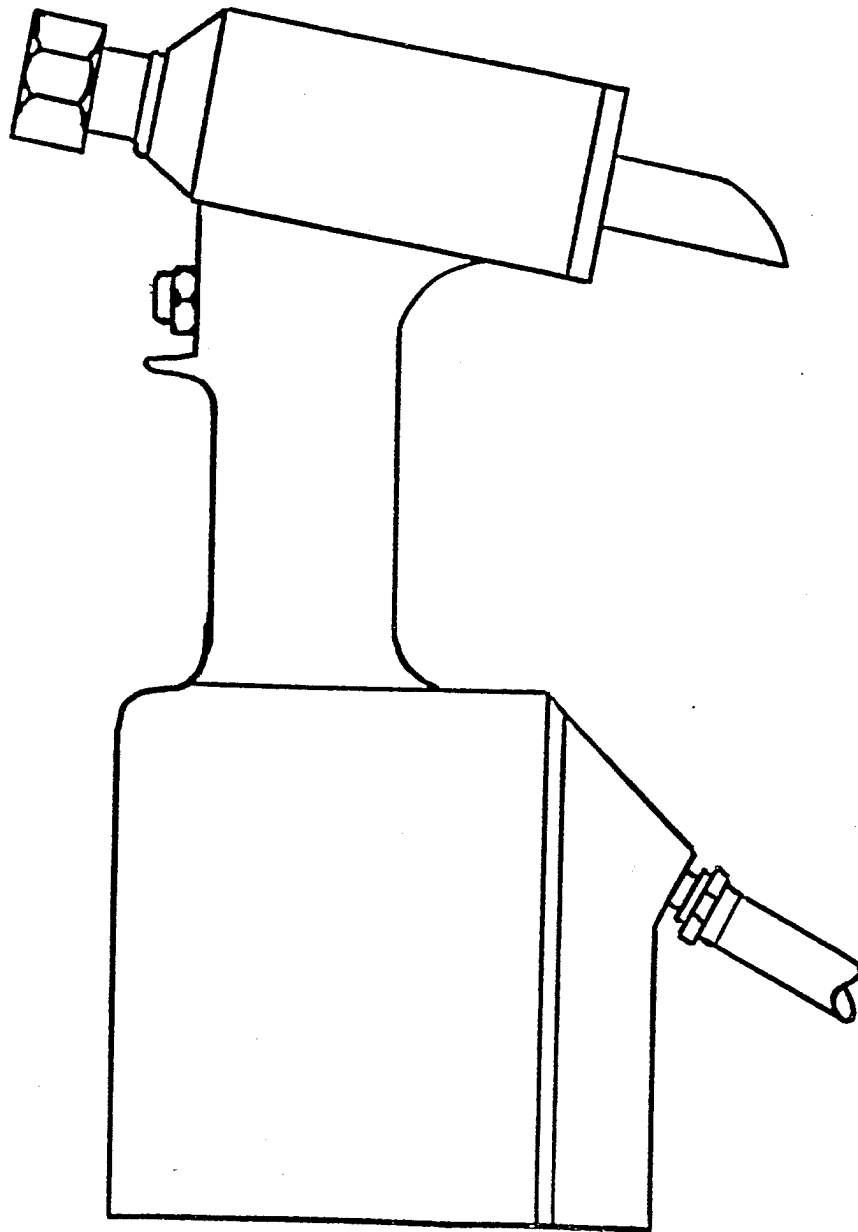


*Instruction Manual*  
**Model 229 Pneudraulic**  
*Installation Tool*



*An important notice:*

Operator must read and understand any WARNING and Caution stickers/labels supplied with equipment before connecting equipment to any primary power supply - - as applicable, the following sections each have specific safety, and other, information:

- *WARNINGS and CAUTIONS*
- *DESCRIPTION*
- *SPECIFICATIONS*
- *PRINCIPLE OF OPERATION*
- *PREPARATION FOR USE*
- *PREVENTIVE MAINTENANCE*
- *OPERATION AND TOOL HANDLING*

As applicable, the disassembly and assembly sections contain specific overhaul and safety procedures.

Only persons who have read and understood all applicable manuals or received training approved by Huck International, Inc. will be able to use Huck equipment with personal safety and efficiency.

If you require additional information, contact your local Huck representative or the nearest office listed on the back cover. For a quick response, call any time during business hours.

