EC Declaration of Conformity

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

Description of Machinery:
Models 920D family of Powerig® hydraulic power sources and specials based on their design (e.g. PR###).

Relevant provisions complied with:
Safety of Machinery - Basic Concepts & Principles (BS EN ISO 12100)
Safety of Machinery - Fluid Power Systems (BS EN ISO 982)

European Representative:
Andrew Smith, 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: ____________________________

Full Name: Nicholas Gougoutris
Position: Engineering Manager
Location: Huck International, LLC d/b/a Arconic Fastening Systems
Kingston, New York, USA
Date: 17/06/2019 (June 17, 2019)

Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: **100.4 dB** (reference 1 pW)  Uncertainty, KWA: 3 dB
A weighted emission sound pressure level at the work station, LpA: **89.4 dB** (reference 20 µPa)  Uncertainty, KpA: 3 dB
C-weighted peak emission sound pressure level, LpC, peak: **112.5 dB** (reference 20 µPa)  Uncertainty, KpC: 3 dB
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.

Test data to support the above information is on file at:
Arconic Fastening Systems, Kingston Operations, Kingston, NY, USA.
Safety Instructions

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 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.

Continued on next page...
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.

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.
Description

GENERAL
The models 920D HUCK Powerig® Hydraulic Power Source is a diesel-operated hydraulic power sources designed to operate Huck Installation Equipment.

This model can operate two pieces of equipment simultaneously and independently of each other. The unit is semi-portable and can be moved with a fork-lift truck.

Hydraulic pressure is developed by an axial piston pump driven by an electric motor. Hydraulic pressure from the pump is directed to PULL and RETURN ports by combination valves controlled from the installation equipment by relays and solenoids.

Hydraulic fluid is stored in a reservoir. A 100 micron strainer in the suction line, and a 10 micron filter in the RETURN line, assure clean, filtered hydraulic fluid for the hydraulic system. A filler-strainer is provided for adding hydraulic fluid. However, any hydraulic fluid that is added to the reservoir must be filtered by a 10 micron (or better) filter.

Before returning to the reservoir, circulating hydraulic fluid passes through the cooler where the temperature of fluid is lowered to proper operating level. A fan aids in dissipating heat from the cooler.

COMBINATION VALVE
Each combination valve contains a Four-way solenoid-operated directional valve, Pressure Relief Valve, and Idler Valve.

The Four-way Valve is controlled by a tool trigger through a relay and solenoid, and directs hydraulic fluid under pressure to PULL or RETURN hoses connected to installation tool, or other equipment.

The Pressure Relief Valve protects the Powerig and installation tools from excessive pressure during the pull cycle. The valve is factory preset to 4400 psi (303 bar).

The Idler Valve (Figure 7) protects the Powerig and installation tools from excessive pressure during the return cycle. The Idler Valve is factory preset to provide 2800 psi (193 bar) return pressure and approximately 200 psi (14 BAR) idling pressure.

NOTE: Various systems require different output pressures. See Checking & Adjusting Pressures before using the POWERIG Hydraulic Unit.

Principle of Operation

Turning the key switch to the ON position with the motor off supplies voltage from the battery to the green POWER ON indicator light, the hour meter, the temperature-controlled cooler fan circuit, the red LOW PRESSURE indicator light circuit, and to the tool trigger circuits.

When the key switch is in the ON position and the motor is not running:

- The green POWER ON indicator light should be on.
- The red LOW ENGINE OIL PRESSURE indicator light should be on.
- The HOUR METER should be on.
- The cooling fan should be on only if the oil temperature sensor is reading above 120°F (49°C).

Turning the key switch to the GLOW position supplies power to the glow plug which heats the cylinder and aids in low temperature operation. When the outside temperature is below 40°F (5°C) it is necessary to hold the key switch in the GLOW position for 5 seconds prior to attempting to start the motor. The indicator lights and hour meter will not be on in the GLOW position.

