Instruction Manual

206 series
Hydraulic Installation Tool
EC Declaration of Conformity

Manufacturer:
Huck International, LLC, Industrial Products Group, 1 Corporate Drive, Kingston, NY, 12401, USA

Description of Machinery:
Models 206- and 208- families of hydraulic installation tools and specials based on their design (e.g. PR####).

Relevant provisions complied with:
British Standard related to hand held, non-electric power tools (ISO 11148-1:2011)

European Representative:
Rob Pattenden, 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: Robert B. Wilcox
Position: Engineering Manager
Location: Huck International, LLC d/b/a Arconic Fastening Systems and Rings
Kingston, New York, USA
Date: 01/11/2016 (November 1, 2016)

Declared dual number noise emission values in accordance with ISO 4871

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Uncertainty</th>
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</thead>
<tbody>
<tr>
<td>A weighted sound power level, LWA:</td>
<td>84 dB</td>
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<tr>
<td>A weighted emission sound pressure level at the work station, LpA:</td>
<td>73 dB</td>
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<tr>
<td>C-weighted peak emission sound pressure level, LpC, peak:</td>
<td>106 dB</td>
<td>3 dB</td>
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</table>

Values determined according to noise test code ISO 3744. The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.

Declared vibration emission values in accordance with EN 12096

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<tbody>
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</tr>
<tr>
<td>Uncertainty, K:</td>
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</tbody>
</table>

Values measured and determined according to ISO 28662-1, ISO 5349-2, and EN 1033

Test data to support the above information is on file at:
Arconic Fastening Systems and Rings, Kingston Operations, Kingston, NY, USA.
I. GENERAL SAFETY RULES:
1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the assembly power tool.
5. Do not modify this assembly power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use assembly power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Read MSDS Specifications before servicing the tool. MSDS specifications are available from the product manufacturer or your Huck representative.
11. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tooling damage or personal injury.
12. Never remove any safety guards or pintail deflectors.
13. Never install a fastener in free air. Personal injury from fastener ejecting may occur.
14. Where applicable, always clear spent pintail out of nose assembly before installing the next fastener.
15. Check clearance between trigger and work piece to ensure there is no pinch point when tool is activated. Remote triggers are available for hydraulic tooling if pinch point is unavoidable.
16. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle or to bend or pry the tool. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency, eliminating downtime, and preventing an accident which may cause severe personal injury.
17. Never place hands between nose assembly and work piece. Keep hands clear from front of tool.
18. Tools with ejector rods should never be cycled without nose assembly installed.
19. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet for correct positioning.

II. PROJECTILE HAZARDS:
1. Risk of whipping compressed air hose if tool is pneumudraulic or pneumatic.
2. Disconnect the assembly power tool from energy source when changing inserted tools or accessories.
3. Be aware that failure of the workpiece, accessories, or the inserted tool itself can generate high velocity projectiles.
4. Always wear impact resistant eye protection during tool operation. The grade of protection required should be assessed for each use.
5. The risk of others should also be assessed at this time.
6. Ensure that the workpiece is securely fixed.
7. Check that the means of protection from ejection of fastener or pintail is in place and operative.
8. There is possibility of forcible ejection of pintails or spent mandrels from front of tool.

III. OPERATING HAZARDS:
1. Use of tool can expose the operator’s hands to hazards including: crushing, impacts, cuts, abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly and be ready to counteract normal or sudden movements with both hands available.
4. Maintain a balanced body position and secure footing.
5. Release trigger or stop start device in case of interruption of energy supply.
6. Use only fluids and lubricants recommended by the manufacturer.
7. Avoid unsuitable postures, as it is likely for these not to allow counteracting of normal or unexpected tool movement.
8. If the assembly power tool is fixed to a suspension device, make sure that fixation is secure.
9. Beware of the risk of crushing or pinching if nose equipment is not fitted.
Safety Instructions (continued)

IV. REPETITIVE MOTION HAZARDS:
1. When using assembly power tool, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
2. When using tool, the operator should adopt a comfortable posture while maintaining a secure footing and avoid awkward or off balanced postures.
3. The operator should change posture during extended tasks to help avoid discomfort and fatigue.
4. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warnings should not be ignored. The operator should tell the employer and consult a qualified health professional.

