Instruction manual & spare parts list

IW-PRO NG SERIES
AIR DRIVEN IMPACT WRENCHES

1. General Safety and Operation Instruction

1.1 Unpacking

When unpacking this product, carefully inspect for any damage that may have occurred during transit. Make sure any loose fittings, bolts, etc, are tightened before putting this product into service.

1.2 This product is a part of a high-pressure system and the following safety precautions must be followed at all times along with any other existing safety rules.

1.3 Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.

1.4 Only persons well acquainted with these rules of safe operation should be allowed to use the air tool.

Do not exceed maximum operation pressure of the air tool (6.2BAR/90 PSI).

The air tool could explode and result in death or serious personal injury.

1.5 Do not exceed any pressure rating of any component in the system.

1.6 Disconnect the air tool from air supply before changing tools or attachments, servicing and during non-operation.

1.7 Always wear safety glasses during operation.

1.8 Do not wear loose fitting clothing, scarves, or neck ties. Loose clothing maybe caught in moving parts and result serious personal injury.

1.9 Do not wear jewellery when operation any tool. Jewellery maybe caught in moving parts and result in serious personal injury.

1.10 Do not depress trigger when connecting the air supply hose.

1.11 Always use attachments designed for use with air powered tools.

Do not use damaged or worn attachments.

Do not use hand-tool sockets. Use Impact-Quality sockets only.

Hand-tool socket are "Glass-Hard" and will shatter and can cause serious personal injury if used with air tools.

1.12 Never trigger the tool when not applied to a work object. Attachments must be securely attached. Loose attachments can cause serious injury.

1.13 Protect air lines from damage or puncture.

1.14 Never point an air tool at oneself or any other person. Serious injury could occur.

1.15 Check air hoses for weak or worn condition before each use. Make sure all connections are secured.

Release all pressure from the system before attempting to install, service, relocate or performs any maintenance.

1.16 Keep all nuts, bolts and screws tight and ensure equipment is in safe working condition.

1.17 Do not put hands near or under moving parts.

1.18 Speed Adjustment

The impact wrench should never be used to set torque. Use a torque wrench to set the torque and equipped with regulators for speed adjustment. To remove nuts, set the regulator to the maximum setting. To install nuts, set the regulator to the minimum to medium setting. Do not over-tighten the nuts.

1.19 Air Hose

Use a 3/8" air hose between the compressor and the tool. Compressed air is cooled and its water content separated, as soon as the air leaves the compressor. A portion of the water content, however, is condensed in the piping, and may cause trouble. So, install an air filter and an oiler between the compressor and the tool.

Clean the hose with a blast of compressed air before connecting the hose to air tool. This will prevent both moisture and dust within the hose from entering the tool and causing possible rust or malfunction. To compensate for unusually long hose (over 25 ft), the line pressure should be increased accordingly.

Never carry a tool by the hose or pull the hose to move the tool or a compressor. Keep hoses away from heat, oil and sharp edges. Replace any hose that is damaged, weak or worn.

1.20 Storage

The impact wrench must be lubricated before storing. Follow the lubrication instructions with an exception to step 4.3.5. Only run the impact wrench for 2 to 3 seconds instead of 20 to 30 seconds because more oil needs to remain in the impact wrench when storing.

2. Specific Safety Instruction

2.1 Information of Noise Level

2.1.1 The noise level at the operator's position is about:

Part No.	Model	A-weighted sound pressure level (Lpf)	A-weighted sound pressure level (Lw)	Uncertainty K_{wA}
403-722208	Impact Wrench IW-PRO 3/4" NG	103(dB)	114(dB)	3(dB)

2.1.2 Reference standard: ISO 15744.

2.1.3 Always wear ear protectors during operation.

2.2 Information of Vibration Level

2.2.1 The vibration level at the handle is about:

Part No.	Model	Vibration Level (m/s^2)	Uncertainty (m/s^2)
403-722208	Impact Wrench IW-PRO 3/4" NG	9.02	0.88

2.2.2 Reference standard: EN 28927-2.

2.3. Warnings

2.3.1 The power tools shall not be used in explosive atmospheres unless specially designed for that purpose.

2.3.2 Unexpected tool movement due to reaction forces or breakage of inserted tool or reaction bar may cause injuries to hands or feet.

