Instruction Manual
2013 and 2014 series
Pneudraulic Installation Tools

Patent Pending
EC Declaration of Conformity

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

Description of Machinery:
Models 2012, 2013, 2014, and 2015 family of pneudraulic 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 1148-1:2011)

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:

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

Declared dual number noise emission values in accordance with ISO 4871

<table>
<thead>
<tr>
<th>Description</th>
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<tr>
<td>A weighted sound power level, LWA:</td>
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<td>Uncertainty, KWA:</td>
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<td>A weighted emission sound pressure level at the work station, LpA:</td>
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<td>Uncertainty, KpA:</td>
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<td>C-weighted peak emission sound pressure level, Lpc, peak:</td>
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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

<table>
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<td>Uncertainty, K:</td>
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Values measured and determined according to ISO 28662-1, ISO 5349-2, and EN 1033

Test data to support the above information is on file at:
Arconic Fastening Systems and Rings, Kingston Operations, Kingston, NY, USA.
I. GENERAL SAFETY RULES:
1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the assembly power tool.
5. Do not modify this assembly power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use assembly power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Read MSDS Specifications before servicing the tool. MSDS specifications are available from the product manufacturer or your Huck representative.
11. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tooling damage or personal injury.
12. Never remove any safety guards or pintail deflectors.
13. Never install a fastener in free air. Personal injury from fastener ejection 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. Disconnect the assembly power tool from energy source when changing inserted tools or accessories.
2. Be aware that failure of the workpiece, accessories, or the inserted tool itself can generate high velocity projectiles.
3. Always wear impact resistant eye protection during tool operation. The grade of protection required should be assessed for each use.
4. The risk of others should also be assessed at this time.
5. Ensure that the workpiece is securely fixed.
6. Check that the means of protection from ejection of fastener or pintail is in place and operative.

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 interuption 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 foothold 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 implementation of proper controls is essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workplace 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 installed 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.
Description

The 2013 series and 2014 model are lightweight, high-speed production tools that install:
- 04 through 06 diameter HUCK-CLINCH® fasteners, and oversize HUCK-CLINCH fasteners
- 04 through 05 diameter Huck UNIMATIC® blind rivets
Any other blind fasteners that have a pinbreak of 2650 lbs or less.

The 2013V model has a Slide & Tubing Assembly, which is a ribbed “ON/OFF” vacuum-regulating slider that enhances the tool capabilities by expelling broken pintails into the pintail collector, and holding fasteners firmly in the nose assembly with the tool in any position.

When the tool is not in use, the OFF position (slider forward) will prevent air loss. See Figure 12 for the location of this assembly (pictured in the ON position) on the tool.

The pulling action of the pull piston is provided by a pneumatic-hydraulic (pneudraulic) intensifier system that is powered by air pressure. The air inlet is equipped with a connector with 1/4”-18 female pipe threads to accept your air hose or quick-connect fitting. The piston return stroke is spring actuated.

Specifications

STROKE: 0.650 in (1.65 cm)

WEIGHT: 2013 & 2014: 4.4 lbs (1.99 kg)
2013B & 2013V: 4.7 lbs (2.13 kg)

MAX AIR PRESSURE: 90 psi (6.2 bar)

MAX FLOW RATE: 2.9 scfm (170 l/min)

POWER SOURCE: 90 psi (6.2 bar) maximum shop air

MAX OPERATING TEMP: 125° F (51.7° C)

PULL CAPACITY: 2670 lbs @ 90 psi
(11.88 kN @ 6.2 bar)

SPEED / CYCLES: 20 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.
Loctite is a registered trademark of Henkel Corporation, U.S.A.
LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
MERCON is a registered trademark of Ford Motor Corp.
Never-Seez is a registered trademark of Bostik, Inc.
Quintolubric is a registered trademark of Quaker Chemical Corp.
Slic-tite is a registered trademark of LA-CO Industries, Inc.
Spirolox is a registered trademark of Smalley Steel Ring Company
Teflon is a registered trademark of E. I. du Pont de Nemours and Company.
Threadmate is a registered trademark of Parker Intangibles LLC.
TRUARC is a trademark of TRUARC Co. LLC.
Vibra-Tite is a registered trademark of ND Industries, Inc. USA.
Specifications (continued)

