

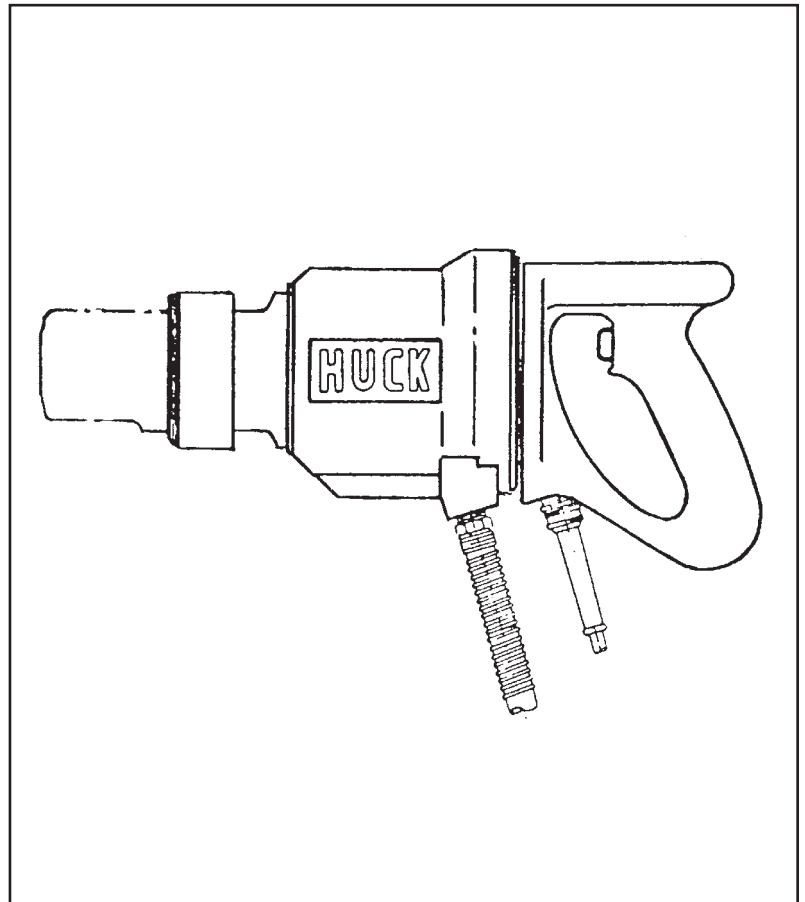
Alcoa  
Fastening  
Systems



## *INSTRUCTION MANUAL*

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

## *HYDRAULIC INSTALLATION TOOL*



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

Form HK 480  
03-11-2004



# 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:**

Council Directive related to Machinery, (89/392/EEC), (91/368/EEC), (93/44/EEC), (93/68/EEC)  
Council Directive related to EMC/EMI, (89/336/EEC)

**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 2.75rn/s<sup>2</sup>.

To calculate the equivalent vibration level for other quantities of fasteners in an eight hour period, use the formula:

$$\text{Equivalent Vibration Level, } Aeq (rn/s^2) = (n/480) \times 3.3$$


where n = number of fasteners in eight hours, and  
3.3 (m/s<sup>2</sup>) = 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 guide lines, 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.



**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. 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](http://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.

