INSTRUCTION MANUAL

MODEL 506, 506-2, 507, 507-2, & 507SP

HYDRAULIC INSTALLATION TOOL
EU Declaration of Conformity

Manufacturer:
Huck International Inc., Installation Systems Division, 85 Grand Street, Kingston, NY, 12401, USA

Description of Machinery:
Model number 506 series of fastener installation tools
Model number 507 series of fastener installation tools

Relevant provisions complied with:

European Representative:
Rob Pattendon, 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: Renno Budziak
Position: Vice President of Engineering, Installation Systems Division
Place: Kingston, New York, USA
Date: November, 1996

Huck Model 507 (family) Sound Level
SEL --- 103 dB (A)
peak value = 132 dB (C)

For an eight hour work day, installing 400 typical Huck fasteners will result in an equivalent noise level (Leq) of 84.4 dB (A).

To calculate equivalent noise level for other quantities of fasteners in an eight hour period, use the formula:
Leq = SEL + 10 log (n/28,800)
where n = number of fasteners in eight hours.

Huck Model 507 (family) Vibration Level

For an eight hour work day, installing 400 typical Huck fasteners will result in an equivalent weighted RMS vibration level (Aeq) of 2.75 m/s^2.

To calculate the equivalent vibration level for other quantities of fasteners in an eight hour period, use the formula:
Equivalent Vibration Level, Aeq (m/s^2) = (n/480) x 3.3
where n = number of fasteners in eight hours, and 3.3 (m/s^2) = Aeq for 60 seconds.

Test data to support the above information is on file at Huck International, Inc., Kingston. NY. USA. Vibration measurements are frequency weighted in accordance with ISO 8041(1990).
SAFETY

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

1. Safety Glossary

- Product complies with requirements set forth by the relevant European directives.
- Read manual prior to using equipment.
- Eye protection required while using this equipment.
- Hearing protection required while using this equipment.

![WARNING - Must be understood to avoid severe personal injury.]

WARNING - 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. Huck equipment must be maintained in a safe working condition at all times and inspected on a regular basis for damage or wear. Any repair should be done by a qualified repairman trained on Huck procedures.

3. Repairman and Operator must read manual prior to using equipment and understand any Warning and Caution stickers/labels supplied with equipment before connecting equipment to any primary power supply. As applicable, each of the sections in this manual have specific safety and other information.

4. See MSDS Specifications before servicing the tool. MSDS Specifications are available from you Huck representative or on-line at www.huck.com. Click on Installation Systems Division.

5. When repairing or operating Huck installation equipment, always wear approved eye protection. Where applicable, refer to ANSI Z87.1 - 1989

6. Disconnect primary power source before doing maintenance on Huck equipment.

7. If any equipment shows signs of damage, wear, or leakage, do not connect it to the primary power supply.

8. Make sure proper power source is used at all times.

9. Never remove any safety guards or pintail deflector.

10. Never install a fastener in free air. Personal injury from fastener ejecting may occur.

11. When using an offset nose always clear spent pintail out of nose assembly before installing the next fastener.

12. If there is a pinch point between trigger and work piece use remote trigger. (Remote triggers are available for all tooling).

13. Do not abuse tool by dropping or using it as a hammer. Never use hydraulic or air lines as a handle. 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.

14. Never place hands between nose assembly and work piece.

15. Tools with ejector rods should never be cycled with out nose assembly installed.

16. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet of correct positioning.
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**DESCRIPTION**

**GENERAL**

Huck Models 506 and 507 In-line Hydraulic installation Tools (H.I.T) are designed to install (C50L) HUCKBOLT® Fasteners and (HLC50L) HUCKLOK® Fasteners and to operate on 5400-5700 psi PULL and 2200-2400 psi RETURN pressures as supplied by Huck Hydraulic POWERIG® Models 906, 908, 910, 911, 914, 916 and 917 or equivalent. The Model 506, when equipped with proper Nose Assembly, is used to install -28 (7/8 diameter) fasteners. The Model 507, when equipped with the proper Nose Assembly, is used to install -32 (1" diameter) or -36 (1-1/8 diameter) fasteners.

