

INSTRUCTION MANUAL

2025 ALL MODELS

PNEUDRAULIC INSTALLATION TOOL

ALCOA FASTENING SYSTEMS

ALCOA FASTE

ALCOA FASTE

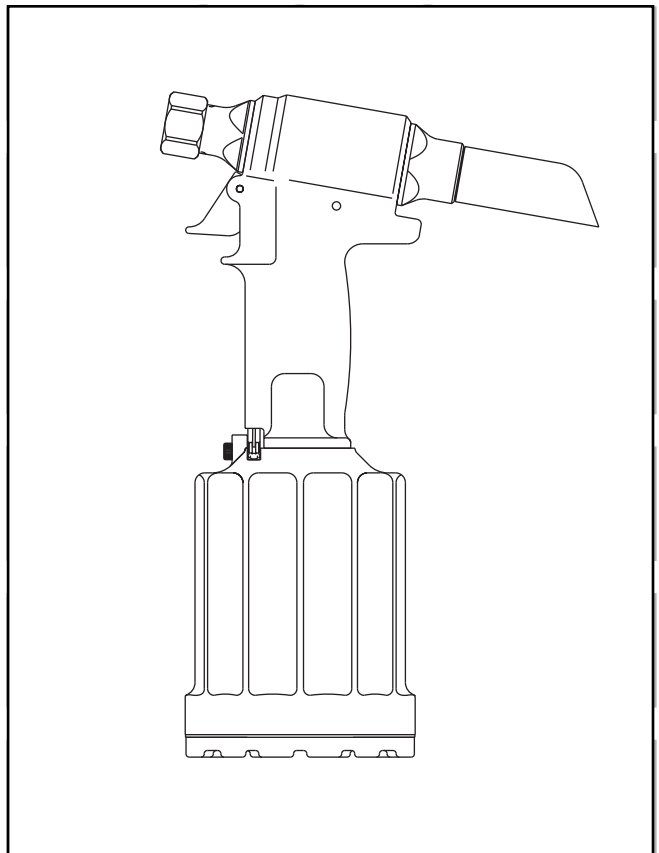
ALCOA FASTE

ALCOA FASTE

ALCOA FASTE

ALCOA FASTE

ALCOA FASTENING SYSTEMS



**Alcoa
Fastening
Systems**



04/02/2003
HK1006

EU Declaration of Conformity

Manufacturer:

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

Description of Machinery:

Model number 2025 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 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: Director, Engineering and Quality Control,
 Installation Systems Division
 Place: Kingston, New York, USA
 Date: May, 1998

Huck Model 2025 Sound Power Level

The sound level of the 2025 tool cycling without fastener is

Sound Exposure Level (SEL) =74.3 dB (A)
 Peak Value = 94.2 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 2025 Vibration Level

For an eight hour work day, installing 3000 typical Huck fasteners will result in an equivalent weighted RMS vibration level (Aeq) of 12.75m/s².

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

Equivalent Vibration Level, Aeq (m/s²) = (n/480) x 2.04

where n = number of fasteners in eight hours, and 2.04 (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).

