

# **Operator's Manual** CP2136,CP2141 Series 1/4" Impact Screwdriver







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To reduce risk of injury, everyone using, installing, repairing, maintaining, changing accessories on, or working near this tool must read and understand these instructions, as well as separately provided safety instructions part number 6159948710, before performing any such task.

# Air Diagram:









Fig		2
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		Torque		Eroo		Inner Hose		Air Consumption		Sound-	Sound-	Vibrations	
Model	Drive	Fmax	Rmax	Speed	Weight	Weight Dia.	Tool Length	Free Speed	Air Inlet	Pressure L <sub>pA</sub>	Power L <sub>wA</sub>	ahd	k
	0	$\bigcirc$	$\bigcirc$	Ó	lb/kg	±∎ 	┝	ł	× T				
	1	2		3	4	5	6	7	8	8 9		10	11
	[inch]	[ft.lbs] [Nm]	[ft.lbs] [Nm]	[min-1]	[lb] [kg]	[inch.] [mm]	[inch.] [mm]	[SCFM] [NI/s]	[inch]	[dB(A)]	[dB(A)]	[m/s <sup>2</sup> ]	[m/s <sup>2</sup> ]
CP2136	1/4"	15.5	16.2	10000	1.51	3/8"	7.28	8.81	1/4" FEMALE	89 100	100	74	2.8
		21	22	10000	0.68	10	185	4.16			100	7.4	2.0
CP2141	1/4"	17.7	19.9	13000	1.90	3/8"	5.63	18.07	1/4"	77	88	53	21
	1/4	24	27	13000	0.87	10	143	8.53	FEMALE		00	5.5	2.1

# CP2136,CP2141 Series

Impact Screwdriver

#### 1. Technical Data (see Fig 2.)

Model		Torque		Free		Innor Hoco		Air Consumption		Sound-	Sound-	Vibrations	
	Drive	Fmax	Rmax	Speed	Weight	Dia.	Tool Length	Free Speed	Air Inlet	Pressure Power L <sub>pA</sub> L <sub>wA</sub>		ahd	k
	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	lb/kg	★	₹	¥	¥¦≮				
	1	2	2	3	4	5	6	7	8		9	10	11
	[inch]	[ft.lbs] [Nm]	[ft.lbs] [Nm]	[min-1]	[lb] [kg]	[inch.] [mm]	[inch.] [mm]	[SCFM] [NI/s]	[inch]	[dB(A)]	[dB(A)]	[m/s <sup>2</sup> ]	[m/s <sup>2</sup> ]

max pressure 6.3 bar (90 psi)

a<sub>hd</sub>: Vibration level, **k** Uncertainty ; L<sub>pA</sub> Sound pressure level dB(A), K<sub>pA</sub> = K<sub>WA</sub> = 3 dB Uncertainty. Declaration of noise (ISO 15744) and vibration emission (ISO 28927-2)

All values are current as of the date of this publication.

These declared values were obtained by laboratory type testing in accordance with the stated standards and are suitable for comparison with the declared values of other tools tested in accordance with the same standards. These declared values are not adequate for use in risk assessments and values measured in individual work places may be higher. The actual exposure values and risk of harm experienced by an individual user are unique and depend upon the way the user works, the workpiece and the workstation design, as well upon the exposure time and the physical condition of the user.

We, CHICAGO PNEUMATIC TOOLS, cannot be held liable for the consequences of using the declared values, instead of values reflecting the actual exposure, in an individual risk assessment in a work place situation over which we have no control.

This tool may cause hand-arm vibration syndrome if its use is not adequately managed.

We recommend a programme of health surveillance to detect early symptoms which may relate to noise or vibration exposure, so that management procedures can be modified to help prevent future impairment.

#### 2. Machine Type

· This product is designed for installing and removing threaded fasteners in wood, metal and plastic. No other use permitted. For professional use only.

· Please read the product safety information carefully!

#### 3. Implementation and Operation

- · Connect device as shown in Fig.01.
- Fix the accessories properly to the tool. .
- To operate in reverse rotation, turn the reverse switch (B) to the left. To operate in forward rotation, turn the reverse switch (B) to the right.
- To start the machine, simply pull the trigger (A). Machine speed is increase by increasing pressure on the trigger. Release the trigger to stop.
- · This Impact Screwdriver is equipped with a regulator (B) to enable adjustment of output power. Turn the regulator knob counter-clockwise for maximum power, clockwise to reduce power
- · Use the reverse switch (B) only when the drive spindle comes to a complete stop. Changing the speed before the drive spindle stops may damage the machine

#### 4. Lubrication

#### Motor Lubrication

Use an air line lubricator with SAE #10 oil, adjusted to two (2) drops per minute. If Use CP Pneu-Lube Synthetic Clutch Grease 8940158455. an air line lubricator cannot be used, add air motor oil to the inlet once a day. Recommended lubricant CP Oil PROTECTO-LUBE:

- 4 oz (0.12l) P/N: CA149661
- 20.8 oz (0.591I) P/N: CA000046
- 1gal (3.8l) P/N: P089507

#### 5. Maintenance

#### · Follow local country environmental regulations for safe handling and disposal of all components

- · Disassemble and inspect the tool every three 3 months if the tool is used every day. Replace damaged or worn parts.
- Always ensure that the machine is disconnected from energy source (compressed air) to avoid accidental operation.
- High wear parts are underlined in the parts list.
- To keep downtime to a minimum, the following service kits are recommended: Tune-Up Kit: see part list

#### 6. Disposal

- · The disposal of this equipment must follow the legislation of the respective country.
- All damaged, badly worn or improperly functioning devices MUST BE TAKEN OUT OF OPERATION.
- . Repair only by technical maintenance staff.

