ARCONIC

Innovation, engineered.

Instruction Manual

2600 series

Hydraulic Installation Tools

December 7, 2018
HK914

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 2600, 2620, 2624, 2630 family of hydraulic 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)

HUCK

Declared dual number noise emission values in accordance with ISO 4871
A weighted sound power level, LWA: **89** dB (reference 1 pW) Uncertainty, KWA: 3 dB
A weighted emission sound pressure level at the work station, LpA: **78** dB (reference 20 µPa) Uncertainty, KpA: 3 dB
C-weighted peak emission sound pressure level, LpC, peak: **119** 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:	**.40 m/s²**
Uncertainty, K:	**.02 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:

CE 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.

Continued on next page...

Safety Instructions (continued)

IV. REPETITIVE MOTION HAZARDS:

1. When using assembly power tool, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
2. When using tool, the operator should adopt a comfortable posture while maintaining a secure footing and avoid awkward or off balanced postures.
3. The operator should change posture during extended tasks to help avoid discomfort and fatigue.
4. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warnings should not be ignored. The operator should tell the employer and consult a qualified health professional.

V. ACCESSORIES HAZARDS:

1. Disconnect tool from energy supply before changing inserted tool or accessory.
2. Use only sizes and types of accessories and consumables that are recommended. Do not use other types or sizes of accessories or consumables.

VI. WORKPLACE HAZARDS:

1. Be aware of slippery surfaces caused by use of the tool and of trip hazards caused by the air line or hydraulic hose.
2. Proceed with caution while in unfamiliar surroundings; there could be hidden hazards such as electricity or other utility lines.
3. The assembly power tool is not intended for use in potentially explosive environments.
4. Tool is not insulated against contact with electrical power.
5. Ensure there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

VII. NOISE HAZARDS:

1. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems such as tinnitus, therefore risk assessment and the implementation of proper controls is essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpiece from 'ringing'.
3. Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations.
4. Operate and maintain tool as recommended in the instruction handbook to prevent an unnecessary increase in the noise level.
5. Select, maintain and replace the consumable / inserted tool as recommended to prevent an unnecessary increase in noise.
6. If the power tool has a silencer, always ensure that it is in place and in good working order when the tool is being operated.

VIII. VIBRATION HAZARDS:

1. Exposure to vibration can cause disabling damage to the nerves and blood supply to the hands and arms.
2. Wear warm clothing when working in cold conditions and keep hands warm and dry.
3. If numbness, tingling, pain or whitening of the skin in the fingers or hands, stop using the tool, tell your employer and consult a physician.
4. Support the weight of the tool in a stand, tensioner or balancer in order to have a lighter grip on the tool.

X. HYDRAULIC TOOL SAFETY INSTRUCTIONS:

WARNINGS:
Do not exceed maximum pull or return settings on tool.
Be sure all hose connections are tight. All tool hoses must be connected.

1. Carry out a daily check for damaged or worn hoses or hydraulic connections and replace if necessary.
2. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.
3. Ensure that couplings are clean and correctly engaged before operation.
4. Use only clean oil and filling equipment.
5. Power units require a free flow of air for cooling purposes and should therefore be positioned in a well ventilated area free from hazardous fumes.
6. Do not inspect or clean the tool while the hydraulic power source is connected. Accidental engagement of the tool can cause serious injury.
7. Be sure all hose connections are tight.
8. Wipe all couplers clean before connecting. Failure to do so can result in damage to the quick couplers and cause overheating.

Description

The Model 2600 is a lightweight and versatile hydraulic installation tool designed to use with a wide range of Huck blind fasteners and HuckBolt® fasteners. The tool's compact size allows it to fit into limited clearance applications, while its light weight provides for outstanding operator productivity. The standard tools are intended to be powered by a Huck Powerig® hydraulic power source. The A2600-series tools are intended to be powered by an air source. Nose assemblies are sold separately.

FASTENER COMPATIBILITY:

Magna-Grip®
C6L® & C120
BOM
HP8
HP10.9

AVAILABLE MODELS:

2600 ..... Standard tool with 2-foot hoses
2600-12..... Standard tool with 12-foot hoses
2600-16..... 1/2 inch piston I.D.
2600-16-3 ..... 1/2 inch piston I.D. with 3-foot hoses
2600-16-12..... 1/2 inch piston I.D. with 12-foot hoses
2600-16-30..... 1/2 inch piston I.D. with 30-foot hoses
2600-2125..... Long stroke tool without pass-through. 2-foot hoses

2600B..... Standard tool with pintail bottle, 2-foot hoses, and no deflector
2600B-12..... Standard tool with pintail bottle, 12-foot hoses, and no deflector

A2600 ..... Air-powered standard tool with 2-foot hoses
A2600-16..... Air-powered tool with 1/2 inch piston I.D, and 2-foot hoses
A2600-16-12..... Air-powered tool with 1/2 inch piston I.D, and 12-foot hoses
A2600-16-30..... Air-powered tool with 1/2 inch piston I.D, and 30-foot hoses
A2600-2125..... Air-powered long stroke tool without pass-through. 2-foot hoses

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Where the following trade names are used in this manual, please note:
DEXRON *is a registered trademark of General Motors Corporation.*
GLYD Ring *is a registered trademark of Trelleborg Sealing Solutions Germany GmbH*
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.*
MOLYKOTE *is a registered trademark of Dow Corning Corporation*
Never-Seez *is a registered trademark of Bostik, Inc.*
Quintolubric *is a registered trademark of Quaker Chemical Corp.*
Slic-tite *is a registered trademark of LA-CO Industries, Inc.*
Spirolox *is a registered trademark of Smalley Steel Ring Company*
Teflon *is a registered trademark of Chemours Company FC.*
Threadmate *is a registered trademark of Parker Intangibles LLC.*
TRUARC *is a trademark of TRUARC Co. LLC.*
Vibra-Tite *is a registered trademark of ND Industries, Inc. USA.*

Specifications

MAX OPERATING TEMP: 125° F (51.7° C)

MAX FLOW RATE: 2 gpm (7.5 l/m)

MAX PULL PRESSURE: 7400 psi (510 bar)

MAX RETURN PRESSURE: 3200 psi (220 bar)

