Clarke®

X-PRO

3/4”HD IMPACT WRENCH

MODEL NO: CAT163

PART NO: 3120177

OPERATING & MAINTENANCE INSTRUCTIONS

UK CA | CE

ORIGINAL INSTRUCTIONS

GC02/22 Rev 2

INTRODUCTION

Thank you for purchasing this CLARKE Impact Wrench. 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.

Please keep these instructions in a safe place for future reference.

SPECIFICATION

Dimensions (L x W x H)	235 x 102 x 262
Weight	7.15 kg
Drive size	3/4" square
Min. Hose Size (ID)	8 mm (5/16")
Air Inlet Size	3/8"BSP Female
Recommended Hose size	13 mm
Operating Pressure	90 psi (6.2 bar)
Air Consumption	40 cfm (max load) (8.5 cfm average)
Max Torque	1800 Nm (1373 Ft.lb)
No Load Speed	4200 rpm @ 90psi
Speed Settings & RPM	
Forward/Reverse 1	700
Forward/Reverse 2	3950
Forward/Reverse 3	4200
Sound Pressure Level (LpA dB)	91 dB(A)
Sound Power Level (LwA dB)	102 dB(A)
Vibration Levels	15.5 m/s^2 (Uncertainty K = 2.0$m/s^{2)}$

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.

USE OF AIR POWERED TOOLS

1. Stay alert and use common sense - do not operate the wrench when you are tired or under the influence of alcohol, drugs or medication.
2. Always wear eye protectors when using the tool - Eye protection must provide protection from flying particles/objects from the front and the side. Ear protectors should also be worn.
3. Do not overreach - Keep proper footing and balance at all times.
4. Never use any type of bottled gas as a source of power for this tool.
5. Do not connect the air supply hose with your finger on the trigger.
6. Do not exceed the maximum pressure for the wrench 90 psi / 6.2 bar.
7. Check hoses for leaks or worn condition before use and ensure that all connections are secure.
8. Keep the air supply hose away from heat, oil and sharp edges.
9. Do not use the tool for any other purpose than that described in this manual.
10. Do not fit the tool to any stand or clamping device that may damage it.
11. Do not carry out any alterations or modifications to the tool.
12. 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.

13. Never use the tool if it is defective or operating abnormally.
14. The tool should be serviced if required by qualified service personnel.
15. Avoid damaging the tool for example by applying excessive force.
16. ALWAYS maintain the tool with care. Keep it clean for the best and safest performance.
17. Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
18. Do not force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
19. Do not remove any labels. Damaged labels should be replaced.
20. 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.

IMPACT WRENCH SAFETY INSTRUCTIONS

1. Always use the impact wrench as described in these instructions.
2. Always ensure the wrench is not moving and disconnected from the air supply when changing sockets etc. Use only Impact Wrench sockets....DO NOT use standard sockets.
3. Always finish tightening wheel nuts or engine parts with a torque wrench or suitable spanner to the correct torque as recommended by the vehicle manufacturer.
4. Always avoid excessive use of the impact wrench. When tightening a nut or bolt, only allow the wrench to impact briefly to avoid overtightening.
5. Always ensure that the socket is correctly installed before switching on.
6. Always only use sockets which are specified for impact wrench use.
7. Due to the possible presence of asbestos dust from vehicle brake linings, always wear suitable respiratory protection.
8. Always disconnect from the air supply when changing sockets or when the wrench is not required for immediate use to avoid accidental starting
9. Never carry the wrench by the air supply hose.
10. Always use both hands to control the wrench.
11. Always ensure the wrench has stopped before putting it down.

SAFETY SYMBOLS

Please read all of the safety and operating instructions carefully before using this product. The following safety symbols are to be found on the machine.

	Read this instruction booklet carefully before use.		Wear ear protection
	Wear eye protection		.

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.

