

CP4120 CHIPPING HAMMER

PNEUMATIC 851

FIRST EDITION
MARCH, 1993



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

Instruction and Parts Book for

PNEUMATIC SIMPLATE HEAVY CHIPPING HAMMER

CP4120 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**

CP-4120 SIMPLATE HEAVY CHIPPING HAMMERS Model "A" & "U"

INDEX

Tools covered by this instruction and parts book have catalog numbers starting with CP-4120 followed by catalog code letters such as 1 IN RND, 1 IN HEX, 2 IN RND, 2 IN HEX, 3 IN RND, 3 IN HEX, 4 IN RND, 4 IN HEX.

The following index indicates the options & brief features.

THROTTLE HANDLE	VALVE	PISTON & CYLINDER	BUSHING
Description	Description	Description	Description
D handle Inside Trigger Auto Shut-off If retainer removed	Simplite	1" Nominal Stroke	.680" Dia. Round
		2" Nominal Stroke	.580 Hexagon
		3" Nominal Stroke	
		4" Nominal Stroke	

PREVIOUS	PREVIOUS
CP-4123-PYBA	1"-Simp. Chip (Rd)
CP-4123-PYBE	1"-Simp. Chip (Hex)
CP-4123-PYRA	2"-Simp. Chip (Rd)
CP-4123-PYRE	2"-Simp. Chip (Hex)
CP-4123-PYSA	3"-Simp. Chip (Rd)
CP-4123-PYSE	3"-Simp. Chip (Hex)

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
LAYOUT AND SPARES

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CROWDER SUPPLY CO., INC. - 8495 ROSLYN ST. - COMMERCE CITY, CO 80022 - TOLL FREE 888-983-5144 - www.crowdersupply.com

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 percussive 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, scaling 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 Airoliene Oil which contains moisture absorbent, rust inhibiting additives and will use with CP Simplite 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/Erratic 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 efficiency.

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 making parts of the tool.

1. Throttle Valve Leakage
Remove throttle valve from tool and remove ring from valve. Slip a new "O" ring on the throttle valve and reassemble. Replace throttle valve bushing if worn, ream (.250" reams) before installing throttle valve.
2. Valve Malfunction
Make sure the handle has not come loose at the threading. If it has, clean up loctite from the threads, apply loctite (Black Max 380 or equivalent) to cylinder threads in a 1/4" wide bead half way around cylinder 1/4" from the valve case end. Tighten handle to 40-50 ft. lb. torque. Replace valve assembly if necessary.

3. Disassembly Techniques

- a) As the handle is loctited on thread joint, need to heat handle with flameless heater to approx. 350°F to loosen thread joints and remove cylinder.
- b) Plug in the needle scaler cylinder can be pressed out to replace piston.

