EC Declaration of Conformity

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

Description of Machinery:
Models 24#, 25#, and 2047 pneumatic installation tools and specials based on their design (e.g. PR####).

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

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

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

Signature: [Signature]

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

Declared dual number noise emission values in accordance with ISO 4871

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: 115 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.

Declared vibration emission values in accordance with EN 12096

Measured Vibrations emission value, a: .63 m/s²
Uncertainty, K: .72 m/s²

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

Test data to support the above information is on file at:
Arconic Fastening Systems and Rings, Kingston Operations, Kingston, NY, USA.
I. GENERAL SAFETY RULES:
1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the assembly power tool.
5. Do not modify this assembly power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use assembly power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Read MSDS Specifications before servicing the tool. MSDS specifications are available from the product manufacturer or your Huck representative.
11. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tool 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 injury from compressed air hose if tool is pneumatic or pneumatic/hydraulic.
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 could cause 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 to 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 it is secure.
9. Beware of the risk of crushing or pinching if nose equipment is not fitted.

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 dampling 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.

IX. PNEUMATIC / PNEUDRAULIC TOOL SAFETY INSTRUCTIONS:
1. Air under pressure can cause severe injury.
2. Always shut off air supply, drain hose of air pressure and disconnect tool from air supply when not in use, before changing accessories or when making repairs.
3. Never direct air at yourself or anyone else.
4. Whipping hoses can cause severe injury, always check for damaged or loose hoses and fittings.
5. Cold air should be directed away from hands.
6. Whenever universal twist couplings (claw couplings) are used, lock pins shall be inserted and whip-check safety cables shall be used to safeguard against possible hose to hose or hose to tool connection failure.
7. Do not exceed maximum air pressure stated on tool.
8. Never carry an air tool by the hose.
Specifications

STROKE: 0.565 in (1.43 cm)
WEIGHT: 8.67 lbs (3.9 kg)
MAX AIR PRESSURE: 90 psi (6.2 bar)
MAX FLOW RATE: 3.5 scfm (382.28 l/min)
POWER SOURCE: 90 psi (6.2 bar) maximum shop air
MAX OPERATING TEMP: 125° F (51.7° C)
PULL CAPACITY: 8,620 lbs @ 90 psi (38.34 kN @ 6.2 bar)
SPEED / CYCLES: 30 per minute
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.
Lectite is a registered trademark of Henkel Corporation, U.S.A.
LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
MERCON is a registered trademark of Ford Motor Corp.
MOLYKOTE is a registered trademark of Dow Corning Corporation
Never-Seez is a registered trademark of Bostik, Inc.

Principle of Operation

When the Trigger is depressed (1), the Throttle Valve moves to the down position (2), and pressurized air is directed to the bottom of the Air Piston, causing it to move upward (3). The air above the Piston is exhausted and directed through the center of the Throttle Valve and out the bottom of the tool (4). The Air Piston has a Rod and a Hydraulic Piston attached. When the Air Piston rod moves upward, a column of pressurized hydraulic fluid is forced up (5) into the tool head, which moves the Pull Piston back (6). The attached nose assembly moves with the Pull Piston to start fastener installation.

When fastener installation is completed, the Trigger is released (7). Air pressure, with the assistance of a Spring (8), causes the Throttle Valve to return to its up position (9). Pressurized air is re-directed to the top of the Air Piston, causing it, along with the Hydraulic Piston Rod, to move downward (10). The air from below the Air Piston is exhausted through the bottom of the tool (11). As this occurs, hydraulic pressure is reversed and the Pull Piston is returned forward (12). A return pressure relief valve protects the tool against pressure spikes. The reservoir replenishes the hydraulic system as needed.
Preparation for Use

The 254 tool ships with a plug in the air inlet connector. The connector has 1/4"-18 female pipe threads to accept the air hose fitting. Huck recommends quick-disconnect fittings and a 1/4" inside-diameter air hose.

