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

NOTE
Please read this manual before using or servicing tool. Comply with WARNINGS and CAUTIONS to insure your safety and to prevent damage to tool.

If you need more information about using or servicing Huck installation equipment, please contact your Huck representative or the nearest Huck office listed on the back cover.

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This manual applies to Huck Model 210 Installation Tools, Serial Number 0241 and above.

WARNING
Using pintail deflector as a handle may result in severe personal injury.
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CAUTION:
Important disassembly and assembly instructions have been added -- see pages 22, 23, 24, 25, 26 and 27. Please follow applicable new entries.
Description

The HUCK Model 210 is a lightweight, high speed production tool designed to install a wide range of HUCK blind fasteners, and HUCKBOLT® fasteners, including 3/16" and 1/4" diameter MAGNA-GRIP® Fasteners and MAGNA-LOK™ fasteners.

Pulling action of the pull piston is provided by a pneumatic-hydraulic (pneudraulic) intensifier system powered by 90-100 psi air pressure. The air inlet is equipped with a connector with 1/4-18 female pipe threads to accept your air hose or quick connect fitting. The piston return stroke is spring actuated.

A nose assembly is required for each fastener type and size. Nose assemblies must be ordered separately. See Model 210 Selection Chart.

Specifications

Table 1.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>8.50 lbs. (3.0 kg)</td>
</tr>
<tr>
<td>Length of Head (l)</td>
<td>9.85 in. (253 mm)</td>
</tr>
<tr>
<td>Width of Head (l)</td>
<td>1.44 in. (37 mm)</td>
</tr>
<tr>
<td>Edge to Centerline</td>
<td>.72 in. (18 mm)</td>
</tr>
<tr>
<td>Cylinder Diameter</td>
<td>4.63 in. (118 mm)</td>
</tr>
<tr>
<td>Height</td>
<td>12.60 in. (320 mm)</td>
</tr>
<tr>
<td>Air Pressure</td>
<td>90-100 psi (620-690 kPa)</td>
</tr>
<tr>
<td>Air Consumption</td>
<td>6 CPM (0.003 m³/s)</td>
</tr>
</tbody>
</table>

(based on 30 fastener installations per minute.)

(1) Weight and length of head does not include nose assembly.

Fasteners installed: See Model 210 Selection Chart

Hydraulic fluid: Automatic transmission fluid, DEXRON II or equivalent.

* DEXRON II is a registered trademark of General Motors Corporation.
Principle of Operation

When tool is connected to proper air supply, air pressure holds throttle valve in the up position -- air pressure is directed to the top of piston keeping it down. Depressing trigger moves throttle valve to the down position -- air is directed to the bottom of the piston moving it upward, air from above piston is exhausted downward thru the throttle valve and exits the muffler at bottom of tool. Air piston rod is a hydraulic piston. Pressurized fluid is forced into head moving pull piston rearward.

When fastener installation is completed, trigger is released. Air pressure causes throttle valve to return to its up position, reversing the air flow. The air piston and rod move down to their starting position, exhausting air from below piston through the muffler at bottom of tool. As rod moves downward and hydraulic pressure is released from pull piston, a spring behind pull piston returns it to its starting position.
Preparation for Use

(See Good Service Practices)

WARNING
Do not pull on a pin without a collar. If a pin is pulled without a collar, pin will eject forcibly when pintail separates and severe personal injury may result.

If deflectors are removed or damaged, separated pintails may eject forcibly from rear of tool. Severe personal injury may result.

Be sure there is adequate clearance for tool and operator's hands before proceeding. Tool moving toward structure may cause severe personal injury if clearance is limited.

The Model 210 Installation Tool is shipped with a plastic plug in the air inlet connector. This connector has 1/4-18 female pipe threads to accept the hose fitting. Quick connect fittings and 1/4 inch inside diameter air hose are recommended. An air supply of 90-100 psi capable of 6 CFM must be available. The air supply should be equipped with a filter-regulator-lubricator unit.

1. Remove plastic plug from air inlet connector and drop in a few drops of Automatic Transmission Fluid, DEXRON II or equivalent.

2. Screw quick-connect fitting into air inlet connector.

3. Set air pressure on regulator to 90 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. Use pintail tube(s) as specified in Table 6 - SELECTION CHART and shown in Figure 2.
9. Select proper nose assembly from Table 6. - Selection Chart for fastener to be installed. Attach nose assembly to tool following applicable Nose Assembly Data Sheet.

