

ORIGINAL INSTRUCTIONS

G704B-SR

CherryMAX® Split Power Tool



Instruction Manual

Pass on to user to read and keep for reference

MANUAL



CHERRY®
AEROSPACE
SPS Fastener Division, a PCC Company

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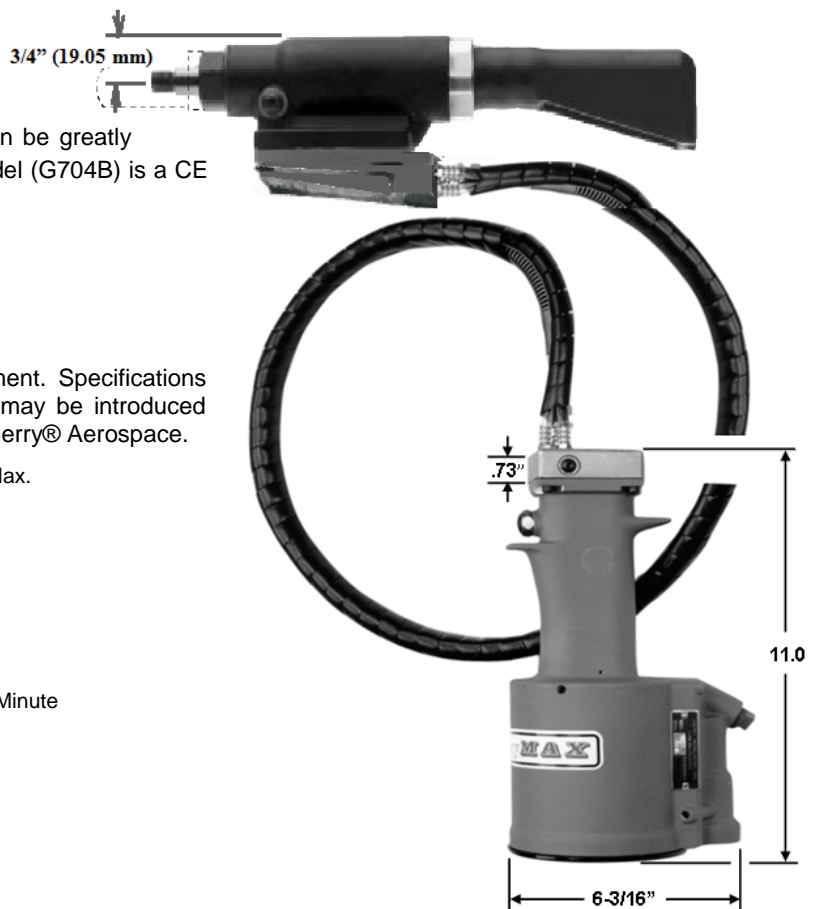
THE G704B-SR TOOL

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DESCRIPTION

G704B-SR is a split riveter designed for the installation of blind rivets in limited access applications. The tool transmits power from the power unit through a flexible 4 foot hose to a compact hand held head. By utilizing the proper pulling head, access issues and operator fatigue can be greatly reduced. The riveter converted into this 4 foot extended model (G704B) is a CE certified tool.



SPECIFICATIONS

Cherry® Aerospace' policy is one of continuous development. Specifications shown in this document may be subject to change which may be introduced after publication. For the latest information always consult Cherry® Aerospace.


AIR PRESSURE	90 PSI (6.2 bar) Min./ 110 PSI (7.6 bar) Max.
STROKE	.518 Inch (13.16 mm)
PULLING FORCE	3,136 LbF. (13.95 kN) @ 90 PSI (6.2 bar)
CYCLE TIME	About 1 second
WEIGHT (Handle)	4 1/4 Pounds (1.93 kg)
NOISE LEVEL	< 85dB(A)
AIR CONSUMPTION	4 CFM (110.5 liters/M) @ 20 Cycles per Minute



Supplier's Federal Identification Code: 11815

TM-G704B_SR; Rev.: A
Date: 11/06/13
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SAFETY WARNINGS