The Model 506 and Model 507 are identical in design, and vary only in size and capacity.

Nose Assemblies for use on Models 506 and 507 are shown in SELECTION CHARTS, Form 461.

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

Figure 1 is a sectional view of the Model 506 or Model 507 Hydraulic Installation Tools showing configuration and arrangement of components.

Each 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.

**Table 1. SPECIFICATIONS**

<table>
<thead>
<tr>
<th>MODEL NO.</th>
<th>FASTENER SIZE</th>
<th>LENGTH WITHOUT HANDLE WITH HANDLE</th>
<th>DIAMETER</th>
<th>WEIGHT</th>
<th>RECOMMENDED HUCK POWERIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>506</td>
<td>-28</td>
<td>8.00 in. 203mm 13.75 in. 349mm</td>
<td>5.50 in. 139mm</td>
<td>33 lbs. 15.0 kg.</td>
<td>906,910,911,914 or 908,916,917</td>
</tr>
<tr>
<td>507</td>
<td>-32 or 36</td>
<td>9.50 in. 241mm 15.25 in. 387mm</td>
<td>6.00 in. 152mm</td>
<td>43 lbs. 19.5 kg.</td>
<td>5400-5700 psi 37250-39300 kPa RETURN pressure 2200-2400 psi 15200-16500 kpa</td>
</tr>
</tbody>
</table>

- Lengths and weights do not include 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 - 10280(old) & T-124833(new), is available for checking these pressures. Instructions are furnished with T-10280(old) & T-124833(new) and in applicable POWERIG® Instruction Manuals.
WARNING

HUCK RECOMMENDS THAT ONLY HUCK HYDRAULIC POWERIGS BE USED AS THE 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.

Refer to Figure 1

When tool hoses and cord are connected to POWERIG hoses and control cord, PULL and RETURN strokes of tool are controlled by a trigger in the handle. When the trigger is depressed, a solenoid operated valve in the POWERIG directs pressured hydraulic fluid through the FILL hose to the front side of piston, and allows fluid on the RETURN side to flow back to tank. The piston and nose assembly collet moves rearward causing follower 0-rings and/or spring to impart a forward motion to the follower. If tool and nose assembly is in position on a fastener pin and collar, this forward motion causes the jaws to clamp onto pintail of fastener and installation cycle commences. Clamping pressure is applied to the sheets. The anvil is forced forward, swaging the collar into locking grooves of the fastener. When the anvil hits the sheet, continued pull causes the pintail to break off. When the piston reaches the end of its PULL stroke, it uncovers flats on the rear end of the unloading valve.

These flats were designed to provide a passage for hydraulic fluid from PULL side to RETURN side of piston, “unloading” or “dumping” the pressurized fluid back to tank. When the trigger is released, the solenoid is de-energized and the valve directs pressurized fluid to rear side of the piston and allows fluid on PULL side to flow back to tank.

This causes piston and collet to move forward and pushes nose assembly and tool off the swaged (installed) fastener. Nose assembly jaw release contacts jaws, causing them to open and release the broken-off pintail. The ejector rod hydraulically ejects the pintail out the front of the nose assembly. When the piston reaches the end of its RETURN stroke, pressure is built up causing the POWERIG-idler valve (except on Models 910 and 911) to go to idling pressure. Idling pressure keeps the tool piston and nose assembly collet, jaws, etc. in the forward position ready for the next installation cycle.

A flat on the front end of the unloading valve was designed to provide a passage for hydraulic fluid from RETURN side of piston to PULL side of piston and back to tank.
PREPARATION FOR USE

CAUTION

KEEP DIRT AND OTHER FOREIGN MATTER OUT OF THE HYDRAULIC SYSTEMS OF THE TOOLS, HOSES, COUPLERS AND POWERIG. DO NOT LET HOSE FITTINGS AND COUPLERS CONTACT A DIRTY FLOOR OR UNCLEAN WORKING SURFACE. FOREIGN MATTER IN HYDRAULIC FLUID WILL CAUSE THE TOOL AND POWERIG VALVES TO MALFUNCTION.