## **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.

*Italic type and underlining strengthens a specific instruction.*

## **WARNINGS**

*When operating Huck installation equipment always wear approved eye protection.*

Whenever within the working environment, wear approved eye protection, with side shields, to protect from anything that breaks on the fastening system including: Erupting fluid lines, flying fastener particles or any other dirt/debris that could cause eye injury.

Refer to ANSI Z87.1 - 1989.

*As applicable, disconnect primary power source before doing ANY maintenance on POWERIG® Hydraulic Unit. DO NOT connect any equipment to primary power supply that shows signs of damage or leakage - - and do not continue to use equipment that develops erratic symptoms. If equipment is damaged, or there are other serious discrepancies, affected equipment may rupture violently - - parts may strike the operator, and/or other personnel, and cause severe injury. Ensure that ALL air and/or hydraulic hose and/or electrical plugs/connectors are correctly connected before switching on power supply to equipment. If incorrectly connected, the tool may respond erratically and cause a severe hand, or other, injury.*

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## Description

The Huck Model 229 is a lightweight -- only 4 3/4 lbs. -- high speed production tool designed to install Huck MAGNA-GRIP® and various other Huck fasteners. Pulling action of the pull piston is provided by a pneumatic-hydraulic (pneudraulic) intensifier system powered by 90-100 psi (620-690 kPa) with an air consumption of 6 CFM (.003 m/3s) based on 30 fasteners per minute). After pin break air pressure returns pull piston. Noise level is 85 dbA max. at 90 psi.

Features incorporated in Model 229 include: one piece, high impact polymer handle/cylinder design; in-line piston extending the life of cylinder and O-ring seals; pull piston wiper preventing abrasive particles from damaging seals; an oil damper in hydraulic system softens pinbreak shock; air porting and muffler exhausts air from bottom of tool.

A nose assembly is required for each fastener type and size. Nose assemblies must be ordered separately.

The Model 229 hydraulic system is recharged by removing bleed plug located at top of cylinder -- fill to top of bleed port (see page 5 for filling instructions). Hydraulic fluid is automatic transmission fluid, DEXRON II, or equivalent.

Millimeters in parenthesis

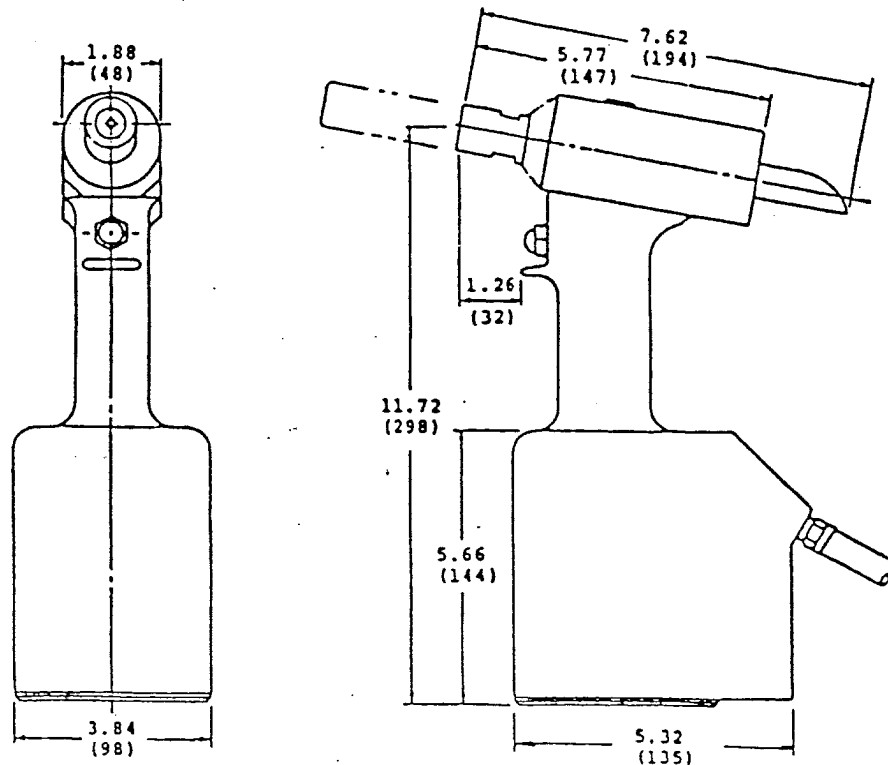


Figure 1. Outline Dimensions

## Principle of Operation

When tool is connected to air supply, air pressure holds air trigger closed and pull piston to the front. Air valve directs air pressure to top of air piston keeping it down. Air trigger is depressed and air valve spool shifts, directing air to bottom of air piston. As piston moves upward, air from above piston is exhausted through muffler at bottom of air valve.