CONTENTS

EU DECLARATION OF CONFORMITY2

CONTENTS3

SPECIFICATIONS4-6

SAFETY7

PRINCIPLE OF OPERATION8

PREPARATION FOR USE9

SERVICING THE TOOL

 GENERAL9

 DAILY9

 WEEKLY9

DISASSEMBLY

 GENERAL10

 HEAD/HANDLE11

 PINTAIL BOTTLE/VACUUM SYSTEM11-12

ASSEMBLY

 HEAD/HANDLE12-13

 GENERAL13

 PINTAIL BOTTLE/VACUUM SYSTEM13

FILL AND BLEED14

MEASURING TOOL STROKE15

ASSEMBLY DRAWINGS16 & 17

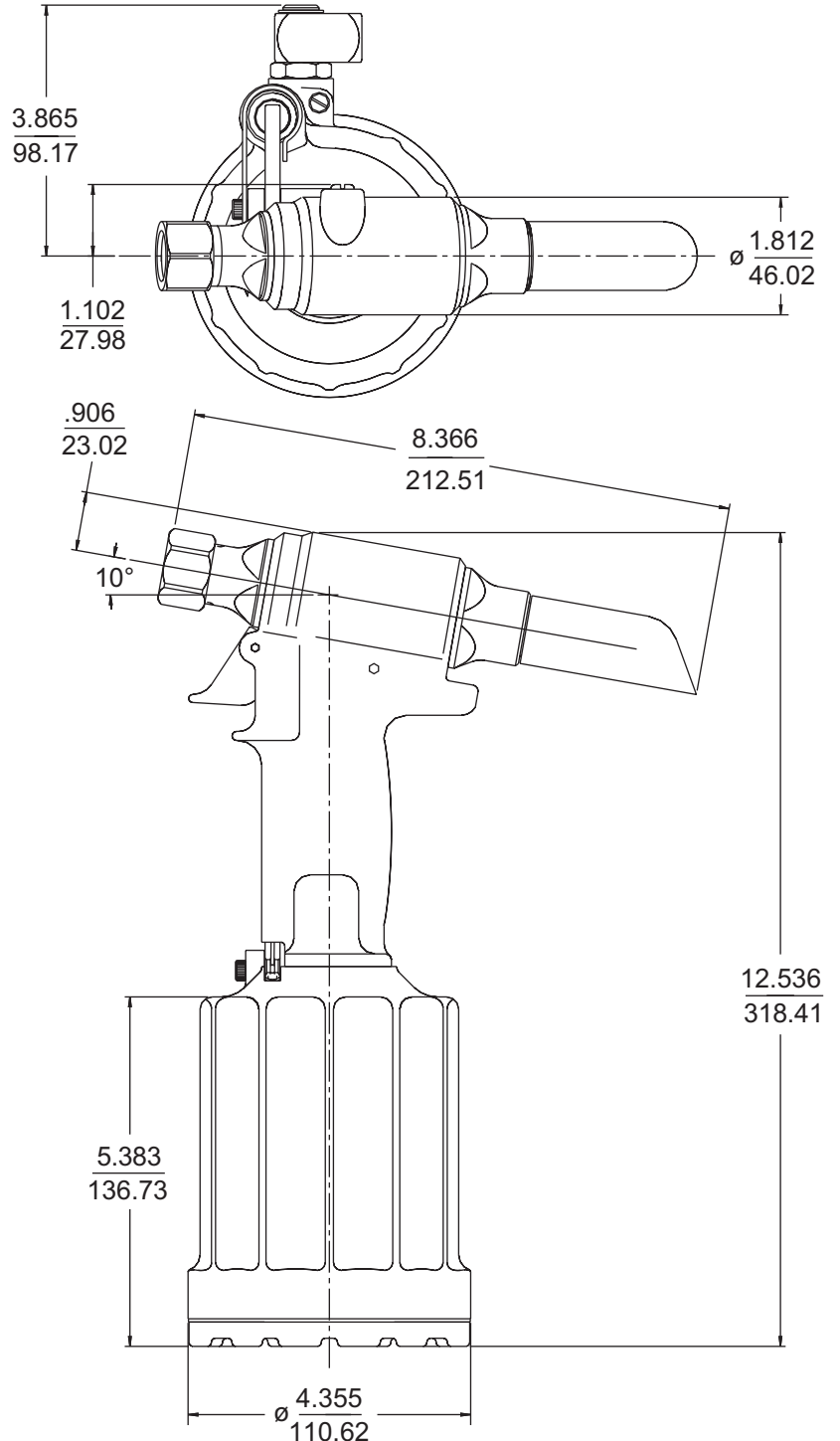
PARTS LIST18 & 19

TROUBLESHOOTING & ACCESSORIES20

MSDS FOR DEXRON III (AUTOMATIC TRANSMISSION FLUID)21-22

TOOL SPECIFICATIONS

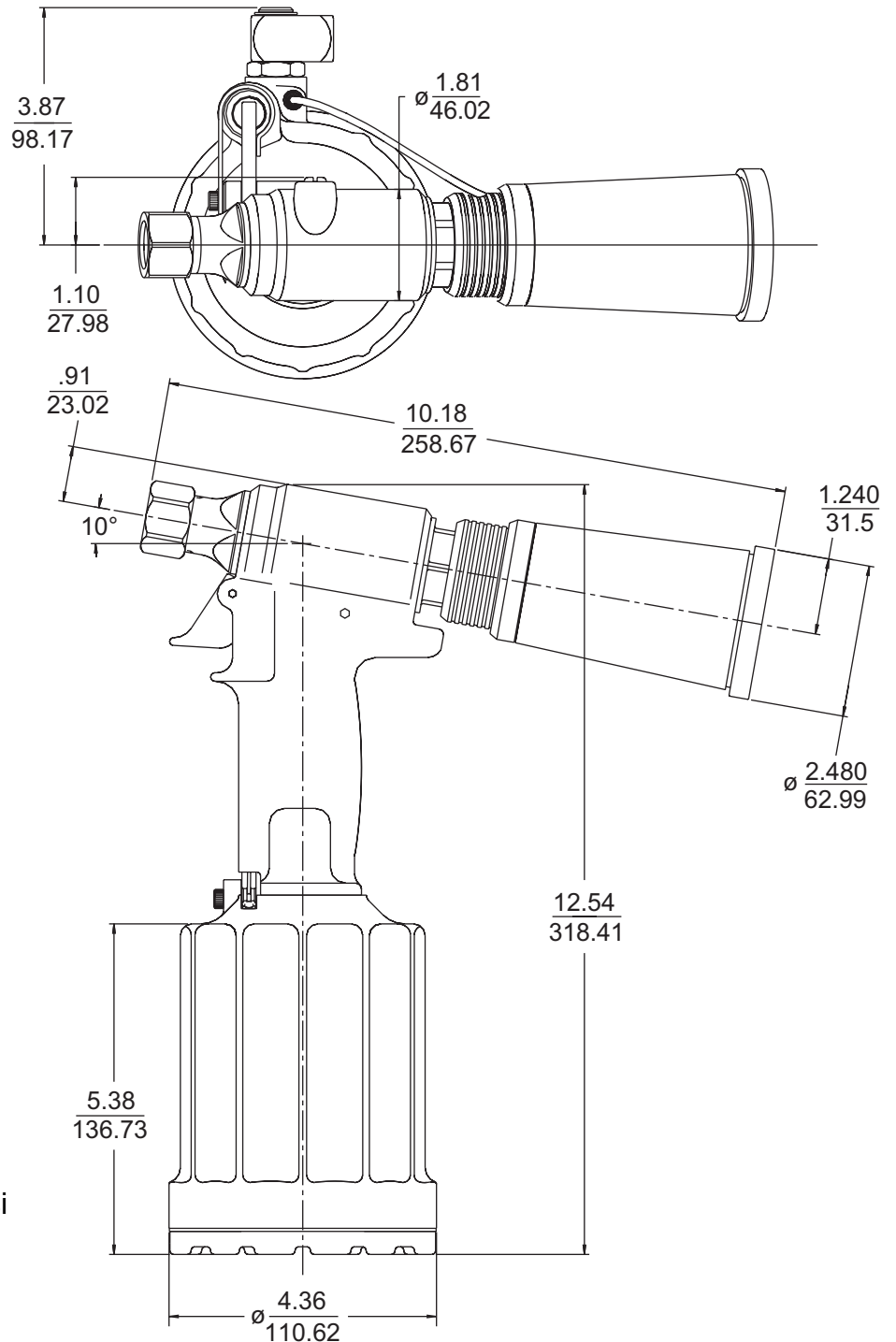
Models 2025 & 2025L



- **Stroke:** .675 in
- **Weight:** 5 lbs 12oz
- **Air Pressure:** 90 psi
- **Capacity:** 5290 lbs @ 90 psi
- **Speed/Cycles:** 30 per minute
- **Noise Level:** 75 dBA @ 90 psi

TOOL SPECIFICATIONS

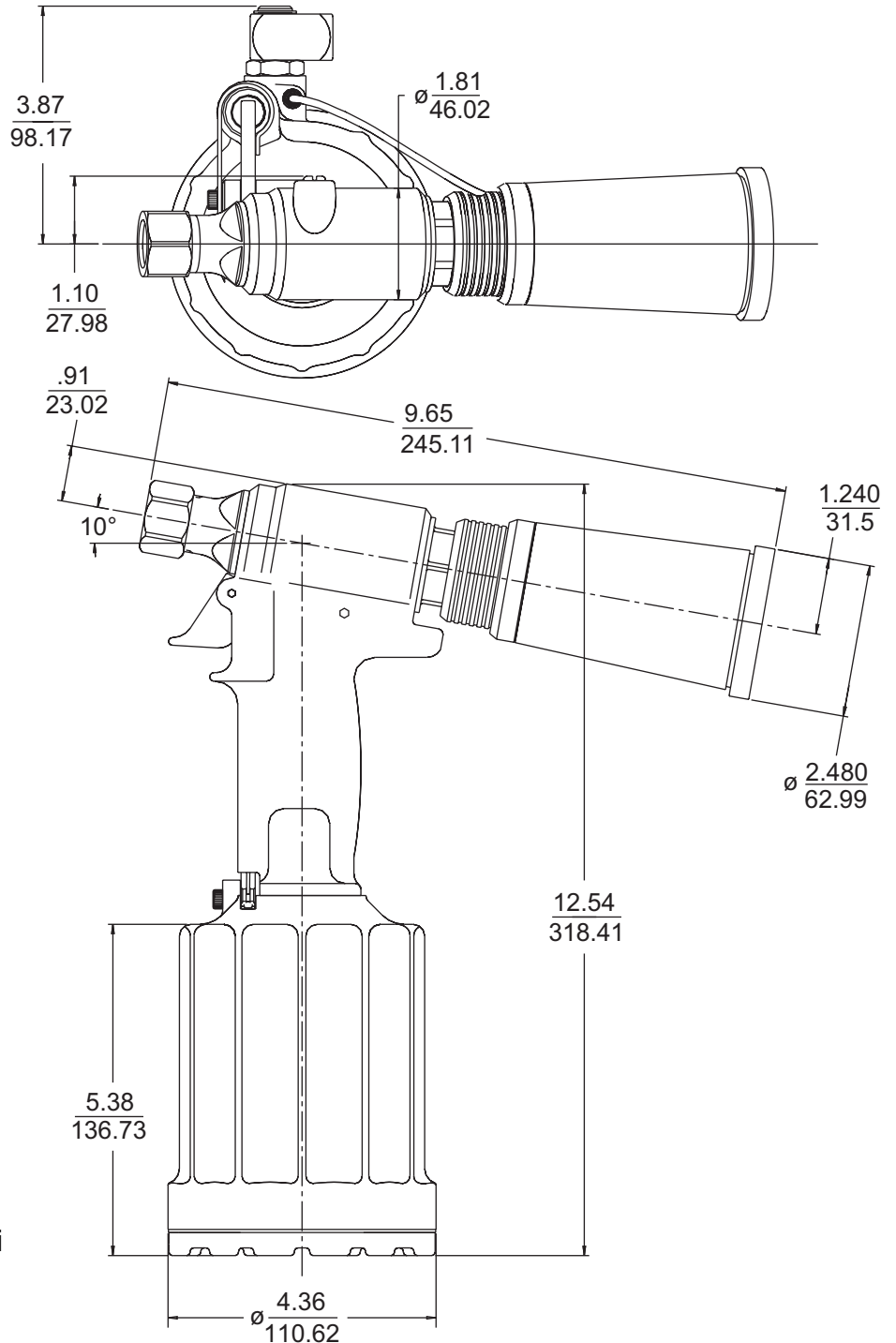
Models 2025V & 2025LV



- **Stroke:** .675 in
- **Weight:** 5 lbs 12oz
- **Air Pressure:** 90 psi
- **Capacity:** 5290 lbs @ 90 psi
- **Speed/Cycles:** 30 per minute
- **Noise Level:** 75 dBA @ 90 psi

TOOL SPECIFICATIONS

Models 2025B & 2025LB



- **Stroke:** .675 in
- **Weight:** 5 lbs 12oz
- **Air Pressure:** 90 psi
- **Capacity:** 5289 lbs @ 90 psi
- **Speed/Cycles:** 30 per minute
- **Noise Level:** 75 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 Safety Glossary