(1) Quick disconnect fittings and air hoses are not available from Huck Manufacturing Company.
Operating Instructions

Blind Fastener and MAGNA-LOK Fastener Installation:

The fastener may be placed in the work hole or in the end of the nose assembly. In either case, tool and nose assembly must be held against work and at right angles to it. Depress trigger and hold it depressed until fastener is installed and pintail breaks.

HUCKBOLT Fastener and MAGNA-GRIP Fastener Installation:

Place pin in work hole and place collar over pin. (If collar has only one end tapered, that end should be out towards the tool.) Hold pin and push nose assembly onto pin protruding thru collar until nose assembly anvil touches collar. Depress trigger and hold it depressed until collar is swaged and pintail breaks.

CAUTION
Do not abuse tool by dropping it or using it as a hammer. Care of installation tools by operators is an important factor in maintaining tool efficiency, in eliminating downtime and in preventing damage to tools.
Maintenance

Good Service Practices

The efficiency and life of any tool depends upon proper maintenance and good service practices. Tool should be serviced by personnel who are thoroughly familiar with it and how it operates.

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. Proper hand tools and soft materials to protect tools must be available. Only standard hand tools, brass drift and wood block are required. Vise with soft jaws should be available. See Table 2 for tools available from Huck Manufacturing Company.

Always replace O-rings and back-up rings when tool is disassembled for any reason. All parts must be handled carefully and examined for damage and/or wear. 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.

Rub SLIC-TITE TEFLON thread compound or equivalent on pipe plug threads and quick connect fitting. Do not use Teflon tape on pipe threads. Pipe threads may cause tape to shred resulting in tool and hydraulic unit valves to malfunction. (Slic-tite is available in stick form as P/N 503237, from Huck Manufacturing Co.)

Smear LUBRIPLATE 130AA, or equivalent lubricant on O-rings and mating surfaces to aid assembly and to prevent damage to O-rings. (Lubriplate 130AA is available in a tube, as P/N 502723, from Huck Manufacturing Company.)

Use VIBRA-TITE on Gland (29) threads. VIBRA-TITE, P/N 505125, is available from Huck. Follow directions on bottle.

Apply LOCTITE Adhesive/Sealant to Nut, P/N 505420. (Loctite is available from Huck Manufacturing Company in a tube, as P/N 503657.)

Service Parts Kit No. 210KIT includes perishable parts and should be available at all times. Other components, as experience dictates, should also be available.

* LUBRIPLATE is a trademark of Fiske Brothers Refining Co.
* TEFLON is a trademark of E. I. duPont de Nemours & Co.
* VIBRA-TITE is a trademark of the Oakland Corporation.
* LOCTITE is a trademark of Loctite Corp.
Preventive Maintenance

Note
Refer to the applicable section for Assembly or Disassembly. For supplementary information refer to Troubleshooting and Table 4. Parts List.

Tool Maintenance

The Model 210 HUCK Installation Tool requires a minimum amount of maintenance. Regular inspection and correction of minor problems will keep the tool operating efficiently and prevent downtime.

If a filter-regulator-lubricator unit is not being used in the air supply: (1) remove hose fitting from air inlet connector and drop in a few drops of automatic transmission fluid or light oil (2) blow out air line to remove dirt and water before connecting air hose to tool.

At regular intervals, depending upon use, replace all QUAD rings, O-rings and back-up rings in tool. Service Parts Kits should be kept on hand. (See Spare Parts and Service Parts Kits and Notes.) Inspect both hydraulic pistons, and their piston rods for scored surfaces. excessive wear or damage, and replace as necessary. Always replace O-rings, QUAD rings and back-up Rings when tool is disassembled for any reason.

Nose Assembly Maintenance

Frequent cleaning of the nose assembly is recommended. Nose assembly with UNITIZED™ jaws must be disassembled and cleaned in mineral spirits or isopropyl alcohol. Do not let UNITIZED™ jaws, (urethane) soak in solvent. Do not use solvents that cause urethane to swell. Use a sharp pointed "pick" to remove particles packed in pull grooves of jaws. Dry components immediately after cleaning.