- Do not use beyond the design intent; do not use substitute components for repair.
- Operating this tool with a damaged or missing stem deflector, or using the deflector as a handle, may result in severe personal injury. Rotate the pin deflector facing away from the operator
- Wear proper PPE when operating, repairing or overhauling this tool ()
- Any modification will void warranty and shall be at the customer's entire responsibility.
- Maintain the tool in a safe working condition at all times and examined at regular intervals for damage.
- Before disassembling the tool for repair, refer to the maintenance instructions. All repairs shall be undertaken only by personnel trained in Cherry installation tools.
- Disconnect the air line from the tool inlet before servicing, adjusting, fitting or removing any accessory.
- Ensure that the vent holes do not become blocked or clogged and the hoses are in good condition.
- Wash thoroughly after handling the fluid; excessive contact could cause rashes.
- Operating air pressure not to exceed 110 psi (7.6 bar); use of a pre-set regulator (P1505) is recommended
- Do not operate the tool without the pulling head in place.
- All retaining rings, screwed end caps, air fittings, trigger valves and pulling heads should be attached securely and examined at the end of each working shift.
- Do not pull rivet in the air or directed at any person.
- **Do not pound on the rear of the tool head to force rivets into holes as this will damage the tool.**
- Safety warnings must be explained all operators as part of training.

FLUID SAFETY AND FIRST AID INFORMATION (ATF type "A")

- **SKIN EXPOSURE:** Wash thoroughly with soap and water as soon as possible. Casual contact requires no immediate attention. If irritation develops, consult a physician.
- **INGESTION:** Seek medical attention immediately. DO NOT INDUCE VOMITING.
- **INHALATION:** No significant adverse health effects are expected to occur on short term exposure. Remove from contaminated area. Apply artificial respiration if needed. If unconscious, consult physician.
- **Eyes:** Flush with copious amounts of water. If irritation develops, consult a physician.
- **FIRE:** Suitable extinguishing media: CO2, dry powder, foam or water fog. DO NOT use water jets.
- **ENVIRONMENT**Waste Disposal: In accordance with local, state and federal regulations.
- **SPILLAGE** Prevent entry into drains, sewers and water courses. Soak up with diatomaceous earth or other inert material. Store the spent fluid in appropriate containers for disposal.
- **HANDLING:** Eye protection required. Protective gloves recommended. Chemically resistant boots and apron recommended. Use in well-ventilated area
- **COMBUSTIBILITY:** It is slightly combustible when heated above flash point. It will release flammable vapors which can burn in open or be explosive in confined spaces if exposed to source of ignition.
- **STORAGE:** Avoid storage near open flame or other sources of ignition.

HOW TO USE THE G704B-SR



After selecting the proper pulling head and attaching it securely to Head Cylinder, connect the regulated airline to the too (if the tool is equipped with a preset regulator P-1505, air source may be unregulated).

The riveter has a 4 foot hose extension allowing it to reach into tight spaces. Hold the Head Manifold in one hand, having the Handle Assembly in the other. If the area to access is close to the floor, the Handle Assembly may be placed on the floor. To trigger, depress the button under the manifold.



MAINTENANCE AND REPAIR

This riveter has been manufactured to give maximum service with minimum care. For optimum function:

1. The hydraulic system to be full of oil and free from air at all times.
2. Use clean and dry air to prevent premature wear and clogging of the air components.
3. Inspect the riveter for fluid leaks routinely

