

Alcoa
Fastening
Systems



INSTRUCTION MANUAL

MODEL 3585

HYDRAULIC INSTALLATION TOOL



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

01-07-2011
HK1080



EC Declaration of Conformity

Manufacturer:

Alcoa Fastening Systems, Industrial Products Group, 1 Corporate Drive, Kingston, NY,
12401, USA

Description of Machinery:

Model number 3585 fastener installation tools

Relevant provisions complied with:

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

British Standard related to hand held, non-electric power tools (EN 792-1)

European Representative:

Rob Pattenden, Huck International, Ltd. Unit C Stafford Park 7, Telford Shropshire TF3 3BQ,
England, United Kingdom

Authorized Signature/date:

I, the undersigned, do hereby declare that the equipment specified above conforms to the
above Directive(s) and Standard(s).

Signature:



Full Name:

Larry M. Krieg

Position:

Engineering Manager
Installation Systems Division

Place:

Kingston, New York, USA

Date:

January, 2011

Declared dual number noise emission values in accordance with ISO 4871

A weighted sound power level, LWA: 89 dB (reference 1 pW)
Uncertainty, KWA: 3 dB

A weighted emission sound pressure level at the work station, LpA: 78 dB
(reference 20 μ Pa)
Uncertainty, KpA: 3 dB

C-weighted peak emission sound pressure level, LpC, peak: 119 dB (reference 20 μ Pa)
Uncertainty, KpC: 3 dB

Values determined according to noise test code ISO 15744, using as basic standards ISO 3744 and ISO 11203. The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.

Declared vibration emission values in accordance with EN 12096

Measured Vibrations emission value, a: .40 m/s²

Uncertainty, K: .02 m/s²

Values measured and determined according to ISO 28662-1, ISO 5349-2, and EN 1033

Test data to support the above information is on file at Alcoa Fastening Systems, Industrial Products Group, Kingston Operations, Kingston, NY, USA.

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SAFETY

This instruction manual must be read, with particular attention to the following safety guidelines, by any person servicing or operating this tool.

1. Glossary



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



— Read manual prior to using this equipment.



— Eye protection is required while using this equipment.



— Hearing protection is required while using this equipment.



WARNINGS: Must be understood to avoid severe personal injury.



CAUTIONS: show conditions that will damage equipment and or structure.

Notes: are reminders of required procedures.

Bold, Italic type and underlining: emphasizes a specific instruction.

2. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
3. 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.
4. Repairman and Operator must read manual prior to using equipment. Warning and Caution stickers/labels supplied with equipment must be understood before connecting equipment to any primary power supply. As applicable, each of the sections in this manual have specific safety and other information.
5. Read MSDS Specifications before servicing the tool. MSDS Specifications are available from the product manufacturer or your Huck representative.
6. When repairing or operating Huck installation equipment, always wear approved eye protection. Where applicable, refer to ANSI Z87.1 - 2003
7. Disconnect primary power source before performing maintenance on Huck equipment or changing Nose Assembly.
8. Tools and hoses should be inspected for leaks at the beginning of each shift/day. If any equipment shows signs of damage, wear, or leakage, do not connect it to the primary power supply.
9. Mounting hardware should be checked at the beginning of each shift/day.
10. Make sure proper power source is used at all times.
11. Release tool trigger if power supply is interrupted.
12. Tools are not to be used in an explosive environment unless specifically designed to do so.
13. Never remove any safety guards or pintail deflectors.
14. Where applicable, ensure deflector or pintail collector is installed and operating prior to use.
15. Never install a fastener in free air. Personal injury from fastener ejecting may occur.
16. Where applicable, always clear spent pintail out of nose assembly before installing the next fastener.
17. There is possibility of forcible ejection of pintails or spent mandrels from front of tool.
18. If there is a pinch point between trigger and work piece, use remote trigger. (Remote triggers are available for all tooling).
19. Unsuitable postures may not allow counteracting of normal expected movement of tool.
20. 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 in preventing an accident which may cause severe personal injury.
21. Never place hands between nose assembly and work piece. Keep hands clear from front of tool.
22. There is a risk of crushing if tool is cycled without Nose Assembly installed.
23. Tools with ejector rods should never be cycled with out nose assembly installed.
24. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet of correct positioning.
25. Tool is only to be used as stated in this manual. Any other use is prohibited.
26. There is a risk of whipping compressed air hose if tool is pneudraulic or pneumatic.
27. Release the trigger in case of failure of air supply or hydraulic supply.
28. Use only fluids or lubricants recommended.
29. Disposal instruction: Disassemble and recycle steel, aluminum and plastic parts, and drain and dispose of hydraulic fluid in accordance with local lawful and safe practices.
30. If tool is fixed to a suspension device, ensure that the device is secure prior to operating the tool.