2.3.3 The air tools shall be isolated from the energy source before changing or adjusting the inserted tool.

2.3.4 Pay attention to the risk of crushing by torque between a reaction bar and the work piece.

2.3.5 Pay attention to the risk of loose clothing, hair etc. being caught in the rotating spindle of the power assembly tool.

2.3.6 Pay attention to the risk of being injured if hands are not kept away from the reaction bar, specially observed when unscrewing in confined work places.

2.3.7 Pay attention to the risk of being injured if hands are not kept away from the nut runner sockets.

2.3.8 Pay attention to the danger to persons from high speed splinters being emitted in the case of a nut-runner socket failure, in particular relevant of impact wrenches.

2.3.9 Pay attention to the risk of being injured by whipping air hoses.

2.4 Instructions

2.4.1 Ensure the proper adaptation of the reaction bar to the application.

2.4.2 Use only sockets and adapters which are in good condition and are intended for use with air tools.

2.4.3 Ensure that the assembly air tool is securely fixed to suspension advice, if used.

2.4.4 Adopt suitable postures to counteract normal or unexpected movement of the air tool due to reaction forces from the tool assembly.

2.4.5 Ensure that the pressure of the air or fluid supply is not lower than the lowest pressure specified by the manufacturer for clutch controlled assembly tools and make sure that the air or fluid supply pressure does not fail after the clutch has been set.

2.4.6 Release the start and stop device in the case of an interruption of the energy supply.

2.4.7Only lubricants recommended by the manufacturer shall be used.

2.5 Explanations of warning signs used for this tool

			
The operator's instruction must be read before work starts	**Warning: Risk of crushing (intended for open-ended spanners)**	**Warning: Risk of crushing (between the reaction bar and the working piece)**	**Direction of rotation**

2.6 Application

Rotary air tool, with a reversible spindle driving a hammer which periodically strikes an anvil which includes a drive adapter for the purpose of tightening or loosening nuts and bolts without producing any major torque reaction on the power tool.

2.7 The weight of this tool is about: 5.0 Kgs.

Note: If the weight of this tool exceeds 15 Kgs, the following attention shall be paid to：

2.7.1 Be sure that you can afford the weight.

2.7.2 Be sure to wear foot protection, to prevent the risk of impact due to the drop of tool.

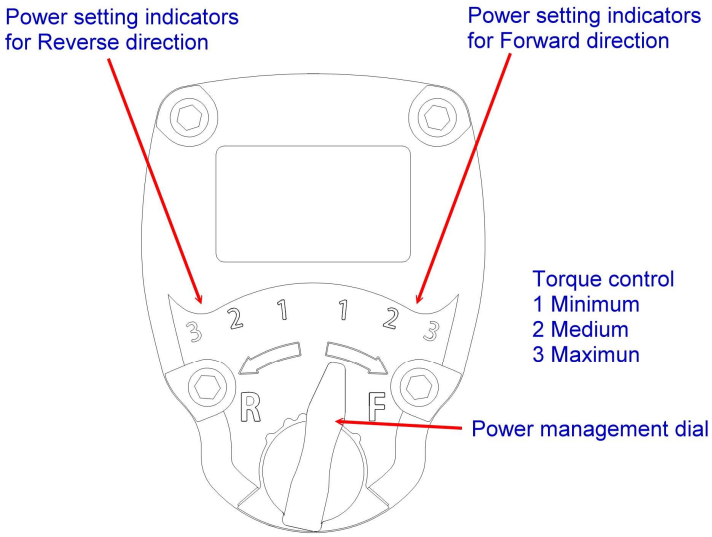
2.8 Specifications:

Part No.	Model	Square Drive	Capacity Bolt Size		Free Speed RPM	Max. Torque		Overall Length		Air Inlet (PT)	Air Hose (ID)	Continuous Air Consumption		Net Weight	
			inch	mm		ft-lb	N.m.	inch	mm			scfm	l/min	lb	kg
403-722208	Impact Wrench IW-PRO 3/4" NG	3/4"	1-1/4	32	4500	1200	1627	8.46	215	3/8"	3/8"	14	396	11.0	5.0

3. Using The Power Management System

Air impact wrenches are not torque control devices. Fasteners with specific torque requirements must be checked with suitable torque measuring devices after installation with an air wrench.

