



Instruction Manual

208 series

Hydraulic Installation Tools



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

December 14, 2021
HK800



**HOWMET
AEROSPACE**

Declaration of Conformity

Manufacturer:

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

Description of Machinery:

Models 206- and 208- 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)

Supply of Machinery (Safety) Regulations 2008

British Standard related to hand held, non-electric power tools (ISO 11148-2:2011)

Representatives:

UK: Paul Carson, Huck International, Ltd. Unit C Stafford Park 7, Telford Shropshire TF3 3BQ, England, United Kingdom

EU: Lutz Baumann, Hildesheim Operations, Fairchild Fasteners Europe - VSD GmbH, Steven 3, 31135, Hildesheim, Germany

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: Nicholas Gougouris

Position: Engineering Manager

Location: Huck International, LLC d/b/a Howmet Fastening Systems
Kingston, New York, USA

Date: 11/02/2021 (November 2, 2021)



Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: **84** dB (reference 1 pW) Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: **73** dB (reference 20 µPa) Uncertainty, KpA: 3 dB

C-weighted peak emission sound pressure level, LpC, peak: **106** dB (reference 20 µPa) Uncertainty, KpC: 3 dB

Values determined according to noise test code ISO 3744. The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.

Declared vibration emission values in accordance with EN 12096

Measured Vibrations emission value, a:	.06 m/s ²
Uncertainty, K:	.04 m/s ²
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:
Howmet Fastening Systems, Kingston Operations, Kingston, NY, USA.



DANGER - IMPORTANT

DO NOT EXCEED HOSE MINIMUM BEND RADIUS

Failure to heed the warnings below could lead to a damaged hose, damaged tool, damaged property, personal injury, or death.

- This high pressure hose is not to be used other than assembled in a genuine HUCK tool or hose assembly or used as a replacement for the hose of a genuine HUCK tool or hose assembly.
- Improper use of this product can cause **property damage, personal injury, and death**, including but not limited to **electrocution, fluid injection** or **loss of limb** caused by **high pressure leak, dangerously whipping hose** or contact with suddenly moving or falling objects.
- Do not exceed rated working pressure (**700 bar/10150 psi**) or minimum bend radius (see chart below). Do not use in temperatures less than **-40°C (-40°F)** or greater than **+100°C (+212°F)**. Do not exceed fluid working temperature of **+70°C (+158°F)**.
- Do not use if the hose is kinked, abraded, cut, bulged, or leaking. Do not attempt to repair the hose.
- Do not carry tool by hoses.
- Refer to a HUCK hydraulic tool manual for hose inspection and maintenance intervals.
- Store hose assemblies in a clean dry area.

Hose Type	Minimum Bend Radius	
126107 Series	2.76 Inches	70 mm
118944 and 124881 Series	2.17 Inches	55 mm
HA and HPH Series	1.97 Inches	50 mm



Safety Instructions

GLOSSARY OF TERMS AND SYMBOLS:



-Product complies with requirements set forth by the relevant UK and 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.

X. HYDRAULIC TOOL SAFETY INSTRUCTIONS:



WARNING: Do not exceed maximum pull or return settings on tool.

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



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

The **208-625**, **A208-625**, and **A208-625-2** models of Hydraulic Installation Tools are lightweight and compact mini-tools with offset nose assemblies that install various HuckBolt and Huck Blind fasteners in limited-clearance applications. Huck recommends that these tools be powered by Huck Powerig® Hydraulic Units, or equivalent.

The 208-625 is an electric-triggered tool that can be powered by POWERIG models **913H**, **918**, and **940**, or equivalent.

The air-triggered A208-625 and A208-625-2 tools can be powered by POWERIG models **956** and **970**, or equivalent. Each tool ships complete with hydraulic hoses, couplings,

and a control-trigger assembly (air or electric). They operate on 5400–5700 psi (372–393 bar) PULL pressure and up to 2400 psi (165 bar) RETURN pressure. The tools have a cylinder assembly and a piston assembly; the piston has an unloading valve to relieve hydraulic pressure at end of PULL stroke. The piston rod is off-center to the centerline of the piston, so tool clearance is increased. The offset nose assembly enhances the tool's built-in clearance and provides the maximum clearance obtainable. A nose assembly is attached to the tool's piston rod using a drawbar. An anvil holder stop limits the nose assembly rotation to 80 degrees. An extra unloading valve (for use when a long-stroke tool is required) is included with each tool.

Hoses can be installed in the bottom of the cylinder or at the back at the cylinder, as application requires. After removing hoses, move pipe plugs to hose ports. Reinstall hoses. Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads per manufacturer's instructions.

Principle of Operation

Hydraulic hoses and the trigger control cord/hose are connected to the POWERIG® Hydraulic Unit; the trigger controls the PULL and RETURN strokes of the tool. When the trigger is pressed, hydraulic pressure is directed to PULL side of piston, causing the piston to move rearward, thus beginning fastener installation.

When fastener installation is completed, the trigger is released. Hydraulic pressure is directed to the RETURN side of the piston, and the piston moves forward. The nose assembly and the tool are pushed off the installed fastener.

At end of piston's PULL stroke, the flat of unloading valve provides a passage for fluid from the PULL side to the RETURN side of piston. When this occurs, pressurized fluid is "unloaded" and circulates back to reservoir of the hydraulic unit.