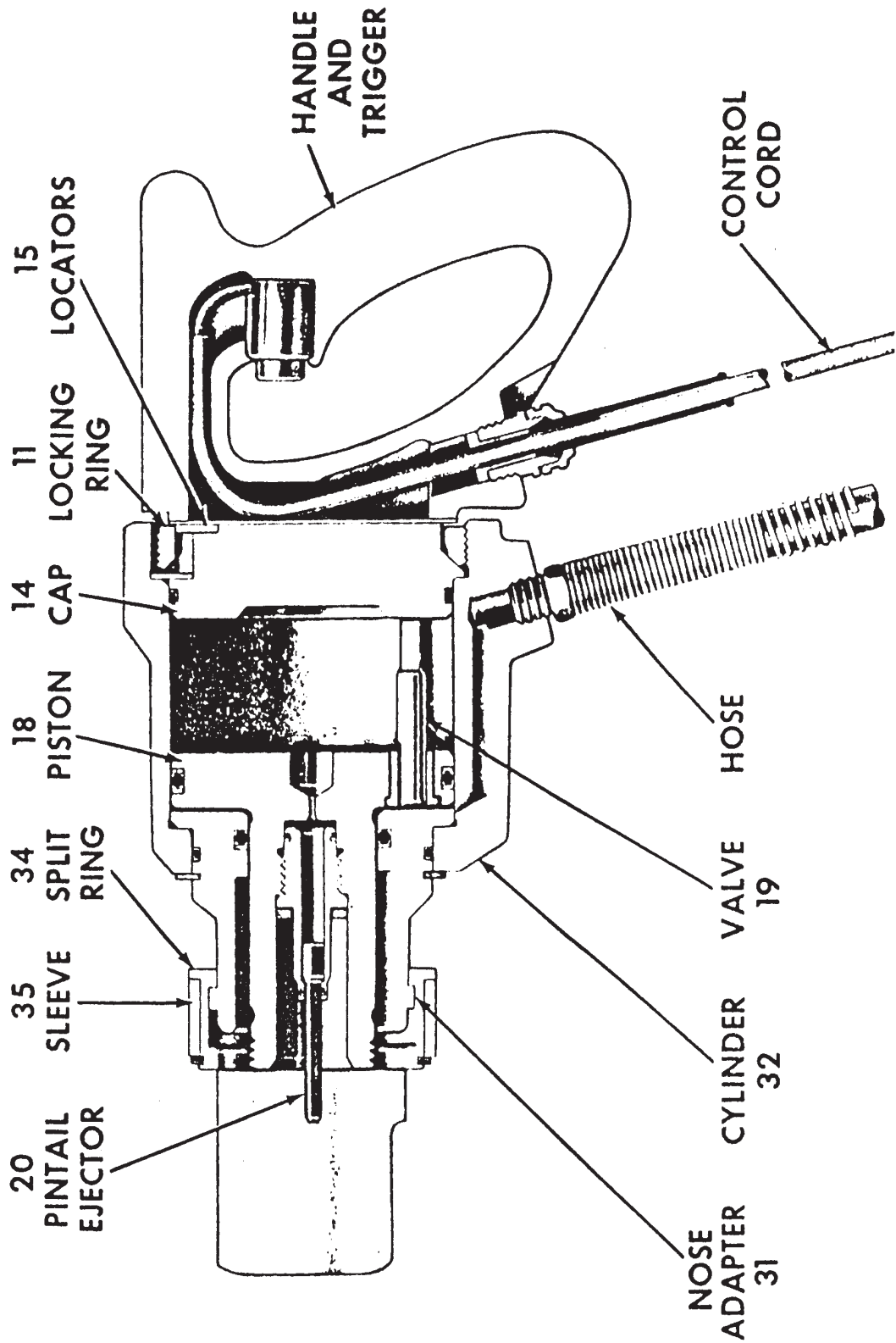
**Table 1.  
SPECIFICATIONS**

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

- 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.

Fig. 1



Sectional View

# PRINCIPLE OF OPERATION



## 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 O-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. Check 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 Chart, 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 O-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.



# TROUBLESHOOTING

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**

<u>TROUBLE</u>	<u>PROBABLE CAUSE</u>	<u>CORRECTIVE ACTION</u>
A. Tool fails to operate	Inoperative Powerig.	Check power source to Powerig. Troubleshoot Powerig.
	Loose or disconnected control cord.	Check and tighten securely.
	Defective auxiliary trigger assembly.	Replace trigger assembly.
	Loose or faulty hydraulic hose couplings.	Check and tighten securely or replace faulty couplings.
B. Tool operates in reverse-stops in back position	Reversed hydraulic hose connections between Powerig and Tool.	Check and connect hose connections.
C. Tool leaks hydraulic oil	Depending on where leak occurs, defective or worn O-rings, or loose hydraulic hose connection at Tool.	Check and replace O-rings and back-up rings, or tighten threaded connectors of hydraulic hose.
D. Hydraulic oil overheats	Powerig not operating properly.	Troubleshoot Powerig.
	Hydraulic couplers not completely tightened.	Tighten hydraulic couplers.
E. Tool operates erratically and fails to install fastener properly	Low or erratic hydraulic pressure supply.	Troubleshoot Powerig.
	Defective or excessively worn piston O-ring in Tool.	Replace O-ring and back-up ring.
	Excessive wear or scoring of sliding surfaces of Tool parts.	Check and replace defective part
	Solenoid pin too short — worn or peened over.	Replace solenoid pin.

# TROUBLESHOOTING (CONT.)



**Table 2. Troubleshooting Chart (continued)**

<u>TROUBLE</u>	<u>PROBABLE CAUSE</u>	<u>CORRECTIVE ACTION</u>
F. Pull grooves on fastener pintail stripped during pull stroke	Operator not sliding nose completely onto fastener pintail.	Instruct operator in proper installation methods.
	Incorrect fastener length.	Use correct length fastener.
	Worn or damaged jaw segments.	Check and replace jaw set.
	Metal chips accumulated in pull grooves of jaw segments.	Clean jaw segments.
G. Collar of HUCKBOLT Fastener not completely swaged	Excessive sheet gap.	Eliminate excessive gap.
	Improper Tool operation.	See Trouble E.
H. Tool “hangs up” on swaged collar of HUCKBOLT Fastener	Scored anvil in nose.	Check and replace anvil.
	Improper Tool operation.	See Trouble E.
I. Pintail of fastener fails to break	Improper Tool operation.	See Trouble E.
	Pull grooves on fastener stripped.	See Trouble F.
J. Jaw segments do not maintain proper position in collet	Improper operation of jaw follower.	Check spring and install correct number of follower O-rings. Clean before reassembling.