TOOL OVERHAUL / REPAIR

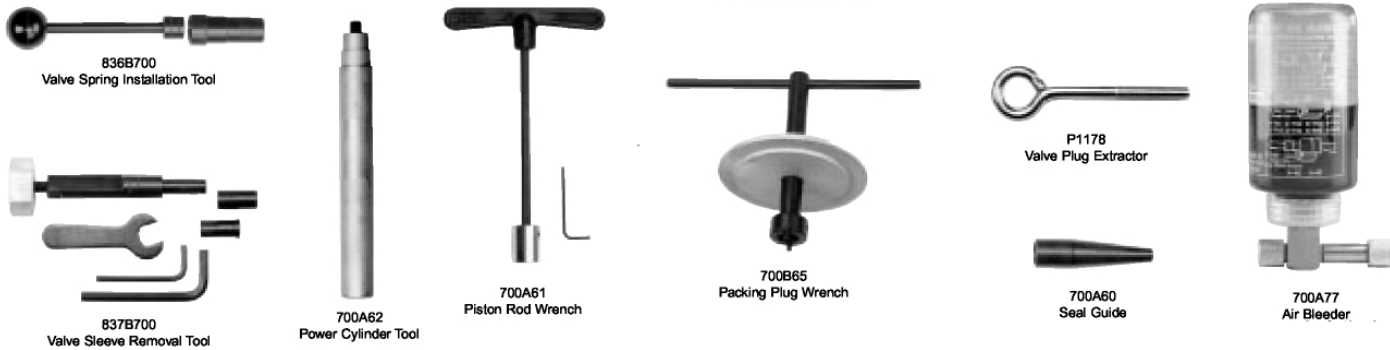
Tool overhaul is needed in case of tool malfunction, massive fluid loss or as part of your routine maintenance program. For detailed instructions on overhauling and repair of the main power unit (G704B) see TM-G704B.

Tips for properly servicing the tools:

- Before proceeding with any repair, make sure that the riveter is disconnected from the air supply and any attachments are removed (pulling head, stem deflector).
- Use a blunt bent hook tool to remove the O-rings from their groove; use care not to scratch the seal surfaces
- Inspect all components for signs of wear or breakage; replace any damaged components
- Replace all gaskets, O-rings and back-up rings; lubricate O-rings with proper lubricant before re-assembling

TOOLS NEEDED:

- G701/G704KT – tool kit, Needle Nose Pliers,
- G704KS – service kit:



THE G701/G704KT TOOL KIT

Also included: 701A67 Seal Guide, 702B62 Power Cylinder Tool, 703A53 Seal Guide, 702A64 Seal Guide, 744-103 Seal Guide.

PRIMING AND BLEEDING INSTRUCTIONS

Use automatic transmission fluid (ATF) type "A" (no substitutes). Dexron® III ATF is recommended.



FLUID PROPERTIES

Specific gravity	0.863
Weight per gallon	7.18 lbs.
Open flash point	>200°C (392°F)

Priming Instructions- After servicing the riveter needs to be primed with fluid.

In order to accomplish

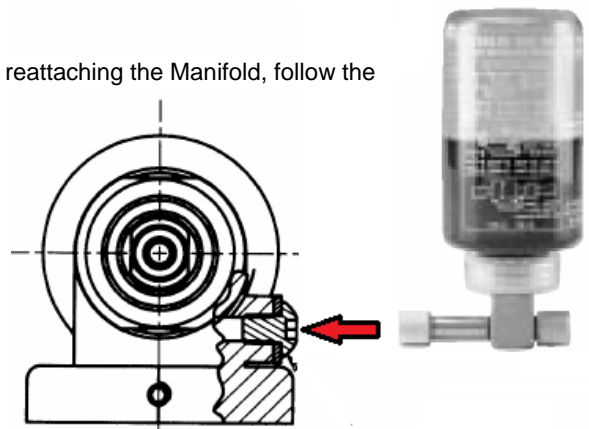
that, with the Handle Manifold off fill the Handle Assembly with fluid to the top. After reattaching the Manifold, follow the Bleeding instructions below.

Bleeding Instructions (air removal and fluid refill)

What is needed: a 1/8" Allen Wrench; the 700A77 Bleed Bottle

Procedure:

- Connect the Riveter to an air source
- Remove screw from the side of the Cylinder Head and thread-in the bleed bottle bottom up (see picture).
- Cycle until no more bubbles surface inside of bottle.
- When completed, remove the Bleed Bottle and re-attach the side screw with the seal. Make sure it is properly tightened to prevent any leaks.



