Parts and Accessories Manual

Model TA7533

Hand Installation Tool
Safety Instructions

GLOSSARY OF TERMS AND SYMBOLS:

I. GENERAL SAFETY RULES:

- 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.

Notes: underlining emphasizes a specific instruction.

WARNINGs: Must be understood to avoid severe personal injury.

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

1. A half hour long hands-on training session with qualified personnel is recommended before using Huck equipment.
2. 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.
3. For multiple hazards, read and understand the safety instructions before installing, operating, repairing, maintaining, changing accessories on, or working near the assembly power tool. Failure to do so can result in serious bodily injury.
4. Only qualified and trained operators should install, adjust or use the assembly power tool.
5. Do not modify this assembly power tool. This can reduce effectiveness of safety measures and increase operator risk.
6. Do not discard safety instructions; give them to the operator.
7. Do not use assembly power tool if it has been damaged.
8. Tools shall be inspected periodically to verify all ratings and markings required, and listed in the manual, are legibly marked on the tool. The employer/ operator shall contact the manufacturer to obtain replacement marking labels when necessary. Refer to assembly drawing and parts list for replacement.
9. Tool is only to be used as stated in this manual. Any other use is prohibited.
10. Read MSDS Specifications before servicing the tool. MSDS specifications are available from the product manufacturer or your Huck representative.
11. Only genuine Huck parts shall be used for replacements or spares. Use of any other parts can result in tooling damage or personal injury.
12. Never remove any safety guards or pintail deflectors.
13. Never install a fastener in free air. Personal injury from fastener ejection may occur.
14. Where applicable, always clear spent pintail out of nose assembly before installing the next fastener.
15. Check clearance between trigger and work piece to ensure there is no pinch point when tool is activated. Remote triggers are available for hydraulic tooling if pinch point is unavoidable.
16. 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 preventing an accident which may cause severe personal injury.
17. Never place hands between nose assembly and work piece. Keep hands clear from front of tool.
18. Tools with ejector rods should never be cycled with out nose assembly installed.
19. When two piece lock bolts are being used always make sure the collar orientation is correct. See fastener data sheet for correct positioning.

II. PROJECTILE HAZARDS:

1. Risk of whipping compressed air hose if tool is pneumatic or pneumacic.
2. Disconnect the assembly power tool from energy source when changing inserted tools or accessories.
3. Be aware that failure of the workpiece, accessories, or the inserted tool itself can generate high velocity projectiles.
4. Always wear impact resistant eye protection during tool operation. The grade of protection required should be assessed for each use.
5. The risk of others should also be assessed at this time.
6. Ensure that the workpiece is securely fixed.
7. Check that the means of protection from ejection of fastener or pintail is in place and operative.
8. There is possibility of forcible ejection of pintails or spent mandrels from front of tool.

III. OPERATING HAZARDS:

1. Use of tool can expose the operator’s hands to hazards including: crushing, impacts, cuts, abrasions and heat. Wear suitable gloves to protect hands.
2. Operators and maintenance personnel shall be physically able to handle the bulk, weight and power of the tool.
3. Hold the tool correctly and be ready to counteract normal or sudden movements with both hands available.
4. Maintain a balanced body position and secure footing.
5. Release trigger or stop start device in case of interruption of energy supply.
6. Use only fluids and lubricants recommended by the manufacturer.
7. Avoid unsuitable postures, as it is likely for these not to allow counteract- ing of normal or unexpected tool movement.
8. If the assembly power tool is fixed to a suspension device, make sure that fixation is secure.
9. Beware of the risk of crushing or pinching if nose equipment is not fitted.

IV. REPETITIVE MOTION HAZARDS:

1. When using assembly power tool, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.
2. When using tool, the operator should adopt a comfortable posture while maintaining a secure footing and avoid awkward or off balanced postures.
3. The operator should change posture during extended tasks to help avoid discomfort and fatigue.
4. If the operator experiences symptoms such as persistent or recurring discomfort, pain, throbbing, aching, tingling, numbness, burning sensations or stiffness, these warnings should not be ignored. The operator should tell the employer and consult a qualified health professional.

