

Instruction Manual
LH-224 & LH-224B
Pneudraulic Installation Tool



**Huck
Fasteners**

From Cordant Technologies

Huck International Ltd.
LH-224 ENG
Revision: 17.02.00

EC DECLARATION OF CONFORMITY FOR MACHINERY

(according to Annex II A of the Machinery Directive)

We, LOBTEX CO., LTD., 12-8, Shijs-cho, Higashi-Osaka, Osaka 578 Japan, herewith declare, on our own responsibility, that the product

"HUCK" Brand Pneumatic-Hydraulic Fastener Installation Tool
model no. L H-3 2 4.

production serial no. UM 8183
(if known)

which this declaration refers to, is according to the conditions of the European Machinery Directive 89/392/EEC, 91/368/EEC, 93/44/EEC & 93/68/EEC.

Osaka, Japan

date MAR. 18. 1999
(signature)

(country, place and date)

LOBTEX CO., LTD.

M. Hosoda
M. Hosoda, production manager
fastener tool division

(name, address & signature or equivalent
stamp of authorized person)

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Huck Fastening Systems

Safety Guidelines when using Huck Installation Equipment to install Huck Fasteners.

Before using equipment:

1. Only Huck Installation Equipment should be used to install Huck fasteners.

2. Only persons that have received training approved by Huck International Ltd should use Huck Installation Equipment.

3. The Manuals and/or Data sheets and warning stickers/labels supplied with the Installation equipment should be studied before connecting the equipment to any primary power supply, in particular the following sections:

Warnings and Cautions.

Specifications

Electrical and/or Air supply.

Principals of Operation.

Preparation for use.

Regular use.

Regular maintenance.

4. With hydraulic tooling, ensure that it is suitable for use with the Huck Powerig or Huck approved hand pump being used.

5. Check that the Powerig or approved hand pump "Pull" and "Return" pressures have been adjusted to suit the tool being used. Reference must be made to the instruction manual supplied with the equipment.

6. Check that the Nose Assembly is of the correct type suitable for installing the fastener being used.

7. Visually check all pneumatic and/or hydraulic hoses, electrical cables, Powerigs, hand pumps and hand tools, for any visible signs of damage and leakage. ALL HYDRAULIC HOSES SHOULD BE RENEWED EVERY FIVE YEARS.

8. Do not connect any equipment to primary power supplies or attempt to use any equipment, that shows signs of damage or leakage.

9. Ensure that all air and/or hydraulic hose and/or electrical plugs/connectors are correctly connected before switching on supply to equipment.

When operating the equipment:

10. When using fasteners in some types of structure, the fracturing of the pintail during installation may generate noise levels above the first action level of the Noise at Work Regulations and therefore hearing protection must be worn.

11. It is recommended that eye protection, (eg. safety glasses), should be worn by the operator.

12. Never look directly at the front or rear of the installation tool.

13. Never hold the Installation Tool around the Nose Assembly.

14. Keep hands/fingers clear of any moving parts and also apertures in Nose Assemblies.

15. Warning
Fasteners should only ever be installed in the actual workpiece to prevent possible high velocity ejection from the Nose Assembly due to tensile forces induced during pintail fracture.

16. When using two piece fasteners, (ie. Pin and Collar type), the conical/chamfered end of the collar MUST always be towards the Nose assembly, NOT against the work piece.

17. Keep fingers clear from the underside of the head, collars and blind side of fasteners and from within the joint being fastened, during the installation cycle.

18. Do not look directly at the head or blind side of fasteners during the installation cycle.

19. During the installation cycle, the tool will pull and straighten itself to the axis of the fastener, beware of hands being trapped against any nearby structure.

KEEP HANDS CLEAR

20. In the event of any difficulty whilst installing a fastener, releasing the tool trigger at any time during the installation cycle will immediately put the tool into reverse.

21. Beware of fastener pintails which are ejected, (sometimes forcibly), from the tool at the completion, or at pintail fracture, during the installation cycle. Tools designed to have Pintail Deflectors and or catchers must never be used without them.

22. Do not continue to use any equipment which develops a fault whilst being used.

23. Avoid kinking of hoses or dragging of hoses and electrical cables over sharp objects.

This instruction manual must be read with particular attention to the following safety guide lines, by any person servicing or operating this tool.

1. Safety Glossary

WARNINGS - Must be understood to avoid severe personal injury.

CAUTIONS - show conditions that will damage equipment and or structure.

Notes - are reminders of required procedures.

Bold, Italic type and unerlining - emphasises a specific instruction.

2. Huck equipment must be maintained in a safe working condition at all times and inspected on a regular basis for damage or wear. Any repair should be done by a qualified repair person trained on Huck procedures.

3. Repair person and Operator must read and understand any Warning and Caution stickers/labels supplied with equipment before connecting equipment to any primary power supply - - as applicable, each of the sections in this manual have specific safety, and other information.

4. When repairing or operating Huck installation equipment always wear approved eye protection. Where applicable, refer to ANSI Z87.1 - 1989.

5. Disconnect primary power source before doing maintenance on Huck equipment.

6. If any equipment shows signs of damage, wear or leakage, do not connect it to the primary power supply.

7. Make sure proper power source is used at all times.

8. Never remove any safety guards or pintail deflector.

9. Never install a fastener in free air, personal injury from fastener ejecting may occur.

10. Do not abuse tool by dropping or using it as a hammer. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency, eliminating downtime and in preventing an accident which may cause severe personal injury.

Description

The pneumatically operated LH-224 is a lightweight, high speed Installation Tool designed to install Huck blind and two piece Fasteners up to 6.35 mm (1/4") diameter. Pulling action of the piston is provided by a pneumatic- hydraulic intensifier system powered by 6.2 to 6.9 bar (90 to 100 psi) air pressure. The correct Nose Assembly must be fitted to the Installation Tool to suit the particular Huck fastener being used.

The fastener installation sequence starts when the Tool trigger is operated and the return cycle starts when the trigger is released. The Tool piston is returned to the fully forward position by a compression spring in the head of the tool at the completion of the fastener installation cycle.

Specifications

Installation Tool Type	LH-224 & LH-224B
Maximum recommended Air supply pressure	6.9 bar (100 psi)
Installation Tool stroke	21 mm
Installation Tool capacity	19 kN
Length (LH-224)	260 mm
Length (LH-224B)	340 mm
Width (nominal Air Cylinder diameter)	107 mm
Height	322 mm
Weight	2.8 kg

Dimensions and weight of the Installation Tool are shown on page 5.

