

1/2" IMPACT WRENCH

MODEL No: CAT101

Part No: 3110857

OPERATION & MAINTENANCE INSTRUCTIONS



SPECIFICATIONS

Drive Size	1/2" Square
Max Torque	260 ft/lb (352 Nm)
Air Inlet	1/4" BSP
Ave. Air Consumption	4.5 cfm
Air Pressure Max	6.2 bar
Noise Level	94dB A
Vibration Level	10.4m/s ²
Net Weight	2.23 kg
Dimensions LxWxH	220 x 70 x 200
Part No	3110857

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

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.

IN THE BOX

1	X	1/2" Impact wrench with 2" Anvil
1	X	Instruction Book

SAFETY PRECAUTIONS

IMPORTANT

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

WORK ENVIRONMENT

- Keep the work area clean and tidy.
- Dress appropriately - Do not wear loose clothing or jewellery. Tie long hair out of the way.
- Keep children and visitors away - Do not let children handle the impact wrench. Make sure that any other persons in the work area are dressed suitably and are wearing eye and ear protectors.
- Do not operate the impact wrench where there are flammable liquids or gases.
- Keep the air supply hose away from heat, oil and sharp edges.
- Do not fit the impact wrench to any stand or clamping device that may damage the tool.

USE

- Stay alert and use common sense - Do not operate the impact wrench when you are tired or under the influence of alcohol, drugs or medication.
- Always wear eye protectors when using the impact wrench - Eye protectors must provide protection from flying particles from the front and the side.
- Always wear ear protectors when using the impact wrench.
- Do not overreach - Keep proper footing and balance at all times.
- Never use any type of bottled gas as a source of power for the impact wrench.
- Do not connect the air supply hose with your finger on the trigger of the impact wrench.
- Do not exceed the maximum pressure for the impact wrench: 90 psi / 6 bar.
- Check hoses for leaks or worn condition before use, and ensure that all connections are secure.
- Do not use the impact wrench for any other purpose than that described in this book.
- Do not carry out any alterations or modifications to the impact wrench.

SAFETY PRECAUTIONS

- Always disconnect from the air supply when:
 - a) Performing any maintenance
 - b) The impact wrench is not in use.
 - c) The impact wrench will be left unattended.
 - d) Moving to another work area.
 - e) Passing the impact wrench to another person.
- Never use the impact wrench if it is defective or operating abnormally.
- The impact wrench should be serviced at regular intervals by qualified service personnel.
- Avoid damaging the impact wrench for example by applying excessive force of any kind.
- ALWAYS maintain the tool with care. Keep it clean for best and safest performance.
- Quick change couplings should not be located at the tool. They add weight and could fail due to vibration.
- DO NOT force or misuse the tool. It will do a better and safer job at the rate for which it was designed.
- DO NOT remove any labels. Damaged labels should be replaced.
- 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.
- NEVER use standard sockets. These may shatter with serious consequences. Use ONLY Impact sockets.

TRANSPORTATION

- Never carry the impact wrench by the air supply hose.
- Never carry the impact wrench with your finger on the trigger.

STORAGE

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

PARTS



AIR SUPPLY

WARNING!