The air supply should be have a filter-regulator-lubricator unit and access to a 90-psi (6.2 bar) air supply capable of a flow rate of 13.5 cfm (382.28 l/min). NOTE: Air quick-disconnect fittings and air hoses are not available from Huck International, Inc. Huck includes an air hose (P/N 115436) to facilitate immediate tool use.

1. Remove the shipping plug from air inlet connector and add a few drops of an approved hydraulic fluid.
2. Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® (per manufacturer’s instructions) to quick-disconnect fittings; screw the quick-disconnect fitting into the air inlet connector. NOTE: On older nose assemblies with lock collars, use Loctite® 243™ on collet threads, because the 254 pull piston does not have staking holes. Refer to the nose assembly drawings that shipped with nose assemblies.
3. Set the air pressure on the regulator to 90 psi (6.2 bar), and connect the air hose to the tool. Press and release the trigger a few times to cycle the tool.
4. Disconnect the air hose from the tool, and remove the stop and the retaining or lock nut. Select the proper nose assembly for the fastener being installed.
5. Hold the pull piston with a 3/8" hex key and screw the collet assembly (including the lock collar and shim if applicable) onto the spindle; tighten with a wrench.
6. Slide the anvil over the collet assembly and into the counterbore. Slide the stop and the retaining or lock nut over the anvil, and screw the nut onto the head.
7. Connect the air hose to the tool and install fasteners in a test plate of proper thickness with proper size holes. Inspect the fasteners.
8. If fasteners do not pass inspection, see Troubleshooting to investigate possible causes.

Kits & Accessories

Product-specific Spare Parts Service Kits that contain various perishable parts are available for each tool. The types and quantities of spare parts 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.

KITS
Service Kit 254KIT contains perishable parts, such as O-rings, springs, etc. Please reference Figures 9-12. Items marked with an asterisk (*) are included in this service kit. The kit contains enough items to service either the 254, or the 254OS.

Assembly Tool Kit 126104 contains Piston Assembly Tool 123111-1, and Spacer123112-2. Both are also available separately.

ACCESSORIES
Stall Nut - 120824
Note: This stall nut is included in Service Kit 254KIT.
FOR SAFE OPERATION, THIS SECTION MUST BE READ AND UNDERSTOOD.

TO INSTALL A LOCKBOLT FASTENER:

1. Place a pin in the workpiece and place the collar over the pin.
   **NOTE:** If collar has one tapered end, that end must be out toward tool; not next to the sheet.
2. Hold the pin in the hole and push the nose assembly onto the pin protruding through the collar until the nose anvil touches the collar.
3. Press and hold the trigger until the collar is swaged and the pintail breaks.
4. Release the trigger; the tool will perform its RETURN stroke.

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

TO INSTALL A HUCK BLIND FASTENER:

1. Place a fastener in the workpiece or in the end of the nose assembly if they are pulled when not in workpiece.
   **NOTE:** The tool or nose assembly must be held against, and at a right angle (90°) to, the workpiece.
2. Press and hold the trigger until the fastener is installed and the pintail breaks.
3. Release the trigger; the tool will perform its RETURN stroke.

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

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**WARNINGS:**
To avoid severe personal injury, wear approved eye and ear protection. Be sure of adequate clearance for operator’s hands before proceeding with fastener installation.

If the tool comes with a pintail deflector or bottle, make sure it is attached to the tool and directed away from all personnel.

Do NOT attempt to install a pin without placing the fastener and collar in the work piece (structure to be fastened).

Do NOT attempt to install a pin without a properly oriented collar in place. The collar flange must be against work piece.

If these safety measures are not followed, the fastener could eject with great velocity and cause severe personal injury.

This condition can cause pin to eject with great velocity and force if the pintail breaks off or teeth/grooves strip. This may cause severe personal injury.

To avoid pinch point, never place hand between nose assembly and work piece.

Only use compatible equipment with this tool.

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**CAUTION:** Tool must be properly reassembled prior to use.

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**CAUTIONS:**
Remove excess gap from between the sheets. This permits enough pintail to emerge from collar for ALL jaw teeth to engage with pintail. If ALL teeth do not engage properly, jaws will be damaged.

