

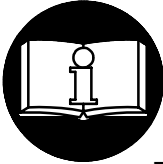
INSTRUCTIONS FOR SERIES DAM MOUNTED TORQUE CONTROL WRENCHES

NOTICE

Series DAM Wrenches are designed for assembly applications requiring precise torque monitoring and control, accuracy, consistency and repeatability.

Ingersoll-Rand is not responsible for customer modification of tools for applications on which Ingersoll-Rand was not consulted.

⚠ WARNING



IMPORTANT SAFETY INFORMATION ENCLOSED.

READ THIS MANUAL BEFORE OPERATING TOOL.

**IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION
IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.**

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

PLACING TOOL IN SERVICE

- Always operate, inspect and maintain this tool in accordance with all regulations (local, state, federal and country), that may apply to hand held/hand operated pneumatic tools.
- For safety, top performance, and maximum durability of parts, operate this tool at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet with 3/8" (10 mm) inside diameter air supply hose.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Be sure all hoses and fittings are the correct size and are tightly secured. See Dwg. TPD905-1 for a typical piping arrangement.
- Always use clean, dry air at 90 psig maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.
- Keep hands, loose clothing and long hair away from rotating end of tool.
- Note the position of the reversing lever before operating the tool so as to be aware of the direction of rotation when operating the throttle.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Keep body stance balanced and firm. Do not overreach when operating this tool. High reaction torques can occur at or below the recommended air pressure.
- Tool shaft may continue to rotate briefly after throttle is released.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Use accessories recommended by Ingersoll-Rand.
- Use only impact sockets and accessories. Do not use hand (chrome) sockets or accessories.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.
- Do not remove the Inlet Plug without first disconnecting the live air supply.
- Whenever the Angle Head is installed or repositioned, the Throttle Switch or Lever must be positioned so that reaction torque will not tend to retain the throttle in the "ON" position.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.

(Continued on page 1-2)

NOTICE

The use of other than genuine Ingersoll-Rand replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorized trained personnel. Consult your nearest Ingersoll-Rand Authorized Servicenter.

Refer All Communications to the Nearest
Ingersoll-Rand Office or Distributor.

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INGERSOLL-RAND®
PROFESSIONAL TOOLS

⚠ WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.


USING THE TOOL (Continued)


- When installing or removing the output device on any tool, **ALWAYS** grasp a metal component of the tool while tightening or loosening the Coupling Nut or Spindle Cap. Acceptable clamping locations include, but are not limited to, the hex on the Gear Case, the Tool Hanger, the Torque Reaction Arm or any metal Mounting Plate. **NEVER** grasp the composite tool body or handle in vise jaws to restrain the torque of the Coupling Nut or Spindle Cap. Such practice will result in damage to the tool.
- Do not use power units and gear trains that exceed the capability of the output device.
- The Tube Nut Attachment has an opening on the front side for construction and application purposes. **DO NOT**, under any circumstance place your fingers in this opening.
- The Torque Reaction Bar must be positioned against a positive stop. Do not use the Bar as a dead handle and take all precautions to make certain the operator's hand cannot be pinched between the Bar and a solid object.
- When operated continuously for long periods of time, Series D Nutrunners may become hot at the spindle end of the tool. Take all precautions necessary to avoid skin contact with the hot surfaces. Prolonged contact may result in burns.
- All Series D Torque Control Wrenches and Nutrunners with reverse capability have rotational arrows molded into the housing in the area of the reversing mechanism. When the direction switching device is positioned nearest the molded circular arrow with an "F" in the center, spindle rotation will be forward or clockwise direction. When the direction switching device is positioned nearest the molded circular arrow with an "R" in the center, spindle rotation will be reverse or counterclockwise direction.


WARNING LABEL IDENTIFICATION


⚠ WARNING


FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.


	⚠ WARNING Always wear eye protection when operating or performing maintenance on this tool.
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	⚠ WARNING Always wear hearing protection when operating this tool.
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	⚠ WARNING Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
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	⚠ WARNING Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
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	⚠ WARNING Do not carry the tool by the hose.
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	⚠ WARNING Do not use damaged, frayed or deteriorated air hoses and fittings.
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	⚠ WARNING Keep body stance balanced and firm. Do not overreach when operating this tool.
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	⚠ WARNING Operate at 90 psig (6.2 bar/ 620 kPa) Maximum air pressure.
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	⚠ WARNING The Torque Reaction Bar must be positioned against a positive stop. Do not use the Bar as a dead handle and take all precautions to make certain the operator's hand cannot be pinched between the Bar and a solid object.
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PLACING TOOL IN SERVICE

