Instruction Manual
3585 series
Hydraulic Installation Tools

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EC Declaration of Conformity

Manufacturer:
Howmet Aerospace, LLC, Industrial Products Group, 1 Corporate Drive, Kingston, NY, 12401, USA

Description of Machinery:
Model 3585 hydraulic installation tool and specials based on its design (e.g. PR####).

Relevant provisions complied with:
British Standard related to hand held, non-electric power tools (ISO 11148-1:2011)

European Representative:
Paul Carson, Howmet Aerospace, 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: Nicholas Gougoutris
Position: Engineering Manager
Location: Howmet Aerospace, LLC d/b/a Howmet Fastening Systems
Kingston, New York, USA
Date: 20/08/2020 (August 20, 2020)

Declared dual number noise emission values in accordance with ISO 4871

<table>
<thead>
<tr>
<th>Noise Parameter</th>
<th>Value (dB)</th>
<th>Reference</th>
<th>Uncertainty</th>
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<tr>
<td>A weighted sound power level, LWA</td>
<td>89</td>
<td>1 pW</td>
<td>3 dB</td>
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<tr>
<td>A weighted emission sound pressure level at the work station, LpA</td>
<td>78</td>
<td>20 μPa</td>
<td>3 dB</td>
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<td>C-weighted peak emission sound pressure level, LpC, peak</td>
<td>119</td>
<td>20 μPa</td>
<td>3 dB</td>
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Values determined according to noise test code ISO 3744. The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.

Declared vibration emission values in accordance with EN 12096

<table>
<thead>
<tr>
<th>Vibration Parameter</th>
<th>Value (m/s²)</th>
<th>Uncertainty, K</th>
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<tbody>
<tr>
<td>Measured Vibrations emission value, a</td>
<td>.40</td>
<td>.02</td>
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</table>

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

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

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

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

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

X. HYDRAULIC TOOL SAFETY INSTRUCTIONS:

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

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

The 3585 series Hydraulic Installation Tools are cylinder and piston assemblies; complete with handle, hoses, couplers, and a control cord, and are ready to be attached to, and powered by, a HUCK Powerig® Hydraulic Unit (model 918 or equivalent); nose assemblies are available separately. These tools install a variety of fasteners.

The tools have a dump valve, positioned by the piston, which relieves the hydraulic pressure at both ends (PULL and RETURN) of the stroke. Correct PULL and RETURN pressures are important for operation of the tool and nose assembly, and for the safety of the operator. Use HUCK Set-up Gauge (P/N T-124833CE) to check and set pressures. The gauge is available separately and includes instructions for use.

MODEL 3585
Installs -16 (1/2”) to -24 (3/4”) Pintail-style Lockbolt Fasteners
Has a pintail ejector to eject broken pintails from the nose assembly
Has a nose adapter and retaining rings for attaching nose assemblies

MODEL 3585PT
Installs -16 (1/2”) to -24 (3/4”) Huck-Spin, Huck-Spin2®, and Bob-Tail® Fasteners
Does NOT have a pintail ejector (it installs fasteners without a pintail break)
Has a pass-through hole (on the piston) to allow the included T-wrench to install Huck-Spin collars

Specifications

POWER SOURCE: HUCK Powerig® hydraulic power source
HOSE KITS: Use only genuine HUCK Hose Kits rated @ 10,000 psi (689.5 BAR) working pressure.

3585 SERIES DIMENSIONS:
(not including hose, cord, or nose assembly)

<table>
<thead>
<tr>
<th>Inches</th>
<th>Centimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>7.84</td>
</tr>
<tr>
<td>Width</td>
<td>4.02</td>
</tr>
<tr>
<td>Height</td>
<td>10.4</td>
</tr>
</tbody>
</table>

MAX OPERATING TEMP: 125°F (51.7°C)
MAX FLOW RATE: 2 gpm (7.5 l/m)
MAX PULL PRESSURE: 7400 psi (510 BAR)
MAX RETURN PRESSURE: 2200 psi (152 BAR)
PULL CAPACITY: 45,668 lbs @ 7400 psi (203 kN @ 510 BAR)

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 IP & Holding GmbH
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.
**PULL CYCLE**

**Figure 1a:** When the trigger is pressed, a solenoid-operated valve in the Powerig® hydraulic power source directs pressurized fluid through the PULL hose to the front side of the piston, and allows fluid on the RETURN side to flow back to the tank. The piston and nose assembly collet move rearward installing the fastener.