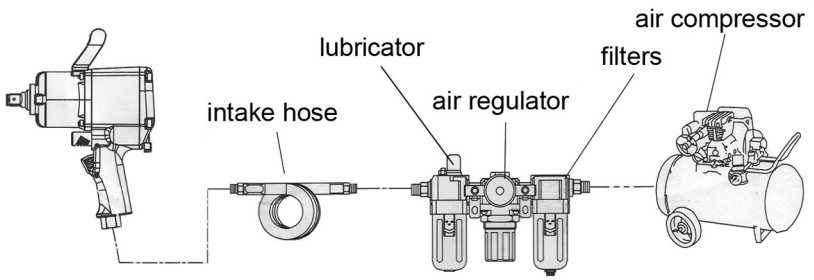
This guarantee does not effect your statutory rights.

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.

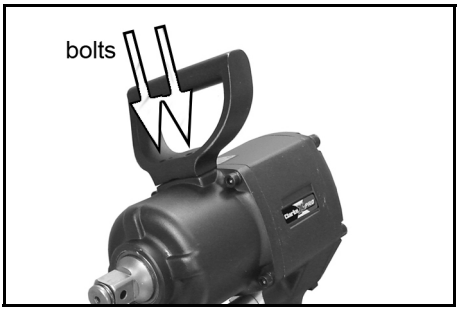
- Use only clean, dry, regulated compressed air as a power source.
- Air compressors used with the tool must comply with the appropriate European Community Safety Directives.
- A build-up of moisture or oil in the air compressor will accelerate wear and corrosion in the tool. ensure any moisture is drained 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.
- The air hose must be rated at least 150% of the maximum operating pressure of the tool.



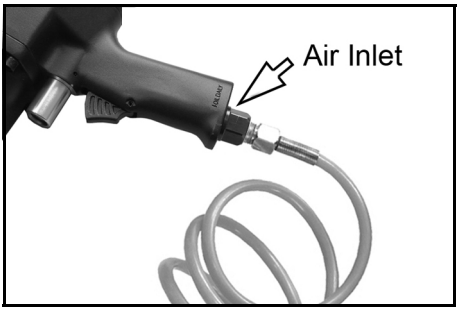
- A typical air line layout is shown above. If an automatic in-line filter/ regulator is used, it will keep the tool in good condition, but should be regularly checked and topped up with oil. SAE 10 oil should be used and the lubricator adjusted to approx 2 drops per minute.
- The minimum hose diameter should be 13mm 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.

BEFORE USE

1. Fit the handle as shown using the bolts provided.
   - A hex key is supplied for this purpose.



2. Remove the protective plug from the air inlet port and connect a suitable hose as shown.
3. Connect the other end of the hose to the compressed air supply.
4. Turn on the air supply and check for air leaks. Rectify any found before proceeding.
   - PTFE tape may be useful for sealing threaded connections.



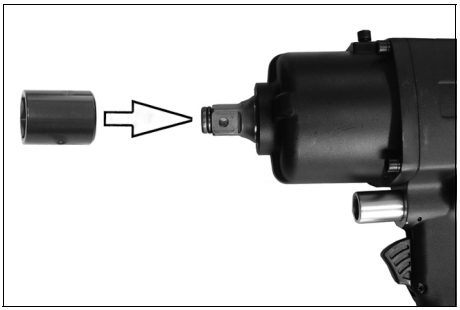
5. If required, connect an in-line mini oiler to the tool.
   - A mini oiler helps to prolong the life of the air tool.
6. If a mini-oiler is not being used, run a few drops of oil through the tool before use. It can be entered through the airline inlet or via the hose at the nearest connection to the air supply.
7. A gauze filter is fitted within the air inlet. Ensure this filter is always in place and is kept clean. An air line is connected to the adapter, preferably via a quick release coupling (not supplied).
8. Ensure the trigger is NOT depressed when connecting the air line.
   - 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

FITTING AN IMPACT SOCKET

WARNING: NEVER USE STANDARD SOCKETS. THESE MAY SHATTER WITH SERIOUS CONSEQUENCES. ONLY USE IMPACT SOCKETS DESIGNED FOR USE WITH IMPACT TOOLS.

1. Select the impact socket you require, which must be in good condition and fit the tool exactly.
2. Push the socket onto the square drive shaft.