Models
2013, 2013B, & 2013V

INCHES (cm)
**PULL STROKE:** When the trigger is pressed, the throttle valve moves down to the PULL position, and pressurized air is directed to the bottom of the air piston, causing it to move upward. The air above the air piston is exhausted and directed through the center of the throttle valve and out the bottom of the tool. The hydraulic piston rod moves upward, a column of fluid is forced into head, which moves the pull piston rearward. The attached nose assembly moves with the pull piston to start fastener installation.

**RETURN STROKE:** When fastener installation is completed, the trigger is released. Air pressure, with the assistance of a spring, sends the throttle valve to the up (RETURN) position. Pressurized air is re-directed to the top of the air piston, causing it and the hydraulic piston rod to move downward. The air from below the piston is exhausted through the bottom of the tool. The piston and hydraulic rod move downward, hydraulic pressure is reversed, and the pull piston is returned forward. The Damper Valve restricts the flow of fluid at pin break, thus preventing “tool kick.” The reservoir replenishes the hydraulic system as needed.

**Preparation for Use**

This tool is shipped with a plug in the air inlet connector, which has 1/4”-18 female pipe threads to accept an air-hose fitting. Huck recommends quick-disconnect fittings and a 1/4” inside-diameter air hose. The air supply should have a filter-regulator-lubricator unit and access to 90 psi (6.2 bar), capable of a flow rate of 2.9 CFM (170 l/m).

**NOTE:** Quick-disconnect fittings and air hoses cannot be purchased from Huck International, Inc. An an air hose is included (P/N 115436) to facilitate immediate tool use.

Remove the shipping plug from air inlet connector and add a few drops of an approved hydraulic fluid. Screw the quick-disconnect fitting into the air inlet connector. 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. Disconnect the air hose from the tool, and remove the retaining nut. Select the proper nose assembly for the fastener being installed. Connect the air hose to the tool and install fasteners in a test plate of proper thickness with proper size holes. Inspect the fasteners.

If the fasteners do not pass inspection, consult the **TROUBLESHOOTING** section to investigate possible causes.
Read all of these instructions in order to ensure the safe operation of this equipment.

TO INSTALL A HUCK BLIND FASTENER:
1. Place a fastener in the workpiece or in the end of the nose assembly.
   **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.

If the tool malfunctions, consult the **Troubleshooting** section before attempting any repairs.
GENERAL
The operating efficiency of your tool is directly related to the performance of the entire system. Regular inspection and the immediate correction of minor problems will keep the tool operating efficiently, and prevent downtime. A schedule of “preventive” maintenance of the tool, nose assembly, hoses, trigger and control cord, and POWERIG® will ensure your tool’s proper operation and extend its life. **NOTE: Huck tools should be serviced only by personnel who are thoroughly familiar with its operation.**

- Service the tool in a clean, well-lighted area. Take special care to prevent contamination of pneumatic and hydraulic systems.
- Have available all necessary hand tools (standard and special), a brass drift and wood block, and a soft-jaw vise. See **Kits & Accessories**.
- Carefully handle all parts. Before reassembly, examine them for damage and wear.
- Disassemble and assemble tool components in a straight line. Do NOT bend, cock, twist, or apply undue force.
- Have the appropriate **Spare Parts Service Kit** ([2013KIT](#) for 2013 and 2013B, **2013VKIT** and **2014KIT**) 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 and locknut (P/N 505420); torque to 25–30 ft.-lbs.
- Smear LUBRIPLATE® 130-AA (Huck P/N 502723) or SUPER-O-LUBE® (Huck P/N 505476) on rings and mating parts to ease assembly.
- Apply Threadmate® (Huck P/N 508517) to pipe threads and quick-connect fittings.