#### 7. Declaration of conformity

#### Declare that the product(s): Impact Screwdriver Machine type(s) : CP2136,CP2141 Origin of the product : Taiwan

Serial Number: From 00501 to 99999

is in conformity with the requirements of the council Directives on the approximation of the laws of the Member States relating : to "Machinery" 2006/42/EC (17/05/2006) applicable harmonised standard(s) : EN ISO 11148-6:2012

Name and position of issuer : Nicolas Lebreton ( R&D Manager)





#### Original Instructions

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Clutch Lubrication

# SAFETY INSTRUCTIONS DO NOT DISCARD - GIVE TO USER

- Our goal is to produce tools that help you work safely and efficiently. The most important safety device for this or any tool is YOU. Your care and good judgment are the best protection against injury. All possible hazards cannot be covered here, but we have tried to highlight some of the important ones.
- Only qualified and trained operators should install, adjust or use this power tool.
- · This tool and its accessories must not be modified in any way.
- · Do not use this tool if it has been damaged.
- If the rated speed, operating pressure or hazard warning signs on the tool cease to be legible or become detached, replace without delay.

# Air Supply And Connection Hazards

- · Air under pressure can cause severe injury.
- Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repair.
- · Never direct air at yourself or anyone else
- Whipping hoses can cause serious injury. Always check for damaged or loose hoses and fittings.
- Do not use quick disconnect couplings at tool. See instructions for correct setup.
- Whenever universal twist couplings are used, lock pins must be installed.
- Do not exceed maximum air pressure of 90 psi/6.3 bar or as stated on tool nameplate.

# A Entanglement Hazards

- Keep away from rotating drive. Choking, scalping and / or lacerations can occur if loose clothing, gloves, jewellery, neck ware and hair are not kept away from tool and accessories.
- Gloves can become entangled with the rotating drive, causing severed or broken fingers.
- Rotating drive sockets and drive extensions can easily entangle rubbercoated or metal reinforced gloves.
- · Do not wear loose-fitting gloves or gloves with cut or frayed fingers.
- · Never hold the drive, socket or drive extension.

### A Projectile Hazards

- Always wear impact-resistant eye and face protection when involved with or near the operation, repair or maintenance of the tool or changing accessories on the tool.
- Be sure all others in the area are wearing impact-resistant eye and face protection. Even small projectiles can injure eyes and cause blindness.
- Serious injury can result from over-torqued or under-torqued fasteners, which can break, or loosen and separate. Released assemblies can become projectiles. Assemblies requiring a specific torque must be checked using a torque meter.

Note: So-called "click" torque wrenches do not check for potentially dangerous over-torque conditions.

- Do not use hand sockets. Use only power or impact sockets in good condition.
- · Ensure that the workpiece is securely fixed.

### A Operating hazards

- Disconnect the air supply before handling the screwdriver bit or socket, adjusting the clutch or dismantling the tool.
- Operators and maintenance personnel must be physically able to handle the bulk, weight and power of the tool.
- Hold the tool correctly: be ready to counteract normal or sudden movements – have both hands available.
- · Immediately after adjusting the clutch, check for correct operation.
- Do not use with reduced air pressure or in a worn condition: the clutch may not operate, resulting in sudden rotation of the tool handle.
- Always support the tool's handle securely, in the direction opposite to the spindle rotation, to reduce the effect of sudden torque reaction during final tightening and initial loosening.
- If possible, use a suspension arm to absorb the reaction torque. If that is
  not possible, side handles are recommended for straight-case ad pistolgrip tools; reaction bars are recommended for angle nutrunners. In any
  case, it is recommended to use a means to absorb the reaction torque
  above 4 Nm (3 lbf.ft) for straight-case tools, above 10 Nm (7.5 lbf.ft) for
  pistol-grip tools, and above 60 Nm (44 lbf.ft) for angle nutrunners.
- Fingers can be crushed in open-ended crow-foot nutrunners.
- Do not use in confi ned spaces: beware of crushing hands

between tool and workpiece, especially when unscrewing.

### A Repetitive motion hazards

- When using a power tool to perform work-related activities, the operator might experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.
- Adopt a comfortable posture whilst maintaining secure footing and avoiding awkward or offbalance postures. Changing posture during extended tasks can help avoid discomfort and fatigue.
- Do not ignore symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensation, or stiffness. Stop using the tool, tell your employer and consult a physician.

### A Noise and Vibration hazards

- High sound levels can cause permanent hearing loss and other problems such as tinnitus. Use hearing protection as recommended by your employer or occupational health and safety regulations.
- Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms. Wear warm clothing and keep your hands warm and dry. If numbness, tingling, pain or whitening of the skin occurs, stop using tool, tell your employer and consult a physician.
- Hold the tool in a light but safe grip because the risk from vibration is generally greater when the grip force is higher. Where possible use a suspension arm or fit a side handle.
- · To prevent unnecessary increases in noise and vibration levels:
  - Operate and maintain the tool, and select, maintain and replace the accessories and consumables, in accordance with this instruction manual;
  - · Do not use worn or ill-fitting screwdriver bits, sockets or extensions.

