PNEUMATIC 852

FIRST EDITIOI
MARCH, 199:

WARNING — TO REDUCE RISK OF INJURY, READ AND UNDERSTAND THIS INSTRUCTION MANUAL BEFORE OPERATING TOOL.

Instruction and Parts Book fo

PNEUMATIC SIMPLATE LIGHTWEIGHT CHIPPING HAMMER

CP4100 Model 'A' & 'U

PROTECT YOUR INVESTMENT
IN THE WORLD'S FINEST AIR TOOLS
USE GENUINE CP REPLACEMENT PARTS

The purchase of replacement parts for your CP tools deserves the same good judgment that resulted in the purchase of the tools themselves. Each genuine CP part is made from carefully selected and inspected material, subjected to sophisticated machinery and finishing processes and heat-treated to produce just the right combination of hardness, ductility and impact resistance for its intended use. Each part is identical to, and made concurrently with, parts used in production tools. The use of parts other than genuine CP replacement parts can lead to sub-standard performance, early failure, possible damage of other parts and, in some instances, unsafe conditions.

Chicago Pneumatic

INDEX

Tools covered by this instruction and parts book have catalog numbers starting with CP-4100 followed by catalog code letters such as 2R, 2H, 3R, 3H, NS.

The following index indicates the options & brief features.

THROTTLE HANDLE	VALVE	PISTON & CYLINDER	BUSHING	OTHER FEATURES
Description	Description	Description	Description	Description
D Handle Inside Trigger Teasing Throttle	Simplate	2" Nominal Stroke 3" Nominal Stroke 1" Nominal Stroke	.680" Dia. Round or .580 Hexagon .401 Shank for Needle Scaler	Screw on Retainer Moveable Deflector Chisel Release Spring

CAUTION: THIS CODE LETTER INDEX DOES NOT NECESSARILY INDICATE INTERCHANGEABILITY OR SAFE PARTS COMBINATIONS. REFER TO THE LATEST CHICAGO PNEUMATIC CATALOG FOR APPROVED TOOL DESIGNATIONS AND ASSEMBLY COMBINATIONS.

GENERAL INSTRUCTIONS

Air Supply

For satisfactory performance, 90 PSIG (6.2 bar) of clean, dry air is required AT THE TOOL with tool operating. Whip hose 3/8" I.D. may be used at the air inlet, but longer runs should be 1/2" hose size or larger, used with couplings or a minimum 7/16" I.D. The use of C-132194 CHICAGO PNEUMATIC Air Line Separator and Filter and a CA-048362 Air Line Pressure Regulator mounted as closely as possible to the tool is recommended.

Instructions for Safe Operation

BEFORE PLACING THIS TOOL IN OPERATION, READ THE FOLLOWING SECTIONS EXCERPTED FROM THE COMPRESSED AIR AND GAS INSTITUTE'S "SAFETY CODE FOR PORTABLE AIR TOOLS." (APRIL 1974)

1. EYE PROTECTION - Eye and face protection shall be worn at all times while operating power tools.

2. RETAINERS - A retainer shall be integral with or installed on a percussion tool which, without such a retainer, can eject the chisel, rivet set, punch or such equipment, when the tool is operated off a work surface.

3. QUICK DISCONNECT COUPLINGS - If a quick-disconnect coupling is used on a percussiont tool it shall be separated from the tool by a whip hose.

4. OPERATOR INSTRUCTIONS - A percussion tool shall not be operated unless the chisel, rivet set, scalling tool, or other, is in position in the tool and in contact with the work piece. Tools shall not be used in such a manner that ejection of an accessory might endanger adjacent personnel.

5. REMOVE TOOLS - When percussion tools are not in use, the dies and accessories shall be removed, unless they are retained in a positive manner.

Preparing for Operation

Daily before using and after each eight hours service, disconnect air hose from Chipping Hammer, and blow out air line to clear it of accumulated dirt and moisture. Pour about one tablespoonful of recommended oil into air inlet, connect air hose and operate tool to allow oil to be carried to the interior.

Lubrication

The use of synthetic oils is not recommended because of possible damage to seals, "O" rings, hose, rotor blades and polycarbonate oiler and filter bowls.

The use of a CHICAGO PNEUMATIC Air Line Lubricator installed as closely as possible to the tool, preferably between the air pipe and the hose leading to the tool, is recommended with all pneumatic tools to assure a constant and adequate supply of lubricant to the working parts of the tool.

Recommended Lubricants

CHICAGO PNEUMATIC Airollene Oil which contains moisture absorbent, rust inhibiting additives and will use with CP Simplate Chipping Hammers and may be purchased under the following symbols:

1 gal. can - - - - - - - P-089507
5 gal. can - - - - - - - P-089508

If recommended oil is not available, use a turbine or spindle grade oil with a viscosity of 100-150 SUS at

100°F which contains a rust inhibitor.

