

# CP-14RR HAND DRILL

## ROCK DRILL 598

SECOND EDITION  
SEPTEMBER, 1983

Supersedes First Edition August, 1975

*Instruction and Parts Book for*

# PNEUMATIC HAND DRILL

**CP-14RR HAND DRILL Model "B-L"  
(WITH ROTATION RELEASE)**

**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.

ROCK DRILL 598



**Chicago  
Pneumatic**

Chicago Pneumatic Tool Company Rock Hill, SC 29730

R-278145

---

## GENERAL INSTRUCTIONS

### Air Supply

For satisfactory performance, 80 psig (5.6 bar) - 90 psig (6.2 bar) of clean, dry air is required AT THE TOOL with tool operating. Leader hose 1/2" hose size may be used at the air inlet, but runs longer than 25' should be 3/4" or larger hose size. The use of a C-132195 CHICAGO PNEUMATIC Air Line Separator and Filter and a C-104093 CHICAGO PNEUMATIC Air Line Pressure Regulator mounted as closely as possible to the tool is recommended.

### Preparing For Operation

Daily before using and before putting tool into operation, disconnect air hose and pour a small quantity of recommended oil into tool air inlet. Blow out air line to clear it of accumulated dirt and moisture, connect tool and operate on reduced throttle to allow oil to be carried to valve and cylinder.

### Lubrication

The use of synthetic oils is **NOT RECOMMENDED** due to possible damage to scale, "O" rings, hose, baldes and polycarbonate oiler/filter bowls.

Daily before using and before putting tool into service, pour a small quantity of recommended oil into air inlet. Daily before using and after four hours of service, remove pipe plug (12) and fill oil reservoir with recommended oil. In addition, use of a C-132200 CHICAGO PNEUMATIC Air Line Lubricator installed at the end air pipe leading to this pneumatic tool is recommended to assure a constant and adequate supply of lubricant.

Indications of proper lubrication are the presence of an oil mist in the exhaust air and of slight traces of oil on drill or adapter shank. If these are not apparent, check oil reservoir, and make sure port leading from oil chamber to air passage is obstructed.

### Recommended Lubricants

CHICAGO PNEUMATIC Rock Drill Oil which is resistant to rust and oxidation, rated for extreme pressure conditions, capable of high emulsification and has a high flash point is recommended under the following symbol;

1 pt. can .....R-087675

If recommended oil is not available, use a good grade # 10 Rock Drill Oil.

### Operating Cautions

Always operate Hand Drill with drill steel in the fronthead and with retainer properly engaged.

Operate Hand Drill only under load to avoid damage to internal moving parts and to avoid excessive strain on spring retainer.

### Loss Of Power / Erratic Action


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

1. Check air pressure. For rated performance, 80 psig (5.6 bar)-90 psig (6.2 bar) air pressure is required AT THE TOOL with tool operating. A drop in air pressure may be caused by lowered compressor output, excessive drain on the air line or by use of hose or connections of improper size or in poor conditions.

2. Check for wet or dirty air. Wet air tends to wash lubricants way from cylinder and to rust and corrode the tool. Dirt and foreign matter in the air supply will impede valve action and cause damage to the tool.

If above are in order;

1. Check cylinder and valve lubrication. Disconnect tool and pour a liberal quantity oil cut with an equal amount of kerosene into tool air inlet. Operate tool on reduced throttle to flush out gum and foreign matter.

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

2. Check mechanical parts of tool. Disassemble tool, thoroughly clean and inspect all parts. Replace worn or broken parts, relubricate and reassemble tool.

### Assembly Caution

Position R-051348 Shifter Plunger of Rotation Release Hand Drill in fronthead BEFORE assembling R-085601 Chuck Sleeve.

Be sure straight spline on piston engages straight spline on chuck sleeve and that spiral spline on piston engages spiral spline of ratchet ring.

Assemble R-093154 Ratchet Ring in fronthead so that flat of ratchet teeth engage ends of R-085588 Pawls.