POWER MANAGEMENT SYSTEM



The impact wrench incorporates a Power Management System that allows the operator to select 3 power output settings. These settings range from minimum power output through maximum power output.

The 3 power setting indicators of increasing size on the rear of the housing indicate increasing power output levels, are for reference only and DO NOT denote a specific power output. The “1” power setting indicator designates minimum power output, the “2” power setting indicators denote medium power outputs and the “3” power setting indicator denotes maximum power output.

The power output can be further reduced in forward or reverse by using the variable throttle. Air supply systems which do not deliver adequate air pressure can affect power output at all settings.

4. Maintenance Instructions

4.1 Lubrication

Proper lubrication is the owner's responsibility. Failure to lubricate the air tool properly will dramatically shorten the life of the tool and will void the warranty.

This impact wrench requires lubrication before the initial use and before and after each additional use.

4.2 Impact wrench require lubrication throughout the life of the tool and must be lubricated in two separate areas: the air motor and the impact mechanism.

4.3 Air Motor Lubrication

4.3.1 The motor must be lubricated daily. An air motor cannot be oiled too often.

Disconnect the impact wrench from the air supply before lubricating.

4.3.2 Disconnect the impact wrench from the air supply.

4.3.3 Turn the impact wrench upside down.

4.3.4 Simultaneously (at the same time), pull the trigger and pour a teaspoon of oil in the air inlet. Then, push the forward and reverse button in both directions.

After an air tool has been lubricated, oil will discharge through the exhaust port during the first few seconds of operation. Thus, the exhaust port must be covered with a towel before applying air pressure. Failure to cover the exhaust port can result in serious injury.

4.3.5 Connect the impact wrench to the air supply and cover the exhaust port with a towel. Run the impact wrench in both the forward and reverse directions for 20 to 30 seconds. Oil will discharge from the exhaust port when air pressure is applied.

4.4 Impact Mechanism Lubrication

4.4.1 The impact wrench should be lubricated monthly.

Disconnect the impact wrench from the air supply before lubricating.

4.4.2 Disconnect the impact wrench from the air supply.

4.4.3 Remove the hexagon socket head screw from hammer housing.

4.4.4 Take off the hammer housing, put grease in the impact system.

4.4.5 Assemble the hammer housing, tighten the hexagon socket head screw.

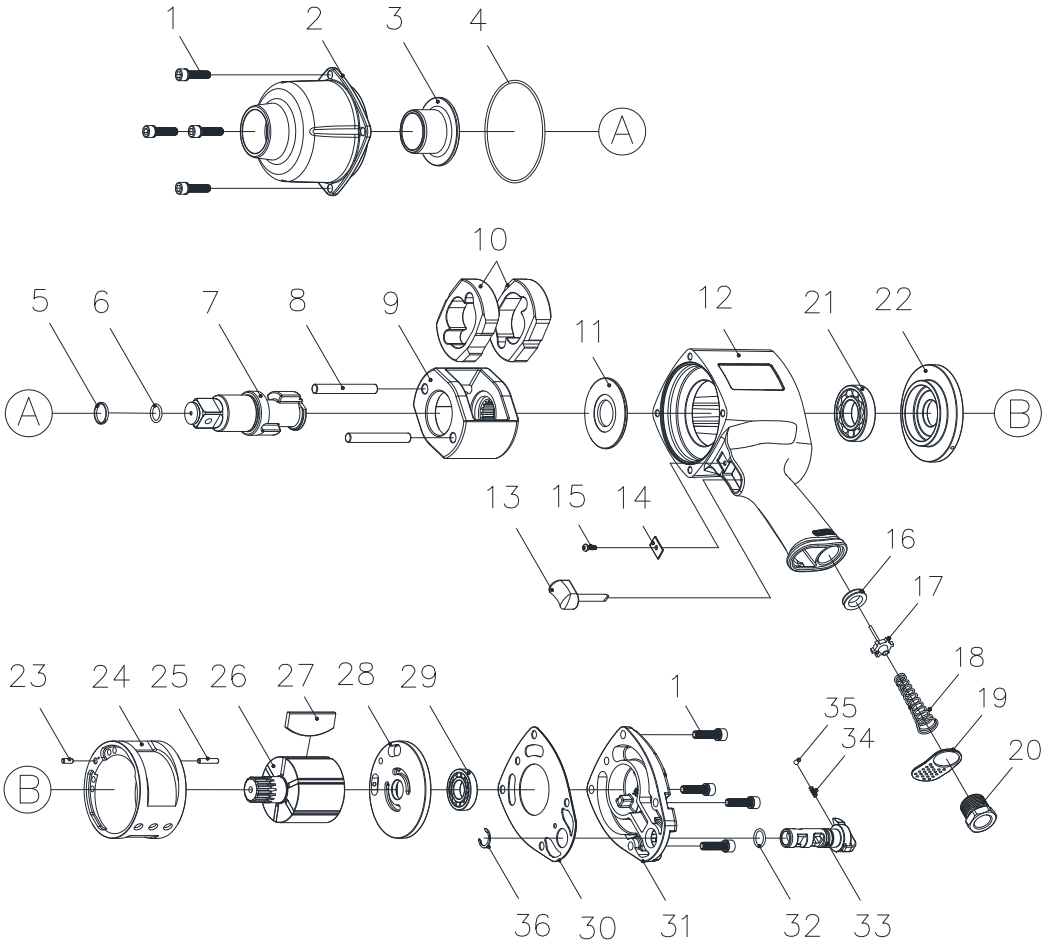
4.4.6 Reconnect the air supply to the impact wrench and run for 20 to 30 seconds.