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

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

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

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

8 Never remove any safety guards or pintail deflector.

9 Never install a fastener in free air, personal injury from fastener ejecting may occur.

10 Do not abuse tool by dropping or using it as a hammer. 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.

Service Notes

PRINCIPLE OF OPERATION

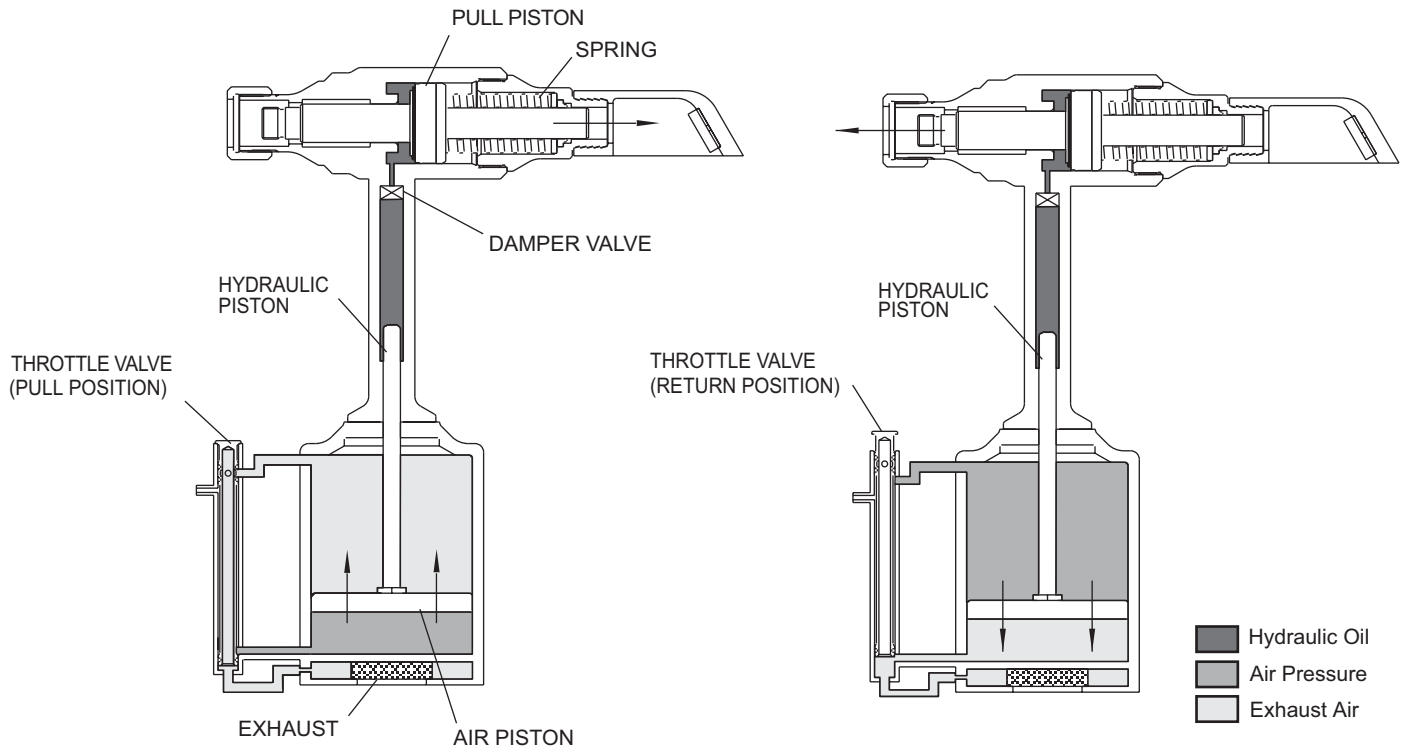


Fig. 1(a)

Fig. 1(b)

When the trigger is depressed the throttle valve moves to down position, pressurized air is directed to the bottom of the air piston, causing the piston to move upward (Fig.1a). The air above the piston is exhausted and directed through the center of the throttle valve and out the bottom of the tool. As the hydraulic rod moves upward, a column of 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 (Fig.1b), causing the air piston and hydraulic rod to move downward. The air from below the piston is exhausted through the bottom of the tool. Spring pressure returns the pull piston to its home position. The damper valve impedes oil flow at pinbreak helping prevent "Tool Kick".

PREPARATION FOR USE

The Model 2025 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 20 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. Connect air hose to tool.
5. Cycle tool a few times by depressing and releasing trigger.
6. Disconnect air hose from tool.
7. Remove Retaining Nut.

8. Select proper Nose Assembly from **NOSE ASSEMBLY SELECTION CHART** for fastener to be installed.
9. Screw Collet Assembly (including lock collar and shim if applicable) onto Spindle. (Wrench Tight)
10. Slide Anvil over Collet Assembly and into counterbore.
11. Slide Retaining Nut over Anvil and screw Nut onto Head.
12. 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 On old style nose assemblies with lock collars, **VIBRA-TITE** should be used on collect threads, since there is no staking hole provided on the 2025 pull piston. 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 2025KIT** includes consumable parts and should be available at all times. Other components, as experience dictates, should also be available.

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 stroke periodically, if stroke is short add oil.

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.



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

DISASSEMBLY INSTRUCTIONS 2025 ALL MODELS



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 14 & 15.

General

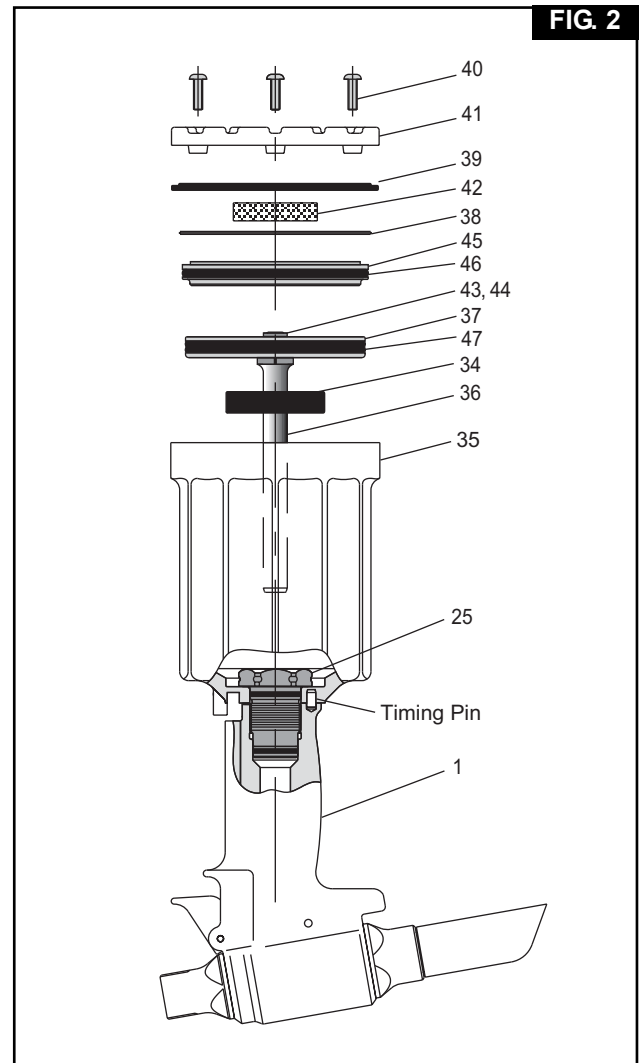
(Refer to Figures 2 & 14)

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 tool from air source.
2. Unscrew Retaining Nut (7) and remove nose assembly.
3. Unscrew Bleed Plug (55), from top of Handle/head. Turn tool over and allow fluid to drain into container (Fig. 10 & 14).
4. **For 2025 & 2025L:** Pull Pintail Deflector (24) off End Cap (21).
For 2025B & 2025LB: By reaching through the window of Pintail Bottle (24) remove Retaining Ring (62) and Washer (63), then remove Pintail Bottle (24) and Adapter (64). (Figures 14 & 15).
For 2025V & 2025LV: Please reference Disassembly of Pintail Bottle and Vacuum System Procedure.
5. Remove Throttle Arm Pivot Screw (48) and Lever Guard (73), and lift out Throttle Arm (53). Disconnect ball end of Cable Assembly (2) from throttle arm.
6. Hold tool in vise with bottom up. (Fig. 2) Remove Button Head Screws (40) with 1/8 hex key. Remove End Cap (41) and Gasket (39). Remove Muffler (42) from end cap. Remove Spring (49) from Throttle Valve (Fig.14).
7. Tap Cylinder Head (45) down with soft mallet (to take pressure off ring), and remove Retaining Ring (38) (Fig.2).
8. Screw Button Head Screws (40) back into Cylinder Head. Carefully pry on screws to remove head. Remove O-ring (46).
9. To remove air piston from cylinder, pull on Lock Nut (43) with VISE-GRIPS. Remove Piston Quad Ring

(47). **CAUTION:** Care must be taken not to scratch piston rod or cylinder during removal

10. Remove Bumper (34) from Gland Assembly. Unscrew Gland Assembly (25) with 1 3/8 socket wrench and extension bar.



11. Remove SPIRO-LOX Retaining Ring (30) from gland (26), pull out Spacer (29) and POLYSEAL (28). Then remove O-rings (31 & 27), Quad Ring (33) & Back-up Ring (32) (Fig. 14).
12. Lift cylinder (35) from handle/head (1) (Fig. 2).
13. Turn handle/head (1) over and drain fluid into container. Discard fluid.
14. Pull Throttle Valve (52) out of air cylinder (35). Remove O-Rings (50) (Fig. 14).

Head/handle 2025 & 2025L:

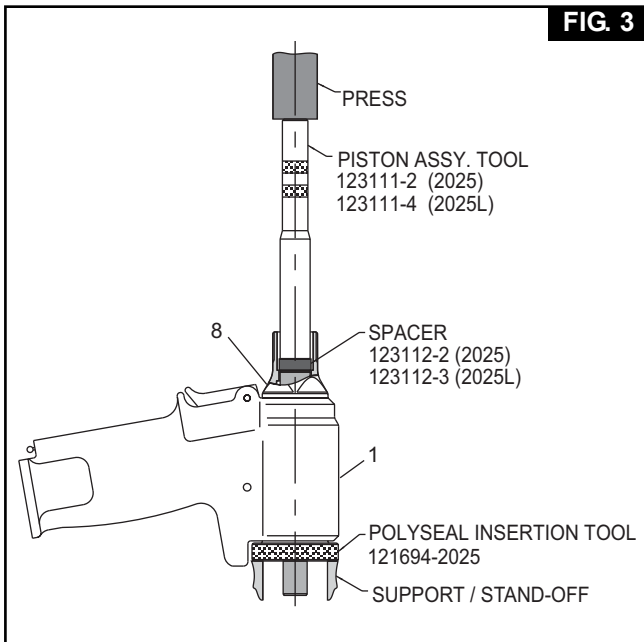
(Refer to Figures 3, 4 & 14)

15. Unscrew End Cap (21) and remove Spring (19), Spacer (22) and Wiper Seal (23).

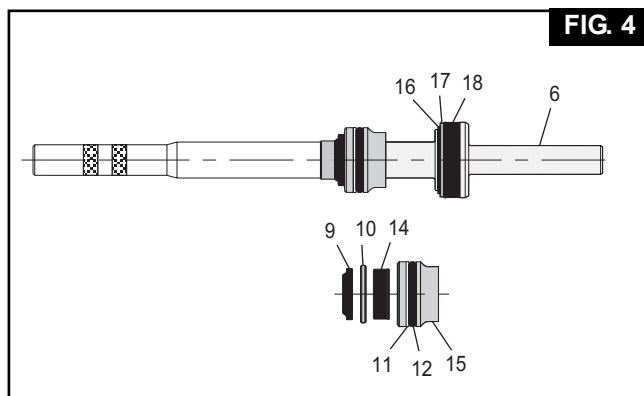
NOTE:

For 2025V please reference Disassembly of Pintail Bottle and Vacuum System procedure.

