

1/2" Air Impact Wrench - 24402

OWNER'S MANUAL

SPECIFICATIONS:

| Bolt capacity | .1/2in. |
|---|--------------|
| Square drive | .1/2in. |
| Recommended air pressure (tool in use at full throttle) | .90 PSI |
| Maximum torque | .450 Ft. Lb. |
| Average air consumption | .5.0 CFM |
| Free speed | 7,000 RPM |
| Air inlet | 1/4in. |
| Recommended hose size | .3/8in. |
| Clutch Type | Twin Hammer |
| Weight | 5.76 Lb. |
| Sound Level |)6.2 db.A |



WARNING! READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS AND WARNINGS BEFORE OPERATING THIS TOOL. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY AND/OR PROPERTYDAMAGE AND WILL VOID WARRANTY.

IMPORTANT SAFETY INFORMATION

- 1. This impact wrench is rated to 1/2" USS bolt size. Rating will decrease for U-Bolts, Long Cap Screws, Spring Fasteners and rusted/corroded Fasteners. All of these factors absorb power and reduce torque capability.
- 2. Use only impact sockets designed for impact wrenches.
- 3. Most impact wrenches have high torque capability. Keep a firm grip on the tool at all times. Use both hands whenever possible. Be physically prepared for the task you will perform.
- 4. Always use approved eye and ear protection when using air powered tools. If raising dust/debris, wear a suitable mask. Do not wear loose clothing or jewelry.
- 5. Always operate tool at a safe distance from yourself and others in the work area. Keep footing and balance at all times.
- 6. Make sure work piece is secure to allow safe operation of the tool with both hands. Do not hold the work piece in your hand, lap or against any part of your body.
- 7. Make sure trigger is in the "off" position before connecting or disconnecting the tool from air source. Disconnect tool form air source before changing accessories, performing service and when not in use.
- 8. Follow air source manufacturer's directions for connection of regulators, filters and other accessories to air source. Do not install quick couplers directly at tool air inlet. This causes inlet failure due to excess weight and vibration. Use a whip hose between tool and quick couplers
- DO NOT OVERLOAD! Do not force tool. Match tool capacity to work load requirement. Use tool
 within its rated capacity and only for its designated purpose. Overloading air tools will cause
 premature wear and/or permanent damage of internal and external driver parts and will void
 warranty.
- 10. Inspect hoses and fitting for wear and damage prior to using tool, do not carry or drag tool by the air hose. Keep air hose free from obstruction, twisting and binding.

LUBRICATION & MAINTENANCE

- Oil tool before each use. 4 to 5 drops of a good grade Air Tool Oil placed in the air inlet is sufficient. Use proper air pressure and CFM rating listed for this tool.
- Drain water from hoses and compressor tank. Water in the air supply line will cause gumming and loss of power. Clean the air filter on the supply line and flush the tool with gum solvent or a 50/50 min of Air
- Tool Oil and kerosene. It may be necessary to disassemble the tool to properly clean and re-lubricate. Oil Plug is available to add air tool oil after repair or maintenance. (See drawing at right) use 1 ounce Air Tool Oil. Do not overfill.

Hammer Mechanism Maintenance-(Hammer Cage, Hammer Dog Anvil and Drive Cam).

- When cleaning or repairing the tool, be sure to lightly coat the load bearing and mating surfaces with clean wheel bearing grease or suitable substitute. Do not apply a thick coat of grease to these parts. This will reduce the torque capability of the tool and will require flushing to regain its power. You may also run the tool until the excessive grease works its way out.
- Test the tool for proper grease periodically by shaking the tool from side. Listen for a metallic rattle. If the sound is loud and sharp, grease the hammer parts. If it is a dull sound, the lubrication is correct.



AIR SOURCE

Clean air and correct air pressure is recommended for the power supply for this tool. A maximum of 90 PSI at the tool is recommended for most air tools of this class. Check specifications section for recommended pressure. (Depending on length of air hose and other circumstances, air pressure at compressor may need to be increased to 100 PSI to ensure 90 PSI at the tool.) Water in the air hose and compressor tank contributes to reduced performance and damage of the air tool. Drain the air tank and filters before each use and as necessary to keep the air supply dry. Hose length over 25' causes loss in line pressure. Increase hose I.D. or increase compressor pressure to

compensate for the pressure loss. Use an in-line pressure regulator with gauge if air inlet pressure is critical.

