

CP0341 COMPRESSION RIVETERS UTICA PNEUMATIC 703

SECOND EDITION

APRIL, 1988

Supersedes Second Edition APRIL, 1986

WARNING— TO AVOID INJURY SEE
CAUTIONS INSIDE

Instruction and Parts Book for

PNEUMATIC COMPRESSION RIVETERS

CP0341 'C' AND ALLIGATOR JAWS

Model 'B'

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**

Chicago Pneumatic Tool Company • 2200 Bleecker Street • Utica NY 13501 • 315-792-2600 • FAX 315-792-2651

P13654

CP-341 RIVETER Model "B"

INDEX

Tools covered by this instruction and parts book have catalog numbers starting with CP-341 followed by catalog letters such as C, N, E, L, A, D, G, K, R.

The following index indicates the pages on which part information corresponding to catalog letters are located.

POWER UNIT			SHORT STROKE DEVICE			YOKE			BACKHEAD			THROTTLE		
Code	Description	Page	Code	Description	Page	Code	Description	Page	Code	Description	Page	Code	Description	Page
C	'C' Type Single Cylinder	4 & 5	U	None	—	N	None	—	E	Plain	4 & 5	L	Lock-Off Self Closing Lever	4 & 5
A	Alligator Type Single Cylinder	4 & 5	S	Short Stroke Adjustment	6 & 7	D	"C" Yoke 2 1/8" Reach CP-2 Set Holes	8	A	Pressure Regulated	4 & 5			
						G	Alligator Yoke 3" Reach CP-2 Set Holes	6 & 7						
						K	Alligator Yoke 5" Reach CP-2 Set Holes	6 & 7						
						R	Alligator Yoke 7" Reach CP-2 Set Holes	6 & 7						

General Instructions.....Pages 2 & 3
Additional Accessories.....Pages 3
Recommended Spares.....Pages 9 & 10

CAUTION:

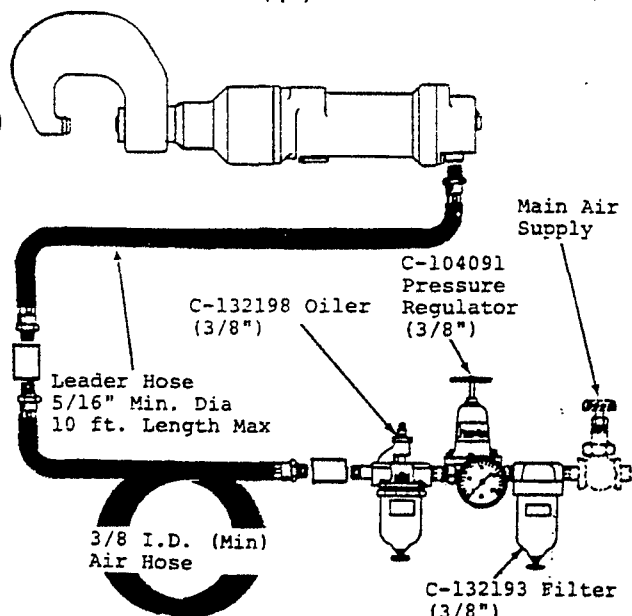
THIS CODE LETTER INDEX DOES NOT NECESSARILY INDICATE INTERCHANGEABILITY OR SAFE PARTS COMBINATIONS. REFER TO THE LATEST CHICAGO PNEUMATIC CATALOG FOR APPROVED TOOL DESIGNATIONS AND ASSEMBLY COMBINATIONS.

GENERAL INSTRUCTIONS

Air Supply

For satisfactory performance, 90 psig (6.2 bar) of clean, dry air is required AT THE TOOL with tool operating.

Recommended Air Supply Installation



The use of a C-104091 CHICAGO PNEUMATIC Air Line Pressure Regulator, C-132193 Air Line Filter and C-132198 Oiler mounted as close as possible to the tool is recommended.

Preparing for Operation

Daily before using and before putting tool into operation, disconnect air hose and pour about one ounce of recommended oil into tool air inlet. Blow out air line to clear it of accumulated dirt and moisture, connect tool and operate to allow oil to be carried to the interior.