For supplementary information, see **Troubleshooting**, and the **Disassembly** and **Assembly** procedures in this manual.

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

WEEKLY
- Disassemble, clean, and 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 or damaged components. For component identification, see Figures 10–13.

1. Disconnect the tool from the air source.
2. Unscrew adapter and remove nose assembly.
3. Unscrew bleed plug, including O-ring, from top of head/handle. Drain fluid into a container. Tool can be cycled to clear more completely. Discard the fluid.
5. Remove the throttle arm pivot screw and lift out the throttle arm. Disconnect the ball end of the cable assembly from the throttle arm.
6. Secure the tool upside-down in a soft-jaw vise, and remove three button-head screws with a 1/8” hex key. Remove the bottom plate and gasket. Remove muffler from bottom plate. Remove spring from throttle valve.
7. Tap cylinder head down into the cylinder assembly and remove the retaining ring.
8. Screw button-head screws into the cylinder head, and carefully pry on them to remove the cylinder head.
9. Use VISE-GRIP pliers to grip the self-locking nut and pull out the air piston and rod assembly from the handle and cylinder assemblies.

NOTE: Air Piston and rod should not be disassembled and reassembled. If the locknut loosens, apply Loctite 271-05; tighten to 25–30 ft-lbs.

10. Remove bumper from gland assembly. Unscrew the gland with a 1-3/8” socket wrench and extension.
11. Remove the retaining ring from the gland. Pull out the spacer and Polyseal.
12. Model 2013V: (Figure 12) Press the ring on the tube connector (45) downward to release the tube.
13. Lift cylinder assembly from handle assembly.

14. Turn over the handle assembly and drain fluid into container. Discard fluid.
15. Pull throttle valve out of the cylinder assembly. NOTE: The throttle valve bushings do not typically require service.

16. Secure handle assembly in a vise, and continue with the procedure that is applicable to your tool.
   Model 2013: (Figure 10) Remove end cap with a 15/16” open-end wrench. Remove spring, washer, and wiper seal.
   Model 2014: (Figure 13) Remove end cap with a 15/16” open-end wrench. Remove spring.
   Models 2013B & 2013V: (Figures 11 & 12)
   a. Rotate the pintail bottle until the retaining ring holes are visible. Then, reach through the bottle window with angled retaining ring pliers and remove the retaining ring.
   b. Through the same window, remove washer.
   c. Remove the pintail bottle.
   Model 2013B: Remove the end cap with a 15/16” open-end wrench. Remove spring, washer, and wiper seal.
   Model 2013V:
   i. Carefully slide tubing and slide assembly off of the end cap assembly.
   ii. Remove the end cap assembly with a 15/16” open-end wrench.

The tool has been properly disassembled. Store all reusable parts (screws and disassembled components) in a clean, dry area.
Disassembly (continued)

PISTON ASSEMBLY AND FRONT GLAND ASSEMBLY REMOVAL

CAUTION: If piston and gland seals must be reused: during disassembly, install the Polyseal Insertion Tool (P/N 121694-202) in the rear of handle to prevent damaging the seals.

1. Thread the Polyseal Insertion Tool into the head.
2. **2013 Series**: Thread the Piston Assembly Tool (P/N 123111-5) onto the piston.
   **2014 Series**: Thread the Piston Assembly Tool (P/N 123111-12) onto the piston.

CAUTION: Take care to not scratch the piston, rod, or cylinder when removing.

3. Use a brass drift to push out the piston from the front. Allow clearance, with stand-off, as the piston leaves the tool.
4. Remove the Piston Assembly Tool, spacer, and Polyseal Insertion Tool.
   **NOTE**: Inspect the piston for wear, scoring, and damage. Replace if necessary.
5. Inspect all seals and parts; replace if necessary.
6. Remove trigger cable assembly by driving out the pin with a punch. Remove trigger pin to disconnect the cable from trigger.

