



Cherry[®] G84-LSR Split Power Riveter

Instruction Manual

THE CHERRY® G84-LSR LOCKBOLT INSTALLATION TOOL

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DESCRIPTION

The Cherry® G84-LSR Pneumatic-Hydraulic Lockbolt and Blindbolt Installation Tool is a heavy duty production tool designed for high speed, reliable installation of the most popular sizes of aircraft lockbolts and blind bolts. The G84-LSR is a “split” version of the standard Cherry G84. The power unit sits on the floor and transmits its power through 10 feet of hose to a lightweight head cylinder. This facilitates rivet installation in many limited access areas and also reduces operator fatigue. Its durable, all metal housing makes this tool very robust for use in a shop environment.

This tool installs all 3/16” and 1/4” diameter lockbolts and blindbolts. Pulling heads are not furnished with the tool, and must be ordered separately. See the section on “Pulling Heads” for correct pulling head part number.

FEATURES AND BENEFITS

- Split riveter using internal shift valve
- Operates in any direction
- Convenient remote pilot operated valve
- Large internal hydraulic reservoir to ensure enough volume for every stroke
- Rigid design requiring low maintenance
- Easy to bleed
- Low profile head for limited access area
- High-pressure hydraulic hoses with low expansion at high pressures for maximum tool efficiency
- Internal pressure relief valve to eliminate the possibility of hydraulic lock and ensure adequate kick off force
- Ergonomic design



SPECIFICATIONS FOR G84-LSR

The policy of Cherry Aerospace LLC (Cherry) 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. at tool

STROKE

.530 inch (13.5 mm)

PULLING FORCE

5,700 lbs. (25.32 kN) @ 90 psi (6.2 bar)

WEIGHT

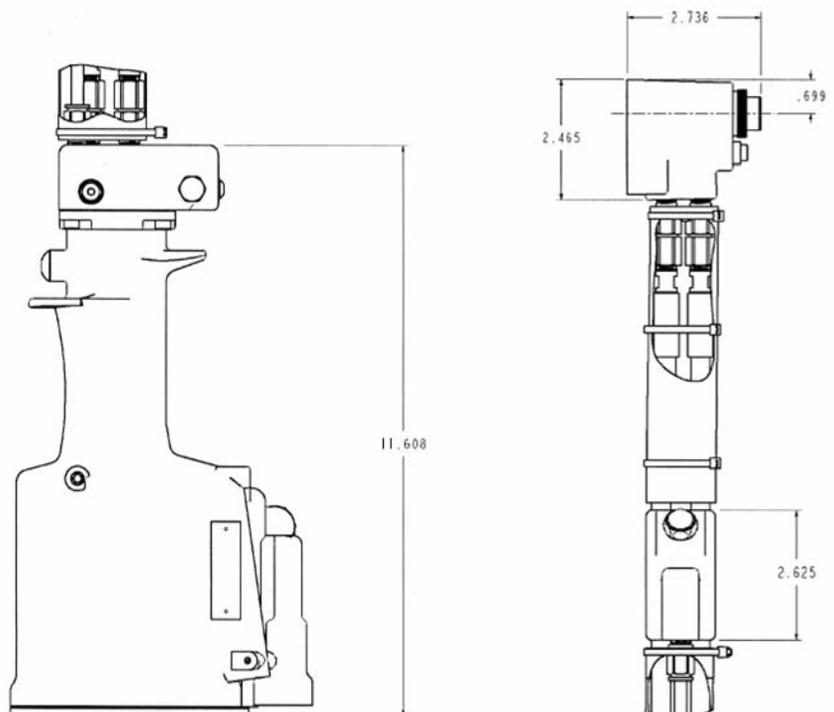
Total: 11.8 lbs. (5.35 kg), Head only: 2.0 lbs. (.91 kg)

NOISE LEVEL 66.5 dB (A)

VIBRATION 4.0 m/s²

AIR CONSUMPTION

.34 SCF/cycle (9.63 L/cycle)



HOW TO USE THE G84-LSR

After selecting the proper pulling head and attaching it securely to the G84-LSR, 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.

