

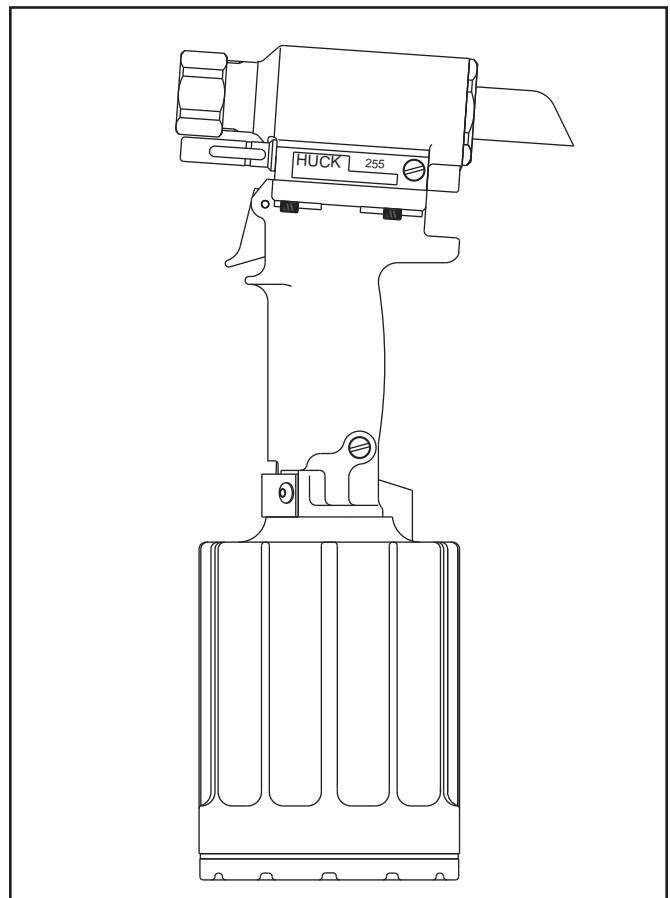
Alcoa
Fastening
Systems



INSTRUCTION MANUAL

255

PNEUDRAULIC INSTALLATION TOOL



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

11-24-2010
HK1014



EU Declaration of Conformity

Manufacturer:

Huck International, Inc., Installation Systems Division, 1 Corporate Drive, Kingston, NY, 12401, USA

Description of Machinery:

Model number 255 fastener installation tool

Relevant provisions complied with:


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

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: Henk Rosier

Position: Engineering Manager,
Installation Systems Division

Place: Kingston, New York, USA

Date: August, 1998

Huck Model 255 Sound Level

The sound level of the 255 tool cycling without fastener is

Sound Exposure Level (SEL) =84.4 dB (A)
Peak Value = 91.1 dB (C)

The noise of the fastener being installed in structure is considered process noise, not tool noise. Sound measurements of simulated process noise are available upon written request from Huck International in Kingston, NY, USA.

Huck Model 255 Vibration Level

For an eight hour work day, installing 3000 typical Huck fasteners will result in an equivalent weighted RMS vibration level (Aeq) of 8.1m/s².

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

$$\text{Equivalent Vibration Level, } A_{eq} \text{ (m/s}^2\text{)} = (n/480) \times 1.3$$

where n = number of fasteners in eight hours, and 1.3(m/s²) = Aeq for 60 seconds.

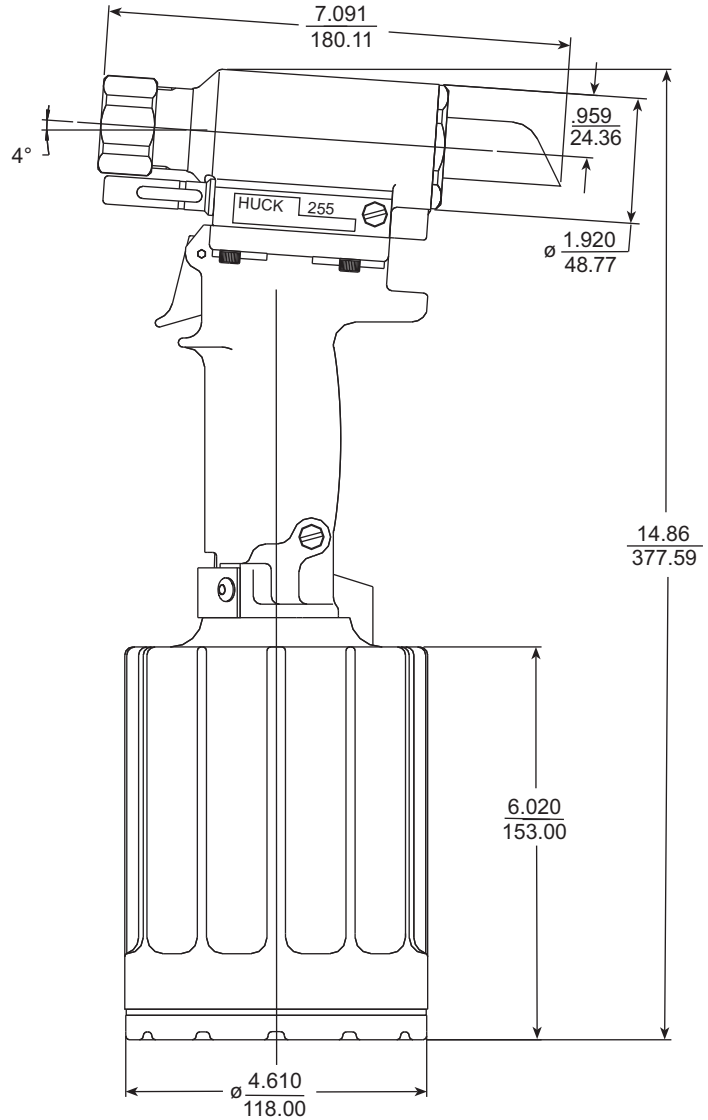
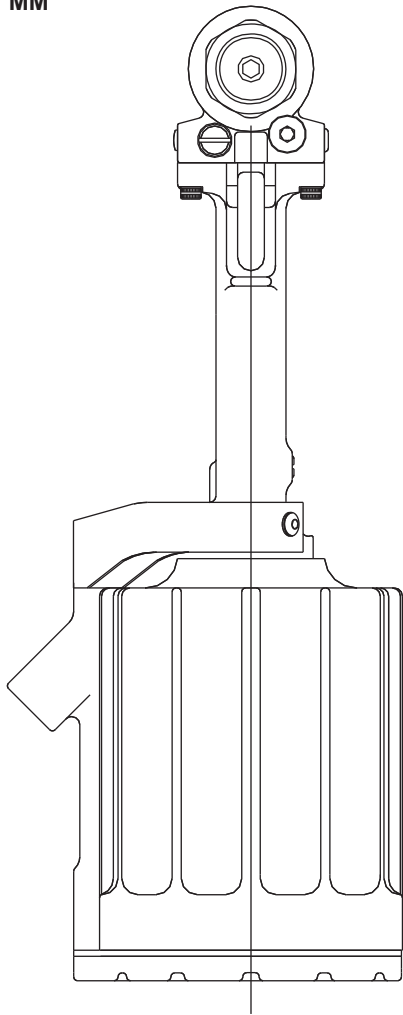
Test data to support the above information is on file at Huck International, Inc., Kingston, NY, USA. Vibration measurements are frequency weighted in accordance with ISO 8041 (1990).