V. ACCESSORIES HAZARDS:
1. Disconnect tool from energy supply before changing inserted tool or accessory.
2. Use only sizes and types of accessories and consumables that are recommended. Do not use other types or sizes of accessories or consumables.

VI. WORKPLACE HAZARDS:
1. Be aware of slippery surfaces caused by use of the tool and of trip hazards caused by the air line or hydraulic hose.
2. Proceed with caution while in unfamiliar surroundings; there could be hidden hazards such as electricity or other utility lines.
3. The assembly power tool is not intended for use in potentially explosive environments.
4. Tool is not insulated against contact with electrical power.
5. Ensure there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

VII. NOISE HAZARDS:
1. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems such as tinnitus, therefore risk assessment and the implementation of proper controls is essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpiece from ‘ringing’.
3. Use hearing protection in accordance with employer’s instructions and as required by occupational health and safety regulations.
4. Operate and maintain tool as recommended in the instruction handbook to prevent an unnecessary increase in the noise level.
5. Select, maintain and replace the consumable / inserted tool as recommended to prevent an unnecessary increase in noise.
6. If the power tool has a silencer, always ensure that it is in place and in good working order when the tool is being operated.

VIII. VIBRATION HAZARDS:
1. Exposure to vibration can cause disabling damage to the nerves and blood supply to the hands and arms.
2. Wear warm clothing when working in cold conditions and keep hands warm and dry.
3. If numbness, tingling, pain or whitening of the skin in the fingers or hands, stop using the tool, tell your employer and consult a physician.
4. Support the weight of the tool in a stand, tensioner or balancer in order to have a lighter grip on the tool.

X. HYDRAULIC TOOL SAFETY INSTRUCTIONS:

WARNINGS:
Do not exceed maximum pull or return settings on tool.
Be sure all hose connections are tight. All tool hoses must be connected.

1. Carry out a daily check for damaged or worn hoses or hydraulic connections and replace if necessary.
2. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.
3. Ensure that couplings are clean and correctly engaged before operation.
4. Use only clean oil and filling equipment.
5. Power units require a free flow of air for cooling purposes and should therefore be positioned in a well ventilated area free from hazardous fumes.
6. Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
7. Be sure all hose connections are tight.
8. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.
Description

Huck Models 206- and A206- Hydraulic Installation Tools install various fasteners. These light-weight and compact mini-tools, with their offset nose assemblies, have been specially designed for limited clearance areas.

The tools are powered by Huck POWERIG® Hydraulic Units, or equivalent, and designed to operate on 5400 to 5700 psi PULL pressure and 2200 to 2400 psi RETURN pressure as supplied by the hydraulic unit.

The A206- series is an air triggered tool to be used with Huck Models 956 and 970 Powerig Hydraulic Units, or equivalent.

The 206- series is an electric triggered tool designed for use with Models 913H, 918, and 940 Powerig Hydraulic Units, or equivalent.

Each tool is complete with hydraulic hoses, couplings and control trigger assembly (air or electric).

The tool consists of a cylinder assembly and a piston assembly. The piston has a “dump valve” to relieve hydraulic pressure at end of PULL stroke. Piston rod is off-center to the centerline of piston. Tool clearance is increased by having an off-center piston assembly. An offset nose assembly enhances the tool’s built-in clearance. This provides the maximum clearance obtainable. A nose assembly is attached to the tool’s piston rod using the nose assembly’s draw bar. An anvil holder stop limits nose assembly rotation to 80 degrees. Included with each tool is an extra dump valve. This valve is used when a long-stroke tool is required.

Principle of Operation

First, hydraulic hoses, and then, trigger control cord/hose are connected to Powerig® Hydraulic Unit. Trigger controls PULL and RETURN strokes of Tool. Trigger is depressed; hydraulic pressure is directed to PULL side of piston and piston moves rearward. Fastener installation begins.

When installation is completed, trigger is released. Hydraulic pressure is directed to RETURN side of piston.

It moves forward, and the nose assembly, with tool, is pushed off the installed fastener.

At end of Piston’s PULL stroke, the flat of the Dump Valve provides a passage for fluid from PULL side to RETURN side of Piston. When this occurs, pressurized fluid is unloaded (or “dumped”). Fluid circulates back to reservoir of the hydraulic unit.