MAINTENANCE AND REPAIR

The G84-LSR 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. Keep hose fittings and hydraulic system plugs tightened snugly. Oil leaking around screws (33) indicates that a screw is loose or a Stat-O-Seal (34) needs replacing. Oil leaking around the small bypass hole near the base of the power unit handle (18) would indicate worn or damaged quad rings (15,16).

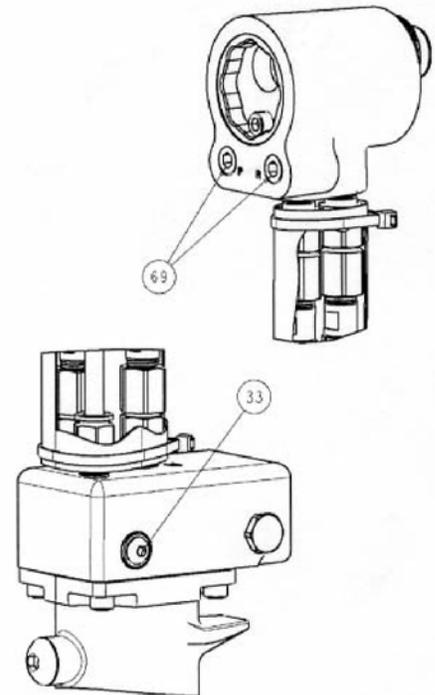
Use automatic transmission fluid Type "A" (no substitutes). Cherry Aerospace LLC recommends using ATF, Dexron III oil. See following page for safety precautions for using and storing Dexron III oil..

FILL AND BLEED INSTRUCTIONS

To replace a small amount of oil in the tool, remove socket head cap screw (33) from side of handle (18). 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 reassembled, take the following steps:

1. Stand power unit upright. Power unit must be higher than the Hoses and Head Assembly. Hold trigger down and when air piston (7) bottoms, disconnect tool from air line.
2. Head piston (64) should move to the rear position during Step 1. If it does not, push the head piston (64) back manually.
3. Remove pipe plug (69) at the location marked "R" from the rear of the head and the button head cap screw (33) from manifold (35). Power unit must be placed higher than the head sub-assembly. Attach a pressure oil can to button head cap screw hole (33) and pump automatic transmission fluid Type "A", such as Dexron III ATF or equivalent (see chart).
4. Force the fluid into the hole (33) until oil flows out of hole (69) marked "R".
5. If oil does not pump easily it indicates that the power piston (25) is seated on the rod sealing face. To open, inject a slight puff of air into the tool and continue pumping until oil flows free of bubbles.
6. Replace pipe plug (69) on side marked "R" on the head and remove pipe plug (69) on side marked "P". Hold a cloth over the hole (69) and connect the tool to air line. Excess oil and air will be discharged from the hole into the cloth. Remove cloth, continue to force oil through hole (33) until it flows air-free out of the (69).
7. Attach Cherry air bleeder (700A77) to filler hole (33) and cycle the tool a few times until there is no air bubble forming within the bleeder bottle.
8. Cherry air bleeder (700A77) should be used for routine bleeding of air from G84-LSR.



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 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 all hoses are always in good condition.
- Excessive contact with the Dexron III ATF 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 in place.
- Do not operate the tool unless the power unit base (2) is fully secured by the retaining ring (3).
- All retaining rings, screwed end caps, air fittings, hoses, hose fittings, trigger valves and pulling heads should be attached securely and examined at the end of each working shift.
- Do not pull fasteners 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 Aerospace LLC.
- Do not pound on the rear of the tool head to force fasteners into holes as this will damage the tool.
- Do not depress the trigger while disconnecting the air bleeder and replacing the socket head cap screw (33) when bleeding the tool.

TROUBLE SHOOTING

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: 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 in appropriate container for disposal.