PULL CAPACITY:
13,840 lbs @ 5700 psi; (61.56 kN @ 393 bar)

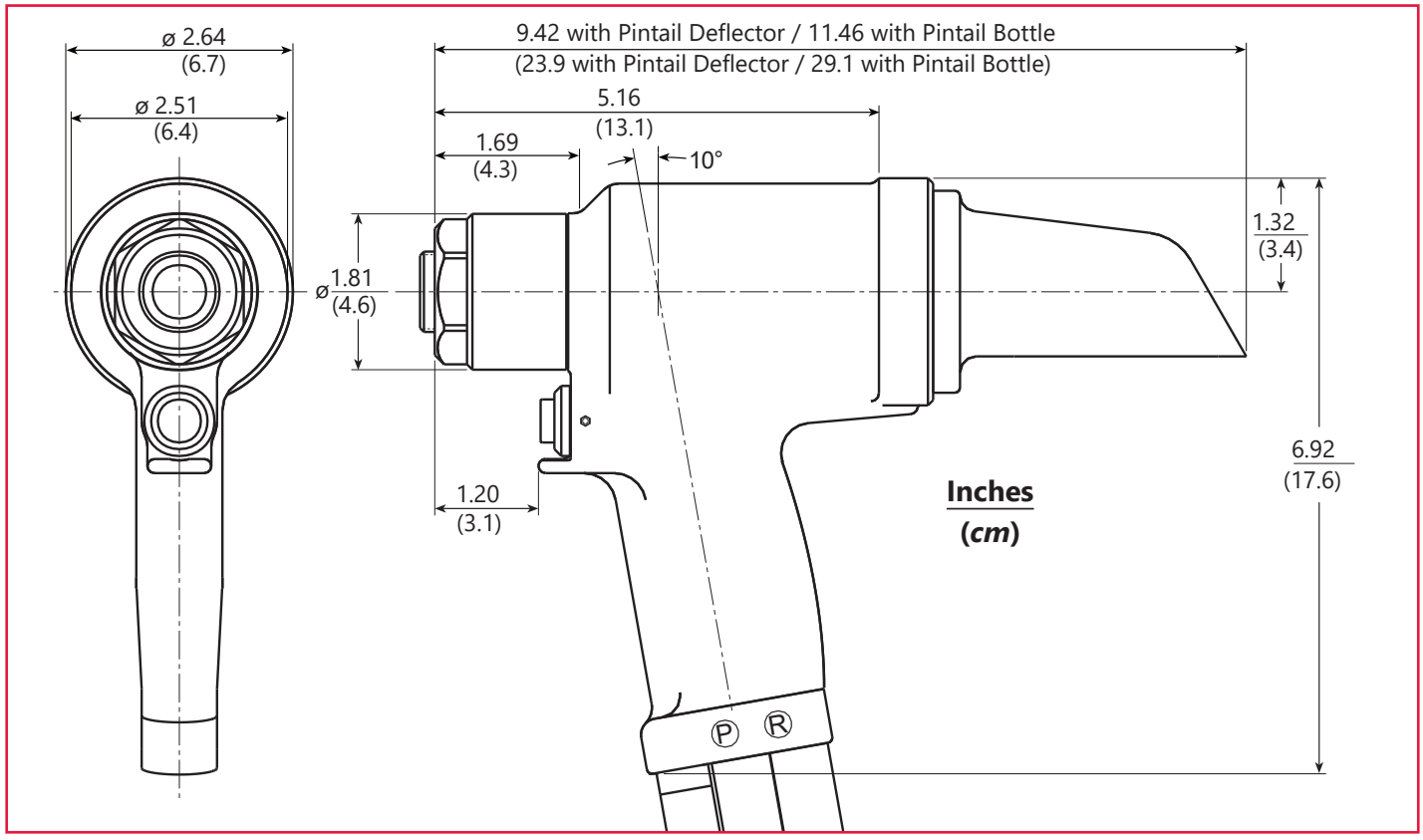
STROKE: 1.25 inches (3.18 cm)

WEIGHT: 7.3 lbs (3.31 kg)

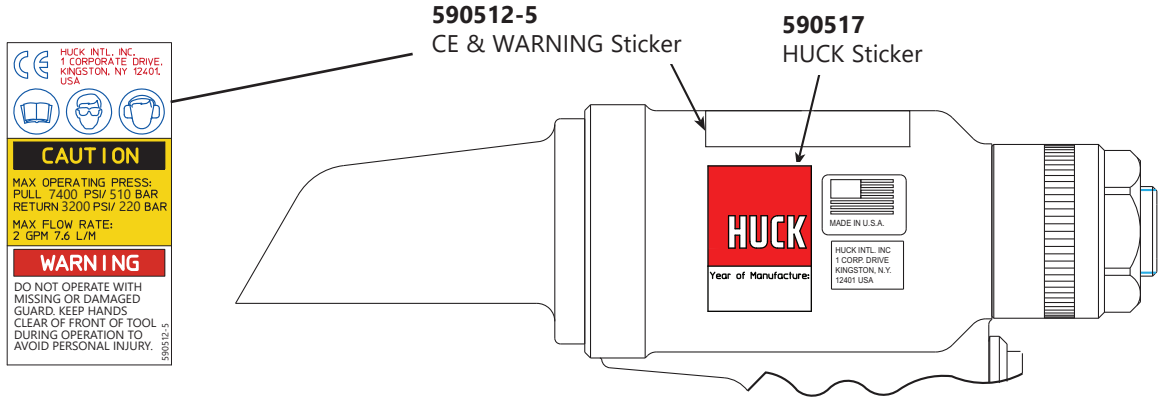
POWER SOURCE: Huck Powerig® hydraulic power source

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.



