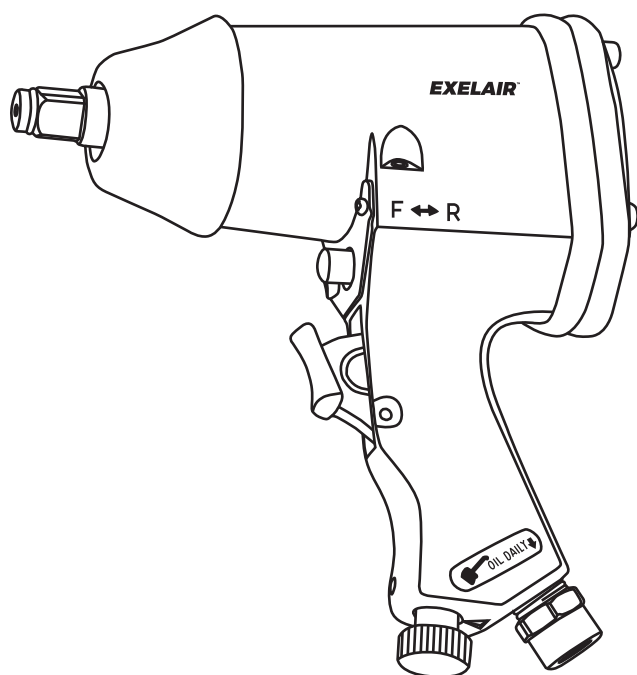


EXELAIR™

OPERATOR'S MANUAL

1/2" AIR IMPACT WRENCH

EX1603KIT



WARNING! Some dust created by using power tools contains chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. This product contains one or more chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

1/2" AIR IMPACT WRENCH

TABLE OF CONTENTS

GENERAL SAFETY RULES.....	2
AIR SUPPLY.....	4
PRODUCT DESCRIPTION.....	5
TECHNICAL SPECIFICATIONS.....	5
ASSEMBLY.....	6
OPERATION.....	8
TROUBLESHOOTING.....	9
CARE AND MAINTENANCE.....	9
EXPLODED DIAGRAMS AND PARTS LISTS.....	10
WARRANTY.....	11

**WARNING!**

- Improper operation or maintenance of this tool could result in personal injury and/or property damage. Read and understand all warnings and operation instructions before using this tool.
- When using this tool, these basic safety precautions should always be followed to reduce the risk of personal injury and/or property damage.

Workplace conditons

1. Always work in a clean, dry, well-ventilated area free of combustible materials. Never operate the tool near flammable substances such as gasoline, naphtha, cleaning solvent, etc.
2. Dress properly. Do not wear loose clothing. Tie up or cover long hair, remove any jewelry, necklaces, etc., which might become caught by the tool.
3. Keep the work area well lit and free of clutter. Slips, trips and falls are major causes of workplace injury. Be aware of excess air hose left on your walking way or on the working surface.
4. Ensure that there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.
5. Keep visitors a safe distance from the work area. Keep children away.

Use of air tools

1. Stay alert and use common sense. Watch what you are doing. Do not operate the tool when you are tired or under the influence of alcohol, drugs or medication.
2. Do not overreach. Keep proper footing and balance at all times.
3. Always wear eye protectors which provides protection from flying particles from the front and side when using the tool. Ear protectors should also be worn.
4. Never use oxygen, carbon dioxide, combustible gases or any other type of bottled gases as a power source for this tool.
5. Always verify prior to using this tool that the air source has been adjusted to the rated air pressure range. Never connect to an air source that is capable of exceeding 200psi.
6. Do not connect the air supply hose to the tool with your finger on the trigger.
7. Do not exceed the maximum working pressure 90psi/6.3bar for the tool. Excessive pressure will reduce the tool life and/or might cause a hazardous situation.
8. Never leave the operating tool unattended. Disconnect the air hose when the tool is not in use.
9. Keep the air supply hose away from heat, oil and sharp edges.
10. Check the air supply hose for wear and/or leaks before each use. Make sure that all connections are tight and secure.
11. Do not use the tool for any other than its intended use.
12. Do not carry out any alternations and/or modifications to the tool.
13. Always disconnect the tool from air supply before replacing any accessories, performing any repair and maintenance, moving to another work area, or passing the tool to another person.