Air piston rod is hydraulic piston. Pressurized fluid is forced into hydraulic cylinder and moves pull piston to the rear. Attached nose assembly moves with piston to start fastener installation.

When fastener installation is completed, trigger is released. Air valve spool of air valve shifts. Reversed air flow moves air piston and rod down to its starting position -- exhausting air from below piston through bottom of air valve. As rod moves downward and hydraulic pressure is released from pull piston, air pressure returns the pull piston to its starting position.

## Preparation for Use

The Model 229 Installation Tool is shipped with a plastic plug in the air inlet connector. This connector has 1/4-18 female pipe threads. A quick connect fitting and 1/4 inch inside diameter air hose are recommended. An air supply of 90-100 psi capable of 6 CFM must be available. The air supply should be equipped with a filter-regulator unit that provides clean dry air.

1. Remove plastic plug from air inlet Connector and drop in a few drops of Automatic Transmission Fluid, Dexron II, or equivalent.
2. Using TEFLON\* thread compound, screw quick disconnect fitting into air inlet and tighten to 6 ft./lbs.
3. Set air pressure on regulator to 90-100 psi.
4. Connect air hose to tool.
5. Cycle tool a few times by depressing and releasing trigger.
6. Disconnect air hose from tool.
7. Install nose assembly on tool per applicable Nose Assembly Data Sheet.
8. Connect air hose to tool and install fastener in test plate of proper thickness with proper size holes. Inspect installed fastener.

## Operating Instructions

### WARNING

If deflectors are removed or damaged, broken pintails may eject forcibly from rear of tool and severe personal injury may result.

Be sure there is adequate clearance for tool and operator's hands before proceeding as severe personal injury may result without clearance.

### CAUTION

Do not abuse tool by dropping it, using it as a hammer, or otherwise causing unnecessary wear and tear. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency and in reducing downtime.

### **WARNING:**

Inspect tool for damage before each use. Do not operate if damaged as severe personal injury may occur

### MAGNA-GRIP® and other Huck Fastener Installation:

The fastener may be placed in the work hole or in the end of the nose assembly. In either case, tool and nose assembly must be held against work and at right angles to it. Depress trigger and hold it depressed until fastener is installed and pintail breaks.

Table 2. Standard Tools Available from Huck

<u>Part No.</u>	<u>Description</u>	<u>Used On</u>	
		<u>Ref. No.</u>	<u>Part. No.</u>
502296	Hex Key, 3/16 across flats	2	502373
502293	Hex Key, 3/32 across flats	46	502472
502450	Hex Key, 5/32 across flats	53	115502
502865	Truarc Pliers - 0200	40	505406

## Maintenance

### Preventive Maintenance

The Model 229 Huck Installation Tool requires a minimum amount of maintenance. Regular inspection and correction of minor problems will keep the tool operating efficiently and prevent downtime.

If a filter-regulator-lubricator unit is not being used: (1) remove hose fitting from air inlet connector and drop in a few drops of Automatic Transmission Fluid or light oil (2) blow out air line to remove dirt and water before connecting air hose to tool.

Remove and clean nose assemblies at regular intervals -- nose collet and tool spindle must be cleaned of oil and abrasive particles. Cleaning prevents spindle seal failure. Particles of black phosphate finish from installed fasteners mix with residual oil on spindle -- the abrasive paste formed causes excessive seal and wiper wear. To prevent seal wear and fluid loss, clean wiper at regular intervals. Wiper should be changed before it becomes too worn and is no longer effective.

### Good Service Practices

The efficiency and life of any tool depends upon proper maintenance and good service practices. The tool should be serviced by personnel who are thoroughly familiar with it and how it operates.

A clean, well-lighted area should be available for servicing the tool. Special care must be taken to prevent contamination of the pneumatic and hydraulic systems.

Proper hand tools, both standard and special, must be available.