Recommended Air Line Oil

CHICAGO PNEUMATIC Airoilene Oil, which contains moisture absorbent, rust inhibiting additives and will not separate while the tool is idle, is recommended for air line lubrication, and may be purchased under the following symbols:

1pt. can-----P137646
1qt.-----P137145
1gal. can-----P089507
5gal. can-----P089508

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.

The use of synthetic oils is NOT RECOMMENDED due to possible damage to seals, "O" rings, hoses, and polycarbonate oiler/filter bowls.

Recommended Hydraulic Oil

Mobil DTE-24
Shell VITREA-32
or equivalent

CP0341 RIVETER

Model 'B'

UTICA PNEUMATIC 703

SPARE PARTS
SERVICE CHART

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.

LEGEND

- X--Type of wear, if no other
comments apply.
- L--Easily lost. Carefully reserve
during assembly.
- D--Easily damaged during
disassembly and assembly
- R--Require replacement at
recommended intervals.
- R1--Replace each time tool
is disassembled.
- R2--Replace each second time
tool is disassembled.

Index No.	CP Part No.	Description	No. Rea'd.	High Wear 100%	Med. Wear 70%	Low Wear 30%	Non-Wear 10%	Subject To External Damage
1	P134980	Piston-Hydraulic ('C' Yoke)	1			X		
2	P134914	Seal-Reservoir	1		R1			
2A	P134978	Seal-Hydraulic Piston	1		R1			
3	P134982	Spring-Piston Return	1	X				
4	P134991	Yoke (CR-2)(2 1/8" Reach)	1			X		
5	P139283	Ring-Retaining	1	X				
6	H073843	Ring-Retaining	1	X				
7	P135444	Bushing-Set (Incl: Index #6)	1	X				
8	P073069	Ring-Yoke Retaining	1			X		
9	P140042	Cylinder-Hydraulic	1			X		
10	P073280	Plunger-Lock	1			X		
11	P073078	Pin-Lock	1			X		
12	P002505	Spring-Lock	1			X		
13	P073079	Screw-Lock	1			X		
14	CA050334	Plug-Bleed Hole(#8-32x3/8")	1			X		
15	P096453	Seal-Oil Filter	1			X		
35	C130134	Screw-Countersunk (M4 x0.7-4g6g-15mm)	4			X		
37	P134884	Cylinder-Air	1			X		
38	P134891	Diffuser	1			X		
39	P087169	Ring-Retaining	1			X		
40	S015150	Screw-Nameplate (#4-40 x 1/8")	4			X		
41	P135453	Plate-Name	1			X		
42	P140040	Reservoir	1		X			
43	P134893	Bladder	1	R1	D			
44	C102507	Plug-Pipe (1/16"NPT)	1				X	
45	P134889	Piston-Air	1			X		
46	A088220	Ring-Retaining	1				X	
47	A083822	Washer-Packing	2		X			
48	A083821	Seal-Packing	2	X				
49	P137705	Bushing-Ram	1			X		
50	P134918	Ring-Backup	3			X		
51	P134913	O-Ring (D12)	3			X		
52	P137708	Plate-Retaining	1			X		
53	P138141	Nut-Locking	1			X		
54	C140654	Diffuser-Oil Return	1			X		
55	P134917	Ring-Retaining	1		X			
56	P137709	Seat-Inlet Check	1			X		
57	C043691	Ball-Steel (11/32")	2			X		
58	P134907	Spring-Inlet Check	1			X		
59	P140041	Cap-Inlet Check	1			X		
60	P135425	Ring-Backup (D14)	2			X		
61	P134920	O-Ring (D14)	2			X		
62	P134911	Seat-Outlet Check	1			X		
63	P134906	Seat-Outlet Check	1			X		
64	C133695	Screw-T.V. Lever (M4x10mm)	1		X			
65	P134908	Lever-Throttle Valve	1			X		
66	P135454	Rod-Throttle	1			X		
67	P134905	Spring-Throttle Return	1		L			
68	P117655	Arm-Lever	1			X		
69	P083234	Screw-Lever Arm (#6-32 x 3/8")	1		X			
70	P134898	Spring-Air Piston Return	1		X			
71	P134885	Cover-Rear (Std)	1				X	
71A	P135800	Cover-Rear (Regulator)	1				X	
72	C105693	O-Ring (D17)	1			X		
75	P134902	Valve-Cycling	1		X			
76	C098779	Spring-Cycling	1		X			
77	P134904	Cap-Cycling Valve	1			X		
78	C055373	O-Ring (D15)	1	X				
79	A088189	Seat-Valve	1			X		
80	P135500	Valve-Throttle	1		X			
81	P134912	Spring-Throttle	1		X			
82	P134916	Connector-Inlet	1		X			
83	P080104	Seat-Air Inlet	1			X		
84	P080101	Gasket-Swivel Nut	1		X			
85	P080102	Nut-Inlet Swivel	1			X		
86	C091451	Elbow (1/8"NPT x 90)	1		X			
87	P080105	Connector-Swivel Head	1		X			
88	P135504	Spring-Prefill	1		L			
89	P135501	Valve-Prefill	1		X			

