OWNER'S MANUAL

½" Impact Wrench

6114

Description

The 61114 1/2" air impact wrench is a powerful, heavy duty and convenient tool with a twin hammer mechanism providing instantaneous and lasting high torque. Ideal for automotive workshops, tyre workshops, industrial and diesel engine work applications, the 61114 features a twist control knob for the simple and easy choice of speed and direction, stable and smooth torque during operation and an ergonomically designed handle with inbuilt exhaust reduces noise levels. Robust and reliable, the 61114 1/2" impact wrench is a great performer and a valuable addition to any busy workshop.

Specifications

Product Use	½" Professional Pistol Grip Impact Wrench
Pin Clutch	Twin Hammer type
RPM	10,000 RPM ± 10%
Weight	2kgs / 4.44lbs
Noise Level	Sound pressure level: 93.1 db(A) Sound power level: 104.7 db(A) Tested in accordance with EN ISO 15744
Recommended Minimum Hose Bore Diameter	10mm / 3/8"
Recommended Maximum Hose Length	10m / 30ft
Air Pressure	Working: 90 psi / 6.3 bar Maximum: 100 psi / 7.0 bar
Vibration Level	5.7m/sec2 Tested in accordance with EN 28662-1 and EN 28662-7
Recommended Personal Safety Equipment	Safety Glasses and Ear Protectors
Air Inlet	¼" NPT
Bolt Capacity	16mm / 5/8"
Torque	1000ft lb / 138kg/m / 1350Nm. Reverse torque: 750ft lb / 1000Nm
Average Air Consumption	13 cfm / 0.37m3/min
Overall Length	193mm / 7.6"
Square Drive	½"
Materials	High strength lightweight patented design of composite & aluminium alloy components. Contoured elastomer handle grip.

Warning

1. This tool cannot be used in explosive atmospheres unless specially designed for that purpose.
2. The tool is not electrically insulated. Do not use where there is a possibility of coming in contact with live electricity.
3. Unexpected tool movement due to forces or breakages may cause injuries.
4. It is preferably to shut off the air supply before changing the socket or at least ensure that hands are well clear of the operating trigger.
5. Be aware of the risk of crushing by torque between a reaction bar and the work area.
6. When loosening fasteners first ensure that there is a sufficient clearance behind the tool to avoid a hand being caught. The tool will move away from the threaded joint as the nut/bolt etc is loosened and rides up the thread moving the tool with it.
7. There is a risk of being injured especially when unscrewing in a confined work place if hands are not kept away from the reaction bar. Keep hands away from the nut runner socket.
8. In case of nut runner socket failure, beware of high speed splinters being emitted from the impact wrench.
9. Be aware of a whipping compressed air hose line.
10. Always ensure that the reverse valve is in the correct position before operating the tool. Do not run the tool unless the socket is first located on the joint.
11. Prevent loose clothes, long hair, or any other personal accessories from catching on any moving parts to reduce the risk of being caught, trapped or drawn into the rotating spindle.

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Operation

The impact wrench is designed for the tightening and loosening of threaded fasteners within the range as specified by the manufacturer. It should only be used in conjunction with suitable impact type ½" square female driver nut running sockets. Only use sockets which are of an impact type.

It is ok to use suitable extension bars, universal joints and socket adaptors between the square output driver of the impact wrench and the square female drive of the socket. Do not use the tool for any other purpose than that specified without consulting the manufacturer or the manufacturer's authorised supplier. To do so may be dangerous.

Never use an impact wrench as a hammer to dislodge or straighten cross threaded fasteners. Never attempt to modify this tool for other uses and never modify the tool for other than its recommended use as a nut runner.

The tool should only be used as handheld, hand operated tool. It is always recommended that the tool is used when standing on a solid floor. It can be in other positions but before any such use, the operator must be in a secure position having a firm grip and footing and be aware that when loosening fasteners the tool can move quite quickly away from the fastener being undone. An allowance must always be made for this rearward movement so as to avoid the possibility of a hand/arm/body getting caught.

Do not connect a quick connect coupling directly to the tool but use a whip or a leader hose of approximately 30cm length. Do not connect the tool to the airline system without incorporating an easy to reach & operate air shut off valve.

The air supply should always be lubricated. It is strongly recommended that an air filter, regulator, lubricator (FRL) is used as this will supply clean, lubricated air at the correct pressure to the tool. If an FRL cannot be used then the tool should be lubricated by shutting off the air supply to the tool, depressurising the line by pressing the trigger on the tool. Disconnect the air line and pour into the intake bushing (22) 5ml of a suitable pneumatic motor lubricating oil preferably incorporating a rust inhibitor. Reconnect tool to air supply and run tool slowly for a few seconds to allow air to circulate the oil. If the tool is used frequently, lubricate on a daily basis and if the tool starts to slow or lose power. When lubricating always ensure that the screen in intake bushing is clean.