DESCRIPTION

Huck Model 3585 In-line Hydraulic installation Tool (H.I.T) is designed to install all -20 (5/8") and -24 (3/4") Pintail-style Lockbolt Fasteners and to operate on 7400 psi (510 BAR) PULL and 3200 psi (220 BAR) RETURN pressures as supplied by Huck Hydraulic POWERIG® Models 918 or equivalent. Lengths and weights do not include Nose Assemblies.

Except for a nose assembly, the tool is complete with handle, hoses, couplers and control cord ready to be attached to a HUCK POWERIG.

The 3585 tool is basically a cylinder and piston assembly. An unloading valve, designed to relieve the

hydraulic pressure at both ends of the stroke, is positioned by the piston. A pintail ejector is provided to eject the broken pintail from the nose assembly. The end of the piston rod is threaded and a nose adapter and retaining rings are included for attaching nose assemblies.

Proper PULL and RETURN pressures are important for the proper function of the Installation Tool and Nose Assemblies, and for the safety of the operator. A Gauge Set-up T-124833CE is available for checking these pressures. Instructions are furnished with the Gauge and in applicable POWERIG® Instruction Manuals.

SPECIFICATIONS

Power Source: Huck POWERIG Hydraulic Unit

Hose Kits: Use only genuine HUCK Hose Kits rated @ 10,000 psi working pressure.

Hydraulic Fluid: ATF meeting DEXRON III, DEXRON IV, MERCON, Allison C-4 or equivalent specifications. Fire resistant hydraulic fluid may also be used, and is required to comply with OSHA regulation 1926.302 paragraph (d): "the fluid used in hydraulic power tools shall be fire resistant fluid approved under schedule 30 of the US Bureau of Mines, Department of Interior, and shall retain its operating characteristics at the most extreme temperatures to which it will be exposed."

Max Operating Temp: 125°F (51.7°C)

Max Flow Rate: 2 gpm (7.5 l/m)

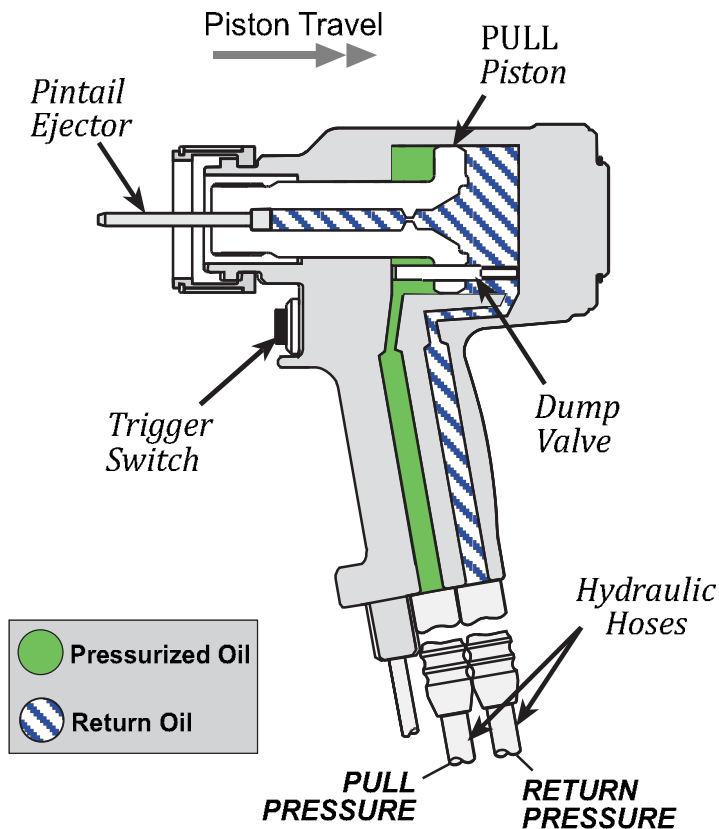
Max Inlet Pressure: 7400 psi, (510 bar)

Pull Capacity: 45,668 lbs (203 KN) @ 7400 psi

Stroke: 1.812 inches (4.60 cm)

Weight: 19 lbs (8.62 kg)

