Instruction Manual

7352

Hydraulic Regional Jet Clearance Tool

(shown with nose assembly attached)
EC Declaration of Conformity

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

Description of Machinery:
Model 7352 hydraulic installation tool and specials based on its 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 Alcoa Fastening Systems & Rings
Kingston, New York, USA
Date: 08/01/2016 (January 8, 2016)

Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: 81.5 dB (reference 1 pW) Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: 70.5 dB (reference 20 µPa) Uncertainty, KpA: 3 dB

C-weighted peak emission sound pressure level, LpC, peak: 119.9 dB (reference 20 µPa) Uncertainty, KpC: 3 dB

Values determined according to noise test code ISO 15744, using as basic standards ISO 3744 and ISO 11203. 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

<table>
<thead>
<tr>
<th>Measured Vibration emission value, a</th>
<th>Uncertainty, K</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.276 m/s²</td>
<td>0.074 m/s²</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:
Alcoa Fastening Systems & Rings, Fasteners Division, Kingston Operations, Kingston, NY, USA.
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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 with out 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 pneudraulic 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 countering 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.

Continued on next page...
Safety Instructions (continued)

IV. REPEETITIVE 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.

X. HYDRAULIC TOOL SAFETY INSTRUCTIONS:
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.

WARNING: Do not exceed maximum pull or return settings on tool.
**SPECIFICATIONS**

**POWER SOURCE:** Huck POWERIG Hydraulic Unit

**MAX OPERATING TEMP:** 125° F (51.7° C)

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

**MAX PULL PRESSURE:** 5,700 psi (393 bar)

**MAX RETURN PRESSURE:** 2,400 psi (165.5 bar)

**CAPACITY:** 5,517 lbs @ 5,700 psi (24.54 kN @ 393 bar)

**STROKE:** 0.45 in. (1.2 cm)

**WEIGHT:** 5.5 lbs (2.49 kg)

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

**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 as serious damage to equipment will occur.

*DEXRON* is a registered trademark of General Motors Corp.

*MERCON* is a registered trademark of Ford Motor Corp.

*Quintolubric* is a registered trademark of Quaker Chemical Corp.
**PRINCIPLE OF OPERATION**

**PULL STROKE**
When the trigger is pressed, hydraulic pressure is directed to the PULL side of the piston, and the piston and nose assembly collet move rearward, installing the fastener. When the piston reaches the end of the PULL stroke, it uncovers flats on the rear end of the Dump Valve. These flats provide a passage for hydraulic fluid from the PULL side to the RETURN side of the piston, “unloading” (“dumping”) the pressurized fluid back to the tank.

**RETURN STROKE**
When fastener installation is complete, the trigger is released. Hydraulic pressure is directed to the RETURN side of the piston, which moves forward, pushing the tool/nose assembly off the installed fastener.
**Preparation for Use**

**WARNING:** Correct PULL and RETURN pressures are required for operator’s safety and for installation Tool’s function. Pressure Gauge T-124883CE is available for checking pressures. See Tool Specifications and Gauge Instruction Manual. Failure to verify pressures may result in severe personal injury.

Use a Huck POWERIG® Hydraulic Unit, or equivalent, that has been suitably prepared for operation. See the CAUTION on this page regarding PULL and RETURN pressures.

1. Turn OFF the POWERIG and disconnect its power supply. Connect the tool hoses to unit.
2. Connect the tool’s trigger control system to the POWERIG.
3. Connect the POWERIG to the power supply and turn it ON. Press and hold the trigger for 30 seconds; then press the trigger a few times to cycle the tool and to circulate the hydraulic fluid. Observe the action of the tool and check for leaks. Turn OFF the POWERIG.
4. Disconnect the tool’s control switch electrical cord from the POWERIG. Disconnect the POWERIG from the power supply.
5. Select a nose assembly for the fastener to be installed and attach it to the tool.
6. Reconnect the POWERIG to the power supply. Connect the tool’s hydraulic hoses to the POWERIG, then connect the tool’s switch control cord to the POWERIG.
7. Check the operation of nose assembly; install fasteners in a test plate of correct thickness with proper size holes. Inspect installed fasteners. If fasteners do not pass inspection, see **Troubleshooting** to investigate possible causes.