5. General Troubleshooting Guide

Symptom	Possible Cause(s)	Corrective Action
Tool runs slowly or will not operate	1. Grit or gum in tool.	1.Flush the tool with air tool oil, gum solvent, or an equal mixture of SAE # 10 motor oil and kerosene. Lubricate the tool after cleaning.
	2. No oil in tool.	2.Lubricate the tool according to the lubrication instructions in this manual.
	3. Low air pressure.	3.Adjust the compressor regulator to tool maximum while the tool is running free.
	4. Air hose leaks.	4.Tighten and seal hose fittings if leaks are found.
	5. Pressure drops.	5-1.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 10 mm (3/8") or larger depending on the total length of the hose. 5-2.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 ball bearing in motor.	6.Remove and inspect bearing for rust, dirt and grit or worn race. Clean and regress bearing with bearing grease.

Symptom	Possible Cause(s)	Corrective Action
Moisture blowing out of tool	1.Water in tank.	1.Drain tank. (See air compressor manual). Oil tool and run until no water is evident. Oil tool again and run 1-2 seconds.
	2.Water in the air lines/hoses.	2-1.Install a water separator/filter. Note: Separators only work properly when the air passing through the separator is cool. Locate the separator/filter as far as possible from the compressor. 2-2.Install an air dryer.
Impacts slowly or Will not impact	1.Lack of lubrication.	1.Lubricate the air motor and the impact mechanism.(See lubrication section of this manual)
	2.Tool regulator set in wrong position.	2.Adjust the regulator setting of the tool.
	3.In-line regulator or compressor regulator set too low.	3.Adjust regulators in the air system.
Impacts rapidly But will not remove bolts	1.Worn impact mechanism.	1-1 Replace impact mechanism. 1-2 Return impact wrench to your supplier for repair.
Does not impact	1.Worn impact mechanism.	1-1 Replace impact mechanism. 1-2 Return impact wrench to your supplier for repair.