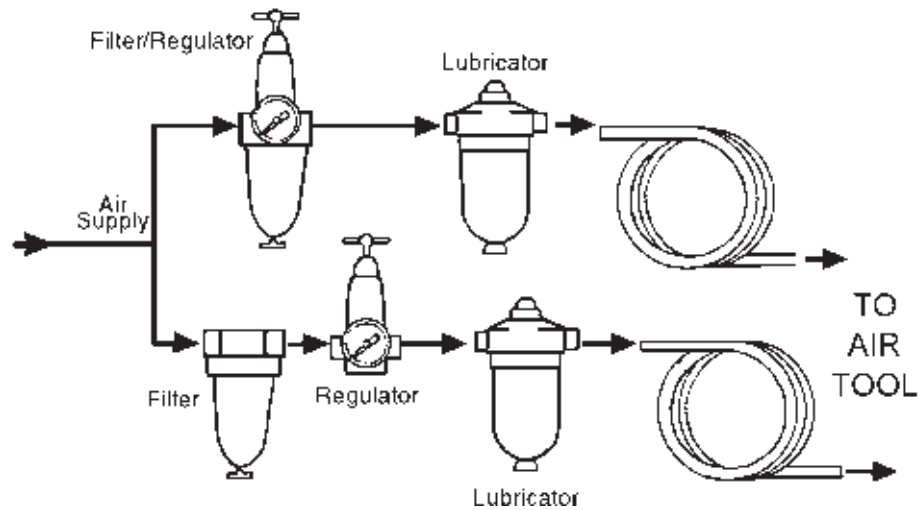
COMPRESSED AIR CAN BE DANGEROUS. ENSURE THAT YOU ARE THOROUGHLY FAMILIAR WITH ALL PRECAUTIONS RELATING TO THE USE OF COMPRESSORS AND COMPRESSED AIR SUPPLY.

- Use only clean, dry, regulated compressed air as a power source for the impact wrench.
- 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.
- Never exceed the maximum operating pressure for the impact wrench.

AIR HOSE

- The air hose must be rated at least 150% of the maximum operating pressure of the tool.

RECOMMENDED AIR SUPPLY CONNECTION



ASSEMBLY

NOTE: ensure the compressor is turned off.

1. Connect a suitable hose to the impact wrench using a $\frac{1}{4}$ " hose adapter.
2. Connect the other end of the hose to the compressor.
3. Your impact wrench is now ready for use.

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



WARNING!

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OPERATING INSTRUCTIONS

WARNING!

WAIT UNTIL THE ANVIL HAS STOPPED ROTATING BEFORE OPERATING THE DIRECTION CONTROL SWITCH.

USING THE DIRECTIONAL CONTROL BUTTON

The direction control button should be used as follows.

- 1 For normal tightening, the impact wrench should be operated in the forward (F) direction.
- 2 For loosening, the impact wrench should be operated in the reverse (R) direction.



Direction control button in forward position



Direction control button in reverse position

FITTING THE IMPACT SOCKET

- 1 Select the impact socket you require

WARNING!
NEVER use standard sockets. These may shatter with serious consequences. Use ONLY Impact sockets.

- 2 Push the impact socket onto the anvil as shown.

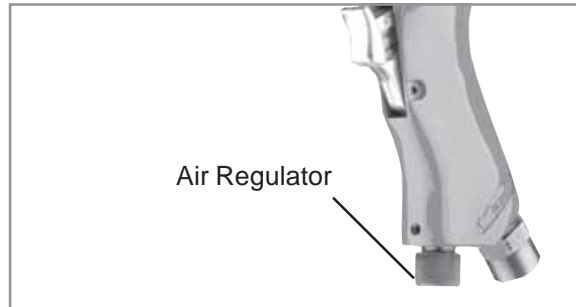


OPERATING INSTRUCTIONS

ADJUSTING THE POWER

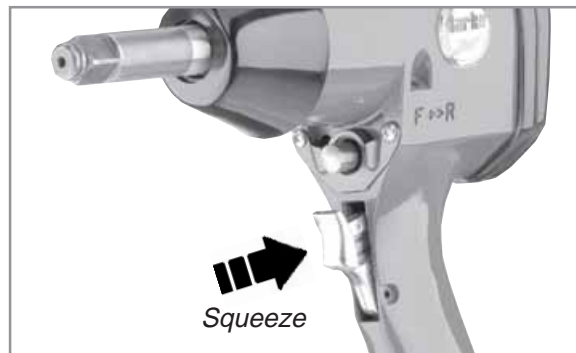
To adjust the power, set the air regulator to one of the 4 settings available.

1 (Low) - 4 (High).



OPERATING THE IMPACT WRENCH

1. Locate the socket over the nut to be tightened or loosened.
2. Squeeze the trigger to start the impact wrench.
3. Release the trigger to stop the impact wrench.



