

ARCONIC

Instruction Manual

2015 series Pneudraulic Installation Tools

Patent Pending



HUCK IS FOREVER.™

February 8, 2017
HK958

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Makers of Huck®, Marson®, Recoil®
Brand Fasteners, Tools & Accessories

**ARCONIC**

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:

Council Directive related to Machinery (2006/42/EC)

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: _____

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: **80** dB (reference 1 pW) Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: **69** dB (reference 20 µPa) Uncertainty, KpA: 3 dB

C-weighted peak emission sound pressure level, LpC, peak: **106** 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:	1.573 m/s²
Uncertainty, K:	.394 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.





Safety Instructions

GLOSSARY OF TERMS AND SYMBOLS:

 - Product complies with requirements set forth by the relevant European directives.

 - Read manual prior to using this equipment.

 - Eye protection is required while using this equipment.

 - Hearing protection is required while using this equipment.

Notes: are reminders of required procedures.

Bold, italic type, and underline: emphasize a specific instruction.

 **WARNINGS: Must be understood to avoid severe personal injury.**

 **CAUTIONS: Show conditions that will damage equipment or structure.**

I. GENERAL SAFETY RULES:

1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. Huck equipment must be maintained in a safe working condition at all times. Tools and hoses should be inspected at the beginning of each shift/day for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the assembly power tool.
5. Do not modify this assembly power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use assembly power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Read MSDS Specifications before servicing the tool. MSDS specifications are available from the product manufacturer or your Huck representative.
11. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tooling damage or personal injury.
12. Never remove any safety guards or pintail deflectors.
13. Never install a fastener in free air. Personal injury from fastener ejecting may occur.
14. Where applicable, always clear spent pintail out of nose assembly before installing the next fastener.
15. Check clearance between trigger and work piece to ensure there is no pinch point when tool is activated. Remote triggers are available for hydraulic tooling if pinch point is unavoidable.
16. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle or to bend or pry the tool. Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency, eliminating downtime, and preventing an accident which may cause severe personal injury.
17. Never place hands between nose assembly and work piece. Keep hands clear from front of tool.
18. Tools with ejector rods should never be cycled with out nose assembly installed.
19. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet for correct positioning.

II. PROJECTILE HAZARDS:

1. Risk of whipping compressed air hose if tool is pneudraulic or pneumatic.
2. Disconnect the assembly power tool from energy source when changing inserted tools or accessories.
3. Be aware that failure of the workpiece, accessories, or the inserted tool itself can generate high velocity projectiles.
4. Always wear impact resistant eye protection during tool operation. The grade of protection required should be assessed for each use.
5. The risk of others should also be assessed at this time.
6. Ensure that the workpiece is securely fixed.
7. Check that the means of protection from ejection of fastener or pintail is in place and operative.
8. There is possibility of forcible ejection of pintails or spent mandrels from front of tool.

III. OPERATING HAZARDS:

1. Use of tool can expose the operator's hands to hazards including: crushing, impacts, cuts, abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly and be ready to counteract normal or sudden movements with both hands available.
4. Maintain a balanced body position and secure footing.
5. Release trigger or stop start device in case of interruption of energy supply.
6. Use only fluids and lubricants recommended by the manufacturer.
7. Avoid unsuitable postures, as it is likely for these not to allow counteracting of normal or unexpected tool movement.
8. If the assembly power tool is fixed to a suspension device, make sure that fixation is secure.
9. Beware of the risk of crushing or pinching if nose equipment is not fitted.

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.

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 **2015** series tools are lightweight, high-speed production tools that install 3/32" and 1/4" nail-type blind fasteners. An integral nose assembly increases reliability and simplifies use of this tool.

The **2015V** model has a Tubing & Slide Assembly - 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 5 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 90 psi (6.2 bar) 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.

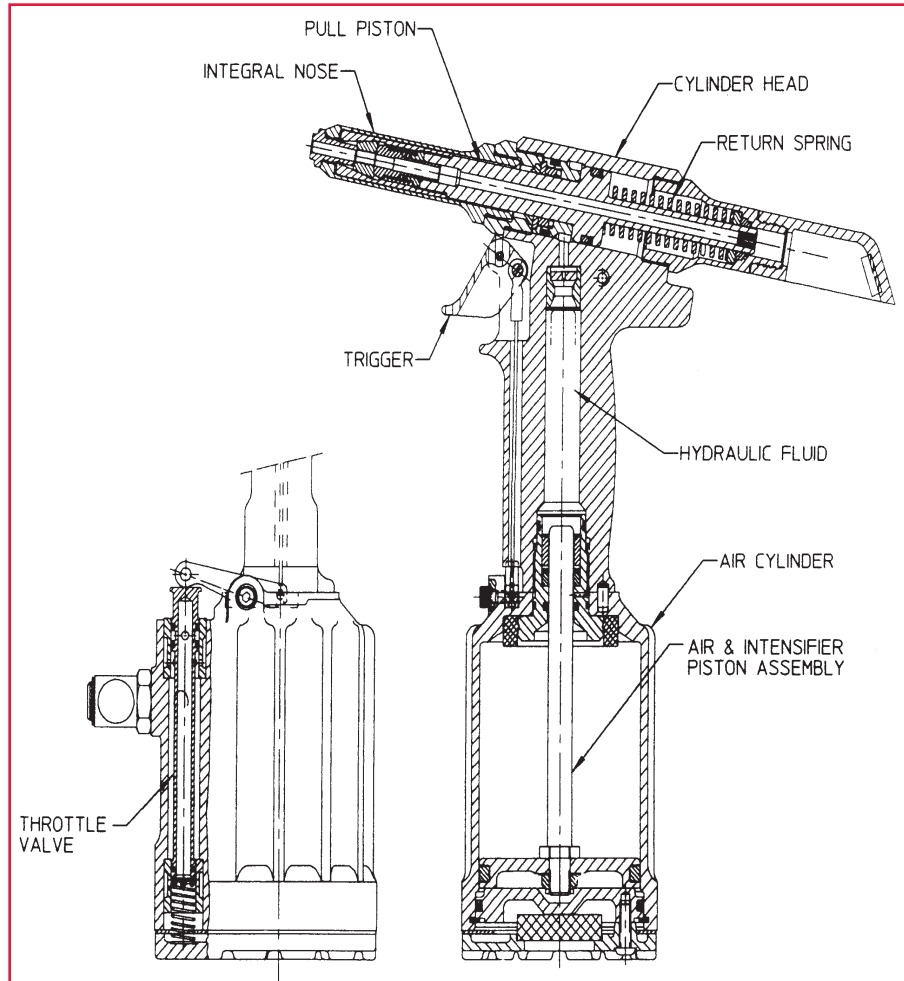
Principle of Operation

PULL STROKE:

When tool is connected to the air supply, the air pressure holds the throttle valve in the up (RETURN) position; air pressure is directed to the top of the air piston, keeping it down. 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 (through the muffler). As the hydraulic piston rod moves upward, a column of pressurized 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 (see above), 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 piston rod move downward, hydraulic pressure is reversed, and the pull piston is returned forward.



Specifications

STROKE: 0.683 in (1.73 cm)

WEIGHT: **2015:** 4.9 lbs (2.22 kg)

2015B & 2015V: 5.2 lbs (2.36 kg)

MAX AIR PRESSURE: 90 psi (6.2 bar)

MAX FLOW RATE: 4.3 scfm (121.76 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: 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.

DEXRON is a registered trademark of General Motors Corp.