Figure 2

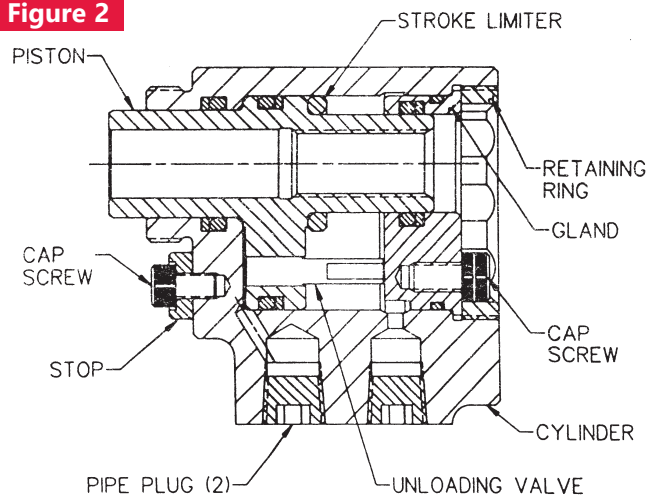
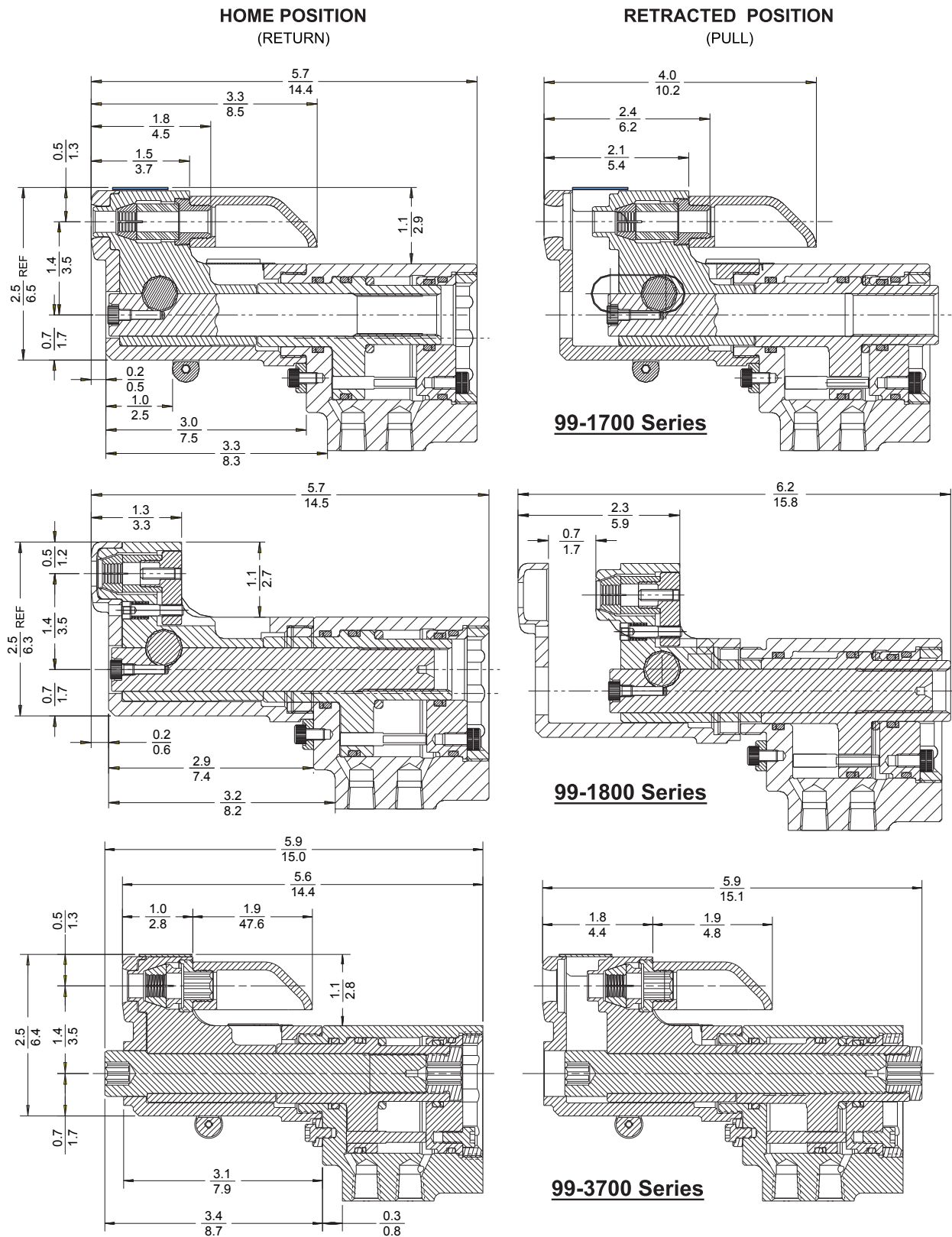


Figure 2 - Tool Components



Tool Operation/Installation Sequence

Figure 3





Specifications

MAX OPERATING TEMP: 125° F (51.7° C)

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

PULL CAPACITY: 10,000 lbs @ 5,700 psi
(44.5 kN @ 393 bar)

MAX PULL PRESSURE: 5,700 psi (393 bar)

MAX RETURN PRESSURE: 2,400 psi (170 bar)

STROKE: .625 inch (1.58 cm)

POWER SOURCE: Huck POWERIG® Hydraulic Unit

Weight: 3.96 lbs. (1.8 kg)

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.

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.

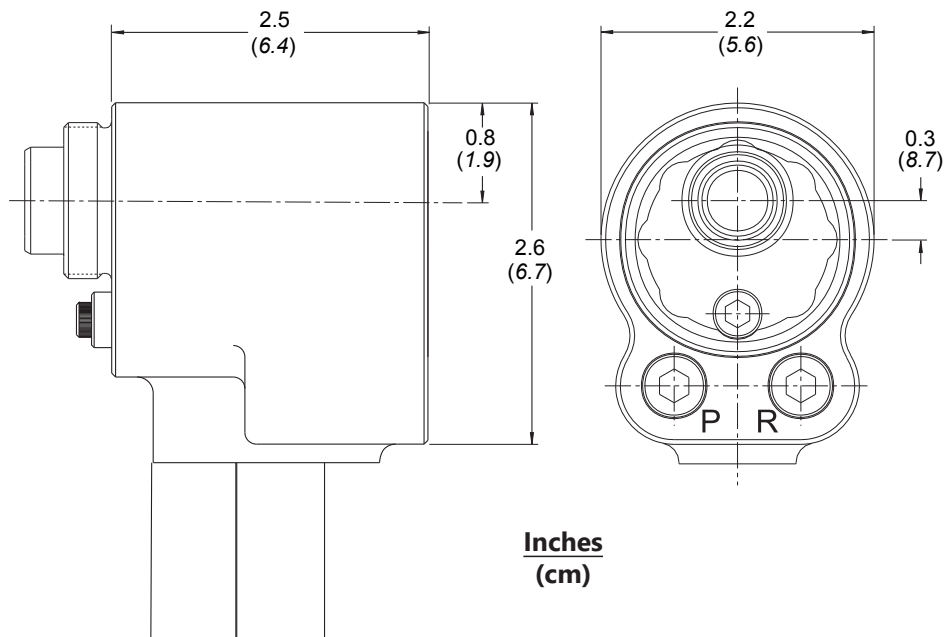
Spirolox is a registered trademark of Smalley Steel Ring Company

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.





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.

Huck recommends that a Huck POWERIG® be used to power Huck tools. 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 may result in serious personal injury.

Huck Pressure Gauge (P/N T-124883CE) is available, and should be used as indicated in its instruction manual.



CAUTION: Keep disconnected hoses, couplers and hydraulic fluid free of foreign matter. Contaminated fluid can cause valve failures.

NOTE: Where a part number (P/N) is given, Huck sells that part.

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



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



WARNING: Disconnect the tool's trigger control system from the POWERIG before disconnecting the tool's hydraulic hoses.

If not disconnected in this order, severe personal injury may occur.

POWER SOURCE CONNECTIONS

Use a Huck POWERIG Hydraulic Unit, or equivalent, that has been suitably prepared for operation.

1. Turn OFF the POWERIG and disconnect its power supply.
2. Disconnect the trigger control system from the POWERIG.



WARNING: Connect the tool's hydraulic hoses to the POWERIG before connecting tool's trigger control system to the POWERIG.

If not connected in this order, severe personal injury may occur.

