

ARCONIC
Innovation, engineered.

Instruction Manual
2580
Hydraulic Installation Tool



Declaration of Conformity
2

Safety Instructions
3-4

Description
5

Specifications
5-7

Principle of Operation
8

Preparation for Use
8

Operating Instructions
9

Maintenance
10

Disassembly Procedure
11

Assembly Procedure
12-13

Components Drawings
14-24

Troubleshooting
25

Kits and Accessories
26



ARCONIC

EC Declaration of Conformity

Manufacturer:

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

Description of Machinery:

Models 2400, 2480, 2500, 2580 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)



Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: **85** dB (reference 1 pW) Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: **74** 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:

.20 m/s²

Uncertainty, K:

.17 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.

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

Huck's **2580** series of Hydraulic Installation Tools—when fitted with an appropriate nose assembly—installs a wide range of Huck Blind Fasteners and HUCKBOLT® Fasteners. These lightweight and compact mini-tools are ideal for installing fasteners in limited-clearance applications.

Each tool is complete with hydraulic hoses and couplings, an electric switch and cord. The tool is basically a cylinder and piston assembly. An unloading valve, designed to relieve the hydraulic pressure at the end of the PULL stroke, is situated near the piston. The end of the piston rod is threaded, and a retaining nut and stop are included for attaching nose assemblies*.

The **2502** series of tools is designed to be powered by a Huck Powerig® Hydraulic Unit (models **913**, **918**, **918-5**, **940**, and **956** or an equivalent hydraulic unit) with maximum operating pressures of:

- PULL: 5700 psi (393.02 bar)
- RETURN: 3200 psi (220.64 bar) and

*Nose assemblies must be ordered separately. A distinct nose assembly is required for each fastener, based on *type* and *size*. Contact your Huck representative for the appropriate *Nose Assembly Selection Chart* and the various Huck *Fastener Selection Chart* for more specific information on fastener type and sizing.

Specifications

MAX OPERATING TEMP: 125° F (51.7° C)

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

MAX PULL PRESSURE: 7400 psi (510.23 bar)



CAUTION: The **PULL** pressure must be set to **7400 psi (510.23 bar)** to install fastener size **-12** and above.

MAX RETURN PRESSURE: 3200 psi (220.64 bar)

PULL CAPACITY:

8240 lbs. @ 5700 psi (36.6 kN @ 393.02 bar)

10700 lbs. @ 7400 psi (47.5 kN @ 510.23 bar)

POWER SOURCE: Huck Powerig® Hydraulic Unit

HOSE KITS: Use only genuine HUCK Hose Kits rated @ 10,000 psi (689.5 bar) working pressure.

HYDRAULIC FLUID: Hydraulic fluid shall meet DEXRON® III, DEXRON VI, MERCON®, Allison C-4 or equivalent Automatic Transmission Fluid (**ATF**) specifications. Fire-resistant fluid may be used if it is

an ester-based fluid such as Quintolubric® HFD or equivalent. Water-based fluid shall NOT be used as serious damage to equipment will occur.

Where the following trade names are used in this manual, please note:

DEXRON is a registered trademark of General Motors Corporation.

Loctite is a registered trademark of Henkel Corporation, U.S.A.

LUBRIPLATE is a registered trademark of Fiske Brothers Refining Co.

MERCON is a registered trademark of Ford Motor Corp.

Never-Seez is a registered trademark of Bostik, Inc.

Quintolubric is a registered trademark of Quaker Chemical Corp.

Slic-tite is a registered trademark of LA-CO Industries, Inc.

Spirolox is a registered trademark of Smalley Steel Ring Company

Teflon is a registered trademark of E. I. du Pont de Nemours and Company.

Threadmate is a registered trademark of Parker Intangibles LLC.

TRUARC is a trademark of TRUARC Co. LLC.

Vibra-Tite is a registered trademark of ND Industries, Inc. USA.

TABLE 1 - TOOL SPECIFICATIONS

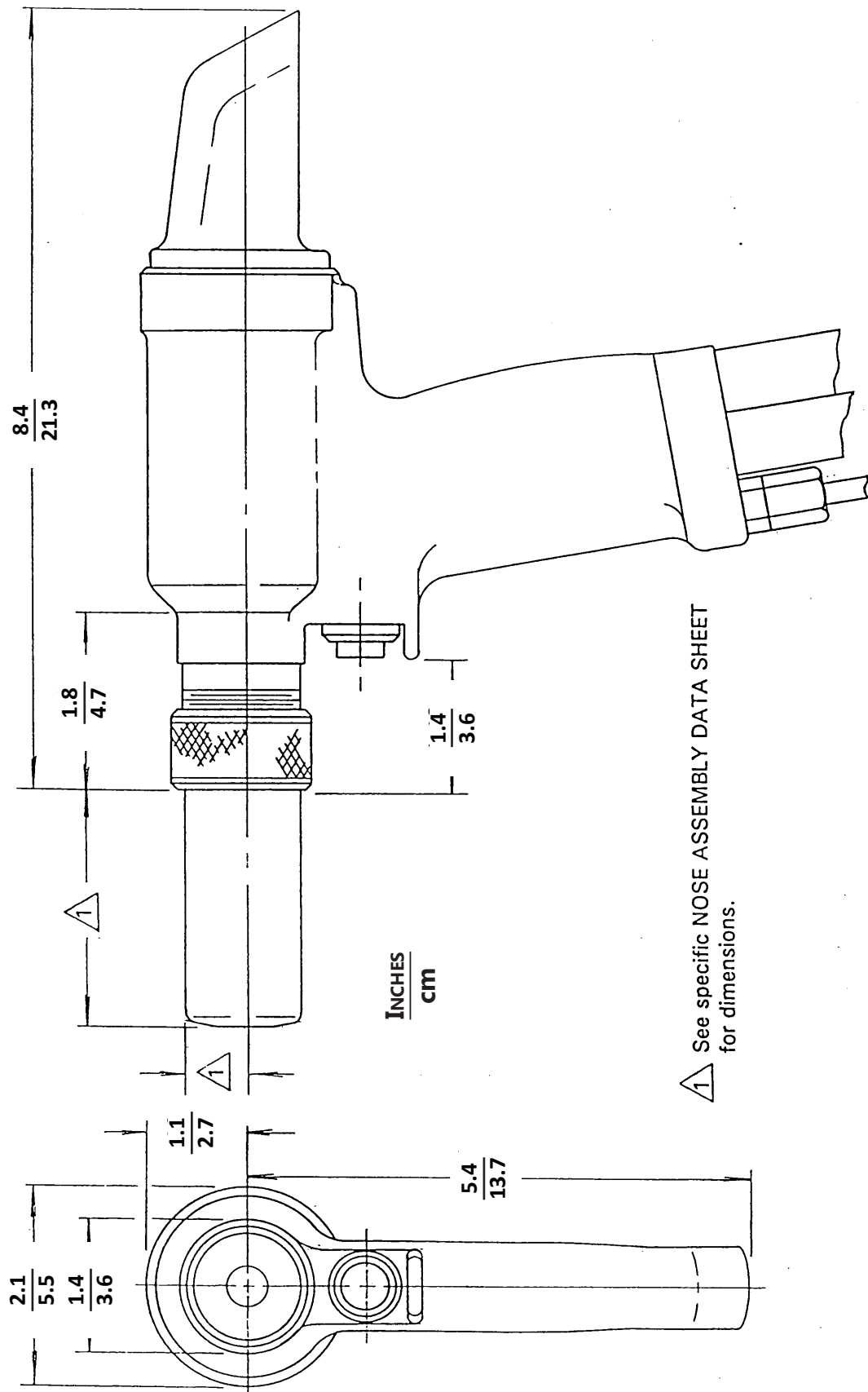
MODEL	LENGTH	WIDTH	HEIGHT (including Handle)	WEIGHT	MINIMUM EFFECTIVE STROKE
Entire Series	8.4 in. (21.3 cm)	2.1 in. (5.5 cm)	6.5 in. (16.4 cm)	6.6 lbs (3.0 kg)	0.9 in. (2.4 cm)

NOTE: Length and weight do not include hoses/cord or nose assemblies.



Specifications (continued)