POWER SOURCE CONNECTIONS

Coat hose fitting threads with a non-hardening Teflon™ thread compound such as Slic-tite™ (Slic-tite is manufactured by Lake Chemical Co. and is available from Huck as part number 503237.) DO NOT use Teflon tape on hose fitting threads.

1. Screw PULL pressure hose, part number 104490, with coupler nipple, part number 103391, into tool port “P.” Screw RETURN pressure hose, part number 104490, with coupler body, part number 103392, into tool port “R.”

2. Use a Huck POWERIG or equivalent that has been prepared for operation per applicable instruction manual. Cheek both PULL and RETURN pressures and adjust as necessary to match installation tool per Table 1. Gage Set-up, part number T-10206(old) & T-124833(new), for checking POWERIG pressures is available from Huck.

3. Turn POWERIG to “OFF” and couple tool hoses to POWERIG hoses. Be sure that the larger hoses run from tool port “P” to POWERIG port “P” and the smaller hoses run from tool port “R” to POWERIG port “R”.

CAUTION

HOSE COUPLERS MUST BE COMPLETELY SCREWED TOGETHER TO INSURE THAT BALL CHECKS IN BOTH NIPPLE AND BODY ARE COMPLETELY OPEN. (IMPROPERLY ASSEMBLED COUPLERS WILL CAUSE OVERHEATING AND MALFUNCTIONS IN BOTH TOOL AND POWERIG.) HAND TIGHTEN COUPLERS-DO NOT USE A PIPE WRENCH.

4. Connect trigger cord to POWERIG cord.

5. Turn POWERIG to “ON” and depress and release trigger a few times to circulate hydraulic fluid. Observe action of tool. Check for fluid leaks.

6. Attach the proper Nose Assembly to the tool per instructions on the Nose Assembly Data Sheet.

NOTICE

Model 506 H.I.T. with a serial number 1389 and above has a deeper pocket in the end of the piston rod. This allows clearance for the pintail. A longer jaw follower CAP, P/N 122690 is required in the nose assembly. CAP, P/N 102881 is required with previous tools.

Model 507 H.I.T. with a serial number 0847 and above has a deeper pocket in the end of the piston rod. This allows clearance for the pintail. A longer jaw follower CAP, P/N 122686 is required in the nose assembly. CAP, P/N 104411 is required with previous tools.

Refer to the applicable Nose Assembly Data Sheet for nose assembly components.
OPERATING INSTRUCTIONS

CAUTION

REASONABLE CARE OF INSTALLATION TOOLS BY OPERATORS IS AN IMPORTANT FACTOR IN MAINTAINING TOOL EFFICIENCY AND IN REDUCING REPAIR DOWN-TIME. 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 HOSES TO EACH OTHER AND USE AS A HANDLE FOR CARRYING

To install a HUCKBOLT Fastener:

1. Check work and remove excessive gap. (Gap is 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 HUCKBOLT® pin in hole.

3. Slide HUCKBOLT® collar over pin. (The beveled end of the collar must be towards the nose assembly and tool.)

4. Push nose assembly onto the pin until the nose assembly anvil stops against the collar. Tool and nose assembly must be held at right angles (90°) to the work.

   ! WARNING
   DO NOT PULL ON A PIN WITHOUT A COLLAR. IF A PIN IS PULLED WITHOUT A COLLAR, THE PIN WILL EJECT FORCIBLY WHEN THE PINTAIL BREAKS OFF.

5. Depress tool trigger to start installation cycle.

6. When forward motion of nose assembly anvil stops and pintail breaks off, release trigger. 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.
MAINTENANCE AND REPAIR

PREVENTIVE MAINTENANCE

NOTE
For supplementary information refer to Troubleshooting Chad, Parts Lists, and Disassembly and Assembly procedures in this Section.

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 hose at six-month to one-year intervals, depending on use.