3. Connect the tool hoses to the hydraulic unit. If necessary, adjust the position of the trigger assembly on the RETURN pressure hose. Connect the trigger control system to the hydraulic unit.
4. Connect the hydraulic unit to the power supply (air or electric). Turn ON the hydraulic unit. 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.
5. Select the correct nose assembly for the fastener to be installed.
6. Disconnect the hydraulic unit from the power supply; disconnect the tool's trigger control system from the hydraulic unit. Attach the nose assembly to the tool.
7. Reconnect the tool's trigger control system to hydraulic unit; reconnect unit to power supply.
8. 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.



Preparation for Use

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)

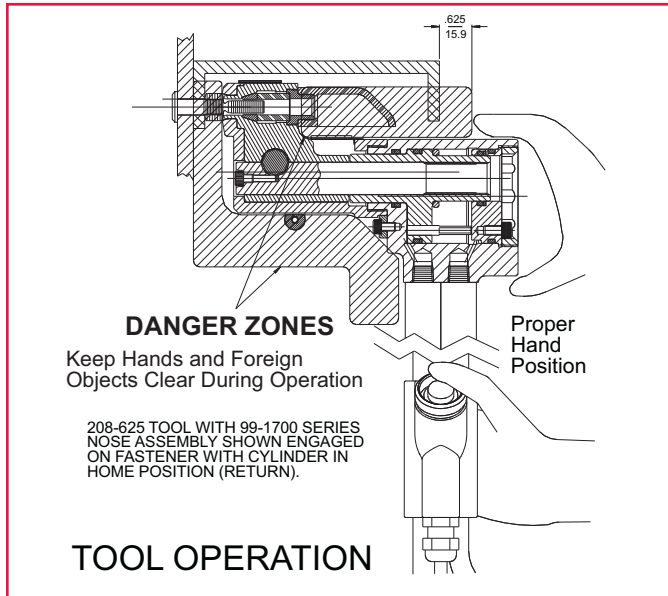
Hydraulic Couplings



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



Operating Instructions



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



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.

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 over the pin.

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



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.

2. Hold the pin in the hole and push the nose assembly onto the pin protruding through the collar until the nose anvil touches the collar. 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.



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.

TO INSTALL A HUCK BLIND FASTENER:

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



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.

the nose assembly.

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

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

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.

NOTE: Where a part number (P/N) is given, Huck sells that part.

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).



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

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

continued...



Maintenance (continued)

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 imbedded particles from the pull grooves of the jaws

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

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; ask for O-ring size (AS 568-number); material and durometer. For additional information and specifications on O-rings and Back-up rings, see **NOTES AND SPECIFICATIONS FOR STANDARD PARTS**.



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

Sub-assembly Part Numbers

Cylinder Assembly (P/N **120016**) includes P/Ns 503806, 505569, and 503704(2).

Gland Assembly (P/N **120018**) includes P/Ns 505875, 505763, and 501109.

Piston Assembly (P/N **120017**) includes P/Ns 505875 and 501121.

MAX. GRIP CONDITIONS and INCREASING TOOL STROKE



WARNING: When the tool stroke has been increased, take extra care to ensure there is sufficient clearance for the operator's hands and the tool. If sufficient clearance is not maintained, severe personal injury could result.

The longer stroke also increases the potential for structural and tool damage.

This tool ships with a longer unloading valve. To install the valve, remove the stroke limiter from the tool and replace the original unloading valve with longer valve (P/N **120020**). The tool will now have stroke of .750 inch (1.90 cm). This stroke is required when installing fasteners in "maximum grip" conditions, and when excessive sheet gap exists. Under normal conditions, nose assemblies will install fasteners with standard 208-625 or A208-625 tools.

Sticker Locations

The 208-625 series tools are labeled with a sticker (P/N **590424-5700**) that contains safety and pressure settings information. If this sticker becomes damaged, worn, removed, or unreadable, or when replacing the cylinder, this sticker must be ordered and placed in the location shown on assembly drawings.



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

For component identification, see Figure 4 and the Assembly Drawings in this manual.



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

TO DISASSEMBLE THE TOOL:

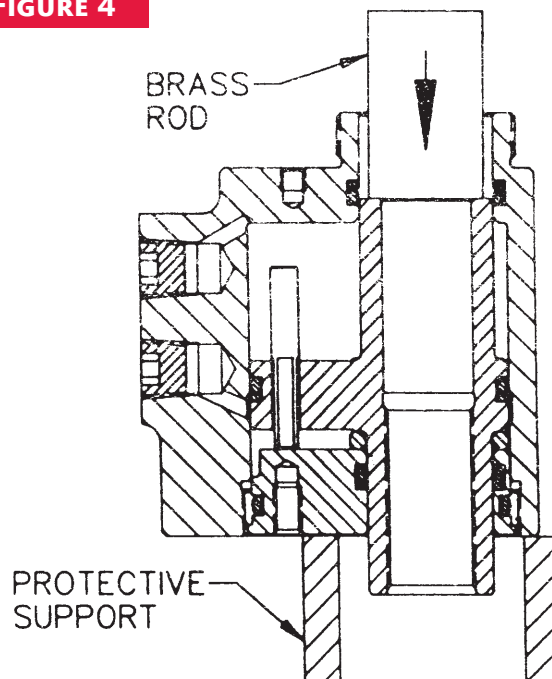
1. Disconnect the tool's electric trigger control cord or air trigger control hose, and then uncouple the hydraulic hoses.
2. Unscrew the cap screw and remove the anvil retainer. Remove the nose assembly from the tool.
3. Cut the cable ties from the hoses, being careful to NOT cut into the hoses.
4. Remove the trigger housing from the hoses. (For more detailed information, see the Assembly Drawings of applicable trigger assemblies in this manual.)
5. Remove both couplers (nipple & body) from the hoses, and drain the hoses into a container.
6. Unscrew both hoses from the tool's cylinder.
7. Use a 5/32" hex key to unscrew the socket-head screw. Remove the retaining ring.
8. Drain the fluid from the cylinder into a container; discard the fluid.

9. Press the piston and gland from the cylinder in two steps as follows.

STEP 1. Press against the piston rod with a wood block (not shown) until the block contacts the front of the cylinder.

STEP 2. Then using a brass drift/rod, resume pressing on the piston rod until the piston rod and gland are free of the cylinder. (Figure 4)

FIGURE 4



10. Slide the gland from the piston rear extension.
11. Remove the unloading valve from the piston; remove the stroke limiter from the piston extension.
12. Use a small, dull pointed rod to remove all O-rings and Back-up rings from parts.

NOTE: Disassemble control trigger systems only when necessary to rewire or replace switch/trigger.

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

Assembly Procedure

For component identification, see Figure 5 and the Assembly Drawings in this manual. Before re-assembling the tool:



CAUTIONS: Always use the proper dump valve and stroke limiter. (If the stroke is going to be changed, see the appropriate drawing.) Always make sure the large flats of the dump valve face the rear of the tool.

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



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

- 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 **208-625KIT**. Smear LUBRIPLATE® 130-AA or SUPER-O-LUBE® on rings and mating parts.
- Apply Parker Threadmate®, Loctite® 567, or Slic-Tite® to male pipe threads per manufacturer's instructions.