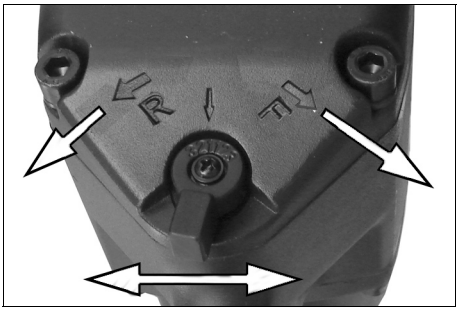


SETTING THE FORWARD/REVERSE ROTATION

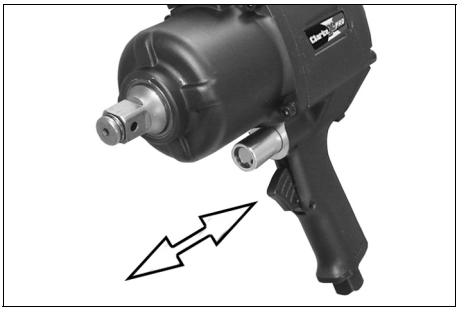
WARNING: WAIT UNTIL THE ANVIL HAS STOPPED ROTATING BEFORE OPERATING THE FORWARD/REVERSE BUTTON.

Forward/Reverse rotation is selected by pushing the combined Forward/ Reverse knob/power regulator in the direction shown by the arrow on the back of the wrench.

1. For normal tightening, the wrench should be operated in the forward (F) direction at position 1, 2 or 3.
2. For loosening, the wrench should be operated in the reverse (R) direction.

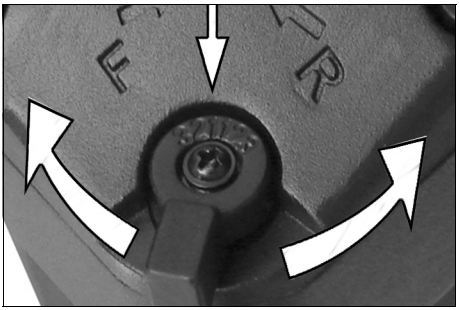


OPERATING THE IMPACT WRENCH



1. Locate the socket over the nut to be tightened or loosened.
2. Squeeze the trigger to start and release the trigger switch to stop the wrench.
    - The square drive will continue to rotate very briefly after the trigger has been released.

ADJUSTING THE SPEED



1. To adjust the speed, set the lever to one of the 3 settings available. (Setting 1-Low, 3- High).
    - These numbers are only for reference and do not denote a specific amount of power.
2. For maximum power when removing stubborn nuts, set the wrench to its highest setting.
3. Where the torque setting is critical, the final tightening of nuts or bolts must be done by hand using a calibrated torque wrench.

LOOSENING A WHEEL NUT

1. Remove any wheel trim, before selecting the appropriate socket and placing firmly on the square drive of the wrench.
2. With the FORWARD/NEUTRAL/REVERSE switch in the REVERSE running position, and holding the wrench firmly in BOTH HANDS, pull the trigger. The nut will be impacted repeatedly until it is loosened. **IMPORTANT!** Release the trigger as soon as the nut begins to loosen.
3. Jack up the vehicle according to the vehicles handbook so that the wheel is clear of the ground, then proceed to fully undo the wheel nuts.
4. Soak rusted nuts in penetrating oil, and break rust seal before twisting off with the wrench.

WARNING: ENSURE THAT THE CORRECT SOCKET IS BEING USED FOR THE NUTS ON YOUR PARTICULAR VEHICLE. AN INCORRECT SOCKET SIZE IS LIKELY TO DAMAGE THE HEADS OF THE BOLTS/NUTS.

TIGHTENING A NUT

1. Start the nut by hand, ensuring it is not cross threaded, then with the appropriate socket installed on the wrench, place it on the nut.
2. With the FORWARD/NEUTRAL/REVERSE selector in the clockwise (FORWARD) running position, and holding the wrench firmly in BOTH HANDS, pull the trigger.
3. Run each nut up in turn until it is 'nipped' up only - do not tighten. When all nuts are nipped up, tighten progressively by pulling the trigger fully and allowing the action to operate briefly to prevent overtightening.
4. ALWAYS finish tightening with a torque wrench. The weight of the vehicle will need to be placed on the wheel to prevent it from rotating while the nuts are tightened. Ensure the final torque applied to the nuts meets the vehicle manufacturer's recommendations.