V. ACCESSORIES HAZARDS:

1. Disconnect tool from energy supply before changing inserted tool or accessory.
2. Use only sizes and types of accessories and consumables that are recom- mended. Do not use other types or sizes of accessories or consumables.

VI. WORKPLACE HAZARDS:

1. Be aware of slippery surfaces caused by use of the tool and of trip haz- ards caused by the air line or hydraulic hose.
2. Proceed with caution while in unfamiliar surroundings; there could be hidden hazards such as electricity or other utility lines.
3. The assembly power tool is not intended for use in potentially explosive environments.
4. Tool is not insulated against contact with electrical power.
5. Ensure there are no electrical cables, gas pipes, etc., which can cause a hazard if damaged by use of the tool.

VII. NOISE HAZARDS:

1. Exposure to high noise levels can cause permanent, disabling hearing loss and other problems such as tinnitus, therefore risk assessment and the implementation of proper controls is essential.
2. Appropriate controls to reduce the risk may include actions such as damping materials to prevent workpiece from ‘ringing’.
3. Use hearing protection in accordance with employer’s instructions and as required by occupational health and safety regulations.
4. Operate and maintain tool as recommended in the instruction handbook to prevent an unnecessary increase in the noise level.
5. Select, maintain and replace the consumable / inserted tool as recom- mended to prevent an unnecessary increase in noise.
6. If the power tool has a silencer, always ensure that it is in place and in good working order when the tool is being operated.

VIII. VIBRATION HAZARDS:

1. Exposure to vibration can cause disabling damage to the nerves and blood supply to the hands and arms.
2. Wear warm clothing when working in cold conditions and keep hands clean and dry.
3. If numbness, tingling, pain or whitening of the skin in the fingers or hands, stop using the tool, tell your employer and consult a physician.
4. Support the weight of the tool in a stand, tensioner or balancer in order to have a lighter grip on the tool.

TA7533 (HK999)
TA7533 (HK999)

HANDLE ASSEMBLY

TA7533

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T1820PG</td>
<td>TRAVEL STOP SCREW</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>T1820RE</td>
<td>ADJUSTING KNOB</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>T1820SG</td>
<td>SPRING</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>T1820AD</td>
<td>GUIDE</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>T0138SS-10-08</td>
<td>CROSS PIN LOCK SCREW</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>T1618HA-12</td>
<td>UPPER HANDLE</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>T1602HD</td>
<td>HANDLE HOUSING</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>T1651SS-10-01</td>
<td>LOCK SCREW</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>T15980R-18</td>
<td>RETAINING RING</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>T1820IN</td>
<td>TEFLOM INSERT</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>T1820BL</td>
<td>TELESCOPING TUBE</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>T1618HA-11</td>
<td>LOWER GRIP</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>T1820HA</td>
<td>LEVER</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>T1820PI</td>
<td>HINGE PIN</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>T0166PI</td>
<td>CROSS PIN</td>
<td>1</td>
</tr>
</tbody>
</table>

MATERIAL:
LOW CARBON STEEL

FINISH:
BLACK OXIDE

Huck International, Inc.
Lakewood Operations
Aerospace Fastener Division
3600 Paramount Blvd.
Lakewood, CA 90712

UNIVERSAL HAND INSTALLATION TOOL
FOR CAPTIVE SCREWS & TURN-LOC FASTENERS.
PLACE SCREW ASSEMBLY THROUGH PREPARED HOLE IN PANEL TO WHICH CAPTIVE SCREW IS TO BE MOUNTED. TURN SCREW INTO NOSE OF TOOL EITHER BY ROTATING TOOL OR SCREW ASSEMBLY. SQUEEZE HANDLES TOGETHER TIGHTLY. EXCESSIVE FORCE IS NOT REQUIRED. REMOVE TOOL FROM SCREW BY UNSQUEEZING. SHOULD SCREW REQUIRE ADDITIONAL TIGHTENING, REPEAT PROCEDURE EXERTING ADDITIONAL SQUEEZING FORCE.

