EU Declaration of Conformity

Manufacturer:
Huck International Inc., Installation Systems Division, 85 Grand Street, Kingston, NY, 12401, USA

Description:
Model number 2400 series fastener installation tools
Model number 2500 series fastener installation tools
Model number 2600 series fastener installation tools

Relevant provisions complied with:

European Representative:
Rob Pattendon, Huck International, Ltd. Unit C Stafford Park 7, Telford Shropshire TF3 3BQ, England, United Kingdom

Authorized Signature/date:
I, the undersigned, do hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s).

Signature: [Signature]
Full Name: Renno Budziak
Position: Vice President of Engineering, Installation Systems Division
Place: Kingston, New York, USA
Date: May, 1996

Huck Model Series 2400, 2500 and 2600 (families) Sound Level

\[ \text{SEL} = 75.8 \text{ dB (A)} \]
\[ \text{peak value} = 108.2 \text{ dB (C)} \]

For an eight hour work day, installing 3000 typical Huck fasteners will result in an equivalent noise level (Leq) of 66 dB (A).

To calculate equivalent noise level for other quantities of fasteners in an eight hour period, use the formula:
\[ \text{Leq} = \text{SEL} + 10 \log \left( \frac{n}{28,800} \right) \]

where \( n \) = number of fasteners in eight hours.

Huck Model Series 2400, 2500 and 2600 (families) Vibration Level

For an eight hour work day, installing 3000 typical Huck fasteners will result in an equivalent weighted RMS vibration level (Aeq) of 12.50m/s².

To calculate equivalent vibration level for other quantities of fasteners in an eight hour period, use the formula:
\[ \text{Equivalent Vibration Level, Aeq (m/s^2)} = (\frac{n}{480}) \times 2.00 \]

where \( n \) = number of fasteners in eight hours, and 2.00(m/s²) = Aeq for 60 seconds.

Test data to support the above information is on file at Huck International, Inc., Kingston, NY, USA. Vibration measurements are frequency weighted in accordance with ISO 8041 (1990).
SAFETY

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

1. Safety Glossary

   - Product complies with requirements set forth by the relevant European directives.
   - Read manual prior to using equipment.
   - Eye protection required while using this equipment.
   - Hearing protection required while using this equipment.

   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 underlining - emphasizes a specific instruction.

   - Disconnect primary power source before doing maintenance on Huck equipment.
   - If any equipment shows signs of damage, wear, or leakage, do not connect it to the primary power supply.
   - Make sure proper power source is used at all times.
   - Never remove any safety guards or pintail deflector.
   - Never install a fastener in free air. Personal injury from fastener ejecting may occur.
   - When using an offset nose always clear spent pintail out of nose assembly before installing the next fastener.
   - If there is a pinch point between trigger and work piece use remote trigger. (Remote triggers are available for all tooling).
   - Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle. 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.
   - Never place hands between nose assembly and work piece.
   - Tools with ejector rods should never be cycled without nose assembly installed.
   - When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet of correct positioning.

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 repairman trained on Huck procedures.

3. Repairman and Operator must read manual prior to using equipment 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. See MSDS Specifications before servicing the tool. MSDS Specifications are available from you Huck representative or on-line at www.huck.com. Click on Installation Systems Division.
CONTENTS

Description ................................................................. 5
Specifications .............................................................. 5
Principle of Operation .................................................... 8
Preparation for Use ....................................................... 9
Checking and Adjusting Pressures ................................. 9
Operating Instructions .................................................... 10
Maintenance ................................................................. 11
Preventive Maintenance .................................................. 12
System Inspection .......................................................... 12
POWERIG® Hydraulic Unit Maintenance .......................... 12
Tool/Nose Assembly Maintenance ..................................... 12
Troubleshooting ......................................................... 13-14
Spare Parts and Service Kit .......................................... 14
Disassembly ................................................................. 15
Assembly ....................................................................... 17
Specifications for Standard Parts ................................. 18
Piston Disassembly/assembly Tool ............................... 20

TABLES

1. Specifications ............................................................ 5
2. Service Kit ................................................................. 18
3. Fastener Selection Chart ........................................... 32
DESCRIPTION

Huck Models 2502 and A2502 Hydraulic Installation Tools are designed to install a wide range of Huck Blind Fasteners and HUCK-BOLT® Fasteners. This mini-tool is a lightweight and compact tool which particularly adapts it to install fasteners in limited clearance areas.

