Original Instructions

G84

Lockbolt Power Tool

Instruction Manual CE

Pass on to user to read and keep for reference

MANUAL

CHERRY® AEROSPACE

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THE G84 TOOL

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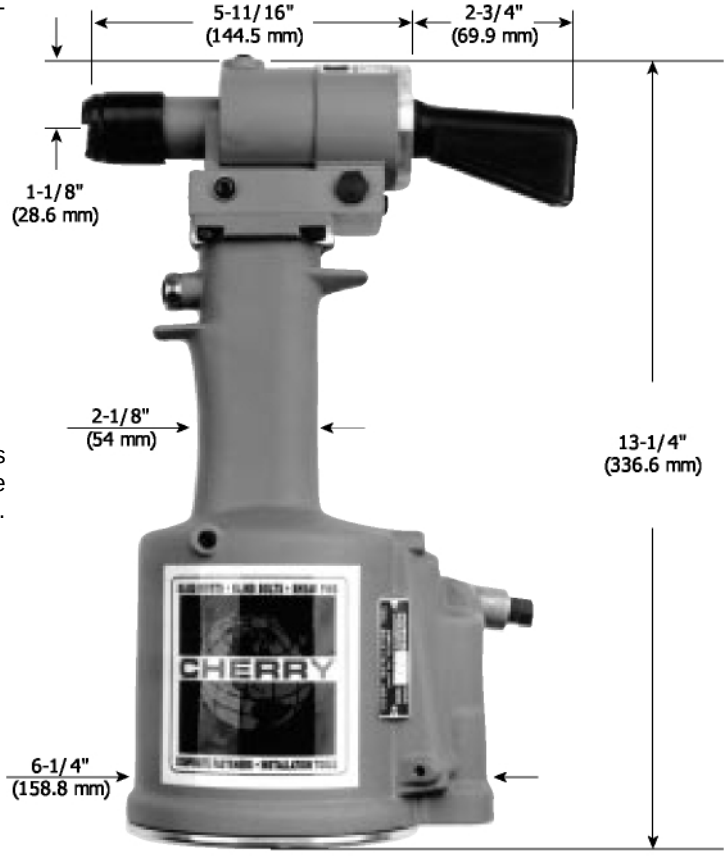
DESCRIPTION

The Cherry® G84 pneumatic-hydraulic lockbolt installation tool is a heavy duty production tool designed for high speed, reliable installation of the most popular sizes of aircraft lockbolts.

This extremely powerful tool has been designed with many ergonomic features: light weight (7.70 lb.), (3.5 kg), less recoil, low noise, and a comfortable fit in the operator's hand. It can be operated in any position with one hand.

By bending the rubber pin deflector (1) sideways, 1-1/2" (38.1 mm) additional clearance can be obtained.

This tool can also be used to install blind bolts and blind rivets. See the section on "Pulling Heads" for correct pulling head part number.



SPECIFICATIONS FOR G84

Cherry® Aerospace (CHERRY®) 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®.

AIR PRESSURE	90 psi (6.2 bar) Min. / 110 psi (7.6 bar) Max.
STROKE	9/16 inch (14.3 mm)
PULLING FORCE	5,750 lbs. (25.6 kN) @ 100 psi,
	1,200 lbs. (5.34 kN) on return stroke
WEIGHT	7.70 lbs. (3.5 kg)
NOISE LEVEL	less than 80 dB (A)
VIBRATION	less than 2.5 m/s^2
AIR CONSUMPTION	0.29 SCF/cycle (8.21 L/cycle)

SAFETY WARNINGS

- **Operating this tool with a damaged or missing stem deflector, or using the deflector as a handle, may result in severe personal injury. The pin deflector should be rotated until the aperture is facing away from the operator and other persons working in the vicinity.**
- **Approved eye protection should be worn when operating, repairing, or overhauling this tool.**
- **Do not use beyond the design intent.**
- **Do not use substitute components for repair.**
- **Any modification to the tool, pulling heads, accessories or any component supplied by CHERRY®, or their representatives, shall be the customer's entire responsibility. CHERRY® will be pleased to advise on any proposed modification.**
- **The tool must be maintained 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 and Repair instructions. All repairs shall be undertaken only by personnel trained in CHERRY® installation tools. Contact CHERRY® with your training requirement.**
- **Always disconnect the air line from the tool inlet before attempting to service, adjust, fit or remove any accessory.**
- **Do not operate the tool when it is directed at any person.**
- **Ensure that the vent holes do not become blocked or covered and that air line hoses are always in good condition.**
- **Excessive contact with the hydraulic oil should be avoided to minimize the possibility of rashes. Care should be taken to wash thoroughly.**
- **Operating air pressure should not exceed 110 psi (7.6 bar).**
- **Do not operate the tool without pulling head correctly and securely attached.**
- **Do not operate the tool unless the handle base (66) is fully secured by retaining ring (67) and the base cover (68) is held in place by retaining ring (69).**
- **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.**
- **The precautions to be used when using this tool must be explained by the customer to all operators. Any question regarding the correct operation of the tool and operator safety should be directed to CHERRY®.**
- **Do not pound on the rear of the tool head to force rivets into holes as this will damage the tool.**
- **Do not depress the trigger while disconnecting the air bleeder and replacing the cap screw when bleeding the tool.**

