

editool[®]
Contractors tools

Flanged Design 'D' Type Pneumatic Chipping Hammer



CD3XR



CD3X

Operation & Maintenance Guide

Flanged Design 'D' Type Pneumatic Chipping Hammer Operation & Maintenance Guide

OPERATION:

Teryair Chipping Hammers are rugged dependable tools and give long service with minimum maintenance. The Strong 'D' handle is large enough to allow a comfortable, sure grip even for a gloved hands. This design results in greater operator comfort. Also four bolt design reduces handle breakage. The common problem of a threaded handle to cylinder connection becoming loose and damaging the handle and internal parts. This problem is overcome in four bolt design. Also these chipping hammers are designed to be easy to maintain (almost maintenance free) thereby keeping downtime to a minimum.

A durable moulded exhaust deflector directs exhaust air away from the operator. Two air inlets - 3/8"NPT & 7/8" - 24 UNS internal threads. The bushings provide for versatile hose connections while protecting the handle inlet threads.

These hammers are used for chipping and fettling metal in forging casting and fabrication industries.

Daily Before Operation:

Daily before use and after each eight hours of service, disconnect and pour 1 to 2 ounces of recommended oil into the tool and re-connect hose line.

Lubrication Requirements:

Always install a line lubricator on the air line as close to the tool as possible. A filter- regulator- Lubricator unit (FRL) is strongly recommended. This should be one of an adjustable type and regulated to introduce a fine oil spray to the compressed air flow and thus ensure smooth and properly cushioned movement of the piston. This will also reduce stress in the striking and retaining parts of the tool and so allow for a long working life. Keep the lubricator bowl topped up with recommended grade of Oil and check that the oil is reaching the tool. Running the tool without lubrication is likely to cause damage to the components causing pre-mature replacement.

Recommended Lubricants:

	ABOVE 27°C 80°F	5°C-27°C 40°F-80°F	BELOW 5°C 40°F
SHELL	Toona R. 72	Toona R. 41	Toona R.27
MOBIL	Almo 529	Almo 527	Almo 525
ESSO		Arox.EP.65	Arox EP.45
CALTEX	Rando Oil 150	Rando Oil 100	Rando Oil 46
CP			Airolene Tool Oil
TEXACO	Regal oil F (R&O)	Regal Oil PE (R&O)	Regal Oil B (R&O)
DALTRON	Silkolene 881	Silkolene 548/T	Silkolene 773
BURMAH CASTROL	Castrol RD Oil 3	Castrol Rd Oil Light	Magna SPX
BP POWER PETROLEUM	RD220 HP60-C	RD150 HP20-C	RD80 HP10-C
DUCKHAM	Garnet 7	Garnet 6	Zero Fio 5
STERNOL	Merlin 87	Merlin 71	Merlin 54
PETROFINA	Purifoc 53	Purifoc 46	Purifoc 32
CHEVRON	Vistac Oil 18X	Vistac Oil 19X	Vistac Oil 9X

SAFETY INSTRUCTIONS:

Always wear suitable protection such as 'eye goggles', 'ear muffs' safety shoes etc. to safeguard against possibility of flying particles.

Never operate the chipping hammer over the rated 7 bar pressure air pressure. Do not exert excessive pressure against the work surface. Keep hoses in good condition ,Check hoses for signs of wear and ensure that fittings are secure. Accidental disconnection while hose is pressurized can make the hose whip and can be a safety hazard.

AIR SUPPLY:

For satisfactory performance 5 to 7 bar air pressure is required at the tool. The air should be clean, dry and lubricated. Install a FRL unit as close to the tool as operation will permit.