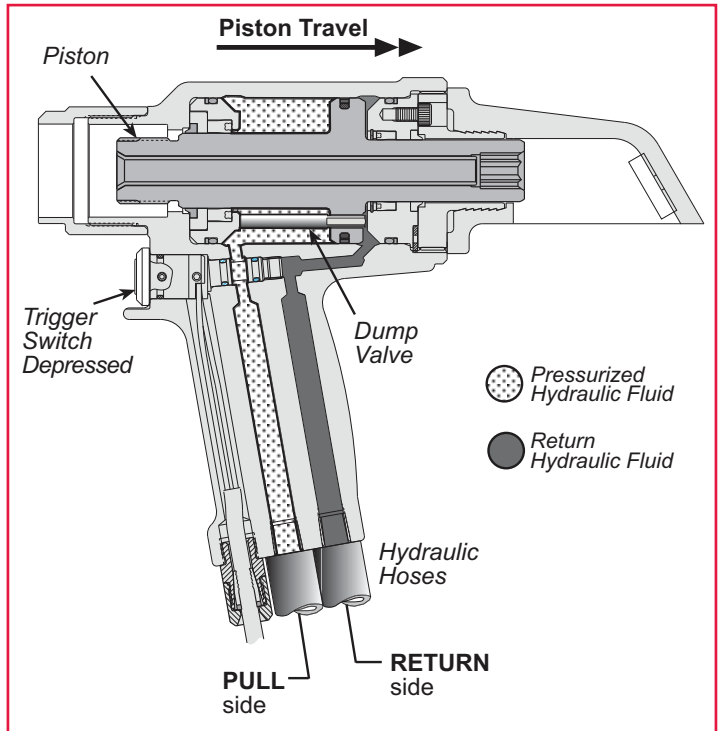
Sticker Locations: The 2600 series tools are labeled with stickers that contain safety and pressure-settings information. These stickers must remain on the tool and be legible. Any sticker that becomes damaged or worn, or has been removed from the tool, *or when replacing the cylinder*, **MUST** be ordered and placed in the location shown below.



Principle of Operation

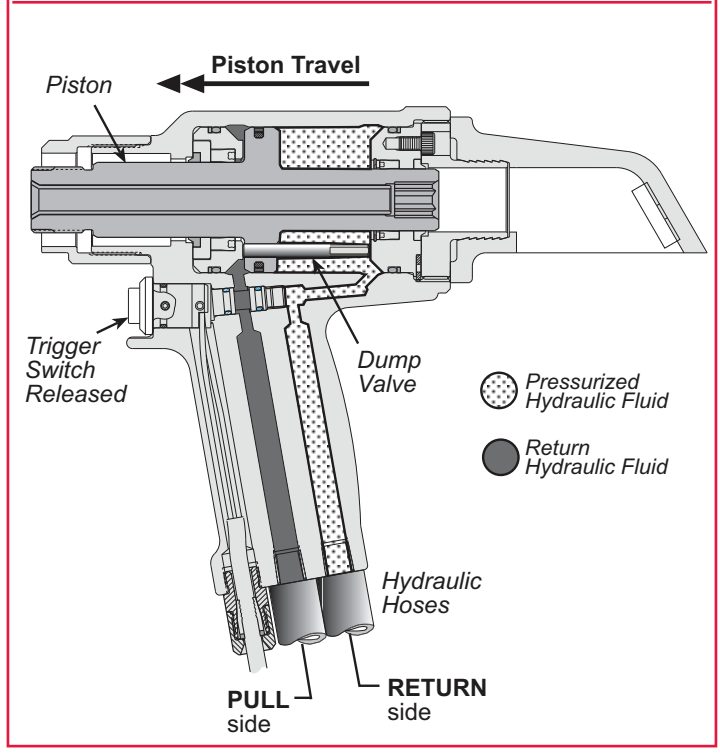
PULL CYCLE

When the Trigger Switch is pressed, pressurized hydraulic fluid moves through the PULL hose to the front side of the Piston. The piston and nose assembly collet move rearward, installing the fastener. When the piston reaches the end of the PULL stroke, it uncovers flats on the back of the Dump Valve. These flats provide a passage for the hydraulic fluid from the PULL side to the RETURN side of the piston; pressurized fluid is unloaded or "dumped" back to the Powerig tank.



RETURN CYCLE

When fastener installation is completed, the trigger is released. Hydraulic pressure is directed to the RETURN side of the piston, moving it and the collet forward. The fluid on the PULL side flows back through the PULL side hose to the Powerig tank. The tool and nose assembly are pushed off the swaged (installed) fastener. When the piston reaches the end of the RETURN stroke, pressure builds up causing the Powerig to shut off, completing the cycle.



Preparation for Use

WARNINGS:
Read entire manual before using tool.
A 30-minute training session with qualified personnel is recommended before using Huck equipment.
When operating Huck equipment, always wear approved eye and hearing protection.
Ensure adequate clearance for the operator's hands before proceeding.
Connect the tool's hydraulic hoses to the Powerig® Hydraulic Unit before connecting the tool's switch control cord to it. If not connected in this order, severe personal injury may occur.
Huck recommends that a Huck Powerig® be used to power Huck tools. (*Only use the Powerig as indicated in its instruction manual.*) Hydraulic power units that deliver high PULL and RETURN pressures—but which are NOT equipped with RELIEF VALVES—are specifically NOT RECOMMENDED and may be dangerous.
Set the PULL and RETURN pressures as specified in SPECIFICATIONS. Failure to properly set these pressures could result in serious personal injury.
Use Pressure Gauge T-124883CE as indicated in its instruction manual. Improper pressure settings may result in severe personal injury.

CAUTIONS:
Keep disconnected hoses, couplers, and hydraulic fluid away from dirty surfaces and free of foreign matter. Contaminated fluid can cause tool and Powerig valve failures.
Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads (per manufacturer's instructions) to prevent leaks and to ease assembly.

POWER SOURCE CONNECTIONS

Use a Huck Powerig® Hydraulic Unit, or equivalent, that has been suitably prepared for operation.
NOTE: Review all Warnings on this page.

1. Turn OFF the Powerig and disconnect its power supply. Connect the tool hoses to the Powerig.
2. Connect tool's control switch electrical cord to the Powerig.
3. Connect the Powerig to the power supply. Turn ON the Powerig. Press and hold the tool trigger for 30 seconds; then press the trigger a few times to cycle the tool and circulate the hydraulic fluid. Observe the action of the tool and check for leaks. Turn OFF the Powerig.
4. Disconnect the tool's control switch electrical cord from the Powerig. Disconnect the Powerig from its power supply. Select the correct nose assembly for the fastener to be installed (see Nose Assembly Selection Chart). Attach the nose assembly.
5. Re-connect the Powerig to the power supply. Reconnect the tool's trigger control system to the Powerig. Check the operation of nose assembly; install fasteners in a test plate of correct thickness with proper size holes. Inspect installed fasteners.