Note: In certain situations, it may be permissible to use a BobTail tool and fastener without a collar to remove sheet gap prior to full installation with a collar. Consult qualified Huck engineering personnel before attempting this operation.

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Do NOT install a fastener without a workpiece (structure to be fastened), a pin, and a properly oriented collar in place.

Do NOT pull a fastener with the collar upside down.
**GENERAL**

The operating efficiency of a tool is directly related to the performance of the entire system. Regular inspection and immediate correction of minor problems will keep a tool operating efficiently, and prevent downtime. A schedule of preventive maintenance of the tool, nose assembly, hoses, trigger and control cord, and Powerig® Hydraulic Power Source will ensure proper tool operation and extend its life. **NOTE: This Huck tool should be serviced only by personnel who are thoroughly familiar with its operation.**

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**CAUTIONS:** Replace all seals, wipers, and rings when the tool is disassembled for any reason, and at regular intervals, depending on severity and length of use. Do not use TEFLON® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions.

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Service the tool in a clean, well-lighted area. Take special care to prevent contamination of pneumatic and hydraulic systems.

Keep all necessary hand tools on-hand and available.

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

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

Keep Spare Parts Service Kit, 254KIT, available when servicing the tool; it includes important perishable parts. Other components, as experience dictates, should also be available. See KITS & ACCESSORIES.

Apply Loctite® 243 Threadlocker (Huck P/N 508567) to gland threads. Apply Loctite® 271-05 (Huck P/N 503657) to nuts.

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

Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® (per manufacturer’s instructions) to male pipe threads and quick-disconnect fittings.

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**DAILY**

If a Filter-Regulator-Lubricator unit is not being used, uncouple the air disconnects and add a few drops of hydraulic fluid or a light-weight oil to the air inlet of the tool. **NOTE: If the tool is in continuous use, add a few drops of oil in every 2–3 hours.**

Before connecting an air hose to the tool, clear the air lines of dirt and water.

Check all hoses and couplings for damage and air leaks; tighten or replace if necessary.

Check the tool and nose assembly for damage and air or hydraulic leaks; tighten, repair, or replace if necessary.

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

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

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**WEEKLY**

Disassemble, clean, and re-assemble nose assembly in accordance with applicable instructions.

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

This procedure is for complete disassembly of the tool. Disassemble only those components necessary to replace damaged O-rings, Quad-rings, Back-up rings, and worn and damaged components. For component identification, see Figures 1–4 & 9–11.

**WARNING:** Disconnect the air hose from the tool before performing any maintenance. Serious personal injury could result if the air hose is connected.

**CAUTION:** DO NOT scratch the piston or cylinder when removing.

1. Disconnect the tool from the air source.
2. Remove the nose assembly per the instructions on Nose Assembly Data Sheet.
3. Insert the Fill Tool (P/N 112465) through the reservoir housing and screw it into the reservoir plunger, locking it in the out position. (Figure 1)
4. Unscrew the 4 cap screws with a 5/32" hex key, and carefully separate the head from the handle. Remove the pull and return gland assemblies; remove the seals from the glands.
5. Unscrew the relief valve plug from the front of the head. Then remove the spring, guide, ball, and sleeve. A small magnet is helpful.
6. Unscrew the reservoir fill plug from the side of the head. Slowly release the fill tool, and drain the fluid into a container. (Figure 1) Discard the fluid.
7. Unscrew the reservoir housing. Then remove the two springs, and slide reservoir plunger out of the head. Remove the spacer and use a “pick” to remove the Quad-ring.
8. Unscrew the check valve plug from the side of the head. Then remove the spring, guide, and ball. (Figure 1)

**If check valve seat is damaged, contact your Huck representative.**

**If seat is damaged, it can be removed (through front of tool head) by using the following procedure. NOTE: If seat is removed, it cannot be reused; it must be replaced.**

**Seat removal:** Remove all parts in the reservoir check valve before removing plug. Unscrew plug, insert a #10 screw in the thread of plug, and pull to remove. Use a small drift and hammer and, from the rear side of the head, drive seat out towards the front of the head.