HOW TO USE THE G84

LOCKBOLT INSTALLATION

After selecting the proper pulling head and attaching it securely to the G84, connect the air line to the tool. Place the lockbolt pin into the workpiece and place the collar over the pintail. It may be necessary to hold the lockbolt in the application to prevent it from backing out when placing the pulling head over the serrations.

If you are using a non-self-releasing pulling head, make certain the collar is placed on the lockbolt pintail before placing the pulling head on the pintail. Once the pintail is inserted into the pulling head the jaws will grip the pintail and prevent it from moving out of the front of the pulling head.

If there is sheet gap or a gap between the head of the lockbolt and the workpiece, it may require multiple stroking of the tool for complete installation. The pintail will eject through the rear of the tool when using H513 series straight pulling heads. The pintail will eject through the rear of the H562/H563 series offset pulling heads.

If the tool does not kick off the swaged collar, shims should be added behind the collet of the pulling head.
See pulling head installation instructions.

REMOVAL OF COLLET FROM HEAD PISTON

At times it may become necessary to hold the head piston from turning while removing a collet. A 3/8" hex is provided at the rear of the head piston. The pin-tail deflector can be bent to one side to allow accessibility.

BLIND BOLTS AND RIVETS

Insert the blind bolt or blind rivet stem into the proper pulling head until the head of the rivet is in contact with the pulling head nosepiece. This will ensure full engagement between the jaws and the rivet stem and will prevent slippage.

Insert the rivet into the application and pull the trigger to activate the tool. Upon release of the trigger, the stem will eject to the rear of the tool when using the H84 series straight pulling head. When using an offset pulling head, the stem will eject through the rear. When using a right angle pulling head, the stem will eject out the front.

MAINTENANCE AND REPAIR

The G84 has been manufactured to give maximum service with minimum care. In order that this may be accomplished, the following recommendations should be followed:

1. The hydraulic system should be full of oil and free from air at all times.
2. Keep excessive moisture and dirt out of air supply to prevent wear of air valve, air cylinder and air piston.
3. Tool should be routinely inspected for oil leaks. Oil leaking around screws (21) indicates that a screw is loose or a Stat-O-Seal (22) needs replacing. Oil leaking around the small by-pass hole near the base of the handle grip (33) would indicate worn or damaged O-rings (38) and (39).

Use automatic transmission fluid (ATF) type “A” (no substitutes). Cherry® Aerospace recommends using, Dexron® III ATF.

DEXRON III OIL SAFETY DATA

FIRST AID

Skin: 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.

Eyes: Flush with copious amounts of water. If irritation develops, consult a physician.

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.

FIRE

Suitable extinguishing media: CO_2, 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 in appropriate container for disposal.

HANDLING

Eye protection required. Protective gloves recommended. Chemically resistant boots and apron recommended. Use in well ventilated area.

COMBUSTIBILITY

Slightly combustible when heated above flash point. Will release flammable vapor which can burn in open or be explosive in confined spaces if exposed to source of ignition.

STORAGE

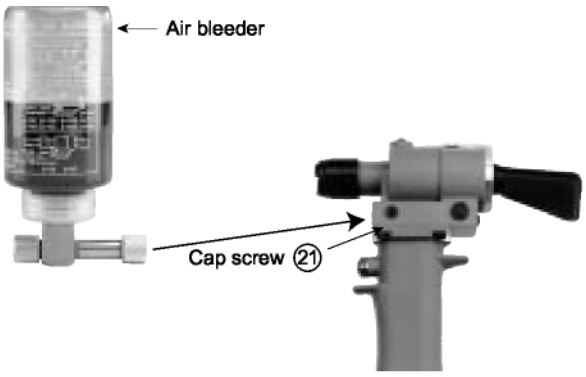
Avoid storage near open flame or other sources of ignition