Noise

The sound measurement is in accordance with BS EN ISO 3746: 1996. Data is as follows:

	SEL (dBA) average	Peak(C weighted (dBA) average
Without Fasteners:	78.075	77.025
*Installing Fasteners:	71.975	121.425

Vibration

The vibration measurement is in accordance with BS EN 28662-1:1993. Data as follows:

* Installing Fasteners: Aeq (m/s²) average = 2.458

Huck Fasteners MGP-R8-10 Pin plus MGC-U8 Collar installed in aluminium test plates held in a workbench vice.

Disposal

Metalic and non-metalic parts/components/materials, (including any fluids), should be disposed of by processing through authorised methods and in accordance with current legislation.

Intended Use

The LH-224 hand held Installation Tool is designed to be used in a normal, factory working environment in conjunction with the appropriate Huck Nose Assembly, to install Huck MAGNA-LOK, MAGNA-BULB, AUTO-BULB, C6L or MAGNA-GRIP fasteners with a maximum diameter of 6.35 mm (0.250").

All dimensions in millimetres

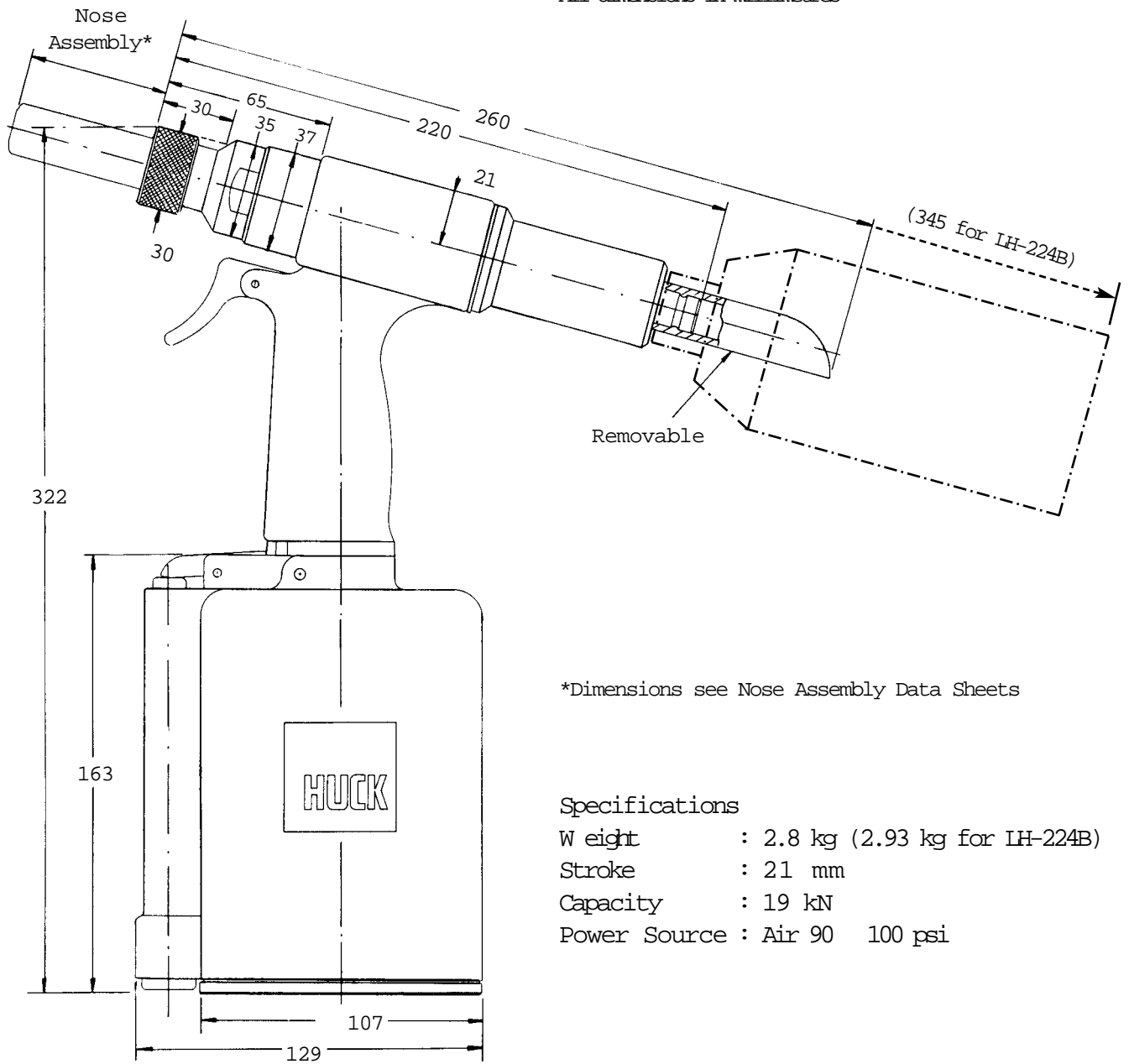


Fig. 1
Dimensions and Data

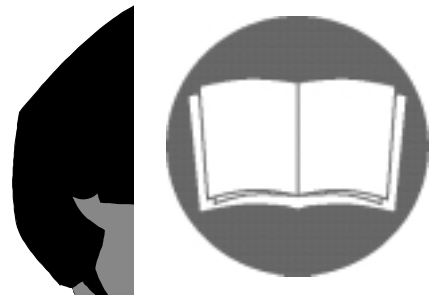
Principle of Operation

When the Trigger 23 is depressed the Throttle Valve 28 moves to down position, pressurized air is directed to underneath the Air Piston 58, causing the Piston and Piston Rod 49 to move upward. The air above the Piston is exhausted from the tool. As the Piston Rod 49 moves upward, a column of hydraulic oil is forced into the head of the tool in front of the Pull Piston 15, which moves back. The attached Nose Assembly moves with the Pull Piston to start fastener installation. When fastener installation is completed, the Trigger 23 is released and the Spring 30 causes the Throttle Valve 28 to return to its up position. Pressure from Spring 18 returns the Pull and Air Pistons to their original positions. The air from below the Air Piston is exhausted from the tool. The Shock Absorber 68 impedes oil flow at pinbreak helping prevent tool recoil.

Preparation for Use

The air supply connector has a male pipe thread to accept an air hose fitting. Quick disconnect fittings and a 6.4 mm (1/4") inside diameter air hose are recommended. An air supply of 6.2 to 6.9 bar (90-100 psi) capable of delivering 566 l/min (20 CFM) is recommended. The air supply should be equipped with a filter-regulator-lubricator unit.

1. Read and ensure that you understand the Safety Guidelines at the front of this manual. Also, read and ensure that you understand the Specification, Noise, Vibration and Principal of Operation information shown on page 4.