![Diagram of 206 series Hydraulic Installation Tool](image)

- **Piston**
- **Dump Valve**
- **PULL**
- **RETURN**
- **Stroke Limiter (if used)**

**Figure 2**
Specifications

POWER SOURCE: Huck POWERIG® Hydraulic Unit

HOSE KITS: Use only genuine Huck Hose Kits rated @ 10,000 psi (689.5 BAR) working pressure.

MAX OPERATING TEMP: 125°F (51.7°C)

MAX FLOW RATE: 2 gpm (7.5 l/m)

MAX PULL PRESSURE: 5700 psi (393 bar)

MAX RETURN PRESSURE: 2400 psi (165 bar)

PULL CAPACITY: 5825 lbs @ 5700 psi (25.9 kN @ 393 bar)

STROKE: TOOL inches (cm)
206-500 .500 (1.27)
206-625 .625 (1.59)
206-1250 1.250 (3.18)

NOTE: The 206-500 tool can be used with an optional stroke limiter kit part number 130866, which will limit stroke to .375 inches (.95 cm); essentially turning the tool into a 206-375 tool.

WEIGHT: approximately 3.5 lbs (~1.6 kg)

HYDRAULIC FLUID:
Hydraulic fluid shall meet DEXRON® III, DEXRON VI, MERCON®, Allison C-4 or equivalent Automatic Transmission Fluid (ATF) specifications. Fire-resistant fluid may be used if it is an ester-based fluid such as Quintolubric® HFD or equivalent. Water-based fluid shall NOT be used; serious damage to equipment will occur.

Where the following trade names are used in this manual, please note:
DEXRON is a registered trademark of General Motors Corporation.
Loctite is a registered trademark of Henkel Corporation, U.S.A.
LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
MERCON is a registered trademark of Ford Motor Corp.
Never-Seez is a registered trademark of Bostik, Inc.
Quintolubric is a registered trademark of Quaker Chemical Corp.
Slic-tite is a registered trademark of LA-CO Industries, Inc.
Spiralox is a registered trademark of Smalley Steel Ring Company.
Teflon is a registered trademark of E. I. du Pont de Nemours and Company.
Threadmate is a registered trademark of Parker Intangibles LLC.
TRUARC is a trademark of TRUARC Co. LLC.
Vibra-Tite is a registered trademark of ND Industries, Inc. USA.

NOTE:
Tools come labeled with important informational stickers (shown at right).

WARNING/CAUTION Sticker 590424-5700, and HUCK Trademark Sticker 590517, must be in place and readable at all times. See Components Drawings, Figures 4, 5, and 6 for sticker placement locations.
TOOL OPERATION

INSTALLATION SEQUENCE
POWER SOURCE CONNECTIONS

Use a Huck Powerig® Hydraulic Unit that has been suitably prepared for operation.

1. Use Huck Powerig Hydraulic Unit that has been prepared for operation per unit's instruction manual. Check both PULL and RETURN pressures and, if required, adjust to pressures given in Specifications section of this manual. See both hydraulic unit and T-124883CE Instruction manuals before/during checking procedure. Visually inspect for leaks and to verify that End Cap is installed correctly.

2. First, turn hydraulic unit to OFF (918 Powerigs only). Then disconnect power supply from hydraulic unit. Disconnect trigger control system from hydraulic unit.

3. Connect tool hoses to hydraulic unit. If required, adjust position of trigger assembly on return pressure hose. Connect trigger control system to hydraulic unit.

4. Connect hydraulic unit to power supply (air or electric). 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.

5. Select nose assembly for fastener to be installed. Disconnect hydraulic unit from power supply; disconnect Tool's trigger control system from hydraulic unit. Attach nose assembly to Tool.

6. Reconnect Tool's trigger control system to hydraulic unit; reconnect unit to power supply. Check operation of nose assembly. Install fasteners in test plate of correct thickness with proper size holes. Inspect installed fasteners. If fasteners do not pass inspection, see Troubleshooting section to locate and correct Tool's malfunction.

7. Operator should receive training on proper use from qualified personnel.

SPECIAL NOTES

Use the correct nose assembly for your fastener. Remove the Stroke Limiter and install extra Valve (flats to rear of tool). Hoses may be installed in bottom of cylinder or out the back of cylinder, as application requires. After removing hoses, move pipe plugs to hose ports, then reinstall hoses. Rub Loctite® with PTFE thread compound, or equivalent, on pipe plug threads and quick connect fitting.