PRINCIPLE OF OPERATION



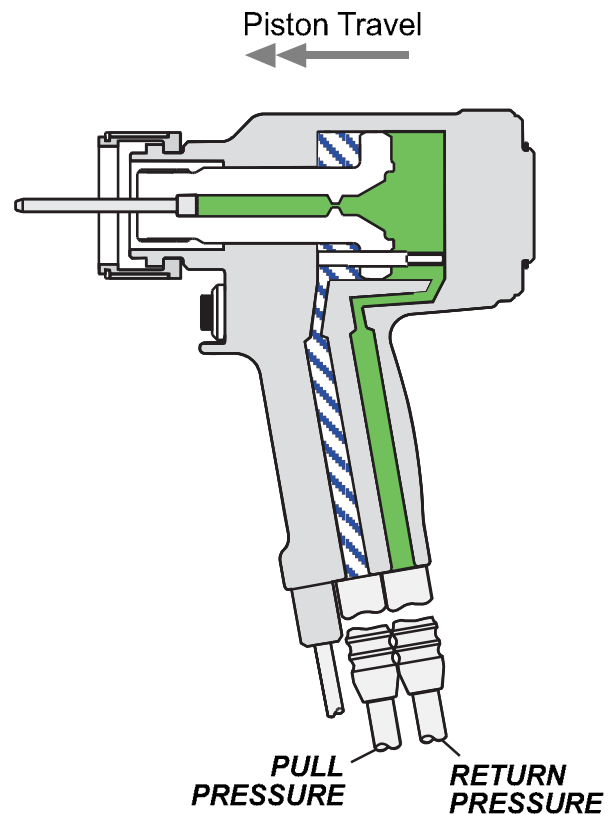
Pull Pressure (Pull Cycle)

Fig. 1(a)

When the trigger is depressed, a solenoid operated valve in the POWERIG® directs pressurized hydraulic 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 (Fig 1a).

The piston and nose assembly collet moves rearward installing the fastener.

When the piston reaches the end of the PULL stroke, it uncovers flats on the rear end 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 (Fig 1a).



Return Pressure (Return Cycle)

Fig. 1(b)

When the trigger is released the solenoid is de-energized and the valve directs pressurized fluid to the rear side of the piston and allows fluid on the PULL side to flow back to the tank (Fig. 1b). This causes 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 is built up, causing the Powerig to shut off, completing the cycle.



PREPARATION FOR USE



WARNINGS:
Read full manual before using tool.

A half-hour training session with qualified personnel is recommended before using Huck equipment.

When operating Huck installation equipment, always wear approved eye and ear protection.

Be sure there is adequate clearance for the operator's hands before proceeding.



CAUTION: Do not let disconnected hoses and couplers contact a dirty floor. Keep harmful material out of hydraulic fluid. Dirt in hydraulic fluid causes valve failure in Tool and in POWERIG Hydraulic Unit.



CAUTION: Do not use TEFLON®* tape on pipe threads. Pipe threads may cause tape to shred resulting in tool malfunction. (Slic-Tite is available in stick form as Huck P/N 503237.)



Huck recommends that only Huck Powerig Hydraulic Units be used as a power source for Huck installation equipment. Hydraulic power units that deliver high pressure for both PULL and RETURN, **AND ARE NOT EQUIPPED WITH RELIEF VALVES ARE SPECIFICALLY NOT RECOMMENDED AND MAY BE DANGEROUS.**

POWER SOURCE CONNECTIONS

Coat hose fitting threads with a non-hardening Teflon™ thread compound such as Slic-tite.™
(Slic-tite is available from Huck as part number 503237.)

1. Use Huck POWERIG® Hydraulic Unit, or equivalent, that has been prepared for operation per applicable instruction manual. Check both PULL and RETURN pressures, and if required, adjust to pressures given in **SPECIFICATIONS.**
2. First, turn hydraulic unit to OFF, and then, disconnect power supply from unit. Connect tool's hoses to Powerig unit.

3. Connect tool's control switch electrical cord to hydraulic unit.



WARNING: Be sure to connect Tool's hydraulic hoses to POWERIG Hydraulic Unit before connecting Tool's switch control cord to unit. If not connected in this order and **disconnected in the reverse order**, severe personal injury may occur.

4. Connect hydraulic unit to power supply. Turn unit to ON. Hold tool trigger depressed for 30 seconds; depress trigger a few times to cycle tool and to circulate hydraulic fluid. Observe action of tool and check for leaks. Turn unit to OFF.
5. Select nose assembly for fastener to be installed. Disconnect tool's control switch electrical cord from hydraulic unit; disconnect unit from power supply. Attach nose assembly to tool.
6. Reconnect hydraulic unit to power supply. Reconnect tool's switch control cord to unit. Check operation of nose assembly; install fasteners in test plate of correct thickness with proper size holes. Inspect installed fasteners. If fasteners do not pass inspection, see **TROUBLESHOOTING** to locate and correct tool malfunction.