Screw must be engaged in tool as far as possible until end of sleeve makes contact with flaring surface of the nose piece.

If tool is properly adjusted, a gap of .025 form washer face or panel to flaring area of nose piece must exist.

To adjust tool to desired grip length:

1. Set screw must be unscrewed to permit free movement of telescoping tube.
2. Rotate adjusting knob clockwise or counterclockwise to obtain desired length adjustment. This is indicated when the fraction marks on the telescoping tube is in line with the edge of the tool handle boss. Push the tube back toward the handle to insure accurate positioning.
3. Tighten set screw.

Note: If much resistance is encountered when rotating the adjusting knob, close the handles while turning the knob, Also make sure that the set screw is not pressing against the tool.
**TA7533 (HK999)**

**Complete Basic Tool Part No.:** TA7533

**Application:**
- NOSE PIECE: HK 7513
- NOSE PIECE: HLS 7513
- NOSE PIECE: HDG 7513
- NOSE PIECE: LOCN 7513

**Component Breakdown:**
- PULLER: CCS 7523
- NOSE PIECE: CCS 7513
- PULLER: HP 7523
- NOSE PIECE: HP 7513
- PULLER: HDG 7523
- NOSE PIECE: HDG 7513
- PULLER: LOCP 7523
- NOSE PIECE: LOCP 7513

**Complete Hand Tool Installation with Extension for Standard C-Bore:**
- HWA 8603

**Extension Length Code:**
- 1: STD
- 2: 2.000
- 3: 3.000
- 4: 4.000
- 5: 5.000
- 6: 6.000
- 7: 7.000
- 8: 8.000

**Thread Size Code:**
- 1: 0.065-56
- 2: 0.112-40
- 3: 0.128-32
- 4: 0.164-32
- 5: 0.190-32
- 6: 0.227-32
- 7: 0.250-28

**Material:**
- NOSE PIECE: TOOL STEEL, O1 HEAT TREAT TO RC 58-62.

**Finish:**
- ALL COMPONENTS: BLACK OXIDE.

**Nose Peices to be Used with Metric Size Pullers:**

**Huck International, Inc. - Lakewood Operations -**

**Universal Hand Installation Tool for Captive Screws & Turn-Loc Fasteners.**

**Size Code:** A 97928

**Scale Note:** 10/31/84
Hand installation tool assembly

HP7533
Puller (See Sht. 4)

HN7513
Nose piece (See Sht. 4)

TA7533
HANDLE ASS'Y
(See Sht. 3)

ORDERED SEPARATE

PART NO. CALLOUT
(Includes puller and nose piece)

HNA8603
H6603
HGW8603
H58603
HLR8603
LFF8603
LHF8603
CGS8603
CGT8603
LDCH8603
URC8603

THD SIZE THREAD SIZE
M2.5 .5 x 0.45 = 46h
M2 .5 x 0.45 = 46h
M2 .5 x 1.0 = 56h
M5 .3 x 0.8 = 46h
M6 .4 x 1.0 = 56h
M8 .5 x 1.0 = 56h
M8 .6 x 1.0 = 56h
M10 .8 x 1.0 = 56h
M10 .9 x 1.0 = 56h
M12 .10 x 1.0 = 56h
M16 .13 x 1.0 = 56h
M20 .18 x 1.0 = 56h

NOTES:

1. For installation instructions (See Sheet 2).

2. This tool is the same as the standard tool when adjusted at Deutsch manufacturer's plant; however, pre-adjustment can only occur when exact remaining top panel thickness is known, and which fastener part number is being used.

3. For variable length nose piece and puller (See Sht. 4).

4. Material:

Handle Assembly: Low carbon steel.
Nose piece: Tool steel 0-1, H.T. RC 56 min.
Puller: 4130 steel, H.T. RC 38-42.
Wrench: Carbon steel.

5. Finish:

Handle assembly: Black oxide
Nose piece: Black oxide
Puller: Black oxide
Wrench: Black oxide

6. Caution: Do not use this tool to install fasteners on parent material harder than BHN200 (86100), as this may overstress the tool.
Consult Deutsch engineering for alternate tooling.