# 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 3.**  
**Standard Tools Available From Huck And Their Use**

Part No.	Description	Used on	
		Ref. No.	Part No.
502446	Hex Key, 5/16 across flats	4	500136
502293	Hex Key, 3/32 across flats	6	501625
502867	Truarc Pliers, Waldes Kohinoor, Inc. #0600	33	502671
502868	Truarc Plier, Waldes Kohinoor, Inc. #S-6800	33	502722
502856	TRUARC Pliers, Wald. Koh. Inc. #S-0100	--	500932
110362	Locking Ring Wrench	11	110126 110132

# 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.
9. Unscrew *ejector* cartridge using 7/16 socket wrench. Using TRUARC pliers, S-0100, remove *retaining ring*. Remove *spacer*.
10. Remove retaining ring (33)
11. Press nose assembly *adapter* (31) out of *cylinder* (32).
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 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 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 valve* (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.)



# ASSEMBLY (CONT.)



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

REF. NO.	PART NAME	NO. REQ.	PART NUMBER		REF. NO.
			506	507	
--	HANDLE ASSEMBLY GROUP	1	110957	110957	--
1*	CUSHION	1	101863	101863	1
2	HANDLE	1	----	----	2
3	LOCKWASHER	4	502601	502601	3
4	SCREW-CAP	4	500136	500136	4
5	SWITCH	1	103944	103944	5
6	SCREW-SET	1	501625	501625	6
7	CORD GRIP	1	503344-2	503344-2	7
--	GRÖMMET-(STRAHN-RELIEF)	1	104619	104619	--
8	CONTROL CORD ASSEMBLY	1	110940	110940	8
10	CONNECTOR ASSEMBLY	1	110835	110835	10
11	LOCKING RING	1	110126	110132	11
--	CAP ASSEMBLY	1	110254	110255	--
12*	BACK-UP RING	1	501168	502434	12
13*	O-RING	1	504647	504698	13
14	CAP	1	----	----	14
15	LOCATOR	2	104589	104589	15
--	PISTON ASSEMBLY	1	106632	106634	--
--	PISTON & O-RING ASSEMBLY	1	110250	110252	--
16*	BACK-UP RING	2	502943	502501	16
17*	O-RING	1	504680	504685	17
18	PISTON	1	----	----	18
19	VALVE UNLOADING	1	110080	110161	19
--	EJECTOR CARTRIDGE GROUP	1	110251	110253	--
20	EJECTOR-PINTAIL	1	122709-1	122709	20
21*	O-RING (OUTSIDE)	1	<del>504555</del>	<del>504555</del>	21
22*	BACK-UP RING (OUTSIDE)	1	<del>501688</del>	501088	22
23	CARTRIDGE	1	----	----	23
24*	O-RING (INSIDE)	1	504547	504547	24
25*	BACK-UP RING (INSHDE)	1	502150	502150	25
26 <sup>(15)</sup>	BUMPER	1	104476	104477	26
--	ADAPTER ASSEMBLY	1	101479	101568	--
27*	O-RING (INSIDE)	1	504665	504667	27
28*	BACK-UP RING (INSIDE)	1	504276	504277	28
29*	O-RING (OUTSIDE)	1	504642	504646	29
30*	BACK-UP RING (OUTSIDE)	1	501163	501167	30

See "EJECTOR CARTRIDGE ASSEMBLIES  
123357 (506) ; 123359 (507 & 507-2)".

Table 4 - Parts List (cont.)

REF. NO.	PART NAME	NO. REQ.	PART NUMBER		REF. NO.
			506	507	
31	ADAPTER	1	----	----	31
32	CYLINDER	1	110148	110157	32
33*	RING-RETAINING	1	502671	502722	33
--	SPLIT RING GROUP	1	104487	104488	--
34	SPLIT RING	1	101394	101577	34
35	SLEEVE	1	101395	101578	35
36*	RING-RETAINING	1	501533	502900	36
--	HOSE & COUPLER GROUP	1	110849	110849	--
37	HOSE-HYDRAULIC	2	123749	123749	37
--	COUPLER SET	1	110440	110440	--
38	NIPPLE (MALE)	1	----	----	38
39	BODY (FEMALE)	1	----	----	39
*	O-RING	1	504438	504438	--
*	BACK-UP RING	1	501102	501102	--

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)

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Revised 8/83  
Revised 2/93  
Revised 10/93  
Revised 1/94