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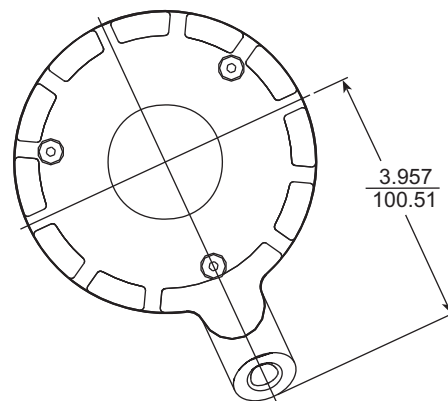
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TOOL SPECIFICATIONS

INCHES
MM




- **Stroke:** .625
- **Weight:** 8.8 lbs
- **Air Pressure:** 90-100 psi
- **Capacity:** 7750 lbs @ 90 psi
- **Speed/Cycles:** 30 per minute
- **Noise Level:** 85 dBA @ 90 psi




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.

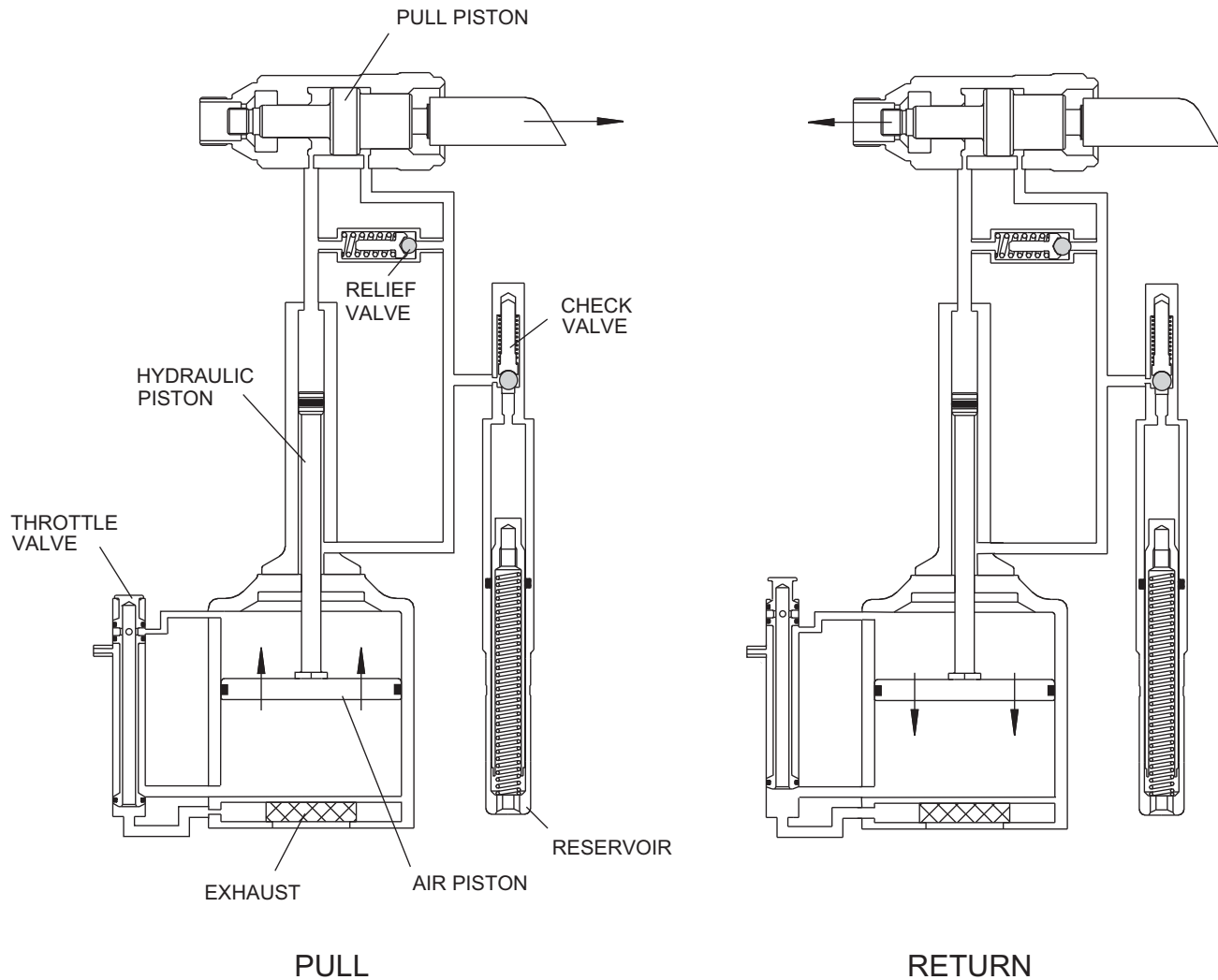
CAUTIONS: show conditions that will damage equipment and or structure.

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.

PRINCIPLE OF OPERATION



When the trigger is depressed, the throttle valve moves to down position, and pressurized air is directed to the bottom of the air piston, causing the piston to move upward. The air above the piston is exhausted and directed through the center of the throttle valve and out the bottom of the tool. The air piston has a rod and a hydraulic piston attached. When the air piston rod moves upward, a column of pressurized fluid is forced into head, which moves the pull piston back. The attached nose assembly moves with the pull piston to start fastener installation.

When fastener installation is completed, the trigger is released. Air pressure, with the assistance of a spring, causes the throttle valve to return to its up position. Pressurized air is re-directed to the top of the air piston, causing the piston to move downward. The air from below the piston is exhausted through bottom of tool. The rod and hydraulic piston move downward, hydraulic pressure is reversed and the pull piston is returned forward. Return pressure relief valve protects tool against pressure spikes. The reservoir replenishes hydraulic system as needed.



PREPARATION FOR USE

The Model 255 Installation Tool is shipped with a plastic plug in the air inlet connector. The connector has 1/4-18 female pipe threads to accept the air hose fitting. Quick disconnect fittings and 1/4" inside diameter air hose are recommended. An air supply of 90-100 psi capable of 11.5 CFM must be available. Air supply should be equipped with a filter-regulator-lubricator unit.