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of the tool and Part Number and Description of each part desired

CP0341 COMPRESSION RIVETER Model 'B'

UTICA PNEUMATIC 703

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. Use recommended air line oil.
2. Provide clean, dry air NOT TO EXCEED 90 psig (6.2 bar) 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.

Replacement of the bladder (43) will become necessary when one or more of the following conditions exist.

- 1) Cycling valve action continues without building maximum pressure, for as long as throttle lever is depressed.
- 2) Hydraulic piston fails to retract completely when throttle lever is released.
- 3) Hydraulic oil blows out the air exhaust.
- 4) Whenever the tool is disassembled.

DISASSEMBLY

1. Remove the yoke from the hydraulic cylinder and secure the tool with hydraulic end down in a vise.
2. Remove rear cover (71), air piston (45), and spring (70) from air cylinder (37).
3. Unscrew lock nut (53) and remove air cylinder (37) from hydraulic cylinder (9).
4. Any remaining hydraulic oil can now be poured out of the hydraulic reservoir (42).
5. The bladder (43) and boot (111) can be removed by stretching them over the top of the reservoir.
6. To remove the reservoir (42) from the hydraulic cylinder (9), locate one end of the retaining ring (5) and tap a 3/32" drift pin punch (P072391) into the nearest hole in the side of the cylinder. Tap another punch in the next hole and continue around until the retaining ring is forced out of the groove completely. Now the reservoir can be removed.
7. Reservoir seal (2), hydraulic piston seal (2A), and packing seal (48) should be inspected and replaced if necessary.

ASSEMBLY

1. Clean all parts and grease all O-rings and seals before reassembly. Secure hydraulic cylinder in vise with reservoir end up.
2. Push the reservoir assembly (42) into the hydraulic cylinder (9), drop one end of retaining ring (5) into groove and force remaining portion of ring around and into position.
3. Stretch the boot (111) and new bladder (43) over the reservoir and position ends of bladder into grooves in reservoir.
4. Pour recommended hydraulic oil into plug (108) opening. Pull the upper end of the bladder away from the reservoir to allow air to escape when you fill. When the oil level reaches the top of the bladder, position it back into the groove and, continue filling until oil reaches the top of the plug (108) opening.
5. Grease the outside of the bladder at both ends and slide the air cylinder (37) over the reservoir and bladder. Use a gentle twisting motion to prevent damage to, or unseating of, the bladder.
6. Screw the lock nut (53) into the hydraulic cylinder while pushing on the air cylinder and tighten.
7. Replace the air piston (45), return spring (70), and rear cover (71).
8. Reposition the tool in the vise, at an angle, with the throttle end down and the bleed hole plug (14) facing up. Remove the plug and fill with hydraulic oil to overflowing using oil fill syringe (P140310). Make certain that no air bubbles remain in the oil. Oil capacity is about 3 1/2 oz.
9. Replace the plug (14), connect the tool to air, and cycle it several times. Disconnect the air supply and repeat step 8 to ensure that the tool is full of oil and no air remains in the hydraulic system.

If disassembly is not required, follow steps 8 and 9 for oil filling. Lack of oil will cause low riveting force.