7. For variable length extension (See Sht. 4).
### Material Information

**Material:**
Low Carbon Steel

**Finish:**
Black Oxide

### Assembly Chart - Table III

<table>
<thead>
<tr>
<th>ASSEMBLY</th>
<th>PULLER</th>
<th>RUSHING</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTPE6230</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>DTPE6231</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>DTPE6232</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>DTPE6233</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>DTPE6234</td>
<td>(-)</td>
<td>(-)</td>
</tr>
<tr>
<td>DTPE6235</td>
<td>(-)</td>
<td>(-)</td>
</tr>
</tbody>
</table>

### Item List

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T1820AD</td>
</tr>
<tr>
<td>2</td>
<td>T1820AD</td>
</tr>
<tr>
<td>3</td>
<td>T1820SG</td>
</tr>
<tr>
<td>4</td>
<td>T1820LA</td>
</tr>
<tr>
<td>5</td>
<td>T1820BL</td>
</tr>
<tr>
<td>6</td>
<td>T1820KE</td>
</tr>
<tr>
<td>7</td>
<td>T1820IN</td>
</tr>
<tr>
<td>8</td>
<td>T1820PG</td>
</tr>
<tr>
<td>9</td>
<td>T9160PI</td>
</tr>
<tr>
<td>10</td>
<td>T1810PI</td>
</tr>
<tr>
<td>11</td>
<td>T1810ES-10-01</td>
</tr>
<tr>
<td>12</td>
<td>T1810SS-10-08</td>
</tr>
<tr>
<td>13</td>
<td>T1810HA-11</td>
</tr>
<tr>
<td>14</td>
<td>T1810HA-12</td>
</tr>
<tr>
<td>15</td>
<td>T1550ER-18</td>
</tr>
</tbody>
</table>

### Tolerances Table

<table>
<thead>
<tr>
<th>LETTER</th>
<th>DESCRIPTION</th>
<th>DATE</th>
<th>APPR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>E. O. 464</td>
<td>8-58</td>
<td>AL</td>
</tr>
<tr>
<td>E</td>
<td>E. O. 464A</td>
<td>1,170-86</td>
<td>AS</td>
</tr>
<tr>
<td>D</td>
<td>D. O. 464A</td>
<td>2,21-86</td>
<td>AS</td>
</tr>
<tr>
<td>C</td>
<td>E. O. 464A</td>
<td>1,0-60</td>
<td>AS</td>
</tr>
</tbody>
</table>

### Revisions

<table>
<thead>
<tr>
<th>LETTER</th>
<th>DESCRIPTION</th>
<th>DATE</th>
<th>APPR.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE I

<table>
<thead>
<tr>
<th>NUT SIZE CODE</th>
<th>THREAD SIZE</th>
<th>Ø A</th>
<th>NUT PLATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF</td>
<td>FHF</td>
<td>FFS</td>
<td></td>
</tr>
<tr>
<td>01</td>
<td>4</td>
<td>1/4-20 UNC</td>
<td>257</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>5/32-24 UNC</td>
<td>278</td>
</tr>
<tr>
<td>02</td>
<td>8</td>
<td>5/32-26 UNC</td>
<td>302</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>16-27 UNF</td>
<td>345</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>8</td>
<td>16-24 UNEF</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>8</td>
<td>16-20 UNF</td>
</tr>
<tr>
<td>HS</td>
<td>N/A</td>
<td>M6X0.7</td>
<td>390</td>
</tr>
<tr>
<td>HS</td>
<td>02</td>
<td>M6X0.7</td>
<td>390</td>
</tr>
<tr>
<td>HS</td>
<td>03</td>
<td>M6X0.7</td>
<td>400</td>
</tr>
<tr>
<td>HS</td>
<td>03</td>
<td>M6X0.7</td>
<td>400</td>
</tr>
</tbody>
</table>