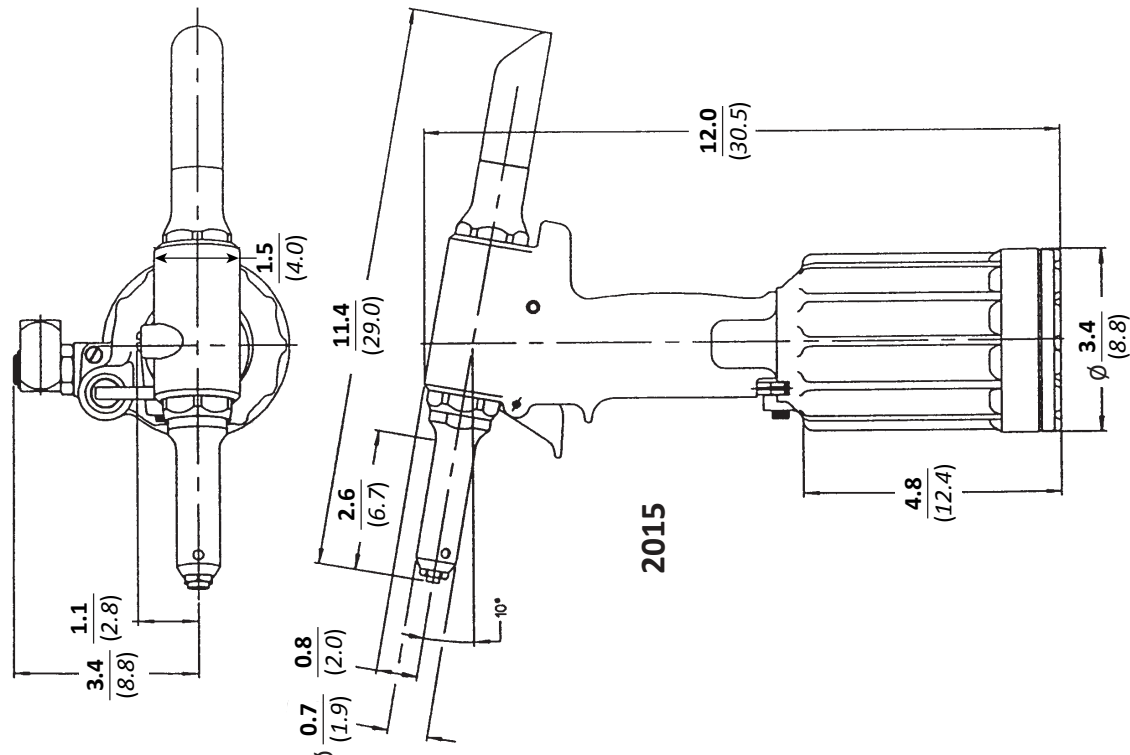
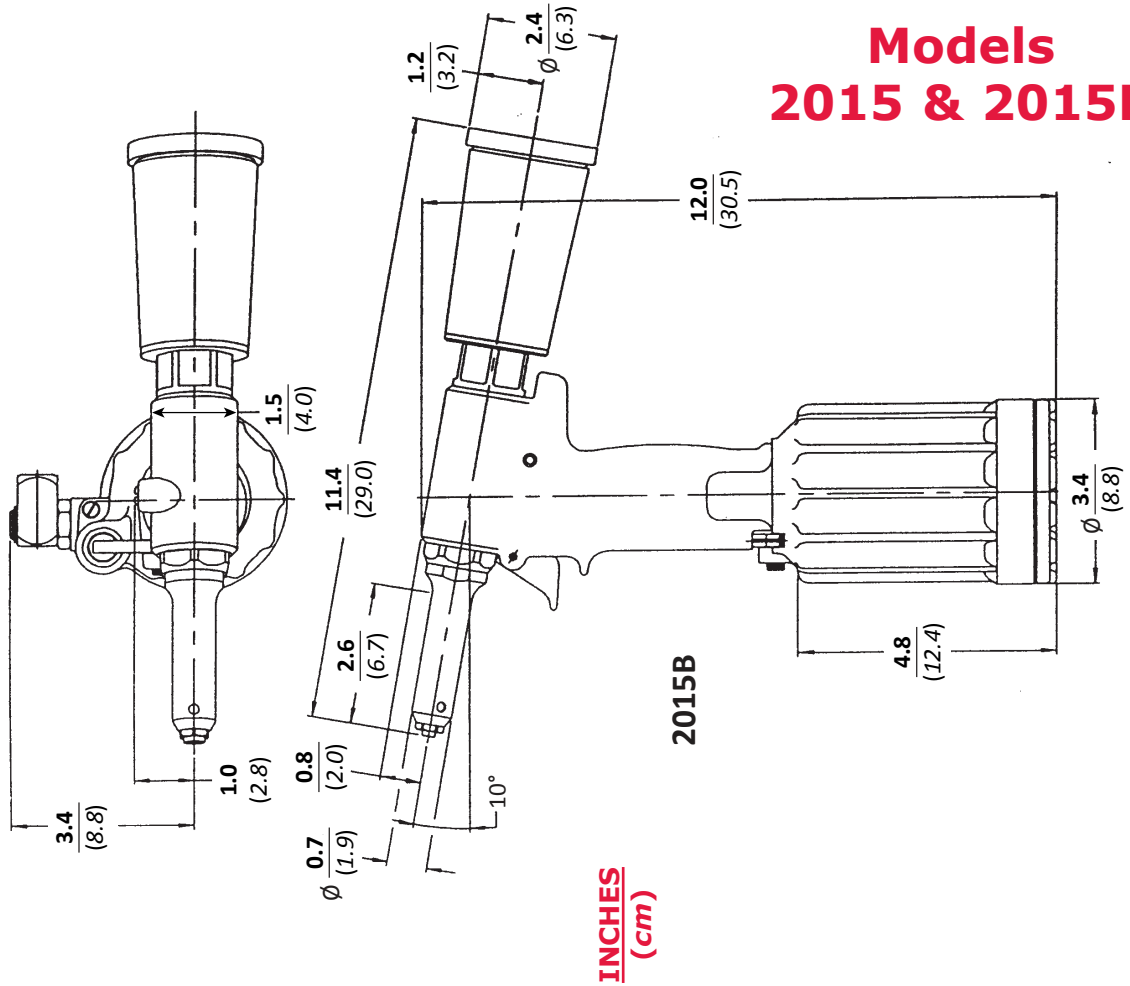
MERCON is a registered trademark of Ford Motor Corp.

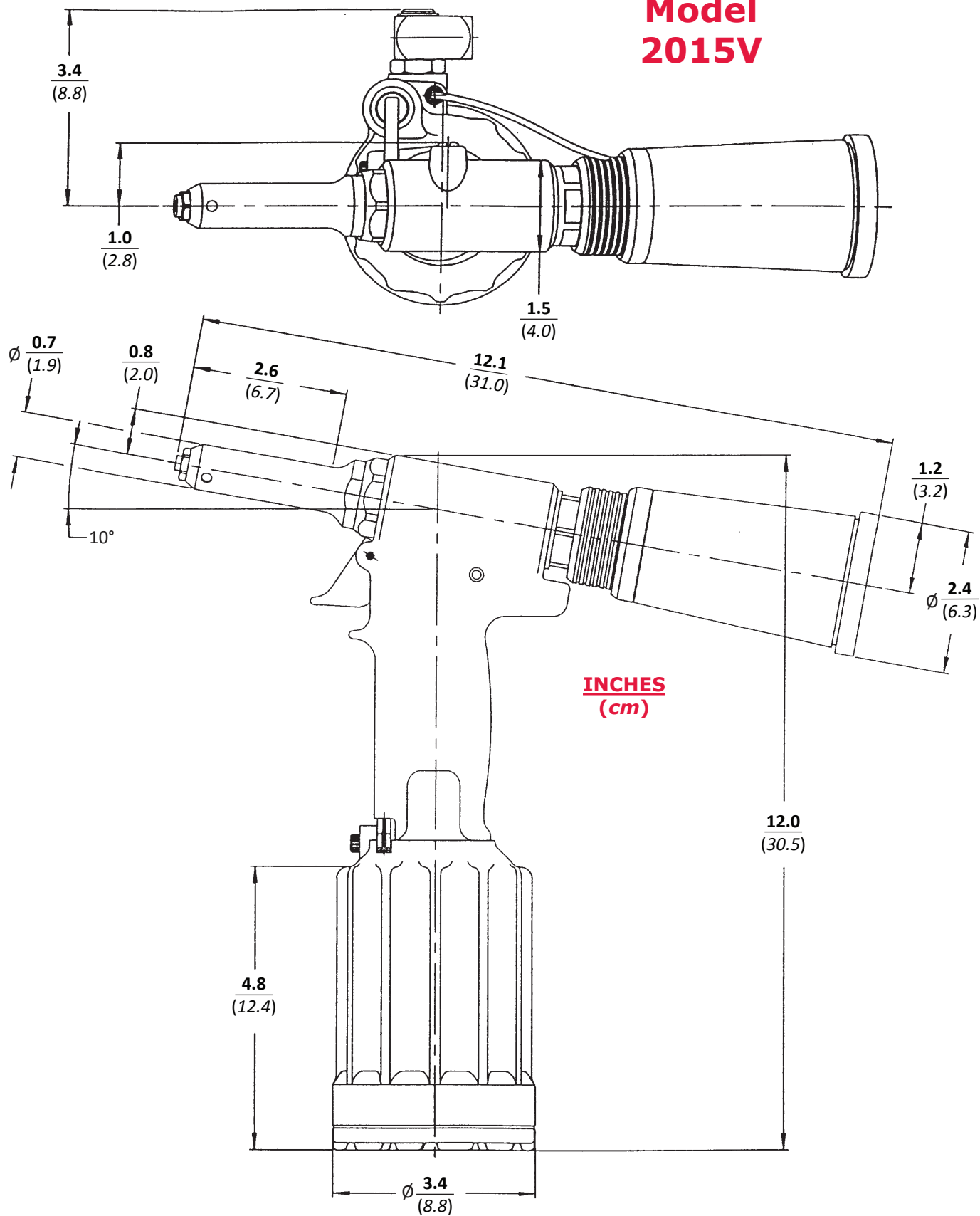
Quintolubric is a registered trademark of Quaker Chemical Corp.