1. Remove plastic shipping plug from Air Inlet Connector and put in a few drops of Automatic Transmission Fluid, DEXRON III, or equivalent.
2. Screw quick disconnect fitting into Air Inlet Connector.

CAUTION: Do not use TEFLON tape on threads - - use TEFLON in stick form only. (Huck P/N 503237)

3. Set air pressure on regulator to 90-100 psi.
4. Attach optional Air Hose (38), supplied with tool, to air inlet connector.
5. Connect air hose to tool.
6. Cycle tool a few times by depressing and releasing trigger.
7. Disconnect air hose from tool.

8. Remove Retaining Nut and Stop.
9. Select proper Nose Assembly from **SELECTION CHART** for fastener to be installed.
10. Screw Collet Assembly (including lock collar and shim if applicable) onto Spindle holding Pull Piston (11) with 3/8 hex key. (Wrench Tight)
11. Slide Anvil over Collet Assembly and into counterbore.
12. Slide Stop and Retaining Nut over Anvil and screw Nut onto Head.
13. Connect air hose to tool and install fastener(s) in test plate of proper thickness with proper size holes. Inspect fastener(s).

NOTES:

- 1 Air quick disconnect fittings and air hoses are not available from Huck International, Inc.
- 2 **VIBRA-TITE** (Huck P/N 505125) should be used on collet threads for nose assemblies without lock collars. All other noses should be staked (*please refer to nose assembly data sheets*).



SERVICING THE TOOL

GENERAL

1. The efficiency and life of any tool depends upon proper maintenance. Regular inspection and correction of minor problems will keep tool operating efficiently and prevent downtime. The tool should be serviced by personnel who are thoroughly familiar with how it operates.
2. A clean, well-lighted area should be available for servicing the tool. Special care must be taken to prevent contamination of pneumatic and hydraulic systems.
3. Proper hand tools, both standard and special, must be available.
4. All parts must be handled carefully and examined for damage or wear. Always replace Seals, when tool is disassembled for any reason. Components should be disassembled and assembled in a straight line without bending, cocking, or undue force. Disassembly and assembly procedures outlined in this manual should be followed.
5. **Service Parts Kit 255KIT** includes consumable parts and should be available at all times. Other components, as experience dictates, should also be available.



WARNING: Inspect tool for damage or wear before each use. Do not operate if damaged or worn, as severe personal injury may occur.

DAILY

1. If a Filter-Regulator-Lubricator unit is not being used, uncouple air disconnects and put a few drops of Automatic Transmission Fluid or light oil into the air inlet of the tool. If the tool is in continuous use, put a few drops of oil in every two to three hours.
2. Bleed the air line to clear it of accumulated dirt or water before connecting air hose to the tool.
3. Check all hoses and couplings for damage or air leaks, tighten or replace if necessary.
4. Check the tool for damage or air/hydraulic leaks, tighten or replace if necessary.
5. Check the nose assembly for tightness or damage, tighten or replace if necessary.
6. Check oil level in tool reservoir, replenish if necessary.

WEEKLY

1. Disassemble and clean nose assemblies and reassemble per applicable NOSE ASSEMBLY DATA SHEET.
2. Check the tool and all connecting parts for damage or oil/air leaks, tighten or replace if necessary.



DISASSEMBLY



WARNING: Be sure air hose is disconnected from tool before cleaning, or performing maintenance. Severe personal injury may occur if air hose is not disconnected.

For component identification and Parts list, refer to Figures 1 thru 4 and 9.

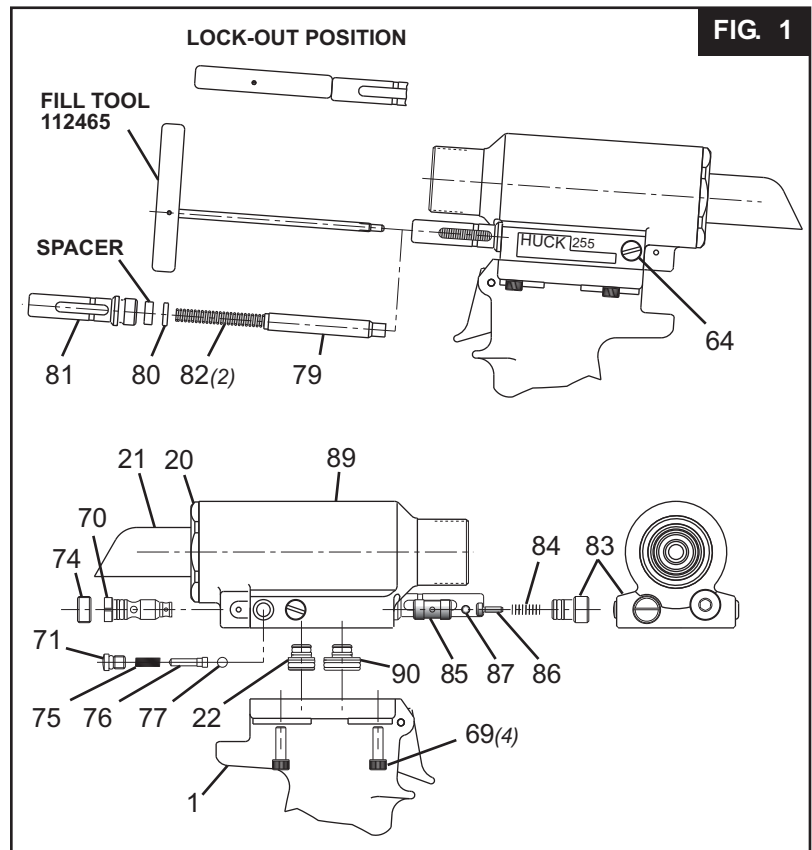
NOTE: The following procedure is for complete disassembly of tool. Disassemble **only** components necessary to replace damaged O-rings, Quad rings, Back-up rings, and worn or damaged components. Always use soft jaw vice to avoid damage to tool.