PROPERTIES

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

FILL AND BLEED INSTRUCTIONS

- To replace a small amount of oil in the tool, remove cap screw (21) from side of head cylinder (13). Attach the Cherry air bleeder (700A77). Connect the tool to the air line and cycle several times. This will ensure the removal of any air from the hydraulic system and its replacement with fluid.
- Should it become necessary to completely refill the tool (such as would be required after the tool has been dismantled and re-assembled) take the following steps:



1. Stand tool upright and connect to air line. Hold trigger down and when air piston (63) bottoms, disconnect tool from air line. Head piston (10) should move to the rear position during this step; if it does not, push the piston back manually
2. Remove the screw (21) and the Seal (22) from the side of the head cylinder (13). Connect a pressurized fluid source filled with automatic transmission fluid Type “A”. See chart.
3. Remove the screw (21) and the Stat-O-Seal (22) from the rear of the head cylinder (13). Force the fluid into the tool until it flows out the rear hole. Position the tool in such a way that the rear hole is the high point. Keep pumping oil until all air bubbles are out. Place the screw (21) and the Stat-O-Seal (22) into the rear hole and tighten.
4. Remove the screw (21) and the Stat-O-Seal (22) from the top of the head cylinder (13). Force the fluid into the tool until it flows out the top hole. Position the tool in such a way that the top hole is the high point. Keep pumping the oil until all air bubbles are out.
5. Disconnect the pressure oil can from the side hole of the head cylinder (13). Replace screw (21) and Stat-O-Seal (22) and tighten.
6. Holding a cloth over the tool head, attach tool to air line. Excess oil and air will be discharged into the cloth. Place the screw (21) with the Stat-O-Seal (22) into the top hole and tighten.

NOTE: For the purpose of bleeding, it is not necessary to remove the pressure relief valve (77). Do not remove any of the hex set screws from the head or the handle.

TROUBLESHOOTING

1. Check the air line for correct pressure at the tool. It must be 90 to 110 psi (6.2 to 7.6 bar).
2. Check the tool for lack of oil (see Fill and Bleed Instructions).
3. Check for oil leakage:
   - Oil leaking around a cap screw (21) in the side, top or rear of the head indicates that a screw (21) is loose or a Stat-O-Seal (22) needs replacing.
   - If oil should leak through the by-pass hole at the base of the handle (33) the O-rings (38) and (39) are worn or damaged.
   - Oil leaking from the front of the head (13) indicates that O-rings (11) are worn or damaged.
4. Check for excessive air leakage from the air valve:
   - If spring (47) is broken or dislodged, air will bleed directly through the bottom of the air valve and the head piston (10) will retreat to its full stroke without returning. See air valve instructions on Page 8.
   - If O-ring (52) on valve plug (53) is worn or damaged, replace.
   - If O-rings (48) on valve spool (49) are worn or damaged, replace.
5. Check movement of the head piston (10). If it does not move freely or is slow in operation:
   - O-rings (5), (8), (11), quad ring (6), or back-up rings (7) and (12) may be damaged and require replacement.
   - Head piston (10) may be mechanically locked due to damaged parts.
   - If O-Ring (35) on power piston (42) is worn or damaged, replace.
   - Muffler (54) or air filter (50) inside valve spool (49) may be plugged with dirt. Clean them thoroughly with normal solvent and back-blow with compressed air.
   - Hole in metering screw (51) in valve spool (49) may be blocked or damaged. Hole diameter should be .028" (.711 mm). Clear and size hole or replace valve spool sub-assembly (79).
6. Stem sticks in the pulling head:
   - Pulling head components need maintenance. Disassemble the pulling head, clean and replace worn parts. Re-assemble following pulling head instructions.
   - Spent rivet stems are wedged side by side in the pulling head from failure to eject stem from tool prior to inserting next fastener. Disassemble the pulling head, remove stems and re-assemble following pulling head instructions.

OVERHAUL

The disassembly and re-assembly procedures can be accomplished by following the instructions and the drawings on pages 9 and 11. **Use extreme care during disassembly and re-assembly not to mar, nick or burr any smooth surface that comes in contact with O-rings.** Before installing O-rings, be sure to apply an O-ring lubricant such as Lubriplate® 630A, or equivalent. It is recommended that special assembly tools, which can be ordered under part number **G740KT,** be used to overhaul this tool.

Virtually all of the moving parts in the tool ride on O-rings, protected by back-up rings where high pressure dictates. This means no metal- to-metal wear. By use of close tolerances and low micro-inch surfaces against which the O- rings seal, a long tool life can be expected

before any overhaul becomes necessary. At that time, complete overhaul can be achieved by the use of Service Kit **G84KS** which contains a complete set of O-rings, back-up rings, screws, washers and gaskets.