2. Visually check the Installation Tool for damage and leakage, replace or rectify as necessary.



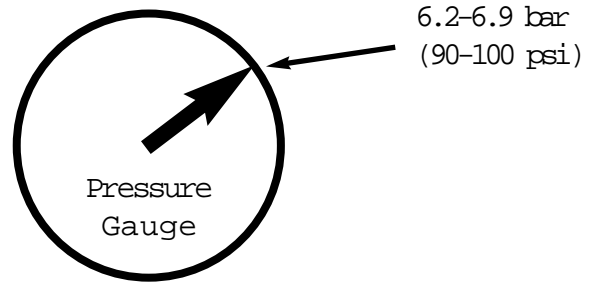
3. Ensure the Deflector is in place on the Installation Tool and that it is not damaged. Replace with a new Deflector if necessary.

4. Put in a few drops of Automatic Transmission Fluid (ATF)/DEXRON II, (or equivalent), into the Air Inlet Connector 43. Screw quick disconnect fitting into Air Inlet Connector.

CAUTION: Do not use TEFLON tape on threads - - use TEFLON in stick form only. (Huck Part Number 503273).



5. Set air supply pressure regulator to 6.2-6.9 bar (90-100 psi). Connect air hose to tool.

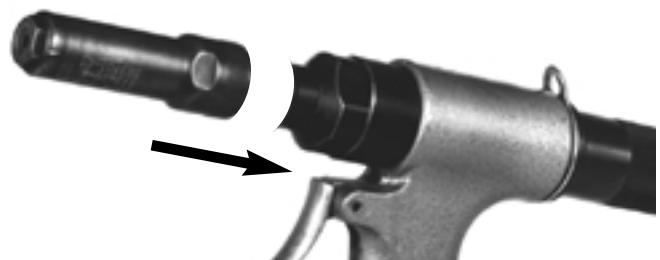


6. Using the Installation Tool Trigger, cycle the Tool several times to ensure correct function and that the Tool Piston returns to the fully forward position



7. Disconnect the air supply from the tool.

Select correct Nose Assembly from Tool/Nose Assembly Matrix. Screw Collet Assembly (including Lock Collar & Shim if applicable), onto tool Piston and tighten with a spanner. To Prevent the Piston rotating during tightening, insert a small allen key, (approx. 5 mm dia.), through the side hole of the Anvil Adaptor 4 and into the matching hole in the Pull Piston 15. Slide Anvil over Collet; slide Retaining Nut 3 over Anvil and tighten onto Anvil Adaptor 4.



Note

Use Vibratite or similar anti-loosening compound on threads of Collet to help maintain tightness during use.

8. Re-connect air supply and test for correct Tool function and fastener installation.

Instructions for use

1. Read and ensure that you understand the Safety Guidelines at the front of this manual. Also, read and ensure that you understand the Specification, Noise, Vibration and Principal of Operation information shown on page 4.
2. Ensure that the hole in the material to be joined is prepared in accordance with the information shown on the Engineering Standards for the fastener being installed.
3. Ensure that the grip length of the fastener to be installed is correct for the material thickness to be joined, (refer to the appropriate Engineering Standards for the fastener being used).
4. Ensure that the equipment has been prepared for use, (refer to the section in this manual "Preparation for Use").

WARNING

DO NOT OPERATE TOOLS WITHOUT PINTAIL DEFLECTORS. UNSHIELDED EYES, ESPECIALLY, MAY BE PERMANENTLY INJURED AND OTHER SEVERE INJURIES MAY BE CAUSED BY FLYING PINTAILS. WHEN A DEFLECTOR IS IN PLACE ON THE TOOL, BROKEN PINTAILS WILL STILL EJECT WITH SPEED AND FORCE. BE SURE THE PINTAIL DEFLECTOR IS DIRECTED SAFELY.

5. Insert the fastener into the prepared hole.
6. Hold the Installation Tool firmly by the handle with the hand in a position that enables finger operation of the Air Trigger. If necessary, use the other hand to support the Installation Tool by holding the Air Cylinder of the tool. DO NOT place the hand around the Nose Assembly. If a Pintail Collector Bottle or Bag is not fitted to the Installation Tool, ensure the Deflector is positioned safely so that the ejected Pintails will not cause injury to yourself or fellow workers.

7. Place the Nose Assembly over the Pintail of the fastener and gently push forward until the Anvil of the Nose Assembly is in contact with the fastener. Operate the Air Trigger.

8. When the fastener Pintail fractures, (at the same time the Installation Tool may be released from the installed fastener), release the Trigger. The Installation Tool Piston and inner components of the Nose Assembly will now return to the fully forward position, (return stroke), ready to install the next fastener; this normally takes about one second. To avoid damage to the Nose Assembly, DO NOT place the Nose Assembly over the Pintail of a fastener until the return stroke is completed.

9. If a Pintail Collector Bottle or Bag is fitted to the Installation Tool, empty at regular intervals using authorised disposal procedures. Failure to do this will could result in Pintails causing a blockage in the Installation Tool and/or Nose Assembly resulting in serious damage to components.

10. In the event of a mains air supply failure coincident with a fastener retained in the Nose Assembly of the Installation Tool, the Installation Tool and Nose Assembly must be placed in a safe location to prevent inadvertent operation of the Trigger once power is restored.

Servicing the Tool

General

1. The efficiency and life of any tool depends upon proper maintenance. Regular inspection and correction of minor problems will keep tool operating efficiently and prevent downtime. The tool should be serviced by personnel who are thoroughly familiar with how it operates.
2. A clean, well-lighted area should be available for servicing the tool. Special care must be taken to prevent contamination of pneumatic and hydraulic systems.
3. Proper hand tools must be available.
4. All parts must be handled carefully and examined for damage or wear. Always replace Seals, when tool is disassembled for any reason. Components should be disassembled and assembled in a straight line without bending, mis-alignment, or undue force. Disassembly and assembly procedures outlined in this manual should be followed.
5. Consumable parts should be available at all times. Other components, as useage dictates, should also be available.

WARNING

Inspect tool for damage and/or wear before each use. Do not operate if damaged or worn, as severe personal injury may occur.

Daily

1. If a Filter-Regulator-Lubricator unit is not being used, disconnect air supply at the tool and put a few drops of Automatic Transmission Fluid (ATF) or light oil into the air inlet of the tool. If the tool is in continuous use, put a few drops of oil in every two to three hours.
2. Bleed the air line to clear it of accumulated dirt or water before connecting air hose to the tool.
3. Check all hoses and couplings for damage or air leaks, tighten or replace if necessary.
4. Check the tool for damage or air/hydraulic leaks, tighten or replace if necessary.
5. Check the Nose Assembly for tightness or damage, tighten or replace if necessary.
6. Check stroke periodically, if stroke is short add oil. If stroke is still short, then bleed the tool in accordance with the instructions in this manual. (Bleeding should not have to be done on a daily basis).