DISCONNECTING THE AIR SUPPLY

1. Do not disconnect the air supply hose until the air supply 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 wrench.

MAINTENANCE

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

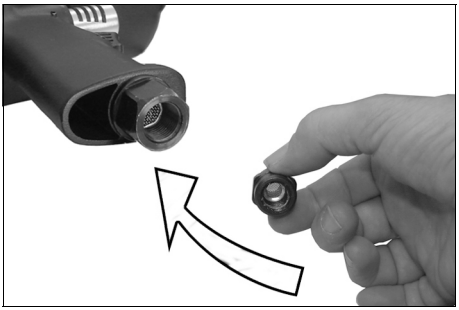
Please note that factors other than the tools condition may effect its operation and efficiency, such as reduced compressor output, excessive drain on the airline, moisture or restrictions in the air-line, or the use of connectors of improper size or poor condition which will reduce air supply.

DAILY

1. Before use, drain water from the air-line and compressor.
2. Lubricate the air tool daily for optimum performance. Use a high quality airline oil either via a lubricator in the air supply system or by placing a few drops into the air inlet immediately before use. This should be carried out regardless of whether or not an in-line lubricator is used.

CLEANING & OVERHAUL

1. If the wrench becomes sluggish and the air supply is of good quality, it may be necessary to replace worn or damaged parts.
2. Grit or gum deposits in the mechanism may eventually reduce efficiency. This condition can be corrected by cleaning the air inlet filter and flushing out the tool with gum solvent oil or an equal mixture of SAE No10 oil and paraffin.



3. Failing this, the tool may be dismantled by unfastening the bolts and removing the rear cover prior to replacing any worn or damaged parts. You may prefer to take the tool to your Clarke dealer if internal maintenance is required.
4. While is a dismantled state, it may be desirable to grease the hammer mechanism and applying a small amount of good quality bearing grease.
    - This may be better left to 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 depress the trigger in order to lubricate the internal parts.

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. Avoid storing in a damp environment.

TROUBLESHOOTING

SYMPTOM	PROBLEM	SOLUTION
Tool runs at normal speed but slows down under any load.	1. Excessive pressure on drill. 2. Motor parts worn. 3. Worn or sticking mechanism due to lack of lubricant.	1. Reduce the force applied to the drill. 2. Return to 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.	1. Motor parts jammed with gum/dirt. 2. Regulator in closed position. 3. General airflow blocked by dirt.	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.	1. Motor vanes stuck due to buildup of foreign material.	1. Disconnect air supply and rotate tool assembly manually. 2. Try operating tool in short bursts. 3. Tap motor housing gently with a rubber mallet. 4. Drip a few drops of air tool lubricating oil into air inlet to soak moving parts.
Tool will not shut off.	1. O-rings damaged or ill-fitting in seat.	1. Return to Clarke dealer for repair.