In nose assemblies without UNITIZED™ jaws, dip nose assembly in mineral spirits, isopropyl alcohol, or other suitable solvent, to clean jaws and wash away metal chips and dirt. If more thorough cleaning or maintenance is necessary, disassemble nose assembly. Use pick to remove particles packed in jaw grooves. Reassemble per instructions on applicable Nose Assembly Data Sheet.
Filling Tool

1. Fill container up to fluid level line. Use DEXRON II automatic transmission fluid or equivalent.

2. Disconnect air supply from tool.

3. Remove bleed plug from head of tool -- See Figure 3.

WARNING
Do not cycle tool without either bleed plug or fill and bleed unit installed in tool head. Fluid will spray out and severe personal injury may occur if tool is cycled without either bleed plug or fill and bleed unit installed in tool head.

4. Screw assembled fill and bleed unit into bleed port of tool head.

5. Connect air supply to tool.

6. Cycle tool from 20 to 30 cycles.

7. Disconnect air supply from tool with pull piston in full forward position. (Trigger released and returned to idle position.)

8. Hold tool upright and unscrew fill and bleed unit. Screw in fill plug.

9. Connect air supply to tool. Measure tool stroke (piston travel). If stroke is less than 0.89 in., repeat entire fill and bleed procedure.

Figure 3
Tool, Fill and Bleed Kit

Fluid Level Line
Bleed Plug
Removed

Fill & Bleed Kit

120337
P/N 144770
Table 2. Standard Tools Available from Huck

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Ref. No.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>502294</td>
<td>Hex Key, 1/8 across flats</td>
<td>45</td>
<td>504127</td>
</tr>
</tbody>
</table>

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 defective part is located. Where possible, substitute known good parts for suspected bad parts. Use this Troubleshooting Table as an aid in locating and correcting malfunction:

1. Tool fails to operate when trigger is depressed.
   a. Throttle valve O-ring (53) or O-ring (54) worn or damaged.

2. Tool does not complete fastener installation or break pintail.
   a. Air pressure too low.
   b. Hydraulic fluid low causing short stroke.
   c. Air piston QUAD ring (40) worn or damaged.
   d. Air in hydraulic system (see Filling and Bleeding Tool)

3. Hydraulic fluid exhausts with air.
   a. Worn or damaged O-ring (37) and Back-up Ring (36), or O-ring (30); O-ring (33) and Back-up Ring (34), Poly Seal (32) or QUAD Ring (31).

4. Hydraulic fluid leaks at Hydraulic Cylinder Head (14).
   a. Worn or damaged Pull Piston Rod O-ring (9) on Back-up ring (10).

5. Hydraulic fluid leaks at Pull Piston Rod (6).
   a. Worn or damaged Pull Piston Rod Ring (7) or Back-up Ring (8).

6. Pull Piston (6) will not return.
   a. Broken or weak Spring (12) and (13).

7. Air leaks at air Cylinder Head (43).
   a. O-ring (44) damaged.

Spare Parts and Service Parts Kit

The quantity of spare parts that should be kept on hand varies with application and number of tools in service. Service parts kit containing perishable parts such as O-rings, back-up rings, etc., should be kept on hand at all times. Parts included in Service Parts Kit, P/N 210KIT are indicated by asterisks (*) in Parts List -- Table 4.
Disassembly

Refer to Figures 1 and 4

For component identification, refer to Figure 4. Exploded View and Table 4. Parts List. Numbers in parenthesis ( ) are reference numbers shown in Figure 4.

WARNING

Be sure air hose is disconnected before cleaning or when replacing worn or damaged tool components. Tool may be actuated and is not disconnected.

The following procedure is for complete disassembly of tool. Disassemble only components necessary to replace damaged or worn O-rings, QUAD Rings, Back-up Rings and other components.

1. Disconnect air hose from tool.

2. Unscrew Retaining Nut (2) and remove Nose Assembly. Remove Pintail Tube (1).

3. Unscrew Bleed Plug (4) including O-ring (5) from top of Handle/Head (3). Turn tool with bottom up and hold over container. Allow hydraulic fluid to drain out of tool. Discard fluid from container.