The tool is designed to be powered by a Huck POWERIG® Hydraulic Unit set to operate at a maximum of (*) 5,700 psi (39,300 kPa) PULL and 2,200 psi (15,180 kPa) RETURN pressures. **CAUTION: To install -12 diameter fasteners in MG, GP and LGP, only PULL pressure must be set at 8400 psi. See (*) below.**

Model 2502 has an electric switch for POWERIG Hydraulic Unit Models 918, 918-5, 940, 943-913, or equivalent. **Model A2502** has an air trigger for POWERIG Hydraulic Unit Model 942 and Model 970-3. Model 970-3 may be used when lower PULL and RETURN pressures are sufficient.

A nose assembly is required for each fastener type and size. Nose assemblies must be ordered separately. See your Huck representative for available Nose Assembly Selection Chart and additional Fastener Selection Chart.

Each tool is complete with 12 ft. hydraulic hoses and couplings, electric switch and cord (2502) or air trigger and tubing (A2502). The tool is basically a cylinder and piston assembly. An unloading valve, designed to relieve the hydraulic pressure at end of PULL stroke, is positioned by the piston. The end of the piston rod is threaded and a retaining nut and stop are included for attaching nose assemblies.

TABLE 1 - SPECIFICATIONS (1)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>7.88 in. (201 mm)</td>
</tr>
<tr>
<td>Width</td>
<td>2.00 in. (51.5 mm)</td>
</tr>
<tr>
<td>Height (incl. handle)</td>
<td>5.88 in. (150 mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>4.50 lbs. (2.04 kg)</td>
</tr>
<tr>
<td>Max. PULL press.</td>
<td>5700/8400 psi (*) (39,300/57,900 kPa)</td>
</tr>
<tr>
<td>Max. RETURN press.</td>
<td>2400 psi (16,500 kPa)</td>
</tr>
</tbody>
</table>

(1) Lengths and weights do not include nose assemblies.

**Power Source:** Huck POWERIG Hydraulic Unit

**Fasteners Installed:** See “TABLE 3 - FASTENER SELECTION CHART”

**Hydraulic Fluid:** Automatic transmission fluid. DEXRON II, or equivalent
Outline Dimensions
Fig. 2

Sectional View

- PISTON ROD
- PISTON
- CYLINDER CAP
- PINTAIL DEFLECTOR
- CYLINDER
- UNLOADING VALVE
- SWITCH
When hydraulic hoses and trigger control are connected to POWERIG Hydraulic Unit, an air or electric trigger controls PULL and RETURN strokes of tool. Trigger is depressed and hydraulic pressure is directed to PULL side of Piston. Fastener installation begins.

When fastener installation is completed, the trigger is released. Hydraulic pressure is directed to RETURN side of piston moving piston forward. Nose assembly, with tool, is pushed off installed fastener.

At end of PULL stroke, piston uncovers flats of unloading valve. When flat is uncovered, pressure is unloaded by allowing fluid to flow back to POWERIG hydraulic unit.

CAUTION
Keep dirt and other foreign matter out of hydraulic systems of the tools, hoses, couplers and POWERIG Hydraulic Unit. Do not let hose fittings and couplers contact a dirty floor or unclean working surface. Foreign matter in hydraulic fluid may cause tool and hydraulic unit valves to malfunction.

WARNINGS
When operating Huck Installation equipment, always wear approved eye protection.

Huck recommends that only Huck POWERIG Hydraulic Units be used as the power source for Huck installation equipment. Hydraulic power units that deliver high pressure for both PULL and RETURN, and are not equipped with relief valves are specifically not recommended, and may be dangerous.

Proper PULL and RETURN pressures are important for proper function of Installation Tools. Severe personal injury, or damage to equipment may occur without correct pressures. Gauge Set-up, P/N T-10280, is available for checking these pressures using instructions furnished with T-10280 and in applicable POWERIG Hydraulic Unit instruction manuals - - see “TABLE 1 - SPECIFICATIONS” for pressures.
PREPARATION FOR USE

CAUTION: Do not let disconnected hoses and couplers contact a dirty floor. Dirt/debris in hydraulic fluid causes valve failure in the POWERIG® Hydraulic Unit. See CAUTION in “DESCRIPTION” and in “FIGURE 3 - SECTIONAL VIEW II”

Rub SLIC-TITE TEFLOm thread compound, or equivalent, on pipe threads to prevent leaks and for ease of assembly -- CAUTION: Do not use TEFLOm tape on pipe threads -- particles of shredded tape cause failure of hydraulic unit valve. (SLIC-TITE -- in stick form, P/N 503237; manufactured by Markal Co.) Note: Where a part number (P/N) is given, Huck sells that part.