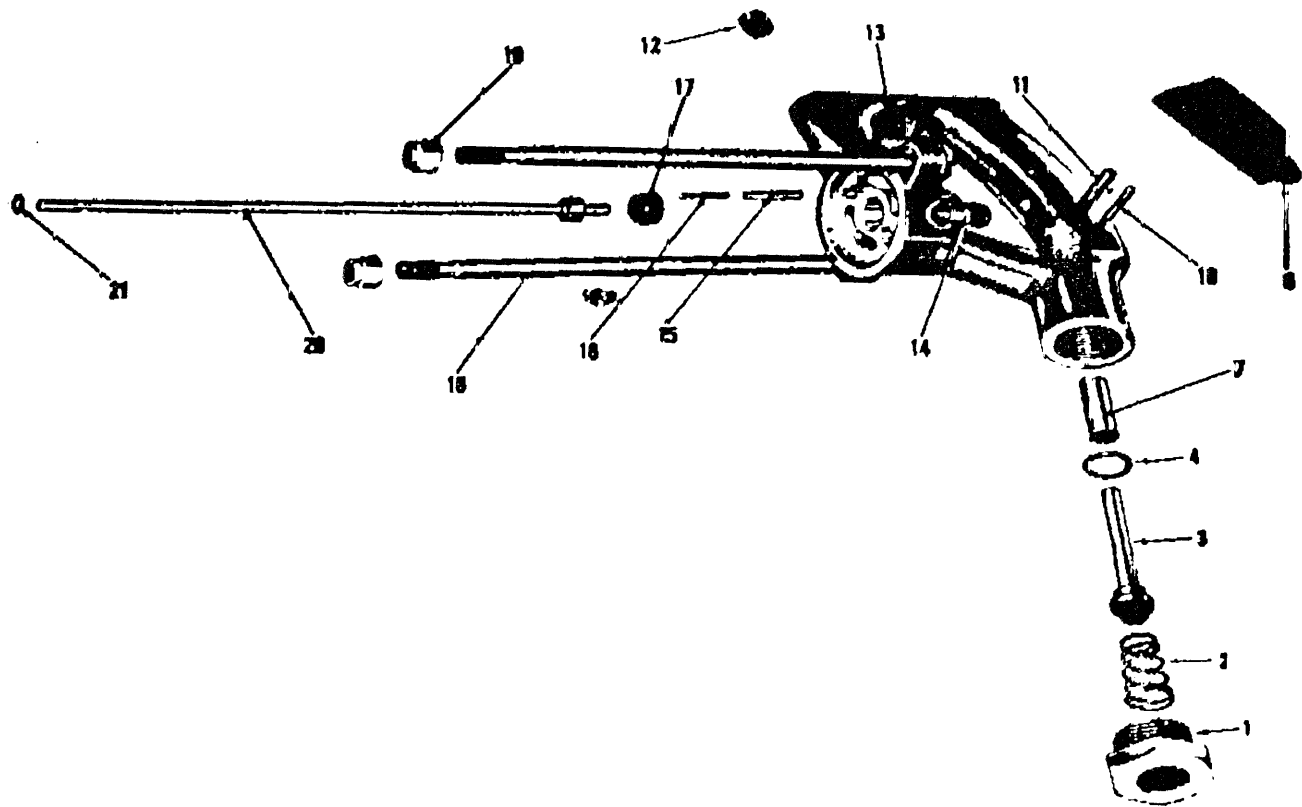
Tighten thru bolts evenly to prevent binding. After tightening, rotate chuck by hand to make sure rotation is free.

### Maintenance

Do not penalize the operator by requiring him to use a tool which is not in first class condition. A regularly scheduled inspection and repair program will correct minor faults, avoid later, extensive repairs and maintain the tool at its highest efficiency.

1. Keep tool properly lubricated.
2. Provide 80 psig (5.6 bar)-90 psig (6.2 bar) of clean, dry air AT THE TOOL.
3. Use hose and connections of proper size and in good condition.
4. Set up and maintain a repair and replacement program scheduled at regular intervals.