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**Figure 2**

- Press
- Piston Assembly Tool
- Front Gland Assembly
- Piston Assembly
- Polyseal Insertion Tool
- Handle Assembly
Assembly

This procedure is for the assembly of the tool. For component identification, see Figures 9–13.

BEFORE RE-ASSEMBLING THE TOOL:

- Clean components with mineral spirits or a similar solvent. Inspect for wear/damage and replace as necessary.
- Replace all seals, wipers, and rings of disassembled components.
- Use the O-rings, Quad-rings, and Back-up rings from the appropriate Huck Spare Parts Service Kit (P/Ns 2013KIT, 2013BKIT, 2013VKIT, or 2014KIT).

When assembling the tool, take care not to damage O-rings, Quad-rings, Back-up rings.

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

TO RE-ASSEMBLE THE TOOL:


   **NOTE**: Note the orientation of the Polyseal in the appropriate Assembly Drawing in this manual.

2. Thread the Polyseal Insertion Tool (P/N 121694-202) into the handle assembly.

3. Push front gland assembly, except for wiper seal, onto piston. Then slide the wiper seal onto the piston.

4. Gently push the assembled components into the handle assembly from the rear using a press, or a soft mallet and wood or brass drift.

5. Remove the Polyseal Insertion Tool.

6. Model 2014: (Figure 13) Place spring into the back end of piston, and install end cap into the handle assembly.

   **2013 Series**: Place pintail extension tube into the back end of piston. Assemble rear wiper seal, spacer (where applicable), and spring in end cap, and install into handle assembly.

   **2013**: (Figure 10) Install pintail deflector.

   **2013B**: (Figure 11) Install pintail collection bottle by sliding it over the back end of end cap. Reach through hole in the pintail bottle and install washer and retaining ring.

   **2013V**: (Figure 12)
   i. Install O-ring, washer, wiper seal, tube, and retaining ring into the back of end cap. (Figure 12, section A-A)
   ii. Press slide onto the back end of the end cap until it is fully forward. Note the orientation in Figure 12.
   iii. Place adapter and pintail collection bottle over the slide and the end cap; secure with washer and retaining ring.

7. Position cable assembly in trigger slot and push trigger pin through holes in trigger and cable assembly. Position assembled trigger in handle and drive roll pin through holes in handle and trigger.

8. Secure the handle assembly upside-down in a soft-jaw vise. Place the inverted cylinder assembly on the base of the handle. The timing pin maintains the orientation. (Figure 9)

9. Apply Loctite® 243™ to the threads of the gland assembly. Screw the gland assembly into the handle assembly. Use a 1-3/8” socket wrench to tighten and torque to 36–66 ft.-lbs.

10. Push the bumper firmly over the gland. (The slots must face the bottom of the tool.)

11. Clean the piston rod threads and apply Loctite® 243™. Carefully press the assembled air piston rod assembly into the cylinder just enough to allow installation of the cylinder head assembly.

12. Secure the head upside-down in a vise. Push the cylinder head assembly squarely into the cylinder, taking care not to damage O-ring. Install retaining ring; align the screw holes with bottom plate.

13. Carefully position bottom plate on the cylinder, making sure that it is properly positioned in the recess of the bottom plate. Secure the muffler end cap with three button-head screws using a 1/8” hex key.

14. Place the tool upright on a level surface. Drop spring into the throttle valve hole in the cylinder, and push throttle valve assembly into the cylinder.

15. Place the ball end of cable assembly in the end of throttle arm. Slide the throttle arm into slot on the cylinder.

16. Insert pivot screw into the cylinder to retain the throttle arm.

The tool is now assembled and must be filled with hydraulic fluid prior to use. See the **Fill and Bleed** section. Install the bleed plug and O-ring assembly after that process.
This section documents the “bleed-&-fill” procedure. For component identification, see Figures 3–5.