WARNING: Correct PULL and RETURN pressures are required for operator's safety and for Installation Tool's function. Pressure Gauge T-124883CE is available for checking pressures. See Tool **SPECIFICATIONS** and Gauge Instruction Manual. Failure to verify pressures may result in severe personal injury.

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

* TEFLON is a registered trademark of DuPont Corp.



OPERATING INSTRUCTIONS



WARNING: Reasonable care of installation tools by operators is an important factor in maintaining tool efficiency and in reducing repair downtime. Do not abuse the tool by dropping it, using it as a hammer, or otherwise, causing unnecessary wear and tear. Be sure there is adequate clearance for the tool and operator's hands before proceeding. Do not connect tool's hoses to each other or use hoses as a handle for carrying.



WARNING: Do not pull on a fastener without a collar. If a fastener is pulled without a collar, the fastener will eject forcibly when the pintail breaks off.

4. Push nose assembly onto the fastener until the nose assembly anvil stops against the collar. Tool and nose assembly must be held at right angles (90°) to the work.
5. Depress tool switch to start installation cycle.
6. When forward motion of nose assembly anvil stops and pintail breaks off, release switch. Tool will go into its return stroke, push off the installed fastener and eject the pintail.
7. The tool and nose assembly is ready for the next installation cycle.

TO INSTALL A HUCKBOLT® FASTENER

1. Check work and remove excessive gap in the space between sheets. Gap is excessive if not enough pintail sticks through the collar for the nose assembly jaws to grab onto.
2. Put fastener into hole.
3. Slide collar over fastener. (The beveled end of the collar must be towards the nose assembly and tool.)



SERVICING THE TOOL



CAUTIONS:

- Consult MSDS before servicing tool.
- Keep dirt and other material out of hydraulic system.
- Separated parts must be kept away from dirty work surfaces.
- Dirt/debris in hydraulic fluid causes Dump Valve failure in Tool and in POWERIG® Hydraulic Unit's valves.
- Always check tool assembly drawing for the proper direction of the flats on the Dump Valve.

See SPECIFICATIONS for fluid type. Dispose of fluid in accordance with local environmental regulations. Recycle steel, aluminum, and plastic parts in accordance with local lawful and safe practices.

PREVENTIVE MAINTENANCE

NOTE: For supplementary information refer to TROUBLESHOOTING, Parts Lists, and DISASSEMBLY AND ASSEMBLY procedures in this manual.



CAUTION: Do not use TEFLON®* tape on pipe threads. Pipe threads may cause tape to shred resulting in tool malfunction. (Slic-Tite is available in stick form as Huck P/N 503237.)



CAUTION: Always replace seals, wipers, and back-up rings when tool is disassembled for any reason.

SYSTEM INSPECTION

Operating efficiency of the installation tool is directly related to performance of the complete system, including the tool with nose assembly, hydraulic hoses, trigger and control cord, and POWERIG.

Therefore, an effective preventive maintenance program includes scheduled inspections of the system to detect and correct minor troubles.

1. Inspect tool and nose for external damage.
2. Verify that hydraulic hose fittings and couplings and electrical connections are secure.
3. Inspect hydraulic hose for signs of damage or aging. Replace hoses if damaged.
4. Inspect tool, hose, and POWERIG during operation to detect abnormal heating, leaks, or vibration.

POWERIG MAINTENANCE

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

TOOL MAINTENANCE

At regular intervals, depending on use, replace all O-rings and back-up rings in the tool. Spare Parts Kit 3585KIT should be kept on hand. Inspect cylinder bore, piston and piston rod and unloading valve for scored surfaces, excessive wear or damage, and replace as necessary.

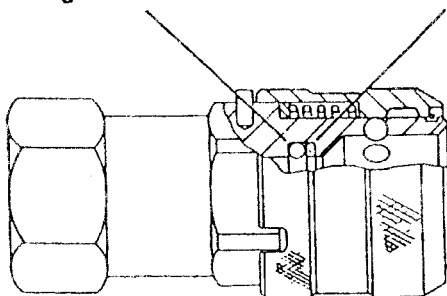
NOSE ASSEMBLY MAINTENANCE

Daily cleaning of the nose assembly is recommended. This can usually be accomplished by dipping nose assembly in mineral spirits, or other suitable solvent, to clean jaws and wash away metal chips and dirt. If more thorough cleaning or maintenance is necessary, disassemble the nose assembly. Use a sharp pointed "pick" to remove imbedded particles from the pull grooves of the jaws.