TABLE II

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>CALL OUT</th>
<th>FLARING TIP</th>
<th>STYLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCS861250 - ( )</td>
<td>T18005G - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
<tr>
<td>DCS861250 - ( )</td>
<td>T1805FT - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
<tr>
<td>DCS866151 - ( )</td>
<td>T1805FT - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
<tr>
<td>DCS866151 - ( )</td>
<td>T1805FT - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
<tr>
<td>DCS866151 - ( )</td>
<td>T1805FT - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
<tr>
<td>DCS866151 - ( )</td>
<td>T1805FT - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
<tr>
<td>DCS866151 - ( )</td>
<td>T1805FT - ( )</td>
<td>C BORE</td>
<td></td>
</tr>
</tbody>
</table>

MISCELLANEOUS:

1. PLACE SPRING (T18005G) INTO ADAPTER (T1800AD).
2. PLACE SCREW PLUG (T18005G) INTO ADAPTER (T1800AD). SUGGESTION: HOLD ASSY UPRIGHT ON FLAT SURFACE, COMPRESS THE SCREW PLUG AND "BANG" THE FOUR PRESSURE PAD PIECES ON THE FLARING TIP.
3. SLIDE COLLAR (T180000C) OVER PRESSURE PAD SECTIONS AND SCREW DOWN ONTO THE SCREW PLUG.
4. PLACE RUBBER RETAINING RING (T180000) INTO GROOVE ON PRESSURE PAD.

CHECK FINAL ASSEMBLY:

A) RETRACT THE PRESSURE PAD BY PULLING IT BACK TO THE STOPPING SCREW (EXPOSING FLARING TIP).
B) SLIDE IT BACK TO THE FORWARD END POSITION.
C) CHECK FOR SMOOTH OPERATION FUNCTION.
INSTALLATION OF NUTS

Panel Preparation:
For mounting hole dimensions see Deutscher Drawing 10-27v or equivalent.

First Connection

Step 1. The pressure pad collets of the flaring nose ass'y should be at forward end of axial travel, providing a recess for the first operation.

Rotate the knurled collar so that the slot does not line up with the stop screw which thus provides a positive stop against the screw plug. This prevents the pressure pad collets from retracting and opening up prematurely.

Step 2. Insert nut assembly sleeve thru installation hole and screw puller into nut until full thread engagement is reached.

Step 3. Close handles, pulling nut assembly sleeve into installation hole, until fully seated against the panel and collets are fully engaged.

Second Operation

Step 4. Without disengaging the tool, rotate the knurled collar to line up the slot in the screw plug with the stop screw, open the handles and retract the pressure pad by pulling it back against the stop. This will expose the flaring surface. Exposure of the flaring surface is necessary to insure full flaring of nut assembly sleeve.

Step 5. Close handles to flare or shape nut assembly sleeve, this captures the nut. Enough pressure should be applied to form a flat upset against the panel. In case of extra long sleeve protrusion, material will roll over resulting in a higher radius upset. Caution: Do not try to completely flatten material as tool might be overstressed due to cold working on sleeve material.


To Adjust Tool to Desired Grip Length

1. Set screw must be backed off to permit free movement of the telescoping tube.

2. Rotate adjusting knob clockwise or counterclockwise to obtain desired grip length adjustment. This is indicated when the mark opposite the grip length letter on the telescoping tube is in line with the edge of the tool handle. Push the tube back towards the handle to insure accurate positioning.

3. Tighten set screw.

Note: If too much resistance is encountered when rotating the adjusting knob, close the handles while turning the knob also. Insure that the set screw is not pressing against the tube.
1. Screw adapter into handle assembly, use loctite.
2. Screw nose piece assembly into handle assembly until it seats against end of tubing.
3. Insert puller stud into nose piece and screw into adapter, using wrench on hex or flats, tighten.

(B) FOR CLOSE TOLERANCE TOOL ASSEMBLY ONLY
1. Screw adapter into handle assembly, use loctite.
2. Insert puller stud into bushing.
3. Insert bushing into nose piece.
4. Insert wave washer on puller stud and screw stud into adapter. Align flat on stud with set screw hole.
5. Tighten set screw in adapter onto puller stud flat.
6. Screw nose piece into handle assembly, using wrench on hex or flats, tighten.