9. Pull the pintail deflector off the end cap (254 only). Use a 1-3/4" open-end wrench to unscrew the end cap. Slide out the spring.
10. Slide Spacer onto the piston. Thread the Piston Assembly Tool onto the piston. (Figure 2) Push the piston out the back of the head. Allow clearance as piston leaves the tool. **NOTE:** This will push out the front and rear gland assemblies, the wiper, and wiper housing. (Figure 9)

continued...
11. Remove the screw from the throttle arm, and then remove the throttle arm. Remove the throttle valve assembly and spring from the cylinder. (Figure 11)

12. With a small punch and hammer, drive out the roll pin to remove the trigger from the handle. (Figure 9) Remove the trigger pin. Remove ball end of the cable from the throttle arm, and pull cable out of handle.

13. Remove the bleed plug from the handle.

**CAUTION: Always use a soft-jaw vise to avoid damaging the tool.**

14. Secure the tool upside-down in a soft-jaw vise, and remove three cap head screws from the muffler end cap with a 5/32” hex key. (Figure 3)

15. Remove the muffler end cap, bottom exhaust gasket, muffler, and O-ring. (Figure 3)

16. Tap the cylinder head down into the cylinder assembly and remove the retaining ring.

17. Screw the cap screws into the cylinder head, and carefully pry on them to remove the cylinder head.

18. Push air piston all the way down in the cylinder, remove tool from vise, and lay on its side. Hold the self-locking nut with a 9/16” socket and extension, and use a 3/16” hex key to remove the Intensifier Piston Assembly. (Figure 4)

**CAUTION: DO NOT scratch the piston, rod, or cylinder when removing.**

19. Secure the cylinder assembly and handle upside-down in a vise again.

20. Use pliers to grip the self-locking nut and pull out the air piston and rod assembly from the handle and cylinder assemblies.

21. Use a 1-3/8” socket and extension to remove the gland assembly. The handle and cylinder assemblies will now separate.

22. Push the piston rod out of the handle.

23. Remove the Retaining Ring and Spacer (P/Ns 505939 and 123904) from the gland assembly, then remove the Polyseal (P/N 506611). (Figure 10)

**WARNING: Do NOT re-use seals, wipers, or rings; irreparable tool damage could occur. Discard these parts and use replacements.**

The tool has been properly disassembled. Store all re-usable parts (screws and disassembled components) in a clean, dry area.
Clean components with mineral spirits or similar solvent. Inspect for wear/damage and replace as necessary. Replace all seals of disassembled components using Service Parts Kit, P/N 256KIT. Smear LUBRIPLATE 130AA or PARKER-O-LUBE on rings and mating parts to ease assembly. Carefully assemble tool without damaging O-rings, Quad rings, or Back-up rings.

1. (Figure 4) Install O-ring inside handle; then push sleeve in handle until it bottoms on the chamfer.

2. Holding handle inverted in a vice, install timing pin; then place air cylinder on handle with timing pin positioned in matching hole. Assemble Main Gland Assembly. Apply anti-seize compound (p/n 508183) to gland threads. With a 1-3/8 inch socket wrench, torque it into the handle to 33-66 foot lbs.

3. Push air piston assembly and piston rod into air cylinder until it seated inside of air cylinder (See Figure 3).

4. Turn tool upright. Assemble Intensifier Piston with O-Ring and Back-up Rings; then apply Loctite 243 to intensifier piston screw threads, and carefully press in from top of handle.

5. Holding Self-locking Nut with 5/8 socket and extension, screw intensifier piston onto piston rod using 3/16 hex key, and torque to 180-190 in. lbs.

6. Hold handle in vise with bottom up. Push Cylinder Head Assembly squarely into air cylinder. Install Retaining Ring.

7. Position O-Ring and Muffler on center of air cylinder. Place Bottom Exhaust Gasket on air cylinder. Place Muffler End Cap on top of Gasket, and secure with 4 Cap Screws using 5/32 hex key.