Checking and Adjusting Output Pressures

⚠️ WARNINGS: Correct PULL and RETURN pressures are required for operators safety and for Installation tool’s function. Gauge Set-Up, T-10280, is available for checking pressures -- see tool’s “TABLE I - SPECIFICATIONS” and “Instruction Manual, T-10280”. Failure to verify pressures may result in severe personal injury.

Be sure to connect tool’s hydraulic hoses to POWERIG Hydraulic Unit before connecting tool’s switch control cord to unit. IF NOT CONNECTED IN THIS ORDER, severe personal injury may occur.

1. Use Huck POWERIG Hydraulic Unit, or equivalent, that has been prepared for operation per INSTRUCTION MANUAL.

Check both PULL and RETURN pressures, and if required, adjust to pressures given in “TABLE 1 - SPECIFICATIONS” of this manual. See both hydraulic unit’s and T-10280’s instruction manuals before and during checking procedure.

2. First, turn hydraulic unit to OFF, and then disconnect power supply from hydraulic unit. Connect tool’s hoses to hydraulic unit.

3. Connect tool’s control switch electrical cord to hydraulic unit.

4. Connect hydraulic unit to power supply. Turn hydraulic unit to ON. Hold Tool trigger depressed for 30 seconds; depress trigger a few times to cycle tool and to circulate hydraulic fluid. Observe action of tool and check for leaks. Turn hydraulic unit to OFF.

5. Select nose assembly from “NOSE ASSEMBLY SELECTION CHART” for fastener to be installed. Disconnect tool’s control switch electrical cord from hydraulic unit; disconnect hydraulic unit from power supply. Attach nose assembly to tool as given by instructions on “NOSE ASSEMBLY DATA SHEET”.

6. Reconnect hydraulic unit to power supply; reconnect tools switch control cord to unit. Check operation of nose assembly -- see “NOSE ASSEMBLY DATA SHEET”-- install fasteners in test plate of correct thickness with proper size holes. Inspect installed fasteners. If fasteners do not pass inspection, see “TROUBLESHOOTING” to locate and correct tool malfunction.
**OPERATION INSTRUCTIONS**

*For safe operation, please read completely*

**WARNINGS**

Do not pull on a pin without placing fastener/collar in a workpiece, and also, collar chamfer MUST be out toward tool - these conditions cause pin to eject with velocity and force when the pintail breaks off or teeth/grooves strip. This may cause severe personal injury.

To avoid severe personal injury, be sure of adequate clearance for operator's hands before proceeding with fastener installation.

**CAUTION**

Remove excess gap from between the sheets - this permits enough pintail to emerge from collar for ALL jaw teeth to engage with pintail - if ALL teeth do not engage properly, jaws will be stripped/damaged.

To avoid structural and tool damage, be sure enough clearance is allowed for nose assembly at full stroke. 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 reducing downtime.

**HUCKBOLT® Fastener Installation:**

Place pin in workpiece and place collar over pin - see WARNING. (If Collar has only one tapered end, that end MUST be out toward tool - not next to sheet.) Hold pin and push nose assembly onto pin protruding through collar until nose anvil touches collar. Depress trigger - hold trigger depressed until collar is swaged and pintail breaks. Release trigger and tool will go into return stroke - tool/nose are ready for next installation cycle.

Remove excess gap from between the sheets to permit correct fastener installation. Fastener may be placed in workpiece or In end of nose assembly - see WARNING. In either case, tool/nose must be held against work and at right angles to it. Depress trigger - hold trigger depressed until fastener is installed and pintail breaks. Release trigger and tool will go into its return stroke. The tool/nose are ready for next fastener installation cycle.

**CAUTION**

BOM blind fasteners jam in nose assembly if pulled when not in workpiece.

**Please note**

Failure to understand WARNINGS may cause severe personal injury.

Failure to understand CAUTIONS may cause damage to structure and Tool.

For additional safety information, see near front of manual.
MAINTENANCE

CAUTION: Keep dirt and other harmful material out of hydraulic system this includes tool, hoses, couplers and POWERIG® Hydraulic Unit. Parts must be kept away from unclean work surfaces. Dirt in hydraulic fluid causes valve failure in POWERIG Hydraulic Unit.