SPECIFICATIONS (CONTINUED)

Models 2015 & 2015B



**SPECIFICATIONS (CONTINUED)****Model
2015V**



PREPARATION FOR USE



WARNING:

As applicable, do not use without deflectors or pintail bottles.

If deflectors are removed or damaged, separated pintails may eject forcibly from rear of tool. Unshielded eyes, especially, may be permanently injured. Other severe injuries can be caused by flying pintails. If there is any chance of a projectile-like ejection, always point rear of tool in a safe direction, or be sure there is some structure that will stop ejecting pintails.



WARNING:

To avoid pinch points, be sure there is adequate clearance for tool and operator's hands before proceeding. Tool moving toward structure may crush hands or fingers between tool and structure if clearance is limited.

The **2015** tools ship 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 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 are not available for purchase 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.



CAUTION: Do not use TEFLON® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions. Threadmate® is available in a 4oz. tube from Huck (P/N 508517).

2. Screw the quick-disconnect fitting into the air inlet connector.

3. Set the air pressure on the regulator to 90 psi (6.2 bar), and connect the air hose to the tool and the air inlet connector.
4. Press and release the trigger a few times to cycle the tool.
5. Disconnect the air hose from the tool, and remove the retaining nut. Select the proper nose assembly for the fastener being installed.
6. 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.

*Threadmate is a registered trademark of Parker Intangibles, LLC.
TEFLON is a registered trademark of E. I. du Pont de Nemours and Company.*



OPERATING INSTRUCTIONS

Read all of these instructions in order to ensure the safe operation of this equipment.

This section details installing Huck Blind Fasteners. Review all CAUTIONs and WARNINGs prior to installing these fasteners. If the tool malfunctions, consult the **TROUBLESHOOTING** section before attempting any repairs.



WARNINGS:

Inspect tools for damage and wear before using. Do not use if damaged or worn; serious personal injury may occur.

Pulling a pin without a collar, or with collar chamfer against workpiece, may result in the pin becoming a high-speed projectile when the pin grooves are stripped or the pintail breaks off. Serious personal injury may occur to anyone in the pin's "flight path." This includes pin ricochet.

Broken pintails eject from the deflector with speed and force. To reduce the risk of serious personal injury, be sure the pintail deflector is properly attached and directed away from all personnel.

Pintail bottles must always be used with models 2015B and 2015V. To reduce the risk of serious personal injury, do not operate tool with a damaged pintail deflector or pintail bottle; replace these parts if they are damaged.

NOTE: Reasonable care of tools by operators is an important factor in maintaining efficiency and reducing downtime.



CAUTION: Ensure the tool has been properly re-assembled prior to use.



WARNINGS:

- Wear approved eye and hearing protection.
- Ensure adequate clearance for operator's hands before installing fasteners.
- Be sure that pintail deflector is attached to the tool and directed away from all personnel.
- Do not pull on a pin without placing a fastener in a workpiece. Make sure that the collar chamfer is out, toward the tool. Pins eject with great velocity when pintails break off or teeth/grooves strip, which could cause serious injury.

TO INSTALL A HUCK BLIND FASTENER:



CAUTION:

- BOM blind fasteners will jam in the nose assembly if they are pulled when not in a workpiece.
- To avoid structural and tool damage, be sure there is sufficient clearance for the nose assembly at full stroke.
- Remove excess gap from between the sheets to permit proper fastener installation and prevent jaw damage. ALL jaw teeth must engage the pintail to avoid damaging the teeth.

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.



MAINTENANCE

GENERAL

The operating efficiency of the 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: This Huck tool 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.



CAUTION: Replace all seals, wipers, and rings when the tool is disassembled for any reason, and at regular intervals, depending on severity and duration of use.

- 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 (2015KIT or 2015VKIT)** 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 Parker Threadmate®, Loctite® 567, or Slic-Tite® (per manufacturer's instructions) to male pipe threads and quick-disconnect fittings.



CAUTION: Do not use TEFLON® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions. Threadmate® is available in a 4oz. tube from Huck (P/N 508517).

For supplementary information, see **TROUBLESHOOTING**, and the **DISASSEMBLY** and **ASSEMBLY** procedures in this manual.

DAILY

- Huck recommends using a filter-regulator-lubricator unit. If one 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 fluid 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.



CAUTION: Damaged jaw teeth, or debris packed between teeth, will result in fastener not being installed or being improperly installed.

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.


*Loctite is a registered trademark of Henkel Corporation, U.S.A.
LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
SUPER-O-LUBE is a registered trademark of Parker Hannifin Corp.
Threadmate is a registered trademark of Parker Intangibles, LLC.
E Z BREAK is a trademark of the LA-CO Industries Inc.*



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 4–7.

1. Disconnect the tool from the air source.




WARNING: Disconnect the air hose from the tool before:

- Removing or attaching the nose assembly
- Performing maintenance on the tool or nose assembly
- Replacing tool components

If the tool is connected to a pressurized cylinder, it could activate; serious injury could result.

2. Remove air hose from cylinder.
3. Unscrew the retaining nut and remove the nose assembly. (Follow the instructions on the *Nose Assembly Data Sheet*.)
4. Unscrew the bleed plug, including O-ring. Drain the fluid into a container. The tool can be cycled to clear more completely. Discard the fluid.
5. **Model 2015:** Pull the pintail deflector off end cap.
6. Remove the throttle arm pivot screw and lift out the throttle arm. Disconnect the ball end of the cable assembly from the throttle arm. Remove the spring from the throttle valve. (Figure 7)
7. Secure the tool upside-down in a soft-jaw vise; use a 1/8" hex key to remove three button-head screws from the muffler end cap.
8. Remove the muffler end cap and bottom exhaust gasket. Remove the muffler from the end cap. Tap the cylinder head down into the cylinder assembly and remove the retaining ring.
9. Screw the button-head screws into the cylinder head, and carefully pry on them to remove the cylinder head. (Figure 7)



CAUTION: Do NOT scratch, nick, or ding piston rod. This will cause permanent hydraulic leakage.

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

NOTE: Do NOT disassemble the air piston and rod assembly. If the locknut loosens, apply Loctite® 271-05; tighten to 25–30 ft.-lbs.

11. Remove bumper from gland assembly. Unscrew the gland with a 1-3/8" socket wrench and extension.
12. Remove the retaining ring from the gland. Pull out the spacer and Polyseal.


13. **Model 2013V:** (Figure 5) Press the ring on the tube connector downward to release the tube.

14. Lift cylinder assembly from the handle assembly.

15. Turn over the handle assembly and drain fluid into container. Discard the fluid.

16. Pull the throttle valve out of the cylinder assembly.


NOTE: The throttle valve bushings do not typically require service.



CAUTION: The bushings in the cylinder must be replaced only if new throttle valve seals cannot correct an air leak.

Send the unit to an authorized repair center to have the bushings replaced.

17. Press out lower and upper bushings. Use square-ended brass rods at least six inches in length. With a proper diameter rod, press out lower bushing, and *then* press out upper bushing using a larger rod.




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

18. Secure the handle in a vise, and continue with the "gland assembly removal" procedure.

Model 2015: (Figure 4) Remove the end cap with a 15/16" open-end wrench. Remove the spring, washer, and wiper seal.