When the piston reaches the end of the PULL stroke, it uncovers flats at the rear of the dump valve. These flats provide a passage for hydraulic fluid from the PULL side to the RETURN side of the piston, unloading (or “dumping”) the pressurized fluid back to the tank.

**RETURN CYCLE**

**Figure 1b:** When the trigger is released, the solenoid is de-energized and the valve directs pressurized fluid to the rear of the piston, and the fluid on the PULL side flows back to the tank. This causes the piston and collet to move forward, and pushes the nose assembly and tool off the swaged (installed) fastener.

When the piston reaches the end of the RETURN stroke, pressure builds, causing the Powerig to shut off, completing the cycle.
Preparation for Use

WARNINGS:
Read entire manual before using tool.
Before using HUCK equipment, a 30-minute training session with qualified personnel is recommended.
When operating HUCK equipment, always wear approved eye and hearing protection.
Ensure adequate clearance for operator’s hands before proceeding.
Only HUCK Powerig® Hydraulic Units should be used to power HUCK tools. Hydraulic units that deliver high PULL and RETURN pressures must be equipped with relief valves; units not equipped with relief valves are not recommended and MAY BE DANGEROUS.
Set PULL and RETURN pressures as specified in SPECIFICATIONS. Failure to properly set pressures may result in serious personal injury. Use Pressure Gauge T-124833CE as indicated in its instruction manual.
Connect tool hoses to the Powerig before connecting tool switch-control cord to the Powerig. Serious personal injury may occur if not connected in this order and disconnected in the reverse order.

CAUTIONS:
Do not use TEFLO® tape on pipe threads. Tape can shred, resulting in malfunctions.
Keep disconnected hoses and couplers and hydraulic fluid free of foreign matter. Contaminated fluid can cause valve failures.
Do not abuse this tool by dropping it, using it as a hammer, or otherwise causing unnecessary wear and tear. Never carry the tool by attached hoses.

GENERAL PRECAUTIONS
During disassembly and assembly, take the following precautions to avoid damaging tool or components:
(a) Use materials such as brass, aluminum, or wood, to protect tool when applying pressure.
(b) Apply continuous steady pressure, rather than sharp blows, to disassemble or assemble components.
   An arbor press provides steady pressure to press a component in or out.
(c) Never force a component if it “hangs up” due to misalignment. Reverse the procedure to correct misalignment and start over.
(d) Smear LUBRIPLATE® 130-AA (HUCK P/N 502723) or equivalent on O-rings and mating surfaces to ease assembly and prevent damage to O-rings.
(e) Coat Parker Threadmate, Loctite 567, or Slic-tite stick to male pipe threads per manufacturer's instructions.

DISASSEMBLY AND ASSEMBLY TOOLS
Working on these tools requires the use of standard hand tools, such as wrenches, drifts, copper and lead hammers, screwdrivers, socket screw hexagon keys, and long forceps (tweezers). HUCK also recommends having access to an arbor press and vise with soft jaws. For specially-designed tools for working on this tool, see KITS & ACCESSORIES.

POWER SOURCE CONNECTIONS
Use a HUCK Powerig® Hydraulic unit, or equivalent, that has been suitably prepared for operation.
1. Turn off the Powerig; disconnect its power supply.
2. Apply Parker Threadmate, Loctite 567, or Slic-tite stick to male pipe threads per manufacturer's instructions, and then connect the hoses to the Powerig.
3. Connect the tool control switch cord to Powerig.
4. Connect the Powerig to the power supply and turn it on. Press and hold the tool trigger for 30 seconds; then press 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.
5. Disconnect tool's control switch cord from the Powerig; disconnect the Powerig from the power supply. Select a nose assembly for the fastener to be installed and attach it to the tool.
6. Reconnect the Powerig to the power supply and the tool's switch control cord to the Powerig.
7. Check the operation of nose assembly; install fasteners in a test plate of correct thickness with proper size holes. Inspect installed fasteners.

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

Hydraulic Couplings

<table>
<thead>
<tr>
<th>110439 Female Connector</th>
<th>110438 Male Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>504438 O-ring</td>
<td>501102 Back-up Ring</td>
</tr>
</tbody>
</table>

Use a fine India stone to remove any nicks or burrs from these areas to prevent damage to O-ring of Female
Operating Instructions
FOR SAFE OPERATION, THIS SECTION MUST BE READ AND UNDERSTOOD.