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 0-rings and hack-up rings in the tool. Spare Parts Kits should be kept on hand. (See Table 4 and SPARE PARTS AND SPARE PARTS KITS). 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. Reassemble per instructions on the applicable Nose Assembly Data Sheet.
Always check out the simplest possible cause of a malfunction first. For example, a switch turned off or a power cord not connected. Then proceed logically, eliminating each possible cause until the defective circuit or part is located. Where possible, substitute known good parts for suspected bad parts. Use a Troubleshooting Chart as an aid in locating and correcting it.

**Table 2. Troubleshooting Chart**

<table>
<thead>
<tr>
<th>TROUBLE</th>
<th>PROBABLE CAUSE</th>
<th>CORRECTIVE ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Tool fails to operate</td>
<td>Inoperative Powerig.</td>
<td>Check power source to Powerig. Troubleshoot Powerig.</td>
</tr>
<tr>
<td></td>
<td>Loose or disconnected control cord.</td>
<td>Check and tighten securely.</td>
</tr>
<tr>
<td></td>
<td>Defective auxiliary trigger assembly.</td>
<td>Replace trigger assembly.</td>
</tr>
<tr>
<td></td>
<td>Loose or faulty hydraulic hose couplings.</td>
<td>Check and tighten securely or replace faulty couplings.</td>
</tr>
<tr>
<td>B. Tool operates in reverse-stops in back position</td>
<td>Reversed hydraulic hose connections between Powerig and Tool.</td>
<td>Check and connect hose connections.</td>
</tr>
<tr>
<td>C. Tool leaks hydraulic oil</td>
<td>Depending on where leak occurs, defective or worn 0-rings, or loose hydraulic hose connection at Tool.</td>
<td>Check and replace 0-rings and back-up rings, or tighten threaded connectors of hydraulic hose.</td>
</tr>
<tr>
<td>D. Hydraulic oil overheats</td>
<td>Powerig not operating properly.</td>
<td>Troubleshoot Powerig.</td>
</tr>
<tr>
<td></td>
<td>Hydraulic couplers not completely tightened.</td>
<td>Tighten hydraulic couplers.</td>
</tr>
<tr>
<td>E. Tool operates erratically and fails to install fastener properly</td>
<td>Low or erratic hydraulic pressure supply.</td>
<td>Troubleshoot Powerig.</td>
</tr>
<tr>
<td></td>
<td>Defective or excessively worn piston 0-ring in Tool.</td>
<td>Replace 0-ring and back-up ring.</td>
</tr>
<tr>
<td></td>
<td>Excessive wear or scoring of sliding surfaces of Tool parts.</td>
<td>Check and replace defective part</td>
</tr>
<tr>
<td></td>
<td>Solenoid pin too short — worn or peened over.</td>
<td>Replace solenoid pin.</td>
</tr>
<tr>
<td>TROUBLE</td>
<td>PROBABLE CAUSE</td>
<td>CORRECTIVE ACTION</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>F. Pull grooves on fastener pintail stripped during pull stroke</td>
<td>Operator not sliding nose completely onto fastener pintail.</td>
<td>Instruct operator in proper installation methods.</td>
</tr>
<tr>
<td></td>
<td>Incorrect fastener length.</td>
<td>Use correct length fastener.</td>
</tr>
<tr>
<td></td>
<td>Worn or damaged jaw segments.</td>
<td>Check and replace jaw set.</td>
</tr>
<tr>
<td></td>
<td>Metal chips accumulated in pull grooves of jaw segments.</td>
<td>Clean jaw segments.</td>
</tr>
<tr>
<td></td>
<td>Excessive sheet gap.</td>
<td>Eliminate excessive gap.</td>
</tr>
<tr>
<td>G. Collar of HUCKBOLT Fastener not completely swaged</td>
<td>Improper Tool operation.</td>
<td>See Trouble E.</td>
</tr>
<tr>
<td></td>
<td>Scored anvil in nose.</td>
<td>Check and replace anvil.</td>
</tr>
<tr>
<td>H. Tool “hangs up” on swaged collar of HUCKBOLT Fastener</td>
<td>Improper Tool operation.</td>
<td>See Trouble E.</td>
</tr>
<tr>
<td>I. Pintail of fastener fails to break</td>
<td>Improper Tool operation.</td>
<td>See Trouble E.</td>
</tr>
<tr>
<td></td>
<td>Pull grooves on fastener stripped.</td>
<td>See Trouble F.</td>
</tr>
<tr>
<td>J. Jaw segments do not maintain proper position in collet</td>
<td>Improper operation of jaw follower.</td>
<td>Check spring and install correct number of follower 0-rings. Clean before reassembling.</td>
</tr>
</tbody>
</table>
DISASSEMBLY AND ASSEMBLY