14. Never use the tool if it is defective, damaged, or operating abnormally.
15. Check for misalignment or binding of moving parts, breakage of parts and any other condition that affects the tool operation. If damaged, have the tool serviced before using.
16. Keep working parts of the tool away from hands and body.
17. Do not carry the tool by the air hose.
18. Do not apply excessive force of any kind to the tool. Let the tool perform the work at the rate as it was designed.
19. Do not remove any labels on the tool. Replace if they become obscured or damaged.
20. Always maintain the tool with care. Keep it clean for the best and safest performance.
21. It is not recommended that quick change couplings should be located directly at the air inlet, as they add weight and could fail due to vibration.
22. This tool vibrates with use. Continuous operation of this tool might be harmful to your hands or arms. Stop using the tool if discomfort, a tingling feeling or pain occurs. Resume work after recovery. Seek medical advice if a serious symptom occurs.

Air impact wrench safety instructions

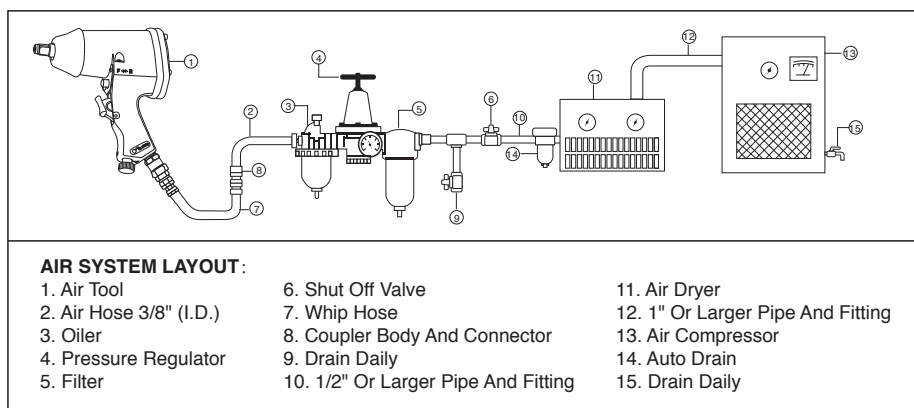
1. Always use the impact wrench in the manner and for the functions described in this manual.
2. Always ensure the wrench is not moving and disconnected from the air supply when changing sockets etc. Only use impact sockets. Do not use standard sockets.
3. Always finish tightening wheel nuts or engine 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, never allow the wrench to impact more than 8 times. This is to avoid over-tightening. 3 to 4 impacts is normally sufficient.
5. Always ensure that the socket is correctly installed onto the tool anvil before starting the tool.
6. Due to the possible presence of asbestos dust from brake linings, always wear suitable respiratory protection.
7. Never carry the impact wrench by the air supply hose.
8. Always disconnect the tool from the air supply when changing impact sockets or when the wrench is not required for immediate use in order to avoid accidental start.
9. Hold the tool correctly. Always use both hands to control the impact wrench.
10. Always ensure that the wrench has come to a complete stop before putting it down after use.
11. If necessary, use clamps or proper devices to securely fix the workpiece when installing/tightening or removing/loosening threaded fasteners on the workpiece.
12. For overhead work, wear a safety helmet.
13. Do not discard the safety instructions, give them to the operator.
14. Always store this product in a dry and safe place out of reach of children or untrained operators.

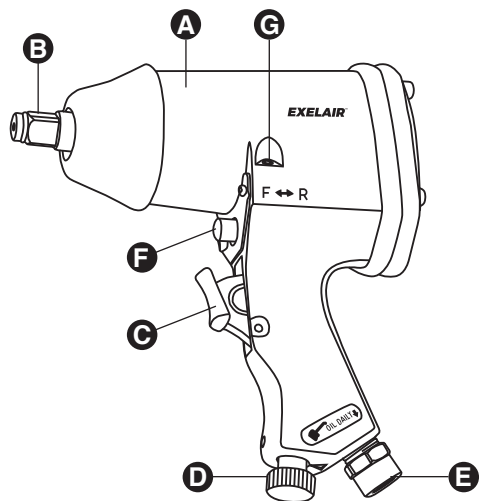
Please refer to the typical air system layout recommended below.



WARNING! Compressed air can be dangerous. Ensure that you are familiar with all precautions relating to the use of compressors and compressed air supply.