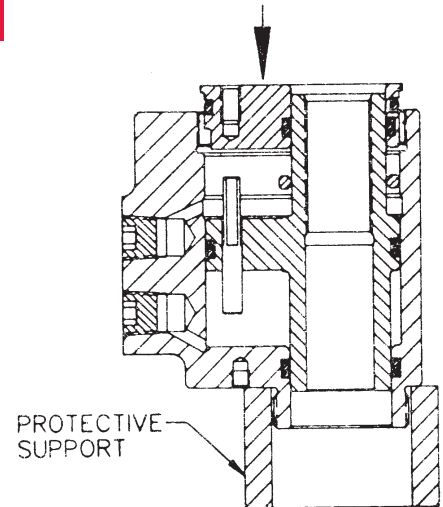


CAUTION: Do not use TEFLON® tape on pipe threads. Tape can shred, resulting in malfunctions.

TO RE-ASSEMBLE THE TOOL:

1. Set the cylinder assembly on a protective support, such as a pipe coupling or a hollow wood block (Figure 5) that will protect the front extension's threads. The piston can then slide through the front opening of the cylinder.
2. Position the piston in the cylinder so that piston rod is aligned with front opening of the cylinder. Push down on piston face (Figure 5). Continue to push until piston stops at bottom of cylinder; the piston rod now extends through the front opening.
3. Push the unloading valve into hole in piston face (flats on unloading valve must be toward rear of tool). Slide the stroke limiter onto piston extension.
4. Place the gland in the cylinder with the opening aligned with the extension, and press the gland in until it stops against the cylinder shoulder.
5. Screw the retaining ring into cylinder until it stops. Back out the retaining ring 1/4 turn or less, until cap screw can be screwed into gland at nearest retaining ring scallop; tighten with a 5/32" hex key.
6. Apply Slic-Tite® to hose threads. Screw the hoses into the cylinder.

FIGURE 5



See Figure 7 for components of the Air Trigger Assembly. See Figure 8 for components of the Electric Trigger Assembly.



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

NOTE: The Air Trigger Assembly can be modified to be used with model 970 POWERIG® Hydraulic Unit. Remove the quick disconnect (P/N 113021) and replace with male air fitting (P/N 503902). Screw air fitting 503902 into the sub-plate of the 970.

7. Clamp the (air or electric) trigger assembly onto the return hose and close to tool.
8. Install six (6) new cable ties, spaced approximately 18" apart.



WARNING: Connect the 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.

9. Connect hydraulic hoses to the POWERIG.
10. Connect the trigger connector/disconnect to hydraulic unit.

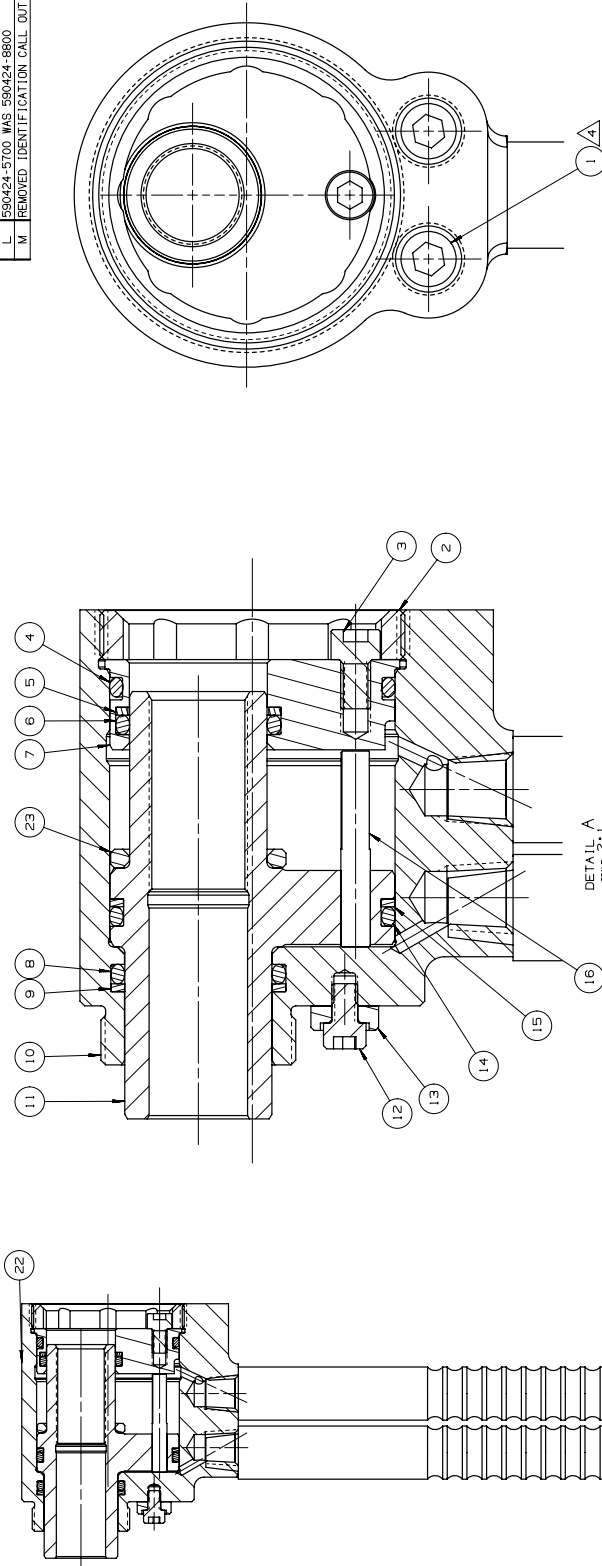
NOTE: See PREPARATION FOR Use for WARNINGS, CAUTIONS, the procedure for tool set-up, and reference to nose assembly and checking installed fasteners. See OPERATING INSTRUCTIONS for safe fastener installing procedure.

If all test results are good, the tool is ready to return to service.