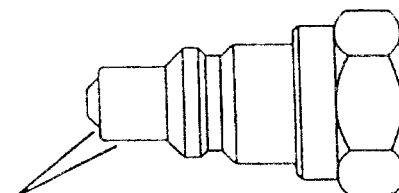
HYDRAULIC COUPLINGS

O-ring—P/N 504436

Back-up Ring—P/N 501102



A



Use a fine India stone to remove any nicks or burrs from diameter A and leading edge, to prevent damage to O-ring.

DISASSEMBLY AND ASSEMBLY PREPARATION



WARNING: Be sure to disconnect Tool's electrical control trigger system from POWERIG® Hydraulic Unit **BEFORE** disconnecting Tool's hydraulic hoses from unit. If not disconnected in this order before any maintenance or cleaning is done, severe personal injury may occur.

GENERAL PRECAUTIONS

During disassembly and assembly, take the following precautions to avoid damaging tool or components:

- (a) Always work on a clean surface.
- (b) Use relatively soft materials, such as brass, aluminum or wood, to protect tool when applying pressure.
- (c) Apply a continuous strong pressure, rather than sharp blows, to disassemble or assemble a component. An arbor press provides steady pressure to press a component in or out.
- (d) Never continue to force a component if it "hangs up" due to misalignment. Reverse the procedure to correct misalignment and start over.
- (e) Smear Lubriplate™ 13OAA or equivalent on O-rings and mating surfaces to aid assembly and prevent damage to O-rings. (Lubriplate is manufactured by Fiske Brothers Refining Co. and is available in most localities. A handy tube of Lubriplate 13OAA is available from Huck as part number 502723).
- (f) Coat hose fitting threads with a nonhardening Teflon thread compound such as Slic-tite.™ (Slic-tite is manufactured by the Markal Co., and is available from Huck in stick form as part number 503237.) **DO NOT use Teflon tape on hose fitting threads.**

DISASSEMBLY AND ASSEMBLY TOOLS

Standard hand tools such as wrenches, drifts, copper or lead hammers, screwdrivers, socket screw hexagon keys, long forceps (tweezers), etc. which can be purchased at most local supply firms are required. If possible, an arbor press and vise with soft jaws should be available. Wrench 122048 is available for Ejector Gland. Wrench 126981 is available for End Cap.

SPARE PARTS AND SPARE PARTS KITS

The quantity of spare parts that should be kept on hand varies with the application and number of tools in service. However, spare parts kits containing perishable parts such as O-rings, back-up rings, etc., should be kept on hand at all times. Parts included in Spare Parts Kit 3585KIT are indicated by asterisks (*) on Figure 8 Parts List.

POWERIG MAINTENANCE

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

TOOL MAINTENANCE

At regular intervals, depending on use, replace all O-rings and back-up rings in the tool. Spare Parts Kit **3585KIT** should be kept on hand. Inspect cylinder bore, piston and piston rod and unloading valve for scored surfaces, excessive wear or damage, and replace as necessary.

NOSE ASSEMBLY MAINTENANCE

Daily cleaning of the nose assembly is recommended. This can usually be accomplished by dipping nose assembly in mineral spirits, or other suitable solvent, to clean jaws and wash away metal chips and dirt. If more thorough cleaning or maintenance is necessary, disassemble the nose assembly. Use a sharp pointed "pick" to remove imbedded particles from the pull grooves of the jaws.

DISASSEMBLY



WARNING: Be sure to disconnect Tool's electrical control trigger system from POWERIG® Hydraulic Unit **BEFORE** disconnecting Tool's hydraulic hoses from unit. If not disconnected in this order before any maintenance or cleaning is done, severe personal injury may occur.

DISASSEMBLY

The following procedure is for complete disassembly. Disassemble only components necessary to check damaged O-ring, C-ring, back-up ring, or other components.

1. Uncouple tool hydraulic hoses, and disconnect electrical control cord.
2. Remove Sleeve (19) and Split Ring (20). Remove nose assembly.
3. Remove Coupler Nipple (32) and Coupler Body (33). Drain Hydraulic Hoses (12) into a clean container.
4. Push rearward on Piston (29) until hydraulic fluid is drained into container.
5. Remove Retaining Ring (5) and Cover Plate (4).
6. Use Wrench to remove End Cap (6).
7. Push rearward on Adapter Assembly (23) and piston, along with adapter, will slide from cylinder.
8. Pull piston out of adapter, and remove Unloading Valve (8) from piston.
9. Remove Ejector Gland Assembly (21) and Pintail Ejector (22) from piston. Use Special Wrench, P/N 122048, to unscrew gland.
10. Use a small diameter, dull-pointed rod to remove O-rings, and back-up rings from all components.
11. Remove Socket Head Cap Screw (10) from Handle Assembly (9).
12. Remove two Button Head Cap Screws from one-half of handle and cylinder.
13. Separate handle halves, and lift out assemble Switch (16), Control Cord (14) including Cord Connector (13), and Strain Relief (15).
14. Remove remaining button head cap screws and handle half. Remove both Hydraulic Hoses (12) from cylinder.
15. Loosen two screws at rear of switch to remove switch from electrical cord. Remove two #6-32 socket set screws to disassemble switch for cleaning. Pull strain relief grommet from cord.
16. Disassemble electrical connector to replace Connector, or to rewire.