### TABLE I

<table>
<thead>
<tr>
<th>NUT SIZE</th>
<th>PULLER THREAD SIZE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>M4 x 0.7 GSNC-3A</td>
<td>04</td>
</tr>
<tr>
<td>4F</td>
<td>M4 x 0.7 GSNC-3A DBL</td>
<td>05</td>
</tr>
<tr>
<td>M3</td>
<td>M3 x 0.54 GSNC-3A DBL</td>
<td>01</td>
</tr>
<tr>
<td>6</td>
<td>M6 x 0.85 GSNC-3A DBL</td>
<td>02</td>
</tr>
<tr>
<td>8F</td>
<td>M8 x 0.7 GSNC-3A Quad</td>
<td>02</td>
</tr>
<tr>
<td>M4</td>
<td>M4 x 0.7 GSNC-3A Quad</td>
<td>04</td>
</tr>
<tr>
<td>10</td>
<td>M10 x 0.8 GSNC-3A Quad</td>
<td>03</td>
</tr>
<tr>
<td>10C</td>
<td>M10 x 0.8 GSNC-3A Quad</td>
<td>04</td>
</tr>
<tr>
<td>12C</td>
<td>M12 x 0.8 GSNC-3A Quad</td>
<td>05</td>
</tr>
<tr>
<td>12F</td>
<td>M12 x 0.8 GSNC-3A Quad</td>
<td>06</td>
</tr>
<tr>
<td>16</td>
<td>M16 x 1.0 GSNC-3A Quad</td>
<td>07</td>
</tr>
</tbody>
</table>

### TABLE II

<table>
<thead>
<tr>
<th>PART NO. CALLOUT</th>
<th>FOR PULLER ASSEMBLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTP-200-3.2</td>
<td>1/2 (2)</td>
</tr>
</tbody>
</table>

### CONFIGURATION

0. STANDARD
1. REDUCED DIA.
2. CLOSE TOLERANCE
3. CLOSE TOL RS
4. CLOSE TOL RM
5. REDU. DIA./BUSHING
6. FOR GROMMEN

### BASIC TOOL NO.

HUCK INTERNATIONAL, INC.
INSTALLATION SYSTEMS DIVISION
UNIVERSAL HAND INSTALLATION TOOL FOR RIVETLESS FLOATING NUT PLATES
PULLER DETAILS

HUCK CODE DENT NO.
B7928
B9170-12-0

TA7533 (HK999)
FLOATING ADAPTER FOR TURN-LOCs

TO PROVIDE FLOAT IN TURN-LOC ASSEMBLIES:

SCREW FLOATING ADAPTER ASSY BY HAND INTO BASIC TOOL UNTIL BOTTLED.

PLACE HAULLED HEAD END OF TURN-LOC IN OPENING OF ADAPTER ASSY AND
SQUEEZE HANDLES WITH MINIMAL FORCE. STOP IN TOOL PROVIDES PROPER
RESULT. FLOATING ACTION IN HOLE AS PREPARED IN ACCORDANCE WITH DRAWING S-029.

NO FLOATING ADAPTER FOR CAPTIVE FASTENER SCREWS. FOR FLOATING APPLI-
CATIONS SEE NOTE 3.

REMOVAL ADAPTER FOR FIXED OR FLOATING:

1. PLACE HAULLED HEAD END OF TURN-LOC IN OPENING OF ADAPTER ASSY WITH
   HANDLE IN OPEN POSITION. SQUEEZE HANDLES TOGETHER PULLING TURN-LOC
   FROM SHEET BY STRAIGHTENING FLARED SECTION OF SLEEVE.

2. MEASURE DISTANCE "A" WITH SCREW FULLY RETRACTED.

3. USE 3/32" ALLEN WRENCH, TURN CLOCKWISE TO INCREASE "B" DIMENSION.

4. FOR REMOVAL OF EXTRA LONG SCREWS, WHERE "A" EXCEEDS .600" SPACER KEEPS PART HAULED. 113195P MUST BE USED
   AND PLACED UNDER THE TOOL (SEE BELOW). SPECIFY THICKNESS WHEN ORDERING. IN THREE PLACE DECIMAL, ORDER IN 1/6" INCREMENTS. W/1.9,, OR .062.