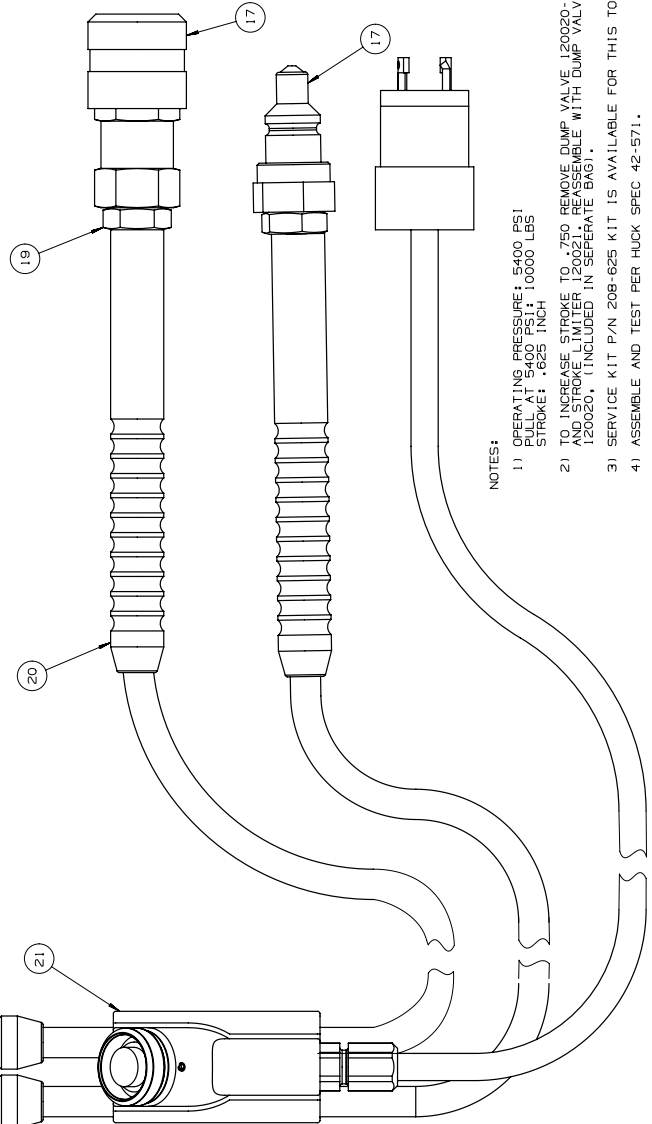


Assembly Drawing 208-625

REV	DESCRIPTION	DET	DATE
L	590424-5700 WAS 590424-6800	MJK	4/10/10
M	REMOVED IDENTIFICATION CALL OUT	MJK	11/10/10



DETAIL A
SCALE 2:1



NOTES:

- 1) OPERATING PRESSURE: 5400 PSI
PULL AT 5400 PSI: 10000 LBS
STROKE: .625 INCH
- 2) TO INCREASE STROKE TO .750 REMOVE DUMP VALVE 120020-1 AND STROKE LIMITER 120021. REASSEMBLE WITH DUMP VALVE 120020, (INCLUDED IN SEPARATE BAG).
- 3) SERVICE KIT P/N 208-625 KIT IS AVAILABLE FOR THIS TOOL.
- 4) ASSEMBLE AND TEST PER HUCK SPEC 42-571.

120021	1	STROKE LIMITER	23
590424-5700	1	COMBINED CE WARNING STICKER ASSEMBLY	22
118940	1	ELECTRIC TRIGGER & HOUSING	21
118944-1	2	HOSE ASSEMBLY	20
503431	2	REDUCING BUSHING	19
110439	1	FEMALE CONNECTOR	18
110438	1	MALE CONNECTOR	17
120020-1	1	DUMP VALVE	16
501121	1	B/U-RING	15
505875	1	O-RING	14
119423	1	STOP	13
501205	1	SOCKET HD. CAP SCREW	12
120011	1	PISTON	11
120019	1	CYLINDER	10
505569	1	B/U RING	9
503806	1	O-RING	8
120012	1	GLAND	7
505763	1	O-RING	6
501109	1	B/U RING	5
505875	1	O-RING	4
118472	1	SOCKET HD. CAP SCREW	1
120013	1	RETAINING RING	1
503704	2	PIPE PLUG	2
120021	1	ITEM	1

IDENTIFICATION PER SPEC 42-311:	DESCRIPTION
120021	STROKE LIMITER
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY
118940	ELECTRIC TRIGGER & HOUSING
118944-1	HOSE ASSEMBLY
503431	REDUCING BUSHING
110439	FEMALE CONNECTOR
110438	MALE CONNECTOR
120020-1	DUMP VALVE
501121	B/U-RING
505875	O-RING
119423	STOP
501205	SOCKET HD. CAP SCREW
120011	PISTON
120019	CYLINDER
505569	B/U RING
503806	O-RING
120012	GLAND
505763	O-RING
501109	B/U RING
505875	O-RING
118472	SOCKET HD. CAP SCREW
120013	RETAINING RING
503704	PIPE PLUG
120021	ITEM

ITEM	DESCRIPTION	QTY
120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
505875	O-RING	1
118472	SOCKET HD. CAP SCREW	1
120013	RETAINING RING	1
503704	PIPE PLUG	2
120021	ITEM	1

ITEM	DESCRIPTION	QTY
120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
505875	O-RING	1
118472	SOCKET HD. CAP SCREW	1
120013	RETAINING RING	1
503704	PIPE PLUG	2
120021	ITEM	1

ITEM	DESCRIPTION	QTY
120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
505875	O-RING	1
118472	SOCKET HD. CAP SCREW	1
120013	RETAINING RING	1
503704	PIPE PLUG	2
120021	ITEM	1

ITEM	DESCRIPTION	QTY
120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
505875	O-RING	1
118472	SOCKET HD. CAP SCREW	1
120013	RETAINING RING	1
503704	PIPE PLUG	2
120021	ITEM	1

ITEM	DESCRIPTION	QTY
120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
505875	O-RING	1
118472	SOCKET HD. CAP SCREW	1
120013	RETAINING RING	1
503704	PIPE PLUG	2
120021	ITEM	1

ITEM	DESCRIPTION	QTY
120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
505875	O-RING	1
118472	SOCKET HD. CAP SCREW	1
120013	RETAINING RING	1
503704	PIPE PLUG	2
120021	ITEM	1

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120021	STROKE LIMITER	1
590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
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118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1
110438	MALE CONNECTOR	1
120020-1	DUMP VALVE	1
501121	B/U-RING	1
505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
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505875	O-RING	1
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505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
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120019	CYLINDER	1
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503806	O-RING	1
120012	GLAND	1
505763	O-RING	1
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505875	O-RING	1
119423	STOP	1
501205	SOCKET HD. CAP SCREW	1
120011	PISTON	1
120019	CYLINDER	1
505569	B/U RING	1
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120012	GLAND	1
505763	O-RING	1
501109	B/U RING	1
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ITEM	DESCRIPTION	QTY
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590424-5700	COMBINED CE WARNING STICKER ASSEMBLY	1
118940	ELECTRIC TRIGGER & HOUSING	1
118944-1	HOSE ASSEMBLY	2
503431	REDUCING BUSHING	2
110439	FEMALE CONNECTOR	1

Assembly Drawing Hydraulic Hose & Coupler Set

Figure 6

TIP: USE A FINE INDIA STONE TO REMOVE NICKS AND BURRS FROM DIAMETER A AND LEADING EDGE TO PREVENT DAMAGE TO O-RING.

HYDRAULIC COUPLER SET, P/N 110440

O-ring P/N 504438, and Back-up ring, P/N 501102, must be replaced if leaking occurs when hydraulic couplings are connected. Use a pick with a long point, approximately .060 in diameter, to lift out O-ring and Back-up ring. O-ring and Back-up ring are included in service kit.