GENERAL

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 130AA,™ 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 130AA is available from Huck as part number 502723).

DISASSEMBLY AND ASSEMBLY TOOLS

A special Spanner Wrench, Part No. 110362, is available from Huck to aid in the disassembly and assembly of Locking Ring, reference No. 11. Piston Rod Guides, Part No. 102884 (506) and Part No. 102862 (507) are available to prevent damage to piston rod seals when assembling the piston.

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. Standard tools available from Huck are shown in Table 3.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Used on</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Ref. No.</td>
</tr>
<tr>
<td>502446</td>
<td>Hex Key, 5/16 across flats</td>
<td>4</td>
</tr>
<tr>
<td>502293</td>
<td>Hex Key, 3/32 across flats</td>
<td>6</td>
</tr>
<tr>
<td>502867</td>
<td>Truarc Pliers, Waldes Kohinoor, Inc. #0600</td>
<td>33</td>
</tr>
<tr>
<td>502868</td>
<td>Truarc Plier, Waldes Kohinoor, Inc. #S-6800</td>
<td>33</td>
</tr>
<tr>
<td>502856</td>
<td>TRUARC Pliers, Wald. Koh. Inc. #S-0100</td>
<td>--</td>
</tr>
<tr>
<td>110362</td>
<td>Locking Ring Wrench</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DISASSEMBLY

For component identification, refer to Figure 1, Sectional View; Figure 2, Exploded View and Table 4, Parts Lists. Numbers in parentheses are reference numbers shown in Figures 1 and 2.

The following procedure is for a complete disassembly. Disassemble only the components necessary to check and replace a damaged O-ring, jaw segment or other component.

NOTE
Be sure POWERIG is turned “OFF” when removing the nose assembly to clean or replace components. See applicable Nose Assembly Data Sheet for additional instructions.

1. REMOVE retaining ring (36). Slide off sleeve (35) and remove split ring (34) segments. Pull nose assembly anvil off and unscrew nose assembly collet assembly.

2. Unscrew four socket head cap screws (4) and remove four lockwashers (3). Handle Assembly (2) and Cushion (1) are now separated from the Tool.

3. Remove one locator (15) and unscrew locking ring (11) using spanner wrench. Remove the other locator (15).

4. Screw locking ring (11) part way in. Screw two cap screws (4) into cylinder cap (14). Use pry bars under the heads of the screws to gradually pry cylinder cap (14) out of cylinder (32).

5. Remove unloading valve (19).

6. Drain hydraulic fluid from cylinder (32).

7. Unscrew hoses (37).

8. Press piston (18) out of cylinder (32). Use an arbor press if one is available.


10. Remove retaining ring (33)


12. Use a small dull-pointed rod to remove O-rings and back-up ring from all components.
ASSEMBLY

For component identification, refer to Figure 1, Sectional View; Figure 2, Exploded View and Table 4, Parts List. (Numbers in parentheses ( ) are reference numbers shown in Figures 1 and 2.

Before assembling tool:

(a) Clean components In mineral spirits or other solvent compatible With 0-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 Figures 1 and 2. Specifications for O-rings, back-up rings and other standard components are shown in Table 5 so that they may be purchased locally.

(e) Smear Lubriplate 130AA on O-rings and mating surfaces to prevent damage to O-rings and to aid assembly.