Fig. 2

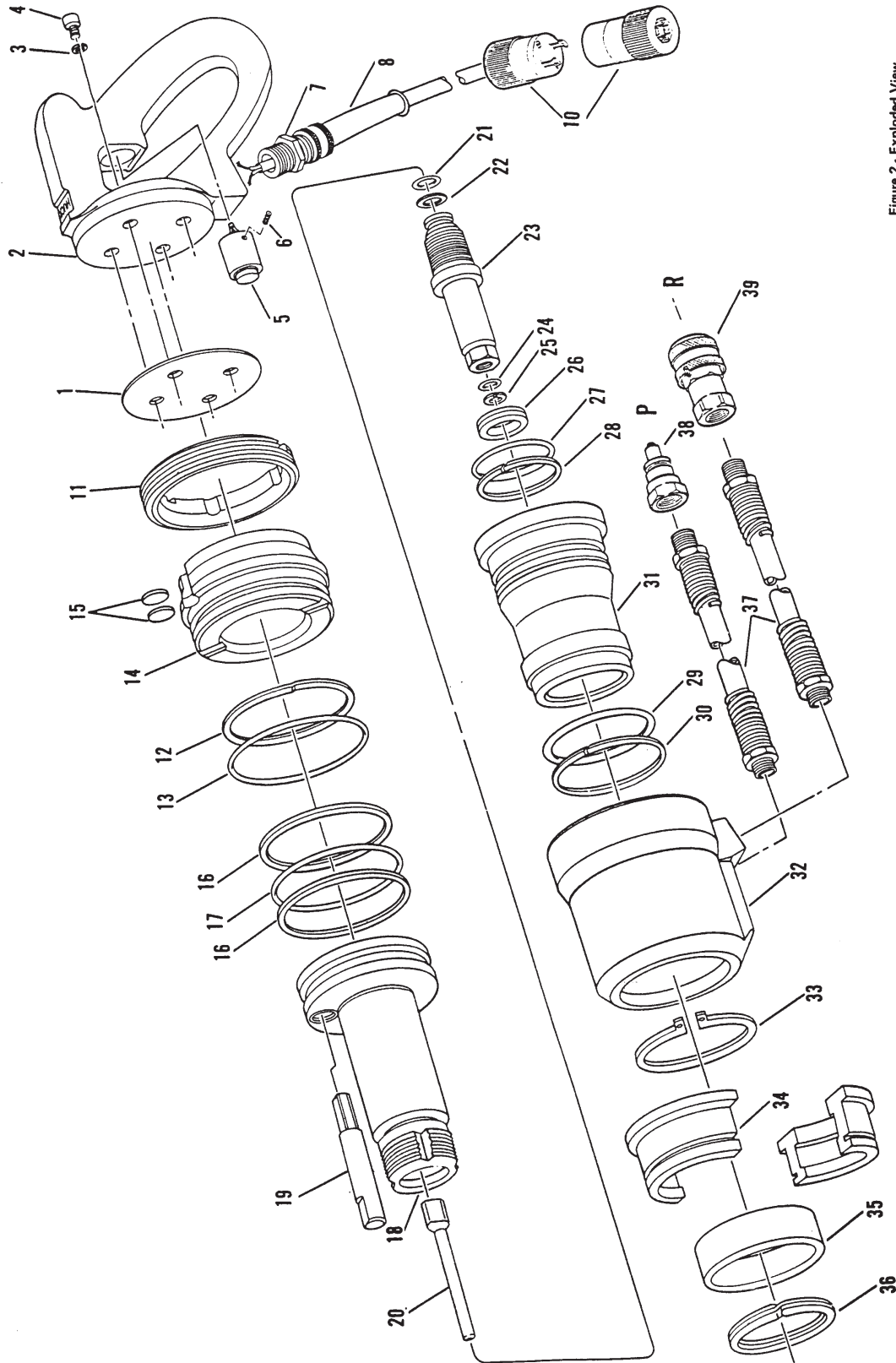


Figure 2 - Exploded View

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Rev/Issd 7-78

Exploded View

# 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 5. SPECIFICATIONS FOR 500000 PART NUMBERS

PART NUMBER	PART NAME	SPECIFICATIONS
500136	Screw	Socket Head Cap, 3/8-24 x 1 long, Alloy Steel
501102	Back-up Ring	S-11248-111
501104	Back-up Ring	S-11248-113
501163	Back-up Ring	S-11248-236
501167	Back-up Ring	S-11248-240
500168	Back-up Ring	S-11248-241
501533	Retaining Ring	Spirolox RST-325
501625	Screw	Cup Point Set, #10-24 x 1/4 long, Alloy Steel
502434	Back-up Ring	S-11248-246
502501	Back-up Ring	S-11248-348
502601	Lockwasher	Ex. Hvy. Spring Type, 3/8 nominal I.D.
504404	O-Ring	AS 568-008
502671	Retaining Ring	Truarc 5100-350
502722	Retaining Ring	Truarc 5100-400
500932	Retaining Ring	Truarc - int. N5000-31
502900	Retaining Ring	Spirolox RST-387
502943	Back-up Ring	S-11248-343
504646	O-Ring	AS 568-240

TABLE 5. SPECIFICATIONS FOR 500000 PART NUMBERS (continued)

PART NUMBER	PART NAME	SPECIFICATIONS
504680	O-Ring	AS 568-343
504440	O-Ring	AS 568-113
504438	O-Ring	AS 568-111
504665	O-Ring	AS 568-328
504667	O-Ring	AS 568-330
504642	O-Ring	AS 568-236
504647	O-Ring	AS 568-241
504685	O-Ring	AS 568-348
504698	O-Ring	AS 568-246
504276	Back-up Ring	S-11109-328
504277	Back-up Ring	S-11109-330