8. Turn tool upright. (Figure 5) Drop Throttle Valve Spring into Throttle Valve hole in cylinder. Push Throttle Valve, with O-rings in place, into cylinder.

9. Assemble Trigger, Cable, and Cable Pin, and slide Cable into Handle. Align hole in Trigger with hole in Handle and install Trigger Pin with a hammer and punch.

10. Slide Throttle Arm onto ball end of throttle cable. Swing arm until end fits over throttle valve. Attach throttle arm Bushing and Screw to Throttle Arm. Tighten with 5/32 hex key.

11. If air hose assembly was removed, reinstall it.

12. If replacing Relief Valve Seat Assy, push Plug “A”, with seals in place, into head. Install Screw “B”. (Figure 10)

13. Carefully drive Relief Valve Seat Assy in using a soft drift, without damaging Relief Valve Ball surface.

14. Assemble Pull Piston with new seals. Lubricate with LUBRIPLATE or PARKER SUPER-O-LUBE.

15. Thread Assembly Bullet onto Pull Piston Assy. (Figure 2) NOTE: Spacer not needed during assembly. Its purpose is to push out the front gland during disassembly.


17. (Figure 10) Install O-rings and Back-up Rings on Rear Gland and push complete assembly into Head. Screw in Cylinder Cap and tighten.

18. (Figure 10) Install O-ring & Back-up Ring on Relief Valve Plug; then install Ball, Guide, Sleeve, Spring, and assembled Relief Valve Plug into head.

19. Install O-ring on Check Valve Plug “D”, then install Ball, Guide, Spring, and assembled Check Valve Plug into head.

20. Push Pintail Deflector onto barbed end of Pull Piston (254 only).

21. (Figure 10) Place O-rings on Bleed Plugs “C” & “E” and screw assemblies into Handle and Cylinder Head.

22. (Figure 10) Install all O-rings and Back-up Rings on Pull and Return Glands. Push Gland Assemblies into handle. Push Head down on glands.

23. Place tool in a vise, head down, and install 4 Cap Screws, and proceed to Fill & Bleed section of this manual.
Fill and Bleed

This section documents the “bleed-&-fill” procedure. For component identification, see Figures 6–8.

**REQUIRED EQUIPMENT**
- DEXRON® III or equivalent ATF
- Shop air-line with 90–100 psi (6.2–6.9 bar) max.
- Air regulator
- Check valve plug.
- Fill Bottle Assembly (P/N 120337, included with tool)
- Fill Tool (P/N 112465)
- Large flat-blade screwdriver
- Nose assembly or optional stall nut (P/N 120824)
- Fasteners (optional)

**PREPARATION**
Install air regulator in the air-line and set the pressure to 20–40 psi (1.4–2.8 bar).

Add an approved hydraulic fluid to the fill point of the Fill Bottle. **NOTE:** Refill the tool only when the fluid level drops below the red line on the reservoir housing; or when the tool is rebuilt.

**TO BLEED AND FILL THE TOOL**

1. Screw Fill Tool into the reservoir plunger. Pull the plunger into the reservoir housing and lock the Fill Tool in full-forward position by tilting the handle (long side touching tool) and locking it in place. (Figure 7)

2. Remove relief valve plug and check valve plug, and all guides, springs, and balls, from ports in head. Re-insert relief valve plug and sleeve. (Figure 7)

3. Screw the retaining/lock nut onto the head assembly, and screw the stall nut onto the hydraulic piston. Tighten to ensure full thread engagement. **NOTE:** Back off the retaining/lock nut until it engages the stall nut. Verify that the hydraulic piston is full-forward and locked with nut (and, optionally, with stall nut).

4. Connect the tool to the air source to seat the air piston at the bottom of the air cylinder; then disconnect. Lay tool on its side with reservoir fill port facing up.