Good Service Practices

The efficiency and life of your Installation Tool depends upon proper maintenance and good service practices. Using the manual will help give a clear understanding of your tool and basic maintenance procedures -- please read entire page before proceeding with maintenance/repair. Use proper hand tools in a clean well-lighted area -- always be careful to keep dirt/debris out of pneumatic and hydraulic systems. Only standard hand tools are required in most cases; where a special tool is required, the description and part number are given.

While clamping installation tool and/or parts in a vise, and when parts require force, use suitable soft materials to cushion impact -- for example, using a half-inch brass drift, wood block and/or vise with soft jaws greatly diminishes the possibility of a damaged tool. Remove components in a straight line without bending, cocking or undue force -- reassemble tool with the same care.

CAUTION: Parts must be handled carefully and examined for damage or wear. Replace parts where required. Always replace O-rings and back-up rings when the tool is disassembled far any reason.

Note: Where a part number (P/N) is given, Huck sells that part. Consult manual’s TROUBLESHOOTING” if malfunction occurs -- then see “DISASSEMBLY”; ASSEMBLY”; “SECTIONAL VIEWS” etc. for further details.

Sealants; Lubricants; Hydraulic Fluid; Service Kits

Rub SLIC-TITE TEFLON thread compound, or equivalent, on pipe threads to prevent leaks and for ease of assembly -- CAUTION: Do not use TEFLON tape on pipe threads -- particles of shredded tape cause hydraulic unit valve failure or malfunction. (SLIC-TITE -- in stick form, P/N 503237.)

Smear LUBRIPLATE 130AA, or equivalent lubricant, on O-rings and mating surfaces. This prevents nicking/pinching O-rings on any rough/tight spot and increases ease of assembly. (LUBRIPLATE 130AA -- in tube, P/N 502723.)

Service Kit contains perishable parts -- see “TABLE 2- SERVICE KIT”. For convenience, and as experience verifies, keep extra Service Kits (O-rings; back-up rings; other standard items) and tool parts on hand. When in short supply, you can obtain O-rings and back-up rings from any regular retailer of these items. Ask for: O-ring size (AS 568-number); material and durometer. For this and additional information on O-rings and back-up rings, see “SPECIFICATIONS for STANDARD PARTS” and “TABLE 2- SERVICE KIT”.
PREVENTIVE MAINTENANCE

System Inspection

Operating efficiency of the tool is directly related to performance of complete system including tool with nose assembly, hydraulic hoses, switch and control cord, and POWERIG® Hydraulic Unit. An effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

1. Inspect tool and nose assembly for external damage.

2. Verify that hose fittings, couplings and electrical connections are secure.

3. Inspect hydraulic hoses for signs of damage or deterioration. Do not carry tool suspended from hoses coupled together. Replace hoses as required.

4. Observe/monitor tool, hoses and POWERIG Hydraulic Unit during operation to detect abnormal heating, leaks or vibration.

POWERIG® Hydraulic Unit Maintenance

Maintenance and repair instructions are in applicable POWERIG Hydraulic Unit Instruction Manual.

Tool/Nose Assembly Maintenance and Precautions

Whenever disassembled, and also at regular intervals (depending on severity and length of use), replace all O-rings and back-up rings — Service Kits should be kept on hand. Inspect cylinder bore, piston and rod, and unloading valve for scored surfaces excessive wear or damage — replace parts as necessary.

Nose assembly with UNITIZED™ jaws must be disassembled and cleaned in MINERAL SPIRITS or ISOPROPYL ALCOHOL. Do not let UNITIZED jaws (urethane) soak in the solvent. Do not use solvents that cause urethane to swell. Use a sharp pointed “pick” to remove particles packed in pull grooves of jaws. IMMEDIATELY after cleaning, completely dry the parts.
TROUBLESHOOTING

Always check out the simplest possible cause of a malfunction first. For example, switch turned off or power cord not connected. Then proceed logically, eliminating each possible cause until the defective circuit or part is located. Where possible, substitute known good parts for suspected bad parts. Use the chart below, as an aid for locating and correcting malfunctions.

1. Tool fails to operate when trigger is depressed
   a. Inoperative POWERIG® Hydraulic Unit. See applicable instruction manual.
   b. Loose or disconnected control cord, or air hose.
   c. Damaged trigger assembly.
   d. Loose or faulty hydraulic hose couplings.
   e. Unloading valve not installed in tool.

2. Tool operates in reverse.
   a. Reversed hydraulic hose connections between hydraulic unit and tool.

3. Tool leaks hydraulic fluid.
   a. Depending on where leak occurs, defective or worn O-rings, or loose hydraulic hose connection at tool.