Not shown but included:

- 700A60 and 744-103 Seal Guides

THE G740KT TOOL KIT

836B740
Valve Spring Installation Tool

837B740
Valve Sleeve Removal Tool

740A43
Power Cylinder Tool

700A61
Piston Rod Wrench

700B65
Packing Plug Wrench

P1178
Valve Plug Extractor

740A42
Seal Guide

700A77
Air Bleeder

AIR VALVE

- To disassemble, first disconnect tool from its air source.
- Remove retaining ring (55) and muffler (54). Insert a valve plug extractor (P1178) or 5/16-18 threaded rod or bolt into end of valve plug (53) and pull it out. Using the same procedures, pull out valve spool assembly (79).

NOTE: It should never be necessary to remove valve sleeve (46) unless the ports in the sleeve have become plugged from contaminated air. The O-rings on this sleeve are static and hence do not wear.

- If it is suspected that the ports are plugged, use needle nose pliers to grasp end of spring (47), turn clockwise and pull to dislodge from groove in handle.
- With spring removed, valve sleeve (46) can be pulled out using the valve sleeve removal tool (837B740).

To re-assemble, reverse the above procedures being certain that all O-rings are properly lubricated. To avoid damaging the O- rings (45), carefully install sleeve (46) with your fingers. Gently push and wiggle sleeve to allow O-rings to slip past inner ports. Spring (47) is best installed using a valve spring installation tool (836B740) to push the large diameter coil into the groove. This requires care as the tool will not operate if this spring is not anchored firmly.

HEAD SUB-ASSEMBLY

- Disconnect the air supply and remove the complete pulling head from the tool before attempting disassembly of the head assembly.
- Remove the four socket head cap screws (75). Lift head assembly from the handle (33). Remove O-ring (73) and gasket (74) and set aside. Empty the oil into a container by pouring from the handle. Dispose of oil according to environmental regulations.
- Remove end cap (4). Attach Seal Guide (744-103) to threaded end of head piston (10) and slide the head piston (10) out of head cylinder (13). Be careful not to damage threads or cause burrs on polished piston rod surface.
- O-rings (11) and back-up ring (12) can now be removed using a bent hook. O-ring (5) and quad ring (6) can be removed in the same manner.
- If the head piston does not return fully forward after the tool has been fully overhauled and it is certain that all air is removed from the system, it may be necessary to remove and service the relief valve sub-assembly (77).
- Remove the pressure relief valve sub-assembly (77) from the head cylinder (13). Remove O-ring (23) from the head cylinder (13). If damaged, replace.

Carefully unscrew the ball seat (24) from the spring seat (29) using soft jaws. Be careful not to damage the spring seat (29). The threads on this part have had Loctite® 242 applied. When all components have been removed, clean and dry thoroughly. If the spring (28) appears to have a “set”, replace it. This pressure relief valve should hold 1200 psi (82.7 bar) before opening.

Upon re-assembly, reverse the above procedures. Apply a small amount of Loctite® 242 or equivalent on the smaller threads of the spring seat (29). Place the ball (25), valve piston (26), and spring (28) into the ball seat (24) and screw this sub-assembly onto the spring seat (29). Now apply Loctite® 242 to the large threads on the spring seat (29). Ensure that the O-ring (23) is seated concentrically inside of the valve cavity, and install the pressure relief valve sub-assembly (77) into the head (13). Allow the Loctite® to cure for 30 to 60 minutes before exposure to hydraulic fluid.

Always lubricate all O-rings with Lubriplate® 630A. The re-assembly sequence is the opposite of disassembly. This includes filling the handle (33) with oil before replacing gasket (74) and O-ring (73), just before replacing the head sub-assembly onto the handle.

Tighten the four socket head cap screws (75) uniformly to prevent leakage around the gasket. When assembled, purge system of air by following the Fill and Bleed instructions on page 5.

HANDLE SUB-ASSEMBLY

To inspect air cylinder bore, remove parts (65) through (69). Any further disassembly will require removal of the head assembly.

For complete disassembly, disconnect tool from air supply. Remove parts (65) through (69). Holding tool upright, remove the four cap screws (75). Lift the head assembly from handle (33) and set aside O-ring (73) and gasket (74). Pour all fluid into a container by from handle. Dispose of fluid according to the environmental regulations.

Place the piston rod wrench (700A61) down into the top of the handle (33), into the hex socket in the head of the piston rod cap (41). While holding this wrench, remove the locknut (64) with a 1/2" socket. While still holding piston rod wrench, remove the air piston (63), using packing plug wrench (700B65), by turning counterclockwise. When the air piston is completely freed from the piston rod, tap or push on the piston rod wrench to eject piston from bottom of handle.