If fasteners do not pass inspection, see TROUBLESHOOTING to investigate possible causes.

Assembly of NPTF Threaded Components

AIR FITTINGS

1) Apply TEFLON® stick to male threads which do not have pre-applied sealant per manufacturer's recommendations. (Proceed to All Fittings step 2)

HYDRAULIC FITTINGS

1) Apply Threadmate™ to male and female threads which do not have pre-applied sealant per manufacturer's recommendations. (Proceed to All Fittings step 2)

ALL FITTINGS:

2) Tighten to finger-tight condition.
3) Wrench tighten to 2-3 turns past finger-tight condition.
4) Final thread engagement can be checked (optional) by measuring the dimension from the flange of male fitting to the end of the thread before assembly and subtracting the distance under the flange after assembly.

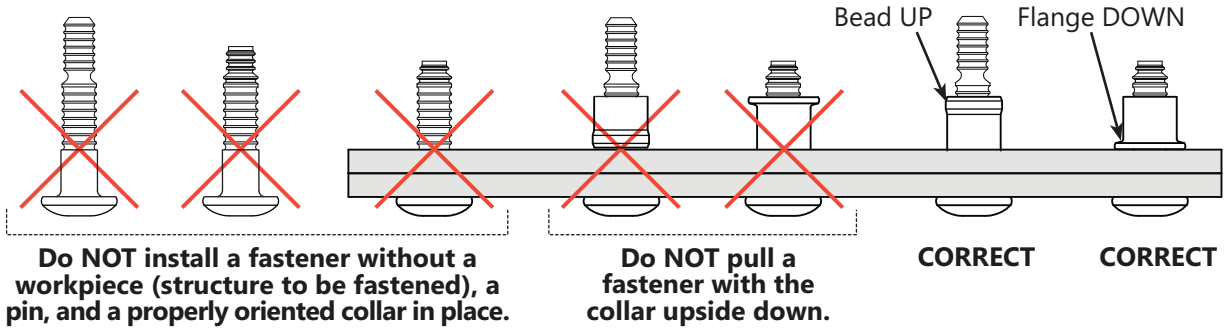
Thread Size	Final thread engagement at full make-up
1/8-27 NPTF	**.235 inch** *(.59 cm)*
1/4-18 NPTF	**.339 inch** *(.86 cm)*
3/8-18 NPTF	**.351 inch** *(.89 cm)*

Hydraulic Couplings

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

Operating Instructions

FOR SAFE OPERATION, THIS SECTION MUST BE READ AND UNDERSTOOD.



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

Do NOT pull a fastener with the collar upside down.

CORRECT **CORRECT**

WARNINGS:

To avoid severe personal injury, wear approved eye and ear protection.

Be sure of adequate clearance for operator's hands before proceeding with fastener installation.

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

Do NOT attempt to install a pin without a properly oriented collar in place.

The collar flange must be against work piece.

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

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

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

Only use compatible equipment with this tool.

CAUTIONS:

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

To avoid structural and tool damage, ensure sufficient clearance for the nose assembly at full stroke.

Do not abuse tool by dropping it, using it as a hammer, or otherwise causing unnecessary wear and tear.

Do not connect tool's hoses to each other or use hoses as a handle for carrying.

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

Review all CAUTIONs and WARNINGs prior to installing fasteners. If the tool malfunctions, consult the **Troubleshooting** section before attempting any repairs.

GENERAL

- Operators should receive training from qualified personnel.
- Do not bend tool to free if stuck.
- Tool should only be used to install fasteners. Never use as a jack/spreader or hammer.
- Reasonable care of tools by operators is an important factor in maintaining efficiency and reducing downtime.

TO INSTALL A HUCKBOLT® FASTENER:

1. Place a fastener in the workpiece and place the collar over the fastener. **NOTE**: ***If the collar has one tapered end, that end must face the tool; not the workpiece.***
2. Hold the fastener in the hole and push the nose assembly onto the fastener protruding through the collar until the nose anvil touches the collar. Hold the tool at a right-angle (90 degrees) to the work.
3. Move hands away from fastener and structure. Keep hands away from the front of the tool during operation; the tool anvil advances forward.
4. Press and hold the trigger until the collar is swaged and the pintail breaks. 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

CAUTIONS:
Consult the Material Safety Data Sheet (MSDS) before servicing tool.

Keep foreign matter out of the hydraulic system. Keep separated parts away from dirty work surfaces.

Dirt and debris in hydraulic fluid causes valve failures in tool and Powerig®.

Check the Assembly Drawings in this manual for the proper direction of the flats on the dump valve.
Always replace all seals, wipers, O-rings, and Back-up rings when the tool is disassembled for any reason.

Do NOT use Teflon® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions.

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

The operating efficiency of your tool is directly related to performance of the entire system, including the tool and nose assembly, hydraulic hoses, control trigger assembly, and the Powerig® Hydraulic Unit. Therefore, an effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

SYSTEM INSPECTION

- Inspect the tool daily. Check hoses, fittings, and couplings for leaks and damage. Clear air-lines of dirt and water.
- Service the tool in a clean, well-lighted area. Take special care to prevent contamination of pneumatic and hydraulic systems.
- Carefully handle all parts and components. Before reassembly, examine them for damage and wear; replace when necessary. Replace O-rings and Back-up rings when the tool is disassembled for any reason.
- Have available all necessary hand tools (standard and special); a half-inch brass drift and wood block; an arbor press; and a soft-jaw vise. Unsuitable hand tools could cause tool damage. See Kits & Accessories.
- Follow the disassembly and assembly procedures in this manual. If Huck recommended procedures are not followed, the tool could be damaged.
- Disassemble and assemble tool components in a straight line. Do NOT bend, twist, or apply undue force.
- Apply continuous steady pressure to disassemble a component. An arbor press provides steady pressure to press a component into or out of an assembly.
- Never force a component if it is misaligned. Reverse the procedure to correct misalignment and start over.