REMOVING THE PISTON AND FRONT GLAND ASSEMBLIES (Figures 4 & 5)



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

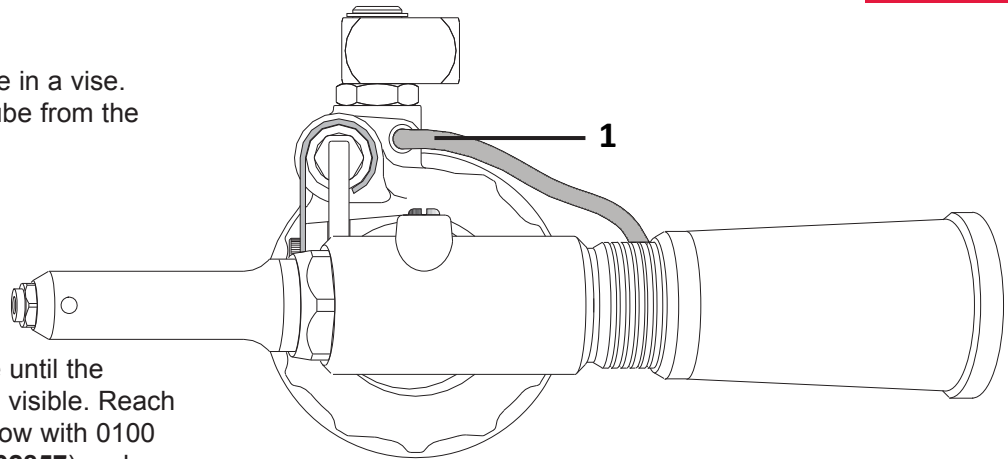
- a. Thread Polyseal Insertion Tool (P/N 121694-202) into the handle/head. Slide spacer (P/N 123112-3) onto the piston. Thread the Piston Assembly Tool (P/N 123111-4) onto the piston.
- b. Use a brass drift to push out the piston from the front. Allow clearance, with stand-off, as the piston leaves the tool.
- c. Remove the Piston Assembly Tool, spacer, and Polyseal Insertion Tool.
NOTE: Inspect the piston for wear, scoring, and damage. Replace if necessary.
- d. Unscrew the adapter (P/N 125132) with a wrench, and inspect all seals and parts; replace if necessary. (Figure 4)
- e. Remove the trigger cable assembly by driving out the pin with a punch. Remove the trigger pin to disconnect the cable from the trigger.

DISASSEMBLY (CONTINUED)

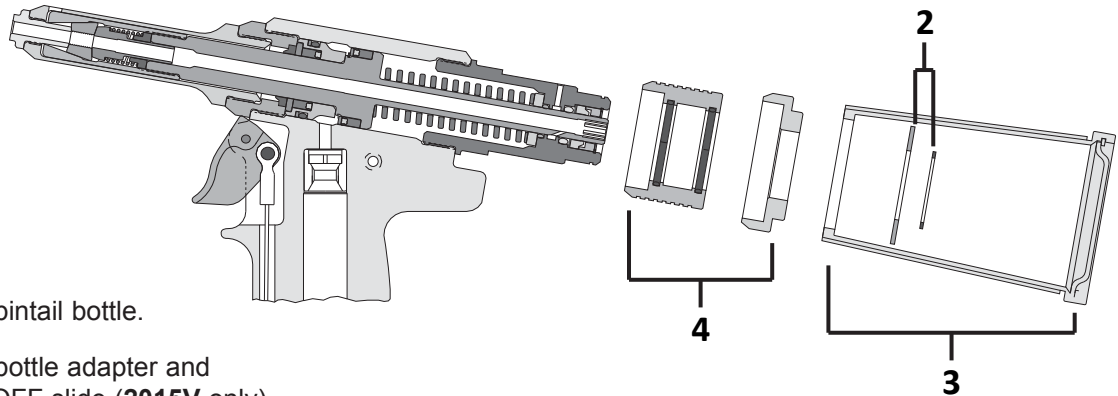
SPECIAL DISASSEMBLY INSTRUCTIONS FOR 2015B & 2015V

FIGURE 1

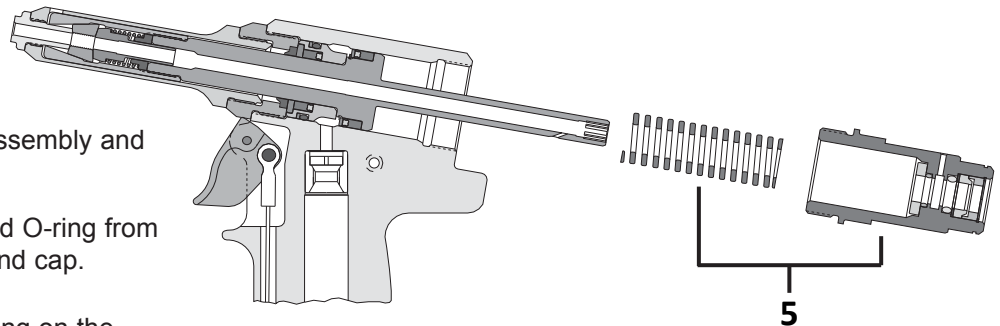
1. Secure the head/handle in a vise.
Remove the vacuum tube from the cylinder. (**2015V** only)



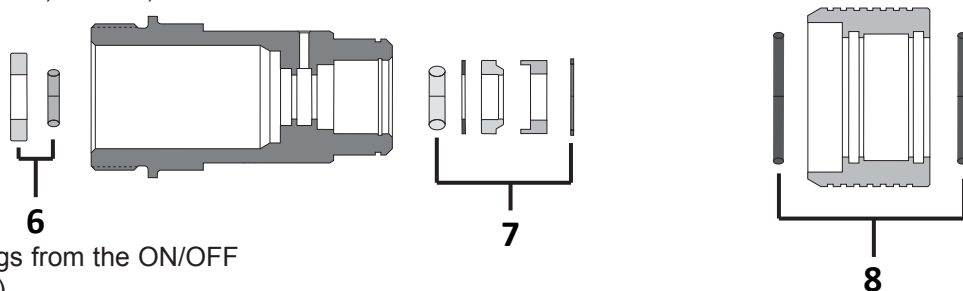
2. Rotate the pintail bottle until the retaining-ring holes are visible. Reach through the bottle window with 0100 TRUARC pliers (P/N **502857**) and remove the retaining ring and the washer.



3. Remove the pintail bottle.
4. Remove the bottle adapter and vacuum ON/OFF slide (**2015V** only).



5. Remove the end cap assembly and spring.
6. Remove the washer and O-ring from the spring side of the end cap.
7. Remove the retaining ring on the bottle side of the end cap. Remove the spacer, wiper seal, washer, and O-ring.



8. Remove the O-rings from the ON/OFF slide. (**2015V** only)



ASSEMBLY

This procedure is for the assembly of the tool. For component identification, see Figures 4–7.

BEFORE RE-ASSEMBLING THE TOOL:

- Clean components with mineral spirits or a similar solvent. Inspect for wear/damage and replace as necessary.



CAUTION: Always replace all seals, wipers and rings of disassembled components; these parts wear out over time. Replacement minimizes problems.

- Use the O-rings, Quad-rings, and Back-up rings from the appropriate Huck Spare Parts Service Kit (P/N **2015KIT** or **2015VKIT**). 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.

IF THE BUSHINGS WERE REMOVED FROM THE CYLINDER:

- Use an arbor press and apply Loctite® #609, (503377) on the bushings before pressing them into the cylinder. Place the chamfered end of the upper bushing in the top of the cylinder. Carefully press the bushing squarely into the cylinder. Repeat the procedure for the lower bushing.

TO RE-ASSEMBLE THE TOOL:

- Assemble the gland assembly. Replace the Polyseal, spacer, and retaining ring. Install the adapter into the cylinder handle/head.

NOTE: Note the orientation of the Polyseal in the Assembly Drawings in this manual.

- Thread the Polyseal Insertion Tool (P/N **121694-202**) into the handle assembly.
- Thread the Piston Assembly Tool (P/N **123111-4**), onto the piston assembly. Push the front gland assembly (except for wiper seal) onto the piston. Then slide the wiper seal onto the piston.
- Use a press, or a soft mallet and wood or brass drift, and gently push the assembled components into the handle assembly from the rear.
- Remove the Piston Assembly Tool and Polyseal Insertion Tool.
- Model 2015:** (Figure 4) Assemble the spring, spacer, rear wiper seal, and end cap into handle/head.

Models 2015B & 2015V: Reverse the instructions in **SPECIAL DISASSEMBLY INSTRUCTIONS FOR 2015B AND 2015V** in the **DISASSEMBLY** section.

- Position cable assembly in trigger slot and push

the dowel pin through holes in trigger and cable assembly. Position assembled trigger in handle and drive roll pin through holes in handle and trigger.