### A Workplace Hazards

 Slip/Trip/Fall is a major cause of serious injury or death. Be aware of excess hose left on the walking or work surface.

- Avoid inhaling dust or fumes or handling debris from the work process which can be harmful to your health (for example, cancer, birth defects, asthma and/or dermatitis). Use dust extraction and wear respiratory protective equipment when working with materials which produce airborne particles.
- Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:
- · Lead from lead based paints
- · Crystalline silica bricks and cement and other masonry products
- And Arsenic and chromium from chemically- treated rubber 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 dust masks that are specially designed to filter out microscopic particles.
- Proceed with care in unfamiliar surroundings. Be aware of potential hazards created by your work activity. This tool is not insulated for coming into contact with electric power sources.
- · This tool is not recommended for use in explosive atmospheres.



# CP2136 Series Impact Scrwdriver



Index No         Part No         Description         Oty         Index No         Part No         Description         Oty           A         8940170473         Collector Kit         I         8940170481         HAMMER CAM KIT         I           2         WASHER         1         17         WASHER CAM KIT         1           3         BUJSHING         1         1         7         WASHER         1           4         SPRING         1         19         8940170482         Ball Bearing Kit         1           4         SPRING         1         19         BALL BEARING (608)         1         1           5         WASHER         1         1         1         7         FRONT CAP         1           6         STOPPING WHEEL (∳10mm)         1         K         894017043         SMUTCH LEVER         1         8         BUSHING         1           34         PIN (∲3x26)         1         1         8         Substring (f260)         1         1           36         SCREW         1         34         PIN (∲3x26)         1         1           37         O-RING (P4x1.9)         1         12         STEEL BALL (∲3.175mm) <t< th=""><th></th><th colspan="9">Ù─── 45</th></t<>		Ù─── 45								
A         8940170473         Collector Kit         I         8940170481         HAMMER CAM KIT           1         RETAINING RING         1         16         HAMMER CAM         1           2         WASHER         1         17         WASHER         1           3         BUSHING         1         J         8940170482         Ball Bearing Kit           4         SPRING         1         19         BALL BEARING (608)         1           5         WASHER         1         27         BALL BEARING (608)         1           6         STOPPING WHEEL (∲10mm)         1         K         8940170483         Front CAP         1           29         SWITCH LEVER         1         8         BUSHING         1           36         SPEED SWITCH         1         1         RETAINING RING         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (∲10mm)         1           36         SPEED SWITCH         1         1         RETAINING RING         1           36         SPEED SWITCH         1         25         PIN (∲2x16)         1           37         C-RING (P4x1.9)         1         12	Index No	Part No	Description	Qty.	Index No	Part No	Description	Qty.		
1         RETAINING RING         1         16         HAMMER CAM         1           2         WASHER         1         17         WASHER         1           3         BUSHING         1         17         WASHER         1           4         SPRING         1         19         BALL BEARING (608)         1           5         WASHER         1         27         BALL BEARING (626)         1           6         STOPPING WHEEL (∳10mm)         1         K         8940170433         Front CAP Kit         1           29         SWITCH LEVER         1         8         BUSHING         1         1           34         PIN (∲3x26)         1         L         8940170483         Small Parts kit         1           30         SCREW         1         6         STOPPING WHEEL (∲10mm)         1           33         SCREW         1         14         8940170480         RETAINING RING         1           34         O-RING (P4x1.9)         1         12         STEEL BALL (∲3.175mm)         2         PIN (∲2x6)         1           35         OCRING (P5x1.9)         1         30         SCREW         1           36	Α	8940170473	Collector Kit		I	8940170481	HAMMER CAM KIT			
2         WASHER         1         17         WASHER         1           3         BUSHING         1         J         394070482         Ball Bearing Kit           4         SPRING         1         19         BALL BEARING (608)         1           6         WASHER         1         27         BALL BEARING (626)         1           6         STOPPING WHEEL (∲10mm)         1         K         8940170482         Front CAP Kit         1           29         SWITCH HEVER         1         8         BUSHING (NG R1         1           34         PIN (∮3x26)         1         L         8940170476         Small Parts kit         -           C         8940170476         Speed Switch Kit         1         1         RETAINING RING (NG 1         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (∲10mm)         1           37         O-RING (P4x1.9)         1         12         STEEL BALL (∲3.175mm)         2           D         8940170476         Iniet Kit         25         PIN (∲2x6)         1           13         AR INLET (PT)         1         23         PIN (∲2x6)         1           14	1		RETAINING RING	1	16		HAMMER CAM	1		