FLUID MAINTENANCE

See Specifications for fluid type. For fluid maintenance, refer to NAS 1638 class 9, ISO CODE 18/15, or SAE level 6. Dispose of fluid in accordance with local environmental regulations. Recycle steel, aluminum, and plastic parts in accordance with local lawful and safe practices.

STANDARD SEALANTS, LUBRICANTS

- Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads per manufacturer's instructions (to ease assembly and to prevent leaks).
- Smear LUBRIPLATE® 130-AA or SUPER-O-LUBE® on rings and mating parts to ease assembly and to prevent nicking/pinching rings on rough/tight spots.

PREVENTIVE MAINTENANCE

Huck recommends that you:

- Inspect the tool and nose daily for damage and wear. Inspect the tool before each use for leaks.
- Verify that hoses, fittings, and trigger connections are secure and free of leaks.
- Inspect hydraulic hoses for signs of damage. Replace if necessary.
- Inspect the tool, hoses, and Powerig during operation to detect abnormal heating, leaks, or vibration.

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

POWERIG MAINTENANCE

Maintenance instructions and repair procedures are in the appropriate Powerig Instruction Manual.

TOOL MAINTENANCE

Whenever disassembled, and at regular intervals, depending on use, replace all O-rings and Back-up rings. Tool-specific Spare Parts Service Kits should be kept on hand. Inspect cylinder bore, piston, piston rod, and unloading valve for scored surfaces, excessive wear, and damage; replace as necessary.

NOSE ASSEMBLY MAINTENANCE

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

For additional information, see the appropriate Nose Assembly Data Sheet.

SPARE PARTS SERVICE KITS

Spare Parts Service Kits contain perishable parts (O-rings, Back-up rings, and other standard items) for your tool (see Kits & Accessories). For convenience, and as experience indicates, keep extra kits and tool parts on hand. As an alternative, you can obtain O-rings and Back-up rings from any regular retailer of these items.

Disassembly Procedure

This procedure is for complete disassembly of the tool. Disassemble **only** those components necessary to replace damaged rings and worn or damaged components. Always replace seals, wipers, O-rings, and Back-up rings of disassembled components. Always use a soft-jaw vise to avoid damaging the tool.

WARNING: Disconnect the tool control trigger system from the Powerig® hydraulic power source before disconnecting the hydraulic hoses from it. If not disconnected in this order, serious personal injury may occur.

TO DISASSEMBLE THE TOOL:

1. Disconnect the tool's electrical or air connector from the Powerig, and then uncouple the hydraulic hoses.
2. Remove the nose assembly from the tool.
3. Unscrew both couplers (nipple & body) from the hoses, and drain the hoses into a container.
4. Push rearward on the piston until the remaining hydraulic fluid is drained into a container. Discard the fluid. **NOTE**: ***Do NOT remove the hydraulic hoses from the tool unless replacing them. To access the hose fittings, slide back the plastic shrouds.***
5. **NOTE**: ***Complete step 5 only if the switch, wire, or connector is to be repaired.*** Remove the retaining nut and locking ferrule from the strain relief. Loosen the setscrew and remove the switch. Loosen and remove the two wires from the switch. Remove the cord from the tool. Disassemble the electrical connector.
6. Remove the Pintail Deflector/Bottle by simultaneously twisting and pulling.
7. Remove the socket-head screw from barbed retainer, or piston guard with back cap (2600B); then insert two 5/16" pins in opposite holes in the rear of barbed retainer/back cap, and unscrew the retainer/back cap from the rear gland.
8. Slide the Spacer over the threaded end of the piston. Screw the Piston Assembly Tool onto the piston. (Figure 1) Press the piston, the front gland, and the rear gland out of the cylinder. Place the hose ends in a container to catch fluid that is forced out by the piston.
9. Use a small, dull pointed "pick" to remove all seals, wipers, O-rings, and Back-up rings from the components. Clean the parts and examine them for wear and defects.
10. Remove the Piston Assembly Tool and the spacer. (Figure 1)
11. Slide the Front Gland Assembly off the piston and remove the front wiper, front wiper housing, Back-up ring, O-ring, and Polyseal. (Figure 2)
12. Remove the GLYD Ring from the piston. (Figure 2)

The tool has been properly disassembled. Store all *re-usable* parts (screws and disassembled components) in a clean, dry area.

Figure 1

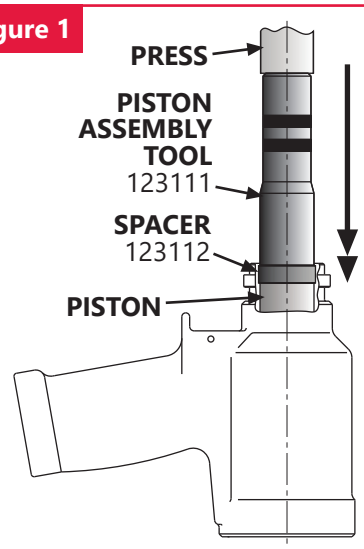
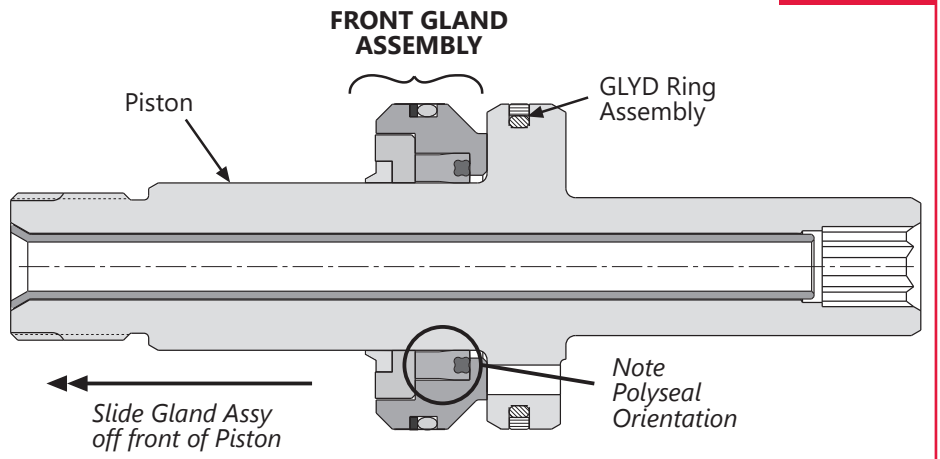


Figure 2



Assembly Procedure

WARNING: Do not omit any seals during servicing or re-assembly; leaks will result and serious personal injury can occur.