4. Hydraulic couplers leak fluid.
   a. Damaged or worn O-ring in coupler body. See Figure 4.

5. Hydraulic fluid overheats.
   a. Hydraulic unit not operating properly. See applicable POWERIG Hydraulic Unit Instruction Manual.
   b. Unloading valve installed backwards.

6. Tool operates erratically and fails to install fastener properly.
   a. Low or erratic hydraulic pressure supply - - air in system. See applicable POWERIG Instruction Manual.
   b. Damaged or excessively worn piston O-ring in tool.
   c. Unloading valve installed backwards.
   d. Excessive wear or scoring of sliding surfaces of tool parts.
   e. Excessive wear of unloading valve.
TROUBLESHOOTING (CONT.)

7. Pull grooves on fastener pintail stripped during pull stroke.
   a. Operator not sliding jaws completely onto fastener pintail.
   b. Incorrect fastener length.
   c. Worn or damaged jaw segments.
   d. Metal particles accumulated in pull grooves of jaw segments.
   e. Excessive sheet gap.
   f. Nose assembly not properly attached - - see Nose Assembly Data Sheet.

8. Collar of HUCKBOLT® Fastener not completely swaged.
   b. Scored anvil in nose assembly.

9. Shear collar on Huck blind fastener not properly installed.
   b. Worn or damaged driving anvil in nose assembly.

10. Tool “hangs-up” on swaged collar of HUCKBOLT Fastener.
    b. RETURN pressure too low.
    c. Nose assembly not properly attached - - see Nose Assembly Data Sheet.

11. Pintail of fastener fails to break.
    b. Pull grooves on fastener stripped. See 7.
    c. Worn piston and/or unloading valve.
    d. Hydraulic pressure too low.
    e. Damaged O-ring on piston.

12. Operator cannot slide nose assembly (completely) onto fastener pintail.
    a. Broken pintails jammed in tool. Install pintail tube if broken pintails will pass through.

SPARE PARTS and SERVICE KIT

The quantity of spare parts that should be kept on hand varies with the application and number of tools in service. Service kits containing perishable parts, such as O-rings, back-up rings, etc., should be kept on hand at all times. Parts included in Service Kit, 2502/2503KIT are shown in “TABLE 2 - SERVICE KIT”.
DISASSEMBLY

Refer to appropriate illustrations and “Good Service Practices”.

The following procedure is for complete disassembly. **Disassemble only components necessary to check and replace damaged O-rings, back-up rings or components** - **always replace seals, wipers, O-rings and back-up rings of disassembled components.**

**WARNING**
Be sure electric control cord (or air trigger) hose is disconnected from POWERIG® Hydraulic Unit **BEFORE disconnecting Tool’s hydraulic hoses from unit. Before any maintenance, DISCONNECT IN THIS ORDER to avoid possible severe personal injury.**

1. Disconnect electrical connector. Uncouple tool hydraulic hoses.
2. Remove nose assembly.
3. Unscrew coupling nipple and coupling body. Drain hydraulic hoses into container.
4. Push rearward on piston until remaining hydraulic fluid is drained into container. Discard fluid.
5. **NOTE: Do not remove hydraulic hoses from tool unless replacing.** Remove protective hose sleeve from hoses. To reach hose fittings, slide plastic shrouds back.
6. **2502:** Loosen strain relief grommet. Remove switch - - loosen set screw and carefully pry switch out with a small screw driver. Loosen two wires at rear of switch and remove it from cord. Pull cord out and remove grommet. Disassemble electrical connector to replace connector, or to rewire it.

**A2502:** Unscrew air trigger assembly. Loosen air fitting. Pull out air trigger hose. Loosen air quick disconnect and remove it.

7. Remove deflector from end cap. Remove socket head cap screw from cap.
8. Hold a spanner wrench in slots of retaining ring - - loosen and remove ring.
9. Push piston, with unloading valve, and end cap out of tool - - see “FIGURE 6 - PISTON DISASSEMBLY/ASSEMBLY TOOL” and “FIGURE 7 - PISTON DISASSEMBLY DETAIL”.
10. Slide end cap and unloading valve from piston.
11. Use a small diameter pointed rod to remove all seals, wipers, O-rings and back-up rings from components.
NOTE
1. When purchasing replacement parts that have seals, be sure to get all components related to part being purchased. For example, if you want Piston, 120339, also ask for O-ring, 505791 and back-up ring; 501146 (2).
2. POLYSEAL installation tool, 505940, is available for installing POLYSEAL, 505865.

