EC Declaration of Conformity

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

Description of Machinery:
Model 968 Powerig® family and specials based on their design (e.g. PR#####).

Relevant provisions complied with:
ISO 12100:2011 Safety of machinery, basic concepts, general principles for design, risk assessment and risk reduction
ISO 4413:2010 Hydraulic Fluid Power - general rules and safety requirements for systems & their components
ISO 4414:2010 Pneumatic Fluid Power - general rules and safety requirements for systems & their components

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:

Full Name: Robert B. Wilcox
Position: Engineering Manager
Location: Huck International, LLC d/b/a Alcoa Fastening Systems & Rings
Kingston, New York, USA
Date: 01/11/2016 (November 1, 2016)

Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: **91 dB** (reference 1 pW) Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: **80 dB** (reference 20 μPa) Uncertainty, KpA: 3 dB

C-weighted peak emission sound pressure level, LpC, peak: **104 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 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 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 pneumatic 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. The grade of protection required should be assessed for each use.

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 of normal or unexpected tool movement.

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, there is no pinch point when tool is activated. Remote triggers are available for hydraulic tooling if pinch point is unavoidable.

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:
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

The Huck Model 968 POWERIG® is a portable, air powered hydraulic power source designed to operate Huck Hydraulic Installation Equipment.

Hydraulic pressure is developed by two hydraulic piston pumps driven by air motors. Pump output is directed to either PULL or RETURN pressure ports of the installation tool by air operated directional valve. The hydraulic unit is controlled, with air trigger, from the tool.

Internal relief valves are pre-set at the factory for the protection of operator and equipment. External relief valves control PULL Pressure and RETURN Pressure. As shipped from the factory, external relief valve is set at 5400-5700 psi (37200-39300 kPa) and return pressure valve is set at 2700-3300 psi (15200-16500 kPa). Pressures are adjustable to match Huck installation tool being used. See applicable installation tool manual.

Hydraulic fluid is stored in a reservoir. Hydraulic quick disconnect couplers are furnished for connecting installation tool.

The unit weighs approximately 75 pounds (34 kg) without the optional dolly assembly, and when filled with hydraulic fluid.

Principle of Operation

When tool trigger is depressed, the directional valve changes positions so that high-pressure hydraulic fluid is directed out the PULL pressure port and hose to tool 1.

When the tool trigger is released, the valve spool returns to its original position, directing the hydraulic fluid out the RETURN pressure port and hose to the tool.
Specifications

**Width**
16.33 (41.5 cm)

**Length**
10.45 (26.5 cm)

**Height**
15.68 (39.83 cm)

**Weight**
75 lbs. (34 kg)

**Operational Weight**
93 lbs. (42 kg)

**Power Source**
Air supply must be minimum 50 CFM (.024 m³/s)

**Hose Kits**
Use only genuine HUCK Hose Kits rated @ 10,000 psi working pressure.

**Reservoir Capacity**
2.5 gallons (9.5 liters)

**Output Pressure**
PULL (max): 8800 psi (606 bar)
RETURN (max): 3500 psi (241 bar)

**Max Operating Temp**
125 ° F (51.7 ° C)

**Max Flow Rate**
1.95 gpm per circuit (7.37 l/m)

**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.

Optional Equipment

Shown here is the 968D. This is the 968 Powerig with the optional Dolly Assembly, Huck part number 129703 which offers convenient portability.

**CAUTION:** Prior to use, make sure that casters are locked.
Additional Safety Precautions

HYDRAULIC HOSES
1. Before operating the pump, all hose connections must be tightened using the proper tools. Do NOT overtighten. Connections need only be secure and leak-free. Over tightening may cause premature thread failure or may cause high pressure fittings to split at pressures lower than their rated capacities.

2. If a hydraulic hose ever ruptures, bursts, or needs to be disconnected, immediately shut off the pump. Never attempt to grasp a leaking hose under pressure with your hands. The force of escaping hydraulic fluid could cause serious injury.

AIR MOTOR
1. Disconnect the air supply when the pump is not in use or when breaking any connection in the hydraulic system.

2. It is recommended that a shut-off valve or quick disconnect be installed in the air line to the pump unit. Close the shut-off valve before connecting the air line to the pump.

Operating Instructions

FIRST TIME USE
1. Remove shipping plug from top of Reservoir and replace with Filler Breather Cap. (Fig. 1) Be sure O-ring is in place on Filler Breather Cap before installing.

2. Fill reservoir with hydraulic fluid, approximately 2 quarts (1.9 liters), until the fluid level is within one inch of the top of the reservoir.

3. Use a T-gauge, Huck part no. T-124833CE, to set Pull and Return pressures to the appropriate values for the installation tool.

4. Attach installation tool to Powerig. Be sure that hose from PULL PRESSURE on the unit runs to port “P” of the tool and hose from RETURN PRESSURE on the unit runs to port “R” of the tool.

5. Connect air supply.

6. Depress tool switch and let unit operate for a few minutes to circulate hydraulic fluid and remove air from the system.

7. Check fluid level in reservoir and add hydraulic fluid as required.

8. The unit and installation tool are now ready for attaching the applicable nose assembly and the installation of Huck fasteners.