1. Disconnect air hose from tool.
2. Remove nose assembly. Follow instructions on Nose Assembly Data sheet.
3. Insert Fill Tool P/N 112465 through reservoir housing and screw into Reservoir Plunger (79) locking it in the out position. (Fig. 1)
4. Unscrew Cap Screws (69) with 5/32 hex key. Carefully lift Head (89) straight up from Handle (1), remove Pull Gland (90) and Return Gland (22) from separated assemblies. Remove seals from glands. (Fig. 1)
5. Unscrew Plug (83) of return Pressure Relief Valve from front of head. Remove Spring (84), Valve Guide (86), Sleeve (85) and Steel Ball (87). A small magnet is helpful. (Fig. 1)
6. Unscrew Bleed Plug (64). Hold over waste oil container and release fill tool slowly. (Fig. 1)
7. Unscrew Reservoir Housing (81) from head. Remove two Springs (82). Slide Reservoir Plunger (79) from head. Remove spacer and Quad Ring (80). A pick may be used to remove the quad ring. (Fig. 1)
8. Unscrew Plug (71) of reservoir check Valve from side of head. Remove Spring (75), check Valve Guide (76) and Stainless Steel Ball (77). (Fig. 1)
9. If check Valve Seat (78) is damaged contact your Huck representative. If Seat (88) is damaged it can be removed (*through the front of the tool head only*)

by using the following procedure.

NOTE: If seat is taken out it can not be reused, it must be replaced. (Fig. 9)

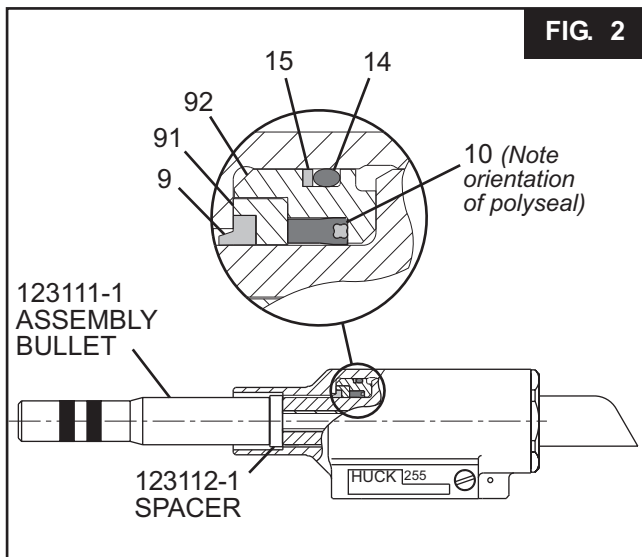
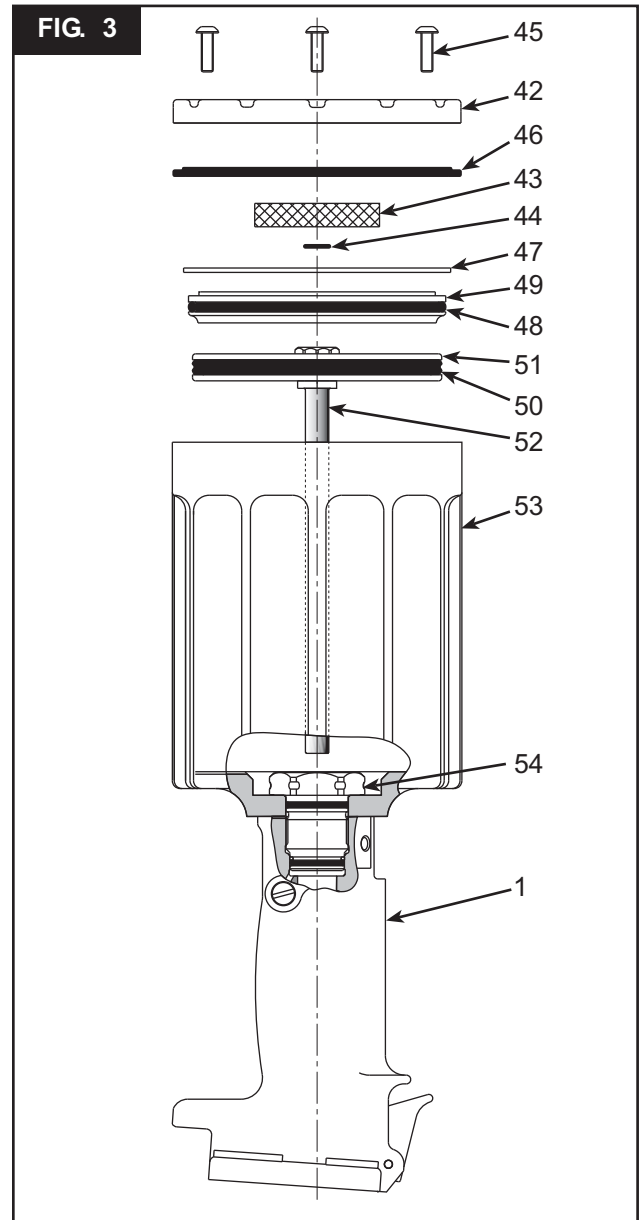
10. **(Seat 88 removal)** Note: all parts in the reservoir check valve must be removed before Plug (70) can be removed. Unscrew Plug (74), insert a #10 screw in the thread of Plug (70), and pull to remove. Using a small drift and hammer, from the rear side of the head, drive Seat (88) out towards the front of the head. (Fig. 9)
11. Pintail Deflector (21) can be pulled off barbed end at rear of Pull Piston (11).
12. Unscrew End Cap (20) from Head (89) with 1 9/16 open end wrench. (Fig. 9)
13. Place Spacer (123112-1) on Pull Piston (11), and screw Assembly/disassembly Bullet (123111-1) onto piston. Tap or press piston assembly out of head.
NOTE: This will push out front and rear gland assemblies and wiper and wiper housing. (Fig. 2)
14. Remove Screw (67) from Throttle Arm (66). Remove throttle arm. Pull Throttle Valve (36) out of cylinder. Remove Spring (40). (Fig. 9)





DISASSEMBLY (CONTINUED)

15. With a small punch and hammer, drive Roll Pin (5) that retains the trigger from Handle (1). Remove trigger pin (4). Remove ball end of Cable (2) from throttle arm (66), and pull cable out of handle. (Figure 9)
16. Remove Bleed Plug (64) from handle. (Fig. 1)
17. Hold tool inverted in vice. Unscrew three Button Head Screws (45) with 1/8 hex key. (Fig. 3)
18. Remove Muffler End Cap (42), Bottom Exhaust Gasket (46), Muffler (43) and O-ring (44). (Fig. 3)
19. Remove Retaining Ring (47) from Cylinder Assembly (53). (Fig. 3) **NOTE:** Tap cylinder head down into cylinder for easier removal of retaining ring.
20. Screw Button Head Screws (45) into Cylinder Head (49). Carefully pry under screws to remove cylinder head.
21. Push air piston all the way down in cylinder, and lay tool on its side. Hold Self-locking Nut (41) with a 9/16 socket and extension and with 7/64 hex key, remove piston Screw (32). (Fig. 4 & 9)
22. Turn cylinder and handle upside down and secure in a vise.
23. Grip Self-locking Nut (41) under Air Piston (51) with pliers and pull piston and rod assembly from handle and cylinder assembly. (Fig. 3 & 4)
CAUTION: Care must be taken not to scratch piston rod or cylinder during removal.