**WARNING:** Connect the tool’s hydraulic hoses to the POWERIG before connecting tool’s control switch cord to the POWERIG. If not connected in this order, severe personal injury may occur.

**WARNING:** Disconnect the tool’s control switch cord from the POWERIG before disconnecting the tool’s hydraulic hoses. If not disconnected in this order, severe personal injury may occur.

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**Assembly of NPTF Threaded Components**

**Air Fittings**

1) Apply TEFILON® stick to male threads which do not have pre-applied sealant per manufacturer’s recommendations. (Proceed to All Fittings step 2)

**Hydraulic Fittings**

1) Apply Threadmate™ to male and female threads which do not have pre-applied sealant per manufacturer’s recommendations. (Proceed to All Fittings step 2)

**All Fittings:**

2) Tighten to finger-tight condition.
3) Wrench tighten to 2-3 turns past finger-tight condition.
4) Final thread engagement can be checked (optional) by measuring the dimension from the flange of male fitting to the end of the thread before assembly and subtracting the distance under the flange after assembly.

<table>
<thead>
<tr>
<th>Thread Size</th>
<th>Final Thread Engagement at Full Make-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8-27 NPTF</td>
<td>.235 inch (.59 cm)</td>
</tr>
<tr>
<td>1/4-18 NPTF</td>
<td>.339 inch (.86 cm)</td>
</tr>
<tr>
<td>3/8-18 NPTF</td>
<td>.351 inch (.89 cm)</td>
</tr>
</tbody>
</table>
Maintenance

**WARNINGS:**
Before performing maintenance, disconnect the tool’s electric control trigger from the POWERIG® Hydraulic Unit before disconnecting tool hoses from it. If not disconnected in this order and reconnected in the reverse order, severe personal injury may occur. Inspect tool for damage and wear before each use. Do not use if damaged or worn; severe personal injury may occur.

**CAUTIONS:**
- Keep foreign matter out of the hydraulic system. Keep separated parts away from dirty work surfaces.
- Dirt and debris in hydraulic fluid causes valve failures in tool and POWERIG®.
- Check the Assembly Drawings in this manual for the proper direction of the flats on the dump valve.

- The efficiency and life of your tool depends on proper maintenance. Using the manual will help give a clear understanding of the tool and basic maintenance procedures. Please read this page completely before proceeding with maintenance and repair. Use proper hand tools in a clean and well-lighted area. Only standard hand tools are required in most cases. Where a special tool is required, the description and part number are given.

**CAUTION:** Always replace seals, wipers, and ALL rings when tool is disassembled for any reason.

- While clamping tool 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 vise with soft jaws greatly reduces possibility of damaging tool. Remove components in a straight line without bending, cocking or undue force. Reassemble tool with the same care. Consult Troubleshooting if a malfunction occurs.

**SYSTEM INSPECTION**
- Inspect the tool daily. Check hoses, fittings, and couplings for leaks and damage. Clear air-lines of dirt and water.
- Service the tool in a clean, well-lighted area. Take special care to prevent contamination of pneumatic and hydraulic systems.
- Carefully handle all parts and components. Before reassembly, examine them for damage and wear.
- Have available all necessary hand tools (standard and special); a brass drift and wood block; an arbor press; and a soft-jaw vise. Unsuitable hand tools could cause tool damage. See Kits & Accessories.
- Follow the disassembly and assembly procedures in this manual. If Huck recommended procedures are not followed, the tool could be damaged.
- Disassemble and assemble tool components in a straight line. Do NOT bend, twist, or apply undue force.
- Apply continuous steady pressure to disassemble a component. An arbor press provides steady pressure to press a component into or out of an assembly.
- Never force a component if it is misaligned. Reverse the procedure to correct misalignment and start over.

**STANDARD SEALANTS, LUBRICANTS & FLUIDS**
- Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads per manufacturer’s instructions.
- Smear LUBRIPLATE® 130-AA (Huck P/N 502723) or SUPER-O-LUBE® (Huck P/N 505476) on O-rings and mating parts to ease assembly, and to prevent damage to O-ring on rough and sharp surfaces.
- Each Service Kit contains perishable parts for your specific tool. As foreseeable use may indicate, keep extra kits (O-rings, Back-up Rings, other standard items) and tool parts in stock. When stock is depleted, you can get kit items from any regular retailer of these items.