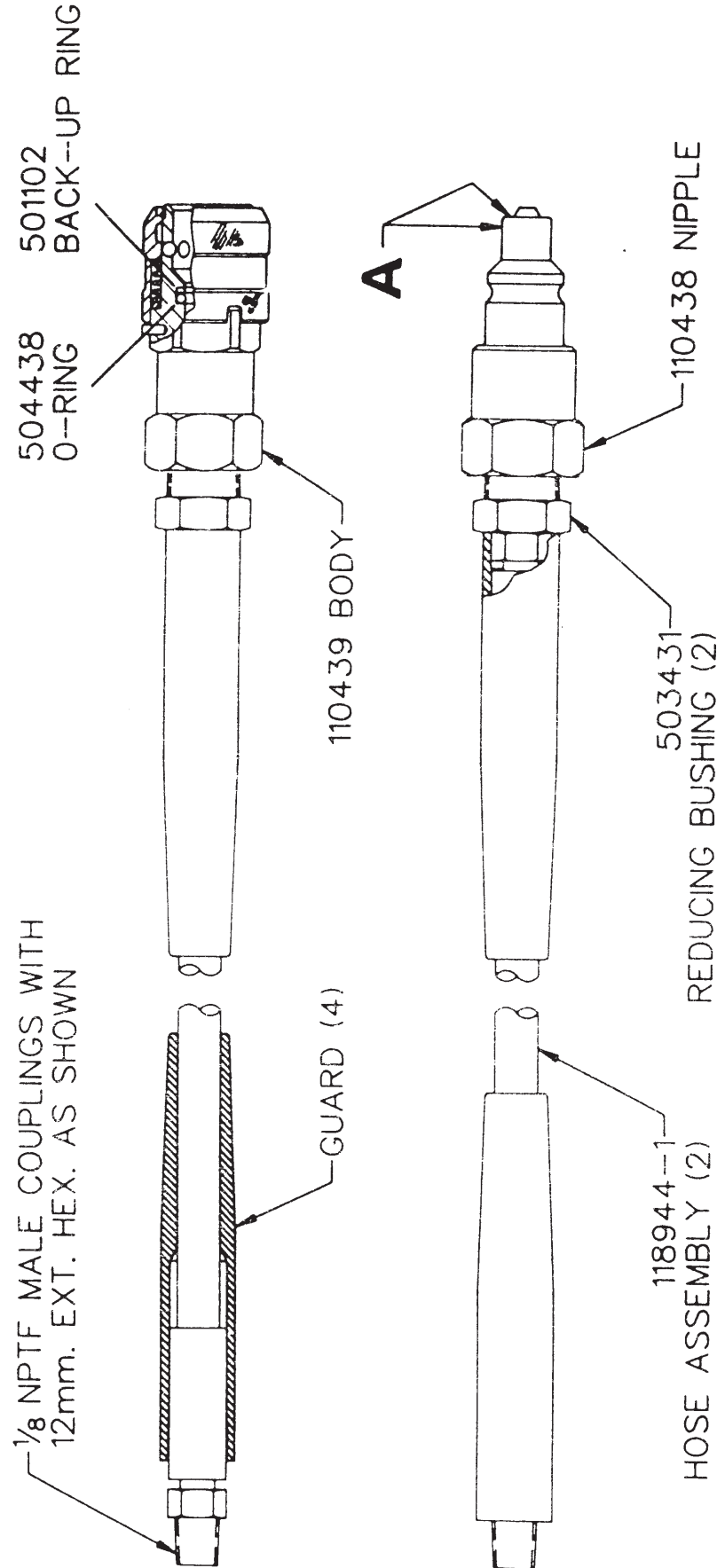


Figure 6 - Hydraulic Hose and Coupler Set



Assembly Drawing Air Trigger Assembly

Figure 7

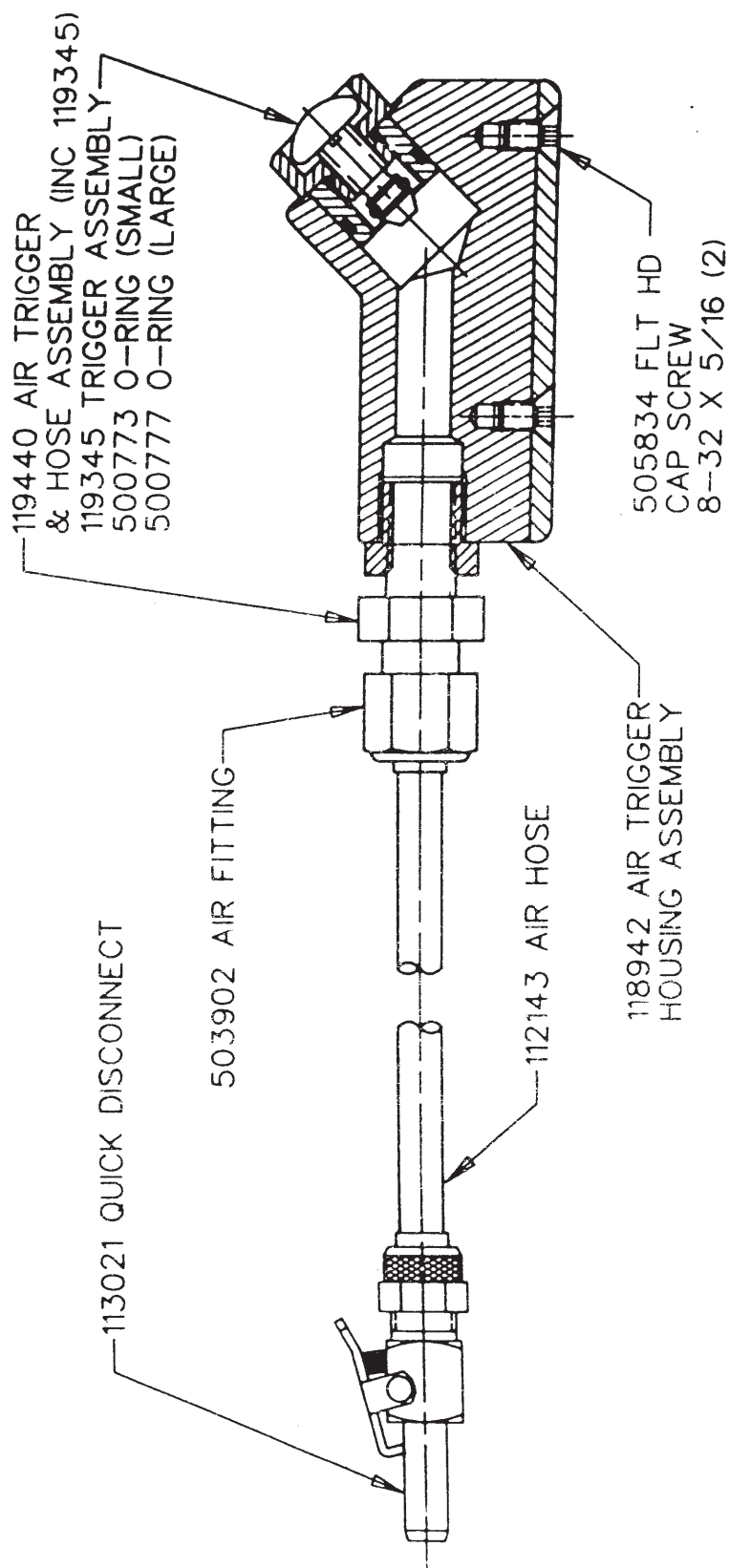


Figure 7 - Air Trigger Assembly, 118935

(Note: 118935 includes entire assembly.)