NOTE:

The ejector gland can be removed to inspect and/or replace components without completely disassembling tool.

ASSEMBLY

ASSEMBLY All Models

Numbers in parentheses () are reference numbers shown in Figure 8.



WARNING: Do not omit any seals during servicing, leaks will result and personal injury may occur.



WARNING: Tool must be fully assembled with all components included.



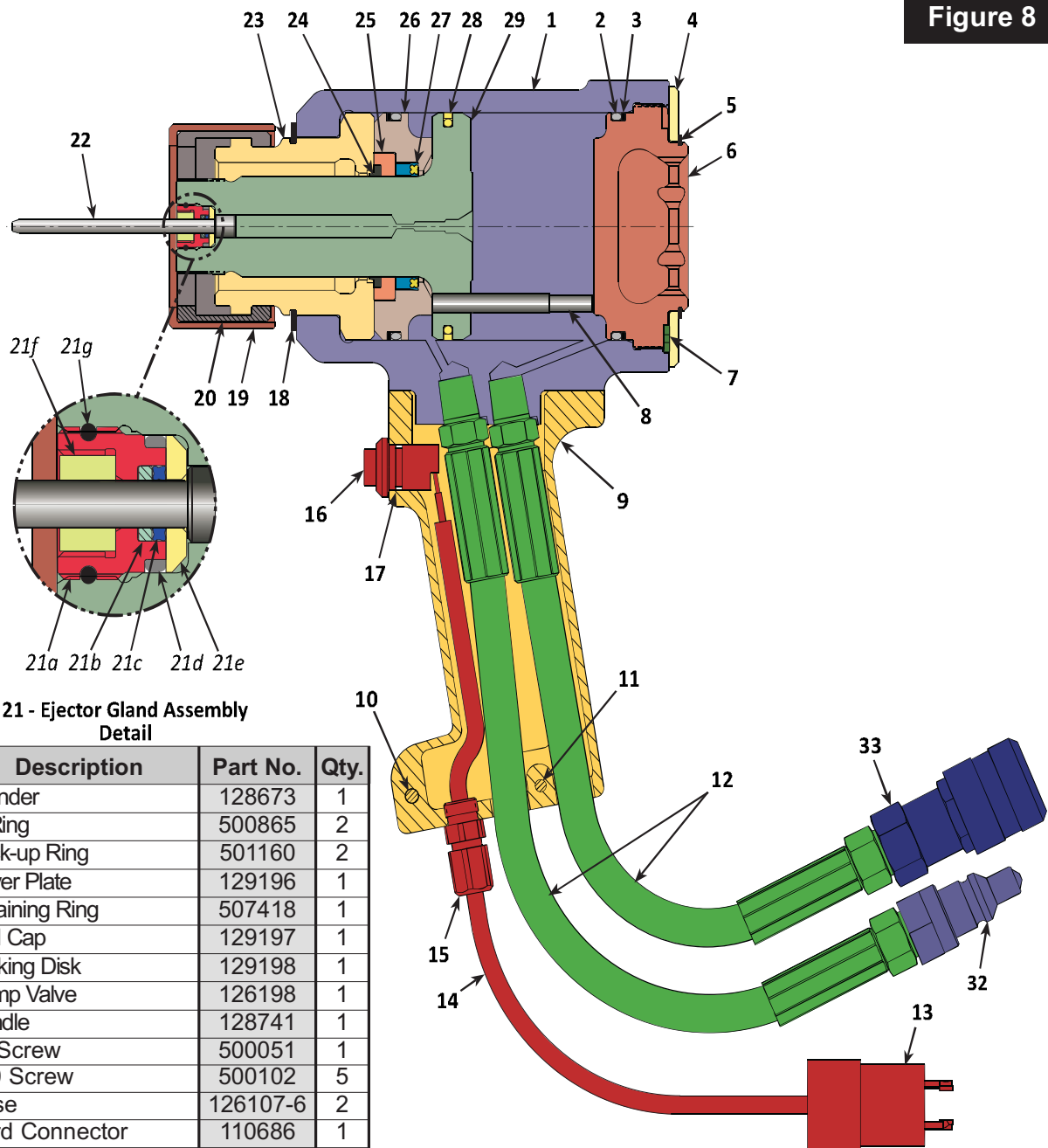
CAUTION: Do not use TEFLON tape.