After removal of air piston, slide power piston and rod sub-assembly (78) back up to the end of its travel. Using packing plug wrench (700B65), remove packing plug (59). It may be necessary to hold handle upside down in a vise while loosening the packing plug. With the packing plug removed, the power cylinder (37) can be tapped out by lowering power cylinder tool (740A43) down into top of handle onto top of cylinder. The O-rings and back-up rings (56) and (57) are best removed and replaced by using a thin bent hook tool.

To re-assemble the handle, reverse the above procedure, being sure that all the O-rings are properly lubricated before installation. Attach the seal guide (700A60) to the piston rod (44) and with a mallet, tap the power piston and rod sub-assembly (78) through the packing plug (59).

Place air piston (63) into handle bore. **Caution:** Be sure that the radial pattern embossed side of the air piston is facing downwards and the smooth side of the air piston is facing you.

To finish the air piston assembly, thread the locknut (64) onto the piston rod. Replace parts (65) through (69).

Most important, to prevent damage to piston threads, the above assembly instructions must be followed and the locknut tightened between 50 and 59 in.-lb. (5.65 and 6.67 N-m) of torque.

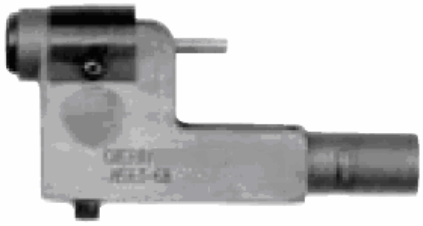
PULLING HEADS

NOSE ASSEMBLIES:

Nose assemblies are not furnished and must be ordered separately. Make certain the nose assembly is kept clean, especially around the riveting end, as adhesives, chips, sealants, etc., will clog up the serrations of the jaws and may cause slippage of the stem. Please refer to the pulling head charts below for the proper selection. All Huck pulling heads suitable for the 352 and 230 style tools will fit directly on this tool.

H513SRC-06-35 STRAIGHT PULLING HEAD

The H513 series pulling heads are available to accommodate the 1/8" diameter through 1/4" diameter lockbolts in varying lengths. The pictured head assembly is swivel-nose, self-releasing, chisel nose with a length of 3.5" (88.9 mm) from the gun line.



H562/H563 OFFSET PULLING HEADS

The H562 and H563 series pulling heads accommodate the 1/8" through 1/4" lockbolts. To pull other lockbolts, contact CHERRY® Technical Services for information.

G84 LOCKBOLT PULLING HEAD SELECTION CHART

	BASIC PULLING HEAD NO.	SWIVEL NOSE PULLING HEAD NO.	SWIVEL NOSE SELF-RELEASING PULLING HEAD NO.	SWIVEL NOSE SELF-RELEASING CHISEL SHAPE NOSE PULLING HEAD NO.	LOCKBOLT DIAMETER
STRAIGHT PULLING HEADS	H513-04-20* H513-04-35* H513-04-60*				-4
	H513-05-35* H513-05-60*	H5135-05-20* H513S-05-35	H513SR-05-20* H513SR-05-35	H513SRC-05-20* H513SRC-05-35*	-5
	H513-06-20* H513-06-60*	H513S-06-20* H513S-06-24 H513S-06-35* H513S-06-48	H513SR-06-20* H513SR-06-24 H513SR-06-35* H513SR-06-48	H513SRC-06-20* H513SRC-06-35*	-6
	H513-08-35*	H513S-08-24 H513S-08-35* H513S-08-48	H513SR-08-24 H513SR-08-48	H513SRC-08-48	-8
OFFSET PULLING HEADS	H563-4B* H563SP-4B*				-4
	H563-5B* H563SP-5B*				-5
	H562-6B H563-6B* H563SP-6B*				-6
	H562-8B				-8

NOTES:

(1) No letter after P/N indicates basic head.
(2) "S" after basic P/N indicates swivel nose.
(3) "SR" after basic P/N indicates swivel nose, self-releasing.
(4) "SRC" after basic P/N indicates swivel nose, self-releasing, chisel shape nose.
(5) Straight lockbolt pulling head part numbers indicate pulling head length when attached to the G84. Example: Part No. H513-04-20 indicates the pulling head extends 2.0" beyond gun line.
(6) "SP" after basic P/N indicates short pintail.
(7) *Heads with an asterisk fit directly on the Cherry® G84 tool. Heads without an asterisk require adapter (744-100) when used on the Cherry G84 tool.