HANDLING: Eye protection required. Protective gloves recommended. Chemical-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)

1. Check the air line for correct pressure at the tool. It must be 90 to 110 psi (6.2 to 7.6 bar) at the tool.
2. Check the tool for lack of oil (see Fill and Bleed instructions).
3. Check for oil leakage:
 - Oil leaking around pipe plugs (69) in head indicates that the pipe plug is loose.
 - Oil leaking from the front of head (10) indicates that O-rings (67) and back-up ring (68) are worn or damaged.
4. Check for excessive air leakage from the air valve:
 - If spring (49) is broken or dislodged, air will bleed directly through the bottom of the air valve sub-assembly and the head piston (64) retreats to its full stroke without returning. See air valve instructions on Page 7.
 - If O-rings (48) on valve spool sub-assembly (91) are worn or damaged, replace.
5. Check movement of the head piston (64). If it does not move freely or is slow in operation:
 - O-Rings (66), or back-up ring (67) may be damaged and require replacement.
 - Head piston (64) may be mechanically locked due to damaged parts.
 - Power piston (25) may be held off its seat on power piston and rod sub-assembly (89) allowing oil to bypass. Drain tool, flush thoroughly, check for contamination and refill with fresh oil. Muffler (55) or air filter (51) inside valve spool sub-assembly (91) may be plugged with dirt. Clean thoroughly with normal solvent and back-blow with compressed air.
 - Oil leakage from front of head (70) indicates damage to O-ring (67) and back-up ring (68) and should be inspected and replaced.
 - Oil leakage from rear of tool indicates damage to O-rings (61,63) and back-up rings (60,62) and should be inspected and replaced.
 - Cap screw (57) must be securely in place to keep power lock ring (58) in place.
6. Check lockbolt stem. If it sticks in the pulling head:
 - Pulling head components need maintenance. Disassemble the pulling head; clean and replace worn parts. Reassemble following pulling head instructions.

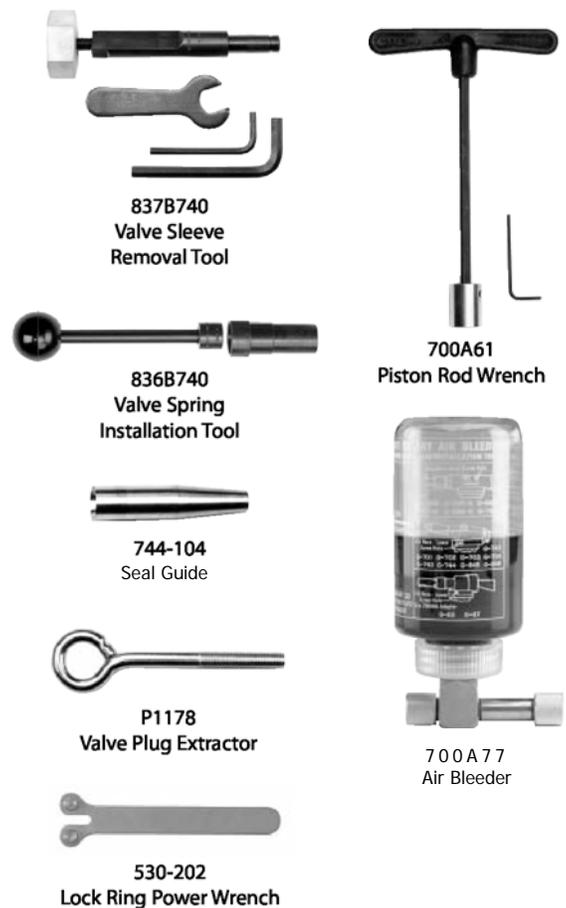
OVERHAUL

The disassembly and re-assembly procedures can be accomplished by following the instructions and the drawings on pages 11 and 13. Use extreme care during disassembly and reassembly not to mar, nick or burr any smooth surface that comes in contact with O-rings. Before installing O-rings and quad rings, be sure to apply an O-ring lubricant such as Parker O-Lube, or equivalent. It is recommended that special assembly tools, which can be ordered under part number G84-LSRKT, 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, a complete overhaul can be achieved by the use of Service Kit G84-LSRKS which contains a complete set of O-rings, quad rings, back-up rings, screws, washers and gaskets.