W eekly

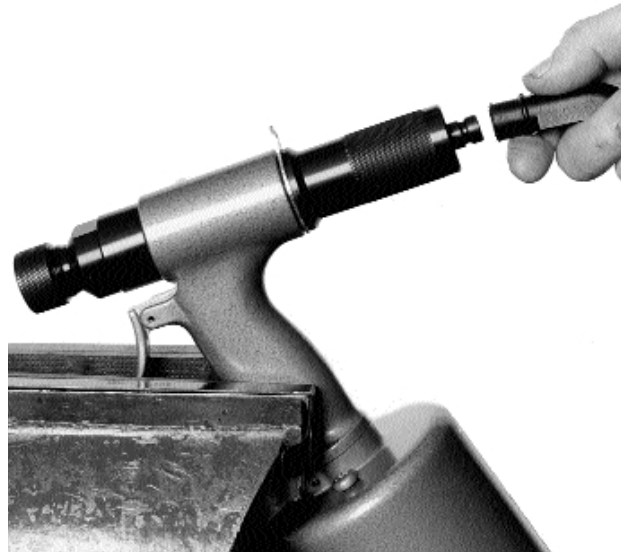
1. Disassemble and clean nose assemblies and reassemble as per applicable NOSE ASSEMBLY DATA SHEET.
2. Check the tool and all connecting parts for damage or oil/air leaks, tighten or replace if necessary.

Disassembly Instructions

WARNING

The air supply hose must be disconnected from the tool before cleaning, or carrying out any maintenance. Severe personal injury may occur if the air supply hose is not disconnected.

1. Remove Nose Assembly, Pintail Deflector and/or Pintail Collector Bottle.



2. Firmly hold the Handle of the Installation Tool in a vice, (use rubber faced vice grips).
Remove Deflector.
Unscrew the Rear Gland 21 from the head of the tool.

CAUTION

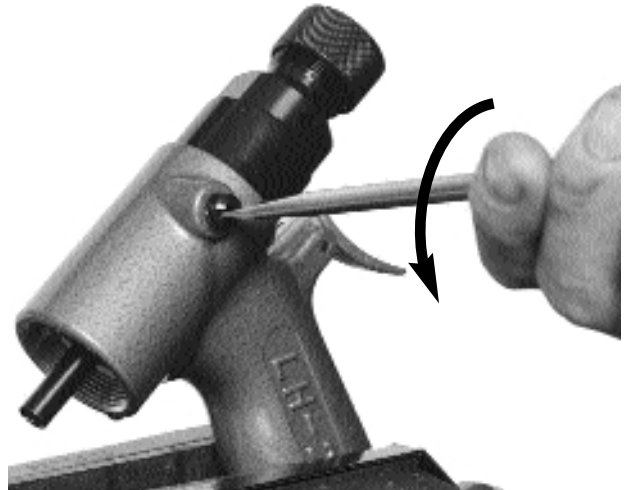
THE REAR GLAND IS UNDER PRESSURE FROM THE VERY POWERFUL INTERNAL SPRING - REMOVE WITH CARE.



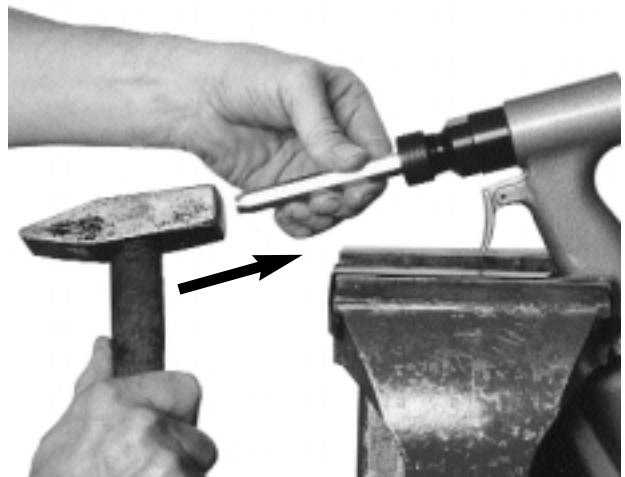
3. Remove Rear Gland 21 and Spring 18 from the tool head.



4. Remove the Bleed Plug 9 & O Ring 10.



5. Remove Pull Piston 15 from the tool head by inserting a small punch into the front of the Piston and tapping gently with a hammer.

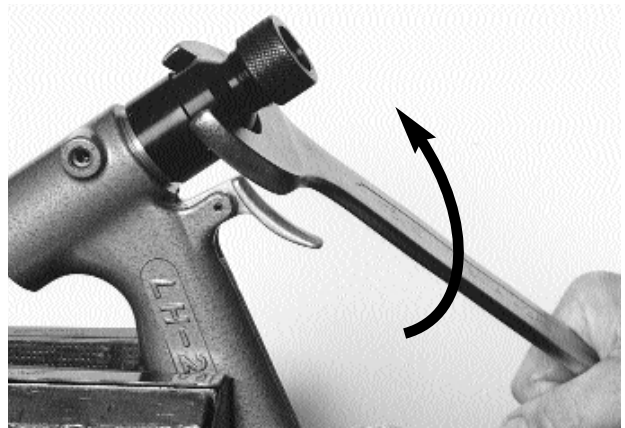


The Piston will slide out and can be removed.
Take care to contain any hydraulic fluid which may escape.

6. Any damaged O Rings and/or Back-up Rings can now be replaced.



7. Unscrew Anvil Adaptor 4 anti-clockwise from head of the tool.



8. Invert tool to allow any remaining hydraulic fluid to drain into a suitable container.



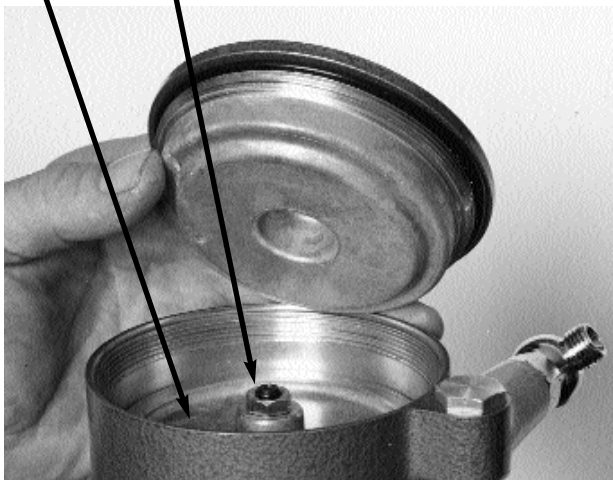
9. Using a pin punch and hammer, remove throttle lever Pivot Pin 22.



