

DRAPER®

INSTRUCTIONS FOR 1/2" Square Drive Composite Body Air Impact Wrench

Stock No.41096 Part No.5201PRO

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS TOOL.



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GENERAL INFORMATION

Read all these instructions before operating this product and save these instructions.

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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DECLARATION OF CONFORMITY

We:
 Draper Tools Ltd.,
 Hursley Road,
 Chandler's Ford,
 Eastleigh, Hampshire.
 SO53 1YF.
 England.

Declare under our sole responsibility that the product:

Stock No:- **41096.**

Part No:- **5201PRO.**

Description:- **½" Composite Impact Wrench.**

To which this declaration relates is in conformity with the following directive(s)
 98/37/EC.

With reference to:
 EN792-6:2000, ISO15744:2002, EN28662-1:1993.

J.N. Draper
 Chairman

04/09/2006



SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock no.	41096
Part no.	5201PRO
Anvil size.....	1/2"
Maximum torque	83kgf-m (813Nm/600ft-lbs)
Maximum operating air pressure	90psi (6.2bar)
Average air consumption	4.4cfm (125L/min)
Revolutions per minute (no load)	7,000r/min
Minimum air line size.....	3/8" ID
Air inlet.....	1/4" BSP
Sound pressure level†	89dB(A)
Sound power level††.....	93dB(A)
Vibration level.....	2.8m/s ²
Weight	2.2kg

WARNING: WEAR APPROVED SAFETY GLASSES AND EAR DEFENDERS

† Continuous A-Weighted Sound Pressure Level at the workstation in accordance to prEN ISO 15744:1999 and declared according to EN ISO 4871.

†† A-Weighted Sound Power Level in accordance to prEN ISO 15744:1999 and declared according to EN ISO 4871.



GUARANTEE

Draper air tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for 6 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

Should the machine develop any fault, please return the complete tool to your nearest authorized warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF, England. Telephone (023) 8049 4344.

A proof of purchase must be provided with the tool.

If, upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any persons other than the authorized Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variation of its terms are not authorized.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL LEAD TO PREMATURE MALFUNCTION OF THE EQUIPMENT WHICH IS NOT COVERED BY THE GUARANTEE.

HYDRAULIC FLUID SPECIFICATION:

Hydraulic fluid viscosity refers to its properties to flow and how it reacts with heat. A low viscosity is thinner than a high viscosity.

Hydraulic fluid becomes thinner as it heats so choosing the right viscosity is essential. If the viscosity is too low it may provide insufficient lubrication when heated. Equally if it is too high the fluid may provide excessive resistance to move through the lines when cold.

The ISO (International Standards Organisation) viscosity grading system measures the kinematic viscosity in centistokes (cSt) at 40° which is today's accepted standard. The SAE (Society of Automotive Engineers) viscosity grade value is based on a scale.

This equipment is suited to an ISO grade 22-32 (SAE grade 5W-15W) hydraulic fluid or monograde oil.

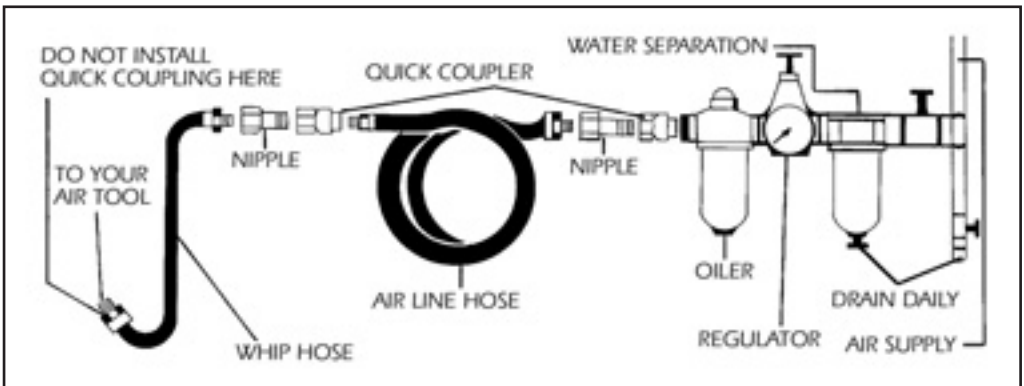
The fluid must be constantly supplied to the equipment during use to ensure complete lubrication and optimum performance is achieved. It also acts as a rust inhibitor when the equipment is not in use. Most of the major brand petroleum companies produce a suitable lubricant to the above specifications.