G84-LSR TOOL KIT

Not shown, but included: 530-201 Packing Plug Wrench



AIR VALVE SUB-ASSEMBLY

- To disassemble, first disconnect tool from its air source.
- Remove retaining ring (56) and muffler (55). Insert a valve plug extractor (P1178) or 5/16-18 threaded rod or bolt into end of valve plug (54) and pull it out. Using the same procedures, pull out valve spool sub-assembly (91). NOTE: It should never be necessary to remove valve sleeve (47) unless the ports in the sleeve have become plugged from contaminated air. The O-rings (46) on this sleeve are static and therefore do not wear.
- If it is suspected that the ports are plugged, use needle nose pliers to grasp the end of spring (49), turn clockwise and pull to dislodge from groove in power unit handle (18).
- With spring removed, valve sleeve (47) 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 (46), carefully install valve sleeve (47) with your fingers. Gently push and wiggle valve sleeve (47) to allow O-rings to slip past inner ports. Spring (49) is best installed using a valve spring installation tool (836B740) to push the large diameter coil into the groove. This requires care as the G84-LSR will not operate if this spring is not anchored firmly.

HEAD SUB-ASSEMBLY

- Always remove the complete pulling head from the tool before attempting to disassemble the head sub-assembly.
- Disconnect tool from air line. Remove socket cap screw (57) from rear of head (70) and unscrew lock ring (58) using spanner wrench (530-202).
- Hold head assembly over a pan to catch oil, which will run out. Empty oil into a container by draining from head, hoses and power unit. Dispose of oil according to environmental regulations.
- Remove rear stop (59) from the rear of the head.
- Remove piston (64) with the O-ring (66) and back-up ring (65) around the groove on piston (64), by pushing it out of the rear of the head.
- O-ring (67) and back-up rings (68) may now be removed using a bent hook. Also, O-ring (63) and back-up ring (62) can be removed in the same way from the inner groove on rear stop (59).
- If the head piston (64) 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 pressure relief valve sub-assembly (90), consisting of components (36) through (42).
- Remove the pressure relief valve sub-assembly (90) from the manifold (35). Remove the O-ring (42) from the manifold (35). If damaged, replace. When all components have been removed, clean and dry thoroughly.
- Upon re-assembly, reverse the above procedures. Before installing the ball seat (41) into the manifold (35), make sure the O-ring (42) is seated concentrically inside of the valve cavity.
- Always lubricate all O-rings with Parker O-Lube or equivalent. The re-assembly sequence is the opposite of disassembly.

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 serration of the jaws and may cause the stem to slip. Please refer to the pulling head charts below for the proper selection. All pulling heads suitable for the 206 style tool will fit directly on this tool.

CHERRY RIVETER	FASTENER TYPE	PULLING HEAD	DIAMETER
G84-LSR	LOCKBOLT	99-1703	-5
		99-1704	-6
	PULL TYPE BLIND BOLT	99-3712	-5
		99-3713	-6

POWER UNIT SUB-ASSEMBLY

To completely disassemble the power unit, disconnect tool from air supply, then use the following procedures:

- Remove the four socket head cap screws (19). As manifold (35) is removed, hold over a container to collect oil. Drain oil from head assembly and hoses, and empty oil from the power unit into a container. Dispose of oil according to environmental regulations.
- Remove gasket (22) and O-rings (21).
- Remove retaining ring (1), and remove the base cover (2) from the power unit handle (18).
- Remove retaining ring (3), and using a screwdriver, carefully pry handle base (4) out of the power unit handle (18).
- Place piston rod wrench (700A61) down into the top of the power unit handle (18) and engage the hex socket of the piston rod cap (26). While holding this wrench, remove locknut (6) with a ½" socket, and unscrew air piston (7) by using packing plug and air piston wrench (530-201) together with a 1 ¼" socket. When the air piston (7) is completely disengaged from the piston rod, use the valve plug extractor (P1178) or a 5/16-18 threaded rod or bolt; screw it into the internal thread of the air piston (7), and pull it out the air piston, with quad ring (8) and back-up rings (9), from the bottom of the tool.
- Thread the power piston rod seal guide (744-104) onto the end of the piston rod, push the power piston and rod sub-assembly (89) up and remove it from the top of the handle (18).
- Using packing plug wrench (530-201) together with a 1 ¼" socket, remove packing plug (11). It may be necessary to hold the handle upside down in a vise while loosening the packing plug (11). Remove O-ring (12) with a thin, bent hook, as well as the O-rings (13) and back-up rings (14) in the bore grooves of the packing plug.
- The power cylinder (17) can be removed by placing a 1" diameter rod on the top surface, tapping it out carefully with a mallet, and removing it from the bottom of the tool.