Turning the key switch to START position energizes the starter solenoid (S3), which closes the S3 contact and engages the starter motor. The indicator lights and hour meter will not be on in the START position. When the motor catches, the key switch is released and will spring return to the ON position, opening the S3 contact and disengaging the starter motor.

When the motor is running, the dynamo and voltage regulator will supply approximately 14.5 volts to the control circuits and will recharge the battery. As the oil pressure builds to normal in the motor, the oil pressure switch will open, and the red LOW ENGINE OIL PRESSURE indicator light will go off.

When the trigger of the tool plugged into TOOL 1 is pressed, the CR1 control relay is energized, closing the CR1 contacts and energizing the S1 TOOL 1 VALVE solenoid. When the S1 TOOL VALVE solenoid is energized, the valve spool moves, and high-pressure hydraulic fluid is directed out the PULL pressure port and hose to Tool 1. When tool trigger is released, the solenoid de-energizes and the valve spool returns to its original position, directing high-pressure hydraulic fluid to the RETURN port and hose to the tool. The Tool 2 controls work in the same way as Tool 1. The Tool 1 and Tool 2 control circuits allow them to run simultaneously and independently.
WARNING: Abnormally high pressure can cause sudden failure of the Powerig, and excessive wear. Severe personal injury could result.

Huck offers a variety of kits for use with the Powerig®. These kits simplify parts ordering for maintenance and operation. To maintain safe pressure at the Powerig® Hydraulic Power Source, and working pressure at the tool, do NOT exceed 156 ft. (47.5 m) of hose length. Hose and Control Cord Kits can be coupled using Quick Disconnects and Adapter Unions (P/N 503697); these parts must be ordered separately. The hoses in these kits are rated by the manufacturer for 10,000 psi (689.5 BAR) maximum working pressure.

PRESSURE CHECKING GAUGE T-124833CE
Huck recommends that maintenance personnel do periodic checks with Pressure Checking Gauge T-124833CE.

AUXILIARY ELECTRIC TRIGGER ASSEMBLY 113056
contains a switch, housing, and a 13-foot (3.9 meter) cord.

Specifications
NOTE: The units are shipped without hydraulic fluid.

<table>
<thead>
<tr>
<th>Width (inch)</th>
<th>Length (inch)</th>
<th>Height (inch)</th>
<th>Dry Weight (lbs.)</th>
<th>Operational Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.3</td>
<td>43.1</td>
<td>30.7</td>
<td>350</td>
<td>375</td>
</tr>
</tbody>
</table>

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.

Where the following trade names are used in this manual, please note:

- DEXRON is a registered trademark of General Motors Corporation.
- GLYD Ring is a registered trademark of Trelleborg Sealing Solutions Germany GmbH
- Locitite is a registered trademark of Henkel IP & Holding GmbH
- LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
- MERCON is a registered trademark of Ford Motor Corp.
- MOLYKOTE is a registered trademark of Dow Corning Corporation
- 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.
- Spirolox is a registered trademark of Smalley Steel Ring Company
- Teflon is a registered trademark of Chemours Company FC.
- Threadmate is a registered trademark of Parker Intangibles LLC.
- TRUARC is a trademark of TRUARC Co. LLC.
- Vibra-Tite is a trademark of ND Industries, Inc. USA.

Kits & Accessories

12-FOOT HOSE AND CONTROL CORD KITS
118309-12 Standard Hose & Control Cord Kit
HAX12-ECA33 1/4 inch ID Lightweight, more flexible Hose & Control Cord Kit with rubber sleeve
HAY12-ECA33 5/16 inch ID Lightweight, more flexible Hose & Control Cord Kit with rubber sleeve

26-FOOT HOSE AND CONTROL CORD KITS
118309-26 Standard Hose & Control Cord Kit
HAX26-ECA33 1/4 inch ID Lightweight, more flexible Hose & Control Cord Kit with rubber sleeve
HAY26-ECA33 5/16 inch ID Lightweight, more flexible Hose & Control Cord Kit with rubber sleeve

52-FOOT HOSE AND CONTROL CORD KIT
118309-52 Standard Hose and Control Cord Kit

HYDRAULIC QUICK DISCONNECTS 110440
This pair of quick disconnects provides a positive, easy connection for tool hoses to Powerig hoses. This set contains one female connector and one male connector.