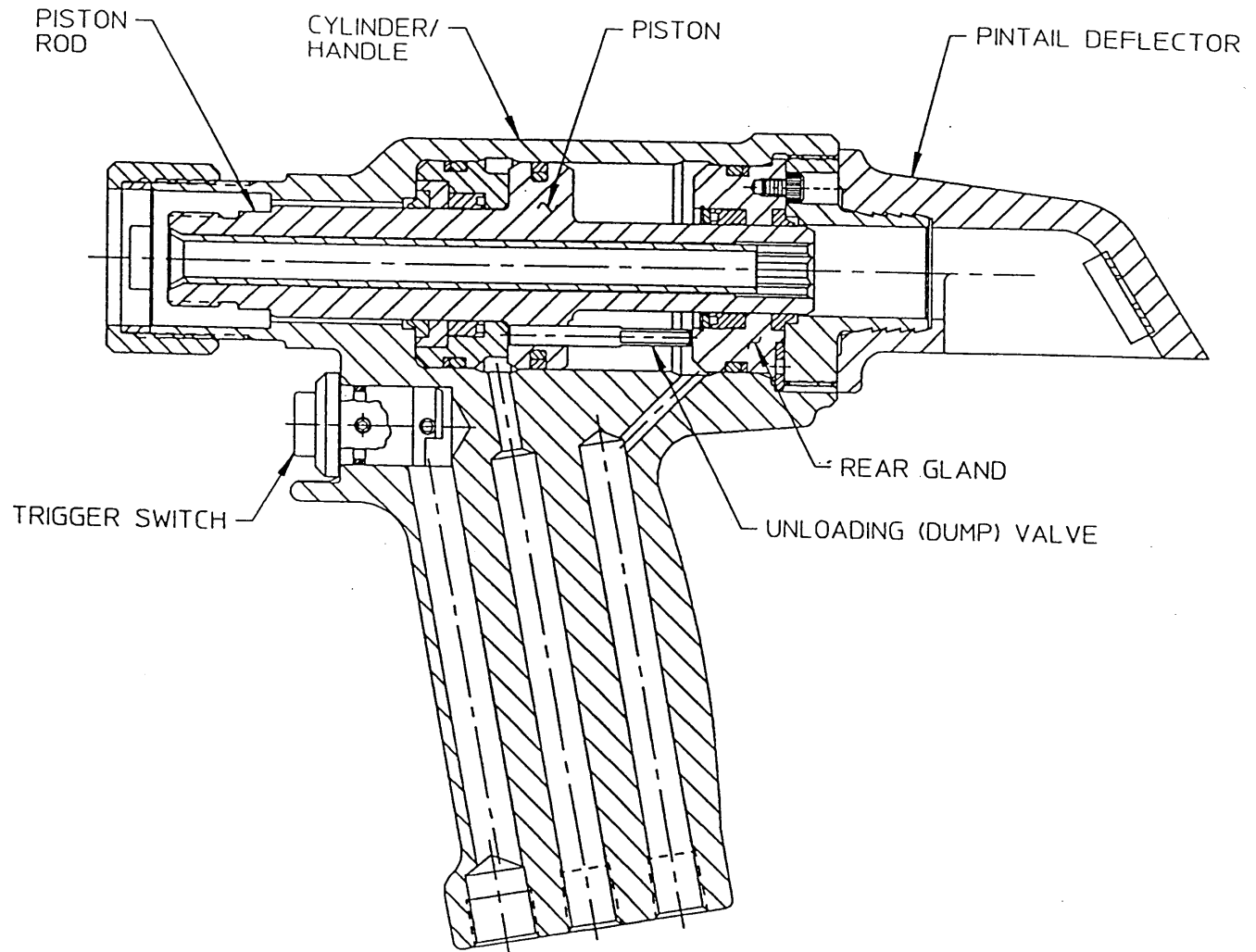
Figure 1





Assembly Drawing Main Components

Figure 2



2580 series Hydraulic Installation Tools (HK961)



Principle of Operation

When the hydraulic hoses and trigger control are connected to the Powerig® Hydraulic Unit, an electric trigger controls the PULL and RETURN strokes of the tool. The trigger is pressed and hydraulic pressure is directed to the PULL side of the piston. Fastener installation begins. When fastener installation is completed, the trigger is

released. Hydraulic pressure is directed to the RETURN side of the piston, moving it forward. The tool and nose assembly are pushed off the installed fastener. At the end of the PULL stroke, the piston uncovers flats of the unloading valve, and the pressure is unloaded by allowing the fluid to flow back to the Powerig.

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.

Be sure there is 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 trigger control system 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 Huck Pressure Gauge, p/n 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 free of foreign matter. Contaminated fluid can cause 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.

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 the power supply. Select the correct nose assembly for the fastener to be installed (see *Nose Assembly Selection Chart*). Attach the nose assembly to the tool as instructed in *Nose Assembly Data Sheet*.
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.

CHECKING & ADJUSTING OUTPUT PRESSURES

Check and adjust hydraulic pressures at first time start-up, after overhauling the unit, and when troubleshooting. Use a Huck Powerig® Hydraulic Unit 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.

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)



Operating Instructions



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/collar 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.

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 pin in the workpiece and place the collar



CAUTION: Remove excess gap from between the sheets to permit correct fastener installation and prevent jaw damage. ALL jaw teeth must engage pintail to avoid damaging teeth.

over the pin.

NOTE: If the collar has one tapered end, that end must be out toward tool; not next to the sheet.

2. Hold the pin in the hole and push the nose



WARNING: Do not pull on a pin without placing fastener in a workpiece; fastener will eject with velocity and force when pintail breaks off or teeth/grooves strip; this may cause severe personal injury.

assembly onto the pin 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 pin and structure. Keep hands away from front of tool during operation. 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.

TO INSTALL A HUCK BLIND FASTENER:

1. Place a fastener in the workpiece or in the end of the nose assembly.

NOTE: The tool or nose assembly must be held against, and at a right angle (90°) to, the workpiece.



CAUTIONS:

- BOM blind fasteners will jam in the nose assembly if they are pulled when not in workpiece.
- To avoid structural and tool damage, be sure there is sufficient clearance for the nose assembly at full stroke.
- Do not abuse the tool by dropping it, using it as a hammer, or otherwise causing unnecessary wear and tear.
- 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.

2. Press and hold the trigger until the fastener is installed 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.

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

Damaged jaw teeth of a nose assembly, or debris packed between teeth, will result in failure of fastener installation, or faulty fastener installation.

The operating efficiency of Huck equipment is directly related to performance of the entire system, including tool, nose assembly, hoses, trigger assembly, and Powerig®. An effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

SYSTEM INSPECTION/PREVENTIVE MAINTENANCE

- Inspect tool and nose assembly daily for damage and wear. Before each use, verify that the tool, hoses, fittings, couplings, and trigger connections are secure, undamaged, and free of leaks; replace as necessary. Clear air-lines of dirt and water.
- Inspect tool, hoses, and Powerig during operation to detect abnormal heating, leaks, or vibration.
- 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 re-assembly, examine them for damage and wear; replace when necessary. Replace O-rings and Back-up rings whenever the tool is disassembled.
- 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

damage tool. See **KITS & ACCESSORIES**.

- Follow the disassembly and assembly procedures in this manual. If Huck-recommended procedures are not followed, tool damage could result.
- Disassemble and assemble tool components in a straight line. Do NOT bend, twist, or apply undue force. Always 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 misaligned component. Reverse the procedure, correct the 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.

POWERIG MAINTENANCE

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

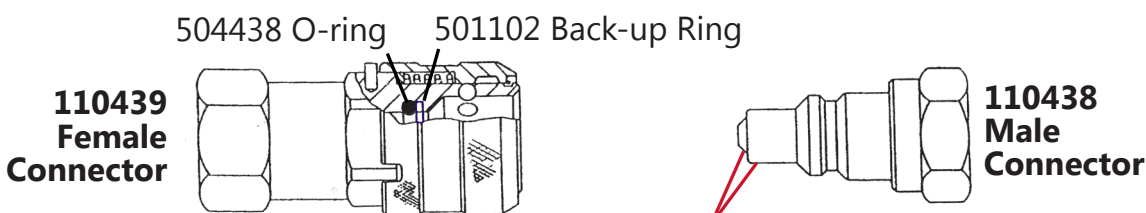
TOOL MAINTENANCE

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.

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.



Disassembly

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.

For component identification, see Figure 3 and the Assembly Drawings in this manual.



WARNING: Disconnect the tool control trigger system from the Powerig® 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 electric trigger control cord, and then uncouple the hydraulic hoses.
2. Remove the retaining nut and nose assembly anvil. Unscrew collet from the piston rod.
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.

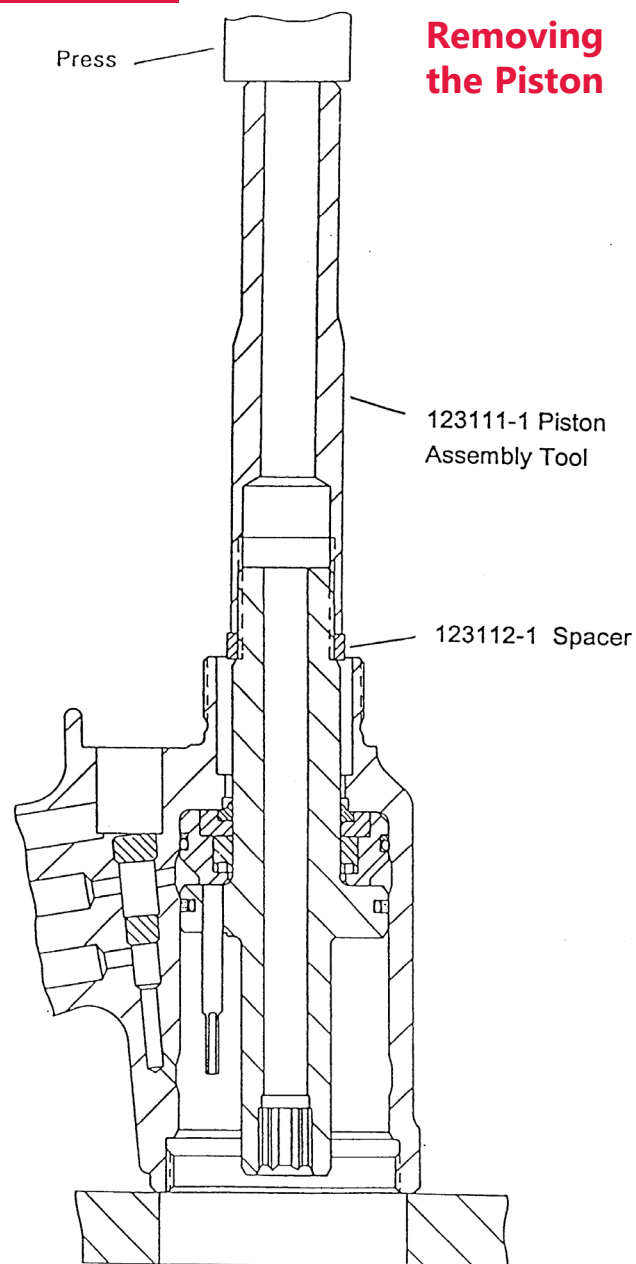
NOTE: Do NOT remove the hydraulic hoses from the tool unless replacing them. If necessary to remove the hoses, slide back the plastic shrouds to access the hose fittings.