MAXIMUM GRIP CONDITIONS AND INCREASING TOOL STROKE

Shipped with the tool is a longer dump valve. To install valve, remove stroke limiter from Tool and replace original unloading valve with longer valve, 119422. Tool will now have .500 stroke. The .500 stroke is required when installing fasteners in maximum grip conditions, and when excessive sheet gap exists. Under normal conditions, Nose Assemblies will install fasteners with standard 206-375 or A206-375.
Operating Instructions

Read all of these instructions in order to ensure the safe operation of this equipment.

This section details installing HuckBolt® and Huck Blind Fasteners. Review all CAUTIONs and WARNINGs prior to installing these fasteners. If the tool malfunctions, consult the Troubleshooting section before attempting any repairs.

NOTE: Reasonable care of tools by operators is an important factor in maintaining efficiency and reducing downtime.

CAUTION: Ensure the tool has been properly re-assembled prior to use.

Prior to starting these procedures, be sure to verify the proper direction of the flats on the dump valve.

TO INSTALL A HUCKBOLT FASTENER:

1. Place a pin in the workpiece and place the collar over the pin.

   CAUTION: Remove excess gap from between the sheets to permit proper fastener installation and prevent jaw damage. ALL jaw teeth must engage the pintail to avoid damaging the teeth.

2. Hold the pin and push the nose assembly onto the pin that is protruding through the collar until the nose anvil touches the collar.
3. Press and hold the trigger until the collar is swaged and the pintail breaks.
4. Release the trigger.

The pressure is re-directed; the piston moves forward; and the tool is pushed off the fastener and ready for the next installation cycle.

TO INSTALL A HUCK BLIND FASTENER:

1. Place a fastener in the workpiece or in the end of the nose assembly.

   NOTE: If the collar has one tapered end, that end must be out toward tool; not next to the sheet.

   CAUTION: BOM blind fasteners will jam in the nose assembly if they are pulled when not in workpiece.
   • To avoid structural and tool damage, be sure there is sufficient clearance for the nose assembly at full stroke.
   • Remove excess gap from between the sheets to permit proper fastener installation and prevent jaw damage. ALL jaw teeth must engage the pintail to avoid damaging the teeth.

2. Press and hold the trigger until the fastener is installed and the pintail breaks.
3. Release the trigger; the tool will perform its RETURN stroke.

The pressure is re-directed; the piston moves forward; and the tool is pushed off the fastener and ready for the next installation cycle.

NOTE: The tool or nose assembly must be held against, and at a right angle (90-degrees) to, the workpiece.

WARNING:
• Wear approved eye and hearing protection.
• Ensure there is adequate clearance for operator’s hands before proceeding with fastener installation.
• Be sure that pintail deflector is attached to the tool and directed away from all personnel.
• Do not pull on a pin without placing a fastener in a workpiece. Make sure that the collar chamfer is out, toward the tool. Pins eject with great velocity when pintails break off or teeth/grooves strip, which could cause severe injury.

CAUTION:
• Ensure the tool has been properly re-assembled prior to use.

NOTE: If the collar has one tapered end, that end must be out toward tool; not next to the sheet.

• Remove excess gap from between the sheets to permit proper fastener installation and prevent jaw damage. ALL jaw teeth must engage the pintail to avoid damaging the teeth.

WARNING:
• Wear approved eye and hearing protection.
• Ensure there is adequate clearance for operator’s hands before proceeding with fastener installation.
• Be sure that pintail deflector is attached to the tool and directed away from all personnel.
• Do not pull on a pin without placing a fastener in a workpiece. Make sure that the collar chamfer is out, toward the tool. Pins eject with great velocity when pintails break off or teeth/grooves strip, which could cause severe injury.
Maintenance

GENERAL
The operating efficiency of your tool is directly related to the performance of the entire system. Regular inspection and the immediate correction of minor problems will keep the tool operating efficiently, and prevent downtime. A schedule of “preventive” maintenance of the tool, nose assembly, hoses, trigger and control cord, and POWERIG will ensure your tool’s proper operation, extend its life, and reduce the risk of personal injury to those who operate it.

NOTE: Huck tools should be serviced only by personnel who are thoroughly familiar with its operation.

Consult MSDS before servicing tool.