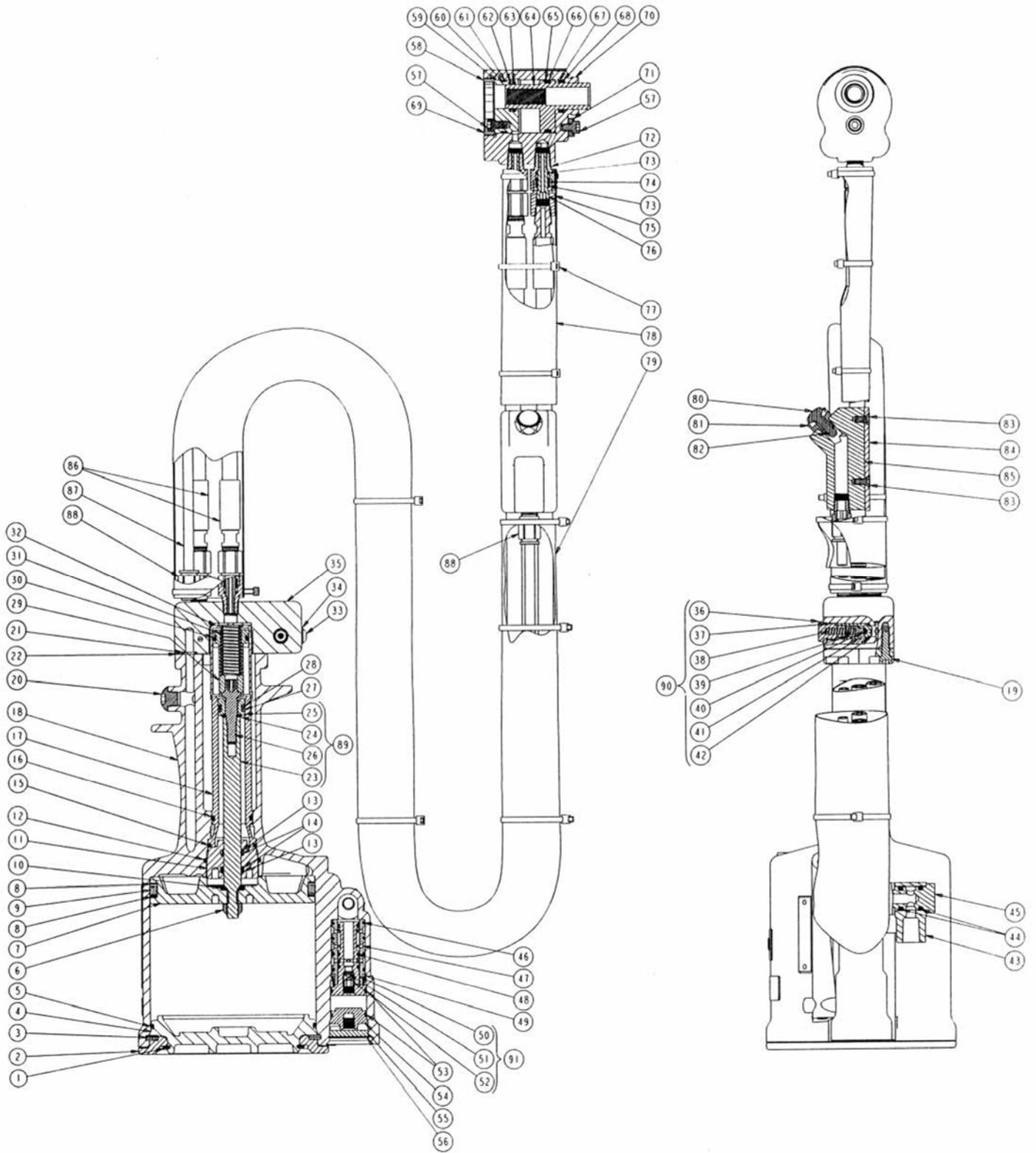
To re-assemble the power unit sub-assembly, reverse the above procedures, being certain that all the O-rings are properly lubricated before installation.