CAUTION
1. Stroke limiter kit, 120752 (.625 stroke), use with adapter, 117831, & 99-1800 series nose assem.
2. Stroke limiter kit 120752-1 (.500) for 99-1700 series.
3. For fasteners with long pintails, use deflector, 118809-1, which is included with tool.
ASSEMBLY

Refer to appropriate illustrations and “Good Service Practices”.

Clean out O-ring grooves and reinstall perishable parts (O-rings, etc.). Use Service Kit - - always replace seals, wipers, O-rings and back-up rings of disassembled components.

1. See “FIGURE 8 - PISTON ASSEMBLING DETAIL” and follow instructions carefully.

2. Slide unloading valve through hole in piston - - the valve flats must be to the rear of the tool.

3. Push end cap assembly over piston extension.

4. Screw in retaining ring - - tighten with spanner wrench. Install socket head cap screw in end cap.

5. Push pintail deflector over end cap - - it engages ribs on cap.

6. CAUTION: Do not use TEFLOM tape on pipe threads - - see “MAINTENANCE, Sealants”. Thread hydraulic hoses into handle. Slide shrouds over fittings.


8. Slide protective hose sleeve onto assembled hoses and control cord/air hose.


10. Install nose assembly per applicable instructions on “NOSE ASSEMBLY DATA SHEET”.

11. Connect electrical connector (or air hose) and hydraulic couplers to POWERIG® Hydraulic Unit.

12. See WARNING in “DISASSEMBLY” and reverse the given procedure i.e. CONNECT HOSES FIRST, and then, connect electrical cord (or air hose). See “PREPARATION FOR USE” before operating tool.
# TABLE 2 - SERVICE KIT (part no. 2502/2503KIT)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty. per Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>504438 (A)</td>
<td>O-RING AS 568-111 CV747 75D</td>
<td>1.000</td>
</tr>
<tr>
<td>501102 (B)</td>
<td>BACK-UP RING S-11248-111</td>
<td>1.000</td>
</tr>
<tr>
<td>500773</td>
<td>O-RING AS 568-007 C366Y 70D</td>
<td>1.000</td>
</tr>
<tr>
<td>500777</td>
<td>O-RING AS 568-011 C366Y 70D</td>
<td>1.000</td>
</tr>
<tr>
<td>505791</td>
<td>O-RING AS 568-219 DISO C6865 70D</td>
<td>1.000</td>
</tr>
<tr>
<td>505790</td>
<td>O-RING AS 568-126 DISO C6865 70D</td>
<td>1.000</td>
</tr>
<tr>
<td>500823</td>
<td>O-RING AS 568-126 C366Y 70 DURO</td>
<td>1.000</td>
</tr>
<tr>
<td>505758</td>
<td>O-RING AS 568-114 DISO C9250 90D</td>
<td>1.000</td>
</tr>
<tr>
<td>501105</td>
<td>BACK-UP RING S-11248-114</td>
<td>1.000</td>
</tr>
<tr>
<td>501117</td>
<td>BACK-UP RING S-11248-126</td>
<td>1.000</td>
</tr>
<tr>
<td>501146</td>
<td>BACK-UP RING S-11248-219</td>
<td>2.000</td>
</tr>
<tr>
<td>505827</td>
<td>MICRODOT P/S 125-00.625 SQB</td>
<td>1.000</td>
</tr>
<tr>
<td>505865</td>
<td>MICRODOT P/S 125-00.875 SQB</td>
<td>1.000</td>
</tr>
<tr>
<td>505894</td>
<td>WIPER-MICRODOT 957-7</td>
<td>1.000</td>
</tr>
<tr>
<td>500060</td>
<td>SCREW-SOC HD CAP 10-24 X 3/8 LONG</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS for STANDARD PARTS**

1. All part numbers are available from Huck. The 500000 series part numbers are standard parts which can generally be purchased locally.

2. O-ring sizes are specified AS 568- dash numbers (AS 568- is an Aerospace Size Standard for O-rings and formerly was known as ARP 568-). “TABLE 2” has specific material and durometer just after the identifying AS 568-000 number.