All parts must be handled carefully and examined for damage or wear. ALWAYS REPLACE O-RINGS, BACK-UP RINGS, POLY SEALS, WIPER AND GASKETS WHEN TOOL IS DISASSEMBLED FOR ANY PURPOSE.

Components should be disassembled and assembled in a straight line without bending, cocking or undue force. Disassembly and assembly procedures outlined in this manual should be followed.

LUBRIPLATE \* 130AA, or equivalent lubricant should be used to facilitate assembly of O-rings, QUAD Rings, Back-up Rings and other components. (LUBRIPLATE 130AA is available from Huck Manufacturing Company in a tube as P/N 502723.)

Use TEFLON\* thread compound on threads of pipe plug and quick disconnect fitting. (Teflon thread compound is available from Huck Manufacturing Company in stick form as P/N 503237.)

Service Parts Kit No. 229KIT includes perishable parts and should be available at all times. Other components, as experience dictates, should also be available.

\* LUBRIPLATE is a trademark of Fiske Brothers Refining Co.

\* TEFLON is a trademark of E.T. duPont de Nemours & Co.

## Filling the Tool

### CAUTION

Before filling tool air piston must be all the way down and hydraulic pull piston must be in full forward position. Tool will not deliver full fastening stroke if pistons are not positioned properly.

1. Connect air supply to tool - air piston will be pulled down. Disconnect air supply.
2. Pull hydraulic pull piston to the full forward position.

### WARNING

Do not cycle tool without fill plug installed in tool head. Severe personal injury may occur if tool is cycled without fill plug installed in tool head.

3. Remove fill plug from head of tool -- see Figure 2.
4. Screw in Fill Bottle, 120337. Cycle tool several times. Remove fill bottle and install fill port screw.
5. Cycle tool while moving it around and changing position: Right side up, and then, up-side-down etc. Repeat several times. Stand tool upright and remove fill port screw. Check for, and remove, captive air bubbles. Add oil as necessary. Repeat this procedure until all air is removed from front of hydraulic chamber of tool.

### Note

If double stroking occurs when installing MAGNA-LOK™ Fasteners, tool must be refilled and plug installed.

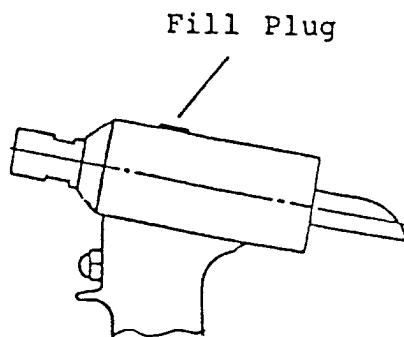


Figure 2. Fill Plug Location



## Troubleshooting

Always check out the simplest possible cause of a malfunction first. For example, an air hose not connected. Then proceed logically, eliminating each possible cause until the defective part is located. Where possible, substitute known good parts for suspected bad parts. Use Troubleshooting chart as an aid in locating and correcting malfunction.

1. Tool fails to operate when trigger is depressed.
  - a. Air hose not connected.
  - b. Spool Valve (22) not shifting. Clean mating surfaces.
  - c. Damaged Gasket (49).
  - d. Air restrictor backed out.
2. Tool does not complete fastener installation or break pintail.
  - a. Hydraulic fluid low causing short stroke.
  - b. Nose Assembly improperly adjusted.
  - c. Improper anvil insert in nose assembly.
  - d. Air pressure too low.
  - e. 1.c.
3. Hydraulic fluid leaks out Pull Piston Rod (1).
  - a. Damaged O-ring (5) and/or Back-up Ring (4).
  - b. Scored or damaged Pull Piston Rod (1).
  - c. Scored or damaged Head (6) at O-ring (5) groove area.
4. Pull Piston (1) will not return to forward position.
  - a. Damaged Air Trigger seal.
  - b. Damaged Gasket (49) or Gasket not positioned properly.
  - c. Hydraulic fluid reservoir overfilled causing short or no stroke.
  - d. 1.b.
  - e. Plugged Orifice in Air Restrictor (26).
5. Oil leaks out through I.D. of Pull Piston (1).
  - a. Damaged O-rings (8) and Back-up Ring (9).
6. Air exhausts out through I.D. of Pull Piston (1).
  - a. Damaged rear O-ring (8).
7. Oil leaks out vent hole at base of handle.
  - a. Damaged PolySeal (44).
  - b. Damaged or scored Piston Rod (39).
  - c. Damaged Gland (41).
8. Air exhausts out vent hole at base of handle.
  - a. Damaged Seals (42) and/or (43).
  - b. 7.b.
  - c. 7.c.
9. Air leaks where Head (6) and Handle (45) join.
  - a. 1.c.