16. Thread POLYSEAL Insertion/removal Tool (121694-2025), into rear of Handle/head. (Fig. 3)
17. Slide Spacer (123112-2 for 2025 or 123112-3 for 2025L) onto piston.
18. Thread Piston Assembly Tool (123111-2 for 2025 or 123111-4 for 2025L) onto piston.



19. Push piston and front gland assemblies out the back of the Handle/Head (1). Allow clearance, with stand-off, for piston as it leaves the tool (Fig. 4).



20. Remove piston assembly tool and spacer from piston. Rethread on the piston assembly tool only, then slide the front gland assembly off the Piston (6) (Fig. 4).
21. Remove Piston Assembly Tool from Piston (6). Remove POLYSEAL Insertion/removal Tool from rear of Head/Handle (1).
23. Remove Retaining Ring (16), Washer (17) and POLYSEAL (18) from piston.

NOTE:
Inspect hydraulic piston for wear, scoring or damage. Replace when necessary.
24. Unscrew Adapter (8) (Fig. 14).
25. Inspect all seals and parts.
24. If frayed or broken, remove trigger Cable Assembly (2) by driving Pin (4) out with punch. Remove Dowel Pin (3) to disconnect cable from trigger.

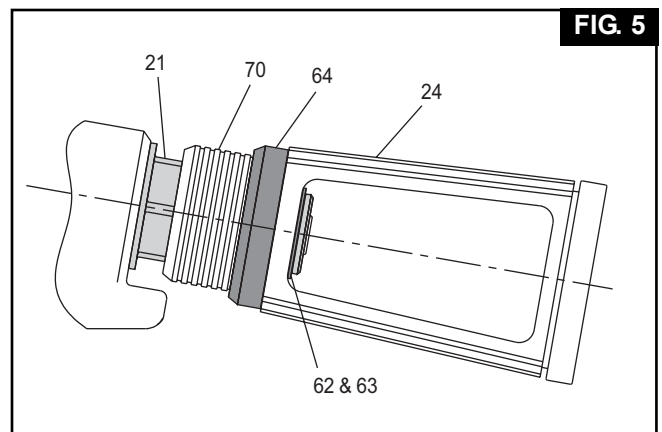
Pintail Bottle/Vacuum System

2025V & 2025LV (Refer to Figures 5, 6 & 15)

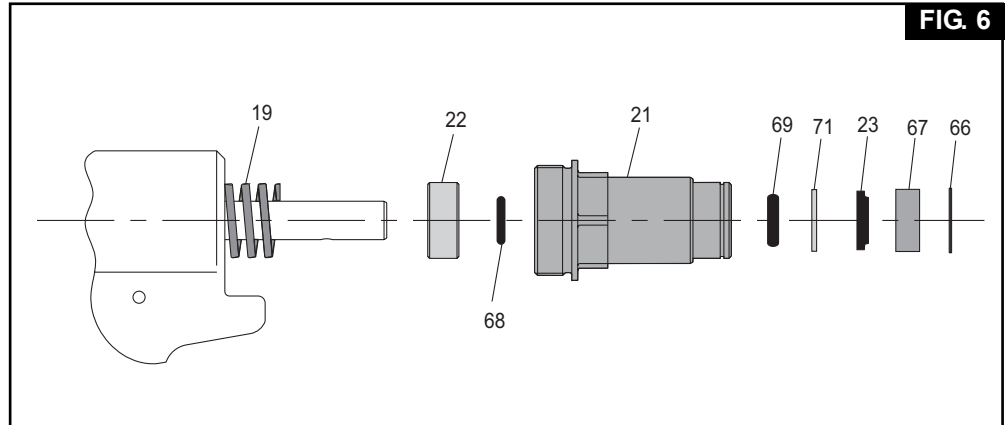
NOTE:

The following steps are for the disassembly of the 2025V and 2025LV models only. Please use these steps in conjunction with the General and Head/Handle disassembly sections of this manual.

1. By reaching through the window of Pintail Bottle (24) remove Retaining Ring (62) and Washer (63) (Fig. 5).
2. Remove Pintail Bottle (24).
3. Disconnect tube from connector (54) (Fig. 15).
4. Remove Adapter (64) and Tube/ Slide Assembly (70).
5. Remove End Cap (21) and Spring (19) (Fig. 6).



6. Remove Spacer (22) and O-Ring (68) from spring side of end cap.
7. From bottle side of end cap, remove Retaining Ring (66), Wiper Housing (67), Wiper Seal (23), Washer (71) and O-Ring (69).
8. Remove the O-Rings (65) from the inside of the Adapter and Tube/Slide Assembly (70) (Fig 15).



ASSEMBLY INSTRUCTIONS 2025 ALL MODELS

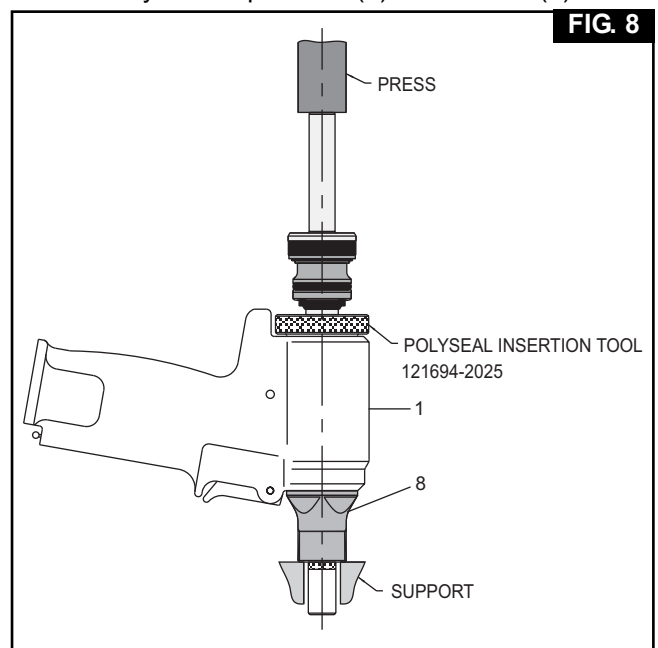
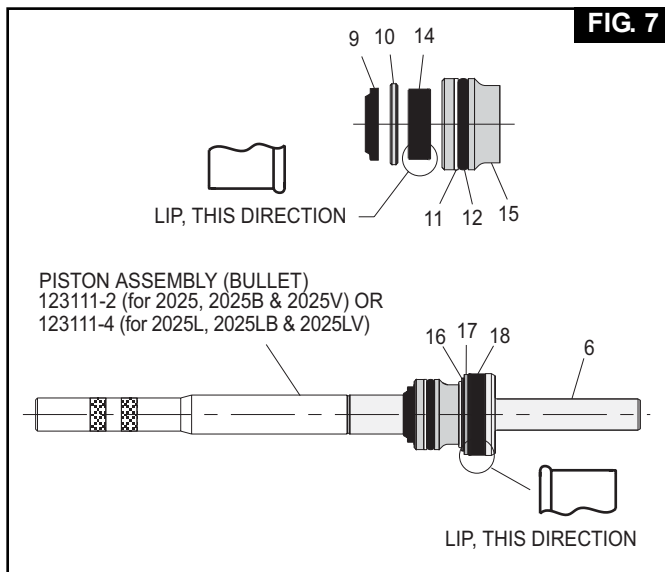
Head/handle 2025, 2025B, 2025L & 2025LB (Refer to Figures (7, 8 & 14))

NOTE:

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 2025KIT or 2025VKIT** 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. If removed, position Cable Assembly (2) in Trigger (5) slot and slide Dowel Pin (3) through holes in trigger and cable assembly. Position assembled trigger in handle and drive Pin (4) through holes in handle and trigger (Fig. 14).

2. Screw Nose Adapter (8) into Head (1) and tighten.
3. Thread POLYSEAL Insertion/removal Tool (121694-2025) into head.
4. Assemble piston (6), Polyseal (18) and retaining ring (16) (Fig 7). Note Polyseal orientation.
5. Assemble front gland (15), O-ring (12), Back-up ring (11), Polyseal (14) and Gland Cap (10). Note Polyseal orientation.
6. Thread Piston Assembly Tool (123111-2 for 2025, 2025B & 2025V) or (123111-4 for 2025L,2025LB & 2025LV) onto Piston (6). Slide complete Gland Assembly and Wiper Seal (9) onto Piston (6).