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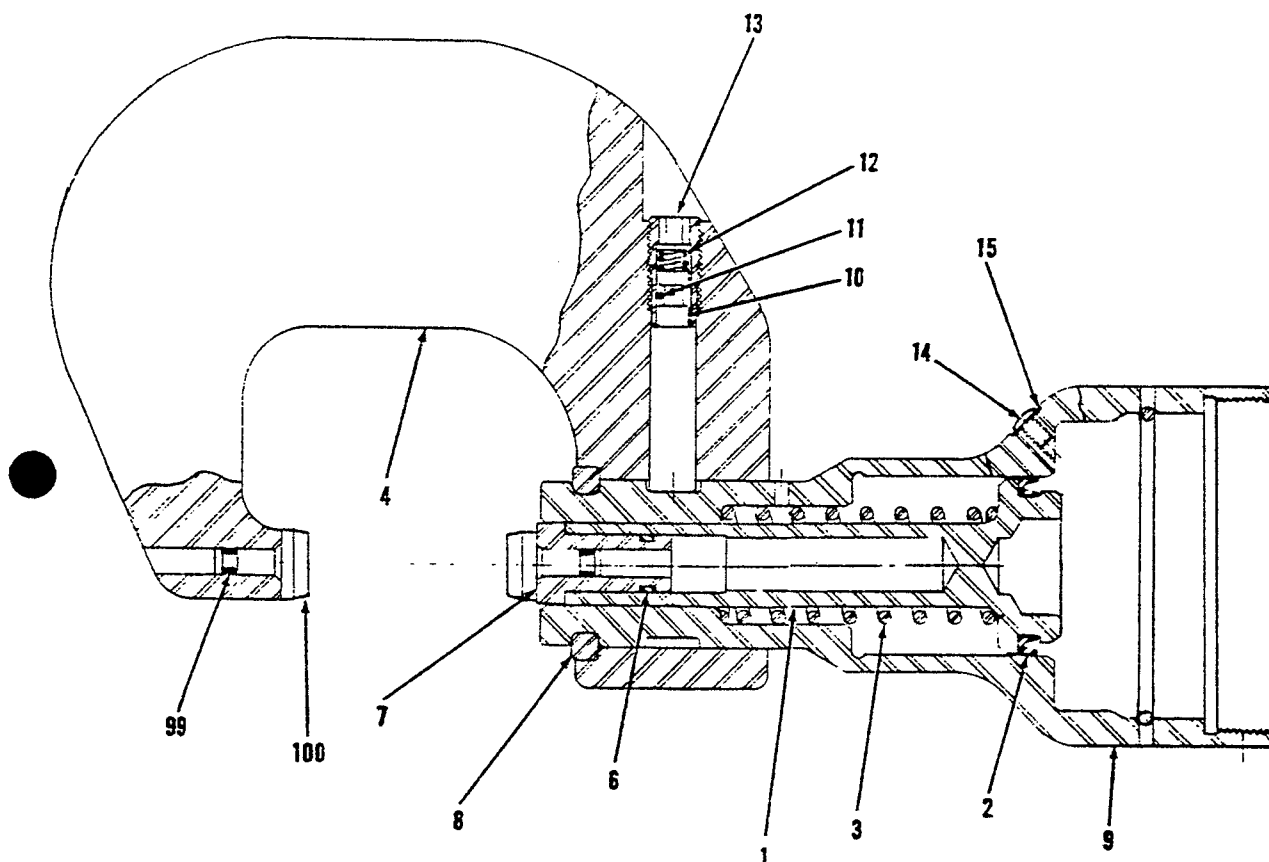
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CP0341 RIVETER

Model 'B'

UTICA PNEUMATIC 703

C-TYPE YOKE 2 1/8" REACH



Index No.	CP Part No.	Description	No. Req'd.
1	P134980	Piston-Hydraulic('C' Yoke)	1
2A	P134978	Seal-Hydraulic Piston	1
3	P134982	Spring-Piston Return	1
4	P134991	Yoke-2 1/8" Reach(CR-2)	1
6	H073843	Ring-Retaining	1
7	P135444	Bushing-Set(Incl. Index #6)	1
8	P073069	Ring-Yoke Retaining	1
9	P140042	Cylinder-Hydraulic	1
10	P073280	Plunger-Lock	1
11	P073078	Pin-Lock	1
12	P002505	Spring-Lock	1
13	P073079	Screw-Lock	1
14	CA050334	Plug-Bleed Hole(#8-32x3/8")	1
	P140310	Syringe-Oil Fill	1
15	P096483	Seal-Oil Filter	1
99	P092706	Ring-Retaining Set	2
	P140310	Syringe-Oil Fill (Not Shown)	2
100	See Pg 3	Set-Rivet	2