- Secure the handle assembly upside-down in a soft-jaw vise. Place the inverted cylinder assembly on the base of the handle. The cylinder pin maintains the orientation.
- 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.
- Push the bumper firmly over the gland. (The slots must face the bottom of the tool.)
- Clean the piston rod threads and apply Loctite® 243™. Carefully press the assembled air piston and piston rod into the cylinder just enough to allow installation of the cylinder head assembly.
- Secure the head upside-down in a vise. Push the cylinder head squarely into the cylinder, taking care not to damage O-ring. Install the retaining ring; align the screw holes with the muffler end cap. (Figure 6)
- Position muffler in the center of the cylinder head. Position the gasket on the cylinder assembly, taking care to note the direction of the lip in Figure 6.
- Carefully position the muffler end cap on the cylinder, making sure that it is properly positioned in the recess of the bottom plate. Secure the muffler end cap with the three button head screws using a 1/8" hex key.
- Place the tool upright on a level surface. Drop the spring into the throttle valve bore in the cylinder, and push the throttle valve assembly into the cylinder.
- Place the ball end of the cable assembly in the end of throttle arm. Slide throttle arm into slot on cylinder.
- Insert the pivot screw into the cylinder to retain the throttle arm.
- Screw anvil insert into anvil holder. (Figures 4 & 5)
- Assemble the collet with all necessary components, and screw the assembled collet onto the piston rod; tighten securely.
- Screw the anvil holder into the adapter.

The tool is now assembled and must be filled with hydraulic fluid prior to use. See the **FILL AND BLEED** section. **NOTE: Install the bleed plug and O-ring assembly after that process.**

*Loctite is a registered trademark of Henkel Corporation, U.S.A.
LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.
SUPER-O-LUBE is a registered trademark of Parker Hannifin Corp.*



FILL AND BLEED

This section documents the “bleed-&-fill” procedure. For component identification, see Figures 2–2B.

REQUIRED EQUIPMENT

- DEXRON® III or equivalent ATF (See SPECIFICATIONS for more information.)



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.

- Shop air-line with 90 psi (6.2 bar) max.
- Air regulator
- Fill Bottle Assembly (P/N **120337**, included with tool)
- Large flat-blade screwdriver
- Nose assembly or optional stall nut (P/N **125340**) and stop (P/N **125341**)

NOTE: The stall nut is used to load the tool during bleeding and for measuring tool stroke. See KITS & ACCESSORIES.

- 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 2)

120337 Fill Bottle Assy

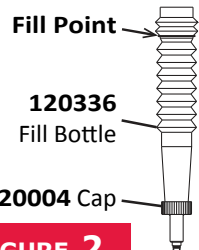


FIGURE 2

TO BLEED AND FILL THE TOOL:



CAUTION: Purge all fluid from the tool before refilling. The tool stroke will be diminished if the fluid is aerated.

1. Connect 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. (Figure 2A)



WARNING: Air pressure must be at 20–40 psi (1.4–2.8 bar) to prevent possible injury from high-pressure spray.

3. Connect tool to the air supply and stand it upright.
4. Hold the fill bottle at a right angle (90°) to the tool (Figure 2B); cycle the tool 20–30 times; watch for air bubbles escaping into the bottle.

NOTE: Rock the tool to free trapped air. Do not allow air to re-enter the tool. Always hold the fill bottle as shown in order to prevent drawing in air.



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 2A)

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.

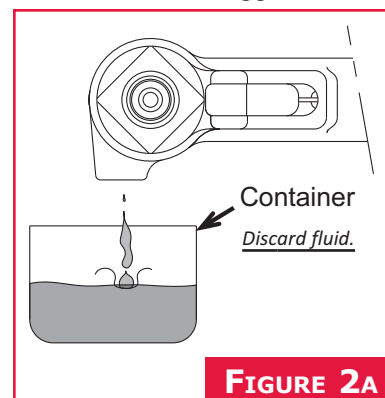


FIGURE 2A

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

If the fluid level drops, repeat 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 air pressure according to specifications.
- 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.

Repeat this process until stroke is at minimum requirement.

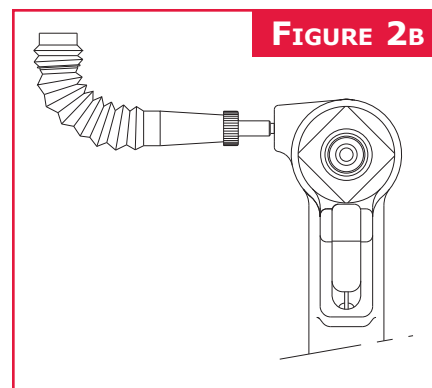


FIGURE 2B

continued...



FILL AND BLEED (CONTINUED)

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 fill port over suitable container. (Figure 2A)



WARNING: Air pressure must be at 20–40 psi (1.4–2.8 bar) to prevent possible injury from high-pressure spray.

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).



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 2A)

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 2B) 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.

Repeat this process until the tool stroke is at the recommended minimum length.



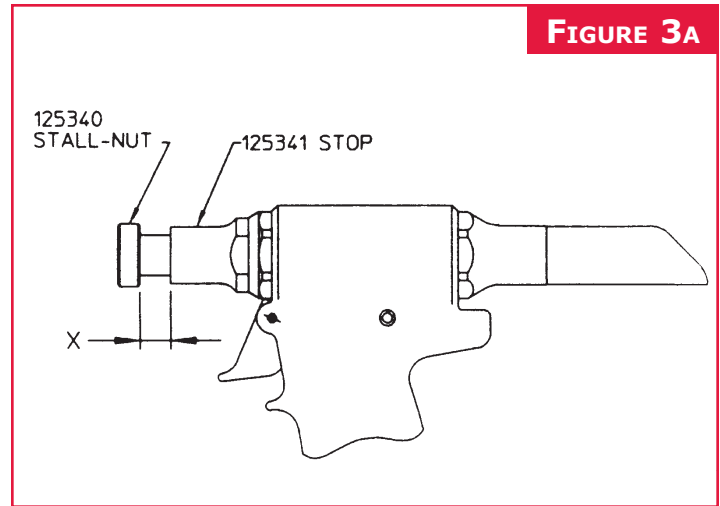
MEASURING TOOL STROKE

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

WITH 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 3A)
4. Measure the **X** dimension. (This is the *tool stroke*.)

If the stroke is less than 0.683 in (1.73 cm), follow the steps at the end of the **FILL AND BLEED** procedure.

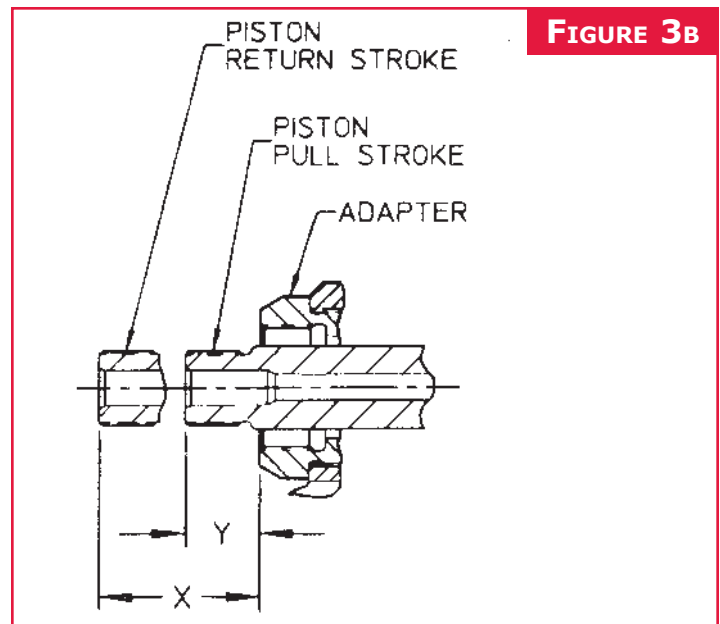


WITHOUT A STALL NUT

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 **X** dimension. (Figure 3B)
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 **Y** dimension. (Figure 3B)
4. Subtract **X** from **Y**.

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

If the stroke is less than 0.683 in (1.73 cm), follow the steps at the end of the **FILL AND BLEED** procedure.