CONTROL CORD CONNECTOR SET 110835
Replacement Control Cord Connector Set
Preparation for Use

NOTE: PULL and RETURN pressure requirements must be understood before preparing these Powerig® Hydraulic Units for first-time use. Set PULL and RETURN pressures for each tool according to tool instruction manual.

GOOD SERVICE PRACTICES
Foreign material in the hydraulic system results in poor performance and repair down time. To avoid this, observe the following good service practices:
1. Clean area around reservoir filler cap before removal.
2. When adding hydraulic fluid to the reservoir, use a clean funnel and filter the fluid with a 10-micron filter.
3. Do not let hose fittings and couplers lay on or drag around on a dirty floor, or on the ground.

FIRST TIME START-UP
1. Check that drain plug and hydraulic fluid accessory port plugs are tight.
2. Fill reservoir with hydraulic fluid until fluid level is in middle of fluid level gauge.
3. Attach battery cables, red cable first.
4. Use strainer to fill fuel tank with fresh, clean diesel fuel.
5. Remove plastic shipping plugs from PULL and RETURN pressure ports of TOOL 1, TOOL 2.
6. Attach T-gage to hydraulic quick connect fittings labeled ‘Tool 1’ and open center valve.
7. Attach trigger button socket labeled to ‘Tool 1’ on the electrical enclosure.
8. Open Powerig Hydraulic Unit cover, then open compression release lever on top of motor (this will automatically close once motor starts). Close cover.
9. In a well-ventilated area, insert key, rotate clockwise to ‘ON’. All lights should illuminate on electrical enclosure.
10. Turn key to ‘START’ and hold until motor starts. Release the key. Green power light should remain illuminated, and hour meter should start to count.
11. Set output pressures for ‘Tool 1’ to correspond with tool and fastener being used. See Checking & Adjusting Pressures section of this manual. NOTE: Pull pressure adjustment is downward facing and return pressure adjustment is upward facing.
12. Detach T-gage and trigger button from ‘Tool 1’. Reattach T-gage and trigger button to ‘Tool 2’ and set output pressures for ‘Tool 2’ to correspond with tool and fastener being used.
13. Detach T-gauge and trigger button from ‘Tool 2’. Attach first hose kit to ‘Tool 1’ and attach T-gauge to far end of hose kit. Open center valve on T-gauge. Attach trigger button to hose kit. Hold button to run hydraulic unit for approximately two minutes to remove air from hose kit. Detach T-gauge and trigger button from hose kit.
14. Attach installation tool to hose kit and cycle tool several times. Check for and correct any leaks.
15. Repeat steps 13 and 14 with second hose kit and installation tool.
16. Rotate key to OFF position, allow motor to stop.
17. Check hydraulic fluid level and add more if necessary.

REGULAR USE BEFORE EACH OPERATION
1. Check hydraulic fluid level in reservoir and add hydraulic fluid as required. Whenever hydraulic fluid is added, it must be filtered by a 10-micron filter.
2. Inspect hoses for damage and replace as required.
3. Check and correct any leaks.

CONNECTING INSTALLATION TOOLS TO POWERIG
Hose and cord kits for connecting Installation Tools to the unit are shown in the KITS AND ACCESSORIES section of this manual. Be sure that hose from port P of tool is connected to PULL pressure port on Powerig Hydraulic Unit, and hose for port R of tool is connected to RETURN pressure port of unit.

Assembly of NPTF Threaded Components

AIR FITTINGS
1) Apply TEFLO® 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 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>

NOTE: Turn key to ‘GLOW’ for 5 seconds if temperature is below 41°F (5°C) prior to ‘START’.

NOTE: Pull and RETURN pressures could cause violent rupture of the system or tool. Fatal or severe injury from exploding components/hydraulic fluid could occur to anyone in the immediate vicinity.