**REQUIRED EQUIPMENT**

- DEXRON® III or equivalent ATF (See Specifications for more information.)
- Shop air-line with 90–100 psi (6.2–6.9 bar) max.
- Air regulator
- Fill Bottle Assembly (P/N 120337, included with tool)
- Large flat-blade screwdriver
- Nose assembly or optional stall nut

**NOTE:** The stall nut is used to load the tool during bleeding and for measuring tool stroke. Stall nuts are available from Huck (P/Ns 124090-3 [2013 series] and 124090-4 [2014]).
- 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. (Figure 3)

**TO BLEED AND FILL THE TOOL:**

**CAUTION:** All fluid must be purged from the tool before refilling. The tool stroke will be diminished if the fluid is aerated. For optimal performance, refill with a fluid that is recommended in Specifications.

1. Connect the tool to the air supply to seat the air piston at the bottom of the air cylinder; then disconnect. Lay tool on its side with fill port facing up.
2. Remove the bleed plug from the fill port. Screw the fill bottle into the fill port.
3. Connect the tool to the air supply and stand it upright. Cycle the tool 20–30 times; watch for air bubbles escaping into the bottle.

**WARNINGS:**

- Before cycling the tool, make sure the bleed plug is tightened in the fill port, or fill bottle is securely attached to the tool (if the bleed plug has been removed), or fill port is held over a container. (Figure 5)
- Air pressure must be at 20–40 psi (1.4–2.8 bar) to prevent possible injury from high-pressure spray.

4. When air bubbles stop accumulating in the fill bottle, stop cycling the tool. When the trigger is released, the pull piston returns to the idle (full forward) position. Disconnect the tool from the air supply.
5. Lay the tool on its side, and remove the fill bottle. Carefully add fluid to “top off” the fluid in the fill port. Insert and tighten the bleed plug.
6. Connect the tool to the air supply to check the tool stroke.

**NOTE:** There are two procedures for measuring tool stroke: with and without a stall nut. See Measuring Tool Stroke.

If the tool stroke is less than the recommended minimum length, remove the bleed plug and add fluid. Then re-insert the bleed plug and re-check the stroke.

**WARNING:** Avoid contact with hydraulic fluid. Hydraulic fluid must be disposed of in accordance with local regulations. See MSDS for hydraulic fluid shipped with tool.
Fill and Bleed (continued)

The fluid level may drop slightly. If so, repeat these steps until the fluid level does not drop when the tool is cycled. **NOTE: This usually requires 3 or 4 repetitions.**

When the tool stroke is as recommended:

a. Increase the air pressure according to the tool specification.

b. Install two fasteners to check function and installation in a single stroke (or cycle the tool with the stall nut fully threaded onto the piston).

c. Re-measure the stroke.

Continue this process until the tool stroke is at the minimum requirement.

**BLEED PROCEDURE FOR PARTIALLY FILLED TOOL IN FIELD USE**

1. Disconnect the tool from the air supply. Lay tool on its side with fill port facing up.
2. Remove the bleed plug from the fill port, and position the fill port over suitable container. (Figure 4)
3. Connect the tool to the air supply and cycle it several times to drain fluid, air, and foam.
4. Screw the fill bottle into the fill port.
5. Connect the tool to the air supply, with the pressure set at 20–40 psi (1.4–2.8 bar).
6. Stand tool upright. While slowly actuating the trigger (20–30 cycles), attach the fill bottle at a right angle (90°) to the tool (Figure 5) and watch for escaping air bubbles.

7. When air bubbles stop accumulating in the fill bottle, stop cycling the tool. When the trigger is released, the pull piston returns to the idle (full forward) position. Disconnect the tool from the air supply.
8. Lay the tool on its side, and remove the fill bottle. Carefully add fluid to “top off” the fluid in the fill port. Insert and tighten the bleed plug.
9. Connect the tool to the air supply to check the tool stroke. **NOTE: There are two procedures for measuring tool stroke: with and without a stall nut. See Measuring Tool Stroke.**

If the tool stroke is less than the recommended minimum length, remove the bleed plug and add fluid. Then re-insert the bleed plug and re-check the stroke.