5. Model **2580**: Loosen the strain relief grommet. Loosen the set screw and carefully pry out the switch with a small screw driver. Loosen the two wires at rear of the switch and remove it from the cord. Pull out the cord and remove the grommet. Disassemble the electrical connector to replace connector, or to rewire it.
Model **A2580**: Unscrew the air trigger assembly. Loosen the air fitting. Pull out the air trigger hose. Loosen the air quick disconnect and remove it.
6. Remove the pintail deflector (P/N **123144**) from the end cap by simultaneously pulling and twisting.
7. Remove the socket-head screw from the rear gland and barbed retainer.
8. Insert two 5/16" pins in opposite holes in the rear of the barbed retainer. Place a bar between the pins, and use it to unscrew the retainer.
9. Remove the unloading valve from the open cylinder.
10. Place the Spacer (P/N **123112-1**) over the threaded end of the piston. Screw the Piston Assembly Tool (P/N **123111-1**) onto the piston. (Figure 3) Press or drive the piston, front gland, and rear gland out of the cylinder. Place the hose ends in a container to catch fluid that is forced out by the piston.

11. Use a small, dull pointed "pick" to remove all seals, wipers, O-rings and Back-up rings from components.

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

Figure 3



Removing the Piston

2580 series Hydraulic Installation Tools (HK961)



Assembly

This section details the re-assembly of the tool. For component identification, see Figure 4 and the Assembly Drawings in this manual.

BEFORE RE-ASSEMBLING THE TOOL:



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

- 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.



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

- 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 **2580KIT**. 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.



CAUTION: Do not use TEFLON® tape on pipe threads. Tape can shred, resulting in malfunctions.

TO RE-ASSEMBLE THE TOOL:

1. Install the GLYD Ring Assembly on the piston as follows: Place the special O-ring in the groove. Roll the GLYD ring's diameter to a diameter smaller than the piston before placing the GLYD ring on top of O-ring. Coat the GLYD ring with a suitable lubricant to ensure it stays in place during piston installation.



CAUTION: Lubricate the inside diameter of the Polyseal.

2. Taking care not to pinch the inner ring, press the Polyseal into the front gland housing. Install O-ring and back-up ring on the front gland assembly.
3. Screw the Piston Assembly Tool onto the piston. (Figure 4)

NOTE: To keep the Polyseal in the front gland, push the front wiper housing into front gland. Hold housing against Polyseal while pressing the front gland/Polyseal onto the piston.



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

4. Press with a suitable pressing drift against the back of the piston. While holding the wiper housing in place, guide the Polyseal onto the piston.
5. Press the wiper into the groove on the wiper housing. **NOTE:** Thread the retaining nut onto the cylinder to act as stand-off.
6. Lubricate the outer seal of the piston and the Polyseal.
7. Install the GLYD Ring Insertion Tool into the cylinder to prevent damage to the GLYD Ring Assembly. (Figure 4)
8. Carefully drive, or press, the piston into the cylinder.
9. Remove the Piston Assembly Tool and GLYD Ring Insertion Tool. Install the relief valve into the piston with four flats toward the rear of the tool.
10. Install the following in the rear gland: O-ring and back-up ring; Polyseal, spacer, and retaining ring; press the assembled gland into the cylinder; press the wiper into the groove in the rear gland.
11. Align the recess in the rear gland with the groove in the cylinder. Install the locking disc.
12. Screw the barbed retainer into the cylinder until it bottoms out. Back out the retainer to the first visible threaded hole in the rear gland. Install and tighten the locking screw to 35 (+/-3) in.-lbs.
13. If the hydraulic hoses were removed, apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads per manufacturer's instructions.

Thread the hydraulic hoses into the handle, and slide the shrouds over the fittings.



CAUTION: Do not use TEFLON® tape on pipe threads. Tape can shred, resulting in malfunctions.

14. Model **2580**: Assemble the electrical cord to the 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 handle and strain relief grommet. Tighten the grommet. Model **A2580**: Thread the hose fitting into the handle. Attach the quick-disconnect to the air-line. Attach the air-line to the handle's hose fitting. Screw the air trigger assembly into the handle's trigger fitting and tighten the setscrew against the fitting.

continued...



Assembly (continued)

15. Screw the coupling nipple onto the PULL pressure hose (from port **P** of tool). Screw the coupling body onto the RETURN pressure hose (from port **R** of tool).
16. Hold a 3/8" hex wrench in the back of the tool when tightening the collet. Use the pintail tube if necessary.



CAUTION: Anvils with ears must have a stop installed in position as shown to prevent damage to the ears; slide the stop over the anvil before installing the retaining nut.

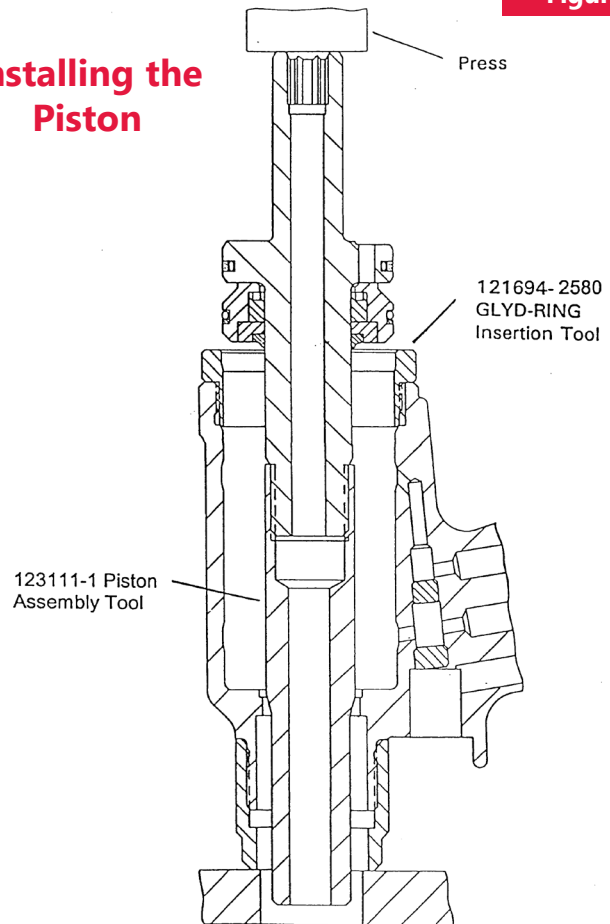


WARNING: Connect the tool's hydraulic hoses to the Powerig® before connecting the (air or electric) trigger assembly to it. If not connected in this order, serious personal injury could occur.

NOTE: See PREPARATION FOR USE before attaching the nose assembly and operating the tool.

Installing the Piston

Figure 4



Subassembly Part Numbers and Notes

Refer to the Assembly Drawings in this manual.

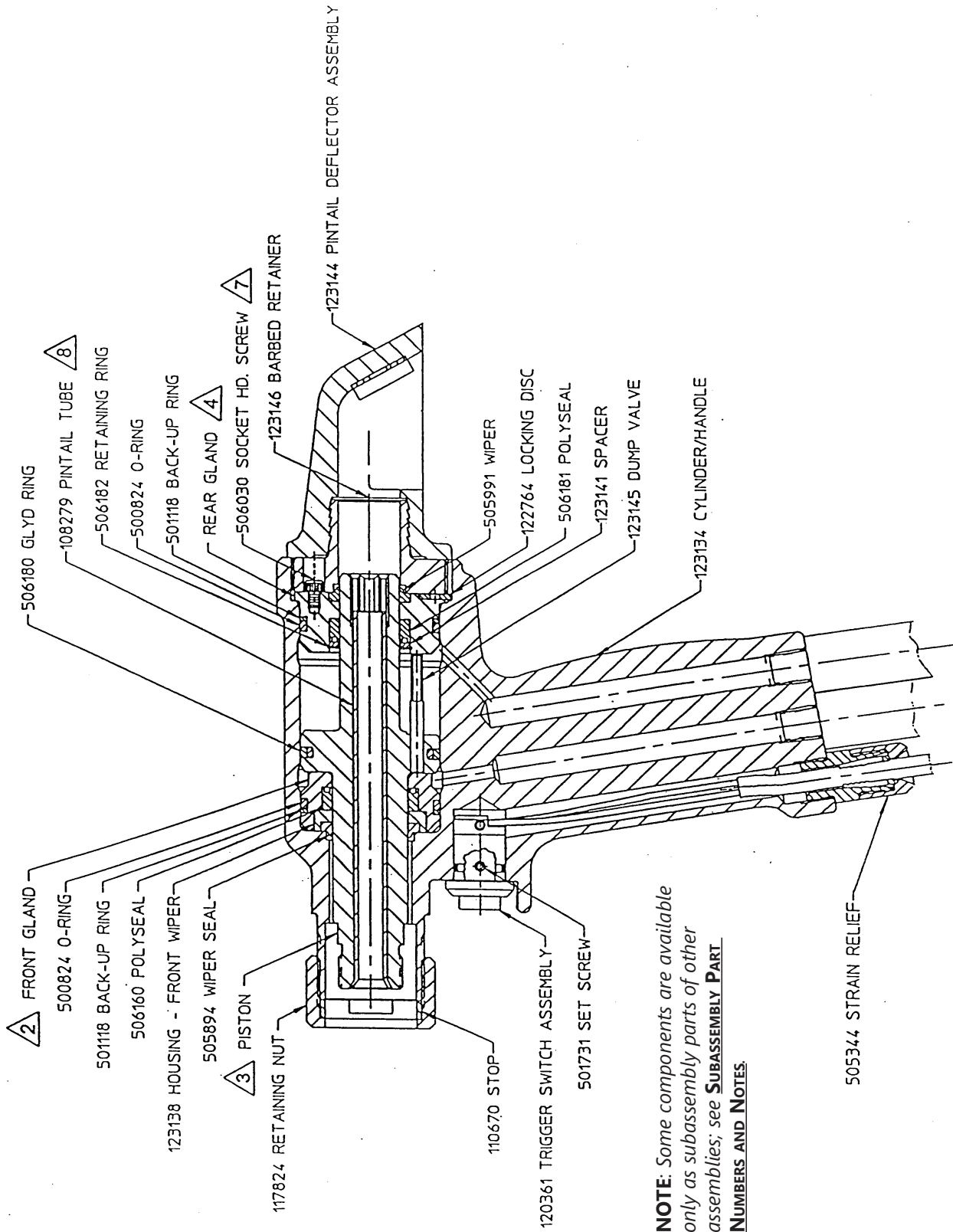
NOTE: Numbers in parentheses are Huck part numbers.