Loss of Power/Erractic Action

Loss of power and erratic action may be caused by factors outside the tool proper. Make the following checks:

1. Check Air pressure. - For rated performance 90 PSIG (6.2 bar) air pressure AT THE TOOL is required with the tool operating on the job.
A drop in air pressure may be caused by lowered compressor output, excessive drain on the air line or by the use of hose or connections of improper size or poor condition.
2. Check for wet or dirty air. - Excessive moisture in the air supply tends to wash lubricant away from the working parts of the tool and rust or corrode the interior. Grit will damage the interior by scoring closely fitted parts, and impede the action of the tool. If the above are found in order, disconnect tool and pour a liberal amount of recommended oil or an SAE #10 oil cut with an equal quantity of kerosene into the air inlet. Operate the tool to allow lubricant to flush accumulated gum and grit out the exhaust

> CAUTION: When operating tool to flush out gum and foreign matter direct tool exhaust away from operator and co-workers.

If outside factors are not to blame, disassemble the tool, thoroughly clean and inspect all parts and replace those worn or broken. Coat parts with light oil and reassemble.

Maintenance

Do not penalize the operator by requiring him to use a tool which is not in first class condition. Regular inspection and immediate repair of minor faults will avoid more extensive future repairs and maintain the tool at its highest efficienty.

1. Keep tool properly lubricated.
2. Provide 90 PSIG (6.2 bar) of clean, dry air AT THE TOOL.
3. Set up and maintain an inspection and repair program regularly scheduled at intervals governed by the degree of use to which the tool is subjected.

Malfunctions and Repairs

This section covers the use of the repair tools listed on Page 5 and enumerates the most usual causes and corrections of malfunctions of the tool proper. It is designed to help the user make rapid and efficient repairs to the dimensions required by mating parts of the tool.

1. Throttle Valve Leakage
Remove throttle valve (22) from tool and remove "O" ring (23) from valve. Slip a new "O" ring on the throttle valve and reassemble. Replace throttle valve bushing (19) if worn, ream (.280" reams) before installing throttle valve.

2. Leakage around valve case lid. If valve shut-off seat (29) or clamp ring (11) is worn or damaged, replace with new parts.
Replace if valve parts are broken or damaged.

3. Inspection Standards
Check tool after disassembly for plugged air porting an for worn parts. As the parts of the tool wear, power will slowly decrease. Depending on the requirements o the particular applicat.on, tolerable wear can vary. As guide in maintaining maximum power output, parts liste in the following table should not be worn in excess of t given dimensions.

Part	Maximum ID (in.)	Part	Minimum OD (in.)
Cylinder (8)	1.127	Piston (5)	1.1220
Sleeve (4)	.6910"		

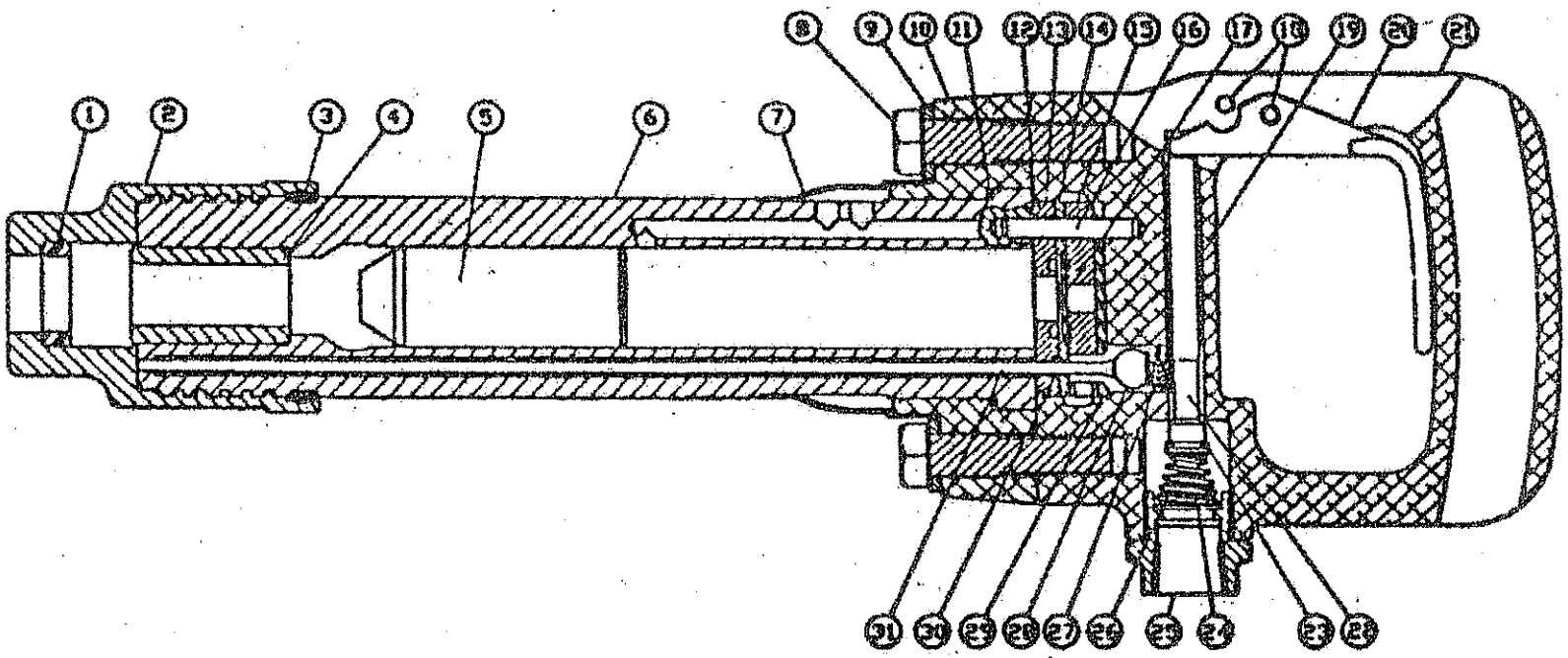
Replace piston if cracked or worn hollow on striking en Valve seats and edges of valve should be inspected visu for wear and pitting.