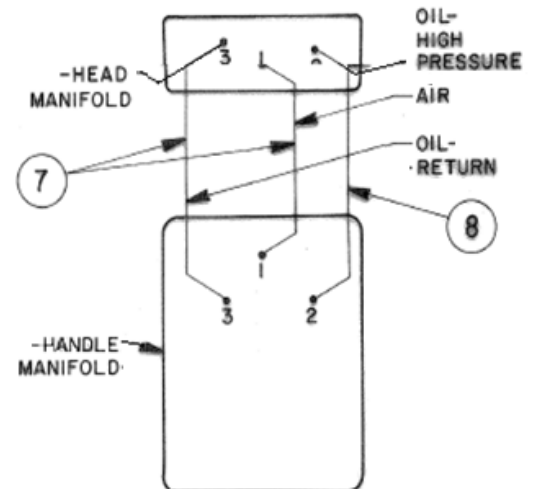
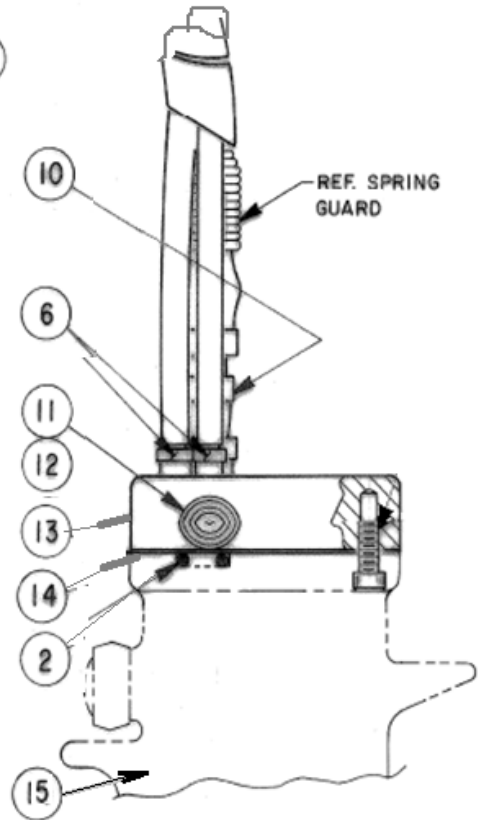
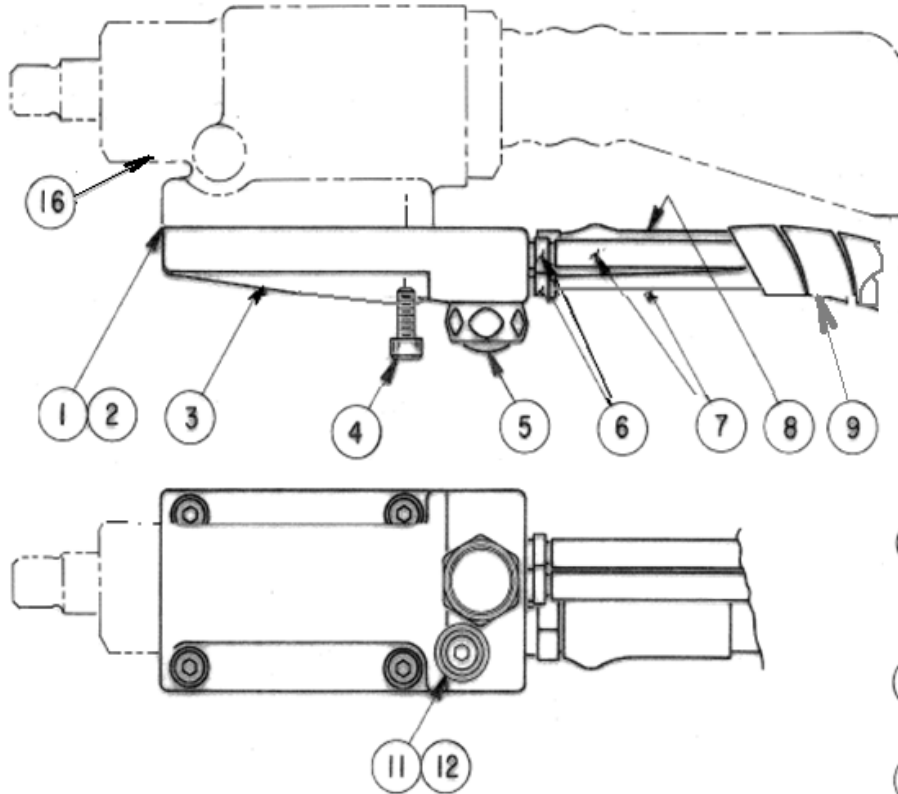
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TROUBLESHOOTING