It is recommended that the air pressure at the tool whilst the tool is running is set at 90 psi/6.3bar. The tool can run at lower and higher pressure with a maximum permitted working air pressure of 100psi/7.0bar. For lower air pressure, the tool will put out a lower output for a given setting of the air regulator set for 90psi operation and increased output for a higher pressure. Hence it is possible that changes in supply pressure can give situation where the fastener is under or over tightened. For changes in pressure the regulator position and application should be reassessed. It is recommended that joint tightness of the threaded fastener assembly be checked with suitable measuring equipment. Follow your local legislation re waste disposal.

Putting Into Service

Use a clean lubricated air supply that will supply a measured air pressure at the tool of 90psi/6.3bar whilst the tool is running with the trigger fully depressed and the air regulator in its maximum opening flow position. Please use the recommended hose size and length.

Operating

The output of the impact wrench in prime working condition is governed primarily by three factors:

a) The input air pressure

b) The time the impact wrench is operated on the joint. Normal time for joints of average tension is 3 – 5 seconds.

c) The setting of the air regulator for a given joint at a given pressure operated for a given time.

The air regulator item (39) can be used to regulate the output of the impact wrench if no other control means is available. It is strongly recommended that an external pressure regulator ideally as part of a filter/regulator/lubricator (FRL) is used to control air inlet pressure so that the pressure can be set to help control the tension required to be applied to the threaded fastener joint.

There is no consistent reliable torque adjustment on an impact wrench of this type. However, the air regulator can be used to adjust torque to the approximate tightness of known threaded joint. To se the tool to the desired torque, select a nut or screw of known tightness of the same size, thread pitch and thread condition as those on the job. Turn air regulator to low position, apply wrench to nut and gradually increase power (turn regulator to admit more air) until nut moves slightly in the direction it was originally set. The tool is now set to duplicate that tightness, note regulator setting for future use. When tightening nuts that do not require critical torque values, run nut up flush and then tighten an additional one-quarter to one half turn (slight additional turning is necessary if gaskets are being clamped). For additional power needed on disassembly work, turn regulator to its fully open position. This impact wrench is rated to a 5/8" bolt size. Ratings must be downgraded for spring U bolts, tie bolts, long cap screws, double depth nuts in a badly rusted condition and spring fasteners as they absorb much of the impact power. When possible, clamp or wedge the bolt to prevent spring back.

Soak rusted nuts in penetrating oil and break the rust seal for them to start to move in three to five seconds and use a large size impact wrench. Do not use an impact wrench beyond the rated capacity as this will drastically reduce the tools life.

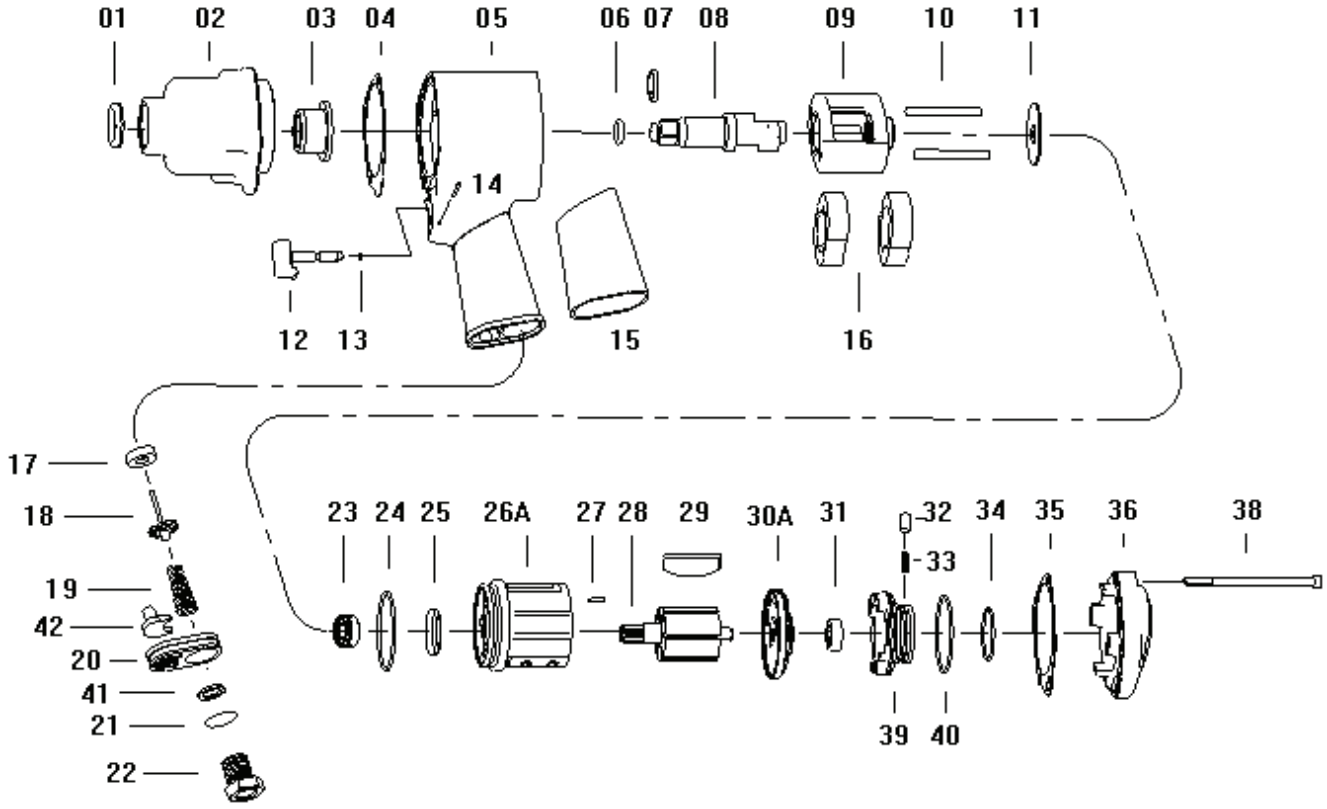
NOTE: The actual torque on a fastener is direct related to joint hardness, tool speed, the condition of the socket and the time the tool is allowed to impact.