MAXIBOLT® PULLING HEADS AND ADAPTERS

	PART NO.	MAXIBOLT DIA.	ADAPTER
STRAIGHT PULLING HEADS	H83B-5MB H83B-6MB H652-8MB H84A-8MB	-5 -6 -8 -8	744-100 744-100 744-100 744-100
OFFSET	H856-6MB	-6	744-200
RIGHT ANGLE	H828-5MB H828-6MB	-5 -6	744-200 744-200

CHERRYMAX® PULLING HEADS AND ADAPTERS

PULLING HEAD	PART NO.	CHERRYMAX® DIAMETER	ADAPTER
STRAIGHT	H701B-456 H84A-8	-4, -5, -6 -8	744-300 —
OFFSET	H781-456 H782 H827-8	-4, -5, -6 -4, -5, -6 -8	744-300 744-300 744-200
RIGHT ANGLE	H753A-456 H828-8	-4, -5, -6 -8	744-300 744-200

ADAPTER MOUNTING INSTRUCTIONS

STEP 1
Remove Bayonet mount with square shank screwdriver. Use even force to turn the bayonet mount free from the thread locking compound. Do not hammer on the screw driver or bayonet mount. We recommend placing the tool carefully in a vise equipped with soft jaws.

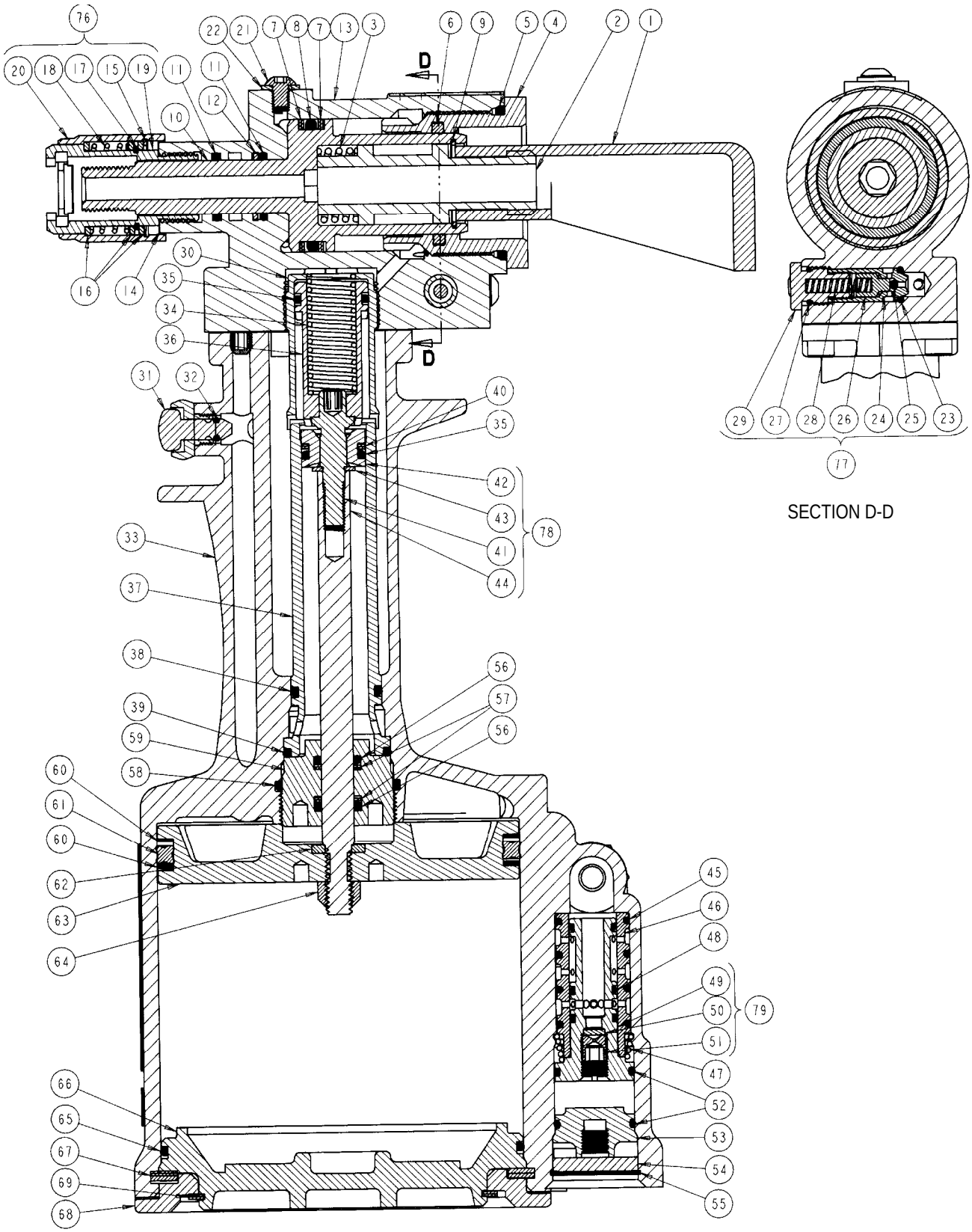
STEP 2
Keep Bayonet mount for future use.