**CAUTION:** Do not use Teflon® tape on pipe threads. Tape can shred, resulting in malfunctions.

continued...

Loctite is a registered trademark of Henkel Corporation, U.S.A.
Threadmate is a registered trademark of Parker Intangibles LLC.
Slic-tite is a registered trademark of LA-CO Industries, Inc.
LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
SUPER-O-LUBE is a registered trademark of Parker Hannifin Corp.
Teflon is a registered trademark of E. I. du Pont de Nemours and Company.
PREVENTIVE MAINTENANCE

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

- Inspect the tool and nose daily for damage and wear.
- Inspect the tool before each use for leaks.
- Verify that hoses, fittings, couplings, and electrical connections are secure and free of leaks.
- Inspect hydraulic hoses for signs of damage and deterioration. Replace if necessary. Do NOT use hoses to carry tool.
- Inspect the tool, hoses, and POWERIG during operation to detect abnormal heating, leaks, or vibration.

POWERIG MAINTENANCE
Maintenance instructions and repair procedures are in the appropriate POWERIG Instruction Manual.

TOOL MAINTENANCE
Whenever disassembled, and at regular intervals, depending on use, replace all O-rings and Back-up rings. Tool-specific Spare Parts Service Kits should be kept on hand. Inspect cylinder bore, piston, piston rod, and unloading valve for scored surfaces, excessive wear, and damage; replace as necessary.

NOSE ASSEMBLY MAINTENANCE
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 imbedded particles from the pull grooves of the jaws.

HYDRAULIC COUPLINGS

**TIP:** Use a fine India stone to remove nicks and burrs from diameter A and leading edge to prevent damage to O-ring.

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![](figure2.png)

O-ring (P/N 504438)  Back-up ring (P/N 501102)
DISASSEMBLY

This procedure is for complete disassembly of the tool. Disassemble only those components necessary to replace damaged rings and worn or damaged components. Always use a soft-jaw vise to avoid damaging the tool. For component identification, see the Assembly Drawing in this manual.

TO DISASSEMBLE THE TOOL:

1. Disconnect tool’s electrical or air connector from Powerig, then uncouple the tool’s hydraulic hoses.
2. Remove the nose assembly.
4. Push rearward on piston until remaining hydraulic fluid is drained into container. Discard fluid.
   
   **NOTE:** Do not remove hydraulic hoses from the tool unless replacing the hoses. If necessary to remove the hoses, uncover the hose fittings by sliding back the plastic shrouds.

   **NOTE:** Use the following steps only if the switch, wire, or connector is in need of repair.

   Remove the retaining nut and locking ferrule from the strain relief. Loosen the set screw and remove the switch. Loosen and remove the two wires from the switch. Remove the cord from the tool. Disassemble the electrical connector.

5. Remove two screws (24) and guard assembly (5) from the rear of the cylinder.
6. Remove the screw (7) from the rear of the drawbar (3), and push the drawbar out the rear of the tool.
7. Remove the retaining ring (10) from the rear of the piston assembly (16) and push the piston assembly and gland (8) out the rear of the tool.
8. Slide gland (8) off the back end of the piston (16).
9. Remove the dump valve (14) from the piston. The tool has been properly disassembled. Store all re-usable parts (screws and disassembled components) in a clean, dry area.

WARNING: Disconnect the tool’s electric control trigger system from the POWERIG before disconnecting the hydraulic hoses from it. If not disconnected in this order, serious personal injury may occur. When re-connecting, reverse the above order. If the order is not followed, serious personal injury could occur.

ASSEMBLY

This section details the re-assembly of the tool. For component identification, see the Figure 3 and Parts List.

**NOTE:** When re-assembling the tool, always replace damaged and defective parts, and all seals, wipers, and rings of sub-assemblies.

**WARNING:** Replace all seals of disassembled components. Do not omit any seals during servicing or re-assembly; leaks will result and serious personal injury can occur.

- Clean components in mineral spirits or other solvent compatible with O-ring seals. Clean O-ring grooves. Inspect components for scoring, excessive wear, and damage; replace as necessary.
- Replace all O-rings, Quad-rings, and Back-up rings. See Figure 3 for guidance on positioning these rings. Take care to NOT damage rings. Use the rings in kit 7352KIT.
- Smear LUBRIPLATE® 130-AA (P/N 502723) or SUPER-O-LUBE® (P/N 505476) on rings and mating parts to ease assembly.