4. Loosen Hose Clamp (16) enough to pull Deflector (17) off Cylinder Head (14).

5. Using wrench, unscrew Cylinder Head (14). Slide out Springs (12) and (13).

6. CAUTION:
   For Piston (6) disassembly, see pages 24, 25 and 26.

Note

Inspect Piston (6) for wear, scoring or damage. Replace when necessary.

7. Hold tool securely with bottom up. Remove three Button Head Screws (51) with 1/8 hex key. Remove Muffler End Cap (50) and Bottom Exhaust Gasket (48). Remove Muffler (47) with O-ring from end cap.

8. Remove Retaining Ring (45) from Cylinder (24).

9. Screw Button Head Screws (51) back into Cylinder Head (43). Carefully pull on screws to remove Head (43).
10. Screw 1/4-20 UNC screws into Piston (39). Pull evenly on screws to remove Piston and Rod Assembly, P/N 111800. Do not scratch Piston Rod (41).

11. Piston (39) and Rod (41) must not be disassembled and reassembled -- If either must be replaced, purchase P/N 111800 from Huck. If Nut (42) loosens, apply LOCTITE and tighten to 30-40 ft. lbs.

Note

Shoulder Screw (23) must be removed before Gland (29) is unscrewed.

12. Remove Bumper (38) from Gland (29).


14. Hold 7/16 hex key in Gland Insert (35) and use 1 3/8 socket to unscrew insert from gland.

15. Lift Cylinder (24) from Handle/Head (3).

16. Turn handle/head over, and drain hydraulic fluid into container. Discard fluid.

17. Remove Throttle Arm (22). Detach ball of Cable Assembly (21) from throttle arm. Push Slotted Pin (18) from Handle (3) and remove Trigger (20) with attached Cable Assembly (21) and Linkage Pin (19). Push out linkage pin and remove cable assembly from trigger.

18. Pull Throttle Valve (52) out of Cylinder (24).

19. Do not remove bushings unless necessary to replace damaged bushings. Press out Lower Bushing (27) and Upper Bushing (26) -- use square ended brass rods at least six inches long. With proper diameter rod, press out lower bushing first, press out upper bushing using a larger diameter rod.

Assembly

Refer to Figures 1, 2, 3 and 4

Clean all components with mineral spirits, and inspect for wear or damage. Replace as necessary. Replace all seals on/in disassembled components. Use O-rings, QUAD Rings and Back-up Rings supplied in Service Parts Kit -- see Notes. Smear LUBRIPLATE 130AA or PARKER-O-LUBE on seals.

2. After new bushings are installed, they may have to be reamed, lapped or honed to bring their back to size for correct fit with throttle valve.

   NOTE: USE LOCTITE NUMBER 609 ON BUSHINGS WHEN PRESSING INTO CYLINDER.

**Note**

Screw (23) must not be installed before Gland (29) is screwed in.

3. Position Cable Assembly (21) in Trigger (20) slot and push Linkage Pin (19) through holes in trigger and cable assembly. Position assembled trigger in Handle (3) and push Slotted Pin (18) through holes in handle and trigger.

4. Hold Head/Handle (3) securely with lower end pointing up. Turn Cylinder (24) bottom up, and line up cylinder pin with handle groove. Lower cylinder onto head.

5. **Cup of Poly Seal (75) must face toward top of tool when installed in Gland (29).** Hold 7/16 hex key in Gland Insert (35) and use 1 3/8 socket to screw insert into gland -- tighten securely.

6. Screw (23) must not be installed before Gland (29). Apply VIBRATITE to threads of Gland Assembly (29) -- follow directions on container (P/N 505125 from Huck). Screw gland into handle/head. Using 1 3/8 socket wrench, tighten gland to 90 ft. lbs. ± 10 lbs.

7. Push Bumper (38) firmly over Gland (29) -- face of bumper with two slots must face toward bottom of tool.

8. Piston and Rod assembly, P/N 111800, should not be disassembled -- warranty is voided. Do not scratch piston rod. If either must be replaced, purchase P/N 111800 from Huck.


10. Push Cylinder Head (39) squarely into cylinder taking care not to damage O-ring (44). Install Retaining Ring (45).

11. Position O-ring (46) and Muffler (47) on center of Cylinder Head (43). Position Spacers (49) over holes in head, Gasket (48) on cylinder and Spring (28) in lower bushing. Carefully position Muffler End Cap (50) on cylinder -- be certain that muffler is properly positioned in recess of muffler end cap. Hold end cap down and screw in three Button Head Screws (51) and tighten with 1/8 hex key.