The fluid level may drop slightly. If so, repeat these steps until the fluid level does not drop when the tool is cycled. **NOTE: This usually requires 3 or 4 repetitions.**

When the tool stroke is as recommended:

a. Increase the air pressure according to the tool specification.

b. Install two fasteners to check function and installation in a single stroke (or cycle the tool with the stall nut fully threaded onto the piston).

c. Re-measure the stroke.

Continue this process until the tool stroke is at the recommended minimum length.
Measuring Tool Stroke

A Stroke Limiter Kit (P/N 126915) is included with the 2014 tool. See Kits & Accessories for more information.

NOTE: Remove the Nose Assembly from the tool for both of the following procedures.

MEASURING STROKE USING A STALL NUT
1. Disconnect the tool from the air-line and remove the nose assembly.
2. Reconnect the tool to the air-line. Press and hold the trigger to cycle the piston fully to the rear of the tool (the end of the PULL stroke). Thread the stall nut onto the piston until it contacts the adapter bushing.
3. Release the trigger. The stall nut will move forward with the piston. (Figure 6)
4. Measure the X dimension. (This is the tool stroke.)

If the stroke is less than 0.650 in (1.65 cm), follow the steps at the end of the Fill and Bleed procedure.

MEASURING STROKE WITHOUT A STALL NUT
1. Disconnect the tool from the air-line and remove the nose assembly.
2. Reconnect the tool to the air-line. Press and hold the trigger to cycle the piston fully forward (the end of the RETURN stroke). Measure and record the Y dimension. (Figure 7)
3. Press and hold the trigger; the piston is now fully to the rear of the tool (the end of the PULL stroke). Measure and record the X dimension. (Figure 8)
4. Subtract X from Y.

Stroke = Y - X (This is the tool stroke.)

If the stroke is less than 0.650 in (1.65 cm), follow the steps at the end of the Fill and Bleed procedure.
**Tool Base (all models)**

**Figure 8**

128762 Swivel Assembly w/Orifice
(128764 Swivel and 128763 Orifice)

115436 Air Hose Assembly

125472-2 Throttle Valve Assembly
(Throttle Valve and 507396 O-ring [3]√)

116134-1 Gland Assembly
Tighten and torque to 36–66 ft-lbs.

123754-1 Throttle Arm

116272 √ Throttle Valve Spring

Shown without Throttle Guard

**NOTES**

√ These parts are included in this tool’s Spare Parts Service Kit (see Kits & Accessories).

* This assembly includes: 500782 O-ring; 125466 Upper Bushing; 115503 Lower Bushing; 505496 Dowel; Cylinder not sold separately. When replacing this assembly, you MUST order and replace stickers 590350, 590351, & 590347 (shown at left).
NOTES
✓ These parts are included in this tool’s Spare Parts Service Kit (see Kits & Accessories).
* When replacing this assembly, you MUST order and replace WARNING sticker 590240-1.
** Note orientation of Wipers and Polyseals.
Figure 10

NOTES
✓ These parts are included in this tool’s Spare Parts Service Kit (see Kits & Accessories).
* When replacing this assembly, you MUST order and replace WARNING sticker 590240-1.
** Note orientation of Wipers and Polyseals.
**NOTES**

✓ These parts are included in this tool's Spare Parts Service Kit (see KITS & ACCESSORIES).

* When replacing this assembly, you MUST order and replace WARNING sticker 590240-1.

** Note orientation of Wipers and Polyseals.

---

**Tool Head 2013V**

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**125780 Adapter**

**123774-4 Piston Assembly** (see Figure 9 for parts)

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**123775 Front Gland Assembly** (see Figure 9 for parts)

**124333-1 Trigger**

**116404-1 Cable Assembly**

**123766 Handle Assembly * **

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**SECTION A-A**

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**125116 Guard**

---

**123577 End Cap**

---

**12384 Adapter**

---

**124245 Tubing & Slide Assembly**

shown in **ON** position; slide forward for **OFF** includes: 123783 Slide, 124244 Tubing (see above), & 500790 O-ring (2)