- Insert the power cylinder (17) with O-rings (15) and (16) into the bottom of the handle (18) and into its bore. To seat the power cylinder (17), place a 1" bar against its bottom surface, and tap into place gently with a mallet. Be careful not to damage the O-rings.
- Insert O-rings (13) and back-up rings (14) in packing plug (11) and thread into position against the power cylinder (17) by turning it clockwise with packing plug wrench (530-201) together with a 1 ¼" socket.
- Thread the power piston rod seal guide (744-104) onto the end of the power piston and rod sub-assembly (89). Insert the assembly into the top of handle (18) and into the bore of the power cylinder (17). Using a mallet, tap the end of the power piston and rod sub-assembly (89) through the packing plug (11). Remove the power piston rod seal guide (744-104).
- Using packing plug wrench (530-201), insert air piston (7) with quad ring (8) and back-up rings (9) into the main bore of the handle (18) until it engages the threaded end of the power piston and rod sub-assembly (89).
- Using piston rod wrench (700A61), tighten power piston and rod sub-assembly into air piston (7).
- Thread locknut (6) onto the end of the power piston and rod sub-assembly (89) and tighten using a ½" socket.

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

- Insert handle base (4) with lubricated O-ring (5) into the bottom of the handle (18) and tap it into its seat. Replace retaining ring (3), base cover (2), and retaining ring (1).
- Using power piston wrench (700A61), push the power piston and rod sub-assembly (89) and air piston (7) to bottom of tool.
- Fill the power unit sub-assembly with oil to about 1/8" above the top of the power piston (17) according to the Fill and Bleed instructions.
- Replace gasket (22) and O-rings (21) on the top of handle (18) and install the manifold sub-assembly. Secure the manifold (35) with the four socket head cap screws (19) and tighten evenly. Make sure the gasket and O-rings are properly oriented.

CROSS SECTIONAL DRAWING OF G84-LSR



PARTS LIST FOR THE G84-LSR (744-180) ASSEMBLY, SPLIT RIVETER

ITEM NO.	PART NO.	DESCRIPTION	QTY
744-158 Sub Assembly, Handle			
1	P-884	Ring, Retaining (Ext. Ø 3.375)	1
2	740B5	Cover, Base	1
3	P-886	Ring, Retaining (Int. Ø 4.250)	1
4	740C4	Base, Handle	1
5	P-890	O-Ring (4.193, 3.897, .103)	1
6	P-1392	Nut, Conelock 5/16-18	1
7	744-094	Piston, Air	1
8	P-909	Ring, Back-Up (4.245, 3.875, .185)	2
9	P-887	Ring, Quad (4.270, 3.850, .210)	1
10	744-095	Washer, Air Piston	1
11	744-165	Plug, Packing	1
12	P-889	O-Ring (1.505, 1.299, .103)	1
13	P-1405**	O-Ring (.630, .424, .103)	2
14	P-1410	Ring, Back-Up (.624, .452, .086)	2
15	P-892**	O-Ring (1.255, 1.049, .103)	1
16	P-833**	O-Ring (1.068, .862, .103)	1
17	744-161	Cylinder, Power	1
18	743A11	Handle	1
19	P-73	Screw, Soc. Hd. Cap 10-24 x 5/8	4
20	530A113	Screw, Button Hd. Cap 3/8-24	1
21	P-832**	O-Ring (.379, .239, .070)	2
22	744-171	Gasket, Manifold	1
89	744-122	Sub-Assembly, Power Piston and Rod	
	23	744-164* Rod, Power Piston	1
	24	740A12* Stop, Piston	1
	25	744-163* Piston, Power	1
	26	744-087* Cap, Piston Rod	1
27	P-1406	O-Ring (.693, .487, .103)	1
28	P-213	Ring, Back-Up (.676, .500, .088)	1
29	744-160	Piston, Return	1
30	P-104	O-Ring (.934, .737, .103)	1
31	P-1414	Spring, Compression	1
32	744-175	Cylinder, Return	1
33	P-573	Screw, Button Hd. Cap, 10-32x1/4	2
34	P-572	Stat-O-Seal (.430, .180, .125)	2
35	744-155	Manifold, Handle	1
90	700-214	Sub-Assembly, Relief Valve	
	36	700-218 Seat, Spring	1
	37	P-383 O-Ring (.441, .301, .070)	1
	38	P-1366 Spring, Compression	1
	39	700-217 Piston, Valve	1
	40	P-688 Ball (3/32)	1
	41	700-215 Seat, Ball	1
	42	P-111 O-Ring (.379, .239, .070)	1
43	530A34	Swivel	1
44	P-195	O-Ring (.630, .424, .103)	2
45	530A35	Bolt, Swivel	1