PROBLEM	POSSIBLE REASONS / SOLUTIONS
Piston does not move after depressing Trigger	- No air supply is connected: Connect to a clean, filtered air source at 90 to 110 psi (6,2 to 7,6 bar).
	- Faulty trigger: Remove and replace trigger assembly.
	- Broken power piston: Service the Handle Subassembly.
Short stroke or low pull force	- Significant fluid loss: Bleed the system to purge the air out. If performance doesn't improve, or excessive leakage continues, see below.
Head Cylinder Fluid leakage	- Leaks around the seals or fittings indicate that they are not tightened to seal properly: Tighten until no more leaks are observed.
	- Leaks at the front of head cylinder indicate worn/ damaged seals
	Service head cylinder per instructions provided herein
Air leakage at the spool valve	- Broken or dislodged valve spring- Service and replace
	- Worn or damaged valve spool seals: Disassemble and service air valve per Air Sub-Assembly Overhaul Instructions.
Head piston is slow or seizes	- Piston or seal damage: Service head cylinder.
	- Clogged air muffler or filter Clean thoroughly with solvent and back-blow with compressed air.

G704B-SR CONVERSION KIT (FROM G704B TO G704B-SR)



HOSE ATTACHMENT DIAGRAM

ASSY NO	ITEM	PART NO	DESCRIPTION	QTY
704C49	G704 B-SR CONVERSION KIT			
	1	P-293	O-RING	2
	2	P-832	O-RING	2
	3	704C45	MANIFOLD HEAD	1
	4	P-27	SOCKET HEAD SCREW	4
	5	703A33	TRIGGER ASSEMBLY	1
	6	P-1181	4' HOSE FITTING	4
	7	704A48-3	FLEXIBLE TUBING	2
	8	P-1180	4' HOSE ASSY	1
	9	704A47-3	CABLE WRAP	1
	10	P-533	SWIVEL ADAPTER	1
	11	P-572	STAT-O-SEAL	2
	12	P-573	BUTTON HEAD SCREW	2
	13	704C46	MANIFOLD-HANDLE	1
14	700A22	GASKET	1	
704-087	G704 RIVETER			
	15	704-086	POWER HANDLE	1
	16	704B35	HEAD CYLINDER	1