1. Press nose assembly adapter (31) into cylinder (32).

3. Place spacer into ejector cartridge. Install retaining ring using TRUARC pliers. Push pintail ejector (20) into ejector cartridge (23) and screw cartridge into piston (19) rod. Note: Step 4 may be done before assembling pintail ejector and ejector cartridge to piston.

4. Place Piston Rod Guide (P/N 102834 for 506; P/N 102862 for 507) over the threads of piston (19) rod and press piston into cylinder (32) and adapter (31).

5. Place unloading value (19) in hole in piston (18).

6. Press cylinder cap (14) into cylinder (32) so that the locator scallop in the cap matches the scallop in the cylinder.

7. Place one locator (15) in matching scallops. (Cap can be turned by putting a screw into one of the tapped holes to use as a handle).

8. Screw locking ring (11) into cylinder (32) using Spanner wrench.

9. Unscrew locking ring (11) 1/4 turn or less until scallop in locking ring matches scallop in cap. Place locator (15) in matching scallops.

10. Position cushion (1) and handle (2) assembly in place and assemble four socket head cap screws (4) and lockwashers (3). Tighten screws to 490 inch pounds torque if screws are plated and 655 inch pounds if screws are unplated.

11. Screw hoses (37) into cylinder (32). Coat hose fitting threads with a non-hardening Teflon™ thread compound such as Slic-tite™ (Slic-tite is manufactured by Lake Chemical Co. and is available from Huck as part number 503237). Do NOT use Teflon tape on hose fitting threads.

12. Screw coupler nipple (38) onto hose (37) assembled into cylinder PORT “P.”

13. Screw coupler body (39) onto hose (37) assembled into cylinder PORT “R.” (Note: Tool will malfunction if coupler nipple and body are not properly assembled.)
14. Attach tool hoses to POWERIG hoses and actuate tool a few times to check operation of tool and inspect for leaks caused by damaged O-rings.

15. Assemble *split ring* (34), *sleeve* (35) and *retaining ring* (33) when attaching the nose assembly per instructions on the applicable Nose Assembly Data Sheet.

**ASSEMBLY — Handle Assembly**

1. Screw body of *cord grip* (7) into handle.

2. Slide *cord grip* cap over cord.

3. Slide strain relief *grommet* over cord.

4. Place cord in *handle* (2) as shown in Fig.1 so that leads come out the *switch* (5) pocket.

5. Assemble leads to rear of *switch* (5).

6. Push *switch* (5) into *handle* (2) and retain with *set screw* (6).

7. Slide *cover* (9) over other end of cord.

8. Assemble *cap* (10) (two-prong plug) to cord, and slide cover over cap.

**SERVICE NOTES:**
## Table 4 - Parts List (cont.)

<table>
<thead>
<tr>
<th>REF NO.</th>
<th>PART NAME</th>
<th>NO. REQ.</th>
<th>PART NUMBER</th>
<th>NO.</th>
<th>MODEL NUMBER</th>
<th>REF. NO.</th>
<th>PART NUMBER</th>
<th>NO.</th>
<th>MODEL NUMBER</th>
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<td>BACK-UP RING</td>
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<td>103357</td>
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### NOTES:

1. See Table 5 for Specifications for 500000 Part Numbers.
2. All part numbers shown are available from Huck for replacements.
3. Asterisks indicate parts in Spare Parts Kits 106641 (506) and 106642 (507).
4. Indentations indicate the components or (sub) assemblies are included in the assembly immediately above it. Example: Handle Assembly Group P/N 110957 includes Ref. Nos. 1 thru 10.
5. Removed from Spare Parts Kit - 106641 (506)