TO RE-ASSEMBLE THE TOOL:

1. Install Back-up rings (12 & 15) and O-rings (13 & 11) in cylinder head assembly (1), around piston (16) and on gland (8).
2. Press piston (16) into rear of cylinder head (1).
3. Push dump valve (14) into hole in piston face.

   **NOTE:** Flats of valve MUST face the rear of tool.

4. Place gland (8) onto rear of piston.
5. Install retaining ring (10) and screw (9) onto rear of piston.
6. Slide drawbar (3) into rear of cylinder head.
7. Using screw (7), fasten drawbar (3) to rear of piston.
8. Install pintail deflector (6).
9. Install guard assembly (5) and secure with two screws (24).
This tool is labeled with important sticker(s) containing vital safety and pressure settings information which MUST remain on the tool and be easily read. If a sticker becomes unreadable, damaged, or worn, or if it has been removed from the tool, it must be replaced. The part number is shown in the table above.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
<th>QTY.</th>
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<tr>
<td>1</td>
<td>126939</td>
<td>Head Assembly contains: Machined Head</td>
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</tr>
<tr>
<td>2*</td>
<td>590424-5700</td>
<td>Sticker (pressure warning &amp; CE)</td>
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<tr>
<td>3</td>
<td>126932</td>
<td>Drawbar</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>-----</td>
<td>---------</td>
<td>---</td>
</tr>
<tr>
<td>5</td>
<td>126931</td>
<td>Guard Assembly</td>
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<tr>
<td>6</td>
<td>126934</td>
<td>Pintail Deflector</td>
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</tr>
<tr>
<td>7</td>
<td>500114</td>
<td>Screw</td>
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<td>126933</td>
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<td>9</td>
<td>118472</td>
<td>Screw</td>
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<td>126925</td>
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<td>11</td>
<td>500819</td>
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<td>12</td>
<td>501106</td>
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<td>500812</td>
<td>O-ring</td>
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<td>14</td>
<td>126924</td>
<td>Dump Valve</td>
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<td>15</td>
<td>501113</td>
<td>Back-up Ring</td>
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<tr>
<td>16</td>
<td>126940</td>
<td>Piston Assembly contains: Piston</td>
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<tr>
<td>17</td>
<td>126926</td>
<td>Key Assembly contains: Key</td>
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<tr>
<td>18</td>
<td>126928</td>
<td>Screw</td>
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<td>Hose</td>
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<td>128298</td>
<td>Trigger Cord Housing Assembly</td>
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<td>Split Sleeve (not shown)</td>
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<td>23</td>
<td>507639</td>
<td>Cable Tie</td>
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<tr>
<td>24</td>
<td>505557</td>
<td>Screw</td>
<td>2</td>
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<td>503431</td>
<td>Reducing Bushing</td>
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<td>26</td>
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<td>HUCK Year of Manufacture Sticker</td>
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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. Pressure tube 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 O-rings or loose hose connections at tool.

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

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

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

7. Pull grooves on fastener pintail stripped during PULL stroke.
   a. Anvil was not slid 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.

8. Collar of fastener not completely swaged.
   b. Scored anvil.

9. Tool “hangs-up” on swaged collar of fastener.
   b. RETURN pressure too low.
   c. Not enough collar lubricant.
   d. Nose assembly not correctly installed.

10. Pintail of fastener fails to break.
    b. Pull grooves on fastener stripped. See Trouble 7.
    c. PULL pressure too low.

11. Nose will not release broken pintail.
    a. Nose assembly not correctly installed.

Kits & Accessories

Huck has created product-specific Spare Parts Service Kits that contain various perishable parts for each tool. The types and quantities of spare parts that should be available vary with the application and tools in use. Have the appropriate kit accessible when using this tool and when performing maintenance on it.

Huck also recommends having the following Accessories available when preparing, using, and performing maintenance on this tool.

**SERVICE KITS**

**7352KIT** contains perishable seals, O-rings, and Back-up rings. Keep the kit on hand.

**ACCESSORIES**

- Parker Threadmate® (4oz tube) - 508517
- Slic-Tite® (stick) - 503237

Threadmate is a registered trademark of Parker Intangibles LLC. Slic-tite is a registered trademark of LA-CO Industries, Inc.
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.