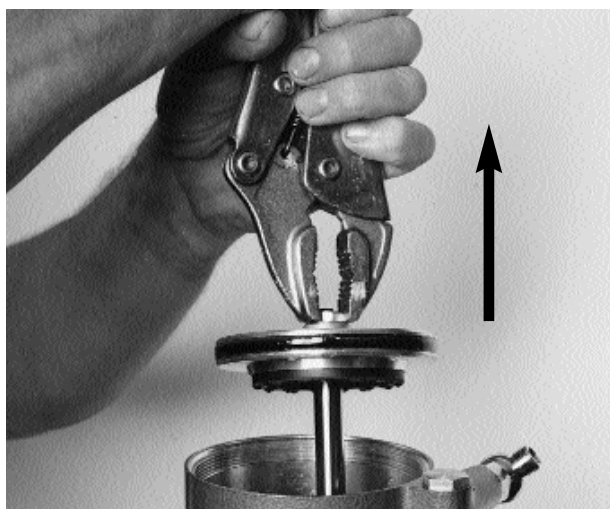
10. Remove Throttle Valve 28 & Spring 30 from tool body.



11. Clamp inverted tool firmly in a vice, (use fibre vice clamps). Use a 28 mm socket wrench to unscrew Cylinder Cap 51 anti-clockwise and expose Air Piston 58 & Nut 61.



12. Use a pair of locking pliers, (eg. Mole Grips), locked onto the Nut 61 and pull the Air Piston assembly out of the cylinder.



13. Use a 18 mm socket wrench to remove Plug 39 at the base of the Throttle Valve.



14. Remove Ball 36 and Spring 37.





Fig. 2
LH-224 Main Components

Assembly Instructions

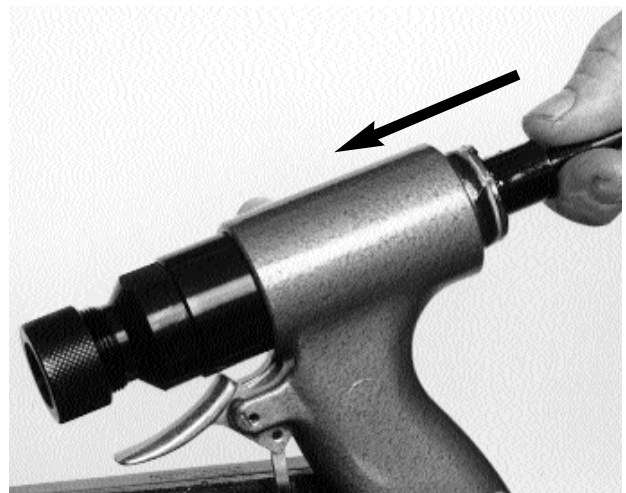
1. Assemble Adaptor-Anvil 4 onto the Handle 1, fully tighten clockwise with a spanner.



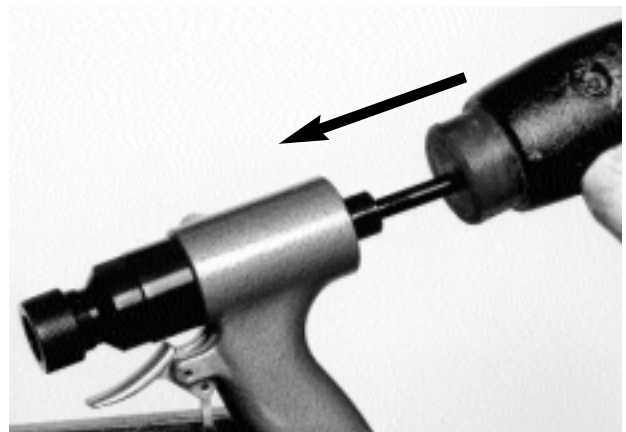
2. Apply grease to the O Rings and Back-up on the Piston 15.



3. Locate Piston inside the head assembly by pushing gently on the rear of the Piston.



4. Gently tap the rear of the Piston with a non-metallic soft faced hammer to locate the Piston fully inside the head assembly.



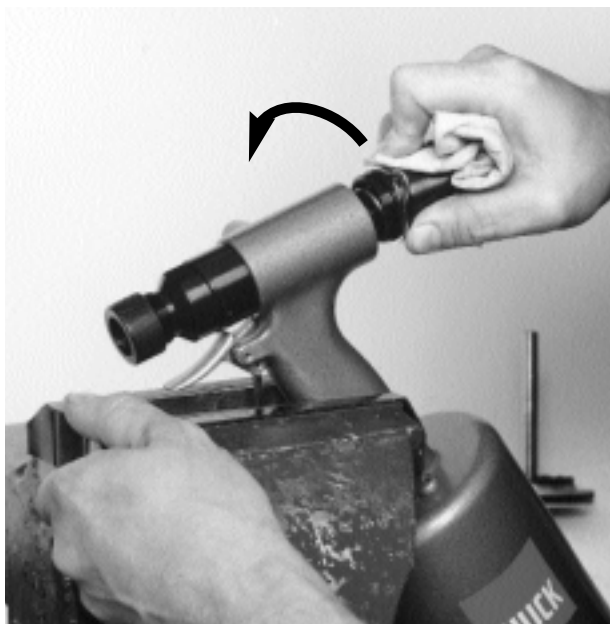
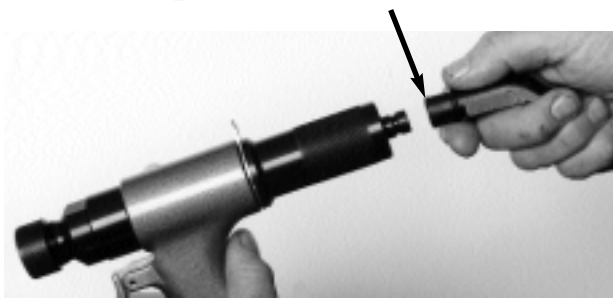
5. Locate Spring 18 inside head assembly. Locate Hanger 20 and O Ring 57 onto the threads of the Rear Gland 21.

6. Use a wad of cloth or paper to protect the hand, locate the Rear Gland over the Spring. Push the Rear Gland forward against the Spring to engage with the thread on the head assembly, rotate clockwise and fully tighten.