4. Inspection Standards

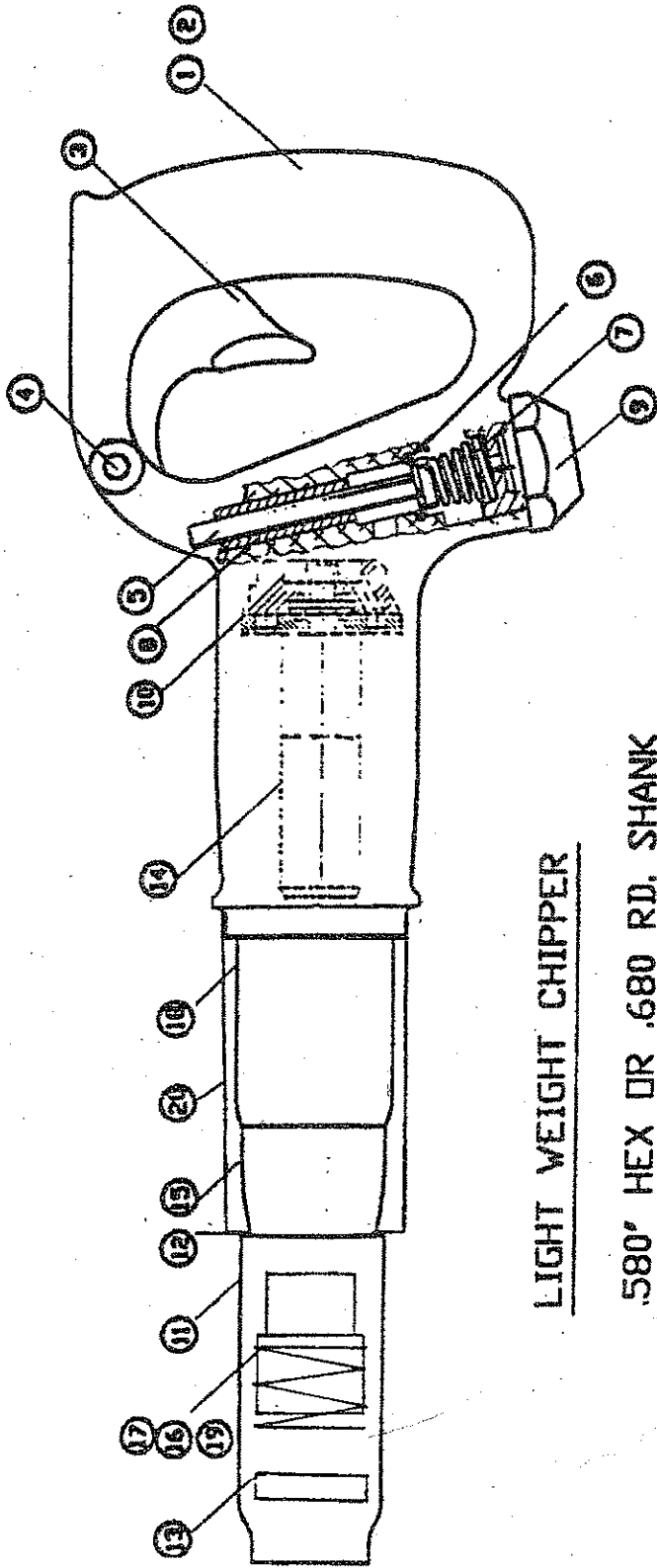
Check tool after disassembly for plugged air porting for worn parts. As the parts of the tool wear, power will slowly decrease. Depending on the requirements the particular application, tolerable wear can vary. A guide in maintaining maximum power output, parts listed in the following table should not be worn in excess of given dimensions.

Part	Maximum ID (in.)	Part	Minimum OD (in.)
Cylinder	.752	Piston	.746
Sleeve	.6910*		