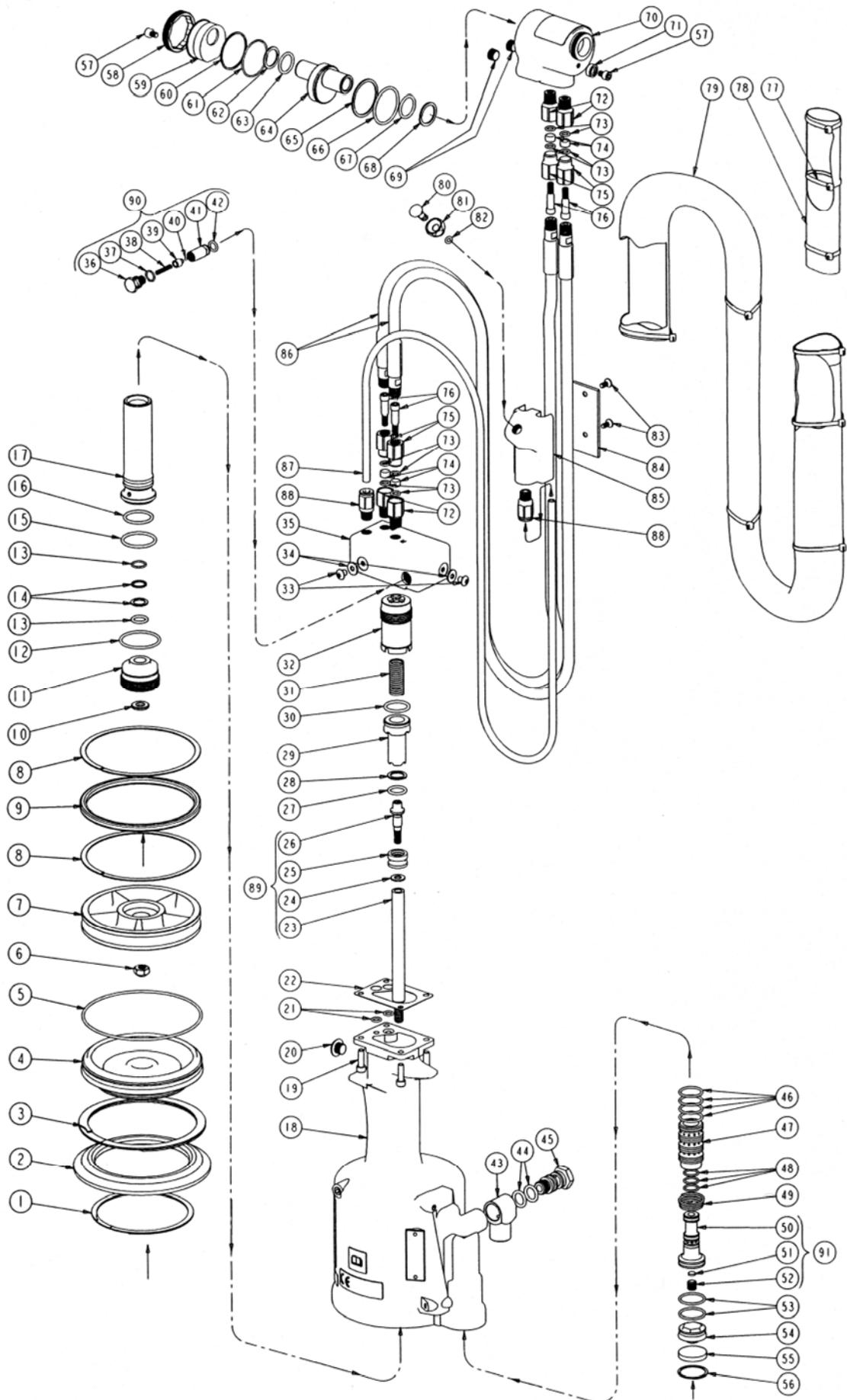
ITEM NO.	PART NO.	DESCRIPTION	QTY
46	P-268	O-Ring (.816, .676, .070)	4
47	740B14	Sleeve, Valve	1
48	P-891**	O-Ring (.566, .426, .070)	3
49	740A18	Spring	1
91	740A15	Sub-Assembly, Valve Spool	
	50	740B15-1* Spool, Valve	1
	51	700A18* Filter	1
	52	700A69* Screw, Metering	1
53	P-848	O-Ring (.941, .801, .070)	2
54	740B16	Plug, Valve	1
55	740A17	Muffler	1
56	P-321	Subassembly, Ring, Retaining (Int. ø 1.000)	1
74	-166		
57	P-85	Screw, Soc. Hd. Cap 10-32 x 1/4	2
58	744-144	Lock, Ring, Power	1
59	744-142	Stop, Rear	1
60	P-1419	Ring, Back-Up (1.377, 1.273, .052)	1
61	P-1420**	O-Ring (1.379, 1.239, .070)	1
62	P-1411	Ring, Back-Up (.812, .640, .086)	1
63	P-1407	O-Ring (.818, .612, .103)	1
64	744-140	Piston, Head	1
65	P-1412	Ring, Back-Up (1.379, 1.207, .086)	1
66	P-1409**	O-Ring (1.309, 1.380, .103)	1
67	P-1408**	O-Ring (.880, .674, .103)	1
68	P-209	Ring, Back-Up (.864, .688, .088)	1
69	P-698	Pipe, Level Seal, 1/8-27 NPTF,	2
70	744-168	Cylinder, Head, Machining	1
71	744-145	Stop, Pulling Head	1
74	-150	Sub-Assembly, Swivel	4
72	744-152	Swivel, Top	1
73	P-832**	O-Ring (.379, .239, .070)	2
74	744-154	Swivel, Bushing	1
75	744-151	Swivel, Bottom	1
76	744-153	Swivel, Screw	1
77	P-1417	Tie, Cable, Black UV Resistant	10
78	744-176-16	Sleeving, Nylon, 16" LG.	1
79	703 A33	Sleeving, Nylon, 104" LG, Trigger	1
80	530A38	Trigger	1
81	703A32	Sleeve, Trigger	1
82	P-223	O-Ring (.145, .285, .070)	1
83	P-747	Screw, Flathead, 8-32 x 3/8	2
84	744-174	Plate, Manifold, Trigger,	1
85	744-173	Trigger, Manifold Machining	1
86	P-1415	Assembly, High Pressure Hose	2
87	744-169	Tubing, 1/4 O.D., Red Polyurethane	1