PART LIST FOR THE G704B (704-087) CHERRYMAX RIVETER ASSEMBLY

ITEM NO.	DESCRIPTION		QTY.
704B35 HEAD CYLINDER SUB-ASSEMBLY			
	704C19 HEAD CYLINDER		
	1	704C18 CYLINDER, HEAD	1
	1A	704B2-2 FITTING, NOSE	1
2	P-701	O-RING (.629, .489, .070)	2
3	P-998	RING, BACK-UP (.609, .503, .053)	1
4	704C3	PISTON, HEAD	1
5	P-931	O-RING (1.193, .987, .103)	1
6	P-1000	RING, BACK-UP (1.176, 1.000, .088)	1
7	P-870	O-RING (1.191, 1.051, .070)	2
8	P-112	O-RING (.504, .364, .070)	1
9	704B4	CAP, HEAD CYLINDER	1
10	P-880	RING, RETAINING (NON-STANDARD)	1
11	703A13	FITTING, DEFLECTOR	1
12	530A16	DEFLECTOR, PIN	1
13	P-572	STAT-O-SEAL (.443, .180, .132)	1
14	P-573	SCREW, BUTTON HD. SOC. 10-32 x 1/4	1
704-086 SUB-ASSEMBLY, HANDLE			
15	P-838**	O-RING, DISOGRIN (.568, .362, .103)	2
16	P-115	RING, BACK-UP (.551, .375, .088)	2
17	P-727	O-RING (1.318, 1.112, .103)	1
18	700B93	PLUG, PACKING	1
19	P-731	RING, BACK-UP (3.387, 3.109, .139)	2
20	P-730	RING, QUAD (3.387, 3.109, .139)	1
21	700B6	PISTON, AIR	1
22	P-737	NUT, CONELOCK, 1/4-20	1
23	P-725	O-RING (3.129, 2.989, .070)	1
24	700B4	BASE, HANDLE	1
25	P-735	RING, RETAINING (INT. Ø3.500)	1
26	700D107	COVER, BASE	1
27	P-736	RING, RETAINING (EXT. Ø2.250)	1
28	703A33	ASSEMBLY, TRIGGER (INCLUDES P-223)	1
29	P-223	O-RING (.285, .145, .070)	1
30	703A11	HANDLE	1
31	700-247	CYLINDER, POWER	1
32	P-833**	O-RING, DISOGRIN (1.068, .862, .103)	2
33	P-739	RING, BACK-UP (.614, .518, .056)	1
34	P-830**	O-RING, DISOGRIN (.629, .489, .070)	1
35	700-248	ROD, POWER PISTON	1
36	P-653	O-RING (.691, .551, .070)	4
37	700B96	SLEEVE, VALVE	1
38	700A67	SPRING	1
39	P-829**	O-RING, DISOGRIN (.504, .364, .070)	4
52	700A94	SUB-ASSEMBLY, VALVE SPOOL	
	40	700B95 SPOOL, VALVE	1
	41	700A18 FILTER	1
	42	700A69 SCREW, METERING	1
43	P-834**	O-RING, DISOGRIN (.816, .676, .070)	2
44	700A16	PLUG, VALVE	1
45	700A17	MUFFLER	1
46	P-279	RING, RETAINING (INT. Ø.906)	1
47	P-832**	O-RING, DISOGRIN (.379, .239, .070)	1
48	700A22	GASKET	1
49	P-27	SCREW, SOC. HD. CAP, 8-32 x 1/2	4
50	670A20*	BAG, MANDREL CATCHER	1
51	P-948*	HOSE, AIR	1
53	P-1505	PRESET INLINE PRESSURE RELIEF VALVE	1

*Not furnished with riveter. Must be ordered separately if desired.

**No substitutions.

Note: Use Loctite #271 or equivalent when assembling items 1 and 1A.

