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INSTRUCTIONS FOR MODELS 285A-AP AND 285A-6-AP AUTOMOTIVE IMPACT WRENCHES

NOTICE

Model 285A-AP and 285A-6-AP Impact Wrenches are designed for use in spring replacement, major engine repair, tractor pad removal and off-road farm equipment maintenance.

WARNING



IMPORTANT SAFETY INFORMATION ENCLOSED - SAVE THESE INSTRUCTIONS
READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS PRODUCT
IT IS YOUR RESPONSIBILITY TO MAKE THIS SAFETY INFORMATION
AVAILABLE TO OTHERS THAT WILL OPERATE THIS PRODUCT
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY

PLACING TOOL IN SERVICE

- Always install, operate, inspect and maintain this product in accordance with all applicable standards and regulations (local, state, country, federal, etc.).
- Always use clean, dry air at 90 psig (6.2 bar/620 kPa) maximum air pressure at the inlet. Higher pressure may result in hazardous situations including excessive speed, rupture, or incorrect output torque or force.
- Be sure all hoses and fittings are the correct size and are tightly secured. See Dwg. TPD905-2 for a typical piping arrangement.
- Ensure an accessible emergency shut off valve has been installed in the air supply line, and make others aware of its location.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Keep clear of whipping air hoses. Shut off the compressed air before approaching a whipping hose.
- Always turn off the air supply, bleed the air pressure and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool or any accessory.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel. Use only recommended lubricants.
- Use only proper cleaning solvents to clean parts. Use only cleaning solvents which meet current safety and health standards. Use cleaning solvents in a well ventilated area.
- Keep work area clean, uncluttered, ventilated and illuminated.
- Do not remove any labels. Replace any damaged label.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Always use Personal Protective Equipment appropriate to the tool used and material worked. This may include dust mask or other breathing apparatus, safety glasses, ear plugs, gloves, apron, safety shoes, hard hat and other equipment.
- When wearing gloves always be sure that the gloves will not prevent the throttle mechanism from being released.
- This tool is not designed for working in explosive environments, including those caused by fumes and dust, or near flammable materials.
- This tool is not insulated against electric shock.
- Prevent exposure and breathing of harmful dust and particles created by power tool use.
Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm.
Some examples of these chemicals are:
 - lead from lead based paints,
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically treated lumber.Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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Using the Tool (Continued)

- Be aware of buried, hidden or other hazards in your work environment. Do not contact or damage cords, conduits, pipes or hoses that may contain electrical wires, explosive gases or harmful liquids.
- Keep others a safe distance from your work area, or ensure they use appropriate Personal Protective Equipment.
- Keep hands, loose clothing, long hair and jewelry away from working end of tool.
- Power 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.
- Keep body stance balanced and firm. Do not over-reach when operating this tool. Anticipate and be alert for sudden changes in motion, reaction torques, or forces during start up and operation.
- Tool and/or accessories may briefly continue their motion after throttle is released.
- To avoid accidental starting - ensure tool is in "off" position before applying air pressure, avoid throttle when carrying, and release throttle with loss of air.
- Ensure work pieces are secure. Use clamps or vises to hold work piece whenever possible.
- Do not carry or drag the tool by the hose.
- Do not use power tools when tired, or under the influence of medication, drugs, or alcohol.
- Never use a damaged or malfunctioning tool or accessory.
- Do not modify the tool, safety devices, or accessories.
- Do not use this tool for purposes other than those recommended.
- Use accessories recommended by Ingersoll-Rand.
- Note the position of the reversing mechanism before operating the tool so as to be aware of the direction of rotation when operating the throttle.
- Use only impact sockets and accessories. Do not use hand (chrome) sockets or accessories.
- Periodically check the drive end of the tool to make certain that the socket retainer functions correctly, and that sockets and drive ends are not excessively worn which may allow the socket to come off when rotating.
- Impact Wrenches are not torque wrenches. Connections requiring specific torque must be checked with a torque meter after fitting with an impact wrench.

NOTICE

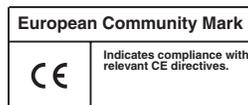
The use of other than genuine Ingersoll-Rand replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

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

WARNING SYMBOL IDENTIFICATION



AGENCY SYMBOL IDENTIFICATION



LUBRICATION



Ingersoll-Rand No. 50



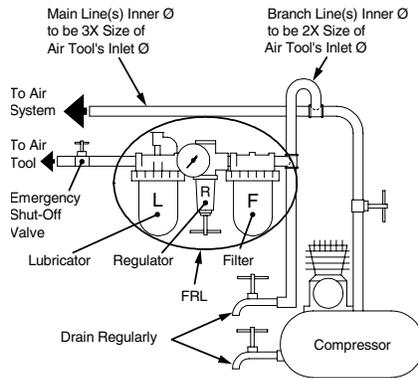
Ingersoll-Rand No. 100

Inside USA use FRL unit #C11-03-G00
Outside USA use FRL unit #C16-C3-A29

Always use an air line lubricator with these tools.
We recommend the following Filter-Regulator-Lubricator (FRL) Unit:

After each eight hours of operation, unless an air line lubricator is used, inject 1-1/2 cc of Ingersoll-Rand No. 50 Oil into the Air Inlet (10).