AIR SUPPLY HOOK-UP
Minimum air supply must be 50 CFM (.57 M^3/min.) and 80 PSI (6.7 BAR), with 100 PSI (XX BAR) being the maximum.

1. Secure pump fitting to the air supply.

2. Assemble the hoses. Clean the areas around the oil ports of the valve and hydraulic cylinders, and remove the plastic thread protectors. Clean all hose ends, couplers, or union ends. Inspect all threads and fittings for signs of wear or damage and replace as needed.

3. FILL the RESERVOIR: Remove the filler cap and insert a clean funnel. Fill the reservoir with hydraulic oil to top of sight glass. Replace the filler cap with the breather hole open.
**WARNINGS:**
Read full manual before using tool.

A half-hour training session with qualified personnel is recommended before using Huck equipment.

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

Be sure there is adequate clearance for the operator’s hands before proceeding.

To prevent tripping hazard, suspend tools and route hoses off of floors.

**NOTE:** To decrease Relief Valve pressure, turn the Relief Valve handle gradually counterclockwise; turn clockwise to increase pressure.

1. With the Nose Assembly in place on the Installation Tool, begin setup. First connect the Hydraulic Hoses to the Powerig.

2. Set Pull and Return pressures on Powerig using Huck Gage P/N: T-124833CE according to pressure settings recommended with tool to be used.

3. Once the system is set up, install test fastener. Check to be sure that the fastener is installed correctly. This can be checked by inspecting the dimples on the collar flange. At least one dimple should be marked by the anvil.

**Maintenance**

**GOOD PRACTICES**
The introduction of foreign material into the hydraulic system will result in poor performance and repair downtime. To avoid this, observe the following good practices:

1. When filling reservoir with hydraulic fluid, clean area around filler cap before removing. Always filter hydraulic fluid using a 10-15 micron filter before adding to powerig.
2. Use clean funnel with filter.
3. Do not let hose fittings or couplings lie, or drag on floor.
4. Wipe off couplings before connecting them.
5. Periodically, drain and clean reservoir and fill with clean fluid.

**REGULAR USE**
Before using Hydraulic Unit:

1. Check hydraulic fluid level in reservoir and add fluid as required.
2. Inspect hoses for damage and replace as required.
3. Check entire system for leaks and repair as needed.

**PREVENTIVE MAINTENANCE**

**LUBRICATION OF THE AIR-DRIVEN MOTOR**
If the pump is operated on a continuous duty cycle or at maximum speed for an extended period, an automatic air line oiler is recommended. Install the oiler in the air inlet line as close to the pumping unit as possible. Adjust the oiler to feed 1-3 drops of SAE #10 oil per minute (one drop for every 50-75 CFM of air) into the system.

**HYDRAULIC FLUID LEVEL**
Check the oil level in the reservoir after each 10 hours of use. Proper oil level is to top of sight glass.

**ADDING OIL TO THE RESERVOIR**
Use only recommended hydraulic fluid. Disconnect power supply when adding oil to the reservoir. Clean the entire area around the filler plug before removing the filler plug. Use a clean funnel with filter when adding oil.

**MAINTENANCE CLEANING**
Keep the outer surface of the pump, all hose connections and any equipment hooked up to the pump as free of dirt and oil as possible. The breather hole in the filler cap must be kept clean and unobstructed at all times. All unused couplers are to be sealed with thread protectors. Change oil as recommended.
Components Drawings

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Troubleshooting

**NOTE:** Use the correct gauges and equipment when troubleshooting. Depending on the pump version, it is often best to check for leaks by using a hand pump and applying pressure to the suspect area without the motor running. Watch for leaking oil and follow it back to its source. Plug the outlet ports of the pump when checking for leakage to determine if the leakage is in the pump or if it is in the cylinder or tool.

1. **Tool fails to operate when trigger is depressed:**
   a. Loose or faulty air connectors on control hose
   b. Loose or faulty hydraulic hose couplings
   c. Defective tool air trigger assembly
   d. Air trigger sensitivity needs adjusting
   e. Low hydraulic fluid level in reservoir
   f. Hydraulic fluid viscosity too heavy to pick up prime
   g. Clogged suction screen
   h. Defective hydraulic pump
   i. Defective spool valve assembly
   j. Installation tool defective

2. **Tool does not return on release of trigger:**
   a. Defective spool valve
   b. Installation tool not operating properly
   c. Air trigger sensitivity needs adjusting
   d. Hoses not coupled properly
   e. Return pressure set to low

3. **Pump runs but will not build pressure:**
   a. Low hydraulic fluid level in reservoir
   b. Clogged suction screen
   c. Hydraulic fluid viscosity too heavy to pick up prime
   d. Pump check valve is leaking
   e. Defective air motor
   f. Pull pressure set too low

4. **Tool operation slow but entire cycle does occur:**
   a. Pump check valve is leaking
   b. Hydraulic fluid viscosity too thin
   c. Defective spool valve assembly
   d. Clogged suction screen
   e. Defective air motor
   f. Internal or external relief valve not operating properly
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 Powerigs® manufactured after 12/1/2016 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.
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