## 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 O-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

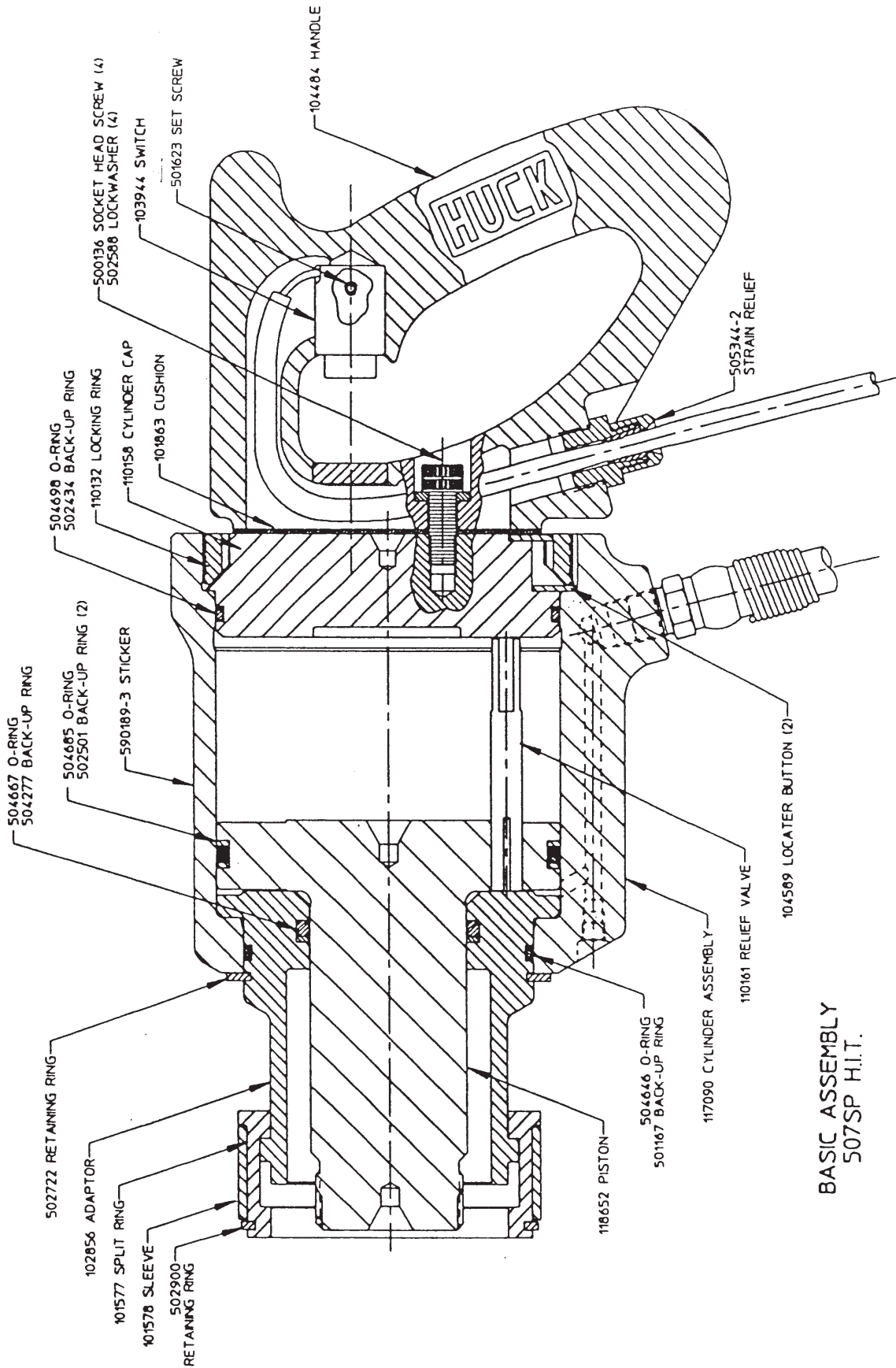
Suspension Brackets, PR1734-506 and PR1734-507, are available. When used with a balance spring suspension system, much of the tool's weight is supported. Operator fatigue is alleviated for longer periods.

TABLE 6. RETROFIT KITS

PART NAME	MODEL 506 SER. NO. BELOW 1389		MODEL 507 SER. NO. BELOW 0847	
	PART NUMBER	ORDER KIT NO.	PART NUMBER	ORDER KIT NO.
CYLINDER	104462	110341	104463	110342
PISTON ASSEMBLY	106633	110339	106635	110340
PISTON	106606		106607	