3. 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.
Electric/Air Controls and Hydraulic Hoses
Fig. 6

Piston Disassembly / Assembly Tool
Piston Disassembly Detail

PUSH

STAND-OFF
Piston Assembling Detail
**Air and Hydraulic Conversion Kit, 125149**

Converts existing tool into the -2 version with 2’ hoses.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Quan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>118944-2</td>
<td>Light Weight Hi-pressure Hose</td>
<td>2</td>
</tr>
<tr>
<td>122839</td>
<td>Female Q.D. Hyd. Fitting</td>
<td>1</td>
</tr>
<tr>
<td>122840</td>
<td>Male Q.D. Hyd. Filling</td>
<td>1</td>
</tr>
<tr>
<td>112143-2</td>
<td>Air Hose</td>
<td>1</td>
</tr>
<tr>
<td>506973</td>
<td>Female Straight Connector</td>
<td>1</td>
</tr>
<tr>
<td>506267</td>
<td>Male Q.D. Air Fitting</td>
<td>1</td>
</tr>
</tbody>
</table>

**Stroke Limiter Kit, 120752**

Changes stroke of any 2502 tool to .625 in.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Quan.</th>
</tr>
</thead>
<tbody>
<tr>
<td>120739</td>
<td>Stroke Limiter</td>
<td>1</td>
</tr>
<tr>
<td>118817-4</td>
<td>Dump Valve</td>
<td>1</td>
</tr>
</tbody>
</table>
NOTES:

1. INCLUDE 119345 AND CABLE TIE P/N 505833 LOOSE IN BAG.

---

119345 AIR TRIGGER

112143-2 TUBING

506267 PLUG

503902 AIR FITTING

506973 FEMALE CONNECTOR

---

MATERIAL:  
HARDNESS:  
HEAT TREAT TO:  
SURFACE TREAT:  
SURFACE FINISH NOT TO EXCEED:  
IDENTIFICATION PER SPEC 42-311:  
SURFACES TO BE  

SPEC:  
(AS DRAWN OR STOCKED STATE)  
SPEC:  
SPEC:  
Ra  
☆ BAG  

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
ALL DIMENSIONS ARE IN INCHES:  

HUCK INTERNATIONAL, INC. I.S.D.  
85 GRAND STREET, P.O. BOX 2270  
KINGSTON, NEW YORK 12401  

AIR TRIGGER, & HOSE ASSEMBLY

DATE: 04/22/96  
SCALE: FULL

DET. SHR C K HR

FOC FAC TFF A 125142
NOTES
1. FOR LONG PNTAL FASTENERS, USE DEFLECTOR P/N 118009-1
   (INCLUDED WITH THIS TOOL)
2. STROKE 6-1/2 INCHES NOMINAL
   PULL CAPACITY AT 5000 PSI 10000 LB
   PULL CAPACITY AT 8000 PSI 10000 LB
3. SERVICE KIT P/N 2502/250301 AVAILABLE FOR THIS TOOL
4. POLYSEAL INSTALLATION TOOL, P/N 509640 AVAILABLE FOR THIS TOOL
5. ASSEMBLE AND TEST PER HUCK SPEC 42-500

PRINT THE FOLLOWING VALUES ON STICKER 5030251 IN
INCHES INK 4000 PSI 580 BAR
CROSS OUT SFCM, LIM. & GPM BLOCKS AS SHOWN.
TABLE 3 - FASTENER SELECTION CHART

A large variety of Nose Assemblies are available for Huck Installation Tools, therefore, please refer to the appropriate Nose Assembly Selection Chart for specific information - sizes installed and clearance dimensions for each specific nose assembly are given.

This list is intended as a general guide to the types of fasteners available from Huck. It is not all inclusive nor does it imply that the tool covered by this manual will install all types of fasteners.