7. Install assembled components in gently from rear of tool using a press as shown in (Fig. 8).
 8. Remove Piston Assembly Tool (123111-2 or 123111-4) and POLYSEAL Insertion / removal (121694-2025) Tool.
 9. Install Rear Wiper Seal (23) into End Cap (21) (Fig. 14).
 10. Slide Spacer (22) and Spring (19) into End Cap (21) and then thread End Cap assembly into rear of Head.
NOTE:
For 2025V please reference Assembly of Pintail Bottle and Vacuum System procedure. (Refer to Figures 5, 6 & 10)
- General:**
(Refer to Figures 2 & 9)
11. Hold Head/Handle (1) inverted in vice (with soft jaws). Place inverted Cylinder Assembly (35) on base of handle. Timing pin maintains orientation.
 12. Assemble Gland assembly (25) with new seals (Fig. 9). Note orientation of polyseal. Apply VIBRATITE (Huck P/N 505125) to threads of Gland Assembly. Screw gland into head/handle and Torque to 75-80 ft. lbs. using 1 3/8 socket wrench.
 13. Push Bumper (34) firmly over gland.
NOTE: The side of the bumper with two slots must face toward the bottom of the tool.
 14. Install Quad Ring (47) onto Air Piston (37).
 15. Lubricate piston rod. Press assembled air piston/rod into cylinder just enough to allow installation of cylinder head (45).
 16. Assemble O-Ring (46) onto Cylinder Head (45) and then push Cylinder Head squarely into cylinder taking care not to damage O-ring (46). Install Retaining Ring (38). (*Align screw holes with muffler end cap*)
 17. Position Muffler (42) in center of cylinder head. Position Gasket (39) on cylinder. (Refer to Fig 2 & 9)
Note direction of Lip
 18. Carefully position Bottom Plate (41) on cylinder.
NOTE:
Make sure that the muffler is properly positioned in recess of Bottom Plate (41) (Fig 2 & 14).
 19. Secure the bottom plate with the three Button Head Screws (40) using 1/8 hex key (Fig. 2).
 20. Assembly O-Rings (50) on Throttle Valve (52). (Fig. 14 Section CC)
 21. Place the tool upright on a level surface, drop Spring (49) into throttle valve bore in cylinder (35). Push Throttle Valve into cylinder.
 22. Place ball end of Throttle Cable (2) into end of Throttle Arm (53), then slide Throttle Arm into slot on Cylinder (Fig. 9).
 23. Snap Lever Guard (73) in place, and install Pivot Screw (48) in cylinder to retain throttle arm (53).
 24. **For 2025 & 2025L:** Push Pintail Deflector (24) onto End Cap (21).
For 2025B & 2025LB: Position Adapter (64) and Pintail Bottle (24) on End Cap and, by reaching through the window of the Pintail Bottle, install Washer (63) and Retaining Ring (62) (Figures 14 & 15).
For 2025V & 2025LV: Please reference Disassembly of Pintail Bottle and Vacuum System Procedure.
 25. Tool is now completely assembled and needs to be filled with oil. Please refer to the fill and bleed section next.
- Pintail Bottle/Vacuum 2025V & 2025LV:**
(Refer to Figures 6 & 15)
The following steps are for the assembly of the 2025V & 2025LV models only. Please use these steps in conjunction with the General and Head/Handle disassembly sections of this manual.
1. Assemble Adapter and Tube/Side Assembly (70) and new O-Rings (65).
 2. From bottle side of End Cap (21) install O-Ring (69), Washer (71), Wiper Seal (23), Wiper Housing (67) and Retaining Ring (66) as shown in (Fig. 6).
 3. From tool side of end cap install O-Ring (68), Spacer (22) and Spring (19). (as shown in Fig. 6) Screw entire assembly into head and tighten.
 4. Assemble Tube/Slide Assembly and O-rings (65), slide complete assembly onto End Cap (21) and push tube into connector (54) (Fig.15).
 5. Position Adapter (64) and pintail bottle (24) on End Cap (21) (Fig. 5 & 15).
 6. By reaching through the window of the Pintail Bottle (24), install Washer (63) and Retaining Ring (62) as shown in (Fig. 5).

Fill and Bleed 2025 All Models

Equipment Required:

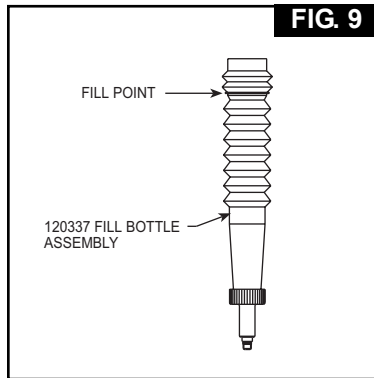
- Shop airline with 90 - 100 psi max.
- Air regulator
- Fill bottle, 120337, (supplied with tool).
- Large flat blade screwdriver
- Optional Stall Nut 124090 or 125340
- Nose assembly
- Fasteners (optional)



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.

Preparation:

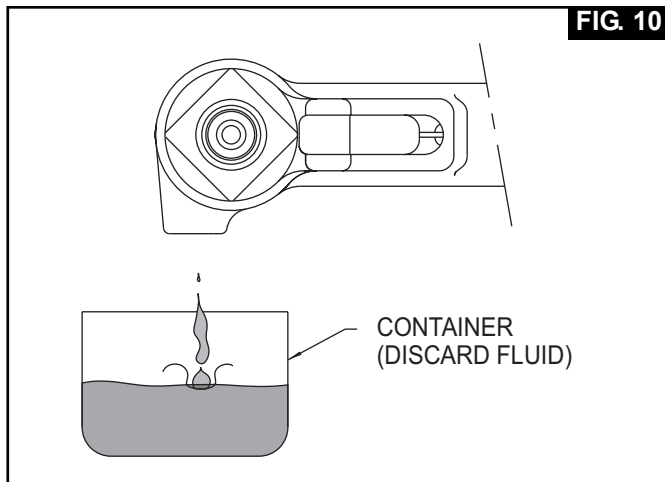
- Install air regulator in airline and set pressure to 20-40 psi.
- Fill bleed bottle almost full of DEXRON III ATF or equivalent.



Caution - Refill using Automatic Transmission Fluid DEXRON III or equivalent for optimal performance.

Step 1

With fill port facing up, lay tool on it's side, and remove bleed plug (55) from bleed port.



Step 2

Connect tool to shop air set at 20 to 40 psi. If fluid is present, hold tool over suitable container with fill port facing into container. Cycle tool several times to drain the old fluid, air and foam (Fig. 10)



WARNING: Air pressure MUST be set to 20 to 40 psi to prevent possible injury from high pressure spray. If plug (55) is removed, fill bottle must be in place before cycling tool.

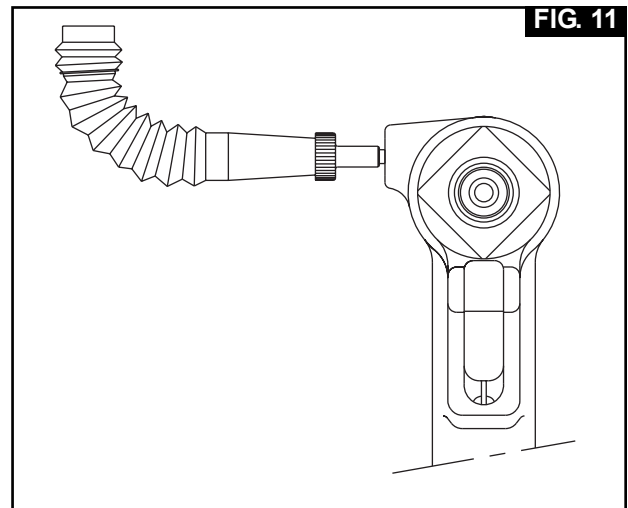
Caution - All oil must be purged from tool before Fill & Bleed process. Tool stroke will be diminished if oil is aerated.

Step 3

Screw fill bottle (120337) into fillport.

Step 4

Stand tool upright on bench. While triggering tool slowly (20 - 30 cycles), bend fill bottle at right angles to tool (Fig. 11) . Air bubbles will accumulate at top of the bottle. When bubbles stop, cycling may be discontinued.



Step 5

When trigger is released, pull piston returns to idle position (full forward). Disconnect tool from airline.

Step 6

Lay tool on it's side and remove fill bottle. Top off fluid in fill port, install bleed plug and tighten.

Step 7

Connect airline to tool and measure the tools stroke, refer to the Measuring Tool Stroke section. If stroke is less than specified, remove bleed plug and top off fluid. Reinstall bleed plug and recheck stroke.

Step 8

Increase air pressure to specifications. Install two fasteners to check function and installation in a single stroke, or cycle tool with stall nut fully threaded onto piston to load up tool. Measure stroke again. Remove plug and top off fluid. Reinstall plug and cycle and measure again. Continue this process until stroke meets minimum requirements.