CAUTIONS:
When re-assembling the tool, always replace damaged and defective parts, and all seals, wipers, and rings of sub-assemblies.

Do NOT use Teflon® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions.

This section details the re-assembly of the tool. For component identification, see Components Drawings.

BEFORE RE-ASSEMBLING THE TOOL:

Inspect components for scoring, excessive wear, and damage; replace as necessary. Clean components in mineral spirits or other solvent compatible with O-ring seals. Clean O-ring grooves.

Replace all O-rings, Quad-rings, and Back-up rings. See Assembly Drawings for guidance on positioning these rings. Take care not to damage rings. Use the rings that are supplied in Spare Parts Service Kit **2600KIT**. Smear LUBRIPLATE® 130-AA or SUPER-O-LUBE® on rings and mating parts to ease assembly.

Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads (per manufacturer's instructions) to prevent leaks and ease assembly.

TO RE-ASSEMBLE THE TOOL:

1. Install the GLYD Ring Assembly on the piston. Place the special O-ring in the groove, and place the GLYD Ring on top of it. Before installing the ring, roll the GLYD Ring's diameter to a diameter smaller than the piston so that the ring stays in place during piston installation. (Figure 3)
2. Thread the Piston Assembly Tool—but NOT the spacer—onto the piston. (Figure 3)
3. Push the front wiper housing into the front gland. Carefully press the Polyseal into the front gland, taking care NOT to pinch the inner ring. Lubricate the inside diameter of the Polyseal and the outside diameter of the piston. Hold the wiper housing in place and guide the front gland/Polyseal onto the piston.

CAUTION: Be sure that the seal does not hang up on the edge of the piston chamfer.

4. Press the front wiper into the groove on the wiper housing.
5. Install the O-ring and Back-up ring on the front gland assembly. (See Figure 2)
6. Thread the GLYD Ring Insertion Tool (Figure 4) into back of the cylinder to prevent damage to the GLYD Ring Assembly.
7. Use a press to carefully push the piston and front gland assembly into the back of the cylinder. (Figure 4)
8. Remove the Piston Assembly Tool and the GLYD Ring Insertion Tool.
9. From the rear of the cylinder, install the dump valve with four flats facing the rear of the tool. (Figure 6)

continued

Figure 3

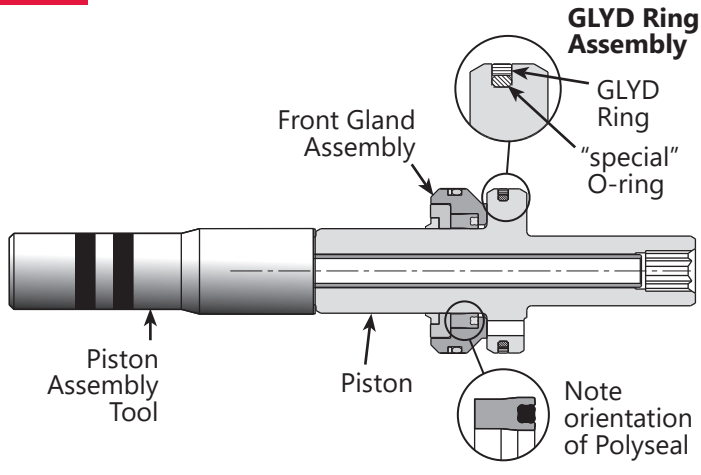
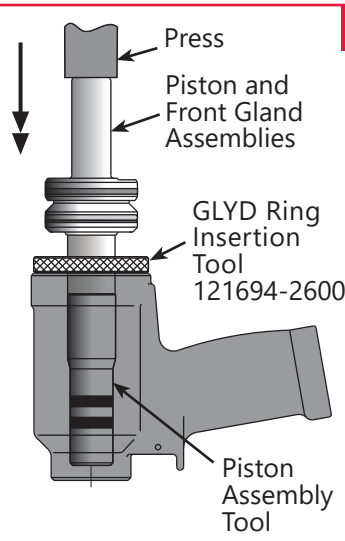


Figure 4



Assembly Instructions (continued)

10. Install the O-ring, Back-up ring, Polyseal, spacer, and retaining ring in the rear gland assembly. (Figure 5)
11. Lubricate the inside of the assembled rear gland assembly, and press into the cylinder.
12. Press the wiper into the groove in the rear gland assembly.
13. Align the assembly recess in the rear gland with the groove in the cylinder, and install the locking disc.
14. Screw the barbed retainer, or piston guard with back cap (2600B) into the cylinder until it bottoms out. Back out the retainer (or guard/back cap) to the first visible threaded hole in the rear gland. Insert the socket-head screw and tighten to 40 (+/-3) in-lbs; then install pintail deflector/bottle.
15. If the hydraulic hoses were removed, apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to the threads; attach the hoses to the handle, and then slide the shrouds over the fittings.

CAUTION: Do NOT use Teflon® tape on pipe threads. Tape can shred and break free into fluid lines, resulting in malfunctions.

16. If removed, reinstall the electrical connector: assemble the control cord to the male connector. Screw the strain relief grommet into the handle. Push the cord through the grommet. Attach the cord to the trigger switch. Press the switch into the handle and tighten the setscrew against the switch. Pull the excess cord down through the handle and strain relief grommet. Tighten the grommet.