See Page 3 for Rivet Sets
and Retaining Rings

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CP0341 RIVETER

Model 'B'

UTICA PNEUMATIC 703

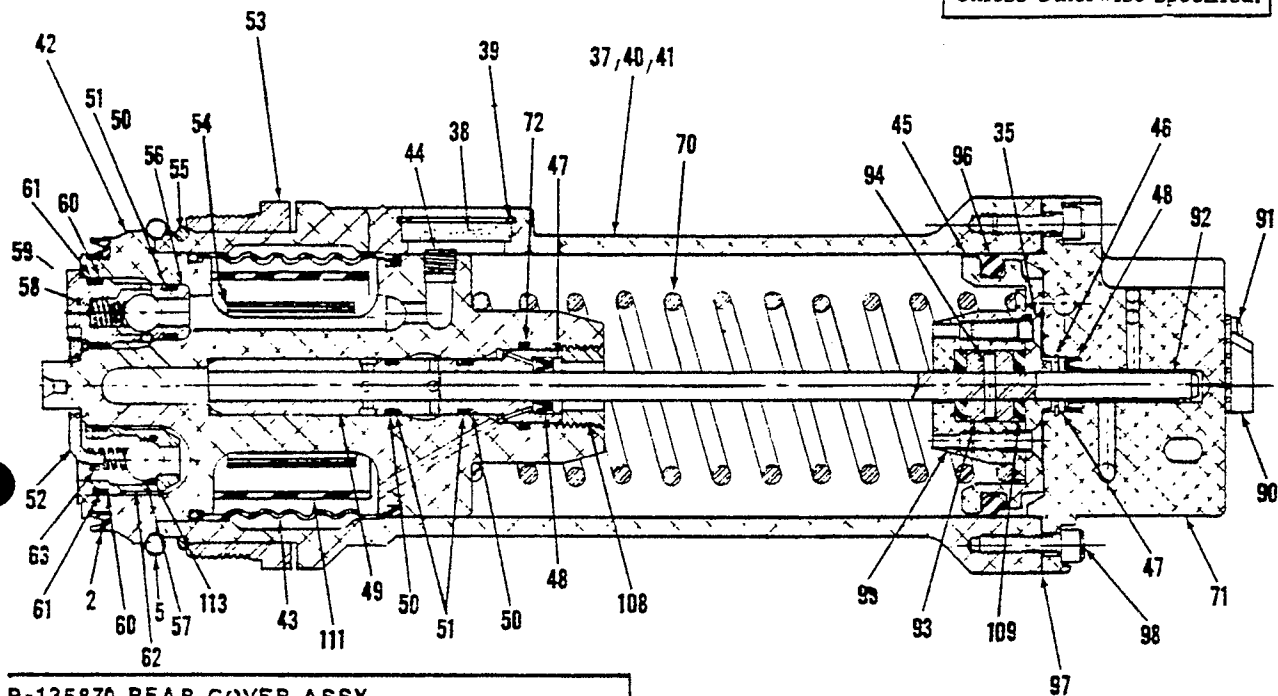
Index No.	CP Part No.	Description	No. Req'd.	Index No.	CP Part No.	Description	No. Req'd.
2	P134914	Seal-Reservoir	1	70	P134898	Spring-Air Piston Return	1
5	P139283	Ring-Retaining	1	71	P134885	Cover-Rear (Std)	1
35	C130134	Screw-Countersunk (M4 x 0.7-4g6g-16mm)	4	71A	P135800	Cover-Rear (Regulator)	1
37	P134884	Cylinder-Air	1	72	C105693	"O" Ring (-017)	1
38	P134891	Diffuser	1	75	P134902	Valve-Cycling	1
39	P087169	Ring-Retaining	1	76	C098779	Spring-Cycling	1
40	S015150	Screw-Name Plate (#4-40 x 1/8")	4	77	P134904	Cap-Cycling Valve	1
41	P135453	Plate-Name	1	78	C055373	"O" Ring (-015)	1
42	P140040	Reservoir	1	79	A088189	Seat-Valve	1
43	P134883	Bladder	1	80	P135500	Valve-Throttle	1
44	C102507	Plug-Pipe (1/16")	1	81	P134912	Spring-Throttle	1
45	P134889	Piston-Air	1	82	P134916	Connector-Inlet	1
46	A088220	Ring-Retaining	1	83	P080104	Seat-Air Inlet	1
47	A083822	Washer-Packing	2	84	P080101	Gasket-Swivel Nut	1
48	A083821	Seal-Packing	2	85	P080102	Nut-Inlet Swivel	1
49	P137705	Bushing-Ram	1	86	C091451	Elbow (1/2 x 90)	1
50	P134918	Ring-Back Up	3	87	P080105	Connector-swivel Head	1
51	P134913	"O" Ring (-012)	3	88	P135504	Spring-Prefill	1
52	P137708	Plate-Retaining	1	89	P135501	Valve-Prefill	1
53	P138141	Nut-Locking	1	90	P134896	Deflector-Exhaust (Std)	1
54	C140654	Diffuser-Oil Return	1	90A	P135806	Deflector-Exhaust (Regulator)	1
55	P134917	Ring-Retaining	1	91	CA091604	Screw-Deflector (#6-32x5/16")	3
56	P137709	Seal-Inlet Check	1	92	P137707	Ram-Hydraulic	1
57	C043691	Ball-Steel (11/32")	1	93	P135340	Collar-Ram	1
58	P134907	Spring-Inlet Check	2	94	P136231	Pin-Ram (.093 dia x .610")	1
59	P140041	Cap-Inlet Check	1	95	P135341	Adaptor-Ram	1
60	P135425	Ring-Back Up (014)	2	96	H082657	"O" Ring (-329)	1
61	P134920	"O" Ring (014)	2	97	P134919	Gasket-cover	1
62	P134911	Seal-Outlet Check	1	98	C127937	Screw-Soc. Hd.(M5 x 16mm)	4
63	P134906	Spring-Outer Check	1	103	P136242	Valve-Regulator	1
64	C133695	Screw-T.V. Lever (M4 x 10 mm)	1	104	P135805	Spring	1
65	P134908	Lever-Throttle Valve	1	105	C100131	O-Ring (011)	1
66	P135454	Rod-Throttle	1	106	P135804	Nut-Adjusting	1
67	P134905	Spring-Throttle Return	1	107	P135802	Screw-Adjusting	1
68	P117655	Arm-Lever	1	108	P135803	Plug-Lock	1
69	P083234	Screw-Lever Arm (#6-32 x 3/8")	1	109	P137639	Spacer	2
				111	P137876	Boot	1
				112	C128315	Lockwasher M4 (Not Shown)	1
				113	C123816	"O" Ring (-'07)	1