CAUTIONS:
Always prime pump after filling reservoir. Do not use TEFLO® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions. Apply Parker Threadmate, Loctite 567, or Slic-tite stick to male pipe threads per manufacturer’s instructions.

WARNING: See PULL and RETURN pressures listed in applicable tool instruction manual. Improper settings of PULL and RETURN pressures could cause violent rupture of the system or tool. Fatal or severe injury from exploding components/hydraulic fluid could occur to anyone in the immediate vicinity.

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**WARNINGS:**

Turn OFF the Powerig prior to connecting or disconnecting tools. If it is necessary to connect or disconnect a tool while the unit is running, use the following procedure for maximum safety.

1. **Connect tool’s hydraulic hoses to unit before connecting tools switch control cord to unit.** If a malfunctioning cord switch is connected first, hydraulic unit may begin to cycle unexpectedly. Unexpected cycling may lead to serious injury. **When connecting hoses, switch MUST be connected last.** Just as important: **When disconnecting hoses, switch MUST be disconnected first.**

(Maximum PULL pressure is 8400 psi (648 bar). Refer to specific tool instruction manual for PULL and RETURN pressures for Huck installation equipment. Severe personal injury may occur if excessive pressures cause violent failure of equipment.)

**CHECKING OUTPUT PRESSURES USING T-124833CE**

2. Open valve by a few counterclockwise handle turns.
3. Press and Release auxiliary trigger switch to set the unit’s internal valve. Hydraulic fluid is directed out RETURN pressure port.
4. SLOWLY close the valve. The pressure will rise, and then sharply drop. Read the RETURN pressure on the left gauge just before the pressure drops.
5. Open the valve. Turn OFF the Powerig.

(Maximum PULL pressure is 8400 psi (648 bar). Refer to specific tool instruction manual for PULL and RETURN pressures for Huck installation equipment. Severe personal injury may occur if excessive pressures cause violent failure of equipment.)

**PREPARATION FOR USING GAUGE T-124833CE**

If necessary, prime and bleed the POWERIG® Hydraulic Unit. See the Preparation for Use section of this manual. **NOTE:** Check each tool’s pressure separately.

1. Turn OFF the POWERIG. Connect the male coupler of gauge to PULL pressure female coupler of Powerig.
2. Connect female coupler of gauge to RETURN pressure male coupler of Powerig.
3. Turn needle valve of T-124833CE all the way out.
4. Install auxiliary electric switch and control cord assembly (P/N 113056) in the control cord socket of the tool port being checked, or use the trigger of the tool connected to the ports being checked. Fluid will be directed out the PULL pressure port when the switch is pressed. Connect the Powerig to the primary power source and turn it ON.

(Maximum PULL pressure is 8400 psi (648 bar). Refer to specific tool instruction manual for PULL and RETURN pressures for Huck installation equipment. Severe personal injury may occur if excessive pressures cause violent failure of equipment.)

**ADJUSTING OUTPUT PRESSURES**

The POWERIG Hydraulic Unit should be prepared for operation as described in Preparation for Use. Use Gauge T-124833CE to check pressures before and after adjusting PULL and RETURN pressures.

**ADJUSTING COMBINATION VALVE P/N 131500**

The 920D Powerig Hydraulic Units are equipped with valves that can be set at specific PULL and RETURN pressures (see the applicable instruction manual for your tool). There is a socket-head screw to adjust PULL pressure and a different one to adjust RETURN pressure.

**PULL PRESSURE ADJUSTMENT**

Use 1/4” hex key for PULL pressure adjusting screw. Turn adjusting screw clockwise to increase pressure.

a. Turn adjusting screw counterclockwise to decrease pressure.

b. Check resulting PULL pressure setting with Gauge T-124833CE.

**RETURN PRESSURE ADJUSTMENT**

Use 1/4” hex key for adjusting screw.

a. Turn adjusting screw clockwise to increase pressure.

b. Turn adjusting screw counterclockwise to decrease pressure.

c. Check resulting RETURN pressure setting with Gauge T-124833CE.
Operating Instructions

Before operating the Powerig® Hydraulic Power Source, make sure the unit has been prepared for service as described in Preparation for Use. Connect hoses and control cords as shown in Connecting Installation Tools to Powerig Hydraulic Unit.