3         BUSHING         1         J         8940170482         Ball Bearing Kit           4         SPRING         1         19         BALL BEARING (608)         1           5         WASHER         1         27         BALL BEARING (608)         1           6         STOPPING WHEEL (∲10mm)         1         K         8940170433         Front CAP Kit         1           29         SWITCH LEVER         1         8         BUSHING         1           34         PIN (∲3x26)         1         Lever Kit         1         8         BUSHING RING         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (∲10mm)         1         12         STOPING WHEEL (∲10mm)         1           30         SCREW         1         1         12         STEEL BALL (∲3.175mm)         2           D         8940170476         Intel Kit         25         PIN (∲2x8)         1           31         AIR INLET (PT)         1         23         PIN (∲2x8)         1           33         SPRING         1         30         SCREW         1           33         SPRING         1         13         8940170485         Hammer	2		WASHER	1	17		WASHER	1		
4         SPRING         1         19         BALL BEARING (608)         1           5         WASHER         1         27         BALL BEARING (608)         1           6         STOPPING WHEEL (\$10mm)         1         K         8940170483         Front CAP Kit           B         8940170474         Lever Kit         7         FRONT CAP         1           29         SWITCH LEVER         1         8         BUSHING         1           34         PIN (\$3226)         1         L         8940170484         Small Parts kit           C         8940170475         Speed Switch Kit         1         1         RETAINING RING         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (\$10mm)         1           36         SPENG         1         34         PIN (\$4326)         1           37         O-RING (P4x1.9)         1         12         STEEL BALL (\$3.175mm)         1         9         WASHER         1           37         O-RING (P8x1.9)         1         13         8940170485         PIN (\$426) (SET OF 2)         1           43         O-RING (P8x1.9)         1         14         8940170486         HAMMER C	3		BUSHING	1	J	8940170482	Ball Bearing Kit			
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6         STOPPING WHEEL (∳10mm)         1         K         8940170483         Front CAP Kit           B         8940170474         Lever Kit         7         Front CAP         1           29         SWITCH LEVER         1         8         8940170483         Front CAP         1           334         PIN (∲3x26)         1         L         8940170484         Small Parts kit         1           C         8940170475         Speed Switch Kit         1         6         STOPPING WHEEL (∲10mm)         1           36         SCREW         1         34         PIN (∲3x26)         1           30         SCREW         1         12         STEEL BALL (∲3.175mm)         2           D         8940170476         Inlet Kit         23         PIN (∲2x26)         1           12         STEEL BALL (∲3.175mm)         1         9         WASHER         1           13         AIR INIG (P11x2.4)         2         32         8940170485         PIN (∲2x26) (SET OF 2)         1           13         Bushink         1         15         8940170485         PIN (∲2x26) (SET OF 2)         1           39         Bushink         1         15         8940170486	5		WASHER	1	27		BALL BEARING (626)	1		
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29         SWITCH LEVER         1         8         BUSHING         1           34         PIN (\$3x26)         1         L         8940170484         Small Parts kit         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (\$10mm)         1           36         SCREW         1         34         PIN (\$3x26)         1           30         SCREW         1         34         PIN (\$4x26)         1           35         O-RING (P4x1.9)         1         12         STEEL BALL (\$3.175mm)         2           D         8940170476         Inlet Kit         23         PIN (\$4x26)         1         1           12         STEEL BALL (\$3.175mm)         1         9         WASHER         1           33         SPRING         1         13         8940170485         PIN (\$4x26) (SET OF 2)         1           34         O-RING (P\$x1.5)         1         13         8940170486         Hammer Case         1           37         O-RING (P\$x1.9)         1         14         8940170486         HAMMER (SET OF 2)         1           43         O-RING (P\$x1.9)         1         14         8940170486         HAMMER (SET OF 2)	В	8940170474	Lever Kit		7		FRONT CAP	1		
34         PIN (\$3x26)         1         L         8940170484         Small Parts kit           C         8940170475         Speed Switch Kit         1         1         RETAINING RING         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (\$10mm)         1           30         SCREW         1         34         PIN (\$3x26)         1           37         O-RING (P4x1.9)         1         12         STEEL BALL (\$3.175mm)         2           D         8940170476         Inlet Kit         25         PIN (\$2x6)         1           31         AIR INLET (PT)         1         23         PIN (\$2x6)         1           33         SPRING         1         30         SCREW         1           33         SPRING         1         13         8940170485         PIN (\$4x26) (SET OF 2)         1           34         O-RING (P5x1.5)         1         13         8940170486         Hammer Case         1           35         O-RING (P3x1.9)         1         14         8940170488         HOOK         1           43         O-RING (P3x1.9)         1         21         8940170488         HOOK         1 <tr< td=""><td>29</td><td></td><td>SWITCH LEVER</td><td>1</td><td>8</td><td></td><td>BUSHING</td><td>1</td></tr<>	29		SWITCH LEVER	1	8		BUSHING	1		
C         8940170475         Speed Switch Kit         1         RETAINING RING         1           36         SPEED SWITCH         1         6         STOPPING WHEEL (∲10mm)         1           30         SCREW         1         34         PIN (∲3x26)         1           35         O-RING (P4x1.9)         1         12         STEEL BALL (∲3.175mm)         2           D         8940170476         Inlet Kit         25         PIN (∲2x6)         1           12         STEEL BALL (∲3.175mm)         1         23         PIN (∲2x6)         1           133         SPRING         1         30         SCREW         1           14         AR INLET (PT)         1         23         PIN (∲2x6)         1           15         8940170486         PIN (∲4x26) (SET OF 2)         1         1           37         O-RING (P8x1.5)         1         13         8940170486         Hammer Case         1           43         O-RING (P5x1.9)         1         14         8940170488         HOOK         1           44         O-RING (P3x1.9)         1         21         8940170498         Rotor         1           44         REVERSE VALVE 1         <	34		PIN (∮3x26)	1	L	8940170484	Small Parts kit			