HEAD/HANDLE 2015 & 2015B

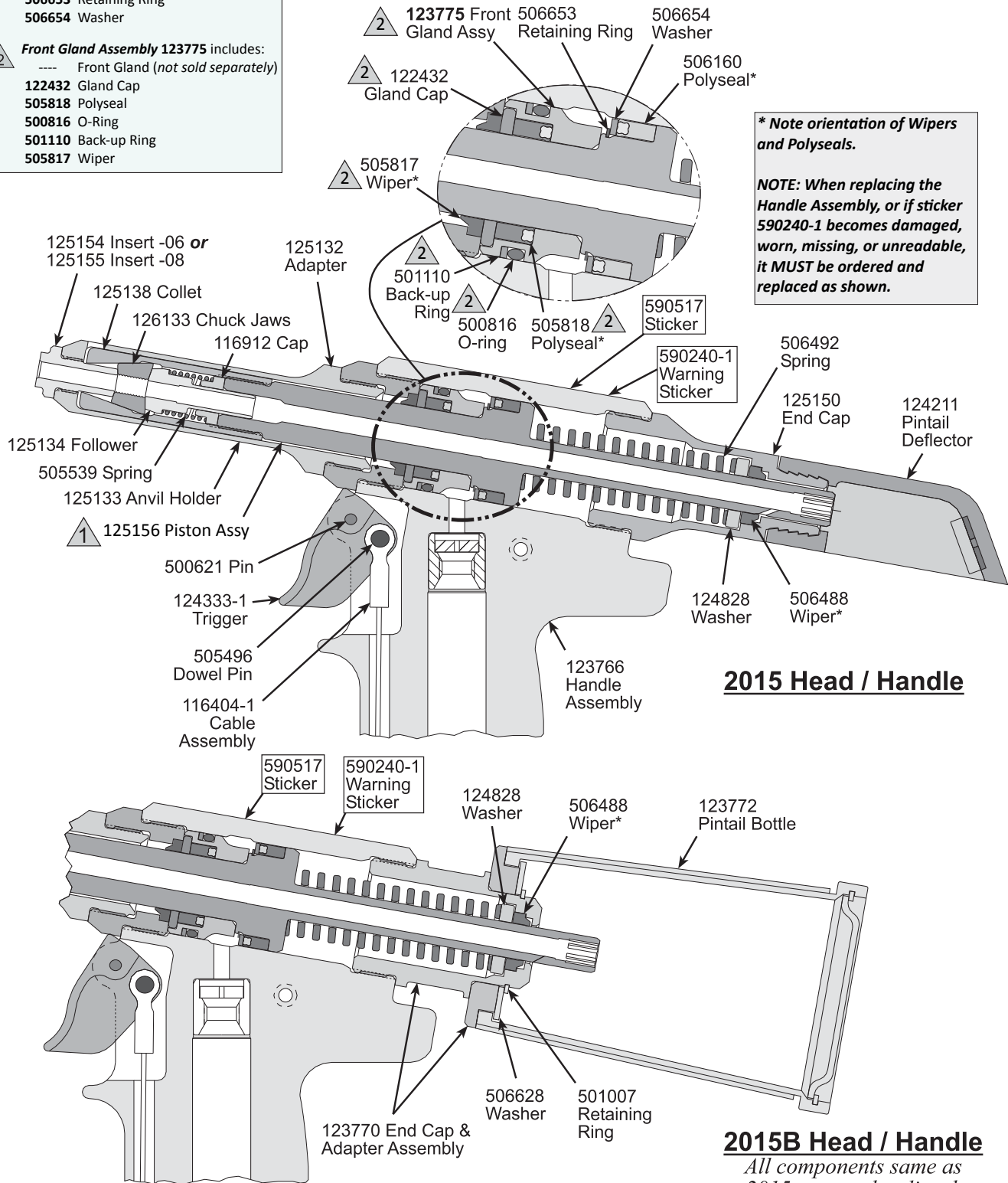
FIGURE 4
NOTES:

1 **Piston Assembly 125156** includes:
 ---- Piston (*not sold separately*)

506160 Polyseal
506653 Retaining Ring
506654 Washer

2 **Front Gland Assembly 123775** includes:
 ---- Front Gland (*not sold separately*)

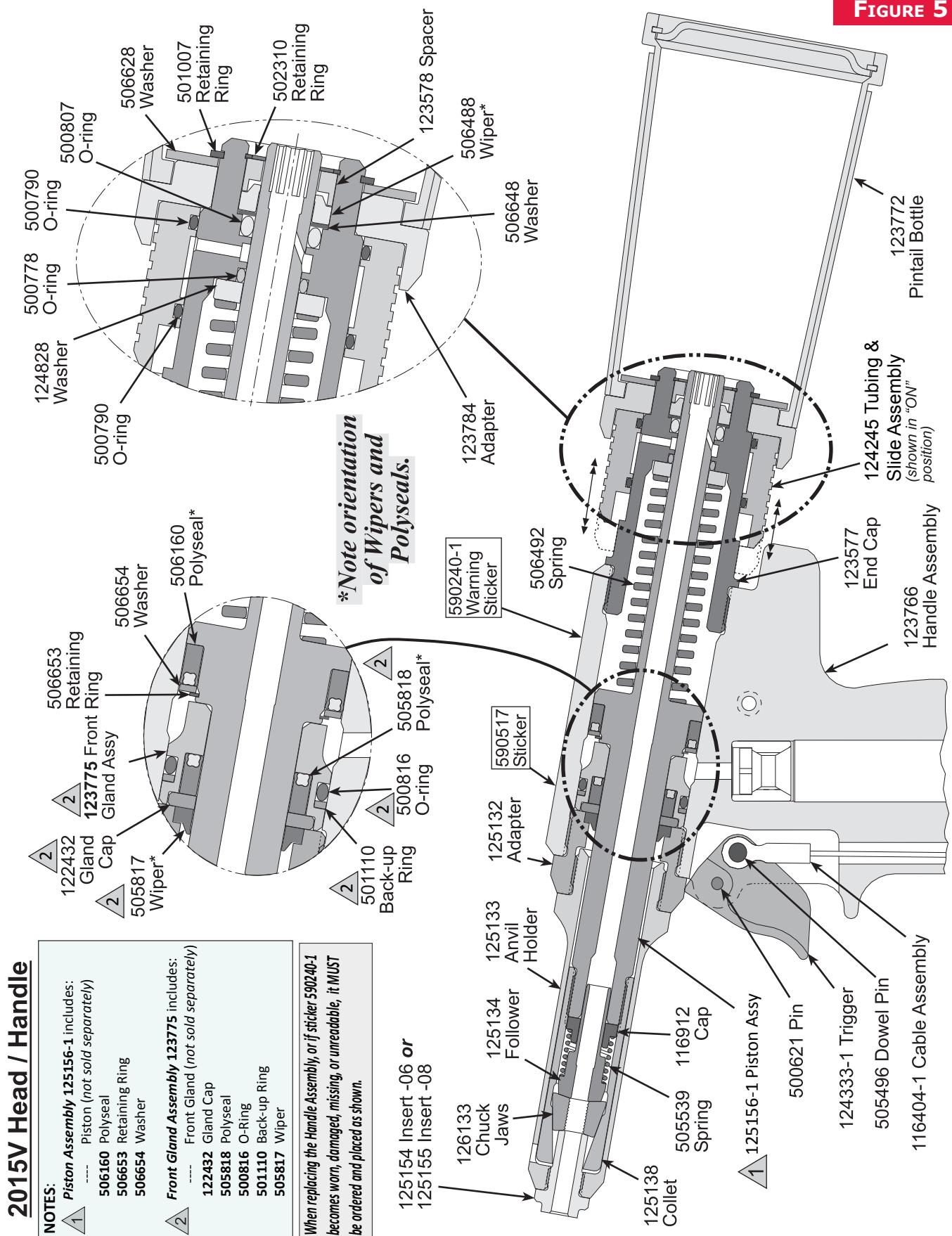
122432 Gland Cap
505818 Polyseal
500816 O-Ring
501110 Back-up Ring
505817 Wiper


2015 Head / Handle
2015B Head / Handle

All components same as 2015 excepted as listed.