24. With a 1 3/8 socket and extension, remove Gland Assembly (54). Handle and cylinder will now separate. (Fig. 3)
25. Push Hydraulic Piston (31) out of handle. Push out from top to bottom.
CAUTION: A plastic or wooden drift must be used to avoid damaging the handle bore.
26. To remove Polyseal (61) from Gland Assembly (54), remove Retaining Ring (59) and Spacer (60). (Fig. 9)



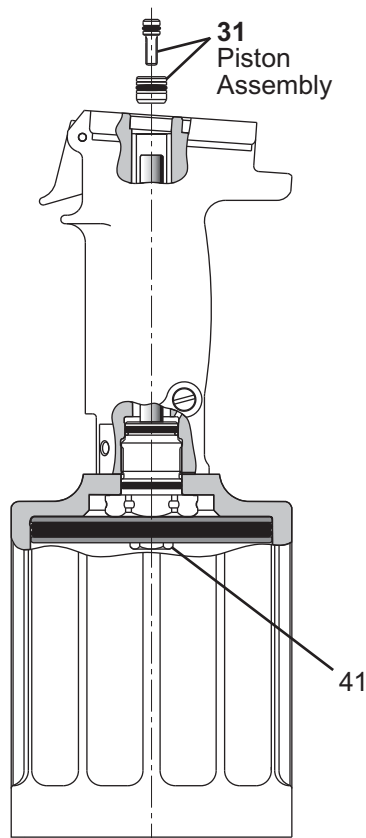
ASSEMBLY

(Refer to Figures 1 thru 5 and 9.)

Clean components with mineral spirits, or similar solvent. Inspect for wear/damage and replace as necessary. Replace all seals of disassembled components. Use O-rings, Quad rings and Back-up rings in **Service Parts Kit, P/N 255KIT**. Smear LUBRIPLATE 130AA or PARKER-O-LUBE on O-rings, Quad rings, Back-up rings and mating parts to ease assembly. Assemble tool taking care not to damage O-rings, Quad rings, or Back-up rings.

1. Holding handle inverted in a vice, Place Cylinder (53) on handle with Timing Pin positioned in matching hole. Assemble Gland Assembly (54). (Fig. 9) Screw complete gland assembly into handle. Torque to 75-80 ft. lbs. using 1 3/8 socket wrench.
2. Push Air Piston/Rod assembly with Quad Ring (50) in place into Air Cylinder until it bottoms at top of Cylinder. (Fig. 3)
3. Turn tool upright. Install Hydraulic Piston Assembly (31) (with O-ring (33) and Back-up Rings (27) in place) in handle. Press in from top of handle taking care not to damage seals. (Fig. 4)
4. Push Screw (32) with O-ring (35) in place through Hydraulic Piston (34) and screw into top of piston rod. Hold Self-locking Nut (41) with 9/16 socket and extension and torque Screw (32) using 7/64 hex key to 55-60 in. lbs. Torque Nut (41) to 28-32 ft. lbs.
5. Hold handle in vise with bottom facing up. Push Cylinder Head (49) with O-ring (48) in place squarely into cylinder. Install Retaining Ring (47). (Figs. 3 & 9)
6. Position O-ring (44) and Muffler (43) on center of Cylinder Head (49). Place Gasket (46) on Cylinder Assembly (53). **NOTE: Lip must face Muffler End Cap (42).** Place Muffler End Cap (42) on top of Gasket (46), and secure with 3 Button Head Screws (45) using 1/8 hex key. (Fig. 3)
7. Turn tool upright. Drop Spring (40) into Throttle valve hole in cylinder. Push Throttle Valve (36) with O-rings (37 & 39) in place into cylinder. (Fig. 9)
8. Assemble Trigger (3) Cable (2) and Trigger Pin (4), and slide cable into Handle (1). Align hole in trigger with hole in handle and install Roll Pin (5) with a hammer and punch. (Fig. 9)
9. Slide Throttle Arm (66) onto ball end of Throttle Cable. Swing arm until other end fits over throttle valve. Push Screw (67) through Throttle Arm (66). Tighten with 5/32 hex key.
10. If Air Hose Assembly (38) was removed, reinstall in Cylinder Assembly (53).
11. **(If seat (88) is being replaced)** Push Plug (70) (with O-ring 72 & Back-up Ring 25 in place) into head. Install Screw (74). (Fig. 9)
12. Install O-ring (72) and Back-up rings (25) onto seat. Drive seat and seal assembly in using soft drift taking care not to damage ball seat surface. (Fig. 1 & 9)
13. Assemble Pull Piston (11) with new Seals (12 & 13). Lubricate with LUBRIPLATE or PARKER SUPER-O-LUBE. (Fig. 9)
14. Thread Assembly Bullet (123111-1) onto Pull Piston (11) and push entire assembly into head. (Fig. 2) **NOTE:** Spacer (123112-1) is **not** needed for this procedure.
15. Push Front Gland (92) with O-ring (14), Back-up Ring (15), Polyseal (10), Wiper Housing (91) and Wiper Seal (9) in place onto Pull Piston (11). (Fig. 2)

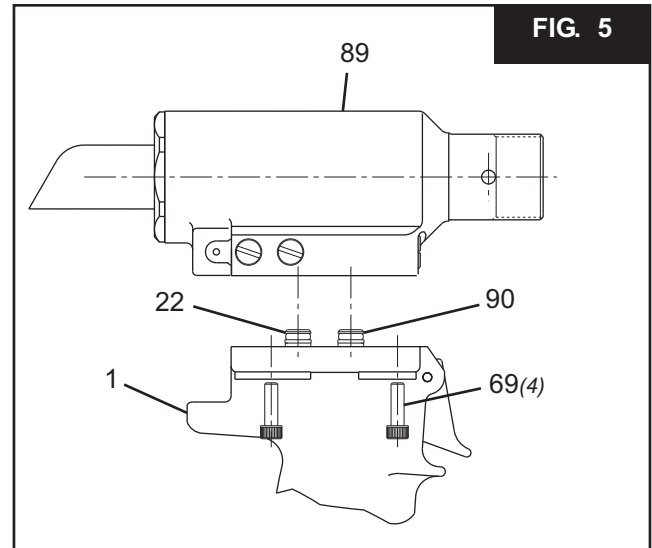
FIG. 4





ASSEMBLY (CONTINUED)