36         SPEED SWITCH         1         6         STOPPING WHEEL (∳10mm)         1           30         SCREW         1         34         PIN (∲3x26)         1           35         O-RING (P4x1.9)         1         12         STEEL BALL (∲3.175mm)         2           D         8940170476         Inlet Kit         25         PIN (∲2x6)         1           31         AIR INLET (PT)         1         23         PIN (∲2x6)         1           12         STEEL BALL (∲3.175mm)         1         9         WASHER         1           33         SPRING         1         30         SCREW         1           33         SPRING         1         13         8940170485         PIN (∲4x26) (SET OF 2)         1           34         O-RING (P5x1.9)         1         14         8940170485         HAMMER (SET OF 2)         1           35         O-RING (P5x1.9)         1         14         8940170488         HAOK         1           40         O-RING (P1x2.4)         2         32         8940170498         Rotor         1           41         VALVE ROD         1         24         8940170498         Rotor         1	С	8940170475	Speed Switch Kit		1		RETAINING RING	1		
30         SCREW         1         34         PIN (\$\phi3x26)         1           35         O-RING (P4x1.9)         1         12         STEEL BALL (\$\phi3.175mm)         2           D         8940170476         Inlet Kit         25         PIN (\$\phi2x18)         1           31         AIR INLET (PT)         1         23         PIN (\$\phi2x6)         1           12         STEEL BALL (\$\phi3.175mm)         1         9         WASHER         1           33         B40170477         Reverse Valve Kit         2         2         PIN (\$\phi2x6) (SET OF 2)         1           33         BUSHING         1         15         8940170487         HAMMER (SET OF 2)         1           39         BUSHING (P5x1.9)         1         14         8940170487         HAMMER (SET OF 2)         1           43         O-RING (P5x1.9)         1         14         8940170487         HAMMER (SET OF 2)         1           44         O-RING (P3x1.9)         1         24         8940170489         Rotor         1           44         VALVE ROD         1         24         8940170490         Cylinder         1           44         REVERSE VALVE 1         18         894	36		SPEED SWITCH	1	6		STOPPING WHEEL (	1		
35         O-RING (P4x1.9)         1         12         STEEL BALL (\$3.175mm)         2           D         8940170476         Inlet Kit         25         PIN (\$2x18)         1           31         AIR INLET (P1)         1         23         PIN (\$2x8)         1           12         STEEL BALL (\$3.175mm)         1         9         WASHER         1           33         SPRING         1         9         WASHER         1           33         SPRING         1         9         WASHER         1           33         SPRING         1         13         8940170485         PIN (\$4x26) (SET OF 2)         1           34         O-RING (P\$x1.9)         1         14         8940170486         Hammer Case         1           43         O-RING (P1x2.4)         2         32         8940170488         HOOK         1           44         O-RING (P3x1.9)         1         21         8940170489         Rotor         1           44         VAVE ROD         1         24         8940170490         Cylinder         1           44         REVERSE VALVE 1         18         8940170491         HAMMER (SEG)         1           44 <td>30</td> <td></td> <td>SCREW</td> <td>1</td> <td>34</td> <td></td> <td>PIN (∮3x26)</td> <td>1</td>	30		SCREW	1	34		PIN (∮3x26)	1		
D         8940170476         Inlet Kit         25         PIN (∲2x18)         1           31         AIR INLET (PT)         1         23         PIN (∲2x6)         1           12         STEEL BALL (∲3.175mm)         1         9         WASHER         1           33         SPRING         1         30         SCREW         1           33         SPRING         1         30         SCREW         1           33         O-RING (P8x1.5)         1         13         8940170485         PIN (∲2x26) (SET OF 2)         1           43         O-RING (P5x1.9)         1         14         8940170485         HAMMER (SET OF 2)         1           44         O-RING (P1x2.4)         2         32         8940170488         HOOK         1           40         O-RING (P3x1.9)         1         21         8940170490         Cylinder         1           41         VALVE ROD         1         24         8940170490         Cylinder         1           42         SPRING         1         22         8940170493         Rotor         1           44         REVERSE VALVE 1         18         8940170493         Botor Blade Set (6)         1 <td>35</td> <td></td> <td>O-RING (P4x1.9)</td> <td>1</td> <td>12</td> <td></td> <td>STEEL BALL (\$3.175mm)</td> <td>2</td>	35		O-RING (P4x1.9)	1	12		STEEL BALL (\$3.175mm)	2		
31       AIR INLET (PT)       1       23       PIN (\$2x6)       1         12       STEEL BALL (\$3.175mm)       1       9       WASHER       1         33       SPRING       1       30       SCREW       1         37       O-RING (P8x1.5)       1       13       8940170485       PIN (\$4x26) (SET OF 2)       1         39       BUSHING       1       15       8940170486       Hammer Case       1         43       O-RING (P5x1.9)       1       14       8940170487       HAMMER (SET OF 2)       1         43       O-RING (P11x2.4)       2       32       8940170488       HOOK       1         40       O-RING (P11x2.4)       2       32       8940170490       Cylinder       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170491       HANDLE       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170493       Tune-up Kit       1         26       REAR PLATE       1       37       O-RING (P8x1.5) <td>D</td> <td>8940170476</td> <td>Inlet Kit</td> <td></td> <td>25</td> <td></td> <td>PIN (∮2x18)</td> <td>1</td>	D	8940170476	Inlet Kit		25		PIN (∮2x18)	1		