MEASURING TOOL STROKE

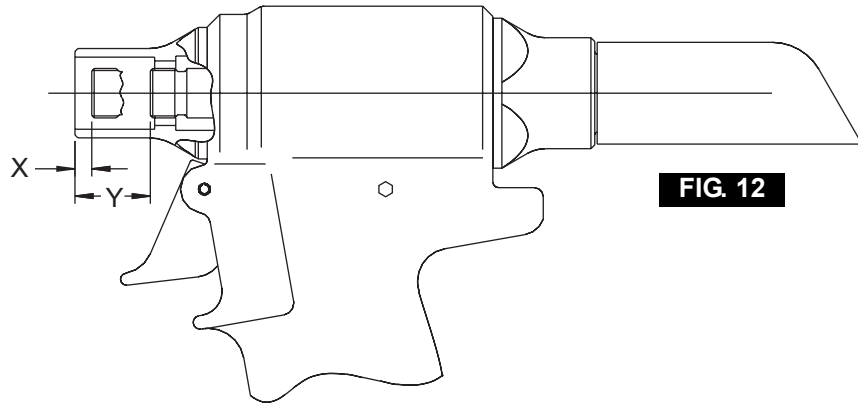


FIG. 12

2025, 2025B & 2025V

Step 1
Cycle Piston all the way forward and measure X.

Step 2
Cycle and hold piston back and measure Y.

Step 3
Stroke = Y-X

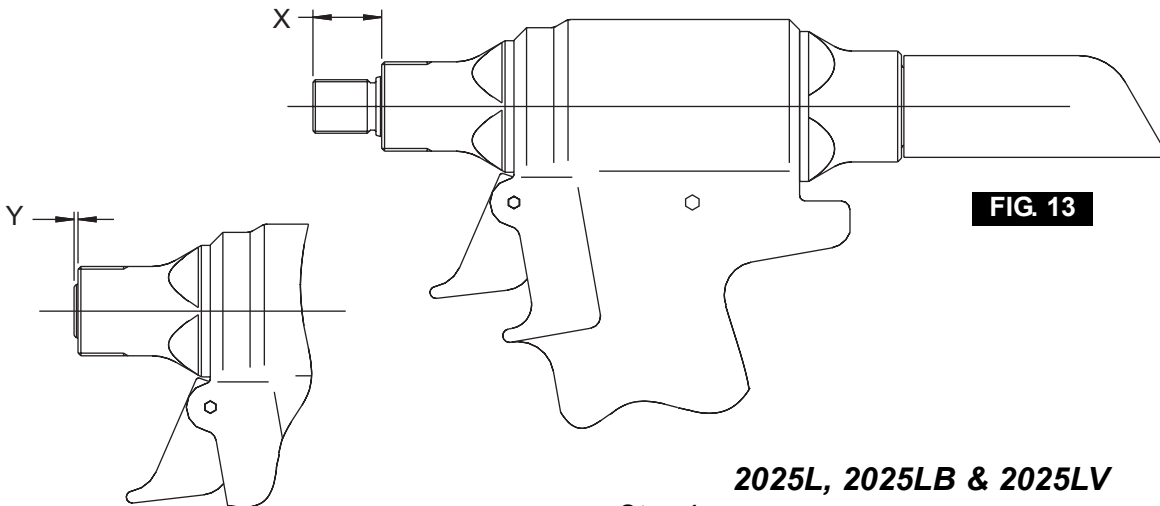


FIG. 13

2025L, 2025LB & 2025LV

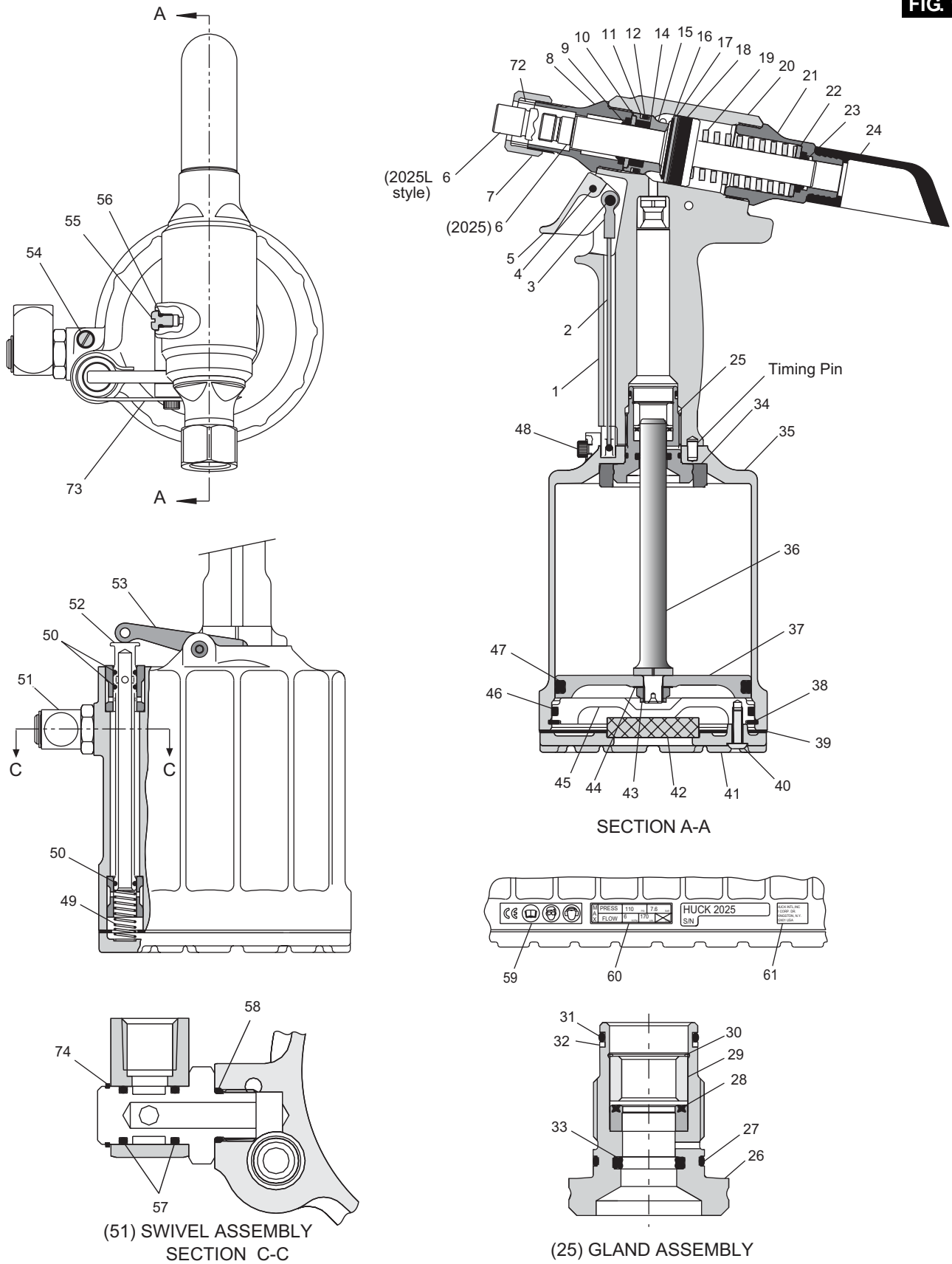
Step 1
Cycle Piston all the way forward and measure X.

Step 2
Cycle and hold piston back and measure Y.

Step 3
Stroke = X-Y

ASSEMBLY DRAWING *(Refer to Parts Lists on following pages)*

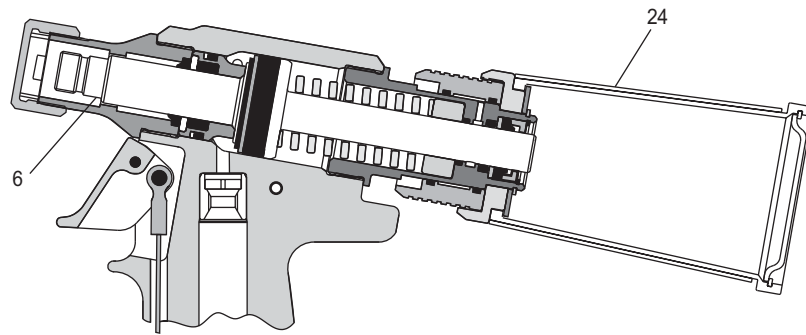
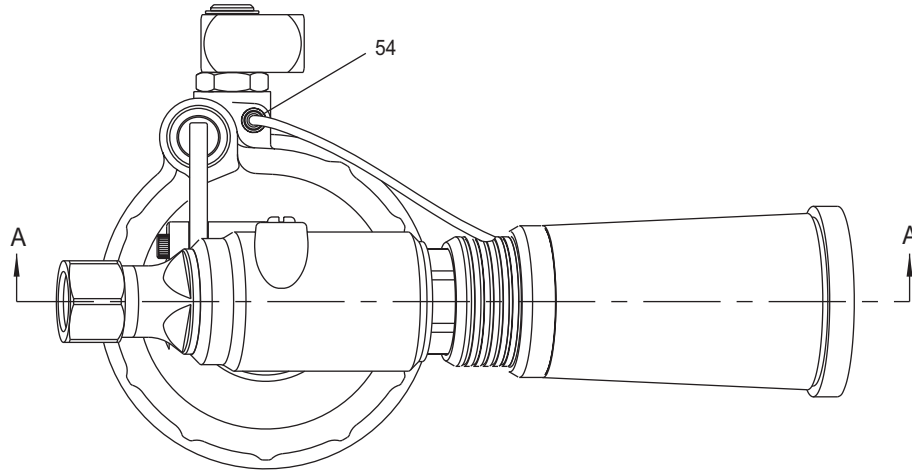
FIG. 14