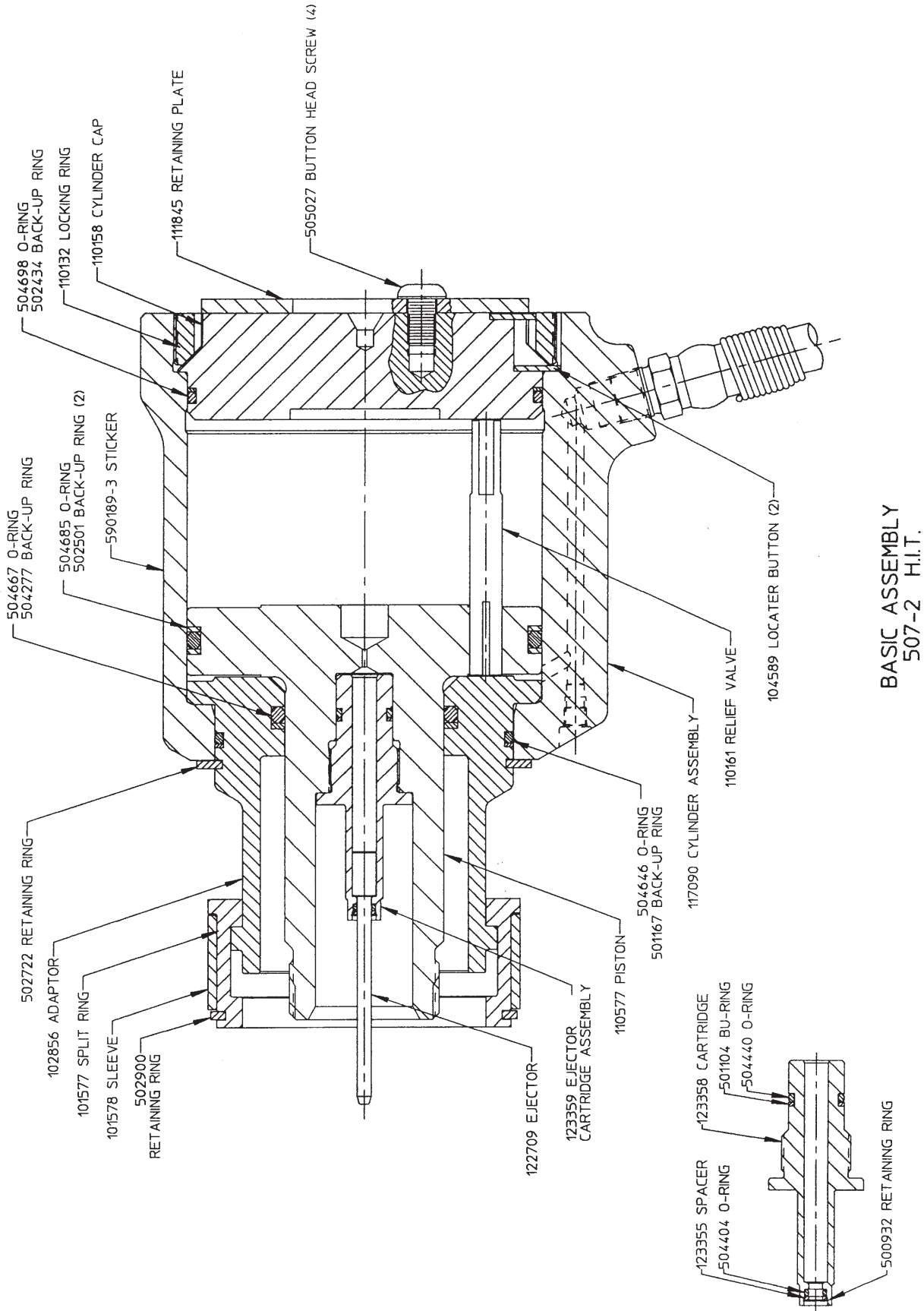
## SERVICE NOTES:

Fig. 3



BASIC ASSEMBLY  
507SP H.I.T.