12. Place tool upright on level surface. Push Throttle Valve (52) into cylinder.
13. Hook ball of Cable Assembly (21) into recess of Throttle Arm (22). Place end of throttle arm in slot in throttle valve. Push Shoulder Screw (23) through throttle arm -- tighten screw.

14. CAUTION: Cup of POLY-SEAL faces to front of tool -- for assembling Piston (6) into tool's head, see pages 24, 25 and 27.

15. Slide Spring Locator (11) over piston extension. Slide Springs (12) and (13) into head and over piston extension.

16. Push Cylinder Head (14) over piston extension. Screw cylinder head into cylinder and tighten with wrench.

17. Slip Hose Clamp (16) over Deflector (17) and push deflector onto cylinder head extension. Tighten hose clamp.

18. Screw in assembled Bleed Plug (4) and O-ring (3).

19. Fill tool with hydraulic fluid, and bleed air from fluid. See Filling and Bleeding Tool.

Notes

SPECIFICATIONS FOR Table 4

1. All part numbers shown in this manual are available from Huck Manufacturing Co. The 500000-series part numbers are standard parts which generally can be purchased locally.

2. Asterisks (*) indicate parts in Service Parts Kit, P/N 210KIT

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

4. Quad ring sizes are specified 24 plus 3 digits. The last 3 digits correspond to O-ring dash numbers. Quad rings are manufactured by Minnesota Rubber Co. unless otherwise specified.

5. Back-up rings are W. S. Shamban & Co. series S-11248, single turn Teflon (MS-28774), or equivalent. The dash numbers correspond to the O-ring AS 568 dash numbers.

6. Material for O-rings and QUAD Rings:

   a. Ref. nos. 15, 30, 31, 33, 37, 44, are Nitrile or Buna N (Minnesota Rubber Co., compound 366Y, or equivalent), 70 durometer.

   b. Ref. nos. 53 and 54 are VITON, (Parker Seal Co., compound V747-75, or equivalent) 75 durometer.

   c. Ref. nos. 5, 7, ———— are Disogrin Ind's. compound 9250, or equiv., 90 durometer.
CAUTION:
Important disassembly and assembly instructions have been added - see pages 22, 23, 24, 25, 26 and 27. Please follow applicable new entries.

