Bush
11	Reverse Selector
12	O-Ring
13	Spring
14	Trigger
15	End Plate
16	Bearing

No	Description
17	End Plate
18	Cylinder
19	Rotor Blade
20	Steel Wire
21	Rotor Body
22	Front Support
23	Gear Wheel
24	Idler Gear
25	Pin
26	Drive Shaft
27	Bearing
28	Bearing
29	Nose Clamping Nut
30	Washer
31	Chuck (3/8")
32	Chuck Securing Screw

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## SPECIFICATION

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<b>Model Numbers</b>	<b>CAT116</b>
Min. Hose Size (ID)	10 mm
Chuck Size	1.5 - 10 mm
Operating Air Pressure	90 psi (6.2 bar)
Air Consumption	6 cfm
Max Speed	1800 rpm
Air Inlet Size	1/4" BSP
Sound Pressure Level (LpA dB)	86.5 dB(A)
Sound Power Level (LwA dB)	97.5 dB(A)
Vibration Levels	1.2 m/s <sup>2</sup> (K=0.41 m/s <sup>2</sup> )
Dimensions (L x W x H)	191 x 42 x 144 mm
Weight	1.27 kg

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. Always consult the machine's data plate.

# DECLARATION OF CONFORMITY



**Clarke**<sup>®</sup>  
**INTERNATIONAL**

Hemnall 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):**

2006/42/EC                      *Machinery Directive.*

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

*EN ISO 1148-3:2012*

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: 2008

**Product Description:**                      3/8 Air Drill  
**Model number(s):**                          CAT116  
**Serial / batch Number:**                      N/A  
**Date of Issue:**                                16/12/2019

**Signed:**

J.A. Clarke  
Director

# A SELECTION FROM THE VAST RANGE OF

# Clarke®

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