Flanged Design 'D' Type Pneumatic Chipping Hammer Operation & Maintenance Guide

Flanged design Closed Handle ('D' type) Models available are: -						
Model	Weight Kgs.	Frequency BPM	Air consumption m3/min	Shank Type	Stroke	
With Retainer	CD 1XR	7.1	2850	0.75	0.58" Hex Across Flat	1"
	CD 2XR	7.9	2450	0.83	0.58" Hex Across Flat	2"
	CD 2RR	7.9	2450	0.83	0.68" Dia .Round	2"
	CD 3XR	8.7	2050	0.9	0.58" Hex Across Flat	3"
	CD 3RR	8.4	2050	0.9	0.68" Dia .Round	3"
	CD 4XR	9.5	1750	1	0.58" Hex Across Flat	4"
	CD 4RR	9.5	1750	1	0.68" Dia .Round	4"
Without Retainer	CD 1 X	6.3	2850	0.75	0.58" Hex Across Flat	1"
	CD 2 X	7.1	2450	0.83	0.58" Hex Across Flat	2"
	CD 2 R	7.1	2450	0.83	0.68" Dia .Round	2"
	CD 3 X	7.9	2050	0.9	0.58" Hex Across Flat	3"
	CD 3 R	7.8	2050	0.9	0.68" Dia .Round	3"
	CD 4 X	7.9	1750	1	0.58" Hex Across Flat	4"
	CD 4 R	7.9	1750	1	0.68" Dia .Round	4"

Note :- 1) Two options exist for Retainers :- With or Without
2) Two options exist for chuck bushing - Hex or Round

MAINTENANCE: -

To dis-assemble this chipping hammer ,disconnect air supply and remove hose end from air inlet nipple (2).For models with retainer-pull out retainer spring (4) and slide out retainer (3) along with accessory in it. Slide out exhaust deflector (28) with help of 2 nos of spanners (suitable for M10 nut & bolt) hold nyloc nut (1) with one spanner and another spanner to the hex head bolt (29) above nut (1) Unscrew nut (1) one-by-one and take out all the four bolts (29).Along with bolts, spring washer (31), Spacer (19) will also come out. Insert tip of screw driver through gap between both flanges and separate them so that flange (7) will fall down with absorber ring (23).Take out absorber ring (23). Hold cylinder (17) and lift handle (5) slowly taking care, not to topple valve parts. Keep aside handle and take out upper valve case lid (14), Valve (12), Valve case (13) and then lower valve case lid (15),Roll pins (30) may remain in cylinder (17). Take out piston (16). Take out 'O' Ring (24) from handle (5) Loosen air inlet bushing (2), another air inlet bushing (8) . Air screen (21) is positioned by tube (9) so do not try to take it out. Take out spring (27), Seat (20) along with 'O' Ring (25) and then stem (10) will come out. Remove 'O' Ring (22) from front face of air inlet bushing (8) on handle (5). Do not try to take out brass bush (11) as it is press fitted in handle. If throttle lever (6) is to be removed, tap out roll pin (26) and take out lever (6). Clean all metal parts in light solvent and inspect carefully for signs of wear. Replace components that appear worn or damaged. Coat parts with recommended light oil and re-assemble carefully in the reverse sequence.