CP-14RR HAND DRILL Models "B-L"



OPTIONAL : R- 085593  
INSIDE THROTTLE LEVER

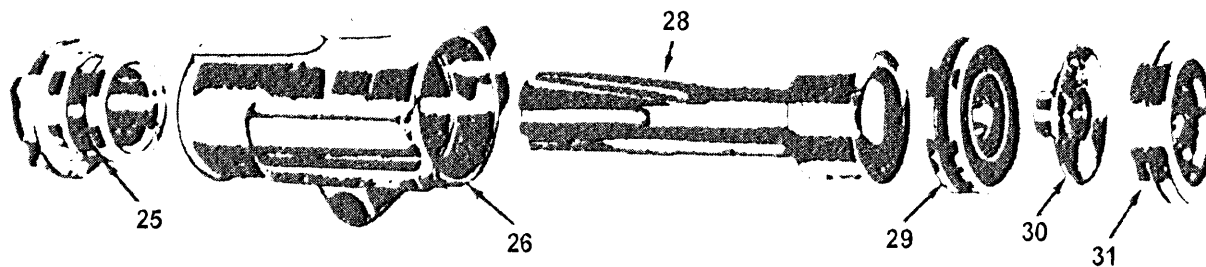
All Threads Are Right Hand  
Unless Otherwise Specified

Index No.	CP Part No.	Description	No. Reqd
1	R-085595	Bushing - Air Inlet	1
2	R-085596	Spring - Throttle Valve	1
3	R-086329	Valve - Throttle	1
4	R-086098	"O" Ring (SPECIAL)	1
7	R-085599	Bushing - Valve Stem	1
8	F-064534	Lever - Throttle	1
10	H-082555	Pin- Throttle Lever Stop	1
11	R-075404	Pin - Throttle Lever	1
12	C-077941	Plug - Pipe 3/8"	1
13	R-119157	Handle (Incl; Index No's 4, 7, 12, 14, & 15)	1
14	C-068799	Plug - Pipe (1/4" NPTF)	1
15	R-085580	Tube - Oil Regulating	1
16	R-085582	Plunger - Oil Regulating	1
17	R-085934	Rubber - Tube	1
18	F-061564	Bolt - Thru	2
19	P-070438	Nut - Thru Bolt	2
20	R-079223	Tube - Air (DRY BLOWER)	1
21	C-069083	"O" RING (-010)	

When ordering spare parts give Name, Speed or Size, Model and Serial Number of the tool and Part Number and Description of each part desired.

CP-14-RR HAND DRILL Models "B-L"

CYLINDER ASSEMBLY

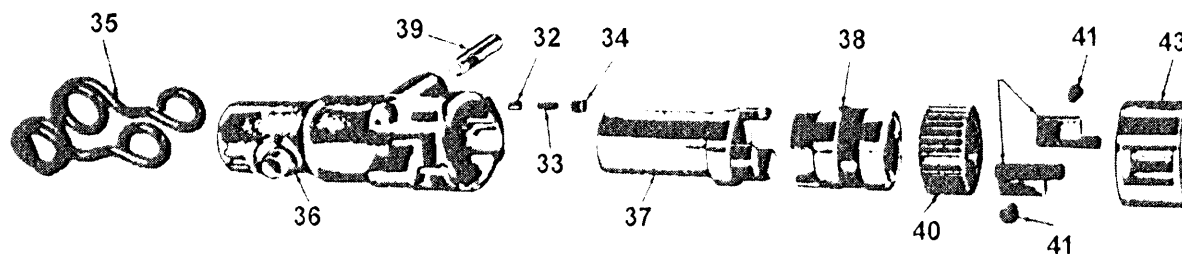


All Threads Are Right Hand Unless Otherwise Specified.