Service the tool in a clean, well-lighted area. Take special care to prevent contamination of pneumatic and hydraulic systems. Keep separated parts away from dirty work surfaces.

Have available all necessary hand tools—standard and special.

Carefully handle all parts. Before reassembly, examine them for damage and wear.

Disassemble and assemble tool components in a straight line. Do NOT bend, cock, twist, or apply undue force.

Have any relevant Huck Spare Parts Service Kits available when servicing the tool; they include important consumable parts. Other components, as experience dictates, should also be available.

DAILY
If a Filter-Regulator-Lubricator unit is not being used, uncouple the air disconnects and add a few drops of hydraulic fluid to the air inlet of the tool.

NOTE: If the tool is in continuous use, add a few drops of oil in every 2–3 hours.

Before connecting an air hose to the tool, bleed the air lines to clear dirt or water.

Check tools and nose assemblies for damage and air or hydraulic leaks; tighten, repair, or replace if necessary.

Inspect the tool, hoses, and POWERIG during operation to detect abnormal heating, leaks, or vibration.

Clean nose assemblies in mineral spirits to clear jaws and rinse metal chips and dirt. For a more thorough cleaning, disassemble the nose assembly. Use a pointed “pick” to remove embedded particles from the pull grooves of the jaws.

Clean all parts of any assembly with UNITIZED™ Jaws in mineral spirits or isopropyl alcohol only; do not let the jaws come in contact with other solvents. Do not let jaws soak; dry them immediately after cleaning. Huck recommends drying other parts before re-assembling.

WEEKLY

Disassemble, clean, and reassemble nose assemblies in accordance with applicable instructions.

Check the tool and all connecting parts for damage and fluid/air leaks; tighten or replace if necessary.

Inspect the cylinder bore, piston and rod/extension, and unloading valve for scored surfaces, excessive wear, and damage; replace as necessary.

STICKERS

Stickers on the tool display safety and pressure-settings information, and must always be legible. For more information on sticker locations and part numbers, see the STICKER LOCATIONS figures on the following pages.

SPARE PARTS SERVICE KITS

Huck Spare Parts Service Kits contain perishable replacement parts for your tool. Huck recommends having the appropriate kit accessible. For more information, see KITS & ACCESSORIES.

FLUID MAINTENANCE

See Specifications on page 6 for information on approved fluid types. Dispose of fluid in accordance with local environmental regulations. Recycle steel, aluminum, and plastic parts in accordance with local lawful and safe practices.
Tool Components

Huck tools are labeled with important stickers that contain safety and pressure-settings information. These stickers must remain on the tools and be legible. Damaged, worn, and missing stickers must be replaced. Sticker locations and part numbers can be found in the following series of figures. A sticker must be ordered and replaced on the tool, in the location shown, if: it becomes damaged or worn; it has been removed from the tool; or replacing the Cylinder.

**Figure 4**

<table>
<thead>
<tr>
<th>119851-2 Piston Assy</th>
<th>119420 Gland Assy</th>
<th>119435 Cylinder Assy</th>
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</thead>
<tbody>
<tr>
<td>Piston (not available separately)</td>
<td>Gland (not available separately)</td>
<td>Cylinder (not available separately)</td>
</tr>
<tr>
<td>503810 O-Ring</td>
<td>505758 O-Ring</td>
<td>503802 O-Ring</td>
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<tr>
<td>501114 Back-up Ring</td>
<td>501105 Back-up Ring</td>
<td>501106 Back-up Ring</td>
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<tr>
<td></td>
<td>500820 O-Ring</td>
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<tr>
<td>119421 Retaining Ring</td>
<td>503704 Pipe Plug (2)</td>
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<tr>
<td>119423 Stop</td>
<td>590424-5700 WARNING Sticker</td>
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<td>119422 Dump Valve</td>
<td>590517 HUCK Sticker</td>
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<td>118472 Screw</td>
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</table>

206-500 Style Head Components
## Tool Components

### 206 series Hydraulic Installation Tool (HK1059)

#### 206 series Hydraulic Installation Tool (HK1059)

**Tool Components**

1. **119851-1 Piston Assy**
   - Contains:
     - Piston (not available separately)
     - 503810 O-Ring
     - 501114 Back-up Ring

2. **11947 Stroke Limiter**
   - (206-625 ONLY)