WARNINGS:
To avoid severe personal injury, wear approved eye and ear protection. Be sure of adequate clearance for operator's hands before proceeding with fastener installation.

If the tool comes with a pintail deflector or bottle, make sure it is attached to the tool and directed away from all personnel.

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

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

The collar flange must be against work piece.

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

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

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

Only use compatible equipment with this tool.

This section details installing HuckBolt® fasteners. Review all CAUTIONs and WARNINGS prior to installing these fasteners. If the tool malfunctions, consult TROUBLESHOOTING prior to attempting any repairs. Prior to starting these procedures, check the tool components drawing to verify the proper orientation of the flats on the dump valve; they should face the rear of the tool.

To install a HuckBolt® Fastener:

1. Place a fastener in the workpiece and place the collar over the fastener.

   **NOTE:** The beveled end of the collar must be towards the nose assembly and tool.

2. Hold the fastener and push the nose assembly onto the fastener that is protruding through the collar until the nose anvil touches the collar.

   **NOTE:** The tool and nose assembly must be at right angles (90°) to the workpiece.

3. Press and hold the trigger to start installation cycle.

4. Release the trigger when forward motion of nose assembly anvil stops and pintail breaks off.

   The pressure is re-directed; the piston moves forward; and the tool is pushed off the fastener and ejects the pintail. The tool and nose assembly are ready for the next installation cycle.

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

Note: In certain situations, it may be permissible to use a BobTail tool and fastener without a collar to remove sheet gap prior to full installation with a collar. Consult qualified Huck engineering personnel before attempting this operation.
CAUTIONS:
Replace all seals, wipers, O-rings and Back-up rings when the tool is disassembled for any reason, and at regular intervals, depending on severity and length of use.
Do not use TEFLOM® tape on pipe threads. Tape can shred, resulting in malfunctions. Apply Parker Threadmate, Loctite 567, or Slic-tite stick to male pipe threads per manufacturer’s instructions.

GENERAL
The operating efficiency of a tool is directly related to the performance of the entire system. Regular inspection and the immediate correction of minor problems will keep the tool operating efficiently, and prevent downtime. A schedule of preventive maintenance of the tool, nose assembly, hoses, trigger and control cord, and Powerig® hydraulic power source will ensure the tool's proper operation, extend its life, and reduce the risk of personal injury to those who operate it. NOTE: HUCK tools should be serviced only by personnel who are thoroughly familiar with its operation. Consult MSDS before servicing tool.

Service the tool in a clean, well-lighted area. Take special care to prevent contamination of pneumatic and hydraulic systems. Keep separated parts away from dirty work surfaces. Carefully handle all parts. Before reassembly, examine them for damage and wear. Disassemble and assemble tool components in a straight line. Do NOT bend, cock, twist, or apply undue force. Keep any relevant hand tools and HUCK Spare Parts Service Kits available. They include important consumable parts. Other components, as experience dictates, should also be available.

DAILY
If a Filter-Regulator-Lubricator unit is not being used, uncouple the air disconnects and add a few drops of hydraulic fluid to the air inlet of the tool. NOTE: If the tool is in continuous use, add a few drops of oil in every 2–3 hours. Before connecting an air hose to the tool, bleed the air lines to clear dirt or water. Verify that hoses, fittings, couplings, and electrical connections are secure and free of leaks; tighten or replace if necessary. Check tools and nose assemblies for damage and air or hydraulic leaks; tighten, repair, or replace if necessary. Inspect the tool, hoses, and Powerig during operation to detect abnormal heating, leaks, or vibration. Clean nose assemblies in mineral spirits to clear jaws and rinse metal chips and dirt. For a more thorough cleaning, disassemble the nose assembly. Use a dull-pointed “pick” to remove embedded particles from the pull grooves of the jaws. Clean all parts of any assembly, and UNITIZED® Jaws, in mineral spirits or isopropyl alcohol only. Do not let the jaws come in contact with other solvents. Do not soak jaws; dry them immediately after cleaning. Dry other parts before re-assembling.