10. Excessive air exhausts from muffler in idle position.
  - a. Damaged O-rings (24) and (27) on Spool (22).
  - b. Damaged Gasket (20).
  - c. Damaged O-ring (31).
  - d. Damaged O-ring (37).
  - e. Damaged O-ring (27) on Cap (28).
  - f. 1.b.
11. Oil leaks where Head (6) and Handle (45) join.
  - a. Damaged O-ring (14).
12. Air exhausts from Back Cap (12).
  - a. Damaged O-ring (10) and/or (11).

### Spare Parts and Service Parts Kit

The quantity of spare parts that should be kept on hand varies with application and number of tools in service. Service parts kit containing perishable parts such as O-rings, back-up rings, etc., should be kept on hand at all times. Parts are included in Service Parts 229KIT.

### Disassembly

Refer to Figure 3.

For component identification, refer to Figure 3. and Table 2 Parts List. Numbers in parenthesis ( ) are reference numbers shown in Figure 3.

### WARNING

Be sure air hose is disconnected before cleaning, or when replacing worn or damaged components. Severe personal injury may occur if air hose is not disconnected.

The following procedure is for complete disassembly of tool. Disassemble only components necessary to replace damaged O-rings, QUAD Ring, Poly Seal, Wiper and worn and/or damaged components.

1. Disconnect shop air hose from tool Air Hose Assembly (23). Unscrew air hose assembly.
2. Unscrew Fill Plug (7) from Cylinder (6) and drain hydraulic fluid into container. Reinstall plug.
3. Unscrew six Button Head Screws (21) attaching Air Valve Housing (19) to Cylinder (45). Use 3/32 hex key. Remove Air Valve Housing Gasket (20).

4. With small diameter rod and hammer, tap out Dowell Pin (29) from air valve housing.
5. Remove Muffler (30). Screw 5/16-18 bolt into Air Valve Cap (28) and pull from housing.
6. Screw 5/16-18 bolt into Air Valve Spool (22) and pull spool from housing. Unscrew Air Restrictor (26) from spool. Use 5/32 hex key. Remove Spring (53).

NOTE

Air Valve Sleeve is pressed into Air Valve Housing (19) and cannot be removed.

7. Unscrew Wiper Housing (2) from Cylinder (6).
8. Pull Deflector (13) out of Hydraulic Cap (12).
9. Hold Cylinder (6) in vise. With wrench unscrew Cap (12).
10. With non-metallic hammer, tap end of Piston (1) until piston can be removed from cylinder.
11. Hold Cylinder (6) in vise with bottom of tool facing up. With 1 1/8" socket wrench unscrew Air Cap (34). Pull Lower Bumper (32) from cap.
12. Screw 1/4-20 bolt into Hydraulic Rod (39) and pull air Piston Assembly from Cylinder (45).
13. With 0200 Truarc Pliers remove Retaining Ring (32) from rod. Slide Piston (36) from rod. Remove Washer (38) and O-ring (31).
14. Unscrew Gland (41) with 1 1/8" socket wrench. Remove upper Bumper (40).
15. Pull Air Cylinder (45) from hydraulic cylinder/hydraulic tube assembly. Remove Head Gasket (49).
16. Remove cylinder/tube from vise and drain remaining fluid from tube.
17. Hold cylinder/tube in vise with tube pointing up. Unscrew Hydraulic Tube (17) from Hydraulic Cylinder (6) -- use tube wrench flats.
18. Pull Oil Damper Cap (14) and Oil Damper Valve (16) out of tube.
19. Unscrew Air Trigger Body (46). Remove O-ring (48) and Sealing Washer (47) from air trigger body and stem.

## Assembly

Refer to Figures 2 and 3.

Clean all components with mineral spirits, and inspect for wear or damage, Replace as necessary. Replace all seals on/in disassembled components. Use O-rings, QUAD Rings, Poly Seals, Back-up Rings and Wipers supplied in Service Parts Kit 229KIT -- see Notes. Smear LUBRIPLATE 130AA or PARKER-O-LUBE on O-rings, QUAD Rings, Poly Seals, Wipers and mating components to facilitate assembly. Assembly tool taking care not to damage O-rings, QUAD Rings, Poly Seal, Back-up Rings, or Wipers.