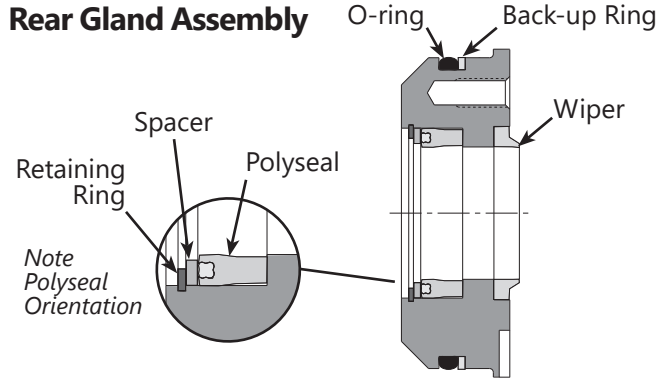
WARNING: Connect the tool's hydraulic hoses to the Powerig® hydraulic power source before connecting the (air or electric) trigger assembly to it. If not connected in this order, serious personal injury could occur.

17. Screw the connector's hoses onto the applicable PULL and RETURN ports of the tool, per Figure 6.
18. Hold a 7/16" hex wrench in the back of the tool when tightening the collet. After the collet bottoms, loosen it 1/4 turn or less until the ball lock can be felt dropping into the groove in the piston rod. Models **2600** & **2600-12** only: Use the Pintail Tube if pintails will fall through.

NOTE: ***See* Preparation For Use *before attaching the nose assembly and using the tool.***

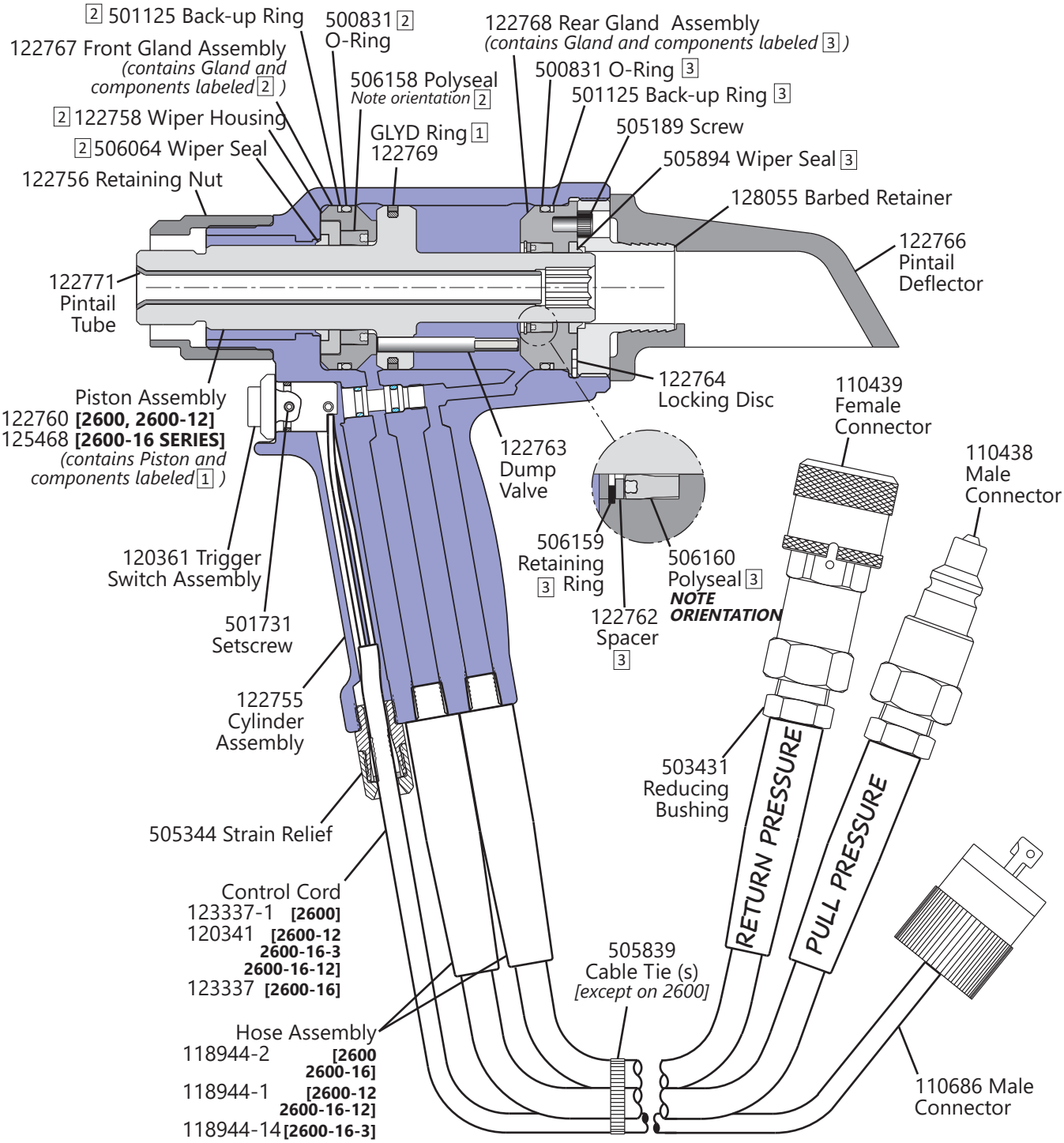
The tool is now assembled and ready for use.