INSTALLATION



(Dwg. TPD905-2)

SPECIFICATIONS

Model	Handle	Drive	Impacts/min	Recommended Torque Range	■ Sound Level dB (A)		◆ Vibrations Level	Inlet Connection (Thread)	Minimum Inside Ø (Air Hose)
I.D.	Type	in ²	bpm	ft•lbs (N•m)	Pressure	•Power	m/s ²	NPT	inch (mm)
285A-AP	D	1	700	100-900 (136-1220)	107.0	120.0	7.9	1/2	1/2 (13)
285A-6-AP	D	1 & 6" extended anvil	700	100-900 (136-1220)	107.0	120.0	7.2	1/2	1/2 (13)

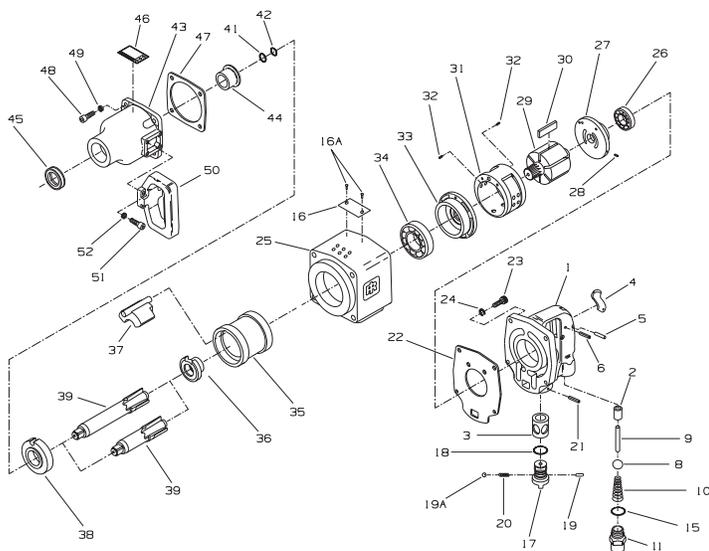
- Tested in accordance with ANSI S5.1-1971 at free speed
- ◆ Tested to ISO8662-1 loaded with frictionbrake to 9 RPM
- Tested in accordance with ISO3744

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

When the life of the tool has expired, it is recommended that the tool be disassembled, degreased and the parts be separated by material so that they can be recycled.

MAINTENANCE INSTRUCTIONS



PART NUMBER FOR ORDERING

(TPA1717-1)

Item	Part Description	Part Number	Part Description	Part Number	
1	Trigger Handle Assembly	285AP-A92A	29	Rotor	285-53
2	Plunger Bushing	291-303	30	Vane Packet (set of 6 vanes)	291-42-6
3	Reverse Valve Bushing	285-330A	31	Cylinder Assembly	285-A3
4	Trigger	285AP-93	32	Cylinder Dowel (2)	291-98
5	Spring Pin	285A-437	33	Front End Plate	291-11
6	Stop Pin	281-439	34	Front Rotor Bearing	58-96
8	Throttle Valve	285-50	35	Hammer Frame	285-703
9	Throttle Valve Plunger	285-302	36	Hammer Cam	285-721
10	Throttle Valve Spring	285-51	37	Hammer	285-724
11	Inlet Bushing	291-A565	38	Side Plate	285-706
15	O-ring	291-566		1" Square Drive Anvil Assembly	
16	Nameplate		39	Standard Length	285-A726
	for 285A-AP	285A-AP-301	39A	6" Extended Length	285-A726-6
	for 285A-6-AP	285A-6-AP-301	41	Retaining Ring	291-425
16A	Nameplate Screw (2)	222-302	42	Retaining O-ring	291-426
17	Reverse Valve Assembly	285-A329	43	Hammer Case Assembly	285-A727
18	Reverse Valve Seal	291-338	44	Hammer Case Bushing	291-641
19	Stop Pin	291-332	45	Oil Seal	291-642
19A	Ball	291-333	46	Warning Label	WARNING-27-99
20	Spring	291-334	47	Hammer Case Gasket	285-36
21	Spring Pin	281-120	48	Hammer Case Cap Screw (4)	291-105
22	Handle Gasket	285-283	49	Hammer Case Cap Screw	
23	Handle Cap Screw (4)	281-638		Lockwasher (4)	291-104
24	Handle Cap Screw		50	Dead Handle	291-48
	Lockwasher(4)	291-104	51	Dead Handle Cap Screw (4)	291-49
25	Motor Housing	285AP-40	52	Dead Handle Cap Screw	
26	Rear Rotor Bearing	291-24		Lockwasher (4)	291-504
27	Rear End Plate Assembly	291-A12			
28	Pin	291-10			

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