OPERATION

- 1. This impact wrench is rated to 1/2" USS bolt size. Rating will decrease for U-Bolts, Long Cap Screws, Spring Fasteners and rusted/corroded fasteners. All of these factors absorb power and reduce torque capability.
- 2. Use the simplest socket to wrench hook-up. Any additional extensions, u-joints or adaptors will absorb power and reduce torque capability.
- 3. Use only impact sockets designed for impact wrenches.
- 4. Forward/Reverse Lever .Select "F" for Forward (Clockwise) or "R" for Reverse (Counter clockwise) operation. Do not attempt to change direction while tool is running.
- 5. If fastener bogs, slows or binds the tool (or, if fastener fails to move in 5 seconds), use a large size impact wrench with a higher torque rating. Overloading this tool will cause premature wear and/or permanent damage to internal and external drive parts and will void warranty.
- 6. Air regulator. This can be used as an air throttle. Turn air regulator knob out (Counter-clockwise) for maximum power.
- 7. Torque setting: to set the tool to desired torque, select a fastener of known tightness of the same size, thread pitch and thread condition as those on the job. Turn air regulator to lowest position. Apply wrench to (Turn regulator out) until fastener moves slightly in the direction it was originally set. This wrench is now set to duplicate the torque applied to this fastener. Critical torque specifications cannot be met by any wrench in this class. Use an appropriate torque wrench to attain a specific torque.



TROUBLESHOOTING

| INSUFFICIENT POWER: <u>Probable Cause</u> Dirty or clogged air passages supply line. | Solution Flush and lubricate tool, drain air tank and insufficient air supply increase line pressure, Make sure compressor matches tool's air pressure and consumption needs. |
|---|---|
| Air leakage | Use Teflon tape at all fittings and joints. Check tool for leaks and repair as necessary |
| Worn/damaged wear & tear torque parts tool matching | Be sure you are using a tool suited for the requirements of the job at hand. |

Safety Rules



READ ALL INSTRUCTIONS. Do not attempt to operate the tool until you read and understand all safety precautions and manual instructions.



Never use oxygen or combustible gas as a power source for the tool. **EXPLOSION MAY OCCUR.** Use dry, filtered, lubricated and regulated compressed air only.



Never use gasoline or other flammable liquids to clean the tool. Vapors in the tool will ignite by a spark and cause the tool to explode.



Do not exceed maximum permissible operating pressure 120 PSI (8 BAR).



Disconnect the tool from air supply when: loading and unloading, clearing jams, performing service or maintenance and non-operation. ALWAYS ASSUME THE TOOL IS LOADED!



Do not use the tool when changing one driving location to another, involves the use of stairs, ladders or scaffolding.

Do not carry the tool with your finger on the trigger.

Do not carry the tool by the hose or pull the hose to move the tool. Carry the tool only the handle.



Wear eye protection with side shields. Wear eye protection where tools are being operated. FREE FLIGHT FASTENERS OR DEBRIS WILL CAUSE PERMANENT EYE INJURY. Wear hearing protection and hard hats.



Never point the tool at yourself or at any other person at all times. Never operate the tool while working above others. **DEATH OR SERIOUS INJURY MAY OCCUR.** No horseplay! Work safe!



Use pressure regulator, filter and oiler. Use air supply hose rated for 150 PSIG minimum. Do not use a check valve or any other fitting that allows air to remain in the tool.

Operation



Protect your eyes and ears. Wear safety glasses with side shields. Wear hearing protection. Employers and users are responsible for ensuring the user or anyone near the tool wears this safety protection.

- 1. Check and replace any damaged or worn components on the tool. The safety warning labels on the tool must also be replaced if they are illegible.
- 2. Add a few drops of lubricant into air inlet.
- 3. Install a quick connect fitting to the tool.
- 4. Connect the tool to an air compressor using a 3/8" I.D. hose. Make sure the tool is not loaded and the hose has a rated working pressure exceeding 200 PSI (13.8 BAR).
- 5. Regulate the air pressure to obtain 70 PSI (5 BAR) at the tool. Check the operation of the safety yoke mechanism.



6. Insert fasteners into your tool following the instructions of loading the tool.

7. Reconnect the air hose to the tool.



8. Test for proper fastener penetration by driving fasteners into a piece of wood. If the fastener penetration, regulate the air pressure to a higher setting until the desired penetration is achieved. Do not exceed 120 PSI (8 BAR) at the tool

Operation Instruction



- 1. Thread the male plug onto the inlet bushing
- 2. Add 2 or 3 drops of non-detergent oil into the plug before each use
- 3. Connect to the air source with quick coupler
- 4. Choose qualified & correct impact socket and connect to the anvil

MAINTENANCE AND CARE

Visual Inspection

- a) Smooth safety and trigger movement.
- b) All screws are tightened.
- c) Never use damaged or incomplete tool.

Cleaning

The periodical cleaning of the tool is recommended to ensure proper functioning.