- 1 An optional 12 ft. Hose Kit (**122854**) is available. See Figure 11.
- 2 Front Gland Assembly (**123139**) includes: Back-up Ring (**501118**), O-ring (**500824**), Wiper (**505894**), Front Wiper Housing (**123138**), Polyseal (**506160**), and Front Gland (**123137**). See Figure 5.
- 3 Piston Assembly (**123136**) includes: Piston (**123135**) and GLYD Ring (**506180**). See Figure 5.
- 4 Rear Gland Assembly (**123142**) includes: Back-up Ring (**501118**), O-ring (**500824**), Wiper (**505991**), Retaining Ring (**506182**), Spacer (**123141**), Polyseal (**506181**), and Rear Gland (**123140**). See Figure 5.
- 5 Trigger Cord Assembly (**123338**) includes: Strain Relief (**505344**), Male Connector (**110686**), Trigger Switch Assembly (**120361**), and Control Cord (**123337**). See Figure 6.
- 6 **CAUTION:** Install the cups of Polyseals and wipers as shown. See Figure 5.
- 7 Torque socket-head screw (**506030**) to 20 (+/-3) in.-lbs. See Figure 5.
- 8 Blind fasteners require Pintail Tube (**108279**). See Figure 5.



Sectional View 2580 Series

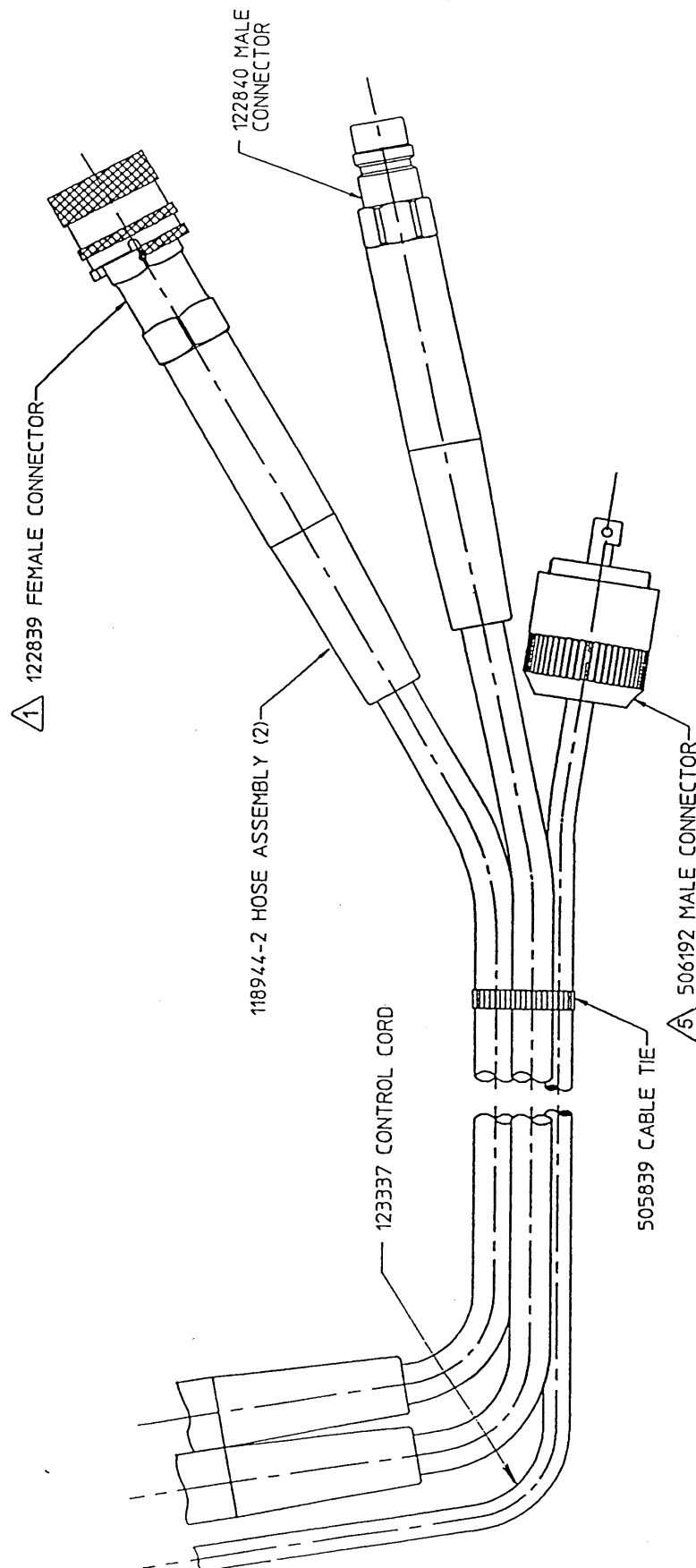
Figure 5





Control Cord & Hose Assembly 2580

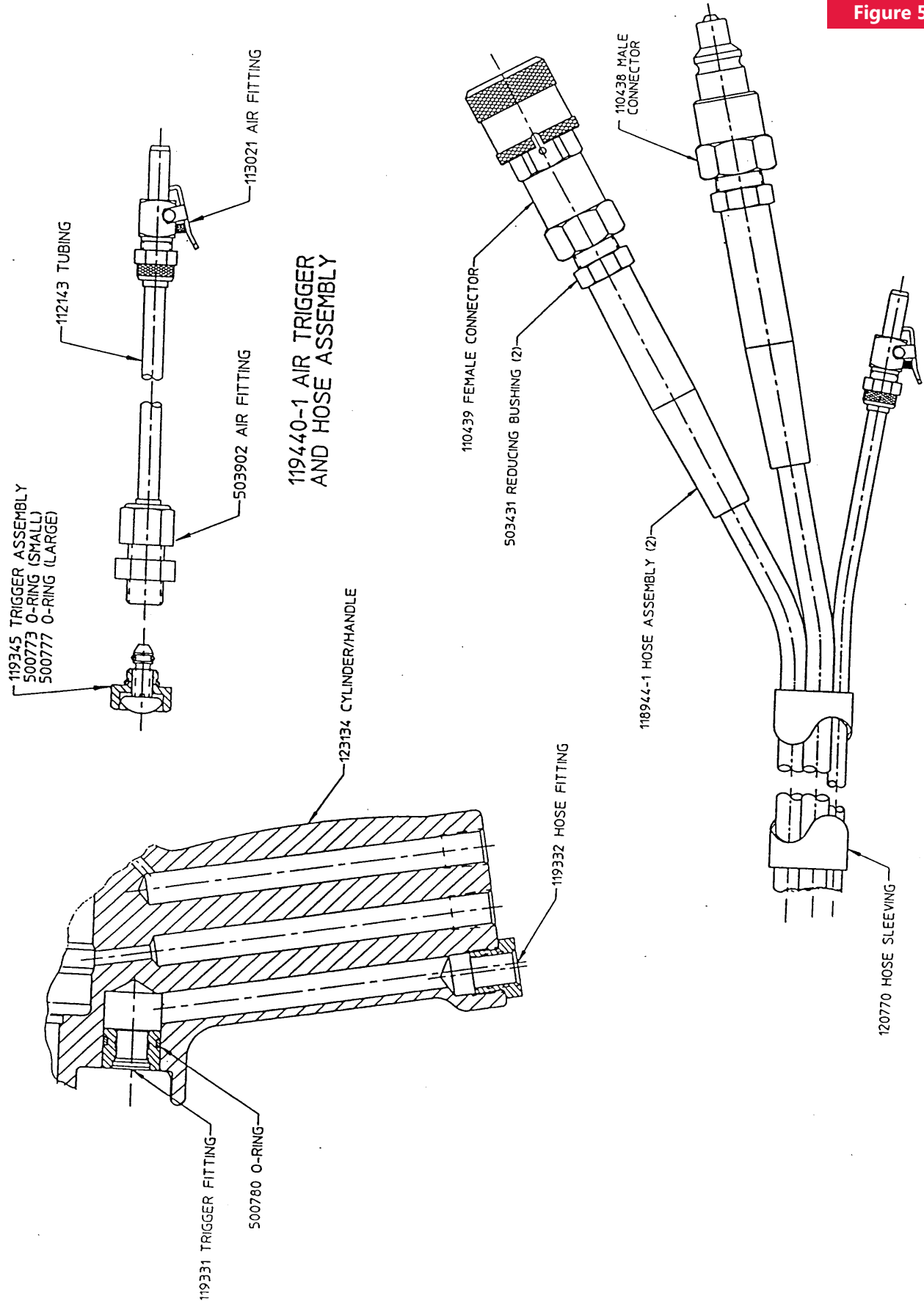
Figure 5a





Sectional View A2580

Figure 5b

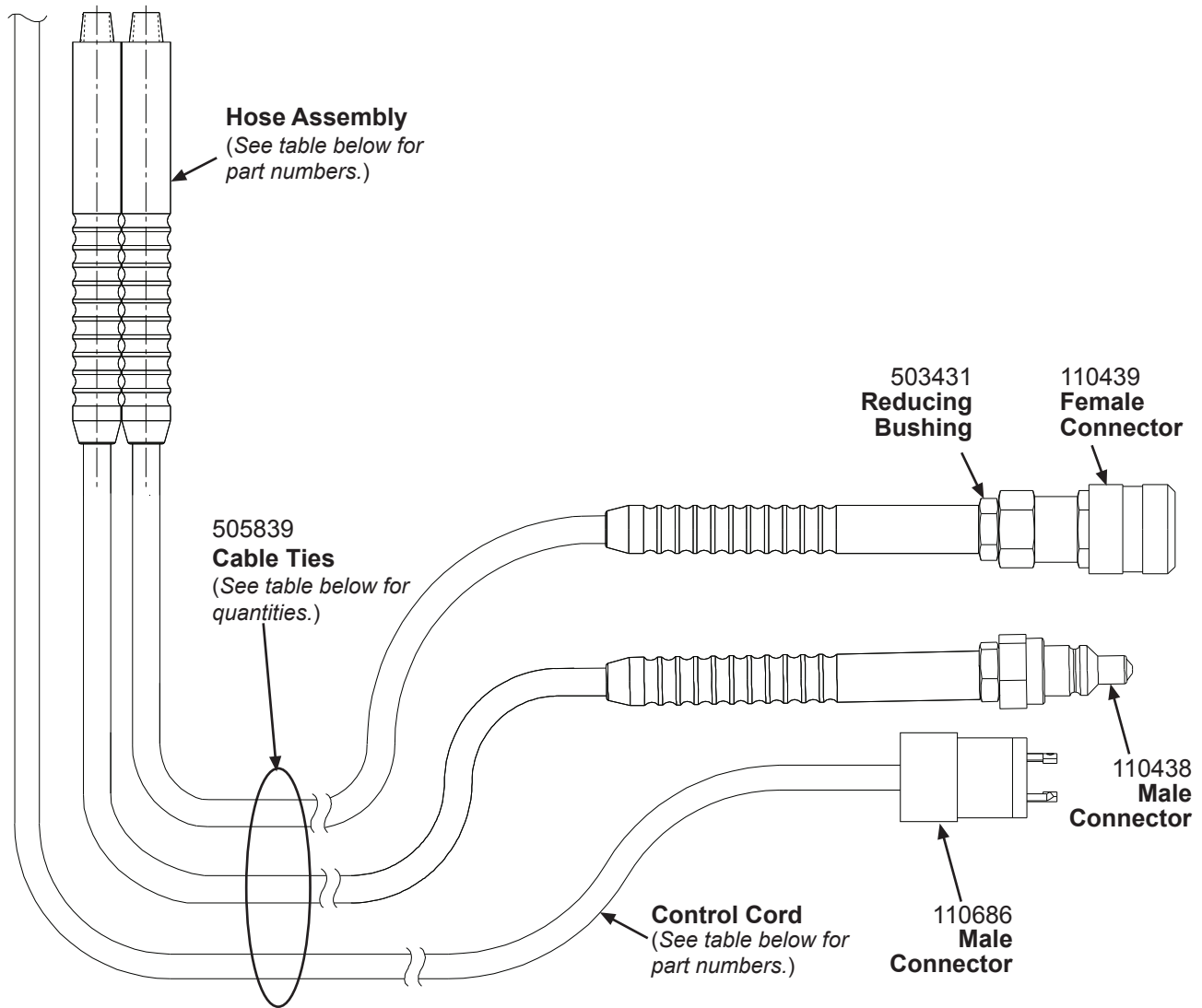




Control Cord & Hose Assembly

Figure 5c

...to Cylinder/Handle
(see Figure 5)



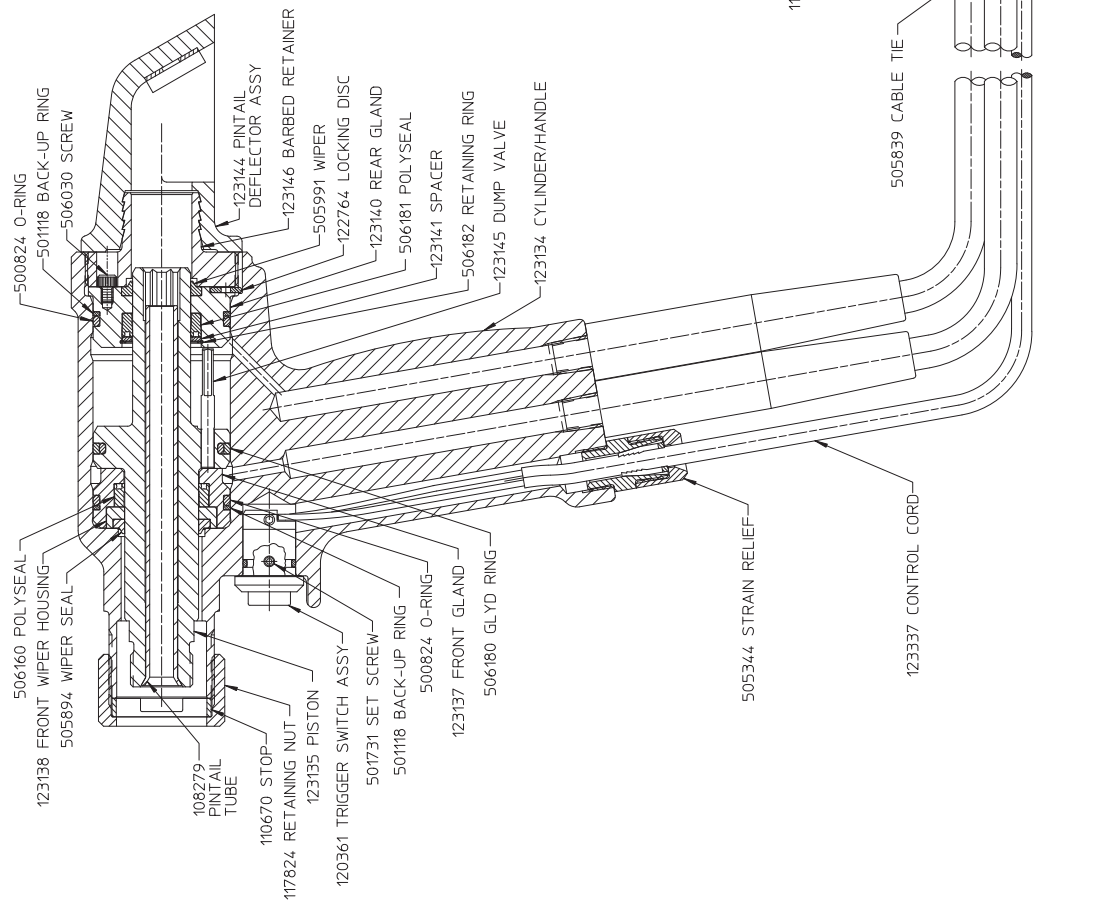
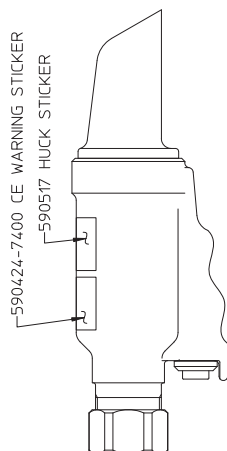
DESCRIPTION	PART NO.				QTY.			
	2580	2580-12	2580-25	2580-38	2580	2580-12	2580-25	2580-38
Cable Ties	505839				1	6	14	19
Control Cord	123337	120341	120341-1	120341-4	1			
Hose Assembly	118944-2	118944-1	118944-3	118944-4	2			
Male Connector (electric)	110686				1			
Female Connector	110439				1			
Reducing Bushing	503431				2			
Male Connector (hydraulic)	110438				1			



Assembly Drawing 2580

Figure 6
NOTES:

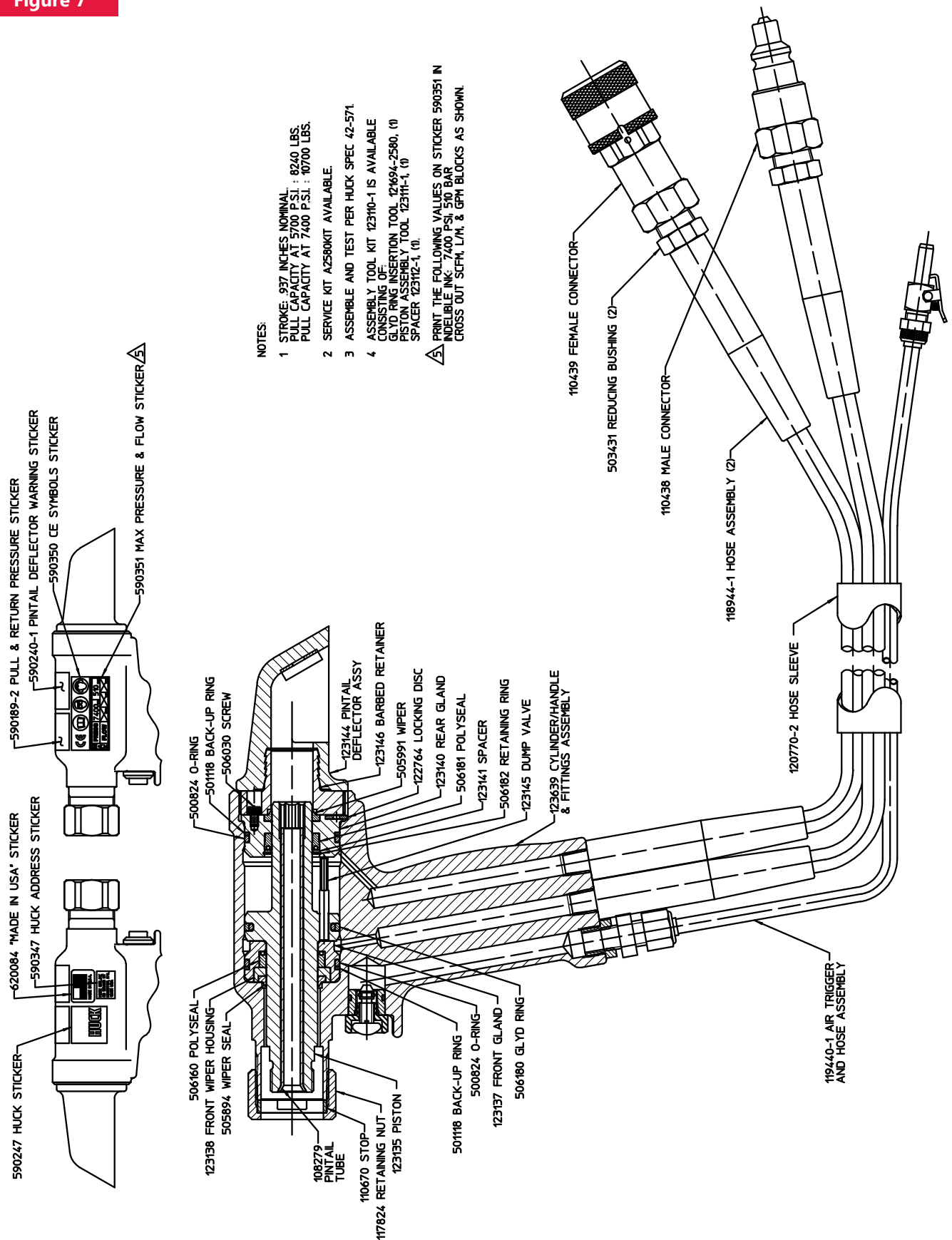
- 1 STROKE: 937 INCHES NOMINAL.
PULL CAPACITY AT 5700 P.S.I. : 8240 LBS.
PULL CAPACITY AT 7400 P.S.I. : 10700 LBS.
- 2 SERVICE KIT 2580KIT AVAILABLE.
- 3 ASSEMBLE AND TEST PER HUCK SPEC 42-571.
- 4 ASSEMBLY TOOL KIT 123110-1 IS AVAILABLE
CONSISTING OF:
GLYD RING INSERTION TOOL 121694-2580. (1)
PISTON ASSEMBLY TOOL 123111-1. (1)
SPACER 123112-1. (1).
- 5 REMOTE TRIGGER PART# 123381+24
OPTIONALLY AVAILABLE





Assembly Drawing A2580

Figure 7

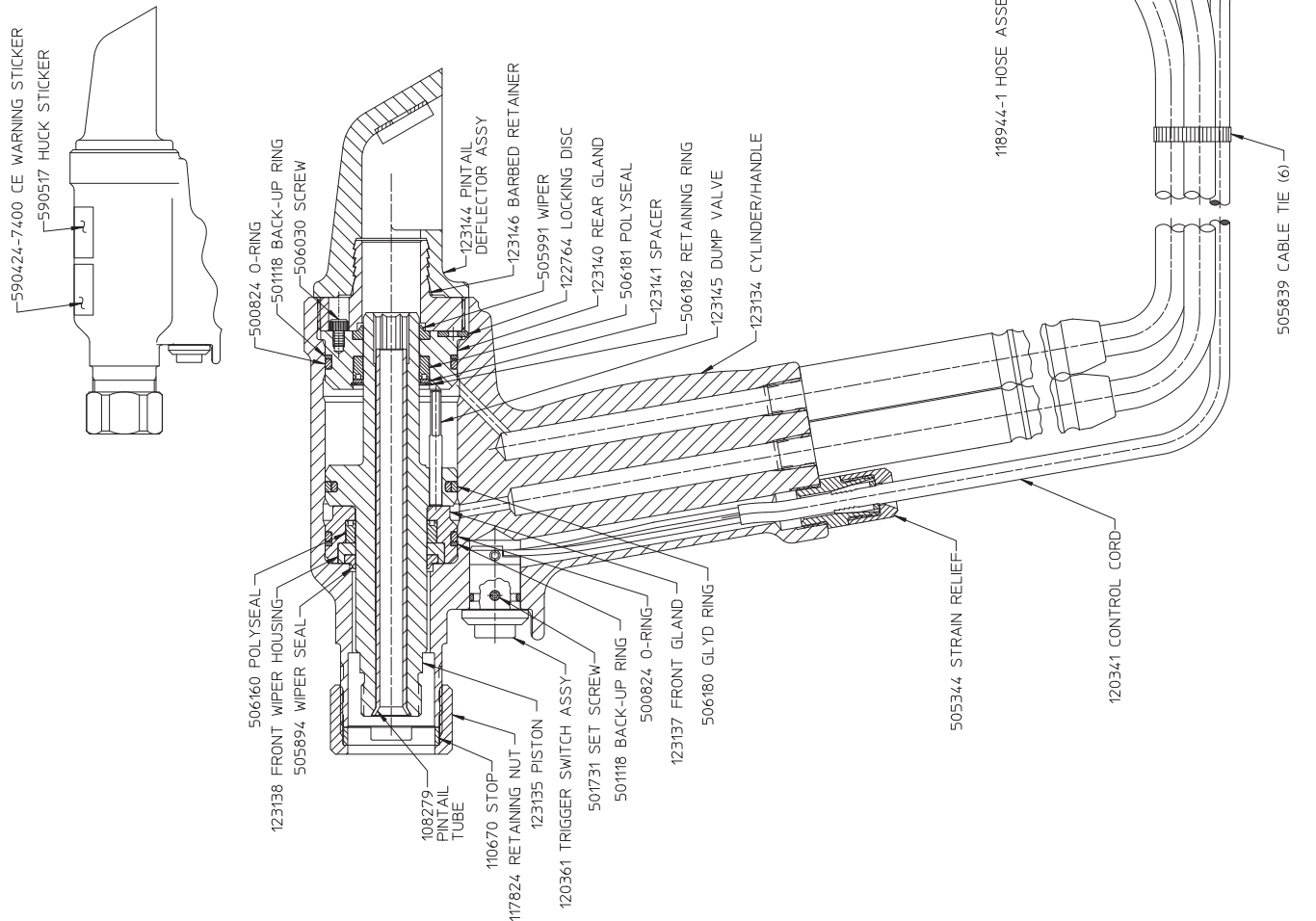




Assembly Drawing 2580-12

Figure 8

- NOTES:
- 1 STROKE: .937 INCHES NOMINAL.
PULL CAPACITY AT 5700 P.S.I. : 8240 LBS.
PULL CAPACITY AT 7400 P.S.I. : 10700 LBS.
 - 2 SERVICE KIT 2580KIT AVAILABLE.
 - 3 ASSEMBLE AND TEST PER HUCK SPEC 42-571.
 - 4 ASSEMBLY TOOL KIT 123110-1 AVAILABLE CONSISTING OF:
GLYD RING INSERTION TOOL 121694-2580, (1)
PISTON ASSEMBLY TOOL 123111-1, (1)
SPACER 123112-1, (1).
 - 5 REMOTE TRIGGER PART# 123381-24
OPTIONALLY AVAILABLE