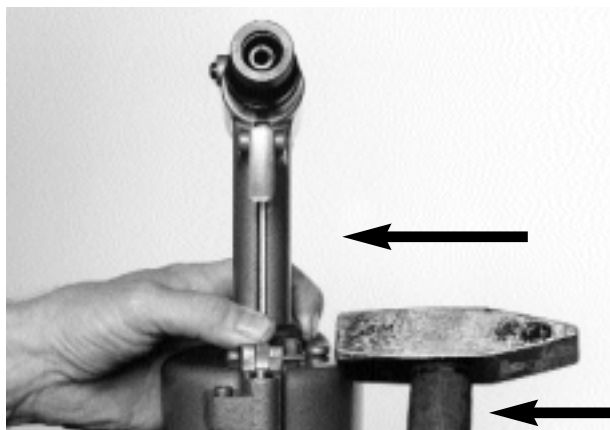
CAUTION

THE REAR GLAND IS UNDER PRESSURE FROM THE VERY POWERFUL INTERNAL SPRING - ENSURE THREAD OF REAR GLAND IS FULLY ENGAGED BEFORE REMOVING HAND.

Replace Deflector. If the Deflector is damaged, replace with a new one.

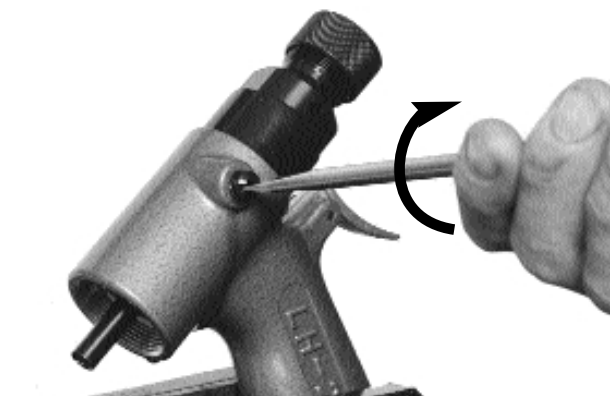


7. Assemble Linkage 24 and Lever-Throttle 25 together by lightly tapping Pin 22 with a hammer into the holes in both components.



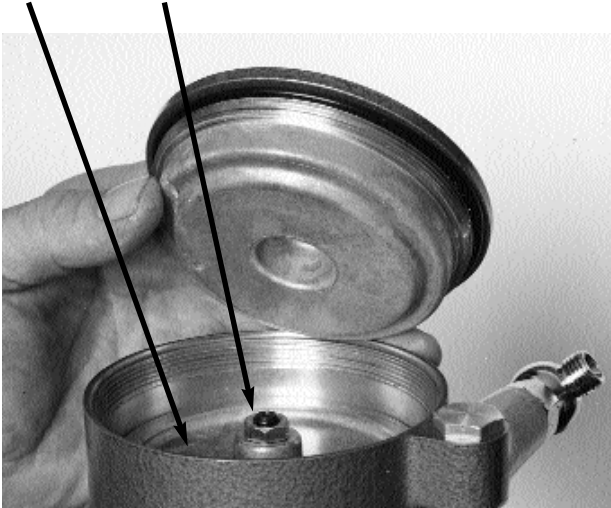
8. Replace the Bleed Plug 9 & O Ring 10 and fully tighten.

Continue from step 3 of the Filling and Bleeding Procedure



Filling and Bleeding Procedure

1. Clamp inverted tool firmly in a vice, (use fibre vice clamps). Use a 28 mm socket wrench to unscrew Cylinder Cap 51 anti-clockwise and expose Air Piston 58 & Nut 61.



2. Use a pair of locking pliers, (eg. Mole Grips), locked onto the Nut 61 and pull the Air Piston assembly out of the Air Cylinder.



3. Fill the Handle assembly of the tool with clean Hydraulic Automatic Transmission Fluid (ATF). Continue filling until the fluid is level with the bottom of the chamfer of the small hydraulic cylinder in the neck of the tool. To prevent contamination of the hydraulic fluid, use a clean container.



4. Clean any contaminants from the Air Cylinder using a lint free cloth. Insert Air Piston assembly into Air Cylinder ensuring that the Piston Rod 49 locates into its mating cylinder.



Continued on next page.....

5. Clamp inverted tool firmly in a vice, (use fibre vice clamps). Apply a thin coating of grease to the O Ring 53 on the Cylinder Cap 51. Use a 28 mm socket and torque wrench to tighten the Cylinder Cap 51 clockwise into the Air Cylinder. Tighten to 25 to 30 Ft.lb (33.90 to 40.68 Nm).

6. Stand tool on a level surface (e.g. workbench), then partly unscrew Bleed Plug 9 to release any excess hydraulic pressure. Re-tighten Bleed Plug.



7. Connect tool to a suitable air supply and Cycle tool several times to check for any leaks and correct function. Continue testing tool in accordance with the section in this manual Preparation for Use