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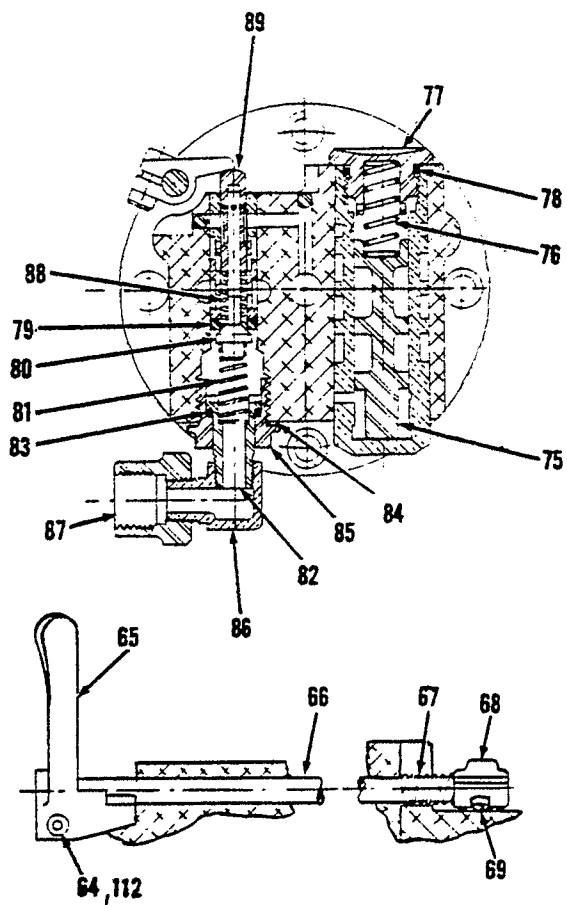
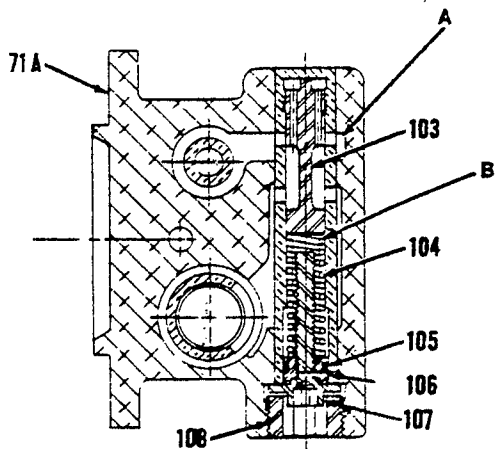
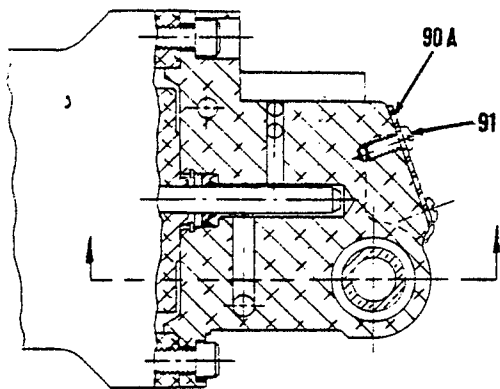
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CP-341 RIVETER Model "B"