---

**124246 End Cap Assembly**

---

**506675 Tube Connector**

**104293 Bleed Plug Assembly**

(Bleed Plug not sold separately)

**500438 O-ring ✓

**50424 9.25” Tubing (see Tubing & Slide Assembly below)**

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**125116 Guard**

---

**123784 Adapter**

---

**124333-1 Trigger**

**505496 Roll Pin**

---

**500621 Trigger Pin**

---

**124333-1 Trigger**

---

**116404-1 Cable Assembly**

---

**123766 Handle Assembly * **

---

**506675 Tube Connector**

**104293 Bleed Plug Assembly**

---

**500438 O-ring ✓

**50424 9.25” Tubing (see Tubing & Slide Assembly below)**

---

**125116 Guard**

---

**123577 End Cap**

---

**12384 Adapter**

---

**124245 Tubing & Slide Assembly**

shown in **ON** position; slide forward for **OFF** includes: 123783 Slide, 124244 Tubing (see above), & 500790 O-ring (2)

---

**NOTES**

✓ These parts are included in this tool's Spare Parts Service Kit (see KITS & ACCESSORIES).

* When replacing this assembly, you MUST order and replace WARNING sticker 590240-1.

** Note orientation of Wipers and Polyseals.
NOTES

✓ These parts are included in this tool’s Spare Parts Service Kit (see Kits & ACCESSORIES).
* When replacing this assembly, you MUST order and replace WARNING sticker 590240-1.
** Note orientation of Wipers and Polyseals.

NOTE: The 2014 tool ships with a Stroke Limiter (P/N 126663) and Sticker (P/N 590463) shown above. When the Stroke Limiter is not in place, the Sticker MUST be applied to the tool.
Troubleshooting

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

1. **Tool fails to operate when trigger is pressed.**
   a. Air-line not connected or air pressure too low.
   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 the Fill and Bleed section.
   e. Collet backed off from Piston.

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 nut.
   c. Check for piston drift.

4. **Hydraulic fluid exhausts with air or leaks at base of handle.**
   a. Worn or damaged gland assembly (P/N 116134-1). Inspect Polyseal and all rings. 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 the Fill and Bleed section.
   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 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, wiper, and O-ring. Replace if necessary.

8. **Pull piston will not return.**
   a. Throttle valve stuck; lubricate O-rings.
   b. Throttle arm, cable, or trigger binding.
   c. Broken or weak return spring.
   d. Collet backed off from piston.

9. **Air leaks at air cylinder head.**
   a. Worn or damaged O-ring. Replace if necessary.
Kits & Accessories

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

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

**KITS**

**SERVICE KITS**
- 2013KIT (2013 & 2013B)
- 2013VKIT
- 2014KIT

**ASSEMBLY TOOL KIT** (2013 series)
- Polyseal Insertion Tool - 123110-5
- Piston Assembly Tool - 121694-202

**STROKE LIMITER KIT** (2014 model)
- Stroke Limiter - 126915
- Sticker - 590463

**STANDARD TOOLS AVAILABLE FROM HUCK**
- 1/8” hex key (P/N 502294), use on button-head screw (P/N 504127)
- 5/32” hex key (P/N 502295), use on socket-cap screw (P/N 123756)
- TRUARC™ pliers (P/N 502866), use on retaining ring (P/N N5100-100)

**ACCESSORIES 2013 SERIES**

<table>
<thead>
<tr>
<th>Item</th>
<th>Part Number</th>
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<tr>
<td>Stall Nut</td>
<td>124090-3</td>
</tr>
<tr>
<td>Fill Bottle Assembly</td>
<td>120337</td>
</tr>
<tr>
<td>Pintail Bag</td>
<td>125652</td>
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**ACCESSORIES 2014 MODEL**

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<tbody>
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<td>Stall Nut</td>
<td>124090-4</td>
</tr>
<tr>
<td>Polyseal Insertion Tool</td>
<td>121694-202</td>
</tr>
</tbody>
</table>

Pintail Collection Bag pictured on 244BT tool

Figure 13
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.