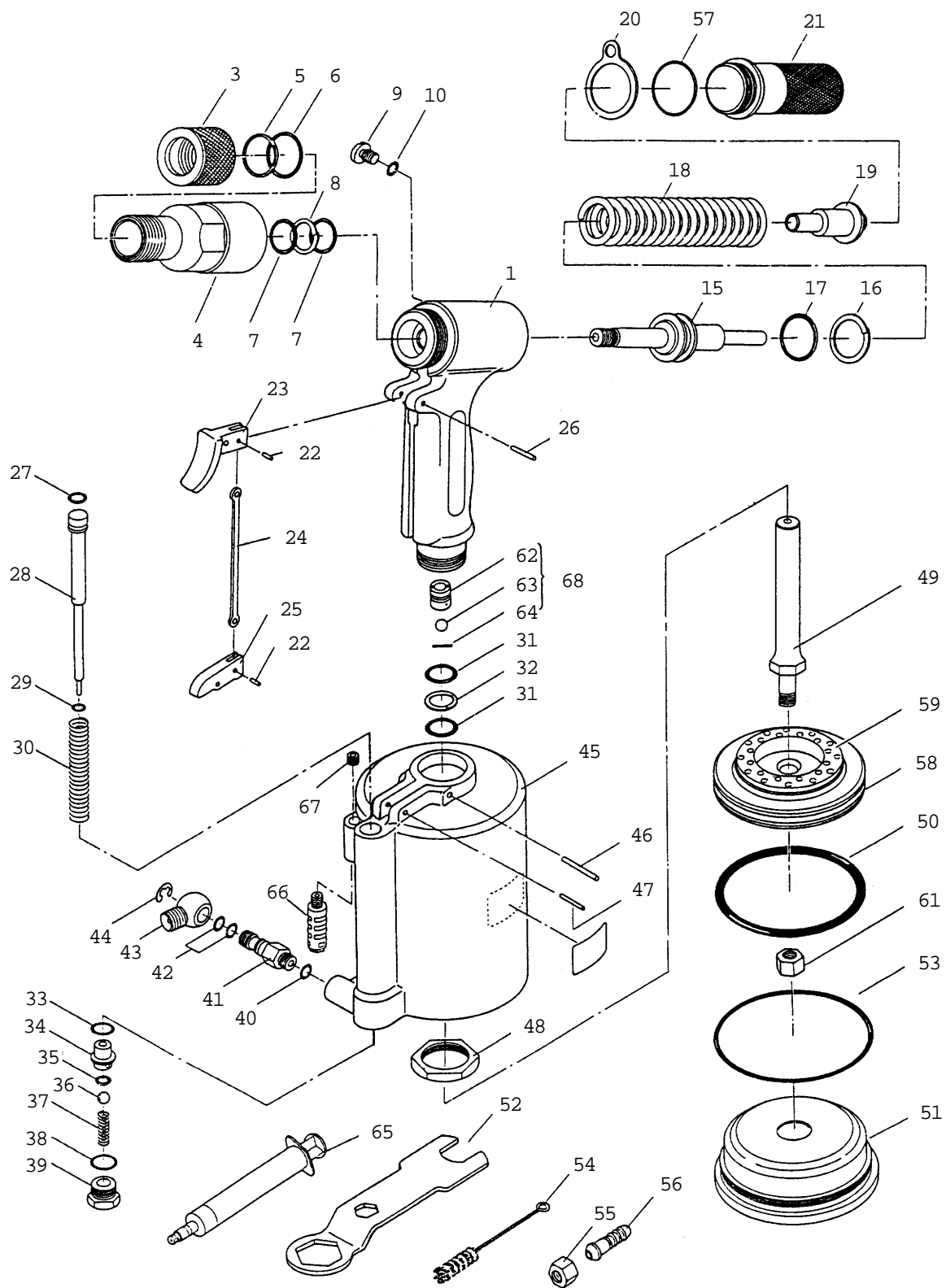


Fig. 3
LH-224 Exploded View

LH224 Parts List

Ref	Part No.	Description
1	LH-401	Handle Includes items 7 10, 31, 32, 62 - 64
3	103090NR	Nut Retaining
4	LH-195	Adaptor Anvil
5	103087NR	Washer Stop
6	LH-56	O Ring P-20
7	LH-281	O Ring P-15
8	LH-282	Backup Ring P-15
9	104293NR	Bleed Plug
10	LH-70	O Ring P-5
15	LH-402-1	Pull Piston Includes items 16 ,17
16	LH-21-1	Backup Ring P-24
17	LH-21	O Ring P-24
18	LH-403-1	Spring
19	LH-404-1	Guide Tube
20	LH-15	Hanger
21	LH-405	Rear Gland
22	LH-32	Pin 3 x 6
23	LH-406	Trigger
24	LH-33	Linkage
25	LH-407	Lever Throttle
26	LH-57	Pin 3 x 22
27	LH-71	O Ring P-9
28	LH-408	Valve-Throttle
29	LH-70	O Ring P-5
30	LH-409	Spring
31	LH-426	O Ring P-12.5
32	LH-427	Backup Ring P-12.5
33	LH-74	O Ring P-10
34	LH-410	Sleeve
35	LH-70	O Ring P-5

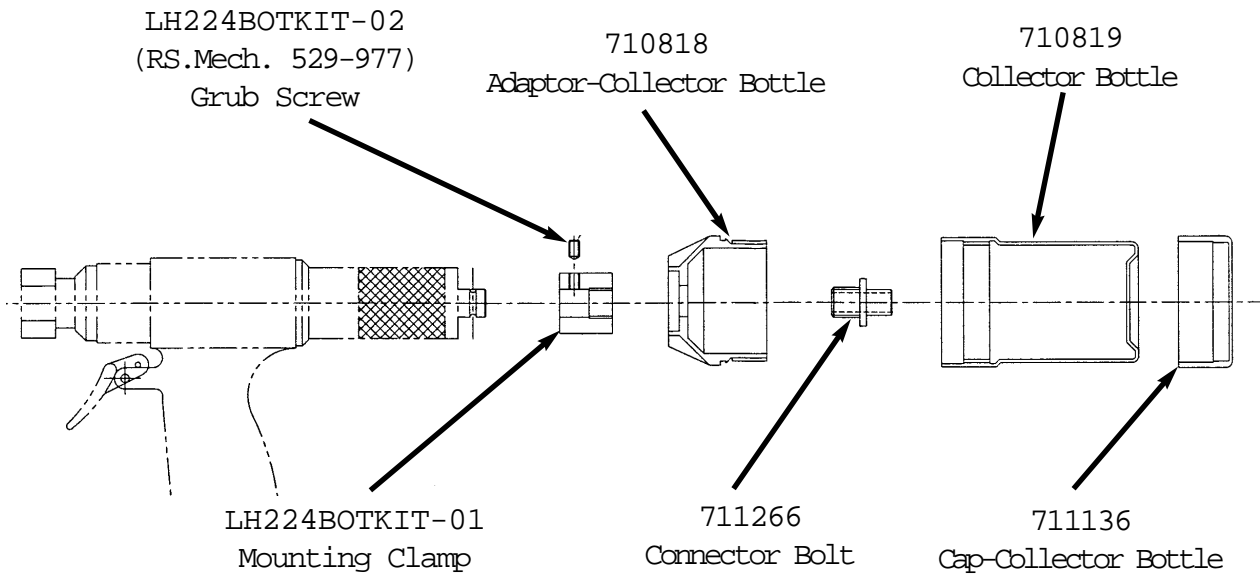
Ref	Part No.	Description
36	LH-411	Ball 8
37	LH-412	Spring
38	LH-76	O Ring S-14
39	LH-413	Plug
40	LH-77	O Ring S-10
41	LH-414	Nipple
42	LH-78	O Ring P-7
43	LH-415	Connector
44	LH-416	Retaining Ring
45	LH-417-1	Cylinder
46	LH-59-1	Pin 4 x 31
47	LH-58	Pin 3 x 18
48	LH-423	Lock Nut
49	LH-418	Piston Rod Includes item 61
50	LH-79	O Ring P-85
51	LH-419	Cylinder Cap Includes item 53
52	LH-455	Wrench
53	LH-81	O Ring G-95
54	LH-80	Brush
55	LH-420	Nut $\frac{1}{4}$
56	LH-422	Hose Connector $\frac{1}{4}$
57	LH-50	O Ring D-28
58	LH-421	Air Piston Includes items 50, 59
59	LH-28	Bumper
61	LH-54	Nut
62	LH-456	Shockless Plug
63	LH-457	Ball 6
64	LH-458	Pin 2 x 10
65	LH-459	Priming Pump
66	LH-460	Silencer
67	LH-461	Plug
68	LH-462	Shock Absorber Includes items 62-64
	100378	Deflector

Pintail Collector Bottle

The LH-224 can be fitted with a Pintail Collector Bottle to replace the existing Deflector (100378). Alternatively, the LH-224B Installation Tool can be purchased which is supplied with the Pintail Collector Bottle already fitted.