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P-135870 REAR COVER ASSY.
AIR PRESSURE REGULATOR - VIEW "AA"



CP0341 COMPRESSION RIVETER Model 'B'

UTICA PNEUMATIC 703

OPERATION

PNEUMATIC

1. With cycling valve (75) in down position, live air port is closed and cylinder is connected to exhaust.
2. Prefill - With throttle valve (80) opened slightly, the chamber outside of bladder (43) is pressurized; forcing oil out of reservoir and advancing hydraulic piston (1) to contact the work.
3. With throttle valve (80) fully open, prefill air pressure remains, and air pressure at the bottom of cycling valve (75) causes it to shift. The cycling valve directs air pressure behind the air piston (45). As the piston travels forward a signal port in the rear cover (71) is opened, relieving pressure on the cycling valve. Spring (76) shifts the cycling valve back to the exhaust position and the air piston is returned by spring (70). The ram extension of the air piston entering seal (48) builds pressure to shift the cycling valve again. The pneumatic cycle is repeated until the tool stalls due to oil pressure acting on the end of ram (92).

HYDRAULIC

1. Forward movement of ram (92) forces oil thru outlet check valve (62) into cylinder chamber driving hydraulic piston (1).
2. When ram retracts, oil enters chamber in front of ram through inlet check valve (59).
3. Cycle action will continue until tool stalls.
4. When throttle is released, the air piston (45) and ram (92) are returned to starting position by spring (70). This allows the high oil pressure ahead of ram to return to the reservoir.

NOTE: Driven height of rivet head is governed by air pressure regulated by an airline regulator such as C104081 (page 2), or built in regulator P135870.

REGULATOR

A built in air pressure regulator P135870 (page 4) is available allowing the output pressure to be varied.

Air from the throttle valve enters the regulator thru port 'A' and exits to the cycling valve thru port 'B'. The air flowing from 'A' to 'B' is metered by piston (103) which has a spring load on the vented side of the piston. Down stream pressure in port 'A' works against the spring load and regulates the air admitted thru port 'B'. The spring load can be adjusted by screw (107) and locked in position by nut (106).

SAFETY CAUTIONS

TO PREVENT EYE INJURY USE SAFETY GLASSES.

ALWAYS CHECK FOR DAMAGED OR LOOSE AIR HOSES AND FITTINGS BEFORE OPERATION. WHIPPING HOSES CAN CAUSE SERIOUS INJURY.