Assembly Cautions

1. Ensure that shut-off needle (31) is in the correct ho in valve parts, the small "O" ring (30) is in lower valve lid (15), the clamp ring (11), "O" ring (12) and seat sh (29) in their respective position, and the valve assembl doweled correctly into cylinder. With valve shut-off in the hole of the seat (29), dowel the handle into positi ensuring that spring (27) is held inside the handle.

2. With lock washers (9) in place, assemble flange (10) against handle by tightening the two cap screws evenly t[illegible] the gap between the flange and the handle disappears As a guide, use approx. 100" lb. torque on the screw

3. Ensure that retainer is fully screwed in place for proper operation of the tool. If retainer is partially or fully removed, a shut-off device (patent pending) cuts off air supply to the tool shutting the tool.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Index No.	Part No.	Description	No. Reqd
1	R144121	Handle-Complete consists of (2,3,4,6,6,7,8,9)	1
2	R144119	Handle Bare	1
3	F027853	Lever-Throttle	1
4	A043627	Pin-Throttle Lever	1
5	R086329	Valve-Throttle	1
6	R086098	Seat-Throttle Valve	1
7	R085596	Spring-Throttle Valve	1
8	R085599	Bush'g-Thr. Valve Stem	1
9	R085893	Air Inlet Bush'g (NPT)	1
	F064697	Air Inlet Bush'g (BSP)	1
10	A142999	Valve-Assy	1
11	P144124	Retainer	1
12	R101103	O-Ring	1
13	A048165	Buffer	1
	FOR 3R, 3H, 2R, 2H ONLY		
14	KF128062	Piston (3R, 3H)	1
	KF041791	Piston (2R, 2H, NS)	1

Index No.	Part No.	Description
15	P144126	Cylinder (3R, 3H)
	P144154	Cylinder (2R, 2H)
16	P144122	Bushing-Hex
17	P144123	Bushing-Rnd
18	A128063	Deflector (3R, 3H)
19	P144197	Spring-Push
20	P144209	Muffler (3R, 3H)
	P144208	Muffler (2R, 2H, NS)
	FOR NS VERSION ONLY	
21	A048163	Needle
15	P144179	Cylinder (incl. piston)
22	P144199	Spring
23	P144200	Holder
24	P144201	Anvil
13	A048165	Buffer

Chisel Types

P144267-9" Moil Point	.680 RD Shank, Rd Collar
P144268-12" Moil Point	.680 RD Shank, Rd Collar
P144271-9" Flat Chisel	.680 RD Shank, Rd Collar
P144272-12" Flat Chisel	.680 RD Shank, Rd Collar
P144269-9" Moil Point	.580 Hx Shank, Rd Collar
P144270-12" Moil Point	.580 Hx Shank, Rd Collar
P144273-9" Flat Chisel	.580 Hx Shank, Rd Collar
P144274-12" Flat Chisel	.580 Hx Shank, Rd Collar