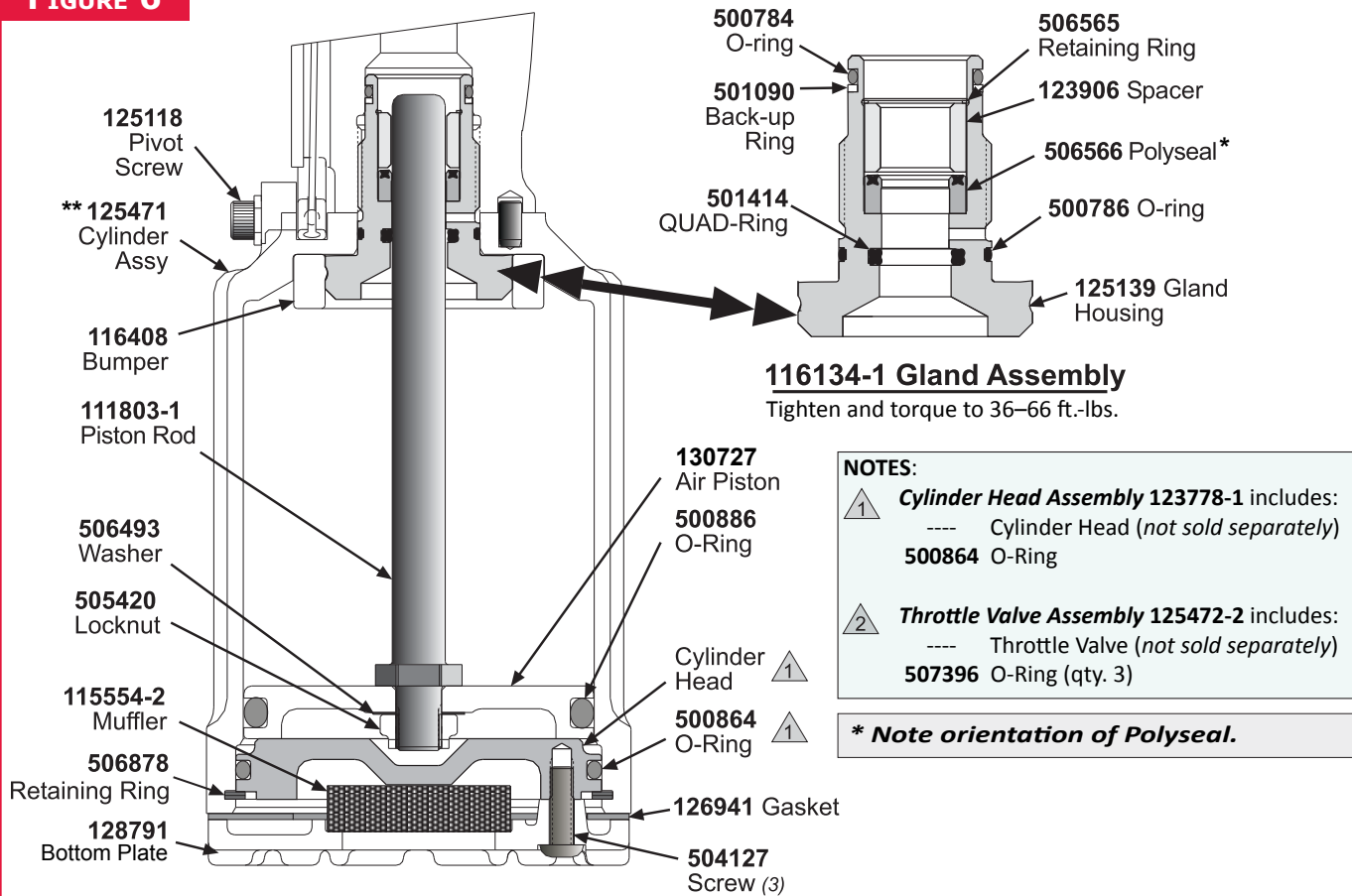
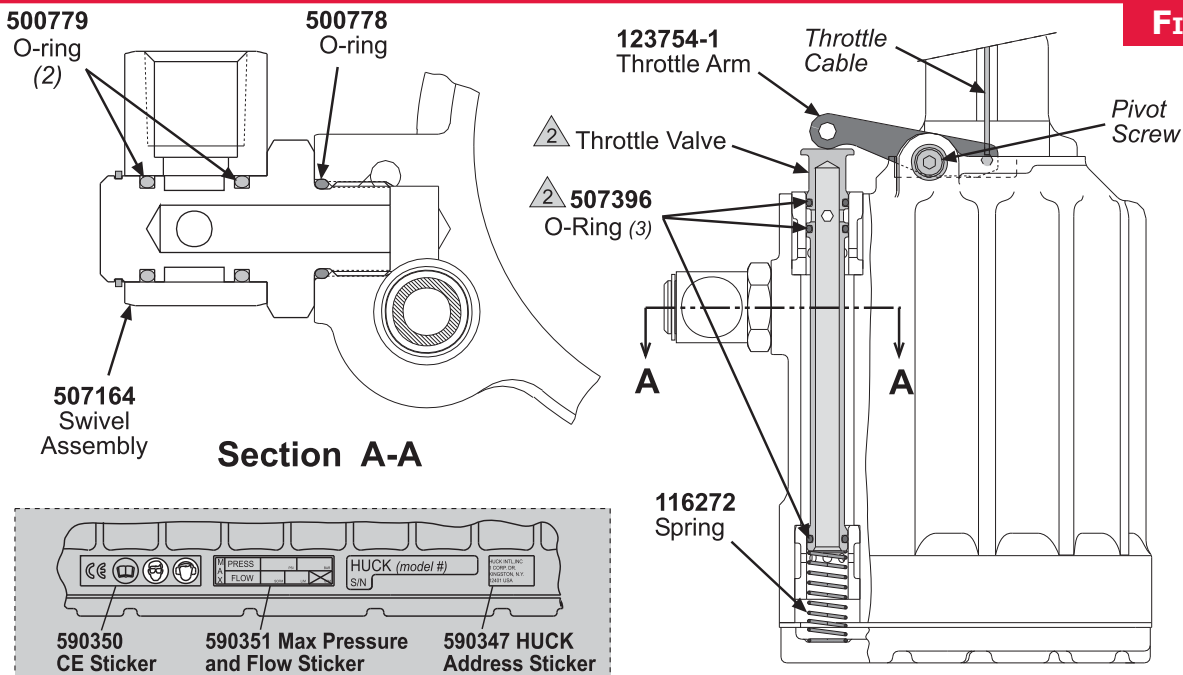


HEAD/HANDLE 2015V

FIGURE 5



TOOL BASE (ALL MODELS)