Fig. 4

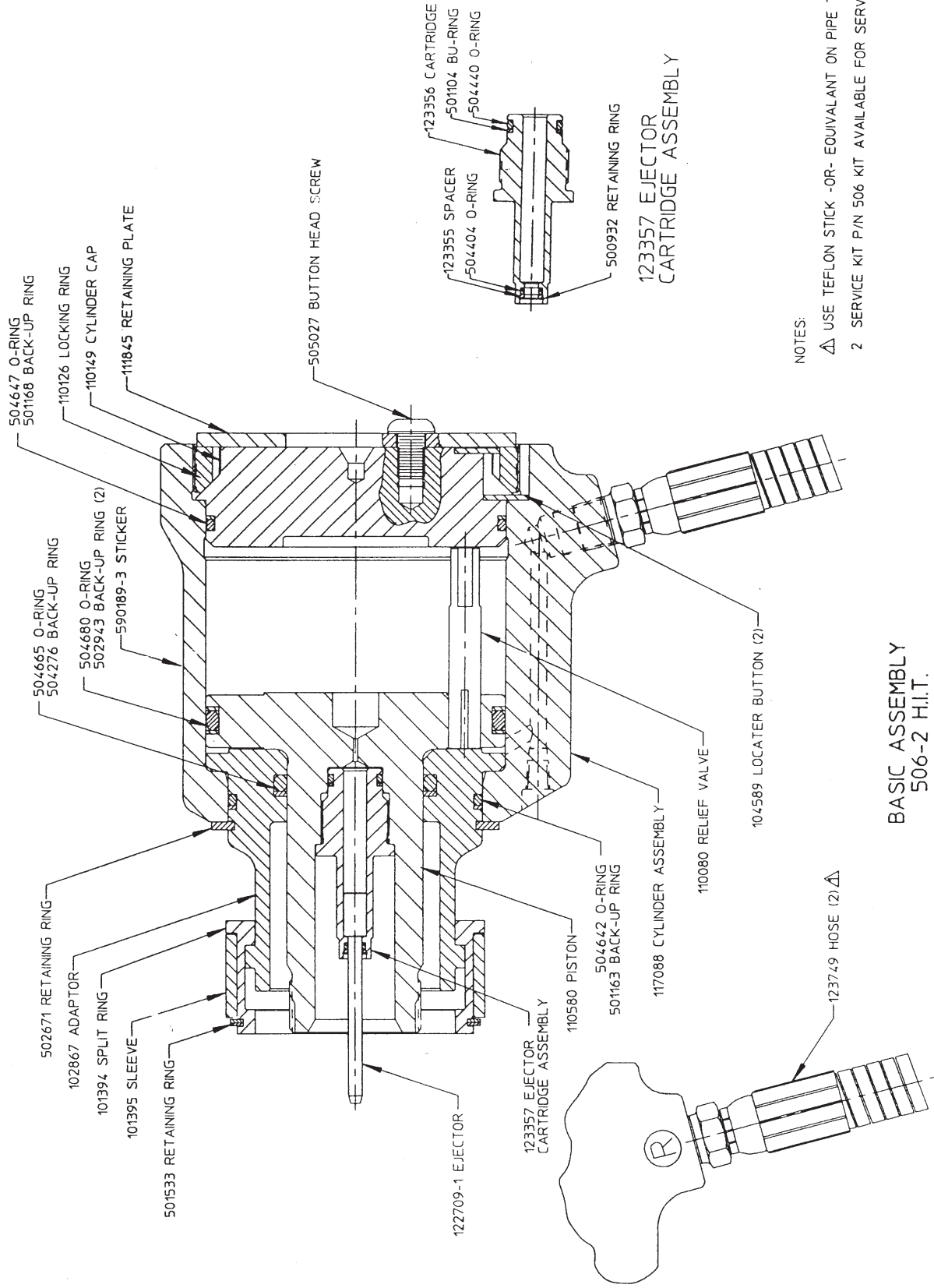


BASIC ASSEMBLY  
507-2 H.I.T.

123359 EJECTOR  
CARTRIDGE ASSEMBLY



Fig. 5



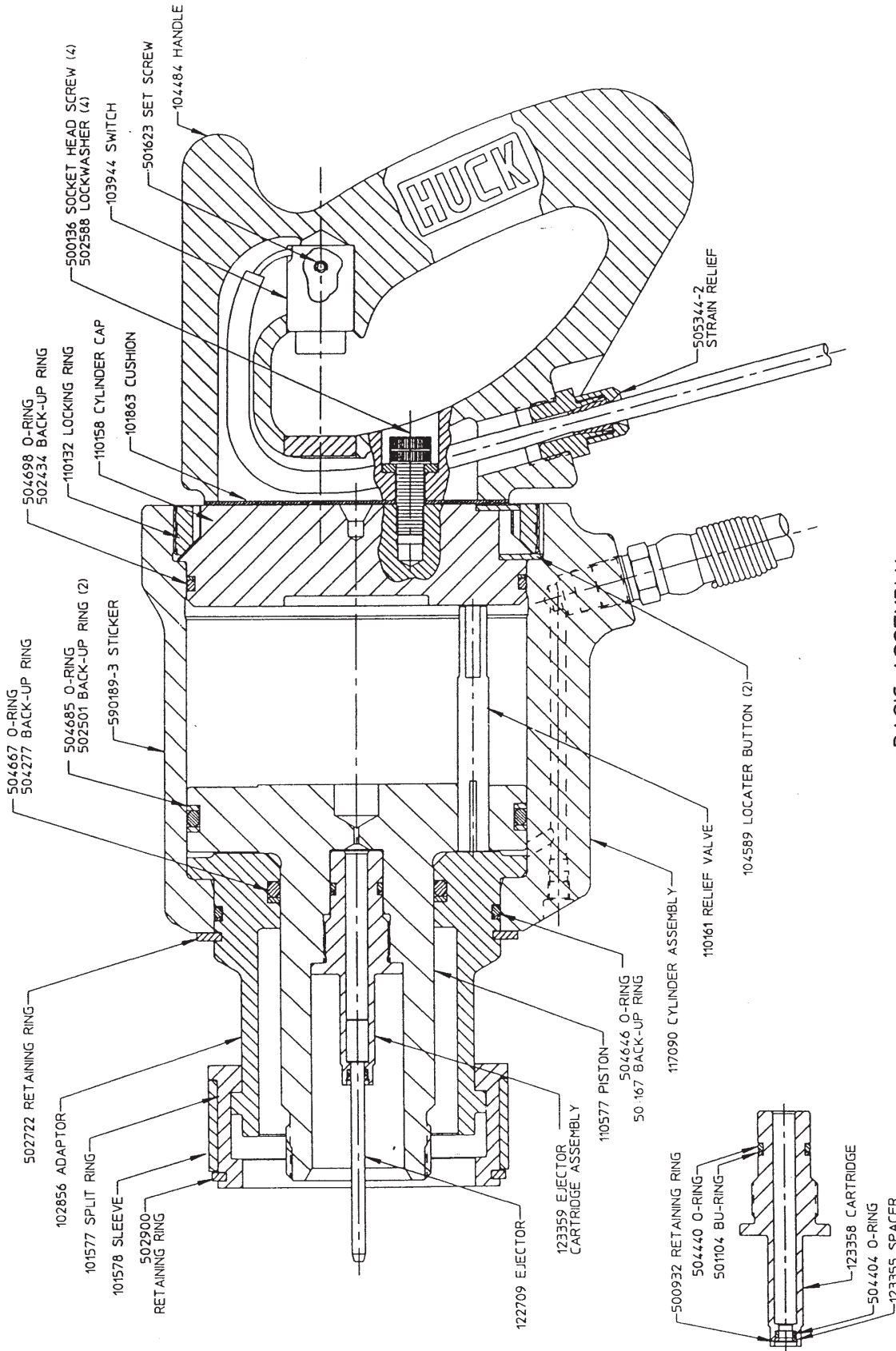
NOTES:

- Δ USE TEFLON STICK -OR- EQUIVALENT ON PIPE THREADS.
- 2 SERVICE KIT P/N 506 KIT AVAILABLE FOR SERVICE PARTS.