Figure 4. Exploded View
<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part Number</th>
<th>No. Req.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100534</td>
<td>1</td>
<td>Tube-Pintail</td>
</tr>
<tr>
<td>2</td>
<td>111795</td>
<td>1</td>
<td>Nut-Retaining</td>
</tr>
<tr>
<td>3</td>
<td>114623(1)</td>
<td>1</td>
<td>Handle/Head (see note # 1)</td>
</tr>
<tr>
<td>4</td>
<td>104293(1)(2)</td>
<td>1</td>
<td>Bleed Plug (incl. ref. 5)</td>
</tr>
<tr>
<td>5*</td>
<td>505436</td>
<td>1</td>
<td>O-ring -- AS 568-006</td>
</tr>
<tr>
<td>6</td>
<td>114627</td>
<td>1</td>
<td>Piston (incl. ref. 7,8,9 &amp; 10)</td>
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<tr>
<td>7*</td>
<td>505436</td>
<td>1</td>
<td>O-Ring - AS 568-112</td>
</tr>
<tr>
<td>8*</td>
<td>501103</td>
<td>1</td>
<td>Back-up Ring</td>
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<tr>
<td>9</td>
<td>501076</td>
<td>1</td>
<td>QUAD RING MR-Q4112</td>
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<tr>
<td>10*</td>
<td>505865</td>
<td>1</td>
<td>Poly seal</td>
</tr>
<tr>
<td>11</td>
<td>(3)</td>
<td>NOT USED</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>505450</td>
<td>1</td>
<td>Spring</td>
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<td>13</td>
<td>505449</td>
<td>1</td>
<td>Spring</td>
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<td>14</td>
<td>114625</td>
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<td>Cylinder Head (incl. ref. 13)</td>
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<td>Clamp-Hose</td>
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<td>17</td>
<td>110691</td>
<td>1</td>
<td>Deflector</td>
</tr>
<tr>
<td>--</td>
<td>115558</td>
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<td>Throttle Valve Assem.</td>
</tr>
<tr>
<td>18</td>
<td>500619</td>
<td>1</td>
<td>Pin-Slotted--.125 dia. x 5/8 long</td>
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<tr>
<td>19</td>
<td>116407</td>
<td>1</td>
<td>Linkage Pin</td>
</tr>
<tr>
<td>20</td>
<td>116262</td>
<td>1</td>
<td>Trigger</td>
</tr>
<tr>
<td>21</td>
<td>116404</td>
<td>1</td>
<td>Cable Assembly</td>
</tr>
<tr>
<td>22</td>
<td>116405</td>
<td>1</td>
<td>Throttle Arm</td>
</tr>
<tr>
<td>23</td>
<td>505459</td>
<td>1</td>
<td>Shoulder Screw</td>
</tr>
<tr>
<td>24</td>
<td>115555</td>
<td>1</td>
<td>Cylinder Assembly (incl. ref. 25,26 &amp; 27)</td>
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<td>25</td>
<td>501352</td>
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<td>Pin-Dowell--.187 dia. x 1/2 long</td>
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<td>Ref. No.</td>
<td>Part Number</td>
<td>Reg.</td>
<td>Description</td>
</tr>
<tr>
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<tr>
<td>26</td>
<td>115504</td>
<td>1</td>
<td>Bushing-Upper</td>
</tr>
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<td>115503</td>
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<td>Bushing-Lower</td>
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<tr>
<td>28</td>
<td>116272</td>
<td>1</td>
<td>Spring-Return</td>
</tr>
<tr>
<td>--</td>
<td>116134</td>
<td>1</td>
<td>Gland Assem (incl. ref. 29 thru 37)</td>
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<tr>
<td>29</td>
<td>116135</td>
<td>1</td>
<td>Gland Housing</td>
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<tr>
<td>30*</td>
<td>500786</td>
<td>1</td>
<td>O-ring</td>
</tr>
<tr>
<td>31*</td>
<td>501414</td>
<td>1</td>
<td>QUAD Ring -- MR Q4111</td>
</tr>
<tr>
<td>32*</td>
<td>505441</td>
<td>1</td>
<td>Poly-Seal -- SQB 125-0</td>
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<td>33*</td>
<td>500781</td>
<td>1</td>
<td>O-ring -- AS 568-015</td>
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<tr>
<td>34*</td>
<td>501087</td>
<td>1</td>
<td>Back-up Ring -- S-11248-15</td>
</tr>
<tr>
<td>35</td>
<td>116136</td>
<td>1</td>
<td>Gland Insert</td>
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<td>36*</td>
<td>501090</td>
<td>1</td>
<td>Back-up Ring -- S-11248-18</td>
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<tr>
<td>37*</td>
<td>500784</td>
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<td>O-ring -- AS 568-018</td>
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<td>38</td>
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<td>Screw-Button Hd.--10-32 x 5/8 long</td>
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<td>54*</td>
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<td>2</td>
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(1) For replacement of handle/head, P/N 114623 & P/N 104293 are required.

(2) When Bleed Plug, P/N 104293, has been removed and reinstalled in tool 5 times, NYLOK locking element in plug becomes worn out, therefore, worn out bleed plug must be replaced with new plug to prevent hydraulic fluid loss.

(3) Reference numbers NOT USED indicate that older tools had additional parts that are no longer required.
**Table 6. Selection Chart**

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<th>Fastener</th>
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(1) Pintail Tube 100534 required  
(2) Installs all grips available  
(3) Pintail Tubes 100534 and 109584 are required  
(4) These nose assemblies for Aluminum (B) material fasteners only
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INSTALLATION OF 120828
HEAD/HANDLE ON MODEL 210 OR 212
INSTALLATION TOOL

WARNING: Be sure air hose is disconnected before cleaning or when replacing worn or damaged tool components. Tool may be actuated if not disconnected and cylinder is under pressure. Severe personal injury may result.

DISASSEMBLY

1. Unscrew Retaining Nut and remove Nose Assembly. Remove Pintail Tube.

2. Unscrew Blood Plug including O-ring, from top of Handle/Head. Turn tool with bottom up and hold over container. Allow hydraulic fluid to drain out of tool. Discard fluid from container.