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 book for the procedures to shut down and release the compressed air.
2. Once the pressure has been released, disconnect the air supply hose from the impact wrench.
3. Store the impact wrench safely in its box in a dry, secure environment

MAINTENANCE

WARNING! Make sure that the impact wrench is disconnected from the air supply before starting any cleaning, or maintenance procedures.

Daily

- Drain water from air tank, air line and compressor.
- Pour a few drops of CLARKE Air Line Oil, into the air inlet. This should be carried out regardless of whether or not an air line lubricator is used. If an Air line lubricator is not used, this procedure should be repeated after every two to three hours of use.

Weekly

- Check the air inlet screen filter and clean if necessary.
- Remove the grub screw and insert a few drops of oil into the oil port on the side of the impact wrench.

CLEANING

- Keep the body of the impact wrench clean and free from debris, Grit or gum deposits in the tool may reduce efficiency.

SERVICE AND REPAIR

- All servicing and repair must be carried out by qualified service technicians.

NOTES

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 line, or the use of connectors of improper size or poor condition which will reduce air supply.

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

DECLARATION OF CONFORMITY

We declare that these products comply to the following standards/directives

- **98/37/EC**

Model No: **CAT101**

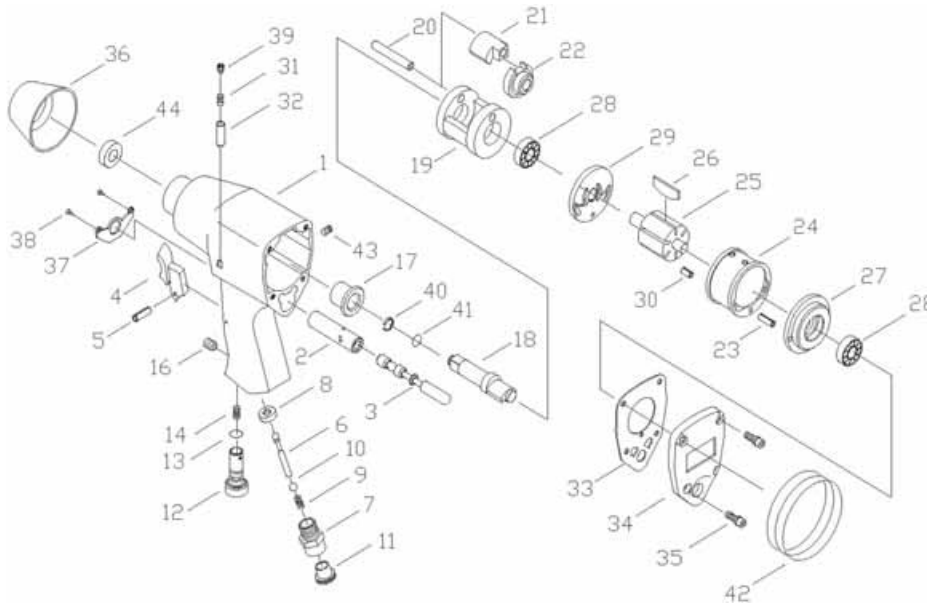
Serial or Batch number: **See product data plate**