This air tool operates at a maximum pressure of 90psi and must be controlled via a combined regulator/oil/water separator such as the Draper 4222/3 unit which with proper maintenance will ensure a constant supply of dry air and lubricating oil at all times (see illustration below). Always check machine operating pressure before use.

WATER IN THE COMPRESSOR TANK WILL CAUSE SERIOUS CORROSION TO YOUR AIR TOOLS AND SHOULD BE DRAINED DAILY TO AVOID EXCESSIVE WATER IN YOUR AIR SUPPLY. DIRTY WET AIR RAPIDLY SHORTENS THE LIFE OF YOUR AIR TOOL.

If you are using an air tool on a hose over 25ft. long it is advisable to increase the bore of the hose to the next larger size available i.e. 1/4" increases 3/8". This will ensure adequate pressure and volume of air to power the machine.

RECOMMENDED AIR SUPPLY SET UP



After each use and before prolonged storage lubricate the equipment with approximately 1.5ml of oil directly down the air inlet.



GENERAL SAFETY INSTRUCTIONS

IMPORTANT:

Draper Tools Limited recommends that this machine should not be modified or used for any application other than that for which it was designed. If you are unsure of its relative applications do not hesitate to contact us in writing and we will advise you.

- Power tools shall not be used in potentially explosive atmospheres unless specifically designed for that purpose;
- Unexpected tool movement due to reaction forces or breakage of inserted tool or reaction bar may cause injuries;
- Power tools shall be isolated from the energy source before changing or adjusting the inserted tool;
- **WARNING:**
 - There is a risk of crushing by torque between a reaction bar and the workpiece;
 - There is a risk of loose clothing, hair, etc. being caught in the rotating spindle of the power assembly tool;
 - There is a risk of being injured if hands are not kept away from the reaction bar, specially observed when unscrewing in confined work places.
 - There is a risk of being injured if hands are not kept away from the nutrunner sockets;
 - There is a risk of danger to persons from high speed splinters being emitted from impact wrenches in the case of nutrunner socket failure;
 - There is a risk of being injured by whipping air hoses.
- Unexpected direction of inserted tool movement can cause a hazardous situation.
- Use only sockets and adapters which are in good condition and are intended for use with power tools;
- Adopt a suitable posture to counteract normal or unexpected movement of the power tool due to reaction forces from the power assembly tool;
- Release the start and stop device in the case of an interruption of the energy supply;
- Only lubricants recommended by the manufacturer shall be used;
- Release pressure when not in use. Disconnect from air line;
- Impact wrenches are not torque wrenches and are not designed or capable of installing fasteners to a specified torque. For fasteners requiring a specific torque, install the fastener to well below the required value then complete the task with a hand torque wrench to avoid damaging the fastener or workpiece.
- Ensure the anvil ring is correctly maintained and if damaged or missing, is replaced immediately before work commences. Missing or damaged anvil rings may lead to sockets detaching from the wrench while rotating at high speed.
- Only use accessories specifically hardened for impact use. Do not use standard chrome type hand tool sockets as they will shatter and splinter causing injury.
- Do not modify this impact wrench in any way.
- Do not carry or move the tool by the air line.
- When starting or finishing the removal and installation of fasteners there is a risk of crushing between the tool and the workpiece due to sudden movement or reaction forces.
- In the event of hydraulic fluid/monograde oil contact or spillage refer to the manufacturer's datasheet. As a general guide refer below.

HYDRAULIC FLUID DATA SHEET:

Always wear gloves and goggles when dealing with hydraulic fluid.