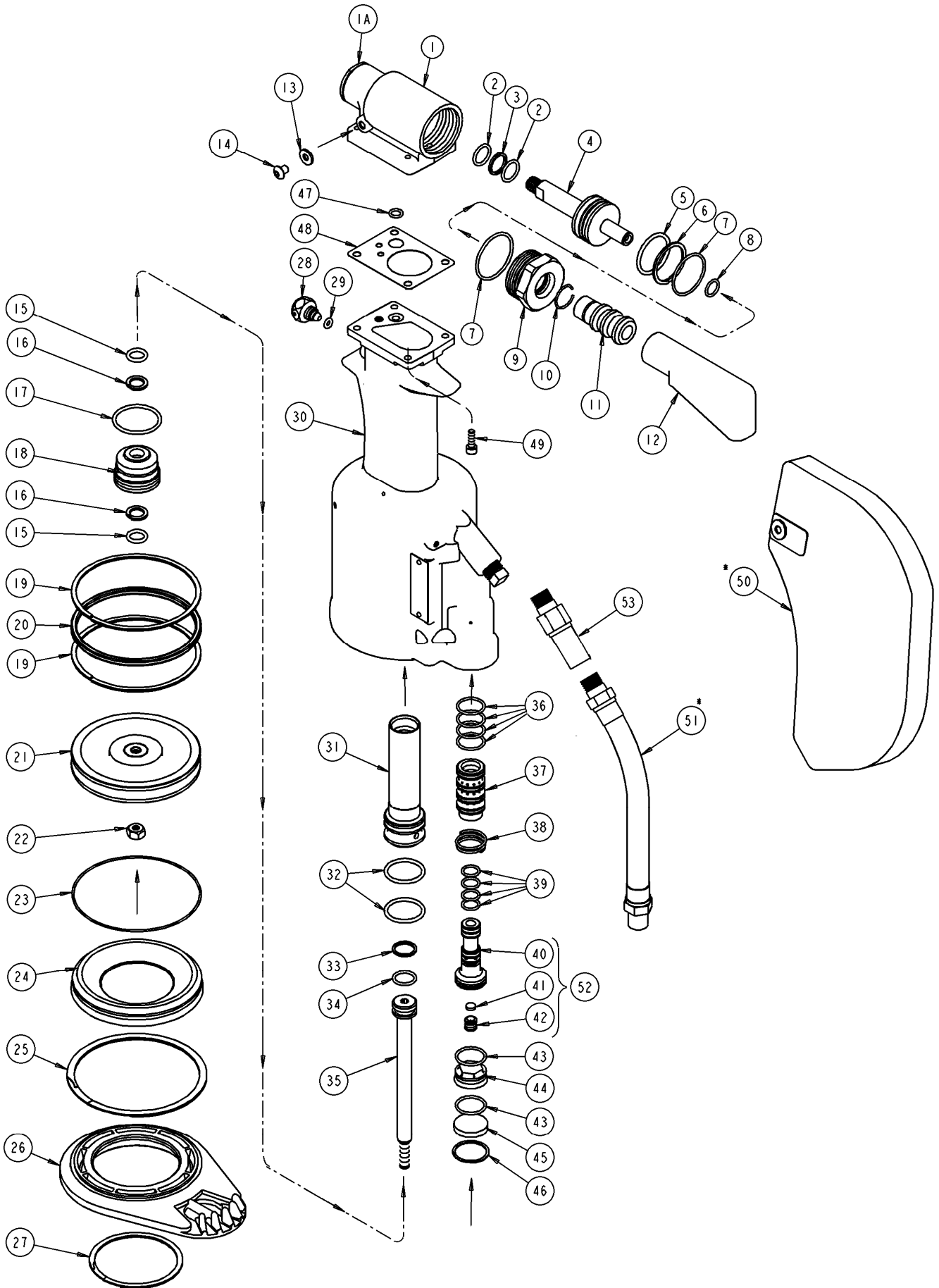


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EXPLODED VIEW OF G704B



G704B-SR PULLING HEADS

Pulling Heads are not furnished with riveter and must be ordered separately; see Tool Sheet for details on service and about all the fastener capabilities of each pulling head.

Pulling Head	Type	Adapter	Rivet	Rivet Diameters	Maximum Grip ¹
H701B-456 H747-456	Straight	-	CherryMAX Bulb	1/8, 5/32, 3/16 ^{2,3}	All
			CherryMAX "AB"	1/8, 5/32, 3/16 ³	-4 ¹
			MBC L/C	1/8, 5/32, 3/16	-4 ¹
H753A-456	Right Angle	-	CherryMAX Bulb	1/8, 5/32, 3/16 ^{2,3}	All
			CherryMAX "AB"	1/8, 5/32, 3/16 ³	-4 ¹
H781-456	Offset	-	CherryMAX Bulb	1/8, 5/32, 3/16 ^{2,3}	All
			CherryMAX "AB"	1/8, 5/32, 3/16 ³	-4 ¹
H9015-Series	Straight	704A9	MS ⁴	3/32, 1/8, 5/32, 3/16	All
H955-Series	Straight	-	CherryLock "A"	3/32, 1/8, 5/32, 3/16 ³	-4 ¹
H782	Straight	-	CherryMAX Bulb	1/8, 5/32, 3/16 ^{2,3}	All
			CherryMAX "AB"	1/8, 5/32, 3/16 ³	-4 ¹
			MBC L/C	1/8, 5/32, 3/16	-4 ¹