Air Trigger. Hose & Housing Assemblies

Figure 7a

REV	DESCRIPTION	DATE
A	RELEASE	04/22/96

125142 AIR TRIGGER
& HOSE ASSEMBLY

118942 AIR TRIGGER
HOUSING ASSEMBLY

FORM KE04 REV C		By accepting this proprietary Huck drawing, recipient agrees not to reproduce or disclose any part thereof to any others without the written permission of Huck International, Inc.	
MATERIAL:	SPEC:	HUCK INTERNATIONAL, INC., I.S.D.	
HARDNESS:	(RAW OR STOCKED STATE)	85 GRAND STREET, P.O. BOX 2270	
HEAT TREAT TO:	SPEC:	KINGSTON, NEW YORK 12401	
SURFACE TREAT:	SPEC:	AIR TRIGGER, HOSE, & HOUSING ASSEMBLY	
SURFACE FINISH NOT TO EXCEED:	Ra	DET. SMR	DATE: 04/22/96
IDENTIFICATION PER SPEC 42-311:	★ BAG	CK: <i>HS</i>	SCALE: FULL
SURFACES TO BE	○ // . Φ . L & □ WITHIN TIR	FOC: TFF	
		FAC: A	125145

TOLERANCES UNLESS OTHERWISE SPECIFIED:
(ALL DIMENSIONS ARE IN INCHES)

XX, XXX	±
INT COR RADII	-
BREAK EDGES	-
ANGLES	±
FINAL ASSY:	



Assembly Drawing Air Trigger & Hose Assembly

Figure 7b

REV	DESCRIPTION	DATE
A	RELEASE	04/22/96

NOTES:

1 INCLUDE 119345 AND CABLE TIE P/N 505833
LOOSE IN BAG

119345 AIR TRIGGER

112143-2 TUBING

503902 AIR FITTING

506267 PLUG

506973 FEMALE CONNECTOR

FORM: KE104 REV C		By accepting this proprietary Huck drawing, recipient agrees not to reproduce or disclose any part thereof to any others without the written permission of Huck International, Inc.	
MATERIAL:	-	TOLERANCES UNLESS OTHERWISE SPECIFIED: (ALL DIMENSIONS ARE IN INCHES)	
HARDNESS:	-	XX, XXX	-
HEAT TREAT TO:	-	INT COR RADII	-
SURFACE TREAT:	-	BREAK EDGES	-
SURFACE FINISH NOT TO EXCEED:	Rq	ANGLES	-
IDENTIFICATION PER SPEC 42-311:	★ BAG	FINAL ASSY:	-
SURFACES TO BE	○, //, ◇, L, & □ WITHIN T.I.R.		

HUCK INTERNATIONAL, INC., I.S.D.	
85 GRAND STREET, P.O. BOX 2270 KINGSTON, NEW YORK 12401	

AIR TRIGGER, & HOSE ASSEMBLY	
DET. SHR	DATE: 04/22/96
CK. ME	SCALE: FULL
FOC. TFF	A
125142	

Assembly Drawing Electric Trigger Assembly

Figure 8

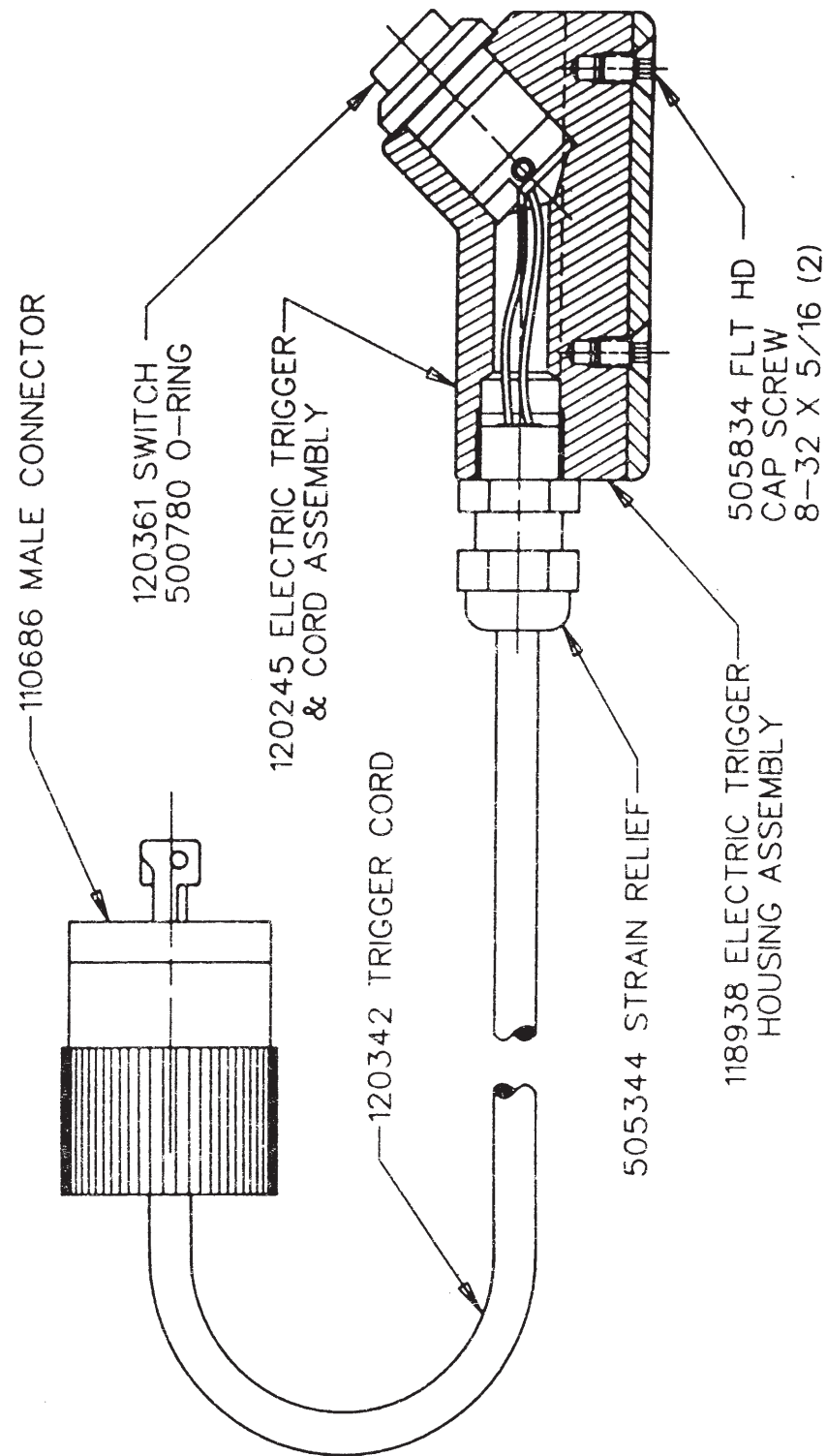
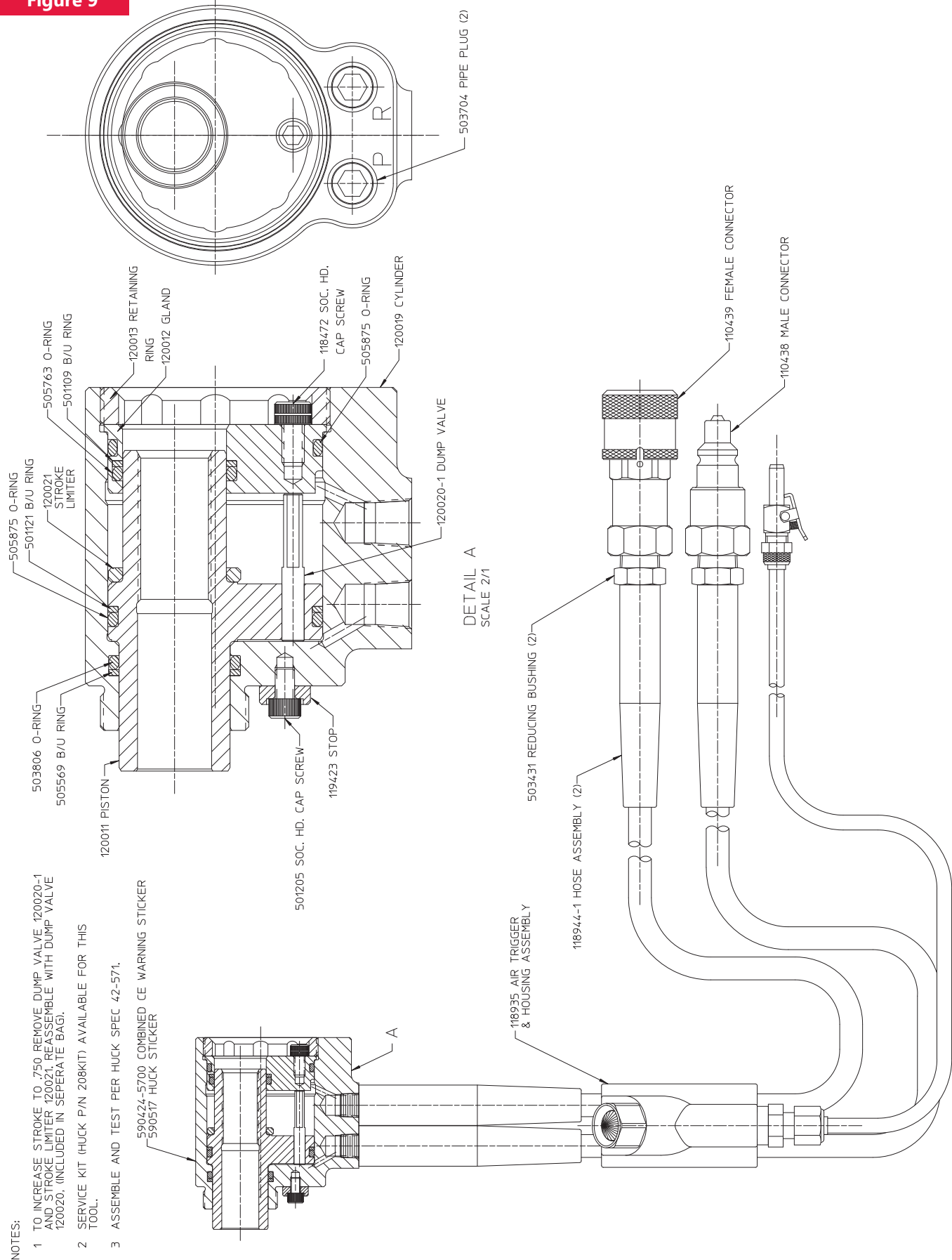