16. Install O-rings (16 & 18) and Back-up Rings (17 & 19) on Rear Gland (93). Push complete assembly into head, screw in End Cap (20) and torque Cap to 55-60 ft.lbs. (Fig. 9)
17. Install O-ring (72) & Back-up Ring (25) on Plug (83). Install Ball (87), Valve Guide (86), Sleeve (85), Spring (84) and Plug (83) into head. (Fig. 1 & 9)
18. Install O-ring (65) on Plug (71). Install Ball (77), Guide (76), Spring (75) and Plug (71) into head.
19. Push Pintail Deflector (21) onto barbed end of Pull Piston (11). (Fig. 9)
20. Place O-ring (65) on Bleed Plug (64) and screw assembly into Handle (1). (Fig. 9)
21. Install O-rings (24 & 30) & Back-up Rings (25 & 29) on Pull Gland (28). Install O-rings (24 & 26) and Back-up Rings (25 & 27) on Return Gland (23). Push Gland Assemblies (22 & 90) into handle. Push Head (89) down on glands. Place tool in a vise, head down, and install 4 Screws (69) and torque to 170 inch pounds. (Fig. 5)



22. Tool is now completely assembled and ready for Fill and Bleed.

SERVICE NOTES



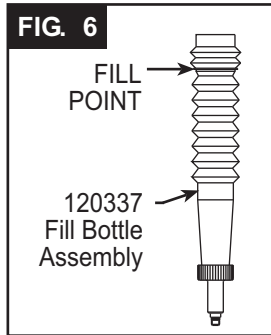
FILL AND BLEED

Equipment Required:

- Shop airline with 90 - 100 psi max.
- Air regulator
- Fill bottle, 120337, (supplied with tool).
- Large flat blade screwdriver
- Optional Stall Nut 120824
- Nose assembly
- Fasteners (Optional)

Preparation:

1. Install air regulator in airline and set pressure to 20-40 psi.
2. Fill bleed bottle almost full of DEXRON III - ATF or equivalent. (Fig.6)

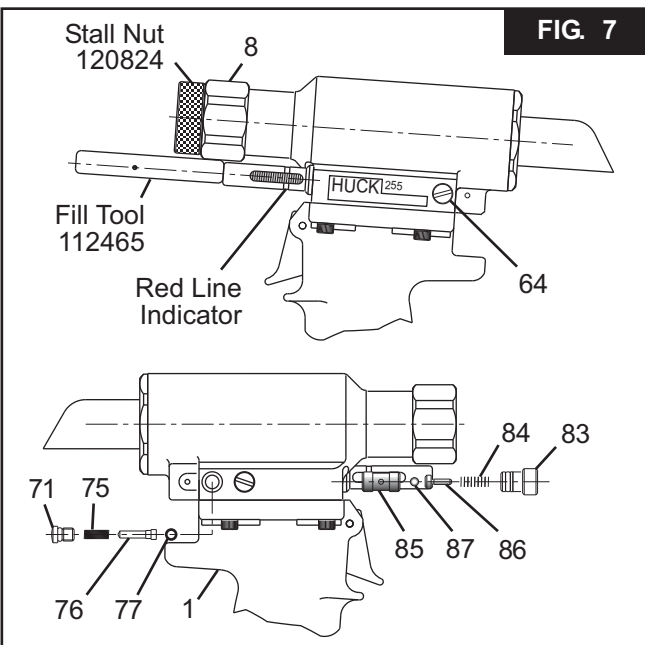


! WARNING: Avoid contact with hydraulic fluid. Hydraulic fluid must be disposed of in accordance with Federal, State and Local Regulations. Please see MSDS for Hydraulic fluid shipped with tool.

Refill tool only when red line on plunger drops below the red line on the reservoir housing or when tool is rebuilt. **USE: AUTOMATIC TRANSMISSION FLUID DEXRON III, OR EQUIVALENT.**

Step 1

Screw Fill Tool P/N 112465 into Reservoir Plunger, pull Plunger into Housing and lock Fill Tool in full forward position by tilting handle (long side touching tool) and locking in place. (Fig. 7)



Step 2

Remove Plugs (83) and (71) and all guides, springs and balls from ports in head. Reinstall Plug (83) in head in Relief Valve port (front of tool). (Fig. 7 & 8).

Step 3

Screw retaining nut onto head assembly. Screw Stall Nut (optional see note:) onto Piston and tighten to ensure full thread engagement. Back off retaining nut until it engages stall nut. Check Piston location. Piston must be all the way forward and locked with stall nut and retaining nut. **Note: If Stall Nut is not used, piston must be pushed to the full forward position before installing valves.**

Step 4

Attach the tool air source momentarily to seat air piston at bottom of cylinder. Disconnect tool. With fill port facing up, (check valve on side) lay tool on its side.

Step 5

Install fill bottle in head fill port (check valve hole). (Fig. 7 & 8)

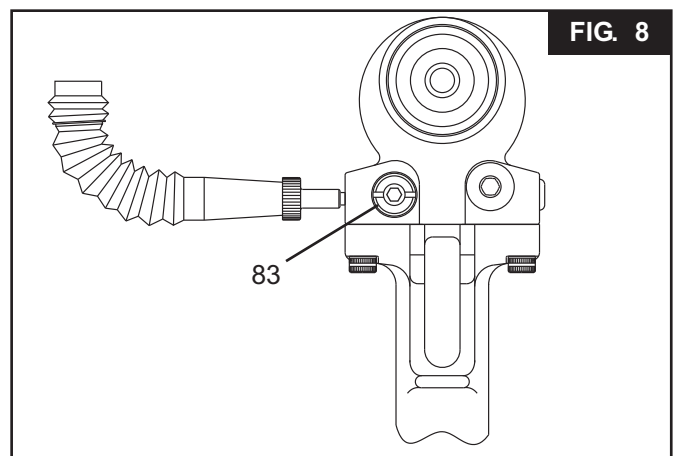
Step 6

Connect tool to shop air regulated to 20 to 40 psi. Cycle tool 20-30 times. Watch for air bubbles escaping from the tool into bottle. (You may rock the tool to free trapped air in the tool.) Do not allow the air to re-enter the tool.

! WARNING: Air pressure MUST be set to 20 to 40 psi to prevent possible injury from high pressure spray. If plug (71) is removed, fill bottle must be in place before cycling tool.

Step 7

When air bubbles no longer appear in bottle, remove fill bottle while tool is lying on its side.