WEEKLY
Disassemble, clean, and reassemble nose assemblies in accordance with applicable instructions. Check the tool and all connecting parts for damage and fluid/air leaks; tighten or replace if necessary. Inspect the cylinder bore, piston and rod/extension, and dump valve for scored surfaces, excessive wear, and damage; replace as necessary.

STICKERS
Stickers on the tool display safety and pressure-settings information, and must always be legible. For more information on sticker locations and part numbers, see STICKER LOCATIONS.

SPARE PARTS SERVICE KITS
HUCK Spare Parts Service Kits contain replacements or perishable tool parts. HUCK recommends having the appropriate kit accessible. For more information, see KITS AND ACCESSORIES.

FLUID MAINTENANCE AND RECYCLED MATERIALS
See SPECIFICATIONS for information on approved fluid types. Dispose of fluid in accordance with local environmental regulations. Recycle steel, aluminum, and plastic parts in accordance with local lawful and safe practices.

Sticker Locations
HUCK tools are labeled with important stickers that contain safety and pressure-settings information. These stickers must remain on the tools and be legible. A sticker must be ordered and replaced on the tool, in the location shown, if it becomes damaged or worn, it has been removed from the tool, or when replacing the Cylinder.
Disassembly Procedure

This procedure is for complete disassembly of the tool. Disassemble only those components necessary in order to replace damaged O-rings, C-rings, Back-up rings, and worn or damaged components. Always use a soft-jaw vise to avoid damage to tool.

For component identification, see Figures 3 & 4.

To disassemble the tool:

NOTE: “P/N” indicates a part that is available from HUCK.

1. Disconnect the tool’s electrical control trigger from the Powerig®; then uncouple the hydraulic hoses.

**WARNING:** Disconnect the tool control cord from the Powerig before disconnecting the hydraulic hoses from it. If not disconnected in this order, serious personal injury may occur.

2. Remove the sleeve and split ring. Remove the nose assembly.
3. Remove the coupler nipple and coupler body. Drain the hydraulic hoses into a clean container.
4. Push rearward on the piston until the hydraulic fluid is drained into the container.
5. Model 3585: Remove the retaining ring and cover plate.
   Model 3585PT: Remove the screws and the retainer.
6. Model 3585: Use the End Cap Hex Wrench (P/N 126981) to remove the end cap.
   Model 3585PT: Use the End Cap Hex Wrench (P/N 126981) to remove the end cap assembly.
7. Push rearward on the adapter assembly. The piston and adapter will slide from the cylinder.
8. Pull the piston out of the adapter, and remove the dump valve from the piston.

   **NOTE:** Ejector gland assembly can be removed to inspect and/or replace components without disassembling tool. Use ejector gland wrench P/N 122048 to unscrew the assembly; then remove it and the pintail ejector from the piston.
9. Use a small-diameter, dull-pointed “pick” to remove O-rings and Back-up rings from all components.
10. Remove the socket head cap screw from the handle assembly.
11. Remove two button-head cap screws from one-half of the handle and cylinder.
12. Separate the handle halves and lift out the trigger switch assembly, strain relief, and control cord (including cord connector).
13. Remove the remaining button-head cap screws and handle half. Remove both hydraulic hoses from the cylinder.
14. Loosen two screws at the rear of the switch to remove the switch from the electrical cord. Remove two #6-32 socket setscrews to disassemble the switch. Pull the strain relief grommet from the cord.

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

**WARNING:** Do NOT re-use seals, wipers, or rings; irreparable tool damage could occur. Discard these parts and use replacements (see Kits & Accessories).

**NOTE:** Disassemble the cord connector to rewire or replace it.
Assembly Procedure

This section details the re-assembly of the tool. For component identification, see Figures 3 & 4.

Prior to re-assembling the tool, HUCK recommends having the following items accessible.

**NOTE:** “P/N” indicates a part that is available from HUCK.
- The appropriate HUCK Spare Parts Service Kit (P/N 3585KIT or P/N 3585PTKIT)
- Make sure all ejector gland assembly parts (rings and wiper) are in place, then screw in the assembly. Use the Ejector Gland Wrench (P/N 122048) to tighten the assembly.

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

- LUBRIPLATE* 130-AA (available as P/N 502723) or SUPER-O-Lube* (available as P/N 505476)

**CAUTION:** Do not use TEFLON* tape on pipe threads. Tape can shred, resulting in malfunctions. Threadmate™ is available in a 4oz. tube from HUCK (P/N 508517).