3. **119420 Gland Assy contains**:
   - Gland (not available separately)
   - 505758 O-Ring
   - 501105 Back-up Ring
   - 500820 O-Ring

4. **119421 Retaining Ring**

5. **119422-2 Dump Valve**

6. **119423 Stop**

### 206-625 Style Head Components
- 206-625, 206-625-2, A206-625

### 206-1250 Style Head Components
- 206-1250, A206-1250

**Figure 5**

#### 206-625 Style Head Components

1. **128136 Piston Assy**
   - Contains:
     - Piston (not available separately)
     - 503810 O-Ring
     - 501114 Back-up Ring

2. **119420 Gland Assy contains**:
   - Gland (not available separately)
   - 505758 O-Ring
   - 501105 Back-up Ring
   - 500820 O-Ring

3. **119421 Retaining Ring**

4. **128134 Dump Valve**

5. **501205 Screw**

6. **119423 Stop**

**Figure 6**

#### 206-1250 Style Head Components
- 206-1250, A206-1250

1. **128135 Cylinder Assy contains**:
   - Cylinder (not available separately)
   - 503802 O-Ring
   - 501106 Back-up Ring
   - 503704 Pipe Plug (2)

2. **590424-5700 WARNING Sticker**

3. **590517 HUCK Sticker**

4. **119421 Retaining Ring**

5. **119420 Gland Assy contains**:
   - Gland (not available separately)
   - 505758 O-Ring
   - 501105 Back-up Ring
   - 500820 O-Ring

6. **118472 Screw**

7. **128134 Dump Valve**

8. **501205 Screw**

**Figure 6**
Electric Trigger Cord with Hydraulic Hoses

<table>
<thead>
<tr>
<th>Tool</th>
<th>Electric Trigger &amp; Housing Assembly (see Figure 8)</th>
<th>Electric Cord Length (Feet)</th>
<th>Hose Assembly</th>
<th>Hose Length (Feet)</th>
<th>Cable Tie</th>
<th>Clamp Assembly</th>
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Air Trigger Assemblies with Hydraulic Hoses

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<th>Tool</th>
<th>Air Trigger &amp; Housing Assy</th>
<th>Hose Assembly</th>
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<td>12</td>
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</table>
Hydraulic Hose & Coupler Set

Hydraulic Coupler Set, Huck P/N 110440, contains both 110438 and 110439.

O-Ring P/N 504438, and back-up ring P/N 501102, must be replaced if leakage occurs when hydraulic couplings are connected. Use a pick with a long point, approximately .060 in. diameter, to lift out rings. These rings are included in the tool service kit.

To prevent damage to O-ring, use a fine India stone to remove any nicks or burrs from diameter and leading edge "A".
Air Trigger, Hose, & Housing Assembly

Figure 12

Tubing (See Table Below)

113021 Air Fitting

503902 Air Fitting

118941 Housing Assembly (must be purchased as a subassembly)
505834 Screw (2)
501732 Setscrew

118942 Air Trigger Housing Assembly

<table>
<thead>
<tr>
<th>Tool</th>
<th>Air Trigger, Hose, &amp; Housing Assembly</th>
<th>Air Trigger &amp; Hose Assembly</th>
<th>Tubing</th>
<th>Air Trigger</th>
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<td>A206-500</td>
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</table>
Electric Trigger, Cord, & Housing Assembly

![Diagram of Electric Trigger, Cord, & Housing Assembly]

**Table 1: Electric Trigger Cord & Housing Assembly**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Electric Trigger Cord &amp; Housing Assembly (from Figure 3e)</th>
<th>Electric Trigger &amp; Cord Assembly (above)</th>
<th>Cord</th>
<th>Male Connector</th>
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<tr>
<td>206-500</td>
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</table>

**Figure 13**
This procedure is for the disassembly of the tool. Disassemble only those components necessary in order to replace damaged O-rings, Quad-rings, Back-up rings, and worn or damaged components. Always use soft jaw vise to avoid damage to tool. For component identification, see Figures 3–9.

WARNING: Be sure to disconnect the tool’s control trigger from the POWERIG® before disconnecting tool’s hydraulic hoses from it. If not disconnected in this order, serious personal injury may occur.