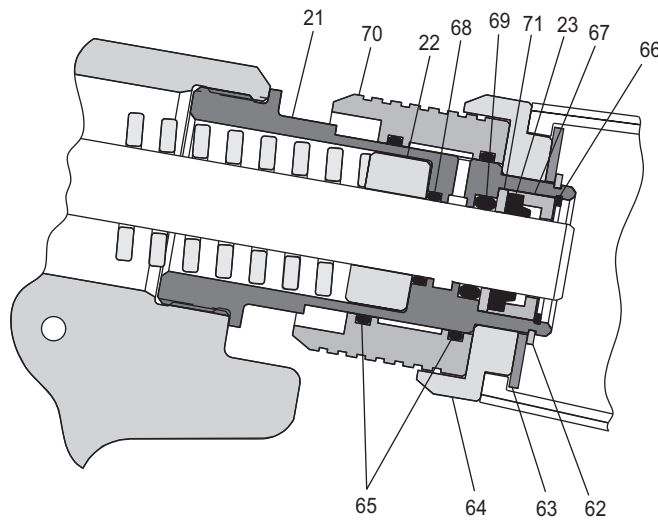
ASSEMBLY DRAWING

(Refer to *Parts Lists* on following pages)

FIG. 15



PARTIAL SECTION AA



PARTS LIST

ITEM	PART NUMBER					DESCRIPTION	QTY
	2025	2025L	2025LB	2025V	2025LV		
1	125736	125736	125736	125736	125736	Handle Assembly	1
2	116404-1	116404-1	116404-1	116404-1	116404-1	Cable Assembly	1
3	505496	505496	505496	505496	505496	Dowel Pin	1
4	500621	500621	500621	500621	500621	Pin	1
5	124333-1	124333-1	124333-1	124333-1	124333-1	Trigger	1
6	125738	125738-1	125737-1	125738-2	125738-3	Piston Assy (Incl. Items 16,17 &18)	1
7	111795	111795	111795	111795	111795	Retaining Nut	1
8	123761	123761	123761	123761	123761	Adapter	1
9	505817	505817	505817	505817	505817	Wiper Seal	1
10	122432	122432	122432	122432	122432	Gland Cap	1
11	501110	501110	501110	501110	501110	Back-Up Ring	1
12	500816	500816	500816	500816	500816	O-Ring	1
14	505818	505818	505818	505818	505818	Polyseal	1
15	123757	123757	123757	123757	123757	Front Gland	1
16	502833	502833	502833	502833	502833	Retaining Ring	1
17	507448	507448	507448	507448	507448	Washer	1
18	507400	507400	507400	507400	507400	Polyseal	1
19	507446	507446	507446	507446	507446	Compression Spring	1
20	590240-1	590240-1	590240-1	590240-1	590240-1	Sticker	1
21	125739	125739	127030	125862	125862	End Cap	1
22	507323	507323	507323	125866	125866	Spacer	1
23	507351	507351	507351	507351	507351	Wiper Seal	1
24	124210	124210	123772	123772	123772	Pintail Deflector/Bottle	1
25	125742	125742	125742	125742	125742	Gland Assembly	1
26	125740	125740	125740	125740	125740	Gland Housing	1
27	500787	500787	500787	500787	500787	O-ring	1
28	507447	507447	507447	507447	507447	Polyseal	1
29	125741	125741	125741	125741	125741	Spacer	1
30	506876	506876	506876	506876	506876	Retaining Ring	1
31	500785	500785	500785	500785	500785	O-Ring	1
32	501091	501091	501091	501091	501091	Back-Up Ring	1
33	501075	501075	501075	501075	501075	Quad Ring	1
34	116408	116408	116408	116408	116408	Bumper	1
35	125733	125733	125733	125733	125733	Cylinder Assembly	1

PARTS LIST

ITEM	PART NUMBER					DESCRIPTION	QTY
	2025	2025L	2025LB	2025V	2025LV		
36	125743	125743	125743	125743	125743	Piston, Rod	1
37	125744	125744	125744	125744	125744	Piston, Air	1
38	507445	507445	507445	507445	507445	Retaining Ring	1
39	126941-4	126941-4	126941-4	126941-4	126941-4	Gasket	1
40	504127	504127	504127	504127	504127	Screw	3
41	125750	125750	125750	125750	125750	Bottom Plate	1
42	115554-1	115554-1	115554-1	115554-1	115554-1	Muffler	1
43	505420	505420	505420	505420	505420	Lock-nut	1
44	506493	506493	506493	506493	506493	Washer	1
45	125747	125747	125747	125747	125747	Cylinder Head	1
46	500871	500871	500871	500871	500871	O-Ring	1
47	501458	501458	501458	501458	501458	Quad Ring	1
48	125118	125118	125118	125118	125118	Pivot Screw	1
49	116272	116272	116272	116272	116272	Spring	1
50	507396	507396	507396	507396	507396	O-Ring	3
51	507164	507164	507164	507164	507164	Swivel Assembly	1
52	125562-1	125562-1	125562-1	125562-1	125562-1	Throttle Valve	1
53	125751	125751	125751	125751	125751	Throttle Arm	1
54	506576	506576	506576	506675	506675	Plug Assy/Tubing Connector	1
55	100309	100309	100309	100309	100309	Plug	1
56	505438	505438	505438	505438	505438	O-Ring	1
57	500779	500779	500779	500779	500779	O-Ring	2
58	500778	500778	500778	500778	500778	O-Ring	1
59	590350	590350	590350	590350	590350	Sticker	1
60	590351	590351	590351	590351	590351	Sticker	1
61	590347	590347	590347	590347	590347	Sticker	1
62	-----	-----	501007	501007	501007	Retaining Ring	1
63	-----	-----	506628	506628	506628	Washer	1
64	-----	-----	124342	123784	123784	Adapter	1
65	-----	-----	-----	500790	500790	O-Ring	2
66	-----	-----	-----	502317	502317	Retaining Ring	1
67	-----	-----	-----	125864	125864	Wiper Housing	1
68	-----	-----	-----	500780	500780	O-Ring	1
69	-----	-----	-----	500809	500809	O-Ring	1
70	-----	-----	-----	124245	124245	Tube and Slide Assembly	1
71	-----	-----	-----	125865	125865	Washer	1
72	120588	120588	120588	120588	120588	Stop	1
73	126439	126439	126439	126439	126439	Lever Guard	1
74	502274	502274	502274	502274	502274	Retaining Ring	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.

1. *Tool fails to operate when trigger is depressed.*
 - a) Air line not connected
 - b) Throttle Valve O-rings (50) 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 (47) worn or damaged.
 - c) Tool is low on hydraulic fluid, refer to Fill and Bleed section.
 - d) Air in hydraulic system, refer to Fill and Bleed section.
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 worn anvil, refer to nose data sheet.
4. *Hydraulic fluid exhausts with air or leaks at base of handle.*
 - a) Worn or damaged Gland Assembly (25), inspect Polyseal (28), O-rings (31 and 27), Quad-ring(33) and Back-up ring (32) replace if necessary.
5. *Hydraulic fluid leaks at rear of Pull Piston (6)*
 - a) Worn or damaged piston Polyseal (18), replace if necessary.
6. *Hydraulic fluid leaks at front of Pull Piston (6).*
 - a) Worn or damaged Front Gland (15), inspect Polyseal (14), O-ring (12) and Back-up Ring (11) replace if necessary.
7. *Pull Piston (6) will not return.*
 - a) Throttle Valve (52) stuck: Lubricate O-rings (50).
 - b) Throttle Arm (53), Cable (2) or Trigger (5) binding.

8. *Air leaks at air Cylinder Head (45).*

- a). Worn or damaged O-ring (46) replace if necessary.

ACCESSORIES

- Fill and Bleed Bottle (Fig. 9) - 120337**
- Stall Nut (2025, 2025B & 2025V) - 124090**
- Stall Nut (2025L, 2025LB & 2025LV) - 125340**
- 2025, 2025B & 2025V Assembly Tool Kit - 123110-6**
Includes: (Fig. 3)
 - Piston Assembly (Bullet) - 123111-2
 - Spacer - 123112-2
 - POLYSEAL Tool - 121694-2025
- 2025L, 2025LB & 2025LV Assembly Tool Kit - 123110-8**
Includes: (Fig. 3)
 - Piston Assembly (Bullet) - 123111-4
 - Spacer - 123112-3
 - POLYSEAL Tool - 121694-2025
- Conversion Kit - 126190**
(To convert 2025L to 2025LV)
Includes:
 - Pintail Collection Bottle - 123772
 - Tubing and Slide Assembly - 124245
 - Piston Assembly - 125738-3
 - End Cap Assembly - 125863
- Conversion Kit - 126432**
(To convert 2025 to 2025V)
Includes:
 - Pintail Collection Bottle - 123772
 - Tubing & Slide Assy - 124245
 - Piston Assy - 125738-2
 - End Cap Assembly - 125863
 - Vacuum Attach Adapter - 123784
 - Retaining Ring Ext - 501007
 - Flat Washer - 506628
 - Straight Connector - 506675
- Service Kit (2025, 2025B, 2025L & 2025LB) - 2025KIT**
- Service Kit (2025LV & 2025V) - 2025VKIT**

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

HYDROCLEAR(R) DEXRON(R) III/MERCON(R) Automatic Transmission Fluid

MSDS Code: ATFC0089 Revised: 14-Mar-2000

"HYDROCLEAR" is a registered trademark of Conoco.
"DEXRON" is a registered trademark of General Motors Corp.
"MERCON" is a registered trademark of Ford Motor Company.