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

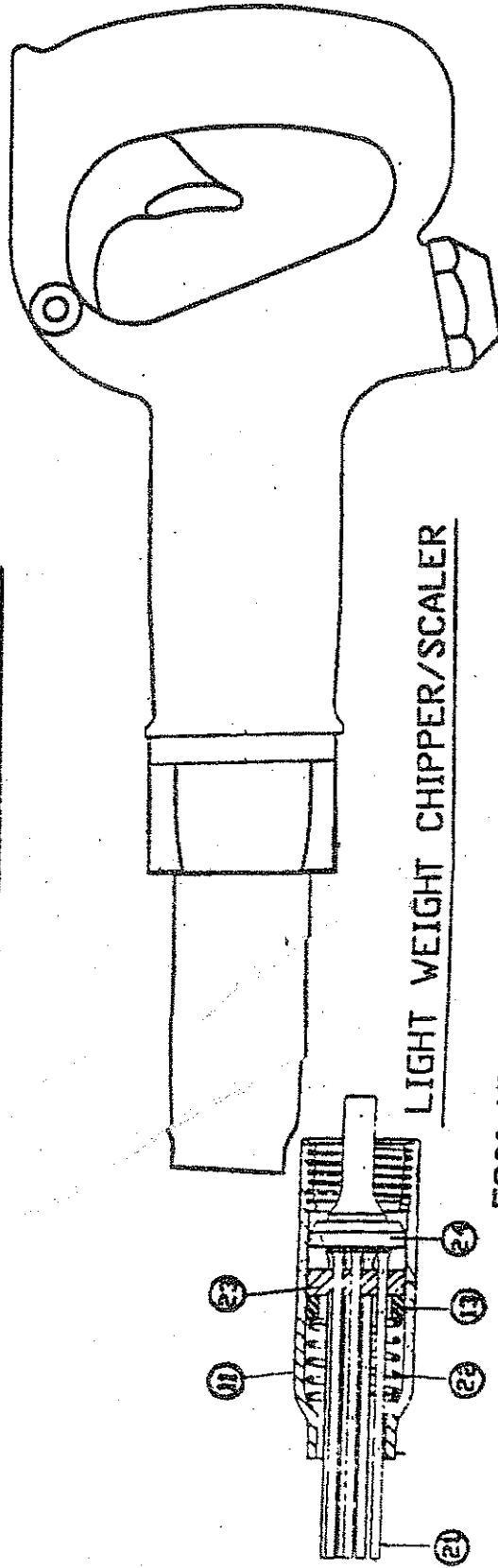
Assembly

1. Clean handle and cylinder threads and degrease. Place piston in cylinder. Place cylinder valve assembly in the cylinder. Apply loctite as described earlier. Screw in the handle assembly to a 40-50 ft. lb. torque.
2. For chippers, fit muffler against the handle, slip an "O" ring over to the end of cylinder threads, fit spring-push (color coded end) over the cylinder bushing, screw in the retainer firmly, with buffer and chisel in place. The "O" ring acts as a locking ring for the retainer.
3. For needle scaler, fit the muffler against the handle slip the "O" ring over the end of the cylinder thread. screw in the retainer firmly with needle scaler attach



LIGHT WEIGHT CHIPPER

.580" HEX DR .680 RD. SHANK



LIGHT WEIGHT CHIPPER/SCALER

.580" HEX DR .680 RD. SHANK / .401" SHANK

CP-4120 SIMPLATE HEAVY CHIPPING HAMMERS Model "A" & "U"

Index No.	Part No.	Description	No. Reqd	Index No.	Part No.	Description
1	P144139	Buffer-Chisel	1	13	P144142	Lid-Lower-Valve
2	P144137	Retainer-Chis (round collar)	1	14	P144141	Case-Valve
3	F035269	Ring-Retainer	1	15	P144140	Lid-Upper-Valve
4	P001550	Bushing-Chisel(Rd)	1	16	P144147	Pin-Dowel (2)
	P001551	Bushing-Chisel(Hex)	1	17	P142921	Valve-Cycling
5	P114386	Piston (1" Str)	1	18	R133757	Pin-Thr. Lever (2)
	P118662	Piston (2"3" Str)	1	19	P144138	Bushing-Thr. Valve
	P118678	Piston (4" Str)	1	20	F815167	Lever-Throttle
6	P144279	Cylinder, 1" (Rd)	1	21	P144134	Handle
	P144280	Cylinder, 1" (Hex)	1	22	P144202	Valve-Throttle
	P144281	Cylinder, 2" (Rd)	1	23	P083071	O-Ring (-011)
	P144282	Cylinder, 2" (Hex)	1	24	C036909	Strainer-Air
	P144283	Cylinder, 3" (Rd)	1	25	C092292	Bushing-Inlet
	P144284	Cylinder, 3" (Hex)	1	26	C077054	Spring-Thr. Valve
	P144285	Cylinder, 4" (Rd)	1	27	P144144	Spring-Shut-Off
	P144286	Cylinder, 4" (Hex)	1	28	C043154	Valve-Shut-Off
7	P071355	Deflector-Exhaust	1	29	P144143	Seat-Shut-Off
8	P144146	Screw-Cap	2	30	C087316	O-Ring (-006)
9	P144782	Washer, Nord-Lock(2per bolt, camface to camface)	4	31	P144205	Rod-Shut-Off (1" Str)
10	P147590	Flange-Cylinder	1		P144204	Rod-Shut-Off (2" Str)
11	P144153	Ring-Clamp	1		P144145	Rod-Shut-Off (3" Str)
12	C100569	O-Ring (-033)	1	*2	P144203	Rod-Shut-Off (4" Str)
				*2	P144441	Retainer-Oval Coll Rd Sha
					P1454545	Retainer-Oval Coll Hex Shi
					P145458	-cylinder insert for ov/hex re
					P145459	-ring-retaing for ov/ ex retai

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