Index No.	CP Part No.	Description	No. Reqd.
25	R-041684	Bushing-Cylinder (With Rotation Release)	1
26	R-085575	Cylinder	1
28	R-000120	Piston	1

Index No.	CP Part No.	Description	No. Reqd.
29	R-085592	Seat - Front Valve	1
30	R-085591	Valve	1
31	R-085935	Seat	1

FRONTHEAD ASSEMBLY Model "B-L"

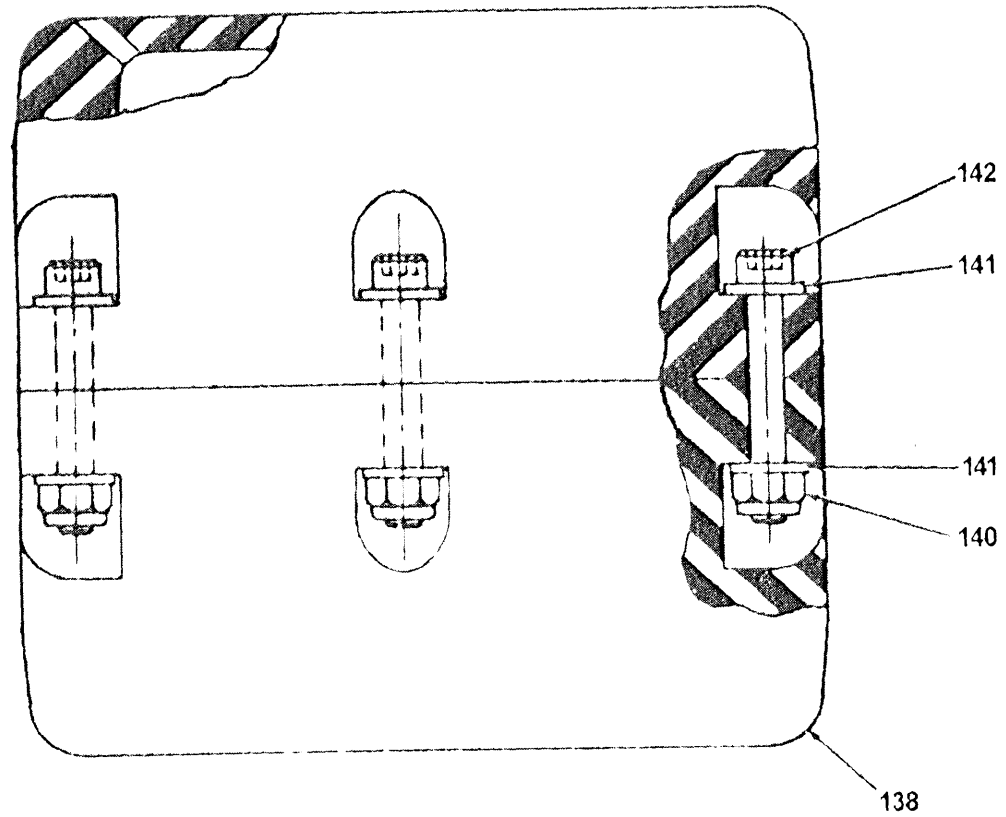


All Threads Are Right Hand Unless Otherwise Specified.

Index No.	CP Part No.	Description	No. Reqd.
32	R-051349	Plunger-Detent	1
33	R-051353	Spring-Plunger	1
34	C-068064	Plug-Pipe (1/8")	1
35	R-050584	Retainer-Wire	1
36	R-041685	Fronthead	1
37	R-085600	Chuck (7/8" x 3 1/4" Shank)	1

Index No.	CP Part No.	Description	No. Reqd.
38	R-085601	Sleeve-Chuck	1
39	R-051348	Plunger-Shifter	1
40	R-093154	Ring-Ratchet	1
41	R-086654	Spring-Pawl	2
42	R-085588	Pawl	2
43	R-051350	Sleeve-Shifter	1

CP-14RR HAND DRILL Models "B-L"