Flanged Design 'D' Type Pneumatic Chipping Hammer Operation & Maintenance Guide

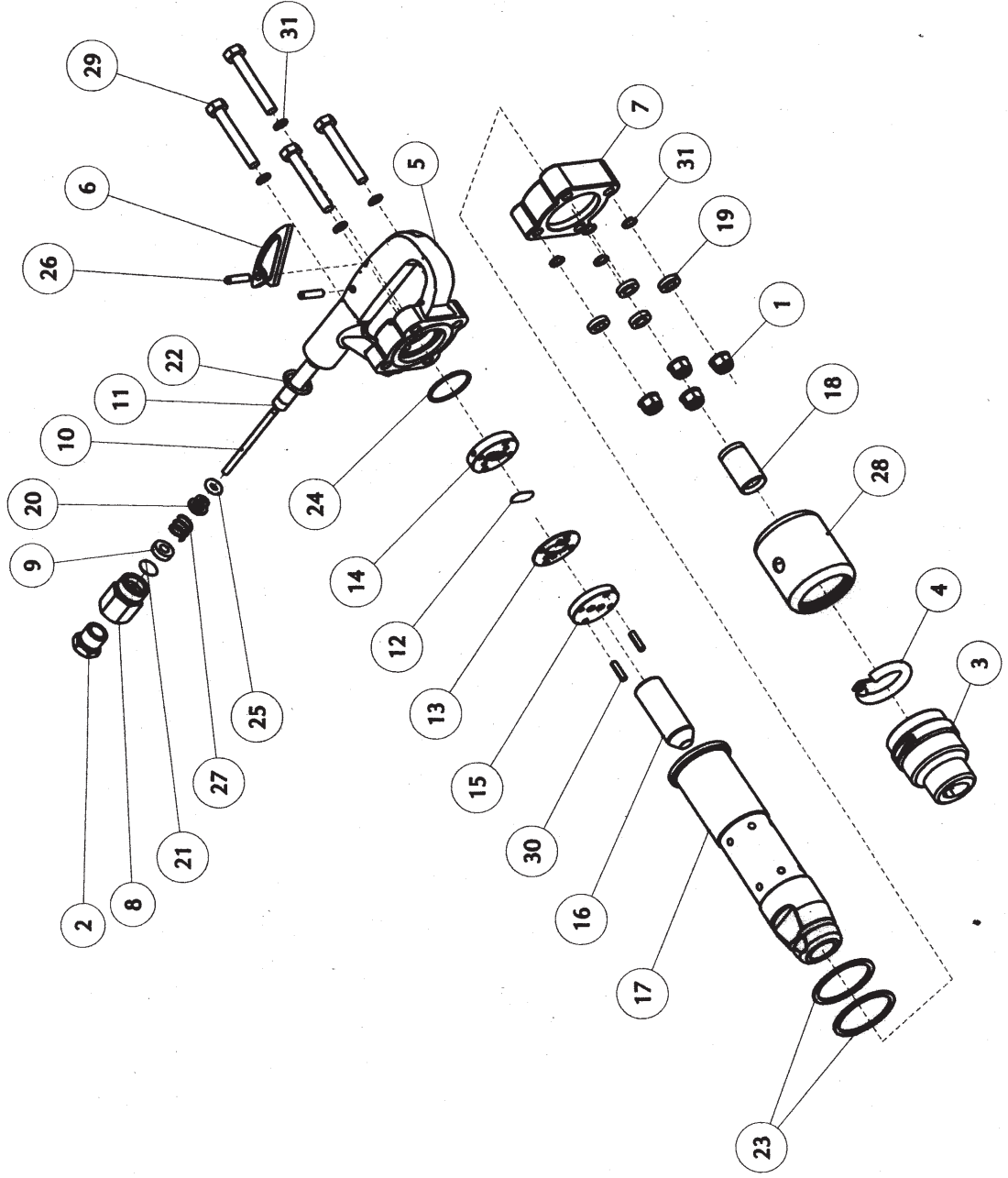
PROBLEMS AND PROBABLE CAUSES & SOLUTIONS TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSES	SOLUTION
Tool Runs Sluggishly	Low Air Pressure at Tool	Increase pressure to 90-100
	Insufficient Air Flow (CFM)	Check Hoses, etc. for Leaks
	Automatic Valve Clogged	Flush tool with Mixture of oil and Diesel Fuel
	Insufficient Lubrication of Air	Add a small amount of Light-Weight Non-Detergent oil into Hose. Alternatively use a line oiler (APPL LUB 0.5)
	Excessive Moisture in Air	Install adequately sized moisture separator in air line between tool and compressed air tank. Drain air tanks and air piping regularly.
Tool Runs Erratically	Valve Tripping	Inspect valve for proper sizing
	Foreign Material in tool Inlet	Remove Foreign Material
	Improper tightening of Handle to Cylinder	Check handle bolts are equally and correctly torqued to the recommended 200 ft.lbs.
	Automatic valve Sticking	Flush tool with Mixture of oil and Diesel fuel. Reduce amount oil/moisture to tool
	Sleeve (18) or steel shank worn	Check for wear in steel sleeve (18) on hammer (in nose) or on steel shank and replace if necessary
Tool will Not Run (Air Blows thru Exhaust)	Automatic valve stuck	Flush tool with Mixture of oil and Diesel fuel
Tool continues to Run (Does not Shut off)	Throttle valve stuck	Flush tool with Mixture of oil and Diesel fuel
	Damaged throttle valve or "O" rings or missing "O" rings	Replace defective or missing parts.
Excessive Recoil	Air pressure too High at Tool	Reduce pressure to 90 100 PSI
	Dull Cutting Edge on steel	Replace with Sharp steel
Excessive Breakage of Retainer Lock Spring (only for models with retainer)	Collar of steel striking Retainer	Exert sufficient down pressure to keep point against work surface.
	Air pressure too high at tool	Reduce pressure to 90 100 PSI
Rapid wearing of retainer (only for models with retainer)	Collar of steel striking Retainer	Exert sufficient down pressure to keep point against work surface.
Steel will not Fit in Sleeve	Steel shank does not match sleeve	Use steel with correct shank
Steel will not Fit retainer (only for models with retainer)	Steel shank does not match Bushing	Use steel with correct shank