1. With rubber surface toward Cylinder (45) push Sealing Washer (47) over air Trigger body and stem. Slip O-ring (48) into groove on stem. Screw in assembled air trigger -- tighten to 15 in. lbs.
2. Push Oil Damper Valve (16) into Hydraulic Tube (17); push Oil Damper Cap (15) into tube. Slide Polyseal (44) into tube -- cup faces inward.
3. Hold Hydraulic Cylinder (6) upside down in vise and insert O-ring (14) into Cylinder. Screw Hydraulic Tube (17) into Hydraulic Cylinder (6) -- use wrench flats on tube. Tighten to 300 in. lbs.
4. Place Head Gasket (49) in Cylinder (45). Slide Hydraulic Tube into Cylinder (45) until seated.
5. Place Upper Bumper (40) in position in Cylinder (45). Screw Gland (41) into Hydraulic Tube (17) with 1 1/8" socket wrench. Tighten to 210 in. lbs.
6. Place O-ring (31) into recess in Piston (36). Place Washer (38) over O-ring (31) in recess. Push piston onto Hydraulic Rod (39). Install Retaining Ring (32) in rod with Truarc Pliers 0200. Push assembled air piston and rod into air cylinder. Push piston approximately two inches into cylinder.

### CAUTION

Position Air Cylinder Cap (34) squarely in Cylinder (45) so that cap does not become cross-threaded when screwed in. Metal cap threads may cut new threads in plastic cylinder if extreme care is not taken-- if any resistance is felt check thread engagement.

7. Push Lower Bumper (33) into Air Cylinder Cap (34). Screw Cap into air cylinder -- tighten with 1 1/8" socket wrench to 150 in. lbs.

8. Screw Wiper Housing (2) into Cylinder (6).
9. Screw Air Restrictor (26) into Air Spool Valve (22) - - use 5/32 hex key. Drop Spring (53) into bottom of air valve sleeve hole.

NOTE

Air Valve Sleeve is pressed into Air Valve Housing (19) and cannot be removed.

10. Push assembled Air Valve Spool (22) into Air Valve Housing (19). Push Air Valve Cap (28) into air valve housing. Push Muffler (30) into housing.
11. With soft mallet, tap Dowell Pin (29) into housing.
12. Place Air Valve Housing Gasket (20) in place. Attach Air Valve Housing (19) to Cylinder (45) using six Button Head Screws (21). Use 3/32 hex key and tighten to 10 in. lbs.
13. Fill tool with hydraulic fluid. See Filling the Tool.
14. Screw Pipe Plug (7) into cylinder. Tighten to 90 in. lbs.
15. Connect shop air hose to tool.

Notes

Specifications for Tables

1. All part numbers shown in this manual are available from Huck Manufacturing Co. The 500000 series part numbers are standard parts which generally can be purchased locally.
2. Asterisks (\*) indicate parts in Service Parts Kit, 229KIT.
3. O-ring sizes are specified AS 568 numbers. (AS 568 is an AEROSPACE SIZE STANDARD FOR O-RINGS and formerly was known as ARP.)
4. Quad ring sizes are specified Q4 plus 3 digits. The last 3 digits correspond to O-ring dash numbers. Quad rings are manufactured by Minnesota Rubber Co.
5. Back-up rings are W.S. Shamban & Co. series S-11248, single turn Teflon (MS-28774), or equivalent. The dash numbers correspond to the O-ring AS 568 dash numbers.