3. Hold tool securely with bottom up. Remove three Button Head Screws with 1/8 hex key. Remove Muffler End Cap and Bottom Exhaust Gasket. Remove Muffler with O-ring from end cap.

4. Remove Retaining Ring from Cylinder.

5. Screw Button Head Screws back into Cylinder Head. Carefully pull on screws to remove Head.

6. Screw 1/4-20 UNC screws into Air Piston. Pull evenly on screws to remove Piston and Rod Assembly.

Caution: Do not scratch Piston Rod.

7. Piston and Rod must NOT be disassembled and reassembled -- if either must be replaced, purchase P/N 111800 from Huck. If nut loosens, apply LOCTITE. Huck P/N 503377 and tighten to 30-40 ft. lbs. required on these parts.

Note: Throttle Arm Screw must be FORM HK-691 11-15-90

removed before Gland is unscrewed.


15. Lift Cylinder from Handle/Head.

16. Turn handle/head over and drain hydraulic fluid into container. Discard fluid.

17. Remove Throttle Arm. Detach ball end of Cable Assembly from throttle arm. Push Slotted Pin from Handle and remove Trigger with attached Cable Assembly and Linkage Pin. Push out linkage pin and remove cable assembly from trigger.

Assembly

Clean all components with mineral spirits, and inspect for wear or damage. Replace as necessary. Always replace all seals on/in disassembled components. Use O-rings, QUAD Rings and Back-up Rings supplied in Service Parts Kit P/N 212KIT. Smear LUBRIPLATE 130AA or PARKER-O-LUBE on seals and moving parts.

1. Remove new Head/Handle Assembly (P/N 120828) from package and remove plastic plug from bottom of assembly.

2. Remove Damper Tube from Head/Handle--damper will drop out.

3. Position Cable Assembly in Trigger slot and push Linkage Pin through holes in trigger and cable assembly. Position assembled trigger in Handle and push Slotted Pin through holes in handle and trigger.

4. Place damper in recess at top of damper tube with small hole and chamfer facing up (See drawing below). Slide damper tube and damper into handle. Hold Head/Handle securely with lower and pointing up. Turn Cylinder bottom up, and line up cylinder pin with handle hole. Press Handle onto cylinder.
5. Cup of Poly Seal must face toward top of tool when installed in Gland. Hold 7/16 hex key in Gland Insert and use 1 3/8 socket to screw Insert into gland --tightly secure. (See drawing below).

Caution: Throttle Arm Screw must not be installed before Gland is threaded into Head Handle Assembly.

6. Apply VIBRATITE to threads of Gland Assembly - follow directions on container (P/N 505125 from Huck). Screw gland into Head/Handle. Using 1 3/8 socket wrench--tighten gland to 90 ft. lbs. +10 lbs.

7. Push Bumper firmly over Gland. Face of bumper with two slots must face toward bottom of tool.

8. Piston and Rod assembly, P/N 111800, should not be disassembled. Do not scratch Piston Rod. If either must be replaced, purchase P/N 111800.


10. Push Cylinder Head squarely into cylinder taking care not to damage O-ring. Install Retaining Ring.


12. Carefully position Muffler End Cap on cylinder--be certain that Muffler is properly positioned in recess of Muffler End Cap.

13. Hold end cap down and screw in three Button Head Screws and tighten with 1/8 hex key.


FORM HK-891
Disassembly

1. **CAUTION** - to prevent damage to Piston Seals and Gland Seals when removing them -- install OPTIONAL Polyseal Insertion Tool (121694-210) in rear of Handle/head. When disassembling the tool for any reason it is recommended to replace all seals, however if seals are not available and tool must be disassembled installation tool may prevent seal damage -- See NOTES Page 25 and Figure 10 for complete removal instructions.

**Note**
Inspect Piston (6) for wear, scoring or damage. Replace when necessary.

Assembly

1. **Caution** -- to prevent damage to Piston Seals and Gland Seals -- install OPTIONAL Polyseal Insertion Tool in rear of Handle/head as shown. See pages 25 and 27 for **COMPLETE** Piston assembly procedures.
PISTON & GLAND ASSEMBLY REMOVAL

FIGURE 10
PISTON/GLAND REMOVAL
NOTES:

1. Seal Assembly Tool Kit 120809 includes
   120806 Piston Bullet, 120807 Gland Removal Nut
   and 120808 Stand-off.

2. Polyseal Insertion Tool 121694-210 is optionally available
   for easier Piston installation.

3. Disassembly of Piston from tool see figure 10
   a. thread optional Polyseal Insertion Tool 121694-210
      into Head/Handle.
   c. Push complete piston from front using brass drift.
      allow clearance for piston as it exits tool.
   d. Remove Gland Removal Nut and Poly Seal Insertion Tool
      if used.