Figure 5



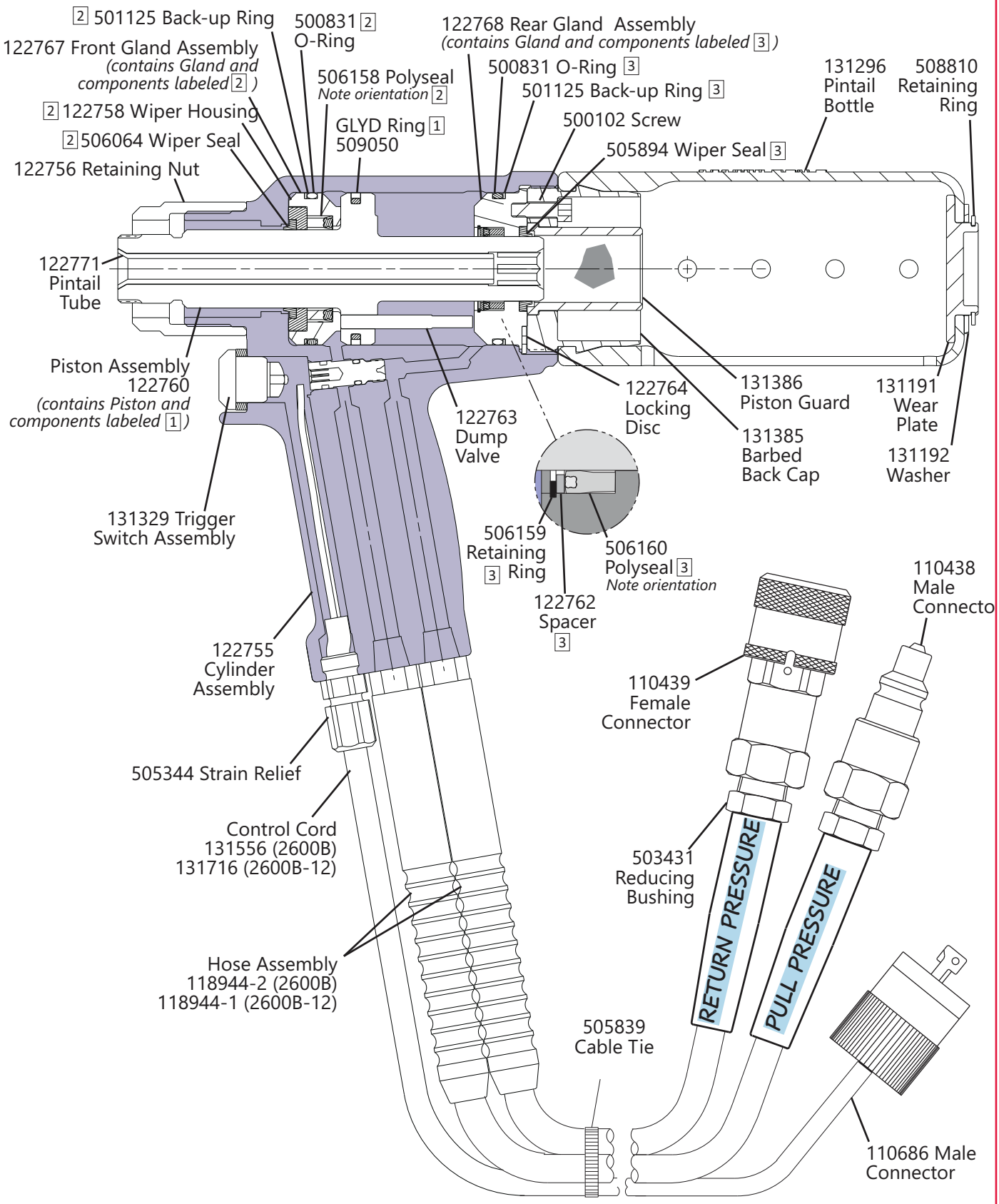
Components Drawing - 2600, 2600-12, 2600-16, 2600-16-3, 2600-16-12

Figure 6



Components Drawing - 2600B

Figure 7



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

Use Service Kit **2600KIT** for all the tools in the 2600 series.

Assembly Tool Kit (P/N 123110): This kit is compatible with all 2600 series tools. It contains one (1) each of:

P/N	Description
121694-2600	GLYD Ring Insertion Tool
123111	Piston Assembly Tool
123112	Spacer

ACCESSORIES

Pintail Deflector - **129601**
(*models 2600-16_DASH, A2600-16-12; non-metallic [for use in sensitive spark applications]*)

Pintail Deflector (*Figure 6*) - **122766**
(*except models 2600-2125, A2600-2125*)

2600BRETROKIT..... Kit for attaching bottle to standard tool

Pintail Tube - **122771**
(*except models 2600-2125, A2600-2125*)

End Cap Hex Key - **128174**
(*models 2600-2125, A2600-2125*)

Remote Trigger - **123381-24**
(*electric-trigger models*)

Loctite® 271 (*5 ml. tube*)	- **503657**
Loctite® 242 (*50 ml. bottle*)	- **505016**
LUBRIPLATE® 130-AA	- **502723**
Parker Threadmate® (*4 oz. tube*)	- **508517**
Slic-Tite® (*stick*)	- **503237**
SUPER-O-LUBE®	- **505476**

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. Inoperative Powerig® Hydraulic Power Source. See applicable instruction manual.
   b. Loose electrical connections.
   c. Damaged trigger assembly.
   d. Loose or faulty hydraulic hose coupling.

2. ***Tool operates in reverse.***
   a. Reversed hydraulic hose connections between Powerig and tool.

3. ***Tool leaks hydraulic fluid.***
   a. Defective or worn O-rings or loose hose connections at tool.

4. ***Hydraulic couplers leak fluid.***
   a. Damaged or worn O-rings in coupler body.

5. ***Hydraulic fluid overheats.***
   a. Hydraulic unit not operating properly; see unit's manual.
   b. Unit running in reverse (918 & 918-5 only). See unit's manual.

6. ***Tool operates erratically and fails to properly install fastener.***
   a. Low or erratic hydraulic pressure supply; air in system. See applicable instruction manual.
   b. Damaged or excessively worn piston O-ring in tool.
   c. Excessive wear on or scoring of sliding surfaces of tool parts.

7. ***Pull grooves on fastener pintail stripped during PULL stroke.***
   a. Operator not sliding anvil completely onto fastener pintail.
   b. Incorrect fastener grip.
   c. Worn or damaged jaw segments.
   d. Metal particles accumulated in pull grooves of jaw segments.
   e. Excessive sheet gap.

8. ***Collar of fastener not completely swaged.***
   a. Improper tool operation. See Trouble 6.
   b. Scored anvil in nose assembly.

9. ***Tool "hangs-up" on swaged collar of fastener.***
   a. Improper tool operation. See Trouble 6.
   b. RETURN pressure too low.
   c. Not enough collar lubricant.
   d. Nose assembly not properly attached.

10. ***Pintail of fastener fails to break.***
    a. Improper tool operation. See Trouble 6.
    b. Pull grooves on fastener stripped. See Trouble 7.
    c. Worn piston and/or unloading valve.
    d. PULL pressure too low.

11. ***Nose will not release broken pintail.***
    a. Nose assembly incorrectly installed.

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

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.

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ISO 9001-2015
CERTIFIED MANAGEMENT SYSTEM
ISO 14001-2015

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