REMOVAL OF EXTRA LONG SCREW ASSy'S

THO. SIZE CODE

FINISH

PART NUMBER CALL OUT

(INCLUDES H 8603-1) AND ADAPTER

(thread size code basic tool no.)

CONFIGURATION

F LOW PROFILE FLOATING
H1 LOW PROFILE REMOVAL
HRB HIGH PROFILE FLOATING
H2B HIGH PROFILE REMOVAL
KHPK HIGH PROFILE LOCKING FLOATING
KHPN HIGH PROFILE LOCKING REMOVAL
RP LOW PROFILE REMOVAL
RC LOW PROFILE CAPTIVE REMOVAL
F3 FLUSH HEAD REMOVAL

ADAPTER:

HUCK APODIZE FOR W1L-4 8625, TYPE 111, CLASS 2
BLACK COLOR IS OPTIONAL.

<table>
<thead>
<tr>
<th>CODE</th>
<th>D</th>
<th>P</th>
<th>REV</th>
<th>DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>97928</td>
<td>123</td>
<td>03/04/93</td>
<td>1</td>
<td>UNIVERSAL HAND INSTALLATION TOOL</td>
</tr>
</tbody>
</table>
SERVICE NOTES:
Limited Warranties

**Limited Lifetime Warranty on BobTail® Tools:**

Huck International, Inc. warrants to the original purchaser that its BobTail® installation tools manufactured after 12/1/2016 shall be free from defects in materials and workmanship for its useful lifetime. This warranty does not cover special order / non-standard products, or part failure due to normal wear, tool abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

**Two Year Limited Warranty on Installation Tools:**

Huck International, Inc. warrants that its installation tools and Powerig® hydraulic power sources manufactured after December 1, 2016 shall be free from defects in materials and workmanship for a period of two years from date of purchase by the end user. This warranty does not cover special order / non-standard products, or part failure due to normal wear, tool abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

**90 Day Limited Warranty on Nose Assemblies and Accessories:**

Huck International, Inc. warrants that its nose assemblies and accessories shall be free from defects in materials and workmanship for a period of 90 days from date of purchase by the end user. This warranty does not cover special clearance noses, or special order / non-standard product, or part failure due to normal wear, abuse or misapplication, or user non-compliance with the service requirements and conditions detailed in the product literature.

Useful lifetime is defined as the period over which the product is expected to last physically, up to the point when replacement is required due to either normal in-service wear, or as part of a complete overhaul. Determination is made on a case-by-case basis upon return of parts to Huck International, Inc. for evaluation.

**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.

Huck 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 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

**Outside USA and Canada**
Contact your nearest Huck International location (see reverse).

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 Tool Kits and Nose Assemblies. Please contact your Huck Representative or the nearest Huck International location (see reverse) for the ATSC in your area.
Arconic Inc. (NYSE: ARNC) creates breakthrough products that shape industries. Working in close partnership with our customers, we solve complex engineering challenges to transform the way we fly, drive, build and power. Through the ingenuity of our people and cutting-edge advanced manufacturing, we deliver these products at a quality and efficiency that ensures customer success and shareholder value.

Arconic Fastening Systems Tooling Support Locations

INDUSTRIAL NORTH AMERICA

<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston Operations</td>
<td>1 Corporate Drive, Kingston, NY 12401</td>
<td>+1-800-278-4825</td>
<td>+1-845-334-7333</td>
<td><a href="mailto:afs.sales.kingston@arconic.com">afs.sales.kingston@arconic.com</a></td>
</tr>
<tr>
<td>Tracy Operations</td>
<td>1925 North MacArthur Drive, Tracy, CA 95376</td>
<td>+1-800-826-2884</td>
<td>+1-800-573-2645</td>
<td><a href="mailto:afs.sales.idg@arconic.com">afs.sales.idg@arconic.com</a></td>
</tr>
<tr>
<td>Waco Operations</td>
<td>PO Box 8117</td>
<td>+1-800-388-4825</td>
<td>+1-800-798-4825</td>
<td><a href="mailto:afs.sales.waco@arconic.com">afs.sales.waco@arconic.com</a></td>
</tr>
</tbody>
</table>