Before re-assembling the tool:
- Clean components in mineral spirits or other solvent compatible with O-ring seals.
- Clean out O-ring grooves.
- Inspect components for scoring, excessive wear, and damage; replace as necessary.
- Replace O-rings and Back-up rings. See Assembly Drawings for guidance on positioning O-rings and Back-up rings.
- Smear LUBRIPLATE* 130-AA (HUCK P/N 502723) or SUPER-O-LUBE* (HUCK P/N 505476) on rings, and mating parts to ease assembly.

To re-assemble the tool:
1. Assemble the electrical control cord to the plug of the electrical connector.
2. Push the cord through the strain relief and attach it to the switch.
3. Screw both hoses into the cylinder.
4. Loosely attach the handle-half by turning two button-head cap screws into the cylinder.
5. Place the assembled switch, electrical cord, strain relief, and electrical connector into the handle recesses. Tighten the four cap screws to 50lbs/in of torque (if plated) or 70lbs/in (if un-plated), while holding the assembled components in position.
6. Assemble the ejector gland assembly and pintail ejector to the piston as follows.
   - Insert the pintail ejector into the piston.
   - Drop in the ejector washer.
   - Drop in the O-ring.

7. Push the nose adapter into the cylinder.
8. Install the retaining ring into the groove in the adapter.
9. Push the assembled piston and the assembled front gland (with all O-rings, Back-up rings, Polyseals, wiper, and wiper housing in place) into the assembled cylinder and adapter.
10. Slide the dump valve into the hole through the piston. Be sure the dump valve is assembled with four flats to the rear.
11. Use the End Cap Hex Wrench (P/N 126981) to tighten the end cap, then back it off until the locator can be placed in closest matching grooves.
12. Model 3585: After the end cap is locked in place, install the cover plate and retaining ring.
   - Model 3585PT: After the end cap is locked in place, install the retainer and cap screws.
13. Screw the coupler nipple onto the hose in port P; screw the coupler body onto the hose in port R.
14. Connect the tool hoses to the Powerig® hydraulic power source hoses and cycle the tool a few times. Observe the action of the tool and check for leaks.
15. Attach the nose assembly to the tool following the applicable Nose Assembly Data Sheet. Use the split ring set and retaining sleeve furnished with tool.

**WARNING:** Make sure the tool has been properly re-assembled prior to use. Failure to do so could result in serious personal injury.
21 - Ejector Gland Assembly

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>P/N</th>
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Kits and Accessories

The following product-specific 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. Keep the appropriate kit and accessories on-hand when preparing, using, and performing maintenance on this tool.

KITS
Service Kits 3585KIT 3585PTKIT

ACCESSORIES
Ejector Gland Wrench 122048
End Cap Hex Wrench 126981
Remote Trigger (all models) 123381
Pressure Gauge T-124833CE
Piston Assembly Tool Kit 123110-12
Contains:
GLYD Ring® insertion tool 121694-2628
Piston Assembly Tool 123111-7
Spacer 123112-7

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 air or electric connections.
   c. Damaged trigger assembly.
   d. Loose or faulty hydraulic hose couplings.
   e. Dump valve not installed in tool.

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

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

4. Hydraulic couplers leak fluid.
   a. Damaged or worn O-rings in coupler body. See Coupler 110440.

5. Hydraulic fluid overheats.
   a. Hydraulic unit not operating properly.
   b. Dump valve installed incorrectly.
   c. Powerig Hydraulic Unit running in reverse (918: 918-5). See unit’s manual.

6. Tool operates erratically and fails to properly install fastener.
   a. Low or erratic hydraulic pressure; air in system.
   b. Damaged or worn piston O-ring in tool.
   c. Dump valve installed incorrectly.
   d. Excessive wear on sliding surfaces of tool parts.
   e. Excessive wear of dump valve in tool.

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

   b. Scored anvil.

9. Shear collar on HUCK Blind Fastener not driven.
   a. Improper tool operation.
   b. Worn or damaged driving anvil in nose assembly.

10. Tool “hangs-up” on swaged collar of HuckBolt Fastener.
    b. RETURN pressure too low.
    c. Nose assembly not installed correctly.

11. Pintail of fastener fails to break.
    b. Pull grooves on fastener are stripped. See Trouble 7.
    c. PULL pressure too low.
    d. Worn dump valve.
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.