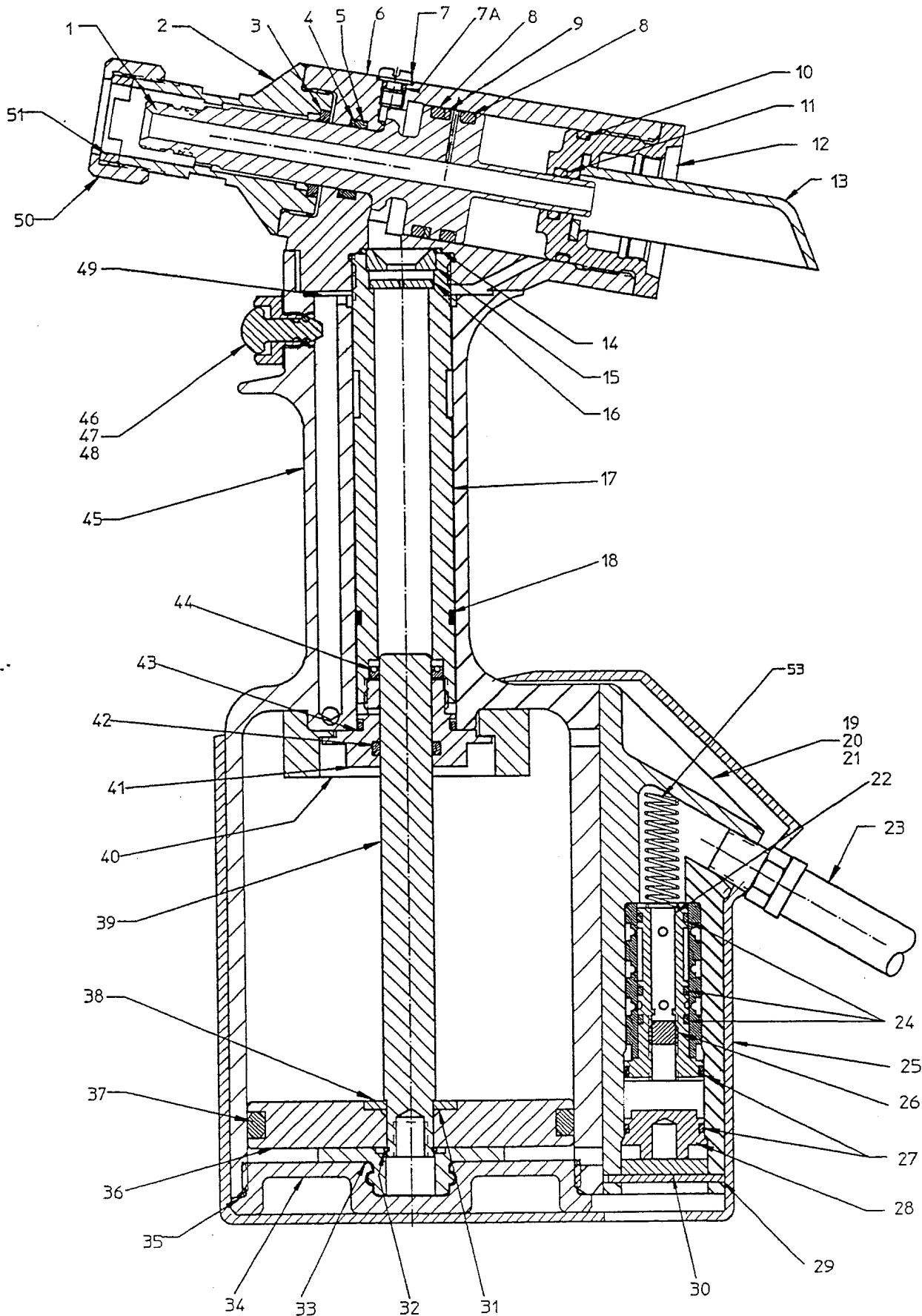


Figure 3. Sectional View

Parts List  
 Table 2. Model 229 Installation Tool

<u>Ref. No.</u>	<u>Part No.</u>	<u>Qty. Req.</u>	<u>Description</u>
1	115851	1	Piston-Hydraulic
2	115848	1	Housing-Wiper
3*	505991	1	Wiper
4*	501106	1	Back-up Ring--S-11248-115
5*	503638	1	O-ring--AS 568-115
6	116177	1	Cylinder-Hydraulic
7	100309	1	Bleed Plug
7A*	505438	1	O-ring -- AS 568-006
9*	501144	1	Back-up Ring--S-11248-217
8*	500850	2	O-ring--AS 568-217
10*	500821	1	O-ring--AS 568-124
11*	500807	1	O-ring--AS 568-110
12	116178	1	Cap-Hydraulic Cylinder
13*	122930	1	Deflector
14*	500784	1	O-ring--AS 568-018
15	115483	1	Cap-Oil Damper
16	115482	1	Valve-Oil Damper
17	116497	1	Tube-Hydraulic
18*	500816	1	O-ring--AS 568-119
19	115792	1	Housing-Air Valve Assembly
20*	115409	1	Gasket-Housing (not shown)
21	502472	6	Screw-Butt.Hd.Cap--#8-32 x 3/8
22	115217	1	Spool-Air Valve
23	115436	1	Air Hose Assem.
24*	500779	3	O-ring--AS 568-013
25	121652	1	Cylinder Cover