DISCONNECT TOOL FROM AIR SUPPLY BEFORE PERFORMING ANY SERVICE. ACCIDENTAL ACTUATION COULD CAUSE SERIOUS INJURY.

DO NOT MODIFY THE SAFETY LOCK-OFF FEATURE OF THE THROTTLE. ACCIDENTAL THROTTLE ACTUATION COULD CAUSE SERIOUS INJURY.

INSPECT RIVETING YOKES FOR CRACKS. IF A Yoke FAILS IN USE, THE TOOL MIGHT DROP UNEXPECTEDLY CAUSING INJURY.

NEVER OPERATE THE TOOL FROM AN AIR SUPPLY OVER 90 PSIG. HIGH AIR PRESSURE CAN CAUSE TOOL FAILURE AND POSSIBLE INJURY.

RIVET SETS

CR-2 SHANK CUPPED RIVET SETS

RIVET DIA.	BODY LENGTH	AN-435 BUTTON	AN-430 ROUND	AN-455 BRAZIER	AN-456 MODIFIER BRAZIER	AN-470 UNIVERSAL	AN-442 FLAT
1/8	1/4 3/8 1/2 5/8 3/4	- P-091642 - - -	P089450 - P089452 - -	- - - - -	- P089491 - - -	P089510 P089511 P089512 P089513 P089514	P091661 P091662 P091663 - -
5/32	1/4 3/8 1/2 5/8 3/4	P091646 P091647 P091648 - -	P089455 P089456 P089457 - -	- P089476 P089477 - -	- - P053843 - -	P089515 P089516 P089517 P089518 -	P091666 P091667 P091668 - -
3/16	1/4 3/8 1/2 5/8 3/4	P091651 P091652 P091653 - -	P089460 P089461 P089462 - -	P089480 P089481 P089482 - -	- P053847 P053848 - -	P089520 P089521 P089522 - P089524	P091671 P091672 P091673 - -
1/4	1/4 3/8 1/2 5/8 3/4	P091656 P091657 P091658 - -	P089465 P089466 P089467 - -	P089485 P089486 P089487 P089488 P089489	P053851 - - - -	P089525 P089526 P089527 P089528 P089529	P091676 P091677 P091678 - -

Symbol Number P093673 Soft Set Blank
CR-2 Shank, Body Length 3/4", Dia. 3/4"

Symbol Number Covers
(1) Rivet Set and
(1) P092706 Retaining Ring

To Harden Above Blank
Heat To 1575 F
Quench In Oil
Draw At 750 F One Hour (42-47Rc)

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CP0341 RIVETER

Model 'B'

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SPARE PARTS
SERVICE CHART

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See Page 10 for LEGEND

Index No.	CP Part No.	Description	No. Req'd.	High Wear 100%	Med. Wear 70%	Low Wear 30%	Non-Wear 10%	Subject To External Damage
90	P134896	Deflector-Exhaust (Std)	1			X		
90A	P135806	Deflector-Exhaust Regulator	1			X		
91	CA091604	Screw-Deflector (#6-32 x 5/16")	3				X	
92	P137707	Ram-Hydraulic	1			X		
93	P135340	Collar-Ram	1			X		
94	P136231	Pin-Ram (.093 dia x.610")	1			X		
95	P135341	Adapter-Ram	1			X		
96	H082657	O-ring (329)	1	X				
97	P134919	Gasket-Cover	1		X			
98	C127937	Screw-HxSkthd(M5 x 16mm)	4			X		
99	P092706	Ring-Retaining Set	2		X			
100		Rivet-Set	2		X			
103	P136242	Valve-Regulator	1		X			
104	P135805	Spring	1		X			
105	C100131	O-ring (O11)	1		X			
106	P135804	Nut-Adjusting	1			X		
107	P135802	Screw-Adjusting	1		X			
108	P135803	Plug-Lock	1			X		
109	P137639	Spacer	2			X		
111	P137876	Boot	1	R1				
112	C128315	Lockwasher (M4)	1			X		
113	C123816	O-ring (107)	1		X			

NOTES

All Threads Are Right Hand Unless Otherwise Specified

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

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