To disassemble the tool:

1. Disconnect Tool’s electric trigger control cord or air trigger control hose from hydraulic power unit, then uncouple Hydraulic Hoses.
2. Unscrew Cap Screw and remove Anvil Retainer, and remove nose assembly from Tool.
3. Cut tape from hoses, being careful not to cut into hoses.
4. Remove Trigger Housing from hoses (for more detailed information, refer to illustrations of applicable trigger assemblies in this manual).
5. Remove both Couplers (male and female) from hoses, and drain hoses into container.
6. Unscrew both hoses (ONLY if servicing or switching hoses; otherwise keep hoses attached to tool.) from Tool’s Cylinder.
7. Unscrew Socket Head Screw using a 5/32 hex key, and remove Retaining Ring.
8. Drain fluid from cylinder into container and discard fluid.
9. Press Piston and Gland from cylinder in two steps as follows:
   STEP 1. Press against piston rod with a wood block until block contacts front of cylinder (block not shown).
   STEP 2. Using a brass drift/rod, resume pressing on piston rod until piston rod and gland are free of cylinder (see Figure 9).
10. Slide Gland from piston rear extension.
11. Remove Dump Valve from piston; remove Stroke Limiter (if used) from rear piston rod.
12. Use a small, dull pointed rod to remove all O-rings and back-up rings from parts.

NOTE: Disassemble control trigger systems only when it is necessary to rewire or replace trigger switch.
Assembly

**P/N indicates a part that is available from Huck.**
Prior to re-assembling the tool, Huck recommends:

Cleaning components with mineral spirits or a similar solvent. Inspect them for wear/damage and replace as necessary.

**NOTE:** When re-assembling the tool, always replace seals, wipers, and rings of subassemblies, as well as damaged and defective parts. Take care not to damage rings.

Using the O-rings, Quad-rings, and Back-up rings from Huck Spare Parts Service Kit (P/N 206-375KIT). Having an extra Service Kit available at all times is advised.

Smear LUBRIPLATE® 130-AA (Huck P/N 502723) or SUPER-O-LUBE® (Huck P/N 505476) on all rings, and mating parts to ease assembly.

To re-assemble the tool:

1. Set Cylinder Assembly on a protective support, such as a pipe coupling or a hollow wood block, (FIGURE 5), that will protect the front extension’s threads. The Piston can then slide through front opening of cylinder.

2. Position piston in cylinder so that piston rod is aligned with front opening of cylinder. Push down on piston face (Figure 10). Continue to push until piston stops at bottom of cylinder. Piston rod now extends through front opening.

3. Push Dump Valve into small hole in rear of piston. **NOTE:** Flats on valve must be toward rear of Tool. If using a stroke limiter, slide it onto rear piston rod.

4. Place Gland into cylinder, over the rear piston rod, with the screw hole facing out, until it stops against cylinder shoulder.

5. Screw Retaining Ring into cylinder until it stops. Back ring out 1/4 turn, or less, until Cap Screw can be screwed into gland at nearest retaining ring scallop. Tighten with 5/32 hex key.

6. If they have been removed, prepare fittings per instructions in *Preparation for Use* section, and screw hoses into Cylinder.

**CAUTION:** Do not use TEFLON® tape on pipe threads. Tape can shred, resulting in malfunctions. Threadmate™ is available in a 4oz. tube from Huck (P/N 508517).

7. Refer to figures 7 and 8 for trigger and hose assembly components. **NOTE:** Air Trigger Control Assembly can be modified to use with 970 Powerig® Hydraulic Unit. Remove Quick Disconnect, 113021, and replace with Male Air Fitting, 503902. Screw 503902 into sub-plate of 970.

8. Clamp either trigger assembly onto return hose and close to Tool.

9. Secure hoses and cord together with black electrical tape, spacing bands approximately 18 inches apart.

10. First connect hydraulic hoses to Powerig® Hydraulic Unit. Then connect control trigger connector/disconnect to hydraulic unit.

11. See *Preparation for Use* for WARNINGS, CAUTIONS, procedure for tool set-up, reference to nose assembly, and checking installed fasteners. See *Operating Instructions* for safe fastener installation procedure.

12. If test results are good, Tool is ready for use.

**WARNING:** Make sure the tool has been properly re-assembled prior to use. Failure to do so could result in serious personal injury. Do not omit any seals during servicing; leaks will result and personal injury may occur.