1. Use only clean, dry, regulated compressed air as the power source.
2. Make sure that the air compressor being used for the tool operation supplies the correct output (CFM).
3. Have the tool in "off" position when connecting the tool to the air supply.
4. Use normal 90psi working pressure for the tool. High pressure and unclean air will shorten the tool life due to the faster wear and also may create a safety hazard.
5. Drain water from the air compressor tank daily, as well as any condensation in the air lines. Water in the air line may enter the tool and cause damage to the tool mechanisms at operation.
6. Clean the tool air inlet screen filter for blockage weekly. Clean if necessary.
7. Usually a 3/8" (inner diameter) air hose is recommended for air supply and airflow to get the optimum performance of tool.
8. A long air hose (usually over 25 feet) may cause up to 15psi drop in pressure, so you need to set the output pressure of the air compressor higher to maintain the required working pressure at the tool.
9. Use proper hoses and fittings. We do not suggest connecting quick change couplings directly to the tool since they may cause failure due to tool vibration at operation. Instead, add a lead hose and connect coupling between air supply and hose whip.
10. Check hoses for wear before each use. Make certain that all connections are in security.





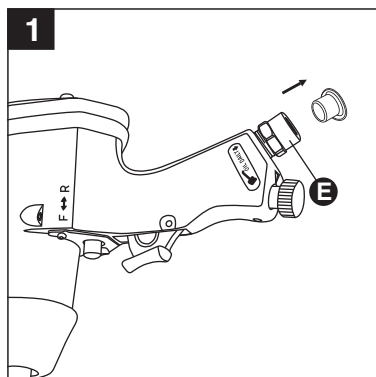
PART	DESCRIPTION	QUANTITY
A	1/2" Air Impact Wrench	1
B	Anvil	1
C	Trigger	1
D	Air Regulating Knob	1
E	Air Inlet	1
F	F/R Valve Stem	1
G	Grease Cap	1

TECHNICAL SPECIFICATIONS

COMPONENT	SPECIFICATIONS
Square drive	1/2"
Maximum no load speed	7,000rpm
Maximum torque	250Ft-Lb (340Nm)
Air inlet	1/4" NPT
Air hose (inner diameter)	3/8"
Average air consumption	4.5cfm
Working pressure	90psi (6.3bar)

ASSEMBLY

1. Remove the air inlet protective cap from the air inlet (E). (See Figure 1)

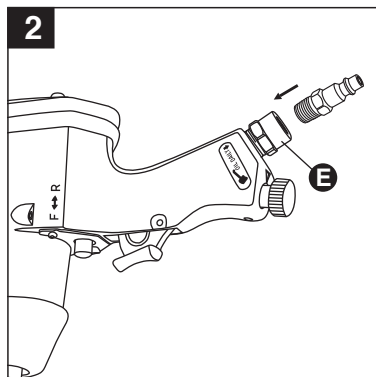


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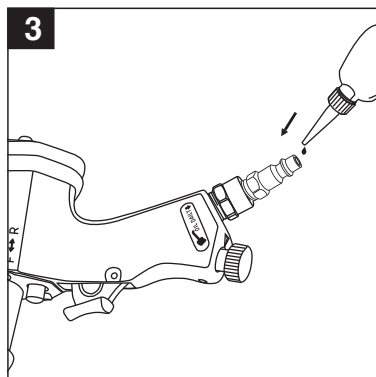
2. Mount a male plug by hand into the air inlet (E). (See Figure 2)



NOTE: Use thread sealant tape on the male plug and tighten it with a wrench for airtight connection. Do not overtighten.



3. Place 2 - 3 drops of air tool oil into the male plug before each use. (See Figure 3)

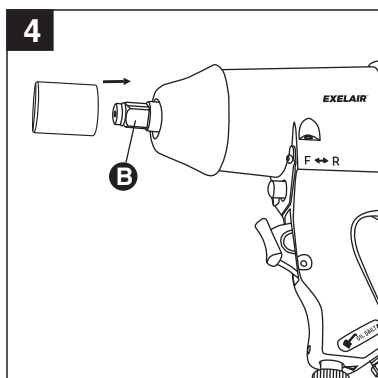


1/2" AIR IMPACT WRENCH

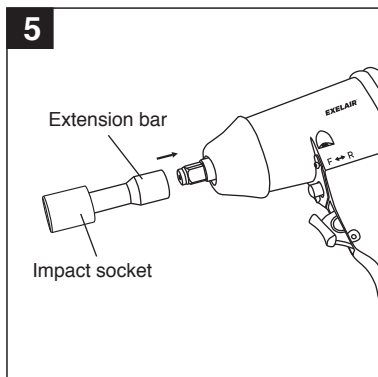
4. Choose the correct impact socket as needed and mount it onto the anvil (B).
(See Figure 4)



WARNING! Only use impact sockets that have a RPM and Torque rating equal to or greater than the tool itself.