FIGURE 6

FIGURE 7


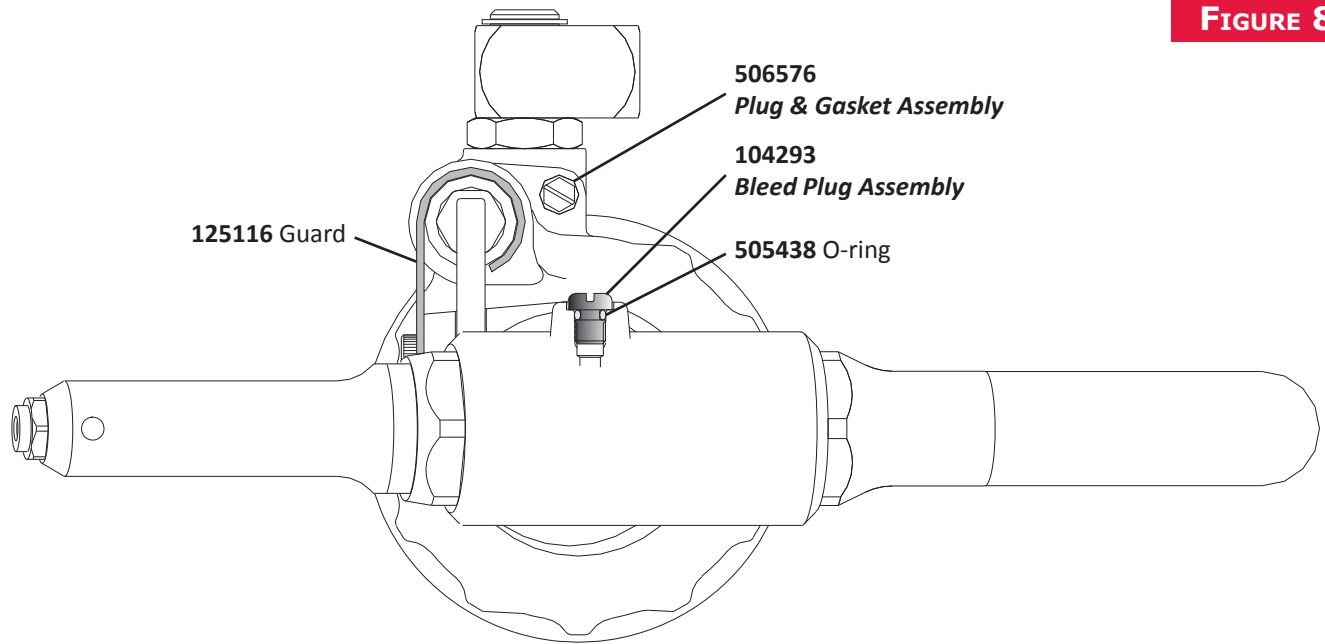
Detail of sticker locations

**** When replacing the Cylinder Assembly, these stickers MUST be ordered and placed as shown.**



TOOL HEAD, TOP VIEW

FIGURE 8

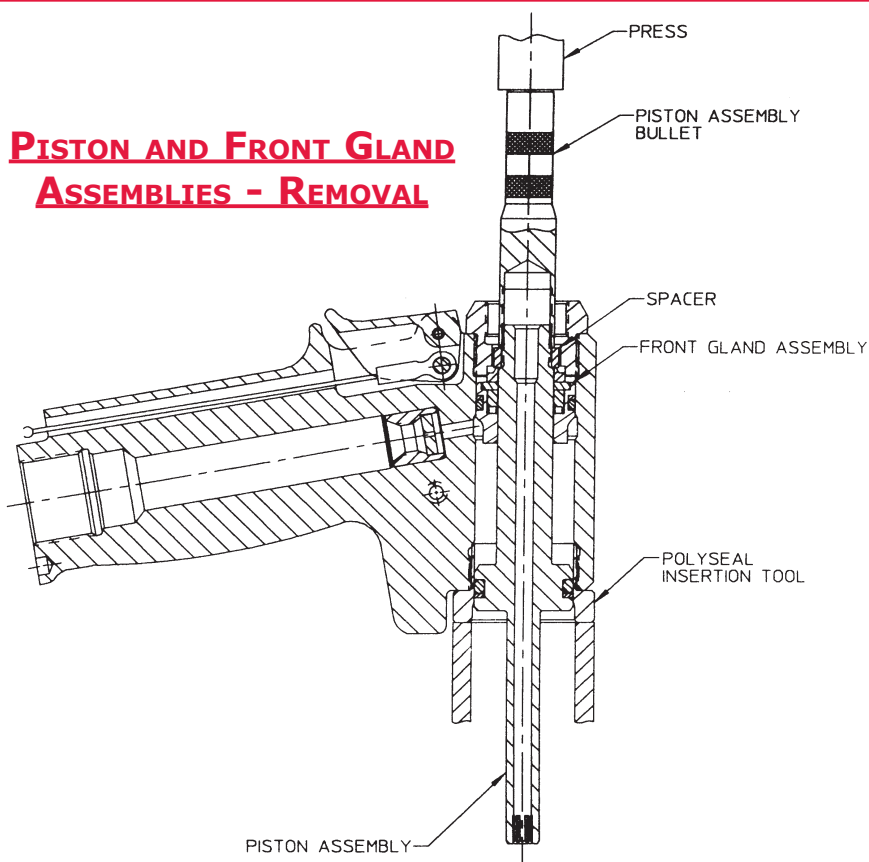




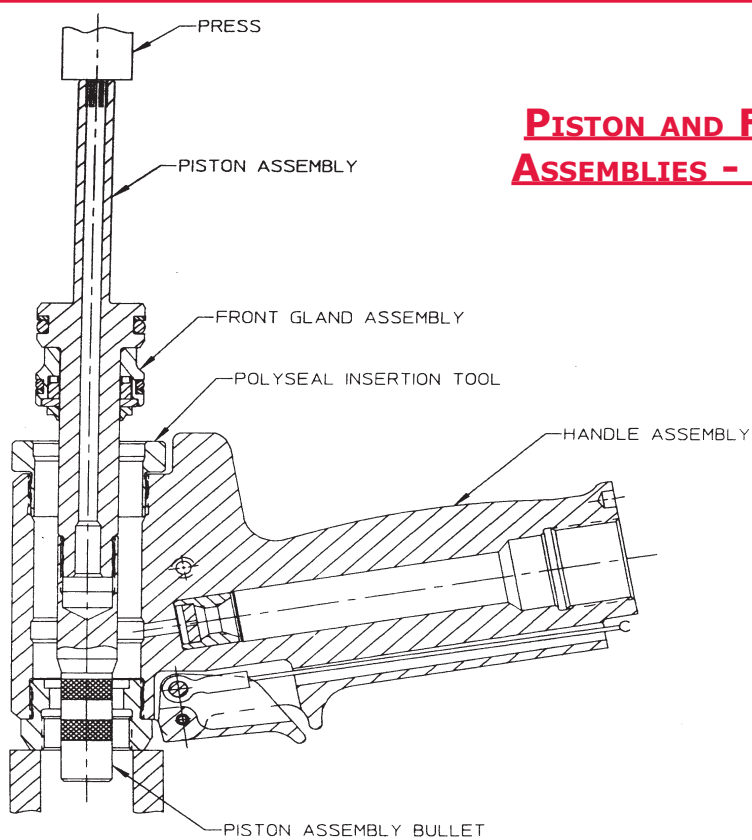
PISTON AND FRONT GLAND ASSEMBLIES

FIGURE 9

PISTON AND FRONT GLAND ASSEMBLIES - REMOVAL

**FIGURE 10**

PISTON AND FRONT GLAND ASSEMBLIES - INSTALLATION





TRUBLESHOOTING

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. **Hydraulic fluid exhausts with air or leaks at base of handle.**
 - a. Worn or damaged Polyseal or rings in gland assembly (P/N 116134-1). Inspect Polyseal and all rings. Replace if necessary.
4. **Hydraulic fluid leaks at cylinder head end cap.**
 - a. Worn or damaged rings in pull piston. Inspect all rings. Replace if necessary.
5. **Hydraulic fluid leaks at front of pull piston.**
 - a. Worn or damaged part in front gland. Inspect Polyseal, wiper, and O-ring. Replace if necessary.
6. **Pull piston will not return.**
 - a. Broken or weak return spring.
 - b. Collet backed off from piston.
7. **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

- **2015KIT** (2015 & 2015B)

- **2015VKIT**

ASSEMBLY TOOL KIT

- **123110-4**

- Polyseal Insertion Tool - 121694-202

- Piston Assembly Tool - 123111-4

- Spacer - 123112-3

ACCESSORIES 2015 SERIES

Stall Nut Assembly - **124090-2**

- Stall Nut - 125340

- Stop - 125341

Fill Bottle Assembly - **120337**

Pintail Bag (Figure 12) - **125652**

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**)

- (0400) TRUARC™ pliers (P/N **502866**), used on retaining ring (P/N **N5100-100**)

ACCESSORIES 2015V MODEL

-06 Insert - **125693**

Anvil Holder - **125694**

NOTE: Various anvil insert kits are also available, as shown in Figure 11, MODEL 2015 INSERT KITS.



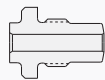
KITS & ACCESSORIES (CONTINUED)

FIGURE 11

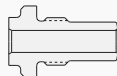
-03 to -08 Nail Type Product

**Included with
Original Tool
Purchase**

-06
125154



-08
125155



KIT 125273

-03
125151



-04
125152



-05
125153



125135 Pintail Tube Assembly

MODEL 2015 INSERT KITS

-06 & -08 MAGNATITE Product

-06 KIT 125366

125280
-06 Protruding
Head



125281
-06 Button
Head

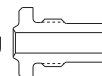


125154
-06 Flat Head



-08 KIT 125366-1

125282
-08 Protruding
Head



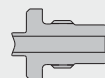
125155
-08 Flat Head



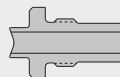
NOTE: *Pintail Tube (P/N 125135-1), supplied with the tool, must be used with all -06 products.*

-06 & -08 PEEL Rivets Kit 125367

-06 PEEL Rivet
125283



-08 PEEL Rivet
125284

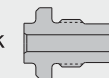


-06 MGL Product Kit 125365

-06 Truss Head
125279



-06 Countersunk
125154



**PINTAIL COLLECTION BAG
PICTURED ON 244BT TOOL**

FIGURE 12



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.



ARCONIC

Innovation, engineered.

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.

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Arconic Fastening Systems and Rings world-wide locations:

AMERICAS

Kingston Operations

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Kingston, NY 12401
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845-331-7300
FAX: 845-334-7333

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3724 East Columbia
Tucson, AZ 85714
800-234-4825
520-747-9898
FAX: 520-748-2142

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Carson, CA 90745
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310-830-8200
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FAX: 525-515-1776
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Australia 3168
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Toll Free: 008-335-030
FAX: 03-764-5510

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