FILL AND BLEED (CONTINUED)

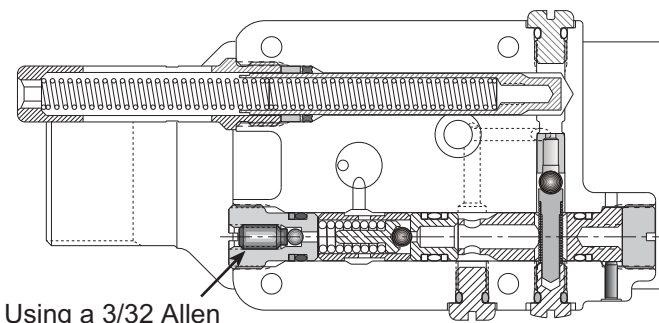
Step 8

Install the check valve Ball (77), Guide (76) and Spring (75). Replace the Plug (71). (Fig. 7) **Note:** *When cycling tool, always hold bottle up as shown in Figure 8 to prevent drawing in air from empty part of bottle.*

Step 9

Turn tool so front of head faces you and remove the relief valve Plug (83). Prior to removing Plug (83), it is advisable to back out setscrew inside of plug by approximately 1/2 turn counterclockwise. (See Figure 8a). This ensures that the Piston will remain in full-forward position. Install relief valve Ball (87), Guide (86), Sleeve (85) and Spring (84). Replace the Plug (83).

FIG. 8a



Using a 3/32 Allen wrench, loosen setscrew inside Plug by approx. 1/2 turn.

SECTION A-A
from Figure 9

Step 10

Unlock Fill Tool and check Reservoir red line. At this point cycle tool with Stall Nut attached (Optional. See note) and retaining nut locked in the full forward position ("Dead Stall"). Reservoir should not drop below the red line on the reservoir housing. **NOTE:** *Dead Stalling is not necessary if Optional Stall nut was not used; just cycle tool.*

Step 11

Re-lock the fill tool in out position. Lay tool on its left side and remove Bleed Plug (64). Top off reservoir by placing a few drops of oil in hole and wait for air bubbles to escape. Push a pin or a scribe into hole to check for trapped air bubbles. Replace plug. (Fig. 7)



WARNING - Failure to re-lock the fill tool will result in oil being ejected from the head under pressure during the topping off of the reservoir. Severe personal injury may result.

Step 12

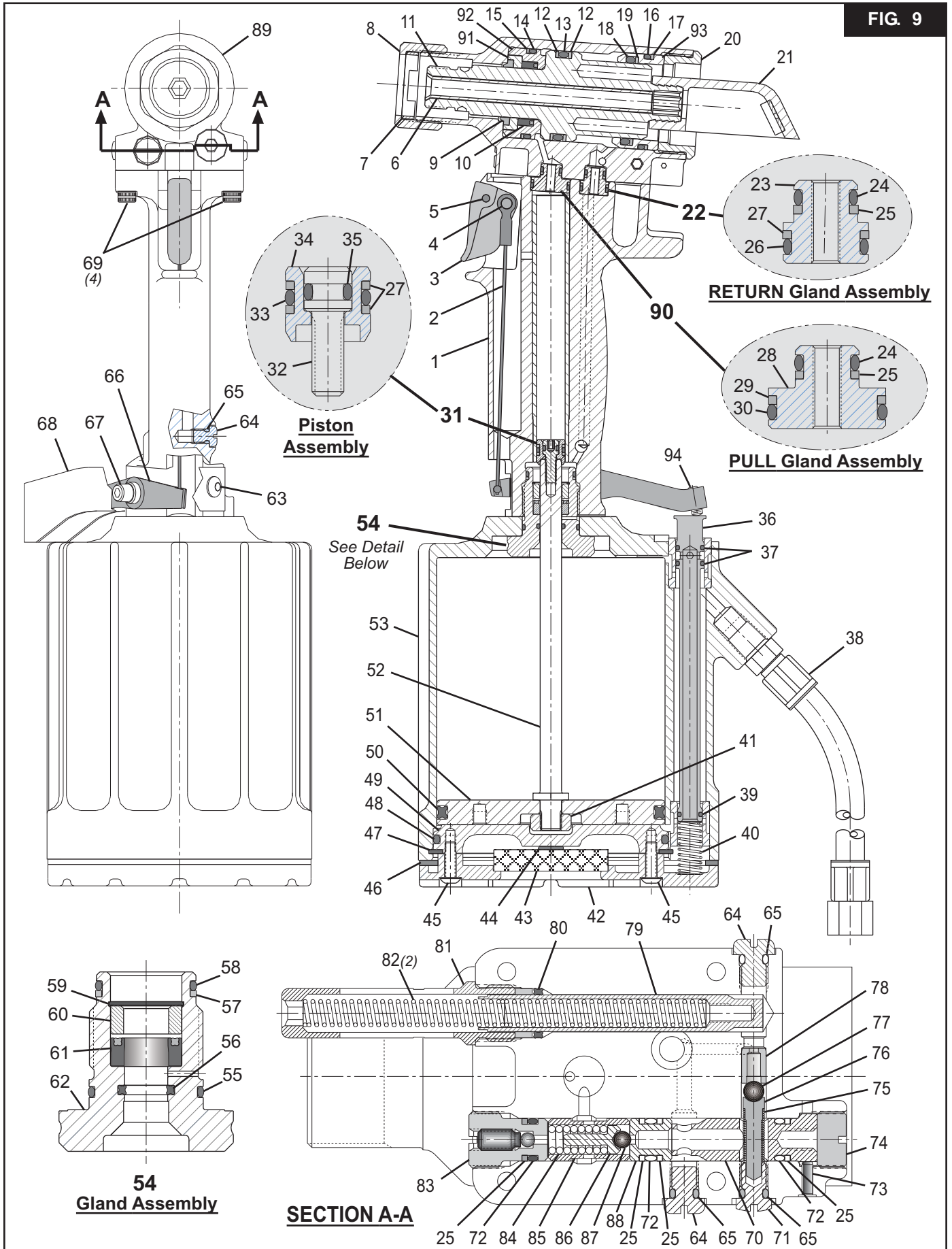
Unlock the fill tool and cycle tool as in step 10. Reservoir may drop slightly. If so, repeat step 11 until, when you touch the fill tool handle, it has no pressure against it and it drops out of the lock position, and the plunger does not drop when tool is cycled. **NOTE:** This usually requires 3 to 4 times topping off.

Step 13

Remove fill tool and stall nut (if used). Install a nose assembly and pull several fasteners to test function.