6. Impact Wrench IW-PRO 3/4" NG



REF NO.	PARTS NO.	DESCRIPTION	Q'TY	REF NO.	PARTS NO.	DESCRIPTION	Q'TY
1	T5266A-01	SCREW	8	19	T5266A-19	EXHAUST DEFLECTOR	1
2	T5266A-02	HAMMER HOUSING	1	20	T5266A-20	INLET BUSHING	1
3	T5266A-03	ANVIL BUSHING	1	21	T5266A-21	BALL BEARING	1
4	T5266A-04	"O" RING	1	22	T5266A-22	FRONT END PLATE	1
5	T5266A-05	SOCKET RETAINER	1	23	T5266A-23	SPRING PIN	1
6	T5266A-06	RETAINER "O" RING	1	24	T5266A-24	CYLINDER	1
7	T5266A-07	ANVIL (3/4")	1	25	T5266A-25	SPRING PIN	1
8	T5266A-08	HAMMER PIN	2	26	T5266A-26	ROTOR	1
9	T5266A-09	HAMMER CAGE	1	27	T5266A-27	ROTOR BLADE	6
10	T5266A-10	HAMMER DOG	2	28	T5266A-28	REAR END PLATE	1
11	T5266A-11	HAMMER FRAME SPACER	1	29	T5266A-29	BALL BEARING	1
12	T5266A-12	MOTOR HOUSING	1	30	T5266A-30	GASKET	1
13	T5266A-13	TRIGGER	1	31	T5266A-31	HOUSING CAP	1
14	T5266A-14	TRIGGER RETAINER	1	32	T5266A-32	"O" RING	1
15	T5266A-15	SCREW	1	33	T5266A-33	REVERSE VALVE	1
16	T5266A-16	THROTTLE BUSHING	1	34	T5266A-34	SPRING	1
17	T5266A-17	VALVE STEM	1	35	T5266A-35	STEEL BALL	1
18	T5266A-18	SPRING	1	36	T5266A-36	RETAINER	1

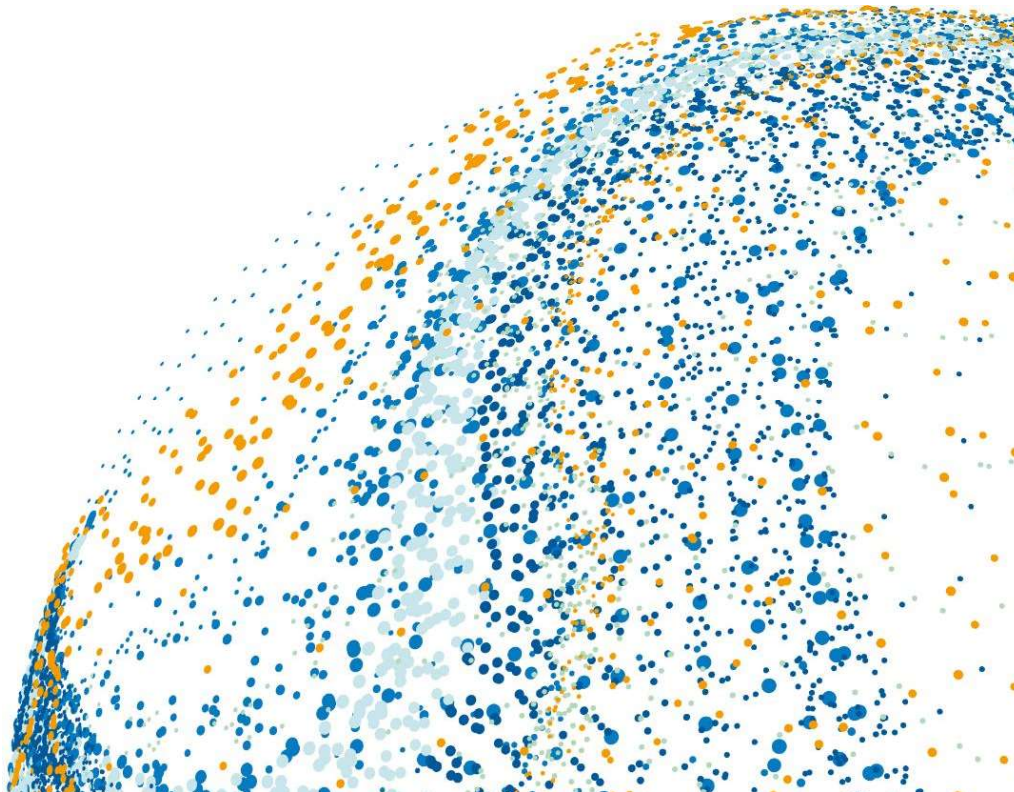
Others Spare Part Kit: **Air Motor Overhaul Kit F/IW-PRO 3/4" NG 407-722220**

Wilhelmsen Ships Service

UNITOR by Wilhelmsen

Attention

Please use these Unitor products exclusively for the purpose indicated by WSS and only if the operator fully understands current practices and procedures. If any further information or assistance is required please contact your local WSS specialist.



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