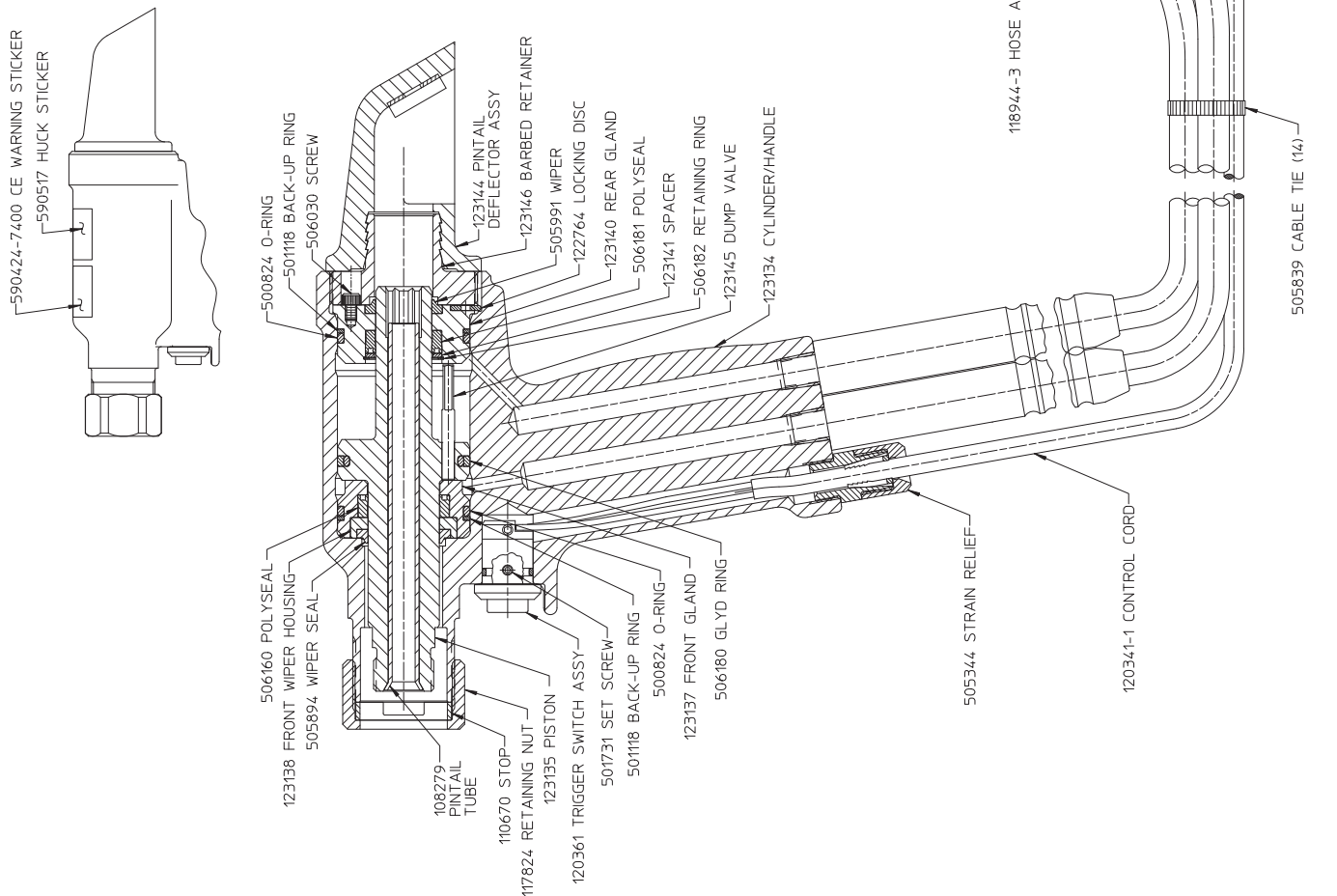


Assembly Drawing 2580-25

Figure 9

NOTES:

- 1 STROKE: .937 INCHES NOMINAL.
PULL CAPACITY AT 5700 P.S.I. : 8240 LBS.
PULL CAPACITY AT 7400 P.S.I. : 10700 LBS.
- 2 SERVICE KIT 2580KIT AVAILABLE.
- 3 ASSEMBLE AND TEST PER HUCK SPEC 42-571.
- 4 ASSEMBLY TOOL KIT 123110-1 AVAILABLE CONSISTING OF:
GLYD RING INSERTION TOOL 121694-2580. (1)
PISTON ASSEMBLY TOOL 123111-1. (1)
SPACER 123112-1. (1).
- 5 REMOTE TRIGGER PART# 123381-24
OPTIONALLY AVAILABLE



2580 series Hydraulic Installation Tools (HK961)

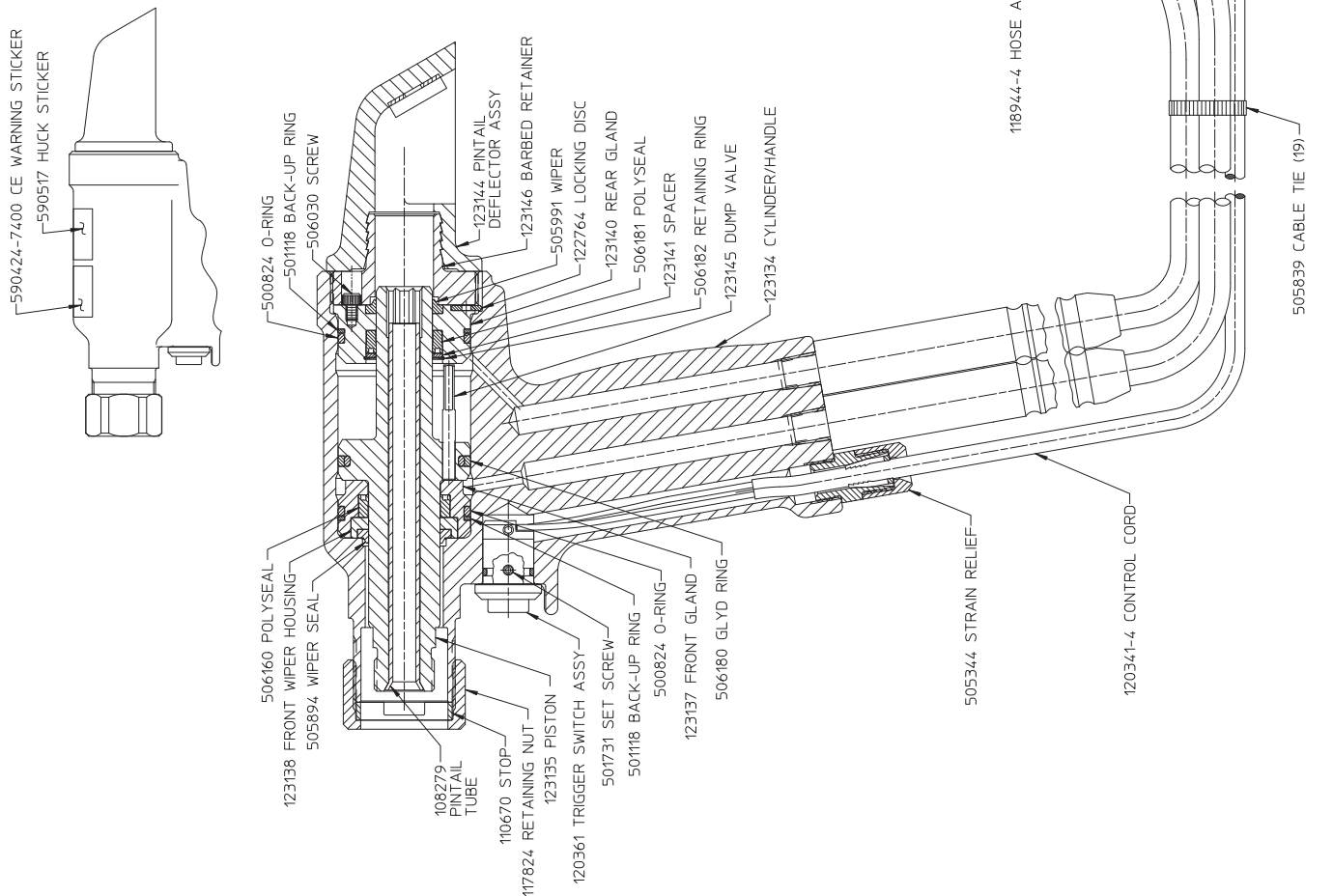


Assembly Drawing 2580-38

Figure 10

NOTES:

- 1 STROKE: .937 INCHES NOMINAL.
PULL CAPACITY AT 5700 P.S.I. : 8240 LBS.
PULL CAPACITY AT 7400 P.S.I. : 10700 LBS.
- 2 SERVICE KIT 2580KIT AVAILABLE.
- 3 ASSEMBLE AND TEST PER HUCK SPEC 42-571.
- 4 ASSEMBLY TOOL KIT 123110-1 AVAILABLE CONSISTING OF:
GLYD RING INSERTION TOOL 121694-2580, (1)
PISTON ASSEMBLY TOOL 123111-1, (1)
SPACER 123112-1, (1).
- 5 REMOTE TRIGGER PART# 123381-24
OPTIONALLY AVAILABLE