Figure 8 - Electric Trigger Assembly, 118940

(Note: 118940 includes entire assembly.)



Assembly Drawing A208-625

Figure 9




Kits & Accessories

Spare Parts Service Kits 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.

Service Kit

Use **208-625KIT** for the 208-625 series tools. It contains:

P/N	Description	Qty.
501109	Back-up ring	1
501121	Back-up ring	1
505569	Back-up ring	1
501102	Back-up ring	1
503806	O-ring (Fig 3)	1
504438	O-ring (Fig 6)	1
505763	O-ring (Fig 3)	1
505875	O-ring (Fig 3)	2
500773	O-ring (Fig 7)	1
500777	O-ring (Fig 7)	1

ACCESSORIES

Parker Threadmate® (4oz tube) - **508517**
Slic-Tite® (stick) - **503237**

Air and Hydraulic Conversion Kit (P/N 125419)

Converts 208-625 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

Replacement Parts

When purchasing a cylinder, piston, or gland, ask for:

120016	Cylinder Assembly
120017	Piston Assembly
120018	Gland

Parts shown may be purchased but are individual parts; they do not include O-rings, etc.

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.

- Inoperative POWERIG® Hydraulic Unit. See applicable instruction manual.
- Loose air or electric connections.
- Damaged trigger assembly.
- Loose or faulty hydraulic hose couplings.
- Unloading valve not installed in tool.

2. Tool operates in reverse.

- Reversed hydraulic hose connections between POWERIG and tool.

3. Tool leaks hydraulic fluid.

- Defective O-rings or loose hose connections at tool.

4. Hydraulic couplers leak fluid.

- Damaged or worn O-rings in coupler body. See Coupler 110440.

5. Hydraulic fluid overheats.

- Hydraulic unit not operating properly; see unit instruction manual.
- Unloading valve incorrectly installed.
- POWERIG Hydraulic Unit running in reverse (918, 918-5 only). See unit instruction manual.

6. Tool operates erratically and fails to install fastener properly.

- Low or erratic hydraulic pressure; air in system.
- Damaged or worn piston O-ring in tool.
- Unloading valve incorrectly installed.
- Excessive wear on sliding surfaces of tool parts.
- Excessive wear of unloading valve in tool.

7. Pull grooves on fastener pintail stripped during PULL stroke.

- Operator not sliding anvil completely onto fastener pintail.
- Incorrect fastener length.
- Worn or damaged jaw segments.
- Metal particles accumulated in pull grooves of jaw segments.
- Excessive sheet gap.

8. Collar of HUCKBOLT® Fastener not completely swaged.

- Improper tool operation. See Trouble 6.
- Scored anvil.

9. Shear collar on Huck Blind fastener not driven.

- Improper tool operation.
- Worn or damaged driving anvil in nose assembly.

10. Tool "hangs-up" on swaged collar of HUCKBOLT Fastener.

- Improper tool operation. See Trouble 6.
- RETURN pressure too low.
- Nose assembly not installed per NOSE ASSEMBLY DATA SHEET.

11. Pintail of fastener fails to break.

- Improper tool operation. See Trouble 6.
- Pull grooves on fastener stripped. See Trouble 7.
- PULL pressure too low.
- Worn unloading valve.



Notes



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.



Howmet Inc. (NYSE: HWM) 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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