Before assembling tool:

- (a) Clean components in mineral spirits or other solvent compatible with O-ring seals.
 - (b) Clean out O-ring grooves.
 - (c) Inspect components for scoring, excessive wear or damage.
 - (d) Replace O-rings and back-up rings. Be sure that relative positions of the O-rings and back-up rings are as shown in Figure 8.
 - (e) Service Kit part number 3585KIT contains O-Rings, Back-up Rings and other seals necessary for servicing this tool.
 - (f) Smear Lubriplate 130AA on O-rings and mating surfaces to prevent damage to O-rings and to aid assembly.
1. Assemble electrical Control Cord (14) to plug of electrical Connector (13).
 2. Push cord thru Strain Relief (15), and attach to Switch (16).
 3. Screw both Hoses (12) into Cylinder (1).
 4. Loosely attach handle half by turning two Button Head Cap Screws into cylinder.
 5. Place assembled switch, electrical cord, strain relief and electrical connector into handle recesses. Loosely attach other handle half. Partially turn Socket Head Cap Screw into handle halves. Evenly tighten five cap screws to 50 in. lbs. torque if plated, and 70 in. lbs. if unplated, while holding assembled components in position.
 6. Assemble ejector gland assembly and pintail ejector to the piston as follows:
 - a. Insert Pintail Ejector (22) into Piston (29).
 - b. Drop in Ejector Washer (21e).
 - c. Drop in O-ring (21d).
 - d. Screw in Gland (21a) with O-ring (21g) in groove in threads, back-up ring (21b) and QUAD ring (21c) inside and Ejector Rod Wiper (21f) in place.
 - e. Tighten Ejector Gland Assembly with Wrench.
 7. Push Nose Adapter (23) into Cylinder.
 8. Install Retaining Ring (18) into groove in adapter.
 9. Push assembled Piston (23), assembled Front Gland with all O-rings, back-up rings, Polyseals, Wiper (24) and Wiper Housing (25) in place, and into assembled cylinder and adapter.
 10. Slide Unloading Valve (22) into hole thru piston. BE SURE UNLOADING VALVE IS ASSEMBLED WITH FOUR FLATS TO THE REAR AS SHOWN.
 11. Tighten End Cap, then, back off until Locator can be placed in closest matching grooves.
 12. After End Cap is locked in place, install Cover Plate and Retaining Ring.
 13. Screw Coupler Nipple (32) onto hose in port P and Coupler Body (33) onto hose in port R.
 14. Connect tool hoses to POWERIG hoses and cycle tool a few times. Observe action of tool and check for leaks.
 15. Attach nose assembly to tool following applicable Nose Assembly Data Sheet. Use Split Ring Set and Retaining Sleeve furnished with tool.

TOOL ASSEMBLY DRAWING

Figure 8



21 - Ejector Gland Assembly Detail

Item	Description	Part No.	Qty.
1	Cylinder	128673	1
2	O-Ring	500865	2
3	Back-up Ring	501160	2
4	Cover Plate	129196	1
5	Retaining Ring	507418	1
6	End Cap	129197	1
7	Locking Disk	129198	1
8	Dump Valve	126198	1
9	Handle	128741	1
10	#6 Screw	500051	1
11	#10 Screw	500102	5
12	Hose	126107-6	2
13	Cord Connector	110686	1
14	Control Cord	128705	1
15	Strain Relief	505344	1
16	Trigger Switch Assy	120361	1
17	Set Screw	501731	1
18	Retaining Ring	501030	1
19	Sleeve	100248	1
20	Split Ring	100247	1
21	Ejector Gland Assy	120653	1
21a	Gland	122047	1
21b	Back-up Ring	501080	1
21c	QUAD Ring	501411	1
21d	O-Ring	500779	1
21e	Ejector Washer	120652	1
21f	Ejector Rod Wiper	122742	1
21g	O-Ring	500779	1

Item	Description	Part No.	Qty.
22	Pintail Ejector	128742	1
23	Nose Adapter	128675	1
24	Wiper Seal	506001	1
25	Wiper Housing	125683	1
26	Front Gland	128674	1
27	Polyseal	507417	1
28	GLYD Ring	122769-3	1
29	Piston	128703	1
30	HUCK Sticker	590247	1
31	Caution Sticker	590189-2	1
32	Male Connector	110438	1
33	Female Connector	110439	1

KITS AND ACCESSORIES

SERVICE KIT:

3585KIT

ACCESSORIES:

Ejector Gland Wrench - 122048

End Cap Hex Wrench - 126981

Remote Trigger (All Models) - 123381-24

TROUBLESHOOTING

Always check the simplest possible cause of a malfunction first (example: a loose or disconnected trigger line). Then proceed logically and eliminate each possible cause until the defect is found. Where possible, substitute known good parts for suspected defective parts. Use the following steps as an aid in troubleshooting.