REFER TO OTHER AVAILABLE FASTENER and NOSE ASSEMBLY SELECTION CHARTS for ADDITIONAL DATA

Fastener Selection List

<table>
<thead>
<tr>
<th>Fastener Type</th>
<th>Model Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>C6L HUCKBOLT®</td>
<td></td>
</tr>
<tr>
<td>MAGNA-GRIP® HUCKBOLT</td>
<td></td>
</tr>
<tr>
<td>HP8 HUCKBOLT® (1)</td>
<td></td>
</tr>
<tr>
<td>NAS SHEAR HUCKBOLT®</td>
<td></td>
</tr>
<tr>
<td>GPL LOCKBOLT® (1)</td>
<td></td>
</tr>
<tr>
<td>9SP &amp; MS BLIND RIVET</td>
<td></td>
</tr>
<tr>
<td>MAGNA-LOK® BLIND RIVET</td>
<td></td>
</tr>
<tr>
<td>Asp® FASTENER</td>
<td></td>
</tr>
<tr>
<td>UNIMATIC® BLIND BOLT</td>
<td></td>
</tr>
<tr>
<td>MS21140U &amp; MS2114OS</td>
<td></td>
</tr>
<tr>
<td>MS21141U &amp; MS21141S</td>
<td></td>
</tr>
<tr>
<td>MS90353U &amp; MS90353S</td>
<td></td>
</tr>
<tr>
<td>DOUBLE ACTION BLIND BOLT</td>
<td></td>
</tr>
<tr>
<td>MS90353 &amp; MS90354</td>
<td></td>
</tr>
<tr>
<td>MS21140 &amp; MS21141</td>
<td></td>
</tr>
<tr>
<td>OVERSIZE BLIND RIVET</td>
<td></td>
</tr>
<tr>
<td>OSMLSP &amp; OSMLS100</td>
<td></td>
</tr>
<tr>
<td>C5OL HUCKBOLT® (1)</td>
<td></td>
</tr>
<tr>
<td>HUCK-FIT™ FASTENER (1)</td>
<td></td>
</tr>
<tr>
<td>NAS TENSION HUCK BOLT®</td>
<td></td>
</tr>
<tr>
<td>LGPL LOCKBOLT® (1)</td>
<td></td>
</tr>
<tr>
<td>RAK BLIND RIVET®</td>
<td></td>
</tr>
<tr>
<td>MAGNA-BULB™ BLIND RIVET</td>
<td></td>
</tr>
<tr>
<td>OSR BLIND RIVET</td>
<td></td>
</tr>
<tr>
<td>UNIMATIC® BLIND RIVET</td>
<td>NAS 1919U &amp; NAS 1919S</td>
</tr>
<tr>
<td>NAS 1921U &amp; NAS 1921S</td>
<td>MS90354U &amp; MS90354S</td>
</tr>
<tr>
<td>DOUBLE ACTION BLIND RIVET</td>
<td>NAS191D &amp; NAS1921</td>
</tr>
</tbody>
</table>

(1) Available in inch & metric sizes
**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 (845) 331-7300 FAX (845) 334-7333

**Canada**
6150 Kennedy Road Unit 10, Mississauga, Ontario, L5T2J4, 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.
A Global Organization
Alcoa Fastening Systems (AFS) maintains company offices throughout the United States and Canada, with subsidiary offices in many other countries. Authorized AFS distributors are also located in many of the world’s industrial and Aerspace centers, where they provide a ready source of AFS fasteners, installation tools, tool parts, and application assistance.

Alcoa Fastening Systems world-wide locations:

**Americas**

Alcoa Fastening Systems
Aerospace Products
**Tucson Operations**
3724 East Columbia
Tucson, AZ 85714
800-234-4825
520-747-9898
FAX: 520-748-2142

Alcoa Fastening Systems
Aerospace Products
**Carson Operations**
PO Box 5268
900 Watson Center Rd.
Carson, CA 90749
800-421-1459
310-830-8200
FAX: 310-830-1436

Alcoa Fastening Systems
**Commercial Products**
Waco Operations
PO Box 8117
8001 Imperial Drive
Waco, TX 76714-8117
800-388-4825
254-776-2000
FAX: 254-751-5259

Alcoa Fastening Systems
Commercial Products
**Kingston Operations**
1 Corporate Drive
Kingston, NY 12401
800-431-3091
845-331-7300
FAX: 845-334-7333
www.hucktools.com

Alcoa Fastening Systems
Commercial Products
**Canada Operations**
6150 Kennedy Road, Unit 10
Mississauga, Ontario L5T2J4
Canada
905-564-4825
FAX: 905-564-1963

Alcoa Fastening Systems
Commercial Products
**Australia Operations**
14 Viewtech Place
Rowville, Victoria
Australia 3178
03-764-5500
Toll Free: 008-335-030
FAX: 03-764-3510

Alcoa Fastening Systems
Commercial Products
**United Kingdom Operations**
Unit C, Stafford Park 7
Telford, Shropshire
England TF3 3BQ
01952-290011
FAX: 0952-290459

Alcoa Fastening Systems
Aerospace Products
**France Operations**
Clos D’Asseville
BP4
95450 Us Par Vigny
France
33-1-30-27-9500
FAX: 33-1-34-66-0600


NOTICE: The information contained in this publication is only for general guidance with regard to properties of the products shown and/or the means for selecting such products, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in Huck’s written quotations, acknowledgements, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.

© 2003 Alcoa Fastening Systems
1 Corporate Drive, Kingston, NY 12401 • Tel: 800-431-3091 • Fax: 845-334-7333 • E-mail: hkitoolinfo@alcoa.com • www.alcoafasteningsystems.com