5. Insert the fill bottle in the check valve port. (Figure 8).

6. Connect the tool to the air supply and cycle it 20–30 times; watch for air bubbles escaping into the bottle. (Rock the tool to free trapped air.) **NOTE:** Do not allow air to re-enter the tool. When cycling the tool, hold the fill bottle as shown in Figure 8 to prevent drawing in air.

7. When air bubbles stop accumulating in the fill bottle, stop cycling the tool. Remove the bottle and replace the reservoir fill plug.

8. Install the check valve ball, guide, and spring. Replace the check valve plug.

9. Turn the tool so the front of the head faces you. Use a 3/32” Allen wrench to back out (approximately 1/2 turn counterclockwise) the setscrew inside the relief valve plug. (This ensures that the piston remains in the full-forward position.) Remove the relief valve plug; insert the ball, guide, sleeve, and spring, and then re-insert the plug.

10. Unlock the Fill Tool and check the fluid level (Red Line Indicator, Figure 7) in the reservoir housing. Cycle the tool with stall nut attached and retaining or lock nut locked in full-forward position (“dead stall”). If the fluid level in the reservoir housing drops below the red line, repeat the “fill” procedure as outlined below until the fluid level is sufficient. **NOTE:** This usually requires 3 or 4 repetitions.

a. Lock the Fill Tool into the reservoir plunger. Lay the tool on its side and remove the reservoir fill plug.

b. Insert the fill bottle and add a few drops of fluid to the reservoir; wait for air bubbles to escape, then remove the fill bottle. (Push a pin or a scribe into the reservoir fill port to check for trapped air bubbles.)

c. Replace the plug.

d. Unlock the Fill Tool, cycle the tool as in step 10, and check the fluid level in the reservoir housing.

The reservoir fluid level may drop slightly. If so, repeat these steps until, when the Fill Tool handle is touched, it has no pressure against it and it drops out of the lock position, and the fluid level in the reservoir housing does not drop when the tool is cycled.

When the fluid level is sufficient, remove the Fill Tool and stall nut. Install a nose assembly and pull several fasteners to test function.
254 Tool Head

Figure 9

254 and 254OS Pneudraulic Installation Tools (HK1172)

* These parts are included in Service Kit 254KIT
254 and 254OS Pneudraulic Installation Tools (HK1172)

254OS Tool Head

Figure 10

113251* Back-up Ring
500823* O-Ring
126088* Back-up Ring
123138 Wiper Housing
505894* Wiper

131544 Cylinder Head
131543 Hydraulic Pull Piston Assy
(Piston not sold separately)

131550 Lock Nut
126082 Front Gland Assy
(Gland not sold separately)

506160* Polyseal
(Note orientation)
500621 Trigger Pin
500101 Screw (4)

130244 Throttle Lever
(Trigger)
131430 Cable Pin
130260 Handle & Sleeve Assembly
125643 Cable Assembly

Reservoir Fill Plug
104293 Bleed Plug Assy
(Includes O-ring 505438*)

Check Valve Seat
502929* Ball
11067 Guide
100874* Spring
507648* O-Ring
501082* Back-up Ring
120129 Screw
508481 Setscrew

Relief Valve Plug
114530 Plug
501082* Back-up Ring
507648* O-Ring
505863* Spring
120127 Sleeve
120128* Ball Guide
130122 Seat & Seals Assembly
(Relief Valve Seat - not sold separately)

Check Valve Plug
111079 Bleed Plug Assy
(Includes O-ring 505438*)

104293 Bleed Plug Assy (Includes O-ring 505438*)
501082* Back-up Ring
507648* O-Ring
501082* Back-up Ring

112405 Reservoir Plunger
501408* QUAD Ring

112491 Cylinder Cap

254OS revA

SECTION A-A
Rotated 90° CCW

* These parts are included in Service Kit 254KIT
Tool Base - 254 and 254OS

*These parts are included in Service Kit 254KIT.

Figure 11

130494 Intensifier Piston Assembly
130353 Gland Assembly (Assume GR-1276, and torque gland to 55 ft-lbs)

Tool comes assembled with this rubber cylinder cover, HUCK part number 130718.