STEP 3
Attach drawbolt adapter to head piston and tighten securely with wrenches.

STEP 4
Attach sleeve adapter to tool housing and tighten with wrenches

The pulling head may now be installed on the adapted tool.

CROSS SECTION OF G84

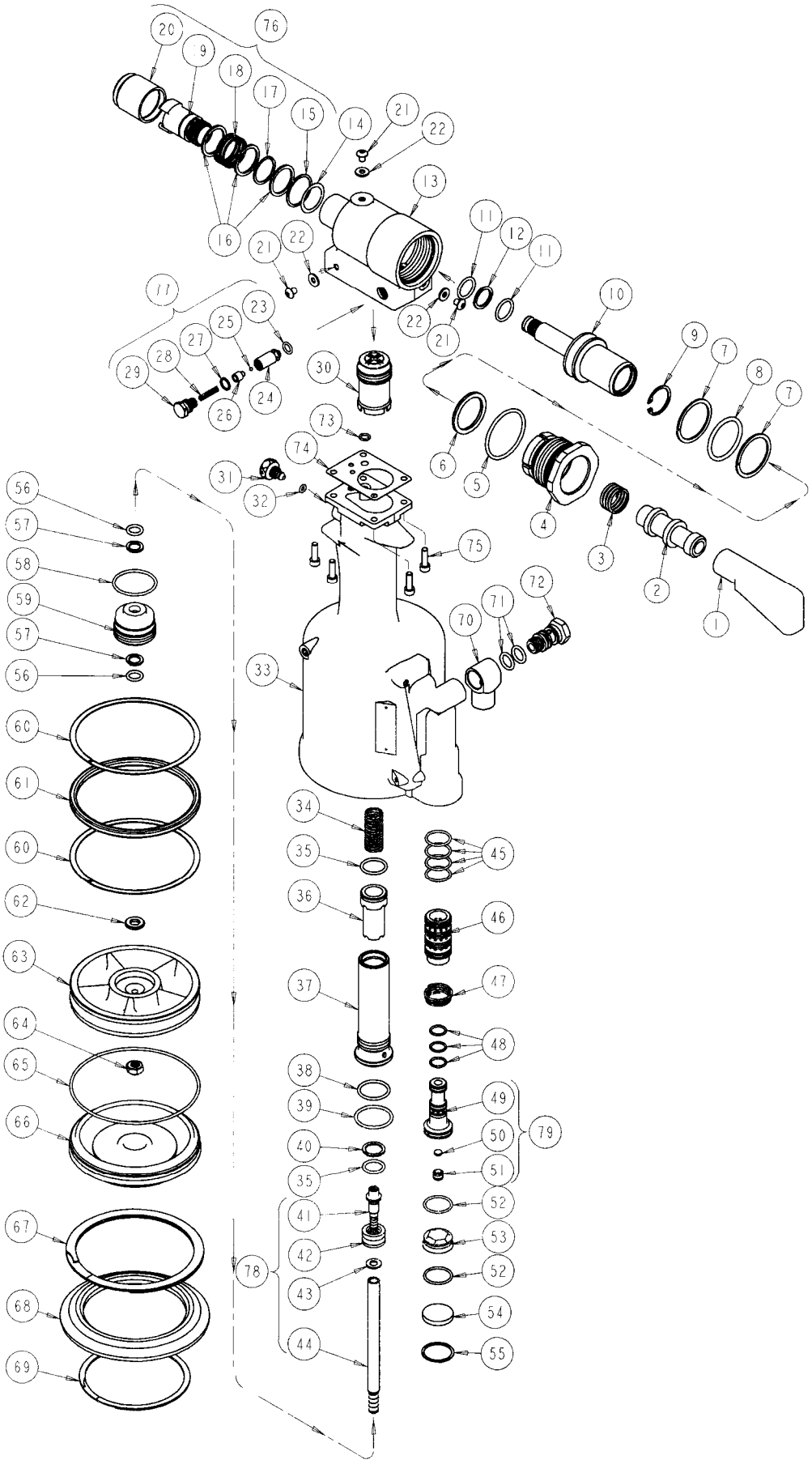


PART LIST FOR THE G84 (744-090) LOCKBOLT POWER TOOL ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION	QTY
744.092 SUB-ASSEMBLY- HEAD			
	530A16	DEFLECTOR. PIN	1
2	560A17	FITTING, DEFLECTOR	1
3	560A20.1	SPRING	1
4	744.083	CAP, END	1
5	P-1252	O-RING	1
6	P-1389	RING. QUAD	1
7	P-1390	RING. BACK-UP	2
8	P-196	O-RING	1
9	P-300	RING. RETAINING	1
10	744-093	PISTON, HEAD	1
11	P-568	O-RING	2
12	P-242	RING. BACK-UP	1
13	744-096	CYLINDER. HEAD	1
14	700-258	SHIM. STEEL	A/R
76	700-211 SUB ASSEMBLY, ADAPTER		
15	P-929	RING. RETAINING	1
16	700-257	SPACER. ADAPTER	3
17	P-957	RING. RETAINING	1
18	P-1372	SPRING	1
19	700-255	EXTENSION. HEAD	1
20	700-256	SLEEVE, LOCKING	1
21	P-573	SCREW. BUTTON HD CAP, 10.32 X 1/4	3
22	P-572	STAT-O-SEAL	3
77	SUB-ASSEMBLY. RELIEF VALVE		
23	P-111	O-RING	1
24	700-215	SEAT. BALL	1
25	P-688	BALL (3/32)	1
26	700-217	PISTON. VALVE	1
27	P-3133	O-RING	1
28	P-1366	SPRING	1
29	700-218	SEAT SPRING	1
30	744-085	CYLINDER. RETURN	1
744-091 SUB-ASSEMBLY. HANDLE			
31	703A33 SUB-ASSEMBLY. TRIGGER (includes P-223)		1
32	P-223	O-RING	1
33	740R3	HANDLE	1
34	P-1391	SPRING	1
35	P-508	O-RING	2
36	744-084	PISTON, RETURN	1
37	744-089	CYLINDER. POWER	1
38	P-833**	O-RING. DISOGRIN	1
39	P-892**	O-RING, DISOGRIN	1
40	P-908	RING. BACK-UP	1
78	744-088 SUB-ASSEMBLY, POWER PISTON AND ROD		
41	744-087	CAP. PISTON ROD	1
42	704A9	PISTON. POWER	1
43	740A12	STOP. PISTON	1
44	744-086	ROD. POWER PISTON	1
45	P-268	O-RING	4
46	740B14	SLEEVE. VALVE	1
47	740A18	SPRING	1
48	P-891**	0-RING, DISOGRIN	3