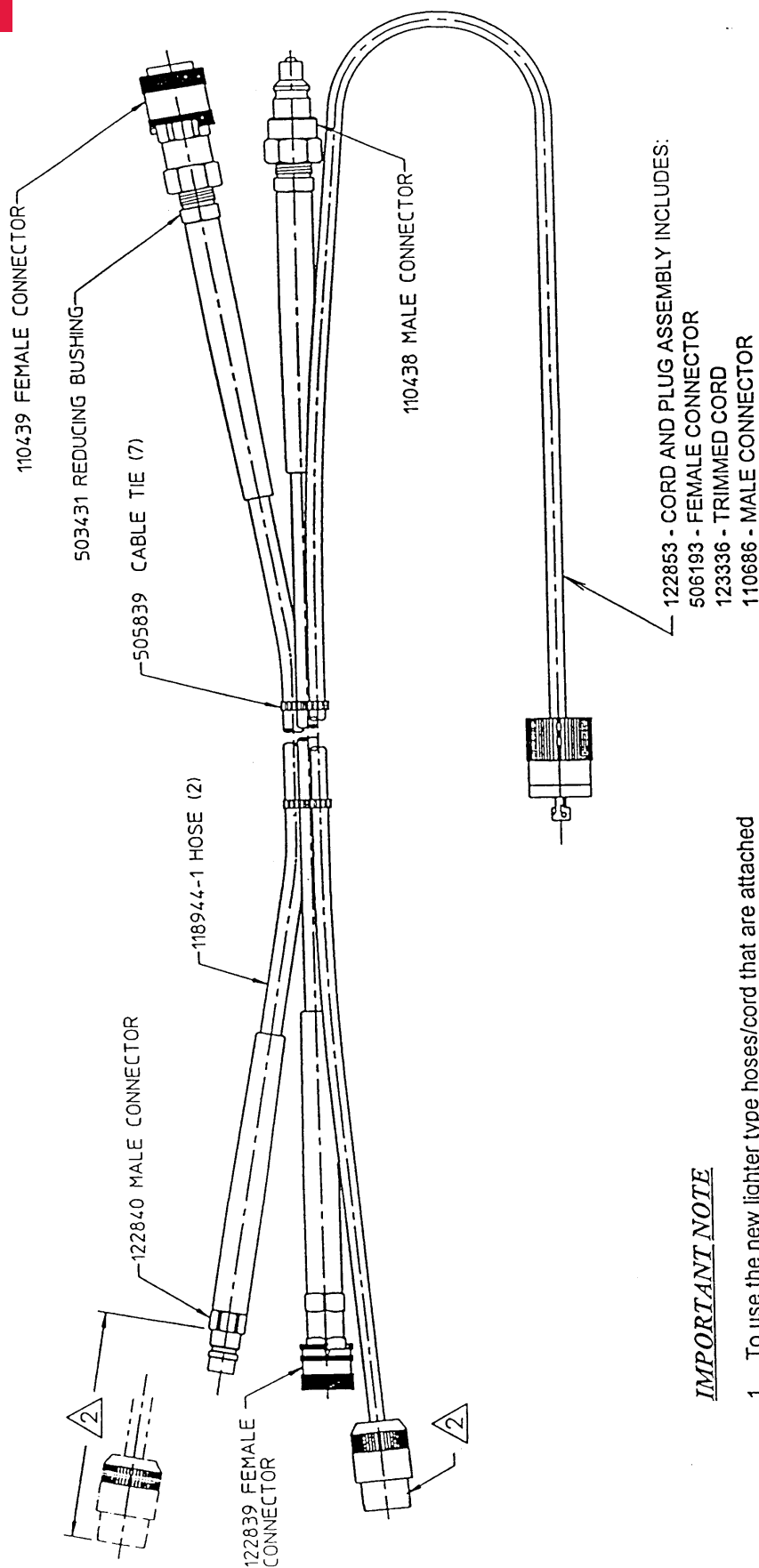




Optional Hose Kit

Figure 11

**Part Number
122854**



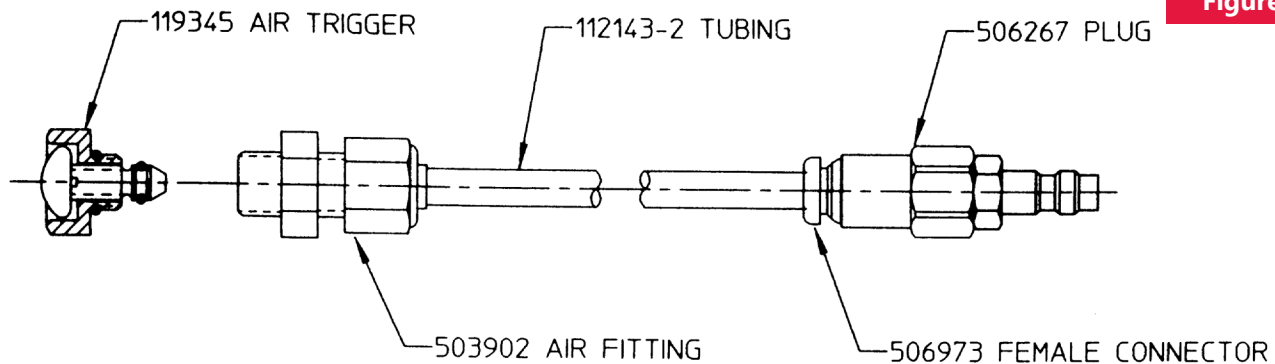
IMPORTANT NOTE

1. To use the new lighter type hoses/cord that are attached to the tool when purchased, one or more, optional 12' Hose Kit(s), 112854, must be purchased separately.
2. Female cord connector to extend beyond hose male connector 4.5 to 5.0 inches as shown.



Air Trigger & Hose Assembly

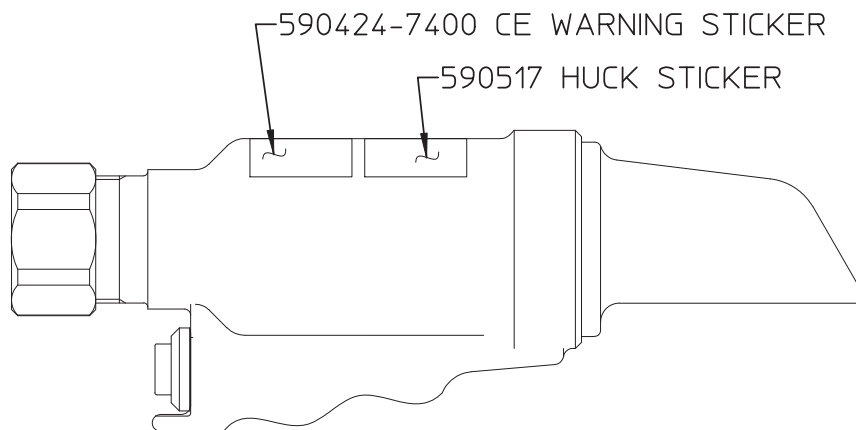
Figure 12



Sticker Locations

The 2580 series tools are labeled with a Sticker (P/N **590424-7400**) that contains safety and pressure settings information. This sticker **must** remain on the tool and be legible. If the sticker becomes damaged or worn, or if it has been removed from the tool, or *when replacing Cylinder*, this sticker **must be ordered and placed in the location shown below**.

Figure 13





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 Unit. See applicable instruction manual.
 - b. Loose or disconnected control cord.
 - c. Damaged trigger assembly.
 - d. Loose or faulty hydraulic hose couplings.
 - e. Unloading valve not installed in tool.
- 2. Tool operates in reverse.**
 - a. Reversed hydraulic hose connections between Powerig and tool.
- 3. Tool leaks hydraulic fluid.**
 - a. Depending on where leak occurs, defective or worn O-rings, or loose hose connection 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 instruction manual.
 - b. Unloading valve incorrectly installed.
- 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. Unloading valve installed backwards.
 - d. Excessive wear on or scoring of sliding surfaces of tool parts.
 - e. Excessive wear of unloading valve.
- 7. Pull grooves on fastener pintail stripped during PULL stroke.**
 - a. Operator not sliding jaws completely onto fastener pintail.
 - b. Incorrect fastener length.
 - c. Worn or damaged jaw segments.
 - d. Metal particles accumulated in pull grooves of jaw segments.
 - e. Excessive sheet gap.
 - f. Nose assembly not properly attached; see *Nose Assembly Data Sheet*.
- 8. Collar of HUCKBOLT® Fastener not completely swaged.**
 - a. Improper tool operation. See Trouble 6.
 - b. Scored anvil in nose assembly.
- 9. Shear collar on Huck Blind fastener not properly installed.**
 - a. Improper tool operation. See Trouble 6.
 - b. Worn or damaged driving anvil in nose assembly.
- 10. Tool "hangs-up" on swaged collar of HUCKBOLT Fastener.**
 - a. Improper tool operation. See Trouble 6.
 - b. RETURN pressure too low.
 - c. Nose assembly not properly attached; see *Nose Assembly Data Sheet*.
- 11. 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.
 - e. Damaged O-ring on piston.
- 12. Operator cannot slide nose assembly (completely) onto fastener pintail.**
 - a. Broken pintails jammed in tool. Install pintail tube if broken pintails will pass through.

2580 series Hydraulic Installation Tools (HK961)



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 **2580KIT** for all tools in the 2580 series. Table 2 lists the various parts and quantities that it contains.

NOTES: *The quantities listed are "per assembly." Part numbers with asterisks are for model A2580.*

TABLE 2 - SERVICE KIT (P/N 2580KIT)

P/N	Description	Qty.
501118	Back-up Ring	2
500824	O-ring	2
500780	O-ring	1
505991	Wiper	1
505894	Wiper	1
506160	Polyseal	1
506181	Polyseal	1
506180	GLYD Ring	1
500777*	O-ring	1
500773*	O-ring	1
504438*	O-ring	1
501102*	Back-up Ring	1
8-2580	Assembly Drawing 2580 H.I.T.	1
8-A2580*	Assembly Drawing A2580 H.I.T.	1

Air and Hydraulic Conversion Kit (P/N 125419)

This kit converts the existing tool to the -2 version with a 2' hose.

P/N	Description	Qty.
118944-2	Lightweight Hi-pressure Hose	2
122839	Q. D. Hydraulic Fitting (female)	1
122840	Q. D. Hydraulic Fitting (male)	1
112143-2	Air Hose	1
506973	Straight Connector (female)	1
506267	Q. D. Air Fitting (male)	1

Assembly Tool Kit (P/N 123110-1)

See Figures 3 & 4. This kit is available separately; it contains:

P/N	Description	Qty.
121694-2580	GLYD Ring Insertion Tool	1
123111-1	Piston Assembly Tool	1
123112-1	Spacer	1

Conversion Kit (P/N 123020)

This kit is supplied with each tool; it contains:

P/N	Description	Qty.
110439	Connector (female)	1
110438	Connector (male)	1
503431	Reducing Bushing	2
110686	Electric Connector (male)	1
505839	Cable Tie	1



CAUTION: Do not use TEFLON® tape on pipe threads. Tape can shred, resulting in malfunctions.

Changing to kit's older, heavier type hoses will accommodate the following extension hose kits.

P/N	HOSE LENGTH	P/N	HOSE LENGTH
110838	12 ft. (3.65 m)	110840	38 ft. (11.58 m)
110839	26 ft. (7.92 m)	110841	52 ft. (15.84 m)

NOTE: See Maintenance, Disassembly, and Assembly.

Stroke Limiter Kit (P/N 125143)

This kit reduces the stroke of any 2580 tool to **0.625 in. (15.87 mm)**.

P/N	Description	Qty.
125143	Stroke Limiter	1
123145-1	Dump Valve	1

ACCESSORIES

Remote Trigger	- 123381-24
Pintail Deflector (Figure 5)	- 123144
Pintail Tube (Figure 5)	- 108279
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



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.

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.

Huck is Forever, For the Long Haul, The Future of Fastening Technology, The Future of Assembly Technology, The Future of Tooling Technology, and Tools of Productivity are service marks of Huck International. Huck provides technical assistance regarding the use and application of Huck fasteners and tooling.

NOTICE: The information contained in this publication is only for general guidance with

regard to properties of the products shown and/or the means for selecting such products, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in Huck's written quotations, acknowledgments, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.



HUCK IS FOREVER.™

Applifast.



251 Cree Crescent, Winnipeg, MB Canada R3J 3X4
Tel: 204 837 8361 • 1 800 563 1293
info@applifast.com



applifast.com