1. **Tool fails to operate when trigger is pressed.**
 - a. Inoperative POWERIG® Hydraulic Unit. See applicable instruction manual.
 - b. Loose electrical connections.
 - c. Damaged trigger assembly.
 - d. Loose or faulty hose coupling.
2. **Tool operates in reverse.**
 - a. Reversed hose connections between hydraulic unit and tool.
3. **Tool leaks hydraulic fluid.**
 - a. Defective tool O-rings or loose connections at tool.
4. **Hydraulic couplers leak fluid.**
 - a. Damaged or worn O-rings in Coupler Body Coupler
5. **Hydraulic fluid overheats.**
 - a. Unit not operating properly. See units manual.
 - b. Unit running in reverse (918; 918-5 only). See unit's manual.
6. **Tool operates erratically and fails to install fastener properly.**
 - a. Low or erratic hydraulic pressure. Air in system.
 - b. Damaged or worn Piston O-ring in tool.
 - c. Excessive wear on sliding surfaces of tool parts.
7. **Pull grooves on fastener pintail stripped during PULL stroke.**
 - a. Operator not sliding anvil completely onto fastener pintail.
 - b. Incorrect fastener grip.
 - c. Worn or damaged jaw segments.
 - d. Metal particles in jaw grooves.
 - e. Excessive sheet gap.
8. **Collar of fastener not completely swaged.**
 - a. Improper tool operation. See No. 6.
 - b. Scored anvil.
9. **Tool "hangs up" on swaged collar of fastener.**
 - a. Improper tool operation. See No. 6.
 - b. RETURN pressure too low.
 - c. Not enough collar lubricant.
 - d. Nose assembly not installed correctly.
10. **Pintail of fastener fails to break.**
 - a. Improper tool operation. See No. 6.
 - b. Pull grooves on fastener stripped. See No. 7.
 - c. PULL pressure too low.
11. **Nose will not release broken pintail.**
 - a. Nose assembly not installed correctly.
 - b. Bent or broken Pintail Ejector.

LIMITED WARRANTIES

TOOLING WARRANTY:

Huck warrants that tooling and other items (excluding fasteners, and hereinafter referred as "other items") manufactured by Huck shall be free from defects in workmanship and materials for a period of ninety (90) days from the date of original purchase.

WARRANTY ON "NON STANDARD OR CUSTOM MANUFACTURED PRODUCTS":

With regard to non-standard products or custom manufactured products to customer's specifications, Huck warrants for a period of ninety (90) days from the date of purchase that such products shall meet Buyer's specifications, be free of defects in workmanship and materials. Such warranty shall not be effective with respect to non-standard or custom products manufactured using buyer-supplied molds, material, tooling and fixtures that are not in good condition or repair and suitable for their intended purpose.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. HUCK MAKES NO OTHER WARRANTIES AND EXPRESSLY DISCLAIMS ANY OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES AS TO MERCHANTABILITY OR AS TO THE FITNESS OF THE TOOLING, OTHER ITEMS, NONSTANDARD OR CUSTOM MANUFACTURED PRODUCTS FOR ANY PARTICULAR PURPOSE AND HUCK SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF SUCH TOOLING, OTHER ITEMS, NONSTANDARD OR CUSTOM MANUFACTURED PRODUCTS OR BREACH OF WARRANTY OR FOR ANY CLAIM FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Huck's sole liability and Buyer's exclusive remedy for any breach of warranty shall be limited, at Huck's option, to replacement or repair, at FOB Huck's plant, of Huck manufactured tooling, other items, nonstandard or custom products found to be defective in specifications, workmanship and materials not otherwise the direct or indirect cause of Buyer supplied molds, material, tooling or fixtures. Buyer shall give Huck written notice of claims for defects within the ninety (90) day warranty period for tooling, other items, nonstandard or custom products described above and Huck shall inspect products for which such claim is made.

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.

The only warranties made with respect to such tool, part(s) or other items thereof are those made by the manufacturer thereof and Huck agrees to cooperate with Buyer in enforcing such warranties when such action is necessary.

Huck shall not be liable for any loss or damage resulting from delays or nonfulfillment 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 Office, see back cover.

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 Tools Kits and Nose Assemblies. Please contact your Huck Representative or the nearest Huck office listed on the back cover for the ATSC in your area.