See "EJECTOR CARTRIDGE ASSEMBLIES 123357 (506); 123359 (507 & 507-2)".
**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 Kits 106641 (506) and 106642 (507) are indicated by asterisks (*) in PARTS LIST — Table 4.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PART NAME</th>
<th>SPECIFICATIONS</th>
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</thead>
<tbody>
<tr>
<td>500136</td>
<td>Screw</td>
<td>Socket Head Cap, 3/8-24 x 1 long, Alloy Steel</td>
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<tr>
<td>501102</td>
<td>Back-up Ring</td>
<td>S-11248-111</td>
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<tr>
<td>501104</td>
<td>Back-up Ring</td>
<td>S-11248-113</td>
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<td>501163</td>
<td>Back-up Ring</td>
<td>S-11248-236</td>
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<td>501167</td>
<td>Back-up Ring</td>
<td>S-11248-240</td>
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<tr>
<td>500168</td>
<td>Back-up Ring</td>
<td>S-11248-241</td>
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<td>501533</td>
<td>Retaining Ring</td>
<td>Spirolox RST-325</td>
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<tr>
<td>501625</td>
<td>Screw</td>
<td>Cup Point Set, #10-24 x 1/4 long, Alloy Steel</td>
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<tr>
<td>502434</td>
<td>Back-up Ring</td>
<td>S-11248-246</td>
</tr>
<tr>
<td>502501</td>
<td>Back-up Ring</td>
<td>S-11248-348</td>
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<tr>
<td>502601</td>
<td>Lockwasher</td>
<td>Ex. Hvy. Spring Type, 3/8 nominal I.D.</td>
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<tr>
<td>504404</td>
<td>O-Ring</td>
<td>AS 568-008</td>
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<td>502671</td>
<td>Retaining Ring</td>
<td>Truarc 5100-350</td>
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<td>502722</td>
<td>Retaining Ring</td>
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<td>500932</td>
<td>Retaining Ring</td>
<td>Truarc - int. N5000-31</td>
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<td>502900</td>
<td>Retaining Ring</td>
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<td>Back-up Ring</td>
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<td>504646</td>
<td>O-Ring</td>
<td>AS 568-240</td>
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### TABLE 5. SPECIFICATIONS FOR 500000 PART NUMBERS (continued)

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PART NAME</th>
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<tr>
<td>504680</td>
<td>O-Ring</td>
<td>AS 568-343</td>
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<td>504440</td>
<td>O-Ring</td>
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<td>504647</td>
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<tr>
<td>504277</td>
<td>Back-up Ring</td>
<td>S-11109-330</td>
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</tbody>
</table>

### NOTES:

1. Part numbers in the 500000 series are standard parts which generally can be purchased locally.

2. O-rings sizes are specified as AS 568 dash numbers. (AS 568 is an AEROSPACE SIZE STANDARD FOR O-RINGS and formerly was known as ARP.)

3. Material for 0-rings is VITON (DuPont) or equivalent.

4. Back-up Rings are W.S. Shamban & Co. or equivalent. Series S-11248 are single turn Teflon and series S-11109 are spiral Teflon. The dash numbers of both series correspond to the O-ring AS 568 dash numbers.
**Retrofit of Earlier Tools**

Replacement parts, except CYLINDERS and PISTONS, — available for earlier Model 506 and 507 Installation Tools. If a replacement cylinder or piston is needed for 506, serial no. below 1389 or 507, serial no. below 0847, the applicable RETROFIT KIT must be ordered.

**NOTE**

PISTON RETROFIT KITS include reference numbers 16 thru 19 and Cylinder Retrofit Kits include reference numbers 32 and 11 thru 15. (See Table 4 and Figure 2 for reference numbers.)

**Optional Accessory**

Suspension Brackets, PR1734-506 and PR1734-507, are available. When used with a balance spring suspension system, much of the tool’s weight is supported. Operator fatigue is alleviated for longer periods.

**TABLE 6. RETROFIT KITS**

<table>
<thead>
<tr>
<th>PART NAME</th>
<th>MODEL 506 SER. NO. BELOW 1389</th>
<th>MODEL 507 SER. NO. BELOW 0847</th>
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<tr>
<td>CYLINDER</td>
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<td>PISTON ASSEMBLY</td>
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<td>110339</td>
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<tr>
<td>PISTON</td>
<td>106606</td>
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</tbody>
</table>

**Service Notes:**
SERVICE NOTES:
**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

**Canada**

6150 Kennedy Road Unit 10, Mississauga, Ontario, L5T2J4, Canada.
Telephone (905) 564-4825 FAX (905) 564-1963

**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.