79	740A15 SUB-ASSEMBLY. VALVE SPOOL		
49	740B15-1*	SPOOL. VALVE	1
50	700A18*	FILTER	1
51	700A69*	SCREW. METERING	1
52	P-848	O-RING	2
53	740B16	PLUG. VALVE	1
54	740A17	MUFFLER	1
55	P-321	RING RETAINING	1
56	P-838**	O-RING. DISOGRIN	2
57	P-115	RING. BACK-UP	2
58	P-889	O-RING	1
59	740B13	PLUG. PACKING	1
60	P-909	RING. BACK-UP	2
61	P-887	RING. QUAD	1
62	744-095	WASHER	1
63	744-094	PISTON. AIR	1
64	P-1392	NUT. CONELOK. 5/16-18	1
65	P-890	O-RING	1
66	740C4	BASE. HANDLE	1
67	P-886	RING. RETAINING	1
68	740B5	COVER. BASE	1
69	P-884	RING. RETAINING	1
70	530A34	SWIVEL	1
71	P-195	O-RING	2
72	530B35	BOLT. SWIVEL	1
73	P-832**	O-RING. DISOGRIN	1
74	700A22	GASKET	1
75	P-73	SCREW, SOC HD CAP. 10-24 x 5/8	4

* NOT SOLD SEPPARATELY
**NO SUBSTITUTIONS

EXPLODED VIEW OF G84



Declaration of Conformity

We, Cherry® Aerospace, 1224 E. Warner Ave., Santa Ana, CA 92705

declare under our sole responsibility that the product

type **G84**

Serial No.-

to which this declaration relates is in conformity with the following standards

EN292 part 1 and part 2
ISO 8662 Part 1
ISO 3744

following the provisions of the Machine Directive 89/392/EEC
(as amended by Directive 91/368/EEC) and 93/68/EEC

Santa Ana, CA -
date of issue

Original certification and signatures on file

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 under any circumstances for incidental, special or consequential damages arising in whole or in part from any breach by Seller, AND SUCH INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES ARE HEREBY EXPRESSLY EXCLUDED.

For more information please contact our Technical Services Department at Tel. 714-850-6022

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Supplier's Federal Identification Code: 11815

TM-G84
Rev.: B
DCR# 07-0662
Date: 06/04/07