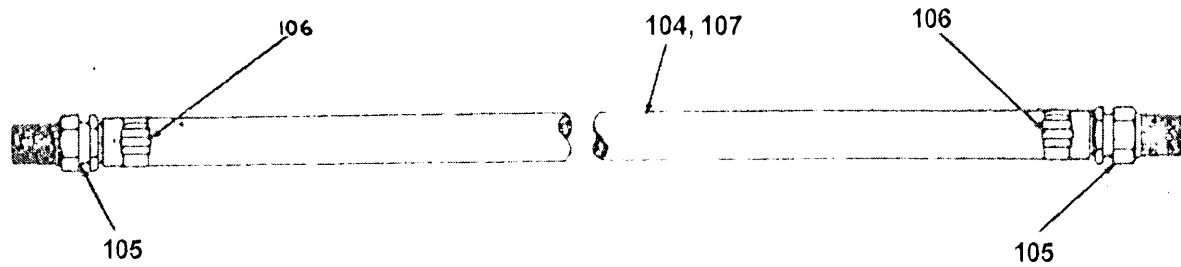


Index No.	CP Part No.	Description	No. Reqd.
139	F-827044	Muffer (Incl : 140, 141 & 142)	1
140	C-037118	Locknut	6
141	F-826979	Washer	12
142	C-051781	Cap Screw	6

When ordering spare parts give Name, Speed or Size, Model and Serial Number of the tool and Part Number and Description of each part desired.

**CP-14RR HAND DRILL Models "B-L"**

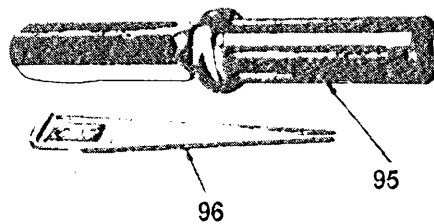
**R- 079158 AIR HOSE ASSEMBLY**



Index No.	CP Part No.	Description	No. Reqd.
104	R-079158	Assembly-Air Hose (Incl; No's 105, 106 & 107)	1
105	P-002083	Nipple-Hose	2
106	C-083679	Clamp-Hose	2
107	R-085676	Hose-Air (1/2" x 25'0")	1

**All Threads Are Right Hand Unless Otherwise Specified.**

**STAR DRILL ADAPTERS**

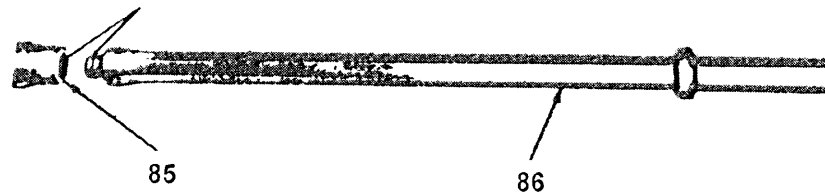


Star Drills Listed on Page 7.

Index No.	CP Part No.	Description	No. Reqd.
95	R-085585	Adapter - Star Drill (1/2" dia.-600 taper)	1
	R-085679	Adapter - Star Drill (3/8" Dia - 600 Taper)	
96	R-085678	Drift - Star Drill Adapter	1

**7/8" HEX.DRILL ROD WITH TIMKEN SERIES "E" BITS**

**LEFT HAND THREADS**



Index No.	CP Part No.	Description	No. Reqd.
85	R-052229	Bit-Cross (15/16")	1
	R-052229	Bit-Cross (1")	
	R-052231	Bit-Cross (1 1/8")	
	R-052232	Bit-Cross (1 1/4")	
86	R-052228	ROd-Drill (18" Overall) (7/8" Hex. x 3 1/4" Shank)	1

**All Threads Are Right Hand Unless Otherwise Specified.**

**ACCESSORIES  
STAR DRILLS**

Type "A" (3/8" Dia. x .600 Taper)

Use R-085679 Adapter  
(See Page 6)

Gauge	Overall Length	Part Number	Gauge	Overall Length	Part Number
3/8"	7"	R-004749	5/8"	9"	R-004751
7/16"	8.3/8"	R-004767	11/16"	9"	R-004769
1/2"	9"	R-004750	3/4"	9"	R-004752
9/16"	9"	R-004768			

Type "B" (1/2" Dia. x .600 Taper)

Use R-085585 Adapter  
(See Page 6)

Gauge	Overall Length	Part Number	Gauge	Overall Length	Part Number
13/16"	9"	R-004770	1"	13"	R-085757
7/8"	9"	R-004753	1 1/16"	9"	R-004772
15/16"	9"	R-004771	1 1/8"	9"	R-004755
1"	9"	R-004754			