BASIC ASSEMBLY  
506-2 H.I.T.

PULL CAPACITY: 56420 LBS. AT 5400 PSI.  
STROKE: 2.000 INCHES.

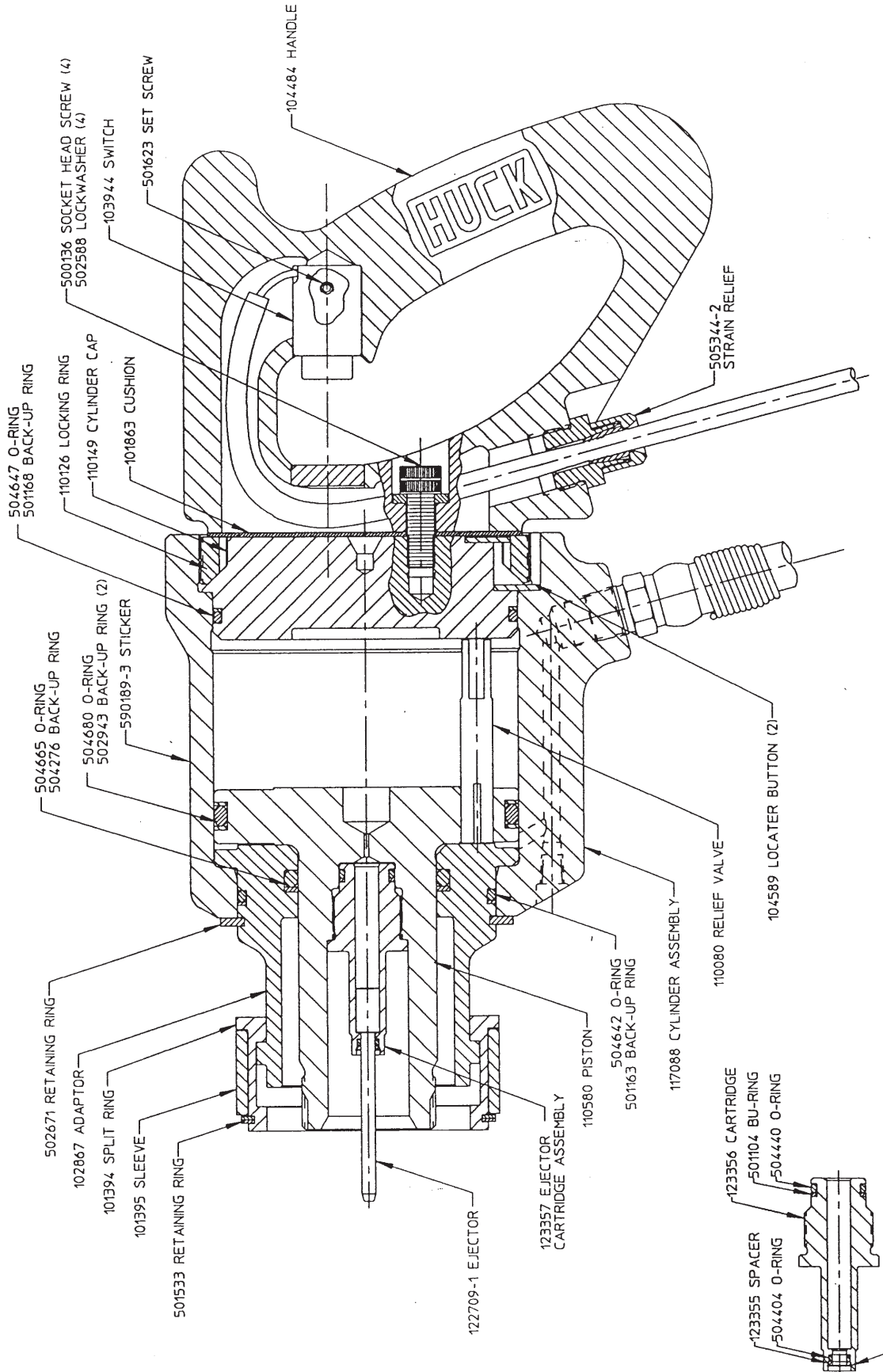
Fig. 6



BASIC ASSEMBLY  
507 H.I.T.

SOLID PISTON 118652 OPTIONALLY AVAILABLE

Fig. 7



BASIC ASSEMBLY  
506 H.I.T.

123357 EJECTOR  
CARTRIDGE ASSEMBLY

# 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.

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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.

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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.



For the Long Haul™

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Tucson, AZ 85714  
800-234-4825  
520-747-9898  
FAX: 520-748-2142

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310-830-8200  
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