5. If necessary, use the extension bar and then mount impact socket onto the bar.
(See Figure 5)

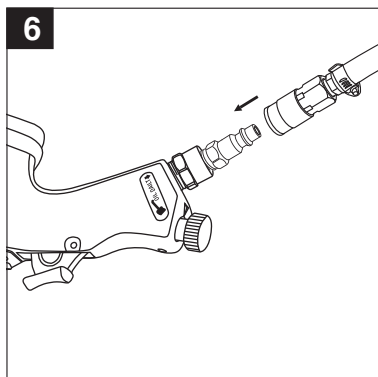


6. Connect air supply hose to the male plug.
(See Figure 6)

7. Set the working pressure at 90psi/6.3bar for best tool performance.



NOTE: Working pressure refers to the air line pressure set to tool when tool is under working conditions.



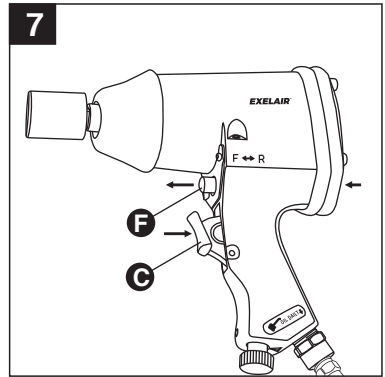
1/2" AIR IMPACT WRENCH

OPERATION

Forward/Reverse rotation is selected by pushing the F/R valve stem in the direction shown by the arrow on the housing of the wrench.

1. How to install/tighten threaded fasteners

Push the F/R valve stem (F) forward as indicated by "F" marked on the housing. Press the trigger (C). Then the tool anvil (B) runs clockwise. (See Figure 7)



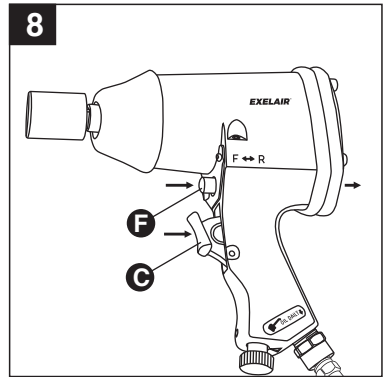
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2. How to remove/loosen threaded fasteners

Push the F/R valve stem (F) backward as indicated by "R" marked on the housing. Press the trigger (C). Then the tool anvil (B) runs counterclockwise. (See Figure 8)

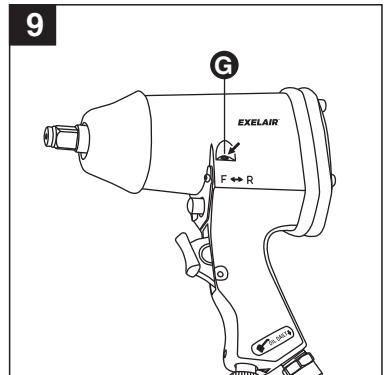


NOTE: This tool features a power regulator valve. Press the air regulating knob (D) downward and then slowly turn it either clockwise or counterclockwise to have either of 4 settings pointing at the triangle mark on the housing. The settings 1, 2, 3, 4 are only for reference and do not denote a specific power output. "Setting 1" is the least amount of power while "Setting 4" is most amount of power.



NOTE: This tool also features a grease cap (G) on the tool body. Remove the screw in the grease cap with a hex key (not provided). Use a grease gun (not included) and insert the gun nozzle into the grease cap. Several drops of grease are recommended for lubrication. After lubrication, replace the screw secure and tight. This will protect the rotor gears of motor assembly in good working condition and extend tool life.

Lubricate the rotor gears once every working day. (See Figure 9)



PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Tool runs slowly or will not operate	1. Grit or gum in tool.	1. Flush the tool with air-tool oil or gum solvent.
	2. No oil in tool.	2. Lubricate the tool.
	3. Low air pressure.	3. a. Adjust the regulator on the tool to maximum setting. b. Adjust the compressor regulator to tool maximum of 90 PSI/6.3 BAR.
	4. Air hose leaks.	4. Tighten and seal hose fittings if leaks are found. Use sealing tape.
	5. Pressure drops.	5. a. Be sure the hose is the proper size. Long hose or tools using large volumes of air may require a hose with an I.D. of 1/2 in. or larger depending on the total length of the hoses. b. Do not use a multiple number of hoses connected together with quick-connect fittings. This causes additional pressure drops and reduces the tool power. Directly connect the hoses together.
	6. Worn rotor blade.	6. Replace rotor blade.
	7. Moisture blowing out of tool exhaust.	7. Water in tank; drain tank. (See air compressor manual). Oil tool and run until no water is evident. Oil tool again and run 1-2 seconds.