**NON-ROTATING ACCESSORY TOOLS**

Description	Length (Inches)	Symbol Number
Moil Point	14	R-085545
1" Flat Chisel	9	R-085544
Clay Pick	16	R-055462
2 1/2" Chisel	14	R-055463
3" x 10" Digging Chisel	17 1/4	R-055464
Tamper Complete	----	R-055467
6" Tamper Pad Only		R-055466
Tamper Shank Only	8	R-055465

**ROTATING TUNGSTEN CARBIDE STEELS WITH INTEGRAL CHISEL BITS**

Size (Inches)	Type	Symbol Numbers 6" Drilling Depth
3/4	Hollow	R-086202
7/8	Hollow	R-086203

**DRILL RODS & DETACHABLE BITS**

7/8" Hex. Drill Rods with 7/8" x 3 1/4" shank and threaded for Timken "H" Bits are available in any desired length. Tungsten carbide or Steel Timken Deatchable Bits with "H" thread are available in sizes from 1 3/8" to 2". Consult your nearest CP District Office for additional information.

## SPARE PARTS SERVICE CHART

Index No.	CP Part No.	Description	No. Reqd.	High Wear 100%	Medium Wear 70%	Low Wear 30%	Non Wear 10%	Subject To External Damage
<b>'D' HANDLE ASSEMBLY</b>								
1	R-085595	Bushing-Air Inlet	1			X		
2	R-085596	Spring-Throttle Valve	1				X	
3	R-086329	Valve-Throttle	1			X		
4	R-086098	Seat-Valve	1					
7	R-085599	Bushing-Throttle Valve Stem	1			X		
8	F-064534	Lever-Throttle (Outside)	1			X		
10	R-082555	Pin Throttle Lever Stop	1			L		
11	R-075404	Pin-Throttle Lever	1			L		
13	R-119157	Handle	1					L
15	R-085580	Tube-Oil Regulator	1			X		
16	R-085582	Plunger-Oil Regulator	1			L		
17	R-085934	Rubber Tube	1		L			
18	F-061564	Bolt-Thru	2			X		
19	P-070438	Nut-thru Bolt	2			X		
20	R-079223	Tube-Air (Dry Blower)	1		X			
21	C-069083	"O" Ring	1		X			
<b>CYLINDER ASSEMBLY</b>								
25	R-041684	Bushing-Cylinder	1		X			
26	R-085575	Cylinder	1		X			
28	R-000120	Piston	1		X			
29	R-085592	Seat-Front Valve	1		X			
30	R-085591	Valve	1		X			
31	R-085935	Seat-Rear Valve	1		X			
<b>FRONTHEAD ASSEMBLY</b>								
32	R-051349	Plunger-Detant	1			L		
33	R-051353	Spring-Plunger	1					L
35	R-050584	Retainer-Wire	1			X		
36	R-041685	Fronthead	1		X			
37	R-085600	Chuck	1	X				
38	R-085601	Sleeve-Chuck	1	X				
39	R-051348	Plunger-Shifter	1	X				
40	R-093154	Ring-Ratchet	1	X				
41	R-086654	Spring-Pawl	1	X				
42	R-085588	Pawl	1	X				
43	R-051350	Sleeve-Shifter	1	X				
<b>MUFFLER ASSEMBLY</b>								
139	F-827044	Muffler	1					X
140	C-037118	Locknut	6			L		
141	F-826979	Washer	12				L	
142	C-051781	Cap Screw	6			L		

THIS SERVICE CHART IS PUBLISHED AS A GUIDE TO EXPECTANT LIFE OF COMPONENT PARTS. THE REPLACEMENT LEVELS ARE BASED ON AVERAGE TOOL USAGE OVER A ONE YEAR PERIOD

EXAMPLE: For 10: tools in use: 10 high wear items will be required per year, 7 medium wear items, etc. NOTE: Quantities must be increased where tool is subjected to more severe and / or continuous usage.

### LEGEND

X- Type of wear.\* no other comments apply.  
L- Easily lost. Carefully reserve during disassembly.



**Chicago  
Pneumatic  
Tool Company**

Printed In India

*When ordering spare parts give Name, Speed or Size, Model and Serial Number of the tool and Part Number and Description of each part desired.*