<u>Ref. No.</u>	<u>Part No.</u>	<u>Qty. Req.</u>	<u>Description</u>
26	115502	1	Restrictor-Air
27*	500784	2	O-ring--AS 568-018
28	115218	1	Cap-Air Valve
29	505375	1	Pin-Dowell
30	115497	1	Muffler
31*	500807	1	O-ring--AS 568-110
32	505406	1	Ring-Retaining--TRUARC 5160-50
33*	115305	1	Bumper-Lower
34	116147	1	Cap-Air Cylinder
35*	505376	1	O-ring--AS 568-042
36	115308	1	Piston-Air
37*	501456	1	QUAD Ring -- MR-PN4338
38	115494	1	Washer
39	115307	1	Rod-Hydraulic
40*	115304	1	Bumper-Upper
41	116496	1	Gland-Hydraulic Cylinder
42*	505452	1	QUAD Ring--MR-Q4113
43*	500816	1	O-ring--AS 568-137
44*	505440	1	PolySeal (Microdot 125-00.562 SQB)
45	115654	1	Cylinder-Machined
46	115928	1	Air Trigger Assembly (incl. 47 & 48)
47	505427	1	Sealing Washer
48*	500772	1	O-ring--AS 568-006
49*	115410	1	Gasket-Head
50	103090	1	Nut-Retaining
51	110452	1	Stop
52	103087	1	Stop
53*	506643	1	Spring

NOTE: Stop (52) used for oversized non-rotatable nose assemblies.  
(not shown)

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## *Warranties*

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### **Warranty**

THE NINETY DAY WARRANTY HEREIN EXPRESSED SHALL BE THE EXCLUSIVE WARRANTY ON ITEMS MANUFACTURED BY SELLER AND SHALL BE IN THE PLACE AND STEAD OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Seller 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 Seller or its suppliers.

All warranty claims must be submitted to the Seller in writing within 90 days from the date of shipment, and no returns will be accepted without written permission.

Other provisions hereof notwithstanding, Seller shall not be liable for any loss of business, profits or any incidental or consequential damages incurred by Buyer or any third person in connection with the items or use thereof, however caused.

### **Tool Warranty**

Seller expressly disclaims any warranty expressed or implied, as to the condition, design, operation, merchantability or fitness for use of any tool or part(s) thereof not manufactured by Seller. The only warranties made with respect to such tool or part(s) thereof are those made by the manufacturer thereof and Seller agrees to cooperate with Buyer in enforcing such warranties when such action is necessary. Seller agrees to repair or replace F.O.B. Seller's plant, any tool or part(s) thereof manufactured by it and proved to Seller to be defective due to faulty workmanship or material.

### **Warranty on "Other Items"**

With regard to items other than FASTENERS and TOOLS ("OTHER ITEMS"), Seller expressly disclaims any warranty, expressed or implied, as to the condition, design, operation, merchantability or fitness for use of any "OTHER ITEMS," or part(s) thereof not manufactured by Seller. The only warranties made with respect to such "OTHER

ITEMS" or part(s) thereof are those made by the manufacturer thereof and Seller agrees to cooperate with Buyer in enforcing such warranties when such action is necessary.

Seller agrees to repair or replace F.O.B. Seller's plant, any "OTHER ITEMS" or part(s) thereof manufactured by it and proved to Seller to be defective due to faulty workmanship or material.

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## *Huck Installation Equipment*

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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**

85 Grand Street, Kingston, New York 12401-0250  
Telephone (914) 331-7300 FAX (914) 334-7333

### **Western**

900 Watsoncenter Road, Carson California 90745  
Telephone (310) 830-8200 FAX (310) 830-1436

### **Canada**

326 Humber College Boulevard, Rexdale, Ontario M9W 5P4, Canada.  
Telephone (416) 675-3400 FAX (416) 675-5917

### **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 Worldwide*

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

### *Huck International, Inc. worldwide locations:*

#### Americas

Huck International, Inc.  
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