Hydraulic fluid composition is achieved when highly refining mineral oil by means of a solvent.

As a substance is not considered to be hazardous to health under normal conditions of use.

First Aid recommendations

- In case of ingestion:
Wash out mouth with clean water and seek medical advice.
Do not induce vomiting.
- In case of contact with eyes:
Thoroughly flush eyes with clean water for 5 to 10 minutes and seek medical advice.
- In case of contact with skin:
Wash area with soap and water. Remove effected clothing and wash. If irritation persists, seek medical advice.
- Other:
Seek medical advice immediately.

Hydraulic fluid is a combustible and in the event of fire should be extinguished using a foam or dry powder fire extinguisher. Do not use water.

In the event of accidental release into the environment measures to prevent spread must be adhered. Do not contaminate rivers, water ways or drains. Spillage should be contained with sand, grit or other appropriate barriers. Warn bystanders as spillage may present a slip hazard.

Hydraulic fluid is not considered biodegradable and may in fact bioaccumulate.

IMPORTANT NOTE:

Residual Risk. Although the safety instructions and operating manuals for our tools contain extensive instructions on safe working with power tools, every power tool involves a certain residual risk which can not be completely excluded by safety mechanisms. Power tools must therefore always be operated with caution!



- ① Variable speed trigger.
- ② 1/2" anvil.
- ③ Anvil ring.

- ④ Reverse/forward (speed) selector.
- ⑤ Composite body.
- ⑥ 1/4" BSP (female).

- **SCOPE:** This air impact wrench is designed for removal and installation of threaded fasteners. Any other use is forbidden.
- **UNPACKING:** After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the product and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

ASSEMBLY

- **WHIP HOSE (FIG.1):**

To connect the impact wrench to an air line a ¼" BSP male thread whip hose† will be required. Wind a length of PTFE tape‡ around the thread before securing the hose in place. The connection must be tight for an airtight union.

† Draper Stock No.54438.

‡ Draper Stock No.63389.

- **NOTE:** Due to the rotating air inlet feature a spanner will be required to hold the inlet while securing the whip hose.



OPERATION & USE

- **NOTE:**

Before connecting the impact wrench to the air supply reduce the line pressure according to the specification.

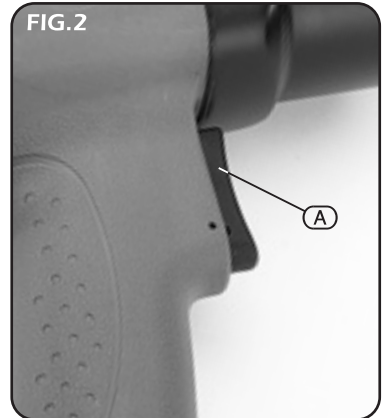
- **TRIGGER (FIG.2):**

Confirm direction of rotation prior to starting. Pull trigger (A) to operate the impact wrench.

Release the trigger to stop the impact wrench. The anvil and accessory will continue to rotate briefly after the trigger has been released.

- **NOTE:**

Before tool operation and work commences ensure the compressor reservoir is drained of condensate along with all connected air lines. Check and drain the air line regulator's water trap and fill up the lubrication reservoir.



- **NOTE:**

Disconnect from the air supply before carrying out adjustment, servicing or maintenance.

- **DIRECTION CONTROL/SPEED REGULATOR (FIG.3):**

- **NOTE:**

Impact wrenches are not torque wrenches and are not designed or capable of installing fasteners to a specified torque. For fasteners requiring a specific torque, use a hand torque wrench.

Rotate the selector (B) fully anticlockwise to engage reverse. Move the selector clockwise to choose one of the three forward speed settings most appropriate for the application. Also note the speed can be regulated using the trigger.

FIG.3



- **ANVIL (FIG.4):**

Ensure the anvil ring (C) is correctly maintained and if damaged or missing is replaced immediately before work commences.

Ensure the socket correctly locates on the anvil firmly engaging on the anvil ring (C).

- **NOTE:** It is natural for the socket to resist removal.

- **WARNING:**

Only use accessories specifically hardened and designed for use with impact tools†.