*Figure 10*
Troubleshooting

Always check the simplest possible cause (such as a loose or disconnected trigger line) of a malfunction first. Then proceed logically, eliminating other possible causes until the cause is discovered. Where possible, substitute known good parts for suspected defective parts. Use this Troubleshooting information to aid in locating and correcting trouble.

1. **Tool fails to operate when trigger is pressed.**
   a. Inoperative POWERIG® Hydraulic Unit. See applicable instruction manual.
   b. Loose air or electric connections.
   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. Defective tool O-rings or loose hose connections at tool.

4. **Hydraulic couplers leak fluid.**
   a. Damaged or worn O-rings in coupler body. See Coupler 110440.

5. **Hydraulic fluid overheats.**
   a. Hydraulic unit not operating properly.
   b. Unloading valve installed incorrectly.
   c. POWERIG running in reverse (918: 918-5). See unit’s manual.

6. **Tool operates erratically and fails to properly install fastener.**
   a. Low or erratic hydraulic pressure; air in system.
   b. Damaged or worn piston O-ring in tool.
   c. Unloading valve installed incorrectly.
   d. Excessive wear on sliding surfaces of tool parts.
   e. Excessive wear of unloading valve in tool.

7. **Pull grooves on fastener pintail stripped during PULL stroke.**
   a. Operator not sliding anvil completely onto fastener pintail.
   b. Incorrect fastener grip.
   c. Worn or damaged jaw segments.
   d. Metal particles in jaw segments pull grooves.
   e. Excessive sheet gap.

8. **Collar of HuckBolt® Fastener not completely swaged.**
   b. Scored anvil.

9. **Shear collar on Huck Blind Fastener not driven.**
   a. Improper tool operation.
   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 installed correctly.

11. **Pintail of fastener fails to break.**
    b. Pull grooves on fastener are stripped. See Trouble 7.
    c. PULL pressure too low.
    d. Worn unloading valve.

Kits & Accessories

**Spare Parts Service Kit**

206-375KIT
Includes all perishable O-rings and Back-up rings contained in the Cylinder Head. A spare kit should be kept on hand.

**Stroke Limiter Kit**

130866
Includes a stroke limiter and dump valve to install on the 206-500 tool to limit the stroke from .500 inches to .375 inches; essentially turning the tool into a 206-375 tool.

**Air and Hydraulic Conversion Kit**

125149
Converts existing tool into the -2 version with 2’ hoses. It includes the hoses, male and female couplers, air hose, and fitting.
Limited Warranties

Limited Lifetime Warranty on BobTail® Tools:

Huck International, Inc. warrants to the original purchaser that its BobTail® installation tools manufactured after 12/1/2016 shall be free from defects in materials and workmanship for its useful lifetime. This warranty does not cover special order / non-standard products, or part failure due to normal wear, tool abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

Two Year Limited Warranty on Installation Tools:

Huck International, Inc. warrants that its installation tools and Powerig® hydraulic power sources manufactured after December 1, 2016 shall be free from defects in materials and workmanship for a period of two years from date of purchase by the end user. This warranty does not cover special order / non-standard products, or part failure due to normal wear, tool abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

90 Day Limited Warranty on Nose Assemblies and Accessories:

Huck International, Inc. warrants that its nose assemblies and accessories shall be free from defects in materials and workmanship for a period of 90 days from date of purchase by the end user. This warranty does not cover special clearance noses, or special order / non-standard product, or part failure due to normal wear, abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

Useful lifetime is defined as the period over which the product is expected to last physically, up to the point when replacement is required due to either normal in-service wear, or as part of a complete overhaul. Determination is made on a case-by-case basis upon return of parts to Huck International, Inc. for evaluation.

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.

Huck shall not be liable for any loss or damage resulting from delays or non-fulfillment 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

**Outside USA and Canada**

Contact your nearest Huck International location (see reverse).

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 Tool Kits and Nose Assemblies. Please contact your Huck Representative or the nearest Huck International location (see reverse) for the ATSC in your area.
Arconic Inc. (NYSE: ARNC) creates breakthrough products that shape industries. Working in close partnership with our customers, we solve complex engineering challenges to transform the way we fly, drive, build and power. Through the ingenuity of our people and cutting-edge advanced manufacturing, we deliver these products at a quality and efficiency that ensures customer success and shareholder value.

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