4. Assembly of Piston to tool see figure 11
   a. Thread optional Polyseal Insertion Tool 121694-210
      into Head/Handle.
   b. Thread 120806 Piston Bullet onto Piston Assembly.
   c. Push Gland Assembly onto Piston.
   d. Insert Wiper in to Head/Handle as shown.
   e. Thread stand-off onto Head/Handle as shown.
   f. Push assembled components in gently from rear of tool
      using a press or a soft mallet and drift.
   g. Remove stand-off, Bullet and Poly Seal Insertion
      tool if used.
PISTON ASSEMBLY
GLAND ASSEMBLY
FRONT GLAND CAP
CYLINDER
PISTON BULLET
WIPER
STAND OFF

PISTON & GLAND ASSEMBLY INSERTION

FIGURE 11
PISTON/GLAND ASSEMBLY
Warranties

Warranty

THE NINETY DAY WARRANTY HEREBIN EXPRESSED SHALL BE THE EXCLUSIVE WARRANTY ON ITEMS MANUFACTURED BY SELLER AND SHALL BE IN THE PLACE AND STEAD OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Seller shall not be liable for any loss or damage resulting from delays or non-fulfillment of orders owing to strikes, fires, accidents, transportation companies or for any reason or reasons beyond the control of seller or its suppliers.

All warranty claims must be submitted to the seller in writing, within 90 days from date of shipment, and no returns will be accepted without written permission.

Other provisions hereof notwithstanding, seller shall not be liable for any loss of business, profits or any incidental or consequential damages incurred by Buyer or any third person in connection with the items or use thereof, however caused.

Tool Warranty

Seller expressly disclaims any warranty express or implied, as to the condition, design, operation, merchantability or fitness for use of any tool, or part(s) thereof not manufactured by seller. The only warranties made with respect to such tool or part(s) thereof are those made by the manufacturer thereof and seller agrees to cooperate with buyer in enforcing such warranties when such action is necessary. Seller agrees to repair or replace F.O.B. seller's plant, any tool or part(s) thereof manufactured by it and proved to be defective due to faulty workmanship or material.

Warranty on "Other Items"

With regard to items other than FASTENERS and TOOLS ("OTHER ITEMS"), seller expressly disclaims any warranty, express or implied, as to the condition, design, operation, merchantability or fitness for use of any "OTHER ITEMS", or part(s) thereof not manufactured by seller. The only warranties made with respect to such "OTHER ITEMS" or part(s) thereof are those made by the manufacturer thereof and seller agrees to cooperate with buyer in enforcing such warranties when such action is necessary.

Seller agrees to repair or replace F.O.B. seller's plant, any "OTHER ITEMS" or part(s) thereof manufactured by it and proved to be defective due to faulty workmanship or material.

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 servicemen only.

Always give the Serial No. 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
85 Grand Street, Kingston, New York 12401-0250
Telephone 914-331-7300, FAX 914-334-7333

Western
900 Watson Center Road, Carson, California 90745
Telephone 310-830-8200, FAX 310-830-1436

Canada
326 Humber College Boulevard, Rexdale, Ontario M9W 5P4, Canada. Telephone 416-675-3400, FAX 416-675-5917

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) located throughout the United States. These service centers offer repair services, spare parts, Service Parts Kits, Service Tool 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 International Inc. maintains company offices throughout the United States and Canada with subsidiary offices in many foreign countries. Sales engineers and systems specialists located in your area can help in solving your fastener problems.

**Huck International Inc. world-wide locations:**

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Irvine, CA 92718
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FAX: 714-855-8537

Huck International, Inc.
Aerospace Fastener Division
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900 Watsoncenter Rd.
Carson, CA 90745
800-421-1459
310-830-8200
FAX: 310-830-1436

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**Europe**

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602-747-8998
FAX: 602-748-2142

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