1. On the first stroke. 2. Nominal and oversize. 3. No 3/16 aluminum, alloy steel and monel only. 4. Serrated stems only.

Extensions

Extensions are offered in order to extend the reach of the pulling head even deeper into narrow access areas.

Extension Number	Length (In)	National Stock No.
704A12-2	2.0	5130-01-145-0206
704A12-4	4.0	5130-01-145-0207
704A12-6	6.0	5130-01-145-0208
704A12-12	12.0	5130-01-178-0331

CE CERTIFICATION

G704B, the base model and power unit converted into this extended version is a CE certified tool (see certification on the back).

For more details about G704B see TM-G704B.

WARRANTY

Seller warrants the goods conform to applicable specifications and drawings and will be manufactured and inspected according to generally accepted practices of companies manufacturing industrial or aerospace fasteners. In the event of any breach of the foregoing warranty, Buyer's sole remedy shall be to return defective goods (after receiving authorization from Seller) for replacement or refund of the purchase price, at the Seller's option. Seller agrees to any freight costs in connection with the return of any defective goods, but any costs relating to removal of the defective or nonconforming goods or installation of replacement goods shall be Buyer's responsibility. SELLER'S WARRANTY DOES NOT APPLY WHEN ANY PHYSICAL OR CHEMICAL CHANGE IN THE FORM OF THE PRODUCT IS MADE BY BUYER.

THE FOREGOING EXPRESS WARRANTY AND REMEDY ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES; ANY IMPLIED WARRANTY AS TO QUALITY, FITNESS FOR PURPOSE, OR MERCHANTABILITY IS HEREBY SPECIFICALLY DISCLAIMED AND EXCLUDED BY SELLER. THIS WARRANTY IS VOID IF SELLER IS NOT NOTIFIED IN WRITING OF ANY REJECTION OF THE GOODS WITHIN ONE (1) YEAR AFTER INITIAL USE BY BUYER OF ANY POWER RIVETER OR NINETY (90) DAYS AFTER INITIAL USE OF ANY OTHER PRODUCT.

Seller shall not be liable for incidental, special, consequential, or punitive damages, AND SUCH
 For more information please contact our Technical Services Department at Tel. 714-850-6022

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 DEXRON® is a registered trademark of GM Corporation.
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Declaration of Conformity

We, **Cherry Aerospace**

Located at **1224 East Warner Avenue, Santa Ana, CA 92705-0157, USA,**

In accordance with the provisions of

Machine Directive 2006/42/EC

Hereby declare under our sole responsibility that:

Equipment: Pneumatic Hydraulic Hand Riveter

Base Model Number: G-704B

Serial Number: _____

Is in conformity with the applicable requirements of the following standards:

- EN ISO 12100:2010 Safety of Machinery; General Principles for design; Risk Assessment and Reduction
- ISO/TR 14121-1&2:2007 Safety of Machinery, Risk assessment
- EN 792-1:2000 + A1:2008 Safety requirements; Assembly power tools for non-threaded mechanical fasteners
- ISO 8662-11 Hand-held portable power tools -- Measurement of vibrations at the handle
- ISO 3744 Acoustics – Determination of sound power levels of noise sources
- ISO 4413:2010. Hydraulic fluid power - General Rules of safety
- ISO 4414:2010. Pneumatic fluid power - General Rules of safety

Signed by.  _____

Cris Cobzaru,
Master of Science in Mechanical Engineering
Sr. Technical Services / Installation Tooling Engineer

The Technical documentation for the machinery is available from:

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