To convert an LH-224 to an LH-224B, order part number LH224BOTKIT.

LH224BOTKIT Parts List



LIMITED WARRANTIES

Tooling Warranty: Huck warrants that tooling and other items (excluding fasteners, and hereinafter referred as "other items") manufactured by Huck shall be free from defects in workmanship and materials for a period of ninety (90) days from the date of original purchase.

Warranty on "non standard or custom manufactured products": With regard to non-standard products or custom manufactured products to customer's specifications, Huck warrants for a period of ninety (90) days from the date of purchase that such products shall meet Buyer's specifications, be free of defects in workmanship and materials. Such warranty shall not be effective with respect to non-standard or custom products manufactured using buyer-supplied molds, material, tooling and fixtures that are not in good condition or repair and suitable for their intended purpose.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. HUCK MAKES NO OTHER WARRANTIES AND EXPRESSLY DISCLAIMS ANY OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES AS TO MERCHANTABILITY OR AS TO THE FITNESS OF THE TOOLING, OTHER ITEMS, NONSTANDARD OR CUSTOM MANUFACTURED PRODUCTS FOR ANY PARTICULAR PURPOSE AND HUCK SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH TOOLING, OTHER ITEMS, NONSTANDARD OR CUSTOM MANUFACTURED PRODUCTS OR BREACH OF WARRANTY OR FOR ANY CLAIM FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Huck's sole liability and Buyer's exclusive remedy for any breach of warranty shall be limited, at Huck's option, to replacement or repair, at FOB Huck's plant, of Huck manufactured tooling, other items, nonstandard or custom products found to be defective in specifications, workmanship and materials not otherwise the direct or indirect cause of Buyer supplied molds, material, tooling or fixtures. Buyer shall give Huck written notice of claims for defects within the ninety (90) day warranty period for tooling, other items, nonstandard or custom products described above and Huck shall inspect products for which such claim is made.

Tooling, Part(s) and Other Items not manufactured by Huck.

HUCK MAKES NO WARRANTY WITH RESPECT TO THE TOOLING, PART(S) OR OTHER ITEMS MANUFACTURED BY THIRD PARTIES. HUCK EXPRESSLY DISCLAIMS ANY WARRANTY

EXPRESSED OR IMPLIED, AS TO THE CONDITION, DESIGN, OPERATION, MERCHANTABILITY OR FITNESS FOR USE OF ANY TOOL, PART(S), OR OTHER ITEMS THEREOF NOT MANUFACTURED BY HUCK. HUCK SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH TOOLING, PART(S) OR OTHER ITEMS OR BREACH OF WARRANTY OR FOR ANY CLAIM FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

The only warranties made with respect to such tool, part(s) or other items thereof are those made by the manufacturer thereof and Huck agrees to cooperate with Buyer in enforcing such warranties when such action is necessary.

Huck shall not be liable for any loss or damage resulting from delays or nonfulfillment of orders owing to strikes, fires, accidents, transportation companies or for any reason or reasons beyond the control of the Huck or its suppliers.

Huck Installation Equipment

Huck International, Inc. reserves the right to make changes in specifications and design and to discontinue models without notice.

Huck Installation Equipment should be serviced by trained service technicians only.

Always give the Serial Number of the equipment when corresponding or ordering service parts.

Complete repair facilities are maintained by Huck International, Inc. Please contact one of the offices listed below.

Eastern

One Corporate Drive Kingston, New York 12401-0250 Telephone (914) 331-7300 FAX (914) 334-7333

Canada

6150 Kennedy Road Unit 10, Mississauga, Ontario, L5T 2J4, Canada.
Telephone (905) 564-4825 FAX (905) 564-1963

Outside USA and Canada

Contact your nearest Huck International Office, see back cover.

In addition to the above repair facilities, there are Authorized Tool Service Centers (ATSC's) -located throughout the 'United States. These service centers offer repair services, spare parts, Service Parts Kits, Service Tools Kits and Nose Assemblies. Please contact your Huck Representative or the nearest Huck office listed on the back cover for the ATSC in your area.

Huck Acceptance is World-wide

Huck Fastener maintains company offices throughout the United States and Canada with subsidiary offices in many other countries. Sales engineers and systems specialists located in your area can help in solving your fastener problems.

Huck Fasteners world-wide locations:

America

Huck International, Inc.
World Headquarters
3724 East Columbia
Tucson, AZ 85714
800-234-4825
602-747-9898
FAX: 602-748-2142

Huck International, Inc.
Aerospace Fasteners Division
3724 East Columbia
Tucson, AZ 85714
800-234-4825
602-747-9898
FAX: 602-748-2142

Huck International, Inc.
Aerospace Fasteners Division
PO Box 5268
900 Watsoncenter Rd.
Carson, CA 90749
800-421-1459
310-830-8200
FAX: 310-830-1436

Huck International, Inc.
Aerospace Fasteners Division
Lakewood Operation
3969 Paramount Blvd.
Lakewood, CA 90712
800-344-6566
310-421-3711
FAX: 310-425-3242

Huck International, Inc.
Industrial Fasteners Division
PO Box 8117
8001 Imperial Drive
Waco, TX 76714-8117
800-388-4825
817-776-2000
FAX: 817-751-5259

Huck International, Inc.
Installation Systems Division
1 Corporate Drive
Kingston, NY 12401
800-431-3091
914-331-7300
FAX: 914-334-7333

Huck International Ltd.
6150 Kennedy Road, Unit 10
Mississauga, Ontario L5T2L4
Canada
905-584-1825
FAX: 905-564-1963

Huck International, Inc.
Avenida Parque Lira. 79-402
Tacubaya Mexico, D.F.
C.P.11850
FAX: 525-515-1776
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Australia 3178
03-764-5500
Toll Free: 008-335-030
FAX: 03-764-5510

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