12       STEEL BALL (\$3.175mm)       1       9       WASHER       1         33       SPRING       1       30       SCREW       1         37       O-RING (P8x1.5)       1       13       8940170485       PIN (\$4x26) (SET OF 2)       1         39       BUSHING       1       15       8940170486       Hammer Case       1         43       O-RING (P5x1.9)       1       14       8940170486       Homer Case       1         43       O-RING (P5x1.9)       1       14       8940170486       HOOK       1         40       O-RING (P3x1.9)       1       21       8940170489       Rotor       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170490       Cylinder       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         56       PIN (\$2x18)       1       35       O-RING (P8x1.9)       1         27       BALL BEARING (626)       1       35       O-RING (P8x1.9)	31		AIR INLET (PT)	1	23		PIN (\$2x6)	1		
33         SPRING         1         30         SCREW         1           arrow of the system         Co-RING (P8x1.5)         1         13         8940170485         PIN (\$4x26) (SET OF 2)         1           37         O-RING (P5x1.9)         1         13         8940170486         Hammer Case         1           39         BUSHING         1         15         8940170486         Hammer Case         1           43         O-RING (P5x1.9)         1         14         8940170486         Hammer Case         1           43         O-RING (P5x1.9)         1         14         8940170487         HAMMER (SET OF 2)         1           440         O-RING (P3x1.9)         1         21         8940170488         HOOK         1           41         VALVE ROD         1         24         8940170490         Cylinder         1           42         SPRING         1         28         8940170490         Cylinder         1           44         ReVERSE VALVE 1         18         8940170492         BOLT         1           56         PIN (\$2x18)         1         37         O-RING (P4x1.9)         1           26         Rear End Plate kit         43	12		STEEL BALL (	1	9		WASHER	1		
E         8940170477         Reverse Valve Kit         ////>           37         O-RING (P8x1.5)         1         13         8940170485         PIN (\$\phi 4x26) (SET OF 2)         1           39         BUSHING         1         15         8940170485         Hammer Case         1           43         O-RING (P5x1.9)         1         14         8940170487         HAMMER (SET OF 2)         1           38         O-RING (P11x2.4)         2         32         8940170487         HAMMER (SET OF 2)         1           40         O-RING (P3x1.9)         1         21         8940170487         HAMMER (SET OF 2)         1           41         VALVE ROD         1         24         8940170487         Rotor         1           42         SPRING         1         28         8940170493         Rotor         1           44         REVERSE VALVE 1         18         8940170498         Rotor Blade Set (6)         1           44         REVERSE VALVE 1         18         8940170493         Tune-up Kit         2           26         REAR PLATE         1         35         O-RING (P4x1.9)         1           27         BALL BEARING (626)         1         35	33		SPRING	1	30		SCREW	1		
37       O-RING (P8x1.5)       1       13       8940170485       PIN (\$\phi4x26\$) (SET OF 2)       1         39       BUSHING       1       15       8940170486       Hammer Case       1         43       O-RING (P5x1.9)       1       14       8940170487       HAMMER (SET OF 2)       1         38       O-RING (P11x2.4)       2       32       8940170489       Rotor       1         40       O-RING (P3x1.9)       1       21       8940170489       Rotor       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170491       HANDLE       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170493       Tune-up Kit       1         26       REAR PLATE       1       8940170493       Tune-up Kit       1       1         27       BALL BEARING (626)       1       35       O-RING (P8x1.5)       1       1         20       FRONT PLATE       1       38       O-RING (P3x1.9)       1       1         23 <td< td=""><td>E</td><td>8940170477</td><td>Reverse Valve Kit</td><td></td><td></td><td></td><td></td><td></td></td<>	E	8940170477	Reverse Valve Kit							
39       BUSHING       1       15       8940170486       Hammer Case       1         43       O-RING (P5x1.9)       1       14       8940170487       HAMMER (SET OF 2)       1         38       O-RING (P11x2.4)       2       32       8940170488       HOOK       1         40       O-RING (P3x1.9)       1       21       8940170489       Rotor       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170491       HANDLE       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         7       BALL BEARING (626)       1       35       O-RING (P4x1.9)       1         27       BALL BEARING (626)       1       35       O-RING (P8x1.5)       1         20       FRONT PLATE       1       38       O-RING (P11x2.4)       2         19       BALL BEARING (608)       1       40       O-RING (P11x2.4)	37		O-RING (P8x1.5)	1	13	8940170485	PIN (\$4x26) ( SET OF 2)	1		
43       O-RING (P5x1.9)       1       14       8940170487       HAMMER (SET OF 2)       1         38       O-RING (P1x2.4)       2       32       8940170488       HOOK       1         40       O-RING (P3x1.9)       1       21       8940170489       Rotor       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170491       HANDLE       1         45       PIN (\$2x18)       1       22       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         44       REVERSE VALVE 1       18       8940170493       Tune-up Kit         27       BALL BEARING (626)       1       35       O-RING (P4x1.9)       1         26       REAR PLATE       1       37       O-RING (P4x1.9)       1         25       PIN (\$2x18)       1       37       O-RING (P5x1.9)       1         20       FRONT PLATE       1       38       O-RING (P5x1.9)       1         23       PIN (\$2x6)       1       22       Rotor Blade Set (6)       1      <	39		BUSHING	1	15	8940170486	Hammer Case	1		