Do not use standard chrome type hand tool sockets and accessories as they will shatter and splinter.

† Example: Draper 19 pieces ½" impact socket set 54651.

FIG.4



- Every Day:

Before connection to the air supply;

- Drain the compressor reservoir of condensate.
- Drain the air lines of condensate.
- Drain the combined separator filter, regulator, water trap.
- Fill up the combined separator filter, regulator, lubricant reservoir.
- Check the line pressure is correct for the tool.

- After Daily Use:

- Repeat the above procedures.
- Lubricate the tool with approximately 1.5ml of oil directly down the air inlet.

PROBLEMS	POSSIBLE CAUSE	REQUIRED ACTION
<ul style="list-style-type: none"> ■ Tool runs slowly. Air flows slightly from exhaust. 	<ul style="list-style-type: none"> ■ Motor parts jammed with dirt particles. ■ Power regulator in closed position. ■ Air flow blocked by dirt. 	<ul style="list-style-type: none"> ■ Check air inlet filter for blockage. ■ Pour air tool lubricating oil into air inlet as per instructions. ■ Operate tool in short bursts, quickly reversing rotation back and forth. ■ Repeat above as needed. If this fails return to service centre.
<ul style="list-style-type: none"> ■ Motor will not run. Exhaust air flows freely. 	<ul style="list-style-type: none"> ■ One or more motor vanes stuck due to material build up. ■ Motor seized due to rust. 	<ul style="list-style-type: none"> ■ Pour air tool lubricating oil into air inlet. ■ Operate tool in short bursts of forward and/or reverse rotation (where applicable). ■ Tap motor housing gently with plastic mallet. ■ Disconnect supply, free motor by rotating drive shank manually. ■ If tool remains jammed, return to service centre.
<ul style="list-style-type: none"> ■ Sockets will not stay on. 	<ul style="list-style-type: none"> ■ Worn anvil ring. 	<ul style="list-style-type: none"> ■ Replace anvil ring.
<ul style="list-style-type: none"> ■ Drive shank wear. 	<ul style="list-style-type: none"> ■ Worn sockets or using conventional chrome plated sockets. 	<ul style="list-style-type: none"> ■ For any air tools, do not use chrome plated conventional sockets under any circumstances as this is a highly dangerous practice, use only high quality impact sockets as listed in the draper catalogue. Chrome plated conventional sockets can shatter and cause injury.
<ul style="list-style-type: none"> ■ Tool runs at normal speed but loses power under load. 	<ul style="list-style-type: none"> ■ Motor parts worn. ■ Cam clutch worn or sticking due to lack of lubricant. 	<ul style="list-style-type: none"> ■ Lubricate clutch housing. ■ Check for excess clutch oil. Clutch cases need only be half full. Overfilling can cause drag on high speed clutch parts. A typical oil, lubricated wrench only requires 1/2 ounce of clutch oil. <p>GREASE LUBRICATED: NOTE: Heat usually indicates insufficient grease in chamber. Severe operating conditions may require more frequent lubrication.</p>
<ul style="list-style-type: none"> ■ Tool will not shut off. 	<ul style="list-style-type: none"> ■ Throttle valve 'O' ring broken or unseated. ■ Throttle valve stem bent or jammed with dirt particles. 	<ul style="list-style-type: none"> ■ Replace new 'O' rings. ■ Lubricate trigger with air tool lubricating oil. If trigger remains jammed return to service centre.

During decommissioning of the equipment certain hazards should be understood and avoided:

- Dealing with hydraulic fluid - refer to the data sheet section for details.
- Only with the line pressure released shall the equipment be disassembled. Goggles should be worn.



The operator's instruction must be read before work starts.



WARNING: Risk of crushing.



Direction of rotation.



Wear safety glasses.



Wear ear defenders.



Wear protective gloves.

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- **Service/Warranty Repair Agent**
For aftersales servicing or warranty repairs, please
contact the Draper Tools Helpline for details of an
agent in your local area.

YOUR DRAPER STOCKIST

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