Product Use: Automatic Transmission Fluid
Conoco Blend Code: 46682

MANUFACTURER/DISTRIBUTOR

Conoco Inc.
P.O. Box 2197
Houston, TX 77252
PHONE NUMBERS
Product Information: 1-281-293-5550
Transport Emergency: CHEMTREC 1-800-424-9300 (U.S. & Canada)
703-527-3887 (elsewhere; call collect)
Medical Emergency: 1-800-441-3637

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS %

Base oils >85
Proprietary additives <15

If oil mist is generated, exposure limits apply (see Section 8).

3. HAZARDS IDENTIFICATION

--- EMERGENCY OVERVIEW ---

APPEARANCE / ODOR

Red liquid / mild petroleum hydrocarbon odor.

OSHA REGULATORY STATUS

This material is classified as nonhazardous under OSHA Regulations.

HMIS RATING

Health: 1; Flammability: 1; Reactivity: 0

Potential Health Effects

Primary Route of Entry: Skin

The product, as with many petroleum products, may cause minor skin, eye, and lung irritation, but good hygienic practices can minimize these effects.

Normal use of this product does not result in generation of an oil mist. However if an oil mist is generated, overexposure can cause minor and reversible irritation to the eyes, skin, and especially the lungs. Proper personal protective equipment and sufficient ventilation can provide adequate protection.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

4. FIRST AID MEASURES

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

Wash skin thoroughly with soap and water. If irritation develops and persists, consult a physician.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

Material poses an aspiration hazard. If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.
If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point (typical): 370 F (188 C)
Flash Point (minimum): 351 F (177 C)
Method: COC

NFPA Classification: Class IIIB Combustible Liquid.
NFPA Rating: Health 0; Flammability 1; Reactivity 0

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Water or foam may cause frothing. Use water to keep fire-exposed containers cool. Water may be used to flush spills away from exposures.

Products of combustion may contain carbon monoxide, carbon dioxide, and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Remove source of heat, sparks, and flame.

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Recover free liquid for reuse or reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

7. HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Wash contaminated clothing prior to reuse.

Handling (Physical Aspects)

Close container after each use. Do not pressurize, cut, weld, braze, solder, grind, or drill on or near full or empty container. Empty container retains residue (liquid and/or vapor) and may explode in heat of a fire.

Storage

Store in accordance with National Fire Protection Association recommendations. Store in a cool, dry place. Store away from heat, sparks and flames, oxidizers. Close container after each use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION

Normal shop ventilation.

Personal Protective Equipment

RESPIRATORY PROTECTION

None normally required except in emergencies or when conditions cause excessive airborne levels of mists or vapors. Select appropriate NIOSH-approved respiratory protective equipment when exposed to sprays or mists. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure, and published respirator protection factors.

PROTECTIVE GLOVES

Should be worn when the potential exists for prolonged or repeated skin contact. NBR or neoprene recommended.

EYE PROTECTION

Safety glasses with side shields.

OTHER PROTECTIVE EQUIPMENT

Coveralls with long sleeves if splashing is probable.

Applicable Exposure Limits
If oil mist is generated, exposure limits apply.
PEL (OSHA) : 5 mg/m³, 8 Hr. TWA
TLV (ACGIH) : 5 mg/m³, 8 Hr. TWA, STEL 10 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data
Boiling Point: Not Available
Vapor Pressure: Nil
Vapor Density: >1 (Air=1.0)
% Volatiles: Nil
Evaporation Rate: Nil
Solubility in Water: Insoluble
Odor: Petroleum Hydrocarbon (mild).
Form: Liquid.
Color: Red.
Specific Gravity: 0.87 @ 60 F (16 C)
Density: 7.14 lb/gal

10. STABILITY AND REACTIVITY

Chemical Stability
Stable.

Conditions to Avoid
Heat, sparks, and flames.

Incompatibility with Other Materials
Incompatible or can react with oxidizers.

Decomposition
Normal combustion forms carbon dioxide; incomplete combustion may produce carbon monoxide.

Polymerization
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Animal Data
Mouse skin painting studies have shown that highly refined petroleum lube base oils similar to ingredients in this product have not caused skin tumors.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information
No specific aquatic data available for this product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal
Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

Container Disposal
Empty drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All other containers should be disposed of in an environmentally safe manner.

14. TRANSPORTATION INFORMATION

Shipping Information
DOT: Not regulated.
ICAO/IMO: Not restricted.

15. REGULATORY INFORMATION

U.S. Federal Regulations
OSHA HAZARD DETERMINATION
This material is not known to be hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA/SUPERFUND
Not applicable; this material is covered by the CERCLA petroleum exclusion.

SARA, TITLE III, 302/304
It is possible material may contain extremely hazardous substances at concentrations below 1.0% so that a large-enough spill could warrant an Emergency Release Report.

SARA, TITLE III: 311/312 HAZARD CLASSIFICATIONS

Acute: No
Chronic: No
Fire: No
Reactivity: No
Pressure: No

SARA, TITLE III, 313

This material is not known to contain any chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and subject to release reporting requirements.

TSCA

Material and/or components are listed in the TSCA Inventory of Chemical Substances (40 CFR 710).

RCRA

This material has been evaluated for RCRA characteristics and does not meet hazardous waste criteria if discarded in its purchased form. Because of product use, transformation, mixing, processing, etc., which may render the resulting material hazardous, it is the product user's responsibility to determine at the time of disposal whether the material meets RCRA hazardous waste criteria.

CLEAN WATER ACT

The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

Ingredient(s): Petroleum Hydrocarbons

Reportable Quantity: Film or sheen upon, or discoloration of any water surface

CLEAN WATER ACT

This material is not known to contain hazardous substances in sufficient quantity to make it subject to CERCLA regulations.

State Regulations (U.S.)
CALIFORNIA "PROP 65"

This material may contain trace amount(s) of an ingredient(s) known to the State of California to cause cancer, birth defects, or other reproductive harm. Read and follow all label directions.

PENNSYLVANIA WORKER & COMMUNITY RIGHT TO KNOW ACT

This material is not known to contain any ingredient(s) subject to the Act. Nonhazardous ingredient information is withheld as a trade secret in accordance with Section 11 of the Act.

Canadian Regulations

This is not a WHMIS Controlled Product.

16. OTHER INFORMATION

NOTE: This product or any other hydrocarbon-based lubricant should not be used in non-diaphragm compressors that produce "breathing air" unless the outlet is monitored continuously for carbon monoxide. These lubricants can produce carbon monoxide when subjected to high temperatures.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : MSDS Coordinator

Address : Conoco Inc.

> : PO Box 2197

> : Houston, TX 77252

Telephone : 1-281-293-5550 Web Site : www.Conoco.com

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.

Huck Acceptance is World-wide

Huck Fastener maintains company offices throughout the United States and Canada with subsidiary offices in many other countries. Sales engineers and systems specialists located in your area can help in solving your fastener problems.

Huck Fasteners world-wide locations:

Americas

Huck International, Inc.
World Headquarters
 3724 East Columbia
 Tucson, AZ 85714
 800-234-4825
 520-747-9898
 FAX: 520-748-2142

Huck International, Inc.
Aerospace Fastener Division
 3724 East Columbia
 Tucson, AZ 85714
 800-234-4825
 520-747-9898
 FAX: 520-748-2142

Huck International, Inc.
Aerospace Fastener Division
 PO Box 5268
 900 Watsoncenter Rd.
 Carson, CA 90749
 800-421-1459
 310-830-8200
 FAX: 310-830-1436

Huck International, Inc.
Industrial Fastener Division
 PO Box 8117
 8001 Imperial Drive
 Waco, TX 76714-8117
 800-388-4825
 254-776-2000
 FAX: 254-751-5259

Far East

Huck International, Inc.
Installation Systems
Division
 1 Corporate Drive
 Kingston, NY 12401
 800-431-3091
 845-331-7300
 FAX: 845-334-7333
www.hucktools.com

Huck International Ltd.
 6150 Kennedy Road, Unit 10
 Mississagua, Ontario L5T2J4
 Canada
 905-564-4825
 FAX: 905-564-1963

Huck International, Inc.
 Avenida Parque Lira. 79-402
 Tacubaya Mexico, D.F.
 C.P. 11850
 FAX: 525-515-1776
 TELEX: 1173530 LUKSME

Huck Australia, Pty. Ltd.
 Private Bag 6
 Rowville, Victoria
 Australia 3178
 03-764-5500
 Toll Free: 008-335-030
 FAX: 03-764-5510

Europe

Huck International Ltd.
 Unit C, Stafford Park 7
 Telford, Shropshire
 England TF3 3BQ
 01952-290011
 FAX: 0952-290459

Huck S.A.
 Clos D'Asseville
 BP4
 95450 Us Par Vigny
 France
 33-1-30-27-9500
 FAX: 33-1-34-66-0600