38       O-RING (P11x2.4)       2       32       8940170488       HOOK       1         40       O-RING (P3x1.9)       1       21       8940170489       Rotor       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170490       Cylinder       1         45       PIN (\$\phi_2x18)       1       28       8940170498       Rotor Blade Set (6)       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         7       BALL BEAR PLATE       1       8940170493       Tune-up Kit       1         26       REAR PLATE       1       35       O-RING (P4x1.9)       1         27       BALL BEARING (626)       1       35       O-RING (P4x1.9)       1         25       PIN (\$\psi x18)       1       37       O-RING (P8x1.5)       1       1         20       FRONT PLATE       1       38       O-RING (P1x2.4)       2       2         19       BALL BEARING (608)       1       40       O-RING (P3x1.9)       1       1         23       PIN (\$\psi x6)       1       22<	43		O-RING (P5x1.9)	1	14	8940170487	HAMMER ( SET OF 2)	1		
40       O-RING (P3x1.9)       1       21       8940170489       Rotor       1         41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170490       Cylinder       1         45       PIN (\$2x18)       1       22       8940170498       Rotor Blade Set (6)       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         F       8940170478       Rear End Plate kit       0       0       0         26       REAR PLATE       1       18       8940170493       Tune-up Kit       0         27       BALL BEARING (626)       1       35       O-RING (P4x1.9)       1         25       PIN (\$2x18)       1       37       O-RING (P4x1.9)       1         20       Front End Plate kit       43       O-RING (P5x1.9)       1         20       FRONT PLATE       1       38       O-RING (P1x2.4)       2         19       BALL BEARING (608)       1       40       O-RING (P3x1.9)       1         23       PIN (\$2x6)       1       22       Rotor Blade Set (6)       1	38		O-RING (P11x2.4)	2	32	8940170488	HOOK	1		
41       VALVE ROD       1       24       8940170490       Cylinder       1         42       SPRING       1       28       8940170491       HANDLE       1         45       PIN (\$2x18)       1       22       8940170498       Rotor Blade Set (6)       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         F       8940170478       Rear End Plate kit       -       -       -         26       REAR PLATE       1       8940170493       Tune-up Kit       -         27       BALL BEARING (626)       1       35       O-RING (P4x1.9)       1         25       PIN (\$2x18)       1       37       O-RING (P8x1.5)       1         20       FRONT PLATE       1       38       O-RING (P5x1.9)       1         20       FRONT PLATE       1       38       O-RING (P3x1.9)       1         23       PIN (\$2x6)       1       22       Rotor Blade Set (6)       1         11       ANVIL       1       1       1       1       2       Rotor Blade Set (6)       1         12       STEEL BALL (\$3.175mm)       1       22       Rotor Blade Set (6)       1 </td <td>40</td> <td></td> <td>O-RING (P3x1.9)</td> <td>1</td> <td>21</td> <td>8940170489</td> <td>Rotor</td> <td>1</td>	40		O-RING (P3x1.9)	1	21	8940170489	Rotor	1		
42       SPRING       1       28       8940170491       HANDLE       1         45       PIN (\$2x18)       1       22       8940170498       Rotor Blade Set (6)       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         F       8940170478       Rear End Plate kit       1       18       8940170493       Tune-up Kit         26       REAR PLATE       1       35       O-RING (P4x1.9)       1         27       BALL BEARING (626)       1       35       O-RING (P8x1.5)       1         25       PIN (\$2x18)       1       37       O-RING (P8x1.5)       1         20       FRONT PLATE       1       38       O-RING (P5x1.9)       1         20       FRONT PLATE       1       38       O-RING (P1x2.4)       2         19       BALL BEARING (608)       1       40       O-RING (P3x1.9)       1         23       PIN (\$2x6)       1       22       Rotor Blade Set (6)       1         41       ANVIL       1       22       Rotor Blade Set (6)       1         11       ANVIL       1       3940172040       Name Plate         8940172040       Nam	41		VALVE ROD	1	24	8940170490	Cylinder	1		
45       PIN (\$\overline{4}2x18)       1       22       8940170498       Rotor Blade Set (6)       1         44       REVERSE VALVE 1       18       8940170492       BOLT       1         F       8940170478       Rear End Plate kit       1       18       8940170493       Tune-up Kit       1         26       REAR PLATE       1       35       O-RING (P4x1.9)       1         27       BALL BEARING (626)       1       35       O-RING (P4x1.9)       1         25       PIN (\$\overline{2x18})       1       37       O-RING (P8x1.5)       1         20       Front End Plate kit       43       O-RING (P5x1.9)       1         20       FRONT PLATE       1       38       O-RING (P1x2.4)       2         19       BALL BEARING (608)       1       40       O-RING (P3x1.9)       1         23       PIN (\$\overline{2x6})       1       22       Rotor Blade Set (6)       1         11       ANVIL       1       1       22       Rotor Blade Set (6)       1         12       STEEL BALL (\$\overline{3.175mm})       1       22       Rotor Blade Set (6)       1         9       WASHER       1       1       1	42		SPRING	1	28	8940170491	HANDLE	1		
44         REVERSE VALVE 1         18         8940170492         BOLT         1           F         8940170478         Rear End Plate kit	45		PIN (∮2x18)	1	22	8940170498	Rotor Blade Set (6)	1		
F         8940170478         Rear End Plate kit         Image: Second s	44		REVERSE VALVE 1		18	8940170492	BOLT	1		