EXHAUST NOISE

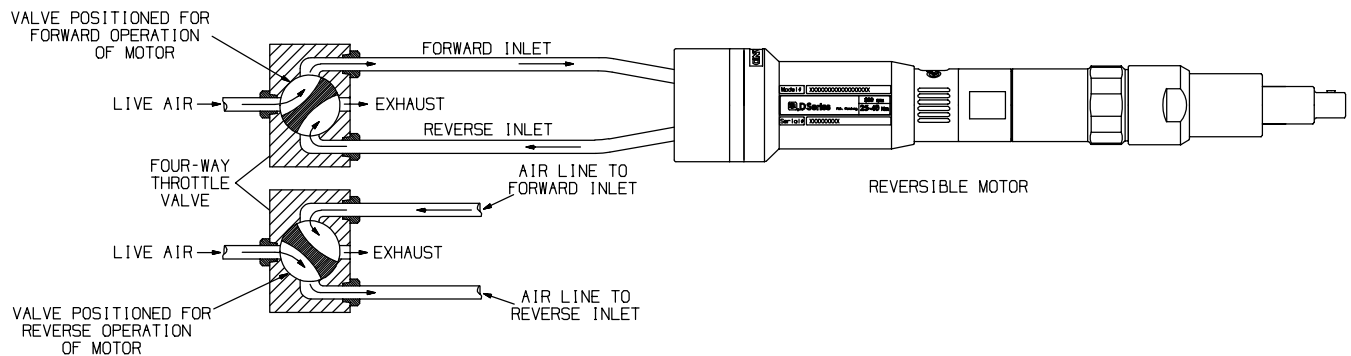
Installing a mounted tool assembly without the Handle Assembly eliminates all the noise suppression equipment located inside the Handle. To reduce exhaust noise to acceptable levels without reducing torque output, install one or two external Mufflers (Part No. MRV015-AC980). If the application requires the tool to operate in the forward

and reverse modes, install one Muffler in the exhaust port, designated by the letter "E" and located at the rear of the Backcap. If the application requires the tool to operate only in direction, install one Muffler in the exhaust port and a second Muffler in the directional port ("F"–forward; "R"–reverse) that is not being used in the application.

CONTROL VALVE

For optimum performance, the air source and supply lines must be capable of maintaining 90 psig (6.2 bar/620 kPa) air pressure at the tool. A 3/8" (10 mm) diameter or larger hose is necessary for ample air flow to each tool. When operating the tool in the reversible mode, it is

necessary to put a four way valve in the air supply line because the reverse air inlet port becomes an auxiliary port when the tool operates in forward rotation. In reverse, the forward inlet becomes the auxiliary exhaust port. A diagrammed example is shown in Drawing TPC601-1.



(Dwg. TPC601-1)

LUBRICATION



Ingersoll-Rand No. 10 **Ingersoll-Rand No. 67**
Ingersoll-Rand No. 90

Adequate lubrication is imperative for maximum performance and durability of the gearing in these tools. Always use an air line lubricator with this tool. We recommend the following Filter-Lubricator-Regulator Unit.

For U.S.A. – No. C18-03-FKG0-28

Motor

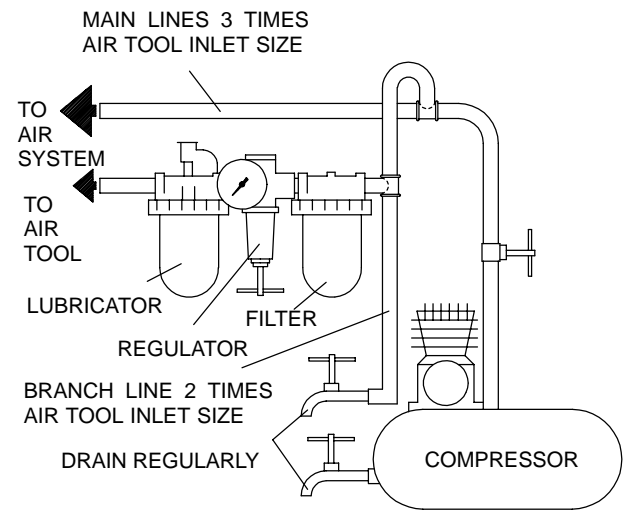
After each eight hours of operation, unless an air line lubricator is used, inject 2 cc of Ingersoll-Rand No. 10 Oil into the Inlet Bushing.

Gearing

After each 50 000 cycles, or one month of operation, inject 3 to 4 cc of Ingersoll-Rand No. 67 Grease into the Grease Fitting in the Gear Case Assembly.

Angle Attachment

After each eight hours of operation, inject 1 to 2 cc of Ingersoll-Rand No. 67 Grease into the Grease Fitting in the Angle Housing Assembly.



(Dwg. TPD905-1)

MANUAL AND VIDEO AVAILABLE

Ingersoll-Rand has a manual and video available which provides a better understanding of the relationship between these tools and proper torque tension. To obtain a copy, contact your nearest Ingersoll-Rand Distributor and request the following items:

“Torque Tension and Tools” (Manual)

Form No. 52074

“Torque Tension and Tools” (Video)

Form No. VCR-101

ERGONOMIC INFORMATION

The D Series Torque Control Wrenches incorporate the latest features in ergonomic design. Ingersoll-Rand has a number of informational items available that explain why tools having an ergonomic design are beneficial in the workplace and to the worker. Following is a list of available items:

MANUAL AND VIDEO AVAILABLE

“Ergonomics: Design for a Better Workplace” (Manual)

Form No. 52070

“Ergonomics: Design for a Better Workplace” (Video)

Form No. VCR-100

POSTERS AVAILABLE

Ergonomics Poster – Series #2

Form No. 52109

Ergonomics Poster – Series #1

Form No. 52108

To receive any of the above listed ergonomic informational items, contact:

**ERGONOMICS
c/o INGERSOLL-RAND COMPANY
PO BOX 1776
LIBERTY CORNER, NJ 07938**

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.