INDUSTRIAL GLOBAL

<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolkata Operations</td>
<td>Unit No. 28, 2nd Floor, 55/1, Chowringhee Road, Kolkatta 700071, West Bengal, India</td>
<td>+91-33-40699170</td>
<td>+91-33-40699180</td>
<td><a href="mailto:afs.sales@arconic.com">afs.sales@arconic.com</a></td>
</tr>
<tr>
<td>Suzhou Operations</td>
<td>58 Yinsheng Road, SIP Suzhou, Jiangsu 215126, China</td>
<td>+86-6512-62863800-8888</td>
<td>+86-6512-62863800-8888</td>
<td></td>
</tr>
<tr>
<td>Melbourne Operations</td>
<td>1508 Centre Road, Clayton, Victoria, Australia 3168</td>
<td>+613-8545-3333</td>
<td>+613-8545-3390</td>
<td><a href="mailto:afs.sales@arconic.com">afs.sales@arconic.com</a></td>
</tr>
<tr>
<td>Telford Operations</td>
<td>Unit C, Stafford Park 7, Telford, Shropshire, England TF3 3BQ</td>
<td>+44-1952-290011</td>
<td>+44-1952-207701</td>
<td><a href="mailto:thisales@arconic.com">thisales@arconic.com</a></td>
</tr>
<tr>
<td>São Paulo Operations</td>
<td>Rodovia Anhanguera, s/n, KM 17 Parque São Domingos - Complexo Anhanguera - Galpão 1 Seção III (Módulo III) Box 11 CEP 05112-000 São Paulo – SP Brazil</td>
<td>+55-11-3583-7061</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tokyo Operations (Japan and Korea)</td>
<td>1013 Hibiya U-1 Bldg. Uchisaiwai-cho 1-1-7 Chiyoda-ku, Tokyo 100-0011 Japan</td>
<td>+81-3-3539-6594</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AEROSPACE NORTH AMERICA

<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kingston Operations</td>
<td>1 Corporate Drive, Kingston, NY 12401</td>
<td>+1-800-278-4825</td>
<td>+1-845-334-7333</td>
<td><a href="mailto:afs.sales.kingston@arconic.com">afs.sales.kingston@arconic.com</a></td>
</tr>
</tbody>
</table>

AEROSPACE GLOBAL

<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Phone</th>
<th>Fax</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aichach Operations</td>
<td>Robert-Bosch Str. 4, Aichach 86551, Germany</td>
<td>+49-8251-8757-0</td>
<td><a href="mailto:aicafswelcomedl@arconic.com">aicafswelcomedl@arconic.com</a></td>
<td></td>
</tr>
<tr>
<td>Cergy Operations</td>
<td>15 Rue du Petit Albi, F-95611 Cergy Pontoise, France</td>
<td>+33-1-34-33-98-00</td>
<td>+33-1-34-33-97-77</td>
<td></td>
</tr>
<tr>
<td>Hong Kong Operations</td>
<td>27th Floor, 88 Hing Fat Street, Causeway Bay, Hong Kong, China</td>
<td>+852-2864-2012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

© 2018 Huck International, Inc.
Arconic Fastening Systems
Kingston Operations
1 Corporate Drive, Kingston, NY 12401
Tel: 800-431-3091 • Fax: 845-334-7333
www.afshuck.net/us

Huck provides technical assistance regarding the use and application of Huck fasteners and tooling. NOTICE: The information contained in this publication is only for general guidance with regard to properties of the products shown and/or the means for selecting such products, and is not intended to create any warranty, express, implied, or statutory; all warranties are contained only in Huck’s written quotations, acknowledgments, and/or purchase orders. It is recommended that the user secure specific, up-to-date data and information regarding each application and/or use of such products.