Use the simplest possible tool-to-socket hook up. Every connection absorbs energy and reduces power.

Safety rules when using an Impact Wrench

1. Read all the instructions before using this tool. All operators must be fully trained in its use and aware of these safety rules. All service and repair must be carried out by trained personnel.
2. The socket used must be of the correct drive size and the "impact" type. Never use sockets other than impact type.
3. Do not use sockets with excessive wear to the input and output drives. Check that the square on any other type of drive or the impact wrench is not cracked or excessively worn before fitting or changing a socket, extension, etc. Make sure that the socket is firmly fixed to the tool.
4. Always ensure that a stable position or footing is adopted before using the tool.
5. Ensure that the tool has been correctly set up on a test joint. Incorrect set up could cause joint breakage with sudden and unexpected movement of the tool.
6. Use only correct spare parts for repair.
7. Check hose and fittings regularly for wear. Use quick connect couplings only as recommended. See "Putting into Service". Do not carry the tool by the hose and ensure that your hand is away from the on/off valve when carrying.
8. Do not attempt to hold or guide the socket by hand when the tool is running.
9. Do not exceed maximum recommended air pressure.
10. Use safety equipment as recommended.
11. Take care against entanglement of moving parts of the tool with clothing, ties, hair, cleaning rags etc.
12. Only use extensions, adaptors and universal joints suitable for use with impact wrenches.
13. If the tool appears to malfunction, remove from use immediately and arrange for service and repair.
14. Release the on/off valve in case of a failure of energy supply.
15. Use only the lubricant recommended by the manufacturer.

Parts And Drawing Breakdown 61114



Ordering Spare Parts

Parts List – Part No. 61114

Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1	61114-1	Oil Seal	1	22	61114-22	Hose Adaptor	1
2	61114-2	Hammer Case	1	23	61114-23	Ball Bearing	1
3	61114-3	Bushing	1	24	61114-24	O-Ring	1
4	61114-4	Front Gasket	1	25	61114-25	Oil Seal	1
5	61114-5	Motor Housing	1	26A	61114-26A	Cylinder	1
6	61114-6	O-Ring	1	27	61114-27	Spring Pin	1
7	61114-7	Anvil Collar	1	28	61114-28	Rotor	1
8	61114-8	Anvil / Anvil (2")	1	29	61114-29	Rotor Blade	6
9	61114-9	Hammer Cage	1	30A	61114-30A	Rear Plate	1
10	61114-10	Hammer Pin	2	31	61114-31	Ball Bearing	1
11	61114-11	Washer	1	32	61114-32	Pin	1
12	61114-12	Trigger	1	33	61114-33	Spring	1
13	61114-13	O-Ring	1	34	61114-34	O-Ring	1
14	61114-14	Spring Pin	1	35	61114-35	Rear Gasket	1
15	61114-15	Rubber	1	36	61114-36	Rear Cover	1
16	61114-16	Hammer Dog	2	38	61114-38	Screw	4
17	61114-17	Retainer	1	39	61114-39	Reverse Lever	1
18	61114-18	Valve Stem	1	40	61114-40	O-Ring	1
19	61114-19	Spring	1	41	61114-41	Washer	1
20	61114-20	Exhaust Deflector	1	42	61114-42	Muffler	1
21	61114-21	O-Ring					

*Note: some parts may not be available as individual spare parts.

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