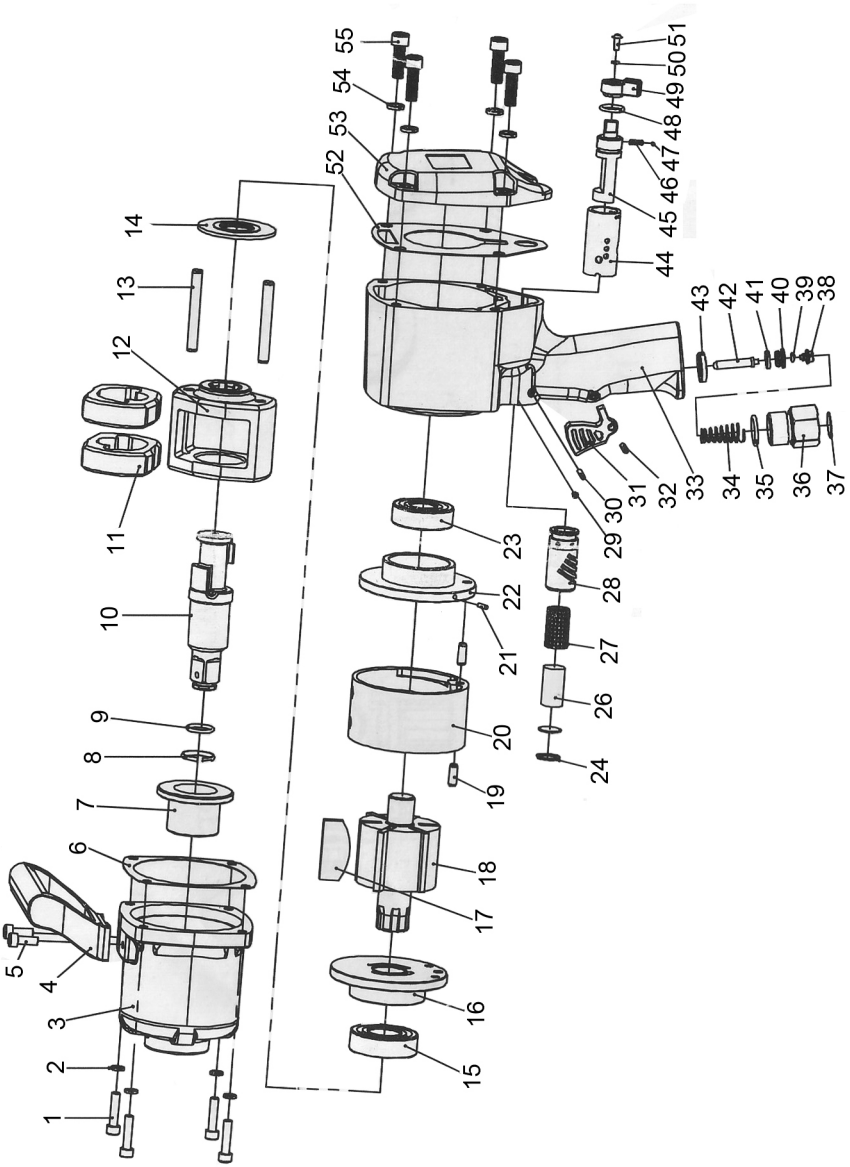
ACCESSORIES

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.

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

PARTS DIAGRAM



Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

PARTS LIST

No	Description
1	Socket head bolt
2	Washer
3	Hammer Casing
4	D-Handle
5	Socket head bolt
6	Gasket
7	Anvil Bush
8	Circlip
9	O-Ring
10	Anvil
11	Hammer
12	Hammer Cage
13	Hammer Pin
14	Gasket
15	Bearing
16	Front End Plate
17	Vane
18	Rotor
19	Pin
20	Cylinder
21	Pin
22	Rear End Plate
23	Bearing
24	Circlip
25	Gasket
26	Sponge
27	Mesh
28	Silencer

No	Description
29	Nut
30	Pin
31	Trigger
32	Pin
33	Handle Body
34	Inlet Spring
35	O-Ring
36	Air Inlet
37	Air Inlet Screen
38	Inlet Valve
39	O-Ring
40	Inlet Valve
41	O-Ring
42	Throttle Valve Pin
43	Inlet Gasket
44	Throttle Bushing
45	Throttle Core
46	Spring
47	Steel Ball
48	O-Ring
49	Direction Switch
50	Washer
51	Screw
52	Gasket
53	Back Cover
54	Washer
55	Socket head bolt

UK CA

Clarke® 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 statuary requirement(s):

Supply of Machinery (Safety) Regulations 2008

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

BS EN ISO 11148-6:2012

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) 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:	3/4" Heavy Duty Twin Hammer Impact Wrench (X-PRO)
Model number(s):	CAT163
Serial / batch Number:	N/A
Date of Issue:	09/02/2022

Signed:

J.A. Clarke
Director

CE

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 11148-6:2012.

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: 2015

Product Description:	3/4" Heavy Duty Twin Hammer Impact Wrench (X-PRO)
Model number(s):	CAT163
Serial / batch Number:	N/A
Date of Issue:	09/02/2022

Signed:

J.A. Clarke
Director

A SELECTION FROM THE VAST RANGE OF

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