1. Fill oil reservoir with ATF per Specifications.
2. Fill fuel tank with diesel fuel.
3. Turn Key to start engine.
4. Press tool trigger to cycle tool.

ALWAYS BE ALERT FOR:
(a) leaks at hose connections,
(b) damage to hoses, and
(c) hydraulic fluid level.

WARNING: Severe personal injury may result if connections or hoses fail.

Maintenance

WARNINGS:
After overhauling combination valve, PULL and RETURN pressures must be checked. Serious personal injury may occur if excessive pressure causes violent hose or installation equipment failure.

Excessive pressures may cause violent rupture of some part of the fastening system. Exploding components may cause severe or fatal injuries to personnel in the vicinity. If the system does not rupture, continuous higher than normal pressure will cause premature wear of equipment.

PREVENTIVE MAINTENANCE
1. Inspect hydraulic and electrical fittings to be sure they are secure.
2. Inspect hoses frequently for signs of damage. Replace hoses if damage is detected.
3. Inspect during operation to detect any abnormal heating, vibration or leakage.
4. Inspect hydraulic fluid periodically and replace if contamination is detected. Clean sump filter if fluid is dirty and being replaced.
5. Keep all exterior surfaces clean.
6. Replace oil filter every six months or every 1,000 hours, and as needed in extremely dirty environments. A filter element can be ordered from Huck, part number 507089.

RECYCLED MATERIALS
Recycle steel, aluminum, and plastic parts in accordance with local lawful and safe practices.

FLUID DISPOSAL
Fluids should be disposed of by processing through authorized methods and in accordance with current legislation.

This symbol indicates that this product must be disposed of according to the WEEE Directive. Products of this nature should be forwarded to a designated collection point or to an authorized collection site for recycling waste electrical and electronic equipment (EEE).

Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE.

KUBOTA ENGINE
Refer to engine manual shipped with the unit.

OUTPUT PRESSURES
To prevent malfunctions, check and adjust PULL and RETURN pressures of Powerig® Hydraulic Power Source. Check pressures when:
- Unit is being used for the first time.
- Any part of combination valve is repaired.
- Combination valve is replaced.
- Troubleshooting is to be performed.
- Before any tool is connected.
- Whenever tool does not perform as expected.
- Whenever unsure of the pressure setting.

Hydraulic Fittings

<table>
<thead>
<tr>
<th>110439 Male Connector</th>
<th>110438 O-ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>501102 Back-up Ring</td>
<td>504438 O-ring</td>
</tr>
</tbody>
</table>

Use a fine India stone to remove any nicks or burrs from these areas to prevent damage to O-ring of Female.
### Electrical Schematic

Note: The shaded area indicates components inside Electrical Enclosure Assembly 131677.

### Hydraulic Diagram
Typical Hose and Control Cord Hook-up
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.

Arconic Fastening Systems Tooling Support Locations

**INDUSTRIAL NORTH AMERICA**

**Kingston Operations**
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Kingston, NY 12401
Tel: +1-800-278-4825
Fax: +1-845-334-7333
afs.sales.kingston@arconic.com

**Tracy Operations**
1925 North MacArthur Drive
Tracy, CA 95376
Tel: +1-800-826-2884
Fax: +1-800-573-2645
afs.sales.idg@arconic.com

**Waco Operations**
PO Box 8117
8001 Imperial Drive
Waco, TX 76714-8117
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**INDUSTRIAL GLOBAL**

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**Melbourne Operations**
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**São Paulo Operations**
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(Módulo III) Box 11
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Tel: +55-11-3583-7061

**Suzhou Operations**
58 Yinsheng Road,
SIP Suzhou, Jiangsu
215126 China
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Huck provides technical assistance regarding the use and application of Huck fasteners and tooling.

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