SERVICE NOTES

FIG. 9



ITEM	DESCRIPTION	Part No.	QTY
1	Handle & Sleeve Assembly	125641	1
2	Cable	125643	1
3	Throttle Lever	124333-2	1
4	Trigger Pin	505496	1
5	Roll Pin	500621	1
6	Pintail Tube	126087	1
7	Stop	110670	1
8	Retaining Nut	117824	1
9	Wiper Seal	505894	1
10	Polyseal	506160	1
11	Piston	126083	1
12	Back-up Ring	113251	2
13	O-ring	500851	1
14	O-ring	500823	1
15	Back-up Ring	126088	1
16	O-ring	505887	1
17	Back-up Ring	113253	1
18	O-ring	505791	1
19	Back-up Ring	113754	1
20	End Cap	112491	1
21	Pintail Deflector	124211	1
22	Return Gland Assembly	112502	1
23	Return Gland	112427	1
24	O-Ring	500776	2
25	Back-up Ring	501082	6
26	O-Ring	500778	1
27	Back-up Ring	501084	3
28	Gland	112426	1
29	Back-up Ring	501087	1
30	O-Ring	500781	1
31	Hydraulic Piston Assembly	118865	1
32	Screw	117773	1
33	O-Ring	503768	1
34	Piston	117774	1
35	O-Ring	500773	1
36	Throttle Valve Assy (contains Throttle Valve - not sold separately, and Items 37, 39, and 40)	115558	1
37	O-Ring	504408	2
38	Air Hose Assembly	115436	1
39	O-Ring	504407	1
40	Spring	116272	1
41	Self-Locking Nut	121241	1
42	Muffler End Cap	116585	1
43	Muffler	115554	1
44	O-Ring	500777	1
45	Screw, Button Head	504127	3
46	Gasket	126941-2	1
47	Retaining Ring	505025	1
48	O-Ring	500873	1
49	Cylinder Head	111959	1

ITEM	DESCRIPTION	Part No.	QTY
50	QUAD Ring	501460	1
51	Air Piston	100315	1
52	Piston Rod	112414	1
53	Cylinder Assembly	115556	1
54	Gland Assembly	116173	1
55	O-Ring	500786	1
56	QUAD Ring	501074	1
57	Back-up Ring	501090	1
58	O-Ring	500784	1
59	Retaining Ring	505939	1
60	Spacer	123904	1
61	Polyseal	506611	1
62	Gland	123903	1
63	Screw	502482	2
64	Bleed Plug	100309	3
65	O-ring	505438	4
66	Throttle Arm	127690	1
67	Screw & Bushing Assembly	127029	1
68	Guard	125656	1
69	Cap Screw	500102	4
70	Plug	120204	1
71	Plug	111068	1
72	O-ring	505446	3
73	Pin	120203	1
74	Screw	120129	1
75	Spring	100874	1
76	Guide	111067	1
77	Ball	502929	1
78	Seat	111139	1
79	Reservoir Plunger	112405	1
80	QUAD Ring	501408	1
81	Housing/Spacer Assembly	112403	1
82	Spring	505864	2
83	Plug	114530	1
84	Spring	505863	1
85	Sleeve	120127	1
86	Valve Guide	120128	1
87	Ball	502506	1
88	Seat	114528	1
89	Head Assembly	126079	1
90	Pull Gland Assembly	112501	1
91	Wiper Housing	123138	1
92	Front Gland	126081	1
93	Rear Gland	126085	1
94	Set Screw	502053	1



TROUBLESHOOTING

Always check out the simplest possible cause of a malfunction first. For example, an air hose not connected. Then proceed logically, eliminating each possible cause until the cause is located. Where possible, substitute known good parts for suspected bad parts. Use TROUBLESHOOTING CHART as an aid in locating and correcting malfunction.

NOTE:

“Piston drift” is when the air piston is in the down position, but the hydraulic pull piston is not in the full forward position. This causes an out of sequence condition.

- 1 *Tool fails to operate when trigger is depressed.*
 - a) Air line not connected
 - b) Throttle Valve O-rings (37 & 39), worn or damaged.
 - c) Throttle Valve Cable (2) is broken.
- 2 *Tool does not complete fastener installation and break pintail.*
 - a) Air pressure too low
 - b) Air Piston Quad-ring (50) worn or damaged.
 - c) Reservoir empty or low, refer to Fill and Bleed section.
 - d) Air in hydraulic system, refer to Fill and Bleed section.
 - e) Reservoir Springs (82) worn or damaged
 - f) Check for piston drift
- 3 *Pintail stripped and/or swaged collar not ejected.*
 - a) Check for broken or worn jaws in nose assembly, refer to nose assembly data sheet.
 - b) Check for loose Retaining Nut (8)
 - c) Check for piston drift.
- 4 *Tool has piston drift.*
 - a) Loose collet crashing into the front of the anvil, this causes the relief valve to open allowing the piston to drift. Tighten the collet and refer to Fill and Bleed section.
 - b) Worn or damaged Return Pressure Relief Valve in tool, inspect Seat (88), O-ring (72), Back-up Rings (25), Steel Ball (87) and Valve Spring (84). Replace if necessary.
 - c) Worn or damaged Piston Assembly (31); inspect O-ring (33), O-ring (35) and Back-up rings (27). Replace if necessary.
- 5 *Hydraulic fluid exhausts with air or leaks at base of handle.*
 - a) Worn or damaged Gland Assembly (54) inspect Polyseal (61), O-rings (58 and 55), Quad-ring (56) and Back-up ring (57) replace if necessary.
6. *Hydraulic fluid leaks at rear of Pull Piston (11)*
 - a) Worn or damaged Rear Gland (93): Inspect O-rings (16 and 18) and Back-up Rings (17 and 19). Replace if necessary.
7. *Hydraulic fluid leaks at front of Pull Piston (11).*
 - a) Worn or damaged Front Gland (92): Inspect Polyseal (10), O-ring (14) and Back-up Ring (15). Replace if necessary.
8. *Pull Piston (11) will not return.*
 - a) Throttle Valve (36) stuck: Lubricate O-rings (37 & 39).
 - b) Throttle Arm (66), Cable (2) or Trigger (3) binding.
9. *Air leaks at air Cylinder Head (49).*
 - a). Worn or damaged O-ring (48). Replace if necessary.

ACCESSORIES

Service Kit	-	255KIT
<i>(includes most consumable parts such as seals, deflector, springs, etc.)</i>		
Stall Nut (Fig. 7)	-	120824
Service Tool Kit	-	126104
<i>Includes:</i>		
Assembly Bullet (Fig.2)	-	123111-1
Spacer (Fig. 2)	-	123112-1

LIMITED WARRANTIES

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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.

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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.



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Alcoa Fastening Systems
Industrial Products
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Tacubaya Mexico, D.F.
C.P. 11850
FAX: 525-515-1776
TELEX: 1173530 LUKSME

Far East

Alcoa Fastening Systems
Industrial Products
Australia Operations
14 Viewtech Place
Rowville, Victoria
Australia 3178
03-764-5500
Toll Free: 008-335-030
FAX: 03-764-5510

Europe

Alcoa Fastening Systems
Industrial Products
United Kingdom Operations
Unit C, Stafford Park 7
Telford, Shropshire
England TF3 3BQ
01952-290011
FAX: 0952-290459

Alcoa Fastening Systems
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