If the suggested remedies fail to correct problem, disassembly must be performed to determine cause.

Flanged Design 'D' Type Pneumatic Chipping Hammer
Operation & Maintenance Guide

Exploded view



Flanged Design 'D' Type Pneumatic Chipping Hammer Operation & Maintenance Guide



Assembly Part List

Illus No.	Part No	Description	Models with Retainer										Models without Retainer					
			CD 1XR	CD 2XR	CD 2RR	CD 3XR	CD 3RR	CD 4XR	CD 4RR	CD 1X	CD 2X	CD 2R	CD 3X	CD 3R	CD 4X			
1	298 00 45	Nyloc Nut (M10)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2	410 21 04	Air Inlet Bush	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	410 21 15	Retainer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4	410 51 38	Retainer spring	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5	442 03 01	Handle	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6	442 03 02	Throttle lever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7	442 03 03	Flange	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
8	442 21 04	Air Inlet bushing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
9	442 21 05	Tube for screen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10	442 21 06	Throttle valve stem	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
11	442 21 07	Brass bush	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12	442 21 08	Valve	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	442 21 09	Valve case	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	442 21 10	Upper valve case lid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	442 21 11	lower valve case lid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	442 21 31	Piston # 1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Flanged Design 'D' Type Pneumatic Chipping Hammer
Operation & Maintenance Guide
Assembly Part List



Illus No.	Part No	Description	Models with Retainer										Models without Retainer					
			CD 1XR	CD 2XR	CD 2RR	CD 3XR	CD 3RR	CD 4XR	CD 4RR	CD 1X	CD 2X	CD 2R	CD 3X	CD 3R	CD 4X			
16	442 21 28	Piston # 2	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-
16	442 21 12	Piston # 3	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-
16	442 21 30	Piston # 4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
17	442 21 33	Cylinder # 1 (bare)	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
17	442 21 34	Cylinder # 2 (bare)	-	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-
17	442 21 13	Cylinder # 3 (bare)	-	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-
17	442 21 35	Cylinder # 4 (bare)	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
18	442 21 14	Hex sleeve	1	1	-	1	-	-	1	-	-	-	1	1	-	1	-	1
18	442 21 27	Round sleeve	-	-	1	-	-	1	-	-	-	1	-	-	1	-	1	-
19	442 21 25	Spacer	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
20	442 25 14	Seat for throttle valve	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
21	442 38 15	Screen	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	442 40 16	'O' Ring for air inlet bushing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
23	442 40 17	Absorber ring	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
24	442 40 18	'O' Ring for valve assy.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Flanged Design 'D' Type Pneumatic Chipping Hammer
Operation & Maintenance Guide
Assembly Part List



Illus No.	Part No	Description	Models with Retainer								Models without Retainer							
			CD 1XR	CD 2XR	CD 2RR	CD 3XR	CD 3RR	CD 4XR	CD 4RR	CD 1X	CD 2X	CD 2R	CD 3R	CD 4X	CD 4R			
25	442 40 32	'O' Ring for throttle valve	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
26	442 50 20	Roll pin for lever	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
27	442 51 21	Spring for throttle valve	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
28	442 40 22	Exhaust deflector	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
29	442 90 24	Hex.Head bolt M10 X 75	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
30	442 90 26	Cylindrical pin for valve assy	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
31	2 10 90 35	Spring_washer	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8