- a) Disconnect the tool from the air supply.
- b) Remove all fasteners
- c) Clear the magazine and nose sections with a blowgun to remove any accumulated debris.
- d) Check for free movement of the trigger, follower and work contact element. Remove any obstructions carefully.
- e) Oil tool daily with proper air tool oil.
- f) Empty the air tanks on your compressor daily to prevent moisture buildup in the air lines.

Lubrication

The tool should be lubricated daily.

- a) Add a few drops of non-detergent oil in the tool air inlet before each use.
- b) Never use detergent oils, which can damage o-rings causing the tool to malfunction.
- c) Wipe off excessive oil from the exhaust.
- d) Hammer cage set should be periodically lubricated at least one time per month **Excessive oil will damage o-rings of tool.**





Stop using the tool immediately if any of the following problems occurs. Serious personal injury could occur. Necessary repair of replacement must be carried out by qualified and trained technician of an authorized service location.

OEM Limited One Year Warranty

For one (1) year from the date of purchase OEM tools will warranty this tool against defects in materials and workmanship. Defective OEM brand hand tools purchased from an authorized OEM distributor will be repaired or replaced when returned freight prepaid to the OEM Warranty Dept., 3580 E. Raines Rd. #3, Memphis, TN 38118. Proof of purchase with date of purchase will be required with all returns. OEM will not be responsible for any consequential or incidental damages arising from the breach of this or any other warranty, whether expressed, implied or statutory. Some states do not allow the exclusion or limitation of consequential or incidental damages, so the above exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

| Problem | Possible Cause | | Corrective Action | | | |
|--|---|----|--|--|--|--|
| | 1.Grit or gum in tool. | 6 | 1.Flush the tool with air tool oil or gum solvent. | | | |
| Tool runs slowly or will not operate. | 2.No oil in too l. | 8 | 2.Lubricate the tool according to the lubrication instructions. | | | |
| | 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 PSIG. | | | |
| | 4.Air hose leaks. | × | 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 hoses 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. | Ø | 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. | | | |
| tool rotor turning w/t triggering | 8.Air Inlet O ring broken. | 0 | 8.replace the broken O ring. | | | |

REPLACEMENT PARTS



| NO. | PART NO. | ASSY NO. | DESCRIPTION | Q'TY | NO. | PART NO. | ASSY NO. | DESCRIPTION | Q'TY |
|-----|---|-------------|-----------------------|------|------|----------|-------------|---------------------|------|
| *1 | 24402A | Α | Housing | 1 | 21 | 24402U | | Bearing | 1 |
| 2 | 24402B | | Valve Sleeve | 1 | 22 | 24402V | | Front Rotor Bearing | 1 |
| 3 | 24402C | | O-Ring | 1 | 23 | 24402W | | Bead Flange | 1 |
| 4 | 24402D | | Spring | 1 | 24 | 24402X | | Cylinder | 1 |
| 5 | 24402E | | Valve Stem | 1 | 25 | 24402Y | | Cylinder Dowell | 1 |
| 6 | 24402F | | Air Inlet Bushing | 1 | 26 | 24402Z | | Anvil Bushing | 1 |
| 7 | 24402G | | Oil Seal | 1 | 27 | 24402AA | | Rotor Blade | 6 |
| 8 | 24402H | | Trigger | 1 | 28 | 24402AB | | Front End Plate | 1 |
| 9 | 244021 | | Spring Pin | 1 | 29 | 24402AC | | Rear End Plate | 1 |
| *10 | 24402J | A | Bushing | 1 | 30 | 24402AD | | Gasket | 1 |
| 11 | 24402K | | O-Ring | 2 | 31 | 24402AE | | Anvil Collar | 1 |
| 12 | 24402L | | Reverse Valve | 1 | 32 | 24402AF | | Hammer Cage | 1 |
| 13 | 24402M | | Steel Ball | 1 | 33 | 24402AG | | Hammer Pin | 2 |
| 14 | 24402N | | Spring | 1 | 34 | 24402AH | | Hammer | 2 |
| 15 | 244020 | | Reverse Valve Knob | 1 | 35 | 24402AI | | Hammer Case Pilot | 1 |
| 16 | 24402P | | Screw | 1 | 36 | 24402AJ | | Protector Cover | 1 |
| *17 | 24402Q | Α | Grease Fitting | 1 | 37 | 24402AK | | Gasket | 1 |
| 18 | 24402R | | Bolt | 1 | 38 | 24402AL | | Screw | 3 |
| 19 | 24402S | | Washer | 1 | 39 | 24402AM | | Standard Anvil | 1 |
| 20 | 24402T | | Rotor | 1 | NS-A | 24402AN | | Housing Assy A | 1 |
| | The parts with "" mark cannot be ordered individually and need to be ordered based on the assembly 20100914 | | | | | | | | |