signature: _____



D. Kemp
ENGINEERING MANAGER

PARTS DIAGRAM



PARTS LIST

Index No.	Part No.	Description	Index No.	Part No.	Description
1	KL504W01	Housing	24	KL504W24	Cylinder
2	KL504W02	Valve Bushing	25	KL504W25	Rotor
3	KL504W03	Reverse Valve	26	KL504W26	Rotor Blade
4	KL504W04	Trigger	27	KL504W27	Rear End Plate
5	KLSP007	Pin	28	KLCA6001	Ball Bearing
6	KL504W06	Valve Stem	29	KL504W29	Front End Plate
7	KL504W07	Air Inlet	30	KLSP006	Pin
8	KL504W08	Ball Seat	31	KL504W31	Spring
9	KL506AW43	Spring	32	KL504W32	Pin
10	KLAA065	Steel Ball	33	KL504W33	Gasket
11	KL504W11	Cover	34	KL504W34	Rear Cover
12	KL504W12	Air Regulator	35	KL504W35	Screw & Spring Washer
13	KL504W13	O-Ring	36	KL504W36	Front Rubber
14	KL504W14	Spring	37	KL504W37	Exhaust Deflector
16	KL504W16	Screw	38	KL504W38	Screw
17	KL504W17	Bushing	39	KL504W39	Screw
18	KL504W18	Anvil	40	KL504W40	Anvil Collar
19	KL504W19	Hammer Cage	41	KL504W41	O-Ring
20	KL504W20	Hammer Pin	42	KL504W42	Rubber
21	KL504W21	Hammer Dog	43	KL504W43	Screw
22	KL504W22	Drive Cam	44	KL504W44	Oil Seal
23	KLSP008	Pin			

HAND-ARM VIBRATION

Employers are advised to refer to the HSE publication "Guide for Employers".

All hand held power tools vibrate to some extent, and this vibration is transmitted to the operator via the handle, or hand used to steady the tool. Vibration from about 2 to 1500 herz is potentially damaging and is most hazardous in the range from about 5 to 20 herz.

Operators who are regularly exposed to vibration may suffer from Hand Arm Vibration Syndrome (HAVS), which includes 'dead hand', 'dead finger', and 'white finger'. These are painful conditions and are widespread in industries where vibrating tools are used.

The health risk depends upon the vibration level and the length of time of exposure to it.....in effect, a daily vibration dose.

Tools are tested using specialised equipment, to approximate the vibration level generated under normal, acceptable operating conditions for the tool in question. For example, a grinder used at 45° on mild steel plate, or a sander on softwood in a horizontal plane etc.

These tests produce a value 'a', expressed in metres per second per second, which represents the average vibration level of all tests taken, in three axes where necessary, and a second figure 'K', which represents the uncertainty factor, i.e. a value in excess of 'a', to which the tool could vibrate under normal conditions. These values appear in the declaration on page 2.

You will note that a third value is given in the specification - the highest measured reading in a single plane. This is the maximum level of vibration measured during testing in one of the axes, and this should also be taken into account when making a risk assessment.

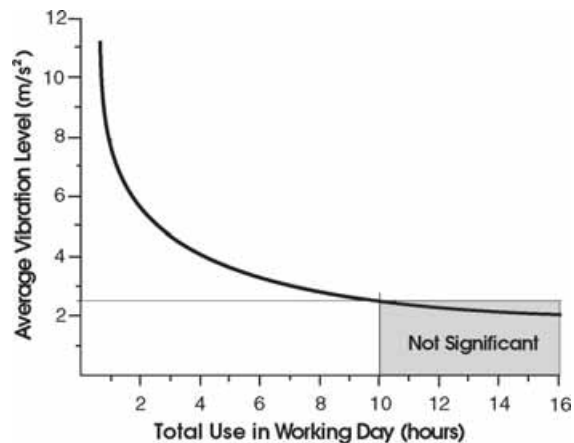
'a' values in excess of 2.5 m/s² are considered hazardous when used for prolonged periods. A tool with a vibration value of 2.8 m/s² may be used for up to 8 hours (cumulative) per day, whereas a tool with a value of 11.2 m/s² may be used for ½ hour per day only.

The graph below shows the vibration value against the maximum time the respective tool may be used, per day.

The uncertainty factor should also be taken into account when assessing a risk. The two figures 'a' and 'K' may be added together and the resultant value used to assess the risk.

It should be noted that if a tool is used under abnormal, or unusual conditions, then the vibration level could possibly increase significantly. Users must always take this into account and make their own risk assessment, using the graph as a reference.

Some tools with a high vibration value, such as impact wrenches, are generally used for a few seconds at a time, therefore the cumulative time may only be in the order of a few minutes per day. Nevertheless, the cumulative effect, particularly when added to that of other hand held power tools that may be used, must always be taken into account when the total daily dose rate is determined.



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