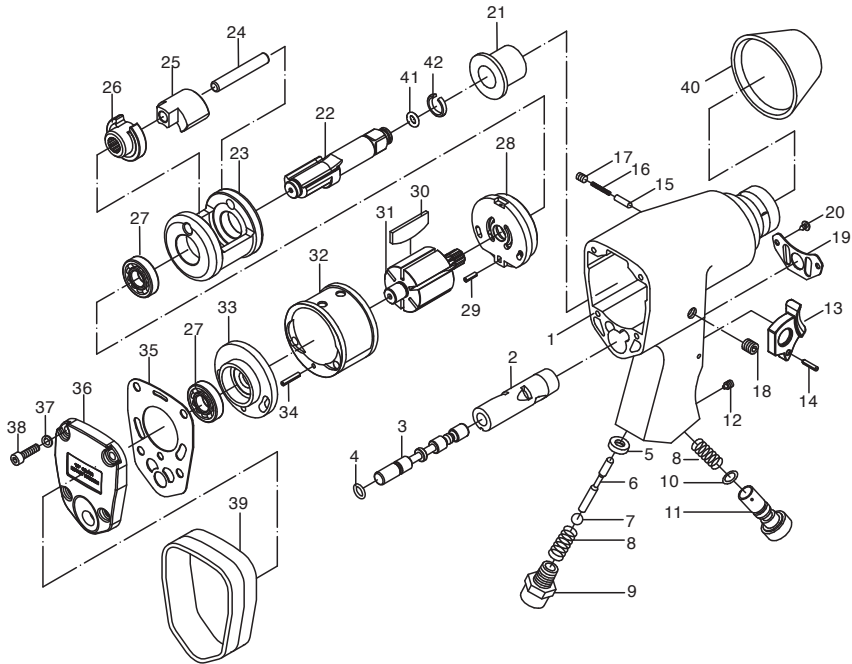
CARE AND MAINTENANCE

An in-line oiler is recommended to be installed on air supply line as it increases tool life and keeps the tool in sustained operation. The in-line oiler should be regularly checked and filled with air-tool oil. Proper adjustment of the in-line oiler is performed by placing a sheet of paper next to the tool's exhaust ports and holding the throttle open approximately 30 seconds. The in-line oiler is properly set when a light stain of oil collects on the paper. Excessive amounts of oil should be avoided.

In the event that it becomes necessary to store the tool for an extended period of time, it should receive a generous amount of lubrication at that time. The tool should be run for approximately 30 seconds to ensure oil has been evenly distributed throughout the tool. The tool should be stored in a clean and dry environment.

Recommended lubricants: use air-tool oil or any other high-grade turbine oil containing moisture absorbent, rust inhibitors, metal wetting agents and an EP (extreme pressure) additive.

Clean the tool all over with a cotton rag after each use. Keep the tool in a dry and safe place out of reach of children.



Part No.	Description	Qty.
1	Housing*	1
2	Valve sleeve*	1
3	F/R valve stem - EX1225IW-03	1
4	O-ring*	1
5	Gasket*	1
6	Bolt*	1
7	Steel ball*	1
8	Spring*	2
9	Inlet nipple*	1
10	O-ring*	1
11	Air flow regulator*	1
12	Screw*	1
13	Trigger*	1
14	Trigger bolt*	1
15	Bolt*	1
16	Spring*	1
17	Screw*	1
18	Screw*	1
19	Muffler*	1
20	Screw*	2
21	Axle sleeve*	1

Part No.	Description	Qty.
22	Anvil*	1
23	Hammer cage*	1
24	Hammer pin*	1
25	Hammer dog*	1
26	Drive cam*	1
27	Bearing*	2
28	Front plate*	1
29	Fixing pin*	1
30	Rotor blade - EX1225IW-30	6
31	Rotor*	1
32	Cylinder*	1
33	Rear plate*	1
34	Fixing pin*	1
35	Gasket*	1
36	Rear cover*	1
37	Cushion*	4
38	Cap screw*	4
39	Back rubber scuff*	1
40	Front rubber scuff*	1
41	O-ring*	1
42	Ring	1

*Replacement part not available

1/2" AIR IMPACT WRENCH

EXELAIR™

MILTON INDUSTRIES AIR TOOL WARRANTY POLICY

3 YEAR LIMITED WARRANTY

Please visit www.miltonindustries.com to register this product for the 3-Year limited warranty offered by Milton.

To make any warranty claims or to learn more about the 3 year warranty please visit www.miltonindustries.com



For questions about our warranty on this product, contact us at:

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