123904 Spacer
507647* O-Ring
505939* Retaining Ring
506611* Polyseal (note orientation)
130352 Gland

130104* Backup Ring
505928* O-Ring

[Diagram showing various components and labels with part numbers]

130247 Guard
130296 Piston Rod
121214 Self-Locking Nut
130543 Air Piston Assy (not sold separately)
500876* O-Ring
11554 Muffler
500777* O-Ring
129757 Bottom Cap
129761* Gasket

104243 Bleed Plug (Order XXX 554387)
502482 Screw (2)

Tool comes assembled with this rubber cylinder cover, HUCK part number 130718.

115436 Air Hose
500101 Screw (4)
1300351 Sticker (on bottom of tool)
The 254 series tools come labeled with important stickers on the outside of the cylinder which contain safety information.

It is necessary that these stickers remain on the tool and are easily read. If stickers become damaged or worn, or if they have been removed from the tool, they must be replaced.

590517
Trademark / Year of Manufacture Sticker

590351
MAX Pressure and Flow Sticker

<table>
<thead>
<tr>
<th>MAX PRESS</th>
<th>PSI</th>
<th>BAR</th>
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<tbody>
<tr>
<td>MAX FLOW</td>
<td>SCFM</td>
<td>LPM</td>
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</table>

130535 Throttle Valve Assembly
(Valve not sold separately)

129771 Throttle Arm
(Shown without guard in place)

127029 Bushing and Screw Assembly

Dowel pin for location

500778* O-Ring

507396* O-Rings

501763 Cone Point Setscrew 10-32 X .19

502053 Oval Point Setscrew 10-32 X .5

507164 Swivel Assy

508459* Throttle Valve Spring

SECTION D-D (magnified)

* These parts are included in Service Kit 254KIT
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. NOTE: “Piston drift” is when the air piston is in the down position, but the hydraulic pull piston is not in the full-forward position. This causes an out-of-sequence condition.

1. **Tool fails to operate when trigger is pressed.**
   a. Air line not connected.
   b. Worn or damaged throttle valve O-rings.
   c. Broken throttle valve cable.

2. **Tool does not complete fastener installation and break pintail.**
   a. Air pressure too low.
   b. Worn or damaged air piston Quad-ring.
   c. Tool is low on hydraulic fluid. See the **FILL AND BLEED** section.
   d. Air in hydraulic system. See **FILL AND BLEED**.
   e. Worn or damaged reservoir springs.
   f. Check for piston drift.

3. **Pintail stripped and/or swaged collar not ejected.**
   a. Check for broken or worn jaws in nose assembly. See Nose Assembly Data Sheet.
   b. Check for loose retaining or lock nut.
   c. Check for piston drift.

4. **Hydraulic fluid exhausts with air or leaks at base of handle.**
   a. Worn or damaged gland assembly. Inspect Polyseal, O-rings, Quad-ring, and Back-up ring. Replace if necessary.

5. **Tool has piston drift.**
   a. Loose collet crashing into the front of the anvil causing the relief valve to open. Tighten the collet. See **FILL AND BLEED**.
   b. Worn or damaged return pressure relief valve. Inspect seat, O-ring, Back-up rings, ball, and valve spring. Replace if necessary.
   c. Worn or damaged Intensifier Piston Assembly. Inspect O-rings and Back-up rings. Replace if necessary.

6. **Hydraulic fluid leaks at rear of pull piston.**
   a. Worn or damaged rear gland. Inspect O-rings and Back-up rings. Replace if necessary.

7. **Hydraulic fluid leaks at front of pull piston.**
   a. Worn or damaged front gland. Inspect Polyseal. Replace if necessary.

8. **Pull piston will not return.**
   a. Throttle valve stuck; lubricate O-rings.
   b. Throttle arm, cable, or trigger binding.

9. **Air leaks at air cylinder head.**
   a. Worn or damaged O-ring. Replace if necessary.
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.
### Industrial North America

<table>
<thead>
<tr>
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<tr>
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