88	P-1413	Connector, Straight Male	2

* Not sold separately.

** No substitutions.

All dimensions in inches.

EXPLODED VIEW OF THE G84-LSR



Declaration of Conformity

We, *Cherry Aerospace LLC, 1224 East Warner Ave., Santa Ana, CA 92707*

declare under our sole responsibility that the product

type **G84-LSR**

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: _____

Ahmed Eldessouky, Engineering Manager, Product Engineering

WARRANTY

Cherry Aerospace LLC (hereinafter "Cherry"), hereby warrants to the initial retail customer ("Warrantee") only that its products will be free from defects in material and workmanship, provided that the products are used in accordance with Cherry's instruction as to maintenance, operation and use. The duration of the foregoing warranty is limited to 90 days from the date of first use by the Warrantee.

The warrantee's only remedy and Cherry's only obligation in the event of a defect or failure in the products, is that Cherry will, at its sole option, repair, replace or rework the products, but in no case shall the cost of the foregoing exceed the invoice price of the products.

This Warranty shall be void if any person seeking to make a claim for defective or failed products fails to notify Cherry within thirty (30) days of receipt of evidence that the product is defective or has failed, or if said person fails to provide Cherry with such evidence as is reasonably requested concerning the defect or failure, including without limitation, evidence of the date of purchase and date of installation. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED,

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