26         REAR PLATE         1         8940170493         Tune-up Kit           27         BALL BEARING (626)         1         35         O-RING (P4x1.9)         1           25         PIN (\$2x18)         1         37         O-RING (P8x1.5)         1           G         8940170479         Front End Plate kit         43         O-RING (P5x1.9)         1           20         FRONT PLATE         1         38         O-RING (P11x2.4)         2           19         BALL BEARING (608)         1         40         O-RING (P3x1.9)         1           23         PIN (\$2x6)         1         22         Rotor Blade Set (6)         1           11         ANVIL         1         1         22         Rotor Blade Set (6)         1           12         STEEL BALL (\$3.175mm)         1         1         8940172035         Instruction Manual           9         WASHER         1         1         1         1         1           10         RING         1         1         1         1         1	F	8940170478	Rear End Plate kit							
27         BALL BEARING (626)         1         35         O-RING (P4x1.9)         1           25         PIN (\$2x18)         1         37         O-RING (P8x1.5)         1           G         8940170479         Front End Plate kit         43         O-RING (P5x1.9)         1           20         FRONT PLATE         1         38         O-RING (P1x2.4)         2           19         BALL BEARING (608)         1         40         O-RING (P3x1.9)         1           23         PIN (\$2x6)         1         22         Rotor Blade Set (6)         1           41         ANVIL         1         22         Rotor Blade Set (6)         1           11         ANVIL         1         1         8940172035         Instruction Manual           9         WASHER         1         1         6159948710         Safety Manual	26		REAR PLATE	1		8940170493	Tune-up Kit			
25         PIN (\$\overline{\phi}2x18)         1         37         O-RING (P8x1.5)         1           G         8940170479         Front End Plate kit         43         O-RING (P5x1.9)         1           20         FRONT PLATE         1         38         O-RING (P1x2.4)         2           19         BALL BEARING (608)         1         40         O-RING (P3x1.9)         1           23         PIN (\$\overline{\pi}2x6)         1         22         Rotor Blade Set (6)         1           41         8940170480         Anvil kit         40         O-RING (P3x1.9)         1           12         STEEL BALL (\$\overline{\pi}3.175mm)         1         22         Rotor Blade Set (6)         1           9         WASHER         1         1         6         8940172035         Instruction Manual           8940166064         Warning Lable         6159948710         Safety Manual	27		BALL BEARING (626)	1	35		O-RING (P4x1.9)	1		
G         8940170479         Front End Plate kit         43         O-RING (P5x1.9)         1           20         FRONT PLATE         1         38         O-RING (P11x2.4)         2           19         BALL BEARING (608)         1         40         O-RING (P3x1.9)         1           23         PIN (\$2x6)         1         22         Rotor Blade Set (6)         1           H         8940170480         Anvil kit         1         22         Rotor Blade Set (6)         1           11         ANVIL         1         1         1         1         1         1           12         STEEL BALL (\$3.175mm)         1         1         8940172035         Instruction Manual           9         WASHER         1         1         1         1         1           10         RING         1         1         1         1         1	25		PIN (∮2x18)	1	37		O-RING (P8x1.5)	1		
20         FRONT PLATE         1         38         O-RING (P11x2.4)         2           19         BALL BEARING (608)         1         40         O-RING (P3x1.9)         1           23         PIN (\$2x6)         1         22         Rotor Blade Set (6)         1           11         ANVIL         1         1         22         Rotor Blade Set (6)         1           12         STEEL BALL (\$3.175mm)         1         8940172035         Instruction Manual           9         WASHER         1         1         8940166064         Warning Lable           10         RING         1         1         1         1         1	G	8940170479	Front End Plate kit		43		O-RING (P5x1.9)	1		
19         BALL BEARING (608)         1         40         O-RING (P3x1.9)         1           23         PIN (\$2x6)         1         22         Rotor Blade Set (6)         1           H         8940170480         Anvil kit         1         22         Rotor Blade Set (6)         1           11         ANVIL         1	20		FRONT PLATE	1	38		O-RING (P11x2.4)	2		
23         PIN (\$\phi2x6)         1         22         Rotor Blade Set (6)         1           H         8940170480         Anvil kit         1         22         Rotor Blade Set (6)         1           11         ANVIL         1         1         8940172035         Instruction Manual           12         STEEL BALL (\$\prime{3}.175mm)         1         1         8940172040         Name Plate           9         WASHER         1         1         1         1         1         1           10         RING         1         1         2         1         1         1	19		BALL BEARING (608)	1	40		O-RING (P3x1.9)	1		
H         8940170480         Anvil kit           11         ANVIL         1           12         STEEL BALL (\$3.175mm)         1           9         WASHER         1           10         RING         1	23		PIN (∮2x6)	1	22		Rotor Blade Set (6)	1		
11         ANVIL         1           12         STEEL BALL (∲3.175mm)         1           9         WASHER         1           10         RING         1	Н	8940170480	Anvil kit			-				
12         STEEL BALL (\$3.175mm)         1         8940172040         Name Plate           9         WASHER         1         8940166064         Warning Lable           10         RING         1         6159948710         Safety Manual	11		ANVIL	1		8940172035	Instruction Manual			
9         WASHER         1         8940166064         Warning Lable           10         RING         1         6159948710         Safety Manual	12		STEEL BALL (\$3.175mm)	1		8940172040	Name Plate			
10 RING 1 6159948710 Safety Manual	9		WASHER	1		8940166064	Warning Lable			
	10		RING	1		6159948710	Safety Manual			

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